

VP-9000

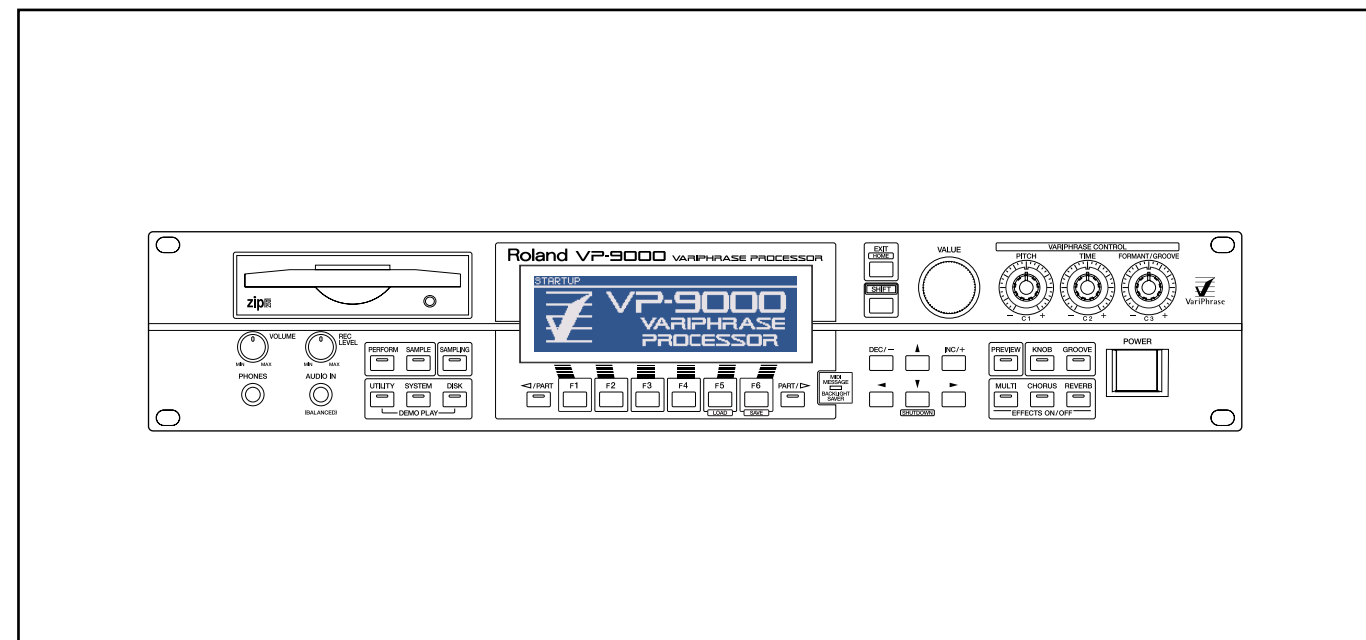
VARI-PHRASE PROCESSOR

SERVICE NOTES

First Edition
Issued by RJA

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SPECIFICATIONS

VP-9000: VariPhrase processor

- **Sound Generator**
VariPhrase
- **Parts**
1 to 6
- **Maximum Polyphony**
6 voices
- **Internal Memory**
Performance: 1
Phrase maps: 12 samples
(for each part)
Samples: 1024
Wave memory (RAM): 8 M
bytes (can be expanded up to
136 M bytes with SIMMs)
- **Effects**
Reverb: 9 sets
Chorus: 1 set (8 types)
Multi: 40 sets
- **Sampling Frequency**
48, 44.1, 32 kHz
(when sampling or playback)
48, 44.1, 32, 30, 24, 22.05, 16,
15, 11, 8 kHz (when importing)
44.1 kHz (Internal)
- **Data Format**
16 bits linear (compatible with
8 or 16 bits when importing)
- **Signal Processing**
AD Conversion: 20 bits
DA Conversion: 20 bits
Internal Processing: 24 bits lin-
ear
- **Frequency Response**
20 Hz to 20 kHz -3/-3 dB
- **Residual Noise Level**
MAIN OUT (L (MONO), R)
(VOLUME: MAX IHF-A typ.)
Balanced: -78 dBm or less
Unbalanced: -84 dBm or less
DIRECT OUT 1/2 (L, R) (IHF-
A typ.)
Balanced: -78 dBm or less
Unbalanced: -84 dBm or less
- **Nominal Input Level**
AUDIO IN (front): -10 dBm
(REC LEVEL: MIN) to -50
dBm (REC LEVEL: MAX)
STEREO INPUT (rear): +4, -10,
-20 dBm (selectable with a gain
switch)
- **Maximum Input Level**
AUDIO IN (front): +6 dBm
(REC LEVEL: MIN) to -34
dBm (REC LEVEL: MAX)
STEREO INPUT (rear): +20,
+6, -4 dBm
- **Input Impedance**
AUDIO IN (front): 10 kohms
STEREO INPUT (rear): 10
kohms
- **Nominal Output Level**
MAIN OUT (L (MONO), R)
Balanced: +10 dBm
Unbalanced: +4 dBm
- DIRECT OUT 1/2 (L, R)
Balanced: +10 dBm
Unbalanced: +4 dBm
- **Output Impedance**
Balanced: 2 kohms
Unbalanced: 1 kohms
- **Display**
240 x 64 dots (backlit LCD)
- **Disk Drive**
Zip Disk Drive (250 M bytes)
- **Connectors**
Headphones Jack
(stereo 1/4 inch phone type)
Audio In Jacks (1/4 inch phone
type, TRS balanced)
Digital Audio Interface
(conforms to S/P DIF)
OPTICAL Connectors
(IN, OUT)
COAXIAL Connectors
(IN, OUT)
SCSI Connectors
SCSI-A: DB-25 type
SCSI-B: Full pitch 50 pins type
MIDI Connectors (in, out, thru)
Stereo Input Jack (1/4 inch
phone type, TRS balanced)
Output Jacks (1/4 inch phone
type, TRS balanced)
MAIN OUT (L (MONO), R)
DIRECT OUT 1 (L, R)
DIRECT OUT 2 (L, R)
- **Power Supply**
AC 117 V, AC 230 V or AC 240 V
- **Power Consumption**
25 W (AC 117 V), 25 W (AC
230 V), 25 W (AC 240 V)
- **Dimensions**
482 (W) x 302 (D) x 87.8 (H)
mm
19 (W) x 11-15/16 (D) x 3-1/2
(H) inches
(EIA-2U rack mount type)
- **Weight**
5.4 kg/11 lbs 15 oz
- **Accessories**
Owner's Manual English
(71453378)
AC Cord Set 120 V (00894378)
AC Cord Set 230 V (00894389)
AC Cord Set 230 VA (23495124)
AC Cord Set 230 VE (00907001)
Demo Zip disk (71453367)
Sound Library CD-ROM
(71673278)
- **Options**
Audio Cable : PJ-1M
MIDI Cable : MSC-15/25/50
Dynamic Microphone : DR-10/
20
- 0 dBm = 0.775 Vrms

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

A LOCATION OF CONTROLS

B

[PARTS]

C

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E

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G

H

I

J

K

L

M

N

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P

Q

R

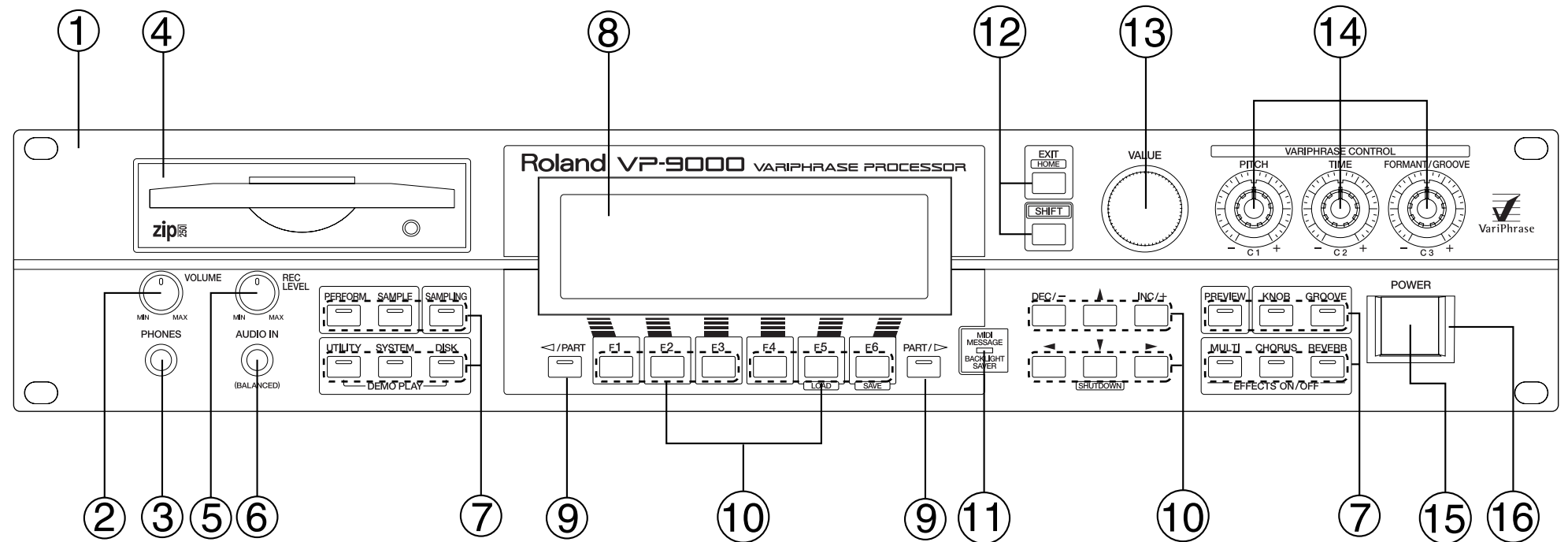
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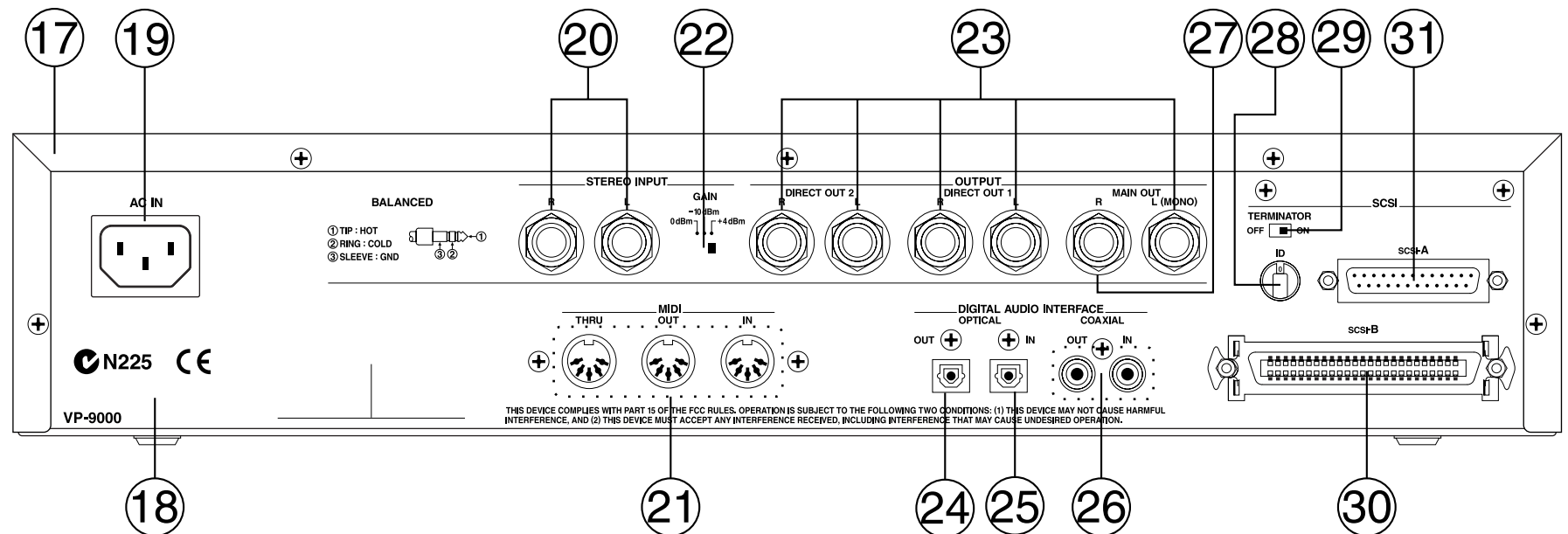
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V

No.	PART CODE	PART NAME
①	01901190	FRONT PANEL
②	01899212	P R-KNOB MF-A BLK/LCG
③	01901601	9M/M ROTARY POTENTIOMETER RK0971220 10KBx2
④	01129145	6.5MM JACK STEREO YKB21-5268 (=YKB21-5255)
⑤	02124656	ZIP DRIVE 250 MB
⑥	01899212	P R-KNOB MF-A BLK/LCG
⑦	02015978	9M/M ROTARY POTENTIOMETER RK0971220 10KRDx2
⑧	01561034	6.5MM JACK YKB21-5277 (1/4 INCH PHONE TYPE)
⑨	00900167	D S-KEYTOP SD3H BLK
⑩	01340290	PTR TACT SWITCH EVQ11A H=5.0
⑪	00348490	LED (RED) SLR-325VCT31
⑫	01901212	DISPLAY COVER
⑬	01893689	LCD UNIT RCM6018U-4A
⑭	00900145	D S-KEYTOP SD1H BLK
⑮	01340290	TACT SWITCH EVQ11A H=5.0
⑯	00348490	LED (RED) SLR-325VCT31
⑰	00904245	D S-KEYTOP SX3H BLK
⑱	01340290	PTR TACT SWITCH EVQ11A H=5.0
⑲	00348490	LED (RED) SLR-325VCT31
⑳	00345945	LENS LED 1H
㉑	01121689	LED (RED/GREEN) SPR-325MVWT31
㉒	00900189	D S-KEYTOP SX1H BLK
㉓	01340290	PTR TACT SWITCH EVQ11A H=5.0
㉔	22480321	S R-KNOB L BLK 248-321
㉕	02014145	ROTARY ENCODER EC16B36244 (L=20.DCUT=7)
㉖	01341267	J R-KNOB SF(BLK/RED)
㉗	01893801	9M/M ROTARY POTENTIOMETER EVUJEGFK3B14
㉘	22495565	F S-BUTTON MX BLK
㉙	01900089	PUSH SWITCH SDDL16500 TV-5 5A/250V
㉚	01459789	BUTTON ESCUTCHEON F B-ESCT MX1H-A BLK
㉛	01901145	TOP COVER
㉜	01901167	BOTTOM CHASSIS
㉝	01347623	AC INLET NC-176-1.0
㉞	01561034	6.5MM JACK YKB21-5277 (1/4 INCH PHONE TYPE)
㉟	22150756	JACK NUT 2
㊱	13429273	MIDI SOCKET YKF51-5046 (TRIPRET)
㊲	01127067	SLIDE SWITCH SSSF123-P06S0
㊳	01129145	6.5MM JACK STEREO YKB21-5268 (=YKB21-5255)
㊴	22150756	JACK NUT 2
㊵	01239078	IC (OPTICAL DIGITAL OUT) TOTX178A
㊶	01343001	IC (OPTICAL DIGITAL IN) TORX178A
㊷	00458801	PIN JACK x2 (ORGANGE) YKC21-3044 0/0
㊸	13449263	6.5MM JACK YKB21-5005 (W/SWICH)
㊹	22150756	JACK NUT 2
㊺	01901678	DIGITAL SWITCH 42J08GT
㊻	01901689	SLIDE SWITCH ESD170202
㊼	01899023	RC10-50R-LW
㊽	01905501	D-SUB DBE-25SF-T-N-26B
㊾	12359137	RUBBER FOOT SJ-5012 BLK



FRONT VIEW



REAR VIEW

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

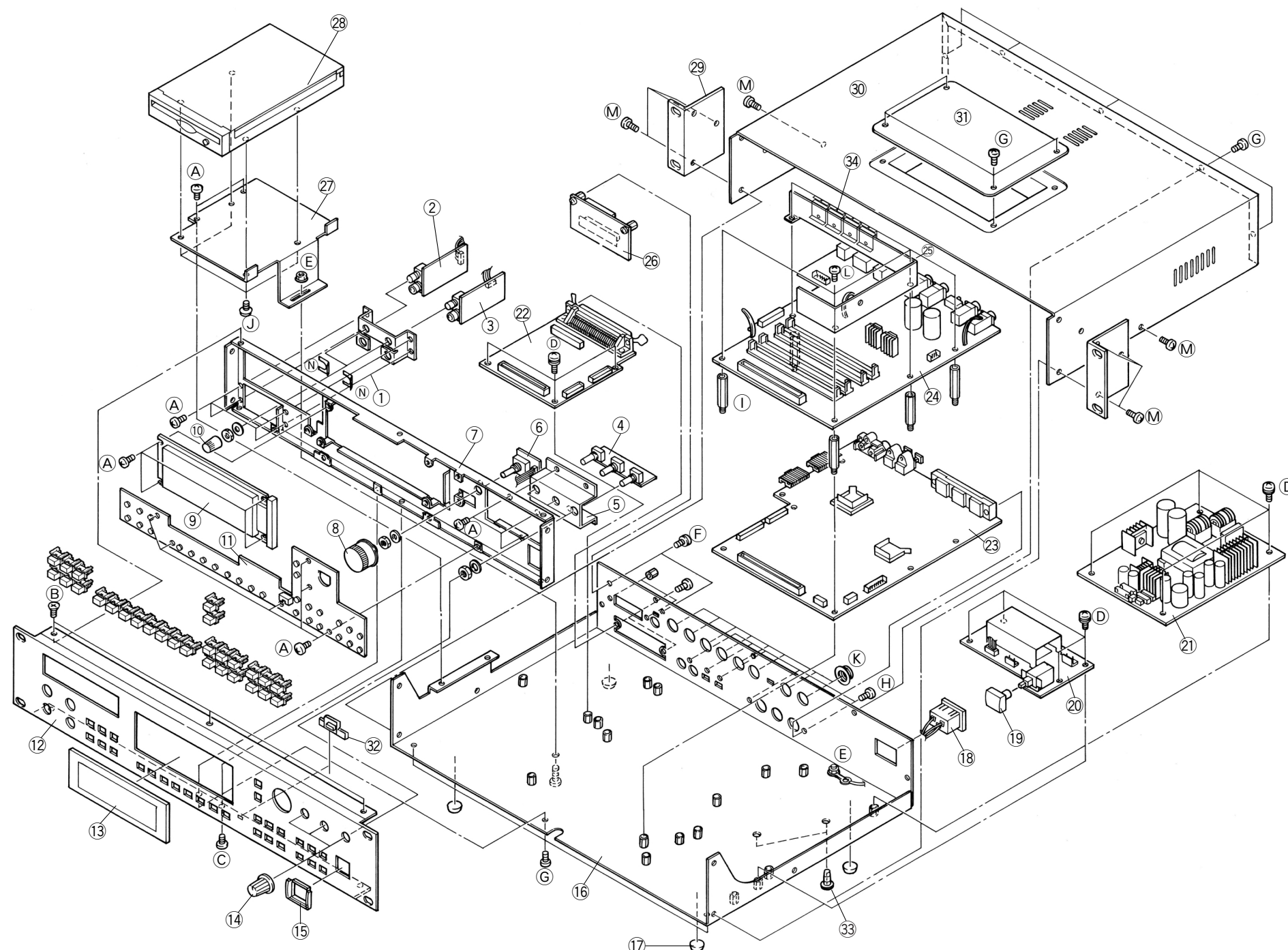
A EXPLODED VIEW

B [PARTS]

No.	PART CODE	PART NAME	Q'ty
①	01901201	AUDIO HOLDER	1
②	71452656	PWB PHONES ASSY	1
③	71452778	PWB MIC ASSY	1
④	71452623	PWB VOLUME ASSY	1
⑤	01901223	VOLUME HOLDER	1
⑥	71452634	PWB ENCODER ASSY	1
⑦	01901178	FRONT HOLDER	1
⑧	22480321	S R-KNOB L BLK 248-321	1
⑨	01893689	LCD UNIT RCM6018U-4A	1
⑩	01899212	P R-KNOB MF-A BLK/LCG	1
⑪	71452601	PWB PANEL ASSY	1
⑫	01901190	FRONT PANEL	1
⑬	01901212	DISPLAY COVER	1
⑭	01341267	J R-KNOB SF(BLK/RED)	3
⑮	01459789	BUTTON ESCUTCHEON F B-ESCT MX1H-A BLK	1
⑯	01901167	BOTTOM CHASSIS	1
⑰	12359137	RUBBER FOOT SJ-5012 BLK	4
⑱	01901801	WIRING W7	1
⑲	22495565	F S-BUTTON MX BLK	1
⑳	71452712	PWB INVERTER ASSY	1
㉑	01121234	SWITCHING REGULATOR RH2	1
㉒	71452745	PWB IDE-SCSI ASSY	1
㉓	71452689	MAIN TOTAL ASSY (EXG)	1
㉔	71452701	PWB JACK ASSY	1
㉕	01901189	PWR SPLY COVER	1
㉖	71452723	DSUB HOLDER ASSY	1
㉗	01901134	ZIP HOLDER	1
㉘	02124656	ZIP DRIVE 250 MB (BLACK)	1
㉙	22125586	2U RACK ANGLE	2
㉚	01901145	TOP COVER	1
㉛	01783878	EXP COVER 2H	1
㉜	00345945	LENS LED 1H	1
㉝	12199562	PCB SPACER KGLS-10RT BLK	2
㉞	02231145	GASKET 97-656-19	1

L [SCREWS]

No.	PART CODE	PART NAME	Q'ty
A	40011056	SCREW 3x6 BINDING TAPTITE B FE ZC	19
B	40011156	SCREW 3x8 FLAT BINDING TAPTITE FE BZC	3
C	40011101	SCREW 3x8 BINDING TAPTITE B FE BZC	1
D	40013067	SCREW M3x8 PAN MACHINE W/SW+SMALL PW ZC	9
E	40011745	HEX NUT M4 W/SPRING WASHER FE CM	2
F	40011489	SCREW M3x4 PAN MACHINE W/SW FE BZC	2
G	40011090	SCREW 3x6 BINDING TAPTITE B FE BZC	12
H	40011312	SCREW 3x8 BINDING TAPTITE P FE BZC	5
I	22153198	BOSS NUT DM-80-4 B	5
J	40017934	SCREW M3x6 PAN MACHINE W/SW+PW FE ZC	4
K	22150756	JACK NUT 2	8
L	40015945	SCREW 3x8 BINDING TAPTITE S FE ZC	5
M	40012345	SCREW 4x10 BINDING TAPTITE B FE BZC	8
N	12199556	JACK SNAP MET41-0105	2

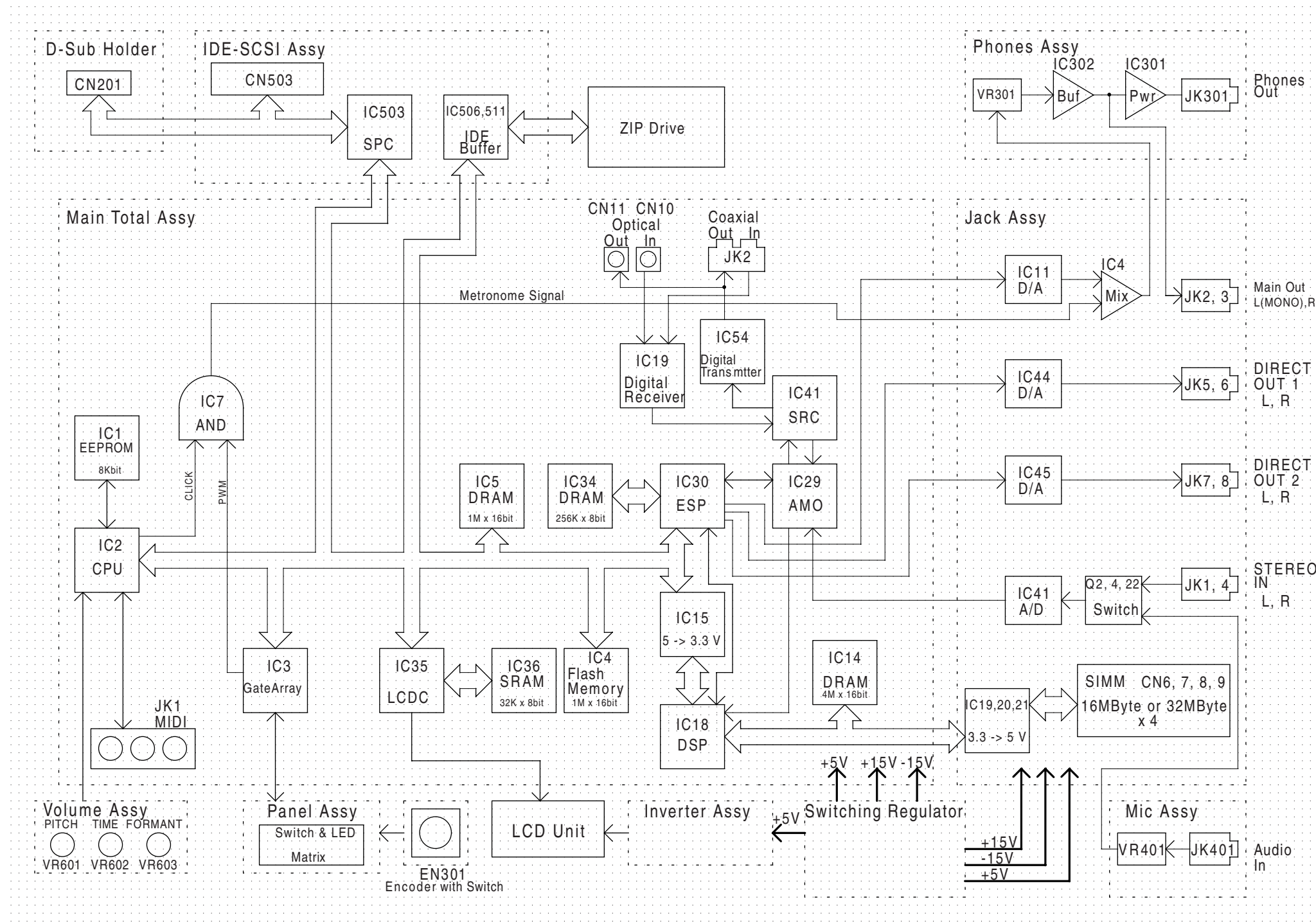


V

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

A BLOCK DIAGRAM

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PARTS LIST

SAFETY PRECAUTION: *1
The parts marked Δ have safety-related characteristics. Use only listed parts for replacement.

The parts marked # are new (initial parts). *2

CONSIDERATIONS ON PARTS ORDERING
When ordering any parts listed in the parts list, please specify the following items in the order sheet.

Ex.	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER
	10	22575241	Sharp key	C-20/50
	15	2247017300	Knob (orange)	DAC-15D

Failure to completely fill the above items with correct number and description will result in delayed or even undelivered replacement.

Main Board → MAIN TOTAL ASSY
Jack Board → PWB JACK ASSY
Panel Board → PWB PANEL ASSY
IDE-SCSI Board → PWB IDE-SCSI ASSY
Phones Board → PWB PHONES ASSY
Mic Board → PWB MIC ASSY
Volume Board → PWB VOLUME ASSY
Dsub Board → DSUB HOLDER ASSY
Encoder Board → PWB ENCODER ASSY
Inverter Board → PWB INVERTER ASSY

*1 *2
↓ ↓

				Q'ty
CASING				
#	01901145	TOP COVER		1
#	01901190	FRONT PANEL		1
#	01901189	PWR SPLY COVER		1
#	01901212	DISPLAY COVER		1
	01783878	EXP COVER 2H		1
	22125586	2U RACK ANGLE		2
#	02231445	GASKET	97-656	1
#	01459789	BUTTON ESCUTCHEON	F B-ESCT MX1H-A BLK	1
	00345945	LENS LED 1H		1
CHASSIS				
#	01901167	BOTTOM CHASSIS		1
#	01901134	ZIP HOLDER		1
#	01901178	FRONT HOLDER		1
#	01901201	AUDIO HOLDER		1
#	01901223	VOLUME HOLDER		1
KNOB, BUTTON				
	22495565	F S-BUTTON	MX BLK	1
	00900145	D S-KEYTOP	SD1H BLK	2
	00900167	D S-KEYTOP	SD3H BLK	4
	00900189	D S-KEYTOP	SX1H BLK	2
	00904245	D S-KEYTOP	SX3H BLK	4
	01341267	J R-KNOB	SF(BLK/RED)	3
	01899212	P R-KNOB	MF-A BLK/LCG	2
	22480321	S R-KNOB	L BLK 248-321	1
SWITCH				
#	01901678	42J08GT	DIGITAL SWITCH	1
#	01901689	ESD170202	SLIDE SWITCH	1
#	01900089	SDDL16500 TV-5 5A/250V	PUSH SWITCH	1
	01127067	SSSF123-P06S0	SLIDE SWITCH	1
	01340290	EVQ11A H=5.0	TACT SWITCH	28
JACK, EXT TERMINAL				
	13449263	YKB21-5005 W/SWICH	6.5MM JACK	1
	01561034	YKB21-5277 1/4 INCH PHONE TYPE	6.5MM JACK	1
	01129145	YKB21-5268 (=YKB21-5255)	6.5MM JACK STEREO	2 +1
	00458801	YKC21-3044 0/0	PIN JACK (ORG) PIN X 2	1
	13429273	YKF51-5046 (TRIPRET)	MIDI CONNECTOR	1
#	01899023	RC10-50R-LW	CN501 on IDE-SCSI Board	1
#	01905501	D-SUB DBE-25SF-T-N-26B	D-SUB CONNECTOR	1
DISPLAY UNIT				
#	01893689	RCM6018U-4A	LCD UNIT	1
NOTE: Replacement 'LCD UNIT RCM6018U-4A' should be made on a unit base.				

POWER SUPPLY UNIT				
#	01121234	RH2	SWITCHING REGULATOR	1
NOTE: Replacement 'SWITCHING REGULATOR RH2' should be made on a unit base.				
ZIP DRIVE				
#	02124656	ZIP DRIVE	250 MB	1
NOTE: Replacement 'ZIP DRIVE 250 MB' should be made on a unit base.				
PCB ASSY				
#	E71452689	MAIN TOTAL ASSY	(EXG)	1
NOTE: 'MAIN TOTAL ASSY' includes the following parts.				
#	02231578	SHIELD SHEET A		1
	40016601	NYLON RIVET	NRP-355	2
	01450745	QFP HEATSINK		2
	40342856	COATING CLIP	CP-1S	1
#	71452701	PWB JACK ASSY		1
NOTE: 'PWB JACK ASSY' includes the following parts.				
#	02230167	WIRING	W13	1
	02015989	HEATSINK	PC0615-22-PT	2
	40012878	SCREW M3x10	PAN SEMS FECM W/SW+PW	2
	40342856	COATING CLIP	CP-1S	3
#	71452601	PWB PANEL ASSY		1
#	71452745	PWB IDE-SCSI ASSY		1
NOTE: 'PWB IDE-SCSI ASSY' includes the following parts.				
#	02231412	SHIELD SHEET B		1
	40237101	SCREW M3x8	DOUBLE SEMS FE BZC	2
#	71452656	PWB PHONES ASSY		1
NOTE: 'PWB PHONES ASSY' includes the following parts.				
#	02122367	WIRING	9x250-P2.0-51065-51015-F	1
			CN301 on Phones Board	
#	71452778	PWB MIC ASSY		1
NOTE: 'PWB MIC ASSY' includes the following parts.				
#	01901590	WIRING	W6	1
			CN401 on Mic Board	
#	71452623	PWB VOLUME ASSY		1
NOTE: 'PWB VOLUME ASSY' includes the following parts.				
	00789856	RIBBON CABLE	5x200-P2.0	1
#	71452723	DSUB HOLDER ASSY		1
NOTE: 'DSUB HOLDER ASSY' includes the following parts.				
#	40345445	SCREW M3x4	PAN SEMS W/SW+SMALL ZC	2
#	02016856	STANDOFF M3	L7.1	2
#	40345456	SCREW M2.6x5	PAN SEMS W/SW+SMALL BZC	2
#	71452634	PWB ENCODER ASSY		1
NOTE: 'PWB ENCODER ASSY' includes the following parts.				
#	01901690	WIRING	6x30-P2.0-51065-51015-F	1
			CN301 on Encoder Board	
#	71452712	PWB INVERTER ASSY		1
NOTE: 'PWB INVERTER ASSY' includes the following parts.				
#	01909389	WIRING	8x100-P2.0-IL-51015-F	1
#	01901756	WIRING	W10	1
			CN404 on Inverter Board	
			CN403 on Inverter Board	

	01896234	RIBBON CABLE	3x90-P2.0		1
	01014101	INVERTER BOARD COVER			1
IC					
#	02017856	CPU HD6437042AA06F	IC (32BIT CPU)	IC2 on Main Board	1
#	01893745	DSPB56362PV100	IC (DSP CPU)	IC18 on Main Board	1
#	01903689	EPS2 FOR VARI	IC (DSP CUSTOM)	IC30 on Main Board	1
	01561945	LH28F160S5T-L70	IC (FLASH MEMORY)	IC4 on Main Board	1
	01906689	BR24C08F-E2	IC (EEPROM)	IC1 on Main Board	1
	01342978	TC160G22AF-1253	IC (CUSTOM)	IC3 on Main Board	1
	01780256	TC190G02AF-0017(AMO)	IC (I/F CUSTOM)	IC29 on Main Board	1
#	01456478	PCM1800E/T2	IC (ADC AD/DA)	IC41 on Jack Board	1
	01451578	AK4324-VF-E2	IC (DAC)	IC11,IC44,IC45 on Jack Board	3
	00893356	SYM53CF92	IC (SIO)	IC503 on IDE-SCSI Board	1
	01125112	TC55257DFL-70L(EL)	IC (SRAM)	IC36 on Main Board	1
#	01906712	LC324260AJ-60-TLM	IC (DRAM)	IC34 on Main Board	1
	01678501	HM5165165TT-6	IC (DRAM)	IC14 on Main Board	1
	01784767	HY5118164CJC-60TE1	IC (DRAM)	IC5 on Main Board	1
	15259743T0	TC74HC151AF(EL)	IC (CMOS)	IC53 on Main Board	1
	15259778T0	TC74HC245AF(EL)	IC (CMOS)	IC501,IC508,IC511 on IDE-SCSI Board	3
	15259809T0	TC74HC393AF(EL)	IC (CMOS)	IC39 on Main Board	1
	15259821T0	TC74HC573AF(EL)	IC (CMOS)	IC506 on IDE-SCSI Board	1
	15259823T0	TC74HC574AF(EL)	IC (CMOS)	IC101 on Panel Board	1
#	01901623	TC74LVXC3245FS	IC (CMOS)	IC19,IC23-IC26,IC35-IC37 on Jack Board	8
	00236889	TC74VHC157F(EL)	IC (CMOS)	IC24,IC43,IC44 on Main Board	3
	01789034	TC74VHC161F(EL)	IC (CMOS)	IC21 on Main Board	1
	01560823	TC74VHC164F	IC (CMOS)	IC32 on Main Board	1
#	01902001	TC74VHC374F(EL)	IC (CMOS)	IC57 on Main Board	1
	00236878	TC74VHC74F-EL	IC (CMOS)	IC64 on Main Board	1
	01670789	TC74VHCT08AF	IC (CMOS)	IC22 on Main Board	1
#	01901612	TC74VHCT138AF	IC (CMOS)	IC17,IC18 on Jack Board	2
#	00789689	TC74VHCT244AF(EL)	IC (CMOS)	IC20-IC22,IC27-IC32 on Jack Board	9
#	01906534	TC74VHCT32AF(EL)	IC (CMOS)	IC33 on Jack Board	1
#	01901990	TC74VHCT374AF(EL)	IC (CMOS)	IC23 on Main Board	1
#	01901967	TC74VHCT74AF(EL)	IC (CMOS)	IC16 on Main Board	1
	15249104	TC7S04F(TE85L)	IC (CMOS)	IC505 on IDE-SCSI Board. IC48 on Main Board	1 +1
	15259884	TC7S08F(TE85L)	IC (CMOS)	IC502 on IDE-SCSI Board. IC7,IC59 on Main Board	1 +2
	15259885	TC7S32F(TE85L)	IC (CMOS)	IC31,IC58 on Main Board	2
#	01901989	TC7SET04F(TE85L)	IC (CMOS)	IC17 on Main Board	1
	01786690	TC7SET08F(TE85L)	IC (CMOS)	IC20 on Main Board	1
	01348956	TC7SH00FU(TE85L)	IC (CMOS)	IC65 on Main Board	1
	00564701	TC7SH08F(TE85L)	IC (CMOS)	IC56,IC28 on Main Board	2
	15249116T0	TC7W00F(TE12L)	IC (CMOS)	IC33 on Main Board	1
	15249121	TC7W04F(TE12L)	IC (CMOS)	IC510 on IDE-SCSI Board. IC12 on Main Board	1 +1
	00127490	TC7W08F(TE12L)	IC (CMOS)	IC9,IC47 on Main Board	2
	01679412	TC7W139F(TE12L)	IC (CMOS)	IC34 on Jack Board	1
	15249112	TC7W32F(TE12L)	IC (CMOS)	IC38 on Main Board	1
#	01455323	TC7W34FU(TE12L)	IC (CMOS)	IC504 on IDE-SCSI Board	1
	01121834	TC7W74FU TE12L	IC (CMOS)	IC60 on Main Board	1
	15249111	TC7WU04F(TE12L)	IC (CMOS)	IC507 on IDE-SCSI Board. IC26,IC45, IC46,IC66 on Main Board	1 +4
	15259706T0	TC74HCU04AF(EL)	IC (HS-CMOS)	IC50 on Main Board	1
	01341567	TC74VHC163F(EL)	IC (TTL COUNTER)	IC61,IC62 on Main Board	2
	01458401	TC74LVX4245FS(EL)	IC (TTL)	IC15 on Main Board	1
#	01451623	TTL TC7SET32F(TE85L)	IC (TTL)	IC27 on Main Board	1
	15199137	AN7805F	IC (REGULATOR)	IC16,IC43 on Jack Board	2
	15199286	AN78L05M-(E1)	IC (REGULATOR)		1
	01233334	AN79L12M-(E1) -12V FLAT	IC (REGULATOR)	IC37 on Main Board	1
	01670890	PQ3DZ53U	IC (REGULATORC)	IC13 on Main Board	1
	15199944	SED1335F0B	IC (DRIVER)	IC35 on Main Board	1
	01124378	LC8905VD-TLM	IC (DIF/RECEIVER)	IC19 on Main Board	1
	01785178	TC9271FS	IC (DIF/TRANSMITTER)	IC54 on Main Board	1
	00893990	BH9595FP-TP	IC (SCSI ACTIVE TERMINATOR)	IC509 on IDE-SCSI Board	1
	15189261	M5218AFP-600E	IC (BIPOLAR OP AMP)	IC301 on Phones Board	1
	15189184	NE5532 SIG	IC (BIPOLAR OP AMP)	IC1-IC10,IC12-IC14 on Jack Board.	
	15289105	UPC4570G2-E2	IC (BIPOLAR OP AMP)	IC401 on Mic Board. IC302 on Phones Board	13 +1 +1
				IC46 on Jack Board. IC40 on Main Board	1 +1

	01893778	SM5844AF	IC (DIF/SAMPLE RATE CONVERTER)	IC41 on Main Board	1
	15199937	M51953BFP-600C	IC (RESET)	IC10 on Main Board	1
	01343001	TORX178A	IC (OPTICAL DIGITAL IN)	CN10 on Main Board	1
	01239078	TOTX178A	IC (OPTICAL DIGITAL OUT)	CN11 on Main Board	1
	15289125	PC-410KT 178FAY	IC (PHOTO COUPLER)	IC11 on Main Board	1

TRANSISTOR

	15309113	2SA1213-O (TE12R.C)	TRANSISTOR	Q14 on Jack Board	1
#	01902012	2SA1244Y(TE16L)	TRANSISTOR	Q9 on Main Board	1
#	00901523	2SA1681 (SC-62) (POW SW)	TRANSISTOR	Q27 on Jack Board	1
	15319101	2SC2412KR T146	TRANSISTOR	Q18,Q20 on Jack Board	2
	15319114	2SC2873-Y (TE12R.C)	TRANSISTOR	Q12 on Jack Board	1
	15319105	2SC3326-A	TRANSISTOR	Q3,Q5-Q11,Q13,Q15,Q16,Q19 on Jack Board.	12 +2
	01239990	2SC4117-GR (TE85L)	TRANSISTOR	Q301,Q302 on Phones Board	2
#	01906701	2SD2114K T146	TRANSISTOR	Q401,Q402 on Mic Board	2
	01451245	RN1414 (TE85L)	TRANSISTOR	Q6 on Main Board	1
	15329521	RN1307 (TE85R)	TRANSISTOR	Q103-Q110 on Panel Board	8
	15329533	RN2307 (TE85R)	TRANSISTOR	Q21,Q24,Q26 on Jack Board	3
	01783612	RN2426 (TE85L)	TRANSISTOR	Q23,Q25 on Jack Board	2
	15329507	DTA114EKT146	DIGITAL TRANSISTOR	Q101,Q102 on Panel Board	2
	15329516	DTC114EKT146	DIGITAL TRANSISTOR	Q1,Q4,Q7,Q10 on Main Board	4
	15329511	DTC114TKT146	DIGITAL TRANSISTOR	Q1 on Jack Board. Q5,Q8 on Main Board	1 +2
	15329104	2SK368-GR (TE85L)	FET TRANSISTOR	Q2,Q3 on Main Board	2
				Q2,Q4,Q22 on Jack Board	3

DIODE

#	01560145	RB706F-40 T106	SCHOTTKY DIODE	DA2,DA3 on Jack Board	2
	01780045	RB051L-40	SCHOTTKY DIODE		1
#	01456456	TE-17 13B	ZENER DIODE	D3 on Jack Board	1
#	01901923	RD3.0S-T1	ZENER DIODE	D1 on Main Board	1
#	01901934	RD18S-T1	ZENER DIODE	D2 on Main Board	1
	01121323	DA204U T106	ARRAY DIODE	DA1 on Jack Board. DA1,DA3-DA8 on Main Board	1 +7
	01121334	DAN202U T106	ARRAY DIODE	DA4 on Jack Board. DA9 on Main Board	1 +1
	15339105	DAN202K T146 (CHIP)	ARRAY DIODE	DA101-DA115 on Panel Board	15
	15339141	DSD010-TB	ARRAY DIODE	D501-D504 on IDE-SCSI Board. D1 on Jack Board. D3 on Main Board	4 +1 +1
	00348490	SLR-325VCT31	LED (RED)	LED101-LED107,LED109-LED115 on Panel Board	14
	01121689	SPR-325MVWT31	LED (RED/GREEN)	LED108 on Panel Board	1

RESISTOR

	15399952	MCR50JZH470 1/2W	CHIP RESISTOR	R303,R304,R314,R315 on Phones Board	4
	01011856	RPC05T 0R0 J	MTL.FILM RESISTOR	on Main Board	114
	00120289	RR1220P-104-D 100K OHM (CHIP)	MTL.FILM RESISTOR	R406,R412,R413 on Mic Board	3
	00560890	RR1220P-823D	MTL.FILM RESISTOR		2
	00564234	RR1220P-473-D 47K OHM (CHIP)	MTL.FILM RESISTOR	R410,R411 on Mic Board	2
	00566867	RPC05T 100 J	MTL.FILM RESISTOR	R37,R84,R96,R97,R193 on Main Board	4
	00566912	RPC05T 220 J	MTL.FILM RESISTOR	R62,R212 on Main Board	2
	00567001	RPC05T 750 J	MTL.FILM RESISTOR	R144,R146 on Main Board	2
	00567023	RPC05T 101 J	MTL.FILM RESISTOR	R52,R67,R44,R56,R101,R109,R171,R187 on Main Board	8
	00567034	RPC05T 121 J	MTL.FILM RESISTOR	R61,R118 on Main Board	2
	00567045	RPC05T 151 J	MTL.FILM RESISTOR	R135 on Main Board	1
	00567067	RPC05T 221 J	MTL.FILM RESISTOR	R23,R63-R66,R210 on Main Board	6
	00567112	RPC05T 471 J	MTL.FILM RESISTOR	R93,R126,R137 on Main Board	3
	00567134	RPC05T 681 J	MTL.FILM RESISTOR	R138 on Main Board	1
	00567156	RPC05T 102 J	MTL.FILM RESISTOR	R60,R71,R129,R197 on Main Board	4
	00567190	RPC05T 222 J	MTL.FILM RESISTOR	R26,R72,R115 on Main Board	3
	00567212	RPC05T 332 J	MTL.FILM RESISTOR	R25 on Main Board	1
	00567245	RPC05T 472 J	MTL.FILM RESISTOR	R54,R74 on Main Board	2
	00567278	RPC05T 822 J	MTL.FILM RESISTOR	R73 on Main Board	1
	00567289	RPC05T 103 J	MTL.FILM RESISTOR	R1,R3-R5,R8,R13-R15,R21,R24,R28,R30, R33,R55,R69,R76,R79,R85,R110,R117,R122, R128,R133,R170,R188,R189 on Main Board	26
	00567290	RPC05T 123 J	MTL.FILM RESISTOR	R114 on Main Board	1
	00567378	RPC05T 473 J	MTL.FILM RESISTOR	R134 on Main Board	1
	00567412	RPC05T 104 J	MTL.FILM RESISTOR	R57-R59,R107,R116,R120 on Main Board	6
	00567501	RPC05T 474 J	MTL.FILM RESISTOR	R112 on Main Board	1

00567523	RPC05T 684 J	MTL.FILM RESISTOR	R113 on Main Board	1			on Jack Board	1 +2	
00567556	RPC05T 105 J	MTL.FILM RESISTOR	R92,R123,R136,R196 on Main Board	4	15399705	MCR25JZH331	MTL.FILM RESISTOR	R25,R43,R57,R75,R91,R99,R107, R115,R124,R133,R142,R155 on Jack Board	12
00787334	RR1220P-272-D 2.7KOHM (CHIP)	MTL.FILM RESISTOR	R32,R77 on Jack Board	2			R415,R416 on Mic Board	2	
00787345	RR1220P-821-D 820	MTL.FILM RESISTOR	R39,R84 on Jack Board	2	15419701	RR1220P-103-D 10K OHM (CHIP)	MTL.FILM RESISTOR	R409 on Mic Board	1
00897245	RR1220P-222-D 2.2K (D)	MTL.FILM RESISTOR	R401,R402 on Mic Board	2	15419706	RR1220P-122-D 1.2K OHM (CHIP)	MTL.FILM RESISTOR	R407,R414 on Mic Board	2
00899178	RR1220P-683-D (68K D-RANK)	MTL.FILM RESISTOR	R23,R68 on Jack Board	2	15419708	RR1220P-123-D 12K OHM 1/10W	MTL.FILM RESISTOR	R404 on Mic Board	1
00908389	MCR100JZH J 331	MTL.FILM RESISTOR	R119,R126,R130,R134 on Jack Board	4	15419717	RR1220P-273-D 27K 1/10W	MTL.FILM RESISTOR	R219,R220 on Jack Board	2
01013867	RR1220P-390D	MTL.FILM RESISTOR	R408 on Mic Board	1	01018223	RR1220P-470D	RESISTOR	RA502,RA503 on IDE-SCSI Board. RA6, RA9,RA10-RA15 on Jack Board. RA2, RA5,RA10,RA15,RA20,RA32,RA33, RA35,RA37,RA39,RA43,RA49,RA57 on Main Board	2 +8 +13
01013890	RR1220P-221-D 220 OHM 1/10W	MTL.FILM RESISTOR	R208,R209 on Jack Board	2	00126134	EXB-A10E103J	RESISTOR ARRAY	RA501 on IDE-SCSI Board	1
01122089	RR1220Q-220-D 22 OHM (CHIP)	MTL.FILM RESISTOR	R405,R417 on Mic Board	2	# 01455367	EXB-A10E102J	RESISTOR ARRAY	RA44,RA45 on Main Board	2
# 01233456	RR1220R-124-D	MTL.FILM RESISTOR		4	# 01906656	MNR14 EOAB J 000	RESISTOR ARRAY	RA3,RA6-RA9,RA11-RA14,RA16-RA19, RA21-RA23,RA25,RA27,RA28,RA30,RA31, RA50-RA52,RA55,RA56,RA58-RA61 on Main Board	31
01569734	MCR25 JZH J 681	MTL.FILM RESISTOR	R114,R132,R24,R141,R98,R123,R106,R90, R74,R56,R42,R154 on Jack Board	12	# 02125501	MNR14 EOAB J 220	RESISTOR ARRAY	RA1-RA4,RA20-RA29,RA30-RA36 on Jack Board. RA38,RA40,RA41, RA54 on Main Board	4 +4
01897878	RPC05T 512 J	MTL.FILM RESISTOR	R131,R132 on Main Board	2	# 02231590	MNR14 EOAB J 221	RESISTOR ARRAY	RA5,RA16-RA19 on Jack Board. RA1,RA29, RA34,RA42,RA47,RA53 on Main Board	5 +6
01897901	RPC05T 243 J	MTL.FILM RESISTOR	R130 on Main Board	1	01906667	MNR14 EOAB J 100	RESISTOR ARRAY	RA24 on Main Board	1
# 02014945	MCR50 JZH J 0R0	MTL.FILM RESISTOR		1				R535 on IDE-SCSI Board	1
# 02017490	MCR100 JZH J 0R0	MTL.FILM RESISTOR	R228,R243 on Jack Board	2					
15399301	RPC10T 0R0 J	MTL.FILM RESISTOR	on IDE-SCSI Board. on Jack Board. on Main Board. on Mic Board. on Phones Board. on Dsub Board	3 +3 +49 +3 +4 +3	# 01906678	MNR14 EOAB J 103	RESISTOR ARRAY		
15399349	RPC10T 100 J 1/10W	MTL.FILM RESISTOR	R176,R207,R200 on Jack Board	3	01906945	MNR14 EOAB J 101	RESISTOR ARRAY		
15399357	RPC10T 220 1/10W	MTL.FILM RESISTOR	R195,R252-R260 on Jack Board	10	01898345	ERY43SA125VA	THERMISTOR		
15399369	RPC10T 680 J 1/10W	MTL.FILM RESISTOR	R104-R110 on Panel Board	7					
15399373	RPC10T 101 J 1/10W	MTL.FILM RESISTOR	R601,R602,R603 on Volume Board. R4, R149,R152,R210-R213 on Jack Board. R103 on Panel Board	7 +3 +2					
15399381	RPC10T 221 J 1/10W	MTL.FILM RESISTOR	R147 on Jack Board	1					
15399385	RPC10T 331 J 1/10W	MTL.FILM RESISTOR		1					
15399389	RPC10T 471 J 1/10W	MTL.FILM RESISTOR	R529 on IDE-SCSI Board. R251,R1 on Jack Board	2					
15399397	RPC10T 102 J 1/10W	MTL.FILM RESISTOR	R303-R306 on Encoder Board. R501-R503, R509 on IDE-SCSI Board. R13,R45,R64,R92, R160 on Jack Board. R311,R322 on Phones Board	4 +5 +4 +2					
15399401	RPC10T 152 J 1/10W	MTL.FILM RESISTOR	R153 on Jack Board	1					
15399403	RPC10T 182 J	MTL.FILM RESISTOR	R250 on Jack Board	1					
15399407	RPC10T 272 J	MTL.FILM RESISTOR	R214,R217 on Jack Board. R301,R305, R312,R316 on Phones Board	2 +4					
15399409	RPC10T 332 J 1/10W	MTL.FILM RESISTOR	R5,R30,R33,R47,R63,R76,R79,R95, R101,R111,R117,R128,R136,R145, R157 on Jack Board	15					
15399411	RPC10T 392 J 1/10W	MTL.FILM RESISTOR	R19,R27,R54,R59,R81,R93,R102,R108, R118,R125,R137,R143 on Jack Board	12					
15399413	RPC10T 472 J 1/10W	MTL.FILM RESISTOR	R403 on Mic Board	1					
15399415	RPC10T 562 J 1/10W	MTL.FILM RESISTOR	R12,R20,R50,R55 on Jack Board. R309,R320 on Phones Board	2					
15399417	RPC10T 682 J 1/10W	MTL.FILM RESISTOR	R26,R34,R36,R41,R67,R69,R73,R80,R96, R97,R112,R113,R129,R131,R146,R150 on Jack Board. R302,R306,R308,R313, R317,R319 on Phones Board	16 +6 16					
15399419	RPC10T 822 J 8.2K OHM 1/10W	MTL.FILM RESISTOR							
15399421	RPC10T 103 J 1/10W	MTL.FILM RESISTOR	R518,R532,R533,R534,R530,R531 on IDE-SCSI Board. R2,R8,R22,R31,R38, R40,R46,R60,R62,R71,R78,R83,R85,R94, R100,R109,R110,R116,R127,R135,R144, R151,R156,R197 on Jack Board	6 +24	# 02014890	RA2-16V221MT2	CERAMIC CAPACITOR	C146,C148,C150 on Main Board	3
15399423	RPC10T 123 J	MTL.FILM RESISTOR	R29,R61 on Jack Board	2	# 02014912	RA2-25V100MT2	CERAMIC CAPACITOR	C90 on Main Board	1
15399425	RPC10T 153 J	MTL.FILM RESISTOR	R301,R302 on Encoder Board. R11,R49, R86,R103,R120,R138,R177,R178,R182, R188,R193,R194,R215,R218 on Jack Board	14 +2	# 02127812	RA2-25V470MT2	CERAMIC CAPACITOR	C83 on Jack Board. C401 on Mic Board	16 +1 +1 +3 +8
15399429	RPC10T 223 J 1/10W	MTL.FILM RESISTOR	R528 on IDE-SCSI Board. R3,R14,R17,R18, R51,R52,R53,R87,R88,R104,R105,R121,R122, R139,R140,R171,R172,R233 on Jack Board	1	# 02129590	RA2-16V102MC-S1	CERAMIC CAPACITOR	C166,C179 on Main Board	2
15399441	RPC10T 683 J	MTL.FILM RESISTOR	R15,R44,R65,R89 on Jack Board	4	13519634M0	ECKR1H102KB5	CERAMIC CAPACITOR	C40,C141 on Main Board	2
15399445	RPC10T 104 J 1/10W	MTL.FILM RESISTOR	R6,R21,R35,R37,R70,R82,R159,R173 on Jack Board. R418 on Mic Board. R318, R326 on Phones Board	10 +2 +1	# 15349405M0	GRM40B273K50PT	CERAMIC CAPACITOR	C159,C171,C204 on Main Board	3
15399449	RPC10T 154 J	MTL.FILM RESISTOR	R148 on Jack Board	1	15359206R0	GRM40F104Z25PT10	CERAMIC CAPACITOR	C95,C96 on Main Board	2
15399469	RPC10T 105 J 1/10W	MTL.FILM RESISTOR	R527 on IDE-SCSI Board. R174,R175		15359374	ECUV1H101KG 100PF/50V	CERAMIC CAPACITOR	C170 on Main Board	1
					15359436R0	GRM40B102K50PT10 1000PF/50V	CERAMIC CAPACITOR	C24 on Main Board	1
					15359439R0	GRM40B182K50PT10	CERAMIC CAPACITOR	C194-C196,C198-C200,C202-C204, C206-C208 on Jack Board. C17,C28-C30, C56,C72-C75,C78,C79,C81,C87,C89, C126-C128 on Main Board	12 +17
								C302,C314 on Phones Board	2
								C14,C22,C28,C40,C45,C52 on Jack Board	4
								C308,C311 on Phones Board	2
								C417,C419 on Mic Board	2
								C134,C167,C181 on Jack Board	3
								C3,C5 on Jack Board	2
									81 +5 +3
								C6,C250 on Jack Board	6
								C43,C114,C16,C21,C25,C38,C48,C50,C55, C66,C71,C93,C109,C128,C30 on Jack Board. C305,C316 on Phones Board	12 +2
								C501,C506,C509,C511 on IDE-SCSI Board	4
								C8,C13,C23,C33,C39,C47,C281,C282 on Jack Board	8
								C516 on IDE-SCSI Board	1
								C517 on IDE-SCSI Board	1
								C601 on Volume Board. C301 on Encoder Board. C502-C505,C507,	

POTENTIOMETER

# 01901601	RK0971220 10KBx2	9M/M ROTARY POTENTIOMETER	VR301 on Phones Board	1
# 02015978	RK0971220 10KRDx2	9M/M ROTARY POTENTIOMETER	VR401 on Mic Board	1
# 01893801	EVUJEGFK3B14	9M/M ROTARY POTENTIOMETER	VR601,VR602,VR603 on Volume Board	3

CAPACITOR

00907689	GRM40F105Z16PT	CERAMIC CAPACITOR	C146,C148,C150 on Main Board	3
# 01233101	GRM39B183K50PT	CERAMIC CAPACITOR	C90 on Main Board	1
01672423	GRM40CH101J50PT	CERAMIC CAPACITOR	C83 on Jack Board. C401 on Mic Board	16 +1 +1 +3 +8
01674190	ECUV1H150JCV	CERAMIC CAPACITOR		4
01674201	ECUV1H180JCV	CERAMIC CAPACITOR		2
01674612	ECJ1VB1H103K	CERAMIC CAPACITOR	C166,C179 on Main Board	2
01674701	ECJ1VF1E104Z 0.1UF/16VK	CERAMIC CAPACITOR		118
01674712	ECJ1VF1A105Z	CERAMIC CAPACITOR	C40,C141 on Main Board	2
01675190	GRM39CH220J50PT	CERAMIC CAPACITOR	C159,C171,C204 on Main Board	3
01675201	GRM39CH270J50PT	CERAMIC CAPACITOR	C95,C96 on Main Board	2
01675212	GRM39CH330J50PT	CERAMIC CAPACITOR	C170 on Main Board	1
01675367	GRM39CH471J50PT	CERAMIC CAPACITOR	C24 on Main Board	1
# 01901634	JMK212BJ475MG-B	CERAMIC CAPACITOR	C194-C196,C198-C200,C202-C204, C206-C208 on Jack Board. C17,C28-C30, C56,C72-C75,C78,C79,C81,C87,C89, C126-C128 on Main Board	12 +17
# 02014890	RA2-16V221MT2	CERAMIC CAPACITOR	C302,C314 on Phones Board	2
# 02014912	RA2-25V100MT2	CERAMIC CAPACITOR	C14,C22,C28,C40,C45,C52 on Jack Board	4
# 02127812	RA2-25V470MT2	CERAMIC CAPACITOR	C308,C311 on Phones Board	2
# 02129590	RA2-16V102MC-S1	CERAMIC CAPACITOR	C417,C419 on Mic Board	2
13519634M0	ECKR1H102KB5	CERAMIC CAPACITOR	C134,C167,C181 on Jack Board	3
# 15349405M0	GRM40B273K50PT	CERAMIC CAPACITOR	C3,C5 on Jack Board	2
15359206R0	GRM40F104Z25PT10	CERAMIC CAPACITOR		81 +5 +3
15359374	ECUV1H101KG 100PF/50V	CERAMIC CAPACITOR		11
15359436R0	GRM40B102K50PT10 1000PF/50V	CERAMIC CAPACITOR	C6,C250 on Jack Board	6
15359439R0	GRM40B182K50PT10	CERAMIC CAPACITOR	C43,C114,C16,C21,C25,C38,C48,C50,C55, C66,C71,C93,C109,C128,C30 on Jack Board. C305,C316 on Phones Board	12 +2
15359614R0	GRM40CH220J50PT10	CERAMIC CAPACITOR	C501,C506,C509,C511 on IDE-SCSI Board	4
15359616R0	GRM40CH150J50PT10	CERAMIC CAPACITOR	C8,C13,C23,C33,C39,C47,C281,C282 on Jack Board	8
15359617R0	GRM40CH180J50PT10	CERAMIC CAPACITOR	C516 on IDE-SCSI Board	1
15359618R0	GRM40CH120J50PT10	CERAMIC CAPACITOR	C517 on IDE-SCSI Board	1
15359707R0	GRM40F104Z50PT85 0.1UF/50V	CERAMIC CAPACITOR	C601 on Volume Board. C301 on Encoder Board. C502-C505,C507,	

			C508,C510,C512,C513,C515,C518, C519,C522,C523,C525 on IDE-SCSI Board. C401,C402 on Inverter Board. C101-C104, C113 on Panel Board	15 +2 +1 +1 +4	
15359733M0	GRM40F103Z50PT	CERAMIC CAPACITOR	C302,C303 on Encoder Board	2	
00568801	ECEA1EPZ470B	CHEMICAL CAPACITOR	C421 on Mic Board	1	
01346001	ECEA1HPZ220B 22UF/50V	CHEMICAL CAPACITOR	C422,C423 on Mic Board	2	
01454889	RA2-16V470MT2 470UF/16V	CHEMICAL CAPACITOR	C97,C103 on Jack Board. C424,C425 on Mic Board	2 +2	
01455845	16CV22NP	CHEMICAL CAPACITOR	C167,C180 on Main Board	2	
01672323	ROS-16V152M	CHEMICAL CAPACITOR	C95,C101 on Jack Board	2	
01893656	ROS-16V101M-T2	CHEMICAL CAPACITOR	C135,C137 on Jack Board	2	
01900823	RA2-16V100M-T2	CHEMICAL CAPACITOR	C4,C15,C41,C59,C62,C127,C252, C253,C255,C258,C260 on Jack Board	11	
01900834	RA2-16V101M-T2	CHEMICAL CAPACITOR	C17,C34,C217 on Jack Board. C410 on Mic Board	3 +1	
01909667	ECEA1CPZ101B	CHEMICAL CAPACITOR	C18,C26,C35,C44,C51,C64,C70, C78,C89,C107,C111,C126 on Jack Board	12	
01909690	RA2-16V471M-T2	CHEMICAL CAPACITOR	C112 on Jack Board	1	
02014923	RA2-35V470MT2	CHEMICAL CAPACITOR		2	
13639682	ECEA1CK5470B (H=5MM)	CHEMICAL CAPACITOR		3 +1	
15369105S0	6.3CV100B 100UF/6.3V	CHEMICAL CAPACITOR	C52 on Main Board	1	
15369142S0	16CV10BS 10UF/16V	CHEMICAL CAPACITOR	C47 on Main Board	1	
15369144S0	16CV33BS 33UF/16V	CHEMICAL CAPACITOR	C132,C137,C139,C208 on Main Board	4	
15369145S0	16CV47BS 47UF/16V	CHEMICAL CAPACITOR	C520,C521,C524 on IDE-SCSI Board. C41 on Main Board	1	
15369151S0	16CV100BS-T 100UF/16V	CHEMICAL CAPACITOR	C149,C147,C151 on Main Board	3	
15369161S0	25CV4R7BS 4.7UF/25V	CHEMICAL CAPACITOR	C162 on Main Board	1	
#	00239390	AMZV0050J561 0200	POLYEST. CAPACITOR	C19,C36,C53,C72,C91,C113 on Jack Board	6
#	00239412	AMZV0050J122 0200	POLYEST. CAPACITOR	C12,C31,C49,C67,C86,C110 on Jack Board	6
	01563745	ECHU1C103JB5	POLYEST. CAPACITOR	C165 on Main Board	1
	01784123	ECHU1H471JX5	POLYEST. CAPACITOR	C153,C155 on Jack Board	2
	01898434	ECHU1H101JX5	POLYEST. CAPACITOR	C407,C412 on Mic Board	2
	01899345	ECHU1H121JX5	POLYEST. CAPACITOR	C408,C409,C411,C413,C414 on Mic Board	5
	01905534	ECHU1H221JX5	POLYEST. CAPACITOR	C404 on Mic Board	1
	01893267	TCFGA0J106M8R	TANTALUM CAPACITOR	C193,C197,C201,C223,C224,C225 on Jack Board	6
#	02122378	SK4-1C475MZ4-RA	TANTALUM CAPACITOR	C157,C159 on Jack Board	2
INDUCTOR, COIL, FILTER					
	00907856	BLM21A601SPT	FERRITE-BEAD	L101-L116 on Panel Board	18 +16
#	02231589	BK1608HS601-T	FERRITE-BEAD		11
	01565589	N1608ZA601T01	FERRITE-BEAD		1
	12449357	PLT1R53C	LINE-FILTER COIL	FL401 on Inverter Board	1
CRYSTAL, RESONATOR					
#	01905512	AT-41CD2 8.192MHZ	X'TAL	X5 on Main Board	1
	01343490	MA-406 4MHZ	X'TAL	X2 on Main Board	1
#	01893790	MA-406 8.25MHZ	X'TAL	X1 on Main Board	1
	01124812	MA-406 10MHZ	X'TAL	X4 on Main Board	1
#	01455201	MA-406 12.288MHZ	X'TAL	X6 on Main Board	1
	00902301	MA-406 22.5792MHZ TE24	X'TAL	X7 on Main Board	1
	01342145	MA-406 25.000MHZ TE24	X'TAL	X501 on IDE-SCSI Board	1
	01453167	SG-8002DC 67.7376MHZ PHC	OSCILLATOR	X3 on Main Board	1
ENCODER					
#	02014145	EC16B36244 (L=20.DCUT=7)	ROTARY ENCODER	EN301 on Encoder Board	1
CONNECTOR					
#	01454967	PS-60PE-D4T1-B1-K	CONNECTOR	CN5 on Jack Board. CN6 on Main Board	1 +1
	01456556	52044-3045	CONNECTOR		1
#	01901712	21R-1.25FJ	CONNECTOR	CN504,CN505 on IDE-SCSI Board	2
#	01901745	B2P4-VH 7A/250V	CONNECTOR	CN405 on Inverter Board	1
#	01901912	21P-1.25FJ	CONNECTOR	CN4,CN5 on Main Board	2
#	01906490	52045-2045	CONNECTOR	CN10 on Jack Board. CN1 on Main Board	1 +1
#	01909289	52045-2445	CONNECTOR		1
#	02014867	52044-2445	CONNECTOR	CN3 on Main Board. CN202 on Dsub Board	1
	13369898	B2P3-VH 7A/250V	CONNECTOR	CN402 on Inverter Board	1
	13369927	53253-0510 (2MM PITCH)	CONNECTOR	CN1 on Jack Board	1

13369928	53253-0610	CONNECTOR	CN102 on Panel Board	1
13369931	53253-0910 (2MM PITCH)	CONNECTOR	CN2 on Jack Board	1
13369934	53253-1210 (2MM PITCH)	CONNECTOR	CN4 on Jack Board. CN8 on Main Board	1 +1
13369936	53253-1410 (2MM PITCH)	CONNECTOR	CN7 on Main Board	1
13429192	PS-40PE-D4T1-B1-K	CONNECTOR	CN503 on IDE-SCSI Board	1
13429292	51048-0300 3PIN	CABLE HOLDER	CN401 on Inverter Board	1
13429294	51048-0500(5P)	CABLE HOLDER		1
01454989	52045-3045	FFC/FPC CONNECTOR	CN502 on IDE-SCSI Board	1
13369598	52147-0310 3PIN	WIRE TRAP	CN9 on Main Board	1
13369600	52147-0510(5P)	WIRE TRAP	CN601 on Volume Board. CN2 on Main Board	1

WIRING, CABLE

#	01901801	WIRING	W7	1
#	02015990	WIRING	14x175-P2.0-51065-PH-F	1
#	02016001	WIRING	12x320-P2.0-IL-51065-F	1
#	02016023	WIRING	IDE	1
#	02016034	WIRING	SIMM	1
#	02230156	WIRING	W12	1
#	02014978	FUJI CARD	20x80-A6.0 BBR-P1.25-HBL10	1
	01121756	FUJI CARD	24x300-A6.OBBR-P1.25-HBL10	1
	01787445	FUJI CARD	30x80-A6.0 BBR-P1.25	1

TRANSFORMER

	00900901	CXA-M10AL 560000030	INVERTER MODULE	MOD401 on Inverter Board	1
	12449615	PT-10244-615	PULSE TRANSFORMER	FL1 on Main Board	1

AC INLET,OUTLET

△	01347623	NC-176-1.0	AC INLET	
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SCREW

	40011489	SCREW M3x4	PAN MACHINE W/SW+SMALL PW FE BZC	2
	40011056	SCREW 3x6	BINDING TAPTITE B ZC	2 +17
	40011090	SCREW 3x6	BINDING TAPTITE B ZC	13
	40017934	SCREW M3x6	PAN MACHINE W/SW+PW FE ZC	4
	40011312	SCREW 3x8	BINDING TAPTITE P FE BZC	5
	40015945	SCREW 3x8	BINDING TAPTITE S ZC	5
	40013067	SCREW M3x8	PAN MACHINE W/SW+SMALL PW ZC	13
	40011101	SCREW 3x8	BINDING TAPTITE B FE BZC	1
	40011156	SCREW 3x8	FLAT TAPTITE B FE BZC	3
	40012345	SCREW 4x10	BINDING TAPTITE B ZC	8
	22153198	BOSS NUT B	215-198 L=35MM	5
	40011745	HEX NUT M4	W/SPRING WASHER FECM	2
	22150756	JACK NUT 2		8
	12199556	JACK SNAP	MET41-0105	2

PACKING

#	01901090	PACKING CASE		1
#	01901112	UPPER PAD		1
#	01901123	LOWER PAD		1

MISCELLANEOUS

#	01126034	IC SOCKET	52706-7220	CN6-CN9 on Jack Board	4
	12359137	RUBBER FOOT	SJ-5012 BLK		4
	40126812	CAUTION LABEL	BARRIER (100V/117V ONLY)		1
	12199562	LOCKING CARD SPACER	KGLS-10R (BLACK)		2
	40016512	INSULOK TIE	80M/M T-18S		5

ACCESSORIES (STANDARD)

#	71453356	OWNER'S MANUAL SET	JAPANESE	1
#	71453378	OWNER'S MANUAL SET	ENGLISH	1
△	00894367	AC CORD SET 100 V	SP18A+IS14 VCTF2x0.75	1
△	00894378	AC CORD SET 120 V	SP301+IS14 SJT18/3	1
△	00894389	AC CORD SET 230 V	SP22+IS14 H05VV-F3G1.0	1
△	00907001	AC CORD SET 240 VE	KP-610 GTTBS-3 KS-31A	1
△	23495124	AC CORD SET 240 VA	SC-144-JO1 ES303-10HMA	1
	71673278	CD-ROM		1
#	71453367	DEMO DISK	ZIP DISK	1

CHECKING THE VERSION NUMBER

There are two ways to check the version number.

1. While holding down the VP-9000's [PART/>>], [DEC/-], and [INC/+]
buttons, turn on the power.

The following display will appear.



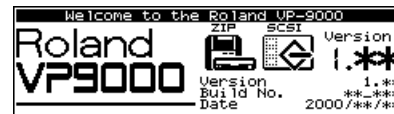
[Note] The “**” area will depend on the program version.

As shown above, the screen will show the CPU version, the program version number, and the date on which the program was updated.

2. Turn on the power of the VP-9000.

While holding down the [SHIFT] button, press the [EXIT] button.

The following display will appear.



[Note] The “**” area will depend on the program version.

As shown above, the screen will show the CPU version, the program version number, and the date on which the program was updated.

TEST MODE

Note: Before you execute test mode, you must backup the user data as described in the section “Saving and loading user data.” Also, since executing test mode will set all settings to special values, you must load the user data after executing test mode.

◇ Required items

- MIDI Cable x1
- Zip Disk (250 MByte Type; used in 8. ZIP Check) x1
- Zip Disk (100 MByte Type; used in 7. SCSI Check) x2
- Zip Drive (SCSI Type) x2
- SCSI Cable (one end must be D-Sub 25 pin) x1
- SCSI Cable (one end must be Amphenol 50 pin) x1
- Monitor Speaker (MA-12 etc) x2
- Audio Cable (Unbalanced) x1
- Audio Cable (Balanced) x1
- SIMM (32 MByte, 60 ns, FPM mode) x4
- A device such as DAT that has a digital input (optical, coaxial), and can display the sampling frequency of the input (32, 44.1, 48 kHz) x1
- Digital Optical Cable x1
- Digital Coaxial Cable x1

◇ Preparations for testing

1. Install the four SIMM's into the VP-9000.
2. Connect Zip drives with Zip disks inserted to the SCSI-A, B connectors.
Set the SCSI ID of the VP-9000 to “0.”
Set the drive connected to the SCSI-A connector to a SCSI ID of “5,” and turn its terminator “ON.”
Set the drive connected to the SCSI-B connector to a SCSI ID of “6,” and turn its terminator “ON.”
After making connections, turn on the power of the two Zip drives.
3. Set the VP-9000's TERMINATOR switch to “OFF.”
4. Use audio cables (unbalanced) to connect the PHONES output to your monitor speakers.

◇ ENTERING TEST MODE

While holding down the VP-9000's [PART/>], [DEC/-], and [INC/+]
buttons, turn on the power.

The test mode program will start up, and the following LCD display
screen will appear.



◇ EXITING TEST MODE

By pressing the [EXIT] button you can exit each test item.

If you wish to quit during an item, or to quit before completing Test
Mode, execute 13. FACTORY RESET.

◇ TEST ITEMS

The following 12 test items are provided. For details refer to each item.

1. DEVICE CHECK 1
2. OUTPUT LEVEL CHECK
3. SWITCH & LED CHECK
4. CONTROL KNOB CHECK
5. LCD & ENCODER CHECK
6. MIDI CHECK
7. SCSI CHECK
8. ZIP CHECK
9. DEVICE CHECK 2
10. DIGITAL I/O CHECK 1
11. DIGITAL I/O CHECK 2
12. OUTPUT CHECK

After entering Test mode, press the [F4] (AUTO L) button to begin Test
mode. Some of the test items will begin automatically when the previ-
ous test has been completed successfully.

To move directly to a desired test item from the initial screen, use the
VALUE knob or the [DEC / -] [INC / +] buttons to move the cursor in
the LCD display to the desired test item, and then press the [SHIFT] or
[F6] (CHECK) button.

To proceed to the next test item after completing the current item, press
the [F6] (NEXT) button.

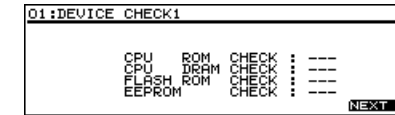
To return to the previous test item, press the [F4] (PREV) button.

1. DEVICE CHECK 1

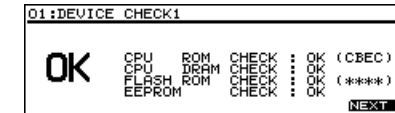
1-1 When you press the [F4](AUTO L) button, DEVICE CHECK 1 will
begin.

(Alternatively, you can select DEVICE CHECK 1 in the initial
screen and then press the [SHIFT] or [F6] (CHECK) button.)

The following display will appear in the LCD screen.



1-2 When each device has been checked, the area shown as “---” in the
LCD screen will change to either “OK” or “NG”



If all devices are OK, you will automatically proceed to the next test.

[Note] The “*” area will depend on the program version.

DEVICE CHECK 1 TROUBLESHOOTING

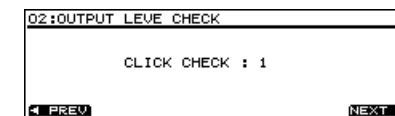
Test result	Item to check
CPU ROM CHECK : NG	Check IS2 on the main board.
CPU DRAM CHECK : NG	Check IC5 on the main board.
FLASH ROM CHECK : NG	Check IC4 on the main board.
EEPROM CHECK : NG	Check IC1 on the main board.

2. OUTPUT LEVEL CHECK

When DEVICE CHECK 1 ends successfully, OUTPUT LEVEL
CHECK will begin automatically.

(Alternatively, you can select OUTPUT LEVEL CHECK in the initial
screen and then press the [SHIFT] or [F6] (CHECK) button.)

2-1 When the level check for the METRONOME sound begins, the fol-
lowing display will appear.



2-2 Use the [DEC/-] [INC/+]
buttons or rotate the VALUE knob, and
verify that the number shown in the LCD display changes in the
range of 1-8.

2-3 Verify that noise is not added to the output sound when you turn the
VALUE knob.
The output sound will be lowest for a setting of 1, and maximum
volume for a setting of 8.

2-4 If the results are normal, press the [F6] (NEXT) button to proceed to
the next test.

OUTPUT LEVEL CHECK TROUBLESHOOTING

Test result	Items to check
Number shown in LCD display does not change.	Check whether a pulse wave is present at pins 23 and 24 of the main board.
Volume of output sound does not change.	Check whether the pulse width at pin 5 of IC3 on the main board changes when VALUE is adjusted.

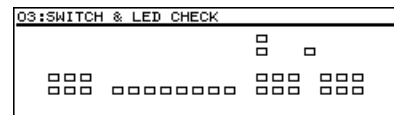
3. SWITCH & LED CHECK

From the OUTPUT LEVEL CHECK, press the [F6](NEXT) button to begin the SWITCH & LED CHECK.

(Alternatively, you can select SWITCH & LED CHECK in the initial screen and press the [SHIFT] or [F6] (CHECK) button.)

While the SWITCH & LED CHECK is in progress, you can use [SHIFT] + [F1] button to return to the previous test item, or [SHIFT] + [F6] button to proceed to the next test item.

3-1 When the switch check begins, the following screen will appear in the LCD display.



Also, all LEDs will light.

3-2 One at a time, press all switches and the VALUE knob.

When you press each button, its name will appear in the LCD screen, and the corresponding switch display will be highlighted and will sound.

When you press a switch that has its own LED, it will go dark.

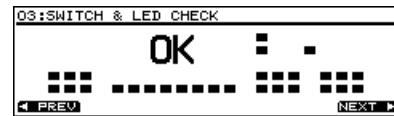
* When you press the [SHIFT] button, MIDI MESSAGE will change from orange -> green.

When you press the VALUE knob, it will change from green -> dark.

Were the switch names displayed?

Did the LEDs go dark?

3-3 When all switches have been pressed and the test has been completed successfully, the LCD screen will indicate "OK," and you will automatically proceed to the next test item.



SWITCH & LED CHECK TROUBLESHOOTING

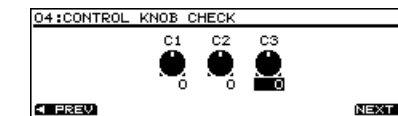
Test result	Items to check
Individual LED does not light	Check the LED that failed to light.
Multiple LEDs do not light	Check whether a pulse wave is present at pin 3 of Q101-102, and pin 1 of Q103-111.
LED remains lit	Check whether a pulse wave is output at pin 3 of Q101-102, and at pin 1 of Q103-111.
Individual switch does not function	Press the switch and check whether the pulse wave of its second pin changes.
Several switches do not function	Check the pulse wave of pins 10-16 of CN101 on the panel board, and whether a pulse wave is output from pins 4-6 of the same CN101 when you press the switch. It is possible that the switch has shorted. If you rotate the VALUE knob immediately after entering SWITCH & LED CHECK, the switch display pressed at that time will be highlighted. Check whether a switch is not being held down.

4. CONTROL KNOB CHECK

When SWITCH CHECK ends successfully, the CONTROL KNOB CHECK will begin automatically.

(Alternatively, you can select CONTROL KNOB CHECK in the initial screen, and press the [SHIFT] or [F6](CHECK) button.)

4-1 When CONTROL KNOB CHECK begins, the following display will appear.

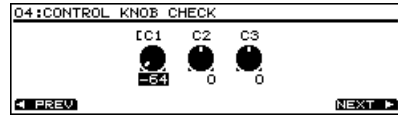


[Note] The LCD screen above shows the values for when all three knobs are in the center position.

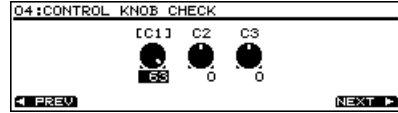
The display will depend on the positions of the knobs when the test is performed.

4-2 One by one, rotate the three knobs, and verify that the display indicates "-64" at the minimum value (when the knob is rotated all the way counterclockwise) and "63" at the maximum value (when the knob is rotated all the way clockwise).

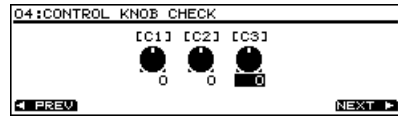
When the display reaches “-64,” the LCD screen will show a “[”beside the “C.”



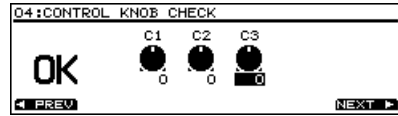
When the display reaches, “63,” the LCD screen will show a “]” beside the “C.”



4-3 One by one, return the three knobs to the center position, and verify that the LCD screen indicates “0.”



4-4 When you press the VALUE knob, the LCD screen will indicate “OK,” and you will automatically proceed to the next test.



[Note] The “OK” display will appear when you press the VALUE knob if you use [F4](AUTO L) to start Test mode, and have performed each test in sequence.

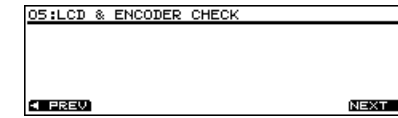
CONTROL KNOB CHECK TROUBLESHOOTING

Test result	Items to check
No response when you move a knob	Check whether a voltage of 0--5 V can be observed at IC2, R44, R52, R56 on the main board.
Displayed value does not reach “-64” or “63”	Check whether the minimum voltage applied to the above R44, R52 and R56 reaches 0V, and the maximum voltage reaches 5V. Rotate the knob fully both ways.



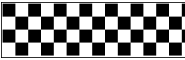
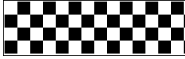
5. LCD & ENCODER CHECK

When CONTROL KNOB CHECK has been successfully completed, LCD & ENCODER CHECK will begin automatically.
(Alternately, you can LCD & ENCODER CHECK in the opening screen, and press the [SHIFT] or [F6] (CHECK) button.)

5-1 When LCD & ENCODER CHECK begins, the following display will appear.



5-2 Press the VALUE knob, and verify that the LCD backlight changes as follows.

- All lit 
- ↓
- All dark 
- ↓
- Checkered 
- ↓
- Inverse checkered 
- ↓
- Backlight will go dark.

Verify that there are no problems, such as faulty displays.

5-3 Press the VALUE knob once. Then rotate the VALUE knob, and the encoder value will be displayed in the center of the LCD screen.



Rotate the knob, and verify that the LCD contrast changes.
ENC VALUE will change from 1 (light) - 16 (dark).

5-4 If the operation ended successfully, press the [F6] (NEXT)button to proceed to the next test.

LCD & ENCODER CHECK TROUBLESHOOTING

Test result	Items to check
Portions do not light	Replace the LCD unit.
Backlight does not light	Check whether the voltage applied to R119 is 0V. It will light at 0V. Try replacing the LCD unit.
There are vertical stripes in the LCD display even when you turn VALUE.	Check whether the contrast does not change when you vary the value of CN7 pin 14 on the main board, or whether a voltage of -6 -- -12V can be observed.
Encoder value does not change when you rotate the VALUE knob.	Check whether a waveform appears at pins 23 and 24 of CN3 on the main board.

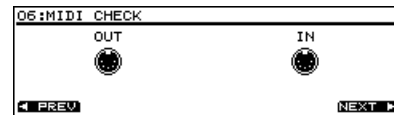
Image in the LCD screen does not change when you press the VALUE knob. Perform the SWITCH & LED switch to see whether the VALUE knob switch is ok.

6. MIDI CHECK

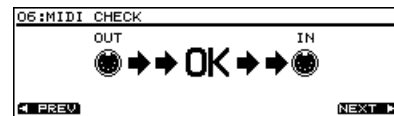
From the LCD & ENCODER CHECK, press the [F6] (NEXT) button and MIDI CHECK will begin automatically.

(Alternatively, you can select MIDI CHECK in the initial screen and then press the [SHIFT] or [F6] (CHECK) button.)

6-1 The following LCD display will appear.



6-2 When you use a MIDI cable to connect the VP-9000's MIDI IN and MIDI OUT, the arrow will move from MIDI OUT to MIDI IN. If the result is normal, the LCD screen will indicate "OK" and you will automatically proceed to the next test.



MIDI CHECK TROUBLESHOOTING

Test result	Items to check
"OK" does not appear	Check IC11 on the main board.

7. SCSI CHECK

When MIDI CHECK has ended successfully, SCSI CHECK will begin automatically.

(Alternately, you can select SCSI CHECK in the initial screen, and press the [SHIFT] or [F6] (CHECK) button.)

7-1 When SCSI CHECK begins, the following display will appear.



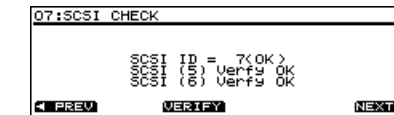
7-2 Slowly turn the SCSI ID switch to change the ID no. from 0--7. At this time, verify that the LCD screen display changes from 0--7.

7-3 When the ID No. has changed from 0 - 7, the LCD screen will display "OK" beside the ID No.



7-4 Next press the [F3] (VERIFY) button.

7-5 When SCSI-A and B connectors have been recognized successfully, the LCD screen will show "OK" beside SCSI (5) and (6), and you will automatically proceed to the next test.



SCSI CHECK TROUBLESHOOTING

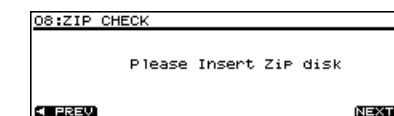
Test results	Items to check
Rotating the ID switch does not	Check that the voltage of pins 16, 17 and 18 of cause the ID No. display to change. CN5 on the main board changes from 0--5 V when you turn the ID switch.
Drive connected to the SCSI-A or B connector is not recognized.	Check the SCSI cable and connector connections. Check the ID setting of each drive.

8. ZIP CHECK

When the SCSI CHECK is completed successfully, the ZIP CHECK will begin automatically.

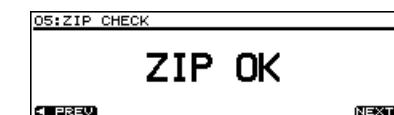
(Alternatively, you can select ZIP CHECK in the initial screen and press the [SHIFT] or [F6] (CHECK) button.)

8-1 When ZIP CHECK begins, the following display will appear.



8-2 Insert a Zip disk (250 MByte type) into the Zip drive. While checking is being performed, the LCD will indicate "Now Zip Checking."

8-3 If Zip disk writing/reading could be performed correctly, the following display will appear, and the Zip disk will be ejected. If the test ended successfully, you will automatically proceed to the next test.



ZIP CHECK TROUBLESHOOTING

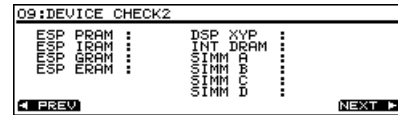
Test result	Items to check
"NG" is displayed	Check whether the ZIP disk is "software protected." Check the power supply and 40 pin connector of the Zip drive.

9. DEVICE CHECK 2

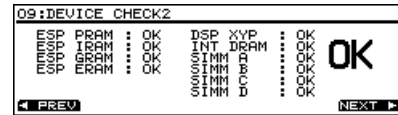
From ZIP CHECK, press the [F6] (NEXT) button and DEVICE CHECK 2 will begin.

(Alternatively, you can select DEVICE CHECK 2 in the initial screen, and then press the [SHIFT] or [F6] (CHECK) button.)

8-1 When DEVICE CHECK 2 begins, the following display will appear.



8-2 When DEVICE CHECK 2 ends successfully, the following display will appear.



[Note] If you used the [F4] (AUTO L) button to start Test mode and performed each test consecutively, this test will end immediately and display the result.

If you executed DEVICE CHECK 2 individually, approximately 1 minute will be required for the test to be completed.

DEVICE CHECK 2 TROUBLESHOOTING

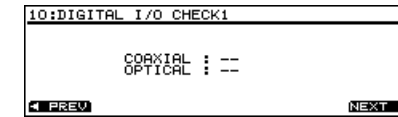
Test result	Items to check
ESP PRAM : NG	Check IC30 on the main board.
ESP IROM : NG	Check IC30 on the main board.
ESP GRAM : NG	Check IC30 on the main board.
ESP ERAM : NG	Check IC30 on the main board.
DSP XYP : NG	Check IC30 on the main board.
INT DRAM : NG	Check IC2 on the main board.
SIMM A : NG	Check the SIMM installed in SIMM socket A of the jack board.
SIMM B : NG	Check the SIMM installed in SIMM socket B of the jack board.
SIMM C : NG	Check the SIMM installed in SIMM socket C of the jack board.
SIMM D : NG	Check the SIMM installed in SIMM socket D of the jack board.

10.DIGITAL I/O CHECK 1

From DEVICE CHECK 2, press the [F6] (NEXT) button to begin the DIGITAL I/O CHECK 1.

(Alternatively, select DIGITAL I/O CHECK 1 in the initial screen, and press the [SHIFT] or [F6] (CHECK) button.)

10-1 When DIGITAL I/O CHECK 2 begins, the following display will appear.

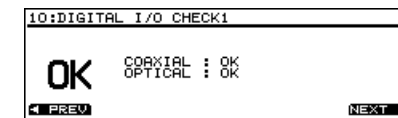


The "--" portion will immediately change to "NG."

10-2 Use a digital optical cable to connect the Optical connector OUT and IN.

Use a digital coaxial cable to connect the Coaxial connector OUT and IN.

10-3 If operation is correct, the indication of "NG" in the display will change to "OK," and you will automatically proceed to the next test.



[Note] If you end the test at this point, don't forget to put the cap back on the optical connectors.

DIGITAL I/O CHECK 1 TROUBLESHOOTING

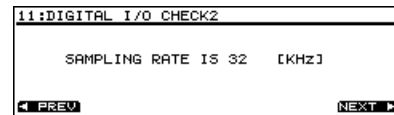
Test result	Items to check
Both OPTICAL and COAXIAL are "NG" even when a cable is connected	Check that a signal is being input at pin 7 of IC54 on the main board. Check that pin 24 of IC19 on the main board is outputting 0 V. Check whether a 256 fs signal is being input to main board IC54 pin 14.
OPTICAL : "OK" is not displayed even when a cable is connected.	Check whether a signal is being input to main board IC19 pin 1.
COAXIAL : "OK" is not displayed even when a cable is connected.	Check whether a signal is being input to main board IC19 pin 2 and IC66 pin 3.

11.DIGITAL I/O CHECK 2

When the DIGITAL I/O CHECK 1 is successfully completed, DIGITAL I/O CHECK 2 will begin automatically.

(Alternatively, you can select DIGITAL I/O CHECK 2 in the initial screen, and press the [SHIFT] or [F6] (CHECK) button.)

11-1 When DIGITAL I/O CHECK 2 begins, the following display will appear.



11-2 Use a digital optical cable and a digital coaxial cable to connect the optical and coaxial outputs of the VP-9000 to a device that is able to display the sampling frequency.

11-3 Turn the VALUE knob to change the SAMPLING RATE from 32 -> 44.1 -> 48 [kHz], and verify that the sampling frequency displayed on the device connected to Optical In and Coaxial In changes correspondingly.

11-4 If all changes in sampling rate occur correctly, press the [F6] (NEXT) button to proceed to the next test.

DIGITAL I/O CHECK 2 TROUBLESHOOTING

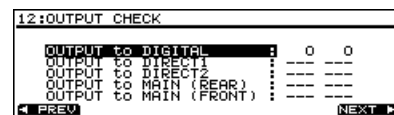
Test result	Items to check
Sampling frequency of the device does not change when you change the SAMPLING RATE	Check that the specified sampling frequency is output from main board IC54 pin 4.

12.OUTPUT CHECK

From DIGITAL I/O CHECK 2, press the [F6] (NEXT) button to begin OUTPUT CHECK.

(Alternatively, select OUTPUT CHECK in the initial screen, and press the [SHIFT] or [F6](CHECK) button.)

12-1 When OUTPUT CHECK begins, the following display will appear.



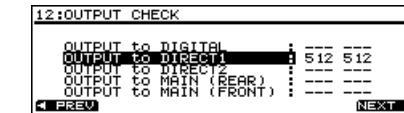
12-2 Use a digital optical cable and a digital coaxial cable to connect the optical and coaxial outputs of the VP-9000 to the optical in and coaxial in of a device that has digital inputs.

12-3 At this time, verify that the receiving device has locked onto the sampling frequency, and that the input sound is heard correctly.

[Note] If you end the test at this point, don't forget to reattach the caps of the optical connectors.

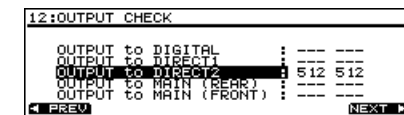
12-4 Next, use unbalanced cables to connect the VP-9000's DIRECT OUT 1 L, R to its STEREO INPUT 1, 2. At this time, set the GAIN switch to -20 dBm.

12-5 Use the [v] button to move the cursor in the LCD screen to OUTPUT to DIRECT 1. At this time, verify that the value in the LCD screen shown at the right of OUTPUT to DIRECT 1 : increases to the region of "512."



12-6 Next, use unbalanced cables to connect the DIRECT OUT 2 1 and 2 of the VP-9000 to its STEREO INPUT 1, 2.

12-7 Use the [v] button to move the cursor in the LCD screen to OUTPUT to DIRECT 2. At this time, verify that the value in the LCD screen shown at the right of OUTPUT to DIRECT 2 : increases to the region of "512."



12-8 Next use unbalanced cables to connect the VP-9000's MAIN OUT L, R to its STEREO INPUT 1, 2.

12-9 Use the [v] button to move the cursor in the LCD screen to OUTPUT to MAIN OUT. Raise the volume knob to the 12 o'clock position. At this time, verify that the value in the LCD screen shown at the right of OUTPUT to MAIN (REAR) : increases to the region of "512."



12-10 Next, use a balanced cable to connect MAIN OUT L to the front AUDIO IN.

12-11 Use the [v] button to move the cursor in the LCD screen to OUTPUT to MAIN OUT. Raise the REC LEVEL knob to the 12 o'clock position. At this time, verify that the value in the LCD screen shown at the right of OUTPUT to MAIN (FRONT) : increases to the region of "512."



12-12 If all test results were correct, press the [F6] (NEXT) button.

OUTPUT CHECK TROUBLESHOOTING

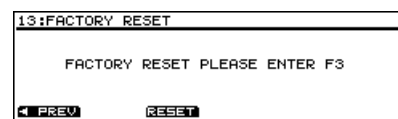
Test result	Items to check
Noise is added to digital output	Check that the sampling frequency specified for output to IC54 pin 4 is being input.
Input result of DIRECT 1 output does not reach "512"	Observe the waveform at mute transistor 2SC3326 pin 3.
Input result of DIRECT 2 output does not reach "512"	If the waveform is abnormal (e.g., distorted), one of the mute transistors is faulty.
REAR input result of MAIN OUT output does not reach "512"	Check IC1 on the Jack Board.
AUDIO IN result of MAIN OUT output does not reach "512"	Check IC401 on the Mic Board.
The output waveform is completely distorted.	Check whether R11, R49, R86 or R103 on the Mic Board is securely connected.

13. FACTORY RESET

From OUTPUT CHECK, press the [F6] (NEXT) button to proceed to FACTORY RESET.

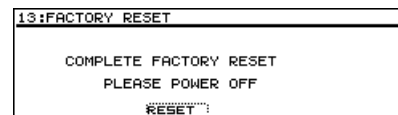
(Alternatively, you can select FACTORY RESET in the initial screen, and press the [SHIFT] or [F6] (CHECK) button.)

13-1 When FACTORY RESET is selected, the following display will appear.



13-2 Press the [F3] (RESET) button, and FACTORY RESET will begin.

13-3 When the following display appears, turn off the power of the VP-9000.



SYSTEM SOFTWARE UPDATE PROCEDURE

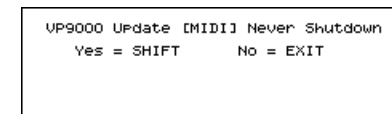
The VP-9000 uses flash memory for its program ROM. This program ROM can be updated with new system software either via MIDI from an external MIDI sequencer, or via the internal Zip drive. Use the following procedure to update the system software.

◇ Required items

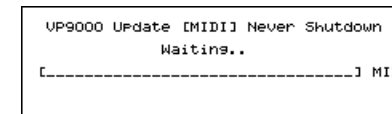
- If using the Update SMF Disk to update the system software
 - VP-9000 Update SMF Disk (P/No.17048979)
 - * The Update SMF Disk contains the VP-9000 program converted into SMF data.
The latest version can be obtained from the RJA Service Center.
 - SMF Player (MIDI Sequencer)
 - * You will need to provide a device that can play back SMF data. We recommend the SB-55 or MC-80.
 - MIDI cable x1
- If using the Update ZIP Disk to update the system software
 - VP-9000 Update ZIP Disk (P/No.17048980)
 - * The Update ZIP Disk contains a special ZIP update program for the VP-9000.
The latest version can be obtained from the RJA Service Center.

◇ Procedure for updating the system software with the Update SMF Disk (Update SMF Disk P/No.17048979)

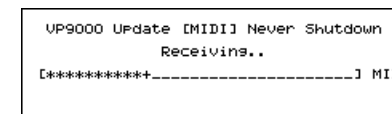
- Connect a MIDI cable from the MIDI OUT of the external MIDI sequencer to the MIDI IN of the VP-9000.
- While holding the VP-9000's [UTILITY] and [DISK] buttons, turn on the power.
The following display will appear.



3. Press the [SHIFT] button, and the following display will appear.



- After you have verified the above display, play back your external MIDI sequencer.
When SMF data is received correctly, the MIDI MESSAGE LED will light while reception is occurring, and the "-" area in the LCD will consecutively change to "*".



The Update SMF Disk contains the following files.

P00001.MID
P00002.MID
:
P00032.MID

5. When all of the SMF data has been received, the following display will appear.

The update will take approximately 30 minutes.

```

VP9000 Update [MIDI]
Complete Update Please Power Off
  
```

The update has now been completed. Turn off the power of the VP-9000.

[Note]: When the update is completed, you must be sure to perform the FACTORY RESET operation.

Never turn off the power of the VP-9000 while the update is being performed.

The VP-9000 will become inoperable, and it will be necessary to replace the main board.

◇ Procedure for updating the system software with the Update ZIP Disk (Update ZIP Disk P/No.17048980)

1. Insert the Update ZIP Disk into the VP-9000.
2. While holding down the [PERFORM] and [SAMPLE] buttons, turn on the power of the VP-9000.

When the following display appears,

```

VP9000 Update [ZIP] Never Shutdown
Now Check Zip Drive Please wait
  
```

you may release the above buttons.

3. The "-" display bar will consecutively change to "*".

```

VP9000 Update [ZIP] Never Shutdown
[*****+-----] ZIP
  
```

4. When all data has been received, the following display will appear.

```

VP9000 Update [ZIP]
Complete Update Please Power Off
  
```

The update has now been completed. Turn off the power of the VP-9000.

[Note]: When the update is completed, you must be sure to perform the FACTORY RESET operation.

Never turn off the power of the VP-9000 while the update is being performed.

The VP-9000 will become inoperable, and it will be necessary to replace the main board.

LOADING PERFORMANCE / SYSTEM SETTINGS

When you load a performance, the samples that were also saved when the performance was saved will be loaded simultaneously.

- * When a performance or system settings are loaded, any performance or system settings that may have been in internal memory will be overwritten.

1. Have ready the media that contains the file you wish to load.

2. Press [DISK] button.

The DISK Menu1 screen will appear.

If the DISK Menu2 screen appears, press [</PART] button.

3. Press [F1 (LOAD)] button.

The DISK Load Menu1 screen will appear.

If the DISK Load Menu2 screen appears, press [</PART] button.

4. If you wish to load a performance, press [F1 (PERFRM)] button.

If you wish to load system settings, press [F3 (SYSTEM)] button.

The file selection screen will appear.

5. Press [F1 (DRIVE)] button to select the drive.



- * If the hard disk has been divided into two or more partitions, the partition number will be shown in the center of the icon.

6. Use [v]/[^] or [F4 (< CLOSE)]/[F5 (OPEN >)] buttons to move the cursor to the file that you wish to load.

7. Press [F6 (LOAD)] button to load the file.

When loading has ended, the display will indicate "Completed!," and you will return to the PERFORM Play screen.

- * If you decide to abort the loading operation, press [F1 (ABORT)] button.

- * A certain amount of time may be required when loading a performance.

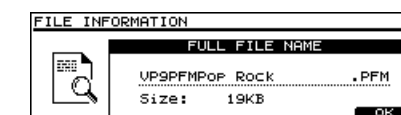
- * By holding down [SHIFT] button and pressing [F1 (DRIVE)] button, you can select the previous drive.

- * When selecting a file, [<]/[>] buttons perform the same function as [F4] (< CLOSE)]/[F5 (OPEN >)] buttons.

- * If you press [F3 (INFO)] button in step 6, the full name and size of the selected file will be displayed.

If a folder is selected, only the full name of the folder will be displayed.

To return to the previous screen press [F6 (OK)] button.



- * As a shortcut to load a performance, you can hold down the [SHIFT] button and press [F5 (LOAD)] button.

You will jump to the screen where you can select the performance to load.

If a message appears when loading a performance sometimes a message may appear when you load a performance.

If this occurs, refer to the following explanation and take the appropriate action.



The above message will appear if the VP-9000 contains samples that have not been saved.

Press [F6 (ACCEPT)] button.

Then as necessary, save the unsaved samples or save the performance.



The above message will appear if the VP-9000 contains unedited samples of the same name.

To cancel the operation, press [F1 (CANCEL)] button.

If you press [F5 (QUICK)] button, only the samples that have not already been loaded will be loaded.

Of the samples already existing in the VP-9000, samples that are not associated with the performance being loaded will be erased.

Samples will be renumbered to the same numbering as when the performance was saved.

If you press [F6 (ALL)] button, all samples will be loaded. All sample-previously existing in the VP-9000 will be erased.



The above message will appear if the VP-9000's memory becomes full.

Press [F6 (ACCEPT)] button to halt the loading operation.

Saving performance / samples / system settings

When you save a performance, all samples in the VP-9000 at that time will also be saved (except for samples without waves, and samples with names that cannot be saved).

We recommend that you create a folder and save each performance in its own folder.

If this is done, it will be clear which samples belong to which performance when you view the contents of the disk.

When you save a sample, the sample that are assigned to the currently selected part (current part) will be saved.

If the Keyboard Map is set to "PHRASE MAP," the sample assigned to the currently selected phrase map number will be saved.

System settings include the parameters that can be set in system mode, sampling template parameters, and EFFECT ON/OFF settings.

* It is not possible to save a sample that has no wave.

* The following names cannot be saved.

Performance

- "NEW PERFORMANCE" (Uppercase and lowercase characters are not distinguished)
- All spaces

Sample

- "NO WAVE DATA:-" (Uppercase and lowercase characters are not distinguished)
- A name consisting of 12 spaces (category can be anything)

System

- All spaces
- * If protect is ON for a Zip disk and you attempt to save data to that Zip disk, the following message will be displayed. If this occurs, press [F6 (ACCEPT)] button, and then press [EXIT] button four times to return to the Play screen.
Then refer to "Prohibiting writing to a Zip disk (Protect)", turn protect OFF, and perform the save operation once again.



1. Prepare the media.
2. If you wish to save samples, use [</PART/][PART/>] buttons to select the part to which the samples you wish to save are assigned.

* If you wish to save a sample that is not assigned to a part, refer to "Selecting a sample", and assign the sample to one of the parts.
3. Press [DISK] button, getting the indicator to light.
The DISK Menu1 screen will appear.
If the DISK Menu2 screen appears, press [</PART] button.
4. Press [F2 (SAVE)] button.
5. Press [F1]-[F3] buttons to select the data that you wish to save.
[F1 (PERFRM)]: Performance
[F2 (SAMPLE)]: Sample
[F3 (SYSTEM)]: System
The naming screen will appear.
6. Assign a name as described in "Assigning a name".
A screen will appear, allowing you to select the save destination.
7. Press [F1 (DRIVE)] button to select the drive.

* By holding down [SHIFT] button and pressing [F1 (DRIVE)] button, you can select the previous drive.

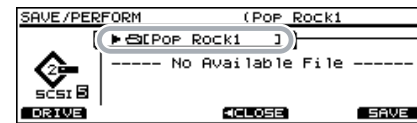
* If you are saving to a hard disk that has been divided into two or more partitions, select the partition number.
The partition number is displayed in the center of the icon.



8. Use [^]/[] or [F4 (CLOSE)]/[F5 (OPEN)] buttons to move the cursor into the save destination folder.

The folder displayed in the second line from the top will be the save destination.

If the cursor is at the top level, the volume label will be displayed.



- * In the screen, [<]/[>] buttons have the same function as [F4 (< CLOSE)]/[F5 (OPEN >)] buttons.

- * If you wish to create a new folder, press [F2 (FOLDER)] button to jump to the CREATE/FOLDER screen.

9. Press [F6 (SAVE)] button to execute the Save operation.

When saving has been completed, you will return to the PERFORM Play screen in the case of performance or system settings, or to the SAMPLE Play screen in the case of samples.

- * For saving performances and samples, you can use the shortcut of holding down the [SHIFT] button and pressing [F6 (SAVE)] button to jump to the screen where you specify the name for saving.

If a message appears during saving Sometimes a message may appear during the save procedure.

If this occurs, refer to the following explanation and take the appropriate action.



The above message will appear if the save destination contains an identically named file.

To halt the operation, press [F1 (CANCEL)] button.

If you press [F6 (REPLACE)] button, the data will be overwritten onto the identically named file.

- * Be aware that the VP-9000 does not distinguish between uppercase and lowercase characters in a filename. For example, it will consider "ABC" and "Abc" to be the same name.



The above message will appear when saving a performance if an identically named sample exists at the save destination.

To halt the procedure, press [F1 (CANCEL)] button.

When you press [F5(QUICK)] button, only the performance, samples with the "E" symbol, and samples that do not exist at the save destination will be saved.

If you press [F6 (ALL)] button, the performance and all samples will be saved.

Identically named samples in the save destination will be overwritten.

RESTORING THE FACTORY SETTINGS (FACTORY RESET)

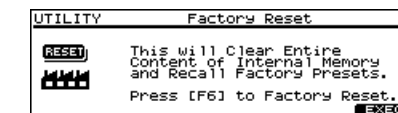
This operation restores all settings of the VP-9000 to the factory settings. Wave data in internal memory will also be lost.

- * If the VP-9000 already contains important data that you created, this operation will cause this data to be lost.

If you wish to keep your data, save it on a separately sold Zip disk or on other media in a connected external drive .

1. Press [UTILITY] button to get the indicator to light.
2. If the UTILITY Menu1 screen is displayed, press [PART/] button.
The UTILITY Menu2 screen will appear.
3. Press [F1 (FACTRY)] button.

The UTILITY Factory Reset screen will appear.



If you decide to exit the Factory Reset screen without resetting, press [EXIT] button.

4. Press [F6 (EXEC)] button to execute the factory reset.

The display will indicate "Completed!," and you will return to the PERFORM Play screen.

ERROR MESSAGE

The VP-9000 displays a variety of messages. There are four types of message screen.

ERROR screen: This will appear if you attempt to perform an incorrect operation, or if an operation could not be executed correctly.

WARNING screen: This will appear when caution is necessary.

MESSAGE screen: This informs you of the current status.

Message box: This informs you of the current status. It will also appear if you attempt to perform an incorrect operation, or if an operation could not be executed correctly.

Messages are listed here alphabetically for each type of message screen.

ERROR Screens

If an ERROR screen appears, press [F6 (ACCEPT)] button to erase the message.

● AUTO PERFORM LOAD

Cannot Find Target File!

Cause: The performance specified for Auto Performance Load was not found.

Action 1: Make sure that the drive you specified for Auto Performance Load is connected.

Action 2: In the case of a Zip disk, insert it into the drive.

Action 3: Have you deleted the specified performance? If you have, re-select a different performance.

● DISK

Disk Full!

Cause: The media is full, and no further writing is possible.

Action: Delete unneeded files from the media. Alternatively, provide other media that has free space.

● DISK

File not Found!

Cause: After saving a performance, you deleted a sample from disk, or renamed a sample. Thus, the sample was not found when the performance was loaded.

Action: Re-create the performance, and save it.

● DISK

File Read Error!

Cause 1: The data is damaged, and cannot be loaded.

Action 1: Do not use this file.

Cause 2: A problem has occurred with the connected SCSI device.

Action 2: Check the connections and power supply of the SCSI device.

● DISK

File Write Error!

Cause 1: The media is of a format to which the VP-9000 cannot write.

Action 1: Prepare a media that is of a format to which the VP-9000 is able to write.

Cause 2: A problem has occurred with the connected SCSI device.

Action 2: Check the connections and power supply of the SCSI device.

Cause 3: Since the data transmission speed is too slow, the data could not be written to the CD-R/RW.

Action 3: Copy the files to be backed up to a hard disk. Then, write the copied files from the hard disk to the CD-R/RW.

● DISK

Illegal Format!

Cause: Since the format of this file is incorrect, it cannot be loaded.

Action: Do not use this file.

● DISK

Illegal PCM Wave!

Cannot Load This Wave.

Cause: This file uses a type of compression that the VP-9000 is unable to read.

Action: Use the device that created the file to convert the data into an 8 bit or 16 bit wave.

● DISK

Illegal Sampling Rate!

Cannot Load This Wave.

Cause: This file uses a sampling frequency that the VP-9000 is unable to read.

Action: Use the device that created the file to convert the data to one of the following sampling frequencies. (The VP-9000 can read the following sampling frequencies: 48, 44.1, 32, 30, 24, 22.05, 16, 15, 11, 8 kHz.)

● DISK

Memory Error!

Cause: Wave memory cannot be read or written.

Action: Perform the wave memory read/write test.

● DISK

Memory Full!

Cause: Wave memory capacity is full, and further data cannot be loaded.

Action: Delete unneeded samples from the VP-9000. Alternately, perform the Defrag operation.

● DISK

Too Many Channels!

Cannot Load This Wave.

Cause: This file contains waves for three or more channels, and cannot be loaded into the VP-9000.

Action: Do not use this file.

● DISK

Unknown Disk Error!

Cause: A disk error of unknown causes has occurred.

Action: Contact your dealer or a nearby Roland service center for service.

● EEP-ROM

System Backup Error!

Cause: There is a problem with the memory that contains the system settings.

Action: Contact your dealer or a nearby Roland service center for service.

● ENCODE

Encode Error!

Cause: For some reason, encoding is not possible.

Action: Shorten the wave. Alternatively, delete unneeded samples from the VP-9000's memory, or perform the Defrag operation.

● ENCODE

Memory Error!

Cause: For some reason, wave memory cannot be read or written.

Action: Perform the wave memory read/write test.

● ENCODE

Memory Full!

Cause: Due to insufficient wave memory, encoding is not possible.

Action: Shorten the wave. Alternatively, delete unwanted samples from the VP-9000's memory, or perform the Defrag operation.

● ENCODE

Unknown Encode Error!

Cause: An encoding error of unknown cause has occurred.

Action: Contact your dealer or a nearby Roland service center for service.

● SAMPLING/UTILITY

Memory Full!

Cause: Since the wave memory has become full, the operation was halted.

Action: Delete unneeded samples from the VP-9000, or perform the Defrag operation.

● WAVE EDIT

Copy Buffer not Allocated!

Cause: There is not enough wave memory to execute the Copy.

Action: Shorten the range that will be copied. Alternatively, delete unneeded samples from the VP-9000, or perform the Defrag operation.

● WAVE EDIT

Memory Allocation Error!

Cause: There is not enough wave memory to execute the wave editing operation (Insert, Zero Insert, Region, Paste).

Action: Delete unneeded samples from the VP-9000. Alternatively, perform the Defrag operation.

● WAVE EDIT

Stereo/Mono Mismatch!

Cause 1: The sampling types (monaural/stereo) do not match.

Action 1: Copy, paste, insert, or divide the wave as appropriate for the sampling type.

Cause 2: When executing LR Mix, the applicable sample was monaural.

Action 2: Perform the LR Mix operation on a stereo sample.

● WAVE EDIT

Unknown Edit Error!

Cause: A wave editing error of unknown causes has occurred.

Action: Contact your dealer or a nearby Roland service center for service.

WARNING Screens If a WARNING screen appears, follow the procedure described in the corresponding "Action."

● CD-R/RW TEST WRITE

Press [F6] button to Test Write.

Are You Sure?

Condition: The VP-9000 will test whether a CD-R or CD-RW can be written.

Is it OK to execute the test?

Action: To cancel the operation, press [F1 (CANCEL)] button.

To execute the test, press [F6 (WRITE)] button.

● CD-R/RW WRITE

Press [F6] button to Write.

Press [F5] button to Write & Close.

Are You Sure?

Condition:A data backup will be made on the CD-R or CD-RW. OK to execute?

Action: To cancel the operation, press [F1 (CANCEL)] button.

To write the data normally,press [F6 (WRITE)] button.

If this will be the last data written to the media and you want to make it impossible for any further writing to occur, press [F5 (CLOSE)] button.

● CD-RW FORMAT

All Data on the Disk Will

Be Lost. Are You Sure?

Condition:When you format a CD-RW, all data on the disk will be lost.

Is it OK to execute?

Action: To cancel the operation, press [F1 (CANCEL)] button.

To execute the formatting operation, press [F6 (FORMAT)] button.

● DELETE FILE/FOLDER

This Will Clear the File(s) / Folder(s). Are You Sure?

Condition:The file(s) or folder(s) will be deleted from the disk.

Is it OK to execute?

Action: To cancel the operation, press [F1 (CANCEL)] button.

To execute the operation, press [F6 (DELETE)] button.

● DELETE SAMPLE

Number '****' Will Be

Deleted. Are You Sure?

Condition:The sample at internal sample number '****' will be deleted.

Is it OK to execute?

Action: To cancel the operation, press [F1 (CANCEL)] button.

To execute the deletion, press [F6 (DELETE)] button.

● DISK

Write Protected!

Cause: The Zip disk is write protected.

Action: After pressing [F6 (ACCEPT)] button to erase the message, turn off the write protection of the Zip disk.

Alternatively, provide a different media that can be written.

● DUPLICATE FILENAME

File '*****'

Already Exists!

Cause: A file of the same name exists at the save destination ('*****' will display the file name.)

Action: To cancel the operation, press [F1 (CANCEL)] button.

If you wish to overwrite the existing file of the same name, press [F6 (REPLCE)] button.

● FULL FORMAT

All Data on the Disk Will

Be Lost. It Will Take a

Long Time. Are You Sure?

Condition:When you execute a Full Format, all data on the disk will be lost.

Also, a substantial length of time is required for a full format.

Is it OK to execute the operation?

Action: To cancel the operation, press [F1 (CANCEL)] button.

To execute the full format, press [F6 (FORMAT)] button.

● LOAD DEMO

Replace All Data.

Are You Sure?

Condition: When you load the demo data, all data in the VP-9000 will be lost.

Is it OK to execute the operation?

Action: To cancel the operation, press [F1 (CANCEL)] button.

If you wish to load the demo data, press [F6 (OK)] button.

● OTHER SAMPLE EXISTS

Number '****' Already

Exists in Another Sample.

Clear Sample?

Cause: A different sample already exists in the selected sample number '****'.

Action: To cancel the operation, press [F1 (CANCEL)] button.

If you wish to overwrite the sample of the selected number, press [F6 (CLEAR)] button.

● OTHER SAMPLES EXIST

Samples Already Exist

at Dest Numbers.

Clear Samples?

Cause: Other samples already exist at the writing destination.

Action: To cancel the operation, press [F1 (CANCEL)] button.

To overwrite the samples at the writing destination numbers, press [F6 (CLEAR)] button.

● QUICK FORMAT

All Data on the Drive Will

Be Lost. Are You Sure?

Condition: If you execute Quick Format, all data on the disk will be lost. Is it OK to execute?

Action: To cancel the operation, press [F1 (CANCEL)] button.
 o execute the Quick Format, press [F6 (FORMAT)] button.

● RESERVED NAME

This Name is Reserved.
 Please Enter Another Name.

Cause: This name is reserved, and cannot be used.

Action: After pressing [F6 (ACCEPT)] button to erase the message,
 assign a different name.

● SAME FILENAME EXISTS

File *****
 Already Exists in
 Internal Memory!

Cause: A sample of the same name exists in the VP-9000 (at the loading
 destination). (***** displays the file name.)

Action: To cancel the operation, press [F1 (CANCEL)] button.
 To overwrite the data onto the identically named sample in the
 VP-9000, press [F6 (REPLCE)] button.

● SAME NAME EXISTS

Same Name Already Exists
 in Internal Memory!
 Please Enter Another Name.

Cause: A sample of the same name exists in the VP-9000.

Action: After pressing [F6 (ACCEPT)] button to erase the message,
 assign a different name.

● SAME NAME SAMPLE EXISTS

Samples Already Loaded
 in Internal Memory.
 Just Load Needed Samples?

Cause: Unedited samples of the same name exist on the VP-9000.

Action: If you wish to load only the necessary samples (those marked
 with an “E” and those that have not been loaded), press [F5
 (QUICK)] button.
 If you press [F6 (ALL)] button, all samples will be loaded.

● SAME NAME SAMPLE EXISTS

Samples Already Saved on
 Disk. Just Save(Replace)
 Needed Samples?

Cause: The save destination contains samples of the same name.

Action: If you wish to save only the samples marked with an “E,” press
 [F5 (QUICK)] button.
 If you press [F6 (ALL)] button, the performance and all samples
 will be saved.
 Identically named samples in the save destination will be over-
 written.

● SAVE SAMPLE

Wave Data Doesn't Exist!
 Cannot Save This Sample!

Cause: Since it has no wave data, this sample cannot be saved.

● WAVE EDIT

Copy Buffer not Avail!
 Are You Sure ?

Cause: When you perform the Cut or Clear wave editing operation, the
 data is simultaneously copied as well.

However, this message indicates that in this case, there is insuf-
 ficient memory remaining to copy the data.

Do you still want to execute the Cut or Clear? (Since a copy will
 not be made, you will be unable to restore the data simply by
 pasting it back.

The Cut or Clear operation can still be carried out, though.)

Action: To cancel the operation, press [F1 (CANCEL)] button.

If you also want to Copy the data, shorten the range being Cut or
 Cleared.

Alternatively, delete unneeded samples from the VP-9000 or
 perform the Defrag operation.

To execute the Cut or Clear operation, press [F6 (OK)] button.

MESSAGE Screens

If a MESSAGE screen appears, press [F6 (ACCEPT)] button to erase the
 message.

● DIGITAL OUT

Sampling Rate is Fixed
 44.1 kHz While Sampling.

Condition: During sampling, the sampling frequency of the digital output is
 fixed at 44.1 kHz.

If the sampling frequency of the digital output is set to 32 kHz
 or 48 kHz, this message will appear when you attempt to sample.

Action: Press [F6 (ACCEPT)] button to erase the message.

● DISK

Format Completed!

Condition: Formatting has been completed.

Action: Press [F6 (ACCEPT)] button to erase the message.

● EDITED SAMPLE EXISTS

If You Need This Sample,
 Save Sample Immediately.

Condition: The VP-9000 contains an unsaved sample.

Action: If you need the sample, save it now.
 Press [F6 (ACCEPT)] button to erase the message.

Message Boxes

Message boxes are displayed briefly, and then disappear automatically.

● Cannot Delete This Event!

Cause: The events at the beginning and end of a wave cannot be deleted.

● CD-R/RW Drive Not Found!

Cause: The CD-R or CD-RW drive cannot be found.

Action: Connect the CD-R or CD-RW drive.

● Checking the disk...

Condition: The disk is being checked.

● Completed!

Condition: The operation has been completed.

● Copy Buffer Empty!

Cause: When you executed the Paste or Insert wave editing operation, no content had been copied.

Action: Copy some data before you execute Paste or Insert.

● Create Folder...

Condition: A folder is being created.

● Dest Disk Incorrect!

Cause: The media is of a format that cannot be written by the VP-9000.

Action: Prepare media of a format that the VP-9000 is able to write.

● Disk Full!

Cause: The media is full.

Action: Either delete unneeded files, or prepare another media.

● Disk Not Ready!

Cause: The media is not ready.

Action: Insert another media.

● Event Doesn't Exist Here!

Cause: There is no event at the specified location.

Action: Specify a location where there is an event.

● Event Interval Too Narrow!

Cause: The event interval is too narrow for events to be placed in it.

Action: Move the interval further from the nearest event.

● File/Folder Name Duplicate!

Cause: There is an identically named file or folder.

Action 1: Assign a different name.

Action 2: Please write to a folder that does not contain an identically-named file or folder.

● Folder Level Too Deep!

Cause: You have exceeded the allowable depth to which folders can be created.

Action: Create the folder at a shallower level of the folder hierarchy.

● Folder Name Exists!

Cause: A folder of the same name exists.

Action: Assign a different name.

● Improper Name!

Cause: The folder name or volume label is blank.

Action: Assign a name before you execute.

● Memory Full!

Cause: Wave memory is full.

Action: Delete unneeded samples from the VP-9000.
Alternatively, perform the Defrag operation.

● MIDI Buffer Full!

Cause: An excessive amount of MIDI data was received all at once, and could not be processed properly.

● MIDI Communication Error!

Cause: A MIDI hardware error has occurred.

Action: Please contact your dealer or a nearby Roland service center for service.

● MIDI Offline!

Cause: The MIDI IN connection has been broken.

Action: Check whether there is a problem with the MIDI cable connected to the VP-9000's MIDI IN, or whether the MIDI cable has been disconnected.

● No Space for Name!

Cause: There is no space to assign the name.

Action: Assign a different name.

● Path Duplicate!

Cause: You are attempting to write to the same hierarchical level.

Action: Change the writing destination.

● Path Name Too Long!

Cause: The path name is too long.

Action: Shorten the names of each folder.

Alternatively, move the entire folder to a shallower level of the hierarchy.

* The "path" indicates the hierarchical level at which the file is located. It is given together with the folder name.

● Phrase Doesn't Exists!

Cause: There is no wave to edit.

Action: Execute the editing operation on a portion where there is a wave.

● Please wait a minute.

Meaning: Please wait a short time.

● Processing...

Condition: The operation is being executed.

● Same Name Exists!

Cause: The same name already exists.

Action: Assign a different name.

● Same Sample

Cause: When copying, moving, or exchanging samples within the VP-9000, the same sample number was selected as the Source and Destination.

Action: Select a different sample number, and then execute the operation.

● Source Disk Incorrect!

Cause: The operation you are attempting to execute does not support this media.

Action: Do not select this media as the object of the operation.

● Too Many Files!

Cause: The maximum number of files that can be created in a folder has been exceeded.

Action: Either delete unneeded files, or write the file to a different folder.

● Too Many Folders!

Cause: The maximum number of folders that can be created in a folder has been exceeded.

Action: Either delete unneeded folders, or create the folder in a different folder.

● Writing...

Condition: Data is being written.

● You Cannot Use This Device!

Cause: The operation you attempted to execute does not support this media.

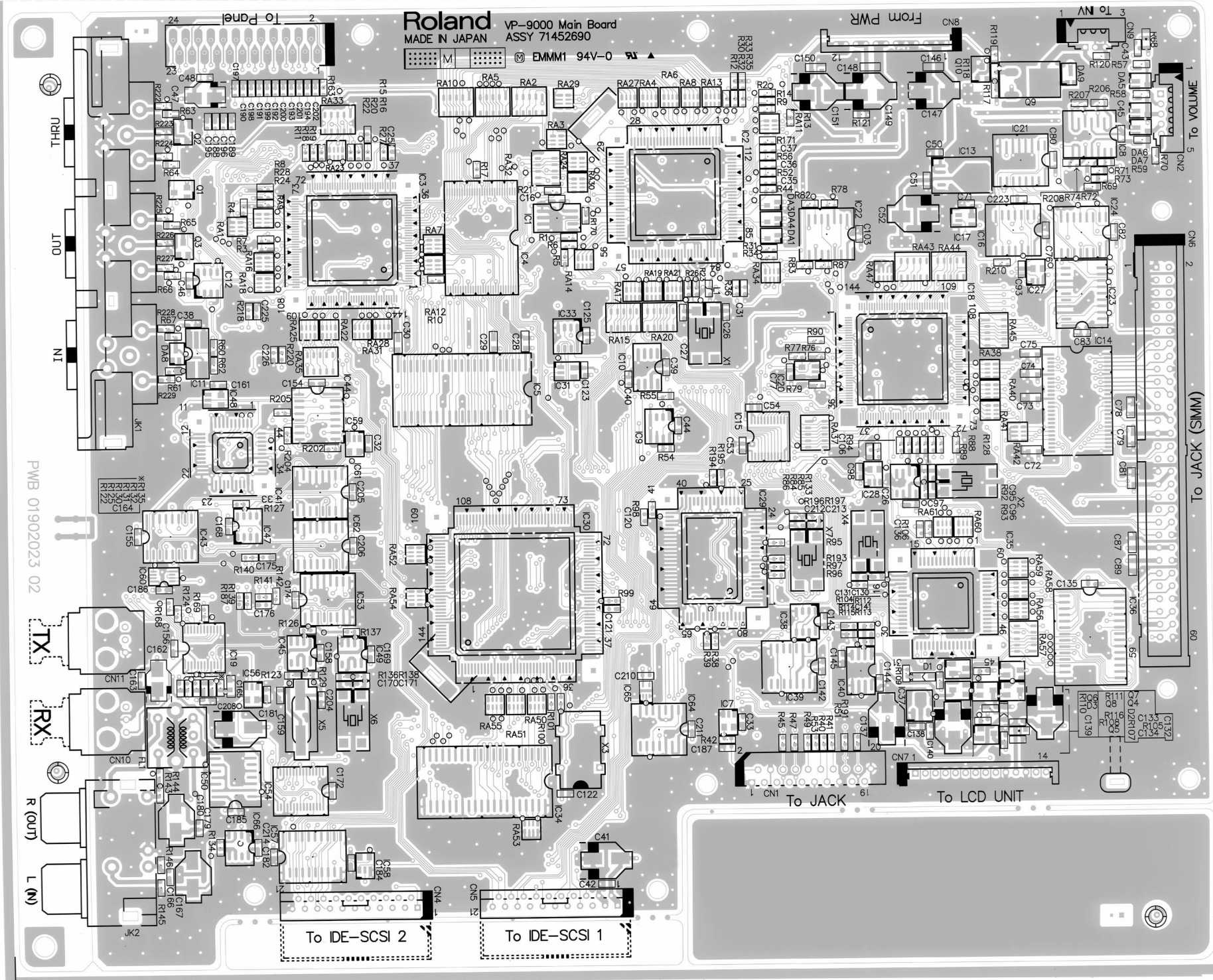
Action: Do not select this media for this operation.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

A CIRCUIT BOARD (MAIN)

B E MAIN TOTAL ASSY (71452689)

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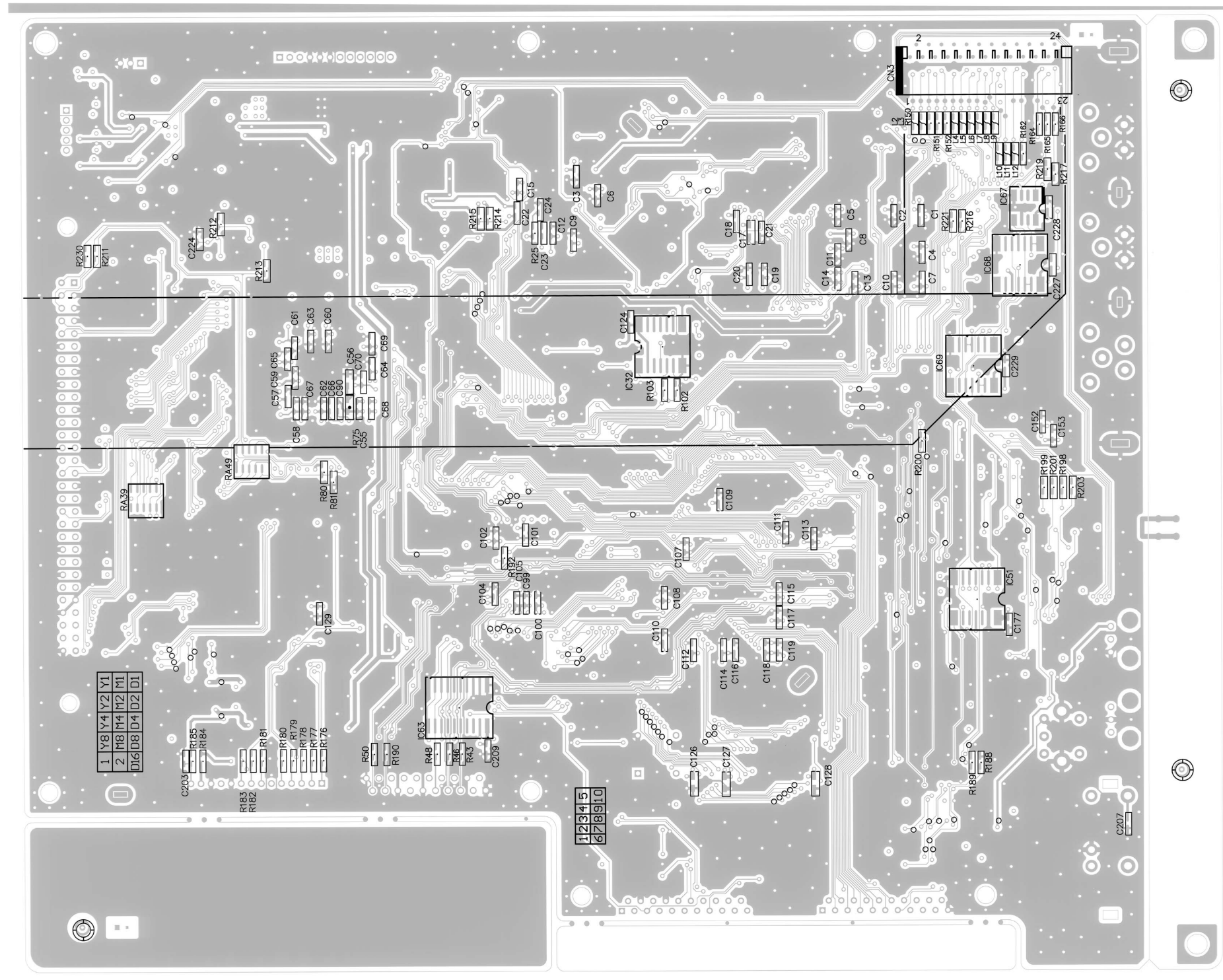
View from components side

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

A CIRCUIT BOARD (MAIN)

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(71452689)

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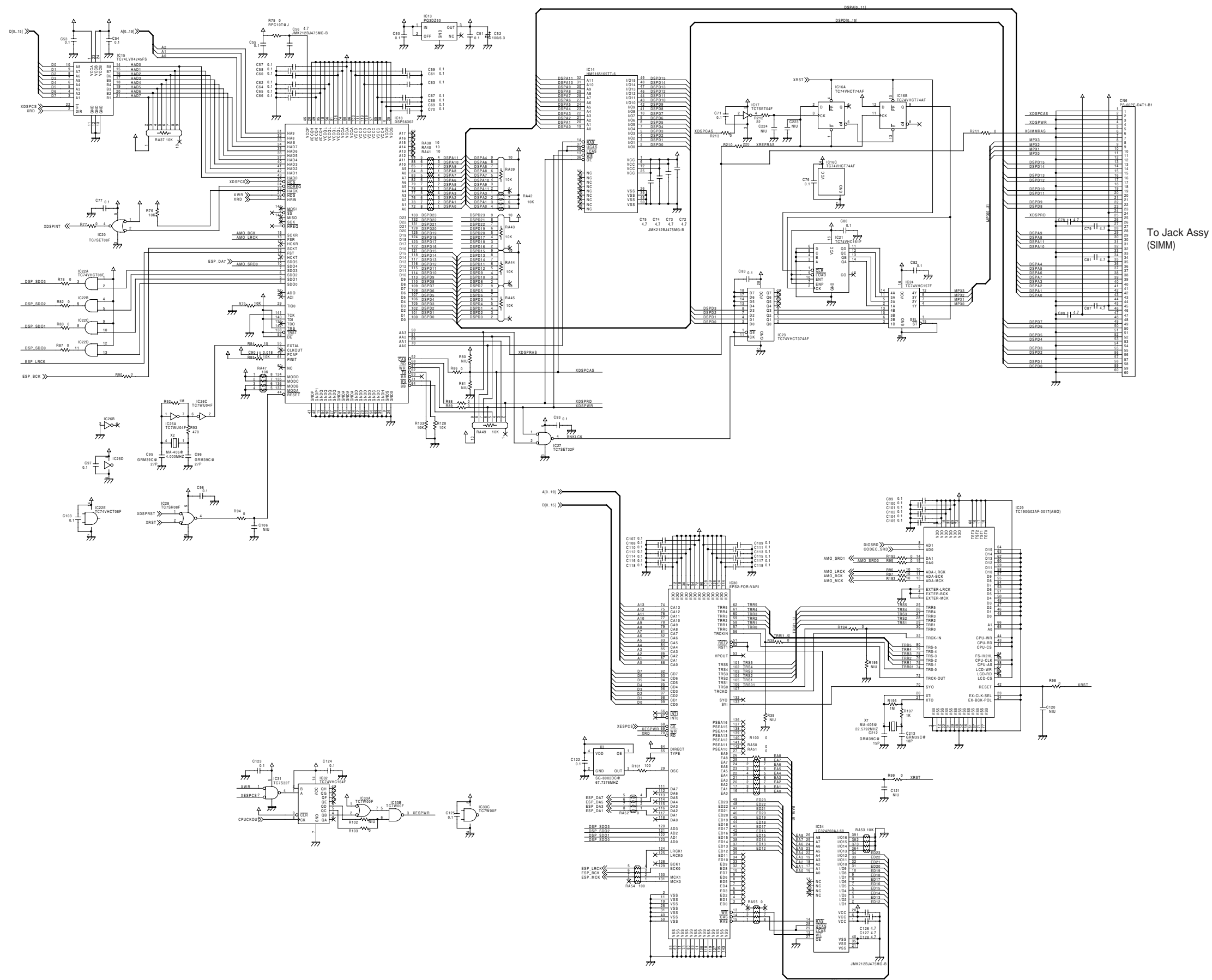


View from foil side

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

A CIRCUIT DIAGRAM (MAIN)2/4

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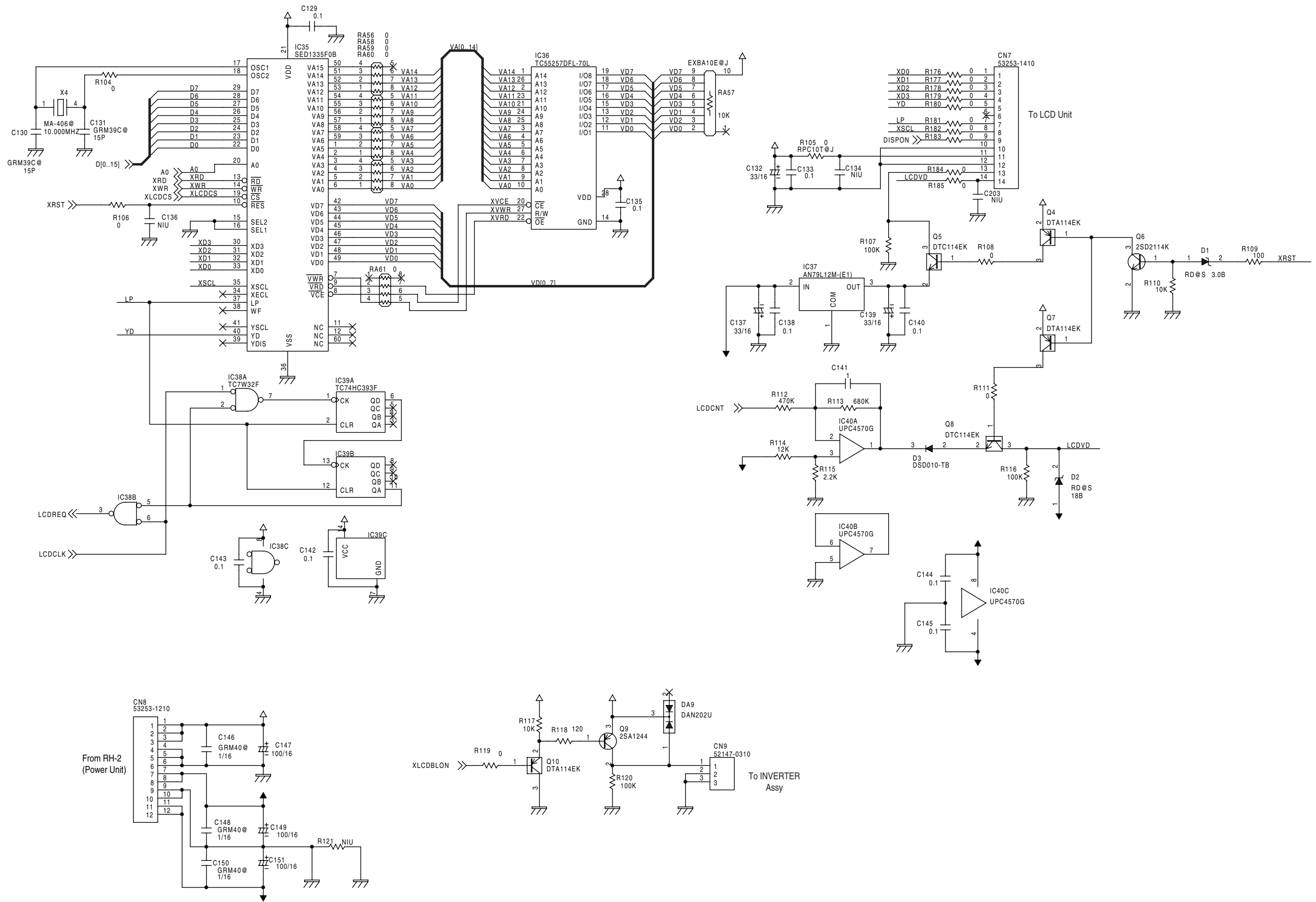


To Jack Assy (SIMM)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

A CIRCUIT DIAGRAM (MAIN)3/4

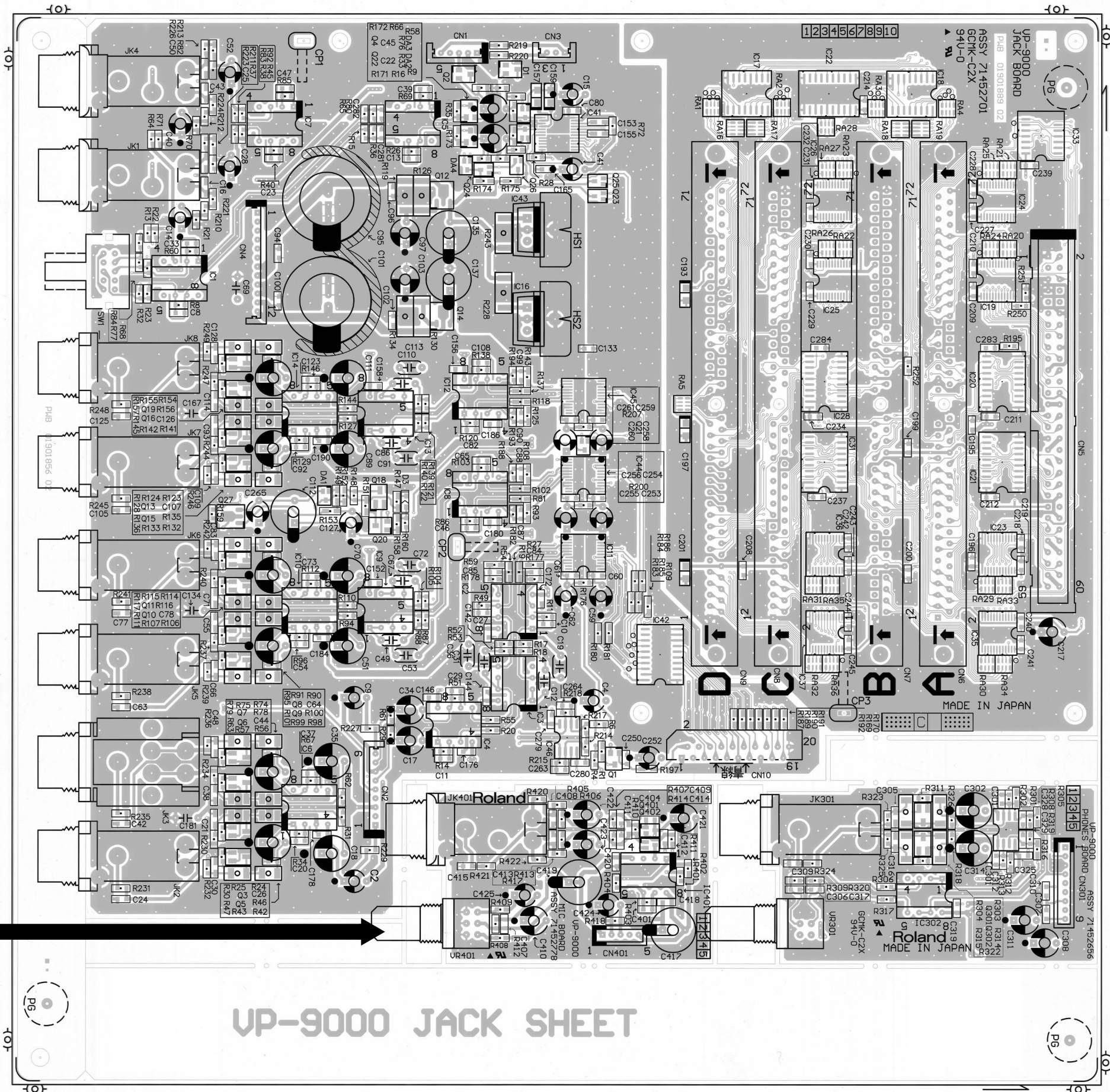
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A CIRCUIT BOARD (JACK SHEET)

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PWB MIC ASSY (71452778)



PWB JACK ASSY (71452701)



PWB PHONES ASSY (71452656)



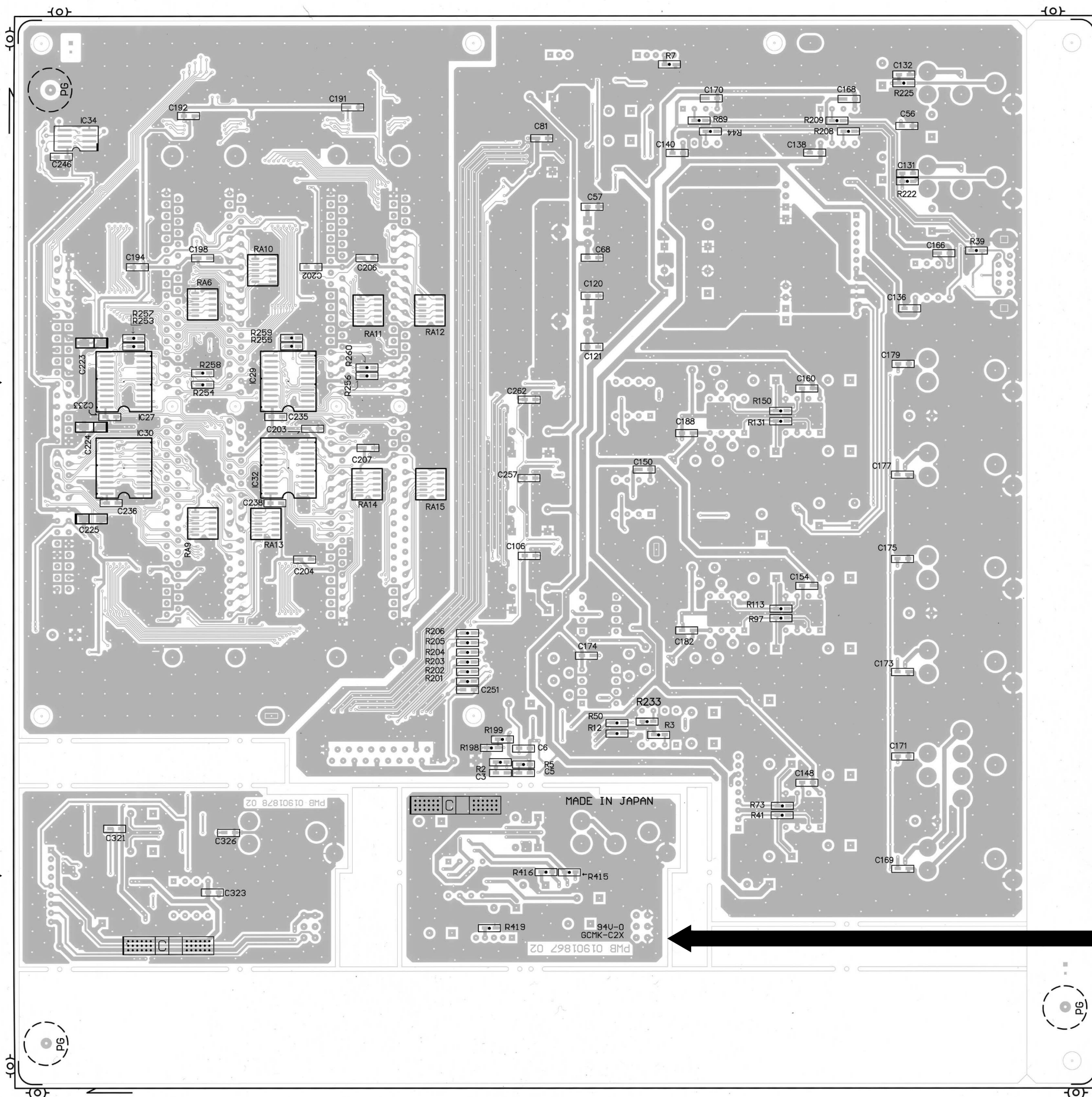
VP-9000 JACK SHEET

View from components side

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

A CIRCUIT BOARD (JACK, PHONES, MIC)

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**PWB JACK ASSY
(71452701)** →

**PWB PHONES ASSY
(71452656)** →

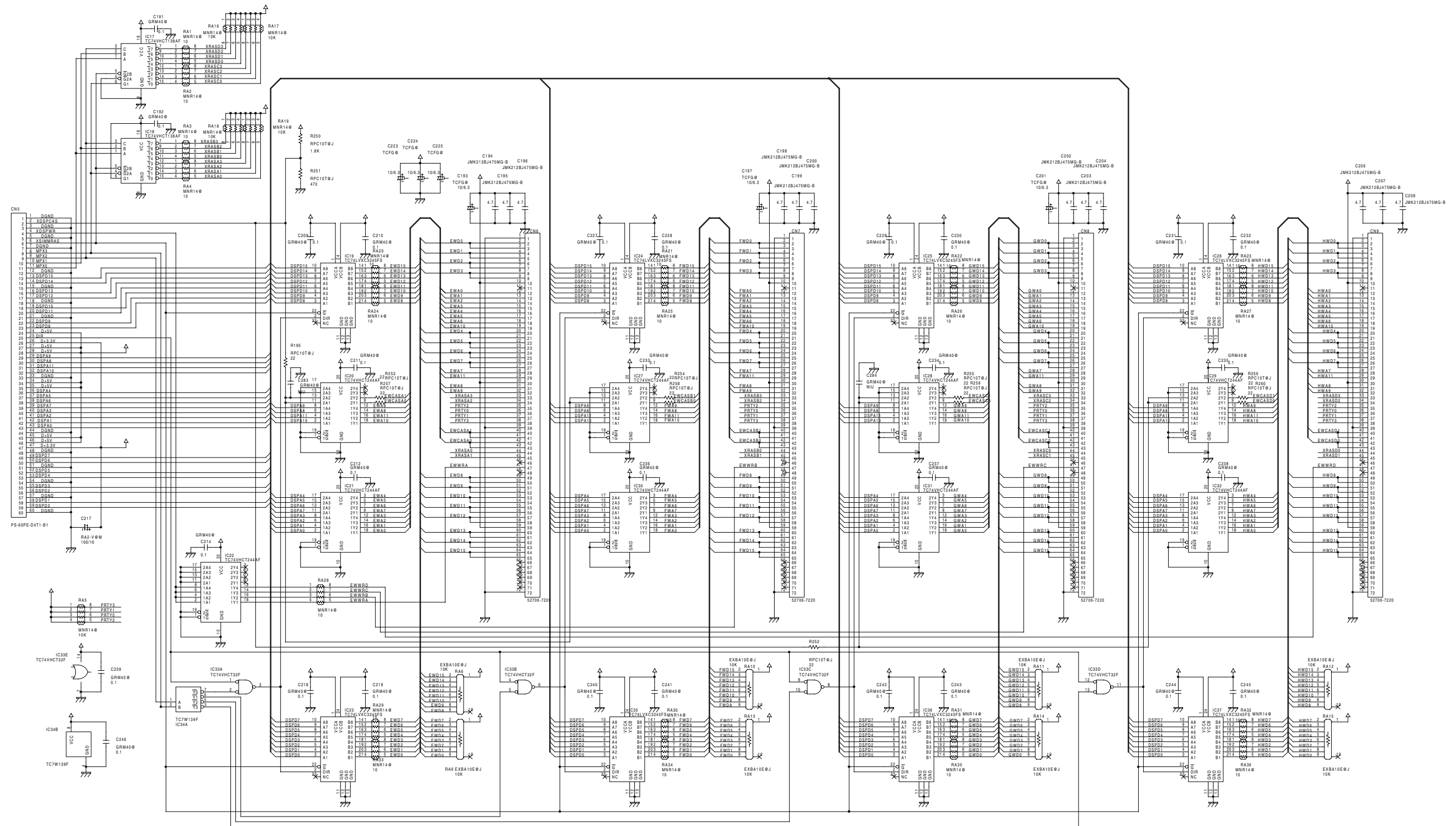
**PWB MIC ASSY
(71452778)** ←

View from foil side

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

A CIRCUIT DIAGRAM (JACK, PHONES, MIC)

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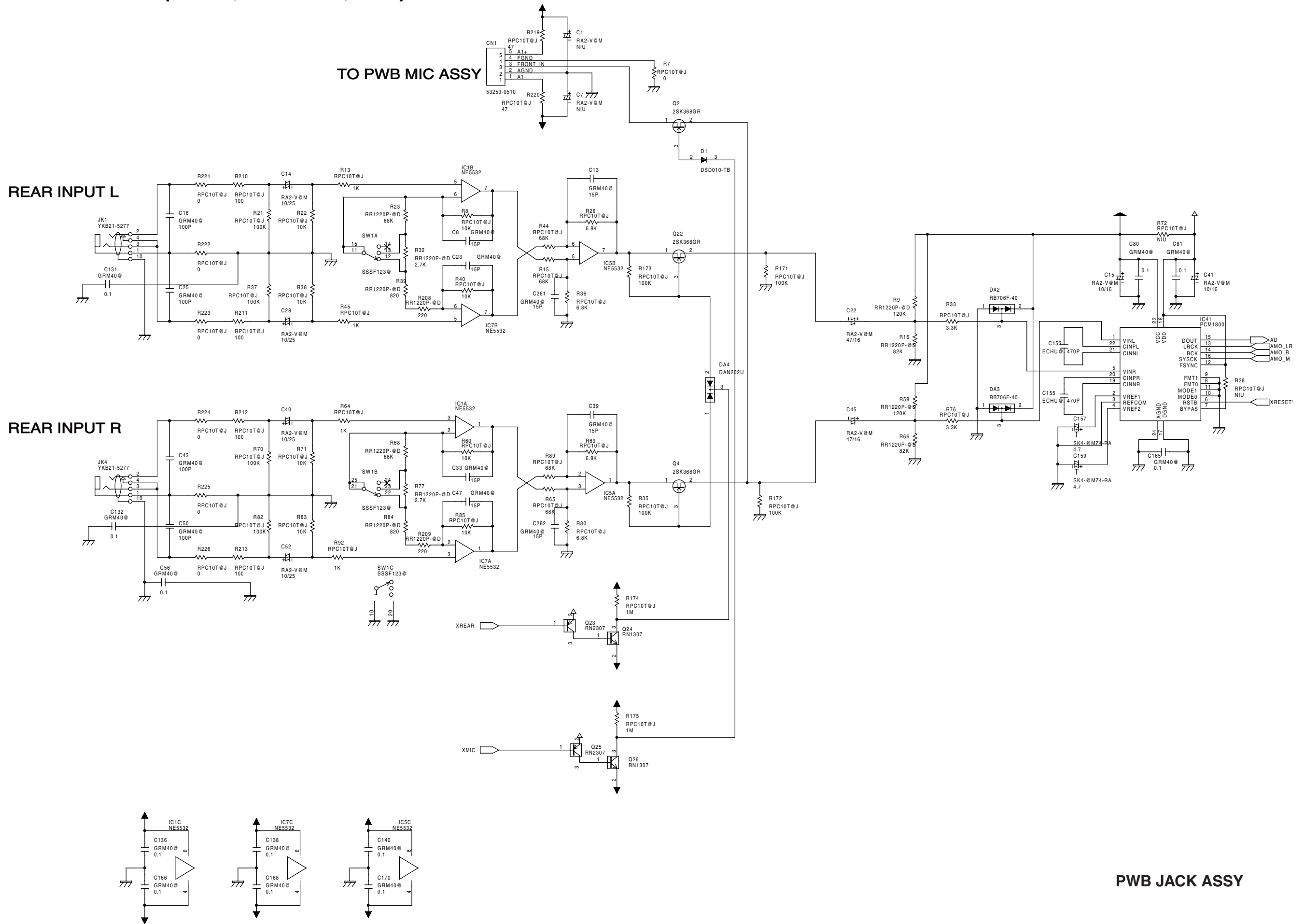


PWB JACK ASSY

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

A CIRCUIT DIAGRAM (JACK, PHONES, MIC)

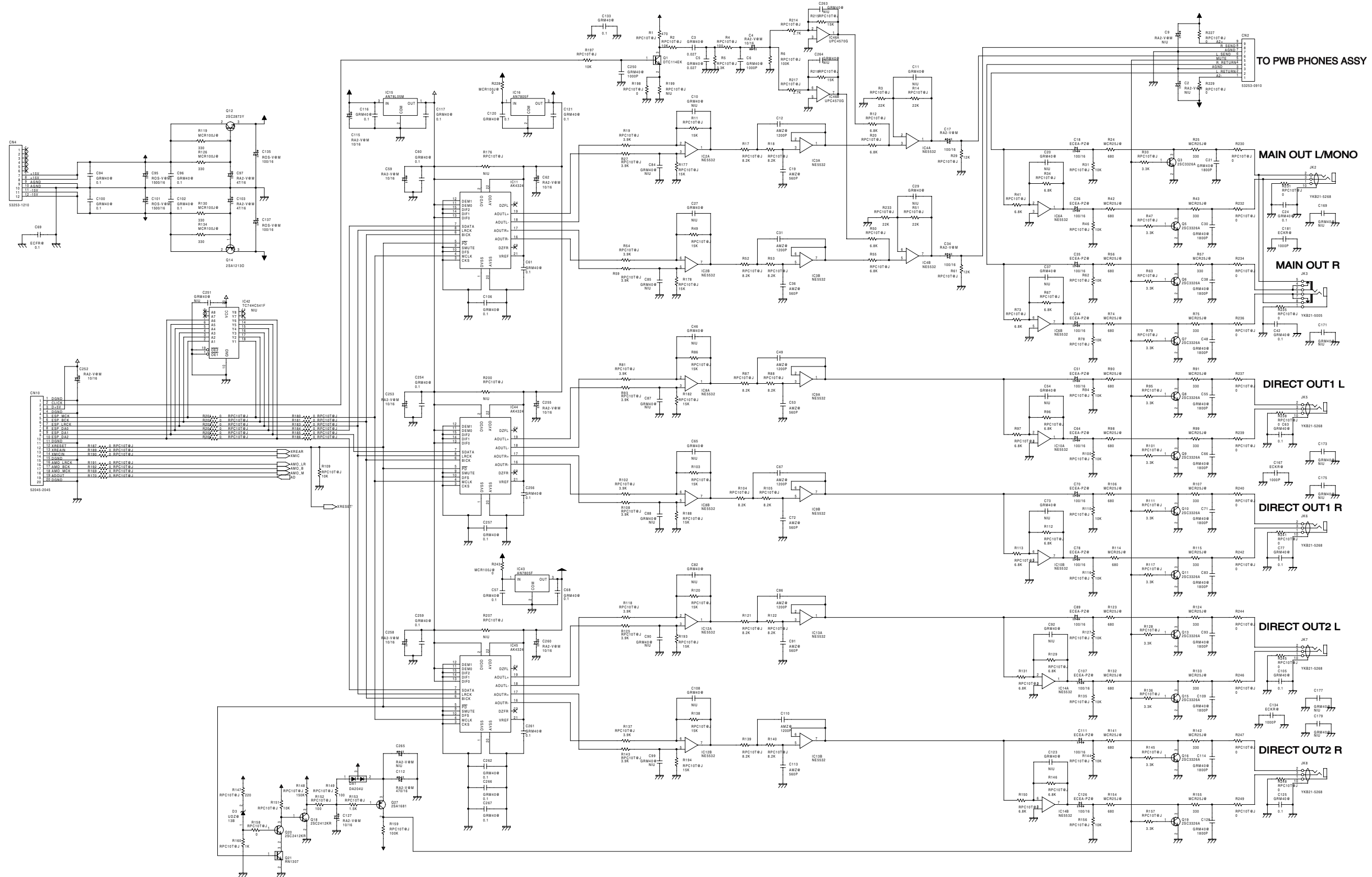
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A CIRCUIT DIAGRAM (JACK, PHONES, MIC)

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TO PWB PHONES ASSY

MAIN OUT L/MONO

MAIN OUT R

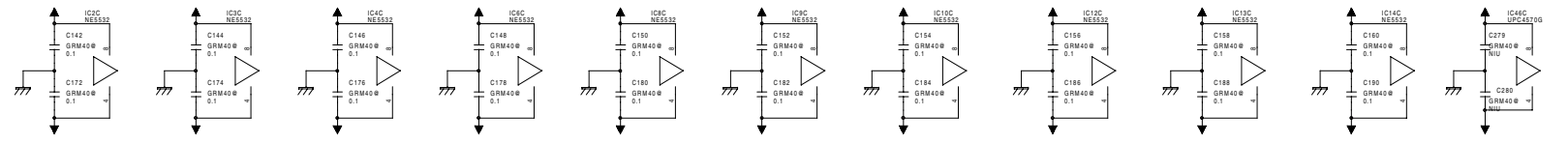
DIRECT OUT1 L

DIRECT OUT1 R

DIRECT OUT2 L

DIRECT OUT2 R

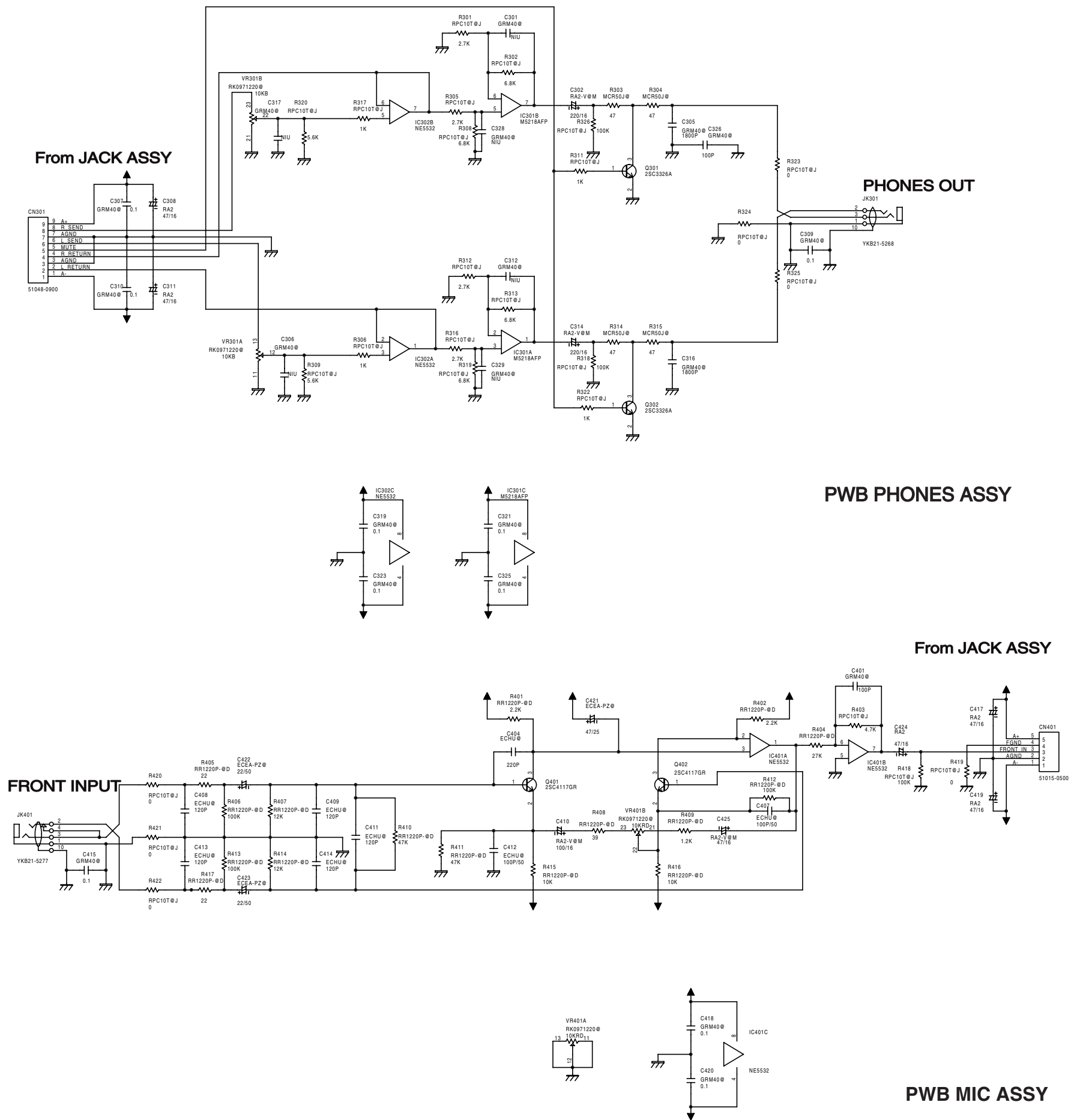
PWB JACK ASSY



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

A CIRCUIT DIAGRAM (JACK, PHONES, MIC)

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A **CIRCUIT BOARD (PANEL, IDE-SCSI, VOLUME, D-SUB, ENCODER, INVERTER)**

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**PWB VOLUME ASSY
(71452623)**



**PWB IDE-SCSI ASSY
(71452745)**



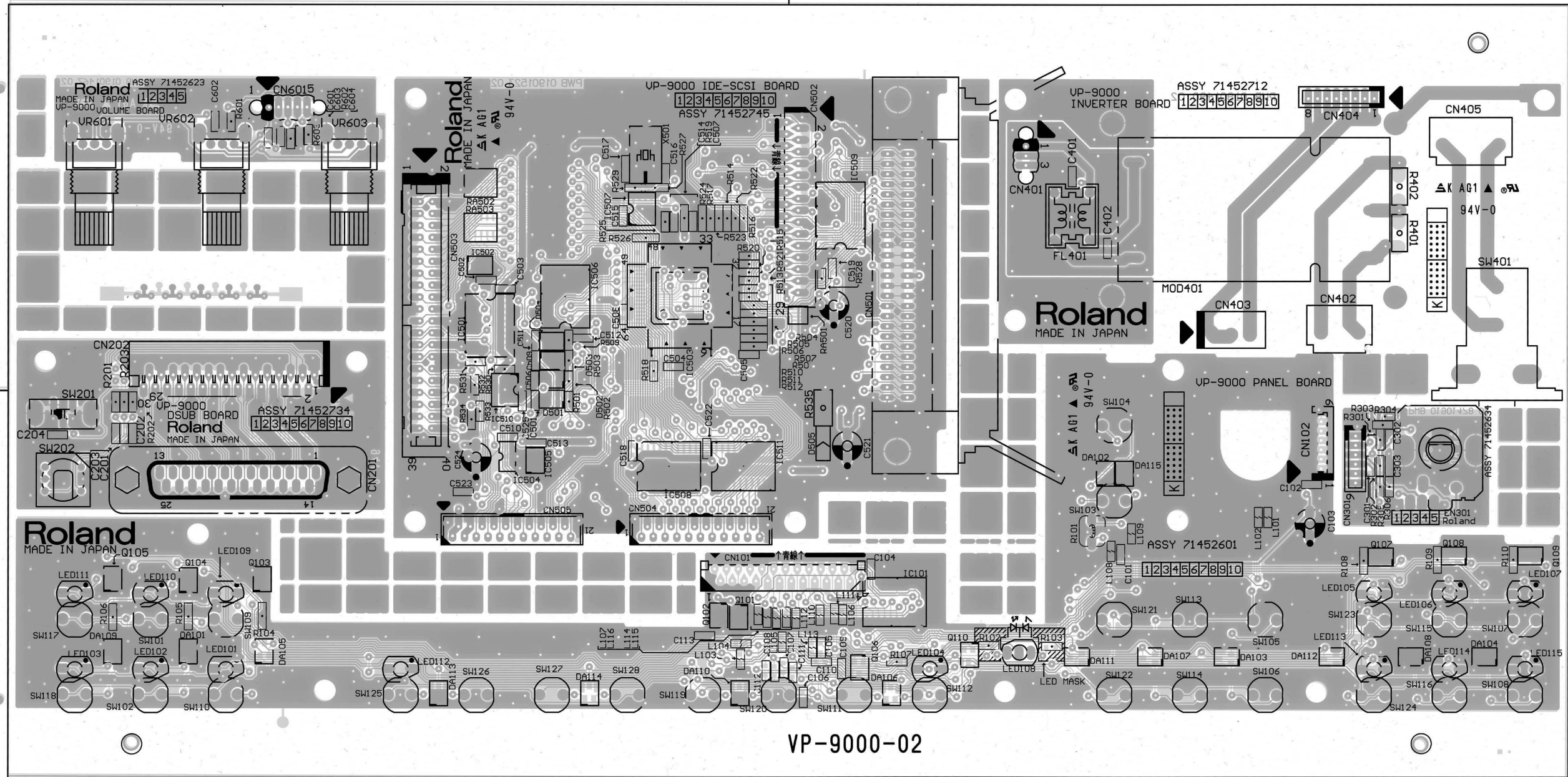
**PWB INVERTER ASSY
(71452712)**



**DSUB HOLDER ASSY
(71452734)**



**PWB ENCODER ASSY
(71452634)**



VP-9000-02

**PWB PANEL ASSY
(71452601)**

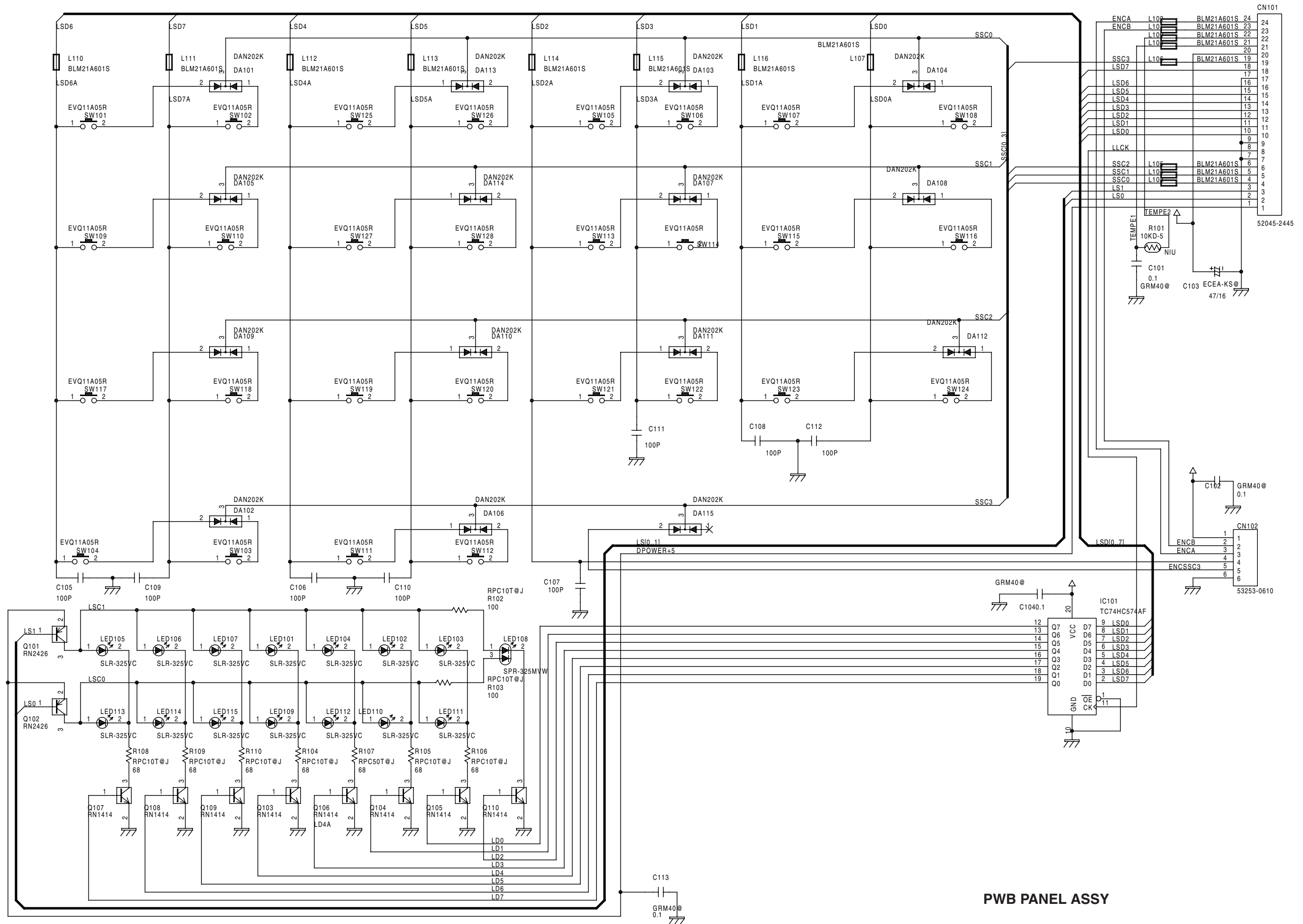


View from components side

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

A CIRCUIT DIAGRAM (PANEL)

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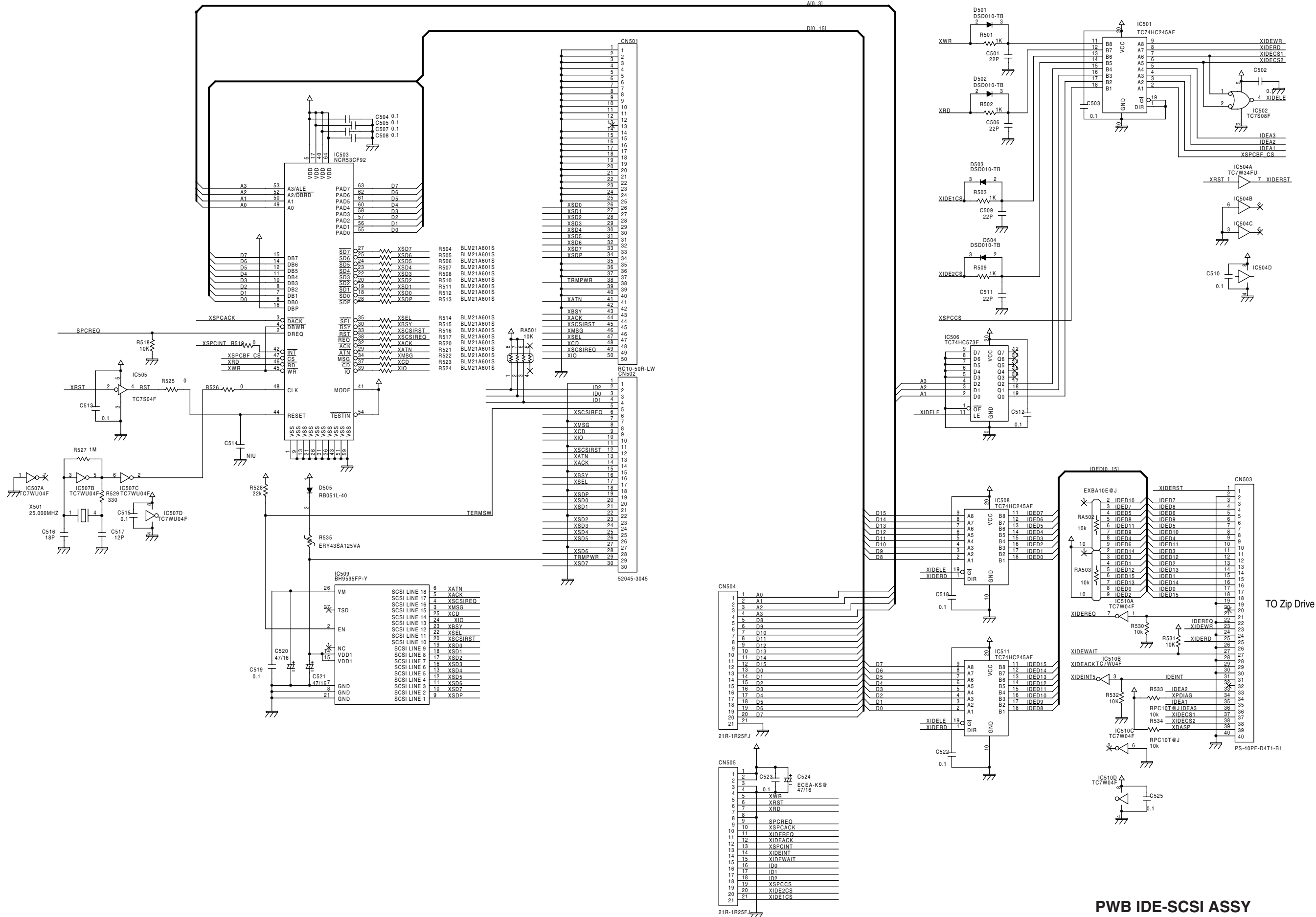


PWB PANEL ASSY

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

A CIRCUIT DIAGRAM (IDE-SCSI)

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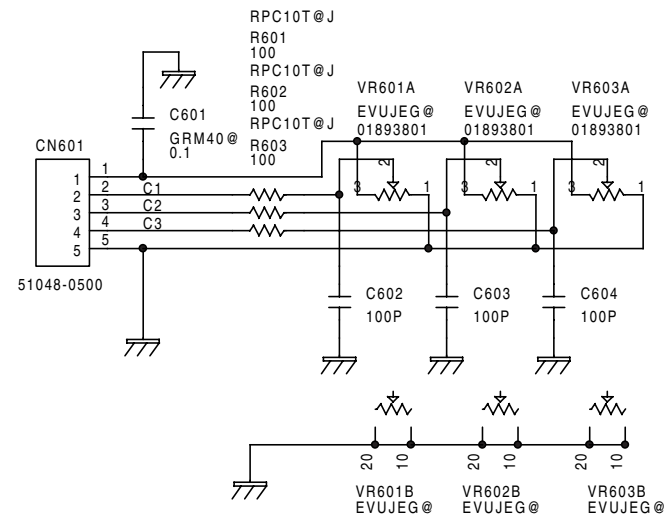


PWB IDE-SCSI ASSY

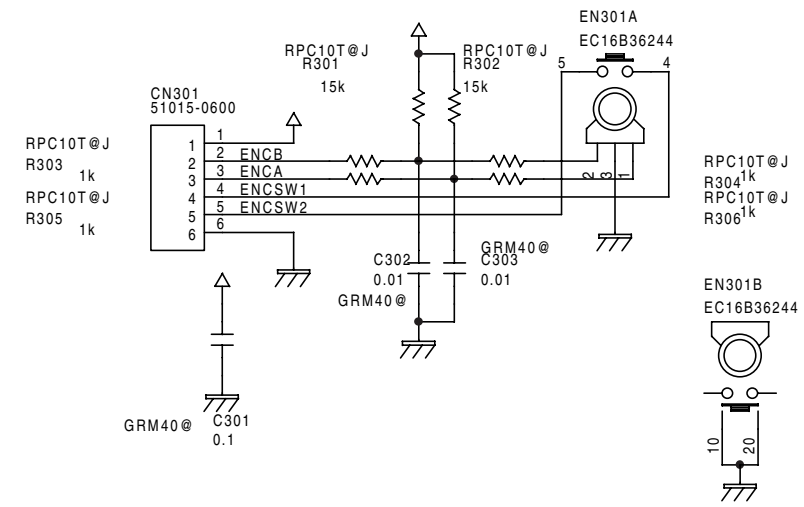
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

A CIRCUIT DIAGRAM (VOLUME, D-SUB, ENCODER, INVERTER)

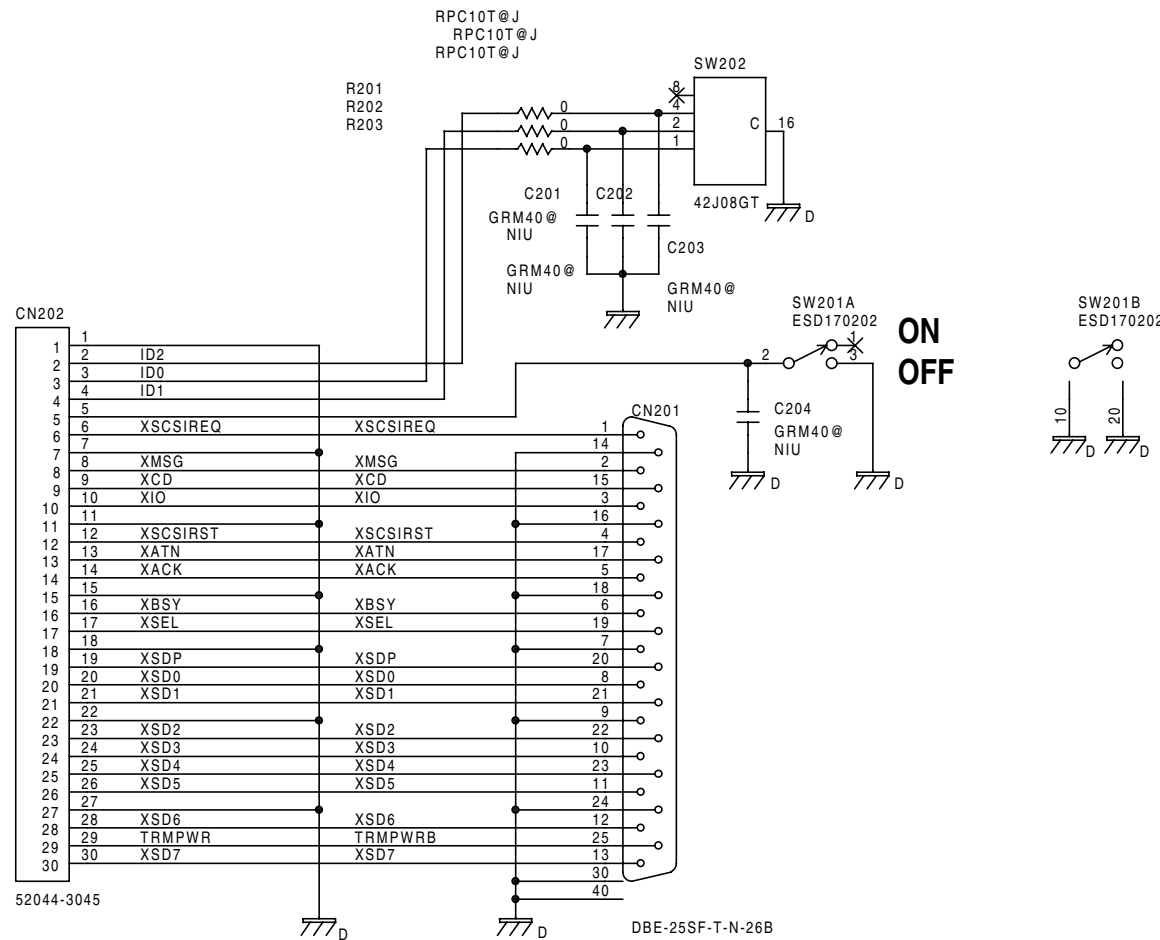
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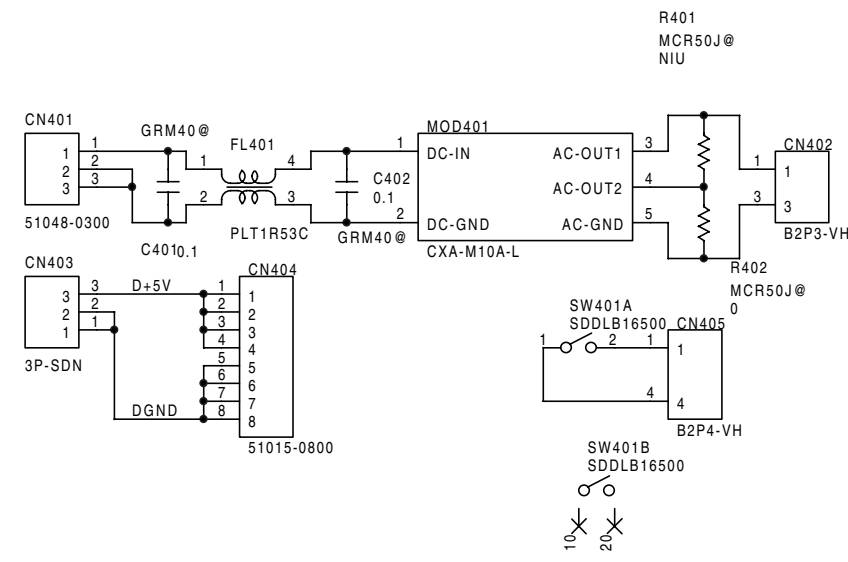
PWB VOLUME ASSY



PWB ENCODER ASSY



PWB D-SUB ASSY



PWB INVERTER ASSY

TO MAIN TOTAL ASSY
CN 13

SCSI CN A