

# DIGITAL MIXING CONSOLE/ PEAK METER BRIDGE/WOODEN SIDE PANELS

## *O2R96*/MB02R96/SP02R96

### SERVICE MANUAL



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This document is printed on chlorine free (ECF) paper with soy ink.

### IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

**WARNING :** Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

**IMPORTANT :** This presentation or sale of this manual to any individual or firm does not constitute authorization certification, recognition of any applicable technical capabilities, or establish a principal-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and changes in specification are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

**WARNING :** Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground bus in the unit (heavy gauge black wires connect to this bus.)

**IMPORTANT :** Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

### WARNING: CHEMICAL CONTENT NOTICE!

The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (Where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

**DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER EVER!**

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

WARNING: THIS APPARATUS MUST BE EARTHED

### IMPORTANT

THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

GREEN-AND-YELLOW :	EARTH
BLUE :	NEUTRAL
BROWN :	LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:


The wire which is coloured GREEN and YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol  $\perp$  or coloured GREEN and YELLOW.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

\* This applies only to products distributed by YAMAHA KEMBLE MUSIC (U.K.) LTD.

## ■ WARNING

Components having special characteristics are marked  and must be replaced with parts having specification equal to those originally installed.

### LITHIUM BATTERY HANDLING

This product uses a lithium battery for memory back-up.

**WARNING :** Lithium batteries are dangerous because they can be exploded by improper handling. Observe the following precautions when handling or replacing lithium batteries.

- Leave lithium battery replacement to qualified service personnel.
- Always replace with batteries of the same type.
- When installing on the PC board by soldering, solder using the connection terminals provided on the battery cells.
- Never solder directly to the cells. Perform the soldering as quickly as possible.
- Never reverse the battery polarities when installing.
- Do not short the batteries.
- Do not attempt to recharge these batteries.
- Do not disassemble the batteries.
- Never heat batteries or throw them into fire.

#### ADVARSEL!

Lithiumbatteri-Eksplosionsfare ved fejlagtig handling. Udskiftning ma kun ske med batteri af samme fabrikat og type. lever det brugte batteri tilbage til leverandren.

#### WARNING

Explosionsfara vid felaktigt batteribyte.

Anvand samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.

Kassera anvant batteri enligt fabrikantens instruktion.

#### VAROITUS

Paristo voi rajahtaa, jos se on virheellisesti asennettu.

Vaihda paristo ainoastaan laitevalmistajan suosittellemaan tyyppiin.

Havita kaytetty paristo valmistajan ohjeiden mukaisesti.

The following information complies with Dutch official Gazette 1995. 45; ESSENTIALS OF ORDER ON THE COLLECTION OF BATTERIES.

- Please refer to the disassembly procedure for the removal of Back-up Battery.
- Leest u voor het verwijderen van de backup batterij deze beschrijving.



Take care not to trap your fingers.

# ■ SPECIFICATIONS

## • 02R96

### General Spec

<b>Number of scene memories</b>		99
<b>Sampling Frequency</b>	<b>Internal</b>	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
	<b>External</b>	Normal rate: 44.1 kHz-10% to 48 kHz+6% Double rate: 88.2 kHz-10% to 96 kHz+6%
<b>Signal Delay</b>		Less than 2.0 ms CH INPUT to STEREO OUT (fs=48 kHz)
		Less than 1.1 ms CH INPUT to STEREO OUT (fs=96 kHz)
<b>Fader</b>		100 mm motorized with touch sense × 25
<b>Fader Resolution</b>		+10 to -96, -∞dB (256 steps/100 mm) input faders
		0 to -130, -∞dB (256 steps/100 mm) master faders, stereo fader
<b>Total Harmonic Distortion</b> *1 (CH INPUT to STEREO OUT) (Input Gain=Min.)	fs=48 kHz	Less than 0.05% 20 Hz to 20 kHz @ +14 dB into 600 Ω Less than 0.01% 1 kHz @ +18 dB into 600 Ω (fs=48 kHz)
	fs=96 kHz	Less than 0.05% 20 Hz to 40 kHz @ +14 dB into 600 Ω Less than 0.01% 1 kHz @ +18 dB into 600 Ω
<b>Frequency Response</b> (CH INPUT to STEREO OUT)		20 Hz-20 kHz, 0.5, -1.5 dB @ +4 dB into 600 Ω (fs=48 kHz)
		20 Hz-40 kHz, 0.5, -1.5 dB @ +4 dB into 600 Ω (fs=96 kHz)
<b>Dynamic Range</b> (maximum level to noise level)		110 dB typ. DA Converter (STEREO OUT)
		105 dB typ. AD+DA (to STEREO OUT) @ fs=48 kHz
		105 dB typ. AD+DA (to STEREO OUT) @ fs=96 kHz
<b>Hum &amp; Noise</b> *2 (20 Hz-20 kHz) Rs=150Ω Input Gain=Max. Input Pad =0 dB		-128 dB Equivalent Input Noise
		-92 dB residual output noise. STEREO OUT (STEREO OUT off)
		-92 dB (96 dB S/N) STEREO OUT (STEREO fader at nominal level and all CH INPUT faders at minimum level)
		-64 dB (68 dB S/N) STEREO OUTPUT (STEREO fader at nominal level and one CH INPUT fader at nominal level)
<b>Maximum Voltage Gain</b>		74 dB CH INPUT (CH1-24) to STEREO OUT/OMNI (BUS) OUT
		74 dB CH INPUT (CH1-24) to OMNI (AUX) OUT (via pre input fader)
		74 dB CH INPUT (CH1-24) to CONTROL ROOM MONITOR OUT (via STEREO bus)
<b>Crosstalk</b> (@ 1 kHz) Input Gain=Min.		-80 dB adjacent input channels (CH1-24)
		-80 dB input to output
<b>AD Input (1-16: A/B)</b>	<b>Phantom switch</b>	+48 V DC is supplied to A (XLR-3-31 type) input
	<b>Pad switch</b>	0/26 dB attenuation
	<b>Gain control</b>	44 dB (-60 to -16), detented
	<b>Peak indicator</b>	LED (red) turns on when post HA level reaches 3 dB below clipping
	<b>Signal indicator</b>	LED (green) turns on when post HA level reaches 20 dB below nominal
	<b>Insert</b>	I/O (pre AD converter)
	<b>Insert switch</b>	on/off
	<b>AD converter</b>	24-bit linear, 128-times oversampling (fs=48 kHz)
<b>AD Input (17-24)</b>	<b>Gain control</b>	44 dB (-34 to +10), detented
	<b>Peak indicator</b>	LED (red) turns on when post HA level reaches 3 dB below clipping
	<b>Signal indicator</b>	LED (green) turns on when post HA level reaches 20 dB below nominal
	<b>AD converter</b>	24-bit linear, 128-times oversampling (fs=48 kHz)
<b>Analog Input</b> (2TR IN ANALOG 1, 2)	<b>AD converter</b>	24-bit linear, 128-times oversampling (fs=48 kHz)

<b>Option Input (SLOT 1–4)</b>	<b>Available cards</b>	Optional digital interface cards (MY8, MY4 series)
<b>Digital Input</b> (2TR IN DIGITAL 1–3)	<b>SRC</b>	On/off (1:3 and 3:1 maximum input to output sample rate ratio)
<b>Input Channel CH1–56</b>	<b>Input patch</b>	—
	<b>Phase</b>	Normal/reverse
	<b>Gate-type</b> *3	On/off
		Key in: 12 ch Group (1–12, 13–24, 25–36, 37–48, 49–56)/AUX1–8
	<b>Comp-type</b> *4	On/off
		Key in: self /Stereo Link
		Pre EQ/pre fader/post fader
	<b>Attenuator</b>	–96.0 to +12.0 dB (0.1 dB step)
	<b>EQ</b>	4-band PEQ *5
		On/off
	<b>Delay</b>	0–43400 samples
	<b>On/off</b>	—
	<b>Fader</b>	100 mm motorized (INPUT/AUX1–8)
	<b>Aux send</b>	On/off
		AUX1–8; pre fader/post fader
	<b>Solo</b>	On/off
		Pre fader/after pan
	<b>Pan</b>	127 positions (Left= 1–63, Center, Right= 1–63)
	<b>Surround pan</b>	127 × 127 positions
<b>LFE level</b>	–∞, –96 dB to +10 dB (256 step)	
<b>Routing</b>	STEREO, BUS1–8, DIRECT OUT	
<b>Direct out</b>	Pre EQ/pre fader/post fader	
<b>Metering</b>	Displayed on LCD	
	Peak hold on/off	
<b>TALKBACK</b>	<b>Level control</b>	Analog rotary potentiometer
	<b>AD converter</b>	24-bit linear, 128-times oversampling
	<b>Talkback select</b>	Built-in microphone/AD IN 1–16
	<b>On/off</b>	—
<b>OSCILLATOR</b>	<b>Level</b>	0 to –96 dB (1 dB step)
	<b>On/off</b>	—
	<b>Waveform</b>	Sine 100 Hz, sine 1 kHz, sine 10 kHz, pink noise, burst noise
	<b>Routing</b>	BUS1–8, AUX1–8, STEREO L, R
<b>STEREO OUT</b>	<b>DA converter</b>	24-bit linear, 128-times oversampling
<b>OMNI OUT 1–8</b>	<b>Output patch</b>	SURROUND MONITOR, STEREO, BUS1–8, AUX1–8, DIRECT OUT 1–56, INSERT OUT (CH1–56, BUS1–8, AUX1–8, STEREO)
	<b>DA converter</b>	24-bit linear, 128-times oversampling
<b>CONTROL ROOM MONITOR OUT</b>	<b>Monitor select</b>	STEREO, 2TR IN DIGITAL 1, 2TR IN DIGITAL 2, 2TR IN DIGITAL 3, 2TR IN ANALOG 1, 2TR IN ANALOG 2, ASSIGN 1, 2 (BUS 1–8/AUX 1–8)
	<b>Mono</b>	On/off
	<b>Dimmer</b>	On/off
	<b>DA converter</b>	24-bit linear, 128-times oversampling
	<b>Level control</b>	Analog rotary potentiometer
	<b>Phones level</b>	Analog rotary potentiometer
<b>STUDIO MONITOR OUT</b>	<b>Monitor select</b>	CONTROL ROOM, STEREO, AUX 7, AUX 8, TALKBACK
	<b>DA converter</b>	24-bit linear, 128-times oversampling
	<b>Level control</b>	Analog rotary potentiometer

2TR OUT DIGITAL 1–3	Dither	On/off
		Word length 16, 20, 24-bit
Option Output (SLOT 1–4)	Output patch	STEREO, BUS1–8, AUX 1–8, DIRECT OUT 1–56, INSERT OUT, CONTROL ROOM
	Available card	Optional digital interface card (MY8, MY4 series)
STEREO	Output patch	SURROUND MONITOR, STEREO, BUS1–8, AUX1–8, DIRECT OUT 1–56, INSERT OUT (CH1–56, BUS1–8, AUX1–8, STEREO)
		Dither
STEREO	Dither	Word length 16/20/24-bit
		Comp-type <sup>*4</sup>
	Attenuator	Pre EQ/pre fader/post fader
		EQ
	EQ	4-band PEQ <sup>*5</sup>
		On/off
	On/off	—
	Fader	100 mm motorized
	Balance	127 positions (Left=1–63, Center, Right=1–63)
	Delay	0–43400 samples
Metering	Displayed on LCD	
	Peak hold on/off	
BUS1–8	Comp-type <sup>*4</sup>	On/off
		Pre EQ/pre fader/post fader
	Attenuator	–96.0 to +12.0 dB (0.1 dB step)
		EQ
	EQ	On/off
		On/off
	Fader	100 mm motorized
	Delay	0–43400 samples
	Bus to stereo	Level (–∞, –130 dB to 0 dB)
		On/off
Pan: 127 positions (Left=1–63, Center, Right=1–63)		
Metering	Displayed on LCD	
	Peak hold on/off	
AUX1–8	Comp-type <sup>*4</sup>	On/off
		Pre EQ/pre fader/post fader
	Attenuator	–96.0 to +12.0 dB (0.1 dB step)
		EQ
	EQ	On/off
		On/off
	Fader	100 mm motorized
	Delay	0–43400 samples
Metering	Displayed on LCD	
	Peak hold on/off	

<b>SURROUND MONITOR</b>	<b>Mute</b>	On/off
	<b>Solo</b>	On/off
	<b>Source</b>	BUS1–8, SLOT 1–4
	<b>Monitor to C-R</b>	On/off
	<b>Oscillator</b>	Pink noise/500–2 kHz/1 kHz/50 Hz
	<b>Monitor matrix</b>	5.1 → 5.1, 5.1→ 3-1, 5.1 → ST, 3.1 → 3.1, 3.1→ ST
	<b>Bass management</b>	5 presets
	<b>Monitor alignment</b>	ATT (–12.0 dB to 12 dB 0.1 dB step), Delay (0–30.0 msec 0.02 msec step)
<b>INTERNAL EFFECTS</b> (EFFECT 1–4)	<b>Bypass</b>	On/off
	<b>In/out</b>	8-in, 8-out (EFFECT1): depends on effects type 2-in, 2-out (EFFECT2–4): depends on effects type
	<b>Effect-in from</b>	AUX1–8/INSERT OUT/effect-out
	<b>Effect-out to</b>	Input patch/effect-in
<b>Power Requirements</b>	<b>Japan</b>	100 V, 50/60 Hz 190 W
	<b>U.S.A./Canada</b>	120 V, 60 Hz 200 W
	<b>Other</b>	220–240 V, 50/60 Hz 200 W
<b>Dimensions</b>	<b>(H x D x W)</b>	239 x 697 x 667 mm (9.4" x 27.4" x 26.3")
<b>Net weight</b>		34 kg (75 lbs)
<b>Operating free-air temperature range</b>		10–35°C (50–95°F)
<b>Storage temperature range</b>		–20 to 60°C (–4 to 140°F)
<b>Supplied Accessories</b>		AC Cable CD-ROM (Studio Manager)
<b>Options</b>		Digital interface card (MY8, MY4 series) PEAK METER BRIDGE: MB02R96 SIDE PANEL: SP02R96

\*1. Total harmonic distortion is measured with a 6 dB/octave filter @ 80 kHz.

\*2. Hum & Noise are measured with a 6 dB/octave filter @ 12.7 kHz; equivalent to a 20 kHz filter with infinite dB/octave attenuation.

\*3. See "Gate Parameters" on page 8.

\*4. See "Comp Parameters" on page 8.

\*5. See "EQ Parameters" on page 7.

## EQ Parameters

	<b>LOW/HPF</b>	<b>L-MID</b>	<b>H-MID</b>	<b>HIGH /LPF</b>
<b>Q</b>	0.1–10.0 (41 points) low shelving HPF	0.1–10.0 (41 points)		0.1–10.0 (41 points) high shelving LPF
<b>F</b>	21.2 Hz–20 kHz (1/12 oct step)			
<b>G</b>	±18 dB (0.1 dB step) HPF: on/off	±18 dB (0.1 dB step)		±18 dB (0.1 dB step) LPF: on/off

## Gate Parameters

<b>Gate</b>	<b>Threshold</b>	-54 dB to 0 dB (0.1 dB step)
	<b>Range</b>	-70 dB to 0 dB (1 dB step)
	<b>Attack</b>	0 ms–120 ms (1 ms step)
	<b>Hold</b>	0.02 ms–1.96 s (216 points) @ 48 kHz
		0.02 ms–2.13 s (216 points) @ 44.1 kHz
		0.01 ms–981 ms (216 points) @ 96 kHz
		0.01 ms–1.06 s (216 points) @ 88.2 kHz
	<b>Decay</b>	5 ms–42.3 s (160 points) @ 48 kHz
		6 ms–46.0 s (160 points) @ 44.1 kHz
		3 ms–21.1 s (160 points) @ 96 kHz
3 ms–23.0 s (160 points) @ 88.2 kHz		
<b>Ducking</b>	<b>Threshold</b>	-54 dB to 0 dB (0.1 dB step)
	<b>Range</b>	-70 dB to 0 dB (1 dB step)
	<b>Attack</b>	0 ms–120 ms (1 ms step)
	<b>Hold</b>	0.02 ms–1.96 s (216 points) @ 48 kHz
		0.02 ms–2.13 s (216 points) @ 44.1 kHz
		0.01 ms–981 ms (216 points) @ 96 kHz
		0.01 ms–1.06 s (216 points) @ 88.2 kHz
	<b>Decay</b>	5 ms–42.3 s (160 points) @ 48 kHz
		6 ms–46.0 s (160 points) @ 44.1 kHz
		3 ms–21.1 s (160 points) @ 96 kHz
3 ms–23.0 s (160 points) @ 88.2 kHz		

## Comp Parameters

<b>Compressor</b>	<b>Threshold</b>	-54 dB to 0 dB (0.1 dB step)
	<b>Ratio (x :1)</b>	x=1, 1.1, 1.3, 1.5, 1.7, 2, 2.5, 3, 3.5, 4, 5, 6, 8, 10, 20, ∞ (16 points)
	<b>Out gain</b>	0 dB to +18 dB (0.1 dB step)
	<b>Knee</b>	Hard, 1, 2, 3, 4, 5 (6 step)
	<b>Attack</b>	0 ms–120 ms (1 ms step)
	<b>Release</b>	5 ms–42.3 s (160 points) @ 48 kHz
		6 ms–46.0 s (160 points) @ 44.1 kHz
		3 ms–21.1 s (160 points) @ 96 kHz
3 ms–23.0 s (160 points) @ 88.2 kHz		
<b>Expander</b>	<b>Threshold</b>	-54 dB to 0 dB (0.1 dB step)
	<b>Ratio (x :1)</b>	x=1, 1.1, 1.3, 1.5, 1.7, 2, 2.5, 3, 3.5, 4, 5, 6, 8, 10, 20, ∞ (16 points)
	<b>Out gain</b>	0 dB to +18 dB (0.1 dB step)
	<b>Knee</b>	Hard, 1, 2, 3, 4, 5 (6 points)
	<b>Attack</b>	0 ms–120 ms (1 ms step)
	<b>Release</b>	5 ms–42.3 s (160 points) @ 48 kHz
		6 ms–46.0 s (160 points) @ 44.1 kHz
		3 ms–21.1 s (160 points) @ 96 kHz
3 ms–23.0 s (160 points) @ 88.2 kHz		



Compander H	<b>Threshold</b>	-54 dB to 0 dB (0.1 dB step)
	<b>Ratio (x :1)</b>	x=1, 1.1, 1.3, 1.5, 1.7, 2, 2.5, 3, 3.5, 4, 5, 6, 8, 10, 20 (15 points)
	<b>Out gain</b>	-18 dB to 0 dB (0.1 dB step)
	<b>Width</b>	1 dB-90 dB (1 dB step)
	<b>Attack</b>	0 ms-120 ms (1 ms step)
	<b>Release</b>	5 ms-42.3 s (160 points) @ 48 kHz
		6 ms-46.0 s (160 points) @ 44.1 kHz
		3 ms-21.1 s (160 points) @ 96 kHz
3 ms-23.0 s (160 points) @ 88.2 kHz		
Compander S	<b>Threshold</b>	-54 dB to 0 dB (0.1 dB step)
	<b>Ratio (x :1)</b>	x=1, 1.1, 1.3, 1.5, 1.7, 2, 2.5, 3, 3.5, 4, 5, 6, 8, 10, 20 (15 points)
	<b>Out gain</b>	-18 dB to 0 dB (0.1 dB step)
	<b>Width</b>	1 dB-90 dB (1 dB step)
	<b>Attack</b>	0 ms-120 ms (1 ms step)
	<b>Release</b>	5 ms-42.3 s (160 points) @ 48 kHz
		6 ms-46.0 s (160 points) @ 44.1 kHz
		3 ms-21.1 s (160 points) @ 96 kHz
3 ms-23.0 s (160 points) @ 88.2 kHz		

## Controls

### Analog Section

INPUT 1-16	+48 V switch	ON/OFF
	PAD switch	0/26 dB
	GAIN control	-16 to -60 dB
	INSERT switch	ON/OFF
INPUT 17-24	GAIN control	+10 to -34 dB
TALKBACK	TALKBACK LEVEL control	
STUDIO MONITOR OUT	STUDIO LEVEL control	
CONTROL ROOM MONITOR OUT	CONTROL ROOM LEVEL control	
PHONES	PHONES LEVEL control	

### Digital Section

FADER MODE Section	<b>AUX SELECT</b>	DISPLAY button AUX 1, AUX 2, AUX 3, AUX 4, AUX 5, AUX 6, AUX 7, AUX 8 buttons (w/LED)
	<b>FADER MODE</b>	FADER, AUX button (w/LED)
	<b>ENCODER MODE</b>	DISPLAY button PAN, AUX, ASSIGN 1, ASSIGN 2 buttons (w/LED)
DISPLAY CONTROL Section	<b>DISPLAY ACCESS buttons</b>	AUTOMIX, DIO, SETUP, UTILITY, MIDI, REMOTE, METER, VIEW, PAIR, GROUP, INPUT PATCH, OUTPUT PATCH
	<b>EFFECTS/PLUG-INS</b>	DISPLAY access, ▲, ▼
		INTERNAL EFFECTS, PLUG-INS, CHANNEL INSERTS, 1, 2, 3, 4 Parameter control: 1, 2, 3, 4
	<b>Others</b>	◀, F1, F2, F3, F4, ▶ buttons LCD contrast control

<b>SELECTED CHANNEL Section</b>	<b>ROUTING</b>	DISPLAY button
		1, 2, 3, 4, 5, 6, 7, 8, STEREO, DIRECT, FOLLOW PAN buttons (w/LED)
	<b>DISPLAY ACCESS</b>	PHASE/INSERT, DELAY buttons
	<b>DYNAMICS</b>	DISPLAY, GATE /COMP buttons
		GATE ON, COMP ON buttons (w/LED)
		Parameter control x 5
	<b>PAN/SURROUND</b>	DISPLAY button
		L, R, LINK, GRAB, EFFECT buttons (w/LED)
		Pan control
		Joystick (Sound image position control)
	<b>EQUALIZER</b>	DISPLAY button
		EQ ON button (w/LED)
GAIN controls: LOW, LOW-MID, HIGH-MID, HIGH		
FREQUENCY/Q controls: LOW, LOW-MID, HIGH-MID, HIGH controls (w/SW)		
<b>MONITOR Section</b>	<b>MONITOR</b>	DISPLAY button
	<b>STUDIO</b>	CONTROL ROOM, STEREO, AUX 7, AUX 8 buttons (w/LED)
	<b>SOLO</b>	CLEAR button
	<b>CONTROL ROOM</b>	2TR D1, 2TR D2, 2TR D3, 2TR A1, 2TR A2, STEREO, ASSIGN 1, ASSIGN 2 buttons (w/LED)
	<b>SURROUND</b>	BUS, SLOT buttons (w/LED)
		SURROUND MONITOR LEVEL control
	<b>Others</b>	TALKBACK, DIMMER buttons (w/LED)
CONTROL ROOM LEVEL control		
<b>SCENE MEMORY and USER DEFINED KEYS section</b>	<b>SCENE MEMORY</b>	DISPLAY button
		▲, ▼, STORE, RECALL buttons
	<b>USER DEFINED KEYS</b>	DISPLAY button 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 buttons (w/LED)
<b>MACHINE CONTROL Section</b>	<b>LOCATOR</b>	DISPLAY button
		LOCATE MEMORY: 1, 2, 3, 4, 5, 6, 7, 8, SET buttons (w/LED)
	<b>TRANSPORT CONTROL</b>	REW, FF, STOP, PLAY, REC, SHUTTLE, SCRUB (w/LED)
<b>CHANNEL STRIP Section</b>	<b>Encoders</b>	x 24 (1-24)
	<b>Buttons</b>	AUTO x 24 (1-24), SEL x 24 (1-24), SOLO x 24 (1-24), ON x 24 (1-24)
	<b>Faders (w/ touch sense)</b>	x 24 (1-24)
<b>MASTER Section</b>	<b>LAYER</b>	1-24, 25-48, MASTER, REMOTE buttons (w/LED)
	<b>STEREO</b>	AUTO, SEL, ON buttons (w/LED)
		Fader (w/touch sense) x 1
<b>DATA ENTRY Section</b>	<b>Buttons</b>	INC, DEC, ▲, ▼, ◀, ▶, ENTER buttons
	<b>Encoder</b>	Parameter wheel

## Indicators

### Analog Section

<b>PEAK LED</b>	x24	INPUT 1–24
<b>SIGNAL LED</b>	x24	INPUT 1–24

### Digital Section

<b>DISPLAY CONTROL Section</b>	<b>DISPLAY</b>	320 × 240 dot graphic LCD (w/contrast control potentiometer)
<b>SELECTED CHANNEL Section</b>	<b>DYNAMICS</b>	GATE, COMP LEDs x2
	<b>PAN/SURROUND</b>	Pan position LEDs x10
	<b>EQUALIZER</b>	FREQUENCY, Q LEDs 2 × 4 dB, Hz, kHz 3 × 4 3-digit numeric LEDs x4 (parameter value)
<b>MONITOR Section</b>	<b>SOLO</b>	LED x1
<b>SCENE MEMORY section</b>	<b>Scene memory number</b>	2-digit numeric LED x1

## Libraries

<b>Effect library (EFFECT 1–4)</b>	Presets	52 (EFFECT 2–4: 44)
	User memories	76
<b>Compressor library</b>	Presets	36
	User memories	92
<b>Gate library</b>	Presets	4
	User memories	124
<b>EQ library</b>	Presets	40
	User memories	160
<b>Channel library</b>	Presets	2
	User memories	127
<b>Surround Monitor library</b>	Presets	1
	User memories	32
<b>Input patch library</b>	Presets	1
	User memories	32
<b>Output patch library</b>	Presets	1
	User memories	32
<b>Bus to Stereo library</b>	Presets	1
	User memories	32

## Analog Input Spec

Input	PAD	GAIN	Actual Load Impedance	For Use With Nominal	Input level			Connector
					Sensitivity *1	Nominal	Max. before clip	
INPUT A/B 1–16	0	–60 dB	3k Ω	50–600 Ω Mics & 600 Ω Lines	–70 dB (0.245 mV)	–60 dB (0.775 mV)	–46 dB (3.88 mV)	A: XLR-3-31 type (Balanced) *2
		–16 dB			–26 dB (38.8 mV)	–16 dB (0.123 V)	–2 dB (616 mV)	B: Phone jack (TRS) (Balanced) *3
	26	0 dB (775 mV)			+10 dB (2.45 V)	+24 dB (12.28 V)		
INPUT 17–24	—	–34 dB	4K Ω	600 Ω Lines	–44 dB (4.89 mV)	–34 dB (15.5 mV)	–20 dB (77.5 mV)	Phone jack (TRS) (Balanced) *3
		+10 dB			0 dB (775 mV)	+10 dB (2.45 V)	+24 dB (12.28 V)	
INSERT IN 1–16	—	—	10K Ω	600 Ω Lines	–6 dB (388 mV)	+4 dB (1.23 V)	+18 dB (6.16 V)	Phone jack (TRS) *4
2TR IN ANALOG 1 [L, R]	—	—	10K Ω	600 Ω Lines	+4 dB (1.23 V)	+4 dB (1.23 V)	+18 dB (6.16 V)	Phone jack (TRS) (Balanced) *3
2TR IN ANALOG 2 [L, R]	—	—	10K Ω	600 Ω Lines	–10 dBV (0.316 V)	–10 dBV (0.316 V)	+4 dBV (1.58 V)	Phono (Unbalanced)

\*1. Sensitivity is the lowest level that will produce an output of +4 dB (1.23 V) or the nominal output level when the unit is set to maximum gain. (All faders and level controls are maximum position.)

\*2. XLR-3-31 type connectors are balanced (1=GND, 2=HOT, 3=COLD).

\*3. Phone jacks are balanced (Tip=HOT, Ring=COLD, Sleeve=GND).

\*4. Phone jacks are wired: Tip=OUT, Ring=IN, Sleeve=GND

In these specifications, when dB represents a specific voltage, 0 dB is referenced to 0.775 Vrms.

For 2TR IN ANALOG 2 levels, 0 dBV is referenced to 1.00 Vrms.

All input AD converters (except INSERT I/O 1–16) are 24-bit linear, 128-times oversampling.

+48 V DC (phantom power) is supplied to CH INPUT (1–16) XLR type connectors via individual switches.

## Analog Output Spec

Output	Actual Source Impedance	For Use With Nominal	GAIN SW *1	Output level		Connector
				Nominal	Max. before clip	
STEREO OUT [L, R]	600 Ω	10k Ω Lines	—	–10 dBV (0.316 V)	+4 dBV (1.58 V)	Phono (Unbalanced)
	150 Ω	600 Ω Lines	—	+4 dB (1.23 V)	+18 dB (6.16 V)	XLR-3-32 type (Balanced) *2
STUDIO MONITOR OUT [L, R]	150 Ω	10k Ω Lines	—	+4 dB (1.23 V)	+18 dB (6.16 V)	Phone Jack (TRS) (Balanced) *3
C-R MONITOR OUT [L, R]	150 Ω	10k Ω Lines	—	+4 dB (1.23 V)	+18 dB (6.16 V)	Phone Jack (TRS) (Balanced) *3
OMNI OUT 1–8	150 Ω	10k Ω Lines	+18 dB (default)	+4 dB (1.23 V)	+18 dB (6.16 V)	Phone Jack (TRS) (Balanced) *3
			+4 dB	–10 dB (0.245 V)	+4 dB (1.23 V)	
INSERT OUT 1–16	600 Ω	10k Ω Lines	—	+4 dB (1.23 V)	+18 dB (6.16 V)	Phone Jack (TRS) *4
PHONES	100 Ω	8 Ω Phones	—	4 mW	25 mW	Stereo Phone Jack (TRS) (Unbalanced) *5
		40 Ω Phones	—	12 mW	75 mW	

\*1. The maximum output level of each OMNI OUT can be set internally.

\*2. XLR-3-32 type connectors are balanced (1=GND, 2=HOT, 3=COLD).

\*3. Phone jacks are balanced (Tip=HOT, Ring=COLD, Sleeve=GND).

\*4. Phone jacks are wired: Tip=OUT, Ring=IN, Sleeve=GND

\*5. PHONES stereo phone jack is unbalanced (Tip=LEFT, Ring=RIGHT, Sleeve=GND).

STEREO OUT [L, R], 0 dBV is referenced to 1.00 Vrms.

In these specifications, when dB represents a specific voltage, 0 dB is referenced to 0.775 Vrms.

All output DA converters (except INSERT OUT 1–16) are 24-bit, 128-times oversampling.

## Digital Input Spec

Input		Format	Data length	Level	Connector
2TR IN DIGITAL	1	AES/EBU	24-bit	RS422	XLR-3-31 type (Balanced) *1
	2	IEC-60958	24-bit	0.5 Vpp/75 Ω	Phono
	3	IEC-60958	24-bit	0.5 Vpp/75 Ω	Phono
CASCADE IN		—	—	RS422	D-SUB Half Pitch Connector 68P (Female)

\*1. XLR-3-31 type connectors are balanced (1=GND, 2=HOT, 3=COLD).

## Digital Output Spec

Output		Format	Data length	Level	Connector
2TR OUT DIGITAL	1	AES/EBU *1 Professional use	24-bit *2	RS422	XLR-3-32 type (Balanced) *3
	2	IEC-60958 *4 Consumer use	24-bit *2	0.5V pp/75 Ω	Phono
	3	IEC-60958 *4 Consumer use	24-bit *2	0.5V pp/75 Ω	Phono
CASCADE OUT		—	—	RS422	D-SUB Half Pitch Connector 68P (Female)

\*1. Channel status of 2TR OUT DIGITAL 1  
Type: 2 audio channels  
Emphasis: NO  
Sampling rate: depends on the internal configuration

\*2. Dither: word length 16/20/24 bit

\*3. XLR-3-32 type connectors are balanced (1=GND, 2=HOT, 3=COLD).

\*4. Channel status of 2TR OUT DIGITAL 2, 3  
Type: 2 audio channels  
Category code: 2 channel PCM encoder/decoder  
Copy prohibit: NO  
Emphasis: NO  
Clock accuracy: Level II (1000 ppm)  
Sampling rate: depends on the internal configuration

## I/O Slot Spec (1-4)

Each I/O SLOT accepts a digital interface card. Only SLOT #1 has a serial interface.

Card Name	Function	Accept	Input	Output	Number of available cards
MY8-AT	ADAT	YES	8 IN	8 OUT (depends on output patch) <sup>*1</sup>	4
MY8-TD	TASCAM	YES	8 IN	8 OUT (depends on output patch) <sup>*1</sup>	4
MY8-AE	AES/EBU	YES	8 IN	8 OUT (depends on output patch) <sup>*1</sup>	4
MY4-AD	ANALOG IN	YES	4 IN	—	4
MY8-AD	ANALOG IN	YES	8 IN	—	4
MY4-DA	ANALOG OUT	YES	—	4 OUT (depends on output patch) <sup>*1</sup>	4
MY8-AD24	ANALOG IN	YES	8 IN	—	4
MY8-AD96	ANALOG IN	YES	8 IN	—	4
MY8-DA96	ANALOG OUT	YES	—	8 OUT (depends on output patch) <sup>*1</sup>	4
MY8-AE96S	AES/EBU	YES	8 IN	8 OUT (depends on output patch) <sup>*1</sup>	2
MY8-AE96	AES/EBU	YES	8 IN	8 OUT (depends on output patch) <sup>*1</sup>	4

\*1. See the Digital I/O chapter.  
Details depend on each interface card.

## Control I/O Spec

I/O Port	Format	Level	Connector in Console	
TO HOST	Serial	—	RS422	Mini DIN Connector 8P
	USB	USB 1.1	0 V–3.3 V	B type USB connector
MIDI	IN	MIDI	—	DIN Connector 5P
	OUT	MIDI	—	DIN Connector 5P
	THRU	MIDI	—	DIN Connector 5P
TIME CODE IN	MTC	MIDI	—	DIN Connector 5P
	SMPTE	SMPTE	Nominal –10 dB/10k Ω	XLR-3-31 type (Balanced) <sup>*1</sup>
WORD CLOCK	IN	—	TTL/75 Ω (ON/OFF) <sup>*2</sup>	BNC Connector
	OUT	—	TTL/75 Ω	BNC Connector
CONTROL	—	—	—	D-SUB Connector 25P (Female)
METER	—	—	RS422	D-SUB Connector 15P (Female)

\*1. XLR-3-31 type connectors are balanced (1=GND, 2=HOT, 3=COLD).

\*2. This switch is on the rear panel.

## Connector Pin Assignments

### CASCADE IN

Pin	Signal	Pin	Signal
1	GND	35	GND
2	INPUT 1-2(+)	36	INPUT 1-2(-)
3	INPUT 3-4(+)	37	INPUT 3-4(-)
4	INPUT 5-6(+)	38	INPUT 5-6(-)
5	INPUT 7-8(+)	39	INPUT 7-8(-)
6	INPUT 9-10(+)	40	INPUT 9-10(-)
7	INPUT 11-12(+)	41	INPUT 11-12(-)
8	INPUT 13-14(+)	42	INPUT 13-14(-)
9	INPUT 15-16(+)	43	INPUT 15-16(-)
10	DTR IN(+)	44	DTR IN(-)
11	RTS OUT(+)	45	RTS OUT(-)
12	GND	46	GND
13	WORD CLOCK IN(+)	47	WORD CLOCK IN(-)
14	WORD CLOCK OUT(+)	48	WORD CLOCK OUT(-)
15	CONTROL IN(+)	49	CONTROL IN(-)
16	CONTROL OUT(+)	50	CONTROL OUT(-)
17	GND	51	ID6 IN
18	GND	52	ID6 OUT
19	INPUT 17-18(+)	53	INPUT 17-18(-)
20	INPUT 19-20(+)	54	INPUT 19-20(-)
21	INPUT 21-22(+)	55	INPUT 21-22(-)
22	INPUT 23-24(+)	56	INPUT 23-24(-)
23	RESERVED	57	RESERVED
24	RESERVED	58	RESERVED
25	RESERVED	59	RESERVED
26	RESERVED	60	RESERVED
27	ID0 IN	61	ID1 IN
28	ID2 IN	62	ID3 IN
29	ID4 IN	63	ID5 IN
30	ID0 OUT	64	ID1 OUT
31	ID2 OUT	65	ID3 OUT
32	ID4 OUT	66	ID5 OUT
33	MSB IN	67	2CH/LINE IN
34	FG	68	FG

### CASCADE OUT

Pin	Signal	Pin	Signal
1	GND	35	GND
2	OUTPUT 1-2(+)	36	OUTPUT 1-2(-)
3	OUTPUT 3-4(+)	37	OUTPUT 3-4(-)
4	OUTPUT 5-6(+)	38	OUTPUT 5-6(-)
5	OUTPUT 7-8(+)	39	OUTPUT 7-8(-)
6	OUTPUT 9-10(+)	40	OUTPUT 9-10(-)
7	OUTPUT 11-12(+)	41	OUTPUT 11-12(-)
8	OUTPUT 13-14(+)	42	OUTPUT 13-14(-)
9	OUTPUT 15-16(+)	43	OUTPUT 15-16(-)
10	DTR OUT(+)	44	DTR OUT(-)
11	RTS IN(+)	45	RTS IN(-)
12	GND	46	GND
13	WORD CLOCK OUT(+)	47	WORD CLOCK OUT(-)
14	WORD CLOCK IN(+)	48	WORD CLOCK IN(-)
15	CONTROL OUT(+)	49	CONTROL OUT(-)
16	CONTROL IN(+)	50	CONTROL IN(-)
17	GND	51	ID6 OUT
18	GND	52	ID6 IN
19	OUTPUT 17-18(+)	53	OUTPUT 17-18(-)
20	OUTPUT 19-20(+)	54	OUTPUT 19-20(-)
21	OUTPUT 21-22(+)	55	OUTPUT 21-22(-)
22	OUTPUT 23-24(+)	56	OUTPUT 23-24(-)
23	RESERVED	57	RESERVED
24	RESERVED	58	RESERVED
25	RESERVED	59	RESERVED
26	RESERVED	60	RESERVED
27	ID0 OUT	61	ID1 OUT
28	ID2 OUT	62	ID3 OUT
29	ID4 OUT	63	ID5 OUT
30	ID0 IN	64	ID1 IN
31	ID2 IN	65	ID3 IN
32	ID4 IN	66	ID5 IN
33	MSB OUT	67	2CH/LINE OUT
34	FG	68	FG

### CONTROL Port

Pin	Signal	Pin	Signal
1	GPO0	14	GPO1
2	GPO2	15	GPO3
3	GPO4	16	GPO5
4	GPO6	17	GPO7
5	GND	18	GND
6	GND	19	GND
7	GND	20	GND
8	GND	21	+5V
9	+5V	22	GPI0
10	GPI1	23	N.C.
11	N.C.	24	SOLO *1
12	SMODE *1	25	MAS/SLV *1
13	SPARE *1		

\*1. For 02R SOLO control.

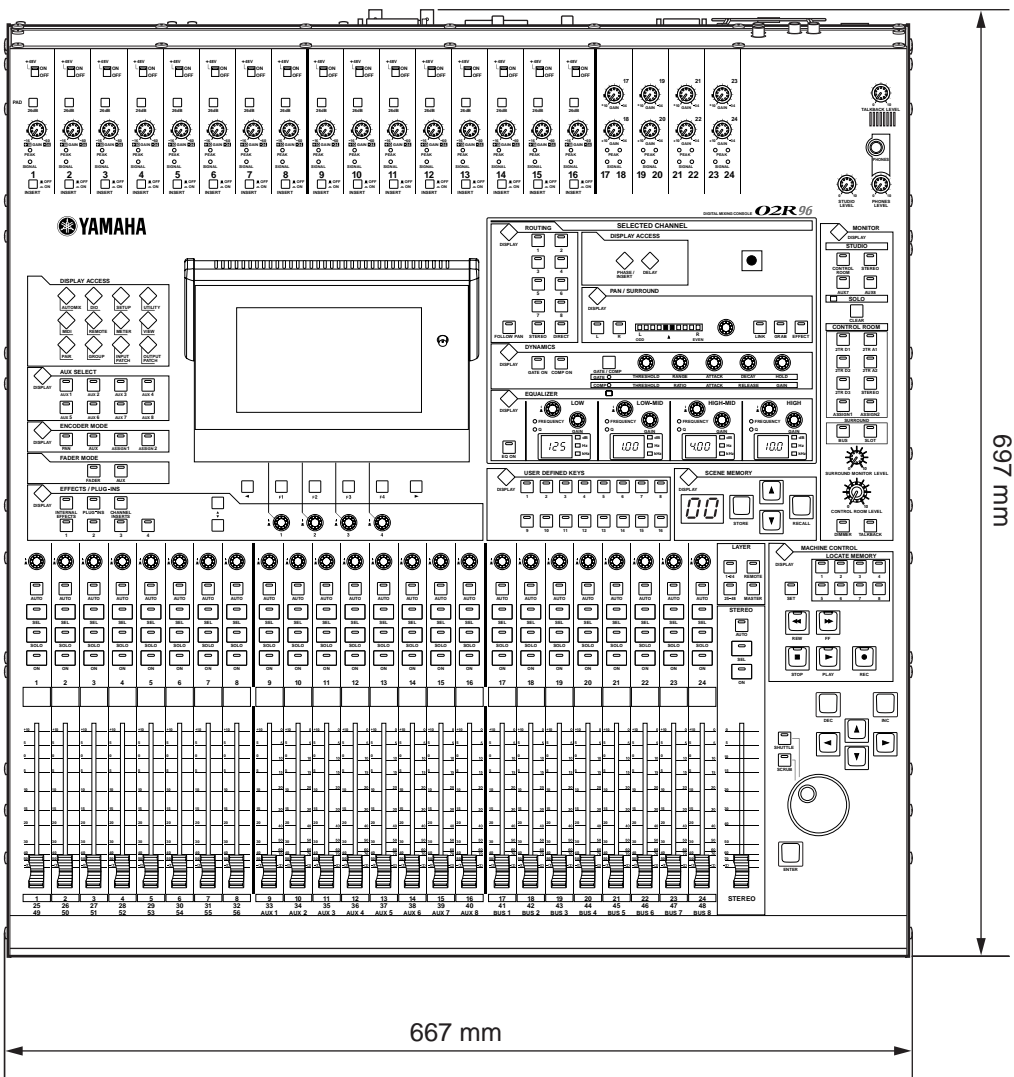
### • MB02R96

Dimensions (W X H X D): 667 X 124 X 95 mm

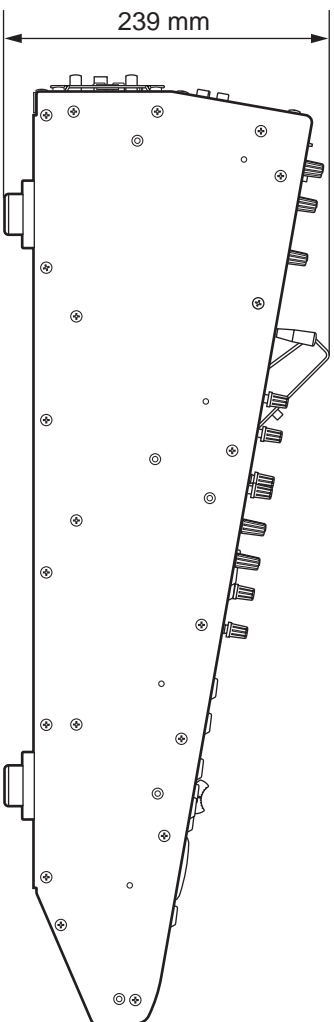
Weight: 2.8 kg

# DIMENSIONS

• Top view



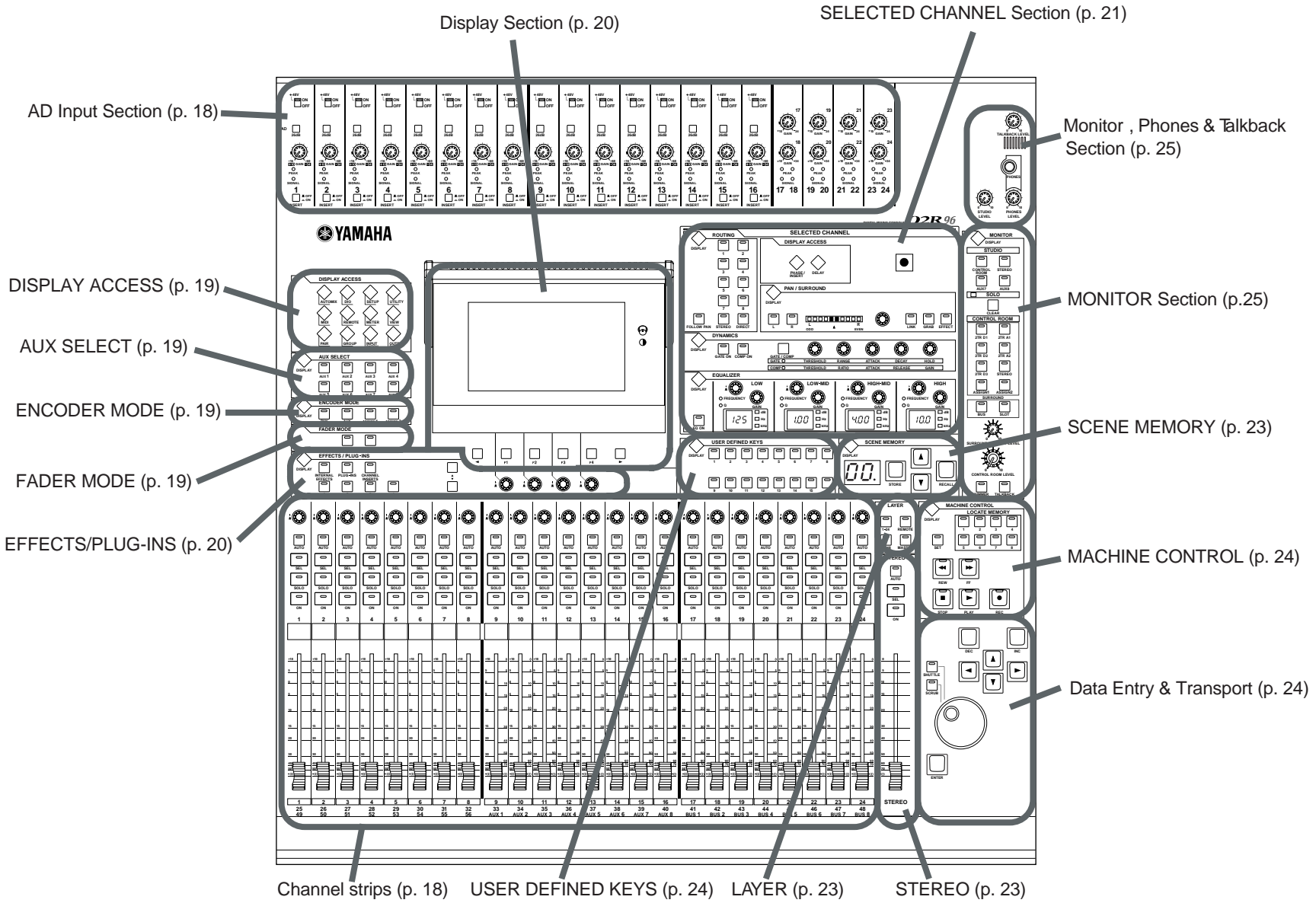
• Side view



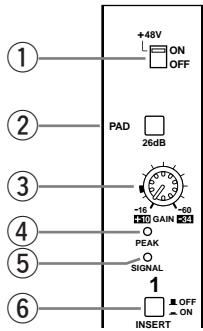


# PANEL LAYOUT

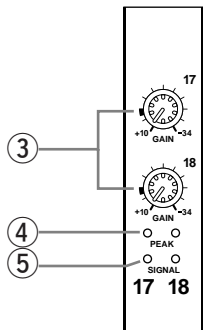
- 02R96
- Control Panel



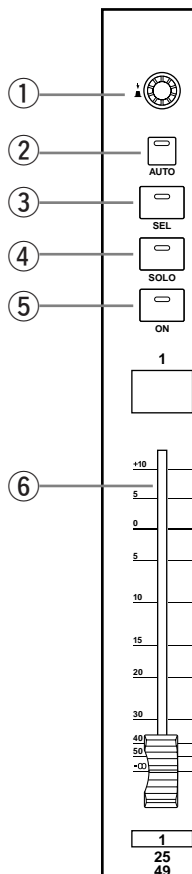
AD Input Section



- ① [+48V ON/OFF] switches (AD 1–16)
- ② [PAD] switches (AD 1–16)
- ③ [GAIN] controls
- ④ [PEAK] indicators
- ⑤ [SIGNAL] indicators
- ⑥ [INSERT ON/OFF] switches (AD 1–16)

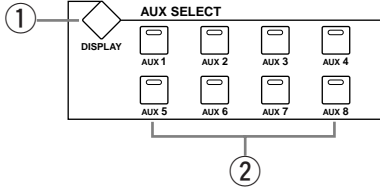


Channel strips



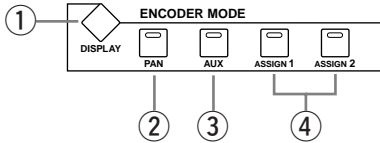
- ① Encoders
- ② [AUTO] buttons
- ③ [SEL] buttons
- ④ [SOLO] buttons
- ⑤ [ON] buttons
- ⑥ Channel faders

**AUX SELECT**



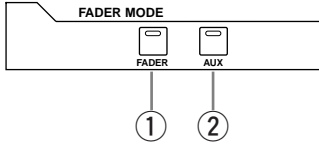
- ① AUX SELECT [DISPLAY] button
- ② [AUX 1]–[AUX 8] buttons

**ENCODER MODE**



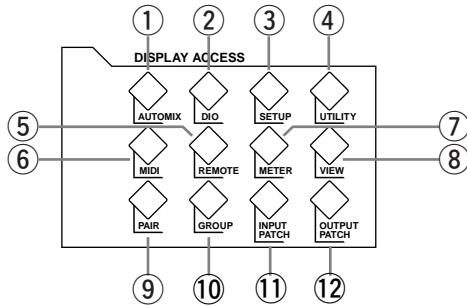
- ① ENCODER MODE [DISPLAY] button
- ② [PAN] button
- ③ [AUX] button
- ④ [ASSIGN 1] & [ASSIGN 2] buttons

**FADER MODE**



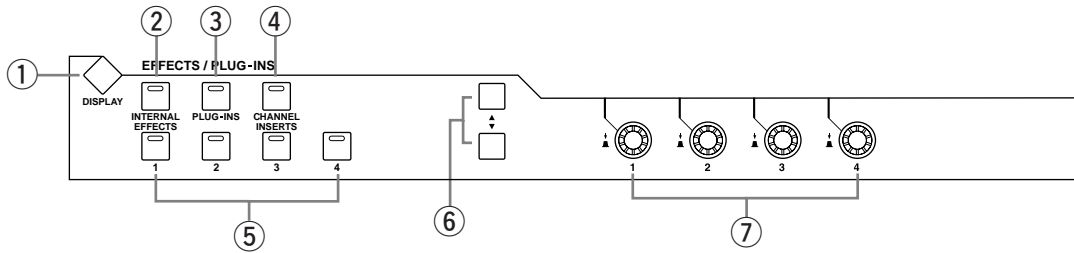
- ① [FADER] button
- ② [AUX] button

**DISPLAY ACCESS**



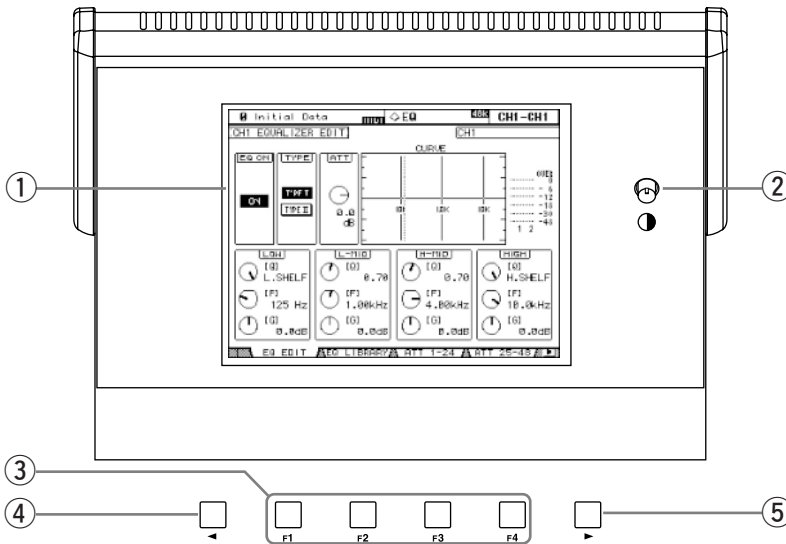
- ① [AUTOMIX] button
- ② [DIO] button
- ③ [SETUP] button
- ④ [UTILITY] button
- ⑤ [REMOTE] button
- ⑥ [MIDI] button
- ⑦ [METER] button
- ⑧ [VIEW] button
- ⑨ [PAIR] button
- ⑩ [GROUP] button
- ⑪ [INPUT PATCH] button
- ⑫ [OUTPUT PATCH] button

EFFECTS/PLUG-INS



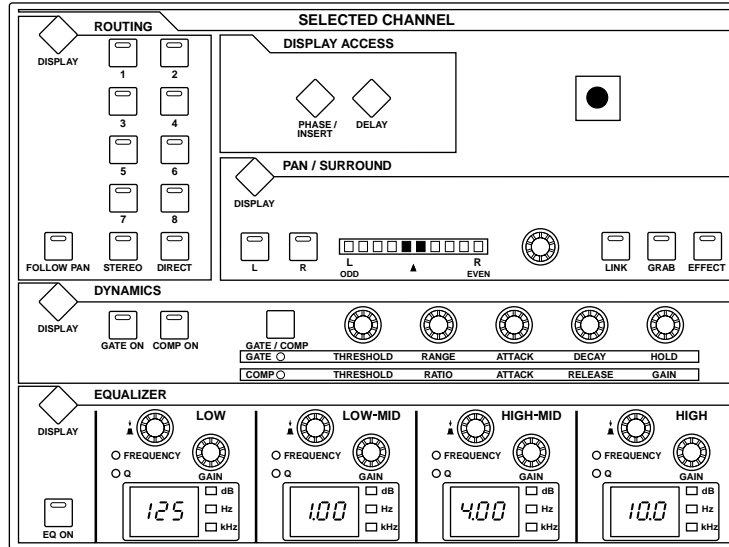
- ① EFFECTS/PLUG-INS [DISPLAY] button
- ② [INTERNAL EFFECTS] button
- ③ [PLUG-INS] button
- ④ [CHANNEL INSERTS] button
- ⑤ EFFECTS/PLUG-INS [1]-[4] buttons
- ⑥ Parameter Up/Down buttons
- ⑦ Parameter controls [1]-[4]

Display Section

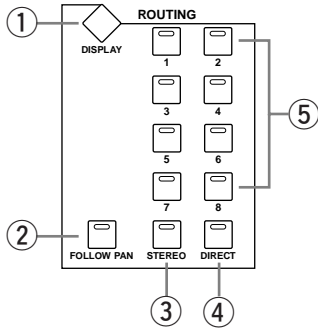


- ① Display
- ② Contrast control
- ③ [F1]-[F4] buttons
- ④ Left Tab Scroll button
- ⑤ Right Tab Scroll button

### SELECTED CHANNEL Section

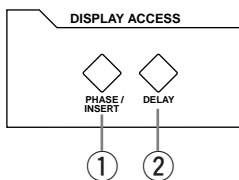


### ROUTING



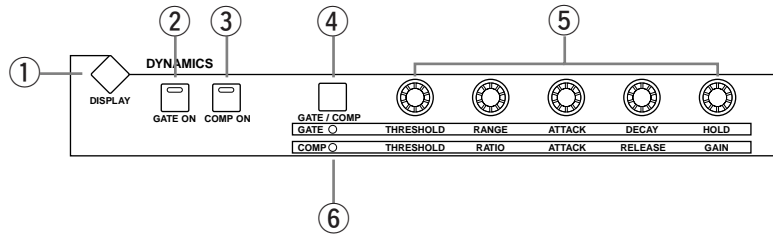
- ① ROUTING [DISPLAY] button
- ② [FOLLOW PAN] button
- ③ [STEREO] button
- ④ [DIRECT] button
- ⑤ ROUTING [1]–[8] buttons

### DISPLAY ACCESS



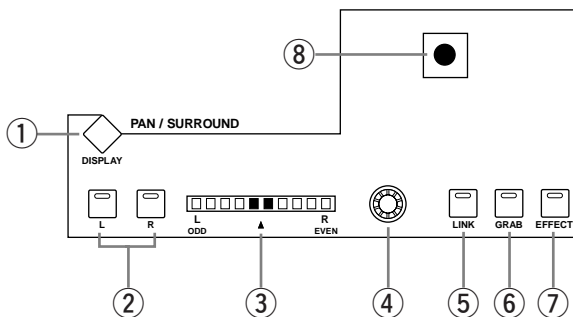
- ① PHASE/INSERT button
- ② DELAY button

## DYNAMICS



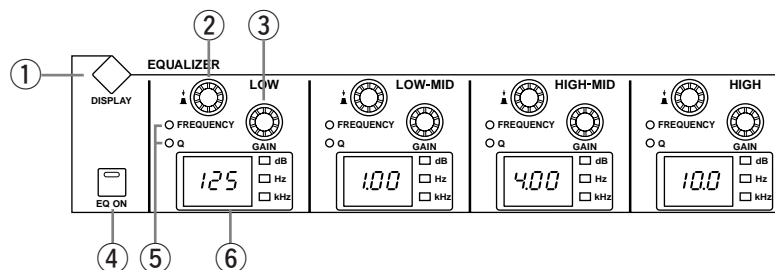
- ① DYNAMICS [DISPLAY] button
- ② [GATE ON] button
- ③ [COMP ON] button
- ④ [GATE/COMP] button
- ⑤ [THRESHOLD], [RANGE], [ATTACK], [DECAY], [HOLD] ([THRESHOLD], [RATIO], [ATTACK], [RELEASE], [GAIN]) controls
- ⑥ [GATE/COMP] indicators

## PAN/SURROUND



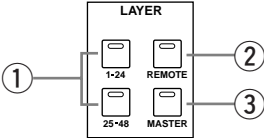
- ① PAN/SURROUND [DISPLAY] button
- ② [L] & [R] buttons
- ③ PAN display
- ④ PAN control
- ⑤ [LINK] button
- ⑥ [GRAB] button
- ⑦ [EFFECT] button
- ⑧ Joystick

## EQUALIZER



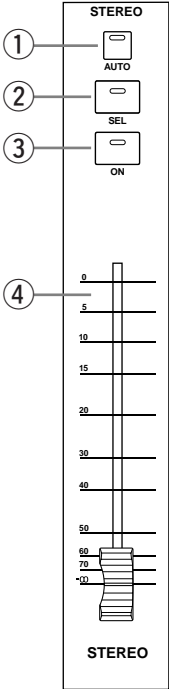
- ① EQUALIZER [DISPLAY] button
- ② [FREQUENCY/Q] controls
- ③ EQ [GAIN] controls
- ④ [EQ ON] button
- ⑤ [FREQUENCY/Q] indicators
- ⑥ EQ displays

LAYER



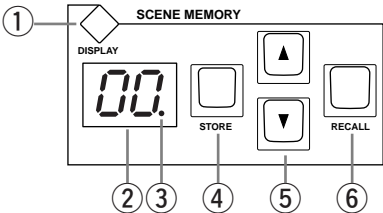
- ① [1–24] & [25–48] buttons
- ② [REMOTE] button
- ③ [MASTER] button

STEREO



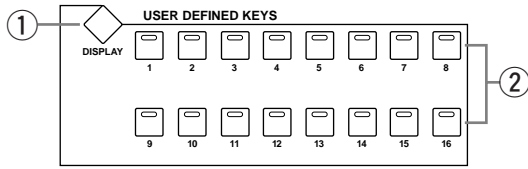
- ① [AUTO] button
- ② [SEL] button
- ③ [ON] button
- ④ Fader

SCENE MEMORY



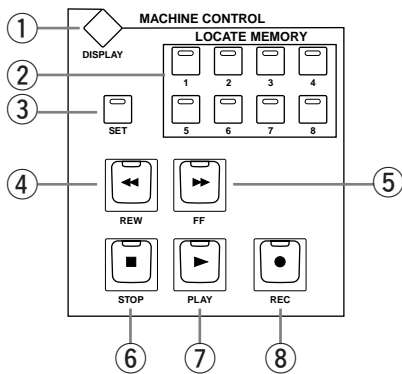
- ① SCENE MEMORY [DISPLAY] button
- ② Scene memory display
- ③ Edit indicator
- ④ [STORE] button
- ⑤ Scene Up/Down buttons
- ⑥ [RECALL] button

**USER DEFINED KEYS**



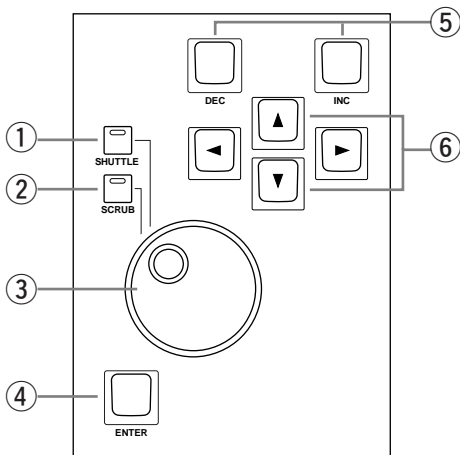
- ① **USER DEFINED KEYS [DISPLAY] button**
- ② **USER DEFINED KEYS [1]–[16] buttons**

**MACHINE CONTROL**



- ① **MACHINE CONTROL [DISPLAY] button**
- ② **LOCATE MEMORY [1]–[8] buttons**
- ③ **[SET] button**
- ④ **[REW] button**
- ⑤ **[FF] button**
- ⑥ **[STOP] button**
- ⑦ **[PLAY] button**
- ⑧ **[REC] button**

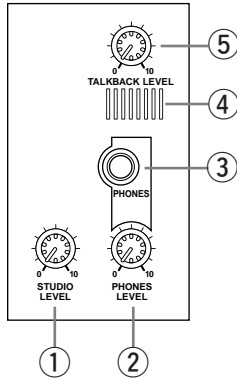
**Data Entry & Transport**



- ① **[SHUTTLE] button**
- ② **[SCRUB] button**
- ③ **Parameter wheel**
- ④ **[ENTER] button**
- ⑤ **[DEC] & [INC] buttons**
- ⑥ **Cursor buttons**

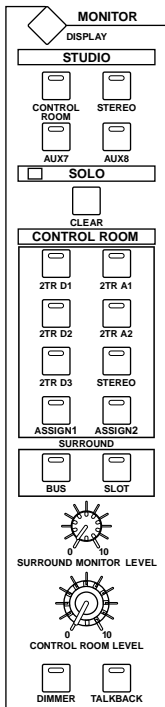


Monitor, Phones & Talkback Section

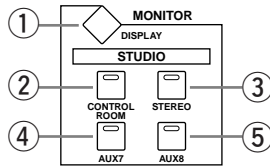


- ① [STUDIO LEVEL] control
- ② [PHONES LEVEL] control
- ③ [PHONES] jack
- ④ Talkback mic
- ⑤ [TALKBACK LEVEL] control

MONITOR Section

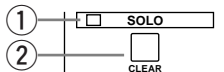


STUDIO



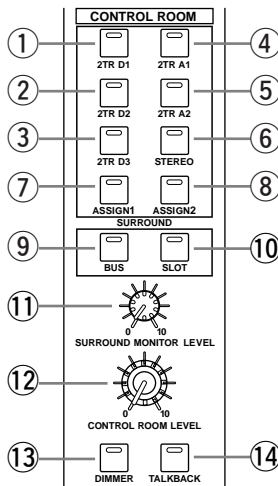
- ① MONITOR [DISPLAY] button
- ② [CONTROL ROOM] button
- ③ [STEREO] button
- ④ [AUX 7] button
- ⑤ [AUX 8] button

SOLO



- ① [SOLO] indicator
- ② [CLEAR] button

CONTROL ROOM

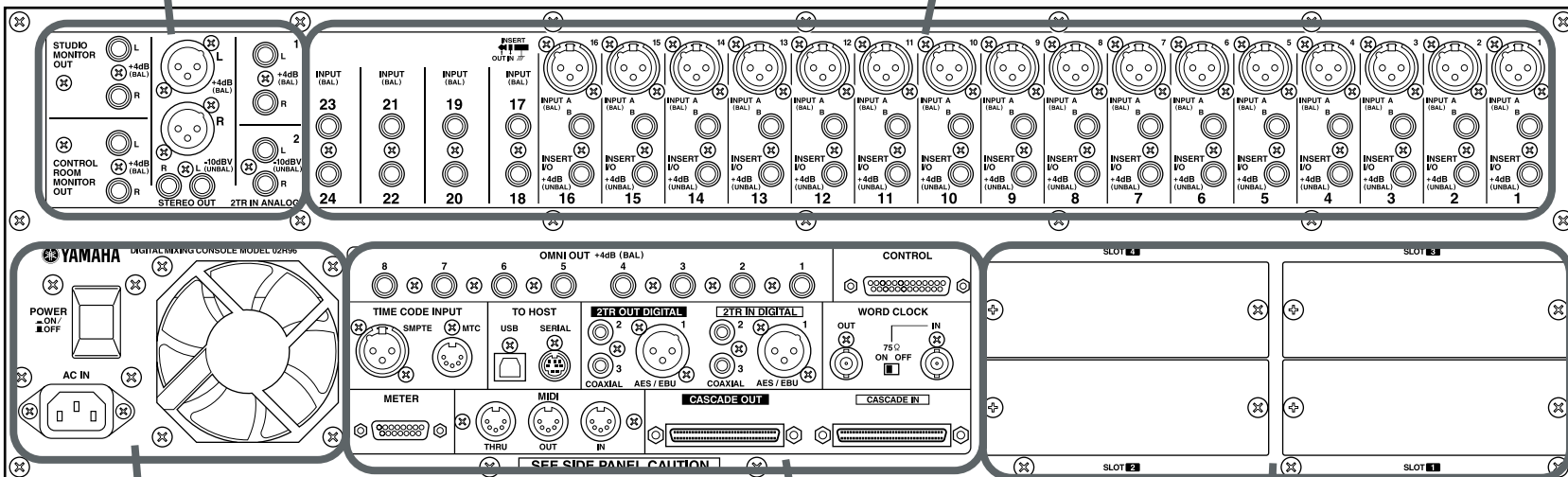


- ① STEREO [2TR D1] button
- ② STEREO [2TR D2] button
- ③ STEREO [2TR D3] button
- ④ STEREO [2TR A1] button
- ⑤ STEREO [2TR A2] button
- ⑥ [STEREO] button
- ⑦ STEREO [ASSIGN 1] button
- ⑧ STEREO [ASSIGN 2] button
- ⑨ SURROUND [BUS] button
- ⑩ SURROUND [SLOT] button
- ⑪ [SURROUND MONITOR LEVEL] control
- ⑫ [CONTROL ROOM LEVEL] control
- ⑬ [DIMMER] button
- ⑭ [TALKBACK] button

• Rear Panel

Analog Master I/O Section (p. 27)

AD Input Section (p. 27)

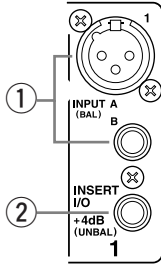


Power Section (p. 28)

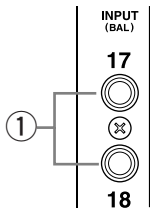
OMNI OUTS, Digital I/O & Control Section (p. 28)

SLOT Section (p. 28)

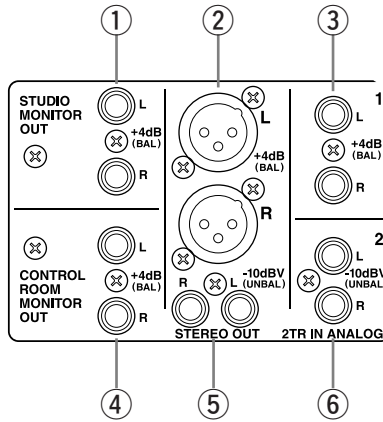
AD Input Section



- ① [INPUT A & B (BAL)] connectors
- ② [INSERT I/O +4dB (UNBAL)] connectors (AD 1–16)

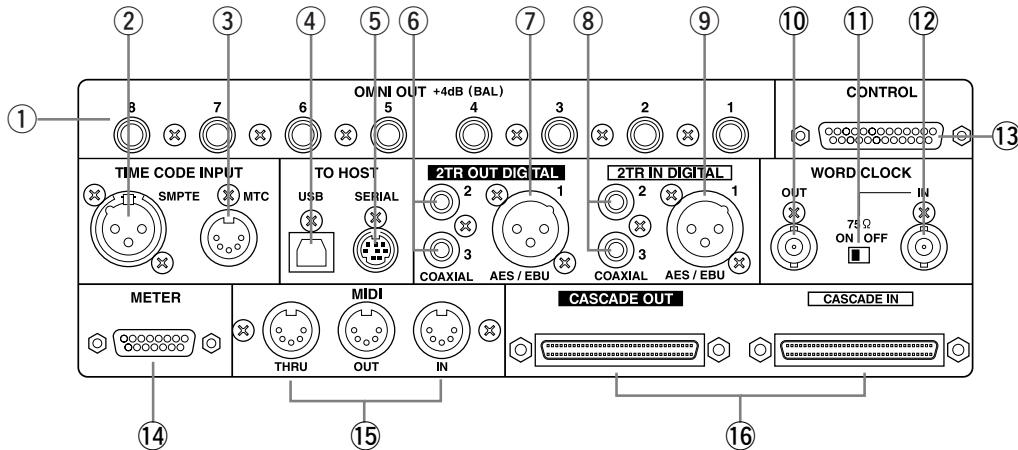


Analog Master I/O Section



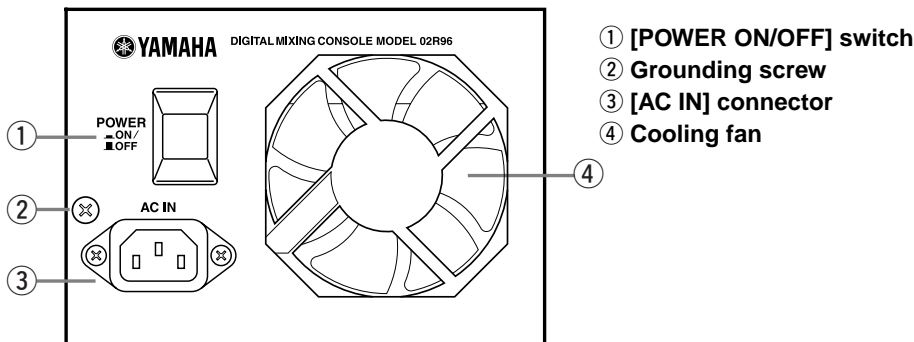
- ① [STUDIO MONITOR OUT +4 dB (BAL)] connectors
- ② [STEREO OUT +4 dB (BAL)] connectors
- ③ [2TR IN ANALOG 1 +4 dB (BAL)] connectors
- ④ [CONTROL ROOM MONITOR OUT +4 dB (BAL)] connectors
- ⑤ [STEREO OUT –10 dBV (UNBAL)] connectors
- ⑥ [2TR IN ANALOG 2 –10 dBV (UNBAL)] connectors

OMNI OUTs, Digital I/O & Control Section

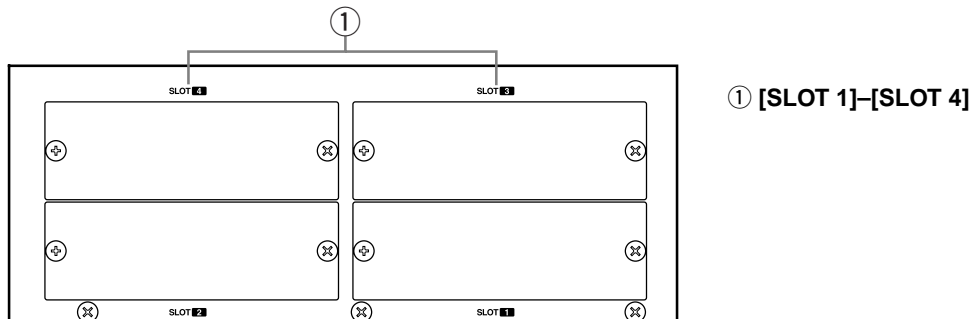


- ① [OMNI OUT +4dB (BAL)] connectors
- ② [SMPTE TIME CODE INPUT] connector
- ③ [MTC TIME CODE INPUT] connector
- ④ [USB TO HOST] port
- ⑤ [SERIAL TO HOST] port
- ⑥ [2TR OUT DIGITAL COAXIAL 2 & 3] connectors
- ⑦ [2TR OUT DIGITAL AES/EBU 1] connector
- ⑧ [2TR IN DIGITAL COAXIAL 2 & 3] connectors
- ⑨ [2TR IN DIGITAL AES/EBU 1] connector
- ⑩ [WORD CLOCK OUT] connector
- ⑪ [WORD CLOCK 75Ω ON/OFF] termination switch
- ⑫ [WORD CLOCK IN] connector
- ⑬ [CONTROL] port
- ⑭ [METER] port
- ⑮ [MIDI IN, OUT & THRU] ports
- ⑯ [CASCADE IN & OUT] ports

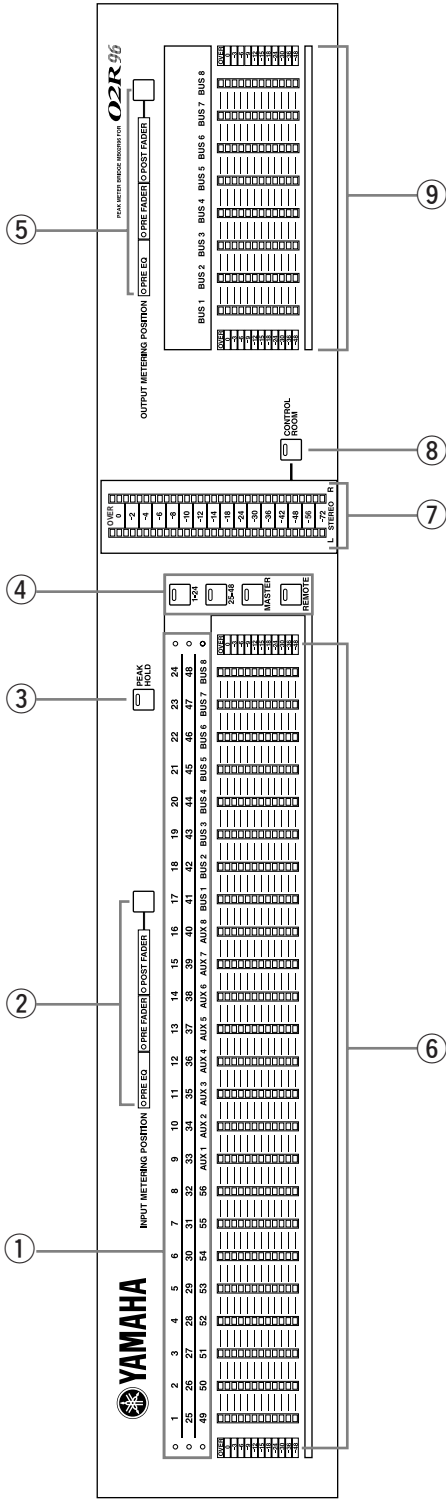
Power Section



SLOT Section



- MB02R96
- Controls

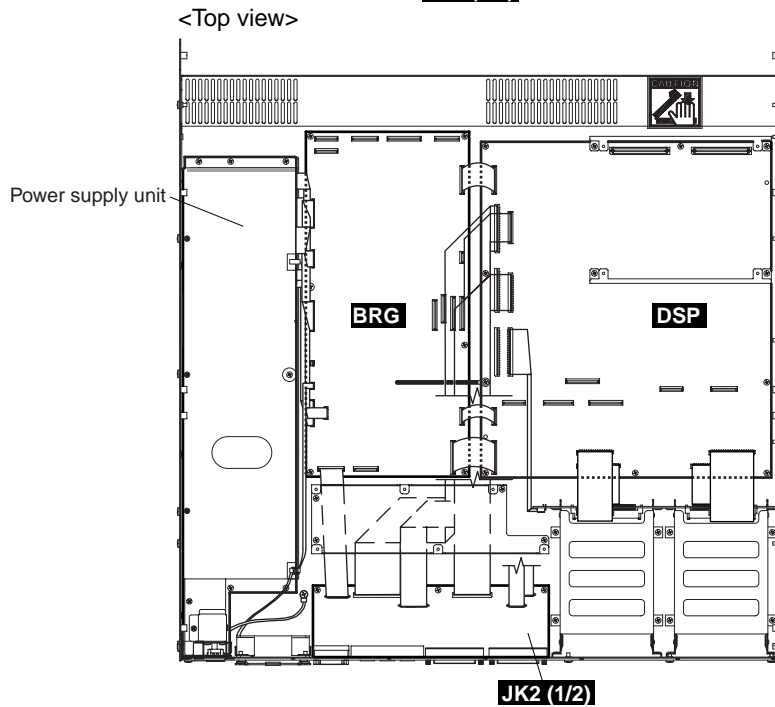
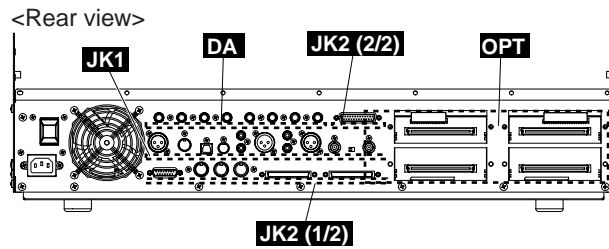
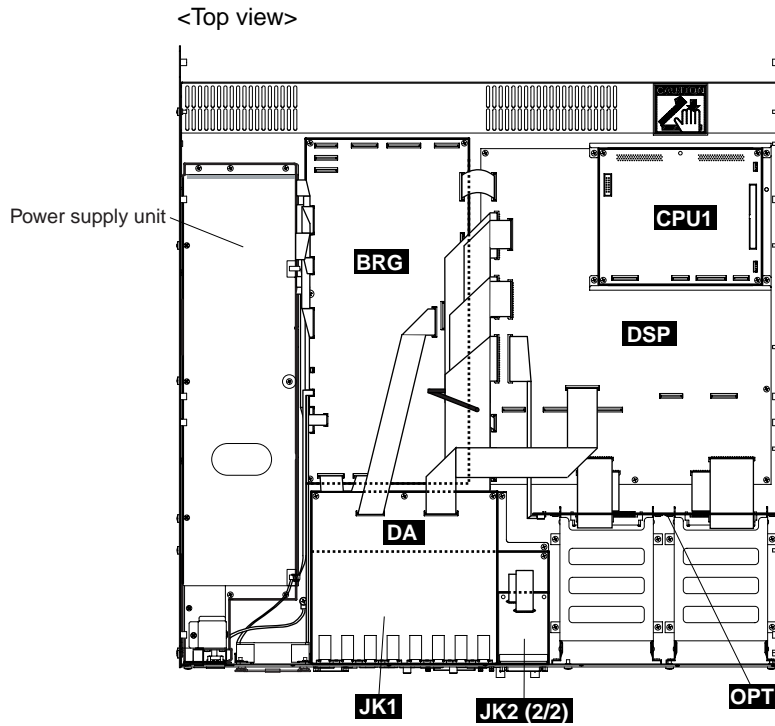


- ① Channel indicators
- ② [INPUT METERING POSITION] button & indicators
- ③ [PEAK HOLD] button
- ④ [LAYER] buttons
- ⑤ [OUTPUT METERING POSITION] button & indicators
- ⑥ Meters
- ⑦ [STEREO] meters
- ⑧ [CONTROL ROOM] button
- ⑨ [BUS] meters

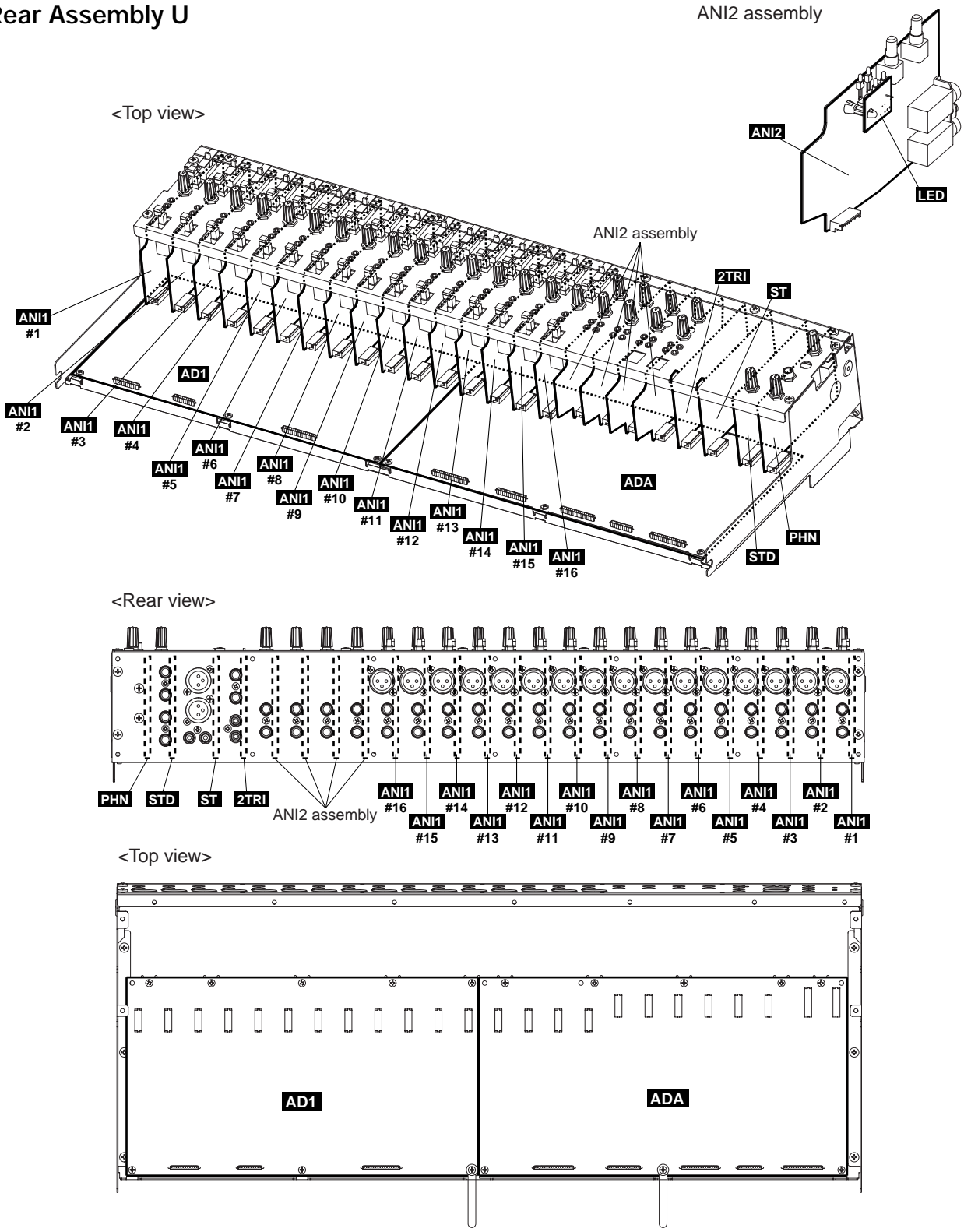
# ■ CIRCUIT BOARD LAYOUT

- 02R96

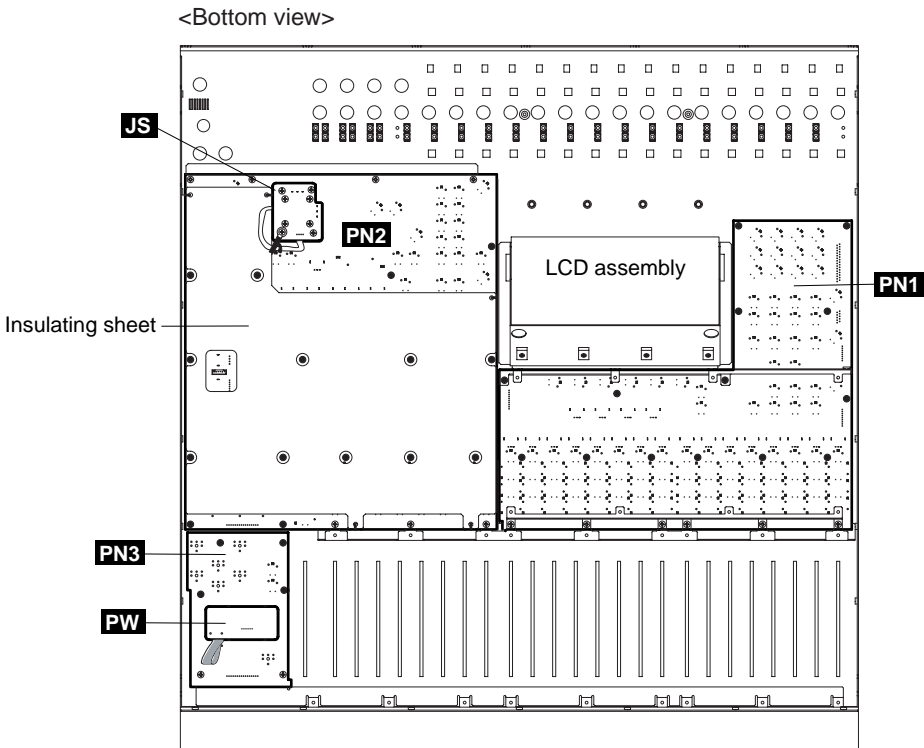
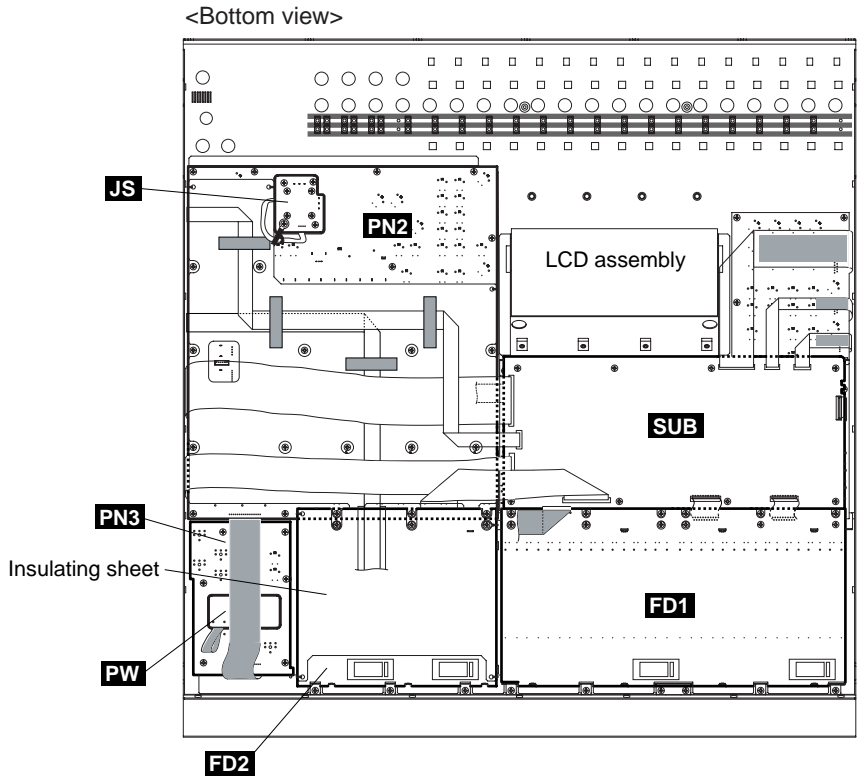
- Bottom Assembly



• Rear Assembly U



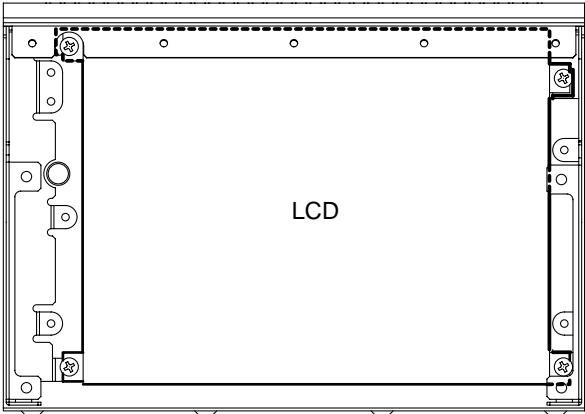
• Control Panel Assembly



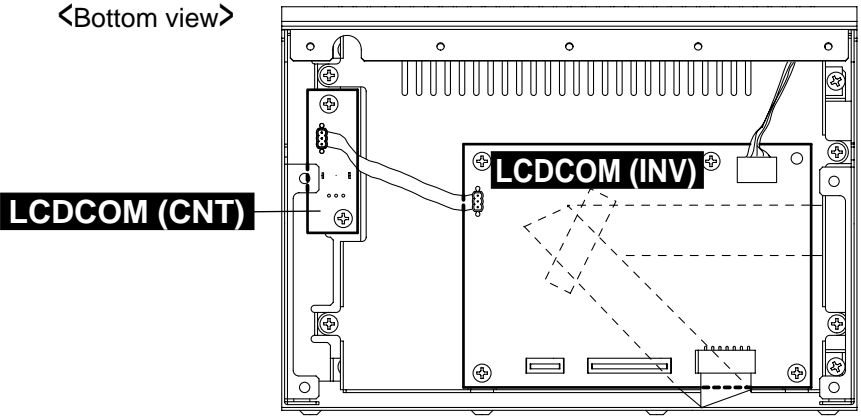


• LCD Assembly

<Bottom view>

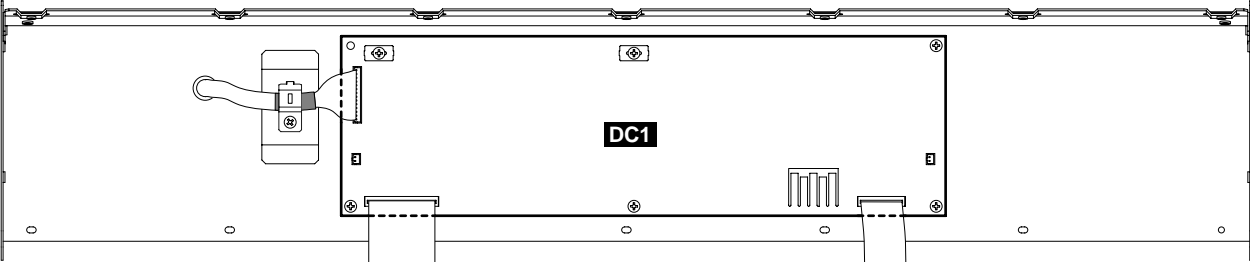


<Bottom view>

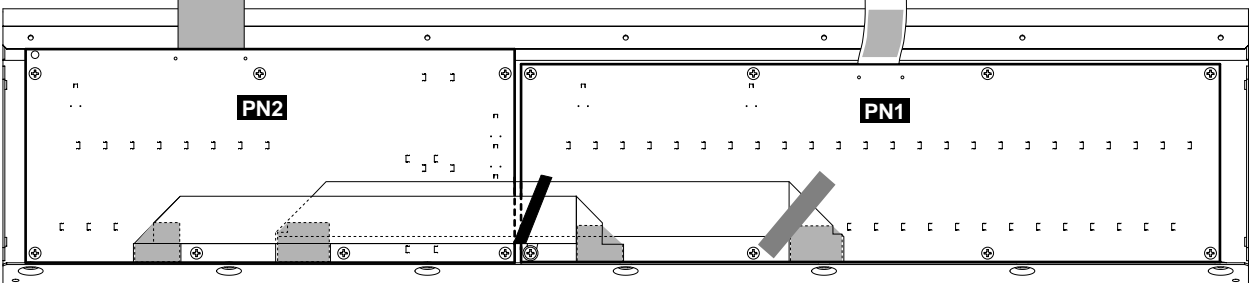


• MB02R96

<Front view>



<Rear view>



## DISASSEMBLY PROCEDURE



**Note: Take care not to trap your fingers.**

\* After replacing the circuit board or fader of FD1 or FD2, please initialize them. (See page 134.)

### Disassembling the 02R96

#### 1. Removing the SP02R96

(Time required: About 5 minutes)

- 1-1. If the SP02R96 is attached to the 02R96, remove the twelve (12) screws marked [A], and then both sides must be removed. (Fig.1)

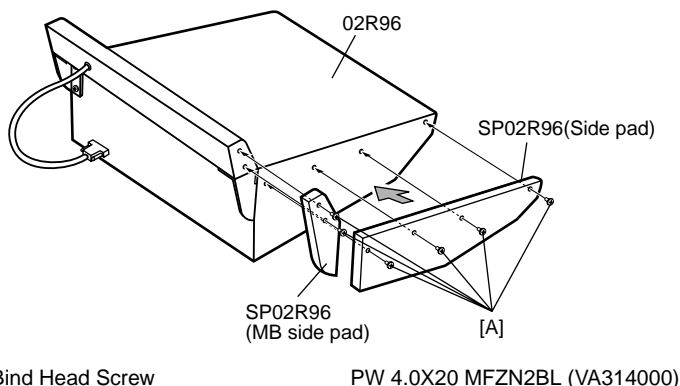


Fig.1

#### 2. Removing the MB02R96

(Time required: About 5 minutes)

- 2-1. Remove the two (2) screws marked [35] and the two (2) screws marked [75]. The MB02R96 can then be removed from the 02R96. (Photo.1,2)

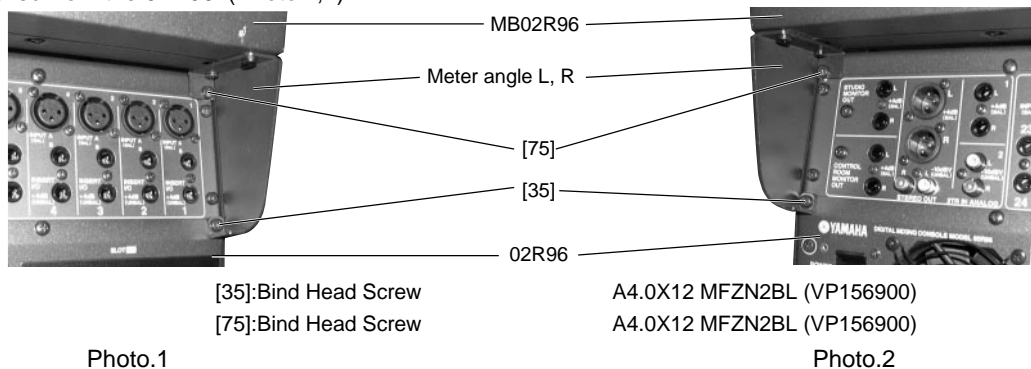


Photo.1

Photo.2

#### 3. Control Panel Assembly

(Time required: About 10 minutes)

- 3-1. Remove the SP02R96. (See procedure 1.)  
 3-2. Remove the MB02R96. (See procedure 2.)  
 3-3. Remove the fourteen (14) screws marked [70A], the seven (7) screws marked [70B] and the five (5) screws marked [70C]. (Fig.2)  
 3-4. Hold the LCD assembly part, and lift the control panel assembly. And then, fasten them by the two (2) front stays. (Photo.3)

\* When assembling the control panel assembly with the side panel, put the screws of the round screw hole of the side panel in place first, then the screws of the elliptic screw hole.

**4. Rear Assembly U**

**(Time required: About 15 minutes)**

- 4-1. Remove the SP02R96. (See procedure 1.)
- 4-2. Remove the MB02R96. (See procedure 2.)
- 4-3. Fasten the control panel assembly. (See procedure 3.)
- 4-4. Remove the two (2) screws marked [30A] and the five (5) screws marked [30B]. (Fig.2)
- 4-5. Lift the rear assembly U from the rear side and fasten them by the two (2) rear stays. (There are two ways of using the rear stays shown in the photo 4 or 5.)

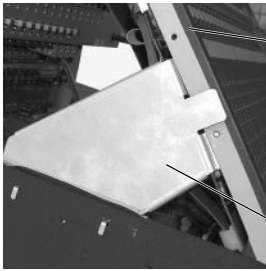


Photo.3

Control panel assembly

Front stay

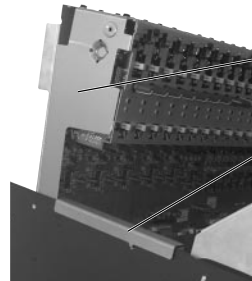


Photo.4

Rear assembly U

Rear stay

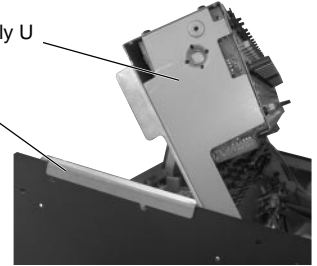
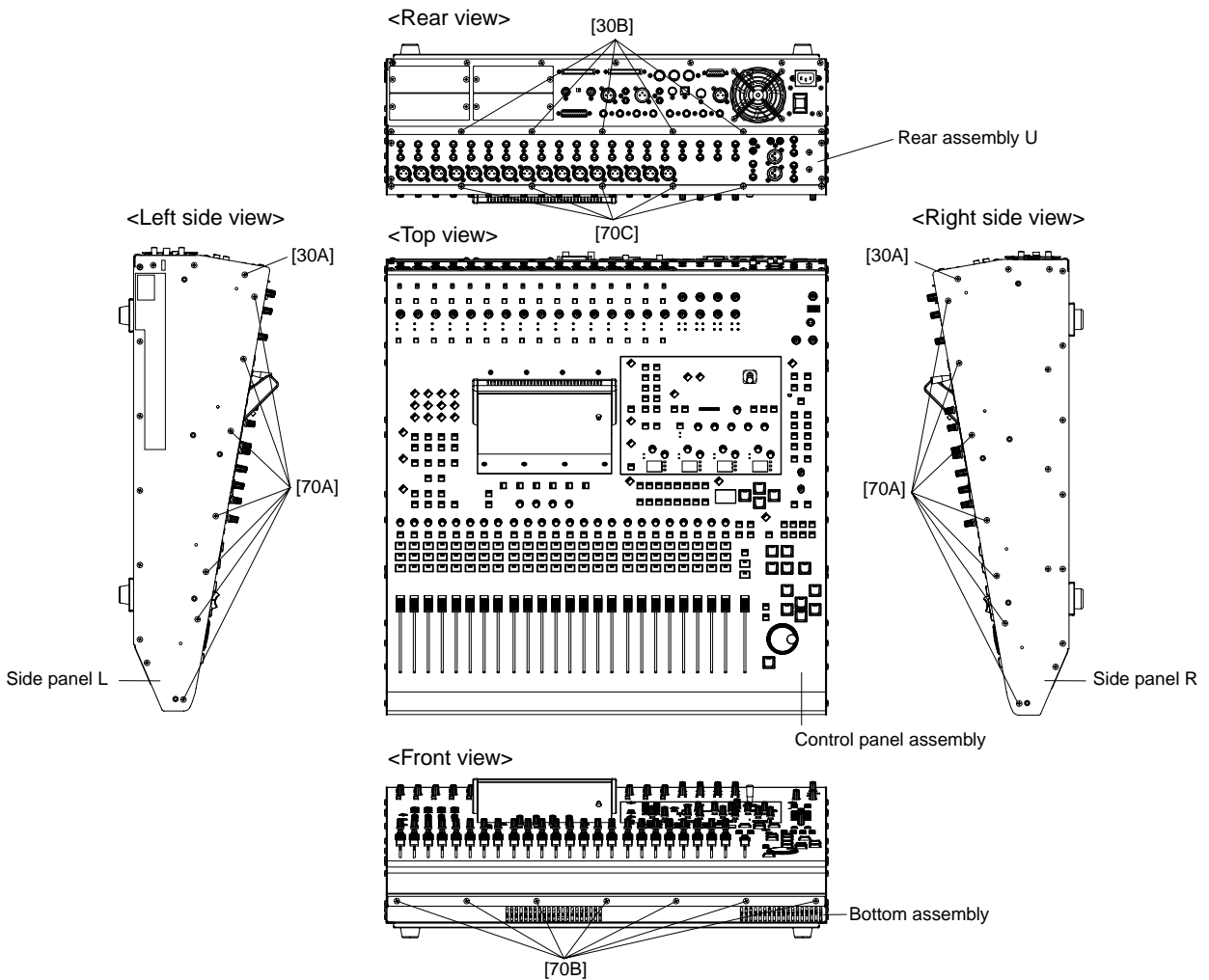


Photo.5



[30]: Bind Head Tapping Screw-B  
 [70]: Bind Head Tapping Screw-B

A4.0X8 MFZN2BL (VC688800)  
 A4.0X8 MFZN2BL (VC688800)

Fig.2

## Bottom Assembly Section

### 5. CPU1 Circuit Board

**(Time required: About 15 minutes)**

- 5-1. Remove the SP02R96. (See procedure 1.)
- 5-2. Remove the MB02R96. (See procedure 2.)
- 5-3. Fasten the control panel assembly. (See procedure 3.)
- 5-4. Remove the four (4) screws marked [590]. The CPU1 circuit board can then be removed. (Fig.4)

### 6. Replacing the Lithium Battery

**(Time required: About 15 minutes)**

- 6-1. Remove the SP02R96. (See procedure 1.)
- 6-2. Remove the MB02R96. (See procedure 2.)
- 6-3. Fasten the control panel assembly. (See procedure 3.)
- 6-4. You can replace the lithium battery from the CPU1 circuit board. (Fig.4)

**\* The lithium battery is not part of the CPU1 circuit board. When you replace the CPU1 circuit board, you should remove the lithium battery from the board, and install in the holder on the new circuit board.**

### 7. DSP Circuit Board

**(Time required: About 25 minutes)**

- 7-1. Remove the SP02R96. (See procedure 1.)
- 7-2. Remove the MB02R96. (See procedure 2.)
- 7-3. Fasten the control panel assembly. (See procedure 3.)
- 7-4. Fasten the rear assembly U. (See procedure 4.)
- 7-5. Remove the CPU1 circuit board. (See procedure 5.)
- 7-6. Remove the eight (8) screws marked [560], the four (4) screws marked [575] and the two (2) CPU holders. The DSP circuit board can then be removed. (Fig.5)

### 8. BRG Circuit Board

**(Time required: About 20 minutes)**

- 8-1. Remove the SP02R96. (See procedure 1.)
- 8-2. Remove the MB02R96. (See procedure 2.)
- 8-3. Fasten the control panel assembly. (See procedure 3.)
- 8-4. Fasten the rear assembly U. (See procedure 4.)
- 8-5. Remove the six (6) screws marked [410A]. The BRG circuit board can then be removed. (Fig.5)

### 9. Power Supply Unit

**(Time required: About 20 minutes)**

- 9-1. Remove the SP02R96. (See procedure 1.)
- 9-2. Remove the MB02R96. (See procedure 2.)
- 9-3. Fasten the control panel assembly. (See procedure 3.)
- 9-4. Fasten the rear assembly U. (See procedure 4.)
- 9-5. Remove the six (6) screws marked [330], the three (3) screws marked [340], the screw marked [350] and the four (4) screws marked [360]. The power supply unit can then be removed. (Fig.5)

**\* The power switch knob is not part of the power supply unit. When you replace the power supply unit, you should remove the power switch knob from the power supply unit, and install in the new power supply unit.**

## 10. OPT Circuit Board

**(Time required: About 20 minutes)**

- 10-1. Remove the SP02R96. (See procedure 1.)
- 10-2. Remove the MB02R96. (See procedure 2.)
- 10-3. Fasten the control panel assembly. (See procedure 3.)
- 10-4. Fasten the rear assembly U. (See procedure 4.)
- 10-5. Remove the four (4) screws marked [390]. The OPT circuit board can then be removed. (Fig.5)

## 11. DA Circuit Board

**(Time required: About 20 minutes)**

- 11-1. Remove the SP02R96. (See procedure 1.)
- 11-2. Remove the MB02R96. (See procedure 2.)
- 11-3. Fasten the control panel assembly. (See procedure 3.)
- 11-4. Fasten the rear assembly U. (See procedure 4.)
- 11-5. Remove the three (3) screws marked [520] and the six (6) screws marked [530]. The DA circuit board can then be removed. (Fig.3)

## 12. JK1 Circuit Board

**(Time required: About 25 minutes)**

- 12-1. Remove the SP02R96. (See procedure 1.)
- 12-2. Remove the MB02R96. (See procedure 2.)
- 12-3. Fasten the control panel assembly. (See procedure 3.)
- 12-4. Fasten the rear assembly U. (See procedure 4.)
- 12-5. Remove the DA circuit board. (See procedure 11.)
- 12-6. Remove the three (3) screws marked [460A], the nine (9) screws marked [480A] and the four (4) screws marked [490]. The JK1 circuit board can then be removed. (Fig.4)

## 13. JK2 (1/2) Circuit Board

**(Time required: About 30 minutes)**

- 13-1. Remove the SP02R96. (See procedure 1.)
- 13-2. Remove the MB02R96. (See procedure 2.)
- 13-3. Fasten the control panel assembly. (See procedure 3.)
- 13-4. Fasten the rear assembly U. (See procedure 4.)
- 13-5. Remove the DA circuit board. (See procedure 11.)
- 13-6. Remove the JK1 circuit board. (See procedure 12.)
- 13-7. Remove the three (3) screws marked [460B], the two (2) screws marked [480B], the two (2) screws marked [B] and the four (4) screws marked [C]. The JK2 (1/2) circuit board can then be removed. (Fig. 5)

## 14. JK2 (2/2) Circuit Board

**(Time required: About 20 minutes)**

- 14-1. Remove the SP02R96. (See procedure 1.)
- 14-2. Remove the MB02R96. (See procedure 2.)
- 14-3. Fasten the control panel assembly. (See procedure 3.)
- 14-4. Fasten the rear assembly U. (See procedure 4.)
- 14-5. Remove the two (2) screws marked [500]. The JK2 (2/2) circuit board can then be removed. (Fig. 5)

## 15. DC Fan Motor

(Time required: About 20 minutes)

- 15-1. Remove the SP02R96. (See procedure 1.)
- 15-2. Remove the MB02R96. (See procedure 2.)
- 15-3. Fasten the control panel assembly. (See procedure 3.)
- 15-4. Fasten the rear assembly U. (See procedure 4.)
- 15-5. Remove the four (4) screws marked [140A]. The DC fan motor, the four (4) fan vibration absorbing rubbers, the fan guide, the fan guard and the four (4) toothed lock washers can then be removed. (Fig.3)

\* When you install the DC fan motor, be sure to attach the screw lock.

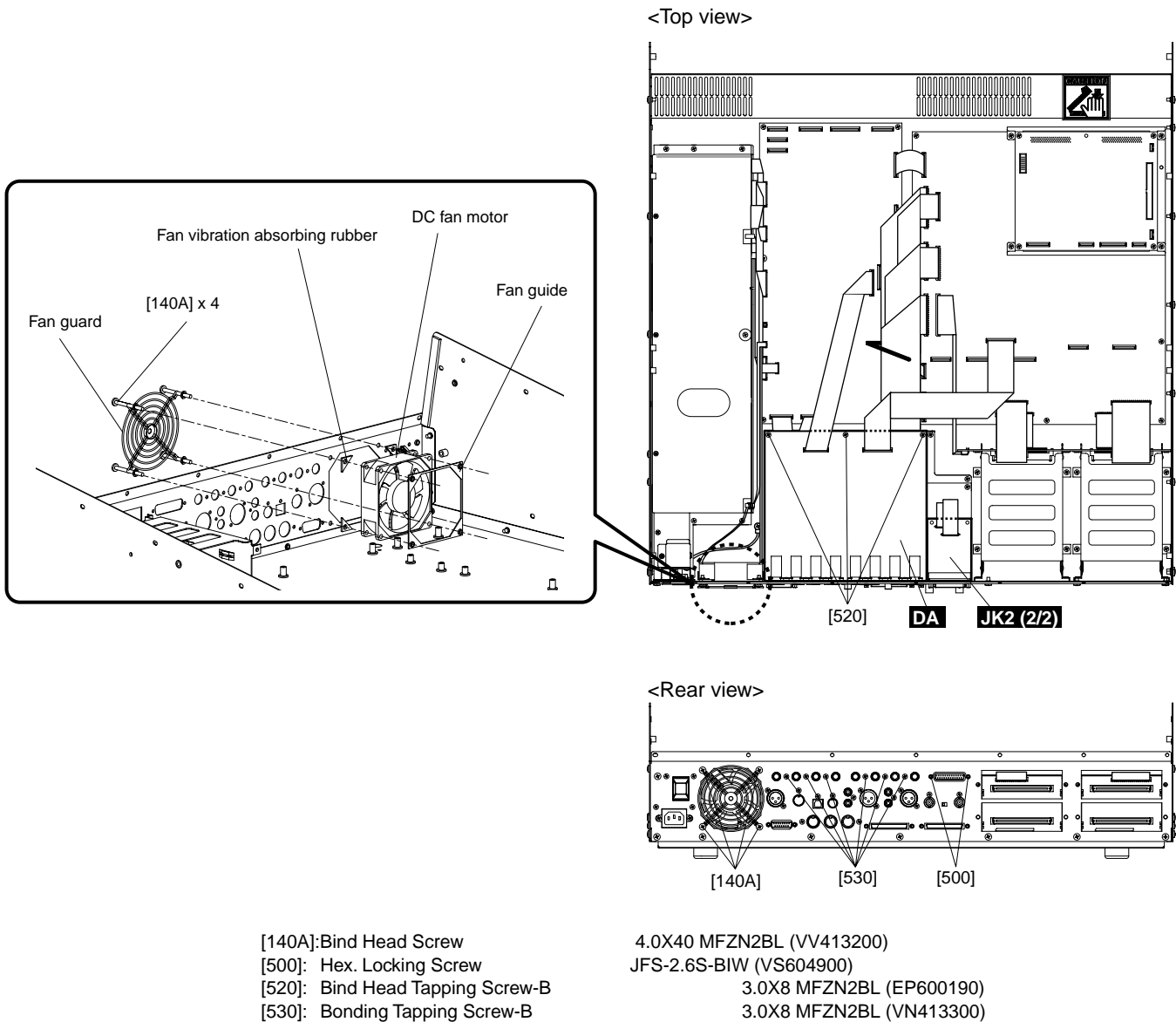


Fig.3

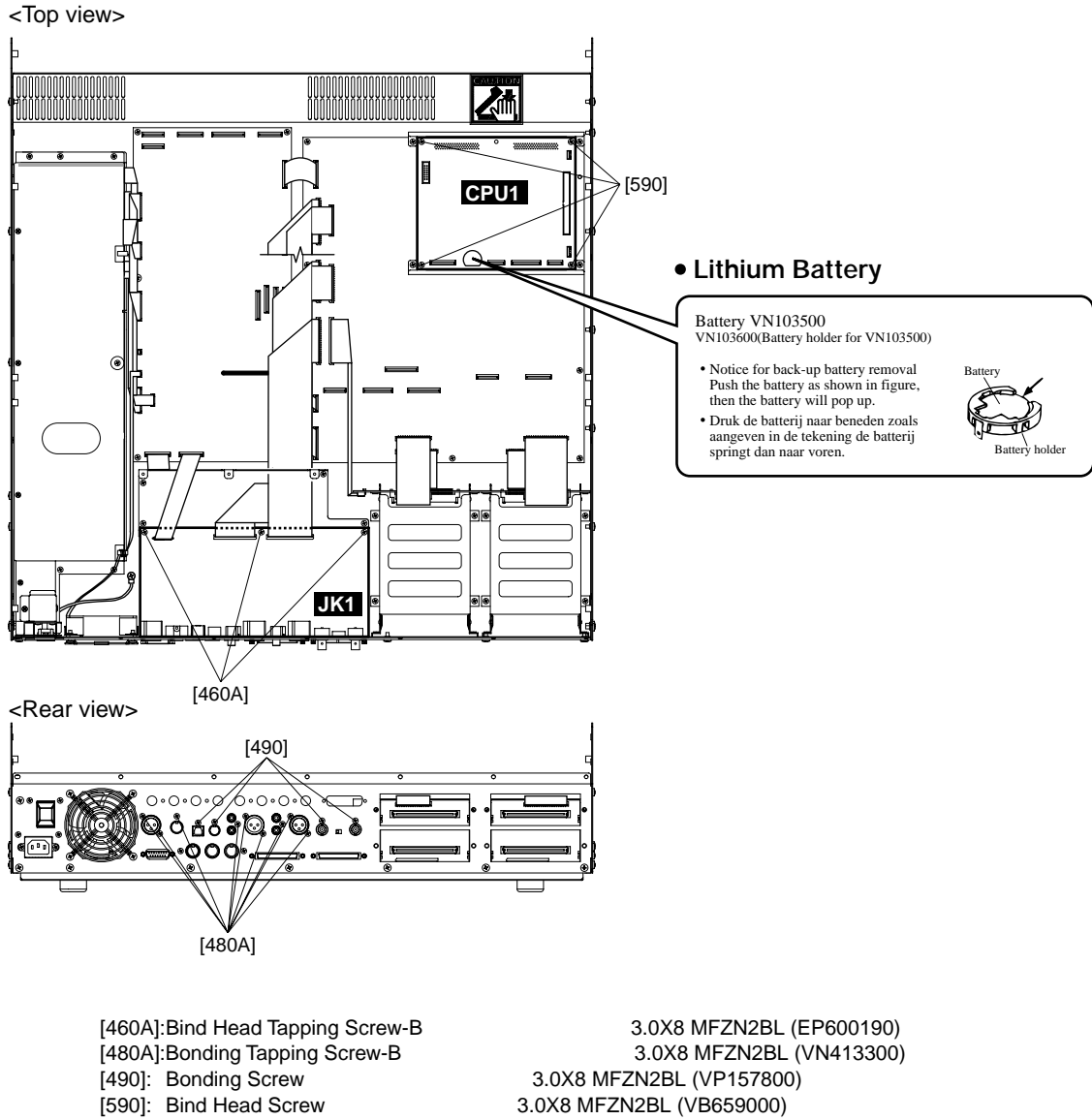
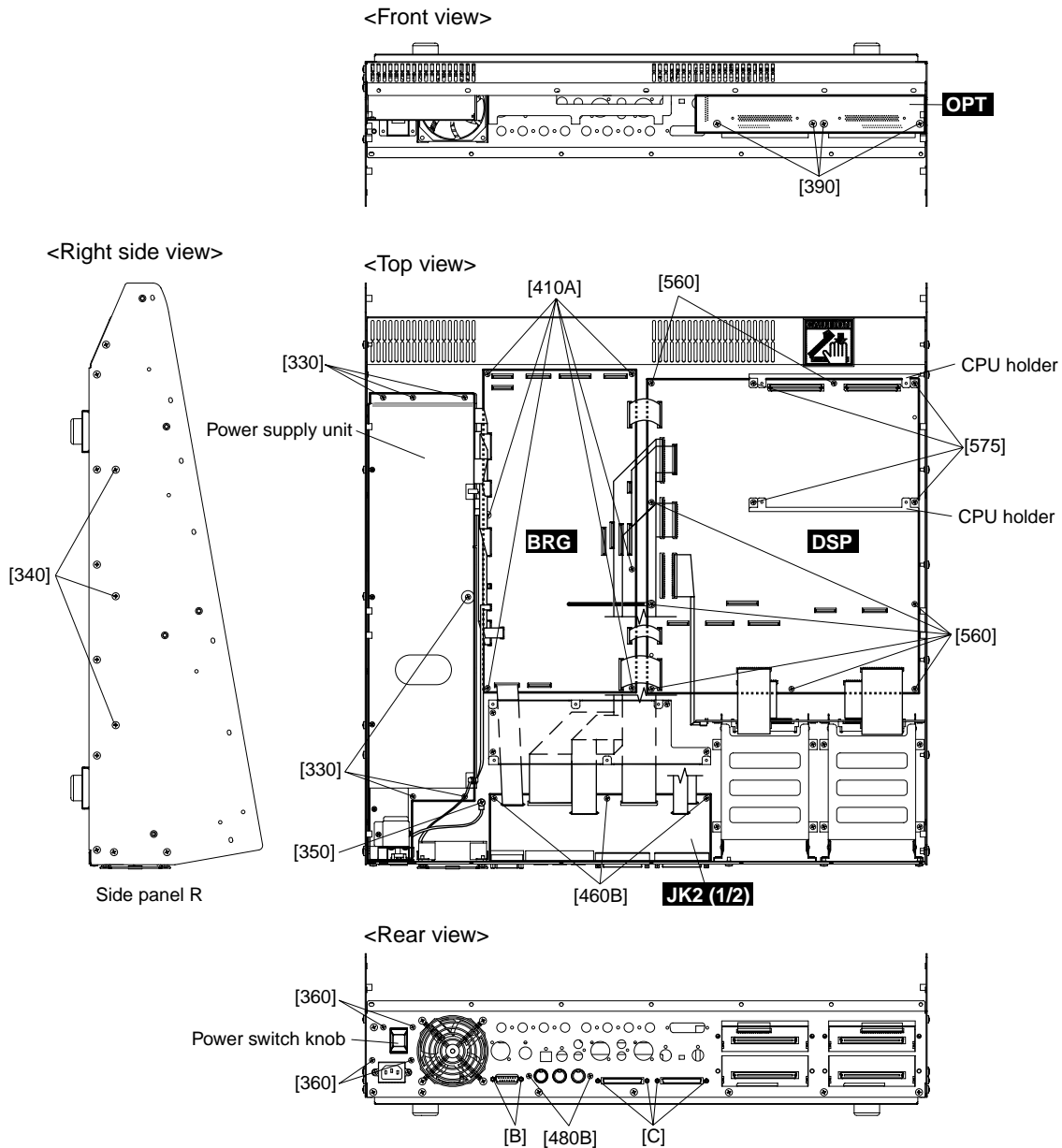


Fig.4



- |                                   |                            |
|-----------------------------------|----------------------------|
| [330]: Bind Head Tapping Screw-B  | 3.0X8 MFZN2BL (EP600190)   |
| [340]: Bind Head Tapping Screw-B  | A4.0X8 MFZN2BL (VC688800)  |
| [350]: Bind Head Tapping Screw-S  | 4.0X8 MFZN2BL (VI693100)   |
| [360]: Bonding Screw              | 3.0X8 MFZN2BL (VP157800)   |
| [390]: Bind Head Screw            | SP 4.0X8 MFZN2Y (VZ538000) |
| [410A]: Bind Head Tapping Screw-B | 3.0X8 MFZN2BL (EP600190)   |
| [460B]: Bind Head Tapping Screw-B | 3.0X8 MFZN2BL (EP600190)   |
| [480B]: Bonding Tapping Screw-B   | 3.0X8 MFZN2BL (VN413300)   |
| [560]: Bind Head Tapping Screw-B  | 3.0X8 MFZN2BL (EP600190)   |
| [575]: Bind Head Tapping Screw-B  | 3.0X8 MFZN2BL (EP600190)   |

Fig.5



## Rear Assembly U Section

### 16. PC Support

**(Time required: About 15 minutes)**

- 16-1. Remove the SP02R96. (See procedure 1.)
- 16-2. Remove the MB02R96. (See procedure 2.)
- 16-3. Fasten the control panel assembly. (See procedure 3.)
- 16-4. Remove the eleven (11) screws marked [260A], the twenty-four (24) nuts marked [270], the four (4) nuts marked [280] and the twenty-seven (27) knobs marked [300]. The PC support can then be removed from the rear assembly U. (Fig.6)

### 17. ANI1 Circuit Board

**(Time required: About 20 minutes)**

- 17-1. Remove the SP02R96. (See procedure 1.)
- 17-2. Remove the MB02R96. (See procedure 2.)
- 17-3. Fasten the control panel assembly. (See procedure 3.)
- 17-4. Remove the PC support. (See procedure 16.)
- 17-5. Remove the three (3) screws marked [200A] and disconnect the connector from the AD1 circuit board or the ADA circuit board. The ANI1 circuit board can then be removed. (Fig.6)

**\* There is a total of sixteen (16) ANI1 circuit boards, and they can all be removed in this way.**

### 18. ANI2 and LED Circuit Boards

**(Time required: About 20 minutes)**

- 18-1. Remove the SP02R96. (See procedure 1.)
- 18-2. Remove the MB02R96. (See procedure 2.)
- 18-3. Fasten the control panel assembly. (See procedure 3.)
- 18-4. Remove the PC support. (See procedure 16.)
- 18-5. Remove the screw marked [200A] and disconnect the connector from the ADA circuit board. The ANI2 assembly can then be removed. (Fig.6)

**\* There is a total of four (4) ANI2 assembly, and they can all be removed in this way.**

- 18-6. Remove the LED circuit board from the connector and the locking card spacer on the ANI2 circuit board. The ANI2 circuit board and the LED circuit board can then be divided. (Fig.6)

## **19. 2TRI, ST, STD, PHN Circuit Boards**

**(Time required: About 20 minutes each)**

- 19-1. Remove the SP02R96. (See procedure 1.)
- 19-2. Remove the MB02R96. (See procedure 2.)
- 19-3. Fasten the control panel assembly. (See procedure 3.)
- 19-4. Remove the PC support. (See procedure 16.)
- 19-5. **2TRI Circuit Board:**  
Remove the two (2) screws marked [200C] and disconnect the connector from the ADA circuit board. The 2TRI circuit board can then be removed. (Fig.6)
- 19-6. **ST Circuit Board:**  
Remove the five (5) screws marked [200D] and disconnect the connector from the ADA circuit board. The ST circuit board can then be removed. (Fig.6)
- 19-7. **STD Circuit Board:**  
Remove the two (2) screws marked [200E] and disconnect the connector from the ADA circuit board. The STD circuit board can then be removed. (Fig.6)
- 19-8. **PHN Circuit Board:**  
Remove the two (2) screws marked [210A] and disconnect the connector from the ADA circuit board. The PHN circuit board can then be removed. (Fig.6)

## **20. AD1 Circuit Board**

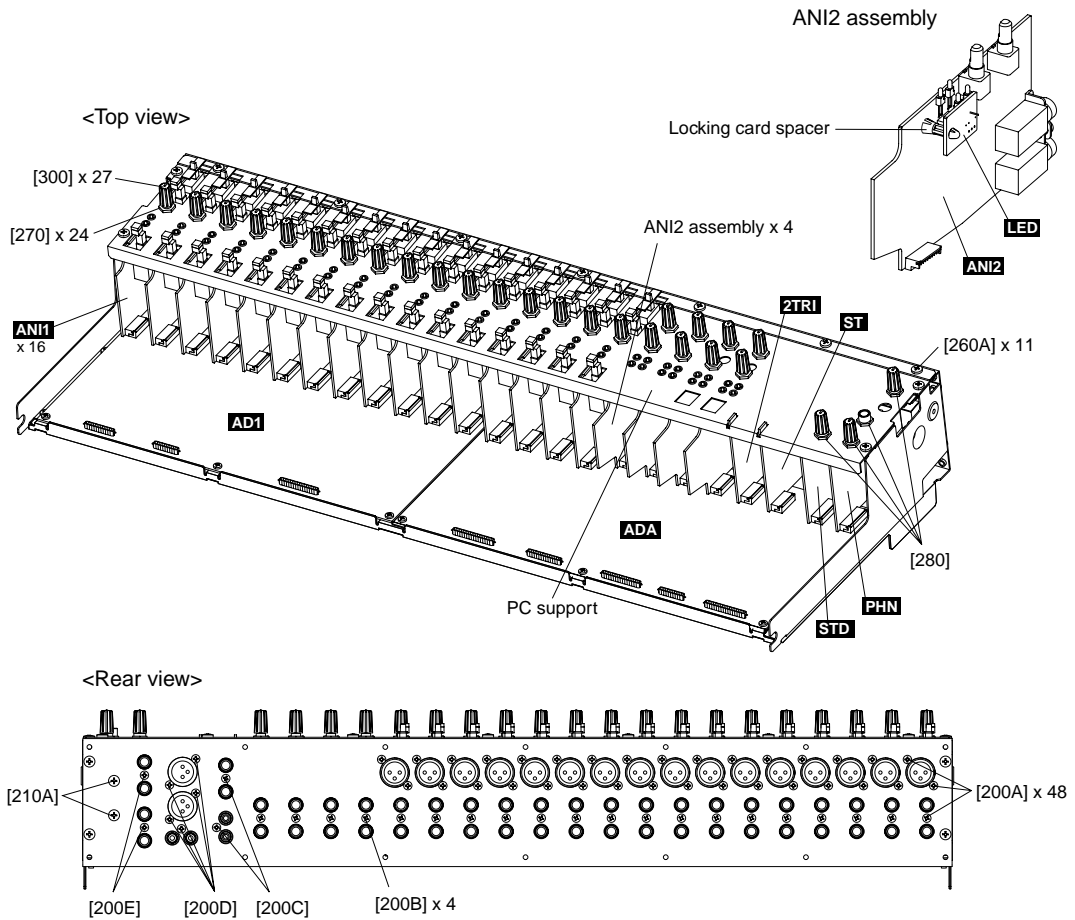
**(Time required: About 25 minutes)**

- 20-1. Remove the SP02R96. (See procedure 1.)
- 20-2. Remove the MB02R96. (See procedure 2.)
- 20-3. Fasten the control panel assembly. (See procedure 3.)
- 20-4. Remove the PC support. (See procedure 16.)
- 20-5. Remove the twelve (12) ANI1 circuit boards.  
(See procedure 17.)
- 20-6. Remove the eight (8) screws marked [120A]. The AD1 circuit board can then be removed. (Fig.7)

## **21. ADA Circuit Board**

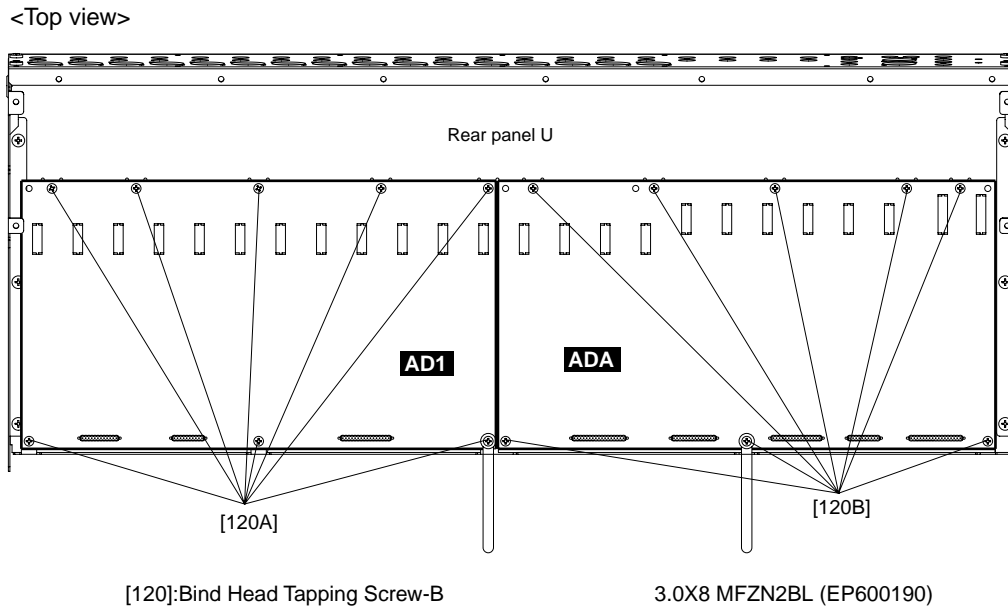
**(Time required: About 25 minutes)**

- 21-1. Remove the SP02R96. (See procedure 1.)
- 21-2. Remove the MB02R96. (See procedure 2.)
- 21-3. Fasten the control panel assembly. (See procedure 3.)
- 21-4. Remove the PC support. (See procedure 16.)
- 21-5. Remove the four (4) ANI1 circuit boards.  
(See procedure 17.)
- 21-6. Remove the four (4) ANI2 assemblies.  
(See procedure 18-5.)
- 21-7. Remove the 2TRI, ST, STD and PHN circuit boards.  
(See procedure 19.)
- 21-8. Remove the eight (8) screws marked [120B]. The ADA circuit board can then be removed. (Fig.7)



- [200]: Bonding Tapping Screw-B
- [210A]: Bind Head Screw
- [260A]: Bind Head Tapping Screw-B
- [270]: Hexagonal Nut
- [280]: Hexagonal Nut
- 3.0X8 MFZN2BL (VN413300)
- A4.0X8 MFZN2BL (VP156800)
- A4.0X8 MFZN2BL (VC688800)
- 7.0X11X2 MFZN2BL (VR991600)
- 9.0X11X2 MFZN2BL (VJ388000)

Fig.6



- [120]: Bind Head Tapping Screw-B
- 3.0X8 MFZN2BL (EP600190)

Fig.7

## Control Panel Assembly Section

\* When removing the circuit board, if it is hard to handle while the control panel assembly is fixed slantwise at the front stay, open it widely at 180° for the work.

### 22. SUB Circuit Board

**(Time required: About 15 minutes)**

- 22-1. Remove the SP02R96. (See procedure 1.)
- 22-2. Remove the MB02R96. (See procedure 2.)
- 22-3. Fasten the control panel assembly. (See procedure 3.)
- 22-4. Remove the eight (8) screws marked [180A]. The SUB circuit board can then be removed. (Fig.9)

### 23. PN1 Circuit Board

**(Time required: About 20 minutes)**

- 23-1. Remove the SP02R96. (See procedure 1.)
- 23-2. Remove the MB02R96. (See procedure 2.)
- 23-3. Remove the four (4) encoder knobs marked [410B] and the sixteen (16) encoder knobs marked [450A] from the control panel side. (Fig.8)
- 23-4. Fasten the control panel assembly. (See procedure 3.)
- 23-5. Remove the SUB circuit board. (See procedure 22.)
- 23-6. Remove the twenty (20) screws marked [160A]. The PN1 circuit board can then be removed with the SUB1 and SUB2 holders. (Fig.10)

### 24. JS Circuit Board

**(Time required: About 15 minutes)**

- 24-1. Remove the SP02R96. (See procedure 1.)
- 24-2. Remove the MB02R96. (See procedure 2.)
- 24-3. Fasten the control panel assembly. (See procedure 3.)
- 24-4. Remove the four (4) screws marked [160B]. The JS circuit board can then be removed. (Fig.10)

### 25. PN2 Circuit Board

**(Time required: About 25 minutes)**

- 25-1. Remove the SP02R96. (See procedure 1.)
- 25-2. Remove the MB02R96. (See procedure 2.)
- 25-3. Remove the encoder knob marked [410C], the five (5) encoder knobs marked [420], the eight (8) encoder knobs marked [440], the eight (8) encoder knobs marked [450B], the knob marked [460C] and the knob marked [470] from the control panel side. (Fig.8)
- 25-4. Fasten the control panel assembly. (See procedure 3.)
- 25-5. Remove the JS circuit board. (See procedure 24.)
- 25-6. Remove the twenty-two (22) screws marked [165]. The PN2 circuit board can then be removed with the insulating sheet. (Fig.10)
- 25-7. Remove the five (5) cord holders. The insulating sheet can then be removed from the PN2 circuit board. (Fig.10)

\* The insulating sheet is fastened to the PN2 circuit board by the cord holders.

\* When you replace the PN2 circuit board, be sure to attach the insulating sheet as before.

## 26. PN3+PW Circuit Boards

**(Time required: About 20 minutes)**

- 26-1. Remove the SP02R96. (See procedure 1.)
- 26-2. Remove the MB02R96. (See procedure 2.)
- 26-3. Remove the encoder knob and the hexagonal nut from the control panel side. (Fig.8, Photo.6)
- 26-4. Fasten the control panel assembly. (See procedure 3.)
- 26-5. Remove the six (6) screws marked [160C]. The PN3+PW circuit boards can then be removed. (Fig.10)

## 27. FD1 Circuit Board

**(Time required: About 20 minutes)**

- 27-1. Remove the SP02R96. (See procedure 1.)
- 27-2. Remove the MB02R96. (See procedure 2.)
- 27-3. Remove the sixteen (16) fader knobs marked [400A] from the control panel side. (Fig.8)
- 27-4. Fasten the control panel assembly. (See procedure 3.)
- 27-5. Remove the twelve (12) screws marked [210B]. The FD1 circuit board can then be removed. (Fig.9)

## 28. FD2 Circuit Board

**(Time required: About 25 minutes)**

- 28-1. Remove the SP02R96. (See procedure 1.)
- 28-2. Remove the MB02R96. (See procedure 2.)
- 28-3. Remove the nine (9) fader knobs marked [400B] from the control panel side. (Fig.8)
- 28-4. Fasten the control panel assembly. (See procedure 3.)
- 28-5. Remove the six (6) screws marked [210C]. The FD2 circuit board can then be removed with the insulating sheet. (Fig.9)
- 28-6. Remove the four (4) cord holders. The insulating sheet can then be removed from the FD2 circuit board. (Fig.9)

**\* The insulating sheet is fastened to the FD2 circuit board by the cord holders.**

**\* When you replace the FD2 circuit board, be sure to attach the insulating sheet as before.**

## 29. LCD Assembly

**(Time required: About 5 minutes each)**

- 29-1. Remove the eight (8) screws marked [260B] from the control panel side. The LCD assembly can then be removed. (Fig.8)

**\* Be careful no to scratch the control panel during installation.**

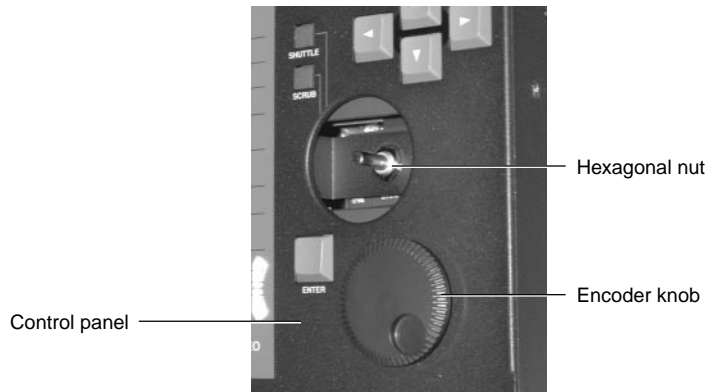
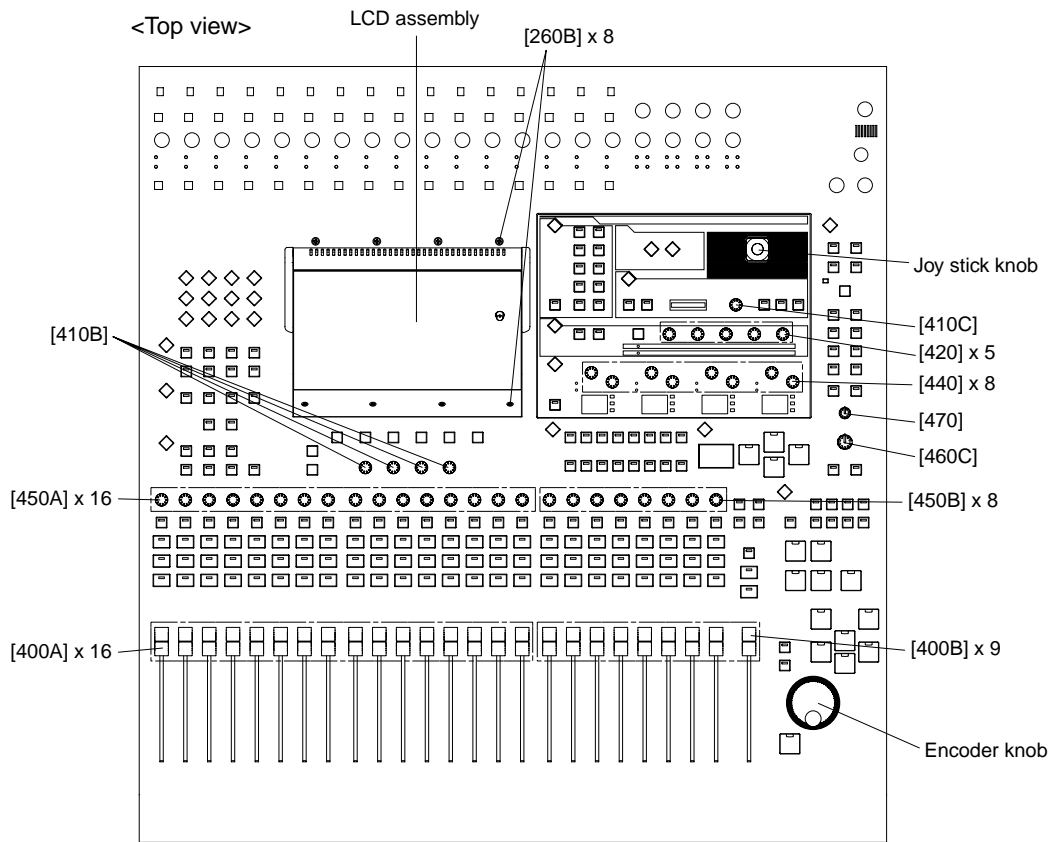


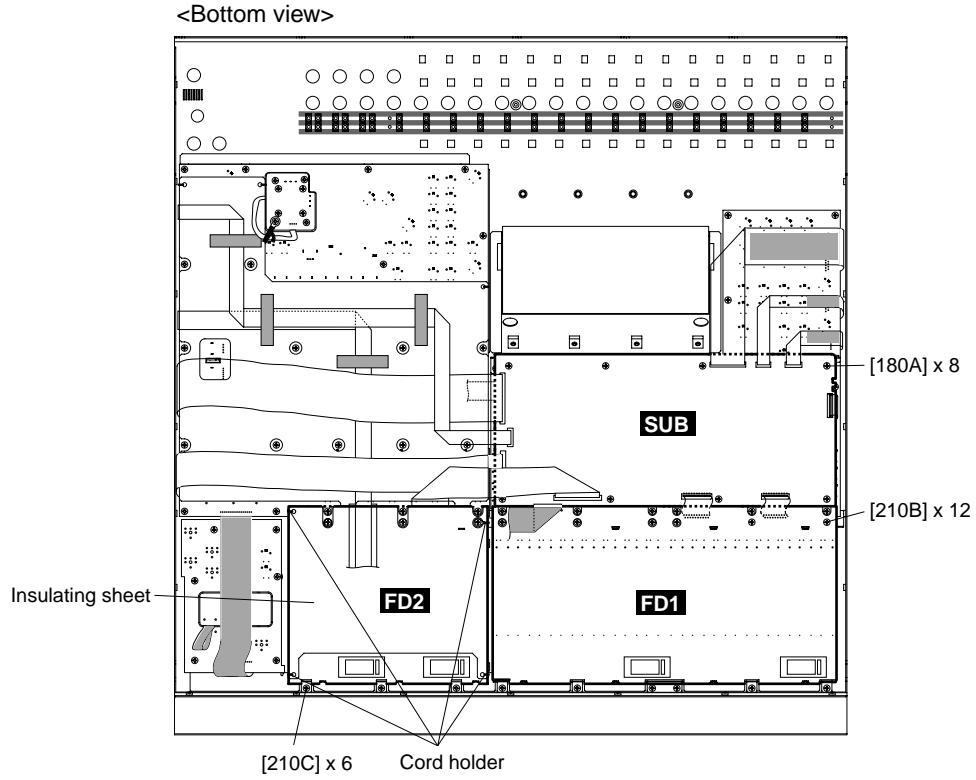
Photo.6



[260B]: Flat Head Tapping Screw-B

3.0X8 MFZN2BL (EP600790)

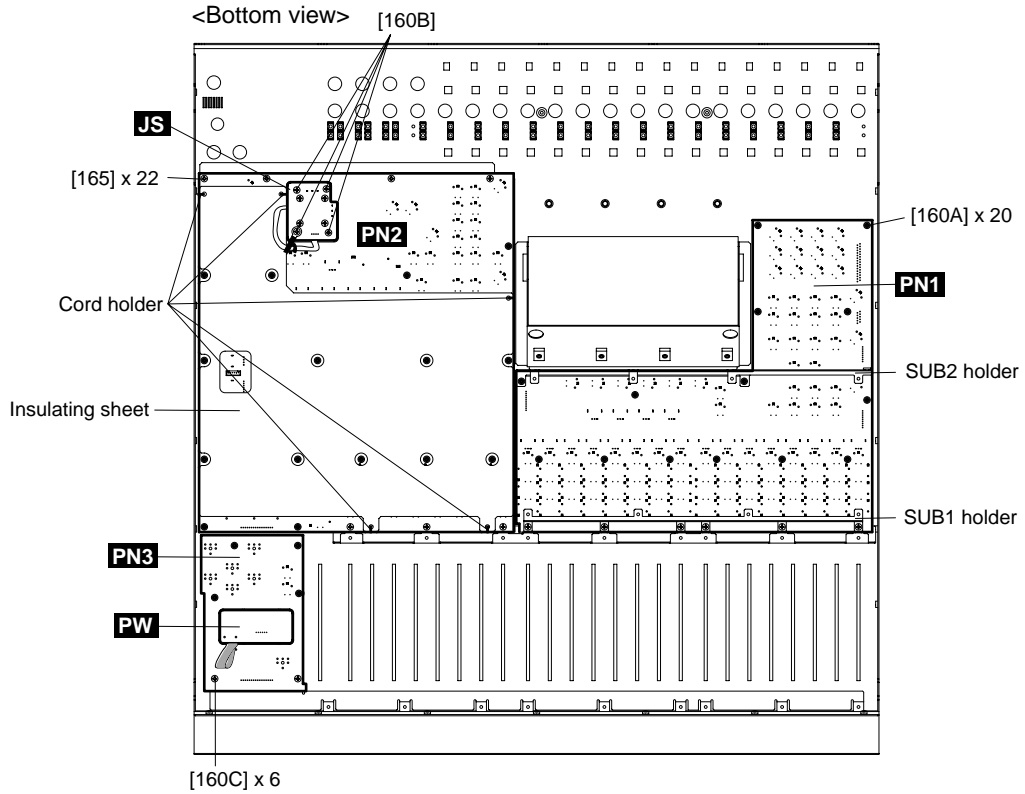
Fig.8



[180A]: Bind Head Tapping Screw-B  
 [210]: Bind Head Tapping Screw-B

3.0X8 MFZN2BL (EP600190)  
 3.0X8 MFZN2BL (EP600190)

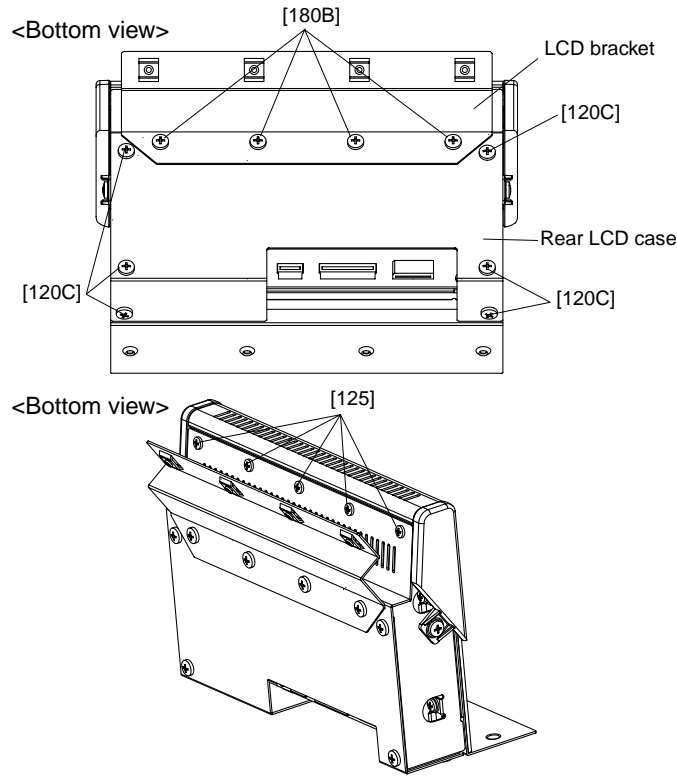
Fig.9



[160]: Bind Head Tapping Screw-B  
 [165]: Bind Head Tapping Screw-B

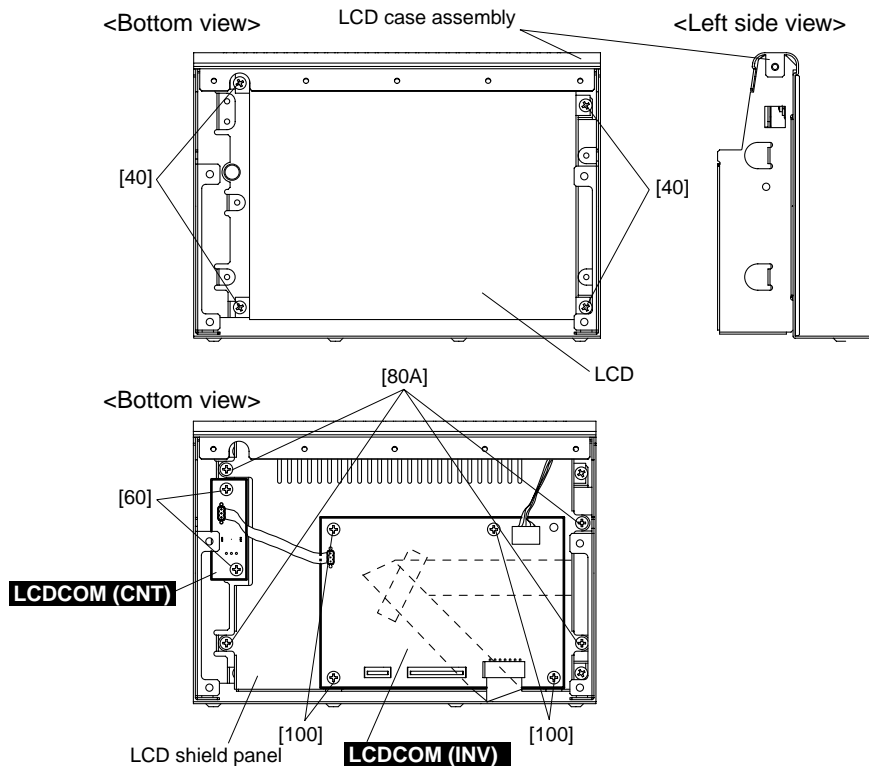
3.0X8 MFZN2BL (EP600190)  
 3.0X8 MFZN2BL (EP600190)

Fig.10



- |                                   |                           |
|-----------------------------------|---------------------------|
| [120C]: Bind Head Tapping Screw-B | A4.0X8 MFZN2BL (VC688800) |
| [125]: Bind Head Tapping Screw-B  | A3.0X6 MFZN2BL (VP157900) |
| [180B]: Bind Head Tapping Screw-B | A4.0X8 MFZN2BL (VC688800) |

Fig.11



- |                                  |                          |
|----------------------------------|--------------------------|
| [40]: Bind Head Tapping Screw-B  | 3.0X6 MFZN2BL (EP600230) |
| [60]: Bind Head Tapping Screw-B  | 3.0X6 MFZN2BL (EP600230) |
| [80A]: Bind Head Tapping Screw-B | 3.0X6 MFZN2BL (EP600230) |
| [100]: Bind Head Tapping Screw-B | 3.0X6 MFZN2BL (EP600230) |

Fig.12



### 30. LCDCOM (CNT+INV) Circuit Board and LCD (Time required: About 15 minutes each)

- 30-1. Remove the LCD assembly. (See procedure 29.)
- 30-2. Remove the four (4) screws marked [180B]. The LCD bracket can then be removed. (Fig.11)
- 30-3. Remove the six (6) screws marked [120C] and the five (5) screws marked [125]. The rear LCD case can then be removed. (Fig.11)
- 30-4. Remove the two (2) screws marked [60] and the four (4) screws marked [80A]. The LCD shield panel can then be removed with the LCDCOM (CNT+INV) circuit board. (Fig.12)
- 30-5. **LCDCOM (CNT+INV) Circuit Board:**  
Remove the four (4) screws marked [100]. The LCDCOM (CNT+INV) circuit board can then be removed from the LCD shield panel. (Fig.12)  
\* The CNT and INV circuit boards are joined by soldering.  
**Note:** The INV circuit board must be handled carefully since it produces high voltages.
- 30-6. **LCD:**  
Remove the four (4) screws marked [40]. The LCD can then be removed. (Fig.12)

## Disassembling the MB02R96

### 31. Rear Panel

(Time required: About 10 minutes)

- 31-1. Remove the MB02R96. (See procedure 2.)
- 31-2. Remove the two (2) screws marked [D]. The meter angle L can then be removed from the MB02R96. (Photo.7)  
The meter angle R can be removed in the same manner.
- 31-3. Remove the twenty-two (22) screws marked [140B]. The rear panel can then be removed from the front panel. (Fig.13)

### 32. DC Circuit Board

(Time required: About 15 minutes)

- 32-1. Remove the rear panel. (See procedure 31.)
- 32-2. Remove the six (6) screws marked [80B]. The DC circuit board can then be removed. (Fig.14)

### 33. PN1 and PN2 Circuit Boards

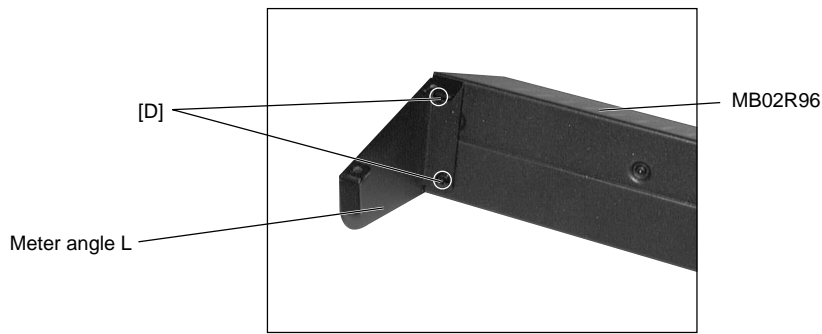
(Time required: About 15 minutes each)

- 33-1. Remove the rear panel. (See procedure 31.)
- 33-2. **PN1 Circuit Board:**  
Remove the eight (8) screws marked [50A]. The PN1 circuit board can then be removed. (Fig.14)
- 33-3. **PN2 Circuit Board:**  
Remove the seven (7) screws marked [50B]. The PN2 circuit board can then be removed. (Fig.14)

### 34. DSUB Cable

(Time required: About 15 minutes)

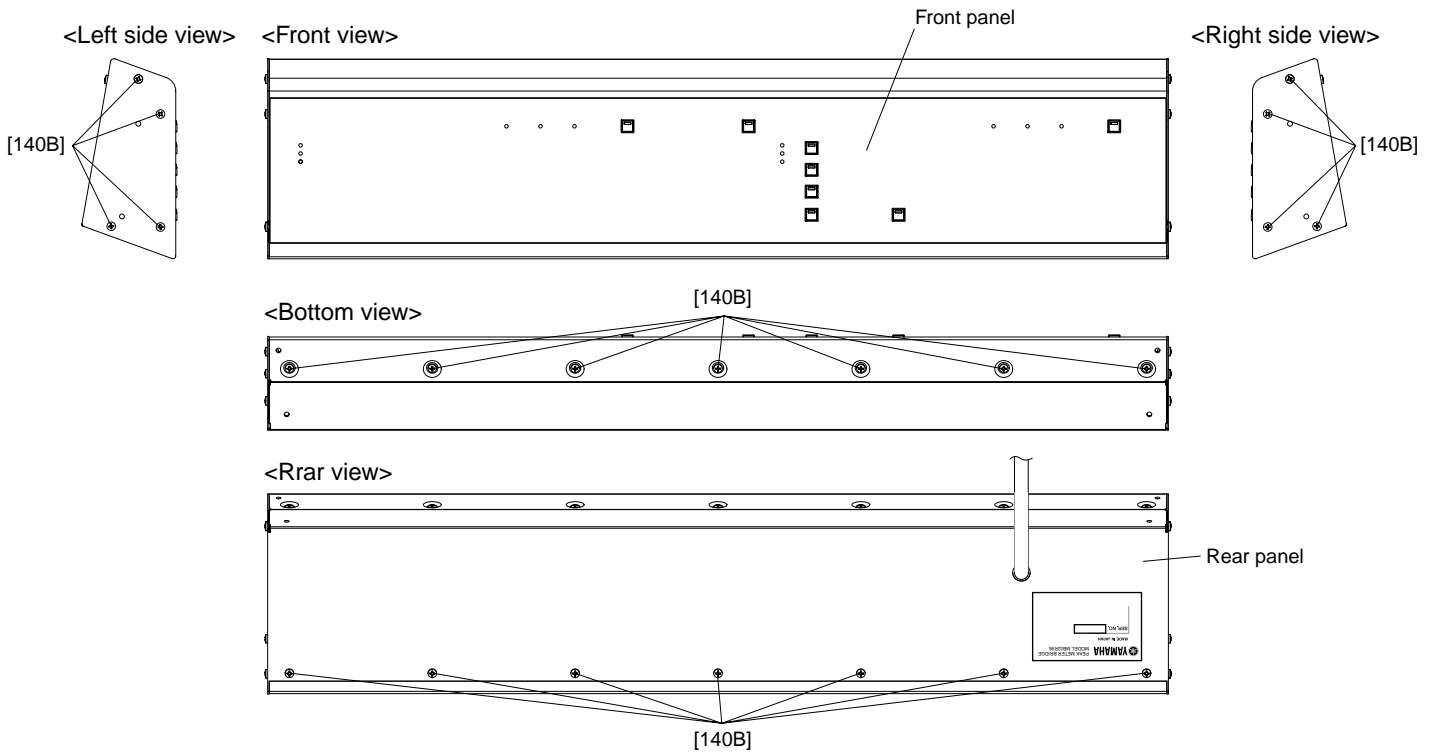
- 34-1. Remove the rear panel. (See procedure 31.)
- 34-2. Remove the screw marked [130]. The cable holder can then be removed. (Fig.14)
- 34-3. Remove the DSUB cable with the bushing. (Fig.14)
  - \* The bushing is not part of the DSUB cable.
  - When you replace the DSUB cable, you should remove the bushing from the cable, and attach in the new cable.



[D]: Bind Head Screw

A4.0X8 MFZN2BL (VP156800)

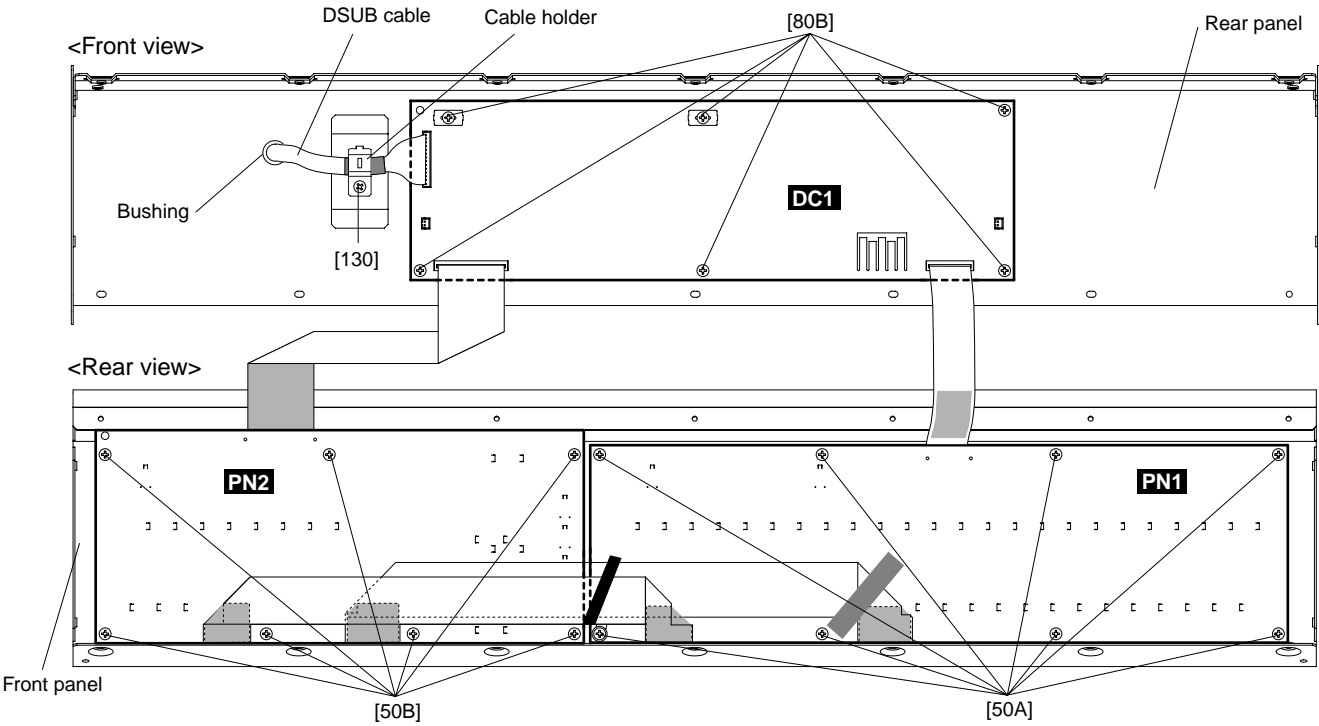
Photo.7



[140B]: Bind Head Tapping Screw-B

A3.0X8 MFZN2BL (VP157000)

Fig.13



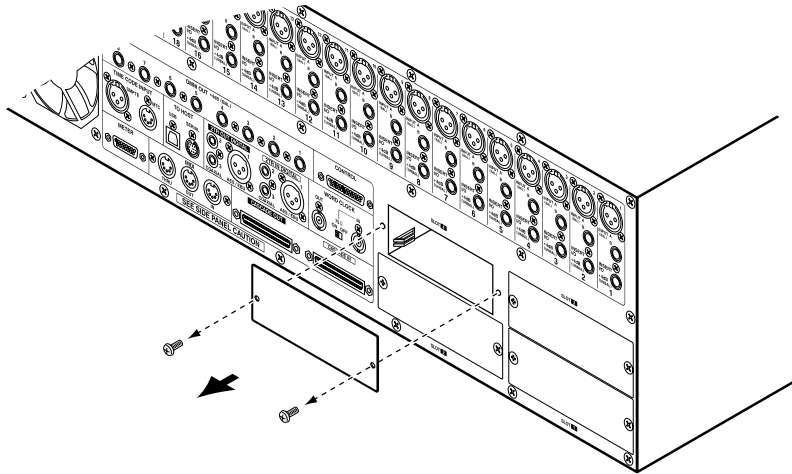
- [50]: Bind Head Tapping Screw-B 3.0X8 MFZN2BL (EP600190)
- [80B]: Bind Head Tapping Screw-B 3.0X8 MFZN2BL (EP600190)
- [130]: Bind Head Tapping Screw-B 3.0X8 MFZN2BL (EP600190)

Fig.14

## ■ INSTALLING I/O CARDS

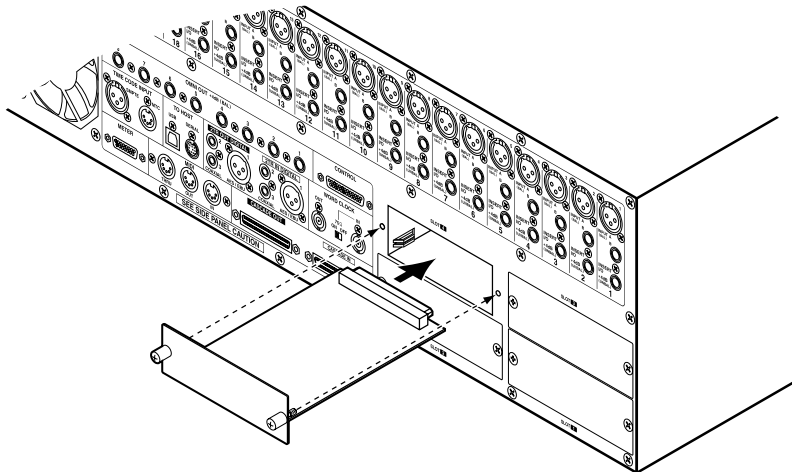
This section explains how to install I/O Cards.

- 1 Turn off the 02R96.
- 2 Undo the two fixing screws and remove the slot cover, as shown below.



Keep the cover and fixing screws in a safe place for future use.

- 3 Insert the card between the guide rails and slide it all the way into the slot, as shown below. You may have to push firmly to plug the card into the internal connector.



- 4 Secure the card using the attached thumbscrews. Do not leave them loose, as the card will not be grounded correctly, which may cause the 02R96 to malfunction.

You can check which I/O Cards are installed on the Word Clock Select page.

## LSI PIN DESCRIPTION

M37640M8-138FP (X0157100) CPU .....	53
SH7709A FP-208C (XY065A00) CPU .....	54
HD64F7044F28 (X3086A00) CPU .....	55
HD64F7044F28 (X3197A00) CPU .....	55
YSS910-S (XV988A00) DSP6 (Digital Signal Processor) .....	56
YSS919-H (XZ693A00) DSP7 (Digital Signal Processor) .....	57
SGH603064F-62F (XV973A00) Gate Array .....	58
YM3436DK (XG948E00) DIR2 (Digital Format Interface Receiver) .....	58
YM6604C-S (XU240A00) ACIA (Asynchronous Communication Interface Adapter) .....	59
MBCG61594-128 (X2162A00) ATSC2 .....	60
ICS2008BV-T (X2832B00) T.C. Reader/Generator .....	61
CS8405A-CS (XZ349A00) DIT (Digital Audio Interface Transmitter) .....	61
CS8420 (XW559A00) SRC (Sample Rate Converter) .....	61
XCS40-3PQ240C (XZ334A00) FPGA (Field Programmable Gate Arrays) .....	62
S1D13305F00B100 (XQ595A00) LCDC (LCD Controller) .....	63
AK4393-VF-E2 (XW029A00) DAC (Digital to Analog Converter) .....	63
AK5383-VS (XW272A00) ADC (Analog to Digital Converter) .....	63

### ● M37640M8-138FP (X0157100) CPU

JK1: IC201

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION	
1	P6 <sub>1</sub> /DQ <sub>1</sub>	I/O	Port 6	41	P1 <sub>7</sub> /AB <sub>15</sub>	I/O	Port 1	
2	P6 <sub>0</sub> /DQ <sub>0</sub>	I/O	Port 6	42	P1 <sub>6</sub> /AB <sub>14</sub>	I/O		
3	P5 <sub>7</sub> //W(R//W)	I/O	Port 5	43	P1 <sub>5</sub> /AB <sub>13</sub>	I/O		
4	P5 <sub>6</sub> //R(E)	I/O						
5	P5 <sub>5</sub> /A <sub>0</sub>	I/O						
6	P5 <sub>4</sub> /S <sub>0</sub>	I/O						
7	P5 <sub>3</sub> //IBF <sub>0</sub>	I/O						
8	P5 <sub>2</sub> /OBF <sub>0</sub>	I/O						
9	CNV <sub>SS</sub> /V <sub>PP</sub>	I		Chip Operation Mode	44	P1 <sub>4</sub> /AB <sub>12</sub>		I/O
10	/RESET	I		Reset Input	45	P1 <sub>3</sub> /AB <sub>11</sub>		I/O
11	P5 <sub>1</sub> /T <sub>OUT</sub> /X <sub>COU</sub> T	I/O	Port 5	46	P1 <sub>2</sub> /AB <sub>10</sub>	I/O		
12	P5 <sub>0</sub> /X <sub>CIN</sub>	I/O	Port 5	47	P1 <sub>1</sub> /AB <sub>9</sub>	I/O		
13	V <sub>SS</sub>	-	Ground	48	P1 <sub>0</sub> /AB <sub>8</sub>	I/O		
14	X <sub>IN</sub>	I	Quartz Crystal Input	49	P0 <sub>7</sub> /AB <sub>7</sub>	I/O		
15	X <sub>OUT</sub>	O	Quartz Crystal Output	50	P0 <sub>6</sub> /AB <sub>6</sub>	I/O		
16	V <sub>CC</sub>	-	Power Supply	51	P0 <sub>5</sub> /AB <sub>5</sub>	I/O		
17	AV <sub>CC</sub>	-	Analog Power Supply	52	P0 <sub>4</sub> /AB <sub>4</sub>	I/O		
18	LPF	O	Loop Filter for Synthesizer	53	P0 <sub>3</sub> /AB <sub>3</sub>	I/O		
19	AV <sub>SS</sub>	-	Analog Ground	54	P0 <sub>2</sub> /AB <sub>2</sub>	I/O		
20	P4 <sub>4</sub> /CNTR <sub>1</sub>	I/O	Port 4	55	P0 <sub>1</sub> /AB <sub>1</sub>	I/O		
21	P4 <sub>3</sub> /CNTR <sub>0</sub>	I/O						
22	P4 <sub>2</sub> /INT <sub>1</sub>	I/O						
23	P4 <sub>1</sub> /INT <sub>0</sub>	I/O						
24	P4 <sub>0</sub> /EDMA	I/O						
25	P8 <sub>7</sub> //RTS <sub>1</sub>	I/O		Port 8	56	P0 <sub>0</sub> /AB <sub>0</sub>	I/O	
26	P8 <sub>6</sub> //CTS <sub>1</sub>	I/O						
27	P8 <sub>5</sub> /URXD <sub>1</sub>	I/O						
28	P8 <sub>4</sub> /UTXD <sub>1</sub>	I/O						
29	P8 <sub>3</sub> //RTS <sub>2</sub> /STXD	I/O						
30	P8 <sub>2</sub> //CTS <sub>2</sub> /SRXD	I/O						
31	P8 <sub>1</sub> /URXD <sub>2</sub> /SCLK	I/O						
32	P8 <sub>0</sub> /UTXD <sub>2</sub> /SRDY	I/O						
33	P3 <sub>7</sub> //RD	I/O	Port 3		57	P2 <sub>7</sub> /DB <sub>7</sub>	I/O	
34	P3 <sub>6</sub> //WR	I/O						
35	P3 <sub>5</sub> /SYNCOU <sub>T</sub>	I/O						
36	P3 <sub>4</sub> /φ <sub>OUT</sub>	I/O						
37	P3 <sub>3</sub> /DMAOU <sub>T</sub>	I/O						
38	P3 <sub>2</sub>	I/O						
39	P3 <sub>1</sub>	I/O						
40	P3 <sub>0</sub> /RDY	I/O						
					58	P2 <sub>6</sub> /DB <sub>6</sub>	I/O	
					59	P2 <sub>5</sub> /DB <sub>5</sub>	I/O	
				60	P2 <sub>4</sub> /DB <sub>4</sub>	I/O		
				61	P2 <sub>3</sub> /DB <sub>3</sub>	I/O		
				62	P2 <sub>2</sub> /DB <sub>2</sub>	I/O		
				63	P2 <sub>1</sub> /DB <sub>1</sub>	I/O		
				64	P2 <sub>0</sub> /DB <sub>0</sub>	I/O		
				65	P7 <sub>4</sub> /OBF <sub>1</sub>	I/O		
				66	P7 <sub>3</sub> //IBF <sub>1</sub> //HLDA	I/O		
				67	P7 <sub>2</sub> /S <sub>1</sub>	I/O		
				68	P7 <sub>1</sub> //HOLD	I/O		
				69	P7 <sub>0</sub> /SOF	I/O		
				70	USB D+	I/O		
				71	USB D-	I/O		
				72	Ext. Cap	O		
				73	V <sub>SS</sub>	-		
				74	V <sub>CC</sub>	-		
				75	P6 <sub>7</sub> /DQ <sub>7</sub>	I/O		
				76	P6 <sub>6</sub> /DQ <sub>6</sub>	I/O		
				77	P6 <sub>5</sub> /DQ <sub>5</sub>	I/O		
				78	P6 <sub>4</sub> /DQ <sub>4</sub>	I/O		
				79	P6 <sub>3</sub> /DQ <sub>3</sub>	I/O		
				80	P6 <sub>2</sub> /DQ <sub>2</sub>	I/O		

## ● SH7709A FP-208C (XY065A00) CPU

CPU1: IC101

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	MD1	I	Clock mode	105	CKE/PTK[5]	I/O	CK enable/Port K
2	MD2	I	Clock mode	106	RAS3L/PTJ[0]	I/O	DRAM row address strobe/Port J
3	Vcc-RTC*1	-	Power supply for RTC (1.8 V)	107	RAS2L/PTJ[1]	I/O	DRAM row address strobe/Port J
4	XTAL2	O	Crystal oscillator for RTC	108	CASLL/CASLPTJ[2]	I/O	Column address strobe (low)/Port J
5	EXTAL2	I	Crystal oscillator for RTC	109	VssO	-	Ground
6	Vss-RTC*1	-	Ground	110	CASLH/CASUPTJ[3]	I/O	Column address strobe (high)/Port J
7	NMI	I	Non-maskable interrupt request	111	VccO	-	Power supply (3.3 V)
8	IRO0/IRL0/PTH[0]	I	Interrupt request/Input port H	112	CASHL/PTJ[4]	I/O	HL Column address strobe/Port J
9	IRO1/IRL1/PTH[1]	I	Interrupt request/Input port H	113	CASHH/PTJ[5]	I/O	HH Column address strobe/Port J
10	IRO2/IRL2/PTH[2]	I	Interrupt request/Input port H	114	DACK0/PTD[5]	I/O	DMA acknowledge transfer strobe 0/Port D
11	IRO3/IRL3/PTH[3]	I	Interrupt request/Input port H	115	DACK1/PTD[7]	I/O	DMA acknowledge transfer strobe 1/Port D
12	IRO4/PTH[4]	I	Interrupt request/Input port H	116	CAS2L/PTE[6]	I/O	Column address strobe (low)/Port E
13	D31/PTB[7]	I/O	Data bus/Port B	117	CAS2H/PTE[3]	I/O	Column address strobe (high)/Port E
14	D30/PTB[6]	I/O	Data bus/Port B	118	RAS3U/PTE[2]	I/O	DRAM address strobe/Port E
15	D29/PTB[5]	I/O	Data bus/Port B	119	RAS2U/PTE[1]	I/O	DRAM address strobe/Port E
16	D28/PTB[4]	I/O	Data bus/Port B	120	TDO/PTE[0]	I/O	Test data output/Port E
17	D27/PYB[3]	I/O	Data bus/Port B	121	BACK	O	Bus acknowledge
18	D26/PTB[2]	I/O	Data bus/Port B	122	BREQ	I	Bus request
19	VssO	-	Ground	123	WAIT	I	Hardware wait request
20	D25/PTB[1]	I/O	Data bus/Port B	124	RESETM	I	Reset
21	VccO	-	Power supply (3.3 V)	125	ADTRG/PTH[5]	I	Analog trigger/Input port H
22	D24/PTB[0]	I/O	Data bus/Port B	126	IOIS16/PTG[7]	I	Write protect/Area 6 input/Input port G
23	D23/PTA[7]	I/O	Data bus/Port A	127	ASEMDO/PTG[6]	I	ASE mode/Input port G
24	D22/PTA[6]	I/O	Data bus/Port A	128	ASEBRKAK/PTG[5]	I/O	ASE break acknowledge/Input port G
25	D21/PTA[5]	I/O	Data bus/Port A	129	PTG[4]	I	Input port G
26	D20/PTA[4]	I/O	Data bus/Port A	130	AUDATA[3]/PTG[3]	I/O	AUD data/Input port G
27	Vss	-	Ground	131	AUDATA[2]/PTG[2]	I/O	AUD data/Input port G
28	D19/PTA[3]	I/O	Data bus/Port A	132	Vss	-	Ground
29	Vcc	-	Power supply (1.8 V)	133	AUDATA[1]/PTG[1]	I/O	AUD data/Input port G
30	D18/PTA[2]	I/O	Data bus/Port A	134	Vcc	-	Power supply (1.8 V)
31	D17/PTA[1]	I/O	Data bus/Port A	135	AUDATA[0]/PTG[0]	I/O	AUD data/Input port G
32	D16/PTA[0]	I/O	Data bus/Port A	136	TRSTPTF[7]/PINT[5]	I	Test reset/Input port F/Interrupt port
33	VssO	-	Ground	137	TMS/PTF[6]/PINT[4]	I	Test mode switch/Input port F/Interrupt port
34	D15	I/O	Data bus	138	TDI/PTF[5]/PINT[3]	I	Input test data/Input port F/Interrupt port
35	VccO	-	Power supply (3.3 V)	139	TCK/PTF[4]/PINT[2]	I	Test clock/Input port F/Interrupt port
36	D14	I/O	Data bus	140	IRLS[3]/PTF[3]/PINT[1]	I	Interrupt request/Input port F/Interrupt port
37	D13	I/O	Data bus	141	IRLS[2]/PTF[2]/PINT[0]	I	Interrupt request/Input port F/Interrupt port
38	D12	I/O	Data bus	142	IRLS[1]/PTF[1]/PINT[0]	I	Interrupt request/Input port F/Interrupt port
39	D11	I/O	Data bus	143	IRLS[0]/PTF[0]/PINT[0]	I	Interrupt request/Input port F/Interrupt port
40	D10	I/O	Data bus	144	MDO	I	Clock mode
41	D9	I/O	Data bus	145	Vcc-PLL1*2	-	PLL1 Power supply (1.8 V)
42	D8	I/O	Data bus	146	CAP1	-	PLL1 capacitor
43	D7	I/O	Data bus	147	Vss-PLL1*2	-	PLL1 Ground
44	D6	I/O	Data bus	148	Vss-PLL2*2	-	PLL2 Ground
45	VssO	-	Ground	149	CAP2	-	PLL2 capacitor
46	D5	I/O	Data bus	150	Vcc-PLL2*2	-	PLL2 Power supply (1.8 V)
47	VccO	-	Power supply (3.3 V)	151	AUDCK/PTH[6]	I	AUD clock/Input port H
48	D4	I/O	Data bus	152	Vss	-	Ground
49	D3	I/O	Data bus	153	Vss	-	Ground
50	D2	I/O	Data bus	154	Vcc	-	Power supply (1.8 V)
51	D1	I/O	Data bus	155	XTAL	O	Clock oscillator
52	D0	I/O	Data bus	156	EXTAL	I	Clock/Crystal oscillator
53	A0	I	Address bus	157	STATUS0/PTJ[6]	I/O	cessor status/Port J
54	A1	I	Address bus	158	STATUS1/PTJ[7]	I/O	Pross./Port J
55	A2	I	Address bus	159	TCLK/PTH[7]	I/O	Clock/Port H
56	A3	I	Address bus	160	IROOUT	O	'Interrupt request
57	VssO	-	Ground	161	VssO	-	Ground
58	A4	I	Address bus	162	CKIO	I/O	System Clock
59	VccO	-	Power supply (3.3 V)	163	VccO	-	Power supply (3.3 V)
60	A5	I	Address bus	164	TxD0/SCPT[0]	O	Data transmission 0/Output port
61	A6	I	Address bus	165	SOK0/SCPT[1]	I/O	Serial clock/Port
62	A7	I	Address bus	166	TxD1/SCPT[2]	O	Data transmission 1/Output port
63	A8	I	Address bus	167	SCK1/SCPT[3]	I/O	Serial clock/Port
64	A9	I	Address bus	168	TxD2/SCPT[4]	O	Data transmission 2/Output port
65	A10	I	Address bus	169	SCK2/SCPT[5]	I/O	Serial clock/Port
66	A11	I	Address bus	170	RTS2/SCPT[6]	I/O	Request to send 2/Output port
67	A12	I	Address bus	171	RxD0/SCPT[0]	I	Data reception 0/Output port
68	A13	I	Address bus	172	RxD1/SCPT[2]	I	Data reception 1/Output port
69	VssO	-	Ground	173	Vss	-	Ground
70	A14	I	Address bus	174	RxD2/SCPT[4]	I	Data reception 2/Output port
71	VccO	-	Power supply (3.3 V)	175	Vcc	-	Power supply (1.8 V)
72	A15	I	Address bus	176	CTS2/IR0S/SCPT[7]	I	Clear to send 2/Interrupt request/Input port
73	A16	I	Address bus	177	MCS[7]/PTC[7]/PINT[7]	I/O	Mask chip select/Port C/Interrupt port
74	A17	I	Address bus	178	MCS[6]/PTC[6]/PINT[6]	I/O	Mask chip select/Port C/Interrupt port
75	A18	I	Address bus	179	MCS[5]/PTC[5]/PINT[5]	I/O	Mask chip select/Port C/Interrupt port
76	A19	I	Address bus	180	MCS[4]/PTC[4]/PINT[4]	I/O	Mask chip select/Port C/Interrupt port
77	A20	I	Address bus	181	VssO	-	Ground
78	A21	I	Address bus	182	WAKEUP/PTD[3]	I/O	Standby mode/Port D
79	Vss	-	Ground	183	VccO	-	Power supply (3.3 V)
80	A22	I	Address bus	184	RESETOUT/PTD[2]	I/O	Reset output/Port D
81	Vcc	-	Power supply (1.8 V)	185	MCS[3]/PTC[3]/PINT[3]	I/O	Mask chip select/Port C/Interrupt port
82	A23	I	Address bus	186	MCS[2]/PTC[2]/PINT[2]	I/O	Mask chip select/Port C/Interrupt port
83	VssO	-	Ground	187	MCS[1]/PTC[1]/PINT[1]	I/O	Mask chip select/Port C/Interrupt port
84	A24	I	Address bus	188	MCS[0]/PTC[0]/PINT[0]	I/O	Mask chip select/Port C/Interrupt port
85	VccO	-	Power supply (3.3 V)	189	DRAK0/PTD[1]	I/O	DMA transfer request/Port D
86	A25	I	Address bus	190	DRAK1/PTD[0]	I/O	DMA transfer request/Port D
87	BS/PTK[4]	I/O	Bus cycle signal start/Port K	191	DREQ0/PTD[4]	I	DMA transfer request/Input port D
88	RD	O	Read strobe	192	DREQ1/PTD[6]	I	DMA transfer request/Input port D
89	WE0/DOMLL	O	D7-D0 select signal/DOM (SDRAM)	193	RESETP	I	Power on reset
90	WE1/DOMLU/WE	O	D15-D8 select signal/DOM (SDRAM)	194	CA	I	Chip active/Hardware stand by request
91	WE2/DOMLUC/RDP/PTK[8]	I/O	D23-D16 select signal/DOM (SDRAM)/PCMCIA I/O read/Port K	195	MD3	I	Area 0 bus allocation
92	WE3/DOMLUC/WR/PTK[7]	I/O	D31-D24 select signal/DOM (SDRAM)/PCMCIA I/O write/Port K	196	MD4	I	Area 0 bus allocation
93	RD/WR	O	Read/Write	197	MD5	I	Area 0 bus allocation
94	AUDSYNC/PTE[7]	I/O	AUD sync. signal/Port E	198	AVss	-	Ground
95	VssO	-	Ground	199	AN[0]/PTL[0]	I	AD converter input/Input port L
96	CS0/MCS[0]	O	Chip select/Mask ROM chip select	200	AN[1]/PTL[1]	I	AD converter input/Input port L
97	VccO	-	Power supply (3.3 V)	201	AN[2]/PTL[2]	I	AD converter input/Input port L
98	CS2/PTK[0]	I/O	Chip select2/Port K	202	AN[3]/PTL[3]	I	AD converter input/Input port L
99	CS3/PTK[1]	I/O	Chip select3/Port K	203	AN[4]/PTL[4]	I	AD converter input/Input port L
100	CS4/PTK[2]	I/O	Chip select4/Port K	204	AN[5]/PTL[5]	I	AD converter input/Input port L
101	CS5/CE1A/PTK[3]	I/O	Chip selects/CE1/Port K	205	AVcc (3.3 V)	-	Analog Power supply (3.3 V)
102	CS6/CE1B	I/O	Chip selects/CE1	206	AN[6]/DA[1]/PTL[6]	I	AD converter input/Input port L
103	CE2A/PTE[4]	I/O	Card enable/Port E	207	AN[7]/DA[0]/PTL[7]	I	AD converter input/Input port L
104	CE2B/PTE[5]	I/O	Card enable/Port E	208	AVss	-	Ground

• HD64F7044F28 (X3086A00) CPU  
 • HD64F7044F28 (X3197A00) CPU

02R96/SUB: IC600, 605  
 MB02R96/PN2: IC508

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	PE14	O	Port E	57	D11	I/O	Data bus
2	PE15	O	Port E	58	D10	I/O	
3	VSS	I	Ground	59	D9	I/O	
4	A0	O	Address bus	60	D8	I/O	Data bus
5	A1	O					
6	A2	O		Ground	61	VSS	I
7	A3	O			Data bus	62	D7
8	A4	O		Power supply		63	D6
9	A5	O			Data bus	64	D5
10	A6	O		Power supply		65	VCC
11	A7	O			Data bus	66	D4
12	A8	O		Data bus		67	D3
13	A9	O			Ground	68	D2
14	A10	O	Crystal oscillator	69		D1	I/O
15	A11	O		Mode control	70	D0	I/O
16	A12	O	Crystal oscillator		71	VSS	I
17	A13	O		Mode control	72	XTAL	I
18	A14	O	Non-maskable interrupt request		73	MD3	I
19	A15	O		Power supply	74	EXTAL	I
20	A16	O	Mode control		75	MD2	I
21	VCC	I		Mode control	76	NMI	I
22	A17	O	PLL Power supply		77	VCC	I
23	VSS	I		PLL capacitor	78	MD1	I
24	PB2//IRQ0	I	PLL Ground		79	MD0	I
25	PB3//IRQ1	I		Port A / Clock	80	PLLVCC	I
26	PB4//IRQ2	I	Reset		81	PLLCAP	I
27	VSS	O		Port E	82	PLLVSS	I
28	PB5//IRQ3	I	Ground		83	PA15 / CK	O
29	A18	O		Address bus	84	/RES	I
30	A19	O	Port B / Address bus		85	PE0	I
31	A20	O		Ground	86	PE1	I
32	PB9 / A21	O	Read		87	PE2	I
33	VSS	I		Watch dog timer overflow	88	PE3	I
34	/RD	O	High write		89	PE4	I
35	/WDTOVF	O		Power supply	90	VSS	I
36	/WRH	O	Low write		91	ANO / PF0	I
37	VCC	I		Ground	92	AN1 / PF1	I
38	/WRL	O	Chip select		93	AN2 / PF2	I
39	VSS	I		Chip select	94	AN3 / PF3	I
40	/CS1	O	Chip select		95	AN4 / PF4	I
41	/CS0	O		Port A / Interrupt request	96	AN5 / PF5	I
42	PA9//IRQ3	I	Port A / Interrupt request		97	AVSS	I
43	PA8//IRQ2	I		Port A / Data transmission	98	AN6 / PF6	I
44	/CS3	O	Interrupt request		99	AN7 / PF7	I
45	/CS2	O		Port A / Data reception	100	AVCC	I
46	PA5//IRQ1	I	Power supply		101	VSS	I
47	TXD1	O		Ground	102	PE5	O
48	RXD1	I	Power supply		103	VCC	I
49	/IRQ0	I		Port E	104	PE6	O
50	PA1 / TXD0	O	Port E		105	PE7	O
51	PA0 / RXD0	I		Ground	106	PE8	O
52	D15	I/O	Data bus		107	PE9	O
53	D14	I/O		Ground	108	PE10	O
54	D13	I/O	Port E		109	VSS	I
55	VSS	I		Data bus	110	PE11	O
56	D12	I/O	Ground		111	PE12	O
					112	PE13	O

● YSS910-S (XV988A00) DSP6 (Digital Signal Processor)

DSP: ICA01-04

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION		
1	Vdd		Power supply (3.3V)	89	Vss		Ground		
2	Vss		Ground	90	DB13	I/O	Parallel data bus		
3	XI	I	System master clock input (60MHz or 30MHz)	91	DB14	I/O			
4	XO	O	System master clock output (High or 30MHz)	92	DB15	I/O			
5	Vdd		Power supply (5V)	93	DB16	I/O			
6	/SYNCI	I	Sync. signal input	94	DB17	I/O			
7	/SYNCO	O	Sync. signal output	95	DB18	I/O			
8	Vdd		Power supply (5V)	96	DB19	I/O			
9	CKI	I	System clock input (30MHz)	97	DB20	I/O			
10	CKO	O	System clock output (30MHz)	98	DB21	I/O			
11	CKSEL	I	System master clock select (0: 60MHz, 1: 30MHz)	99	DB22	I/O			
12	Vss		Ground	100	Vss		Ground		
13	MCKS	I	Serial I/O master clock input (128 x Fs)	101	Vdd		Power supply (3.3V)		
14	/SSYNC	I	Serial I/O Sync. signal output	102	DB23	I/O	Parallel data bus		
15	/IC	I	Initial clear	103	DB24	I/O			
16	/TEST	I	Test mode setting (0: Test, 1: Normal)	104	DB25	I/O			
17	BTYP	I	Data bus type select (0: 8bit, 1: 16bit)	105	DB26	I/O			
18	/IRQ	O	IRQ output	106	DB27	I/O			
19	TRIG	I/O	Trigger signal input/output	107	DB28	I/O			
20	Vdd		Power supply (5V)	108	DB29	I/O			
21	Vss		Ground	109	DB30	I/O			
22	/CS	I	chip select signal input	110	DB31	I/O			
23	/WR	I	Write signal input	111	TIMO/DBOB	I/O		Timing signal output/ Parallel data bus output/ input	
24	/RD	I	Read signal input	112	Vss		Ground		
25	CA7	I/O	Address bus of internal register	113	Vdd		Power supply (5V)		
26	CA6	I/O			114	DA00	I/O	Memory data bus	
27	CA5	I/O			115	DA01	I/O		
28	CA4	I/O			116	DA02	I/O		
29	CA3	I/O			117	DA03	I/O		
30	CA2	I/O			118	DA04	I/O		
31	CA1	I/O			119	DA05	I/O		
32	Vss		Ground	120	DA06	I/O	Memory data bus		
33	Vdd		Power supply (3.3V)	121	DA07	I/O			
34	CD15	I/O	Data bus of internal register	122	Vss			Ground	
35	CD14	I/O			123	DA08		I/O	
36	CD13	I/O			124	DA09		I/O	
37	CD12	I/O			125	DA10		I/O	
38	CD11	I/O			126	DA11		I/O	
39	CD10	I/O			127	DA12	I/O		
40	CD09	I/O			128	DA13	I/O		
41	CD08	I/O			129	DA14	I/O		
42	CD07	I/O			130	DA15	I/O		
43	CD06	I/O			131	Vss		Ground	
44	Vss		Ground	132	Vdd		Power supply (3.3V)		
45	Vdd		Power supply (3.3V)	133	(n.c)		Not used		
46	Vdd		Power supply (5V)	134	Vdd		Power supply (5V)		
47	CD05	I/O	Data bus of internal register	135	DA16	I/O	Memory data bus		
48	CD04	I/O			136	DA17		I/O	
49	CD03	I/O			137	DA18		I/O	
50	CD02	I/O			138	DA19		I/O	
51	CD01	I/O			139	DA20		I/O	
52	CD00	I/O			140	DA21		I/O	
53	/WAIT	O		WAIT output	141	DA22		I/O	
54	Vss		Ground	142	DA23	I/O	Memory data bus		
55	SI0	I	Serial data input	143	Vss			Ground	
56	SI1	I			144	DA24		I/O	
57	SI2	I			145	DA25		I/O	
58	SI3	I			146	DA26		I/O	
59	SI4	I			147	DA27		I/O	
60	SI5	I			148	DA28		I/O	
61	SI6	I			149	DA29	I/O		
62	SI7	I		150	DA30	I/O	Memory data bus		
63	Vss		Ground	151	DA31	I/O			
64	Vdd		Power supply (5V)	152	Vdd			Power supply (5V)	
65	SO0	O	Serial data output	153	Vss			Ground	
66	SO1	O			154	A00		O	Memory address (SRAM, PSRAM, DRAM)
67	SO2	O			155	A01		O	
68	SO3	O			156	A02		O	
69	SO4	O			157	A03	O		
70	SO5	O			158	A04	O		
71	SO6	O			159	A05	O		
72	SO7	O		160	A06	O			
73	Vss		Ground	161	A07	O	Memory address (SRAM, PSRAM)		
74	DB00	I/O	Parallel data bus	162	A08	O			
75	DB01	I/O			163	A09		O	
76	DB02	I/O			164	Vss			Ground
77	DB03	I/O			165	Vdd			Power supply (3.3V)
78	DB04	I/O			166	A10		O	Memory address (SRAM, PSRAM, DRAM)
79	DB05	I/O			167	A11		O	
80	DB06	I/O			168	A12	O	Memory address (SRAM, PSRAM)	
81	DB07	I/O			169	A13	O		
82	DB08	I/O			170	A14	O		
83	DB09	I/O			171	A15/RAS	O	Memory address (SRAM, PSRAM), /RAS (DRAM)	
84	DB10	I/O			172	A16/CAS	O	Memory address (SRAM, PSRAM), /CAS (DRAM)	
85	DB11	I/O			173	A17/CE	O	Memory address (SRAM), /CE (PSRAM)	
86	DB12	I/O		174	/WE	O	Memory write enable signal		
87	Vdd		Power supply (5V)	175	/OE	O	Memory output enable signal		
88	Vdd		Power supply (3.3V)	176	Vdd		Power supply (5V)		



● YSS919-H (XZ693A00) DSP7 (Digital Signal Processor)

DSP: ICB01-09

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION	
1	PLLEN	I	PLL enable input (0: PLL unuse, 1: PLL use)	105	SIO32	I/O	Serial data bus	
2	/TEST	I	Test mode setting (0: TEST, 1: Normal)	106	SIO33	I/O		
3	AVSS	I	Analog ground	107	SIO34	I/O		
4	CPO	I	PLL filter	108	SIO35	I/O		
5	AVDD	I	Power supply (2.5 V)	109	SIO36	I/O	Power supply (2.5 V)	
6	VSS	I	Ground	110	SIO37	I/O		
7	VDD	I	Power supply (3.3 V)	111	SIO38	I/O		
8	/IC	I	Initial clear	112	SIO39	I/O		
9	/MUTE	I	Mute control (0: SIO mute, 1: SIO normal in-out)	113	VDD	I	Ground	
10	/SSYNC	I	Serial I/O Sync. signal input	114	VSS	I		
11	MCKS	I	Serial I/O master clock input (128 x Fs)	115	SIO40	I/O	Serial data bus	
12	XI	I	System master clock input (60 MHz or 15 MHz)	116	SIO41	I/O		
13	BTYP	I	Data bus type select (0: 16 bits, 1: 32 bits)	117	SIO42	I/O		
14	/CS	I	Chip select	118	SIO43	I/O		
15	/WR	I	Write enable input	119	SIO44	I/O	Power supply (3.3 V)	
16	/RD	I	Read enable input	120	SIO45	I/O		
17	CA7	I	CPU address bus	121	SIO46	I/O		
18	CA6	I			122	SIO47		I/O
19	CA5	I			123	VSS	I	
20	CA4	I			124	VDD	I	
21	CA3	I	Ground	125	SIO48	I/O		
22	CA2	I			126	SIO49	I/O	
23	VSS	I			127	SIO50	I/O	
24	VDD	I			128	SIO51	I/O	
25	CD31/CA1	I/O	CPU data bus / CPU address bus	129	SIO52	I/O	Serial data bus	
26	CD30	I/O	CPU data bus	130	SIO53	I/O		
27	CD29	I/O			131	SIO54		I/O
28	CD28	I/O			132	SIO55		I/O
29	CD27	I/O			133	VSS	I	
30	CD26	I/O	Power supply (2.5 V)	134	SIO56	I/O	Serial data bus	
31	CD25	I/O			135	SIO57		I/O
32	CD24	I/O			136	SIO58		I/O
33	VDD	I			137	SIO59		I/O
34	VSS	I	Ground	138	SIO60	I/O	Power supply (2.5 V)	
35	CD23	I/O			139	SIO61		I/O
36	CD22	I/O			140	SIO62		I/O
37	CD21	I/O			141	SIO63		I/O
38	CD20	I/O	CPU data bus	142	VDD	I	Power supply (2.5 V)	
39	CD19	I/O			143	VSS		I
40	CD18	I/O			144	VDD		I
41	CD17	I/O			145	DA00		I/O
42	CD16	I/O	Ground	146	DA01	I/O	Memory data bus	
43	VSS	I			147	DA02		I/O
44	VDD	I			148	DA03		I/O
45	CD15	I/O			149	DA04		I/O
46	CD14	I/O	CPU data bus	150	DA05	I/O	Ground	
47	CD13	I/O			151	DA06		I/O
48	CD12	I/O			152	DA07		I/O
49	CD11	I/O			153	VSS		I
50	CD10	I/O	Ground	154	DA08	I/O	Memory data bus	
51	CD09	I/O			155	DA09		I/O
52	CD08	I/O			156	DA10		I/O
53	VSS	I			157	DA11		I/O
54	CD07	I/O	CPU data bus	158	DA12	I/O	Memory data bus	
55	CD06	I/O			159	DA13		I/O
56	CD05	I/O			160	DA14		I/O
57	CD04	I/O			161	DA15		I/O
58	CD03	I/O	Ground	162	VSS	I	Power supply (3.3 V)	
59	CD02	I/O			163	VDD		I
60	CD01	I/O			164	DA16		I/O
61	CD00	I/O			165	DA17		I/O
62	/WAIT	O	Wait output	166	DA18	I/O	Memory data bus	
63	VDD	I	Power supply (2.5 V)	167	DA19	I/O		
64	VSS	I	Ground	168	DA20	I/O		
65	VDD	I	Power supply (3.3 V)	169	DA21	I/O		
66	SIO0	I/O	Serial data bus	170	DA22	I/O	Ground	
67	SIO1	I/O			171	DA23		I/O
68	SIO2	I/O			172	VDD		I
69	SIO3	I/O			173	VSS		I
70	SIO4	I/O	Ground	174	DA24	I/O	Memory data bus	
71	SIO5	I/O			175	DA25		I/O
72	SIO6	I/O			176	DA26		I/O
73	SIO7	I/O			177	DA27		I/O
74	VSS	I	Serial data bus	178	DA28	I/O	Power supply (3.3 V)	
75	SIO8	I/O			179	DA29		I/O
76	SIO9	I/O			180	DA30		I/O
77	SIO10	I/O			181	DA31		I/O
78	SIO11	I/O	Ground	182	VSS	I	Memory data bus	
79	SIO12	I/O			183	VDD		I
80	SIO13	I/O			184	/WE		O
81	SIO14	I/O			185	/CAS		O
82	SIO15	I/O	Power supply (3.3 V)	186	SDCK	O	Bank select (SDRAM)	
83	VSS	I			187	CKE		O
84	VDD	I			188	/RAS		O
85	SIO16	I/O			189	VDD		I
86	SIO17	I/O	Serial data bus	190	VSS	I	Ground	
87	SIO18	I/O			191	BA1		O
88	SIO19	I/O			192	BA0		O
89	SIO20	I/O			193	A12		O
90	SIO21	I/O	Power supply (2.5 V)	194	A11	O	Memory address (SDRAM, DRAM)	
91	SIO22	I/O			195	A10		O
92	SIO23	I/O			196	A09		O
93	VDD	I			197	A08		O
94	VSS	I	Ground	198	VSS	I	Power supply (3.3 V)	
95	SIO24	I/O			199	VDD		I
96	SIO25	I/O			200	A07		O
97	SIO26	I/O			201	A06		O
98	SIO27	I/O	Serial data bus	202	A05	O	Memory address (SDRAM, DRAM)	
99	SIO28	I/O			203	A04		O
100	SIO29	I/O			204	A03		O
101	SIO30	I/O			205	A02		O
102	SIO31	I/O	Ground	206	A01	O	Power supply (3.3 V)	
103	VSS	I			207	A00		O
104	VDD	I			208	VSS		I

• **SGH603064F-62F (XV973A00) Gate Array**

SUB: IC901-903

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	RA1	I	Encoder input	33	D0	O	Data bus
2	RB1	I		34	D1	O	
3	RA2	I		35	Vss		
4	RB2	I	Ground	36	D2	O	Data bus
5	Vss			37	D3	O	
6	RA3	I		38	Vss		
7	RB3	I	Encoder input	39	D4	O	Data bus
8	RA4	I		40	D5	O	
9	RB4	I		41	Vss		
10	Vss		Ground	42	D6	O	Data bus
11	RA5	I		43	D7	O	
12	RB5	I		44	Vss		
13	RA6	I	Encoder input	45	NC		Not used
14	RB6	I		46	NC		
15	Vss			47	RA9	I	
16	RA7	I	Encoder input	48	RB9	I	Encoder input
17	RB7	I		49	RA10	I	
18	RA8	I		50	RB10	I	
19	RB8	I	Address bus	51	RA11	I	Encoder input
20	A0	I		52	RB11	I	
21	A1	I		53	RA12	I	
22	A2	I	Ground	54	RB12	I	Power supply +5V
23	Vss			55	RA13	I	
24	RDN	I		56	RB13	I	
25	CSN	I	Read	57	RA14	I	Power supply +5V
26	VDD		Chip select	58	VDD		
27	ASN	I	Power supply +5V	59	RB14	I	
28	A3N	I	Address strobe	60	RA15	I	Encoder input
29	SEL	I	Address bus	61	RB15	I	
30	NC		Bus select	62	RA16	I	
31	NC		Not used	63	RB16	I	Encoder input
32	NC			64	Vss		

• **YM3436DK (XG948E00) DIR2 (Digital Format Interface Receiver)**

DSP: IC064

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	DAUX	I	Auxiliary input for audio data	23	RSTN	I	System reset input
2	HDLT	O	Asynchronous buffer operation flag	24	Vdda		VCO section power (+5V)
3	DOU	O	Audio data output	25	CTLN	I	VCO control input N
4	VFL	O	Parity flag output	26	PCO	O	PLL phase comparison output
5	OPT	O	Fs x 1 Synchronous output signal for DAC	27	(NC)		
6	SYNC	O	Fs x 1 Synchronous output signal for DSP	28	CTLP	I	VCO control input P
7	MCC	O	Fs x 64 Bit clock output	29	Vssa		VCO section power (GND)
8	WC	O	Fs x 1 Word clock output	30	TSTN	I	Test terminal. Open for normal use
9	MCB	O	Fs x 128 Bit clock output	31	KM2	I	Clock mode switching input 2
10	MCA	O	Fs x 256 Bit clock output	32	KM0	I	Clock mode switching input 0
11	SKSY	I	Clock synchronization control input	33	FS1	O	Channel status sampling frequency display output 1
12	XI	I	Crystal oscillator connection or external clock input	34	FS0	O	Channel status sampling frequency display output 0
13	XO	O	Crystal oscillator connection	35	CSM	I	Channel status output method selection
14	P256	O	VCO oscillating clock connection	36	EXTW	I	External synchronous auxiliary input word clock
15	LOCK	O	PLL lock flag	37	DDIN	I	EIAJ (AES/EBU) data input
16	Vss		Logic section power (GND)	38	LR	O	PLL word clock output
17	TC	O	PLL time constant switching output	39	Vdd		Logic section power (+5 V)
18	DIM1	I	Data input mode selection	40	ERR	O	Data error flag output
19	DIM0	I	Data input mode selection	41	EMP	O	Channel status emphasis control code output
20	DOM1	I	Data output mode selection	42	CD0	O	3-wire type microcomputer interface data output
21	DOM0	I	Data output mode selection	43	CCK	I	3-wire type microcomputer interface clock input
22	KM1	I	Clock mode switching input 1	44	CLD	I	3-wire type microcomputer interface load input

● **YM6604C-S (XU240A00) ACIA (Asynchronous Communication Interface Adapter)**

DSP: IC703

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION	
1	RESETN	I	Reset	51	NC		Not used	
2	NC		Not used	52	IRQ3N	I	} Interrupt request	
3	CSN	I	Chip select	53	IRQ4N	I		
4	ASN	I	Address strobe	54	NC		Not used	
5	LDSN	I	Data strobe	55	IRQ5N	I	} Interrupt request	
6	A1P	I	Address bus	56	IRQ6N	I		
7	NC		Not used	57	IRQ7N	I		
8	A2P	I	} Address bus	58	TXD1P	O	Transmit data (1ch)	
9	A3P	I			59	RXD1P	I	Receive data (1ch)
10	NC		Not used	60	NC		Not used	
11	A4P	I	Address bus	61	RTS1N	O	Request to send (1ch)	
12	NC		} Not used	62	NC		Not used	
13	NC				63	CTS1N	I	Clear to send (1ch)
14	A5P	I	Address bus	64	NC		Not used	
15	Vss		Ground	65	DCD1N	I	Data carrier detect (1ch)	
16	NC		Not used	66	Vss		Ground	
17	CLKP	I	System clock	67	NC		Not used	
18	RW	I	Read / Write	68	TXD2P	O	Transmit data (2ch)	
19	NC		Not used	69	RXD2P	I	Receive data (2ch)	
20	DTACKN	O	Data acknowledge	70	NC		Not used	
21	Vss		Ground	71	RTS2N	O	Request to send (2ch)	
22	D0P	I/O	} Data bus	72	CTS2N	I	Clear to send (2ch)	
23	D1P	I/O			73	DCD2N	I	Data carrier detect (2ch)
24	D2P	I/O			74	NC		Not used
25	NC		} Not used	75	TXD3P	O	Transmit data (3ch)	
26	NC				76	NC		} Not used
27	D3P	I/O	Data bus	77	NC			
28	Vss		Ground	78	RXD3P	I	Receive data (3ch)	
29	D4P	I/O	} Data bus	79	RTS3N	O	Request to send (3ch)	
30	D5P	I/O			80	NC		Not used
31	D6P	I/O			81	CTS3N	I	Clear to send (3ch)
32	D7P	I/O			82	TXD4P	O	Transmit data (4ch)
33	Vss		Ground	83	NC		Not used	
34	FC0P	I	} Function code	84	RXD4P	I	Receive data (4ch)	
35	FC1P	I			85	RTS4N	O	Request to send (4ch)
36	NC		Not used	86	NC		Not used	
37	FC2P	I	Function code	87	CTS4N	I	Clear to send (4ch)	
38	NC		Not used	88	V <sub>DD</sub>		Power supply +5V	
39	IACKON	O	Interrupt acknowledge	89	NC		Not used	
40	V <sub>DD</sub>		Power supply +5V	90	TXD5P	O	Transmit data (5ch)	
41	NC		Not used	91	NC		Not used	
42	MODEP	I	CPU select	92	RXD5P	I	Receive data (5ch)	
43	NC		Not used	93	TXD6P	O	Transmit data (6ch)	
44	IPL0N	O	} Interrupt control	94	RXD6P	I	Receive data (6ch)	
45	IPL1N	O			95	Vss		Ground
46	IPL2N	O			96	FSP	I	Counter clock
47	IRQ1N	I	} Interrupt request	97	XCLK2P	I	} Transmission clock	
48	IRQ2N	I			98	XCLK1P		I
49	NC		} Not used	99	NC		} Not used	
50	NC				100	NC		

### • MBCG61594-128 (X2162A00) ATSC2

DSP: IC601-604, 651-654

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION	
1	VDD		Power supply +3.3V	73	VDD		Power supply +3.3V	
2	XTST	I	LSI test pin	74	PB_H_M4_SEL	I	Port B audio data input buffer active select	
3	VSS		Ground	75	PB_O_MUTE	I	Port B mute	
4	WT_X	I	CPU interface write input	76	VSS		Ground	
5	RD_X	I	CPU interface read input	77	PB_S00_ATO	O	Port B audio data output	
6	CS_X	I	CPU interface chip select input	78	PB_SO1	O		
7	HS_SEL	I	Chip active select	79	PB_SO2	O		
8	RES_X	I	System reset input	80	PB_SO3	O	Ground	
9	VSS		Ground	81	VSS			
10	ADD[0]	I	CPU interface address bus	82	PB_O_H_MODE[0]	I	Port B audio data output mode select	
11	ADD[1]	I						
12	ADD[2]	I						
13	ADD[3]	I		Port C audio data input mode select	84	PB_O_H_MODE[2]	I	
14	ADD[4]	I						
15	ADD[5]	I						
16	ADD[6]	I						
17	ADD[7]	I	Port C audio data input buffer active select	85	PC_I_H_MODE[0]	I		
18	VDD			Power supply +3.3V	86	PC_I_H_MODE[1]	I	
19	VSS		Ground	87	PC_I_H_MODE[2]	I	Port C audio data input	
20	DAT[0]	I/O	CPU interface data bus	88	PC_H_M4_SEL	I		
21	DAT[1]	I/O						
22	DAT[2]	I/O						
23	DAT[3]	I/O	Power supply +3.3V	89	PC_SIO_ATI	I	Port C audio data input	
24	VDD			Ground	90	VDD		Power supply +3.3V
25	VSS		CPU interface data bus	91	VSS		Ground	
26	DAT[4]	I/O						
27	DAT[5]	I/O						
28	DAT[6]	I/O						
29	DAT[7]	I/O						
30	VSS			Ground	92	PC_S11	I	Port C audio data input
31	VDD			Power supply +3.3V	93	PC_S12	I	
32	PA_I_H_MODE[0]	I	Port A audio data input mode select	94	PC_S13	I		
33	PA_I_H_MODE[1]	I						
34	PA_I_H_MODE[2]	I	Port A audio data output mode select	95	PC_I_SW_SEL	I	Port C audio data input sync/wc select	
35	PA_O_H_MODE[0]	I						
36	PA_O_H_MODE[1]	I		Port C audio data input sync/wc input	96	PC_SYNC_WC_SI	I	
37	PA_O_H_MODE[2]	I						
38	PA_SIO_ATI	I	Port A audio data input	97	PC_FS256_SI	I	Port C audio data input bit clock input (256fs)	
39	PA_S11	I		Ground	98	VSS		
40	PA_S12	I						
41	PA_S13	I		Port C audio data output bit clock input (256fs)	99	PC_FS256_SO	I	
42	PA_I_SW_SEL	I						
43	PA_SYNC_WC_SI	I		Port C audio data output sync/wc input	100	PC_SYNC_WC_SO	I	
44	PA_FS256_SI	I						
45	VSS		Ground	101	PC_O_SW_SEL	I	Port C audio data output sync/wc select	
46	PA_FS256_SO	I	Port A audio data output bit clock input (256fs)	102	VSS		Ground	
47	PA_SYNC_WC_SO	I	Port A audio data output sync/wc input	103	PC_SO0	O	Port C audio data output	
48	PA_O_SW_SEL	I	Port A audio data output sync/wc select	104	PC_SO1	O		
49	VSS		Ground	105	PC_SO2	O		
50	PA_S00	O	Port A audio data output	106	PC_SO3	O		
51	PA_SO1	O						
52	PA_SO2	O						
53	PA_SO3	O						
54	VDD		Power supply +3.3V	107	VSS		Ground	
55	VSS		Ground	108	PC_O_MUTE	I	Port C mute	
56	PA_CLK_ATI	I	Port A ADAT clock input	109	PC_O_H_MODE[0]	I	Port C audio data output mode select	
57	PA_H_M4_SEL	I	Port A audio data input buffer active select	110	PC_O_H_MODE[1]	I		
58	PA_O_MUTE	I	Port A mute	111	PC_O_H_MODE[2]	I		
59	PB_S10	I	Port B audio data input	112	PC_CLK_ATI	I	Port C ADAT clock input	
60	PB_S11	I						
61	PB_S12	I						
62	PB_S13	I						
63	PB_I_SW_SEL	I	Port B audio data input sync/wc select	113	VSS		Ground	
64	PB_SYNC_WC_SI	I	Port B audio data input sync/wc input	114	PD_I_H_MODE[0]	I	Port D audio data input mode select	
65	PB_FS256_SI	I	Port B audio data input bit clock input (256fs)	115	PD_I_H_MODE[1]	I		
66	VSS		Ground	116	PD_I_H_MODE[2]	I		
67	PB_FS256_SO	I	Port B audio data output bit clock input (256fs)	117	VSS		Ground	
68	PB_SYNC_WC_SO	I	Port B audio data output sync/wc input	118	PD_H_M4_SEL	I	Port D audio data input buffer active select	
69	PB_O_SW_SEL	I	Port B audio data output sync/wc select	119	PD_S10	I	Port D audio data input	
70	PB_I_H_MODE[0]	I	Port B audio data input mode select	120	PD_S11	I		
71	PB_I_H_MODE[1]	I						
72	PB_I_H_MODE[2]	I		121	PD_S12	I		
				122	PD_S13	I	Port D audio data output	
				123	PD_I_SW_SEL	I		
				124	PD_SYNC_WC_SI	I		
				125	PD_FS256_SI	I	Port D audio data input bit clock input (256fs)	
				126	VDD		Power supply +3.3V	
				127	VSS		Ground	
				128	PD_FS256_SO	I	Port D audio data output bit clock input (256fs)	
				129	PD_SYNC_WC_SO	I	Port D audio data output sync/wc input	
				130	PD_O_SW_SEL	I	Port D audio data output sync/wc select	
				131	VSS		Ground	
				132	PD_S00_ATO	O	Port D audio data output	
				133	PD_SO1	O		
				134	PD_SO2	O		
				135	PD_SO3	O	Ground	
				136	VSS			
				137	PD_O_MUTE	I	Port D mute	
				138	VSS		Ground	
				139	PD_O_H_MODE[0]	I	Port D audio data output mode select	
				140	PD_O_H_MODE[1]	I		
				141	PD_O_H_MODE[2]	I		
				142	XSM	I	LSI test pin	
				143	PA_WC_ATI	O	Port A ADAT word clock output	
				144	PC_WC_ATI	O	Port C ADAT word clock output	

• **ICS2008BV-T (X2832B00) T.C. Reader/Generator**

JK1: IC305

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	INTR	O	Interrupt request	23	CTS	I	Clear to send
2	RESET	I	Master reset	24	TXD	O	UART transmit data
3	FRAME	I	Color frame A / B input	25	RTS	O	Ready to send
4	CLICK	I	LTC SYNC input	26	LRCLK	O	SMPTE LTC receive clock
5	LTCIN-	I	SMPTE LTC input -	27	VITCGATE	O	VITE cord is for video overlay
6	LTCIN+	I	SMPTE LTC input +	28	VITCOUT	O	SMPTE VITE output
7	LTCOUT	O	SMPTE LTC output	29	A0	I	Address bus
8	LFC	I	External RC circuit	30	A1	I	Address bus
9	XTAL2	O	14.318 MHz crystal oscillator	31	/SMPTECS	I	SMPTE port chip select
10	XTAL1	I	14.318 MHz crystal oscillator	32	/UARTCS	I	UART chip select
11	AVDD	-	Analog power supply	33	/IOR	I	Read enable
12	AVSS	-	Analog ground	34	VSS	-	Digital ground
13	COUT	O	C(Chroma) output	35	VDD	-	Digital power supply
14	YOUT	O	Y(Luma) output	36	/LOW	I	Write enable
15	C2	I	C(Chroma) input	37	D0	I/O	Data bus
16	Y2	I	Y(Luma) input	38	D1	I/O	
17	C1	I	C(Chroma) input	39	D2	I/O	
18	Y1	I	Y(Luma) input	40	D3	I/O	
19	STHRESH	I	SYNC threshold bypass input	41	D4	I/O	
20	CTHRESH	I	Clamp threshold bypass input	42	D5	I/O	
21	DTHRESH	I	Data threshold bypass input	43	D6	I/O	
22	RXD	I	UART receive data	44	D7	I/O	

• **CS8405A-CS (XZ349A00) DIT (Digital Audio Interface Transmitter)**

JK1: IC101-103

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	SDA/CDOUT	I/O	Serial control data I/O (I <sup>2</sup> C) / Data out (SPI)	15	TCBL	I/O	Transmit channel status block start
2	AD0/CS	I/O	Address bit 0 (I <sup>2</sup> C) / Control port chip select (SPI)	16	NC3		Not used
3	AD2	I	Address bit 2 (I <sup>2</sup> C)	17	NC4		
4	RXP	I	Auxiliary AES3 Receiver port	18	NC5		
5	DGND2		Digital ground	19	INT	O	Interrupt
6	VD2+		Positive digital power supply (+5V)	20	U	I/O	User data
7	DGND4		Digital ground	21	OMCK	I	Master clock
8	DGND3				22	DGND	
9	/RST	I	Reset	23	VD+		Positive digital power supply (+5V)
10	NC1		Not used	24	H/S	I	Hardware/software control mode select
11	NC2				25	TXN	O
12	ILRCK	I/O	Serial audio input left/right clock	26	TXP	O	
13	ISCLK	I/O	Serial audio bit clock	27	AD1/CDIN	I	Address bit 1 (I <sup>2</sup> C) / Serial control data in (SPI)
14	SDIN	I	Serial audio data port	28	SCL/CCLK	I	Control port clock

• **CS8420 (XW559A00) SRC (Sample Rate Converter)**

JK1: IC003-005

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	SDA/CDOUT	I/O	Serial control data I/O (I <sup>2</sup> C) / data out (SPI)	15	TCBL	I/O	Transmit channel status block start
2	AD0/CS	I	Address bit 0 (I <sup>2</sup> C) / Control port chip select (SPI)	16	OSCLK	I/O	Serial audio output port bit clock input or output
3	/EMPH	O	Pre-emphasis indicator output	17	OLRCK	I/O	Serial audio output port left/right clock input or output
4	RXP	I	Differential line receiver inputs	18	SDOUT	O	Serial audio output port data output
5	RXN	I			19	/INT	O
6	VA+		Positive analog power supply (+5V)	20	U	I/O	User data
7	AGND		Analog ground	21	OMCK	I	Output section master clock input
8	FILT	I/O	PLL loop filter	22	DGND		Digital ground
9	/RST	I	Reset input	23	VD+		Positive digital power supply (+5V)
10	RMCK	O	Input section recovered master clock output	24	H/S	O	Hardware or software control mode select
11	RERR	O	Receiver error indicator	25	TXN	O	Differential line driver outputs
12	ILRCK	I/O	Serial audio input port left/right clock input or output	26	TXP	O	
13	ISCLK	I/O	Serial audio input port bit clock input or output	27	AD1/CDIN	I	Address bit 1 (I <sup>2</sup> C) / Serial control data in (SPI)
14	SDIN	I	Serial audio input port data input	28	SCL/CCLK	I	Control port clock

# ● XCS40-3PQ240C (XZ334A00) FPGA (Field Programmable Gate Arrays)

DSP: IC056

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION				
1	GND		Ground	121	V <sub>CC</sub>	I	Power supply +5V				
2	CPUCCLK	I/O	Primary global	122	/PROGRAM	I	Active low input				
3	/CSIN2	I/O	Unrestricted user-programmable Input/Output pin	123	/CSATSC[3]	I/O	Unrestricted user-programmable Input/Output pin				
4	/CSIN3	I/O		124	I/O/PGCK3	I/O	Primary global				
5	/RD	I/O		125	/CSATSC[4]	I/O	Unrestricted user-programmable Input/Output pin				
6	I/O/TDI	I/O		126	/CSATSC[5]	I/O		Unrestricted user-programmable Input/Output pin			
7	I/O/TCK	I/O	127	/CSATSC[6]	I/O	Unrestricted user-programmable Input/Output pin					
8	/WRH	I/O	128	/CSATSC[7]	I/O				Unrestricted user-programmable Input/Output pin		
9	/WRL	I/O	129	/CSATSC[8]	I/O					Unrestricted user-programmable Input/Output pin	
10	/RES	I/O	130	/CSATSC[9]	I/O						Unrestricted user-programmable Input/Output pin
11	/JK1_WRL	I/O	131	/CSATSC[10]	I/O						
12	/JK1_RD	I/O	132	/CSATSC[11]	I/O		Unrestricted user-programmable Input/Output pin				
13	SLOT6_16CH	I/O	133	/CSATSC[12]	I/O			Unrestricted user-programmable Input/Output pin			
14	GND		134	/CSATSC[13]	I/O	Unrestricted user-programmable Input/Output pin					
15	SLOT5_16CH	I/O	135	GND					Ground		
16	SLOT4_16CH	I/O	136	256_SLOT6	I/O				Unrestricted user-programmable Input/Output pin		
17	I/O/TMS	I/O	137	WC_SLOT6	I/O					Unrestricted user-programmable Input/Output pin	
18	SLOT3_16CH	I/O	138	256_SLOT3	I/O						Unrestricted user-programmable Input/Output pin
19	V <sub>CC</sub>		139	WC_SLOT3	I/O		Unrestricted user-programmable Input/Output pin				
20	SLOT2_16CH	I/O	140	V <sub>CC</sub>				Power supply +5V			
21	SLOT1_16CH	I/O	141	256_SLOT5	I/O	Unrestricted user-programmable Input/Output pin					
22	GND		142	WC_SLOT5	I/O			Unrestricted user-programmable Input/Output pin			
23	/CSPER	I/O	143	GND		Ground					
24	/AT1_EN	I/O	144	256_SLOT2	I/O	Unrestricted user-programmable Input/Output pin					
25	/AT2_EN	I/O	145	WC_SLOT2	I/O		Unrestricted user-programmable Input/Output pin				
26	I/O	I/O	146	256_SLOT4	I/O			Unrestricted user-programmable Input/Output pin			
27	I/O	I/O	147	WC_SLOT4	I/O				Unrestricted user-programmable Input/Output pin		
28	/CSDSP3	I/O	148	256_SLOT1	I/O	Unrestricted user-programmable Input/Output pin					
29	GND		149	WC_SLOT1	I/O		Unrestricted user-programmable Input/Output pin				
30	V <sub>CC</sub>		150	V <sub>CC</sub>				Power supply +5V			
31	/CSACIA1	I/O	151	GND				Ground			
32	/CSGPI_RW	I/O	152	/CSSLOT6	I/O	Unrestricted user-programmable Input/Output pin					
33	I/O	I/O	153	EXTWC[7]	I/O		Unrestricted user-programmable Input/Output pin				
34	ACLK1 (1MHz)	I/O	154	SLOT_48K	I/O			Unrestricted user-programmable Input/Output pin			
35	ACLK2 (1.2288MHz)	I/O	155	SLOT_48K	I/O				Unrestricted user-programmable Input/Output pin		
36	I/O	I/O	156	/CSSLOT3	I/O	Unrestricted user-programmable Input/Output pin					
37	GND		157	EXTWC[4]	I/O		Unrestricted user-programmable Input/Output pin				
38	I/O	I/O	158	GND				Ground			
39	/CSDSP2	I/O	159	/CSSLOT5	I/O			Unrestricted user-programmable Input/Output pin			
40	V <sub>CC</sub>		160	EXTWC[6]	I/O	Unrestricted user-programmable Input/Output pin					
41	/CSDIT_RW	I/O	161	V <sub>CC</sub>			Power supply +5V				
42	/CSJK1	I/O	162	SLOT_12M	I/O	Unrestricted user-programmable Input/Output pin					
43	/CSJK	I/O	163	/CSSLOT2	I/O		Unrestricted user-programmable Input/Output pin				
44	I/O	I/O	164	EXTWC[3]	I/O			Unrestricted user-programmable Input/Output pin			
45	GND		165	/CSSLOT4	I/O				Unrestricted user-programmable Input/Output pin		
46	ANA256FS	I/O	166	GND		Ground					
47	DOUBLE	I/O	167	EXTWC[5]	I/O	Unrestricted user-programmable Input/Output pin					
48	K48K96	I/O	168	SLOT_6M	I/O		Unrestricted user-programmable Input/Output pin				
49	/CSDSP1	I/O	169	SLOT_3M	I/O			Unrestricted user-programmable Input/Output pin			
50	I/O	I/O	170	/CSSLOT1	I/O				Unrestricted user-programmable Input/Output pin		
51	EXTWC[10]	I/O	171	EXTWC[2]	I/O	Unrestricted user-programmable Input/Output pin					
52	EXTWC[11]	I/O	172	/CSSLOT	I/O		Unrestricted user-programmable Input/Output pin				
53	EXTWC[12]	I/O	173	I/O	I/O			Unrestricted user-programmable Input/Output pin			
54	TRRERR[1]	I/O	174	DIR2XI	I/O				Unrestricted user-programmable Input/Output pin		
55	TRRERR[2]	I/O	175	I/O	I/O	Unrestricted user-programmable Input/Output pin					
56	TRRERR[3]	I/O	176	I/O	I/O		Unrestricted user-programmable Input/Output pin				
57	I/O/SGCK2	I/O	177	I/O (DIN)	I/O			Serial configuration data input			
58	NC		178	I/O/SGCK4 (DOUT)	I/O			Secondary global / Serial configuration data output			
59	GND		179	CLK	I/O	Configuration clock					
60	MODE	I	180	V <sub>CC</sub>		Power supply +5V					
61	V <sub>CC</sub>		181	O/TDO	O	Test data output					
62	NC		182	GND		Ground					
63	I/O/PGCK2	I/O	183	CINPCPOUT	I/O	Unrestricted user-programmable Input/Output pin					
64	I/O (HDC)	I/O	184	I/O/PGCK4	I/O	Primary global					
65	NORMAL_WC	I/O	185	DIRMCA	I/O	Unrestricted user-programmable Input/Output pin					
66	I/O	I/O	186	DIRMCB	I/O		Unrestricted user-programmable Input/Output pin				
67	I/O	I/O	187	DIRWC	I/O			Unrestricted user-programmable Input/Output pin			
68	I/O (/LDC)	I/O	188	DIRMCC	I/O				Unrestricted user-programmable Input/Output pin		
69	/JK1WAIT	I/O	189	DIRSYNC	I/O	Unrestricted user-programmable Input/Output pin					
70	I/O	I/O	190	DIRWCSEL	I/O		Unrestricted user-programmable Input/Output pin				
71	/MLOCKSEL	I/O	191	CIN256FS	I/O			Unrestricted user-programmable Input/Output pin			
72	/LOCKRTN	I/O	192	CINPLOUT	I/O				Unrestricted user-programmable Input/Output pin		
73	/LOCK	I/O	193	CINWC	I/O	Unrestricted user-programmable Input/Output pin					
74	/DIRLOCK	I/O	194	EXTWC[1]	I/O		Unrestricted user-programmable Input/Output pin				
75	GND		195	NC				Not used			
76	PLLOUT	I/O	196	GND				Ground			
77	EXTWCSEL	I/O	197	EXTWC[8]	I/O	Unrestricted user-programmable Input/Output pin					
78	PCPOUT	I/O	198	EXTWC[9]	I/O		Unrestricted user-programmable Input/Output pin				
79	MWC	I/O	199	CIN48K96K	I/O			Unrestricted user-programmable Input/Output pin			
80	V <sub>CC</sub>		200	CINPLLINH	I/O				Unrestricted user-programmable Input/Output pin		
81	MSYNC	I/O	201	V <sub>CC</sub>		Power supply +5V					
82	M64FS	I/O	202	DT[0]	I/O	Unrestricted user-programmable Input/Output pin					
83	GND		203	DT[1]	I/O		Unrestricted user-programmable Input/Output pin				
84	M128FS	I/O	204	GND		Ground					
85	M256FS	I/O	205	DT[2]	I/O	Unrestricted user-programmable Input/Output pin					
86	MUTEIN	I/O	206	DT[3]	I/O		Unrestricted user-programmable Input/Output pin				
87	MUTEOUT	I/O	207	DT[4]	I/O			Unrestricted user-programmable Input/Output pin			
88	/CSDSP6[1]	I/O	208	DT[5]	I/O				Unrestricted user-programmable Input/Output pin		
89	I/O (/INIT)	I/O	209	DT[6]	I/O	Unrestricted user-programmable Input/Output pin					
90	V <sub>CC</sub>		210	DT[7]	I/O		Unrestricted user-programmable Input/Output pin				
91	GND		211	GND				Ground			
92	/CSDSP6[2]	I/O	212	V <sub>CC</sub>				Power supply +5V			
93	/CSDSP6[3]	I/O	213	DT[8]	I/O	Unrestricted user-programmable Input/Output pin					
94	/CSDSP6[4]	I/O	214	DT[9]	I/O		Unrestricted user-programmable Input/Output pin				
95	/CSDSP6[5]	I/O	215	DT[10]	I/O			Unrestricted user-programmable Input/Output pin			
96	/CSDSP6[6]	I/O	216	DT[11]	I/O				Unrestricted user-programmable Input/Output pin		
97	/CSDSP6[7]	I/O	217	DT[12]	I/O	Unrestricted user-programmable Input/Output pin					
98	GND		218	DT[13]	I/O		Unrestricted user-programmable Input/Output pin				
99	/CSDSP6[8]	I/O	219	GND				Ground			
100	/CSDSP7[1]	I/O	220	DT[14]	I/O			Unrestricted user-programmable Input/Output pin			
101	V <sub>CC</sub>		221	DT[15]	I/O	Unrestricted user-programmable Input/Output pin					
102	/CSDSP7[2]	I/O	222	V <sub>CC</sub>			Power supply +5V				
103	/CSDSP7[3]	I/O	223	AD[16]	I/O	Unrestricted user-programmable Input/Output pin					
104	/CSDSP7[4]	I/O	224	/JK1_WRH	I/O		Unrestricted user-programmable Input/Output pin				
105	/CSDSP7[5]	I/O	225	AD[1]	I/O			Unrestricted user-programmable Input/Output pin			
106	GND		226	AD[2]	I/O				Unrestricted user-programmable Input/Output pin		
107	/CSDSP7[6]	I/O	227	GND		Ground					
108	/CSDSP7[7]	I/O	228	AD[3]	I/O	Unrestricted user-programmable Input/Output pin					
109	/CSDSP7[8]	I/O	229	AD[4]	I/O		Unrestricted user-programmable Input/Output pin				
110	/CSDSP7[9]	I/O	230	AD[5]	I/O			Unrestricted user-programmable Input/Output pin			
111	/CSDSP7[10]	I/O	231	AD[6]	I/O				Unrestricted user-programmable Input/Output pin		
112	/CSDSP7[11]	I/O	232	AD[7]	I/O	Unrestricted user-programmable Input/Output pin					
113	/CSDSP7[12]	I/O	233	AD[8]	I/O		Unrestricted user-programmable Input/Output pin				
114	/CSDSP7[13]	I/O	234	AD[11]	I/O			Unrestricted user-programmable Input/Output pin			
115	/CSDSP7[14]	I/O	235	AD[12]	I/O				Unrestricted user-programmable Input/Output pin		
116	/CSATSC[1]	I/O	236	AD[13]	I/O	Unrestricted user-programmable Input/Output pin					
117	/CSATSC[2]	I/O	237	AD[14]	I/O		Unrestricted user-programmable Input/Output pin				
118	I/O/SGCK3	I/O	238	AD[15]	I/O			Unrestricted user-programmable Input/Output pin			
119	GND		239	I/O/SGCK1	I/O				Secondary global		
120	DONE	O	240	V <sub>CC</sub>		Power supply +5V					

**● S1D13305F00B100 (XQ595A00) LCDC (LCD Controller)**

CPU1: IC129

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION	
1	VA5	O	} VRAM address bus	31	XD2	O	} Data bus output for 4 bit dot	
2	VA4	O		32	XD1	O		
3	VA3	O		33	XD0	O		
4	VA2	O		34	XECL	O		S driver enable, chain clock
5	VA1	O		35	XSCL	O		Data bus shift clock
6	VA0	O		36	Vss	-		Ground
7	/VWR	O	VRAM read/write	37	LP	O	X driver latch pulse	
8	/VCE	O	Memory control	38	WF	O	Frame signal for X/Y driver	
9	/VRD	-	Not used	39	YDIS	O	Power down signal for displaying off mode	
10	/RES	I	Initial clear	40	YD	O	Scan start signal	
11	NC	-	Not used	41	YSCL	O	Scan shift clock	
12	NC	-	Not used	42	VD7	I/O	} VRAM data bus	
13	/RD	I	Read strobe	43	VD6	I/O		
14	/WR	I	Write strobe	44	VD5	I/O		
15	SEL2	I	Bus select	45	VD4	I/O		
16	SEL1	I	Bus select	46	VD3	I/O		
17	OSC1	I	Clock	47	VD2	I/O		
18	OSC2	O	Clock	48	VD1	I/O		
19	/CS	I	Chip select	49	VD0	I/O	} VRAM address bus	
20	A0	I	Data mode select	50	VA15	O		
21	Vdd	-	Power supply	51	VA14	O		
22	D0	I/O	} Data bus	52	VA13	O		
23	D1	I/O		53	VA12	O		
24	D2	I/O		54	VA11	O		
25	D3	I/O		55	VA10	O		
26	D4	I/O		56	VA9	O		
27	D5	I/O		57	VA8	O		
28	D6	I/O	} Data bus output for 4 bit dot	58	VA7	O		
29	D7	I/O		59	VA6	O		
30	XD3	O		60	NC	-	Not used	

**● AK4393-VF-E2 (XW029A00) DAC (Digital to Analog Converter)**
ADA: IC151, 251, 351, 451  
DA: IC903-906

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	DVSS	-	Digital ground	15	BVSS	-	Substrate ground
2	DVDD	-	Digital power supply	16	VREFL	I	Low level voltage reference
3	MCLK	I	Master clock	17	VREFH	I	High level voltage reference
4	/PD	I	Power down mode	18	AVDD	-	Analog power supply +5 V
5	BICK	I	Audio serial data clock	19	AVSS	-	Analog ground
6	SDATA	I	Audio serial data input	20	AOUTR-	O	Rch negative analog output
7	LRCK	I	L/R clock	21	AOUTR+	O	Rch positive analog output
8	SMUTE//CS	I	Soft mute	22	AOURL-	O	Lch negative analog output
9	DFS	I	Double speed sampling mode	23	AOURL+	O	Lch positive analog output
10	DEMO/CCLK	I	} De-emphasis enable	24	VCOM	O	Common voltage output
11	DEM1/CDTI	I		25	P//S	I	Parallel/serial select
12	DIF0	I		} Digital input format	26	CKS0	I
13	DIF1	I	27		CKS1	I	
14	DIF2	I	28		CKS2	I	

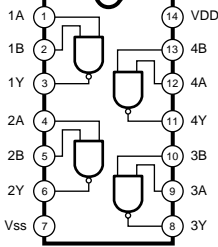
**● AK5383-VS (XW272A00) ADC (Analog to Digital Converter)**
AD1: IC103, 203, 303, 403, 503, 603  
ADA: IC103, 203, 303, 403, 503, 552, 603, 703, 803

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	VREFL	O	Lch voltage reference output	15	SDATA	O	Serial data output
2	GNDL	O	Lch ground	16	FSYNC	I/O	Frame synchronization clock
3	VCOML	O	Lch common voltage	17	MCLK	I	Master clock input
4	AINL+	I	Lch positive analog input	18	DFS	I	Double speed sampling mode select
5	AINL-	I	Lch negative analog input	19	HPFE	I	HPF enable
6	ZCAL	I	Zero calibration	20	TEST	I	Test
7	VD	I	Digital power supply +3.3V	21	BGND	-	Substrate ground
8	DGND	-	Digital ground	22	AGND	-	Analog ground
9	CAL	O	Calibration status	23	VA	-	Analog power supply +5V
10	/RST	I	Reset	24	AINR-	I	Rch negative analog input
11	SMODE2	I	} Serial interface mode select	25	AINR+	I	Rch positive analog input
12	SMODE1	I		26	VCOMR	O	Rch common voltage
13	LRCK	I/O	L/R channel select clock	27	GNDR	-	Rch ground
14	SCLK	I/O	Serial data clock	28	VREFR	O	Rch voltage reference output

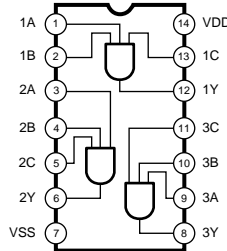
# IC BLOCK DIAGRAM

## 02R96

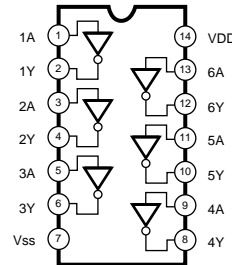
- **TC74VHC00F (XT229A00)**  
CPU1: IC133  
DSP: IC058, 704
- **MM74HC00SJX (XW105A00)**  
FD1: IC138  
FD2: IC127
- **HD74LV00AFPEL (IS000000)**  
SUB: IC704  
Quad 2 Input NAND



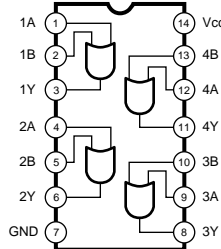
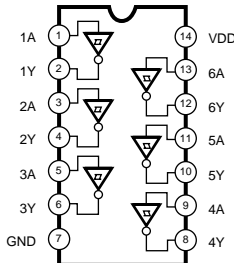
- **TC74VHC11F (EL) (XT812A00)**  
DSP: IC411-413  
Triple 3 Input AND



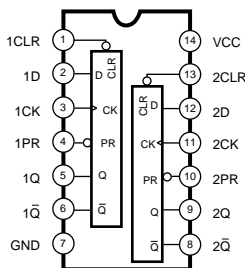
- **TC74VHC04F (EL) (XM332A00)**  
CPU1: IC132  
DSP: IC702  
JK1: IC407, 408
- **HD74LV04AFPEL (IS000400)**  
SUB: IC907
- **HD74LVU04AFPEL (XY102A00)**  
SUB: IC706
- **SN74HCU04NSR (XW842A00)**  
JK1: IC001
- **HD74LS06FPEL (XH610A00)**  
FD1: IC130-132  
FD2: IC120, 121  
Hex Inverter



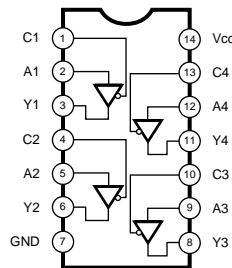
- **TC74VHC14F-EL (XW876A00)**  
DSP: IC057, 072  
JK1: IC456  
JK2 (1/2): IC701  
Hex Inverter
- **TC74VHC32F (EL) (XY537A00)**  
CPU1: IC136, 141  
DSP: IC032, 955
- **TC74HC32AF (XN241A00)**  
DSP: IC033  
Quad 2 Input OR



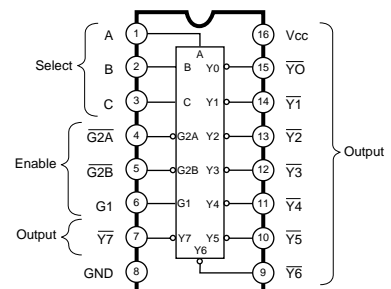
- **TC74VHC74F-EL (XW875A00)**  
DSP: IC105  
Dual D-Type Flip-Flop
- **TC74VHC125F (XW313A00)**  
DSP: IC705  
JK1: IC301
- **HD74LV125AFPEL (IS012500)**  
SUB: IC703  
Quad 3-State Bus Buffer



INPUTS			OUTPUTS	
PR	CLR	CLK	Q	Q
L	H	X	X	L
H	L	X	X	L
L	L	X	X	H
H	H	f	H	L
H	H	f	L	H
H	H	L	X	Q <sub>o</sub>

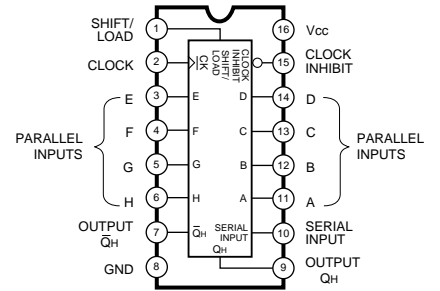
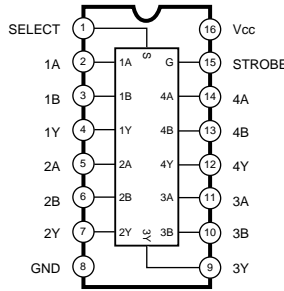
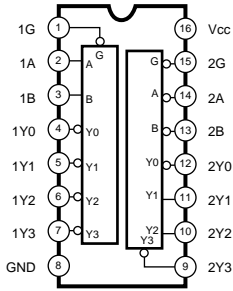


- **SN74LV138ANSR (IS013810)**  
SUB: IC900
- **TC74HC138AFEL (XW762A00)**  
SUB: IC906, 910
- **TC74VHC138F (XT015A00)**  
JK1: IC402  
JK2 (1/2): IC907  
3 to 8 Demultiplexer

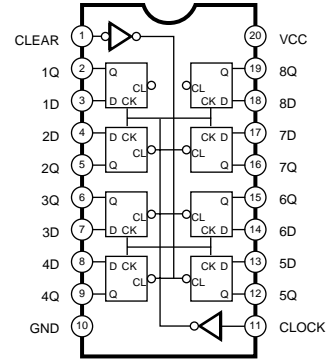
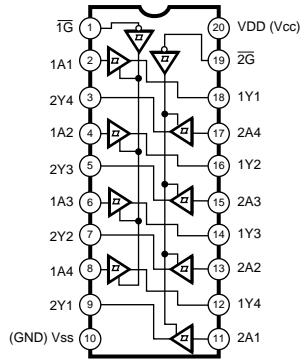
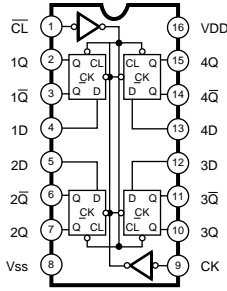




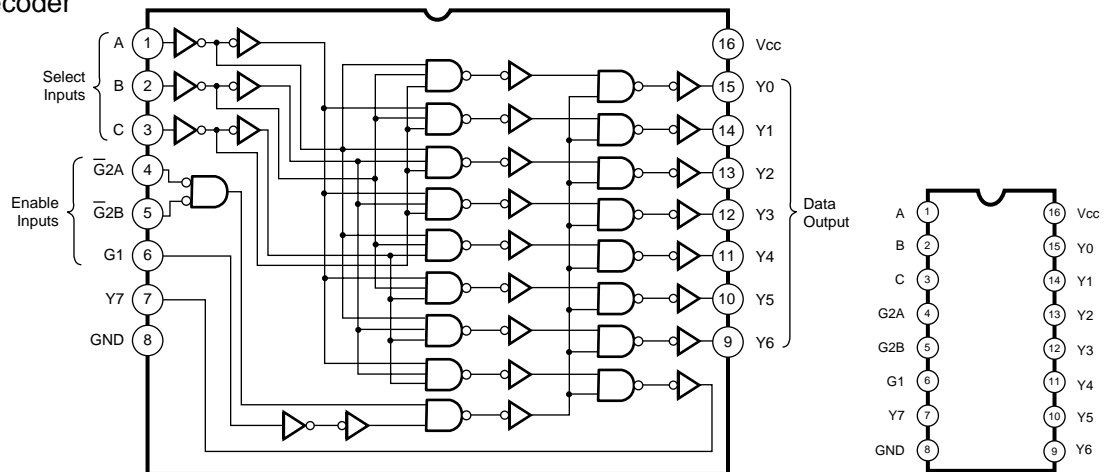
- TC74VHC139F (EL) (XW324A00)** • **TC74VHC157F (EL) (XT475A00)** • **HD74LV165AFPEL (IS016500)**  
 CPU1: IC125  
 JK1: IC401  
 Dual 2 to 4 Demultiplexer
- DSP: IC608-611, 655-658  
 Quad 2 to 1 Multiplexer
- PN1: IC104, 105  
 PN2: IC102, 103, 503  
 8-Bit Shift Register



- HD74LV175AFPEL (IS017500)**  
 JK2 (1/2): IC802  
 Quad D-Type Flip-Flop
- TC74VHC244F (XT800A00)**  
 CPU1: IC118  
 DSP: IC904, 905  
 JK1: IC455, 459  
 JK2 (1/2): IC903, 904  
 Octal 3-State Bus Buffer
- MM74HC273SJX (XY198A00)**  
 FD1: IC104-109  
 FD2: IC104-107
- TC74VHC273F (EL) (XY254A00)**  
 JK1: IC404-406  
 JK2 (1/2): IC801, 909  
 Octal D-Type Flip-Flop



- TC74HC238AF (XT163A00)**  
 PN1: IC101  
 PN2: IC108, 109, 500  
 3 to 8 Line Decoder



● **HD74LV245AFPEL** (IS024500)

SUB: IC601, 602

● **TC74HC245AF** (XS720A00)

AD1: IC001, 002  
 ADA: IC001, 002, 004, 005  
 DA: IC901, 902  
 FD1: IC101-103  
 FD2: IC101-103  
 PN1: IC100  
 PN2: IC100, 101  
 SUB: IC701, 904, 905, 908, 909, 911-913

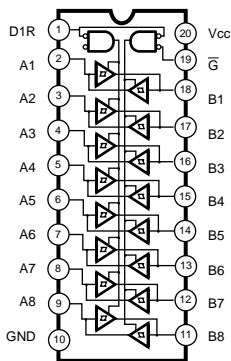
● **TC74VHC245F** (XT487A00)

CPU1: IC115-117, 119-121, 126, 134, 135  
 DSP: IC005-009, 013-020, 052-054, 067-069, 120, 409, 410, 605-607, 612-615, 802, 805, 851, 901  
 JK1: IC403, 451-454, 457, 458  
 JK2 (1/2): IC804, 901, 902, 905, 906, 908, 910-913

● **TC74VHCT245AF** (XV242A00)

CPU1: IC112, 131  
 DSP: IC002-004, 023-027, 055, 801, 804, 902, 906, 907, 953

Octal 3-State Bus Transceiver



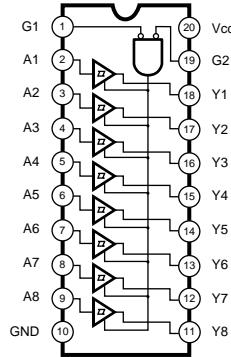
● **74VHC541SJX** (XY961A00)

DSP: IC070, 071, 106, 803, 806, 852, 903, 908, 909, 951, 952

● **HD74LV541AFPEL** (IS054100)

DSP: IC001

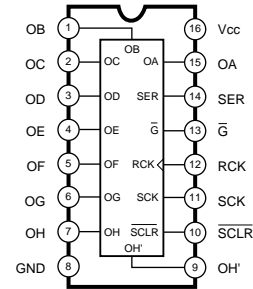
Octal 3-State Buffer



● **HD74LV595AFPEL** (IS059500)

PN1: IC102, 103  
 PN2: IC104-107, 501, 502

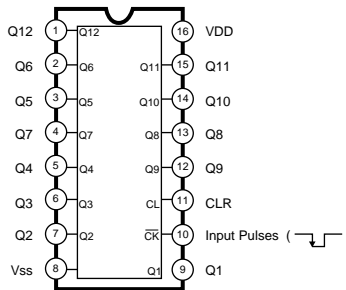
8-Bit Shift Register with Output Latches



● **SN74LV4040ANSR** (IS404010)

DSP: IC701

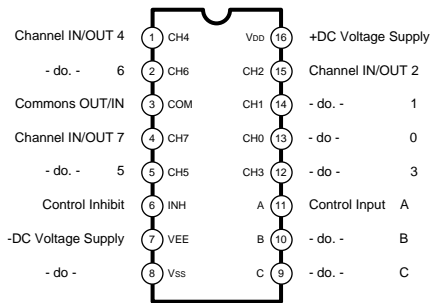
12-Stage Binary Ripple Counter



● **HD74LV4051AFPEL** (IS405100)

FD1: IC139, 140  
 FD2: IC128, 129

Single 8-channel Multiplexer/Demultiplexer



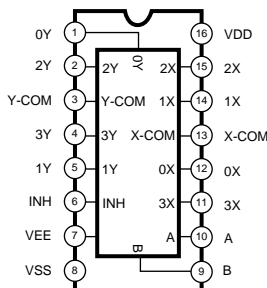
● **SN74LV4052ANSR** (IS405210)

SUB: IC914

● **TC74HC4052AF** (XS790A00)

FD1: IC110, 111  
 FD2: IC108

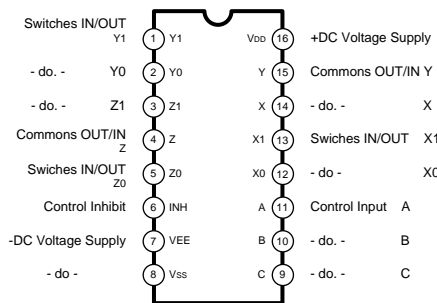
Differential 4-channel Multiplexer/Demultiplexer



● **HD74LV4053AFPEL** (IS405300)

DSP: IC060, 062

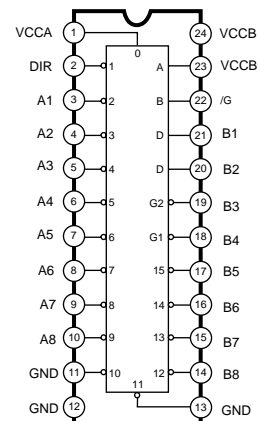
Triple 2-Channel Multiplexer/Demultiplexer



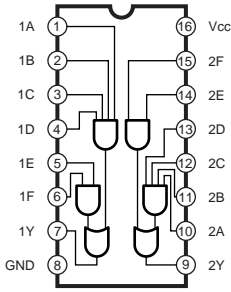
● **TC74LVX4245FS** (XU229A00)

CPU1: IC127  
 DSP: IC010, 011, 021, 022, 028-031

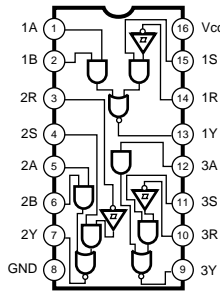
Dual Supply Octal Bus Transceiver



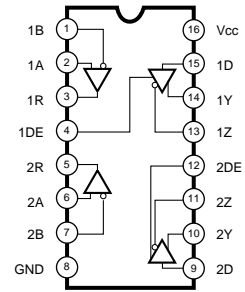
- **SN75121NSR (XU816A00)**  
JK1: IC104  
Dual Line Driver



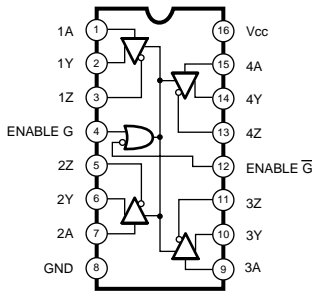
- **SN75124NSR (XV930A00)**  
JK1: IC002  
Triple Line Receiver



- **SN75C1168NSR (XU073A00)**  
JK2 (1/2): IC803  
Line Driver/Receiver



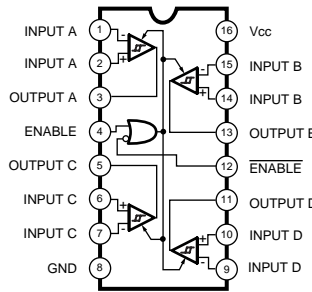
- **AM26LS31CNSR (XU996A00)**  
JK2 (1/2): IC501, 601-604  
Quad Line Driver



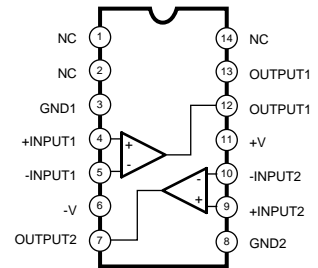
INPUT A	ENABLES		OUTPUTS	
	G	G-bar	Y	Z
H	H	X	H	L
L	H	X	L	H
H	X	L	H	L
L	X	L	L	H
X	L	H	Z	Z

H= high level  
L= low level  
X= irrelevant  
Z= high impedance (off)

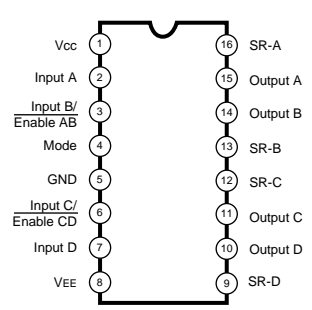
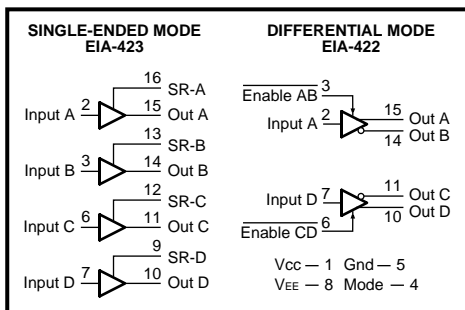
- **DS26C32ATMX (XU815A00)**  
JK1: IC203  
JK2 (1/2): IC502-505, 605  
Quad Differential Line Receiver



- **UPC319G2 (IG156700)**  
JK1: IC304  
Voltage Comparator



- **MC26LS30DR2 (XL334A00)**  
JK1: IC202  
Line Driver



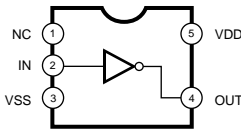
Operation	Vcc	VEE	Inputs				Outputs					
			Mode	A	B	C	D	A	B	C	D	
Differential (EIA-422-A)	+5.0	GND	0	0	0	0	0	0	1	1	0	
			0	1	0	0	1	1	0	0	1	
			0	X	1	0	1	Z	Z	0	1	
			0	1	0	0	0	1	0	0	1	0
			0	0	0	0	1	0	1	0	1	0
Single-Ended (EIA-423-A)	+5.0	-5.0	1	0	0	0	0	0	0	0	0	
			1	1	0	0	0	1	0	0	0	
			1	0	1	0	0	0	1	0	0	
			1	0	0	1	0	0	0	1	0	
			1	0	0	0	1	0	0	0	1	
X	0	X	X	X	X	X	Z	Z	Z	Z		

X = Don't Care  
Z = High Impedance (Off)

● **TC7S04F (XM182A00)**

AD1: IC003  
 ADA: IC003  
 DA: IC900

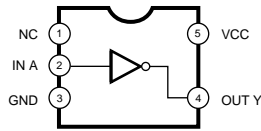
Inverter Gate



● **TC7SH04FU (XS775A00)**

CPU1: IC122  
 DSP: IC012, 066

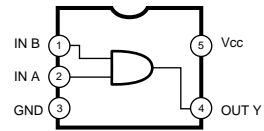
Inverter Gate



● **TC7SH08FU (XR680A00)**

CPU1: IC123, 137

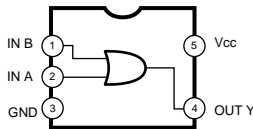
2 Input AND Gate



● **TC7SH32FU (TE85L) (XW633A00)**

DSP: IC051

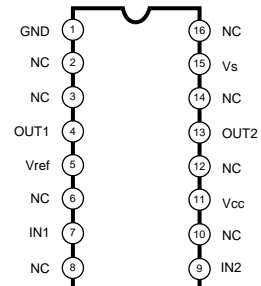
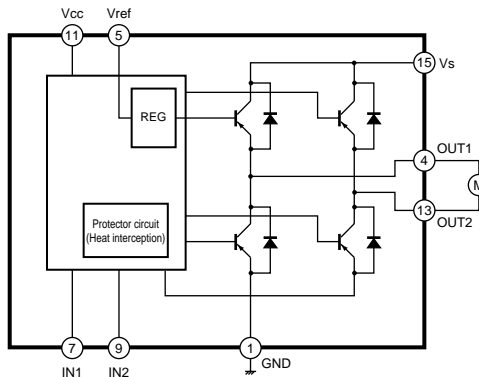
Input OR Gate



● **TA7291F (XW618A00)**

FD1: IC114-129  
 FD2: IC111-119

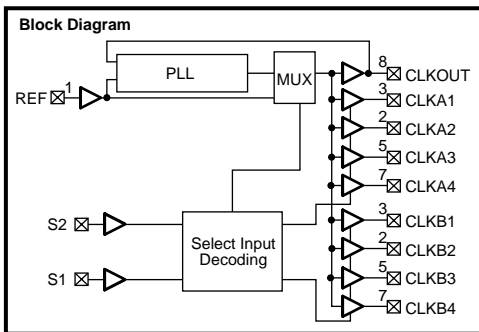
Motor Driver



● **CY2305 (XY937A00)**

CPU1: IC114

Clock Buffer



Pin No.	Signal	Function
1	REF	Input reference frequency, 5V-tolerant input
2	CLK2	Buffered clock output
3	CLK1	Buffered clock output
4	GND	Ground
5	CLK3	Buffered clock output
6	VDD	3.3V supply
7	CLK4	Buffered clock output
8	CLKOUT	Buffered clock output, internal feedback on this pin

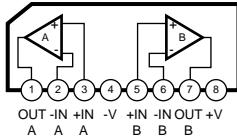
● **NJM2068L-D** (XM356A00)

2TR1: IC101, 102  
 PHN: IC202  
 ANI1: IC100, 101  
 ANI2: IC100, 101, 200, 201

● **NJM4556AL** (XP844A00)

PHN: IC201  
 ST: IC301, 401  
 DA: IC102, 202, 302, 402, 502, 602, 702, 802

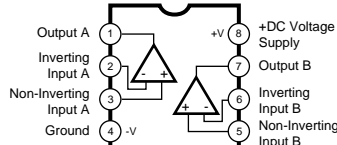
Dual Operational Amplifier



● **NJM2904V (TE1)** (XR532A00)

CPU1: IC139  
 FD1: IC112, 113, 137  
 FD2: IC109, 110, 126  
 SUB: IC608

Dual Operational Amplifier



● **NJM2068V (TE1)** (XT618A00)

FD1: IC133-136  
 FD2: IC122-125

● **NJM4560M (T1)** (XA862B00)

JK1: IC302

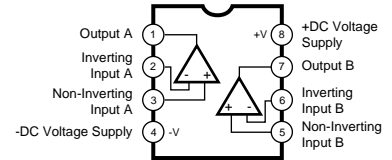
● **μPC4570G2** (XF291A00)

AD1: IC101, 102, 201, 202, 301, 302, 401, 402, 501, 502, 601, 602  
 ADA: IC101, 102, 153, 154, 201, 202, 253, 254, 301, 302, 353-355, 401, 402, 453, 454, 501, 502, 551, 601, 602, 701, 702, 801, 802  
 DA: IC101, 201, 301, 401, 501, 601, 701, 801  
 STD: IC102

● **NJM4580E-T1** (XQ178A00)

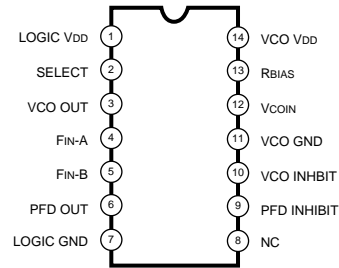
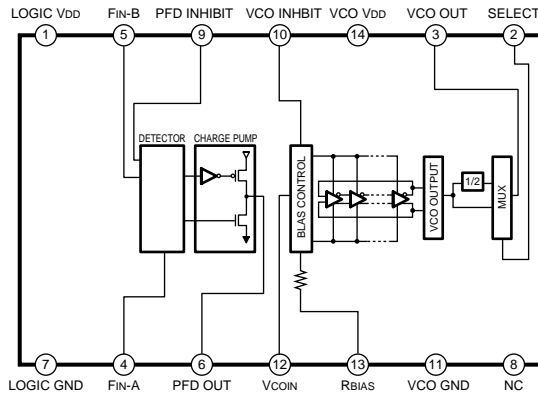
STD: IC101, 201, 301, 401

Dual Operational Amplifier



● **TLC2932IPWR** (XV064A00)

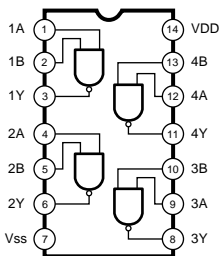
DSP: IC061, 063  
 PLL



● **MB02R96**

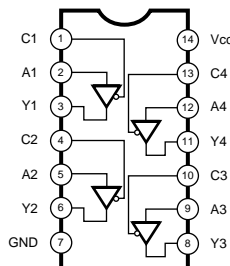
● **SN74HC00NSR** (XE165A00)

PN2: IC500  
 Quad 2 Input NAND



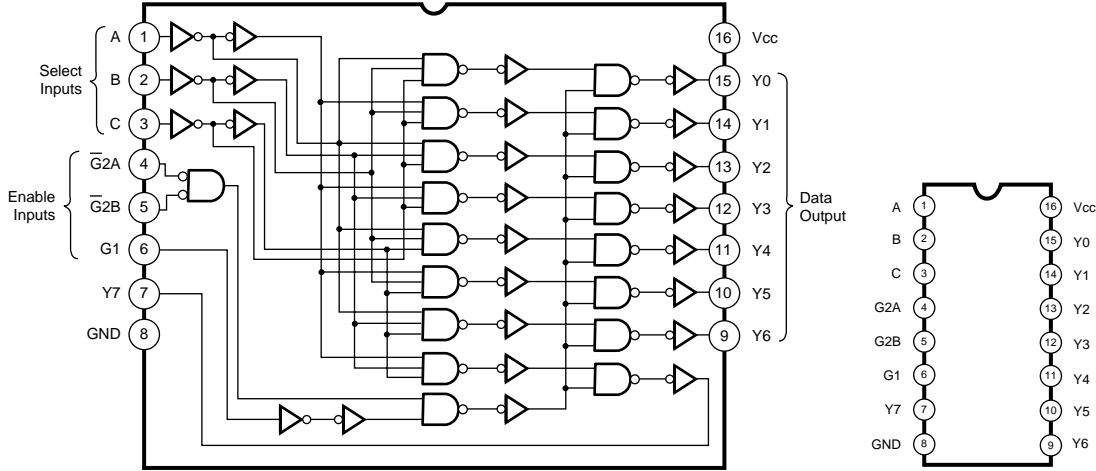
● **SN74HC125NSR** (XH218A00)

PN2: IC501  
 Quad 3-State Bus Buffer



● **TC74HC238AF** (XT163A00)

PN2: IC511  
3 to 8 Line Decoder

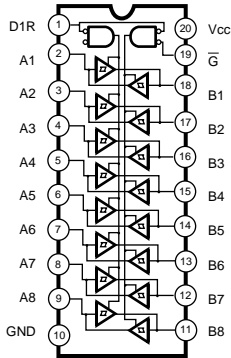


● **SN74HC245NSR** (XD838A00)

PN2: IC510

● **TC74HC245AF** (XS720A00)

PN1: IC100  
Octal 3-State Bus Transceiver

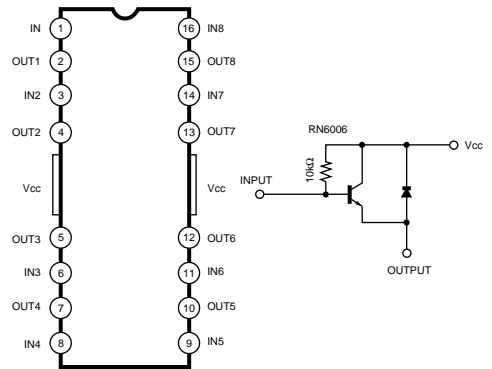
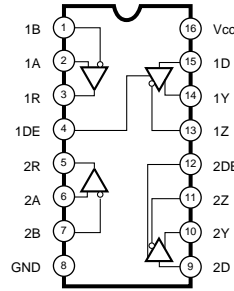


● **SN75C1168N** (XU463A00)

DC1: IC303  
Line Driver/Receiver

● **TD62M8600F** (XV014A00)

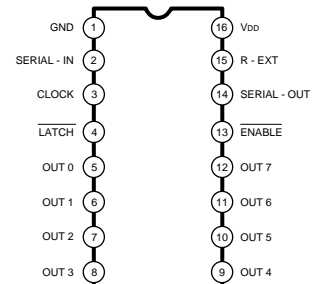
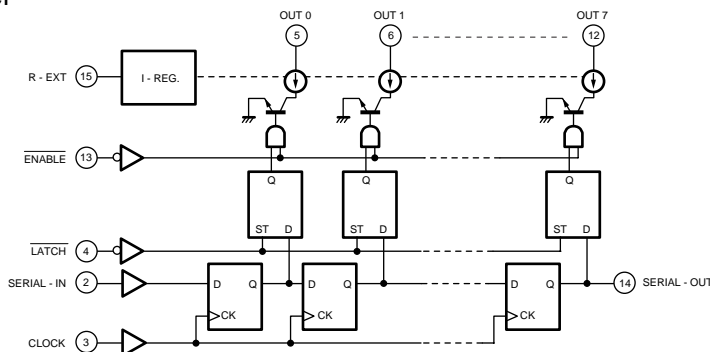
PN1: IC101, 300  
PN2: IC600  
Source Driver



● **TB62705CF (EL)** (XV013A00)

PN1: IC102-104, 301, 302  
PN2: IC601-603

LED Driver



## ■ CIRCUIT BOARDS

### ● 02R96

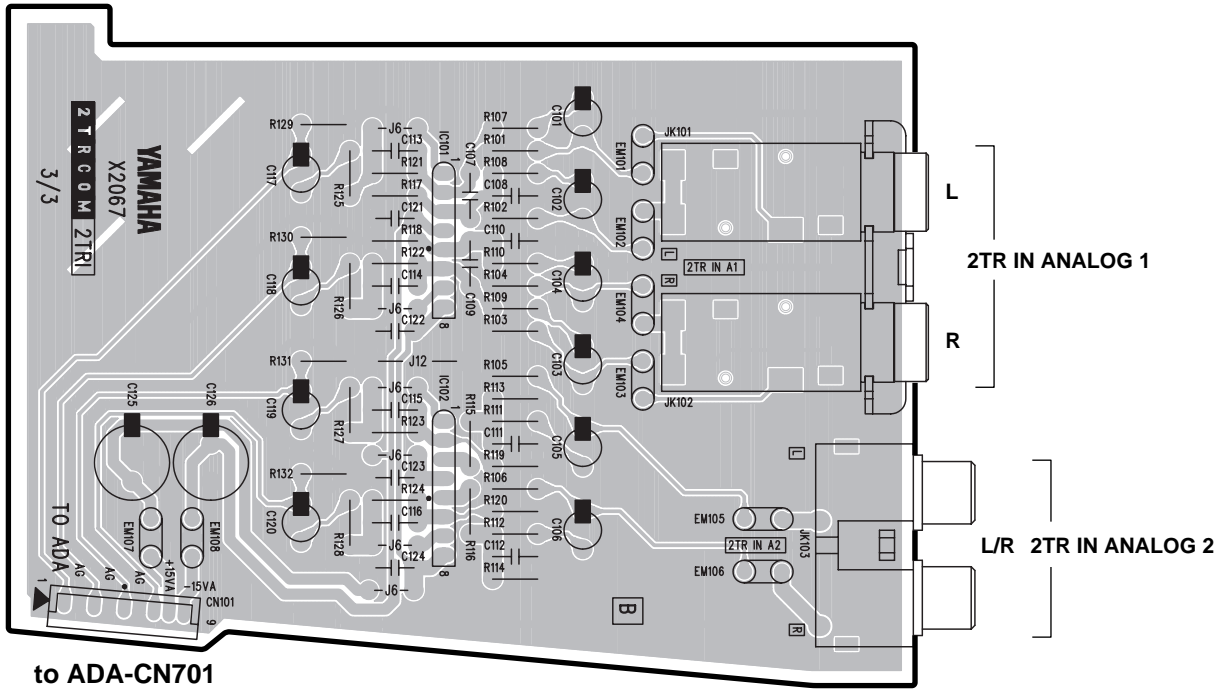
2TRCOM (2TRI) Circuit Board (X2067B0) .....	72
2TRCOM (PHN) Circuit Board (X2067B0) .....	73
2TRCOM (ST) Circuit Board (X2067B0) .....	74
AD1 Circuit Board (XZ020B0) .....	76/78
ADA Circuit Board (X2064B0) .....	80/82
ANI1 Circuit Board (X2065B0) .....	84
ANI2 (ANI2) Circuit Board (X2066B0) .....	85
ANI2 (LED) Circuit Board (X2066B0) .....	85
BRG Circuit Board (X2062B0) .....	86/88
CPU1 Circuit Board (X0383C0) .....	90/91
DA Circuit Board (XZ021C0) .....	92/93
DSP Circuit Board (X2057C0) .....	94/96/98/100
FD1 Circuit Board (X2053B0) .....	102/104
FD2 Circuit Board (X2054B0) .....	106/107
JKCOM (JK1) Circuit Board (X2058B0) .....	108/109
JKCOM (JK2 (1/2)) Circuit Board (X2058B0) .....	110
JKCOM (JK2 (2/2)) Circuit Board (X2058B0) .....	111
LCDCOM (CNT) Circuit Board (X2160B0) .....	75
LCDCOM (INV) Circuit Board (X2160B0) .....	75
OPT Circuit Board (X2060B0) .....	112/113
PN1COM (PN1) Circuit Board (X2050B0) .....	114/116
PN1COM (PN3) Circuit Board (X2050B0) .....	118/119
PN1COM (PW) Circuit Board (X2050B0) .....	118/119
PN1COM (SUB) Circuit Board (X2050B0) .....	120/122
PN2COM (PN2) Circuit Board (X2051B0) .....	124/126
PN2COM (JS) Circuit Board (X2051B0) .....	124/127
STD Circuit Board (X2068B0) .....	128

### ● MB02R96

DC1 Circuit Board (XZ038B0) .....	129
PNCOM (PN1) Circuit Board (X2069C0) .....	130
PNCOM (PN2) Circuit Board (X2069C0) .....	132/133

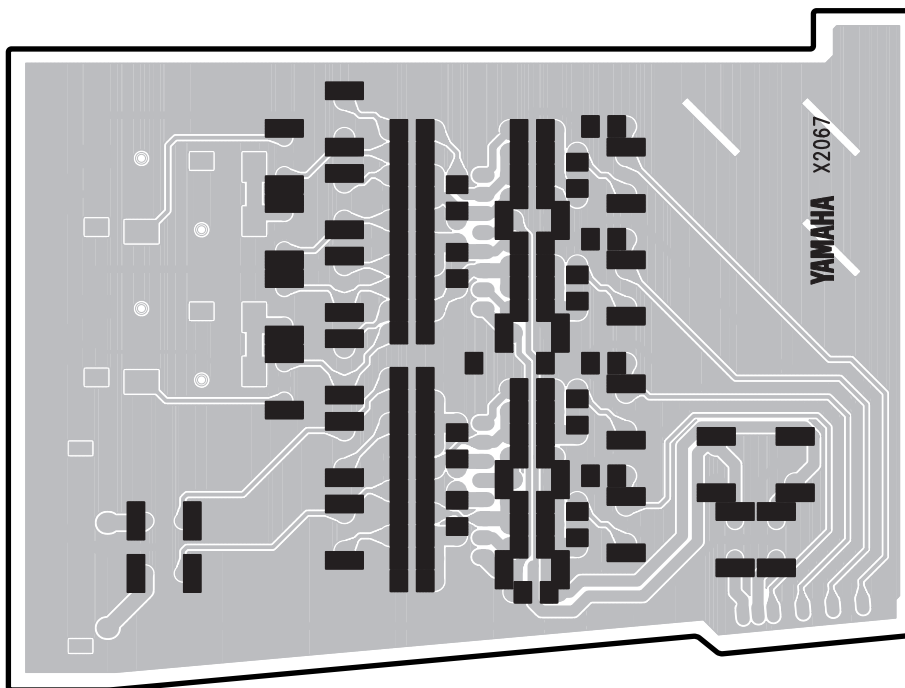
Note: See parts list for details of circuit board component parts.

• 2TRCOM (2TRI) Circuit Board



to ADA-CN701

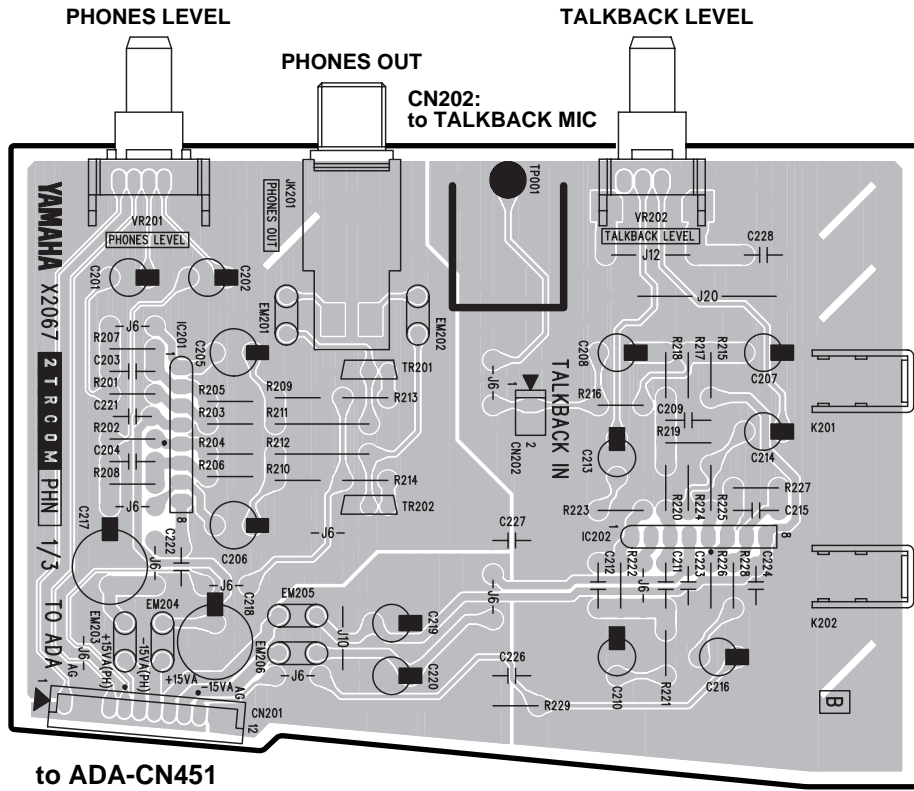
Component side



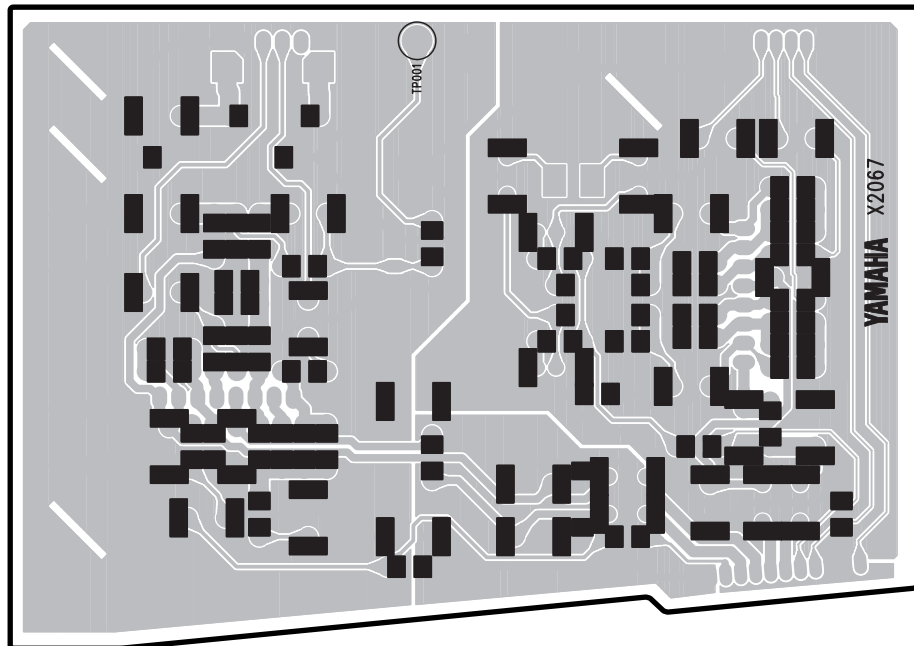
Pattern side



• 2TRCOM (PHN) Circuit Board

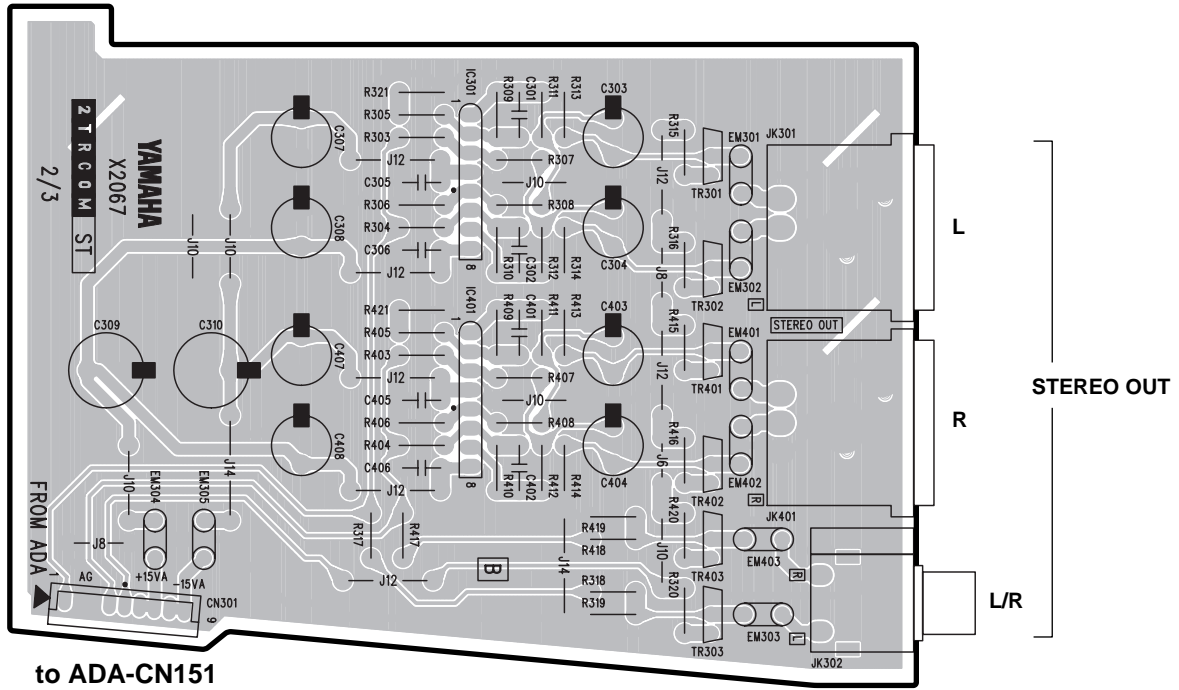


Component side



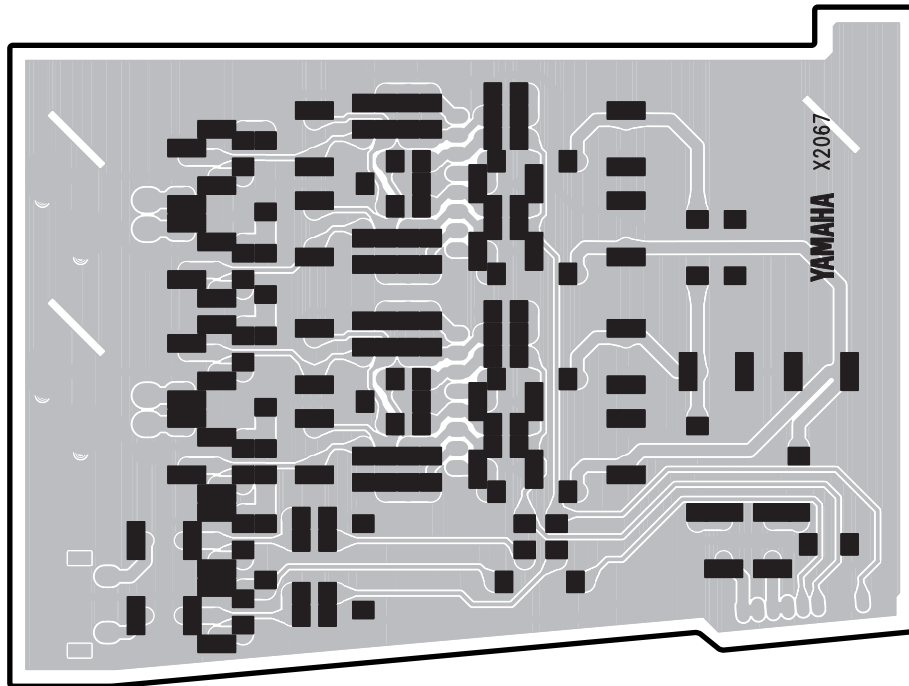
Pattern side

● 2TRCOM (ST) Circuit Board



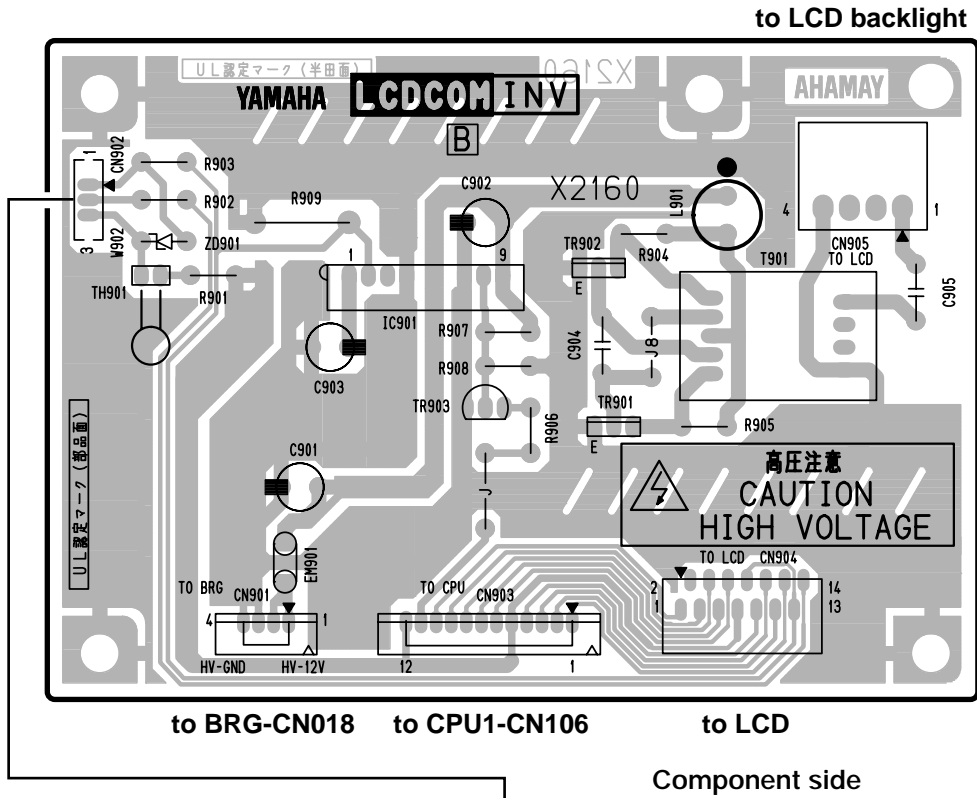
to ADA-CN151

Component side

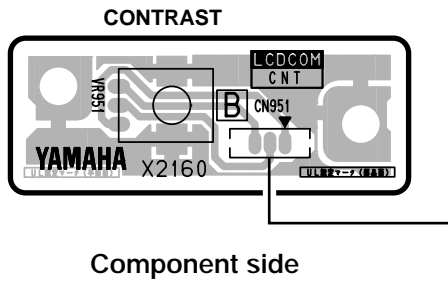


Pattern side

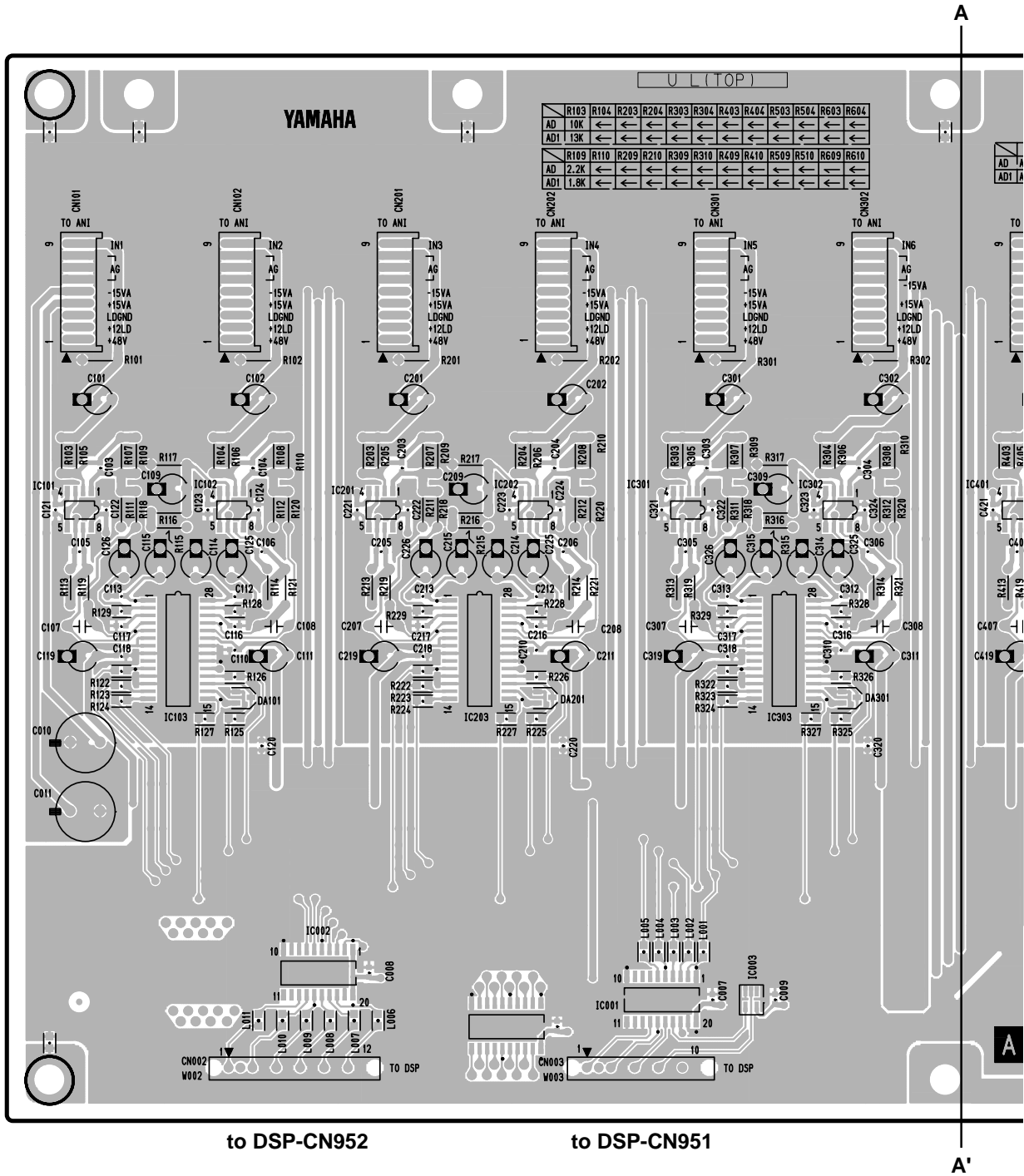
• LCDCOM (INV) Circuit Board

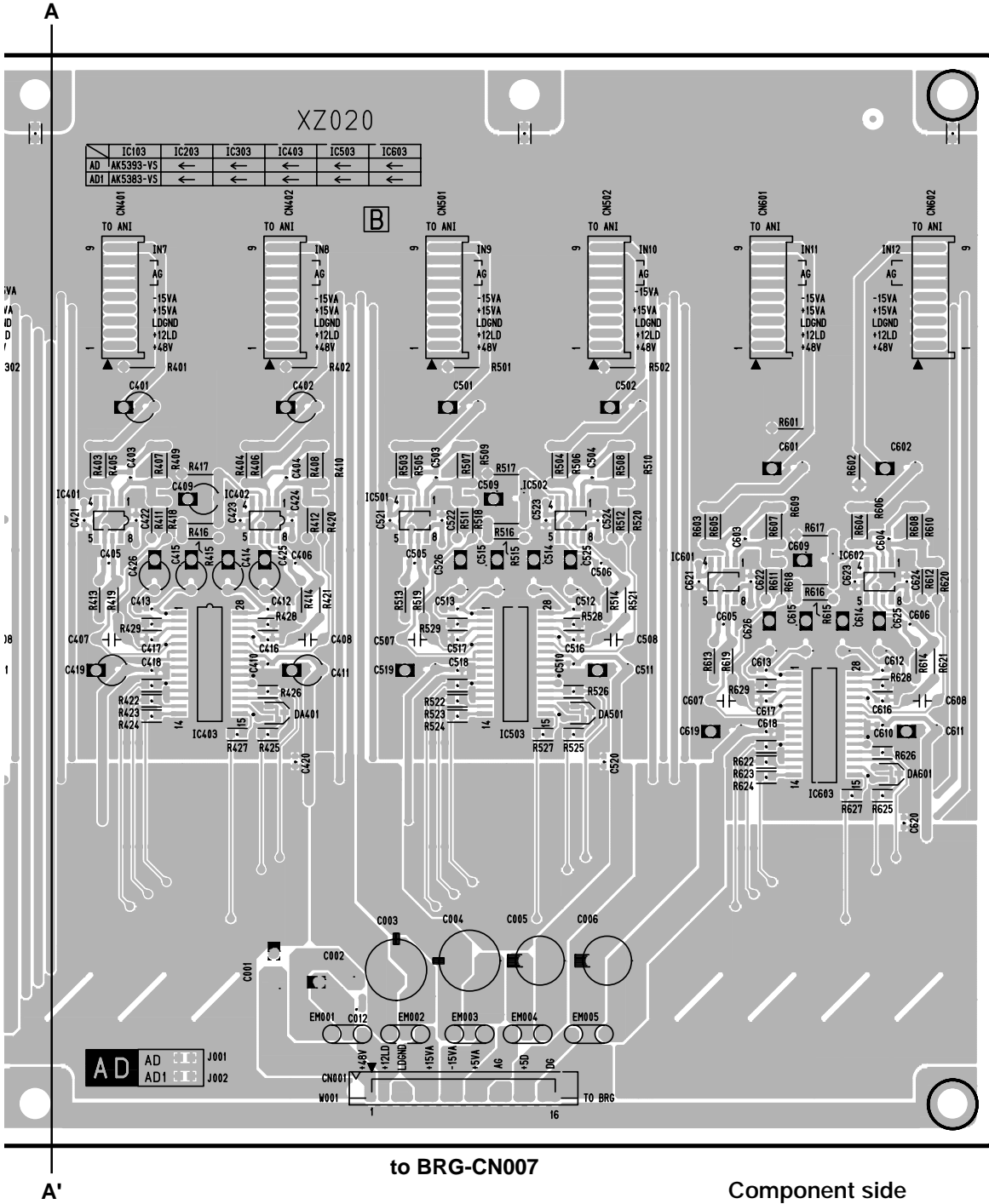


• LCDCOM (CNT) Circuit Board



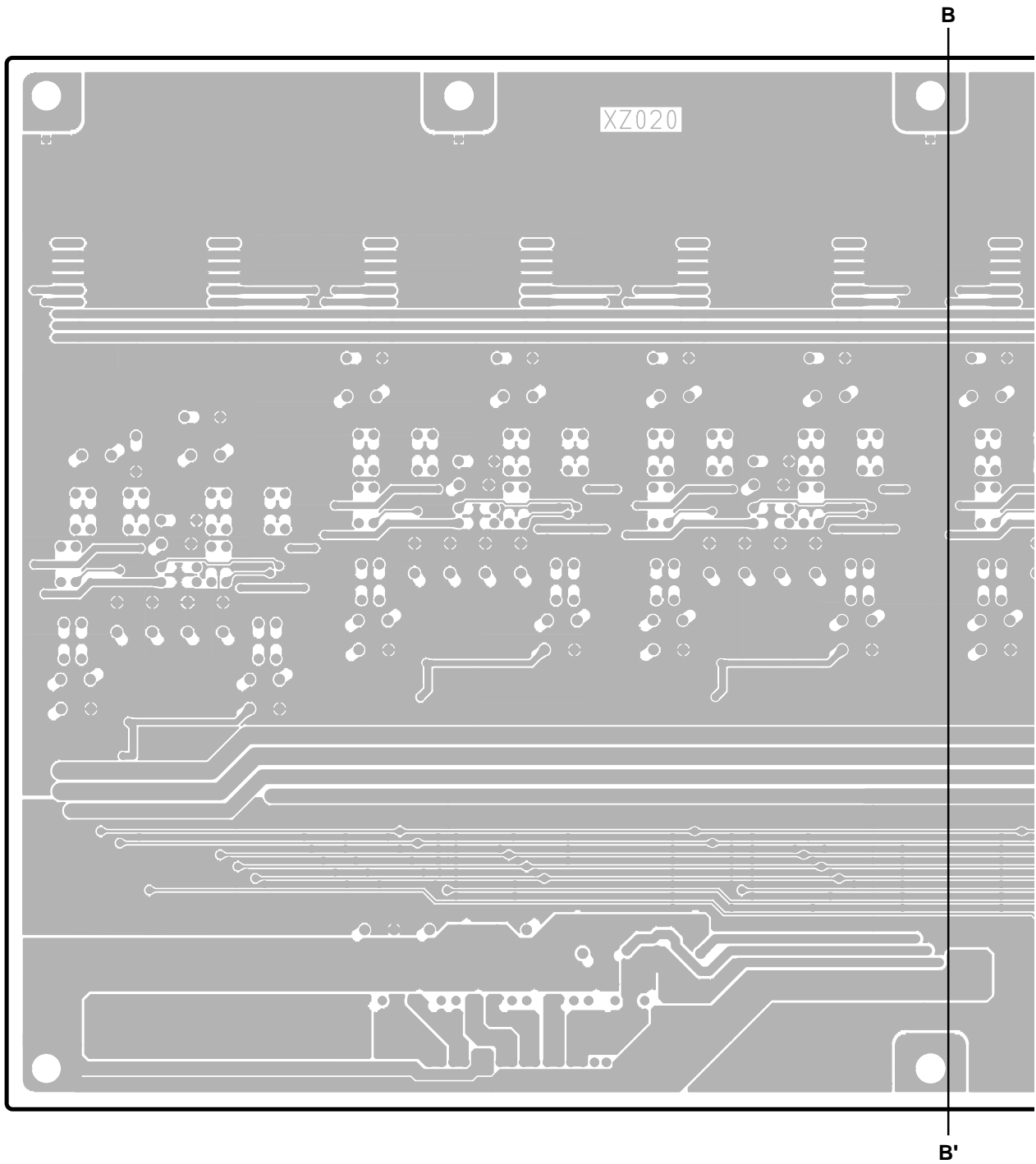
• AD1 Circuit Board

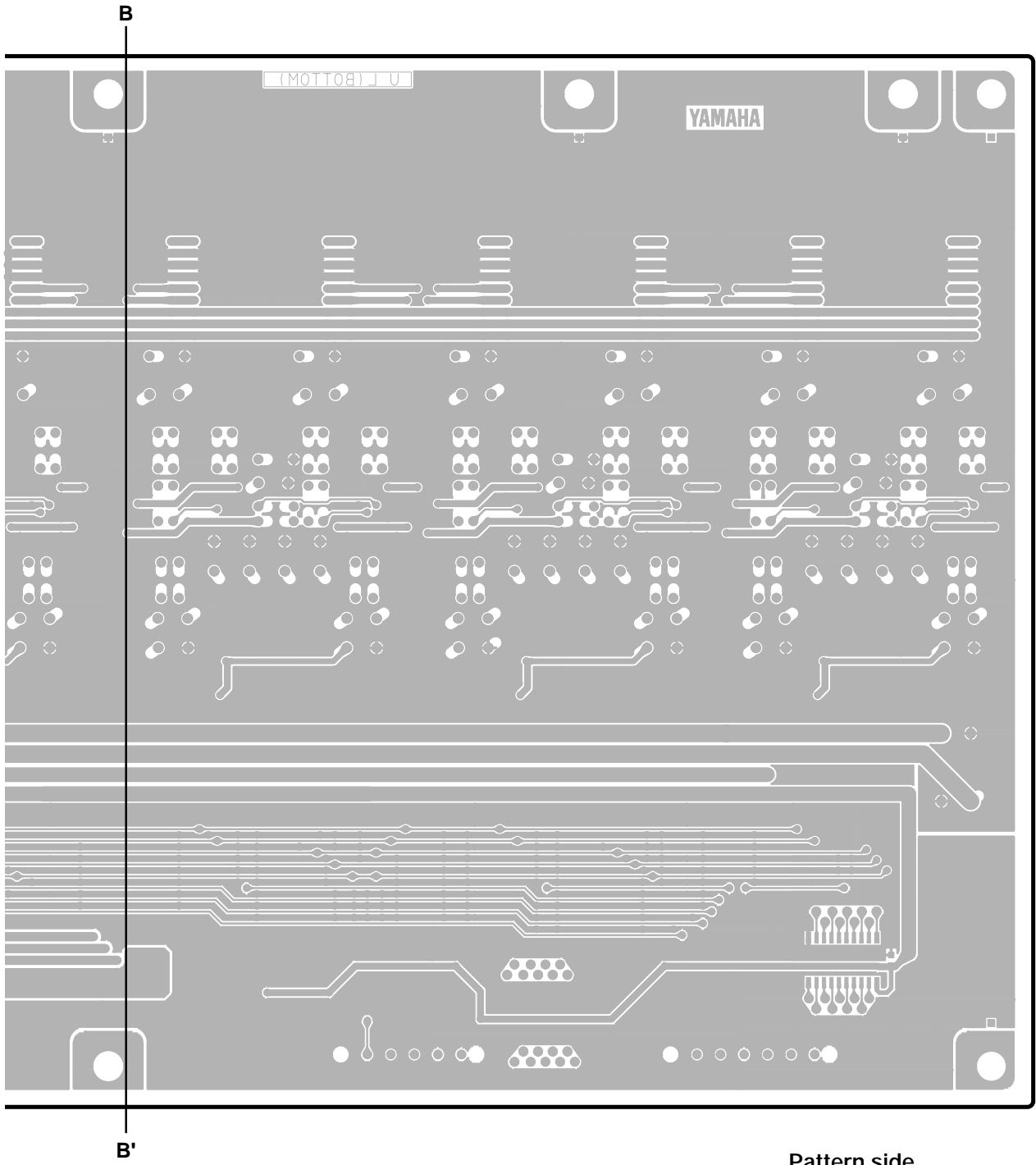




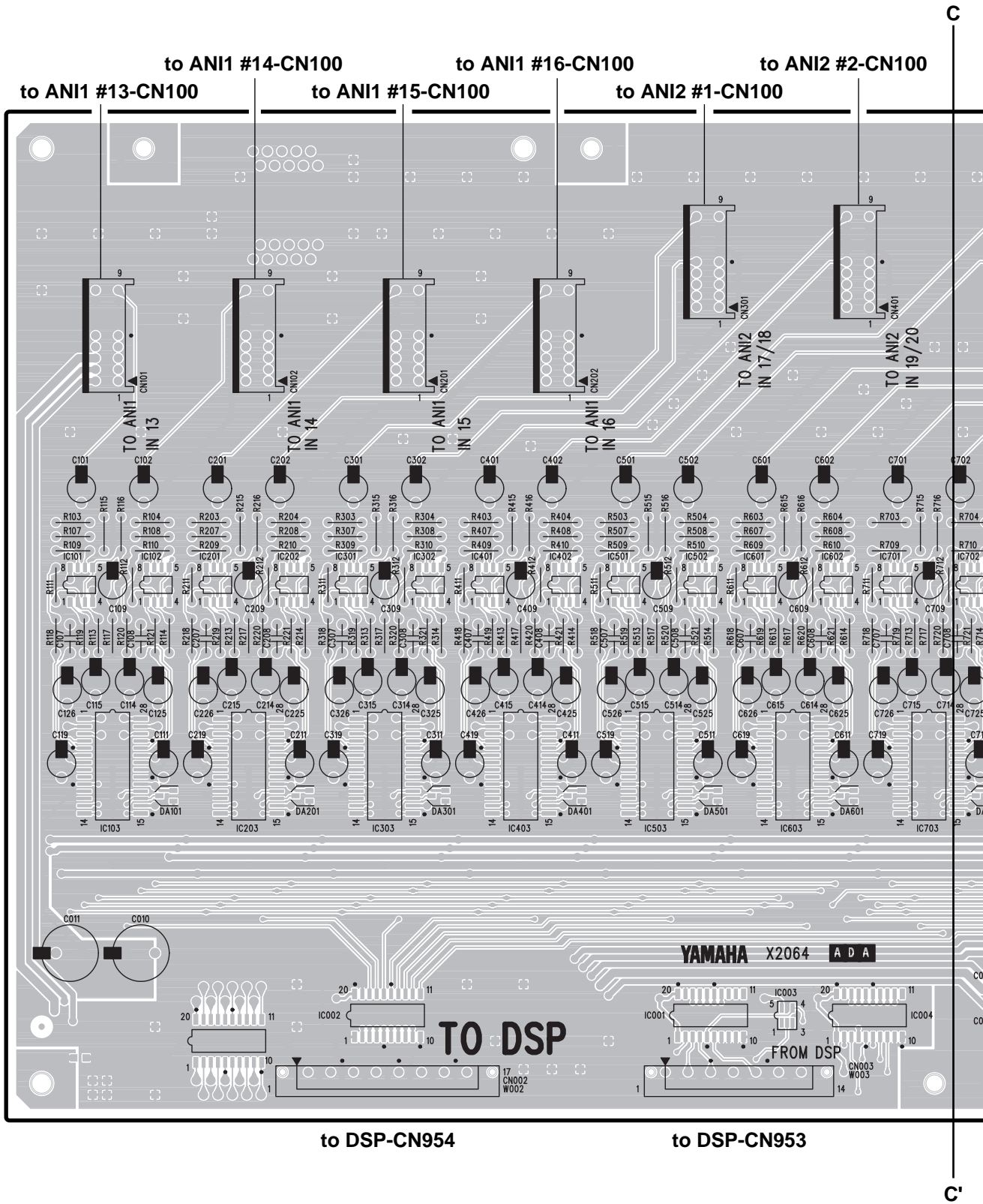
- CN101: to ANI#1-CN100
- CN102: to ANI#2-CN100
- CN201: to ANI#3-CN100
- CN202: to ANI#4-CN100
- CN301: to ANI#5-CN100
- CN302: to ANI#6-CN100
- CN401: to ANI#7-CN100
- CN402: to ANI#8-CN100
- CN501: to ANI#9-CN100
- CN502: to ANI#10-CN100
- CN601: to ANI#11-CN100
- CN602: to ANI#12-CN100

• AD1 Circuit Board

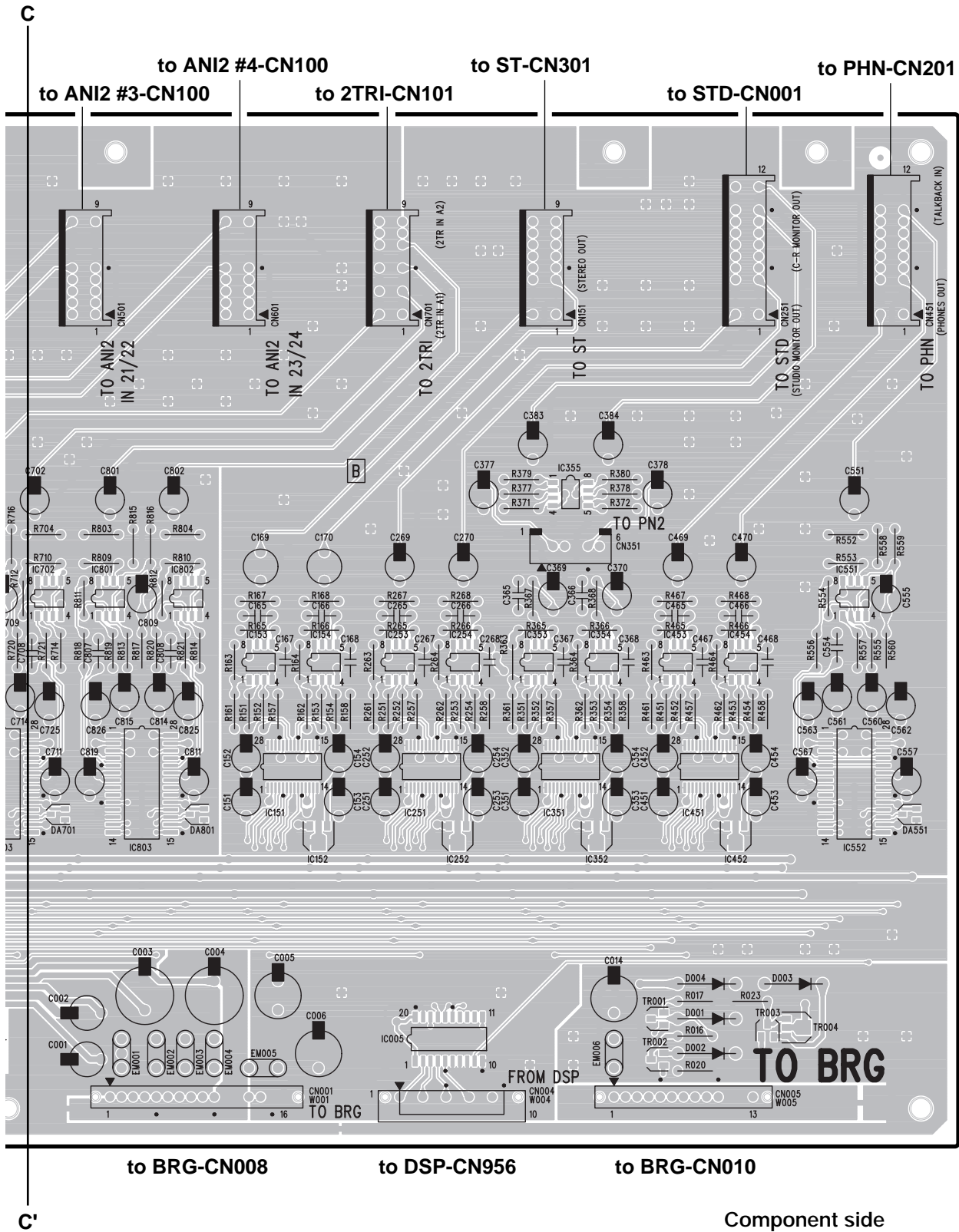




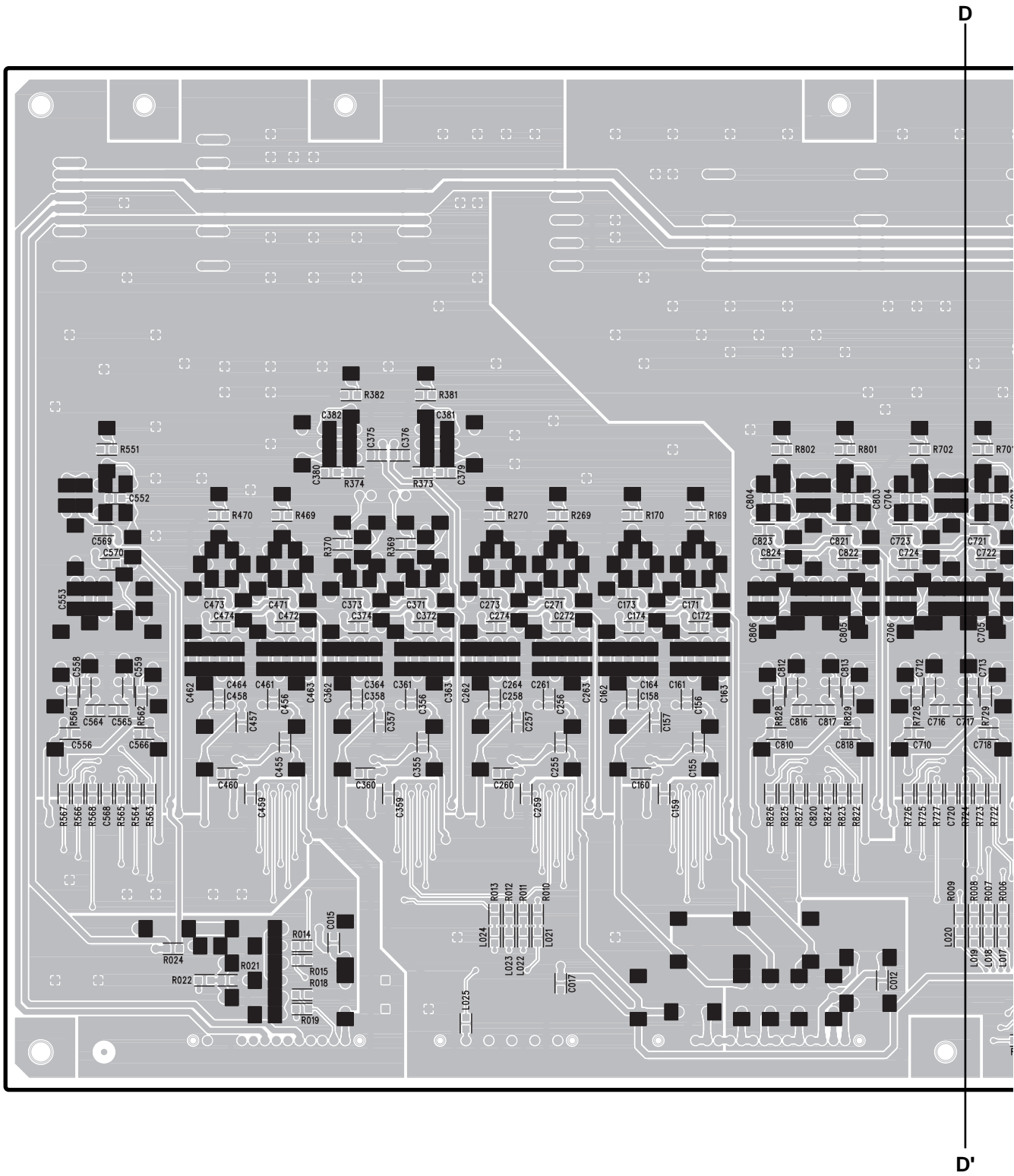
• ADA Circuit Board

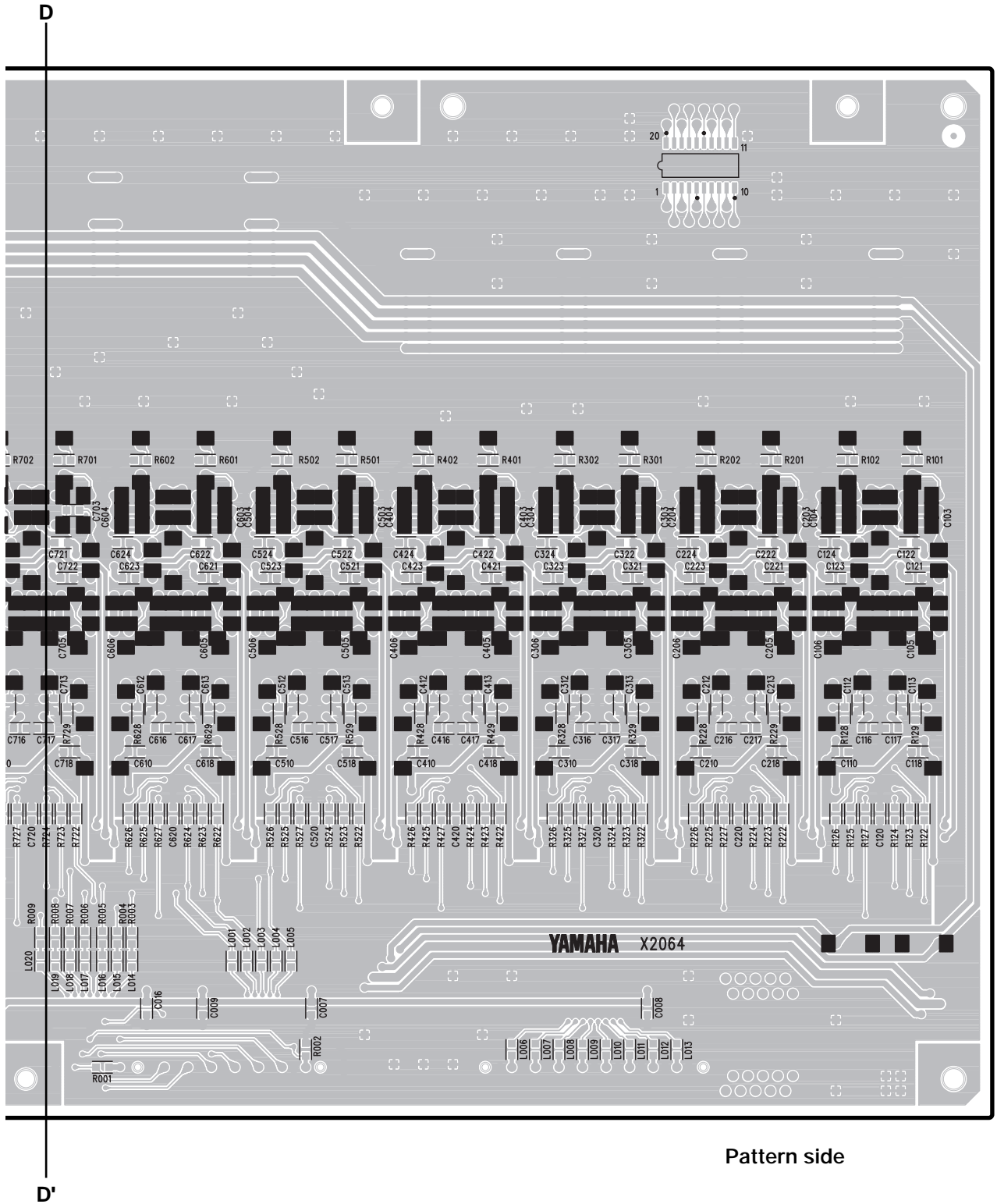






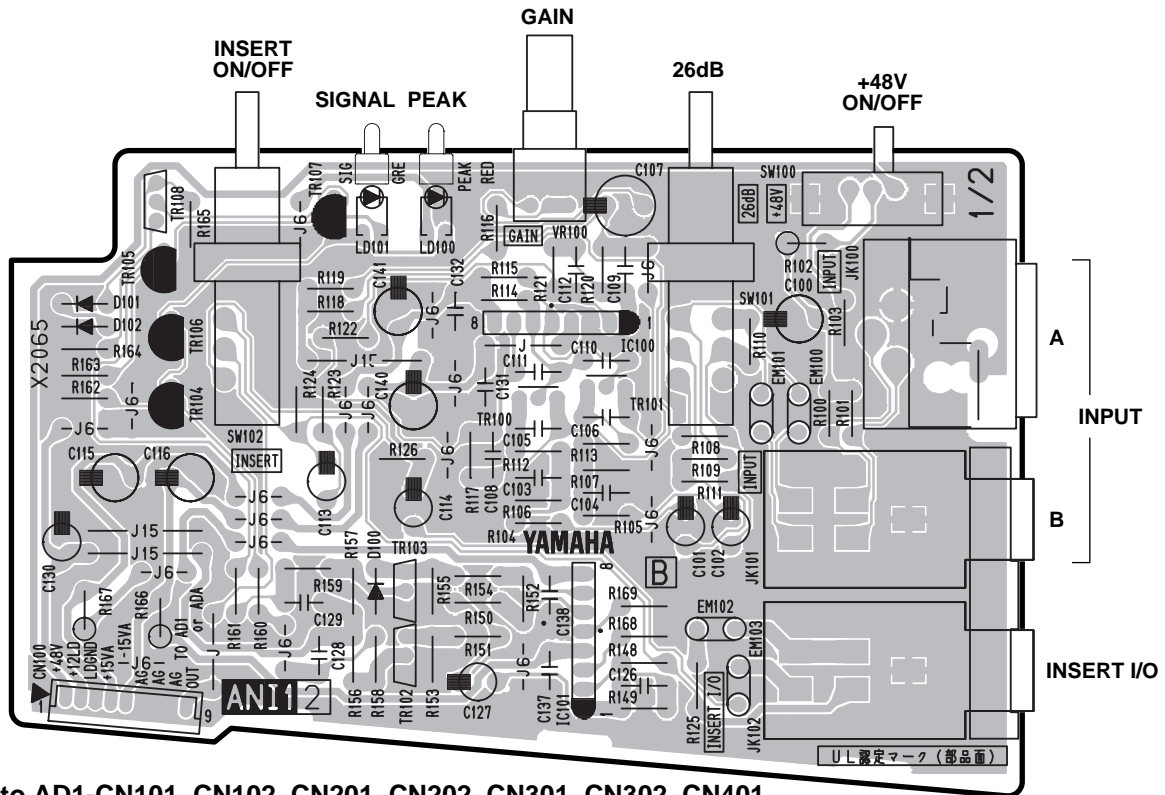
• ADA Circuit Board





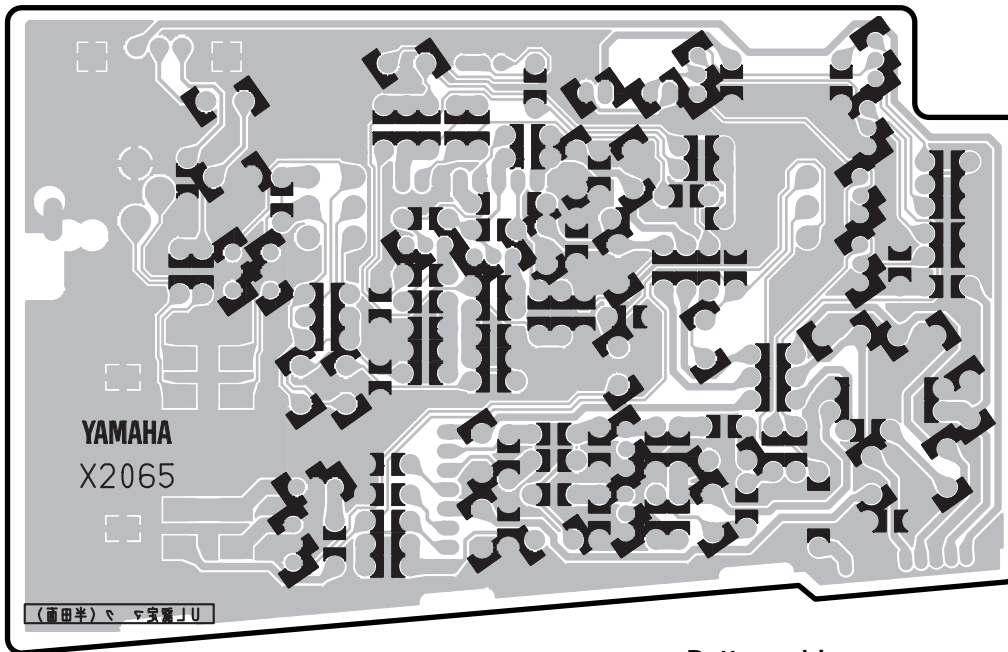
Pattern side

● ANI1 Circuit Board



to AD1-CN101, CN102, CN201, CN202, CN301, CN302, CN401,  
 CN402, CN501, CN502, CN601, CN602  
 ADA-CN101, CN102, CN201, CN202

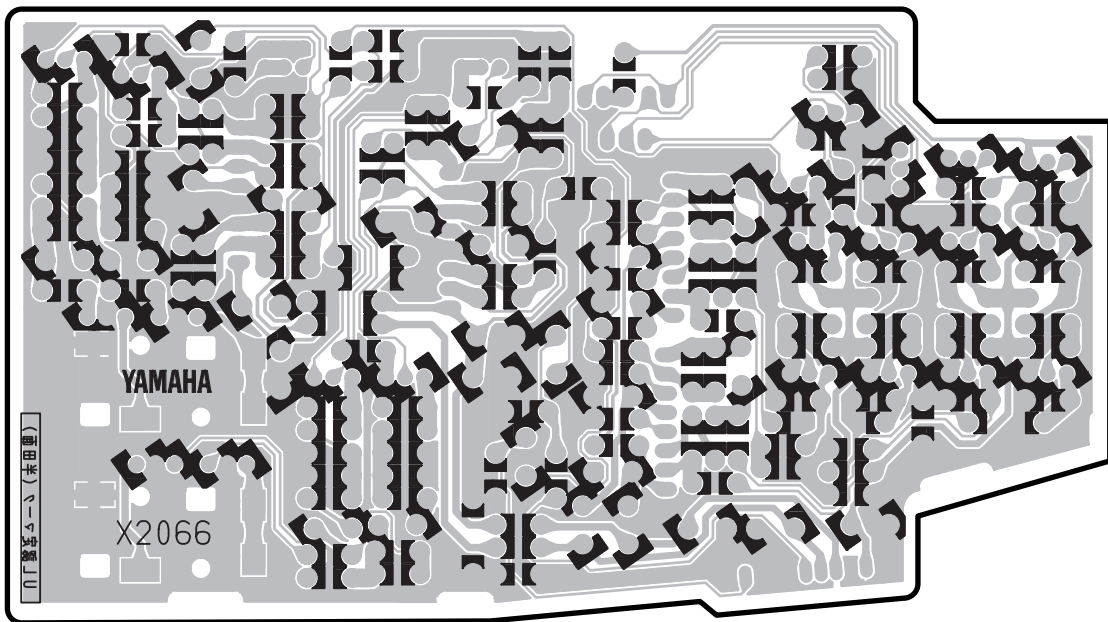
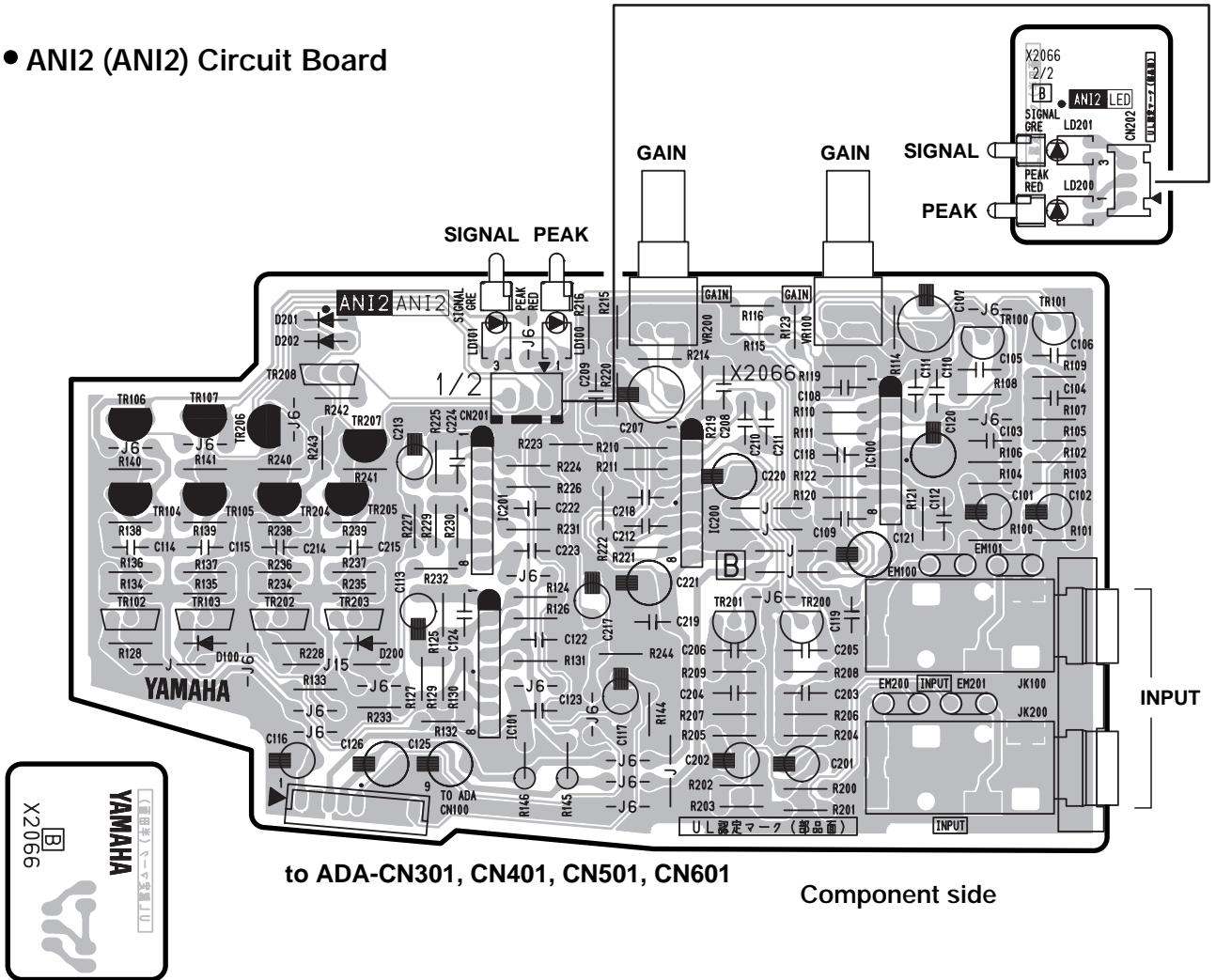
Component side



Pattern side

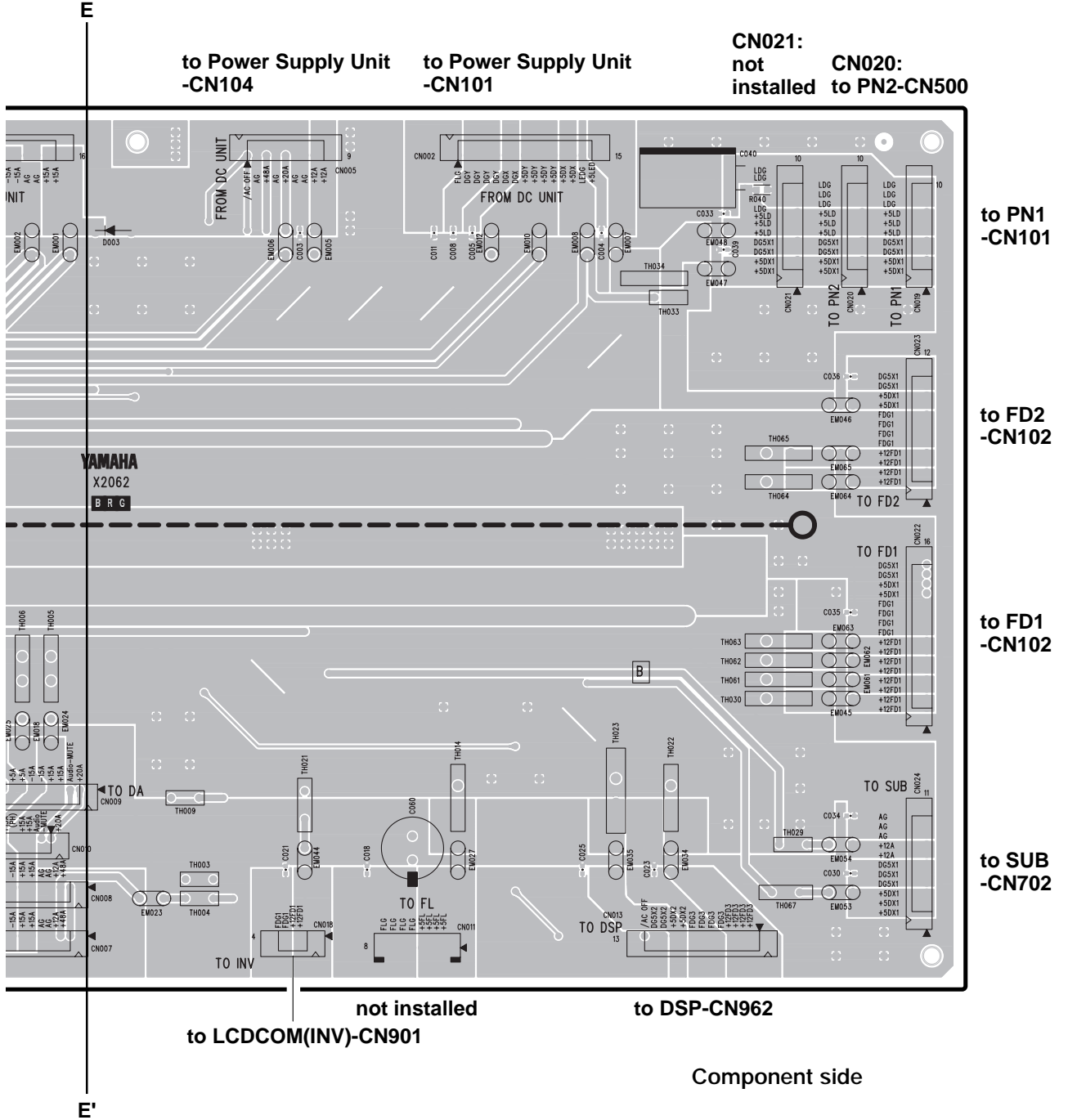
● ANI2 (LED) Circuit Board

● ANI2 (ANI2) Circuit Board

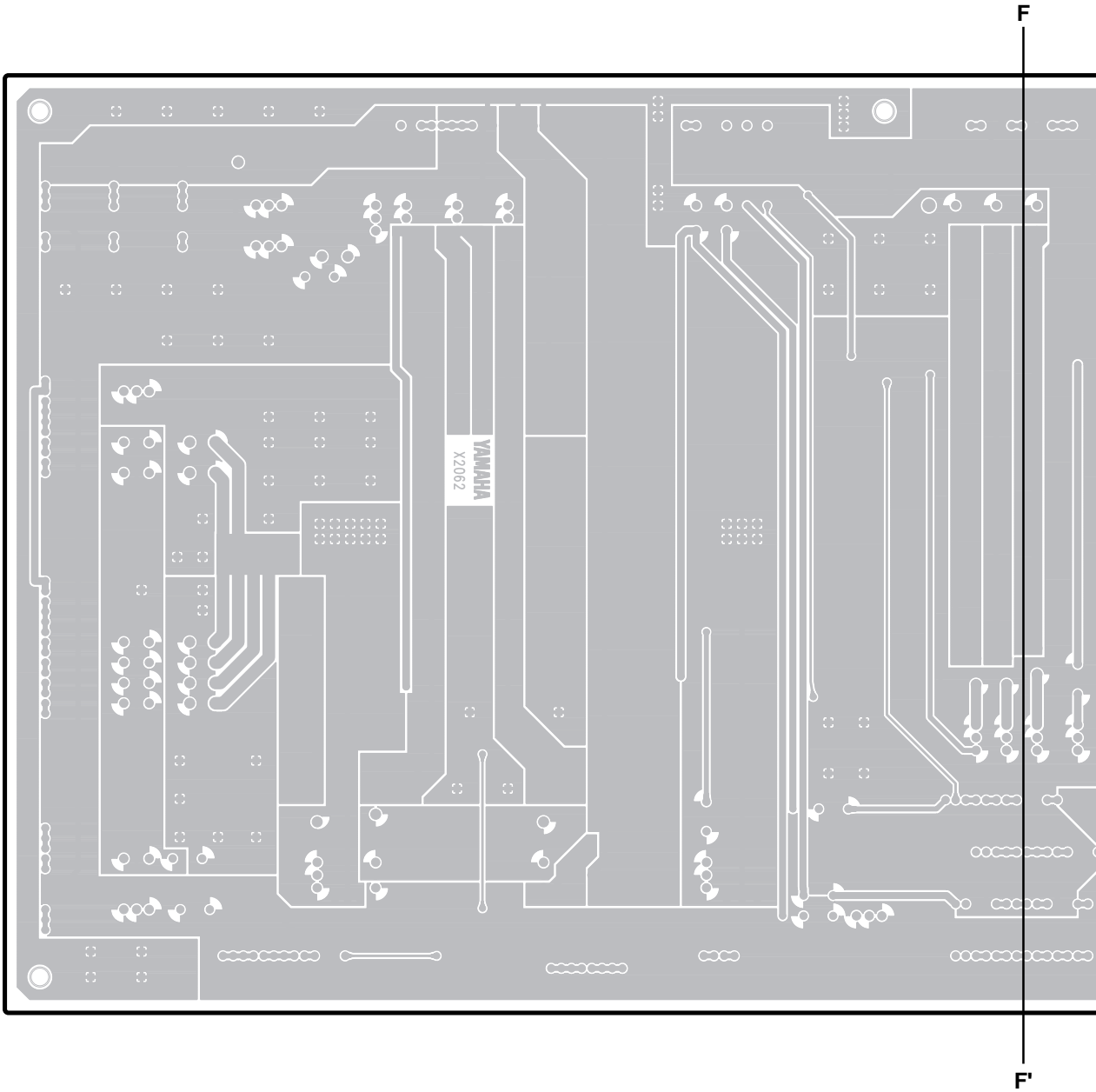


Pattern side

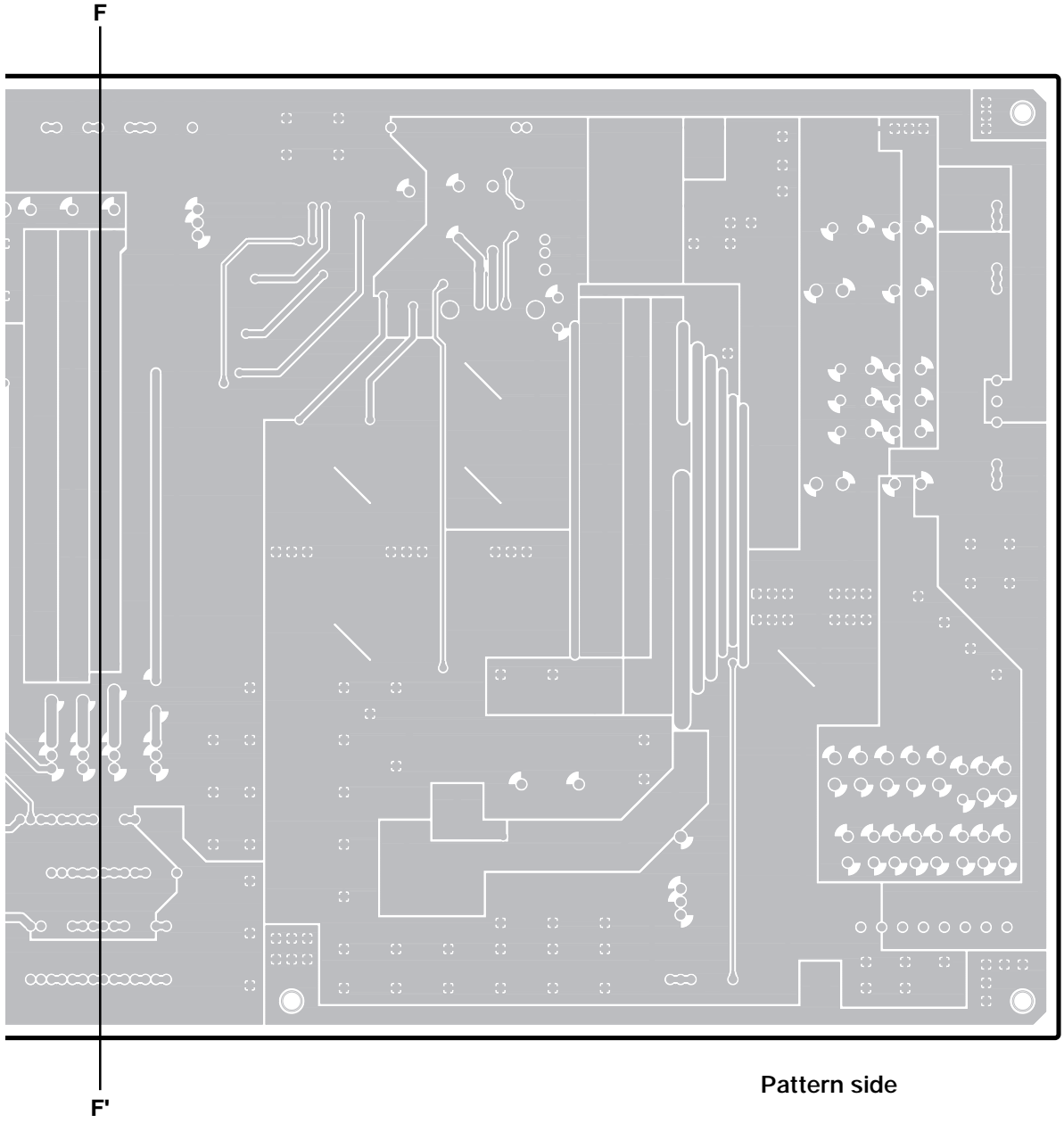




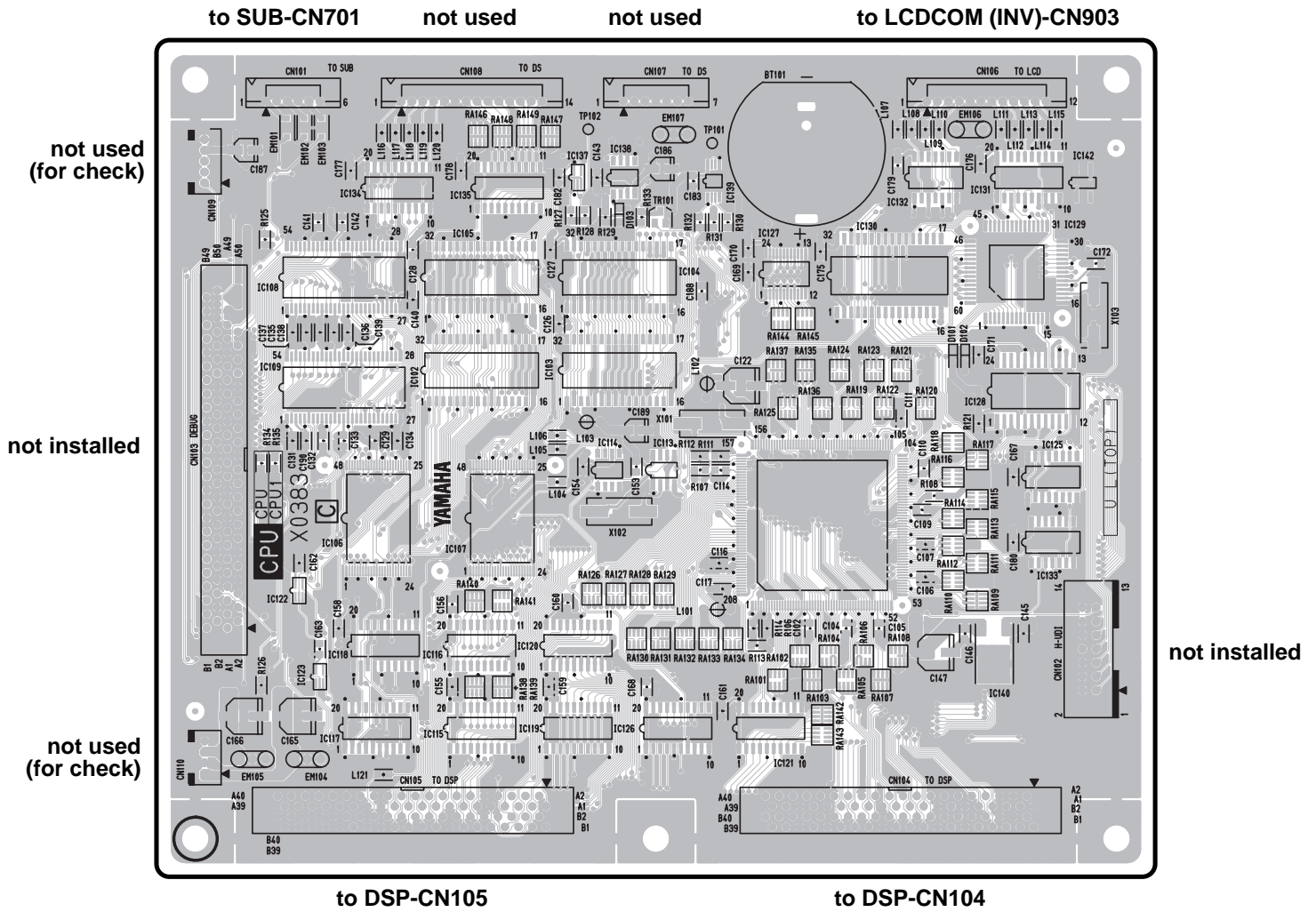
● BRG Circuit Board







• CPU1 Circuit Board

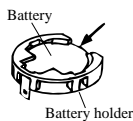


Component side

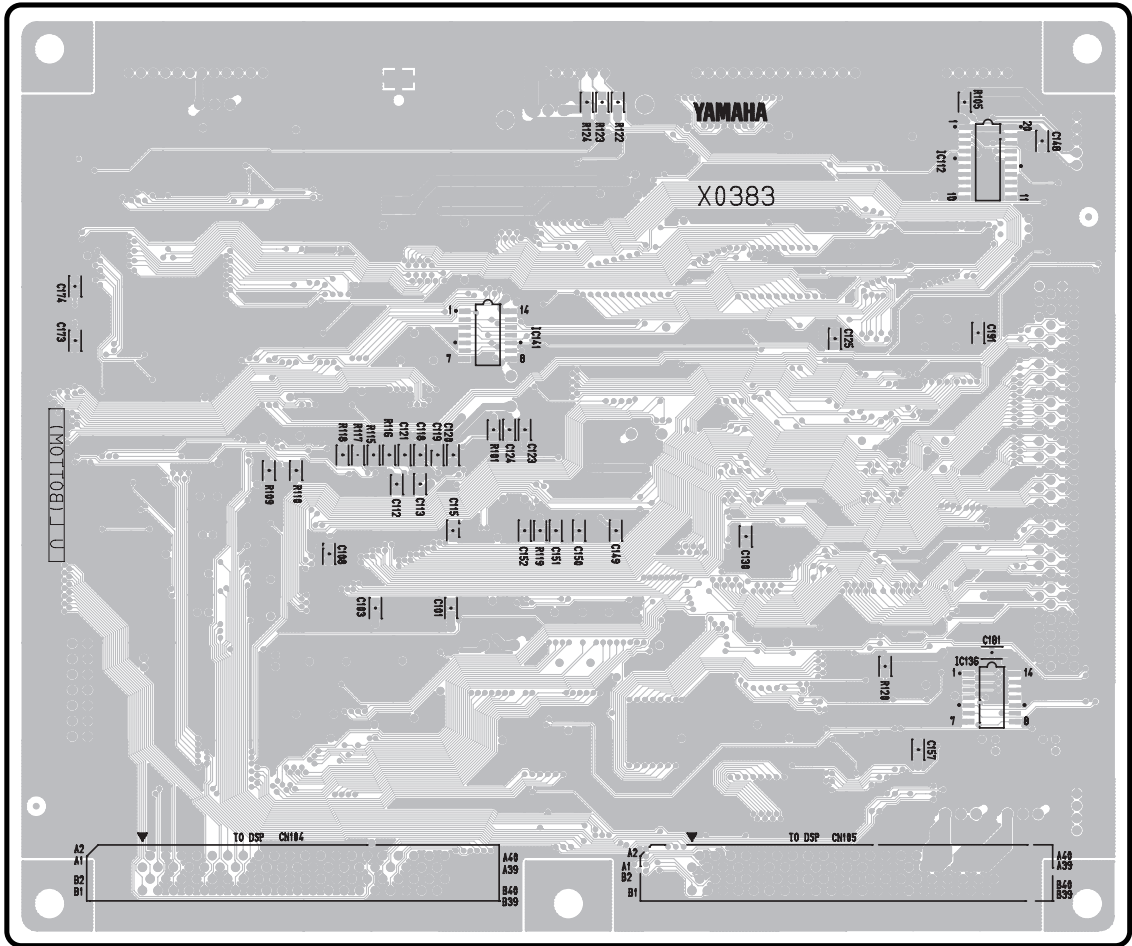
• Lithium Battery

Battery VN103500  
 VN103600(Battery holder for VN103500)

- Notice for back-up battery removal  
 Push the battery as shown in figure,  
 then the battery will pop up.
- Druk de batterij naar beneden zoals  
 aangegeven in de tekening de batterij  
 springt dan naar voren.

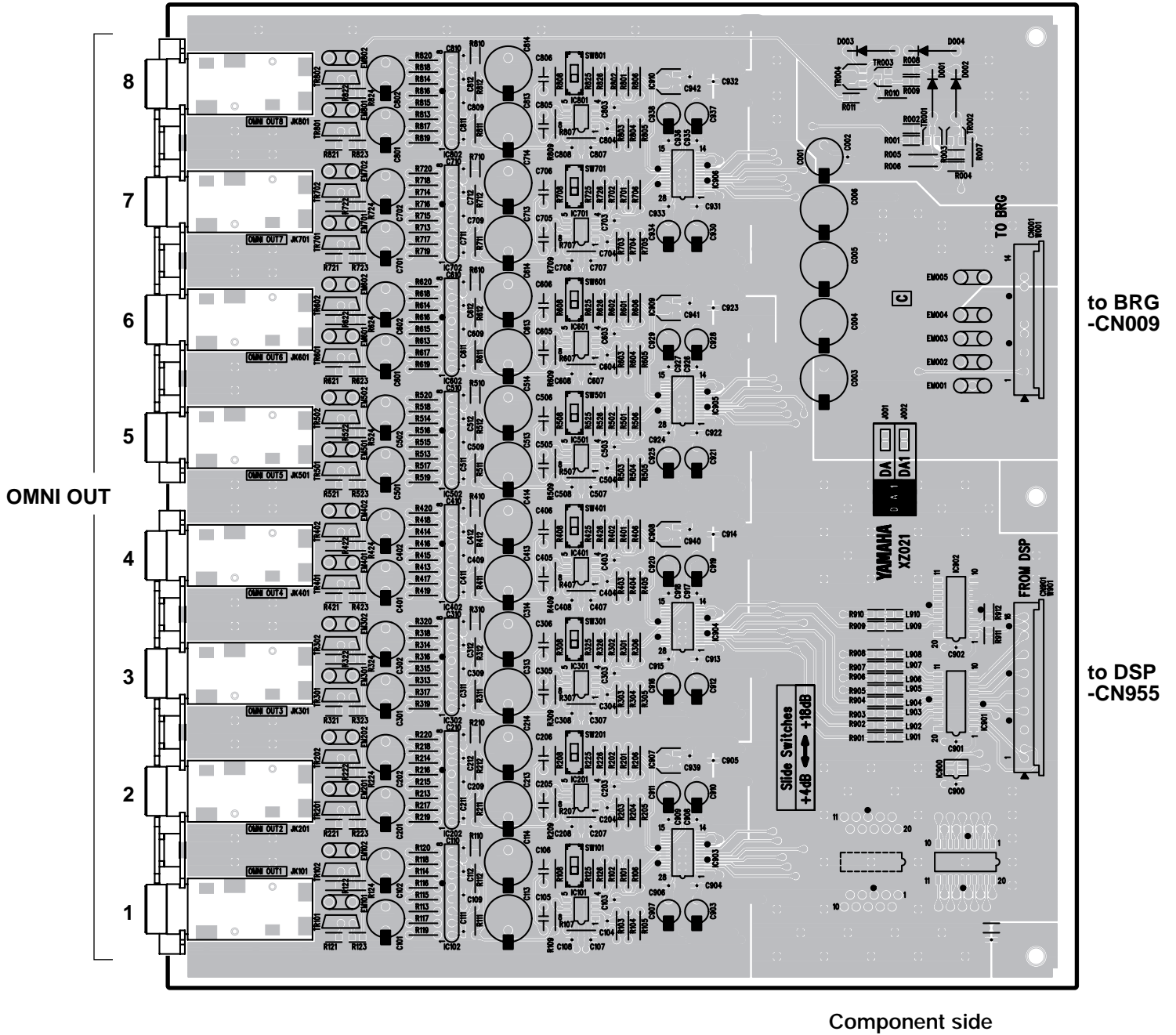


• CPU1 Circuit Board

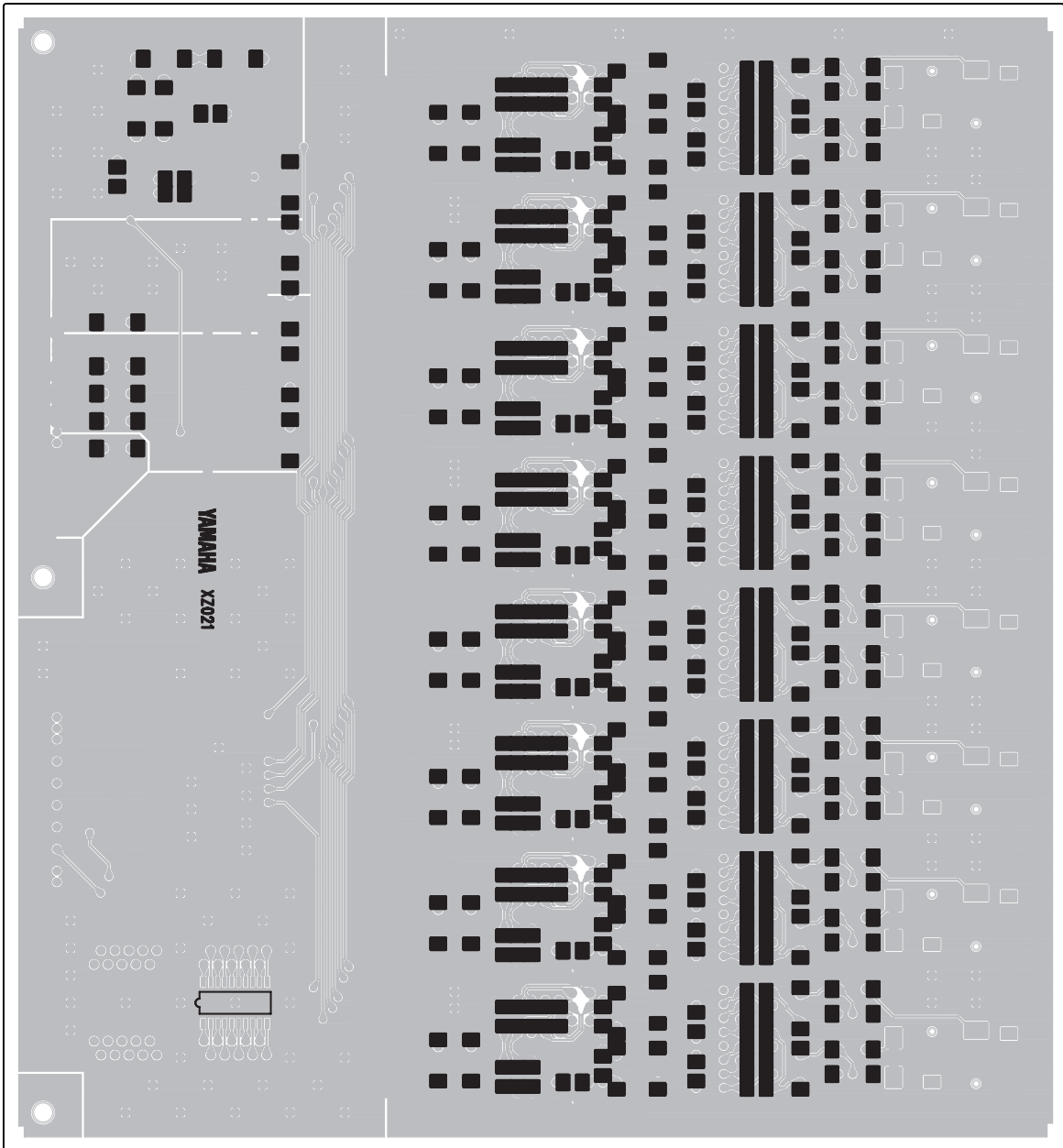


Pattern side

• DA Circuit Board

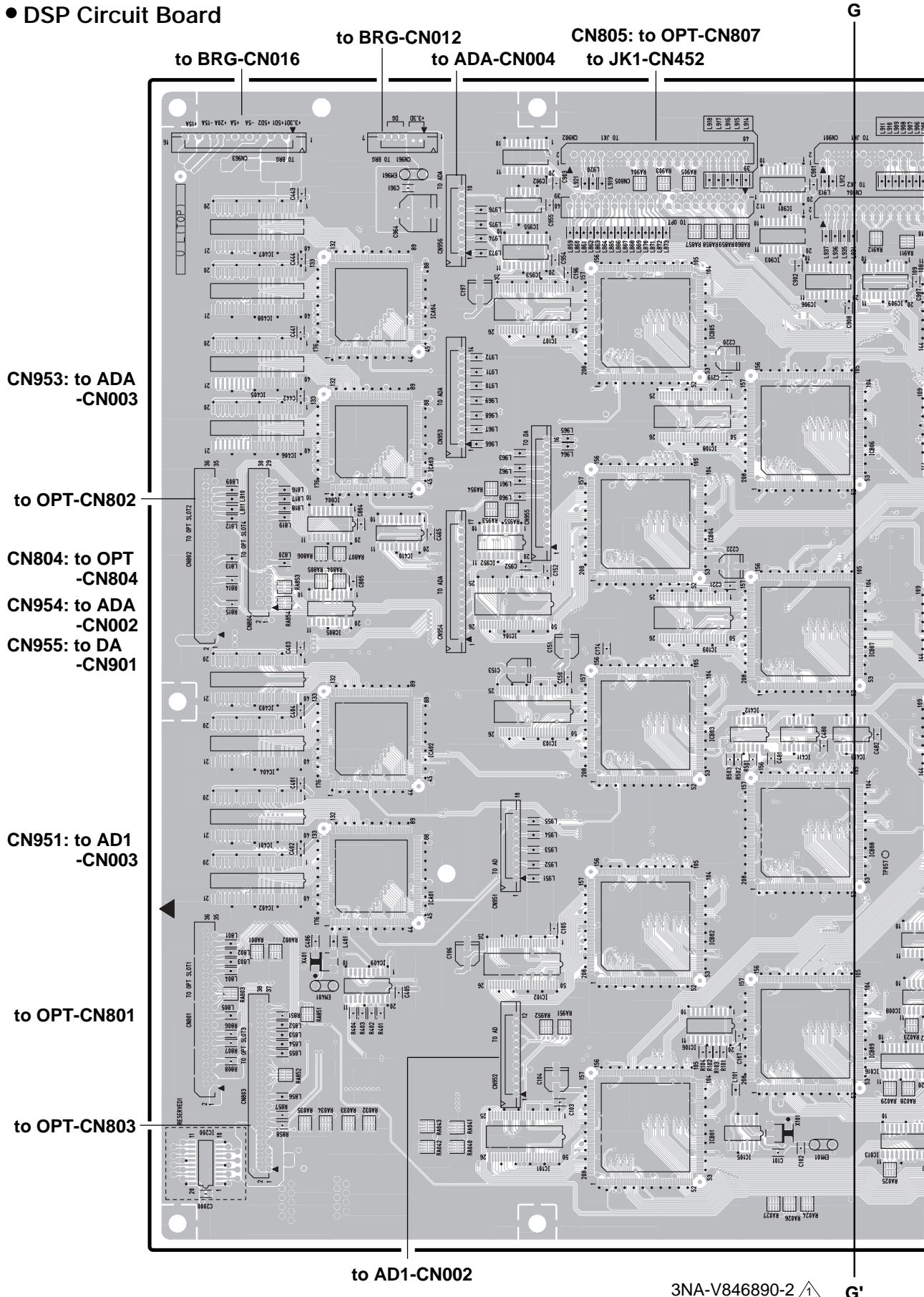


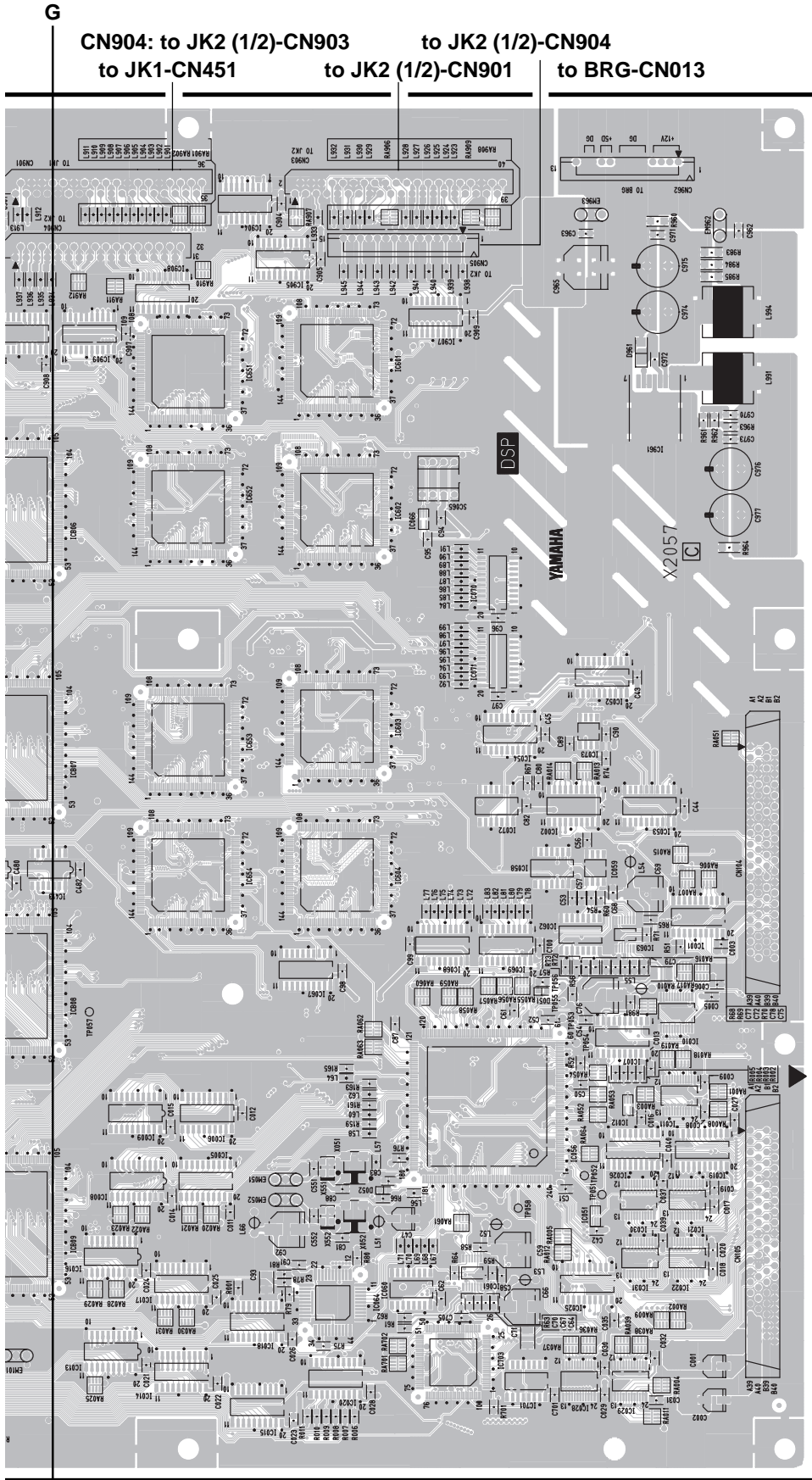
• DA Circuit Board



Pattern side

• DSP Circuit Board



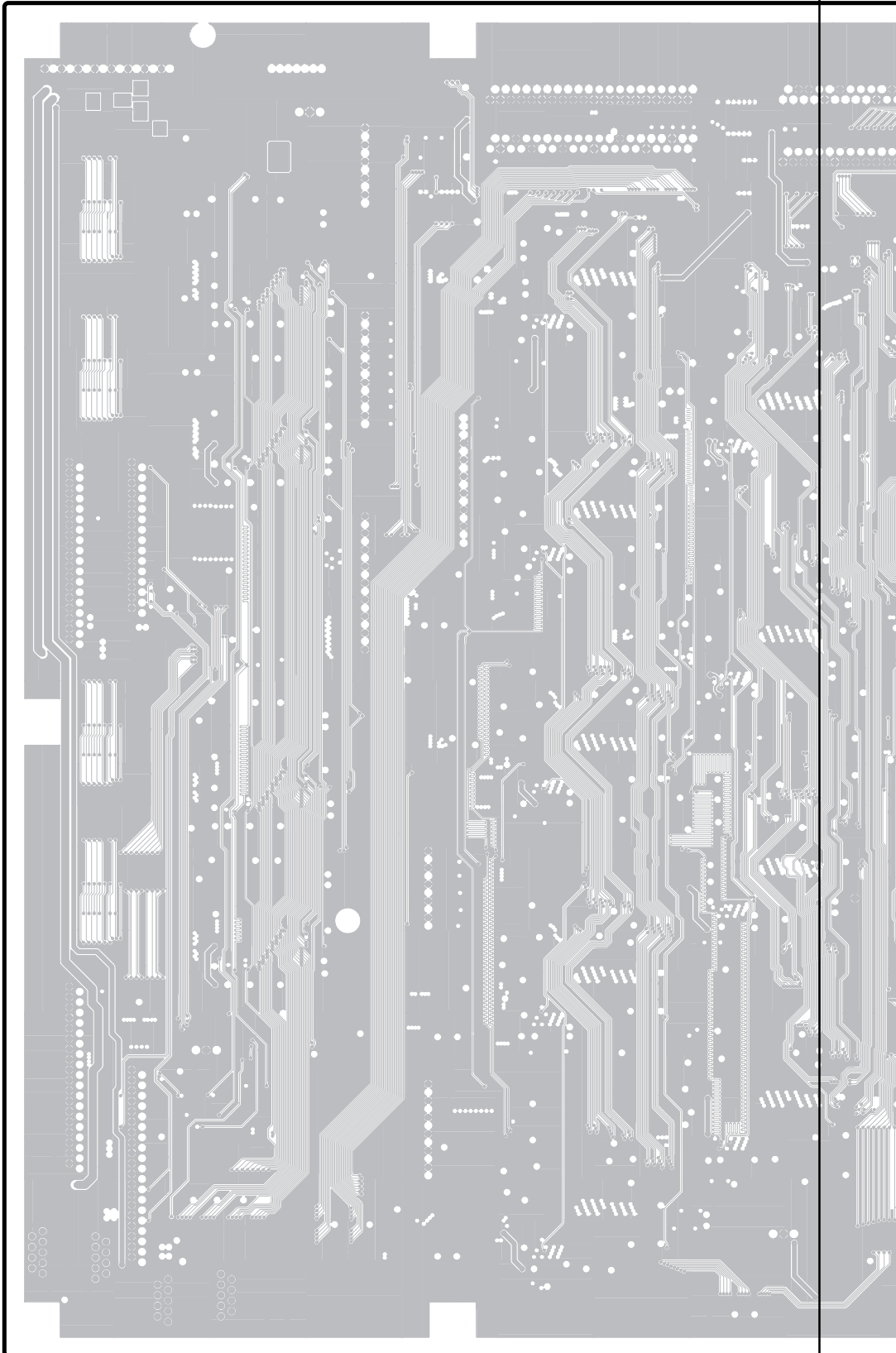



G' 3NA-V846890-2  $\triangle$

Component side

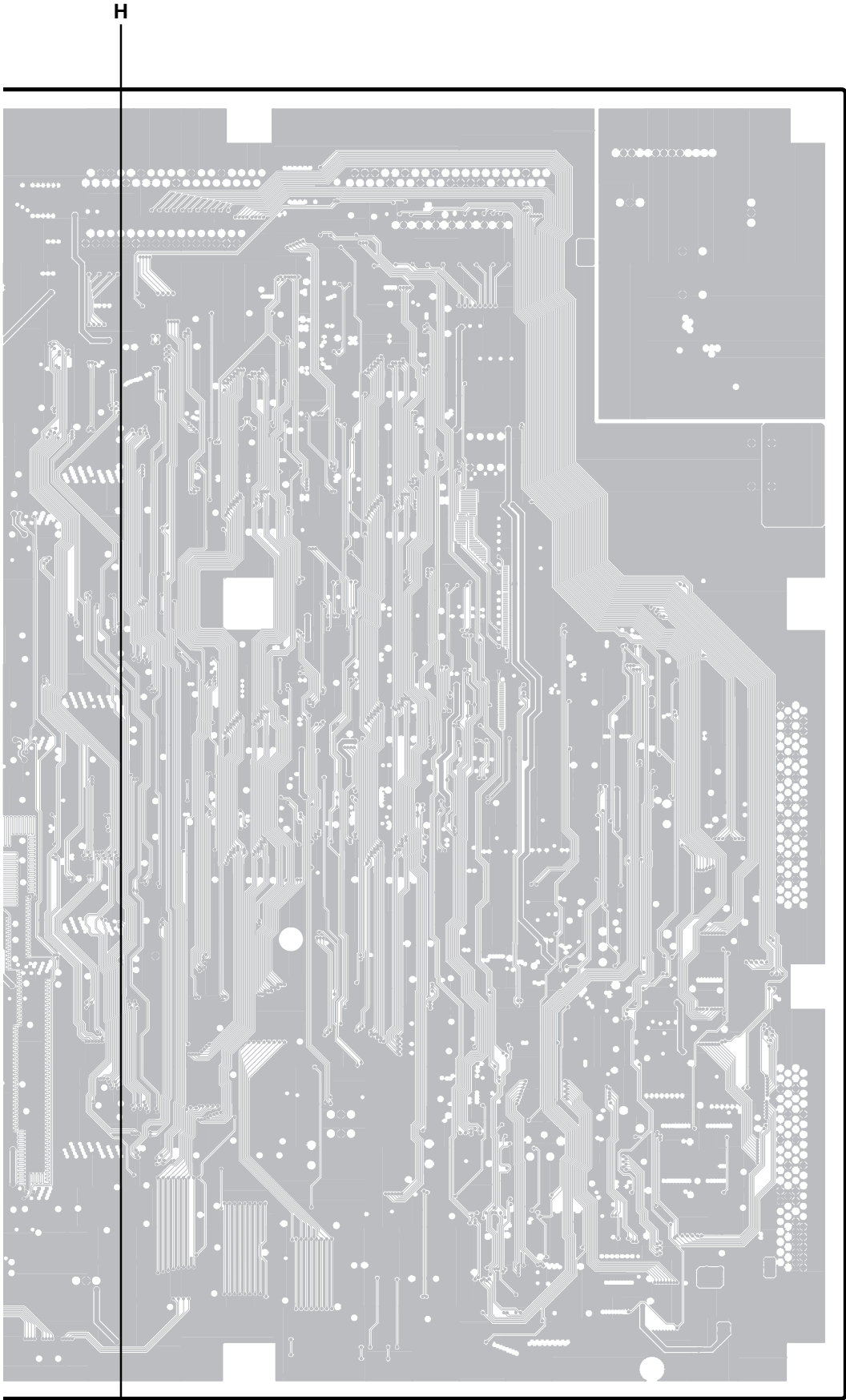
• DSP Circuit Board


H



H' 3NA-V846890-2 



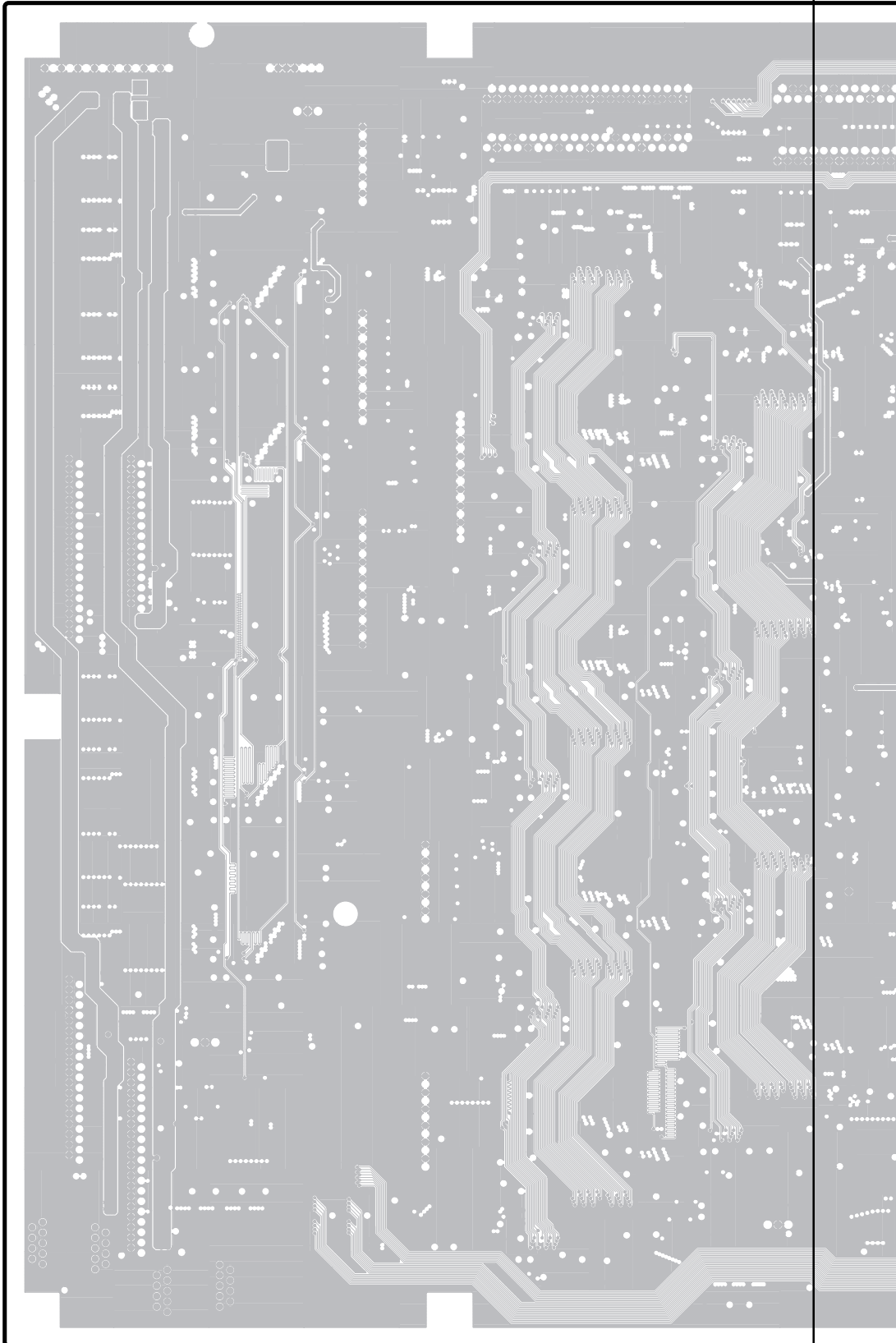


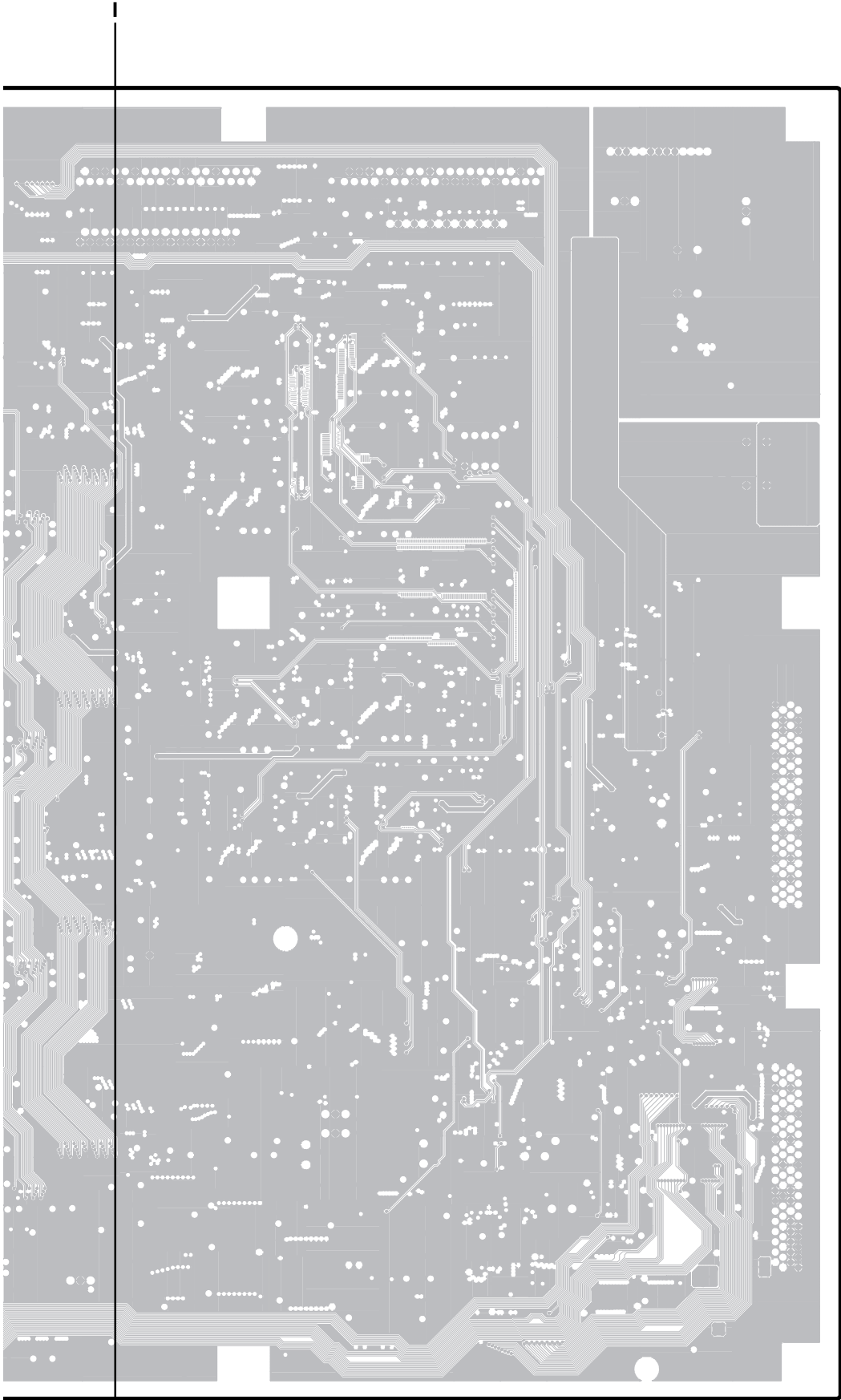
3NA-V846890-2 


H'

Component side  
2 layer

• DSP Circuit Board

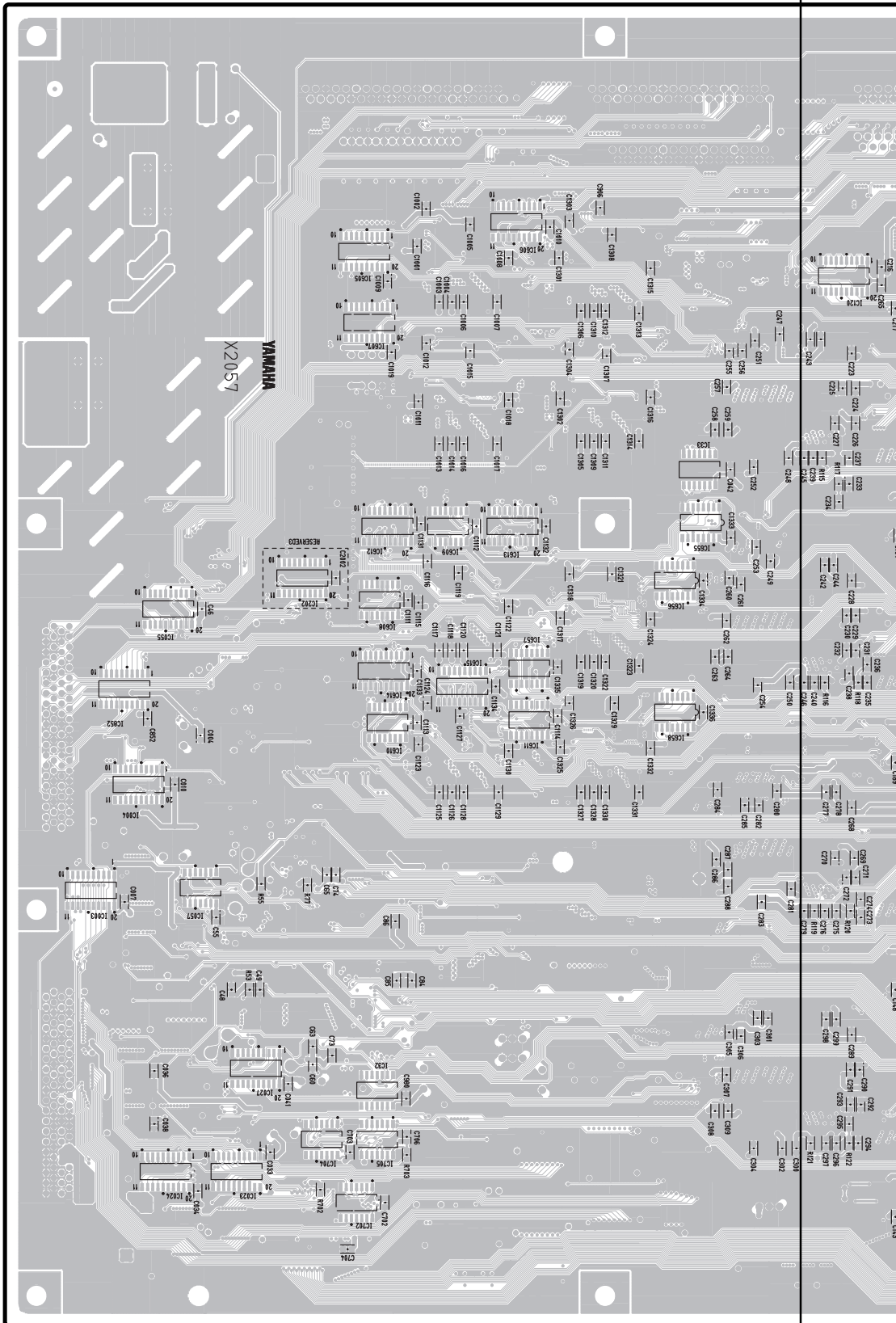




3NA-V846890-2 

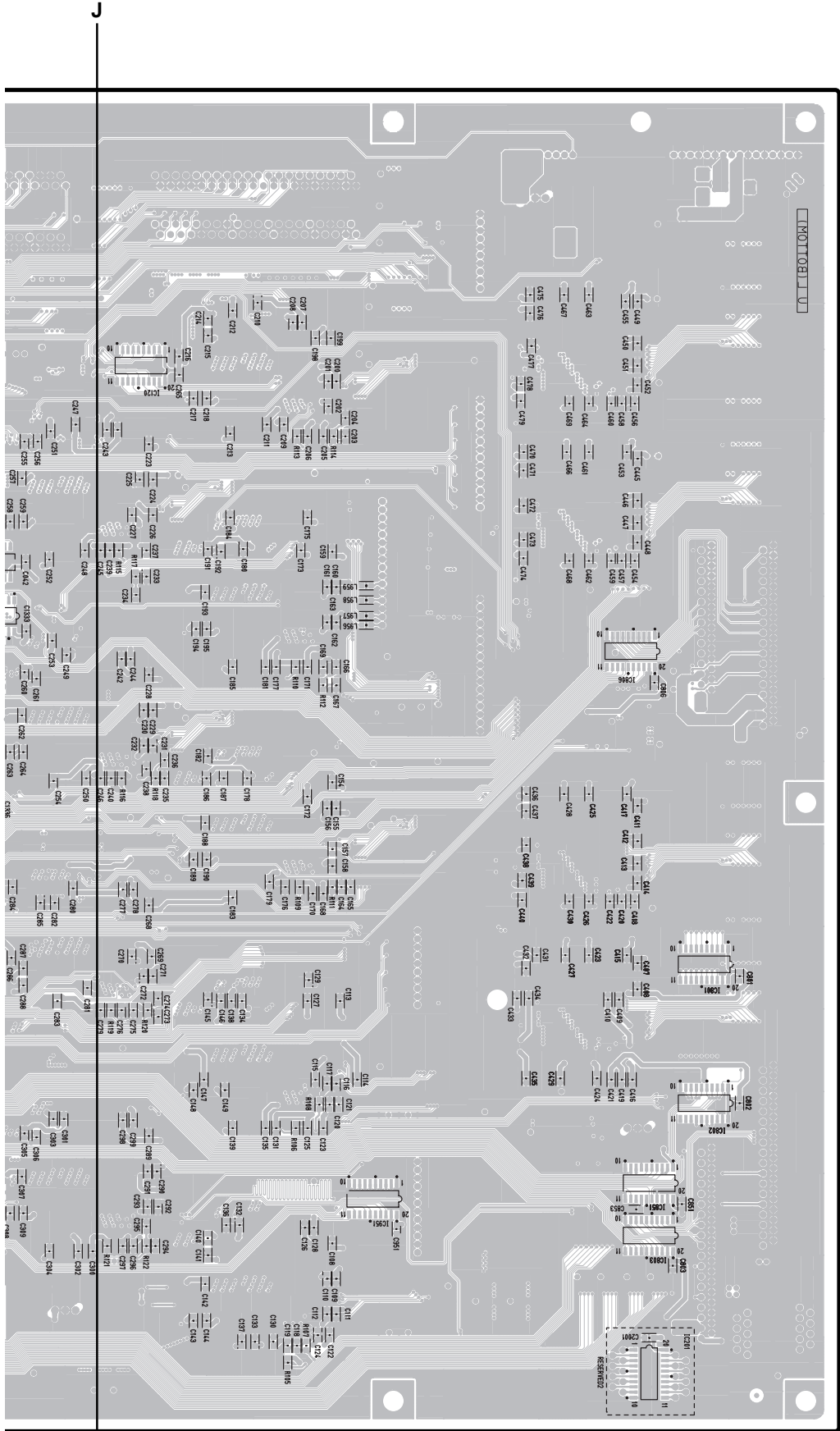
Component side  
5 layer

● DSP Circuit Board

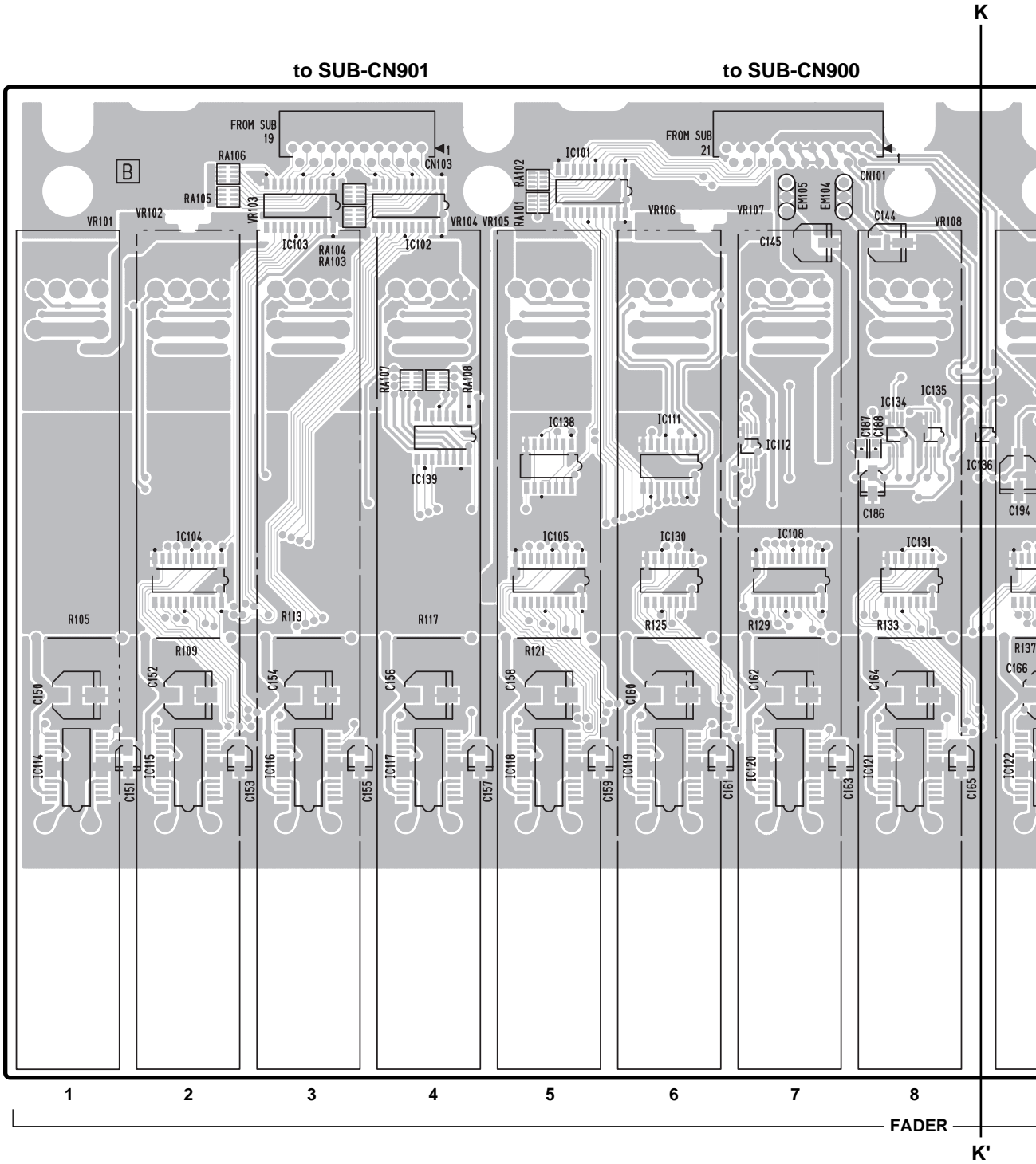


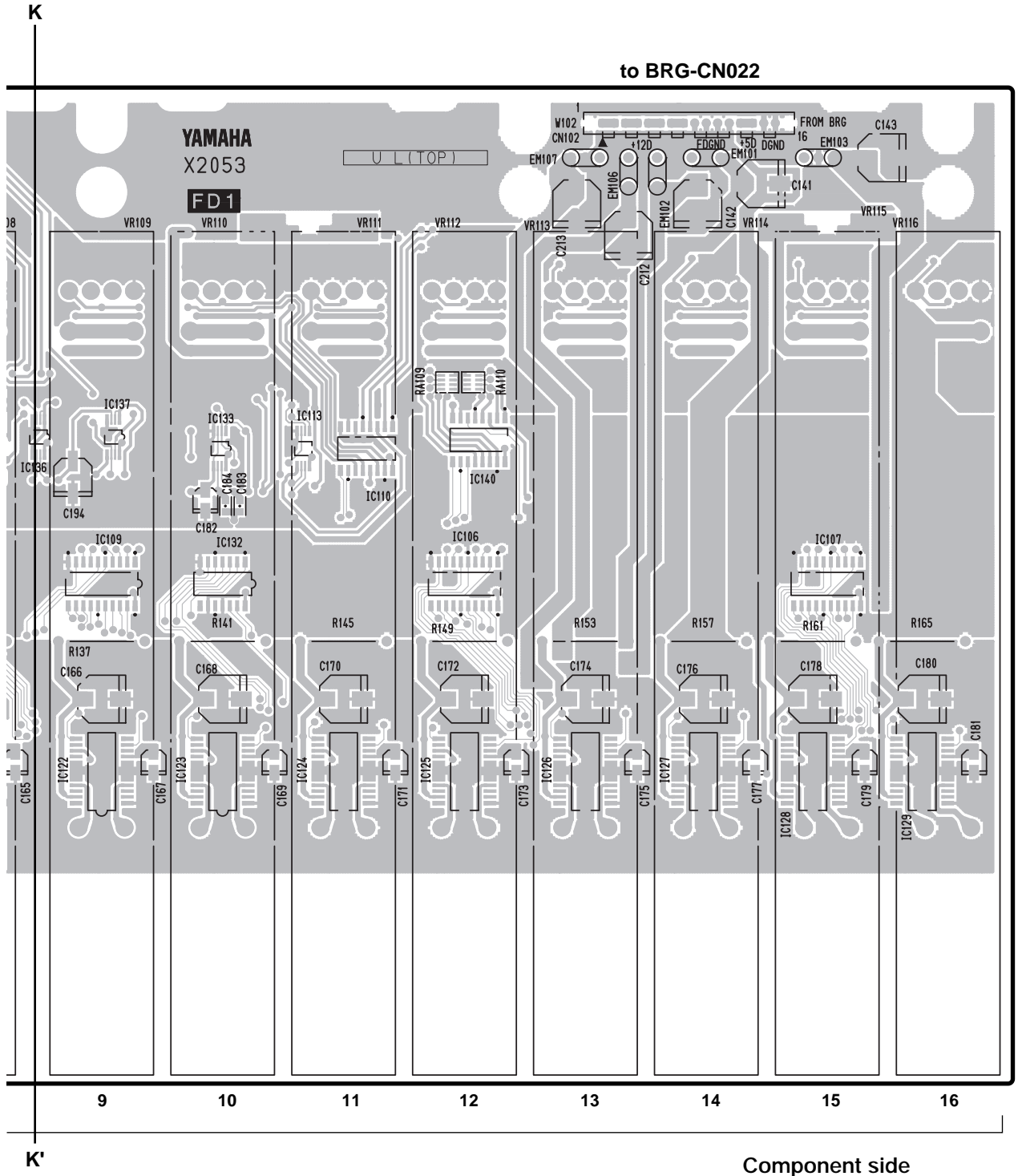
J

J'

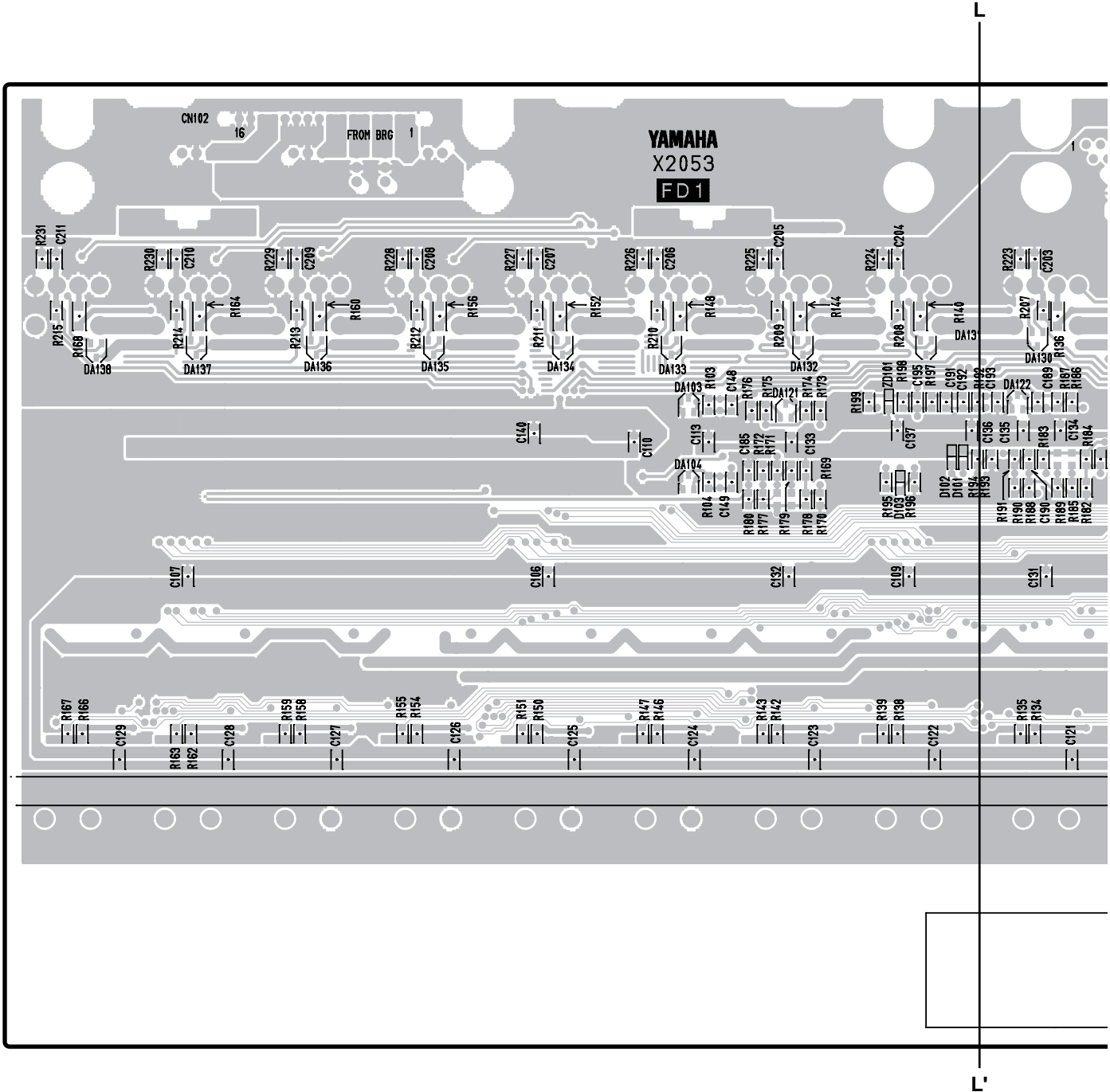


● FD1 Circuit Board

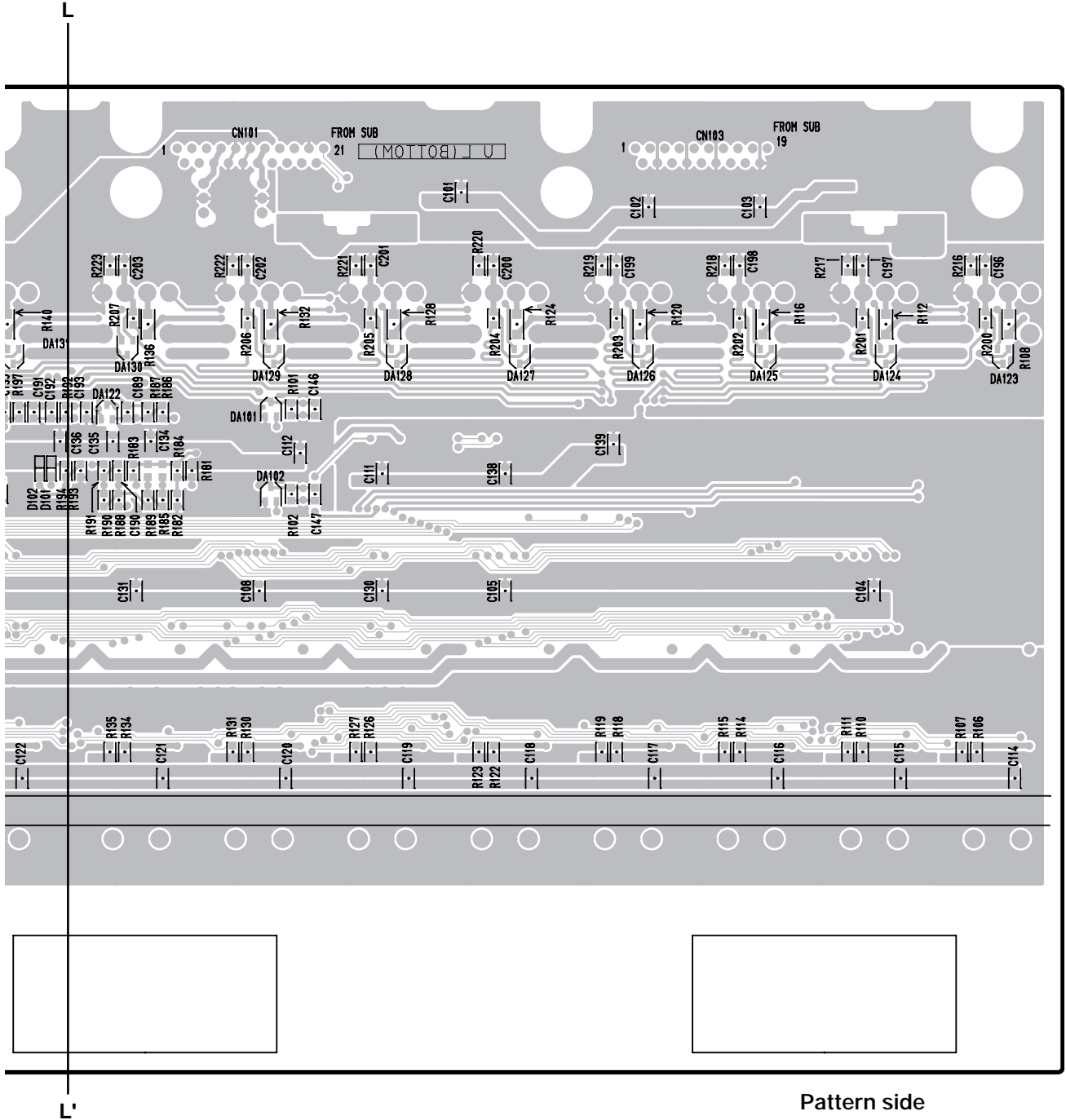




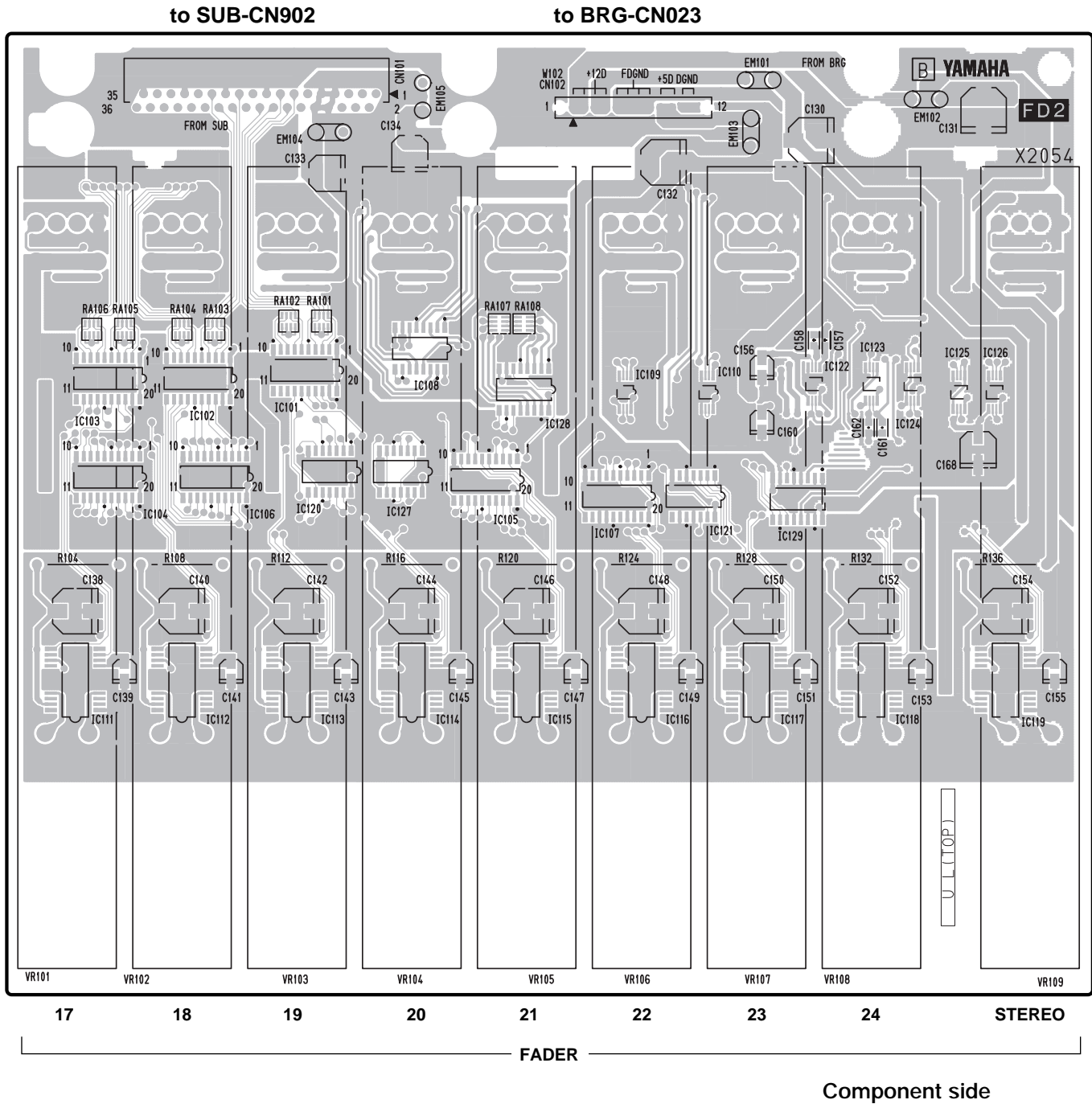
● FD1 Circuit Board



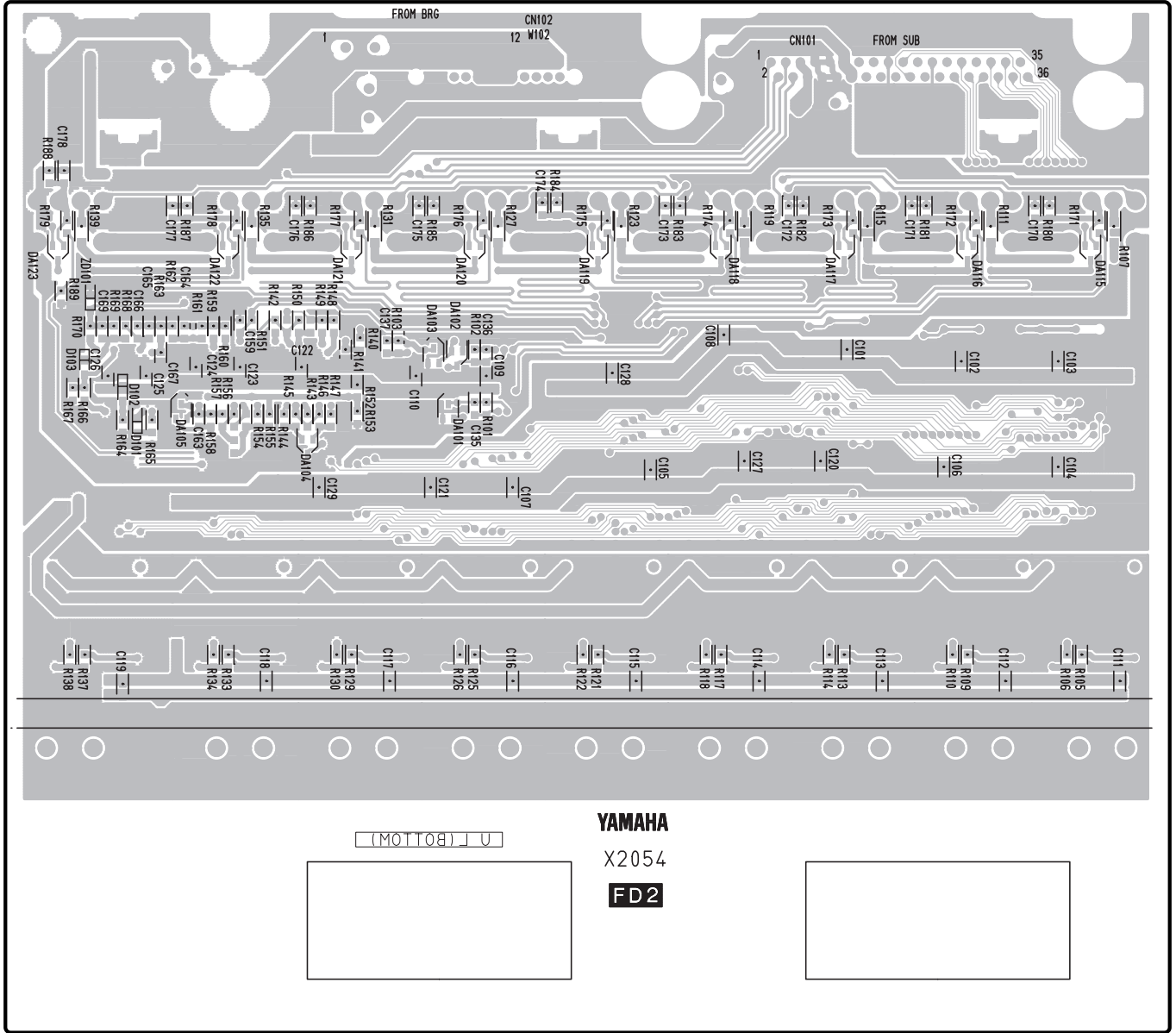




● FD2 Circuit Board

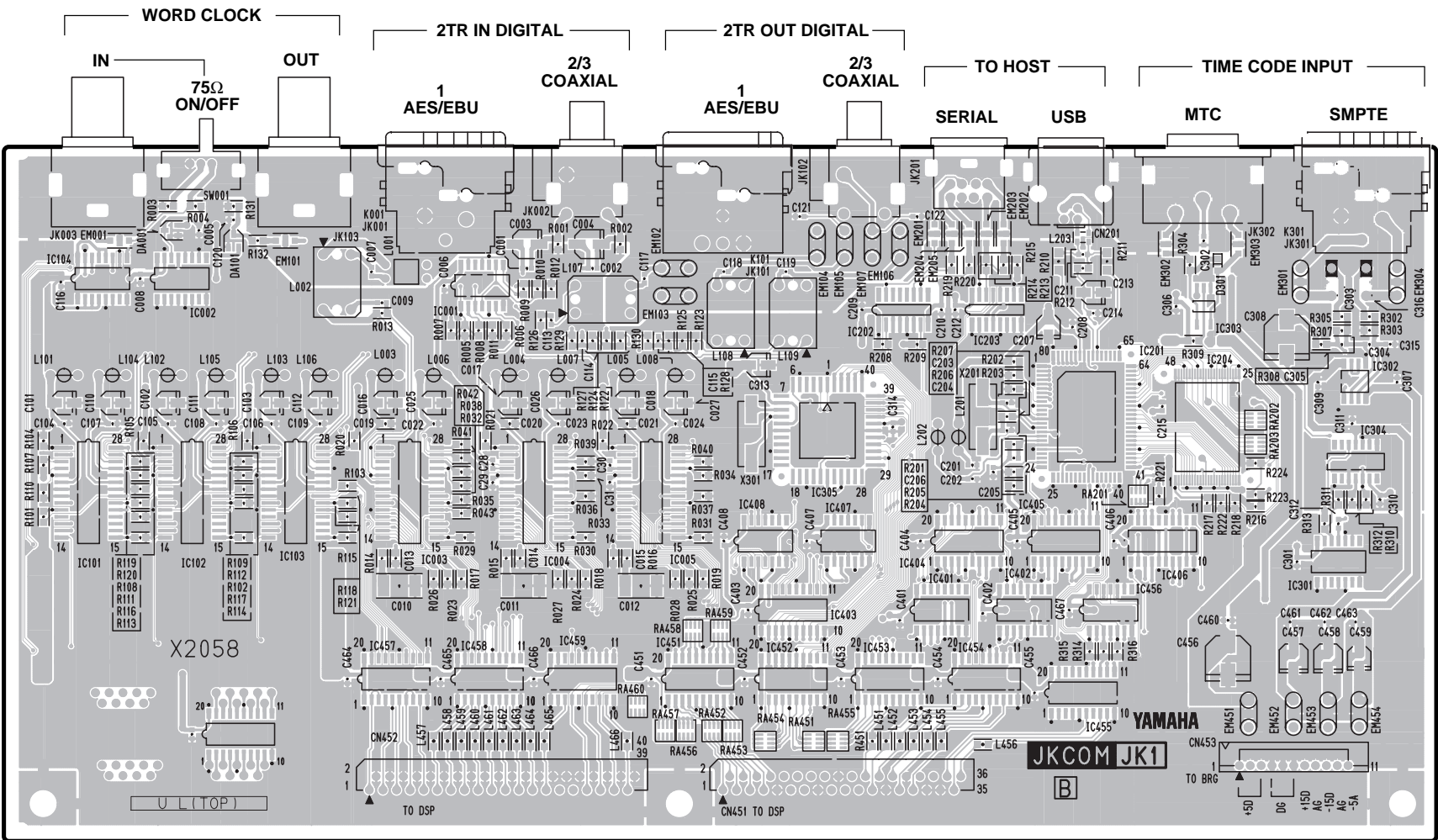


● FD2 Circuit Board



Pattern side

● JKCOM (JK1) Circuit Board



to DSP-CN902

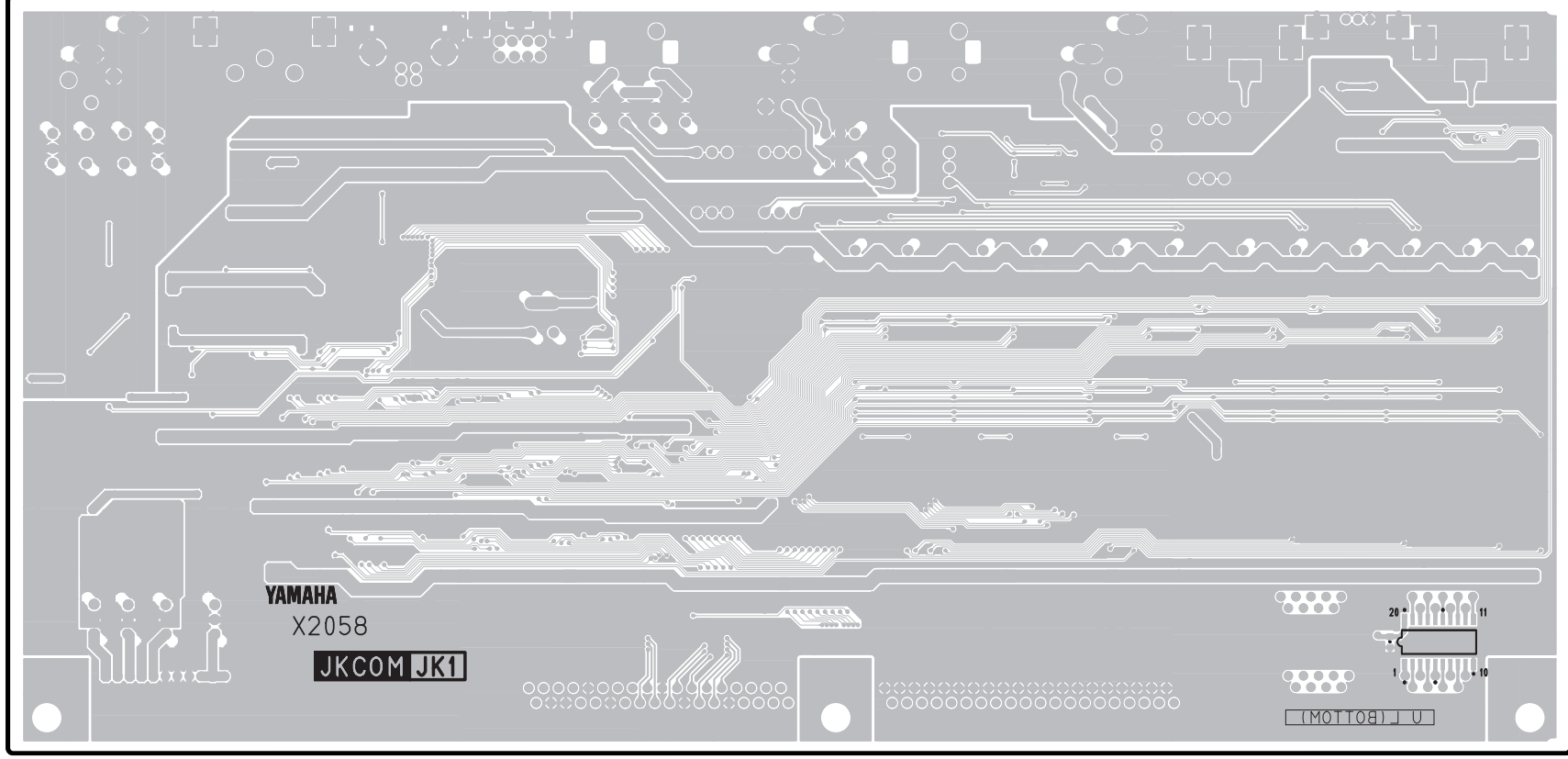
to DSP-CN901

to BRG-CN014

Component side

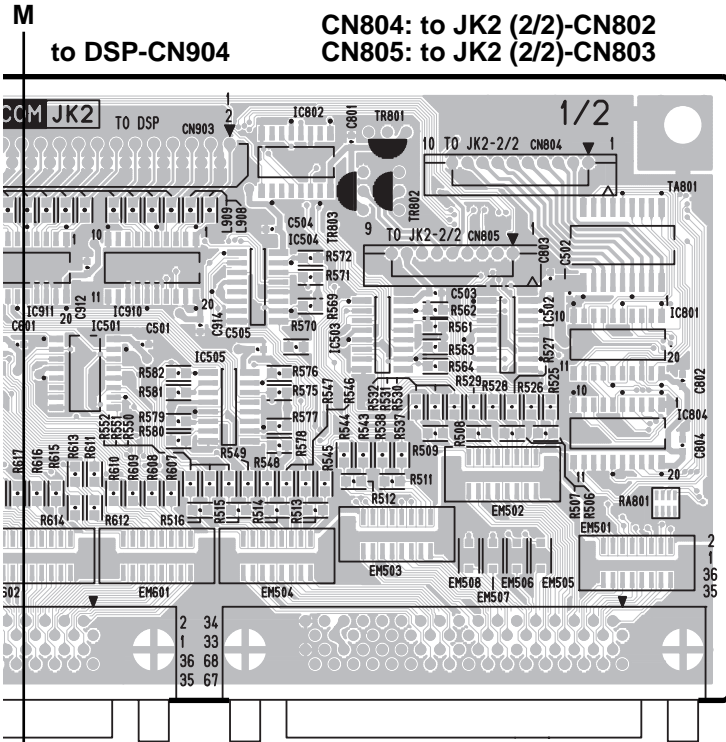
3NA-V846900-2

● JKCOM (JK1) Circuit Board

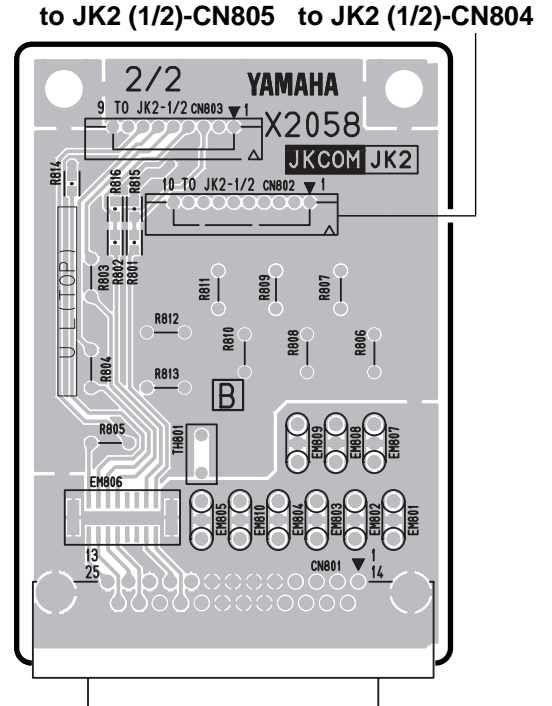




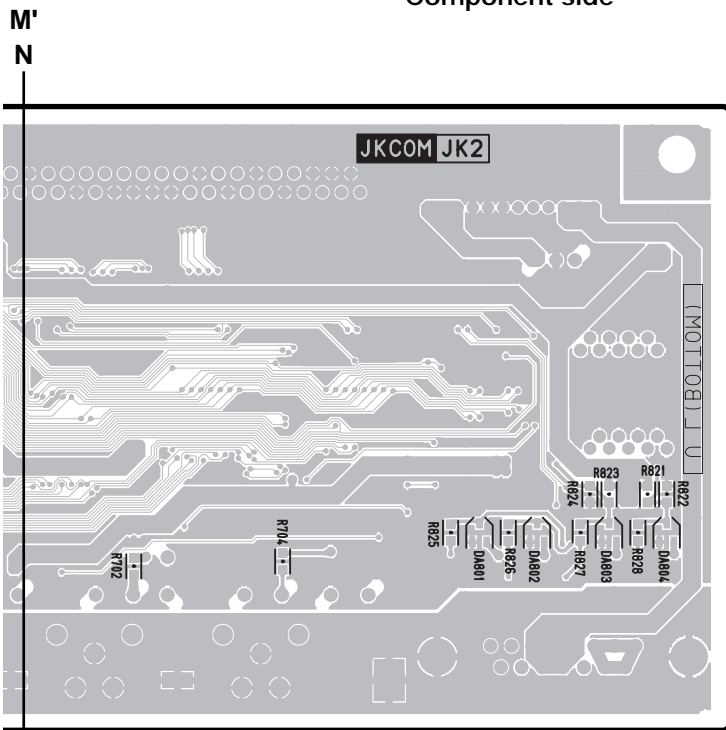
● JKCOM (JK2 (2/2)) Circuit Board



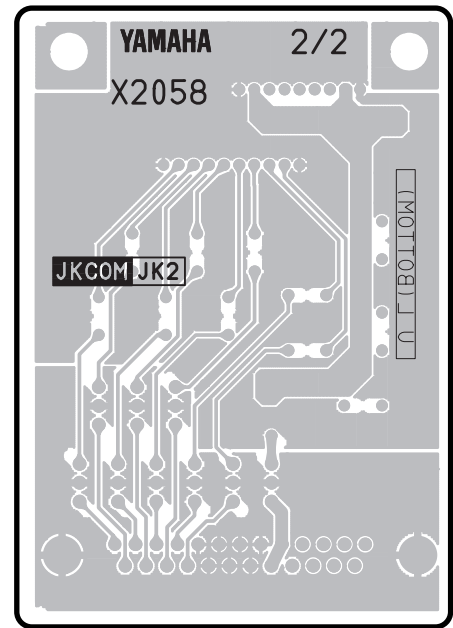
CASCAD IN  
Component side




CONTROL  
Component side



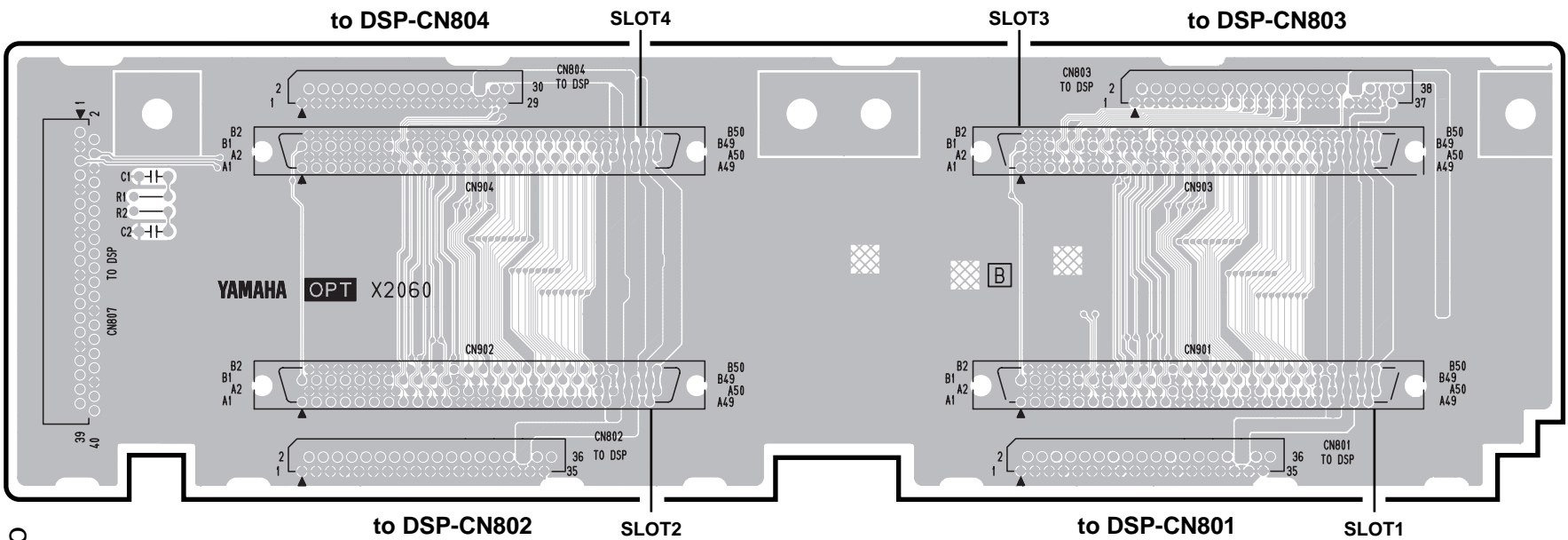
Pattern side



Pattern side

N'  
3NA-V846900-2   
3NA-V846900-3

● OPT Circuit Board



to DSP-CN805

to DSP-CN804

SLOTT4

SLOTT3

to DSP-CN803

to DSP-CN802

SLOTT2

to DSP-CN801

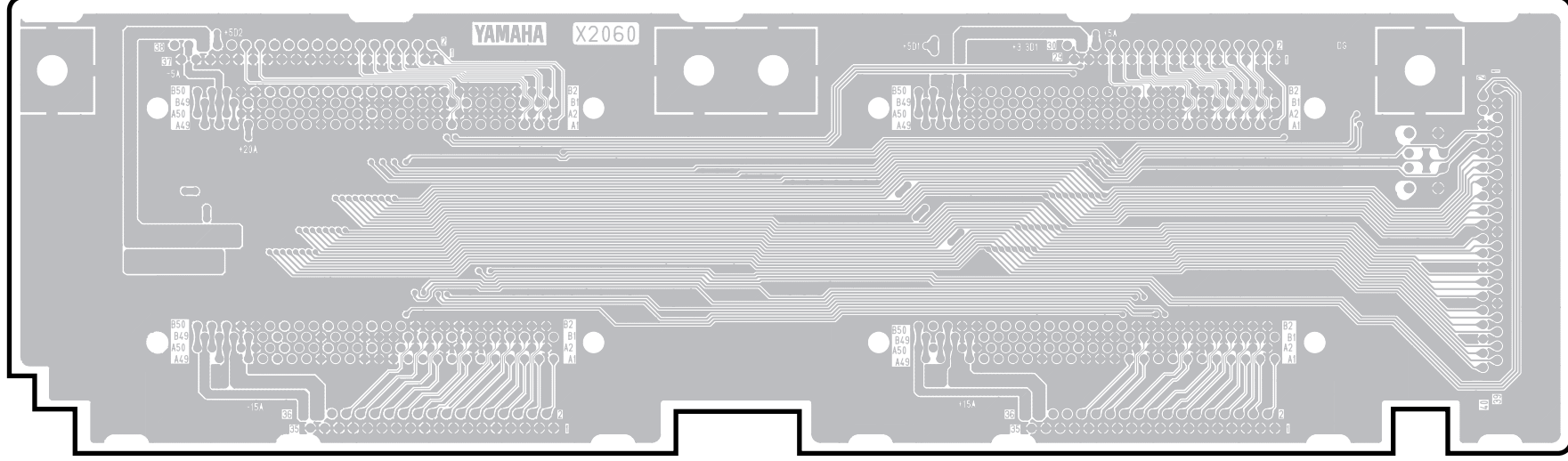
SLOTT1

YAMAHA OPT X2060

Component side



● OPT Circuit Board



Pattern side

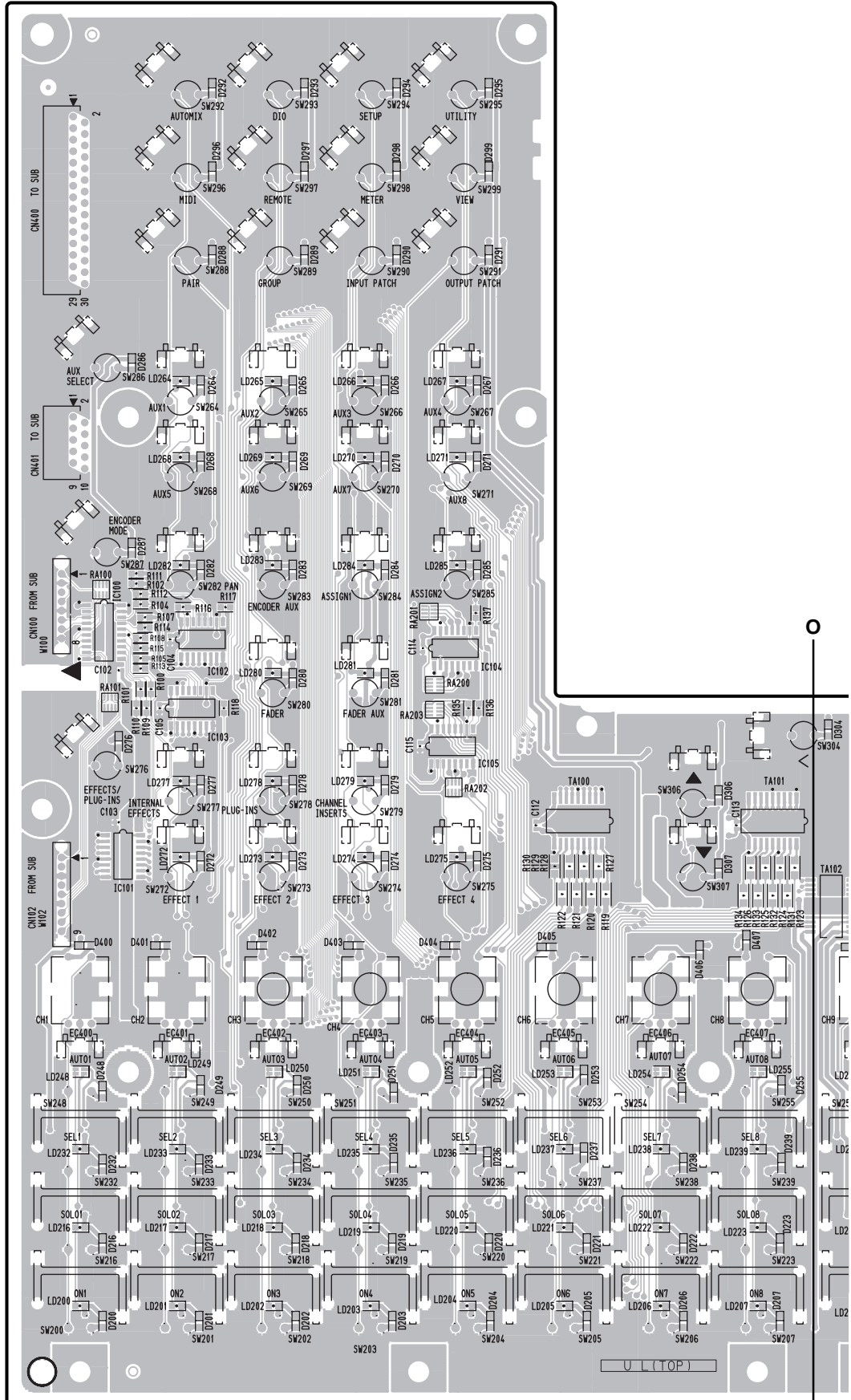
● PN1COM (PN1)  
Circuit Board

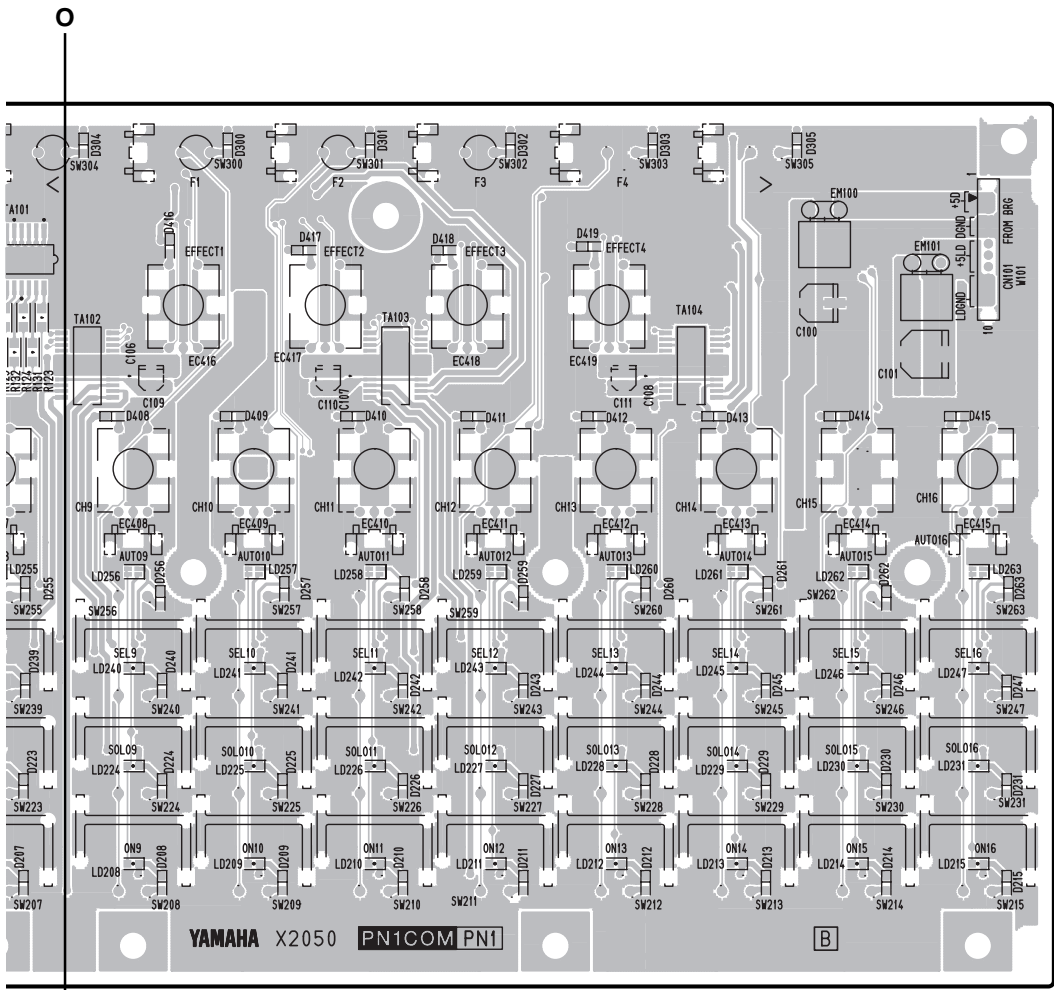
to SUB  
-CN906

to SUB  
-CN905

to SUB  
-CN903

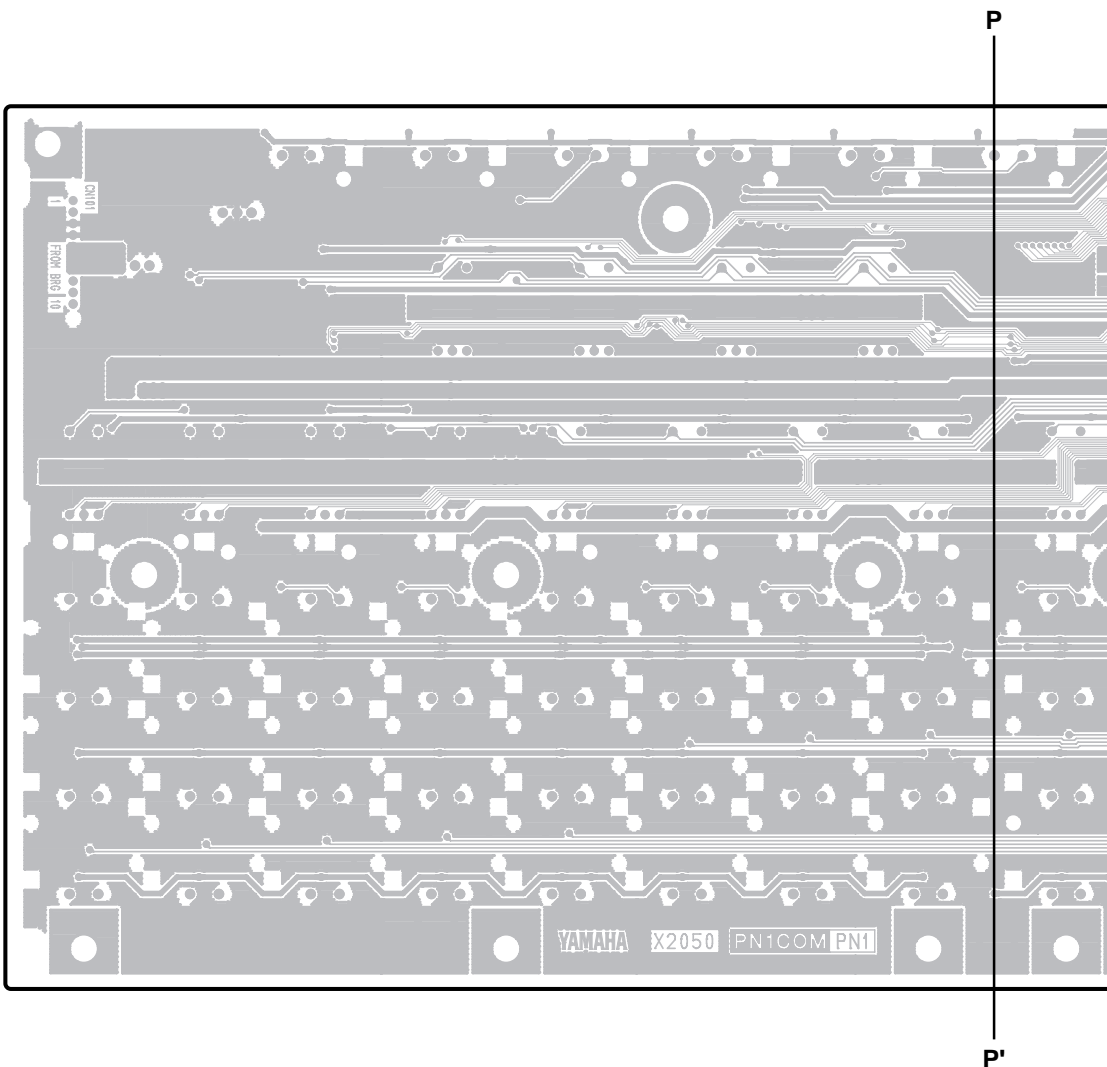
to SUB  
-CN904

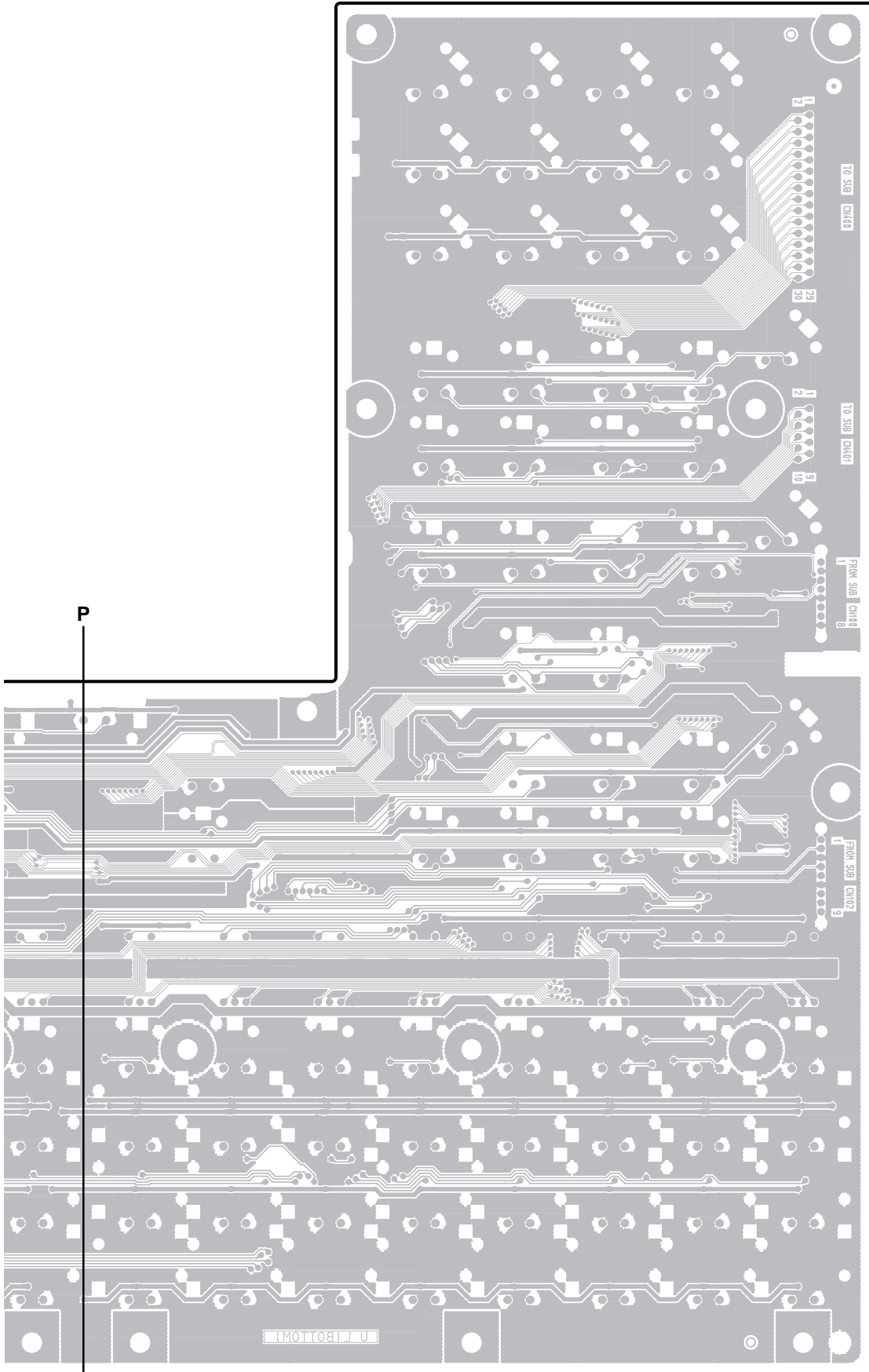




to BRG  
-CN019

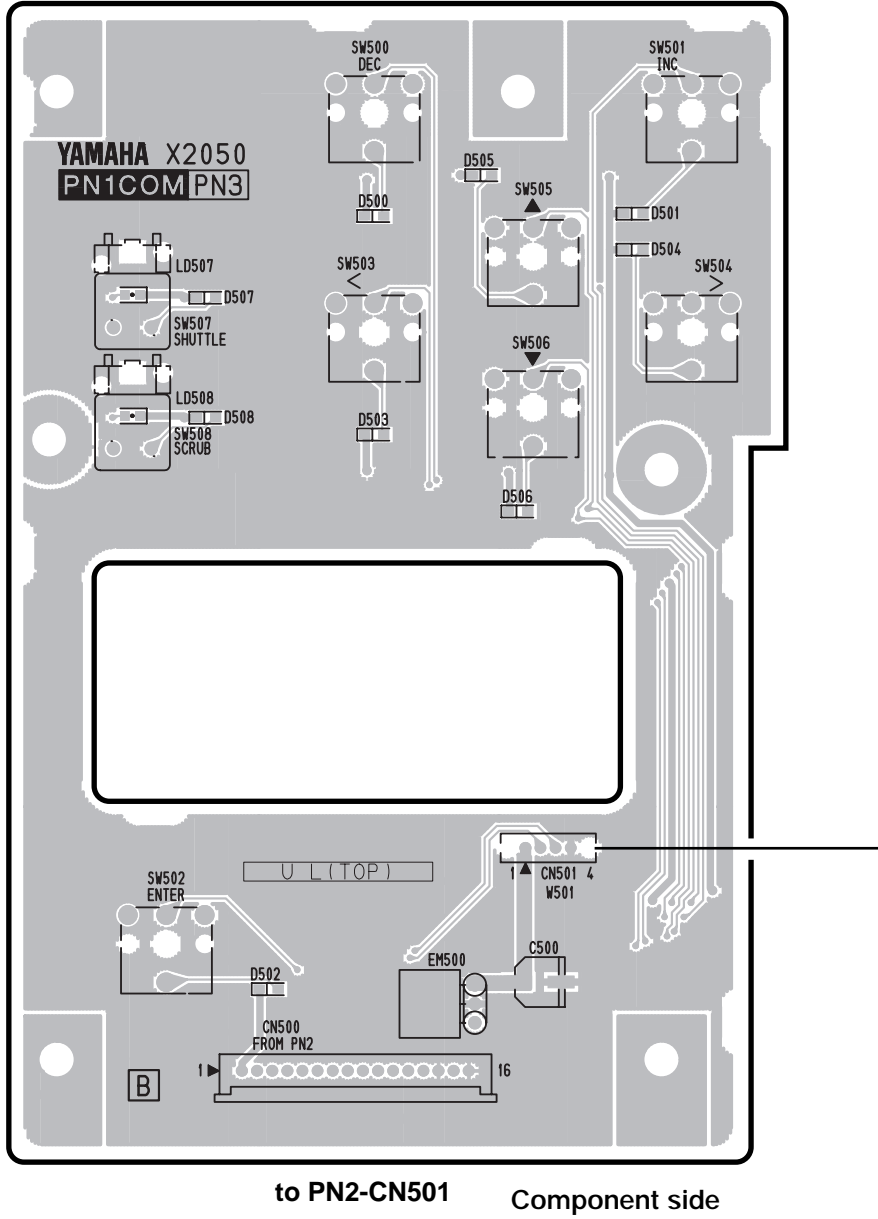
• PN1COM (PN1) Circuit Board



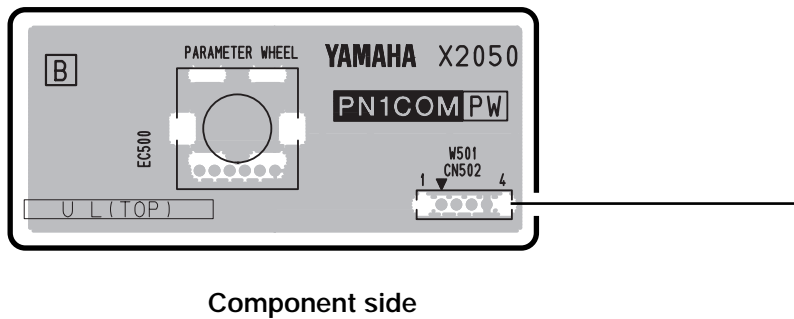


Pattern side

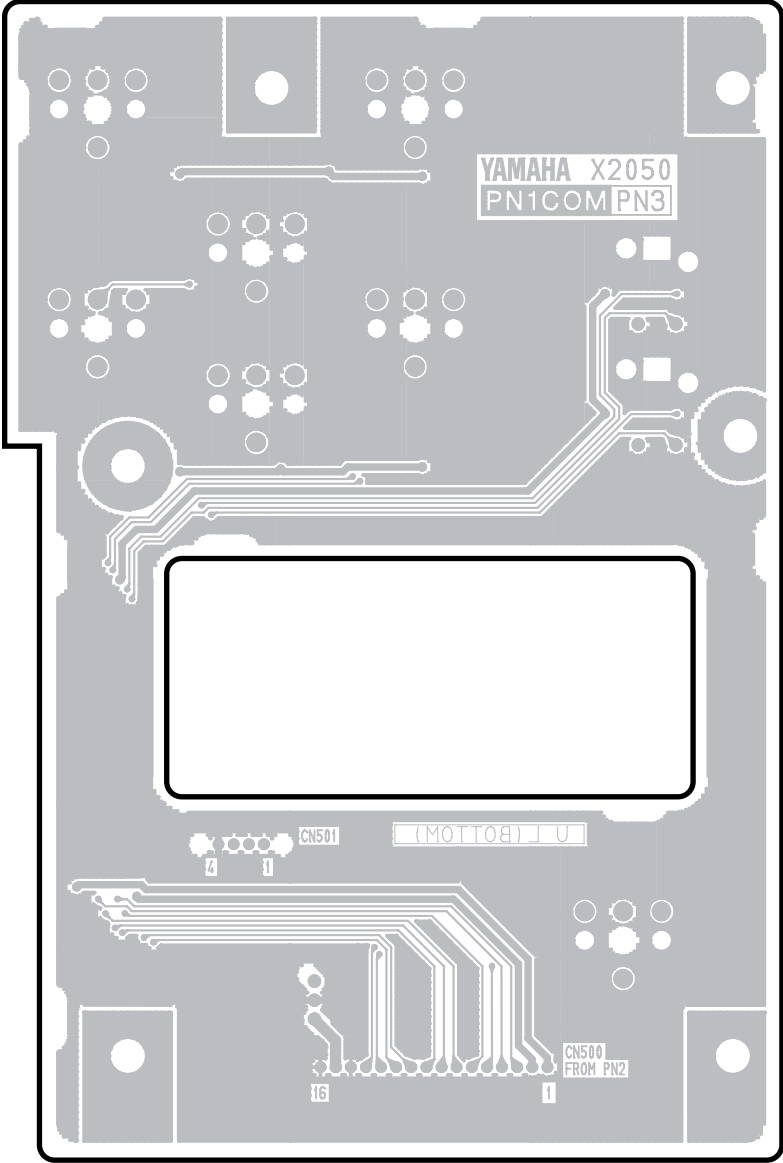
• PN1COM (PN3) Circuit Board



• PN1COM (PW) Circuit Board

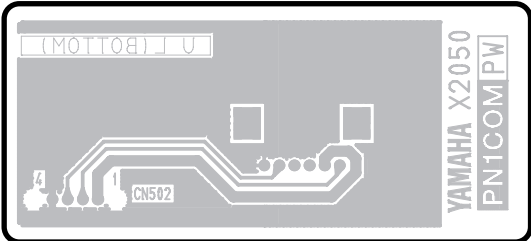


• PN1COM (PN3) Circuit Board



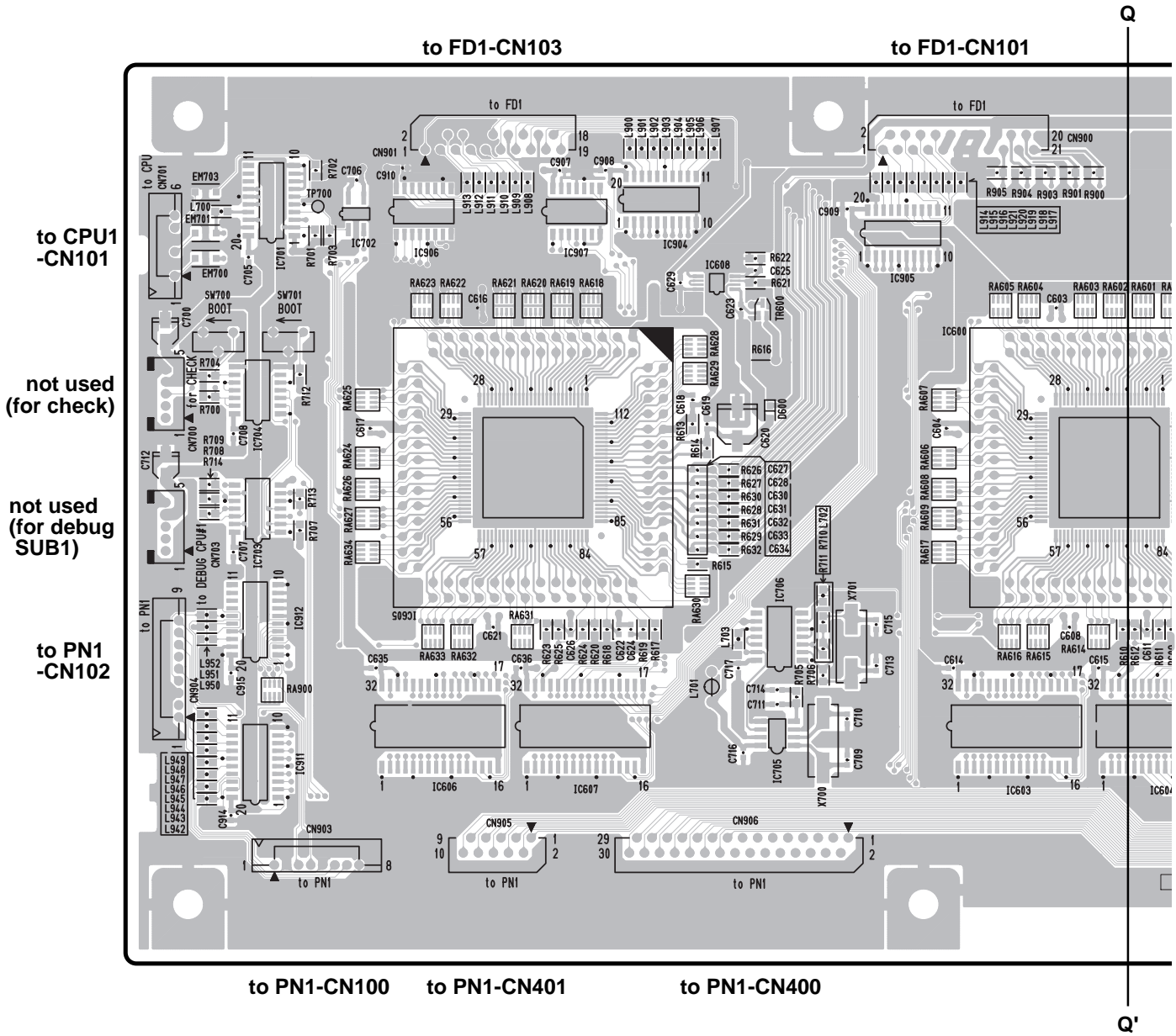
Pattern side

• PN1COM (PW) Circuit Board

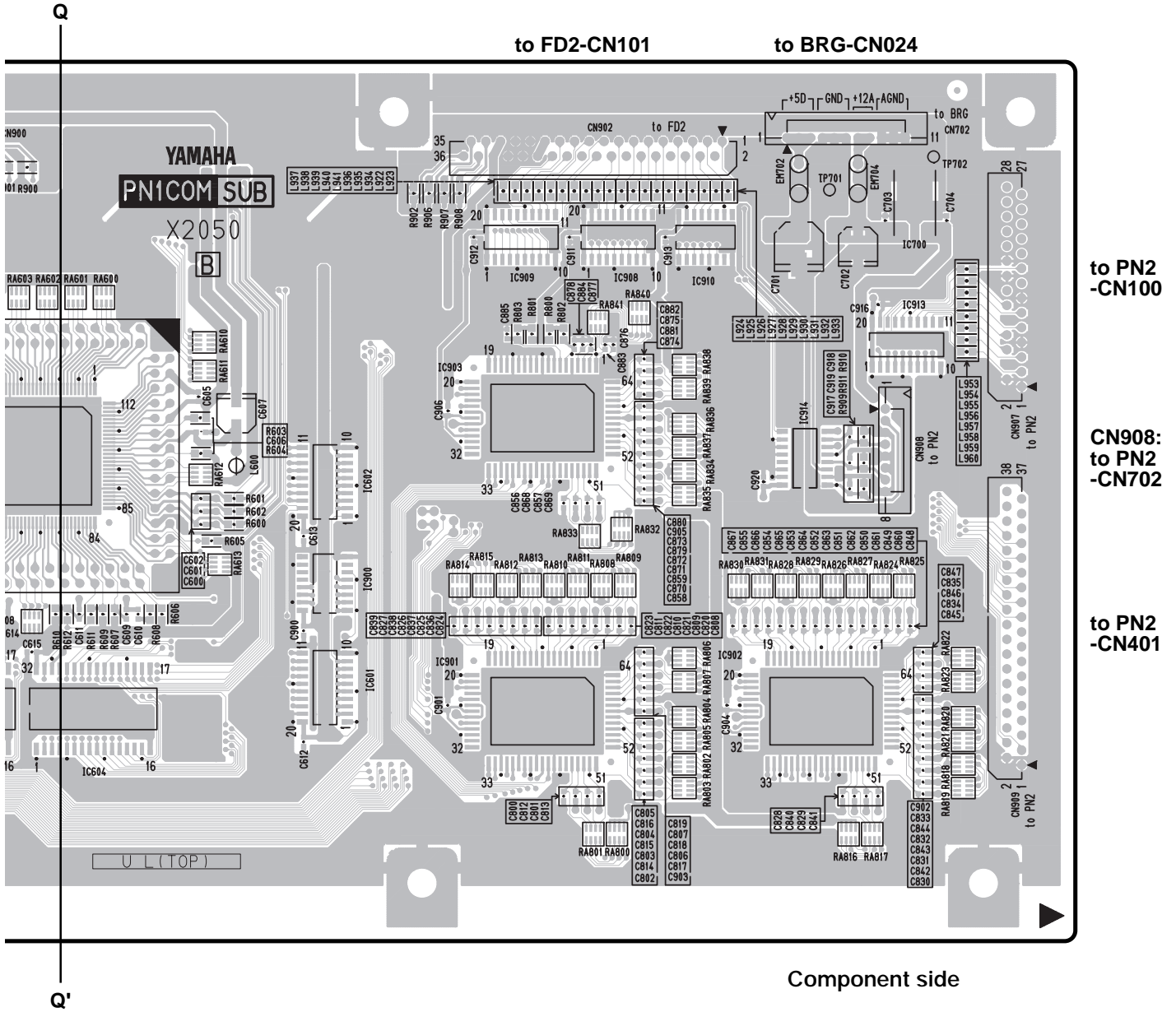


Pattern side

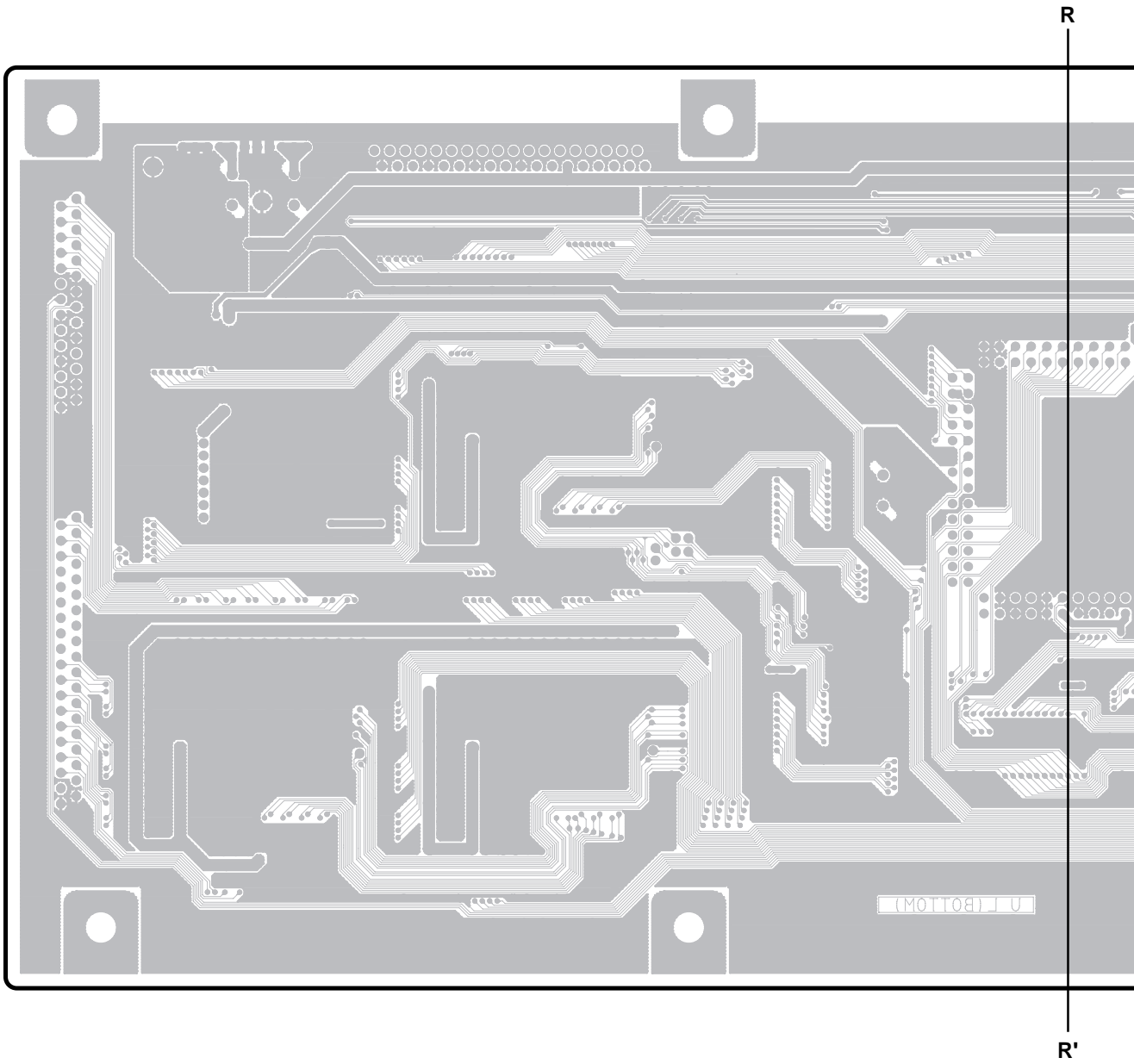
• PN1COM (SUB) Circuit Board

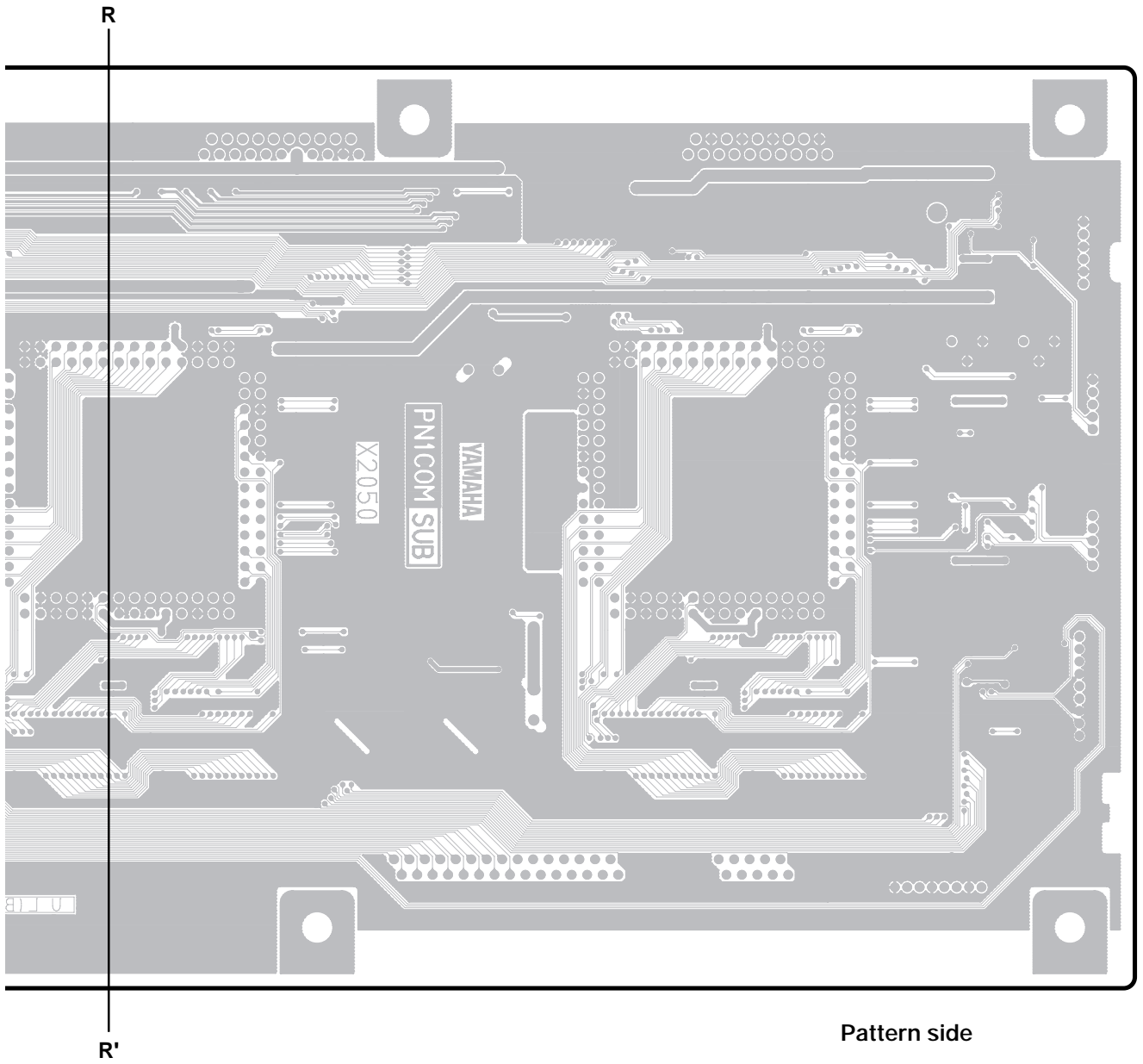






● PN1COM (SUB) Circuit Board

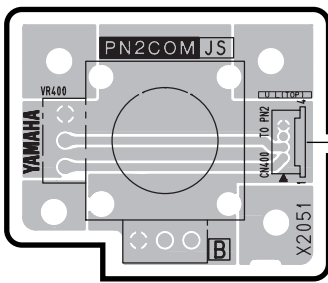




● PN2COM (PN2) Circuit Board

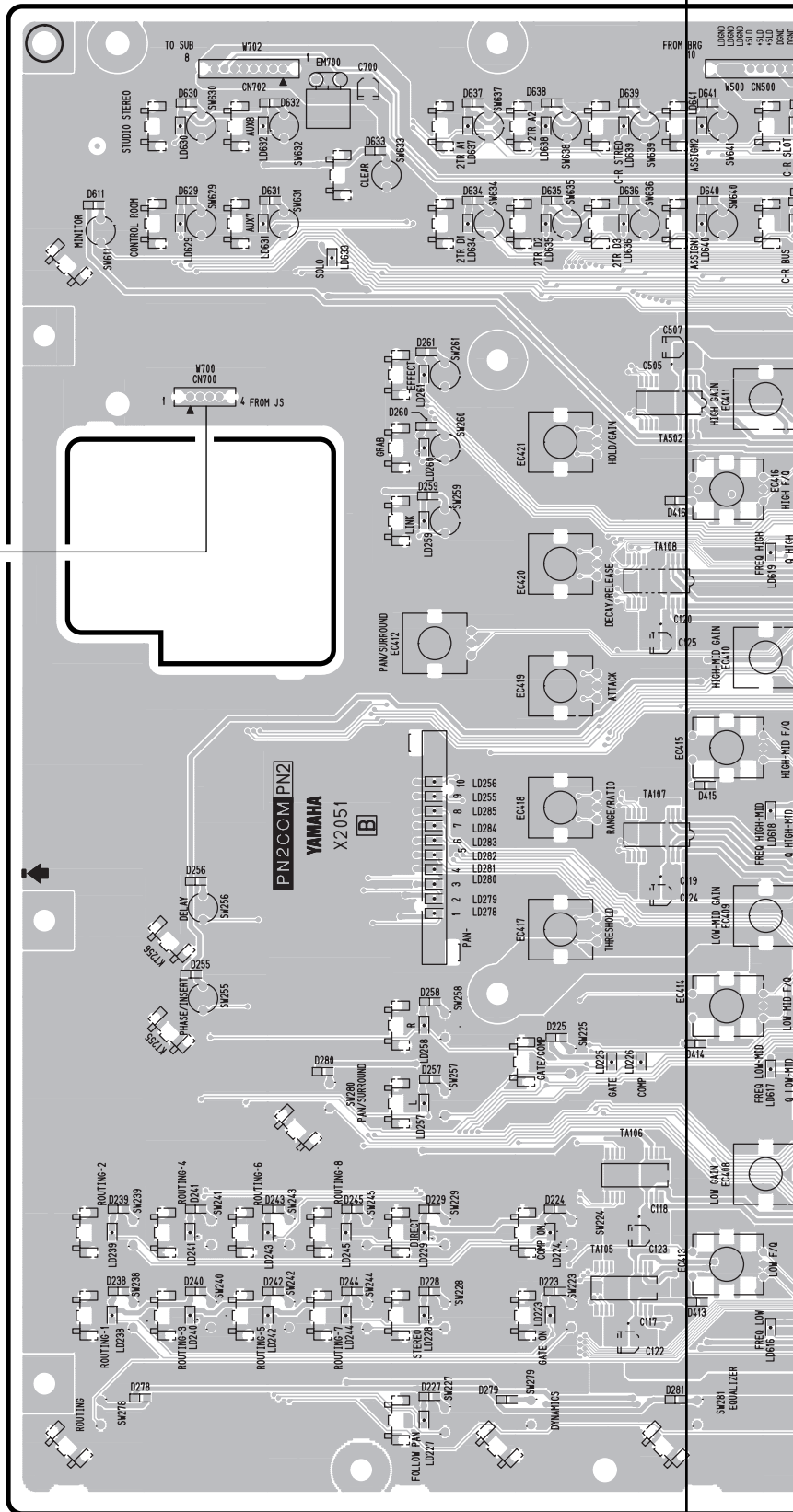
to SUB-CN908

● PN2COM (JS) Circuit Board



JOY STICK

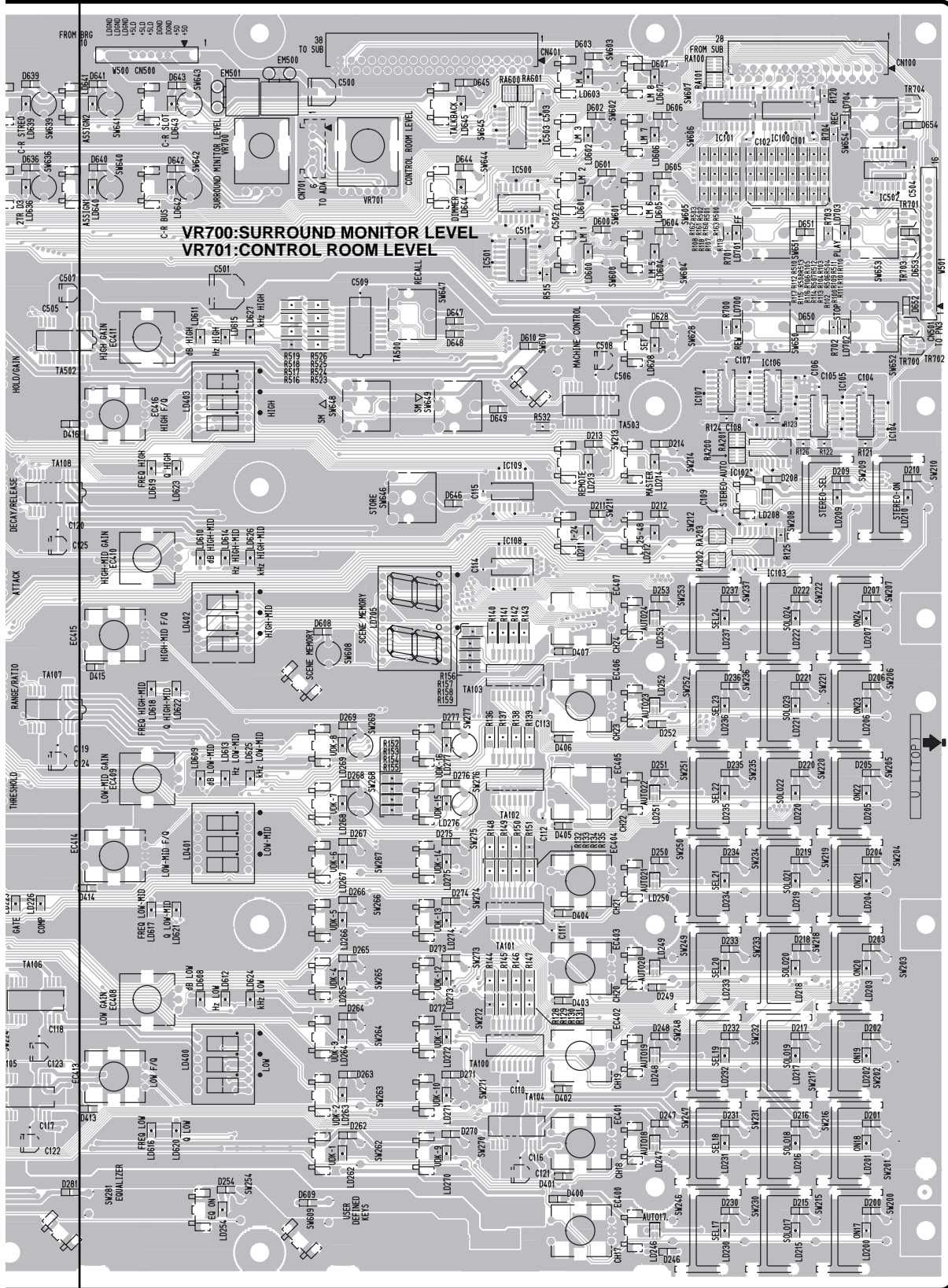
Component side



S

CN701: to ADA-CN351  
to BRG-CN020 to SUB-CN909

to SUB-CN907



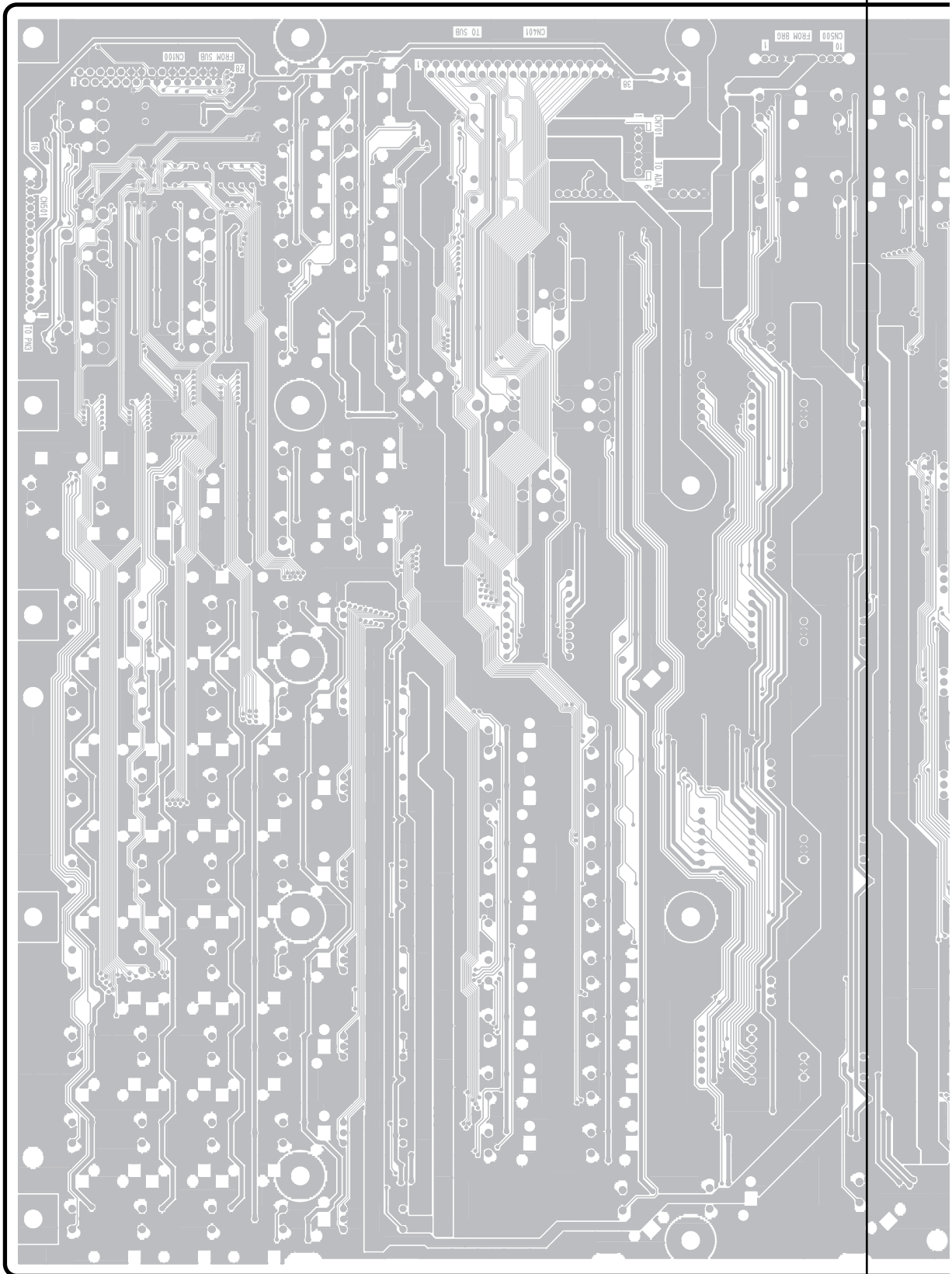
to PN3  
-CN500

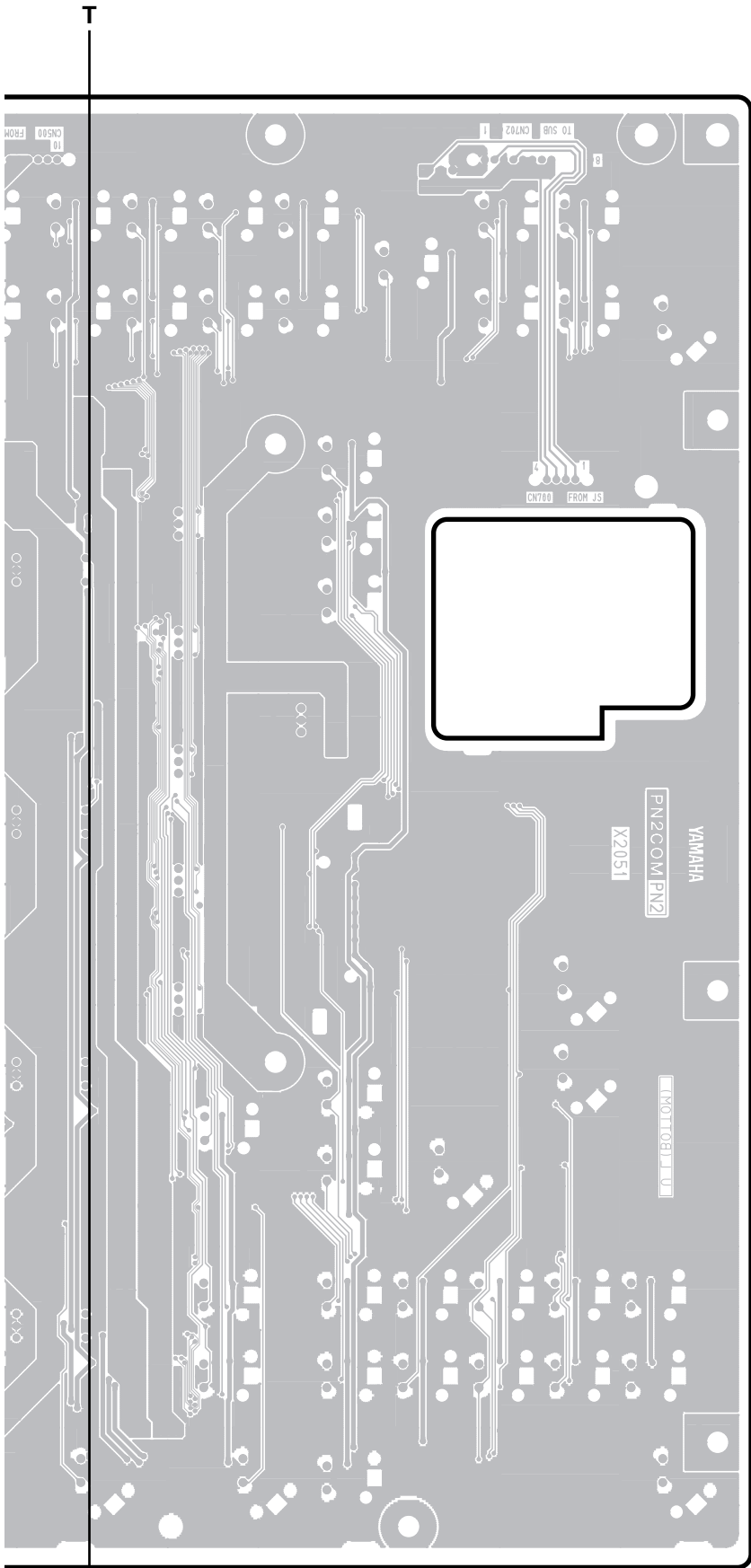
Component side

S'

3NA-V862670-2

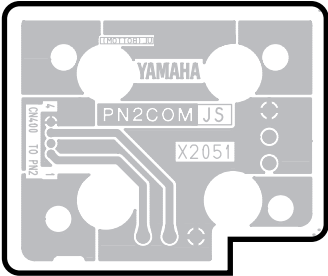
● PN2COM (PN2) Circuit Board





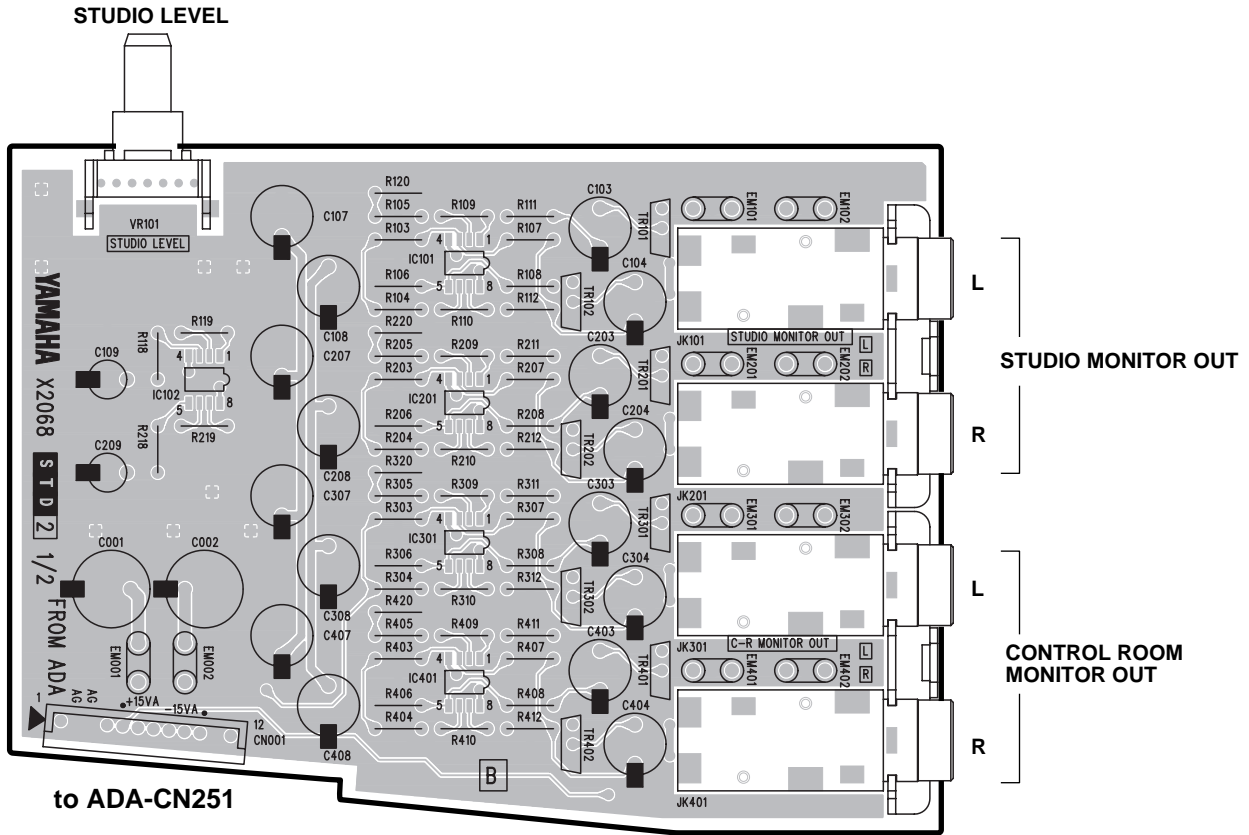
Pattern side

● PN2COM (JS) Circuit Board

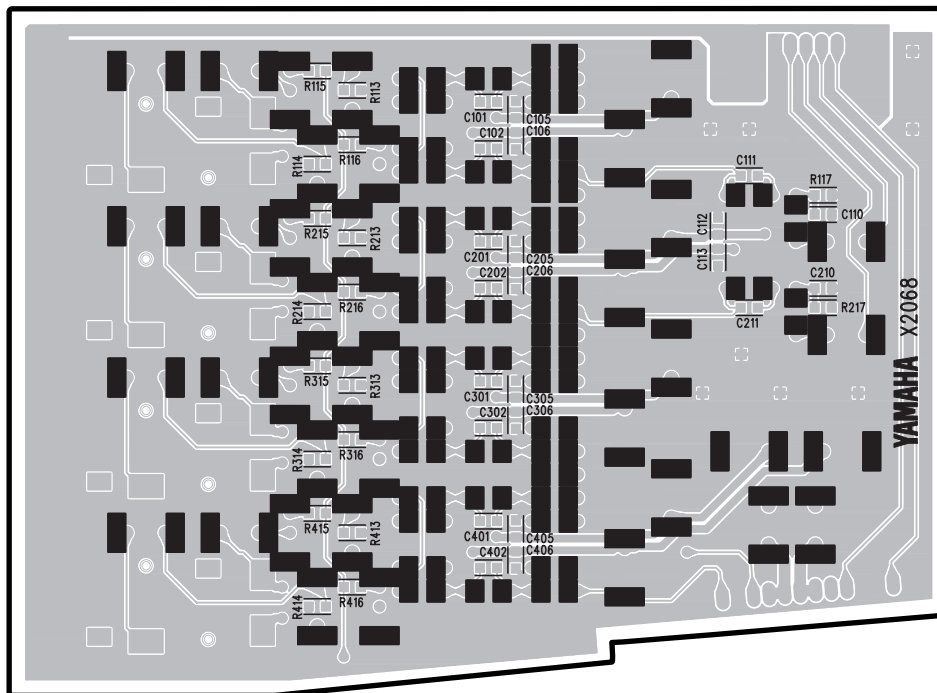


Pattern side



• STD Circuit Board



Component side



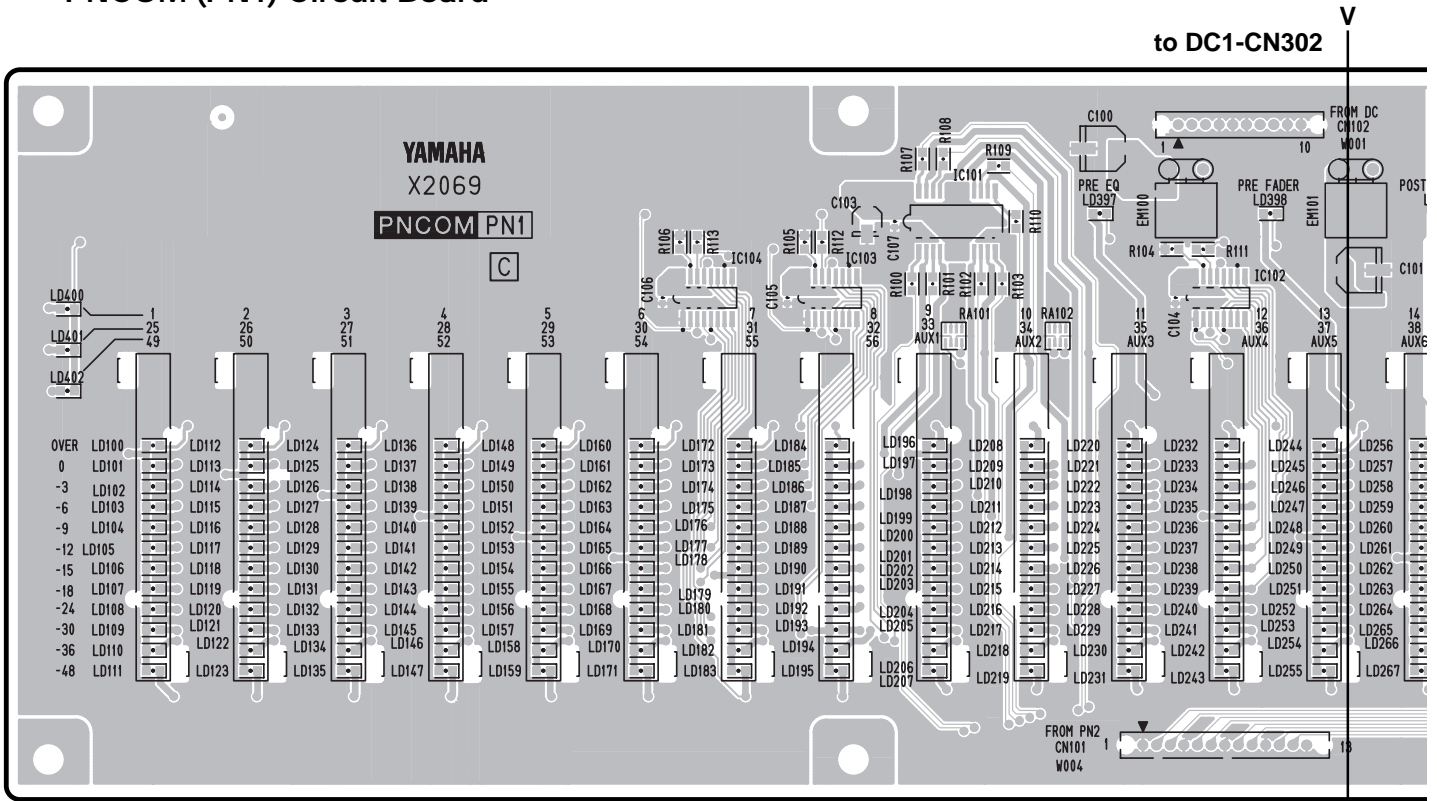
Pattern side

3NA-V863070-2   
 3NA-V863070-3 

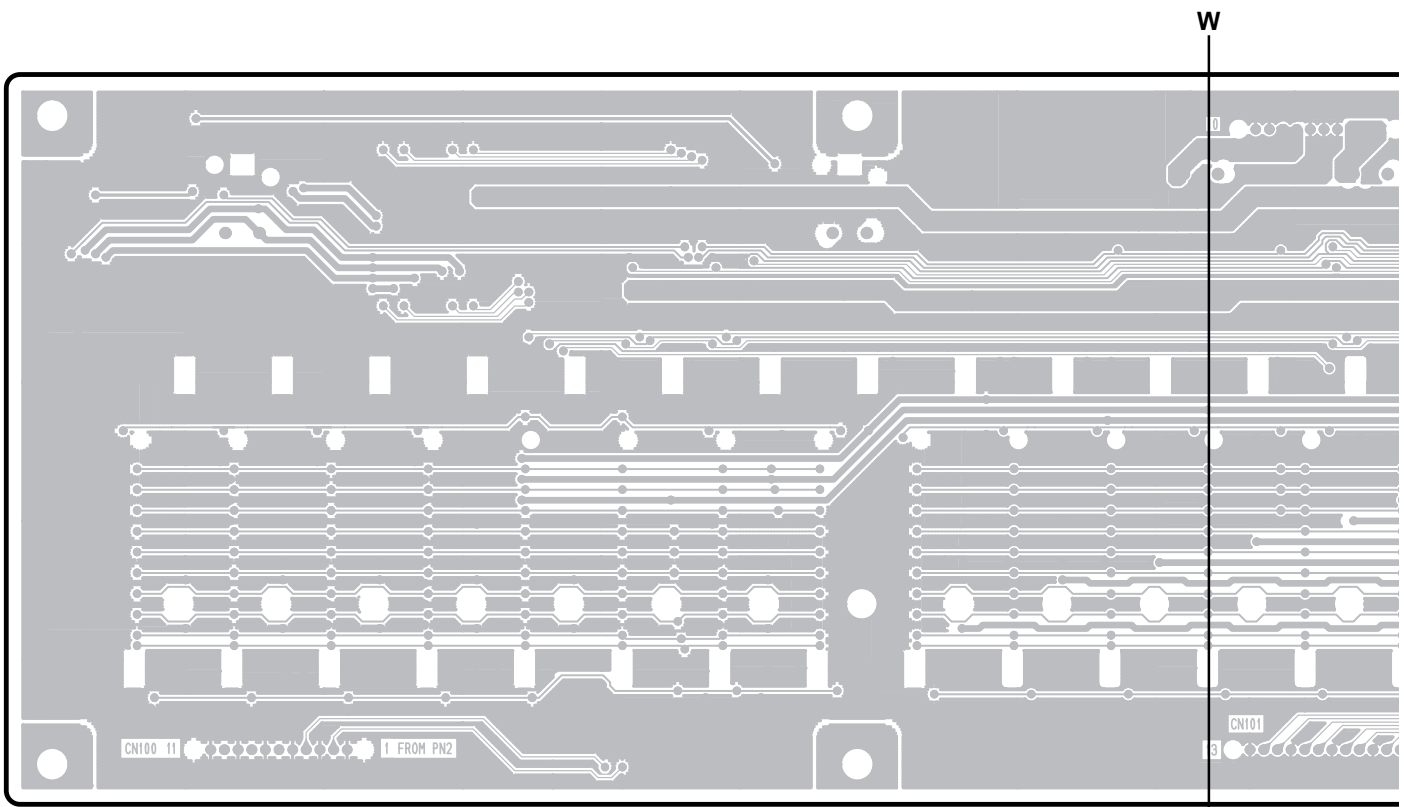




● PNCOM (PN1) Circuit Board

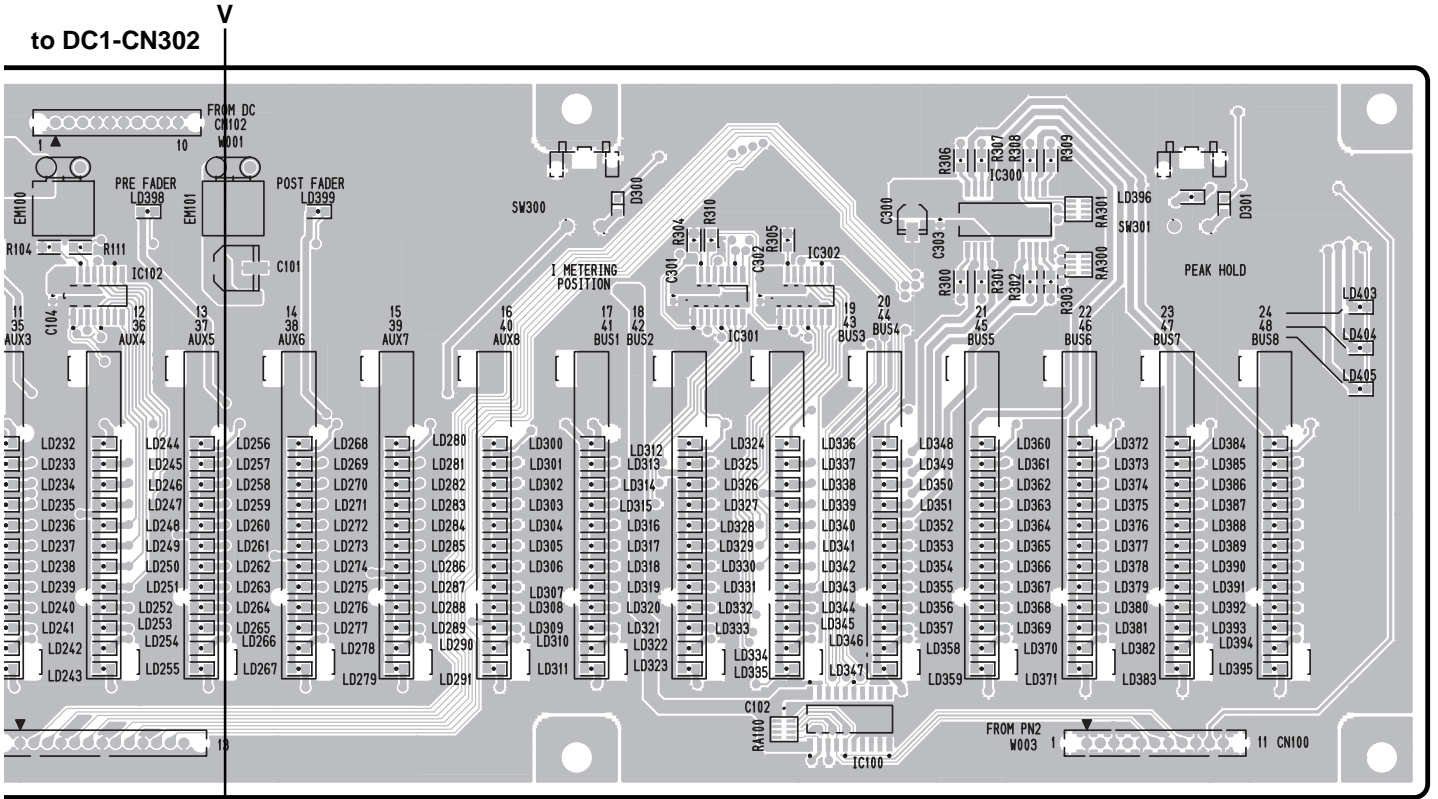


to PN2-CN501



3NA-V862150-2  $\triangle$   
3NA-V862150-2a  $\triangle$

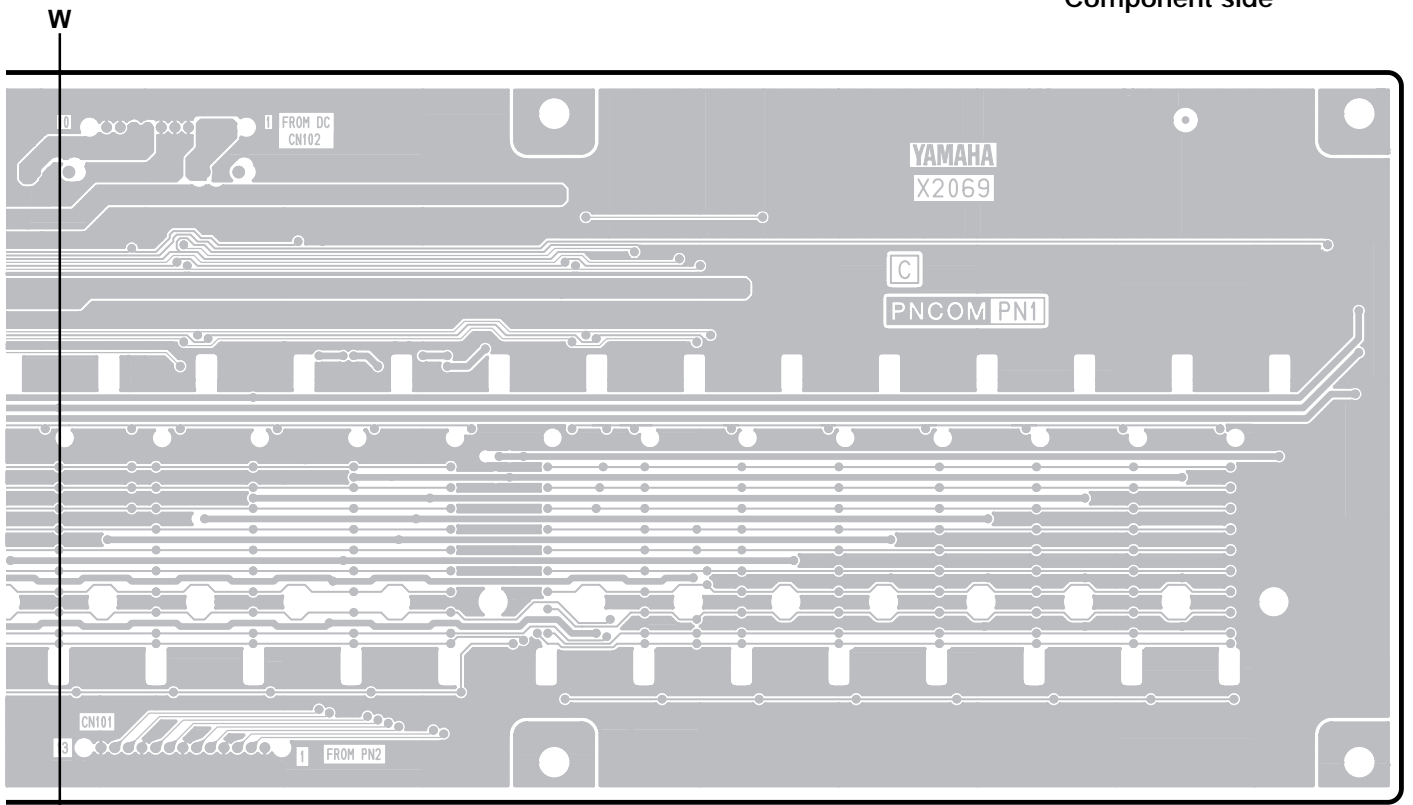
W'



to PN2-CN501

to PN2-CN502

Component side



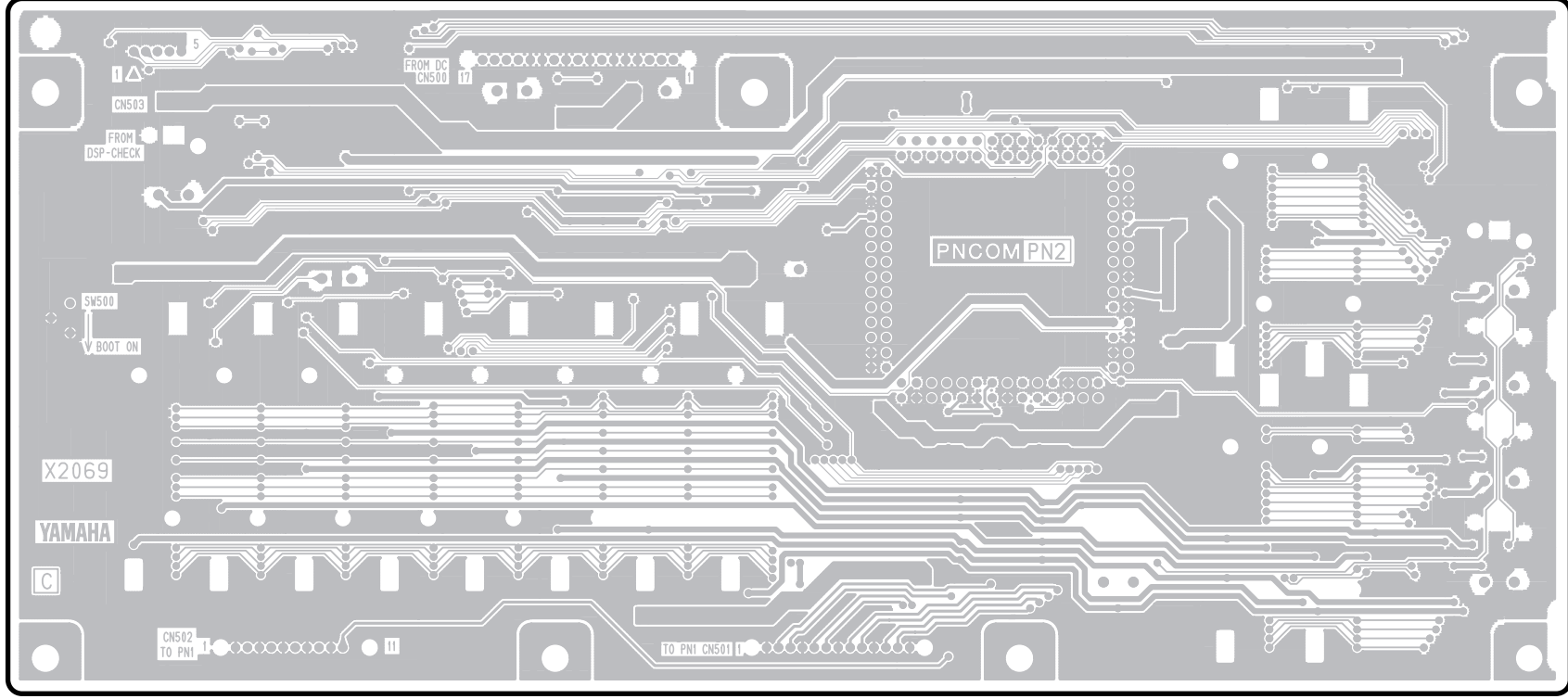
Pattern side

W'

3NA-V862150-2  $\triangle$   
 3NA-V862150-2a  $\triangle$



● PNCOM (PN2) Circuit Board



Pattern side

# INSPECTIONS

\* Perform the Check of 02R96.

## 1. Preparation

### 1-1. Condition

◇ Conditioned as follows unless specified:

- WORD CLOCK to be INT 96kHz.
- Only CH to be checked shall be turned ON.  
PAN: Center  
GAIN: MIN  
PAD: ON  
INSERT: OFF  
FADER: NOMINAL (0dB)
- 0dBu = 0.775Vrms
- 0dBV = 1Vrms = 2.2dBu
- 0dBFS = 0 decibel full scale
- Output impedance of oscillator shall be 150Ω.
- Input impedance of oscilloscope, level gauge shall be over 100kΩ.
- Noise measuring shall be at 12.7kHz, and be corrected with LPF of -6dB/OCT.  
(Not average value but effective value should be measured.)
- Measurement should be performed at 80kHz and corrected with LPF of -6dB/OCT.

◇ When checking analogue output, the following conditions shall be added or changed:

- When measuring maximum output, unless specified, output 0dB from the built-in oscillator.
- The load of analogue output shall be as follows:  
INSERTOUT: 10kΩ  
STEREO OUT (XLR): 600Ω  
STEREO OUT (PIN): 10kΩ  
CONTROL ROOM MONITOR OUT: 10kΩ  
STUDIO MONITOR OUT: 10kΩ  
OMNI OUT: 10kΩ  
PHONES: 8Ω

### 1-2. Selected DSP7 Inspections

The latest version of the selected DSP7 program must be installed beforehand.

(Refer to "1-4. Program writing ② Procedure of version up" for details on installation procedures.)

- ① Check to ascertain that it is possible to perform the initialization procedure in accordance with the instructions in "1-3. Initialization".
- ② Press channels 1, 9, 9 and 7 in that order with the channel [SEL] key, and then press the [ENTER] key.

- ③ The LCD screen will change as shown below, and the selected DSP7 program will start up.

	****H**M ← [Elapsed Time]			
[DSP7 Number]	[Error Count]	[First Time]	[Latest Time]	
↓	↓	↓	↓	
0	#	****H**M	****H**M	
1	#	****H**M	****H**M	
2				
3				
4	#	****H**M	****H**M	
5				
6	#	****H**M	****H**M	
7				
8	#	****H**M	****H**M	

Supplementary information  
←, ↓ and [ ] will not be displayed.  
[Error Count], [First Time] and [Latest Time] will not be displayed if no errors exist.

- ④ The LCD screen will be determined in accordance with the following standards after the power has been left on for one hour.
  - a. No error → Proceed to page 1-3.
  - b. Error → Replace the DSP7 in which the error occurred, and then run the inspection again.

DSP sheet and location support is shown below.

DSP7 Number	0	1	2	3	4	5	6	7	8
Location	ICB1	ICB2	ICB3	ICB4	ICB5	ICB6	ICB7	ICB8	ICB9

### 1-3. Initialization

Press down simultaneously on the AUX SELECT [DISPLAY] key and the [AUX1] key and then switch on the power to start up the system. Check to ascertain that the DIO WORD CLOCK SELECT screen is displayed. Important data should be backed up by MIDI dump. (See page 176.)

### 1-4. Main program writing

If the program version is not latest, program of the latest version must be installed.

- ① How to check the program version.  
Turning ON the power while pressing the [UTILITY] key will display the version number.
- ② Procedure of version up
  - a. Prepare the application to be used for writing data into the computer, and the data file that is to be loaded.
  - b. Connect the personal computer to the 02R96 with a USB cable, and disconnect all other cables.
  - c. Switch on the power to the 02R96 while pressing down on the [REC] button. (The communication standby screen will be displayed.)

- d. Start up the application to be used for writing data into the computer.
- e. Select the I/O port.
- f. Open the data file to be loaded (02r96.bin) and execute the loading procedure.
- g. 02R96 will automatically restart a few moments after loading has been completed.
- h. End the application.
- i. Press channels 5,9,6 and 3 in that order with the channel [SEL] key, and then press the [ENTER] key. Check to ascertain that the [MAIN] version number displayed on the LCD screen is the same as the installed program version.
- j. Switch off the power to 02R96.
- k. Press down simultaneously on the AUX SELECT [DISPLAY] key and the [AUX1] key and then switch on the power to start up the system. Check to ascertain that the DIO WORD CLOCK SELECT screen is displayed.

\* For the latest main program, please download from the YSISS home page.

#### 1-5. How to check the sub program version

If the sub program version is not the latest one, then it is necessary to upgrade to the most recent version.

Switch on the power to the main unit and check to ascertain that it has started up. Use the channel [SEL] key to press channels 5, 9, 6 and 3 in that order, and then press the [ENTER] key to display the required information. It is necessary for both SUB1 and SUB2 to be the latest versions.

#### 1-6. Fader sensing inspections

##### ① Preparations

- a. Set the layer to "MASTER", click on the "OUT FADER" tab on the group screen, and then perform grouping for the CH9 to 24 and STEREO faders with the use of the [SEL] key with all of the faders between CH9 and 24 and STEREO set at the maximum values.
- b. Set the layer to "1 - 24", click on the "FADER 1 - 48" tab on the group screen, and then perform grouping for the CH1 to 10 faders with the use of the [SEL] key with all of the faders between CH1 and 10 set at the maximum values.

##### ② Special learning

- a. Set the layer to "MASTER", operate the CH9 fader to divide all 100mm strokes into equal units of 10, and then move then approximately 10mm. When they have been moved once, they will be stopped for 0.5 seconds or longer. (Learning is achieved throughout these positioning operations.)
- b. Perform the operations outlined in 'a' above for all positions from MAX to MIN.
- c. Then perform the operations outlined in 'a' above for all positions from MIN to MAX.
- d. Set the layer to "1 - 24", operate the CH10 fader to divide all 100mm strokes into equal units of 10, and then move then approximately 10mm. When they have been moved once, they will be stopped for 0.5 seconds or longer. (Learning is achieved throughout these positioning operations.)
- e. Perform the operations outlined in 'd' above for all positions from MAX to MIN.
- f. Then perform the operations outlined in 'd' above for all positions from MIN to MAX.

##### ③ Group sensing inspections

- a. Set the layer to "MASTER", and then operate the CH9 fader for two slow return trips and two fast return trips.
- b. Set the layer to "1 - 24", and then operate the CH10 fader for two slow return trips and two fast return trips.
- c. While performing the above procedures, check to confirm that there are no faders that vibrate or that are exceptionally slow.

##### ④ Recall sensing inspections

- a. Select "1 - 24" for the layer, and then recall No.0.
- b. Set all faders to the MAX position, and store them in No.1.
- c. After recalling No.0, recall No.1.
- d. Repeat procedure 'c' twice.
- e. While performing the above procedures, check to confirm that there are no faders that vibrate or that are exceptionally slow.

## 2. Check of ANALOGUE IN/OUT at WORD CLOCK INT 96 kHz

### 2-1. STEREO OUT L/R (XLR)

Condition: Input from the CH1 (XLR).

#### ① Gain (L/R common)

Input Frequency	Input Level	Specified Output Level	Permissible range
1kHz	+10dBu	+4dBu	+4±2dBu

#### ② f Characteristic (L/R common)

Condition: Permissible range of 1kHz to be standard.

Input Frequency	Input Level	Permissible range
20Hz	+10dBu	-1.5~ +0.5dB
40kHz	+10dBu	-1.5~ +0.5dB

#### ③ Distortion factor (L/R common)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.01% or below

#### ④ Residual noise (L/R common)

Condition: [STEREO OUT] key to be switched OFF.

Permissible range
-92dBu or below

#### ⑤ Level gap between L/R

Level gap measured in ① to be decided as follows:

Permissible range
Within 1dB

#### ⑥ Cross talk between L and R

Condition: PAN to fully lean to the L side.

Input Frequency	Output Level (L)	Permissible range (R)
1kHz	+16dBu	-64dBu or below

Confirm that the R side also satisfies the above conditions.

#### ⑦ Maximum output (L/R common)

Input Frequency	Output Level	Permissible range	Permissible range (Distortion factor)
1kHz	+18dBu	+18±0.5dBu	0.01% or below

Condition: Connect hot, cold terminal to GND respectively.

Input Frequency	Output Level	Permissible range	Permissible range (Distortion factor)
1kHz	+18dBu	+18±1.0dBu	0.02% or below

### 2-2. STEREO OUT L/R (PIN)

Condition: Input from the CH1 (XLR).

#### ① Gain (L/R common)

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	+10dBu	-10dBV	-10±2dBV

#### ② Characteristic (L/R common)

Condition: Permissible range of 1kHz to be standard.

Input Frequency	Input Level	Permissible range
20Hz	+10dBu	-1.5~ +0.5dB
40kHz	+10dBu	-1.5~ +0.5dB

#### ③ Maximum output (L/R common)

Input Frequency	Output Level	Permissible range	Permissible range (Distortion factor)
1kHz	+4dBV	+4±0.5dBV	0.02% or below

#### ④ Cross talk between L and R

Condition: PAN to fully lean to the L side.

Input Frequency	Output Level (L)	Permissible range (R)
1kHz	+2dBV	-78dBu or below

Confirm that the R side also satisfies the above conditions.

### 2-3. CONTROL ROOM MONITOR OUT L/R

Condition: Input from the CH1 (XLR).

Set the [CONTROL ROOM LEVEL] control to MAX.

Set the [STEREO] key of CONTROL ROOM to ON.

#### ① Gain (L/R common)

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	+10dBu	+4dBu	+4±2dBu

#### ② f Characteristic (L/R common)

Condition: Permissible range of 1kHz to be standard.

Input Frequency	Input Level	Permissible range
20Hz	+10dBu	-1.5~ +0.5dB
40kHz	+10dBu	-1.5~ +0.5dB

#### ③ Distortion factor (L/R common)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

#### ④ Residual noise (L/R common)

Condition: [STEREO OUT] key to be switched OFF.

CONTROL ROOM LEVEL	Permissible range
MAX	-92dBu or below
MIN	-100dBu or below



- ⑤ Level gap between L/R  
Level gap measured in ① to be decided as follows:

Permissible range
Within 1dB

- ⑥ Cross talk between L and R  
Condition: PAN to fully lean to the L side.

Input Frequency	Output Level (L)	Permissible range (R)
1kHz	+16dBu	-64dBu or below

Confirm that the R side also satisfies the above conditions.

- ⑦ Maximum output (L/R common)

Input Frequency	Output Level	Permissible range	Permissible range (Distortion factor)
1kHz	+18dBu	+18±0.5dBu	0.02% or below

Condition: Connect hot, cold terminal to GND respectively.

Input Frequency	Output Level	Permissible range	Permissible range (Distortion factor)
1kHz	+18dBu	+18±1.0dBu	0.02% or below

## 2-4. STUDIO MONITOR OUT L/R

Condition: Input from the CH1 (XLR).

The [STUDIO LEVEL] control to be set to MAX.

The [STEREO] key of STUDIO to be turned ON.

- ① Gain (L/R common)

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	+10dBu	+4dBu	+4±2dBu

- ② f Characteristic (L/R common)  
Condition: Permissible range of 1kHz to be standard.

Input Frequency	Input Level	Permissible range
20Hz	+10dBu	-1.5~ +0.5dB
40kHz	+10dBu	-1.5~ +0.5dB

- ③ Distortion factor (L/R common)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

- ④ Residual noise (L/R common)  
Condition: [STEREO OUT] key to be switched OFF.

STUDIO LEVEL	Permissible range
MAX	-92dBu or below
MIN	-100dBu or below

- ⑤ Level gap between L/R  
Level gap measured in ① to be decided as follows:

Permissible range
Within 1dB

- ⑥ Cross talk between L and R  
Condition: PAN to fully lean to the L side.

Input Frequency	Output Level (L)	Permissible range (R)
1kHz	+16dBu	-64dBu or below

Confirm that the R side also satisfies the above conditions.

- ⑦ Maximum output (L/R common)

Input Frequency	Output Level	Permissible range	Permissible range (Distortion factor)
1kHz	+18dBu	+18±0.5dBu	0.02% or below

Condition: Connect hot, cold terminal to GND respectively.

Input Frequency	Output Level	Permissible range	Permissible range (Distortion factor)
1kHz	+18dBu	+18±1.0dBu	0.02% or below

## 2-5. OMNI OUT 1~8

Condition: Input from the CH1 (XLR).

Turn ON BUS1~8 at ROUTING of CH1.

Assign BUS nCH to OMNI nCH with the [OUTPUT PATCH] key.

Turn ON MASTER FADER of BUS 1~8.

The slide switches SW101~801 (8 switches) in DA circuit board are to be +18dB.

- ① Gain (OMNI OUT 1~8)

Input Frequency	Input Level	Specified Output Level	Permissible range
1kHz	+10dBu	+4dBu	+4±2dBu

- ② f Characteristic (OMNI OUT 1~8)  
Condition: Permissible range of 1kHz to be standard.

Input Frequency	Input Level	Permissible range
20Hz	+10dBu	-1.5~ +0.5dB
40kHz	+10dBu	-1.5~ +0.5dB

- ③ Distortion factor (OMNI OUT 1~8)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

- ④ Residual noise (OMNI OUT 1~8)  
Condition: [BUS OUT] key to be switched OFF.

Permissible range
-92dBu or below

- ⑤ Level gap among the terminals [OMNI OUT 1~8]  
Level gap measured in ① and ② to be decided as follows:

Permissible range
Within 1dB

- ⑥ Cross talk between odd CH/even CH

Input Frequency	Output Level (odd CH)	Permissible range (even CH)
1kHz	+16dBu	-64dBu or below

Confirm that the even side also satisfies the above conditions.

- ⑦ Maximum output (OMNI OUT 1~8)

Input Frequency	Output Level	Permissible range	Permissible range (Distortion factor)
1kHz	+18dBu	+18±0.5dBu	0.02% or below

Condition: Connect hot, cold terminal to GND respectively.

Input Frequency	Output Level	Permissible range	Permissible range (Distortion factor)
1kHz	+18dBu	+18±1.0dBu	0.02% or below

## 2-6. PHONES OUT L/R

Condition: Input from the CH1 (XLR).  
The [PHONES LEVEL] control to be set to MAX.

- ① Gain (L/R common)

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	+10dBu	-12.8dBu	-12.8±2dBu

- ② f Characteristic (L/R common)  
Condition: Permissible range of 1kHz to be standard.

Input Frequency	Input Level	Permissible range
20Hz	+10dBu	-3~0.5dB
40kHz	+10dBu	-3~0.5dB

- ③ Distortion factor (L/R common)

Input Frequency	Output Level	Permissible range
1kHz	-10dBu	0.04% or below

- ④ Residual noise (L/R common)  
Condition: The [PHONES LEVEL] control to be set to MIN.

Permissible range
-100dBu or below

- ⑤ Level gap between L/R  
Level gap measured in ① to be decided as follows:

Permissible range
Within 1dB

- ⑥ Maximum output (L/R common)  
Condition: To output -6dB from the built-in oscillator.

Input Frequency	Output Level	Permissible range	Permissible range (Distortion factor)
1kHz	-4.8dBu	-4.8±0.5dBu	0.04% or below

- ⑦ Cross talk between L and R  
Condition: PAN to fully lean to the L side.

Input Frequency	Output Level (L)	Permissible range (R)
1kHz	-10dBu	-75dBu or below

Confirm that the R side also satisfies the above conditions.

## 2-7. 2TR IN ANALOG 1 L/R

Condition: Check at the [STEREO OUT L] terminal (XLR).

- ① Gain (L/R common)

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	+4dBu	+4dBu	+4±2dBu

- ② f Characteristic (L/R common)  
Condition: Permissible range of 1kHz to be standard.

Input Frequency	Input Level	Permissible range
20Hz	+4dBu	-1.5~0.5dB
40kHz	+4dBu	-1.5~0.5dB

- ③ Distortion factor (L/R common)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

- ④ Residual noise (L/R common)  
Condition: [2TR IN ANALOG 1] terminal to be shorted at 150Ω.

Permissible range
-85dBu or below

- ⑤ Level gap between L/R  
Level gap measured in ① to be decided as follows:

Permissible range
Within 1dB

- ⑥ Cross talk between L and R  
Condition: Input the signal into the L side.  
The R side to be shorted at 150Ω.

Input Frequency	Output Level (L)	Permissible range (R)
1kHz	+16dBu	-64dBu or below

Confirm that the R side also satisfies the above conditions.

## 2-8. 2TR IN ANALOG 2 L/R

Condition: Check at the [STEREO OUT L] terminal (XLR).

### ① Gain (L/R common)

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	-10dBV	+4dBu	+4±2dBu

### ② f Characteristic (L/R common)

Condition: Permissible range of 1kHz to be standard.

Input Frequency	Input Level	Permissible range
20Hz	-10dBV	-1.5~0.5dB
40kHz	-10dBV	-1.5~0.5dB

### ③ Distortion factor (L/R common)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

### ④ Residual noise (L/R common)

Condition: [2TR IN ANALOG 2] terminal to be shorted at 150Ω.

Permissible range
-85dBu or below

### ⑤ Level gap between L/R

Level gap measured in ① to be decided as follows:

Permissible range
Within 1dB

### ⑥ Cross talk between L and R

Condition: Input the signal into the L side.

The R side to be shorted at 150Ω.

Input Frequency	Output Level (L)	Permissible range (R)
1kHz	+16dBu	-64dBu or below

Confirm that the R side also satisfies the above conditions.

## 2-9. CH IN 1~16 (XLR)

Condition: Check at the [STEREO OUT L] terminal (XLR).

### A. GAIN MAX, PAD OFF

#### ① Gain (CH1~16)

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	-60dBu	+4dBu	+4±2dBu

#### ② f Characteristic (CH1~16)

Condition: Permissible range of 1kHz to be standard.

Input Frequency	Input Level	Permissible range
20Hz	-60dBu	-1.5~0.5dB
40kHz	-60dBu	-1.5~0.5dB

#### ③ Distortion factor (CH1~16)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

#### ④ Noise level (CH1~16)

Condition: Measured CH IN to be shorted at 150Ω.

Permissible range
-64dBu or below

However, if not be within the above range EIN, confirm that the measured value is (Gain at 1kHz)  $\leq -128$ .

#### ⑤ Level gap (CH1~16)

Level gap measured in ① to be decided as follows:

Permissible range
Within 2dB

### B. GAIN MIN, PAD ON

#### ① Gain (CH1~16)

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	+10dBu	+4dBu	+4±2dBu

#### ② Distortion factor (CH1~16)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.01% or below

#### ③ Noise level (CH1~16)

Condition: Measured CH IN to be shorted at 150Ω.

Permissible range
-85dBu or below

#### ④ INSERT OUT gain (CH1~16)

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	+10dBu	+4dBu	+4±1.5dBu

#### ⑤ INSERT IN 1~16 gain

Condition: Turn ON the [INSERT] switch.

Input the signal into the measured [INSERT IN] terminal.

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	+4dBu	+4dBu	+4±1.5dBu

### C. Phantom (CH1~16)

Voltage with XLR Pin 2 and Pin 3 shorted, a load of 10kΩ between Pin 2 and 1, and the Phantom Switch ON is prescribed as follows:

Permissible range
DC 31~37V

Check if a discharge of electricity occurs quickly when the Phantom switch is turned OFF.

## 2-10. CH IN 17~24 (PHONE)

Condition: Check at the [STEREO OUT L] terminal (XLR).

### A. GAIN MAX

#### ① Gain (CH17~24)

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	-34dBu	+4dBu	+4±2dBu

#### ② f Characteristic (CH17~24)

Condition: Permissible range of 1kHz to be standard.

Input Frequency	Input Level	Permissible range
20Hz	-34dBu	-1.5~0.5dB
40kHz	-34dBu	-1.5~0.5dB

#### ③ Distortion factor (CH17~24)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

#### ④ Level gap (CH17~24)

Level gap measured in ① to be decided as follows:

Permissible range
Within 2dB

#### ⑤ Noise level (CH17~24)

Condition: Measured CH IN to be shorted at 150Ω.

Permissible range
-69dBu or below

However, if not be within the above range EIN, confirm that the measured value is (Gain at 1kHz)  $\leq$  -107.

### B. GAIN MIN

#### ① Gain (CH17~24)

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	+10dBu	+4dBu	+4±2dBu

#### ② Distortion factor (CH17~24)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.01% or below

#### ③ Noise level (CH17~24)

Condition: Measured CH IN to be shorted at 150Ω.

Permissible range
-85dBu or below

## 2-11. Checking the action of the CH IN 1~24 Level Meter

Condition: Input the specified levels into the CH (PHONE) to be measured.

Concurrent inputs into CH 1~24 are possible.

Confirm visually each LED ON/OFF of PEAK, NOMINAL, SIGNAL.

### Light ON

LED level	Input frequency	Input level	Reference output level (INSERT OUT)
PEAK	1kHz	+23dBu	+17dBu
SIGNAL	1kHz	-8dBu	-14dBu

### Light OFF

LED level	Input frequency	Input level	Reference output level (INSERT OUT)
PEAK	1kHz	+19dBu	+13dBu
SIGNAL	1kHz	-12dBu	-18dBu

## 2-12. TALKBACK

Condition: Check at the [STEREO OUT L/R] terminal (XLR).

Set the [TALKBACK LEVEL] control to MAX.

Turn ON the [SLATE] key of TALKBACK. Confirm the signal through the microphone.

## 3. ANALOG IN/OUT check at 48kHz WORD CLOCK INT

### 3-1. STEREO OUT L/R (XLR)

Condition: Input from the CH1 (XLR).

#### ① Distortion factor (L/R common)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.01% or below

#### ② Residual noise (L/R common)

Condition: Turn OFF the [STEREO OUT] key.

Permissible range
-92dBu or below

### 3-2. CONTROL ROOM MONITOR OUT L/R

Condition: Input from the CH1 (XLR).

Set the [CONTROL ROOM LEVEL] control to MAX.

Turn ON the [STEREO] key of CONTROL ROOM.

#### ① Distortion factor (L/R common)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

#### ② Residual noise (L/R common)

Condition: Set the [STEREO OUT] key to OFF.

CONTROL ROOM LEVEL	Permissible range
MAX	-92dBu or below

**3-3. STUDIO MONITOR OUT L/R**

Condition: Input from the CH1 (XLR).  
Set the [STUDIO LEVEL] control to MAX.  
Turn ON the [STEREO] key of STUDIO.

① Distortion factor (L/R common)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

② Residual noise (L/R common)

Condition: Set the [STEREO OUT] key to OFF.

STUDIO LEVEL	Permissible range
MAX	-92dBu or below

**3-4. OMNI OUT 1~8**

Condition: Input from the CH1 (XLR).  
Turn ON BUS1~8 at ROUTING of CH1.  
Assign BUS nCH to OMNI nCH with the [OUTPUT PATCH] key.  
Turn ON MASTER FADER of BUS 1~8.  
The slide switches SW101~801 (8 switches) in DA circuit board are to be +18dB.

① Distortion factor (OMNI OUT 1~8)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

② Residual noise (OMNI OUT 1~8)

Condition: [BUS OUT] key to be switched OFF.

Permissible range
-92dBu or below

**3-5. PHONES OUT L/R**

Condition: Input from the CH1 (XLR).  
Set the [PHONES LEVEL] control to MAX.

① Distortion factor (L/R common)

Input Frequency	Output Level	Permissible range
1kHz	-10dBu	0.04% or below

② Residual noise (L/R common)

Condition: Set the [PHONES LEVEL] control to MIN.

Permissible range
-100dBu or below

**3-6. 2TR IN ANALOG 1 L/R**

Condition: Check at the [STEREO OUT L] terminal (XLR).

① Distortion factor (L/R common)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

② Residual noise (L/R common)

Condition: [2TR IN ANALOG 1] terminal to be shorted at 150Ω.

Permissible range
-87dBu or below

**3-7. 2TR IN ANALOG 2 L/R**

Condition: Check at the [STEREO OUT L] terminal (XLR).

① Distortion factor (L/R common)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

② Residual noise (L/R common)

Condition: [2TR IN ANALOG 2] terminal to be shorted at 150Ω.

Permissible range
-87dBu or below

**3-8. CH IN 1~24 (PHONE)**

Condition: Check at the [STEREO OUT L] terminal (XLR).  
Set the [GAIN] control to MIN (CH1~24)  
and the [PAD] switch to ON (CH1~16).

① Distortion factor (CH1~24)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.01% or below

② Noise level (CH1~24)

Condition: Measured CH IN to be shorted at 150Ω.

Permissible range
-87dBu or below

**4. Checking DIGITAL IN/OUT**

**4-1. 2TR DIGITAL OUT 1,2,3**

Condition: Use System Two.  
Input from the CH1 (XLR).

A. WORD CLOCK INT 48kHz.

Condition: Set WORD CLOCK INT to 48kHz.

① Distortion factor (2TR DIGITAL OUT 1)

Input Frequency	Output Level	Permissible range
1kHz	-2dBFS	0.02% or below

B. WORD CLOCK INT 96kHz.

Condition: Set WORD CLOCK INT to 96kHz.

① Gain (2TR DIGITAL OUT 1,2,3 common)

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	+10dBu	-14dBFS	-14±2dBFS

## ② f Characteristic (2TR DIGITAL OUT 1)

Condition: Permissible range of 1kHz to be standard.

Input Frequency	Input Level	Permissible range
20Hz	+10dBu	-1.0~0.5dB
40kHz	+10dBu	-1.5~0.5dB

## ③ Distortion factor (2TR DIGITAL OUT 1)

Input Frequency	Output Level	Permissible range
1kHz	-2dBFS	0.02% or below

## 4-2. 2TR DIGITAL IN 1,2,3

Condition: Use System Two.

Check at the [STEREO OUT L/R] terminal (XLR).

Select as follows for WORD CLOCK.

When checking the [2TR DIGITAL IN 1] terminal: 2TR D1

When checking the [2TR DIGITAL IN 2] terminal: 2TR D2

When checking the [2TR DIGITAL IN 3] terminal: 2TR D3

## A. 48kHz.

Condition: Set the frequency setting (Sample Rate) of System Two to 48kHz.

Turn OFF SRC of the [2TR DIGITAL IN] terminal.

## ① Distortion factor (2TR DIGITAL IN 1)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

## B. 96kHz.

Condition: Set the frequency setting (Sample Rate) of System Two to 96kHz.

Turn OFF SRC of the [2TR DIGITAL IN] terminal.

## ① Gain (2TR DIGITAL IN 1,2,3 common)

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	-14dBFS	+4dBu	+4±2dBu

## ② f Characteristic (2TR DIGITAL IN 1)

Condition: Permissible range of 1kHz to be standard.

Input Frequency	Input Level	Permissible range
20Hz	-14dBFS	-1.0~0.5dB
40kHz	-14dBFS	-1.5~0.5dB

## ③ Distortion factor (2TR DIGITAL IN 1)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

## C. SRC action

Condition: Set WORD CLOCK INT to 96kHz.

Check at the [2TR DIGITAL OUT1] terminal.

Set the frequency setting of System

Two (Sample Rate) to 44.1kHz.

Turn ON SRC of CH to be measured.

## ① FS (2TR DIGITAL IN 1,2,3 common)

Input Frequency	Input Level	Specified output level	Permissible range
1kHz	-14dBFS	96kHz	96kHz±100Hz

## ② Distortion factor (2TR DIGITAL IN 1,2,3 common)

Input Frequency	Output Level	Permissible range
1kHz	-14dBFS	0.005% or below

## 4-3. PLL action range of WORD CLOCK IN and 2TR DIGITAL IN 1,2,3

Condition: Use System Two.

Check at the [STEREO OUT L/R] terminal (XLR).

Select as follows for WORD CLOCK.

When checking the [WORD CLOCK IN] terminal: WC IN

When checking the [2TR DIGITAL IN 1] terminal: 2TR D1

When checking the [2TR DIGITAL IN 2] terminal: 2TR D2

When checking the [2TR DIGITAL IN 3] terminal: 2TR D3

Input from the CH1 (XLR).

## A. 96kHz + 6% (101.76kHz)

Condition: When checking the [WORD CLOCK IN] terminal, set the frequency setting of the oscillator to 96kHz + 6%. When checking the [2TR DIGITAL IN 1,2,3] terminal, set the setting of System Two (Sample Rate) to 96kHz + 6%.

## ① Distortion factor (WORD CLOCK IN, 2TR DIGITAL IN 1,2,3 common)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

## B. 44.1kHz - 10% (39.69kHz)

Condition: When checking the [WORD CLOCK IN] terminal, set the frequency setting of the oscillator to 44.1kHz - 10%. When checking the [2TR DIGITAL IN 1,2,3] terminal, set the setting of System Two (Sample Rate) to 44.1kHz - 10%.

## ① Distortion factor (WORD CLOCK IN, 2TR DIGITAL IN 1,2,3 common)

Input Frequency	Output Level	Permissible range
1kHz	+16dBu	0.02% or below

## 5. Measuring jitter

Condition: Use System Two.

Select Sec, PK

BW: Select 700Hz~100kHz.

Check at the [2TR DIGITAL OUT1] terminal.

### 5-1. WORD CLOCK INT

Condition: For WORD CLOCK, select as follows:

#### ① Jitter

WORD CLOCK	Permissible range
INT 44.1kHz	5nsec. or below
INT 48kHz	5nsec. or below
INT 88.2kHz	5nsec. or below
INT 96kHz	5nsec. or below

### 5-2. WORD CLOCK EXT

Condition: Select as follows for WORD CLOCK.

When checking the [WORD CLOCK IN] terminal: WC IN

When checking the [2TR DIGITAL IN 1] terminal: 2TR D1

When checking the [2TR DIGITAL IN 2] terminal: 2TR D2

When checking the [2TR DIGITAL IN 3] terminal: 2TR D3

When checking the [WORD CLOCK IN] terminal, select the values in the following table for the frequency setting of the oscillator.

When checking the [2TR DIGITAL IN 1,2,3] terminals, select the values in the following table for the frequency setting of the System Two (Sample Rate).

#### ① Jitter (WORD CLOCK IN, 2TR DIGITAL IN 1,2,3 common)

WORD CLOCK	Permissible range
44.1kHz	10nsec. or below
48kHz	10nsec. or below
88.2kHz	10nsec. or below
96kHz	10nsec. or below

## 6. Sound check

Check the following items with the sense of hearing.

- ANALOG INPUT, ANALOG OUTPUT

Check at the [STEREO OUT L/R] terminal (XLR) of CH1 (XLR), CH12 (XLR), CH24 (PHONE).

- 2TR DIGITAL IN 1,2,3

Condition: Set WORD CLOCK INT to 96kHz.

Check at the [STEREO OUT L/R] terminal (XLR).

Set the frequency setting of System Two (Sample Rate) to 44.1kHz.

Turn ON SRC of CH to be measured.

- EEEFFECT function (DSP6 operation verification)

Condition: • [Sound emission scene data]:

[02\_MDR\_02] file for verifying the EFFECT function.

- WORD CLOCK: INT 96kHz

- Input the music signals from the [ANALOG INPUT] terminal's CH1, recall in order from scene 1 to scene 4, and then adjust the [GAIN] knob so that the stereo meter's [OVER] indicator does not become illuminated for any of the scenes.

Inspection: Recall scene 1 (REVERB) and verify the signals with the headphones for at least 15 seconds.

Decision standard #1: Check to ensure that the EFFECT sounds are emitted.

Decision standard #2: Check to ensure that there is no noise included.

Recall the following scenes from 2 to 16 in the same way for inspection purposes.

The EFFECT functions for scene 2 to scene 16 are as follows:

Scene 2: SYMPHONIC

Scene 3: HQ PITCH

Scene 4: DYNAMIC FILTER

Scene 5: REVERB

Scene 6: SYMPHONIC

Scene 7: HQ PITCH

Scene 8: DYNAMIC FILTER

Scene 9: REVERB

Scene 10: SYMPHONIC

Scene 11: HQ PITCH

Scene 12: DYNAMIC FILTER

Scene 13: REVERB

Scene 14: SYMPHONIC

Scene 15: HQ PITCH

Scene 16: DYNAMIC FILTER

























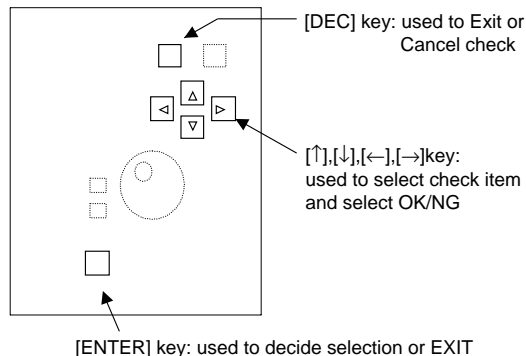
# SERVICE CHECK PROGRAM

\* Execute the service check programs for 02R96 and MB02R96.

## 0. Outline

### 0-1 How to operate

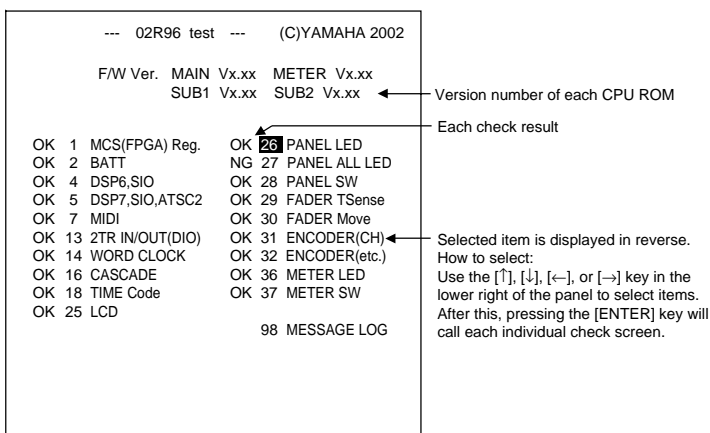
Keys used for the service check on the panel



### 0-2. Explanation of screen

(Fig.1)

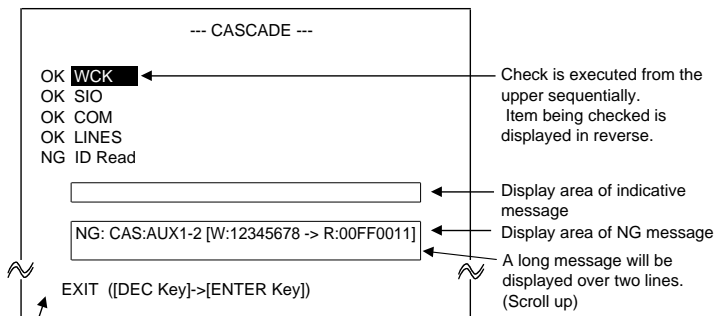
Example of screen for the entire check items



\* 36 and 37 are the test programs of MB02R96.

(Fig.2)

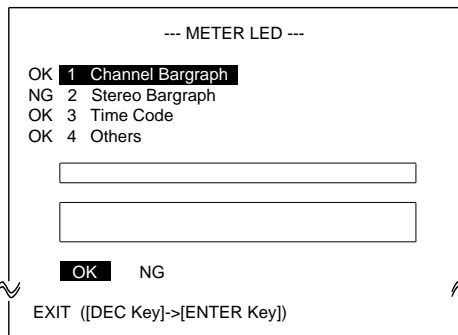
Example A of individual check screen (when forwarding check items by automatic judge)



- 1) Check is carried out automatically and turns to the [EXIT] mode when all items are completed. Pressing the [ENTER] key will display the screen of Fig.1.
- 2) If redo the check, return to Fig.1 to select items.

(Fig.3)

Example B of individual check screen (when checking each one of multiple items automatically (semi-automatically) or visually)



- 1) When starting the check, OK/NG selection items will be displayed. Judging by actions and results, select OK/NG. Use the [←] or [→] key for the selection and decide by using the [ENTER] key.
- 2) Choice of OK or NG displays the next check item automatically.
- 3) Pressing the [DBC] key while the entry of OK/NG decision is being waited will reverse the appearance of [EXIT] and this screen is terminated when the [ENTER] key is pressed. (Some check items can be processed the [EXIT] by pressing the [DEC] key even during the execution.) If executed the [EXIT] before all the check items are completed, the judges of Fig.1 will be displayed as NG.
- 4) Check items with numbers at the head as such Fig.3 are selectable. Select an item using the [↑] or [↓] key and press the [ENTER] key to start a check. For the ones without numbers at the head the check will be automatically initiated.

### 0-3 List of check items

Item	Check name	Outline of check item	Judge
1-1	MCS(FPGA)	Check the FPGA register by Read/Write.	Auto
1-2	BATT	Check the voltage of the backup battery.	Auto
1-3			
1-4	DSP6,SIO	Check the SIO connection by Reading/Writing the register of each DSP6.	Auto
1-5	DSP7,SIO,ATSC2	Check the SIO and ATSC2 connection by Reading/Writing the register of each DSP7.	Auto
1-6			
1-7	MIDI	MIDI OUT-->Check the Send/Receive of IN.	Auto
1-8			
1-9			
1-10			
1-11			
1-12			
1-13	2TR IN/OUT(DIO)	Check by Loop Backing the 2TR IN/OUT DIGITAL.	Auto
1-14	WORD CLOCK	Count the Fs of WCLK OUT at WCLK IN to judge the LOCK of PLL.	Semi-Auto
1-15			
1-16	CASCADE	Check the Send/Receive of CASCADE OUT > IN.	Auto
1-17			
1-18	TIME Code	Check the MTC MIDI input.	Auto
1-19			
1-25	LCD	Display the entire screen in black and white to check contrast volume.	Visual check
1-26	PANEL LED	LEDs (including 7 Seg LEDs) will light sequentially as specified.	Visual check
1-27	PANEL ALL LED	Check all LEDs for gradual brightness and for each color.	Visual check
1-28	PANEL SW	Press the SW sequentially as specified for check.	Semi-Auto
1-29	FADER TSense	Check the touch sense sensitivity of the FADER.	Semi-Auto
1-30	FADER Move	Check the moving time and stop position of the FADER.	Semi-Auto
1-31	ENCODER(CH)	Rotate the Encoder (CH1-24) for check.	Semi-Auto
1-32	ENCODER(etc.)	Rotate the Encoder (etc.) for check.	Semi-Auto
1-33			
1-36	METER LED	MB02R96 LEDs will light sequentially as specified.	Visual check
1-37	METER SW	Pressing the SW of MB02R96 will turn ON/OFF corresponding LED.	Visual check

Checked items and item numbers correspond to those of the test program.

1. Service Check

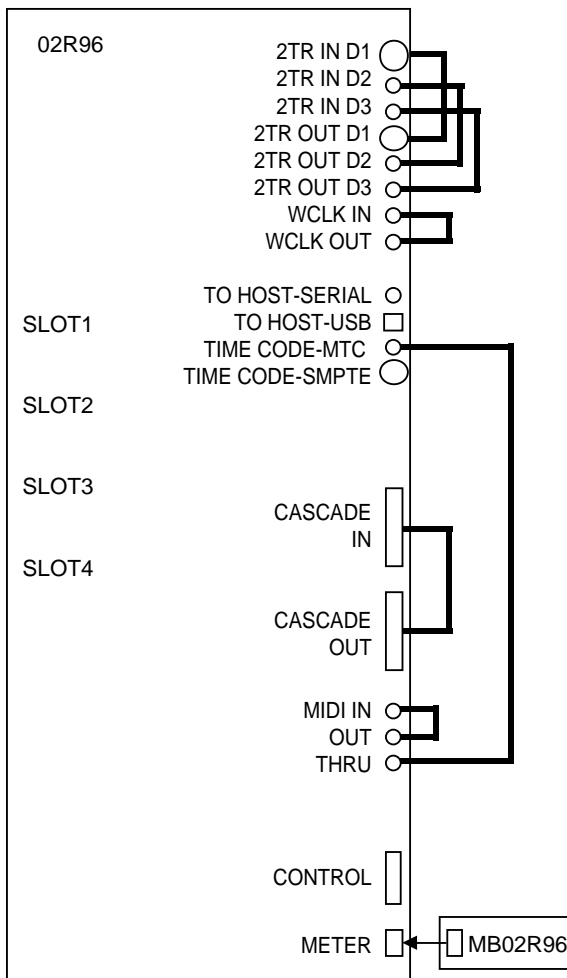
Common contents

- 1) The contents and example screens of execution for each check item are displayed.

Common preparation

- 1) Objectives to be checked: 02R96 + MB02R96
- 2) Cable:
  - MIDI cable: 2
  - CANNON cable: 2
  - COAXIAL cable: 1
  - BNC cable: 1
  - D-SUB 68pin (CASCADE) cable: 1
- 3) How to
  - During normal operation, pressing the Start 02R96: [SEL] key in the order CH [6, 7, 1, 1] and pressing the [ENTER] key will display the dialogue box for approval. After this, selecting YES and pressing the [ENTER] key will restart the 02R96 in the Service Check mode.
- 4) Ending method: Switch off the power to escape from the inspection mode.

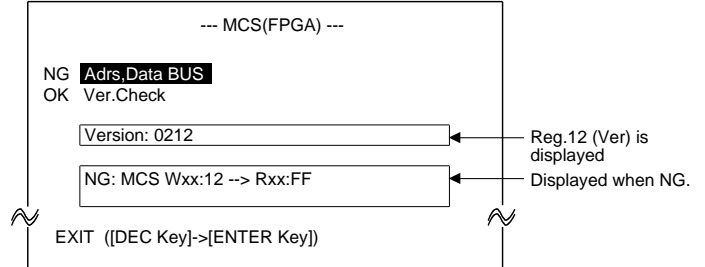
Connection diagram of Service Check



1-1 MCS(FPGA) Test

Contents: Read/Write the Reg. (00, 0f, 10, 11, 15, 16) of FPGA to compare and judge and then readout the Reg.12 (Ver) and display it.

Example of execution screen

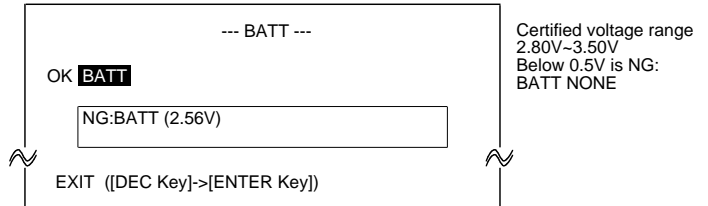


For the Ver.Check test, select OK when "Version: 0212" is displayed.

1-2 BATT Test

Contents: Measure the voltage of the backup battery in A/D for automatic judge.

Example of execution screen

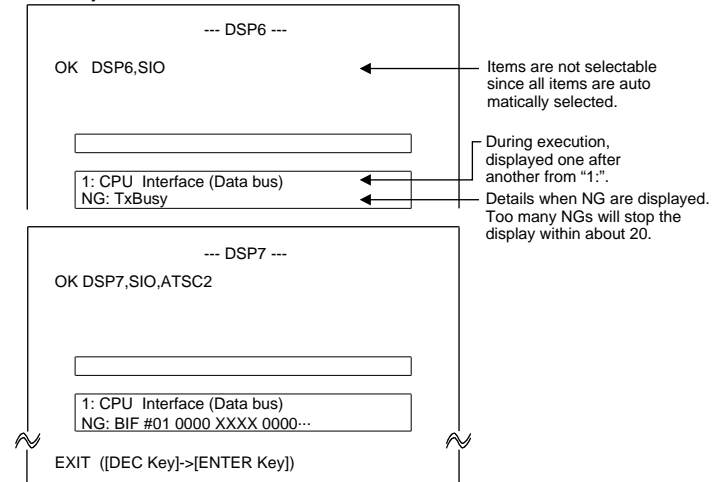


1-4 DSP6, S10 Test

1-5 DSP7, S10, ATSC2 test

Contents: Check DataBUS and AddressBUS for good or bad by Writing/Reading the Register of each DSP6 and DSP7. Compare and check by Writing/Reading DRAM and SDRAM of each DSP6 and DSP7 through the Register. Check the SIO connection between each DSP, and between ATSC by sending/receiving signal.

Example of execution screen



**Test item for DSP6**

- 1: CPU Interface (Data bus)
- 2: CPU Interface (Data bus)
- 3: CPU Interface (Chip Select, TXB)
- 4: CPU Interface (Address bus)
- 5: CPU Interface (BUS W/R Reg.)
- 6: DRAM Interface (Data Bus)
- 7: DRAM Interface (Address Bus)
- 8: DRAM Interface (Address Bus & MPR)
- 9: SIO Connection (DSP6-->DSP6 SIO test)

**Test item for DSP7**

- 1: CPU Interface (Data Bus)
- 2: CPU Interface (Chip Select)
- 3: CPU Interface (Address Bus)
- 4: E-RAM Interface (Data Bus)
- 5: E-RAM Interface (Address Bus)
- 6: SIO Connection (DSP7 -> DSP6)
- 7: SIO Connection (DSP6 -> DSP7)
- 8: SIO Connection (DSP7 -> DSP7)
- 9: SIO Connection (ATSC -> DSP7)
- A: SIO Connection (DSP7 -> ATSC)

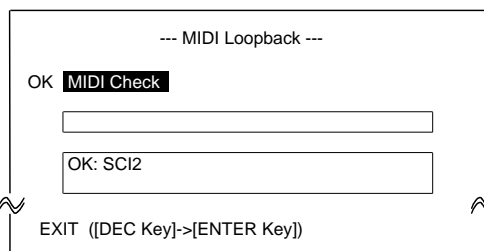
Explanation about expression when DSP6 and DSP7 are common, or when NG:

- 1) CPU Interface (Data Bus) ...NG: IC401(1) ← IC number  
 0000 0000 XXXX 0000 0000 0000 X00X ← DSP number (#1..#nn)  
 MSB X=Error bit LSB
- 2) SIO Connection (DSP7 -> DSP6) ...  
 NG: 1 IC111(1)[Soxx] -> IC401(1)[Sixx]

**1-7 MIDI Test**

Contents: Sending/Receiving the string "SCI2:TEST¥n" (¥n=0Ah) at 31.25Kbps from/into MIDI OUT→MIDI IN, verify if identical.  
 Preparation: Connect MIDI OUT and MIDI IN connector of the unit.

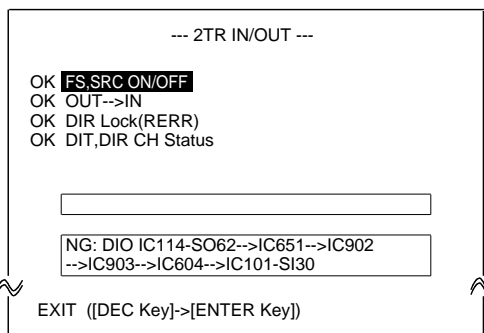
**Example of execution screen**



**1-13 2TR IN/OUT (DIO) Test**

Contents: Connect 2TR OUT DIGITAL 1,2,3 to 2TR IN DIGITAL 1,2,3 and verify by using DSP SIO.  
 Preparation: Connect each MIDI OUT DIGITAL 1,2,3 and each MIDI IN DIGITAL 1,2,3 connector of the unit respectively.

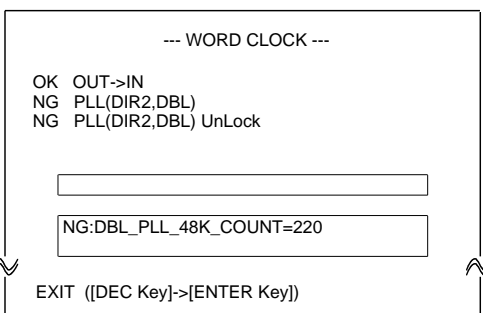
**Example of execution screen**



**1-14 WORD CLOCK Test**

Contents: Count FPGA over WORD CLOCK OUT→IN for automatic judge (Fs=44.1/48/88.2/96kHz). For the LOCK check of PLL, read the UNLOCK signal for judge after the clock becomes stable (after about 100ms). The UnLock check of PLL inspect after disconnecting the cable connected to WORD CLOCK IN.  
 Preparation: Connect WORD CLOCK OUT→IN with the BNC cable. Set the 75 Ω switch on the WORD CLOCK to ON.

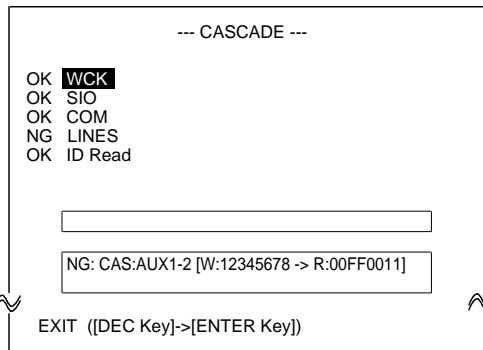
**Example of execution screen**



**1-16 CASCADE Test**

Contents: Send each signal from CASCADE OUT to CASCADE IN for automatic judge.  
 Preparation: Connect CASCADE OUT to CASCADE IN of the unit.

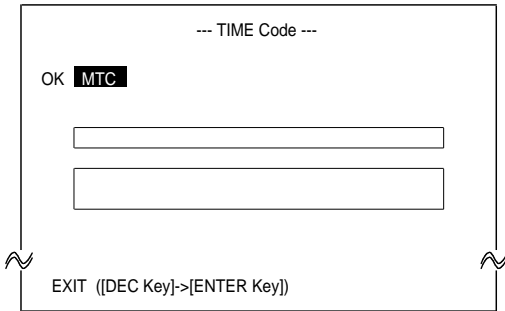
**Example of execution screen**



**1-18 TIME Code Test**

Contents: Receiving the MIDI OUT signal from the unit and compare with the Send/Receive signal "Test MTC" for judge. (Only MTC can be checked. SMPTE check is unavailable.)  
 Preparation: Connect MIDI THRU of the unit to MTC.

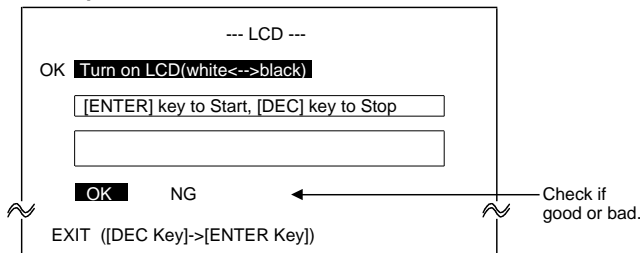
**Example of execution screen**



**1-25 LCD Test**

Contents: Display the entire LCD screen in black and white alternatively for visual check.

**Example of execution screen**



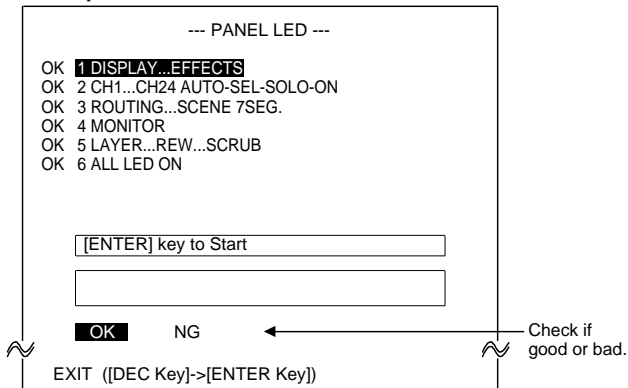
Check if the entire screen is displayed in black and white respectively.  
 Check for no dot less.  
 Check if the contrast of the screen changes when the contrast volume is changed.

If the above is confirmed, then press the [DEC] key and select OK/NG.

**1-26 PANEL LED Test**

Contents: Check visually if each LED on the panel and 7-SegLEDs lights in a specified order.

**Example of execution screen**

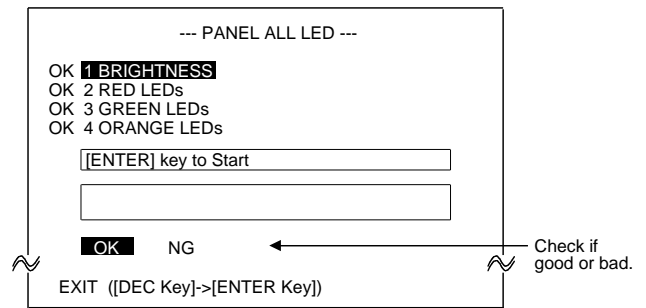


For the lighting order, see 2. Supplement "LED lighting order Fig. 1,2." For 7-SegLEDs, they light in the order 1..9,0-dot.

**1-27 PANEL ALL LED Test**

Contents: Check if all the LEDs on the panel light properly in the four grades (for two-color LED is in red).  
 Confirm that only red LEDs light (including two-color LED).  
 Confirm that only green LEDs light (including two-color LED).  
 Confirm that only orange LEDs light.

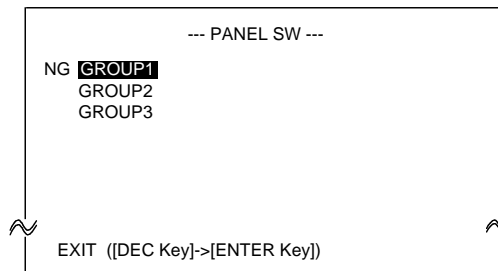
**Example of execution screen**



**1-28 PANEL SW Test**

Contents: Check if each switch on the panel corresponds correctly as specified when pressed. (Auto-judge)

**Example of execution screen**



- 1) For the operation sequence, see 2. Supplement "SW operation Fig1, 2."
- 2) LCD display will change to that of 2. Supplement "LCD display Fig.1" and if the [DEC] key is pressed, it goes ahead forcibly to the next screen and thus the [DEC] key check is not required.

**1-29 FADER TSense Test**

Contents: Touch sense is automatically checked by the variation of input when the Fader is touched by hand.

Example of execution screen

```

--- FADER Tsense ---
OK CH1 **          NG CH13 **
NG CH2 *           OK CH14 *****
NG CH3 **          NG CH15 *
OK CH4 **          NG CH16 **
OK CH5 **          NG CH17 *
OK CH6 **          NG CH18 *
NG CH7 **          NG CH19 *
NG CH8 *           NG CH20 *
NG CH9 *           NG CH21 *
NG CH10 *          NG CH22 *
NG CH11 *          NG CH23 *
OK CH12 *          OK CH24 *
                   OK STEREO *
    
```

When the Fader is touched, the bar graph changes. (Up to 10)

- If the judged OK, the check will go to the next channel.
- If not OK, press the [DEC] key to go to the next check.

EXIT ([DEC Key]->[ENTER Key])

1-30 FADER Move Test

- Contents:
- 1) Move all faders up and down over a short range to perform the learning procedure for fader drivability (FADER Learn).
  - 2) Move all faders up and down (aging).
  - 3) Drive the faders in a pre-determined pattern for a pre-determined period of time, and then measure the distance actually moved to automatically determine drivability.
  - 4) Stop all faders at a specified position, and then detect the positions with the built-in A/D for automatic determination purposes (three locations).  
Stop the faders at a position where they are within  $\pm 2\text{mm}$  of the standard fader position 1, and then visually determine that there is no extreme misalignment with fader positions 2 and 3.

Example of execution screen

```

--- FADER Move ---
-- 1 FADER Learn
-- 2 FADER Aging
OK 3 FADER Select
-- 4 FADER Speed1
-- 5 FADER Speed2
NG 6 FADER Position1
OK 7 FADER Position2
OK 8 FADER Position3
-- 9 FADER UpDown
    
```

[ENTER] key to Start

CH\_Pos 828 (820..839) MAS\_Pos 812 (804..823)  
NG\_CH:02 (840)

1 OK NG

EXIT ([DEC Key]->[ENTER Key])

When entering this screen, wait at 1. Starting item can be selected with the [↑] or [↓] key. The [ENTER] key starts the check which then goes forward automatically up to 9.

1) Specified position of FADER Position

	CH1-24	STEREO
FADER Position 1	0dB at the index of the Fade's left	-10dB
FADER Position 2	-10dB at the index of the Fade's left	-20dB
FADER Position 3	-30dB at the index of the Fade's left	-50dB

2) Explanation on the automatic determination display for fader positions 1 to 3

"CH\_Pos 207=828 (820.. 839)"

207: Prescribed fader stop value (displayed in 256 resolution)

828: Prescribed fader stop value (displayed in 1024 resolution)

(820.. 839): Acceptable range when the fader's stop position is detected with the built-in A/D (displayed in 1024 resolution)

"NG 02 (840)"

NG 02: The CH2 fader is not acceptable (NG = No Good).

(840): Actual value when the fader's stop position is read with the built-in A/D (displayed in 1024 resolution)

\*The items displayed with "--" in the determination column represent inspection items for which OK or NG cannot be determined.

1-31 ENCODER (CH) Test

Contents: Check the rotation response of Encoder of CH1 through CH24.

Rotating the Encoder in clockwise moves the mark ">" located on the left end to the right direction. When the mark ">" reaches the right end, it turns into the mark "<." After this, rotating the Encoder counterclockwise moves the mark "<" to the left direction. If the mark "<" reaches the left end, it will be OK.

Example of execution screen

```

--- ENCODER(CH) ---
OK CH1          NG CH13
OK CH2          NG CH14
OK CH3          NG CH15
OK CH4          NG CH16
OK CH5          NG CH17
OK CH6          NG CH18
OK CH7          NG CH19
OK CH8          NG CH20
OK CH9          NG CH21
OK CH10         NG CH22
OK CH11         NG CH23
OK CH12         NG CH24
    
```

CCW ----->----- CW

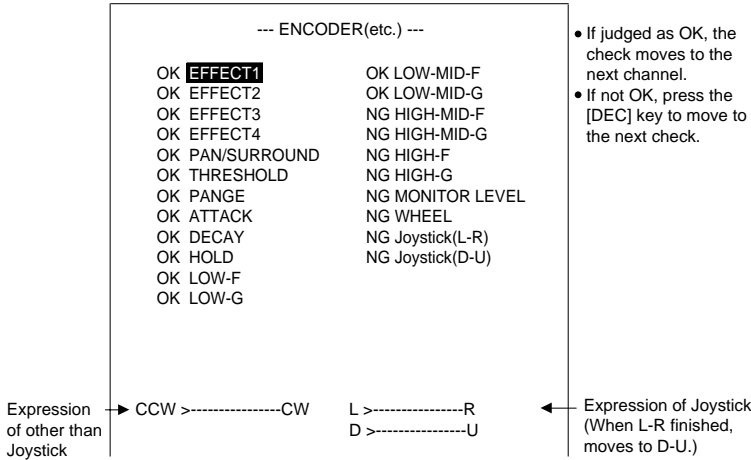
If judged as OK, the check moves to the next channel.  
If not OK, press the [DEC] key to move to the next check.

The bar moves to the rotating direction.  
> means to rotate CW (Clockwise)  
< means to rotate CCW (Counterclockwise)

**1-32 ENCODER (etc.) Test**

Contents: From CH1, check the rotation response of Encoder of other than CH24.  
The way of operation is the same as 1-31.

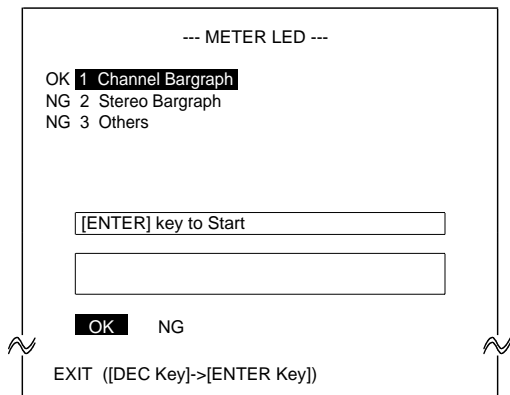
**Example of execution screen**



**1-36 METER LED Test**

Contents: Visually check if MB02R96's LEDs and 7-seg LEDs light correctly in the order specified.

**Example of execution screen**



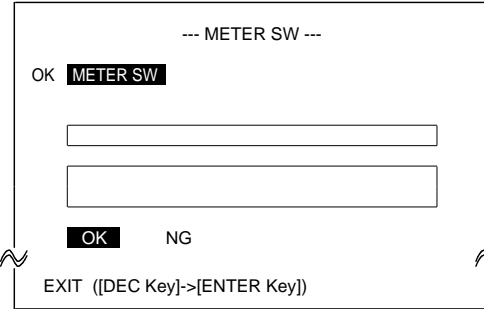
The orders of lighting are as follows:

- 1) Channel bar graph is turned on. (LED lighting order: CH1: Lower→Upper..CH24: Lower→Upper)
- 2) Stereo bar graph is turned on. (LED lighting order: Stereo L: Lower→Upper, Stereo R: Lower→Upper)
- 3) Other lighting  
(CH1-24\_L → CH25-48\_L → CH49-56\_L → INPUT PRE EQ → PRE FADER → POST FADER → PEAK HOLD SW → CH1-24\_R → CH25-48\_R → CH49-56\_R → 1-24 SW → 25-48 SW → MASTER SW → REMOTE SW → CONTROL ROOM → OUTPUT PRE EQ → PRE FADER → POST FADER)

**1-37 METER SW Test**

Contents: Press the SWs of MB02R96 to check if the corresponding LED turns ON/OFF.

**Example of execution screen**



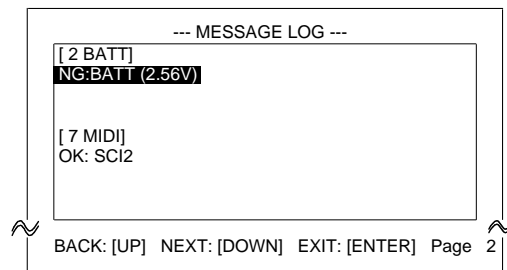
Correspondence between SWs and LEDs is as follow:

Switch	LED
INPUT METERING POSITION	POST FADER LED
OUTPUT METERING POSITION	POST FADER LED
PEAK HOLD	PEAK HOLD
1-24	1-24
25-48	25-48
MASTER	MASTER
REMOTE	REMOTE
CONTROL ROOM	CONTROL ROOM

**1-98 MESSAGE LOG**

Contents: Displays the inspection result log.

**Example of execution screen**



- The [↓] key displays the next page.
- The [↑] key displays the previous page.
- The [ENTER] key ends the screen.
- The SOLO [CLEAR] key clears the log.
- The "NG" lines will be highlighted.

**Limitations:**

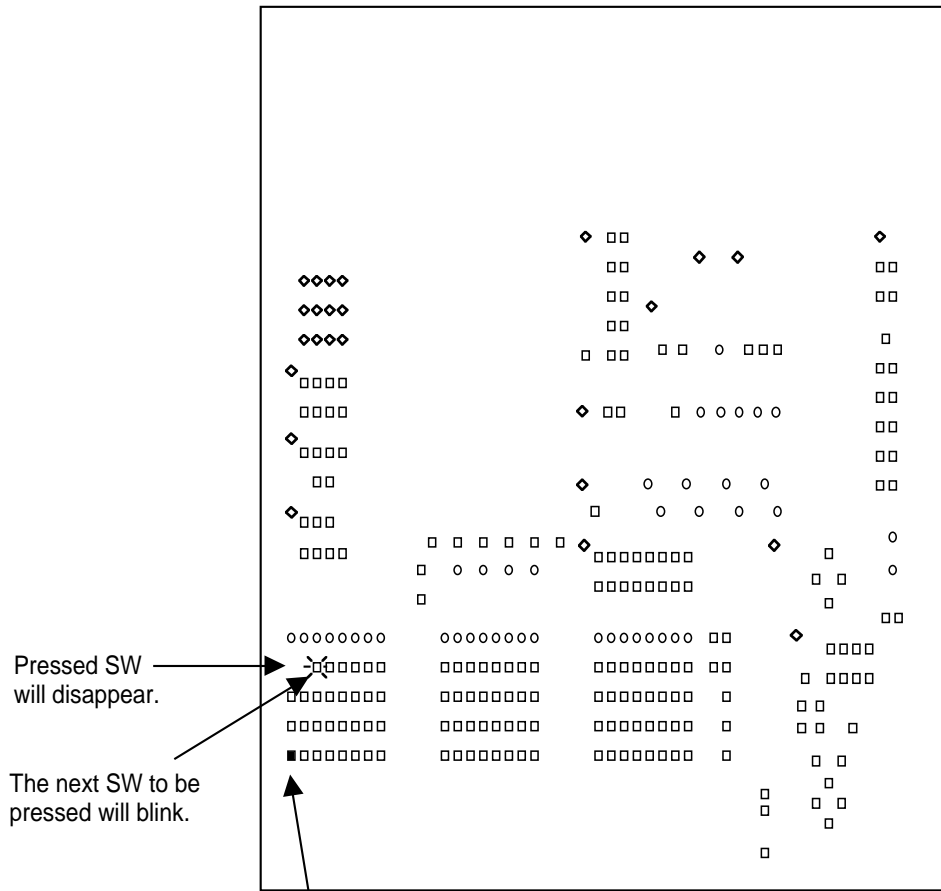
A maximum of 999 pages can be displayed. Logs after that cannot be loaded. Clear the log in this event.  
The log will also be cleared when the service inspections are ended.

2. Supplement

LCD Display Fig.1 PANEL SW operation sequence Screen

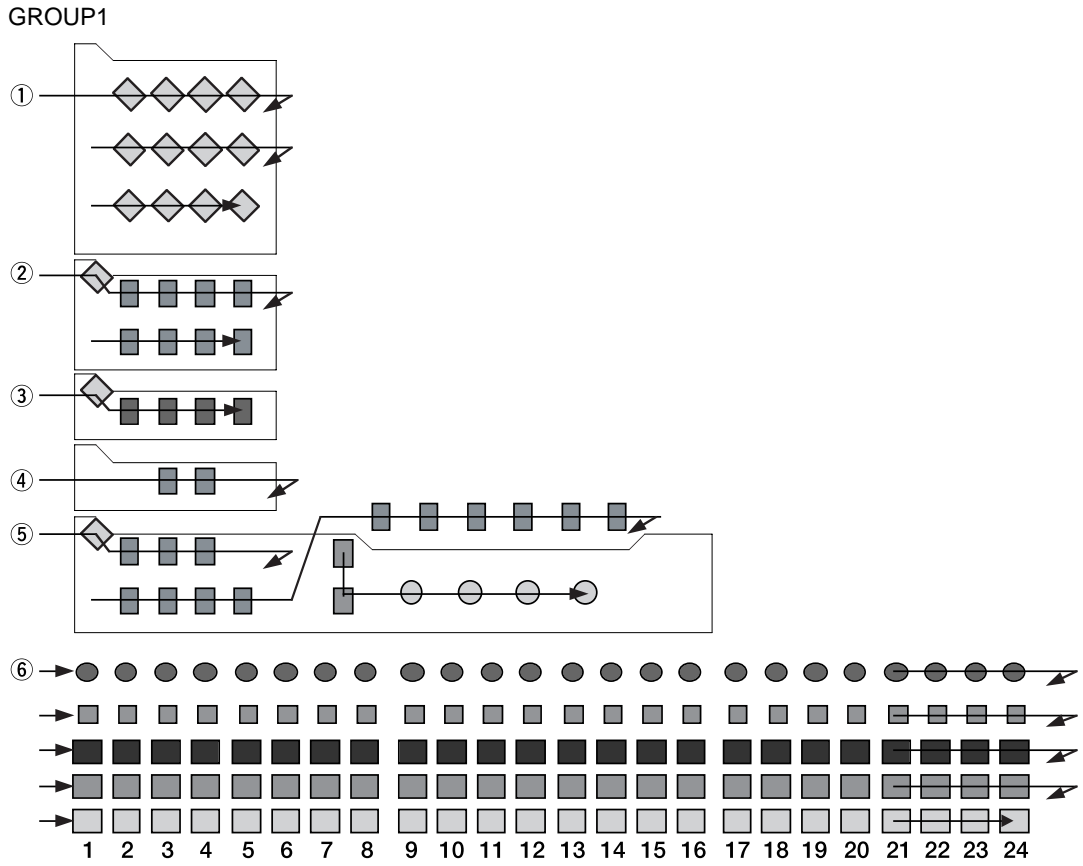
(For operation sequence, see "SW operation Fig.1 and 2.)

LCD display: 53 columns x 30 lines (320 x 240 dots with Font5x7)

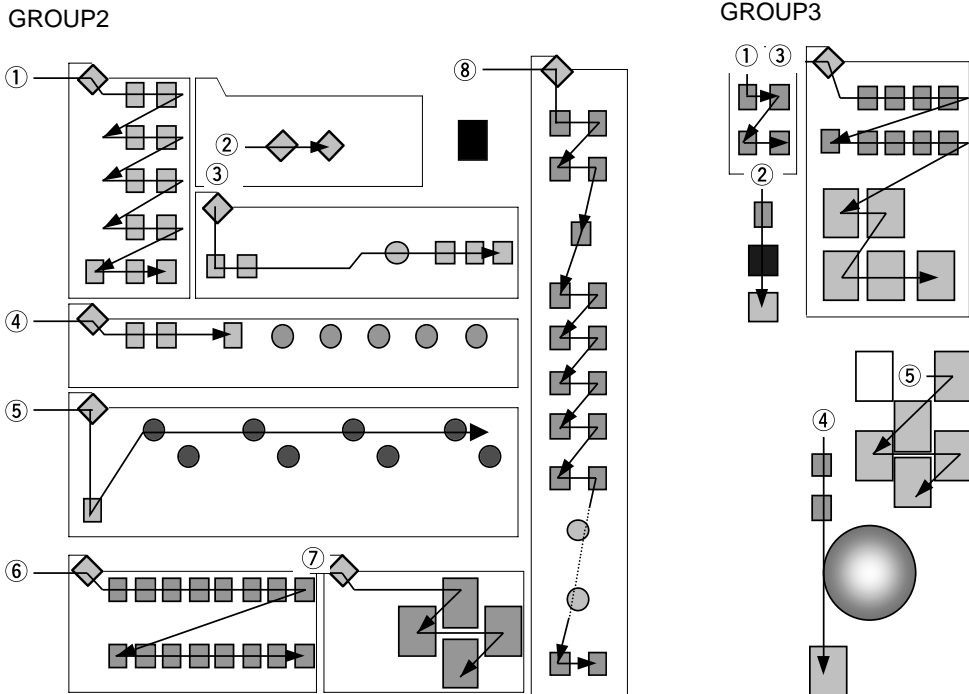




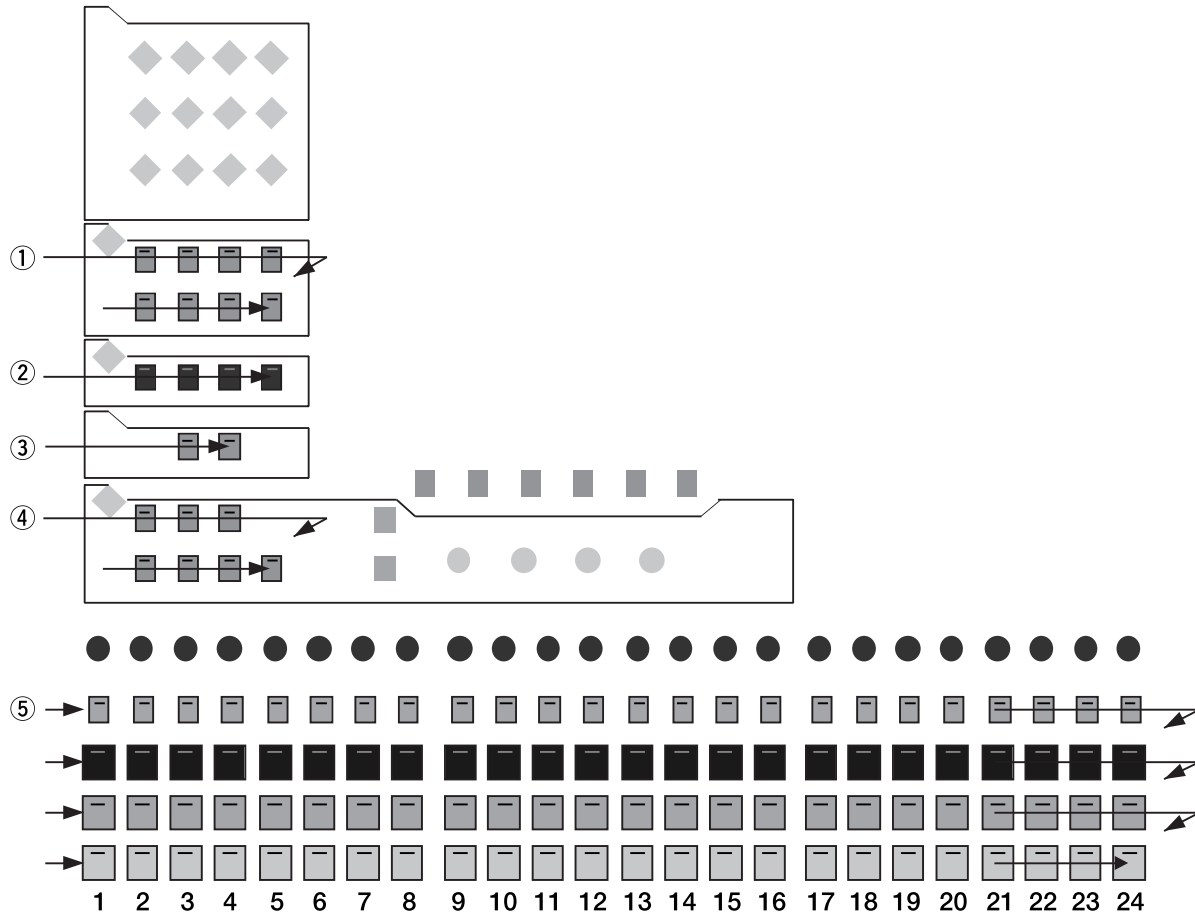
SW Operation Fig.1



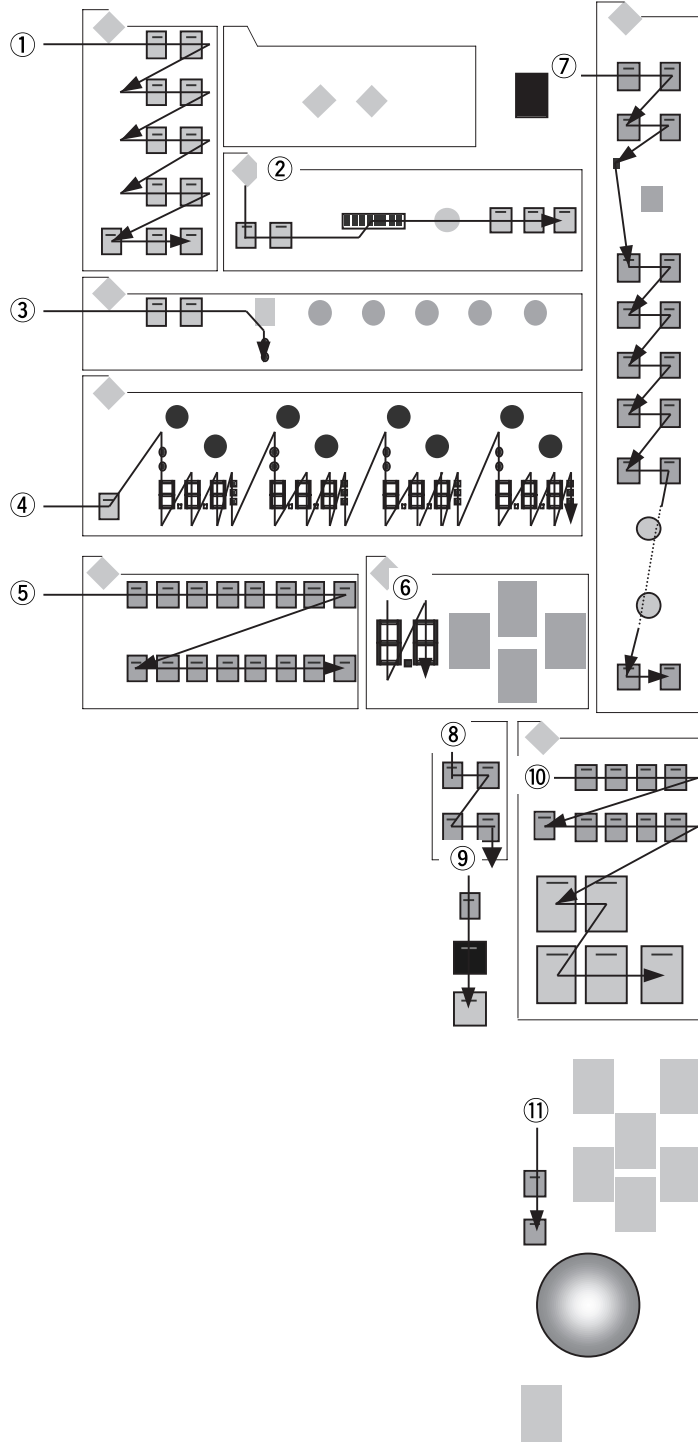
SW Operation Fig.2



LED Lighting Sequence Fig.1



LED Lighting Sequence Fig.2

























## ■ TEST PROGRAM

\* Execute the test program for MB02R96.

### 1. Preparation

- 1) Connect the D-sub 15pin cable to the [METER] terminal in the rear of 02R96.
- 2) If 02R96 is not provided, supply +12V between +12V and GND from an external power supply.  
 Note) Loop Back test will result in ERROR if independent test is carried out with being connected to the body of 02R96.

### 2. Starting the test program

- 1) Turn on the power while pressing the [PEAK HOLD] switch and the [CONTROL ROOM] switch to go to the independent test mode and start the SW check.
- 2) Press the [PEAK HOLD] switch and the [CONTROL ROOM] switch again to start the LED check 1.  
 (To restart the SW check, turn on the power once again.)
- 3) After this, the test item will be changed by pressing the [1-24] switch and the [25-48] switch.
- 4) Pressing [MASTER] switch and [REMOTE] switch will change LED light duration time.

### 3. Check items

#### 3-1 SW check

Judge by LED light ON/OFF when each switch is pressed.

Switch	Action
INPUT METERING POSITION	POST FADER LED turned ON/OFF
OUTPUT METERING POSITION	POST FADER LED turned ON/OFF
PEAK HOLD	PEAK HOLD LED turned ON/OFF
1-24	1-24 LED turned ON/OFF
25-48	25-48 LED turned ON/OFF
MASTER	MASTER LED turned ON/OFF
REMOTE	REMOTE LED turned ON/OFF
CONTROL ROOM	CONTROL ROOM LED turned ON/OFF

#### 3-2 LED check

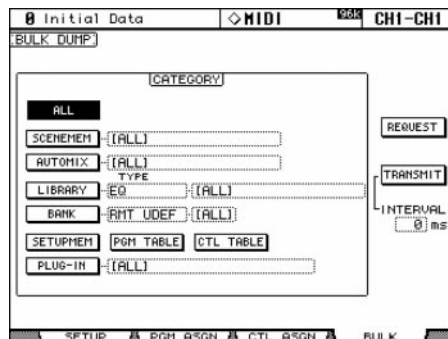
Check number	Check item
1	Communication Loop Back test Normal: BUS1 -48 (green) turned ON, Error: BUS1 OVER (red) turned ON
1-24 ↓↑ 25-48	
2	LED full bright
3	Green LED full bright
4	Orange LED full bright
5	Red LED full bright
6	Channel bar-graph turned ON (LED light sequence: CH1: lower → upper..CH24: lower → upper)
7	Stereo bar-graph turned ON (LED light sequence: STEREO L: lower → upper, STEREO R: lower → upper)
8	Other lights turned ON (CH1-24_L → CH25-48_L → CH49-56_L → INPUT PRE EQ → PRE FADER → POST FADER → PEAK HOLD SW → CH1-24_R → CH25-48_R → CH49-56_R → 1-24 SW → 25-48 SW → MASTER SW → REMOTE SW → CONTROL ROOM → OUTPUT PRE EQ → PRE FADER → POST FADER )



## ■ USING BULK DUMP

02R96 data can be stored to an external MIDI device, such as a MIDI data filer, by using MIDI Bulk Dump.

- 1 Use the **DISPLAY ACCESS [MIDI]** button to locate the Bulk Dump page.



- 2 To transmit data, use the **CATEGORY** parameters to select the type of data you want to transmit, select the **TRANSMIT** button, and then press [ENTER].
- 3 To receive data, use the **CATEGORY** parameters to select the type of data you want to receive, select the **REQUEST** button, and then press [ENTER].

The **INTERVAL** parameter sets the interval between data packets during transmission.

The **CATEGORY** parameters can be set as follows:

**ALL:** All data.

**SCENE MEM:** ALL Scenes, individual Scenes, or current (i.e., the Edit buffer).

**AUTOMIX:** ALL Automixes, individual Automixes, or the current Automix.

**LIBRARY:** The following libraries: EQ, Gate, Comp, Channel, Effects, Bus to Stereo, Input Patch, Output Patch, Surround Monitor. For each library you can specify ALL user memories, individual user memories, and for the Bus to Stereo, Input Patch, Output Patch, Surround Monitor libraries you can also specify the current settings.

**BANK:** User Defined Remote Layer banks, User Defined Plug-Ins banks, or the User Defined Keys banks. For each item you can specify ALL or individual banks.

**SETUP MEM:** 02R96 setup data (i.e., system settings).

**PGM TABLE:** Scene to MIDI Program Change table.

**CTL TABLE:** Parameter to MIDI Control Change table.

**PLUG-IN:** The settings of any installed Y56K cards. You can specify ALL Slots or Slot 3 or 4.



## ■ CHECKING THE BATTERY

The condition of the internal memory-backup battery can be checked as follows.

- 1 Use the DISPLAY ACCESS [UTILITY] button to locate the Battery Check page.



If the Status is "Okay," the battery is okay. If the Status is "Getting Low," failure to replace a low battery may result in data loss.

## ■ MIDI DATA FORMAT

### Scene Memory to Program Change Table

Program Change #	Initial Scene #	User Scene #
1	01	
2	02	
3	03	
4	04	
5	05	
6	06	
7	07	
8	08	
9	09	
10	10	
11	11	
12	12	
13	13	
14	14	
15	15	
16	16	
17	17	
18	18	
19	19	
20	20	
21	21	
22	22	
23	23	
24	24	
25	25	
26	26	
27	27	
28	28	
29	29	
30	30	
31	31	
32	32	
33	33	
34	34	
35	35	
36	36	
37	37	
38	38	
39	39	
40	40	
41	41	
42	42	
43	43	

Program Change #	Initial Scene #	User Scene #
44	44	
45	45	
46	46	
47	47	
48	48	
49	49	
50	50	
51	51	
52	52	
53	53	
54	54	
55	55	
56	56	
57	57	
58	58	
59	59	
60	60	
61	61	
62	62	
63	63	
64	64	
65	65	
66	66	
67	67	
68	68	
69	69	
70	70	
71	71	
72	72	
73	73	
74	74	
75	75	
76	76	
77	77	
78	78	
79	79	
80	80	
81	81	
82	82	
83	83	
84	84	
85	85	
86	86	

Program Change#	Initial Scene #	User Scene #
87	87	
88	88	
89	89	
90	90	
91	91	
92	92	
93	93	
94	94	
95	95	
96	96	
97	97	
98	98	
99	99	
100	00	
101	—	
102	—	
103	—	
104	—	
105	—	
106	—	
107	—	
108	—	
109	—	
110	—	
111	—	
112	—	
113	—	
114	—	
115	—	
116	—	
117	—	
118	—	
119	—	
120	—	
121	—	
122	—	
123	—	
124	—	
125	—	
126	—	
127	—	
128	—	

## Initial Parameter to Control Change Table

#	High	Mid	Low
0	NO ASSIGN		
1	FADER H	CHANNEL	INPUT1
2	FADER H	CHANNEL	INPUT2
3	FADER H	CHANNEL	INPUT3
4	FADER H	CHANNEL	INPUT4
5	FADER H	CHANNEL	INPUT5
6	FADER H	CHANNEL	INPUT6
7	FADER H	CHANNEL	INPUT7
8	FADER H	CHANNEL	INPUT8
9	FADER H	CHANNEL	INPUT9
10	FADER H	CHANNEL	INPUT10
11	FADER H	CHANNEL	INPUT11
12	FADER H	CHANNEL	INPUT12
13	FADER H	CHANNEL	INPUT13
14	FADER H	CHANNEL	INPUT14
15	FADER H	CHANNEL	INPUT15
16	FADER H	CHANNEL	INPUT16
17	FADER H	CHANNEL	INPUT17
18	FADER H	CHANNEL	INPUT18
19	FADER H	CHANNEL	INPUT19
20	FADER H	CHANNEL	INPUT20
21	FADER H	CHANNEL	INPUT21
22	FADER H	CHANNEL	INPUT22
23	FADER H	CHANNEL	INPUT23
24	FADER H	CHANNEL	INPUT24
25	FADER H	CHANNEL	INPUT25
26	FADER H	CHANNEL	INPUT26
27	FADER H	CHANNEL	INPUT27
28	FADER H	CHANNEL	INPUT28
29	FADER H	CHANNEL	INPUT29
30	FADER H	CHANNEL	INPUT30
31	FADER H	CHANNEL	INPUT31
32	NO ASSIGN		
33	FADER L	CHANNEL	INPUT1
34	FADER L	CHANNEL	INPUT2
35	FADER L	CHANNEL	INPUT3
36	FADER L	CHANNEL	INPUT4
37	FADER L	CHANNEL	INPUT5
38	FADER L	CHANNEL	INPUT6
39	FADER L	CHANNEL	INPUT7
40	FADER L	CHANNEL	INPUT8
41	FADER L	CHANNEL	INPUT9
42	FADER L	CHANNEL	INPUT10
43	FADER L	CHANNEL	INPUT11
44	FADER L	CHANNEL	INPUT12
45	FADER L	CHANNEL	INPUT13
46	FADER L	CHANNEL	INPUT14
47	FADER L	CHANNEL	INPUT15
48	FADER L	CHANNEL	INPUT16
49	FADER L	CHANNEL	INPUT17
50	FADER L	CHANNEL	INPUT18
51	FADER L	CHANNEL	INPUT19
52	FADER L	CHANNEL	INPUT20
53	FADER L	CHANNEL	INPUT21
54	FADER L	CHANNEL	INPUT22
55	FADER L	CHANNEL	INPUT23
56	FADER L	CHANNEL	INPUT24
57	FADER L	CHANNEL	INPUT25
58	FADER L	CHANNEL	INPUT26
59	FADER L	CHANNEL	INPUT27

#	High	Mid	Low
60	FADER L	CHANNEL	INPUT28
61	FADER L	CHANNEL	INPUT29
62	FADER L	CHANNEL	INPUT30
63	FADER L	CHANNEL	INPUT31
64	ON	CHANNEL	INPUT1
65	ON	CHANNEL	INPUT2
66	ON	CHANNEL	INPUT3
67	ON	CHANNEL	INPUT4
68	ON	CHANNEL	INPUT5
69	ON	CHANNEL	INPUT6
70	ON	CHANNEL	INPUT7
71	ON	CHANNEL	INPUT8
72	ON	CHANNEL	INPUT9
73	ON	CHANNEL	INPUT10
74	ON	CHANNEL	INPUT11
75	ON	CHANNEL	INPUT12
76	ON	CHANNEL	INPUT13
77	ON	CHANNEL	INPUT14
78	ON	CHANNEL	INPUT15
79	ON	CHANNEL	INPUT16
80	ON	CHANNEL	INPUT17
81	ON	CHANNEL	INPUT18
82	ON	CHANNEL	INPUT19
83	ON	CHANNEL	INPUT20
84	ON	CHANNEL	INPUT21
85	ON	CHANNEL	INPUT22
86	ON	CHANNEL	INPUT23
87	ON	CHANNEL	INPUT24
88	ON	CHANNEL	INPUT25
89	PAN	CHANNEL	INPUT1
90	PAN	CHANNEL	INPUT2
91	PAN	CHANNEL	INPUT3
92	PAN	CHANNEL	INPUT4
93	PAN	CHANNEL	INPUT5
94	PAN	CHANNEL	INPUT6
95	PAN	CHANNEL	INPUT7
96	PAN	CHANNEL	INPUT8
97	PAN	CHANNEL	INPUT9
98	PAN	CHANNEL	INPUT10
99	PAN	CHANNEL	INPUT11
100	PAN	CHANNEL	INPUT12
101	PAN	CHANNEL	INPUT13
102	PAN	CHANNEL	INPUT14
103	PAN	CHANNEL	INPUT15
104	PAN	CHANNEL	INPUT16
105	PAN	CHANNEL	INPUT17
106	PAN	CHANNEL	INPUT18
107	PAN	CHANNEL	INPUT19
108	PAN	CHANNEL	INPUT20
109	PAN	CHANNEL	INPUT21
110	PAN	CHANNEL	INPUT22
111	PAN	CHANNEL	INPUT23
112	PAN	CHANNEL	INPUT24
113	PAN	CHANNEL	INPUT25
114	PAN	CHANNEL	INPUT1
115	PAN	CHANNEL	INPUT2
116	PAN	CHANNEL	INPUT3
117	PAN	CHANNEL	INPUT4
118	PAN	CHANNEL	INPUT5
119	PAN	CHANNEL	INPUT6

# MIDI Data Format

## 1. CHANNEL MESSAGE

Command	rx/tx	function
8n NOTE OFF	rx	Control the internal effects
9n NOTE ON	rx	Control the internal effects
Bn CONTROL CHANGE	rx/tx	Control parameters
Cn PROGRAM CHANGE	rx/tx	Switch scene memories

## 2. SYSTEM COMMON MESSAGE

Command	rx/tx	function
F1 MIDI TIME CODE QUARTER FRAME	rx	Used when TIME REFERENCE is MIDI CLOCK.
F2 SONGPOSITIONPOINTER	rx	Used when TIME REFERENCE is MIDI CLOCK.

## 3. SYSTEM REALTIME MESSAGE

Command	rx/tx	function
F8 TIMING CLOCK	rx	MIDI clock
FA START	rx*	Start automix (from the beginning)
FB CONTINUE	rx*	Start automix (from the middle)
FC STOP	rx*	Stop automix
FE ACTIVE SENSING	rx	Check MIDI cable connections
FF RESET	rx	Clear running status

Received only when the Automix TIME REFERENCE setting is MIDI CLOCK.

## 4. EXCLUSIVE MESSAGE

### 4.1 Real Time System Exclusive

Command	rx/tx	function
F0 7F dd 06 MMC COMMAND	tx	MMC command (refer to MMC specification)
F0 7F dd 07 MMC RESPONSE	rx	MMC response(referto MMC specification)
F0 7F dd 01 MIDI TIME CODE	rx	Used when TIME REFERENCE is MTC.

### 4.2 System Exclusive Message

#### 4.2.1 Bulk Dump

Command	rx/tx	function
F0 43 0n 7E BULK DUMP DATA	rx/tx	BULK DUMP DATA
F0 43 2n 7E BULK DUMP REQUEST	rx/tx	BULKDUMP REQUEST

The following data types of bulk dump are used on the 02R96.

Data name	tx/rx	function
'm'	tx/rx	Scene Memory & Request
'S'	tx/rx	Setup Memory & Request
'a'	tx/rx	Automix data & Request
'R'	tx/rx	Input patch library & Request
'O'	tx/rx	Output patch library & Request
'H'	tx/rx	Channel library & Request
'G'	tx/rx	Gate library & Request
'Y'	tx/rx	Compressor library & Request
'Q'	tx/rx	Equalizer library & Request
'E'	tx/rx	Effect library & Request
'J'	tx/rx	Bus to Stereo library & Request
'K'	tx/rx	Surround Monitor library & Request
'P'	tx/rx	Program change table & Request
'C'	tx/rx	Control change table & Request
'L'	tx/rx	User define layer & Request
'I'	tx/rx	Plug-in User define & Request
'V'	tx/rx	User define key & Request
'N'	tx/rx	Plug-in Effect Card Data & Request

## 4.2.2 PARAMETER CHANGE

Command	rx/tx	function
F0 43 1n 3E 0B PARAMETER CHANGE	rx/tx	02R96-specific parameter change
F0 43 3n 3E 0B PARAMETER REQUEST	rx/tx	02R96-specific parameter request
F0 43 1n 3E 7F PARAMETER CHANGE	rx/tx	General purpose digital mixer parameter change
F0 43 3n 3E 7F PARAMETER REQUEST	rx/tx	General purpose digital mixer parameter request

The following data types of parameter change are used by the 02R96.

Type	tx/rx	function
1	tx/rx	Edit buffer
2	tx/rx	Patch data
3	tx/rx	Setup data
4	tx/rx	Backup data
16	tx/rx	Function (recall, store, title)
17	rx	Function (pair)
18	rx	Function (event)
32	rx	Key remote
33	tx/rx	remote meter
34	tx/rx	remote counter

\*\* tx means that the data can be transmitted from the 02R96. rx means that the data can be received by the 02R96.

## Format Details

### 1. NOTE OFF (8n)

#### Reception

Received when the [Rx CH] matches.

Used to control effects.

STATUS	1 000nnnn	8n	Note off message
DATA	0nnnnnnn	nn	Note number
	0vvvvvvv	vv	Velocity (ignored)

### 2. NOTE ON (9n)

#### Reception

Received when the [Rx CH] matches.

Used to control effects.

STATUS	1 001nnnn	9n	Note on message
DATA	0nnnnnnn	nn	Note number
	0vvvvvvv	vv	Velocity (1-127:on, 0:off)

### 3. CONTROL CHANGE (Bn)

#### Reception

Received when [Control Change Rx] is ON and the [Rx CH] matches.

However if [OMNI] is ON, this is received regardless of the channel. If [Control Change ECHO] is ON, these messages are echoed to MIDI OUT.

If [TABLE] is selected, parameters will be controlled according to the settings of the [Control assign table]. The parameters that can be set are defined in the CONTROL CHANGE ASSIGN PARAMETER LIST.

If [NRPN] is selected, four messages are used to control the defined parameter: NRPN control numbers (62h, 63h) and DATA ENTRY control numbers (06h, 26h). Parameter settings are defined in the CONTROL CHANGE ASSIGN PARAMETER LIST.

Parameter settings are defined in the CONTROL CHANGE ASSIGN PARAMETER LIST.

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#### Transmission

If [TABLE] is selected, operating the parameters specified in the [Control assign table] will cause these messages to be transmitted on the [Tx CH] if [Control Change TX] is ON. The parameters that can be specified are defined in the CONTROL CHANGE ASSIGN PARAMETER LIST.

If [NRPN] is selected, operating the specified parameters will cause data to be transmitted on the [Tx CH] if [Control Change TX] is ON, using four messages: NRPN control numbers (62h, 63h) and DATA ENTRY control numbers (06h, 26h). Parameter settings are defined in the CONTROL CHANGE ASSIGN PARAMETER LIST.

Parameter settings are defined in the CONTROL CHANGE ASSIGN PARAMETER LIST.

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**If [TABLE] is selected**

STATUS	1011nnnn	Bn	Control change
DATA	0ccccccc	cc	Control number (0-95, 102-119)
	0vvvvvvv	vv	Control value (0-127)

**If [NRPN] is selected**

STATUS	1011nnnn	Bn	Control change	
DATA	01100010	62	NRPN LSB	
	0vvvvvvv	vv	LSB of parameter number	
STATUS	1011nnnn	Bn	Control change	*1
DATA	01100011	63	NRPN MSB	
	0vvvvvvv	vv	MSB of parameter number	
STATUS	1011nnnn	Bn	Control change	*1
DATA	00100110	26	LSB of data entry	
	0vvvvvvv	vv	LSB of parameter data	
STATUS	1011nnnn	Bn	Control change	*1, *2
DATA	00000110	06	MSB of data entry	*2
	0vvvvvvv	vv	MSB of parameter data	*2

\*1) There is no particular need to add the 2nd, 3rd, and 4th status for transmission. However if these are present during reception, they should be received.

\*2) Does not need to be transmitted if the parameter data fits within 7 bits.

**4. PROGRAM CHANGE (Cn)****Reception**

This message is received if [Program Change RX] is ON and [Rx CH] matches. However if [OMNI] is ON, this is received regardless of the channel.

A scene memory will be recalled according to the settings of the [Program Change Table].

This message will be echoed if [Program Change ECHO] is ON.

**Transmission**

If [Program Change TX] is ON, this message is transmitted according to the settings of the [Program Change Table] on the [Tx CH] channel when a scene memory is recalled.

If the recalled scene has been assigned to more than one program number, the lowest-numbered program number will be transmitted. Transmission to Studio Manager using Program Change messages will not be performed since there is no guarantee that the contents of the tables will match. (Parameter Changes will always be used.)

STATUS	1100nnnn	Cn	Program change
DATA	0nnnnnnn	nn	Program number (0-127)

**5. SONG POSITION POINTER (F2)****Reception**

If this is received when the automix TIME REFERENCE setting is MIDI CLOCK, the automix will move to the song position that was received.

STATUS	11110010	F2	Song position pointer
DATA	0vvvvvvv	vv	Song position LSB
	0vvvvvvv	vv	Song position MSB

**6. TIMING CLOCK (F8)****Reception**

If the automix TIME REFERENCE setting is MIDI CLOCK, this message is used to synchronize automix. It is also used to control effects. This message is transmitted 24 times per quarter note.

STATUS	11111000	F8	Timing clock
--------	----------	----	--------------

**7. START (FA)****Reception**

This message is received if the automix TIME REFERENCE setting is MIDI CLOCK, and will start the automix. In actuality, automix will start when the next TIMING CLOCK is received after receiving the START message.

STATUS	11111010	FA	Start
--------	----------	----	-------

**8. CONTINUE (FB)****Reception**

This message is received if the automix TIME REFERENCE setting is MIDI CLOCK, and will cause automix to start from the current song position. In actuality, automix will start when the next TIMING CLOCK is received after receiving the CONTINUE message.

STATUS	11111011	FB	Continue
--------	----------	----	----------

**9. STOP (FC)****Reception**

This message is received if the automix TIME REFERENCE setting is MIDI CLOCK, and will cause automix to stop.

STATUS	11111100	FC	Stop
--------	----------	----	------

**10. ACTIVE SENSING (FE)****Reception**

Once this message has been received, the failure to receive any message for an interval of 400 ms or longer will cause MIDI transmission to be initialized, such as by clearing the Running Status.

STATUS	11111101	FE	Active sensing
--------	----------	----	----------------

**11. SYSTEM RESET (FF)****Reception**

When this message is received, MIDI communications will be cleared, e.g., by clearing the Running Status.

STATUS	11111111	FF	System reset
--------	----------	----	--------------

**12. SYSTEM EXCLUSIVE MESSAGE (F0)****12.1 MIDI MACHINE CONTROL (MMC)**

These messages are transmitted when the Machine Control section of the 02R96 is operated. For details, refer to the MMC specification.

**12.2 BULK DUMP**

This message sends or receives the contents of various memories stored within the 02R96.

The basic format is as follows.

**For DUMP DATA**

```
F0 43 0n 7E cc cc <Model ID> tt mm mm [Data ...]
cs F7
```

**For DUMP REQUEST**

```
F0 43 2n 7E <Model ID> tt mm mm F7
n          Device Number
cc cc     DATA COUNT (the number of bytes that follow this, ending
          before the checksum)
<Model ID> Model ID (for the 02R96, this is 4C 4D 20 20 38 43 35 34)
tt        DATA TYPE
mm mm     DATA NUMBER
cs        CHECK SUM
```

A unique header (Model ID) is used to determine whether the device is a 02R96.

CHECK SUM is obtained by adding the bytes that follow BYTE COUNT (LOW) and end before CHECK SUM, taking the binary complement of this sum, and then setting bit 7 to 0.

CHECK SUM =  $(-sum) \& 0x7F$

**Reception**

This message is received if [Bulk RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

When a bulk dump is received, it is immediately written into the specified memory.

When a bulk dump request is received, a bulk dump is immediately transmitted.

**Transmission**

This message is transmitted on the [Tx CH] by key operations in the [MIDI]-[BULK DUMP] screen.

A bulk dump is transmitted on the [Rx CH] in response to a bulk dump

request.

The data area is handled by converting seven words of 8-bit data into eight words of 7-bit data.

#### [Conversion from actual data into bulk data]

```
d[0~6]: actual data
b[0~7]: bulk data
b[0] = 0;
for( I=0; I<7; I++){
    if( d[I]&0x80){
        b[0] |= 1<<(6-I);
    }
    b[I+1] = d[I]&0x7F;
}
}
```

#### [Restoration from bulk data into actual data]

```
d[0~6]: actual data
b[0~7]: bulk data
for( I=0; I<7; I++){
    b[0] <<= 1;
    d[I] = b[I+1]+(0x80&b[0]);
}
}
```

### 12.2.1 Scene memory bulk dump format

The 02R96 can transmit and receive scene memories in compressed form.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacturer's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	''
	00100000	20	''
	00111000	38	'8'
	01000011	43	'C'
	00110101	35	'5'
	00110100	34	'4'
DATA NAME	01101101	6D	'm'
	0mmmmmmm	mh	m=0-99, 256(Scene0-99, EDIT BUFFER)
	0mmmmmmm	m1	Receive is effective 1-99, 256
BLOCK INFO.	0ttttttt	tt	total block number(minimum number is 0)
	0bbbbbbb	bb	current block number(0-total block number)
DATA	0ddddddd	ds	Scene data of block[mm]
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee=(Invert('L'+...+de)+1)&0x7F
EOX	11110111	F7	End of exclusive

### 12.2.2 Scene memory bulk dump request format

The second and third bytes of the DATA NAME indicate the scene number that is being requested. If this is 256, the data of the edit buffer will be bulk-dumped.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacturer's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	''
	00100000	20	''
	00111000	38	'8'
	01000011	43	'C'
	00110101	35	'5'
	00110100	34	'4'
DATA NAME	01101101	6D	'm'
	0mmmmmmm	mh	m=0-99, 256(Scene0-99, EDIT BUFFER)
	0mmmmmmm	m1	
EOX	11110111	F7	End of exclusive

### 12.2.3 Setup memory bulk dump format

Of the setup memory of the 02R96, this bulk-dumps data other than the User define layer, User define plug-in, User define keys, Control change table, and Program change table.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacturer's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	''
	00100000	20	''
	00111000	38	'8'
	01000011	43	'C'
	00110101	35	'5'
	00110100	34	'4'
DATA NAME	01010011	53	'S'
	00000010	02	
	00000000	00	No.256 = Current
BLOCK INFO.	0ttttttt	tt	total block number(minimum number is 0)
	0bbbbbbb	bb	current block number(0-total block number)
DATA	0ddddddd	ds	Setup memory data
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee=(Invert('L'+...+de)+1)&0x7F
EOX	11110111	F7	End of exclusive

### 12.2.4 Setup memory bulk dump request format

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacturer's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	''
	00100000	20	''
	00111000	38	'8'
	01000011	43	'C'
	00110101	35	'5'
	00110100	34	'4'
DATA NAME	01010011	53	'S'
	00000010	02	
	00000000	00	No.256 = Current
EOX	11110111	F7	End of exclusive

### 12.2.5 User define layer bulk dump format

The second and third bytes of the DATA NAME indicate the bank number.

Be aware that the state of the transmission destination will (in some cases) change if the same bank is being used.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacturer's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	''
	00100000	20	''
	00111000	38	'8'
	01000011	43	'C'
	00110101	35	'5'
	00110100	34	'4'
DATA NAME	01001100	4C	'L'
	00000000	00	

```

0bbbbbbb bb b=0-3(bank no.1-4)
BLOCK INFO. 0ttttttt tt total block number(minimum number
is 0)
0bbbbbbb bb current block number(0-total block
number)
DATA 0ddddddd ds User define layer
:
:
0ddddddd de
CHECK SUM 0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX 11110111 F7 End of exclusive

```

**12.2.6 User define layer bulk dump request format**

The second and third bytes of the DATA NAME indicate the bank number.

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0010nnnn 2n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01001100 4C 'L'
00000000 00
0bbbbbbb bb b=0-3(bank no.1-4)
EOX 11110111 F7 End of exclusive

```

**12.2.7 User define plug-in bulk dump format**

The second and third bytes of the DATA NAME indicate the bank number.

Be aware that the state of the transmission destination will (in some cases) change if the same bank is being used.

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0000nnnn 0n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
COUNT HIGH 0ccccccc ch data count = ch * 128 + cl
COUNT LOW 0ccccccc cl
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01001001 49 'I'
00000000 00
0bbbbbbb bb b=0-7(bank no.1-8)
BLOCK INFO. 0ttttttt tt total block number(minimum number
is 0)
0bbbbbbb bb current block number(0-total block
number)
DATA 0ddddddd ds User define plug-in data
:
:
0ddddddd de
CHECK SUM 0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX 11110111 F7 End of exclusive

```

**12.2.8 User define plug-in bulk dump request format**

The second and third bytes of the DATA NAME indicate the bank number.

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0010nnnn 2n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
01001100 4C 'L'

```

```

01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01001001 49 'I'
00000000 00
0bbbbbbb bb b=0-7(bank no.1-8)
EOX 11110111 F7 End of exclusive

```

**12.2.9 User Define Key bulk dump format**

The second and third bytes of the DATA NAME indicate the bank number.

Be aware that the state of the transmission destination will (in some cases) change if the same bank is being used.

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0000nnnn 0n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
COUNT HIGH cccccccc ch data count = ch * 128 + cl
COUNT LOW cccccccc cl
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01010110 56 'V'
00000000 00
0bbbbbbb bb b=0-3(bank no.A-D)
BLOCK INFO. 0ttttttt tt total block number(minimum number
is 0)
0bbbbbbb bb current block number(0-total block
number)
DATA 0ddddddd ds User define key data
:
:
0ddddddd de
CHECK SUM 0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX 11110111 F7 End of exclusive

```

**12.2.10 User Define Key bulk dump request format**

The second and third bytes of the DATA NAME indicate the bank number.

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0010nnnn 2n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01010110 56 'V'
BANK No. 00000000 00
0bbbbbbb bb b=0-3(bank no.A-D)
EOX 11110111 F7 End of exclusive

```

**12.2.11 Control change table bulk dump format**

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0000nnnn 0n n=0-15 (Device number=MIDI Channel)
FORMAT No.  01111110 7E Universal bulk dump
COUNT HIGH 00000011 ch data count = ch * 128 + cl
COUNT LOW  00010010 c1
              01001100 4C 'L'
              01001101 4D 'M'
              00100000 20 ''
              00100000 20 ''
              00111000 38 '8'
              01000011 43 'C'
              00110101 35 '5'
              00110100 34 '4'
DATA NAME    01000011 43 'C'
              00000000 02
              00000000 00 No.256 = Current
BLOCK INFO. 0ttttttt tt total block number(minimum number
              0bbbbbbb bb current block number(0-total block
              is 0)
DATA         0ddddddd ds Control change table data
              :         : (342/7)*8+(342%7)+1=391bytes →
              :         : unfixed
              0ddddddd de
CHECK SUM    0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX          11110111 F7 End of exclusive

```

**12.2.12 Control change table bulk dump request format**

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0010nnnn 2n n=0-15 (Device number=MIDI Channel)
FORMAT No.  01111110 7E Universal bulk dump
              01001100 4C 'L'
              01001101 4D 'M'
              00100000 20 ''
              00100000 20 ''
              00111000 38 '8'
              01000011 43 'C'
              00110101 35 '5'
              00110100 34 '4'
DATA NAME    01000011 43 'C'
              00000000 02
              00000000 00 No.256 = Current
EOX          11110111 F7 End of exclusive

```

**12.2.13 Program change table bulk dump format**

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0000nnnn 0n n=0-15 (Device number=MIDI Channel)
FORMAT No.  01111110 7E Universal bulk dump
COUNT HIGH 0ccccccc ch data count = ch * 128 + cl
COUNT LOW  0ccccccc c1
              01001100 4C 'L'
              01001101 4D 'M'
              00100000 20 ''
              00100000 20 ''
              00111000 38 '8'
              01000011 43 'C'
              00110101 35 '5'
              00110100 34 '4'
DATA NAME    01010000 50 'P'
              00000000 02
              00000000 00 No.256 = Current
BLOCK INFO. 0ttttttt tt total block number(minimum number
              0bbbbbbb bb current block number(0-total block
              is 0)
DATA         0ddddddd ds Program change table data

```

```

:         :
0ddddddd de
CHECK SUM  0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX        11110111 F7 End of exclusive

```

**12.2.14 Program change table bulk dump request format**

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0010nnnn 2n n=0-15 (Device number=MIDI Channel)
FORMAT No.  01111110 7E Universal bulk dump
              01001100 4C 'L'
              01001101 4D 'M'
              00100000 20 ''
              00100000 20 ''
              00111000 38 '8'
              01000011 43 'C'
              00110101 35 '5'
              00110100 34 '4'
DATA NAME    01010000 50 'P'
              00000000 02
              00000000 00 No.256 = Current
EOX          11110111 F7 End of exclusive

```

**12.2.15 Equalizer library bulk dump format**

The second and third bytes of the DATA NAME indicate the bank number.

0:Library no.1 - 199:Library no.200, 256:CH1 - 311:CH56, 384:BUS1 - 391:BUS8, 512:AUX1 - 519:AUX8, 768:STEREO L - 769:STEREO R

256 and following are data for the corresponding channel of the edit buffer.

For reception by the 02R96, only the user area is valid. (40-199, 256-)

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0000nnnn 0n n=0-15 (Device number=MIDI Channel)
FORMAT No.  01111110 7E Universal bulk dump
COUNT HIGH 0ccccccc ch data count = ch * 128 + cl
COUNT LOW  0ccccccc c1
              01001100 4C 'L'
              01001101 4D 'M'
              00100000 20 ''
              00100000 20 ''
              00111000 38 '8'
              01000011 43 'C'
              00110101 35 '5'
              00110100 34 '4'
DATA NAME    01010001 51 'Q'
LIB. No. H  0bbbbbbb bb 0-199(EQ Library no.1-200),
              256-(channel current data)
LIB. No. L  0bbbbbbb bb
BLOCK INFO. 0ttttttt tt total block number(minimum number
              0bbbbbbb bb current block number(0-total block
              is 0)
DATA         0ddddddd ds EQ Library data
              :         :
              0ddddddd de
CHECK SUM    0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX          11110111 F7 End of exclusive

```

**12.2.16 Equalizer library bulk dump request format**

The second and third bytes of the DATA NAME indicate the bank number. (See above)

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0010nnnn 2n n=0-15 (Device number=MIDI Channel)
FORMAT No.  01111110 7E Universal bulk dump
              01001100 4C 'L'
              01001101 4D 'M'
              00100000 20 ''
              00100000 20 ''

```



```

00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01010001 51 'Q'
LIB. No. H 0bbbbbbb bb 0-199(EQ Library no.1-200),
256-(channel current data)
LIB. No. L 0bbbbbbb bb
EOX 11110111 F7 End of exclusive

```

### 12.2.17 Compressor library bulk dump format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.1 - 199:Library no.200, 256:CH1 - 311:CH56, 384:BUS1 - 391:BUS8, 512:AUX1 - 519:AUX8, 768:STEREO L - 769:STEREO R 256 and following are data for the corresponding channel of the edit buffer.

For reception by the 02R96, only the user area is valid. (36-127, 256-)

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0000nnnn 0n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
COUNT HIGH 0ccccccc ch data count = ch * 128 + cl
COUNT LOW 0ccccccc cl
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01011001 59 'Y'
LIB. No. H 0bbbbbbb bb 0-127(COMP Library no.1-128),
256-(channel current data)
LIB. No. L 0bbbbbbb bb
BLOCK INFO. 0ttttttt tt total block number(minimum number
is 0)
0bbbbbbb bb current block number(0-total block
number)
DATA 0ddddddd ds COMP Library data
: :
0ddddddd de
CHECK SUM 0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX 11110111 F7 End of exclusive

```

### 12.2.18 Compressor library bulk dump request format

The second and third bytes of the DATA NAME indicate the library number. (See above)

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0010nnnn 2n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01011001 59 'Y'
LIB. No. H 0bbbbbbb bb 0-127(COMP Library no.1-128),
256-(channel current data)
LIB. No. L 0bbbbbbb bb
EOX 11110111 F7 End of exclusive

```

### 12.2.19 Gate library bulk dump format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.1 - 127:Library no.128, 256:CH1 - 311:CH56 256 and following are data for the corresponding channel of the edit buffer.

er.

For reception by the 02R96, only the user area is valid. (4-127, 256-)

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0000nnnn 0n n=0-15 (Device number=MIDI
Channel)
FORMAT No. 01111110 7E Universal bulk dump
COUNT HIGH 0ccccccc ch data count = ch * 128 + cl
COUNT LOW 0ccccccc cl
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01000111 47 'G'
LIB. No. H 0bbbbbbb bh 0-127(GATE Library no.1-128),
256-351(channel current data)
LIB. No. L 0bbbbbbb bl
BLOCK INFO. 0ttttttt tt total block number(minimum number
is 0)
0bbbbbbb bb current block number(0-total block
number)
DATA 0ddddddd ds GATE Library data
: :
0ddddddd de
CHECK SUM 0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX 11110111 F7 End of exclusive

```

### 12.2.20 Gate library bulk dump request format

The second and third bytes of the DATA NAME indicate the library number. (See above)

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0010nnnn 2n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01000111 47 'G'
LIB. No. H 0bbbbbbb bh 0-127(GATE Library no.1-128),
256-351(channel current data)
LIB. No. L 0bbbbbbb bl
EOX 11110111 F7 End of exclusive

```

### 12.2.21 Effect library bulk dump format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.1 - 127:Library no.128, 256:EFFECT1 - 259:EFFECT8

256-259 are the data for the corresponding area of the edit buffer.

For reception by the 02R96, only the user area is valid. (52-127, 256-259)

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0000nnnn 0n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
COUNT HIGH 0ccccccc ch data count = ch * 128 + cl
COUNT LOW 0ccccccc cl
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'

```

```

00110100 34 '4'
DATA NAME 01000100 45 'E'
LIB. No. H 0bbbbbbb bh 0-127(Effect Library no.1-128),
256-259(Effect1-4 current)
LIB. No. L 0bbbbbbb bl
BLOCK INFO. 0ttttttt tt total block number(minimum number
is 0)
0bbbbbbb bb current block number(0-total block
number)
DATA 0ddddddd ds Effect Library data
: :
0ddddddd de
CHECK SUM 0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX 11110111 F7 End of exclusive

```

### 12.2.22 Effect library bulk dump request format

The second and third bytes of the DATA NAME indicate the library number. (See above)

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0010nnnn 2n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01000100 45 'E'
LIB. No. H 0bbbbbbb bh 0-127(Effect Library no.1-128),
256-259(Effect1-4 current)
LIB. No. L 0bbbbbbb bl
EOX 11110111 F7 End of exclusive

```

### 12.2.25 Channel library bulk dump format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.0 - 128:Library no.128,  
256:CH1 - 311:CH56, 384:BUS1 - 391:BUS8, 512:AUX1 - 519:AUX8,  
768:STEREO L - 769:STEREO R

256 and following are the data for the corresponding channel of the edit buffer.

For reception by the 02R96, only the user area is valid. (2-128, 256-)

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0000nnnn 0n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
COUNT HIGH 0ccccccc ch data count = ch * 128 + cl
COUNT LOW 0ccccccc cl
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01001000 48 'H'
LIB. No. H 0bbbbbbb bh 0-128(Channel Library no.0-128),
256-(current)
LIB. No. L 0bbbbbbb bl
BLOCK INFO. 0ttttttt tt total block number(minimum number
is 0)
0bbbbbbb bb current block number(0-total block
number)
DATA 0ddddddd ds channel Library data
: :
0ddddddd de
CHECK SUM 0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX 11110111 F7 End of exclusive

```

### 12.2.26 Channel library bulk dump request format

The second and third bytes of the DATA NAME indicate the library number. (See above)

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0010nnnn 2n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110001 31 '1'
00110010 32 '2'
DATA NAME 01001000 48 'H'
LIB. No. H 0bbbbbbb bh 0-128(Channel Library no.0-128),
256-(current)
LIB. No. L 0bbbbbbb bl
EOX 11110111 F7 End of exclusive

```

### 12.2.27 Input patch library bulk dump format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.0 - 32:Library no.32, 256:current input patch data

For reception by the 02R96, only the user area is valid. (1-32, 256)

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0000nnnn 0n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
COUNT HIGH 0ccccccc ch data count = ch * 128 + cl
COUNT LOW 0ccccccc cl
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01010010 52 'R'
0bbbbbbb bh 0-32(Library no.0-32), 256(Current
data)
0bbbbbbb bl
BLOCK INFO. 0ttttttt tt total block number(minimum number
is 0)
0bbbbbbb bb current block number(0-total block
number)
DATA 0ddddddd ds Input Patch Library data
: :
0ddddddd de
CHECK SUM 0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX 11110111 F7 End of exclusive

```

### 12.2.28 Input patch library bulk dump request format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.0 - 32:Library no.32, 256:current input patch data

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0010nnnn 2n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01010010 52 'R'

```

```

0bbbbbbb bh 0-32(Library no.0-32), 256(Current
data)
0bbbbbbb b1
EOX 11110111 F7 End of exclusive

```

**12.2.29 Output patch library bulk dump format**

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.0 - 32:Library no.32, 256:current output patch data  
For reception by the 02R96, only the user area is valid. (1-32, 256)

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0000nnnn 0n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
COUNT HIGH 0ccccccc ch data count = ch * 128 + cl
COUNT LOW 0ccccccc cl
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01001111 4F 'O'
0bbbbbbb bh 0-32(Library no.0-32), 256(Current
data)
00100000 b1
BLOCK INFO. 0ttttttt tt total block number(minimum number
is 0)
0bbbbbbb bb current block number(0-total block
number)
DATA 0ddddddd ds Input Patch Library data
: :
0ddddddd de
CHECK SUM 0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX 11110111 F7 End of exclusive

```

**12.2.30 Output patch library bulk dump request format**

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.0 - 32:Library no.32, 256:current output patch data

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0010nnnn 2n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01001111 4F 'O'
0bbbbbbb bh 0-32(Library no.0-32), 256(Current
data)
0bbbbbbb b1
EOX 11110111 F7 End of exclusive

```

**12.2.31 Bus to Stereo library bulk dump format**

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.0 - 32:Library no.32, 256:current data  
For reception by the 02R96, only the user area is valid.

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0000nnnn 0n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
COUNT HIGH 0ccccccc ch data count = ch * 128 + cl
COUNT LOW 0ccccccc cl
01001100 4C 'L'

```

```

01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01001010 4A 'J'
0bbbbbbb bh 0-32(Library no.0-32), 256(Current
data)
0bbbbbbb b1
BLOCK INFO. 0ttttttt tt total block number(minimum number
is 0)
0bbbbbbb bb current block number(0-total block
number)
DATA 0ddddddd ds Input Patch Library data
: :
0ddddddd de
CHECK SUM 0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX 11110111 F7 End of exclusive

```

**12.2.32 Bus to Stereo library bulk dump request format**

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.0 - 32:Library no.32, 256:current data

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0010nnnn 2n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01001010 4A 'J'
0bbbbbbb bh 0-32 (Library no.0-32), 256 (Current
data)
0bbbbbbb b1
EOX 11110111 F7 End of exclusive

```

**12.2.33 Surround Monitor library bulk dump format**

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.0 - 32:Library no.32, 256:current data  
For reception by the 02R96, only the user area is valid. (1-32, 256)

```

STATUS 11110000 F0 System exclusive message
ID No. 01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS 0000nnnn 0n n=0-15 (Device number=MIDI Channel)
FORMAT No. 01111110 7E Universal bulk dump
COUNT HIGH 0ccccccc ch data count = ch * 128 + cl
COUNT LOW 0ccccccc cl
01001100 4C 'L'
01001101 4D 'M'
00100000 20 ''
00100000 20 ''
00111000 38 '8'
01000011 43 'C'
00110101 35 '5'
00110100 34 '4'
DATA NAME 01001011 4B 'K'
0bbbbbbb bh 0-32(Library no.0-32), 256(Current
data)
0bbbbbbb b1
BLOCK INFO. 0ttttttt tt total block number(minimum number
is 0)
0bbbbbbb bb current block number(0-total block
number)
DATA 0ddddddd ds Input Patch Library data
: :

```

```

0ddddddd de
CHECK SUM 0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX      11110111 F7 End of exclusive

```

### 12.2.34 Surround Monitor library bulk dump request format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.0 - 32:Library no.32, 256:current data

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0010nnnn 2n n=0-15 (Device number=MIDI Channel)
FORMAT No.  01111110 7E Universal bulk dump
            01001100 4C 'L'
            01001101 4D 'M'
            00100000 20 ''
            00100000 20 ''
            00111000 38 '8'
            01000011 43 'C'
            00110101 35 '5'
            00110101 35 '5'
            00110101 35 '5'
            00110100 34 '4'
            00110100 34 '4'
DATA NAME   01001011 4B 'K'
            0bbbbbbb bh 0-32(Library no.0-32), 256(Current
            data)
            0bbbbbbb b1
EOX        11110111 F7 End of exclusive

```

### 12.2.35 Plug-in effect card bulk dump format

The second byte of the DATA NAME indicates the slot number.

0:SLOT 1 - 3:SLOT 4

The data is not received if the Developer ID and Product ID are different than the card that is installed in the slot.

The data is not transmitted if a valid plug-in effect card is not installed.

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0000nnnn 0n n=0-15 (Device number=MIDI Channel)
FORMAT No.  01111110 7E Universal bulk dump
COUNT HIGH 0ccccccc ch data count = ch * 128 + cl
COUNT LOW  0ccccccc cl
            01001100 4C 'L'
            01001101 4D 'M'
            00100000 20 ''
            00100000 20 ''
            00111000 38 '8'
            01000011 43 'C'
            00110101 35 '5'
            00110101 35 '5'
            00110100 34 '4'
            00110100 34 '4'
DATA NAME   01001110 4E 'N'
            0mmmmmmm mh 0-3 (SLOT1-4)
            0mmmmmmm m1
DATA        0xxxxxxx xh block count (High)
            0xxxxxxx xl block count (Low)
            0yyyyyyy yh total size (High)
            0yyyyyyy yl total size (Low)
            0000iiii Developer id (High)
            0000iiii Developer id (Low)
            0000jjjj Product id (High)
            0000jjjj Product id (Low)
            0ddddddd ds Plug-in Effect card memory data
            :          : (1024/7)*8+(1024%7)+1=1171bytes
            0ddddddd de
CHECK SUM  0eeeeeee ee ee=(Invert('L'+...+de)+1)&0x7F
EOX        11110111 F7 End of exclusive

```

### 12.2.36 Plug-in effect card bulk dump request format

The second byte of the DATA NAME indicates the library number.

0:SLOT 1 - 3:SLOT 4

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0010nnnn 2n n=0-15 (Device number=MIDI Channel)

```

```

FORMAT No.  01111110 7E Universal bulk dump
            01001100 4C 'L'
            01001101 4D 'M'
            00100000 20 ''
            00100000 20 ''
            00111000 38 '8'
            01000011 43 'C'
            00110101 35 '5'
            00110100 34 '4'
DATA NAME   01000001 41 'A'
            0mmmmmmm mm 0-3 (SLOT1-4)
            0mmmmmmm m1
EOX        11110111 F7 End of exclusive

```

## 12.3 PARAMETER CHANGE

### 12.3.1 Parameter change basic format

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0001nnnn 1n n=0-15 (Device number=MIDI Channel)
GROUP ID    00111110 3E MODEL ID (digital mixer)
MODEL ID    00001011 0B 02R96
ADDRESS     0ttttttt tt Data type
            0eeeeeee ee Element No.
            (If 'ee' is 0, 'ee' is expanded to two
            bytes)
            0ppppppp pp Parameter No.
            0ccccccc cc Channel No.
DATA * )    0ddddddd dd Data
            :          :
EOX        11110111 F7 End of exclusive

```

For parameters with a data size of 2 or more, data for that size will be transmitted.

### 12.3.2 Parameter Change basic format (Universal format)

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0001nnnn 1n n=0-15 (Device number=MIDI Channel)
GROUP ID    00111110 3E MODEL ID (digital mixer)
MODEL ID    01111111 7F Universal
ADDRESS     0ttttttt tt Data type
            0eeeeeee ee Element No.
            (If 'ee' is 0, 'ee' is expanded to two
            bytes)
            0ppppppp pp Parameter No.
            0ccccccc cc Channel No.
DATA * )    0ddddddd dd Data
            :          :
EOX        11110111 F7 End of exclusive

```

For parameters with a data size of 2 or more, data for that size will be transmitted.

### 12.3.3 Parameter request basic format

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0011nnnn 3n n=0-15 (Device number=MIDI Channel)
GROUP ID    00111110 3E MODEL ID (digital mixer)
MODEL ID    00001011 0B 02R96
ADDRESS     0ttttttt tt Data type
            0eeeeeee ee Element No.
            (If 'ee' is 0, 'ee' is expanded to two
            bytes)
            0ppppppp pp Parameter No.
            0ccccccc cc Channel No.
EOX        11110111 F7 End of exclusive

```

### 12.3.4 Parameter request basic format (Universal format)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	0ttttttt	tt	Data type
	0eeeeeee	ee	Element No. (If 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter No.
	0ccccccc	cc	Channel No.
EOX	11110111	F7	End of exclusive

### 12.3.5 Parameter Address

Consult your dealer for parameter address details.

### 12.3.6 Parameter change (Edit buffer)

#### Reception

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the specified parameter will be controlled.

#### Transmission

If [Parameter change TX] is ON and a parameter not specified in the [Control assign table] is modified, this message will be transmitted with the device number specified by the [Tx CH].

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00000001	01	Edit Buffer
	0eeeeeee	ee	Element No. (If 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter No.
	0ccccccc	cc	Channel No.
DATA	0ddddddd	dd	Data
	:	:	
EOX	11110111	F7	End of exclusive

### 12.3.7 Parameter request (Edit buffer)

#### Reception

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the value of the specified parameter will be transmitted as a Parameter Change.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00000001	01	Edit Buffer
	0eeeeeee	ee	Element No. (If 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter No.
	0ccccccc	cc	Channel No.
EOX	11110111	F7	End of exclusive

### 12.3.8 Parameter change (Patch data)

#### Reception

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the specified parameter will be controlled.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)

GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001011	0B	02R96
ADDRESS	00000010	02	Patch data
	0eeeeeee	ee	Element No. (If 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter No.
	0ccccccc	cc	Channel No.
DATA	0ddddddd	dd	Data
	:	:	
EOX	11110111	F7	End of exclusive

### 12.3.9 Parameter request (Patch data)

#### Reception

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the value of the specified parameter will be transmitted as a Parameter Change.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001011	0B	02R96
ADDRESS	00000010	02	Patch data
	0eeeeeee	ee	Element No. (If 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter No.
	0ccccccc	cc	Channel No.
EOX	11110111	F7	End of exclusive

### 12.3.10 Parameter change (Setup memory)

#### Reception

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the value of the specified parameter will be controlled.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001011	0B	02R96
ADDRESS	00000011	03	Setup memory
	0eeeeeee	ee	Element No. (If 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter No.
	0ccccccc	cc	Channel No.
DATA	0ddddddd	dd	Data
	:	:	
EOX	11110111	F7	End of exclusive

### 12.3.11 Parameter request (Setup memory)

#### Reception

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the value of the specified parameter will be transmitted as a Parameter Change.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001011	0B	02R96
ADDRESS	00000011	03	Setup memory
	0eeeeeee	ee	Element No. (If 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter No.
	0ccccccc	cc	Channel No.
EOX	11110111	F7	End of exclusive

### 12.3.12 Parameter change (Backup memory)

#### Reception

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the value of the specified parameter will be controlled.

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0001nnnn 1n n=0-15 (Device number=MIDI Channel)
GROUP ID    00111110 3E MODEL ID (digital mixer)
MODEL ID    00001011 0B 02R96
ADDRESS     00000100 04 Backup memory
            0aaaaaaa ee Element No.
            0aaaaaaa pp Parameter No.
            0ccccccc cc Channel No.
DATA        0ddddd dd Data
            :
            :
EOX         11110111 F7 End of exclusive

```

### 12.3.13 Parameter request (Backup memory)

#### Reception

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the value of the specified parameter will be transmitted as a Parameter Change.

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0011nnnn 3n n=0-15 (Device number=MIDI Channel)
GROUP ID    00111110 3E MODEL ID (digital mixer)
MODEL ID    00001011 0B 02R96
ADDRESS     00000100 04 Backup memory
            0aaaaaaa ee Element No.
            0aaaaaaa pp Parameter No.
            0ccccccc cc Channel No.
EOX         11110111 F7 End of exclusive

```

### 12.3.14 Parameter change (Function call Library: store/recall)

#### Reception

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the specified memory/library will be stored/recalled.

#### Transmission

If [Parameter change ECHO] is ON, this message will be retransmitted without change.

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0001nnnn 1n n=0-15 (Device number=MIDI Channel)
GROUP ID    00111110 3E MODEL ID (digital mixer)
MODEL ID    00000110 7F Universal
ADDRESS     00010000 10 Address UU
            00ffff ff Address UL (function)
            0aaaaaaa aa Address LU (number H)
            0aaaaaaa aa Address LL (number L)
DATA        0ddddd dd channel High
            0ddddd dd channel Low
EOX         11110111 F7 End of exclusive

```

function	number	channel*1)	tx/rx
SCENE RECALL	0x00	0-99	256 tx*/2/rx
EQ LIB RECALL	0x01	1-200	0-513 tx/rx
GATE LIB RECALL	0x02	1-128	0-95 tx/rx
COMP LIB RECALL	0x03	1-128	0-513 tx/rx
EFF LIB RECALL	0x04	1-128	0-7 tx/rx
CHANNEL LIB RECALL	0x06	0-128	0-513 tx/rx
INPATCH LIB RECALL	0x07	0-32	256 tx/rx
OUTPATCH LIB RECALL	0x08	0-32	256 tx/rx
Bus to Stereo LIB RECALL	0x09	0-32	256 tx/rx

function	number	channel*1)	tx/rx
Surround Monitor LIB RECALL	0x0A	0-32	256 tx/rx
AUTOMIX LIB RECALL	0x0B	1-16	256 tx/rx
SCENE STORE	0x20	1-99	256, 16383 tx/rx
EQ LIB STORE	0x21	41-200	0-513, 16383 tx/rx
GATE LIB STORE	0x22	5-128	0-56, 16383 tx/rx
COMP LIB STORE	0x23	37-128	0-513, 16383 tx/rx
EFF LIB STORE	0x24	53-128	0-7, 16383 tx/rx
CHANNEL LIB STORE	0x26	3-128	0-513, 16383 tx/rx
INPATCH LIB STORE	0x27	1-32	256, 16383 tx/rx
OUTPATCH LIB STORE	0x28	1-32	256, 16383 tx/rx
Bus to Stereo LIB STORE	0x29	1-32	256, 16383 tx/rx
Surround Monitor LIB STORE	0x2A	1-32	256, 16383 tx/rx
AUTOMIX LIB STORE	0x2B	1-32	256, 16383 tx/rx

\*1) 0:CH1 - 55:CH56, 128:BUS1 - 135:BUS8, 256:AUX1 - 263:AUX5, 512:STEREO L - 513:STEREO R  
Use 256 if the recall destination or store source is a single data item.

Effect is 0:Effect 1-3:Effect 4

If the store destination is 16383 (0x3FFF), this indicates that the library data has been changed by an external cause (only transmitted by the 02R96)

\*2) This is also transmitted when a program that has not been assigned to the [Program change table] is recalled.

(Normally this would be transmitted as a program change message.)

### 12.3.15 Parameter change (Function call: title)

#### Reception

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the title of the specified memory/library will be changed

#### Transmission

In response to a request, a Parameter Change message will be transmitted on the [Rx CH].

If [Parameter change ECHO] is ON, this message will be retransmitted without change.

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0001nnnn 1n n=0-15 (Device number=MIDI Channel)
GROUP ID    00111110 3E MODEL ID (digital mixer)
MODEL ID    00000110 7F Universal
ADDRESS     00010000 10 Function call Library
            0100aaaa 4a Address UL (function)
            0nnnnnnn nn Address LU (number H)
            0nnnnnnn nn Address LL (number L)
DATA        0ddddd dd title 1
            :
            :
            0ddddd dd title x(depend on the librar y)
EOX         11110111 F7 End of exclusive

```

function	number	size
SCENE LIB TITLE	0x40	0-99, 256(0:response only)
EQ LIB TITLE	0x41	1-200(1-40:response only)
GATE LIB TITLE	0x42	1-128(1-4:response only)
COMP LIB TITLE	0x43	1-128(1-36:response only)
EFF LIB TITLE	0x44	1-128(1-52:response only)
CHANNEL LIB TITLE	0x46	0-128(0-1:response only)
INPATCH LIB TITLE	0x47	0-32(0:response only)
OUTPATCH LIB TITLE	0x48	0-32(0:response only)
Bus to Stereo LIB TITLE	0x49	0-32(0:response only)
Surround Monitor LIB TITLE	0x4A	0-32(0:response only)
AUTOMIX LIB TITLE	0x4B	1-16

### 12.3.16 Parameter request (Function call: title)

#### Reception

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, a Parameter Change message will be transmitted on the [Rx CH].

Refer to the above table for the Functions and Numbers.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00000110	7F	Universal
ADDRESS	00010000	10	Function call Library
	0100aaaa	4a	Address UL (function)
	0nnnnnnn	nn	Address LU (number H)
	0nnnnnnn	nn	Address LL (number L)
EOX	11110111	F7	End of exclusive

**12.3.17 Parameter change (Function call: Scene/Library Clear)**

**Reception**

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the specified memory/library will be stored/recalled.

**Transmission**

If [Parameter change ECHO] is ON, this message will be retransmitted without change.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00000110	7F	Universal
ADDRESS	00010000	10	Function call Library
	0110aaaa	6a	Address UL (function)
	0nnnnnnn	nn	Address LU (number H)
	0nnnnnnn	nn	Address LL (number L)
EOX	11110111	F7	End of exclusive

function	number
SCENE LIB CLEAR	0x60 1-99
EQ LIB CLEAR	0x61 41-200
GATE LIB CLEAR	0x62 5-128
COMP LIB CLEAR	0x63 37-128
EFF LIB CLEAR	0x64 1-128
CHANNEL LIB CLEAR	0x66 2-128
INPATCH LIB CLEAR	0x67 0-32
OUTPATCH LIB CLEAR	0x68 0-32
Bus to Stereo LIB CLEAR	0x69 0-32
Surround Monitor LIB CLEAR	0x6A 0-32
AUTOMIX LIB CLEAR	0x6B 1-16

**12.3.18 Parameter change (Function call: pair, copy)**

**Reception**

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS. This is echoed if [Parameter change ECHO] is ON.

When this is received, pairing will be enabled/disabled for the specified channel. (Items other than PAIR are reserved for future use.)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00000110	7F	Universal
ADDRESS	00010001	11	Function call Pair
	0000aaaa	0a	Function
DATA	0ddddddd	dd	Source channel number H
	0ddddddd	dd	Source channel number L
	0ddddddd	dd	Destination channel number H
	0ddddddd	dd	Destination channel number L
EOX	11110111	F7	End of exclusive

function	Channel
PAIR ON with COPY	0x00 *1)
PAIR ON with RESET BOTH	0x01 *1)
PAIR OFF	0x02 *1)

\*1)0:CH1 - 55:CH56, 128:BUS1 - 135:BUS8, 256:AUX1 - 263:AUX8, 512:STEREO L - 513:STEREO R

Effect is 0:Effect 1-3:Effect 4

In the case of PAIR, you must specify channels for which pairing is possible.

In the case of PAIR ON with COPY, you must specify Source Channel as the copy source, and Destination Channel as the copy destination.

**12.3.19 Parameter change (Function call Event: Effect)**

**Reception**

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the corresponding effect's function activates (depending on the effect type).

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00000110	7F	Universal
ADDRESS	00010010	12	Function call Event
	0000aaaa	0a	Function
DATA	00000000	00	-
	0ddddddd	dd	Release:0, Press:1
	00000000	00	-
	0ddddddd	dd	Destination Effect Number 0 - 7
EOX	11110111	F7	End of exclusive

function	Channel
Freeze Play button	0x00 0:Effect1-3:Effect4
Freeze Record button	0x01 0:Effect1-3:Effect4
Auto Pan 5.1 Trigger Button	0x02 0:Effect1
Auto Pan 5.1 Reset Button	0x03 0:Effect1

• This does not activate when the effect type is different.

**12.3.20 Parameter change (Key remote)**

**Reception**

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the same processing that is executed when the key specified by Address is pressed (released). (Refer to the PARAMETER CHANGE PARAMETER NUMBER LIST.)

**Transmission**

If [Parameter Change ECHO] is ON, this message is retransmitted without change.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001011	0B	02R96
ADDRESS	00100000	20	Address UU
	0aaaaaaaa	aa	Address UL
	0aaaaaaaa	aa	Address LU
	0aaaaaaaa	aa	Address LL
DATA	0ddddddd	dd	0:press, 1:release
EOX	11110111	F7	End of exclusive

**12.3.21 Parameter change (Remote Meter)**

When transmission is enabled by receiving a Request of Remote meter, the specified meter information is transmitted every 50 msec for 10 seconds. When you want to transmit meter information continuously, a Request must be transmitted continuously within every 10 seconds.

**Reception**

This is echoed if [Parameter change ECHO] is ON.

**Transmission**

When transmission has been enabled by a Request, the parameter specified by Address (see PARAMETER CHANGE PARAMETER NUMBER LIST) will be transmitted on the [Rx CH] channel at 50 msec intervals for a duration of 10 seconds.

Transmission will be disabled if the power is turned off and on again, or if the PORT setting is changed.

If [Parameter Change ECHO] is ON, this message is retransmitted without

change.

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0001nnnn 1n n=0-15 (Device number=MIDI Channel)
GROUP ID    00111110 3E MODEL ID (digital mixer)
MODEL ID    00001011 0B 02R96
ADDRESS     00100001 21 Address UU
              0aaaaaaa aa Address UL
              0aaaaaaa aa Address LU
              0aaaaaaa aa Address LL
DATA        0ddddd dd Data1 H
              0ddddd dd Data1 L
              :
EOX         11110111 F7 End of exclusive

```

Meter data uses the unmodified DECAy value of the DSP. For the interpretation of the value, refer to the PARAMETER CHANGE PARAMETER NUMBER LIST.

### 12.3.22 Parameter request (Remote Meter)

#### Reception

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the parameter specified by Address (refer to PARAMETER CHANGE PARAMETER NUMBER LIST) will be transmitted on the [Rx CH] at 50 msec intervals for a duration of 10 seconds.

If Address UL=0x7F is received, transmission of all meter data will be halted immediately. (disable)

#### Transmission

If [Parameter Change ECHO] is ON, this message is retransmitted without change.

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0011nnnn 3n n=0-15 (Device number=MIDI Channel)
GROUP ID    00111110 3E MODEL ID (digital mixer)
MODEL ID    00001011 0B 02R96
ADDRESS     00100001 21 Address UU
              0aaaaaaa aa Address UL
              0aaaaaaa aa Address LU
              0aaaaaaa aa Address LL
DATA        0cccccccc Count H
              0ccccccccCc Count L
EOX         11110111 F7 End of exclusive

```

### 12.3.23 Parameter change (Remote Time Counter)

When transmission is enabled by receiving a Request of Remote Time Counter, the Time Counter data is transmitted every 50 msec for 10 seconds. When you want to transmit Counter information continuously, a Request must be transmitted within every 10 seconds.

#### Reception

This is echoed if [Parameter change ECHO] is ON.

#### Transmission

When transmission is enabled by receiving a Request, the Time Counter information is transmitted on [RxCH] channel every 50 msec for 10 seconds.

Transmission will be disabled if the power is turned off and on again, or if the PORT setting is changed.

If [Parameter Change ECHO] is ON, this message is retransmitted without change.

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0001nnnn 1n n=0-15 (Device number=MIDI Channel)
GROUP ID    00111110 3E MODEL ID (digital mixer)
MODEL ID    00001011 0B 02R96
ADDRESS     00100001 22 Remote Time Counter
              0000tttt 0t 0:Time Code, 1: Measure, Beat, Clock
DATA        0ddddd dd Hour / Measure H
              0ddddd dd Min / Measure L
              0ddddd dd Sec / Beat
              0ddddd dd Frame / Clock

```

```
EOX         11110111 F7 End of exclusive
```

### 12.3.24 Parameter request (Remote Time Counter)

#### Reception

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the Time Counter information is transmitted on the [Rx CH] channel every 50 msec for 10 seconds.

When the second byte of Address is received on 0x7F, data transmission will be halted immediately.

#### Transmission

If [Parameter Change ECHO] is ON, this message is retransmitted without change.

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0011nnnn 3n n=0-15 (Device number=MIDI Channel)
GROUP ID    00111110 3E MODEL ID (digital mixer)
MODEL ID    00001011 0B 02R96
ADDRESS     00100001 22 Remote Time Counter
              0aaaaaaa aa 0:Transmission request,
              0x7F:Transmission stop request
EOX         11110111 F7 End of exclusive

```

### 12.3.25 Parameter change (Automix Status)

When transmission is enabled by receiving a Request of Automix status, the Automix Status data is transmitted every second for 10 seconds. When you want to transmit the Automix Status information continuously, the Request must be transmitted continuously minimum within 10 seconds interval. The data is transmitted continuously while the transmission is enabled, even when the Automix Status on the 02R96 has been changed.

#### Reception

This is echoed if [Parameter change ECHO] is ON.

#### Transmission

When the transmission is set to enable by receiving a Request. The Automix Status data is transmitted on the [Rx CH] channel every second for 10 seconds. The data is transmitted continuously while the transmission is enabled, even when the Automix Status on the 02R96 has been changed. Transmission will be disabled if the power is turned off and on again, or if the PORT setting is changed.

If [Parameter Change ECHO] is ON, this message is retransmitted without change.

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0001nnnn 1n n=0-15 (Device number=MIDI Channel)
GROUP ID    00111110 3E MODEL ID (digital mixer)
MODEL ID    00001011 0B 02R96
ADDRESS     00100011 23 Automix Status
              00000000 00
DATA        0000dddd 0d Automix Status H
              0000dddd 0d Automix Status L
EOX         11110111 F7 End of exclusive

```

### 12.3.26 Parameter request (Automix Status)

#### Reception

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When the data is received, the Automix Status data is transmitted on the [Rx CH] every second for 10 seconds.

When the second byte of Address is received on 0x7F, data transmission will be halted immediately (disable).

#### Transmission

If [Parameter Change ECHO] is ON, this message is retransmitted without change.

```

STATUS      11110000 F0 System exclusive message
ID No.      01000011 43 Manufacture's ID number (YAMAHA)
SUB STATUS  0011nnnn 3n n=0-15 (Device number=MIDI Channel)
GROUP ID    00111110 3E MODEL ID (digital mixer)
MODEL ID    00001011 0B 02R96
ADDRESS     00100011 23 Automix Status
              0aaaaaaa aa 0:Transmission request,
              0x7F:Transmission stop request
EOX         11110111 F7 End of exclusive

```



YAMAHA [Digital Mixing Console-Internal Parameters]

Date: 20 Mar. 2002

Model: 02R96

## MIDI Implementation Chart

Version: 1.0

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1-16 1-16	1-16 1-16	Memorized
Mode	Default Messages Altered	X X *****	OMNI off/OMNI on X X	Memorized
Note Number	True Voice	X *****	0-127 X	
Velocity	Note On Note Off	X X	O O	Effect Control
After	Key's Ch's	X X	X X	
Pitch Bend		X	X	
Control Change	0-95,102-119	O	O	Assignable
Prog Change	:True#	0-127 *****	0-127 0-99	Assignable
System Exclusive		O	O	*1
System Common	:Song Pos :Song Sel :Tune	X X X	O X X	Automix
System Real Time	:Clock :Commands	X X	O O	Automix, Effect Control
Aux Messages	:Local ON/OFF :All Notes OFF :Active Sense :Reset	X X X X	X X O O	
Notes		MTC quarter frame message is recognized (MTC IN & MIDI IN). *1: Bulk Dump/Request, Parameter Change/Request, and MMC. For MIDI Remote, ALL messages can be transmitted.		

Mode 1: OMNI ON, POLY  
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO  
Mode 4: OMNI OFF, MONO

O: Yes  
X: No

# DIGITAL MIXING CONSOLE

# *O2R 96*

# PARTS LIST


## ■ CONTENTS

OVERALL ASSEMBLY	.....	2
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CONTROL PANEL ASSEMBLY	.....	13
LCD ASSEMBLY	.....	18
ELECTRICAL PARTS	.....	21

## Notes : DESTINATION ABBREVIATIONS

A : Australian model	M: South African model
B : British model	O : Chinese model
C : Canadian model	Q : South-east Asia model
D : German model	T : Taiwan model
E : European model	U : U.S.A. model
F : French model	V : General export model (110V)
H : North European model	W: General export model (220V)
I : Indonesian model	N,X: General export model
J : Japanese model	Y : Export model

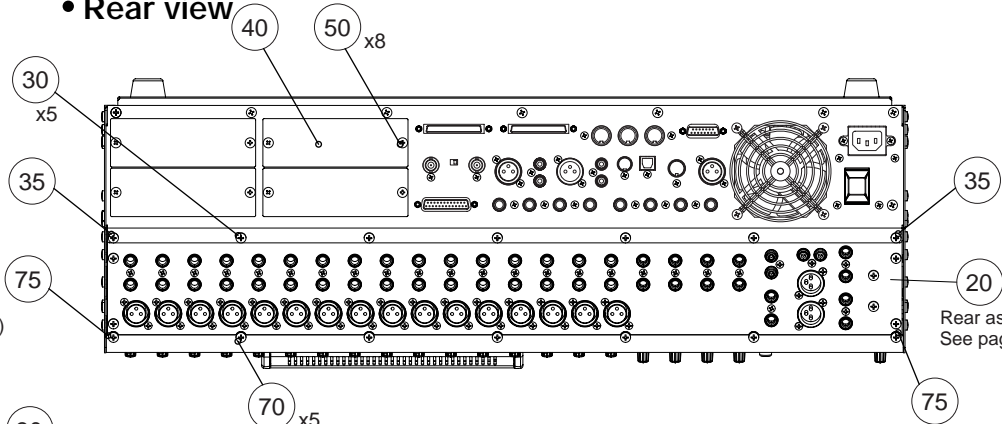
## ■ WARNING

Components having special characteristics are marked  and must be replaced with parts having specification equal to those originally installed.

- The numbers "QTY" show quantities for each unit.
- The parts with "--" in "PART NO." are not available as spare parts.
- This mark "}" in the REMARKS column means these parts are interchangeable.
- The second letter of the shaded (■) part number is O, not zero.
- The second letter of the shaded (■) part number is I, not one.

# OVERALL ASSEMBLY

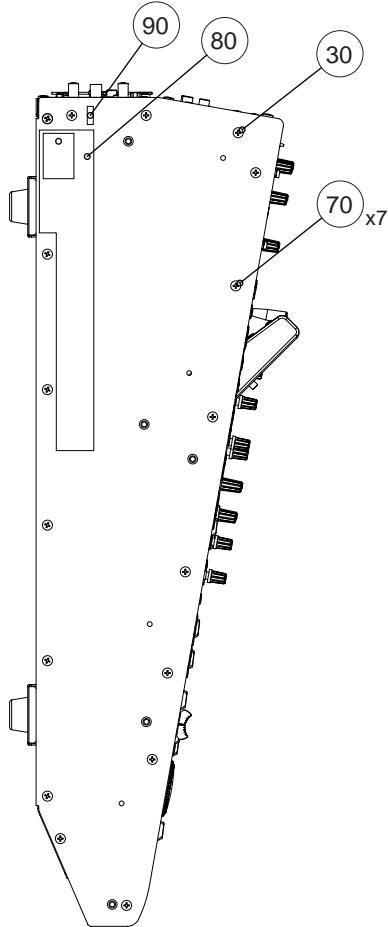
• Rear view



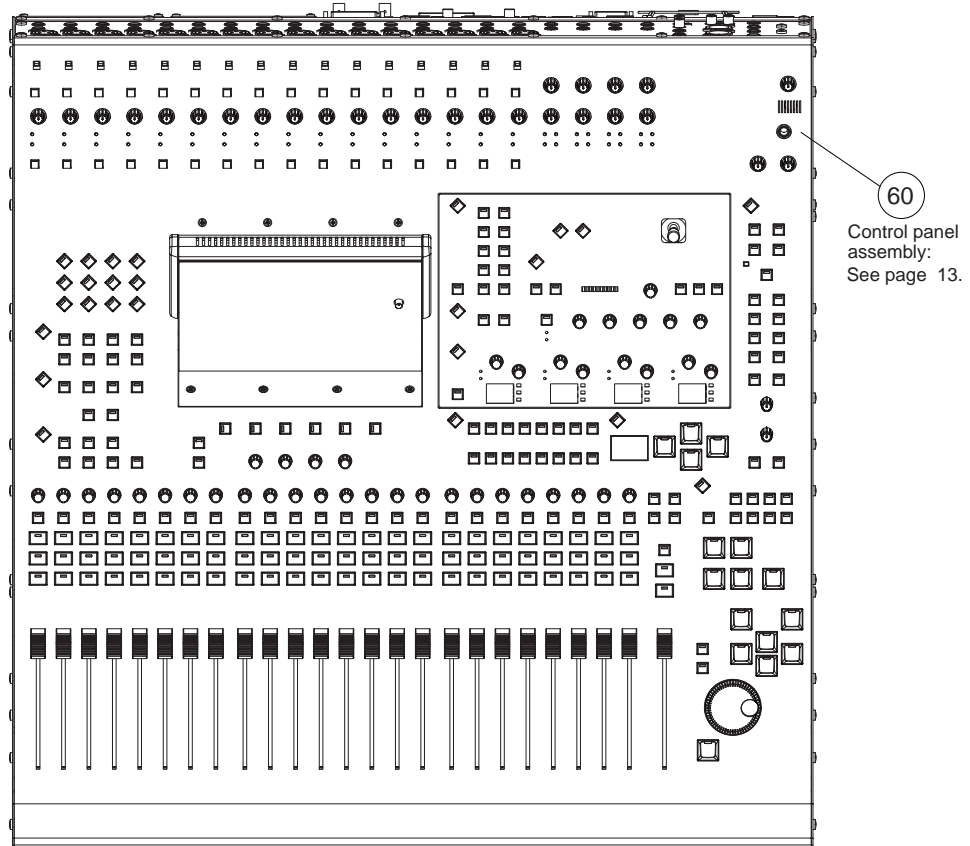
• Left side view

(30, 70): Right side is the same too.)

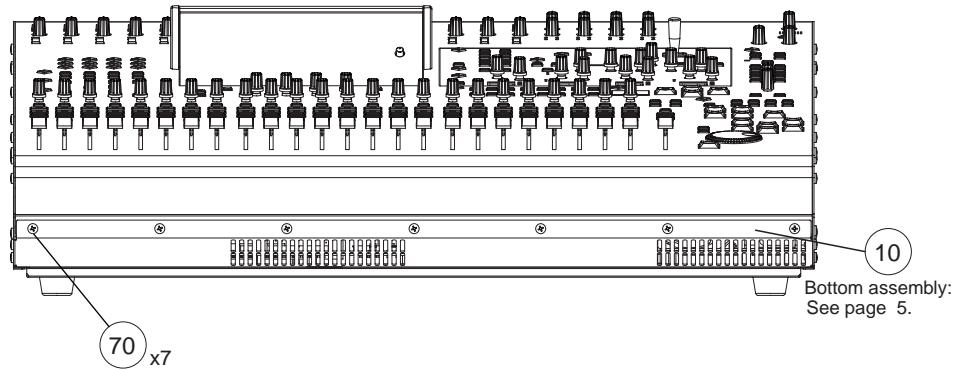
U.S.A. model only



• Top view

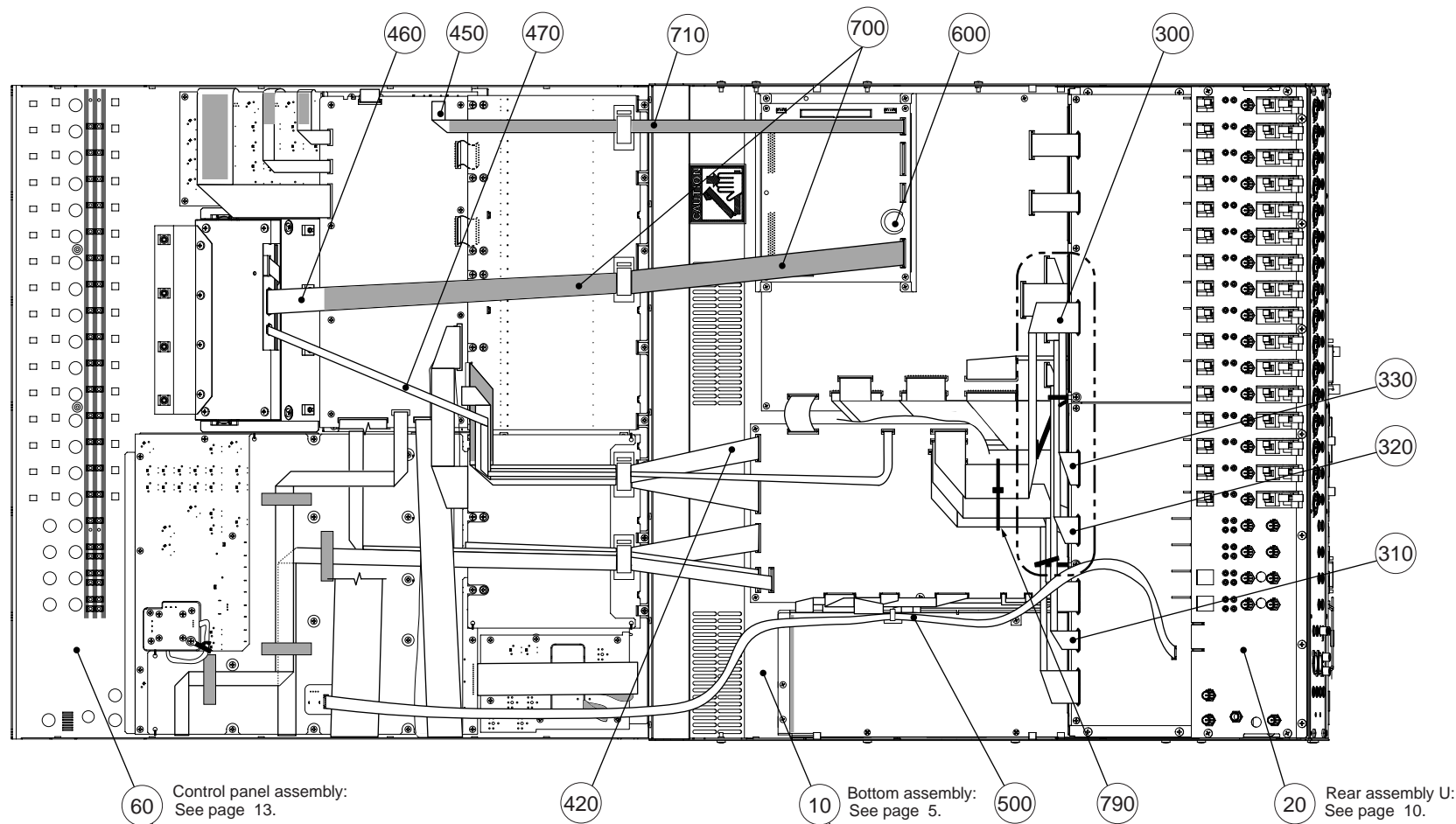


• Front view

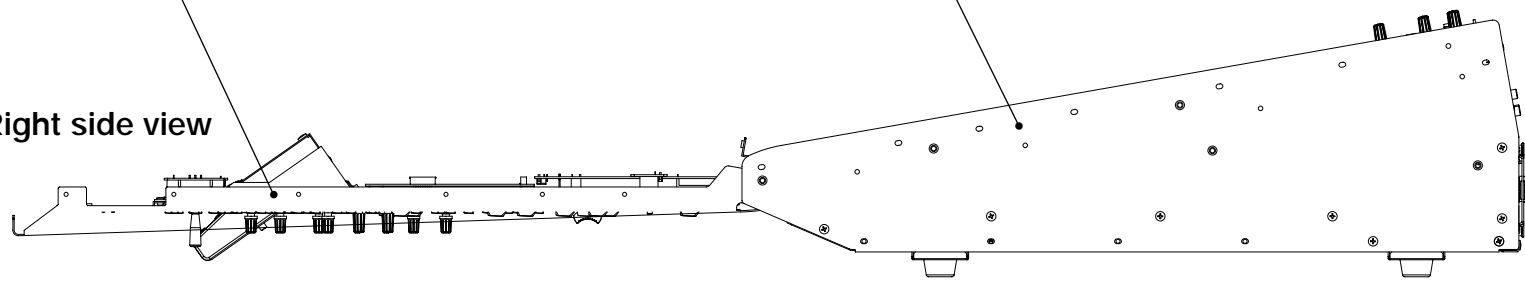


• Bottom view

• Top view



• Right side view



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	OVERALL ASSEMBLY		02R96		
	--	Overall Assembly		J (V781630)		
	--	Overall Assembly		U,V (V781640)		
	--	Overall Assembly		H,B,W (V781650)		
	--	Overall Assembly		K (V980380)		
10	--	Bottom Assembly		(V781680)		
20	--	Rear Assembly U	UPPER	(V781700)		
30	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		7	01
35	VP156900	Bind Head Screw	A4.0X12 MFZN2BL		2	01
40	VZ678500	IF Plate			4	05
50	VP156900	Bind Head Screw	A4.0X12 MFZN2BL		8	01
60	--	Control Panel Assembly		(V781690)		
70	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		26	01
75	VP156900	Bind Head Screw	A4.0X12 MFZN2BL		2	01
80	--	Label		J (V868650)		
80	--	Label		U,V (V868660)		
80	--	Label		H,B,W (V868670)		
80	--	Label		K (V980410)		
90	VA039300	Label		U,V		03
* 300	V8973500	Jumper Wire	FVP=2.0C26SB16-350			
* 310	V8973600	Jumper Wire	FVP=2.0C26SB10-400			
* 320	V8973700	Jumper Wire	FVP=2.0C26SB14-330			
* 330	V8973800	Jumper Wire	FVP=2.0C26SB17-330			
* 420	VU073600	Jumper Wire	FVP=2.0C26SB11-460			
* 450	V8964500	Jumper Wire	FVP=2.0C26SB6-550			
* 460	V8948900	Jumper Wire	FVP=2.0C26SB12-750			
* 470	VU143300	Jumper Wire	FVP=2.0C26SB4-750			
500	VT960800	Connector Assembly	CR LEVEL PH-6P			07
600	VN103500	Lithium Battery	CR2032			03
* 700	V9105400	Rubber Sponge Spacer 1			2	
* 710	V9660300	Sponge SUB-CPU				
790	CB069250	Cord Holder	BK-1			01
		ACCESSORIES				
	VQ240200	AC Cord Adaptor	KPR-24	J		06
	X2407A00	CD-ROM	CD-R			
	V5800000	AC Cord	J 3P 15A	J		09
	V5068000	AC Cord	U/C 3P 13A	U,V		09
	V5067700	AC Cord	CE 3P 10A	H,W,K		08
	V6190800	AC Cord	BS	B		10
		TOOLS				
	AAX34450	Interchange CPU-EXT C.B.		Service part		
	AAX33140	Front Stay Set				15
	AAX33150	Rear Stay Set				11

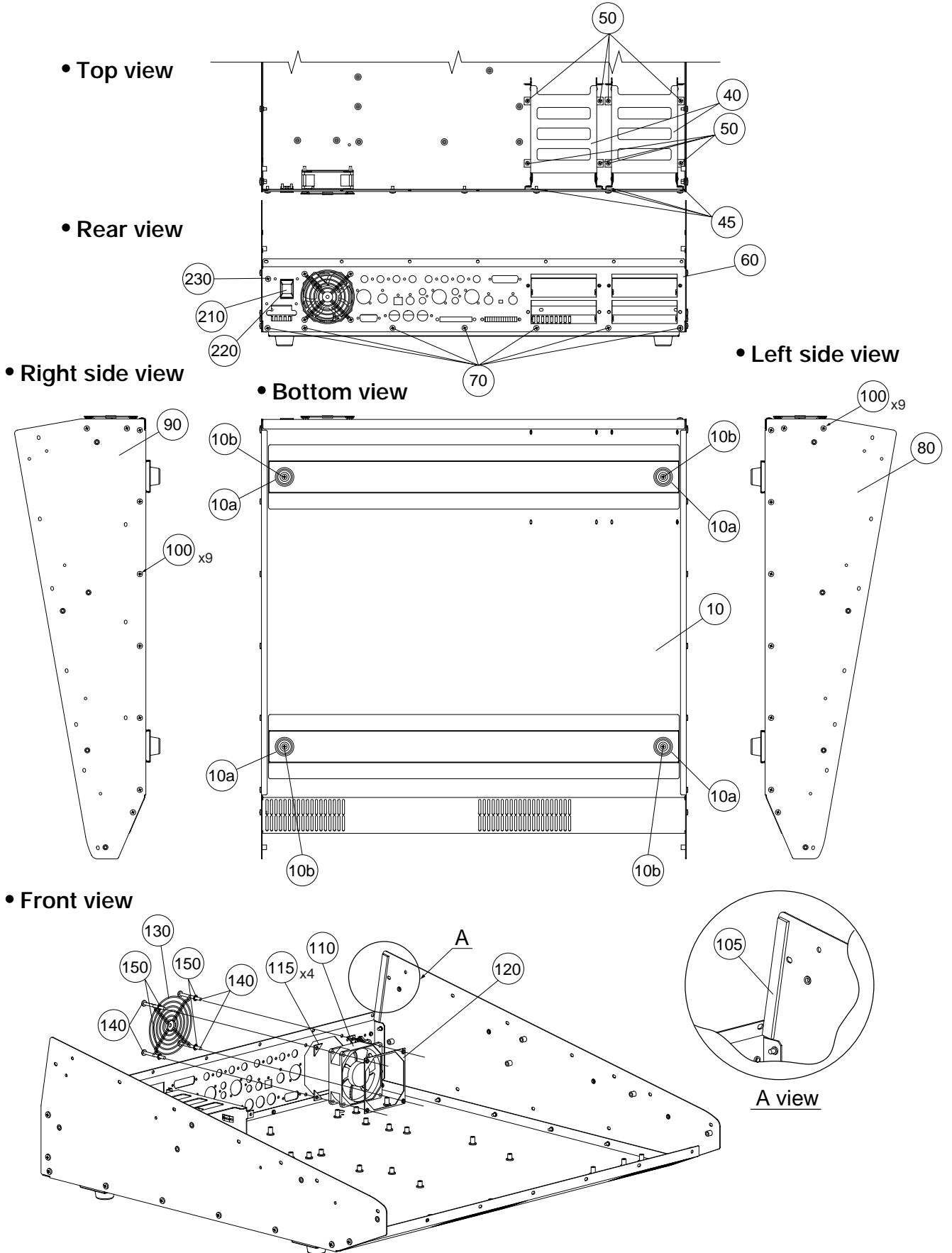
\*: New Parts

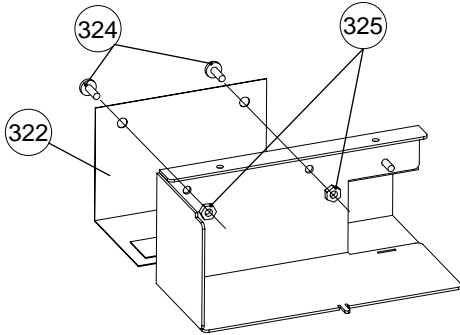
RANK: Japan only

## • CPU-EXT Circuit Board



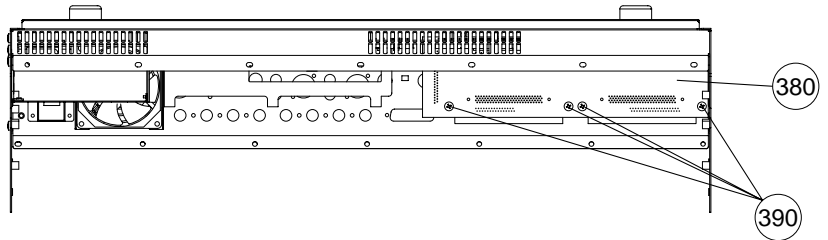
# ■ BOTTOM ASSEMBLY



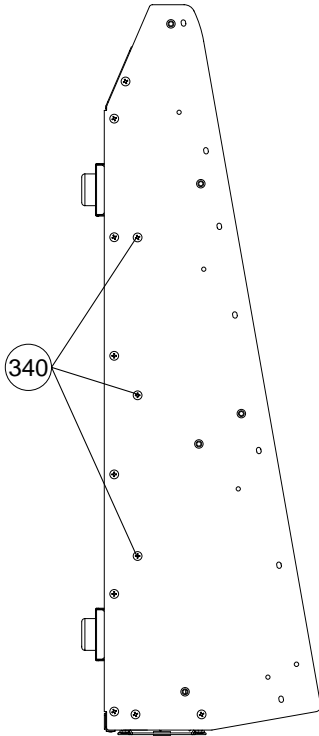


**B view**

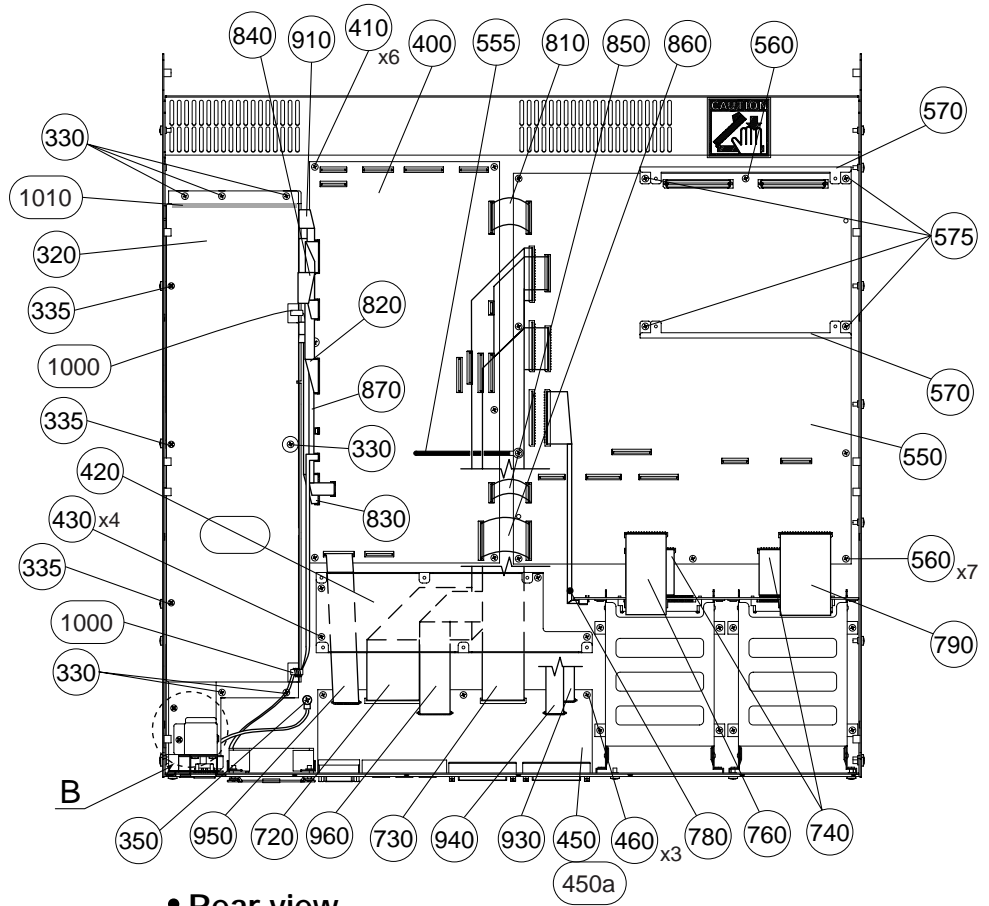
• **Front view**



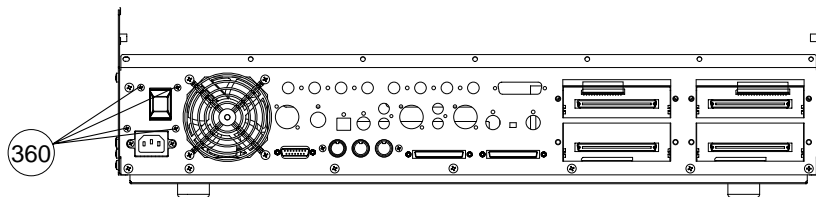
• **Right side view**



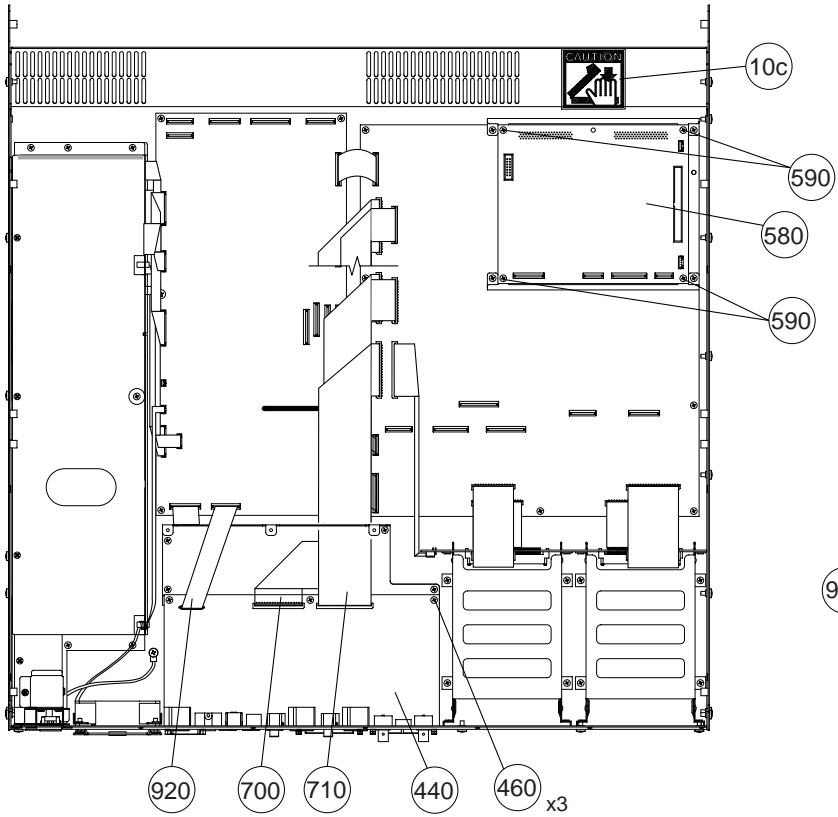
• **Top view**



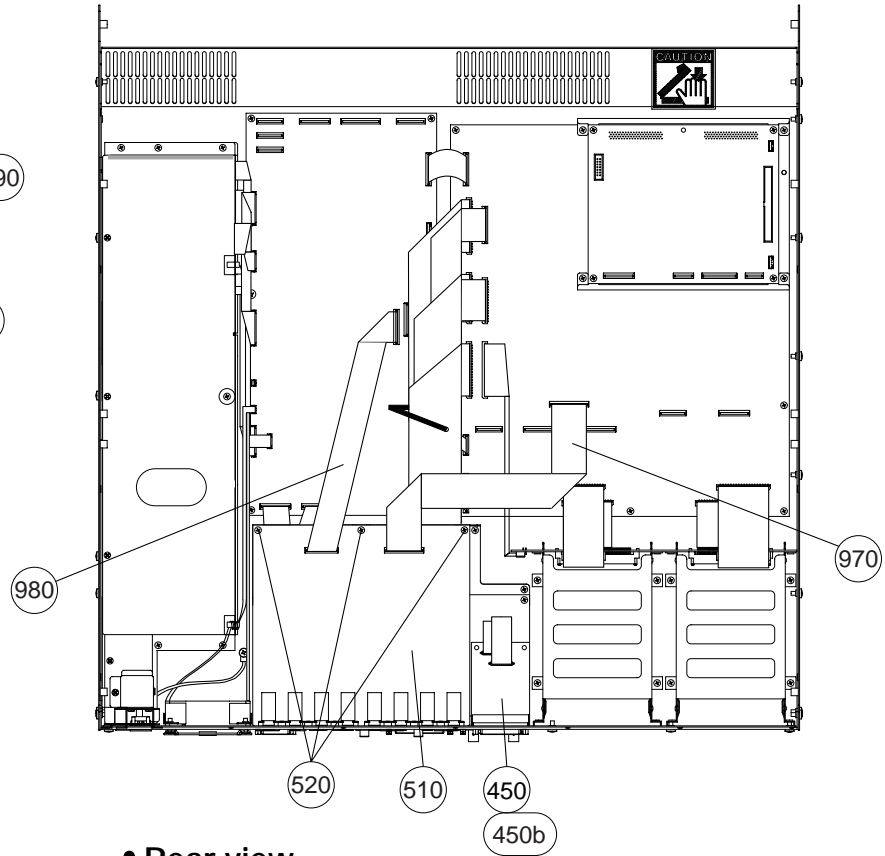
• **Rear view**



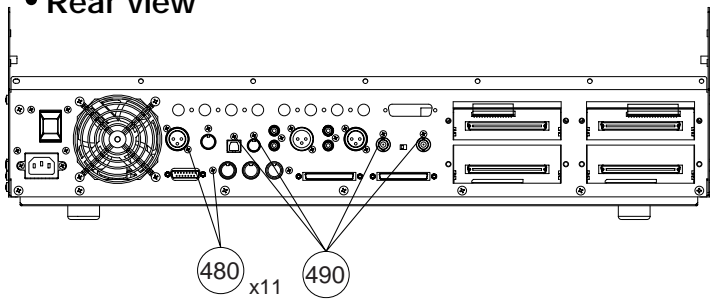
• Top view



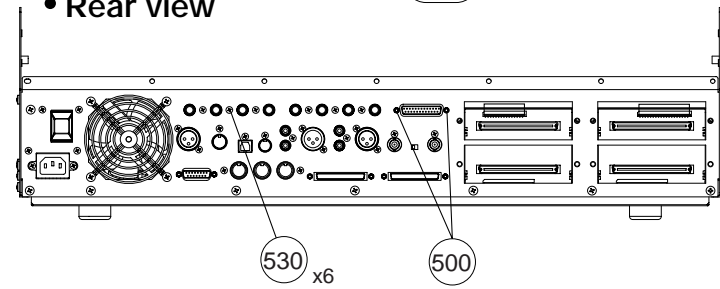
• Top view



• Rear view



• Rear view





REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
* 10	--	BOTTOM ASSEMBLY		02R96 (V781680)		
	V8681800	Bottom Chassis				
10a	V8991500	Foot			4	03
10b	VR138400	Bind Head Tapping Screw-B	4.0X12 MFZN2BL		4	01
10c	--	Caution Label		(V85650)		
40	V8806500	OPT Angle			2	11
45	--	Soft Gasket	UC-300282	(V913040)	4	
50	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		8	01
* 60	V8676200	Rear Panel L	LOWER			
70	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		7	01
* 80	V8676400	Side Panel L	LEFT			
* 90	V8676600	Side Panel R	RIGHT			
100	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		18	01
* 105	V9745300	Rubber Sponge Side Panel	10X100 T=3		2	
110	V8628200	Motor	DC KDE1208PTS3-6	Fan		09
* 115	V9745200	Vibration Absorbing Rubber			4	
120	V5107200	Fan Guide				06
130	V8968200	Fan Guard	FG-08UL-BK			07
140	VV413200	Bind Head Screw	4.0X40 MFZN2BL		4	01
150	ET800070	Toothed Lock Washer-A	4.0 MFZN2BL		4	01
210	VL812900	Power Switch Knob		POWER ON/OFF		03
220	VL813000	Escutcheon, Power Switch				03
230	V1693100	Bind Head Tapping Screw-S	4.0X8 MFZN2BL			01
* 320	V8629600	Power Supply Unit	PS J,UL,CSA			
* 322	V9695200	Shield Plate for PW				
324	VB659000	Bind Head Screw	3.0X8 MFZN2BL		2	01
325	ES200030	Hexagonal Nut	#1 3.0 MFZ2BL		2	01
330	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		6	01
335	VB659000	Bind Head Screw	3.0X8 MFZN2BL		3	01
340	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		3	01
350	V1693100	Bind Head Tapping Screw-S	4.0X8 MFZN2BL			01
360	VP157800	Bonding Screw	3.0X8 MFZN2BL		4	01
* 380	V8469100	Circuit Board	OPT			
390	VZ538000	Bind Head Screw	SP 4.0X8 MFZN2Y		4	
* 400	V9221600	Circuit Board	BRG			
410	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		6	01
* 420	V8676900	Holder	DA-JK			
430	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		4	01
* 440	V8629100	Circuit Board	JK1 (JKCOM)	(V846900)		
450	--	Circuit Board	JK2 (JKCOM)	(V862920)		
* 450a	AAX34460	Circuit Board	JK2 1/2	(V862920)		
* 450b	AAX34470	Circuit Board	JK2 2/2	(V862920)		
460	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		6	01
480	VN413300	Bonding Tapping Screw-B	3.0X8 MFZN2BL		11	01
490	VP157800	Bonding Screw	3.0X8 MFZN2BL		4	01
500	VS604900	Hex. Locking Screw	JFS-2.6S-BIW		2	01
* 510	V9106700	Circuit Board	DA			
520	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		3	01
530	VN413300	Bonding Tapping Screw-B	3.0X8 MFZN2BL		6	01
* 550	V8468900	Circuit Board	DSP			
555	VJ770600	Cord Binder	S-126			01
560	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		8	01
* 570	V9048100	Holder	CPU		2	
575	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		4	01
* 580	V8468800	Circuit Board	CPU1			
590	VB659000	Bind Head Screw	3.0X8 MFZN2BL		4	01
700	MF136450	Connector Assembly	36P 450mm P=1.25			04
* 710	MF140300	Connector Assembly	40P 300mm P=1.25			
720	MF140600	Connector Assembly	40P 600mm P=1.25			05
* 730	MF132450	Connector Assembly	32P 450mm P=1.25			
740	MF136120	Connector Assembly	36P 120mm P=1.25		2	02
* 760	MF130160	Connector Assembly	30P 160mm P=1.25			
* 780	MF140300	Connector Assembly	40P 300mm P=1.25			
* 790	MF138160	Connector Assembly	38P 160mm P=1.25			
810	VT645600	Jumper Wire	FVP=2.0C26SB13-70			
* 820	V2015700	Jumper Wire	FVP=2.0C26SB16-200			
* 830	V9468500	Jumper Wire	FVP=2.0C26SB14-225			
* 840	V9468300	Jumper Wire	FVP=2.0C26SB15-190			
850	VT645200	Jumper Wire	FVP=2.0C26SB7-60			
* 860	V9468200	Jumper Wire	FVP=2.0C26SB16-70			

\*: New Parts

RANK: Japan only

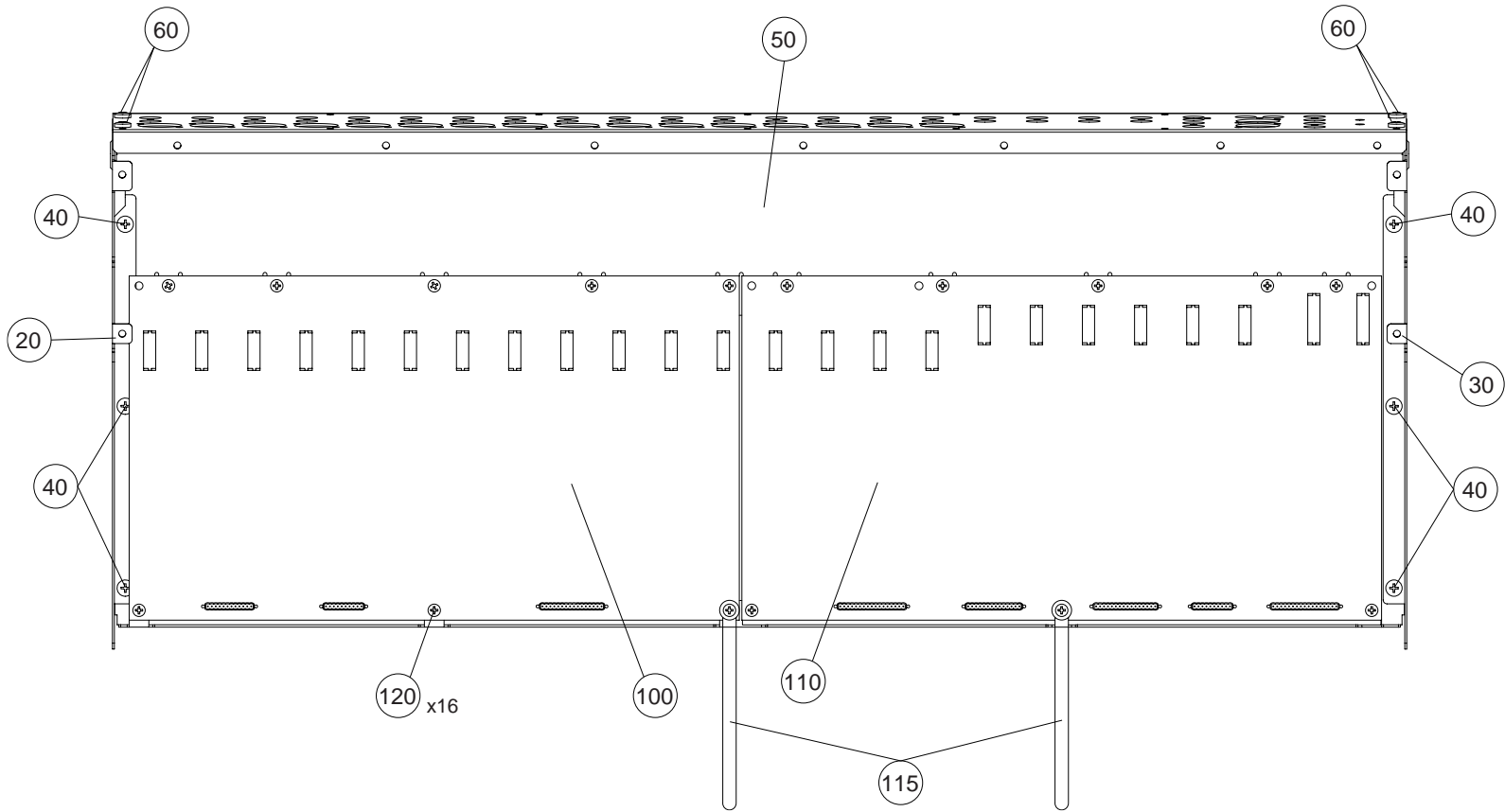
REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
* 870	VY689800	Jumper Wire	FVP=2.0C26SB6-250			
* 910	V9468400	Jumper Wire	FVP=2.0C26SB9-150			
* 920	VT644300	Jumper Wire	FVP=2.0C26SB11-200			
* 930	V8948700	Jumper Wire	FVP=2.0C26SB10-200			
* 940	V8948600	Jumper Wire	FVP=2.0C26SB9-200			
* 950	V8948800	Jumper Wire	FVP=2.0C26SB12-220			
* 960	V2016000	Jumper Wire	FVP=2.0C26SB15-550			03
* 970	V8973500	Jumper Wire	FVP=2.0C26SB16-350			
* 980	V8973700	Jumper Wire	FVP=2.0C26SB14-330			
1000	CB095100	Cord Keeper	K-103G		2	01
1010	--	Adhesive Tape	#570F W=19	(CB07714)		

\*: New Parts

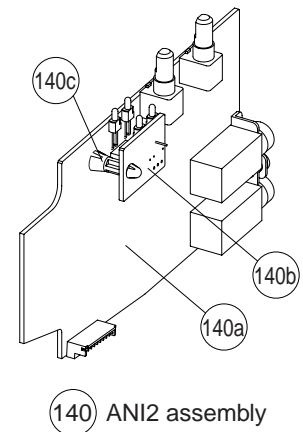
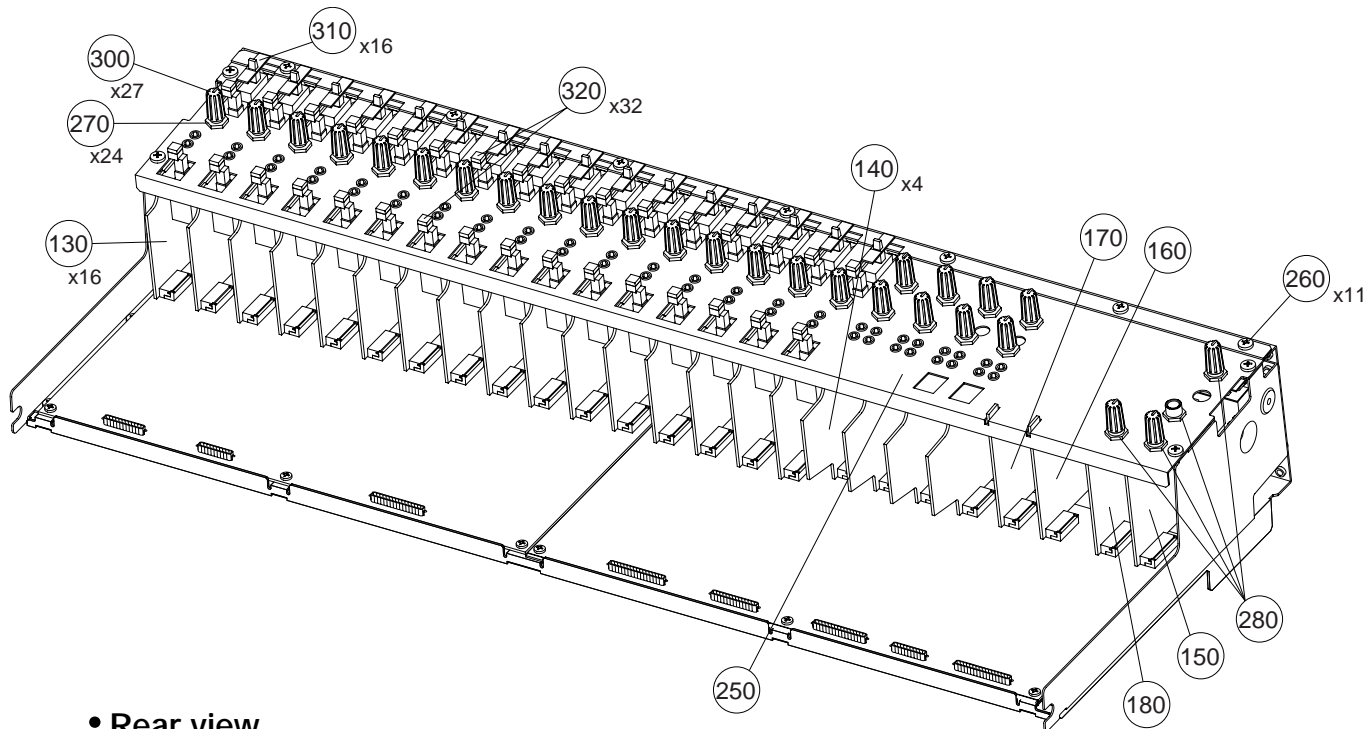
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# REAR ASSEMBLY U

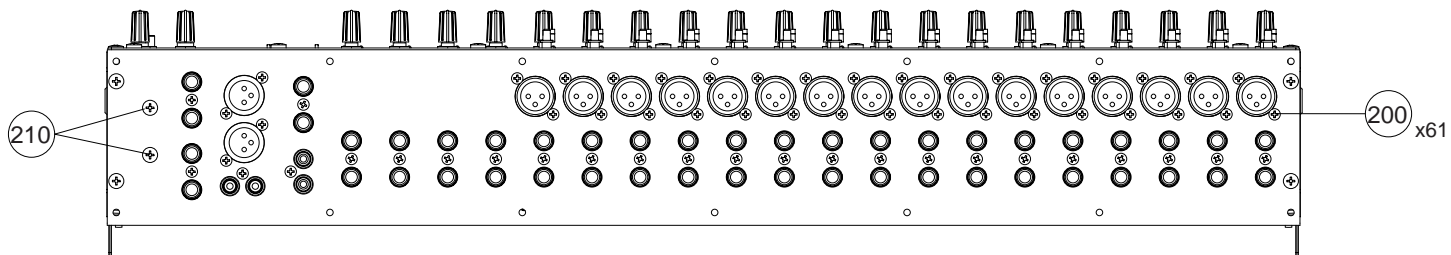
• Top view



• Top view



• Rear view



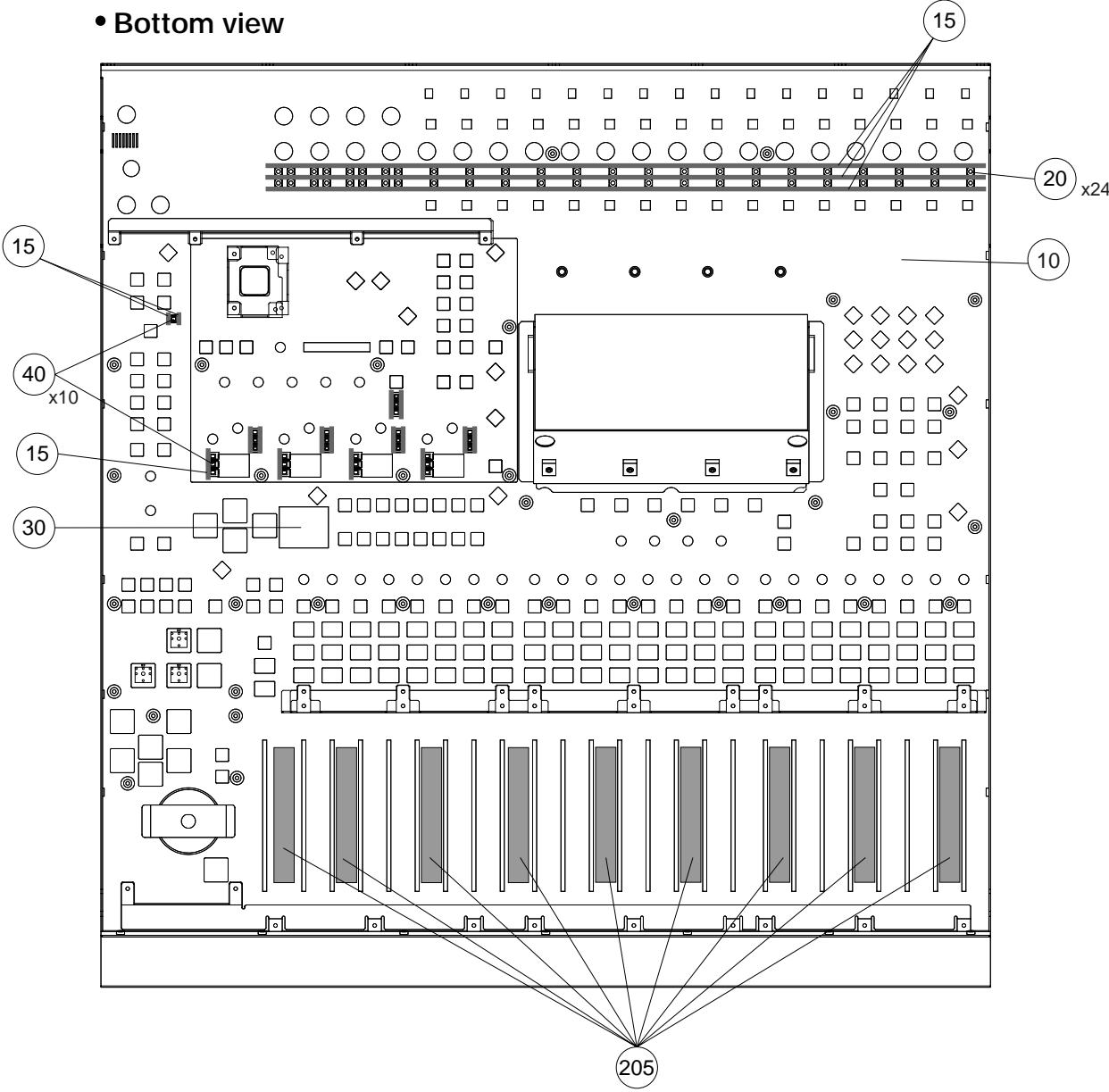
REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	REAR ASSEMBLY U	UPPER	02R96 (V781700)		
* 20	V7987700	Shield Plate L	LEFT			
* 30	V7987800	Shield Plate R	RIGHT			
40	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		6	01
* 50	V8678200	Rear Panel U	UPPER			
60	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		4	01
* 100	V8630200	Circuit Board	AD1			
* 110	V8630300	Circuit Board	ADA			
115	VJ770600	Cord Binder	S-126		2	01
120	EP600250	Bind Head Tapping Screw-B	3.0X8 MFZN2Y		16	01
* 130	V8632100	Circuit Board	ANI1		16	
140	--	ANI2 Assembly		(V963060)	4	
* 140a	V8632300	Circuit Board	ANI2 (ANI2)		4	
* 140b	V9629200	Circuit Board	LED (ANI2)		4	
140c	VF950800	Locking Card Spacer	KGLS-12RT		4	01
* 150	V8632400	Circuit Board	PHN (2TRCOM)	(V863060)		
* 160	V8632500	Circuit Board	ST (2TRCOM)	(V863060)		
* 170	V8632600	Circuit Board	2TRI (2TRCOM)	(V863060)		
* 180	V8911500	Circuit Board	STD			
200	VN413300	Bonding Tapping Screw-B	3.0X8 MFZN2BL		61	01
210	VP156800	Bind Head Screw	A4.0X8 MFZN2BL		2	01
* 250	V7987900	PC Support				
260	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		11	01
270	VR991600	Hexagonal Nut	7.0X11X2 MFZN2BL		24	01
280	VJ388000	Hexagonal Nut	9.0X11X2 MFZN2BL		4	01
300	VS085700	Knob Gray/Dark Gray	S	GAIN 1-24,TALKBACK LEVEL, STUDIO LEVEL,PHONES LEVEL	27	03
310	VJ859500	Slide Knob Red		+48V ON/OFF 1-16	16	05
320	VT651400	Push Button D.Gray/Gray	S	26dB,INSERT ON/OFF (1-16)	32	01

\*: New Parts

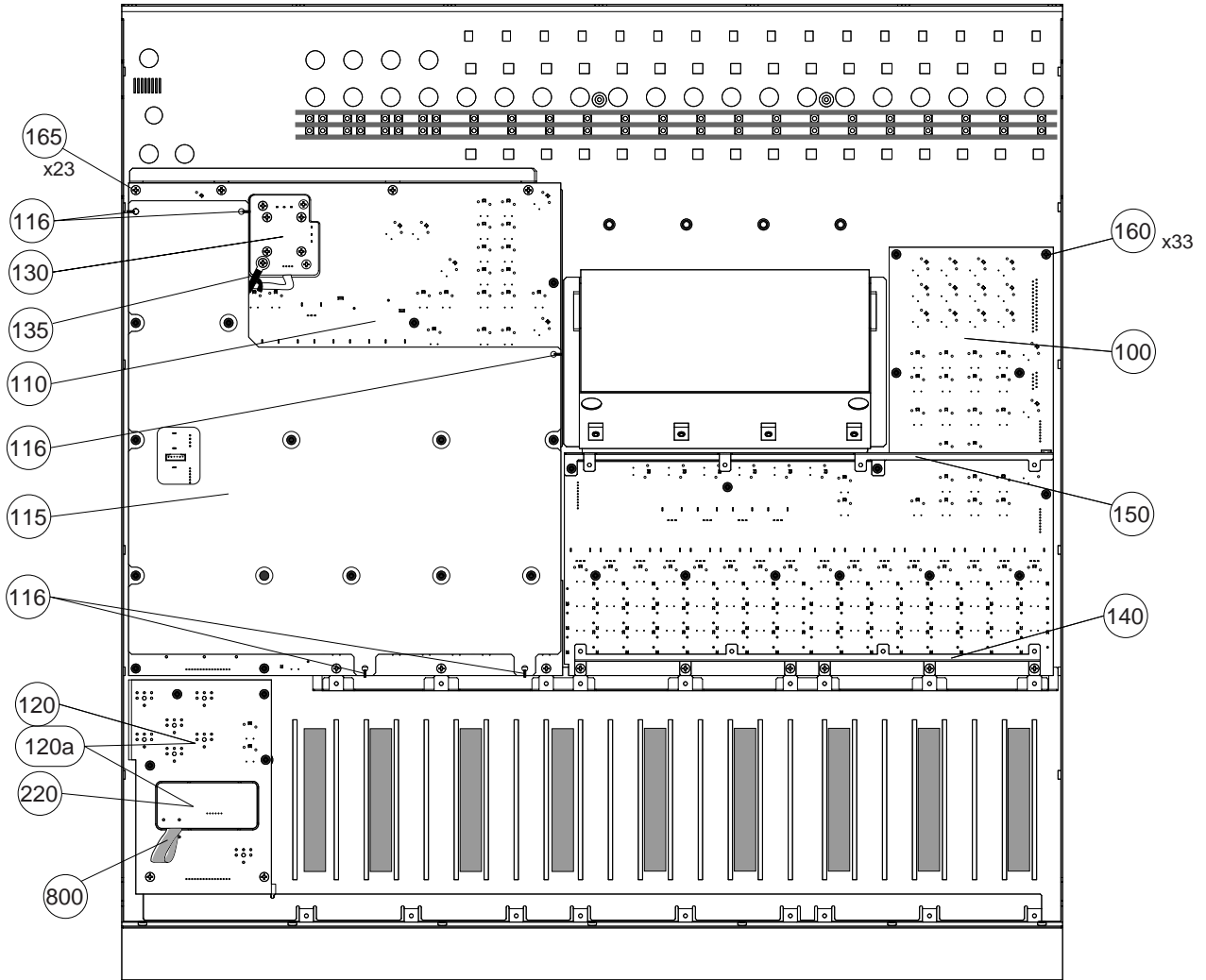
RANK: Japan only

# CONTROL PANEL ASSEMBLY

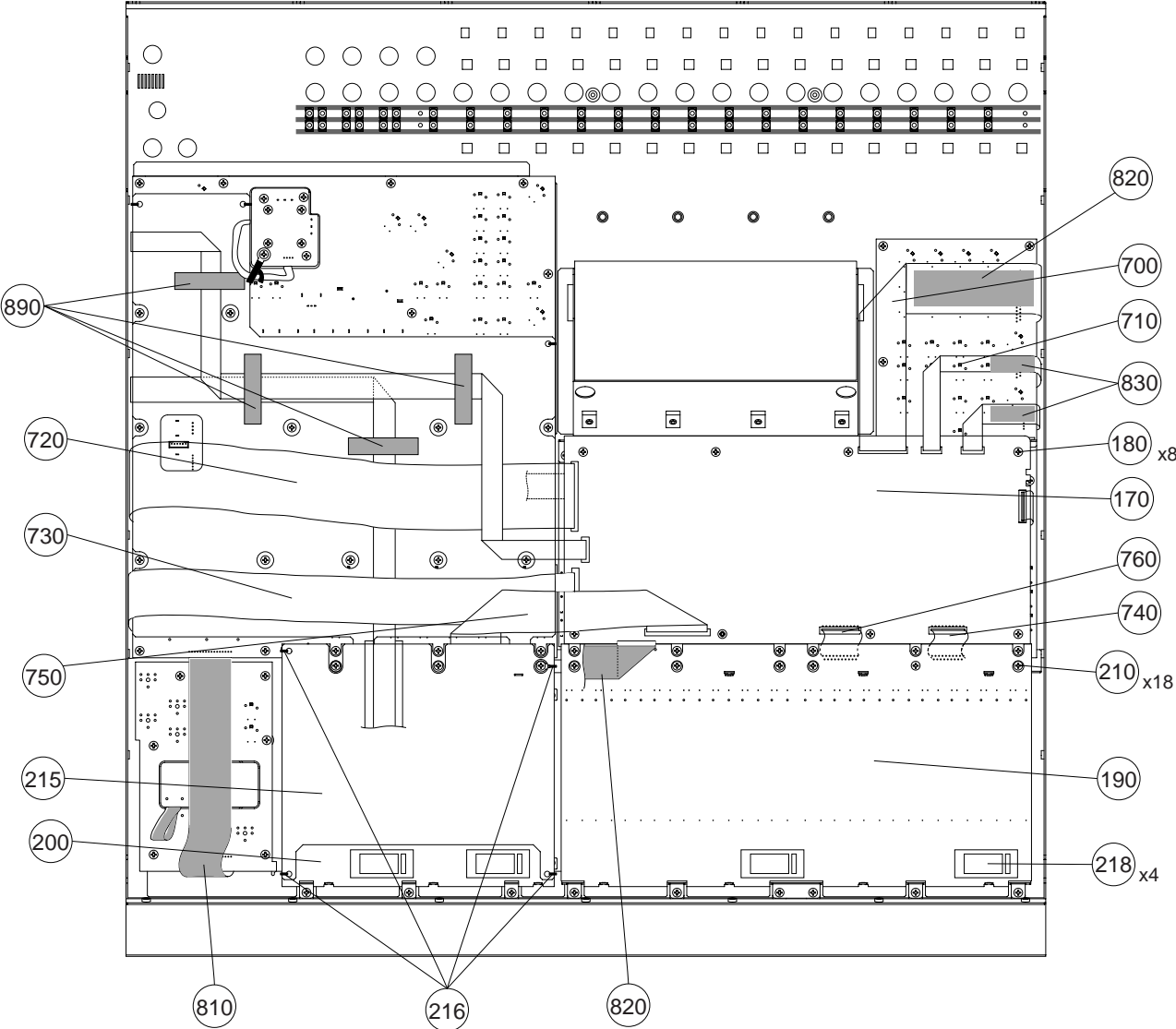
• Bottom view



• Bottom view



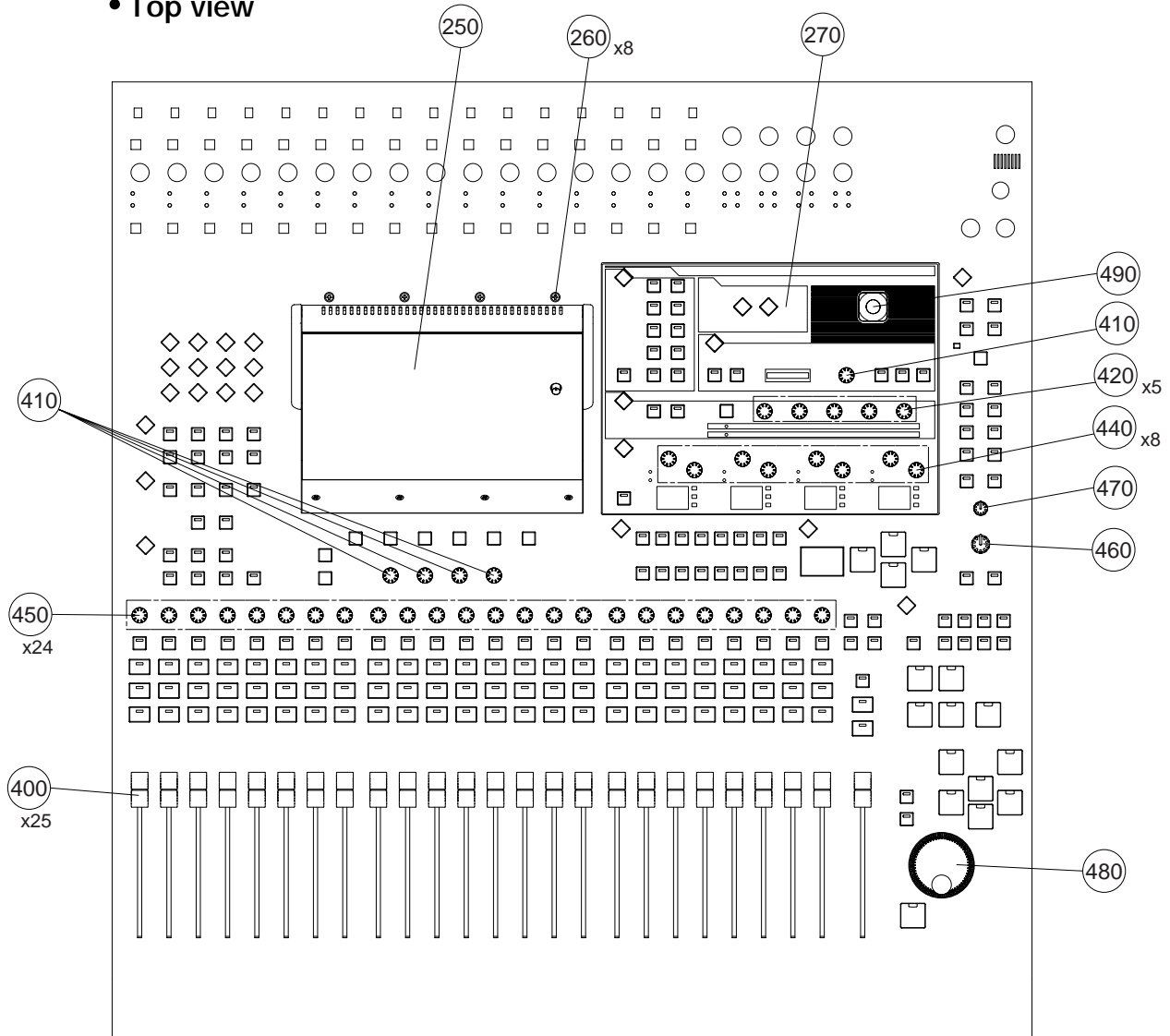
• Bottom view





• Top view

LCD assembly: See page 18.



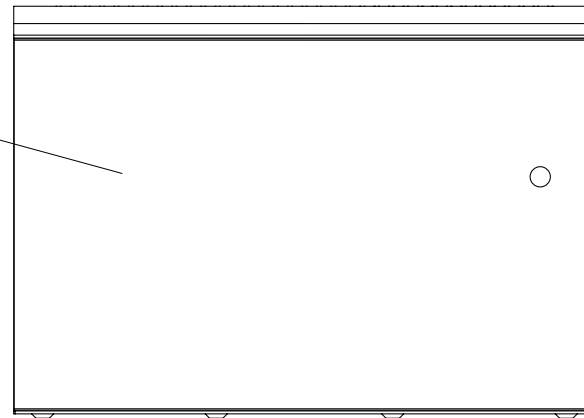
REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	CONTROL PANEL ASSEMBLY		02R96 (V781690)		
* 10	V8677200	Control Panel				
15	--	Adhesive Tape	W=3	(VE36240)		
20	V8127000	LED Lens	x2	PEAK 1-24, SIGNAL 1-24	24	02
30	V6435000	Cover, 7 Seg. LED		SCENE MEMORY		07
40	V6180000	LED Lens	x3	SOLO,GATE,COMP, FREQUENCY,Q,dB,Hz,kHz	10	02
* 100	V8627500	Circuit Board	PN1 (PN1COM)	(V924550)		
* 110	V8627800	Circuit Board	PN2 (PN2COM)	(V862670)		
* 115	V9396900	Insulating Sheet 02R96		for PN2		
116	CB069250	Cord Holder	BK-1		5	01
120	--	Circuit Board	PN3 (PN1COM)	(V862760)		
* 120a	AA34510	Circuit Board	PN3+PW	(V924550)		
* 130	V8627900	Circuit Board	JS (PN2COM)	(V862670)		
135	CB040540	Cord Binder	S-72B			01
* 140	V8678000	Holder	SUB1			
* 150	V8678100	Holder	SUB2			
160	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		33	01
165	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		23	01
* 170	V9246300	Circuit Board	SUB (PN1COM)	(V924550)		
180	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		8	01
* 190	V8626900	Circuit Board	FD1			
* 200	V8627000	Circuit Board	FD2			
* 205	V9116000	Rubber Sponge Spacer			9	
210	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		18	01
* 215	V9396900	Insulating Sheet 02R96		for FD2		
216	CB069250	Cord Holder	BK-1		4	01
218	--	Cable Clamp	FCN-3010	(V908970)	4	
220	--	Circuit Board	PW (PN1COM)	(V862770)		
250	V6428800	LCD Assembly				
260	EP600790	Flat Head Tapping Screw-B	3.0X8 MFZN2BL		8	01
* 270	V7988500	Sheet				
400	V7421900	Fader Knob Silver		1-24,STEREO	25	05
410	V8486000	Encoder Knob Light Gray		EFFECT 1-4,PAN/SURROUND	5	
420	V8486200	Encoder Knob M_Gray		THRESHOLD,RANGE/RATIO	5	
				ATTACK,DECAY/RELEASE, HOLD/GAIN		
440	V8486400	Encoder Knob Green/M_Gray		F/Q,GAIN (LOW,LOW-MID, HIGH-MID,HIGH)	8	
450	V8486500	Encoder Knob Blue/M_Gray		CH 1-24	24	
460	VN009700	Knob Black/Light Gray	L	CONTROL ROOM LEVEL		03
470	VS085700	Knob Gray/Dark Gray	S	SURROUND MONITOR LEVEL		03
480	VT651700	Encoder Knob		Parameter wheel		02
490	V6429800	Joy Stick Knob				
* 700	MF130250	Connector Assembly	30P 250mm P=1.25			
710	MF110160	Connector Assembly	10P 160mm P=1.25			02
* 720	MF138350	Connector Assembly	38P 350mm P=1.25			
* 730	MF128350	Connector Assembly	28P 350mm P=1.25			
* 740	MF119070	Connector Assembly	19P 70mm P=1.25			
* 750	MF136250	Connector Assembly	36P 250mm P=1.25			
* 760	MF121070	Connector Assembly	21P 70mm P=1.25			
* 800	V9660700	Rubber Sponge PN3-PW				
* 810	V9660500	Rubber Sponge PN2-PN3				
* 820	V9660600	Rubber Sponge FD1-BRG			2	
* 830	V9660400	Rubber Sponge PN1-SUB			2	
890	VA126100	Adhesive Tape	12X50		4	03

\*: New Parts

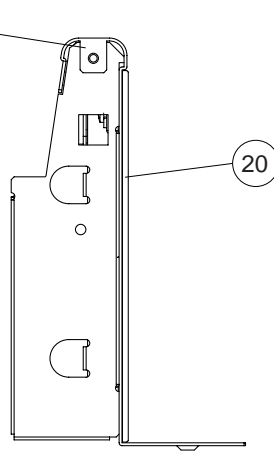
RANK: Japan only

■ LCD ASSEMBLY

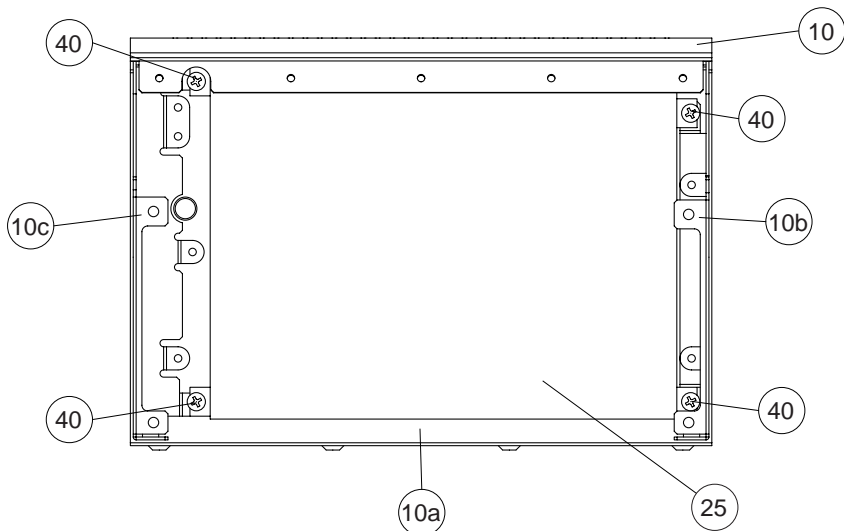
• Top view



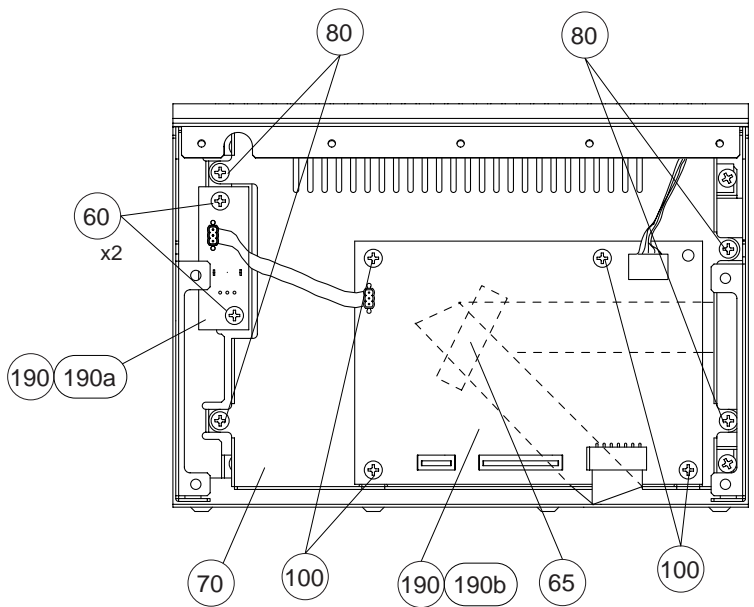
• Left side view



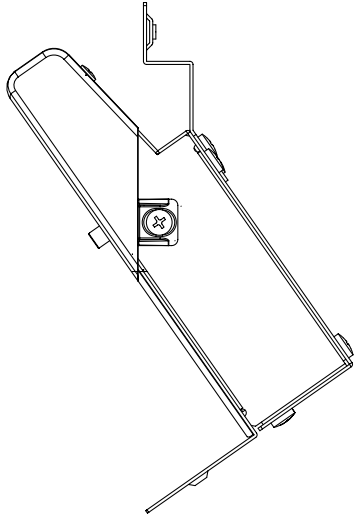
• Bottom view



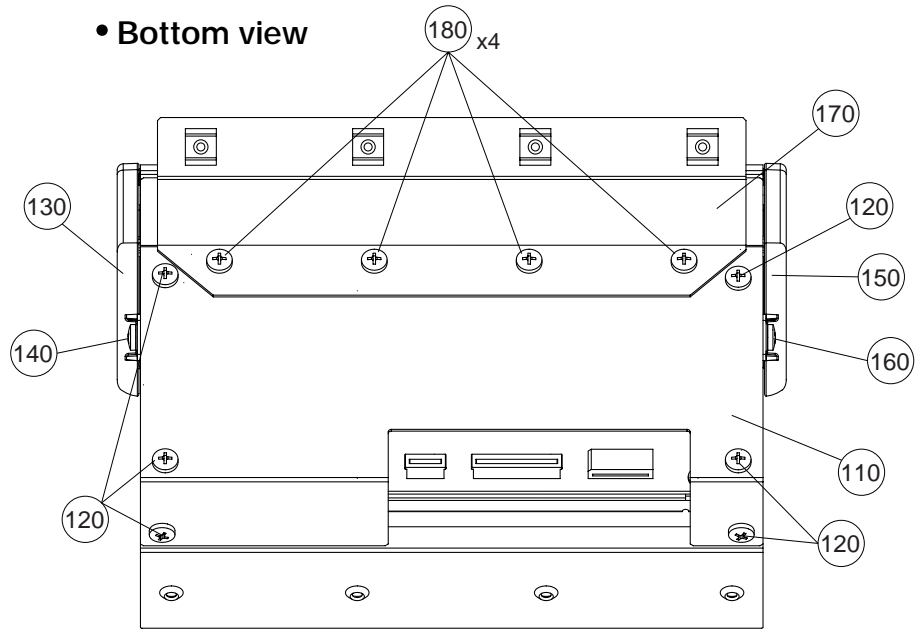
• Bottom view



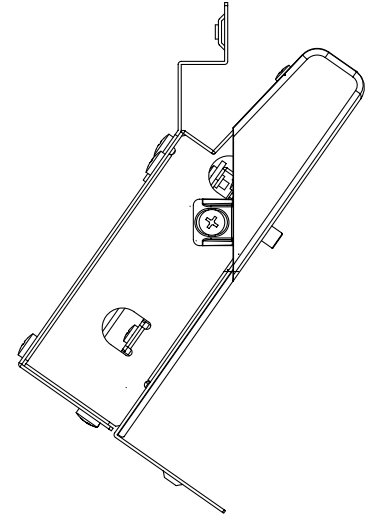
• Right side view



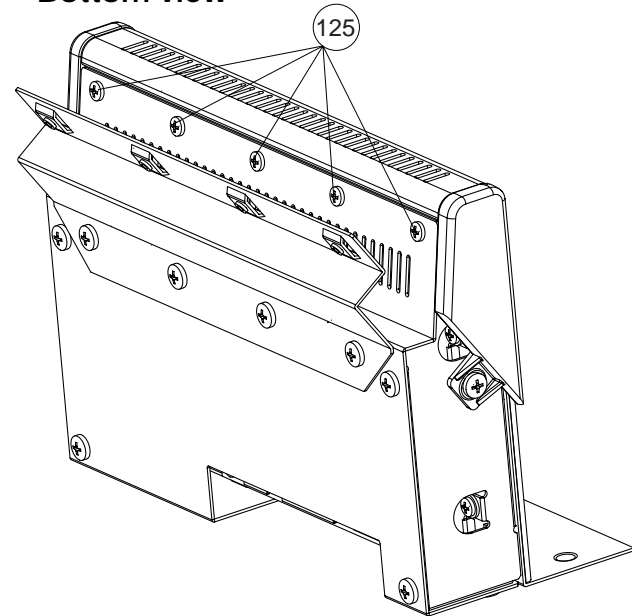
• Bottom view



• Left side view



• Bottom view



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
10	V6428800	LCD ASSEMBLY		02R96		
	V6437400	LCD Case Assembly				11
10a	--	LCD Case		(V636340)		
10b	--	LCD Side Panel L	LEFT	(V643630)		
10c	--	LCD Side Panel R	RIGHT	(V643650)		
20	V6363500	LCD Cover				13
25	V5125700	LCD	EDMMPU3BDF			24
40	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL		4	01
60	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL		2	01
65	VA126100	Adhesive Tape	12X50			03
70	V6363600	LCD Shield Panel				05
80	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL		4	01
100	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL		4	01
110	V6363700	Rear LCD Case				09
120	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		6	01
125	VP157900	Bind Head Tapping Screw-B	A3.0X6 MFZN2BL		5	01
130	V6363900	LCD Pad R				05
140	EG340190	Bind Head Tapping Screw-B	4.0X8 MFZN2BL			01
150	V6363800	LCD Pad L				05
160	EG340190	Bind Head Tapping Screw-B	4.0X8 MFZN2BL			01
170	V6364000	LCD Bracket				03
180	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		4	01
190	V8249100	Circuit Board	DM2 LCDCOM CNT+INV			
190a	--	Circuit Board	DM2K CNT (LCDCOM)	(V824910)(V646840)		
190b	--	Circuit Board	DM2K INV (LCDCOM)	(V824910)(V646830)		

\*: New Parts

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# ELECTRICAL PARTS

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		ELECTRICAL PARTS		02R96		
*	V8632600	Circuit Board	2TRI (2TRCOM)	(V863060)(X2067B0)		
*	V8632400	Circuit Board	PHN (2TRCOM)	(V863060)(X2067B0)		
*	V8632500	Circuit Board	ST (2TRCOM)	(V863060)(X2067B0)		
*	V8630200	Circuit Board	AD1	(XZ020B0)		
*	V8630300	Circuit Board	ADA	(X2064B0)		
*	V8632100	Circuit Board	ANI1	(X2065B0)		
*	V8632300	Circuit Board	ANI2 (ANI2)	(V863050)(X2066B0)		
*	V9629200	Circuit Board	LED (ANI2)	(V863050)(X2066B0)		
*	V9221600	Circuit Board	BRG	(X2062B0)		
*	V8468800	Circuit Board	CPU1	(X0383C0)		
*	V9106700	Circuit Board	DA	(XZ021C0)		
*	V8468900	Circuit Board	DSP	(X2057C0)		
*	V8626900	Circuit Board	FD1	(X2053B0)		
*	V8627000	Circuit Board	FD2	(X2054B0)		
*	V8629100	Circuit Board	JK1 (JKCOM)	(V846900)(X2058B0)		
*	AAX34460	Circuit Board	JK2 1/2 (JKCOM)	(V862920)(X2058B0)		
*	AAX34470	Circuit Board	JK2 2/2 (JKCOM)	(V862920)(X2058B0)		
*	V8249100	Circuit Board	DM2 LCDCOM CNT+INV	(X2160B0)		
*	--	Circuit Board	DM2K CNT (LCDCOM)	(V646840)(X2160B0)		
*	--	Circuit Board	DM2K INV (LCDCOM)	(V646830)(X2160B0)		
*	V8469100	Circuit Board	OPT	(X2060B0)		
*	V8627500	Circuit Board	PN1 (PN1COM)	(V924550)(X2050B0)		
*	AAX34510	Circuit Board	PN3+PW (PN1COM)	(V862760+V862770), (V924550)(X2050B0)		
*	V9246300	Circuit Board	SUB (PN1COM)	(V924550)(X2050B0)		
*	V8627800	Circuit Board	PN2 (PN2COM)	(V862670)(X2051B0)		
*	V8627900	Circuit Board	JS (PN2COM)	(V862670)(X2051B0)		
*	V8911500	Circuit Board	STD	(V863070)(X2068B0)		
*	V8632600	Circuit Board	2TRI (2TRCOM)	(V863060)(X2067B0)		
*	V8632400	Circuit Board	PHN (2TRCOM)	(V863060)(X2067B0)		
*	V8632500	Circuit Board	ST (2TRCOM)	(V863060)(X2067B0)		
	VI474400	Terminal Plate			2	01
	VT960700	Holder, Microphone				05
	V6435400	Holder, Phones	x2			02
	V7539800	Cannon Angle			2	02
	VT572400	Mic. Cushion				01
	VT572500	Mic. Cover				01
226	--	Jumper Wire	0.55	(VA07890)		
C101	UU167100	Electrolytic Cap.	10.00 50.0V			01
-104	UU167100	Electrolytic Cap.	10.00 50.0V			01
C105	UU147470	Electrolytic Cap.	47.00 25.0V			01
C106	UU147470	Electrolytic Cap.	47.00 25.0V			01
C107	VF466800	Ceramic Capacitor-B	100P 50V K			01
-116	VF466800	Ceramic Capacitor-B	100P 50V K			01
C117	UU147470	Electrolytic Cap.	47.00 25.0V			01
-120	UU147470	Electrolytic Cap.	47.00 25.0V			01
C121	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
-124	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C125	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C126	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C201	UU167100	Electrolytic Cap.	10.00 50.0V			01
C202	UU167100	Electrolytic Cap.	10.00 50.0V			01
C203	VF466800	Ceramic Capacitor-B	100P 50V K			01
C204	VF466800	Ceramic Capacitor-B	100P 50V K			01
C205	UU138220	Electrolytic Cap.	220.00 16.0V			01
C206	UU138220	Electrolytic Cap.	220.00 16.0V			01
C207	UR847470	Electrolytic Cap.	47.00 25.0V			01
C208	VJ097400	Electrolytic Cap.-KL	10.00 50.0V			01
C209	VG278400	Ceramic Capacitor-B	220P 50V K			01
C210	UR847470	Electrolytic Cap.	47.00 25.0V			01
C211	VG278400	Ceramic Capacitor-B	220P 50V K			01
C212	VF466700	Ceramic Capacitor-SL	47P 50V J			01
C213	UR847470	Electrolytic Cap.	47.00 25.0V			01
C214	UR847470	Electrolytic Cap.	47.00 25.0V			01
C215	VF466700	Ceramic Capacitor-SL	47P 50V J			01
C216	UR847470	Electrolytic Cap.	47.00 25.0V			01
C217	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C218	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C219	UR847470	Electrolytic Cap.	47.00 25.0V			01
C220	UR847470	Electrolytic Cap.	47.00 25.0V			01
C221	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
-224	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C226	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
-228	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C301	VG277000	Ceramic Capacitor-SL	33P 50V J			01
C302	VG277000	Ceramic Capacitor-SL	33P 50V J			01
C303	UU168100	Electrolytic Cap.	100.00 50.0V			01
C304	UU168100	Electrolytic Cap.	100.00 50.0V			01
C305	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C306	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C307	UU168100	Electrolytic Cap.	100.00 50.0V			01
C308	UU168100	Electrolytic Cap.	100.00 50.0V			01
C309	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C310	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C401	VG277000	Ceramic Capacitor-SL	33P 50V J			01
C402	VG277000	Ceramic Capacitor-SL	33P 50V J			01
C403	UU168100	Electrolytic Cap.	100.00 50.0V			01
C404	UU168100	Electrolytic Cap.	100.00 50.0V			01
C405	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C406	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C407	UU168100	Electrolytic Cap.	100.00 50.0V			01
C408	UU168100	Electrolytic Cap.	100.00 50.0V			01
CN101	VB994900	Base Post Connector	MQ 9P TE			01
CN201	VA252400	Base Post Connector	MQ 12P TE			03
CN202	VU066300	Connector Assembly	MIC&SAN 2P			04
	JE000270	Capacitor Microphone	WM-034C	with CN202		03
CN301	VB994900	Base Post Connector	MQ 9P TE			01
EM101	FZ006920	LC Filter	MTB271KBTBM			01
-106	FZ006920	LC Filter	MTB271KBTBM			01
EM107	FZ006970	LC Filter	MTY223NBTBM			02
EM108	FZ006970	LC Filter	MTY223NBTBM			02
EM201	FZ007070	LC Filter	MTX222MBTBM			01
-206	FZ006970	LC Filter	MTY223NBTBM			02
EM301	FZ006920	LC Filter	MTB271KBTBM			01
-303	FZ006920	LC Filter	MTB271KBTBM			01
EM304	FZ006970	LC Filter	MTY223NBTBM			02
EM305	FZ006970	LC Filter	MTY223NBTBM			02
EM401	FZ006920	LC Filter	MTB271KBTBM			01
-403	FZ006920	LC Filter	MTB271KBTBM			01
IC101	XM356A00	IC	NJM2068L-D	OP AMP		02
IC102	XM356A00	IC	NJM2068L-D	OP AMP		02
IC201	XP844A00	IC	NJM4556AL	OP AMP		02
IC202	XM356A00	IC	NJM2068L-D	OP AMP		02
IC301	XP844A00	IC	NJM4556AL	OP AMP		02
IC401	XP844A00	IC	NJM4556AL	OP AMP		02
JK101	VS056300	Phone Jack	HLJ7001-01	2TR IN ANALOG 1 L		01
JK102	VS056300	Phone Jack	HLJ7001-01	2TR IN ANALOG 1 R		01
JK103	VM725600	Pin Jack	2P E YKC21-3045	2TR IN ANALOG 2 L/R		02
JK201	LB302070	Phone Jack	HLJ0544 STREO	PHONES OUT		03
JK301	VS133700	Cannon Connector	NC3MAH	STEREO OUT L (BAL)		04
JK302	VM725700	Pin Jack	2P E YKC21-3081	STEREO OUT L/R (UNBAL)		01
JK401	VS133700	Cannon Connector	NC3MAH	STEREO OUT R (BAL)		04
K201	VI474400	Terminal Plate				01
K202	VI474400	Terminal Plate				01
R101	HF458100	Carbon Resistor	100.0K 1/4 J			01
-104	HF458100	Carbon Resistor	100.0K 1/4 J			01
R105	HB027270	Metal Film Resistor	27.0K 1/4 F			01
R106	HB027270	Metal Film Resistor	27.0K 1/4 F			01
R107	HB027160	Metal Film Resistor	16.0K 1/4 F			01
-110	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R111	HF455220	Carbon Resistor	220.0 1/4 J			01
R112	HF455220	Carbon Resistor	220.0 1/4 J			01
R113	HB027270	Metal Film Resistor	27.0K 1/4 F			01
R114	HB027270	Metal Film Resistor	27.0K 1/4 F			01
R115	HF455220	Carbon Resistor	220.0 1/4 J			01
R116	HF455220	Carbon Resistor	220.0 1/4 J			01
R117	HB027100	Metal Film Resistor	10.0K 1/4 F			01
R118	HB027100	Metal Film Resistor	10.0K 1/4 F			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R119	HB026820	Metal Film Resistor	8.2K 1/4 F			01
R120	HB026820	Metal Film Resistor	8.2K 1/4 F			01
R121	HB027100	Metal Film Resistor	10.0K 1/4 F			
R122	HB027100	Metal Film Resistor	10.0K 1/4 F			
R123	HB027120	Metal Film Resistor	12.0K 1/4 F			01
R124	HB027120	Metal Film Resistor	12.0K 1/4 F			01
R125	HF454390	Carbon Resistor	39.0 1/4 J			01
-128	HF454390	Carbon Resistor	39.0 1/4 J			01
R129	HF458100	Carbon Resistor	100.0K 1/4 J			01
-132	HF458100	Carbon Resistor	100.0K 1/4 J			01
R201	HB026430	Metal Film Resistor	4.3K 1/4 F			01
R202	HB026430	Metal Film Resistor	4.3K 1/4 F			01
R203	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R204	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R205	HB026240	Metal Film Resistor	2.4K 1/4 F			01
R206	HB026240	Metal Film Resistor	2.4K 1/4 F			01
R207	HB027100	Metal Film Resistor	10.0K 1/4 F			
R208	HB027100	Metal Film Resistor	10.0K 1/4 F			
R209	HF458100	Carbon Resistor	100.0K 1/4 J			01
R210	HF458100	Carbon Resistor	100.0K 1/4 J			01
R211	VC745000	Metal Oxide Film Resistor	100.0 1W J			01
R212	VC745000	Metal Oxide Film Resistor	100.0 1W J			01
R213	HF457100	Carbon Resistor	10.0K 1/4 J			01
R214	HF457100	Carbon Resistor	10.0K 1/4 J			01
R215	HF457150	Carbon Resistor	15.0K 1/4 J			01
R216	HF456220	Carbon Resistor	2.2K 1/4 J			01
R217	HF456220	Carbon Resistor	2.2K 1/4 J			01
R218	HF455220	Carbon Resistor	220.0 1/4 J			01
R219	HF457470	Carbon Resistor	47.0K 1/4 J			01
R220	HF455220	Carbon Resistor	220.0 1/4 J			01
R221	HB025220	Metal Film Resistor	220.0 1/4 F			01
R222	HB027220	Metal Film Resistor	22.0K 1/4 F			01
R223	HF454390	Carbon Resistor	39.0 1/4 J			01
R224	HF457220	Carbon Resistor	22.0K 1/4 J			01
R225	HF455220	Carbon Resistor	220.0 1/4 J			01
R226	HB026470	Metal Film Resistor	4.7K 1/4 F			01
R227	HB027100	Metal Film Resistor	10.0K 1/4 F			
R228	HF454390	Carbon Resistor	39.0 1/4 J			01
R229	HF458100	Carbon Resistor	100.0K 1/4 J			01
R303	HB027100	Metal Film Resistor	10.0K 1/4 F			
R304	HB027100	Metal Film Resistor	10.0K 1/4 F			
R305	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R306	HB027100	Metal Film Resistor	10.0K 1/4 F			
R307	HB027200	Metal Film Resistor	20.0K 1/4 F			
R308	HB027200	Metal Film Resistor	20.0K 1/4 F			
R309	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R310	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R311	HF454750	Carbon Resistor	75.0 1/4 J			01
R312	HF454750	Carbon Resistor	75.0 1/4 J			01
R313	HF458100	Carbon Resistor	100.0K 1/4 J			01
R314	HF458100	Carbon Resistor	100.0K 1/4 J			01
R315	HF457100	Carbon Resistor	10.0K 1/4 J			01
R316	HF457100	Carbon Resistor	10.0K 1/4 J			01
R317	HF454100	Carbon Resistor	10.0 1/4 J			01
R318	HB026150	Metal Film Resistor	1.5K 1/4 F			01
R319	HB026120	Metal Film Resistor	1.2K 1/4 F			01
R320	HF457100	Carbon Resistor	10.0K 1/4 J			01
* R321	HB024820	Metal Film Resistor	82.0 1/4 F			
R403	HB027100	Metal Film Resistor	10.0K 1/4 F			
R404	HB027100	Metal Film Resistor	10.0K 1/4 F			
R405	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R406	HB027100	Metal Film Resistor	10.0K 1/4 F			
R407	HB027200	Metal Film Resistor	20.0K 1/4 F			
R408	HB027200	Metal Film Resistor	20.0K 1/4 F			
R409	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R410	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R411	HF454750	Carbon Resistor	75.0 1/4 J			01
R412	HF454750	Carbon Resistor	75.0 1/4 J			01
R413	HF458100	Carbon Resistor	100.0K 1/4 J			01
R414	HF458100	Carbon Resistor	100.0K 1/4 J			01

\* New Parts

RANK: Japan only



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R415	HF457100	Carbon Resistor	10.0K 1/4 J			01
R416	HF457100	Carbon Resistor	10.0K 1/4 J			01
R417	HF454100	Carbon Resistor	10.0 1/4 J			01
R418	HB026150	Metal Film Resistor	1.5K 1/4 F			01
R419	HB026120	Metal Film Resistor	1.2K 1/4 F			01
R420	HF457100	Carbon Resistor	10.0K 1/4 J			01
* R421	HB024820	Metal Film Resistor	82.0 1/4 F			
TR201	VK432900	Transistor	2SD1915(F) S,T			01
TR202	VK432900	Transistor	2SD1915(F) S,T			01
TR301	VK432900	Transistor	2SD1915(F) S,T			01
-303	VK432900	Transistor	2SD1915(F) S,T			01
TR401	VK432900	Transistor	2SD1915(F) S,T			01
-403	VK432900	Transistor	2SD1915(F) S,T			01
VR201	VQ901400	Rotary Variable Resistor	A20KX2 RK14K12B	PHONES LEVEL		03
VR202	V6226000	Rotary Pot.	A 20K RK11K112	TALKBACK LEVEL		02
*	V8630200	Circuit Board	AD1	(XZ020B0)		
C001	UR877470	Electrolytic Cap.	47.00 63.0V			
C002	UR848100	Electrolytic Cap.	100.00 25.0V			01
C003	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C004	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C005	V5829300	Electrolytic Cap. (chip)	100 16V 16SG100M+T			04
C006	V5829300	Electrolytic Cap. (chip)	100 16V 16SG100M+T			04
C007	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-009	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C010	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C011	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C012	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C101	UU147470	Electrolytic Cap.	47.00 25.0V			01
C102	UU147470	Electrolytic Cap.	47.00 25.0V			01
C103	US062220	Ceramic Capacitor-SL(chip)	220P 50V J			01
-106	US062220	Ceramic Capacitor-SL(chip)	220P 50V J			01
C107	UA353220	Mylar Capacitor	2200P 50V J			01
C108	UA353220	Mylar Capacitor	2200P 50V J			01
C109	UU147220	Electrolytic Cap.	22.00 25.0V			01
C110	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C111	UU147220	Electrolytic Cap.	22.00 25.0V			01
C112	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C113	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C114	UU167100	Electrolytic Cap.	10.00 50.0V			01
C115	UU167100	Electrolytic Cap.	10.00 50.0V			01
C116	US135220	Ceramic Capacitor-F (chip)	0.2200 16V Z			01
C117	US135220	Ceramic Capacitor-F (chip)	0.2200 16V Z			01
C118	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C119	UU167100	Electrolytic Cap.	10.00 50.0V			01
C120	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C121	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-124	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C201	UU147470	Electrolytic Cap.	47.00 25.0V			01
C202	UU147470	Electrolytic Cap.	47.00 25.0V			01
C203	US062220	Ceramic Capacitor-SL(chip)	220P 50V J			01
-206	US062220	Ceramic Capacitor-SL(chip)	220P 50V J			01
C207	UA353220	Mylar Capacitor	2200P 50V J			01
C208	UA353220	Mylar Capacitor	2200P 50V J			01
C209	UU147220	Electrolytic Cap.	22.00 25.0V			01
C210	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C211	UU147220	Electrolytic Cap.	22.00 25.0V			01
C212	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C213	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C214	UU167100	Electrolytic Cap.	10.00 50.0V			01
C215	UU167100	Electrolytic Cap.	10.00 50.0V			01
C216	US135220	Ceramic Capacitor-F (chip)	0.2200 16V Z			01
C217	US135220	Ceramic Capacitor-F (chip)	0.2200 16V Z			01
C218	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C219	UU167100	Electrolytic Cap.	10.00 50.0V			01
C220	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C221	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-224	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C301	UU147470	Electrolytic Cap.	47.00 25.0V			01
C302	UU147470	Electrolytic Cap.	47.00 25.0V			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C303	US062220	Ceramic Capacitor-SL(chip)	220P 50V J			01
-306	US062220	Ceramic Capacitor-SL(chip)	220P 50V J			01
C307	UA353220	Mylar Capacitor	2200P 50V J			01
C308	UA353220	Mylar Capacitor	2200P 50V J			01
C309	UU147220	Electrolytic Cap.	22.00 25.0V			01
C310	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C311	UU147220	Electrolytic Cap.	22.00 25.0V			01
C312	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C313	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C314	UU167100	Electrolytic Cap.	10.00 50.0V			01
C315	UU167100	Electrolytic Cap.	10.00 50.0V			01
C316	US135220	Ceramic Capacitor-F (chip)	0.2200 16V Z			01
C317	US135220	Ceramic Capacitor-F (chip)	0.2200 16V Z			01
C318	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C319	UU167100	Electrolytic Cap.	10.00 50.0V			01
C320	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C321	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-324	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C401	UU147470	Electrolytic Cap.	47.00 25.0V			01
C402	UU147470	Electrolytic Cap.	47.00 25.0V			01
C403	US062220	Ceramic Capacitor-SL(chip)	220P 50V J			01
-406	US062220	Ceramic Capacitor-SL(chip)	220P 50V J			01
C407	UA353220	Mylar Capacitor	2200P 50V J			01
C408	UA353220	Mylar Capacitor	2200P 50V J			01
C409	UU147220	Electrolytic Cap.	22.00 25.0V			01
C410	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C411	UU147220	Electrolytic Cap.	22.00 25.0V			01
C412	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C413	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C414	UU167100	Electrolytic Cap.	10.00 50.0V			01
C415	UU167100	Electrolytic Cap.	10.00 50.0V			01
C416	US135220	Ceramic Capacitor-F (chip)	0.2200 16V Z			01
C417	US135220	Ceramic Capacitor-F (chip)	0.2200 16V Z			01
C418	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C419	UU167100	Electrolytic Cap.	10.00 50.0V			01
C420	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C421	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-424	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C501	UU147470	Electrolytic Cap.	47.00 25.0V			01
C502	UU147470	Electrolytic Cap.	47.00 25.0V			01
C503	US062220	Ceramic Capacitor-SL(chip)	220P 50V J			01
-506	US062220	Ceramic Capacitor-SL(chip)	220P 50V J			01
C507	UA353220	Mylar Capacitor	2200P 50V J			01
C508	UA353220	Mylar Capacitor	2200P 50V J			01
C509	UU147220	Electrolytic Cap.	22.00 25.0V			01
C510	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C511	UU147220	Electrolytic Cap.	22.00 25.0V			01
C512	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C513	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C514	UU167100	Electrolytic Cap.	10.00 50.0V			01
C515	UU167100	Electrolytic Cap.	10.00 50.0V			01
C516	US135220	Ceramic Capacitor-F (chip)	0.2200 16V Z			01
C517	US135220	Ceramic Capacitor-F (chip)	0.2200 16V Z			01
C518	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C519	UU167100	Electrolytic Cap.	10.00 50.0V			01
C520	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C521	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-524	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C601	UU147470	Electrolytic Cap.	47.00 25.0V			01
C602	UU147470	Electrolytic Cap.	47.00 25.0V			01
C603	US062220	Ceramic Capacitor-SL(chip)	220P 50V J			01
-606	US062220	Ceramic Capacitor-SL(chip)	220P 50V J			01
C607	UA353220	Mylar Capacitor	2200P 50V J			01
C608	UA353220	Mylar Capacitor	2200P 50V J			01
C609	UU147220	Electrolytic Cap.	22.00 25.0V			01
C610	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C611	UU147220	Electrolytic Cap.	22.00 25.0V			01
C612	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C613	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C614	UU167100	Electrolytic Cap.	10.00 50.0V			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C615	UU167100	Electrolytic Cap.	10.00 50.0V			01
C616	US135220	Ceramic Capacitor-F (chip)	0.2200 16V Z			01
C617	US135220	Ceramic Capacitor-F (chip)	0.2200 16V Z			01
C618	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C619	UU167100	Electrolytic Cap.	10.00 50.0V			01
C620	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C621	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-624	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
CN001	VJ861600	Wire Trap	52147 16P TE			01
CN002	V1879000	Cable Holder	51048 12P TE			01
CN003	V1878800	Cable Holder	51048 10P TE			01
CN101	V1378700	Connector Socket	MQ 9P SE			01
CN102	V1378700	Connector Socket	MQ 9P SE			01
CN201	V1378700	Connector Socket	MQ 9P SE			01
CN202	V1378700	Connector Socket	MQ 9P SE			01
CN301	V1378700	Connector Socket	MQ 9P SE			01
CN302	V1378700	Connector Socket	MQ 9P SE			01
CN401	V1378700	Connector Socket	MQ 9P SE			01
CN402	V1378700	Connector Socket	MQ 9P SE			01
CN501	V1378700	Connector Socket	MQ 9P SE			01
CN502	V1378700	Connector Socket	MQ 9P SE			01
CN601	V1378700	Connector Socket	MQ 9P SE			01
CN602	V1378700	Connector Socket	MQ 9P SE			01
EM001	FZ006970	LC Filter	MTY223NBTBM			02
-005	FZ006970	LC Filter	MTY223NBTBM			02
IC001	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC002	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC003	XM182A00	IC	TC7S04F	INVERTER		01
IC101	XF291A00	IC	UPC4570G2	OP AMP		03
IC102	XF291A00	IC	UPC4570G2	OP AMP		03
IC103	XW272A00	IC	AK5383-VS	ADC		09
IC201	XF291A00	IC	UPC4570G2	OP AMP		03
IC202	XF291A00	IC	UPC4570G2	OP AMP		03
IC203	XW272A00	IC	AK5383-VS	ADC		09
IC301	XF291A00	IC	UPC4570G2	OP AMP		03
IC302	XF291A00	IC	UPC4570G2	OP AMP		03
IC303	XW272A00	IC	AK5383-VS	ADC		09
IC401	XF291A00	IC	UPC4570G2	OP AMP		03
IC402	XF291A00	IC	UPC4570G2	OP AMP		03
IC403	XW272A00	IC	AK5383-VS	ADC		09
IC501	XF291A00	IC	UPC4570G2	OP AMP		03
IC502	XF291A00	IC	UPC4570G2	OP AMP		03
IC503	XW272A00	IC	AK5383-VS	ADC		09
IC601	XF291A00	IC	UPC4570G2	OP AMP		03
IC602	XF291A00	IC	UPC4570G2	OP AMP		03
IC603	XW272A00	IC	AK5383-VS	ADC		09
J002	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
L001	VS740100	Chip Inductance	BLM21B751S 2125			03
-011	VS740100	Chip Inductance	BLM21B751S 2125			03
R101	HF458100	Carbon Resistor	100.0K 1/4 J			01
R102	HF458100	Carbon Resistor	100.0K 1/4 J			01
R103	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R104	HB027130	Metal Film Resistor	13.0K 1/4 F			01
* R109	HB026180	Metal Film Resistor	1.8K 1/4 F			
* R110	HB026180	Metal Film Resistor	1.8K 1/4 F			
R111	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-114	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R115	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R116	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R117	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R118	HF454470	Carbon Resistor	47.0 1/4 J			01
-121	HF454470	Carbon Resistor	47.0 1/4 J			01
R122	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-127	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R128	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R129	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R201	HF458100	Carbon Resistor	100.0K 1/4 J			01
R202	HF458100	Carbon Resistor	100.0K 1/4 J			01
R203	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R204	HB027130	Metal Film Resistor	13.0K 1/4 F			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
* R209	HB026180	Metal Film Resistor	1.8K 1/4 F			
* R210	HB026180	Metal Film Resistor	1.8K 1/4 F			
R211	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-214	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R215	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R216	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R217	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R218	HF454470	Carbon Resistor	47.0 1/4 J			01
-221	HF454470	Carbon Resistor	47.0 1/4 J			01
R222	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-227	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R228	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R229	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R301	HF458100	Carbon Resistor	100.0K 1/4 J			01
R302	HF458100	Carbon Resistor	100.0K 1/4 J			01
R303	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R304	HB027130	Metal Film Resistor	13.0K 1/4 F			01
* R309	HB026180	Metal Film Resistor	1.8K 1/4 F			
* R310	HB026180	Metal Film Resistor	1.8K 1/4 F			
R311	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-314	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R315	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R316	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R317	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R318	HF454470	Carbon Resistor	47.0 1/4 J			01
-321	HF454470	Carbon Resistor	47.0 1/4 J			01
R322	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-327	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R328	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R329	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R401	HF458100	Carbon Resistor	100.0K 1/4 J			01
R402	HF458100	Carbon Resistor	100.0K 1/4 J			01
R403	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R404	HB027130	Metal Film Resistor	13.0K 1/4 F			01
* R409	HB026180	Metal Film Resistor	1.8K 1/4 F			
* R410	HB026180	Metal Film Resistor	1.8K 1/4 F			
R411	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-414	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R415	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R416	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R417	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R418	HF454470	Carbon Resistor	47.0 1/4 J			01
-421	HF454470	Carbon Resistor	47.0 1/4 J			01
R422	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-427	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R428	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R429	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R501	HF458100	Carbon Resistor	100.0K 1/4 J			01
R502	HF458100	Carbon Resistor	100.0K 1/4 J			01
R503	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R504	HB027130	Metal Film Resistor	13.0K 1/4 F			01
* R509	HB026180	Metal Film Resistor	1.8K 1/4 F			
* R510	HB026180	Metal Film Resistor	1.8K 1/4 F			
R511	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-514	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R515	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R516	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R517	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R518	HF454470	Carbon Resistor	47.0 1/4 J			01
-521	HF454470	Carbon Resistor	47.0 1/4 J			01
R522	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-527	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R528	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R529	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R601	HF458100	Carbon Resistor	100.0K 1/4 J			01
R602	HF458100	Carbon Resistor	100.0K 1/4 J			01
R603	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R604	HB027130	Metal Film Resistor	13.0K 1/4 F			01
* R609	HB026180	Metal Film Resistor	1.8K 1/4 F			
* R610	HB026180	Metal Film Resistor	1.8K 1/4 F			

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R611	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-614	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R615	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R616	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R617	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R618	HF454470	Carbon Resistor	47.0 1/4 J			01
-621	HF454470	Carbon Resistor	47.0 1/4 J			01
R622	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-627	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R628	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R629	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
W002	V8970400	Jumper Wire	FVP=2.0C26SB12-120			01
W003	V8970300	Jumper Wire	FVP=2.0C26SB10-120			01
	V8630300	Circuit Board	ADA	(X2064B0)		
C001	UR877470	Electrolytic Cap.	47.00 63.0V			
C002	UR848100	Electrolytic Cap.	100.00 25.0V			01
C003	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C004	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C005	V5829300	Electrolytic Cap. (chip)	100 16V 16SG100M+T			04
C006	V5829300	Electrolytic Cap. (chip)	100 16V 16SG100M+T			04
C007	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
-009	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C010	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C011	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C012	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C014	UR868100	Electrolytic Cap.	100.00 50.0V			01
C015	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
-017	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C101	UU147470	Electrolytic Cap.	47.00 25.0V			01
C102	UU147470	Electrolytic Cap.	47.00 25.0V			01
C103	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
-106	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
C107	UA353220	Mylar Capacitor	2200P 50V J			01
C108	UA353220	Mylar Capacitor	2200P 50V J			01
C109	UU147220	Electrolytic Cap.	22.00 25.0V			01
C110	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C111	UU147220	Electrolytic Cap.	22.00 25.0V			01
C112	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C113	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C114	UU167100	Electrolytic Cap.	10.00 50.0V			01
C115	UU167100	Electrolytic Cap.	10.00 50.0V			01
C116	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C117	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C118	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C119	UU167100	Electrolytic Cap.	10.00 50.0V			01
C120	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C121	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
-124	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
C151	UU167100	Electrolytic Cap.	10.00 50.0V			01
-154	UU167100	Electrolytic Cap.	10.00 50.0V			01
C155	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
-159	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C160	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C161	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
-164	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
C165	UA353470	Mylar Capacitor	4700P 50V J			01
C166	UA353470	Mylar Capacitor	4700P 50V J			01
C167	UA353160	Mylar Capacitor	1600P 50V J			01
C168	UA353160	Mylar Capacitor	1600P 50V J			01
C169	UN847470	Electrolytic Cap.-BP	47.00 25.0V			01
C170	UN847470	Electrolytic Cap.-BP	47.00 25.0V			01
C171	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
-174	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
C201	UU147470	Electrolytic Cap.	47.00 25.0V			01
C202	UU147470	Electrolytic Cap.	47.00 25.0V			01
C203	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
-206	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
C207	UA353220	Mylar Capacitor	2200P 50V J			01
C208	UA353220	Mylar Capacitor	2200P 50V J			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C209	UU147220	Electrolytic Cap.	22.00 25.0V			01
C210	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C211	UU147220	Electrolytic Cap.	22.00 25.0V			01
C212	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C213	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C214	UU167100	Electrolytic Cap.	10.00 50.0V			01
C215	UU167100	Electrolytic Cap.	10.00 50.0V			01
C216	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C217	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C218	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C219	UU167100	Electrolytic Cap.	10.00 50.0V			01
C220	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C221	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
-224	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
C251	UU167100	Electrolytic Cap.	10.00 50.0V			01
-254	UU167100	Electrolytic Cap.	10.00 50.0V			01
C255	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
-259	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C260	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C261	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
-264	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
C265	UA353470	Mylar Capacitor	4700P 50V J			01
C266	UA353470	Mylar Capacitor	4700P 50V J			01
C267	UA353160	Mylar Capacitor	1600P 50V J			01
C268	UA353160	Mylar Capacitor	1600P 50V J			01
C269	UU147470	Electrolytic Cap.	47.00 25.0V			01
C270	UU147470	Electrolytic Cap.	47.00 25.0V			01
C271	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
-274	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
C301	UU147470	Electrolytic Cap.	47.00 25.0V			01
C302	UU147470	Electrolytic Cap.	47.00 25.0V			01
C303	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
-306	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
C307	UA353220	Mylar Capacitor	2200P 50V J			01
C308	UA353220	Mylar Capacitor	2200P 50V J			01
C309	UU147220	Electrolytic Cap.	22.00 25.0V			01
C310	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C311	UU147220	Electrolytic Cap.	22.00 25.0V			01
C312	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C313	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C314	UU167100	Electrolytic Cap.	10.00 50.0V			01
C315	UU167100	Electrolytic Cap.	10.00 50.0V			01
C316	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C317	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C318	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C319	UU167100	Electrolytic Cap.	10.00 50.0V			01
C320	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C321	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
-324	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
C351	UU167100	Electrolytic Cap.	10.00 50.0V			01
-354	UU167100	Electrolytic Cap.	10.00 50.0V			01
C355	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
-359	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C360	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C361	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
-364	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
C365	UA353470	Mylar Capacitor	4700P 50V J			01
C366	UA353470	Mylar Capacitor	4700P 50V J			01
C367	UA353160	Mylar Capacitor	1600P 50V J			01
C368	UA353160	Mylar Capacitor	1600P 50V J			01
C369	UU147470	Electrolytic Cap.	47.00 25.0V			01
C370	UU147470	Electrolytic Cap.	47.00 25.0V			01
C371	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
-376	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
C377	UU147470	Electrolytic Cap.	47.00 25.0V			01
C378	UU147470	Electrolytic Cap.	47.00 25.0V			01
C379	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
-382	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
C383	UU147470	Electrolytic Cap.	47.00 25.0V			01
C384	UU147470	Electrolytic Cap.	47.00 25.0V			01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C401	UU147470	Electrolytic Cap.	47.00 25.0V			01
C402	UU147470	Electrolytic Cap.	47.00 25.0V			01
C403	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
-406	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
C407	UA353220	Mylar Capacitor	2200P 50V J			01
C408	UA353220	Mylar Capacitor	2200P 50V J			01
C409	UU147220	Electrolytic Cap.	22.00 25.0V			01
C410	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C411	UU147220	Electrolytic Cap.	22.00 25.0V			01
C412	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C413	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C414	UU167100	Electrolytic Cap.	10.00 50.0V			01
C415	UU167100	Electrolytic Cap.	10.00 50.0V			01
C416	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C417	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C418	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C419	UU167100	Electrolytic Cap.	10.00 50.0V			01
C420	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C421	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
-424	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
C451	UU167100	Electrolytic Cap.	10.00 50.0V			01
-454	UU167100	Electrolytic Cap.	10.00 50.0V			01
C455	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
-459	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C460	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C461	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
-464	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
C465	UA353470	Mylar Capacitor	4700P 50V J			01
C466	UA353470	Mylar Capacitor	4700P 50V J			01
C467	UA353160	Mylar Capacitor	1600P 50V J			01
C468	UA353160	Mylar Capacitor	1600P 50V J			01
C469	UU147470	Electrolytic Cap.	47.00 25.0V			01
C470	UU147470	Electrolytic Cap.	47.00 25.0V			01
C471	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
-474	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
C501	UU147470	Electrolytic Cap.	47.00 25.0V			01
C502	UU147470	Electrolytic Cap.	47.00 25.0V			01
C503	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
-506	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
C507	UA353220	Mylar Capacitor	2200P 50V J			01
C508	UA353220	Mylar Capacitor	2200P 50V J			01
C509	UU147220	Electrolytic Cap.	22.00 25.0V			01
C510	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C511	UU147220	Electrolytic Cap.	22.00 25.0V			01
C512	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C513	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C514	UU167100	Electrolytic Cap.	10.00 50.0V			01
C515	UU167100	Electrolytic Cap.	10.00 50.0V			01
C516	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C517	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C518	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C519	UU167100	Electrolytic Cap.	10.00 50.0V			01
C520	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
-524	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
C551	UU147470	Electrolytic Cap.	47.00 25.0V			01
C552	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
C553	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
C554	UA353220	Mylar Capacitor	2200P 50V J			01
C555	UU147220	Electrolytic Cap.	22.00 25.0V			01
C556	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C557	UU147220	Electrolytic Cap.	22.00 25.0V			01
C558	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C559	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C560	UU167100	Electrolytic Cap.	10.00 50.0V			01
C561	UU167100	Electrolytic Cap.	10.00 50.0V			01
C564	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C565	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C566	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C567	UU167100	Electrolytic Cap.	10.00 50.0V			01
C568	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C569	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
C570	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
C601	UU147470	Electrolytic Cap.	47.00 25.0V			01
C602	UU147470	Electrolytic Cap.	47.00 25.0V			01
C603	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
-606	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
C607	UA353220	Mylar Capacitor	2200P 50V J			01
C608	UA353220	Mylar Capacitor	2200P 50V J			01
C609	UU147220	Electrolytic Cap.	22.00 25.0V			01
C610	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C611	UU147220	Electrolytic Cap.	22.00 25.0V			01
C612	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C613	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C614	UU167100	Electrolytic Cap.	10.00 50.0V			01
C615	UU167100	Electrolytic Cap.	10.00 50.0V			01
C616	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C617	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C618	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C619	UU167100	Electrolytic Cap.	10.00 50.0V			01
C620	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C621	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
-624	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
C701	UU147470	Electrolytic Cap.	47.00 25.0V			01
C702	UU147470	Electrolytic Cap.	47.00 25.0V			01
C703	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
-706	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
C707	UA353220	Mylar Capacitor	2200P 50V J			01
C708	UA353220	Mylar Capacitor	2200P 50V J			01
C709	UU147220	Electrolytic Cap.	22.00 25.0V			01
C710	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C711	UU147220	Electrolytic Cap.	22.00 25.0V			01
C712	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C713	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C714	UU167100	Electrolytic Cap.	10.00 50.0V			01
C715	UU167100	Electrolytic Cap.	10.00 50.0V			01
C716	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C717	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C718	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C719	UU167100	Electrolytic Cap.	10.00 50.0V			01
C720	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C721	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
-724	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
C801	UU147470	Electrolytic Cap.	47.00 25.0V			01
C802	UU147470	Electrolytic Cap.	47.00 25.0V			01
C803	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
-806	UB052220	Monolithic Ceramic Cap.	SL 220P 50V J			01
C807	UA353220	Mylar Capacitor	2200P 50V J			01
C808	UA353220	Mylar Capacitor	2200P 50V J			01
C809	UU147220	Electrolytic Cap.	22.00 25.0V			01
C810	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C811	UU147220	Electrolytic Cap.	22.00 25.0V			01
C812	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C813	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C814	UU167100	Electrolytic Cap.	10.00 50.0V			01
C815	UU167100	Electrolytic Cap.	10.00 50.0V			01
C816	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C817	UB245220	Monolithic Ceramic Cap.	F 0.220 25V Z			01
C818	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C819	UU167100	Electrolytic Cap.	10.00 50.0V			01
C820	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
-824	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
CN001	VI879400	Cable Holder	51048 16P TE			01
CN002	VF667700	Wire Trap	52147 17P TE			01
CN003	VK025800	Wire Trap	52147 14P TE			01
CN004	VF728200	Wire Trap	52147 10P TE			01
CN005	VI879100	Cable Holder	51048 13P TE			01
CN101	VI378700	Connector Socket	MQ 9P SE			01
CN102	VI378700	Connector Socket	MQ 9P SE			01
CN151	VI378700	Connector Socket	MQ 9P SE			01
CN201	VI378700	Connector Socket	MQ 9P SE			01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
CN202	V1378700	Connector Socket	MQ 9P SE			01
CN251	V1379200	Connector Socket	MQ 12P SE			02
CN301	V1378700	Connector Socket	MQ 9P SE			01
CN351	VB390200	Connector Base Post	PH 6P TE			01
CN401	V1378700	Connector Socket	MQ 9P SE			01
CN451	V1379200	Connector Socket	MQ 12P SE			02
CN501	V1378700	Connector Socket	MQ 9P SE			01
CN601	V1378700	Connector Socket	MQ 9P SE			01
CN701	V1378700	Connector Socket	MQ 9P SE			01
D001	VF195600	Diode	11ES4 TA1			01
-004	VF195600	Diode	11ES4 TA1			01
EM001	FZ006970	LC Filter	MTY223NBTBM			02
-005	FZ006970	LC Filter	MTY223NBTBM			02
EM006	FZ007070	LC Filter	MTX222MBTBM			01
IC001	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC002	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC003	XM182A00	IC	TC7S04F	INVERTER		01
IC004	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC005	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC101	XF291A00	IC	UPC4570G2	OP AMP		03
IC102	XF291A00	IC	UPC4570G2	OP AMP		03
IC103	XW272A00	IC	AK5383-VS	ADC		09
IC151	XW029A00	IC	AK4393-VF-E2	DAC		07
IC152	XJ598A00	IC	NJM78L05UA	REGULATOR +5V		02
IC153	XF291A00	IC	UPC4570G2	OP AMP		03
IC154	XF291A00	IC	UPC4570G2	OP AMP		03
IC201	XF291A00	IC	UPC4570G2	OP AMP		03
IC202	XF291A00	IC	UPC4570G2	OP AMP		03
IC203	XW272A00	IC	AK5383-VS	ADC		09
IC251	XW029A00	IC	AK4393-VF-E2	DAC		07
IC252	XJ598A00	IC	NJM78L05UA	REGULATOR +5V		02
IC253	XF291A00	IC	UPC4570G2	OP AMP		03
IC254	XF291A00	IC	UPC4570G2	OP AMP		03
IC301	XF291A00	IC	UPC4570G2	OP AMP		03
IC302	XF291A00	IC	UPC4570G2	OP AMP		03
IC303	XW272A00	IC	AK5383-VS	ADC		09
IC351	XW029A00	IC	AK4393-VF-E2	DAC		07
IC352	XJ598A00	IC	NJM78L05UA	REGULATOR +5V		02
IC353	XF291A00	IC	UPC4570G2	OP AMP		03
-355	XF291A00	IC	UPC4570G2	OP AMP		03
IC401	XF291A00	IC	UPC4570G2	OP AMP		03
IC402	XF291A00	IC	UPC4570G2	OP AMP		03
IC403	XW272A00	IC	AK5383-VS	ADC		09
IC451	XW029A00	IC	AK4393-VF-E2	DAC		07
IC452	XJ598A00	IC	NJM78L05UA	REGULATOR +5V		02
IC453	XF291A00	IC	UPC4570G2	OP AMP		03
IC454	XF291A00	IC	UPC4570G2	OP AMP		03
IC501	XF291A00	IC	UPC4570G2	OP AMP		03
IC502	XF291A00	IC	UPC4570G2	OP AMP		03
IC503	XW272A00	IC	AK5383-VS	ADC		09
IC551	XF291A00	IC	UPC4570G2	OP AMP		03
IC552	XW272A00	IC	AK5383-VS	ADC		09
IC601	XF291A00	IC	UPC4570G2	OP AMP		03
IC602	XF291A00	IC	UPC4570G2	OP AMP		03
IC603	XW272A00	IC	AK5383-VS	ADC		09
IC701	XF291A00	IC	UPC4570G2	OP AMP		03
IC702	XF291A00	IC	UPC4570G2	OP AMP		03
IC703	XW272A00	IC	AK5383-VS	ADC		09
IC801	XF291A00	IC	UPC4570G2	OP AMP		03
IC802	XF291A00	IC	UPC4570G2	OP AMP		03
IC803	XW272A00	IC	AK5383-VS	ADC		09
L001	VS740100	Chip Inductance	BLM21B751S 2125			03
-025	VS740100	Chip Inductance	BLM21B751S 2125			03
R001	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R002	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R003	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-013	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R014	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R015	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R016	HF456220	Carbon Resistor	2.2K 1/4 J			01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R017	HF456220	Carbon Resistor	2.2K 1/4 J			01
R018	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R019	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R020	HF457100	Carbon Resistor	10.0K 1/4 J			01
R021	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R022	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R023	HF456470	Carbon Resistor	4.7K 1/4 J			01
R024	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R101	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R102	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R103	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R104	HB027130	Metal Film Resistor	13.0K 1/4 F			01
* R109	HB026180	Metal Film Resistor	1.8K 1/4 F			
* R110	HB026180	Metal Film Resistor	1.8K 1/4 F			
R111	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-114	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R115	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R116	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R117	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R118	HF454470	Carbon Resistor	47.0 1/4 J			01
-121	HF454470	Carbon Resistor	47.0 1/4 J			01
R122	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-127	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R128	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R129	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R151	HB026330	Metal Film Resistor	3.3K 1/4 F			
-154	HB026330	Metal Film Resistor	3.3K 1/4 F			
R157	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R158	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R161	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R162	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R163	HB026100	Metal Film Resistor	1.0K 1/4 F			01
-166	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R167	HF454390	Carbon Resistor	39.0 1/4 J			01
R168	HF454390	Carbon Resistor	39.0 1/4 J			01
R169	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R170	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R201	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R202	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R203	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R204	HB027130	Metal Film Resistor	13.0K 1/4 F			01
* R209	HB026180	Metal Film Resistor	1.8K 1/4 F			
* R210	HB026180	Metal Film Resistor	1.8K 1/4 F			
R211	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-214	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R215	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R216	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R217	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R218	HF454470	Carbon Resistor	47.0 1/4 J			01
-221	HF454470	Carbon Resistor	47.0 1/4 J			01
R222	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-227	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R228	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R229	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R251	HB026330	Metal Film Resistor	3.3K 1/4 F			
-254	HB026330	Metal Film Resistor	3.3K 1/4 F			
R257	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R258	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R261	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R262	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R263	HB026100	Metal Film Resistor	1.0K 1/4 F			01
-266	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R267	HF454390	Carbon Resistor	39.0 1/4 J			01
R268	HF454390	Carbon Resistor	39.0 1/4 J			01
R269	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R270	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R301	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R302	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R303	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R304	HB027130	Metal Film Resistor	13.0K 1/4 F			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
* R309	HB026180	Metal Film Resistor	1.8K 1/4 F			
* R310	HB026180	Metal Film Resistor	1.8K 1/4 F			
R311	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-314	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R315	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R316	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R317	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R318	HF454470	Carbon Resistor	47.0 1/4 J			01
-321	HF454470	Carbon Resistor	47.0 1/4 J			01
R322	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-327	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R328	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R329	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R351	HB026330	Metal Film Resistor	3.3K 1/4 F			
-354	HB026330	Metal Film Resistor	3.3K 1/4 F			
R357	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R358	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R361	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R362	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R363	HB026100	Metal Film Resistor	1.0K 1/4 F			01
-366	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R367	HF454390	Carbon Resistor	39.0 1/4 J			01
R368	HF454390	Carbon Resistor	39.0 1/4 J			01
R369	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R370	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R371	HB025470	Metal Film Resistor	470.0 1/4 F			01
R372	HB025470	Metal Film Resistor	470.0 1/4 F			01
R373	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R374	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R377	HB025470	Metal Film Resistor	470.0 1/4 F			01
R378	HB025470	Metal Film Resistor	470.0 1/4 F			01
R379	HF454390	Carbon Resistor	39.0 1/4 J			01
R380	HF454390	Carbon Resistor	39.0 1/4 J			01
R381	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R382	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R401	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R402	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R403	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R404	HB027130	Metal Film Resistor	13.0K 1/4 F			01
* R409	HB026180	Metal Film Resistor	1.8K 1/4 F			
* R410	HB026180	Metal Film Resistor	1.8K 1/4 F			
R411	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-414	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R415	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R416	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R417	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R418	HF454470	Carbon Resistor	47.0 1/4 J			01
-421	HF454470	Carbon Resistor	47.0 1/4 J			01
R422	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-427	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R428	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R429	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R451	HB026330	Metal Film Resistor	3.3K 1/4 F			
-454	HB026330	Metal Film Resistor	3.3K 1/4 F			
R457	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R458	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R461	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R462	HB026750	Metal Film Resistor	7.5K 1/4 F			01
R463	HB026100	Metal Film Resistor	1.0K 1/4 F			01
-466	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R467	HF454390	Carbon Resistor	39.0 1/4 J			01
R468	HF454390	Carbon Resistor	39.0 1/4 J			01
R469	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R470	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R501	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R502	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R503	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R504	HB027130	Metal Film Resistor	13.0K 1/4 F			01
* R509	HB026180	Metal Film Resistor	1.8K 1/4 F			
* R510	HB026180	Metal Film Resistor	1.8K 1/4 F			

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R511	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-514	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R515	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R516	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R517	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R518	HF454470	Carbon Resistor	47.0 1/4 J			01
-521	HF454470	Carbon Resistor	47.0 1/4 J			01
R522	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-527	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R528	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R529	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R551	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R552	HB027100	Metal Film Resistor	10.0K 1/4 F			01
R553	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-555	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R556	HF454470	Carbon Resistor	47.0 1/4 J			01
R557	HF454470	Carbon Resistor	47.0 1/4 J			01
R558	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R559	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R560	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R561	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R562	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R563	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-568	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R601	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R602	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R603	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R604	HB027130	Metal Film Resistor	13.0K 1/4 F			01
* R609	HB026180	Metal Film Resistor	1.8K 1/4 F			01
* R610	HB026180	Metal Film Resistor	1.8K 1/4 F			01
R611	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-614	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R615	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R616	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R617	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R618	HF454470	Carbon Resistor	47.0 1/4 J			01
-621	HF454470	Carbon Resistor	47.0 1/4 J			01
R622	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-627	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R628	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R629	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R701	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R702	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R703	HB027100	Metal Film Resistor	10.0K 1/4 F			01
R704	HB027100	Metal Film Resistor	10.0K 1/4 F			01
R709	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-714	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R715	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R716	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R717	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R718	HF454470	Carbon Resistor	47.0 1/4 J			01
-721	HF454470	Carbon Resistor	47.0 1/4 J			01
R722	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-727	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R728	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R729	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R801	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R802	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R803	HB027100	Metal Film Resistor	10.0K 1/4 F			01
R804	HB027100	Metal Film Resistor	10.0K 1/4 F			01
R809	HB026220	Metal Film Resistor	2.2K 1/4 F			01
-814	HB026220	Metal Film Resistor	2.2K 1/4 F			01
R815	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R816	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R817	HB026270	Metal Film Resistor	2.7K 1/4 F			01
R818	HF454470	Carbon Resistor	47.0 1/4 J			01
-821	HF454470	Carbon Resistor	47.0 1/4 J			01
R822	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-827	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R828	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R829	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
TR001	VJ927100	Transistor	2SC2712 Y			01
TR002	VJ927100	Transistor	2SC2712 Y			01
TR003	VQ395600	Transistor	2SA1052 B,C			01
TR004	VG013300	Transistor	2SB1132 82-390			01
* W001	V8973500	Jumper Wire	FVP=2.0C26SB16-350			
* W005	V2015800	Jumper Wire	FVP=2.0C26SB13-460			
	V8632100	Circuit Board	ANI1	(X2065B0)		
	V6435400	Holder, Phones	x2			02
	V7539700	Cannon Angle				02
	V9610500	Earth Film ANI1				
109	--	Jumper Wire	0.55	(VA07890)		
C100	UR877470	Electrolytic Cap.	47.00 63.0V			
C101	VJ097400	Electrolytic Cap.-KL	10.00 50.0V			01
C102	VJ097400	Electrolytic Cap.-KL	10.00 50.0V			01
C103	VG278400	Ceramic Capacitor-B	220P 50V K			01
C104	VG278400	Ceramic Capacitor-B	220P 50V K			01
C105	VF467000	Ceramic Capacitor-B	1000P 50V K			01
C106	VF467000	Ceramic Capacitor-B	1000P 50V K			01
C107	UR819100	Electrolytic Cap.	1000 6.3V			01
C108	VF466600	Ceramic Capacitor-SL	10P 50V J			01
C109	VF466600	Ceramic Capacitor-SL	10P 50V J			01
C110	VG278400	Ceramic Capacitor-B	220P 50V K			01
C111	VG276600	Ceramic Capacitor-SL	22P 50V J			01
C112	VG276600	Ceramic Capacitor-SL	22P 50V J			01
C113	UU147470	Electrolytic Cap.	47.00 25.0V			01
C114	UU147470	Electrolytic Cap.	47.00 25.0V			01
C115	UU148100	Electrolytic Cap.	100.00 25.0V			01
C116	UU148100	Electrolytic Cap.	100.00 25.0V			01
C126	VF466600	Ceramic Capacitor-SL	10P 50V J			01
C127	UR867100	Electrolytic Cap.	10.00 50.0V			01
C128	UA654470	Mylar Capacitor	0.0470 50V J			01
C129	UA654470	Mylar Capacitor	0.0470 50V J			01
C130	UR867100	Electrolytic Cap.	10.00 50.0V			01
C131	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C132	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C137	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C138	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C140	UU148100	Electrolytic Cap.	100.00 25.0V			01
C141	UU148100	Electrolytic Cap.	100.00 25.0V			01
CN100	VB994900	Base Post Connector	MQ 9P TE			01
D100	VD631600	Diode	1SS133,176,HSS104			01
D101	VD631600	Diode	1SS133,176,HSS104			01
D102	VD631600	Diode	1SS133,176,HSS104			01
EM100	FZ006920	LC Filter	MTB271KBTBM			01
-103	FZ006920	LC Filter	MTB271KBTBM			01
IC100	XM356A00	IC	NJM2068L-D	OP AMP		02
IC101	XM356A00	IC	NJM2068L-D	OP AMP		02
JK100	VS763000	Cannon Connector	NC3FAHR1-0	INPUT A (1-16)		03
JK101	LB301920	Phone Jack	HLJ4306 STREO	INPUT B (1-16)		02
JK102	LB301920	Phone Jack	HLJ4306 STREO	INSERT I/O (1-16)		02
LD100	VH325200	LED	GL2PR6	PEAK (1-16)		01
LD101	VH325300	LED	GL2EG6	SIGNAL (1-16)		01
R100	VP441000	Metal Film Resistor	6.8K 1/4 F			01
R101	VP441000	Metal Film Resistor	6.8K 1/4 F			01
R102	HV755390	Flame Proof C. Resistor	390.0 1/4 J			01
R103	HF458100	Carbon Resistor	100.0K 1/4 J			01
R104	HF454100	Carbon Resistor	10.0 1/4 J			01
R105	HF454100	Carbon Resistor	10.0 1/4 J			01
R106	VP443000	Metal Film Resistor	47.0K 1/4 F			01
R107	VP443000	Metal Film Resistor	47.0K 1/4 F			01
R108	VP437400	Metal Film Resistor	220.0 1/4 F			01
R109	VP439700	Metal Film Resistor	2.0K 1/4 F			01
R110	VP439700	Metal Film Resistor	2.0K 1/4 F			01
R111	VP440600	Metal Film Resistor	4.7K 1/4 F			01
R112	HF454100	Carbon Resistor	10.0 1/4 J			01
R113	HF454100	Carbon Resistor	10.0 1/4 J			01
R114	VP439800	Metal Film Resistor	2.2K 1/4 F			01
R115	VP439800	Metal Film Resistor	2.2K 1/4 F			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R116	VP434800	Metal Film Resistor	18.0 1/4 F			01
* R117	VP442700	Metal Film Resistor	36.0K 1/4 F			01
R118	VP440900	Metal Film Resistor	6.2K 1/4 F			01
R119	VP440900	Metal Film Resistor	6.2K 1/4 F			01
* R120	VP442700	Metal Film Resistor	36.0K 1/4 F			01
R121	VP441400	Metal Film Resistor	10.0K 1/4 F			01
R122	VP441400	Metal Film Resistor	10.0K 1/4 F			01
R123	HF454390	Carbon Resistor	39.0 1/4 J			01
R124	HF458100	Carbon Resistor	100.0K 1/4 J			01
R125	HF455560	Carbon Resistor	560.0 1/4 J			01
R126	HF458100	Carbon Resistor	100.0K 1/4 J			01
R148	HB028100	Metal Film Resistor	100.0K 1/4 F			01
* R149	HB027620	Metal Film Resistor	62.0K 1/4 F			01
R150	HB027100	Metal Film Resistor	10.0K 1/4 F			01
R151	HB027820	Metal Film Resistor	82.0K 1/4 F			01
R152	HB028100	Metal Film Resistor	100.0K 1/4 F			01
R153	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R154	HB028100	Metal Film Resistor	100.0K 1/4 F			01
R155	HB028100	Metal Film Resistor	100.0K 1/4 F			01
R156	HF458100	Carbon Resistor	100.0K 1/4 J			01
R157	HF458100	Carbon Resistor	100.0K 1/4 J			01
R158	HF456470	Carbon Resistor	4.7K 1/4 J			01
R159	HF456470	Carbon Resistor	4.7K 1/4 J			01
R160	HF458100	Carbon Resistor	100.0K 1/4 J			01
-163	HF458100	Carbon Resistor	100.0K 1/4 J			01
R164	HF454750	Carbon Resistor	75.0 1/4 J			01
R165	HF457120	Carbon Resistor	12.0K 1/4 J			01
R166	HV755390	Flame Proof C. Resistor	390.0 1/4 J			01
R167	HV755390	Flame Proof C. Resistor	390.0 1/4 J			01
R168	HB027470	Metal Film Resistor	47.0K 1/4 F			01
R169	HB027100	Metal Film Resistor	10.0K 1/4 F			01
SW100	VQ907900	Slide Switch	SSSU112-S06N-1	+48V ON/OFF		01
SW101	VQ901900	Push Switch	SPUN19-2N-W H6.5	26dB		03
SW102	VQ901900	Push Switch	SPUN19-2N-W H6.5	INSERT ON/OFF		03
TR100	IC224030	Transistor	2SC2240 GR,BL			01
TR101	IC224030	Transistor	2SC2240 GR,BL			01
TR102	IC174020	Transistor	2SC1740S R,S			01
TR103	IC174020	Transistor	2SC1740S R,S			01
TR104	VV912400	Transistor	2SA933ASTP R,S			01
-107	VV912400	Transistor	2SA933ASTP R,S			01
TR108	IC174020	Transistor	2SC1740S R,S			01
VR100	VT975100	Rotary Variable Resistor	5K	GAIN (1-16)		04
* V8632300		Circuit Board	ANI2	(V863050)(X2066B0)		
* V9629200		Circuit Board	LED	(V863050)(X2066B0)		
V6435400		Holder, Phones	x2			02
177	--	Jumper Wire	0.55	(VA07890)		
C101	VJ097400	Electrolytic Cap.-KL	10.00 50.0V			01
C102	VJ097400	Electrolytic Cap.-KL	10.00 50.0V			01
C103	VG278400	Ceramic Capacitor-B	220P 50V K			01
C104	VG278400	Ceramic Capacitor-B	220P 50V K			01
C105	VF467000	Ceramic Capacitor-B	1000P 50V K			01
C106	VF467000	Ceramic Capacitor-B	1000P 50V K			01
C107	UR819100	Electrolytic Cap.	1000 6.3V			01
C108	VF466600	Ceramic Capacitor-SL	10P 50V J			01
C109	VF466600	Ceramic Capacitor-SL	10P 50V J			01
C110	VG278400	Ceramic Capacitor-B	220P 50V K			01
C111	VG276600	Ceramic Capacitor-SL	22P 50V J			01
C112	VG276600	Ceramic Capacitor-SL	22P 50V J			01
C113	UR867100	Electrolytic Cap.	10.00 50.0V			01
C114	UA654470	Mylar Capacitor	0.0470 50V J			01
C115	UA654470	Mylar Capacitor	0.0470 50V J			01
C116	UR867100	Electrolytic Cap.	10.00 50.0V			01
C117	UU147470	Electrolytic Cap.	47.00 25.0V			01
C118	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C119	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C120	UU148100	Electrolytic Cap.	100.00 25.0V			01
C121	UU148100	Electrolytic Cap.	100.00 25.0V			01
C122	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C123	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01

\* New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C124	VF466600	Ceramic Capacitor-SL	10P 50V J			01
C125	UU148100	Electrolytic Cap.	100.00 25.0V			01
C126	UU148100	Electrolytic Cap.	100.00 25.0V			01
C201	VJ097400	Electrolytic Cap.-KL	10.00 50.0V			01
C202	VJ097400	Electrolytic Cap.-KL	10.00 50.0V			01
C203	VG278400	Ceramic Capacitor-B	220P 50V K			01
C204	VG278400	Ceramic Capacitor-B	220P 50V K			01
C205	VF467000	Ceramic Capacitor-B	1000P 50V K			01
C206	VF467000	Ceramic Capacitor-B	1000P 50V K			01
C207	UR819100	Electrolytic Cap.	1000 6.3V			01
C208	VF466600	Ceramic Capacitor-SL	10P 50V J			01
C209	VF466600	Ceramic Capacitor-SL	10P 50V J			01
C210	VG278400	Ceramic Capacitor-B	220P 50V K			01
C211	VG276600	Ceramic Capacitor-SL	22P 50V J			01
C212	VG276600	Ceramic Capacitor-SL	22P 50V J			01
C213	UR867100	Electrolytic Cap.	10.00 50.0V			01
C214	UA654470	Mylar Capacitor	0.0470 50V J			01
C215	UA654470	Mylar Capacitor	0.0470 50V J			01
C217	UU147470	Electrolytic Cap.	47.00 25.0V			01
C218	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C219	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C220	UU148100	Electrolytic Cap.	100.00 25.0V			01
C221	UU148100	Electrolytic Cap.	100.00 25.0V			01
C222	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C223	VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
C224	VF466600	Ceramic Capacitor-SL	10P 50V J			01
CN100	VB994900	Base Post Connector	MQ 9P TE			01
CN201	VL844700	Base Post Connector	XH 3P TE			01
* CN202	VN555800	Socket	JQ 3P TE			01
D100	VD631600	Diode	1SS133,176,HSS104			01
D200	VD631600	Diode	1SS133,176,HSS104			01
-202	VD631600	Diode	1SS133,176,HSS104			01
EM100	FZ006920	LC Filter	MTB271KBTBM			01
EM101	FZ006920	LC Filter	MTB271KBTBM			01
EM200	FZ006920	LC Filter	MTB271KBTBM			01
EM201	FZ006920	LC Filter	MTB271KBTBM			01
IC100	XM356A00	IC	NJM2068L-D	OP AMP		02
IC101	XM356A00	IC	NJM2068L-D	OP AMP		02
IC200	XM356A00	IC	NJM2068L-D	OP AMP		02
IC201	XM356A00	IC	NJM2068L-D	OP AMP		02
JK100	VS056300	Phone Jack	HLJ7001-01	INPUT (17,19,21,23)		01
JK200	VS056300	Phone Jack	HLJ7001-01	INPUT (18,20,22,24)		01
LD100	VH325200	LED	GL2PR6	PEAK (17,19,21,23)		01
LD101	VH325300	LED	GL2EG6	SIGNAL (17,19,21,23)		01
LD200	VH325200	LED	GL2PR6	PEAK (18,20,22,24)		01
LD201	VH325300	LED	GL2EG6	SIGNAL (18,20,22,24)		01
* R100	VP439600	Metal Film Resistor	1.8K 1/4 F			01
* R101	VP439600	Metal Film Resistor	1.8K 1/4 F			01
* R103	VP438600	Metal Film Resistor	680.0 1/4 F			01
R104	HF454100	Carbon Resistor	10.0 1/4 J			01
R105	HF454100	Carbon Resistor	10.0 1/4 J			01
R106	VP443000	Metal Film Resistor	47.0K 1/4 F			01
R107	VP443000	Metal Film Resistor	47.0K 1/4 F			01
R108	HF454100	Carbon Resistor	10.0 1/4 J			01
R109	HF454100	Carbon Resistor	10.0 1/4 J			01
R110	VP439800	Metal Film Resistor	2.2K 1/4 F			01
R111	VP439800	Metal Film Resistor	2.2K 1/4 F			01
* R114	VP434700	Metal Film Resistor	16.0 1/4 F			01
R115	VP441200	Metal Film Resistor	8.2K 1/4 F			01
R116	VP441200	Metal Film Resistor	8.2K 1/4 F			01
R119	VP441400	Metal Film Resistor	10.0K 1/4 F			01
-122	VP441400	Metal Film Resistor	10.0K 1/4 F			01
R123	HF454390	Carbon Resistor	39.0 1/4 J			01
R124	HB028100	Metal Film Resistor	100.0K 1/4 F			01
* R125	HB027620	Metal Film Resistor	62.0K 1/4 F			01
R126	HB027470	Metal Film Resistor	47.0K 1/4 F			01
R127	HB027820	Metal Film Resistor	82.0K 1/4 F			01
R128	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R129	HB027100	Metal Film Resistor	10.0K 1/4 F			01
R130	HB028100	Metal Film Resistor	100.0K 1/4 F			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R131	HB027100	Metal Film Resistor	10.0K 1/4 F			
R132	HB028100	Metal Film Resistor	100.0K 1/4 F			
R133	HB028100	Metal Film Resistor	100.0K 1/4 F			
R134	HF458100	Carbon Resistor	100.0K 1/4 J			01
R135	HF458100	Carbon Resistor	100.0K 1/4 J			01
R136	HF456470	Carbon Resistor	4.7K 1/4 J			01
R137	HF456470	Carbon Resistor	4.7K 1/4 J			01
R138	HF458100	Carbon Resistor	100.0K 1/4 J			01
-141	HF458100	Carbon Resistor	100.0K 1/4 J			01
R144	HF458100	Carbon Resistor	100.0K 1/4 J			01
R145	HV755390	Flame Proof C. Resistor	390.0 1/4 J			01
R146	HV755390	Flame Proof C. Resistor	390.0 1/4 J			01
* R200	VP439600	Metal Film Resistor	1.8K 1/4 F			
* R201	VP439600	Metal Film Resistor	1.8K 1/4 F			
* R203	VP438600	Metal Film Resistor	680.0 1/4 F			
R204	HF454100	Carbon Resistor	10.0 1/4 J			01
R205	HF454100	Carbon Resistor	10.0 1/4 J			01
R206	VP443000	Metal Film Resistor	47.0K 1/4 F			01
R207	VP443000	Metal Film Resistor	47.0K 1/4 F			01
R208	HF454100	Carbon Resistor	10.0 1/4 J			01
R209	HF454100	Carbon Resistor	10.0 1/4 J			01
R210	VP439800	Metal Film Resistor	2.2K 1/4 F			01
R211	VP439800	Metal Film Resistor	2.2K 1/4 F			01
* R214	VP434700	Metal Film Resistor	16.0 1/4 F			
R215	VP441200	Metal Film Resistor	8.2K 1/4 F			01
R216	VP441200	Metal Film Resistor	8.2K 1/4 F			01
R219	VP441400	Metal Film Resistor	10.0K 1/4 F			01
-222	VP441400	Metal Film Resistor	10.0K 1/4 F			01
R223	HF454390	Carbon Resistor	39.0 1/4 J			01
R224	HB028100	Metal Film Resistor	100.0K 1/4 F			
* R225	HB027620	Metal Film Resistor	62.0K 1/4 F			
R226	HB027470	Metal Film Resistor	47.0K 1/4 F			01
R227	HB027820	Metal Film Resistor	82.0K 1/4 F			01
R228	HB027130	Metal Film Resistor	13.0K 1/4 F			01
R229	HB027100	Metal Film Resistor	10.0K 1/4 F			
R230	HB028100	Metal Film Resistor	100.0K 1/4 F			
R231	HB027100	Metal Film Resistor	10.0K 1/4 F			
R232	HB028100	Metal Film Resistor	100.0K 1/4 F			
R233	HB028100	Metal Film Resistor	100.0K 1/4 F			
R234	HF458100	Carbon Resistor	100.0K 1/4 J			01
R235	HF458100	Carbon Resistor	100.0K 1/4 J			01
R236	HF456470	Carbon Resistor	4.7K 1/4 J			01
R237	HF456470	Carbon Resistor	4.7K 1/4 J			01
R238	HF458100	Carbon Resistor	100.0K 1/4 J			01
-241	HF458100	Carbon Resistor	100.0K 1/4 J			01
R242	HF454750	Carbon Resistor	75.0 1/4 J			01
R243	HF457120	Carbon Resistor	12.0K 1/4 J			01
R244	HF458100	Carbon Resistor	100.0K 1/4 J			01
TR100	IC224030	Transistor	2SC2240 GR,BL			01
TR101	IC224030	Transistor	2SC2240 GR,BL			01
TR102	IC174020	Transistor	2SC1740S R,S			01
TR103	IC174020	Transistor	2SC1740S R,S			01
TR104	VV912400	Transistor	2SA933ASTP R,S			01
-107	VV912400	Transistor	2SA933ASTP R,S			01
TR200	IC224030	Transistor	2SC2240 GR,BL			01
TR201	IC224030	Transistor	2SC2240 GR,BL			01
TR202	IC174020	Transistor	2SC1740S R,S			01
TR203	IC174020	Transistor	2SC1740S R,S			01
TR204	VV912400	Transistor	2SA933ASTP R,S			01
-207	VV912400	Transistor	2SA933ASTP R,S			01
TR208	IC174020	Transistor	2SC1740S R,S			01
VR100	VT975100	Rotary Variable Resistor	5K	GAIN (17,19,21,23)		04
VR200	VT975100	Rotary Variable Resistor	5K	GAIN (18,20,22,24)		04
*	V9221600	Circuit Board	BRG	(X2062B0)		
10	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			01
20	IL000690	Insulation Sheet	CSSX-G509			01
C001	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C007	UF066100	Electrolytic Cap. (chip)	1 50V			01
C013	UR848470	Electrolytic Cap.	470.00 25.0V			01

\*: New Parts

RANK: Japan only



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C040	UR639220	Electrolytic Cap.	2200 16.0V			
C051	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C052	V8878500	Electrolytic Cap. (chip)	150 16V			04
C054	V8878900	Electrolytic Cap. (chip)	330 6.3V			04
C056	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C057	UR838470	Electrolytic Cap.	470.00 16.0V			01
C058	UR838470	Electrolytic Cap.	470.00 16.0V			01
C061	US061100	Ceramic Capacitor-CH(chip)	10P 50V D			01
CN002	VF667600	Wire Trap	52147 15P TE			01
CN003	VK025800	Wire Trap	52147 14P TE			01
CN004	VJ861600	Wire Trap	52147 16P TE			01
CN005	VK025300	Wire Trap	52147 9P TE			01
CN006	VB389900	Connector Base Post	PH 3P TE			01
CN007	VJ861600	Wire Trap	52147 16P TE			01
CN008	VJ861600	Wire Trap	52147 16P TE			01
CN009	VK025800	Wire Trap	52147 14P TE			01
CN010	VK025700	Wire Trap	52147 13P TE			01
CN012	VK025100	Wire Trap	52147 7P TE			01
CN013	VK025700	Wire Trap	52147 13P TE			01
CN014	VK025500	Wire Trap	52147 11P TE			01
CN015	VK025600	Wire Trap	52147 12P TE			01
CN016	VJ861600	Wire Trap	52147 16P TE			01
CN018	VK024800	Wire Trap	52147 4P TE			01
CN019	VF728200	Wire Trap	52147 10P TE			01
CN020	VF728200	Wire Trap	52147 10P TE			01
CN022	VJ861600	Wire Trap	52147 16P TE			01
CN023	VK025600	Wire Trap	52147 12P TE			01
CN024	VK025500	Wire Trap	52147 11P TE			01
CN025	VF728300	Wire Trap	52147 6P TE			01
D002	V6267600	Diode	RB051L-40			01
D003	VP974300	Diode	D3S6M-4002			03
DA001	VV556300	Diode Array	DAN217 0.3A X2			01
EM001	FZ007070	LC Filter	MTX222MBTBM			01
EM002	FZ007070	LC Filter	MTX222MBTBM			01
EM003	FZ006970	LC Filter	MTY223NBTBM			02
-005	FZ006970	LC Filter	MTY223NBTBM			02
EM006	FZ007070	LC Filter	MTX222MBTBM			01
EM007	FZ006970	LC Filter	MTY223NBTBM			02
EM008	FZ006970	LC Filter	MTY223NBTBM			02
EM010	FZ006970	LC Filter	MTY223NBTBM			02
EM013	FZ006970	LC Filter	MTY223NBTBM			02
EM015	FZ006970	LC Filter	MTY223NBTBM			02
EM016	FZ006970	LC Filter	MTY223NBTBM			02
EM018	FZ007070	LC Filter	MTX222MBTBM			01
EM023	FZ006970	LC Filter	MTY223NBTBM			02
EM024	FZ007070	LC Filter	MTX222MBTBM			01
EM025	FZ006970	LC Filter	MTY223NBTBM			02
EM026	FZ006970	LC Filter	MTY223NBTBM			02
EM028	FZ006970	LC Filter	MTY223NBTBM			02
EM029	FZ006970	LC Filter	MTY223NBTBM			02
EM030	FZ007070	LC Filter	MTX222MBTBM			01
EM031	FZ007070	LC Filter	MTX222MBTBM			01
EM032	FZ006970	LC Filter	MTY223NBTBM			02
EM034	FZ006970	LC Filter	MTY223NBTBM			02
-036	FZ006970	LC Filter	MTY223NBTBM			02
EM037	FZ007070	LC Filter	MTX222MBTBM			01
EM038	FZ006970	LC Filter	MTY223NBTBM			02
EM039	FZ006970	LC Filter	MTY223NBTBM			02
-041	FZ006970	LC Filter	MTY223NBTBM			02
EM042	FZ007070	LC Filter	MTX222MBTBM			01
EM043	FZ007070	LC Filter	MTX222MBTBM			01
EM044	FZ006970	LC Filter	MTY223NBTBM			02
-048	FZ006970	LC Filter	MTY223NBTBM			02
EM053	FZ006970	LC Filter	MTY223NBTBM			02
-055	FZ006970	LC Filter	MTY223NBTBM			02
EM061	FZ006970	LC Filter	MTY223NBTBM			02
-065	FZ006970	LC Filter	MTY223NBTBM			02
EM068	FZ006970	LC Filter	MTY223NBTBM			02
* IC003	X2790A00	IC	LM2596SX-ADJ	DC-DC CONVERTER		
K001	VG864300	Heat Sink	DPS(15)-30			02

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
* L001	V9224300	Coil	CDRH127-470MC 47uH		
* L002	V9224300	Coil	CDRH127-470MC 47uH		
R004	RD257100	Carbon Resistor (chip)	10.0K 0.1 J		01
R005	RD256100	Carbon Resistor (chip)	1.0K 0.1 J		01
* R006	RD156220	Carbon Resistor (chip)	2.2K 1/4 J		
* R007	RD156220	Carbon Resistor (chip)	2.2K 1/4 J		
R008	RD156470	Carbon Resistor (chip)	4.7K 1/4 J		
R010	RD257100	Carbon Resistor (chip)	10.0K 0.1 J		01
R012	VI825600	Carbon Resistor (chip)	56.0 1/0 J		01
R013	RD257100	Carbon Resistor (chip)	10.0K 0.1 J		01
R014	RD256270	Carbon Resistor (chip)	2.7K 0.1 J		01
* R016	RD156220	Carbon Resistor (chip)	2.2K 1/4 J		
R017	RD257100	Carbon Resistor (chip)	10.0K 0.1 J		01
R018	RD256220	Carbon Resistor (chip)	2.2K 0.1 J		01
R019	RD257220	Carbon Resistor (chip)	22.0K 0.1 J		01
R020	RD257100	Carbon Resistor (chip)	10.0K 0.1 J		01
R021	RD257100	Carbon Resistor (chip)	10.0K 0.1 J		01
R026	VI194900	Metal Film Resistor (chip)	1.0K 1/10 D		01
R027	VI193800	Metal Film Resistor (chip)	360.0 1/10 D		
R028	VI195300	Metal Film Resistor (chip)	1.5K 1/10 D		01
R031	RD257100	Carbon Resistor (chip)	10.0K 0.1 J		01
R035	VC740900	Metal Oxide Film Resistor	2.2 1W J		01
R036	VC740900	Metal Oxide Film Resistor	2.2 1W J		01
* TH003	V7647500	Protector Switch	RXE040-AP 0.40A		
* TH004	V7647500	Protector Switch	RXE040-AP 0.40A		
* TH005	V9414500	Protector Switch	RXE135-AP 1.35A		
* TH006	V9414500	Protector Switch	RXE135-AP 1.35A		
* TH007	V9414600	Protector Switch	RXE160-AP 1.60A		
* TH008	V9414300	Protector Switch	RXE090-AP 0.90A		
* TH009	V9413700	Protector Switch	RXE020-AP 0.20A		
* TH015	V9414600	Protector Switch	RXE160-AP 1.60A		
* -017	V9414600	Protector Switch	RXE160-AP 1.60A		
* TH018	V9413700	Protector Switch	RXE020-AP 0.20A		
* TH019	V9414500	Protector Switch	RXE135-AP 1.35A		
* TH020	V9414500	Protector Switch	RXE135-AP 1.35A		
* TH021	V9414300	Protector Switch	RXE090-AP 0.90A		
* TH022	V9414500	Protector Switch	RXE135-AP 1.35A		
* TH023	V9414600	Protector Switch	RXE160-AP 1.60A		
* TH024	V9414600	Protector Switch	RXE160-AP 1.60A		
* TH025	V9413700	Protector Switch	RXE020-AP 0.20A		
* TH026	V9413700	Protector Switch	RXE020-AP 0.20A		
* TH027	V9414600	Protector Switch	RXE160-AP 1.60A		
* TH028	V9414300	Protector Switch	RXE090-AP 0.90A		
* TH029	V7647500	Protector Switch	RXE040-AP 0.40A		
* TH030	V9414500	Protector Switch	RXE135-AP 1.35A		
* TH033	V7647500	Protector Switch	RXE040-AP 0.40A		
* TH034	V9414500	Protector Switch	RXE135-AP 1.35A		
* TH039	V9414600	Protector Switch	RXE160-AP 1.60A		
* TH040	V9414600	Protector Switch	RXE160-AP 1.60A		
* TH041	V9413700	Protector Switch	RXE020-AP 0.20A		
* TH043	V7647500	Protector Switch	RXE040-AP 0.40A		
* TH044	V9414500	Protector Switch	RXE135-AP 1.35A		
* TH061	V9414500	Protector Switch	RXE135-AP 1.35A		
* -065	V9414500	Protector Switch	RXE135-AP 1.35A		
* TH067	V9414300	Protector Switch	RXE090-AP 0.90A		
* TH068	V9414600	Protector Switch	RXE160-AP 1.60A		
TR002	VV655500	Digital Transistor	DTC124EKA TP		01
TR003	VG013400	Transistor	2SD1664 82-390		01
TR005	VV925400	Transistor	2SC2SC2712 GR		01
TR006	VJ927200	Transistor	2SA1162 O,Y		01
TR007	VJ927200	Transistor	2SA1162 O,Y		01
TR009	VV925400	Transistor	2SC2SC2712 GR		01
TR010	VV925400	Transistor	2SC2SC2712 GR		01
TR011	IB059630	Transistor	2SB596 O,Y		04
* ZD001	VU173400	Zener Diode	UDZ 22B TE-17 22V		
ZD002	VU171800	Zener Diode	UDZ 4.7BTE-17 4.7V		01
*	V8468800	Circuit Board	CPU1	(X0383C0)	
BT101	VN103600	Battery Holder	CR2032		03
C101	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
-117	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C118	UB012470	Monolithic Ceramic Cap.	B 470P 50V K		01
C119	UB446100	Ceramic Capacitor-F (chip)	F 1.0 16V Z		01
C120	UB446100	Ceramic Capacitor-F (chip)	F 1.0 16V Z		01
C121	UB012470	Monolithic Ceramic Cap.	B 470P 50V K		01
C122	UF018100	Electrolytic Cap. (chip)	100 6.3V		01
C123	UB051220	Monolithic Ceramic Cap.	SL 22P 50V J		01
C124	UB051220	Monolithic Ceramic Cap.	SL 22P 50V J		01
C125	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-143	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C145	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C146	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C147	UF018100	Electrolytic Cap. (chip)	100 6.3V		01
C148	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C154	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-163	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C165	UF028100	Electrolytic Cap. (chip)	100 10V		01
C166	UF018100	Electrolytic Cap. (chip)	100 6.3V		01
C167	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-170	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C172	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C173	UB051180	Monolithic Ceramic Cap.	SL 18P 50V J		01
C174	UB051150	Monolithic Ceramic Cap.	SL 15P 50V J		01
C175	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-183	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C186	UF037100	Electrolytic Cap. (chip)	10 16V		01
C187	UF037100	Electrolytic Cap. (chip)	10 16V		01
C188	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C189	UF037100	Electrolytic Cap. (chip)	10 16V		01
C190	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C191	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
CN101	VF728300	Wire Trap	52147 6P TE		01
* CN104	V9152200	Receptacle	PHEC 80R TE		
* CN105	V9152200	Receptacle	PHEC 80R TE		
CN106	VK025600	Wire Trap	52147 12P TE		01
CN107	VK025100	Wire Trap	52147 7P TE		01
CN108	VK025800	Wire Trap	52147 14P TE		01
CN109	VB390100	Connector Base Post	PH 5P TE		01
CN110	VB390000	Connector Base Post	PH 4P TE		01
D103	V2376600	Diode	RB500V-40		01
EM101	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L		01
-103	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L		01
EM104	FZ006970	LC Filter	MTY223NBTBM		02
-107	FZ006970	LC Filter	MTY223NBTBM		02
IC101	XY065A00	IC	SH7709A	CPU	14
IC102	X2086A00	IC	HM62V8512CLTT-7		15
-105	X2086A00	IC	HM62V8512CLTT-7	SRAM 4M	15
IC102	X2882A00	IC	M5M5V408BTP-85H		
-105	X2882A00	IC	M5M5V408BTP-85H		
IC106	X2661A00	IC	MBM29LV160BE90TN	FLASH ROM 16M	13
IC107	X2662A00	IC	MBM29LV160BE90TN	FLASH ROM 16M	13
IC108	XZ414B00	IC	W986416DH-7		
IC108	X0303A00	IC	HY57V641620HGT-HQ	DRAM 64M	15
IC108	X2760A00	IC	K4S641632F-TC75		
IC109	XZ414B00	IC	W986416DH-7		
IC109	X0303A00	IC	HY57V641620HGT-HQ	DRAM 64M	15
IC109	X2760A00	IC	K4S641632F-TC75		
IC112	XV242A00	IC	TC74VHCT245AF	TRANSCEIVER	03
IC114	XY937A00	IC	CY2305	CLOCK BUFFER	07
IC115	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
-117	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
IC118	XT800A00	IC	TC74VHC244F	BUFFER	03
IC119	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
-121	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
IC122	XS775A00	IC	TC7SH04FU	INVERTER	01
IC123	XR680A00	IC	TC7SH08FU	AND	
IC125	XW324A00	IC	TC74VHC139F(EL)	DECODER	01
IC126	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
IC127	XU229A00	IC	TC74LVX4245FS	TRANSCEIVER	04
IC129	XQ595A00	IC	S1D13305F00B100	LCD CONTROLLER	08

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
IC130	XT138A00	IC	UPD431000AGW-70LL	SRAM 1M		07
IC131	XV242A00	IC	TC74VHCT245AF	TRANSCEIVER		03
IC132	XM332A00	IC	TC74VHC04F EL	INVERTER		01
IC133	XT229A00	IC	TC74VHC00F	NAND		01
IC134	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
IC135	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
IC136	XY537A00	IC	TC74VHC32F(EL)	OR		01
IC137	XR680A00	IC	TC7SH08FU	AND		
IC138	X2163A00	IC	M62023FP	SYSTEM RESET		03
IC139	XR532A00	IC	NJM2904V(TE1)	OP AMP		02
IC140	X2157A00	IC	UPC2918T-E1	REGULATOR +1.8V		03
IC141	XY537A00	IC	TC74VHC32F(EL)	OR		01
IC142	XP226A00	IC	IC-PST591DMT	SYSTEM RESET		03
L101	GE300610	Ferrite Bead	BL02RN1-R62T4			01
-103	GE300610	Ferrite Bead	BL02RN1-R62T4			01
L104	V8143400	Chip Inductance	BLM21R121SKPT			01
-121	V8143400	Chip Inductance	BLM21R121SKPT			01
R101	RD255220	Carbon Resistor (chip)	220.0 0.1 J			01
R105	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
-112	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R114	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R116	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R117	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R120	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R122	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
-128	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R129	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R130	RD259470	Carbon Resistor (chip)	4.7M 0.1 J			01
R131	RD256300	Carbon Resistor (chip)	3.0K 0.1 J			01
R132	RD256200	Carbon Resistor (chip)	2.0K 0.1 J			01
R133	RD259100	Carbon Resistor (chip)	1.0M 0.1 J			01
R135	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
RA101	RE047100	Resistor Array	10KX4			01
-145	RE047100	Resistor Array	10KX4			01
RA146	RE047220	Resistor Array	22KX4			01
RA147	RE047220	Resistor Array	22KX4			01
RA148	RE044680	Resistor Array	68X4			01
RA149	RE044680	Resistor Array	68X4			01
TR101	V3033500	Digital Transistor	DTC143XKA TP			01
X101	VS486900	Quartz Crystal Unit	8.0MHz SMD-49			03
X103	VR870700	Quartz Crystal Unit	10MHz SMD-49			04
*	V9106700	Circuit Board	DA	(XZ021C0)		
	V5274300	Jack Holder			2	01
*	V9074400	Earth Film DA1				
C001	UI557470	Electrolytic Cap.	47.00 35.0V			01
C002	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C003	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
-006	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C101	UU168100	Electrolytic Cap.	100.00 50.0V			01
C102	UU168100	Electrolytic Cap.	100.00 50.0V			01
C103	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C104	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C105	UA353470	Mylar Capacitor	4700P 50V J			01
C106	UA353160	Mylar Capacitor	1600P 50V J			
C107	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-110	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C111	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C112	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C201	UU168100	Electrolytic Cap.	100.00 50.0V			01
C202	UU168100	Electrolytic Cap.	100.00 50.0V			01
C203	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C204	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C205	UA353470	Mylar Capacitor	4700P 50V J			01
C206	UA353160	Mylar Capacitor	1600P 50V J			
C207	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-210	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C211	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C212	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C301	UU168100	Electrolytic Cap.	100.00 50.0V			01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C302	UU168100	Electrolytic Cap.	100.00 50.0V			01
C303	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C304	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C305	UA353470	Mylar Capacitor	4700P 50V J			01
C306	UA353160	Mylar Capacitor	1600P 50V J			01
C307	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-310	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C311	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C312	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C401	UU168100	Electrolytic Cap.	100.00 50.0V			01
C402	UU168100	Electrolytic Cap.	100.00 50.0V			01
C403	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C404	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C405	UA353470	Mylar Capacitor	4700P 50V J			01
C406	UA353160	Mylar Capacitor	1600P 50V J			01
C407	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-410	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C411	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C412	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C501	UU168100	Electrolytic Cap.	100.00 50.0V			01
C502	UU168100	Electrolytic Cap.	100.00 50.0V			01
C503	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C504	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C505	UA353470	Mylar Capacitor	4700P 50V J			01
C506	UA353160	Mylar Capacitor	1600P 50V J			01
C507	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-510	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C511	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C512	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C601	UU168100	Electrolytic Cap.	100.00 50.0V			01
C602	UU168100	Electrolytic Cap.	100.00 50.0V			01
C603	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C604	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C605	UA353470	Mylar Capacitor	4700P 50V J			01
C606	UA353160	Mylar Capacitor	1600P 50V J			01
C607	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-610	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C611	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C612	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C701	UU168100	Electrolytic Cap.	100.00 50.0V			01
C702	UU168100	Electrolytic Cap.	100.00 50.0V			01
C703	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C704	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C705	UA353470	Mylar Capacitor	4700P 50V J			01
C706	UA353160	Mylar Capacitor	1600P 50V J			01
C707	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-710	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C711	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C712	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C801	UU168100	Electrolytic Cap.	100.00 50.0V			01
C802	UU168100	Electrolytic Cap.	100.00 50.0V			01
C803	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C804	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C805	UA353470	Mylar Capacitor	4700P 50V J			01
C806	UA353160	Mylar Capacitor	1600P 50V J			01
C807	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-810	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C811	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C812	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C900	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-902	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C903	UU167100	Electrolytic Cap.	10.00 50.0V			01
C904	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-906	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C907	UU167100	Electrolytic Cap.	10.00 50.0V			01
C908	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C909	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C910	UU167100	Electrolytic Cap.	10.00 50.0V			01
-912	UU167100	Electrolytic Cap.	10.00 50.0V			01
C913	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
-915	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C916	UU167100	Electrolytic Cap.	10.00 50.0V			01
C917	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C918	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C919	UU167100	Electrolytic Cap.	10.00 50.0V			01
-921	UU167100	Electrolytic Cap.	10.00 50.0V			01
C922	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-924	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C925	UU167100	Electrolytic Cap.	10.00 50.0V			01
C926	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C927	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C928	UU167100	Electrolytic Cap.	10.00 50.0V			01
-930	UU167100	Electrolytic Cap.	10.00 50.0V			01
C931	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-933	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C934	UU167100	Electrolytic Cap.	10.00 50.0V			01
C935	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C936	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C937	UU167100	Electrolytic Cap.	10.00 50.0V			01
C938	UU167100	Electrolytic Cap.	10.00 50.0V			01
C939	US135220	Ceramic Capacitor-F (chip)	0.2200 16V Z			01
-942	US135220	Ceramic Capacitor-F (chip)	0.2200 16V Z			01
CN001	VK027300	Wire Trap	52151 14P SE			01
CN901	VU421600	Wire Trap	52151 16P SE			01
D001	VF195600	Diode	11ES4 TA1			01
-004	VF195600	Diode	11ES4 TA1			01
EM001	FZ007070	LC Filter	MTX222MBTBM			01
EM002	FZ006970	LC Filter	MTY223NBTBM			02
-005	FZ006970	LC Filter	MTY223NBTBM			02
EM101	FZ006920	LC Filter	MTB271KBTBM			01
EM102	FZ006920	LC Filter	MTB271KBTBM			01
EM201	FZ006920	LC Filter	MTB271KBTBM			01
EM202	FZ006920	LC Filter	MTB271KBTBM			01
EM301	FZ006920	LC Filter	MTB271KBTBM			01
EM302	FZ006920	LC Filter	MTB271KBTBM			01
EM401	FZ006920	LC Filter	MTB271KBTBM			01
EM402	FZ006920	LC Filter	MTB271KBTBM			01
EM501	FZ006920	LC Filter	MTB271KBTBM			01
EM502	FZ006920	LC Filter	MTB271KBTBM			01
EM601	FZ006920	LC Filter	MTB271KBTBM			01
EM602	FZ006920	LC Filter	MTB271KBTBM			01
EM701	FZ006920	LC Filter	MTB271KBTBM			01
EM702	FZ006920	LC Filter	MTB271KBTBM			01
EM801	FZ006920	LC Filter	MTB271KBTBM			01
EM802	FZ006920	LC Filter	MTB271KBTBM			01
IC101	XF291A00	IC	UPC4570G2	OP AMP		03
IC102	XP844A00	IC	NJM4556AL	OP AMP		02
IC201	XF291A00	IC	UPC4570G2	OP AMP		03
IC202	XP844A00	IC	NJM4556AL	OP AMP		02
IC301	XF291A00	IC	UPC4570G2	OP AMP		03
IC302	XP844A00	IC	NJM4556AL	OP AMP		02
IC401	XF291A00	IC	UPC4570G2	OP AMP		03
IC402	XP844A00	IC	NJM4556AL	OP AMP		02
IC501	XF291A00	IC	UPC4570G2	OP AMP		03
IC502	XP844A00	IC	NJM4556AL	OP AMP		02
IC601	XF291A00	IC	UPC4570G2	OP AMP		03
IC602	XP844A00	IC	NJM4556AL	OP AMP		02
IC701	XF291A00	IC	UPC4570G2	OP AMP		03
IC702	XP844A00	IC	NJM4556AL	OP AMP		02
IC801	XF291A00	IC	UPC4570G2	OP AMP		03
IC802	XP844A00	IC	NJM4556AL	OP AMP		02
IC900	XM182A00	IC	TC7S04F	INVERTER		01
IC901	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC902	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC903	XW029A00	IC	AK4393-VF-E2	DAC		07
-906	XW029A00	IC	AK4393-VF-E2	DAC		07
IC907	XJ598A00	IC	NJM78L05UA	REGULATOR +5V		02
-910	XJ598A00	IC	NJM78L05UA	REGULATOR +5V		02
J001	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
JK101	VS056300	Phone Jack	HLJ7001-01	OMNI OUT 1		01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
JK201	VS056300	Phone Jack	HLJ7001-01	OMNI OUT 2		01
JK301	VS056300	Phone Jack	HLJ7001-01	OMNI OUT 3		01
JK401	VS056300	Phone Jack	HLJ7001-01	OMNI OUT 4		01
JK501	VS056300	Phone Jack	HLJ7001-01	OMNI OUT 5		01
JK601	VS056300	Phone Jack	HLJ7001-01	OMNI OUT 6		01
JK701	VS056300	Phone Jack	HLJ7001-01	OMNI OUT 7		01
JK801	VS056300	Phone Jack	HLJ7001-01	OMNI OUT 8		01
L901	VS740100	Chip Inductance	BLM21B751S 2125			03
-910	VS740100	Chip Inductance	BLM21B751S 2125			03
R001	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R002	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R003	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R004	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R005	HF456220	Carbon Resistor	2.2K 1/4 J			01
R006	HF456220	Carbon Resistor	2.2K 1/4 J			01
R007	HF457100	Carbon Resistor	10.0K 1/4 J			01
R008	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R009	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R010	HF456470	Carbon Resistor	4.7K 1/4 J			01
R011	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R101	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R102	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R104	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R105	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R107	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R108	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R109	HF454390	Carbon Resistor	39.0 1/4 J			01
R110	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R111	HB027100	Metal Film Resistor	10.0K 1/4 F			
R112	HB027100	Metal Film Resistor	10.0K 1/4 F			
R113	V9008100	Metal Film Resistor	11.5K 1/4 D			
R114	HB027100	Metal Film Resistor	10.0K 1/4 F			
R115	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R116	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R117	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R118	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R119	HF454750	Carbon Resistor	75.0 1/4 J			01
R120	HF454750	Carbon Resistor	75.0 1/4 J			01
R121	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R122	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R123	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R124	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R125	HB026390	Metal Film Resistor	3.9K 1/4 F			
R126	HB026390	Metal Film Resistor	3.9K 1/4 F			
R201	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R202	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R204	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R205	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R207	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R208	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R209	HF454390	Carbon Resistor	39.0 1/4 J			01
R210	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R211	HB027100	Metal Film Resistor	10.0K 1/4 F			
R212	HB027100	Metal Film Resistor	10.0K 1/4 F			
R213	V9008100	Metal Film Resistor	11.5K 1/4 D			
R214	HB027100	Metal Film Resistor	10.0K 1/4 F			
R215	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R216	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R217	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R218	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R219	HF454750	Carbon Resistor	75.0 1/4 J			01
R220	HF454750	Carbon Resistor	75.0 1/4 J			01
R221	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R222	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R223	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R224	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R225	HB026390	Metal Film Resistor	3.9K 1/4 F			
R226	HB026390	Metal Film Resistor	3.9K 1/4 F			
R301	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R302	HB027150	Metal Film Resistor	15.0K 1/4 F			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R304	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R305	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R307	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R308	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R309	HF454390	Carbon Resistor	39.0 1/4 J			01
R310	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R311	HB027100	Metal Film Resistor	10.0K 1/4 F			
R312	HB027100	Metal Film Resistor	10.0K 1/4 F			
R313	V9008100	Metal Film Resistor	11.5K 1/4 D			
R314	HB027100	Metal Film Resistor	10.0K 1/4 F			
R315	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R316	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R317	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R318	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R319	HF454750	Carbon Resistor	75.0 1/4 J			01
R320	HF454750	Carbon Resistor	75.0 1/4 J			01
R321	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R322	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R323	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R324	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R325	HB026390	Metal Film Resistor	3.9K 1/4 F			
R326	HB026390	Metal Film Resistor	3.9K 1/4 F			
R401	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R402	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R404	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R405	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R407	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R408	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R409	HF454390	Carbon Resistor	39.0 1/4 J			01
R410	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R411	HB027100	Metal Film Resistor	10.0K 1/4 F			
R412	HB027100	Metal Film Resistor	10.0K 1/4 F			
R413	V9008100	Metal Film Resistor	11.5K 1/4 D			
R414	HB027100	Metal Film Resistor	10.0K 1/4 F			
R415	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R416	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R417	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R418	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R419	HF454750	Carbon Resistor	75.0 1/4 J			01
R420	HF454750	Carbon Resistor	75.0 1/4 J			01
R421	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R422	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R423	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R424	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R425	HB026390	Metal Film Resistor	3.9K 1/4 F			
R426	HB026390	Metal Film Resistor	3.9K 1/4 F			
R501	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R502	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R504	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R505	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R507	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R508	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R509	HF454390	Carbon Resistor	39.0 1/4 J			01
R510	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R511	HB027100	Metal Film Resistor	10.0K 1/4 F			
R512	HB027100	Metal Film Resistor	10.0K 1/4 F			
R513	V9008100	Metal Film Resistor	11.5K 1/4 D			
R514	HB027100	Metal Film Resistor	10.0K 1/4 F			
R515	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R516	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R517	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R518	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R519	HF454750	Carbon Resistor	75.0 1/4 J			01
R520	HF454750	Carbon Resistor	75.0 1/4 J			01
R521	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R522	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R523	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R524	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R525	HB026390	Metal Film Resistor	3.9K 1/4 F			
R526	HB026390	Metal Film Resistor	3.9K 1/4 F			

\*: New Parts

RANK: Japan only



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R601	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R602	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R604	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R605	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R607	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R608	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R609	HF454390	Carbon Resistor	39.0 1/4 J			01
R610	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R611	HB027100	Metal Film Resistor	10.0K 1/4 F			
R612	HB027100	Metal Film Resistor	10.0K 1/4 F			
R613	V9008100	Metal Film Resistor	11.5K 1/4 D			
R614	HB027100	Metal Film Resistor	10.0K 1/4 F			
R615	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R616	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R617	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R618	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R619	HF454750	Carbon Resistor	75.0 1/4 J			01
R620	HF454750	Carbon Resistor	75.0 1/4 J			01
R621	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R622	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R623	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R624	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R625	HB026390	Metal Film Resistor	3.9K 1/4 F			
R626	HB026390	Metal Film Resistor	3.9K 1/4 F			
R701	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R702	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R704	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R705	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R707	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R708	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R709	HF454390	Carbon Resistor	39.0 1/4 J			01
R710	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R711	HB027100	Metal Film Resistor	10.0K 1/4 F			
R712	HB027100	Metal Film Resistor	10.0K 1/4 F			
R713	V9008100	Metal Film Resistor	11.5K 1/4 D			
R714	HB027100	Metal Film Resistor	10.0K 1/4 F			
R715	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R716	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R717	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R718	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R719	HF454750	Carbon Resistor	75.0 1/4 J			01
R720	HF454750	Carbon Resistor	75.0 1/4 J			01
R721	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R722	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R723	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R724	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R725	HB026390	Metal Film Resistor	3.9K 1/4 F			
R726	HB026390	Metal Film Resistor	3.9K 1/4 F			
R801	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R802	HB027150	Metal Film Resistor	15.0K 1/4 F			01
R804	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R805	HB026680	Metal Film Resistor	6.8K 1/4 F			01
R807	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R808	HB026100	Metal Film Resistor	1.0K 1/4 F			01
R809	HF454390	Carbon Resistor	39.0 1/4 J			01
R810	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R811	HB027100	Metal Film Resistor	10.0K 1/4 F			
R812	HB027100	Metal Film Resistor	10.0K 1/4 F			
R813	V9008100	Metal Film Resistor	11.5K 1/4 D			
R814	HB027100	Metal Film Resistor	10.0K 1/4 F			
R815	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R816	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R817	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R818	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R819	HF454750	Carbon Resistor	75.0 1/4 J			01
R820	HF454750	Carbon Resistor	75.0 1/4 J			01
R821	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R822	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R823	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R824	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R825	HB026390	Metal Film Resistor	3.9K 1/4 F			
R826	HB026390	Metal Film Resistor	3.9K 1/4 F			
R901	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-910	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R911	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R912	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
SW101	VN316300	Slide Switch	SSSS2-22-01	+4dB<->+18dB		02
SW201	VN316300	Slide Switch	SSSS2-22-01	+4dB<->+18dB		02
SW301	VN316300	Slide Switch	SSSS2-22-01	+4dB<->+18dB		02
SW401	VN316300	Slide Switch	SSSS2-22-01	+4dB<->+18dB		02
SW501	VN316300	Slide Switch	SSSS2-22-01	+4dB<->+18dB		02
SW601	VN316300	Slide Switch	SSSS2-22-01	+4dB<->+18dB		02
SW701	VN316300	Slide Switch	SSSS2-22-01	+4dB<->+18dB		02
SW801	VN316300	Slide Switch	SSSS2-22-01	+4dB<->+18dB		02
TR001	VJ927100	Transistor	2SC2712 Y			01
TR002	VJ927100	Transistor	2SC2712 Y			01
TR003	VQ395600	Transistor	2SA1052 B,C			01
TR004	VG013300	Transistor	2SB1132 82-390			01
TR101	VK432900	Transistor	2SD1915(F) S,T			01
TR102	VK432900	Transistor	2SD1915(F) S,T			01
TR201	VK432900	Transistor	2SD1915(F) S,T			01
TR202	VK432900	Transistor	2SD1915(F) S,T			01
TR301	VK432900	Transistor	2SD1915(F) S,T			01
TR302	VK432900	Transistor	2SD1915(F) S,T			01
TR401	VK432900	Transistor	2SD1915(F) S,T			01
TR402	VK432900	Transistor	2SD1915(F) S,T			01
TR501	VK432900	Transistor	2SD1915(F) S,T			01
TR502	VK432900	Transistor	2SD1915(F) S,T			01
TR601	VK432900	Transistor	2SD1915(F) S,T			01
TR602	VK432900	Transistor	2SD1915(F) S,T			01
TR701	VK432900	Transistor	2SD1915(F) S,T			01
TR702	VK432900	Transistor	2SD1915(F) S,T			01
TR801	VK432900	Transistor	2SD1915(F) S,T			01
TR802	VK432900	Transistor	2SD1915(F) S,T			01
* V8468900		Circuit Board	DSP	(X2057C0)		
C01	UF017470	Electrolytic Cap. (chip)	47 6.3V			01
C02	UF017470	Electrolytic Cap. (chip)	47 6.3V			01
C03	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
-46	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C47	UF017470	Electrolytic Cap. (chip)	47 6.3V			01
C48	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
-52	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C53	UB445330	Monolithic Ceramic Cap.	F 0.330 16V Z			01
C54	VJ903700	Monolithic Ceramic Cap.	CH 560P 50V J			01
C55	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C56	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C57	UB445330	Monolithic Ceramic Cap.	F 0.330 16V Z			01
C58	UB014220	Monolithic Ceramic Cap.	B 0.022 50V K			01
C59	UF128470	Electrolytic Cap. (chip)	470 10V UUR1A4			02
C60	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
-63	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C64	UB014220	Monolithic Ceramic Cap.	B 0.022 50V K			01
C65	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C66	UF128470	Electrolytic Cap. (chip)	470 10V UUR1A4			02
C67	UB014220	Monolithic Ceramic Cap.	B 0.022 50V K			01
C68	UB014220	Monolithic Ceramic Cap.	B 0.022 50V K			01
C69	UF128470	Electrolytic Cap. (chip)	470 10V UUR1A4			02
C70	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C71	V6200900	Capacitor	1.0000 16V M			01
C72	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
-74	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C75	UB014220	Monolithic Ceramic Cap.	B 0.022 50V K			01
C76	UF128470	Electrolytic Cap. (chip)	470 10V UUR1A4			02
C77	UB014220	Monolithic Ceramic Cap.	B 0.022 50V K			01
C78	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C79	V6200900	Capacitor	1.0000 16V M			01
C80	VJ903700	Monolithic Ceramic Cap.	CH 560P 50V J			01
C81	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
-88	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
C89	UB445330	Monolithic Ceramic Cap.	F 0.330 16V Z		01
C90	UB445330	Monolithic Ceramic Cap.	F 0.330 16V Z		01
C91	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C92	UF118330	Electrolytic Cap. (chip)	330 6.3V UUR0J3		01
C93	VR327300	Mylar Capacitor (chip)	0.0820 16V J		01
C94	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-99	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C100	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-103	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C104	UF038100	Electrolytic Cap. (chip)	100 16V		01
C105	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C106	UF038100	Electrolytic Cap. (chip)	100 16V		01
C107	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-117	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C118	VR328100	Mylar Capacitor (chip)	.00022 50V J		01
C119	VP864400	Mylar Capacitor (chip)	0.0047 16V J		01
C120	VR328100	Mylar Capacitor (chip)	.00022 50V J		01
C121	VP864400	Mylar Capacitor (chip)	0.0047 16V J		01
C122	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-150	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C151	UF038100	Electrolytic Cap. (chip)	100 16V		01
C152	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C153	UF038100	Electrolytic Cap. (chip)	100 16V		01
C154	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-163	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C164	VR328100	Mylar Capacitor (chip)	.00022 50V J		01
C165	VP864400	Mylar Capacitor (chip)	0.0047 16V J		01
C166	VR328100	Mylar Capacitor (chip)	.00022 50V J		01
C167	VP864400	Mylar Capacitor (chip)	0.0047 16V J		01
C168	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-196	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C197	UF038100	Electrolytic Cap. (chip)	100 16V		01
C198	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-202	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C203	VR328100	Mylar Capacitor (chip)	.00022 50V J		01
C204	VP864400	Mylar Capacitor (chip)	0.0047 16V J		01
C205	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-219	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C220	UF038100	Electrolytic Cap. (chip)	100 16V		01
C221	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C222	UF038100	Electrolytic Cap. (chip)	100 16V		01
C223	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-232	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C233	VR328100	Mylar Capacitor (chip)	.00022 50V J		01
C234	VP864400	Mylar Capacitor (chip)	0.0047 16V J		01
C235	VR328100	Mylar Capacitor (chip)	.00022 50V J		01
C236	VP864400	Mylar Capacitor (chip)	0.0047 16V J		01
C237	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-265	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C268	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-272	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C273	VR328100	Mylar Capacitor (chip)	.00022 50V J		01
C274	VP864400	Mylar Capacitor (chip)	0.0047 16V J		01
C275	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-293	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C294	VR328100	Mylar Capacitor (chip)	.00022 50V J		01
C295	VP864400	Mylar Capacitor (chip)	0.0047 16V J		01
C296	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-309	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C401	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-479	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C481	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C482	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C701	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-706	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C801	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
-806	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C851	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C852	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z		01
C853	UB052100	Monolithic Ceramic Cap.	SL 100P 50V J		01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C901	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
-909	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C951	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C952	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C954	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C955	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C961	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
-963	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C964	UF119100	Electrolytic Cap. (chip)	1000 6.3V UUR0J1			02
C965	UF119100	Electrolytic Cap. (chip)	1000 6.3V UUR0J1			02
C971	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C972	UB044100	Monolithic Ceramic Cap.	F 0.010 50V Z			01
C973	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C974	V8878500	Electrolytic Cap. (chip)	150 16V			04
C976	V8878900	Electrolytic Cap. (chip)	330 6.3V			04
C980	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C1001	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
-1019	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C1111	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
-1134	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C1301	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
-1336	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
* CN104	V9152000	Plug	PHEC 80P TE			
* CN105	V9152000	Plug	PHEC 80P TE			
CN801	VQ048500	Connector, FFC	52045 36P TE			02
CN802	VQ048500	Connector, FFC	52045 36P TE			02
* CN803	VQ151900	Connector, FFC	52045 38P TE			
CN804	VP327200	Connector, FFC	52045 30P TE			01
CN805	VO022100	Connector, FFC	52045 40P TE			02
CN901	VQ048500	Connector, FFC	52045 36P TE			02
CN902	VO022100	Connector, FFC	52045 40P TE			02
CN903	VO022100	Connector, FFC	52045 40P TE			02
CN904	VQ048100	Connector, FFC	52045 32P TE			01
CN905	VF667600	Wire Trap	52147 15P TE			01
CN951	VF728200	Wire Trap	52147 10P TE			01
CN952	VK025600	Wire Trap	52147 12P TE			01
CN953	VK025800	Wire Trap	52147 14P TE			01
CN954	VF667700	Wire Trap	52147 17P TE			01
CN955	VJ861600	Wire Trap	52147 16P TE			01
CN956	VF728200	Wire Trap	52147 10P TE			01
CN961	VK025100	Wire Trap	52147 7P TE			01
CN962	VK025700	Wire Trap	52147 13P TE			01
CN963	VJ861600	Wire Trap	52147 16P TE			01
D051	VT332900	Diode	1SS355 TE-17			01
D052	VT332900	Diode	1SS355 TE-17			01
* D961	V9224500	Diode	RB081L-20 TE25			
EM051	FZ006970	LC Filter	MTY223NBTBM			02
EM052	FZ006970	LC Filter	MTY223NBTBM			02
EM101	FZ006970	LC Filter	MTY223NBTBM			02
EM401	FZ006970	LC Filter	MTY223NBTBM			02
EM961	FZ006970	LC Filter	MTY223NBTBM			02
-963	FZ006970	LC Filter	MTY223NBTBM			02
IC001	IS054100	IC	HD74LV541AFPEL	BUFFER		03
IC002	XV242A00	IC	TC74VHCT245AF	TRANSCEIVER		03
-004	XV242A00	IC	TC74VHCT245AF	TRANSCEIVER		03
IC005	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
-009	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
IC010	XU229A00	IC	TC74LVX4245FS	TRANSCEIVER		04
IC011	XU229A00	IC	TC74LVX4245FS	TRANSCEIVER		04
IC012	XS775A00	IC	TC7SH04FU	INVERTER		01
IC013	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
-020	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
IC021	XU229A00	IC	TC74LVX4245FS	TRANSCEIVER		04
IC022	XU229A00	IC	TC74LVX4245FS	TRANSCEIVER		04
IC023	XV242A00	IC	TC74VHCT245AF	TRANSCEIVER		03
-027	XV242A00	IC	TC74VHCT245AF	TRANSCEIVER		03
IC028	XU229A00	IC	TC74LVX4245FS	TRANSCEIVER		04
-031	XU229A00	IC	TC74LVX4245FS	TRANSCEIVER		04
IC032	XY537A00	IC	TC74VHC32F(EL)	OR		01
IC033	XN241A00	IC	TC74HC32AF	OR		

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
IC051	XW633A00	IC	TC7SH32FU(TE85L)		01
IC052	XT487A00	IC	TC74VHC245F	OR	03
-054	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
IC055	XV242A00	IC	TC74VHCT245AF	TRANSCEIVER	03
IC056	XZ334A00	IC	XCS40-3PQ240C	FPGA	22
IC057	XW876A00	IC	TC74VHC14F-EL	INVERTER	01
IC058	XT229A00	IC	TC74VHC00F	NAND	01
IC059	XW422A00	IC	M51953AFP	SYSTEM RESET	01
IC060	IS405300	IC	HD74LV4053AFPEL	MULTIPLEXER	02
IC061	XV064A00	IC	TLC2932IPWR	PLL	06
IC062	IS405300	IC	HD74LV4053AFPEL	MULTIPLEXER	02
IC063	XV064A00	IC	TLC2932IPWR	PLL	06
IC064	XG948E00	IC	YM3436DK	DIR2	11
IC065	X2855A00	IC	DSPV212	PROM	11
IC066	XS775A00	IC	TC7SH04FU	INVERTER	01
IC067	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
-069	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
IC070	XY961A00	IC	74VHC541SJX	BUFFER	03
IC071	XY961A00	IC	74VHC541SJX	BUFFER	03
IC072	XW876A00	IC	TC74VHC14F-EL	INVERTER	01
IC073	XW422A00	IC	M51953AFP	SYSTEM RESET	01
IC101	XW874A00	IC	HY57V161610DTC-8	SDRAM 16M	08
-104	XW874A00	IC	HY57V161610DTC-8	SDRAM 16M	08
IC101	X2360A00	IC	K4S161622D-TC80	SDRAM 16M	
-104	X2360A00	IC	K4S161622D-TC80	SDRAM 16M	
* IC101	X3482A00	IC	MSM56V16160F-8	SDRAM 16M	
-104	X3482A00	IC	MSM56V16160F-8	SDRAM 16M	
IC105	XW875A00	IC	TC74VHC74F-EL	D-FF	01
IC106	XY961A00	IC	74VHC541SJX	BUFFER	03
IC107	XW874A00	IC	HY57V161610DTC-8	SDRAM 16M	08
-109	XW874A00	IC	HY57V161610DTC-8	SDRAM 16M	08
IC107	X2360A00	IC	K4S161622D-TC80	SDRAM 16M	
-109	X2360A00	IC	K4S161622D-TC80	SDRAM 16M	
* IC107	X3482A00	IC	MSM56V16160F-8	SDRAM 16M	
-109	X3482A00	IC	MSM56V16160F-8	SDRAM 16M	
IC120	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
IC401	XV077B00	IC	MSM514260E-60JS	DRAM 4M	
-408	XV077B00	IC	MSM514260E-60JS	DRAM 4M	
IC409	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
IC410	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
IC412	XT812A00	IC	TC74VHC11F(EL)	AND	01
IC413	XT812A00	IC	TC74VHC11F(EL)	AND	01
IC601	X2162A00	IC	MBCG61594-128	ATSC2	11
-604	X2162A00	IC	MBCG61594-128	ATSC2	11
IC605	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
-607	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
IC608	XT475A00	IC	TC74VHC157F(EL)	MULTIPLEXER	02
-611	XT475A00	IC	TC74VHC157F(EL)	MULTIPLEXER	02
IC612	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
-615	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
IC651	X2162A00	IC	MBCG61594-128	ATSC2	11
-654	X2162A00	IC	MBCG61594-128	ATSC2	11
IC655	XT475A00	IC	TC74VHC157F(EL)	MULTIPLEXER	02
-658	XT475A00	IC	TC74VHC157F(EL)	MULTIPLEXER	02
IC701	IS404010	IC	SN74LV4040ANSR	COUNTER	02
IC702	XM332A00	IC	TC74VHC04F EL	INVERTER	01
IC703	XU240A00	IC	YM6604C-S	ACIA	11
IC704	XT229A00	IC	TC74VHC00F	NAND	01
IC705	XW313A00	IC	TC74VHC125F	BUFFER	02
IC801	XV242A00	IC	TC74VHCT245AF	TRANSCEIVER	03
IC802	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
IC803	XY961A00	IC	74VHC541SJX	BUFFER	03
IC804	XV242A00	IC	TC74VHCT245AF	TRANSCEIVER	03
IC805	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
IC806	XY961A00	IC	74VHC541SJX	BUFFER	03
IC851	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
IC852	XY961A00	IC	74VHC541SJX	BUFFER	03
IC901	XT487A00	IC	TC74VHC245F	TRANSCEIVER	03
IC902	XV242A00	IC	TC74VHCT245AF	TRANSCEIVER	03
IC903	XY961A00	IC	74VHC541SJX	BUFFER	03

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
IC904	XT800A00	IC	TC74VHC244F	BUFFER		03
IC905	XT800A00	IC	TC74VHC244F	BUFFER		03
IC906	XV242A00	IC	TC74VHCT245AF	TRANSCEIVER		03
IC907	XV242A00	IC	TC74VHCT245AF	TRANSCEIVER		03
IC908	XY961A00	IC	74VHC541SJX	BUFFER		03
IC909	XY961A00	IC	74VHC541SJX	BUFFER		03
IC951	XY961A00	IC	74VHC541SJX	BUFFER		03
IC952	XY961A00	IC	74VHC541SJX	BUFFER		03
IC953	XV242A00	IC	TC74VHCT245AF	TRANSCEIVER		03
IC955	XY537A00	IC	TC74VHC32F(EL)	OR		01
* IC961	X2789A00	IC	LM2678SX-ADJ	DC-DC CONVERTER		
ICA01	XV988A00	IC	YSS910-S	DSP6		10
-04	XV988A00	IC	YSS910-S	DSP6		10
ICB01	XZ693A00	IC	YSS919-H	DSP7		15
-09	XZ693A00	IC	YSS919-H	DSP7		15
L51	GE300610	Ferrite Bead	BL02RN1-R62T4			01
-55	GE300610	Ferrite Bead	BL02RN1-R62T4			01
L56	V8143400	Chip Inductance	BLM21R121SKPT			01
-58	V8143400	Chip Inductance	BLM21R121SKPT			01
L60	V8143400	Chip Inductance	BLM21R121SKPT			01
L62	V8143400	Chip Inductance	BLM21R121SKPT			01
L64	V8143400	Chip Inductance	BLM21R121SKPT			01
L66	GE300610	Ferrite Bead	BL02RN1-R62T4			01
L67	V8143400	Chip Inductance	BLM21R121SKPT			01
-99	V8143400	Chip Inductance	BLM21R121SKPT			01
L101	V8143400	Chip Inductance	BLM21R121SKPT			01
L401	V8143400	Chip Inductance	BLM21R121SKPT			01
L801	V8143400	Chip Inductance	BLM21R121SKPT			01
-805	V8143400	Chip Inductance	BLM21R121SKPT			01
L809	V8143400	Chip Inductance	BLM21R121SKPT			01
-813	V8143400	Chip Inductance	BLM21R121SKPT			01
L816	V8143400	Chip Inductance	BLM21R121SKPT			01
-820	V8143400	Chip Inductance	BLM21R121SKPT			01
L852	V8143400	Chip Inductance	BLM21R121SKPT			01
-856	V8143400	Chip Inductance	BLM21R121SKPT			01
L859	V8143400	Chip Inductance	BLM21R121SKPT			01
-873	V8143400	Chip Inductance	BLM21R121SKPT			01
L901	V8143400	Chip Inductance	BLM21R121SKPT			01
-921	V8143400	Chip Inductance	BLM21R121SKPT			01
L923	V8143400	Chip Inductance	BLM21R121SKPT			01
-945	V8143400	Chip Inductance	BLM21R121SKPT			01
L951	V8143400	Chip Inductance	BLM21R121SKPT			01
-976	V8143400	Chip Inductance	BLM21R121SKPT			01
* L991	V9224400	Coil	CDRH127-270MC 27uH			
* L994	V9224400	Coil	CDRH127-270MC 27uH			
R01	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R02	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
-11	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R51	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
-53	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R54	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R55	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R56	RD255150	Carbon Resistor (chip)	150.0 0.1 J			01
R57	RD256150	Carbon Resistor (chip)	1.5K 0.1 J			01
R58	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
-60	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
R61	VI195300	Metal Film Resistor (chip)	1.5K 1/10 D			01
R62	VI195500	Metal Film Resistor (chip)	1.8K 1/10 D			01
R63	VI193700	Metal Film Resistor (chip)	330.0 1/10 D			01
R64	VI194900	Metal Film Resistor (chip)	1.0K 1/10 D			01
R65	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
R66	RD256150	Carbon Resistor (chip)	1.5K 0.1 J			01
R67	RD255150	Carbon Resistor (chip)	150.0 0.1 J			01
R68	VI195300	Metal Film Resistor (chip)	1.5K 1/10 D			01
R69	VI195500	Metal Film Resistor (chip)	1.8K 1/10 D			01
R70	VI193700	Metal Film Resistor (chip)	330.0 1/10 D			01
R71	VI196000	Metal Film Resistor (chip)	3.0K 1/10 D			01
R72	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
R73	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
R74	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R75	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R76	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R77	RD256470	Carbon Resistor (chip)	4.7K 0.1 J			01
R78	V1194600	Metal Film Resistor (chip)	750.0 1/10 D			01
R79	V1196100	Metal Film Resistor (chip)	3.3K 1/10 D			01
R80	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R81	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R101	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
-104	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R105	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R106	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R107	V1195700	Metal Film Resistor (chip)	2.2K 1/10 D			01
R108	V1195700	Metal Film Resistor (chip)	2.2K 1/10 D			01
R109	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R110	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R111	V1195700	Metal Film Resistor (chip)	2.2K 1/10 D			01
R112	V1195700	Metal Film Resistor (chip)	2.2K 1/10 D			01
R113	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R114	V1195700	Metal Film Resistor (chip)	2.2K 1/10 D			01
R115	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R116	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R117	V1195700	Metal Film Resistor (chip)	2.2K 1/10 D			01
R118	V1195700	Metal Film Resistor (chip)	2.2K 1/10 D			01
R119	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R120	V1195700	Metal Film Resistor (chip)	2.2K 1/10 D			01
R121	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R122	V1195700	Metal Film Resistor (chip)	2.2K 1/10 D			01
R159	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R161	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R163	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R165	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R401	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
-404	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R501	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
-503	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R701	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
-703	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R806	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
-808	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R814	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R815	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R851	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R857	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R961	V1194900	Metal Film Resistor (chip)	1.0K 1/10 D			01
R962	V1194500	Metal Film Resistor (chip)	680.0 1/10 D			01
R963	V1193900	Metal Film Resistor (chip)	390.0 1/10 D			01
R981	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
RA001	RE047100	Resistor Array	10KX4			01
-043	RE047100	Resistor Array	10KX4			01
RA051	RE047100	Resistor Array	10KX4			01
-064	RE047100	Resistor Array	10KX4			01
RA701	RE047100	Resistor Array	10KX4			01
RA702	RE047100	Resistor Array	10KX4			01
RA801	RE047100	Resistor Array	10KX4			01
-807	RE047100	Resistor Array	10KX4			01
RA851	RE047100	Resistor Array	10KX4			01
-854	RE047100	Resistor Array	10KX4			01
RA857	RE044680	Resistor Array	68X4			01
-860	RE044680	Resistor Array	68X4			01
RA901	RE044220	Resistor Array	22X4			01
RA902	RE044220	Resistor Array	22X4			01
RA903	RE047100	Resistor Array	10KX4			01
-907	RE047100	Resistor Array	10KX4			01
RA908	RE044220	Resistor Array	22X4			01
RA909	RE044220	Resistor Array	22X4			01
RA910	RE047100	Resistor Array	10KX4			01
-912	RE047100	Resistor Array	10KX4			01
RA951	RE047100	Resistor Array	10KX4			01
-955	RE047100	Resistor Array	10KX4			01
SO065	VV047100	IC Socket	DICF-8CS-E			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
X051	V4552100	Quartz Crystal Unit	45.1584MHz DSO751S			05
X052	V4552200	Quartz Crystal Unit	49.152MHz DSO751S			05
X101	VZ156100	Quartz Crystal Unit	60MHz DSO751S			06
X401	VZ156100	Quartz Crystal Unit	60MHz DSO751S			06
*	V8626900	Circuit Board	FD1	(X2053B0)		
	EC030030	Flat Head Screw	3.0X6 MFZN2BL		32	01
*	V7987200	Fader Angle	1		2	
C101	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
-140	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C141	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C142	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C143	UF128220	Electrolytic Cap. (chip)	220 10V UUR1A2			01
C144	UF027470	Electrolytic Cap. (chip)	47 10V			01
C145	UF037470	Electrolytic Cap. (chip)	47 16V			01
C146	UB052100	Monolithic Ceramic Cap.	SL 100P 50V J			01
-149	UB052100	Monolithic Ceramic Cap.	SL 100P 50V J			01
C150	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C151	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C152	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C153	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C154	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C155	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C156	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C157	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C158	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C159	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C160	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C161	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C162	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C163	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C164	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C165	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C166	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C167	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C168	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C169	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C170	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C171	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C172	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C173	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C174	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C175	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C176	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C177	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C178	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C179	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C180	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C181	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C182	UF037100	Electrolytic Cap. (chip)	10 16V			01
C183	VS029500	Mylar Capacitor (chip)	.00047 50V G			01
C184	VS029500	Mylar Capacitor (chip)	.00047 50V G			01
C185	UB051470	Monolithic Ceramic Cap.	SL 47P 50V J			01
C186	UF037100	Electrolytic Cap. (chip)	10 16V			01
C187	VS029500	Mylar Capacitor (chip)	.00047 50V G			01
C188	VS029500	Mylar Capacitor (chip)	.00047 50V G			01
C189	UB051470	Monolithic Ceramic Cap.	SL 47P 50V J			01
C190	UB051470	Monolithic Ceramic Cap.	SL 47P 50V J			01
C191	UB013150	Monolithic Ceramic Cap.	B 1500P 50V K			01
-193	UB013150	Monolithic Ceramic Cap.	B 1500P 50V K			01
C194	UF037470	Electrolytic Cap. (chip)	47 16V			01
C195	UB052470	Monolithic Ceramic Cap.	SL 470P 50V J			01
C212	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C213	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
CN101	VQ045100	Connector, FFC	52044 21P SE			02
CN102	VI879400	Cable Holder	51048 16P TE			01
CN103	VQ044900	Connector, FFC	52044 19P SE			01
D101	VT332900	Diode	1SS355 TE-17			01
-103	VT332900	Diode	1SS355 TE-17			01
DA101	VV556300	Diode Array	DAN217 0.3A X2			01

\*: New Parts

RANK: Japan only



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
-104	VV556300	Diode Array	DAN217 0.3A X2			01
DA121	VV556300	Diode Array	DAN217 0.3A X2			01
DA122	VV556300	Diode Array	DAN217 0.3A X2			01
DA123	V8974000	Zener Diode	NNCD6.2MF 6.2V SMD			
-138	V8974000	Zener Diode	NNCD6.2MF 6.2V SMD			
EM101	FZ006970	LC Filter	MTY223NBTBM			02
-107	FZ006970	LC Filter	MTY223NBTBM			02
IC101	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
-103	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC104	XY198A00	IC	MM74HC273SJX	D-FF		03
-109	XY198A00	IC	MM74HC273SJX	D-FF		03
IC110	XS790A00	IC	TC74HC4052AF	MULTIPLEXER		02
IC111	XS790A00	IC	TC74HC4052AF	MULTIPLEXER		02
IC112	XR532A00	IC	NJM2904V(TE1)	OP AMP		02
IC113	XR532A00	IC	NJM2904V(TE1)	OP AMP		02
IC114	XW618A00	IC	TA7291F	MOTOR DRIVER		02
-129	XW618A00	IC	TA7291F	MOTOR DRIVER		02
IC130	XH610A00	IC	HD74LS06FPEL	INVERTER		02
-132	XH610A00	IC	HD74LS06FPEL	INVERTER		02
IC133	XT618A00	IC	NJM2068V(TE1)	OP AMP		01
-136	XT618A00	IC	NJM2068V(TE1)	OP AMP		01
IC137	XR532A00	IC	NJM2904V(TE1)	OP AMP		02
IC138	XW105A00	IC	MM74HC00SJX	NAND		01
IC139	IS405100	IC	HD74LV4051AFPEL	MULTIPLEXER		02
IC140	IS405100	IC	HD74LV4051AFPEL	MULTIPLEXER		02
R101	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-104	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R105	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R106	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R107	RD256680	Carbon Resistor (chip)	680.0 0.1 J			01
R108	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R109	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R110	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R111	RD256680	Carbon Resistor (chip)	680.0 0.1 J			01
R112	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R113	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R114	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R115	RD256680	Carbon Resistor (chip)	680.0 0.1 J			01
R116	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R117	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R118	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R119	RD256680	Carbon Resistor (chip)	680.0 0.1 J			01
R120	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R121	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R122	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R123	RD256680	Carbon Resistor (chip)	680.0 0.1 J			01
R124	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R125	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R126	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R127	RD256680	Carbon Resistor (chip)	680.0 0.1 J			01
R128	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R129	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R130	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R131	RD256680	Carbon Resistor (chip)	680.0 0.1 J			01
R132	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R133	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R134	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R135	RD256680	Carbon Resistor (chip)	680.0 0.1 J			01
R136	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R137	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R138	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R139	RD256680	Carbon Resistor (chip)	680.0 0.1 J			01
R140	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R141	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R142	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R143	RD256680	Carbon Resistor (chip)	680.0 0.1 J			01
R144	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R145	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R146	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R147	RD256680	Carbon Resistor (chip)	680.0 0.1 J			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R148	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R149	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R150	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R151	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R152	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R153	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R154	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R155	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R156	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R157	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R158	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R159	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R160	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R161	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R162	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R163	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R164	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R165	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R166	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R167	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R168	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R169	RD256390	Carbon Resistor (chip)	3.9K 0.1 J			01
R170	RD256160	Carbon Resistor (chip)	1.6K 0.1 J			01
R171	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R172	RD257120	Carbon Resistor (chip)	12.0K 0.1 J			01
R173	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R174	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R175	RD256180	Carbon Resistor (chip)	1.8K 0.1 J			01
R176	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R177	RD257750	Carbon Resistor (chip)	75.0K 0.1 J			01
R178	RD256150	Carbon Resistor (chip)	1.5K 0.1 J			01
R179	RD258150	Carbon Resistor (chip)	150.0K 0.1 J			01
R180	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
R181	RD256330	Carbon Resistor (chip)	3.3K 0.1 J			01
R182	RD256330	Carbon Resistor (chip)	3.3K 0.1 J			01
R183	RD257240	Carbon Resistor (chip)	24.0K 0.1 J			01
R184	RD256180	Carbon Resistor (chip)	1.8K 0.1 J			01
R185	RD258130	Carbon Resistor (chip)	130.0K 0.1 J			01
R186	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
-188	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R189	RD257200	Carbon Resistor (chip)	20.0K 0.1 J			01
R190	RD257200	Carbon Resistor (chip)	20.0K 0.1 J			01
R191	RD257150	Carbon Resistor (chip)	15.0K 0.1 J			01
R192	RD257150	Carbon Resistor (chip)	15.0K 0.1 J			01
R193	RD258330	Carbon Resistor (chip)	330.0K 0.1 J			01
R194	RD256220	Carbon Resistor (chip)	2.2K 0.1 J			01
R195	RD256910	Carbon Resistor (chip)	9.1K 0.1 J			01
R196	RD257560	Carbon Resistor (chip)	56.0K 0.1 J			01
R197	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R198	RD257560	Carbon Resistor (chip)	56.0K 0.1 J			01
R199	RD255150	Carbon Resistor (chip)	150.0 0.1 J			01
R200	RD257240	Carbon Resistor (chip)	24.0K 0.1 J			01
-215	RD257240	Carbon Resistor (chip)	24.0K 0.1 J			01
R216	RD258150	Carbon Resistor (chip)	150.0K 0.1 J			01
-231	RD258150	Carbon Resistor (chip)	150.0K 0.1 J			01
RA101	RE047100	Resistor Array	10KX4			01
-106	RE047100	Resistor Array	10KX4			01
VR101	V6226100	Slide Pot., Motor Drive	B10K	1 fader		09
VR102	V6226100	Slide Pot., Motor Drive	B10K	2 fader		09
VR103	V6226100	Slide Pot., Motor Drive	B10K	3 fader		09
VR104	V6226100	Slide Pot., Motor Drive	B10K	4 fader		09
VR105	V6226100	Slide Pot., Motor Drive	B10K	5 fader		09
VR106	V6226100	Slide Pot., Motor Drive	B10K	6 fader		09
VR107	V6226100	Slide Pot., Motor Drive	B10K	7 fader		09
VR108	V6226100	Slide Pot., Motor Drive	B10K	8 fader		09
VR109	V6226100	Slide Pot., Motor Drive	B10K	9 fader		09
VR110	V6226100	Slide Pot., Motor Drive	B10K	10 fader		09
VR111	V6226100	Slide Pot., Motor Drive	B10K	11 fader		09
VR112	V6226100	Slide Pot., Motor Drive	B10K	12 fader		09
VR113	V6226100	Slide Pot., Motor Drive	B10K	13 fader		09

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
VR114	V6226100	Slide Pot., Motor Drive	B10K	14 fader		09
VR115	V6226100	Slide Pot., Motor Drive	B10K	15 fader		09
VR116	V6226100	Slide Pot., Motor Drive	B10K	16 fader		09
* W102	V2016100	Jumper Wire	FVP=2.0C26SB16-570			
ZD101	VU171800	Zener Diode	UDZ 4.7BTE-17 4.7V			01
*	V8627000	Circuit Board	FD2	(X2054B0)		
	EC030030	Flat Head Screw	3.0X6 MFZN2BL		18	01
*	V7987300	Fader Angle	2		2	
C101	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
-129	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
C130	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C131	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C132	UF128220	Electrolytic Cap. (chip)	220 10V UUR1A2			01
C133	UF027470	Electrolytic Cap. (chip)	47 10V			01
C134	UF037470	Electrolytic Cap. (chip)	47 16V			01
C135	UB052100	Monolithic Ceramic Cap.	SL 100P 50V J			01
-137	UB052100	Monolithic Ceramic Cap.	SL 100P 50V J			01
C138	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C139	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C140	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C141	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C142	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C143	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C144	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C145	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C146	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C147	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C148	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C149	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C150	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C151	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C152	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C153	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C154	UF138220	Electrolytic Cap. (chip)	220 16V UUR1C2			01
C155	UF046470	Electrolytic Cap. (chip)	4.7 25V			01
C156	UF037100	Electrolytic Cap. (chip)	10 16V			01
C157	VS029500	Mylar Capacitor (chip)	.00047 50V G			01
C158	VS029500	Mylar Capacitor (chip)	.00047 50V G			01
C159	UB051470	Monolithic Ceramic Cap.	SL 47P 50V J			01
C160	UF037100	Electrolytic Cap. (chip)	10 16V			01
C161	VS029500	Mylar Capacitor (chip)	.00047 50V G			01
C162	VS029500	Mylar Capacitor (chip)	.00047 50V G			01
C163	UB051470	Monolithic Ceramic Cap.	SL 47P 50V J			01
C164	UB051470	Monolithic Ceramic Cap.	SL 47P 50V J			01
C165	UB013150	Monolithic Ceramic Cap.	B 1500P 50V K			01
-167	UB013150	Monolithic Ceramic Cap.	B 1500P 50V K			01
C168	UF037470	Electrolytic Cap. (chip)	47 16V			01
C169	UB052470	Monolithic Ceramic Cap.	SL 470P 50V J			01
CN101	VQ046500	Connector, FFC	52044 36P SE			01
CN102	V1879000	Cable Holder	51048 12P TE			01
D101	VT332900	Diode	1SS355 TE-17			01
-103	VT332900	Diode	1SS355 TE-17			01
DA101	VV556300	Diode Array	DAN217 0.3A X2			01
-105	VV556300	Diode Array	DAN217 0.3A X2			01
DA115	V8974000	Zener Diode	NNCD6.2MF 6.2V SMD			
-123	V8974000	Zener Diode	NNCD6.2MF 6.2V SMD			
EM101	FZ006970	LC Filter	MTY223NBTBM			02
-105	FZ006970	LC Filter	MTY223NBTBM			02
IC101	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
-103	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC104	XY198A00	IC	MM74HC273SJX	D-FF		03
-107	XY198A00	IC	MM74HC273SJX	D-FF		03
IC108	XS790A00	IC	TC74HC4052AF	MULTIPLEXER		02
IC109	XR532A00	IC	NJM2904V(Te1)	OP AMP		02
IC110	XR532A00	IC	NJM2904V(Te1)	OP AMP		02
IC111	XW618A00	IC	TA7291F	MOTOR DRIVER		02
-119	XW618A00	IC	TA7291F	MOTOR DRIVER		02
IC120	XH610A00	IC	HD74LS06FPEL	INVERTER		02
IC121	XH610A00	IC	HD74LS06FPEL	INVERTER		02

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
IC122	XT618A00	IC	NJM2068V(Te1)	OP AMP		01
-125	XT618A00	IC	NJM2068V(Te1)	OP AMP		01
IC126	XR532A00	IC	NJM2904V(Te1)	OP AMP		02
IC127	XW105A00	IC	MM74HC00SJX	NAND		01
IC128	IS405100	IC	HD74LV4051AFPEL	MULTIPLEXER		02
IC129	IS405100	IC	HD74LV4051AFPEL	MULTIPLEXER		02
R101	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-103	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R104	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R105	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R106	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R107	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R108	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R109	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R110	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R111	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R112	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R113	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R114	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R115	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R116	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R117	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R118	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R119	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R120	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R121	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R122	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R123	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R124	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R125	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R126	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R127	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R128	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R129	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R130	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R131	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R132	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R133	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R134	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R135	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R136	VC756300	Metal Oxide Film Resistor	10.0 2W J			01
R137	RD256680	Carbon Resistor (chip)	6.8K 0.1 J			01
R138	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R139	RD155100	Carbon Resistor (chip)	100.0 1/4 J			01
R140	RD256390	Carbon Resistor (chip)	3.9K 0.1 J			01
R141	RD256160	Carbon Resistor (chip)	1.6K 0.1 J			01
R142	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R143	RD257120	Carbon Resistor (chip)	12.0K 0.1 J			01
R144	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R145	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R146	RD256180	Carbon Resistor (chip)	1.8K 0.1 J			01
R147	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R148	RD257750	Carbon Resistor (chip)	75.0K 0.1 J			01
R149	RD256150	Carbon Resistor (chip)	1.5K 0.1 J			01
R150	RD258150	Carbon Resistor (chip)	150.0K 0.1 J			01
R151	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
R152	RD256330	Carbon Resistor (chip)	3.3K 0.1 J			01
R153	RD256330	Carbon Resistor (chip)	3.3K 0.1 J			01
R154	RD257240	Carbon Resistor (chip)	24.0K 0.1 J			01
R155	RD256180	Carbon Resistor (chip)	1.8K 0.1 J			01
R156	RD258130	Carbon Resistor (chip)	130.0K 0.1 J			01
R157	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
-159	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R160	RD257200	Carbon Resistor (chip)	20.0K 0.1 J			01
R161	RD257200	Carbon Resistor (chip)	20.0K 0.1 J			01
R162	RD257150	Carbon Resistor (chip)	15.0K 0.1 J			01
R163	RD257150	Carbon Resistor (chip)	15.0K 0.1 J			01
R164	RD258330	Carbon Resistor (chip)	330.0K 0.1 J			01
R165	RD256220	Carbon Resistor (chip)	2.2K 0.1 J			01
R166	RD256910	Carbon Resistor (chip)	9.1K 0.1 J			01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R167	RD257560	Carbon Resistor (chip)	56.0K 0.1 J			01
R168	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R169	RD257560	Carbon Resistor (chip)	56.0K 0.1 J			01
R170	RD255150	Carbon Resistor (chip)	150.0 0.1 J			01
R171	RD257240	Carbon Resistor (chip)	24.0K 0.1 J			01
-179	RD257240	Carbon Resistor (chip)	24.0K 0.1 J			01
R180	RD258150	Carbon Resistor (chip)	150.0K 0.1 J			01
-188	RD258150	Carbon Resistor (chip)	150.0K 0.1 J			01
RA101	RE047100	Resistor Array	10KX4			01
-106	RE047100	Resistor Array	10KX4			01
VR101	V6226100	Slide Pot., Motor Drive	B10K	17 fader		09
VR102	V6226100	Slide Pot., Motor Drive	B10K	18 fader		09
VR103	V6226100	Slide Pot., Motor Drive	B10K	19 fader		09
VR104	V6226100	Slide Pot., Motor Drive	B10K	20 fader		09
VR105	V6226100	Slide Pot., Motor Drive	B10K	21 fader		09
VR106	V6226100	Slide Pot., Motor Drive	B10K	22 fader		09
VR107	V6226100	Slide Pot., Motor Drive	B10K	23 fader		09
VR108	V6226100	Slide Pot., Motor Drive	B10K	24 fader		09
VR109	V6226100	Slide Pot., Motor Drive	B10K	STEREO fader		09
* W102	V8964400	Jumper Wire	FVP=2.0C26SB12-440			
ZD101	VU171800	Zener Diode	UDZ 4.7BTE-17 4.7V			01
*	V8629100	Circuit Board	JK1 (JKCOM)	(V846900)(X2058B0)		
*	AAX34460	Circuit Board	JK2 1/2 (JKCOM)	(V862920)(X2058B0)		
*	AAX34470	Circuit Board	JK2 2/2 (JKCOM)	(V862920)(X2058B0)		
*	V9401200	Earth Film JK1				
C28	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
-31	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C001	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C002	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C003	UF037220	Electrolytic Cap. (chip)	22 16V			01
C004	UF037220	Electrolytic Cap. (chip)	22 16V			01
C005	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C006	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-009	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C010	V9074200	Mylar Capacitor (chip)	0.15 50V J			
-012	V9074200	Mylar Capacitor (chip)	0.15 50V J			
C013	VS026900	Mylar Capacitor (chip)	0.0039 16V G			01
-015	VS026900	Mylar Capacitor (chip)	0.0039 16V G			01
C016	UF066100	Electrolytic Cap. (chip)	1 50V			01
-018	UF066100	Electrolytic Cap. (chip)	1 50V			01
C019	UB446100	Ceramic Capacitor-F (chip)	F 1.0 16V Z			01
-021	UB446100	Ceramic Capacitor-F (chip)	F 1.0 16V Z			01
C022	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-024	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C025	UF066100	Electrolytic Cap. (chip)	1 50V			01
-027	UF066100	Electrolytic Cap. (chip)	1 50V			01
C028	V6490000	Monolithic Ceramic Cap.	1.000 25V Z			01
-030	V6490000	Monolithic Ceramic Cap.	1.000 25V Z			01
C101	UF066100	Electrolytic Cap. (chip)	1 50V			01
-103	UF066100	Electrolytic Cap. (chip)	1 50V			01
C104	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-109	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C110	UF066100	Electrolytic Cap. (chip)	1 50V			01
-112	UF066100	Electrolytic Cap. (chip)	1 50V			01
C113	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-119	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C120	US062100	Ceramic Capacitor-SL(chip)	100P 50V J			01
C121	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-202	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C203	US061100	Ceramic Capacitor-CH(chip)	10P 50V D			01
C204	US061100	Ceramic Capacitor-CH(chip)	10P 50V D			01
C205	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C206	US062680	Ceramic Capacitor-SL(chip)	680P 50V J			01
C207	UF037100	Electrolytic Cap. (chip)	10 16V			01
C208	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-210	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C211	US061330	Ceramic Capacitor-CH(chip)	33P 50V J			01
C212	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C213	UF037100	Electrolytic Cap. (chip)	10 16V			01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C214	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C215	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C301	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C302	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C303	UR896100	Electrolytic Cap.	1.0 100.0V			01
C304	US062100	Ceramic Capacitor-SL(chip)	100P 50V J			01
C305	US062100	Ceramic Capacitor-SL(chip)	100P 50V J			01
C306	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C307	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C308	UF167470	Electrolytic Cap. (chip)	47 50V UUR1H4			01
C309	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-312	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C313	UF037100	Electrolytic Cap. (chip)	10 16V			01
C314	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C315	US062100	Ceramic Capacitor-SL(chip)	100P 50V J			01
C316	UR896100	Electrolytic Cap.	1.0 100.0V			01
C401	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-408	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C451	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-455	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C456	UF118330	Electrolytic Cap. (chip)	330 6.3V UUR0J3			01
C457	UF047100	Electrolytic Cap. (chip)	10 25V			01
C458	UF047100	Electrolytic Cap. (chip)	10 25V			01
C459	UF037100	Electrolytic Cap. (chip)	10 16V			01
C460	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-467	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C501	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-505	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C601	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-605	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C701	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-703	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C801	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-805	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C901	UF118330	Electrolytic Cap. (chip)	330 6.3V UUR0J3			01
C902	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-915	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
CN201	V3671200	USB Jack	4P TE	TO HOST USB		03
CN451	VQ048500	Connector, FFC	52045 36P TE			02
CN452	VQ022100	Connector, FFC	52045 40P TE			02
CN453	VK025500	Wire Trap	52147 11P TE			01
CN501	V4158600	Connector	230R(SCSI) 68P SE	CASCADE IN		06
CN601	V4158600	Connector	230R(SCSI) 68P SE	CASCADE OUT		06
CN801	VR147400	D-sub Connector	JBY 25P SE	CONTROL		05
CN802	VF728200	Wire Trap	52147 10P TE			01
CN803	VK025300	Wire Trap	52147 9P TE			01
CN804	VF728200	Wire Trap	52147 10P TE			01
CN805	VK025300	Wire Trap	52147 9P TE			01
CN806	VR336300	D-Sub Connector	17LE 15P SE	METER (from MB02R96)		04
CN901	VQ022100	Connector, FFC	52045 40P TE			02
CN902	VK025600	Wire Trap	52147 12P TE			01
CN903	VQ048100	Connector, FFC	52045 32P TE			01
CN904	VF667600	Wire Trap	52147 15P TE			01
D301	VT332900	Diode	1SS355 TE-17			01
D701	VT332900	Diode	1SS355 TE-17			01
DA001	VV556300	Diode Array	DAN217 0.3A X2			01
DA101	VV556300	Diode Array	DAN217 0.3A X2			01
DA501	VV556300	Diode Array	DAN217 0.3A X2			01
-536	VV556300	Diode Array	DAN217 0.3A X2			01
DA601	VV556300	Diode Array	DAN217 0.3A X2			01
-636	VV556300	Diode Array	DAN217 0.3A X2			01
DA801	VV556300	Diode Array	DAN217 0.3A X2			01
-804	VV556300	Diode Array	DAN217 0.3A X2			01
EM001	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
EM101	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
EM102	FZ006920	LC Filter	MTB271KBTBM			01
-107	FZ006920	LC Filter	MTB271KBTBM			01
EM201	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
-205	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
EM301	FZ006920	LC Filter	MTB271KBTBM			01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
EM302	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
EM303	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
EM304	FZ006920	LC Filter	MTB271KBTBM			01
EM451	FZ006970	LC Filter	MTY223NBTBM			02
EM452	FZ007070	LC Filter	MTX222MBTBM			01
EM453	FZ007070	LC Filter	MTX222MBTBM			01
EM454	FZ006970	LC Filter	MTY223NBTBM			02
EM501	VL534100	LC Filter	NFAC1CC101S1H8L			05
-504	VL534100	LC Filter	NFAC1CC101S1H8L			05
EM505	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
-508	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
EM601	VL534100	LC Filter	NFAC1CC101S1H8L			05
-604	VL534100	LC Filter	NFAC1CC101S1H8L			05
EM605	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
-608	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
EM801	FZ006920	LC Filter	MTB271KBTBM			01
-804	FZ006920	LC Filter	MTB271KBTBM			01
EM805	FZ006970	LC Filter	MTY223NBTBM			02
EM806	VL534100	LC Filter	NFAC1CC101S1H8L			05
EM807	FZ006920	LC Filter	MTB271KBTBM			01
-810	FZ006920	LC Filter	MTB271KBTBM			01
EM811	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
-815	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
EM901	FZ006970	LC Filter	MTY223NBTBM			02
IC001	XW842A00	IC	SN74HCU04NSR	INVERTER		01
IC002	XV930A00	IC	SN75124NSR	LINE RECEIVER		05
IC003	XW559A00	IC	CS8420	SRC		11
-005	XW559A00	IC	CS8420	SRC		11
IC101	XZ349A00	IC	CS8405A-CS	DIT		06
-103	XZ349A00	IC	CS8405A-CS	DIT		06
IC104	XU816A00	IC	SN75121NSR	LINE DRIVER		05
IC201	X0157100	IC	M37640M8-138FP	MASK CPU (USB)		09
IC202	XL334A00	IC	MC26LS30DR2	LINE DRIVER		08
IC203	XU815A00	IC	DS26C32ATMX	LINE RECEIVER		06
IC204	XW914C00	IC	539V110	FLASH ROM 4M		08
IC301	XW313A00	IC	TC74VHC125F	BUFFER		02
IC302	XA862B00	IC	NJM4560M(T1)	OP AMP		02
IC303	VR903700	Photo Coupler	HCPL-M600			04
IC304	IG156700	IC	UPC319G2	DUAL COMPARATOR		05
IC305	X2832B00	IC	ICS2008BV-T	T.C. READER/GENERATOR		
IC401	XW324A00	IC	TC74VHC139F(EL)	DECODER		01
IC402	XT015A00	IC	TC74VHC138F	DECODER		02
IC403	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
IC404	XY254A00	IC	TC74VHC273F(EL)	D-FF		03
-406	XY254A00	IC	TC74VHC273F(EL)	D-FF		03
IC407	XM332A00	IC	TC74VHC04F EL	INVERTER		01
IC408	XM332A00	IC	TC74VHC04F EL	INVERTER		01
IC451	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
-454	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
IC455	XT800A00	IC	TC74VHC244F	BUFFER		03
IC456	XW876A00	IC	TC74VHC14F-EL	INVERTER		01
IC457	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
IC458	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
IC459	XT800A00	IC	TC74VHC244F	BUFFER		03
IC501	XU996A00	IC	AM26LS31CNSR	LINE DRIVER		05
IC502	XU815A00	IC	DS26C32ATMX	LINE RECEIVER		06
-505	XU815A00	IC	DS26C32ATMX	LINE RECEIVER		06
IC601	XU996A00	IC	AM26LS31CNSR	LINE DRIVER		05
-604	XU996A00	IC	AM26LS31CNSR	LINE DIRVER		05
IC605	XU815A00	IC	DS26C32ATMX	LINE RECEIVER		06
IC701	XW876A00	IC	TC74VHC14F-EL	INVERTER		01
IC702	VN686000	Photo Coupler	PC410T			04
IC801	XY254A00	IC	TC74VHC273F(EL)	D-FF		03
IC802	IS017500	IC	HD74LV175AFPEL	D-FF		02
IC803	XU073A00	IC	SN75C1168NSR	LINE DRIVER/RECEIVER		05
IC804	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
IC901	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
IC902	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
IC903	XT800A00	IC	TC74VHC244F	BUFFER		03
IC904	XT800A00	IC	TC74VHC244F	BUFFER		03

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
IC905	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
IC906	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
IC907	XT015A00	IC	TC74VHC138F	DECODER		02
IC908	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
IC909	XY254A00	IC	TC74VHC273F(EL)	D-FF		03
IC910	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
-913	XT487A00	IC	TC74VHC245F	TRANSCEIVER		03
JK001	VS133800	Cannon Connector	NC3FAH1-0	2TR OUT DIGITAL 1(AES/EBU)		04
* JK002	V8277500	Pin Connector	x2 YKC21-4225	2TR OUT DIGITAL 2,3(COAX.)		
JK003	V6415900	BNC Connector	1P YKS11-0067	WORD CLOCK OUT		05
JK101	VS133700	Cannon Connector	NC3MAH	2TR IN DIGITAL 1(AES/EBU)		04
* JK102	V8277500	Pin Connector	x2 YKC21-4225	2TR IN DIGITAL 2,3(COAX.)		
JK103	V6415900	BNC Connector	1P YKS11-0067	WORD CLOCK IN		05
JK201	VN997100	DIN Connector	8P TCS7927 MINI	TO HOST SERIAL		04
JK301	VS133800	Cannon Connector	NC3FAH1-0	TIME CODE INPUT SMPTE		04
JK302	VK018800	DIN Connector	5P3 YKF51-50	TIME CODE INPUT MTC		02
JK701	VI466400	DIN Connector	x3 YKF51-5046	MIDI IN/OUT/THRU		04
K001	V7539800	Cannon Angle				02
K101	V7539800	Cannon Angle				02
K201	V6442200	USB Angle				
K301	V7539800	Cannon Angle				02
L001	VP246300	Noise Filter	ZJY51R5-2P			04
L002	V7930100	Pulse Transformer	TB06A015			05
L003	GE300610	Ferrite Bead	BL02RN1-R62T4			01
-008	GE300610	Ferrite Bead	BL02RN1-R62T4			01
L101	GE300610	Ferrite Bead	BL02RN1-R62T4			01
-106	GE300610	Ferrite Bead	BL02RN1-R62T4			01
L107	V7930100	Pulse Transformer	TB06A015			05
-109	V7930100	Pulse Transformer	TB06A015			05
L201	GE300610	Ferrite Bead	BL02RN1-R62T4			01
L202	GE300610	Ferrite Bead	BL02RN1-R62T4			01
L203	V5239100	Common Mode Coil	PLP3216S121SL2T1			03
L451	V8143400	Chip Inductance	BLM21R121SKPT			01
-466	V8143400	Chip Inductance	BLM21R121SKPT			01
L701	GE300610	Ferrite Bead	BL02RN1-R62T4			01
-706	GE300610	Ferrite Bead	BL02RN1-R62T4			01
L901	V8143400	Chip Inductance	BLM21R121SKPT			01
-919	V8143400	Chip Inductance	BLM21R121SKPT			01
R001	RD254750	Carbon Resistor (chip)	75.0 0.1 J			01
-003	RD254750	Carbon Resistor (chip)	75.0 0.1 J			01
R004	RD254470	Carbon Resistor (chip)	47.0 0.1 J			01
R005	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R006	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R007	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R008	RD256470	Carbon Resistor (chip)	4.7K 0.1 J			01
R009	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R010	RD256470	Carbon Resistor (chip)	4.7K 0.1 J			01
R011	RD256220	Carbon Resistor (chip)	2.2K 0.1 J			01
R012	RD256220	Carbon Resistor (chip)	2.2K 0.1 J			01
R013	RD255110	Carbon Resistor (chip)	110.0 0.1 J			01
R014	VI196400	Metal Film Resistor (chip)	3.9K 1/10 D			01
-016	VI196400	Metal Film Resistor (chip)	3.9K 1/10 D			01
R020	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
-022	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
R026	RD257220	Carbon Resistor (chip)	22.0K 0.1 J			01
-031	RD257220	Carbon Resistor (chip)	22.0K 0.1 J			01
R035	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
-037	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
R041	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
-043	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
R104	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
-106	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
R107	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
-109	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R110	RD257220	Carbon Resistor (chip)	22.0K 0.1 J			01
-115	RD257220	Carbon Resistor (chip)	22.0K 0.1 J			01
R116	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
-121	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
R122	RD255220	Carbon Resistor (chip)	220.0 0.1 J			01
R123	RD255220	Carbon Resistor (chip)	220.0 0.1 J			01

\*: New Parts

RANK: Japan only



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R124	RD254430	Carbon Resistor (chip)	43.0 0.1 J			01
R125	RD254430	Carbon Resistor (chip)	43.0 0.1 J			01
R126	RD255110	Carbon Resistor (chip)	110.0 0.1 J			01
R127	RD254390	Carbon Resistor (chip)	39.0 0.1 J			01
R128	RD254390	Carbon Resistor (chip)	39.0 0.1 J			01
R131	RD256220	Carbon Resistor (chip)	2.2K 0.1 J			01
R132	RD253470	Carbon Resistor (chip)	4.7 0.1 J			01
R201	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R202	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R205	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R206	RD255680	Carbon Resistor (chip)	680.0 0.1 J			01
R207	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R208	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R209	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R210	RD154330	Carbon Resistor (chip)	33.0 1/4 J			01
R211	RD154330	Carbon Resistor (chip)	33.0 1/4 J			01
R212	RD256150	Carbon Resistor (chip)	1.5K 0.1 J			01
R213	RD255470	Carbon Resistor (chip)	470.0 0.1 J			01
R214	RD255470	Carbon Resistor (chip)	470.0 0.1 J			01
R215	RD257220	Carbon Resistor (chip)	22.0K 0.1 J			01
R216	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R217	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R218	RD256470	Carbon Resistor (chip)	4.7K 0.1 J			01
R219	RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
R220	RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
R221	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R222	RD256470	Carbon Resistor (chip)	4.7K 0.1 J			01
R224	RD256470	Carbon Resistor (chip)	4.7K 0.1 J			01
R302	RD256220	Carbon Resistor (chip)	2.2K 0.1 J			01
R303	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R304	RD255220	Carbon Resistor (chip)	220.0 0.1 J			01
R305	RD256220	Carbon Resistor (chip)	2.2K 0.1 J			01
R307	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R308	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R309	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R310	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R311	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R312	RD256360	Carbon Resistor (chip)	3.6K 0.1 J			01
R313	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R314	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
-316	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R451	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R501	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R502	RD255150	Carbon Resistor (chip)	150.0 0.1 J			01
-516	RD255150	Carbon Resistor (chip)	150.0 0.1 J			01
R517	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
-534	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R535	RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
R536	RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
R537	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R538	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R539	RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
-542	RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
R543	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
-552	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R553	RD257220	Carbon Resistor (chip)	22.0K 0.1 J			01
-582	RD257220	Carbon Resistor (chip)	22.0K 0.1 J			01
R601	RD257220	Carbon Resistor (chip)	22.0K 0.1 J			01
-606	RD257220	Carbon Resistor (chip)	22.0K 0.1 J			01
R607	RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
-624	RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
R625	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R626	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R627	RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
R628	RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
R629	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R630	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R631	RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
R632	RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
R633	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R634	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R635	RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
-642	RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
R643	RD255150	Carbon Resistor (chip)	150.0 0.1 J			01
-645	RD255150	Carbon Resistor (chip)	150.0 0.1 J			01
R701	RD255220	Carbon Resistor (chip)	220.0 0.1 J			01
-705	RD255220	Carbon Resistor (chip)	220.0 0.1 J			01
R706	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R707	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R801	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R802	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R803	HV754100	Flame Proof C. Resistor	10.0 1/4 J			01
-813	HV754100	Flame Proof C. Resistor	10.0 1/4 J			01
R814	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R815	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
R816	RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
R817	RD256470	Carbon Resistor (chip)	4.7K 0.1 J			01
-819	RD256470	Carbon Resistor (chip)	4.7K 0.1 J			01
R820	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R821	RD256270	Carbon Resistor (chip)	2.7K 0.1 J			01
R822	RD256220	Carbon Resistor (chip)	2.2K 0.1 J			01
R823	RD256220	Carbon Resistor (chip)	2.2K 0.1 J			01
R824	RD256270	Carbon Resistor (chip)	2.7K 0.1 J			01
R825	RD254470	Carbon Resistor (chip)	47.0 0.1 J			01
-828	RD254470	Carbon Resistor (chip)	47.0 0.1 J			01
R901	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
RA201	RE047220	Resistor Array	22KX4			01
-203	RE047220	Resistor Array	22KX4			01
RA451	RE047100	Resistor Array	10KX4			01
RA452	RE044220	Resistor Array	22X4			01
RA453	RE044220	Resistor Array	22X4			01
RA454	RE047100	Resistor Array	10KX4			01
RA455	RE047100	Resistor Array	10KX4			01
RA456	RE048100	Resistor Array	100KX4			01
RA457	RE048100	Resistor Array	100KX4			01
-458	RE047100	Resistor Array	10KX4			01
RA460	RE047100	Resistor Array	10KX4			01
RA501	RE047100	Resistor Array	10KX4			01
RA502	RE047100	Resistor Array	10KX4			01
RA601	RE047100	Resistor Array	10KX4			01
RA602	RE047100	Resistor Array	10KX4			01
RA801	RE047100	Resistor Array	10KX4			01
RA901	RE044220	Resistor Array	22X4			01
RA902	RE044220	Resistor Array	22X4			01
RA903	RE047100	Resistor Array	10KX4			01
RA904	RE048100	Resistor Array	100KX4			01
RA905	RE048100	Resistor Array	100KX4			01
RA906	RE047100	Resistor Array	10KX4			01
-910	RE047100	Resistor Array	10KX4			01
SW001	VR365100	Slide Switch	SSSF112-S06N1	WORD CLOCK IN ON/OFF		02
TA801	VQ248500	Transistor Array	TD62381F			04
TH801	VV216100	Protector Switch	RXE050 0.50A 72V			03
TR702	V7798800	Digital Transistor	DTA143ZUA TP			01
TR801	IA101590	Transistor	2SA1015 O,Y			01
-803	IA101590	Transistor	2SA1015 O,Y			01
X201	VP864900	Quartz Crystal Unit	16MHz SMD-49			04
X301	VZ751900	Quartz Crystal Unit	14.31818MHz SMD-49			03
	V8249100	Circuit Board	DM2 LCDCOM CNT+INV	(X2160B0)		
	--	Circuit Board	DM2K CNT (LCDCOM)	(V646840)(X2160B0)		
	--	Circuit Board	DM2K INV (LCDCOM)	(V646830)(X2160B0)		
	--	Jumper Wire	0.55	(VA07890)		
C901	UI538100	Electrolytic Cap.	100.00 16.0V			01
C902	UI538100	Electrolytic Cap.	100.00 16.0V			01
C903	UI557470	Electrolytic Cap.	47.00 35.0V			01
C904	V8564200	Electrolytic Cap. (chip)	0.039 250V ECQE2			01
C905	VS147400	Ceramic Capacitor-SL	18P 3KV J			01
CN901	VK024800	Wire Trap	52147 4P TE			01
CN902	VI878100	Cable Holder	51048 3P TE			01
CN903	VK025600	Wire Trap	52147 12P TE			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
CN904	VF982200	Connector, FFC	52044 14P SE			02
CN905	VT389600	Base Post Connector	53259 4P SE			01
CN951	V1878100	Cable Holder	51048 3P TE			01
EM901	FZ006970	LC Filter	MTY223NBTBM			02
IC901	X2216A00	IC	CE-0703	DC-DC CONVERTER		07
L901	VS587900	Coil	LH L 08TB221K 220u			01
R901	HF457110	Carbon Resistor	11.0K 1/4 J			01
R902	HF457100	Carbon Resistor	10.0K 1/4 J			01
R903	HF456120	Carbon Resistor	1.2K 1/4 J			01
R904	HF456560	Carbon Resistor	5.6K 1/4 J			01
R905	HF456560	Carbon Resistor	5.6K 1/4 J			01
R906	HF456470	Carbon Resistor	4.7K 1/4 J			01
R907	HF457470	Carbon Resistor	47.0K 1/4 J			01
R908	HF457120	Carbon Resistor	12.0K 1/4 J			01
R909	VC748400	Metal Oxide Film Resistor	2.2K 1W J			01
T901	VS602500	Inverter Transformer	CLF16A			07
TH901	VT816300	Thermistor	ERT-D2FGL332S 3.3K			01
TR901	VS185600	Transistor	2SD1863 TV2 82-390			01
TR902	VS185600	Transistor	2SD1863 TV2 82-390			01
TR903	IC1815M0	Transistor	2SC1815 Y,GR			01
VR951	V3820700	Rotary Variable Resistor	B 10K RK09K1130A5R	LCD contrast		01
W902	V5183000	Ribbon Cable	P=2.0 #26 3P 100L			01
ZD901	VG438300	Zener Diode	MTZ J 6.8B 6.8V			01
*	V8469100	Circuit Board	OPT	(X2060B0)		
CN801	VQ048500	Connector, FFC	52045 36P TE			02
CN802	VQ048500	Connector, FFC	52045 36P TE			02
* CN803	VQ151900	Connector, FFC	52045 38P TE			
CN804	VP327200	Connector, FFC	52045 30P TE			01
CN807	VO022300	Connector, FFC	52044 40P SE			02
CN901	VU328200	Plug	PHEC 100P TE	SLOT1-4		05
-904	VU328200	Plug	PHEC 100P TE			05
*	V8627500	Circuit Board	PN1 (PN1COM)	(V924550)(X2050B0)		
*	AAX34510	Circuit Board	PN3+PW (PN1COM)	(V862760+V862770), (V924550)(X2050B0)		
*	V9246300	Circuit Board	SUB (PN1COM)	(V924550)(X2050B0)		
10	V6197400	Button Dark Gray	S LENS	AUX1-8 <AUX SELECT> FADER/AUX <FADER MODE> INTERNAL EFFECT,PLUG-INS, CHANNEL INSERTS,1-4<EFF.> SOLO 1-16 ON 1-16 SEL 1-16 PAN,AUX,ASSIGN1,ASSIGN2 <ENCODER MODE>	17	
20	V8486700	Button M_Gray	L LENS		16	
30	V8486800	Button Light Gray	L LENS		16	
40	V8486900	Button Blue	L LENS		16	
50	V8487000	Button Blue	S LENS		4	
60	V8487100	Button M_Gray	S LENS	AUTO 1-16,SHUTTLE,SCRUB	18	
70	V8487400	Button Dark Gray	S	Cursor Left/Right,F1-4	6	
80	V8487500	Button M_Gray	S	Cursor Up/Down	2	
90	V8487600	Button Light Gray	S	DISPLAY<AUX,ENCODER,EFF.> AUTOMIX,DIO,SETUP,UTILITY MIDI,REMOTE,METER,VIEW, PAIR,GROUP,INPUT PATCH, OUTPUT PATCH <DISPLAY...> DEC,INC,ENTER	15	
100	V8487900	Button Light Gray	CURSOR		3	
110	V8489000	Button Light Gray	CURSOR	Left		
120	V8489100	Button Light Gray	CURSOR	Right		
130	V8489200	Button Light Gray	CURSOR	Up		
140	V8489400	Button Light Gray	CURSOR	Down		
C100	UF028100	Electrolytic Cap. (chip)	100 10V			01
C101	UF128220	Electrolytic Cap. (chip)	220 10V UUR1A2			01
C102	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-108	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C109	UF037100	Electrolytic Cap. (chip)	10 16V			01
-111	UF037100	Electrolytic Cap. (chip)	10 16V			01
C112	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-115	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C500	UF028100	Electrolytic Cap. (chip)	100 10V			01
C600	US063100	Ceramic Capacitor-B (chip)	1000P 50V K			01
C601	US063100	Ceramic Capacitor-B (chip)	1000P 50V K			01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C602	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C603	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-606	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C607	UF027470	Electrolytic Cap. (chip)	47 10V			01
C608	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C609	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C610	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C612	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-619	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C620	UF027470	Electrolytic Cap. (chip)	47 10V			01
C621	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C622	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C623	US062100	Ceramic Capacitor-SL(chip)	100P 50V J			01
C624	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C625	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C627	US063100	Ceramic Capacitor-B (chip)	1000P 50V K			01
C628	US063100	Ceramic Capacitor-B (chip)	1000P 50V K			01
C629	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C630	US063100	Ceramic Capacitor-B (chip)	1000P 50V K			01
-634	US063100	Ceramic Capacitor-B (chip)	1000P 50V K			01
C635	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C636	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C700	UF037100	Electrolytic Cap. (chip)	10 16V			01
C701	UF128220	Electrolytic Cap. (chip)	220 10V UUR1A2			01
C702	UF037470	Electrolytic Cap. (chip)	47 16V			01
C703	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-708	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C712	UF037100	Electrolytic Cap. (chip)	10 16V			01
C713	US061220	Ceramic Capacitor-CH(chip)	22P 50V J			01
C715	US061220	Ceramic Capacitor-CH(chip)	22P 50V J			01
C717	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C800	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-877	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C878	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C879	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-884	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C885	US064100	Ceramic Capacitor-B (chip)	0.0100 50V K			01
C900	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-920	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
CN100	VI878600	Cable Holder	51048 8P TE			01
CN101	VI878800	Cable Holder	51048 10P TE			01
CN102	VI878700	Cable Holder	51048 9P TE			01
CN400	VQ045900	Connector, FFC	52044 30P SE			02
CN401	VP113500	Connector, FFC	52044 10P SE			01
CN500	VU421600	Wire Trap	52151 16P SE			01
CN501	VI878200	Cable Holder	51048 4P TE			01
CN502	VI878200	Cable Holder	51048 4P TE			01
CN700	VB390100	Connector Base Post	PH 5P TE			01
CN701	VF728300	Wire Trap	52147 6P TE			01
CN702	VK025500	Wire Trap	52147 11P TE			01
CN703	VB390100	Connector Base Post	PH 5P TE			01
CN900	VQ047600	Connector, FFC	52045 21P TE			02
CN901	VQ047400	Connector, FFC	52045 19P TE			01
CN902	VQ048500	Connector, FFC	52045 36P TE			02
CN903	VK025200	Wire Trap	52147 8P TE			01
CN904	VK025300	Wire Trap	52147 9P TE			01
CN905	VM688900	Connector, FFC	52045 10P TE			01
CN906	VP327200	Connector, FFC	52045 30P TE			01
CN907	VN773600	Connector, FFC	52045 28P TE			02
CN908	VK025200	Wire Trap	52147 8P TE			01
* CN909	VQ151900	Connector, FFC	52045 38P TE			01
D200	VT332900	Diode	1SS355 TE-17			01
-307	VT332900	Diode	1SS355 TE-17			01
D400	VT332900	Diode	1SS355 TE-17			01
-419	VT332900	Diode	1SS355 TE-17			01
D500	VT332900	Diode	1SS355 TE-17			01
-508	VT332900	Diode	1SS355 TE-17			01
D600	VT332900	Diode	1SS355 TE-17			01
EC400	V3750900	Rotary Encoder	EC12E2444400	CH 1		03
EC401	V3750900	Rotary Encoder	EC12E2444400	CH 2		03

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
EC402	V3750900	Rotary Encoder	EC12E2444400	CH 3		03
EC403	V3750900	Rotary Encoder	EC12E2444400	CH 4		03
EC404	V3750900	Rotary Encoder	EC12E2444400	CH 5		03
EC405	V3750900	Rotary Encoder	EC12E2444400	CH 6		03
EC406	V3750900	Rotary Encoder	EC12E2444400	CH 7		03
EC407	V3750900	Rotary Encoder	EC12E2444400	CH 8		03
EC408	V3750900	Rotary Encoder	EC12E2444400	CH 9		03
EC409	V3750900	Rotary Encoder	EC12E2444400	CH 10		03
EC410	V3750900	Rotary Encoder	EC12E2444400	CH 11		03
EC411	V3750900	Rotary Encoder	EC12E2444400	CH 12		03
EC412	V3750900	Rotary Encoder	EC12E2444400	CH 13		03
EC413	V3750900	Rotary Encoder	EC12E2444400	CH 14		03
EC414	V3750900	Rotary Encoder	EC12E2444400	CH 15		03
EC415	V3750900	Rotary Encoder	EC12E2444400	CH 16		03
EC416	V3750900	Rotary Encoder	EC12E2444400	1 <EFFECTS/PLUG-INS>		03
EC417	V3750900	Rotary Encoder	EC12E2444400	2 <EFFECTS/PLUG-INS>		03
EC418	V3750900	Rotary Encoder	EC12E2444400	3 <EFFECTS/PLUG-INS>		03
EC419	V3750900	Rotary Encoder	EC12E2444400	4 <EFFECTS/PLUG-INS>		03
EC500	V6225900	Optical Rotary Encoder	REC16B25-201-K	Parameter wheel		
EM100	FZ006970	LC Filter	MTY223NBTBM			02
EM101	FZ006970	LC Filter	MTY223NBTBM			02
EM500	FZ006970	LC Filter	MTY223NBTBM			02
EM700	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
EM701	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
EM702	FZ006970	LC Filter	MTY223NBTBM			02
EM703	VQ761400	EMI Filter (chip)	NFM3DCC101U1H3L			01
EM704	FZ006970	LC Filter	MTY223NBTBM			02
IC100	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC101	XT163A00	IC	TC74HC238AF	TRANSCEIVER		03
IC102	IS059500	IC	HD74LV595AFPEL	REGISTER		02
IC103	IS059500	IC	HD74LV595AFPEL	REGISTER		02
IC104	IS016500	IC	HD74LV165AFPEL	REGISTER		02
IC105	IS016500	IC	HD74LV165AFPEL	REGISTER		02
* IC600	X3086A00	IC	HD64F7044F28	CPU		
IC601	IS024500	IC	HD74LV245AFPEL	TRANSCEIVER		02
IC602	IS024500	IC	HD74LV245AFPEL	TRANSCEIVER		02
IC603	XT138A00	IC	UPD431000AGW-70LL	SRAM 1M		07
IC604	XT138A00	IC	UPD431000AGW-70LL	SRAM 1M		07
* IC605	X3086A00	IC	HD64F7044F28	CPU		
IC606	XT138A00	IC	UPD431000AGW-70LL	SRAM 1M		07
IC607	XT138A00	IC	UPD431000AGW-70LL	SRAM 1M		07
IC608	XR532A00	IC	NJM2904V(Te1)	OP AMP		02
IC700	XS534A00	IC	NJM78M05DL1A(Te1)	REGULATOR +5V		02
IC701	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC702	XP226A00	IC	IC-PST591DMT	SYSTEM RESET		03
IC703	IS012500	IC	HD74LV125AFPEL	BUFFER		01
IC704	IS000000	IC	HD74LV00AFPEL	NAND		01
IC706	XY102A00	IC	HD74LVU04AFPEL	INVERTER		01
IC900	IS013810	IC	SN74LV138ANSR	DECODER		01
IC901	XV973A00	IC	SGH603064F-62F	GATE ARRAY		07
-903	XV973A00	IC	SGH603064F-62F	GATE ARRAY		07
IC904	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC905	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC906	XW762A00	IC	TC74HC138AFEL	DECODER		02
IC907	IS000400	IC	HD74LV04AFPEL	INVERTER		01
IC908	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC909	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC910	XW762A00	IC	TC74HC138AFEL	DECODER		02
IC911	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
-913	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC914	IS405210	IC	SN74LV4052ANSR	MULTIPLEXER		02
L600	GE300610	Ferrite Bead	BL02RN1-R62T4			01
L700	V8143400	Chip Inductance	BLM21R121SKPT			01
L701	GE300610	Ferrite Bead	BL02RN1-R62T4			01
L702	V8143400	Chip Inductance	BLM21R121SKPT			01
L703	V8143400	Chip Inductance	BLM21R121SKPT			01
L900	V8143400	Chip Inductance	BLM21R121SKPT			01
-960	V8143400	Chip Inductance	BLM21R121SKPT			01
LD200	V3670200	LED Yellow	LT1H40A	ON 1		01
LD201	V3670200	LED Yellow	LT1H40A	ON 2		01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
LD202	V3670200	LED Yellow	LT1H40A	ON 3		01
LD203	V3670200	LED Yellow	LT1H40A	ON 4		01
LD204	V3670200	LED Yellow	LT1H40A	ON 5		01
LD205	V3670200	LED Yellow	LT1H40A	ON 6		01
LD206	V3670200	LED Yellow	LT1H40A	ON 7		01
LD207	V3670200	LED Yellow	LT1H40A	ON 8		01
LD208	V3670200	LED Yellow	LT1H40A	ON 9		01
LD209	V3670200	LED Yellow	LT1H40A	ON 10		01
LD210	V3670200	LED Yellow	LT1H40A	ON 11		01
LD211	V3670200	LED Yellow	LT1H40A	ON 12		01
LD212	V3670200	LED Yellow	LT1H40A	ON 13		01
LD213	V3670200	LED Yellow	LT1H40A	ON 14		01
LD214	V3670200	LED Yellow	LT1H40A	ON 15		01
LD215	V3670200	LED Yellow	LT1H40A	ON 16		01
LD216	V3670200	LED Yellow	LT1H40A	SOLO 1		01
LD217	V3670200	LED Yellow	LT1H40A	SOLO 2		01
LD218	V3670200	LED Yellow	LT1H40A	SOLO 3		01
LD219	V3670200	LED Yellow	LT1H40A	SOLO 4		01
LD220	V3670200	LED Yellow	LT1H40A	SOLO 5		01
LD221	V3670200	LED Yellow	LT1H40A	SOLO 6		01
LD222	V3670200	LED Yellow	LT1H40A	SOLO 7		01
LD223	V3670200	LED Yellow	LT1H40A	SOLO 8		01
LD224	V3670200	LED Yellow	LT1H40A	SOLO 9		01
LD225	V3670200	LED Yellow	LT1H40A	SOLO 10		01
LD226	V3670200	LED Yellow	LT1H40A	SOLO 11		01
LD227	V3670200	LED Yellow	LT1H40A	SOLO 12		01
LD228	V3670200	LED Yellow	LT1H40A	SOLO 13		01
LD229	V3670200	LED Yellow	LT1H40A	SOLO 14		01
LD230	V3670200	LED Yellow	LT1H40A	SOLO 15		01
LD231	V3670200	LED Yellow	LT1H40A	SOLO 16		01
LD232	V3670100	LED Yellow/Green	LT1E40A	SEL 1		01
LD233	V3670100	LED Yellow/Green	LT1E40A	SEL 2		01
LD234	V3670100	LED Yellow/Green	LT1E40A	SEL 3		01
LD235	V3670100	LED Yellow/Green	LT1E40A	SEL 4		01
LD236	V3670100	LED Yellow/Green	LT1E40A	SEL 5		01
LD237	V3670100	LED Yellow/Green	LT1E40A	SEL 6		01
LD238	V3670100	LED Yellow/Green	LT1E40A	SEL 7		01
LD239	V3670100	LED Yellow/Green	LT1E40A	SEL 8		01
LD240	V3670100	LED Yellow/Green	LT1E40A	SEL 9		01
LD241	V3670100	LED Yellow/Green	LT1E40A	SEL 10		01
LD242	V3670100	LED Yellow/Green	LT1E40A	SEL 11		01
LD243	V3670100	LED Yellow/Green	LT1E40A	SEL 12		01
LD244	V3670100	LED Yellow/Green	LT1E40A	SEL 13		01
LD245	V3670100	LED Yellow/Green	LT1E40A	SEL 14		01
LD246	V3670100	LED Yellow/Green	LT1E40A	SEL 15		01
LD247	V3670100	LED Yellow/Green	LT1E40A	SEL 16		01
LD248	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 1		01
LD249	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 2		01
LD250	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 3		01
LD251	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 4		01
LD252	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 5		01
LD253	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 6		01
LD254	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 7		01
LD255	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 8		01
LD256	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 9		01
LD257	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 10		01
LD258	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 11		01
LD259	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 12		01
LD260	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 13		01
LD261	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 14		01
LD262	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 15		01
LD263	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 16		01
LD264	V3670100	LED Yellow/Green	LT1E40A	AUX1	<AUX SELECT>	01
LD265	V3670100	LED Yellow/Green	LT1E40A	AUX2	<AUX SELECT>	01
LD266	V3670100	LED Yellow/Green	LT1E40A	AUX3	<AUX SELECT>	01
LD267	V3670100	LED Yellow/Green	LT1E40A	AUX4	<AUX SELECT>	01
LD268	V3670100	LED Yellow/Green	LT1E40A	AUX5	<AUX SELECT>	01
LD269	V3670100	LED Yellow/Green	LT1E40A	AUX6	<AUX SELECT>	01
LD270	V3670100	LED Yellow/Green	LT1E40A	AUX7	<AUX SELECT>	01
LD271	V3670100	LED Yellow/Green	LT1E40A	AUX8	<AUX SELECT>	01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
LD272	V3670100	LED Yellow/Green	LT1E40A	1 <EFFECTS/PLUG-INS>		01
LD273	V3670100	LED Yellow/Green	LT1E40A	2 <EFFECTS/PLUG-INS>		01
LD274	V3670100	LED Yellow/Green	LT1E40A	3 <EFFECTS/PLUG-INS>		01
LD275	V3670100	LED Yellow/Green	LT1E40A	4 <EFFECTS/PLUG-INS>		01
LD277	V3670100	LED Yellow/Green	LT1E40A	INTERNAL EFFECTS		01
LD278	V3670100	LED Yellow/Green	LT1E40A	PLUG-INS		01
LD279	V3670100	LED Yellow/Green	LT1E40A	CHANNEL INSERTS		01
LD280	V3670100	LED Yellow/Green	LT1E40A	FADER <FADER MODE>		01
LD281	V3670100	LED Yellow/Green	LT1E40A	AUX <FADER MODE>		01
LD282	V3670100	LED Yellow/Green	LT1E40A	PAN <ENCODER MODE>		01
LD283	V3670100	LED Yellow/Green	LT1E40A	AUX <ENCODER MODE>		01
LD284	V3670100	LED Yellow/Green	LT1E40A	ASSIGN1 <ENCODER MODE>		01
LD285	V3670100	LED Yellow/Green	LT1E40A	ASSIGN2 <ENCODER MODE>		01
LD507	V3670200	LED Yellow	LT1H40A	SHUTTLE		01
LD508	V3670200	LED Yellow	LT1H40A	SCRUB		01
R100	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-102	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R104	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R105	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R107	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-115	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R116	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R117	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R118	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R119	RD154330	Carbon Resistor (chip)	33.0 1/4 J			01
-134	RD154330	Carbon Resistor (chip)	33.0 1/4 J			01
R135	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R136	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R137	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R600	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-602	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R603	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
-606	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R607	RD255220	Carbon Resistor (chip)	220.0 0.1 J			01
R608	RD256300	Carbon Resistor (chip)	3.0K 0.1 J			01
R611	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R612	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R613	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
-615	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R616	HV754470	Flame Proof C. Resistor	47.0 1/4 J			01
R617	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R618	RD255220	Carbon Resistor (chip)	220.0 0.1 J			01
R619	RD256300	Carbon Resistor (chip)	3.0K 0.1 J			01
R621	V1192200	Metal Film Resistor (chip)	75.0 1/10 D			01
R622	V1197400	Metal Film Resistor (chip)	10.0K 1/10 D			01
R624	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R625	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R626	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-632	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R700	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
-704	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R706	RD259100	Carbon Resistor (chip)	1.0M 0.1 J			01
R707	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
-709	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R710	RD255220	Carbon Resistor (chip)	220.0 0.1 J			01
R711	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R712	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R800	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
-803	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R900	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
-908	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R909	RD258470	Carbon Resistor (chip)	470.0K 0.1 J			01
-911	RD258470	Carbon Resistor (chip)	470.0K 0.1 J			01
RA100	RE047100	Resistor Array	10KX4			01
RA101	RE047100	Resistor Array	10KX4			01
RA200	RE047100	Resistor Array	10KX4			01
-203	RE047100	Resistor Array	10KX4			01
RA600	RE047100	Resistor Array	10KX4			01
-634	RE047100	Resistor Array	10KX4			01
RA800	RE047100	Resistor Array	10KX4			01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
-841	RE047100	Resistor Array	10KX4			01
RA900	RE047100	Resistor Array	10KX4			01
SW200	VV056000	Tact Switch	SKQNAED010	ON 1		01
SW201	VV056000	Tact Switch	SKQNAED010	ON 2		01
SW202	VV056000	Tact Switch	SKQNAED010	ON 3		01
SW203	VV056000	Tact Switch	SKQNAED010	ON 4		01
SW204	VV056000	Tact Switch	SKQNAED010	ON 5		01
SW205	VV056000	Tact Switch	SKQNAED010	ON 6		01
SW206	VV056000	Tact Switch	SKQNAED010	ON 7		01
SW207	VV056000	Tact Switch	SKQNAED010	ON 8		01
SW208	VV056000	Tact Switch	SKQNAED010	ON 9		01
SW209	VV056000	Tact Switch	SKQNAED010	ON 10		01
SW210	VV056000	Tact Switch	SKQNAED010	ON 11		01
SW211	VV056000	Tact Switch	SKQNAED010	ON 12		01
SW212	VV056000	Tact Switch	SKQNAED010	ON 13		01
SW213	VV056000	Tact Switch	SKQNAED010	ON 14		01
SW214	VV056000	Tact Switch	SKQNAED010	ON 15		01
SW215	VV056000	Tact Switch	SKQNAED010	ON 16		01
SW216	VV056000	Tact Switch	SKQNAED010	SOLO 1		01
SW217	VV056000	Tact Switch	SKQNAED010	SOLO 2		01
SW218	VV056000	Tact Switch	SKQNAED010	SOLO 3		01
SW219	VV056000	Tact Switch	SKQNAED010	SOLO 4		01
SW220	VV056000	Tact Switch	SKQNAED010	SOLO 5		01
SW221	VV056000	Tact Switch	SKQNAED010	SOLO 6		01
SW222	VV056000	Tact Switch	SKQNAED010	SOLO 7		01
SW223	VV056000	Tact Switch	SKQNAED010	SOLO 8		01
SW224	VV056000	Tact Switch	SKQNAED010	SOLO 9		01
SW225	VV056000	Tact Switch	SKQNAED010	SOLO 10		01
SW226	VV056000	Tact Switch	SKQNAED010	SOLO 11		01
SW227	VV056000	Tact Switch	SKQNAED010	SOLO 12		01
SW228	VV056000	Tact Switch	SKQNAED010	SOLO 13		01
SW229	VV056000	Tact Switch	SKQNAED010	SOLO 14		01
SW230	VV056000	Tact Switch	SKQNAED010	SOLO 15		01
SW231	VV056000	Tact Switch	SKQNAED010	SOLO 16		01
SW232	VV056000	Tact Switch	SKQNAED010	SEL 1		01
SW233	VV056000	Tact Switch	SKQNAED010	SEL 2		01
SW234	VV056000	Tact Switch	SKQNAED010	SEL 3		01
SW235	VV056000	Tact Switch	SKQNAED010	SEL 4		01
SW236	VV056000	Tact Switch	SKQNAED010	SEL 5		01
SW237	VV056000	Tact Switch	SKQNAED010	SEL 6		01
SW238	VV056000	Tact Switch	SKQNAED010	SEL 7		01
SW239	VV056000	Tact Switch	SKQNAED010	SEL 8		01
SW240	VV056000	Tact Switch	SKQNAED010	SEL 9		01
SW241	VV056000	Tact Switch	SKQNAED010	SEL 10		01
SW242	VV056000	Tact Switch	SKQNAED010	SEL 11		01
SW243	VV056000	Tact Switch	SKQNAED010	SEL 12		01
SW244	VV056000	Tact Switch	SKQNAED010	SEL 13		01
SW245	VV056000	Tact Switch	SKQNAED010	SEL 14		01
SW246	VV056000	Tact Switch	SKQNAED010	SEL 15		01
SW247	VV056000	Tact Switch	SKQNAED010	SEL 16		01
SW248	VV056000	Tact Switch	SKQNAED010	AUTO 1		01
SW249	VV056000	Tact Switch	SKQNAED010	AUTO 2		01
SW250	VV056000	Tact Switch	SKQNAED010	AUTO 3		01
SW251	VV056000	Tact Switch	SKQNAED010	AUTO 4		01
SW252	VV056000	Tact Switch	SKQNAED010	AUTO 5		01
SW253	VV056000	Tact Switch	SKQNAED010	AUTO 6		01
SW254	VV056000	Tact Switch	SKQNAED010	AUTO 7		01
SW255	VV056000	Tact Switch	SKQNAED010	AUTO 8		01
SW256	VV056000	Tact Switch	SKQNAED010	AUTO 9		01
SW257	VV056000	Tact Switch	SKQNAED010	AUTO 10		01
SW258	VV056000	Tact Switch	SKQNAED010	AUTO 11		01
SW259	VV056000	Tact Switch	SKQNAED010	AUTO 12		01
SW260	VV056000	Tact Switch	SKQNAED010	AUTO 13		01
SW261	VV056000	Tact Switch	SKQNAED010	AUTO 14		01
SW262	VV056000	Tact Switch	SKQNAED010	AUTO 15		01
SW263	VV056000	Tact Switch	SKQNAED010	AUTO 16		01
SW264	VV056000	Tact Switch	SKQNAED010	AUX1	<AUX SELECT>	01
SW265	VV056000	Tact Switch	SKQNAED010	AUX2	<AUX SELECT>	01
SW266	VV056000	Tact Switch	SKQNAED010	AUX3	<AUX SELECT>	01
SW267	VV056000	Tact Switch	SKQNAED010	AUX4	<AUX SELECT>	01

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
SW268	VV056000	Tact Switch	SKQNAED010	AUX5 <AUX SELECT>		01
SW269	VV056000	Tact Switch	SKQNAED010	AUX6 <AUX SELECT>		01
SW270	VV056000	Tact Switch	SKQNAED010	AUX7 <AUX SELECT>		01
SW271	VV056000	Tact Switch	SKQNAED010	AUX8 <AUX SELECT>		01
SW272	VV056000	Tact Switch	SKQNAED010	1 <EFFECTS/PLUG-INS>		01
SW273	VV056000	Tact Switch	SKQNAED010	2 <EFFECTS/PLUG-INS>		01
SW274	VV056000	Tact Switch	SKQNAED010	3 <EFFECTS/PLUG-INS>		01
SW275	VV056000	Tact Switch	SKQNAED010	4 <EFFECTS/PLUG-INS>		01
SW276	VV056000	Tact Switch	SKQNAED010	DISPLAY<EFFECTS/PLUG-INS>		01
SW277	VV056000	Tact Switch	SKQNAED010	INTERNAL EFFECTS		01
SW278	VV056000	Tact Switch	SKQNAED010	PLUG-INS		01
SW279	VV056000	Tact Switch	SKQNAED010	CHANNEL INSERTS		01
SW280	VV056000	Tact Switch	SKQNAED010	FADER <FADER MODE>		01
SW281	VV056000	Tact Switch	SKQNAED010	AUX <FADER MODE>		01
SW282	VV056000	Tact Switch	SKQNAED010	PAN <ENCODER MODE>		01
SW283	VV056000	Tact Switch	SKQNAED010	AUX <ENCODER MODE>		01
SW284	VV056000	Tact Switch	SKQNAED010	ASSIGN1 <ENCODER MODE>		01
SW285	VV056000	Tact Switch	SKQNAED010	ASSIGN2 <ENCODER MODE>		01
SW286	VV056000	Tact Switch	SKQNAED010	DISPLAY <AUX SELECT>		01
SW287	VV056000	Tact Switch	SKQNAED010	DISPLAY <ENCODER MODE>		01
SW288	VV056000	Tact Switch	SKQNAED010	PAIR <DISPLAY ACCESS>		01
SW289	VV056000	Tact Switch	SKQNAED010	GROUP <DISPLAY ACCESS>		01
SW290	VV056000	Tact Switch	SKQNAED010	INPUT PATCH<DISPLAY ACCE		01
SW291	VV056000	Tact Switch	SKQNAED010	OUTPUT PATCH<DISPLAY ACC		01
SW292	VV056000	Tact Switch	SKQNAED010	AUTOMIX <DISPLAY ACCESS>		01
SW293	VV056000	Tact Switch	SKQNAED010	DIO <DISPLAY ACCESS>		01
SW294	VV056000	Tact Switch	SKQNAED010	SETUP <DISPLAY ACCESS>		01
SW295	VV056000	Tact Switch	SKQNAED010	UTILITY <DISPLAY ACCESS>		01
SW296	VV056000	Tact Switch	SKQNAED010	MIDI <DISPLAY ACCESS>		01
SW297	VV056000	Tact Switch	SKQNAED010	REMOTE <DISPLAY ACCESS>		01
SW298	VV056000	Tact Switch	SKQNAED010	METER <DISPLAY ACCESS>		01
SW299	VV056000	Tact Switch	SKQNAED010	VIEW <DISPLAY ACCESS>		01
SW300	VV056000	Tact Switch	SKQNAED010	F1		01
SW301	VV056000	Tact Switch	SKQNAED010	F2		01
SW302	VV056000	Tact Switch	SKQNAED010	F3		01
SW303	VV056000	Tact Switch	SKQNAED010	F4		01
SW304	VV056000	Tact Switch	SKQNAED010	Cursor Left		01
SW305	VV056000	Tact Switch	SKQNAED010	Cursor Right		01
SW306	VV056000	Tact Switch	SKQNAED010	Cursor Up		01
SW307	VV056000	Tact Switch	SKQNAED010	Cursor Down		01
SW500	VR531200	Push Switch	ML1A-11JW	DEC		02
SW501	VR531200	Push Switch	ML1A-11JW	INC		02
SW502	VR531200	Push Switch	ML1A-11JW	ENTER		02
SW503	VR531200	Push Switch	ML1A-11JW	Cursor Left		02
SW504	VR531200	Push Switch	ML1A-11JW	Cursor Right		02
SW505	VR531200	Push Switch	ML1A-11JW	Cursor Up		02
SW506	VR531200	Push Switch	ML1A-11JW	Cursor Down		02
SW507	VV056000	Tact Switch	SKQNAED010	SHUTTLE		01
SW508	VV056000	Tact Switch	SKQNAED010	SCRUB		01
SW700	KA401270	Slide Switch	SSS212	Boot		03
SW701	KA401270	Slide Switch	SSS212	Boot		03
TA100	VQ248400	Transistor Array	TD62783AF			04
TA101	VQ248400	Transistor Array	TD62783AF			04
TA102	VY703900	Transistor Array	TD62309F(EL)			04
TA103	VY703900	Transistor Array	TD62309F(EL)			04
TA104	VY703900	Transistor Array	TD62309F(EL)			04
TR600	VQ986700	Transistor	2SC2SC4081 T106			01
* W100	VV153600	Jumper Wire	FVP=2.0C26SB8-100			
W101	V8392000	Jumper Wire	FVP=2.0C26SB10-700			03
* W102	V9468100	Jumper Wire	FVP=2.0C26SB9-90			
* W501	V8964600	Jumper Wire	FVP=2.0C26SB4-60			
X701	V3719200	Quartz Crystal Unit	6.7584MHz SMD-49			03
* V8627800	V8627800	Circuit Board	PN2 (PN2COM)	(V862670)(X2051B0)		
* V8627900	V8627900	Circuit Board	JS (PN2COM)	(V862670)(X2051B0)		
10	V8486700	Button M_Gray	L LENS	SOLO 17-24	8	
20	V8486800	Button Light Gray	L LENS	ON 17-24/STEREO	9	
30	V8486900	Button Blue	L LENS	SEL 17-24/STEREO	9	
40	V8487100	Button M_Gray	S LENS	AUTO 17-24/STEREO LAYER(4 buttons)	73	

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
				SET,1-8 <MACHINE CONTROL> 1-16 <USER DEFINED KEYS> STUDIO(4 buttons) CONTROL ROOM(10 buttons) DIMMER, TALKBACK <MONITOR ROUTING(11 buttons) PAN/SURROUND(5 buttons) GATE ON,COMP ON-<DYNAMICS> EQ ON <EQUALIZER> CLEAR <SOLO> GATE/COMP <DYNAMICS> DISPLAY ACCESS(2 buttons) DISPLAY <MACHINE CTR., MONITOR,SCENE MEMORY, USER DEFINED KEYS, ROUTING,PAN/SURROUND, DYNAMICS,EQUALIZER-> STORE,RECALL<SCENE MEMO.> REW <MACHINE CONTROL> FF <MACHINE CONTROL> STOP <MACHINE CONTROL> PLAY <MACHINE CONTROL> REC <MACHINE CONTROL> Cursor Up <SCENE MEMORY> Cursor Down <SCENE MEMORY> L/ODD-R/EVEN <PAN/SURR.>		
60	V8487500	Button M_Gray	S		2	
70	V8487600	Button Light Gray	S		10	
80	V8488000	Button M_Gray	CURSOR		2	
90	V8488200	Button Light Gray	LENS CURSOR			
100	V8488400	Button Light Gray	LENS CURSOR			
110	V8488500	Button Light Gray	LENS CURSOR			
120	V8488600	Button Light Gray	LENS CURSOR			
130	V8488800	Button Light Gray	LENS CURSOR			
140	V8489600	Button M_Gray	CURSOR			
150	V8489700	Button M_Gray	CURSOR			
160	V6179800	LED Lens	x16P			03
C101	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C102	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C104	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-120	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C121	UF037100	Electrolytic Cap. (chip)	10 16V			01
-125	UF037100	Electrolytic Cap. (chip)	10 16V			01
C500	UF028100	Electrolytic Cap. (chip)	100 10V			01
C501	UF128220	Electrolytic Cap. (chip)	220 10V UUR1A2			01
C502	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-506	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C507	UF037100	Electrolytic Cap. (chip)	10 16V			01
C508	UF037100	Electrolytic Cap. (chip)	10 16V			01
C509	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C511	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C700	UF037100	Electrolytic Cap. (chip)	10 16V			01
CN100	VQ045700	Connector, FFC	52044 28P SE			02
CN400	VK026300	Wire Trap	52151 4P SE			01
CN401	VQ152000	Connector, FFC	52044 38P SE			01
CN500	VI878800	Cable Holder	51048 10P TE			01
CN501	VI879400	Cable Holder	51048 16P TE			01
CN700	VI878200	Cable Holder	51048 4P TE			01
CN701	VB390200	Connector Base Post	PH 6P TE			01
CN702	VI878600	Cable Holder	51048 8P TE			01
D200	VT332900	Diode	1SS355 TE-17			01
-225	VT332900	Diode	1SS355 TE-17			01
D227	VT332900	Diode	1SS355 TE-17			01
-281	VT332900	Diode	1SS355 TE-17			01
D400	VT332900	Diode	1SS355 TE-17			01
-407	VT332900	Diode	1SS355 TE-17			01
D413	VT332900	Diode	1SS355 TE-17			01
-416	VT332900	Diode	1SS355 TE-17			01
D600	VT332900	Diode	1SS355 TE-17			01
-611	VT332900	Diode	1SS355 TE-17			01
D628	VT332900	Diode	1SS355 TE-17			01
-654	VT332900	Diode	1SS355 TE-17			01
EC400	V3750900	Rotary Encoder	EC12E2444400	CH 17		03
EC401	V3750900	Rotary Encoder	EC12E2444400	CH 18		03
EC402	V3750900	Rotary Encoder	EC12E2444400	CH 19		03
EC403	V3750900	Rotary Encoder	EC12E2444400	CH 20		03
EC404	V3750900	Rotary Encoder	EC12E2444400	CH 21		03
EC405	V3750900	Rotary Encoder	EC12E2444400	CH 22		03
EC406	V3750900	Rotary Encoder	EC12E2444400	CH 23		03
EC407	V3750900	Rotary Encoder	EC12E2444400	CH 24		03
EC408	V3750700	Rotary Encoder	EC12E2410401	GAIN <EQUALIZER LOW>		01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
EC409	V3750700	Rotary Encoder	EC12E2410401	GAIN <EQUALIZER LOW-MID>		01
EC410	V3750700	Rotary Encoder	EC12E2410401	GAIN <EQUALIZER HIGH-MID>		01
EC411	V3750700	Rotary Encoder	EC12E2410401	GAIN <EQUALIZER HIGH>		01
EC412	V3750700	Rotary Encoder	EC12E2410401	PAN/SURROUND		01
EC413	V3750900	Rotary Encoder	EC12E2444400	F/Q <EQUALIZER LOW>		03
EC414	V3750900	Rotary Encoder	EC12E2444400	F/Q <EQUALIZER LOW-MID>		03
EC415	V3750900	Rotary Encoder	EC12E2444400	F/Q <EQUALIZER HIGH-MID>		03
EC416	V3750900	Rotary Encoder	EC12E2444400	F/Q <EQUALIZER HIGH>		03
EC417	V3750700	Rotary Encoder	EC12E2410401	THRESHOLD <DYNAMICS>		01
EC418	V3750700	Rotary Encoder	EC12E2410401	RANGE/RATIO <DYNAMICS>		01
EC419	V3750700	Rotary Encoder	EC12E2410401	ATTACK <DYNAMICS>		01
EC420	V3750700	Rotary Encoder	EC12E2410401	DECAY/RELEASE<DYNAMICS>		01
EC421	V3750700	Rotary Encoder	EC12E2410401	HOLD/GAIN <DYNAMICS>		01
EM500	FZ006970	LC Filter	MTY223NBTBM			02
* EM501	V9883200	Carbon Film Resistor	0.0 RD16MT			
EM700	FZ006970	LC Filter	MTY223NBTBM			02
IC100	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC101	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC102	IS016500	IC	HD74LV165AFPEL	REGISTER		02
IC103	IS016500	IC	HD74LV165AFPEL	REGISTER		02
IC104	IS059500	IC	HD74LV595AFPEL	REGISTER		02
-107	IS059500	IC	HD74LV595AFPEL	REGISTER		02
IC108	XT163A00	IC	TC74HC238AF	TRANSCEIVER		03
IC109	XT163A00	IC	TC74HC238AF	TRANSCEIVER		03
IC500	XT163A00	IC	TC74HC238AF	TRANSCEIVER		03
IC501	IS059500	IC	HD74LV595AFPEL	REGISTER		02
IC502	IS059500	IC	HD74LV595AFPEL	REGISTER		02
IC503	IS016500	IC	HD74LV165AFPEL	REGISTER		02
LD200	V3670200	LED Yellow	LT1H40A	ON 17		01
LD201	V3670200	LED Yellow	LT1H40A	ON 18		01
LD202	V3670200	LED Yellow	LT1H40A	ON 19		01
LD203	V3670200	LED Yellow	LT1H40A	ON 20		01
LD204	V3670200	LED Yellow	LT1H40A	ON 21		01
LD205	V3670200	LED Yellow	LT1H40A	ON 22		01
LD206	V3670200	LED Yellow	LT1H40A	ON 23		01
LD207	V3670200	LED Yellow	LT1H40A	ON 24		01
LD208	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO <STEREO>		01
LD209	V3670100	LED Yellow/Green	LT1E40A	SEL <STEREO>		01
LD210	V3670200	LED Yellow	LT1H40A	ON <STEREO>		01
LD211	V3670100	LED Yellow/Green	LT1E40A	1-24 <LAYER>		01
LD212	V3670100	LED Yellow/Green	LT1E40A	25-48 <LAYER>		01
LD213	V3670100	LED Yellow/Green	LT1E40A	REMOTE <LAYER>		01
LD214	V3670100	LED Yellow/Green	LT1E40A	MASTER <LAYER>		01
LD215	V3670200	LED Yellow	LT1H40A	SOLO 17		01
LD216	V3670200	LED Yellow	LT1H40A	SOLO 18		01
LD217	V3670200	LED Yellow	LT1H40A	SOLO 19		01
LD218	V3670200	LED Yellow	LT1H40A	SOLO 20		01
LD219	V3670200	LED Yellow	LT1H40A	SOLO 21		01
LD220	V3670200	LED Yellow	LT1H40A	SOLO 22		01
LD221	V3670200	LED Yellow	LT1H40A	SOLO 23		01
LD222	V3670200	LED Yellow	LT1H40A	SOLO 24		01
LD223	V3670200	LED Yellow	LT1H40A	GATE ON <DYNAMICS>		01
LD224	V3670200	LED Yellow	LT1H40A	COMP ON <DYNAMICS>		01
LD225	V3670200	LED Yellow	LT1H40A	GATE <DYNAMICS>		01
LD226	V3670200	LED Yellow	LT1H40A	COMP <DYNAMICS>		01
LD227	V3670200	LED Yellow	LT1H40A	FOLLOW PAN <ROUTING>		01
LD228	V3670200	LED Yellow	LT1H40A	STEREO <ROUTING>		01
LD229	V3670200	LED Yellow	LT1H40A	DIRECT <ROUTING>		01
LD230	V3670100	LED Yellow/Green	LT1E40A	SEL 17		01
LD231	V3670100	LED Yellow/Green	LT1E40A	SEL 18		01
LD232	V3670100	LED Yellow/Green	LT1E40A	SEL 19		01
LD233	V3670100	LED Yellow/Green	LT1E40A	SEL 20		01
LD234	V3670100	LED Yellow/Green	LT1E40A	SEL 21		01
LD235	V3670100	LED Yellow/Green	LT1E40A	SEL 22		01
LD236	V3670100	LED Yellow/Green	LT1E40A	SEL 23		01
LD237	V3670100	LED Yellow/Green	LT1E40A	SEL 24		01
LD238	V3670200	LED Yellow	LT1H40A	1 <ROUTING>		01
LD239	V3670200	LED Yellow	LT1H40A	2 <ROUTING>		01
LD240	V3670200	LED Yellow	LT1H40A	3 <ROUTING>		01
LD241	V3670200	LED Yellow	LT1H40A	4 <ROUTING>		01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
LD242	V3670200	LED Yellow	LT1H40A	5 <ROUTING>		01
LD243	V3670200	LED Yellow	LT1H40A	6 <ROUTING>		01
LD244	V3670200	LED Yellow	LT1H40A	7 <ROUTING>		01
LD245	V3670200	LED Yellow	LT1H40A	8 <ROUTING>		01
LD246	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 17		01
LD247	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 18		01
LD248	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 19		01
LD249	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 20		01
LD250	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 21		01
LD251	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 22		01
LD252	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 23		01
LD253	V7647400	LED Yellow-Green/Red	LT1ED67A	AUTO 24		01
LD254	V3670200	LED Yellow	LT1H40A	EQ ON <EQUALIZER>		01
LD255	V3670200	LED Yellow	LT1H40A	L/ODD-R/EVEN(9) <PAN/SUR.>		01
LD256	V3670200	LED Yellow	LT1H40A	L/ODD-R/EVEN(10) <PAN/SUR.>		01
LD257	V3670200	LED Yellow	LT1H40A	L <PAN/SURROUND>		01
LD258	V3670200	LED Yellow	LT1H40A	R <PAN/SURROUND>		01
LD259	V3670200	LED Yellow	LT1H40A	LINK <PAN/SURROUND>		01
LD260	V3670200	LED Yellow	LT1H40A	GRAB <PAN/SURROUND>		01
LD261	V3670200	LED Yellow	LT1H40A	EFFECT <PAN/SURROUND>		01
LD262	V3670200	LED Yellow	LT1H40A	1 <USER DEFINED KEYS>		01
LD263	V3670200	LED Yellow	LT1H40A	2 <USER DEFINED KEYS>		01
LD264	V3670200	LED Yellow	LT1H40A	3 <USER DEFINED KEYS>		01
LD265	V3670200	LED Yellow	LT1H40A	4 <USER DEFINED KEYS>		01
LD266	V3670200	LED Yellow	LT1H40A	5 <USER DEFINED KEYS>		01
LD267	V3670200	LED Yellow	LT1H40A	6 <USER DEFINED KEYS>		01
LD268	V3670200	LED Yellow	LT1H40A	7 <USER DEFINED KEYS>		01
LD269	V3670200	LED Yellow	LT1H40A	8 <USER DEFINED KEYS>		01
LD270	V3670200	LED Yellow	LT1H40A	9 <USER DEFINED KEYS>		01
LD271	V3670200	LED Yellow	LT1H40A	10 <USER DEFINED KEYS>		01
LD272	V3670200	LED Yellow	LT1H40A	11 <USER DEFINED KEYS>		01
LD273	V3670200	LED Yellow	LT1H40A	12 <USER DEFINED KEYS>		01
LD274	V3670200	LED Yellow	LT1H40A	13 <USER DEFINED KEYS>		01
LD275	V3670200	LED Yellow	LT1H40A	14 <USER DEFINED KEYS>		01
LD276	V3670200	LED Yellow	LT1H40A	15 <USER DEFINED KEYS>		01
LD277	V3670200	LED Yellow	LT1H40A	16 <USER DEFINED KEYS>		01
LD278	V3670200	LED Yellow	LT1H40A	L/ODD-R/EVEN(1) <PAN/SUR.>		01
LD279	V3670200	LED Yellow	LT1H40A	L/ODD-R/EVEN(2) <PAN/SUR.>		01
LD280	V3670200	LED Yellow	LT1H40A	L/ODD-R/EVEN(3) <PAN/SUR.>		01
LD281	V3670200	LED Yellow	LT1H40A	L/ODD-R/EVEN(4) <PAN/SUR.>		01
LD282	V3670200	LED Yellow	LT1H40A	L/ODD-R/EVEN(5) <PAN/SUR.>		01
LD283	V3670200	LED Yellow	LT1H40A	L/ODD-R/EVEN(6) <PAN/SUR.>		01
LD284	V3670200	LED Yellow	LT1H40A	L/ODD-R/EVEN(7) <PAN/SUR.>		01
LD285	V3670200	LED Yellow	LT1H40A	L/ODD-R/EVEN(8) <PAN/SUR.>		01
LD400	V3673800	LED Display	7 SEG.	EQUALIZER LOW		07
LD401	V3673800	LED Display	7 SEG.	EQUALIZER LOW-MID		07
LD402	V3673800	LED Display	7 SEG.	EQUALIZER HIGH-MID		07
LD403	V3673800	LED Display	7 SEG.	EQUALIZER HIGH		07
LD600	V3670200	LED Yellow	LT1H40A	1 <LOCATE MEMORY>		01
LD601	V3670200	LED Yellow	LT1H40A	2 <LOCATE MEMORY>		01
LD602	V3670200	LED Yellow	LT1H40A	3 <LOCATE MEMORY>		01
LD603	V3670200	LED Yellow	LT1H40A	4 <LOCATE MEMORY>		01
LD604	V3670200	LED Yellow	LT1H40A	5 <LOCATE MEMORY>		01
LD605	V3670200	LED Yellow	LT1H40A	6 <LOCATE MEMORY>		01
LD606	V3670200	LED Yellow	LT1H40A	7 <LOCATE MEMORY>		01
LD607	V3670200	LED Yellow	LT1H40A	8 <LOCATE MEMORY>		01
LD608	V3670200	LED Yellow	LT1H40A	dB <EQUALIZER LOW>		01
LD609	V3670200	LED Yellow	LT1H40A	dB <EQUALIZER LOW-MID>		01
LD610	V3670200	LED Yellow	LT1H40A	dB <EQUALIZER HIGH-MID>		01
LD611	V3670200	LED Yellow	LT1H40A	dB <EQUALIZER HIGH>		01
LD612	V3670200	LED Yellow	LT1H40A	Hz <EQUALIZER LOW>		01
LD613	V3670200	LED Yellow	LT1H40A	Hz <EQUALIZER LOW-MID>		01
LD614	V3670200	LED Yellow	LT1H40A	Hz <EQUALIZER HIGH-MID>		01
LD615	V3670200	LED Yellow	LT1H40A	Hz <EQUALIZER HIGH>		01
LD616	V3670200	LED Yellow	LT1H40A	FREQ.<EQUALIZER LOW>		01
LD617	V3670200	LED Yellow	LT1H40A	FREQ.<EQUALIZER LOW-MID>		01
LD618	V3670200	LED Yellow	LT1H40A	FREQ.<EQUALIZER HIGH-MID>		01
LD619	V3670200	LED Yellow	LT1H40A	FREQ.<EQUALIZER HIGH>		01
LD620	V3670200	LED Yellow	LT1H40A	Q <EQUALIZER LOW>		01
LD621	V3670200	LED Yellow	LT1H40A	Q <EQUALIZER LOW-MID>		01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
LD622	V3670200	LED Yellow	LT1H40A	Q <EQUALIZER HIGH-MID>	01
LD623	V3670200	LED Yellow	LT1H40A	Q <EQUALIZER HIGH>	01
LD624	V3670200	LED Yellow	LT1H40A	kHz <EQUALIZER LOW>	01
LD625	V3670200	LED Yellow	LT1H40A	kHz <EQUALIZER LOW-MID>	01
LD626	V3670200	LED Yellow	LT1H40A	kHz <EQUALIZER HIGH-MID>	01
LD627	V3670200	LED Yellow	LT1H40A	kHz <EQUALIZER HIGH>	01
LD628	V3670200	LED Yellow	LT1H40A	SET <MACHINE CONTROL>	01
LD629	V3670200	LED Yellow	LT1H40A	CTR.ROOM<MONITOR STUDIO>	01
LD630	V3670200	LED Yellow	LT1H40A	STEREO<MONITOR STUDIO>	01
LD631	V3670200	LED Yellow	LT1H40A	AUX7<MONITOR STUDIO>	01
LD632	V3670200	LED Yellow	LT1H40A	AUX8<MONITOR STUDIO>	01
LD633	V3670000	LED Red	LT1D40A	SOLO <MONITOR>	01
LD634	V3670200	LED Yellow	LT1H40A	2TR D1<MONITOR CTR.ROOM	01
LD635	V3670200	LED Yellow	LT1H40A	2TR D2<MONITOR CTR.ROOM	01
LD636	V3670200	LED Yellow	LT1H40A	2TR D3<MONITOR CTR.ROOM	01
LD637	V3670200	LED Yellow	LT1H40A	2TR A1 <MONITOR CTR.ROOM	01
LD638	V3670200	LED Yellow	LT1H40A	2TR A2 <MONITOR CTR.ROOM	01
LD639	V3670200	LED Yellow	LT1H40A	STEREO<MONITOR CTR.ROOM	01
LD640	V3670200	LED Yellow	LT1H40A	ASSIGN1<MONITOR CTR.ROOM	01
LD641	V3670200	LED Yellow	LT1H40A	ASSIGN2<MONITOR CTR.ROOM	01
LD642	V3670200	LED Yellow	LT1H40A	BUS <MONITOR SURROUND>	01
LD643	V3670200	LED Yellow	LT1H40A	SLOT <MONITOR SURROUND	01
LD644	V3670200	LED Yellow	LT1H40A	DIMMER <MONITOR>	01
LD645	V3670200	LED Yellow	LT1H40A	TALKBACK <MONITOR>	01
LD700	V3670200	LED Yellow	LT1H40A	REW <MACHINE CONTROL>	01
LD701	V3670200	LED Yellow	LT1H40A	FF <MACHINE CONTROL>	01
LD702	V3670200	LED Yellow	LT1H40A	STOP <MACHINE CONTROL>	01
LD703	V3670100	LED Yellow/Green	LT1E40A	PLAY <MACHINE CONTROL>	01
LD704	V3670000	LED Red	LT1D40A	REC <MACHINE CONTROL>	01
LD705	V3674300	LED Display	7	SCENE MEMORY	05
R100	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
-119	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
R120	RD257100	Carbon Resistor (chip)	10.0K 0.1 J		01
R121	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
-126	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
R128	RD154330	Carbon Resistor (chip)	33.0 1/4 J		01
-159	RD154330	Carbon Resistor (chip)	33.0 1/4 J		01
R160	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
-163	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
R500	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
-504	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
R506	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
-508	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
R510	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
-513	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
R515	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
R516	RD154330	Carbon Resistor (chip)	33.0 1/4 J		01
-519	RD154330	Carbon Resistor (chip)	33.0 1/4 J		01
R523	RD154330	Carbon Resistor (chip)	33.0 1/4 J		01
-526	RD154330	Carbon Resistor (chip)	33.0 1/4 J		01
R532	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
R700	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
-704	RD255100	Carbon Resistor (chip)	100.0 0.1 J		01
RA100	RE047100	Resistor Array	10KX4		01
RA101	RE047100	Resistor Array	10KX4		01
RA200	RE047100	Resistor Array	10KX4		01
-203	RE047100	Resistor Array	10KX4		01
RA600	RE047100	Resistor Array	10KX4		01
RA601	RE047100	Resistor Array	10KX4		01
SW200	VV056000	Tact Switch	SKQNAED010	ON 17	01
SW201	VV056000	Tact Switch	SKQNAED010	ON 18	01
SW202	VV056000	Tact Switch	SKQNAED010	ON 19	01
SW203	VV056000	Tact Switch	SKQNAED010	ON 20	01
SW204	VV056000	Tact Switch	SKQNAED010	ON 21	01
SW205	VV056000	Tact Switch	SKQNAED010	ON 22	01
SW206	VV056000	Tact Switch	SKQNAED010	ON 23	01
SW207	VV056000	Tact Switch	SKQNAED010	ON 24	01
SW208	VV056000	Tact Switch	SKQNAED010	AUTO <STEREO>	01
SW209	VV056000	Tact Switch	SKQNAED010	SEL <STEREO>	01
SW210	VV056000	Tact Switch	SKQNAED010	ON <STEREO>	01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
SW211	VV056000	Tact Switch	SKQNAED010	1-24 <LAYER>		01
SW212	VV056000	Tact Switch	SKQNAED010	25-48 <LAYER>		01
SW213	VV056000	Tact Switch	SKQNAED010	REMOTE <LAYER>		01
SW214	VV056000	Tact Switch	SKQNAED010	MASTER <LAYER>		01
SW215	VV056000	Tact Switch	SKQNAED010	SOLO 17		01
SW216	VV056000	Tact Switch	SKQNAED010	SOLO 18		01
SW217	VV056000	Tact Switch	SKQNAED010	SOLO 19		01
SW218	VV056000	Tact Switch	SKQNAED010	SOLO 20		01
SW219	VV056000	Tact Switch	SKQNAED010	SOLO 21		01
SW220	VV056000	Tact Switch	SKQNAED010	SOLO 22		01
SW221	VV056000	Tact Switch	SKQNAED010	SOLO 23		01
SW222	VV056000	Tact Switch	SKQNAED010	SOLO 24		01
SW223	VV056000	Tact Switch	SKQNAED010	GATE <DYNAMICS>		01
SW224	VV056000	Tact Switch	SKQNAED010	COMP ON <DYNAMICS>		01
SW225	VV056000	Tact Switch	SKQNAED010	GATE/COMP <DYNAMICS>		01
SW227	VV056000	Tact Switch	SKQNAED010	FOLLOW PAN <ROUTING>		01
SW228	VV056000	Tact Switch	SKQNAED010	STEREO <ROUTING>		01
SW229	VV056000	Tact Switch	SKQNAED010	DIRECT <ROUTING>		01
SW230	VV056000	Tact Switch	SKQNAED010	SEL 17		01
SW231	VV056000	Tact Switch	SKQNAED010	SEL 18		01
SW232	VV056000	Tact Switch	SKQNAED010	SEL 19		01
SW233	VV056000	Tact Switch	SKQNAED010	SEL 20		01
SW234	VV056000	Tact Switch	SKQNAED010	SEL 21		01
SW235	VV056000	Tact Switch	SKQNAED010	SEL 22		01
SW236	VV056000	Tact Switch	SKQNAED010	SEL 23		01
SW237	VV056000	Tact Switch	SKQNAED010	SEL 24		01
SW238	VV056000	Tact Switch	SKQNAED010	1 <ROUTING>		01
SW239	VV056000	Tact Switch	SKQNAED010	2 <ROUTING>		01
SW240	VV056000	Tact Switch	SKQNAED010	3 <ROUTING>		01
SW241	VV056000	Tact Switch	SKQNAED010	4 <ROUTING>		01
SW242	VV056000	Tact Switch	SKQNAED010	5 <ROUTING>		01
SW243	VV056000	Tact Switch	SKQNAED010	6 <ROUTING>		01
SW244	VV056000	Tact Switch	SKQNAED010	7 <ROUTING>		01
SW245	VV056000	Tact Switch	SKQNAED010	8 <ROUTING>		01
SW246	VV056000	Tact Switch	SKQNAED010	AUTO 17		01
SW247	VV056000	Tact Switch	SKQNAED010	AUTO 18		01
SW248	VV056000	Tact Switch	SKQNAED010	AUTO 19		01
SW249	VV056000	Tact Switch	SKQNAED010	AUTO 20		01
SW250	VV056000	Tact Switch	SKQNAED010	AUTO 21		01
SW251	VV056000	Tact Switch	SKQNAED010	AUTO 22		01
SW252	VV056000	Tact Switch	SKQNAED010	AUTO 23		01
SW253	VV056000	Tact Switch	SKQNAED010	AUTO 24		01
SW254	VV056000	Tact Switch	SKQNAED010	EQ ON <EQUALIZER>		01
SW255	VV056000	Tact Switch	SKQNAED010	PHASE/INSERT<DISP.ACCESS>		01
SW256	VV056000	Tact Switch	SKQNAED010	DELAY <DISPLAY ACCESS>		01
SW257	VV056000	Tact Switch	SKQNAED010	L <PAN/SURROUND>		01
SW258	VV056000	Tact Switch	SKQNAED010	R <PAN/SURROUND>		01
SW259	VV056000	Tact Switch	SKQNAED010	LINK <PAN/SURROUND>		01
SW260	VV056000	Tact Switch	SKQNAED010	GRAB <PAN/SURROUND>		01
SW261	VV056000	Tact Switch	SKQNAED010	EFFECT <PAN/SURROUND>		01
SW262	VV056000	Tact Switch	SKQNAED010	1 <USER DEFINED KEYS>		01
SW263	VV056000	Tact Switch	SKQNAED010	2 <USER DEFINED KEYS>		01
SW264	VV056000	Tact Switch	SKQNAED010	3 <USER DEFINED KEYS>		01
SW265	VV056000	Tact Switch	SKQNAED010	4 <USER DEFINED KEYS>		01
SW266	VV056000	Tact Switch	SKQNAED010	5 <USER DEFINED KEYS>		01
SW267	VV056000	Tact Switch	SKQNAED010	6 <USER DEFINED KEYS>		01
SW268	VV056000	Tact Switch	SKQNAED010	7 <USER DEFINED KEYS>		01
SW269	VV056000	Tact Switch	SKQNAED010	8 <USER DEFINED KEYS>		01
SW270	VV056000	Tact Switch	SKQNAED010	9 <USER DEFINED KEYS>		01
SW271	VV056000	Tact Switch	SKQNAED010	10 <USER DEFINED KEYS>		01
SW272	VV056000	Tact Switch	SKQNAED010	11 <USER DEFINED KEYS>		01
SW273	VV056000	Tact Switch	SKQNAED010	12 <USER DEFINED KEYS>		01
SW274	VV056000	Tact Switch	SKQNAED010	13 <USER DEFINED KEYS>		01
SW275	VV056000	Tact Switch	SKQNAED010	14 <USER DEFINED KEYS>		01
SW276	VV056000	Tact Switch	SKQNAED010	15 <USER DEFINED KEYS>		01
SW277	VV056000	Tact Switch	SKQNAED010	16 <USER DEFINED KEYS>		01
SW278	VV056000	Tact Switch	SKQNAED010	DISPLAY <ROUTING>		01
SW279	VV056000	Tact Switch	SKQNAED010	DISPLAY <DYNAMICS>		01
SW280	VV056000	Tact Switch	SKQNAED010	DISPLAY <PAN/SURROUND>		01
SW281	VV056000	Tact Switch	SKQNAED010	DISPLAY <EQUALIZER>		01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
SW600	VV056000	Tact Switch	SKQNAED010	1 <LOCATE MEMORY>		01
SW601	VV056000	Tact Switch	SKQNAED010	2 <LOCATE MEMORY>		01
SW602	VV056000	Tact Switch	SKQNAED010	3 <LOCATE MEMORY>		01
SW603	VV056000	Tact Switch	SKQNAED010	4 <LOCATE MEMORY>		01
SW604	VV056000	Tact Switch	SKQNAED010	5 <LOCATE MEMORY>		01
SW605	VV056000	Tact Switch	SKQNAED010	6 <LOCATE MEMORY>		01
SW606	VV056000	Tact Switch	SKQNAED010	7 <LOCATE MEMORY>		01
SW607	VV056000	Tact Switch	SKQNAED010	8 <LOCATE MEMORY>		01
SW608	VV056000	Tact Switch	SKQNAED010	DISPLAY <SCENE MEMORY>		01
SW609	VV056000	Tact Switch	SKQNAED010	DISPLAY<USER DEFINED KEYS		01
SW610	VV056000	Tact Switch	SKQNAED010	DISPLAY<MACHINE CONTROL>		01
SW611	VV056000	Tact Switch	SKQNAED010	DISPLAY <MONITOR>		01
SW628	VV056000	Tact Switch	SKQNAED010	SET <MACHINE CONTROL>		01
SW629	VV056000	Tact Switch	SKQNAED010	CTR.ROOM<MONITOR STUDIO>		01
SW630	VV056000	Tact Switch	SKQNAED010	STEREO <MONITOR STUDIO>		01
SW631	VV056000	Tact Switch	SKQNAED010	AUX7 <MONITOR STUDIO>		01
SW632	VV056000	Tact Switch	SKQNAED010	AUX8 <MONITOR STUDIO>		01
SW633	VV056000	Tact Switch	SKQNAED010	SOLO <MONITOR>		01
SW634	VV056000	Tact Switch	SKQNAED010	2TR D1<MONITOR CTR.ROOM		01
SW635	VV056000	Tact Switch	SKQNAED010	2TR D2<MONITOR CTR.ROOM		01
SW636	VV056000	Tact Switch	SKQNAED010	2TR D3<MONITOR CTR.ROOM		01
SW637	VV056000	Tact Switch	SKQNAED010	2TR A1<MONITOR CTR.ROOM		01
SW638	VV056000	Tact Switch	SKQNAED010	2TR A2<MONITOR CTR.ROOM		01
SW639	VV056000	Tact Switch	SKQNAED010	STEREO<MONITOR CTR.ROOM		01
SW640	VV056000	Tact Switch	SKQNAED010	ASSIGN1 <MONITOR CTR.ROOM		01
SW641	VV056000	Tact Switch	SKQNAED010	ASSIGN2 <MONITOR CTR.ROOM		01
SW642	VV056000	Tact Switch	SKQNAED010	BUS <MONITOR SURROUND>		01
SW643	VV056000	Tact Switch	SKQNAED010	SLOT<MONITOR SURROUND>		01
SW644	VV056000	Tact Switch	SKQNAED010	DIMMER <MONITOR>		01
SW645	VV056000	Tact Switch	SKQNAED010	TALKBACK <MONITOR>		01
SW646	VR531200	Push Switch	ML1A-11JW	STORE <SCENE MEMORY>		02
SW647	VR531200	Push Switch	ML1A-11JW	RECALL <SCENE MEMORY>		02
SW648	VR531200	Push Switch	ML1A-11JW	Cursor Up <SCENE MEMORY>		02
SW649	VR531200	Push Switch	ML1A-11JW	Cursor Down<SCENE MEMORY>		02
SW650	VR531200	Push Switch	ML1A-11JW	REW <MACHINE CONTROL>		02
SW651	VR531200	Push Switch	ML1A-11JW	FF <MACHINE CONTROL>		02
SW652	VR531200	Push Switch	ML1A-11JW	STOP <MACHINE CONTROL>		02
SW653	VR531200	Push Switch	ML1A-11JW	PLAY <MACHINE CONTROL>		02
SW654	VR531200	Push Switch	ML1A-11JW	REC <MACHINE CONTROL>		02
TA100	VQ248400	Transistor Array	TD62783AF			04
-103	VQ248400	Transistor Array	TD62783AF			04
TA104	VY703900	Transistor Array	TD62309F(EL)			04
-108	VY703900	Transistor Array	TD62309F(EL)			04
TA500	VQ248400	Transistor Array	TD62783AF			04
TA502	VY703900	Transistor Array	TD62309F(EL)			04
TA503	VY703900	Transistor Array	TD62309F(EL)			04
TR700	VV655400	Digital Transistor	DTC114EKA TP			01
-704	VV655400	Digital Transistor	DTC114EKA TP			01
VR400	V3674400	Stick Controller		Joy stick		08
VR700	VQ670500	Rotary Pot.	B 10K RK11K1130	SURROUND MONITOR LEVEL		02
VR701	VZ583900	Rotary Variable Resistor	A 20.0K RK14K12C0	CONTROL ROOM LEVEL		03
* W500	V8964200	Jumper Wire	FVP=2.0C26SB10-750			
* W501	V8392500	Jumper Wire	FVP=2.0C26SB16-240			
* W700	V9468000	Jumper Wire	FVP=2.0C26SB4-120			
* W702	V8963900	Jumper Wire	FVP=2.0C26SB8-580			
* V8911500		Circuit Board	STD	(V863070)(X2068B0)		
V6435400		Holder, Phones	x2			02
C001	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C002	V5829200	Electrolytic Cap. (chip)	100 20V 20SG100M+T			04
C101	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
C102	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
C103	UU168100	Electrolytic Cap.	100.00 50.0V			01
C104	UU168100	Electrolytic Cap.	100.00 50.0V			01
C105	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C106	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C107	UU168100	Electrolytic Cap.	100.00 50.0V			01
C108	UU168100	Electrolytic Cap.	100.00 50.0V			01
C109	UU147470	Electrolytic Cap.	47.00 25.0V			01
C110	UB052470	Monolithic Ceramic Cap.	SL 470P 50V J			01

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C111	UB052470	Monolithic Ceramic Cap.	SL 470P 50V J			01
C112	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C113	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C201	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
C202	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
C203	UU168100	Electrolytic Cap.	100.00 50.0V			01
C204	UU168100	Electrolytic Cap.	100.00 50.0V			01
C205	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C206	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C207	UU168100	Electrolytic Cap.	100.00 50.0V			01
C208	UU168100	Electrolytic Cap.	100.00 50.0V			01
C209	UU147470	Electrolytic Cap.	47.00 25.0V			01
C210	UB052470	Monolithic Ceramic Cap.	SL 470P 50V J			01
C211	UB052470	Monolithic Ceramic Cap.	SL 470P 50V J			01
C301	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
C302	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
C303	UU168100	Electrolytic Cap.	100.00 50.0V			01
C304	UU168100	Electrolytic Cap.	100.00 50.0V			01
C305	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C306	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C307	UU168100	Electrolytic Cap.	100.00 50.0V			01
C308	UU168100	Electrolytic Cap.	100.00 50.0V			01
C401	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
C402	UB051330	Monolithic Ceramic Cap.	SL 33P 50V J			01
C403	UU168100	Electrolytic Cap.	100.00 50.0V			01
C404	UU168100	Electrolytic Cap.	100.00 50.0V			01
C405	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C406	UB045100	Monolithic Ceramic Cap.	F 0.100 50V Z			01
C407	UU168100	Electrolytic Cap.	100.00 50.0V			01
C408	UU168100	Electrolytic Cap.	100.00 50.0V			01
CN001	VA252400	Base Post Connector	MQ 12P TE			03
EM001	FZ006970	LC Filter	MTY223NBTBM			02
EM002	FZ006970	LC Filter	MTY223NBTBM			02
EM101	FZ006920	LC Filter	MTB271KBTBM			01
EM102	FZ006920	LC Filter	MTB271KBTBM			01
EM201	FZ006920	LC Filter	MTB271KBTBM			01
EM202	FZ006920	LC Filter	MTB271KBTBM			01
EM301	FZ006920	LC Filter	MTB271KBTBM			01
EM302	FZ006920	LC Filter	MTB271KBTBM			01
EM401	FZ006920	LC Filter	MTB271KBTBM			01
EM402	FZ006920	LC Filter	MTB271KBTBM			01
IC101	XQ178A00	IC	NJM4580E-T1	OP AMP		01
IC102	XF291A00	IC	UPC4570G2	OP AMP		03
IC201	XQ178A00	IC	NJM4580E-T1	OP AMP		01
IC301	XQ178A00	IC	NJM4580E-T1	OP AMP		01
IC401	XQ178A00	IC	NJM4580E-T1	OP AMP		01
JK101	VS056300	Phone Jack	HLJ7001-01	STUDIO MONITOR OUT L		01
JK201	VS056300	Phone Jack	HLJ7001-01	STUDIO MONITOR OUT R		01
JK301	VS056300	Phone Jack	HLJ7001-01	CTR.ROOM MONITOR OUT L		01
JK401	VS056300	Phone Jack	HLJ7001-01	CTR.ROOM MONITOR OUT R		01
R103	HB027100	Metal Film Resistor	10.0K 1/4 F			
R104	HB027100	Metal Film Resistor	10.0K 1/4 F			
R105	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R106	HB027100	Metal Film Resistor	10.0K 1/4 F			
R107	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R108	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R109	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R110	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R111	HF454750	Carbon Resistor	75.0 1/4 J			01
R112	HF454750	Carbon Resistor	75.0 1/4 J			01
R113	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R114	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R115	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R116	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R117	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R118	VC325700	Metal Film Resistor	470.0 1/4 F			01
R119	HB025470	Metal Film Resistor	470.0 1/4 F			01
* R120	HB025510	Metal Film Resistor	510.0 1/4 F			
R203	HB027100	Metal Film Resistor	10.0K 1/4 F			
R204	HB027100	Metal Film Resistor	10.0K 1/4 F			

\*: New Parts

RANK: Japan only



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R205	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R206	HB027100	Metal Film Resistor	10.0K 1/4 F			
R207	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R208	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R209	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R210	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R211	HF454750	Carbon Resistor	75.0 1/4 J			01
R212	HF454750	Carbon Resistor	75.0 1/4 J			01
R213	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R214	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R215	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R216	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R217	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R218	HB025470	Metal Film Resistor	470.0 1/4 F			01
R219	HB025470	Metal Film Resistor	470.0 1/4 F			01
* R220	HB025510	Metal Film Resistor	510.0 1/4 F			
R303	HB027100	Metal Film Resistor	10.0K 1/4 F			
R304	HB027100	Metal Film Resistor	10.0K 1/4 F			
R305	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R306	HB027100	Metal Film Resistor	10.0K 1/4 F			
R307	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R308	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R309	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R310	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R311	HF454750	Carbon Resistor	75.0 1/4 J			01
R312	HF454750	Carbon Resistor	75.0 1/4 J			01
R313	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R314	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R315	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R316	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
* R320	HB025510	Metal Film Resistor	510.0 1/4 F			
R403	HB027100	Metal Film Resistor	10.0K 1/4 F			
R404	HB027100	Metal Film Resistor	10.0K 1/4 F			
R405	HB027110	Metal Film Resistor	11.0K 1/4 F			01
R406	HB027100	Metal Film Resistor	10.0K 1/4 F			
R407	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R408	HB027180	Metal Film Resistor	18.0K 1/4 F			01
R409	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R410	HB027160	Metal Film Resistor	16.0K 1/4 F			01
R411	HF454750	Carbon Resistor	75.0 1/4 J			01
R412	HF454750	Carbon Resistor	75.0 1/4 J			01
R413	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R414	RD258100	Carbon Resistor (chip)	100.0K 0.1 J			01
R415	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R416	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
* R420	HB025510	Metal Film Resistor	510.0 1/4 F			
TR101	VK432900	Transistor	2SD1915(F) S,T			01
TR102	VK432900	Transistor	2SD1915(F) S,T			01
TR201	VK432900	Transistor	2SD1915(F) S,T			01
TR202	VK432900	Transistor	2SD1915(F) S,T			01
TR301	VK432900	Transistor	2SD1915(F) S,T			01
TR302	VK432900	Transistor	2SD1915(F) S,T			01
TR401	VK432900	Transistor	2SD1915(F) S,T			01
TR402	VK432900	Transistor	2SD1915(F) S,T			01
VR101	VQ901400	Rotary Variable Resistor	A20KX2 RK14K12B	STUDIO LEVEL		03
⚠ *	V8629600	Power Supply Unit	PS J,U,L,CSA			
		NOTE: See parts list of the power supply unit service manual for details of circuit board component parts.				
	V8628200	Motor	DC KDE1208PTS3-6	Fan		09
	V5125700	LCD	EDMMPU3BDF			24
⚠	VN103500	Lithium Battery	CR2032			03
⚠	V5800000	AC Cord	J 3P 15A	J		09
⚠	V5068000	AC Cord	U/C 3P 13A	U,V		09
⚠	V5067700	AC Cord	CE 3P 10A	H,W,K		08
⚠	V6190800	AC Cord	BS	B		10

\*: New Parts

RANK: Japan only

# PEAK METER BRIDGE

# MB02R96

# PARTS LIST


## ■ CONTENTS

OVERALL ASSEMBLY	.....	2
ELECTRICAL PARTS	.....	6

## Notes : DESTINATION ABBREVIATIONS

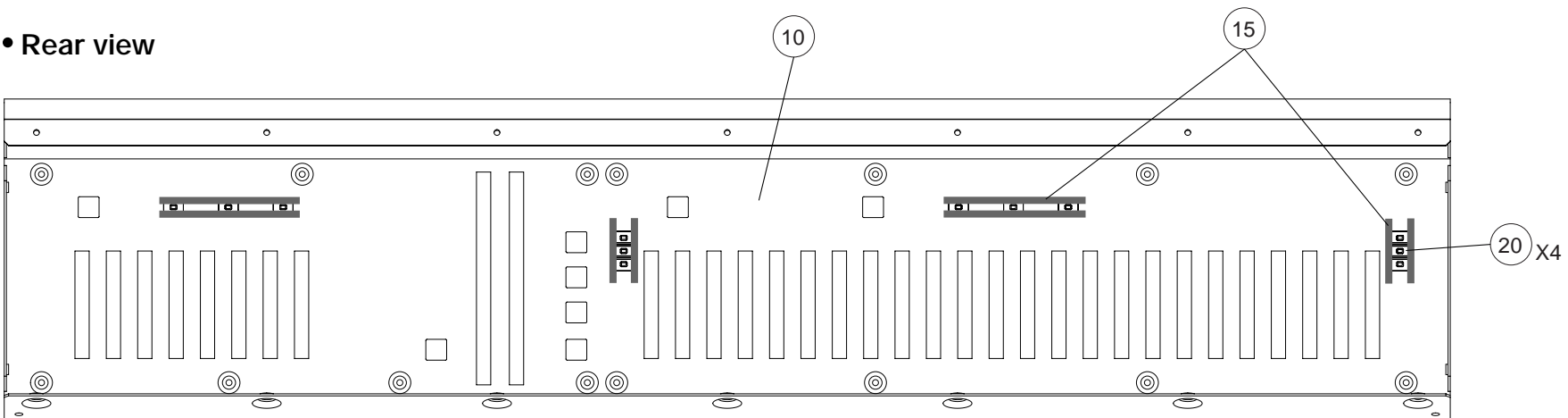
A : Australian model	M: South African model
B : British model	O : Chinese model
C : Canadian model	Q : South-east Asia model
D : German model	T : Taiwan model
E : European model	U : U.S.A. model
F : French model	V : General export model (110V)
H : North European model	W: General export model (220V)
I : Indonesian model	N,X: General export model
J : Japanese model	Y : Export model

## ■ WARNING

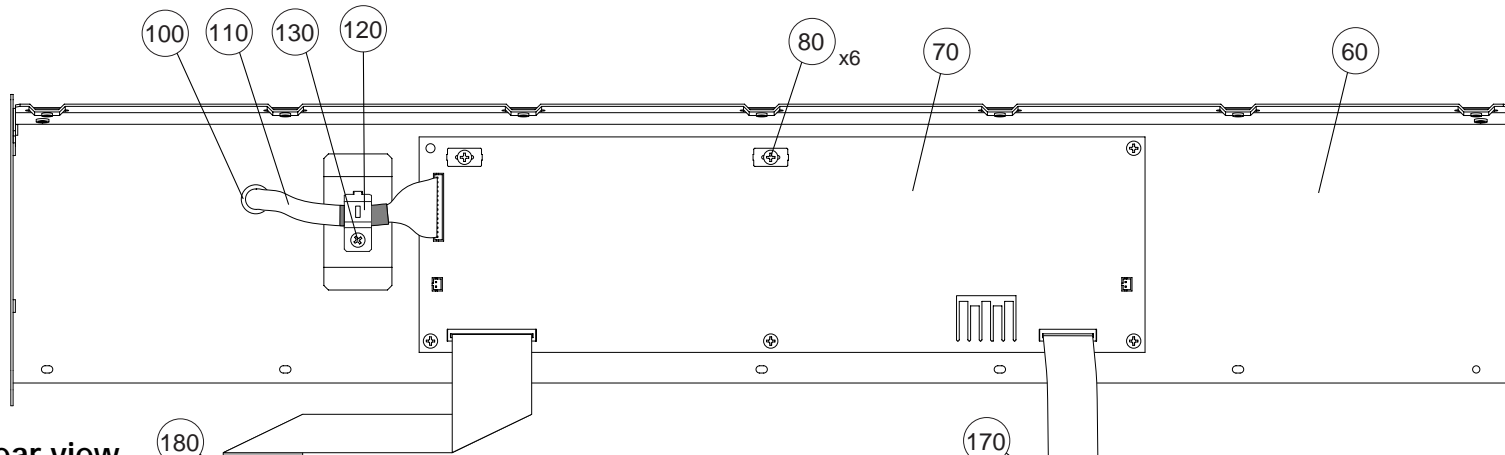
Components having special characteristics are marked  and must be replaced with parts having specification equal to those originally installed.

- The numbers "QTY" show quantities for each unit.
- The parts with "--" in "PART NO." are not available as spare parts.
- This mark "}" in the REMARKS column means these parts are interchangeable.
- The second letter of the shaded (■) part number is O, not zero.
- The second letter of the shaded (■) part number is I, not one.

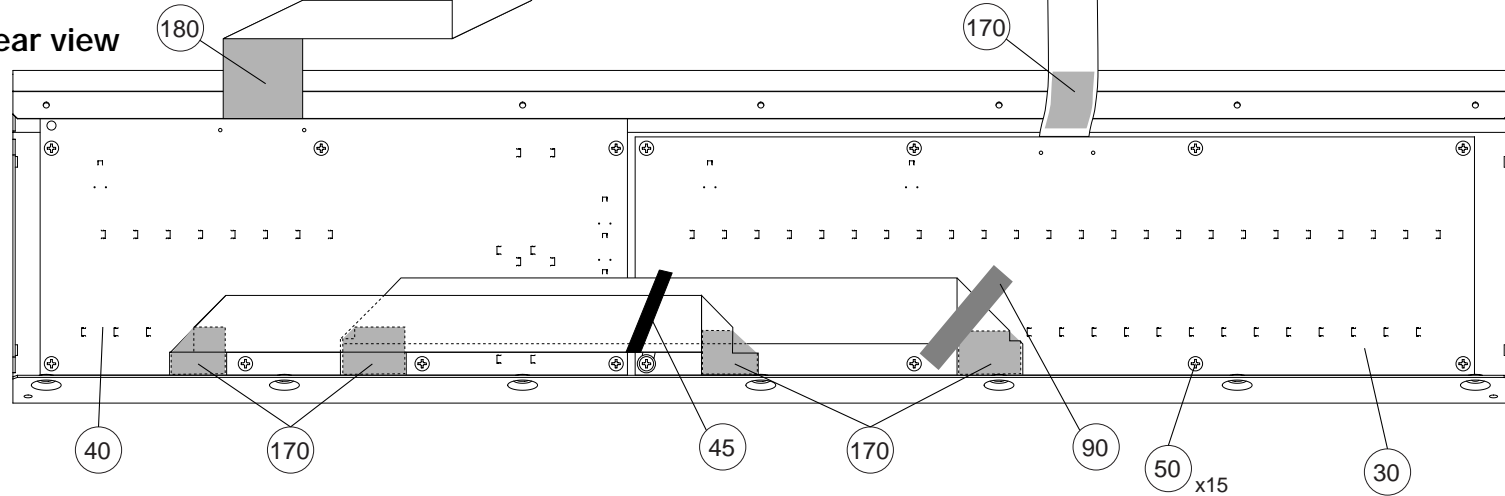
# OVERALL ASSEMBLY



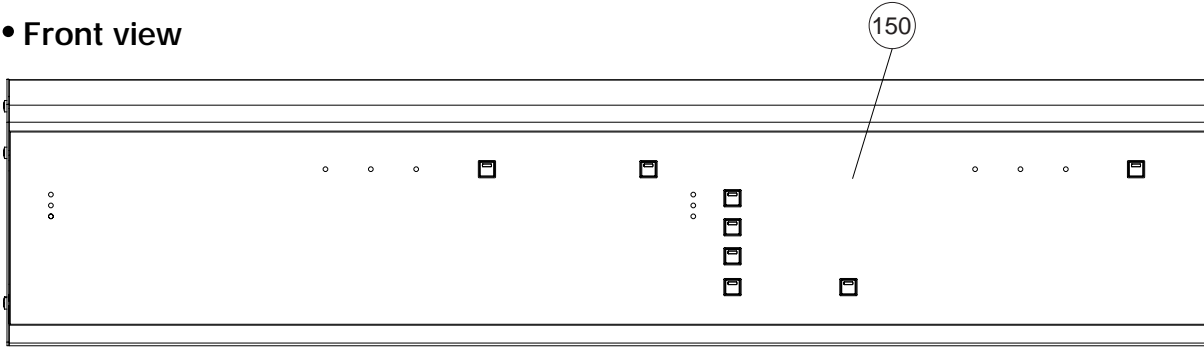
• Front view



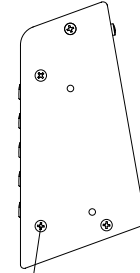
• Rear view



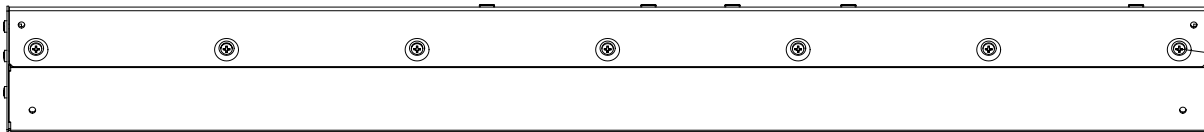
• Front view



• Right side view

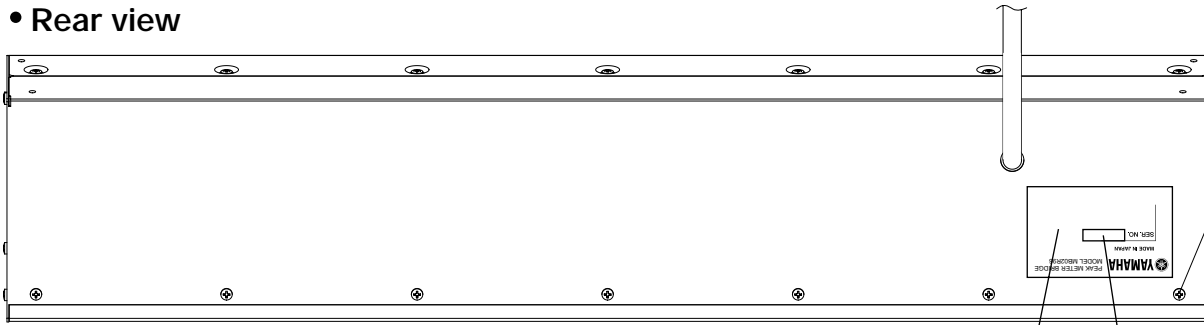


• Bottom view



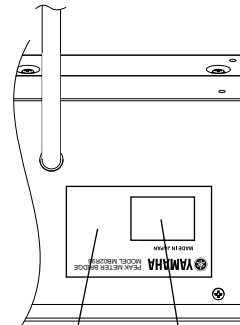
140 x22

• Rear view



160

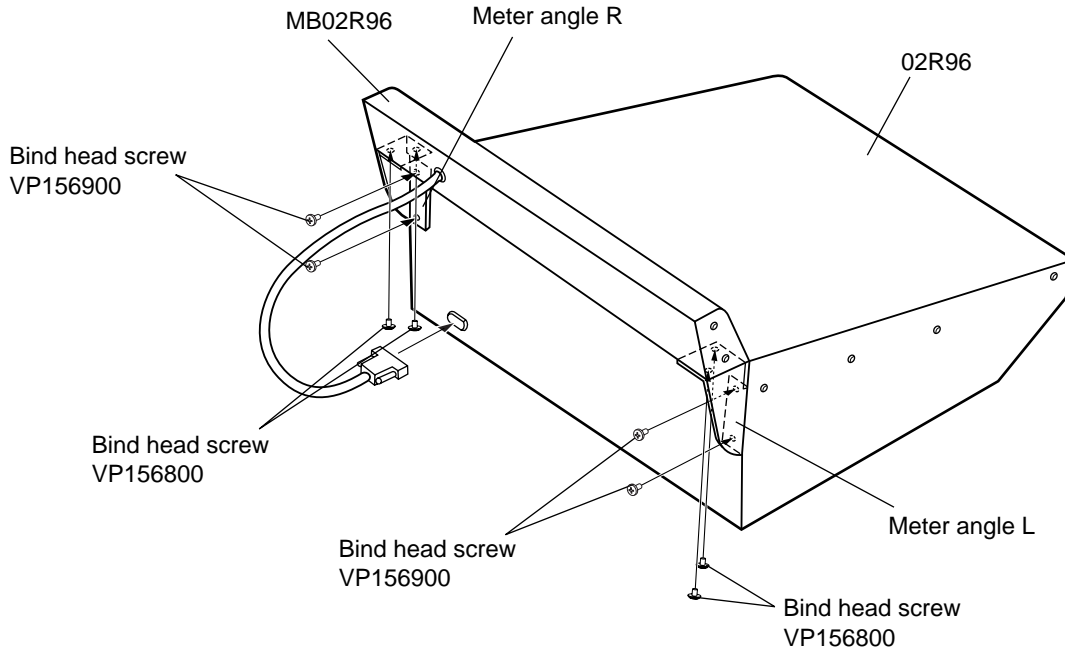
Label (Japanese model only)



160

UPC bar code label (Export model only)

• Accessories



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	OVERALL ASSEMBLY		MB02R96 (V810390)		
* 10	V8680000	Front Panel				
15	--	Adhesive Tape	W=3	(VE36240)	4	02
20	V6180000	LED Lens	3P			
* 30	V8621600	Circuit Board	PN1 (PNCOM)			
* 40	V8621700	Circuit Board	PN2 (PNCOM)			
45	VJ770600	Cord Binder	S-126			01
50	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		15	01
* 60	V8680200	Rear Panel				
* 70	V8630800	Circuit Board	DC1			
80	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		6	01
90	VA126100	Adhesive Tape	12X50			03
100	VU264700	Bushing	TB-9513			01
110	V6552600	DSUB Cable	DSUB15P 0.5m			07
120	VU264800	Cable Holder				08
130	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			01
140	VP157000	Bind Head Tapping Screw-B	A3.0X8 MFZN2BL		22	01
* 150	V8680800	Meter Sheet				
160	--	Label	J	(V868680)		
* 170	V9660700	Rubber Sponge PN3-PW			5	
* 180	V9094500	Rubber Sponge Spacer JW2				
		ACCESSORIES				
	VP156800	Bind Head Screw	A4.0X8 MFZN2BL		4	01
	VP156900	Bind Head Screw	A4.0X12 MFZN2BL		4	01
* 180	V8678400	Meter Angle L	LEFT			
* 180	V8679400	Meter Angle R	RIGHT			

\*: New Parts

RANK: Japan only

# ELECTRICAL PARTS

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		ELECTRICAL PARTS		MB02R96		
*	V8630800	Circuit Board	DC1	(XZ038A0)		
*	V8621600	Circuit Board	PN1 (PNCOM)	(V862150)(X2069C0)		
*	V8621700	Circuit Board	PN2 (PNCOM)	(V862150)(X2069C0)		
*	V8630800	Circuit Board	DC1	(XZ038A0)		
	VB659000	Bind Head Screw	3.0X8 MFZN2BL			01
	IL000690	Insulation Sheet	CSSX-G509			01
	--	Jumper Wire	0.55	(VA07890)	38	
C301	UR868470	Electrolytic Cap.	470.00 50.0V			01
C302	FG644100	Ceramic Capacitor-F	0.0100 50V Z			01
C303	UR848470	Electrolytic Cap.	470.00 25.0V			01
C304	UR868470	Electrolytic Cap.	470.00 50.0V			01
C306	FG644100	Ceramic Capacitor-F	0.0100 50V Z			01
C308	VF611200	Monolithic Ceramic Cap.	0.100 50V Z			02
C309	UR848470	Electrolytic Cap.	470.00 25.0V			01
C315	VF611200	Monolithic Ceramic Cap.	0.100 50V Z			02
C316	VF611200	Monolithic Ceramic Cap.	0.100 50V Z			02
CN301	VE352600	Connector Base Post	PH 14P TE			01
CN302	VF728200	Wire Trap	52147 10P TE			01
CN303	VF667700	Wire Trap	52147 17P TE			01
D301	VP974300	Diode	D3S6M-4002			03
D302	VB481900	Diode	11ES4			01
-309	VB481900	Diode	11ES4			01
D310	VP974300	Diode	D3S6M-4002			03
EM302	FZ006970	LC Filter	MTY223NBTBM			02
EM303	FZ006970	LC Filter	MTY223NBTBM			02
EM305	FZ006920	LC Filter	MTB271KBTBM			01
-308	FZ006920	LC Filter	MTB271KBTBM			01
EM310	FZ006970	LC Filter	MTY223NBTBM			02
-312	FZ006970	LC Filter	MTY223NBTBM			02
EM314	FZ006970	LC Filter	MTY223NBTBM			02
IC301	XT442A00	IC	SI-8050S	REGULATOR +5V		05
IC302	XZ274A00	IC	SI-8033S(LF1101)	REGULATOR +3.3V		05
IC303	XU463A00	IC	SN75C1168N	LINE TRANSCEIVER		05
K302	BB069510	Land Terminal	#6951 A-8			01
K304	VJ802700	Heat Sink	PUG26-25			02
K307	BB069510	Land Terminal	#6951 A-8			01
L301	V2379700	Coil	HP-033JY 150			06
L302	V2379700	Coil	HP-033JY 150			06
R301	HF757100	Carbon Resistor	10.0K 1/4 J			01
R302	HF454470	Carbon Resistor	47.0 1/4 J			01
-305	HF454470	Carbon Resistor	47.0 1/4 J			01
R307	HF456220	Carbon Resistor	2.2K 1/4 J			01
R308	HF456270	Carbon Resistor	2.7K 1/4 J			01
R310	HF456270	Carbon Resistor	2.7K 1/4 J			01
R311	HF456220	Carbon Resistor	2.2K 1/4 J			01
R312	HF757100	Carbon Resistor	10.0K 1/4 J			01
R313	HF757100	Carbon Resistor	10.0K 1/4 J			01
TH301	VV455700	Protector Switch	RXE020 0.20A 72V			02
TH303	VV456500	Protector Switch	RXE090 0.90A 72V			03
*	V8621600	Circuit Board	PN1 (PNCOM)	(V862150)(X2069C0)		
*	V8621700	Circuit Board	PN2 (PNCOM)	(V862150)(X2069C0)		
10	V8487200	Button Light Gray	S LENS	1-24,25-48,MASTER,REMOTE, PEAK HOLD,CONTROL ROOM INPUT METERING POSITION, OUTPUT METERING POSITION Level Meters (STEREO L/R) (INPUT:1-56,AUX1-8,BUS1-8 (OUTPUT:BUS1-8)	6	
20	V8487600	Button Light Gray	S		2	
30	V6179800	LED Lens	x16P		36	03
C100	UF038100	Electrolytic Cap. (chip)	100 16V			01
C101	UF038100	Electrolytic Cap. (chip)	100 16V			01
C102	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C103	UF037100	Electrolytic Cap. (chip)	10 16V			01
C104	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-107	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C300	UF037100	Electrolytic Cap. (chip)	10 16V			01
C301	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-303	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
C500	UF037100	Electrolytic Cap. (chip)	10 16V			01
C501	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C502	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C504	UF018100	Electrolytic Cap. (chip)	100 6.3V			01
C505	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-512	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C513	US062470	Ceramic Capacitor-SL(chip)	470P 50V J			01
C514	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C515	US061220	Ceramic Capacitor-CH(chip)	22P 50V J			01
C516	US061220	Ceramic Capacitor-CH(chip)	22P 50V J			01
C517	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C522	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
C600	UF038100	Electrolytic Cap. (chip)	100 16V			01
C601	UF038100	Electrolytic Cap. (chip)	100 16V			01
C602	UF037100	Electrolytic Cap. (chip)	10 16V			01
C603	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
-606	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z			01
CN100	VI878900	Cable Holder	51048 11P TE			01
CN101	VI879100	Cable Holder	51048 13P TE			01
CN102	VI878800	Cable Holder	51048 10P TE			01
CN500	VI879500	Cable Holder	51048 17P TE			01
CN501	VI879100	Cable Holder	51048 13P TE			01
CN502	VI878900	Cable Holder	51048 11P TE			01
CN503	VB390100	Connector Base Post	PH 5P TE			01
D300	VT332900	Diode	1SS355 TE-17			01
D301	VT332900	Diode	1SS355 TE-17			01
D600	VT332900	Diode	1SS355 TE-17			01
D601	VT332900	Diode	1SS355 TE-17			01
-605	VT332900	Diode	1SS355 TE-17			01
EM100	FZ006970	LC Filter	MTY223NBTBM			02
EM101	FZ006970	LC Filter	MTY223NBTBM			02
EM600	FZ006970	LC Filter	MTY223NBTBM			02
EM601	FZ006970	LC Filter	MTY223NBTBM			02
EM602	FZ006920	LC Filter	MTB271KBTBM			01
IC100	XS720A00	IC	TC74HC245AF	TRANSCEIVER		03
IC101	XV014A00	IC	TD62M8600F	SOURCE DRIVER		05
IC102	XV013A00	IC	TB62705CF(EL)	LED DRIVER		04
-104	XV013A00	IC	TB62705CF(EL)	LED DRIVER		04
IC300	XV014A00	IC	TD62M8600F	SOURCE DRIVER		05
IC301	XV013A00	IC	TB62705CF(EL)	LED DRIVER		04
IC302	XV013A00	IC	TB62705CF(EL)	LED DRIVER		04
IC500	XE165A00	IC	SN74HC00NSR	NAND		01
IC501	XH218A00	IC	SN74HC125NSR	BUFFER		02
IC508	X3197A00	IC	HD64F7044F28	CPU		02
IC509	XP226A00	IC	IC-PST591DMT	SYSTEM RESET		03
IC510	XD838A00	IC	SN74HC245NSR	TRANSCEIVER		04
IC511	XT163A00	IC	TC74HC238AF	DECODER		03
IC600	XV014A00	IC	TD62M8600F	SOURCE DRIVER		05
IC601	XV013A00	IC	TB62705CF(EL)	LED DRIVER		04
-603	XV013A00	IC	TB62705CF(EL)	LED DRIVER		04
L500	GE300680	Ferrite Bead	BL01RN1A1F1J			02
L501	VS740100	Chip Inductance	BLM21B751S 2125			03
-505	VS740100	Chip Inductance	BLM21B751S 2125			03
LD001	V3670100	LED Yellow/Green	LT1E40A	STEREO L -72		01
LD002	V3670100	LED Yellow/Green	LT1E40A	STEREO L		01
LD003	V3670100	LED Yellow/Green	LT1E40A	STEREO L -60		01
LD004	V3670100	LED Yellow/Green	LT1E40A	STEREO L		01
LD005	V3670100	LED Yellow/Green	LT1E40A	STEREO L -48		01
LD006	V3670100	LED Yellow/Green	LT1E40A	STEREO L		01
LD007	V3670100	LED Yellow/Green	LT1E40A	STEREO L -42		01
LD008	V3670100	LED Yellow/Green	LT1E40A	STEREO L		01
LD009	V3670100	LED Yellow/Green	LT1E40A	STEREO L -36		01
LD010	V3670100	LED Yellow/Green	LT1E40A	STEREO L		01
LD011	V3670100	LED Yellow/Green	LT1E40A	STEREO L -30		01
LD012	V3670100	LED Yellow/Green	LT1E40A	STEREO L		01
LD013	V3670100	LED Yellow/Green	LT1E40A	STEREO L -24		01
LD014	V3670100	LED Yellow/Green	LT1E40A	STEREO L		01
LD015	V3670200	LED Yellow	LT1H40A	STEREO L -18		01
LD016	V3670200	LED Yellow	LT1H40A	STEREO L		01
LD017	V3670200	LED Yellow	LT1H40A	STEREO L -14		01

\*: New Parts

RANK: Japan only



REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
LD018	V3670200	LED Yellow	LT1H40A		01
LD019	V3670200	LED Yellow	LT1H40A		01
LD020	V3670200	LED Yellow	LT1H40A		01
LD021	V3670200	LED Yellow	LT1H40A		01
LD022	V3670200	LED Yellow	LT1H40A		01
LD023	V3670200	LED Yellow	LT1H40A		01
LD024	V3670200	LED Yellow	LT1H40A		01
LD025	V3670200	LED Yellow	LT1H40A		01
LD026	V3670200	LED Yellow	LT1H40A		01
LD027	V3670200	LED Yellow	LT1H40A		01
LD028	V3670200	LED Yellow	LT1H40A		01
LD029	V3670200	LED Yellow	LT1H40A		01
LD030	V3670200	LED Yellow	LT1H40A		01
LD031	V3670200	LED Yellow	LT1H40A		01
LD032	V3670000	LED Red	LT1D40A		01
LD033	V3670100	LED Yellow/Green	LT1E40A		01
LD034	V3670100	LED Yellow/Green	LT1E40A		01
LD035	V3670100	LED Yellow/Green	LT1E40A		01
LD036	V3670100	LED Yellow/Green	LT1E40A		01
LD037	V3670100	LED Yellow/Green	LT1E40A		01
LD038	V3670100	LED Yellow/Green	LT1E40A		01
LD039	V3670100	LED Yellow/Green	LT1E40A		01
LD040	V3670100	LED Yellow/Green	LT1E40A		01
LD041	V3670100	LED Yellow/Green	LT1E40A		01
LD042	V3670100	LED Yellow/Green	LT1E40A		01
LD043	V3670100	LED Yellow/Green	LT1E40A		01
LD044	V3670100	LED Yellow/Green	LT1E40A		01
LD045	V3670100	LED Yellow/Green	LT1E40A		01
LD046	V3670100	LED Yellow/Green	LT1E40A		01
LD047	V3670200	LED Yellow	LT1H40A		01
LD048	V3670200	LED Yellow	LT1H40A		01
LD049	V3670200	LED Yellow	LT1H40A		01
LD050	V3670200	LED Yellow	LT1H40A		01
LD051	V3670200	LED Yellow	LT1H40A		01
LD052	V3670200	LED Yellow	LT1H40A		01
LD053	V3670200	LED Yellow	LT1H40A		01
LD054	V3670200	LED Yellow	LT1H40A		01
LD055	V3670200	LED Yellow	LT1H40A		01
LD056	V3670200	LED Yellow	LT1H40A		01
LD057	V3670200	LED Yellow	LT1H40A		01
LD058	V3670200	LED Yellow	LT1H40A		01
LD059	V3670200	LED Yellow	LT1H40A		01
LD060	V3670200	LED Yellow	LT1H40A		01
LD061	V3670200	LED Yellow	LT1H40A		01
LD062	V3670200	LED Yellow	LT1H40A		01
LD063	V3670200	LED Yellow	LT1H40A		01
LD064	V3670000	LED Red	LT1D40A		01
LD100	V3670000	LED Red	LT1D40A	1/25/49 OVER (INPUT)	01
LD101	V3670200	LED Yellow	LT1H40A	1/25/49 0 (INPUT)	01
LD102	V3670200	LED Yellow	LT1H40A	1/25/49 -3 (INPUT)	01
LD103	V3670200	LED Yellow	LT1H40A	1/25/49 -6 (INPUT)	01
LD104	V3670200	LED Yellow	LT1H40A	1/25/49 -9 (INPUT)	01
LD105	V3670200	LED Yellow	LT1H40A	1/25/49 -12 (INPUT)	01
LD106	V3670200	LED Yellow	LT1H40A	1/25/49 -15 (INPUT)	01
LD107	V3670200	LED Yellow	LT1H40A	1/25/49 -18 (INPUT)	01
LD108	V3670100	LED Yellow/Green	LT1E40A	1/25/49 -24 (INPUT)	01
LD109	V3670100	LED Yellow/Green	LT1E40A	1/25/49 -30 (INPUT)	01
LD110	V3670100	LED Yellow/Green	LT1E40A	1/25/49 -36 (INPUT)	01
LD111	V3670100	LED Yellow/Green	LT1E40A	1/25/49 -48 (INPUT)	01
LD112	V3670000	LED Red	LT1D40A	2/26/50 OVER (INPUT)	01
LD113	V3670200	LED Yellow	LT1H40A	2/26/50 0 (INPUT)	01
LD114	V3670200	LED Yellow	LT1H40A	2/26/50 -3 (INPUT)	01
LD115	V3670200	LED Yellow	LT1H40A	2/26/50 -6 (INPUT)	01
LD116	V3670200	LED Yellow	LT1H40A	2/26/50 -9 (INPUT)	01
LD117	V3670200	LED Yellow	LT1H40A	2/26/50 -12 (INPUT)	01
LD118	V3670200	LED Yellow	LT1H40A	2/26/50 -15 (INPUT)	01
LD119	V3670200	LED Yellow	LT1H40A	2/26/50 -18 (INPUT)	01
LD120	V3670100	LED Yellow/Green	LT1E40A	2/26/50 -24 (INPUT)	01
LD121	V3670100	LED Yellow/Green	LT1E40A	2/26/50 -30 (INPUT)	01
LD122	V3670100	LED Yellow/Green	LT1E40A	2/26/50 -36 (INPUT)	01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
LD123	V3670100	LED Yellow/Green	LT1E40A	2/26/50 -48 (INPUT)		01
LD124	V3670000	LED Red	LT1D40A	3/27/51 OVER (INPUT)		01
LD125	V3670200	LED Yellow	LT1H40A	3/27/51 0 (INPUT)		01
LD126	V3670200	LED Yellow	LT1H40A	3/27/51 -3 (INPUT)		01
LD127	V3670200	LED Yellow	LT1H40A	3/27/51 -6 (INPUT)		01
LD128	V3670200	LED Yellow	LT1H40A	3/27/51 -9 (INPUT)		01
LD129	V3670200	LED Yellow	LT1H40A	3/27/51 -12 (INPUT)		01
LD130	V3670200	LED Yellow	LT1H40A	3/27/51 -15 (INPUT)		01
LD131	V3670200	LED Yellow	LT1H40A	3/27/51 -18 (INPUT)		01
LD132	V3670100	LED Yellow/Green	LT1E40A	3/27/51 -24 (INPUT)		01
LD133	V3670100	LED Yellow/Green	LT1E40A	3/27/51 -30 (INPUT)		01
LD134	V3670100	LED Yellow/Green	LT1E40A	3/27/51 -36 (INPUT)		01
LD135	V3670100	LED Yellow/Green	LT1E40A	3/27/51 -48 (INPUT)		01
LD136	V3670000	LED Red	LT1D40A	4/28/52 OVER (INPUT)		01
LD137	V3670200	LED Yellow	LT1H40A	4/28/52 0 (INPUT)		01
LD138	V3670200	LED Yellow	LT1H40A	4/28/52 -3 (INPUT)		01
LD139	V3670200	LED Yellow	LT1H40A	4/28/52 -6 (INPUT)		01
LD140	V3670200	LED Yellow	LT1H40A	4/28/52 -9 (INPUT)		01
LD141	V3670200	LED Yellow	LT1H40A	4/28/52 -12 (INPUT)		01
LD142	V3670200	LED Yellow	LT1H40A	4/28/52 -15 (INPUT)		01
LD143	V3670200	LED Yellow	LT1H40A	4/28/52 -18 (INPUT)		01
LD144	V3670100	LED Yellow/Green	LT1E40A	4/28/52 -24 (INPUT)		01
LD145	V3670100	LED Yellow/Green	LT1E40A	4/28/52 -30 (INPUT)		01
LD146	V3670100	LED Yellow/Green	LT1E40A	4/28/52 -36 (INPUT)		01
LD147	V3670100	LED Yellow/Green	LT1E40A	4/28/52 -48 (INPUT)		01
LD148	V3670000	LED Red	LT1D40A	5/29/53 OVER (INPUT)		01
LD149	V3670200	LED Yellow	LT1H40A	5/29/53 0 (INPUT)		01
LD150	V3670200	LED Yellow	LT1H40A	5/29/53 -3 (INPUT)		01
LD151	V3670200	LED Yellow	LT1H40A	5/29/53 -6 (INPUT)		01
LD152	V3670200	LED Yellow	LT1H40A	5/29/53 -9 (INPUT)		01
LD153	V3670200	LED Yellow	LT1H40A	5/29/53 -12 (INPUT)		01
LD154	V3670200	LED Yellow	LT1H40A	5/29/53 -15 (INPUT)		01
LD155	V3670200	LED Yellow	LT1H40A	5/29/53 -18 (INPUT)		01
LD156	V3670100	LED Yellow/Green	LT1E40A	5/29/53 -24 (INPUT)		01
LD157	V3670100	LED Yellow/Green	LT1E40A	5/29/53 -30 (INPUT)		01
LD158	V3670100	LED Yellow/Green	LT1E40A	5/29/53 -36 (INPUT)		01
LD159	V3670100	LED Yellow/Green	LT1E40A	5/29/53 -48 (INPUT)		01
LD160	V3670000	LED Red	LT1D40A	6/30/54 OVER (INPUT)		01
LD161	V3670200	LED Yellow	LT1H40A	6/30/54 0 (INPUT)		01
LD162	V3670200	LED Yellow	LT1H40A	6/30/54 -3 (INPUT)		01
LD163	V3670200	LED Yellow	LT1H40A	6/30/54 -6 (INPUT)		01
LD164	V3670200	LED Yellow	LT1H40A	6/30/54 -9 (INPUT)		01
LD165	V3670200	LED Yellow	LT1H40A	6/30/54 -12 (INPUT)		01
LD166	V3670200	LED Yellow	LT1H40A	6/30/54 -15 (INPUT)		01
LD167	V3670200	LED Yellow	LT1H40A	6/30/54 -18 (INPUT)		01
LD168	V3670100	LED Yellow/Green	LT1E40A	6/30/54 -24 (INPUT)		01
LD169	V3670100	LED Yellow/Green	LT1E40A	6/30/54 -30 (INPUT)		01
LD170	V3670100	LED Yellow/Green	LT1E40A	6/30/54 -36 (INPUT)		01
LD171	V3670100	LED Yellow/Green	LT1E40A	6/30/54 -48 (INPUT)		01
LD172	V3670000	LED Red	LT1D40A	7/31/55 OVER (INPUT)		01
LD173	V3670200	LED Yellow	LT1H40A	7/31/55 0 (INPUT)		01
LD174	V3670200	LED Yellow	LT1H40A	7/31/55 -3 (INPUT)		01
LD175	V3670200	LED Yellow	LT1H40A	7/31/55 -6 (INPUT)		01
LD176	V3670200	LED Yellow	LT1H40A	7/31/55 -9 (INPUT)		01
LD177	V3670200	LED Yellow	LT1H40A	7/31/55 -12 (INPUT)		01
LD178	V3670200	LED Yellow	LT1H40A	7/31/55 -15 (INPUT)		01
LD179	V3670200	LED Yellow	LT1H40A	7/31/55 -18 (INPUT)		01
LD180	V3670100	LED Yellow/Green	LT1E40A	7/31/55 -24 (INPUT)		01
LD181	V3670100	LED Yellow/Green	LT1E40A	7/31/55 -30 (INPUT)		01
LD182	V3670100	LED Yellow/Green	LT1E40A	7/31/55 -36 (INPUT)		01
LD183	V3670100	LED Yellow/Green	LT1E40A	7/31/55 -48 (INPUT)		01
LD184	V3670000	LED Red	LT1D40A	8/32/56 OVER (INPUT)		01
LD185	V3670200	LED Yellow	LT1H40A	8/32/56 0 (INPUT)		01
LD186	V3670200	LED Yellow	LT1H40A	8/32/56 -3 (INPUT)		01
LD187	V3670200	LED Yellow	LT1H40A	8/32/56 -6 (INPUT)		01
LD188	V3670200	LED Yellow	LT1H40A	8/32/56 -9 (INPUT)		01
LD189	V3670200	LED Yellow	LT1H40A	8/32/56 -12 (INPUT)		01
LD190	V3670200	LED Yellow	LT1H40A	8/32/56 -15 (INPUT)		01
LD191	V3670200	LED Yellow	LT1H40A	8/32/56 -18 (INPUT)		01
LD192	V3670100	LED Yellow/Green	LT1E40A	8/32/56 -24 (INPUT)		01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
LD193	V3670100	LED Yellow/Green	LT1E40A	8/32/56 -30 (INPUT)		01
LD194	V3670100	LED Yellow/Green	LT1E40A	8/32/56 -36 (INPUT)		01
LD195	V3670100	LED Yellow/Green	LT1E40A	8/32/56 -48 (INPUT)		01
LD196	V3670000	LED Red	LT1D40A	9/33/AUX1 OVER (INPUT)		01
LD197	V3670200	LED Yellow	LT1H40A	9/33/AUX1 0 (INPUT)		01
LD198	V3670200	LED Yellow	LT1H40A	9/33/AUX1 -3 (INPUT)		01
LD199	V3670200	LED Yellow	LT1H40A	9/33/AUX1 -6 (INPUT)		01
LD200	V3670200	LED Yellow	LT1H40A	9/33/AUX1 -9 (INPUT)		01
LD201	V3670200	LED Yellow	LT1H40A	9/33/AUX1 -12 (INPUT)		01
LD202	V3670200	LED Yellow	LT1H40A	9/33/AUX1 -15 (INPUT)		01
LD203	V3670200	LED Yellow	LT1H40A	9/33/AUX1 -18 (INPUT)		01
LD204	V3670100	LED Yellow/Green	LT1E40A	9/33/AUX1 -24 (INPUT)		01
LD205	V3670100	LED Yellow/Green	LT1E40A	9/33/AUX1 -30 (INPUT)		01
LD206	V3670100	LED Yellow/Green	LT1E40A	9/33/AUX1 -36 (INPUT)		01
LD207	V3670100	LED Yellow/Green	LT1E40A	9/33/AUX1 -48 (INPUT)		01
LD208	V3670000	LED Red	LT1D40A	10/34/AUX2 OVER (INPUT)		01
LD209	V3670200	LED Yellow	LT1H40A	10/34/AUX2 0 (INPUT)		01
LD210	V3670200	LED Yellow	LT1H40A	10/34/AUX2 -3 (INPUT)		01
LD211	V3670200	LED Yellow	LT1H40A	10/34/AUX2 -6 (INPUT)		01
LD212	V3670200	LED Yellow	LT1H40A	10/34/AUX2 -9 (INPUT)		01
LD213	V3670200	LED Yellow	LT1H40A	10/34/AUX2 -12 (INPUT)		01
LD214	V3670200	LED Yellow	LT1H40A	10/34/AUX2 -15 (INPUT)		01
LD215	V3670200	LED Yellow	LT1H40A	10/34/AUX2 -18 (INPUT)		01
LD216	V3670100	LED Yellow/Green	LT1E40A	10/34/AUX2 -24 (INPUT)		01
LD217	V3670100	LED Yellow/Green	LT1E40A	10/34/AUX2 -30 (INPUT)		01
LD218	V3670100	LED Yellow/Green	LT1E40A	10/34/AUX2 -36 (INPUT)		01
LD219	V3670100	LED Yellow/Green	LT1E40A	10/34/AUX2 -48 (INPUT)		01
LD220	V3670000	LED Red	LT1D40A	11/35/AUX3 OVER (INPUT)		01
LD221	V3670200	LED Yellow	LT1H40A	11/35/AUX3 0 (INPUT)		01
LD222	V3670200	LED Yellow	LT1H40A	11/35/AUX3 -3 (INPUT)		01
LD223	V3670200	LED Yellow	LT1H40A	11/35/AUX3 -6 (INPUT)		01
LD224	V3670200	LED Yellow	LT1H40A	11/35/AUX3 -9 (INPUT)		01
LD225	V3670200	LED Yellow	LT1H40A	11/35/AUX3 -12 (INPUT)		01
LD226	V3670200	LED Yellow	LT1H40A	11/35/AUX3 -15 (INPUT)		01
LD227	V3670200	LED Yellow	LT1H40A	11/35/AUX3 -18 (INPUT)		01
LD228	V3670100	LED Yellow/Green	LT1E40A	11/35/AUX3 -24 (INPUT)		01
LD229	V3670100	LED Yellow/Green	LT1E40A	11/35/AUX3 -30 (INPUT)		01
LD230	V3670100	LED Yellow/Green	LT1E40A	11/35/AUX3 -36 (INPUT)		01
LD231	V3670100	LED Yellow/Green	LT1E40A	11/35/AUX3 -48 (INPUT)		01
LD232	V3670000	LED Red	LT1D40A	12/36/AUX4 OVER (INPUT)		01
LD233	V3670200	LED Yellow	LT1H40A	12/36/AUX4 0 (INPUT)		01
LD234	V3670200	LED Yellow	LT1H40A	12/36/AUX4 -3 (INPUT)		01
LD235	V3670200	LED Yellow	LT1H40A	12/36/AUX4 -6 (INPUT)		01
LD236	V3670200	LED Yellow	LT1H40A	12/36/AUX4 -9 (INPUT)		01
LD237	V3670200	LED Yellow	LT1H40A	12/36/AUX4 -12 (INPUT)		01
LD238	V3670200	LED Yellow	LT1H40A	12/36/AUX4 -15 (INPUT)		01
LD239	V3670200	LED Yellow	LT1H40A	12/36/AUX4 -18 (INPUT)		01
LD240	V3670100	LED Yellow/Green	LT1E40A	12/36/AUX4 -24 (INPUT)		01
LD241	V3670100	LED Yellow/Green	LT1E40A	12/36/AUX4 -30 (INPUT)		01
LD242	V3670100	LED Yellow/Green	LT1E40A	12/36/AUX4 -36 (INPUT)		01
LD243	V3670100	LED Yellow/Green	LT1E40A	12/36/AUX4 -48 (INPUT)		01
LD244	V3670000	LED Red	LT1D40A	13/37/AUX5 OVER (INPUT)		01
LD245	V3670200	LED Yellow	LT1H40A	13/37/AUX5 0 (INPUT)		01
LD246	V3670200	LED Yellow	LT1H40A	13/37/AUX5 -3 (INPUT)		01
LD247	V3670200	LED Yellow	LT1H40A	13/37/AUX5 -6 (INPUT)		01
LD248	V3670200	LED Yellow	LT1H40A	13/37/AUX5 -9 (INPUT)		01
LD249	V3670200	LED Yellow	LT1H40A	13/37/AUX5 -12 (INPUT)		01
LD250	V3670200	LED Yellow	LT1H40A	13/37/AUX5 -15 (INPUT)		01
LD251	V3670200	LED Yellow	LT1H40A	13/37/AUX5 -18 (INPUT)		01
LD252	V3670100	LED Yellow/Green	LT1E40A	13/37/AUX5 -24 (INPUT)		01
LD253	V3670100	LED Yellow/Green	LT1E40A	13/37/AUX5 -30 (INPUT)		01
LD254	V3670100	LED Yellow/Green	LT1E40A	13/37/AUX5 -36 (INPUT)		01
LD255	V3670100	LED Yellow/Green	LT1E40A	13/37/AUX5 -48 (INPUT)		01
LD256	V3670000	LED Red	LT1D40A	14/38/AUX6 OVER (INPUT)		01
LD257	V3670200	LED Yellow	LT1H40A	14/38/AUX6 0 (INPUT)		01
LD258	V3670200	LED Yellow	LT1H40A	14/38/AUX6 -3 (INPUT)		01
LD259	V3670200	LED Yellow	LT1H40A	14/38/AUX6 -6 (INPUT)		01
LD260	V3670200	LED Yellow	LT1H40A	14/38/AUX6 -9 (INPUT)		01
LD261	V3670200	LED Yellow	LT1H40A	14/38/AUX6 -12 (INPUT)		01
LD262	V3670200	LED Yellow	LT1H40A	14/38/AUX6 -15 (INPUT)		01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
LD263	V3670200	LED Yellow	LT1H40A	14/38/AUX6 -18 (INPUT)		01
LD264	V3670100	LED Yellow/Green	LT1E40A	14/38/AUX6 -24 (INPUT)		01
LD265	V3670100	LED Yellow/Green	LT1E40A	14/38/AUX6 -30 (INPUT)		01
LD266	V3670100	LED Yellow/Green	LT1E40A	14/38/AUX6 -36 (INPUT)		01
LD267	V3670100	LED Yellow/Green	LT1E40A	14/38/AUX6 -48 (INPUT)		01
LD268	V3670000	LED Red	LT1D40A	15/39/AUX7 OVER (INPUT)		01
LD269	V3670200	LED Yellow	LT1H40A	15/39/AUX7 0 (INPUT)		01
LD270	V3670200	LED Yellow	LT1H40A	15/39/AUX7 -3 (INPUT)		01
LD271	V3670200	LED Yellow	LT1H40A	15/39/AUX7 -6 (INPUT)		01
LD272	V3670200	LED Yellow	LT1H40A	15/39/AUX7 -9 (INPUT)		01
LD273	V3670200	LED Yellow	LT1H40A	15/39/AUX7 -12 (INPUT)		01
LD274	V3670200	LED Yellow	LT1H40A	15/39/AUX7 -15 (INPUT)		01
LD275	V3670200	LED Yellow	LT1H40A	15/39/AUX7 -18 (INPUT)		01
LD276	V3670100	LED Yellow/Green	LT1E40A	15/39/AUX7 -24 (INPUT)		01
LD277	V3670100	LED Yellow/Green	LT1E40A	15/39/AUX7 -30 (INPUT)		01
LD278	V3670100	LED Yellow/Green	LT1E40A	15/39/AUX7 -36 (INPUT)		01
LD279	V3670100	LED Yellow/Green	LT1E40A	15/39/AUX7 -48 (INPUT)		01
LD280	V3670000	LED Red	LT1D40A	16/40/AUX8 OVER (INPUT)		01
LD281	V3670200	LED Yellow	LT1H40A	16/40/AUX8 0 (INPUT)		01
LD282	V3670200	LED Yellow	LT1H40A	16/40/AUX8 -3 (INPUT)		01
LD283	V3670200	LED Yellow	LT1H40A	16/40/AUX8 -6 (INPUT)		01
LD284	V3670200	LED Yellow	LT1H40A	16/40/AUX8 -9 (INPUT)		01
LD285	V3670200	LED Yellow	LT1H40A	16/40/AUX8 -12 (INPUT)		01
LD286	V3670200	LED Yellow	LT1H40A	16/40/AUX8 -15 (INPUT)		01
LD287	V3670200	LED Yellow	LT1H40A	16/40/AUX8 -18 (INPUT)		01
LD288	V3670100	LED Yellow/Green	LT1E40A	16/40/AUX8 -24 (INPUT)		01
LD289	V3670100	LED Yellow/Green	LT1E40A	16/40/AUX8 -30 (INPUT)		01
LD290	V3670100	LED Yellow/Green	LT1E40A	16/40/AUX8 -36 (INPUT)		01
LD291	V3670100	LED Yellow/Green	LT1E40A	16/40/AUX8 -48 (INPUT)		01
LD300	V3670000	LED Red	LT1D40A	17/41/BUS1 OVER (INPUT)		01
LD301	V3670200	LED Yellow	LT1H40A	17/41/BUS1 0 (INPUT)		01
LD302	V3670200	LED Yellow	LT1H40A	17/41/BUS1 -3 (INPUT)		01
LD303	V3670200	LED Yellow	LT1H40A	17/41/BUS1 -6 (INPUT)		01
LD304	V3670200	LED Yellow	LT1H40A	17/41/BUS1 -9 (INPUT)		01
LD305	V3670200	LED Yellow	LT1H40A	17/41/BUS1 -12 (INPUT)		01
LD306	V3670200	LED Yellow	LT1H40A	17/41/BUS1 -15 (INPUT)		01
LD307	V3670200	LED Yellow	LT1H40A	17/41/BUS1 -18 (INPUT)		01
LD308	V3670100	LED Yellow/Green	LT1E40A	17/41/BUS1 -24 (INPUT)		01
LD309	V3670100	LED Yellow/Green	LT1E40A	17/41/BUS1 -30 (INPUT)		01
LD310	V3670100	LED Yellow/Green	LT1E40A	17/41/BUS1 -36 (INPUT)		01
LD311	V3670100	LED Yellow/Green	LT1E40A	17/41/BUS1 -48 (INPUT)		01
LD312	V3670000	LED Red	LT1D40A	18/42/BUS2 OVER (INPUT)		01
LD313	V3670200	LED Yellow	LT1H40A	18/42/BUS2 0 (INPUT)		01
LD314	V3670200	LED Yellow	LT1H40A	18/42/BUS2 -3 (INPUT)		01
LD315	V3670200	LED Yellow	LT1H40A	18/42/BUS2 -6 (INPUT)		01
LD316	V3670200	LED Yellow	LT1H40A	18/42/BUS2 -9 (INPUT)		01
LD317	V3670200	LED Yellow	LT1H40A	18/42/BUS2 -12 (INPUT)		01
LD318	V3670200	LED Yellow	LT1H40A	18/42/BUS2 -15 (INPUT)		01
LD319	V3670200	LED Yellow	LT1H40A	18/42/BUS2 -18 (INPUT)		01
LD320	V3670100	LED Yellow/Green	LT1E40A	18/42/BUS2 -24 (INPUT)		01
LD321	V3670100	LED Yellow/Green	LT1E40A	18/42/BUS2 -30 (INPUT)		01
LD322	V3670100	LED Yellow/Green	LT1E40A	18/42/BUS2 -36 (INPUT)		01
LD323	V3670100	LED Yellow/Green	LT1E40A	18/42/BUS2 -48 (INPUT)		01
LD324	V3670000	LED Red	LT1D40A	19/43/BUS3 OVER (INPUT)		01
LD325	V3670200	LED Yellow	LT1H40A	19/43/BUS3 0 (INPUT)		01
LD326	V3670200	LED Yellow	LT1H40A	19/43/BUS3 -3 (INPUT)		01
LD327	V3670200	LED Yellow	LT1H40A	19/43/BUS3 -6 (INPUT)		01
LD328	V3670200	LED Yellow	LT1H40A	19/43/BUS3 -9 (INPUT)		01
LD329	V3670200	LED Yellow	LT1H40A	19/43/BUS3 -12 (INPUT)		01
LD330	V3670200	LED Yellow	LT1H40A	19/43/BUS3 -15 (INPUT)		01
LD331	V3670200	LED Yellow	LT1H40A	19/43/BUS3 -18 (INPUT)		01
LD332	V3670100	LED Yellow/Green	LT1E40A	19/43/BUS3 -24 (INPUT)		01
LD333	V3670100	LED Yellow/Green	LT1E40A	19/43/BUS3 -30 (INPUT)		01
LD334	V3670100	LED Yellow/Green	LT1E40A	19/43/BUS3 -36 (INPUT)		01
LD335	V3670100	LED Yellow/Green	LT1E40A	19/43/BUS3 -48 (INPUT)		01
LD336	V3670000	LED Red	LT1D40A	20/44/BUS4 OVER (INPUT)		01
LD337	V3670200	LED Yellow	LT1H40A	20/44/BUS4 0 (INPUT)		01
LD338	V3670200	LED Yellow	LT1H40A	20/44/BUS4 -3 (INPUT)		01
LD339	V3670200	LED Yellow	LT1H40A	20/44/BUS4 -6 (INPUT)		01
LD340	V3670200	LED Yellow	LT1H40A	20/44/BUS4 -9 (INPUT)		01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
LD341	V3670200	LED Yellow	LT1H40A	20/44/BUS4 -12 (INPUT)	01
LD342	V3670200	LED Yellow	LT1H40A	20/44/BUS4 -15 (INPUT)	01
LD343	V3670200	LED Yellow	LT1H40A	20/44/BUS4 -18 (INPUT)	01
LD344	V3670100	LED Yellow/Green	LT1E40A	20/44/BUS4 -24 (INPUT)	01
LD345	V3670100	LED Yellow/Green	LT1E40A	20/44/BUS4 -30 (INPUT)	01
LD346	V3670100	LED Yellow/Green	LT1E40A	20/44/BUS4 -36 (INPUT)	01
LD347	V3670100	LED Yellow/Green	LT1E40A	20/44/BUS4 -48 (INPUT)	01
LD348	V3670000	LED Red	LT1D40A	21/45/BUS5 OVER (INPUT)	01
LD349	V3670200	LED Yellow	LT1H40A	21/45/BUS5 0 (INPUT)	01
LD350	V3670200	LED Yellow	LT1H40A	21/45/BUS5 -3 (INPUT)	01
LD351	V3670200	LED Yellow	LT1H40A	21/45/BUS5 -6 (INPUT)	01
LD352	V3670200	LED Yellow	LT1H40A	21/45/BUS5 -9 (INPUT)	01
LD353	V3670200	LED Yellow	LT1H40A	21/45/BUS5 -12 (INPUT)	01
LD354	V3670200	LED Yellow	LT1H40A	21/45/BUS5 -15 (INPUT)	01
LD355	V3670200	LED Yellow	LT1H40A	21/45/BUS5 -18 (INPUT)	01
LD356	V3670100	LED Yellow/Green	LT1E40A	21/45/BUS5 -24 (INPUT)	01
LD357	V3670100	LED Yellow/Green	LT1E40A	21/45/BUS5 -30 (INPUT)	01
LD358	V3670100	LED Yellow/Green	LT1E40A	21/45/BUS5 -36 (INPUT)	01
LD359	V3670100	LED Yellow/Green	LT1E40A	21/45/BUS5 -48 (INPUT)	01
LD360	V3670000	LED Red	LT1D40A	22/46/BUS6 OVER (INPUT)	01
LD361	V3670200	LED Yellow	LT1H40A	22/46/BUS6 0 (INPUT)	01
LD362	V3670200	LED Yellow	LT1H40A	22/46/BUS6 -3 (INPUT)	01
LD363	V3670200	LED Yellow	LT1H40A	22/46/BUS6 -6 (INPUT)	01
LD364	V3670200	LED Yellow	LT1H40A	22/46/BUS6 -9 (INPUT)	01
LD365	V3670200	LED Yellow	LT1H40A	22/46/BUS6 -12 (INPUT)	01
LD366	V3670200	LED Yellow	LT1H40A	22/46/BUS6 -15 (INPUT)	01
LD367	V3670200	LED Yellow	LT1H40A	22/46/BUS6 -18 (INPUT)	01
LD368	V3670100	LED Yellow/Green	LT1E40A	22/46/BUS6 -24 (INPUT)	01
LD369	V3670100	LED Yellow/Green	LT1E40A	22/46/BUS6 -30 (INPUT)	01
LD370	V3670100	LED Yellow/Green	LT1E40A	22/46/BUS6 -36 (INPUT)	01
LD371	V3670100	LED Yellow/Green	LT1E40A	22/46/BUS6 -48 (INPUT)	01
LD372	V3670000	LED Red	LT1D40A	23/47/BUS7 OVER (INPUT)	01
LD373	V3670200	LED Yellow	LT1H40A	23/47/BUS7 0 (INPUT)	01
LD374	V3670200	LED Yellow	LT1H40A	23/47/BUS7 -3 (INPUT)	01
LD375	V3670200	LED Yellow	LT1H40A	23/47/BUS7 -6 (INPUT)	01
LD376	V3670200	LED Yellow	LT1H40A	23/47/BUS7 -9 (INPUT)	01
LD377	V3670200	LED Yellow	LT1H40A	23/47/BUS7 -12 (INPUT)	01
LD378	V3670200	LED Yellow	LT1H40A	23/47/BUS7 -15 (INPUT)	01
LD379	V3670200	LED Yellow	LT1H40A	23/47/BUS7 -18 (INPUT)	01
LD380	V3670100	LED Yellow/Green	LT1E40A	23/47/BUS7 -24 (INPUT)	01
LD381	V3670100	LED Yellow/Green	LT1E40A	23/47/BUS7 -30 (INPUT)	01
LD382	V3670100	LED Yellow/Green	LT1E40A	23/47/BUS7 -36 (INPUT)	01
LD383	V3670100	LED Yellow/Green	LT1E40A	23/47/BUS7 -48 (INPUT)	01
LD384	V3670000	LED Red	LT1D40A	24/48/BUS8 OVER (INPUT)	01
LD385	V3670200	LED Yellow	LT1H40A	24/48/BUS8 0 (INPUT)	01
LD386	V3670200	LED Yellow	LT1H40A	24/48/BUS8 -3 (INPUT)	01
LD387	V3670200	LED Yellow	LT1H40A	24/48/BUS8 -6 (INPUT)	01
LD388	V3670200	LED Yellow	LT1H40A	24/48/BUS8 -9 (INPUT)	01
LD389	V3670200	LED Yellow	LT1H40A	24/48/BUS8 -12 (INPUT)	01
LD390	V3670200	LED Yellow	LT1H40A	24/48/BUS8 -15 (INPUT)	01
LD391	V3670200	LED Yellow	LT1H40A	24/48/BUS8 -18 (INPUT)	01
LD392	V3670100	LED Yellow/Green	LT1E40A	24/48/BUS8 -24 (INPUT)	01
LD393	V3670100	LED Yellow/Green	LT1E40A	24/48/BUS8 -30 (INPUT)	01
LD394	V3670100	LED Yellow/Green	LT1E40A	24/48/BUS8 -36 (INPUT)	01
LD395	V3670100	LED Yellow/Green	LT1E40A	24/48/BUS8 -48 (INPUT)	01
LD396	V3670200	LED Yellow	LT1H40A	PEAK HOLD	01
LD397	V3670100	LED Yellow/Green	LT1E40A	PRE EQ (INPUT)	01
LD398	V3670100	LED Yellow/Green	LT1E40A	PRE FADER (INPUT)	01
LD399	V3670100	LED Yellow/Green	LT1E40A	POST FADER (INPUT)	01
LD400	V3670100	LED Yellow/Green	LT1E40A	1-24	01
LD401	V3670100	LED Yellow/Green	LT1E40A	25-48	01
LD402	V3670100	LED Yellow/Green	LT1E40A	49-56/AUX1-8/BUS1-8	01
LD403	V3670100	LED Yellow/Green	LT1E40A	1-24	01
LD404	V3670100	LED Yellow/Green	LT1E40A	25-48	01
LD405	V3670100	LED Yellow/Green	LT1E40A	49-56/AUX1-8/BUS1-8	01
LD600	V3670000	LED Red	LT1D40A	BUS1 OVER (OUTPUT)	01
LD601	V3670200	LED Yellow	LT1H40A	BUS1 0 (OUTPUT)	01
LD602	V3670200	LED Yellow	LT1H40A	BUS1 -3 (OUTPUT)	01
LD603	V3670200	LED Yellow	LT1H40A	BUS1 -6 (OUTPUT)	01
LD604	V3670200	LED Yellow	LT1H40A	BUS1 -9 (OUTPUT)	01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
LD605	V3670200	LED Yellow	LT1H40A	BUS1 -12 (OUTPUT)		01
LD606	V3670200	LED Yellow	LT1H40A	BUS1 -15 (OUTPUT)		01
LD607	V3670200	LED Yellow	LT1H40A	BUS1 -18 (OUTPUT)		01
LD608	V3670100	LED Yellow/Green	LT1E40A	BUS1 -24 (OUTPUT)		01
LD609	V3670100	LED Yellow/Green	LT1E40A	BUS1 -30 (OUTPUT)		01
LD610	V3670100	LED Yellow/Green	LT1E40A	BUS1 -36 (OUTPUT)		01
LD611	V3670100	LED Yellow/Green	LT1E40A	BUS1 -48 (OUTPUT)		01
LD612	V3670000	LED Red	LT1D40A	BUS2 OVER (OUTPUT)		01
LD613	V3670200	LED Yellow	LT1H40A	BUS2 0 (OUTPUT)		01
LD614	V3670200	LED Yellow	LT1H40A	BUS2 -3 (OUTPUT)		01
LD615	V3670200	LED Yellow	LT1H40A	BUS2 -6 (OUTPUT)		01
LD616	V3670200	LED Yellow	LT1H40A	BUS2 -9 (OUTPUT)		01
LD617	V3670200	LED Yellow	LT1H40A	BUS2 -12 (OUTPUT)		01
LD618	V3670200	LED Yellow	LT1H40A	BUS2 -15 (OUTPUT)		01
LD619	V3670200	LED Yellow	LT1H40A	BUS2 -18 (OUTPUT)		01
LD620	V3670100	LED Yellow/Green	LT1E40A	BUS2 -24 (OUTPUT)		01
LD621	V3670100	LED Yellow/Green	LT1E40A	BUS2 -30 (OUTPUT)		01
LD622	V3670100	LED Yellow/Green	LT1E40A	BUS2 -36 (OUTPUT)		01
LD623	V3670100	LED Yellow/Green	LT1E40A	BUS2 -48 (OUTPUT)		01
LD624	V3670000	LED Red	LT1D40A	BUS3 OVER (OUTPUT)		01
LD625	V3670200	LED Yellow	LT1H40A	BUS3 0 (OUTPUT)		01
LD626	V3670200	LED Yellow	LT1H40A	BUS3 -3 (OUTPUT)		01
LD627	V3670200	LED Yellow	LT1H40A	BUS3 -6 (OUTPUT)		01
LD628	V3670200	LED Yellow	LT1H40A	BUS3 -9 (OUTPUT)		01
LD629	V3670200	LED Yellow	LT1H40A	BUS3 -12 (OUTPUT)		01
LD630	V3670200	LED Yellow	LT1H40A	BUS3 -15 (OUTPUT)		01
LD631	V3670200	LED Yellow	LT1H40A	BUS3 -18 (OUTPUT)		01
LD632	V3670100	LED Yellow/Green	LT1E40A	BUS3 -24 (OUTPUT)		01
LD633	V3670100	LED Yellow/Green	LT1E40A	BUS3 -30 (OUTPUT)		01
LD634	V3670100	LED Yellow/Green	LT1E40A	BUS3 -36 (OUTPUT)		01
LD635	V3670100	LED Yellow/Green	LT1E40A	BUS3 -48 (OUTPUT)		01
LD636	V3670000	LED Red	LT1D40A	BUS4 OVER (OUTPUT)		01
LD637	V3670200	LED Yellow	LT1H40A	BUS4 0 (OUTPUT)		01
LD638	V3670200	LED Yellow	LT1H40A	BUS4 -3 (OUTPUT)		01
LD639	V3670200	LED Yellow	LT1H40A	BUS4 -6 (OUTPUT)		01
LD640	V3670200	LED Yellow	LT1H40A	BUS4 -9 (OUTPUT)		01
LD641	V3670200	LED Yellow	LT1H40A	BUS4 -12 (OUTPUT)		01
LD642	V3670200	LED Yellow	LT1H40A	BUS4 -15 (OUTPUT)		01
LD643	V3670200	LED Yellow	LT1H40A	BUS4 -18 (OUTPUT)		01
LD644	V3670100	LED Yellow/Green	LT1E40A	BUS4 -24 (OUTPUT)		01
LD645	V3670100	LED Yellow/Green	LT1E40A	BUS4 -30 (OUTPUT)		01
LD646	V3670100	LED Yellow/Green	LT1E40A	BUS4 -36 (OUTPUT)		01
LD647	V3670100	LED Yellow/Green	LT1E40A	BUS4 -48 (OUTPUT)		01
LD648	V3670000	LED Red	LT1D40A	BUS5 OVER (OUTPUT)		01
LD649	V3670200	LED Yellow	LT1H40A	BUS5 0 (OUTPUT)		01
LD650	V3670200	LED Yellow	LT1H40A	BUS5 -3 (OUTPUT)		01
LD651	V3670200	LED Yellow	LT1H40A	BUS5 -6 (OUTPUT)		01
LD652	V3670200	LED Yellow	LT1H40A	BUS5 -9 (OUTPUT)		01
LD653	V3670200	LED Yellow	LT1H40A	BUS5 -12 (OUTPUT)		01
LD654	V3670200	LED Yellow	LT1H40A	BUS5 -15 (OUTPUT)		01
LD655	V3670200	LED Yellow	LT1H40A	BUS5 -18 (OUTPUT)		01
LD656	V3670100	LED Yellow/Green	LT1E40A	BUS5 -24 (OUTPUT)		01
LD657	V3670100	LED Yellow/Green	LT1E40A	BUS5 -30 (OUTPUT)		01
LD658	V3670100	LED Yellow/Green	LT1E40A	BUS5 -36 (OUTPUT)		01
LD659	V3670100	LED Yellow/Green	LT1E40A	BUS5 -48 (OUTPUT)		01
LD660	V3670000	LED Red	LT1D40A	BUS6 OVER (OUTPUT)		01
LD661	V3670200	LED Yellow	LT1H40A	BUS6 0 (OUTPUT)		01
LD662	V3670200	LED Yellow	LT1H40A	BUS6 -3 (OUTPUT)		01
LD663	V3670200	LED Yellow	LT1H40A	BUS6 -6 (OUTPUT)		01
LD664	V3670200	LED Yellow	LT1H40A	BUS6 -9 (OUTPUT)		01
LD665	V3670200	LED Yellow	LT1H40A	BUS6 -12 (OUTPUT)		01
LD666	V3670200	LED Yellow	LT1H40A	BUS6 -15 (OUTPUT)		01
LD667	V3670200	LED Yellow	LT1H40A	BUS6 -18 (OUTPUT)		01
LD668	V3670100	LED Yellow/Green	LT1E40A	BUS6 -24 (OUTPUT)		01
LD669	V3670100	LED Yellow/Green	LT1E40A	BUS6 -30 (OUTPUT)		01
LD670	V3670100	LED Yellow/Green	LT1E40A	BUS6 -36 (OUTPUT)		01
LD671	V3670100	LED Yellow/Green	LT1E40A	BUS6 -48 (OUTPUT)		01
LD672	V3670000	LED Red	LT1D40A	BUS7 OVER (OUTPUT)		01
LD673	V3670200	LED Yellow	LT1H40A	BUS7 0 (OUTPUT)		01
LD674	V3670200	LED Yellow	LT1H40A	BUS7 -3 (OUTPUT)		01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
LD675	V3670200	LED Yellow	LT1H40A	BUS7 -6 (OUTPUT)		01
LD676	V3670200	LED Yellow	LT1H40A	BUS7 -9 (OUTPUT)		01
LD677	V3670200	LED Yellow	LT1H40A	BUS7 -12 (OUTPUT)		01
LD678	V3670200	LED Yellow	LT1H40A	BUS7 -15 (OUTPUT)		01
LD679	V3670200	LED Yellow	LT1H40A	BUS7 -18 (OUTPUT)		01
LD680	V3670100	LED Yellow/Green	LT1E40A	BUS7 -24 (OUTPUT)		01
LD681	V3670100	LED Yellow/Green	LT1E40A	BUS7 -30 (OUTPUT)		01
LD682	V3670100	LED Yellow/Green	LT1E40A	BUS7 -36 (OUTPUT)		01
LD683	V3670100	LED Yellow/Green	LT1E40A	BUS7 -48 (OUTPUT)		01
LD684	V3670000	LED Red	LT1D40A	BUS8 OVER (OUTPUT)		01
LD685	V3670200	LED Yellow	LT1H40A	BUS8 0 (OUTPUT)		01
LD686	V3670200	LED Yellow	LT1H40A	BUS8 -3 (OUTPUT)		01
LD687	V3670200	LED Yellow	LT1H40A	BUS8 -6 (OUTPUT)		01
LD688	V3670200	LED Yellow	LT1H40A	BUS8 -9 (OUTPUT)		01
LD689	V3670200	LED Yellow	LT1H40A	BUS8 -12 (OUTPUT)		01
LD690	V3670200	LED Yellow	LT1H40A	BUS8 -15 (OUTPUT)		01
LD691	V3670200	LED Yellow	LT1H40A	BUS8 -18 (OUTPUT)		01
LD692	V3670100	LED Yellow/Green	LT1E40A	BUS8 -24 (OUTPUT)		01
LD693	V3670100	LED Yellow/Green	LT1E40A	BUS8 -30 (OUTPUT)		01
LD694	V3670100	LED Yellow/Green	LT1E40A	BUS8 -36 (OUTPUT)		01
LD695	V3670100	LED Yellow/Green	LT1E40A	BUS8 -48 (OUTPUT)		01
LD700	V3670100	LED Yellow/Green	LT1E40A	1-24 switch		01
LD701	V3670100	LED Yellow/Green	LT1E40A	25-48 switch		01
LD702	V3670100	LED Yellow/Green	LT1E40A	MASTER		01
LD703	V3670100	LED Yellow/Green	LT1E40A	REMOTE		01
LD704	V3670200	LED Yellow	LT1H40A	CONTROL ROOM		01
LD705	V3670100	LED Yellow/Green	LT1E40A	PRE EQ (OUTPUT)		01
LD706	V3670100	LED Yellow/Green	LT1E40A	PRE FADER (OUTPUT)		01
LD707	V3670100	LED Yellow/Green	LT1E40A	POST FADER (OUTPUT)		01
R100	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-103	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R104	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
-106	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R107	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-113	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R300	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-303	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R304	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R305	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R306	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-310	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R500	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
-502	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R505	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R506	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R507	RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
R509	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R510	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R511	RD255220	Carbon Resistor (chip)	220.0 0.1 J			01
R512	RD256300	Carbon Resistor (chip)	3.0K 0.1 J			01
R513	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R514	RD255220	Carbon Resistor (chip)	220.0 0.1 J			01
R515	RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
R600	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-603	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
R604	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
-606	RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
R607	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
-613	RD255100	Carbon Resistor (chip)	100.0 0.1 J			01
RA100	RE047100	Resistor Array	10KX4			01
RA101	RE046220	Resistor Array	2.2KX4			01
RA102	RE046220	Resistor Array	2.2KX4			01
RA300	RE046220	Resistor Array	2.2KX4			01
RA301	RE046220	Resistor Array	2.2KX4			01
RA500	RE047100	Resistor Array	10KX4			01
-520	RE047100	Resistor Array	10KX4			01
RA600	RE046220	Resistor Array	2.2KX4			01
RA601	RE046220	Resistor Array	2.2KX4			01
SW300	VV056000	Tact Switch	SKQNAED010	INPUT METERING POSITION		01
SW301	VV056000	Tact Switch	SKQNAED010	PEAK HOLD		01

\*: New Parts

RANK: Japan only





# WOODEN SIDE PANELS

# SP02R96

# PARTS LIST


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### Notes : DESTINATION ABBREVIATIONS

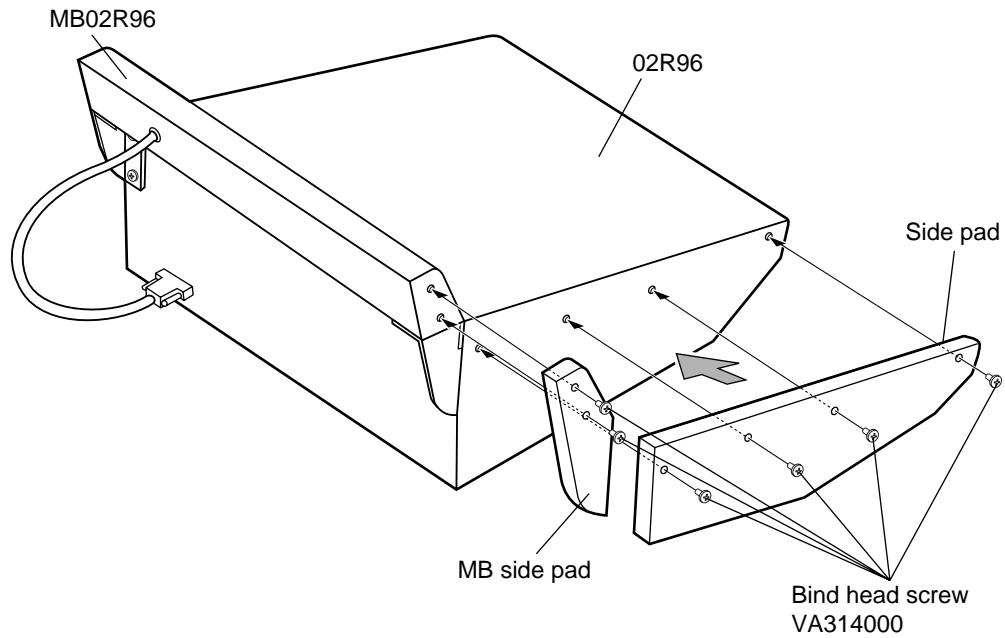
A : Australian model	M: South African model
B : British model	O : Chinese model
C : Canadian model	Q : South-east Asia model
D : German model	T : Taiwan model
E : European model	U : U.S.A. model
F : French model	V : General export model (110V)
H : North European model	W: General export model (220V)
I : Indonesian model	N,X: General export model
J : Japanese model	Y : Export model

## ■ WARNING

Components having special characteristics are marked  and must be replaced with parts having specification equal to those originally installed.

- The numbers "QTY" show quantities for each unit.
- The parts with "--" in "PART NO." are not available as spare parts.
- This mark "}" in the REMARKS column means these parts are interchangeable.
- The second letter of the shaded (■) part number is O, not zero.
- The second letter of the shaded (■) part number is I, not one.

# OVERALL ASSEMBLY



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
		OVERALL ASSEMBLY		SP02R96		
	--	Overall Assembly		J (V868530)		
	--	Overall Assembly		Y (V910140)		
	VA314000	Bind Head Screw	PW 4.0X20 MFZN2BL		12	01
*	V8680900	Side Pad L	LEFT			
*	V8681000	Side Pad R	RIGHT			
*	V9036600	MB Side Pad L	LEFT			
*	V9036700	MB Side Pad R	RIGHT			

\*: New Parts

RANK: Japan only

# DIGITAL MIXING CONSOLE

## *O2R 96*

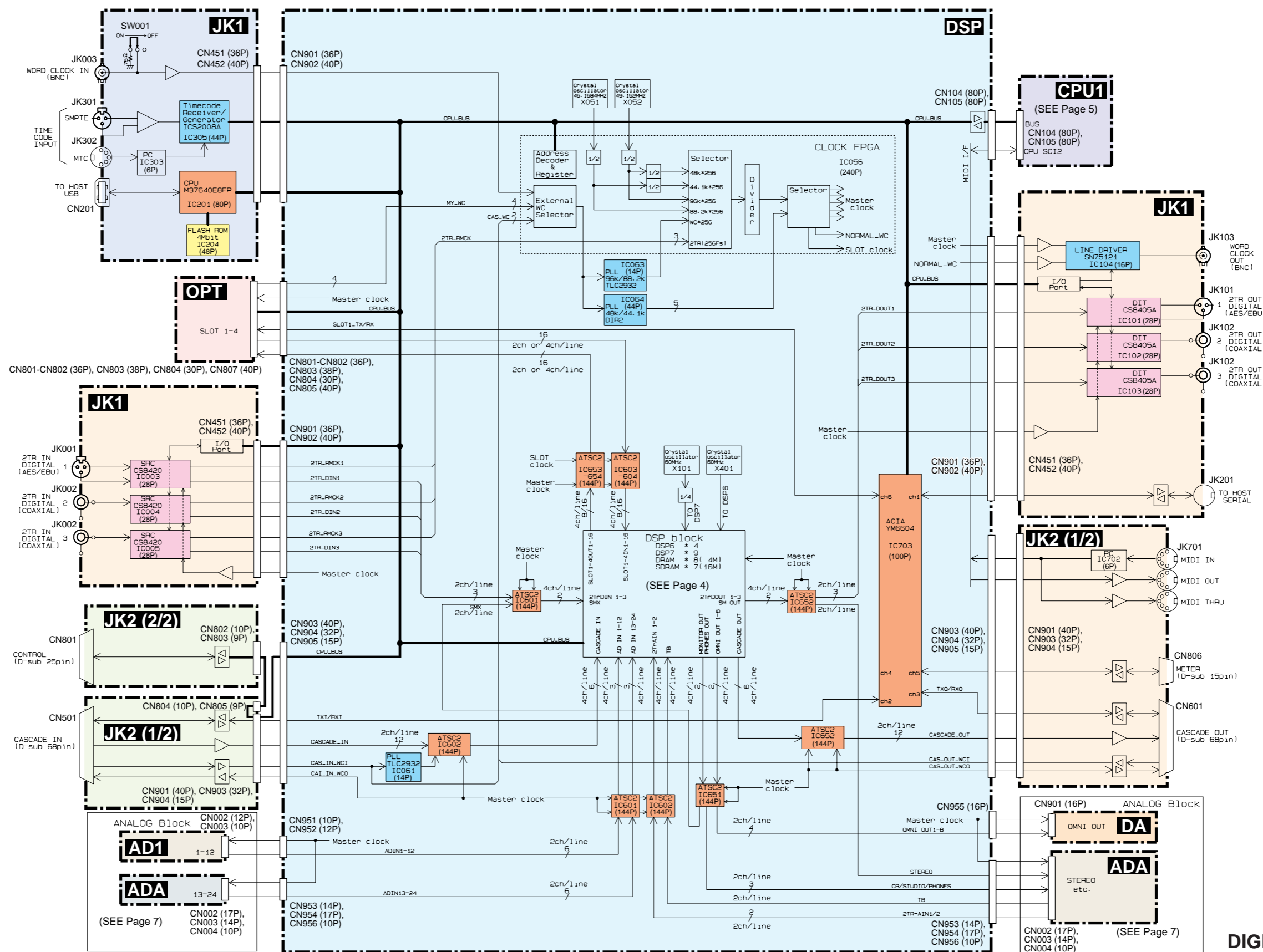
# CIRCUIT DIAGRAM

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Note: See parts list for details of circuit board component parts.

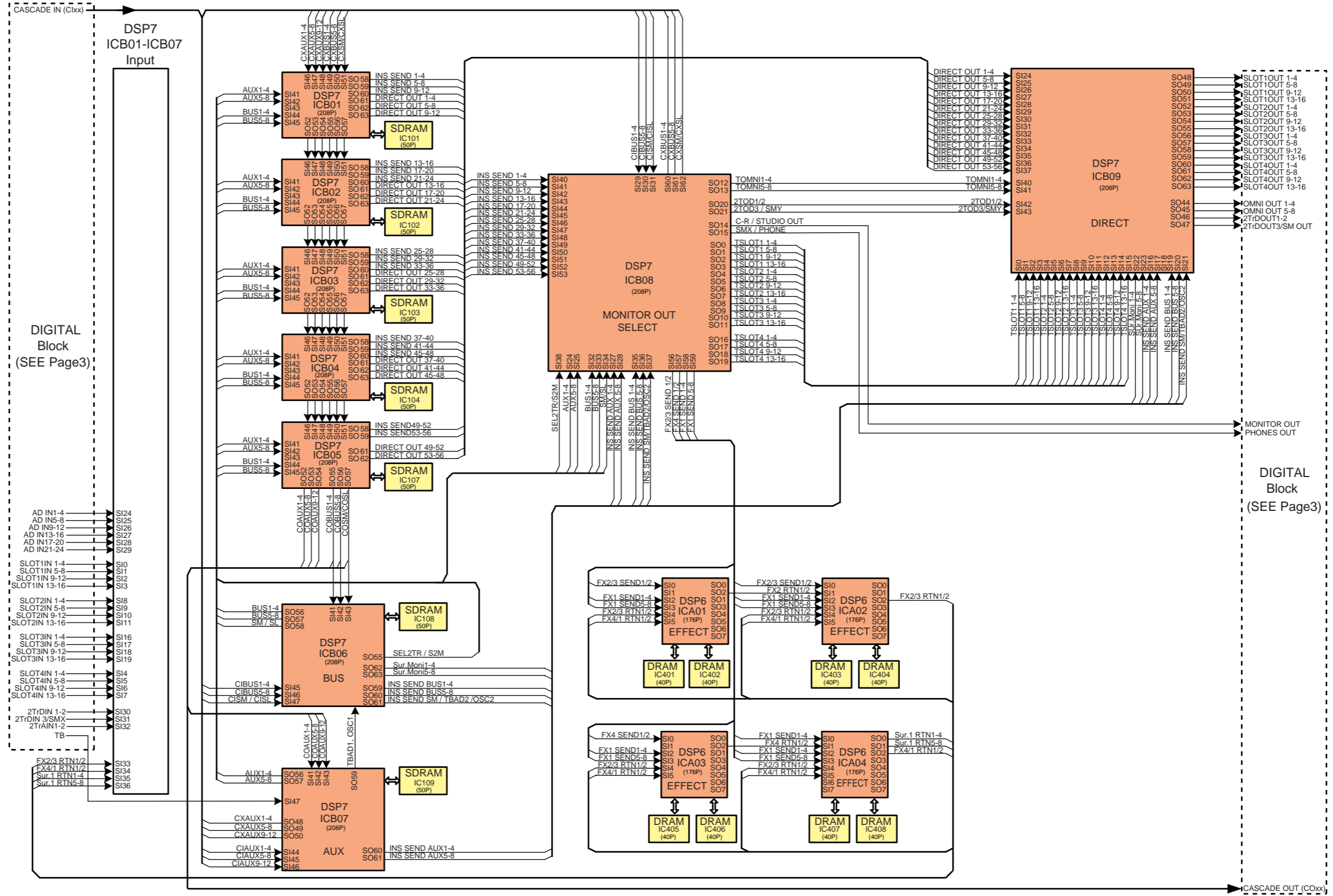
■ BLOCK DIAGRAM 002 (02R96)



DIGITAL Block

**BLOCK DIAGRAM 003 (02R96)**

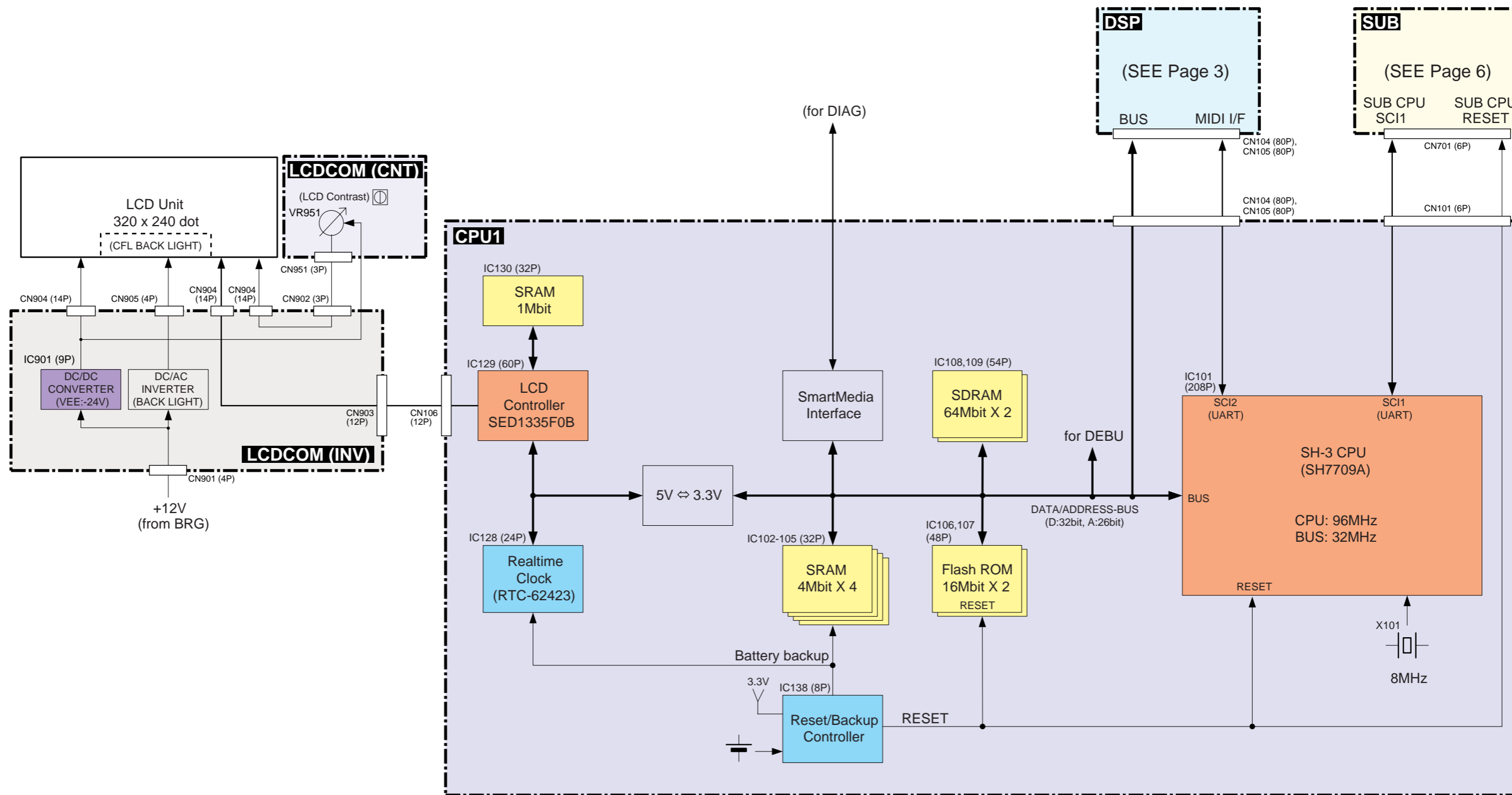
02R96



DSP Block

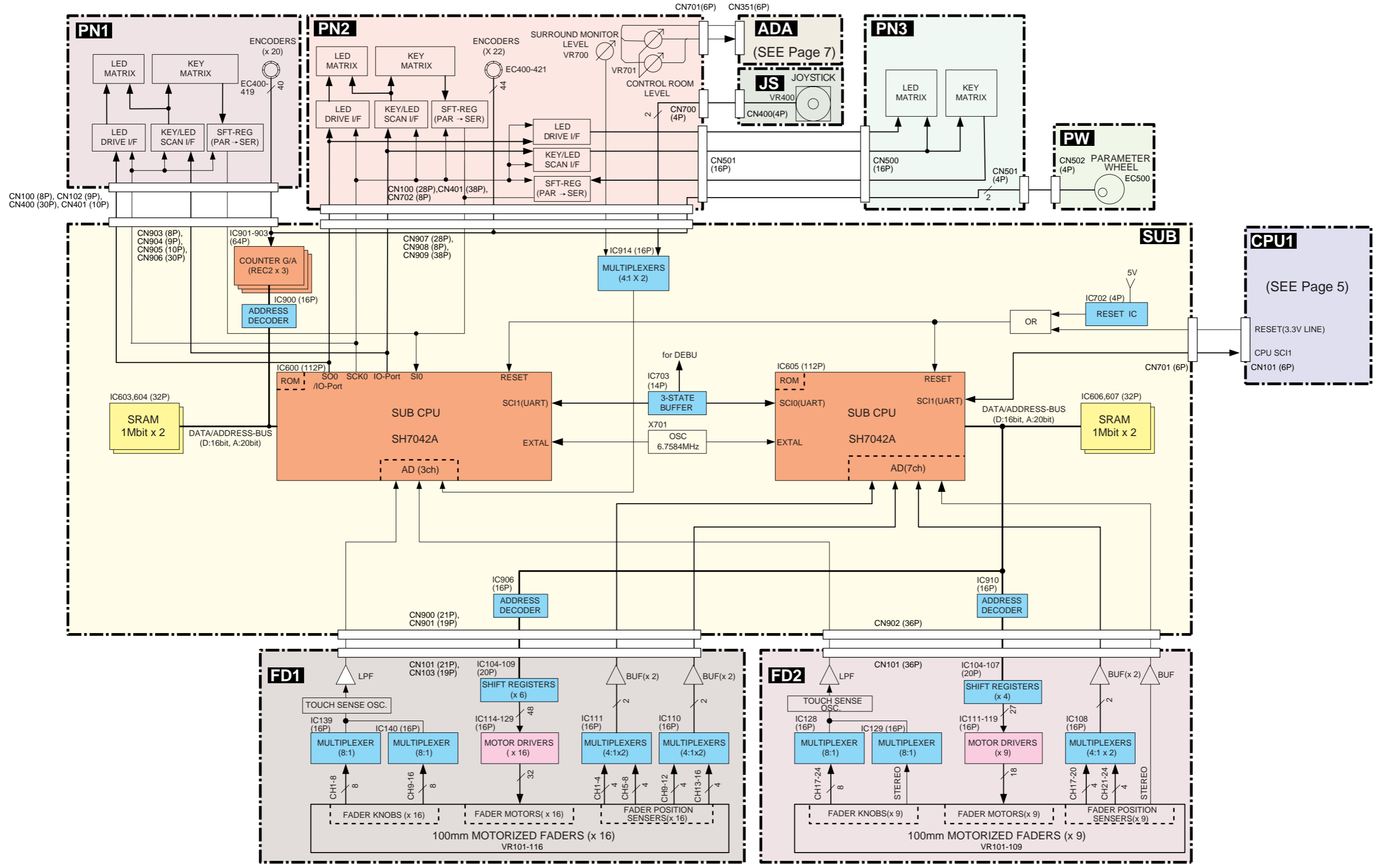
■ BLOCK DIAGRAM 004 (02R96)

02R96



CPU Block

■ BLOCK DIAGRAM 005 (02R96)

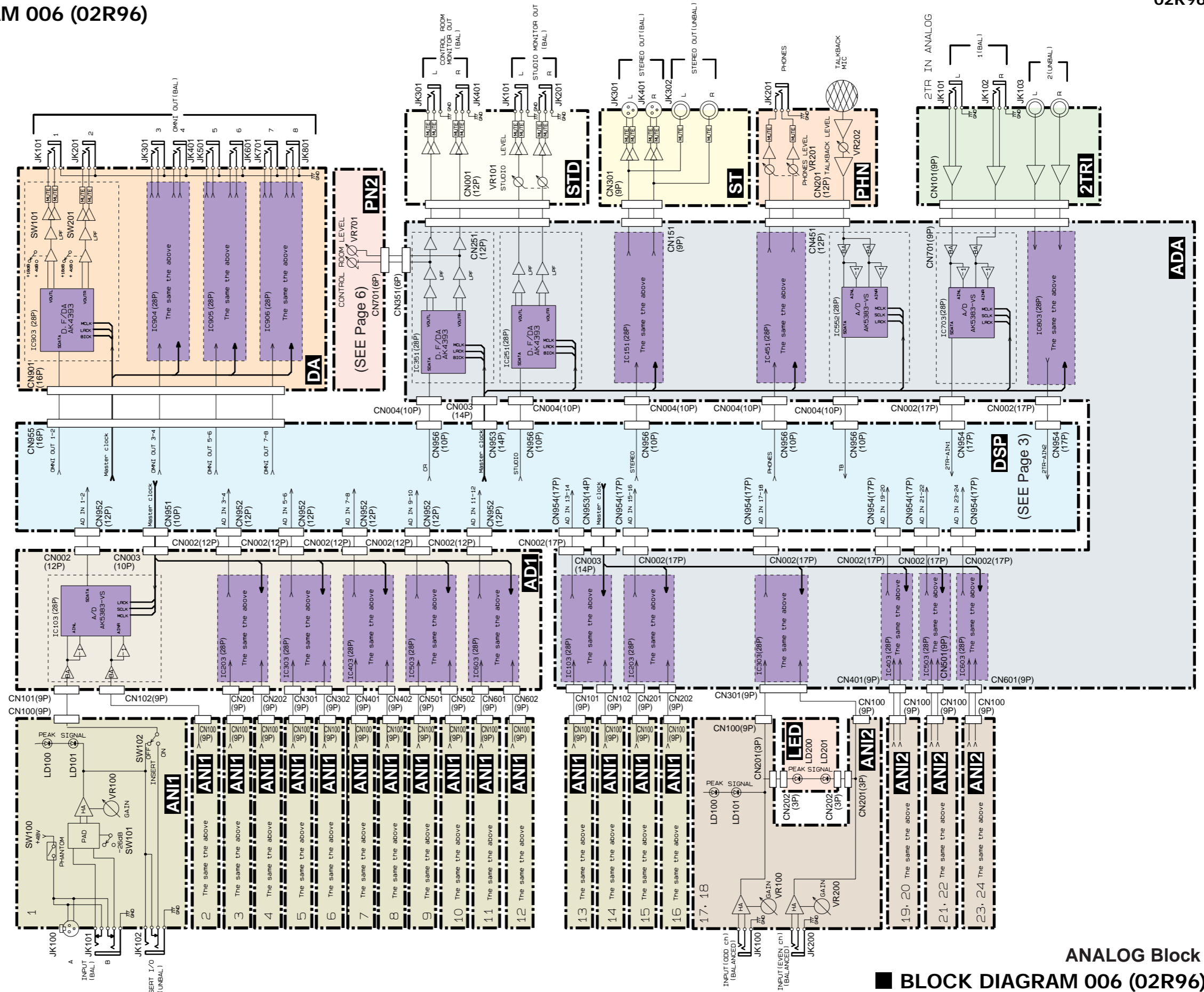


CONTROL PANEL Block

■ BLOCK DIAGRAM 005 (02R96)

■ BLOCK DIAGRAM 006 (02R96)

02R96



38CA1-8823677-6

■ BLOCK DIAGRAM 006 (02R96)

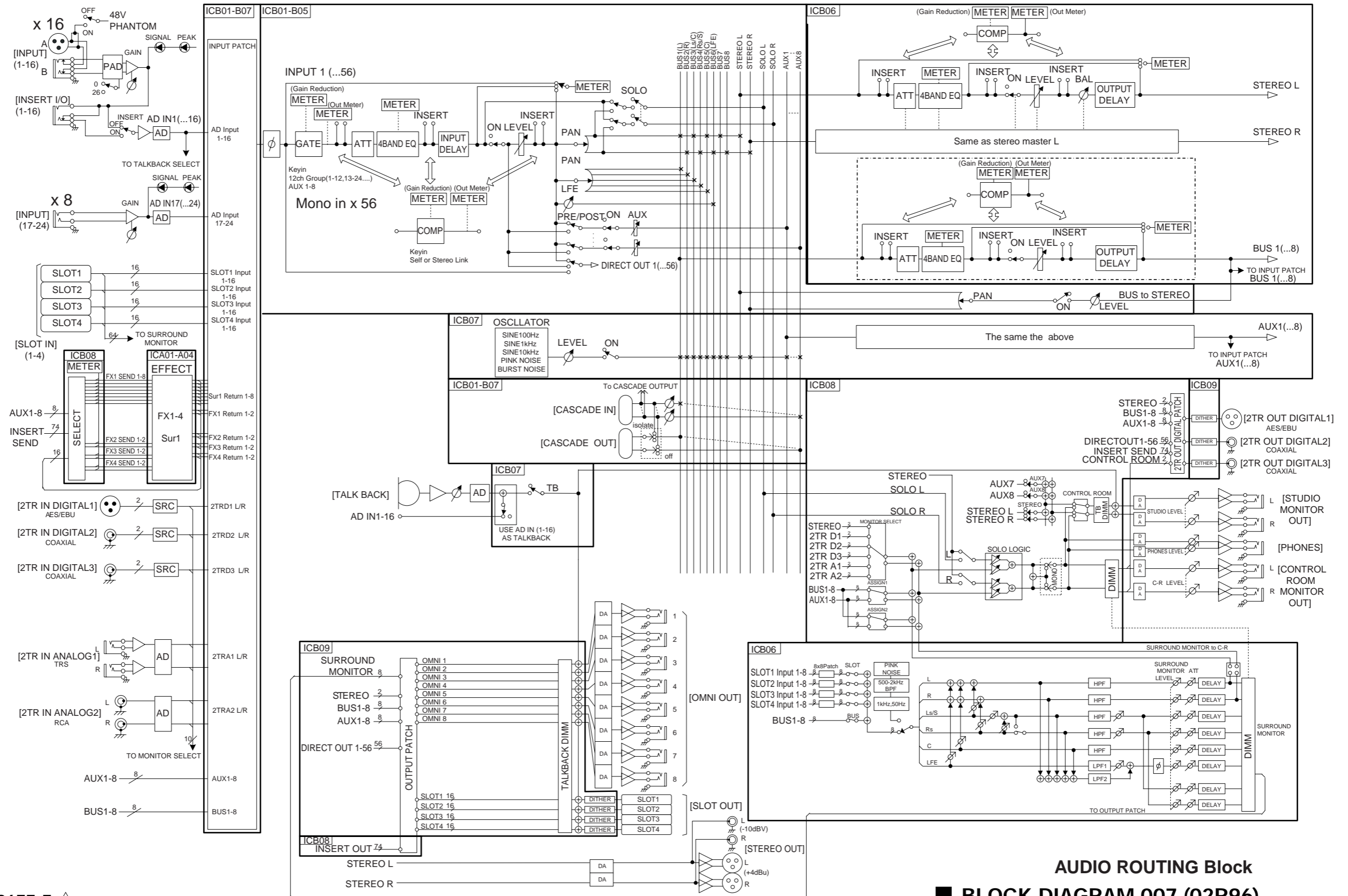
ANALOG Block

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12



■ BLOCK DIAGRAM 007 (02R96)

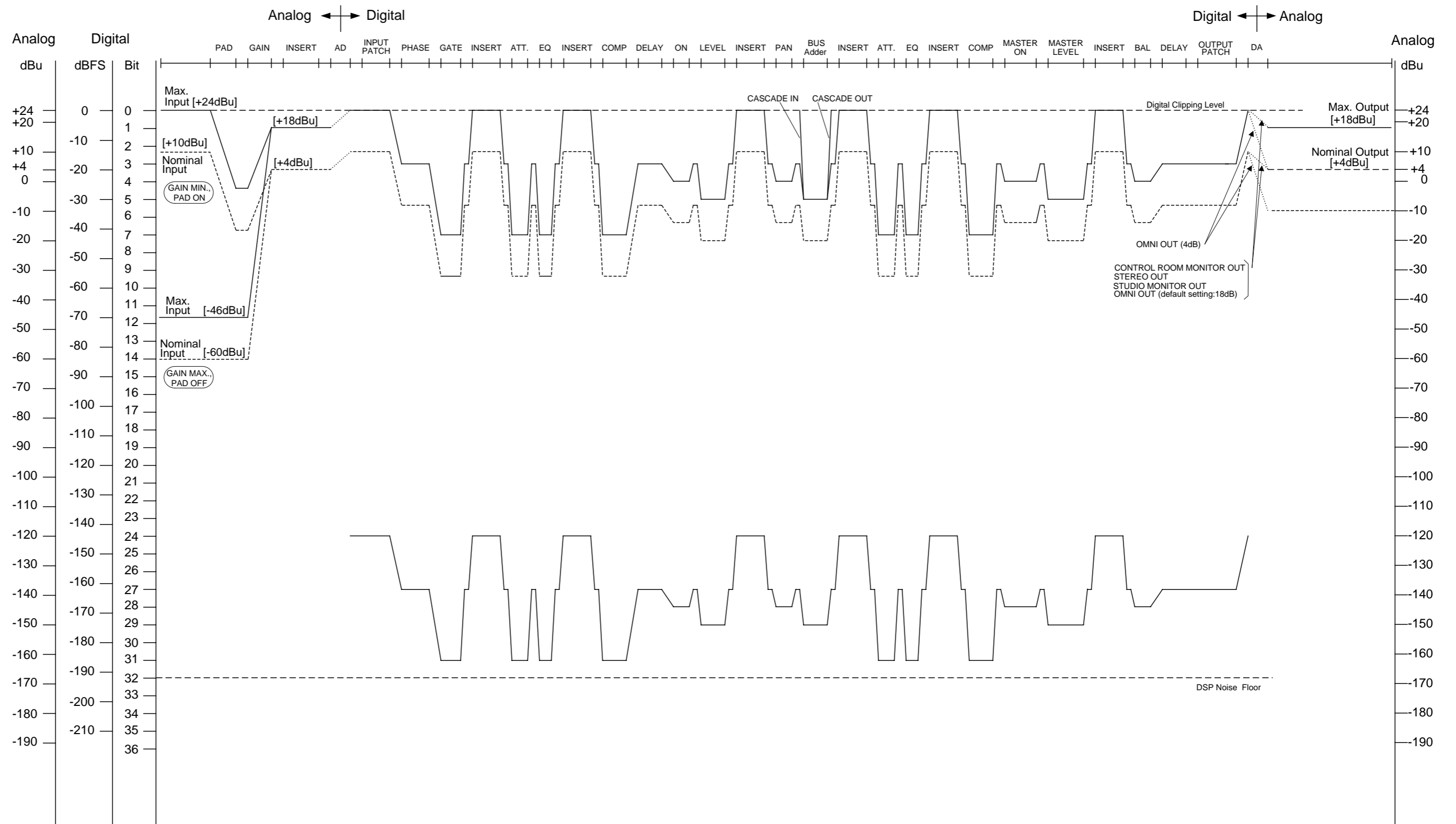
02R96



AUDIO ROUTING Block

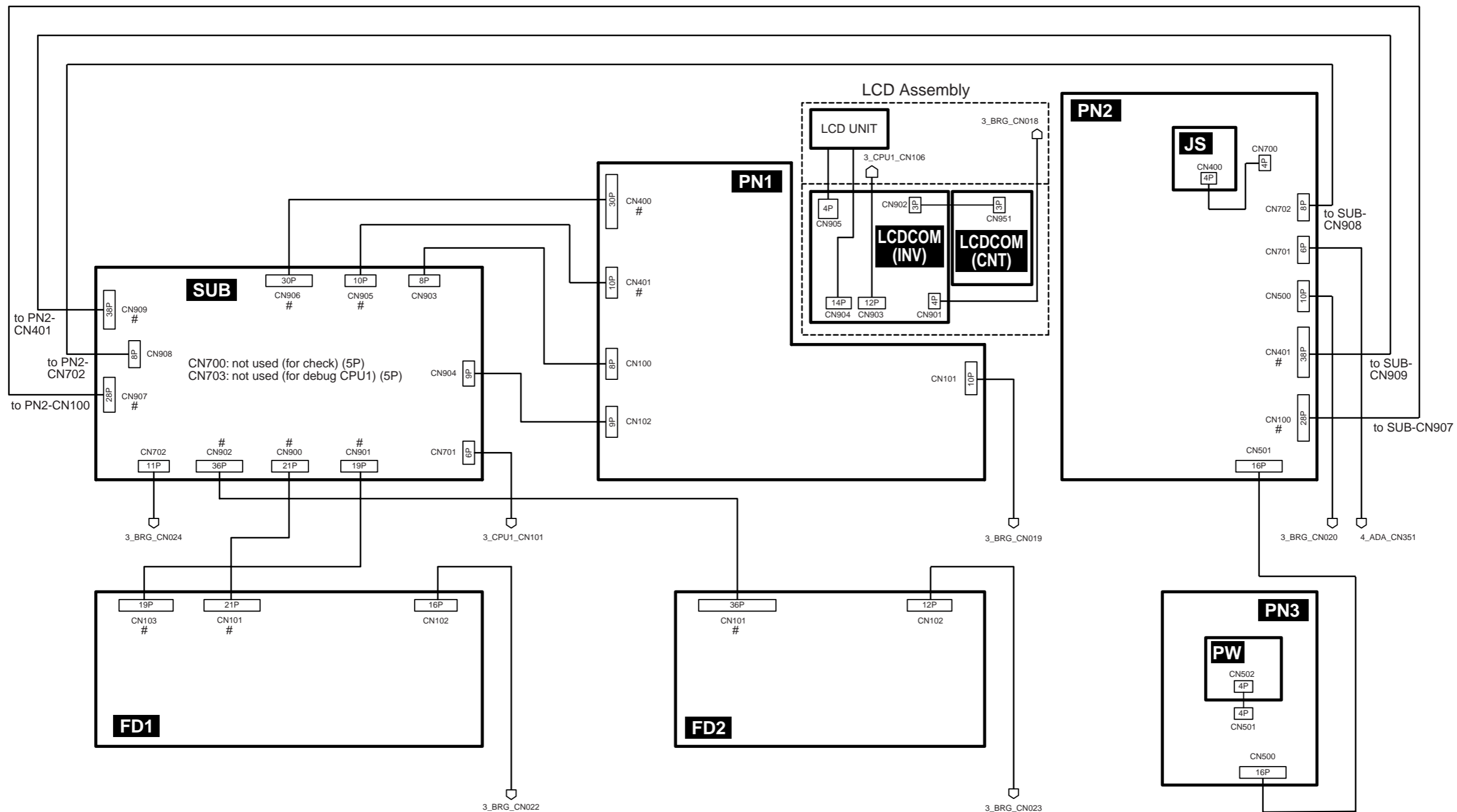
■ BLOCK DIAGRAM 007 (02R96)

■ BLOCK DIAGRAM 008 (02R96)



[0dBu = 0.775Vrms]  
[0dBFS = Full Scale]

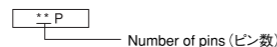
OVERALL CONNECTOR CIRCUIT DIAGRAM 002 (02R96)



Note) [ ] indicates the sheet name. ( [ ] 内はシート名称を示します。)

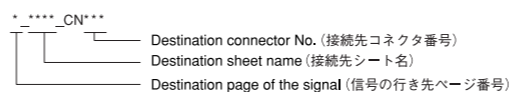
• Connection between connectors is connected to the same pin numbers, but connection between connectors marked # is connected like pin 1 to pin N, pin 2 to pin (N-1), ... when the last pin number is set to N. (コネクタ間の接続は、同じピン番号同士がつながるように接続されます。ただし、#の印のついたコネクタ間は、最終ピン番号をNとしたとき、1ピンとNピン、2ピンと(N-1)ピン、...のように接続されます。)

• Connectors are identified by the following items. (コネクタ部の表示については下記の通りとします。)



• Inter-assembly connections are indicated as follows. (Assy間のコネクタ接続については下記の通りとします。)

◁ Connection between assemblies is indicated by the symbol given on the right, and the destination is indicated as follows. (Assy間の接続は左記の記号にて示します。また接続先は下記の表示通りとします。)

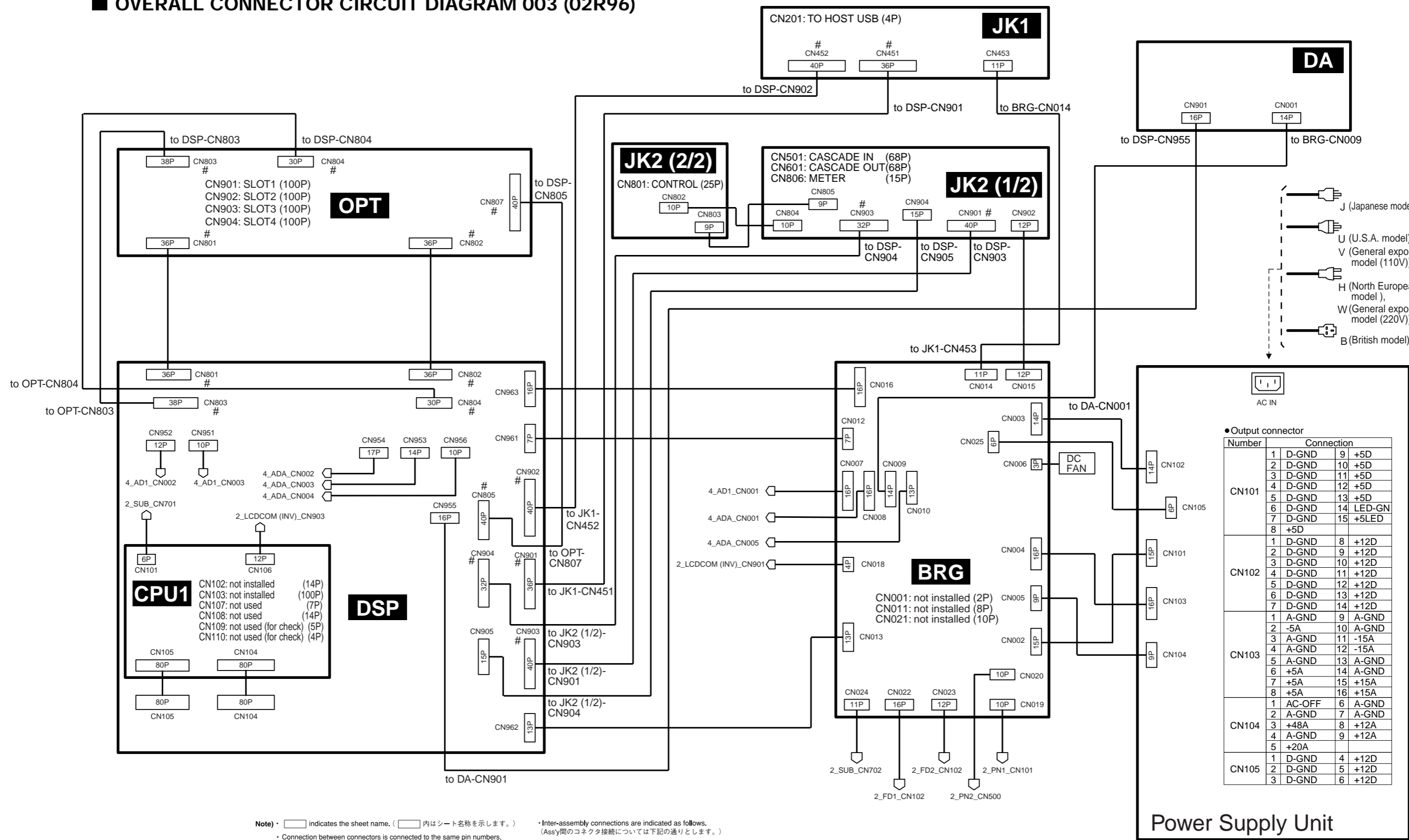


Control Panel Assembly

OVERALL CONNECTOR CIRCUIT DIAGRAM 002 (02R96)

# OVERALL CONNECTOR CIRCUIT DIAGRAM 003 (02R96)

02R96



**Note)** □ indicates the sheet name. (□内はシート名称を示します。)

- Connection between connectors is connected to the same pin numbers, but connection between connectors marked # is connected like pin 1 to pin N, pin 2 to pin (N-1), ... when the last pin number is set to N. (コネクタ間の接続は、同じピン番号同士がつながるように接続されます。ただし、#の印のついたコネクタ間は、最終ピン番号をNとしたとき、1ピンとNピン、2ピンと(N-1)ピン、...のように接続されます。)
- Connectors are identified by the following items. (コネクタ部の表示については下記の通りとします。)

Inter-assembly connections are indicated as follows. (Ass'y間のコネクタ接続については下記の通りとします。)

Connection between assemblies is indicated by the symbol given on the right, and the destination is indicated as follows. (Ass'y間の接続は左記の記号にて示します。また接続先は下記の表示通りとします。)

.....CN...  
 Destination connector No. (接続先コネクタ番号)  
 Destination sheet name (接続先シート名)  
 Destination page of the signal (信号の行き先ページ番号)

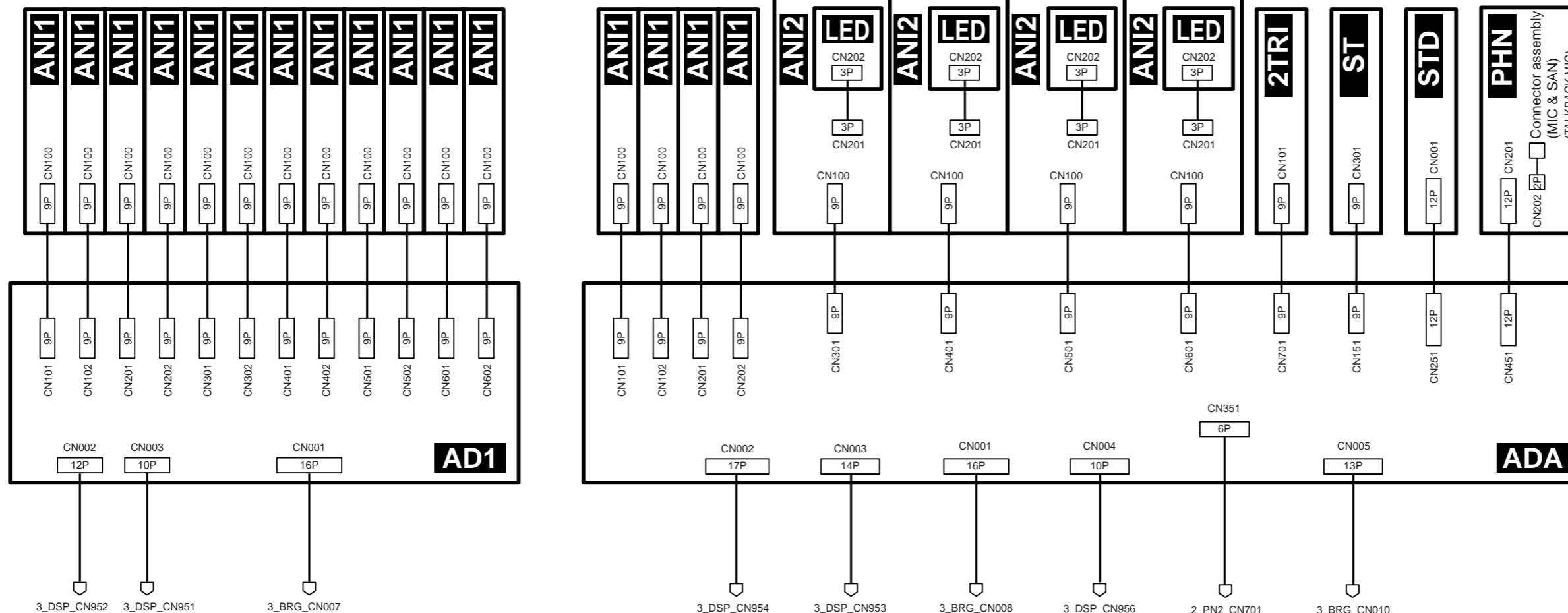
38CA2-8823678-3

Number of pins (ピン数)

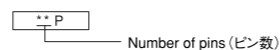
# OVERALL CONNECTOR CIRCUIT DIAGRAM 003 (02R96)

Bottom Assembly

OVERALL CONNECTOR CIRCUIT DIAGRAM 004 (02R96)

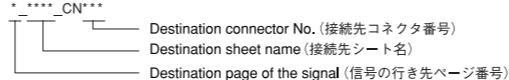


Note) indicates the sheet name. (内はシート名称を示します。)  
 • Connection between connectors is connected to the same pin numbers.  
 (コネクタ間の接続は、同じピン番号同士がつながるように接続されます。)  
 • Connectors are identified by the following items.  
 (コネクタ部の表示については下記の通りとします。)



• Inter-assembly connections are indicated as follows.  
 (Assy間のコネクタ接続については下記の通りとします。)

Connection between assemblies is indicated by the symbol given on the right, and the destination is indicated as follows. (Assy間の接続は左記の記号にて示します。また接続先は下記の表示通りとします。)

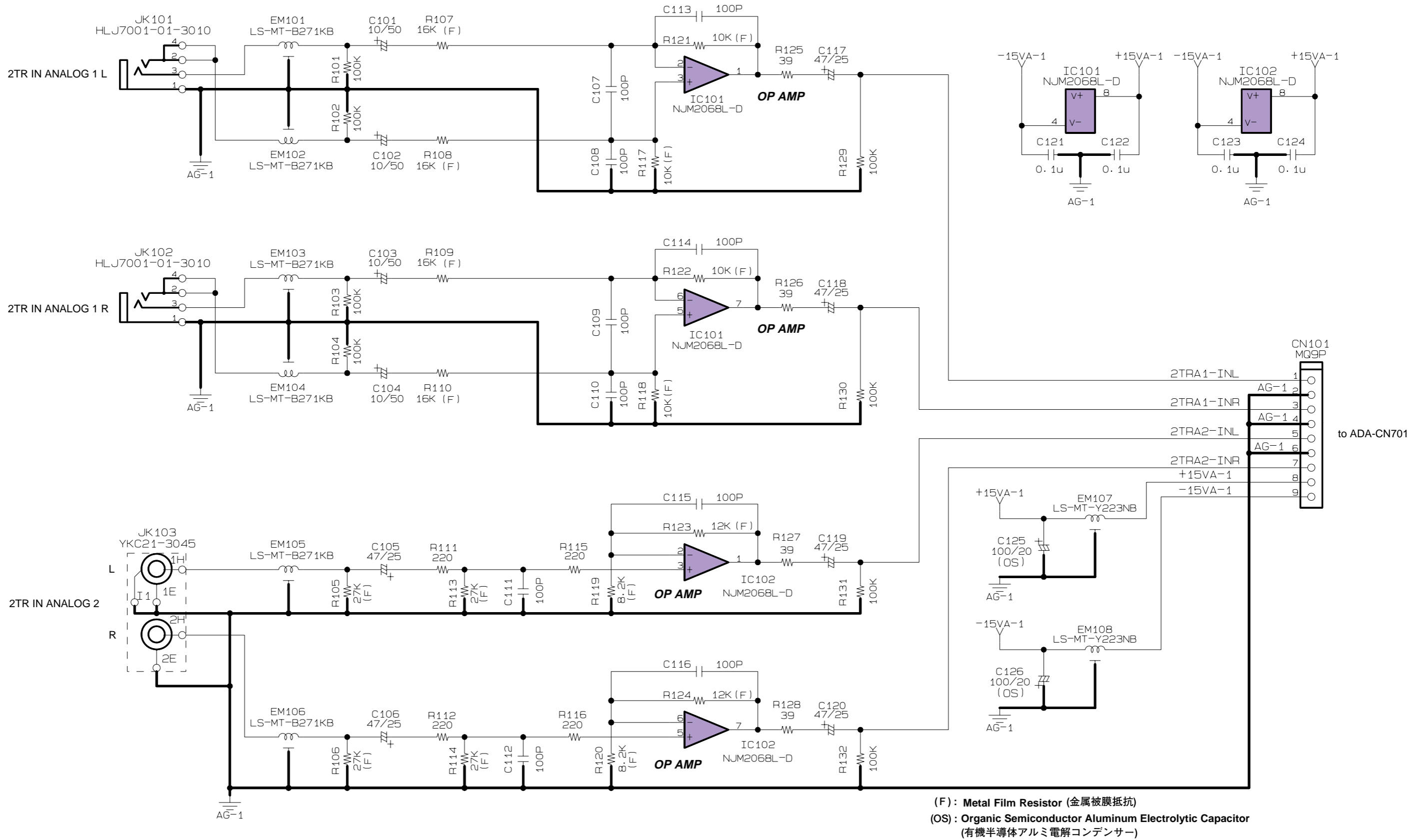


Rear Assembly Upper

OVERALL CONNECTOR CIRCUIT DIAGRAM 004 (02R96)

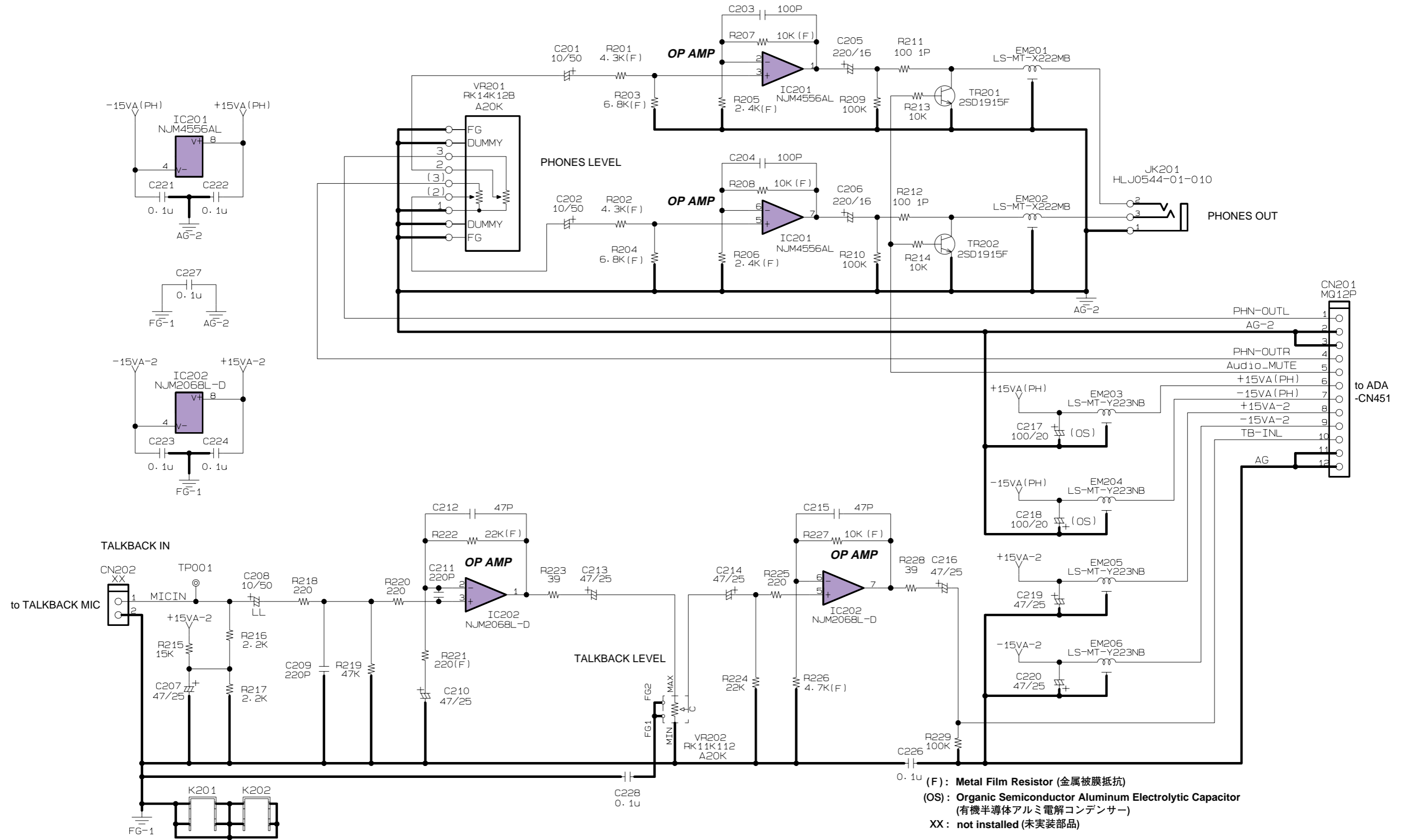
2TRI CIRCUIT DIAGRAM (02R96)

02R96



PHN CIRCUIT DIAGRAM (02R96)

02R96

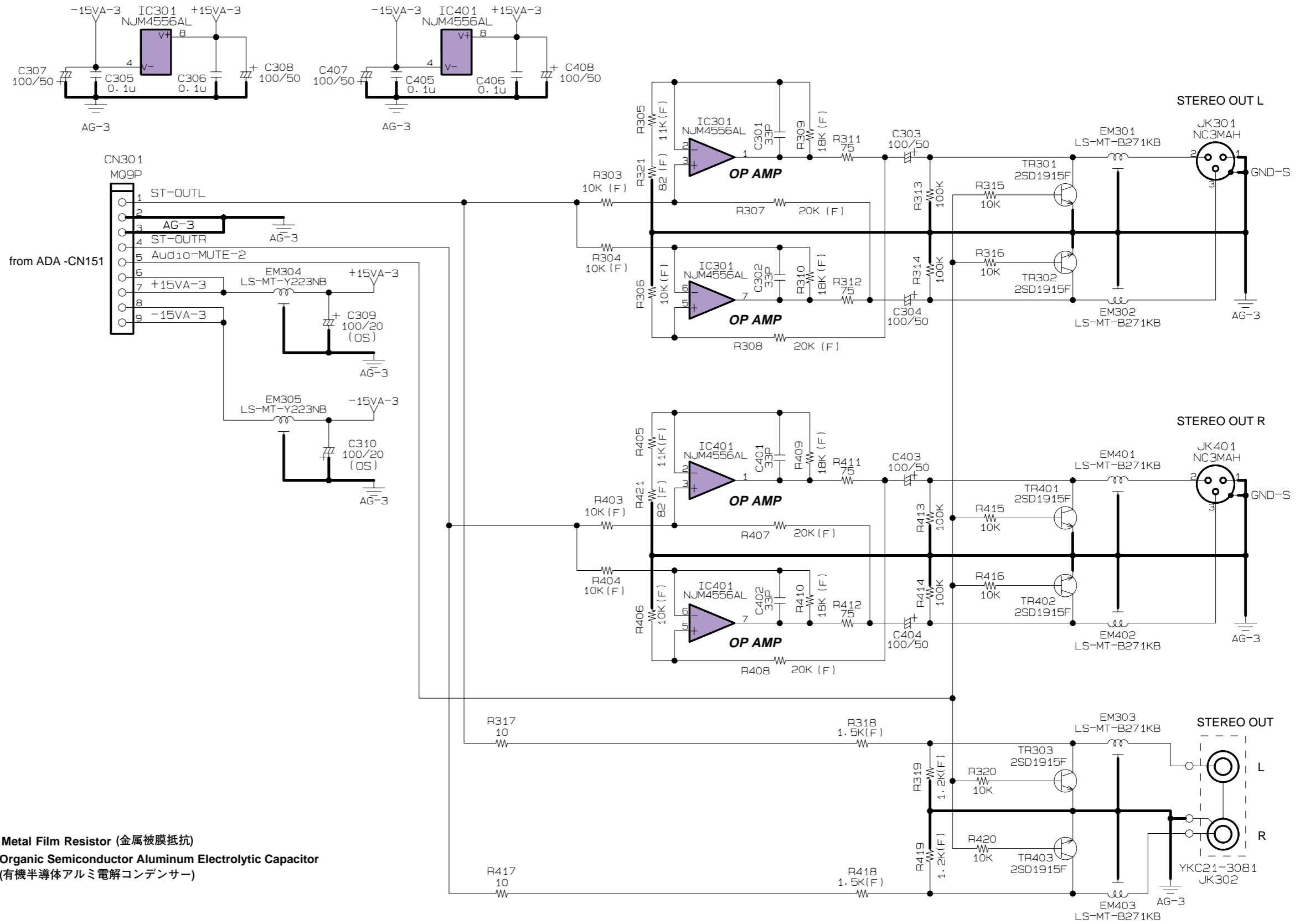


PHN CIRCUIT DIAGRAM (02R96)

38CC1-8823578-1

ST CIRCUIT DIAGRAM (02R96)

02R96

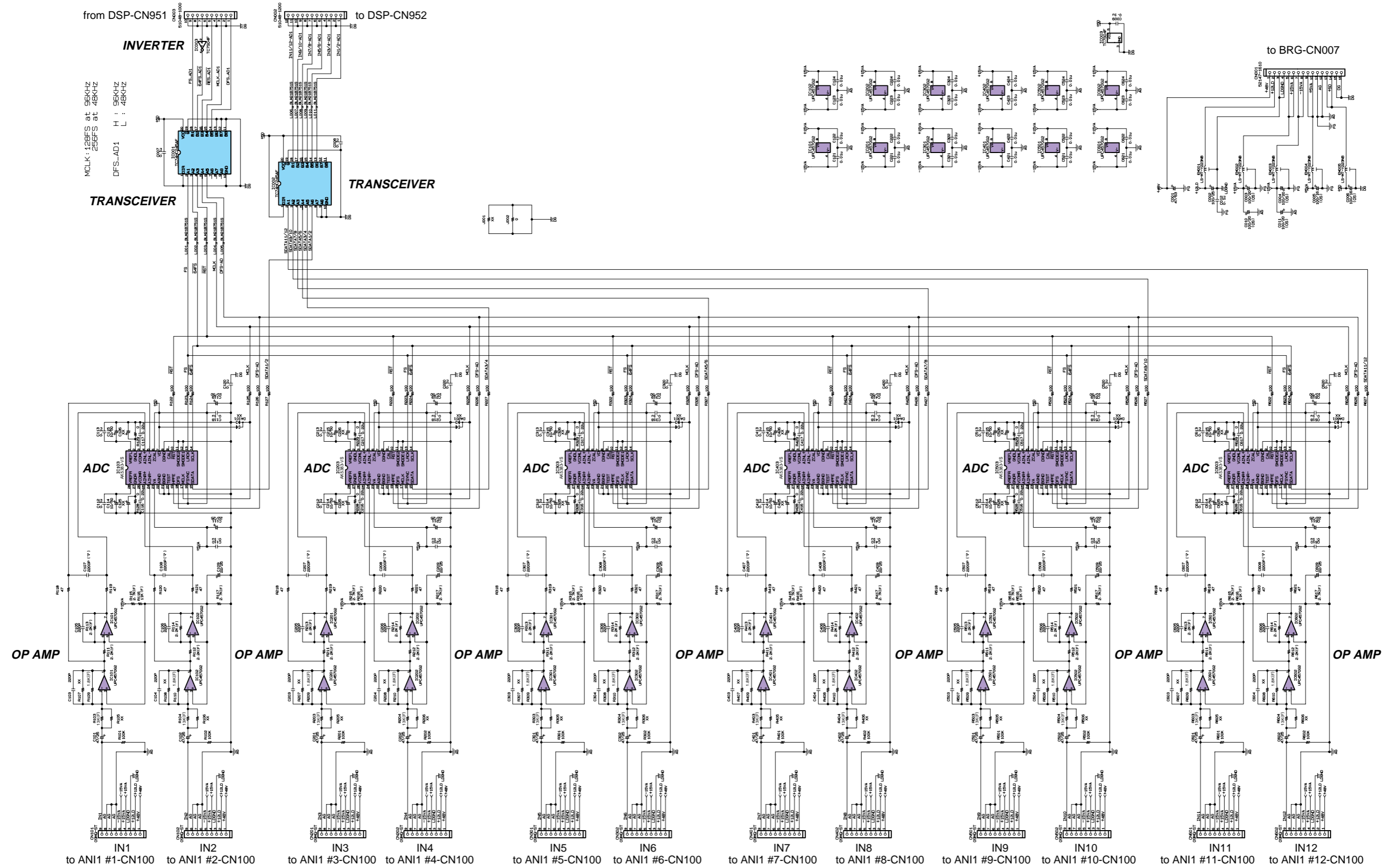


(F) : Metal Film Resistor (金属被膜抵抗)  
 (OS) : Organic Semiconductor Aluminum Electrolytic Capacitor  
 (有機半導体アルミ電解コンデンサー)



AD1 CIRCUIT DIAGRAM (02R96)

02R96

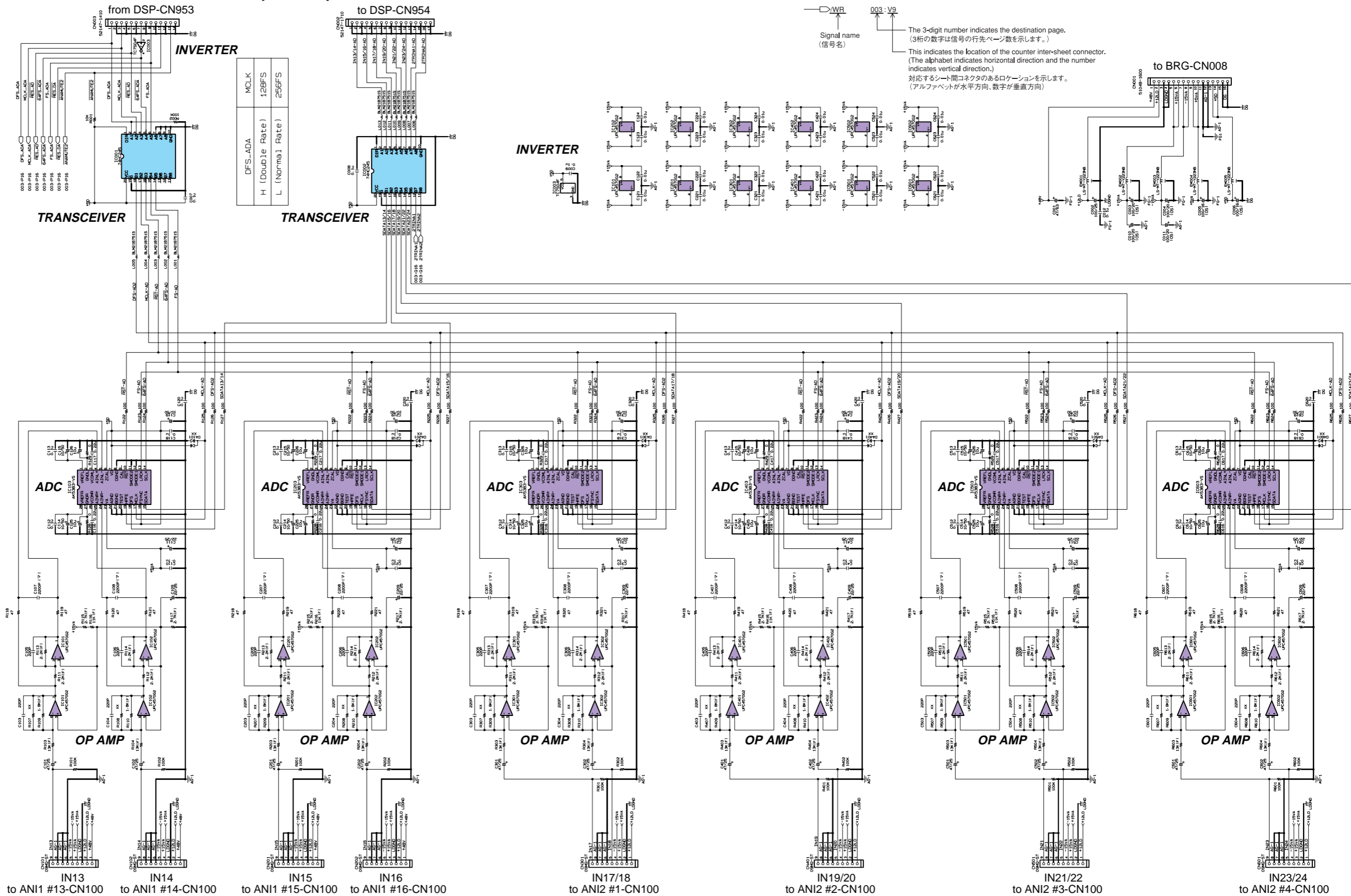


(F) : Metal Film Resistor (金属被膜抵抗)  
 (マ) : Mylar Capacitor (マイラーコンデンサー)  
 (OS) : Organic Semiconductor Aluminum Electrolytic Capacitor (有機半導体アルミ電解コンデンサー)  
 XX : not installed (未実装部品)

AD1 CIRCUIT DIAGRAM (02R96)

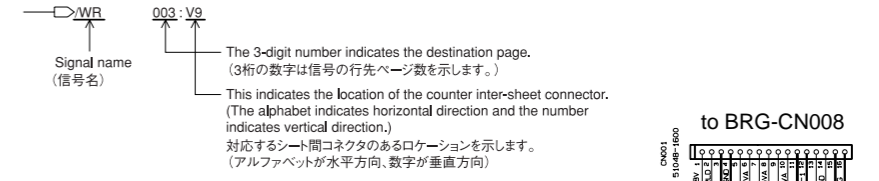
ADA CIRCUIT DIAGRAM 002 (02R96)

02R96



Notation for Circuit Diagrams (回路図表記上の注意)

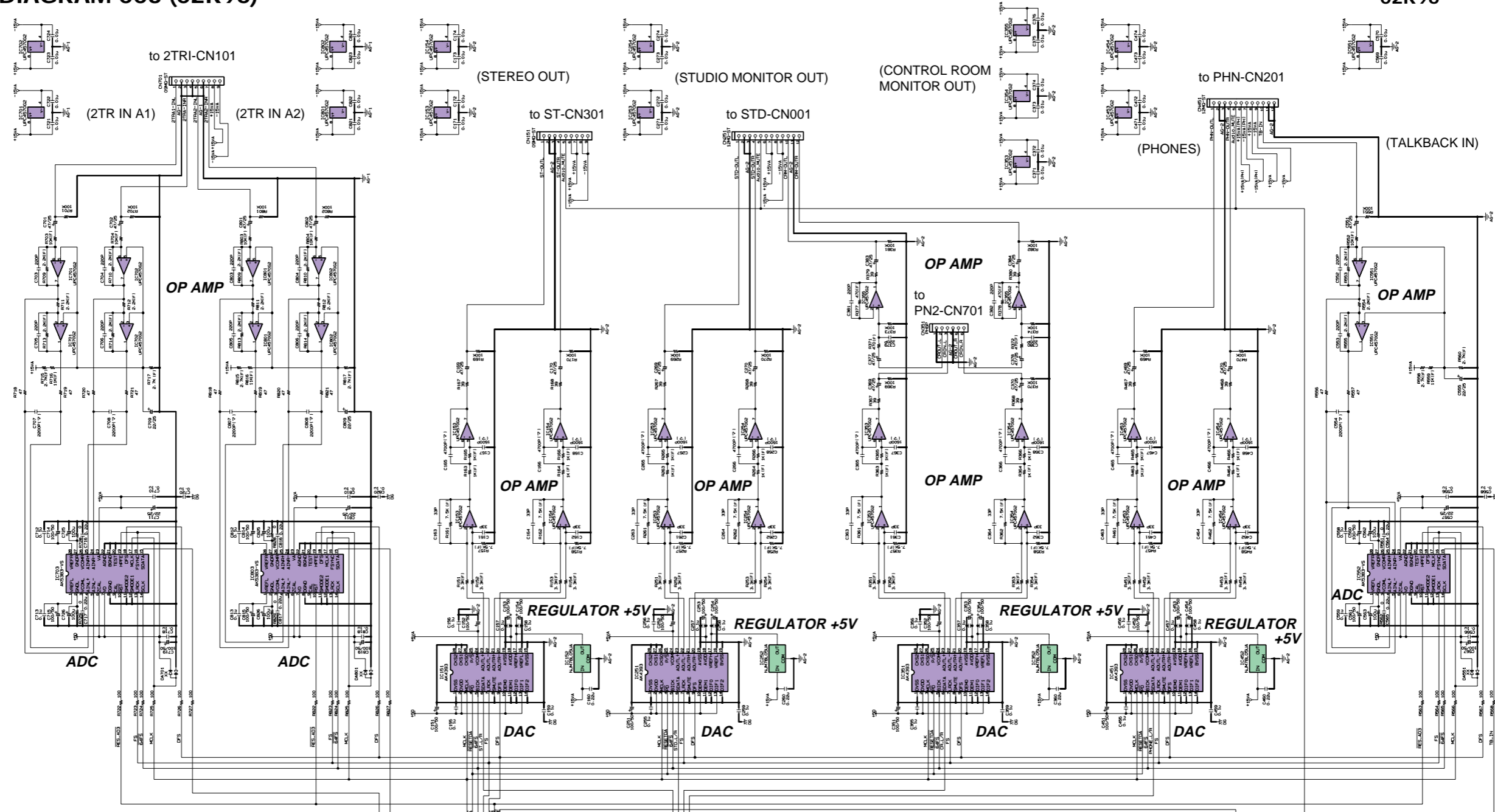
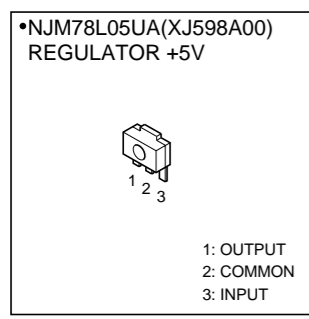
1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



(F) : Metal Film Resistor (金属被膜抵抗)  
 (マ) : Mylar Capacitor (マイラーコンデンサー)  
 (OS) : Organic Semiconductor Aluminum Electrolytic Capacitor (有機半導体アルミ電解コンデンサー)  
 XX : not installed (未実装部品)

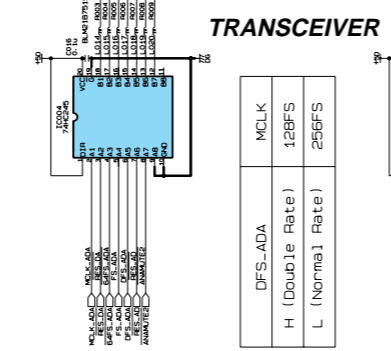
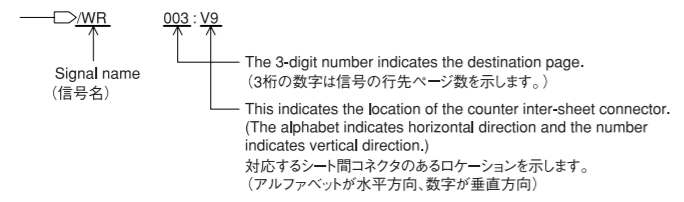
# ADA CIRCUIT DIAGRAM 003 (02R96)

02R96



**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

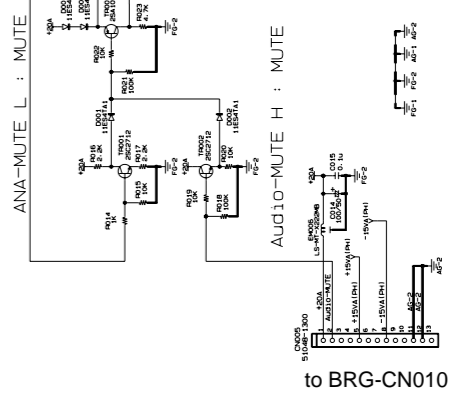


from DSP-CN956

NOTE  
The maximum output level change by service correspondence.  
(サービス対応による最大出力レベル変更。)

	STEREO OUT L	STEREO OUT R	STUDIO MONITOR OUT L	STUDIO MONITOR OUT R	CONTROL ROOM MONITOR OUT L	CONTROL ROOM MONITOR OUT R	PHONES L	PHONES R	ST Circuit Board STEREO OUT L R318	ST Circuit Board STEREO OUT R R418
Maximum output level	R151 R152	R153 R154	R251 R252	R253 R254	R351 R352	R353 R354	R451 R452	R453 R454	3.9K	↑
24dBu	1.6K	↑	↑	↑	↑	↑	↑	↑	↑	↑
18dBu	3.3K	↑	↑	↑	↑	↑	↑	↑	1.5K	↑
15dBu	4.7K	↑	↑	↑	↑	↑	↑	↑	750	↑

\*1 : A setup at the time of factory shipments. (工場出荷時の設定。)  
\*2 : Also change the value of R318 and R418 of ST circuit board at the time of output level change of STEREO OUT.  
(STEREO OUTの出力レベル変更時、シートSTのR318、R418の値も変更する事。)

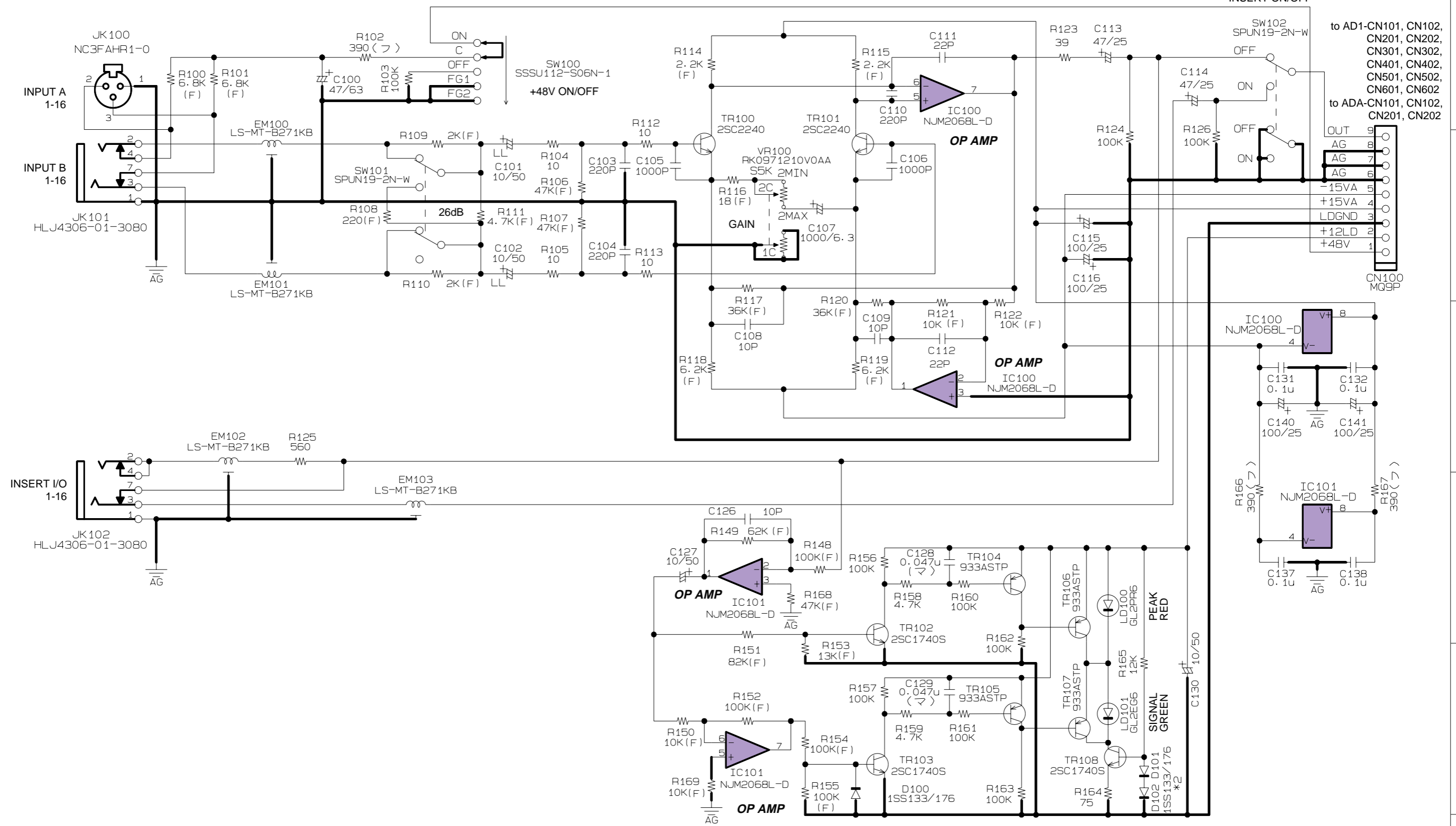


to BRG-CN1010

38CC1-8823582-3

# ADA CIRCUIT DIAGRAM 003 (02R96)

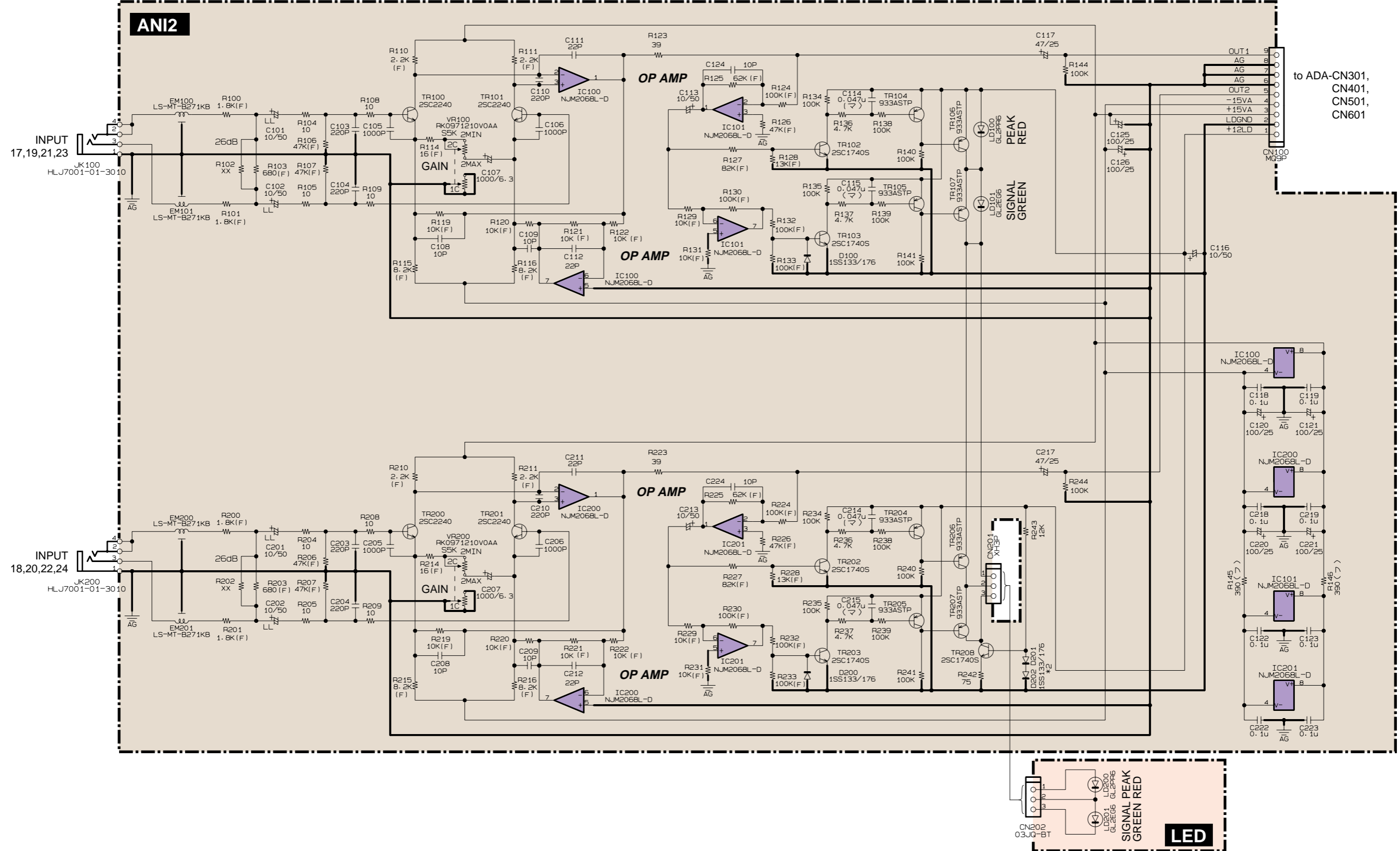
# ANI1 CIRCUIT DIAGRAM (02R96)



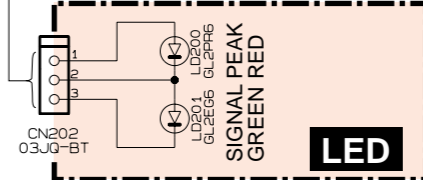
(F): Metal Film Resistor (金属被膜抵抗)  
 (フ): Flame Proof C. Resistor (不燃化カーボン抵抗)  
 (マ): Mylar Capacitor (マイラーコンデンサー)

■ ANI2, LED CIRCUIT DIAGRAM (02R96)

02R96



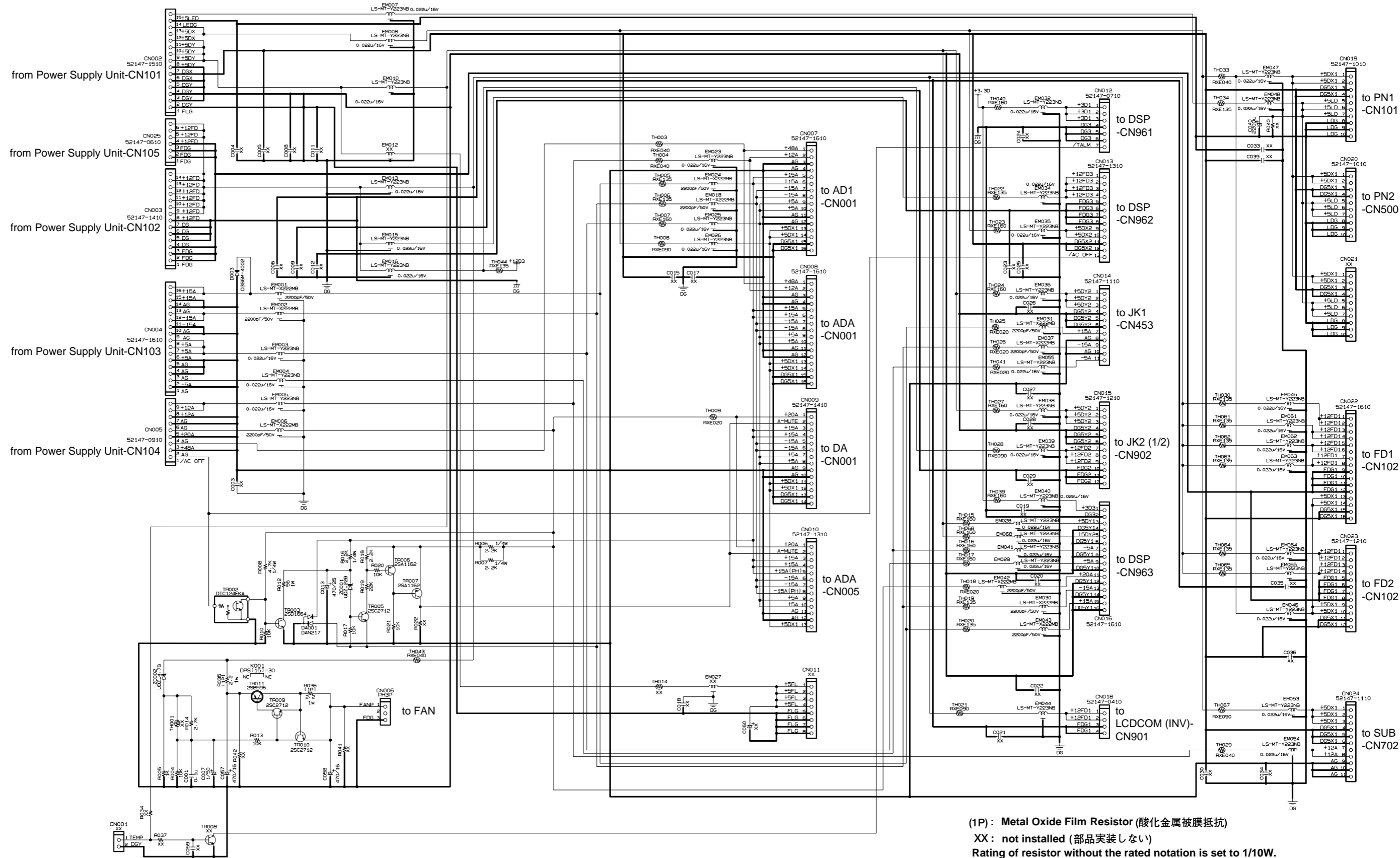
to ADA-CN301,  
CN401,  
CN501,  
CN601



- (F): Metal Film Resistor (金属被膜抵抗)
- (フ): Flame Proof C. Resistor (不燃化カーボン抵抗)
- (マ): Mylar Capacitor (マイラーコンデンサー)
- XX: not installed (未実装部品)

BRG CIRCUIT DIAGRAM 002 (02R96)

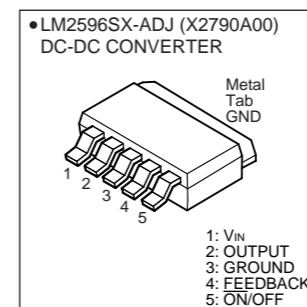
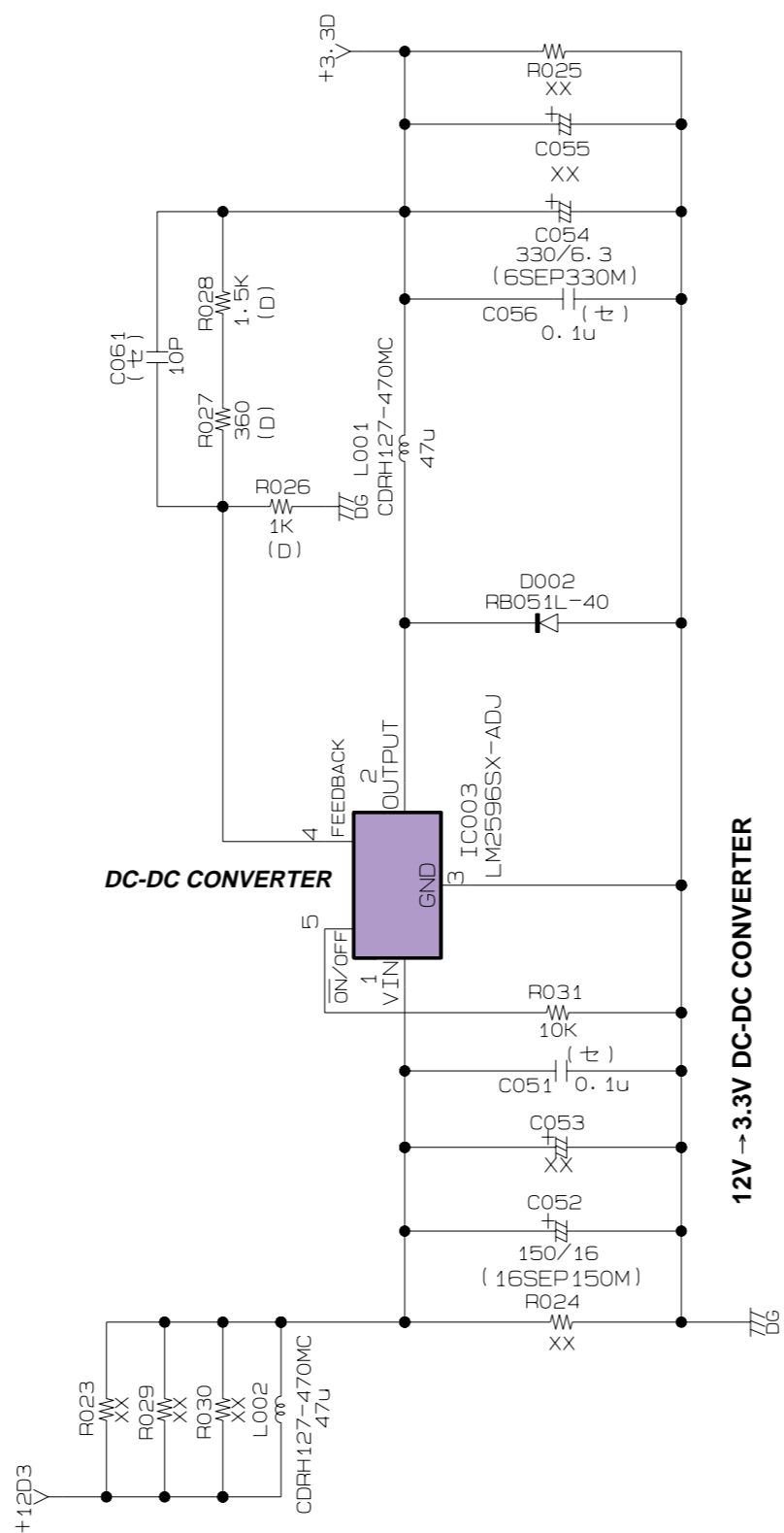
02R96



(1P): Metal Oxide Film Resistor (酸化金属被膜抵抗)  
 XX: not installed (部品実装しない)  
 Rating of resistor without the rated notation is set to 1/10W.  
 (定格表記のない抵抗の定格は1/10Wとします。)

■ BRG CIRCUIT DIAGRAM 003 (02R96)

02R96



(セ): Ceramic Capacitor (セラミックコンデンサー)  
 (D): Tolerance (許容差) ±0.5%  
 XX: not installed (部品実装しない)  
 Rating of resistor without the rated notation is set to 1/10W.  
 (定格表記のない抵抗の定格は1/10Wとします。)

# CPU1 CIRCUIT DIAGRAM 002 (02R96)

02R96

**Notation for Circuit Diagrams (回路図表記上の注意)**

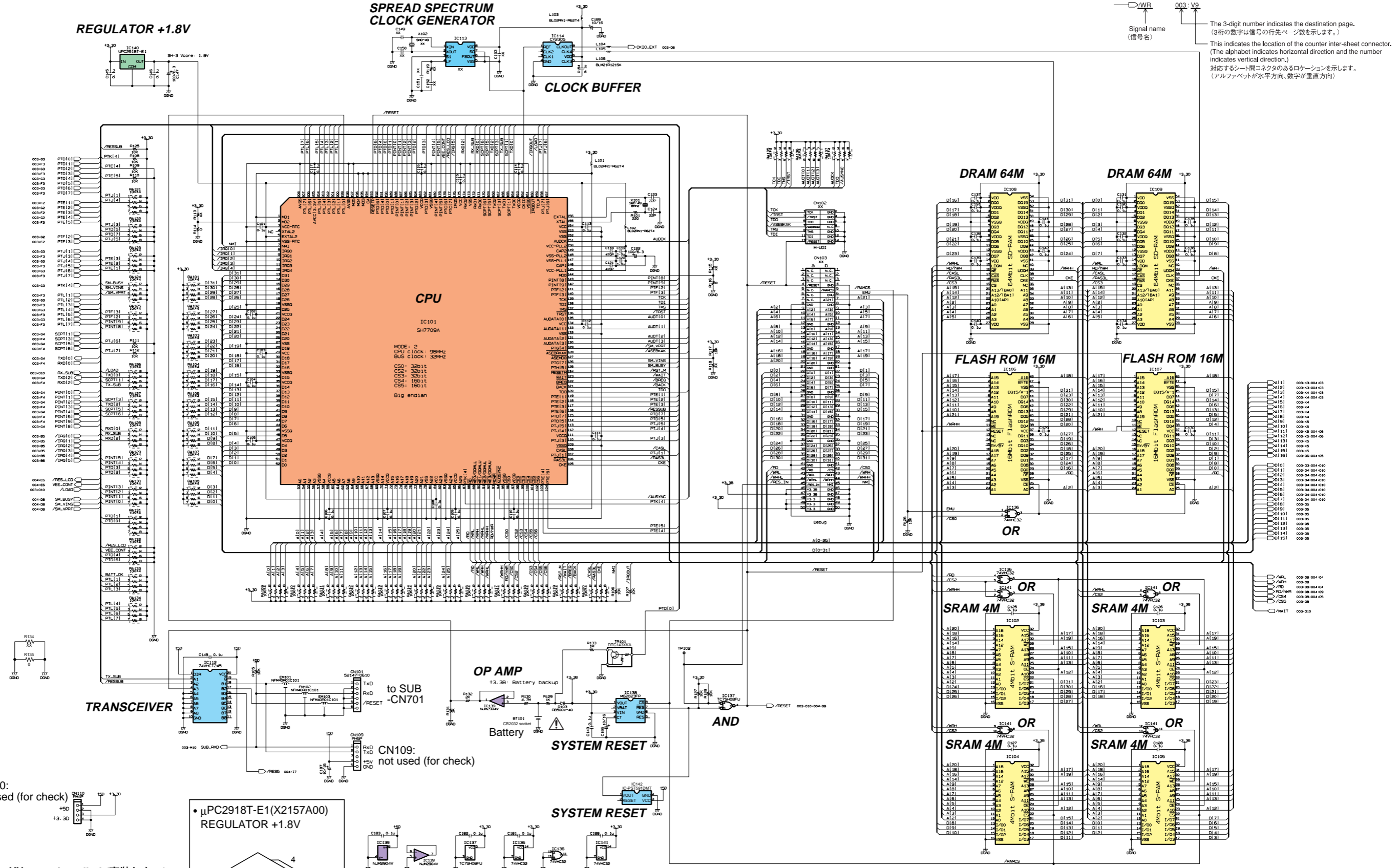
1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

—WVR— 003-V9

Signal name (信号名)

The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.) (対応するシート間コネクタのあるローケーションを示します。(アルファベットが水平方向、数字が垂直方向))

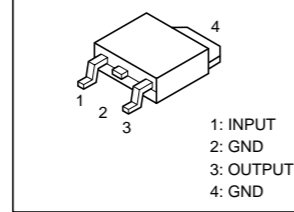


CN110: not used (for check)

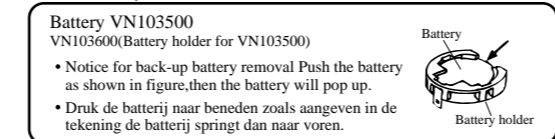
XX: not installed (実装しない)

38CC1-882240-2

•  $\mu$ PC2918T-E1 (X2157A00)  
REGULATOR +1.8V



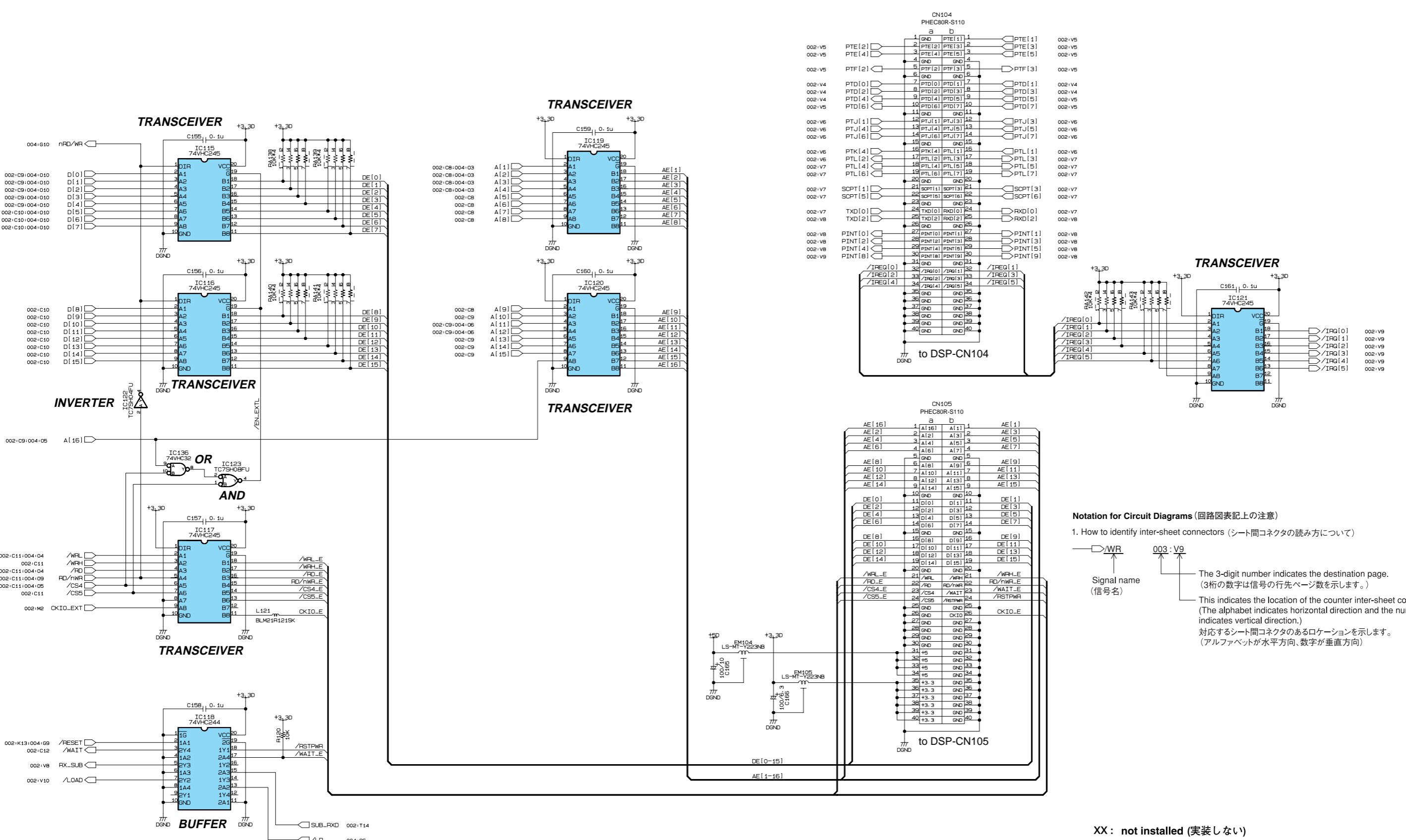
Lithium Battery (リチウム電池)





CPU1 CIRCUIT DIAGRAM 003 (02R96)

02R96



**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

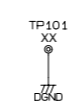
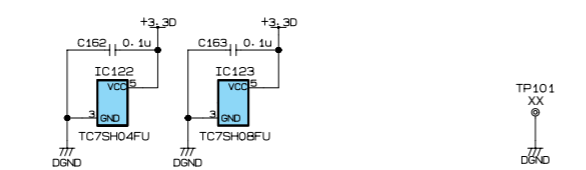
Signal name (信号名)      003:V9

The 3-digit number indicates the destination page. (3桁の数字は信号の先行ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.) (アルファベットが水平方向、数字が垂直方向)

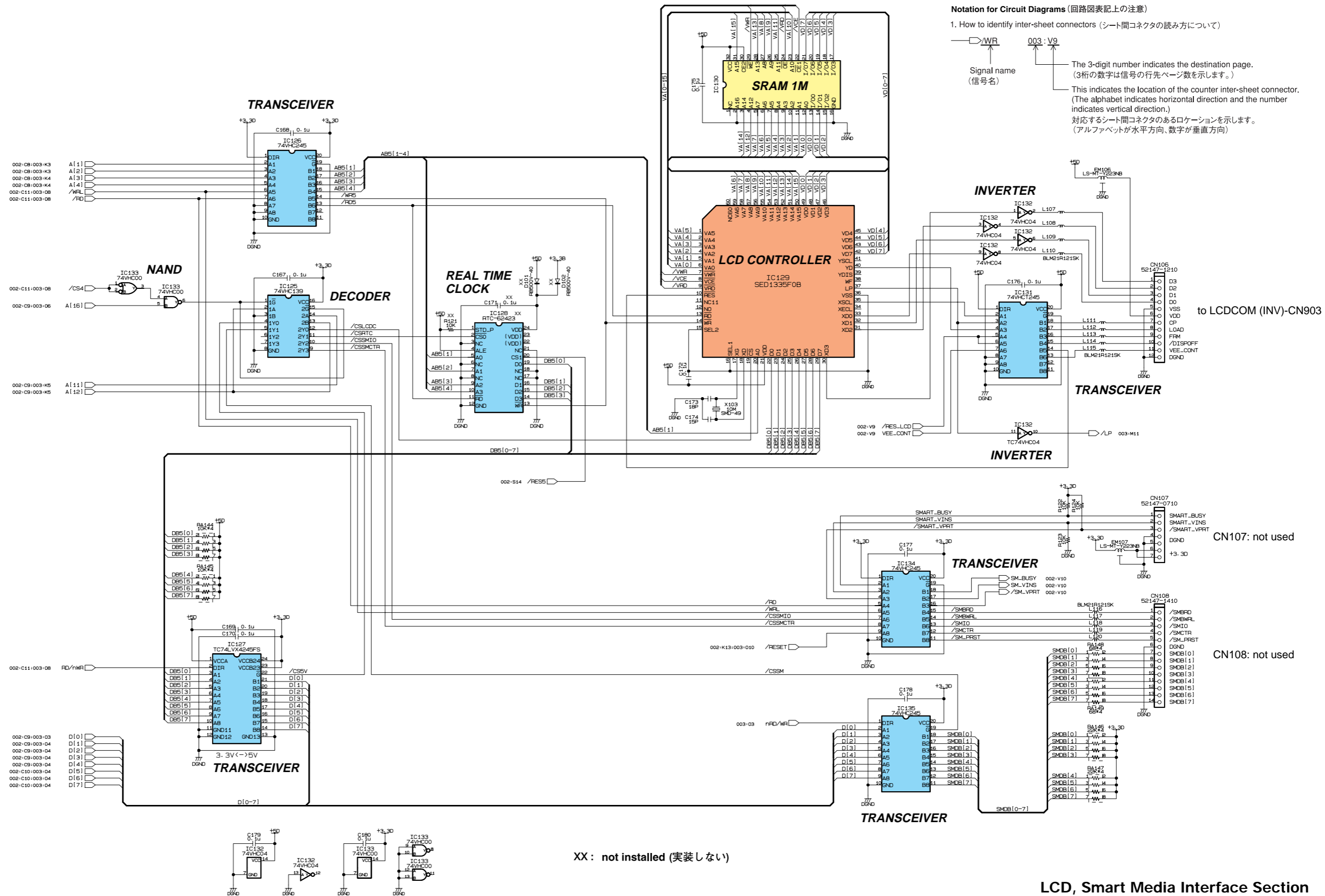
XX: not installed (実装しない)

External Interface Section  
CPU1 CIRCUIT DIAGRAM 003 (02R96)



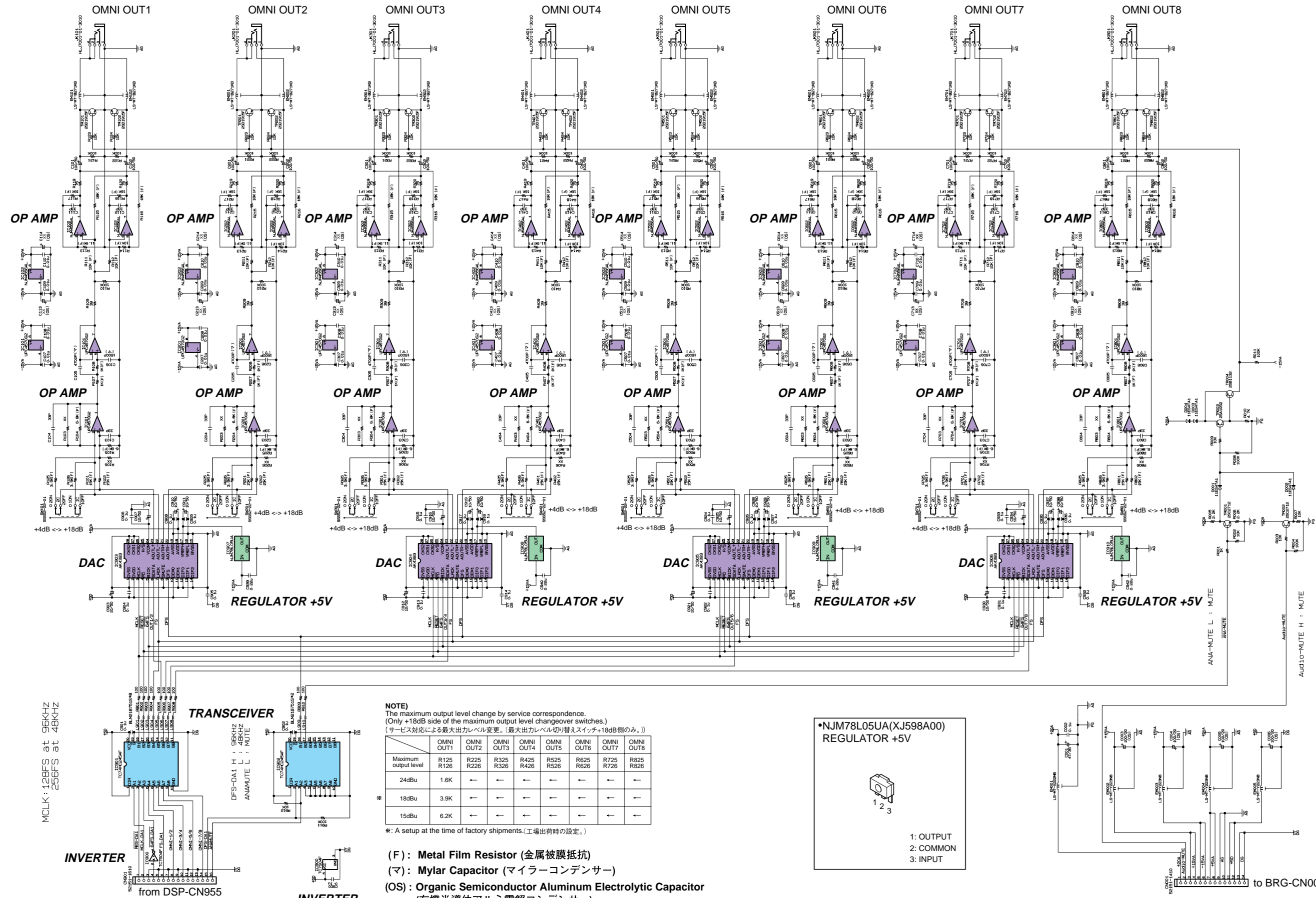
■ CPU1 CIRCUIT DIAGRAM 004 (02R96)

02R96



DA CIRCUIT DIAGRAM (02R96)

02R96



NOTE)  
The maximum output level change by service correspondence.  
(Only +18dB side of the maximum output level changeover switches.)  
(サービス対応による最大出力レベル変更。(最大出力レベル切り替えスイッチ+18dB側のみ。))

	OMNI OUT1	OMNI OUT2	OMNI OUT3	OMNI OUT4	OMNI OUT5	OMNI OUT6	OMNI OUT7	OMNI OUT8
Maximum output level	R125 R126	R225 R226	R325 R326	R425 R426	R525 R526	R625 R626	R725 R726	R825 R826
24dBu	1.6K	↑	↑	↑	↑	↑	↑	↑
18dBu	3.9K	↑	↑	↑	↑	↑	↑	↑
15dBu	6.2K	↑	↑	↑	↑	↑	↑	↑

\*: A setup at the time of factory shipments.(工場出荷時の設定。)

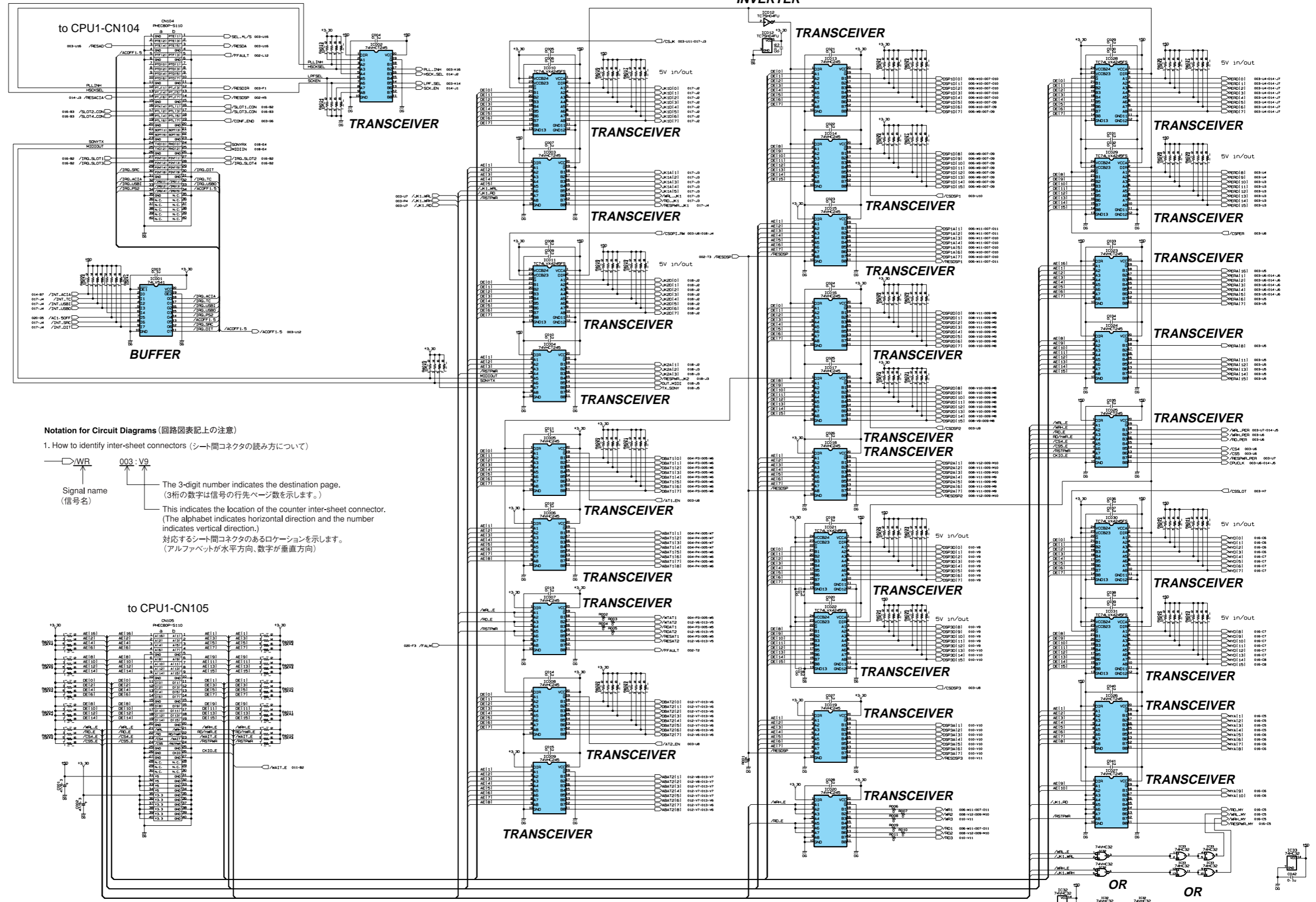
- (F) : Metal Film Resistor (金属被膜抵抗)
- (マ) : Mylar Capacitor (マイラーコンデンサー)
- (OS) : Organic Semiconductor Aluminum Electrolytic Capacitor (有機半導体アルミ電解コンデンサー)
- XX : not installed (未実装部品)

38CC1-8822219-1 3

DA CIRCUIT DIAGRAM (02R96)

DSP CIRCUIT DIAGRAM 002 (02R96)

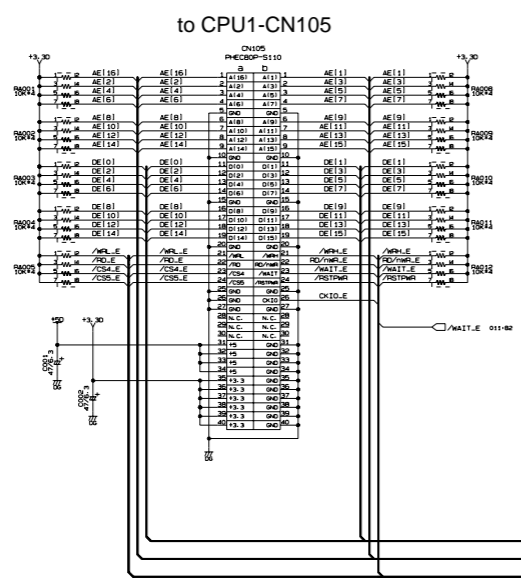
02R96



Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

Signal name (信号名)
   
 The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)
   
 This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)
   
 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)



CPU INTERFACE

DSP CIRCUIT DIAGRAM 002 (02R96)



# DSP CIRCUIT DIAGRAM 004 (02R96)

02R96

**Notation for Circuit Diagrams (回路図表記上の注意)**

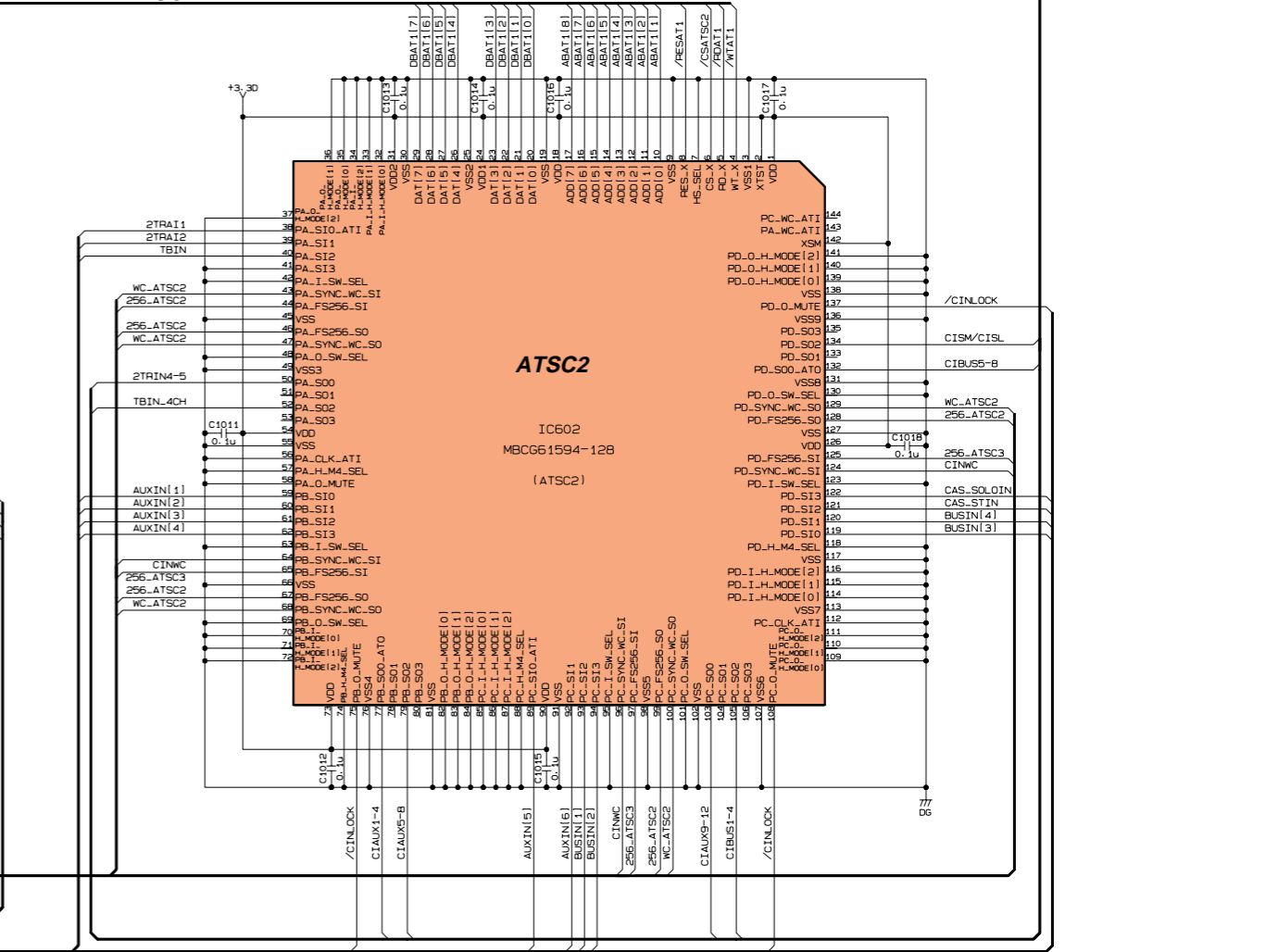
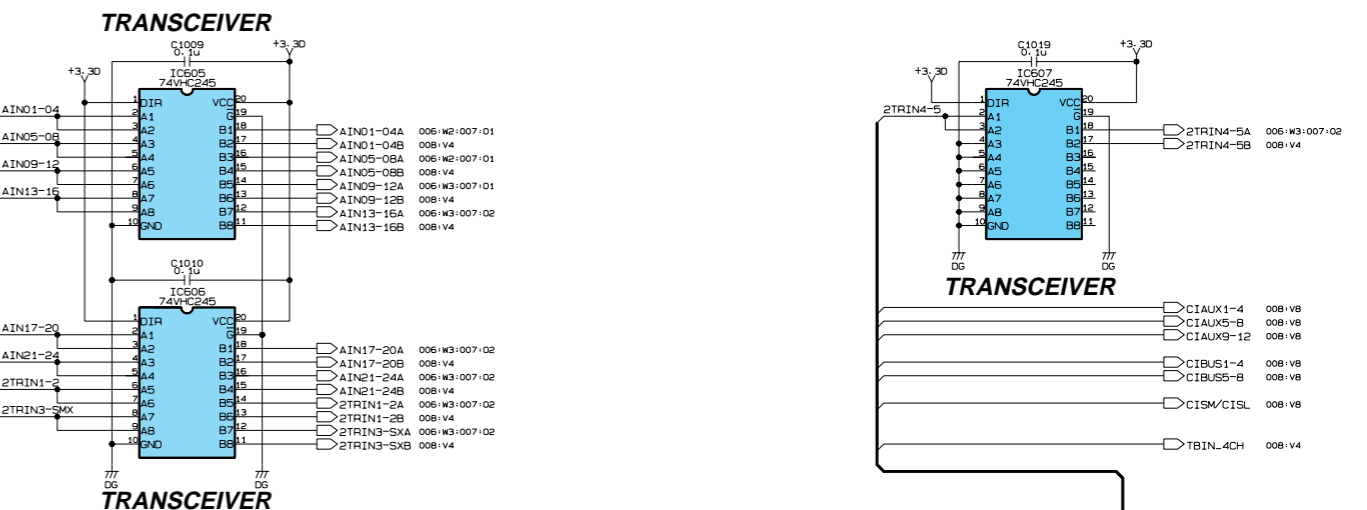
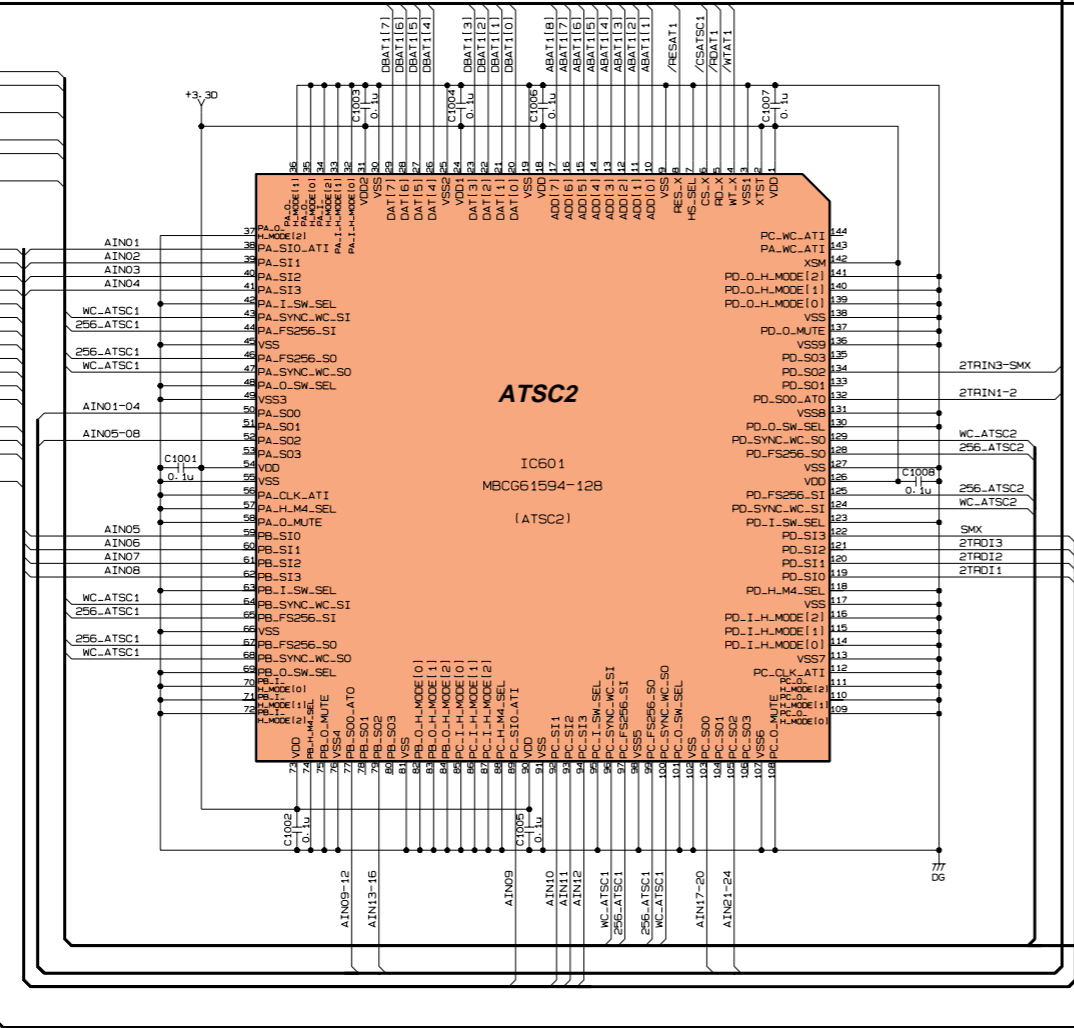
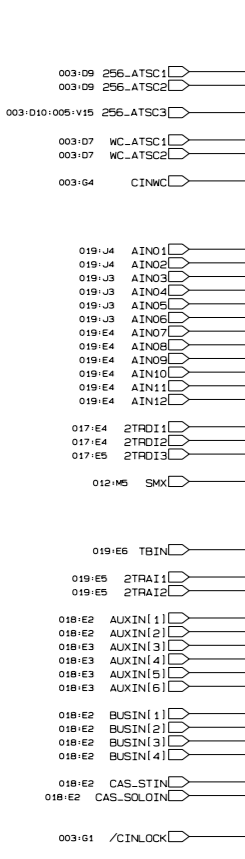
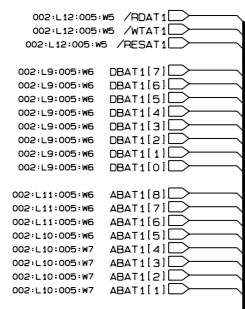
1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

—▷/WR      003:V9

Signal name (信号名)

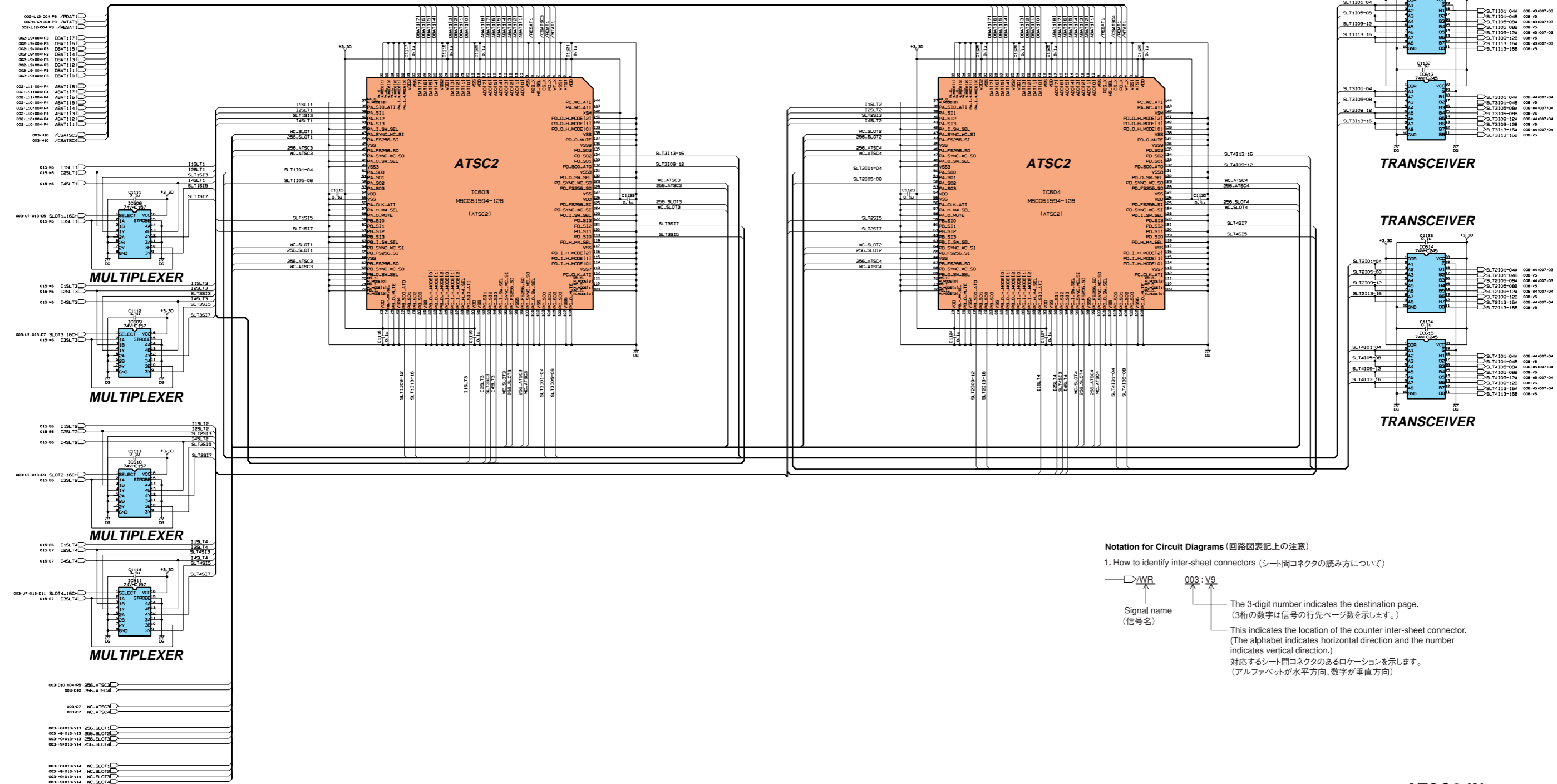
The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.) 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)



DSP CIRCUIT DIAGRAM 005 (02R96)

02R96



**Notation for Circuit Diagrams (回路図表記上の注意)**

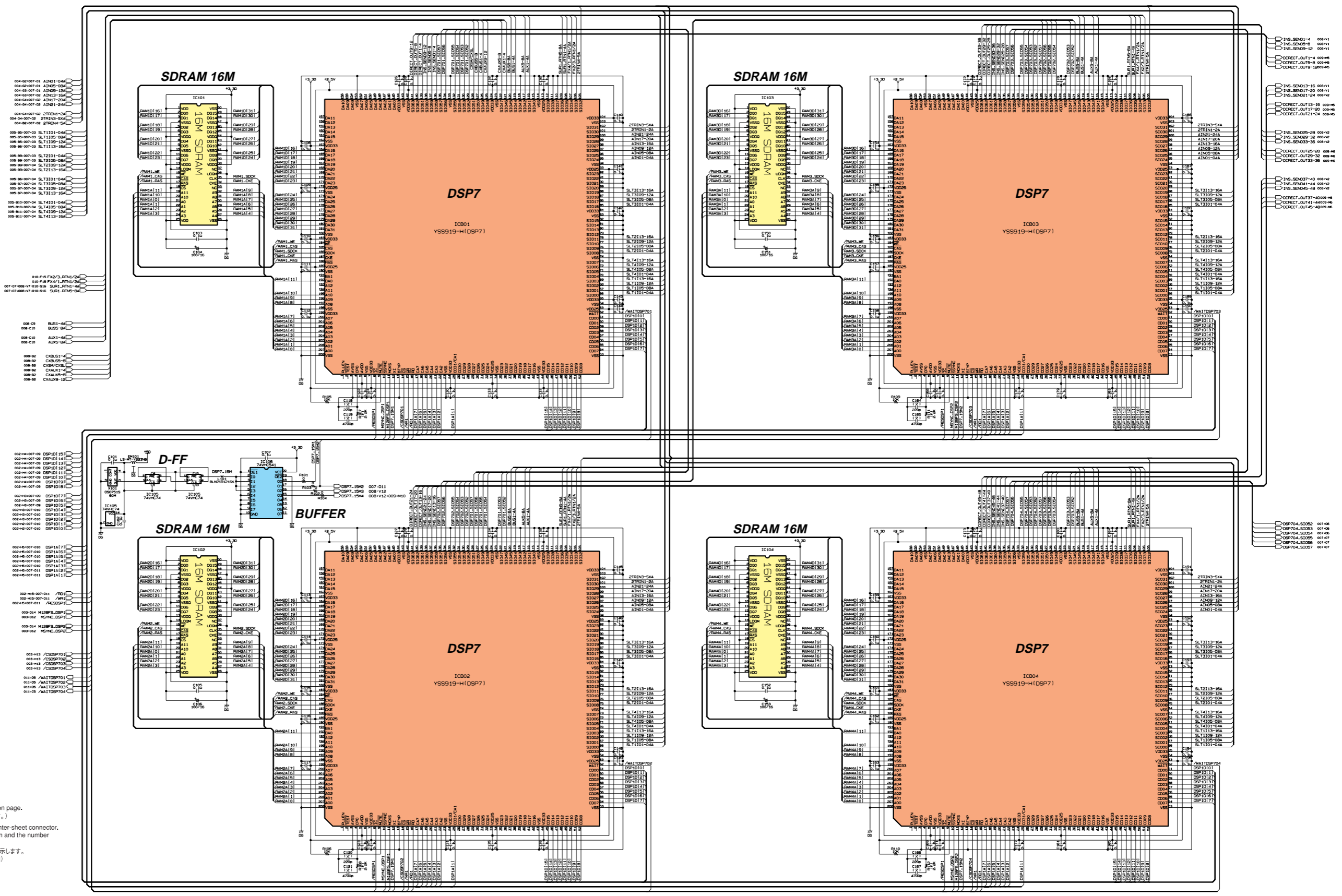
1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)  
 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

DSP CIRCUIT DIAGRAM 006 (02R96)

02R96



Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

Signal name (信号名) → 003-V8

The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.) 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

38CC1-8823583-6

(F): Metal Film Resistor (金属被膜抵抗)  
(マ): Mylar Capacitor (マイラーコンデンサー)

DSP CIRCUIT DIAGRAM 006 (02R96)

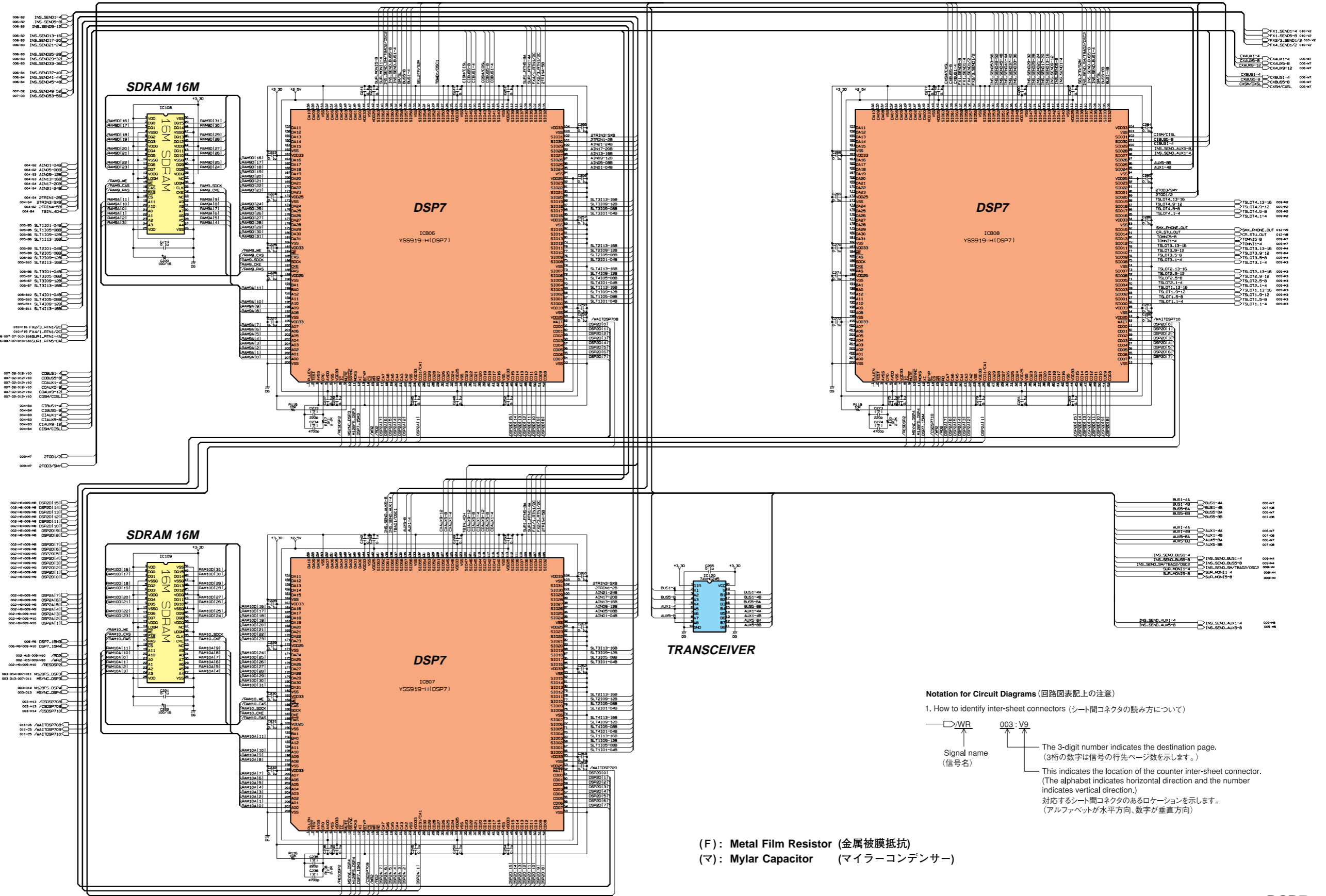
DSP7





DSP CIRCUIT DIAGRAM 008 (02R96)

02R96



**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

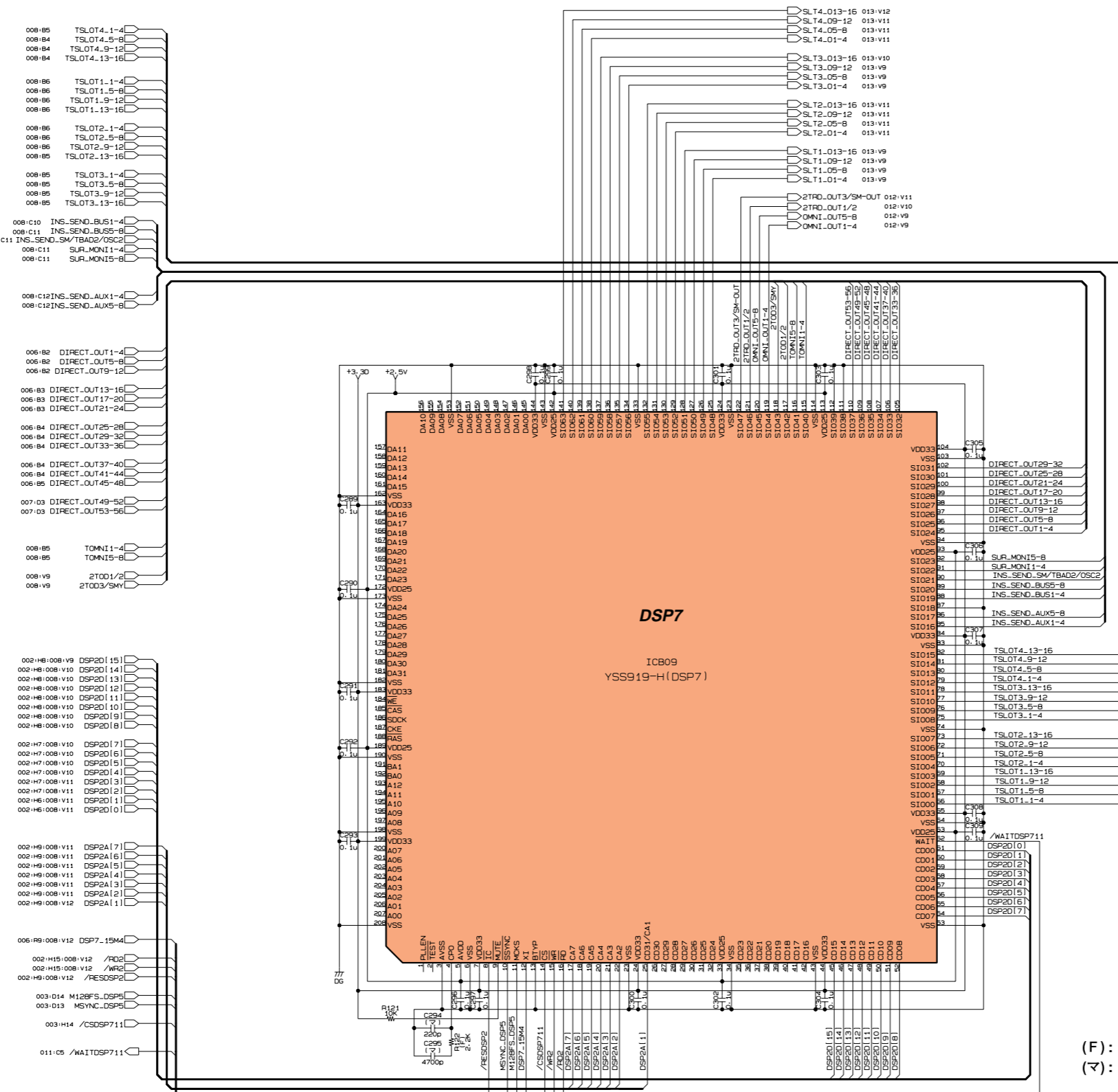
—WR—  
Signal name (信号名)

003:V9  
The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)  
対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

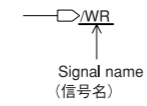
(F): Metal Film Resistor (金属被膜抵抗)  
(M): Mylar Capacitor (マイラーコンデンサー)

DSP CIRCUIT DIAGRAM 009 (02R96)



Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



The 3-digit number indicates the destination page.  
(3桁の数字は信号の行先ページ数を示します。)

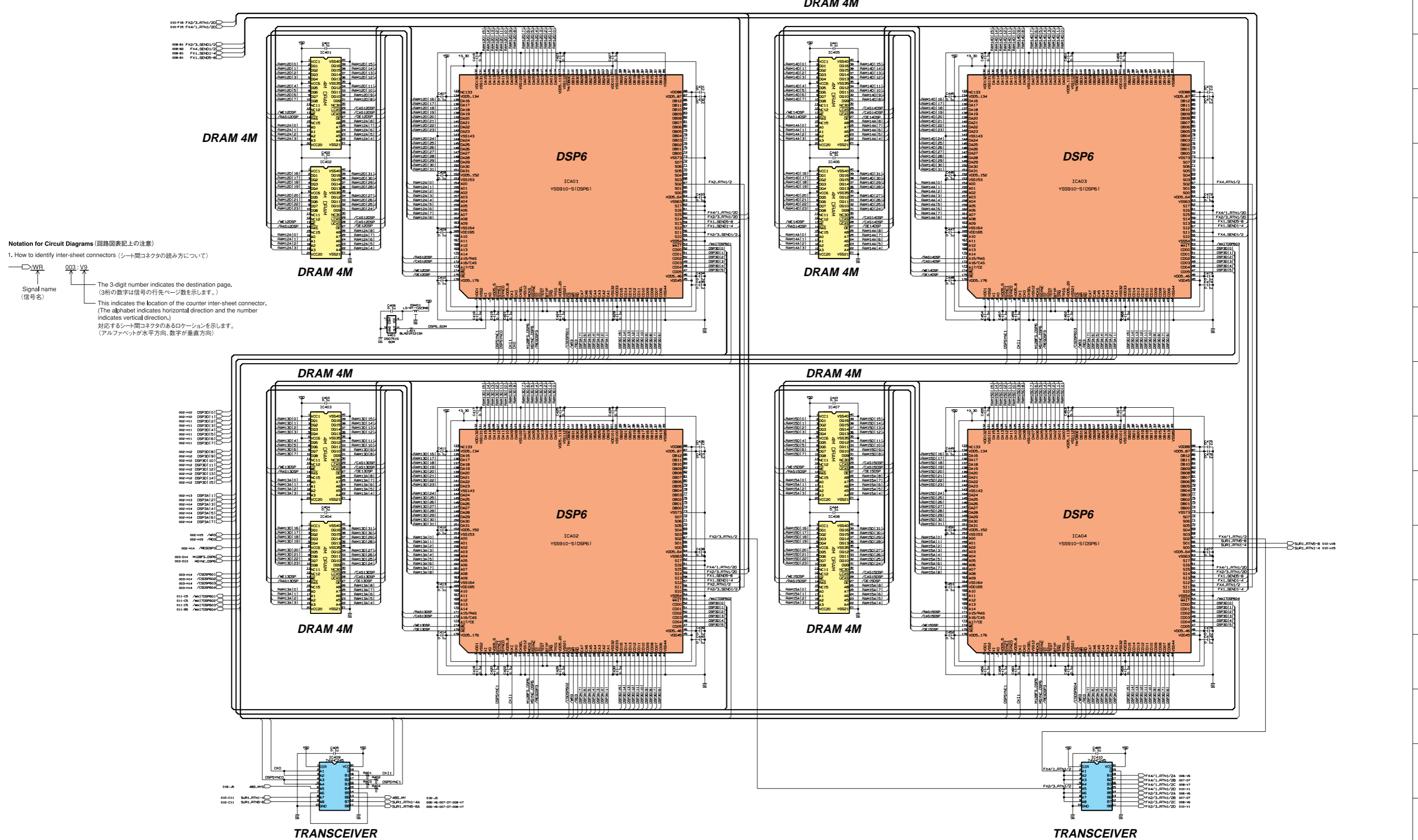
This indicates the location of the counter inter-sheet connector.  
(The alphabet indicates horizontal direction and the number indicates vertical direction.)  
対応するシート間コネクタのあるロケーションを示します。  
(アルファベットが水平方向、数字が垂直方向)

(F) : Metal Film Resistor (金属被膜抵抗)  
(マ) : Mylar Capacitor (マイラーコンデンサー)

DSP7 DSP CIRCUIT DIAGRAM 009 (02R96)

DSP CIRCUIT DIAGRAM 010 (02R96)

02R96



**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

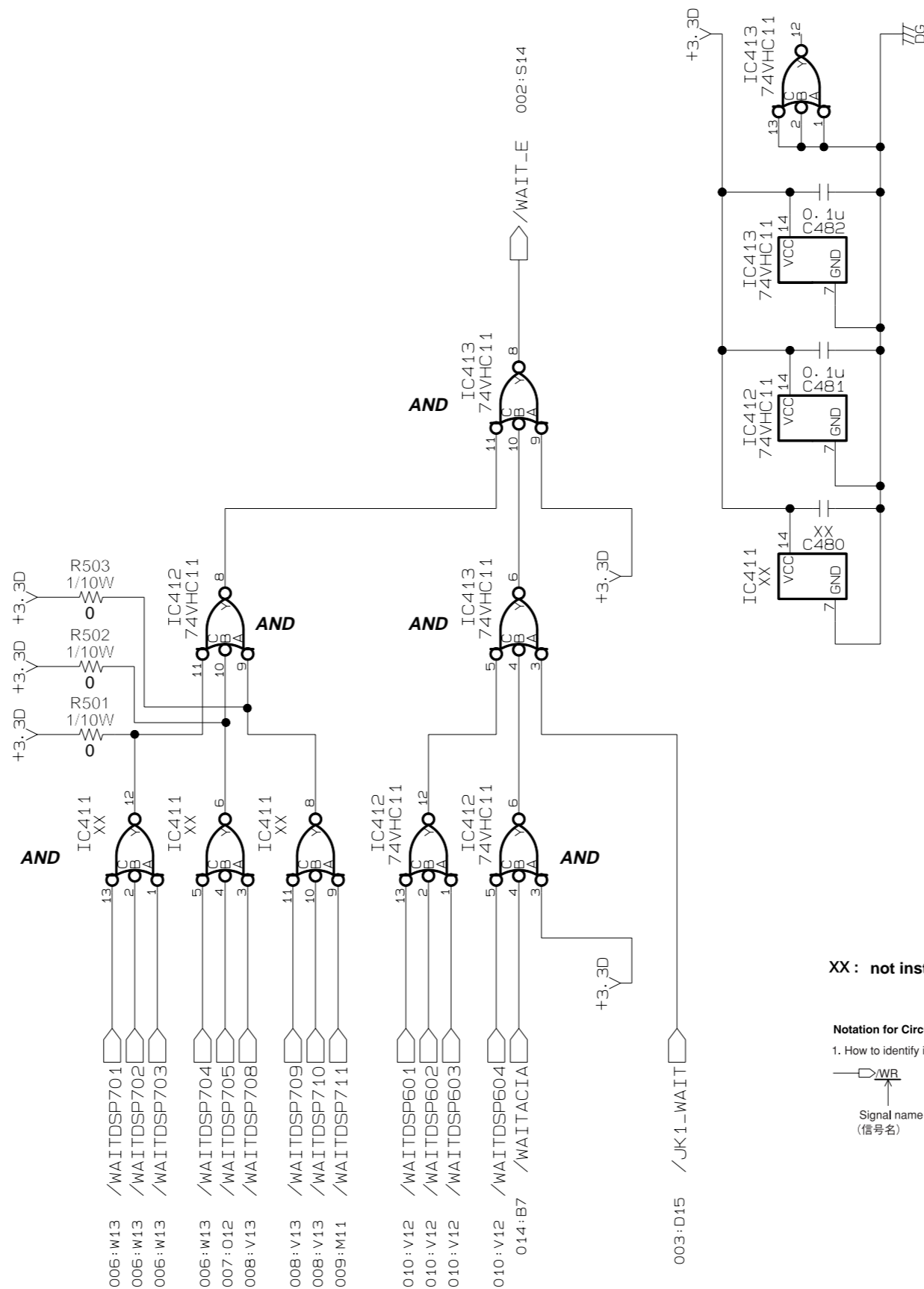
Signal name (信号名)      003-V9

The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.) (対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向))

DSP CIRCUIT DIAGRAM 011 (02R96)

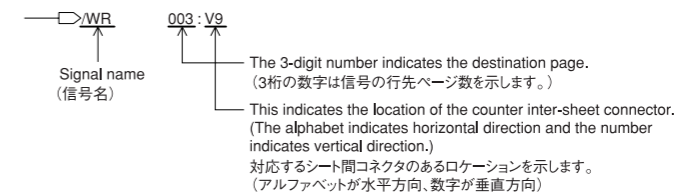
02R96



XX : not installed (実装しない)

Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

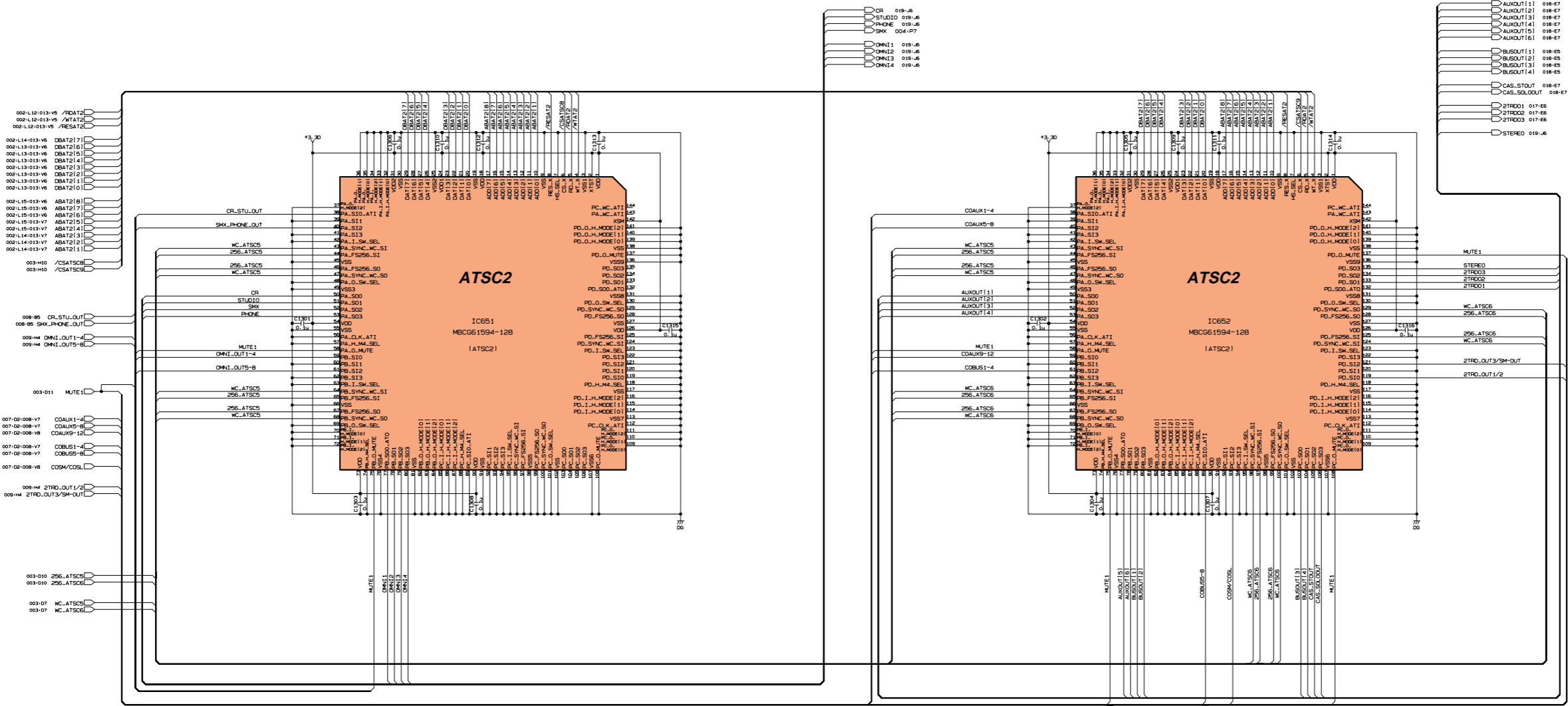


WAIT GATE

DSP CIRCUIT DIAGRAM 011 (02R96)

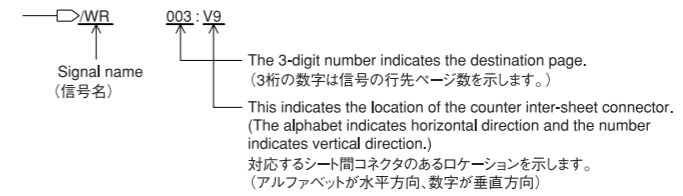
DSP CIRCUIT DIAGRAM 012 (02R96)

02R96



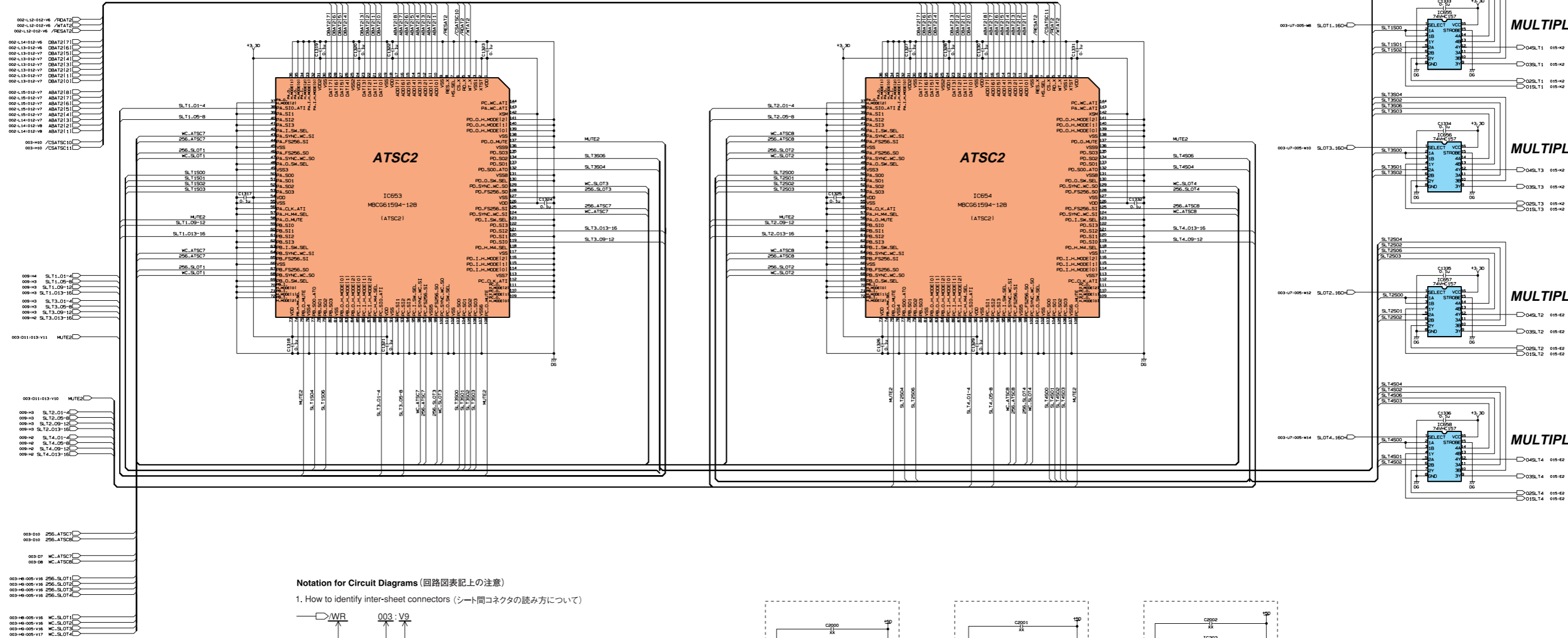
Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



DSP CIRCUIT DIAGRAM 013 (02R96)

02R96



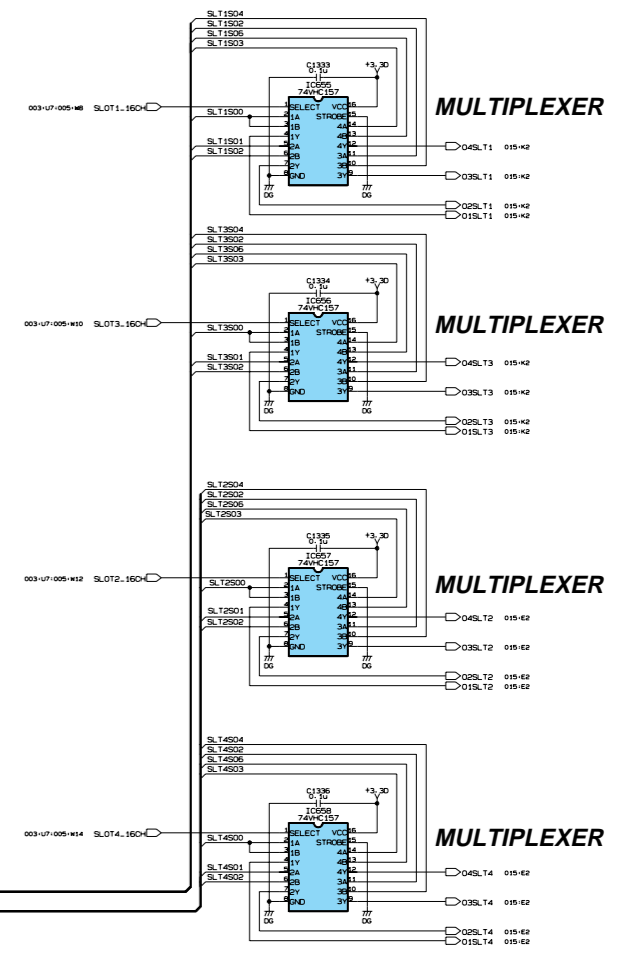
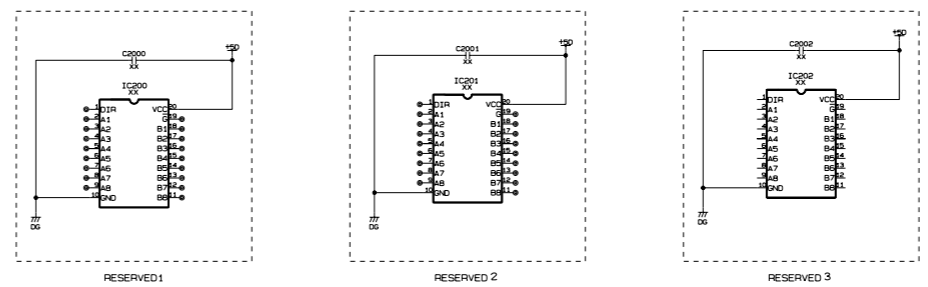
**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

—▷WR  
Signal name (信号名)

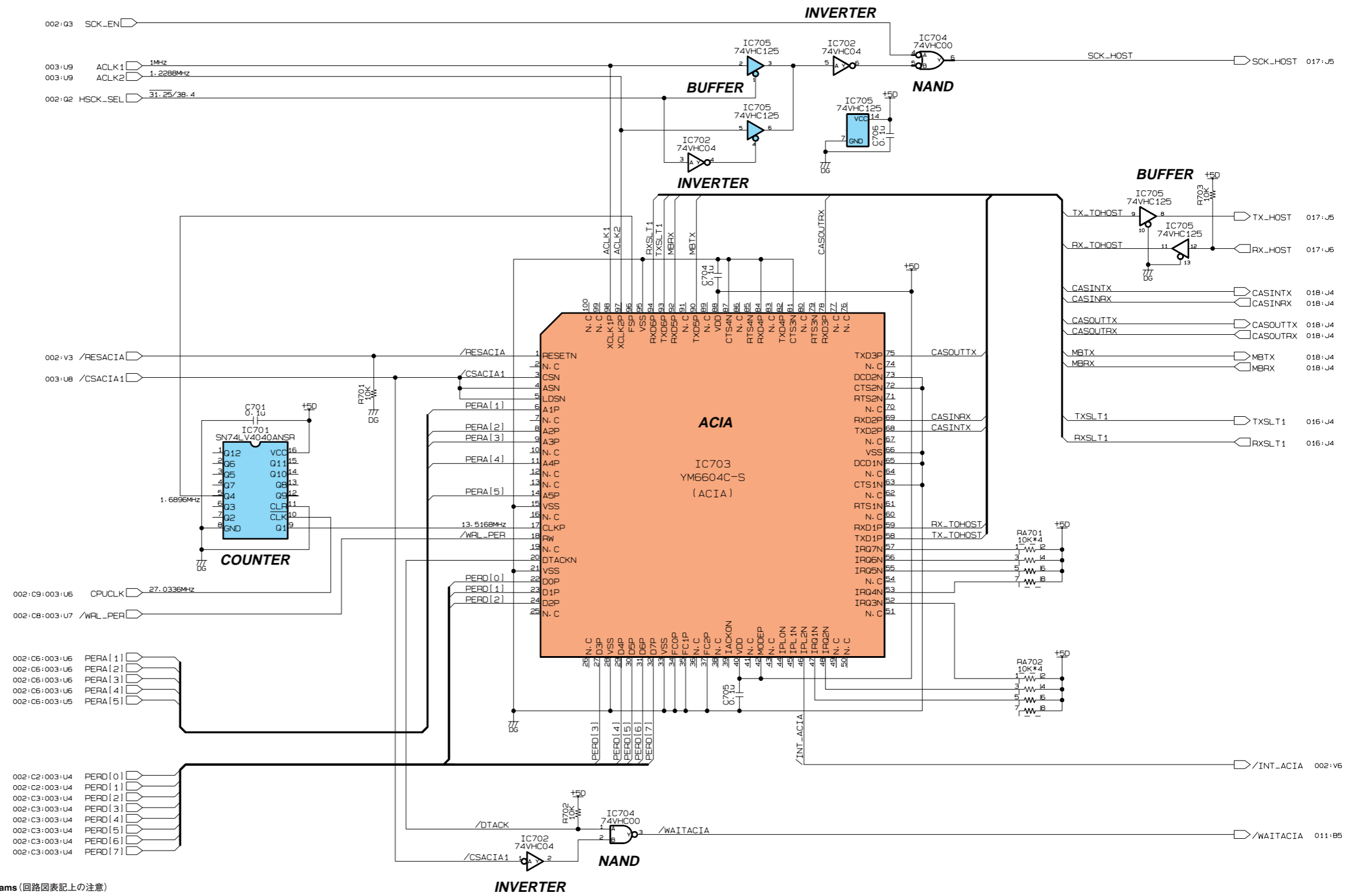
003 : V9  
The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)  
対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)



# DSP CIRCUIT DIAGRAM 014 (02R96)

02R96



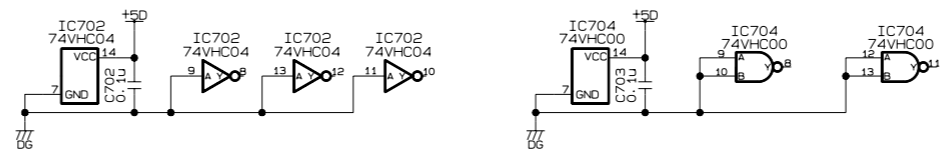
**Notation for Circuit Diagrams (回路図表記上の注意)**  
 1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

—▷WR (Signal name (信号名))

003:V9

The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.) (対応するシート間コネクタのあるロケーションを示します。 (アルファベットが水平方向、数字が垂直方向))





■ DSP CIRCUIT DIAGRAM 015 (02R96)

02R96

1

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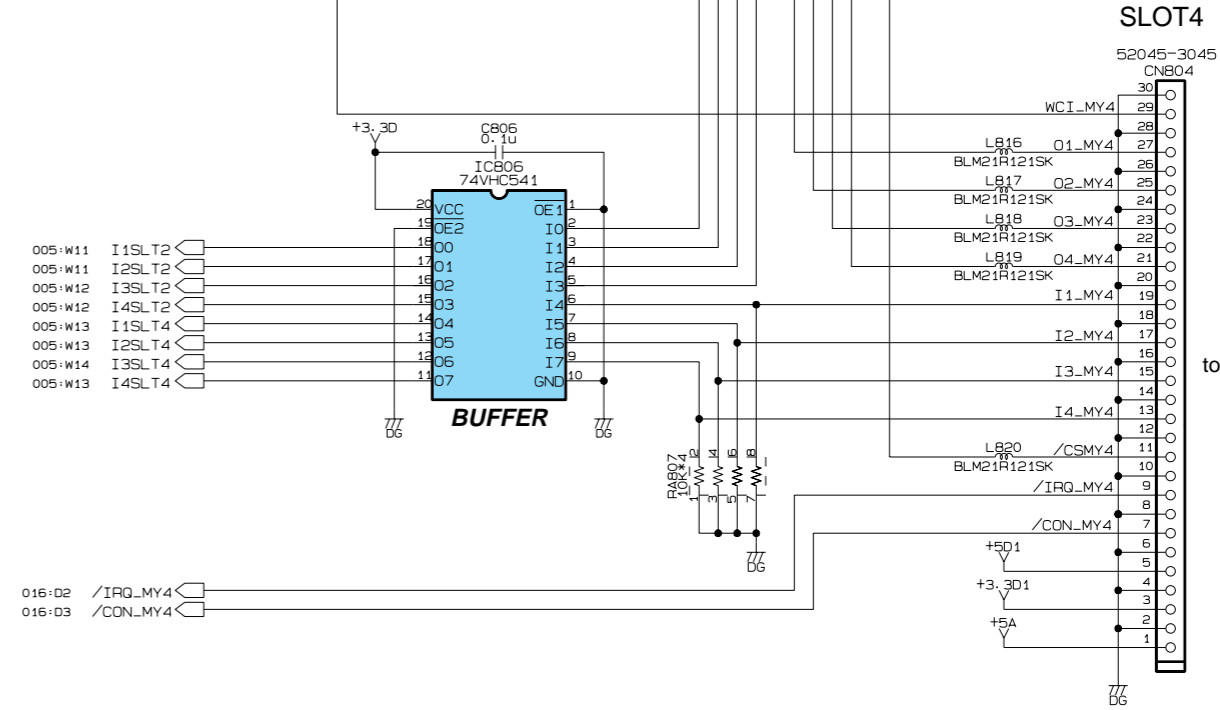
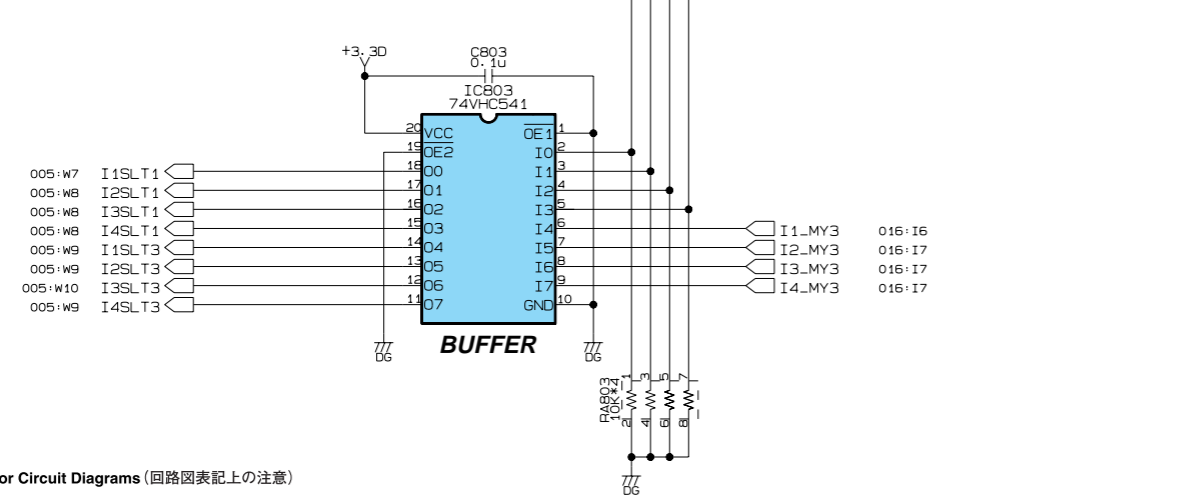
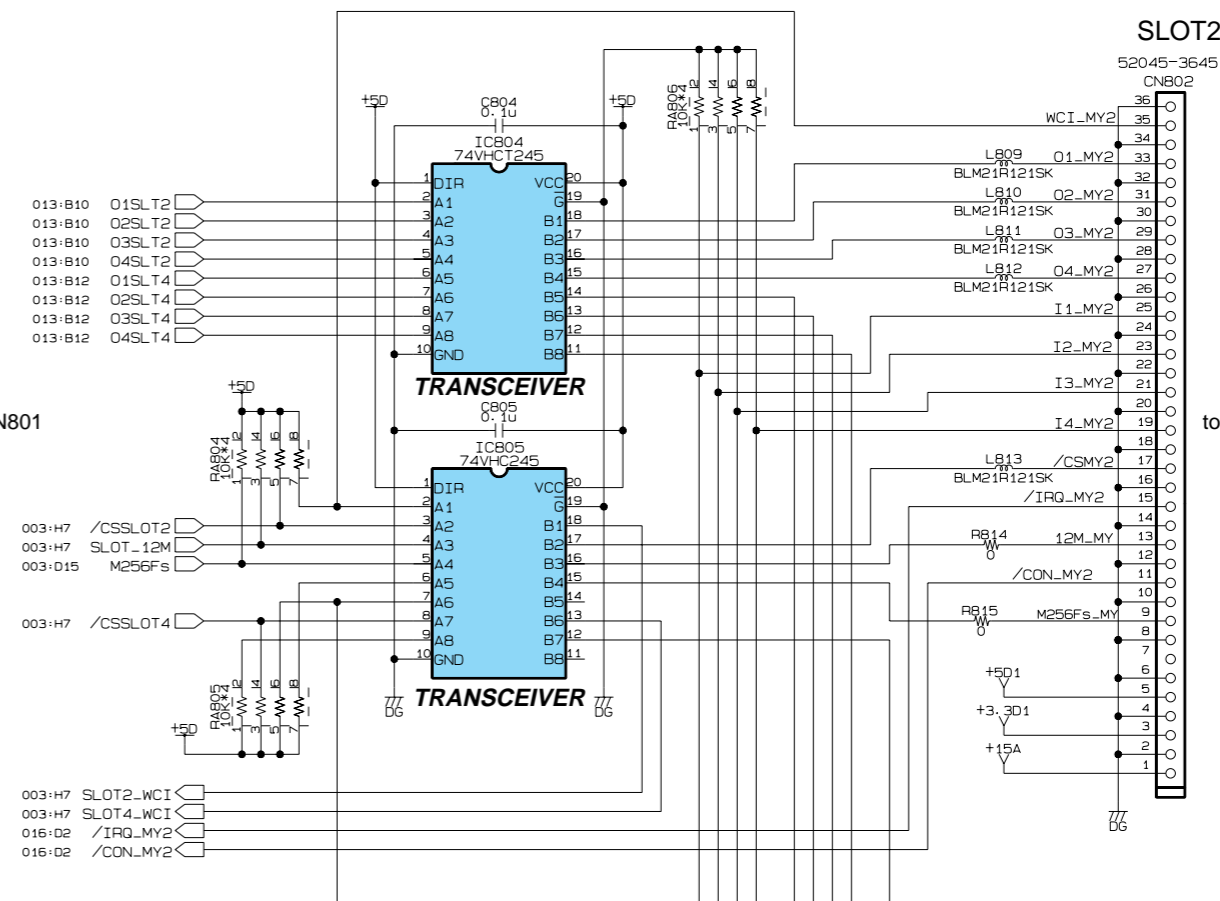
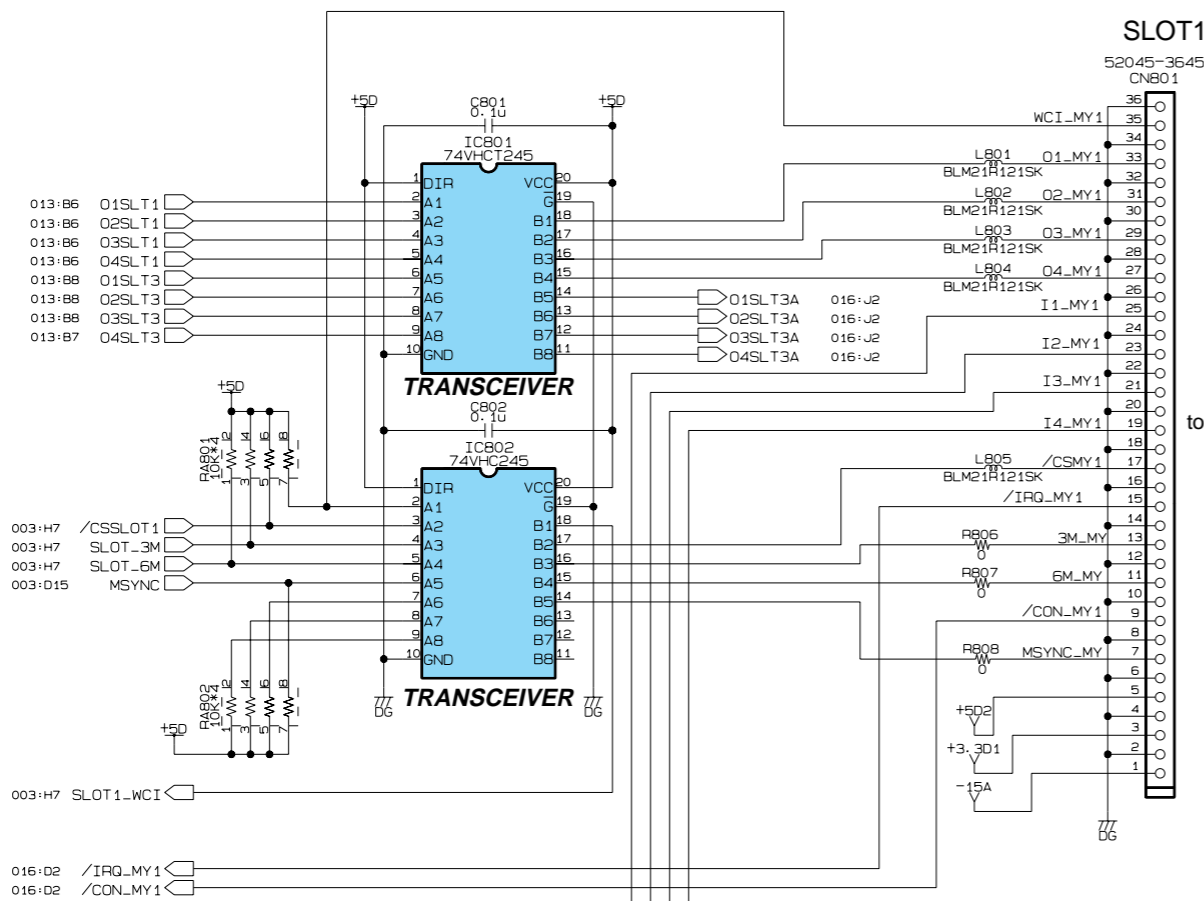
5

6

7

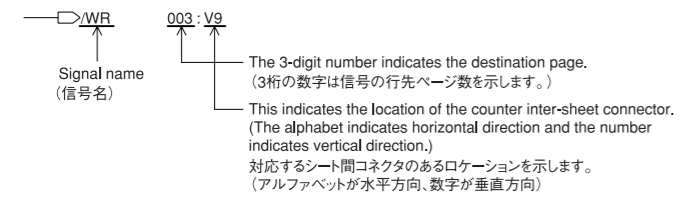
8

9



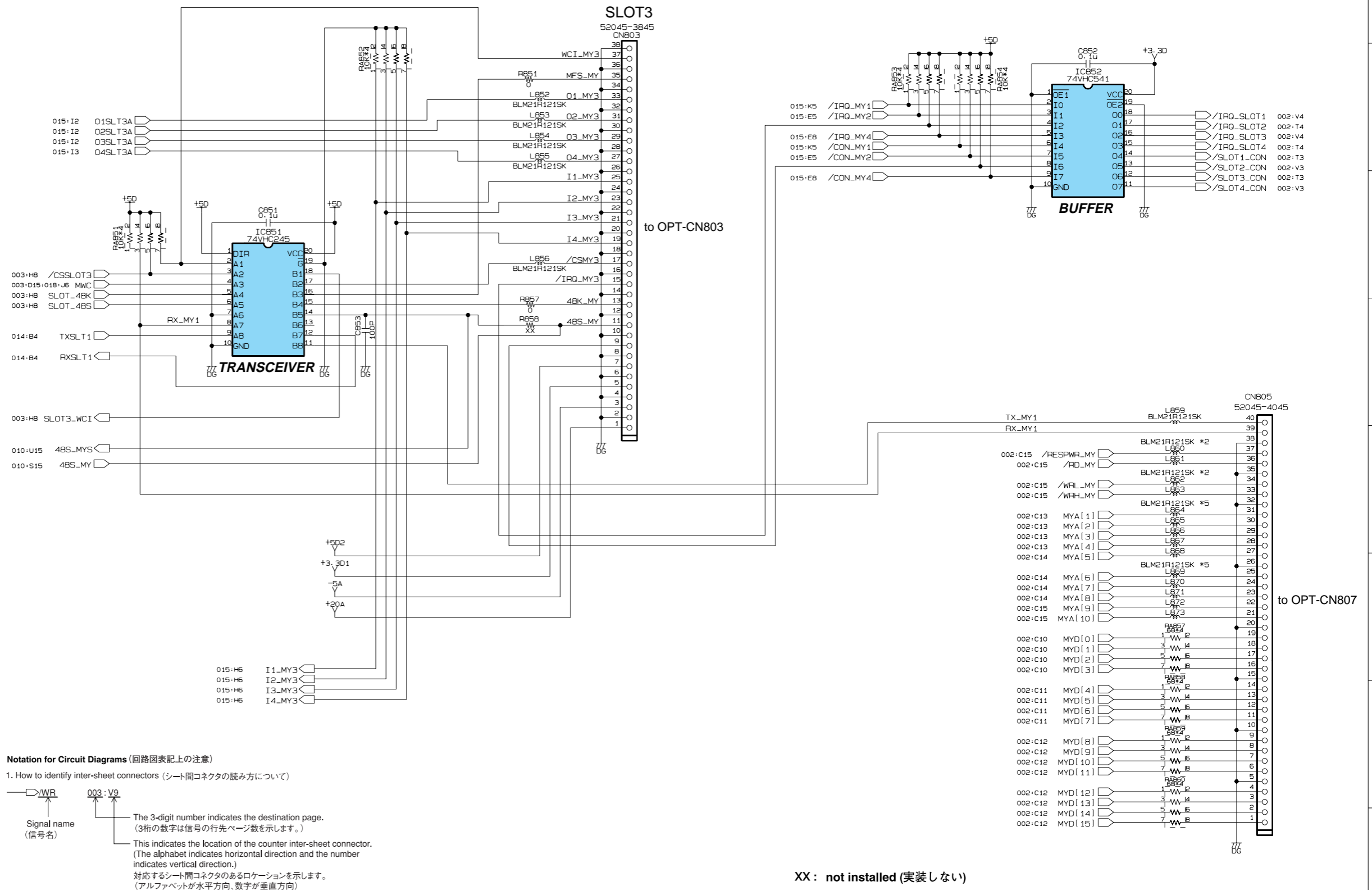
Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



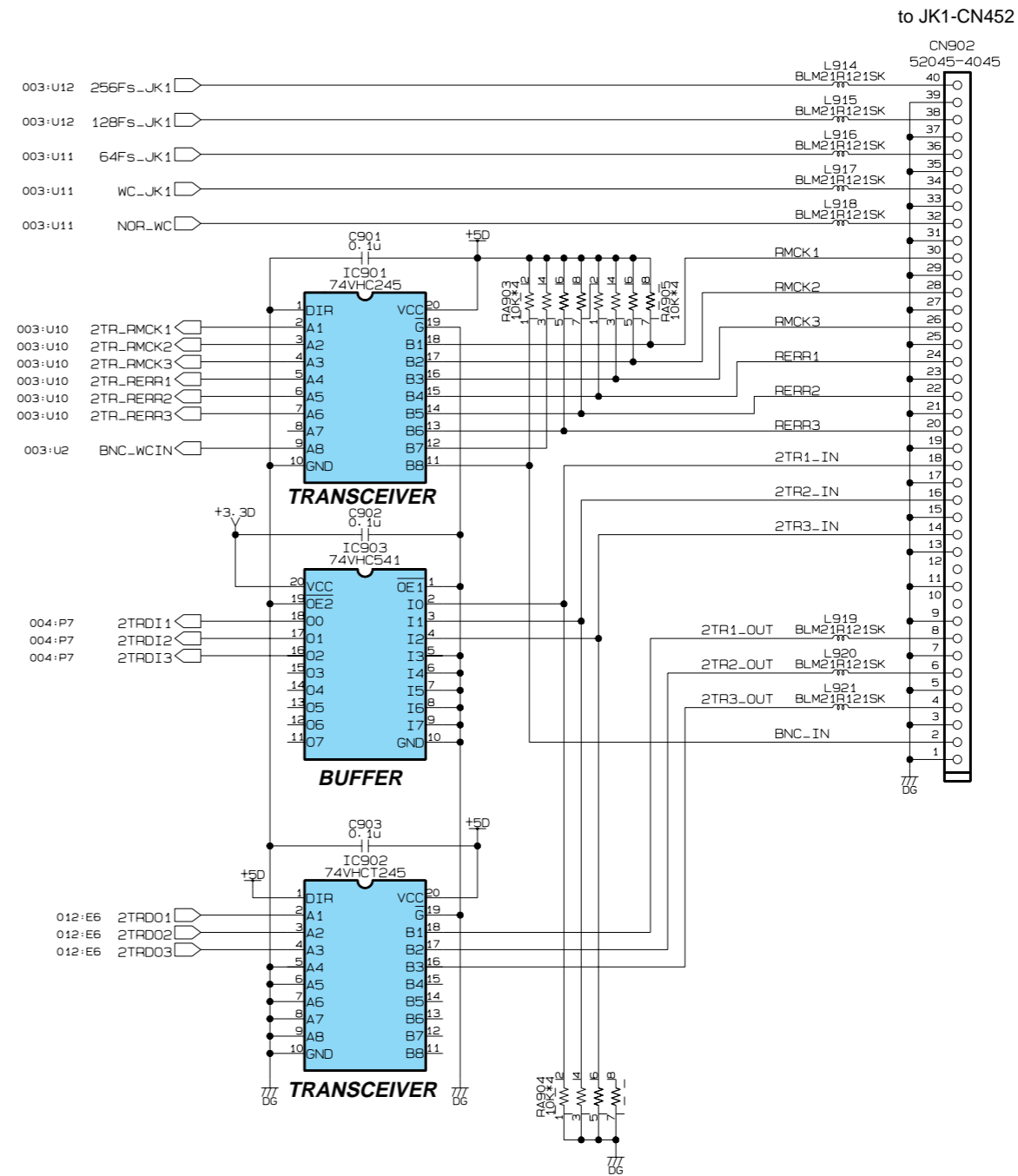
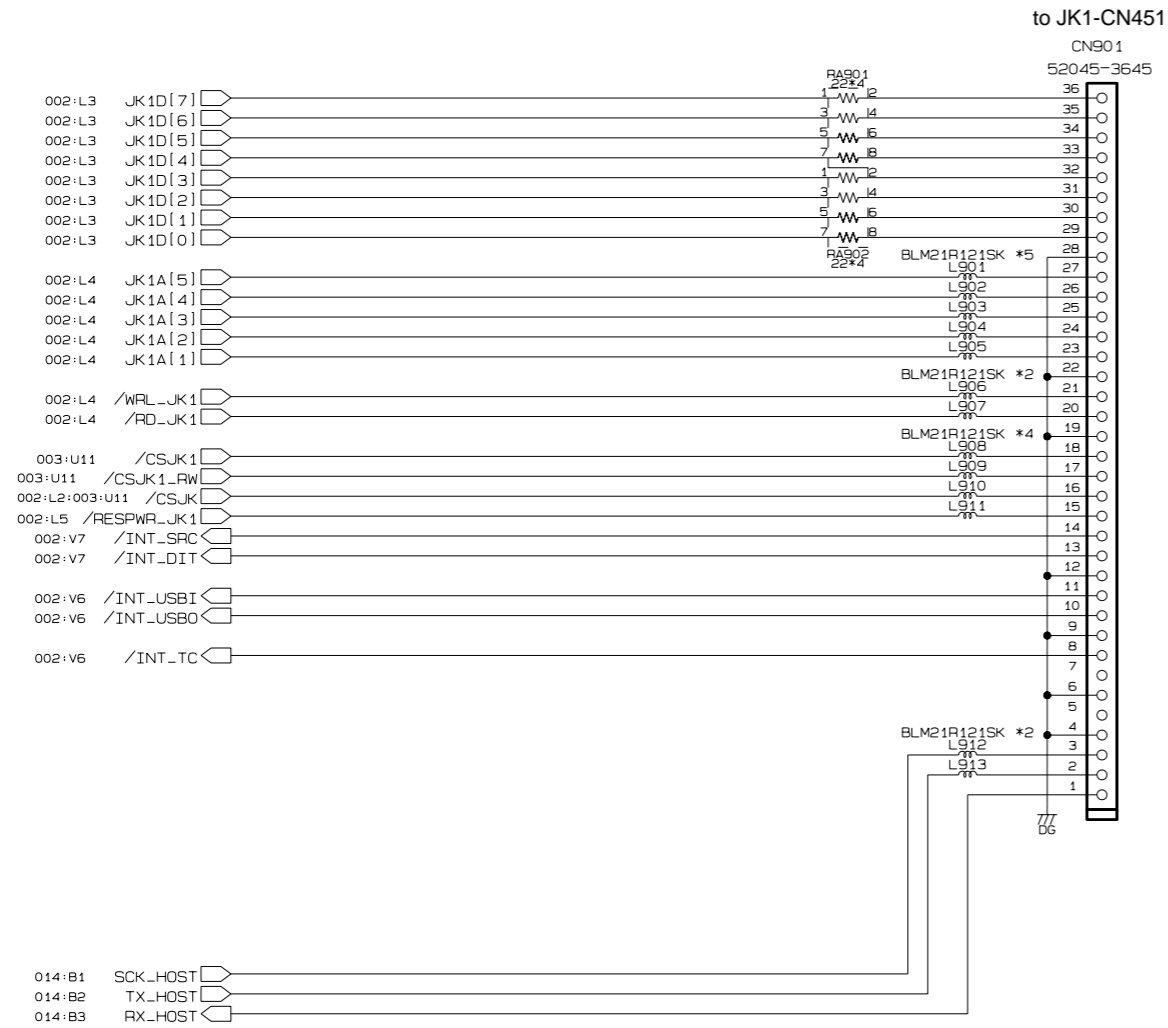
# DSP CIRCUIT DIAGRAM 016 (02R96)

02R96



■ DSP CIRCUIT DIAGRAM 017 (02R96)

02R96



Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

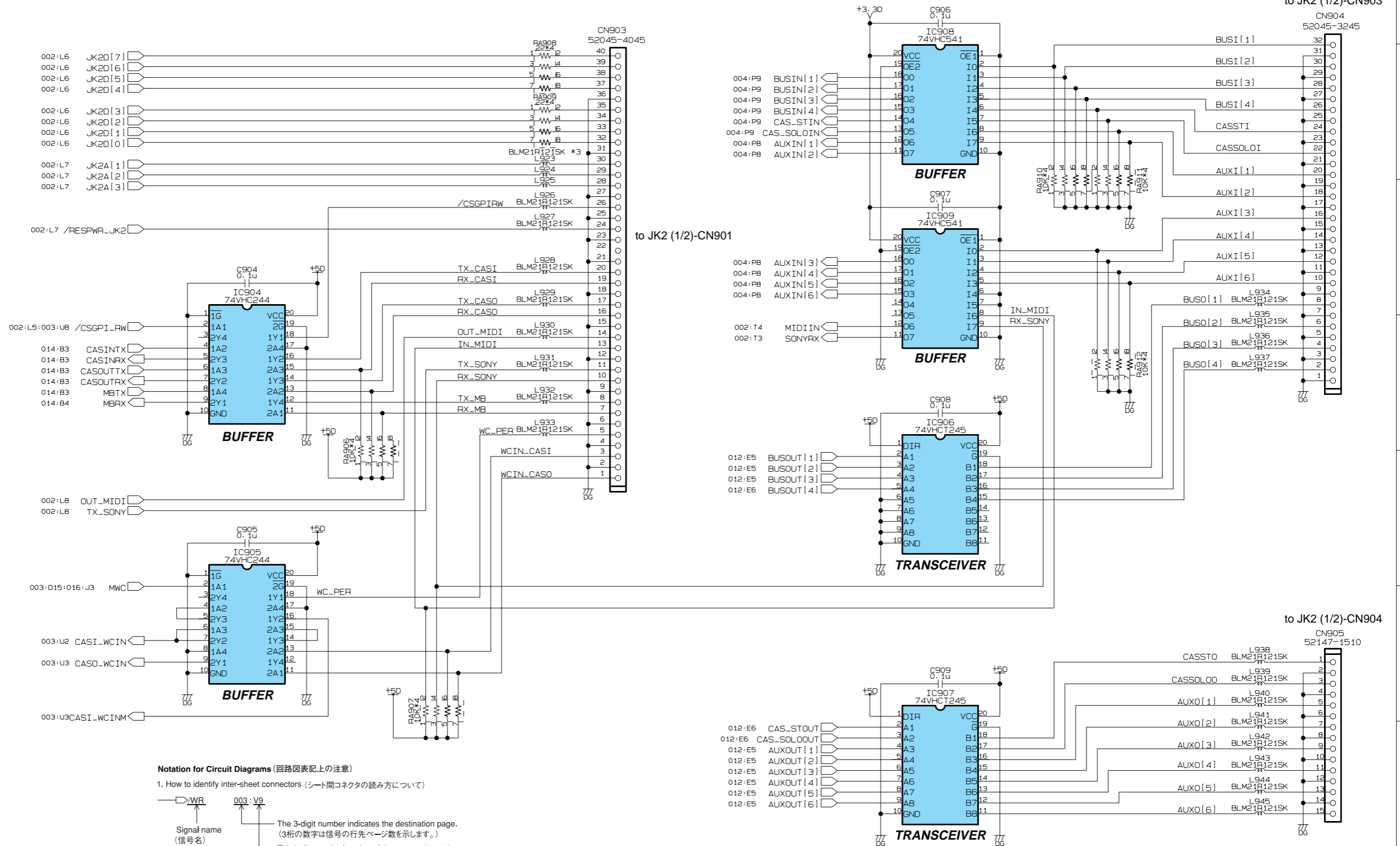


The 3-digit number indicates the destination page.  
(3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector.  
(The alphabet indicates horizontal direction and the number indicates vertical direction.)  
対応するシート間コネクタのあるロケーションを示します。  
(アルファベットが水平方向、数字が垂直方向)

■ DSP CIRCUIT DIAGRAM 018 (02R96)

02R96



**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

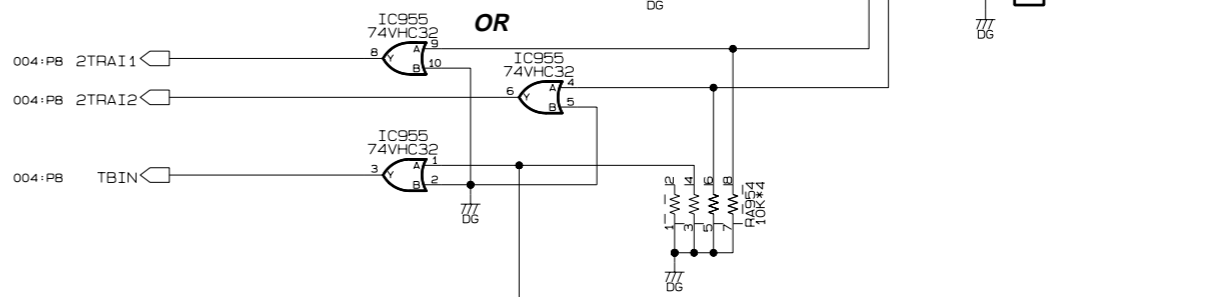
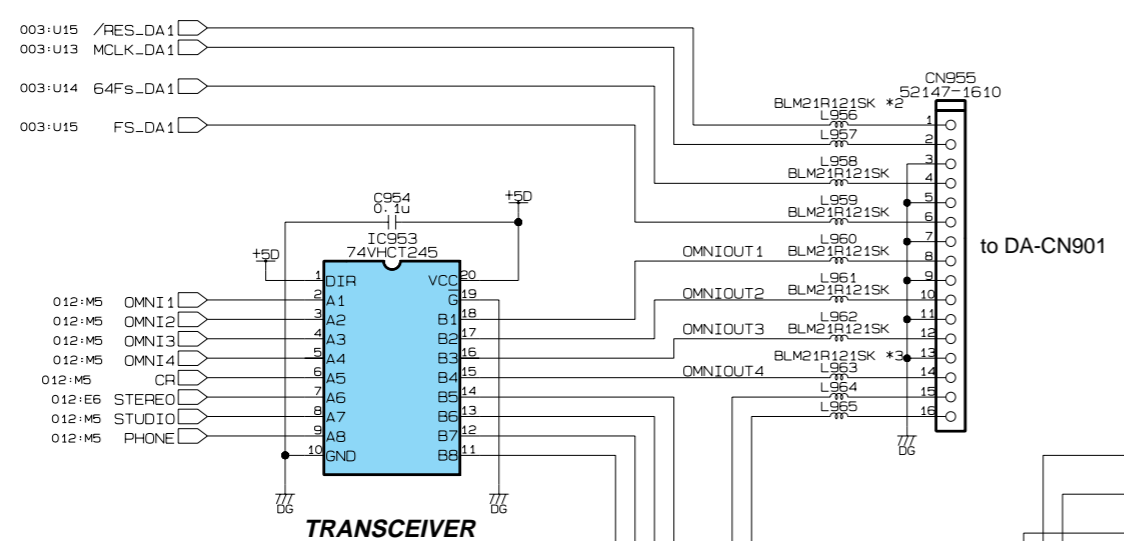
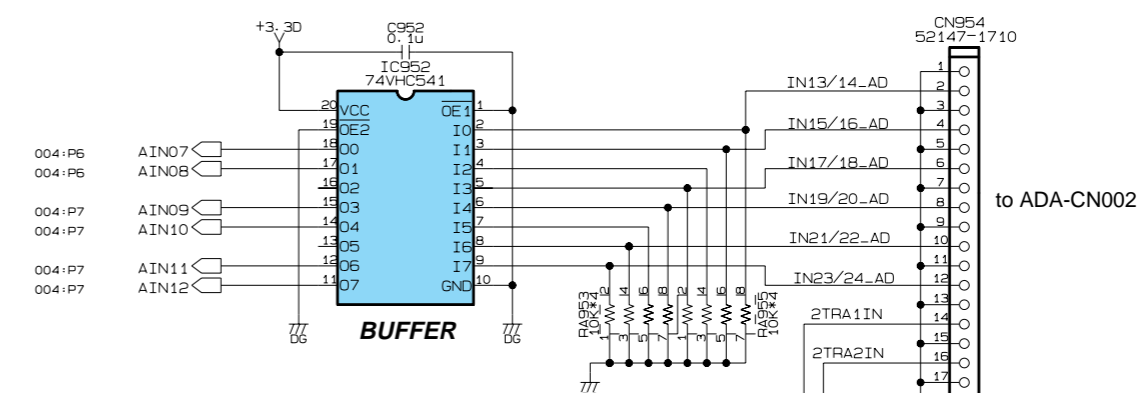
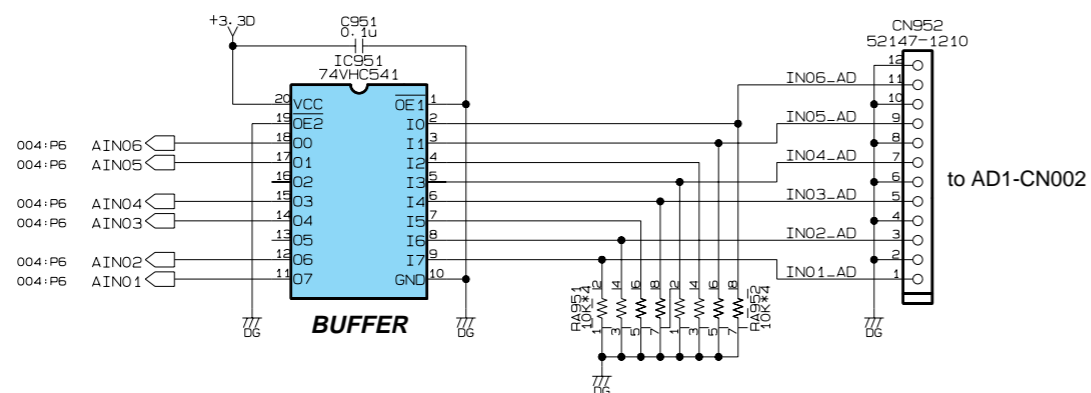
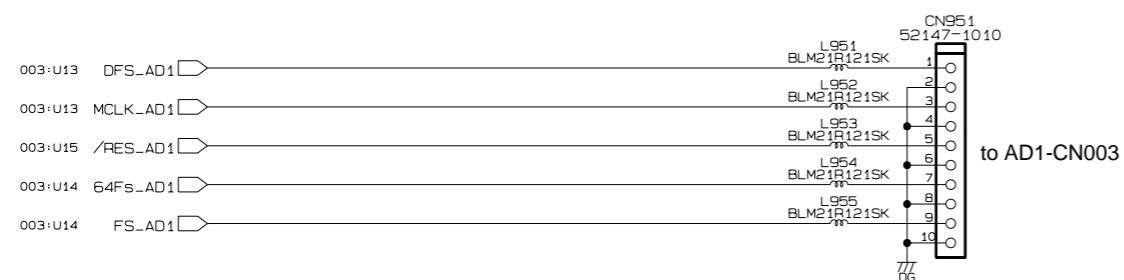
— WR —  
Signal name (信号名)

003:V9  
The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

— WR —  
This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)  
対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

■ DSP CIRCUIT DIAGRAM 019 (02R96)

02R96



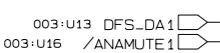
**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

—▷WR—  
↑  
Signal name (信号名)

003:V9  
↑  
The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

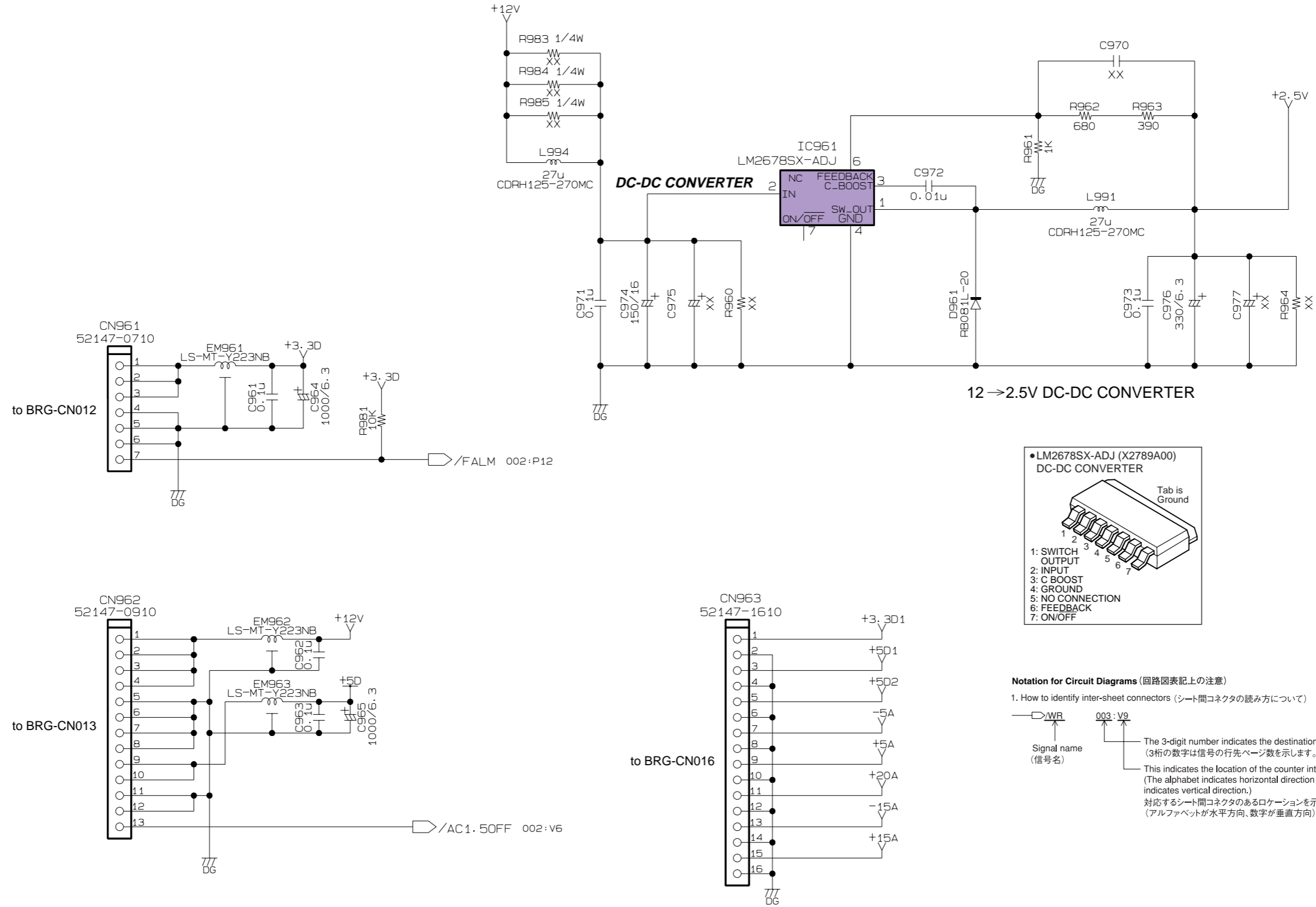
—▷WR—  
↑  
This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)  
対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)



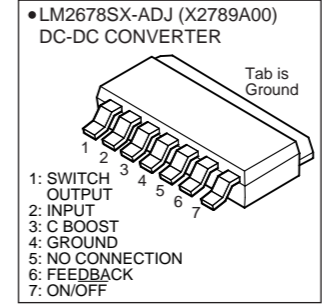
AD, DA I/F ■ DSP CIRCUIT DIAGRAM 019 (02R96)

■ DSP CIRCUIT DIAGRAM 020 (02R96)

02R96



12 → 2.5V DC-DC CONVERTER

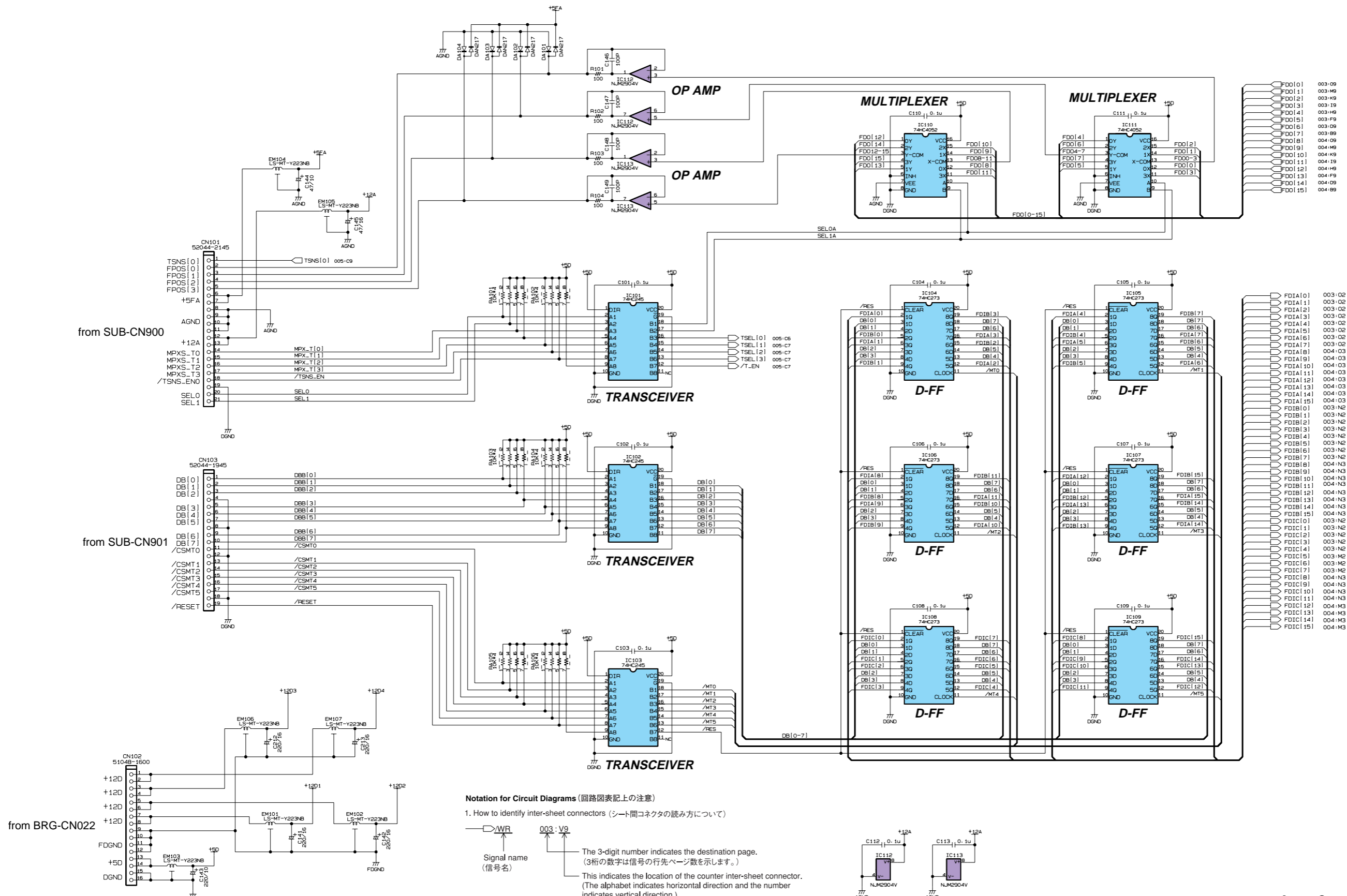


**Notation for Circuit Diagrams (回路図表記上の注意)**  
 1. How to identify inter-sheet connectors (シート間コネクタの読み方について)  
  
 Signal name (信号名)  
 The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)  
 This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)  
 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

XX: not installed (実装しない)

FD1 CIRCUIT DIAGRAM 002 (02R96)

02R96



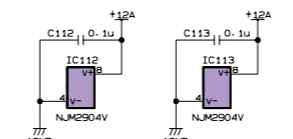
**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

Signal name (信号名)      003 : V9

The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

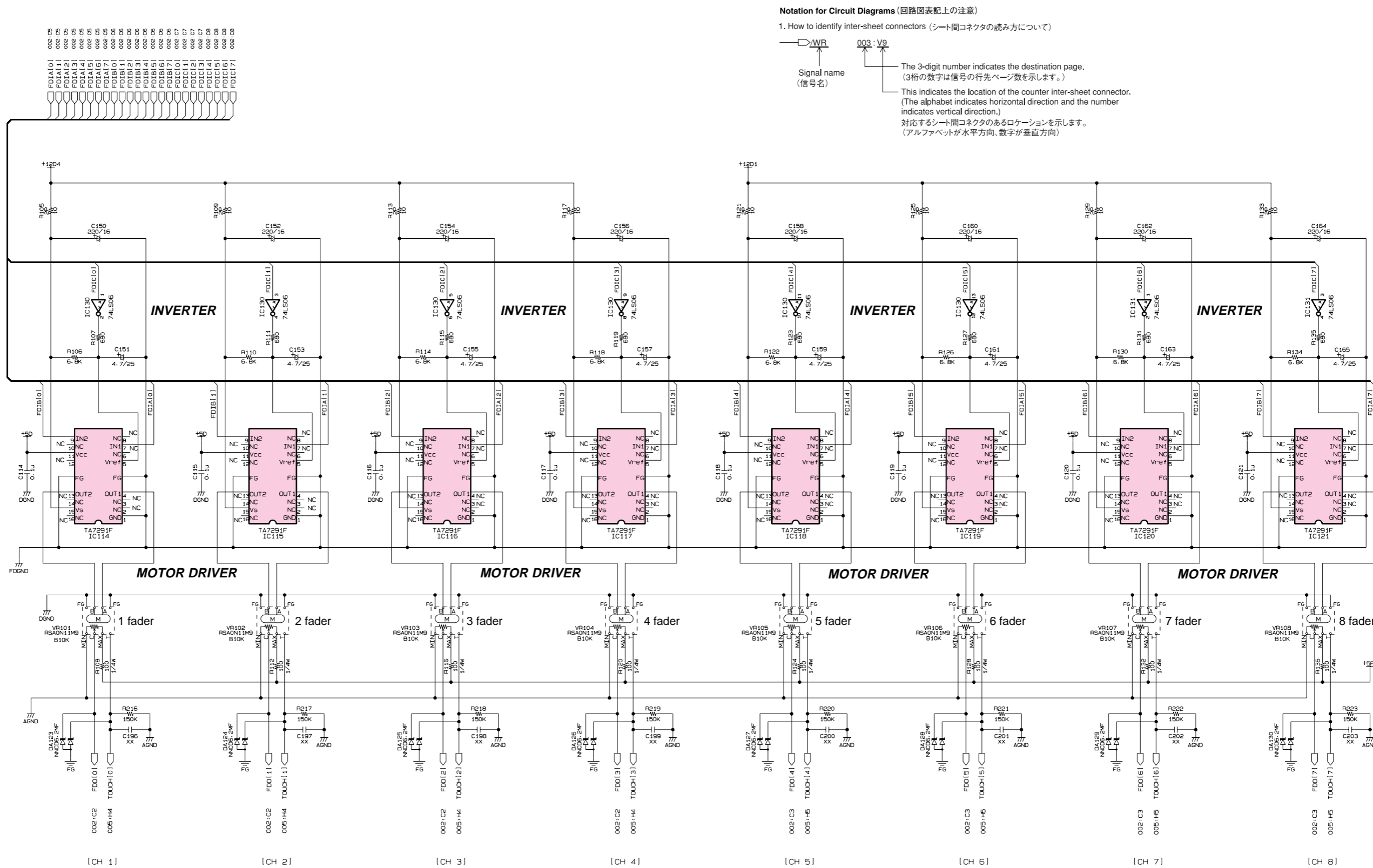
This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.) 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)



Interface Section  
FD1 CIRCUIT DIAGRAM 002 (02R96)

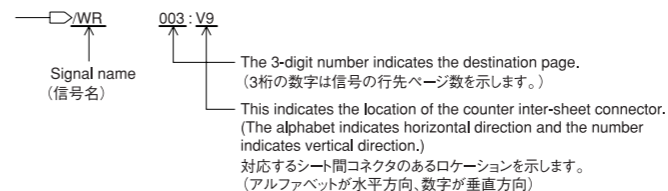
FD1 CIRCUIT DIAGRAM 003 (02R96)

02R96



Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



XX : not installed (実装しない)  
 2P : 2W Metal Oxide Film Resistor (2W酸化金属被膜抵抗)

38CC1-8823588-3

Fader Drive Section (CH1-8)  
 FD1 CIRCUIT DIAGRAM 003 (02R96)

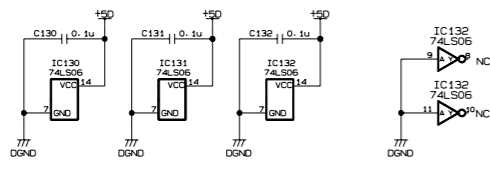
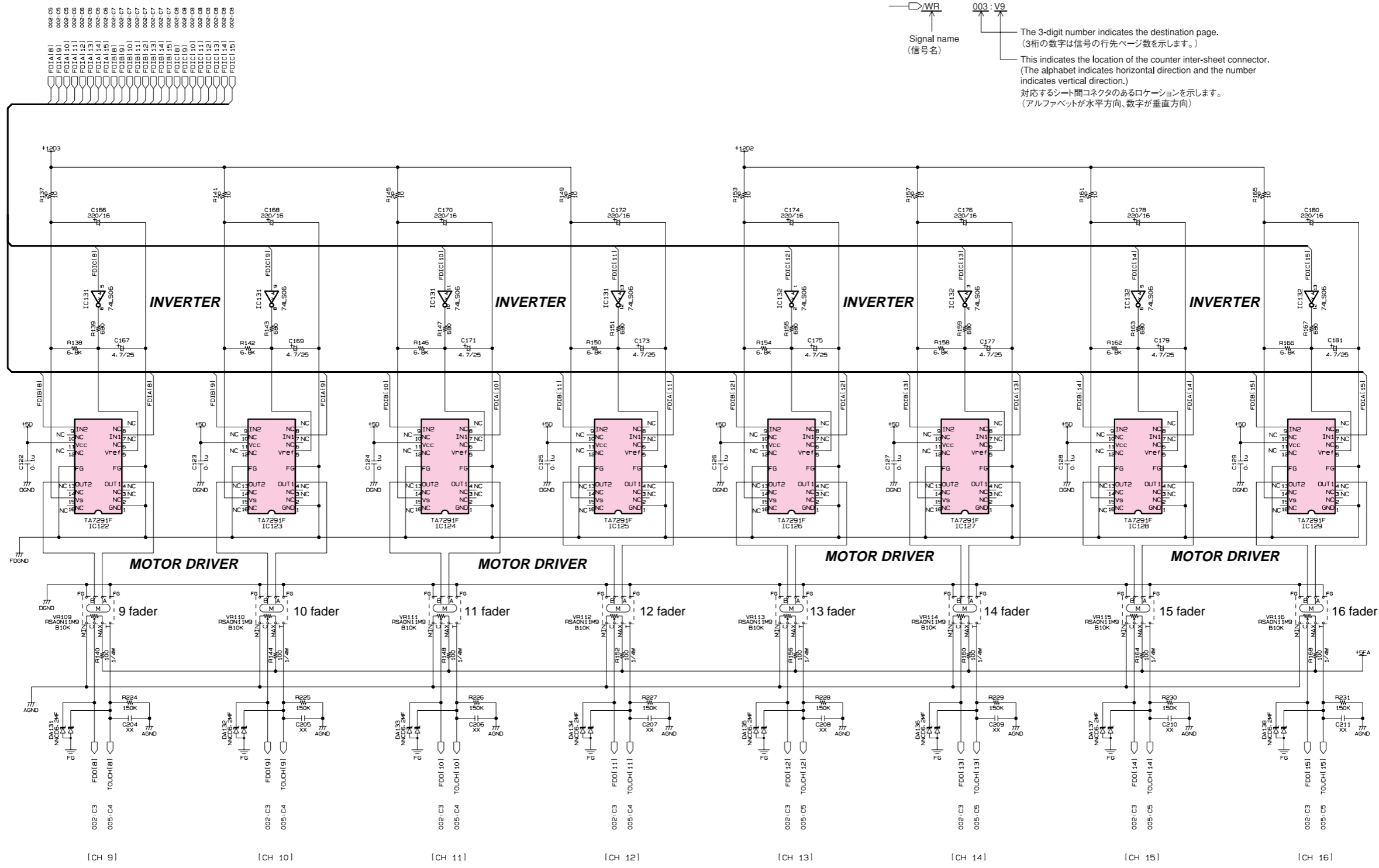
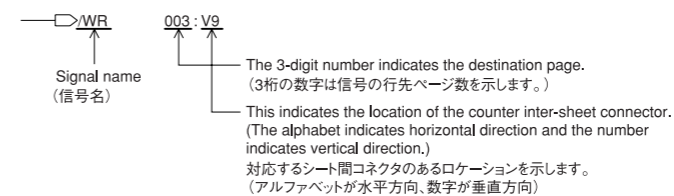


FD1 CIRCUIT DIAGRAM 004 (02R96)

02R96

Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



XX : not installed (実装しない)  
 2P : 2W Metal Oxide Film Resistor (2W酸化金属被膜抵抗)

Fader Drive Section (CH9~16)

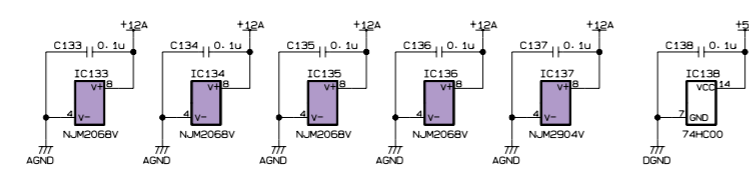
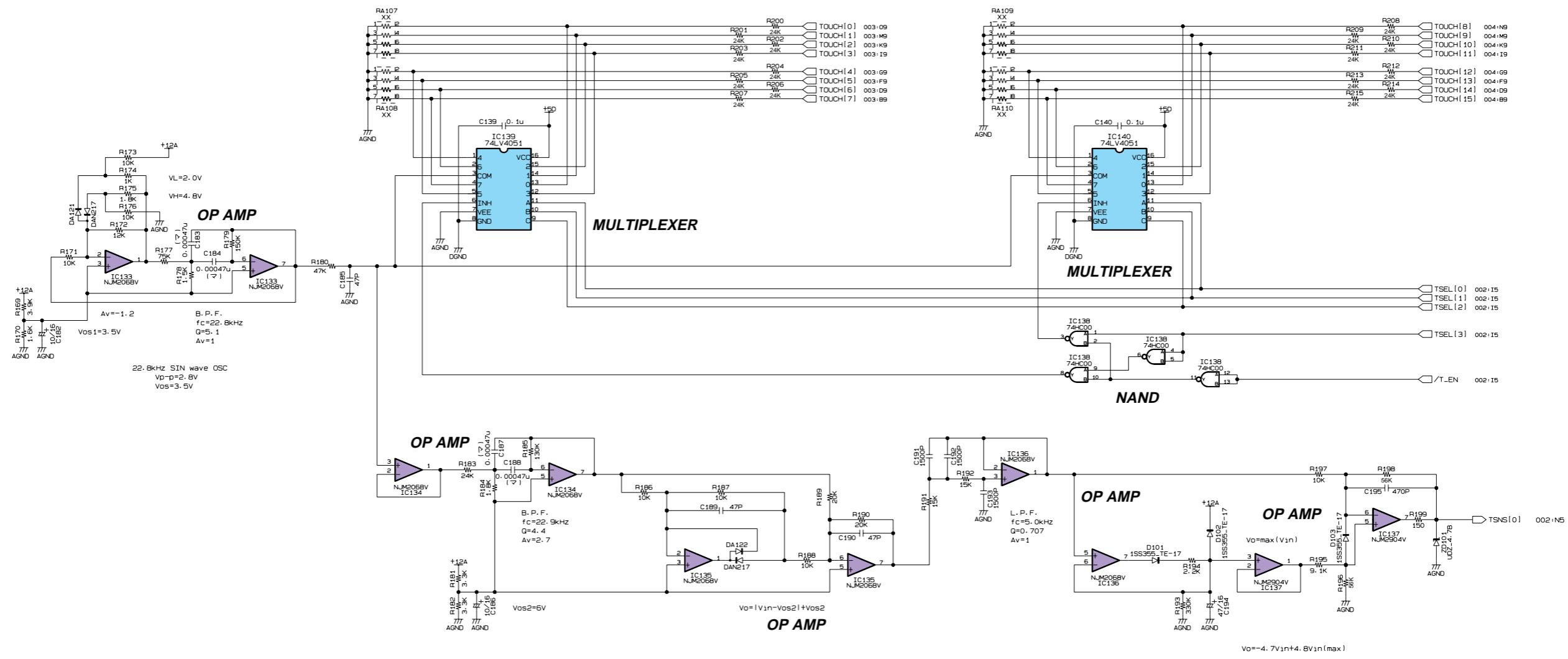
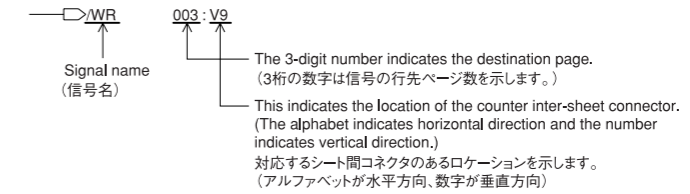
FD1 CIRCUIT DIAGRAM 004 (02R96)

# FD1 CIRCUIT DIAGRAM 005 (02R96)

02R96

### Notation for Circuit Diagrams (回路図表記上の注意)

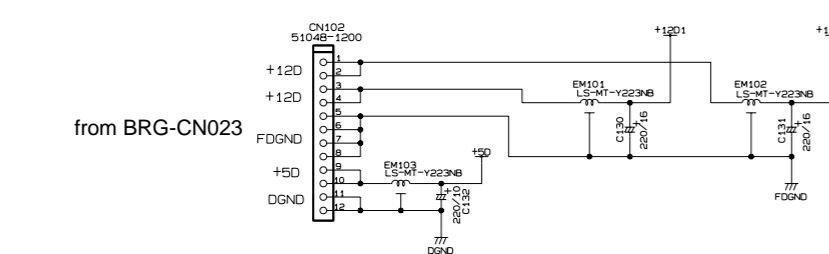
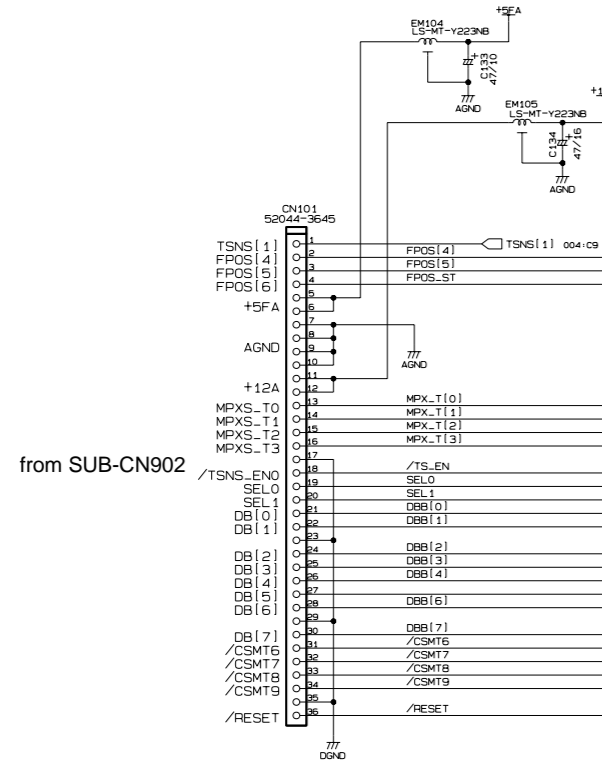
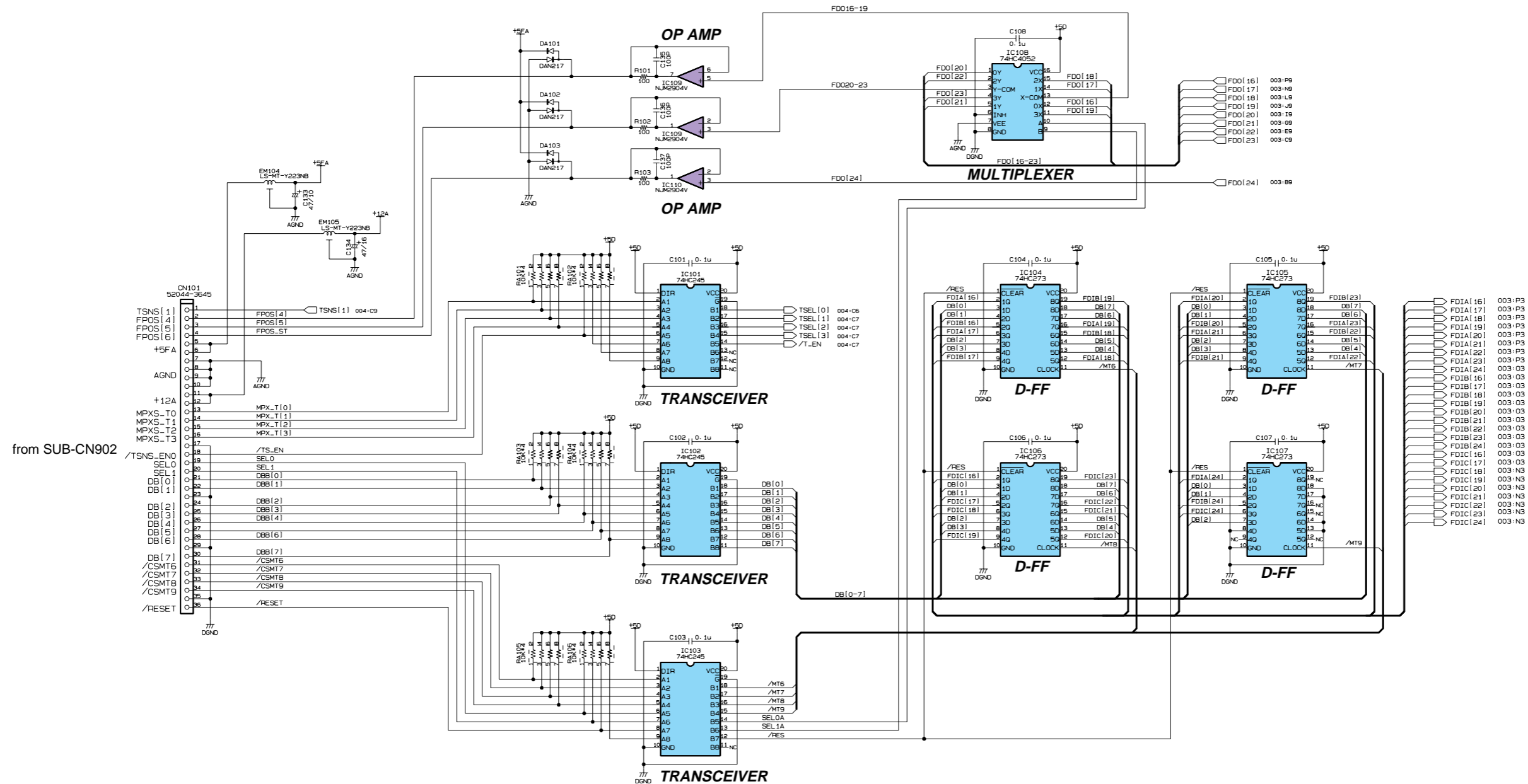
1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



(マ): Mylar Capacitor (マイラーコンデンサー)  
 XX: not installed (実装しない)

FD2 CIRCUIT DIAGRAM 002 (02R96)

02R96



**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

**Signal name (信号名)**

**003:V9**

The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

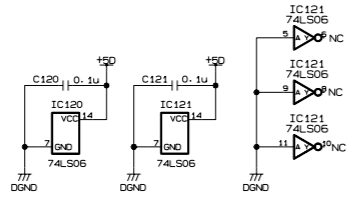
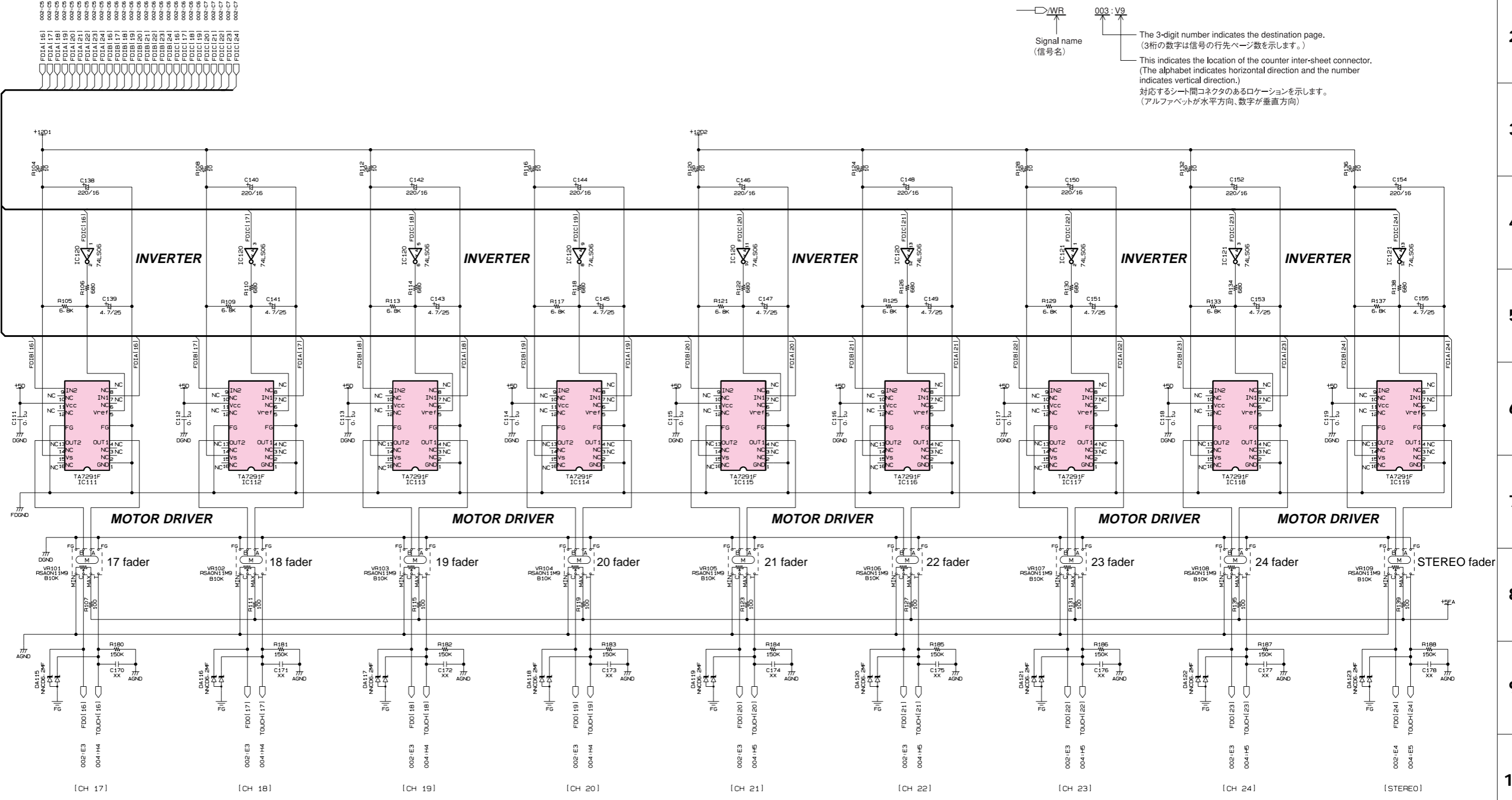
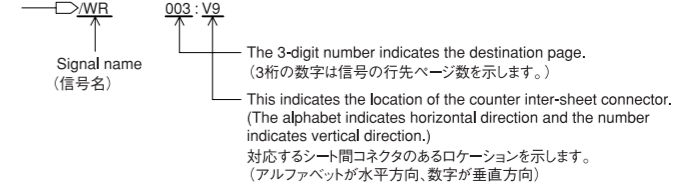
This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)  
 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

FD2 CIRCUIT DIAGRAM 003 (02R96)

02R96

Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



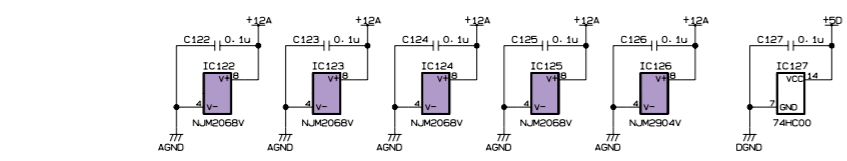
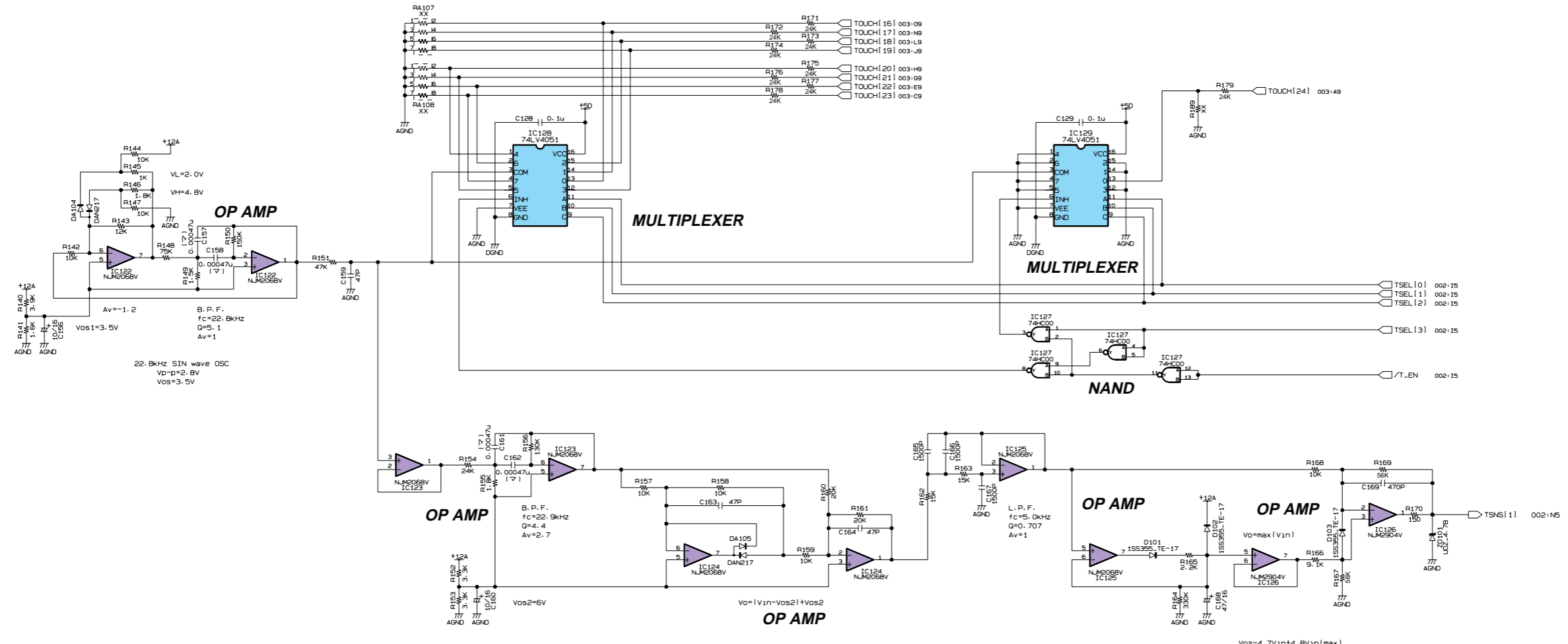
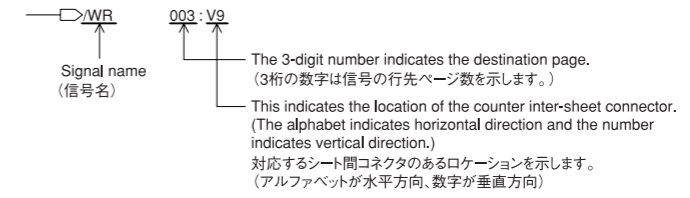
XX: not installed (実装しない)  
 2P: 2W Metal Oxide Film Resistor (2W酸化金属被膜抵抗)

FD2 CIRCUIT DIAGRAM 004 (02R96)

02R96

Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

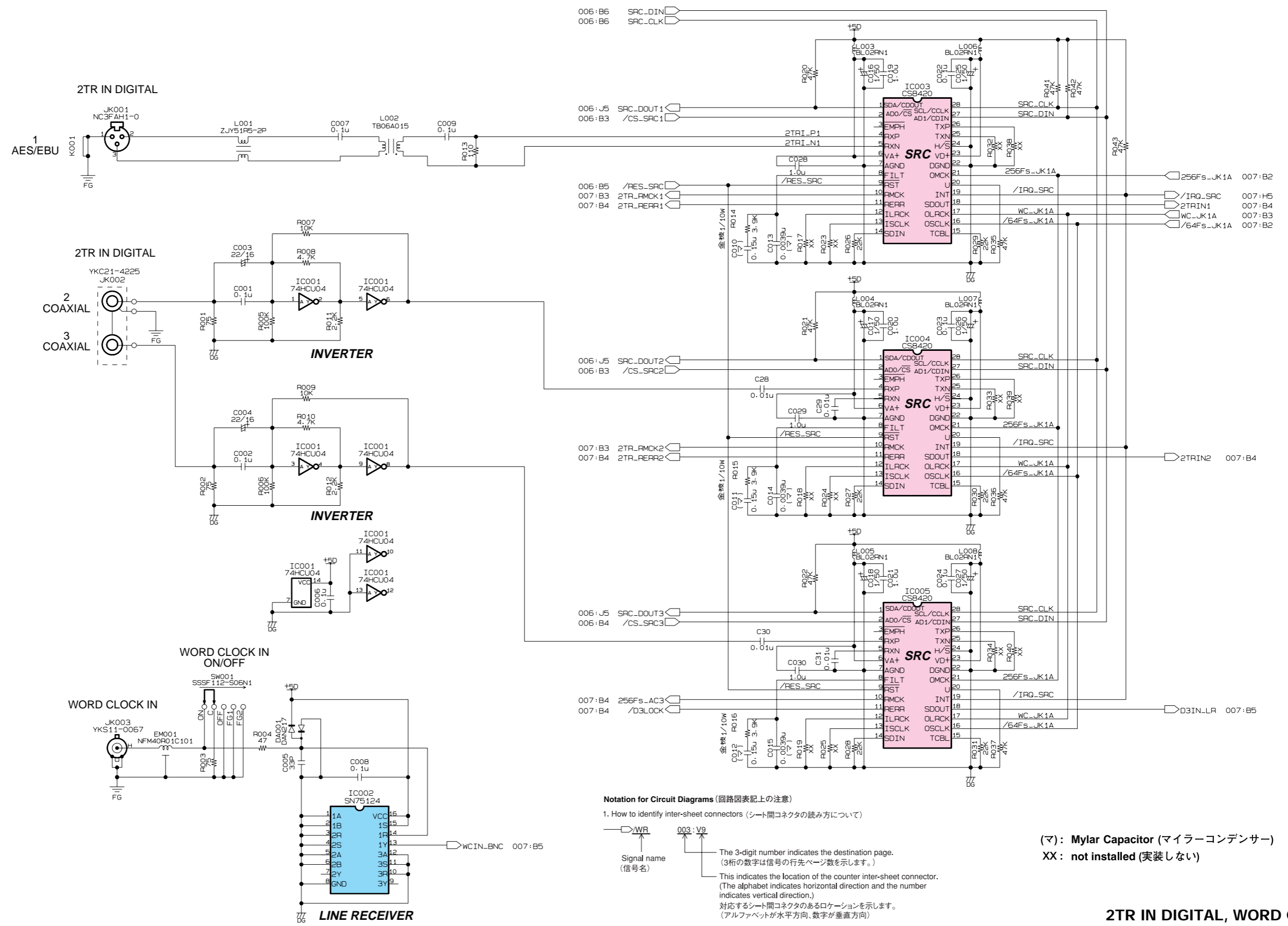


Touch Sense Section

FD2 CIRCUIT DIAGRAM 004 (02R96)

JK1 CIRCUIT DIAGRAM 002 (02R96)

02R96



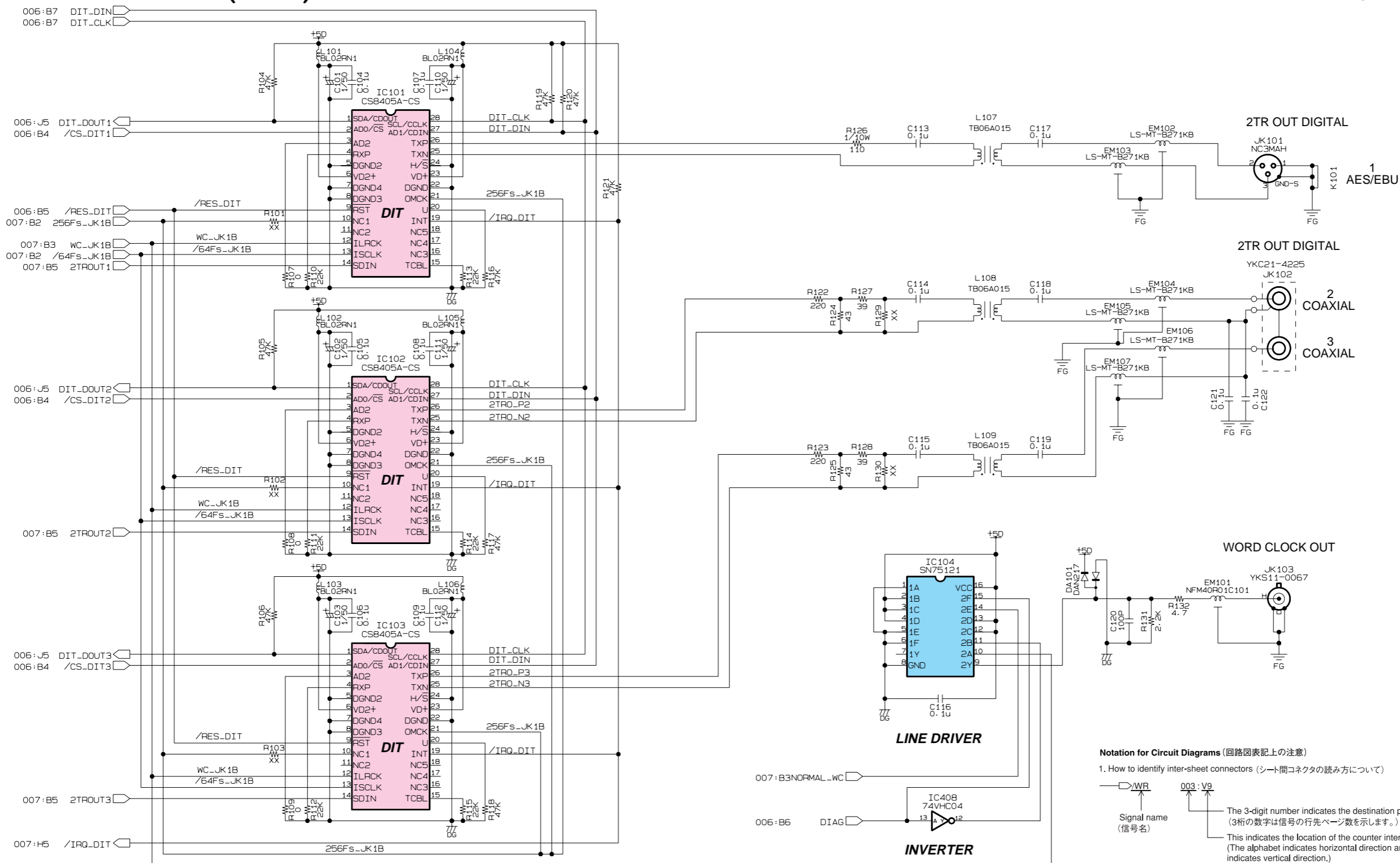
Notation for Circuit Diagrams (回路図表記上の注意)

- How to identify inter-sheet connectors (シート間コネクタの読み方について)
  - Signal name (信号名)
  - The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)
  - This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.) (対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向))

(マ): Mylar Capacitor (マイラーコンデンサー)  
 XX: not installed (実装しない)

JK1 CIRCUIT DIAGRAM 003 (02R96)

02R96

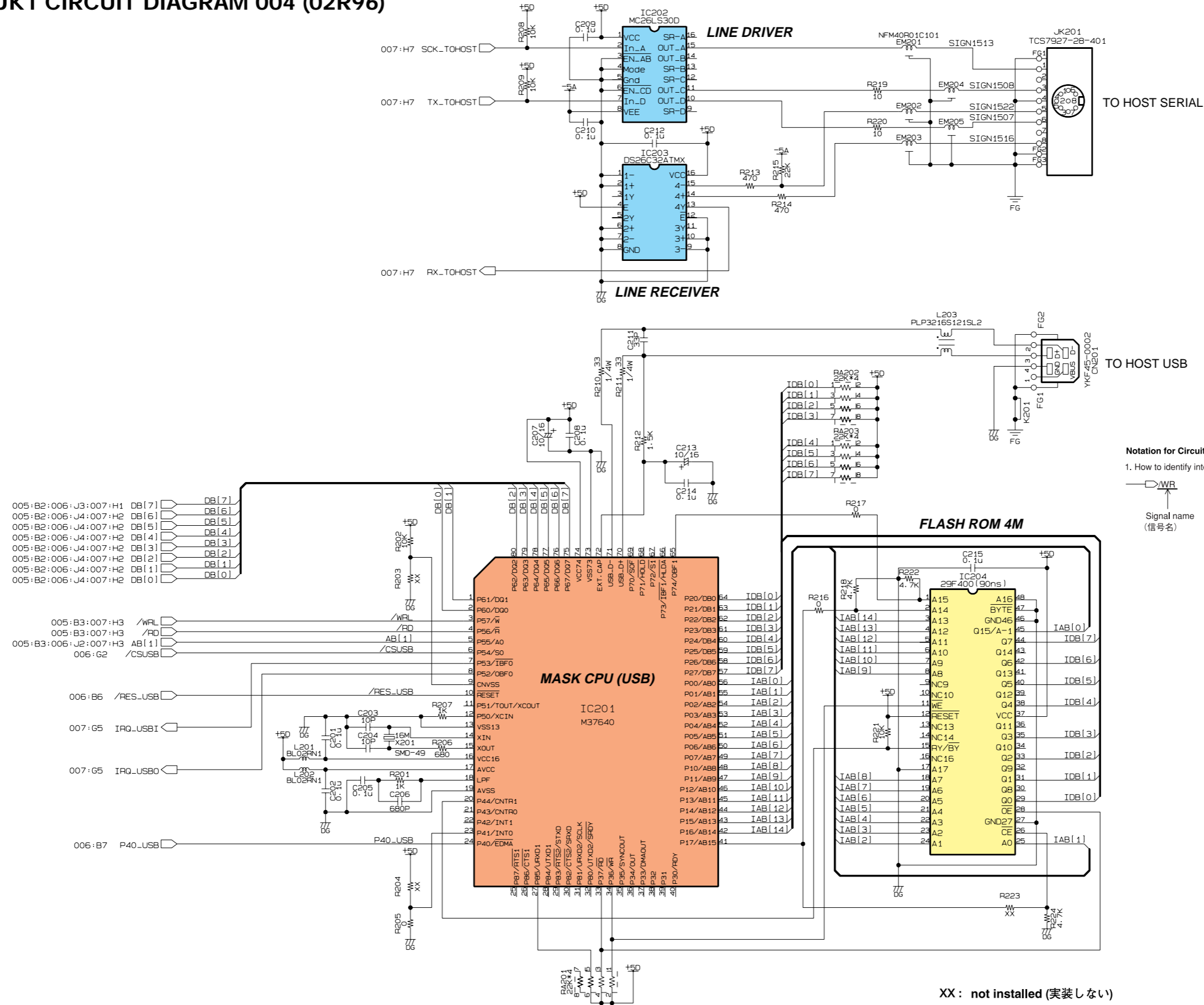


XX: not installed (実装しない)

2TR OUT DIGITAL, WORD CLOCK OUT  
JK1 CIRCUIT DIAGRAM 003 (02R96)

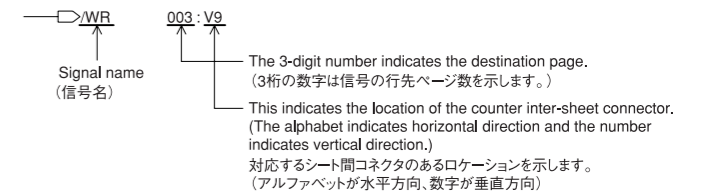
JK1 CIRCUIT DIAGRAM 004 (02R96)

02R96



Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

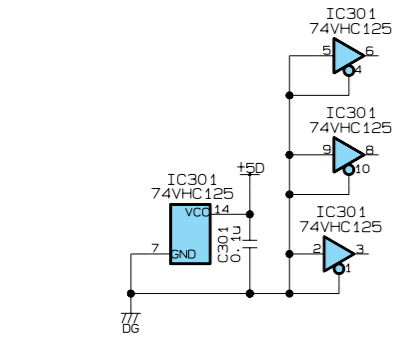
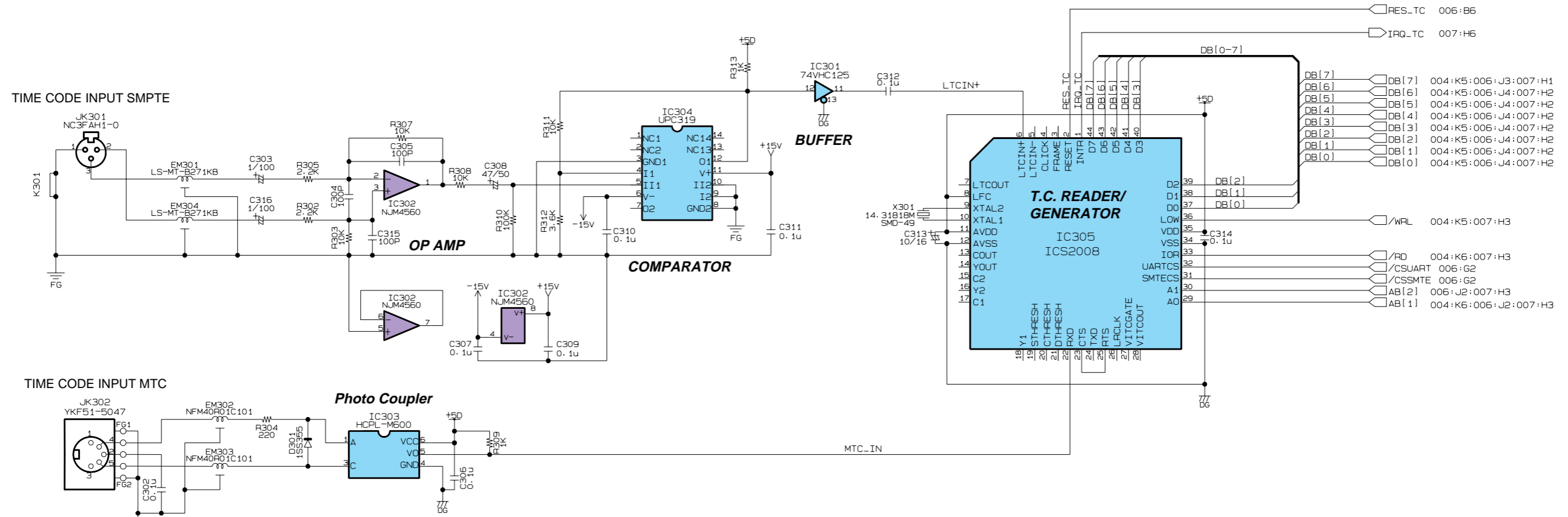


XX: not installed (実装しない)



JK1 CIRCUIT DIAGRAM 005 (02R96)

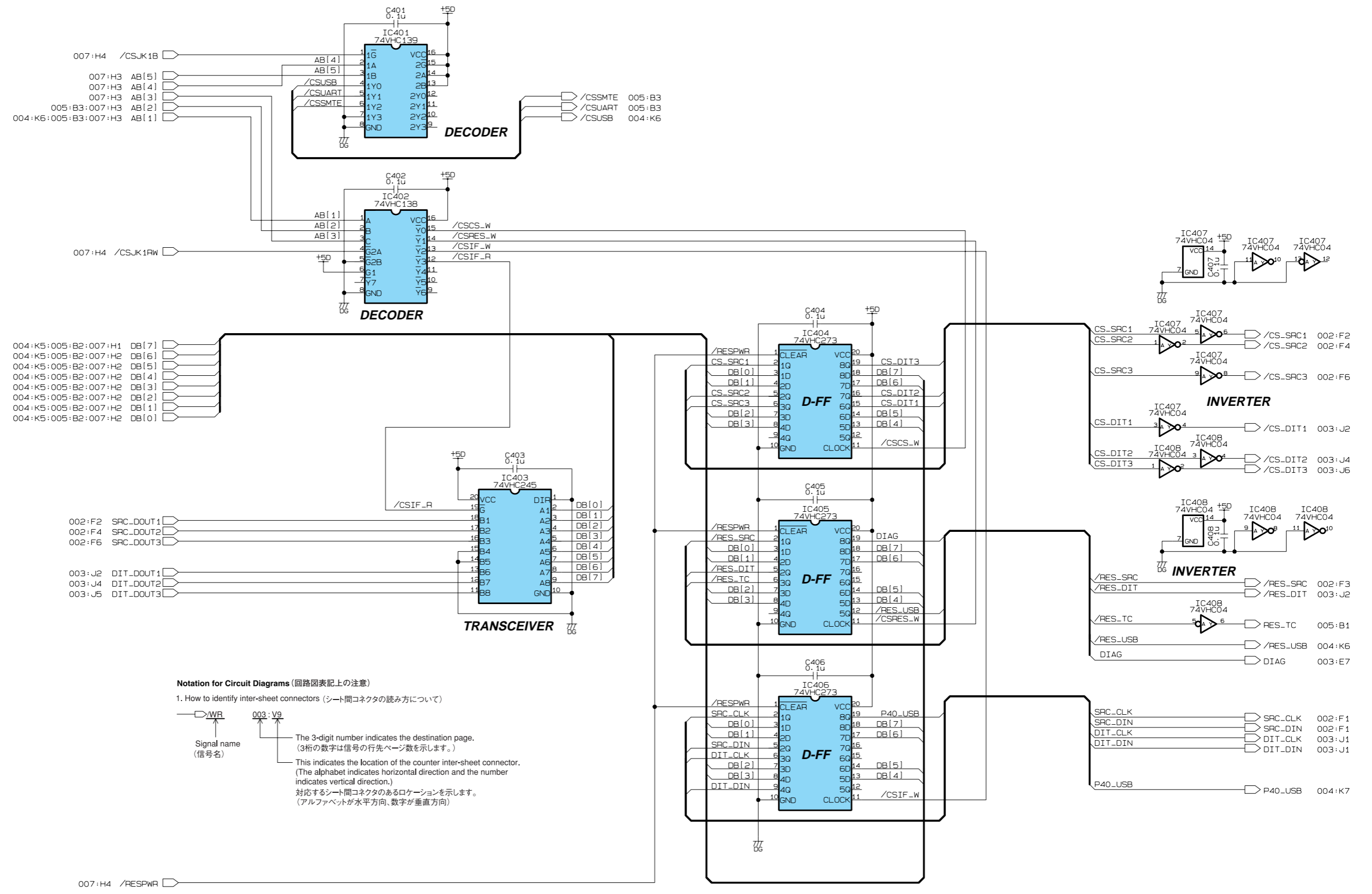
02R96



**Notation for Circuit Diagrams (回路図表記上の注意)**  
 1. How to identify inter-sheet connectors (シート間コネクタの読み方について)  
 —▷/WR 003:V9  
 Signal name (信号名)  
 The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)  
 This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.) 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

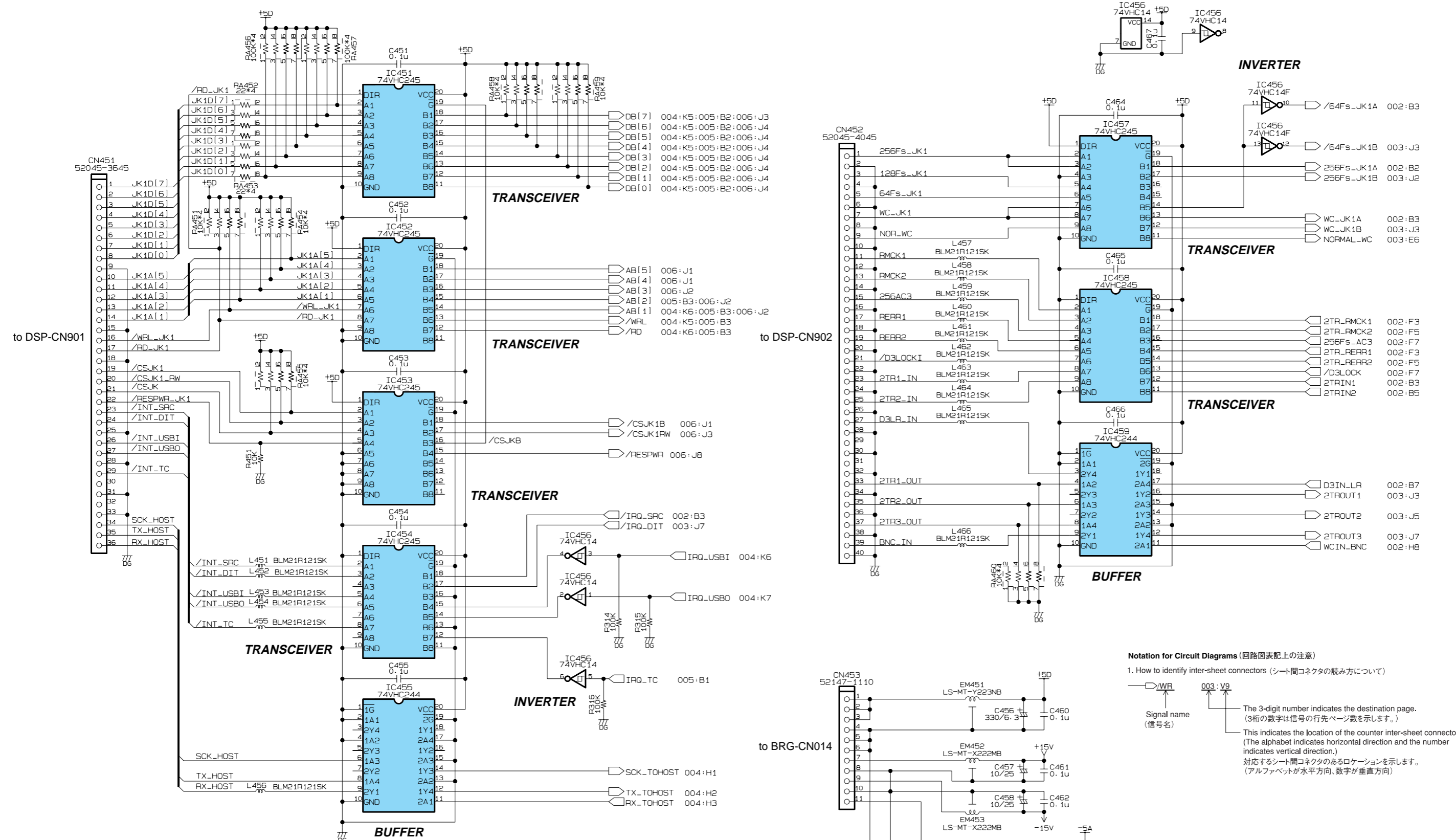
# JK1 CIRCUIT DIAGRAM 006 (02R96)

02R96



# JK1 CIRCUIT DIAGRAM 007 (02R96)

02R96



**Notation for Circuit Diagrams (回路図表記上の注意)**

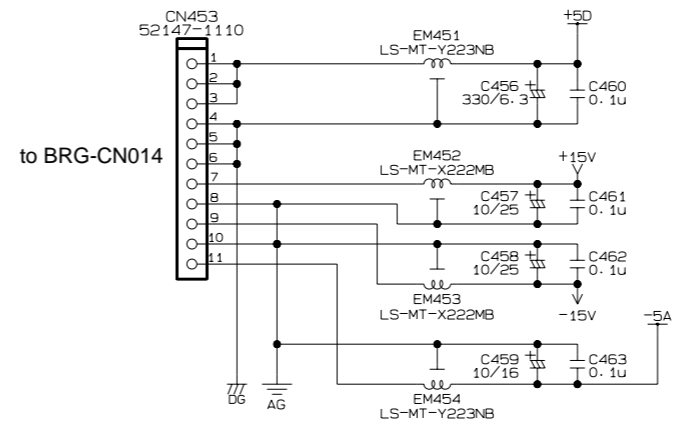
1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

—WR—  
Signal name (信号名)

003:V9

The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)  
対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)



38CC1-8823590-7

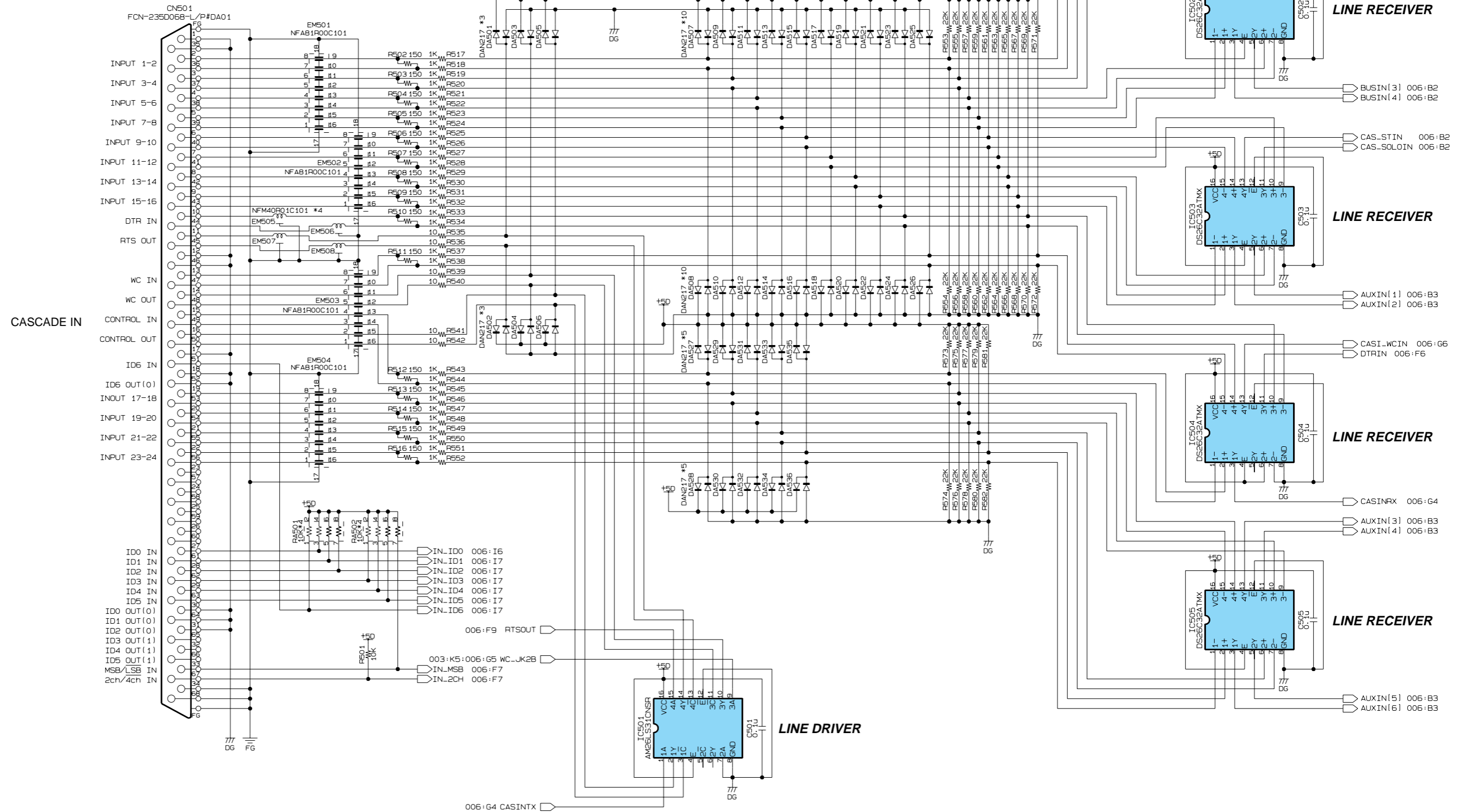
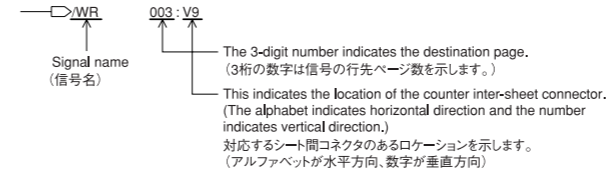
## CONNECTER JK1 CIRCUIT DIAGRAM 007 (02R96)

# JK2 CIRCUIT DIAGRAM 002 (02R96)

## JK2 (1/2)

### Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



02R96

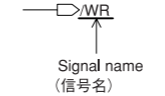
JK2 CIRCUIT DIAGRAM 003 (02R96)

02R96

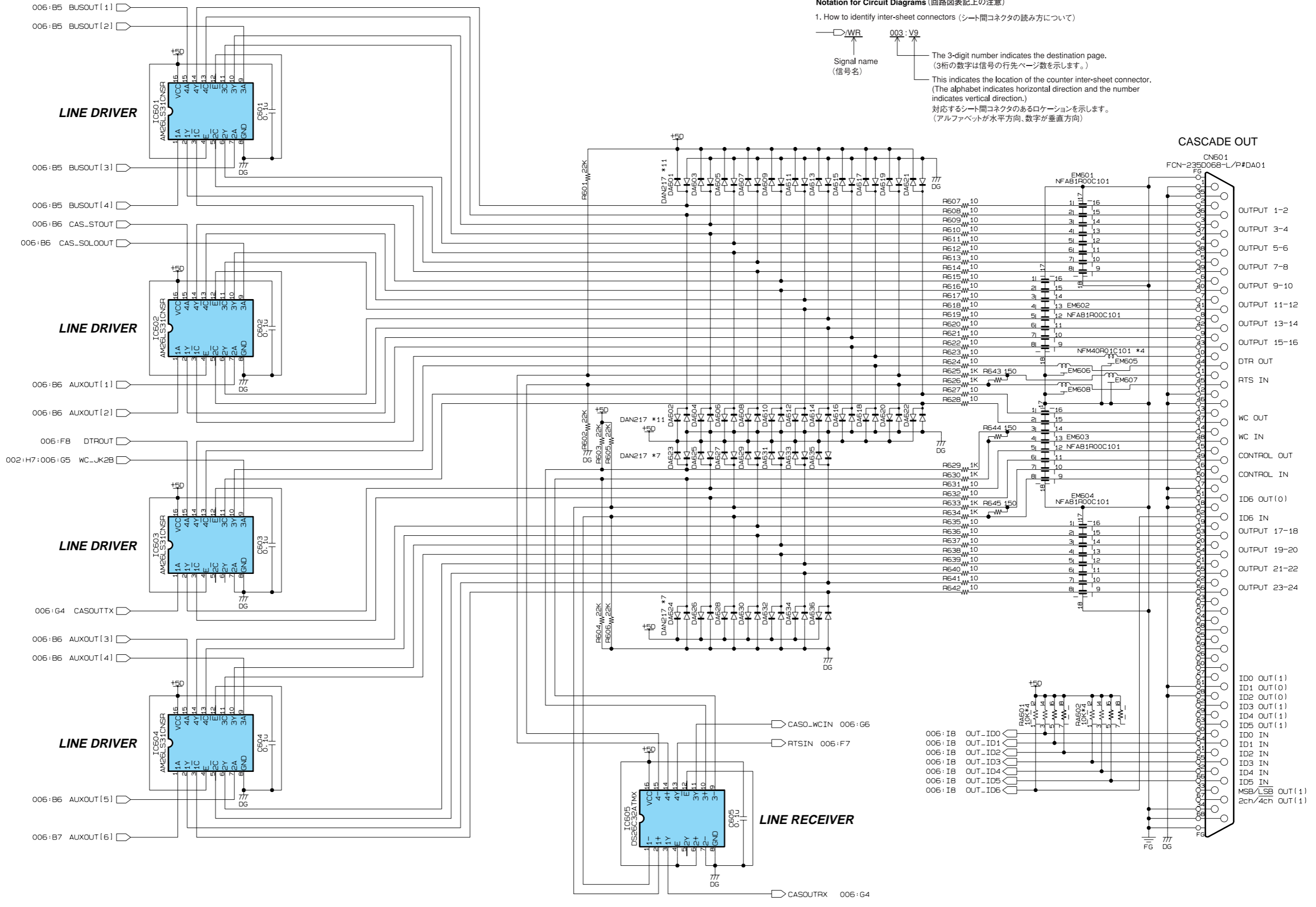
JK2 (1/2)

Notation for Circuit Diagrams (回路図表記上の注意)

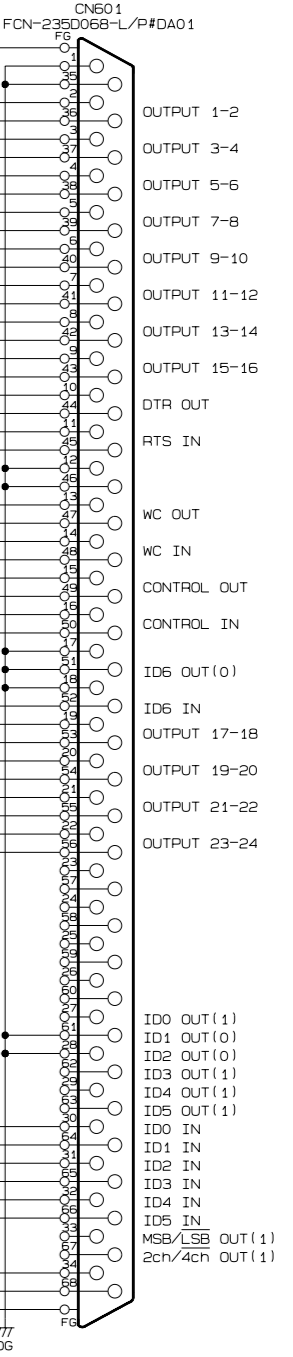
1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します.)  
 This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)  
 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)



CASCADE OUT



CASCADE OUT

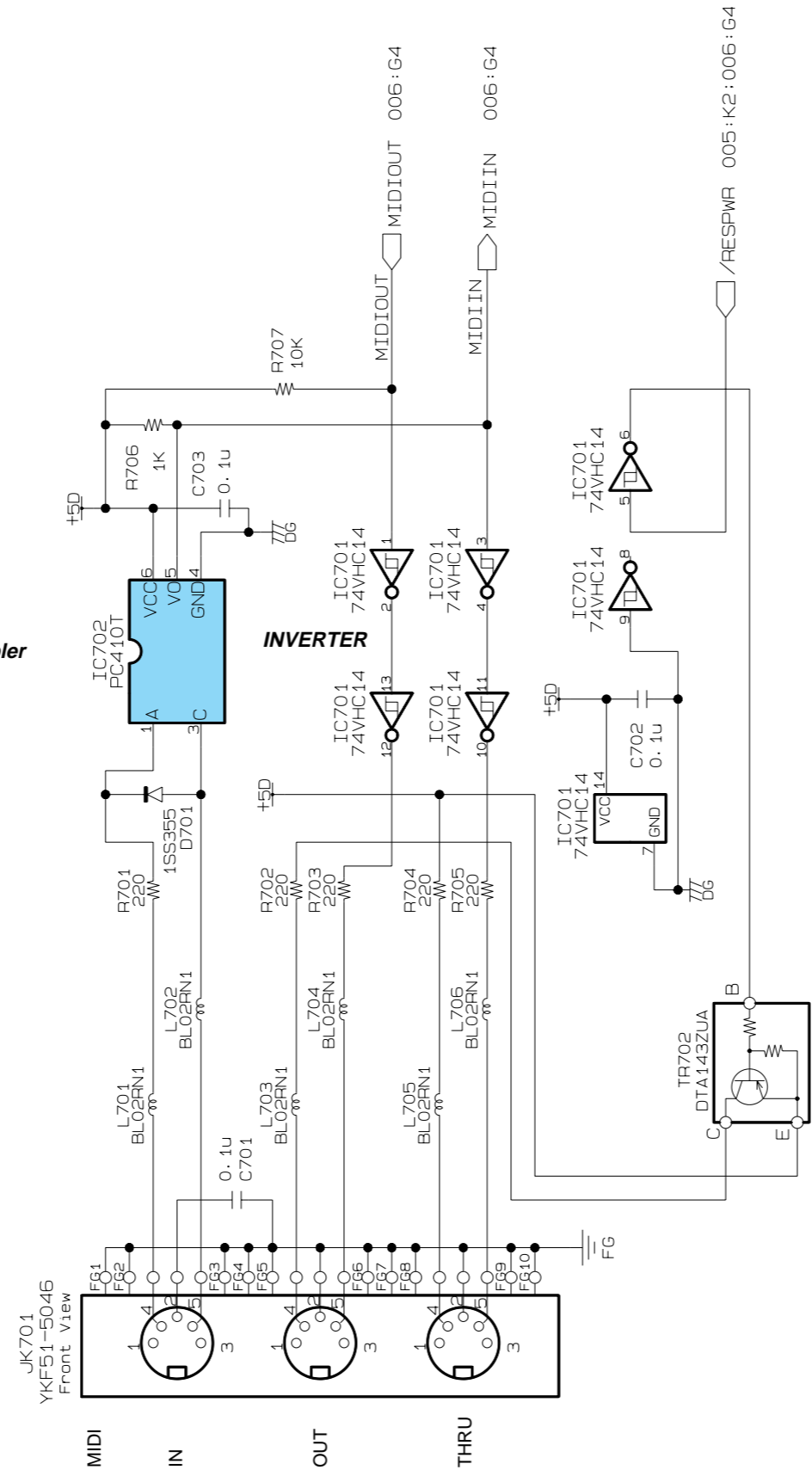
JK2 CIRCUIT DIAGRAM 003 (02R96)

JK2 CIRCUIT DIAGRAM 004 (02R96)

02R96

JK2 (1/2)

Photo Coupler



**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

—>WR  
Signal name (信号名)

003:V9

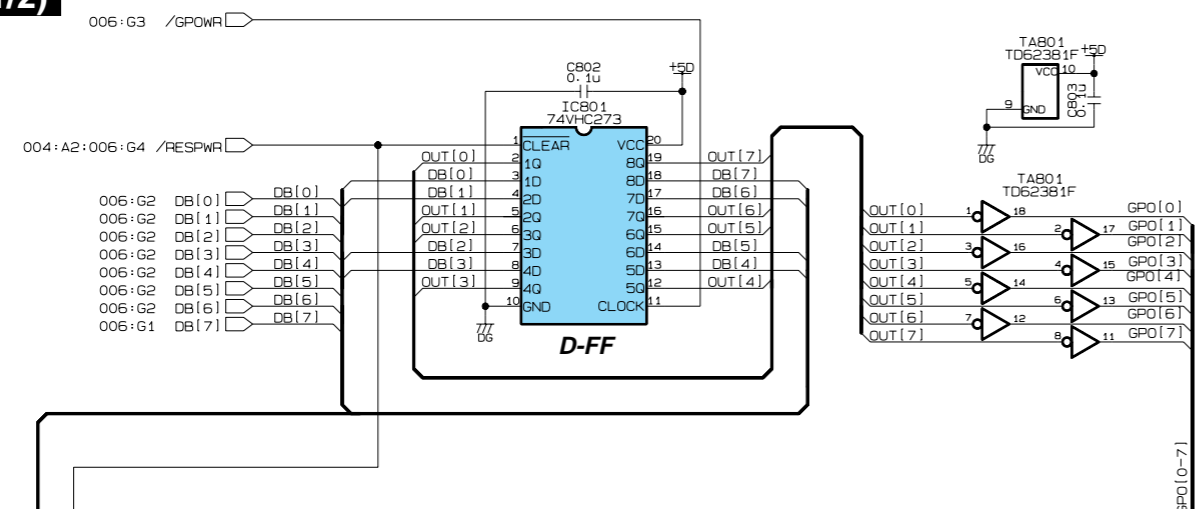
The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)  
対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

JK2 CIRCUIT DIAGRAM 005 (02R96)

02R96

JK2 (1/2)



**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

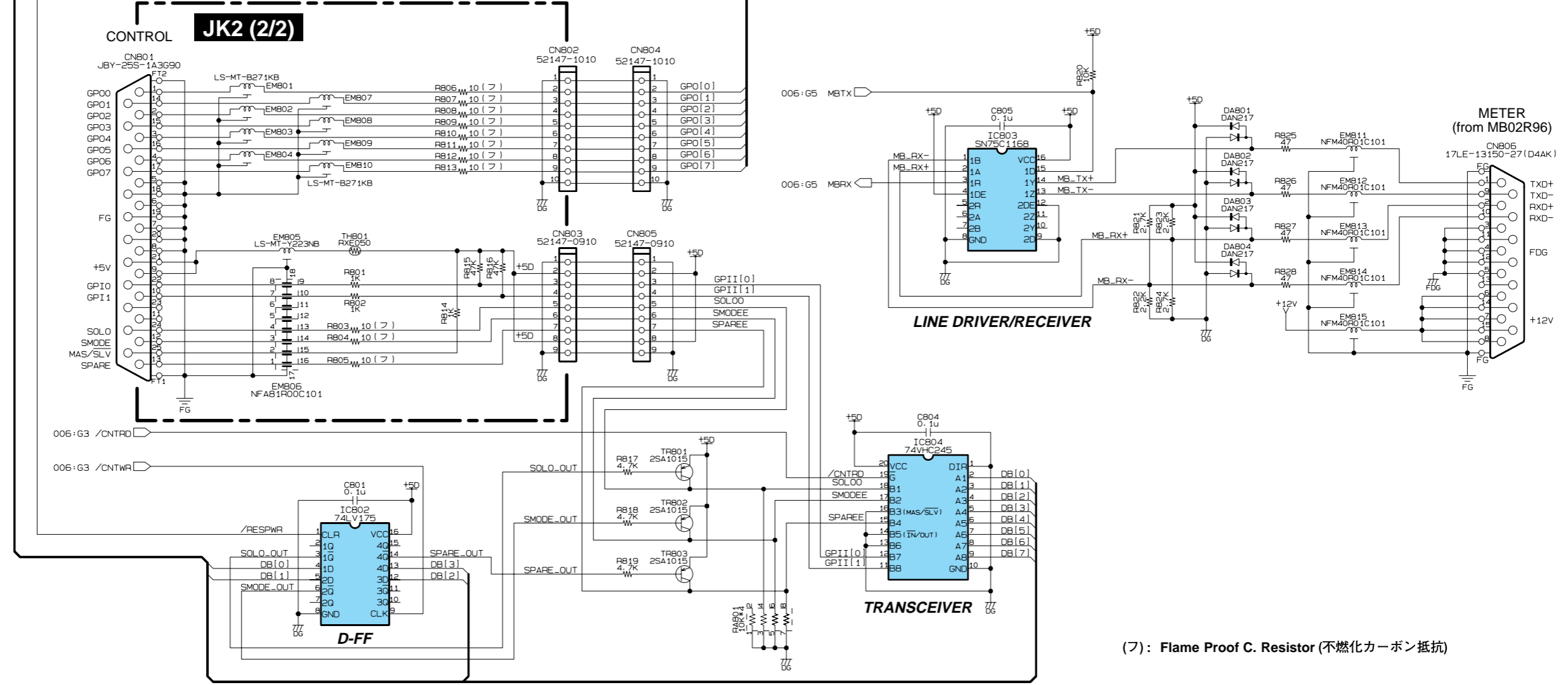
Signal name (信号名)

003:V9

The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)  
対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

JK2 (2/2)

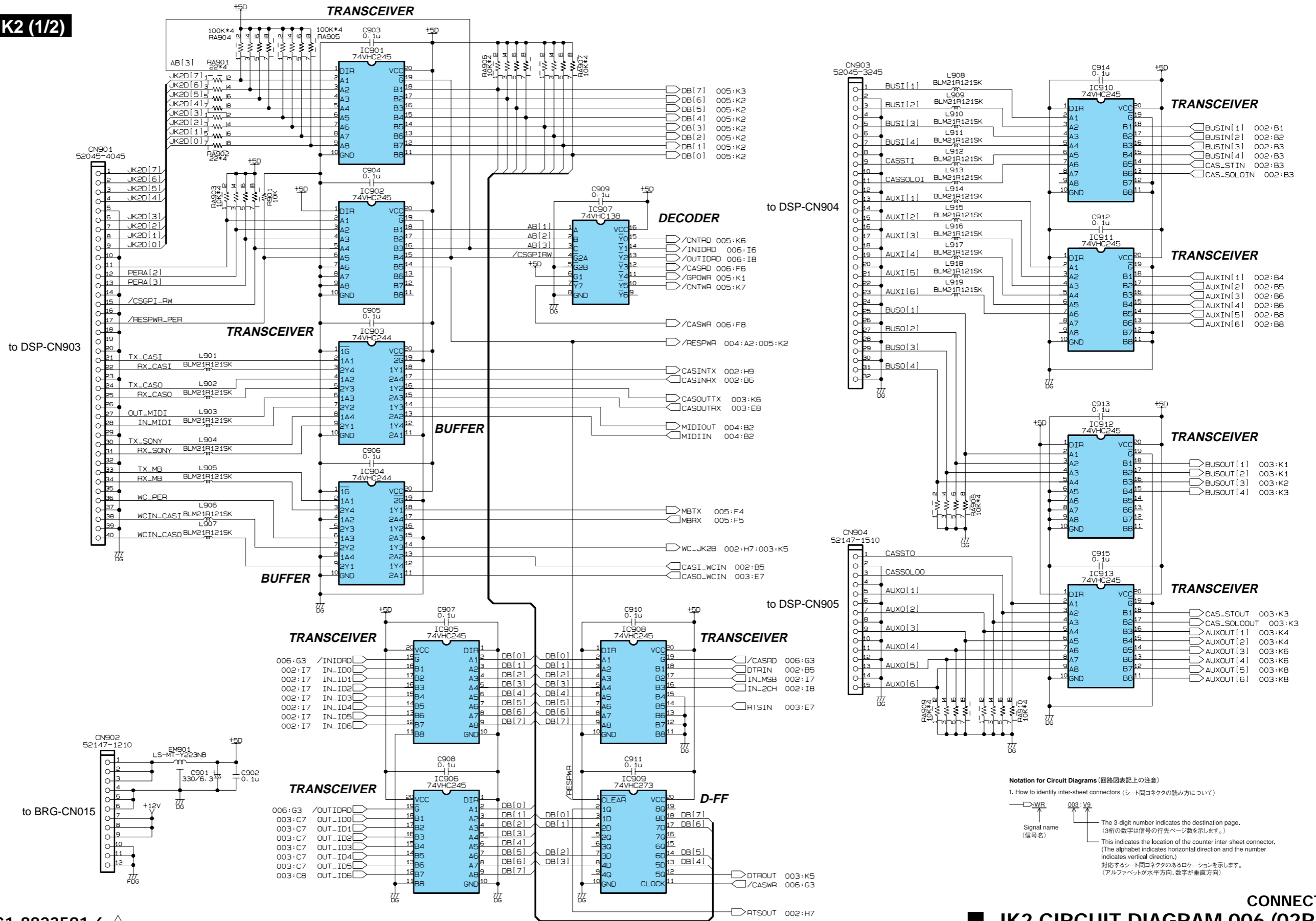


(フ) : Flame Proof C. Resistor (不燃化カーボン抵抗)

# JK2 CIRCUIT DIAGRAM 006 (02R96)

02R96

JK2 (1/2)



**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

Signal name (信号名) → 003:V9

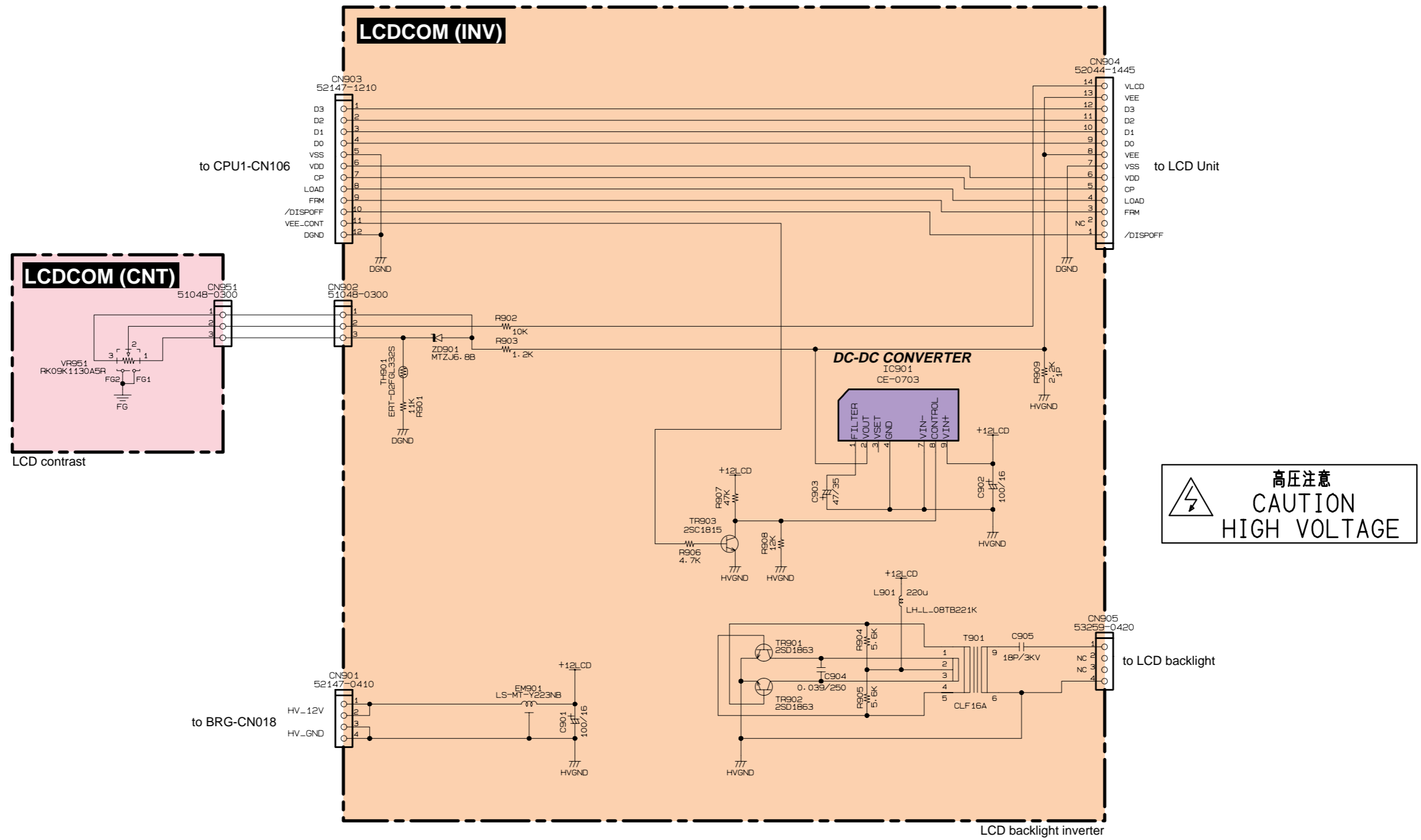
The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.) (対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向))



# LCDCOM CIRCUIT DIAGRAM (02R96)

02R96

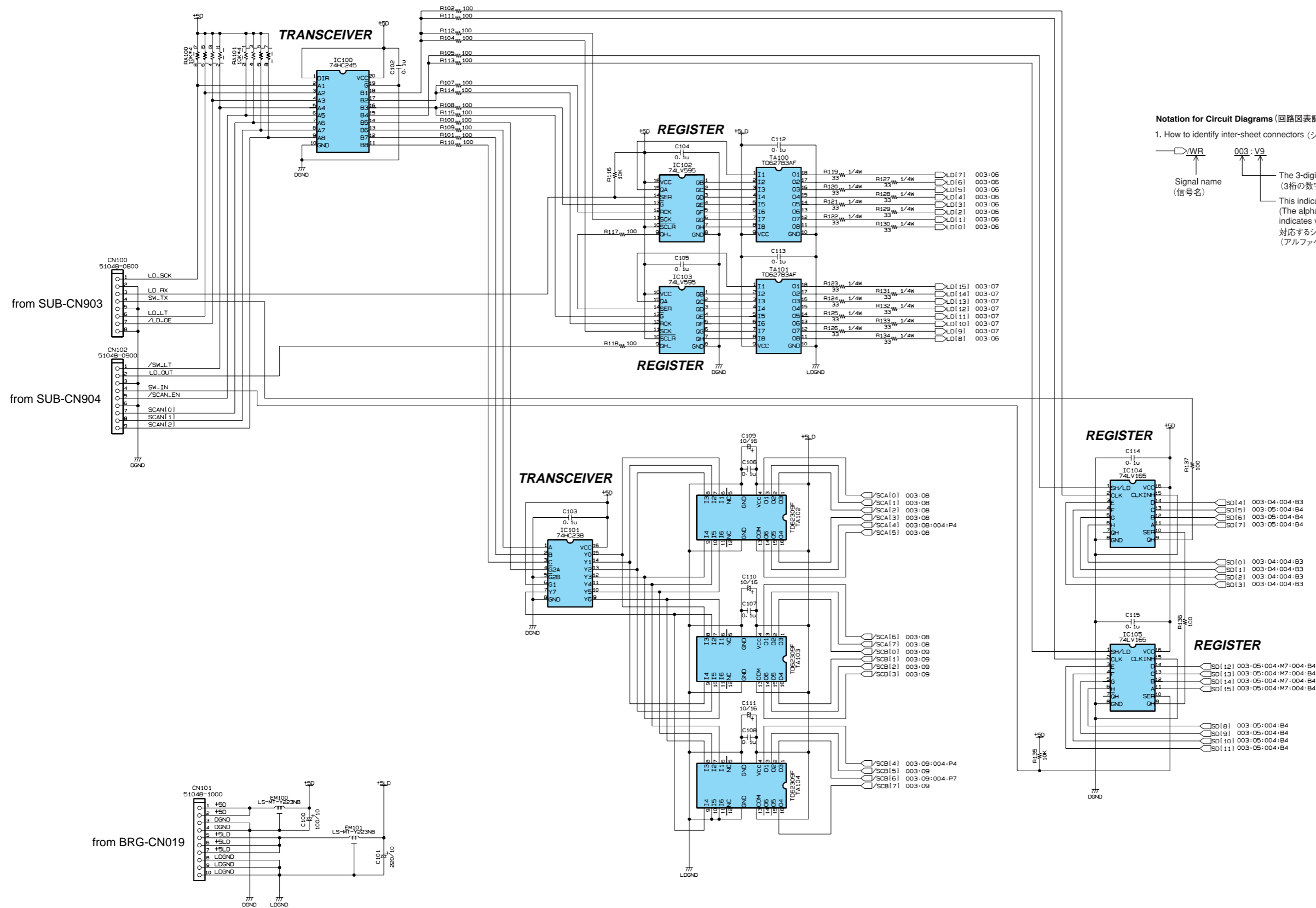


⚡ 高压注意  
CAUTION  
HIGH VOLTAGE

1P: 1W Metal Oxide Film Resistor (1W酸化金属被膜抵抗)

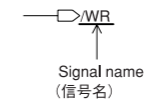
# LCDCOM CIRCUIT DIAGRAM (02R96)





Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

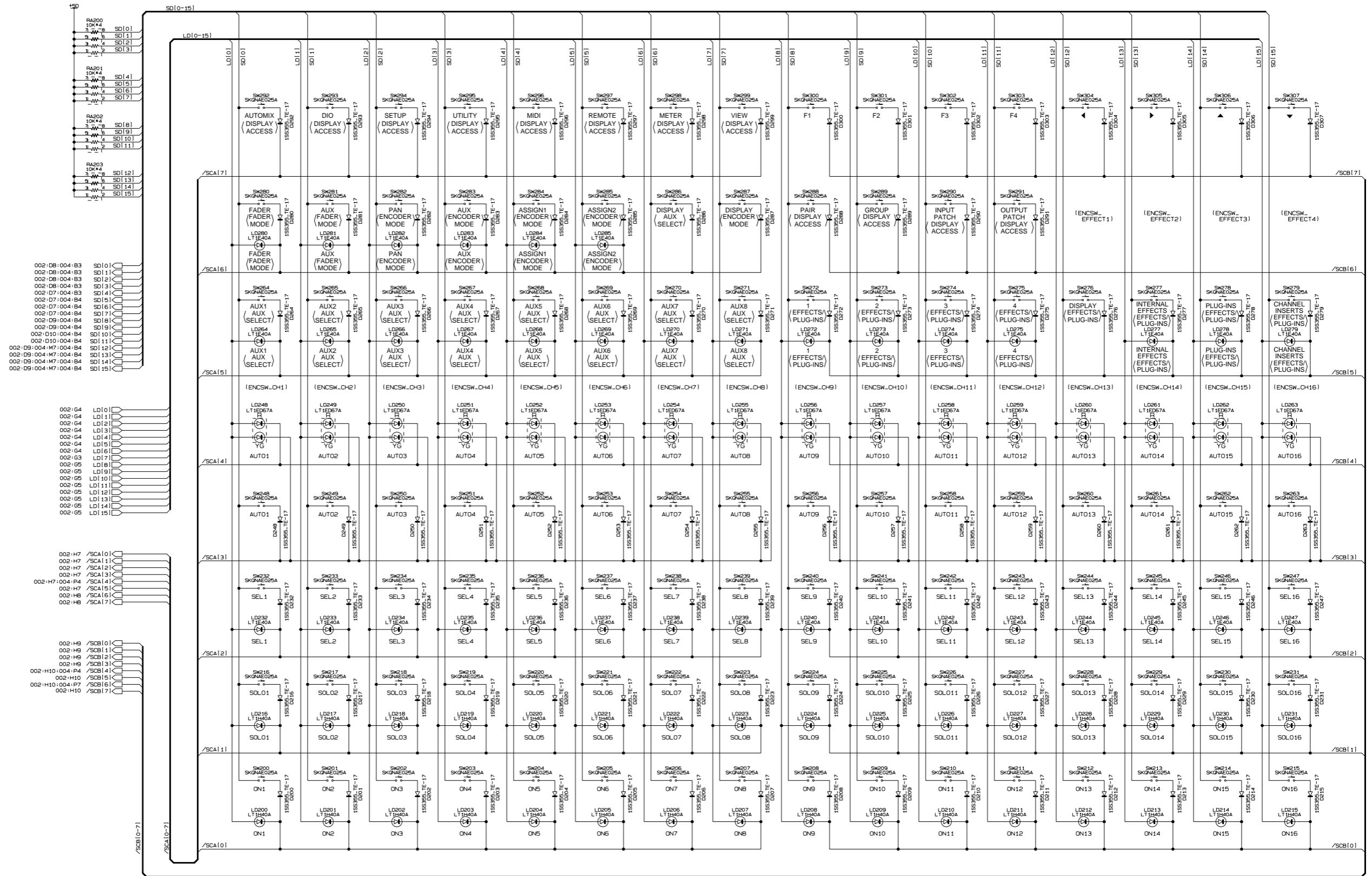


The 3-digit number indicates the destination page.  
(3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector.  
(The alphabet indicates horizontal direction and the number indicates vertical direction.)  
対応するシート間コネクタのあるロケーションを示します。  
(アルファベットが水平方向、数字が垂直方向)

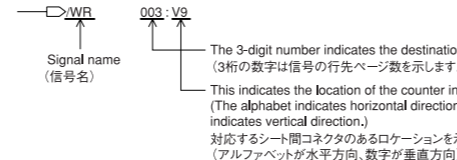
PN1 CIRCUIT DIAGRAM 003 (02R96)

02R96



Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

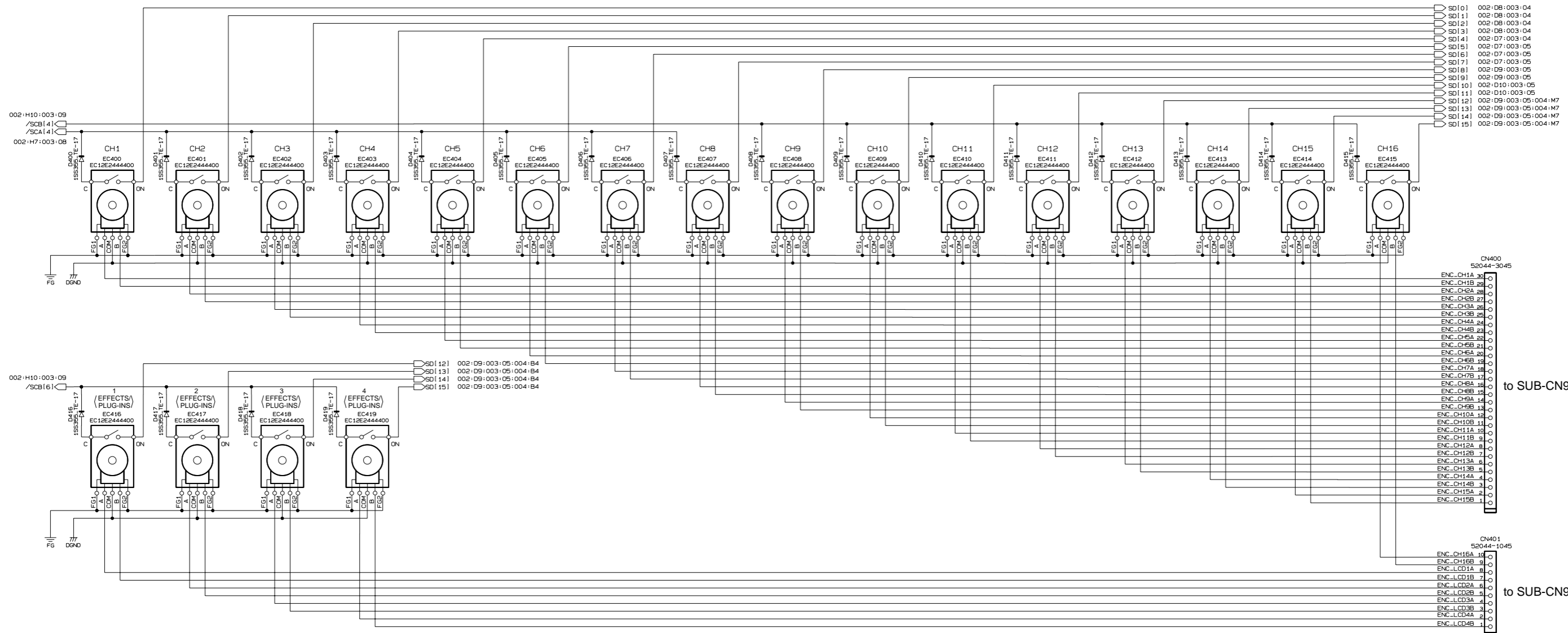


LED  
 LT1H40A: Yellow  
 LT1E40A: Yellow Green  
 LT1ED67A: Red/Yellow Green

ENCSW\_ = ENCODER SWITCH

PN1 CIRCUIT DIAGRAM 004 (02R96)

02R96



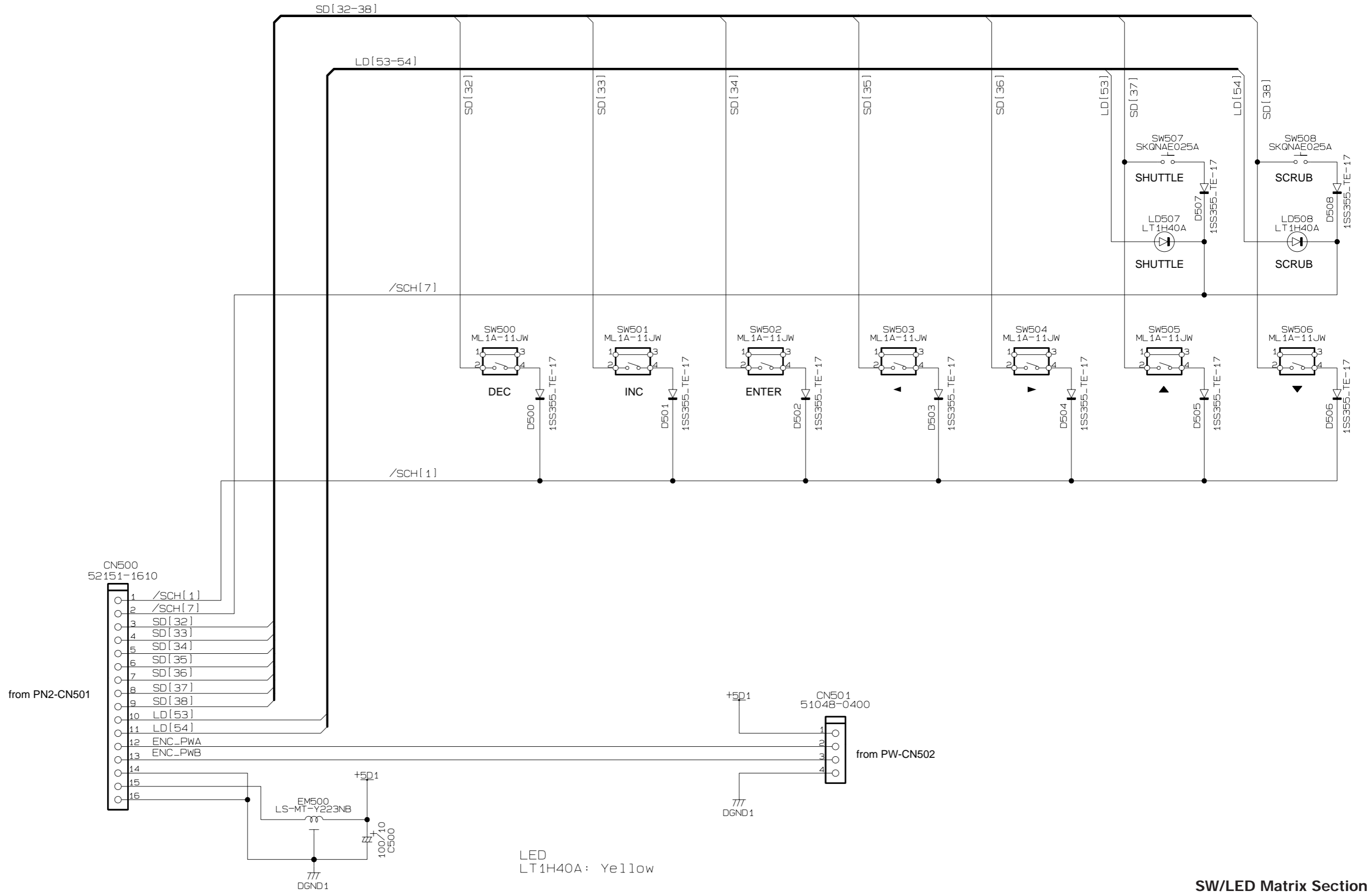
**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

Signal name (信号名)
   
 The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)
   
 This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)
   
 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

PN3 CIRCUIT DIAGRAM (02R96)

02R96

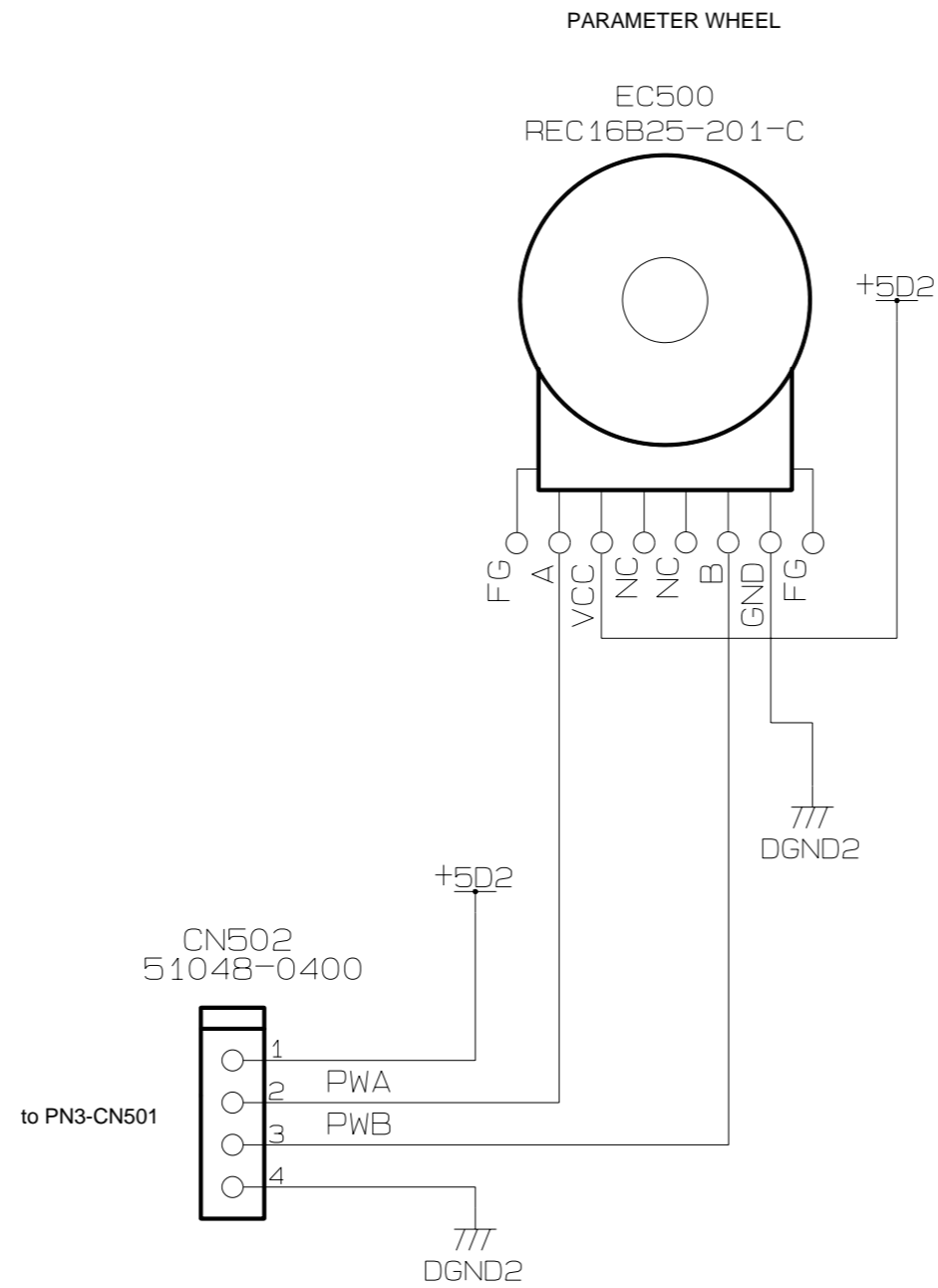


38CC1-8823596-2

SW/LED Matrix Section  
PN3 CIRCUIT DIAGRAM (02R96)

■ PW CIRCUIT DIAGRAM (02R96)

02R96



■ PW CIRCUIT DIAGRAM (02R96)

2

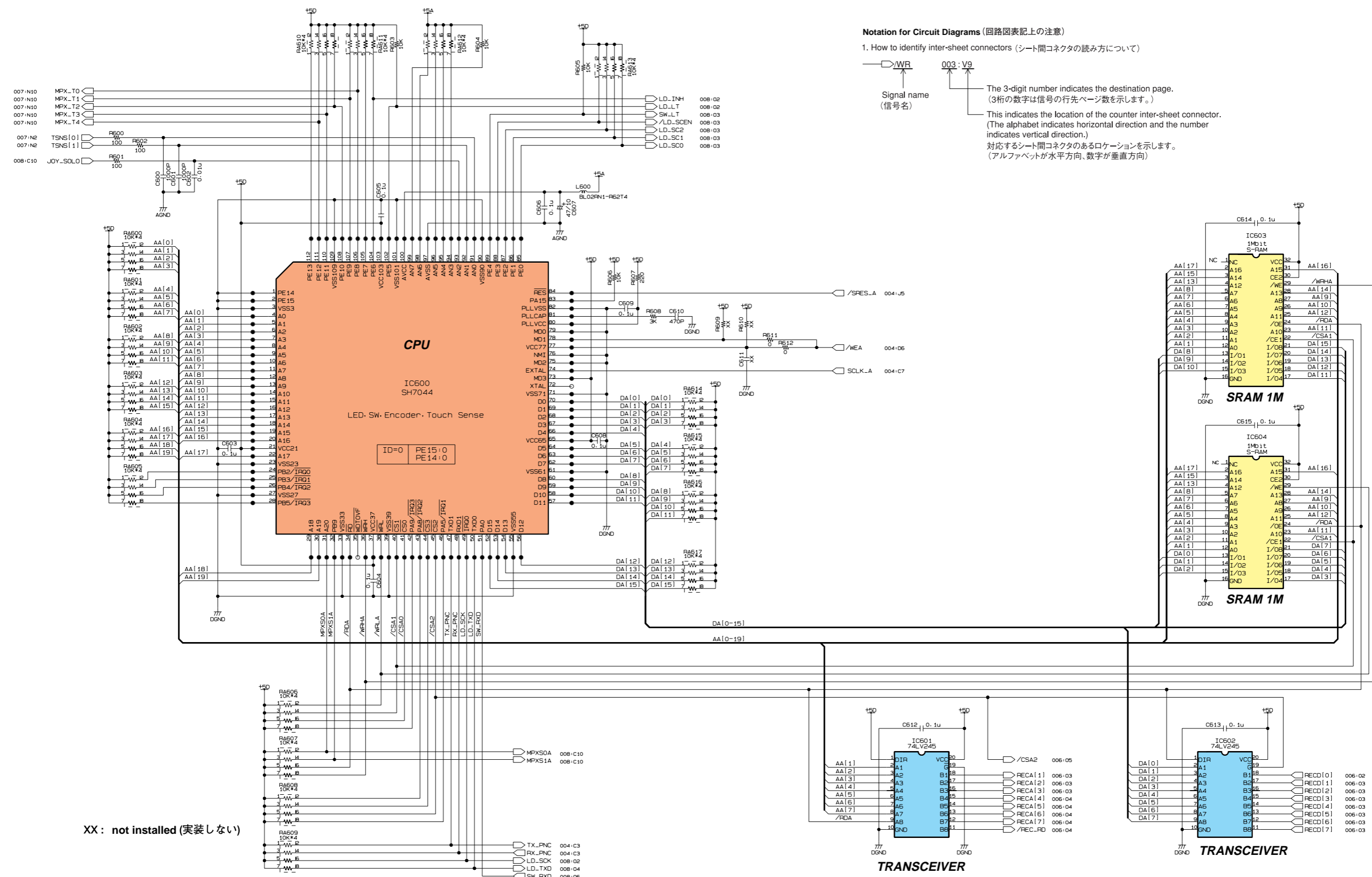
3

4

5

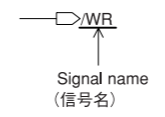
# SUB CIRCUIT DIAGRAM 002 (02R96)

02R96



### Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



The 3-digit number indicates the destination page.  
(3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector.  
(The alphabet indicates horizontal direction and the number indicates vertical direction.)  
対応するシート間コネクタのあるロケーションを示します。  
(アルファベットが水平方向、数字が垂直方向)

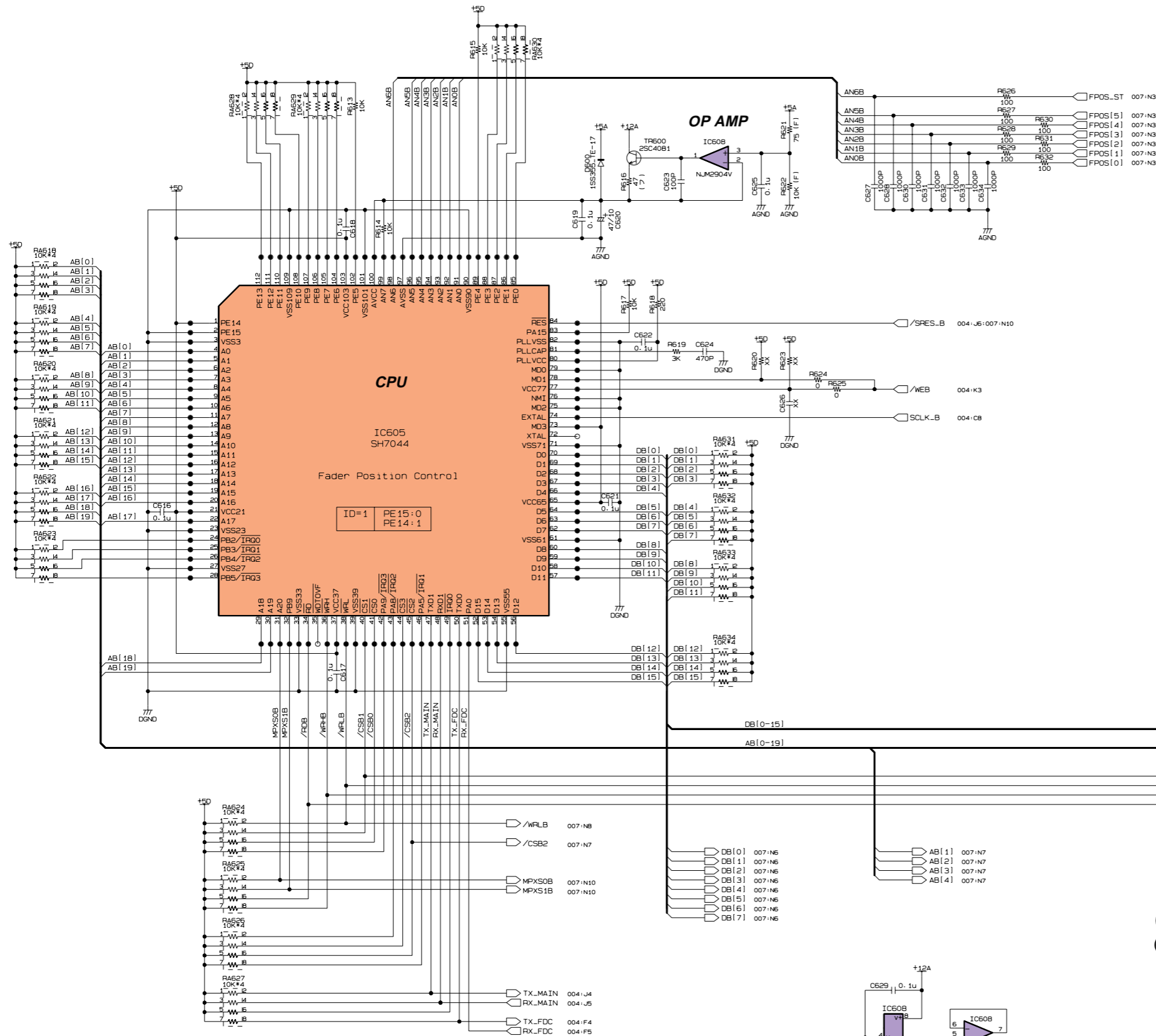
XX: not installed (実装しない)

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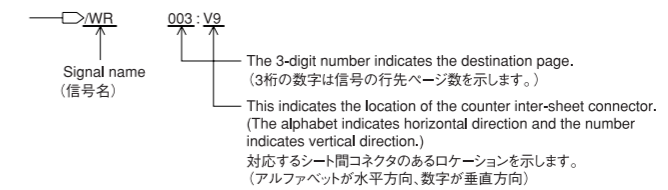
■ SUB CIRCUIT DIAGRAM 003 (02R96)

02R96

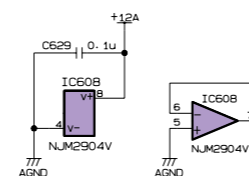


Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



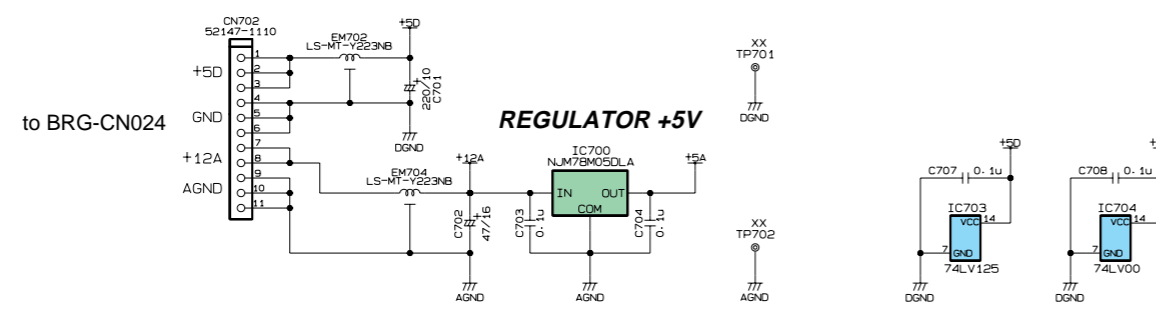
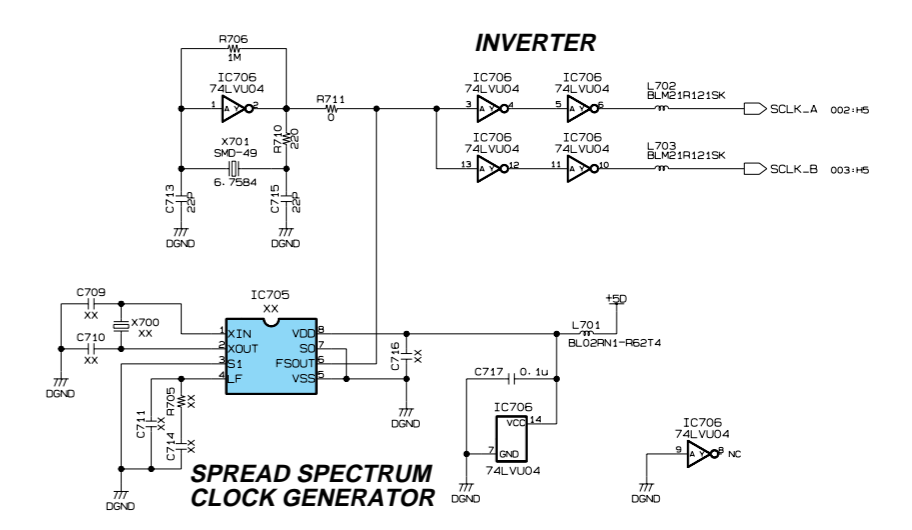
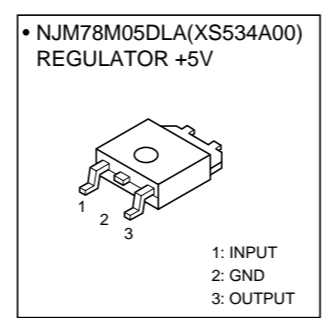
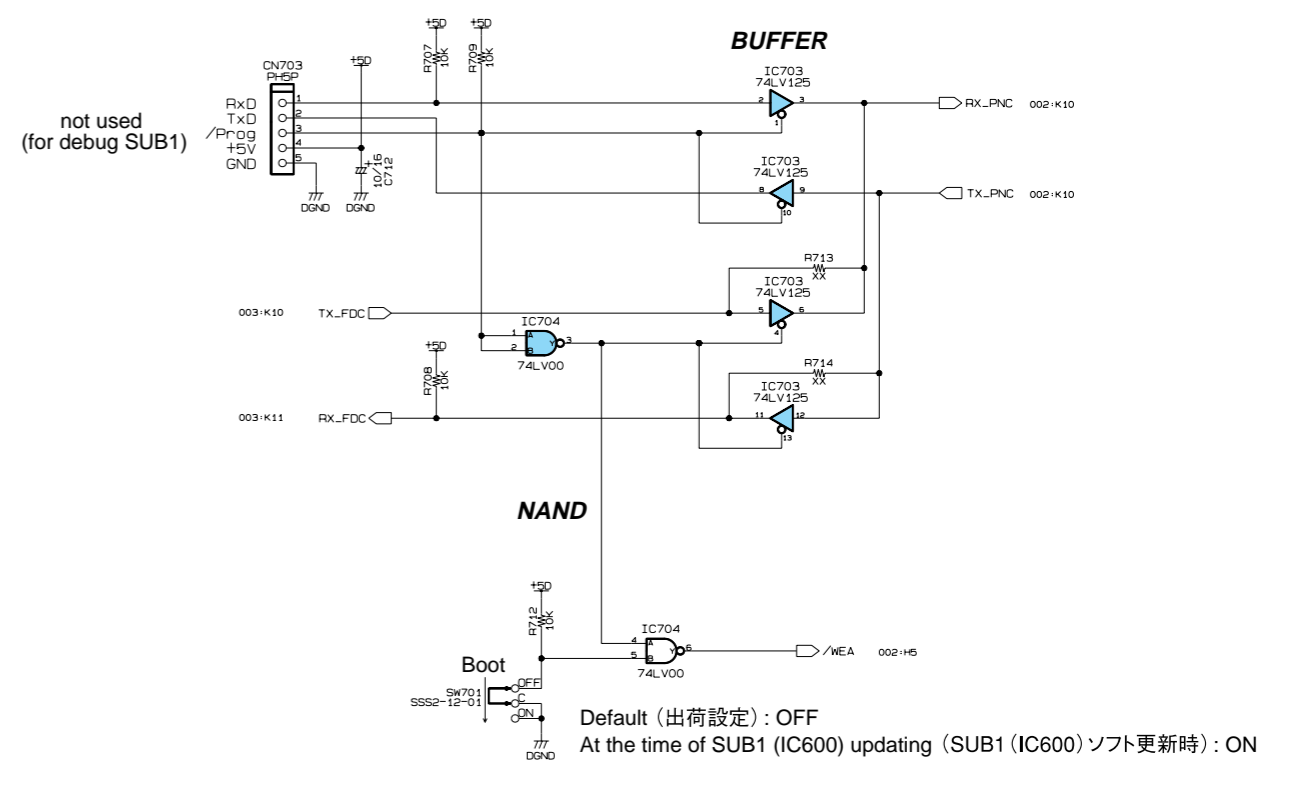
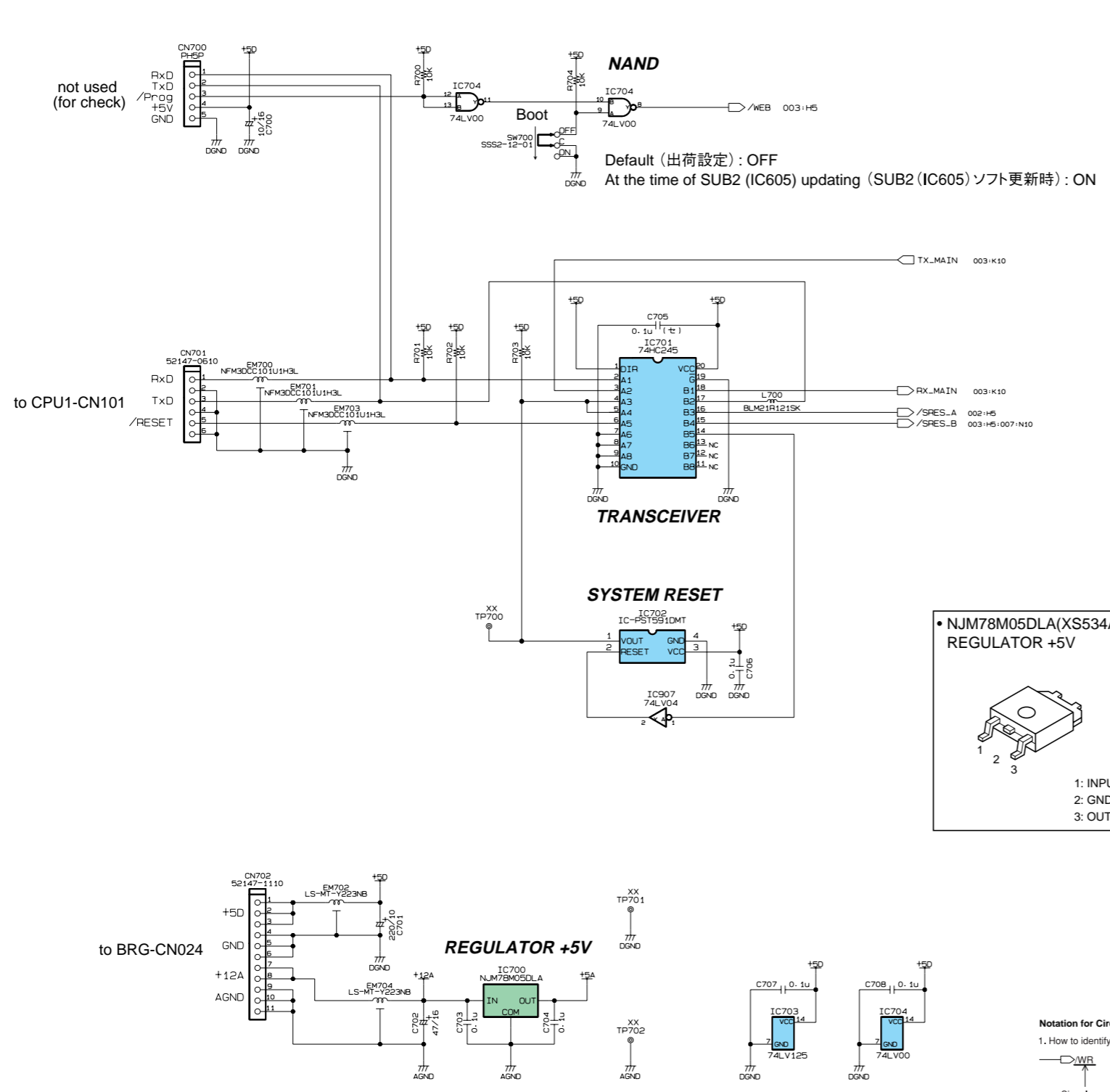
- XX : not installed (実装しない)
- (F) : 1/10W Metal Film Resistor (1/10W金属被膜抵抗)
- (F) : 1/4W Flame Proof C. Resistor (1/4W不燃化カーボン抵抗)



SH2-CPU (SUB2) Section  
■ SUB CIRCUIT DIAGRAM 003 (02R96)

■ SUB CIRCUIT DIAGRAM 004 (02R96)

02R96



XX: not installed (実装しない)

38CC1-8823598-4

**Notation for Circuit Diagrams (回路図表記上の注意)**  
 1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

Signal name (信号名) → 003:V9

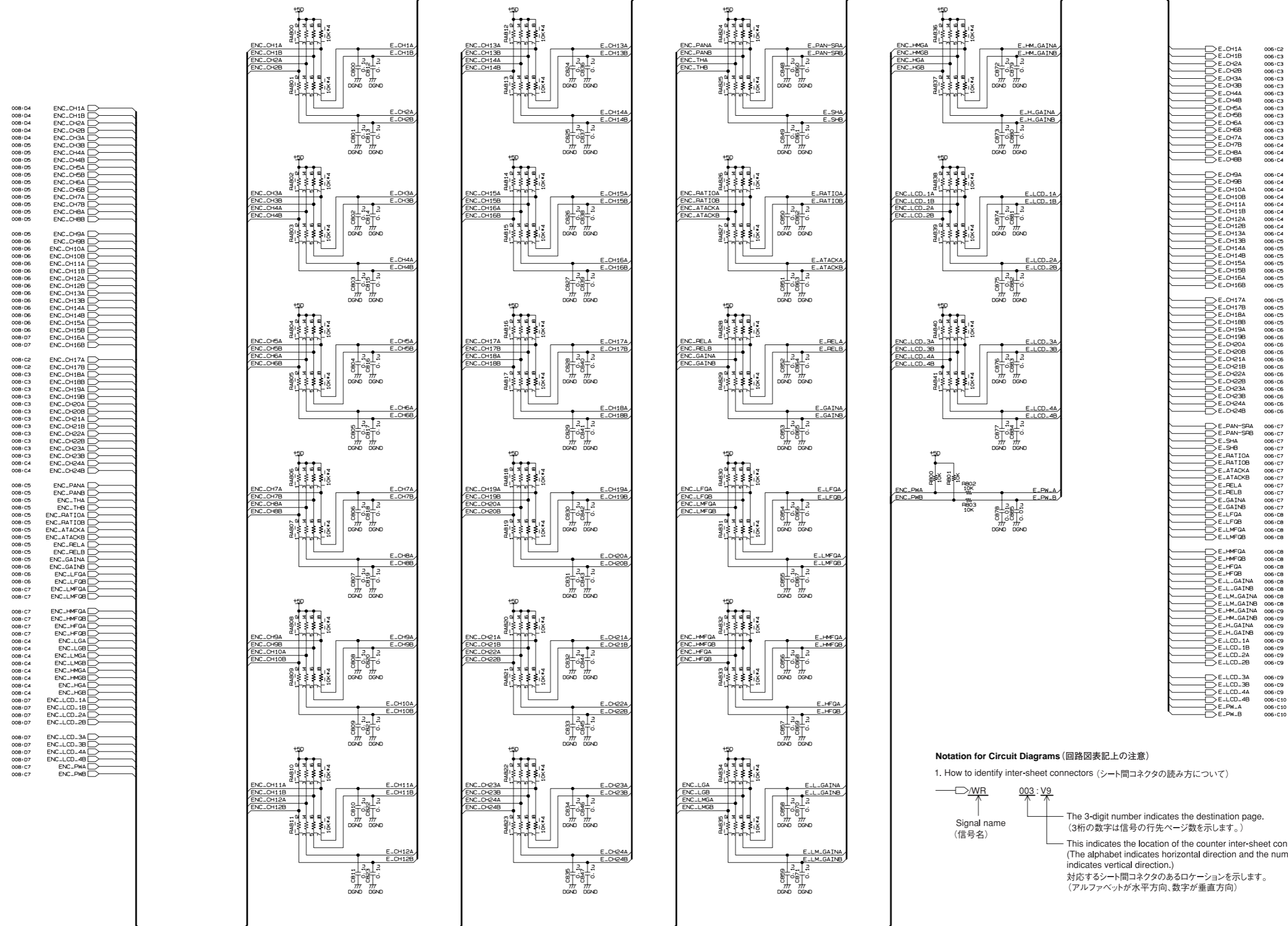
The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.) (対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向))

Serial Interface, Reset, Clock Section  
 ■ SUB CIRCUIT DIAGRAM 004 (02R96)

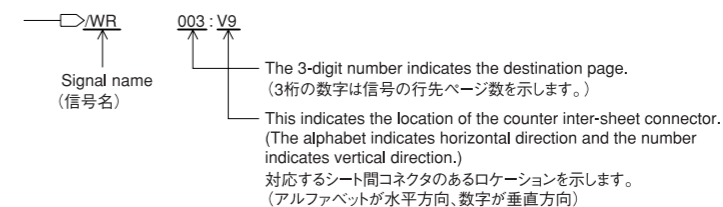
■ SUB CIRCUIT DIAGRAM 005 (02R96)

02R96



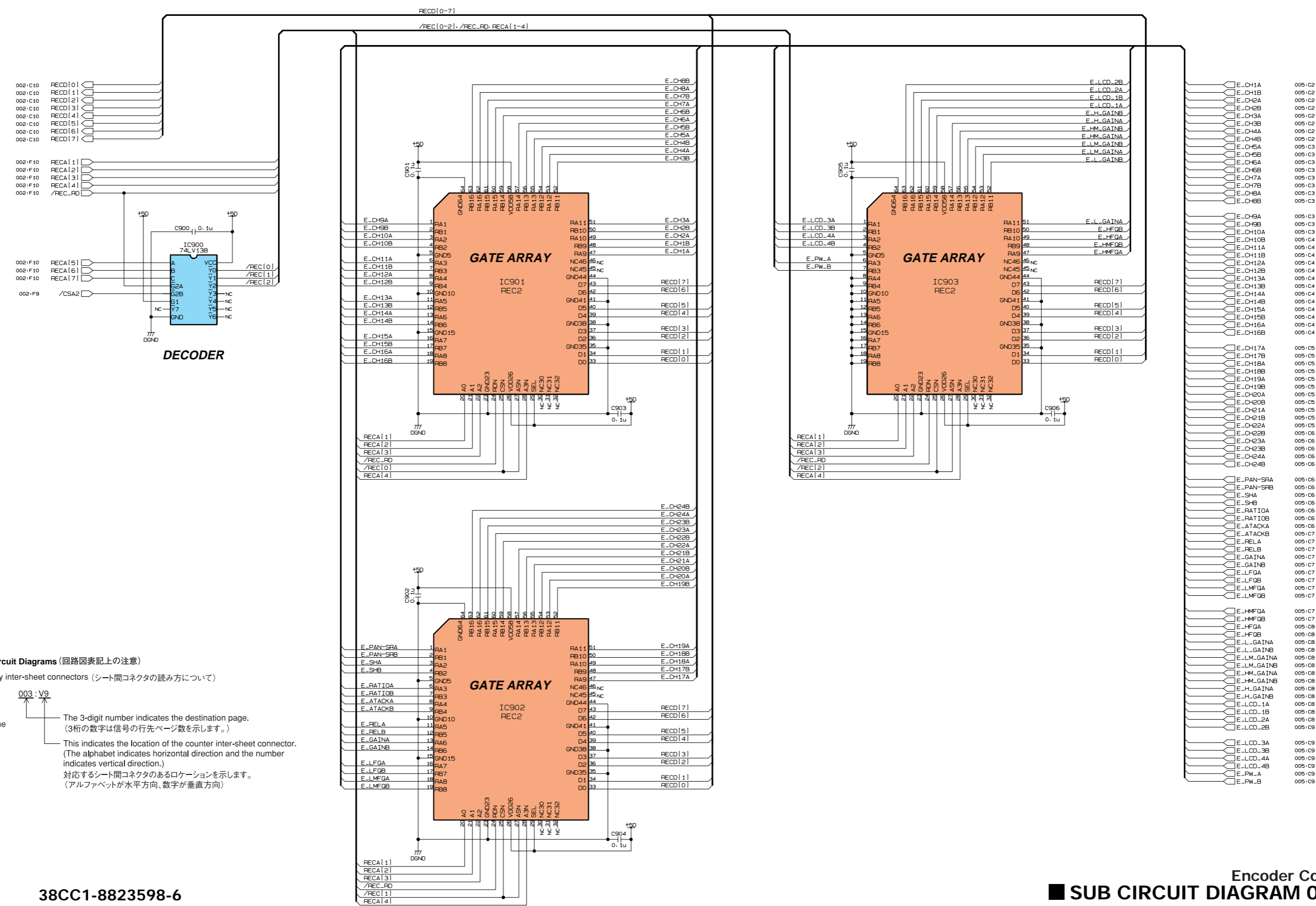
Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



■ SUB CIRCUIT DIAGRAM 006 (02R96)

02R96



**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

—▷/WR      003:V9

Signal name (信号名)

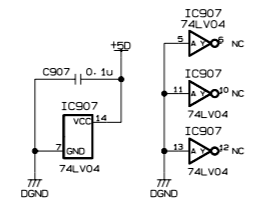
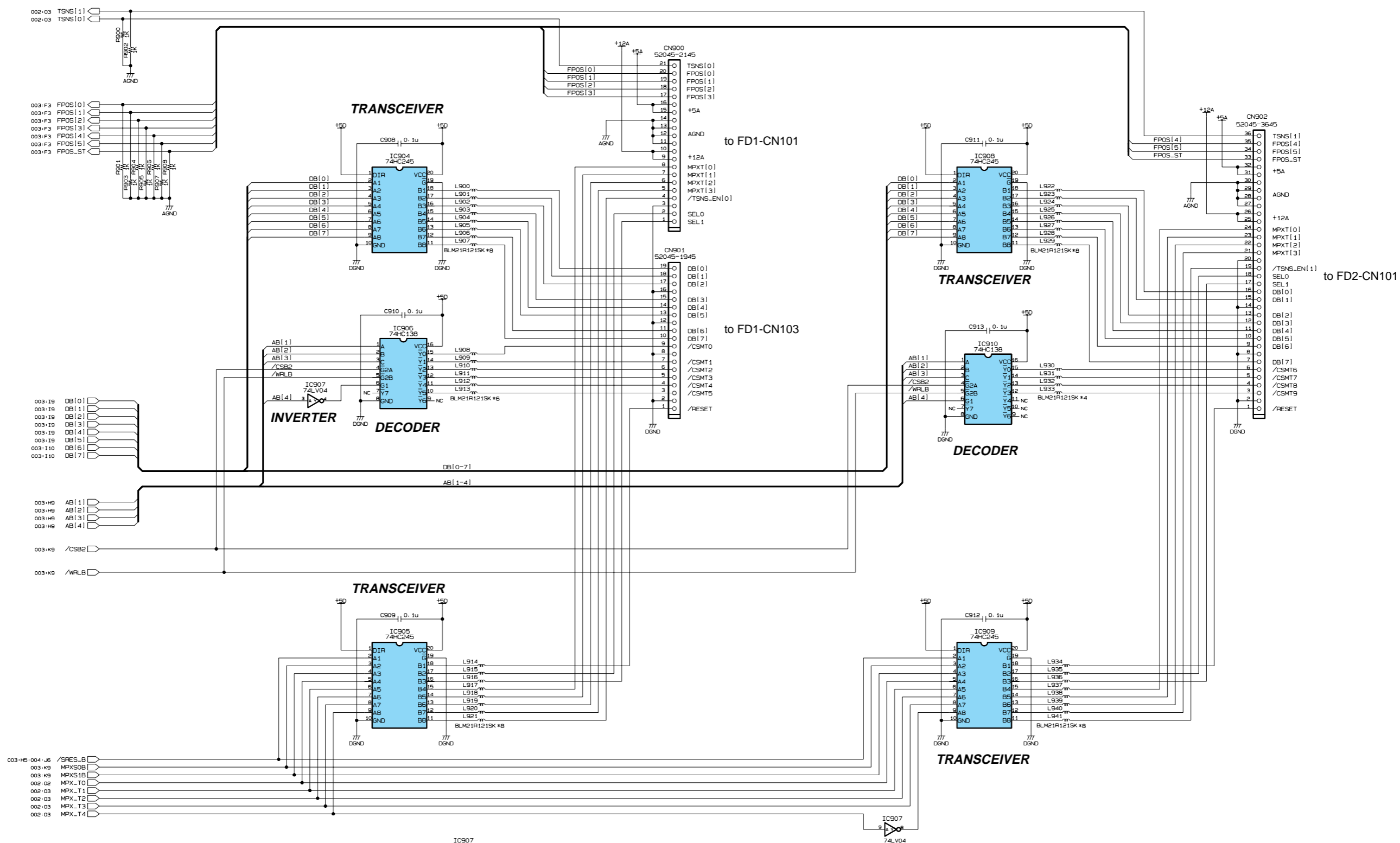
The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.) (対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向))

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■ SUB CIRCUIT DIAGRAM 007 (02R96)

02R96



**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

Signal name (信号名)      003:V9

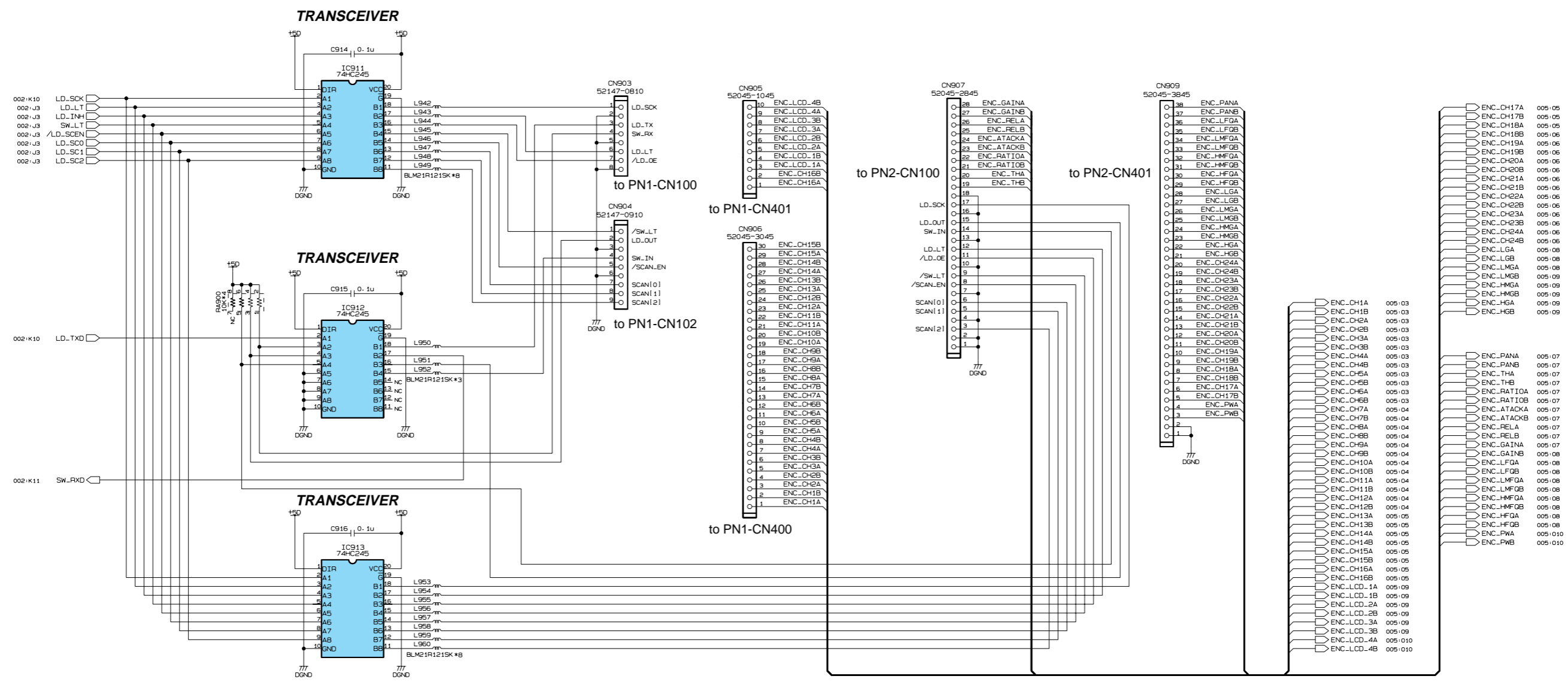
The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.) 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

Fader Interface Section ■ SUB CIRCUIT DIAGRAM 007 (02R96)

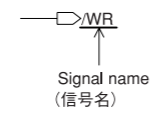
■ SUB CIRCUIT DIAGRAM 008 (02R96)

02R96

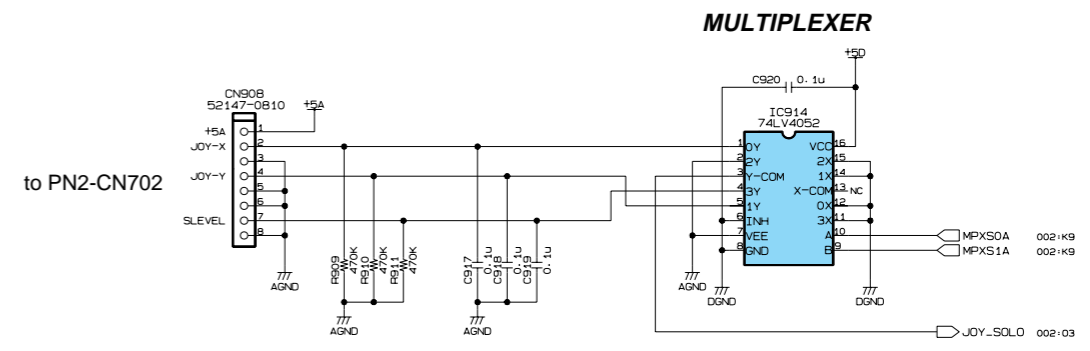


Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

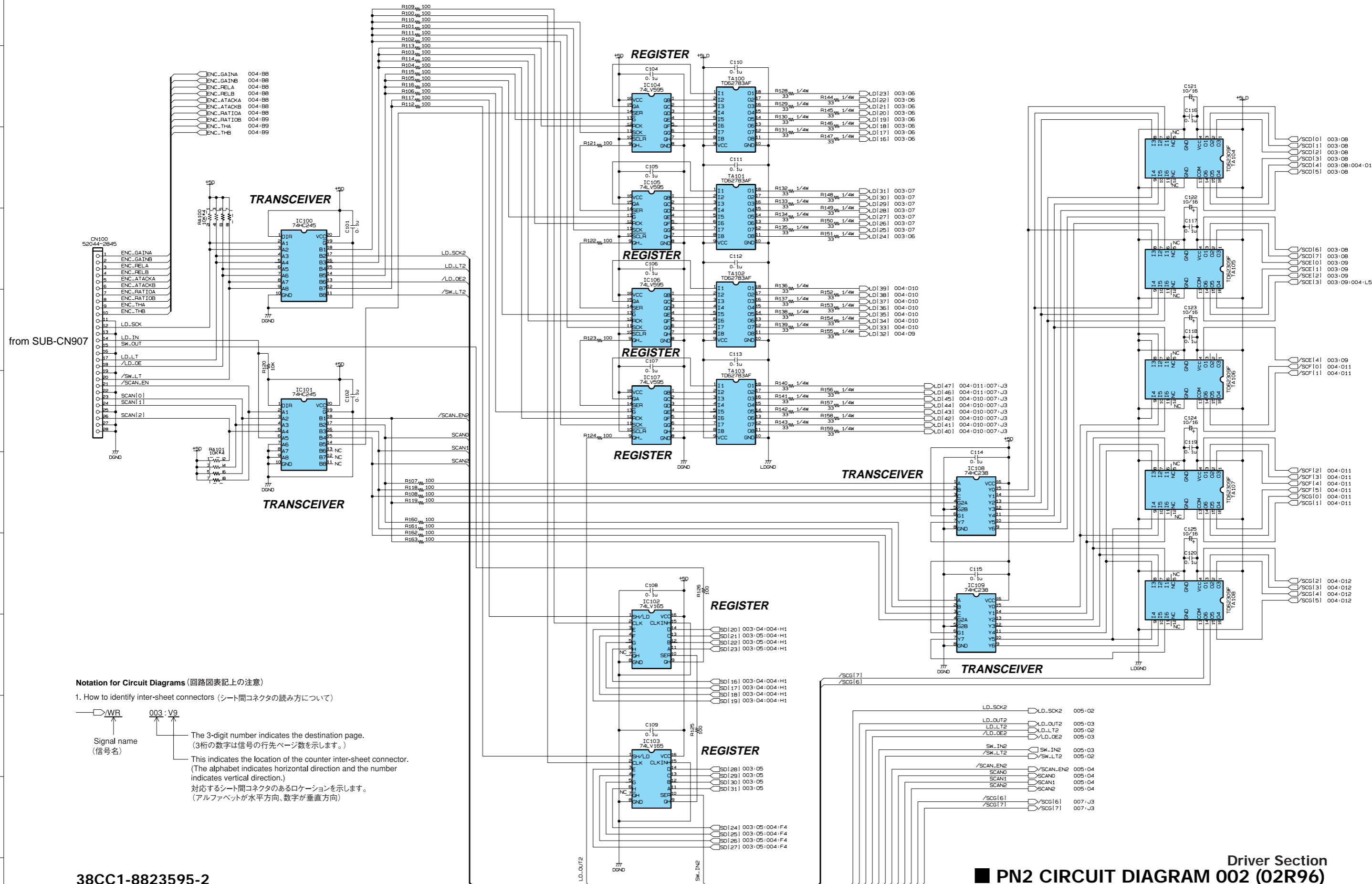


The 3-digit number indicates the destination page. (3桁の数字は信号の先行ページ数を示します.)  
 This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)  
 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)



PN2 CIRCUIT DIAGRAM 002 (02R96)

02R96



Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



The 3-digit number indicates the destination page.  
(3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector.  
(The alphabet indicates horizontal direction and the number indicates vertical direction.)  
対応するシート間コネクタのあるロケーションを示します。  
(アルファベットが水平方向、数字が垂直方向)

R Q P O N M L K J I H G F E D C B A

PN2 CIRCUIT DIAGRAM 003 (02R96) 02R96

Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

Signal name (信号名)
   
 The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)
   
 This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)
   
 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

38CC1-8823595-3

LED  
 LT1H40A: Yellow  
 LT1E40A: Yellow Green  
 LT1E67A: Red/Yellow Green

ENCSW\_ = ENCODER SWITCH  
 UDK\_ = USER DEFINED KEYS

SW/LED Matrix Section  
**PN2 CIRCUIT DIAGRAM 003 (02R96)**

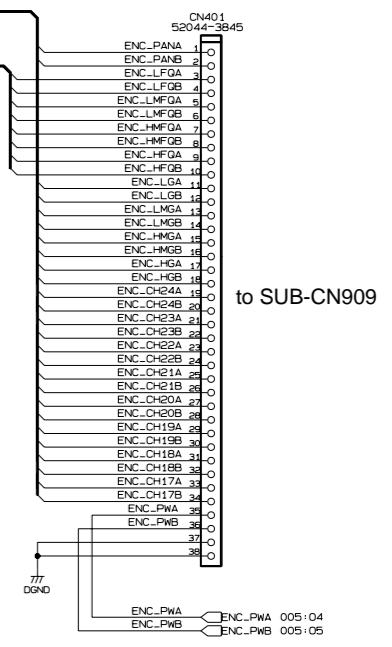
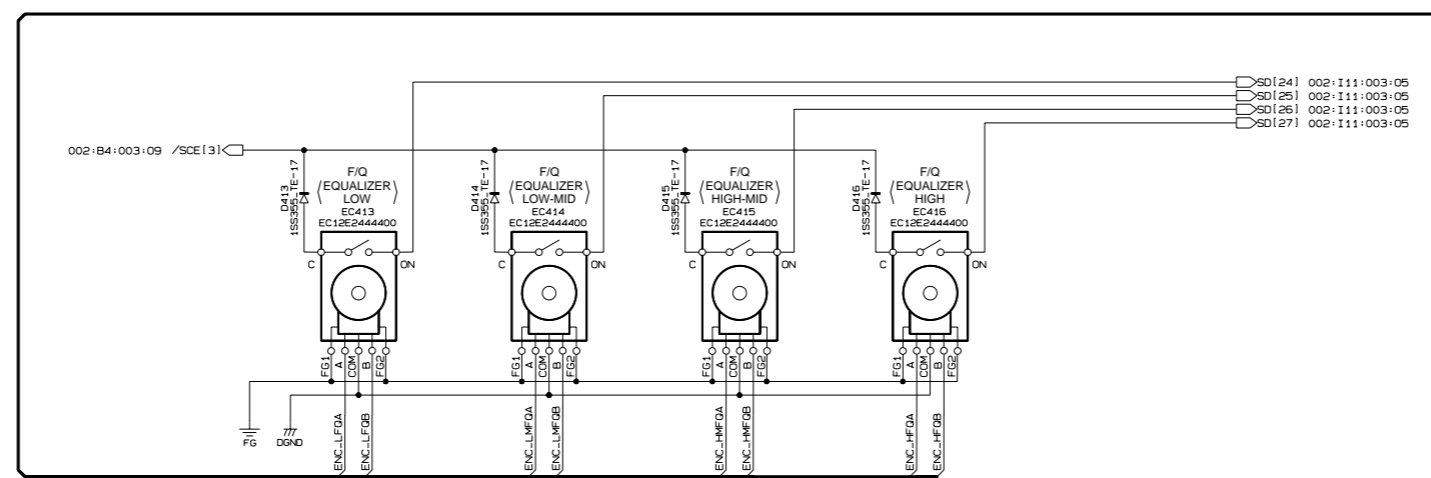
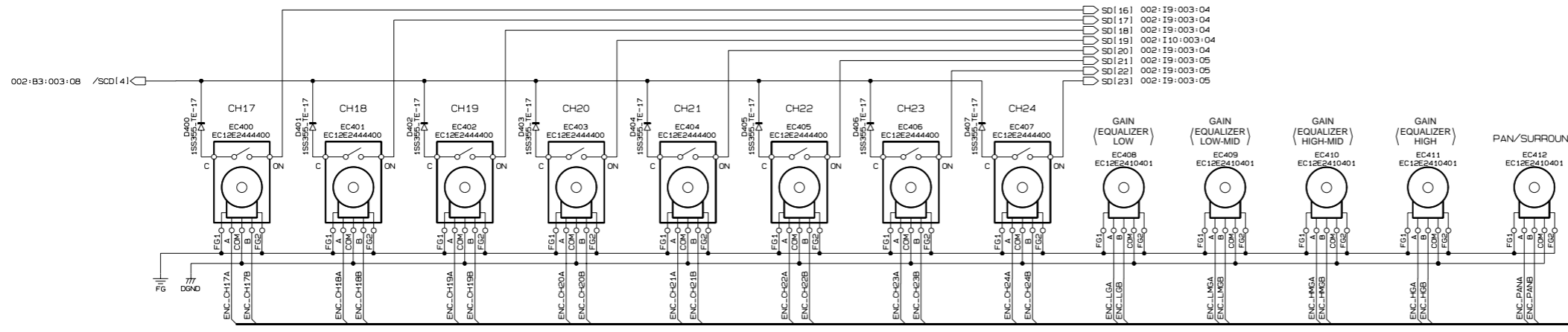
79

12



PN2 CIRCUIT DIAGRAM 004 (02R96)

02R96

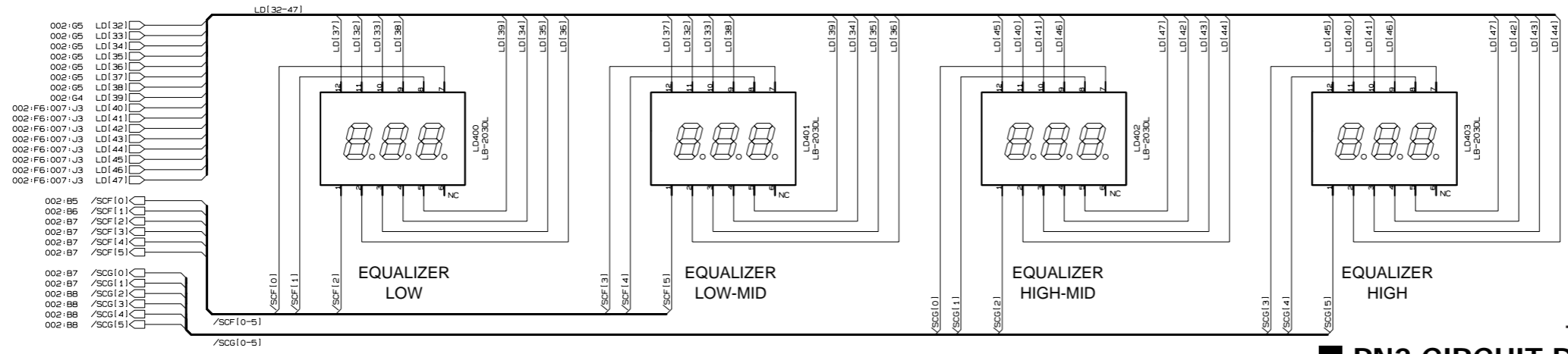
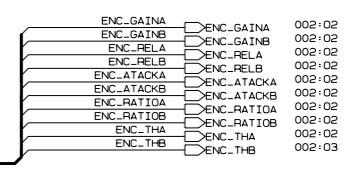
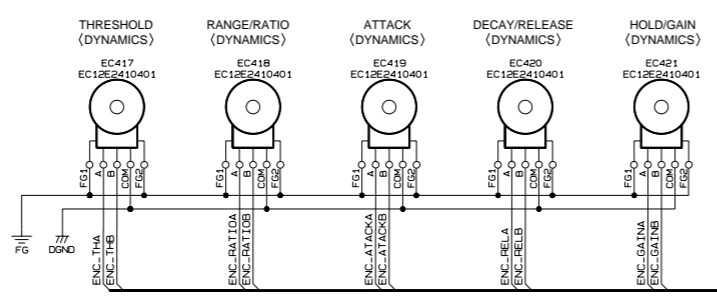


**Notation for Circuit Diagrams (回路図表記上の注意)**  
 1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

Signal name (信号名) → 003:V9

The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)  
 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

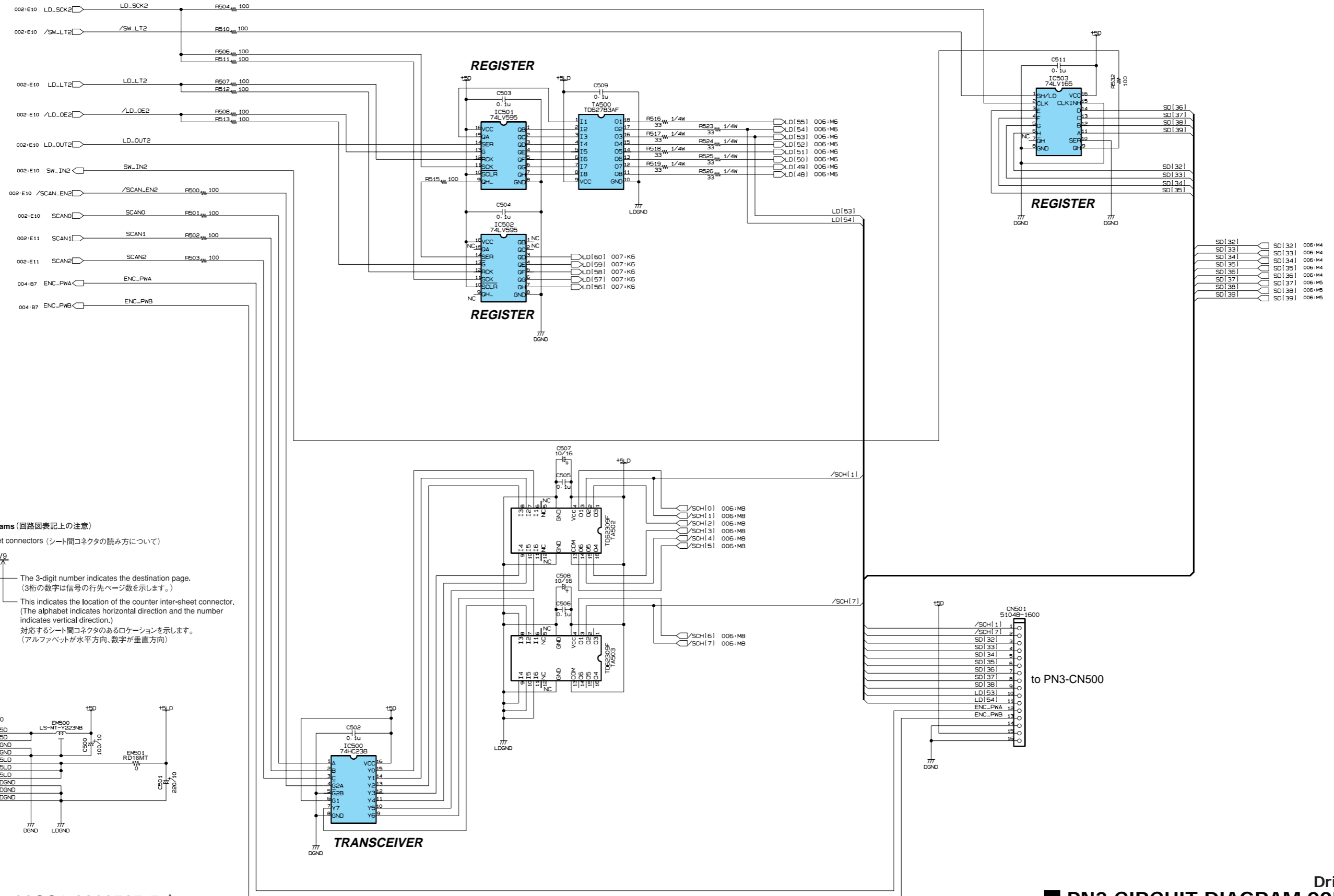


7 Seg LED, Encoder Section

PN2 CIRCUIT DIAGRAM 004 (02R96)

PN2 CIRCUIT DIAGRAM 005 (02R96)

02R96



**Notation for Circuit Diagrams (回路図表記上の注意)**

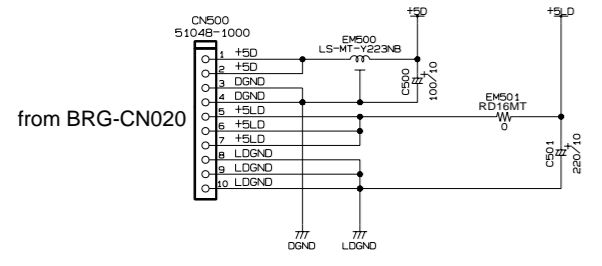
1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

— WWR —      003 : V9

Signal name (信号名)

The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

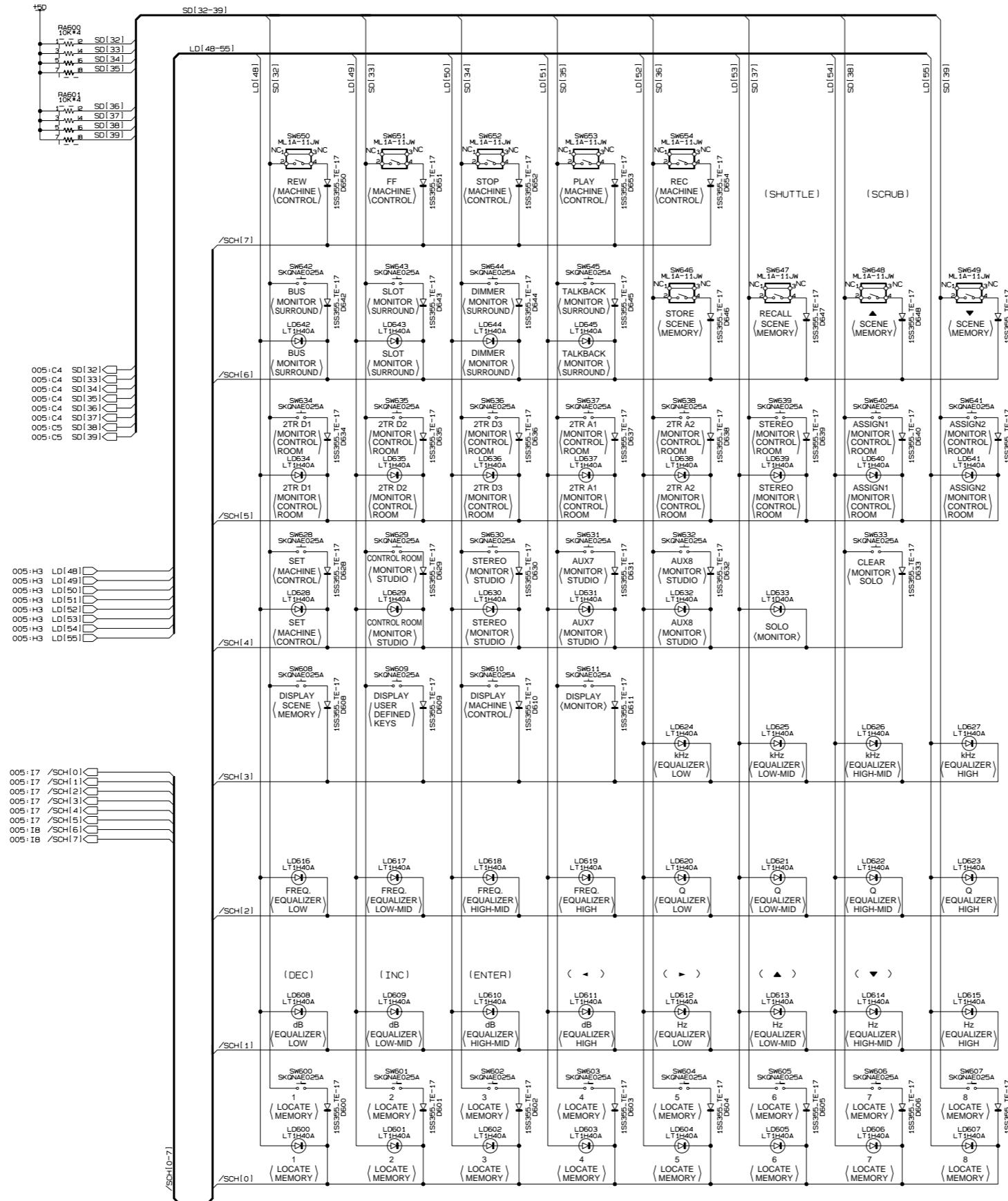
This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.) (対応するシート間コネクタのあるロケーションを示します。 (アルファベットが水平方向、数字が垂直方向))



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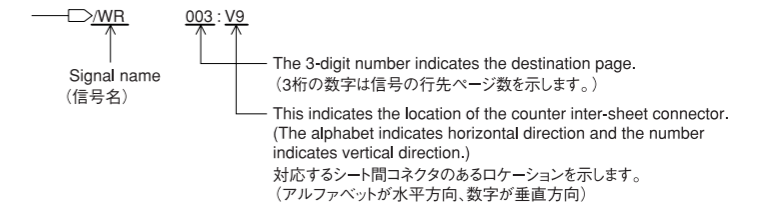
PN2 CIRCUIT DIAGRAM 006 (02R96)

02R96



Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



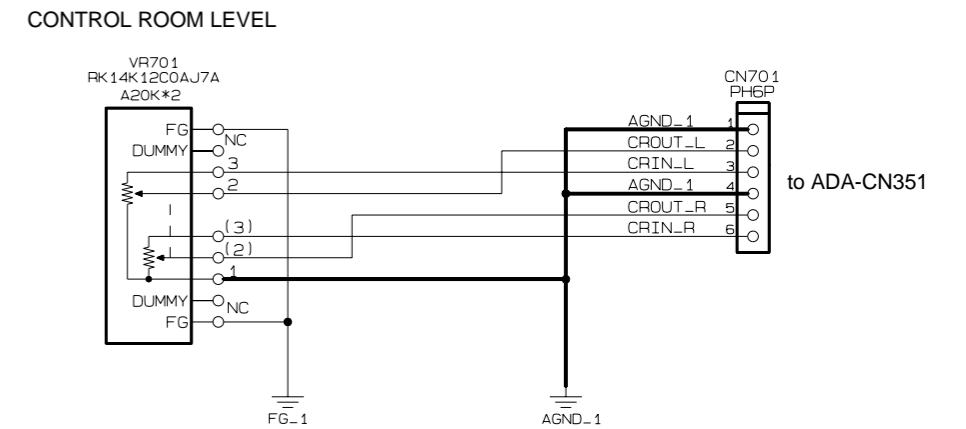
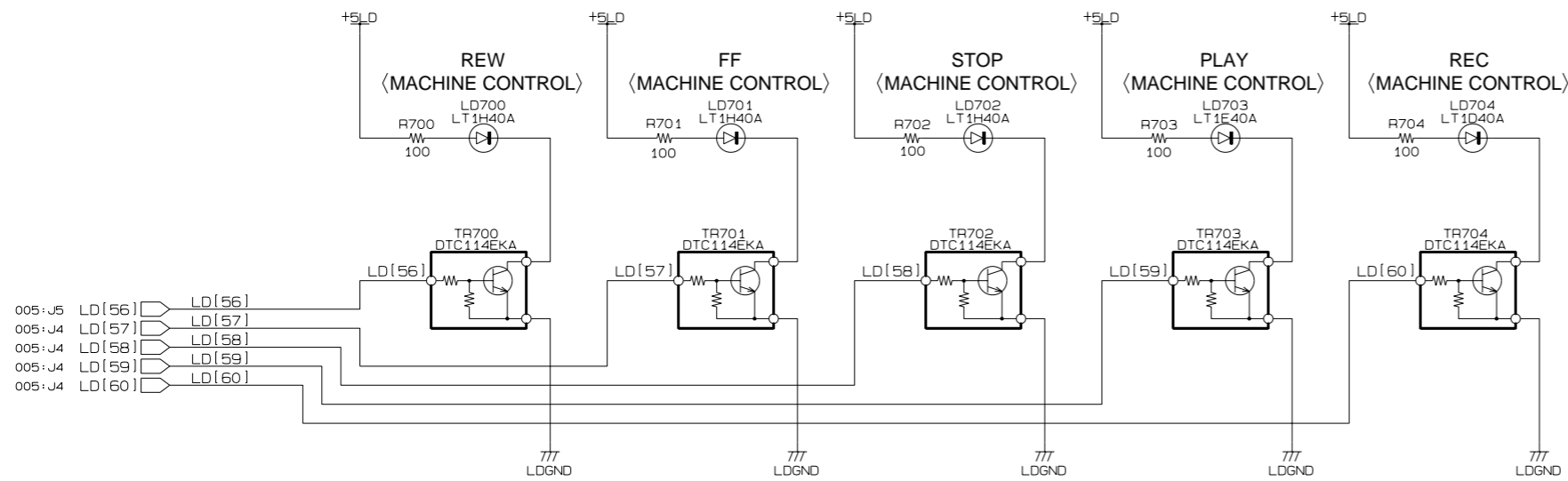
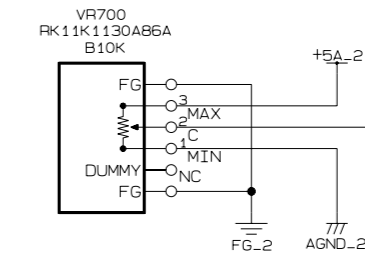
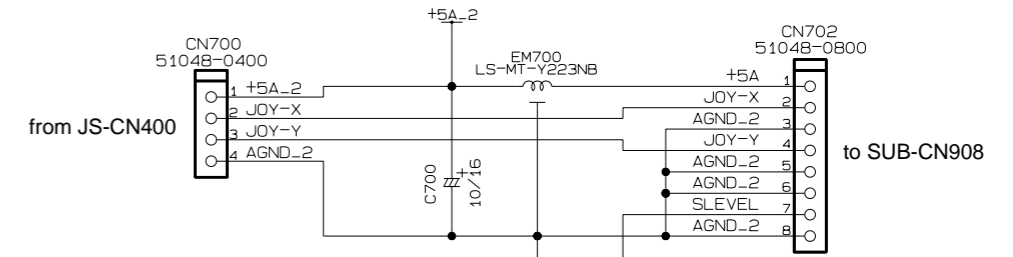
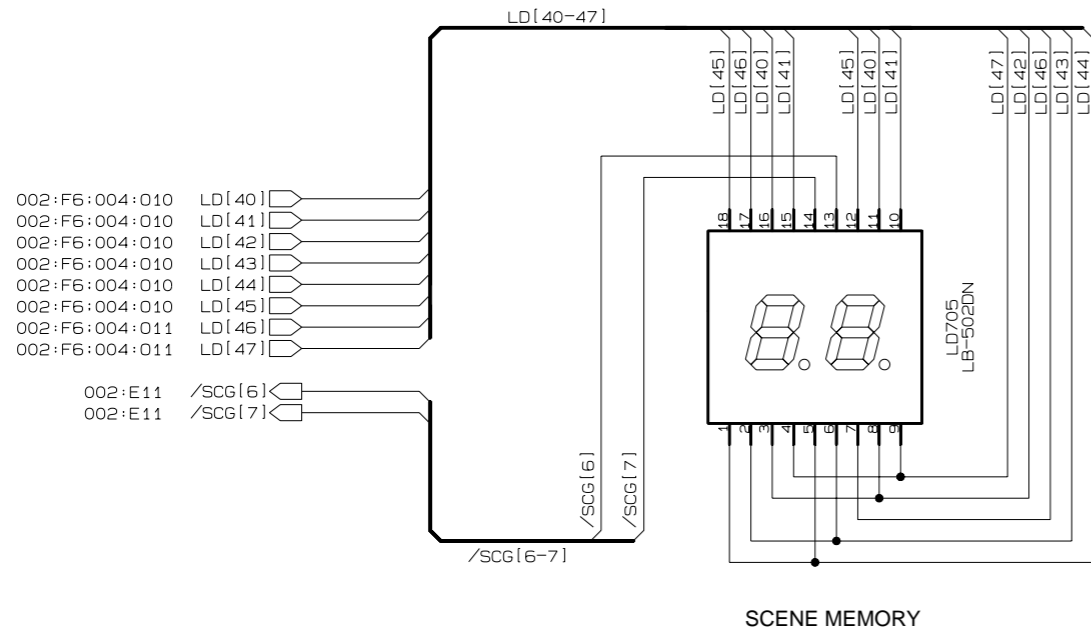
LED  
 LT1H40A: Yellow  
 LT1D40A: Red

C-R\_ = CONTROL ROOM  
 LM\_ = LOCATE MEMORY  
 SM\_ = SCENE MEMORY

SW/LED Matrix Section  
 PN2 CIRCUIT DIAGRAM 006 (02R96)

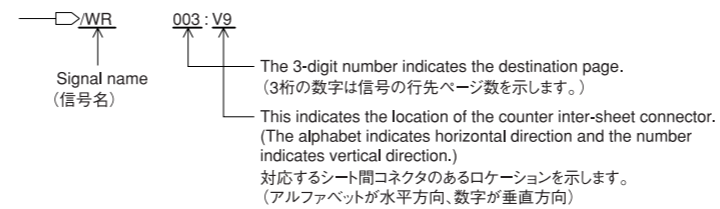
PN2 CIRCUIT DIAGRAM 007 (02R96)

02R96



Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



■ JS CIRCUIT DIAGRAM (02R96)

02R96

1

2

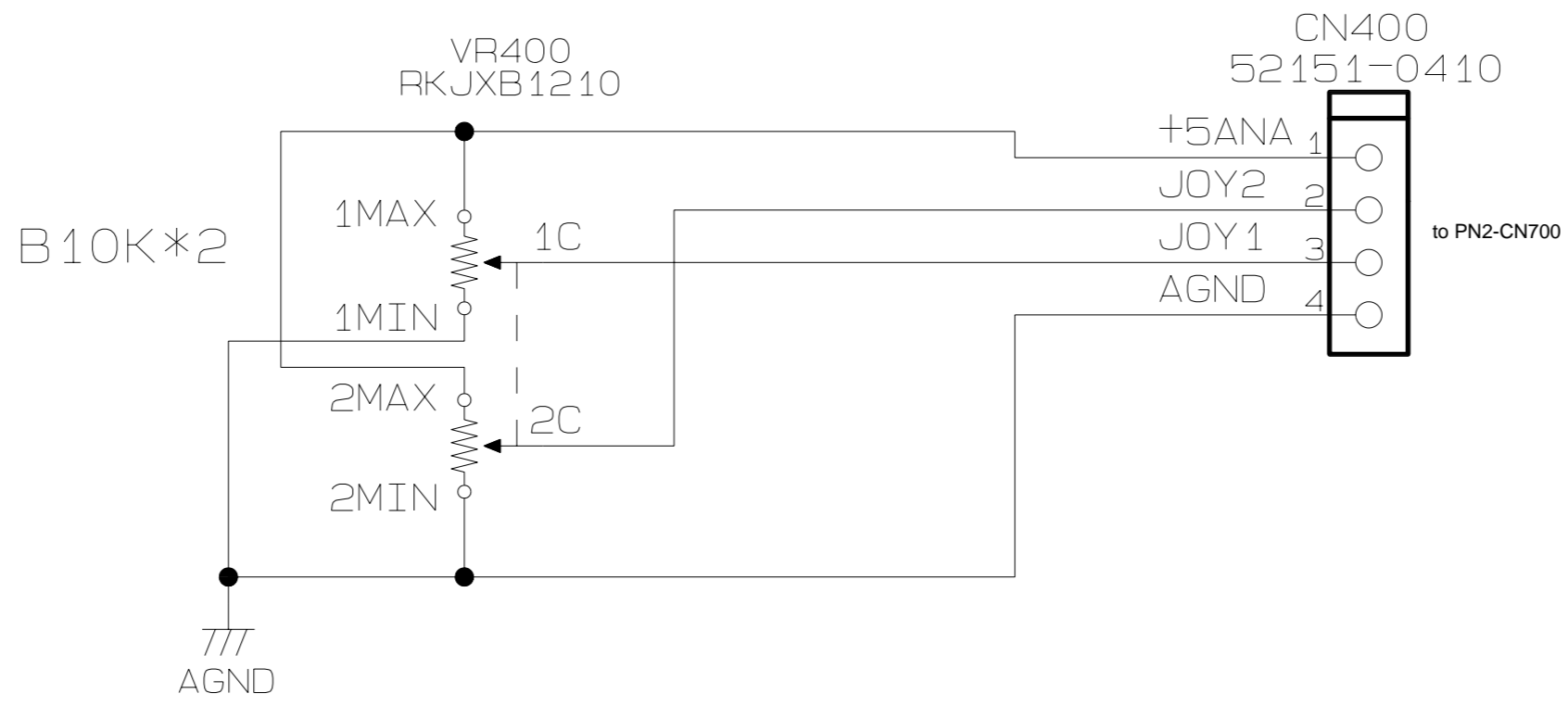
3

4

5

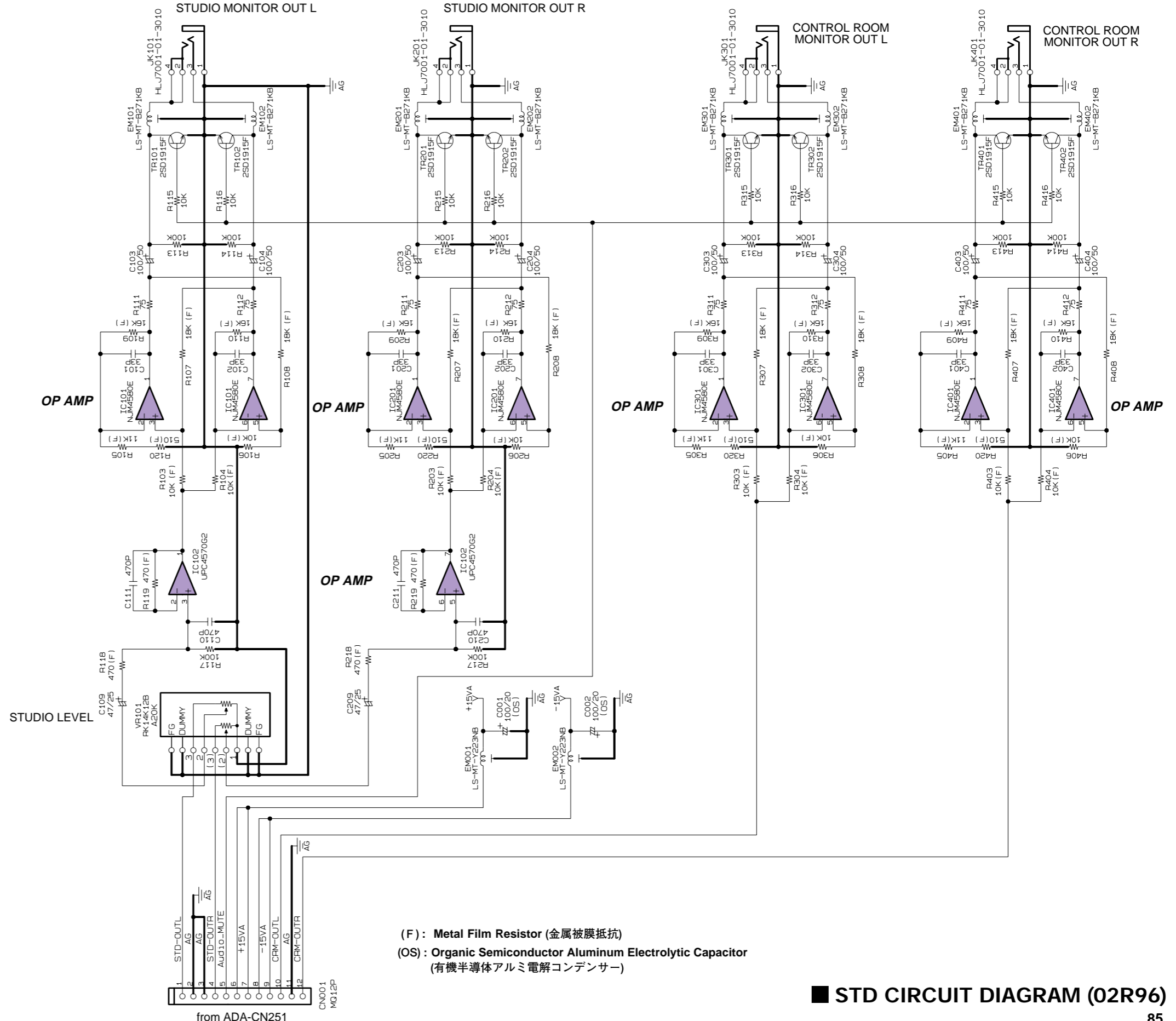
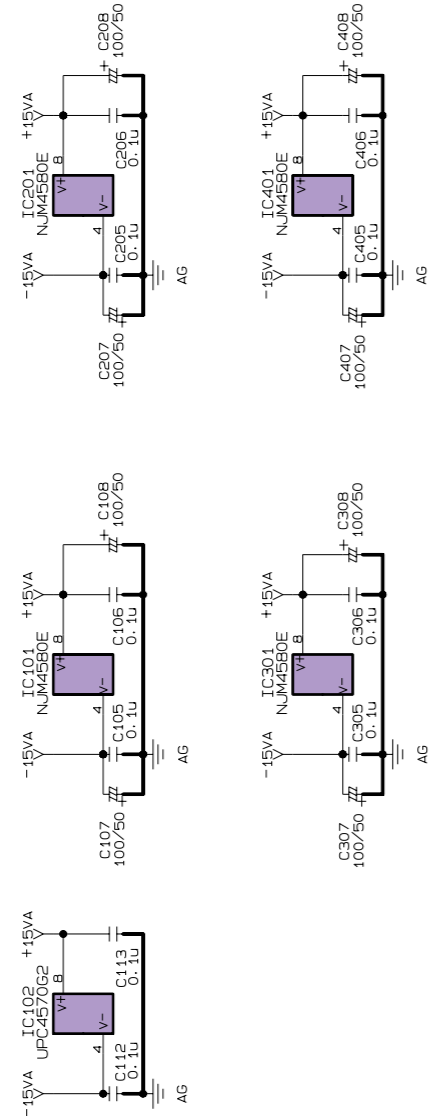
6

PAN/SURROUND JOYSTICK



STD CIRCUIT DIAGRAM (02R96)

02R96



(F) : Metal Film Resistor (金属被膜抵抗)  
 (OS) : Organic Semiconductor Aluminum Electrolytic Capacitor  
 (有機半導体アルミ電解コンデンサー)

38CC1-8823580-1

STD CIRCUIT DIAGRAM (02R96)

# PEAK METER BRIDGE

# MB02R96

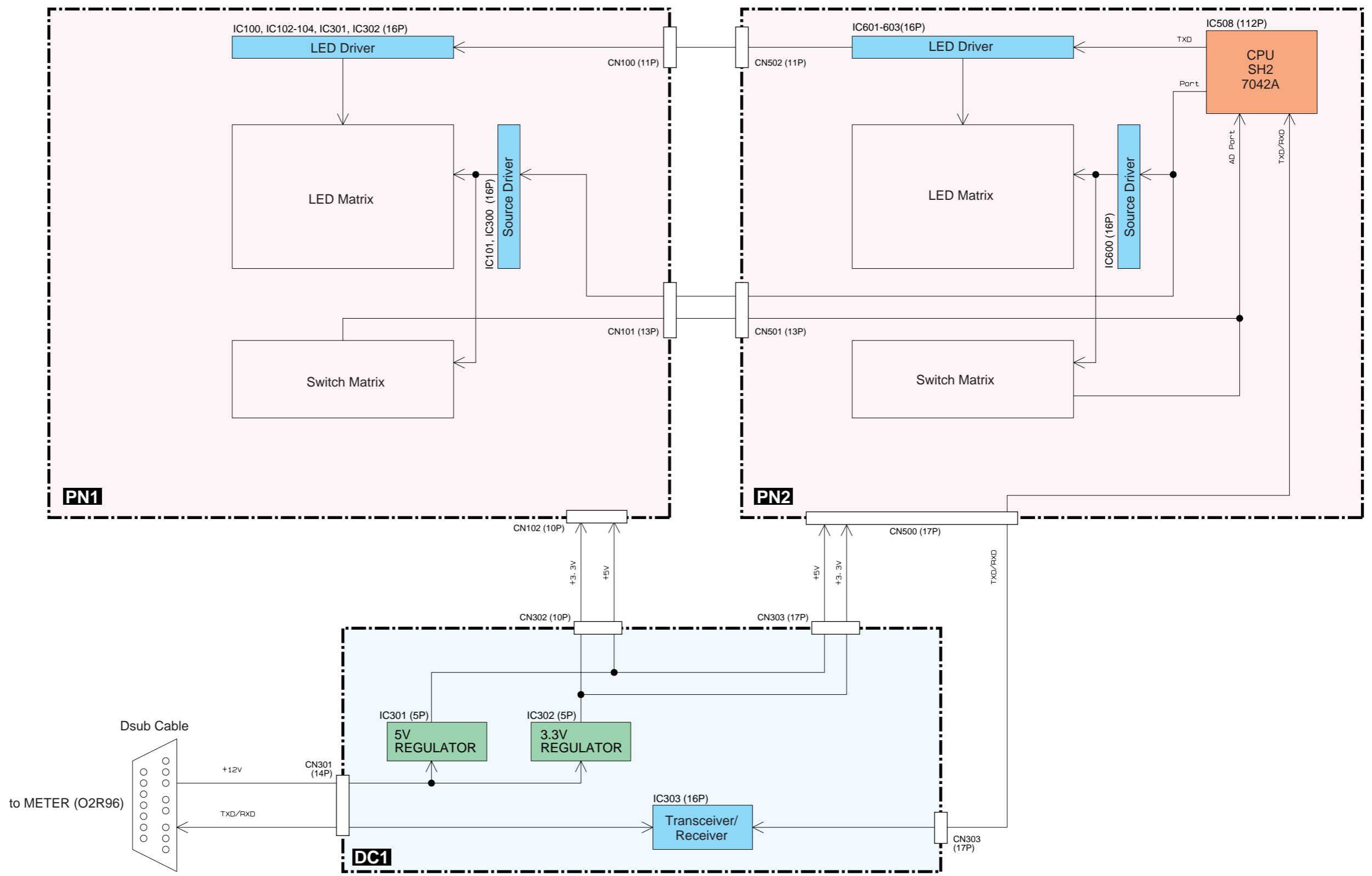
# CIRCUIT DIAGRAM

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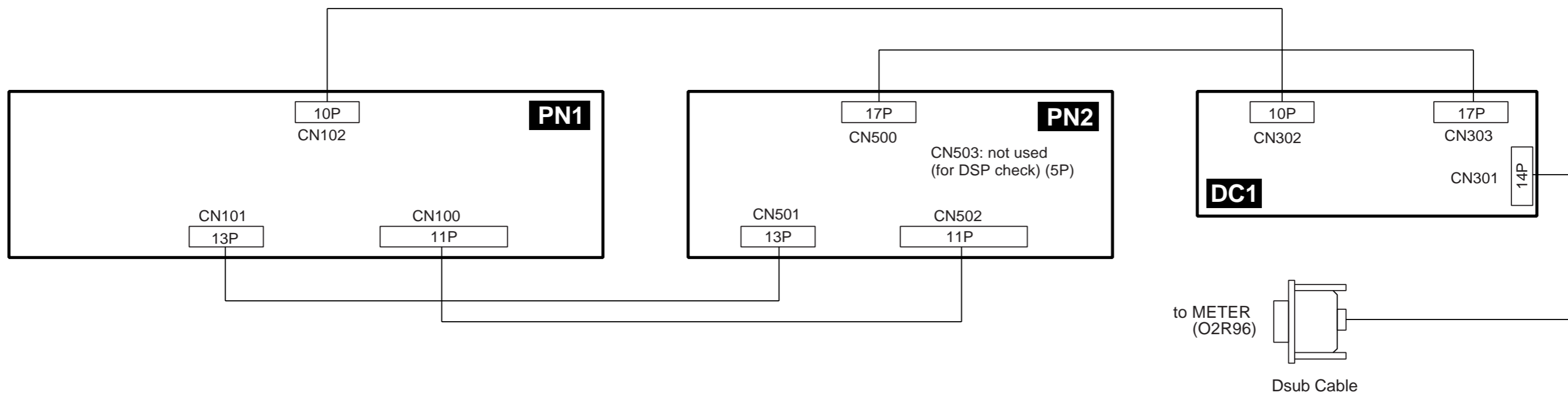
Note: See parts list for details of circuit board component parts.

■ BLOCK DIAGRAM (MB02R96)

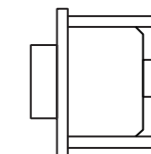




OVERALL CONNECTOR CIRCUIT DIAGRAM (MB02R96)



to METER (O2R96)

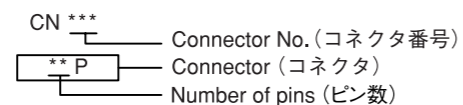


Dsub Cable

Dsub ↔ Connector CN301  
Pin Assignments Table

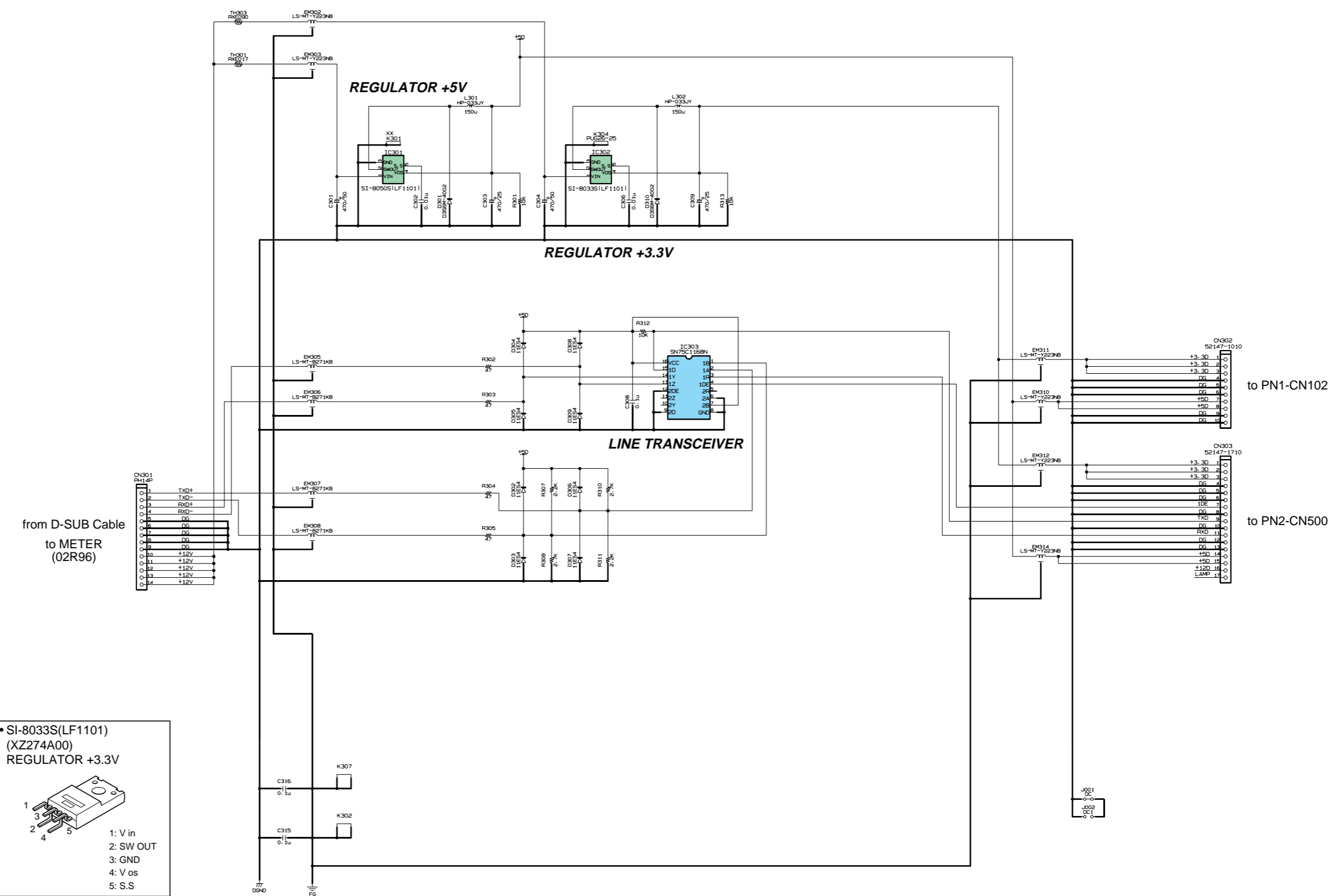
Dsub 15PIN	14PIN Connector
1	1
9	2
2	3
10	4
3	5
4	6
5	7
11	8
12	9
6	10
7	11
8	12
14	13
15	14
13	NC

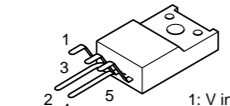
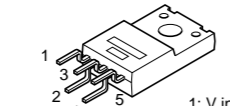
- Note)** ·   indicates the sheet name. (   内はシート名称を示します。)
- Pin 1 of each connector, except for CN301, is connected to pin 1 of the destination connector. (CN301以外のコネクタの1ピンは、接続先コネクタの1ピンに接続されます。)
  - Connectors are identified by the following items. (コネクタの読み方については下記の通りとします。)



DC1 CIRCUIT DIAGRAM (MB02R96)

MB02R96

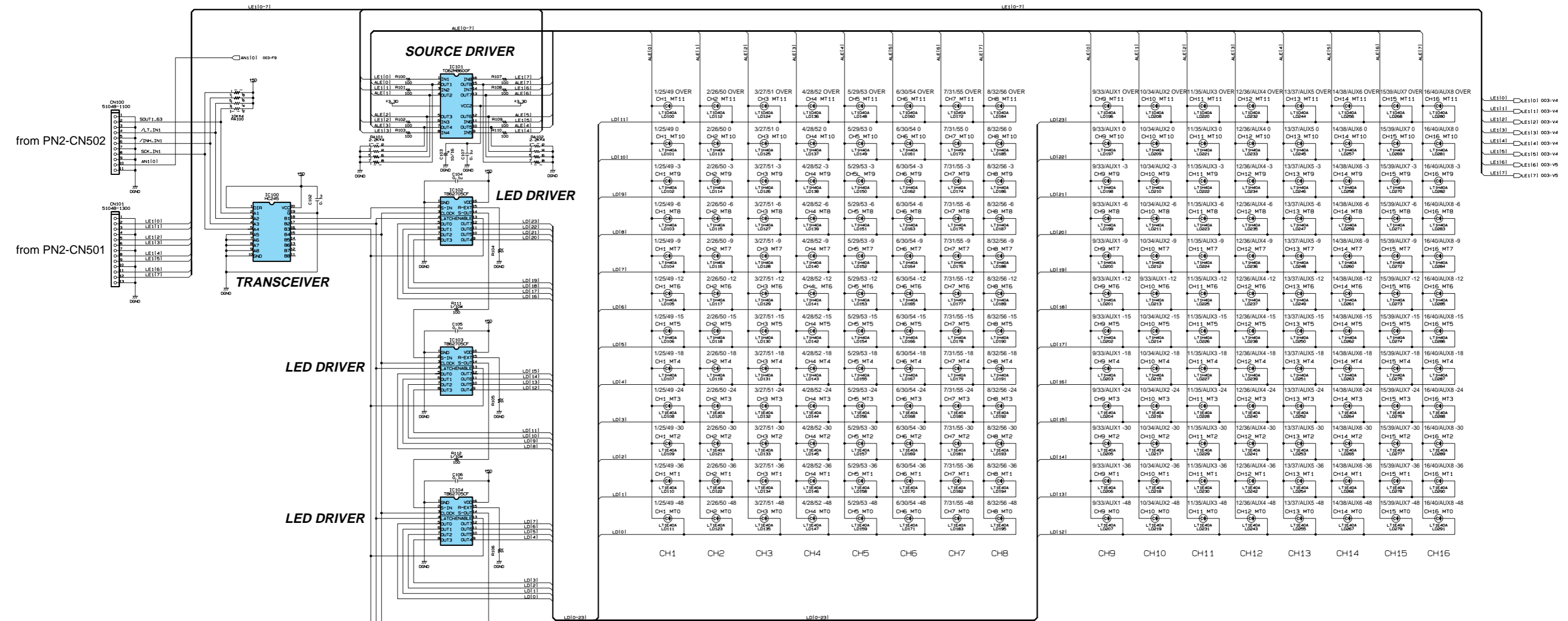


<p>• SI-8050S(XT442A00) REGULATOR +5V</p>  <p>1: V in 2: SW out 3: GND 4: V os 5: S.S</p>	<p>• SI-8033S(LF1101) (XZ274A00) REGULATOR +3.3V</p>  <p>1: V in 2: SW OUT 3: GND 4: V os 5: S.S</p>
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XX: not installed (実装しない)

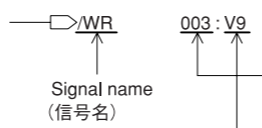
PN1 CIRCUIT DIAGRAM 002 (MB02R96)

MB02R96

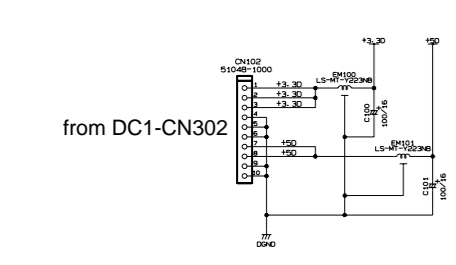


Notation for Circuit Diagrams (回路図表記上の注意)

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

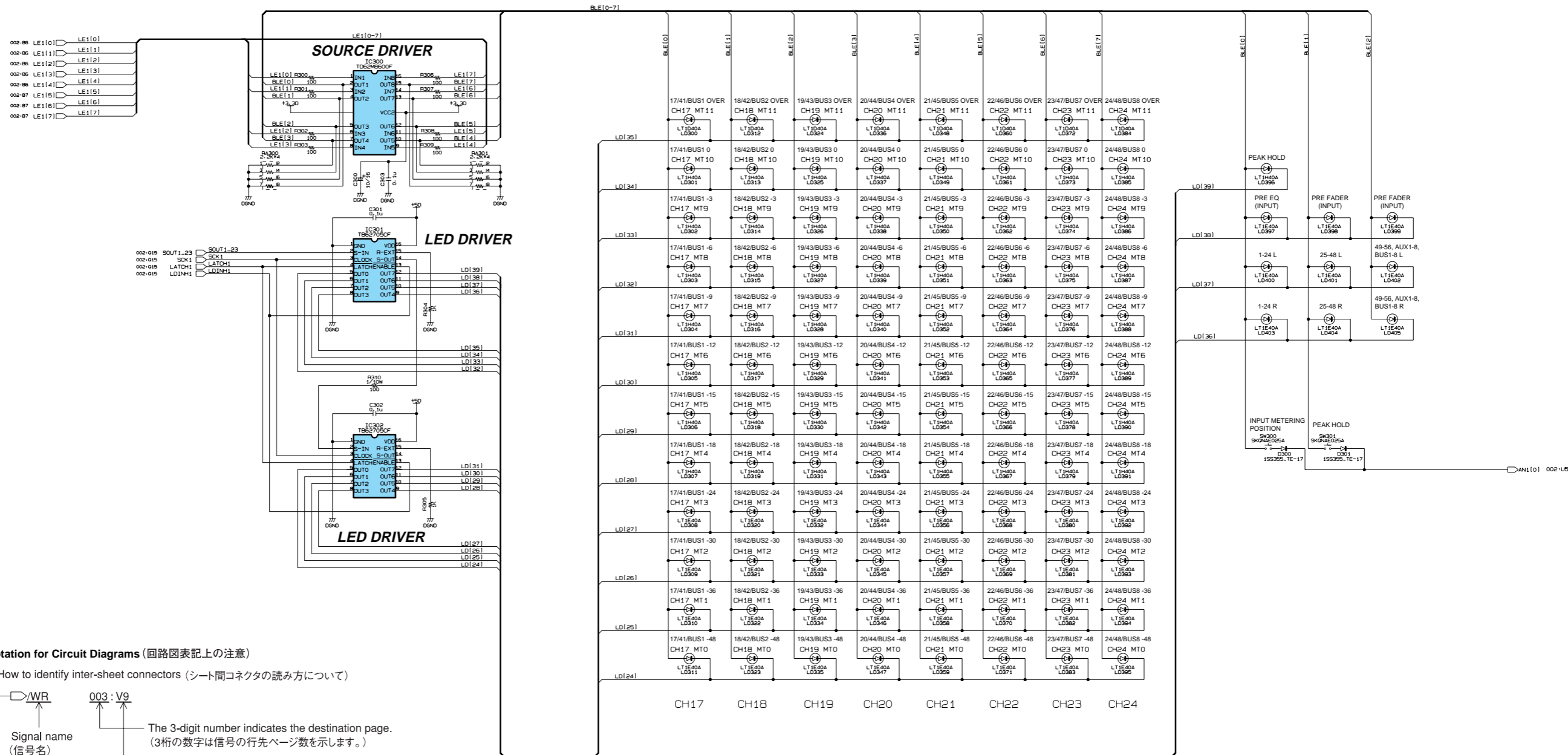


The 3-digit number indicates the destination page.  
(3桁の数字は信号の行先ページ数を示します。)  
This indicates the location of the counter inter-sheet connector.  
(The alphabet indicates horizontal direction and the number indicates vertical direction.)  
対応するシート間コネクタのあるロケーションを示します。  
(アルファベットが水平方向、数字が垂直方向)



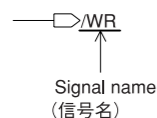
PN1 CIRCUIT DIAGRAM 003 (MB02R96)

MB02R96



Notation for Circuit Diagrams (回路図表記上の注意)

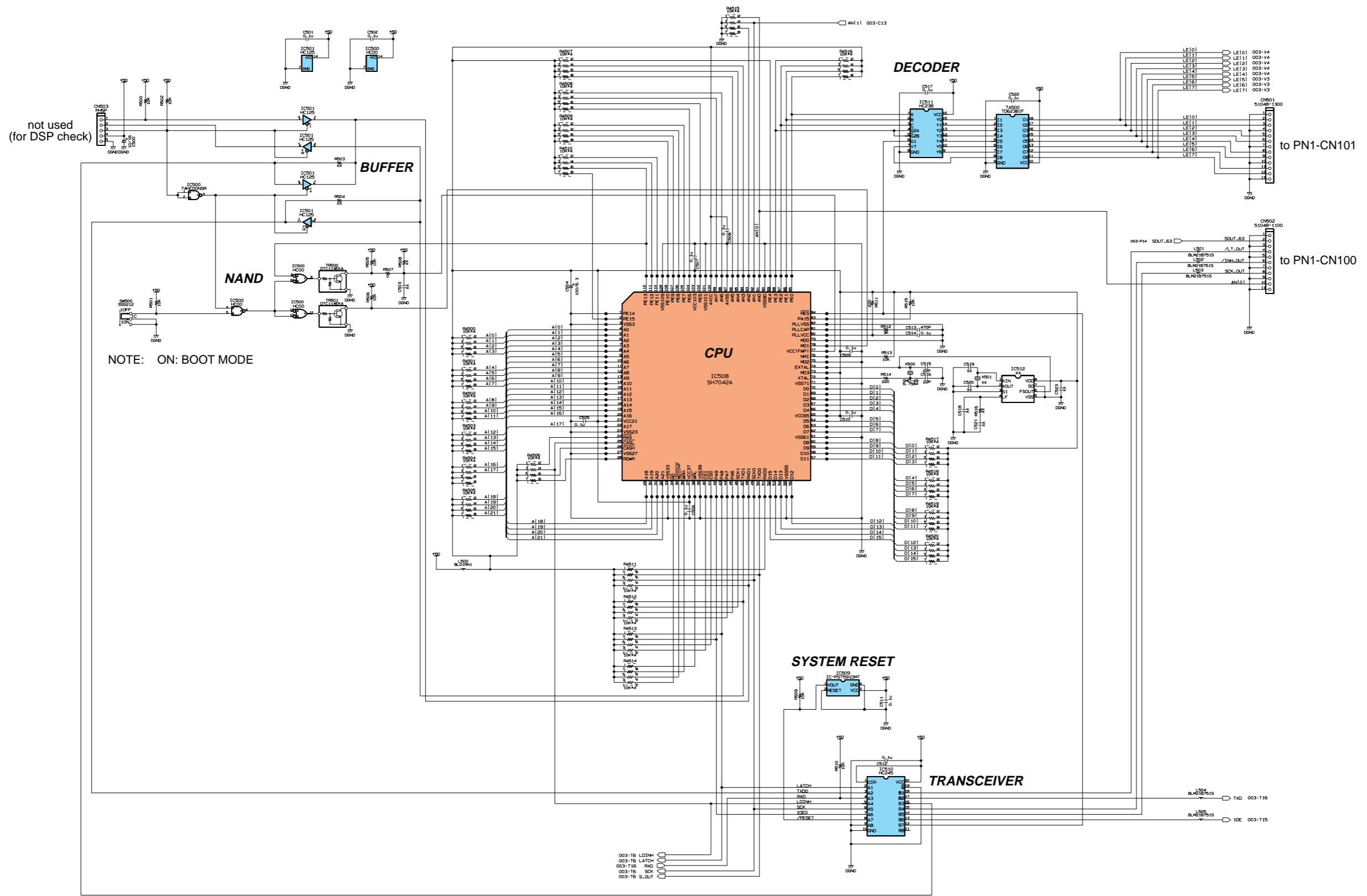
1. How to identify inter-sheet connectors (シート間コネクタの読み方について)



The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)  
 This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)  
 対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

PN2 CIRCUIT DIAGRAM 002 (MB02R96)

MB02R96



**Notation for Circuit Diagrams (回路図表記上の注意)**

1. How to identify inter-sheet connectors (シート間コネクタの読み方について)

Signal name (信号名)      003-V9

The 3-digit number indicates the destination page. (3桁の数字は信号の行先ページ数を示します。)

This indicates the location of the counter inter-sheet connector. (The alphabet indicates horizontal direction and the number indicates vertical direction.)

対応するシート間コネクタのあるロケーションを示します。(アルファベットが水平方向、数字が垂直方向)

XX : not installed (実装しない)

PN2 CIRCUIT DIAGRAM 003 (MB02R96)

MB02R96

