

**ICOM**

**SERVICE  
MANUAL**

MF/HF MARINE TRANSCEIVER

**IC-M710RT**

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**Icom Inc.**

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## INTRODUCTION

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This service manual describes the latest service information for the **IC-M710RT** MF/HF MARINE TRANSCEIVER at the time of publication.

To upgrade quality, any electrical or mechanical parts and internal circuits are subject to change without notice or obligation.

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## DANGER

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**NEVER** connect the transceiver to an AC outlet or to a DC power supply that uses more than 16 V. This will ruin the transceiver.

**DO NOT** expose the transceiver to rain, snow or any liquids.

**DO NOT** reverse the polarities of the power supply when connecting the transceiver.

**DO NOT** apply an RF signal of more than 20 dBm (100 mW) to the antenna connector. This could damage the transceiver's front end.



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## ORDERING PARTS

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Be sure to include the following four points when ordering replacement parts:

1. 10-digit order numbers
2. Component part number and name
3. Equipment model name and unit name
4. Quantity required

**<SAMPLE ORDER>**

1160000130 IC TD62783AF IC-M710RT MAIN UNIT 5 pieces  
8810009400 Screw PH M3x8 SUS ZK IC-M710RT Rear panel 10 pieces

Addresses are provided on the inside back cover for your convenience.

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## REPAIR NOTES

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1. Make sure a problem is internal before disassembling the transceiver.
2. **DO NOT** open the transceiver until the transceiver is disconnected from its power source.
3. **DO NOT** force any of the variable components. Turn them slowly and smoothly.
4. **DO NOT** short any circuits or electronic parts. An insulated tuning tool **MUST** be used for all adjustments.
5. **DO NOT** keep power ON for a long time when the transceiver is defective.
6. **DO NOT** transmit power into a signal generator or a sweep generator.
7. **ALWAYS** connect a 50 dB to 60 dB attenuator between the transceiver and a deviation meter or spectrum analyzer when using such test equipment.
8. **READ** the instructions of test equipment thoroughly before connecting equipment to the transceiver.

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# SECTION 1 SPECIFICATIONS

## ■ GENERAL

• Frequency coverage	: Receive	500 kHz–29.9999 MHz	
	Transmit	1.6000–2.9999 MHz	4.0000–4.9999 MHz
		6.0000–6.9999 MHz	8.0000–8.9999 MHz
		12.0000–13.9999 MHz	16.0000–17.9999 MHz
		18.0000–19.9999 MHz	22.0000–22.9999 MHz
		25.0000–27.5000 MHz	
• Mode	: J3E (USB/LSB), H3E (AM), J2B (AFSK), F1B (FSK), R3E, A1A (CW)		(Available modes differ with version)
• Number of channels	: 1136 channels (max.)		
• Antenna impedance	: 50 Ω (nominal)		
• Usable temperature range	: –30°C to +60°C; –22°F to +140°F		
• Frequency stability	: ±10 Hz (–30°C to +60°C; –22°F to +140°F)		(±20 Hz above 15 MHz)
• Power supply requirement	: 13.6 V DC ±15% Negative ground		
• Current drain (at 13.6 V DC)	: Transmit (max. output power)	30 A	
	Receive (max. audio output)	3.0 A	
• Dimensions	Main unit	: 292(W)×117(H)×317(D) mm; 11½(W)×4½(H)×12½(D) in	
(projections not included)	Controller	: 292(W)×116(H)×66(D) mm; 11½(W)×4½(H)×2½(D) in	
• Weight	Main unit	: 7.45 kg; 16 lb 7 oz	
	Controller	: 1.2 kg; 2 lb 10 oz	
• Remote connector	: NMEA D-sub 9-pin (female)		
• ACC 1 connector	: DIN 8-pin (female)		
• ACC 2 connector	: DIN 7-pin (female)		

## ■ TRANSMITTER

• Output power (at 13.6 V DC)	: 150, 60, 20 W PEP
	(60, 20 W PEP only above 24 MHz)
• Spurious emissions	: –65 dB
• Carrier suppressions	: 40 dB
• Unwanted sideband suppression	: 55 dB
• Microphone impedance	: 600 Ω

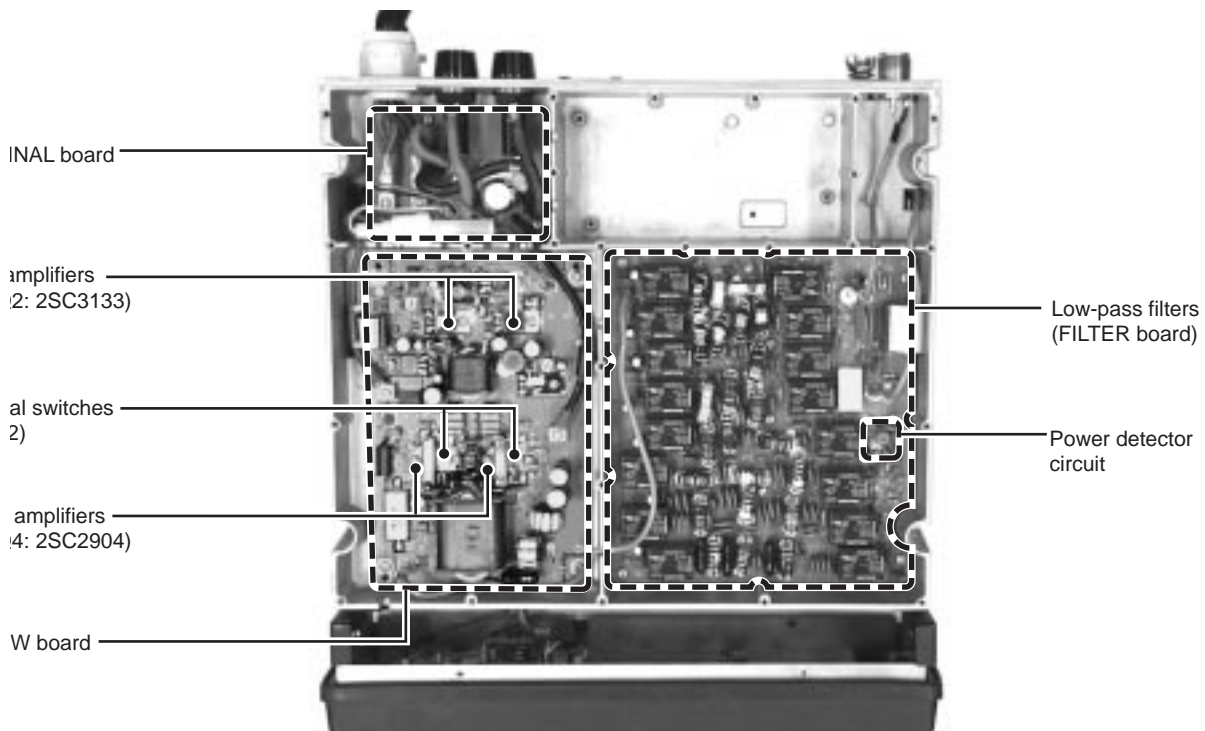
## ■ RECEIVER

• Sensitivity	:
J3E, R3E, J2B, A1A, F1B	0.5 μV (1.8000–29.9999 MHz)
(for 12dB SINAD)	1.0 μV (1.6000–1.7999 MHz)
	6.3 μV (0.5000–1.5999 MHz)
H3E (for 10dB S/N)	3.2 μV (1.8000–29.9999 MHz)
	6.3 μV (1.6000–1.7999 MHz)
	32 μV (0.5000–1.5999 MHz)
• Spurious response rejection	: More than 70 dB (1.6000–29.9999 MHz)
• Audio output power	: 4.5 W typical (at 10% distortion with a 4 Ω load)
• Audio impedance	: 4 to 8 Ω
• Clarity variable range	: ±150 Hz

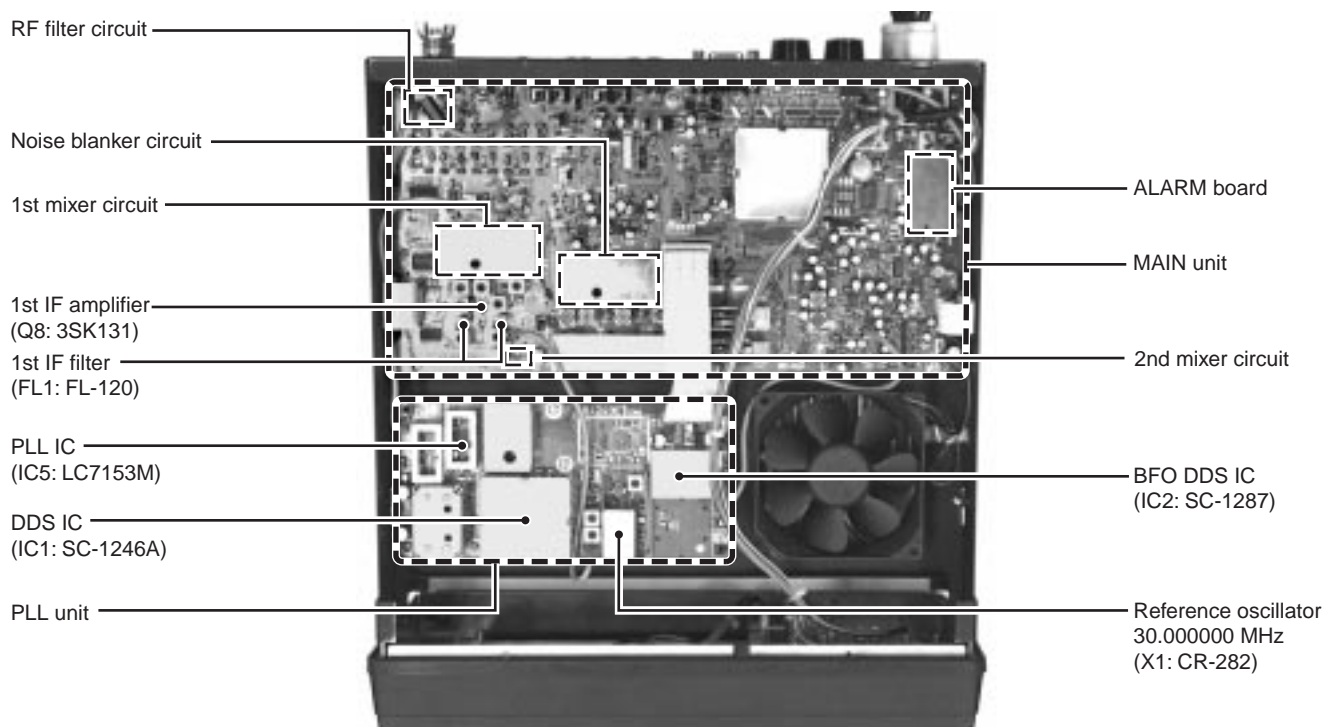
All stated specifications are subject to change without notice or obligation.

## SECTION 2 INSIDE VIEWS

### 50W, FILTER AND TERMINAL BOARDS



### • MAIN AND PLL UNITS



# SECTION 3 CIRCUIT DESCRIPTION

## 3-1 RECEIVER CIRCUITS

### 3-1-1 RF FILTER CIRCUIT (MAIN UNIT)

Received signals from the antenna connector pass through the transmit/receive switching relay (FILTER board RL17) and are then applied to the MAIN unit via J2.

The signals pass through the protection relay (RL2), 1.6 MHz cut off high-pass filter (L2–L4, C4–C8, C629) and are then applied to one of nine bandpass filters (including one low-pass filter for below 2.0 MHz). These filters are selected by the filter control signals (B0–B8) as described in the table below.

The filtered signals pass through the 30 MHz cut-off low-pass filter (L71, L72, C130–C134, C618) and are then applied to the 1st mixer circuit (Q6, Q7).

#### • RF FILTERS USED

Frequency (MHz)	Control signal	Entrance coil	Frequency (MHz)	Control signal	Entrance coil
0.5–1.999	B0	L49	10–13.999	B5	L28
2–2.999	B1	L8	14–17.999	B6	L33
3–4.999	B2	L13	18–23.999	B7	L38
5–6.999	B3	L18	24–29.999	B8	L43
7–9.999	B4	L23			

### 3-1-2 1ST MIXER AND IF CIRCUITS (MAIN UNIT)

The 1st mixer circuit converts the received signals into a fixed frequency, 69.0115 MHz 1st IF signal using the PLL output frequency. By changing the PLL frequency, only the desired frequency is picked up at the pair of crystal filters (F11a, F11b) at the next stage.

The IF amplifier (Q8) and resonator circuits are designed between the filter pair. The PLL output signal (1LO) enters the MAIN unit via J3 and is amplified at the 1st LO amplifier (Q5) and then applied to the 1st mixer (Q6, Q7)

### 3-1-3 2ND MIXER AND IF CIRCUITS (MAIN UNIT)

The 1st IF signal from the crystal filter (F11b) is converted again into a 9.0115 MHz 2nd IF signal at the 2nd mixer circuit (D52, L66, L67). The 60 MHz 2nd local signal (2LO) from the PLL unit enters the MAIN unit via J4 to be applied to the 2nd mixer.

The 2nd IF signal is passed through the noise blanker gate (D15, D16) and amplified at the 2nd IF amplifier (Q16) and then applied to one of the 9 MHz IF filters as described below. The passed signal is amplified at the two stage 2nd IF amplifiers (Q32, Q33) and is applied to a demodulator circuit (D39 for H3E or IC10 for J3E and others).

#### • 2ND IF FILTERS USED

MODE	Used filter	Control signal
J3E, R3E, FSK	F12	SEL8: low, H3E8: low
H3E	F13/F14	SEL8: low, H3E8: high
FSK narrow, A1A narrow	Optional narrow filter	SEL8: high, H3E8: low

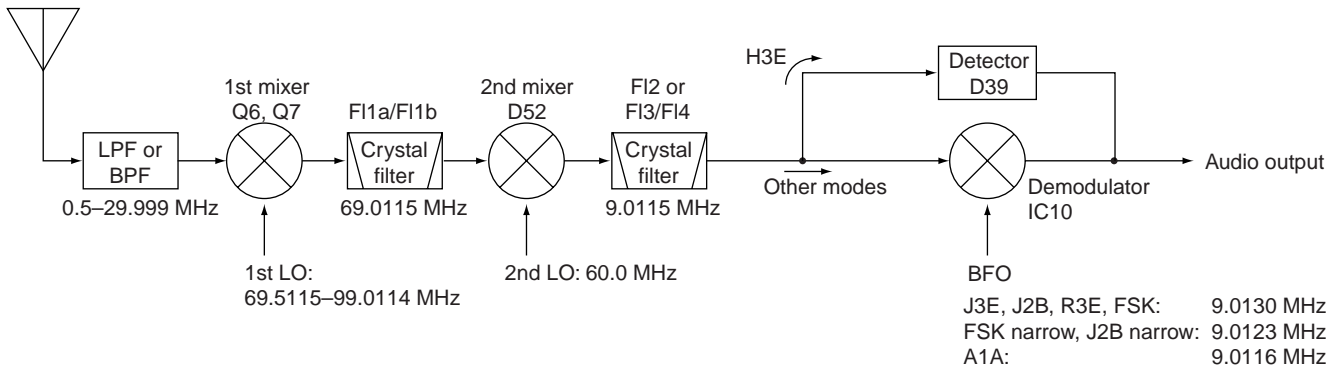
### 3-1-4 NOISE BLANKER CIRCUIT (MAIN UNIT)

The noise blanker circuit cuts off the IF circuit line at the moment of receiving a pulse-type noise.

A portion of the 2nd IF signal between resonator circuits (L83, L84 after stage of the 2nd mixer, D52) is amplified at the noise amplifiers (Q9, IC8, Q11). The signal is then detected at the noise detector (D17) to convert the noise components to DC voltages.

The signals are then applied to the noise blanker switch (Q13, Q14). At the moment the detected voltage exceeds the Q13's threshold level, Q14 outputs a blanking signal to close the noise blanker gate (D15, D16) by applying reverse-biased voltage. Q15 turns the noise blanker circuit ON and OFF.

#### • RECEIVE FREQUENCY CONSTRUCTION



The detected voltage is also applied to the noise blanker AGC circuit (Q12, Q10) and is then fed back to the noise amplifier (IC8) as a bias voltage. The noise blanker AGC circuit prevents closure of the noise blanker gate for long periods by non-pulse-type noise. The time constant of the noise blanker AGC circuit is determined by R58 and C114.

### 3-1-5 DEMODULATOR CIRCUIT (MAIN UNIT)

This circuit mixes the 2nd IF and BFO signals to pick up the AF components (except H3E mode). The 2nd IF signal from the 2nd IF amplifier (Q33) is applied to the balanced mixer (IC10, pin 1). The 9.0116–9.013 MHz BFO signal from the PLL unit is also applied to IC10 (pin 10). AF signals are output from pin 6 and are then applied to the AF circuits.

### 3-1-6 H3E DETECTOR CIRCUIT (MAIN UNIT)

The 2nd IF signal from the 2nd IF amplifier (Q33) is applied to the AM detector circuit (D39) to be demodulated into AF signals. The detected signals are amplified at the buffer amplifier (Q45) and then applied to the AF circuits.

### 3-1-7 AGC CIRCUIT (MAIN UNIT)

The AGC (Automatic Gain Control) circuit reduces IF amplifier gain to prevent the receiver circuit from distorting and to keep the audio output at a constant level.

A portion of the IF signals from the 2nd IF amplifier (Q33) is detected at the AGC detector circuit (D31) and is then applied to the AGC amplifier (Q41) to control the AGC time constant line. The reference voltage of the AGC line is controlled by the "RFG" line which comes from the CPU for the RF gain setting.

When receiving a strong signal, the detected voltage increases and the voltage of the AGC line is decreased by the AGC amplifier (Q41) via the -5 V voltage line. The AGC line is used for the bias voltage of the IF amplifiers (Q8, Q16, Q32, Q33), so that these amplifiers reduce gain.

When the strong signal disappears, the AGC line voltage is released by C245/R268 and C670/R813.

The AGC switch (Q42, D38) turns the AGC circuit OFF when the AGC OFF function activates. The AGC-fast switch (Q131) sets the AGC line as fast-release during scanning and A1A mode selection.

### 3-1-8 S-METER CIRCUIT (MAIN UNIT)

The S-meter indicates the AGC level on the display, since the AGC level varies with the received signal strength.

The AGC bias voltage (AGC time constant line) from the AGC amplifier (Q41) is inverted and amplified at the meter amplifier (IC19b). The amplified signal is applied to the CPU via the "RSM" line.

### 3-1-9 AF AMPLIFIER CIRCUITS (MAIN UNIT AND LOGIC BOARD)

AF signals from the demodulator or H3E detector circuits pass through the active low-pass filter (IC20b) and squelch gate (IC12a), and are then divided into the AF amplifier circuit and AF activated squelch circuit. The divided AF signals are applied to the CTRL2 board via the buffer amplifier (IC42).

The AF signals are converted into PWM signal at the PWM modulation circuit (IC4, Q11) via the AF amplifier (CTRL2 board; IC5), and are applied to the serial interface IC (IC1). The serial interface IC outputs PWM signal to the CTRL1 board (RC-21) via a coaxial cable.

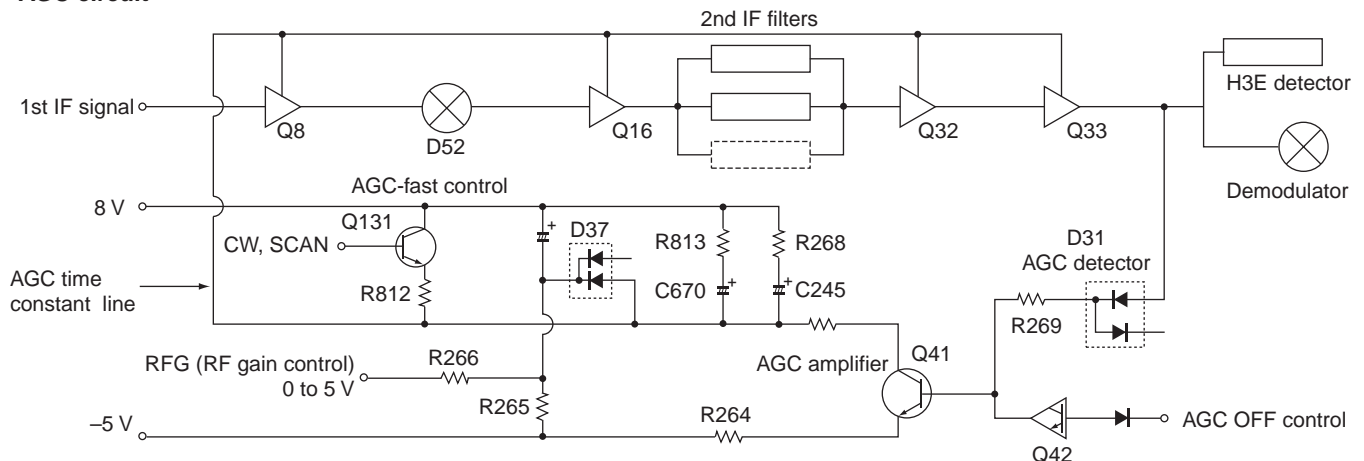
The PWM signal from the IC-M710RT is applied to the LOGIC board after being converted into an analog signal by passing through the serial interface IC (IC1) on the CTRL1 board.

The AF signals are applied to the electronic volume control (LOGIC board; IC9). The CPU (pin 39) outputs the volume control signal (1 to 5 V) according to the [VOLUME] control setting.

The AF output signals from IC9 (pin 5) are amplified at the AF power amplifier (IC8) and then applied to the internal speaker via the microphone connector (pins 3 and 4).

The speaker switch relay (RL1) is connected to the (-) terminal of the internal speaker for the [SPEAKER] switch function.

#### • AGC circuit



### 3-1-10 SQUELCH CIRCUIT (MAIN UNIT)

The transceiver has two squelch circuits, voice activated squelch for J3E/H3E and S-meter squelch for A1A/FSK/J2B.

#### (1) AF ACTIVATED SQUELCH

A portion of the AF signal from the active low-pass filter (IC20b) is amplified at the limiter amplifier (IC20a) and is then applied to the one-shot multi-vibrator (IC22c, IC22d). The one shot multi-vibrator functions as an F-V converter which generates a signal only when audio signals are received.

The output signals pass through the NOR gate (IC22b) and then the 3 Hz low-pass filter (IC21a) to remove the remaining noise components. The filtered signal is applied to the window comparator (IC21b). The NOR gate (IC22b) deactivates the audio activated squelch during A1A/FSK/J2B mode operation.

The comparator outputs "High" when the integrated signals exceed the reference voltage. C269, R310 and R780 are used as a time constant circuit. The resulting signal output from IC22a is inverted at Q46 and is then applied to the CPU as the "SQLS" signal. The CPU controls the squelch gate (IC12a) when the "SQLS" signal is received.

#### (2) S-METER SQUELCH

The S-meter signal from IC19b is applied to the squelch comparator (IC19a) to close or open the squelch circuit. The reference voltage is adjusted by R257 and then applied to the (-) terminal of the comparator (IC19a). When the S-meter signal exceeds the reference voltage, the comparator outputs "High" to the CPU via IC22a and Q46 in the same manner as the voice activated squelch circuit.

## 3-2 TRANSMITTER CIRCUITS

### 3-2-1 MICROPHONE AMPLIFIER CIRCUIT (LOGIC BOARD IN THE RC-21)

The AF signals from the [MICROPHONE] connector pass through the microphone gain controller (R81) and AF amplifier (IC12a), and are applied to the CTRL1 board. The microphone AGC circuit (D9, D10, Q13, Q14) controls the amplifier gain to prevent signal distortion.

The AF signals are converted into PWM signal at the PWM modulation circuit (IC3, Q1, D1) via the AF amplifier (CTRL1 board; IC4), and are applied to the serial interface IC (IC1). The serial interface IC outputs PWM signal to the CTRL2 board (IC-M710 RT) via a coaxial cable.

The PWM signal from the RC-21 (controller) is applied to the MAIN unit after being converted into an analog signal by passing through the serial interface IC on the CTRL2 board.

The AF signals are applied to the balanced modulator (MAIN unit; IC9, pin 1) via the AF switch (IC38b).

External modulation inputs from the ACC socket or a 2-tone emergency signal from the CPU are applied to the balanced modulator directly via AF switches (IC38, IC39).

### 3-2-2 MODULATION CIRCUIT (MAIN UNIT)

#### (1) J3E AND J2B MODES

The balanced modulator is used for J3E and J2B modes to add the audio signal to the BFO frequency and outputs the IF signal while suppressing the BFO signal.

The AF signals from the microphone amplifier or external audio from the modulation terminals are applied to the balanced modulator (IC9, pin 1). The BFO signal from the PLL unit is applied to IC9 (pin 10) as a carrier signal. A double sideband signal is output from IC9 (pin 6) and is then applied to the 9 MHz filter (FI2) to create an SSB signal.

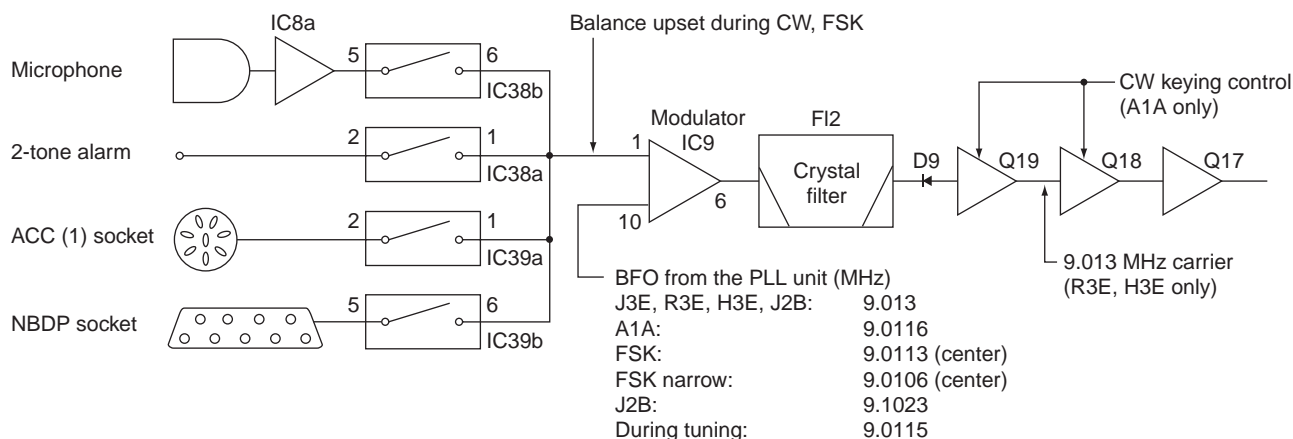
R238 adjusts the balanced level of IC9 for maximum carrier suppression. In J2B mode, the BFO frequency is shifted 1.7 kHz to set the transmit frequency the same as the displayed frequency.

The SSB signal from FI2 is amplified at the 9 MHz amplifiers (Q17-Q19) and is then applied to the mixer circuit (D52). The switching diode (D19) is turned ON when R8 voltage disappears.

#### (2) H3E AND R3E MODES

An SSB signal is applied to the IF amplifier (Q18) in the same manner as with J3E/J2B mode. The BFO signal from the PLL unit is amplified at the buffer amplifier (Q30) and is then applied to the IF amplifier (Q18) as a carrier signal to be added to an SSB signal. R211 and R212 adjust the carrier levels in H3E and R3E modes, respectively.

### • MODULATOR CIRCUIT





### (3) A1A AND FSK MODES

The CW8 or FSK8 voltage are applied to the balanced modulator (IC9, pin 4) to upset the balance and create a carrier signal.

In A1A mode, the CW keying circuit (IC18a) controls the bias voltage of the IF amplifiers (Q18, Q19) and T/R switching diode (D19) to switch the carrier transmission.

In FSK mode, BFO frequency is shifted in the PLL unit to create the mark and space frequencies.

### 3-2-3 1ST MIXER CIRCUIT (MAIN UNIT)

The amplified signal from the IF amplifier (Q17) is mixed with a 60 MHz LO signal at the 1st mixer circuit (D52) to produce a 69.0115 MHz IF signal. The mixer is commonly used with the receiver 2nd mixer.

The 69.0115 MHz IF signal passes through the filter (F11b) and is then applied to the 2nd mixer circuit.

### 3-2-4 2ND MIXER CIRCUIT (MAIN UNIT)

The filtered signal is mixed with a PLL output frequency (1LO: 69.5155–99.0155 MHz) at the 2nd mixer circuit (Q3, Q4) to produce an RF signal which is the same frequency as the displayed one.

### 3-2-5 RF FILTER CIRCUIT (MAIN UNIT)

The RF signal passes through the low-pass filter (L55, L56, C89–C93, C620, C628) and is then amplified at the RF amplifier (Q2).

The amplified signal is applied to one of nine RF filters. These RF filters are commonly used with the receiver circuit which consists of eight high-pass filters and one low-pass filter. The filtered signal is amplified at the RF amplifier (Q1) and is then applied to the PA150W board via J1.

### 3-2-6 POWER AMPLIFIER CIRCUIT (PA150W BOARD)

This circuit provides a stable 150 W (at 13.6 V DC) of output power. The RF signal from the MAIN unit is amplified at the pre-driver (Q8), driver (Q1, Q2), and power amplifier (Q3, Q4).

The driver and power amplifiers form class AB push-pull circuits. Bias voltage to these transistors is produced by diodes (D1–D3) which have temperature junctions with the transistors.

The amplified signal is then applied to one of eight low-pass filters to suppress high harmonic components. The filtered signal passes through the power detector circuit (FILTER board; L41) and transmit/receive switching relay (FILTER board; RL17) and is then applied to the antenna connector.

#### • LOW-PASS FILTERS USED (FILTER BOAED)

Frequency (MHz)	Control signal	Entrance coil	Frequency (MHz)	Control signal	Entrance coil
0.5–1.999	L0	RL1	10–13.999	L5	RL11
2–2.999	L1	RL3	14–17.999	L6	RL13
3–4.999	L2	RL5	18–19.999		
5–6.999	L3	RL7	20–21.999	L7	RL15
7–9.999	L4	RL9	22–23.999		
			24–29.999		

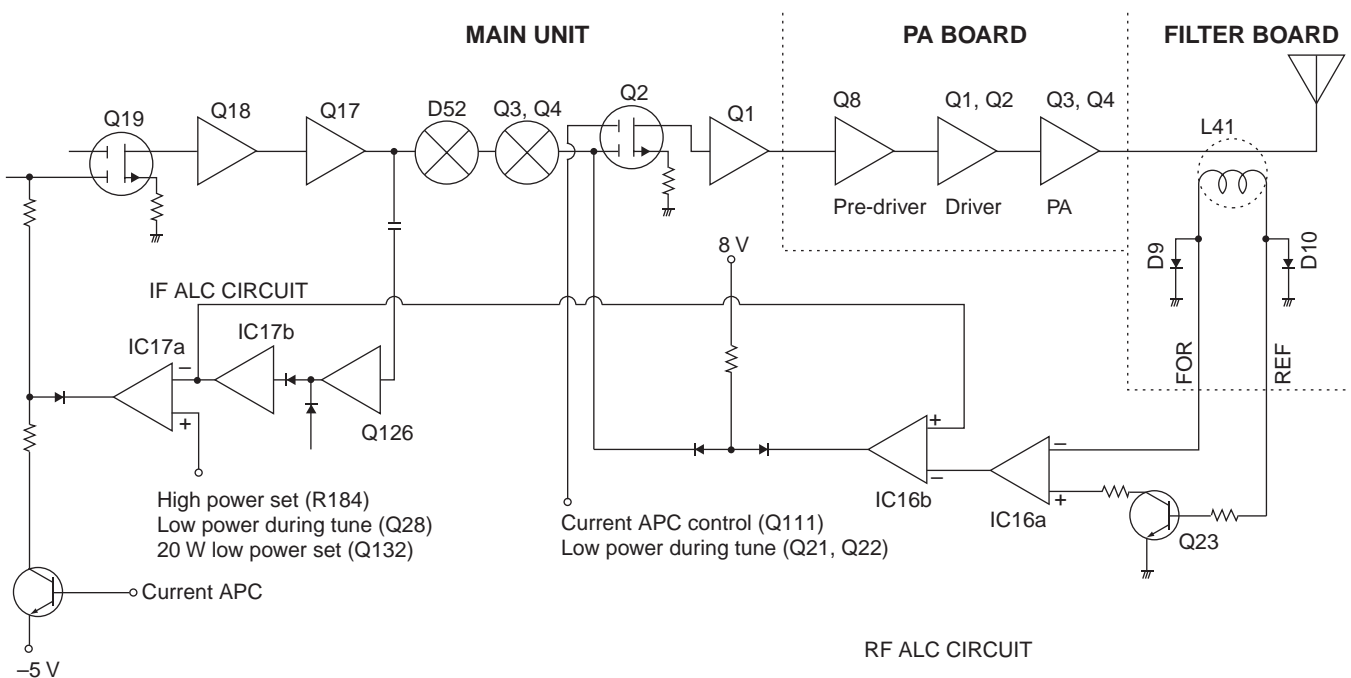
### 3-2-7 ALC CIRCUIT

The transceiver has two ALC (Auto Level Control) loops for constant output power over all marine bands and for high power setting.

#### (1) IF ALC CIRCUIT (MAIN UNIT)

A portion of the IF signals from the IF amplifier (Q17) is applied to the IF ALC circuit. The signal is amplified at Q126 and then detected at the ALC detector (D46). The detected signal is amplified at the ALC amplifier (IC17b) and is then applied to the comparator (IC17a).

#### • ALC CIRCUIT



The reference voltage for the comparator is set by R184. The antenna tuning control voltage (TUN8) is also affected by the reference voltage to decrease the IF signal level.

The comparator output controls the gate bias of the IF amplifier (Q19), so that the IF signal level is determined by the reference voltage of the comparator (IC17a).

**(2) RF ALC CIRCUIT (FILTER BOARD)**

The RF output power level is detected at D9 of the power detector circuit (L41, D9, D10) on the FILTER board. The detected signal (“FOR” signal) is applied to the RF ALC amplifier (IC16a) in the MAIN unit.

The amplified signal enters the transmit gain controller (IC16b) which functions as an inversion amplifier. The gain controller decrease the gain of the IF amplifier (Q2) on the MAIN unit to constant output power from differential amplifier gains which are occurred by their frequency characteristics.

**3-2-8 APC CIRCUIT**

The APC (Auto Power Control) circuit protects the power amplifiers on the PA unit from high SWR and excessive current.

**(1) SWR APC (FILTER BOARD AND MAIN UNIT)**

The reflected wave signal appears and increases on the antenna connector. When the antenna is mismatched, D10 of the power detector circuit (D9, D10, L41) on the FILTER board detects the signal and applies it to the APC amplifier (Q23) on the MAIN unit. The output signal decreases the bias voltage of the RF ALC amplifier to reduce the output power.

**(2) CURRENT APC (PA150W BOARD AND MAIN UNIT)**

The power transistor current is detected from the different voltages between both terminals of a 0.012 Ω resistor (R26) on the PA150W board. The detected voltage is applied to the differential amplifier (IC2b). When the current of the final transistors is more than 30 A, the detected voltage is applied to the APC amplifier controller (Q111) in the MAIN unit to reduce the gate-2 voltage of the IF amplifier (Q2) and thus reduce the output power.

**3-2-9 TEMPERATURE DETECTION (PA150W BOARD)**

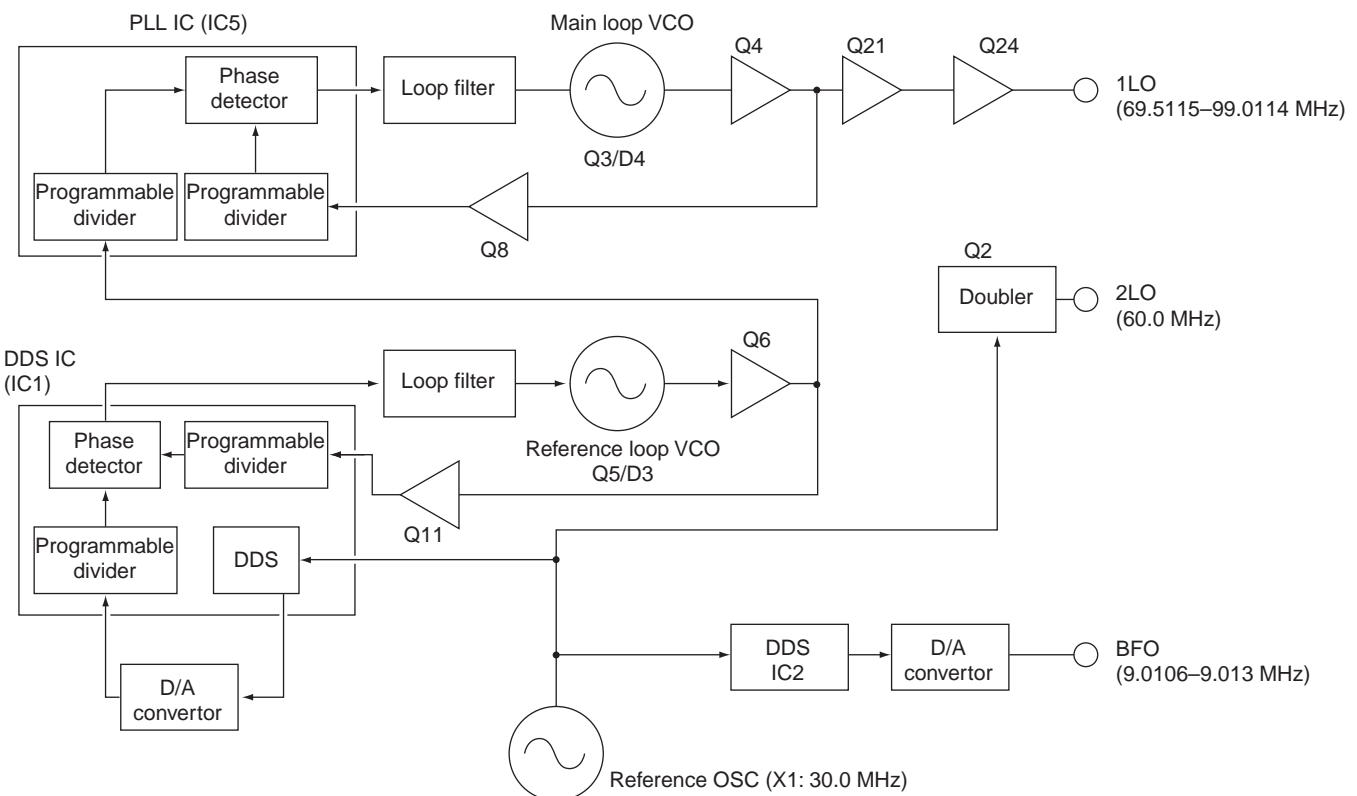
Thermal switches (S1, S2) protect the final transistors from excessive temperatures. When the temperature of the final transistor (Q4) or exceeds 50 °C (122 °F), S2 is turned ON to start the cooling fan. When the temperature of the final transistor (Q3) exceeds 110 °C (230 °F), S1 is turned ON to control the “POC2” line and sets the power to 60 W.

**3-2-10 RF METER CIRCUIT (MAIN UNIT)**

The output of the ALC amplifier (IC16a) is applied to the CPU (pin 31) to indicate the transmit power level on the display.

for antenna current meter indication, the “ANTC” signal from an optional AT-130E is applied to the CPU (pin 32).

**• PLL CIRCUIT**



### 3-3 PLL CIRCUIT

#### 3-3-1 GENERAL

The PLL unit generates a 1st LO frequency (69.5115-99.0114 MHz), 2nd LO frequency (60 MHz) and a BFO frequency (9.0106–9.013 MHz) for the MAIN unit. The 1st LO PLL adopts a mixerless dual loop PLL system. The BFO uses a DDS and a 2nd LO as a fixed frequency double that the crystal oscillator.

#### 3-3-2 1ST LO PLL (PLL UNIT)

The 1st LO PLL contains a main loop and reference loop as a dual loop system. The reference loop generates a 10.65 to 10.75 MHz frequency using a DDS circuit, and the main loop generates a 69.5115 to 99.0114 MHz frequency using the reference loop frequency.

##### (1) REFERENCE LOOP PLL

The oscillated signal at the reference VCO (Q5, D3) is amplified at the buffer amplifiers (Q6, Q11) and is then applied to the DDS IC (IC1, pin 46). The signal is then divided and detected on phase with the DDS generated frequency.

The detected signal output from IC1 (pin 56) is converted into a DC voltage (lock voltage) at the loop filter (R18, R19, C 44) and then fed back to the varactor diode (D3) in the VCO circuit.

##### (2) MAIN LOOP PLL

The oscillated signal at the main loop VCO (Q3, D4) is amplified at the buffer amplifiers (Q4, Q8) and is then applied to the PLL IC (IC5, pin 14). The signal is then divided and detected on phase with the reference loop output frequency.

The detected signal output from IC5 (pins 9, 10) is converted into a DC voltage (lock voltage) at the loop filter and then fed back to the varactor diode (D4) in the VCO circuit.

The oscillated signal is amplified at the buffer amplifiers (Q4, Q21, Q24) and then applied to the MAIN unit as a 1st LO signal.

#### 3-3-3 2ND LO AND REFERENCE OSCILLATOR CIRCUITS

The reference oscillator (X1) generates 30.0 MHz frequency used for the both DDS ICs as a system clock and for the LO output. The oscillated signal is doubled at the driver (Q2) and picked up the 60 MHz frequency at the resonator circuit (L4, L5). The 60 MHz signal is applied to the MAIN unit as a 2nd LO signal.

#### 3-3-4 BFO CIRCUIT

The DDS IC (IC2) generates a 10-bit digital signal using the 30 MHz system clock. The digital signal is converted to an analog wave signal at the D/A converter (R120–R139). The analog wave is passed through the low-pass filter (L37, L38, C154–C158) and is then applied to the MAIN unit as the BFO signal.

### 3-4 PORT ALLOCATIONS

#### 3-4-1 CPU (MAIN unit; IC44)

Pin number	Port name	Description
1	RES	Input port for the CPU reset signal. When receiving a "LOW" pulse, the CPU is reset.
10	RXDO	Data input port from the sub CPU in the controller.
11	TXDO	Data output port to the sub CPU in the controller.
16	POC2	Outputs low power control signal for 60 W power.
17	POC1	Outputs low power control signal for 20 W power.
21	ASEN	Outputs a "SEND" control signal for the ACC socket.
22	CSEN	Outputs a "SEND" control signal for T8 and R8 voltage line control. Low : for transmit.
23	ALMS	Outputs an alarm control signal to activate the 2-tone emergency alarm encoder. High : alarm on
24	ALMC	Outputs a tone switching signal for the 2-tone emergency alarm encoder. High : high tone
25	SCK	Outputs a clock signal for the EEPROM (IC46).
26	SI	Input port for serial signal from the EEPROM (IC46).
27	SO	Outputs serial signal for the EEPROM (IC46).
28	CS	Outputs select signal for the EEPROM (IC46).
30	RSM	Input port for the S-meter indication.
31	MFOR	Input port for the RF-meter indication.
33	SQLS	Input port for the squelch detected signal. High : when squelch is open.
34	TRC	Input port for the transmit/receive switching signal.
36	RFG	Outputs RF gain control signal to the AGC circuit.
37	CWIN	CW keying input. High : when key is closed.
39	AFG	Outputs AF gain control signal to the controller.
41	STB1	Outputs a strobe signal to the main loop PLL IC (IC5).
42	STB2	Outputs a strobe signal to the reference loop DDS IC (IC1).
48	STB3	Outputs a strobe signal to the BFO PLL IC (IC2).

**(MAIN unit; IC44)–Continued**

<b>Pin number</b>	<b>Port name</b>	<b>Description</b>
49	DATA	Outputs data to PLL and DDS ICs.
50	CK	Outputs a clock signal to PLL and DDS ICs.
51	SQL C	Outputs an AF mute signal for squelch function. High : squelch closed.
52	NBS	Outputs an external NBDP equipment control signal. Low : during NBDP data output
53	AGCS	Outputs a “noise blanker” signal. High : noise blanker is on
54	INC	Outputs intercom gate control signal.
55	P20	Outputs a strobe signal for an initial matrix.
57–60	P17–P14	Input ports for an initial matrix.
61–64	PD–PA	Output band signals for RF LPF and BPF selection.
65–67	J2B, R3E, H3E	Outputs mode signals.
68	KEY	Input port for an optional AT-130. Low : during tuning.
70	TUNE	Outputs an antenna tuner tuning control signal for transceiver’s power/mode control.
71	FSEL	Outputs a narrow filter selection signal. Low : for an optional narrow filter selection.
72	PROG	Outputs a program scan control signal for “AGC fast” and “audio squelch” deactivation.
74	STAT	Outputs the “tuner start” pulse to an optional AT-130.

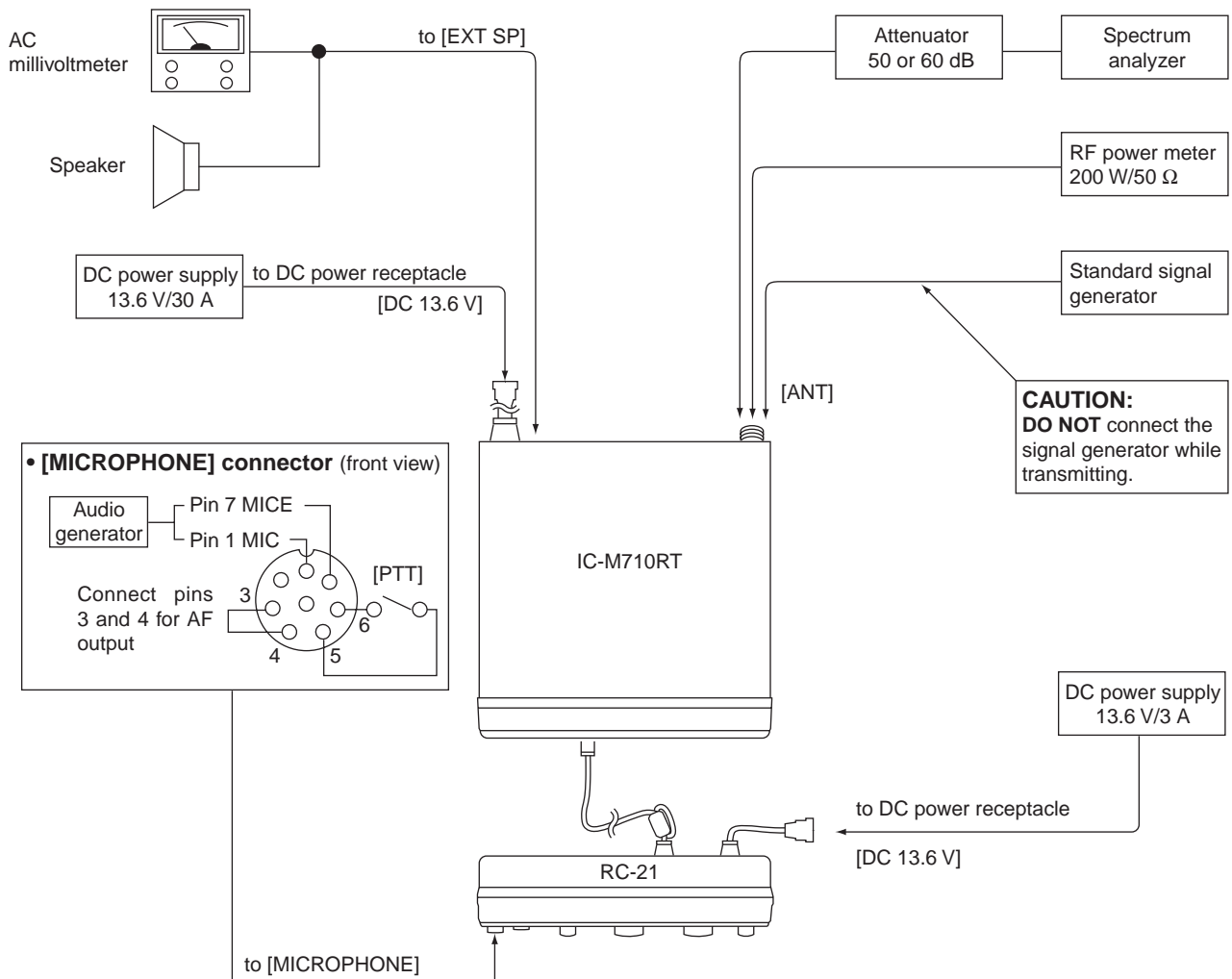
# SECTION 4 ADJUSTMENT PROCEDURES

## 4-1 PREPARATION BEFORE SERVICING

### ■ REQUIRED TEST EQUIPMENT

EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
DC power supply	Output voltage : 13.6 V DC Current capacity : 30 A or more	Audio generator	Frequency range : 300–3000 Hz Measuring range : 1–500 mV
RF power meter (terminated type)	Measuring range : 10–200 W Frequency range : 1.8–30 MHz Impedance : 50 Ω SWR : Less than 1.2 : 1	Standard signal generator (SSG)	Frequency range : 0.1–30 MHz Output level : 0.1 μV–32 mV (–127 to –17 dBm)
Frequency counter	Frequency range : 0.1–100 MHz Frequency accuracy : ±1 ppm or better Sensitivity : 100 mV or better	Oscilloscope	Frequency range : DC–100 MHz Measuring range : 0.01–10 V
RF voltmeter	Frequency range : 0.1–100 MHz Measuring range : 0.01–10 V	AC millivoltmeter	Measuring range : 10 mV–10 V
DC voltmeter	Input impedance : 50 kΩ/V DC or better	External speaker	Input impedance : 4 Ω Capacity : 6 W or more
Spectram analyzer	Frequency minimum : At least 90 MHz Spectraum bandwidth : 100 kHz or more	Attenuator	Power attenuation : 50 or 60 dB Capacity : 150 W or more
		DC ammeter	Measurement capability: 1 A/3 A /50 A

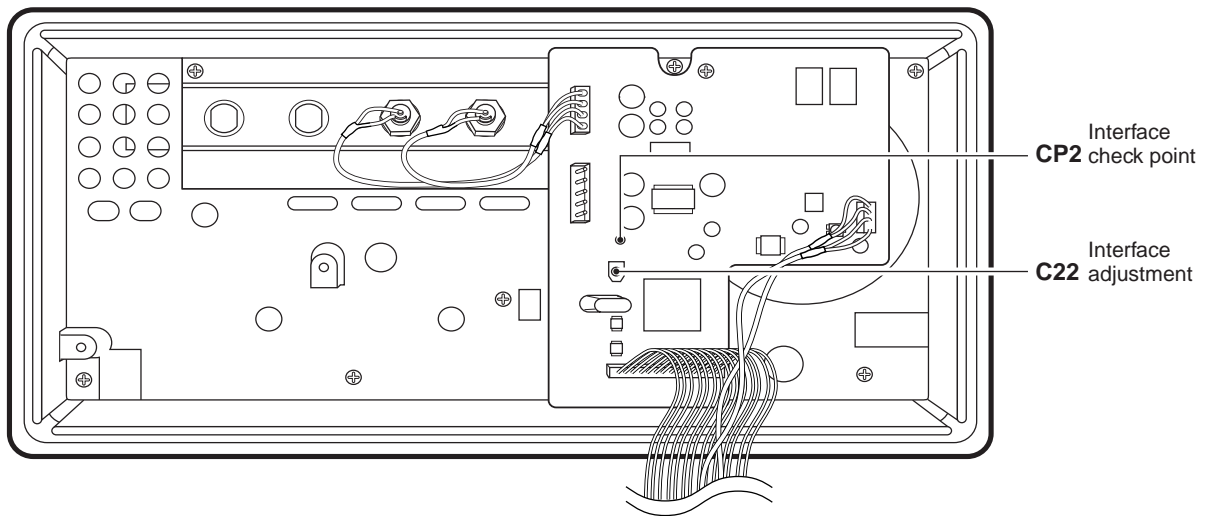
### ■ CONNECTIONS



## 4-2 INTERFACE ADJUSTMENTS

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
INTERFACE ADJUSTMENT	1 • Connect a main body and controller with a coaxial cable, then turn power ON.	CTRL2	Connect a frequency counter to check point CP2.	1.2672 MHz	CTRL2	C22

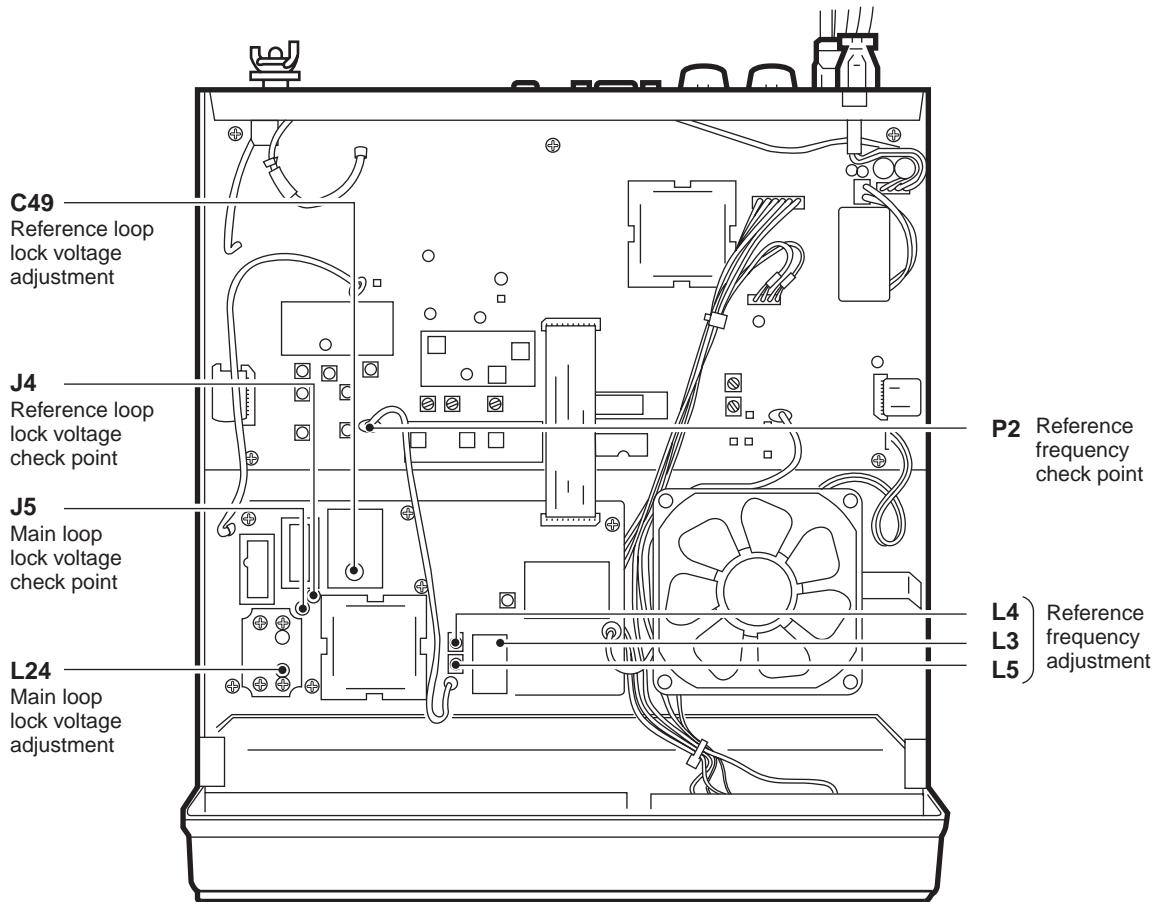
### • CTRL2 BOARD



### 4-3 PLL ADJUSTMENTS

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
REFERENCE LOOP LOCK VOLTAGE	1 • Display frequency : 7.9999 MHz • Mode : J3E • Receiving	PLL	Connect a digital multimeter or oscilloscope to check point J4.	3.2 V	PLL	C49
	2 • Display frequency : 0.0300 MHz			More than 1.5 V		Verify
MAIN LOOP LOCK VOLTAGE	1 • Display frequency : 0.5000 MHz • Receiving	PLL	Connect a digital multimeter or oscilloscope to check point J5.	4.0 V	PLL	L24
	2 • Display frequency : 29.9999 MHz			More than 1.0 V		Verify
REFERENCE FREQUENCY	1 • Wait for 5 minutes after power ON. • Terminate P2 on the PLL unit to ground with a 50 Ω resistor. • Receiving	PLL	Connect an RF voltmeter to check point P2.	Maximum level (More than +2 dBm)	PLL	L4, L5
			2			Connect a frequency counter to check point P2.

#### • MAIN AND PLL UNITS

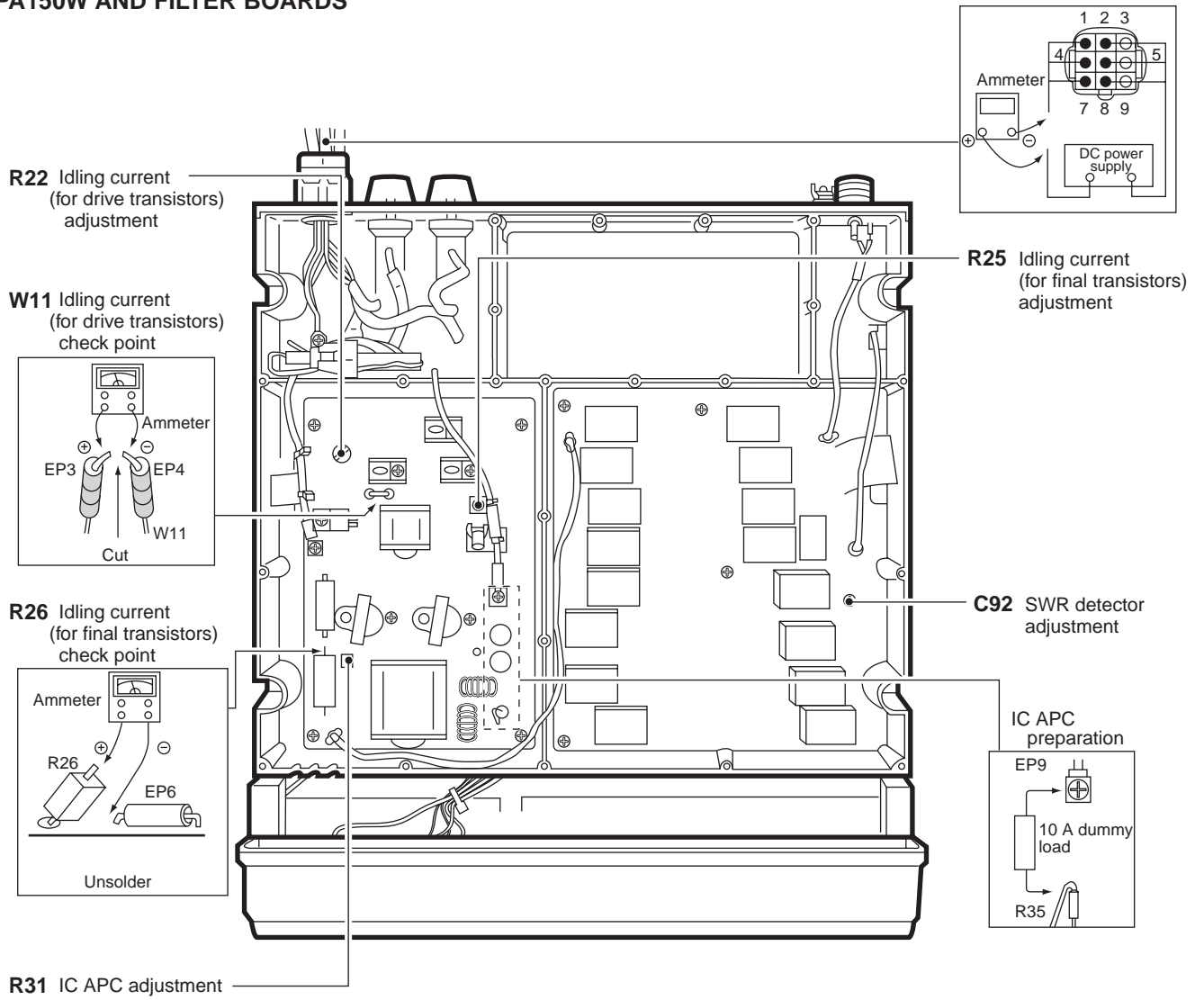


## 4-4 TRANSMITTER ADJUSTMENTS

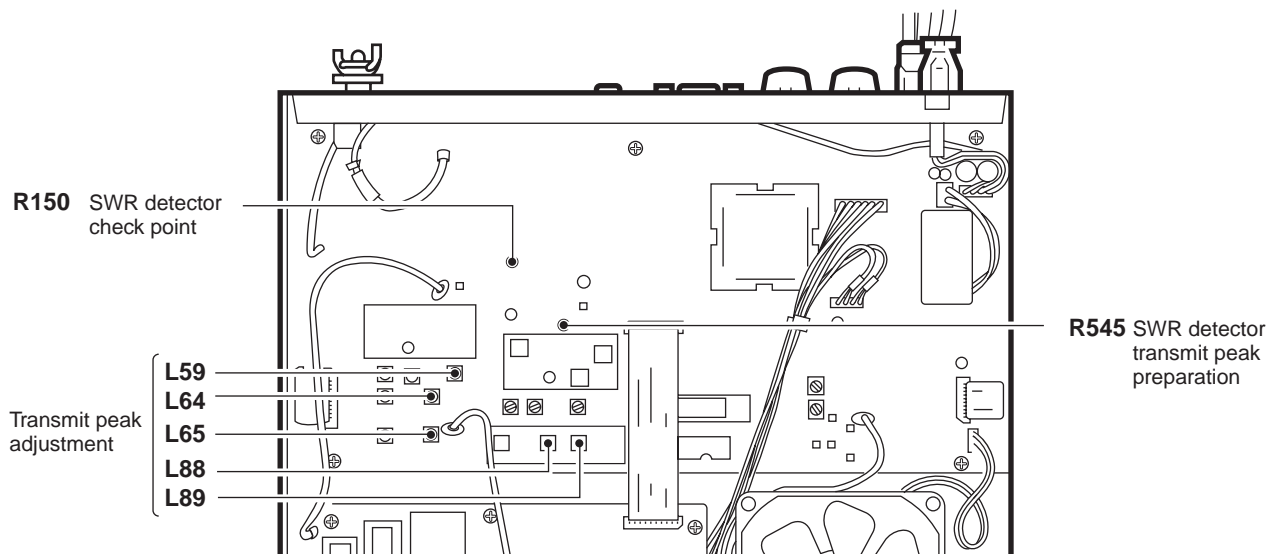
ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT		
		UNIT	LOCATION		UNIT	ADJUST	
IDLING CURRENT (For drive transistors)	1	<ul style="list-style-type: none"> <li>• Display frequency : 12.2300 MHz</li> <li>• Mode : J3E</li> <li>• Apply no audio signal to the [MICROPHONE] connector.</li> <li>• Transmitting</li> </ul>	PA150W	Cut the lead wire (W11) and connect a DC ammeter (1 A) to the cut points.	100 mA	PA150W	R22
	After adjustment, re-solder the lead wire (W11) on the PA150W board.						
(For final transistors)	2	<ul style="list-style-type: none"> <li>• Display frequency : 12.2300 MHz</li> <li>• Mode : J3E</li> <li>• Apply no audio signal to the [MICROPHONE] connector.</li> <li>• Transmitting</li> </ul>	PA150W	Unsolder R26 and connect the DC ammeter (3 A) to the unsoldered points.	500 mA	PA150W	R25
	After adjustment, re-solder R26 on the PA150W board.						
IC APC	1	<ul style="list-style-type: none"> <li>• Display frequency : 22.0000 MHz</li> <li>• Mode : J3E</li> <li>• Preset R31 on the PA150W board to the maximum counterclockwise position.</li> <li>• Connect a dummy load (10 A) between lead of R35 (power line) and EP9 (power ground) on the PA150W board.</li> <li>• Connect an audio generator to the [MICROPHONE] connector and set as: Frequency : 1.5 kHz Level : 100 mV rms</li> <li>• Connect an RF power meter to the [ANT] connector.</li> <li>• Transmitting</li> </ul>	Rear Panel	Connect a DC ammeter (50 A) between the DC power supply and DC power receptacle (DC input +).	30 A	PA150W	R31
	After adjustment, remove the dummy load.						
SWR DETECTOR	1	<ul style="list-style-type: none"> <li>• Display frequency : 22.0000 MHz</li> <li>• Mode : J3E</li> <li>• Ground the lead of R545 on the MAIN unit with a wire.</li> </ul>	Rear Panel	Connect an RF power meter to the [ANT] connector.	140 W	Audio generator	Output level
	2	<ul style="list-style-type: none"> <li>• Connect an audio generator to the [MICROPHONE] connector and set as: Frequency : 1.5 kHz</li> <li>• Transmitting</li> </ul>	MAIN	Connect a DC voltmeter to R150.	Minimum level	FILTER	C92
After adjustment, remove the wire from R545 on the MAIN unit.							
TRANSMIT PEAK	1	<ul style="list-style-type: none"> <li>• Display frequency : 12.2300 MHz</li> <li>• Mode : J3E</li> <li>• Ground the lead of R545 on the MAIN unit with a wire.</li> <li>• Connect an audio generator to the [MICROPHONE] connector and set as: Frequency : 1.5 kHz Level : 3 mV</li> <li>• Transmitting</li> </ul>	Rear Panel	Connect an RF power meter to the [ANT] connector.	Maximum output power	MAIN	Adjust in sequence L89, L88, L65, L64, L59
	After adjustment, remove the wire from R545 on the MAIN unit.						



• PA150W AND FILTER BOARDS



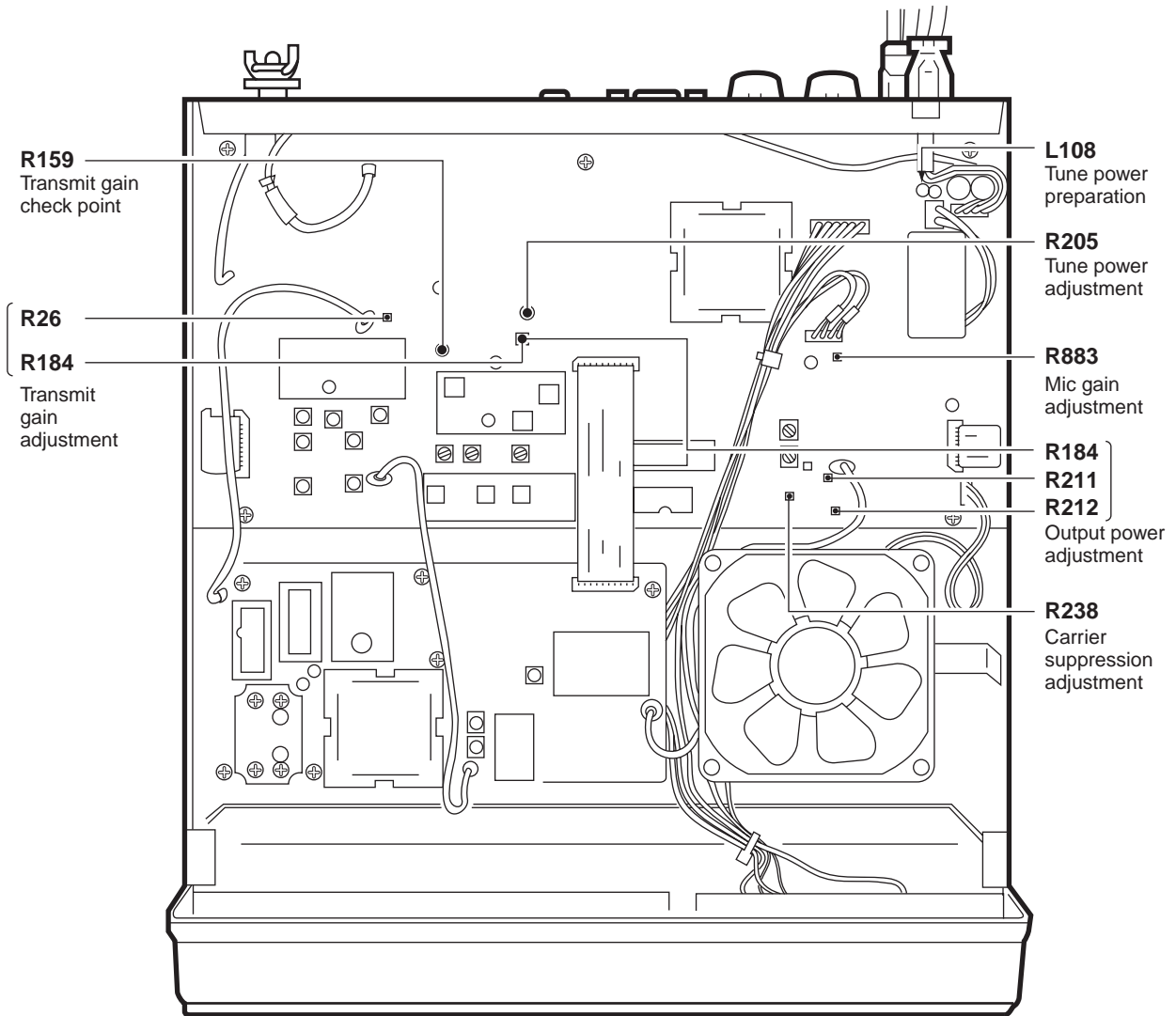
• MAIN UNIT



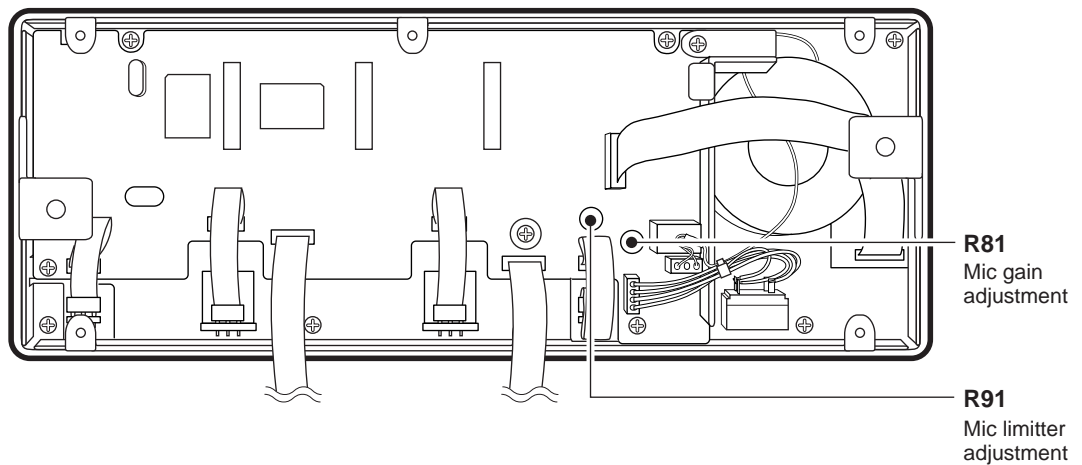
## TRANSMITTER ADJUSTMENTS (continued)

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
TRANSMIT GAIN	1 • Display frequency : 12.2300 MHz • Mode : A1A • Transmitting	Rear Panel	Connect an RF power meter to the [ANT] connector.	140 W	MAIN	R184
	2 • Display frequency : 16.3650 MHz • Transmitting	MAIN	Connect a digital multimeter to R159.	0.5 V		R26
OUTPUT POWER	1 • Display frequency : 12.2300 MHz • Mode : H3E • Apply no audio signal to the [MICROPHONE] connector. • Transmitting	Rear Panel	Connect an RF power meter to the [ANT] connector.	45 W	MAIN	R211
	2 • Mode : R3E • Transmitting			2.0 W		R212
	3 • Mode : A1A • Transmitting			140 W		R184
CARRIER SUPPRESSION	1 • Display frequency : 12.2300 MHz • Mode : J3E • Apply no audio signal to the [MICROPHONE] connector. • Transmitting	Rear Panel	Connect a spectrum analyzer or RF voltmeter to the [ANT] connector via an attenuator.	Minimum carrier level (Less than -40 dB)	MAIN	R238
TUNE POWER	1 • Display frequency : 12.2300 MHz • Ground the lead of L108 (KEY line) on the MAIN unit with a wire. • Transmitting	Rear Panel	Connect an RF power meter to the [ANT] connector.	10 W	MAIN	R205
POWER METER	1 • While pushing the [SQL] and [TX] switches, turn power ON. • Display frequency : 12.2300 MHz • Mode : J3E • Connect an audio generator to the [MICROPHONE] connector and set as:	Rear Panel	Connect an RF power meter to the [ANT] connector.	17 W	Audio generator	Output level
	2 as: Frequency : 1.5 kHz Level : 100 mV • Set the transmit power: [PO-1] (20 W PEP) • Transmitting			Push the [DIMMER] switch.		Font Panel
MIC LIMITER	1 • Display frequency : 12.2300 MHz • Mode : J3E • Preset R81 on the LOGIC board to the maximum clockwise position. • Connect an audio generator to the [MICROPHONE] connector and set as: Frequency : 1.5 kHz Level : 150 mV • Transmitting	CTRL2	Connect an oscilloscope to check point CP2 (Refer at page 4-2).	1.5 V PEP	LOGIC	R91
MIC GAIN	1 • Display frequency : 12.2300 MHz • Mode : J3E • Connect an audio generator to the [MICROPHONE] connector and set as: Frequency : 1.5 kHz Level : 10 mV • Transmitting	CTRL2	Connect an oscilloscope to check point CP2 (Refer at page 4-2).	400 mV PEP	LOGIC	R81
	2 • Set an AG as: Frequency : 1.5 kHz Level : 5 mV • Transmitting	Rear Panel	Connect an RF power meter to the [ANT] connector.	100 W	MIAN	R883

• MAIN UNIT



• LOGIC BOARD

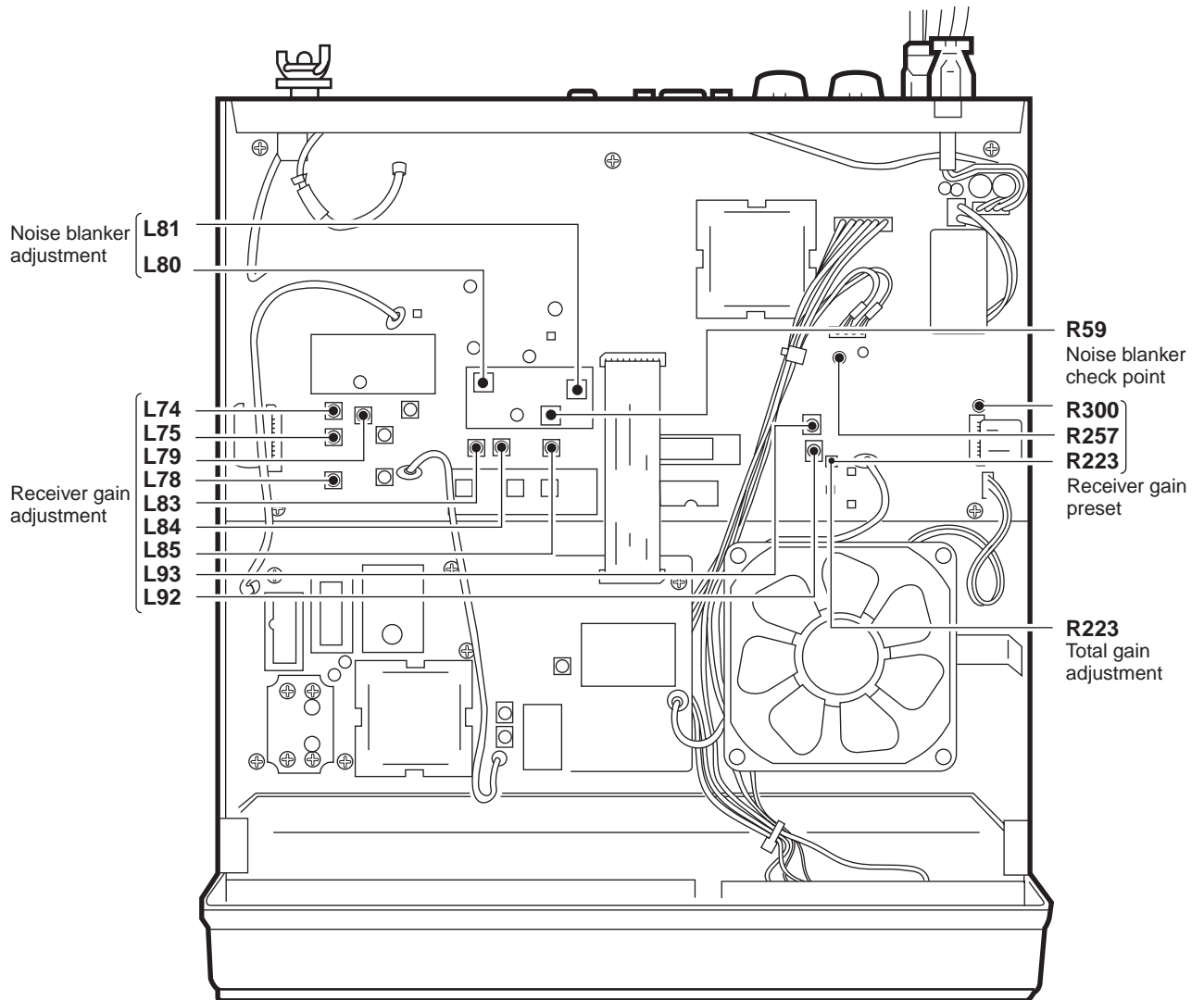


## 4-5 RECEIVER ADJUSTMENTS

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
RECEIVER GAIN	1 <ul style="list-style-type: none"> <li>• Display frequency : 2.1820 MHz</li> <li>• Mode : J3E</li> <li>• Noise blanker : OFF</li> <li>• Squelch : OFF</li> <li>• Speaker : OFF</li> <li>• AGC : ON</li> <li>• RF gain : 9</li> <li>• R223 (MAIN unit) : Max. clockwise</li> <li>• R257 (MAIN unit) : Max. counter clockwise</li> <li>• R300 (MAIN unit) : Center</li> <li>• Connect a standard signal generator to the [ANT] connector and set as:               <ul style="list-style-type: none"> <li>Frequency : 2.1815 MHz</li> <li>Level : 0.5 <math>\mu</math>V* (-113 dBm)</li> <li>Modulation : OFF</li> </ul> </li> <li>• Receiving</li> </ul>	Rear Panel	Connect an AC millivoltmeter to the [EXT SP] jack with a 4 $\Omega$ dummy load.	Maximum output level	MAIN	Adjust in sequence L74, L75, L78, L79, L83, L84, L85, L92, L93
CLARITY	1 <ul style="list-style-type: none"> <li>• While pushing the [SQL] and [CE] switches, turn power ON.</li> </ul>	Set the [CLARITY] control to the center position and push the [DIMMER] switch.			Front Panel	[CLARITY], [DIMMER]
TOTAL GAIN	1 <ul style="list-style-type: none"> <li>• Display frequency : 12.2300 MHz</li> <li>• Mode : J3E</li> <li>• Connect a standard signal generator to the [ANT] connector and set as:               <ul style="list-style-type: none"> <li>Frequency : 12.2315 MHz</li> <li>Level : 0.32 mV* (-57 dBm)</li> <li>Modulation : OFF</li> </ul> </li> <li>• Receiving</li> </ul>	Rear Panel	Connect an AC millivoltmeter to the [EXT SP] jack with a 4 $\Omega$ dummy load.	1.0 V	Front Panel	[VOLUME]
	2 <ul style="list-style-type: none"> <li>• Set the signal generator to OFF (no output).</li> </ul>			-30 dB (32 mV)	MAIN	R223
S-METER	1 <ul style="list-style-type: none"> <li>• While pushing the [SQL] and [RX] switches, turn power ON.</li> <li>• Display frequency : 12.2300 MHz</li> <li>• Mode : J3E</li> </ul>	Function display	S/Rf meter	Push the [DIMMER] switch.	Font Panel	[DIMMER]
	2 <ul style="list-style-type: none"> <li>• Connect a standard signal generator to the [ANT] connector and set as:               <ul style="list-style-type: none"> <li>Frequency : 12.2315 MHz</li> <li>Level : 1 mV* (-47 dBm)</li> </ul> </li> <li>• Receiving</li> </ul>			7th dot just appears while pushing the [DIMMER].		Verify
NOISE BLANKER	1 <ul style="list-style-type: none"> <li>• Display frequency : 12.2300 MHz</li> <li>• Mode : J3E</li> <li>• Connect a standard signal generator to the [ANT] connector and set as:               <ul style="list-style-type: none"> <li>Frequency : 12.2315 MHz</li> <li>Level : 3.2 <math>\mu</math>V* (-97 dBm)</li> </ul> </li> <li>Add the following signal into the signal generator output.</li> </ul>	MAIN	Connect an oscilloscope to R59.	Adjust the maximum noise wave displayed on the oscilloscope.	MAIN	L80, L81
	<ul style="list-style-type: none"> <li>• Receiving</li> </ul>					

\*This output level of the standard signal generator (SSG) is indicated as SSG's open circuit.

• MAIN UNIT



# SECTION 5 PARTS LIST

## 5-1 RC-21

### [FRONT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
S1	2260001580	SWITCH	JPZ2120-0101 (TV-3)
SP1	2510000441	SPEAKER	F77G08-6205
W7	8900005340	CABLE	OPC-522
W8	8900005340	CABLE	OPC-522
W9	8900005340	CABLE	OPC-522
W10	8900005340	CABLE	OPC-522
W11	8900005370	CABLE	OPC-524
WS1	8600034520	M.OTHER	SX1632 P2801FR
WS2	8600036430	M.OTHER	EX2143 P02FR

### [LOGIC BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1140007281	S.IC	HD6433832SD20F
IC2	1140005130	S.IC	HD66100F
IC3	1110004300	S.IC	S-80741AL-A5-T1
IC7	1140004450	S.IC	X24C01AS-3.0T6
IC8	1110002550	IC	TA7252AP
IC9	1110003300	S.IC	M5282FP 70CD
IC10	1130004200	S.IC	TC4S66F (TE85R)
IC11	1180001070	S.IC	TA7805F (TE16L)
IC12	1110000960	S.IC	NJM4558M-T1
Q1	1590001380	S.TRANSISTOR	DTC114EKA T146
Q2	1590001380	S.TRANSISTOR	DTC114EKA T146
Q3	1590001380	S.TRANSISTOR	DTC114EKA T146
Q4	1530001970	S.TRANSISTOR	2SC1623-T2B-L6
Q5	1520000290	TRANSISTOR	2SB1015-Y
Q6	1530001970	S.TRANSISTOR	2SC1623-T2B-L6
Q7	1590001380	S.TRANSISTOR	DTC114EKA T146
Q8	1540000590	S.TRANSISTOR	2SD1899-Z-E1
Q9	1590001380	S.TRANSISTOR	DTC114EKA T146
Q10	1530001970	S.TRANSISTOR	2SC1623-T2B-L6
Q11	1540000550	S.TRANSISTOR	2SD1664 T100Q
Q12	1590001380	S.TRANSISTOR	DTC114EKA T146
Q13	1530001970	S.TRANSISTOR	2SC1623-T2B-L6
Q14	1590001380	S.TRANSISTOR	DTC114EKA T146
Q15	1530001970	S.TRANSISTOR	2SC1623-T2B-L6
D3	1730000830	S.ZENER	RD9.1M-T2B1
D4	1750000020	S.DIODE	1SS184 (TE85R)
D5	1750000020	S.DIODE	1SS184 (TE85R)
D6	1750000020	S.DIODE	1SS184 (TE85R)
D7	1750000020	S.DIODE	1SS184 (TE85R)
D8	1730000830	S.ZENER	RD9.1M-T2B1
D9	1750000020	S.DIODE	1SS184 (TE85R)
D10	1750000020	S.DIODE	1SS184 (TE85R)
D11	1750000020	S.DIODE	1SS184 (TE85R)
X1	6050009450	XTAL	CR-513 (9.8304 MHz)
L3	6910000670	COIL	BL01RN1-A62-001
L4	6200003260	S.COIL	NL 322522T-101J
L5	6910000670	COIL	BL01RN1-A62-001
L6	6910000670	COIL	BL01RN1-A62-001
L7	6200003260	S.COIL	NL 322522T-101J
L8	6200003260	S.COIL	NL 322522T-101J
L9	6200003260	S.COIL	NL 322522T-101J
L10	6200003260	S.COIL	NL 322522T-101J

### [LOGIC BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
R1	7030000580	S.RESISTOR	MCR10EZJH 47 kΩ (473)
R2	7030000520	S.RESISTOR	MCR10EZJH 15 kΩ (153)
R3	7030000540	S.RESISTOR	MCR10EZJH 22 kΩ (223)
R4	7030000520	S.RESISTOR	MCR10EZJH 15 kΩ (153)
R5	7030000400	S.RESISTOR	MCR10EZJH 1.5 kΩ (152)
R6	7030000430	S.RESISTOR	MCR10EZJH 2.7 kΩ (273)
R7	7030000520	S.RESISTOR	MCR10EZJH 15 kΩ (153)
R8	7030000580	S.RESISTOR	MCR10EZJH 47 kΩ (473)
R9	7030000580	S.RESISTOR	MCR10EZJH 47 kΩ (473)
R10	7030000580	S.RESISTOR	MCR10EZJH 47 kΩ (473)
R11	7030000580	S.RESISTOR	MCR10EZJH 47 kΩ (473)
R12	7030000620	S.RESISTOR	MCR10EZJH 100 kΩ (104)
R13	7030000380	S.RESISTOR	MCR10EZJH 1 kΩ (102)
R14	7030000700	S.RESISTOR	MCR10EZJH 470 kΩ (474)
R15	7030000500	S.RESISTOR	MCR10EZJH 10 kΩ (103)
R16	7030000660	S.RESISTOR	MCR10EZJH 220 kΩ (224)
R17	7030000660	S.RESISTOR	MCR10EZJH 220 kΩ (224)
R18	7030000740	S.RESISTOR	MCR10EZJH 1 MΩ (105)
R19	7030000500	S.RESISTOR	MCR10EZJH 10 kΩ (103)
R20	7030000500	S.RESISTOR	MCR10EZJH 10 kΩ (103)
R21	7030000500	S.RESISTOR	MCR10EZJH 10 kΩ (103)
R22	7030000530	S.RESISTOR	MCR10EZJH 18 kΩ (183)
R23	7030000530	S.RESISTOR	MCR10EZJH 18 kΩ (183)
R24	7030000530	S.RESISTOR	MCR10EZJH 18 kΩ (183)
R25	7030000530	S.RESISTOR	MCR10EZJH 18 kΩ (183)
R26	7030000530	S.RESISTOR	MCR10EZJH 18 kΩ (183)
R27	7030000470	S.RESISTOR	MCR10EZJH 5.6 kΩ (562)
R28	7030000500	S.RESISTOR	MCR10EZJH 10 kΩ (103)
R29	7030000500	S.RESISTOR	MCR10EZJH 10 kΩ (103)
R30	7030000500	S.RESISTOR	MCR10EZJH 10 kΩ (103)
R31	7030000540	S.RESISTOR	MCR10EZJH 22 kΩ (223)
R32	7030000540	S.RESISTOR	MCR10EZJH 22 kΩ (223)
R33	7030000460	S.RESISTOR	MCR10EZJH 4.7 kΩ (472)
R34	7030000580	S.RESISTOR	MCR10EZJH 47 kΩ (473)
R35	7030000500	S.RESISTOR	MCR10EZJH 10 kΩ (103)
R36	7030000500	S.RESISTOR	MCR10EZJH 10 kΩ (103)
R37	7030000620	S.RESISTOR	MCR10EZJH 100 kΩ (104)
R38	7030000620	S.RESISTOR	MCR10EZJH 100 kΩ (104)
R39	7030000500	S.RESISTOR	MCR10EZJH 10 kΩ (103)
R40	7030000260	S.RESISTOR	MCR10EZJH 100 Ω (101)
R41	7030000340	S.RESISTOR	MCR10EZJH 470 Ω (471)
R42	7030000540	S.RESISTOR	MCR10EZJH 22 kΩ (223)
R43	7030000580	S.RESISTOR	MCR10EZJH 47 kΩ (473)
R44	7030000380	S.RESISTOR	MCR10EZJH 1 kΩ (102)
R45	7030000360	S.RESISTOR	MCR10EZJH 680 Ω (681)
R46	7030000440	S.RESISTOR	MCR10EZJH 3.3 kΩ (332)
R47	7030000410	S.RESISTOR	MCR10EZJH 1.8 kΩ (182)
R48	7030000500	S.RESISTOR	MCR10EZJH 10 kΩ (103)
R49	7030000300	S.RESISTOR	MCR10EZJH 220 Ω (221)
R50	7030000460	S.RESISTOR	MCR10EZJH 4.7 kΩ (472)
R52	7030000440	S.RESISTOR	MCR10EZJH 3.3 kΩ (332)
R53	7030000660	S.RESISTOR	MCR10EZJH 220 kΩ (224)
R54	7030000580	S.RESISTOR	MCR10EZJH 47 kΩ (473)
R55	7030000580	S.RESISTOR	MCR10EZJH 47 kΩ (473)
R56	7030000360	S.RESISTOR	MCR10EZJH 680 Ω (681)
R58	7030000460	S.RESISTOR	MCR10EZJH 4.7 kΩ (472)
R63	7010003101	RESISTOR	PSD1/4 V 3.3 Ω
R64	7030000380	S.RESISTOR	MCR10EZJH 1 kΩ (103)
R65	7030000020	S.RESISTOR	MCR10EZJH 1 Ω (103)
R66	7030000500	S.RESISTOR	MCR10EZJH 10 kΩ (103)
R67	7030000220	S.RESISTOR	MCR10EZJH 47 Ω (471)
R68	7010003241	RESISTOR	PSD1/4 V 47 Ω
R69	7030000380	S.RESISTOR	MCR10EZJH 1 kΩ (103)
R70	7030000580	S.RESISTOR	MCR10EZJH 47 kΩ (473)
R71	7030000380	S.RESISTOR	MCR10EZJH 1 kΩ (103)
R72	7030000380	S.RESISTOR	MCR10EZJH 1 kΩ (103)
R73	7030000460	S.RESISTOR	MCR10EZJH 4.7 kΩ (472)
R75	7030000380	S.RESISTOR	MCR10EZJH 1 kΩ (103)
R76	7030000580	S.RESISTOR	MCR10EZJH 47 kΩ (473)
R77	7030000600	S.RESISTOR	MCR10EZJH 68 kΩ (683)
R78	7030000260	S.RESISTOR	MCR10EZJH 100 Ω (101)
R79	7030000440	S.RESISTOR	MCR10EZJH 3.3 kΩ (332)
R80	7030000440	S.RESISTOR	MCR10EZJH 3.3 kΩ (332)
R81	7310004380	TRIMMER	KV5F637A 10 kΩ (103)

S.=Surface mount

[LOGIC BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
R82	7030000510	S.RESISTOR	MCR10EZHZ 12 kΩ (123)
R83	7030000380	S.RESISTOR	MCR10EZHZ 1 kΩ (102)
R84	7030000620	S.RESISTOR	MCR10EZHZ 100 kΩ (104)
R85	7030000610	S.RESISTOR	MCR10EZHZ 82 kΩ (823)
R86	7030000600	S.RESISTOR	MCR10EZHZ 68 kΩ (683)
R87	7030000410	S.RESISTOR	MCR10EZHZ 1.8 kΩ (182)
R88	7030000360	S.RESISTOR	MCR10EZHZ 680 Ω (681)
R89	7030000340	S.RESISTOR	MCR10EZHZ 470 Ω (471)
R90	7030000300	S.RESISTOR	MCR10EZHZ 220 Ω (221)
R91	7310004390	TRIMMER	KVSF637A 100 kΩ
R93	7030000460	S.RESISTOR	MCR10EZHZ 4.7 kΩ (472)
R94	7030000580	S.RESISTOR	MCR10EZHZ 47 kΩ (473)
R95	7030000520	S.RESISTOR	MCR10EZHZ 15 kΩ (153)
R96	7030000560	S.RESISTOR	MCR10EZHZ 33 kΩ (333)
R97	7030000580	S.RESISTOR	MCR10EZHZ 47 kΩ (473)
R98	7030000380	S.RESISTOR	MCR10EZHZ 1 kΩ (102)
R99	7030000380	S.RESISTOR	MCR10EZHZ 1 kΩ (102)
R100	7030000380	S.RESISTOR	MCR10EZHZ 1 kΩ (102)
R101	7030000380	S.RESISTOR	MCR10EZHZ 1 kΩ (102)
R102	7030000380	S.RESISTOR	MCR10EZHZ 1 kΩ (102)
R103	7030000380	S.RESISTOR	MCR10EZHZ 1 kΩ (102)
R104	7030000380	S.RESISTOR	MCR10EZHZ 1 kΩ (102)
R105	7030000380	S.RESISTOR	MCR10EZHZ 1 kΩ (102)
R109	7030000260	S.RESISTOR	MCR10EZHZ 100 Ω (101)
C4	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C5	4030004750	S.CERAMIC	C2012 JB 1H 103K-T-A
C6	4510004490	ELECTROLYTIC	25 MV 22 HW
C7	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C8	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C9	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C10	4310000520	MYLAR	50 F2D 224J
C11	4030004880	S.CERAMIC	C2012 CH 1H 120J-T-A
C12	4030004880	S.CERAMIC	C2012 CH 1H 120J-T-A
C14	4030004750	S.CERAMIC	C2012 JB 1H 103K-T-A
C15	4030004750	S.CERAMIC	C2012 JB 1H 103K-T-A
C16	4030004750	S.CERAMIC	C2012 JB 1H 103K-T-A
C17	4510005500	ELECTROLYTIC	16 MV 10 HC
C18	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C19	4510005120	ELECTROLYTIC	16 MV 47 HC
C20	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C21	4510005500	ELECTROLYTIC	16 MV 10 HC
C23	4030004750	S.CERAMIC	C2012 JB 1H 103K-T-A
C24	4510005120	ELECTROLYTIC	16 MV 47 HC
C25	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C26	4510005120	ELECTROLYTIC	16 MV 47 HC
C27	4030012600	S.CERAMIC	C2012 JB 1A 105M-T-A
C28	4030004750	S.CERAMIC	C2012 JB 1H 103K-T-A
C29	4030012600	S.CERAMIC	C2012 JB 1A 105M-T-A
C30	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C31	4510005500	ELECTROLYTIC	16 MV 10 HC
C32	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C33	4510005500	ELECTROLYTIC	16 MV 10 HC
C34	4510005120	ELECTROLYTIC	16 MV 47 HC
C35	4510005120	ELECTROLYTIC	16 MV 47 HC
C36	4510005500	ELECTROLYTIC	16 MV 10 HC
C37	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C38	4030005110	S.CERAMIC	C2012 JB 1E 473K-T-A
C39	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C40	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C41	4510005480	ELECTROLYTIC	50 MV 1 HC
C42	4510003940	ELECTROLYTIC	25 MV 4R7 HW
C43	4510003940	ELECTROLYTIC	25 MV 4R7 HW
C44	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C45	4510004990	ELECTROLYTIC	16 MV 100 HC
C46	4510005120	ELECTROLYTIC	16 MV 47 HC
C47	4510005120	ELECTROLYTIC	16 MV 47 HC
C48	4510007160	ELECTROLYTIC	16 MV 470 CG
C49	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C50	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C51	4510004600	ELECTROLYTIC	16 MV 1000 HC
C52	4510004990	ELECTROLYTIC	16 MV 100 HC
C53	4510004590	ELECTROLYTIC	16 MV 470 HC
C54	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C55	4030004750	S.CERAMIC	C2012 JB 1H 103K-T-A
C56	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C57	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C58	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C59	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C60	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C61	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A

[LOGIC BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
C62	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C63	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C64	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C65	4510004490	ELECTROLYTIC	25 MV 22 HW
C66	4510005490	ELECTROLYTIC	50 MV 2R2 HC
C67	4510005490	ELECTROLYTIC	50 MV 2R2 HC
C68	4510005480	ELECTROLYTIC	50 MV 1 HC
C69	4510004490	ELECTROLYTIC	25 MV 22 HW
C70	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C71	4510005120	ELECTROLYTIC	16 MV 47 HC
C72	4510003940	ELECTROLYTIC	25 MV 4R7 HW
C73	4510003940	ELECTROLYTIC	25 MV 4R7 HW
C74	4510003940	ELECTROLYTIC	25 MV 4R7 HW
C75	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C76	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C77	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C79	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C80	4030004750	S.CERAMIC	C2012 JB 1H 103K-T-A
C82	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C83	4510005120	ELECTROLYTIC	16 MV 47 HC
RL1	6330001330	RELAY	AG 201344
J2	6510003400	CONNECTOR	B04B-EH-S
J3	6510018390	CONNECTOR	06FE-BT-M
J4	6510018390	CONNECTOR	06FE-BT-M
J5	6510018390	CONNECTOR	06FE-BT-M
J6	6510018390	CONNECTOR	06FE-BT-M
J7	6510003390	CONNECTOR	B03B-EH-S
J8	6510018380	CONNECTOR	10FE-BT-M
J9	6510018380	CONNECTOR	10FE-BT-M
J10	6510018380	CONNECTOR	10FE-BT-M
DS1	5080000305	LAMP	HRT-3290A-F
DS2	5080000305	LAMP	HRT-3290A-F
DS3	5080000305	LAMP	HRT-3290A-F
DS4	5010000180	LCD	DLC-7978P
S3	2260002230	SWITCH	SW-158 (SKHHPM)
S4	2260002230	SWITCH	SW-158 (SKHHPM)
S5	2260002230	SWITCH	SW-158 (SKHHPM)
S6	2260002230	SWITCH	SW-158 (SKHHPM)
S7	2260002230	SWITCH	SW-158 (SKHHPM)
S8	2260002230	SWITCH	SW-158 (SKHHPM)
S9	2260002230	SWITCH	SW-158 (SKHHPM)
S10	2260002230	SWITCH	SW-158 (SKHHPM)
S11	2260002230	SWITCH	SW-158 (SKHHPM)
S12	2260002230	SWITCH	SW-158 (SKHHPM)
S13	2260002230	SWITCH	SW-158 (SKHHPM)
S14	2260002230	SWITCH	SW-158 (SKHHPM)
S15	2260002230	SWITCH	SW-158 (SKHHPM)
S16	2260002230	SWITCH	SW-158 (SKHHPM)
S17	2260002230	SWITCH	SW-158 (SKHHPM)
S18	2260002230	SWITCH	SW-158 (SKHHPM)
S19	2260002230	SWITCH	SW-158 (SKHHPM)
S20	2260002230	SWITCH	SW-158 (SKHHPM)
S21	2260002230	SWITCH	SW-158 (SKHHPM)
S22	2260002230	SWITCH	SW-158 (SKHHPM)
S23	2260002230	SWITCH	SW-158 (SKHHPM)
S24	2260002230	SWITCH	SW-158 (SKHHPM)
S25	2260002230	SWITCH	SW-158 (SKHHPM)
S26	2260002230	SWITCH	SW-158 (SKHHPM)
S27	2260002230	SWITCH	SW-158 (SKHHPM)
W1	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W2	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W3	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W4	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W8	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W10	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W11	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W12	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W13	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W14	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W15	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W16	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W17	7030000010	S.JUMPER	MCR10EZHZ JPW (000)

S.=Surface mount

**[LOGIC BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
W18	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W19	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W20	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W21	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W22	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W23	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W24	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W25	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W26	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W27	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W28	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W29	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W30	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W31	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W32	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W33	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
W34	7030000010	S.JUMPER	MCR10EZHZ JPW (000)
EP1	0910050082	PCB	B 5148B

**[VR2 BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
R1	7210002730	VARIABLE	TP96N944-15F-10KB-1632
J1	6510018390	CONNECTOR	06FE-BT-M
EP1	0910050110	PCB	B 5151

**[MIC BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
J1	6510021050	CONNECTOR	A28 SOCKET
J2	6510018380	CONNECTOR	10FE-BT-M
EP1	0910050122	PCB	B 5152B

**[SENSOR1 BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
J1	6510018390	CONNECTOR	06FE-BT-M
S1	2250000020	ENCODER	SRB18100 25KC
EP1	0910050091	PCB	B 5149A

**[REAR UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
W1	8900008290	CABLE	OPC-819
W2	8900008290	CABLE	OPC-819
W3	8900008090	CABLE	OPC-774
W4	8900008110	CABLE	OPC-776

**[SENSOR2 BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
J1	6510018390	CONNECTOR	06FE-BT-M
S1	2250000020	ENCODER	SRB18100 25KC
EP1	0910050091	PCB	B 5149A

**[CTRL1 BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1140004670	S.IC	SC-1288
IC2	1120002560	S.IC	HD26C32AFP
IC3	1120002550	S.IC	NJM311M-TE3
IC4	1110002750	S.IC	TA75S01F (TE85R)
IC5	1130007260	S.IC	TC7W74FU (TE12L)
IC6	1110003780	S.IC	NJM2902V-TE1
Q1	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q2	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q3	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
D1	1750000370	S.DIODE	DA221 TL
D2	1720000670	S.VARICAP	HVU17TRF
D4	1750000370	S.DIODE	DA221 TL
D10	1790000700	DIODE	DSA3A1
D11	1750000550	S.DIODE	1SS355 TE-17
X1	6050009470	XTAL	CR-508 (5.0688 MHz)
L1	5920000660	COIL	FK-060C-1020
L2	6200000020	S.COIL	LQH 3N 101K 04
L3	6200002920	S.COIL	ELJNC R33K-F
R1	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R2	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R3	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R4	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R5	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R6	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R7	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R8	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R9	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R10	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R11	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)

**[VR1 BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
R1	7210002540	VARIABLE	TP96N937-15F-10KB-1540
J1	6510018390	CONNECTOR	06FE-BT-M
EP1	0910050100	PCB	B 5150

S.=Surface mount



[CTRL1 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
R12	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R14	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R15	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R16	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R17	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R18	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R19	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R20	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R21	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R22	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R23	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R24	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R25	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R26	7030005340	S.RESISTOR	RR0816P-332-D (3.3 kΩ)
R27	7030005390	S.RESISTOR	RR0816P-102-D (1 kΩ)
R28	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R29	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R30	7030000300	S.RESISTOR	MCR10EZHZ 220 Ω (221)
R31	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R32	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R33	7030000220	S.RESISTOR	MCR10EZHZ 47 Ω (471)
R34	7030000220	S.RESISTOR	MCR10EZHZ 47 Ω (471)
R35	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R36	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R38	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R39	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R40	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R41	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R42	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R43	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R44	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R45	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R46	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R47	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R48	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ)
R49	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ)
R50	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R51	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R52	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R67	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R68	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R69	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ)
R70	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R71	7030003740	S.RESISTOR	ERJ3GEYJ 334 V (330 kΩ)
R72	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R73	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R74	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R75	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
C1	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C2	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C3	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C4	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C5	4510006670	S.ELECTROLYTIC	ECEV 1CA 471P
C7	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C8	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C9	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C10	4030007170	S.CERAMIC	C1608 CH 1H 221J-T-A
C11	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C12	4510005430	S.ELECTROLYTIC	ECEV0JA220SR
C13	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C14	4550006150	S.TANTALUM	ECST1CY105R
C15	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C16	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C17	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C18	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C19	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C20	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C21	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C22	4030011530	S.CERAMIC	C1608 CH 1H 110J-T-A
C23	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C25	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C26	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C27	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C28	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C29	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C31	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C32	4030008880	S.CERAMIC	C1608 JB 1C 223K-T-A
C33	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C34	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C35	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

[CTRL1 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
C36	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C37	4030008880	S.CERAMIC	C1608 JB 1C 223K-T-A
C38	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C39	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C40	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C41	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C55	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C56	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C57	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C58	4550006150	S.TANTALUM	ECST1CY105R
C59	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C60	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C61	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
J1	6510017650	CONNECTOR	52045-1045
J2	6510021080	CONNECTOR	S2P-VH-R
J3	6510021070	CONNECTOR	S2P-VH
J4	6510017650	CONNECTOR	52045-1045
J5	6510003390	CONNECTOR	B03B-EH-S
W3	7030003860	S.JUMPER	ERJ3GE JPW V
W4	7030003860	S.JUMPER	ERJ3GE JPW V
W6	7030003860	S.JUMPER	ERJ3GE JPW V
W7	7030003860	S.JUMPER	ERJ3GE JPW V
W10	7030003860	S.JUMPER	ERJ3GE JPW V
W11	7030003860	S.JUMPER	ERJ3GE JPW V
W12	7030003860	S.JUMPER	ERJ3GE JPW V
W13	7030003860	S.JUMPER	ERJ3GE JPW V
W14	7030003860	S.JUMPER	ERJ3GE JPW V
W15	7030003860	S.JUMPER	ERJ3GE JPW V
W16	7030003860	S.JUMPER	ERJ3GE JPW V
W17	7030003860	S.JUMPER	ERJ3GE JPW V
W18	7030003860	S.JUMPER	ERJ3GE JPW V
W19	7030003860	S.JUMPER	ERJ3GE JPW V
W20	7030003860	S.JUMPER	ERJ3GE JPW V
W21	7030003860	S.JUMPER	ERJ3GE JPW V
EP1	0910050133	PCB	B 5153C

S.=Surface mount

## 5-2 IC-M710RT

### [CONNECT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
J1	6510007130	CONNECTOR	BNC-R111E
J2	6510007130	CONNECTOR	BNC-R111E
WS1	8600036270	M.OTHER	SX2132 P02CO

### [CTRL2 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1140004670	S.IC	SC-1288
IC2	1120002560	S.IC	HD26C32AFP
IC3	1120002510	S.IC	DS14C232TM
IC4	1120002550	S.IC	NJM311M-TE3
IC5	1110002750	S.IC	TA75S01F (TE85R)
IC6	1130003760	S.IC	TC4S81F (TE85R)
IC7	1110003780	S.IC	NJM2902V-TE1
IC8	1130007260	S.IC	TC7W74FU (TE12L)
IC9	1130007260	S.IC	TC7W74FU (TE12L)
Q1	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q2	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q3	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q4	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q5	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q6	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q7	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q8	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q9	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q10	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q11	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
D1	1750000370	S.DIODE	DA221 TL
D2	1750000370	S.DIODE	DA221 TL
D3	1750000370	S.DIODE	DA221 TL
D4	1750000370	S.DIODE	DA221 TL
D7	1160000070	S.DIODE	DAN202K T146
D8	1160000070	S.DIODE	DAN202K T146
D9	1160000080	S.DIODE	DAP202K T146
D10	1160000080	S.DIODE	DAP202K T146
D11	1750000370	S.DIODE	DA221 TL
D12	1750000550	S.DIODE	1SS355 TE-17
X1	6050009470	XTAL	CR-508 (5.0688 MHz)
L1	6200000020	S.COIL	LQH 3N 101K 04
L2	6200002920	S.COIL	ELJNC R33K-F
L3	6200002920	S.COIL	ELJNC R33K-F
L4	6200002920	S.COIL	ELJNC R33K-F
L5	6200002920	S.COIL	ELJNC R33K-F
R5	7030000220	S.RESISTOR	MCR10EZHZ 47 Ω (471)
R6	7030000220	S.RESISTOR	MCR10EZHZ 47 Ω (471)
R7	7030000220	S.RESISTOR	MCR10EZHZ 47 Ω (471)
R8	7030000220	S.RESISTOR	MCR10EZHZ 47 Ω (471)
R9	7030000220	S.RESISTOR	MCR10EZHZ 47 Ω (471)
R10	7030000220	S.RESISTOR	MCR10EZHZ 47 Ω (471)
R11	7030000220	S.RESISTOR	MCR10EZHZ 47 Ω (471)
R12	7030000220	S.RESISTOR	MCR10EZHZ 47 Ω (471)
R13	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R14	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R15	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R16	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R17	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R18	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R19	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R20	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R21	7030000300	S.RESISTOR	MCR10EZHZ 220 Ω (221)
R22	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R23	7030006090	S.RESISTOR	RR0816P-272-D (2.7 kΩ)
R24	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)

### [CTRL2 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
R25	7410000950	S.ARRAY	EXB-V8V 102JV
R26	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R27	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R28	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R29	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R30	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R31	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R32	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R33	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R36	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R37	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R38	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R39	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R40	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R41	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R42	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R43	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R44	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R45	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R46	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R47	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R48	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R50	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R51	7030006090	S.RESISTOR	RR0816P-272-D (2.7 kΩ)
R52	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R53	7030005980	S.RESISTOR	RR0816P-333-D (33 kΩ)
R54	7030003730	S.RESISTOR	ERJ3GEYJ 274 V (270 kΩ)
R55	7030005870	S.RESISTOR	RR0816P-104-D (100 kΩ)
R56	7030003840	S.RESISTOR	ERJ3GEYJ 225 V (2.2 MΩ)
R57	7030005320	S.RESISTOR	RR0816P-103-D (10 kΩ)
R58	7030005320	S.RESISTOR	RR0816P-103-D (10 kΩ)
R59	7030005680	S.RESISTOR	RR0816R-473-D (47 kΩ)
R60	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R61	7030005970	S.RESISTOR	RR0816R-683-D (68 kΩ)
R62	7030003840	S.RESISTOR	ERJ3GEYJ 225 V (2.2 MΩ)
R63	7030005320	S.RESISTOR	RR0816P-103-D (10 kΩ)
R64	7030005320	S.RESISTOR	RR0816P-103-D (10 kΩ)
R65	7030006100	S.RESISTOR	RR0816P-183-D (18 kΩ)
R66	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R67	7030005690	S.RESISTOR	RR0816P-123-D (12 kΩ)
R68	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R69	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R70	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R71	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R72	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R73	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R74	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R75	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R76	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R77	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R78	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R79	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R80	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R81	7030008070	S.RESISTOR	RR0816P-273-D (27 kΩ)
R82	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R83	7030006100	S.RESISTOR	RR0816P-183-D (18 kΩ)
R84	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R85	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R86	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R88	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
C1	4510005090	ELECTROLYTIC	6.3 MV 470 HC
C2	4510005090	ELECTROLYTIC	6.3 MV 470 HC
C3	4510005090	ELECTROLYTIC	6.3 MV 470 HC
C4	4510005090	ELECTROLYTIC	6.3 MV 470 HC
C5	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C6	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C7	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C8	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C9	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C10	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C11	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C12	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C13	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C14	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C15	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C16	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C17	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C18	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

S.=Surface mount

[CTRL2 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
C19	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C20	4030011530	S.CERAMIC	C1608 CH 1H 110J-T-A
C21	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C22	4610001910	S.TRIMMER	CTZ3E-10A-W1
C24	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C25	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C26	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C27	4550006200	S.TANTALUM	ECST0JY106R
C28	4510005430	S.ELECTROLYTIC	ECEV0JA220SR
C29	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C30	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C31	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C32	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C33	4030007170	S.CERAMIC	C1608 CH 1H 221J-T-A
C34	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C35	4340000080	S.MYLAR	ECH-U 1C223JB5
C36	4340000040	S.MYLAR	ECH-U 1H 102JB5
C37	4340000040	S.MYLAR	ECH-U 1H 102JB5
C38	4340000040	S.MYLAR	ECH-U 1H 102JB5
C39	4340000040	S.MYLAR	ECH-U 1H 102JB5
C40	4340000080	S.MYLAR	ECH-U 1C223JB5
C41	4340000040	S.MYLAR	ECH-U 1H 102JB5
C42	4030012610	S.CERAMIC	C2012 JB 1C 474K-T-A
C43	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C44	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C45	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C46	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C47	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C48	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C52	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C53	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C54	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C55	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C56	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C57	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C58	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C59	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C60	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C61	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C62	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C63	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C64	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C65	4510005090	ELECTROLYTIC	6.3 MV 470 HC
J1	6510020960	CONNECTOR	JES-9S-4A3F
J2	6510003400	CONNECTOR	B04B-EH-S
DS1	5040001260	LED	LN01301C (Q)
W1	7030003860	S.JUMPER	ERJ3GE JPW V
W3	7030003860	S.JUMPER	ERJ3GE JPW V
WS1	8600036290	M.OTHER	SX2132 P02xJ07CT
WS2	8600036300	M.OTHER	SX2132 P01xJ06CT
EP1	0910050073	PCB	B 5147C

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
IC4	1160000130	S.IC	TD62783AF (TP1)
IC5	1160000130	S.IC	TD62783AF (TP1)
IC6	1160000130	S.IC	TD62783AF (TP1)
IC8	1110003140	IC	LA1150N
IC9	1110004840	S.IC	NJM1496V-TE1
IC10	1110004840	S.IC	NJM1496V-TE1
IC11	1130001910	S.IC	μPD4011BG-T1
IC12	1140003830	S.IC	TC4W66F (TE12L)
IC16	1110000960	S.IC	NJM4558M-T1
IC17	1110000960	S.IC	NJM4558M-T1
IC18	1110000960	S.IC	NJM4558M-T1
IC19	1110000960	S.IC	NJM4558M-T1
IC20	1110000960	S.IC	NJM4558M-T1
IC21	1110000960	S.IC	NJM4558M-T1
IC22	1130001230	S.IC	μPD4001BG-T1
IC23	1110001400	S.IC	μPC1555G2-T1
IC24	1180001250	S.IC	TA7808F (TE16L)
IC27	1170000280	S.IC	TLP121 (GB)
IC31	1130008630	S.IC	MC14028BF-EL
IC32	1130003760	S.IC	TC4S81F (TE85R)
IC34	1130005720	S.IC	TC7W04F (TE12L)
IC35	1130007040	S.IC	TC7W32F (TE12L)
IC38	1140003830	S.IC	TC4W66F (TE12L)
IC39	1140003830	S.IC	TC4W66F (TE12L)
IC40	1180001080	S.IC	S-81250PG-PD-T1
IC41	1140003830	S.IC	TC4W66F (TE12L)
IC42	1110002750	S.IC	TA75S01F (TE85R)
IC43	1180001070	S.IC	TA7805F (TE16L)
IC44	1140007330	S.IC	HD64F2132FA20
IC45	1110004300	S.IC	S-80741AL-A5-T1
IC46	1140005880	S.IC	X25320S8I-2.7T6
Q1	1530003150	S.TRANSISTOR	2SC4673D-TD
Q2	1580000620	S.FET	3SK131-T2 MAS
Q3	1580000620	S.FET	3SK131-T2 MAS
Q4	1580000620	S.FET	3SK131-T2 MAS
Q5	1530003150	S.TRANSISTOR	2SC4673D-TD
Q6	1560000720	S.FET	2SK2171-4-TD
Q7	1560000720	S.FET	2SK2171-4-TD
Q8	1580000620	S.FET	3SK131-T2 MAS
Q9	1560000330	S.FET	2SK210-GR (TE85R)
Q10	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q11	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q12	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q13	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q14	1590001640	S.TRANSISTOR	UN5111 (TX)
Q15	1590002120	S.TRANSISTOR	UN5211 (TX)
Q16	1580000620	S.FET	3SK131-T2 MAS
Q17	1540000440	S.TRANSISTOR	2SD1619-T-TD
Q18	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q19	1580000620	S.FET	3SK131-T2 MAS
Q21	1590002120	S.TRANSISTOR	UN5211 (TX)
Q22	1590002120	S.TRANSISTOR	UN5211 (TX)
Q23	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q24	1590002120	S.TRANSISTOR	UN5211 (TX)
Q25	1590002120	S.TRANSISTOR	UN5211 (TX)
Q26	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q27	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q28	1590002120	S.TRANSISTOR	UN5211 (TX)
Q30	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q31	1530003090	S.TRANSISTOR	2SC4213-B (TE85R)
Q32	1580000620	S.FET	3SK131-T2 MAS
Q33	1580000620	S.FET	3SK131-T2 MAS
Q34	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q35	1590002120	S.TRANSISTOR	UN5211 (TX)
Q36	1590001640	S.TRANSISTOR	UN5111 (TX)
Q40	1590002120	S.TRANSISTOR	UN5211 (TX)
Q41	1530003090	S.TRANSISTOR	2SC4213-B (TE85R)
Q42	1590002120	S.TRANSISTOR	UN5211 (TX)
Q43	1590002120	S.TRANSISTOR	UN5211 (TX)
Q44	1590001640	S.TRANSISTOR	UN5111 (TX)
Q45	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q46	1590002120	S.TRANSISTOR	UN5211 (TX)
Q52	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q54	1540000440	S.TRANSISTOR	2SD1619-T-TD
Q55	1590002120	S.TRANSISTOR	UN5211 (TX)
Q56	1590002120	S.TRANSISTOR	UN5211 (TX)
Q57	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q58	1530003300	S.TRANSISTOR	2SC3647S-TD
Q59	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q60	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
Q61	1540000440	S.TRANSISTOR	2SD1619-T-TD
Q62	1540000440	S.TRANSISTOR	2SD1619-T-TD
Q64	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q65	1590002120	S.TRANSISTOR	UN5211 (TX)
Q69	1590002120	S.TRANSISTOR	UN5211 (TX)
Q70	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q71	1590001640	S.TRANSISTOR	UN5111 (TX)
Q72	1590002120	S.TRANSISTOR	UN5211 (TX)
Q74	1590001640	S.TRANSISTOR	UN5111 (TX)
Q78	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q79	1590002120	S.TRANSISTOR	UN5211 (TX)
Q80	1590002120	S.TRANSISTOR	UN5211 (TX)
Q82	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q83	1590002120	S.TRANSISTOR	UN5211 (TX)
Q84	1590002120	S.TRANSISTOR	UN5211 (TX)
Q101	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q102	1590002120	S.TRANSISTOR	UN5211 (TX)
Q103	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q104	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q106	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q111	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q113	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q114	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q115	1590002120	S.TRANSISTOR	UN5211 (TX)
Q119	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q122	1590002120	S.TRANSISTOR	UN5211 (TX)
Q123	1590002120	S.TRANSISTOR	UN5211 (TX)
Q124	1590002120	S.TRANSISTOR	UN5211 (TX)
Q125	1590002120	S.TRANSISTOR	UN5211 (TX)
Q126	1560000330	S.FET	2SK210-GR (TE85R)
Q128	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q129	1590002120	S.TRANSISTOR	UN5211 (TX)
Q130	1590001640	S.TRANSISTOR	UN5111 (TX)
Q131	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q132	1590002120	S.TRANSISTOR	UN5211 (TX)
Q135	1590001640	S.TRANSISTOR	UN5111 (TX)
Q137	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q138	1540000440	S.TRANSISTOR	2SD1619-T-TD
Q139	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q140	1590002120	S.TRANSISTOR	UN5211 (TX)
Q141	1590001640	S.TRANSISTOR	UN5111 (TX)
Q143	1590002200	FET	2SJ349
Q144	1590002120	S.TRANSISTOR	UN5211 (TX)
Q147	1530002800	S.TRANSISTOR	2SC2873-Y (TE12RC)
Q148	1510000800	S.TRANSISTOR	2SA1213-Y (TE12R,C)
Q149	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q150	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q151	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q152	1590002120	S.TRANSISTOR	UN5211 (TX)
Q153	1590002120	S.TRANSISTOR	UN5211 (TX)
Q154	1590002120	S.TRANSISTOR	UN5211 (TX)
Q155	1590000720	S.TRANSISTOR	DTA144EUA T106
Q156	1590000720	S.TRANSISTOR	DTA144EUA T106
D1	1790000450	S.DIODE	MA862 (TX)
D2	1790000450	S.DIODE	MA862 (TX)
D3	1790000620	S.DIODE	MA77 (TX)
D4	1790000620	S.DIODE	MA77 (TX)
D5	1790000450	S.DIODE	MA862 (TX)
D6	1790000450	S.DIODE	MA862 (TX)
D7	1790000450	S.DIODE	MA862 (TX)
D8	1790000450	S.DIODE	MA862 (TX)
D9	1790000450	S.DIODE	MA862 (TX)
D10	1790000450	S.DIODE	MA862 (TX)
D11	1790000450	S.DIODE	MA862 (TX)
D12	1790000450	S.DIODE	MA862 (TX)
D13	1790000450	S.DIODE	MA862 (TX)
D14	1790000450	S.DIODE	MA862 (TX)
D15	1790000450	S.DIODE	MA862 (TX)
D16	1790000450	S.DIODE	MA862 (TX)
D17	1790000690	S.DIODE	HSM88ASR-TR
D18	1790000620	S.DIODE	MA77 (TX)
D19	1710000270	DIODE	M1204
D20	1750000520	S.DIODE	DAN222TL
D21	1790000450	S.DIODE	MA862 (TX)
D22	1790000450	S.DIODE	MA862 (TX)
D23	1790000450	S.DIODE	MA862 (TX)
D24	1790000450	S.DIODE	MA862 (TX)
D25	1790000450	S.DIODE	MA862 (TX)
D26	1790000450	S.DIODE	MA862 (TX)
D27	1750000520	S.DIODE	DAN222TL

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
D28	1750000520	S.DIODE	DAN222TL
D30	1790000450	S.DIODE	MA862 (TX)
D31	1790000690	S.DIODE	HSM88ASR-TR
D32	1750000520	S.DIODE	DAN222TL
D33	1790000450	S.DIODE	MA862 (TX)
D34	1750000520	S.DIODE	DAN222TL
D35	1750000520	S.DIODE	DAN222TL
D36	1750000520	S.DIODE	DAN222TL
D37	1750000520	S.DIODE	DAN222TL
D38	1730000120	ZENER	RD6.2E B2
D39	1790000690	S.DIODE	HSM88ASR-TR
D40	1750000300	S.DIODE	1SS302 (TE85R)
D41	1750000520	S.DIODE	DAN222TL
D42	1750000520	S.DIODE	DAN222TL
D43	1750000520	S.DIODE	DAN222TL
D45	1750000520	S.DIODE	DAN222TL
D46	1790000690	S.DIODE	HSM88ASR-TR
D47	1750000520	S.DIODE	DAN222TL
D48	1750000520	S.DIODE	DAN222TL
D49	1790000450	S.DIODE	MA862 (TX)
D50	1750000520	S.DIODE	DAN222TL
D51	1790000450	S.DIODE	MA862 (TX)
D52	1750000430	S.DIODE	HSB88WSTR
D53	1750000520	S.DIODE	DAN222TL
D59	1750000520	S.DIODE	DAN222TL
D60	1750000520	S.DIODE	DAN222TL
D61	1750000520	S.DIODE	DAN222TL
D62	1750000520	S.DIODE	DAN222TL
D63	1750000520	S.DIODE	DAN222TL
D65	1750000520	S.DIODE	DAN222TL
D66	1750000520	S.DIODE	DAN222TL
D68	1750000520	S.DIODE	DAN222TL
D69	1750000300	S.DIODE	1SS302 (TE85R)
D70	1750000300	S.DIODE	1SS302 (TE85R)
D74	1730000100	ZENER	RD5.1E B2
D75	1750000300	S.DIODE	1SS302 (TE85R)
D76	1750000300	S.DIODE	1SS302 (TE85R)
D79	1750000520	S.DIODE	DAN222TL
D88	1790000690	S.DIODE	HSM88ASR-TR
D89	1750000520	S.DIODE	DAN222TL
D90	1750000520	S.DIODE	DAN222TL
D97	1750000520	S.DIODE	DAN222TL
D98	1750000520	S.DIODE	DAN222TL
D99	1790000450	S.DIODE	MA862 (TX)
D101	1750000520	S.DIODE	DAN222TL
D102	1750000520	S.DIODE	DAN222TL
D103	1750000520	S.DIODE	DAN222TL
D201	1710000160	DIODE	1SS133
D202	1710000160	DIODE	1SS133
D203	1710000160	DIODE	1SS133
D204	1710000160	DIODE	1SS133
D205	1710000160	DIODE	1SS133
D207	1710000160	DIODE	1SS133
D209	1750000520	S.DIODE	DAN222TL
D210	1750000520	S.DIODE	DAN222TL
D211	1750000520	S.DIODE	DAN222TL
D212	1750000520	S.DIODE	DAN222TL
D213	1750000300	S.DIODE	1SS302 (TE85R)
D214	1750000300	S.DIODE	1SS302 (TE85R)
D215	1750000300	S.DIODE	1SS302 (TE85R)
D217	1750000520	S.DIODE	DAN222TL
D218	1750000300	S.DIODE	1SS302 (TE85R)
D220	1730000250	ZENER	RD12E B2
D222	1750000520	S.DIODE	DAN222TL
D223	1750000520	S.DIODE	DAN222TL
D224	1730000500	ZENER	RD13E B2
D225	1750000520	S.DIODE	DAN222TL
D226	1750000520	S.DIODE	DAN222TL
D227	1750000520	S.DIODE	DAN222TL
D228	1750000520	S.DIODE	DAN222TL
D229	1750000300	S.DIODE	1SS302 (TE85R)
D235	1750000300	S.DIODE	1SS302 (TE85R)
D236	1750000300	S.DIODE	1SS302 (TE85R)
F11	2010001010	FILTER	FL-120
F12	2010000320	FILTER	FL-30
F13	2010000950	FILTER	FL-116
F14	2010000950	FILTER	FL-116
X2	6050009870	S.XTAL	CR-567 (9.8304 MHz)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
L1	6140000060	COIL	LR-18
L2	6180002480	COIL	LAL 03NA 820K
L3	6200002960	S.COIL	NL 322522T-4R7J-3
L4	6200003100	S.COIL	NL 322522T-3R9J-3
L7	6200003260	S.COIL	NL 322522T-101J
L8	6200002990	S.COIL	NL 322522T-2R2J-3
L9	6200003320	S.COIL	NL 322522T-3R3J-3
L10	6200003100	S.COIL	NL 322522T-3R9J-3
L11	6200001850	S.COIL	NL 322522T-5R6J
L12	6200003260	S.COIL	NL 322522T-101J
L13	6200002990	S.COIL	NL 322522T-2R2J-3
L14	6200002990	S.COIL	NL 322522T-2R2J-3
L15	6200002990	S.COIL	NL 322522T-2R2J-3
L16	6200003080	S.COIL	NL 322522T-1R8J-3
L17	6200003260	S.COIL	NL 322522T-101J
L18	6200003070	S.COIL	NL 322522T-1R5J-3
L19	6200003070	S.COIL	NL 322522T-1R5J-3
L20	6200003080	S.COIL	NL 322522T-1R8J-3
L21	6200003060	S.COIL	NL 322522T-1R2J-3
L22	6200003260	S.COIL	NL 322522T-101J
L23	6200001720	S.COIL	NL 322522T-1R0J
L24	6200001720	S.COIL	NL 322522T-1R0J
L25	6200001720	S.COIL	NL 322522T-1R0J
L26	6200003050	S.COIL	NL 322522T-R82J-3
L27	6200003260	S.COIL	NL 322522T-101J
L28	6200003050	S.COIL	NL 322522T-R82J-3
L29	6200003040	S.COIL	NL 322522T-R68J-3
L30	6200003040	S.COIL	NL 322522T-R68J-3
L31	6200003040	S.COIL	NL 322522T-R68J-3
L32	6200003260	S.COIL	NL 322522T-101J
L33	6200003040	S.COIL	NL 322522T-R68J-3
L34	6200003030	S.COIL	NL 322522T-R47J-3
L35	6200003030	S.COIL	NL 322522T-R47J-3
L36	6200002980	S.COIL	NL 322522T-R56J-3
L37	6200003260	S.COIL	NL 322522T-101J
L38	6200003030	S.COIL	NL 322522T-R47J-3
L39	6200003250	S.COIL	NL 322522T-R39J-3
L40	6200003250	S.COIL	NL 322522T-R39J-3
L41	6200003250	S.COIL	NL 322522T-R39J-3
L42	6200003260	S.COIL	NL 322522T-101J
L43	6200003020	S.COIL	NL 322522T-R33J-3
L44	6200003010	S.COIL	NL 322522T-R27J-3
L45	6200003010	S.COIL	NL 322522T-R27J-3
L46	6200003020	S.COIL	NL 322522T-R33J-3
L49	6200001850	S.COIL	NL 322522T-5R6J
L50	6200002960	S.COIL	NL 322522T-4R7J-3
L51	6180001710	COIL	LAL 03NA 561K
L52	6140002060	COIL	LR-225
L53	6180001710	COIL	LAL 03NA 561K
L54	6200003260	S.COIL	NL 322522T-101J
L55	6200001720	S.COIL	NL 322522T-1R0J
L56	6200003040	S.COIL	NL 322522T-R68J-3
L57	6200003260	S.COIL	NL 322522T-101J
L58	6140002220	COIL	LR-270
L59	6150004270	COIL	LS-483A
L60	6140000930	COIL	LR-116
L61	6200001830	S.COIL	NL 322522T-100J
L62	6200003020	S.COIL	NL 322522T-R33J-3
L64	6150004280	COIL	LS-484B
L65	6150004280	COIL	LS-484B
L66	6140002060	COIL	LR-225
L67	6140002060	COIL	LR-225
L69	6200003060	S.COIL	NL 322522T-1R2J-3
L70	6200003060	S.COIL	NL 322522T-1R2J-3
L71	6200003000	S.COIL	NL 322522T-R22J-3
L72	6200003010	S.COIL	NL 322522T-R27J-3
L73	6140000930	COIL	LR-116
L74	6150004270	COIL	LS-483A
L75	6150002430	COIL	LS-254
L76	6110001620	COIL	LA-245
L77	6200001830	S.COIL	NL 322522T-100J
L78	6150004280	COIL	LS-484B
L79	6150004250	COIL	LS-471A
L80	6150004050	COIL	LS-466
L81	6150004050	COIL	LS-466
L82	6200003260	S.COIL	NL 322522T-101J
L83	6150004310	COIL	LS-487A
L84	6150004290	COIL	LS-485A
L85	6150004290	COIL	LS-485A
L86	6200001830	S.COIL	NL 322522T-100J
L87	6140001600	COIL	LR-178
L88	6150001590	COIL	LS-175

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
L89	6150001590	COIL	LS-175
L90	6200003140	S.COIL	NL 322522T-150J
L91	6200003140	S.COIL	NL 322522T-150J
L92	6150004430	COIL	LS-501
L93	6150004300	COIL	LS-486A
L94	2040000490	COIL	EXC-ELDR25C
L95	6180002340	COIL	LAL 04NA 221K
L96	6180000960	COIL	LAL 03NA 102K
L100	6200003090	S.COIL	NL 322522T-2R7J-3
L101	2040000490	COIL	EXC-ELDR25C
L102	2040000490	COIL	EXC-ELDR25C
L103	2040000490	COIL	EXC-ELDR25C
L104	2040000490	COIL	EXC-ELDR25C
L105	6910003570	COIL	2943-666663
L106	6910003570	COIL	2943-666663
L107	6180001710	COIL	LAL 03NA 561K
L108	6180001710	COIL	LAL 03NA 561K
L115	6200003260	S.COIL	NL 322522T-101J
L116	6200003260	S.COIL	NL 322522T-101J
L117	6180001710	COIL	LAL 03NA 561K
L118	6180001710	COIL	LAL 03NA 561K
L119	6180001710	COIL	LAL 03NA 561K
L120	6180001710	COIL	LAL 03NA 561K
L121	6180001710	COIL	LAL 03NA 561K
L122	6180001710	COIL	LAL 03NA 561K
L123	6200003020	S.COIL	NL 322522T-R33J-3
L124	6200003000	S.COIL	NL 322522T-R22J-3
L125	6200003260	S.COIL	NL 322522T-101J
L126	6180000990	COIL	LAL 04NA 101K
L127	6200003260	S.COIL	NL 322522T-101J
L129	6180000900	COIL	LAL 03NA 101K
L130	6180000900	COIL	LAL 03NA 101K
L131	6180000900	COIL	LAL 03NA 101K
L132	6200003260	S.COIL	NL 322522T-101J
L133	2040000490	COIL	EXC-ELDR25C
L134	2040000490	COIL	EXC-ELDR25C
L135	2040000490	COIL	EXC-ELDR25C
L136	2040000490	COIL	EXC-ELDR25C
L137	6200001720	S.COIL	NL 322522T-1R0J
L138	2040000490	COIL	EXC-ELDR25C
L139	6200001830	S.COIL	NL 322522T-100J
L140	6200003260	S.COIL	NL 322522T-101J
L141	2040000490	COIL	EXC-ELDR25C
L142	6180000900	COIL	LAL 03NA 101K
L144	6200003260	S.COIL	NL 322522T-101J
L145	6200003260	S.COIL	NL 322522T-101J
L147	6200003260	S.COIL	NL 322522T-101J
L148	6200001710	S.COIL	NL 322522T-220J
L149	6200003260	S.COIL	NL 322522T-101J
L150	6200003260	S.COIL	NL 322522T-101J
L151	6180001240	COIL	LAL 04NA 820K
L152	2040000490	COIL	EXC-ELDR25C
L154	6200003000	S.COIL	NL 322522T-R22J-3
R1	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R2	7010003180	RESISTOR	ELR20J 15 Ω
R3	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R4	7010003200	RESISTOR	ELR20J 22 Ω
R5	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R6	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R7	7010003390	RESISTOR	ELR20J 820 Ω
R8	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R9	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R10	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R11	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R12	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R13	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R14	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R15	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R16	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R17	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R18	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R19	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R20	7010003400	RESISTOR	ELR20J 1 kΩ
R21	7010003400	RESISTOR	ELR20J 1 kΩ
R22	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R23	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R24	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R25	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R26	7310004050	S.TRIMMER	EVM-1YSX50 B52 (501)
R27	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)

S.=Surface mount

## [MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
R28	7010003350	RESISTOR ELR20J 390 Ω
R29	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R32	7030003350	S.RESISTOR ERJ3GEYJ 181 V (180 Ω)
R33	7010003220	RESISTOR ELR20J 33 Ω
R34	7030003350	S.RESISTOR ERJ3GEYJ 181 V (180 Ω)
R35	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R36	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R37	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R38	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R39	7010003180	RESISTOR ELR20J 15 Ω
R41	7010003240	RESISTOR ELR20J 47 Ω
R43	7030003530	S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ)
R44	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)
R45	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R46	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)
R47	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R48	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R49	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R50	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R51	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R52	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R53	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R54	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R55	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R56	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R57	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R58	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R59	7010004450	RESISTOR R20J 100 kΩ
R60	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R61	7030003540	S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ)
R62	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)
R63	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R64	7030006520	S.RESISTOR RR0816P-561-D (560 Ω)
R65	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)
R66	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)
R67	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R69	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R70	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R71	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R72	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R73	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R74	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)
R75	7010003200	RESISTOR ELR20J 22Ω
R76	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R77	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R79	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)
R80	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R81	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R82	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R83	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R84	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R85	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)
R86	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R87	7030003660	S.RESISTOR ERJ3GEYJ 683 V (68 kΩ)
R88	7030003610	S.RESISTOR ERJ3GEYJ 273 V (27 kΩ)
R89	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R90	7510000290	THERMISTOR ERT-D2ZGL 301S
R91	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R92	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R94	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R95	7010003170	RESISTOR ELR20J 12 Ω
R96	7010003170	RESISTOR ELR20J 12 Ω
R97	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R98	7010003200	RESISTOR ELR20J 22 Ω
R99	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R100	7030003530	S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ)
R101	7010003200	RESISTOR ELR20J 22 Ω
R102	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R103	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R104	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R105	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R106	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)
R107	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R108	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R109	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R110	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R111	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)
R112	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R113	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R114	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R116	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R117	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)

## [MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
R118	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R119	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R120	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R121	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R122	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R123	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R124	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R125	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R126	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R127	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R128	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R129	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R130	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R131	7010003380	RESISTOR ELR20J 680 Ω
R132	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R133	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R134	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R135	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R136	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R138	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R139	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R140	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R143	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R149	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)
R150	7010004270	RESISTOR R20J 4.7 kΩ
R157	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R158	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R159	7010004340	RESISTOR R20J 15 kΩ
R161	7030003840	S.RESISTOR ERJ3GEYJ 225 V (2.2 MΩ)
R162	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)
R163	7030003840	S.RESISTOR ERJ3GEYJ 225 V (2.2 MΩ)
R164	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R165	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R166	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R167	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)
R168	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R169	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R170	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R171	7010003550	RESISTOR ELR20J 15 kΩ
R172	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R173	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R174	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R175	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R176	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R177	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R183	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R184	7310004090	S.TRIMMER EVM-1YSX50 B14 (103)
R185	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R186	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R187	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)
R188	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)
R189	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R190	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R191	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R192	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)
R193	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)
R194	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R196	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R197	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R198	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R199	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R200	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R201	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)
R202	7030003590	S.RESISTOR ERJ3GEYJ 183 V (18 kΩ)
R204	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R205	7310000750	TRIMMER RH0651C14J2WA (103)
R207	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R208	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R209	7030003580	S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)
R210	7030003340	S.RESISTOR ERJ3GEYJ 151 V (150 Ω)
R211	7310004050	S.TRIMMER EVM-1YSX50 B52 (501)
R212	7310004030	S.TRIMMER EVM-1YSX50 B12 (101)
R213	7510000240	THERMISTOR ERT-D2ZGL 332S
R214	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R215	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R216	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R217	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R218	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R219	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R220	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R221	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R222	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)

S.=Surface mount

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
R223	7310004080	S.TRIMMER	EVM-1YSX50 B53 (502)
R224	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R225	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R226	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R227	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R228	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R229	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R230	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R231	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R232	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R233	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R234	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R235	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R236	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R237	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)
R238	7310004070	S.TRIMMER	EVM-1YSX50 B33 (302)
R239	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R240	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R241	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R242	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R243	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R244	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R245	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R246	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R247	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R254	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R255	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R256	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R257	7310000750	TRIMMER	RH0651C14J2WA (103)
R258	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R259	7030003840	S.RESISTOR	ERJ3GEYJ 225 V (2.2 MΩ)
R261	7030003840	S.RESISTOR	ERJ3GEYJ 225 V (2.2 MΩ)
R262	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R263	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R264	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R265	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R266	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R267	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R268	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R269	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R270	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R271	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R272	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R273	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R274	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R275	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R276	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R277	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R278	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R279	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R280	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R281	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R282	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R283	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R284	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R285	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R286	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R287	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R288	7010003300	RESISTOR	ELR20J 150 Ω
R290	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R291	7030006520	S.RESISTOR	RR0816P-561-D (560 Ω)
R292	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R293	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R294	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R295	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R296	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R297	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R298	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R299	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R300	7310000750	TRIMMER	RH0651C14J2WA (103)
R301	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R302	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R303	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R304	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R305	7030003840	S.RESISTOR	ERJ3GEYJ 225 V (2.2 MΩ)
R306	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R307	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R308	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R310	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R324	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R325	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R328	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
R329	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R333	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R334	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R335	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R336	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R337	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R338	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R339	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R340	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R342	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R344	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R345	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R346	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R348	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R349	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R350	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R352	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R353	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R354	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R362	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R363	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R364	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R365	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R369	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R370	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R371	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R372	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R373	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R374	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R375	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R376	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R377	7010000090	RESISTOR	ELR25J 4.7 Ω
R378	7010004190	RESISTOR	R20J 1 kΩ
R379	7010000090	RESISTOR	ELR25J 4.7 Ω
R380	7010004190	RESISTOR	R20J 1 kΩ
R381	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R382	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R385	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R386	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R387	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R388	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R389	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R390	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R391	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R392	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R393	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R394	7010003240	RESISTOR	ELR20J 47 Ω
R395	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R396	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R403	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R404	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R411	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R412	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R413	7010003280	RESISTOR	ELR20J 100 Ω
R414	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R415	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R416	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R448	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R449	7010003180	RESISTOR	ELR20J 15 Ω
R450	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R465	7010003200	RESISTOR	ELR20J 22 Ω
R466	7010003200	RESISTOR	ELR20J 22 Ω
R467	7010003200	RESISTOR	ELR20J 22 Ω
R468	7010003200	RESISTOR	ELR20J 22 Ω
R469	7010003200	RESISTOR	ELR20J 22 Ω
R470	7010003200	RESISTOR	ELR20J 22 Ω
R471	7010003200	RESISTOR	ELR20J 22 Ω
R472	7010003200	RESISTOR	ELR20J 22 Ω
R481	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R493	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R494	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R501	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R502	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R503	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R504	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R505	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R506	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R510	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R514	7010000290	RESISTOR	ELR25J 220 Ω
R515	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R517	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R518	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)

S.=Surface mount

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
R519	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R520	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R521	7010003130	RESISTOR	ELR20J 5.6 Ω
R522	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R523	7010004910	RESISTOR	R50X 27 Ω
R525	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R526	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R527	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R528	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R529	7070000281	RESISTOR	ERX1SJ 2R2 (2.2 Ω)
R533	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R534	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R535	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R536	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R537	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R538	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R539	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R540	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R541	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R542	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R543	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R544	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R545	7010004450	RESISTOR	R20J 100 kΩ
R601	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R602	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R603	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R604	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R605	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R606	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R607	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R608	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R609	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R610	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R611	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R612	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R633	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R634	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R635	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R636	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R637	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R638	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R639	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R640	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R642	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R646	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R647	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R648	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R650	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R651	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R652	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R653	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R654	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R655	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R657	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R658	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R659	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R663	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R664	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R670	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R671	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R672	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R673	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R674	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R675	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R676	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R677	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R678	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R679	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R680	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R681	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R682	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R683	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R684	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R690	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R691	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R692	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R693	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R694	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R695	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R696	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R697	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R698	7010003380	RESISTOR	ELR20J 680 Ω

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
R699	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R700	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R701	7010003830	RESISTOR	R20J 1Ω
R702	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R703	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R704	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R705	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R706	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R707	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R708	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R709	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R719	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R720	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R721	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R722	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R723	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R724	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R725	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R726	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R729	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R730	7010003170	RESISTOR	ELR20J 12 Ω
R731	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R733	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R735	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R736	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R738	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R739	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R740	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R741	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R742	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R752	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R753	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R754	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R755	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R756	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R757	7030006520	S.RESISTOR	RR0816P-561-D (560 Ω)
R764	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R765	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R766	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R771	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R772	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R773	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R774	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R777	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R778	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R779	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R780	7030003770	S.RESISTOR	ERJ3GEYJ 564 V (560 kΩ)
R781	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R782	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R783	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R784	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R785	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R786	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R787	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R789	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R790	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R791	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R792	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R793	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R794	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R796	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R797	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R798	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R799	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R800	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R801	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R802	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R803	7510000540	THERMISTOR	ERT-D2ZGL 171S
R804	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R805	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R807	7510000300	THERMISTOR	ERT-D2ZGL 601S
R808	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R809	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R810	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R811	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R812	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R813	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R820	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R821	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R822	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R823	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R824	7030009220	S.RESISTOR	ERJ12YJ 561H (560 Ω)

S.=Surface mount



**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION
R825	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R826	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R827	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)
R828	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R829	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R830	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R831	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R832	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R833	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R834	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R835	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R836	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R837	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R838	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R839	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)
R840	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)
R841	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R842	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R843	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)
R844	7030003490	S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ)
R845	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R846	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R847	7070000211	RESISTOR ERG1SJ 470 (47 Ω)
R848	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R849	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R850	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R851	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R852	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R853	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R854	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R855	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R856	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R857	7010003240	RESISTOR ELR20J 47 Ω
R858	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R862	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R863	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R864	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R866	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R868	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R870	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R871	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R872	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R873	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R874	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R875	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)
R876	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R877	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R878	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R879	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R880	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R882	7030004050	S.RESISTOR ERJ3GEYJ 1R0 V (1 Ω)
R883	7310004080	S.TRIMMER EVM-1YSX50 B53 (502)
R884	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R885	7030003510	S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ)
R886	7030003510	S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ)
R887	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R888	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R889	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R890	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R891	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R892	7030003540	S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ)
R893	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R894	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R895	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R896	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R897	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R898	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R899	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R900	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)
C2	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C3	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C4	4030006870	S.CERAMIC C1608 JB 1H 222K-T-A
C5	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C6	4030010020	S.CERAMIC C1608 JB 1H 122K-T-A
C7	4030008860	S.CERAMIC C1608 JB 1C 153K-T-A
C8	4030006870	S.CERAMIC C1608 JB 1H 222K-T-A
C9	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C10	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C11	4030006870	S.CERAMIC C1608 JB 1H 222K-T-A
C12	4030011280	S.CERAMIC C1608 CH 1H 271J-T-A

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION
C13	4030009970	S.CERAMIC C1608 JB 1H 182K-T-A
C14	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C15	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C16	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C17	4030009980	S.CERAMIC C1608 JB 1H 152K-T-A
C18	4030010750	S.CERAMIC C1608 CH 1H 201J-T-A
C19	4030009980	S.CERAMIC C1608 JB 1H 152K-T-A
C20	4030008470	S.CERAMIC C1608 JB 1H 272K-T-A
C21	4030008850	S.CERAMIC C1608 JB 1C 123K-T-A
C22	4030009980	S.CERAMIC C1608 JB 1H 152K-T-A
C23	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C24	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C25	4030010040	S.CERAMIC C1608 JB 1H 561K-T-A
C26	4030007140	S.CERAMIC C1608 CH 1H 121J-T-A
C27	4030010040	S.CERAMIC C1608 JB 1H 561K-T-A
C28	4030009980	S.CERAMIC C1608 JB 1H 152K-T-A
C29	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C30	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C31	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C32	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C33	4030010040	S.CERAMIC C1608 JB 1H 561K-T-A
C34	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C35	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C36	4030010040	S.CERAMIC C1608 JB 1H 561K-T-A
C37	4030009970	S.CERAMIC C1608 JB 1H 182K-T-A
C38	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C39	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C40	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C41	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C42	4030007100	S.CERAMIC C1608 CH 1H 560J-T-A
C43	4030010760	S.CERAMIC C1608 CH 1H 331J-T-A
C44	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C45	4030006870	S.CERAMIC C1608 JB 1H 222K-T-A
C46	4030010760	S.CERAMIC C1608 CH 1H 331J-T-A
C47	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C48	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C49	4030011330	S.CERAMIC C1608 CH 1H 391J-T-A
C50	4030007080	S.CERAMIC C1608 CH 1H 390J-T-A
C51	4030011830	S.CERAMIC C1608 CH 1H 301J-T-A
C52	4030011280	S.CERAMIC C1608 CH 1H 271J-T-A
C53	4030006870	S.CERAMIC C1608 JB 1H 222K-T-A
C54	4030007170	S.CERAMIC C1608 CH 1H 221J-T-A
C55	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C56	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C57	4030011830	S.CERAMIC C1608 CH 1H 301J-T-A
C58	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C59	4030007170	S.CERAMIC C1608 CH 1H 221J-T-A
C60	4030011280	S.CERAMIC C1608 CH 1H 271J-T-A
C61	4030009980	S.CERAMIC C1608 JB 1H 152K-T-A
C62	4030007160	S.CERAMIC C1608 CH 1H 181J-T-A
C63	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C64	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C65	4030010750	S.CERAMIC C1608 CH 1H 201J-T-A
C66	4030007050	S.CERAMIC C1608 CH 1H 220J-T-A
C67	4030007160	S.CERAMIC C1608 CH 1H 181J-T-A
C68	4030007160	S.CERAMIC C1608 CH 1H 181J-T-A
C69	4030009980	S.CERAMIC C1608 JB 1H 152K-T-A
C70	4030007150	S.CERAMIC C1608 CH 1H 151J-T-A
C71	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C72	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C73	4030007150	S.CERAMIC C1608 CH 1H 151J-T-A
C74	4030007040	S.CERAMIC C1608 CH 1H 180J-T-A
C75	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C76	4030007150	S.CERAMIC C1608 CH 1H 151J-T-A
C77	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C78	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C79	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C80	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C81	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C82	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C83	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C84	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C85	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C86	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C87	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C88	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C89	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C90	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C91	4030007080	S.CERAMIC C1608 CH 1H 390J-T-A
C92	4030007040	S.CERAMIC C1608 CH 1H 180J-T-A
C93	4030007050	S.CERAMIC C1608 CH 1H 220J-T-A
C94	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A

S.=Surface mount

## [MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
C95	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C96	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C98	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C99	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C100	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C101	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C102	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C103	4030007170	S.CERAMIC C1608 CH 1H 221J-T-A
C104	4030006930	S.CERAMIC C1608 CH 1H 020C-T-A
C106	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C107	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C108	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C109	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C110	4510005260	ELECTROLYTIC 25 MV 10 HW
C111	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C112	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C113	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C114	4510005260	ELECTROLYTIC 25 MV 10 HW
C115	4030007140	S.CERAMIC C1608 CH 1H 121J-T-A
C116	4030007050	S.CERAMIC C1608 CH 1H 220J-T-A
C117	4510003910	ELECTROLYTIC 16 MV 47 HW
C118	4510005260	ELECTROLYTIC 25 MV 10 HW
C119	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C120	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C121	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C122	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C126	4030007100	S.CERAMIC C1608 CH 1H 560J-T-A
C127	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C128	4030010760	S.CERAMIC C1608 CH 1H 331J-T-A
C129	4030010760	S.CERAMIC C1608 CH 1H 331J-T-A
C130	4030007120	S.CERAMIC C1608 CH 1H 820J-T-A
C131	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C132	4030007150	S.CERAMIC C1608 CH 1H 151J-T-A
C133	4030007010	S.CERAMIC C1608 CH 1H 100D-T-A
C134	4030007120	S.CERAMIC C1608 CH 1H 820J-T-A
C135	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C137	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C138	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C139	4030007000	S.CERAMIC C1608 CH 1H 090D-T-A
C140	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C141	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C142	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C143	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C144	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C145	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C146	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C147	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C148	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C149	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C150	4030006990	S.CERAMIC C1608 CH 1H 080D-T-A
C151	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C152	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C153	4030006930	S.CERAMIC C1608 CH 1H 020C-T-A
C154	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C155	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C156	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C157	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C158	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C159	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C160	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C161	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C162	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C163	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C164	4510004490	ELECTROLYTIC 25 MV 22 HW
C165	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C166	4510004490	ELECTROLYTIC 25 MV 22 HW
C167	4030007010	S.CERAMIC C1608 CH 1H 100D-T-A
C168	4510003970	ELECTROLYTIC 50 MV 2R2 HW
C169	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C170	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C171	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C172	4030014300	S.CERAMIC C1608 JB 1C 563K-T-A
C173	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C174	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C175	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C176	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C177	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C178	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C179	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C180	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C181	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C182	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A

## [MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
C183	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C184	4030006990	S.CERAMIC C1608 CH 1H 080D-T-A
C185	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C186	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C187	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C188	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C189	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C190	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C191	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C192	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C193	4510005260	ELECTROLYTIC 25 MV 10 HW
C194	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C195	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C196	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C197	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C198	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C199	4510003910	ELECTROLYTIC 16 MV 47 HW
C200	4030010760	S.CERAMIC C1608 CH 1H 331J-T-A
C201	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C202	4030007170	S.CERAMIC C1608 CH 1H 221J-T-A
C203	4030007050	S.CERAMIC C1608 CH 1H 220J-T-A
C204	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C205	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C206	4510005260	ELECTROLYTIC 25 MV 10 HW
C207	4030012610	S.CERAMIC C2012 JB 1C 474K-T-A
C208	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C209	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C210	4510005260	ELECTROLYTIC 25 MV 10 HW
C211	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C212	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C213	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C214	4510005260	ELECTROLYTIC 25 MV 10 HW
C215	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C216	4030007050	S.CERAMIC C1608 CH 1H 220J-T-A
C217	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C218	4510004490	ELECTROLYTIC 25 MV 22 HW
C222	4030007170	S.CERAMIC C1608 CH 1H 221J-T-A
C225	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C226	4510004490	ELECTROLYTIC 25 MV 22 HW
C228	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C229	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C230	4510005260	ELECTROLYTIC 25 MV 10 HW
C231	4510005260	ELECTROLYTIC 25 MV 10 HW
C232	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C234	4510005260	ELECTROLYTIC 25 MV 10 HW
C235	4510005260	ELECTROLYTIC 25 MV 10 HW
C236	4510005260	ELECTROLYTIC 25 MV 10 HW
C237	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C238	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C239	4030007150	S.CERAMIC C1608 CH 1H 151J-T-A
C240	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C241	4030011280	S.CERAMIC C1608 CH 1H 271J-T-A
C242	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C243	4510004490	ELECTROLYTIC 25 MV 22 HW
C244	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C245	4510003970	ELECTROLYTIC 50 MV 2R2 HW
C246	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C247	4030010760	S.CERAMIC C1608 CH 1H 331J-T-A
C248	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C249	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C250	4510003910	ELECTROLYTIC 16 MV 47 HW
C251	4510004490	ELECTROLYTIC 25 MV 22 HW
C252	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C253	4030014300	S.CERAMIC C1608 JB 1C 563K-T-A
C254	4030012610	S.CERAMIC C2012 JB 1C 474K-T-A
C256	4030009980	S.CERAMIC C1608 JB 1H 152K-T-A
C257	4310000610	MYLAR 50 F2D 472J
C258	4510003940	ELECTROLYTIC 25 MV 4R7 HW
C259	4030007170	S.CERAMIC C1608 CH 1H 221J-T-A
C260	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C261	4510003910	ELECTROLYTIC 16 MV 47 HW
C262	4310000360	MYLAR 50 F2D 103J
C263	4510004990	ELECTROLYTIC 16 MV 100 HC
C264	4310000360	MYLAR 50 F2D 103J
C265	4510004910	ELECTROLYTIC 16 MV 10 SWN
C266	4510003940	ELECTROLYTIC 25 MV 4R7 HW
C267	4030012610	S.CERAMIC C2012 JB 1C 474K-T-A
C268	4510003910	ELECTROLYTIC 16 MV 47 HW
C269	4510003970	ELECTROLYTIC 50 MV 2R2 HW
C270	4510003940	ELECTROLYTIC 25 MV 4R7 HW
C271	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C275	4510003910	ELECTROLYTIC 16 MV 47 HW

S.=Surface mount

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION
C276	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C277	4510003940	ELECTROLYTIC 25 MV 4R7 HW
C278	4510005250	ELECTROLYTIC 50 MV 2R2 SWN
C279	4510005250	ELECTROLYTIC 50 MV 2R2 SWN
C280	4510005250	ELECTROLYTIC 50 MV 2R2 SWN
C281	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C282	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C283	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C284	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C285	4030012610	S.CERAMIC C2012 JB 1C 474K-T-A
C286	4030012610	S.CERAMIC C2012 JB 1C 474K-T-A
C287	4510005260	ELECTROLYTIC 25 MV 10 HW
C288	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C289	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C290	4510005260	ELECTROLYTIC 25 MV 10 HW
C293	4510005260	ELECTROLYTIC 25 MV 10 HW
C294	4310000380	MYLAR 50 F2D 153J
C295	4310000380	MYLAR 50 F2D 153J
C296	4310000380	MYLAR 50 F2D 153J
C297	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C298	4510005260	ELECTROLYTIC 25 MV 10 HW
C299	4510004500	ELECTROLYTIC 25 MV 100 HW
C300	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C301	4510005260	ELECTROLYTIC 25 MV 10 HW
C302	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C303	4510003970	ELECTROLYTIC 50 MV 2R2 HW
C304	4510006010	ELECTROLYTIC 16 MV 47 SWB
C305	4510006990	ELECTROLYTIC 35 MV 10 SGX
C306	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C307	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C317	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C319	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C320	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C321	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C322	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C323	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C324	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C325	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C326	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C343	4510003940	ELECTROLYTIC 25 MV 4R7 HW
C361	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C362	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C363	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C364	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C374	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C387	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C397	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C398	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C403	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C408	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C409	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C410	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C411	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C412	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C413	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C414	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C416	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C417	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C418	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C419	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C420	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C421	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C434	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C435	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C436	4510003970	ELECTROLYTIC 50 MV 2R2 HW
C437	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C438	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C439	4030007010	S.CERAMIC C1608 CH 1H 100D-T-A
C444	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C448	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C449	4510005260	ELECTROLYTIC 25 MV 10 HW
C450	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C451	4510003940	ELECTROLYTIC 25 MV 4R7 HW
C452	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C454	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C455	4510004590	ELECTROLYTIC 16 MV 470 HC
C456	4030007010	S.CERAMIC C1608 CH 1H 100D-T-A
C457	4030006920	S.CERAMIC C1608 CH 1H 010C-T-A
C458	4030007010	S.CERAMIC C1608 CH 1H 100D-T-A
C459	4030006970	S.CERAMIC C1608 CH 1H 060D-T-A
C460	4030006920	S.CERAMIC C1608 CH 1H 010C-T-A
C461	4030006880	S.CERAMIC C1608 JB 1H 102K-T-A

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION
C462	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C463	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C464	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C501	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C502	4510004470	ELECTROLYTIC FYLOH 473Z
C503	4510005260	ELECTROLYTIC 25 MV 10 HW
C504	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C507	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C508	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C509	4030007020	S.CERAMIC C1608 CH 1H 120J-T-A
C510	4030007020	S.CERAMIC C1608 CH 1H 120J-T-A
C511	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C512	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C513	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C514	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C515	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C516	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C517	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C518	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C519	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C520	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C521	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C522	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C523	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C524	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C525	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C526	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C527	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C528	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C531	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C532	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C533	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C534	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C538	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C539	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C542	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C543	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C544	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C546	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C547	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C548	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C550	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C551	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C555	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C558	4510003910	ELECTROLYTIC 16 MV 47 HW
C559	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C560	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C561	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C562	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C564	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C565	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C568	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C569	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C571	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C572	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C573	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C574	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C581	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C582	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C583	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C584	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C585	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C593	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C594	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C595	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C597	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C598	4510005260	ELECTROLYTIC 25 MV 10 HW
C599	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C608	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C609	4510004490	ELECTROLYTIC 25 MV 22 HW
C610	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C614	4030012600	S.CERAMIC C2012 JB 1A 105M-T-A
C618	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C620	4030006920	S.CERAMIC C1608 CH 1H 010C-T-A
C622	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C623	4030009980	S.CERAMIC C1608 JB 1H 152K-T-A
C624	4030007140	S.CERAMIC C1608 CH 1H 121J-T-A
C625	4030006870	S.CERAMIC C1608 JB 1H 222K-T-A
C627	4030007160	S.CERAMIC C1608 CH 1H 181J-T-A
C628	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C629	4030008850	S.CERAMIC C1608 JB 1C 123K-T-A
C631	4510003940	ELECTROLYTIC 25 MV 4R7 HW

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C632	4510005260	ELECTROLYTIC	25 MV 10 HW
C633	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C634	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C637	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C639	4030009980	S.CERAMIC	C1608 JB 1H 152K-T-A
C640	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C641	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C642	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C643	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C644	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C645	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C646	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C647	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C648	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C649	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C650	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C651	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C654	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C655	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C656	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C657	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C658	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C659	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C660	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C661	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C662	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C663	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C664	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C665	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C666	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C667	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C670	4510005260	ELECTROLYTIC	25 MV 10 HW
C671	4510004990	ELECTROLYTIC	16 MV 100 HC
C672	4510004990	ELECTROLYTIC	16 MV 100 HC
C673	4510004990	ELECTROLYTIC	16 MV 100 HC
C674	4030012600	S.CERAMIC	C2012 JB 1A 105M-T-A
C682	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C683	4510004910	ELECTROLYTIC	16 MV 10 SWN
C684	4030012610	S.CERAMIC	C2012 JB 1C 474K-T-A
C685	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C686	4510005260	ELECTROLYTIC	25 MV 10 HW
C687	4510005260	ELECTROLYTIC	25 MV 10 HW
C688	4510005260	ELECTROLYTIC	25 MV 10 HW
C689	4510006010	ELECTROLYTIC	16 MV 47 SWB
C690	4510006990	ELECTROLYTIC	35 MV 10 SGX
C691	4510005260	ELECTROLYTIC	25 MV 10 HW
C692	4510005260	ELECTROLYTIC	25 MV 10 HW
C693	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C694	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C695	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C696	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C697	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C701	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C702	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C703	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C704	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C705	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C707	4510005260	ELECTROLYTIC	25 MV 10 HW
C708	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C709	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C711	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C712	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C713	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C714	4030007170	S.CERAMIC	C1608 CH 1H 221J-T-A
C715	4510005260	ELECTROLYTIC	25 MV 10 HW
C716	4030012610	S.CERAMIC	C2012 JB 1C 474K-T-A
C717	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C718	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C719	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C720	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
RL2	6330000110	RELAY	FBR22D12-P
J1	6510017150	CONNECTOR	TMP-S01X-C1
J2	6510017150	CONNECTOR	TMP-S01X-C1
J3	6510007020	CONNECTOR	TMP-J01X-V6
J4	6510007020	CONNECTOR	TMP-J01X-V6
J5	6510007020	CONNECTOR	TMP-J01X-V6
J7	6450001440	CONNECTOR	HSJ1403-01-010
J9	6510017660	CONNECTOR	52045-1645

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
J11	6510017990	CONNECTOR	DEL-C-J9SAF-20L9
J12	6450001580	CONNECTOR	TCS5073-28-4151
J13	6450001590	CONNECTOR	TCS5073-17-4151
J15	6510003400	CONNECTOR	B04B-EH-S
J16	6510011180	CONNECTOR	PI28A-14M
J19	6510017660	CONNECTOR	52045-1645
J20	6510003390	CONNECTOR	B03B-EH-S
J22	6510017650	CONNECTOR	52045-1045
J23	6510003400	CONNECTOR	B04B-EH-S
J29	6510018150	S.CONNECTOR	4-175638-0
J30	6510017950	S.CONNECTOR	4-175638-4
J32	6510010020	CONNECTOR	RTB-1.5-2F
J33	6450001560	CONNECTOR	PD-72
S9	2220000520	SWITCH	ESD-11V120
S11	2220000520	SWITCH	ESD-11V120
W1	7120000020	JUMPER	JPW 02H
W3	7030003860	S.JUMPER	ERJ3GE JPW V
W10	7030000010	S.JUMPER	MCR10EZJH JPW (000)
W11	7120000010	JUMPER	JPW 02A
W12	7030003860	S.JUMPER	ERJ3GE JPW V
W13	7120000010	JUMPER	JPW 02A
W14	7030003860	S.JUMPER	ERJ3GE JPW V
W17	7030003860	S.JUMPER	ERJ3GE JPW V
W18	7030003860	S.JUMPER	ERJ3GE JPW V
W23	7030003860	S.JUMPER	ERJ3GE JPW V
W24	7030003860	S.JUMPER	ERJ3GE JPW V
W25	7030003860	S.JUMPER	ERJ3GE JPW V
W27	7030003860	S.JUMPER	ERJ3GE JPW V
W28	7030003860	S.JUMPER	ERJ3GE JPW V
EP1	0910050064	PCB	B 5146D

S.=Surface mount

## [PLL UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1140007880	S.IC	SC-1246A
IC2	1140004550	S.IC	SC-1287
IC3	1180001070	S.IC	TA7805F (TE16L)
IC4	1130004830	S.IC	TC7SU04F (TE85R)
IC5	1130007660	S.IC	LC7153M-TLM
IC6	1130004830	S.IC	TC7SU04F (TE85R)
IC8	1130004830	S.IC	TC7SU04F (TE85R)
Q1	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q2	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q3	1560000720	S.FET	2SK2171-4-TD
Q4	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q5	1560000330	S.FET	2SK210-GR (TE85R)
Q6	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q7	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q8	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q9	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q10	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
Q11	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q21	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q22	1590001330	S.TRANSISTOR	DTA114EUA T106
Q24	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q25	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
D1	1750000270	S.DIODE	1SS301 (TE85R)
D2	1750000270	S.DIODE	1SS301 (TE85R)
D3	1790000540	S.VARICAP	MA338 (TX)
D4	1720000540	S.VARICAP	HVM17-01TR
D5	1750000070	S.DIODE	1SS226 (TE85R)
D6	1790000620	S.DIODE	MA77 (TX)
D15	1790000490	S.DIODE	HSM88AS-TR
D16	1790000490	S.DIODE	HSM88AS-TR
F11	2020001140	S.CERAMIC	SFECA10.7MA-5-A
X1	6050005770	XTAL	CR-282 (30.000 MHz)
L1	6200001830	S.COIL	NL 322522T-100J
L2	6170000230	COIL	LW-25
L3	6150004370	COIL	LS-472C (C-15045)
L4	6150004250	COIL	LS-471A (C-14922)
L5	6150004250	COIL	LS-471A (C-14922)
L7	6200003260	S.COIL	NL 322522T-101J
L8	6180001220	COIL	LAL 04NA 100K
L9	6200003260	S.COIL	NL 322522T-101J
L10	6200003100	S.COIL	NL 322522T-3R9J-3
L11	6200003260	S.COIL	NL 322522T-101J
L12	6200003260	S.COIL	NL 322522T-101J
L13	6130001850	COIL	LB-185
L15	6200001830	S.COIL	NL 322522T-100J
L16	6200003260	S.COIL	NL 322522T-101J
L17	6200001830	S.COIL	NL 322522T-100J
L19	6200001830	S.COIL	NL 322522T-100J
L20	6170000180	COIL	LW-19
L21	6170000230	COIL	LW-25
L22	6200003260	S.COIL	NL 322522T-101J
L23	6200003260	S.COIL	NL 322522T-101J
L24	6190001090	COIL	MC138-E544EN-110164
L26	6200003260	S.COIL	NL 322522T-101J
L28	6200003260	S.COIL	NL 322522T-101J
L35	6200003430	S.COIL	NL 322522T-R10J
L36	6200003430	S.COIL	NL 322522T-R10J
L37	6200003120	S.COIL	NL 322522T-8R2J
L38	6200001830	S.COIL	NL 322522T-100J
L40	6200003320	S.COIL	NL 322522T-3R3J-3
L41	2040000490	COIL	EXC-ELDR25C
L42	2040000490	COIL	EXC-ELDR25C
L43	6200003420	S.COIL	NL 322522T-R15J-3
L44	6200003430	S.COIL	NL 322522T-R10J
L45	6180000880	COIL	LAL 03NA 100K
L46	6200001830	S.COIL	NL 322522T-100J
L47	6200001830	S.COIL	NL 322522T-100J
R1	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R2	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R3	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)

## [PLL UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R5	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R6	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R7	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R8	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R9	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R10	7070000820	RESISTOR	ERG1SJ 220 (22 Ω)
R11	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R12	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R14	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R17	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R18	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R19	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R20	7030005400	S.RESISTOR	RR0816P-202-D (2 kΩ)
R21	7030005400	S.RESISTOR	RR0816P-202-D (2 kΩ)
R22	7030005390	S.RESISTOR	RR0816P-102-D (1 kΩ)
R23	7030005400	S.RESISTOR	RR0816P-202-D (2 kΩ)
R24	7030005390	S.RESISTOR	RR0816P-102-D (1 kΩ)
R25	7030005400	S.RESISTOR	RR0816P-202-D (2 kΩ)
R26	7030005390	S.RESISTOR	RR0816P-102-D (1 kΩ)
R27	7030005400	S.RESISTOR	RR0816P-202-D (2 kΩ)
R28	7030005390	S.RESISTOR	RR0816P-102-D (1 kΩ)
R29	7030005400	S.RESISTOR	RR0816P-202-D (2 kΩ)
R30	7030005390	S.RESISTOR	RR0816P-102-D (1 kΩ)
R31	7030005400	S.RESISTOR	RR0816P-202-D (2 kΩ)
R32	7030005390	S.RESISTOR	RR0816P-102-D (1 kΩ)
R33	7030005400	S.RESISTOR	RR0816P-202-D (2 kΩ)
R34	7030005380	S.RESISTOR	RR0816P-102-B (1 kΩ)
R35	7030005370	S.RESISTOR	RR0816P-202-B (2 kΩ)
R36	7030005380	S.RESISTOR	RR0816P-102-B (1 kΩ)
R37	7030005370	S.RESISTOR	RR0816P-202-B (2 kΩ)
R38	7030005380	S.RESISTOR	RR0816P-102-B (1 kΩ)
R39	7030005370	S.RESISTOR	RR0816P-202-B (2 kΩ)
R40	7030005380	S.RESISTOR	RR0816P-102-B (1 kΩ)
R41	7030005370	S.RESISTOR	RR0816P-202-B (2 kΩ)
R42	7030005380	S.RESISTOR	RR0816P-102-B (1 kΩ)
R43	7030005370	S.RESISTOR	RR0816P-202-B (2 kΩ)
R44	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R45	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R46	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ)
R48	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R50	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R52	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R53	7030003270	S.RESISTOR	ERJ3GEYJ 390 V (39 Ω)
R54	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R55	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R56	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R57	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R58	7030003250	S.RESISTOR	ERJ3GEYJ 270 V (27 Ω)
R60	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R61	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R62	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R63	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R64	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R65	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R66	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R67	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R68	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R69	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R70	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R71	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R72	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R73	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R74	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R77	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R79	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R80	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R81	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R82	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R83	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R84	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R85	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R86	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R87	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)
R90	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R91	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R92	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R93	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R94	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R95	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R96	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R97	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R98	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)

S.=Surface mount

[PLL UNIT]

REF NO.	ORDER NO.	DESCRIPTION
R99	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R100	7030003350	S.RESISTOR ERJ3GEYJ 181 V (180 Ω)
R103	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)
R104	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R105	7030003430	S.RESISTOR ERJ3GEYJ 821 V (820 Ω)
R120	7030005400	S.RESISTOR RR0816P-202-D (2 kΩ)
R121	7030005400	S.RESISTOR RR0816P-202-D (2 kΩ)
R122	7030005390	S.RESISTOR RR0816P-102-D (1 kΩ)
R123	7030005400	S.RESISTOR RR0816P-202-D (2 kΩ)
R124	7030005390	S.RESISTOR RR0816P-102-D (1 kΩ)
R125	7030005400	S.RESISTOR RR0816P-202-D (2 kΩ)
R126	7030005390	S.RESISTOR RR0816P-102-D (1 kΩ)
R127	7030005400	S.RESISTOR RR0816P-202-D (2 kΩ)
R128	7030005390	S.RESISTOR RR0816P-102-D (1 kΩ)
R129	7030005400	S.RESISTOR RR0816P-202-D (2 kΩ)
R130	7030005390	S.RESISTOR RR0816P-102-D (1 kΩ)
R131	7030005400	S.RESISTOR RR0816P-202-D (2 kΩ)
R132	7030005390	S.RESISTOR RR0816P-102-D (1 kΩ)
R133	7030005400	S.RESISTOR RR0816P-202-D (2 kΩ)
R134	7030005380	S.RESISTOR RR0816P-102-B (1 kΩ)
R135	7030005370	S.RESISTOR RR0816P-202-B (2 kΩ)
R136	7030005380	S.RESISTOR RR0816P-102-B (1 kΩ)
R137	7030005370	S.RESISTOR RR0816P-202-B (2 kΩ)
R138	7030005380	S.RESISTOR RR0816P-102-B (1 kΩ)
R139	7030005370	S.RESISTOR RR0816P-202-B (2 kΩ)
R140	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R141	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R142	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R143	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R144	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R145	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R146	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R147	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R148	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R168	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R173	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R174	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)
R176	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R177	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R178	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R179	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R180	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R181	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R183	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R184	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R186	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R187	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R188	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R189	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R190	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R191	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R193	7030003430	S.RESISTOR ERJ3GEYJ 821 V (820 Ω)
R194	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R195	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)
R196	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R197	7030003490	S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ)
R198	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R199	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)
R200	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R201	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R211	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
C1	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C2	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C3	4030007850	S.CERAMIC C1608 SH 1H 820J-T-A
C4	4030007870	S.CERAMIC C1608 SH 1H 121J-T-A
C5	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C6	4510005600	S.ELECTROLYTIC ECEV1CS100SR
C7	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C8	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C9	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C10	4030006910	S.CERAMIC C1608 CH 1H 0R5C-T-A
C11	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C12	4510004630	S.ELECTROLYTIC ECEV1CA100SR
C13	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C14	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C15	4510005600	S.ELECTROLYTIC ECEV1CS100SR
C16	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C17	4510004630	S.ELECTROLYTIC ECEV1CA100SR
C18	4510004640	S.ELECTROLYTIC ECEV1CA470SP
C19	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A

[PLL UNIT]

REF NO.	ORDER NO.	DESCRIPTION
C20	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C21	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C23	4510004640	S.ELECTROLYTIC ECEV1CA470SP
C24	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C25	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C26	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C27	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C30	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C31	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C32	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C33	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C34	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C35	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C36	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C37	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C38	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C39	4030010000	S.CERAMIC C1608 CH 1H 510J-T-A
C40	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C41	4030010000	S.CERAMIC C1608 CH 1H 510J-T-A
C42	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C43	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C44	4550000730	S.TANTALUM TESVA QJ 225M1-8L
C45	4030007010	S.CERAMIC C1608 CH 1H 100D-T-A
C46	4030007080	S.CERAMIC C1608 CH 1H 390J-T-A
C47	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C48	4030011570	S.CERAMIC CM105 CH 101G 50AT
C49	4610001850	S.TRIMMER TZBX4R200BA110T00 20P
C50	4030007150	S.CERAMIC C1608 CH 1H 151J-T-A
C52	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C53	4510005600	S.ELECTROLYTIC ECEV1CS100SR
C54	4030007150	S.CERAMIC C1608 CH 1H 151J-T-A
C55	4030007150	S.CERAMIC C1608 CH 1H 151J-T-A
C56	4030007010	S.CERAMIC C1608 CH 1H 100D-T-A
C59	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C60	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C61	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C62	4510005600	S.ELECTROLYTIC ECEV1CS100SR
C63	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C64	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C65	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C66	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C67	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C68	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C69	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C70	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C71	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C72	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C73	4510005600	S.ELECTROLYTIC ECEV1CS100SR
C77	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C83	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C84	4550003250	S.TANTALUM TEMSVA 1V 474M-8L
C85	4550006050	S.TANTALUM TEMSVA QJ 106M8L
C86	4340000100	S.MYLAR ECHU 1C 473JB5
C87	4510005600	S.ELECTROLYTIC ECEV1CS100SR
C88	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C89	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C90	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C91	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C92	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C93	4510004590	ELECTROLYTIC 16 MV 470 HC
C94	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C95	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C96	4510004590	ELECTROLYTIC 16 MV 470 HC
C97	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C98	4030006920	S.CERAMIC C1608 CH 1H 010C-T-A
C99	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C100	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C101	4030006930	S.CERAMIC C1608 CH 1H 020C-T-A
C102	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C105	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C106	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C107	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C109	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C110	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C111	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C114	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C124	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C125	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C129	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C130	4030007110	S.CERAMIC C1608 CH 1H 680J-T-A
C132	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C133	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A

S.=Surface mount

[PLL UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C135	4030007060	S.CERAMIC	C1608 CH 1H 270J-T-A
C136	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C137	4030007060	S.CERAMIC	C1608 CH 1H 270J-T-A
C138	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C139	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C141	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C142	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C143	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C144	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C145	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C154	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C155	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A
C156	4030007060	S.CERAMIC	C1608 CH 1H 270J-T-A
C157	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C158	4030008560	S.CERAMIC	C1608 CH 1H 300J-T-A
C161	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C164	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C165	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C170	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C171	4030011280	S.CERAMIC	C1608 CH 1H 271J-T-A
C173	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C174	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C175	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C177	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C178	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C179	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C180	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C181	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C182	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C183	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C184	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C185	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C201	4030007060	S.CERAMIC	C1608 CH 1H 270J-T-A
C202	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C203	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C204	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C205	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
J4	6510003080	CONNECTOR	RT01T-1.0B
J5	6510003080	CONNECTOR	RT01T-1.0B
J6	6910003140	CONNECTOR	IMSA-9202B-1-02T
J7	6510017660	CONNECTOR	52045-1645
P4	6910003120	CONNECTOR	IMSA-9206H-T
W7	7030003860	S.JUMPER	ERJ3GE JPW V
W10	7030003860	S.JUMPER	ERJ3GE JPW V
W11	7030003860	S.JUMPER	ERJ3GE JPW V
WS1	8970022070	M.OTHER	SX1632 1.5D COAXIAL (3)/PL
EP1	0910044667	PCB	B 4249G

[PA150W BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1110002030	IC	TA7808S
IC2	1110000960	S.IC	NJM4558M-T1
IC3	1170000290	S.IC	PS2701-1-F3
IC4	1170000290	S.IC	PS2701-1-F3
Q1	1530000190	TRANSISTOR	2SC3133
Q2	1530000190	TRANSISTOR	2SC3133
Q3	1530000200	TRANSISTOR	2SC2904
Q4	1530000200	TRANSISTOR	2SC2904
Q5	1510000740	S.TRANSISTOR	2SA1037K WT T147 S
Q6	1540000500	TRANSISTOR	2SD1585
Q7	1530001970	S.TRANSISTOR	2SC1623-T2B-L6
Q8	1530000790	TRANSISTOR	2SC1971
D1	1790000710	VARISTOR	MA29B
D2	1790000710	VARISTOR	MA29B
D3	1790000710	VARISTOR	MA29B
D4	1710000830	S.DIODE	DF30SC4M-4062
L1	6140002350	COIL	LR-274
L3	6140002780	COIL	LR-315
L4	6140002980	COIL	LR-143
L5	2040000490	COIL	EXC-ELDR25C
L6	6140002220	COIL	LR-270
L7	2040000490	COIL	EXC-ELDR25C
L9	6140000610	COIL	LR-83
L10	6140002990	COIL	LR-148
L11	2040000490	COIL	EXC-ELDR25C
L12	6170000140	COIL	LW-15
L13	6140002780	COIL	LR-315
L14	6200003260	S.COIL	NL 322522T-101J
L16	6180001220	COIL	LAL 04NA 100K
L18	2040000490	COIL	EXC-ELDR25C
L20	6200003260	S.COIL	NL 322522T-101J
L21	6200003260	S.COIL	NL 322522T-101J
L22	6200003260	S.COIL	NL 322522T-101J
L23	6180001220	COIL	LAL 04NA 100K
R4	7010000211	RESISTOR	PSN1/4 V 47 Ω
R5	7010000211	RESISTOR	PSN1/4 V 47 Ω
R6	7030006490	S.RESISTOR	MCR100JZHJ 68 Ω (680)
R7	7030006490	S.RESISTOR	MCR100JZHJ 68 Ω (680)
R8	7070000321	RESISTOR	ERX1SJ 3R3 (3.3 Ω)
R9	7070000321	RESISTOR	ERX1SJ 3R3 (3.3 Ω)
R10	7070000321	RESISTOR	ERX1SJ 3R3 (3.3 Ω)
R11	7070000321	RESISTOR	ERX1SJ 3R3 (3.3 Ω)
R12	7070000321	RESISTOR	ERX1SJ 3R3 (3.3 Ω)
R13	7070000321	RESISTOR	ERX1SJ 3R3 (3.3 Ω)
R14	7010004651	RESISTOR	PSD1/2 10 Ω
R15	7010004651	RESISTOR	PSD1/2 10 Ω
R16	7070000281	RESISTOR	ERX1SJ 2R2 (2.2 Ω)
R17	7070000281	RESISTOR	ERX1SJ 2R2 (2.2 Ω)
R18	7030000460	S.RESISTOR	MCR10EZHZJ 4.7 kΩ (472)
R19	7030000460	S.RESISTOR	MCR10EZHZJ 4.7 kΩ (472)
R20	7010004741	RESISTOR	PSD1/2 150 Ω
R22	7310004210	TRIMMER	KVSF 687A 100 Ω
R23	7070000311	RESISTOR	ERG1SJ 100 (10 Ω)
R24	7030000290	S.RESISTOR	MCR10EZHZJ 180 Ω (181)
R25	7310004220	TRIMMER	KVSF 687A 478 Ω
R26	7100000640	RESISTOR	5 SI 0.012 Ω (J)
R27	7030000600	S.RESISTOR	MCR10EZHZJ 68 kΩ (683)
R28	7030000600	S.RESISTOR	MCR10EZHZJ 68 kΩ (683)
R29	7030000560	S.RESISTOR	MCR10EZHZJ 33 kΩ (333)
R30	7030000560	S.RESISTOR	MCR10EZHZJ 33 kΩ (333)
R31	7310004200	TRIMMER	KVSF637A 4.7 kΩ
R32	7030000740	S.RESISTOR	MCR10EZHZJ 1 MΩ (105)
R33	7030000500	S.RESISTOR	MCR10EZHZJ 10 kΩ (103)
R34	7010000301	RESISTOR	PSN1/4 V 270 Ω
R35	7070000251	RESISTOR	ERX2SJ 4R7 (4.7 Ω)
R36	7010000331	RESISTOR	PSN1/4 V 470 Ω
R39	7010000091	RESISTOR	PSN1/4 V 4.7 Ω
R40	7030006500	S.RESISTOR	MCR100JZHJ 100 Ω (101)
R44	7010000331	RESISTOR	PSN1/4 V 470 Ω
R45	7030000140	S.RESISTOR	MCR10EZHZJ 10 Ω (100)
R46	7030000290	S.RESISTOR	MCR10EZHZJ 180 Ω (181)
R47	7010000051	RESISTOR	PSN1/4 V 2.2 Ω
R48	7010000061	RESISTOR	PSN1/4 V 2.7 Ω
R49	7010000281	RESISTOR	PSN 1/4 V 280 Ω

S.=Surface mount

[PA150W BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
R50	7010000411	RESISTOR	PSN1/4 V 2.2 kΩ
R51	7030000340	S.RESISTOR	MCR10EZJH 470 Ω (471)
R52	7030000150	S.RESISTOR	MCR10EZJH 12 Ω (120)
R53	7030000340	S.RESISTOR	MCR10EZJH 470 Ω (471)
C3	4010005360	CERAMIC	HM11SJ SL 301J 500V
C4	4010005360	CERAMIC	HM11SJ SL 301J 500V
C6	4310000360	MYLAR	50 F2D 103J
C7	4310000360	MYLAR	50 F2D 103J
C8	4030005050	S.CERAMIC	C2012 CH 1H 331J-T-A
C10	4030011760	S.CERAMIC	GRM44-1 SL 682J 200PT
C11	4030011760	S.CERAMIC	GRM44-1 SL 682J 200PT
C12	4010006410	CERAMIC	HM13SJ SL 471J 500V
C13	4030016740	S.CERAMIC	GRH111 CH 102J 50PT
C14	4030016740	S.CERAMIC	GRH111 CH 102J 50PT
C15	4030011760	S.CERAMIC	GRM44-1 SL 682J 200PT
C16	4030011760	S.CERAMIC	GRM44-1 SL 682J 200PT
C18	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C19	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C20	4510005120	ELECTROLYTIC	16 MV 47 HC
C21	4510004990	ELECTROLYTIC	16 MV 100 HC
C22	4030005110	S.CERAMIC	C2012 JB 1E 473K-T-A
C23	4510004510	ELECTROLYTIC	25 MV 470 HC
C24	4030005110	S.CERAMIC	C2012 JB 1E 473K-T-A
C26	4510006160	ELECTROLYTIC	25 MV 10 HC
C27	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C28	4510004600	ELECTROLYTIC	16 MV 1000 HC
C29	4030005110	S.CERAMIC	C2012 JB 1E 473K-T-A
C30	4030005110	S.CERAMIC	C2012 JB 1E 473K-T-A
C31	4030005110	S.CERAMIC	C2012 JB 1E 473K-T-A
C32	4030004990	S.CERAMIC	C2012 CH 1H 101J-T-A
C33	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C34	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C35	4510005040	ELECTROLYTIC	25 MV 1000 HC
C36	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C38	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C41	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C42	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C43	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C44	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C45	4320000960	DIP MICA	KD20C 472J5
C46	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C47	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C48	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C50	4510005040	ELECTROLYTIC	25 MV 1000 HC
C51	4510004590	ELECTROLYTIC	16 MV 470 HC
C52	4510006160	ELECTROLYTIC	25 MV 10 HC
C53	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C54	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C55	4030016740	S.CERAMIC	GRH111 CH 102J 50PT
C56	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C57	4320000810	DIP MICA	KD20C 681J5
C59	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C63	4510004590	ELECTROLYTIC	16 MV 470 HC
C64	4030005030	S.CERAMIC	C2012 CH 1H 221J-T-A
C65	4040000690	BARRIERLAYR	UAT 08X 473K
C66	4040000690	BARRIERLAYR	UAT 08X 473K
C67	4040000690	BARRIERLAYR	UAT 08X 473K
C68	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C69	4030005110	S.CERAMIC	C2012 JB 1E 473K-T-A
C70	4030004720	S.CERAMIC	C2012 JB 1H 102K-T-A
C71	4030004930	S.CERAMIC	C2012 CH 1H 330J-T-A
C72	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C73	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C74	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C75	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C76	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C77	4030004720	S.CERAMIC	C2012 JB 1H 102K-T-A
C78	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C79	4030004990	S.CERAMIC	C2012 CH 1H 101J-T-A
J2	6510007020	CONNECTOR	TMP-J01X-V6
J3	6510018380	CONNECTOR	10FE-BT-M
J4	6510003080	CONNECTOR	RT01T-1.0B
J5	6510003080	CONNECTOR	RT01T-1.0B
S1	6910006900	THERMAL	OHD-3 110M
S2	6910000050	THERMAL	OHD-3 50M

[PA150W BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
W1	7120000010	JUMPER	JPW 02A
W2	7120000010	JUMPER	JPW 02A
W3	7120000010	JUMPER	JPW 02A
W4	7120000010	JUMPER	JPW 02A
WS1	8970022030	M.OTHER	SX1632 J READ SET (1)/PA150
WS2	8970022040	M.OTHER	SX1632 1.5D COAXIAL (1)/PA150
EP1	0910045047	PCB	B 4250G
EP3	6910000610	BEAD	FSOH050RN01
EP4	6910000610	BEAD	FSOH050RN01
EP6	6910000630	BEAD	FSOH070RN
EP8	6510018330	TERMINAL	F4053A
EP9	6510018330	TERMINAL	F4053A
EP10	9001602001	TUBE	IRRAX 0.7(d) L=10 mm
EP11	9001602001	TUBE	IRRAX 0.7(d) L=10 mm
EP12	9034701901	TUBE	IRRAX 0.7(d) L=20 mm
EP13	6910000630	BEAD	FSOH070RN

[FILTER BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
Q1	1590002190	TRANSISTOR	DTC114ES TP
D1	1710000060	DIODE	1SS55
D2	1710000060	DIODE	1SS55
D3	1710000060	DIODE	1SS55
D4	1710000060	DIODE	1SS55
D5	1710000060	DIODE	1SS55
D6	1710000060	DIODE	1SS55
D7	1710000060	DIODE	1SS55
D8	1710000060	DIODE	1SS55
D9	1710000980	DIODE	MBD701
D10	1710000980	DIODE	MBD701
D11	1710000060	DIODE	1SS55
L1	6180000900	COIL	LAL 03NA 101K
L2	6140002950	COIL	LR-226
L3	6140002960	COIL	LR-227
L4	6180000900	COIL	LAL 03NA 101K
L5	6180000900	COIL	LAL 03NA 101K
L6	6140002900	COIL	LR-263
L7	6140002820	COIL	LR-235
L8	6140002830	COIL	LR-236
L9	6180000900	COIL	LAL 03NA 101K
L10	6180000900	COIL	LAL 03NA 101K
L11	6140002850	COIL	LR-238
L12	6140002820	COIL	LR-235
L13	6140002820	COIL	LR-235
L14	6180000900	COIL	LAL 03NA 101K
L15	6180000900	COIL	LAL 03NA 101K
L16	6140002840	COIL	LR-237
L17	6140002900	COIL	LR-263
L18	6140002900	COIL	LR-263
L19	6180000900	COIL	LAL 03NA 101K
L20	6180000900	COIL	LAL 03NA 101K
L21	6140002860	COIL	LR-241
L22	6140002840	COIL	LR-237
L23	6140002840	COIL	LR-237
L24	6180000900	COIL	LAL 03NA 101K
L25	6180000900	COIL	LAL 03NA 101K
L27	6140002880	COIL	LR-243
L28	6140002870	COIL	LR-242
L29	6140002870	COIL	LR-242
L30	6180000900	COIL	LAL 03NA 101K
L31	6180000900	COIL	LAL 03NA 101K
L32	6140002880	COIL	LR-243
L33	6140002870	COIL	LR-242
L34	6180000900	COIL	LAL 03NA 101K
L35	6180000900	COIL	LAL 03NA 101K
L36	6140002890	COIL	LR-262
L37	6140002890	COIL	LR-262
L38	6180000900	COIL	LAL 03NA 101K

S.=Surface mount



**[FILTER BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
L39	6180000900	COIL	LAL 03NA 101K
L40	6180000900	COIL	LAL 03NA 101K
L41	6140002530	COIL	LR-291
L42	6140001460	COIL	LR-170
L43	6180000900	COIL	LAL 03NA 101K
L44	6180000900	COIL	LAL 03NA 101K
L45	6140002830	COIL	LR-236
L46	6140002870	COIL	LR-242
R1	7010004372	RESISTOR	PSD1/4 22 kΩ
R2	7010007240	RESISTOR	PSD1/4 V 100 kΩ
R3	7010006980	RESISTOR	PSD1/4 10 kΩ
R4	7010007240	RESISTOR	PSD1/4 V 100 kΩ
R5	7010007180	RESISTOR	PSD1/4 V 22 kΩ
R6	7010006980	RESISTOR	PSD1/4 10 kΩ
R7	7010004701	RESISTOR	PSD1/2 68 Ω
R8	7010000911	RESISTOR	R25J 10 Ω
R9	7540000010	ABSORBER	DSA-301LA
R12	7010004272	RESISTOR	PSD1/4 4.7 kΩ
R13	7010007140	RESISTOR	PSD1/4 V 4.7 k Ω
R14	7010007290	RESISTOR	PSD1/4 V 1 MΩ
C1	4040000260	BARRIERLAYR	UZE 08X 104M
C2	4320000650	DIP MICA	KD20C 102J5
C3	4010006410	CERAMIC	HM13SJ SL 471J 500V
C4	4010006410	CERAMIC	HM13SJ SL 471J 500V
C5	4320000980	DIP MICA	KD20C 222J5
C6	4010005360	CERAMIC	HM11SJ SL 301J 500V
C7	4010005880	CERAMIC	HM95SJ SL 271J 500V
C8	4320000950	DIP MICA	KD20C 272J5
C9	4010005850	CERAMIC	HM95SJ SL 181J 500V
C10	4010005480	CERAMIC	HM60SJ CH 100D 500V
C11	4010005930	CERAMIC	HM11SJ SL 391J 500V
C12	4010005930	CERAMIC	HM11SJ SL 391J 500V
C13	4010005370	CERAMIC	HM11SJ SL 331J 500V
C14	4010005930	CERAMIC	HM11SJ SL 391J 500V
C15	4040000260	BARRIERLAYR	UZE 08X 104M
C16	4040000260	BARRIERLAYR	UZE 08X 104M
C17	4010005690	CERAMIC	HM60SJ SL 300J 500V
C18	4010005370	CERAMIC	HM11SJ SL 331J 500V
C19	4010006410	CERAMIC	HM13SJ SL 471J 500V
C20	4010005370	CERAMIC	HM11SJ SL 331J 500V
C21	4010005880	CERAMIC	HM95SJ SL 271J 500V
C22	4010005880	CERAMIC	HM95SJ SL 271J 500V
C23	4010005880	CERAMIC	HM95SJ SL 271J 500V
C24	4010006410	CERAMIC	HM13SJ SL 471J 500V
C25	4010006410	CERAMIC	HM13SJ SL 471J 500V
C26	4010006410	CERAMIC	HM13SJ SL 471J 500V
C27	4010005880	CERAMIC	HM95SJ SL 271J 500V
C28	4010005370	CERAMIC	HM11SJ SL 331J 500V
C29	4010005370	CERAMIC	HM11SJ SL 331J 500V
C30	4010006410	CERAMIC	HM13SJ SL 471J 500V
C31	4010005930	CERAMIC	HM11SJ SL 391J 500V
C32	4010005370	CERAMIC	HM11SJ SL 331J 500V
C33	4010005820	CERAMIC	HM74SJ SL 121J 500V
C34	4010005820	CERAMIC	HM74SJ SL 121J 500V
C35	4010005930	CERAMIC	HM11SJ SL 391J 500V
C36	4010005930	CERAMIC	HM11SJ SL 391J 500V
C37	4010005750	CERAMIC	HM60SJ SL 680J 500V
C38	4040000260	BARRIERLAYR	UZE 08X 104M
C39	4010006900	CERAMIC	HE80SJ YB 472K 50V
C40	4010005870	CERAMIC	HM95SJ SL 221J 500V
C41	4010005370	CERAMIC	HM11SJ SL 331J 500V
C42	4010005370	CERAMIC	HM11SJ SL 331J 500V
C43	4010005930	CERAMIC	HM11SJ SL 391J 500V
C44	4010005830	CERAMIC	HM74SJ SL 151J 500V
C45	4010005370	CERAMIC	HM11SJ SL 331J 500V
C46	4010006410	CERAMIC	HM13SJ SL 471J 500V
C47	4010005780	CERAMIC	HM60SJ SL 101J 500V
C48	4010005360	CERAMIC	HM11SJ SL 301J 500V
C49	4010006900	CERAMIC	HE80SJ YB 472K 50V
C50	4010006900	CERAMIC	HE80SJ YB 472K 50V
C51	4010005850	CERAMIC	HM95SJ SL 181J 500V
C52	4010005370	CERAMIC	HM11SJ SL 331J 500V
C53	4010005820	CERAMIC	HM74SJ SL 121J 500V
C54	4010005880	CERAMIC	HM95SJ SL 271J 500V
C55	4010005360	CERAMIC	HM11SJ SL 301J 500V
C56	4010005740	CERAMIC	HM60SJ SL 560J 500V
C57	4010005560	CERAMIC	HM60SJ SL 050C 500V
C58	4010005360	CERAMIC	HM11SJ SL 301J 500V

**[FILTER BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
C59	4010006900	CERAMIC	HE80SJ YB 472K 50V
C60	4010006900	CERAMIC	HE80SJ YB 472K 50V
C61	4010005930	CERAMIC	HM11SJ SL 391J 500V
C62	4010005820	CERAMIC	HM74SJ SL 121J 500V
C63	4010005930	CERAMIC	HM11SJ SL 391J 500V
C64	4010005770	CERAMIC	HM60SJ SL 820J 500V
C65	4010005870	CERAMIC	HM95SJ SL 221J 500V
C66	4010006900	CERAMIC	HE80SJ YB 472K 50V
C67	4010006900	CERAMIC	HE80SJ YB 472K 50V
C68	4010005880	CERAMIC	HM95SJ SL 271J 500V
C69	4010005780	CERAMIC	HM60SJ SL 101J 500V
C70	4010005370	CERAMIC	HM11SJ SL 331J 500V
C71	4010005750	CERAMIC	HM60SJ SL 680J 500V
C72	4010005770	CERAMIC	HM60SJ SL 820J 500V
C73	4010006900	CERAMIC	HE80SJ YB 472K 50V
C74	4010006900	CERAMIC	HE80SJ YB 472K 50V
C77	4010005860	CERAMIC	HM95SJ SL 201J 500V
C78	4010005730	CERAMIC	HM60SJ SL 470J 500V
C79	4010005870	CERAMIC	HM95SJ SL 221J 500V
C80	4010006900	CERAMIC	HE80SJ YB 472K 50V
C81	4010006900	CERAMIC	HE80SJ YB 472K 50V
C82	4010005830	CERAMIC	HM74SJ SL 151J 500V
C83	4010005660	CERAMIC	HM60SJ SL 220J 500V
C84	4010005360	CERAMIC	HM11SJ SL 301J 500V
C85	4010005730	CERAMIC	HM60SJ SL 470J 500V
C86	4010005830	CERAMIC	HM74SJ SL 151J 500V
C87	4010006900	CERAMIC	HE80SJ YB 472K 50V
C88	4010006850	CERAMIC	HE40SJ YB 471K 50V
C89	4010006850	CERAMIC	HE40SJ YB 471K 50V
C90	4010006380	CERAMIC	HE90SJ SL 471J 50V
C91	4010006380	CERAMIC	HE90SJ SL 471J 50V
C92	4610002040	TRIMMER	ECR-HA030E41
C93	4010006310	CERAMIC	HE60SJ SL 181J 50V
C94	4010006900	CERAMIC	HE80SJ YB 472K 50V
C95	4010006900	CERAMIC	HE80SJ YB 472K 50V
C96	4010006900	CERAMIC	HE80SJ YB 472K 50V
C98	4010007600	CERAMIC	HM17SJ YB 103K 500V
C99	4010007600	CERAMIC	HM17SJ YB 103K 500V
C100	4010006280	CERAMIC	HE50SJ SL 101J 50V
C101	4010006110	CERAMIC	HE40SJ SL 180J 50V
C102	4010006280	CERAMIC	HE50SJ SL 101J 50V
C104	4010006900	CERAMIC	HE80SJ YB 472K 50V
C106	4040000690	BARRIERLAYR	UAT 08X 473K
C107	4510006160	ELECTROLYTIC	25 MV 10 HC
C108	4010005730	CERAMIC	HM60SJ SL 470J 500V
C109	4010005480	CERAMIC	HM60SJ CH 100D 500V
C110	4010005820	CERAMIC	HM74SJ SL 121J 500V
C111	4010005480	CERAMIC	HM60SJ CH 100D 500V
C112	4010005770	CERAMIC	HM60SJ SL 820J 500V
C113	4010005740	CERAMIC	HM60SJ SL 560J 500V
C114	4010005480	CERAMIC	HM60SJ CH 100D 500V
C115	4010005780	CERAMIC	HM60SJ SL 101J 500V
C116	4010006900	CERAMIC	HE80SJ YB 472K 50V
C117	4010005780	CERAMIC	HM60SJ SL 101J 500V
C120	4010005770	CERAMIC	HM60SJ SL 820J 500V
C121	4010005660	CERAMIC	HM60SJ SL 220J 500V
C122	4510005480	ELECTROLYTIC	50 MV 1 HC
C123	4510005480	ELECTROLYTIC	50 MV 1 HC
C124	4510005480	ELECTROLYTIC	50 MV 1 HC
C125	4510005480	ELECTROLYTIC	50 MV 1 HC
C126	4510005480	ELECTROLYTIC	50 MV 1 HC
C127	4510005480	ELECTROLYTIC	50 MV 1 HC
C128	4510005480	ELECTROLYTIC	50 MV 1 HC
C129	4010005640	CERAMIC	HM60SJ SL 180J 500V
C130	4010006900	CERAMIC	HE80SJ YB 472K 50V
C131	4010005480	CERAMIC	HM60SJ CH 100D 500V
RL1	6330001570	RELAY	AJS1315
RL2	6330001570	RELAY	AJS1315
RL3	6330001570	RELAY	AJS1315
RL4	6330001570	RELAY	AJS1315
RL5	6330001570	RELAY	AJS1315
RL6	6330001570	RELAY	AJS1315
RL7	6330001570	RELAY	AJS1315
RL8	6330001570	RELAY	AJS1315
RL9	6330001570	RELAY	AJS1315
RL10	6330001570	RELAY	AJS1315
RL11	6330001570	RELAY	AJS1315
RL12	6330001570	RELAY	AJS1315
RL13	6330001570	RELAY	AJS1315
RL14	6330001570	RELAY	AJS1315

S.=Surface mount

**[FILTER BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
RL15	6330001570	RELAY	AJS1315
RL16	6330001570	RELAY	AJS1315
RL17	6330000780	RELAY	AGP 2013
J3	6510018570	CONNECTOR	16FE-BT-M
J4	6510007020	CONNECTOR	TMP-J01X-V6
W12	6910001030	JUMPER	IPS-1041-4
W13	6910001030	JUMPER	IPS-1041-4
W14	6910001030	JUMPER	IPS-1041-4
W19	7120000010	JUMPER	JPW 02A
W20	6910001030	JUMPER	IPS-1041-4
W21	6910001030	JUMPER	IPS-1041-4
W29	7120000380	JUMPER	JPW 01 R-01
W30	7120000010	JUMPER	JPW 02A
WS1	8970022020	M.OTHER	SX1632 1.5D COAXIAL (2)/FI
EP1	0910045057	PCB	B 4251G

**[TERMINAL BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
C1	4510005980	ELECTROLYTIC	16 MV 4700 HC
C2	4010006900	CERAMIC	HE80SJ YB 472K 50V
C3	4010006890	CERAMIC	HE60SJ YB 222K 50V
C4	4010006890	CERAMIC	HE60SJ YB 222K 50V
C5	4010006900	CERAMIC	HE80SJ YB 472K 50V
C6	4010006900	CERAMIC	HE80SJ YB 472K 50V
J1	6510010020	CONNECTOR	RTB-1.5-2F
F1	5220000110	HOLDER	TFH-S30
F2	5210000060	FUSE	FGB 5A
WS1	8970022051	M.OTHER	SX1632 J READ SET-1 (4)/TE
WS2	8970022060	M.OTHER	SX1632 J BOARD SET (2)/TE
WS3	8970023240	M.OTHER	SX1632 LEAD (1)/TE
EP1	0910044565	PCB	B 4421E
EP3	6510018330	TERMINAL	F4053A
EP4	6510018330	TERMINAL	F4053A
EP5	6910000630	BEAD	FSOH070RN
EP6	6910000630	BEAD	FSOH070RN
EP7	6510013860	TERMINAL	FV2-S3.3
EP8	6510013860	TERMINAL	FV2-S3.3

**[CHASSIS PARTS]**

REF NO.	ORDER NO.	DESCRIPTION	
J1	6510000370	CONNECTOR	MR-DS
F1	5220000210	HOLDER	FH-052S
F2	5220000210	HOLDER	FH-052S
F3	5210000090	FUSE	FGB 30A
F4	5210000090	FUSE	FGB 30A
W3	8900005700	CABLE	OPC-569
W4	8900005770	CABLE	OPC-564
W5	8900005780	CABLE	OPC-565
WS1	8970022010	M.OTHER	SX1632 1.5D COAXIAL (1)/PA
WS2	8600034560	M.OTHER	SX1632 P4602x4603PA
EP5	6910000340	SHEET	P101 KD
EP9	6910000310	M.OTHER	B312D

**[ALARM BOARD]—Marine version only**

REF NO.	ORDER NO.	DESCRIPTION	
IC5001	1130007800	S.IC	S-7116AF-TF
Q5001	1530002690	S.TRANSISTOR	2SC4116-GR (TE85R)
X5001	6060000150	S.CERAMIC	CSAC3.58MGC300CD
R5001	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R5002	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R5003	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R5004	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R5005	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R5006	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R5007	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R5008	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R5009	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R5010	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
C5001	4550006140	S.TANTALUM	ECST1EY474R
C5002	4550006210	S.TANTALUM	ECST1CX106R
C5004	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C5005	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C5006	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C5007	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C5008	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
J5001	6510018160	S.CONNECTOR	4-175643-0
J5002	6510018170	S.CONNECTOR	4-175643-4
EP5001	0910045601	PCB	B 4368A

S.=Surface mount

# SECTION 6

# MECHANICAL PARTS AND DISASSEMBLY

## 6-1 RC-21 (CONTROLLER)

### [FRONT UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
S1	2260001580	JPZ2120-0101	1
SP1	2510000441	F77G08-6205	1
W7	8900005340	Cable OPC-522	1
W8	8900005340	Cable OPC-522	1
W9	8900005340	Cable OPC-522	1
W10	8900005340	Cable OPC-522	1
W11	8900005370	Cable OPC-524	1
MP1	8210012341	1632 front panel (A)-1	1
MP2	8310035580	1632 window plate	1
MP3	8930035591	1632 3-key-1	1
MP4	8930035600	1632 4-key	1
MP5	8930035610	1632 14-key	1
MP6	8930035640	1632 power key	1
MP7	8930035650	1632 1-key	1
MP8	8930035660	1632 2-key	1
MP9	8610009750	Knobe N232	2
MP10	8610009760	Knobe N233	2
MP11	8210012200	1632 mask plate [GENERAL] only	1
MP12	8930035580	1632 sensor seal	2
MP13	8930035571	1632 knob plate-1	1
MP15	8930035630	1632 front seal	1
MP16	8930031830	O-ring SO-008-17	2
MP17	8010017380	2143 sub chassis	1
MP18	8810008900	Screw PH M3 x 6 NI	4
MP19	8810008550	Screw PH BT M3 x 8 NI	7
MP20	8930036350	1632 T-key	1
MP21	8930036320	1632 key spacer	1
MP22	8810008890	Screw FH M3 x 6 NI	2
MP23	8610009240	Knob spring No. 7800P	2
MP24	8930032370	Shaft tape (A)	2
MP25	8410002240	2143 heatsink	1
MP27	8930020650	IC clip	1
MP28	8930047650	2143 SP sponge	1
MP29	8930047660	2143 H-sheet	2
MP30	8930047880	2143 B-sheet	2
WS1	8600034520	SX1632 P2801FR	1
WS2	8600036430	EX2143 P02FR	1

### [LOGIC BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J2	6510003400	Connector B04B-EH-S	1
J3	6510018390	Connector 06FE-BT-M	1
J4	6510018390	Connector 06FE-BT-M	1
J5	6510018390	Connector 06FE-BT-M	1
J6	6510018390	Connector 06FE-BT-M	1
J7	6510003390	Connector B03B-EH-S	1
J8	6510018380	Connector 10FE-BT-M	1
J9	6510018380	Connector 10FE-BT-M	1
J10	6510018380	Connector 10FE-BT-M	1
S3	2260002230	SW-158 (SKHHPM)	1
DS1	5080000305	HRT-3290A-F	1
DS2	5080000305	HRT-3290A-F	1
DS3	5080000305	HRT-3290A-F	1
DS4	5010000180	DLC-7978P	1
MP1	8410002001	1632 heatsink plate-1	1
MP2	8930035621	1632 LCD holder-1	1
MP3	8930036280	1632 LCD-L filter	1
MP4	8930036310	1632 LCD-U filter	1
MP5	8810009400	Screw M3 x 8 black SUS	1
MP6	8830001060	Nut M3 NI BS	1
MP7	8930036570	1632 lamp rubber	3
MP8	8930047670	2143 rubber sheet	2

### [SENSOR1 BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510018390	Connector 06FE-BT-M	1
S1	2250000020	SRB18100 25KC	1

### [SENSOR2 BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510018390	Connector 06FE-BT-M	1
S1	2250000020	SRB18100 25KC	1

### [VR1 BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
R1	7210002730	TP96N944-15F-10KB-1632	1
J1	6510018390	Connector 06FE-BT-M	1

### [VR2 BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
R1	7210002730	TP96N944-15F-10KB-1632	1
J1	6510018390	Connector 06FE-BT-M	1

### [MIC BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510021050	Connector A28 SOCKET	1
J2	6510018380	Connector 10FE-BT-M	1

### [REAR UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
W1	8900008290	Cable OPC-819	1
W2	8900008290	Cable OPC-819	1
W3	8900008090	Cable OPC-774	1
W4	8900008110	Cable OPC-776	1
MP1	8210015590	2143 rear panel	1
MP2	8930046890	2143 earth plate	1
MP3	8810009300	Set screw (J)	1
MP4	8850001410	Flat washer M5 SUS	1
MP7	8810008550	Screw PH BT M3 x 8 NI	5
MP8	8810009400	Screw M3 x 8 black SUS	6
MP10	8930047680	Rubber sheet	1
MP11	8930047820	Non-woven sheet (BY)	1
MP12	8930047890	2143 A-sheet	1
MP13	8930047900	Sheet (G)	1

### [CTRL1 BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510017650	Connector 52045-1045	1
J2	6510021080	Connector S2P-VH-R	1
J3	6510021070	Connector S2P-VH	1
J4	6510017650	Connector 52045-1045	1
J5	6510003390	Connector B03B-EH-S	1

## 6-2 IC-M710RT [CHASSIS UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MF1	2710000520	Fan SB0812H-ICOM-00	1
W3	8900006220	Cable OPC-539	1
W12	8900006080	Cable OPC-567	1
EP1	6910000890	Pipe PG-7	1
MP3	8010017490	2132 main chassis	1
MP4	8930035801	Rubber foot (J)-1	4
MP5	8850001410	Flat washer M5 SUS	3
MP6	8850001480	S washer M5 SUS	1
MP7	8830001030	Nut M5 SUS	1
MP8	8830001080	Wing nut M5 SUS	1
MP10	8810008720	Screw PH BT M3 x 6 NI-ZU	7
MP11	8810008720	Screw PH BT M3 x 6 NI-ZU	7
MP15	8810009850	Screw BT M4 x 12 NI-ZU	4
MP18	8110005511	1632 cover-1	1
MP20	8210012221	1632 rear panel-1	1
MP22	8930035780	1632 rear seal	1
MP24	8930035750	1632 connector plate	1
MP29	8810009400	Screw M3 x 8 black SUS	1
MP30	8810009400	Screw M3 x 8 black SUS	4
MP31	8810008850	Cap bolt M4 x 8 ZK	4
MP38	8810009400	Screw M3 x 8 black SUS	9
MP40	8810008890	Screw M3 x 6 NI	4
MP45	8930037030	1562 stand-off	2

## [CONNECT UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510007130	Connector BNC-R111E	1
J2	6510007130	Connector BNC-R111E	1
MP1	8210015580	2132 front panel	1
MP2	8010017370	2132 sub chassis	1
MP3	8930046840	2132 D-cap	1
MP4	8930046830	2132 BNC cap	2
MP5	8930046850	2132 D-rubber	1
MP6	8930046860	2132 BNC rubber	2
MP8	8930047240	2132 P-sheet	1
MP12	8810008900	Screw M3 x 6 NI	2
MP13	8810008550	Screw BT M3 x 8 NI	7
MP14	8930047360	2132 stand-off	2
MP15	8930041500	1887 lens	1
MP17	8930035630	1632 front seal	1

## [CTRL2 BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510020960	Connector JES-9S-4A3F	1
J2	6510003400	Connector B04B-EH-S	1

## [MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J7	6450001440	Connector HSJ1403-01-010	1
J9	6510017660	Connector 52045-1645	1
J11	6510017990	Connector DELC-J9SAF-20L9	1
J12	6450001580	Connector TCS5073-28-4151	1
J13	6450001590	Connector TCS5073-17-4151	1
J15	6510003400	Connector B04B-EH-S	1
J16	6510011180	Connector PI28A-14M	1
J19	6510017660	Connector 52045-1645	1
J20	6510003390	Connector B03B-EH-S	1
J22	6510017650	Connector 52045-1045	1
J23	6510003400	Connector B04B-EH-S	1
J29	6510018150	S. connector 4-175638-0	1
J30	6510017950	S. connector 4-175638-0	1
J32	6510010020	Connector RTB-1.5-2F	1
J33	6450001560	Connector PD-72	4

## [MAIN UNIT]

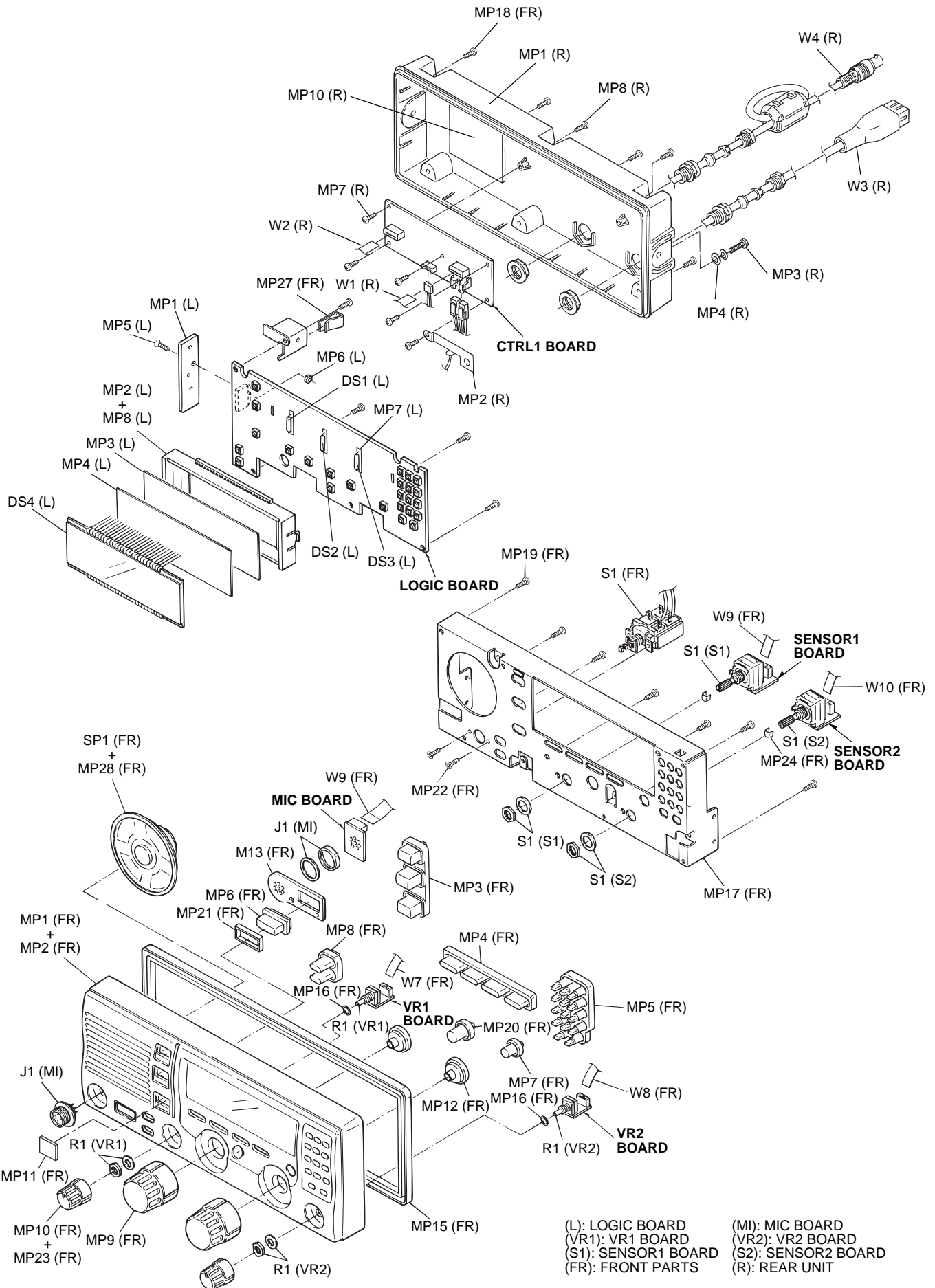
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MP1	8510000230	220 shield case	1
MP2	8510000241	220 shield case cover-1	1
MP3	8510002200	VCO case	1
MP4	8510000230	220 shield case	1
MP5	8510008300	963 DDS shield case	1
MP6	8510008310	963 DDS shield cover	1
MP8	8510001060	Shield case	1
MP9	8510001740	Shield case upper cover	1
MP10	8930011830	9M filter fitting	1
MP11	8510004640	220 shield plate (C)	1
MP12	8930005440	Insulation plate (E)	1
MP13	8510004640	220 shield plate (C)	1
MP14	8930005440	Insulation plate (E)	1
MP15	8510000241	220 shield case cover-1	1
MP16	8510003090	419 shield plate	1

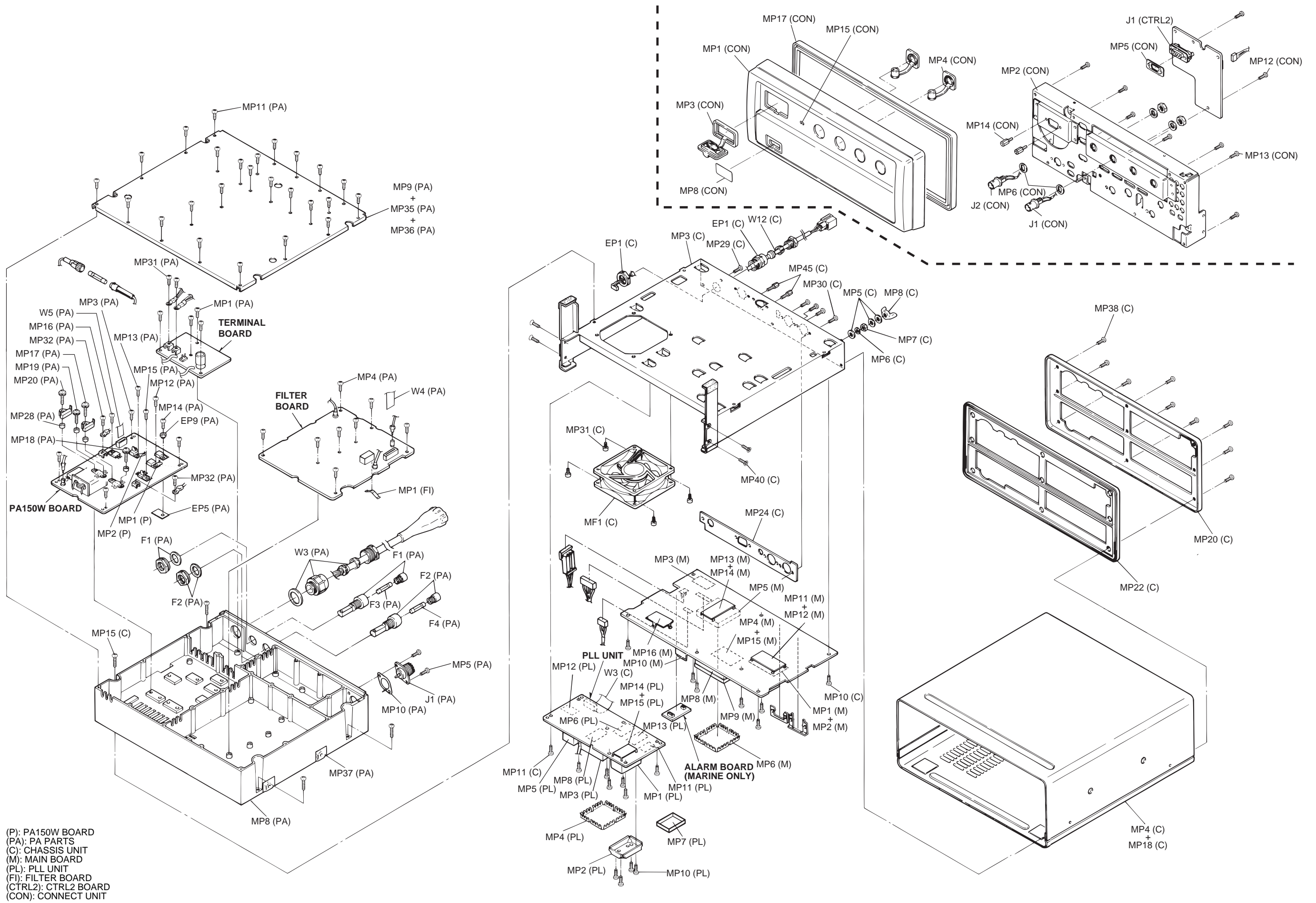
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REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J4	6510003080	RT01T-1.0B	1
J5	6510003080	RT01T-1.0B	1
J6	6910003140	IMSA-9202B-1-02T	1
J7	6510017660	52045-1645	1
MP1	8510009220	1386 shield case	1
MP2	8510009860	1632 shield cover	1
MP3	8510008300	963 DDS shield case	1
MP4	8510008310	963 DDS shield cover	1
MP5	8510000230	220 shield case	1
MP6	8510000881	194 VCO case-1	1
MP7	8510006510	194 VCO case cover (E)	1
MP8	8510005330	Coil case	1
MP10	8810008860	Set screw A 2.6 x 5	4
MP11	8510002200	VCO case	1
MP12	8510006941	DTMF shield case-1	1
MP13	8510002200	VCO case	1
MP14	8510000210	194 shield plate	1
MP15	8930005570	Insulation plate (U)	1

## [PA PARTS]

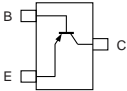
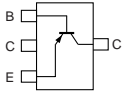
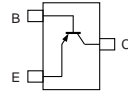
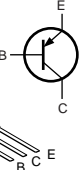
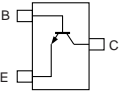
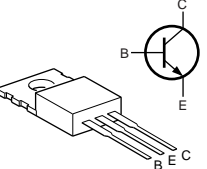
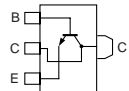
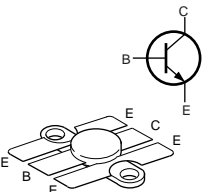
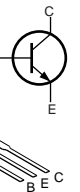
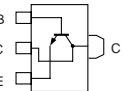
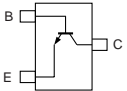
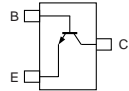
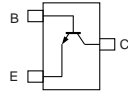
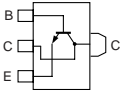
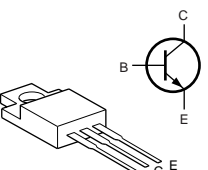
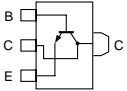
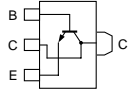
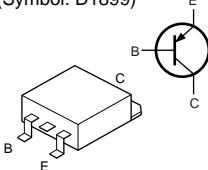
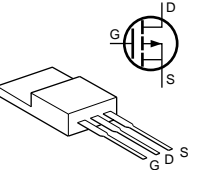
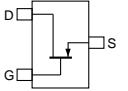
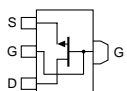
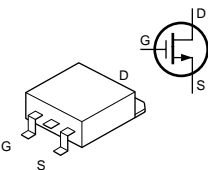
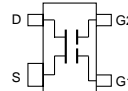
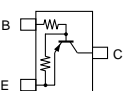
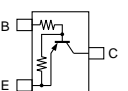
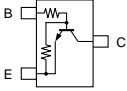
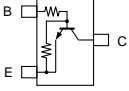
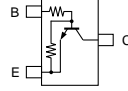
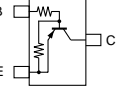
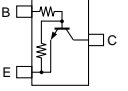
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J1	6510000370	Connector MR-DS	1
F1	5220000210	Fuse holder FH-052S	1
F2	5220000210	Fuse holder FH-052S	1
F3	5210000090	Fuse FGB 30A	1
F4	5210000090	Fuse FGB 30A	1
W3	8900005700	Cable OPC-569	1
W4	8900005770	Cable OPC-564	1
W5	8900005780	Cable OPC-565	1
EP5	6910000340	Insulation sheet P101 (KD)	1
EP9	6910000310	Insulation washer B312D	1
MP1	8810008630	Screw PH BT M3 x 6 NI-ZU	4
MP3	8810008630	Screw PH BT M3 x 6 NI-ZU	4
MP4	8810008630	Screw PH BT M3 x 6 NI-ZU	8
MP5	8810003840	Screw M3 x 8 black SUS	2
MP8	8410002170	1632 heat sink (A)-1	1
MP9	8110005391	1632 PA cover-1	1
MP10	8930035790	1632 ANT plate	1
MP11	8810008630	Screw PH BT M3 x 6 NI-ZU	25
MP12	8810008900	Screw M3 x 6 NI	1
MP13	8810008900	Screw M3 x 6 NI	1
MP14	8810008900	Screw M3 x 6 NI	1
MP15	8810008900	Screw M3 x 6 NI	1
MP16	8810008900	Screw M3 x 6 NI	1
MP17	8810008880	Set screw H M2.6 x 16 NI	1
MP18	8810008870	Set screw H M2.6 x 10 NI	1
MP19	8810008870	Set screw H M2.6 x 10 NI	1
MP20	8810008880	Set screw H M2.6 x 16 NI	1












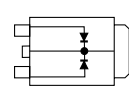











# SECTION 7 SEMI-CONDUCTOR INFORMATION

## • TRANSISTOR AND FET'S

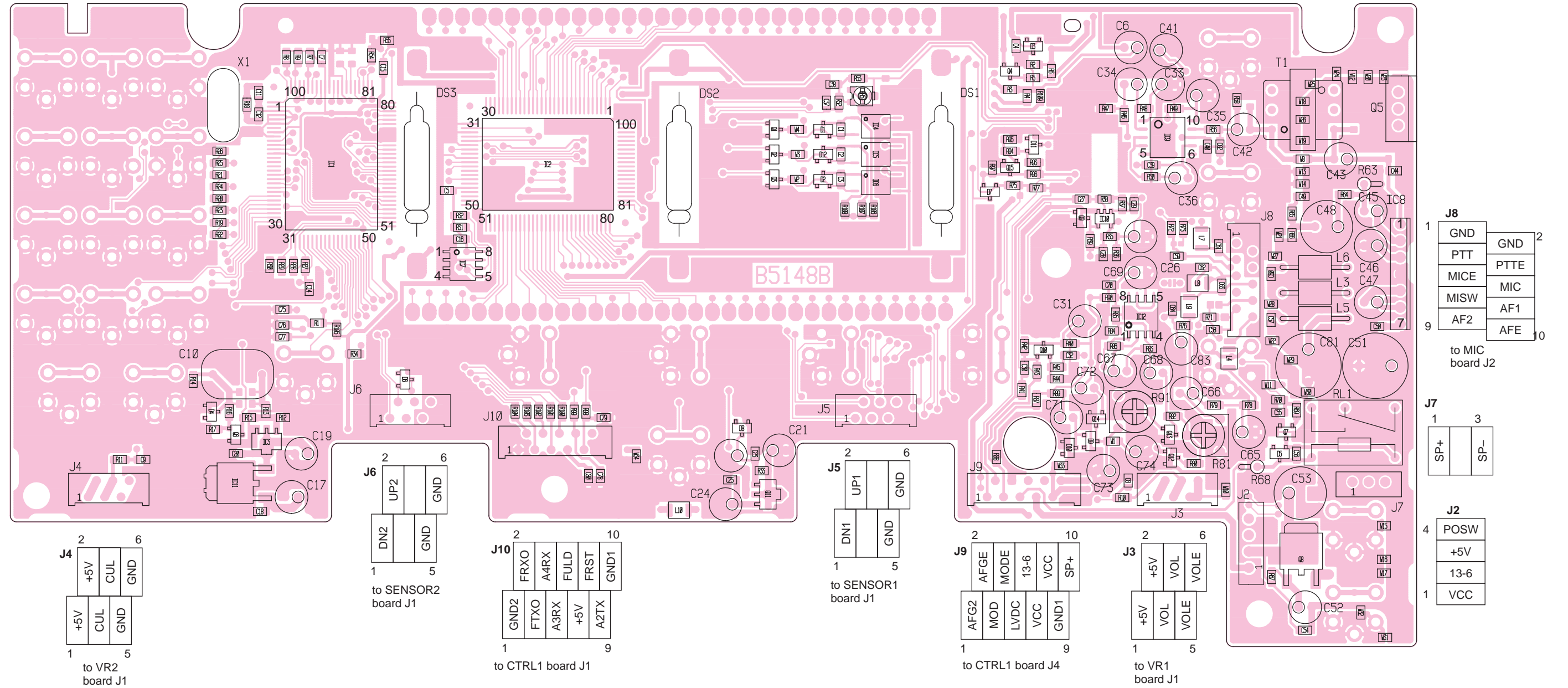
<b>2SA1037K</b> (Symbol: FR) 	<b>2SA1213 Y</b> (Symbol: NY) 	<b>2SA1586 GR</b> (Symbol: SG) 	<b>2SB1015 Y</b> 	<b>2SC1623</b> 
<b>2SC1971</b> 	<b>2SC2873 Y</b> (Symbol: MY) 	<b>2SC2904</b> 	<b>2SC3133</b> 	<b>2SC3647S</b> (Symbol: CC) 
<b>2SC4116 GR</b> (Symbol: LG) 	<b>2SC4213 B</b> (Symbol: AB) 	<b>2SC4215 O</b> (Symbol: QO) 	<b>2SC4673</b> (Symbol: CO) 	<b>2SD1585</b> 
<b>2SD1619</b> (Symbol: DB) 	<b>2SD1664 Q</b> (Symbol: DA) 	<b>2SD1899 Z</b> (Symbol: D1899) 	<b>2SJ349</b> 	<b>2SK210 GR</b> (Symbol: YG) 
<b>2SK2171 4</b> (Symbol: KM) 	<b>2SK2286</b> 	<b>3SK131-T2 MAS</b> (Symbol: VIT) 	<b>DTA114EUA</b> (Symbol: 14) 	<b>DTA144EU</b> (Symbol: 16) 
<b>DTC114EK</b> (Symbol: 24) 	<b>DTC114ES</b> (Symbol: E.SK) 	<b>DTC114EU</b> (Symbol: 24) 	<b>UN5111</b> (Symbol: 6A) 	<b>UN5211</b> (Symbol: 8A) 

## • DIODES

<b>1SS184</b> (Symbol: B3) 	<b>1SS226</b> (Symbol: C3) 	<b>1SS301</b> (Symbol: B3) 	<b>1SS302</b> (Symbol: C3) 	<b>1SS355</b> (Symbol: A) 
<b>DA221 TL</b> (Symbol: K) 	<b>DAN202K</b> (Symbol: N) 	<b>DAN222TL</b> (Symbol: N) 	<b>DAP202K</b> (Symbol: P) 	<b>DF30SC4M</b> (Symbol: 30SC4M) 
<b>HSB88WSTR</b> (Symbol: Silver Line) 	<b>HSM88ASR</b> (Symbol: C3) 	<b>HSM88AS</b> (Symbol: C1) 	<b>HVM17-01TR</b> (Symbol: T6) 	<b>HVU17TRF</b> (Symbol: E) 
<b>MA338</b> (Symbol: 6H) 	<b>MA77</b> (Symbol: 4B) 	<b>MA862</b> (Symbol: M1I) 	<b>RD9.1M T2B1</b> (Symbol: 911) 	

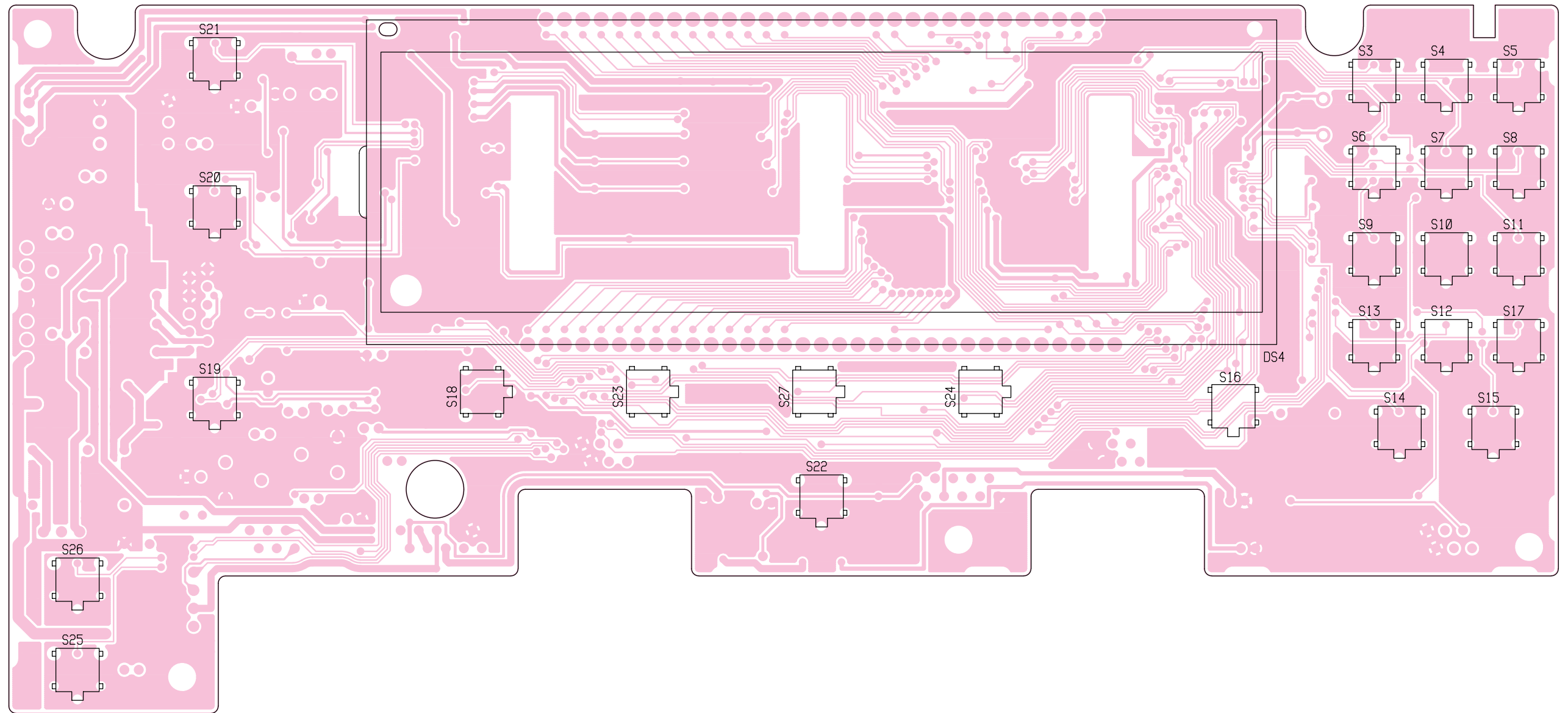
# SECTION 8 BOARD LAYOUTS

8-1 RC-21  
8-1-1 LOGIC BOARD  
• TOP VIEW

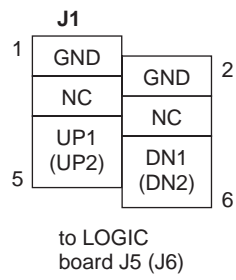
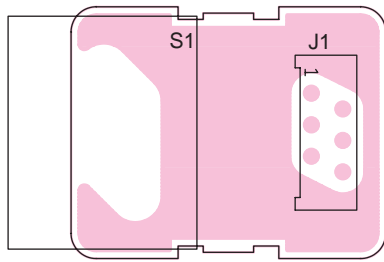




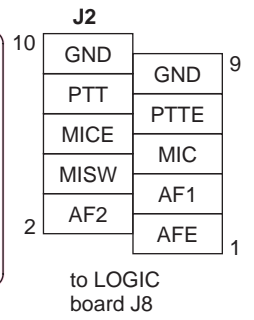
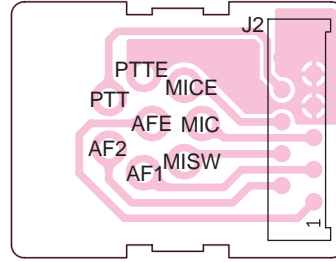
• BOTTOM VIEW



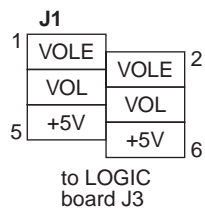
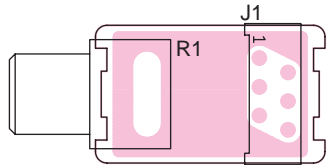
### 8-1-2 SENSOR 1/2 BOARDS



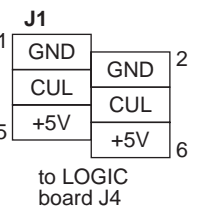
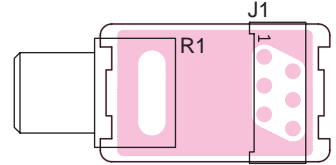
### 8-1-3 MIC BOARD



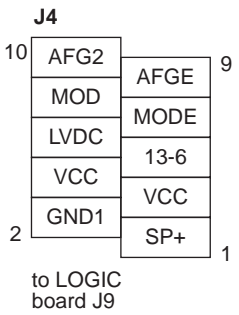
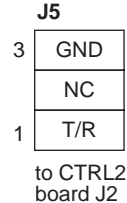
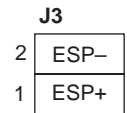
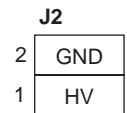
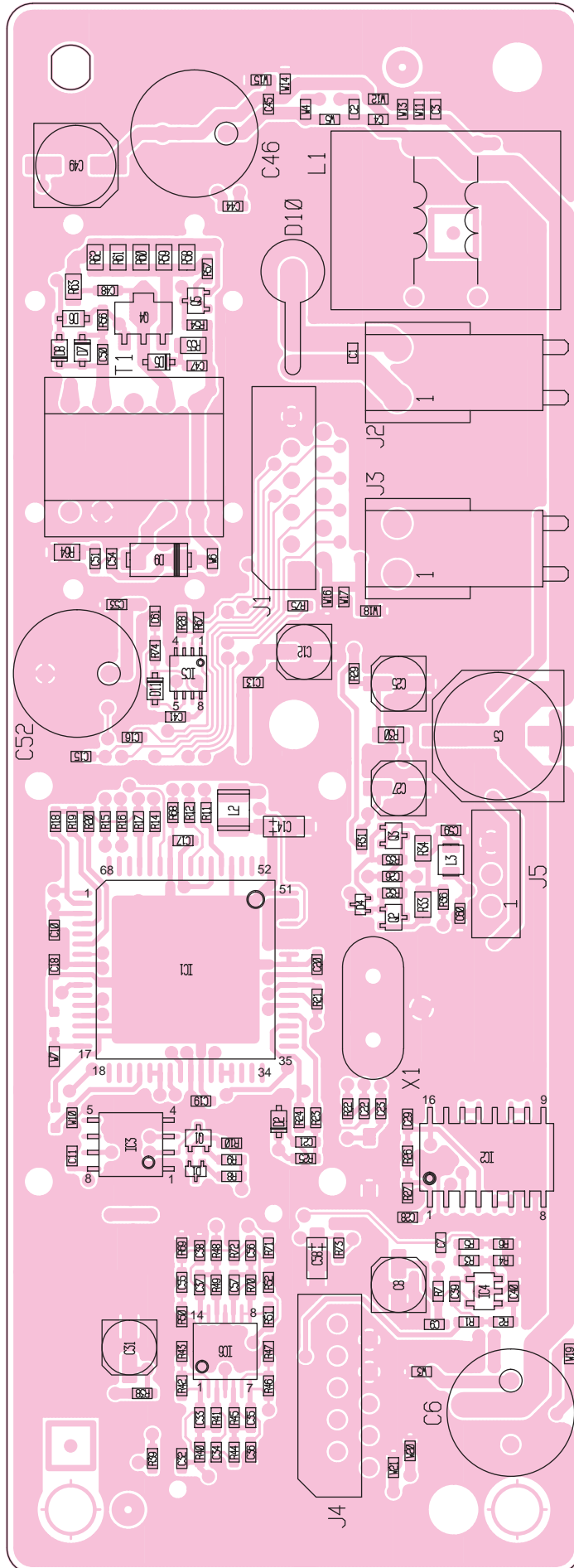
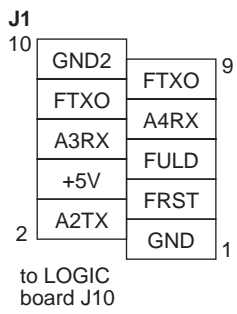
### 8-1-4 VR1 BOARD



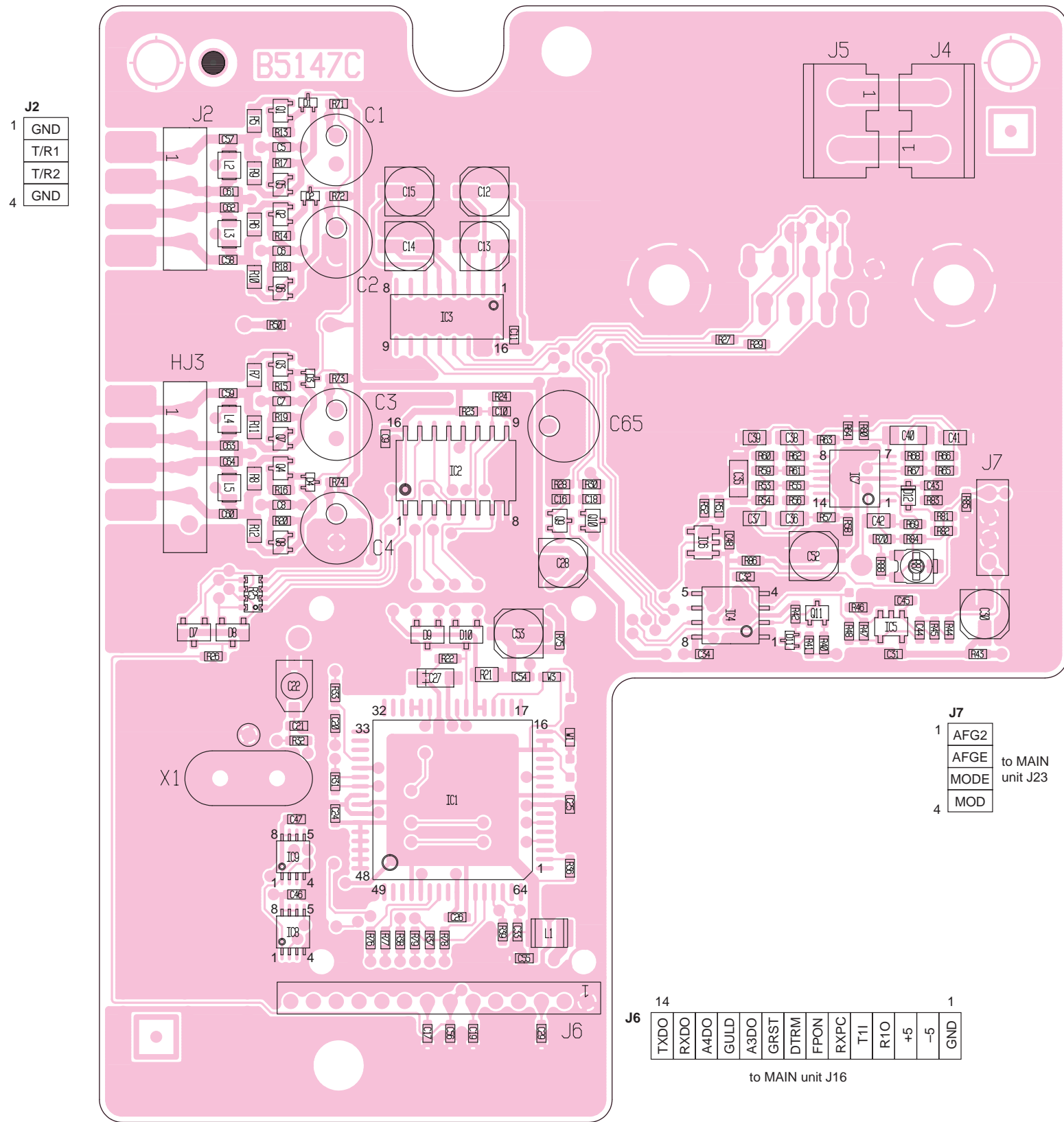
### 8-1-5 VR2 BOARD



# 8-1-6 CTRL1 BOARD



**8-2 IC-M710RT**  
**8-2-1 CTRL2 BOARD**  
**• TOP VIEW**



**J2**

1	GND
	T/R1
	T/R2
4	GND

**J4**

2	POI
1	POO

**J5**

1	POI
2	POO

**J7**

1	AFG2
	AFGE
	MODE
4	MOD

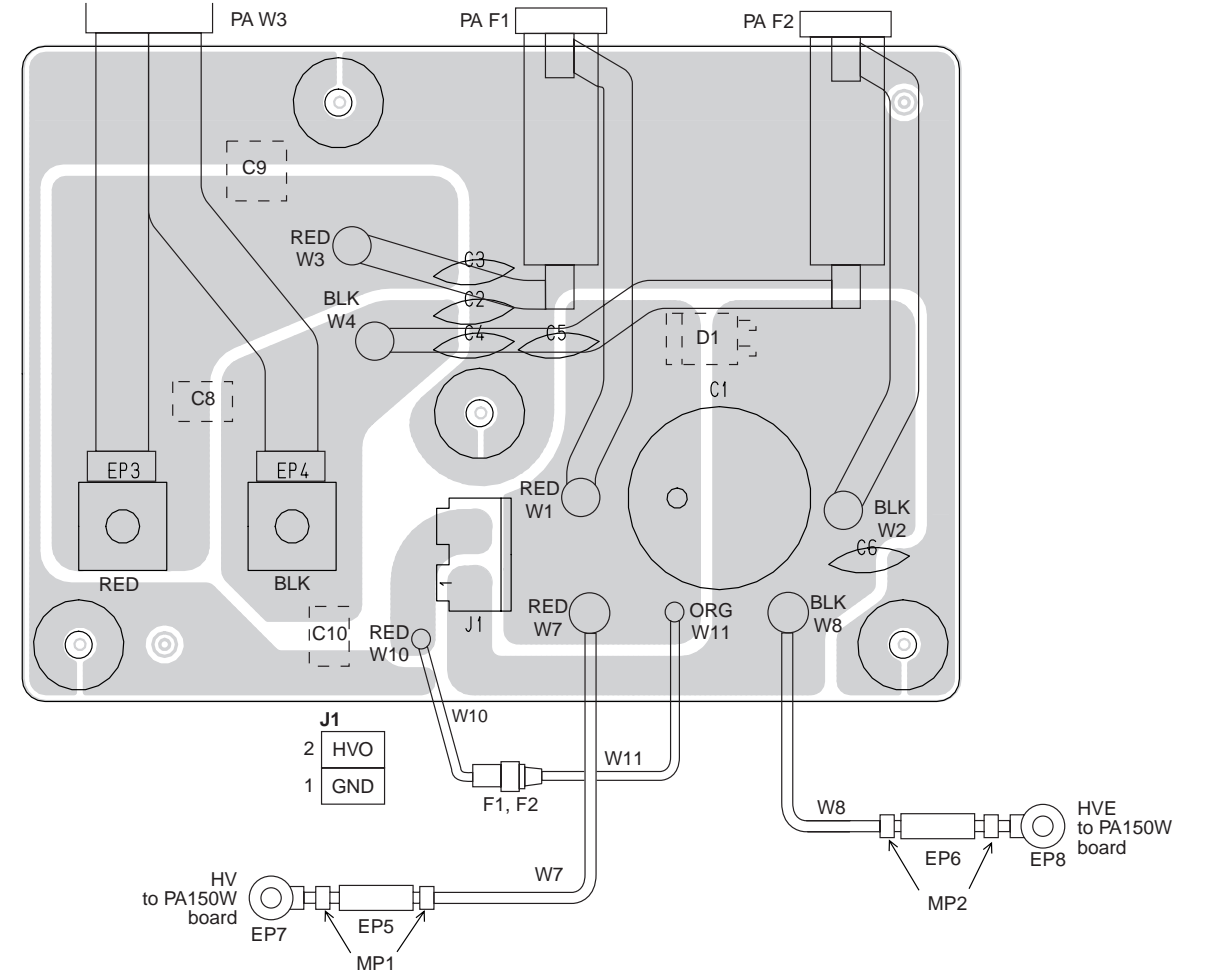
to MAIN unit J23

**J6**

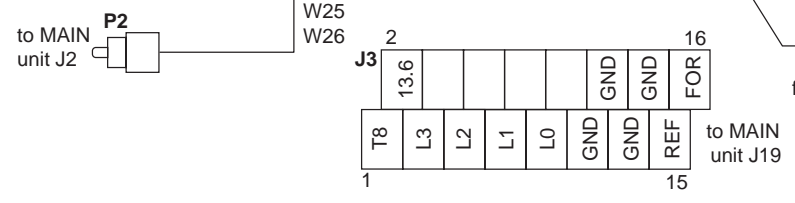
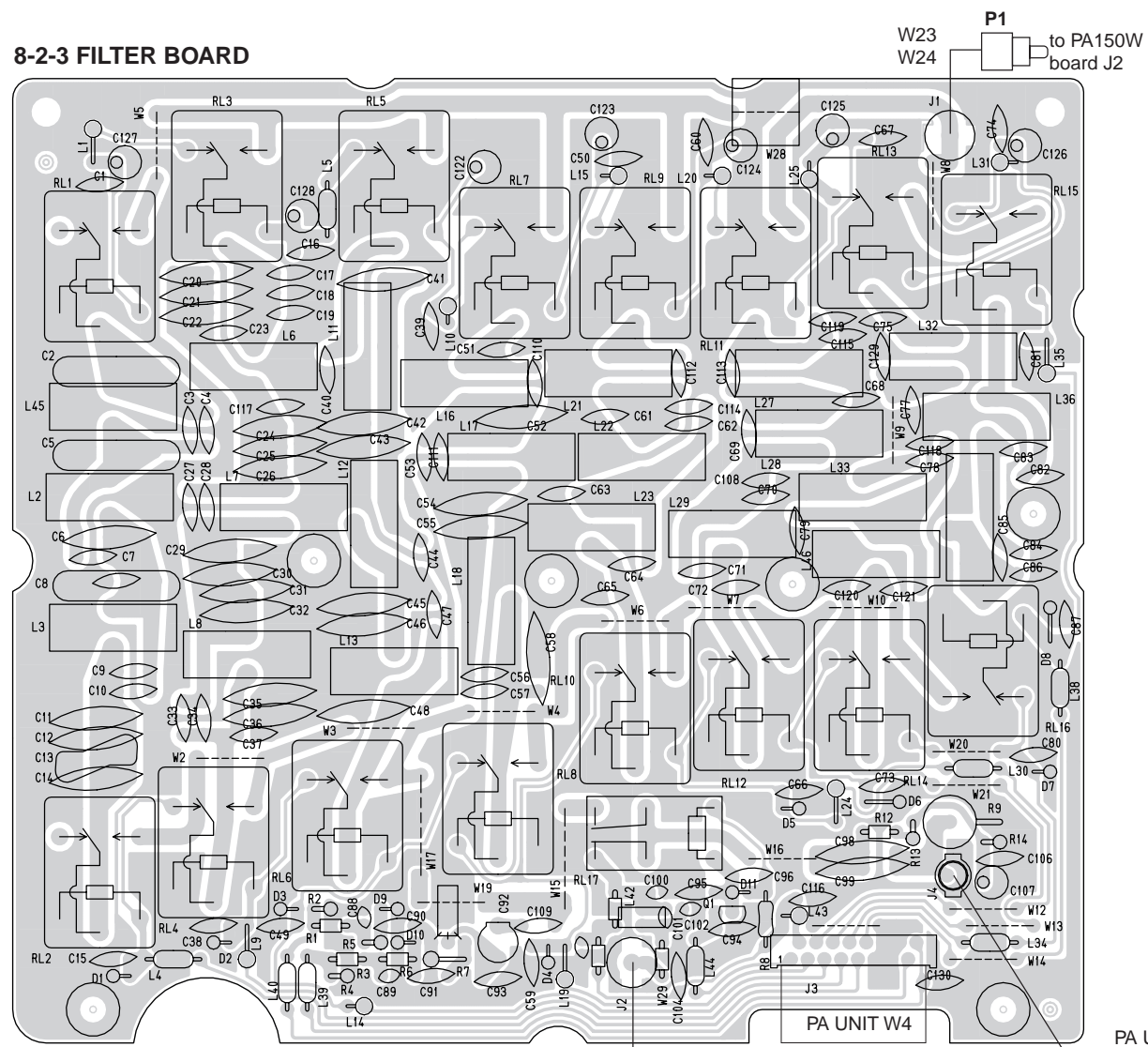
14	TXDO
	RXDO
	A4DO
	GULD
	A3DO
	GRST
	DTRM
	FPON
	RXPC
	T11
	R10
	+5
	-5
1	GND

to MAIN unit J16

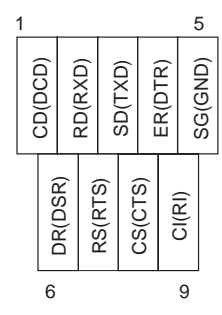
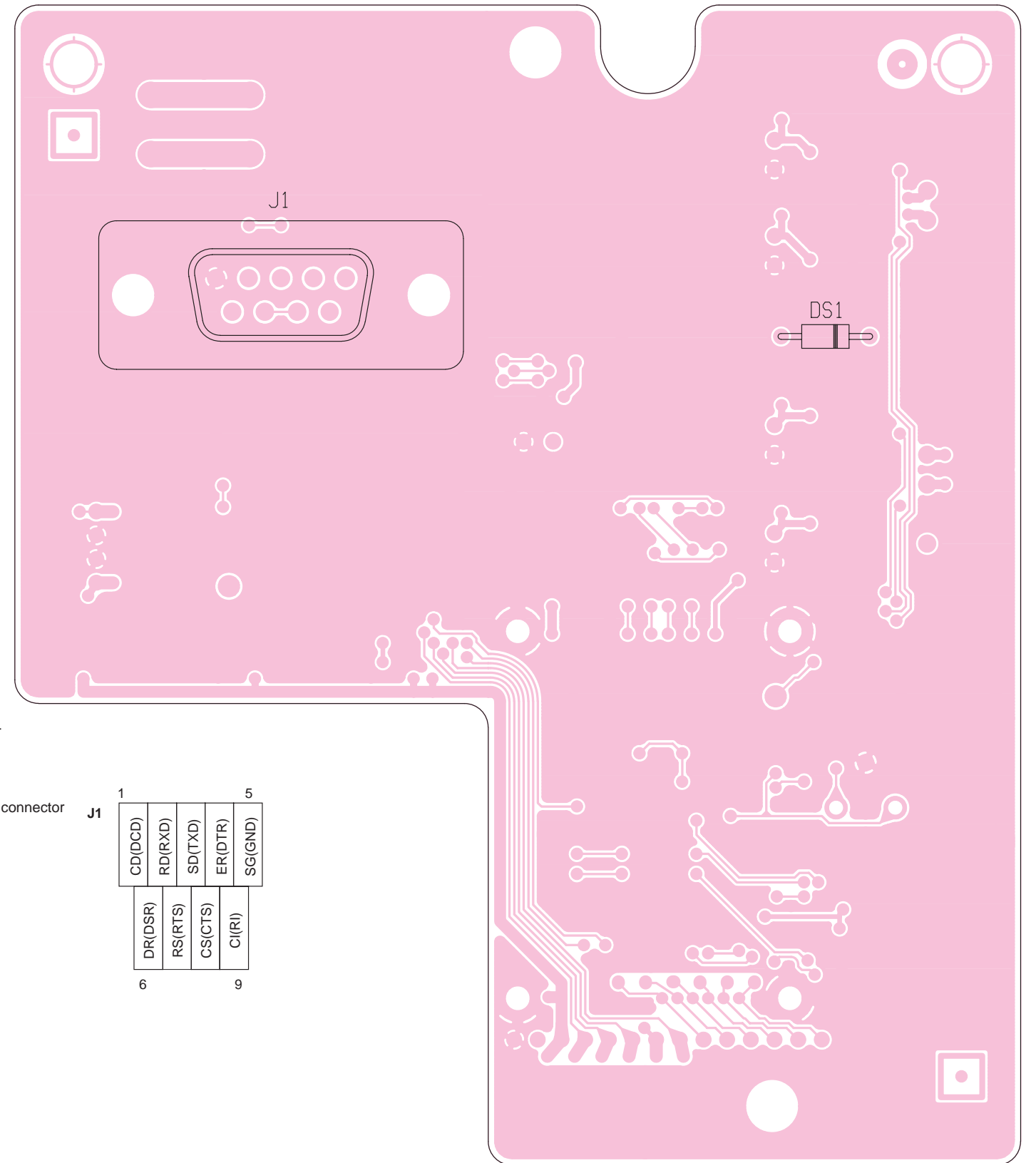
**8-2-2 TERMINAL UNIT**



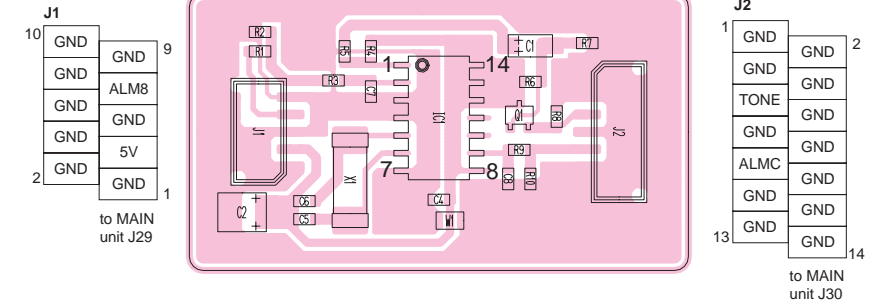
**8-2-3 FILTER BOARD**



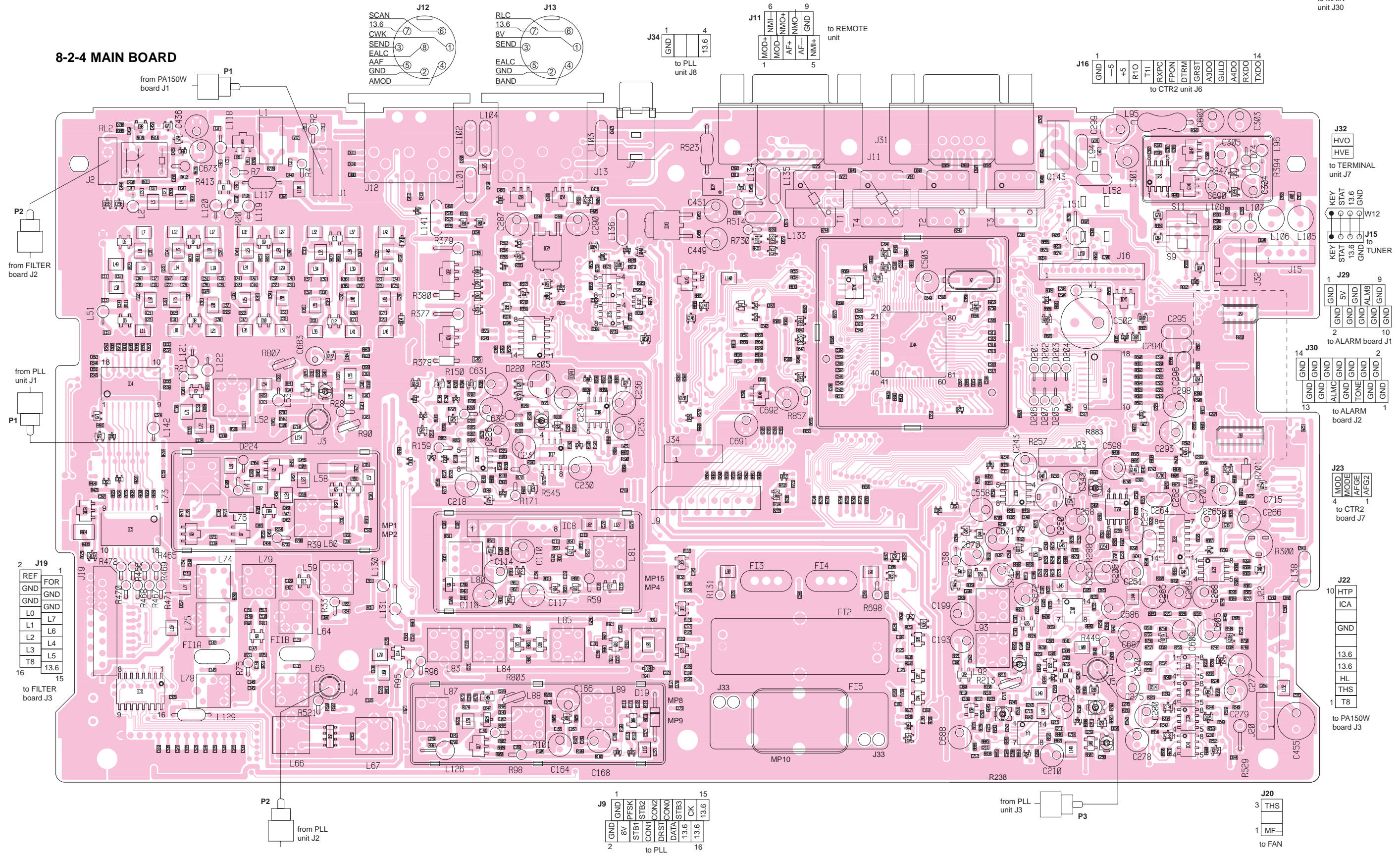
**• BOTTOM VIEW (CTRL 2)**



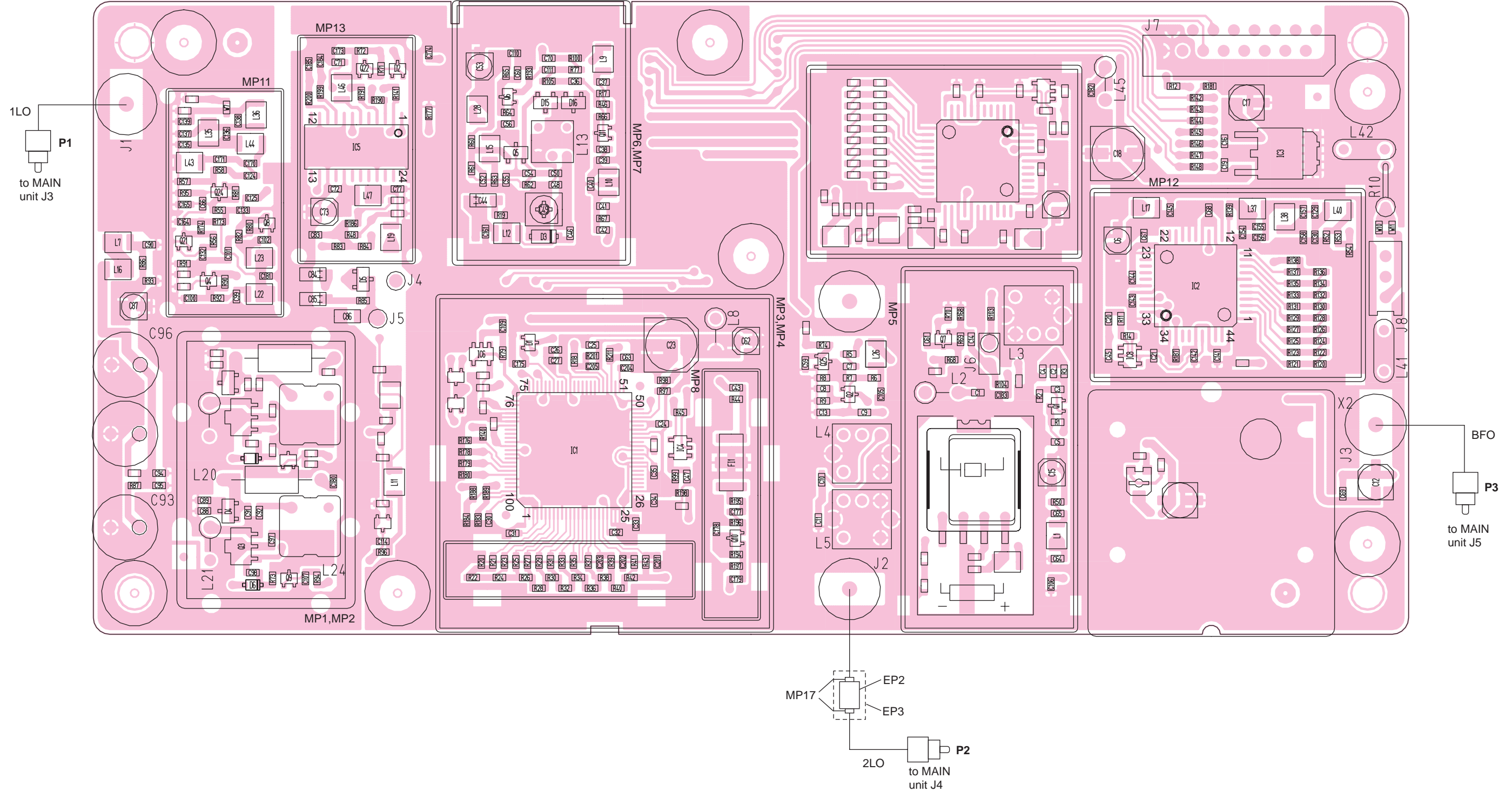
8-2-5 ALARM BOARD



8-2-4 MAIN BOARD

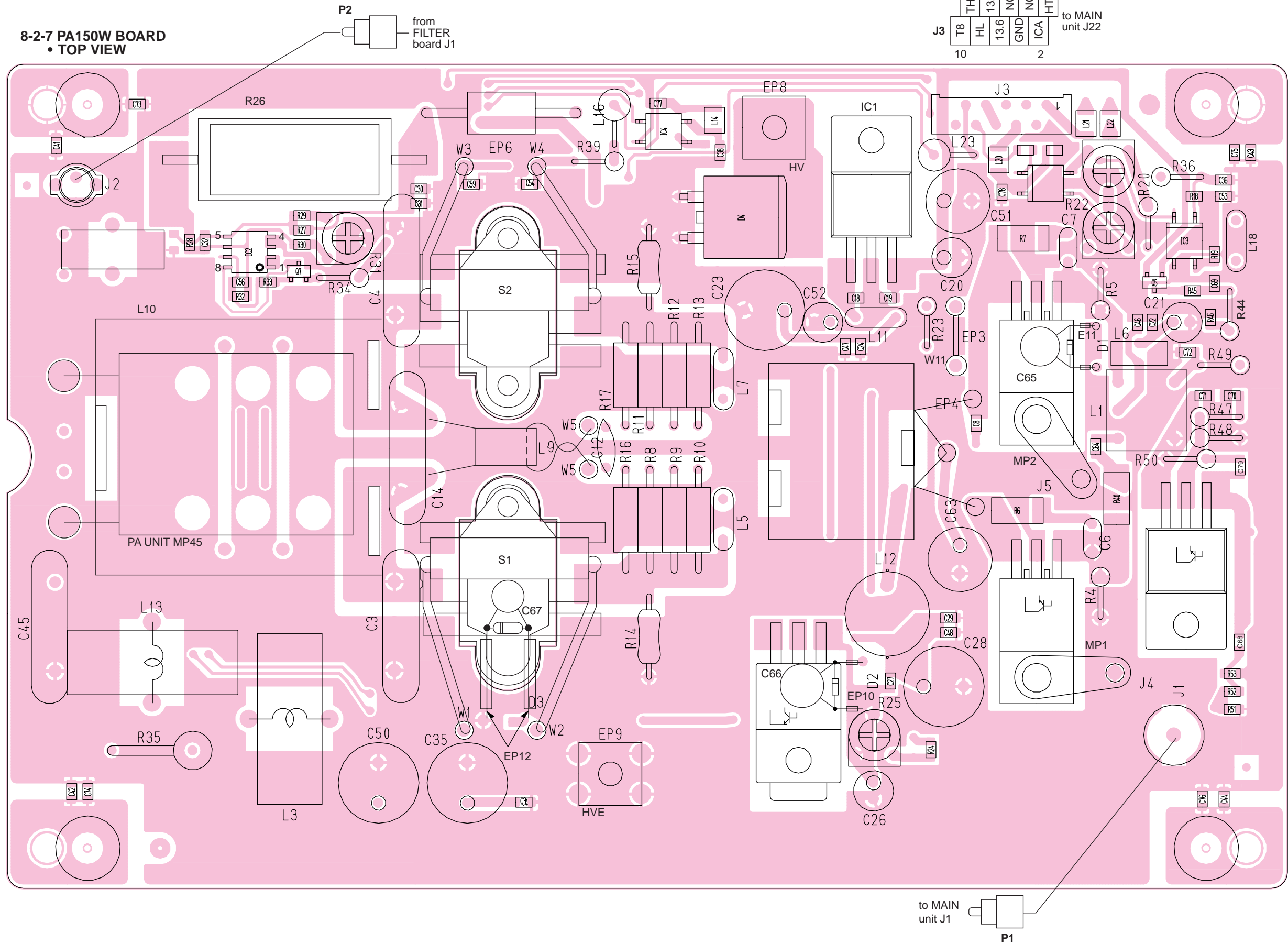


8-2-6 PLL UNIT



	15		1
	GND	8V	STB1
	PFSK	STB2	CON1
to MAIN	CON2	CON0	DRST
unit J9	STB3	CK	DATA
	13.6	13.6	
	16		2
			J7

8-2-7 PA150W BOARD  
• TOP VIEW

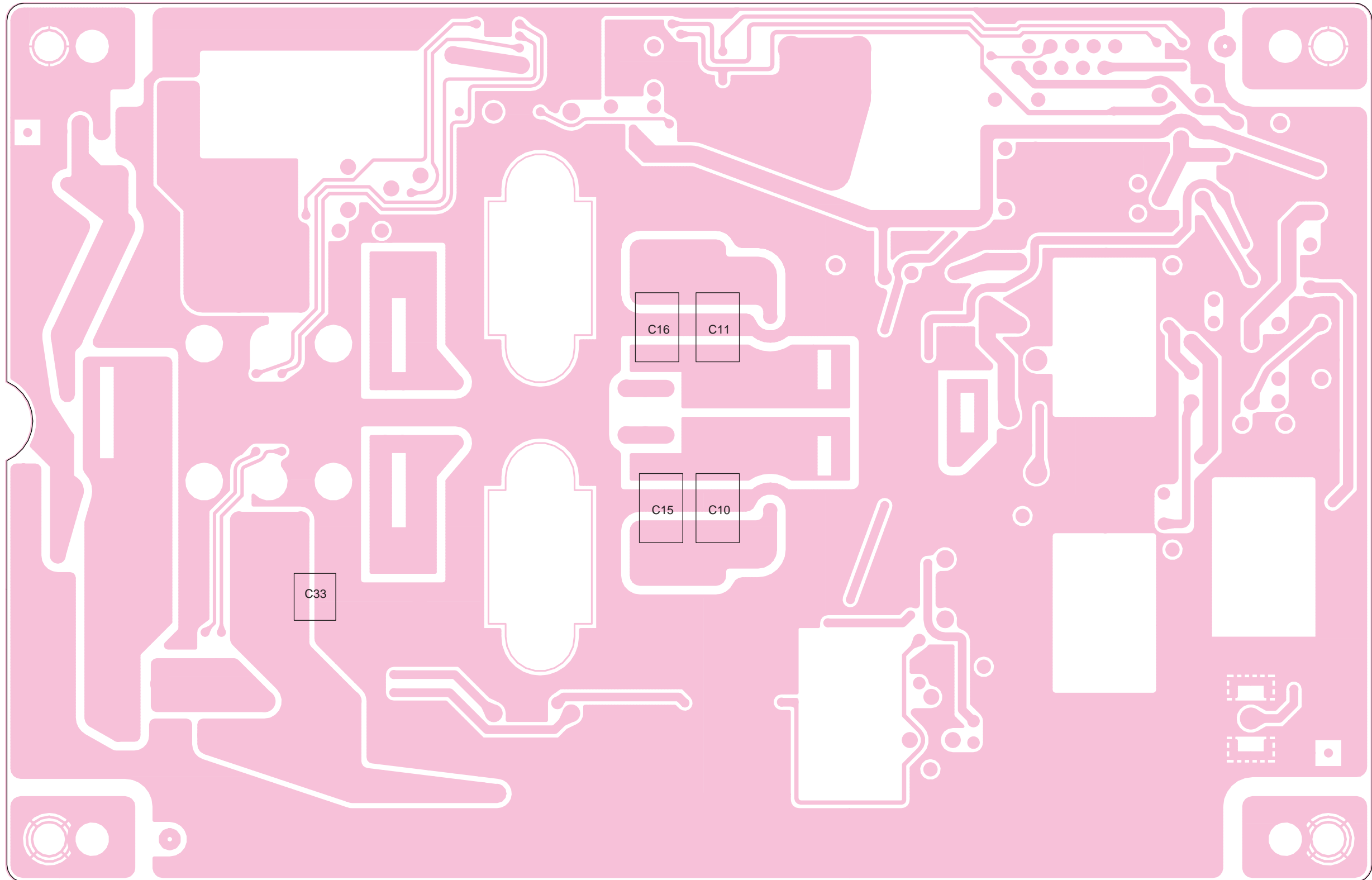


	9	1
J3	THS	HTP
	HL	13.6
	13.6	NC
	GND	NC
	ICA	2
	10	

to MAIN unit J22

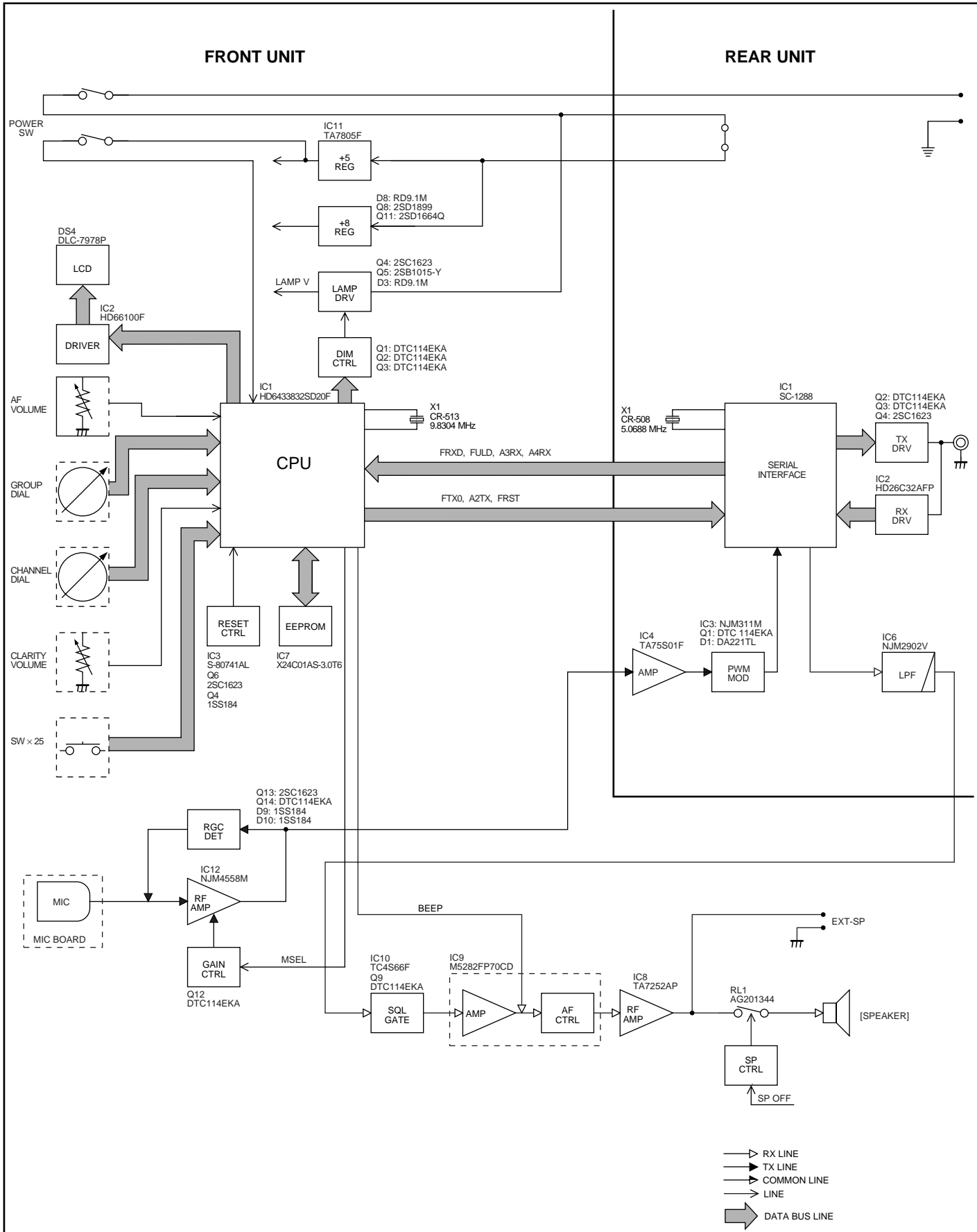


• BOTTOM VIEW

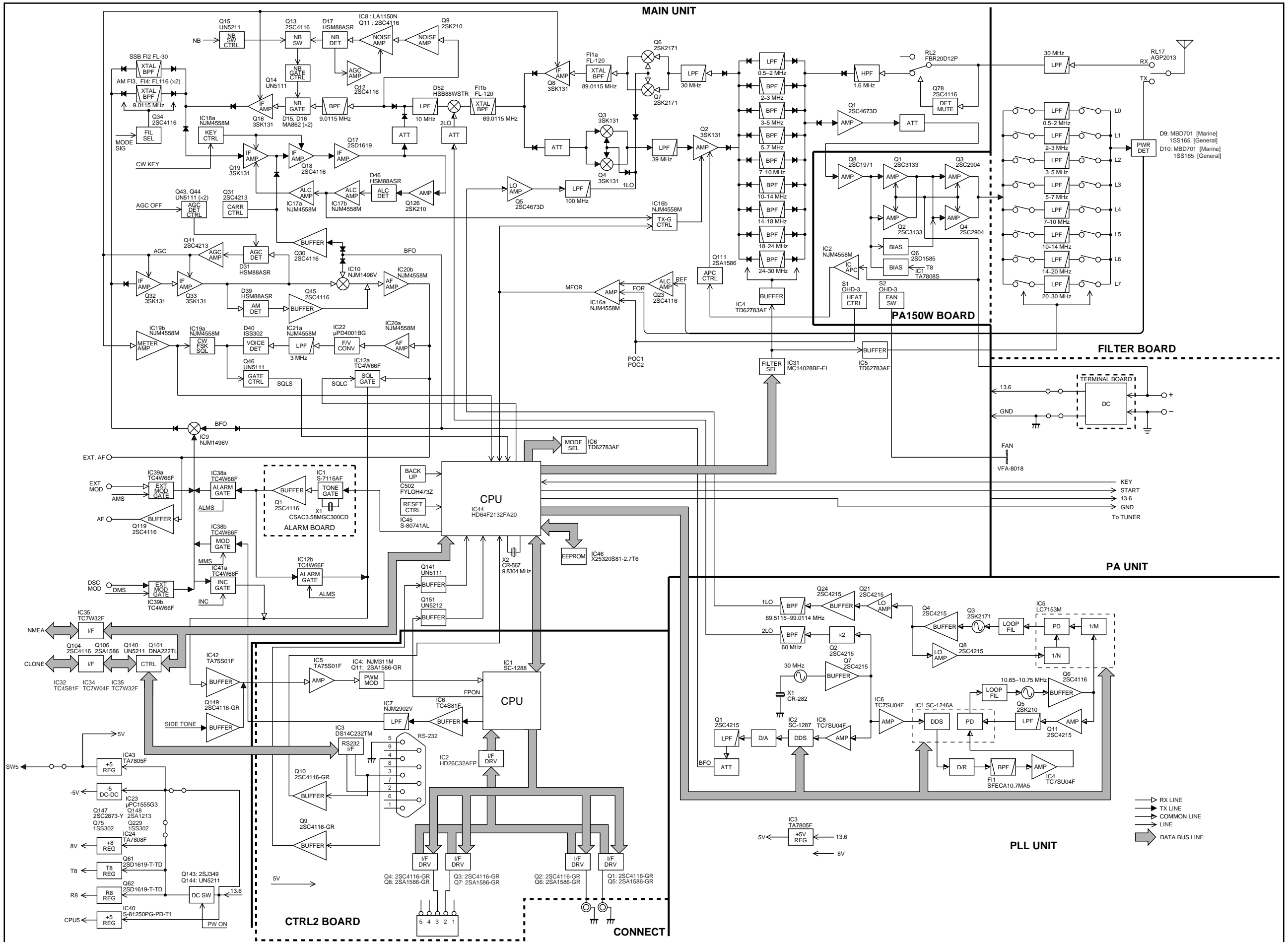


# SECTION 9 BLOCK DIAGRAM

## • RC-21 (CONTROLLER)



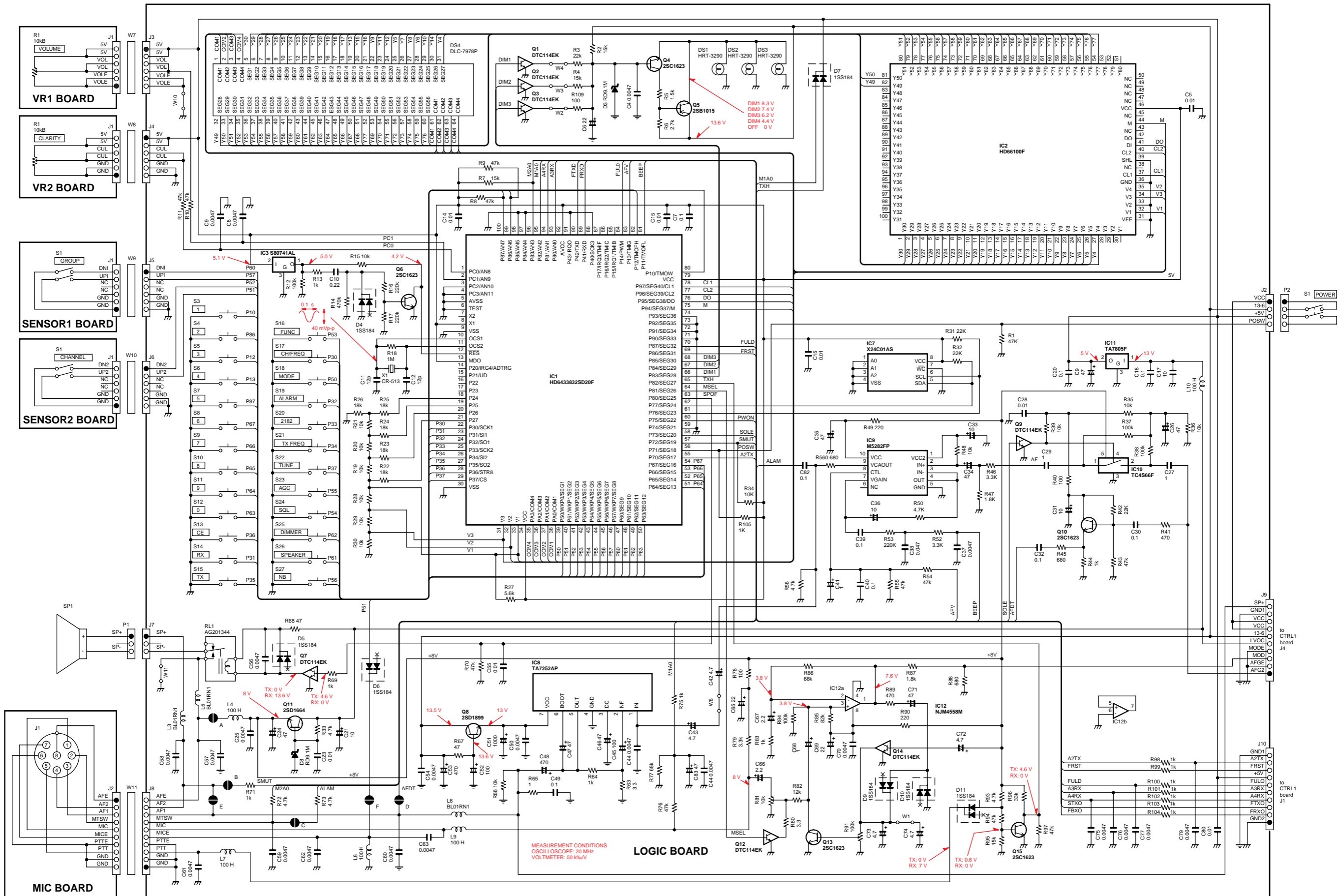
• IC-M710RT

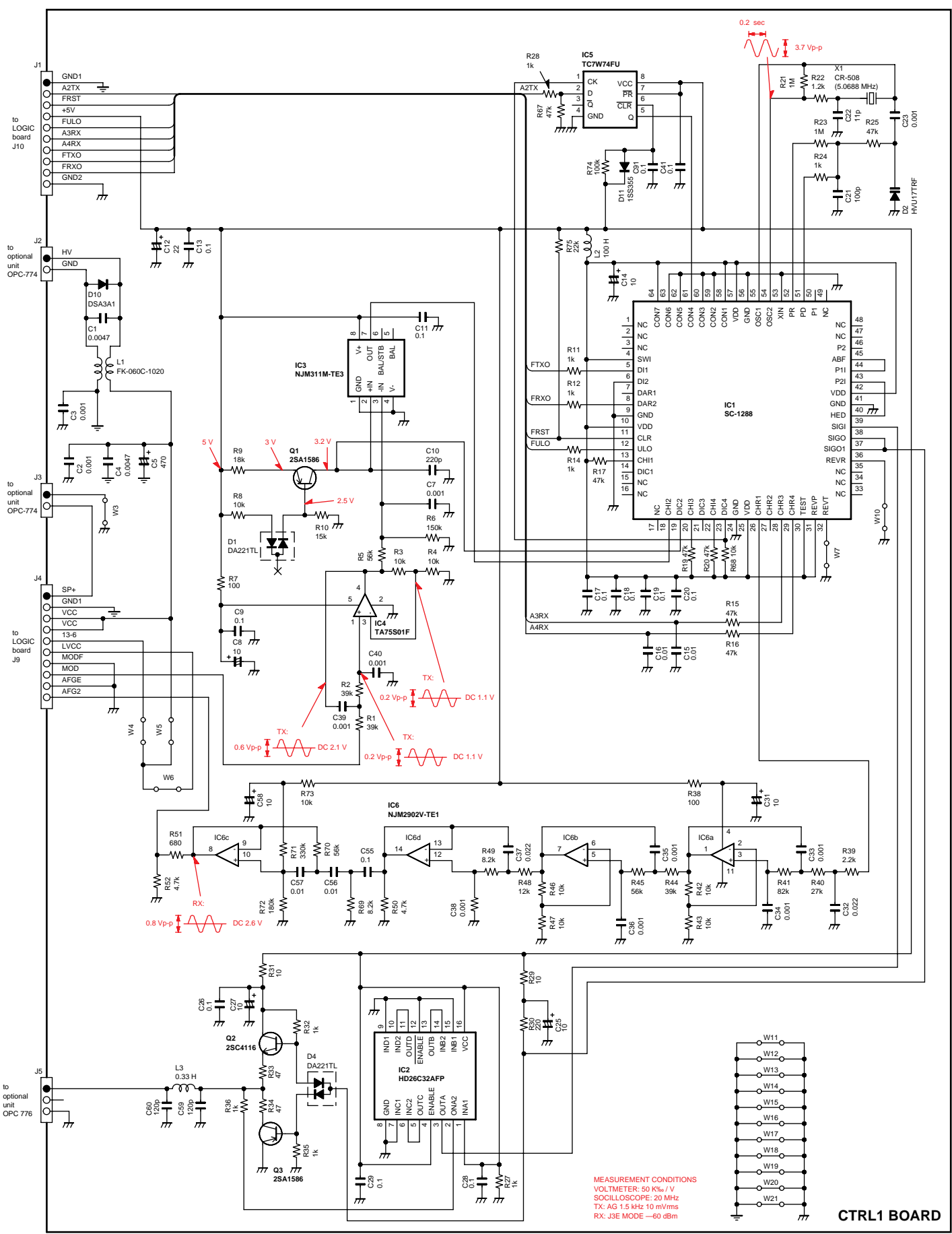


**COMPLETE VIEW**



# SECTION 10 VOLTAGE DIAGRAM



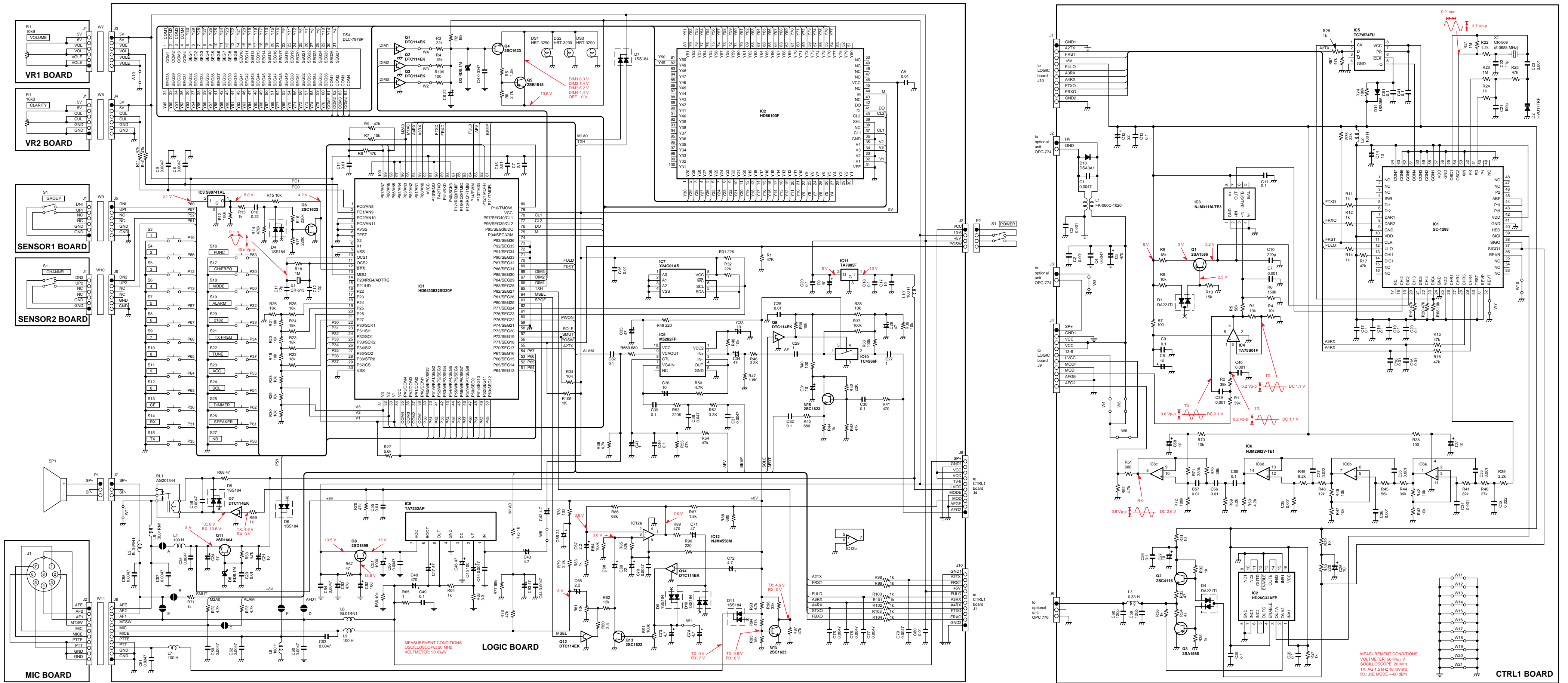


MEASUREMENT CONDITIONS  
 VOLTMETER: 50 K $\Omega$  / V  
 SCILLOSCOPE: 20 MHz  
 TX: AG 1.5 kHz 10 mV/ms  
 RX: J3E MODE -60 dBm

CTRL1 BOARD

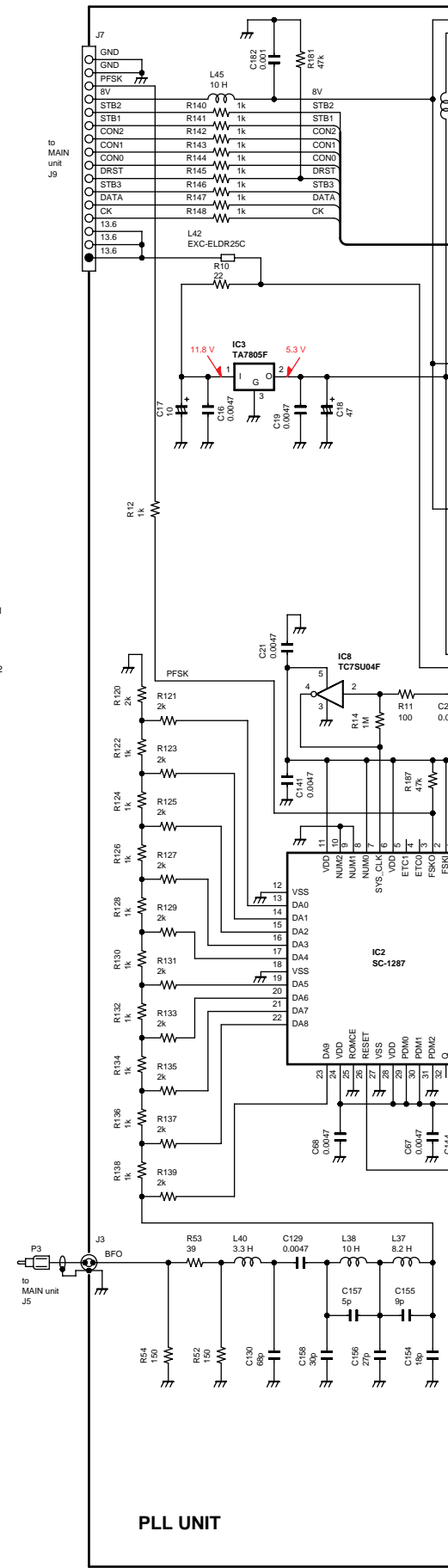
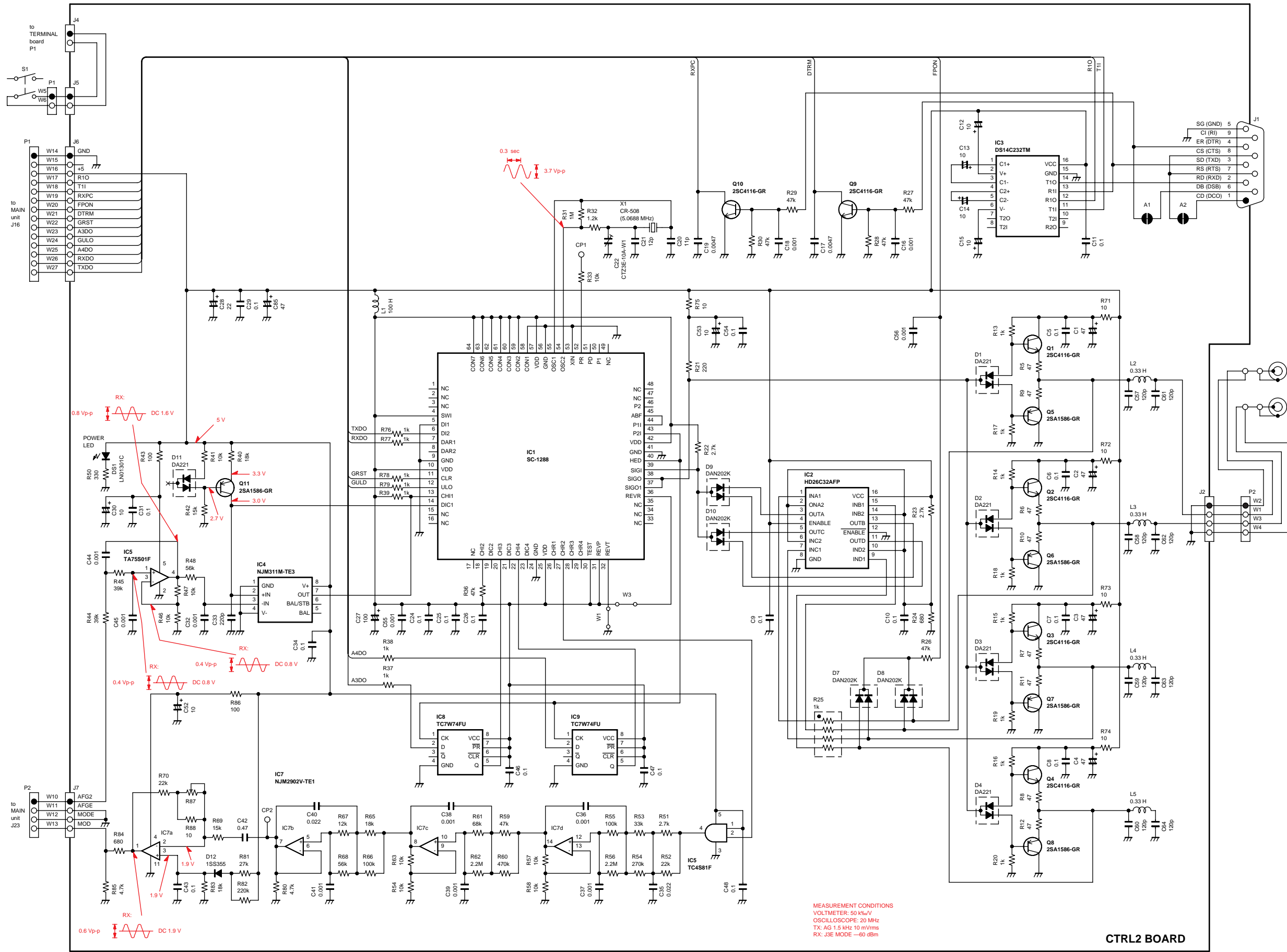


# SECTION 10 VOLTAGE DIAGRAM

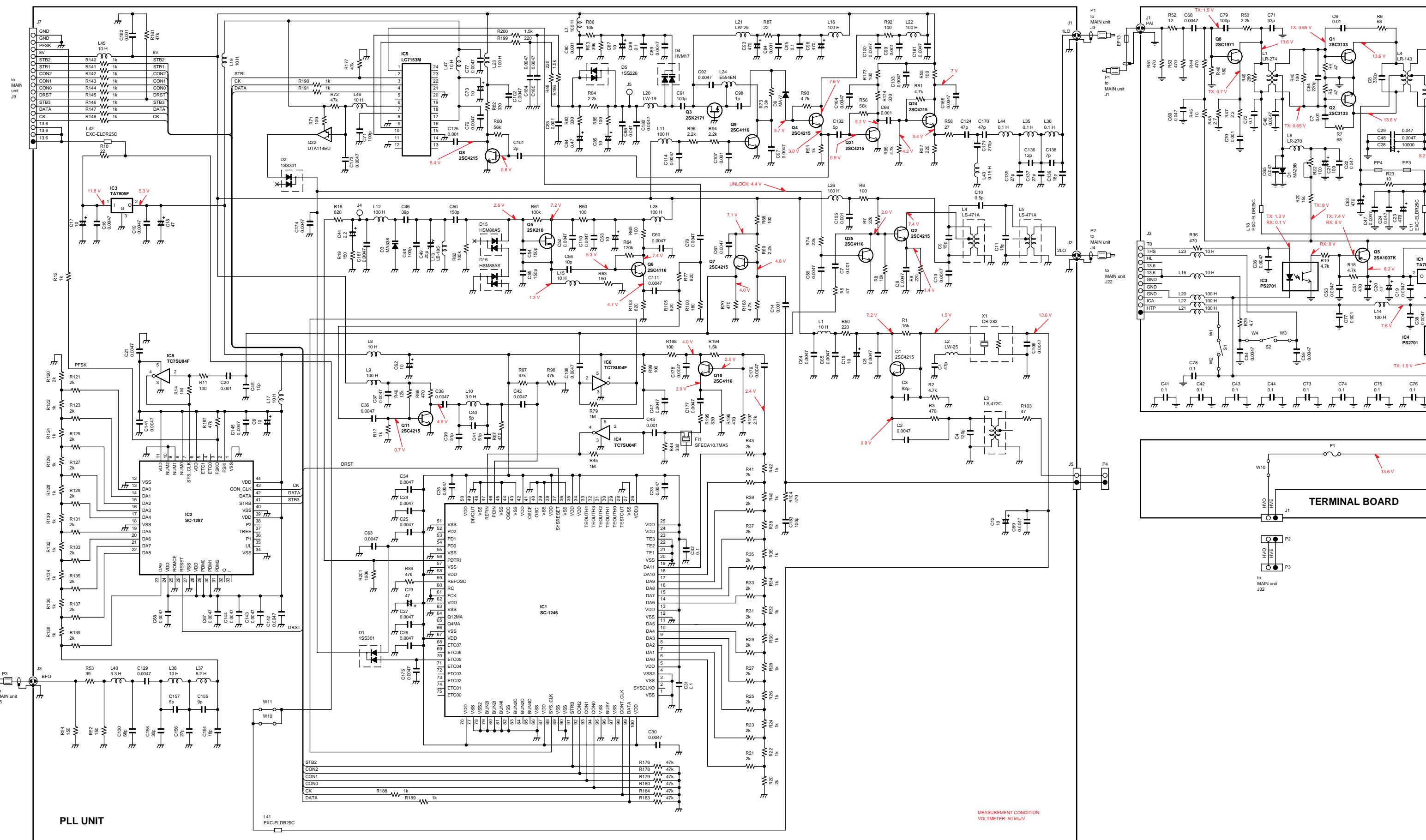


LEFT SIDE

RIGHT SIDE

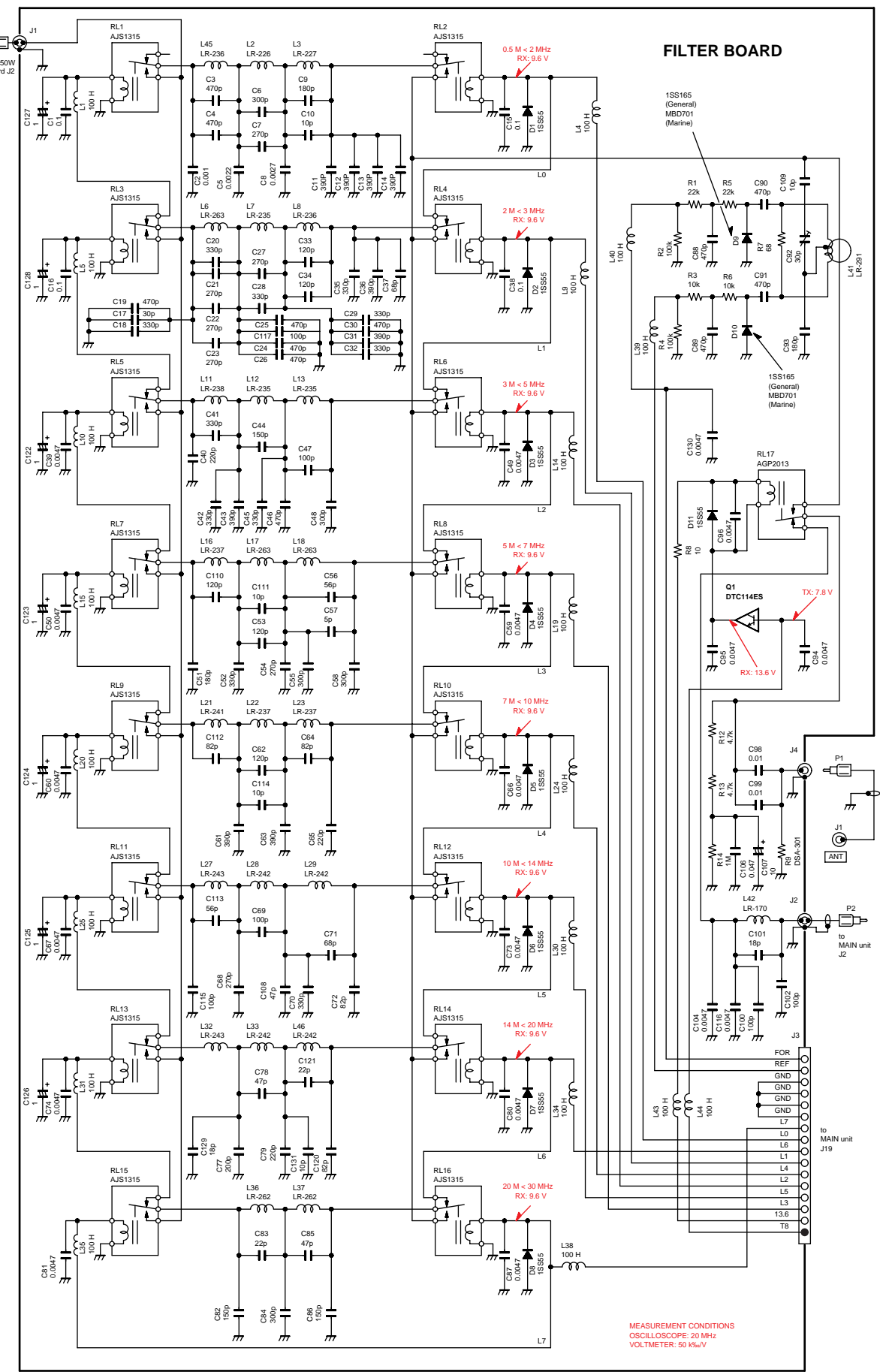
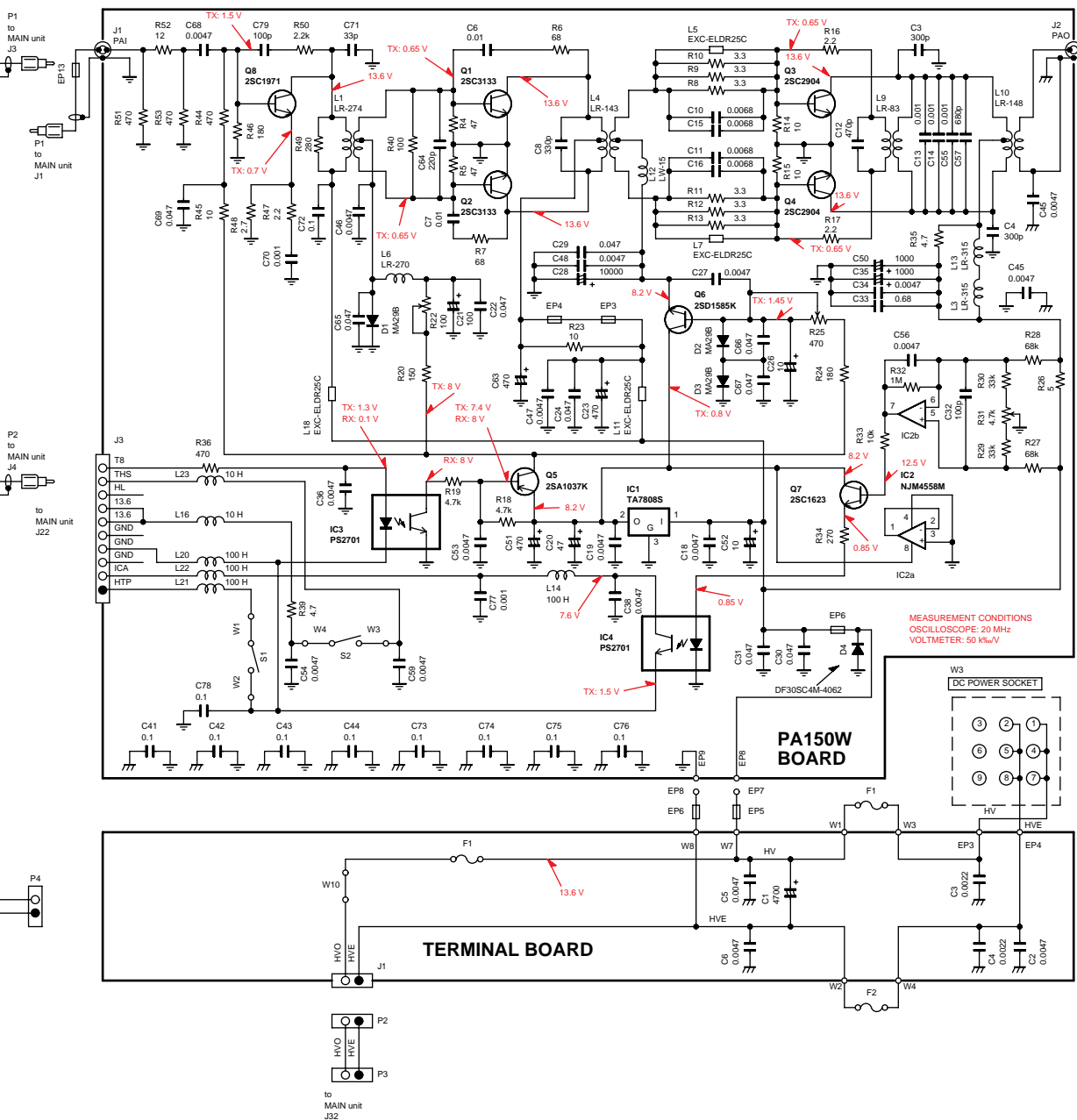




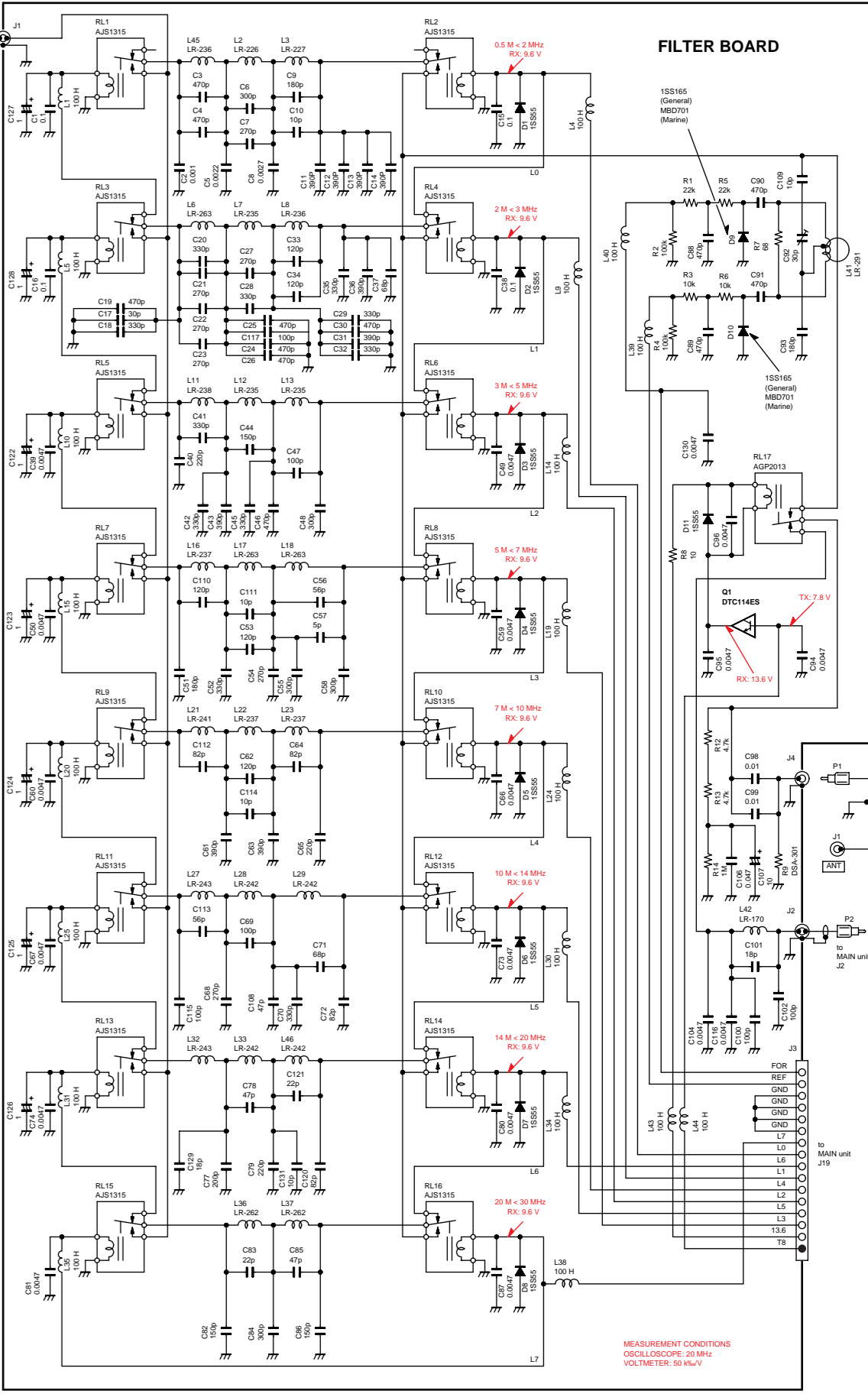
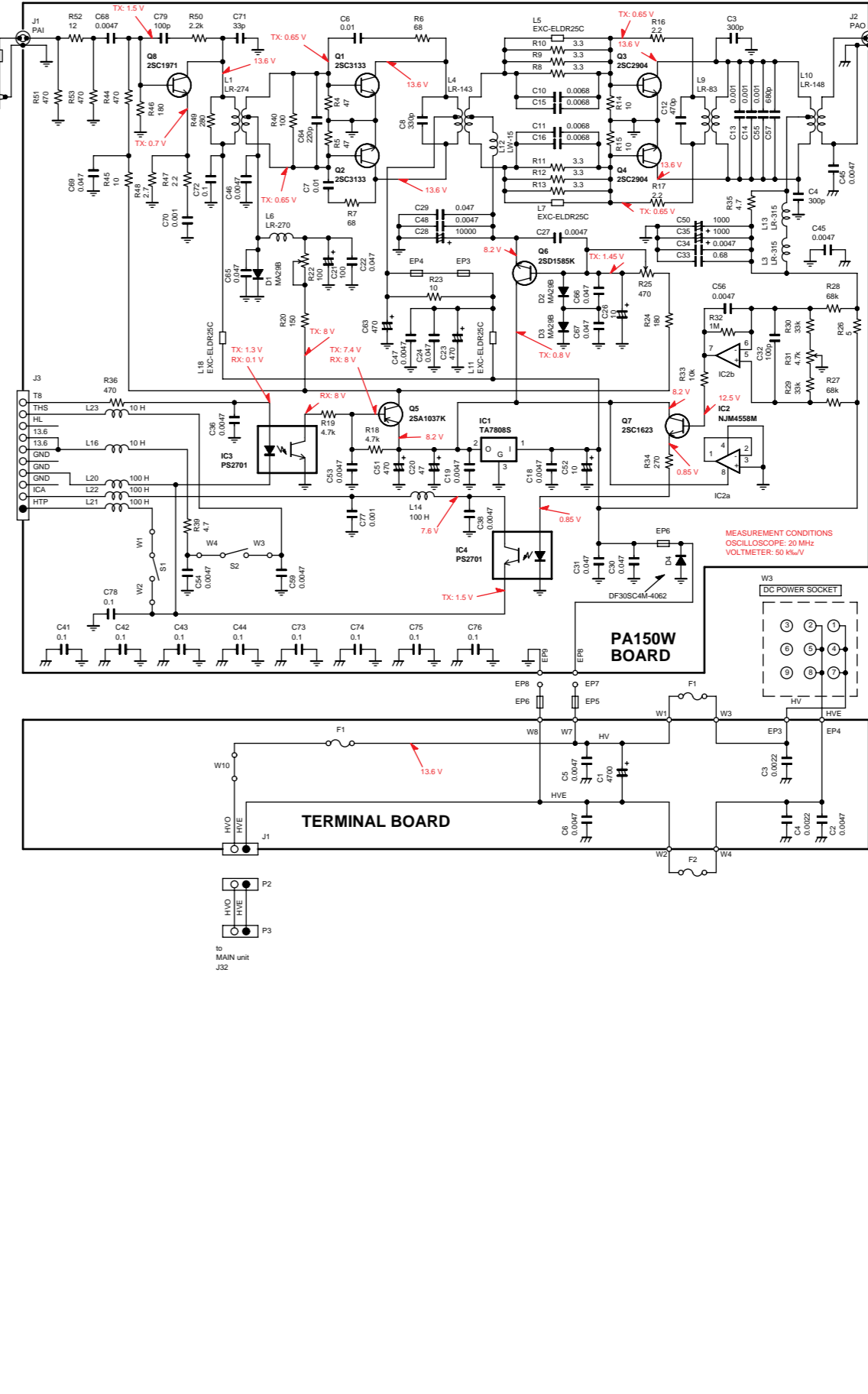
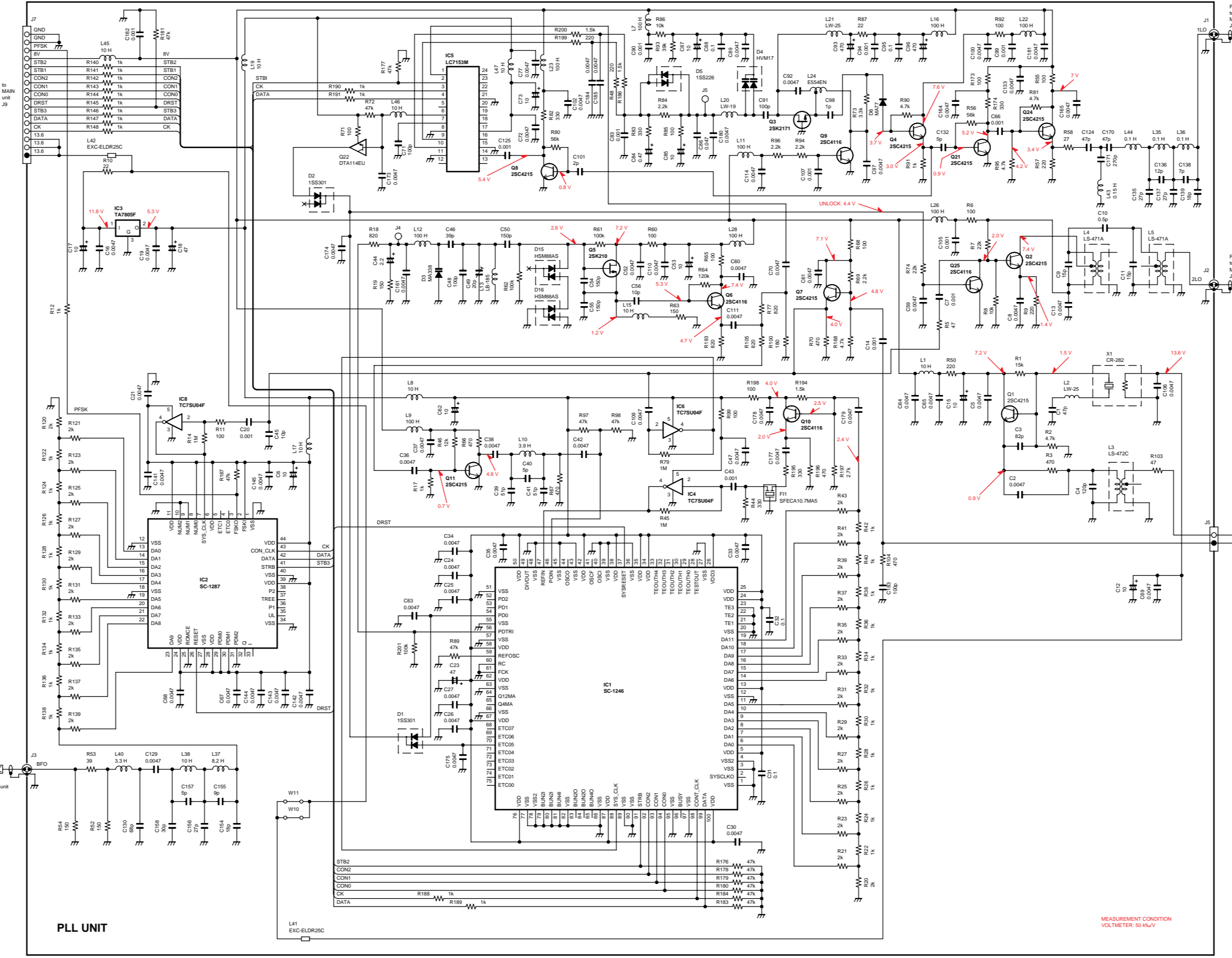
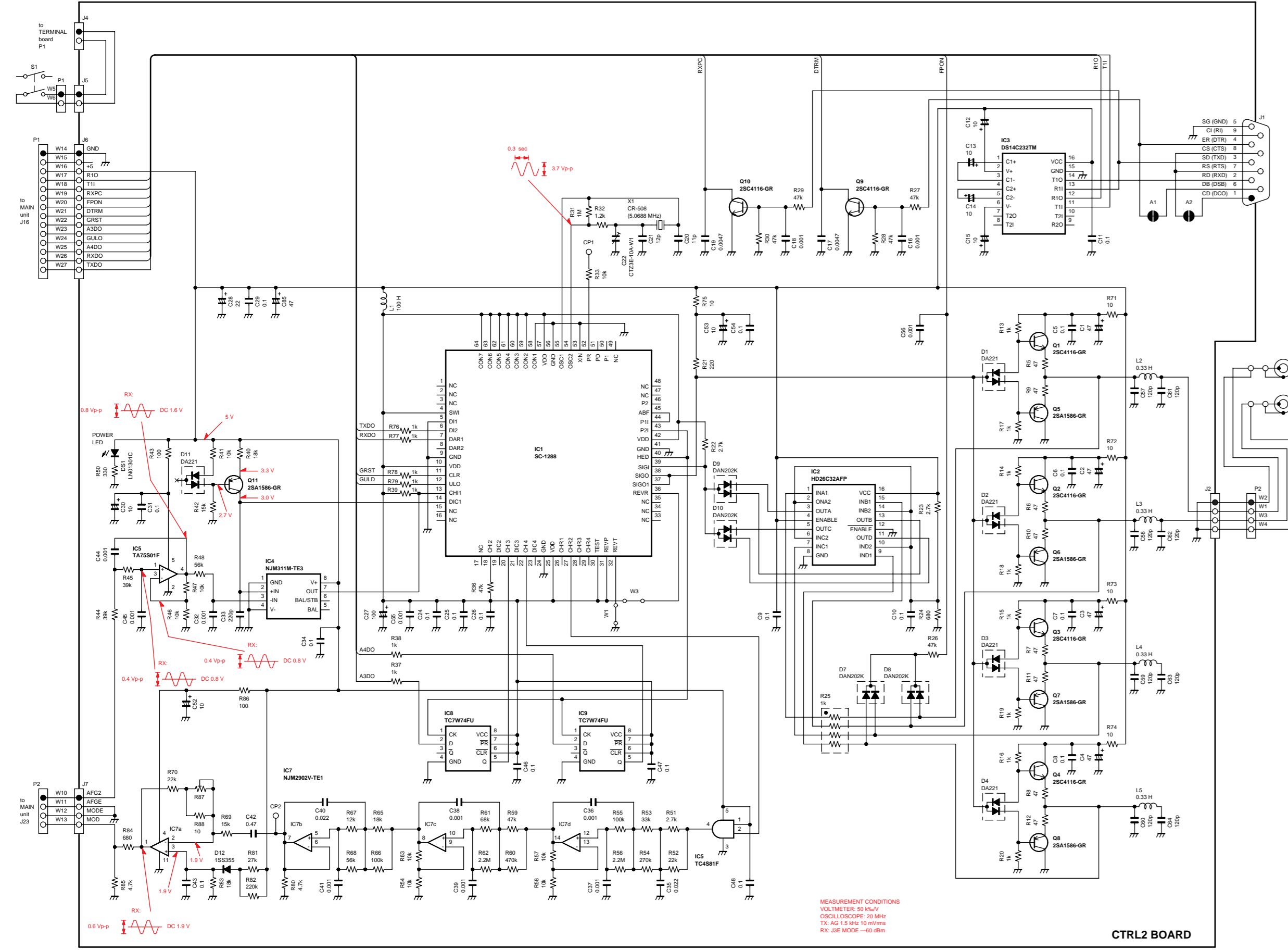


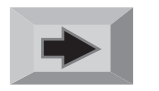
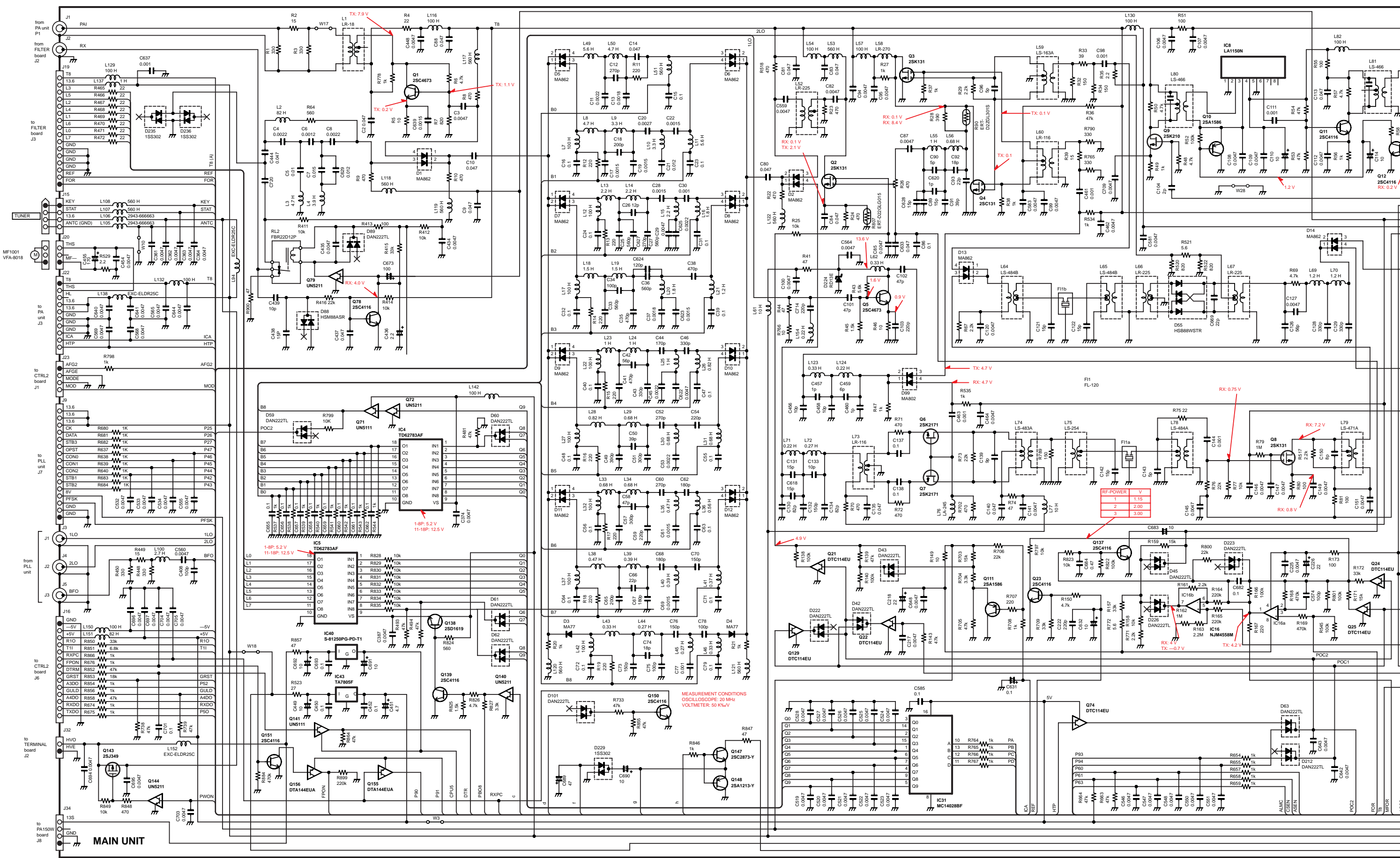
COMPLETE VIEW

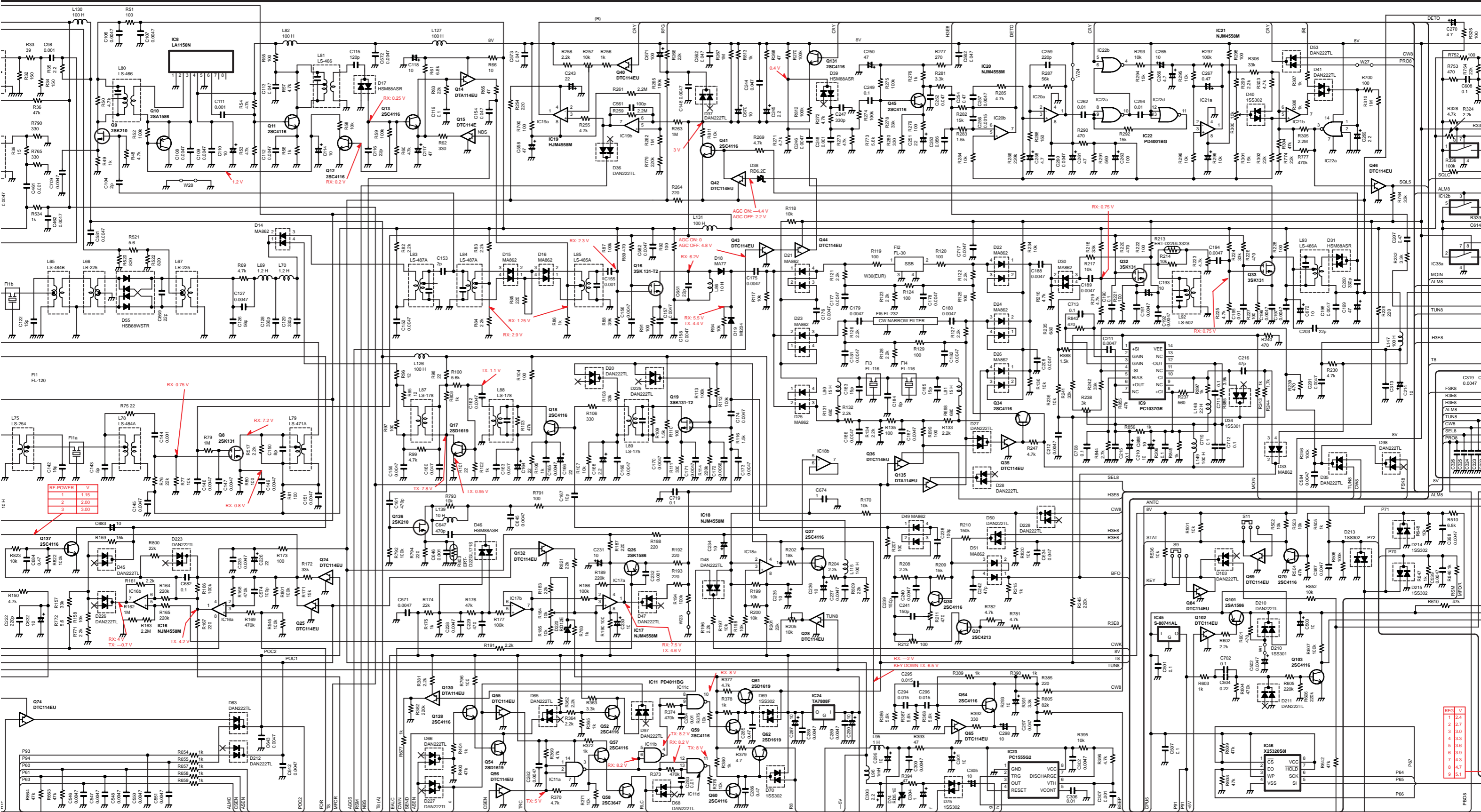




**COMPLETE VIEW**



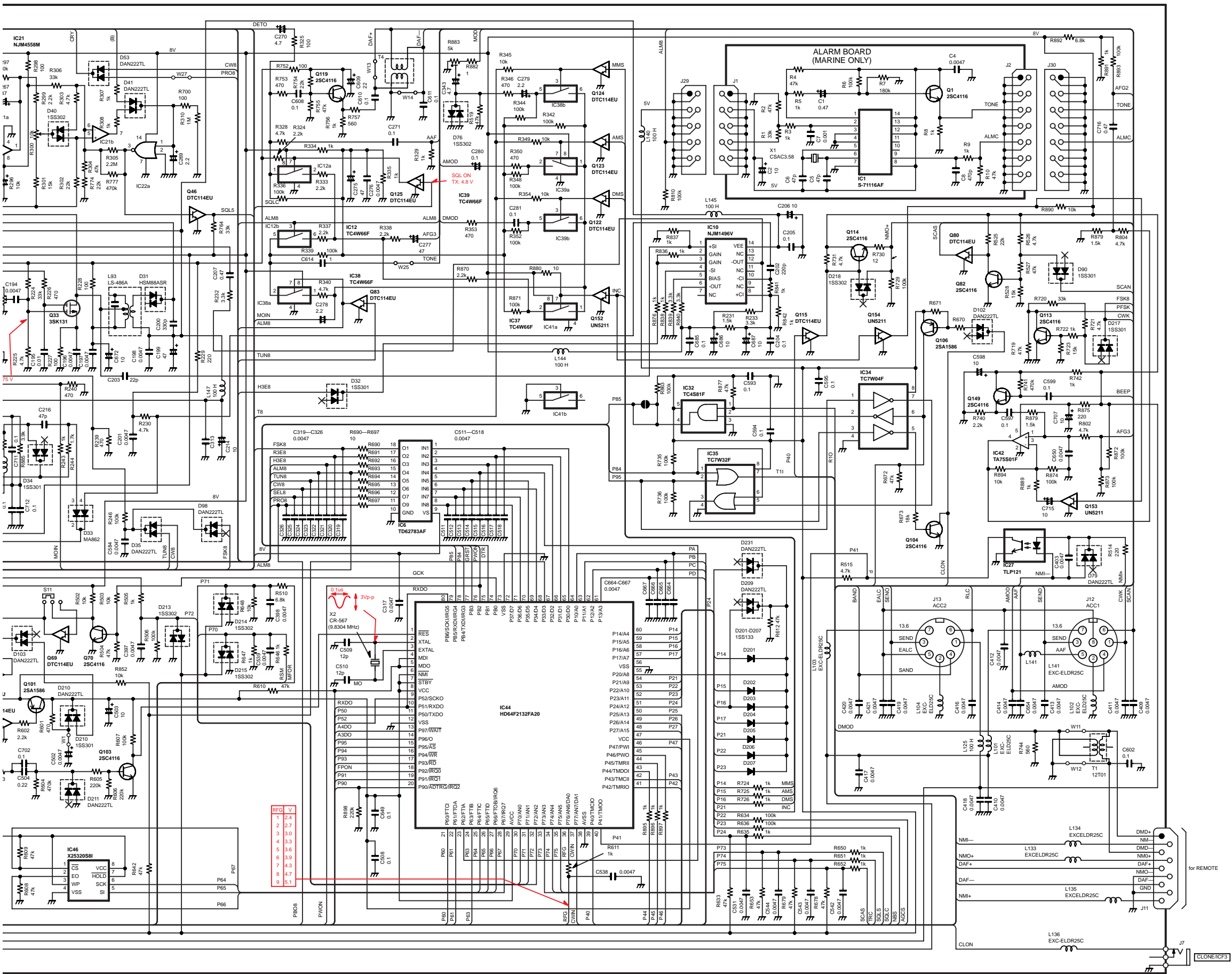




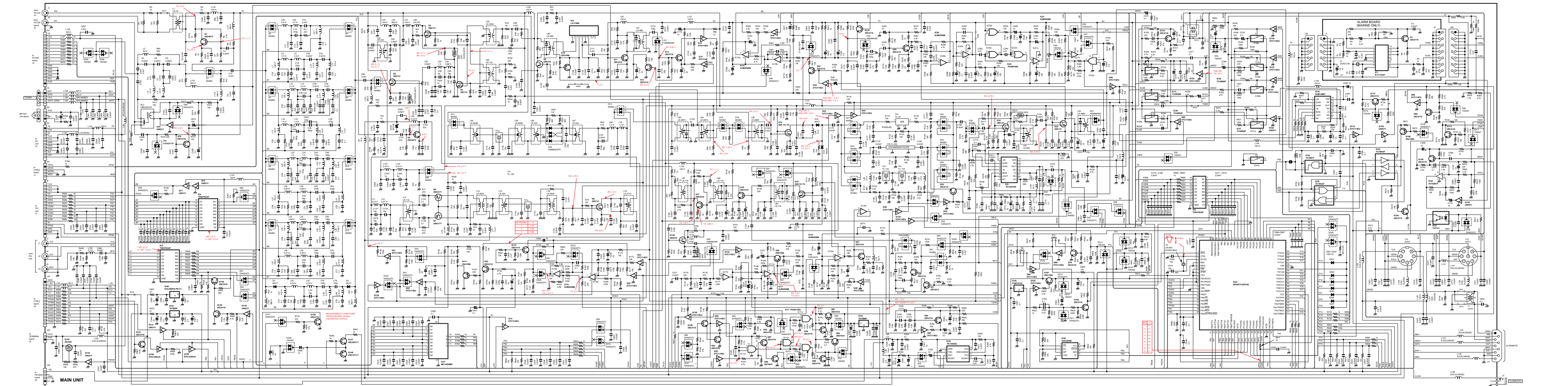
RF-POWER	V
1	1.15
2	2.05
3	3.05

1	2.4
2	2.7
3	3.0
4	3.3
5	3.6
6	3.9
7	4.3
8	4.7
9	5.1

COMPLETE VIEW



REF	1	2	3	4	5	6	7	8	9
	2.4	2.7	3.0	3.3	3.6	3.9	4.3	4.7	5.1



LEFT SIDE

CENTER

RIGHT SIDE

## Icom Inc.

6-9-16, Kamihigashi, Hirano-ku, Osaka 547-0002, Japan  
Phone : 06 6793 5302  
Fax : 06 6793 0013

### Icom America Inc.

<Corporate Headquarters>  
2380 116th Avenue N.E., Bellevue, WA 98004, U.S.A.  
Phone : (425) 454-8155 Fax : (425) 454-1509  
URL : <http://www.icomamerica.com>  
<Customer Service>  
Phone : (425) 454-7619

### Icom Canada

A Division of Icom America Inc.  
3071 #5 Road, Unit 9, Richmond, B.C., V6X 2T4, Canada  
Phone : (604) 273-7400 Fax : (604) 273-1900

### Icom (Australia) Pty. Ltd.

A.C.N. 006 092 575  
290-294 Albert Street, Brunswick, Victoria, 3056, Australia  
Phone : 03 9387 0666 Fax : 03 9387 0022  
URL : <http://www.icom.net.au>

### Asia Icom Inc.

6F No. 68, Sec. 1 Cheng-Teh Road, Taipei, Taiwan R.O.C.  
Phone : (02) 2559 1899 Fax : (02) 2559 1874

### Icom (Europe) GmbH

Communication Equipment  
Himmelgeister Str. 100, D-40225 Düsseldorf, Germany  
Phone : 0211 346047 Fax : 0211 333639  
URL : <http://www.icomeurope.com>

### Icom Spain S.L.

Ctra. de Gracia a Manresa Km. 14,750  
08190 Sant Cugat del Valles Barcelona, SPAIN  
Phone : (93) 590 26 70 Fax : (93) 589 04 46  
URL : <http://www.icomspain.com>

### Icom (UK) Ltd.

Unit 9, Sea St., Herne Bay, Kent, CT6 8LD, U.K.  
Phone : 01227 741741 Fax : 01227 741742  
URL : <http://www.icomuk.co.uk>

### Icom France Sa

Zac de la Plaine, Rue Brindejonc des Moulinais  
BP 5804, 31505 Toulouse Cedex, France  
Phone : 561 36 03 03 Fax : 561 36 03 00  
URL : <http://www.icom-france.com>



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**Icom Inc.**

6-9-16, Kamihigashi, Hirano-ku, Osaka 547-0002, Japan

A-5504HI-S1

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