

ICOM[®]

**SERVICE
MANUAL**

THE TRANSCEIVER

IC-7800

Icom Inc.

INTRODUCTION

This service manual describes the latest service information for the **IC-7800 THE TRANSCEIVER** at the time of publication.

MODEL	SYMBOL	VERSION
IC-7800	USA	U.S.A.
	EUR	Europe
	FRA	France
	ITR	Italy
	KOR	Korea
	ESP	Spain
	UK	United Kingdom

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



ORDERING PARTS

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>

1110003870 S.IC NJM2058M IC-7800 MAIN UNIT 5 pieces
8810008450 Screw BIH M4x8 ZK IC-7800 Top cover 10 pieces

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

DANGER

NEVER connect the transceiver to an DC power supply or to an AC outlet that uses more than 265 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.

REPAIR NOTES

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	0.030–60.000 MHz*1, *2	
Transmit	1.800–1.999 MHz*2	3.500–3.999 MHz*2
	5.332, 5.348, 5.368, 5.373, 5.405 MHz*2	
	7.000–7.300 MHz*2	10.100–10.150 MHz*2
	14.000–14.350 MHz*2	18.068–18.168 MHz*2
	21.000–21.450 MHz*2	24.890–24.990 MHz*2
	28.000–29.700 MHz*2	50.000–54.000 MHz*2

*1 Some frequency bands are not guaranteed.
*2 Depending on version.
- Mode : USB, LSB, CW, RTTY, AM, FM, PSK31
- Number of memory channels : 101 (99 regular, 2 scan edges)
- Antenna connector : SO-239 × 4 and phono [(RCA); 50 Ω]
- Usable temp. range: 0°C to +50°C (32°F to 122°F)
- @Frequency stability : Less than ±0.5 ppm from 1 min. after power ON.
- Freq. resolution : 1 Hz
- Power supply voltage : AC 85 V–265 V (negative ground)
- Current drain :

Transmit	max. power	800 VA
Receive	stand-by	200 VA (typical)
	max. audio	210 VA (typical)
- Dimensions : 424 (W) × 149(H) × 435(D) mm (Proj. not included) 161¹/₁₆(W) × 57⁸/₁₆(H) × 171⁸/₁₆(D) in
- Weight : Approximate 25 kg (57 lb 6 oz)
- ACC 1 connector : 8-pin DIN connector
- ACC 2 connector : 7-pin DIN connector
- CI-V connector : 2-conductor 3.5(d) mm (1/8")
- Display : 7-inch wide TFT color LCD

■ TRANSMITTER

- Output power :

HF: SSB/CW/RTTY/FM/PSK31	5–200 W
AM	5–50 W
137 kHz: CW	More than –20 dBm
- Modulation system :

SSB	PSN modulation
AM	Low power modulation
FM	Phase modulation
- Spurious emission : More than 60 dB (HF bands)
More than 70 dB (50 MHz band)
- Carrier suppression: More than 63 dB
- Unwanted sideband suppression: More than 80 dB
- Mic. connector : 8-pin connector (600 Ω)
- ELE-KEY connector: 3-conductor 6.35(d) mm (1/4")
- KEY connector : 3-conductor 6.35(d) mm (1/4")
- SEND connector : Phono (RCA)
- ALC connector : Phono (RCA)

■ RECEIVER

- Receive system : Triple-conversion superheterodyne
- Intermediate frequencies:

1st IF frequency	64.455 MHz
2nd IF frequency	455 kHz
3rd IF frequency	36 kHz
- Sensitivity (Typ.) :

SSB, CW, RTTY (at 2.4 kHz bandwidth)	
0.1–1.799 MHz*1	0.5 μV (10 dB S/N)
1.8–29.99 MHz*1	0.16 μV (10 dB S/N)
50.0–54.0 MHz*2	0.13 μV (10 dB S/N)
AM (at 6.0 kHz bandwidth)	
0.1–1.799 MHz*1	6.3 μV (10 dB S/N)
1.8–29.99 MHz*1	2.0 μV (10 dB S/N)
50.0–54.0 MHz*2	1.0 μV (10 dB S/N)
FM (at 15 kHz bandwidth)	
28.0–29.99 MHz*1	0.5 μV (12 dB SINAD)
50.0–54.0 MHz*2	0.32 μV (12 dB SINAD)

*1 Pre-amp1 is ON *2 Pre-amp2 is ON
- Internal Modulate Distortion (Typ.)
Dynamic range is 109 dB at 100 MHz, 100 kHz separation (Pre-amp1 and Pre-amp2 are OFF).
- Squelch sensitivity : (Pre-amp OFF)

SSB/CW/RTTY/PSK31	Less than 5.6 μV
FM	Less than 1.0 μV
- Selectivity :

SSB/RTTY (at 2.4 kHz bandwidth)	
	More than 2.4 kHz/–3 dB
	Less than 3.6 kHz/–60 dB
CW (at 500 Hz bandwidth)	
	More than 500 Hz/–3 dB
	Less than 700 Hz/–60 dB
AM (at 6 kHz bandwidth)	
	More than 6.0 kHz/–3 dB
	Less than 15.0 kHz/–60 dB
FM (at 15 kHz bandwidth)	
	More than 12 kHz/–6 dB
	Less than 20 kHz/–60 dB
- Spurious and image rejection response ratio: More than 70 dB
- RIT variable range : ±9.999 kHz
- Audio output power: More than 2.6 W at 10 % distortion with an 8 Ω load
- PHONES connector: 3-conductor 6.35 (d) mm (1/4")
- EXT SP connector : 2-conductor 3.5 (d) mm (1/8") 8 Ω

■ ANTENNA TUNER

- Output matching range:

HF bands	16.7 to 150 Ω unbalanced*1
50 MHz band	20 to 125 Ω unbalanced*2

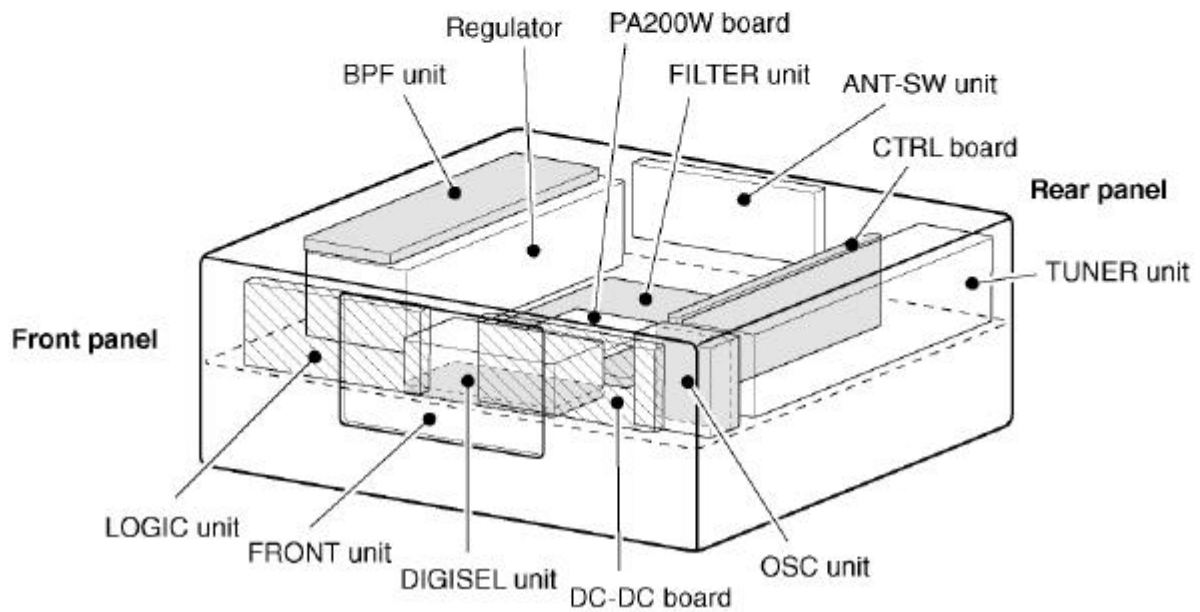
*1 Less than VSWR 3:1; *2 Less than VSWR 2.5:1
- Minimum operating input power:

HF bands	: 8 W
50 MHz band	: 15 W
- Tuning accuracy : VSWR 1.5:1 or less
- Insertion loss : Less than 1.0 dB (after tuning)

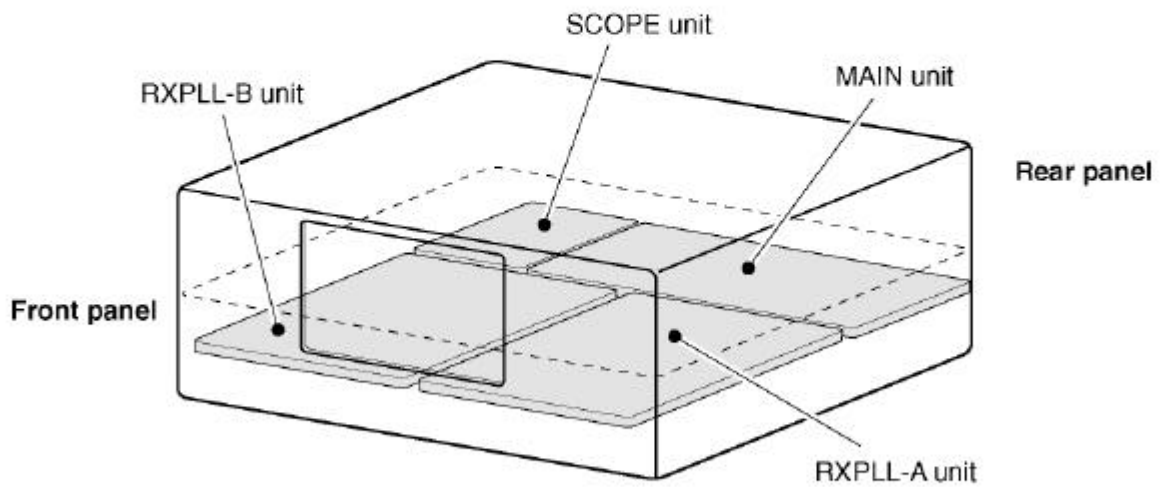
All stated specifications are subject to change without notice or obligation.

SECTION 2 INSIDE VIEWS

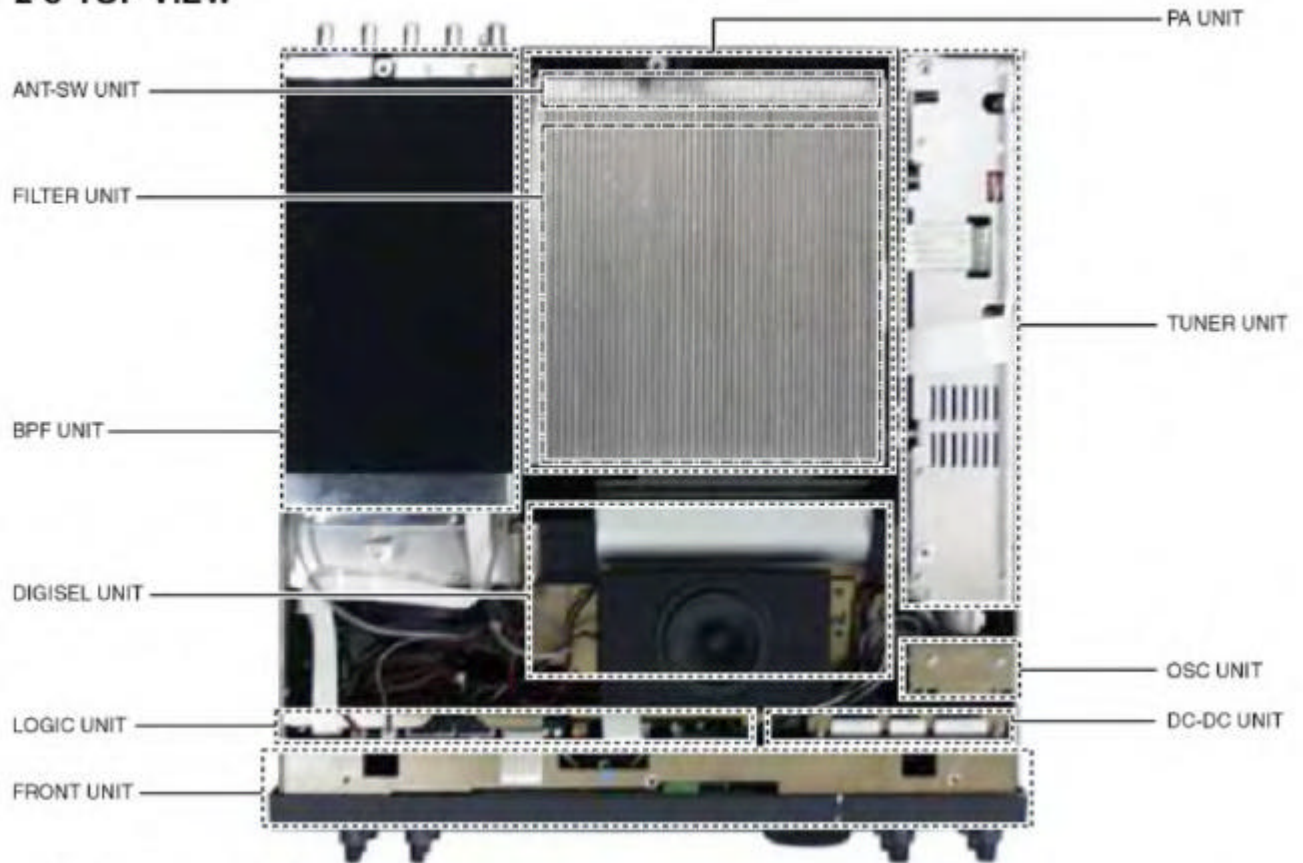
2-1 UPPER LAYER



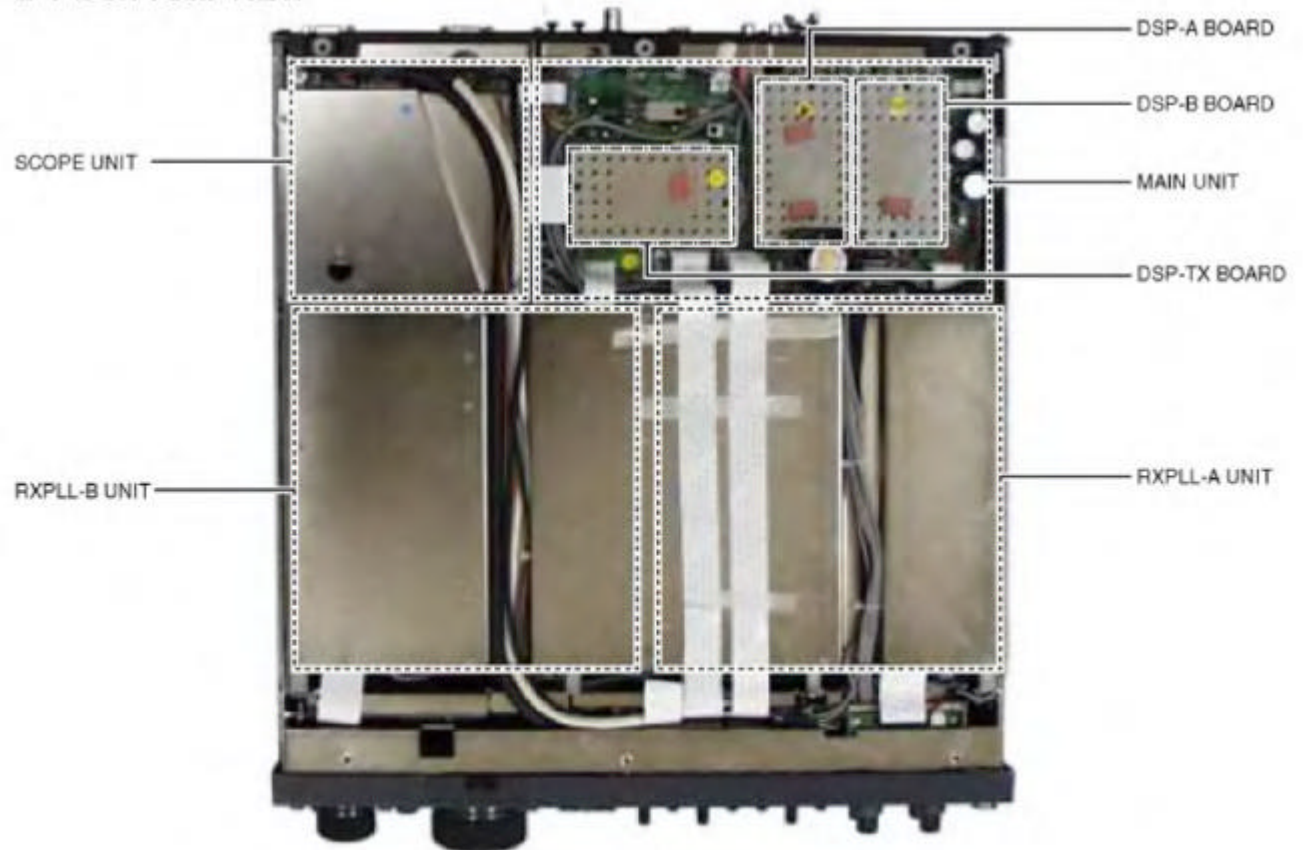
2-2 UNDER LAYER



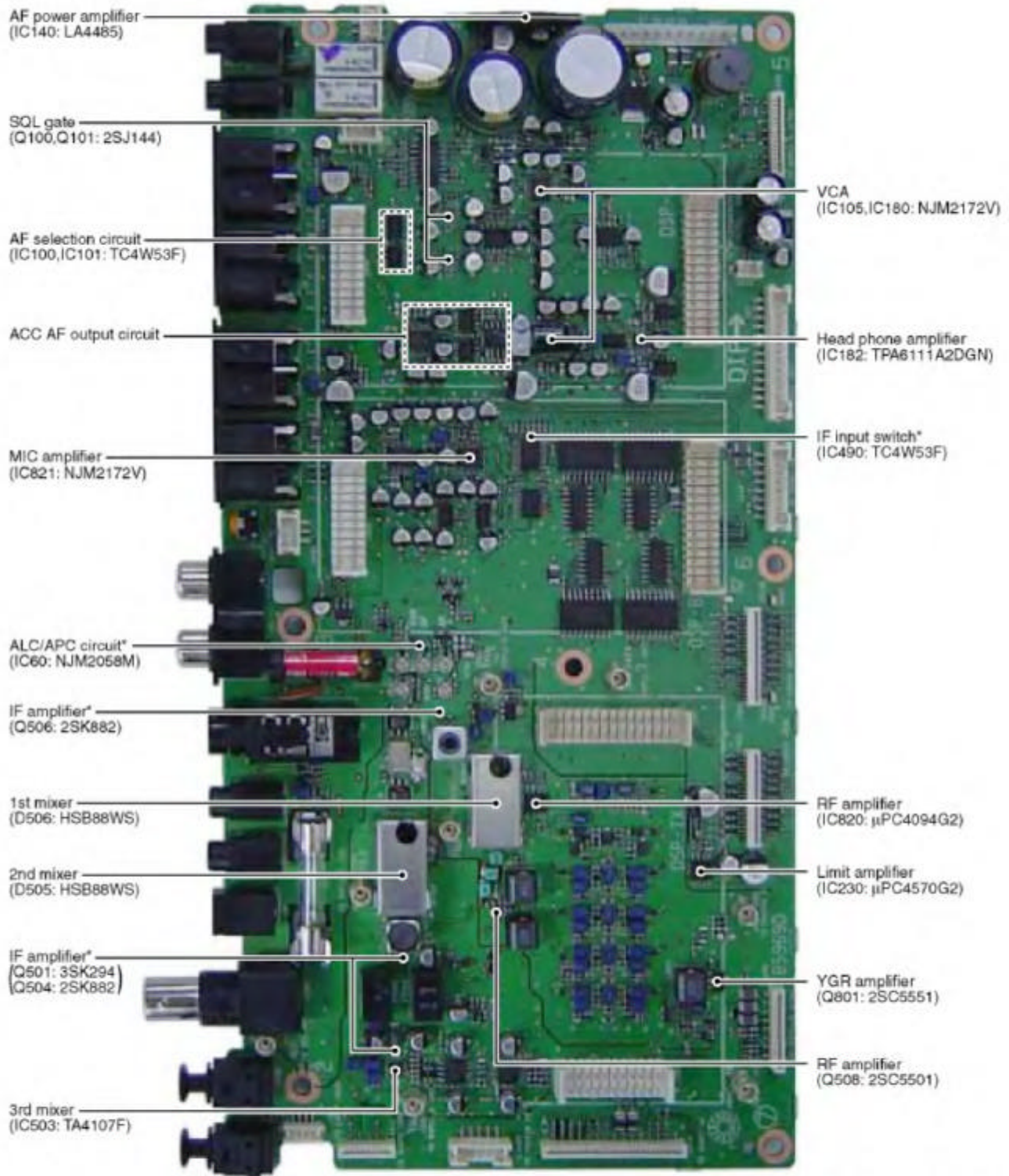
2-3 TOP VIEW



2-4 BOTTOM VIEW

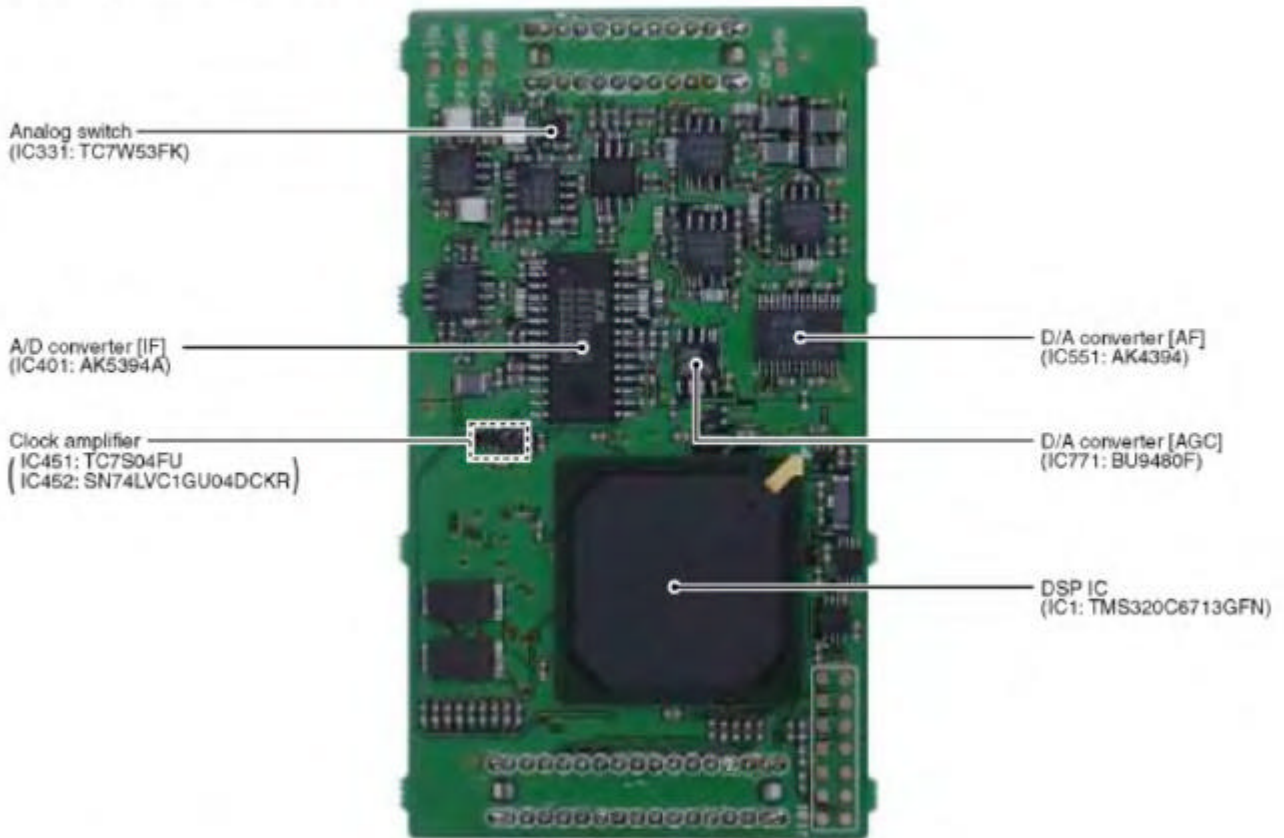


2-5 MAIN UNIT

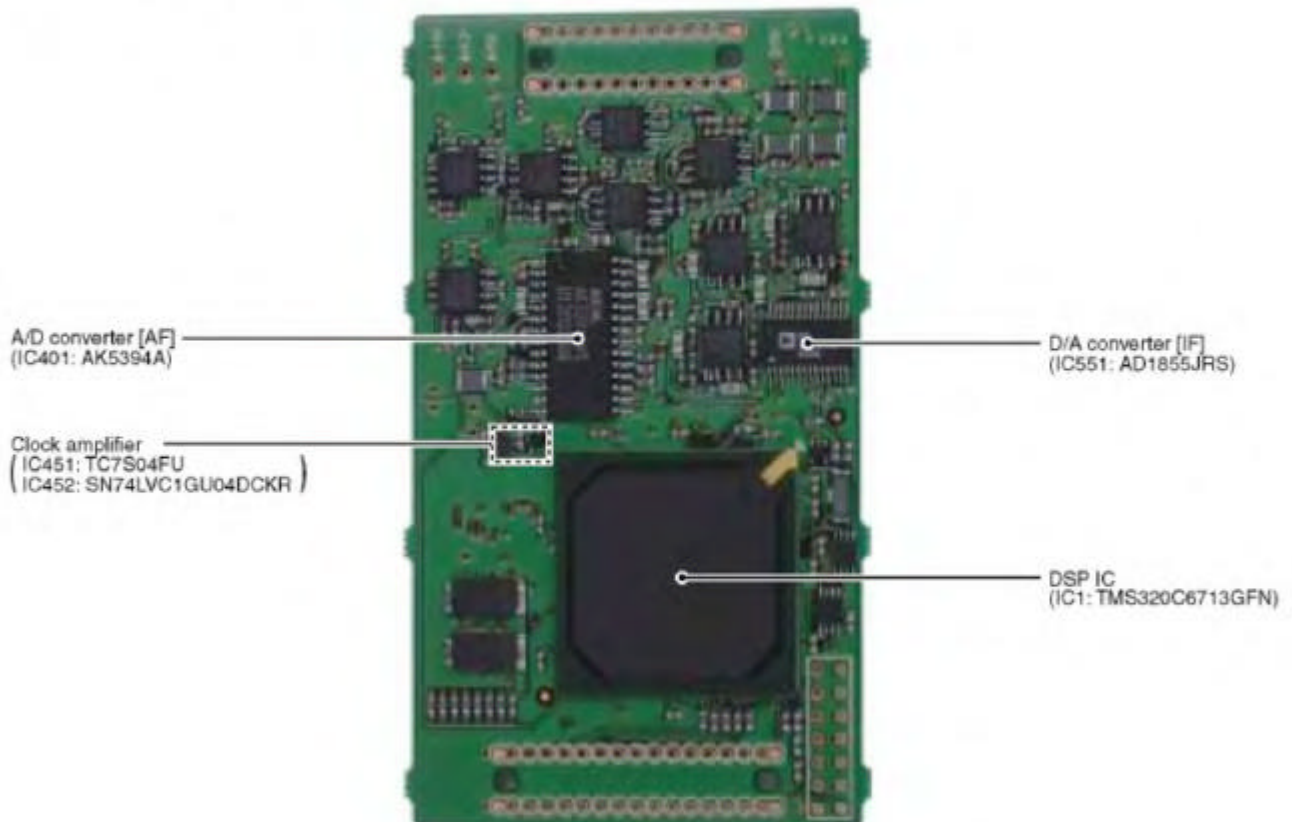


*Located under side of the point

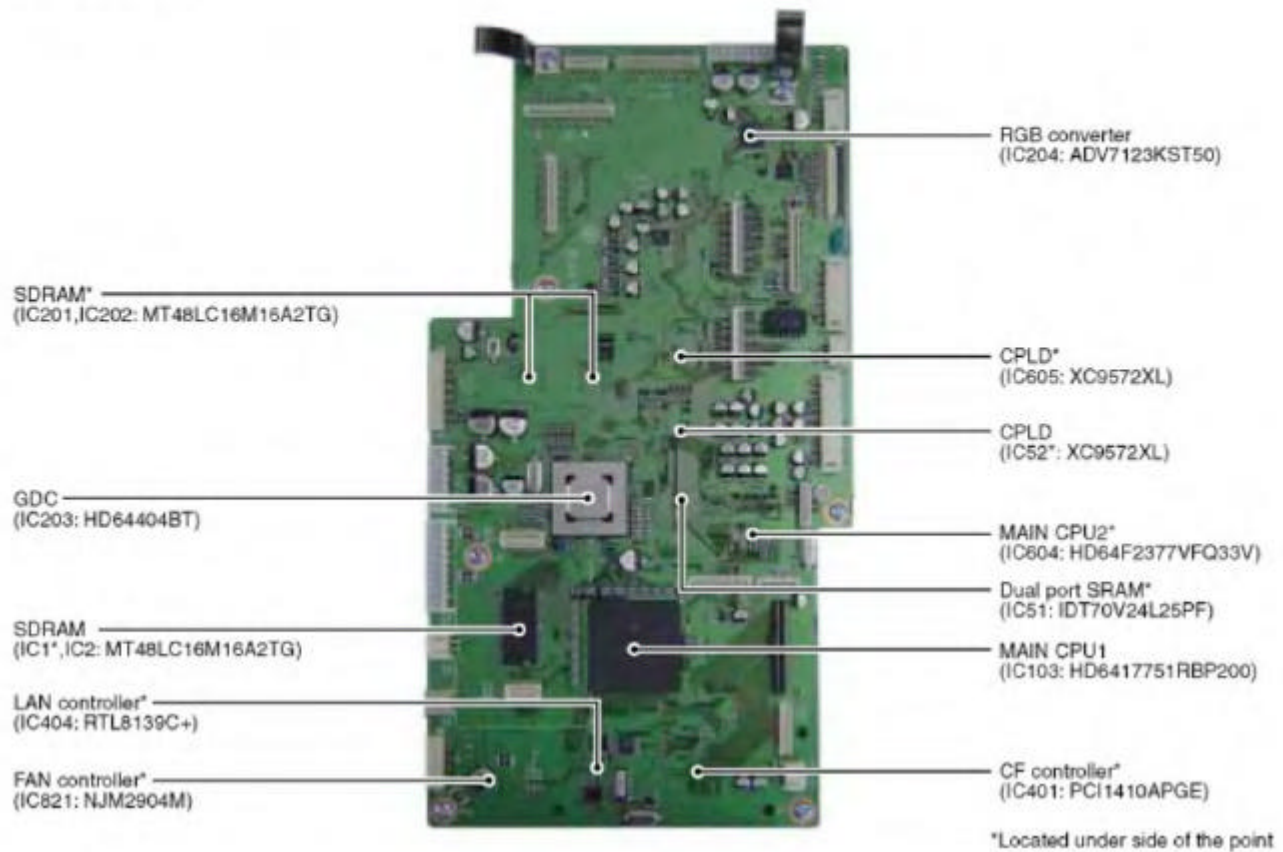
2-6 DSP-A/DSP-B BOARDS



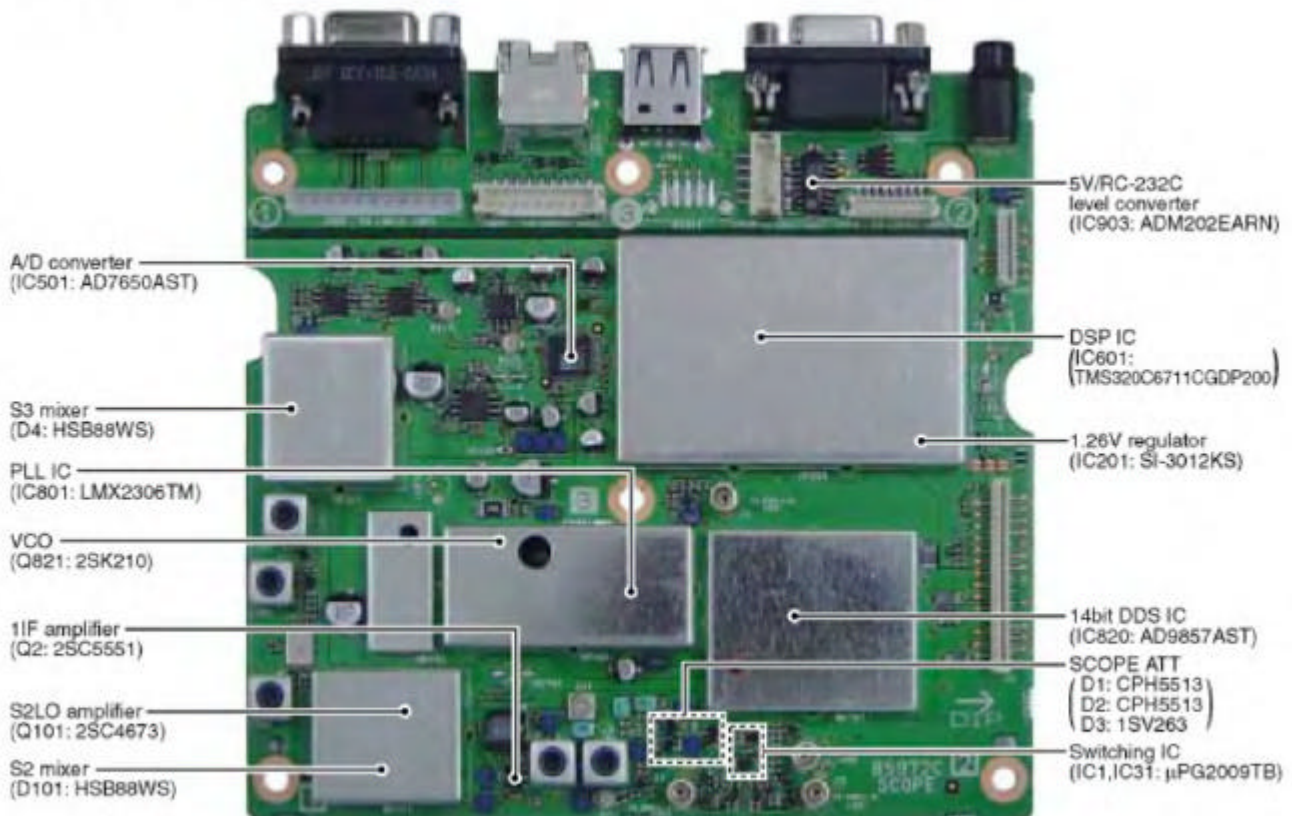
2-7 DSP-TX BOARD



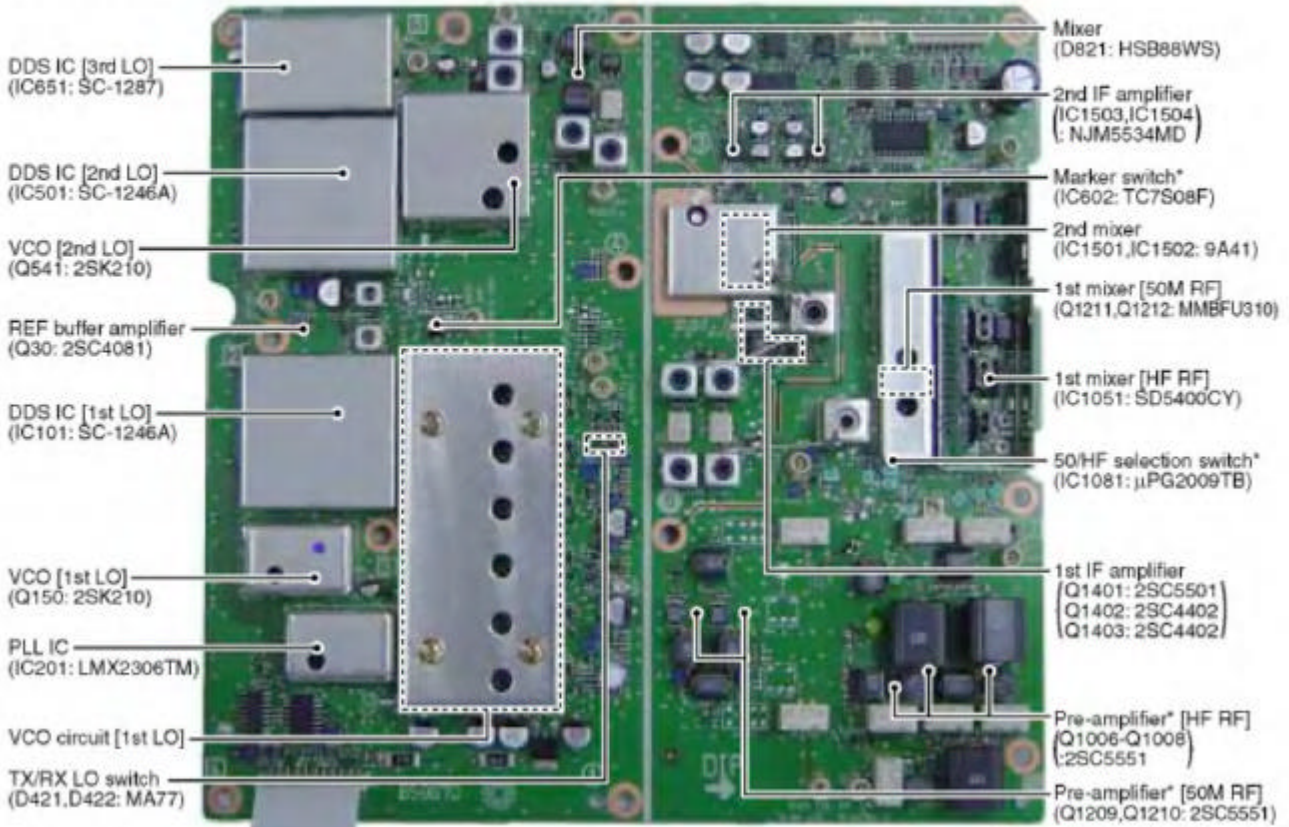
2-8 LOGIC UNIT



2-7 SCOPE UNIT

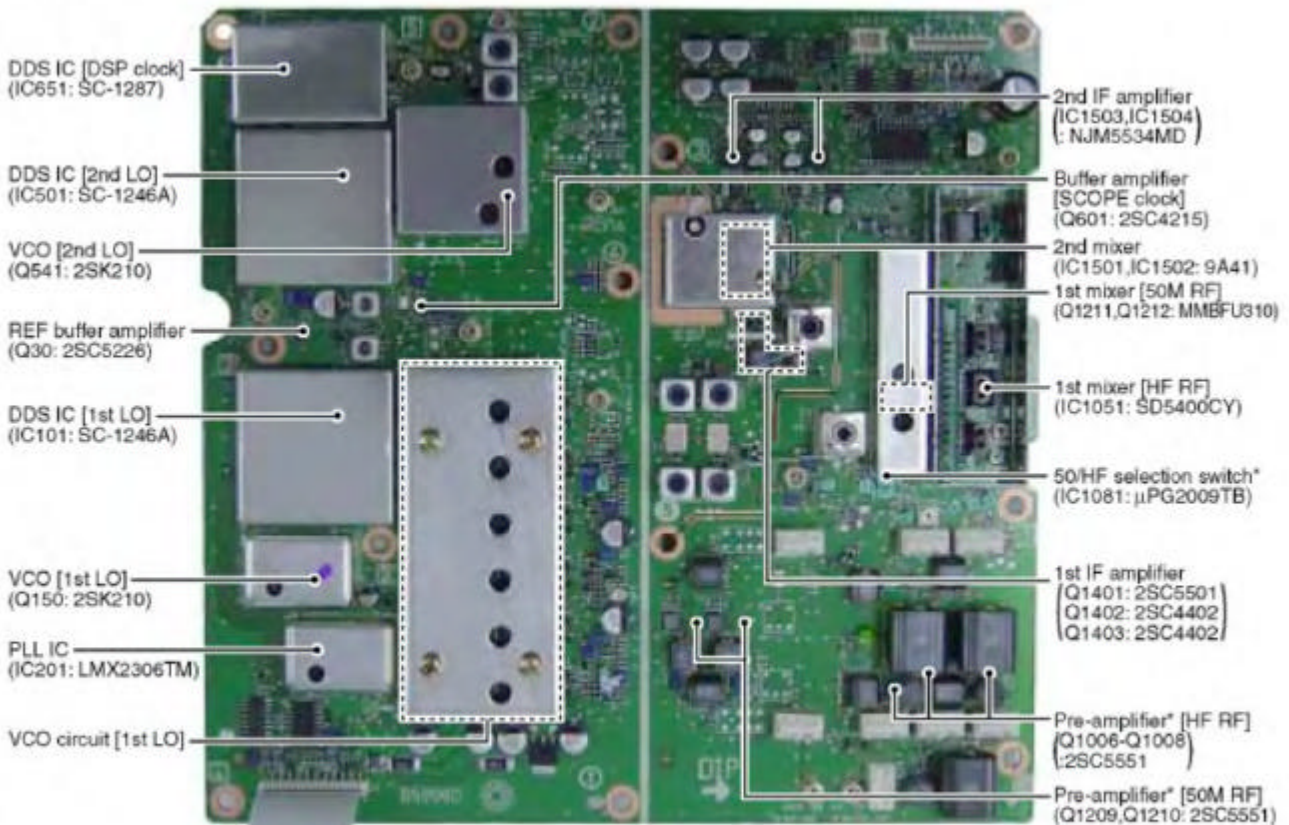


2-9 RXPLL-A BOARD



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2-10 RXPLL-B UNIT

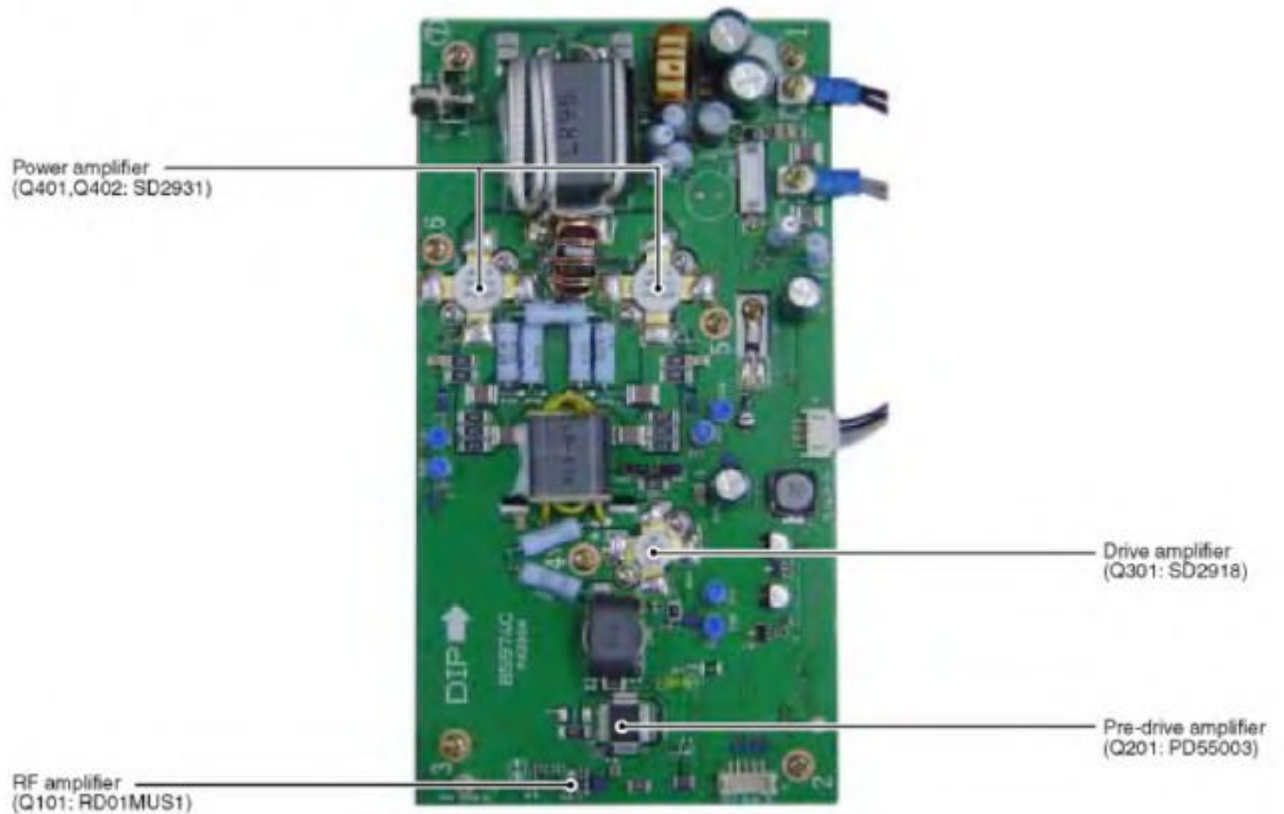


*Located under side of the point

2-11 OSC UNIT



2-12 PA200W BOARD



SECTION 3 CIRCUIT DESCRIPTION

3-1 RECEIVER CIRCUITS

3-1-1 ANTENNA SWITCHING CIRCUIT (ANT-SW UNIT)

The ANTENNA switching circuit leads receive signals to bandpass filters from an antenna connector while receiving. However, the circuit leads the signal from the RF power amplifier to the antenna connector while transmitting. RF signals are applied to the RX-A, RX-B or RX-ONLY circuits.

• RX-A CIRCUIT

RF signals from [ANT1], [ANT2], [ANT3] or [ANT4] pass through one of the antenna selectors (RL51; passing through [ANT1], RL61; passing through [ANT2], RL71; passing through [ANT3], RL81; passing through the ANT4), and are then applied to the CTRL board via J1.

The RF signals pass through the current detector (CTRL board; D301, D302), and are then applied to the BPF unit via J351 on the CTRL board.

• RX-B CIRCUIT

RF signals from [ANT1], [ANT2], [ANT3] or [ANT4] pass through one of the antenna selectors (RL52; passing through [ANT1], RL62; passing through [ANT2], RL72; passing through [ANT3], RL82; passing through the ANT4), and are then applied to the BPF unit via J2.

• RX-ONLY CIRCUIT

RF signals from [ANT4] pass through the antenna selector (RL84), and are then applied to the BPF unit via J3.

3-1-2 BANDPASS FILTER CIRCUIT (BPF, DIGISEL-A AND DIGISEL-B UNITS)

RF bandpass filters pass only the desired band signals and suppress any undesired band signals. The RF circuit has 11 bandpass filters and 1 low-pass filter.

• RX-A OR RX-ONLY CIRCUITS

RF signals from RX-A circuit (CTRL board; J1) or RX-ONLY circuit (ANT-SW unit; J3) are applied to the RF signal switching circuit (RL402) via the REV_Po detector (Q401, D402). The filtered signals pass through (or bypass) splitter (L371–L373) via the RL371 and RL355, and are then attenuated at RL354 (3 dB), RL353 (6 dB) and RL352 (12 dB). A portion of the filtered signals are separated at the splitter, and are then applied to the RX-B circuit's DW selector (RL855).

The attenuated signals pass through the low-pass filter or one of the bandpass filters.

(1) 0.03–30 MHz (BPF BOARD AND DIGISEL-A UNIT)

The signals pass through the low-pass filter or one of the 9 bandpass filters. The filtered signals pass through (or bypass) the bandpass filter and the RF amplifier (DIGISEL-A unit; Q201) via the D S THRU selector (RL21 and RL2) on the DIGISEL-A unit, and are then applied to the pre-amplifier circuit on the RXPLL-A unit.

(2) 50–60 MHz (BPF BOARD)

The signals pass through the one of the 2 bandpass filters, and are then amplified (or bypass) at the DW amplifier (Q901) via the DW selector (RL900, RL901). The signals are applied to (or bypass) the pre-amplifier circuit.

• RX-B CIRCUIT

RF signals from RX-B circuit (ANT-SW unit; J2) pass through the REV_Po detector (Q873, D872). The signals are applied to the DW selector (RL855). A portion of RF signals from RX-A or RX-ONLY circuits are applied to the this selector too.

The signals are attenuated at RL854 (3 dB), RL853 (6 dB) and RL852 (12 dB), and are then applied to the 6M selector (RL851).

The attenuated signals pass through the low-pass filter or one of the bandpass filters.

(1) 0.03–30 MHz (BPF BOARD AND DIGISEL-B UNIT)

The signals pass through the low-pass filter or one of the 9 bandpass filters. The filtered signals pass through (or bypass) the bandpass filter and the RF amplifier (DIGISEL-B unit; Q701) via the D_S_THRU selector (RL521 and RL502) on the DIGISEL-B unit, and are then applied to the pre-amplifier circuit on the RXPLL-B unit.

(2) 50–60 MHz (BPF BOARD)

The signals pass through the one of the 2 bandpass filter, and are then amplified (or bypass) at the DW amplifier (Q951) via the DW selector (RL950, RL951). The signals are applied to (or bypass) the pre-amplifier circuit.

3-1-3 PRE-AMPLIFIER CIRCUITS (BPF UNIT, DIGISEL-A, RXPLL-A, DIGISEL-B AND RXPLL-B UNITS)

The IC-7800 has 2 gain levels of pre-amplifier circuits which is composed of the pre-amplifier1 and pre-amplifier2. The circuit is controlled by the [P.AMP] switch.

• RX-A OR RX-ONLY CIRCUITS

(1) 0.03–30 MHz (DIGISEL-A AND RXPLL-A UNIT)

The RF signals from the DIGISEL-A unit are applied to (or bypass) the DW amplifier (Q1001) via the DW selector (RL1001, RL1002), and are then applied to the pre-amplifier circuit.

When the [P.AMP] switch is set to [P.AMP 1] or [P.AMP 2], the signals are applied to the pre-amplifier1 (Q1007, Q1008) or pre-amplifier2 (Q1006) circuit via the P.AMP_ON selector (RL1003, RL1006) and P.AMP selector (RL1004, RL1005), respectively. Pre-amplified or bypassed signals are applied to the 1st mixer circuit after being passed through the low-pass filter (L1051–L1054, C1053–C1059, C1067).

(2) 50–60 MHz (BPF UNIT AND RXPLL-A UNIT)

When the [P.AMP] switch is set to [P.AMP 1] or [P.AMP 2], the amplified signals from the DW amplifier (BPF unit; Q901) are applied to the pre-amplifier2 (BPF unit; Q903) or pre-amplifier1 (RXPLL-A unit; Q1209, Q1210) via the P.AMP2_ON selector (BPF unit; RL902, RL903) and P.AMP1_ON selector (RXPLL-A unit; RL1203, RL1206), respectively. Pre-amplified or bypassed signals are applied to the 1st mixer circuit after being passed through the low-pass filter (RXPLL-A unit; L1217–L1219, C1244–C1250).

• RX-B CIRCUIT

(1) 0.03–30 MHz (DIGISEL-B AND RXPLL-B UNIT)

The RF signals from the DIGISEL-B unit are applied to (or bypass) the DW amplifier (Q1001) via the DW selector (RL1001, RL1002), and are then applied to the pre-amplifier circuit.

When the [P.AMP] switch is set to [P.AMP 1] or [P.AMP 2], the signals are applied to the pre-amplifier1 (Q1007, Q1008) or pre-amplifier2 (Q1006) circuit via the P.AMP_ON selector (RL1003, RL1006) and P.AMP selector (RL1004, RL1005), respectively. Pre-amplified or bypassed signals are applied to the 1st mixer circuit after being passed through the low-pass filter (L1052–L1054, C1053–C1059, C1067).

(2) 50–60 MHz (BPF BOARD AND RXPLL-B UNIT)

When the [P.AMP] switch is set to [P.AMP 1] or [P.AMP 2], the amplified signals from the DW amplifier (BPF unit; Q951) are applied to the pre-amplifier2 (BPF unit; Q953) or pre-amplifier1 (RXPLL-B unit; Q1209, Q1210) via the P.AMP2_ON selector (BPF unit; RL952, RL953) and P.AMP1_ON selector (RXPLL-B unit; RL1203, RL1206), respectively. Pre-amplified or bypassed signals are applied to the 1st mixer circuit after being passed through the low-pass filter (RXPLL-B unit; L1217–L1219, C1244–C1250).

3-1-4 1ST MIXER CIRCUIT (RXPLL-A AND RXPLL-B UNITS)

The 1st mixer circuit mixes the receive signals with the 1st LO signal to convert the receive signal frequencies into a 64.455 MHz (main) or 64.555 MHz (sub) 1st IF signal. The IC-7800 has four 1st mixer circuits for the dualwatch function.

• RX-A OR RX-ONLY CIRCUITS (RXPLL-A UNIT)

(1) 0.03–30 MHz

The signals from the pre-amplifier circuit pass through the L1055, and are then applied to the 1st mixer circuit (IC1051). The applied signals are mixed with 1st LO signal from the RXPLL-A circuit to convert from RF signals to a 64.455 MHz 1st IF signal.

The 1st IF signal passes through the low-pass filter (L1058–L1060, L1062, C1061–C1064, C1066, R1054), and is then applied to the 1st IF circuit.

(2) 50–60 MHz

The signals from the pre-amplifier circuit pass through the L1220, and are then applied to the 1st mixer circuit (Q1211, Q1212). The applied signals are mixed with 1st LO signal from the RXPLL-A circuit to convert from RF signals to a fixed 64.455 MHz 1st IF signal.

The 1st IF signal is applied to the 1st IF circuit.

• RX-B CIRCUIT (RXPLL-B UNIT)

(1) 0.03–30 MHz

The signals from the pre-amplifier circuit pass through the L1055, and are then applied to the 1st mixer circuit (IC1051). The applied signals are mixed with 1st LO signal from the RXPLL-B circuit to convert from RF signals to a fixed 64.555 MHz 1st IF signal.

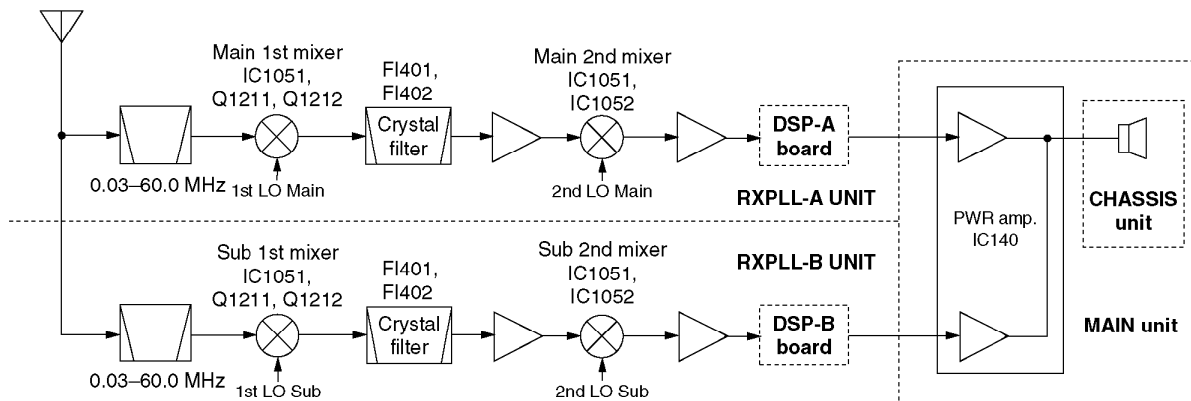
The 1st IF signal is applied to the 1st IF circuit.

(2) 50–60 MHz

The signals from the pre-amplifier circuit pass through the L1220, and are then applied to the 1st mixer circuit (Q1211, Q1212). The applied signals are mixed with 1st LO signal from the RXPLL-B circuit to convert from RF signals to a fixed 64.555 MHz 1st IF signal.

The 1st IF signal is applied to the 1st IF circuit.

• RECEIVER CONSTRUCTION



3-1-5 1ST IF CIRCUIT (RXPLL-A AND RXPLL-B UNITS)

The 1st IF circuit filters and amplifies the 1st IF signal. The 1st IF signal selected at 50/HF selector is applied to an MCF (Monolithic Crystal Filter) to suppress out-of-band signals.

• RX-A OR RX-ONLY CIRCUITS (RXPLL-A UNIT)

The filtered 1st IF signals from the HF band 1st mixer and 50 MHz band 1st mixer are applied to the 50/HF selector (IC1081, pin 3: for HF band / pin 1: for 50 MHz band) respectively. The signal from pin 5 of the 1st mixer passes through the one of the two crystal bandpass filters (FI1401: bandwidth is 15 kHz, or FI1402: bandwidth is 6 kHz) via the FIL selector (IC1402, IC1403). The filtered signal is amplified at the 1st IF amplifiers (Q1401–Q1403). The amplified 1st IF signal is applied to the 2nd mixer circuit.

• RX-B CIRCUIT (RXPLL-B UNIT)

The filtered 1st IF signals from the HF band 1st mixer and 50 MHz band 1st mixer are applied to the 50/HF selector (IC1081, pin 3: for HF band / pin 1: for 50 MHz band) respectively. The signal from pin 5 of the 1st mixer passes through the one of the two crystal bandpass filters (FI1401: bandwidth is 15 kHz, or FI1402: bandwidth is 6 kHz) via the FIL selector (IC1402, IC1403). The filtered signal is amplified at the 1st IF amplifiers (Q1401–Q1403), and is then applied to the 2nd mixer circuit.

3-1-6 2ND MIXER CIRCUIT (RXPLL-A AND RXPLL-B UNIT)

The 2nd mixer circuit mixes the amplified 1st IF signal and 2nd LO signal for conversion into the 2nd IF signal.

• RX-A OR RX-ONLY CIRCUITS (RXPLL-A UNIT)

The 1st IF signal from the 1st IF amplifier (Q1401–Q1403) is applied to the 2nd mixer circuit (IC1501, pin 4; IC1502, pin 4) respectively. The applied signals are mixed with 2nd LO signal from the RXPLL-A circuit to convert from 1st IF signal to 36 kHz 2nd IF signal.

The 2nd IF signal from the 2nd mixer circuit (IC1501, pin 5) is amplified at the buffer amplifier (Q1501), and is then applied to the 2nd IF amplifier (IC1503, pin 3). The signal is applied to the 90 degrees transphasor (IC1505, pin 6).

The 2nd IF signal from the other 2nd mixer circuit (IC1502, pin 5) is amplified at the buffer amplifier (Q1502), and is then applied to the 2nd IF amplifier (IC1504, pin 3). The signal is applied to the 90 degrees transphasor (IC1505, pin 2).

The signals from the 90 degrees transphasor (IC1505, pin 1 and 7) are applied to the compositor (IC1505, pins 9 and 10). The signals is amplified at other 2nd IF amplifier, and is then applied to the DSP-A unit to demodulate 2nd IF signal.

A portion of 2nd IF signal from the compositor (IC1505, pin 8) is applied to the AGC detector circuit.

The 2nd mixer circuit has 2 mixers and 90 degrees transphasor to improve image rejection ratio.

• RX-B CIRCUIT (RXPLL-B UNIT)

The 1st IF signal from the 1st IF amplifier (Q1401–Q1403) is applied to the 2nd mixer circuit (IC1501, pin 4; IC1502, pin 4) respectively. The applied signals are mixed with 2nd LO signal from the RX-B circuit to convert from 1st IF signal to 36 kHz 2nd IF signal.

The 2nd IF signal from the 2nd mixer circuit (IC1501, pin 5) is amplified at the buffer amplifier (Q1501), and is then applied to the 2nd IF amplifier (IC1503, pin 3). The signal is applied to the 90 degrees transphasor (IC1505, pin 6).

The 2nd IF signal from the other 2nd mixer circuit (IC1502, pin 5) is amplified at the buffer amplifier (Q1502), and is then applied to the 2nd IF amplifier (IC1504, pin 3). The signal is applied to the 90 degrees transphasor (IC1505, pin 2).

The signals from the 90 degrees transphasor (IC1505, pin 1 and 7) are applied to the compositor (IC1505, pins 9 and 10). The signals is amplified at other 2nd IF amplifier, and is then applied to the DSP-B unit to demodulate 2nd IF signal.

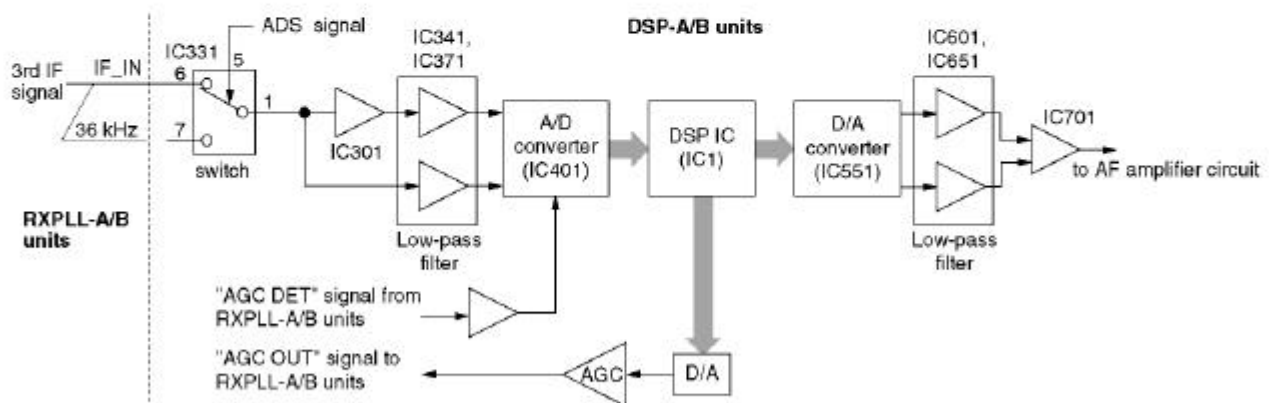
A portion of 2nd IF signal from the compositor (IC1505, pin 8) is applied to the AGC detector circuit.

The 2nd mixer circuit has 2 mixers and 90 degrees transphasor to improve image rejection ratio.

3-1-7 DSP RECEIVER CIRCUIT (DSP-A AND DSP-B UNITS)

The DSP (Digital Signal Processor) circuit enables digital IF filter, digital noise reduction, digital PSN (Phase Shift Network)/Low Power/Phase demodulation, digital automatic notch, etc.

• DSP CIRCUIT (RECEIVER)



• RX-A AND RX-ONLY CIRCUITS (DSP-A UNIT)

The 36 kHz 2nd IF signal from the 2nd IF amplifier (RXPLL-A unit, IC1506) passes through the analog switch (IC331, pins 7, 1) with limiter function, and is then applied to the buffer amplifiers (IC301; pin 2, IC341; pin 2, IC371; pin 2) to convert to balancing signal. The signal is applied to the A/D convertor IC (IC401, pins 4, 5).

The digital signals are applied to the DSP IC (IC1) to do filtering, demodulate and so on. The demodulated digital signals are applied to the D/A convertor IC (IC551) to convert analog AF signals.

The signals pass through the low-pass filter (IC601, pins 3 and 6, IC651, pins 3 and 6), and are then applied to the buffer amplifier (IC701, pins 2 and 3) to convert to unbalancing signals.

The signals are applied to the AF amplifier circuit.

• RX-B CIRCUIT (DSP-B UNIT)

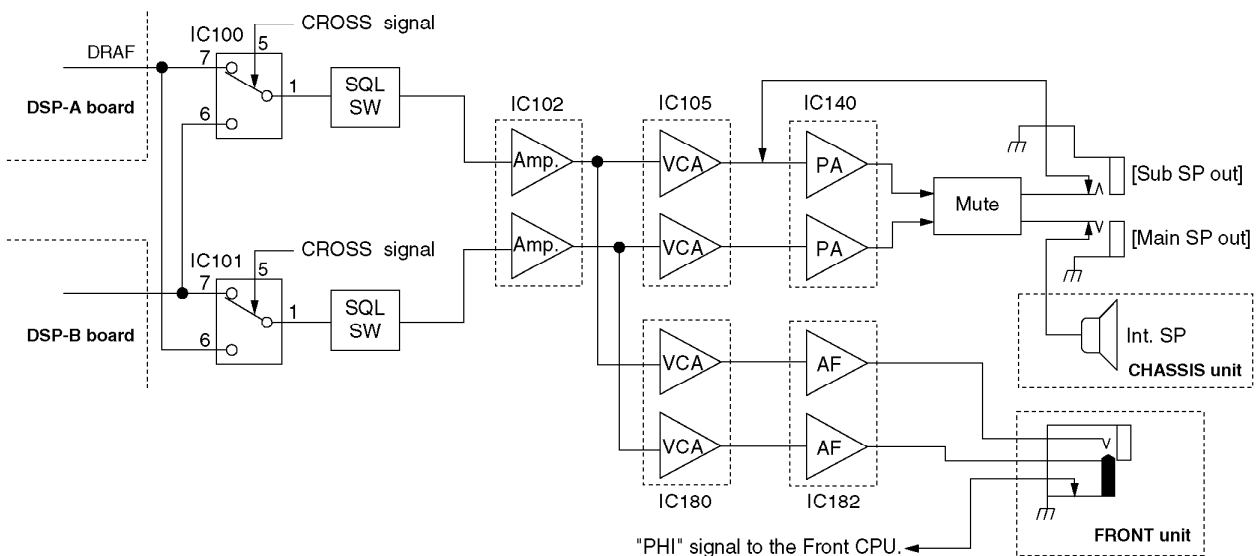
The 36 kHz 2nd IF signal from the 2nd IF amplifier (RXPLL-B unit, IC1506) passes through the analog switch (IC331, pins 7, 1) with limiter function, and is then applied to the buffer amplifiers (IC301; pin 2, IC341; pin 2, IC371; pin 2) to convert to balancing signal. The signal is applied to the A/D convertor IC (IC401, pins 4, 5).

The digital signals are applied to the DSP IC (IC1) to do filtering, demodulate and so on. The demodulated digital signals are applied to the D/A convertor IC (IC551) to convert analog AF signals.

The signals pass through the low-pass filter (IC601, pins 3 and 6, IC651, pins 3 and 6), and are then applied to the buffer amplifier (IC701, pins 2 and 3) to convert to unbalancing signals.

The signals are applied to the AF amplifier circuit.

• AF AMPLIFIER CIRCUIT



3-1-8 AF AMPLIFIER CIRCUITS (MAIN UNIT)

The AF amplifier circuits amplifies the AF input signals to the suitable driving level for the speaker.

• MAIN SPEAKER OUTPUT

The AF signals from the DSP-A and DSP-B units are applied to the AF switch (MAIN unit: IC100, pin 7 for DSP-A, pin 6 for DSP-B), and pass through the SQL switch (Q100) which is controlled by "SQLM" signal. The signals are applied to the buffer amplifier (IC102, pin 3), and are then amplified at the VCA (Voltage Control Amplifier) circuit (IC105, pin 14). The amplified signals from VCA circuit from pin 11 are applied to the AF power amplifier (IC140, pin 1) to obtain the suitable driving level for speaker. The output signals from pin 13 pass through the mute switch (Q141, RL140), and are then applied to the internal speaker jack (J142, pin 1) via the MAIN speaker phone jack (J140).

• SUB SPEAKER OUTPUT

The AF signals from the DSP-A and DSP-B units are applied to the AF switch (MAIN unit: IC101, pin 6 for DSP-A, pin 7 for DSP-B), and pass through the SQL switch (Q101) which is controlled by "SQLS" signal. The signals are applied to the buffer amplifier (IC102, pin 5), and are then amplified at the VCA (Voltage Control Amplifier) circuit (IC105, pin 1). The amplified signals from VCA circuit from pin 4 are applied to the AF power amplifier (IC140, pin 2) to obtain the suitable driving level for speaker. The output signals from pin 12 pass through the mute switch (Q141, RL140), and are then applied to the SUB speaker jack (J141).

3-1-9 AGC CIRCUIT

(RXPLL-A, DSP-A, RXPLL-B AND DSP-B UNITS)

The AGC (Automatic Gain Control) circuit reduces IF amplifier gain and attenuates IF signal to keep the audio output at a constant level.

• RX-A CIRCUIT (RXPLL-A AND DSP-A UNITS)

A part of signals from the compositor circuit (RXPLL-A unit; IC1505, pin 8) are applied to the AGC detector circuit (IC1652, D1653), and are then amplified at the AGC amplifier (RXPLL-A unit; IC1653, pin 3). The amplified signals are applied to the DSP-A unit via the J921, pin 1 on the DSP-A unit as "AGCDET_A" line.

The signals are applied to the amplifier (DSP-A unit; IC501, pin 2), and are then applied to the A/D converter (DSP-A unit; IC401, pin 25). The converted digital signals are applied to the DSP IC (DSP-A unit; IC1), and then applied to the D/A converter (DSP-A unit; IC771). The converted analog signals are amplified at the AGC amplifier (DSP-A unit; IC501, pin 5), and are then applied to the MAIN unit via the J921, pin 6 as "AGCOUT_A" line.

The signals are applied to the RXPLL-A unit via the J1701, pin 9 as "DAGC" line after being passed through the J400, pin 8 on MAIN unit as "AGC1A" line. The signals are amplified at the AGC amplifier (RXPLL_A unit; IC1653, pin 5), and are then applied to the IF amplifier (RXPLL-A unit; Q1403) as AGC signal.

• RX-B CIRCUIT (RXPLL-B AND DSP-B UNITS)

A part of signals from the compositor circuit (RXPLL-B unit; IC1505, pin 8) are applied to the AGC detector circuit (IC1652, D1653), and are then amplified at the AGC amplifier (RXPLL-B unit; IC1653, pin 3). The amplified signals are applied to the DSP-B unit via the J921, pin 1 on the DSP-B unit as "AGCDET_B" line.

The signals are applied to the amplifier (DSP-B unit; IC501, pin 2), and are then applied to the A/D converter (DSP-B unit; IC401, pin 25). The converted digital signals are applied to the DSP IC (DSP-B unit; IC1), and then applied to the D/A converter (DSP-B unit; IC771). The converted analog signals are amplified at the AGC amplifier (DSP-B unit; IC501, pin 5), and are then applied to the MAIN unit via the J921, pin 6 as "AGCOUT_B" line.

The signals are applied to the RXPLL-B unit via the J1701, pin 9 as "DAGC" line after being passed through the J400, pin 8 on MAIN unit as "AGC1B" line. The signals are amplified at the AGC amplifier (RXPLL_B unit; IC1653, pin 5), and are then applied to the IF amplifier (RXPLL-B unit; Q1403) as AGC signal.

3-2 TRANSMITTER CIRCUITS

3-2-1 MICROPHONE AMPLIFIER CIRCUIT (MAIN-A UNIT)

The microphone amplifier circuit amplifies microphone audio signals to a level needed for the DSP circuit.

Audio signals from the [MIC] connector (MIC board; J1, pin 1) are amplified at the audio amplifier section in IC821 (pin 2), then applied to the VCA section. The gain controlled signals are output from (IC821, pin 4) and passed through the analog switch (IC201, pins 1, 7). The signals pass through the analog switch (IC460, pins 6, 1), and are then applied to the DSP circuit after being passed through the limiter amplifier (IC230, pins 3, 1) as the "AFIN" signal.

The VCA section in IC821 controls microphone input gain according to the [MIC GAIN] control level using the MIGV signal coming from the main CPU via the I/O expander (IC330, pin 2).

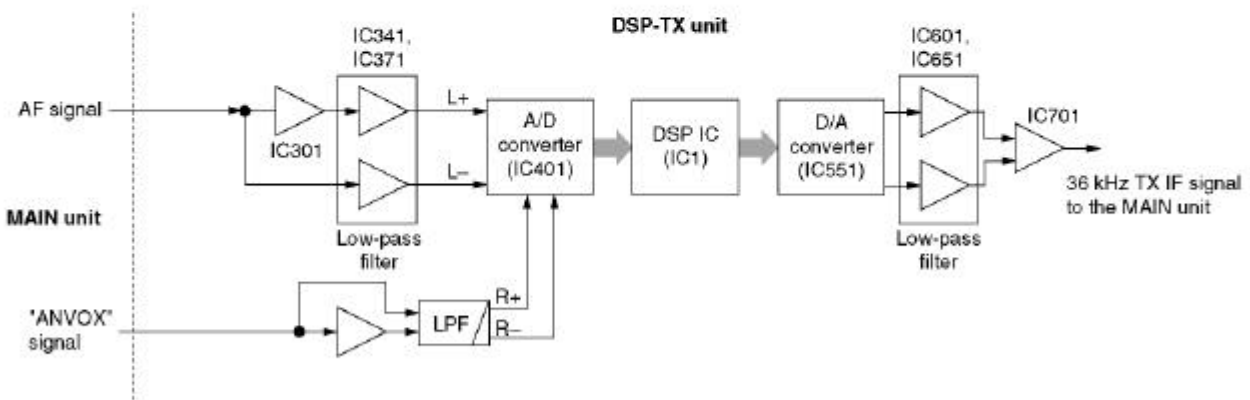
3-2-2 DSP TRANSMITTER CIRCUIT (TX DSP UNIT)

The DSP (Digital Signal Processor) circuit enables digital IF filter, digital noise reduction, digital PSN (Phase Shift Network)/Low Power/Phase demodulation, digital automatic notch, and etc.

The AF signals from the limiter amplifier (MAIN unit, IC230, pin 1) are then applied to the buffer amplifiers (IC301; pins 2, 6, IC341; pins 2, 6, IC371; pins 2, 6) to convert to balancing signal. The signal is applied to the A/D converter IC (IC401, pins 4, 5).

The digital signals are applied to the DSP IC (IC1) to do filtering, modulate and so on. The modulated signals are applied to the D/A converter IC (IC551) to convert 36 kHz IF signal.

• DSP TRANSMITTER CIRCUIT



The signal passes through the low-pass filter (IC601, pins 3 and 6, IC651, pins 3 and 6), and is then applied to the IF amplifier (IC701, pins 2 and 3) to convert to unbalancing IF signal.

The 36 kHz IF signal from the IF amplifier (pin 6) is applied to the 3rd mixer circuit.

3-2-3 3RD MIXER CIRCUIT (MAIN UNIT)

The modulated 36 kHz IF signal from the TX DSP unit pass through the two low-pass filters (IC501, pins 3, 6; IC502, pins 3, 6), and is then applied to the 3rd mixer circuit (IC503, pin 3). The 36 kHz IF signal is mixed with 491 kHz 3rd LO signal (from RXPLL-A unit) to produce the 455 kHz 3rd IF signal.

The signal is amplified at the IF amplifier (Q501), and passes through the ceramic bandpass filter (FI501; 20 kHz, FI502; 4 kHz). The filtered signal is amplified at the other IF amplifier (Q504), and is then applied to the 2nd mixer circuit via the attenuator (R545–R547).

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

The 3rd IF signal from the 3rd mixer circuit is applied to the 2nd mixer circuit (D505). The 3rd IF signal is mixed with 64 MHz 2nd LO signal (from RXPLL-A unit) to produce the 2nd IF signal.

The signal passes through the bandpass filter (FI503; Fc=64.455 MHz) to suppress unwanted signals, and is then applied to the IF amplifier (Q506). The 2nd IF signal is applied to the 1st mixer circuit.

3-2-5 1ST MIXER AND RF CIRCUITS (MAIN UNIT)

The 2nd IF signal from the 2nd mixer circuit is applied to the 1st mixer circuit (D506). The 1st IF signal is mixed with 1st LO signal (from the RXPLL-A unit) to produce the RF signal. The RF signal passes through the low-pass filter (L518, L519, C564–C568) and 3 dB attenuator (R578–R580). The signal is then applied to the RF amplifier and bandpass filter circuits.

3-2-5 RF AMPLIFIER AND BANDPASS FILTER CIRCUITS (MAIN UNIT)

The RF signal is amplified at the RF amplifier (Q508), and applied to the one of the 10 bandpass filters via the 5 dB attenuator (R575–R577).

The filtered signal is applied to the YGR amplifier (Q801), and passes through the 3 dB attenuator (R805–R807). The signal is applied to the power amplifier circuit via the J801.

3-2-6 POWER AMPLIFIER CIRCUIT (PA200W UNIT)

The signal from the attenuator (MAIN unit; R805–R807) passes through the 3 dB attenuator (R101–R103) via the J1, and is then amplified at the RF amplifier (Q101). The signal is applied to the pre-drive (Q201) and drive amplifier (Q301), and is then amplified at the power amplifier (Q401, Q402) to obtain 200 W output power.

The output signal is applied to the FILTER circuit via the J401.

3-2-7 FILTER CIRCUIT (FILTER UNIT)

The power amplified signal passes through the one of the 9 low-pass filters which is depended on the RF frequencies to suppress the unwanted frequency components. The filtered signal is applied to the CONTROL circuit via the J904.

3-2-8 CONTROL CIRCUIT (CTRL UNIT)

The signal from the FILTER unit is applied to the SWR-DET circuit (D101, D102) to detect SWR value, and then passes through the P-DET (D151, D152) and R-DET circuit (D201, D202). The signal is applied to the T/R switch (RL251), and is then applied to (or bypass) the antenna tuner circuit (NET-WORK board) via the antenna tuner selector switch (RL252, RL253).

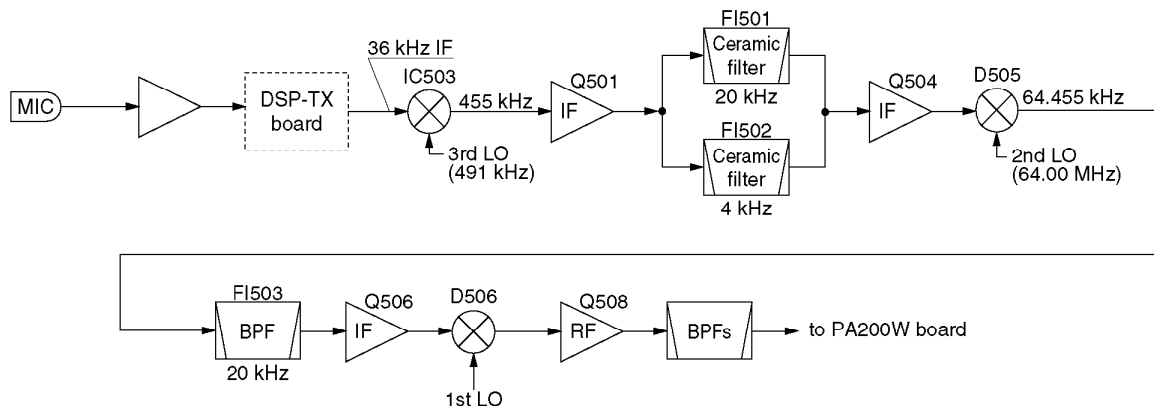
The tuned signal from J252 (or bypass signal) passes through the CRNT DET circuit (D301, D302) to detect the driving current, and is then applied to the antenna switching circuit.

The detected signal at CRNT DET circuit is amplified at the amplifier (IC301, pin 3), and is then applied to the TUNER_CPU (IC1, pin 16).

3-2-9 ANTENNA SWITCHING CIRCUIT (ANT-SW UNIT)

The signal from the CTRL unit is applied to the ANT-SW unit via the J1, and is applied to the one of the 4 relays (RL51, RL61, RL71, RL81). The signal is output from the one of the 4 antenna connectors, J51, J61, J71 or J81.

• TRANSMITTER CONSTRUCTION



The antenna switching relays are controlled by the RL-CTRL CPU (IC11, pins 6, 9, 12, 15) as the "ANT1A", "ANT2A", "ANT3A" and "ANT4A" signals respectively.

3-2-10 ALC CIRCUIT (CTRL BOARD, LOGIC AND MAIN UNITS)

The RF power level is detected at one of the SWR detector circuits (CTRL unit; D102) to be converted into DC voltage and applied to the MAIN-A unit as the FORV signal via the LOGIC unit.

The FORV signal from the LOGIC unit is applied to the comparator (MAIN unit; IC60, pin 2). The POCV signal, controlled by the [RF POWER] control via the I/O expander (MAIN unit; IC330, pin 4), is also applied to the other input (pin 3) for reference. The compared signal is output from pin 1 and applied to the IF amplifiers (MAIN unit; Q504 and Q506) to control amplifying gain.

When the FORV signal exceeds the POCV voltage, ALC bias voltage from the comparator controls the IF amplifiers. This adjusts the output power to a specified level from the [RF POWER] control until the FORV and POCV voltages are equalized.

In AM mode, the comparator operates as an averaging ALC amplifier. Q61 (MAIN unit) turns ON and the POCV voltage is shifted for 50 W AM output power (maximum) through R82.

The ALC bias voltage is also applied to the ALC meter amplifier (MAIN unit; IC61, pin 9) to obtain an ALC meter signal (ALCL). The amplified signal is applied to the main CPU2 (LOGIC unit; IC604, pin 115) to drive the S/RF meter via the front CPU (IC6) on the DISPLAY board.

An external ALC input from the [ALC] jack, [ACC1] or [ACC2] sockets is applied to the ALC amplifier (Q62). External ALC operation is identical to that of the internal ALC.

The FORV signal is also applied to the power meter amplifier (LOGIC unit; IC851, pin 5). The amplified signal is applied to the main CPU2 (LOGIC unit; IC604, pin 113) to drive the S/RF meter as an FORL signal when the power meter is selected.

3-2-11 APC CIRCUIT (MAIN UNIT, CTRL AND PA200W BOARDS)

The APC (Automatic Power Control) circuit protects the power amplifiers on the PA 200W unit from high SWR and excessive current.

The reflected wave signal appears and increases when the connected antenna is mismatched to 50 Ω. The SWR detector (CTRL unit; D101) detects the reflected signal, and applies it to the APC circuit (MAIN unit; IC60, pin 13) as a REFV signal via the LOGIC unit.

When the REFV signal level increases, the APC circuit decreases the ALC voltage to activate the APC.

For the current APC, the power transistor current is obtained by detecting the voltages (IDH and IDL) which appear at both terminals of the ID detector (PA200W board; R505). The detected voltages are applied to the differential amplifier (IC60, pins 5, 6). When the current of transistors is increased, the amplifier controls the ALC line to prevent excessive current flow.

3-2-12 TEMPERATURE PROTECTION CIRCUIT (PA200W BOARD)

The cooling fan (CHASSIS; MF1) is activated while transmitting or when the temperature of the power amplifier exceeds the preset value. The temperature protection circuit consists of IC604, IC330, IC821, Q821, Q822 and R3.

While transmitting, IC821 and Q821 are turned ON, and provide a voltage to the cooling fan to rotate at medium speed. The thermistor (R3) detects the temperature of the power amplifier (Q401 and Q402). The detected signal is applied to the CPU (IC604, pin 118) to analyze the power amplifier's temperature via "THML" signal. The signal is applied to the D/A converter (IC330), and is then applied to the FAN controller (IC821, pin 1; Q821 and Q822) via "FANI" signal. The control signal outputs from the controller (IC821, pin 7) as "FANV" signal, and then controls cooling fan via the J824.

3-3 PLL CIRCUITS

3-3-1 GENERAL

The PLL circuits consist of OSC, RXPLL-A and RXPLL-B units.

The REF unit oscillates 10 MHz reference frequency for RXPLL-A, RXPLL-B units and external reference frequency.

The RXPLL-A unit oscillates 6 LO frequencies for the RX-A unit's receive 1st and 2nd LO frequencies, MAIN unit's transmit 1st, 2nd and 3rd LO frequencies, marker frequency.

The RXPLL-B unit oscillates 6 LO frequencies for the RX-B unit's receive 1st and 2nd LO frequencies, SCOPE unit's reference frequency, clock signal of DSP-TX, DSP-A and DSP-B unit.

1st and 2nd LO frequency lists for RX, 3rd IF and LO frequency lists and 2nd IF and LO frequency list are shown at page 3-14.

1st IF and 1st LO frequency lists for TX are shown at page 3-15.

3-3-2 OSCILLATOR CIRCUIT (OSC UNIT)

The reference oscillator (IC91, X1) generates a 10 MHz frequency which field intensity is 0 dBm. The signal is used for the RXPLL-A and RXPLL-B unit's system clock, etc.

• IN CASE OF USING AS RXPLL-A AND RXPLL-B UNIT'S SYSTEM CLOCK

The oscillated signal is amplified at the buffer amplifier (Q21), and is applied to the amplifier (Q22). The amplified signal passes through the oscillated signal selector (RL11), and is then amplified at the buffer amplifier (Q70). The amplified signal is applied to the RXPLL-A and RXPLL-B units via the J72 and J73, respectively.

• IN CASE OF USING REFERENCE SIGNAL TO EXTERNAL

The oscillated signal is amplified at the buffer amplifier (Q21), and is then applied to the amplifier (Q42). The amplified signal is applied to the input-output switching circuit (RL10) via the low-pass filter (L43, L44, C46–C51), and is then output from J71 after being passed through the 6 dB attenuator (R71–R73).

• IN CASE OF USING REFERENCE SIGNAL FROM EXTERNAL

The reference signal from external equipment is applied to the J71, and is then applied to the input-output switching circuit (RL10) via the 6 dB attenuator (R71–R73). The signal is applied to the amplifier (Q61, Q62), and passes through the bandpass filter (L61, L62, C66). The filtered signal is applied to the reference signal switching circuit (RL11), and is then amplified at the buffer amplifier (Q70). The amplified signal is applied to the RXPLL-A and RXPLL-B units via the J72 and J73, respectively.

3-3-3 RXPLL-A CIRCUIT

The 10 MHz oscillated signal from the OSC unit is applied to the amplifier (Q30) via the J10, and is then amplified at the quadrupler (Q702) to produce 40 MHz reference signal. The amplified signal passes through the bandpass filter (L702, L703, C709–C713), and is then applied to the 1st LO, maker, 2nd LO and 3rd LO circuits, respectively.

• 1ST LO CIRCUIT

The 40 MHz reference signal is applied to the amplifier (Q104) via the “40M” line, and is then applied to the DDS IC (IC101, pin 88) as the system clock signal.

The signal passes through the D/A convertor (R110–R133). The signal passes through the ceramic filter (FI101) to pass the 10.5 MHz signal, and is then applied to the amplifier (IC102, pin 2). The signal is applied to the DDS IC (IC101, pin 47) again, and is then applied to the phase detector section of the DDS IC. The signal which outputs from the DDS IC (IC101, pin 56) passes through the loop filter (L151, C152–C155), and is then applied to the oscillator circuit (Q150). The circuit oscillates 10.4122038–10.4963312 MHz signal.

The oscillated signal is applied to the amplifier (Q151), and is then applied to the PLL IC.

A part of the oscillated signal is fed back to the DDS IC (IC101, pin 46) via the amplifier (Q152) as the comparison signal.

The amplified signal from Q151 is applied to the PLL IC’s 1/21 divider section (IC201, pin 8), and is then applied to the PLL section. The signal outputs from pin 2, and passes through the loop filter (Q202). The filtered signal is applied to the one of the 6 VCOs as follow.

VCO No.	Parts No.	Display frequency
1	Q220	64.485–72.454999 MHz
2	Q230	72.455–79.454999 MHz
3	Q240	79.455–86.454999 MHz
4	Q250	86.455–94.454999 MHz
5	Q260	94.455–109.454999 MHz
6	Q270	109.455–124.455 MHz

The oscillated signal is amplified at the buffer amplifier (Q301), and passes through the low-pass (L331, C331–C333) and high-pass (D341, L332, C334–C337) filters. The signal is applied to the amplifier (Q302).

A portion of buffer amplified signal from Q301 is fed back to the PLL IC’s 1/N (N=130–250) divider section (IC201, pin 6).

The amplified signal from Q302 is applied to another amplifier (Q351), and is then amplified at the buffer amplifier (Q352). The signal passes through the low-pass filter (D441, L441, L442, C442–C446) and attenuator (R364–R366), and is then output from J351/J421 as the RX 1st LO signal (64.485–124.455 MHz)/TX 1st LO signal (64.485–124.455 MHz) to the RX-A/RX-B circuits respectively via the LO switching circuit (D421, D422).

• MARKER CIRCUIT

The 40 MHz reference signal is applied to the amplifier (Q104) via the “40M” line, and is then applied to the DDS IC (IC101, pin 88) as the system clock signal.

The signal passes through the DDS IC’s 1/400 divider section, and outputs from the IC (pin 49). The signal is applied to the marker switch (IC602, pin 1), and is then output from the IC (pin 4) as the 100 kHz marker signal.

• 2ND LO CIRCUIT

The 40 MHz reference signal is applied to the amplifier (IC503) via the “40M” line, and is then applied to the DDS IC (IC501, pin 88) as the system clock signal. The signal which is output from the IC is applied to the D/A convertor (R510–R533), and then passes through the low-pass filter (L530–L532, C531–C536) to suppress more than 4.5 MHz signals. The filtered signal (4.0–4.0306875 MHz) is applied to the amplifier (IC502, pin 2), and is then applied to the DDS IC’s phase detector section (IC501, pin 47). The signal passes through the loop filter (D541, D542, L541, C545, C546, R548, R554), and is then applied to the oscillator circuit (Q541) to oscillate the 64 MHz reference signal.

The 64 MHz signal is amplified at the buffer amplifier (Q561), and is then applied to the hybrid divider.

A portion of 64 MHz signal passes through the attenuator (R571, R572), and is then applied to the amplifier (Q580). The amplified signal is applied to the DDS IC’s quarter detector section (IC501, pin 80) as the comparison signal.

The 64 MHz signal from the hybrid divider passes through the attenuator (R573–R575), and is then applied to the TX or RX 2nd LO circuit.

(1) TX 2ND LO CIRCUIT

The signal from the attenuator passes through the another attenuator (R587–R589), and is then applied the amplifier (Q591). The signal passes through the bandpass filter to suppress unwanted signals, and is then applied to the TX 2nd mixer circuit (RX-A unit; D505) via the J561.

(2) RX 2ND LO CIRCUIT

The signal from the attenuator (R573–R575) passes through the another attenuator (R802, R803), and is then applied to the amplifier (Q801). The signal passes through the attenuator (R805–R807), and is then applied to the mixer circuit (D821) to mix with TX 3rd LO signal. The mixed signal passes through the attenuator (R831–R833) and bandpass filter (F1831), and is then applied to the amplifier (Q831). The signal passes through the attenuator (R836–R838), and is then applied to the LO (Q1651) and buffer (IC1651, pin 10) amplifiers. The amplified signal is applied to the buffer amplifier (IC1651, pins 1 and 2), and is then applied to the 2nd mixer circuit (IC1501, pin 1) as 2nd LO signal.

A part of amplified signal from buffer amplifier (IC1651, pin 8) passes through the 90 degrees phase inversion circuit (L1652, C1655 and C1656), and is then amplified at the buffer amplifier (IC1651, pins 4 and 5). The amplified signal is applied to the 2nd mixer circuit (IC1502, pin 1) as 2nd LO signal.

• TX 3RD LO CIRCUIT

The 40 MHz reference signal is applied to the amplifier (Q652) via the “40M” line, and is then applied to the DDS IC (IC651, pin 7) as the system clock signal. The signal which is output from the IC is applied to the D/A convertor (R661–R671, R673–R681), and then passes through the low-pass filter (L681, L682, C680–C685) to suppress more than 0.5 MHz signals. The signal is amplified at the buffer amplifier (Q680), and passes through the attenuator (R690–R692). The signal is applied to the TX 3rd mixer circuit (IC502, pin 1) via the J681.

3-3-4 RXPLL-B CIRCUIT

The 10 MHz oscillated signal from the OSC unit is applied to the amplifier (Q30) via the J10, and is then amplified at the quadrupler (Q702) to produce 40 MHz reference signal. The amplified signal passes through the attenuator (R708–R10), and is then applied to the 1st LO, 2nd LO and DSP system clock, scope unit system clock circuits, respectively.

• 1ST LO CIRCUIT

The 40 MHz reference signal is applied to the amplifier (Q104) via the “40M” line, and is then applied to the DDS IC (IC101, pin 88) as the system clock signal.

The signal passes through the D/A convertor (R110–R133). The signal passes through the ceramic filter (F1101) to pass the 10.7 MHz signal, and is then applied to the amplifier (IC102, pin 2). The signal is applied to the DDS IC (IC101, pin 47) again, and is then applied to the phase detector section of the DDS IC. The signal which outputs from the DDS IC (IC101, pin 56) passes through the loop filter (D152–D154, L151, C152–C155), and is then applied to the oscillator circuit (Q150). The circuit oscillates 10.5813219–10.7408384 MHz signal.

The oscillated signal is applied to the amplifier (Q151), and is then applied to the PLL IC.

A part of the oscillated signal is fed back to the DDS IC (IC101, pin 46) via the amplifier (Q152) as the comparison signal.

VCO No.	Parts No.	Display frequency
1	Q220	64.585–72.554999 MHz
2	Q230	72.555–79.554999 MHz
3	Q240	79.555–86.554999 MHz
4	Q250	86.555–94.554999 MHz
5	Q260	94.555–109.554999 MHz
6	Q270	109.555–124.555 MHz

The amplified signal from Q151 is applied to the PLL IC’s 1/21 divider section (IC201, pin 8), and is then applied to the PLL section. The signal outputs from pin 2, and passes through the loop filter (Q202). The filtered signal is applied to the one of the 6 VCOs circuits as follow.

The oscillated signal is amplified at the buffer amplifier (Q301), and passes through the low-pass (L331, C331–C333) and high-pass (D341, L332, C334–C337) filters. The signal is applied to the amplifier (Q302).

A portion of buffer amplified signal from Q301 is fed back to the PLL IC’s 1/N (N=130–250) divider section (IC201, pin 6) as the comparison signal.

The amplified signal from Q302 is applied to another amplifier (Q351), and is then amplified at the buffer amplifier (Q352). The signal passes through the low-pass filter (D441, L441, L442, C441–C446) and attenuator (R364–R366), and is then output from J351 as the RX 1st LO signal (64.585–124.555 MHz) to the RX-B unit.

• 2ND LO CIRCUIT

The 40 MHz reference signal is applied to the amplifier (Q503) via the “40M” line, and is then applied to the DDS IC (IC501, pin 88) as the system clock signal. The signal which is output from the IC is applied to the D/A convertor (R510–R533), and then passes through the low-pass filter (L530–L532, C531–C536) to suppress more than 4.5 MHz signals. The filtered signal (4.0–4.0369735 MHz) is applied to the amplifier (IC502, pin 2), and is then applied to the DDS IC’s phase detector section (IC501, pin 47). The signal passes through the loop filter (D541, D542, L541, C543, C545–C557, R548, R554), and is then applied to the oscillator circuit (Q541) to oscillate the 64.591 MHz reference signal.

The 64.591 MHz signal is amplified at the buffer amplifier (Q561), and is then applied to the hybrid divider.

A portion of 64.591 MHz signal passes through the attenuator (R571, R572), and is then applied to the amplifier (Q580). The amplified signal is applied to the DDS IC’s quarter detector section (IC501, pin 80) as the comparison signal.

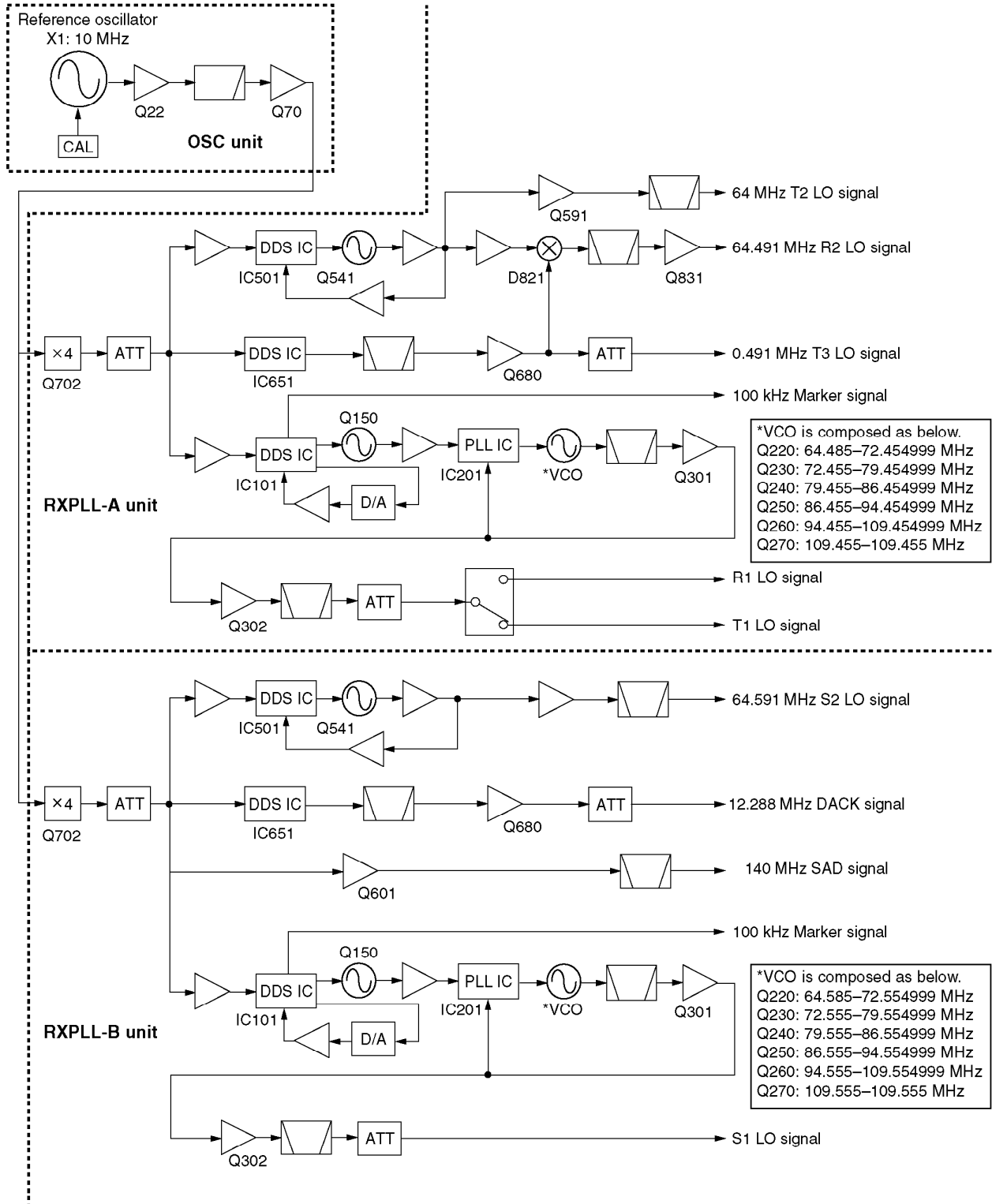
The 64.591 MHz signal from the hybrid divider passes through the two attenuators (R573–R575, R587–R589), and is then applied to the amplifier (Q591). The amplified signal passes through the bandpass filter to suppress unwanted signals, and is then applied to the RX 2nd mixer circuit (IC1501, IC1502) as 2nd LO signal via the J561.

• **DSP SYSTEM CLOCK CIRCUIT**

The 40 MHz reference signal is applied to the amplifier (Q652) via the "40M" line, and is then applied to the DDS IC (IC651, pin 7) as the system clock signal. The signal which is output from the IC is applied to the D/A convertor (R661-R671, R673-R681), and then passes through the low-pass (L681, L682, C680-C685) and high-pass (L683,

C686-C688) filters to suppress unwanted signals. The signal is amplified at the buffer amplifier (Q680), and passes through the attenuator (R690-R692). The signal is applied to the DSP IC for TX (DSP-TX unit; IC1), RX-A (DSP-A unit; IC1) and RX-B (DSP-B unit; IC1) as 12.288 MHz system clock signal via the A/D converters.

• **RXPLL-A/B CIRCUITS**



• SCOPE UNIT SYSTEM CLOCK CIRCUIT

The 40 MHz reference signal is amplified at the buffer amplifier (Q601) via the “40M” line, and then passes through the low-pass filter (L602, L603, C609–C613). The filtered signal is applied to the buffer amplifier (SCOPE unit; Q701) as the 40 MHz system clock via the J601.

3-4 ANTENNA TUNER CIRCUITS

3-4-1 MATCHING CIRCUIT (NETWORK BOARD)

The matching circuit is a T-network. Using 2 tuning motors, the matching circuit obtains rapid overall tuning speed.

Using relays (RL50, RL60, RL70, RL80, RL90, RL100, RL110, RL120), the relay control signals from the antenna tuner CPU (CTRL unit; IC1) via the buffer amplifier (IC402) ground one of the taps of L50, L60, L70, L80, L90, L100, L110, L120. After selecting the coils, 2 motors (TUNER unit; MF1, MF2) adjust C1 and C2 using the antenna tuner CPU (CTRL unit; IC1) and the motor controller (CTRL unit; Q3–Q10, D3–D6) to obtain a low SWR (Standing Wave Ratio).

3-4-2 DETECTOR CIRCUIT (CTRL BOARD)

(1) SWR DETECTOR

Forward and reflected power are picked up by a current transformer (L101), detected by D101 and D102, and then amplified at IC101, pin 3 and pin 5, respectively. The amplified voltages are applied to the antenna tuner CPU (IC1, pins 2, 3) via “AN0” and “AN1” lines. The tuner CPU detects the SWR.

(2) REACTANCE COMPONENTS DETECTOR

Reactance components are picked up by comparing the phases of the RF current and RF voltage. The RF current is detected by L151 and R151–R154 and buffer-amplified at IC151, pin 13 and IC154, pin 1 and then applied to the phase comparator (IC156, pin 1). RF voltages are detected by C151–C153, C158 and then applied to the phase comparator (IC156, pin 13) after being amplified at the buffer amplifiers (IC151, IC153). The output signal from the phase comparator (IC156, pin 6 for RF current, IC156 pin 7 for RF voltage) is rectified at D154 and D153 for conversion into DC voltage. The rectified voltage signals are combined, then amplified at the inverter amplifier (IC201, pin 2), then applied to the antenna tuner CPU (IC1, pin 64) via the “AN3” line. A C-MOS IC is used for the buffer amplifier (IC151) to improve functionable sensitivity; the inverter amplifier (IC201) is very responsive even with a low signal level input. Together, these ensure quick and stable signal detection even at low RF signal level input.

(3) RESISTANCE COMPONENTS DETECTOR

Resistance components are picked up by L201, and detected by D201, D202 and Q201. The detected resistance components are amplified at the inverter amplifier (IC201, pin 6), and then applied to the antenna tuner CPU (IC1, pin 1) via the “AN2” line.

3-4-3 MOTOR CONTROL CIRCUIT (CTRL AND TUNER UNITS)

The control circuit of the internal antenna tuner consists of the CPU, EEPROM (Electrically-Erasable Programmable Read Only Memory), tuning motors and tuning relays.

(1) CPU AND EEPROM (CTRL UNIT)

The antenna tuner CPU (IC1) controls the tuning motors via the motor controller (Q3–Q10, D3–D6) and tuning relays, and memorizes the best preset position in 100 kHz steps. The memory contents are stored in the EEPROM (IC2) without a backup battery.

(2) TUNING MOTORS (CTRL AND TUNER UNITS)

A motor controller (Q3–Q10 D3–D6) rotates the tuning motors (TUNER unit; MF1, MF2) to obtain a low SWR.

(3) TUNING RELAYS (TUNER UNIT)

According to the operating frequency band and antenna condition, tuning relays select the capacitors and coils.

3-4-4 ANTENNA TUNER CPU PORT ALLOCATION (CTRL unit; IC1)

Pin number	Port name	Description
1	AN2	Input port for the resistance components detection voltage.
2	AN1	Input port for the reflected RF power voltage.
13	IKEY	Outputs tuner data signal.
15	IKEYB	Input port for the serial signal.
17	THRU	Input port for the [TUNER] ON/OFF signal.
21	TRC	Input port for the TX/RX switching signal.
22, 23	#CL1, CL2	Input port for the antenna tuner CPU system clock.
26	VHF	Outputs the coil selection signal. High : While 46–60 MHz band is displayed.
27–32	L24M, L18M, L14M, L10M, L7M, L3.5M	Output the coil selection signal.
34–40	CO3, CO2, CO1, C13, C12, C11	Output the capacitor selection signal.
41–48	AZ, AY, AX, AW, PZ, PY, PX, PW	Output pulse-type control signals for the tuning motors (MF1, MF2).
64	AN3	Input port for the reactance components detection voltage.

3-5 SCOPE CIRCUITS

3-5-1 SCOPE RECEIVER CIRCUIT (SCOPE UNIT)

A portion of the 64.455 MHz 1st IF signal from the 1st mixer circuit (RXPLL-A/B units; IC1051, Q1211 and Q1212: while receiving) or IF amplifier (MAIN unit; Q506: while transmitting) passes through the switches (IC1 and IC31). The signal is passed through the PIN attenuator (D1 and D2) and amplified at the IF amplifiers (Q2), and then mixed with the 18.455–20.455 MHz scope 2nd LO (S2LO) signal at the mixer circuit (D101) to produce the 45 MHz IF signal. The mixed IF signal is passed through the ceramic bandpass filters (F1201) to suppress unwanted signals. The filtered IF signal is applied to other mixer (D4) after amplifying at 2 amplifiers (Q201 and Q202). The signal is applied to the amplifier (IC401, pin 6), and then passes through the low-pass filter (IC403, pins 6 and 1). The filtered signal is amplified at the amplifier (IC404, pin 6), and is then applied to the DSP IC (IC601) via the A/D converter (IC501, pin 43). The DSP IC analyzes digital signals, and then outputs digital data to the CPU.

3-5-2 SCOPE UNIT AGC CIRCUIT (SCOPE UNIT)

One of the filtered signal at the low-pass filter (IC403, pin 1) is applied to the amplifier (IC404, pin 6). The amplified signal is applied to the AGC detector (D401 and D402), and is then applied to the AGC amplifier (IC405, pin 2). The amplified signal is applied to the comparator section of one to compare with "ATTV" signal. The signal is amplified at the AGC amplifier (Q1), and is then applied to the PIN attenuator (D1 and D2) to keep same gain.

3-5-3 SWEEP LO CIRCUIT (SCOPE UNIT)

The 40 MHz signal is applied to the J3 from the RXPLL-B unit. The signal is used for reference system clock of each circuits.

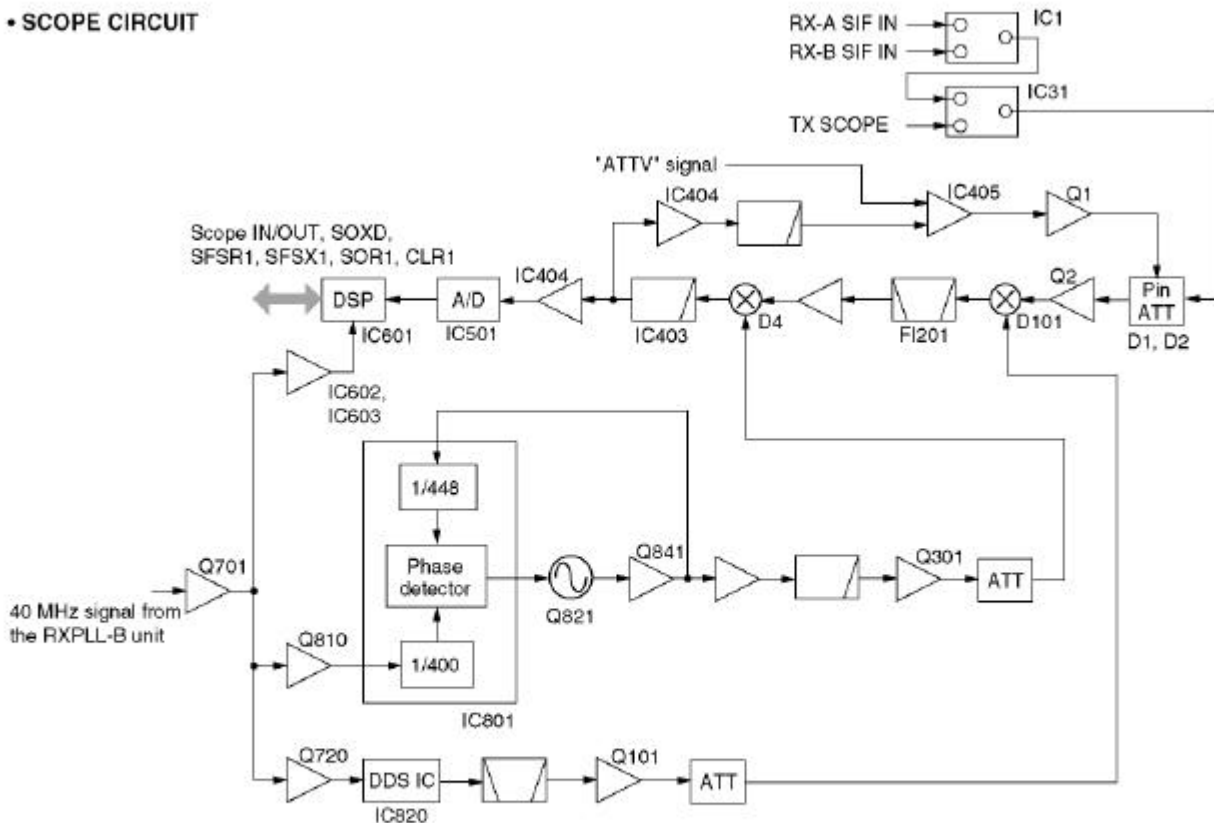
(1) S2 LO CIRCUIT

The 40 MHz reference system clock is amplified at the amplifiers (Q701 and Q720). The signal is applied to the 14 bits DDS IC (IC820, pin 62). The DDS IC which is controlled by the CPU outputs 19.555 MHz (for MAIN RX) or 19.555±0.5 MHz (for SUB RX) system clock from pin 45, and then passes through the low-pass filter (L761–L763, C761–C767), high-pass filter (L764, C768–C770) and attenuator (R764–R766). The attenuated signal is applied to the LO amplifier (Q101), and then passes through the low-pass filter (L104, C108–C110) and attenuator (R105–R107). The attenuated signal is applied to the mixer circuit (D101) as S2 LO signal (19.555–20.455 MHz).

(2) S3 LO CIRCUIT

The 40 MHz reference system clock is amplified at the amplifiers (Q701 and Q810). The signal is applied to the PLL IC (IC801, pin 8). The signal passes through the 1/400 divider and phase detector circuits of the IC, and is then applied to the VCO circuit (Q821) via the loop filter to produce 44.8 MHz signal. The 44.8 MHz signal is amplified at the buffer amplifiers (Q841–Q843), and then passes through the low-pass filter (L851, L852, C852–C856) to suppress high-harmonics components. The filtered signal passes through the attenuator (R856–R858), and is then amplified at the amplifier (Q301). The signal passes through the other attenuator (R302–R304), and is then applied to the mixer circuit (D4) as S3 LO signal.

• SCOPE CIRCUIT



(3) DDS LO CIRCUIT

The 40 MHz reference system clock is amplified at the amplifiers (Q701, IC602 and IC603), and is then applied to the DSP IC (IC601). The applied signal is quintupled in the IC, then uses 200 MHz DSP system clock signal.

The 200 MHz clock signal is divided 1/400, and then uses as the 500 kHz sampling frequency of the A/D converter (IC501).

3-6 POWER SUPPLY CIRCUITS

3-6-1 VOLTAGE LINES (DC-DC UNIT)

LINE	DESCRIPTION
C15V	Common 15 V line from the REG unit. The voltage is applied to the LOGIC unit via the J3, pin 6.
H8V	Common 8 V from the REG unit. The signal is applied to the regulator circuits on the DC-DC unit.
+15V	The same voltage as the +15 line passed through the switching relay (RL142). The voltage is applied to the PA200W board (via J420, pins 1 and 2), LOGIC (via the J820, pins 4–6) and MAIN (via the J450, pin 3) units.
-12V	Common -12 V converted from the +15 V line and regulated by the -12V regulator circuit (IC121). The voltage is applied to the LOGIC (via the J820, pin 3) and MAIN (via the J450, pin 2) units.
VDD1R5	Common 5 V converted from the H8V line and regulated by the VDD1R5 regulator circuit (IC101). The voltage is applied to the LOGIC unit via the J821, pin 2.
5V	Common 5 V converted from the H8V line and regulated by the VDD5 regulator circuit (IC81). The voltage is applied to the LOGIC (via the J821, pin 4) and MAIN (via the J450, pin 10) units.
+8V	The same voltage as the H8V line passed through the switching relay (RL142). The voltage is applied to LOGIC (via the J820, pin 7) and MAIN (via the J450, pin 4) units.
+5V	Common 5 V converted from the +8V line and regulated by the +5V regulator circuit (IC61). The voltage is applied to the LOGIC (via the J820, pin 8) and MAIN (via the J450, pin 4) units.
+3R3V	Common 3 V converted from the +8V line and regulated by the +3R3V regulator circuit (IC41). The voltage is applied to the LOGIC (via the J820, pin 9) and MAIN (via the J450, pin 6–8) units.
VDD3R3	Common 3 V converted from the H8V line and regulated by the VDD3R3 regulator circuit (IC21). The voltage is applied to the LOGIC unit via the J821, pin 3.

• MAIN AND SUB 1ST LO FREQUENCY LIST (FOR RECEIVING)

MODE	MAIN 1ST LO FREQUENCY (MHz)	SUB 1ST LO FREQUENCY (MHz)
USB	64.4865–124.4565	64.5865–124.5565
LSB	64.4835–124.4535	64.5835–124.5535
CW	64.4850–124.4550	64.5850–124.5550
RTTY	64.48483–124.45483	64.58483–124.55483
PSK31	64.4850–124.4550	64.5850–124.5550
AM	64.4850–124.4550	64.5850–124.5550
FM	64.4850–124.4550	64.5850–124.5550

• MAIN AND SUB 2ND FREQUENCY LIST (FOR RECEIVE)

MODE	MAIN 2ND LO FREQUENCY (kHz)	SUB 2ND LO FREQUENCY (MHz)
USB	64.4925	64.5925
LSB	64.4895	64.5985
CW*1	64.4910 - CW PITCH	64.5910 - CW PITCH
RTTY*2	64.48868	64.58868
PSK31	64.4925	64.5925
AM	64.4910	64.5910
FM	64.4910	64.5910

*1CW-PITCH: 300–900 Hz, *2RTTY TONE: 21.25 Hz; SHIFT: 170 Hz

• 3RD IF AND LO FREQUENCY LIST (FOR TRANSMIT)

MODE	3RD IF FREQUENCY (kHz)	3RD LO FREQUENCY (kHz)
USB	36.000	492.500
LSB	36.000	489.500
CW	36.000	491.000
RTTY*	33.875	488.705
PSK31	36.000	491.000
AM	36.000	491.000
FM	36.000	491.000

*RTTY TONE: 21.25 Hz; SHIFT: 170 Hz

• 2ND IF AND LO FREQUENCY LIST (FOR TRANSMIT)

MODE	2ND IF FREQUENCY (kHz)	2ND LO FREQUENCY (MHz)
USB	456.500	64.000
LSB	453.500	
CW	455.000	
RTTY	454.830	
PSK31	455.000	
AM	455.000	
FM	455.000	

• 1ST IF FREQUENCY LIST (FOR TRANSMIT)

MODE	1ST IF FREQUENCY (MHz)
USB	64.45650
LSB	64.45350
CW	64.45500
RTTY	64.45483
PSK31	64.45500
AM	64.45500
FM	64.45500

• 1ST LO FREQUENCY LIST (FOR TRANSMIT)

BAND (MHz)	LO FREQUENCY (MHz)	BAND (MHz)	LO FREQUENCY (MHz)
1.9	66.2580–66.2800	10	66.2580–66.2800
	66.3625–66.3675	14	66.3625–66.3675
3.5	67.9550–68.0300	18	67.9550–68.0300
3.8	68.2020–68.2090	21	68.2020–68.2090
	68.2460–68.2600	24	68.2460–68.2600
4.63	69.0850	28	69.0850
7	71.4550–71.5550	50	71.4550–71.5550

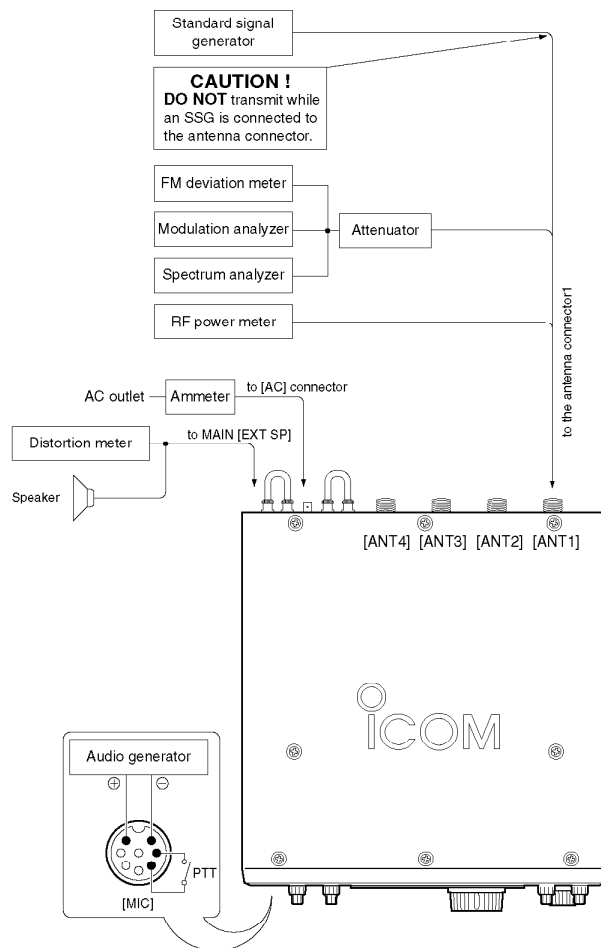
SECTION 4 ADJUSTMENT PROCEDURES

4-1 PREPARATION BEFORE SERVICING

■ REQUIRED TEST EQUIPMENT

EQUIPMENT	GREDE AND RANGE	EQUIPMENT	GREDE AND RENGE
AC outlet	Voltage : 85 V–265 V	Audio generator	Frequency range : 300–3000 Hz Measuring range : 1–500 mV
RF power meter (terminated type)	Measuring range : 250–300 W Frequency range : 1.8–100 MHz Impedance : 50 Ω SWR : Less than 1.2 : 1	Standard signal generator (SSG)	Frequency range : 0.1–100 MHz Output level : 0.1 μV–32 mV (–127 to –17 dBm)
Frequency counter	Frequency range : 0.1–100 MHz Frequency accuracy : ±0.5 ppm or better Sensitivity : 100 mV or better	Digital multimeter	Input impedance : 10 MΩ/DC or beter
RF voltmeter	Frequency range : 0.1–100 MHz Measuring range : 0.01–10 V	AC millivoltmeter	Measuring range : 10 mV–10 V
FM deviation meter	Frequency range : DC–500 MHz Measuring range : 0 to ±5 kHz	DC voltmeter	Input impedance : 50 kΩ/V DC or better
Modulation analyzer	Frequency range : At least 90 MHz Measuring range : 0–100 %	DC ammeter	Measurement capability: 1 A/30 A
Distortion meter	Frequency range : 1 kHz ±10 % Measuring range : 1–100 %	Spectrum analyzer	Frequency range : At least 90 MHz Spectraum bandwidth : 100 kHz or more
Oscilloscope	Frequency range : DC–20 MHz Measuring range : 0.01–20 V	Attenuator	Power attenuation : 50 or 60 dB Capacity : 200 W or more
		External speaker	Input impedance : 8 Ω Capacity : 5 W or more
		Terminator	Resistance : 50 and 150 Ω Capacity : 200 W or more

■ CONNECTIONS



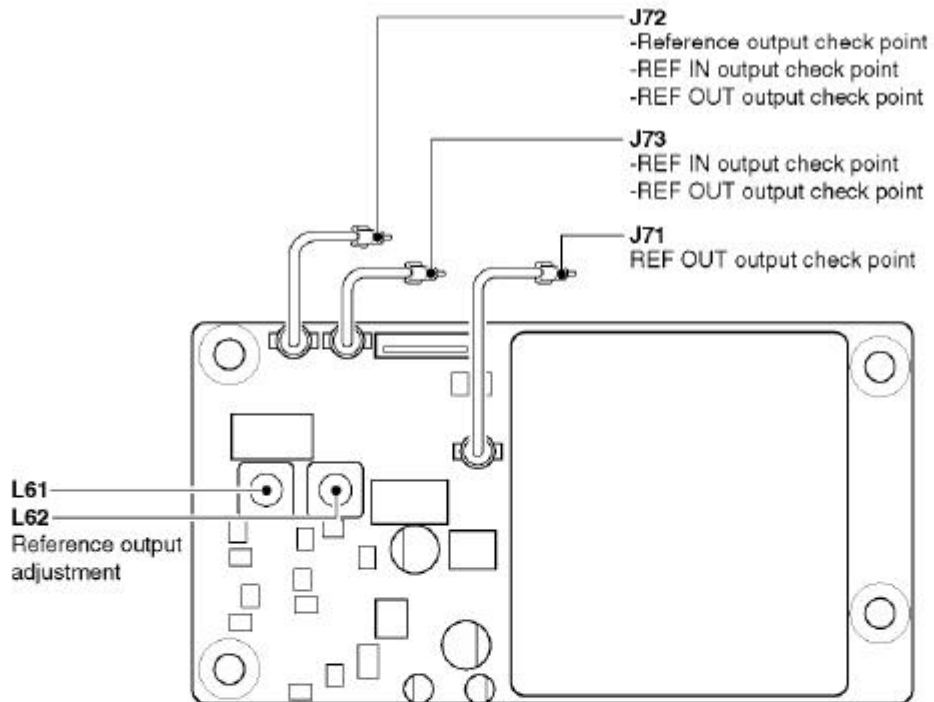
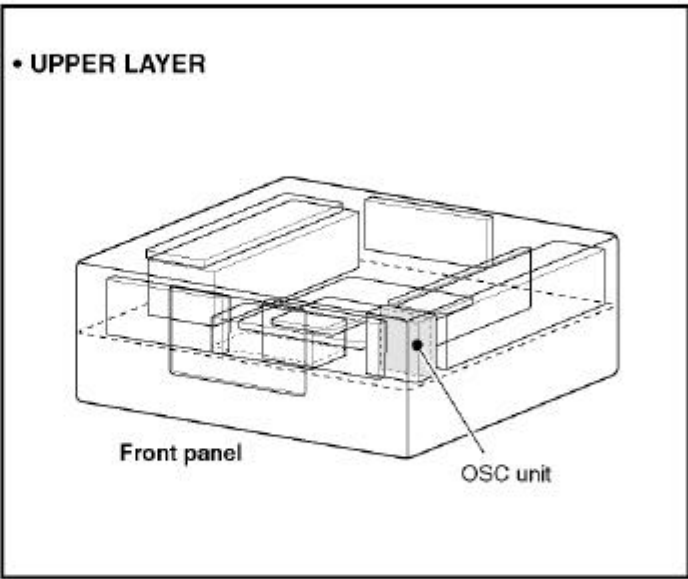
4-2 OSC UNIT ADJUSTMENTS

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
	OSC unit and set as : Frequency : 10.000 MHz Level : 71 mV* (-10 dBm) Modulation : OFF • Terminates J73 with 50 Ω. • Receiving					
REF IN OUTPUT	2 • Receiving	OSC	Connect an RF voltmeter to the J72.	0 dBm ±3.0 dB		Verify
	• Terminates J72 with 50 Ω. • Receiving		Connect an RF voltmeter to the J73.	0 dBm ±3.0 dB		Verify
REF OUT OUTPUT	3 • Set the OSC unit to the internal reference mode on the set mode. • Receiving	OSC	Connect an RF voltmeter to the J71.	-10.0 dBm ±3.0 dB		Verify
	• Terminates J73 with 50 Ω. • Receiving		Connect an RF voltmeter to the J72.	0 dBm ±3.0 dB		Verify
	• Terminates J72 with 50 Ω. • Receiving		Connect an RF voltmeter to the J73.	0 dBm ±3.0 dB		Verify

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

• OSC UNIT TOP VIEW

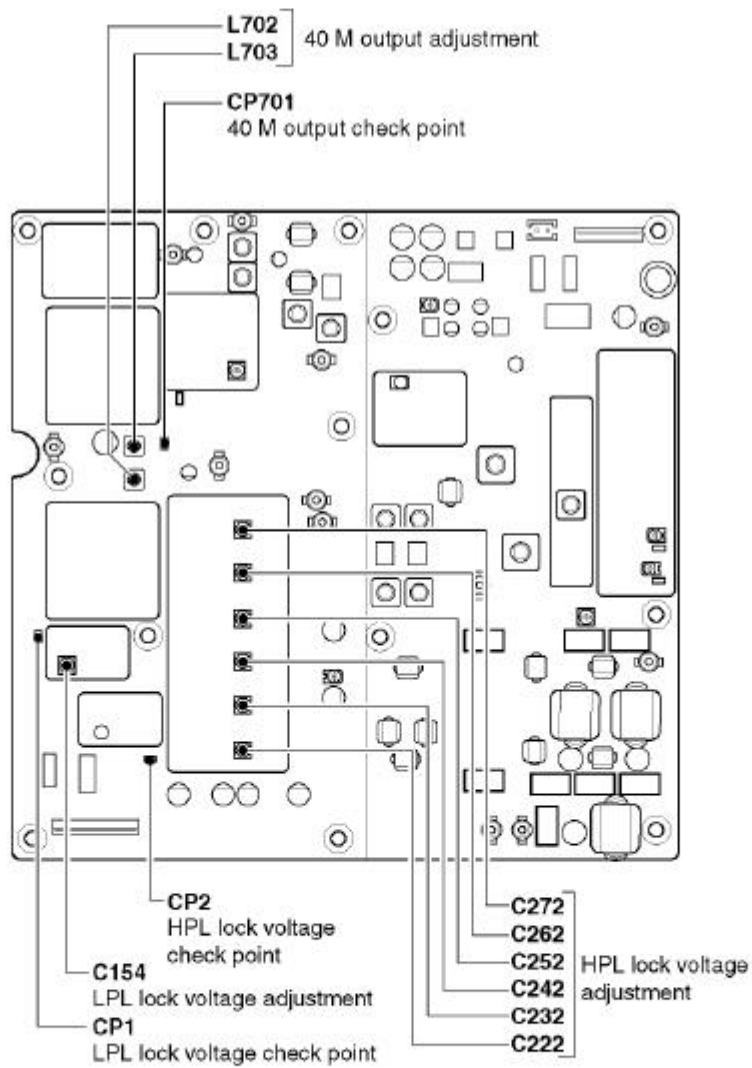
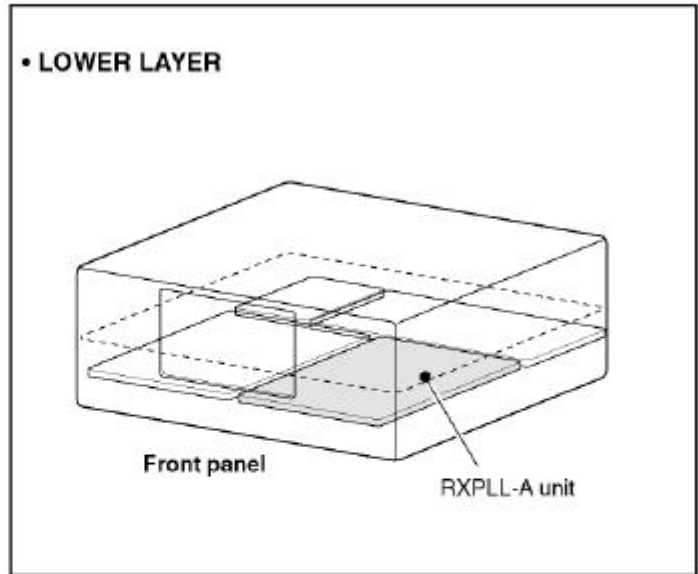
• UPPER LAYER



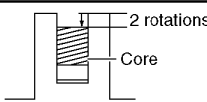
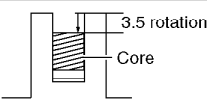
4-3 RXPLL-A UNIT ADJUSTMENTS

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
40M OUTPUT	1 • MAIN display frequency : 0.030 MHz • Mode : USB • Receiving	RX PLL-A	Connect an RF volt- meter to the CP701 (40MHz).	Maximum voltage	RX PLL-A	L702, L703
LPL LOCK VOLTAGE	1 • MAIN display frequency : 0.030 MHz • Mode : USB • Receiving	RX PLL-A	Connect a DC volt- meter to the CP1 (LV1).	2.0 V \pm 0.1 V	RX PLL-A	C154
	2 • MAIN display frequency : 7.999 MHz • Mode : USB • Receiving			Less than 3.0 V		Verify
HPL LOCK VOLTAGE (VCO1)	1 • MAIN display frequency : 7.999 MHz • Mode : USB • Receiving	RX PLL-A	Connect a DC volt- meter to the CP2 (LV2).	6.0 V \pm 0.1 V	RX PLL-A	C222
(VCO2)	2 • MAIN display frequency : 14.999 MHz • Mode : USB • Receiving			6.0 V \pm 0.1 V		C232
(VCO3)	3 • MAIN display frequency : 21.999 MHz • Mode : USB • Receiving			6.0 V \pm 0.1 V		C242
(VCO4)	4 • MAIN display frequency : 29.999 MHz • Mode : USB • Receiving			6.0 V \pm 0.1 V		C252
(VCO5)	5 • MAIN display frequency : 44.999 MHz • Mode : USB • Receiving			6.0 V \pm 0.1 V		C262
(VCO6)	6 • MAIN display frequency : 60.000 MHz • Mode : USB • Receiving			6.0 V \pm 0.1 V		C272
(VCO1)	7 • MAIN display frequency : 0.030 MHz • Mode : USB • Receiving			RX PLL-A		Connect a DC volt- meter to the CP2 (LV2).
(VCO2)	8 • MAIN display frequency : 8.000 MHz • Mode : USB • Receiving	1.8 V–2.8 V	Verify			
(VCO3)	9 • MAIN display frequency : 15.000 MHz • Mode : USB • Receiving	1.8 V–2.8 V	Verify			
(VCO4)	10 • MAIN display frequency : 22.000 MHz • Mode : USB • Receiving	1.8 V–2.8 V	Verify			
(VCO5)	11 • MAIN display frequency : 30.000 MHz • Mode : USB • Receiving	1.8 V–2.8 V	Verify			

• RXPLL-A UNIT TOP VIEW

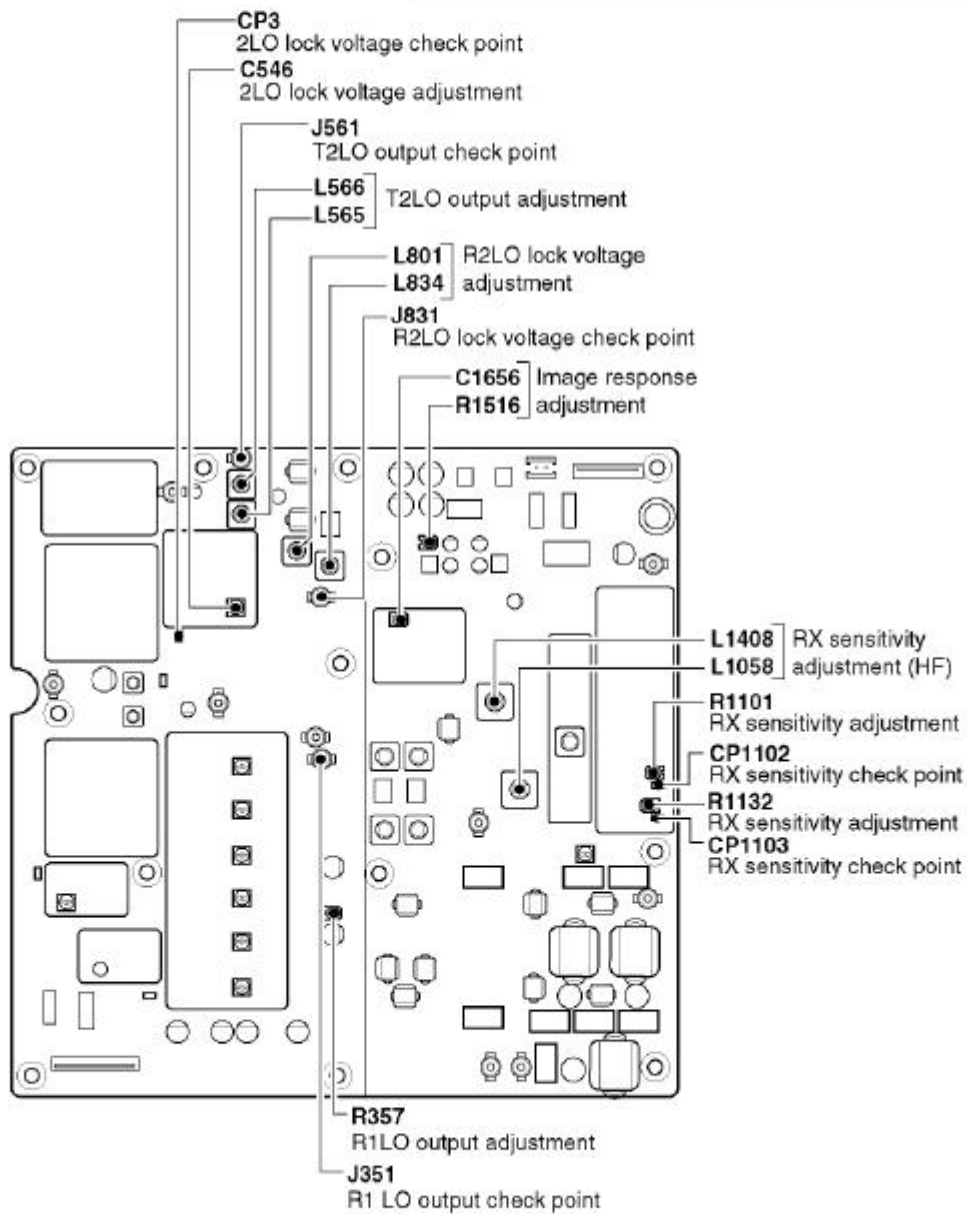
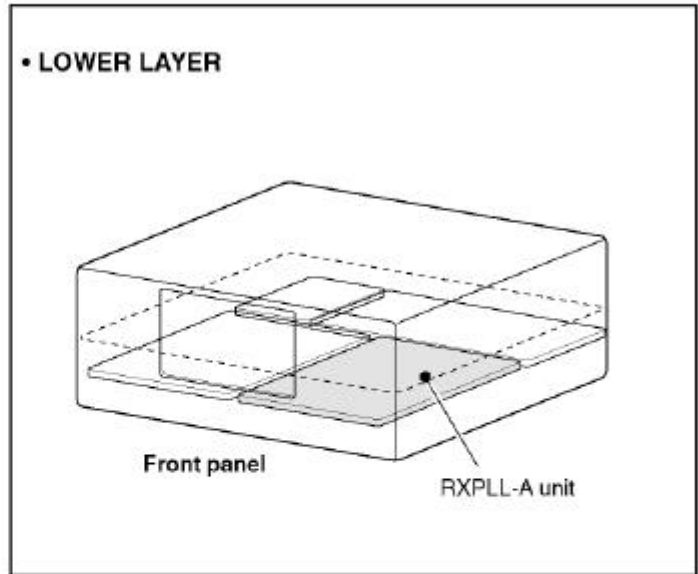


RXPLL-A UNIT ADJUSTMENTS—Continued

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
HPL LOCK VOLTAGE (VCO6)	12 <ul style="list-style-type: none"> MAIN display frequency : 45.0 MHz Mode : USB Receiving 	RX PLL-A	Connect a DC voltmeter to the CP2 (LV2).	1.8 V–2.8 V		Verify
R1 LO OUTPUT	1 <ul style="list-style-type: none"> MAIN display frequency : 14.999 MHz Mode : USB Receiving 	RX PLL-A	Connect an RF voltmeter to the J351 (R1LO).	2.25 dBm \pm 0.25 dB	RX PLL-A	R357
2LO LOCK VOLTAGE	1 <ul style="list-style-type: none"> MAIN display frequency : 14.100 MHz Mode : USB Receiving 	RX PLL-A	Connect an DC voltmeter to the CP3.	1.5 V \pm 0.3 V	RX PLL-A	C546
R2 LO OUTPUT	1 <ul style="list-style-type: none"> MAIN display frequency : 14.100 MHz Mode : USB Receiving 	RX PLL-A	Connect a spectrum analyzer to the J831 (R2LO).	Maximum level (–10 dBm \pm 3.0 dB)	RX PLL-A	L801, L834
T2 LO OUTPUT	1 <ul style="list-style-type: none"> MAIN display frequency : 14.100 MHz Mode : USB Receiving 	RX PLL-A	Connect a spectrum analyzer to the J561 (T2LO).	Maximum level (3.0 dBm \pm 3.0 dB)	RX PLL-A	L565, L566
	2					
RX SENSITIVITY	1 <ul style="list-style-type: none"> Pre-set the IC-7800 as below condition. MAIN display frequency : 14.150 MHz Mode : USB Dualwatch : OFF MAIN Ant. : ANT1 Pre-amp. 1 : ON SUB AF : Minimum level Receiving 	RX PLL-A	Connect a DC voltmeter to the CP1102.	4.5 V \pm 0.1 V	RX PLL-A	R1101
			Connect a DC voltmeter to the CP1103.	4.5 V \pm 0.1 V	RX PLL-A	R1132
				Center position		R1228
						L1401 L1402
			L1403 L1404			
(HF)	2 <ul style="list-style-type: none"> MAIN display frequency : 14.150 MHz Mode : USB Connect an SSG to [ANT1] connector and set as : <ul style="list-style-type: none"> Frequency : 14.1515 MHz Level : 1 μV* (–107 dBm) Modulation : OFF Receiving 	Rear panel	Connect an AC millivolt meter to the [EXT SP] jack with 8 Ω load.	Maximum audio level	RX PLL-A	L1408, L1058
IMAGE RESPONSE	1 <ul style="list-style-type: none"> MAIN display frequency : 14.150 MHz Mode : USB Connect an SSG to [ANT1] connector and set as : <ul style="list-style-type: none"> Frequency : 14.0765 MHz Level : 50 mV* (–13 dBm) Modulation : OFF Receiving 	Rear panel	Connect a AC millivoltmeter to the [EXT SP] jack with 8 Ω load.	Minimum image	RX PLL-A	R1516, C1656
	2					

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

• RXPLL-A UNIT TOP VIEW

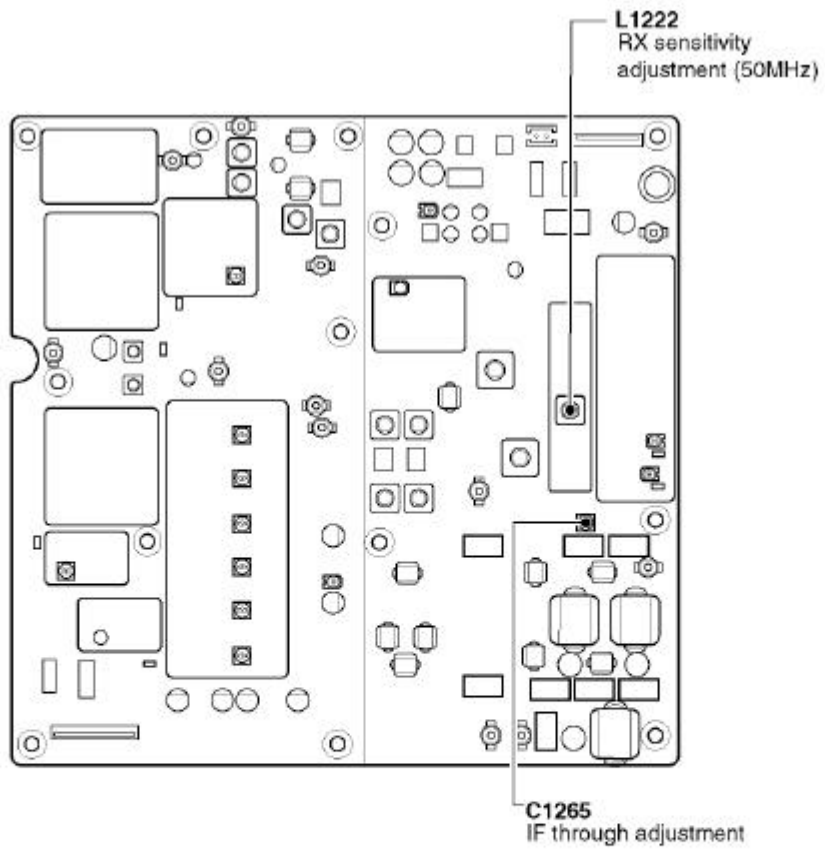
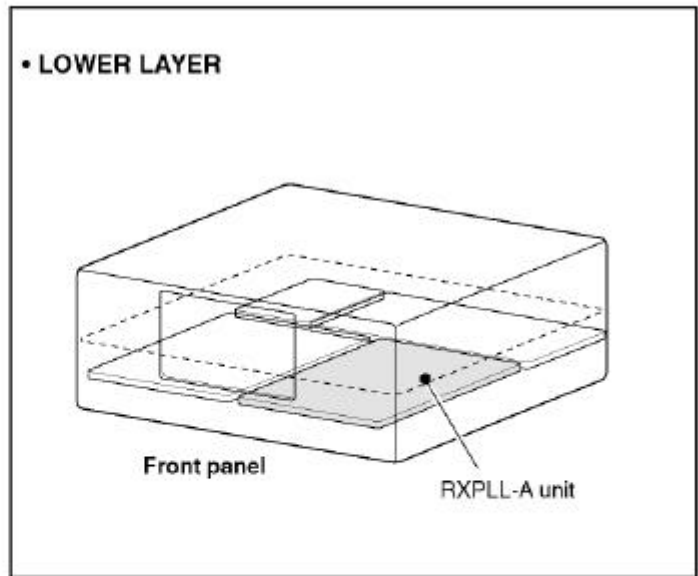


RXPLL-A UNIT ADJUSTMENTS–Continued

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
RX SENSITIVITY (50 MHz)	1 <ul style="list-style-type: none"> • MAIN display frequency : 50.020 MHz • Mode : USB • Pre-amp. 2 : ON • Connect an SSG to [ANT1] connector and set as : <ul style="list-style-type: none"> Frequency : 50.0215 MHz Level : 0.32 μV* (-117 dBm) Modulation : OFF • Receiving 	Rear panel	Connect an AC millivolt meter to the [EXT SP] jack with 8 Ω load.	Maximum audio level	RX PLL-A	L1222
IF THROUGH (50 MHz)	1 <ul style="list-style-type: none"> • MAIN display frequency : 50.020 MHz • Mode : USB • Connect an SSG to [ANT1] connector and set as : <ul style="list-style-type: none"> Frequency : 64.455 MHz Level : 50 mV* (-13 dBm) Modulation : OFF • Receiving 	Front panel	S-meter	Minimum level	RX PLL-A	C1265

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

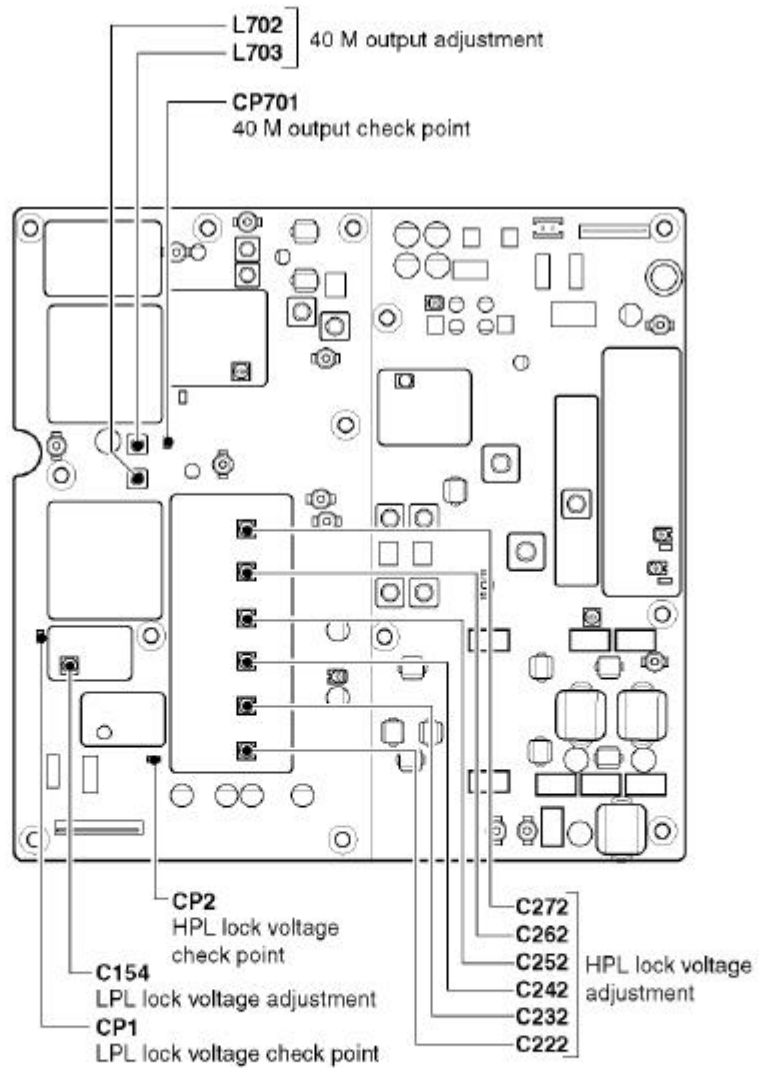
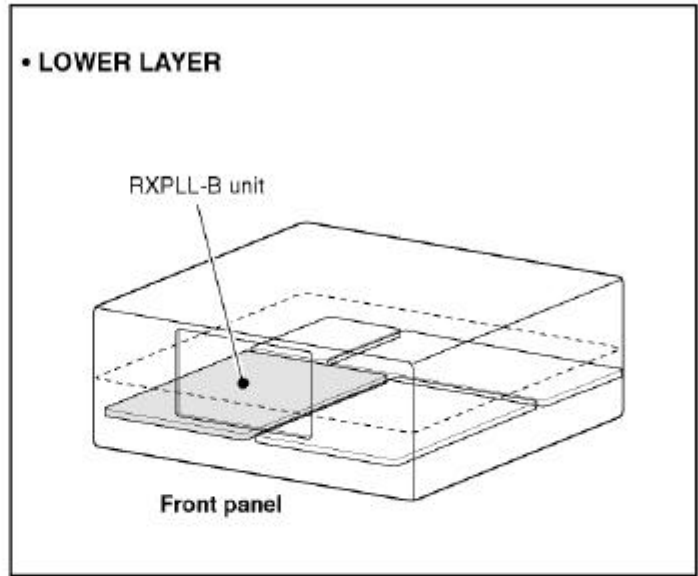
• RXPLL-A UNIT TOP VIEW



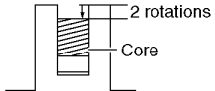
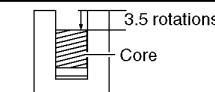
4-4 RXPLL-B UNIT ADJUSTMENTS

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
40M OUTPUT	1 <ul style="list-style-type: none"> • Dualwatch : ON • SUB display frequency : 60.000 MHz • Mode : USB • Receiving 	RX PLL-B	Connect an RF voltmeter to the CP701 (40MHz).	Maximum voltage	RX PLL-B	L702, L703
LPL LOCK VOLTAGE	1 <ul style="list-style-type: none"> • SUB display frequency : 60.000 MHz • Mode : USB • Receiving 	RX PLL-B	Connect a DC voltmeter to the CP1 (LV1).	2.0 V \pm 0.1 V	RX PLL-B	C154
	2 <ul style="list-style-type: none"> • SUB display frequency : 1.499 MHz • Mode : USB • Receiving 			Less than 4.0 V		Verify
HPL LOCK VOLTAGE (VCO1)	1 <ul style="list-style-type: none"> • SUB display frequency : 7.999 MHz • Mode : USB • Receiving 	RX PLL-B	Connect a DC voltmeter to the CP2 (LV2).	6.0 V \pm 0.1 V	RX PLL-B	C222
(VCO2)	2 <ul style="list-style-type: none"> • SUB display frequency : 14.999 MHz • Mode : USB • Receiving 			6.0 V \pm 0.1 V		C232
(VCO3)	3 <ul style="list-style-type: none"> • SUB display frequency : 21.999 MHz • Mode : USB • Receiving 			6.0 V \pm 0.1 V		C242
(VCO4)	4 <ul style="list-style-type: none"> • SUB display frequency : 29.999 MHz • Mode : USB • Receiving 			6.0 V \pm 0.1 V		C252
(VCO5)	5 <ul style="list-style-type: none"> • SUB display frequency : 44.999 MHz • Mode : USB • Receiving 			6.0 V \pm 0.1 V		C262
(VCO6)	6 <ul style="list-style-type: none"> • SUB display frequency : 60.000 MHz • Mode : USB • Receiving 			6.0 V \pm 0.1 V		C272
(VCO1)	7 <ul style="list-style-type: none"> • SUB display frequency : 0.030 MHz • Mode : USB • Receiving 	RX PLL-B	Connect a DC voltmeter to the CP2 (LV2).	1.8 V–2.8 V	RX PLL-B	Verify
(VCO2)	8 <ul style="list-style-type: none"> • SUB display frequency : 8.000 MHz • Mode : USB • Receiving 			1.8 V–2.8 V		Verify
(VCO3)	9 <ul style="list-style-type: none"> • SUB display frequency : 15.000 MHz • Mode : USB • Receiving 			1.8 V–2.8 V		Verify
(VCO4)	10 <ul style="list-style-type: none"> • SUB display frequency : 22.000 MHz • Mode : USB • Receiving 			1.8 V–2.8 V		Verify
(VCO5)	11 <ul style="list-style-type: none"> • SUB display frequency : 30.000 MHz • Mode : USB • Receiving 			1.8 V–2.8 V		Verify

• RXPLL-B UNIT TOP VIEW

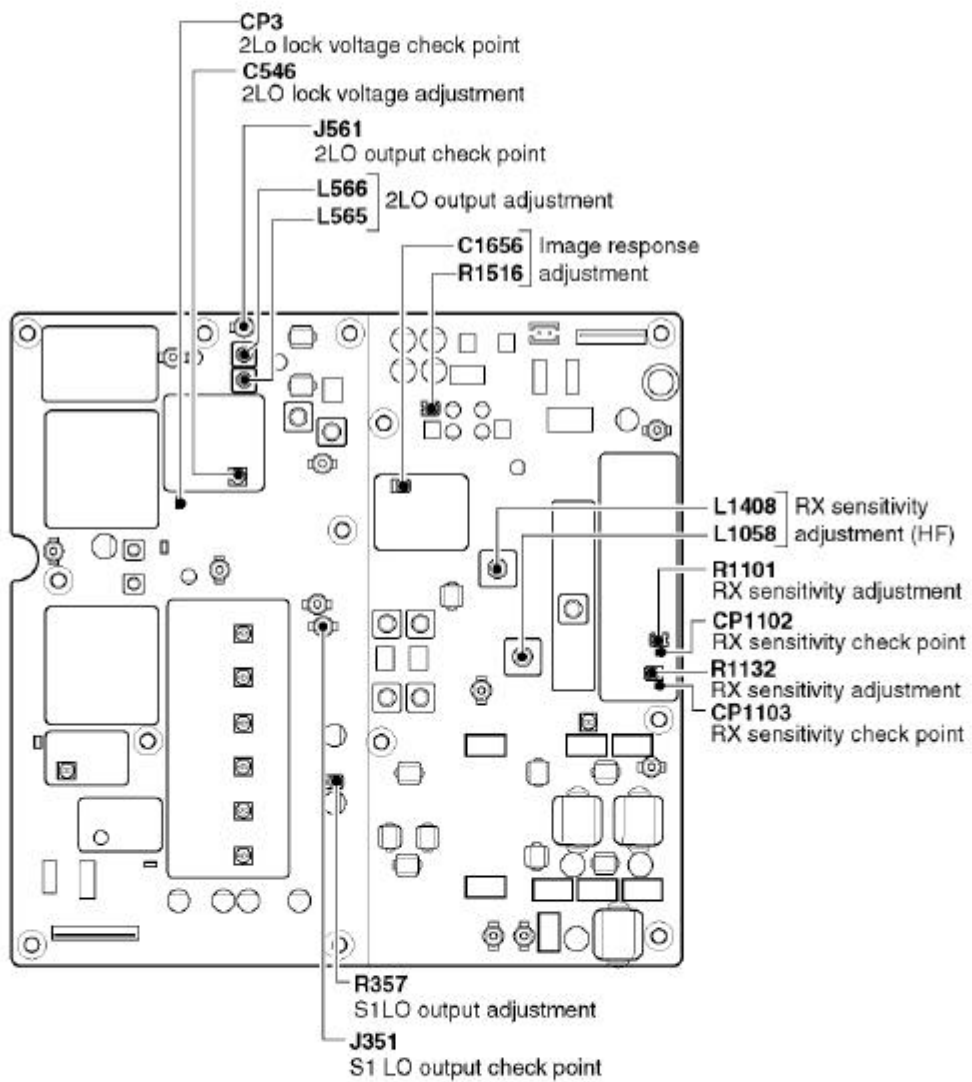
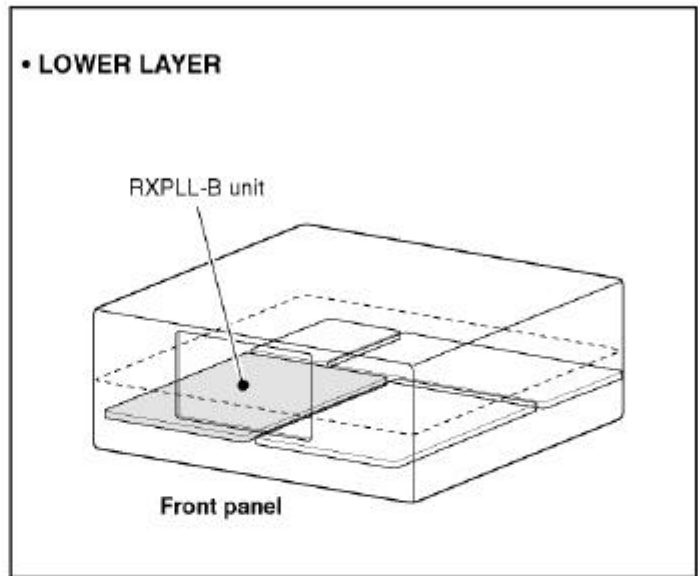


RXPLL-B UNIT ADJUSTMENTS—Continued

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
HPL LOCK VOLTAGE (VCO6)	12 <ul style="list-style-type: none"> • SUB display frequency : 45.000 MHz • Mode : USB • Receiving 	RX PLL-B	Connect a DC voltmeter to the CP2 (LV2).	1.8 V–2.8 V		Verify
S1 LO OUTPUT	1 <ul style="list-style-type: none"> • SUB display frequency : 14.999 MHz • Mode : USB • Receiving 	RX PLL-B	Connect an RF voltmeter to the J351 (S1LO).	2.25 dBm ±0.25 dB	RX PLL-B	R357
2LO LOCK VOLTAGE	1 <ul style="list-style-type: none"> • SUB display frequency : 14.100 MHz • Mode : USB • Receiving 	RX PLL-B	Connect a DC voltmeter to the CP3.	1.5 V ±0.3 V	RX PLL-B	C546
2LO OUTPUT	1 <ul style="list-style-type: none"> • MAIN display frequency : 14.100 MHz • Mode : USB • Receiving 	RX PLL-B	Connect a spectrum analyzer to the J561 (2LO).	Maximum level (–9.0 dBm ±3.0 dB)	RX PLL-B	L565, L566
	2 Repeat the above adjustment sometimes.					
RX SENSITIVITY	1 Pre-set the IC-7800 as below condition. <ul style="list-style-type: none"> • SUB display frequency : 14.150 MHz • Mode : USB • Dual watch : ON • MAIN Ant. : ANT2 • SUB Ant. : ANT1 • Pre-amp. 1 : ON • MAIN AF : Minimum level • Receiving 	RX PLL-B	Connect a DC voltmeter to the CP1102.	4.5 V ±0.1 V	RX PLL-B	R1101
			Connect a DC voltmeter to the CP1103.	4.5 V ±0.1 V	RX PLL-B	R1132
				Center position		R1228
				2 rotations	Core	L1401 L1402
	3.5 rotations	Core	L1403 L1404			
(HF)	2 <ul style="list-style-type: none"> • SUB display frequency : 14.150 MHz • Mode : USB • Connect an SSG to [ANT1] connector and set as : <ul style="list-style-type: none"> Frequency : 14.1515 MHz Level : 1 μV* (–107 dBm) Modulation : OFF • Receiving 	Rear panel	Connect an AC millivolt meter to the [EXT SP] jack with 8 Ω load.	Maximum audio level	RX PLL-B	L1408, L1058
IMAGE RESPONSE	1 <ul style="list-style-type: none"> • SUB display frequency : 14.150 MHz • Mode : USB • Connect an SSG to [ANT1] connector and set as : <ul style="list-style-type: none"> Frequency : 14.0765 MHz Level : 50 mV* (–13 dBm) Modulation : OFF • Receiving 	Rear panel	Connect a AC millivoltmeter to the [EXT SP] jack with 8 Ω load.	Minimum image	RX PLL-B	R1516, C1656
	2 Repeat the above adjustment sometimes.					

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

• RXPLL-B UNIT TOP VIEW

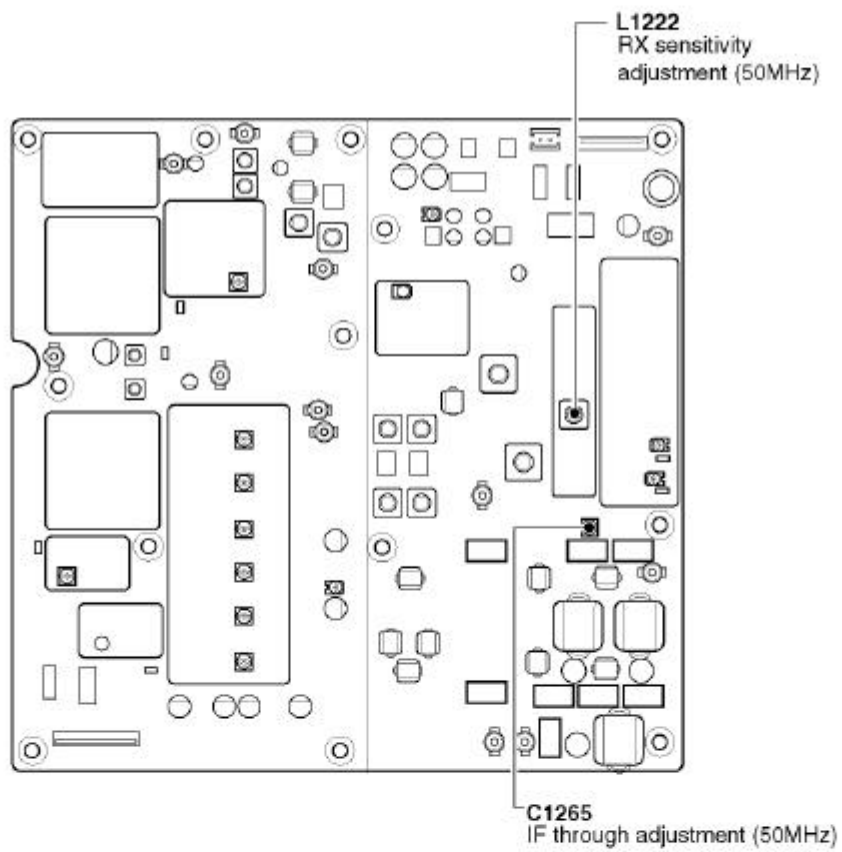
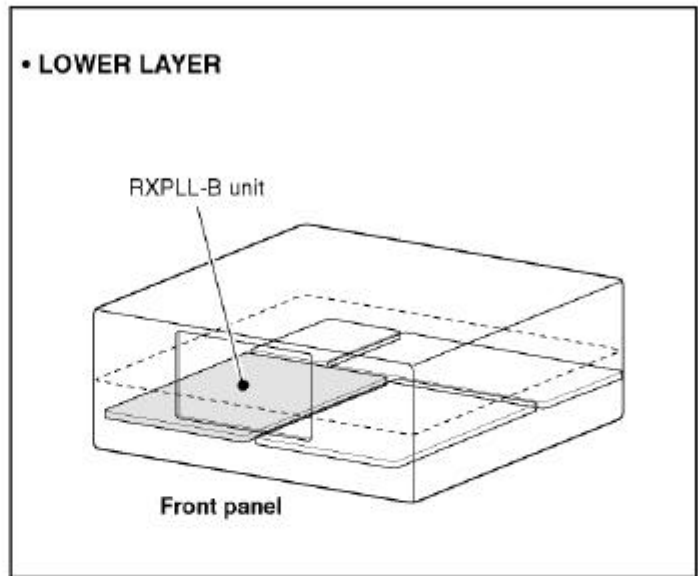


RXPLL-B UNIT ADJUSTMENTS–Continued

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
RX SENSITIVITY (50 MHz)	1 <ul style="list-style-type: none"> • SUB display frequency : 50.020 MHz • Mode : USB • Pre-amp. 2 : ON • Connect an SSG to [ANT1] connector and set as : <ul style="list-style-type: none"> Frequency : 50.0215 MHz Level : 0.32 μV* (-117 dBm) Modulation : OFF • Receiving 	Rear panel	Connect an AC millivolt meter to the [EXT SP] jack with 8 Ω load.	Maximum audio level	RX PLL-B	L1222
IF THROUGH (50 MHz)	1 <ul style="list-style-type: none"> • SUB display frequency : 50.020 MHz • Mode : USB • Connect an SSG to [ANT1] connector and set as : <ul style="list-style-type: none"> Frequency : 64.455 MHz Level : 50 mV* (-13 dBm) Modulation : OFF • Receiving 	Front panel	S-meter	Minimum level	RX PLL-B	C1265

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

• RXPLL-B UNIT TOP VIEW

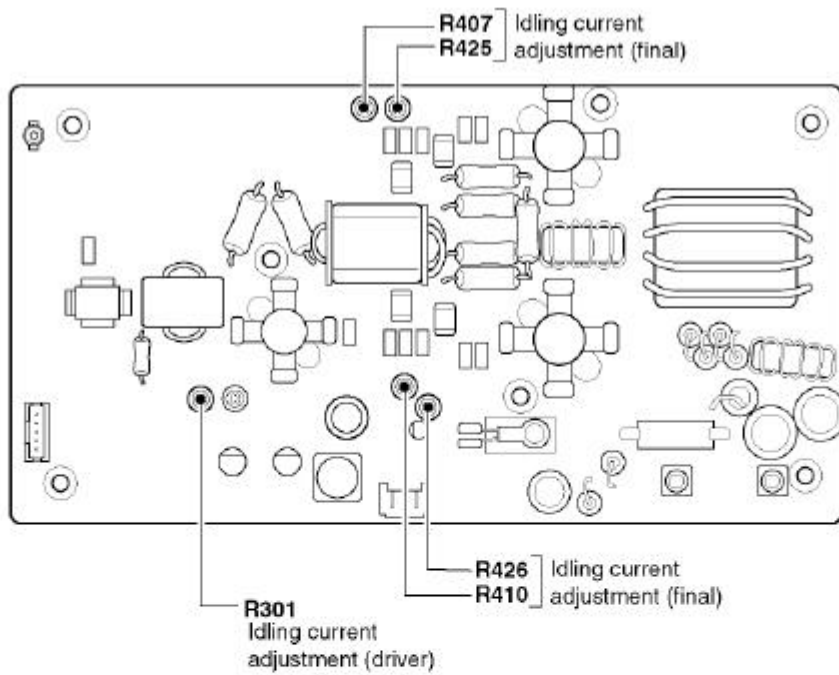
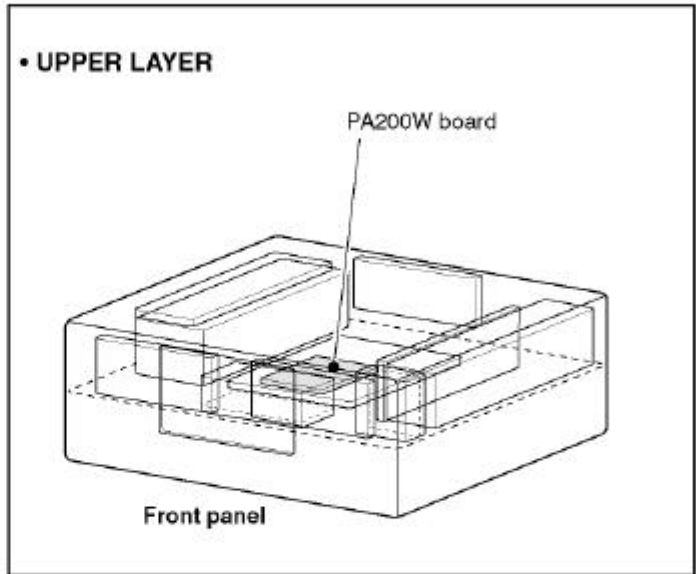


4-5 PA200W BOARD ADJUSTMENTS

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT			
			UNIT	LOCATION		UNIT	ADJUST		
IDLING CURRENT (For driver)	1	<ul style="list-style-type: none"> • Preset R301, R407, R410 on the PA200W unit to max. CCW*. • [MIC] gain : max. CCW* • Main display frequency : 14.100 MHz • Mode : USB • Apply no audio signals to the [MIC] connector. • Transmitting 	PA200W	Connect an ammeter between W1 and the transceiver.	1.0 A higher	PA200W	R301		
	(For final amplifier)	2					<ul style="list-style-type: none"> • Transmitting 	1.0 A higher	R407 R425
		3					<ul style="list-style-type: none"> • Transmitting 	1.0 A higher	R410 R426

*CCW: Counter clockwise

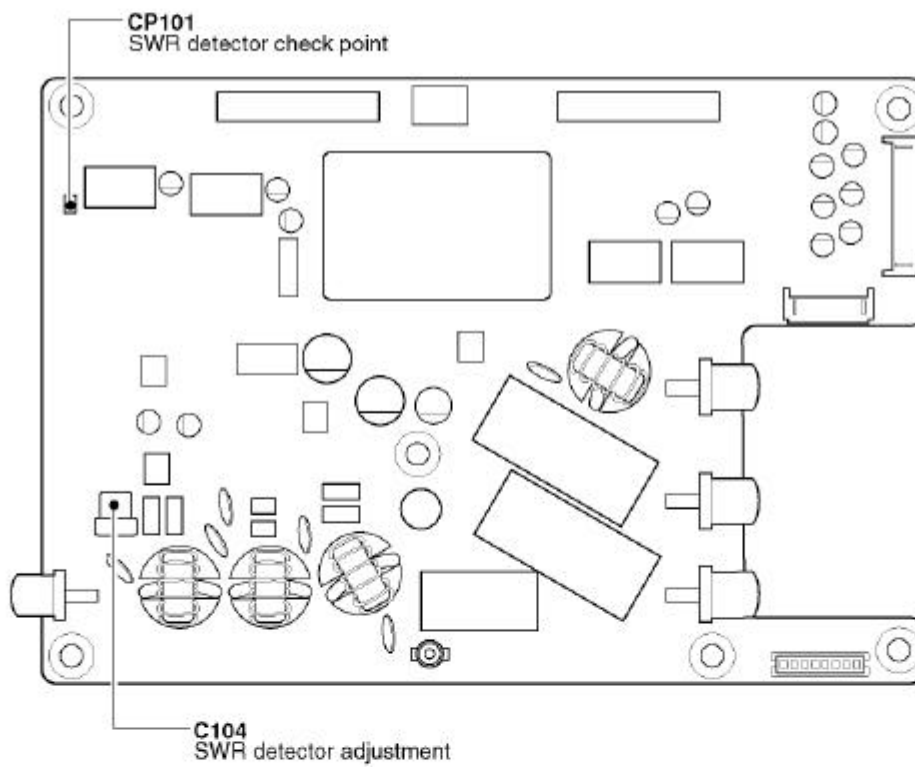
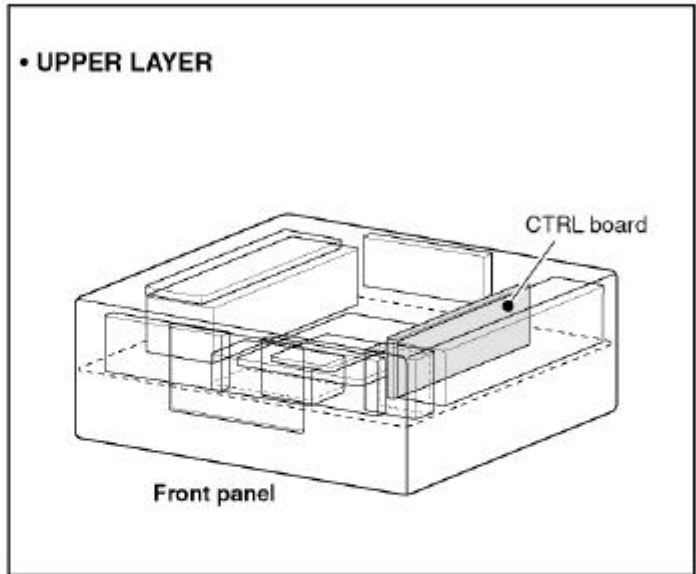
• PA200W BOARD TOP VIEW



4-6 TUNER ADJUSTMENT

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT		
		UNIT	LOCATION		UNIT	ADJUST	
SWR DETECTOR	1	<ul style="list-style-type: none"> • Main display frequency : 24.950 MHz • Mode : FM • [RF POWER] : Max. CW (200W) • [TUNER] : Through • APC : OFF • Connect a 50 Ω terminator to [ANT1] connector. • Transmitting 	CTRL	Connect a digital multimeter or oscilloscope to the check point CP101 (REF).	Minimum voltage	CTRL	C104
		ADJUSTMENT CONDITION	DISPLAY		OPERATION		
TUNER REFERENCE	1	<ul style="list-style-type: none"> • Enter the tuner adjustment mode: <ol style="list-style-type: none"> ① Turn power OFF. ② Terminate the [REMOTE] jack with a 2-conductor 3.5(d) mm mini-plug. ③ While pushing [M.SCOPE] and [EXIT/SET], turn power ON. 	TUNER-ADJUST MODE		Push [F-7 (START)] to start tuning.		
	2		-- TUNER -- Adjusting Now		Verify the display shows "Adjusting Now".		
	3		-- TUNER -- OK		Verify the display shows "OK".		

• CTRL BOARD TOP VIEW

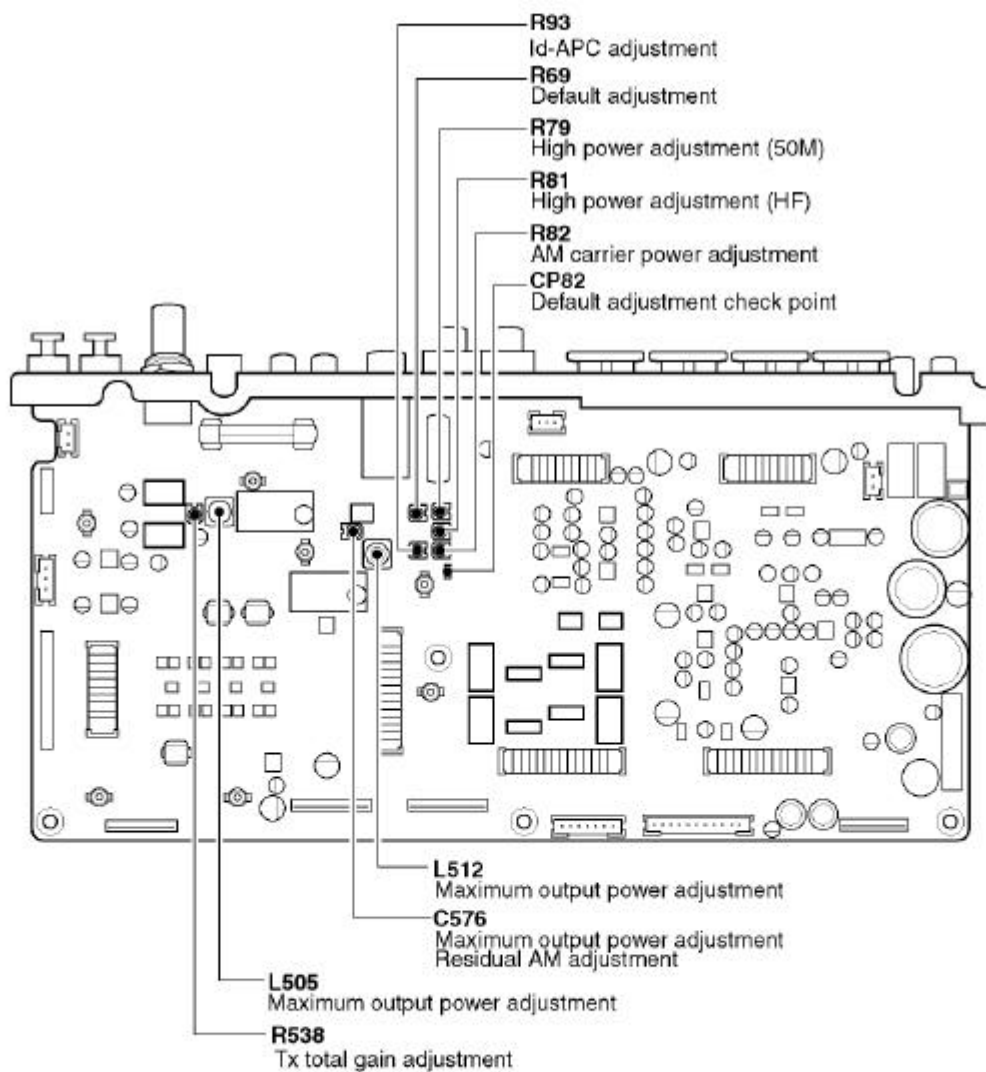
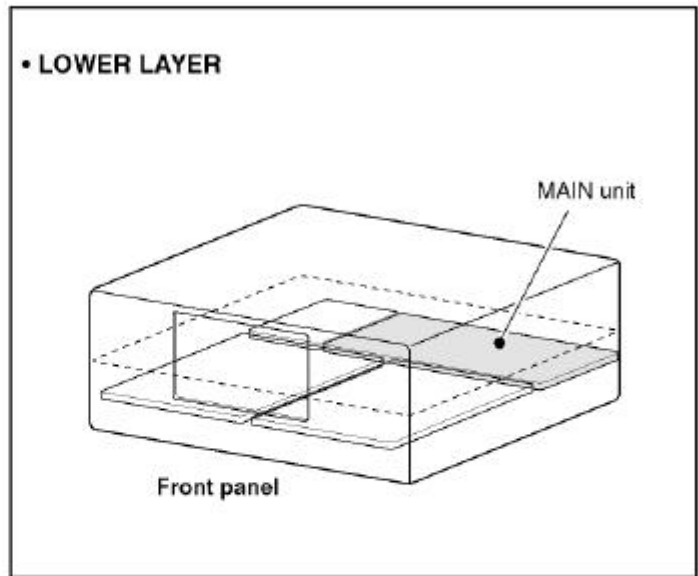


4-7 MAIN UNIT ADJUSTMENTS

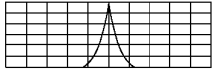
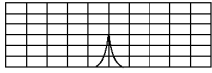
ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT		
		UNIT	LOCATION		UNIT	ADJUST	
MAXIMUM OUTPUT POWER	1	<ul style="list-style-type: none"> • Turn the power OFF • Push and hold [F-INP] and [MW], and then turn the power ON. • Preset R93 to 3 o'clock position. 	MAIN	Connect a digital multimeter or oscilloscope to the check point CP82.	0.5 V \pm 0.2 V	MAIN	R69
	2	<ul style="list-style-type: none"> • Connect an audio generator to the [MIC] connector and set as: Frequency : 1.5 kHz Level : 1 mV • Transmitting 	Rear panel	Connect an RF power meter to the [ANT1] connector.	Maximum output power	MAIN	L505 C576 L512
RESIDUAL AM	3	<ul style="list-style-type: none"> • Mode : FM • Connect an audio generator to the [MIC] connector and set as: Frequency : 1.0 kHz Level : 10 mV • Transmitting 	Rear panel	Connect an RF power meter to the [ANT1] connector.			verify
	4	<ul style="list-style-type: none"> • Apply no audio signals to the [MIC] connector. • Transmitting 			Minimum level difference between an audio generator is ON and OFF.	MAIN	C576
TX TOTAL GAIN	1	<ul style="list-style-type: none"> • MAIN display frequency : Any • Mode : USB • [MIC] GAIN : 12 o'clock position • Connect an audio generator to the [MIC] connector and set as: Frequency : 1.5 kHz Level : 1 mV • Transmitting 	Rear panel	Connect an RF power meter to the [ANT1] connector.	130 W	MAIN	R538
HIGH POWER (HF)	1	<ul style="list-style-type: none"> • MAIN display frequency : 14.100 MHz • Mode : RTTY • Transmitting 	Rear panel	Connect an RF power meter to the [ANT1] connector.	200 W	MAIN	R81
(50 MHz)	2	<ul style="list-style-type: none"> • MAIN display frequency : 50.100 MHz • Mode : RTTY • Transmitting 			200 W		R79
AM CARRIER POWER	1	<ul style="list-style-type: none"> • MAIN display frequency : 14.100 MHz • Mode : AM • Apply no audio signals to the [MIC] connector. • Transmitting 	Rear panel	Connect an RF power meter to the [ANT1] connector.	55 W	MAIN	R82
Id-APC	1	<ul style="list-style-type: none"> • MAIN display frequency : 14.100 MHz • Mode : RTTY • Connect CP81 to GND. • Preset R93 to 90° CCW*. • Transmitting 	PA	Connect an ammeter between the PA unit and the W1.	12 A	MAIN	R93

*CCW: Counter clockwise

• MAIN UNIT TOP VIEW

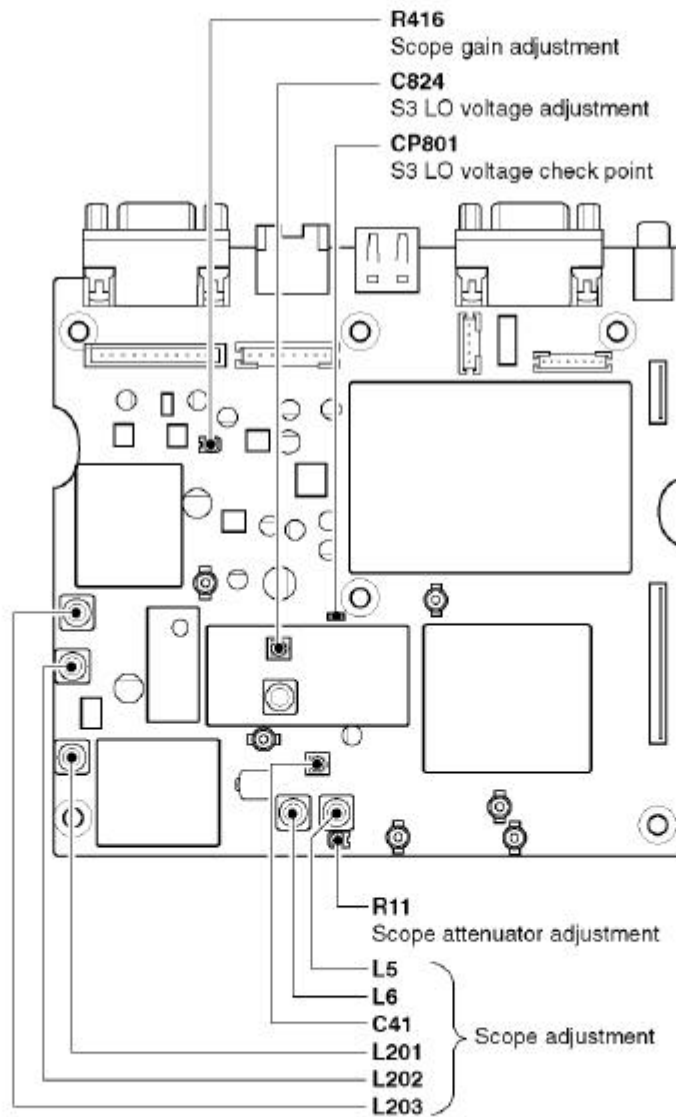
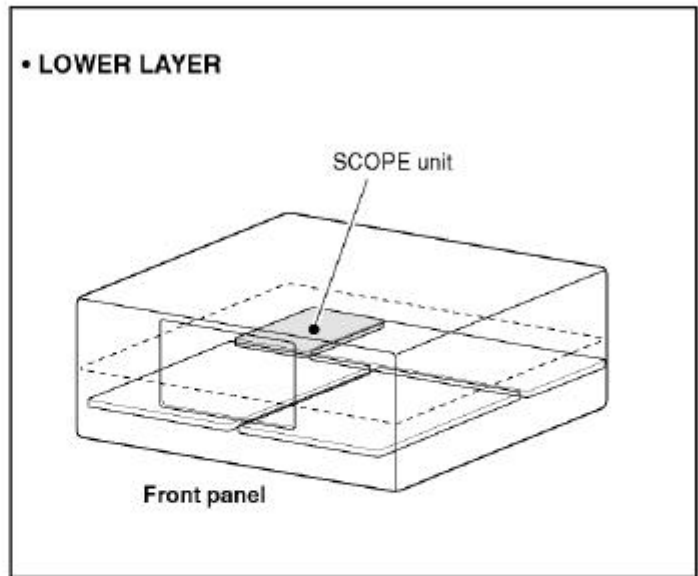


4-8 SCOPE UNIT ADJUSTMENTS

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
S3 LO LOCK VOLTAGE	1 <ul style="list-style-type: none"> • Pre-set the IC-7800 as below condition. • Dualwatch : OFF • Pre-amp. : OFF • Attenuator : OFF • Scope : ON • Scope attenuator: OFF • MAIN display frequency : 14.200 MHz • Mode : CW • Span : ± 25 kHz • Receiving 	SCOPE	Connect a digital voltmeter to the CP801.	2.5 V	SCOPE	C824
SCOPE	1 <ul style="list-style-type: none"> • Connect an SSG to the [ANT1] connector and set as : Frequency : 14.200 MHz Level : $500 \mu\text{V}^*$ (-53 dBm) Modulation: OFF • Receiving 	Front panel	Scope wave on the LCD.	Maximum wave form	SCOPE	L203 L202 L201 L5 L6 C41
	2 Repeat the above adjustment L5, L6 and C41 sometimes.			Minimum wave form		C41
	3 <ul style="list-style-type: none"> • Connect an SSG to J1 and set as: Frequency : 71.715 MHz Level : 100mV^* (-7 dBm) Modulation: OFF • Receiving 			Maximum wave form		L5 L6
	4 <ul style="list-style-type: none"> • Set an SSG as: Frequency : 14.200 MHz Level : $500 \mu\text{V}^*$ (-53 dBm) Modulation: OFF • Receiving 					
SCOPE GAIN	1 <ul style="list-style-type: none"> • MAIN display frequency : 14.200 MHz • Mode : CW • Connect an SSG to J1 and set as: Frequency : 14.200 MHz Level : $500 \mu\text{V}^*$ (-53 dBm) Modulation: OFF • Receiving 	Front panel	Scope wave on the LCD.	Set peak of scope wave form to 6 scales on the LCD.	SCOPE	R416
						
SCOPE ATTENUATOR	1 <ul style="list-style-type: none"> • MAIN display frequency : 14.200 MHz • Mode : CW • Scope attenuator: 30 dB • Connect an SSG to J1 and set as: Frequency : 14.200 MHz Level : $500 \mu\text{V}^*$ (-53 dBm) Modulation: OFF • Receiving 	Front panel	Scope wave on the LCD.	Set peak of scope wave form to 3 scales on the LCD.	SCOPE	R11
						

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

• SCOPE UNIT TOP VIEW



4-9 SOFTWARE ADJUSTMENTS

ADJUSTMENT	ADJUSTMENT CONDITION	DISPLAY	OPERATION
ENTERING ADJUSTMENT MODE	1	ADJUST MODE	<p>Push [F-1 (METER)], [F-2 (RX)] or [F-3 (TX)] to select each adjustment mode.</p> <p>Once entering adjustment mode, use [F-1 (▼)] to skip items, or [F-2 (EXIT)] to return the opening display.</p>
	<ul style="list-style-type: none"> • Enter the adjustment mode: <ol style="list-style-type: none"> ① Turn power OFF. ② Terminate the [REMOTE] jack with a 2-conductor 3.5(d) mm mini-plug. ③ While pushing [SSB] and [CW/RTTY], turn power ON. <p>CAUTION: NEVER select adjustment items [F-3 (TX)] while transceiver is connected to an SSG. Because transceiver automatically transmits when transmit item in the [F-3 (TX)] is selected.</p>		
HF PO METER	1	POWER HF/50M 0W	Push [F-7 (SET)] to store the “0 W” meter indication into memory, and move to the next step .
	2	POWER HF 10W	Rotate [MAIN DIAL] to set the RF output power become 10 W. Push [F-7 (SET)] to set 10 W power meter indication and selects the next adjustment item.
	3	POWER HF 50W	Rotate [MAIN DIAL] to set the RF output power become 50 W. Push [F-7 (SET)] to set 50 W power meter indication and selects the next adjustment item.
	4	POWER HF 100W	Rotate [MAIN DIAL] to set the RF output power become 100 W. Push [F-7 (SET)] to set 100 W power meter indication and selects the next adjustment item.
	5	POWER HF 150W	Rotate [MAIN DIAL] to set the RF output power become 150 W. Push [F-7 (SET)] to set 150 W power meter indication and selects the next adjustment item.
	6	POWER HF 200W	Rotate [MAIN DIAL] to set the RF output power become 195 W. Push [F-7 (SET)] to set 200 W power meter indication and selects the next adjustment item.
50 MHz PO METER	1	POWER 50M 10W	Rotate [MAIN DIAL] to set the RF output power become 10 W. Push [F-7 (SET)] to set 10 W power meter indication and selects the next adjustment item.
	2	POWER 50M 50W	Rotate [MAIN DIAL] to set the RF output power become 50 W. Push [F-7 (SET)] to set 50 W power meter indication and selects the next adjustment item.
	3	POWER 50M 100W	Rotate [MAIN DIAL] to set the RF output power become 100 W. Push [F-7 (SET)] to set 100 W power meter indication and selects the next adjustment item.
	4	POWER 50M 150W	Rotate [MAIN DIAL] to set the RF output power become 150 W. Push [F-7 (SET)] to set 150 W power meter indication and selects the next adjustment item.
	5	POWER 50M 200W	Rotate [MAIN DIAL] to set the RF output power become 195 W. Push [F-7 (SET)] to set 200 W power meter indication and selects the next adjustment item.
RESERVE POWER SET ^o	1	RESERVE POWER SET	Push [F-7 (SET)] to memorize the setting, and select the next adjustment item.
POWER SET (power down)	1	Power for Power Down HF/50M	Set the RF output power to 100 W with [MAIN DIAL]. Push [F-7 (SET)] to set the RF power level and selects the next adjustment item.
ALC METER	1	ALC	Push [F-7 (SET)] to set the ALC meter and selects the next adjustment item.

SOFTWARE ADJUSTMENTS–Continued

ADJUSTMENT	ADJUSTMENT CONDITION	DISPLAY	OPERATION	
DRIVE LEVEL	1	• Connect an audio generator to the [MIC] connector and set as: Frequency : 1.5 kHz Level : 10 mVrms	DRIVE	Push [F-7 (SET)] to set the DRIVE level and selects the next adjustment item.
Vd METER	1		Vd48V	Push [F-7 (SET)] to set the Vd meter indication and selects the next adjustment item.
Id METER	1	• Connect an RF power meter to the [ANT1] connector. • Connect a load which becomes SWR is 2 to the [ANT2] connector.	Id 0A	Push [F-7 (SET)] to set the 0 A meter indication and selects the next adjustment item.
	2		Id 5A	Rotate [MAIN DIAL] to set the driving current become 5 A. Push [F-7 (SET)] to set the 5 A meter indication and selects the next adjustment item
	3		Id 10A	Rotate [MAIN DIAL] to set the driving current become 10 A. Push [F-7 (SET)] to set the 10 A meter indication and selects the next adjustment item
SWR METER			SWR	Push [F-7 (SET)] to set the SWR meter indication and selects the next adjustment item.
HF TOTAL GAIN	1	• Connect an SSG to the [ANT1] connector and set as: Frequency : 14.1515 MHz Level : 1 mV* (-47 dBm) Modulation : OFF • Connect an AC millivolt meter to [SP] jack with an 8 Ω load.	Total Gain A HF PRE OFF	Set the AF output level to 0 dB.
	2			Rotate [MAIN DIAL] to set the AF output level to -30 dB. Push [F-7 (SET)] to set the HF A total gain and selects the next adjustment item.
	3		Total Gain A HF PRE ON	Rotate [MAIN DIAL] to set the AF output level to -30 dB. Push [F-7 (SET)] to set the HF A total gain and selects the next adjustment item.
	4	• Set the SSG as: Frequency : 50.1515 MHz Level : 1 mV* (-47 dBm)	Total Gain A 50M PRE OFF	Rotate [MAIN DIAL] to set the AF output level to -30 dB. Push [F-7 (SET)] to set the 50 MHz A total gain and selects the next adjustment item.
	5		Total Gain A 50M PRE ON	Rotate [MAIN DIAL] to set the AF output level to -30 dB. Push [F-7 (SET)] to set the 50 MHz A total gain and selects the next adjustment item.
	6	• Set the SSG as: Frequency : 14.1515 MHz Level : 1 mV* (-47 dBm)	Total Gain B HF PRE OFF	Set the AF output level to 0 dB.
	7			Rotate [MAIN DIAL] to set the AF output level to -30 dB. Push [F-7 (SET)] to set the HF B total gain and selects the next adjustment item.
	8		Total Gain B HF PRE ON	Rotate [MAIN DIAL] to set the AF output level to -30 dB. Push [F-7 (SET)] to set the HF B total gain and selects the next adjustment item.
	9	• Set the SSG as: Frequency : 50.1515 MHz Level : 1 mV* (-47 dBm)	Total Gain B 50M PRE OFF	Rotate [MAIN DIAL] to set the AF output level to -30 dB. Push [F-7 (SET)] to set the 50 MHz B total gain and selects the next adjustment item.
	10		Total Gain B 50M PRE ON	Rotate [MAIN DIAL] to set the AF output level to -30 dB. Push [F-7 (SET)] to set the 50 MHz B total gain and selects the next adjustment item.

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

SOFTWARE ADJUSTMENTS–Continued

ADJUSTMENT	ADJUSTMENT CONDITION	DISPLAY	OPERATION
EXTERNAL AGC	1 • Connect an SSG to the [ANT1] connector and set as:	AGC(RX-DSP)A	Push [F-7 (SET)] to set the external AGC level and selects the next adjustment item.
	2 Frequency : 14.1515 MHz Level : 3.2 mV* (-37 dBm) Modulation : OFF	AGC(RX-DSP)B	Push [F-7 (SET)] to set the external AGC level and selects the next adjustment item.
HF S-METER	1 • Set the SSG as: Level : OFF	HF S0 LEVEL	<ul style="list-style-type: none"> • Push [F-7 (SET)] to set the HF S0 meter indication and selects the next adjustment item. • Never change the SSG output level until 2 short beeps are sound.
	2 • Set the SSG as: Level : 50 μ V* (-73 dBm)	HF S9 LEVEL	<ul style="list-style-type: none"> • Push [F-7 (SET)] to set the HF S9 meter indication and selects the next adjustment item. • Never change the SSG output level until 2 short beeps are sound.
	3 • Set the SSG as: Level : 50 mV* (-13 dBm)	S9+60 LEVEL	<ul style="list-style-type: none"> • Push [F-7 (SET)] to set the HF S9+60 meter indication and selects the next adjustment item. • Never change the SSG output level until 2 short beeps are sound.
50 MHz S-METER	1 • Set the SSG as: Level : OFF	50M S0 LEVEL	<ul style="list-style-type: none"> • Push [F-7 (SET)] to set the 50 MHz S0 meter indication and selects the next adjustment item. • Never change the SSG output level until 2 short beeps are sound.
	2 • Set the SSG as: Level : 50 μ V* (-73 dBm)	50M S9 LEVEL	<ul style="list-style-type: none"> • Push [F-7 (SET)] to set the 50MHz S9 meter indication and selects the next adjustment item. • Never change the SSG output level until 2 short beeps are sound.
	3 • Set the SSG as: Level : 50 mV* (-13 dBm)	S9+60 LEVEL	<ul style="list-style-type: none"> • Push [F-7 (SET)] to set the 50 MHz S9+60 meter indication and selects the next adjustment item. • Never change the SSG output level until 2 short beeps are sound.
REFERENCE FREQUENCY	1 • Connect a frequency counter to the MAIN unit, J490. <div style="border: 1px solid black; padding: 2px; width: fit-content;"> NOTE: This adjustment need to adjust after more than 5 minutes past since IC-7800 is power ON. </div>	REF OSC	Rotate [MAIN DIAL] to set the reference frequency to 10.0000000 MHz. Push [F-7 (SET)] to set the frequency and return to the initial screen.

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

SECTION 5 PARTS LIST

[FRONT UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
W1	8900008940	CABLE	OPC-886 (P=1 N=10 L=75)	
W2	8900008940	CABLE	OPC-886 (P=1 N=10 L=75)	
W3	8900012870	CABLE	OPC-1331 (N=40,L=70)	
W4	8900008670	CABLE	OPC-849 (N:30 L:70)	
W5	8900008940	CABLE	OPC-886 (P=1 N=10 L=75)	
W6	8900008940	CABLE	OPC-886 (P=1 N=10 L=75)	
W7	8900012880	CABLE	OPC-1336 (N=18,L=70)	
W8	8900008940	CABLE	OPC-886 (P=1 N=10 L=75)	
W9	8900012890	CABLE	OPC-1332 (N=40,L=100)	
W10	8900006990	CABLE	OPC-683 (N:10 L:110)	
W11	8900008670	CABLE	OPC-849 (N:30 L:70)	
W12	8900008670	CABLE	OPC-849 (N:30 L:70)	
W13	8900008940	CABLE F	OPC-886 (P=1 N=10 L=75)	
W14	8900008670	CABLE	OPC-849 (N:30 L:70)	
W15	8900008940	CABLE	OPC-886 (P=1 N=10 L=75)	
W51	8600037050		SX2590 P51*P52FR	
EP1	6910015290	UNIT BOARD	EDTCB23QAF	
EP11	6910011090	SENSOR UNIT	RMS20-250-201-P	
EP12	6910011090	SENSOR UNIT	RMS20-250-201-P	
EP13	0880001460	UNIT BOARD	EX-2500 #03	
EP101	6910015650	E.OTHER	S-G2218-3#01 (MOUNT PLATE)	
EP102	6910015650	E.OTHER	S-G2218-3#01 (MOUNT PLATE)	

[VR-A BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
R1	7210002890	VARIABLE	RK161221005J/RV-308	T
R2	7210002890	VARIABLE	RK161221005J/RV-308	T
R3	7210002890	VARIABLE	RK161221005J/RV-308	T
R4	7210002890	VARIABLE	RK161221005J/RV-308	T
R11	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R12	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R13	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R14	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R15	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R16	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R17	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R18	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R21	7030003860	S.RESISTOR	ERJ3GE JPW V	B
R22	7030003860	S.RESISTOR	ERJ3GE JPW V	B
R23	7030003860	S.RESISTOR	ERJ3GE JPW V	B
R24	7030003860	S.RESISTOR	ERJ3GE JPW V	B
R25	7030003860	S.RESISTOR	ERJ3GE JPW V	B
R26	7030003860	S.RESISTOR	ERJ3GE JPW V	B
C11	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C12	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C13	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C14	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C15	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C16	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C17	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C18	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
J1	6510021720	S.CONNECTOR	30FLT-SM1-TB	B
J2	6510018920	S.CONNECTOR	B8B-PH-SM3-TB	B
J3	6510019970	S.CONNECTOR	52808-1091	B
J4	6510019970	S.CONNECTOR	52808-1091	B
EP1	0910057493	PCB	B 5951C	B
EP2	6910012350	PCB	MMZ1608Y 102BT	B
EP3	6910012350	PCB	MMZ1608Y 102BT	B
EP4	6910012350	PCB	MMZ1608Y 102BT	B
EP5	6910012350	PCB	MMZ1608Y 102BT	B
EP6	6910012350	PCB	MMZ1608Y 102BT	B
EP7	6910012350	PCB	MMZ1608Y 102BT	B
EP8	6910012350	PCB	MMZ1608Y 102BT	B
EP9	6910012350	PCB	MMZ1608Y 102BT	B
EP10	6910012350	PCB	MMZ1608Y 102BT	B

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[VR-A BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
EP11	6910012350	PCB	MMZ1608Y 102BT	B
EP12	6910012350	PCB	MMZ1608Y 102BT	B
EP13	6910012350	PCB	MMZ1608Y 102BT	B
EP14	6910012350	PCB	MMZ1608Y 102BT	B
EP15	6910012350	PCB	MMZ1608Y 102BT	B
EP16	6910012350	PCB	MMZ1608Y 102BT	B
EP17	6910012350	PCB	MMZ1608Y 102BT	B
EP18	6910012350	PCB	MMZ1608Y 102BT	B
EP19	6910012350	PCB	MMZ1608Y 102BT	B
EP20	6910012350	PCB	MMZ1608Y 102BT	B
EP21	6910012350	PCB	MMZ1608Y 102BT	B
EP22	6910012350	PCB	MMZ1608Y 102BT	B

[VR-B BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
R1	7210003160	VARIABLE	RV-317 (RK0972210)	T
R2	7210003160	VARIABLE	RV-317 (RK0972210)	T
R3	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	T
R4	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	T
R5	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	T
R6	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	T
C1	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C2	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C3	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C4	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
J1	6510019970	S.CONNECTOR	52808-1091	T
EP1	0910057502	PCB	B 5952B	

[VR-C BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
VR-C				
R1	7210003160	VARIABLE	RV-317 (RK0972210)	T
R2	7210003160	VARIABLE	RV-317 (RK0972210)	T
R3	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	T
R4	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	T
R5	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	T
R6	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	T
C1	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C2	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C3	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C4	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
J1	6510019970	S.CONNECTOR	52808-1091	T
EP1	0910057512	PCB	B 5953B	

S.=Surface mount

[VR-D BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
R1	7210001130	VARIABLE	RK097111T005A (10KB)	T
R2	7210001130	VARIABLE	RK097111T005A (10KB)	T
R3	7210001130	VARIABLE	RK097111T005A (10KB)	T
R4	7210001130	VARIABLE	RK097111T005A (10KB)	T
R5	7210001130	VARIABLE	RK097111T005A (10KB)	T
R6	7210001130	VARIABLE	RK097111T005A (10KB)	T
R7	7210001130	VARIABLE	RK097111T005A (10KB)	T
R11	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R12	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R13	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R14	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R15	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R16	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R17	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
C11	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C12	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C13	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C14	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C15	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C16	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C17	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
J1	6510019970	S.CONNECTOR	52808-1091	B
EP1	0910057522	PCB	B 5954B	

[SW-A BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
DS7	5040002930	S.LED	SML-512MW T86P	T
DS8	5040002930	S.LED	SML-512MW T86P	T
DS9	5040002930	S.LED	SML-512MW T86P	T
DS10	5040002930	S.LED	SML-512MW T86P	T
DS11	5040002930	S.LED	SML-512MW T86P	T
DS12	5040002930	S.LED	SML-512MW T86P	T
DS13	5040002930	S.LED	SML-512MW T86P	T
DS14	5040002930	S.LED	SML-512MW T86P	T
DS15	5040002990	S.LED	SML-512UWT86	T
DS16	5040002930	S.LED	SML-512MW T86P	T
DS17	5040002930	S.LED	SML-512MW T86P	T
S1	2260002740	S.SWITCH	LS8J2M-T	T
S2	2260002740	S.SWITCH	LS8J2M-T	T
S3	2260002740	S.SWITCH	LS8J2M-T	T
S4	2260002740	S.SWITCH	LS8J2M-T	T
S5	2260002740	S.SWITCH	LS8J2M-T	T
S6	2260002740	S.SWITCH	LS8J2M-T	T
S7	2260002740	S.SWITCH	LS8J2M-T	T
S8	2260002740	S.SWITCH	LS8J2M-T	T
S11	2260002740	S.SWITCH	LS8J2M-T	T
S12	2260002740	S.SWITCH	LS8J2M-T	T
S13	2260002740	S.SWITCH	LS8J2M-T	T
S14	2260002740	S.SWITCH	LS8J2M-T	T
S15	2260002740	S.SWITCH	LS8J2M-T	T
S16	2260002740	S.SWITCH	LS8J2M-T	T
S17	2260002740	S.SWITCH	LS8J2M-T	T
S18	2260002740	S.SWITCH	LS8J2M-T	T
S19	2260002740	S.SWITCH	LS8J2M-T	T
S20	2260002740	S.SWITCH	LS8J2M-T	T
S21	2260002740	S.SWITCH	LS8J2M-T	T
EP1	0910057443	PCB	B 5955C	

[SW-A BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
R2	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R3	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)	B
R4	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R6	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R7	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R8	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R9	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R10	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R11	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R12	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R13	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)	B
R14	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R15	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)	B
R16	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R17	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)	B
R18	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R19	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	B
R20	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	B
R21	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	B
R22	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)	B
R23	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R24	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)	B
R25	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)	B
R26	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R27	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	B
R28	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	B
R29	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)	B
R30	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
C1	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C2	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C3	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C4	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C5	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C6	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C7	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C8	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C9	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
J1	6510019970	S.CONNECTOR	52808-1091	B
J2	6510019970	S.CONNECTOR	52808-1091	B
J3	6510022470	S.CONNECTOR	40FLT-SM1-TB	B
DS5	5040002980	S.LED	SML-512DW-T86	T
DS6	5040002930	S.LED	SML-512MW T86P	T

[SW-B BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
J1	6510020530	S.CONNECTOR	52808-1891	B
S1	2260002740	S.SWITCH	LS8J2M-T	T
S2	2260002740	S.SWITCH	LS8J2M-T	T
S3	2260002740	S.SWITCH	LS8J2M-T	T
S4	2260002740	S.SWITCH	LS8J2M-T	T
S5	2260002740	S.SWITCH	LS8J2M-T	T
S6	2260002740	S.SWITCH	LS8J2M-T	T
S7	2260002740	S.SWITCH	LS8J2M-T	T
S8	2260002740	S.SWITCH	LS8J2M-T	T
S9	2260002740	S.SWITCH	LS8J2M-T	T
S10	2260002740	S.SWITCH	LS8J2M-T	T
S11	2260002740	S.SWITCH	LS8J2M-T	T
S12	2260002740	S.SWITCH	LS8J2M-T	T
S13	2260002740	S.SWITCH	LS8J2M-T	T
S14	2260002740	S.SWITCH	LS8J2M-T	T
S15	2260002740	S.SWITCH	LS8J2M-T	T
S16	2260002740	S.SWITCH	LS8J2M-T	T
S17	2260002740	S.SWITCH	LS8J2M-T	T
EP1	0910057452	PCB	B 5956B	

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[SW-C BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
R1	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)	B
R2	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R3	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)	B
R4	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	B
R5	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)	B
R6	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R7	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)	B
R8	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	B
R9	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)	B
R10	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R11	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)	B
R12	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	B
R13	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)	B
R14	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R15	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	B
R51	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R52	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R53	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R54	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R55	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R56	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R57	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
R58	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	B
C1	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C2	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C3	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C4	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
J1	6510021720	S.CONNECTOR	30FLT-SM1-TB	B
J2	6510019970	S.CONNECTOR	52808-1091	B
DS51	5040002930	S.LED	SML-512MW T86P	T
DS52	5040002930	S.LED	SML-512MW T86P	T
DS53	5040002930	S.LED	SML-512MW T86P	T
DS54	5040002930	S.LED	SML-512MW T86P	T
DS55	5040002930	S.LED	SML-512MW T86P	T
DS56	5040002930	S.LED	SML-512MW T86P	T
DS57	5040002930	S.LED	SML-512MW T86P	T
DS58	5040002930	S.LED	SML-512MW T86P	T
S1	2260002740	S.SWITCH	LS8J2M-T	T
S2	2260002740	S.SWITCH	LS8J2M-T	T
S3	2260002740	S.SWITCH	LS8J2M-T	T
S4	2260002740	S.SWITCH	LS8J2M-T	T
S5	2260002740	S.SWITCH	LS8J2M-T	T
S6	2260002740	S.SWITCH	LS8J2M-T	T
S7	2260002740	S.SWITCH	LS8J2M-T	T
S8	2260002740	S.SWITCH	LS8J2M-T	T
S9	2260002740	S.SWITCH	LS8J2M-T	T
S10	2260002740	S.SWITCH	LS8J2M-T	T
S11	2260002740	S.SWITCH	LS8J2M-T	T
S12	2260002740	S.SWITCH	LS8J2M-T	T
S13	2260002740	S.SWITCH	LS8J2M-T	T
S14	2260002740	S.SWITCH	LS8J2M-T	T
S15	2260002740	S.SWITCH	LS8J2M-T	T
S16	2260002740	S.SWITCH	LS8J2M-T	T
S17	2260002740	S.SWITCH	LS8J2M-T	T
S18	2260002740	S.SWITCH	LS8J2M-T	T
S19	2260002740	S.SWITCH	LS8J2M-T	T
S20	2260002740	S.SWITCH	LS8J2M-T	T
S21	2260002740	S.SWITCH	LS8J2M-T	T
S22	2260002740	S.SWITCH	LS8J2M-T	T
EP1	0910057462	PCB	B 5957B	B

[JACK BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
L1	6200003950	S.COIL	HF50ACC 322513-T	B
L2	6200003950	S.COIL	HF50ACC 322513-T	B
L3	6200003950	S.COIL	HF50ACC 322513-T	B
R1	7030006060	S.RESISTOR	ERJ12YJ100U (10 Ω)	T
R2	7030006060	S.RESISTOR	ERJ12YJ100U (10 Ω)	T

[JACK BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
C1	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C2	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C3	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C101	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C102	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
J1	6510019970	S.CONNECTOR	52808-1091	B
J2	6510023890	CONNECTOR	S-G4617#01	B
J102	6510023900	CONNECTOR	LGR4619-7000	B
EP1	0910057472	PCB	B 5959B	B
EP101	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP102	6910012350	S.BEAD	MMZ1608Y 102BT	B

[MIC BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
MIC				
L1	6200003260	S.COIL	NL 322522T-101J	B
L2	6200003260	S.COIL	NL 322522T-101J	B
L3	6200003260	S.COIL	NL 322522T-101J	B
L4	6200003950	S.COIL	HF50ACC 322513-T	B
C1	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C2	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C3	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C4	4030007130	S.CERAMIC	C1608 CH 1H 101J-T	B
C5	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C6	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C7	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
J1	6510000190	CONNECTOR	FM214-8SS (P)	T
J2	6510019970	S.CONNECTOR	52808-1091	B
EP1	0910057533	PCB	B 5960C	B
EP2	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP3	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP4	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP5	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP6	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP7	6910015130	S.BEAD	MMZ1608D 301BT	B
EP8	6910015130	S.BEAD	MMZ1608D 301BT	B
EP9	6910015130	S.BEAD	MMZ1608D 301BT	B
EP10	6910015130	S.BEAD	MMZ1608D 301BT	B
EP11	6910015130	S.BEAD	MMZ1608D 301BT	B

[TENKEY BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
IC1	1130011510	S.IC	BU2099FV-E2	B
IC2	1130011510	S.IC	BU2099FV-E2	B
R1	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)	B
R2	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R3	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)	B
R4	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	B
R5	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)	B
R6	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R7	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)	B
R8	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	B
R9	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)	B
R10	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	B
R11	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)	B
R12	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	B
R51	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R52	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R53	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R54	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[TENKEY BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
R55	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R56	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R57	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R58	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R59	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R60	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R61	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R62	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R63	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R64	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R65	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R66	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R67	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R68	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R69	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R70	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R71	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R72	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R73	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R74	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)	B
R75	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)	B
R76	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)	B
C1	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C2	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C3	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C4	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C5	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
J1	6510021720	S.CONNECTOR	30FLT-SM1-TB	B
J2	6510021720	S.CONNECTOR	30FLT-SM1-TB	B
J3	6510021720	S.CONNECTOR	30FLT-SM1-TB	B
J4	6510019970	S.CONNECTOR	52808-1091	B
J5	6510019970	S.CONNECTOR	52808-1091	B
J6	6510003400	CONNECTOR	B04B-EH-S	B
J7	6510018970	S.CONNECTOR	B4B-PH-SM3-TB	B
DS1	5040002980	S.LED	SML-512DW-T86	T
DS2	5040002980	S.LED	SML-512DW-T86	T
S1	2260002740	S.SWITCH	LS8J2M-T	T
S2	2260002740	S.SWITCH	LS8J2M-T	T
S3	2260002740	S.SWITCH	LS8J2M-T	T
S4	2260002740	S.SWITCH	LS8J2M-T	T
S5	2260002740	S.SWITCH	LS8J2M-T	T
S6	2260002740	S.SWITCH	LS8J2M-T	T
S7	2260002740	S.SWITCH	LS8J2M-T	T
S8	2260002740	S.SWITCH	LS8J2M-T	T
S9	2260002740	S.SWITCH	LS8J2M-T	T
S11	2260002820	S.SWITCH	LS9J2M-2D/D-T	T
S12	2260002820	S.SWITCH	LS9J2M-2D/D-T	T
S13	2260002820	S.SWITCH	LS9J2M-2D/D-T	T
S14	2260002820	S.SWITCH	LS9J2M-2D/D-T	T
S15	2260002820	S.SWITCH	LS9J2M-2D/D-T	T
S16	2260002820	S.SWITCH	LS9J2M-2D/D-T	T
S17	2260002820	S.SWITCH	LS9J2M-2D/D-T	T
S18	2260002820	S.SWITCH	LS9J2M-2D/D-T	T
S19	2260002820	S.SWITCH	LS9J2M-2D/D-T	T
S20	2260002820	S.SWITCH	LS9J2M-2D/D-T	T
S21	2260002820	S.SWITCH	LS9J2M-2D/D-T	T
S22	2260002820	S.SWITCH	LS9J2M-2D/D-T	T
S23	2260002740	S.SWITCH	LS8J2M-T	T
S24	2260002740	S.SWITCH	LS8J2M-T	T
EP1	0910057543	PCB	B 5961C	

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[PBT1 BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
R1	7210003180	VARIABLE	RV-319 (RK0972210)	T
R2	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	T
R3	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	T
C1	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C2	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
J1	6510019970	S.CONNECTOR	52808-1091	T
S1	2250000410	ENCODER	TP90D96E20-30F-2178-1	T
EP1	0910057552	PCB	B 5962B	

[PBT2 BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
R1	7210003180	VARIABLE	RV-319 (RK0972210)	T
R2	7210003170	VARIABLE	RV-318 (RK09L1120CON)	T
R3	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	T
R4	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	T
R5	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	T
C1	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C2	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C3	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
J1	6510019970	S.CONNECTOR	52808-1091	T
S1	2250000410	ENCODER	TP90D96E20-30F-2178-1	T
EP1	0910057562	PCB	B 5963B	

[LED BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
R1	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)	T
R2	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)	T
R3	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R4	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)	T
R5	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)	T
R6	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)	T
R7	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
J1	6510020710	S.CONNECTOR	52793-1090	T
DS1	5040003000	S.LED	SML-A12UT-T86	T
DS2	5040002960	S.LED	SML-A12MT T86	T
DS3	5040003010	S.LED	SML-A12WT	T
DS4	5040002970	S.LED	CL-270WB-D-TS	T
DS5	5040003000	S.LED	SML-A12UT-T86	T
DS6	5040002960	S.LED	SML-A12MT T86	T
DS7	5040003010	S.LED	SML-A12WT	T
EP1	0910057483	PCB	B 5964C	

S.=Surface mount

[CF BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
R1	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)	T
J1	6510024150	S.CONNECTOR	50FY BMT-TB	T
J2	6510024120	S.CONNECTOR	31-5620-050-716-871	T
J3	6510021600	S.CONNECTOR	S2B-PH-SM3-TB	T
DS1	5040002990	S.LED	SML-512UWT86	T
EP2	6910015640	E.OTHER	30-5610-000-002-000	
EP10	0910057572	PCB	B 5965B	

[DISPLAY BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
R209	7030003860	S.RESISTOR	ERJ3GE JPW V	T
R210	7030003860	S.RESISTOR	ERJ3GE JPW V	T
R212	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)	T
R213	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)	T
R214	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R215	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R216	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R217	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R218	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R219	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R220	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R221	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R222	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R223	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R224	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R225	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R226	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R227	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R228	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R229	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R230	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R232	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R233	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R234	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R235	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R236	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R237	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R238	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R239	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R240	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R241	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	T
R242	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	T
R246	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R247	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R248	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R249	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R250	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R251	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)	T
R252	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R253	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R254	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	T
R255	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)	T
R256	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)	T
R257	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)	T
R258	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)	T
R259	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R260	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R261	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R262	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R263	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R264	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R265	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R266	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R267	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R268	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R269	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R270	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R271	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R272	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R273	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R274	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R275	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R276	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R278	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R279	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R280	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R281	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R282	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R283	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R284	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	T
R285	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R286	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R287	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R288	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R289	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R290	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R291	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R292	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R293	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R294	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R295	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R296	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R297	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R298	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R299	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R300	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R301	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R302	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	T

[DISPLAY BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
IC1	1130009640	S.IC	BU4051BCFV-E2	T
IC2	1130009640	S.IC	BU4051BCFV-E2	T
IC3	1130009640	S.IC	BU4051BCFV-E2	T
IC4	1130009640	S.IC	BU4051BCFV-E2	T
IC5	1130009640	S.IC	BU4051BCFV-E2	T
IC6	1140011820	S.IC	M30620FCMGP D5 (SX-2590D)	T
IC7	1130011510	S.IC	BU2099FV-E2	T
IC201	1130009300	S.IC	TC7SET08FU (TE85L)	T
IC202	1130009300	S.IC	TC7SET08FU (TE85L)	T
IC601	1130011550	S.IC	RX-4581NB	T
IC651	1110005820	S.IC	R3112N281A-TR	T
Q200	1590000430	S.TRANSISTOR	DTC144EUA T106	T
Q201	1530003300	S.TRANSISTOR	2SC3647S-TD	T
Q202	1530003300	S.TRANSISTOR	2SC3647S-TD	T
Q203	1530002060	S.TRANSISTOR	2SC4081 T106 R	T
Q204	1520000650	S.TRANSISTOR	2SB1201-S-TL	T
Q205	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q206	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q208	1590001330	S.TRANSISTOR	DTA114EUA T106	T
Q209	1520000650	S.TRANSISTOR	2SB1201-S-TL	T
Q210	1530002060	S.TRANSISTOR	2SC4081 T106 R	T
Q211	1590001330	S.TRANSISTOR	DTA114EUA T106	T
Q212	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q501	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q502	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q503	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q504	1590001330	S.TRANSISTOR	DTA114EUA T106	T
Q505	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q601	1510000500	S.TRANSISTOR	2SA1162-GR (TE85R)	T
D7	1750000520	S.DIODE	DAN222TL	T
D8	1160000140	S.DIODE	DAP222 TL	T
D9	1730002340	S.ZENER	MA8047-M (TX)	T
D10	1730002590	S.ZENER	MA8033-H (TX)	T
D11	1790001670	S.DIODE	RB706F-40T106	T
D12	1790001670	S.DIODE	RB706F-40T106	T
D601	1790001250	S.DIODE	MA2S111-(TX)	T
D602	1790001250	S.DIODE	MA2S111-(TX)	T
D603	1790001250	S.DIODE	MA2S111-(TX)	T
X1	6050009870	S.XTAL	CH-567 (9.8304 MHz)	I
L201	6200001830	S.COIL	NL 322522T-100J	T
L203	6200003950	S.COIL	HF50ACC 322513-T	T
L204	6200001830	S.COIL	NL 322522T-100J	T
L205	6200003950	S.COIL	HF50ACC 322513-T	T
L207	6200003950	S.COIL	HF50ACC 322513-T	T
L208	6200003950	S.COIL	HF50ACC 322513-T	T
L209	6200003950	S.COIL	HF50ACC 322513-T	T
L210	6190001190	S.COIL	D10F-A814AY-101K=P3	T
L211	6190001190	S.COIL	D10F-A814AY-101K=P3	T
L601	6200001830	S.COIL	NL 322522T-100J	T
R200	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R201	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)	T
R202	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)	T
R203	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)	T
R208	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[DISPLAY BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.
R303	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R304	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R305	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R306	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R307	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R308	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R309	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R310	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R311	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R312	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R313	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R314	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R315	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R316	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R317	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R318	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R319	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R320	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R321	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R322	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R323	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R325	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)	T
R326	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R327	7030003580	S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)	T
R328	7030003660	S.RESISTOR ERJ3GEYJ 683 V (68 kΩ)	T
R329	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R330	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R331	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R332	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R333	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R334	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R335	7030003670	S.RESISTOR ERJ3GEYJ 823 V (82 kΩ)	T
R336	7030003670	S.RESISTOR ERJ3GEYJ 823 V (82 kΩ)	T
R337	7030003670	S.RESISTOR ERJ3GEYJ 823 V (82 kΩ)	T
R338	7030003670	S.RESISTOR ERJ3GEYJ 823 V (82 kΩ)	T
R339	7070000261	RESISTOR ERG2SJ 220 (22 Ω)	T
R340	7070000261	RESISTOR ERG2SJ 220 (22 Ω)	T
R342	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R343	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R351	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R352	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R353	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R354	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R355	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R356	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R357	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R358	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R359	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R360	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R361	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R362	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R363	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R364	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R365	7030004730	S.RESISTOR ERJ3GEYF 222 V (2.2 kΩ)	T
R366	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R369	7030003860	S.RESISTOR ERJ3GE JPW V	T
R501	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R502	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R503	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R504	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R505	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R601	7030003860	S.RESISTOR ERJ3GE JPW V	T
R602	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)	T
R603	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R604	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R651	7030003650	S.RESISTOR ERJ3GEYJ 563 V (56 kΩ)	T
R652	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)	T
R653	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)	T
C8	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C201	4310001170	MYLAR ECQE1A 124JBB	T
C202	4030016880	S.CERAMIC C4520 CH 3F 150KT-A	T
C203	4030007020	S.CERAMIC C1608 CH 1H 120J-T	T
C204	4030007020	S.CERAMIC C1608 CH 1H 120J-T	T
C205	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C206	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C207	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C208	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C209	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C210	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C211	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C212	4510006650	S.ELECTROLYTIC ECEV1EA100SR	T
C213	4510006230	S.ELECTROLYTIC ECEV1EA470UP	T
C214	4510006650	S.ELECTROLYTIC ECEV1EA100SR	T
C215	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C216	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C217	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T

[DISPLAY BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.
C218	4510006230	S.ELECTROLYTIC ECEV1EA470UP	T
C219	4030006860	S.CERAMIC C1608 JB 1H 102K-T	T
C220	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C221	4030008960	S.CERAMIC C2012 JB 1C 104K-T	T
C222	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C223	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C224	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C225	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C226	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C227	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C228	4510006650	S.ELECTROLYTIC ECEV1EA100SR	T
C229	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C230	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C231	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C232	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C241	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C242	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C243	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C244	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C245	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C246	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C247	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C248	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C249	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C250	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C251	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C252	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C253	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C254	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C255	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C256	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C257	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C258	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C259	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C260	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C261	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C262	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C263	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C264	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C265	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C266	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C267	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C268	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C601	4510006650	S.ELECTROLYTIC ECEV1EA100SR	T
C602	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C651	4030008890	S.CERAMIC C1608 JB 1H 273K-T	T
C652	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
J1	6510021720	S.CONNECTOR 30FLT-SM1-TB	T
J2	6510021720	S.CONNECTOR 30FLT-SM1-TB	T
J3	6510022470	S.CONNECTOR 40FLT-SM1-TB	T
J4	6510020530	S.CONNECTOR 52808-1891	T
J5	6510019970	S.CONNECTOR 52808-1091	T
J6	6510021720	S.CONNECTOR 30FLT-SM1-TB	T
J7	6510019970	S.CONNECTOR 52808-1091	T
J201	6510022470	S.CONNECTOR 40FLT-SM1-TB	T
J202	6510022470	S.CONNECTOR 40FLT-SM1-TB	T
J203	6510020080	S.CONNECTOR 52808-2091	T
J205	6510003400	CONNECTOR B04B-EH-S	T
J301	6510021180	S.CONNECTOR SM02 (8.0) B-BHS-1-TB	T
J302	6510022190	S.CONNECTOR B3B-PH-SM3-TB	T
J601	6510021860	CONNECTOR BH-800.8 <LTC>	T
T201	5910000980	TRANSFORMER 3319-T088	T
BT601	3020000110	LITHIUM CH2032	T
EP1	0910057592	PCB B 5966B	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[RXPLL-A UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
IC1	1130011530	S.IC CD74HC4094M96	T
IC2	1130009690	S.IC TC74HCT7007AF	T
IC51	1180001250	S.IC TA7808F (TE16L)	T
IC61	1180000420	S.IC TA78L05F (TE12R)	B
IC101	1140007880	S.IC TC190G08AF-0046-Z/SC-1246A	T
IC102	1130003830	S.IC TC7S04F (TE85R)	T
IC103	1130006440	S.IC TC7S08F (TE85R)	B
IC104	1130003830	S.IC TC7S04F (TE85R)	T
IC201	1130009230	S.IC LMX2306TMX	T
IC501	1140007880	S.IC TC190G08AF-0046-Z/SC-1246A	T
IC502	1130003830	S.IC TC7S04F (TE85R)	T
IC503	1130003830	S.IC TC7S04F (TE85R)	T
IC602	1130006440	S.IC TC7S08F (TE85R)	B
IC651	1140004550	S.IC M65343FP/SC1287	T
IC652	1130003830	S.IC TC7S04F (TE85R)	T
IC1051	1190002010	S.IC SD5400CY <1A>	T
IC1081	1110006180	S.IC UPG2009TB-E3	B
IC1402	1110006180	S.IC UPG2009TB-E3	T
IC1403	1110006180	S.IC UPG2009TB-E3	T
IC1501	1110006120	S.IC DBM9A41-TR	T
IC1502	1110006120	S.IC DBM9A41-TR	T
IC1503	1110006100	S.IC NJM5534MD-TE1	T
IC1504	1110006100	S.IC NJM5534MD-TE1	T
IC1505	1110006190	S.IC NJM074M-TE1	T
IC1506	1110006100	S.IC NJM5534MD-TE1	T
IC1651	1130011920	S.IC TC74LCX00F (EL)	T
IC1652	1110005420	S.IC BA15532F-E2	T
IC1653	1110005100	S.IC NJM072BM-TE2	B
IC1701	1130011530	S.IC CD74HC4094M96	T
IC1702	1130011530	S.IC CD74HC4094M96	T
IC1703	1160000130	S.IC TD62783AF (S,EL)	T
IC1704	1180000790	S.IC AN78L10M (E1)	B
Q1	1590001050	S.TRANSISTOR DTC114TUA T106	B
Q30	1530002060	S.TRANSISTOR 2SC4081 T106 R	T
Q41	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q150	1560000330	S.FET 2SK210-GR (TE85R)	T
Q151	1530002280	S.TRANSISTOR 2SC4081 T106 S	B
Q152	1530002280	S.TRANSISTOR 2SC4081 T106 S	B
Q201	1590001330	S.TRANSISTOR DTA114EUA T106	T
Q202	1560000530	S.FET 2SK880-GR (TE85R)	B
Q203	1530002490	S.TRANSISTOR 2SC3324-GR (TE85R)	T
Q204	1530002490	S.TRANSISTOR 2SC3324-GR (TE85R)	T
Q220	1560000330	S.FET 2SK210-GR (TE85R)	T
Q221	1530002060	S.TRANSISTOR 2SC4081 T106 R	T
Q230	1560000330	S.FET 2SK210-GR (TE85R)	T
Q240	1560000330	S.FET 2SK210-GR (TE85R)	T
Q250	1560000330	S.FET 2SK210-GR (TE85R)	T
Q260	1560000330	S.FET 2SK210-GR (TE85R)	T
Q270	1560000330	S.FET 2SK210-GR (TE85R)	T
Q280	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q281	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q282	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q283	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q284	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q285	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q301	1530003430	S.TRANSISTOR 2SC5226-4-TL	T
Q302	1530003430	S.TRANSISTOR 2SC5226-4-TL	B
Q341	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q351	1580000750	S.FET 3SK294 (TE85L)	T
Q352	1530003430	S.TRANSISTOR 2SC5226-4-TL	B
Q363	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q364	1590001330	S.TRANSISTOR DTA114EUA T106	T
Q421	1590000680	S.TRANSISTOR DTC114EUA T106	B
Q422	1590000680	S.TRANSISTOR DTC114EUA T106	B
Q441	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q502	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q540	1530002060	S.TRANSISTOR 2SC4081 T106 H	B
Q541	1560000330	S.FET 2SK210-GR (TE85R)	T
Q561	1530003430	S.TRANSISTOR 2SC5226-4-TL	T
Q580	1530003430	S.TRANSISTOR 2SC5226-4-TL	T
Q591	1530003150	S.TRANSISTOR 2SC4673D-TD	T
Q592	1520000560	S.TRANSISTOR 2SB1123T-TD	B
Q593	1590000680	S.TRANSISTOR DTC114EUA T106	B
Q680	1530002060	S.TRANSISTOR 2SC4081 T106 R	T
Q702	1530002600	S.TRANSISTOR 2SC4215-O (TE85R)	T
Q801	1560000560	S.FET 2SK882-GR (TE85L)	T
Q811	1560000560	S.FET 2SK882-GR (TE85L)	T
Q831	1560000560	S.FET 2SK882-GR (TE85L)	T
Q832	1520000560	S.TRANSISTOR 2SB1123T-TD	B
Q833	1590000680	S.TRANSISTOR DTC114EUA T106	B
Q1001	1530003850	S.TRANSISTOR 2SC5551F-TD	B
Q1004	1590001960	S.TRANSISTOR XP4311 (TX)	T
Q1005	1590001960	S.TRANSISTOR XP4311 (TX)	T
Q1006	1530003850	S.TRANSISTOR 2SC5551F-TD	B
Q1007	1530003850	S.TRANSISTOR 2SC5551F-TD	B
Q1008	1530003850	S.TRANSISTOR 2SC5551F-TD	B

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[RXPLL-A UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
Q1101	1530003860	TRANSISTOR 2SC3950D	T
Q1102	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q1103	1520000560	S.TRANSISTOR 2SB1123T-TD	B
Q1104	1530003860	TRANSISTOR 2SC3950D	T
Q1105	1530003840	S.TRANSISTOR 2SC5501-4-TR	T
Q1205	1590001960	S.TRANSISTOR XP4311 (TX)	T
Q1209	1530003850	S.TRANSISTOR 2SC5551F-TD	B
Q1210	1530003850	S.TRANSISTOR 2SC5551F-TD	B
Q1211	1560001310	S.FET MMBFU310LT1	T
Q1212	1560001310	S.FET MMBFU310LT1	T
Q1213	1590000680	S.TRANSISTOR DTC114EUA T106	B
Q1214	1520000560	S.TRANSISTOR 2SB1123T-TD	B
Q1301	1530003150	S.TRANSISTOR 2SC4673D-TD	T
Q1352	1530003850	S.TRANSISTOR 2SC5551F-TD	B
Q1401	1530003840	S.TRANSISTOR 2SC5501-4-TR	T
Q1402	1530003020	S.TRANSISTOR 2SC4402-3-TL	T
Q1403	1530003020	S.TRANSISTOR 2SC4402-3-TL	T
Q1501	1530003450	S.TRANSISTOR 2SC4835-R (TX)	T
Q1502	1530003450	S.TRANSISTOR 2SC4835-R (TX)	T
Q1651	1530002600	S.TRANSISTOR 2SC4215-O (TE85R)	B
Q1701	1590001960	S.TRANSISTOR XP4311 (TX)	T
Q1702	1590001960	S.TRANSISTOR XP4311 (TX)	T
Q1703	1590001960	S.TRANSISTOR XP4311 (TX)	T
D101	1750000520	S.DIODE DAN222TL	T
D152	1720000590	S.VARICAP MA357 (TX)	T
D153	1790000490	S.DIODE HSM88AS-TR	T
D154	1790000490	S.DIODE HSM88AS-TR	T
D201	1750000520	S.DIODE DAN222TL	T
D220	1720000590	S.VARICAP MA357 (TX)	T
D221	1720000590	S.VARICAP MA357 (TX)	T
D222	1790000620	S.DIODE MA77 (TX)	T
D230	1720000590	S.VARICAP MA357 (TX)	T
D231	1720000590	S.VARICAP MA357 (TX)	T
D232	1790000620	S.DIODE MA77 (TX)	T
D240	1720000590	S.VARICAP MA357 (TX)	T
D241	1720000590	S.VARICAP MA357 (TX)	T
D242	1790000620	S.DIODE MA77 (TX)	T
D250	1720000590	S.VARICAP MA357 (TX)	T
D251	1720000590	S.VARICAP MA357 (TX)	T
D252	1790000620	S.DIODE MA77 (TX)	T
D261	1720000590	S.VARICAP MA357 (TX)	T
D262	1790000620	S.DIODE MA77 (TX)	T
D271	1720000590	S.VARICAP MA357 (TX)	T
D272	1790000620	S.DIODE MA77 (TX)	T
D341	1790000620	S.DIODE MA77 (TX)	T
D342	1750000520	S.DIODE DAN222TL	B
D362	1790000620	S.DIODE MA77 (TX)	T
D363	1790000620	S.DIODE MA77 (TX)	T
D421	1790000620	S.DIODE MA77 (TX)	T
D422	1790000620	S.DIODE MA77 (TX)	T
D423	1790000620	S.DIODE MA77 (TX)	T
D424	1790000620	S.DIODE MA77 (TX)	T
D441	1790000620	S.DIODE MA77 (TX)	T
D501	1750000520	S.DIODE DAN222TL	T
D541	1720000590	S.VARICAP MA357 (TX)	T
D542	1720000590	S.VARICAP MA357 (TX)	T
D821	1750000430	S.DIODE HSB88WSTR	T
D1001	1750000580	S.DIODE 1SV307 (TPH3)	T
D1101	1790000620	S.DIODE MA77 (TX)	T
D1102	1790000620	S.DIODE MA77 (TX)	T
D1201	1750000580	S.DIODE 1SV307 (TPH3)	T
D1351	1750000580	S.DIODE 1SV307 (TPH3)	T
D1653	1750000550	S.DIODE 1SS355 TE-17	T
D1654	1750000550	S.DIODE 1SS355 TE-17	T
D1701	1790001670	S.DIODE RB706F-40T106	T
F1101	2020001820	S.CERAMIC SFCEV10M5FA00-R0	T
F1831	2030000300	S.MONOLITH FL-356 (64.491 MHz)	T
F11401	2030000280	S.MONOLITH FL-364 (64.455 MHz)	T
F11402	2030000330	S.MONOLITH FL-358 (64.455 MHz)	T
L1	6200003260	S.COIL NL 322522T-101J	T
L2	6200003260	S.COIL NL 322522T-101J	T
L10	6200003950	S.COIL HF50ACC 322513-T	T
L11	6200003950	S.COIL HF50ACC 322513-T	T
L12	6200003950	S.COIL HF50ACC 322513-T	T
L13	6200003950	S.COIL HF50ACC 322513-T	T
L20	6200003320	S.COIL NL 322522T-3R3J-3	T
L30	6200005490	S.COIL NL 322522T-331J	T
L101	6200001830	S.COIL NL 322522T-100J	T
L151	6130002970	COIL LB-343	T
L152	6200001830	S.COIL NL 322522T-100J	T
L201	6200005010	S.COIL NL 252018T-100J	T
L211	6200003660	S.COIL	B

S.=Surface mount

[RXPLL-A UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
R550	7030009691	S.RESISTOR ERA3YED 101V (100 Ω)	B
R554	7030009691	S.RESISTOR ERA3YED 101V (100 Ω)	B
R555	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)	B
R556	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)	B
R561	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)	T
R562	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R563	7030003490	S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ)	T
R564	7030003510	S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ)	T
R565	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R570	7030003230	S.RESISTOR ERJ3GEYJ 180 V (18 Ω)	T
R571	7030003230	S.RESISTOR ERJ3GEYJ 180 V (18 Ω)	T
R572	7030003290	S.RESISTOR ERJ3GEYJ 560 V (56 Ω)	B
R573	7030009841	S.RESISTOR ERA3YHD 330V	T
R574	7030003300	S.RESISTOR ERJ3GEYJ 680 V (68 Ω)	T
R575	7030003220	S.RESISTOR ERJ3GEYJ 150 V (15 Ω)	T
R580	7030009861	S.RESISTOR ERA3YED 471V	T
R581	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R582	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)	T
R587	7030009851	S.RESISTOR ERA3YED 271V	T
R588	7030003230	S.RESISTOR ERJ3GEYJ 180 V (18 Ω)	T
R589	7030009851	S.RESISTOR ERA3YED 271V	T
R591	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R592	7030005321	S.RESISTOR ERA3YED 103V	T
R593	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R594	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	B
R595	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	B
R596	7030003540	S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ)	B
R603	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R604	7030007230	S.RESISTOR ERA3YED 102V	B
R605	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R651	7030007230	S.RESISTOR ERA3YED 102V	B
R652	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R653	7030007230	S.RESISTOR ERA3YED 102V	T
R654	7030007230	S.RESISTOR ERA3YED 102V	T
R656	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)	T
R657	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R661	7030007220	S.RESISTOR ERA3YED 202V	T
R662	7030007220	S.RESISTOR ERA3YED 202V	T
R663	7030007220	S.RESISTOR ERA3YED 202V	T
R664	7030007220	S.RESISTOR ERA3YED 202V	T
R665	7030007220	S.RESISTOR ERA3YED 202V	T
R666	7030007220	S.RESISTOR ERA3YED 202V	T
R667	7030007220	S.RESISTOR ERA3YED 202V	T
R668	7030007220	S.RESISTOR ERA3YED 202V	T
R669	7030007200	S.RESISTOR ERA3YEB 202V	T
R670	7030007200	S.RESISTOR ERA3YEB 202V	T
R671	7030007200	S.RESISTOR ERA3YEB 202V	T
R673	7030007230	S.RESISTOR ERA3YED 102V	T
R674	7030007230	S.RESISTOR ERA3YED 102V	T
R675	7030007230	S.RESISTOR ERA3YED 102V	T
R676	7030007230	S.RESISTOR ERA3YED 102V	T
R677	7030007230	S.RESISTOR ERA3YED 102V	T
R678	7030007230	S.RESISTOR ERA3YED 102V	T
R679	7030007210	S.RESISTOR ERA3YEB 102V	T
R680	7030007210	S.RESISTOR ERA3YEB 102V	T
R681	7030007210	S.RESISTOR ERA3YEB 102V	T
R682	7030003860	S.RESISTOR ERJ3GE JPW V	B
R685	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)	T
R686	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R687	7030003470	S.RESISTOR ERJ3GEYJ 182 V (1.8 kΩ)	T
R688	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R689	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R690	7030009851	S.RESISTOR ERA3YED 271V	T
R691	7030003230	S.RESISTOR ERJ3GEYJ 180 V (18 Ω)	T
R692	7030009851	S.RESISTOR ERA3YED 271V	T
R693	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)	T
R704	7030009841	S.RESISTOR ERA3YHD 330V	T
R705	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)	T
R706	7030005321	S.HESISTOR ERA3YED 103V	T
R707	7030009861	S.RESISTOR ERA3YED 471V	T
R708	7030003410	S.RESISTOR ERJ3GEYJ 561 V (560 Ω)	T
R709	7030007860	S.RESISTOR ERJ3GEYJ 8R2V (8.2 Ω)	T
R710	7030003410	S.RESISTOR ERJ3GEYJ 561 V (560 Ω)	T
R711	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R802	7030009861	S.RESISTOR ERA3YED 471V	T
R803	7030005321	S.RESISTOR ERA3YED 103V	T
R804	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R805	7030009851	S.RESISTOR ERA3YED 271V	T
R806	7030003230	S.RESISTOR ERJ3GEYJ 180 V (18 Ω)	T
R807	7030009851	S.RESISTOR ERA3YED 271V	T
R812	7030007230	S.RESISTOR ERA3YED 102V	T
R814	7030005321	S.RESISTOR ERA3YED 103V	T
R815	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R831	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	B
R832	7030003300	S.RESISTOR ERJ3GEYJ 680 V (68 Ω)	B
R833	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	B
R834	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)	T
R835	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[RXPLL-A UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
R836	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)	T
R837	7030003220	S.RESISTOR ERJ3GEYJ 150 V (15 Ω)	T
R838	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)	T
R839	7030005321	S.RESISTOR ERA3YED 103V	B
R840	7030003540	S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ)	B
R1000	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	B
R1001	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R1002	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R1003	7030010980	S.RESISTOR ERA3YHD 470V	T
R1004	7030007230	S.RESISTOR ERA3YED 102V	B
R1005	7030003550	S.RESISTOR ERJ3GEYJ 822 V (8.2 kΩ)	T
R1006	7030007230	S.RESISTOR ERA3YED 102V	T
R1007	7030004030	S.RESISTOR ERJ3GEYJ 5R6 V (5.6 Ω)	B
R1008	7030003240	S.RESISTOR ERJ3GEYJ 220 V (22 Ω)	T
R1009	7030010980	S.RESISTOR ERA3YHD 470V	T
R1010	7030010980	S.RESISTOR ERA3YHD 470V	T
R1011	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	B
R1012	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	B
R1013	7030007230	S.RESISTOR ERA3YED 102V	B
R1014	7030007230	S.RESISTOR ERA3YED 102V	B
R1015	7030003530	S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ)	B
R1016	7030003530	S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ)	B
R1017	7030003530	S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ)	B
R1018	7030003650	S.RESISTOR ERJ3GEYJ 563 V (56 kΩ)	B
R1019	7030005321	S.RESISTOR ERA3YED 103V	T
R1020	7030003390	S.RESISTOR ERJ3GEYJ 391 V (390 Ω)	T
R1021	7030003220	S.RESISTOR ERJ3GEYJ 150 V (15 Ω)	T
R1022	7030003390	S.RESISTOR ERJ3GEYJ 391 V (390 Ω)	T
R1023	7030010980	S.RESISTOR ERA3YHD 470V	B
R1024	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)	B
R1025	7030003300	S.RESISTOR ERJ3GEYJ 680 V (68 Ω)	T
R1026	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	B
R1051	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)	T
R1054	7030010980	S.RESISTOR ERA3YHD 470V	T
R1055	7030000010	S.RESISTOR MCR10EZHJ JPW (000)	T
R1056	7030000010	S.RESISTOR MCR10EZHJ JPW (000)	T
R1071	7030010980	S.RESISTOR ERA3YHD 470V	B
R1101	7310004860	S.TRIMMER EVM-3YSX50 B53 (502)	T
R1102	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	B
R1103	7030007680	S.RESISTOR ERJ8ENF 47R0V (47 Ω)	T
R1104	7030007680	S.RESISTOR ERJ8ENF 47R0V (47 Ω)	T
R1105	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)	T
R1106	7030009620	S.RESISTOR ERJ12YJ120U (12 Ω)	B
R1107	7030010980	S.RESISTOR ERA3YHD 470V	T
R1109	7030007180	S.RESISTOR ERJ12YJ150U (15 Ω)	B
R1110	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	B
R1111	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R1113	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R1114	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)	T
R1115	7030006240	S.RESISTOR ERJ12YJ181U (180 Ω)	B
R1116	7030007230	S.RESISTOR ERA3YED 102V	T
R1117	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)	T
R1118	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R1119	7030003470	S.RESISTOR ERJ3GEYJ 182 V (1.8 kΩ)	T
R1120	7030006070	S.RESISTOR ERJ12YJ101U (100 Ω)	B
R1121	7030003240	S.RESISTOR ERJ3GEYJ 220 V (22 Ω)	T
R1122	7030010980	S.RESISTOR ERA3YHD 470V	T
R1123	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R1124	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)	T
R1125	7030003420	S.RESISTOR ERJ3GEYJ 681 V (680 Ω)	B
R1126	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)	T
R1127	7030010980	S.RESISTOR ERA3YHD 470V	T
R1128	7030003470	S.RESISTOR ERJ3GEYJ 182 V (1.8 kΩ)	T
R1129	7030003470	S.RESISTOR ERJ3GEYJ 182 V (1.8 kΩ)	T
R1130	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R1131	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	B
R1132	7310004860	S.TRIMMER EVM-3YSX50 B53 (502)	T
R1133	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)	T
R1134	7030003640	S.HESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R1135	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R1203	7030000010	S.RESISTOR MCR10EZHJ JPW (000)	T
R1208	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R1209	7030005321	S.RESISTOR ERA3YED 103V	T
R1210	7030003650	S.RESISTOR ERJ3GEYJ 563 V (56 kΩ)	B
R1211	7030003860	S.RESISTOR ERJ3GE JPW V	T
R1212	7030003860	S.RESISTOR ERJ3GE JPW V	T
R1220	7030010980	S.RESISTOR ERA3YHD 470V	T
R1221	7030007230	S.RESISTOR ERA3YED 102V	T
R1222	7030003530	S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ)	T
R1223	7030010980	S.RESISTOR ERA3YHD 470V	T
R1224	7030007230	S.RESISTOR ERA3YED 102V	T
R1225	7030003530	S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ)	T
R1226	7030003410	S.RESISTOR ERJ3GEYJ 561 V (560 Ω)	T
R1227	7030003410	S.RESISTOR ERJ3GEYJ 561 V (560 Ω)	T
R1228	7310004860	S.TRIMMER EVM-3YSX50 B53 (502)	T
R1229	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	B
R1230	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	B
R1231	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	B

S.=Surface mount

[RXPLL-A UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
J831	6510007020	CONNECTOR	TMP-J01X-V6	T
J1001	6510007020	CONNECTOR	TMP-J01X-V6	T
J1002	6510007020	CONNECTOR	TMP-J01X-V6	T
J1101	6510007020	CONNECTOR	TMP-J01X-V6	T
J1201	6510007020	CONNECTOR	TMP-J01X-V6	T
J1301	6510007020	CONNECTOR	TMP-J01X-V6	T
J1501	6510018960	S.CONNECTOR	B2B-PH-SM3-TB	T
J1701	6510019980	S.CONNECTOR	52808-1691	T
W1052	9016201006	JUMPER	73/98/025/X98/X98	
W1401	9029495075	JUMPER	73/98/020/X98/X98	
W1411	7120000480	S.JUMPER	MJP-0.4-T	T
EP1	0910057614	PCB	B 5967D	
EP20	6910012350	S.BEAD	MMZ1608Y 102BT	T
EP21	6910012350	S.BEAD	MMZ1608Y 102BT	T
EP22	6910012350	S.BEAD	MMZ1608Y 102BT	T
EP101	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP102	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP103	6910012350	S.BEAD	MMZ1608Y 102BT	T
EP104	6910012350	S.BEAD	MMZ1608Y 102BT	T
EP105	6910012350	S.BEAD	MMZ1608Y 102BT	T
EP106	6910012350	S.BEAD	MMZ1608Y 102BT	T
EP107	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP108	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1701	6910012350	S.BEAD	MMZ1608Y 102BT	T
EP1702	6910012350	S.BEAD	MMZ1608Y 102BT	T
EP1801	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1802	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1804	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1805	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1806	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1807	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1808	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1809	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1810	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1811	6910012350	S.BEAD	MMZ1608Y 102BT	T
EP1812	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1813	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1814	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1815	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1816	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1817	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1818	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1819	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1820	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1821	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1825	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1826	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1830	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1831	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1832	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1833	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1834	6910012350	S.BEAD	MMZ1608Y 102BT	T
EP1835	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP1836	6910012350	S.BEAD	MMZ1608Y 102BT	T

[RXPLL-B UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
IC1503	1110006100	S.IC	NJM5534MD-TE1	T
IC1504	1110006100	S.IC	NJM5534MD-TE1	T
IC1505	1110006190	S.IC	NJM074M-TE1	T
IC1506	1110006100	S.IC	NJM5534MD TE1	T
IC1651	1130011920	S.IC	TC74LCX00F (EL)	T
IC1652	1110005420	S.IC	BA15532F-E2	T
IC1653	1110005100	S.IC	NJM072BM-TE2	B
IC1701	1130011530	S.IC	CD74HC4094M96	T
IC1702	1130011530	S.IC	CD74HC4094M96	T
IC1703	1160000130	S.IC	TD62783AF (S.EL)	T
IC1704	1180000790	S.IC	AN78L10M (E1)	B
Q1	1590001050	S.TRANSISTOR	DTC114TUA T106	B
Q30	1530002060	S.TRANSISTOR	2SC4081 T106 R	T
Q41	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q150	1560000330	S.FET	2SK210-GR (TE85R)	T
Q151	1530002280	S.TRANSISTOR	2SC4081 T106 S	B
Q152	1530002280	S.TRANSISTOR	2SC4081 T106 S	B
Q201	1590001330	S.TRANSISTOR	DTA114EUA T106	T
Q202	1560000530	S.FET	2SK880-GR (TE85R)	B
Q203	1530002490	S.TRANSISTOR	2SC3324-GR (TE85R)	T
Q204	1530002490	S.TRANSISTOR	2SC3324-GR (TE85R)	T
Q220	1560000330	S.FET	2SK210-GR (TE85R)	T
Q221	1530002060	S.TRANSISTOR	2SC4081 T106 R	T
Q230	1560000330	S.FET	2SK210-GR (TE85R)	T
Q240	1560000330	S.FET	2SK210-GR (TE85R)	T
Q250	1560000330	S.FET	2SK210-GR (TE85R)	T
Q260	1560000330	S.FET	2SK210-GR (TE85R)	T
Q270	1560000330	S.FET	2SK210-GR (TE85R)	T
Q280	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q281	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q282	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q283	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q284	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q285	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q301	1530003430	S.TRANSISTOR	2SC5226-4-TL	T
Q302	1530003430	S.TRANSISTOR	2SC5226-4-TL	B
Q341	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q351	1580000750	S.FET	3SK294 (TE85L)	T
Q352	1530003430	S.TRANSISTOR	2SC5226-4-TL	B
Q363	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q364	1590001330	S.TRANSISTOR	DTA114EUA T106	T
Q441	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q502	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q540	1530002060	S.TRANSISTOR	2SC4081 T106 R	B
Q541	1560000330	S.FET	2SK210-GR (TE85R)	T
Q561	1530003430	S.TRANSISTOR	2SC5226-4-TL	T
Q580	1530003430	S.TRANSISTOR	2SC5226-4-TL	T
Q591	1530003150	S.TRANSISTOR	2SC4673D-TD	T
Q592	1520000560	S.TRANSISTOR	2SB1123T-TD	B
Q593	1590000680	S.TRANSISTOR	DTC114EUA T106	B
Q601	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)	T
Q680	1530002060	S.TRANSISTOR	2SC4081 T106 R	T
Q702	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)	T
Q1001	1530003850	S.TRANSISTOR	2SC5551F-TD	B
Q1004	1590001960	S.TRANSISTOR	XP4311 (TX)	T
Q1005	1590001960	S.TRANSISTOR	XP4311 (TX)	T
Q1006	1530003850	S.TRANSISTOR	2SC5551F-TD	B
Q1007	1530003850	S.TRANSISTOR	2SC5551F-TD	B
Q1008	1530003850	S.TRANSISTOR	2SC5551F-TD	B
Q1101	1530003860	TRANSISTOR	2SC3950D	T
Q1102	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q1103	1520000560	S.TRANSISTOR	2SB1123T-TD	B
Q1104	1530003860	TRANSISTOR	2SC3950D	T
Q1105	1530003840	S.TRANSISTOR	2SC5501-4-TR	T
Q1205	1590001960	S.TRANSISTOR	XP4311 (TX)	T
Q1209	1530003850	S.TRANSISTOR	2SC5551F-TD	B
Q1210	1530003850	S.TRANSISTOR	2SC5551F-TD	B
Q1211	1560001310	S.FET	MMBFU310LT1	T
Q1212	1560001310	S.FET	MMBFU310LT1	T
Q1213	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q1214	1520000560	S.TRANSISTOR	2SB1123T-TD	B
Q1301	1530003150	S.TRANSISTOR	2SC4673D-TD	T
Q1352	1530003850	S.TRANSISTOR	2SC5551F-TD	B
Q1401	1530003840	S.TRANSISTOR	2SC5501-4-TR	T
Q1402	1530003020	S.TRANSISTOR	2SC4402-3-TL	T
Q1403	1530003020	S.TRANSISTOR	2SC4402-3-TL	T
Q1501	1530003450	S.TRANSISTOR	2SC4835-R (TX)	T
Q1502	1530003450	S.TRANSISTOR	2SC4835-R (TX)	T
Q1651	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)	B
Q1701	1590001960	S.TRANSISTOR	XP4311 (TX)	T
Q1702	1590001960	S.TRANSISTOR	XP4311 (TX)	T
Q1703	1590001960	S.TRANSISTOR	XP4311 (TX)	T
D101	1750000520	S.DIODE	DAN222TL	T
D152	1720000590	S.VARICAP	MA357 (TX)	T

[RXPLL-B UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
IC1	1130011530	S.IC	CD74HC4094M96	T
IC2	1130009690	S.IC	TC74HCT7007AF	T
IC51	1180001250	S.IC	TA7808F (TE16L)	T
IC61	1180000420	S.IC	TA78L05F (TE12R)	B
IC101	1140007880	S.IC	TC190G08AF-0046-Z/SC-1246A	T
IC102	1130003830	S.IC	TC7S04F (TE85R)	T
IC104	1130003830	S.IC	TC7S04F (TE85R)	T
IC201	1130009230	S.IC	LMX2306TMX	T
IC501	1140007880	S.IC	TC190G08AF-0046-Z/SC-1246A	T
IC502	1130003830	S.IC	TC7S04F (TE85R)	T
IC503	1130003830	S.IC	TC7S04F (TE85R)	T
IC651	1140004550	S.IC	M65343FP/SC1287	T
IC652	1130003830	S.IC	TC7S04F (TE85R)	T
IC1051	1190002010	S.IC	SD5400CY <IA>	T
IC1081	1110006180	S.IC	UPG2009TB-E3	B
IC1402	1110006180	S.IC	UPG2009TB-E3	T
IC1403	1110006180	S.IC	UPG2009TB-E3	T
IC1501	1110006120	S.IC	DBM9A41-TR	T
IC1502	1110006120	S.IC	DBM9A41-TR	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[RXPLL-B UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
L1653	6200001830	S.COIL NL 322522T-100J	B
L1654	6200001830	S.COIL NL 322522T-100J	B
L1655	6200001830	S.COIL NL 322522T-100J	B
L1701	6200001830	S.COIL NL 322522T-100J	T
L1702	6200003950	S.COIL HF50ACC 322513-T	T
L1703	6200003950	S.COIL HF50ACC 322513-T	T
L1704	6200003950	S.COIL HF50ACC 322513-T	T
L1705	6200003950	S.COIL HF50ACC 322513-T	T
L1803	6200003950	S.COIL HF50ACC 322513-T	B
L1804	6200003950	S.COIL HF50ACC 322513-T	B
L1805	6200003950	S.COIL HF50ACC 322513-T	B
L1807	6200003950	S.COIL HF50ACC 322513-T	B
L1808	6200003950	S.COIL HF50ACC 322513-T	B
L1809	6200003950	S.COIL HF50ACC 322513-T	B
R1	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R2	7030005321	S.RESISTOR ERA3YED 103V	T
R3	7030003550	S.RESISTOR ERJ3GEYJ 822 V (8.2 kΩ)	T
R4	7030003550	S.RESISTOR ERJ3GEYJ 822 V (8.2 kΩ)	T
R5	7030003550	S.RESISTOR ERJ3GEYJ 822 V (8.2 kΩ)	T
R6	7030003550	S.RESISTOR ERJ3GEYJ 822 V (8.2 kΩ)	T
R10	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R11	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R12	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R13	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R14	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R15	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R16	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R17	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R30	7030003240	S.RESISTOR ERJ3GEYJ 220 V (22 Ω)	T
R31	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)	T
R32	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R33	7030003340	S.RESISTOR ERJ3GEYJ 151 V (150 Ω)	T
R51	7030011030	S.RESISTOR ERJ1TYJ 270U (27 Ω)	T
R61	7030011030	S.RESISTOR ERJ1TYJ 270U (27 Ω)	T
R101	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 Ω)	T
R102	7030003860	S.RESISTOR ERJ3GE JPW V	B
R103	7030007230	S.RESISTOR ERA3YED 102V	T
R104	7030007230	S.RESISTOR ERA3YED 102V	T
R105	7030007230	S.RESISTOR ERA3YED 102V	T
R106	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R107	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R108	7030007230	S.RESISTOR ERA3YED 102V	T
R109	7030007230	S.RESISTOR ERA3YED 102V	T
R110	7030007220	S.RESISTOR ERA3YED 202V	T
R111	7030007220	S.RESISTOR ERA3YED 202V	T
R112	7030007220	S.RESISTOR ERA3YED 202V	T
R113	7030007220	S.RESISTOR ERA3YED 202V	T
R114	7030007220	S.RESISTOR ERA3YED 202V	T
R115	7030007220	S.RESISTOR ERA3YED 202V	T
R116	7030007220	S.RESISTOR ERA3YED 202V	T
R117	7030007220	S.RESISTOR ERA3YED 202V	T
R118	7030007200	S.RESISTOR ERA3YEB 202V	T
R119	7030007200	S.RESISTOR ERA3YEB 202V	T
R120	7030007200	S.RESISTOR ERA3YEB 202V	T
R121	7030007200	S.RESISTOR ERA3YEB 202V	T
R122	7030007200	S.RESISTOR ERA3YEB 202V	T
R123	7030007230	S.RESISTOR ERA3YED 102V	T
R124	7030007230	S.RESISTOR ERA3YED 102V	T
R125	7030007230	S.RESISTOR ERA3YED 102V	T
R126	7030007230	S.RESISTOR ERA3YED 102V	T
R127	7030007230	S.RESISTOR ERA3YED 102V	T
R128	7030007230	S.RESISTOR ERA3YED 102V	T
R129	7030007210	S.RESISTOR ERA3YEB 102V	T
R130	7030007210	S.RESISTOR ERA3YEB 102V	T
R131	7030007210	S.RESISTOR ERA3YEB 102V	T
R132	7030007210	S.RESISTOR ERA3YEB 102V	T
R133	7030007210	S.RESISTOR ERA3YEB 102V	T
R134	7030009861	S.RESISTOR ERA3YED 471V	T
R135	7030003860	S.RESISTOR ERJ3GE JPW V	T
R136	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)	T
R137	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)	T
R138	7030003860	S.RESISTOR ERJ3GE JPW V	T
R139	7030003860	S.RESISTOR ERJ3GE JPW V	T
R150	7030003330	S.RESISTOR ERJ3GEYJ 121 V (120 Ω)	B
R151	7030003220	S.RESISTOR ERJ3GEYJ 150 V (15 Ω)	B
R152	7030005321	S.RESISTOR ERA3YED 103V	B
R153	7030005321	S.RESISTOR ERA3YED 103V	T
R154	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	B
R155	7030003350	S.RESISTOR ERJ3GEYJ 181 V (180 Ω)	B
R156	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R157	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R158	7030003340	S.RESISTOR ERJ3GEYJ 151 V (150 Ω)	B
R159	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	B
R160	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	B
R161	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	B
R163	7030003220	S.RESISTOR ERJ3GEYJ 150 V (15 Ω)	B

[RXPLL-B UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
R164	7030003310	S.RESISTOR ERJ3GEYJ 820 V (82 Ω)	B
R165	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	B
R166	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	B
R167	7030003240	S.RESISTOR ERJ3GEYJ 220 V (22 Ω)	B
R168	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	B
R169	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	B
R202	7030007230	S.RESISTOR ERA3YED 102V	T
R203	7030007230	S.RESISTOR ERA3YED 102V	T
R204	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R205	7030005321	S.RESISTOR ERA3YED 103V	T
R206	7030003220	S.RESISTOR ERJ3GEYJ 150 V (15 Ω)	T
R210	7030007230	S.RESISTOR ERA3YED 102V	T
R211	7030009591	S.RESISTOR ERA3YED 472V	T
R212	7030007230	S.RESISTOR ERA3YED 102V	T
R213	7030007230	S.RESISTOR ERA3YED 102V	T
R214	7030007230	S.RESISTOR ERA3YED 102V	T
R215	7030009861	S.RESISTOR ERA3YED 471V	T
R216	7030009861	S.RESISTOR ERA3YED 471V	T
R219	7030003860	S.RESISTOR ERJ3GE JPW V	T
R220	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R221	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R222	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R223	7030007230	S.RESISTOR ERA3YED 102V	T
R224	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R230	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R231	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R232	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R233	7030007230	S.RESISTOR ERA3YED 102V	T
R234	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R240	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R241	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R242	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R243	7030007230	S.RESISTOR ERA3YED 102V	T
R244	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R250	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R251	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R252	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R253	7030007230	S.RESISTOR ERA3YED 102V	T
R254	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R260	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R261	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R262	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R263	7030007230	S.RESISTOR ERA3YED 102V	T
R264	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R270	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R271	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R272	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R273	7030007230	S.RESISTOR ERA3YED 102V	T
R274	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R301	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)	T
R302	7030007230	S.RESISTOR ERA3YED 102V	T
R303	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R304	7030003490	S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ)	T
R305	7030003510	S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ)	T
R306	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R307	7030009841	S.RESISTOR ERA3YHD 330V	T
R308	7030009851	S.RESISTOR ERA3YED 271V	B
R309	7030003540	S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ)	B
R310	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)	B
R311	7030003350	S.RESISTOR ERJ3GEYJ 181 V (180 Ω)	B
R317	7030006270	S.RESISTOR ERJ12YJ221U (220 Ω)	B
R318	7030009841	S.RESISTOR ERA3YHD 330V	B
R341	7030007230	S.RESISTOR ERA3YED 102V	T
R342	7030005321	S.RESISTOR ERA3YED 103V	T
R343	7030007230	S.RESISTOR ERA3YED 102V	T
R351	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)	B
R352	7030010980	S.RESISTOR ERA3YHD 470V	T
R353	7030009591	S.RESISTOR ERA3YED 472V	T
H354	7030009591	S.HESISTOR ERA3YED 472V	T
R355	7030009591	S.RESISTOR ERA3YED 472V	T
R356	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R357	7310002720	S.TRIMMER RV-148 (RH03A3AS3X0DA) 472	T
R358	7030010980	S.RESISTOR ERA3YHD 470V	T
R359	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R360	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	B
R361	7030003490	S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ)	B
R362	7030003510	S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ)	B
R363	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	B
R364	7030003410	S.RESISTOR ERJ3GEYJ 561 V (560 Ω)	T
R365	7030007860	S.RESISTOR ERJ3GEYJ 8R2V (8.2 Ω)	T
R366	7030003410	S.RESISTOR ERJ3GEYJ 561 V (560 Ω)	T
R368	7030005321	S.RESISTOR ERA3YED 103V	T
R369	7030008240	S.RESISTOR ERJ12YJ0R00U	B
R421	7030007230	S.RESISTOR ERA3YED 102V	T
R425	7030003410	S.RESISTOR ERJ3GEYJ 561 V (560 Ω)	T
R427	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	B
R428	7030009861	S.RESISTOR ERA3YED 471V	B
R441	7030007230	S.RESISTOR ERA3YED 102V	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[BPF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
L82	6200005520	S.COIL NL 252018T-470J	B
L83	6140004090	COIL LR-447	T
L84	6140004230	COIL LR-458	T
L85	6140004230	COIL LR 458	T
L86	6140004230	COIL LR-458	T
L87	6140004090	COIL LR-447	T
L111	6200005520	S.COIL NL 252018T-470J	B
L112	6200005520	S.COIL NL 252018T-470J	B
L113	6140004090	COIL LR-447	T
L114	6140004100	COIL LR-448	T
L115	6140004100	COIL LR-448	T
L116	6140004100	COIL LR-448	T
L117	6140004090	COIL LR-447	T
L141	6200005520	S.COIL NL 252018T-470J	B
L142	6200005520	S.COIL NL 252018T-470J	B
L143	6140004110	COIL LR-449	T
L144	6140004120	COIL LR-450	T
L145	6140004120	COIL LR-450	T
L146	6140004120	COIL LR-450	T
L147	6140004110	COIL LR-449	T
L171	6200005520	S.COIL NL 252018T-470J	B
L172	6200005520	S.COIL NL 252018T-470J	B
L173	6140004140	COIL LR-451	T
L174	6140004150	COIL LR-452	T
L175	6140004150	COIL LR-452	T
L176	6140004150	COIL LR-452	T
L177	6140004140	COIL LR-451	T
L201	6200007020	S.COIL NL 252018T-270J	B
L202	6200007020	S.COIL NL 252018T-270J	B
L203	6140004160	COIL LR-453	T
L204	6140004180	COIL LR-454	T
L205	6140004180	COIL LR-454	T
L206	6140004180	COIL LR-454	T
L207	6140004160	COIL LR-453	T
L231	6200005010	S.COIL NL 252018T-100J	B
L232	6200005010	S.COIL NL 252018T-100J	B
L233	6140004190	COIL LR-455	T
L234	6140004210	COIL LR-456	T
L235	6140004210	COIL LR-456	T
L236	6140004210	COIL LR-456	T
L237	6140004190	COIL LR-455	T
L261	6200009140	S.COIL NL 252018T-6R8J	B
L262	6200009140	S.COIL NL 252018T-6R8J	B
L263	6140004220	COIL LR-457	T
L264	6140004160	COIL LR-453	T
L265	6140004160	COIL LR-453	T
L266	6140004160	COIL LR-453	T
L267	6140004220	COIL LR-457	T
L291	6200003280	S.COIL NL 252018T-2R2J	B
L292	6200003280	S.COIL NL 252018T-2R2J	B
L293	6200008090	S.COIL LQW2BHN68NJ01L (LQN21A 68NJ04)	T
L294	6200003040	S.COIL NL 322522T-R68J-3	T
L295	6200008090	S.COIL LQW2BHN68NJ01L (LQN21A 68NJ04)	T
L296	6200010870	S.COIL C2520C-R33G (0.33U)	T
L321	6200003280	S.COIL NL 252018T-2R2J	B
L322	6200003280	S.COIL NL 252018T-2R2J	B
L323	6200003010	S.COIL NL 322522T-R27J-3	T
L324	6200003000	S.COIL NL 322522T-R22J-3	T
L325	6200003010	S.COIL NL 322522T-R27J-3	T
L371	6140004390	COIL LR-459	T
L372	6140004390	COIL LR-459	T
L373	6140003530	COIL LR-395	T
L391	6200005490	S.COIL NL 322522T-331J	T
L392	6200005490	S.COIL NL 322522T-331J	T
L501	6200005520	S.COIL NL 252018T-470J	B
L502	6200005520	S.COIL NL 252018T-470J	B
L504	6200010830	S.COIL C2520C-3R3G-A	T
L505	6200010830	S.COIL C2520C-3R3G-A	T
L506	6200010830	S.COIL C2520C-3R3G-A	T
L507	6200010830	S.COIL C2520C-3R3G-A	T
L531	6200005520	S.COIL NL 252018T-470J	B
L532	6200005520	S.COIL NL 252018T-470J	B
L533	6140004040	COIL LR-443	T
L534	6140004050	COIL LR-444	T
L535	6140004050	COIL LR-444	T
L536	6140004050	COIL LR-444	T
L537	6140004040	COIL LR-443	T
L561	6200005520	S.COIL NL 252018T-470J	B
L562	6200005520	S.COIL NL 252018T-470J	B
L563	6140004060	COIL LR-445	T
L564	6140004080	COIL LR-446	T
L565	6140004080	COIL LR-446	T
L566	6140004080	COIL LR-446	T
L567	6140004060	COIL LR-445	T
L591	6200005520	S.COIL NL 252018T-470J	B
L592	6200005520	S.COIL NL 252018T-470J	B
L593	6140004090	COIL LR-447	T
L594	6140004230	COIL LR-458	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[BPF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
L595	6140004230	COIL LR-458	T
L596	6140004230	COIL LR-458	T
L597	6140004090	COIL LR-447	T
L621	6200005520	S.COIL NL 252018T-470J	B
L622	6200005520	S.COIL NL 252018T-470J	B
L623	6140004090	COIL LR-447	T
L624	6140004100	COIL LR-448	T
L625	6140004100	COIL LR-448	T
L626	6140004100	COIL LR-448	T
L627	6140004090	COIL LR-447	T
L651	6200005520	S.COIL NL 252018T-470J	B
L652	6200005520	S.COIL NL 252018T-470J	B
L653	6140004110	COIL LR-449	T
L654	6140004120	COIL LR-450	T
L655	6140004120	COIL LR-450	T
L656	6140004120	COIL LR-450	T
L657	6140004110	COIL LR-449	T
L681	6200005520	S.COIL NL 252018T-470J	B
L682	6200005520	S.COIL NL 252018T-470J	B
L683	6140004140	COIL LR-451	T
L684	6140004150	COIL LR-452	T
L685	6140004150	COIL LR-452	T
L686	6140004150	COIL LR-452	T
L687	6140004140	COIL LR-451	T
L711	6200007020	S.COIL NL 252018T-270J	B
L712	6200007020	S.COIL NL 252018T-270J	B
L713	6140004160	COIL LR-453	T
L714	6140004180	COIL LR-454	T
L715	6140004180	COIL LR-454	T
L716	6140004180	COIL LR-454	T
L717	6140004160	COIL LR-453	T
L741	6200005010	S.COIL NL 252018T-100J	B
L742	6200005010	S.COIL NL 252018T-100J	B
L743	6140004190	COIL LR-455	T
L744	6140004210	COIL LR-456	T
L745	6140004210	COIL LR-456	T
L746	6140004210	COIL LR-456	T
L747	6140004190	COIL LR-455	T
L771	6200009140	S.COIL NL 252018T-6R8J	B
L772	6200009140	S.COIL NL 252018T-6R8J	B
L773	6140004220	COIL LR-457	T
L774	6140004160	COIL LR-453	T
L775	6140004160	COIL LR-453	T
L776	6140004160	COIL LR-453	T
L777	6140004220	COIL LR-457	T
L801	6200003280	S.COIL NL 252018T-2R2J	B
L802	6200003280	S.COIL NL 252018T-2R2J	B
L805	6200008090	S.COIL LQW2BHN68NJ01L (LQN21A 68NJ04)	T
L806	6200003040	S.COIL NL 322522T-R68J-3	T
L807	6200008090	S.COIL LQW2BHN68NJ01L (LQN21A 68NJ04)	T
L808	6200010870	S.COIL C2520C-R33G (0.33U)	T
L831	6200003280	S.COIL NL 252018T-2R2J	B
L832	6200003280	S.COIL NL 252018T-2R2J	B
L833	6200003010	S.COIL NL 322522T-R27J-3	T
L834	6200003000	S.COIL NL 322522T-R22J-3	T
L835	6200003010	S.COIL NL 322522T-R27J-3	T
L900	6200001830	S.COIL NL 322522T-100J	B
L901	6200003950	S.COIL HF50ACC 322513-T	B
L902	6200003950	S.COIL HF50ACC 322513-T	B
L903	6200001830	S.COIL NL 322522T-100J	T
L904	6200001830	S.COIL NL 322522T-100J	T
L905	6140004380	COIL LR-498	T
L906	6200009690	S.COIL LQH43CN101K01L (LQH 4C 101K04)	T
L907	6200001830	S.COIL NL 322522T-100J	B
L908	6140004380	COIL LR-498	T
L909	6200009690	S.COIL LQH43CN101K01L (LQH 4C 101K04)	T
L950	6200001830	S.COIL NL 322522T-100J	T
L951	6140004380	COIL LR-498	B
L952	6200009690	S.COIL LQH43CN101K01L (LQH 4C 101K04)	T
L953	6200001830	S.COIL NL 322522T-100J	B
L954	6140004380	COIL LR-498	T
L955	6200009690	S.COIL LQH43CN101K01L (LQH 4C 101K04)	T
R1	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R3	7030003860	S.RESISTOR ERJ3GE JPW V	T
R101	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R102	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R103	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R104	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R105	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R106	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R107	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R108	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R117	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R118	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R119	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R120	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T

S.=Surface mount

[BPF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
EP903	6910012350	S.BEAD MMZ1608Y 102BT	B
EP950	6910012350	S.BEAD MMZ1608Y 102BT	B
EP951	6910012350	S.BEAD MMZ1608Y 102BT	T
EP952	6910012350	S.BEAD MMZ1608Y 102BT	B
EP953	6910012350	S.BEAD MMZ1608Y 102BT	B

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
IC1	1110003870	S.IC NJM2058M-TE1	T
IC2	1110001900	S.IC μPC4570G2-T1	T
IC3	1130005640	S.IC TC4W53F (TE12L)	T
IC4	1110006300	S.IC NJM2172V-TE1	T
IC5	1130005640	S.IC TC4W53F (TE12L)	T
IC50	1190001930	S.IC PS7122AL-1A-E3	B
IC60	1110003870	S.IC NJM2058M-TE1	B
IC61	1110003870	S.IC NJM2058M-TE1	B
IC100	1130005640	S.IC TC4W53F (TE12L)	T
IC101	1130005640	S.IC TC4W53F (TE12L)	T
IC102	1110001900	S.IC μPC4570G2-T1	T
IC104	1110001900	S.IC μPC4570G2-T1	T
IC105	1110006300	S.IC NJM2172V-TE1	T
IC140	1110006140	IC LA4485	T
IC180	1110006300	S.IC NJM2172V-TE1	T
IC181	1130005640	S.IC TC4W53F (TE12L)	T
IC182	1110006160	S.IC TPA6111A2DGN	T
IC191	1130005640	S.IC TC4W53F (TE12L)	T
IC192	1130005640	S.IC TC4W53F (TE12L)	T
IC201	1130005640	S.IC TC4W53F (TE12L)	T
IC210	1110006300	S.IC NJM2172V-TE1	T
IC230	1110001900	S.IC μPC4570G2-T1	T
IC250	1130011530	S.IC CD74HC4094M96	T
IC251	1160000130	S.IC TD62783AF (S.EL)	T
IC260	1130011530	S.IC CD74HC4094M96	T
IC261	1160000130	S.IC TD62783AF (S.EL)	T
IC290	1130011530	S.IC CD74HC4094M96	T
IC291	1160000130	S.IC TD62783AF (S.EL)	T
IC310	1130011530	S.IC CD74HC4094M96	T
IC311	1160000130	S.IC TD62783AF (S.EL)	T
IC330	1130012000	S.IC M62352AGP C60Q	T
IC331	1130012000	S.IC M62352AGP C60Q	T
IC450	1180002650	S.REG SI-3012KS-TL	B
IC451	1180002650	S.REG SI-3012KS-TL	B
IC452	1180002650	S.REG SI-3012KS-TL	B
IC460	1130005640	S.IC TC4W53F (TE12L)	T
IC490	1130005640	S.IC TC4W53F (TE12L)	B
IC491	1110003870	S.IC NJM2058M-TE1	B
IC495	1130011990	S.IC SN74LVC1G08DCKR	T
IC501	1110006100	S.IC NJM5534MD-TE1	T
IC502	1110006100	S.IC NJM5534MD-TE1	T
IC503	1110005460	S.IC TA4107F (TE12L)	T
IC550	1180001770	S.IC TA79L05F (TE12L)	T
IC820	1110006130	S.IC μPC4094G2-E1	T
IC821	1110006300	S.IC NJM2172V-TE1	T
Q1	1590001050	S.TRANSISTOR DTC114TUA T106	B
Q2	1590001050	S.TRANSISTOR DTC114TUA T106	B
Q3	1530002060	S.TRANSISTOR 2SC4081 T106 R	B
Q4	1530002060	S.TRANSISTOR 2SC4081 T106 R	B
Q5	1590001330	S.TRANSISTOR DTA114EUA T106	B
Q6	1540000440	S.TRANSISTOR 2SD1619-1-ID	B
Q7	1530002060	S.TRANSISTOR 2SC4081 T106 R	B
Q8	1530002060	S.TRANSISTOR 2SC4081 T106 R	T
Q9	1530002060	S.TRANSISTOR 2SC4081 T106 R	T
Q50	1590001050	S.TRANSISTOR DTC114TUA T106	B
Q51	1590001050	S.TRANSISTOR DTC114TUA T106	B
Q52	1530002060	S.TRANSISTOR 2SC4081 T106 R	B
Q60	1590002710	S.TRANSISTOR UMH11NTN	T
Q61	1590002150	S.TRANSISTOR DTC144TE TL	T
Q62	1510000510	S.TRANSISTOR 2SA1576A T106R	T
Q63	1590001050	S.TRANSISTOR DTC114TUA T106	T
Q64	1590002430	S.TRANSISTOR DTA144EE TL	T
Q100	1590001450	S.FET 2SJ144-GR (TE85R)	T
Q101	1590001450	S.FET 2SJ144-GR (TE85R)	T
Q131	1560001130	S.FET CPH3403-TL	T
Q132	1560001130	S.FET CPH3403-TL	T
Q140	1540000470	S.TRANSISTOR 2SD1801S-TL	T
Q141	1590000680	S.TRANSISTOR DTC114EUA T106	B
Q142	1590000680	S.TRANSISTOR DTC114EUA T106	B
Q143	1590001050	S.TRANSISTOR DTC114TUA T106	T

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
Q474	1510000510	S.TRANSISTOR 2SA1576A T106R	T
Q475	1510000510	S.TRANSISTOR 2SA1576A T106R	T
Q476	1590001050	S.TRANSISTOR DTC114TUA T106	T
Q477	1590001050	S.TRANSISTOR DTC114TUA T106	T
Q490	1590000680	S.TRANSISTOR DTC114EUA T106	B
Q491	1520000460	S.TRANSISTOR 2SB1132 T100 R	B
Q501	1580000750	S.FET 3SK204 (TE85L)	B
Q502	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q503	1590002710	S.TRANSISTOR UMH11NTN	T
Q504	1560000560	S.FET 2SK882-GR (TE85L)	B
Q506	1560000560	S.FET 2SK882-GR (TE85L)	B
Q507	1530003150	S.TRANSISTOR 2SC4673D-TD	T
Q508	1530003840	S.TRANSISTOR 2SC5501-4-TR	T
Q801	1530003850	S.TRANSISTOR 2SC5551F-TD	T
Q802	1520000530	S.TRANSISTOR 2SB1119S-TD	B
Q803	1590000680	S.TRANSISTOR DTC114EUA T106	B
Q804	1590002710	S.TRANSISTOR UMH11NTN	T
Q805	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q806	1530002060	S.TRANSISTOR 2SC4081 T106 R	T
Q808	1590001330	S.TRANSISTOR DTA114EUA T106	T
Q809	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q810	1530002060	S.TRANSISTOR 2SC4081 T106 R	T
D1	1750000550	S.DIODE 1SS355 TE-17	B
D2	1750000550	S.DIODE 1SS355 TE-17	B
D3	1790001750	S.DIODE DSM3MA4	B
D4	1790001750	S.DIODE DSM3MA4	B
D50	1750000550	S.DIODE 1SS355 TE-17	B
D51	1790001670	S.DIODE RB706F-40T106	T
D52	1750000550	S.DIODE 1SS355 TE-17	T
D60	1750000550	S.DIODE 1SS355 TE-17	B
D61	1750000550	S.DIODE 1SS355 TE-17	B
D62	1750000550	S.DIODE 1SS355 TE-17	B
D63	1750000550	S.DIODE 1SS355 TE-17	B
D64	1790001240	S.DIODE MA2S728-(TX)	B
D65	1750000550	S.DIODE 1SS355 TE-17	B
D66	1750000550	S.DIODE 1SS355 TE-17	B
D67	1730002340	S.ZENER MA8047-M (TX)	B
D140	1750000550	S.DIODE 1SS355 TE-17	B
D141	1750000550	S.DIODE 1SS355 TE-17	B
D241	1730002280	S.ZENER MA8091-M (TX)	T
D450	1710000840	S.DIODE 1SR154-400 TE25	B
D451	1710000840	S.DIODE 1SR154-400 TE25	B
D452	1710000840	S.DIODE 1SR154-400 TE25	B
D490	1790000620	S.DIODE MA77 (TX)	B
D501	1790000620	S.DIODE MA77 (TX)	B
D502	1790000620	S.DIODE MA77 (TX)	B
D503	1790000620	S.DIODE MA77 (TX)	B
D504	1790000620	S.DIODE MA77 (TX)	B
D505	1750000430	S.DIODE HSB88WSTR	T
D506	1750000430	S.DIODE HSB88WSTR	T
D601	1790000620	S.DIODE MA77 (TX)	B
D602	1790000620	S.DIODE MA77 (TX)	B
D603	1790000620	S.DIODE MA77 (TX)	B
D604	1790000620	S.DIODE MA77 (TX)	B
D605	1790000620	S.DIODE MA77 (TX)	B
D606	1790000620	S.DIODE MA77 (TX)	B
D607	1790000620	S.DIODE MA77 (TX)	B
D608	1790000620	S.DIODE MA77 (TX)	B
D609	1790000620	S.DIODE MA77 (TX)	B
D610	1790000620	S.DIODE MA77 (TX)	B
D611	1790000620	S.DIODE MA77 (TX)	T
D612	1790000620	S.DIODE MA77 (TX)	T
D613	1790000620	S.DIODE MA77 (TX)	T
D614	1790000620	S.DIODE MA77 (TX)	T
D615	1790000620	S.DIODE MA77 (TX)	T
D616	1790000620	S.DIODE MA77 (TX)	T
D617	1790000620	S.DIODE MA77 (TX)	T
D618	1790000620	S.DIODE MA77 (TX)	T
D619	1790000620	S.DIODE MA77 (TX)	T
D620	1790000620	S.DIODE MA77 (TX)	T
D801	1790000620	S.DIODE MA77 (TX)	T
D802	1790000620	S.DIODE MA77 (TX)	T
D806	1790000620	S.DIODE MA77 (TX)	B
D820	1790000620	S.DIODE MA77 (TX)	T
FI501	2020001070	CERAMIC CFWLA455KDFA-B0 (CFWS455D)	T
FI502	2020001510	CERAMIC CFWLA455KJFA-B0 (CFWS455IT)	T
FI503	2010002580	S.FILTER FL-348 (64.455 MHz)	T
L1	6200003260	S.COIL NL 322522T-101J	B
L2	6200003260	S.COIL NL 322522T-101J	B
L3	6200003950	S.COIL HF50ACC 322513-T	B
L4	6200003260	S.COIL NL 322522T-101J	B
L5	6200003260	S.COIL NL 322522T-101J	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
C907	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C908	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C909	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C922	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C923	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C924	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C925	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C926	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C927	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C928	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C929	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C930	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C932	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C933	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C934	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C936	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C937	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C945	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C946	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C947	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C948	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C952	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C953	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C954	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C955	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C957	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C958	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C974	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C975	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C976	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C977	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C978	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C979	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C980	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C981	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
RL50	6330000540	RELAY OMR-109F	T
RL140	6330001430	RELAY NA-12W-K	T
RL141	6330001430	RELAY NA-12W-K	T
CP81	6910009670	S.CHECK P HK3-S-T	T
CP82	6910009670	S.CHECK P HK3-S-T	T
CP495	6910009670	S.CHECK P HK3-S-T	T
CP496	6910009670	S.CHECK P HK3-S-T	T
J1	6510023670	CONNECTOR TCS4480-01-4151	T
J2	6510023660	CONNECTOR TCS4470-01-4151	T
J3	6510023670	CONNECTOR TCS4480-01-4151	T
J4	6510023660	CONNECTOR TCS4470-01-4151	T
J5	6450001130	CONNECTOR JPJ2042-01-110	T
J6	6510023730	CONNECTOR LGY6502-0600C	T
J7	6510023730	CONNECTOR LGY6502-0600C	T
J8	6510023740	CONNECTOR LGR4609-7000	T
J9	6510023070	CONNECTOR HEC2305-01-250	T
J140	6510023720	CONNECTOR LGY6501-0600C	T
J141	6510023720	CONNECTOR LGY6501-0600C	T
J142	6510018960	S.CONNECTOR B2B-PH-SM3-TB	T
J340	6510022810	CONNECTOR IMSA-9180B-22B	T
J341	6510021650	CONNECTOR IMSA-9180B-30B	T
J360	6510022810	CONNECTOR IMSA-9180B-22B	T
J361	6510021650	CONNECTOR IMSA-9180B-30B	T
J380	6510022810	CONNECTOR IMSA-9180B-22B	T
J381	6510021650	CONNECTOR IMSA-9180B-30B	T
J399	6510007020	CONNECTOR TMP-J01X-V6	T
J400	6510019980	S.CONNECTOR 52808-1691	T
J401	6510022190	S.CONNECTOR B3B-PH-SM3-TB	T
J403	6510019980	S.CONNECTOR 52808-1691	T
J404	6510022190	S.CONNECTOR B3B-PH-SM3-TB	T
J410	6510020000	S.CONNECTOR 52808-3091	T
J411	6510019970	S.CONNECTOR 52808-1091	T
J430	6510022310	S.CONNECTOR B5B-PH-SM3-TB	T
J440	6510018920	S.CONNECTOR B8B-PH-SM3-TB	T
J450	6510003470	CONNECTOR B11B-EH-S	T
J451	6510018940	S.CONNECTOR B13B-PH-SM3-TB	T
J490	6510023750	CONNECTOR 01K1971-10	T
J491	6510007020	CONNECTOR TMP-J01X-V6	T
J492	6510014960	S.CONNECTOR B2B-ZR-SM3-TF	T
J495	6510023700	CONNECTOR TORX178S	T
J496	6510023710	CONNECTOR TOTX178S	T
J501	6510007020	CONNECTOR TMP-J01X-V6	T
J502	6510007020	CONNECTOR TMP-J01X-V6	T
J503	6510007020	CONNECTOR TMP-J01X-V6	T
J801	6510007020	CONNECTOR TMP-J01X-V6	T
J802	6510007020	CONNECTOR TMP-J01X-V6	T
J808	6510007020	CONNECTOR TMP-J01X-V6	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
J900	6510022470	S.CONNECTOR 40FLT-SM1-TB	T
J901	6510015540	S.CONNECTOR B4B-ZR-SM3-TF	T
J940	6510022470	S.CONNECTOR 40FLT-SM1-TB	T
F1	5220000230	HOLDER S-N5054	T
F2	5220000230	HOLDER S-N5054	T
F3	5210000040	FUSE FGB 2A (FGB0 125V)	T
EP1	0910057434	PCB B 5969D	
EP50	6910012350	S.BEAD MMZ1608Y 102BT	B
EP51	6910012350	S.BEAD MMZ1608Y 102BT	B
EP52	6910012350	S.BEAD MMZ1608Y 102BT	B
EP403	6910012350	S.BEAD MMZ1608Y 102BT	T
EP404	6910012350	S.BEAD MMZ1608Y 102BT	T
EP408	6910012350	S.BEAD MMZ1608Y 102BT	T
EP409	6910012350	S.BEAD MMZ1608Y 102BT	T
EP414	6910012350	S.BEAD MMZ1608Y 102BT	T
EP415	6910012350	S.BEAD MMZ1608Y 102BT	B
EP416	6910012350	S.BEAD MMZ1608Y 102BT	B
EP417	6910012350	S.BEAD MMZ1608Y 102BT	T
EP420	6910012350	S.BEAD MMZ1608Y 102BT	T
EP421	6910012350	S.BEAD MMZ1608Y 102BT	B
EP430	6910012350	S.BEAD MMZ1608Y 102BT	B
EP431	6910012350	S.BEAD MMZ1608Y 102BT	B
EP432	6910012350	S.BEAD MMZ1608Y 102BT	B
EP905	6910012350	S.BEAD MMZ1608Y 102BT	B
EP907	6910012350	S.BEAD MMZ1608Y 102BT	B

[DSP-A BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.
IC1	1140011160	S.IC TMS320C6713GDP225	T
IC151	1130008360	S.IC TC7SHU04FU (TE85L)	B
IC171	1130008040	S.IC TC7SH04FU	T
IC181	1130011150	S.IC SN74AHC2G08HDCTR	T
IC191	1130011150	S.IC SN74AHC2G08HDCTR	T
IC201	1130012190	S.IC AT29LV040A-20TC (SX-2590E)	B
IC301	1110006100	S.IC NJM5534MD-TE1	T
IC331	1130009980	S.IC TC7W53FK (TE85L)	T
IC341	1110006100	S.IC NJM5534MD-TE1	T
IC371	1110006100	S.IC NJM5534MD-TE1	T
IC401	1110006110	S.IC AK5394A-VS	T
IC451	1130006890	S.IC TC7S04FU (TE85R)	T
IC452	1130012160	S.IC SN74LVC1GU04DCKR	T
IC501	1110001900	S.IC μPC4570G2-T1	T
IC551	1130011460	S.IC AK4394-VF	T
IC601	1110006100	S.IC NJM5534MD-TE1	T
IC651	1110006100	S.IC NJM5534MD-TE1	T
IC701	1110006100	S.IC NJM5534MD-TE1	T
IC771	1110004770	S.IC BU9480F-E2	T
Q1	1590000680	S.TRANSISTOR DTC114EUA T106	T
D501	1730002320	S.ZENER MA8051-M (TX)	B
FI101	2040000790	S.LC EXCCET103U	T
X151	6050011660	S.XTAL CR-754 (30.000 MHz)	B
L1	6200003950	S.COIL HF50ACC 322513-T	B
L2	6180003500	S.COIL SLF6028T-100M1R3	B
L3	6200003640	S.COIL MLF1608E 100K-T	B
L401	6200003950	S.COIL HF50ACC 322513-T	T
L921	6200003950	S.COIL HF50ACC 322513-T	T
L922	6200003950	S.COIL HF50ACC 322513-T	T
L924	6200003950	S.COIL HF50ACC 322513-T	T
L925	6200003950	S.COIL HF50ACC 322513-T	T
L961	6200003950	S.COIL HF50ACC 322513-T	B
L962	6200003950	S.COIL HF50ACC 322513-T	B
R1	7030003560	S.RESISTOR ERJ3GEVJ 103 V (10 kΩ)	B

S.=Surface mount

[DSP-TX BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.
C604	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C605	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C606	4550006820	S.TANTALUM ECST1DX106R	B
C607	40300118510	S.CERAMIC C2012 CH 1H 682J-T	T
C608	4030007050	S.CERAMIC C1608 CH 1H 220J-T	T
C651	4550006450	S.TANTALUM ECST1EY105R	B
C652	40300118510	S.CERAMIC C2012 CH 1H 682J-T	T
C653	4550006820	S.TANTALUM ECST1DX106R	B
C654	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C655	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C656	4550006820	S.TANTALUM ECST1DX106R	B
C657	40300118510	S.CERAMIC C2012 CH 1H 682J-T	T
C658	4030007050	S.CERAMIC C1608 CH 1H 220J-T	T
C701	4030017840	S.CERAMIC C2012 CH 1H 222J-T	T
C702	4030017840	S.CERAMIC C2012 CH 1H 222J-T	T
C703	4550006820	S.TANTALUM ECST1DX106R	B
C704	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C705	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C706	4550006820	S.TANTALUM ECST1DX106R	B
C707	4030007050	S.CERAMIC C1608 CH 1H 220J-T	T
C801	4030006860	S.CERAMIC C1608 JB 1H 102K-T	T
C802	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C803	4550006200	S.TANTALUM ECST0JY106R	B
C804	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C805	4550006700	S.TANTALUM ECST1AY106R	B
C806	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C807	4550006820	S.TANTALUM ECST1DX106R	B
C808	4030007050	S.CERAMIC C1608 CH 1H 220J-T	T
C831	4030006860	S.CERAMIC C1608 JB 1H 102K-T	T
C832	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C833	4550006200	S.TANTALUM ECST0JY106R	B
C834	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C835	4550006700	S.TANTALUM ECST1AY106R	B
C836	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C837	4550006820	S.TANTALUM ECST1DX106R	B
C838	4030007050	S.CERAMIC C1608 CH 1H 220J-T	T
C871	4550006700	S.TANTALUM ECST1AY106R	B
C872	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C873	4550006820	S.TANTALUM ECST1DX106R	B
C874	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C875	4030007050	S.CERAMIC C1608 CH 1H 220J-T	T
C921	4550006210	S.TANTALUM ECST1CX106R	B
C922	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C923	4550002830	S.TANTALUM TEESVD2 1V 685M12R	B
C924	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C925	4550006210	S.TANTALUM ECST1CX106R	B
C926	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C927	4550002830	S.TANTALUM TEESVD2 1V 685M12R	B
C928	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C961	4030011600	S.CERAMIC C1608 JB 1E 104K-T	B
C962	4550006700	S.TANTALUM ECST1AY106R	B
C963	4030011600	S.CERAMIC C1608 JB 1E 104K-T	B
C964	4550006700	S.TANTALUM ECST1AY106R	B
J201	6510024450	S.CONNECTOR IC197-3202-2000	B
J921	6910013900	CONNECTOR IMSA-9180S-22A	B
J961	6910012460	CONNECTOR IMSA-9180S-30A	B
EP1	0910057652	PCB B 5971B	

[SCOPE UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
IC801	1130009230	S.IC LMX2306TMX	T
IC803	1130009690	S.IC TC74HCT7007AF	B
IC820	1190001960	S.IC AD9857AST	T
IC903	1120002920	S.IC ADM202EARN	T
IC904	1130005720	S.IC TC7W04F (TE12L)	T
IC905	1130005251	S.IC TC74HC08AF (TP1)	B
IC906	1130009830	S.IC TC74VHCT04AF	B
Q1	1530002060	S.TRANSISTOR 2SC4081 T106 R	T
Q2	1530003850	S.TRANSISTOR 2SC5551F-TD	T
Q11	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q12	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q31	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q32	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q33	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q101	1530003150	S.TRANSISTOR 2SC4406-TD	T
Q201	1560000560	S.FET 2SK882-GR (TE85L)	T
Q202	1560000560	S.FET 2SK882-GR (TE85L)	T
Q301	1530003150	S.TRANSISTOR 2SC4673D-TD	T
Q701	1530003220	S.TRANSISTOR 2SC4406-4-TL	T
Q720	1530003220	S.TRANSISTOR 2SC4406-4-TL	T
Q810	1530003220	S.TRANSISTOR 2SC4406-4-TL	T
Q821	1560000330	S.FET 2SK210-GR (TE85R)	T
Q841	1530002060	S.TRANSISTOR 2SC4081 T106 R	T
Q842	1530003430	S.TRANSISTOR 2SC5226-4-TL	T
Q843	1530003430	S.TRANSISTOR 2SC5226-4-TL	T
Q872	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q903	1530002280	S.TRANSISTOR 2SC4081 T106 S	B
Q904	1510000510	S.TRANSISTOR 2SA1576A T106R	B
Q921	1590001330	S.TRANSISTOR DTA114EUA T106	T
Q922	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q923	1590001330	S.TRANSISTOR DTA114EUA T106	T
Q924	1590000680	S.TRANSISTOR DTC114EUA T106	T
D1	1750000970	S.DIODE CPH5513-TL	T
D2	1750000970	S.DIODE CPH5513-TL	T
D3	1750000440	S.DIODE 1SV263-TL	T
D4	1750000430	S.DIODE HSB88WSTR	T
D11	1790000620	S.DIODE MA77 (TX)	T
D12	1790000620	S.DIODE MA77 (TX)	T
D101	1750000430	S.DIODE HSB88WSTR	T
D201	1710000840	S.DIODE 1SR154-400 TE25	B
D401	1790001250	S.DIODE MA2S111-(TX)	T
D402	1790001250	S.DIODE MA2S111-(TX)	T
D403	1790001250	S.DIODE MA2S111-(TX)	T
D821	1750000680	S.VARICAP 1SV232 (TPH2) /(TPH3)	T
D822	1750000680	S.VARICAP 1SV232 (TPH2) /(TPH3)	T
D902	1750000550	S.DIODE 1SS355 TE-17	B
F1201	2030000290	S.MONOLITH FL-357 (45 MHz)	T
F1501	2040000790	S.LC EXCCET103U	T
L1	6200001830	S.COIL NL 322522T-100J	T
L2	6200001830	S.COIL NL 322522T-100J	T
L3	6200001830	S.COIL NL 322522T-100J	B
L4	6200001830	S.COIL NL 322522T-100J	T
L5	6150004280	COIL LS-484B (C-14927)	T
L6	6150004280	COIL LS-484B (C-14927)	T
L7	6200003260	S.COIL NL 322522T-101J	T
L8	6140003790	COIL LR-442	T
L9	6200001830	S.COIL NL 322522T-100J	T
L10	6200001830	S.COIL NL 322522T-100J	T
L11	6200001830	S.COIL NL 322522T-100J	T
L12	6200010450	S.COIL C2520C-R82G (0.82U)	T
L13	6200010940	S.COIL C2520C-39NG-A	T
L14	6200010860	S.COIL C2520C-R10G (01.U)	T
L31	6200001830	S.COIL NL 322522T-100J	B
L32	6200001830	S.COIL NL 322522T-100J	B
L33	6200001830	S.COIL NL 322522T-100J	B
L34	6200001830	S.COIL NL 322522T-100J	B
L51	6200001830	S.COIL NL 322522T-100J	B
L52	6200001830	S.COIL NL 322522T-100J	B
L53	6200001830	S.COIL NL 322522T-100J	T
L54	6200001830	S.COIL NL 322522T-100J	T
L55	6200003950	S.COIL HF50ACC 322513-T	B
L56	6200003950	S.COIL HF50ACC 322513-T	T
L57	6200003950	S.COIL HF50ACC 322513-T	T
L58	6200003950	S.COIL HF50ACC 322513-T	T
L59	6200003950	S.COIL HF50ACC 322513-T	B
L60	6200003950	S.COIL HF50ACC 322513-T	T
L101	6140003530	COIL LR-395	T
L102	6140003530	COIL LR-395	T
L103	6200003020	S.COIL NL 322522T-R33J-3	T
L104	6200001920	S.COIL ELJNC R15K-F	B

[SCOPE UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
IC1	1110006180	S.IC UPG2009TB-E3	T
IC2	1180001770	S.IC TA79L05F (TE12L)	T
IC31	1110006180	S.IC UPG2009TB-E3	T
IC201	1180002650	S.REG SI-3012KS-TL	T
IC401	1110006130	S.IC μPC4094G2-E1	T
IC403	1110006130	S.IC μPC4094G2-E1	T
IC404	1110006130	S.IC μPC4094G2-E1	T
IC405	1110002700	S.IC NJM2904M-TE1	T
IC501	1190002030	S.IC AD7650AST	T
IC502	1130006890	S.IC TC7S04FU (TE85R)	T
IC505	1180002630	S.REG AD1582BRT-REEL7	T
IC601	1140011530	S.IC TMS320C6711 CGDP200	T
IC602	1130011930	S.IC SN74LVC1G04DCKR	T
IC603	1130011930	S.IC SN74LVC1G04DCKR	T
IC604	1130008040	S.IC TC7SH04FU	B
IC671	1130012210	S.IC AT49LV001N-90TC (SX-2590G)	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[SCOPE UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
DS901	5040002930	S.LED	SML-512MW T86P	T
DS902	5040002930	S.LED	SML-512MW T86P	T
EP1	0910057583	PCB	B 5972C	
EP901	6910012350	S.BEAD	MMZ1608Y 102BT	B
EP902	6910012350	S.BEAD	MMZ1608Y 102BT	B

[LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
IC1	1140011550	S.IC	MT48LC16M16A2TG-75	B
IC2	1140011550	S.IC	MT48LC16M16A2TG-75	T
IC51	1130011290	S.IC	IDT70V24L25PF	B
IC52	1140011830	S.IC	XC9572XL-10TQ100C (SX2590H)	B
IC53	1110005820	S.IC	R3112N281A-TR	T
IC54	1130007430	S.IC	TC7S14FU (TE85R)	T
IC55	1130008040	S.IC	TC7SH04FU	T
IC56	1130010110	S.IC	TC7WH04FU (TE12L)	B
IC101	1130011010	S.IC	SN74CBTLV3257PWR <WMC>	T
IC102	1130006440	S.IC	TC7S08F (TE85R)	T
IC103	1140011560	S.IC	HD6417751RBP200	T
IC104	1130008360	S.IC	TC7SHU04FU (TE85L)	T
IC105	1130012240	S.IC	CY2292F (SX-2590J)	T
IC106	1130011110	S.IC	TC74VCX04FT (EL)	T
IC201	1140011550	S.IC	MT48LC16M16A2TG-75	B
IC202	1140011550	S.IC	MT48LC16M16A2TG-75	B
IC203	1140011570	S.IC	HD64404BTD	T
IC204	1140011580	S.IC	ADV7123KST50	T
IC205	1130011940	S.IC	TC7SZ04F (TE85L)	T
IC206	1130012150	S.IC	SN74ACT04PWR	T
IC207	1130005720	S.IC	TC7W04F (TE12L)	B
IC208	1130011950	S.IC	μPD16875G-E1	B
IC209	1190001920	S.IC	AK5355-VT-E2	B
IC210	1190001920	S.IC	AK5355-VT-E2	B
IC211	1190001910	S.IC	AK4384-VT-E2	B
IC212	1190001910	S.IC	AK4384-VT-E2	B
IC401	1130010970	S.IC	PCI1410APGE	B
IC402	1130011960	S.IC	TPS2211AIDBR	B
IC403	1130009570	S.IC	BR93LC46F-WE2	T
IC404	1130010990	S.IC	RTL8139C <GMI>	B
IC601	1130008040	S.IC	TC7SH04FU	B
IC602	1130008710	S.IC	TC7SET04FU (TE85L)	B
IC603	1110004770	S.IC	BU9480F-E2	T
IC604	1140011810	S.IC	HD64F2377VFO33V (SX-2590C)	B
IC605	1140011840	S.IC	XC9572XL-10TQ100C (SX2590I)	B
IC607	1130006440	S.IC	TC7S08F (TE85R)	B
IC608	1130006440	S.IC	TC7S08F (TE85R)	B
IC609	1130005251	S.IC	TC74HC08AF (TP1)	B
IC610	1140008650	S.IC	HN58X2464T1	B
IC801	1180002020	S.REG	BA033FP-E2	B
IC821	1110002700	S.IC	NJM2904M-TE1	B
IC851	1110003870	S.IC	NJM2058M-TE1	B
IC852	1110003870	S.IC	NJM2058M-TE1	B
IC853	1110003870	S.IC	NJM2058M-TE1	B
IC854	1130005720	S.IC	TC7W04F (TE12L)	B
Q601	1530002060	S.TRANSISTOR	2SC4081 T106 R	B
Q602	1510000510	S.TRANSISTOR	2SA1576A T106R	B
Q802	1530002060	S.TRANSISTOR	2SC4081 T106 R	T
Q803	1540000440	S.TRANSISTOR	2SD1619-T-TD	B
Q804	1540000440	S.TRANSISTOR	2SD1619-T-TD	B
Q805	1530002060	S.TRANSISTOR	2SC4081 T106 R	T
Q806	1540000440	S.TRANSISTOR	2SD1619-T-TD	B
Q807	1530002060	S.TRANSISTOR	2SC4081 T106 R	T
Q808	1590001330	S.TRANSISTOR	DTA114EUA T106	B
Q809	1590001330	S.TRANSISTOR	DTA114EUA T106	B
Q810	1540000550	S.TRANSISTOR	2SD1664 T100Q	T
Q821	1520000650	S.TRANSISTOR	2SB1201-S-TL	B
Q822	1530002060	S.TRANSISTOR	2SC4081 T106 R	B
Q901	1590001960	S.TRANSISTOR	XP4311 (TX)	B
Q902	1590001960	S.TRANSISTOR	XP4311 (TX)	B
Q903	1590001960	S.TRANSISTOR	XP4311 (TX)	B
Q904	1590001960	S.TRANSISTOR	XP4311 (TX)	B
D51	1750000550	S.DIODE	1SS355 TE-17 except [FRA]	T
D52	1750000550	S.DIODE	1SS355 TE-17 [FRA], [KOR], [ESP], [UK] only	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
D53	1750000550	S.DIODE	1SS355 TE-17 [USA], [EUR], [UK] only	T
D54	1750000550	S.DIODE	1SS355 TE-17 except [FRA]	T
D55	1750000550	S.DIODE	1SS355 TE 17 [EUR], [ITR], [ESP], [UK] only	T
D56	1750000550	S.DIODE	1SS355 TE-17 [FRA], [KOR], [ESP], [UK] only	T
D57	1750000550	S.DIODE	1SS355 TE-17 [USA], [EUR], [UK] only	T
D58	1750000550	S.DIODE	1SS355 TE-17 except [FRA]	T
D59	1750000550	S.DIODE	1SS355 TE-17 [EUR], [ITR], [ESP], [UK] only	T
D60	1750000550	S.DIODE	1SS355 TE-17	T
D61	1750000550	S.DIODE	1SS355 TE-17	T
D62	1750000550	S.DIODE	1SS355 TE-17	T
D65	1750000550	S.DIODE	1SS355 TE-17	T
D66	1750000550	S.DIODE	1SS355 TE-17 [EUR], [FRA], [ITR], [UK] only	T
D67	1750000550	S.DIODE	1SS355 TE-17	T
D68	1750000550	S.DIODE	1SS355 TE-17	T
D201	1790000980	S.DIODE	MA742 (TX)	B
D202	1790000980	S.DIODE	MA742 (TX)	B
D203	1790000980	S.DIODE	MA742 (TX)	B
D204	1790000980	S.DIODE	MA742 (TX)	T
D205	1790000980	S.DIODE	MA742 (TX)	T
D206	1790000980	S.DIODE	MA742 (TX)	B
D207	1790000980	S.DIODE	MA742 (TX)	B
D208	1790000980	S.DIODE	MA742 (TX)	B
D209	1790000980	S.DIODE	MA742 (TX)	B
D601	1750000550	S.DIODE	1SS355 TE-17	B
D801	1750000370	S.DIODE	DA221 TL	B
D802	1750000370	S.DIODE	DA221 TL	B
D803	1750000370	S.DIODE	DA221 TL	B
D804	1750000270	S.DIODE	1SS301 (TE85R)	B
D805	1790001610	S.DIODE	1SS385 (TE85L)	B
D806	1790001610	S.DIODE	1SS385 (TE85L)	B
D821	1730002340	S.ZENER	MA8047-M (TX)	B
D851	1750000550	S.DIODE	1SS355 TE-17	B
D852	1750000550	S.DIODE	1SS355 TE-17	B
D853	1790000980	S.DIODE	MA742 (TX)	B
D854	1790000980	S.DIODE	MA742 (TX)	B
D855	1790000980	S.DIODE	MA742 (TX)	B
D856	1790000980	S.DIODE	MA742 (TX)	B
D857	1750000550	S.DIODE	1SS355 TE-17	B
D858	1750000550	S.DIODE	1SS355 TE-17	B
D860	1790000980	S.DIODE	MA742 (TX)	T
D861	1790000980	S.DIODE	MA742 (TX)	T
D862	1790000980	S.DIODE	MA742 (TX)	T
D863	1790000980	S.DIODE	MA742 (TX)	T
D864	1790000980	S.DIODE	MA742 (TX)	T
D865	1790000980	S.DIODE	MA742 (TX)	T
D866	1790000980	S.DIODE	MA742 (TX)	T
D901	1790000980	S.DIODE	MA742 (TX)	T
X101	6050011610	S.XTAL	CR-751 (25.000 MHz)	T
X201	6050010680	S.XTAL	CR-628 (24.576 MHz)	T
X202	6050011910	S.XTAL	CR-780 (48 MHz)	T
X601	6050011810	S.XTAL	CR-755 (15.9744 MHz)	T
L203	6200002630	S.COIL	NL 252018T-R10J	B
L204	6200002630	S.COIL	NL 252018T-R10J	B
L205	6200002630	S.COIL	NL 252018T-R10J	B
L801	6200003260	S.COIL	NL 322522T-101J	B
L803	6180003320	S.COIL	SLF6028T-150M1R0	B
L804	6180003320	S.COIL	SLF6028T-150M1R0	B
L805	6180003320	S.COIL	SLF6028T-150M1R0	B
L806	6180003320	S.COIL	SLF6028T-150M1R0	B
L807	6180003320	S.COIL	SLF6028T-150M1R0	B
L808	6200003590	S.COIL	EXCCL3225U1	T
L809	6200003590	S.COIL	EXCCL3225U1	B
L810	6200003590	S.COIL	EXCCL3225U1	B
L811	6200001830	S.COIL	NL 322522T-100J	B
L821	6200003590	S.COIL	EXCCL3225U1	B
L822	6200003590	S.COIL	EXCCL3225U1	T
L823	6200009790	S.COIL	BLM31PG121SN1	T
L824	6200003590	S.COIL	EXCCL3225U1	B
L825	6200003590	S.COIL	EXCCL3225U1	B
L826	6180003320	S.COIL	SLF6028T-150M1R0	B
L827	6200003590	S.COIL	EXCCL3225U1	T
L832	6200003590	S.COIL	EXCCL3225U1	B
L833	6200003590	S.COIL	EXCCL3225U1	B
L834	6200003590	S.COIL	EXCCL3225U1	B
L835	6200003590	S.COIL	EXCCL3225U1	B
L901	6200003590	S.COIL	EXCCL3225U1	B
L902	6200003590	S.COIL	EXCCL3225U1	B
L903	6200003590	S.COIL	EXCCL3225U1	B

S.=Surface mount

[LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
J1	6510022490	S.CONNECTOR AXK5S30045P	T
J2	6510019870	S.CONNECTOR AXK5S40045P	T
J51	6910014250	CONNECTOR IMSA-9202B-2-06	T
J102	6510019980	S.CONNECTOR 52808-1691	T
J602	6510019970	S.CONNECTOR 52808-1091	T
J604	6510019970	S.CONNECTOR 52808-1091	T
J802	6510024260	S.CONNECTOR S9B-PH-SM3-TB	T
J803	6510024400	CONNECTOR S11B-EH	T
J804	6510024250	S.CONNECTOR S5B-PH-SM3-TB	T
J805	6510024110	S.CONNECTOR 52793-2090	T
J806	6510024130	S.CONNECTOR IMSA-9637S-40Y901	T
J807	6510024150	S.CONNECTOR 50FY-BMT-TB	T
J808	6510022470	S.CONNECTOR 40FLT-SM1-TB	T
J809	6510022470	S.CONNECTOR 40FLT-SM1-TB	T
J810	6510022730	S.CONNECTOR S13B-PH-SM3-TB	T
J811	6510021560	S.CONNECTOR 52808-2490	T
J812	6510020700	S.CONNECTOR 52793-1290	T
J813	6510020080	S.CONNECTOR 52808-2091	T
J814	6510019970	S.CONNECTOR 52808-1091	T
J815	6510019990	S.CONNECTOR 52808-2291	T
J816	6510019990	S.CONNECTOR 52808-2291	T
J820	6510003580	CONNECTOR S10B-EH-S	T
J821	6510003550	CONNECTOR S07B-EH-S	T
J822	6510021600	S.CONNECTOR S2B-PH-SM3-TB	T
J823	6510021600	S.CONNECTOR S2B-PH-SM3-TB	T
J824	6510024100	CONNECTOR SC25-02WL	T
J825	6510019420	S.CONNECTOR B8B-ZR-SM3-TF	T
J826	6510023800	S.CONNECTOR S4B-ZR-SM3A-TF	T
DS401	5040002930	S.LED SML-512MW T86P	T
DS402	5040002930	S.LED SML-512MW T86P	T
DS403	5040002930	S.LED SML-512MW T86P	T
S51	2260001890	S.SWITCH SKQDPA	T
T401	5920000840	TRANSFORMER H1102	T
EP1	0910057416	PCB B 5973F	
EP101	6910013310	S.BEAD MMZ1608D121B	T
EP102	6910013310	S.BEAD MMZ1608D121B	T
EP103	6910013310	S.BEAD MMZ1608D121B	T
EP201	6910012350	S.BEAD MMZ1608Y 102BT	T
EP202	6910012350	S.BEAD MMZ1608Y 102BT	T
EP401	6910013310	S.BEAD MMZ1608D121B	T
EP402	6910013310	S.BEAD MMZ1608D121B	T
EP403	6910013310	S.BEAD MMZ1608D121B	T
EP801	6910013310	S.BEAD MMZ1608D121B	T
EP802	6910013310	S.BEAD MMZ1608D121B	T
EP803	6910013310	S.BEAD MMZ1608D121B	T
EP804	6910013310	S.BEAD MMZ1608D121B	T
EP805	6910013310	S.BEAD MMZ1608D121B	B
EP806	6910013310	S.BEAD MMZ1608D121B	T
EP807	6910013310	S.BEAD MMZ1608D121B	B
EP808	6910013310	S.BEAD MMZ1608D121B	T
EP809	6910013310	S.BEAD MMZ1608D121B	B
EP810	6910013310	S.BEAD MMZ1608D121B	T
EP811	6910013310	S.BEAD MMZ1608D121B	B
EP812	6910013310	S.BEAD MMZ1608D121B	B
EP813	6910013310	S.BEAD MMZ1608D121B	T
EP814	6910013310	S.BEAD MMZ1608D121B	T
EP815	6910013310	S.BEAD MMZ1608D121B	T
EP816	6910013310	S.BEAD MMZ1608D121B	T
EP817	6910013310	S.BEAD MMZ1608D121B	T
EP818	6910013310	S.BEAD MMZ1608D121B	T
EP819	6910013310	S.BEAD MMZ1608D121B	T
EP820	6910013310	S.BEAD MMZ1608D121B	T
EP972	6910015970	S.BEAD MMZ1608B 301CT-AS	T
EP973	6910015970	S.BEAD MMZ1608B 301CT-AS	T
EP996	6910015970	S.BEAD MMZ1608B 301CT-AS	B
EP997	6910015970	S.BEAD MMZ1608B 301CT-AS	B
EP1001	6910015970	S.BEAD MMZ1608B 301CT-AS	B
EP1002	6910015970	S.BEAD MMZ1608B 301CT-AS	B

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[PA UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
MF1	2710000770	FAN FCB34AC12A	
W1	8900012790	CABLE OPC 1299	

[PA200W BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.
IC2	1180001540	S.IC TA78L08F (TE12R)	T
Q1	1520000530	S.TRANSISTOR 2SB1119S-TD	T
Q2	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q101	1560001240	S.FET RD01MUS1	T
Q201	1590003050	S.FET PD55003	T
Q301	1590003350	FET SD2918	T
Q401	1590003360	FET SD2931-11	T
Q402	1590003360	FET SD2931-11	T
D1	1730000560	S.ZENER RD2.7M-T2B1	T
D401	1750000270	S.DIODE 1SS301 (TE85R)	T
D402	1750000270	S.DIODE 1SS301 (TE85R)	T
D403	1750000270	S.DIODE 1SS301 (TE85R)	T
D404	1750000270	S.DIODE 1SS301 (TE85R)	T
L1	6200005010	S.COIL NL 252018T-100J	T
L2	6200005010	S.COIL NL 252018T-100J	T
L3	6200005010	S.COIL NL 252018T-100J	T
L6	6200005010	S.COIL NL 252018T-100J	T
L7	6200010880	S.COIL CDRH124-330MC	T
L101	6200005130	S.COIL NLC453232T-101K	T
L102	6200007220	S.COIL EXCCL4532U1	T
L201	6180001240	COIL LAL 04NA 820K	T
L202	6140004350	COIL LR-475	T
L301	6200003260	S.COIL NL 322522T-101J	T
L303	6200001830	S.COIL NL 322522T-100J	T
L304	2040000490	COIL EXC-ELDR25C	T
L305	2040000490	COIL EXC-ELDR25C	T
L306	6140004340	COIL LR-474	T
L307	6200001830	S.COIL NL 322522T-100J	T
L401	6200003260	S.COIL NL 322522T-101J	T
L402	6200003260	S.COIL NL 322522T-101J	T
L403	6140002590	COIL LR-296 (TR18X8X8 D12A)	T
L404	6140000720	COIL LR-95	T
L501	6140002030	COIL LR-230 (SK-10M-15Y 120)	T
R1	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R2	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R3	7510001740	THERMISTOR DTN-C103F3H-STS-40	T
R4	7030000380	S.RESISTOR MCR10EZJH 1 kΩ	T
R5	7030000861	S.RESISTOR ERA3YED 222V	T
R6	7030007210	S.RESISTOR ERA3YEB 102V	T
R7	7030007210	S.RESISTOR ERA3YEB 102V	T
R101	7030003370	S.RESISTOR ERJ3GEYJ 271 V (270 Ω)	T
R102	7030003220	S.RESISTOR ERJ3GEYJ 150 V (15 Ω)	T
R103	7030003370	S.RESISTOR ERJ3GEYJ 271 V (270 Ω)	T
R104	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R105	7030003430	S.RESISTOR ERJ3GEYJ 821 V (820 Ω)	T
R106	7030003480	S.RESISTOR ERJ3GEYJ 222 V (220 kΩ)	T
R107	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R108	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)	T
R110	7030000230	S.RESISTOR MCR10EZJH 56 Ω (560)	T
R111	7030003420	S.RESISTOR ERJ3GEYJ 681 V (680 Ω)	T
R112	7030003510	S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ)	T
R113	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)	T
R115	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)	T
R117	7030003530	S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ)	T
R118	7030003550	S.RESISTOR ERJ3GEYJ 822 V (8.2 kΩ)	T
R119	7030008240	S.RESISTOR ERJ12YJ0R00U	T
R201	7030004050	S.RESISTOR ERJ3GEYJ 1R0 V (1 Ω)	T
R202	7030003410	S.RESISTOR ERJ3GEYJ 561 V (560 Ω)	T
R203	7030010800	S.RESISTOR ERJ1TYJ 2R7U (2.7 Ω)	T
R205	7030006260	S.RESISTOR ERJ12YJ471U (470 Ω)	T
R301	7310004720	TRIMMER EVM-2AGA00 B24 (203)	T
R302	7030008180	S.RESISTOR ERJ12YJ331U (330 Ω)	T
R305	7030003530	S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ)	T
R307	7070000830	RESISTOR ERG3SJ 101 (100 Ω)	T
R309	7030010570	S.RESISTOR ERJ1TYJ 4R7U (4.7 Ω)	T

S.=Surface mount

[PA200W BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.
R310	7310004710	TRIMMER EVM-2AGA00 B23 (202)	T
R312	7070000830	RESISTOR ERG3SJ 101 (100 Ω)	T
R401	7030010960	S.RESISTOR ERJ1TYJ 120U (12 Ω)	T
R402	7030010960	S.RESISTOR ERJ1TYJ 120U (12 Ω)	T
R403	7030010960	S.RESISTOR ERJ1TYJ 120U (12 Ω)	T
R404	7030010960	S.RESISTOR ERJ1TYJ 120U (12 Ω)	T
R405	7030010960	S.RESISTOR ERJ1TYJ 120U (12 Ω)	T
R406	7030010960	S.RESISTOR ERJ1TYJ 120U (12 Ω)	T
R407	7310004720	TRIMMER EVM-2AGA00 B24 (203)	T
R408	7030000420	S.RESISTOR MCR10EZHZ 2.2 kΩ	T
R409	7030000420	S.RESISTOR MCR10EZHZ 2.2 kΩ	T
R410	7310004720	TRIMMER EVM-2AGA00 B24 (203)	T
R411	7030010520	S.RESISTOR ERJ1TYJ 101U (100 Ω)	T
R412	7030010520	S.RESISTOR ERJ1TYJ 101U (100 Ω)	T
R413	7030010520	S.RESISTOR ERJ1TYJ 101U (100 Ω)	T
R414	7030010520	S.RESISTOR ERJ1TYJ 101U (100 Ω)	T
R416	7070000890	RESISTOR ERG3SJ 150 (15 Ω)	T
R418	7070001190	RESISTOR ERG3SJ180 (18 Ω)	T
R420	7070000890	RESISTOR ERG3SJ 150 (15 Ω)	T
R422	7070001190	RESISTOR ERG3SJ180 (18 Ω)	T
R423	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)	T
R424	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)	T
R425	7310004710	TRIMMER EVM-2AGA00 B23 (202)	T
R426	7310004710	TRIMMER EVM-2AGA00 B23 (202)	T
R427	7070001200	RESISTOR ERG3SJ100P (10 Ω)	T
R501	7070000900	RESISTOR ERX3SJ 1R8 (1.8 Ω)	T
R502	7070000900	RESISTOR ERX3SJ 1R8 (1.8 Ω)	T
R503	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)	T
R504	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)	T
R505	7100000810	S.RESISTOR ERX5WQK 12MH	T
R507	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)	T
R508	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)	T
R511	7070000900	RESISTOR ERX3SJ 1R8 (1.8 Ω)	T
R512	7070000900	RESISTOR ERX3SJ 1R8 (1.8 Ω)	T
R513	7070001000	RESISTOR ERG3SJ 821 (820 Ω)	T
R514	7070001000	RESISTOR ERG3SJ 821 (820 Ω)	T
C1	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C2	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C3	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C6	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C7	4030006900	S.CERAMIC C1608 JB 1H 103K-T	T
C8	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C9	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C10	4510004640	S.ELECTROLYTIC ECEV1CA470SP	T
C11	4030006900	S.CERAMIC C1608 JB 1H 103K-T	T
C12	4510004640	S.ELECTROLYTIC ECEV1CA470SP	T
C15	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C16	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C17	4510004440	S.ELECTROLYTIC ECEV1HA010SR	T
C102	4030017810	S.CERAMIC C1608 CH 1H 102J-T	T
C103	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C104	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C106	4030017320	S.CERAMIC GRM21BB1H104KA11L (GRM40-034)	T
C107	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C108	4030017810	S.CERAMIC C1608 CH 1H 102J-T	T
C109	4030017320	S.CERAMIC GRM21BB1H104KA11L (GRM40-034)	T
C110	4030017810	S.CERAMIC C1608 CH 1H 102J-T	T
C111	4030017810	S.CERAMIC C1608 CH 1H 102J-T	T
C112	4030017320	S.CERAMIC GRM21BB1H104KA11L (GRM40-034)	T
C113	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C114	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C201	4030017320	S.CERAMIC GRM21BB1H104KA11L (GRM40-034)	T
C202	4030017810	S.CERAMIC C1608 CH 1H 102J-T	T
C204	4030008490	S.CERAMIC C2012 JB 1H 682K-T	T
C206	4030008700	S.CERAMIC GRM21B1H473KA01L (GRM40 B)	T
C207	4030008700	S.CERAMIC GRM21B1H473KA01L (GRM40 B)	T
C301	4030004760	S.CERAMIC C2012 JF 1H 104Z-T	T
C303	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C305	4030004760	S.CERAMIC C2012 JF 1H 104Z-T	T
C307	4030017810	S.CERAMIC C1608 CH 1H 102J-T	T
C309	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C311	4030018750	S.CERAMIC C3225 CH 2J 682K-T	T
C313	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C314	4510008050	ELECTROLYTIC 63 MV 220 CZ	T
C317	4030018790	S.CERAMIC C3225 JB 2E 104K-T	T
C318	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C319	4030018790	S.CERAMIC C3225 JB 2E 104K-T	T
C401	4030011790	S.CERAMIC GRM55RF52A684ZD01L (GRM44-1)	T
C402	4030011790	S.CERAMIC GRM55RF52A684ZD01L (GRM44-1)	T
C403	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C404	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C405	4030006900	S.CERAMIC C1608 JB 1H 103K-T	T
C406	4030006900	S.CERAMIC C1608 JB 1H 103K-T	T
C407	4030017810	S.CERAMIC C1608 CH 1H 102J-T	T
C408	4030017810	S.CERAMIC C1608 CH 1H 102J-T	T
C409	4030018790	S.CERAMIC C3225 JB 2E 104K-T	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[PA200W BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.
C410	4030018790	S.CERAMIC C3225 JB 2E 104K-T	T
C411	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C412	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C413	4030011600	S.CERAMIC C1608 JB 1E 104K T	T
C414	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C415	4030011790	S.CERAMIC GRM55RF52A684ZD01L (GRM44-1)	T
C416	4030011790	S.CERAMIC GRM55RF52A684ZD01L (GRM44-1)	T
C417	4030018760	S.CERAMIC C4532 CH 2A 104K-T	T
C418	4030018760	S.CERAMIC C4532 CH 2A 104K-T	T
C419	4030018760	S.CERAMIC C4532 CH 2A 104K-T	T
C420	4030018760	S.CERAMIC C4532 CH 2A 104K-T	T
C501	4030018790	S.CERAMIC C3225 JB 2E 104K-T	T
C502	4030018780	S.CERAMIC C3225 JB 2J 473K-T	T
C503	4030018770	S.CERAMIC C3216 CH 2J 102J-T	T
C504	4510006830	ELECTROLYTIC 63 MV 470CZ	T
C505	4510006830	ELECTROLYTIC 63 MV 470CZ	T
C506	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C507	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C510	4030018790	S.CERAMIC C3225 JB 2E 104K-T	T
C511	4030018780	S.CERAMIC C3225 JB 2J 473K-T	T
C512	4030018770	S.CERAMIC C3216 CH 2J 102J-T	T
C513	4510008050	ELECTROLYTIC 63 MV 220 CZ	T
C514	4030011790	S.CERAMIC GRM55RF52A684ZD01L (GRM44-1)	T
C515	4030011790	S.CERAMIC GRM55RF52A684ZD01L (GRM44-1)	T
J1	6510007020	CONNECTOR TMP-J01X-V6	T
J2	6510022310	S.CONNECTOR B5B-PH-SM3-TB	T
J5	6510020420	S.CONNECTOR S4B-PH-SM3-TB	T
J401	6510017920	CONNECTOR 1811P342	T
J402	6910001040	CONNECTOR IPS-1136	T
W401	9025900010	WIRE 23/05/085/B21/W07	
W501	9040401001	JUMPER 74/98/050/X98/X98	
EP1	0910057683	PCB B 5974C	
EP501	6910011330	TERMINAL OT-009 M3	T
EP502	6910011330	TERMINAL OT-009 M3	T
EP503	6910000640	BEAD FSR1090160RN000B (FSOH090RN)	T

[DC-DC BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.
IC21	1180002510	S.REG LM2673S-3.3	T
IC41	1180002510	S.REG LM2673S-3.3	T
IC61	1180002520	S.REG LM2673S-5.0	T
IC81	1180002520	S.REG LM2673S-5.0	T
IC101	1180002500	S.REG LM2673S-ADJ	T
IC121	1180002530	S.REG LM2594M-12	T
Q141	1590003310	S.TRANSISTOR DTD113ZK T146	T
D21	1750000960	S.DIODE RB081L-20	T
D41	1750000960	S.DIODE RB081L-20	T
D61	1750000960	S.DIODE RB081L-20	T
D81	1750000960	S.DIODE RB081L-20	T
D101	1750000960	S.DIODE RB081L-20	T
D121	1710000840	S.DIODE 1SR154-400 1E25	T
D122	1750001010	S.DIODE MBRD835LT4	T
D123	1750000960	S.DIODE RB081L-20	T
D141	1750000520	S.DIODE DAN222TL	T
L21	6200003950	S.COIL HF50ACC 322513-T	T
L22	6200010890	S.COIL CDRH124-150MC	T
L23	6200010880	S.COIL CDRH124-330MC	T
L41	6200009790	S.COIL BLM31PG121SN1	T
L42	6200010890	S.COIL CDRH124-150MC	T
L43	6200010880	S.COIL CDRH124-330MC	T
L44	6200009790	S.COIL BLM31PG121SN1	T
L61	6200003950	S.COIL HF50ACC 322513-T	T
L62	6200010900	S.COIL CDRH104R-100NC	T
L63	6200010880	S.COIL CDRH124-330MC	T
L81	6200003950	S.COIL HF50ACC 322513-T	T
L82	6200010900	S.COIL CDRH104R-100NC	T
L83	6200010880	S.COIL CDRH124-330MC	T
L101	6200003950	S.COIL HF50ACC 322513-T	T

S.=Surface mount

[DC-DC BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.
L102	6200010880	S.COIL CDRH124-330MC	T
L103	6190001190	S.COIL D10F-A814AY-101K=P3	T
L121	6190001640	S.COIL SLF12555T-101M1R1	T
L122	6190001190	S.COIL D10F A814AY 101K=P3	T
L141	6200000970	S.COIL NL 322522T-100K	T
L142	6200010900	S.COIL CDRH104R-100NC	T
R21	7030006091	S.RESISTOR ERA3YED 822V	T
R41	7030006091	S.RESISTOR ERA3YED 822V	T
R61	7030006091	S.RESISTOR ERA3YED 822V	T
R81	7030006091	S.RESISTOR ERA3YED 822V	T
R101	7030009851	S.RESISTOR ERA3YED 271V	T
R102	7030007230	S.RESISTOR ERA3YED 102V	T
R103	7030006091	S.RESISTOR ERA3YED 822V	T
R121	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R122	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R141	7030008190	S.RESISTOR ERJ12YJ330U (33 Ω)	T
C9	4510007580	S.ELECTROLYTIC EEVFC1C101P	T
C21	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C22	4510008230	S.ELECTROLYTIC EEFWA1A151P	T
C23	4030011340	S.CERAMIC C1608 CH 1H 471J-T	T
C24	4030004750	S.CERAMIC C2012 JB 1H 103K-T	T
C25	4030005110	S.CERAMIC C2012 JB 1E 473K-T	T
C26	4550006770	S.TANTALUM TEESVD2 1C 476M-12R	T
C27	4510008230	S.ELECTROLYTIC EEFWA1A151P	T
C41	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C42	4510008230	S.ELECTROLYTIC EEFWA1A151P	T
C43	4030011340	S.CERAMIC C1608 CH 1H 471J-T	T
C44	4030004750	S.CERAMIC C2012 JB 1H 103K-T	T
C45	4030005110	S.CERAMIC C2012 JB 1E 473K-T	T
C46	4550007140	S.TANTALUM TEESVD 1C 107M12R	T
C47	4510008230	S.ELECTROLYTIC EEFWA1A151P	T
C61	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C62	4510008230	S.ELECTROLYTIC EEFWA1A151P	T
C63	4030011340	S.CERAMIC C1608 CH 1H 471J-T	T
C64	4030004750	S.CERAMIC C2012 JB 1H 103K-T	T
C65	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C66	4550006770	S.TANTALUM TEESVD2 1C 476M-12R	T
C67	4510008230	S.ELECTROLYTIC EEFWA1A151P	T
C81	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C82	4510008230	S.ELECTROLYTIC EEFWA1A151P	T
C83	4030011340	S.CERAMIC C1608 CH 1H 471J-T	T
C84	4030004750	S.CERAMIC C2012 JB 1H 103K-T	T
C85	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C86	4550006770	S.TANTALUM TEESVD2 1C 476M-12R	T
C87	4510008230	S.ELECTROLYTIC EEFWA1A151P	T
C101	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C102	4510008230	S.ELECTROLYTIC EEFWA1A151P	T
C103	4030011340	S.CERAMIC C1608 CH 1H 471J-T	T
C104	4030004750	S.CERAMIC C2012 JB 1H 103K-T	T
C105	4030005110	S.CERAMIC C2012 JB 1E 473K-T	T
C106	4550006770	S.TANTALUM TEESVD2 1C 476M-12R	T
C107	4510008230	S.ELECTROLYTIC EEFWA1A151P	T
C122	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C123	4510008170	S.ELECTROLYTIC EEVFC1V470P	T
C141	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
RL142	6330001760	RELAY AW3023	T
J2	6510003470	CONNECTOR B11B-EH-S	T
J3	6510003430	CONNECTOR B07B-EH-S	T
J4	6510003460	CONNECTOR B10B-EH-S	T
J5	6510020420	S.CONNECTOR S4B-PH-SM3-TB	T
W1	8900012780	CABLE OPC-1298	T
EP1	0910057713	PCB B 5975C	

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[TUNER UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
P51	5610000350	CONNECTOR PHR-10	
P52	65100009610	CONNECTOR ZHR-5	
P53	65100009610	CONNECTOR ZHR-5	
MF1	2710000780	MOTOR MP24Z (STEPPING MOTOR	
MF2	2710000780	MOTOR MP24Z (STEPPING MOTOR	
MF3	2710000470	FAN MF60B-12H901	
W1	8900012900	CABLE OPC-1345	
W2	8900012900	CABLE OPC-1345	
W3	8900009410	CABLE OPC-927 (P=1 N=24 L=100)	
W51	9025900490	WIRE 23/00/230/B11/B09	
W52	9025900490	WIRE 23/00/230/B11/B09	
W53	9025900490	WIRE 23/00/230/B11/B09	
W54	9025900490	WIRE 23/00/230/B11/B09	
W55	9025900490	WIRE 23/00/230/B11/B09	
W56	9025900500	WIRE 23/08/230/B11/B09	
W57	9025900500	WIRE 23/08/230/B11/B09	
W58	9025900500	WIRE 23/08/230/B11/B09	
W59	9025900500	WIRE 23/08/230/B11/B09	
W60	9025900500	WIRE 23/08/230/B11/B09	

[CTRL BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.
IC1	1140004120	S.IC M38022M2-138FP	T
IC2	1130010390	S.IC HN58X2416T1	T
IC3	1130003920	S.IC TC4S69F (TE85R)	T
IC4	1180001070	S.IC TA7805F (TE16L)	B
IC5	1130009690	S.IC TC74HCT7007AF	B
IC6	1130006440	S.IC TC7508F (TE85R)	T
IC51	1130011530	S.IC CD74HC4094M96	T
IC52	1130007690	S.IC BU4066BCF-E2	B
IC55	1130011530	S.IC CD74HC4094M96	B
IC56	1130011530	S.IC CD74HC4094M96	B
IC57	1160000130	S.IC TD62783AF (S,EL)	T
IC58	1160000130	S.IC TD62783AF (S,EL)	T
IC101	1110000960	S.IC NJM4558M-T1	T
IC151	1120002300	S.IC TC74AC04F	B
IC153	1130012010	S.IC TC7SZ32F (TE85L)	T
IC154	1130012010	S.IC TC7SZ32F (TE85L)	T
IC155	1130012010	S.IC TC7SZ32F (TE85L)	T
IC156	1130012020	S.IC TC74ACT112F (EL)	T
IC201	1110000960	S.IC NJM4558M-T1	T
IC301	1110002690	S.IC NJM2903M-T1	T
IC401	1160000130	S.IC TD62783AF (S,EL)	T
IC402	1160000130	S.IC TD62783AF (S,EL)	T
Q1	1590001330	S.TRANSISTOR DTA114EUA T106	T
Q2	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q3	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q4	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q5	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q6	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q7	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q8	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q9	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q10	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q11	1590000680	S.TRANSISTOR DTC114EUA T106	B
Q51	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q52	1590000680	S.TRANSISTOR DTC114EUA T106	T
Q53	1590000680	S.TRANSISTOR DTC114EUA T106	B
Q54	1560001260	S.FET 2SK3018 T106	B
Q55	1590000680	S.TRANSISTOR DTC114EUA T106	B
Q59	1590000680	S.TRANSISTOR DTC114EUA T106	B
Q201	1560000870	S.FET 2SK515-T1B (X33)	T
Q251	1590000680	S.TRANSISTOR DTC114EUA T106	T
D1	1730000410	S.ZENER RD5.1M-T2B2	T
D2	1710000790	S.DIODE MA114 (TX)	T
D3	1750000200	S.DIODE 1SS319 (TE85R)	B
D4	1750000200	S.DIODE 1SS319 (TE85R)	B
D5	1750000200	S.DIODE 1SS319 (TE85R)	B
D6	1750000200	S.DIODE 1SS319 (TE85R)	B
D7	1730000030	S.ZENER RD5.6M-T2B2	T
D101	1790000490	S.DIODE HSM88AS-TR	T
D102	1790000490	S.DIODE HSM88AS-TR	T

S.=Surface mount

[CTRL BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.
D103	1750000200	S.DIODE 1SS319 (TE85R)	T
D151	1790000490	S.DIODE HSM88AS-TR	T
D152	1790000490	S.DIODE HSM88AS-TR	T
D153	1790000490	S.DIODE HSM88AS-TR	T
D154	1790000490	S.DIODE HSM88AS-TR	T
D201	1790000490	S.DIODE HSM88AS-TR	T
D202	1790000490	S.DIODE HSM88AS-TR	T
D203	1750000200	S.DIODE 1SS319 (TE85R)	T
D251	1750000270	S.DIODE 1SS301 (TE85R)	T
D301	1790000490	S.DIODE HSM88AS-TR	T
D302	1790000490	S.DIODE HSM88AS-TR	T
X1	6050009890	S.XTAL CR-569 (6.144 MHz)	T
L1	6200003260	S.COIL NL 322522T-101J	T
L2	6200003260	S.COIL NL 322522T-101J	T
L4	2040000490	COIL EXC-ELDR25C	T
L5	6200005130	S.COIL NLC453232T-101K	T
L6	6200003590	S.COIL EXCCL3225U1	T
L7	6200003590	S.COIL EXCCL3225U1	T
L8	6200003590	S.COIL EXCCL3225U1	T
L9	6200003950	S.COIL HF50ACC 322513-T	B
L10	6200003950	S.COIL HF50ACC 322513-T	B
L51	6200003260	S.COIL NL 322522T-101J	T
L52	6200005130	S.COIL NLC453232T-101K	T
L101	6140004410	COIL LR-502	T
L102	6200001830	S.COIL NL 322522T-100J	T
L103	6200003260	S.COIL NL 322522T-101J	T
L151	6140004410	COIL LR-502	T
L152	6200001830	S.COIL NL 322522T-100J	T
L201	6140004410	COIL LR-502	T
L202	6180003300	COIL T6-222J (2.2M)	T
L301	6140004410	COIL LR-502	T
L302	6200003260	S.COIL NL 322522T-101J	B
L401	6200003950	S.COIL HF50ACC 322513-T	T
L402	6200003950	S.COIL HF50ACC 322513-T	T
R2	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	T
R3	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	T
R4	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	T
R5	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	T
R6	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R7	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R8	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	T
R9	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	T
R10	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	T
R11	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	T
R12	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R13	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	T
R14	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	T
R15	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R16	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R17	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R18	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R19	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	T
R20	7030003570	S.RESISTOR ERJ3GEYJ 123 V (12 kΩ)	T
R21	7030003650	S.RESISTOR ERJ3GEYJ 563 V (56 kΩ)	T
R22	7030003450	S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ)	T
R23	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	B
R24	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	B
R25	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)	B
R26	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)	B
R27	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)	B
R28	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)	B
R29	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)	B
H30	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)	B
R31	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)	B
R32	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)	B
R40	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R42	7030003860	S.RESISTOR ERJ3GE JPW V	T
R43	7030003860	S.RESISTOR ERJ3GE JPW V	T
R44	7030003860	S.RESISTOR ERJ3GE JPW V	T
R45	7030003860	S.RESISTOR ERJ3GE JPW V	T
R46	7030003860	S.RESISTOR ERJ3GE JPW V	T
R51	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	B
R52	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	B
R53	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	B
R54	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	B
R55	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	B
R56	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	B
R57	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	B
R58	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	B
R59	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R60	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R61	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[CTRL BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.
R62	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R63	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R64	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R65	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R66	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)	B
R67	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)	T
R68	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)	T
R69	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)	T
R70	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)	T
R71	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)	T
R72	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)	T
R73	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)	T
R74	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)	T
R75	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)	T
R76	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)	T
R77	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)	T
R78	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)	B
R84	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)	B
R85	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)	B
R86	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	B
R87	7030003860	S.RESISTOR ERJ3GE JPW V	T
R88	7030003860	S.RESISTOR ERJ3GE JPW V	T
R89	7030003860	S.RESISTOR ERJ3GE JPW V	T
R90	7030003860	S.RESISTOR ERJ3GE JPW V	T
R91	7030003860	S.RESISTOR ERJ3GE JPW V	T
R92	7030003860	S.RESISTOR ERJ3GE JPW V	T
R95	7030003860	S.RESISTOR ERJ3GE JPW V	T
R97	7030003860	S.RESISTOR ERJ3GE JPW V	T
R101	7030010950	S.RESISTOR ERJ1TYJ 100U (10 Ω)	T
R102	7030010950	S.RESISTOR ERJ1TYJ 100U (10 Ω)	T
R103	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R104	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R105	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)	T
R106	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)	T
R107	7030003660	S.RESISTOR ERJ3GEYJ 683 V (68 kΩ)	T
R108	7030003660	S.RESISTOR ERJ3GEYJ 683 V (68 kΩ)	T
R109	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)	T
R110	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)	T
R111	7030003820	S.RESISTOR ERJ3GEYJ 155 V (1.5 MΩ)	T
R112	7030003810	S.RESISTOR ERJ3GEYJ 125 V (1.2 MΩ)	T
R113	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R114	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R151	7030007180	S.RESISTOR ERJ12YJ150U (15 Ω)	B
R152	7030007180	S.RESISTOR ERJ12YJ150U (15 Ω)	T
R153	7030007180	S.RESISTOR ERJ12YJ150U (15 Ω)	T
R154	7030007180	S.RESISTOR ERJ12YJ150U (15 Ω)	B
R155	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R157	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R158	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R159	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R160	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)	T
R161	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)	T
R162	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R163	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R164	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)	T
R165	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)	T
R166	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R167	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R168	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)	T
R169	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R170	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)	T
R171	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)	T
R172	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R173	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)	T
R174	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R201	7030010550	S.RESISTOR ERJ1TYJ 820U (82 Ω)	B
R202	7030010550	S.RESISTOR ERJ1TYJ 820U (82 Ω)	T
R203	7030010550	S.RESISTOR ERJ1TYJ 820U (82 Ω)	T
H204	7030010550	S.RESISTOR ERJ1TYJ 820U (82 Ω)	B
R205	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R206	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R207	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)	T
R208	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R209	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)	T
R210	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R211	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R212	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R213	7030005331	S.RESISTOR ERA3YED 562V	T
R214	7030005331	S.RESISTOR ERA3YED 562V	T
R215	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R216	7030008121	S.RESISTOR ERA3YED 682V	T
R217	7030008121	S.RESISTOR ERA3YED 682V	T
R218	7030005871	S.RESISTOR ERA3YKD 104V (100 kΩ)	T
R221	7030003670	S.RESISTOR ERJ3GEYJ 823 V (82 kΩ)	B
R222	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	T
R223	7030003820	S.RESISTOR ERJ3GEYJ 155 V (1.5 MΩ)	T
R224	7030003820	S.RESISTOR ERJ3GEYJ 155 V (1.5 MΩ)	T
R225	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T

S.=Surface mount

[CTRL BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
R226	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	T
R227	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	T
R228	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	T
R252	7030000230	S.RESISTOR	MCR10EZHZ 56 Ω (560)	T
R253	7030000230	S.RESISTOR	MCR10EZHZ 56 Ω (560)	T
R254	7030000230	S.RESISTOR	MCR10EZHZ 56 Ω (560)	T
R255	7030000220	S.RESISTOR	MCR10EZHZ 47 Ω (470)	T
R256	7030000230	S.RESISTOR	MCR10EZHZ 56 Ω (560)	T
R301	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	T
R302	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	T
R303	7030010910	S.RESISTOR	ERJ1TYJ 150Ω (15 Ω)	B
R304	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	T
R305	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)	T
R306	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)	T
R307	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)	T
R308	7030003840	S.RESISTOR	ERJ3GEYJ 225 V (2.2 MΩ)	B
R309	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)	T
R310	7030003840	S.RESISTOR	ERJ3GEYJ 225 V (2.2 MΩ)	T
R311	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	T
R312	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	T
R313	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)	T
R401	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	T
R402	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	T
R403	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	T
R404	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	T
R405	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	T
R406	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	T
R407	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	T
R408	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	T
R409	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	B
R410	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	B
R411	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	B
R412	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	B
R413	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	B
R414	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	B
R415	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	B
R416	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)	B
R417	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R418	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R419	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R420	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R421	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R422	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R423	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R424	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R425	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R426	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R427	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R428	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R429	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R430	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R431	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
R432	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	B
C1	4510004630	S.ELECTROLYTIC	ECEV1CA100SR	T
C2	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C3	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C4	4030006900	S.CERAMIC	C1608 JB 1H 103K-T	T
C5	4030006900	S.CERAMIC	C1608 JB 1H 103K-T	T
C6	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C7	4030017810	S.CERAMIC	C1608 CH 1H 102J-T	T
C8	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C9	4030009990	S.CERAMIC	C1608 CH 1H 200J-T	T
C10	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C11	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C12	4030009990	S.CERAMIC	C1608 CH 1H 200J-T	T
C13	4510006260	S.ELECTROLYTIC	ECEV1AA471UP	T
C14	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C15	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C16	4510006220	S.ELECTROLYTIC	ECEV1CA101UP	T
C17	4510004440	S.ELECTROLYTIC	ECEV1HA010SR	T
C18	4510004440	S.ELECTROLYTIC	ECEV1HA010SR	T
C19	4510004440	S.ELECTROLYTIC	ECEV1HA010SR	T
C20	4510004440	S.ELECTROLYTIC	ECEV1HA010SR	T
C21	4510004440	S.ELECTROLYTIC	ECEV1HA010SR	T
C22	4510004440	S.ELECTROLYTIC	ECEV1HA010SR	T
C23	4510004440	S.ELECTROLYTIC	ECEV1HA010SR	T
C24	4510004440	S.ELECTROLYTIC	ECEV1HA010SR	T
C25	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C26	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C38	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C39	4510006260	S.ELECTROLYTIC	ECEV1AA471UP	T
C40	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C41	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C43	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C66	4510004630	S.ELECTROLYTIC	ECEV1CA100SR	T
C68	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[CTRL BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
C69	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C70	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C71	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C72	4510004630	S.ELECTROLYTIC	ECEV1CA100SR	T
C88	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C102	4010005530	CERAMIC	HM60SJ SL 020C 500V	T
C103	4010005530	CERAMIC	HM60SJ SL 020C 500V	T
C104	4610002250	TRIMMER	TZ03R200Y169B00	T
C105	4030011540	S.CERAMIC	C1608 CH 1H 750J-T	B
C106	4030011540	S.CERAMIC	C1608 CH 1H 750J-T	T
C107	4030017810	S.CERAMIC	C1608 CH 1H 102J-T	T
C108	4030017810	S.CERAMIC	C1608 CH 1H 102J-T	T
C109	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C110	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C111	4510004630	S.ELECTROLYTIC	ECEV1CA100SR	T
C112	4510004630	S.ELECTROLYTIC	ECEV1CA100SR	T
C113	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C114	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C115	4030007100	S.CERAMIC	C1608 CH 1H 560J-T	B
C116	4030011540	S.CERAMIC	C1608 CH 1H 750J-T	T
C119	4030007100	S.CERAMIC	C1608 CH 1H 560J-T	T
C151	4010005540	CERAMIC	HM60SJ SL 030C 500V	T
C152	4030007070	S.CERAMIC	C1608 CH 1H 330J-T	T
C153	4030007120	S.CERAMIC	C1608 CH 1H 402J-T	T
C154	4030007070	S.CERAMIC	C1608 CH 1H 330J-T	T
C155	4030007120	S.CERAMIC	C1608 CH 1H 402J-T	T
C156	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C157	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C158	4030007060	S.CERAMIC	C1608 CH 1H 270J-T	T
C159	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C161	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C162	4550003120	S.TANTALUM	TEESVD2 1A 4/6M-12L	T
C163	4030007170	S.CERAMIC	C1608 CH 1H 221J-T	T
C164	4030007170	S.CERAMIC	C1608 CH 1H 221J-T	T
C165	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C171	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C173	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C174	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C175	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C180	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C181	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C201	4010005580	CERAMIC	HM60SJ SL 070D 500V	T
C202	4010005520	CERAMIC	HM60SJ SL 010C 500V	T
C204	4030007130	S.CERAMIC	C1608 CH 1H 101J-T	T
C205	4030011540	S.CERAMIC	C1608 CH 1H 750J-T	T
C206	4030007110	S.CERAMIC	C1608 CH 1H 680J-T	T
C207	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C208	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C209	4030017810	S.CERAMIC	C1608 CH 1H 102J-T	T
C210	4030006880	S.CERAMIC	C1608 CH 1H 472K-T	T
C211	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C212	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C213	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C214	4030007170	S.CERAMIC	C1608 CH 1H 221J-T	T
C215	4030007170	S.CERAMIC	C1608 CH 1H 221J-T	T
C216	4030011340	S.CERAMIC	C1608 CH 1H 471J-T	T
C217	4030011340	S.CERAMIC	C1608 CH 1H 471J-T	T
C218	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C252	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C253	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C254	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C255	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C301	4010005520	CERAMIC	HM60SJ SL 010C 500V	T
C302	4030007030	S.CERAMIC	C1608 CH 1H 150J-T	T
C303	4030007050	S.CERAMIC	C1608 CH 1H 220J-T	T
C304	4030017810	S.CERAMIC	C1608 CH 1H 102J-T	T
C305	4030017810	S.CERAMIC	C1608 CH 1H 102J-T	T
C307	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C308	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C309	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C310	4030009530	S.CERAMIC	C1608 CH 1H 030B-T	T
C417	4510004630	S.ELECTROLYTIC	ECEV1CA100SR	T
C418	4510004630	S.ELECTROLYTIC	ECEV1CA100SR	T
C419	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C420	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
RL251	6330001530	RELAY	NR-HD (5V) AE5349	T
RL252	6330001460	RELAY	FTR-F1CA012V	T
RL253	6330001460	RELAY	FTR-F1CA012V	T
CP1	6910009670	S.CHECK P	HK3-S-T	T
CP101	6910009670	S.CHECK P	HK3-S-T	T
J1	6510023770	S.CONNECTOR	52793-2490	T
J2	6510023760	S.CONNECTOR	S10B-PH-SM3-TB	T

S.=Surface mount

[CTRL BOARD]

REF NO.	ORDER NO.	DESCRIPTION		M.
J51	6510023770	S.CONNECTOR	52793-2490	T
J52	6510022030	S.CONNECTOR	B10B-ZR-SM3-TF	T
J53	6510021430	S.CONNECTOR	S8B-ZR-SM3A-TF	T
J101	6510017920	CONNECTOR	1811P342	T
J251	6510017920	CONNECTOR	1811P342	T
J252	6510017920	CONNECTOR	1811P342	T
J301	6510017920	CONNECTOR	1811P342	T
J351	6510007020	CONNECTOR	TMP-J01X-V6	T
W1	9029804001	WIRE	72/99/040/X98/X98	
EP1	9040902903	TUBE	IRRAX 0.7 (d) L=22 mm	
EP2	0910057663	PCB	B 5976C	

[ANT-SW UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
C73	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C81	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C82	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C83	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C84	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
RL51	6330001460	RELAY	FTR-F1CA012V	T
RL52	6330001780	RELAY	FTR-MYAA012D	T
RL53	6330001780	RELAY	FTR-MYAA012D	T
RL61	6330001460	RELAY	FTR-F1CA012V	T
RL62	6330001780	RELAY	FTR-MYAA012D	T
RL63	6330001780	RELAY	FTR-MYAA012D	T
RL71	6330001460	RELAY	FTR-F1CA012V	T
RL72	6330001780	RELAY	FTR-MYAA012D	T
RL73	6330001780	RELAY	FTR-MYAA012D	T
RL81	6330001460	RELAY	FTR-F1CA012V	T
RL82	6330001780	RELAY	FTR-MYAA012D	T
RL83	6330001780	RELAY	FTR-MYAA012D	T
RL84	6330001780	RELAY	FTR-MYAA012D	T
J1	6510017930	CONNECTOR	1771P145-20	T
J2	6510007020	CONNECTOR	TMP-J01X-V6	T
J3	6510007020	CONNECTOR	TMP-J01X-V6	T
J4	6510019970	S.CONNECTOR	52808-1091	T
J51	6510000410	CONNECTOR	MR-DS-E 02	B
J61	6510000410	CONNECTOR	MR-DS-E 02	B
J71	6510000410	CONNECTOR	MR-DS-E 02	B
J81	6510000410	CONNECTOR	MR-DS-E 02	B
EP1	0910057672	PCB	B 5978B	

[ANT-SW UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
IC11	1130011510	S.IC	BU2099FV-E2	T
IC12	1180002390	S.REG	S-812C33AMC-C2N-T2	T
Q11	1590001000	S.TRANSISTOR	RN2427 (TE85R)	T
Q12	1590001000	S.TRANSISTOR	RN2427 (TE85R)	T
Q13	1590001000	S.TRANSISTOR	RN2427 (TE85R)	T
Q14	1590001000	S.TRANSISTOR	RN2427 (TE85R)	T
D51	1750000550	S.DIODE	1SS355 TE-17	T
D52	1750000550	S.DIODE	1SS355 TE-17	T
D53	1750000550	S.DIODE	1SS355 TE-17	T
D61	1750000550	S.DIODE	1SS355 TE-17	T
D62	1750000550	S.DIODE	1SS355 TE-17	T
D63	1750000550	S.DIODE	1SS355 TE-17	T
D71	1750000550	S.DIODE	1SS355 TE-17	T
D72	1750000550	S.DIODE	1SS355 TE-17	T
D73	1750000550	S.DIODE	1SS355 TE-17	T
D81	1750000550	S.DIODE	1SS355 TE-17	T
D82	1750000550	S.DIODE	1SS355 TE-17	T
D83	1750000550	S.DIODE	1SS355 TE-17	T
D84	1750000550	S.DIODE	1SS355 TE-17	T
L1	6200003590	S.COIL	EXCCCL3225U1	T
L2	6110001670	COIL	LA-253	T
R1	7540000100	ABSORBER	SRYH-350L	T
R2	7540000130	ABSORBER	2P-50A-301	T
R3	7540000130	ABSORBER	2P-50A-301	T
R11	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
R12	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
R13	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
R14	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
R15	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
R16	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
R17	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
R18	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
R19	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
R20	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
H21	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
R22	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
R23	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
R24	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
R25	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
R26	7030003320	S.RESISTOR	ERJ3GGEYJ 101 V (100 Ω)	T
C1	4010005610	CERAMIC	HM60SJ SL 100D 500V	T
C2	4010005660	CERAMIC	HM60SJ SL 220J 500V	T
C11	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C12	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C51	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C52	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C53	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C61	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C62	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C63	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C71	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C72	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T

[OSC UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
IC10	1180002610	S.REG	BA12FP-E2	T
IC91	1190002000	S.IC	AD5260BRU	T
IC92	1130005720	S.IC	TC7W04F (TE12L)	T
Q10	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q11	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q12	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q13	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q21	1530002060	S.TRANSISTOR	2SC4081 T106 R	T
Q22	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)	T
Q23	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q42	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)	T
Q43	1590000680	S.TRANSISTOR	DTC114EUA T106	T
Q61	1530002060	S.TRANSISTOR	2SC4081 T106 R	T
Q62	1530002060	S.TRANSISTOR	2SC4081 T106 R	T
Q70	1530002060	S.TRANSISTOR	2SC4081 T106 R	T
Q101	1530002700	S.TRANSISTOR	2SC4097 T106Q	T
D10	1790001250	S.DIODE	MA2S111-(TX)	T
D11	1790001250	S.DIODE	MA2S111-(TX)	T
D71	1750000380	S.DIODE	1SS312 (TE85R)	T
D72	1750000380	S.DIODE	1SS312 (TE85R)	T
X1	6050011820	XTAL	CR-772 OCOXO	T
L1	6200003950	S.COIL	HF50ACC 322513-T	T
L2	6200003950	S.COIL	HF50ACC 322513-T	T
L10	6200003950	S.COIL	HF50ACC 322513-T	T
L20	6200005490	S.COIL	NL 322522T-331J	T
L21	6200003260	S.COIL	NL 322522T-101J	T
L22	6200003260	S.COIL	NL 322522T-101J	T
L23	6200003040	S.COIL	NL 322522T-R68J-3	T
L24	6200003050	S.COIL	NL 322522T-R82J-3	T
L41	6200003260	S.COIL	NL 322522T-101J	T
L42	6200003260	S.COIL	NL 322522T-101J	T
L43	6200003040	S.COIL	NL 322522T-R68J-3	T
L44	6200003050	S.COIL	NL 322522T-R82J-3	T
L61	6150004170	COIL	LS-476	T
L62	6150004170	COIL	LS-476	T
L91	6200003950	S.COIL	HF50ACC 322513-T	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[OSC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
L92	6200003950	S.COIL HF50ACC 322513-T	T
R1	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R2	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R3	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R11	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)	T
R12	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)	T
R13	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R20	7030003240	S.RESISTOR ERJ3GEYJ 220 V (22 Ω)	T
R21	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R22	7030003370	S.RESISTOR ERJ3GEYJ 271 V (270 Ω)	T
R23	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)	T
R24	7030003370	S.RESISTOR ERJ3GEYJ 271 V (270 Ω)	T
R25	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)	T
R26	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R27	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R28	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R43	7030003240	S.RESISTOR ERJ3GEYJ 220 V (22 Ω)	T
R44	7030003370	S.RESISTOR ERJ3GEYJ 271 V (270 Ω)	T
R45	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)	T
R46	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R47	7030003290	S.RESISTOR ERJ3GEYJ 560 V (56 Ω)	T
R61	7030003240	S.RESISTOR ERJ3GEYJ 220 V (22 Ω)	T
R62	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R63	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)	T
R64	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)	T
R65	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)	T
R67	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R68	7030003550	S.RESISTOR ERJ3GEYJ 822 V (8.2 kΩ)	T
R71	7030003340	S.RESISTOR ERJ3GEYJ 151 V (150 Ω)	T
R72	7030003270	S.RESISTOR ERJ3GEYJ 390 V (39 Ω)	T
R73	7030003340	S.RESISTOR ERJ3GEYJ 151 V (150 Ω)	T
R75	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)	T
R77	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R78	7030003470	S.RESISTOR ERJ3GEYJ 182 V (1.8 kΩ)	T
R79	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R80	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R82	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)	T
R91	7030006091	S.RESISTOR ERA3YED 822V	T
R92	7030005341	S.RESISTOR ERA3YED 332V	T
R93	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R94	7030003540	S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ)	T
R95	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)	T
R96	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R97	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R98	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R99	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)	T
R100	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)	T
R101	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R102	7030005981	S.RESISTOR ERA3YED 333V	T
C1	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C2	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C3	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C4	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C5	4510004440	S.ELECTROLYTIC ECEV1HA010SR	T
C6	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C7	4510004440	S.ELECTROLYTIC ECEV1HA010SR	T
C8	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C9	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C10	4510005750	S.ELECTROLYTIC ECEV1EA220SP	T
C11	4030004760	S.CERAMIC C2012 JF 1H 104Z-T	T
C12	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C13	4510005750	S.ELECTROLYTIC ECEV1EA220SP	T
C14	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C15	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C16	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C17	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C18	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C19	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C20	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C21	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C22	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C23	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C24	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C25	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C26	4030017800	S.CERAMIC C1608 CH 1H 561J-T	T
C27	4030007120	S.CERAMIC C1608 CH 1H 820J-T	T
C28	4030011340	S.CERAMIC C1608 CH 1H 471J-T	T
C29	4030011330	S.CERAMIC C1608 CH 1H 391J-T	T
C30	4030007050	S.CERAMIC C1608 CH 1H 220J-T	T
C31	4030017800	S.CERAMIC C1608 CH 1H 561J-T	T
C32	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C33	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C42	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C43	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[OSC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
C44	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C45	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C46	4030017800	S.CERAMIC C1608 CH 1H 561J-T	T
C47	4030007120	S.CERAMIC C1608 CH 1H 820J-T	T
C48	4030011340	S.CERAMIC C1608 CH 1H 471J-T	T
C49	4030011330	S.CERAMIC C1608 CH 1H 391J-T	T
C50	4030007050	S.CERAMIC C1608 CH 1H 220J-T	T
C51	4030017800	S.CERAMIC C1608 CH 1H 561J-T	T
C52	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C53	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C61	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C62	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C63	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C64	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C66	4030007010	S.CERAMIC C1608 CH 1H 100D-T	T
C67	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C71	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C72	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C73	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C74	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C75	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C76	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C77	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C91	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C92	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C93	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C94	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C101	4550006480	S.TANTALUM TEESVA 1C 475M8L	T
RL10	6330001750	RELAY FTR-B4CA012Z	T
RL11	6330001750	RELAY FTR-B4CA012Z	T
J2	6510019970	S.CONNECTOR 52808-1091	T
J71	6510007020	CONNECTOR TMP-J01X-V6	T
J72	6510007020	CONNECTOR TMP-J01X-V6	T
J73	6510007020	CONNECTOR TMP-J01X-V6	T
EP1	0910057602	PCB B 5979B	T

[REG UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
MF1	2710000520	FAN SB0812H-ICOM-00	
EP1	6910016050 6910016060	UNIT BOARD FP2212B JPN [USA] UNIT BOARD FP2212C JPN except [USA]	

S.=Surface mount

[DIGISEL UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
IC1	1130011140	S.IC CAT24WC256K1.8	B
IC4	1130011510	S.IC BU2099FV-E2	T
IC5	1130011510	S.IC BU2099FV-E2	T
IC501	1130011140	S.IC CAT24WC256K1.8	B
IC504	1130011510	S.IC BU2099FV-E2	T
IC505	1130011510	S.IC BU2099FV-E2	T
Q201	1530003850	S.TRANSISTOR 2SC5551F-TD	T
Q701	1530003850	S.TRANSISTOR 2SC5551F-TD	T
D21	1750000550	S.DIODE 1SS355 TE-17	B
D51	1750000550	S.DIODE 1SS355 TE-17	B
D52	1750000550	S.DIODE 1SS355 TE-17	B
D53	1750000550	S.DIODE 1SS355 TE-17	T
D54	1750000550	S.DIODE 1SS355 TE-17	B
D55	1750000550	S.DIODE 1SS355 TE-17	B
D56	1750000550	S.DIODE 1SS355 TE-17	B
D57	1750000550	S.DIODE 1SS355 TE-17	T
D58	1750000550	S.DIODE 1SS355 TE-17	B
D59	1750000550	S.DIODE 1SS355 TE-17	B
D60	1750000550	S.DIODE 1SS355 TE-17	B
D61	1750000550	S.DIODE 1SS355 TE-17	B
D62	1750000550	S.DIODE 1SS355 TE-17	B
D63	1750000550	S.DIODE 1SS355 TE-17	B
D64	1750000550	S.DIODE 1SS355 TE-17	B
D65	1750000550	S.DIODE 1SS355 TE-17	B
D66	1750000550	S.DIODE 1SS355 TE-17	B
D67	1750000550	S.DIODE 1SS355 TE-17	B
D68	1750000550	S.DIODE 1SS355 TE-17	T
D69	1750000550	S.DIODE 1SS355 TE-17	B
D70	1750000550	S.DIODE 1SS355 TE-17	B
D71	1750000550	S.DIODE 1SS355 TE-17	B
D72	1750000550	S.DIODE 1SS355 TE-17	B
D73	1750000550	S.DIODE 1SS355 TE-17	B
D74	1750000550	S.DIODE 1SS355 TE-17	B
D75	1750000550	S.DIODE 1SS355 TE-17	B
D201	1710001020	DIODE XB15A204	T
D202	1710001020	DIODE XB15A204	T
D203	1750000550	S.DIODE 1SS355 TE-17	B
D204	1750000550	S.DIODE 1SS355 TE-17	B
D205	1750000550	S.DIODE 1SS355 TE-17	B
D521	1750000550	S.DIODE 1SS355 TE-17	B
D551	1750000550	S.DIODE 1SS355 TE-17	B
D552	1750000550	S.DIODE 1SS355 TE-17	B
D553	1750000550	S.DIODE 1SS355 TE-17	B
D554	1750000550	S.DIODE 1SS355 TE-17	B
D555	1750000550	S.DIODE 1SS355 TE-17	T
D556	1750000550	S.DIODE 1SS355 TE-17	B
D557	1750000550	S.DIODE 1SS355 TE-17	B
D558	1750000550	S.DIODE 1SS355 TE-17	B
D559	1750000550	S.DIODE 1SS355 TE-17	B
D560	1750000550	S.DIODE 1SS355 TE-17	B
D561	1750000550	S.DIODE 1SS355 TE-17	B
D562	1750000550	S.DIODE 1SS355 TE-17	B
D563	1750000550	S.DIODE 1SS355 TE-17	B
D564	1750000550	S.DIODE 1SS355 TE-17	B
D565	1750000550	S.DIODE 1SS355 TE-17	B
D566	1750000550	S.DIODE 1SS355 TE-17	B
D567	1750000550	S.DIODE 1SS355 TE-17	B
D568	1750000550	S.DIODE 1SS355 TE-17	B
D569	1750000550	S.DIODE 1SS355 TE-17	B
D570	1750000550	S.DIODE 1SS355 TE-17	B
D571	1750000550	S.DIODE 1SS355 TE-17	B
D572	1750000550	S.DIODE 1SS355 TE-17	B
D573	1750000550	S.DIODE 1SS355 TE-17	B
D574	1750000550	S.DIODE 1SS355 TE-17	B
D575	1750000550	S.DIODE 1SS355 TE-17	B
D701	1710001020	DIODE XB15A204	T
D702	1710001020	DIODE XB15A204	T
D703	1750000550	S.DIODE 1SS355 TE-17	B
D704	1750000550	S.DIODE 1SS355 TE-17	B
D705	1750000550	S.DIODE 1SS355 TE-17	T
L1	6200003260	S.COIL NL 322522T-101J	B
L2	6200003950	S.COIL HF50ACC 322513-T	B
L3	6200003260	S.COIL NL 322522T-101J	B
L4	6200003260	S.COIL NL 322522T-101J	B
L101	6140003980	COIL LR-476	T
L102	6140003990	COIL LR-477	T
L103	6140004001	COIL LR-478A	T
L104	6140004010	COIL LR-479	T
L105	6140004020	COIL LR-480	T
L106	6140004030	COIL LR-481	T
L107	6110003930	COIL LA-595	T
L201	6180000920	COIL LAL 03NA 221K	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[DIGISEL UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
L203	6140003940	COIL LR-493	T
L503	6200003260	S.COIL NL 322522T-101J	B
L504	6200003260	S.COIL NL 322522T-101J	B
L601	6140003980	COIL LR 476	T
L602	6140003990	COIL LR-477	T
L603	6140004001	COIL LR-478A	T
L604	6140004010	COIL LR-479	T
L605	6140004020	COIL LR-480	T
L606	6140004030	COIL LR-481	T
L607	6110003930	COIL LA-595	T
L701	6180000920	COIL LAL 03NA 221K	T
L703	6140003940	COIL LR-493	T
R1	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	B
R2	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	B
R3	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R4	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R5	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R6	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R7	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R8	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R9	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	B
R10	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R35	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R36	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R37	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R38	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R39	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R40	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R41	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R42	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R43	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R44	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R45	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R46	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R47	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R48	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R49	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R50	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R51	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R52	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R53	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R54	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R55	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R56	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R57	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R58	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R59	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R100	7030000010	S.RESISTOR MCR10EZJH JPW (000)	B
R104	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	B
R105	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	B
R201	7030000380	S.RESISTOR MCR10EZJH 1 kΩ	B
R202	7030000290	S.RESISTOR MCR10EZJH 180 Ω (181)	B
R203	7030000220	S.RESISTOR MCR10EZJH 47 Ω (470)	B
R204	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	B
R205	7030003350	S.RESISTOR ERJ3GEYJ 181 V (180 Ω)	T
R206	7030003370	S.RESISTOR ERJ3GEYJ 271 V (270 Ω)	B
R207	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R208	7030000200	S.RESISTOR MCR10EZJH 33 Ω (330)	B
R209	7030003240	S.RESISTOR ERJ3GEYJ 220 V (22 Ω)	T
R210	7030003370	S.RESISTOR ERJ3GEYJ 271 V (270 Ω)	T
R211	7030003370	S.RESISTOR ERJ3GEYJ 271 V (270 Ω)	B
R213	7030000220	S.RESISTOR MCR10EZJH 47 Ω (470)	B
R214	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)	B
R215	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)	B
R216	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	B
R501	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)	B
H502	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	B
R503	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)	T
R504	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	B
R505	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R506	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R507	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	B
R508	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)	T
R509	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R510	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R535	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R536	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R537	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R538	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R539	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R540	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R541	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R542	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R543	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R544	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T
R545	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)	T

S.=Surface mount

[DIGISEL UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
R546	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T
R547	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T
R548	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T
R549	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T
R550	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T
R551	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T
R552	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T
R553	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T
R554	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T
R555	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T
R556	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T
R557	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T
R558	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T
R600	7030000010	S.RESISTOR	MCR10EZJH JPW (000)	B
R604	7030003360	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	B
R605	7030003360	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	B
R701	7030000380	S.RESISTOR	MCR10EZJH 1 kΩ	T
R702	7030000290	S.RESISTOR	MCR10EZJH 180 Ω (181)	T
R703	7030000220	S.RESISTOR	MCR10EZJH 47 Ω (470)	T
R704	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	T
R705	7030003350	S.RESISTOR	ERJ3GEYJ 181 V (180 Ω)	B
R706	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)	B
R707	7030003360	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	T
R708	7030000200	S.RESISTOR	MCR10EZJH 33 Ω (330)	T
R709	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)	T
R710	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)	B
R711	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)	B
R713	7030000220	S.RESISTOR	MCR10EZJH 47 Ω (470)	B
R714	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)	T
R715	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)	T
R716	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)	B
C1	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C2	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C4	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C5	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C21	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C35	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C51	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C52	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C53	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C54	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C55	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C56	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C57	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C58	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C59	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C60	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C61	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C62	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C63	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C64	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C65	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C66	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C67	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C68	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C69	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C70	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C71	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C72	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C73	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C74	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C75	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C101	4030011340	S.CERAMIC	C1608 CH 1H 471J-T	T
C102	4030011280	S.CERAMIC	C1608 CH 1H 271J-T	T
C103	4030011280	S.CERAMIC	C1608 CH 1H 271J-T	T
C104	4030007130	S.CERAMIC	C1608 CH 1H 101J-T	T
C105	4030006940	S.CERAMIC	C1608 CH 1H 030C-T	B
C106	4030007150	S.CERAMIC	C1608 CH 1H 151J-T	B
C107	4030007150	S.CERAMIC	C1608 CH 1H 151J-T	B
C108	4030007150	S.CERAMIC	C1608 CH 1H 151J-T	B
C109	4030007150	S.CERAMIC	C1608 CH 1H 151J-T	B
C110	4030009520	S.CERAMIC	C1608 CH 1H 020B-T	T
C111	4030009550	S.CERAMIC	C1608 CH 1H 2R5B-T	B
C113	4030007000	S.CERAMIC	C1608 CH 1H 090D-T	T
C114	4030007040	S.CERAMIC	C1608 CH 1H 180J-T	T
C115	4030007040	S.CERAMIC	C1608 CH 1H 180J-T	T
C116	4030007040	S.CERAMIC	C1608 CH 1H 180J-T	T
C117	4030007070	S.CERAMIC	C1608 CH 1H 330J-T	T
C118	4030007090	S.CERAMIC	C1608 CH 1H 470J-T	B
C119	4030007040	S.CERAMIC	C1608 CH 1H 180J-T	B
C120	4030007040	S.CERAMIC	C1608 CH 1H 180J-T	B
C121	4030007040	S.CERAMIC	C1608 CH 1H 180J-T	B
C122	4030007000	S.CERAMIC	C1608 CH 1H 090D-T	B
C124	4030009520	S.CERAMIC	C1608 CH 1H 020B-T	B
C125	4030009550	S.CERAMIC	C1608 CH 1H 2R5B-T	B
C126	4030008360	S.CERAMIC	C1608 UJ 1H 101J-T	B

[DIGISEL UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
C128	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-T	B
C129	4030009510	S.CERAMIC	C1608 CH 1H 010B-T	B
C130	4030009520	S.CERAMIC	C1608 CH 1H 020B-T	B
C131	4030009910	S.CERAMIC	C1608 CH 1H 040B-T	B
C132	4030006990	S.CERAMIC	C1608 CH 1H 080D-T	B
C133	4030007040	S.CERAMIC	C1608 CH 1H 180J-T	B
C134	4030008750	S.CERAMIC	C1608 CH 1H 360J-T	B
C135	4030007110	S.CERAMIC	C1608 CH 1H 680J-T	B
C136	4030007140	S.CERAMIC	C1608 CH 1H 121J-T	B
C137	4030007140	S.CERAMIC	C1608 CH 1H 121J-T	B
C138	4030007130	S.CERAMIC	C1608 CH 1H 101J-T	B
C139	4030007160	S.CERAMIC	C1608 CH 1H 181J-T	B
C140	4030007160	S.CERAMIC	C1608 CH 1H 181J-T	B
C141	4030008330	S.CERAMIC	C1608 UJ 1H 560J-T	B
C142	4030008330	S.CERAMIC	C1608 UJ 1H 560J-T	B
C201	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C202	4030006900	S.CERAMIC	C1608 JB 1H 103K-T	T
C203	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C204	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C205	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C206	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C207	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C208	4030007010	S.CERAMIC	C1608 CH 1H 100D-T	T
C209	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C210	4030006900	S.CERAMIC	C1608 JB 1H 103K-T	B
C211	4030009000	S.CERAMIC	C2012 JB 1C 224K-T	B
C212	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C213	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C214	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C215	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C501	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C504	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	T
C505	4030011600	S.CERAMIC	C1608 JB 1E 104K-T	B
C521	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C535	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C551	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C552	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C553	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C554	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C555	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C556	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C557	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C558	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C559	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C560	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C561	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C562	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C563	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C564	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C565	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C566	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C567	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C568	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C569	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	B
C570	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C571	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C572	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C573	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C574	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C575	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C601	4030011340	S.CERAMIC	C1608 CH 1H 471J-T	B
C602	4030011280	S.CERAMIC	C1608 CH 1H 271J-T	B
C603	4030011280	S.CERAMIC	C1608 CH 1H 271J-T	T
C604	4030007130	S.CERAMIC	C1608 CH 1H 101J-T	T
C605	4030006940	S.CERAMIC	C1608 CH 1H 030C-T	T
C606	4030007150	S.CERAMIC	C1608 CH 1H 151J-T	T
C607	4030007150	S.CERAMIC	C1608 CH 1H 151J-T	T
C608	4030007150	S.CERAMIC	C1608 CH 1H 151J-T	T
C609	4030007150	S.CERAMIC	C1608 CH 1H 151J-T	T
C610	4030009520	S.CERAMIC	C1608 CH 1H 020B-T	B
C611	4030009550	S.CERAMIC	C1608 CH 1H 2R5B-T	B
C613	4030007000	S.CERAMIC	C1608 CH 1H 090D-T	B
C614	4030007040	S.CERAMIC	C1608 CH 1H 180J-T	B
C615	4030007040	S.CERAMIC	C1608 CH 1H 180J-T	B
C616	4030007040	S.CERAMIC	C1608 CH 1H 180J-T	B
C617	4030007070	S.CERAMIC	C1608 CH 1H 330J-T	B
C618	4030007090	S.CERAMIC	C1608 CH 1H 470J-T	T
C619	4030007040	S.CERAMIC	C1608 CH 1H 180J-T	T
C620	4030007040	S.CERAMIC	C1608 CH 1H 180J-T	T
C621	4030007040	S.CERAMIC	C1608 CH 1H 180J-T	T
C622	4030007000	S.CERAMIC	C1608 CH 1H 090D-T	T
C624	4030009520	S.CERAMIC	C1608 CH 1H 020B-T	T
C625	4030009550	S.CERAMIC	C1608 CH 1H 2R5B-T	T
C626	4030008360	S.CERAMIC	C1608 UJ 1H 101J-T	B
C628	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-T	B
C629	4030009510	S.CERAMIC	C1608 CH 1H 010B-T	B
C630	4030009520	S.CERAMIC	C1608 CH 1H 020B-T	B
C631	4030009910	S.CERAMIC	C1608 CH 1H 040B-T	B

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[DIGISEL UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
C632	4030006990	S.CERAMIC C1608 CH 1H 080D-T	B
C633	4030007040	S.CERAMIC C1608 CH 1H 180J-T	B
C634	4030008750	S.CERAMIC C1608 CH 1H 360J-T	B
C635	4030007110	S.CERAMIC C1608 CH 1H 680J-T	B
C636	4030007140	S.CERAMIC C1608 CH 1H 121J-T	B
C637	4030007140	S.CERAMIC C1608 CH 1H 121J-T	B
C638	4030007130	S.CERAMIC C1608 CH 1H 101J-T	B
C639	4030007160	S.CERAMIC C1608 CH 1H 181J-T	B
C640	4030007160	S.CERAMIC C1608 CH 1H 181J-T	B
C641	4030008330	S.CERAMIC C1608 UJ 1H 560J-T	B
C642	4030008330	S.CERAMIC C1608 UJ 1H 560J-T	B
C701	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C702	4030006900	S.CERAMIC C1608 JB 1H 103K-T	T
C703	4030011600	S.CERAMIC C1608 JB 1E 104K-T	B
C704	4030011600	S.CERAMIC C1608 JB 1E 104K-T	B
C705	4030011600	S.CERAMIC C1608 JB 1E 104K-T	B
C706	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C707	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C708	4030007010	S.CERAMIC C1608 CH 1H 100D-T	T
C709	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C710	4030006900	S.CERAMIC C1608 JB 1H 103K-T	B
C711	4030009000	S.CERAMIC C2012 JB 1C 224K-T	B
C712	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C713	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C714	4030006880	S.CERAMIC C1608 JB 1H 472K-T	B
C715	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
RL2	6330001750	RELAY FTR-B4CA012Z	T
RL21	6330001750	RELAY FTR-B4CA012Z	T
RL51	6330001750	RELAY FTR-B4CA012Z	T
RL52	6330001750	RELAY FTR-B4CA012Z	T
RL53	6330001750	RELAY FTR-B4CA012Z	T
RL54	6330001750	RELAY FTR-B4CA012Z	T
RL55	6330001750	RELAY FTR-B4CA012Z	T
RL56	6330001750	RELAY FTR-B4CA012Z	T
RL57	6330001750	RELAY FTR-B4CA012Z	T
RL58	6330001750	RELAY FTR-B4CA012Z	T
RL59	6330001750	RELAY FTR-B4CA012Z	T
RL60	6330001750	RELAY FTR-B4CA012Z	T
RL61	6330001750	RELAY FTR-B4CA012Z	T
RL62	6330001750	RELAY FTR-B4CA012Z	T
RL63	6330001750	RELAY FTR-B4CA012Z	T
RL64	6330001750	RELAY FTR-B4CA012Z	T
RL65	6330001750	RELAY FTR-B4CA012Z	T
RL66	6330001750	RELAY FTR-B4CA012Z	T
RL67	6330001750	RELAY FTR-B4CA012Z	T
RL69	6330001750	RELAY FTR-B4CA012Z	T
RL70	6330001750	RELAY FTR-B4CA012Z	T
RL71	6330001750	RELAY FTR-B4CA012Z	T
RL72	6330001750	RELAY FTR-B4CA012Z	T
RL73	6330001750	RELAY FTR-B4CA012Z	T
RL74	6330001750	RELAY FTR-B4CA012Z	T
RL75	6330001750	RELAY FTR-B4CA012Z	T
RL76	6330001750	RELAY FTR-B4CA012Z	T
RL201	6330001750	RELAY FTR-B4CA012Z	T
RL502	6330001750	RELAY FTR-B4CA012Z	T
RL521	6330001750	RELAY FTR-B4CA012Z	T
RL551	6330001750	RELAY FTR-B4CA012Z	T
RL552	6330001750	RELAY FTR-B4CA012Z	T
RL553	6330001750	RELAY FTR-B4CA012Z	T
RL554	6330001750	RELAY FTR-B4CA012Z	T
RL555	6330001750	RELAY FTR-B4CA012Z	T
RL556	6330001750	RELAY FTR-B4CA012Z	T
RL557	6330001750	RELAY FTR-B4CA012Z	T
RL558	6330001750	RELAY FTR-B4CA012Z	T
RL559	6330001750	RELAY FTR-B4CA012Z	T
RL560	6330001750	RELAY FTR-B4CA012Z	T
RL561	6330001750	RELAY FTR-B4CA012Z	T
RL562	6330001750	RELAY FTR-B4CA012Z	T
RL563	6330001750	RELAY FTR-B4CA012Z	T
RL564	6330001750	RELAY FTR-B4CA012Z	T
RL565	6330001750	RELAY FTR-B4CA012Z	T
RL566	6330001750	RELAY FTR-B4CA012Z	T
RL567	6330001750	RELAY FTR-B4CA012Z	T
RL569	6330001750	RELAY FTR-B4CA012Z	T
RL570	6330001750	RELAY FTR-B4CA012Z	T
RL571	6330001750	RELAY FTR-B4CA012Z	T
RL572	6330001750	RELAY FTR-B4CA012Z	T
RL573	6330001750	RELAY FTR-B4CA012Z	T
RL574	6330001750	RELAY FTR-B4CA012Z	T
RL575	6330001750	RELAY FTR-B4CA012Z	T
RL576	6330001750	RELAY FTR-B4CA012Z	T
RL701	6330001750	RELAY FTR-B4CA012Z	T
J1	6510007020	CONNECTOR TMP-J01X-V6	T
J2	6510007020	CONNECTOR TMP-J01X-V6	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[DIGISEL UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
J10	6510020080	S.CONNECTOR 52808-2091	T
J501	6510007020	CONNECTOR TMP-J01X-V6	T
J502	6510007020	CONNECTOR TMP-J01X-V6	T
EP1	0910057403	PCB B 5980C	

[NETWORK UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
Q300	1520000560	S.TRANSISTOR 2SB1123T-TD	T
Q301	1590000680	S.TRANSISTOR DTC114EUA T106	T
L50	6110003950	COIL LA-598	T
L60	6110003910	COIL LA-593	T
L70	6110003050	COIL LA-492	T
L80	6110003050	COIL LA-492	T
L90	6110003060	COIL LA-493	T
L100	6110003070	COIL LA-494	T
L110	6110003920	COIL LA-594	T
L120	6140004320	COIL LR-472	T
L130	6140004330	COIL LR-473	T
L131	6140004330	COIL LR-473	T
L300	6180000990	COIL LAL 04NA 101K	T
R300	7030000420	S.RESISTOR MCR10EZJH 2.2 kΩ	T
R301	7030000420	S.RESISTOR MCR10EZJH 2.2 kΩ	T
R302	7030000420	S.RESISTOR MCR10EZJH 2.2 kΩ	T
R303	7030009800	S.RESISTOR ERJ12YJ121U (120 Ω)	T
C1	4620000120	VARIABLE UV44 150P	T
C2	4620000120	VARIABLE UV44 150P	T
C3	4010007580	CERAMIC HT20SJ SL 201J 3KV	T
C4	4010007580	CERAMIC HT20SJ SL 201J 3KV	T
C5	4010007580	CERAMIC HT20SJ SL 201J 3KV	T
C6	4010007580	CERAMIC HT20SJ SL 201J 3KV	T
C7	4010007580	CERAMIC HT20SJ SL 201J 3KV	T
C8	4010007580	CERAMIC HT20SJ SL 201J 3KV	T
C9	4010007580	CERAMIC HT20SJ SL 201J 3KV	T
C10	4010007580	CERAMIC HT20SJ SL 201J 3KV	T
C20	4010007570	CERAMIC HT15SJ SL 151J 3KV	T
C21	4010007570	CERAMIC HT15SJ SL 151J 3KV	T
C22	4010007570	CERAMIC HT15SJ SL 151J 3KV	T
C23	4010007570	CERAMIC HT15SJ SL 151J 3KV	T
C24	4010007570	CERAMIC HT15SJ SL 151J 3KV	T
C25	4010007570	CERAMIC HT15SJ SL 151J 3KV	T
C26	4010007570	CERAMIC HT15SJ SL 151J 3KV	T
C27	4010007570	CERAMIC HT15SJ SL 151J 3KV	T
C30	4010007550	CERAMIC HT11SJ SL 820J 3KV	T
C31	4010007550	CERAMIC HT11SJ SL 820J 3KV	T
C32	4010007550	CERAMIC HT11SJ SL 820J 3KV	T
C33	4010007550	CERAMIC HT11SJ SL 820J 3KV	T
C34	4010007550	CERAMIC HT11SJ SL 820J 3KV	T
C35	4010007550	CERAMIC HT11SJ SL 820J 3KV	T
C36	4010007550	CERAMIC HT11SJ SL 820J 3KV	T
C37	4010007550	CERAMIC HT11SJ SL 820J 3KV	T
C40	4010008550	CERAMIC DEA1X3F390JC3B (DE0607SL390J)	T
C41	4010008550	CERAMIC DEA1X3F390JC3B (DE0607SL390J)	T
C42	4010008550	CERAMIC DEA1X3F390JC3B (DE0607SL390J)	T
C43	4010008550	CERAMIC DEA1X3F390JC3B (DE0607SL390J)	T
C44	4010008550	CERAMIC DEA1X3F390JC3B (DE0607SL390J)	T
C45	4010008550	CERAMIC DEA1X3F390JC3B (DE0607SL390J)	T
C46	4010008550	CERAMIC DEA1X3F390JC3B (DE0607SL390J)	T
C47	4010008550	CERAMIC DEA1X3F390JC3B (DE0607SL390J)	T
C50	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C60	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C70	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C80	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C90	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C100	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C110	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C120	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C202	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C203	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C204	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C205	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C206	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C207	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T

S.=Surface mount

[NETWORK UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
C208	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C209	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C252	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C253	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C254	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C255	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C256	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C257	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C258	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C259	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C300	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C301	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
RL10	6330001200	RELAY	VS-12MBU-UC	T
RL11	6330001200	RELAY	VS-12MBU-UC	T
RL20	6330001200	RELAY	VS-12MBU-UC	T
RL21	6330001200	RELAY	VS-12MBU-UC	T
RL30	6330001200	RELAY	VS-12MBU-UC	T
RL31	6330001200	RELAY	VS-12MBU-UC	T
RL40	6330001200	RELAY	VS-12MBU-UC	T
RL41	6330001200	RELAY	VS-12MBU-UC	T
RL50	6330001460	RELAY	FTR-F1CA012V	T
RL60	6330001200	RELAY	VS-12MBU-UC	T
RL70	6330001200	RELAY	VS-12MBU-UC	T
RL80	6330001200	RELAY	VS-12MBU-UC	T
RL90	6330001200	RELAY	VS-12MBU-UC	T
RL100	6330001200	RELAY	VS-12MBU-UC	T
RL110	6330001200	RELAY	VS-12MBU-UC	T
RL120	6330001200	RELAY	VS-12MBU-UC	T
J1	6510021560	S.CONNECTOR	52808-2490	T
J2	6510017930	CONNECTOR	1771P145-20	T
J3	6510017930	CONNECTOR	1771P145-20	T
J4	6510003520	CONNECTOR	S04B-EH-S	T
EP1	0910057692	PCB	B 5977B	T

[FILTER UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
L653	6140004170	COIL	LR-462	T
L654	6140004170	COIL	LR-462	T
L655	6200005130	S.COIL	NLC453232T-101K	T
L701	6200005130	S.COIL	NLC453232T-101K	T
L702	6140004130	COIL	LR-461	T
L703	6140004070	COIL	LR-460	T
L704	6140004070	COIL	LR-460	T
L705	6200005130	S.COIL	NLC453232T-101K	T
L751	6200005130	S.COIL	NLC453232T-101K	T
L752	6110003900	COIL	LA-592	T
L753	6110003890	COIL	LA-591	T
L754	6110003890	COIL	LA-591	T
L755	6200005130	S.COIL	NLC453232T-101K	T
L801	6200001830	S.COIL	NL 322522T-100J	T
L802	6110003880	COIL	LA-590	T
L803	6110003870	COIL	LA-589	T
L804	6110003870	COIL	LA-589	T
L805	6200001830	S.COIL	NL 322522T-100J	T
C401	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C402	4010008200	CERAMIC	HM11TJ SL 331J 500V	T
C403	4010008200	CERAMIC	HM11TJ SL 331J 500V	T
C404	4010008300	CERAMIC	HM11TJ SL 391J 500V	T
C405	4010008300	CERAMIC	HM11TJ SL 391J 500V	T
C406	4010008210	CERAMIC	HM60TJ SL 560J 500V	T
C407	4010007590	CERAMIC	HM15SJ SL 681J 500V	T
C408	4010007590	CERAMIC	HM15SJ SL 681J 500V	T
C409	4010007590	CERAMIC	HM15SJ SL 681J 500V	T
C410	4010005870	CERAMIC	HM95SJ SL 221J 500V	T
C411	4010008280	CERAMIC	HM95TJ SL 221J 500V	T
C412	4010008370	CERAMIC	HM60TJ SL 150J 500V	T
C413	4010007590	CERAMIC	HM15SJ SL 681J 500V	T
C414	4010007590	CERAMIC	HM15SJ SL 681J 500V	T
C415	4010007590	CERAMIC	HM15SJ SL 681J 500V	T
C416	4010008300	CERAMIC	HM11TJ SL 391J 500V	T
C417	4010008230	CERAMIC	HM60TJ SL 820J 500V	T
C418	4010007590	CERAMIC	HM15SJ SL 681J 500V	T
C419	4010007590	CERAMIC	HM15SJ SL 681J 500V	T
C420	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C451	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C452	4010008290	CERAMIC	HM95TJ SL 221J 500V	T
C453	4010008280	CERAMIC	HM95TJ SL 221J 500V	T
C454	4010008240	CERAMIC	HM60TJ SL 101J 500V	T
C455	4010005810	CERAMIC	HM74SJ SL 111J 500V	T
C456	4010007490	CERAMIC	HM15SJ SL 561J 500V	T
C457	4010006410	CERAMIC	HM13SJ SL 471J 500V	T
C458	4010008250	CERAMIC	HM74TJ SL 121J 500V	T
C459	4010005810	CERAMIC	HM74SJ SL 111J 500V	T
C461	4010007490	CERAMIC	HM15SJ SL 561J 500V	T
C462	4010007490	CERAMIC	HM15SJ SL 561J 500V	T
C463	4010008340	CERAMIC	HM60TJ SL 270J 500V	T
C464	4010008320	CERAMIC	HM60TJ SL 390J 500V	T
C465	4010007490	CERAMIC	HM15SJ SL 561J 500V	T
C466	4010008220	CERAMIC	HM60TJ SL 680J 500V	T
C467	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C468	4010008230	CERAMIC	HM60TJ SL 820J 500V	T
C501	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C502	4010008280	CERAMIC	HM95TJ SL 221J 500V	T
C503	4010008260	CERAMIC	HM74TJ SL 151J 500V	T
C504	4010008280	CERAMIC	HM95TJ SL 221J 500V	T
C506	4010008200	CERAMIC	HM11TJ SL 331J 500V	T
C507	4010008280	CERAMIC	HM95TJ SL 221J 500V	T
C508	4010008280	CERAMIC	HM95TJ SL 221J 500V	T
C509	4010005810	CERAMIC	HM74SJ SL 111J 500V	T
C511	4010008300	CERAMIC	HM11TJ SL 391J 500V	T
C512	4010008300	CERAMIC	HM11TJ SL 391J 500V	T
C513	4010008260	CERAMIC	HM74TJ SL 151J 500V	T
C514	4010008320	CERAMIC	HM60TJ SL 390J 500V	T
C515	4010008280	CERAMIC	HM95TJ SL 221J 500V	T
C516	4010008280	CERAMIC	HM95TJ SL 221J 500V	T
C517	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C518	4010008340	CERAMIC	HM60TJ SL 270J 500V	T
C551	4030006880	S.CERAMIC	C1608 JB 1H 472K-T	T
C552	4010005860	CERAMIC	HM95SJ SL 201J 500V	T
C554	4010008230	CERAMIC	HM60TJ SL 820J 500V	T
C555	4010008370	CERAMIC	HM60TJ SL 150J 500V	T
C556	4010008290	CERAMIC	HM95TJ SL 271J 500V	T
C557	4010008290	CERAMIC	HM95TJ SL 271J 500V	T
C558	4010008320	CERAMIC	HM60TJ SL 390J 500V	T
C559	4010008330	CERAMIC	HM60TJ SL 330J 500V	T
C560	4010008340	CERAMIC	HM60TJ SL 270J 500V	T
C561	4010008200	CERAMIC	HM11TJ SL 331J 500V	T
C562	4010008290	CERAMIC	HM95TJ SL 271J 500V	T
C563	4010008330	CERAMIC	HM60TJ SL 330J 500V	T
C564	4010005650	CERAMIC	HM60SJ SL 200J 500V	T
C565	4010008280	CERAMIC	HM95TJ SL 221J 500V	T
C566	4010008350	CERAMIC	HM60TJ SL 220J 500V	T

[FILTER UNIT]

REF NO.	ORDER NO.	DESCRIPTION		M.
D402	1750000270	S.DIODE	1SS301 (TE85R)	T
D452	1750000270	S.DIODE	1SS301 (TE85R)	T
D502	1750000270	S.DIODE	1SS301 (TE85R)	T
D552	1750000270	S.DIODE	1SS301 (TE85R)	T
D602	1750000270	S.DIODE	1SS301 (TE85R)	T
D652	1750000270	S.DIODE	1SS301 (TE85R)	T
D702	1750000270	S.DIODE	1SS301 (TE85R)	T
D752	1750000270	S.DIODE	1SS301 (TE85R)	T
D802	1750000270	S.DIODE	1SS301 (TE85R)	T
L401	6200005130	S.COIL	NLC453232T-101K	T
L402	6140004310	COIL	LR-471	T
L403	6140004300	COIL	LR-470	T
L404	6140004300	COIL	LR-470	T
L405	6200005130	S.COIL	NLC453232T-101K	T
L451	6200005130	S.COIL	NLC453232T-101K	T
L452	6140004270	COIL	LR-467	T
L453	6140004290	COIL	LR-469	T
L454	6140004290	COIL	LR-469	T
L455	6200005130	S.COIL	NLC453232T-101K	T
L501	6200005130	S.COIL	NLC453232T-101K	T
L502	6140004280	COIL	LR-468	T
L503	6140004270	COIL	LR-467	T
L504	6140004270	COIL	LR-467	T
L505	6200005130	S.COIL	NLC453232T-101K	T
L551	6200005130	S.COIL	NLC453232T-101K	T
L552	6140004260	COIL	LR-466	T
L553	6140004280	COIL	LR-468	T
L554	6140004280	COIL	LR-468	T
L555	6200005130	S.COIL	NLC453232T-101K	T
L601	6200005130	S.COIL	NLC453232T-101K	T
L602	6140004250	COIL	LR-465	T
L603	6140004240	COIL	LR-464	T
L604	6140004240	COIL	LR-464	T
L605	6200005130	S.COIL	NLC453232T-101K	T
L651	6200005130	S.COIL	NLC453232T-101K	T
L652	6140004200	COIL	LR-463	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

S.=Surface mount

[FILTER UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
C567	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C601	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C604	4010008230	CERAMIC HM60TJ SL 820J 500V	T
C605	4010008370	CERAMIC HM60TJ SL 150J 500V	T
C606	4010008280	CERAMIC HM95TJ SL 221J 500V	T
C607	4010008220	CERAMIC HM60TJ SL 680J 500V	T
C608	4010008350	CERAMIC HM60TJ SL 220J 500V	T
C609	4010008340	CERAMIC HM60TJ SL 270J 500V	T
C610	4010008200	CERAMIC HM11TJ SL 331J 500V	T
C611	4010008230	CERAMIC HM60TJ SL 820J 500V	T
C612	4010008360	CERAMIC HM60TJ SL 180J 500V	T
C613	4010008260	CERAMIC HM74TJ SL 151J 500V	T
C614	4010008230	CERAMIC HM60TJ SL 820J 500V	T
C615	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C651	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C654	4010008360	CERAMIC HM60TJ SL 180J 500V	T
C655	4010008320	CERAMIC HM60TJ SL 390J 500V	T
C656	4010008280	CERAMIC HM95TJ SL 221J 500V	T
C657	4010008220	CERAMIC HM60TJ SL 680J 500V	T
C658	4010008360	CERAMIC HM60TJ SL 180J 500V	T
C659	4010008380	CERAMIC HM60TJ SL 120J 500V	T
C660	4010008280	CERAMIC HM95TJ SL 221J 500V	T
C661	4010008240	CERAMIC HM60TJ SL 101J 500V	T
C662	4010008390	CERAMIC HM60TJ SL 100D 500V	T
C663	4010008250	CERAMIC HM74TJ SL 121J 500V	T
C664	4010008320	CERAMIC HM60TJ SL 390J 500V	T
C665	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C701	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C703	4010008370	CERAMIC HM60TJ SL 150J 500V	T
C704	4010008350	CERAMIC HM60TJ SL 220J 500V	T
C705	4010005650	CERAMIC HM60SJ SL 200J 500V	T
C706	4010005860	CERAMIC HM95SJ SL 201J 500V	T
C707	4010008310	CERAMIC HM60TJ SL 470J 500V	T
C708	4010008370	CERAMIC HM60TJ SL 150J 500V	T
C709	4010008280	CERAMIC HM95TJ SL 221J 500V	T
C710	4010008350	CERAMIC HM60TJ SL 220J 500V	T
C712	4010008330	CERAMIC HM60TJ SL 330J 500V	T
C713	4010008310	CERAMIC HM60TJ SL 470J 500V	T
C714	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C715	4010008360	CERAMIC HM60TJ SL 180J 500V	T
C751	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C755	4010008240	CERAMIC HM60TJ SL 101J 500V	T
C756	4010008210	CERAMIC HM60TJ SL 560J 500V	T
C757	4010008360	CERAMIC HM60TJ SL 180J 500V	T
C758	4010008210	CERAMIC HM60TJ SL 560J 500V	T
C759	4010008240	CERAMIC HM60TJ SL 101J 500V	T
C760	4010008400	CERAMIC HM60TJ SL 060D 500V	T
C761	4010008310	CERAMIC HM60TJ SL 470J 500V	T
C763	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C764	4010005650	CERAMIC HM60SJ SL 200J 500V	T
C765	4010008370	CERAMIC HM60TJ SL 150J 500V	T
C801	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
C804	4010008360	CERAMIC HM60TJ SL 180J 500V	T
C805	4010008320	CERAMIC HM60TJ SL 390J 500V	T
C806	4010008310	CERAMIC HM60TJ SL 470J 500V	T
C807	4010005600	CERAMIC HM60SJ SL 090D 500V	T
C808	4010008330	CERAMIC HM60TJ SL 330J 500V	T
C809	4010008320	CERAMIC HM60TJ SL 390J 500V	T
C810	4010008410	CERAMIC HM60TJ SL 030C 500V	T
C811	4010005560	CERAMIC HM60SJ SL 050C 500V	T
C813	4030006880	S.CERAMIC C1608 JB 1H 472K-T	T
RL401	6330001470	RELAY AJS1311	T
RL402	6330001470	RELAY AJS1311	T
RL451	6330001470	RELAY AJS1311	T
RL452	6330001470	RELAY AJS1311	T
RL501	6330001470	RELAY AJS1311	T
RL502	6330001470	RELAY AJS1311	T
RL551	6330001470	RELAY AJS1311	T
RL552	6330001470	RELAY AJS1311	T
RL601	6330001470	RELAY AJS1311	T
RL602	6330001470	RELAY AJS1311	T
RL651	6330001470	RELAY AJS1311	T
RL652	6330001470	RELAY AJS1311	T
RL701	6330001470	RELAY AJS1311	T
RL702	6330001470	RELAY AJS1311	T
RL751	6330001470	RELAY AJS1311	T
RL752	6330001470	RELAY AJS1311	T
RL801	6330001460	RELAY FTR-F1CA012V	T
RL802	6330001460	RELAY FTR-F1CA012V	T
J901	6510017930	CONNECTOR 1771P145-20	T
J902	6510022030	S.CONNECTOR B10B-ZR-SM3-TF	T
J903	6510019970	S.CONNECTOR 52808-1091	T
J904	6510017930	CONNECTOR 1771P145-20	T
J905	6510019420	S.CONNECTOR B8B-ZR-SM3-TF	T

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)

[FILTER UNIT]

REF NO.	ORDER NO.	DESCRIPTION	M.
EP1	0910057703	PCB B 5958C	

[MEMORY BOARD]

REF NO.	ORDER NO.	DESCRIPTION	M.
IC1	1130012220	S.IC E28F128J3C-150 (SX-2590A)	T
IC2	1130012230	S.IC E28F128J3C-150	T
C1	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C2	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C3	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C4	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C5	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
C6	4030011600	S.CERAMIC C1608 JB 1E 104K-T	T
J1	6510024210	S.CONNECTOR AXK6S30435P	T
J2	6510024200	S.CONNECTOR AXK6S40435P	T
EP1	0910057392	PCB B 5993B	

S.=Surface mount

SECTION 6 MECHANICAL PARTS AND DISSASSEMBLY

[CHASSIS PARTS]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MF1	2710000760	Fan FD1240107B-1N	1
SP1	2510001260	2590 SP box	1
MP1	8930040720	1768 B-clip	1
MP2	8930061280	2590 ant angle	1
MP3	8930061840	2590 A-stand sheet	2
MP4	8510016031	2590 BPF case-1	1
MP5	8510016040	2590 BPF S-cover	1
MP6	8010019281	2590 Chassis-1	1
MP7	8930061720	2590 DIGISEL plate	1
MP8	8930062320	2590 A-DIGISEL sponge	1
MP10	8510015850	2590 FILTER case	1
MP11	8110008080	2590 L-cover	1
MP12	8110008091	2590 LOGIC cover-1	1
MP13	8930061350	2590 main stand	2
MP14	8930061960	2590 M-fan angle	1
MP15	8930061761	2590 M-jack angle-1	1
MP16	8510016100	2590 PLL plate	2
MP17	8510016010	2590 P-R cover	1
MP18	8210020460	2590 rear panel	1
MP20	8510015860	2590 SCOPE cover	1
MP21	8210019620	2590 side panel	2
MP22	8930062010	2590 S-jack angle	1
MP23	8930061950	2590 SP angle	1
MP27	8110008070	2590 U-cover	1
MP101	8810007230	Set screw H M3 • 8	4
MP102	8810007230	Set screw H M3 • 8	1
MP103	8810009110	Screw PH M2.6 • 16 ZK	2
MP104	8810005770	Screw BIH M3 • 8 ZK	2
MP105	8810005770	Screw BIH M3 • 8 ZK	2
MP106	8810008450	Screw BIH M4 • 8 ZK	4
MP107	8810005770	Screw BIH M3 • 8 ZK	8
MP108	8810008450	Screw BIH M4 • 8 ZK	14
MP109	8810008450	Screw BIH M4 • 8 ZK	13
MP110	8810008450	Screw BIH M4 • 8 ZK	4
MP111	8810008450	Screw BIH M4 • 8 ZK	2
MP112	8810008450	Screw BIH M4 • 8 ZK	2
MP113	8930011680	Rubber foot (G)	2
MP114	8810009650	Screw FH BT M3 • 8 NI-ZU	20
MP115	8810009650	Screw FH BT M3 • 8 NI-ZU	4
MP116	8810009460	Screw FH M3 • 8 ZK	4
MP117	8810009460	Screw FH M3 • 8 ZK	2
MP118	8810009460	Screw FH M3 • 8 ZK	1
MP119	8810009460	Screw FH M3 • 8 ZK	4
MP120	8810008630	Screw PH BT M3 • 6 NI-ZU	6
MP121	8810008660	Screw PH BT M3 • 8 NI-ZU	12
MP122	8810008660	Screw PH BT M3 • 8 NI-ZU	7
MP123	8810008660	Screw PH BT M3 • 8 NI-ZU	5
MP124	8810008660	Screw PH BT M3 • 8 NI-ZU	26
MP125	8810008660	Screw PH BT M3 • 8 NI-ZU	7
MP126	8810008660	Screw PH BT M3 • 8 NI-ZU	6
MP127	8810008660	Screw PH BT M3 • 8 NI-ZU	4
MP128	8810008660	Screw PH BT M3 • 8 NI-ZU	3
MP129	8810008660	Screw PH BT M3 • 8 NI-ZU	2
MP130	8810008660	Screw PH BT M3 • 8 NI-ZU	2
MP131	8810008660	Screw PH BT M3 • 8 NI-ZU	4
MP132	8810008660	Screw PH BT M3 • 8 NI-ZU	7
MP133	8810008660	Screw PH BT M3 • 8 NI-ZU	2
MP135	8810008660	Screw PH BT M3 • 8 NI-ZU	4
MP136	8810008660	Screw PH BT M3 • 8 NI-ZU	2
MP137	8810008660	Screw PH BT M3 • 8 NI-ZU	1
MP138	8810008660	Screw PH BT M3 • 8 NI-ZU	4
MP139	8810008660	Screw PH BT M3 • 8 NI-ZU	4
MP140	8810008660	Screw PH BT M3 • 8 NI-ZU	11
MP141	8810004430	Screw PH M3 • 6 ZK	2
MP142	8810004430	Screw PH M3 • 6 ZK	4

[CHASSIS PARTS]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP143	8810009990	Screw PH BT M3 • 8 ZK	1
MP144	8810004430	Screw PH M3 • 6 ZK	4
MP145	8810008690	Screw PH BT M4 • 16 NI-ZU	2
MP146	8830000360	Wing nut M5 NI	1
MP147	8930028390	Himelon sheet AH	1
MP148	8850000150	Flat washer M5 NI BS	2
MP150	8930049850	2240 D-sponge 3.5 • 5 • 50	1
MP151	8930049850	2240 D-sponge 3.5 • 5 • 50	1
MP152	8930017190	Earth spring (F)	1
MP153	8930017190	Earth spring (F)	1
MP154	8510016281	2590 K-plate-1	1
MP155	8930056160	Double side tape (AG)	4
MP156	8810004430	Screw PH M3 • 6 ZK	1
MP157	8930062690	Sponge (HQ)	1
MP158	8930062720	Sponge (HS)	1
MP159	8930062270	2590 A-net	1
MP160	8930062280	2590 B-net	1
MP161	8930062290	2590 C-net	1
MP162	8930062360	2590 D-net	1
MP163	8930006960	Sponge (Y)	1
MP164	8930062770	Himelon sheet (CN)	1
MP165	8930058170	Shield sponge (O)	1
MP166	8930058170	Shield sponge (O)	1
MP167	8930017190	Earth spring (F)	1
MP169	8930063220	AL sheet (AJ)	1

[FRONT PARTS]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	6910015290	LCD unit EDTCB23QAF	1
EP11	6910011090	Main sensor RMS20-250-201-P	1
EP12	6910011090	Sub sensor RMS20-250-201-P	1
EP13	0880001480	Rit sensor	1
EP101	6910015650	Mount plate S-G2218-3#01	1
EP102	6910015650	Mount plate S-G2218-3#01	1
MP1	8810008970	Screw FH BT M2 • 3.5 NI-ZU	2
MP2	8810009180	Screw FH BT M2 • 5 NI-ZU	3
MP3	8810009180	Screw FH BT M2 • 5 NI-ZU	1
MP4	8810009180	Screw FH BT M2 • 5 NI-ZU	2
MP5	8810005700	Screw PH M2 • 4 ZK	2
MP7	8210019931	2590 10-key panel-1	1
MP10	8930061450	2590 brake button	1
MP11	8930061470	2590 brake plate	1
MP12	8930061460	2590 brake spacer	1
MP13	8930060640	2590 CF lens	1
MP14	8110008100	2590 CF lens cover	1
MP15	8930060651	2590 CF plate -1	1
MP17	8930060581	2590 EJECT button-1	1
MP19	8210019800	2590 front panel	1
MP20	8930060600	2590 JACK plate	1
MP21	8930060591	2590 LCD holder-1	1
MP22	8930061620	2590 LCD sponge	1
MP23	8930062561	2590 LENS holder-1 assembly	1
MP24	8310059640	2590 name plate	1
MP25	8930060690	2590 spring	1
MP26	8010019311	2590 sub chassis-1	1
MP27	8930060622	2590 VR plate-2	1
MP28	8310061241	2590 window frame-1 assembly	1
MP29	8310059661	2590 window plate-1	1

Screw abbreviations BT: Self-tapping PH: Pan head
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 NI-ZU: Nickel-Zinc

[FRONT PARTS]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP30	8930062190	Double side tape (AJ)	2
MP31	8930062180	Double side tape (AK)	2
MP32	8930062170	Double side tape (AL)	3
MP33	8610012051	Knob K230-1 assembly	1
MP34	8610012061	Knob K231-1 assembly	1
MP35	8610012071	Knob K232-1 assembly	2
MP36	8610011391	Knob K233-1	1
MP37	8610011451	Knob K234-1	1
MP38	8610011461	Knob K234 (A)-1	1
MP39	8610011471	Knob K234 (B)-1	1
MP40	8610011481	Knob K235-1	1
MP41	8610011491	Knob K236-1	1
MP42	8610011501	Knob K237-1	1
MP43	8610011511	Knob K237 (A)-1	1
MP44	8610011521	Knob K238-1	1
MP45	8610011531	Knob K239-1	1
MP46	8610011541	Knob K239 (A)-1	1
MP47	8610011551	Knob K240-1	1
MP48	8610012081	Knob K241-1 assembly	1
MP49	8610011561	Knob K243-1	1
MP50	8610011421	Knob K244-1	1
MP51	8610011431	Knob K245-1	1
MP52	8610011950	Knob N300 assembly (green)	3
MP53	8610011960	Knob N300 (A) assembly (red)	3
MP55	8610011830	Knob N301	2
MP56	8610011970	Knob N302 assembly	2
MP58	8610011760	Knob N303 (green)	1
MP59	8610011770	Knob N303(A) (red)	1
MP60	8610011780	Knob N303(B) (gray)	2
MP61	8610011980	Knob N304 assembly (green)	1
MP62	8610011990	Knob N304 (A) assembly (red)	1
MP63	8610012000	Knob N304 (B) assembly (gray)	2
MP65	8610012010	Knob N305 assembly	1
MP67	8610012020	Knob N306 assembly	1
MP68	8610011840	Knob N-306 cover	1
MP70	8610011740	Knob N307	7
MP71	8610012030	Knob N309 assembly	1
MP72	8610011850	Knob N-309 cover	1
MP75	8610011810	Knob N310 (green)	3
MP76	8610011820	Knob N310 (A) (red)	3
MP77	8610012040	Knob N311 assembly	1
MP78	8850002010	Plain washer (AG)	1
MP79	8930062080	Rubber tube (C)	12
MP80	8930062090	Rubber tube (D)	2
MP81	8930061731	Sponge (H)-1	2
MP82	8810008450	Screw BIH M4 · 8 ZK	4
MP84	8810008760	Screw PH BT M2 · 8 NI-ZU	10
MP85	8810008760	Screw PH BT M2 · 8 NI-ZU	4
MP86	8810008760	Screw PH BT M2 · 8 NI-ZU	4
MP87	8810008760	Screw PH BT M2 · 8 NI-ZU	2
MP88	8810008760	Screw PH BT M2 · 8 NI-ZU	10
MP90	8810008630	Screw PH BT M3 · 6 NI-ZU	4
MP91	8810008630	Screw PH BT M3 · 6 NI-ZU	4
MP92	8810008630	Screw PH BT M3 · 6 NI-ZU	4
MP93	8810008630	Screw PH BT M3 · 6 NI-ZU	1
MP94	8810008630	Screw PH BT M3 · 6 NI-ZU	2
MP95	8810008630	Screw PH BT M3 · 6 NI-ZU	3
MP99	8810009180	Screw FH BT M2 · 5 NI-ZU	2
MP100	8930062350	Double side tape (AM)	1
MP102	8930062380	Insulation sheet (HR)	1
MP103	8930008960	Sponge (Y)	1
MP104	8930019010	Sponge (CI)	1
MP105	8930062910	Double side tape (AO)	2
MP106	8930062170	Double side tape (AL)	2

Screw abbreviations BT: Self-tapping PH: Pan head
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 NI: Nickel SUS: Stainless
 NI-ZU: Nickel-Zinc

[DISPLAY BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
BT601	3020000110	Battery CR2032	1
MP301*	8510015390	2591 REG plate	1

[VR-A BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
R1	7210002890	Variable resistor RK161221005J [MAIN NB/NR]	1
R2	7210002890	Variable resistor RK161221005J [SUB NB/NR]	1
R3	7210002890	Variable resistor RK161221005J [MAIN AF/RF]	1
R4	7210002890	Variable resistor RK161221005J [SUB AF/RF]	1

[VR-B BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
R1	7210003160	Variable resistor RV-317 [MIC/RF PWR]	1
R2	7210003160	Variable resistor RV-317 [MAIN AGC/SQL]	1

[VR-C BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
R1	7210003160	Variable resistor RV-317 [KEY SPEED/DELAY]	1
R2	7210003160	Variable resistor RV-317 [SUB AGC/SQL]	1

[VR-D BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
R1	7210001130	Variable resistor RK097111T005A [BRIGHT]	1
R2*	7210001130	Variable resistor RK097111T005A [CONTRAST]	1
R3*	7210001130	Variable resistor RK097111T005A [ANTI VOX]	1
R4*	7210001130	Variable resistor RK097111T005A [VOX GAIN]	1
R5*	7210001130	Variable resistor RK097111T005A [DRIVE]	1
R6*	7210001130	Variable resistor RK097111T005A [COMP]	1
R7*	7210001130	Variable resistor RK097111T005A [MONI GAIN]	1

[JACK BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J2	6510023890	Connector S-G4617#01 [PHONES]	1
J102	6510023900	Connector LGR4619-7000 [ELEC-KEY]	1

[MIC BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510000190	Connector FM214-8SS (F) [MIC]	1

[PBT1 BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
R1	7210003180	Variable resistor RV-319 [MAIN DIGI-SEL/NOTCH]	1
S1	2250000410	Switch TP80096E20-30F-2178-1 [MAIN TWIN PBT]	1

[PBT2 BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
R1	7210003180	Variable resistor RV-319 [SUB DIGI-SEL/NOTCH]	1
R2	7210003170	Variable resistor RV-318 [CW PITCH]	1
S1	2250000410	Switch TP90096E20-30F-2178-1 [SUB TWIN PBT]	1

*Refer to SECTION 8 BOARD LAYOUTS.

[DIGISEL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8930061600	2590 DIGISEL spring	1
MP2	8930061600	2590 DIGISEL spring	1
MP3	8930061600	2590 DIGISEL spring	1
MP4	8930061600	2590 DIGISEL spring	1
MP5	8510015840	2590 D-SHIELD plate	1
MP6	8930014140	Earth spring (D)	1
MP7	8930014140	Earth spring (D)	1
MP8	8510016020	2590 DIGISEL case	1
MP9	8110008060	2590 DIGISEL cover	1
MP10	8930014140	Earth spring (D)	1
MP11	8930014140	Earth spring (D)	1
MP12	8930014140	Earth spring (D)	1
MP13	8930014140	Earth spring (D)	1
MP14	8810007230	Set screw H M3 · 8	8
MP15	8810008660	Screw PH BT M3 · 8 NI-ZU	1

[OSC UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8510015821	2590 OSC case-1	1
MP2	8110008050	2590 OSC cover	1
MP3	8810008660	Screw PH BT M3 · 8 NI-ZU	4
MP4	8810008660	Screw PH BT M3 · 8 NI-ZU	4

[ANT-SW UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J51	6510000410	Connector MR-DS-E 02 [ANT1]	1
J61	6510000410	Connector MR-DS-E 02 [ANT2]	1
J71	6510000410	Connector MR-DS-E 02 [ANT3]	1
J81	6510000410	Connector MR-DS-E 02 [ANT4]	1

[PA UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MF1	2710000770	Fan FCB34AC12A	1
W1	8900012790	Cable OPC-1299	1
MP1	8820000700	1129 screw	4
MP3	8930061230	2590 FL-PA angle	1
MP4	8930061240	2590 FR-PA angle	1
MP5	8930061260	2590 L-fan angle	1
MP6	8510015990	2590 PA cover	1
MP7	8410002550	2590 PA heatsink	1
MP8	8930062120	2590 PA sheet	1
MP9	8930061250	2590 R-fan angle	1
MP10	8930061221	2590 R-PA angle-1	1
MP11	8930061430	2590 rubber	4
MP12	8930062210	Thermally sheet (AL)	1
MP13	8810009040	Set screw H M2 6 · 10 NI	6
MP14	8810007230	Set screw H M3 · 8	10
MP15	8810008660	Screw PH BT M3 · 8 NI-ZU	8
MP16	8810008660	Screw PH BT M3 · 8 NI-ZU	5
MP17	8810008660	Screw PH BT M3 · 8 NI-ZU	1
MP18	8810008660	Screw PH BT M3 · 8 NI-ZU	1
MP19	8910008240	Clip 59TN4772	1
MP20	8930063150	Thermally sheet (AR)	2

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
F3	5210000040	Fuse FGB 2A	1
J1*	6510023670	Connector TCS4480-01-4151 [MAIN ACC (1)]	1
J2*	6510023660	Connector TCS4470-01-4151 [MAIN ACC (2)]	1
J3*	6510023670	Connector TCS4480-01-4151 [SUB ACC (1)]	1
J4*	6510023660	Connector TCS4470-01-4151 [SUB ACC (2)]	1
J5*	6450001130	Connector JPJ2042-01-110 [RELAY/ALC]	1
J6*	6510023730	Connector LGY6502-0600C [METER]	1
J7*	6510023730	Connector LGY6502-0600C [EXT KEYPAD]	1
J8*	6510023740	Connector LGR4609-7000 [KEY]	1
J9*	6510023070	Connector HEC2305-01-250 [DC OUT]	1
J140*	6510023720	Connector LGY6501-0600C [EXT-SP MAIN]	1
J141*	6510023720	Connector LGY6501-0600C [EXT-SP SUB]	1
J490	6510023750	Connector 01K1971-10 [REF I/O]	1
J495*	6510023700	Connector TORX178S [S/P DIF IN]	1
J496*	6510023710	Connector TOTX178S [S/P DIF OUT]	1
MP496	8930062740	2590 M-spring	1
MP501	8930014140	Earth spring (D)	1
MP502*	8510015800	2590 2LO case	1
MP511*	8510015900	2590 M-2LO case	1
MP551	8930014140	Earth spring (D)	1
MP801	8930014140	Earth spring (D)	1

[DSP-A BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8510014140	2432 DSP cover	1
MP2	8510016110	2590 M-DSP case	1
MP3*	8930062220	Thermally sheet (AO)	1
MP4	8930055051	Thermally sheet (V)-1	2

[DSP-B BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8510014140	2432 DSP cover	1
MP2	8510016110	2590 M-DSP case	1
MP3*	8930062220	Thermally sheet (AO)	1
MP4	8930055051	Thermally sheet (V)-1	2

[DSP-TX BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8510014140	2432 DSP cover	1
MP2	8510016110	2590 M-DSP case	1
MP3*	8930062220	Thermally sheet (AO)	1
MP4	8930055051	Thermally sheet (V)-1	2

[MEMORY BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8930028840	Sponge (DF)	1
MP2	8930028840	Sponge (DF)	1

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*Refer to SECTION 8 BOARD LAYOUTS.

[SCOPE UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J902	6510023120	Connector CD6109SA1J0 [RS-232C]	1
J903	6510024040	Connector TM11R-5M2-88-LP [LAN]	1
J904	6510024030	Connector UBA-4R-D10T-1 [USB]	1
J905	6450001940	Connector KEY-15S-2A3A(EXT MONITOR)	1
MP3	8930014140	Earth spring (D)	1
MP101*	8510015810	2590 MIX case	1
MP301*	8510015610	2590 MIX case	1
MP601*	8510015770	2590 DSP case	1
MP701*	8510015880	2590 S2LO case	1
MP801*	8510015891	2590 S3LO case-1	1
MP802*	8510014870	2577 RX-VCO case	1
MP901	8850001860	Flat washer M3 (3 · 6 · 0.5) SUS	2
MP902	8850000420	Spring washer M3 Ni	2

[DC-DC UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
W1	8900012780	Cable OPC-1298	1
MP21*	8510015720	2590 DC-DC A-case	1
MP22	8510015730	2590 DC-DC A-plate	1
MP41*	8510015720	2590 DC-DC A-case	1
MP42	8510015730	2590 DC-DC A-plate	1
MP61*	8510015720	2590 DC-DC A-case	1
MP62	8510015730	2590 DC-DC A-plate	1
MP81*	8510015720	2590 DC-DC A-case	1
MP82	8510015730	2590 DC-DC A-plate	1
MP101*	8510015720	2590 DC-DC A-case	1
MP102	8510015730	2590 DC-DC A-plate	1
MP121*	8510015740	2590 DC-DC B-case	1
MP122	8510015750	2590 DC-DC B-plate	1

[RXPLL-A UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP1*	8930039710	Rubber sheet (V)	2
MP101*	8510010760	1876 DDS case	1
MP102	8510010770	1876 DDS cover	1
MP103*	8510010850	1897 D/A case	1
MP151*	8510013510	2355 VCO case	1
MP201*	8510013510	2355 VCO case	1
MP221*	8510015780	2590 VCO case	1
MP222	8510015790	2590 VCO cover	1
MP223	8810007230	Setscrew H M3 · 8	4
MP224	8930062300	Rubber sheet (BI)	1
MP301*	8930014140	Earth spring (D)	1
MP501*	8510010760	1876 DDS case	1
MP502	8510010770	1876 DDS cover	1
MP503*	8510010850	1897 D/A case	1
MP541*	8510011970	2177 OSC case	1
MP542	8510011960	2177 OSC cover	1
MP601*	8930014140	Earth spring (D)	1
MP651*	8510005980	724 shield case	1
MP652	8510005990	724 shield case cover	1
MP1058*	6910001130	10M shield case	1
MP1101*	8510016060	2590 HF case	1
MP1102	8510015910	2590 HF cover	1
MP1103	8930020860	IC-holder	2
MP1104	8930049850	2240 D-sponge 3.5 · 5 · 50	1
MP1301*	8510016050	2590 50M case	1
MP1302*	8930014140	Earth spring (D)	1
MP1408*	6910001130	10M shield case	1
MP1501*	8930014140	Earth spring (D)	1
MP1502*	8930014140	Earth spring (D)	1
MP1503*	8930014140	Earth spring (D)	1
MP1504*	8930014140	Earth spring (D)	1
MP1651*	8510016340	2590 2MIX case	1
MP1652*	8510016390	2590 shield plate	1
MP1653*	8930024170	Earth spring (G)	1
MP1654*	8930058170	Shield sponge (O)	1

[RXPLL-B UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP1*	8930039710	Rubber sheet (V)	2
MP101*	8510010760	1876 DDS case	1
MP102	8510010770	1876 DDS cover	1
MP103*	8510010850	1897 D/A case	1
MP151*	8510013510	2355 VCO case	1
MP201*	8510013510	2355 VCO case	1
MP221*	8510015780	2590 VCO case	1
MP222	8510015790	2590 VCO cover	1
MP223	8810007230	Setscrew H M3 · 8	4
MP224	8930062300	Rubber sheet (BI)	1
MP301*	8930014140	Earth spring (D)	1
MP501*	8510010760	1876 DDS case	1
MP502	8510010770	1876 DDS cover	1
MP503*	8510010850	1897 D/A case	1
MP541*	8510011970	2177 OSC case	1
MP542	8510011960	2177 OSC cover	1
MP543*	8510005070	599 shield plate	1
MP544*	8930030940	Enboss tape (D)	1
MP545*	8930030940	Enboss tape (D)	1
MP546*	8930027810	Enboss tape (B)	1
MP601*	8930014140	Earth spring (D)	1
MP651*	8510005980	724 shield case	1
MP652	8510005990	724 shield case cover	1
MP1058*	6910001130	10M shield case	1
MP1101*	8510016060	2590 HF case	1
MP1102	8510015910	2590 HF cover	1
MP1103	8930020860	IC-holder	2
MP1104	8930049850	2240 D-sponge 3.5 · 5 · 50	1
MP1301*	8510016050	2590 50M case	1
MP1302*	8930014140	Earth spring (D)	1
MP1408*	6910001130	10M shield case	1
MP1501*	8930014140	Earth spring (D)	1
MP1502*	8930014140	Earth spring (D)	1
MP1503*	8930014140	Earth spring (D)	1
MP1504*	8930014140	Earth spring (D)	1
MP1651*	8510016340	2590 2MIX case	1
MP1652*	8510016390	2590 shield plate	1
MP1653*	8930024170	Earth spring (G)	1
MP1654*	8930058170	Shield sponge (O)	1

[LOGIC UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP101*	8510016490	2590 LOGIC B-plate	1
MP103*	8930063300	AL sheet (AK)	1
MP201*	8510016480	2590 LOGIC C-plate	1
MP203*	8510016500	2590 LOGIC A-plate	1
MP204*	8930063320	2590 A-sheet (top side of MP203)	1
MP205*	8930063310	2590 B-sheet (bottom side of MP203)	1
MP801*	8510005350	VCC shield plate	1

Screw abbreviations BT: Self-tapping PH: Pan head
 FH: Flat head BiH: Binding head
 ZK: Black BS: Brass
 Ni: Nickel SUS: Stainless
 Ni-ZU: Nickel-Zinc

*Refer to SECTION 8 BOARD LAYOUTS.

[REG UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	6910015660	REG unit FP2212A [JPN]	1
	6910016050	REG unit FP2212B [USA]	1
	6910016060	REG unit FP2212C [OTHER]	1
MP9000	8850001691	Insulation flat washer (X)-1	1

[BPF UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J103	6510023750	Connector 01K1971-10 [X-VERTER]	1
J104	6510023750	Connector 01K1971-10 [RXANT INA]	1
J105	6510023750	Connector 01K1971-10 [RXANT OUTA]	1
J504	6510023750	Connector 01K1971-10 [RXANT INB]	1
J505	6510023750	Connector 01K1971-10 [RXANT OUTB]	1

[TUNER UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MF1	2710000780	Motor MP24Z	1
MF2	2710000780	Motor MP24Z	1
MF3	2710000470	Fan MF60B-12H901	1
MP1	8950003200	Universal couplings UJ6-5	2
MP2	8930030111	1414 plate-1	2
MP3	8620000680	1528 screw	4
MP4	8930061271	2590 motor angle-1	1
MP5	8510015831	2590 TUNER case-1	1
MP6	8510015870	2590 TUNER cover	1
MP7	8810005160	Cap bolt M3 X 20 ZK	4
MP8	8810007230	Set screw H M3 • 8	6
MP9	8810007230	Set screw H M3 • 8	4
MP10	8810008660	Screw PH BT M3 • 8 NI-ZU	6
MP11	8810008660	Screw PH BT M3 • 8 NI-ZU	6
MP12	8810008660	Screw PH BT M3 • 8 NI-ZU	4
MP13	8850000130	Flat washer M3 (3 • 8 • 0.5) NI BS	4
MP14	8930006980	Sponge (Y)	1
MP15	8930059520	Nonwovens sheet (CG)	1
MP16	8930058760	Shield sponge (S)	1
MP17	8930005170	Aluminum sheet (F)	1

[CTRL BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP1*	8510015760	2590 A-CTRL case	1
MP2	8930014140	Earth spring (D)	1

[NETWORK BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8510011480	1900 AL cover	1

[ACCESSORIES]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	0800007460	CF card SDCFB-64-101	1
F1	5210000040	Fuse FGB 2A	1
W1	8900005260	AC power cable OPC-511 [JPN]	1
	8900005250	AC power cable OPC-510 [USA], [KOR]	1
	8900005220	AC power cable OPC-513 [AUS]	1
	8900005120	AC power cable OPC-491 [UK]	1
	8900005130	AC power cable OPC-492 [OTHER]	1
	8900012770	Jumper cable OPC-1243	2
P1	5610000050	Key plug AP-330 [CW]	3
P2	5610000020	Speaker plug AP-313 [MONORAL]	3
P3	5610000170	Speaker plug AP-370 [STEREO]	2
J1	6510023200	Pin plug P030010	2
J2	5610000280	DC power plug MP-121M4	1
J3	6450001270	ACC plug TCP0577-71-5201 [7-pin]	2
J4	6450001280	ACC plug TCP0587-71-5401 [8-pin]	2
MP1	8930061400	Rack mounting angle (A)	2
MP2	8810006110	Screw FH M4 • 9 ZK	4
MP3	8810010280	Screw FH M4 • 15 ZK	2
MP4	8930061360	2590 sub stand	2
MP5	8930061840	2590 A-stand sheet	2

Screw abbreviations BT: Self-tapping PH: Pan head
 FH: Flat head BiH: Binding head
 ZK: Black BS: Brass
 NI: Nickel SUS: Stainless
 NI-ZU: Nickel-Zinc

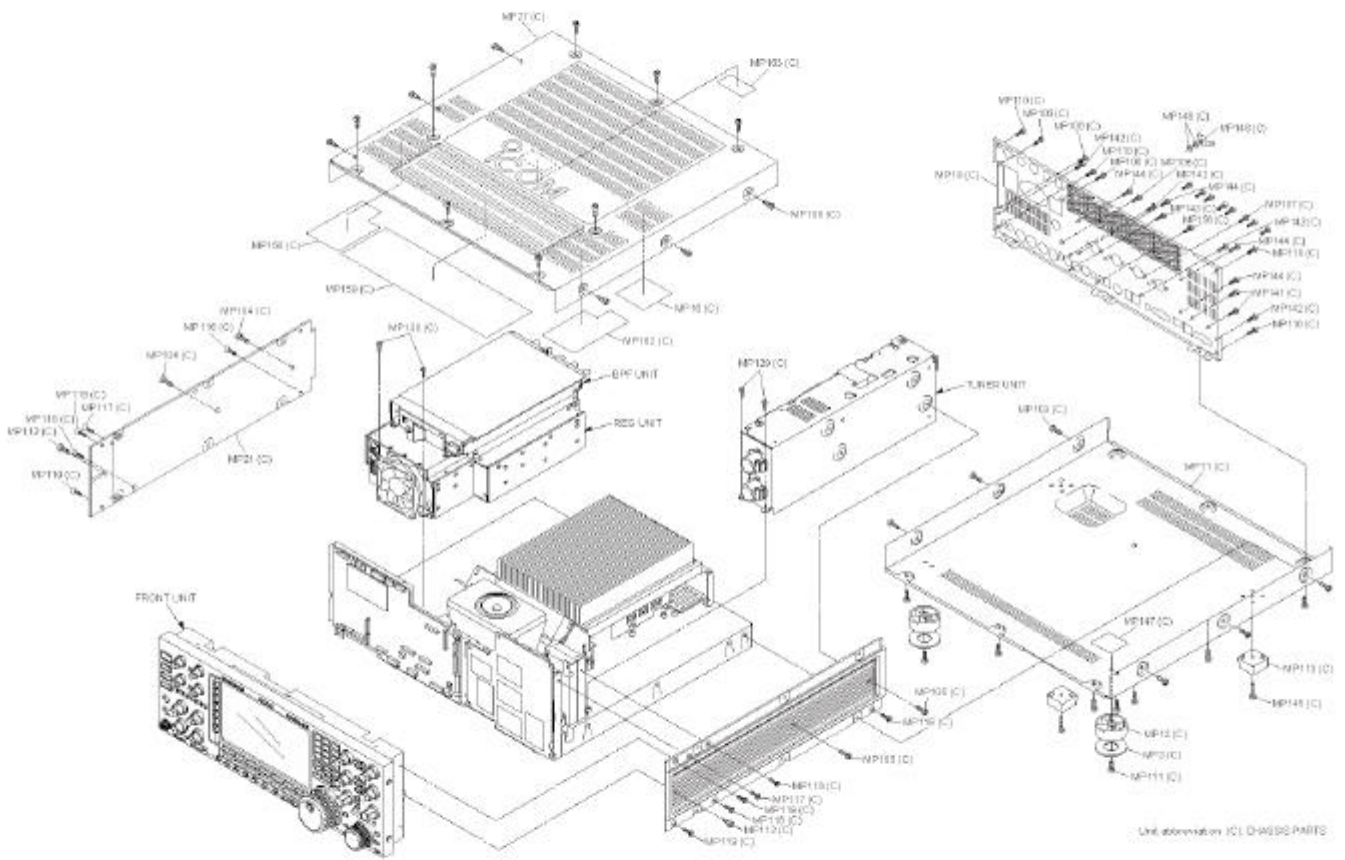
*Refer to SECTION 8 BOARD LAYOUTS.

• WIRE CONNECTION INFORMATION

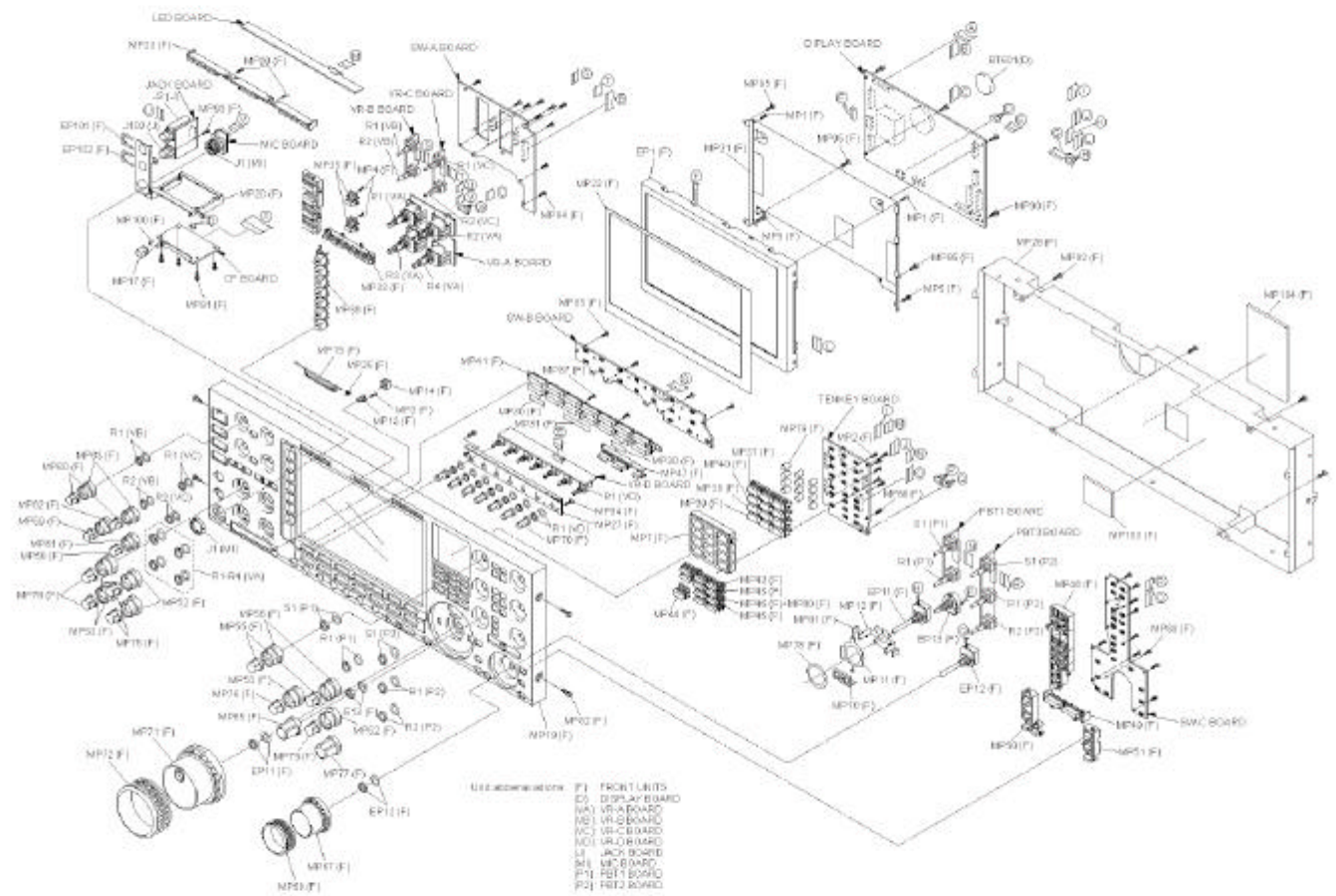
WIRE No.	CONNECTION1	CONNECTION2
Ⓐ	DISPLAY BOARD J203	LOGIC UNIT J805
Ⓑ	DISPLAY BOARD J3	SW-A BOARD J3
Ⓒ	DISPLAY BOARD J6	VR-A BOARD J1
Ⓓ	DISPLAY BOARD J302	CF BOARD J3
Ⓔ	DISPLAY BOARD J5	VR-D BOARD J1
Ⓕ	DISPLAY BOARD J301	LCD UNIT
Ⓖ	DISPLAY BOARD J4	SW-B BOARD J1
Ⓗ	DISPLAY BOARD J205	FRONT UNIT EP11
Ⓘ	DISPLAY BOARD J1	TENKEY BOARD J1
Ⓝ	DISPLAY BOARD J205	TENKEY BOARD J2
Ⓚ	DISPLAY BOARD J202	LOGIC UNIT J806
Ⓛ	DISPLAY BOARD J201	LCD UNIT
Ⓜ	TENKEY BOARD J5	LED BOARD J1
Ⓝ	TENKEY BOARD J4	PBT1 BOARD J1
Ⓞ	TENKEY BOARD J3	SW-C BOARD J1
Ⓟ	TENKEY BOARD J7	FRONT UNIT EP13
Ⓠ	TENKEY BOARD J6	FRONT UNIT EP12
Ⓡ	PBT2 BOARD J1	SW-C BOARD J2
Ⓢ	SW-A BOARD J1	VR-B BOARD J1
Ⓣ	SW-A BOARD J2	VR-C BOARD J1
Ⓤ	VR-A BOARD J3	JACK BOARD J1
Ⓥ	VR-A BOARD J4	MIC BOARD J2
Ⓦ	VR-A BOARD J2	MAIN UNIT J440
Ⓧ	CF BOARD J1	LOGIC UNIT J807

WIRE No.	CONNECTION1	CONNECTION2
①	LOGIC UNIT J826	MAIN UNIT J901
②	LOGIC UNIT J810	MAIN UNIT J451
③	LOGIC UNIT J815	RXPLL-B UNIT J2
④	LOGIC UNIT J814	OSC UNIT UNIT J2
⑤	LOGIC UNIT J813	DIGISEL UNIT J10
⑥	LOGIC UNIT J816	RXPLL-A UNIT J2
⑦	LOGIC UNIT J808	MAIN UNIT J940
⑧	LOGIC UNIT J809	MAIN UNIT J900
⑩	LOGIC UNIT J825	SCOPE UNIT J910
⑪	MAIN UNIT J400	RXPLL-A UNIT J1701
⑫	MAIN UNIT J450	DC-DC UNIT J2
⑬	LOGIC UNIT J802	SCOPE UNIT J907
⑭	MAIN UNIT J492	CHASSIS UNIT MF1
⑮	LOGIC UNIT J822	MAIN UNIT J142
⑯	MAIN UNIT J401	RXPLL-A UNIT J1501
⑰	MAIN UNIT J399	RXPLL-B UNIT J681
⑱	MAIN UNIT J503	RXPLL-A UNIT J421
⑲	MAIN UNIT J801	PA200W BOARD J1
⑳	MAIN UNIT J808	SCOPE UNIT J11
㉑	MAIN UNIT J403	RXPLL-B UNIT J1701
㉒	MAIN UNIT J502	RXPLL-A UNIT J561
㉓	MAIN UNIT J501	RXPLL-A UNIT J681
㉔	MAIN UNIT J491	OSC UNIT UNIT J71
㉕	MAIN UNIT J410	SCOPE UNIT J4
㉖	MAIN UNIT J430	PA200W BOARD J2
㉗	MAIN UNIT J411	SCOPE UNIT J906
㉘	RXPLL-A UNIT J1002	DIGISEL UNIT J10
㉙	RXPLL-A UNIT J801	RXPLL-A UNIT J1001
㉚	SCOPE UNIT J1	RXPLL-A UNIT J1301
㉛	RXPLL-A UNIT J351	RXPLL-A UNIT J1101
㉜	RXPLL-A UNIT J1002	OSC UNIT UNIT J72
㉝	RXPLL-B UNIT J1002	DIGISEL UNIT J501
㉞	SCOPE UNIT J2	RXPLL-B UNIT J1301
㉟	RXPLL-B UNIT J351	RXPLL-B UNIT J1101
㊱	SCOPE UNIT J3	RXPLL-B UNIT J601
㊲	RXPLL-B UNIT J561	RXPLL-B UNIT J631
㊳	RXPLL-B UNIT J1002	OSC UNIT UNIT J73
㊴	MAIN UNIT J404	RXPLL-B UNIT J1501
㊵	PA200W BOARD J5	DC-DC UNIT J5
㊶	DC-DC UNIT W1	REG UNIT
㊷	FILTER UNIT J901	PA200W BOARD J401
㊸	FILTER UNIT J903	ANT-SW J4
㊹	CTRL BOARD J252	NETWORK BOARD J3
㊺	CTRL BOARD J251	NETWORK BOARD J2
㊻	ANT-SW UNIT J1	CTRL BOARD J301
㊼	CTRL BOARD J351	BPF UNIT J106
㊽	LOGIC UNIT J811	CTRL BOARD J1
㊾	FILTER UNIT J904	CTRL BOARD J101
㊿	FILTER UNIT J905	CTRL BOARD J53
1	FILTER UNIT J902	CTRL BOARD J52
2	DIGISEL UNIT J2	BPF UNIT J101
3	LOGIC UNIT J812	BPF UNIT J1
4	DIGISEL UNIT J502	BPF UNIT J601
5	RXPLL-A UNIT J1201	BPF UNIT J102
6	ANT-SW UNIT J3	BPF UNIT J108
7	RXPLL-B UNIT J1201	BPF UNIT J602
8	MAIN UNIT J802	BPF UNIT J107
9	CTRL BOARD J51	NETWORK BOARD J1
0	LOGIC UNIT J824	PA UNIT MF1
1	LOGIC UNIT J823	CHASSIS UNIT SP1
2	LOGIC UNIT J820	DC-DC UNIT J4
3	LOGIC UNIT J821	DC-DC UNIT J3
4	LOGIC UNIT J803	SCOPE UNIT J909
5	LOGIC UNIT J804	SCOPE UNIT J908
6	CTRL BOARD J2	TUNER UNIT MF1/2
7	NETWORK BOARD J4	TUNER UNIT MF3
8	PA UNIT EP501/EP502	REG UNIT
9	ANT-SW J2	BPF UNIT J506

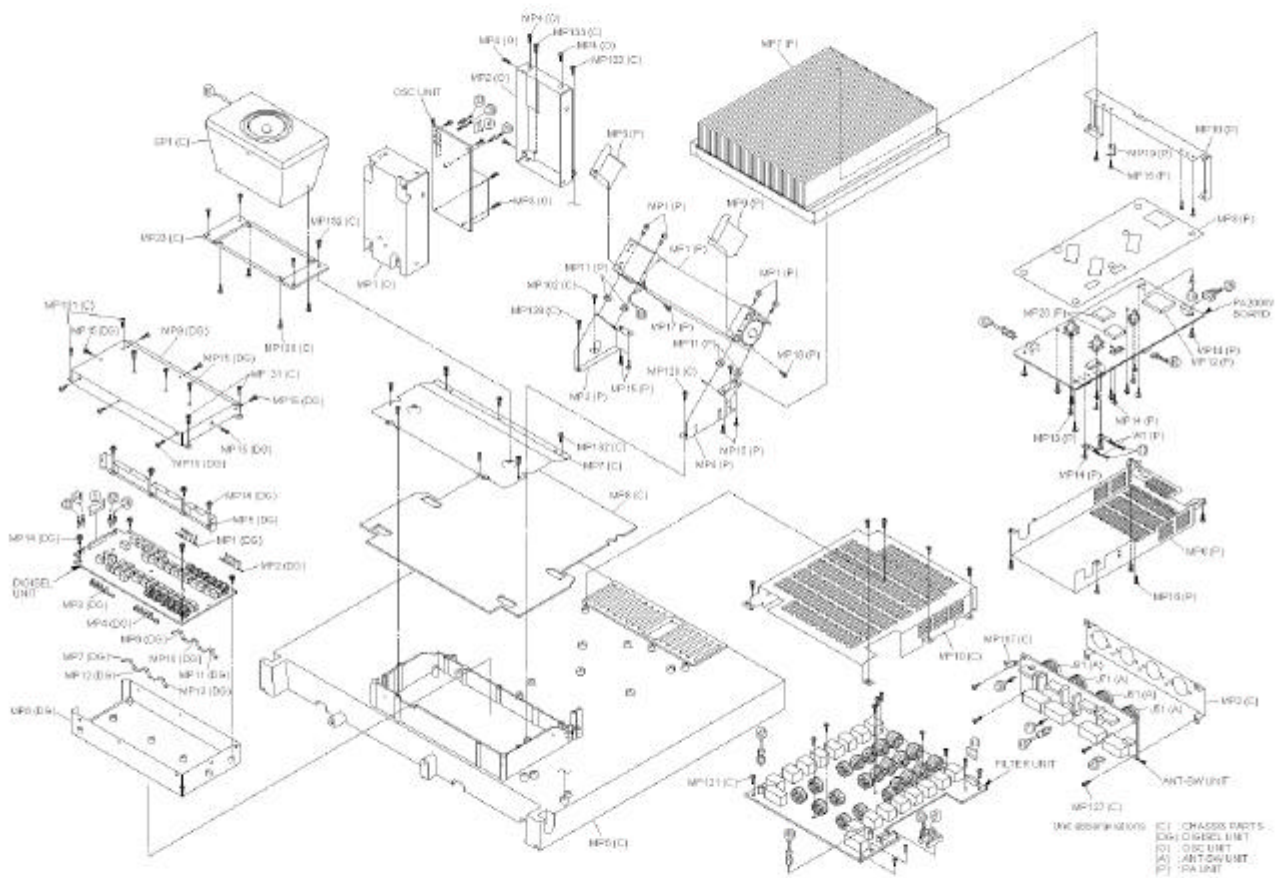
• OVERALL



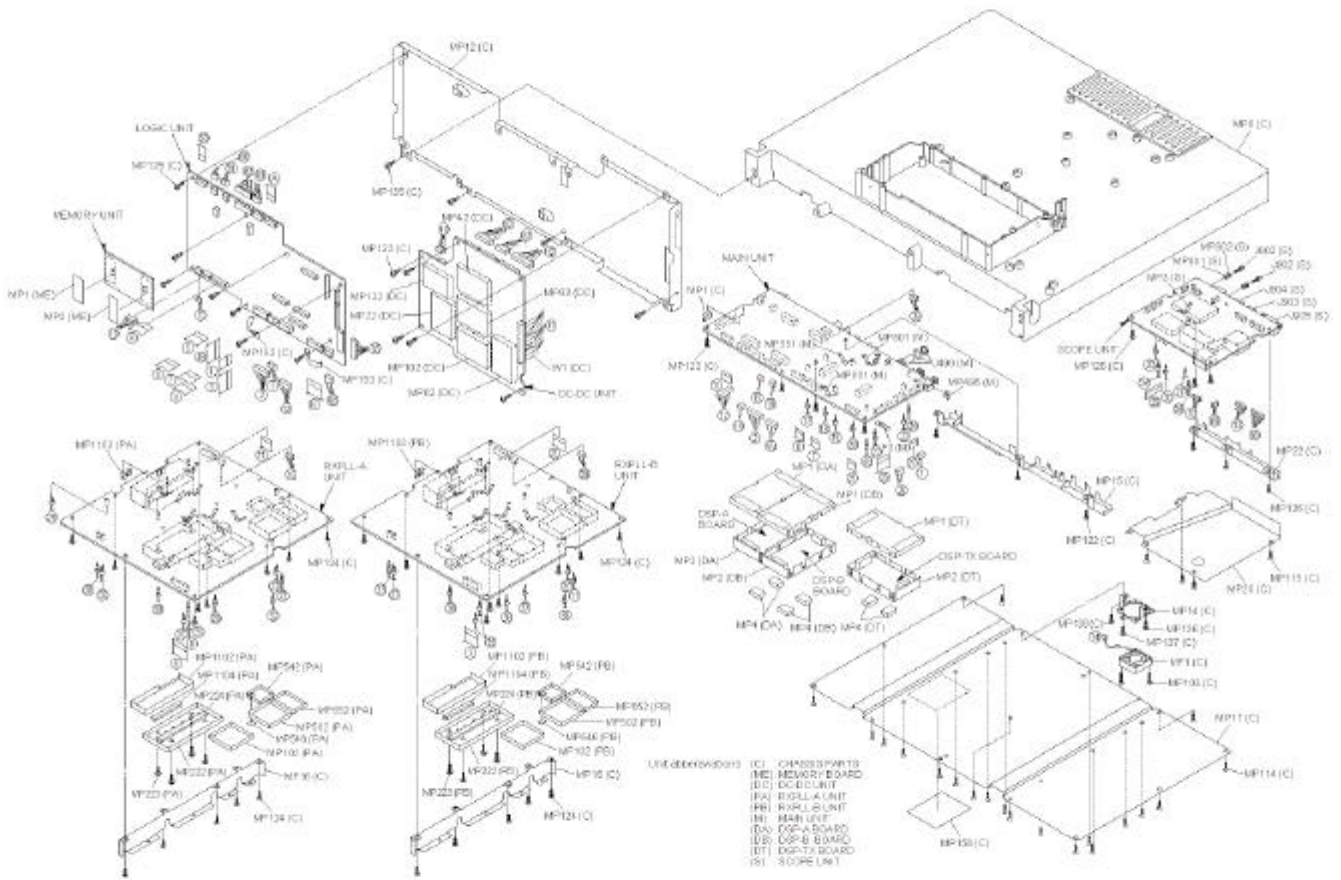
• FRONT UNIT



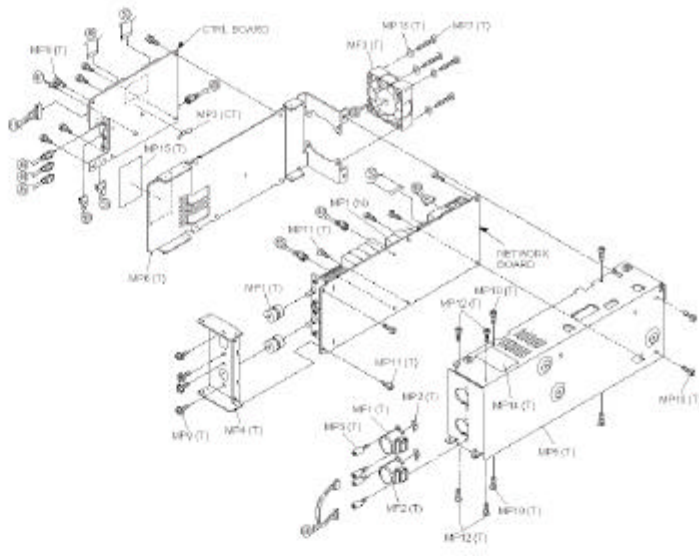
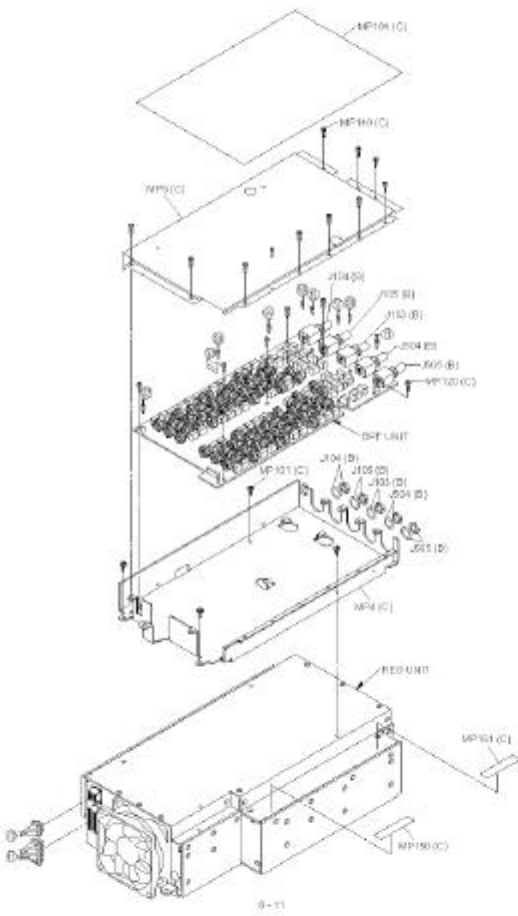
• TOP SIDE



• FRONT AND BOTTOM SIDE



• RCG, BPF AND TUNER UNITS



Unit Abbreviations

(C)	CLASS OF PARTS
(B)	BPF UNIT
(T)	TUNER UNIT
(CT)	CTRL. BOARD
(N)	NETWORK BOARD

































SECTION 7 SEMI-CONDUCTOR INFORMATION

TRANSISTORS AND FET'S

2N4102 GP (Symbol 5G)	2N4106A T106 G (Symbol 1F)	2N4106A T3 (Symbol 4E)	2N4107 T7D (Symbol 2F)	2N4113 T100 G (Symbol 6AR)
2N4131 G (Symbol 5G3)	2N4224 GP (Symbol 3BG)	2N4247 S T3 (Symbol 2C)	2N4262D (Symbol 2M3D)	2N4269 T100 G (Symbol 6E)
2N4231 T100 G (Symbol 6E)	2N4237 T100 G (Symbol 2C)	2N4110 Y (Symbol 1F)	2N4216 D (Symbol 2D)	2N4402 S TL (Symbol 1D3)
2N4269 (Symbol 6E)	2N4269 D T3 (Symbol 2C)	2N4269 K (Symbol 3B)	2N4269 A TL (Symbol 1M)	2N4269 A T3 (Symbol 1D3)
2N4281 (Symbol 2D)	2N4109 T7D (Symbol 2F)	2N4004 T100 G (Symbol 6AG)	2N4101 S TL (Symbol 2D)	2N4148 GP (Symbol 1V)
2N4211 GP (Symbol 1G)	2N4215 T7 G (Symbol 4E)	2N4218 GP (Symbol 1V)	2N4207 GP (Symbol 2GR)	2N4237 T100 (Symbol 6E)
2N4204 (Symbol 1V)	2N4205 TL (Symbol 1D)	2N4146A T100 (Symbol 1A)	2N4146A TL (Symbol 1E)	2N4146A T100 (Symbol 2A)

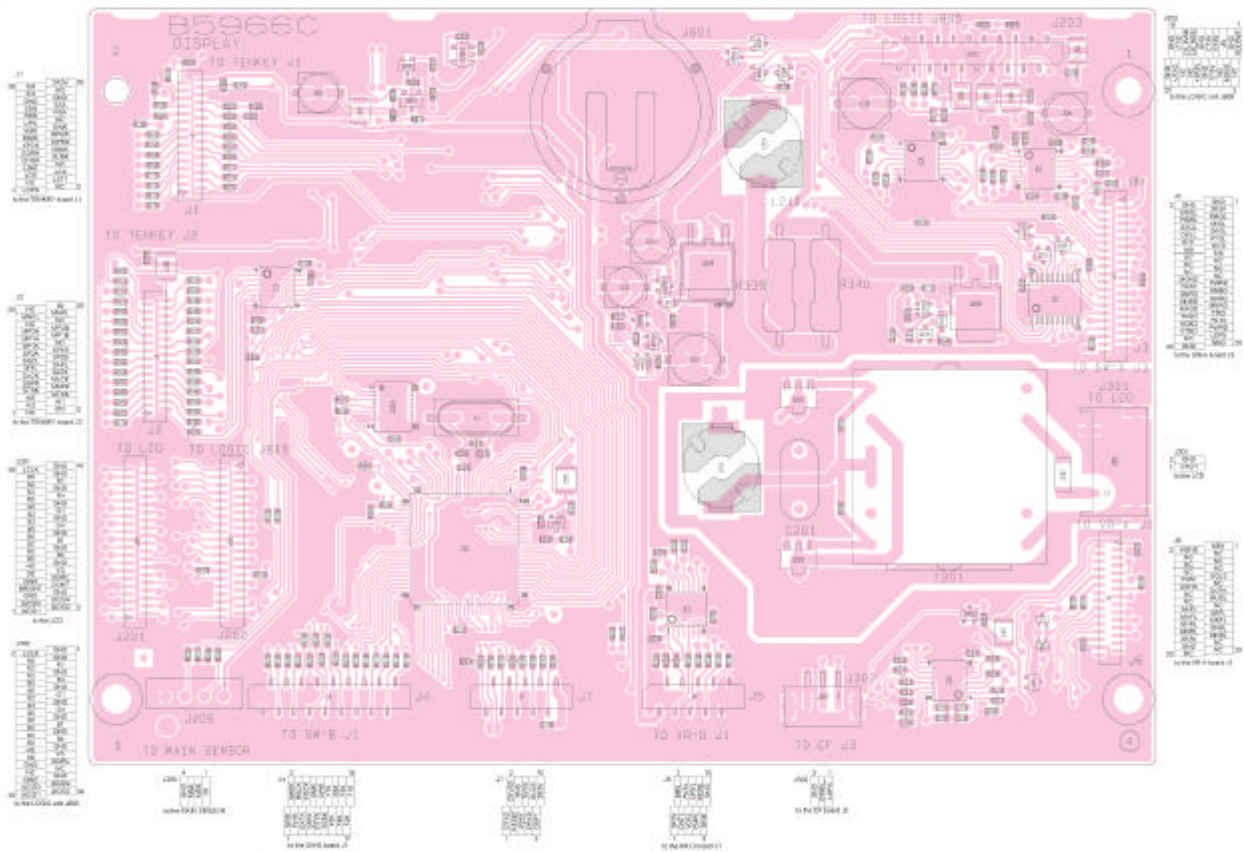
2N4147A T100 (Symbol 6E)	2N4146A T100 (Symbol 2A)	2N4147 TL (Symbol 1E)	2N4147A (Symbol 2C)	2N4146A TL TL (Symbol 1E)
2N4147 GP (Symbol 1G)	2N4147 (Symbol 2GR)	2N4147 (Symbol 2G)	2N4147 (Symbol 1V)	2N4147 (Symbol 1V)
2N4147 TL (Symbol 1E)	2N4147 (Symbol 2GR)			

• DIODES

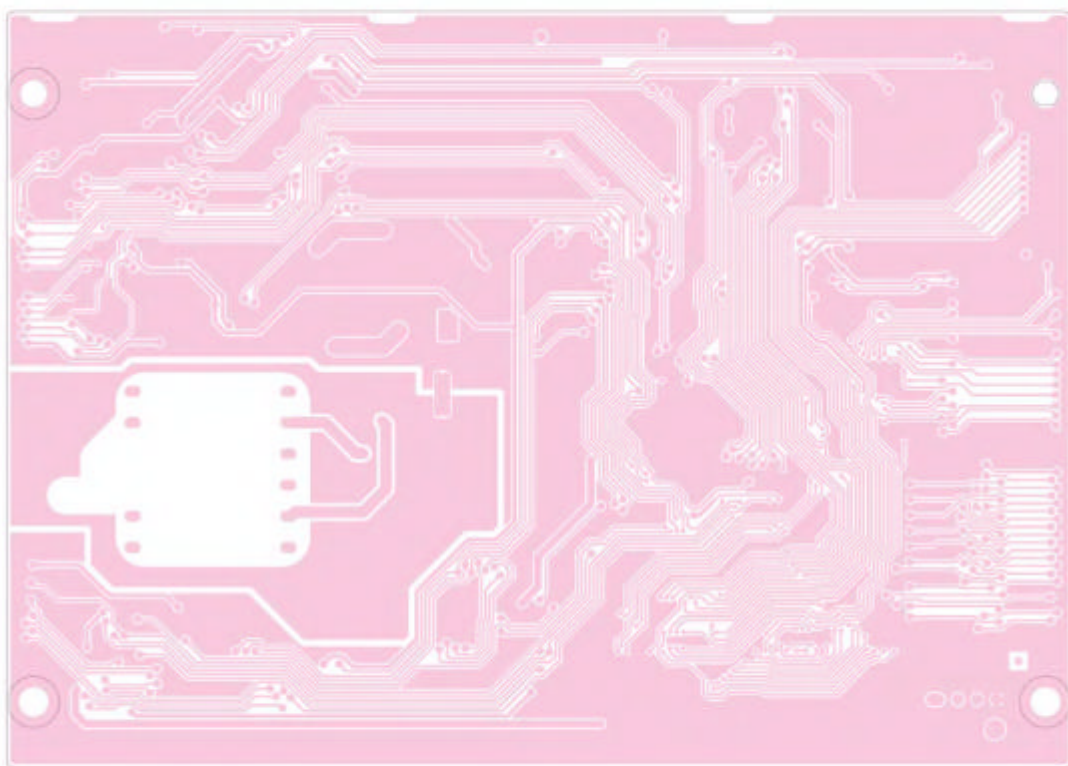
1N4148-430 (Symbol 14)	1N6033 (Symbol 81)	1N6012 (Symbol 5F)	1N6018 (Symbol A4)	1N6035 (Symbol A)
				
1N6020 (Symbol 1T8)	1N6031 TL (Symbol 1V)	1N6037 (Symbol 1G)	1N6051 TL (Symbol 2B)	1N6051 TL (Symbol F)
				
DA1422 TL (Symbol 1B)	DA1722 TL (Symbol V)	DSM2AA4 (Symbol 5A4)	H5000V6 TP (Symbol 500V6T)	H5000V6 TP (Symbol CT)
				
MA14 (Symbol 81)	MA2011 (Symbol A)	MA2211 (Symbol B)	MA27 (Symbol 4B)	MA28 (Symbol 3A)
				
MA142 (Symbol M1)	MA2021 (Symbol 1A)	MA2017 M (Symbol 4-2)	MA201 M (Symbol 5-1)	MEPC1321 L1 (Symbol 600L)
				
MPD1722A1 (Symbol 4P)	PDS1-20 (Symbol 3E)	PSM1-17100 (Symbol 5L)	PDS1M D1 (Symbol 3T)	PDS1M T321 (Symbol 4TD)
				
PEE 3M T321 (Symbol M 32)	PH603a			
				

SECTION 8 BOARD LAYOUTS

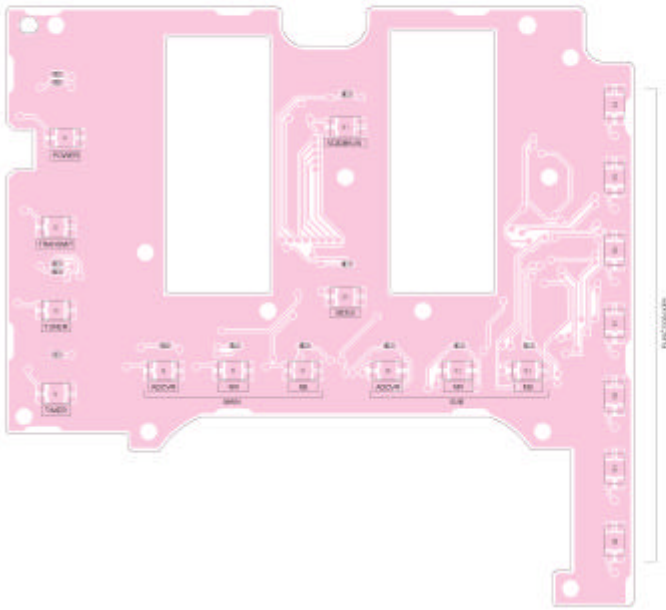
8-1 DISPLAY BOARD
• TOP VIEW



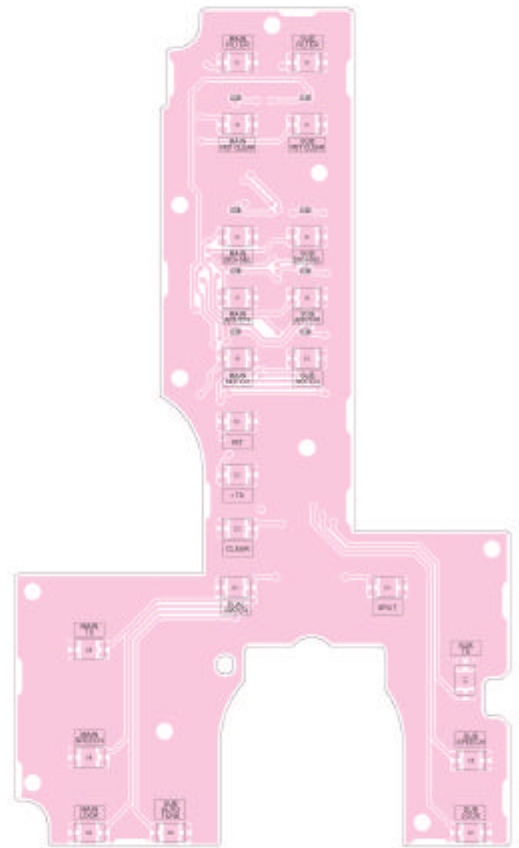
• BOTTOM VIEW (DISPLAY BOARD)



8-2 SWA BOARD
 • TOP VIEW



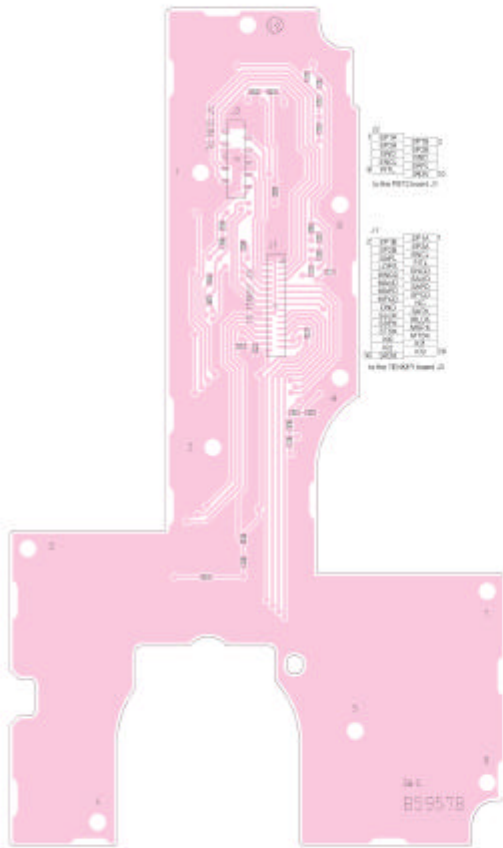
8-4 SW-C BOARD
 • TOP VIEW



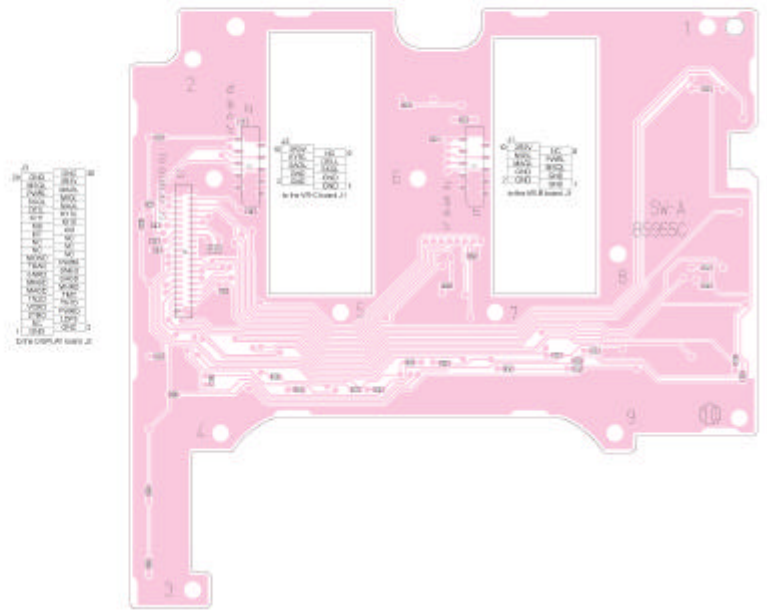
8-3 SW-B BOARD
 • TOP VIEW



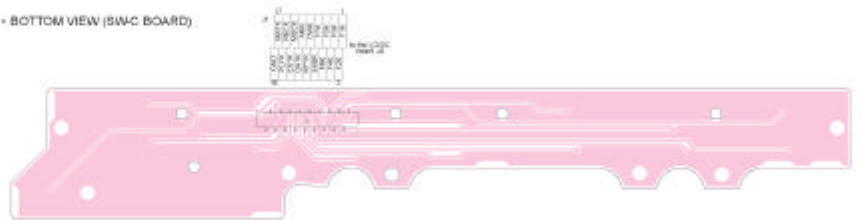
• BOTTOM VIEW (SWC BOARD)



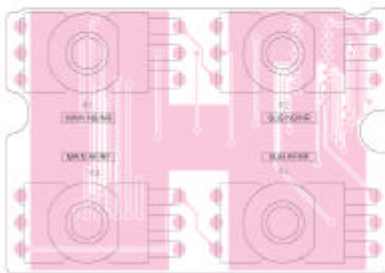
• BOTTOM VIEW (SWA BOARD)



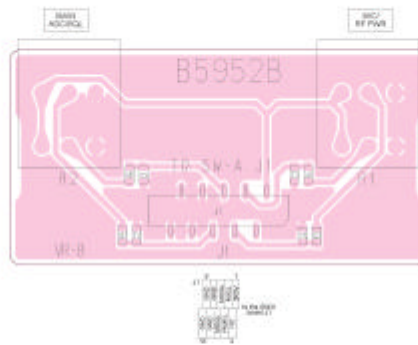
• BOTTOM VIEW (SWC BOARD)



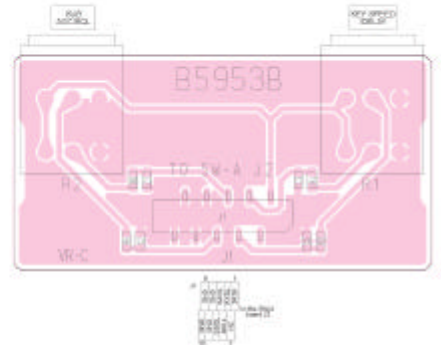
8-5 VR-A BOARD
• TOP VIEW



8-6 VR-B BOARD
• TOP VIEW



8-7 VR-C BOARD
• TOP VIEW



8-8 VR-D BOARD
• TOP VIEW



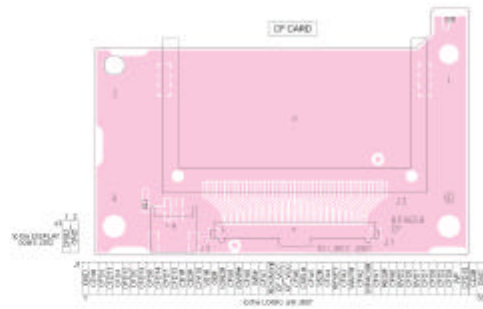
8-9 JACK BOARD
• TOP VIEW



8-10 MIC BOARD
• TOP VIEW



B-11 CF BOARD
• TOP VIEW



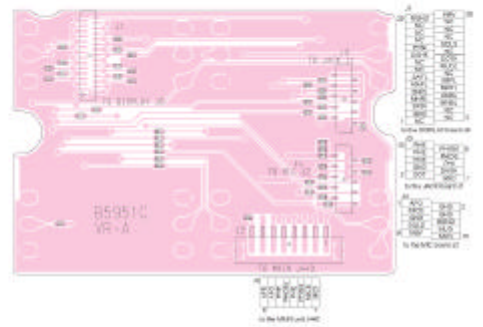
• BOTTOM VIEW (VR-C BOARD)



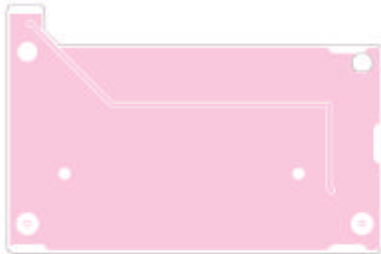
• BOTTOM VIEW (VR-B BOARD)



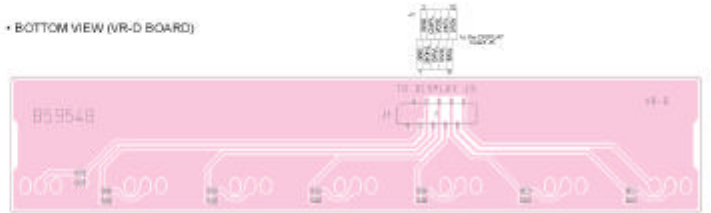
• BOTTOM VIEW (VR-A BOARD)



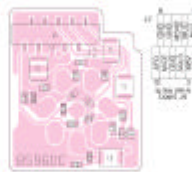
• BOTTOM VIEW (CF BOARD)



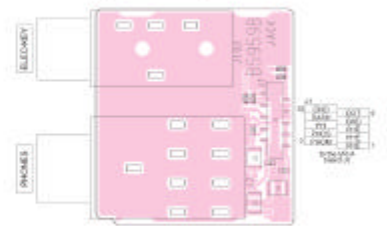
• BOTTOM VIEW (VR-D BOARD)



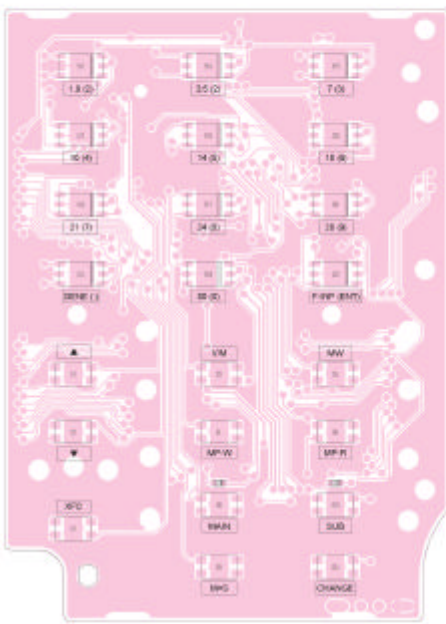
• BOTTOM VIEW (MIC BOARD)



• BOTTOM VIEW (JACK BOARD)



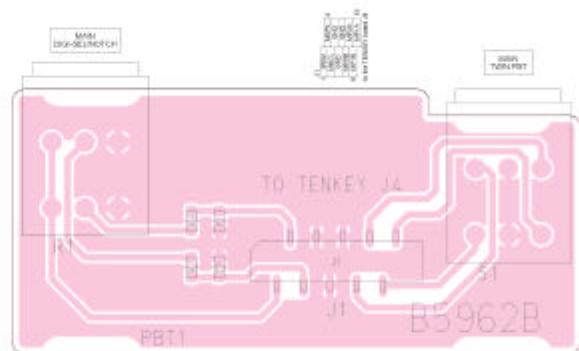
8-12 TENKEY BOARD
• TOP VIEW



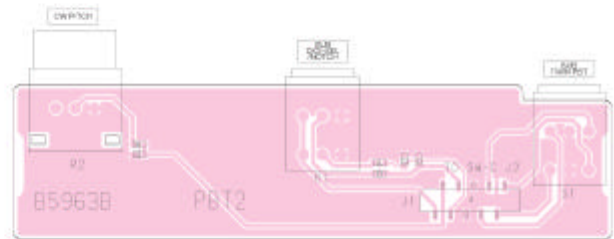
8-13 LED BOARD
• TOP VIEW



8-14 PBT1 BOARD
• TOP VIEW



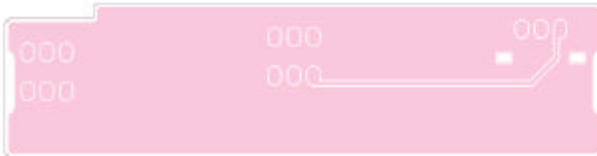
8-15 PBT2 BOARD
• TOP VIEW



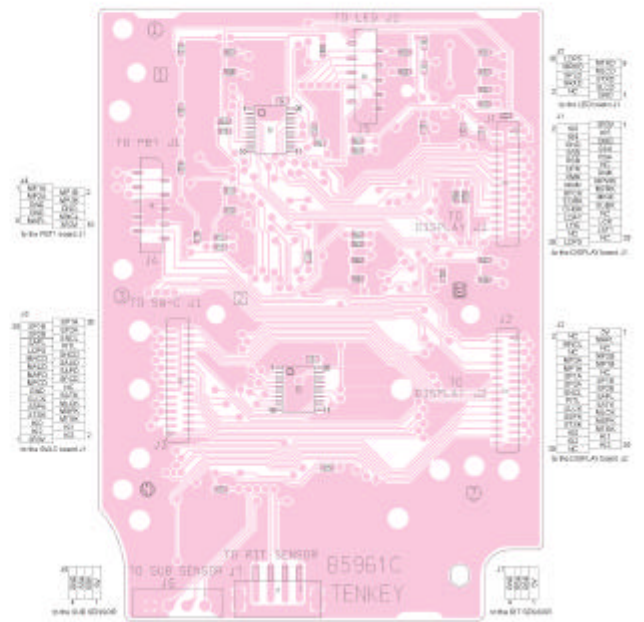
• BOTTOM VIEW (PBT1 BOARD)



• BOTTOM VIEW (PBT2 BOARD)



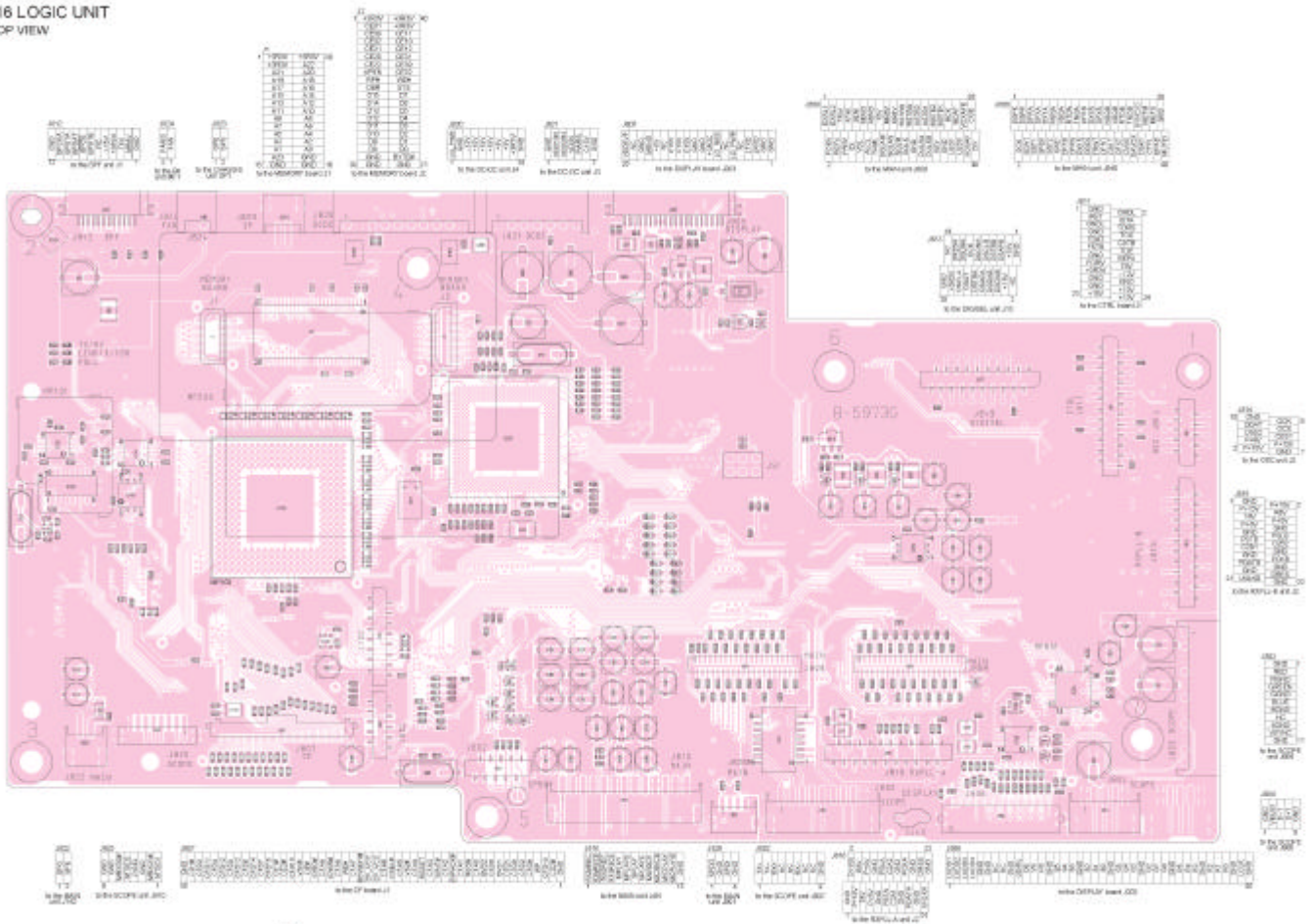
• BOTTOM VIEW (TENKEY BOARD)



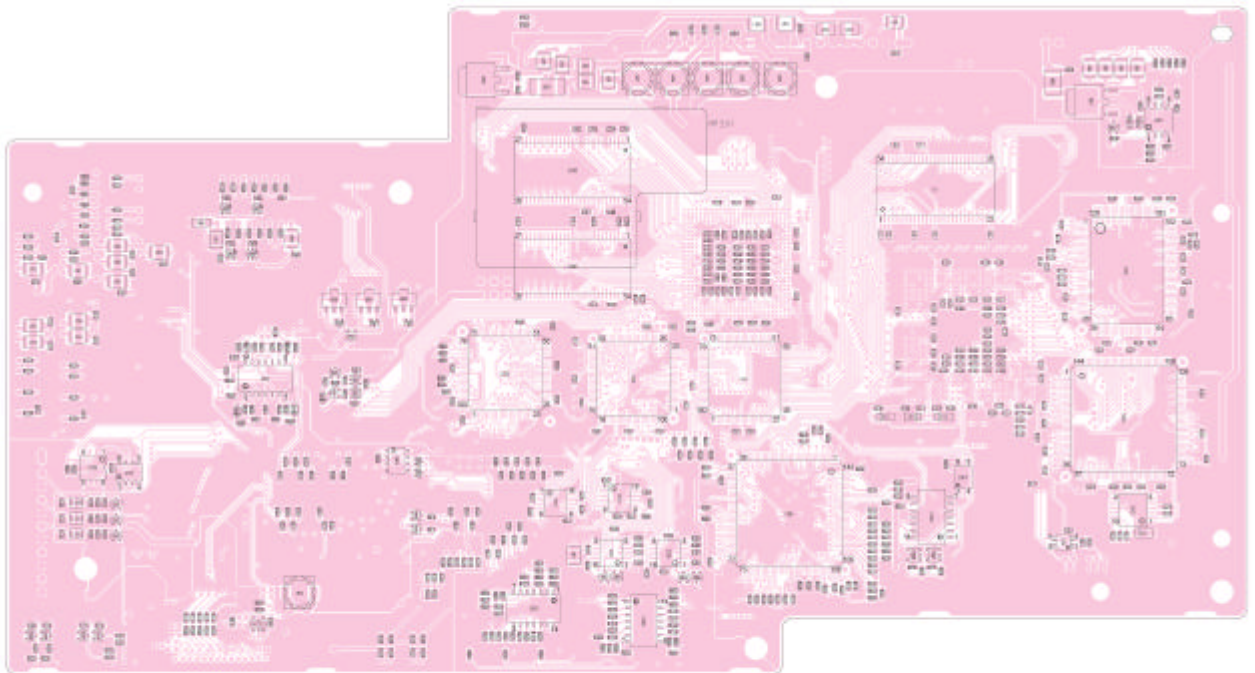
• BOTTOM VIEW (LED BOARD)



8-16 LOGIC UNIT
- TOP VIEW



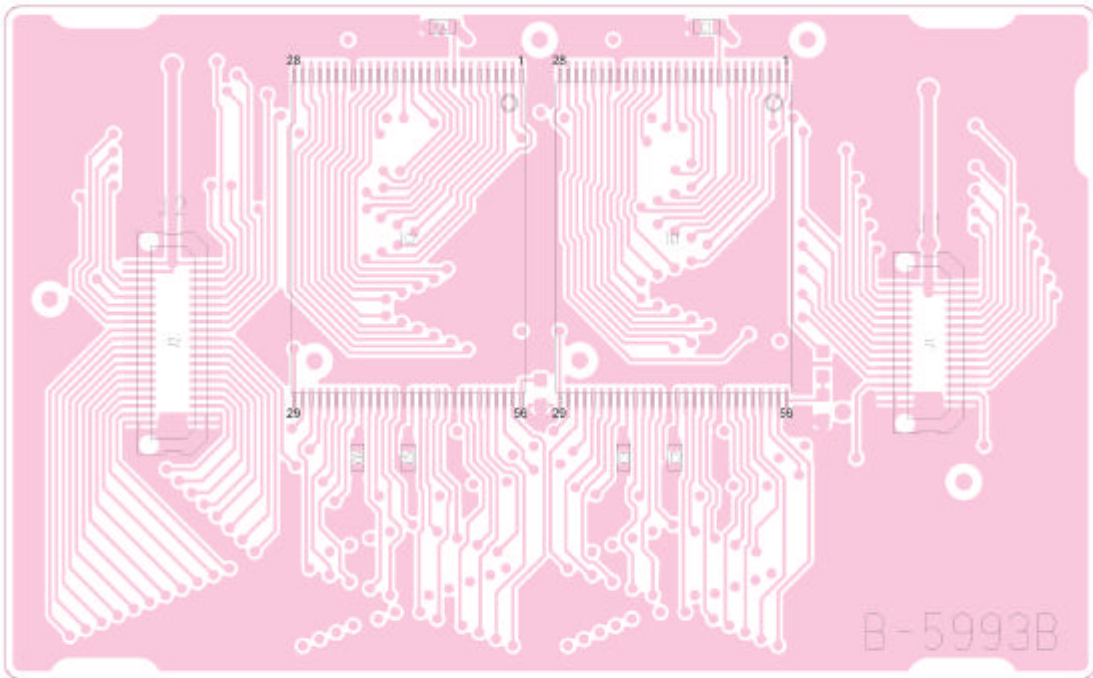
• BOTTOM VIEW (LOGIC UNIT)



8-17 MEMORY BOARD
- TOP VIEW

32	1	+3.0V	+3.0V	40
		CE01	CE11	
		CE00	CE11	
		CE02	CE12	
		CE21	CE12	
		CE20	CE30	
		CE22	CE30	
		UPDN	CE32	
		RP9	WWE	
		OCW	STG	
		D15	D7	
		D14	D6	
		D13	D6	
		D12	D4	
		D11	D3	
		D10	D2	
		D9	D1	
		D8	D1	
		D6	D0	
		GND	BITMAP	21
	20	GND	GND	21

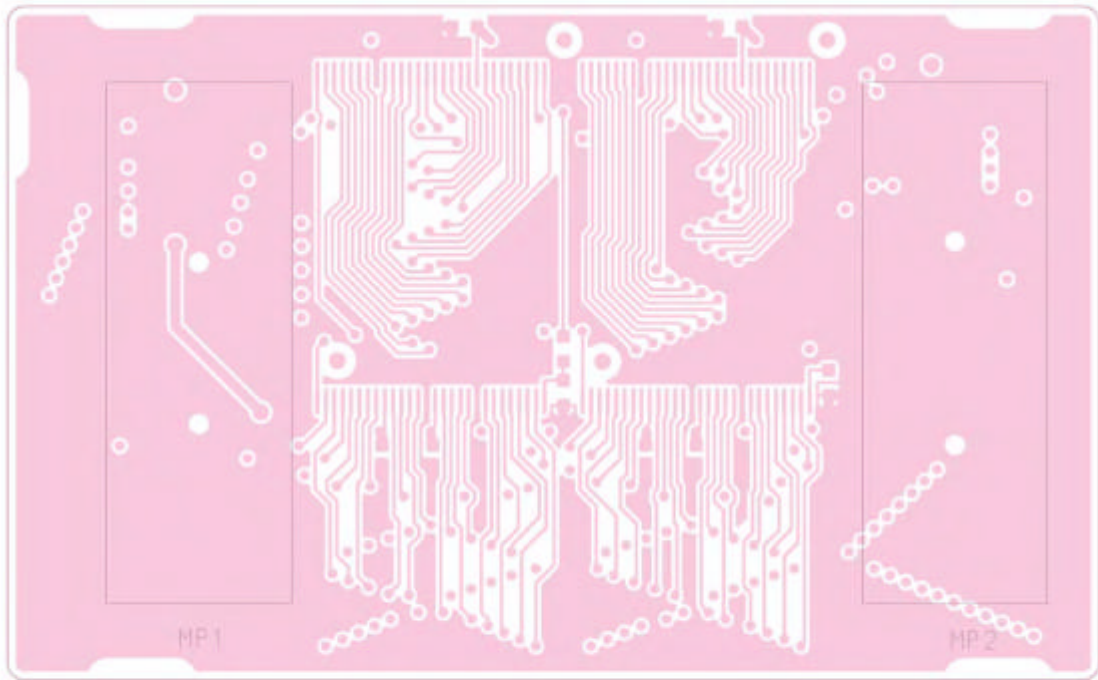
to the LOGIC unit J2



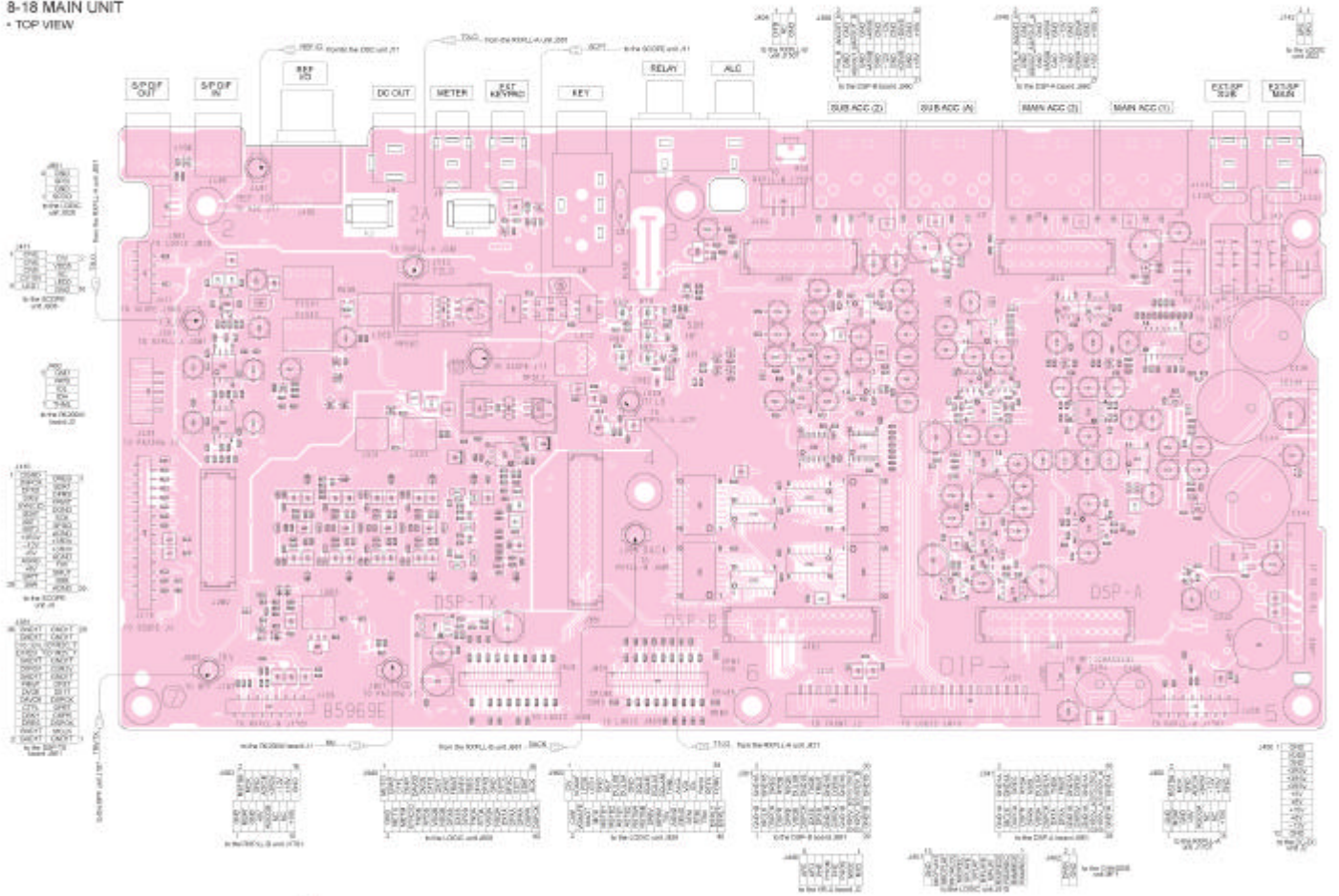
21	1	+3.0V	+3.0V	30
		A21	A22	
		A20	A20	
		A18	A18	
		A17	A16	
		A15	A14	
		A13	A13	
		A11	A10	
		A9	A8	
		A7	A6	
		A6	A4	
		A3	A2	
		A1	A0	
		A23	GND	
	15	GND	GND	16

to the LOGIC unit J1

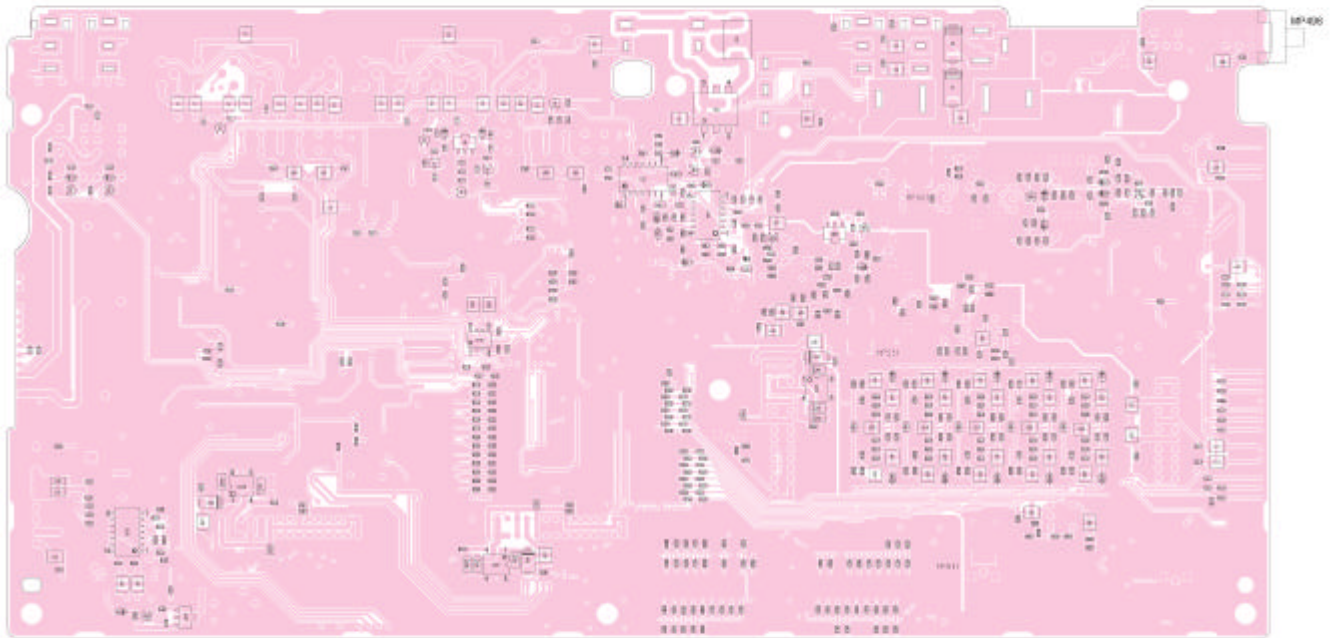
• BOTTOM VIEW (MEMORY BOARD)



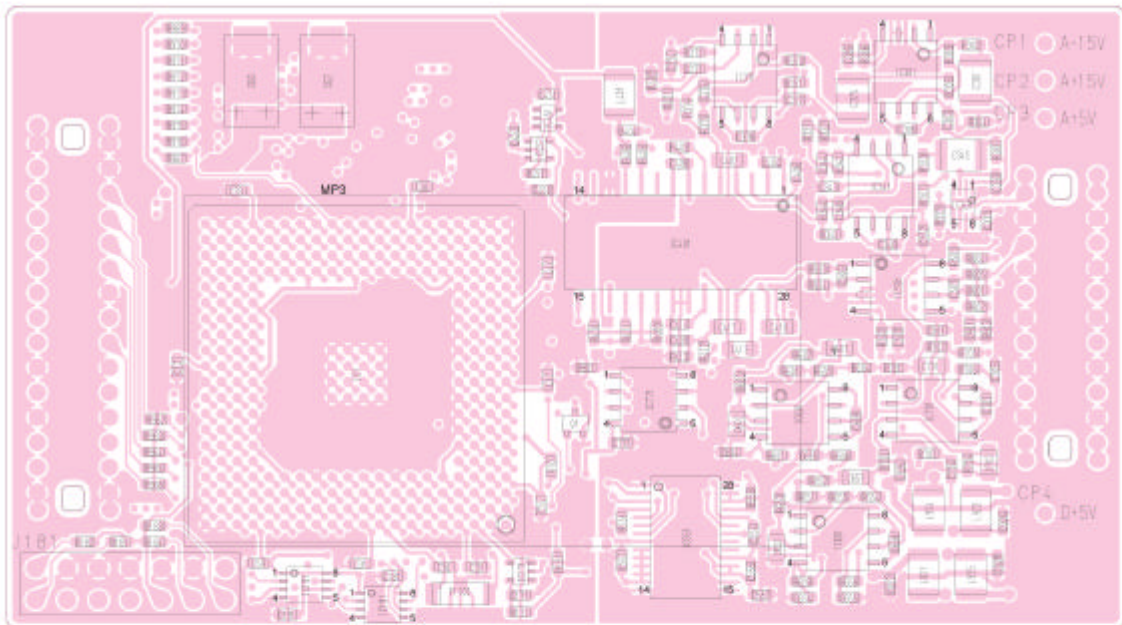
8-18 MAIN UNIT
- TOP VIEW



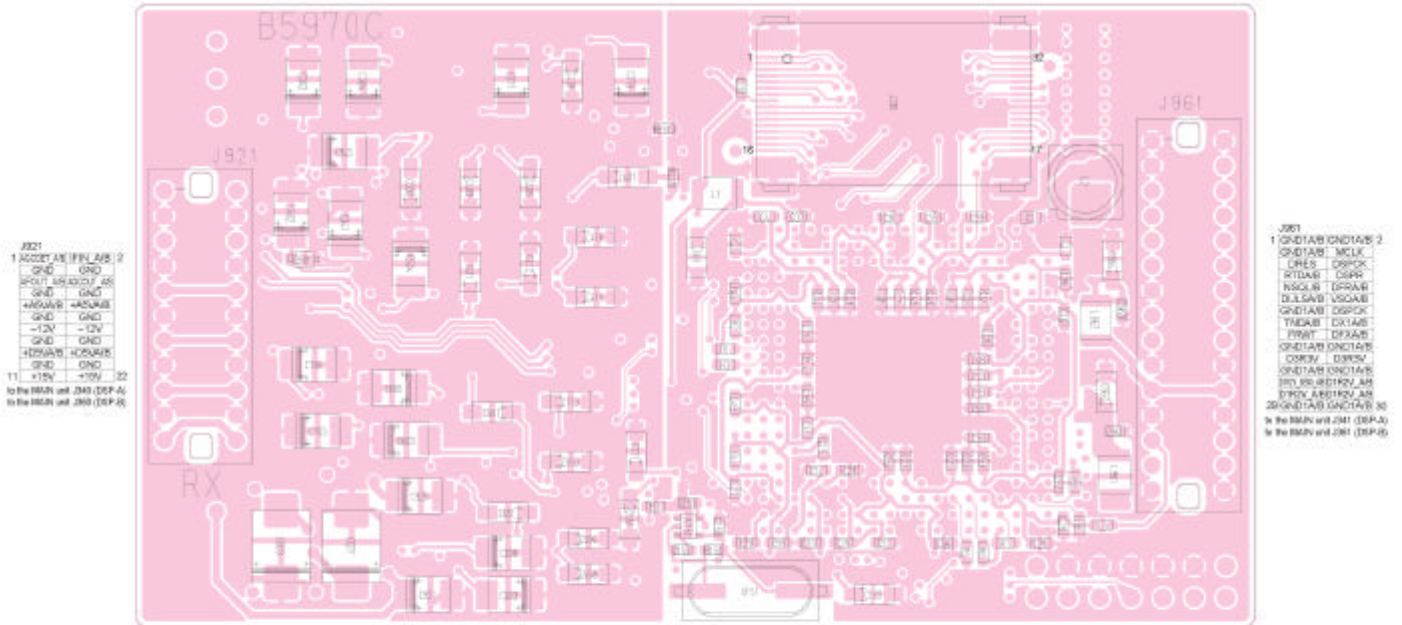
• BOTTOM VIEW (MAIN UNIT)



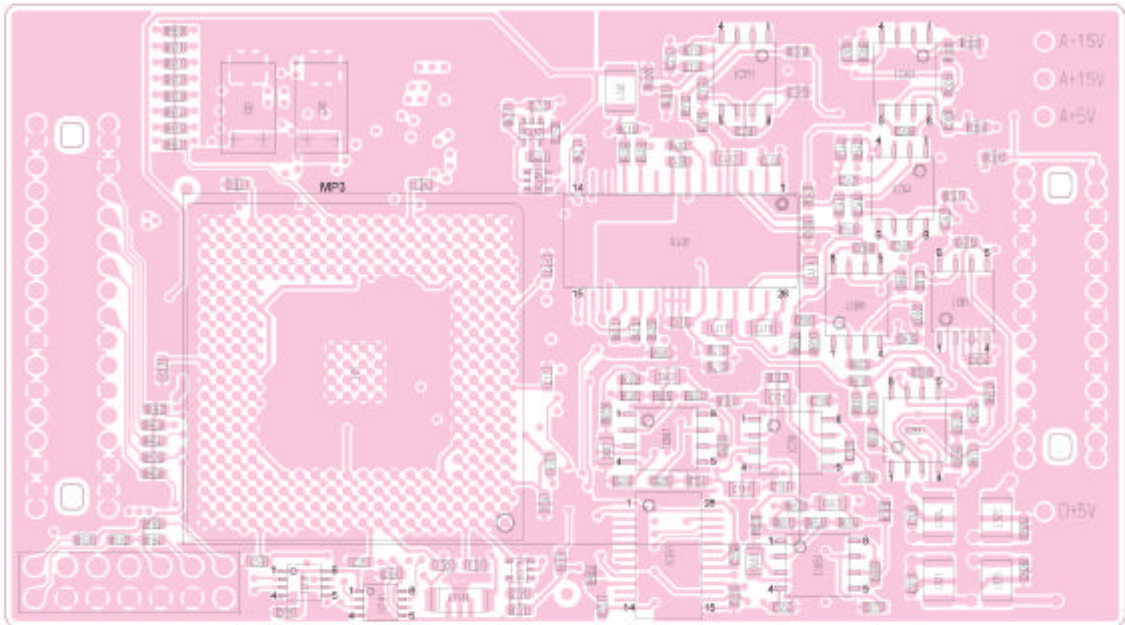
8-19 DSP-A/DSP-B BOARDS
• TOP VIEW



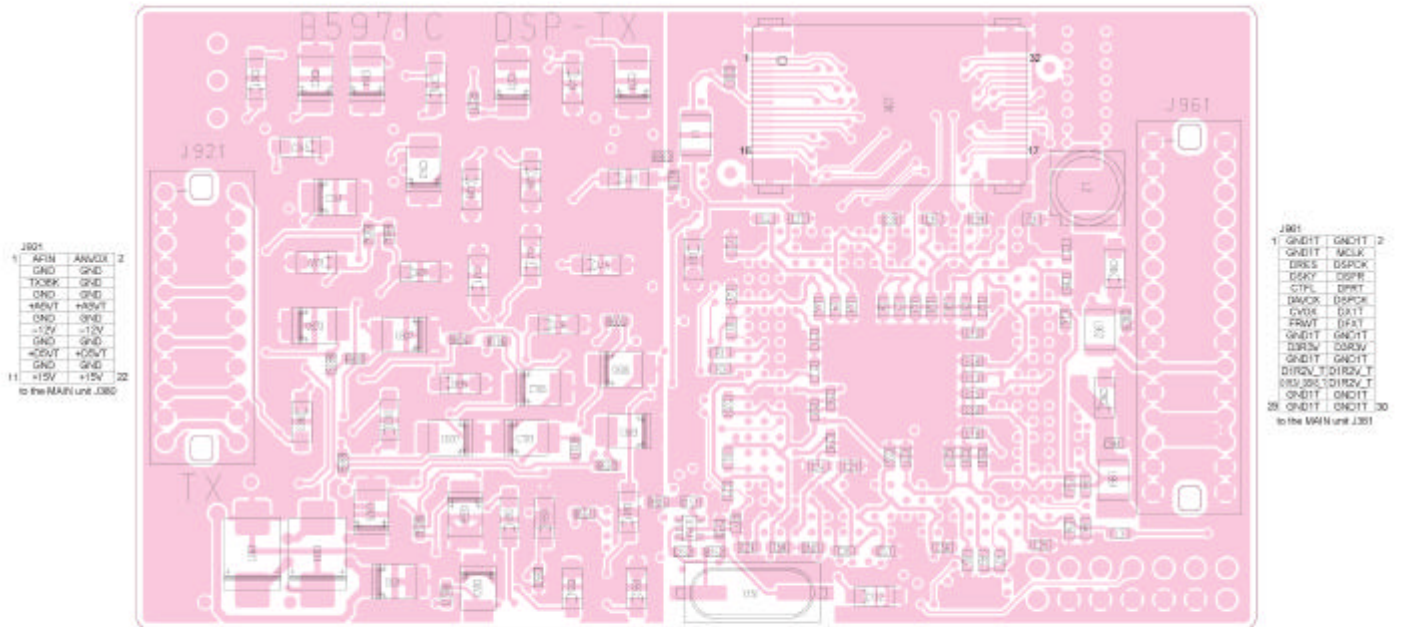
• BOTTOM VIEW (DSP-A/DSP-B BOARDS)



8-20 DSP-TX BOARD
- TOP VIEW



• BOTTOM VIEW (DSP-TX BOARD)



J921

1	AFIN	ANALOG	2
3	GND	GND	
4	TXCLK	GND	
5	GND	GND	
6	+5VUT	+5VUT	
7	GND	GND	
8	-12V	-12V	
9	GND	GND	
10	+5VUT	+5VUT	
11	GND	GND	
12	+15V	+15V	

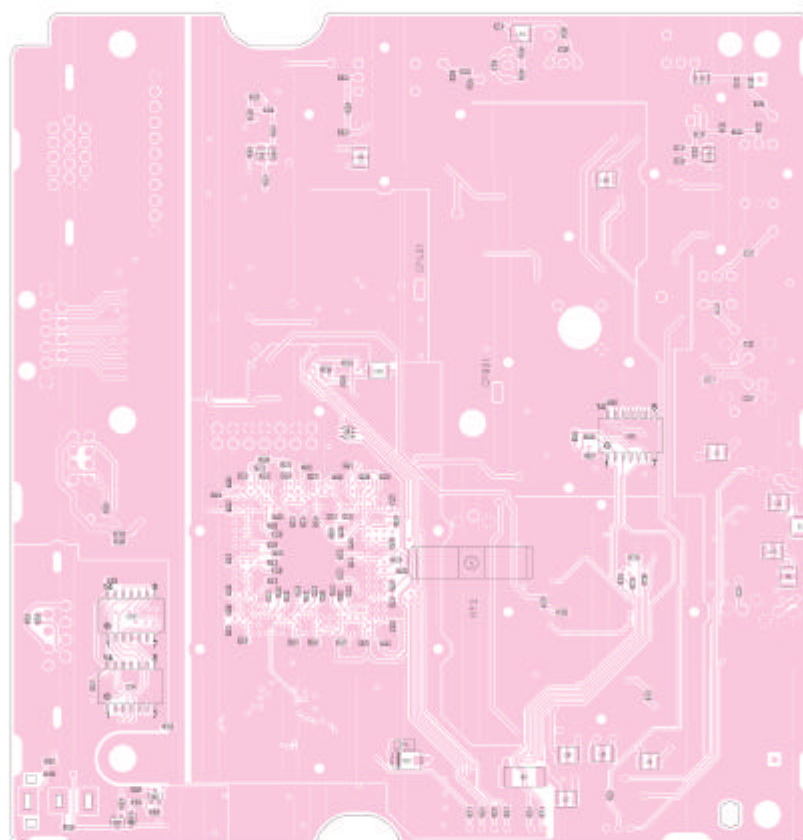
to the MAIN unit J380

J961

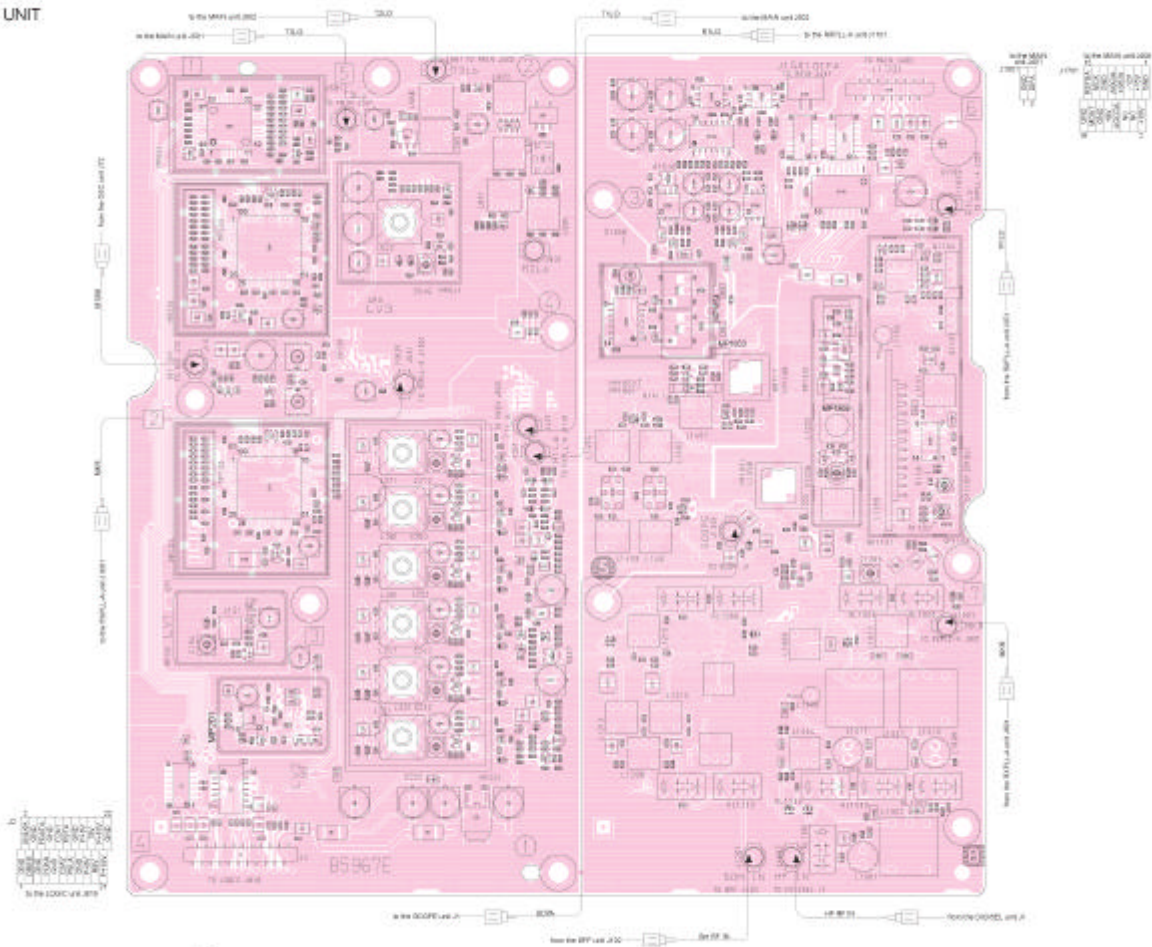
1	GND1T	GND1T	2
3	DRS5	DRSPCK	
4	DSKY	DSPE	
5	CTPL	DPWT	
6	DAWCK	DSPOK	
7	DSVX	DS1T	
8	DSWT	DSRT	
9	GND1T	GND1T	
10	DSRSV	DSRSV	
11	GND1T	GND1T	
12	DIRSQ_T	DIRSQ_T	
13	DIRSQ_TDIRSQ_T		
14	GND1T	GND1T	
15	GND1T	GND1T	
16	GND1T	GND1T	
17	GND1T	GND1T	
18	GND1T	GND1T	
19	GND1T	GND1T	
20	GND1T	GND1T	
21	GND1T	GND1T	
22	GND1T	GND1T	
23	GND1T	GND1T	
24	GND1T	GND1T	
25	GND1T	GND1T	
26	GND1T	GND1T	
27	GND1T	GND1T	
28	GND1T	GND1T	
29	GND1T	GND1T	
30	GND1T	GND1T	

to the MAIN unit J381

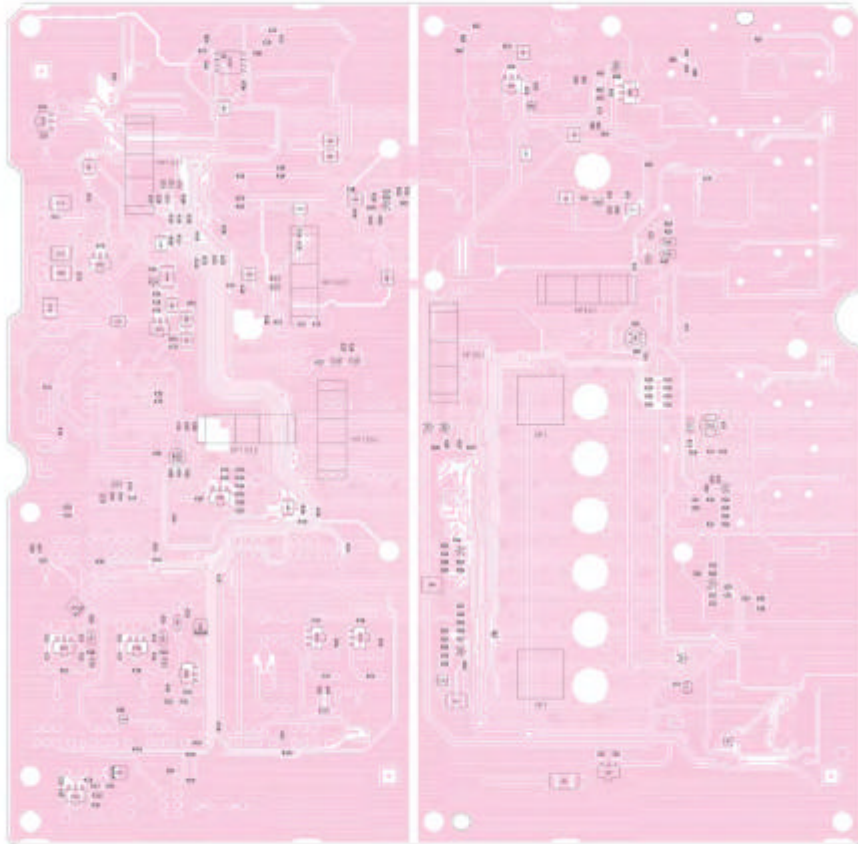
• BOTTOM VIEW (SCOPE UNIT)



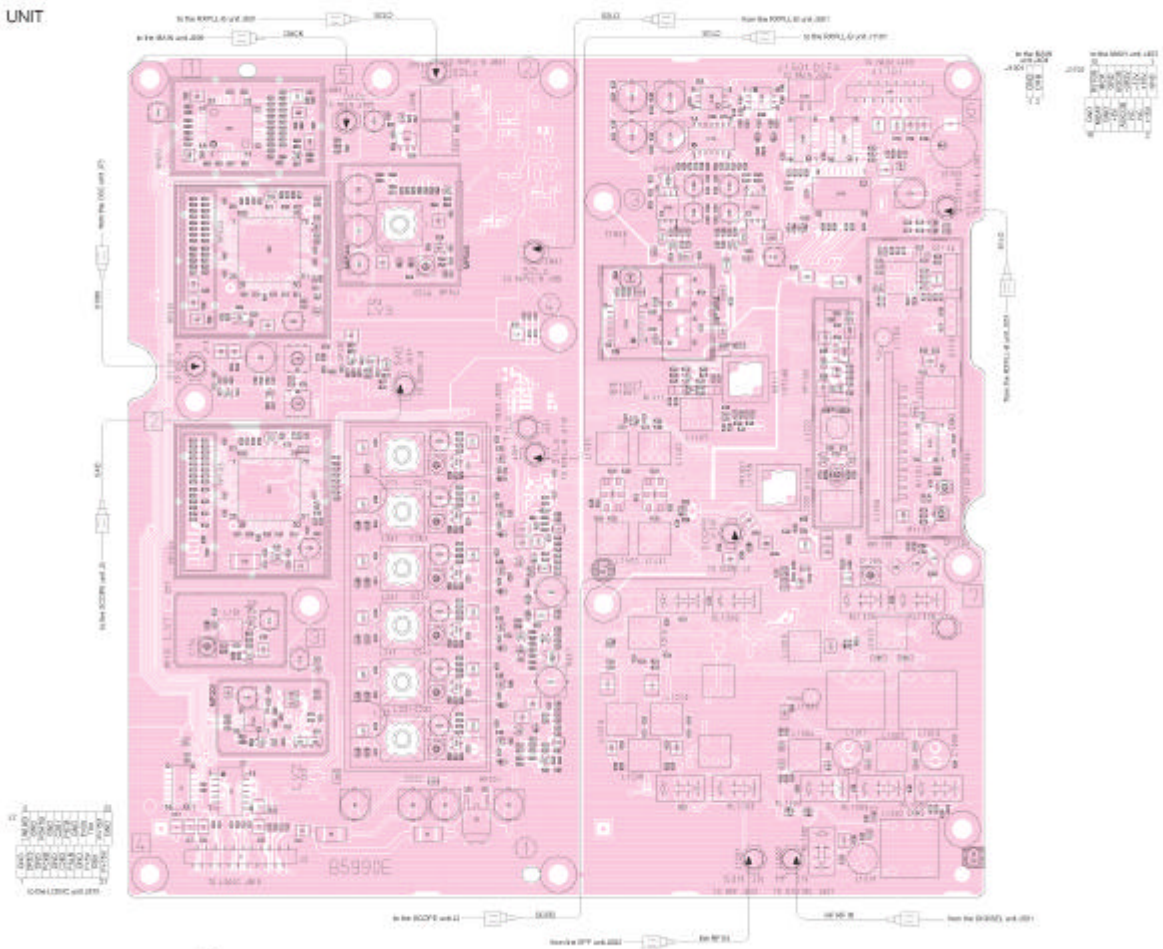
8-22 RXPLL-A UNIT
• TOP VIEW



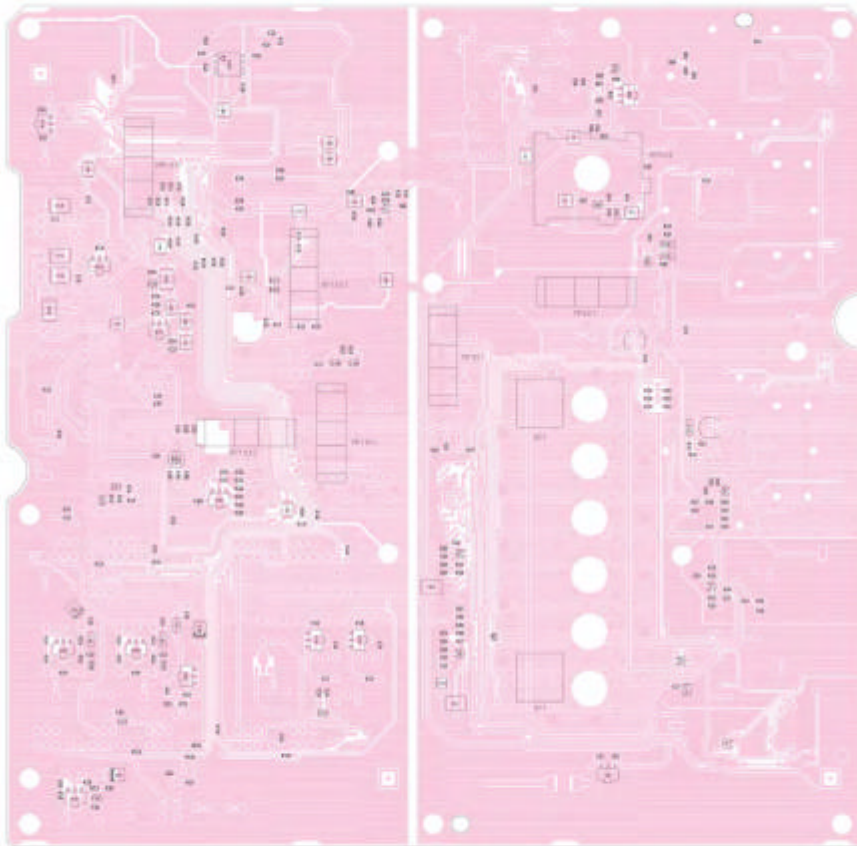
• BOTTOM VIEW (RXPLL-A UNIT)



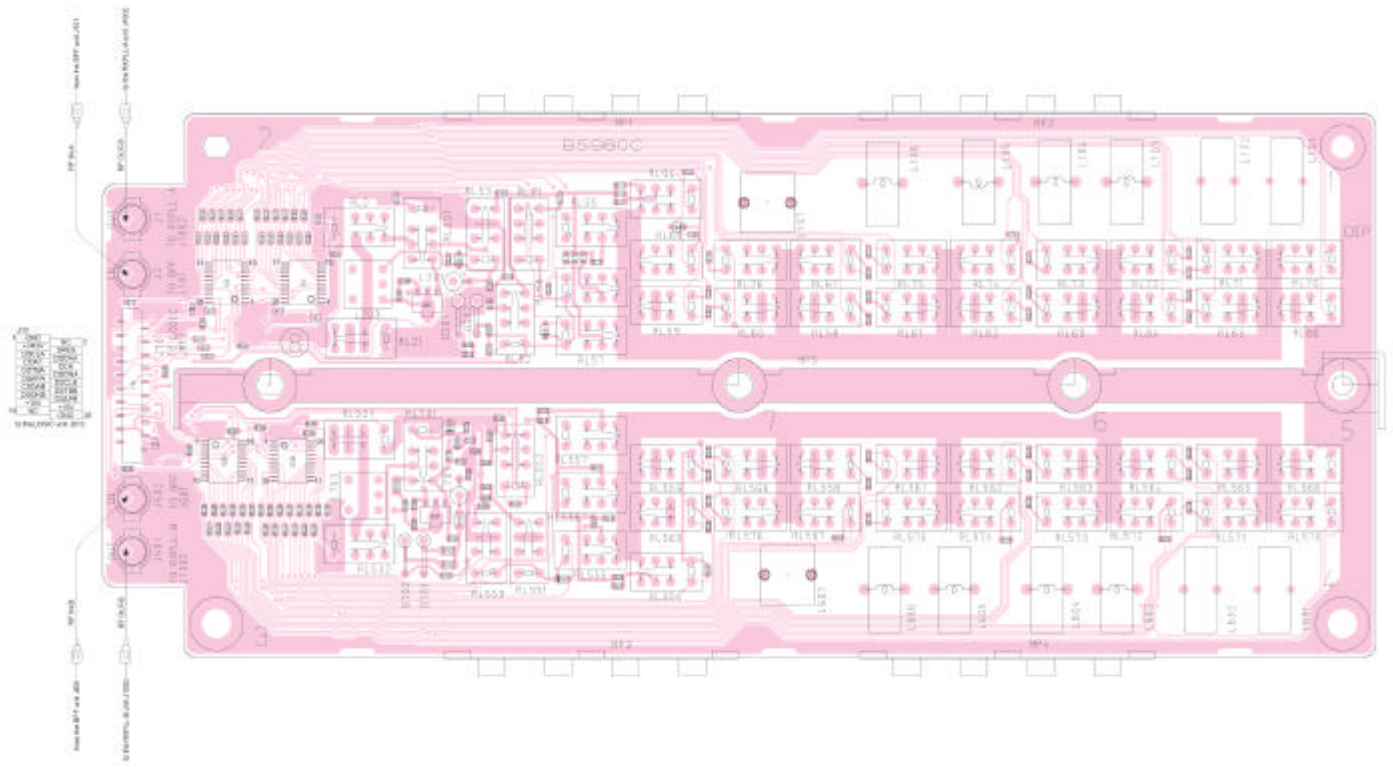
8-23 RXPLL-B UNIT
 • TOP VIEW



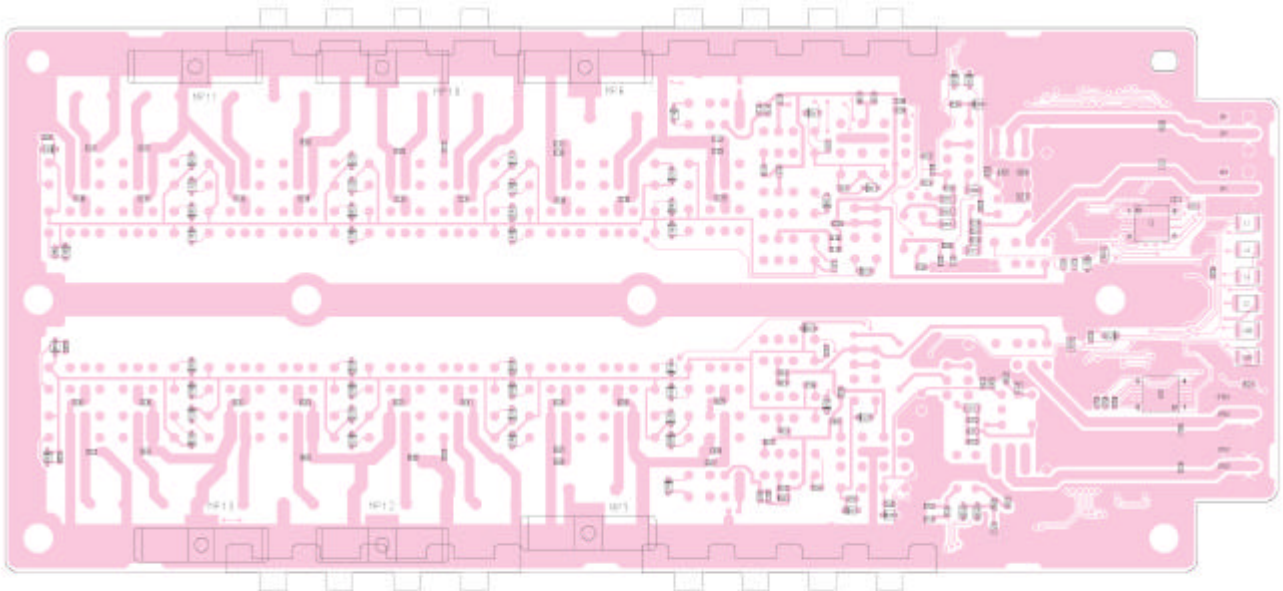
• BOTTOM VIEW (RXPLL-B UNIT)



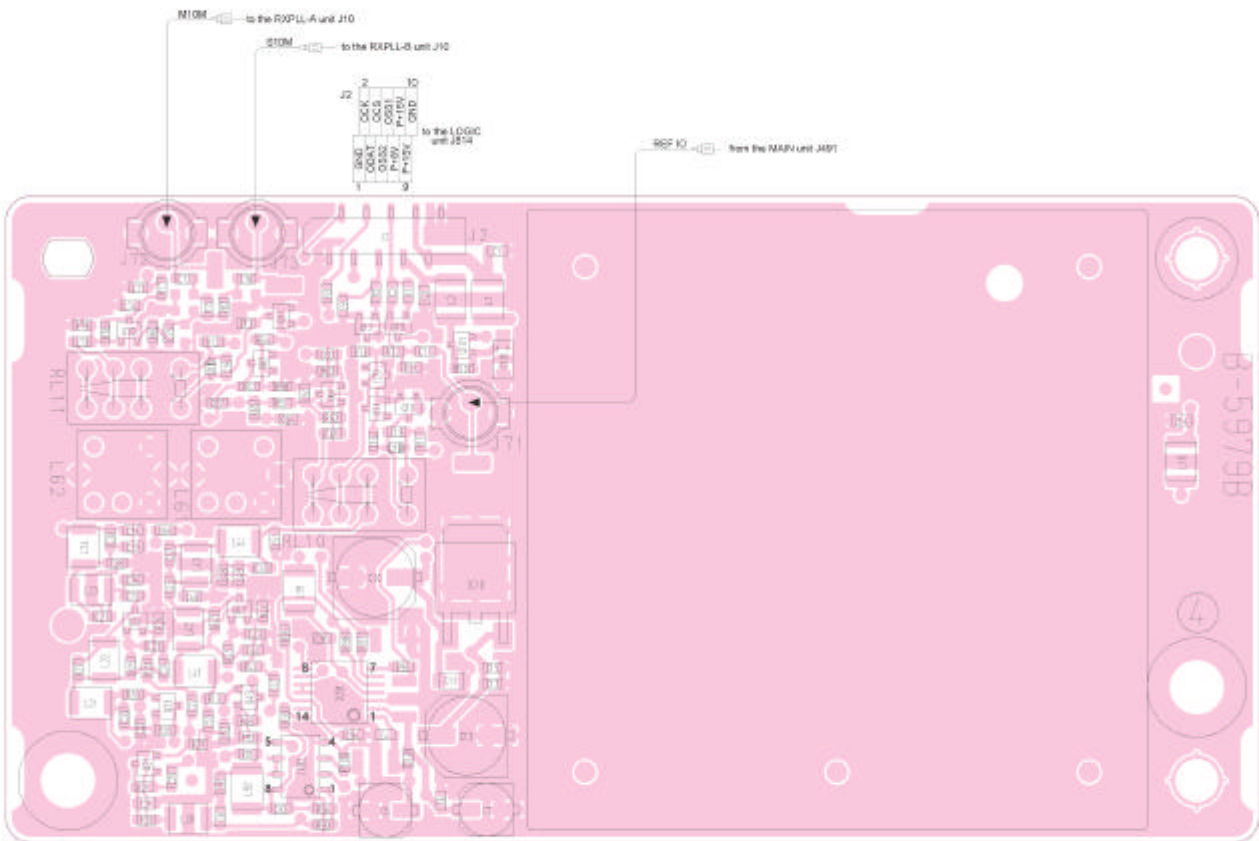
8-24 DIGISEL UNIT
 - TOP VIEW



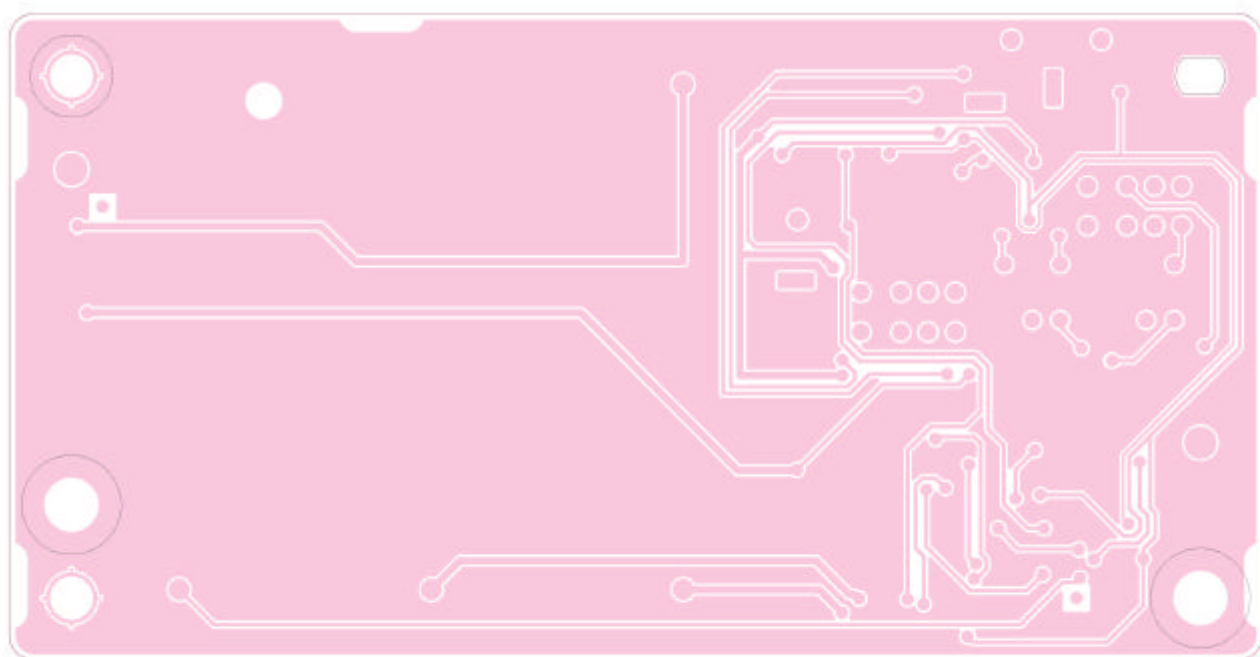
• BOTTOM VIEW (DIGISEL UNIT)



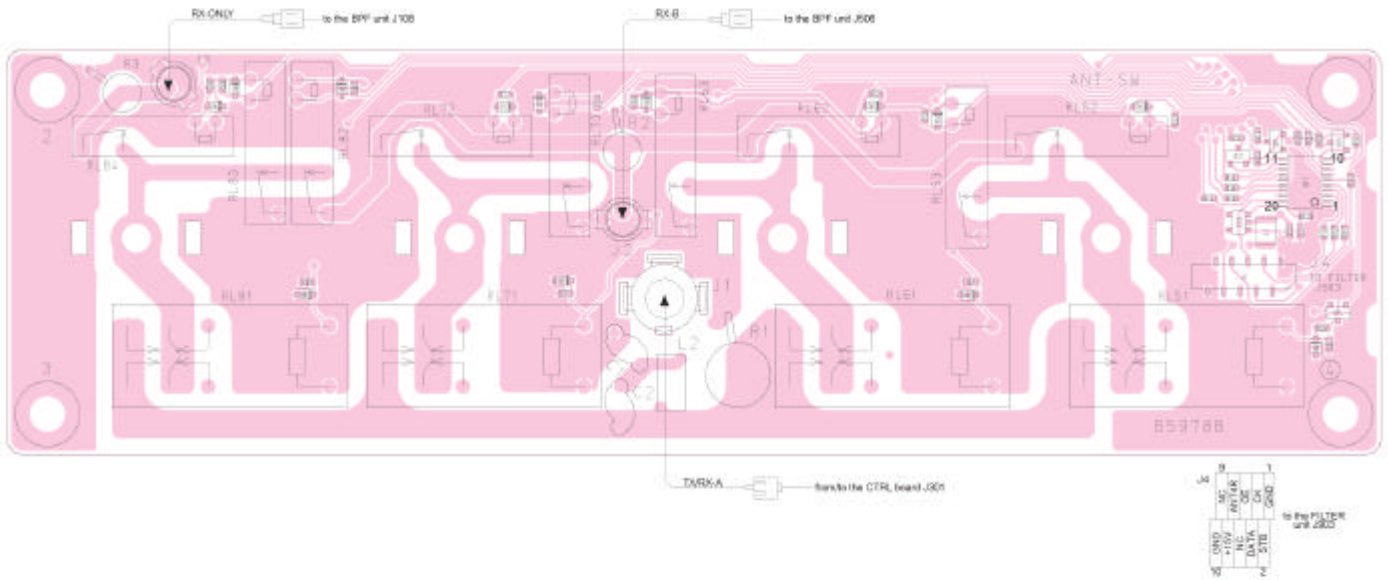
8-25 OSC UNIT
- TOP VIEW



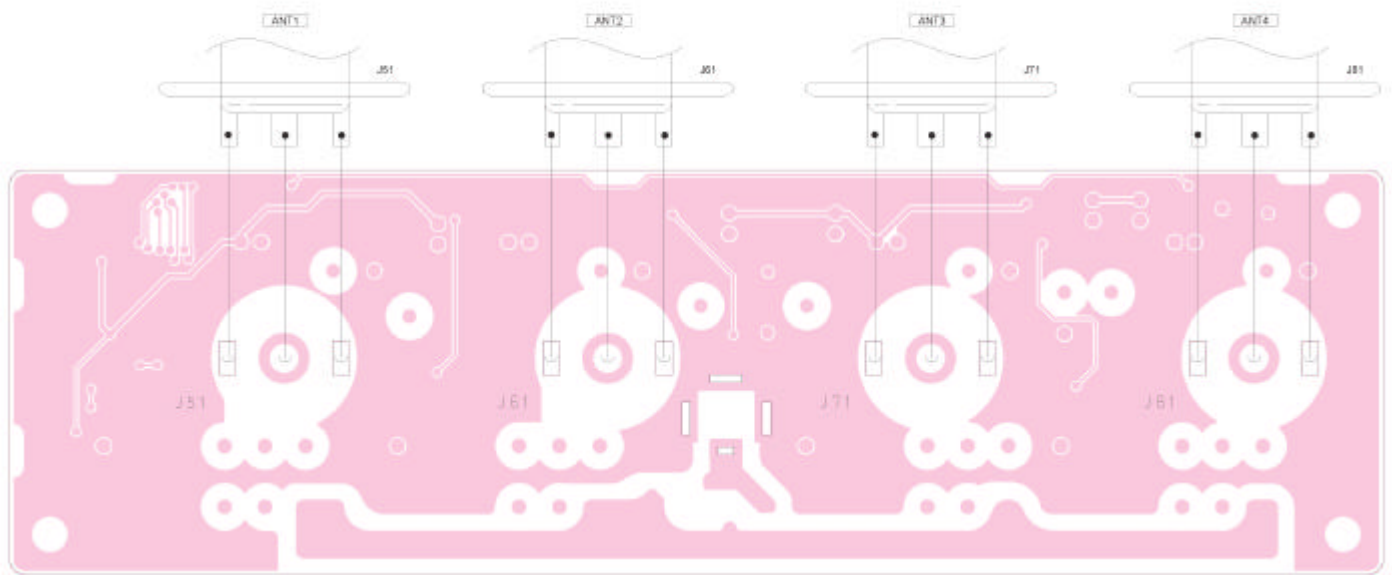
• BOTTOM VIEW (OSC UNIT)



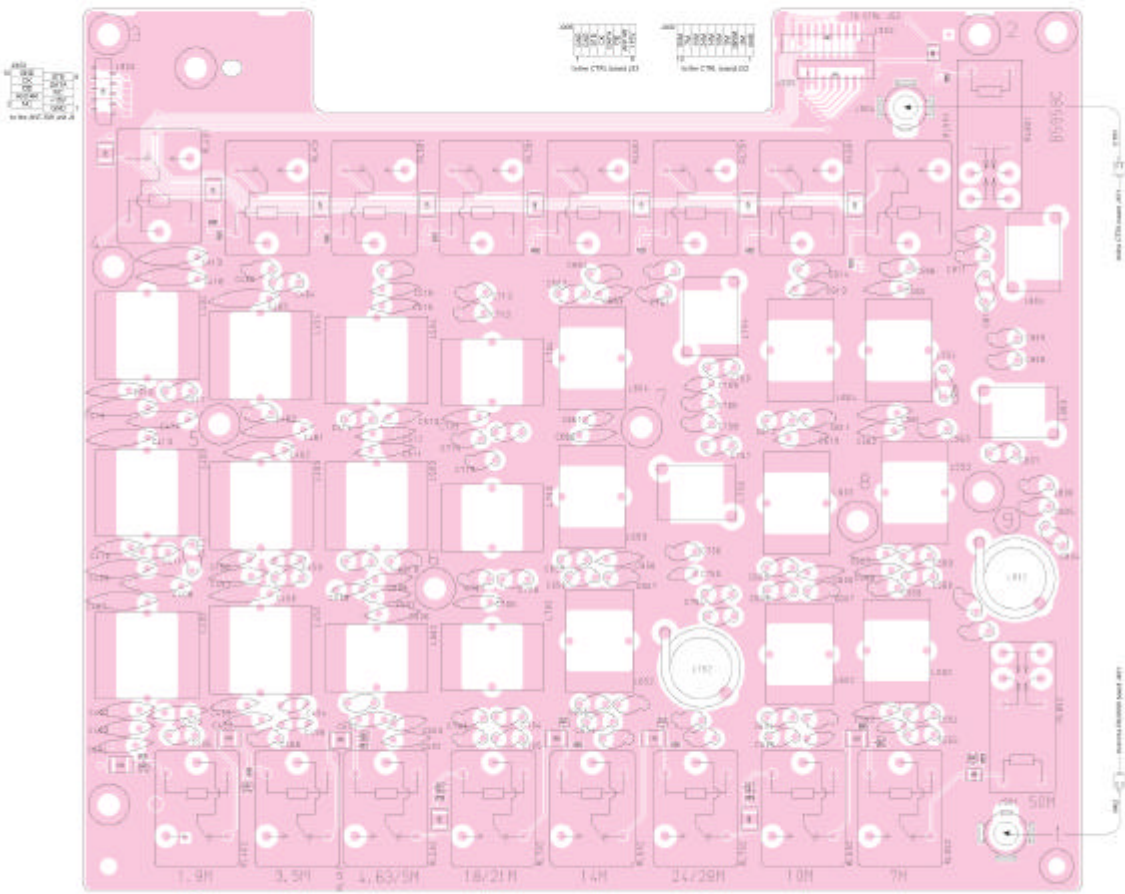
8-26 ANT-SW UNIT
- TOP VIEW



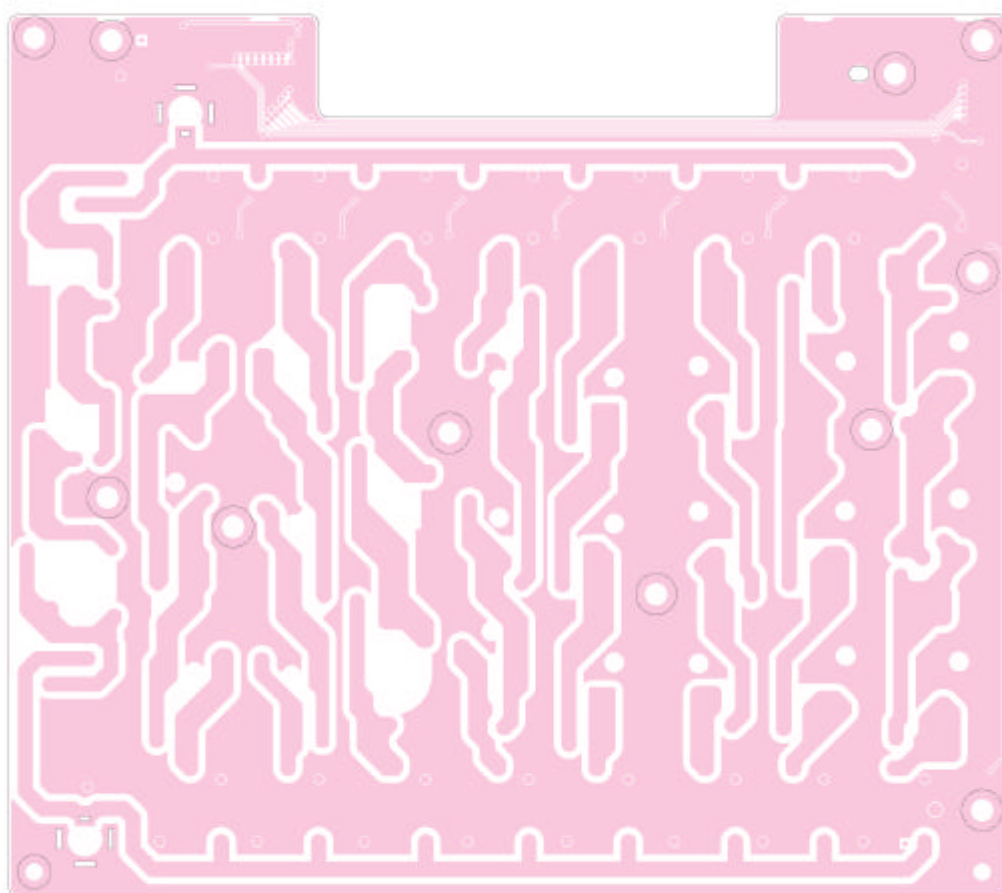
• BOTTOM VIEW (ANT-SW UNIT)



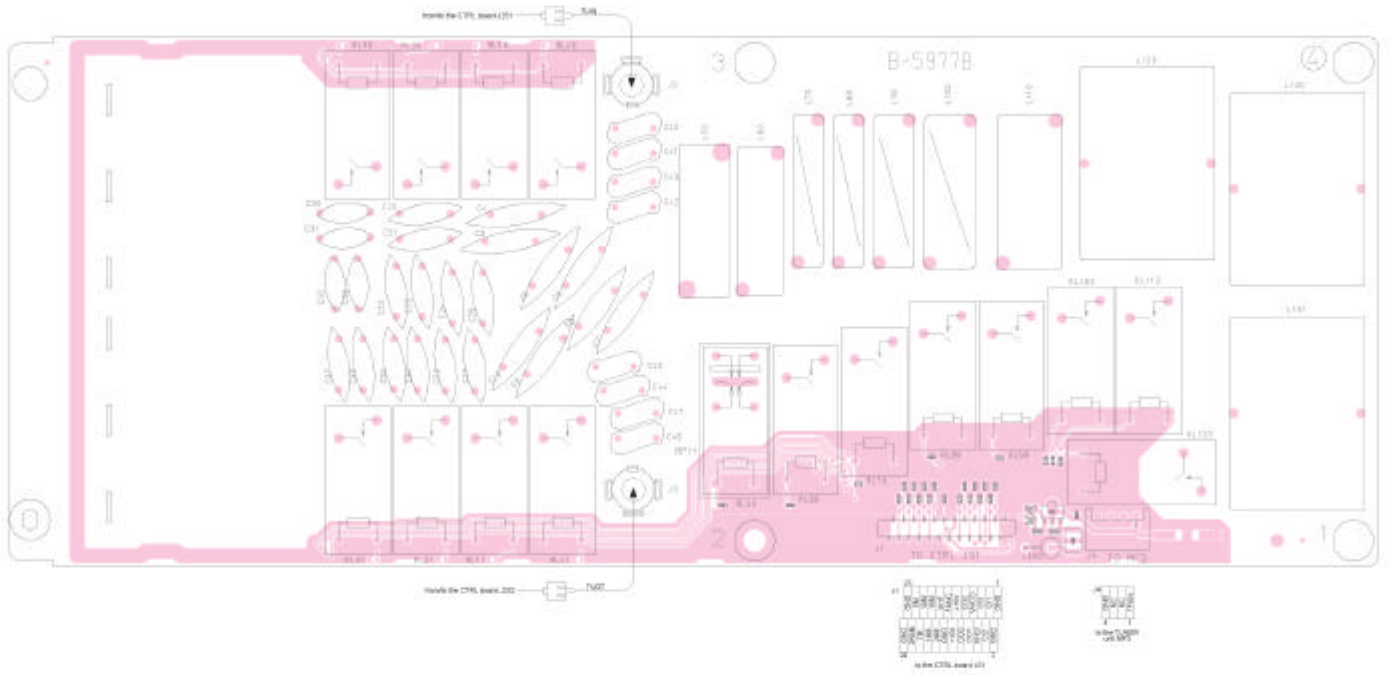
8-27 FILTER UNIT
 - TOP VIEW



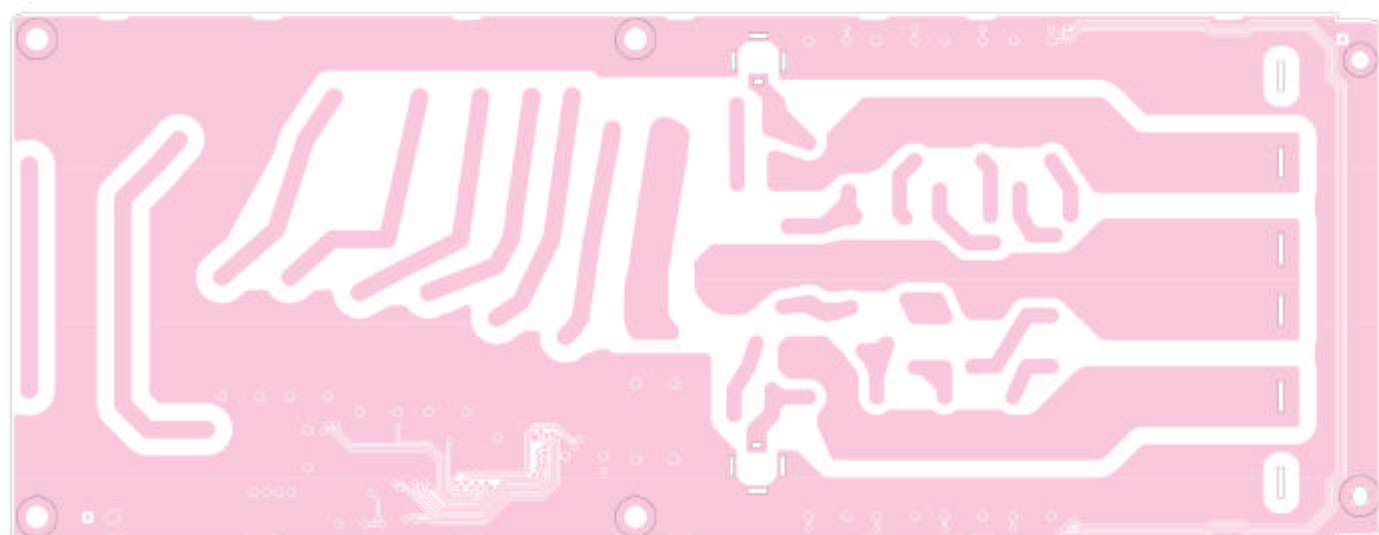
↳ BOTTOM VIEW (FILTER UNIT)



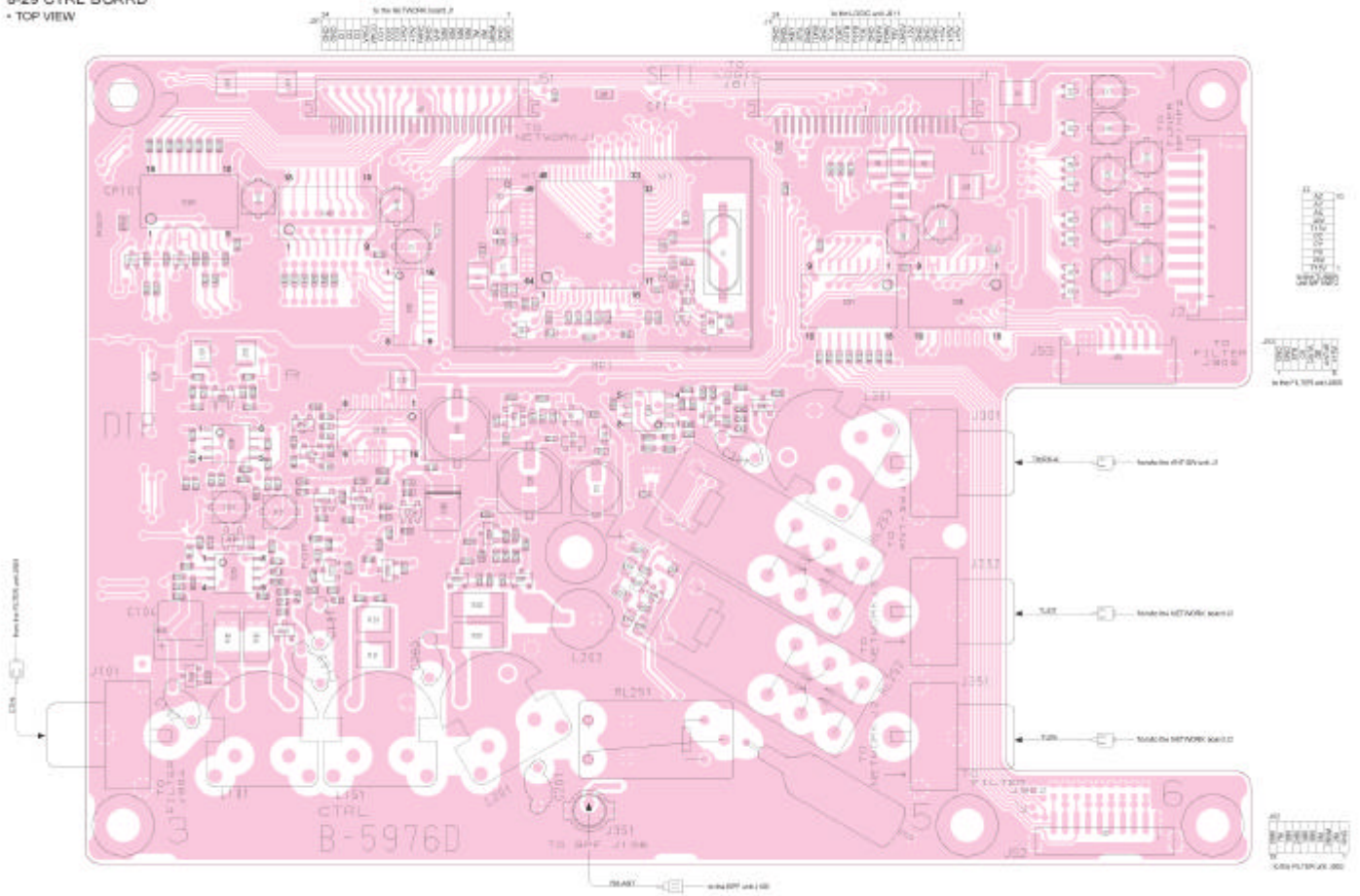
8-28 NETWORK BOARD
 - TOP VIEW



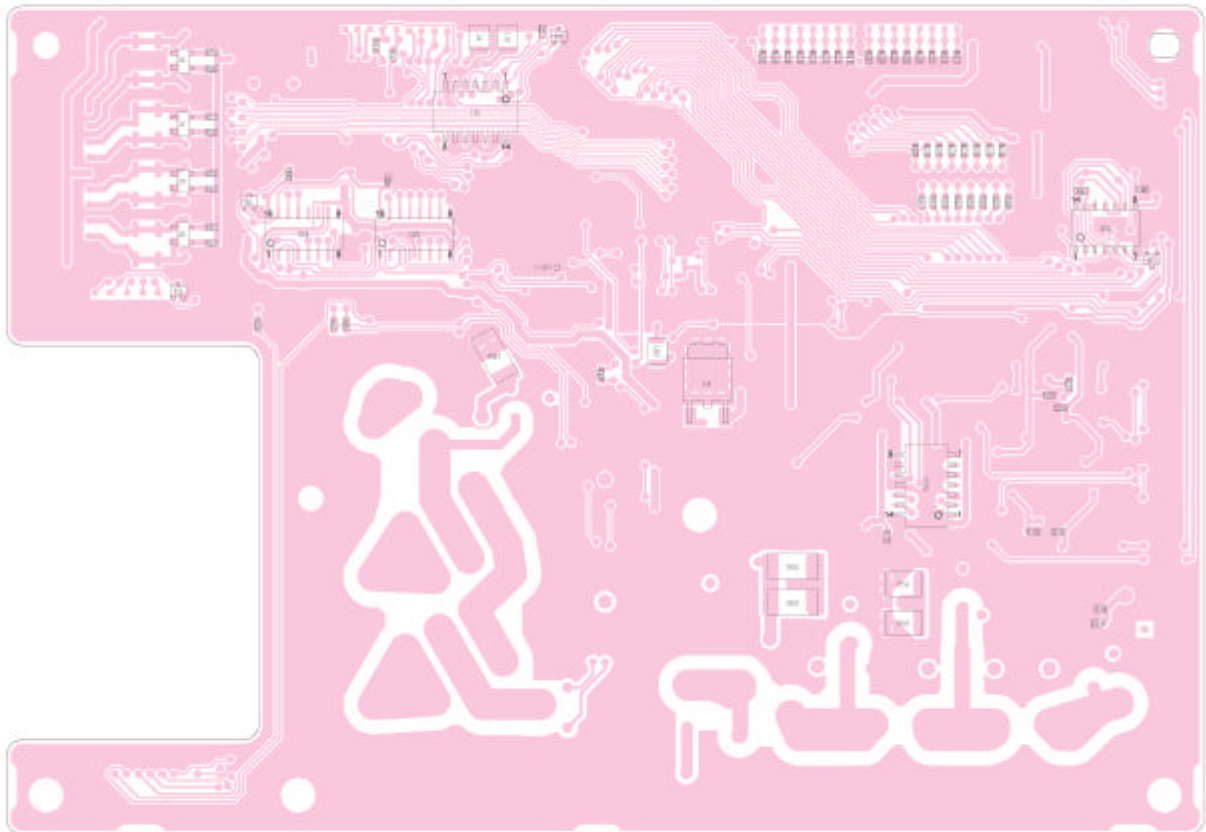
• BOTTOM VIEW (NETWORK BOARD)



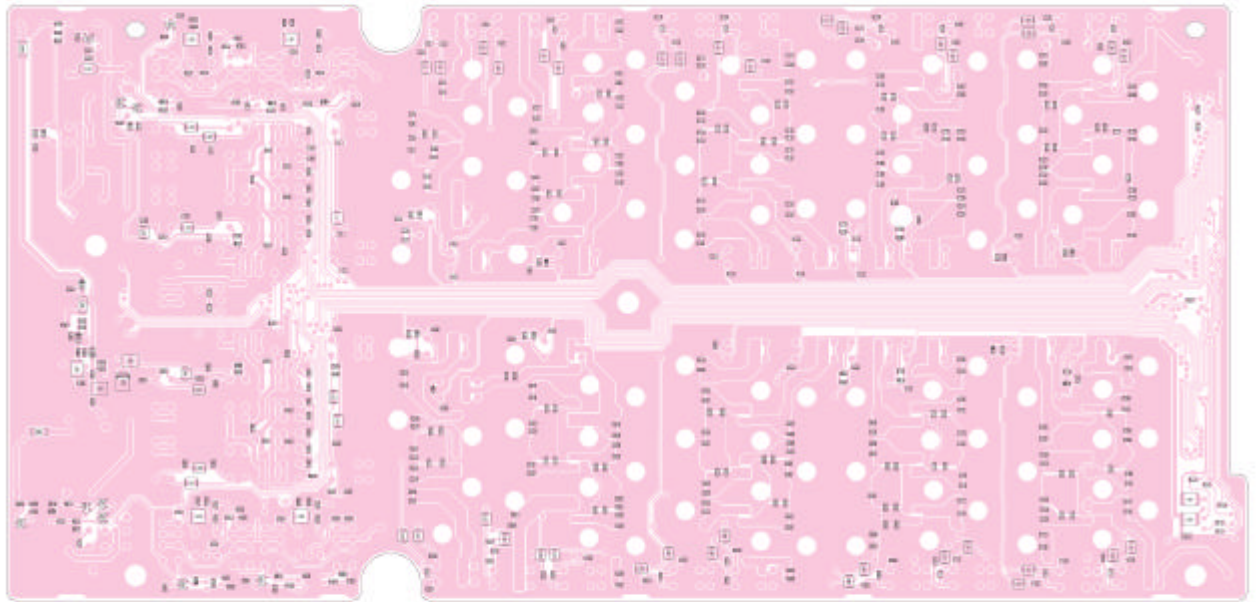
8-29 CTRL BOARD
 - TOP VIEW



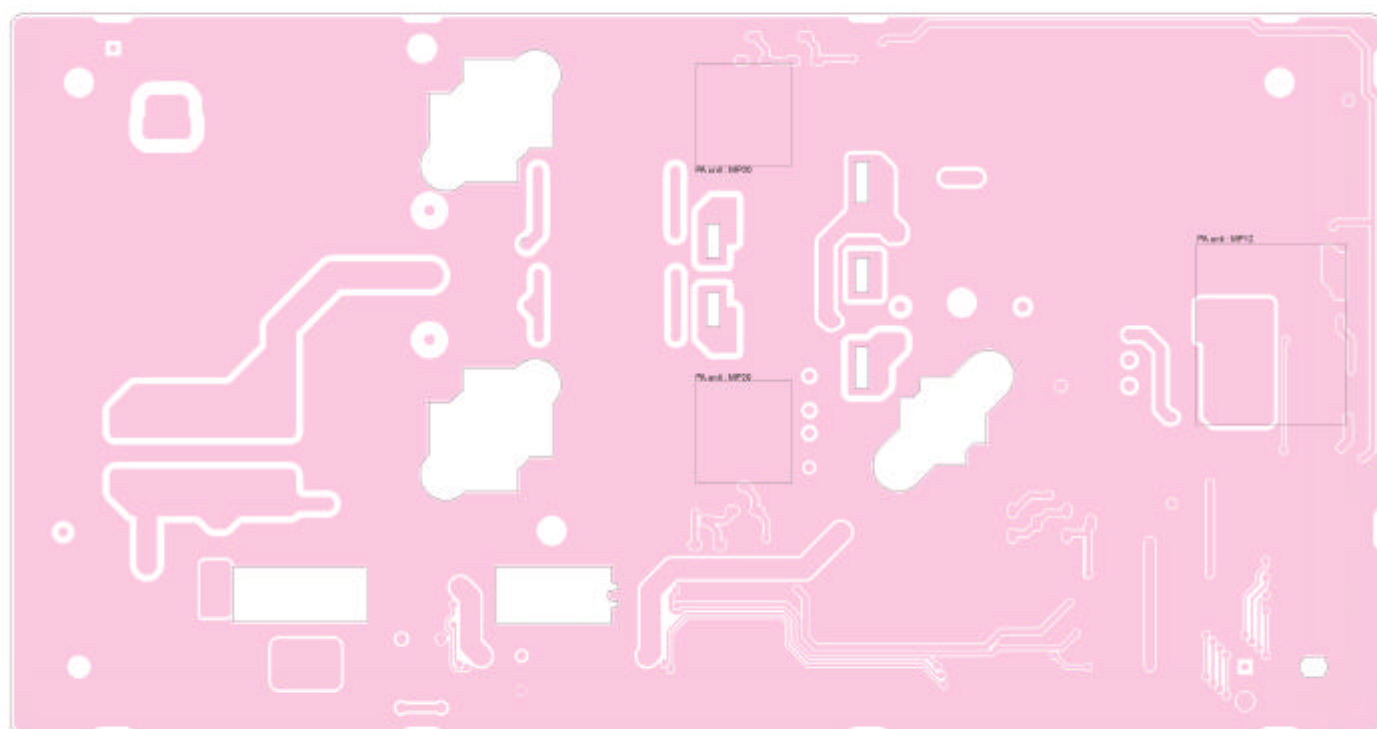
• BOTTOM VIEW (CTRL BOARD)



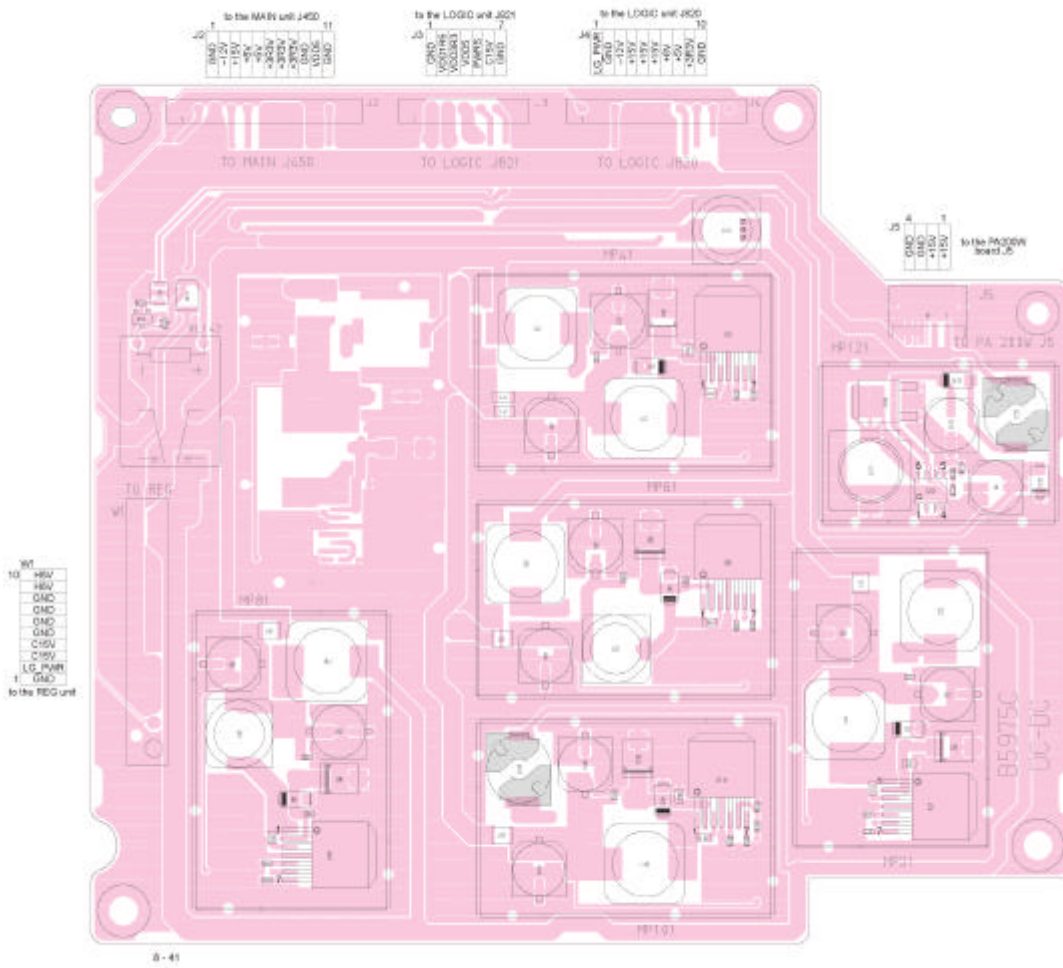
• BOTTOM VIEW (BPF UNIT)



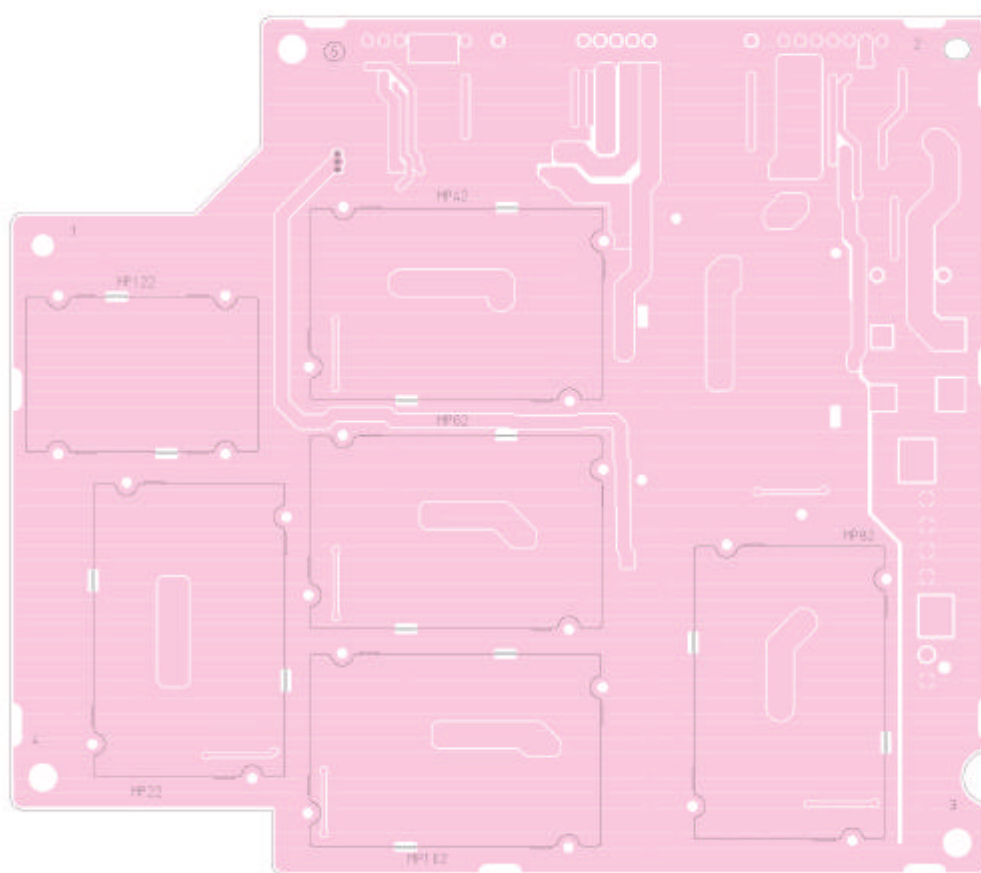
• BOTTOM VIEW (PA200W BOARD)



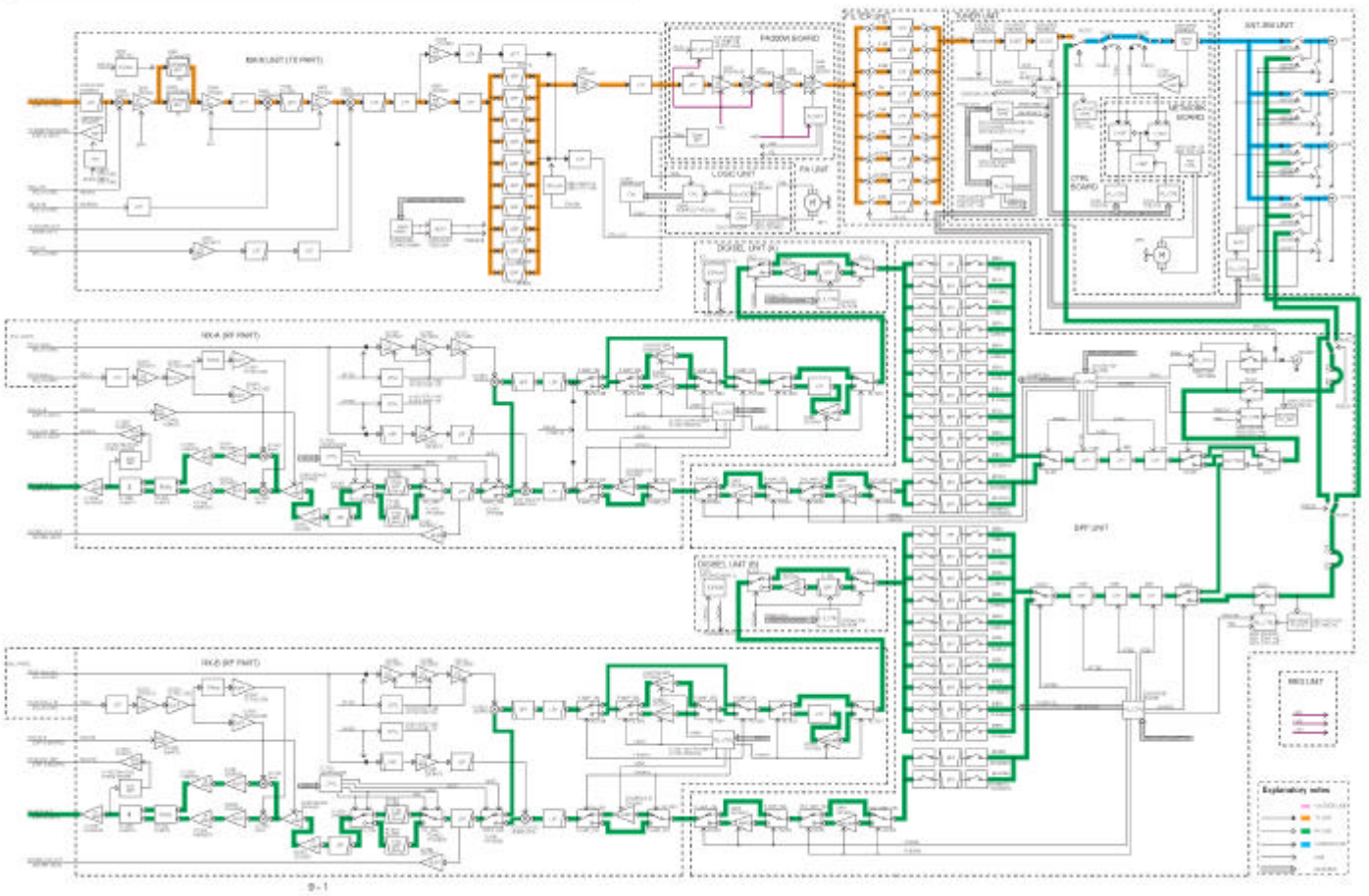
8-32 DC-DC UNIT
- TOP VIEW

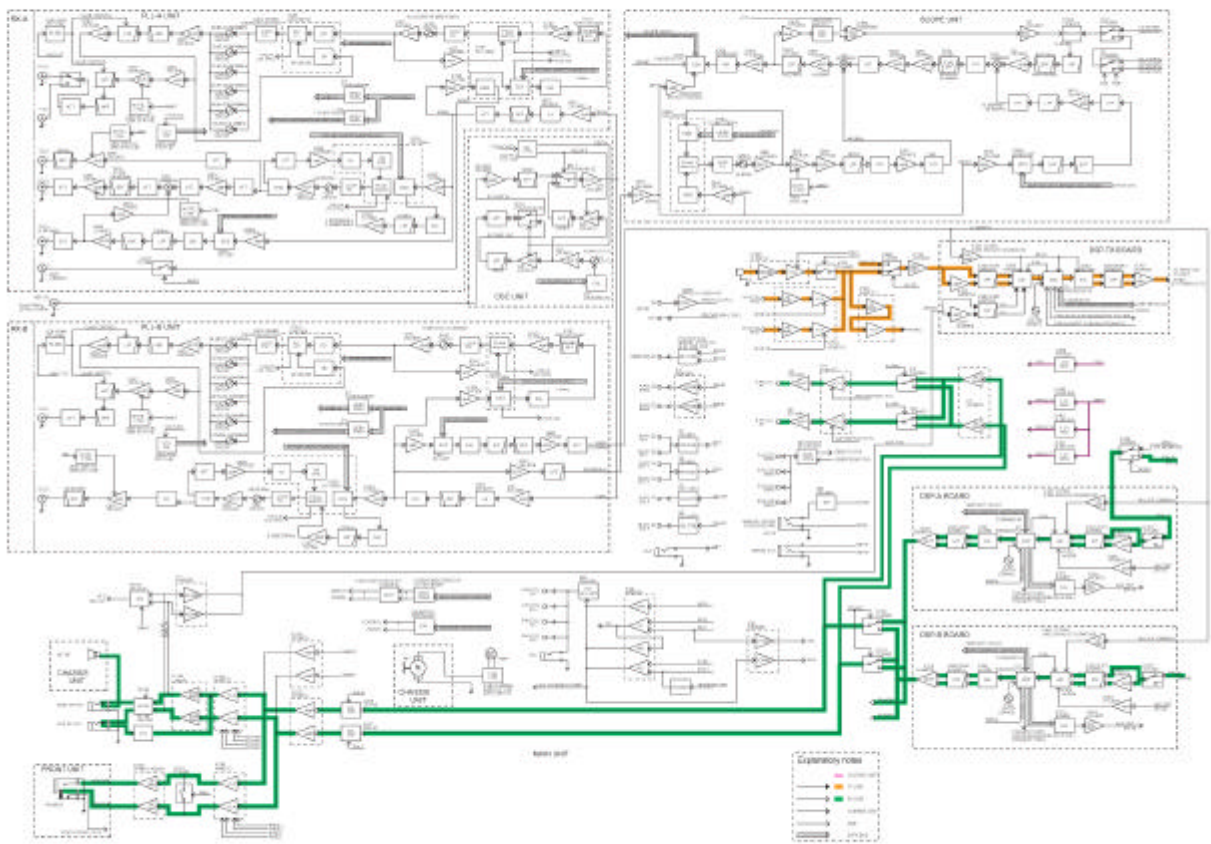


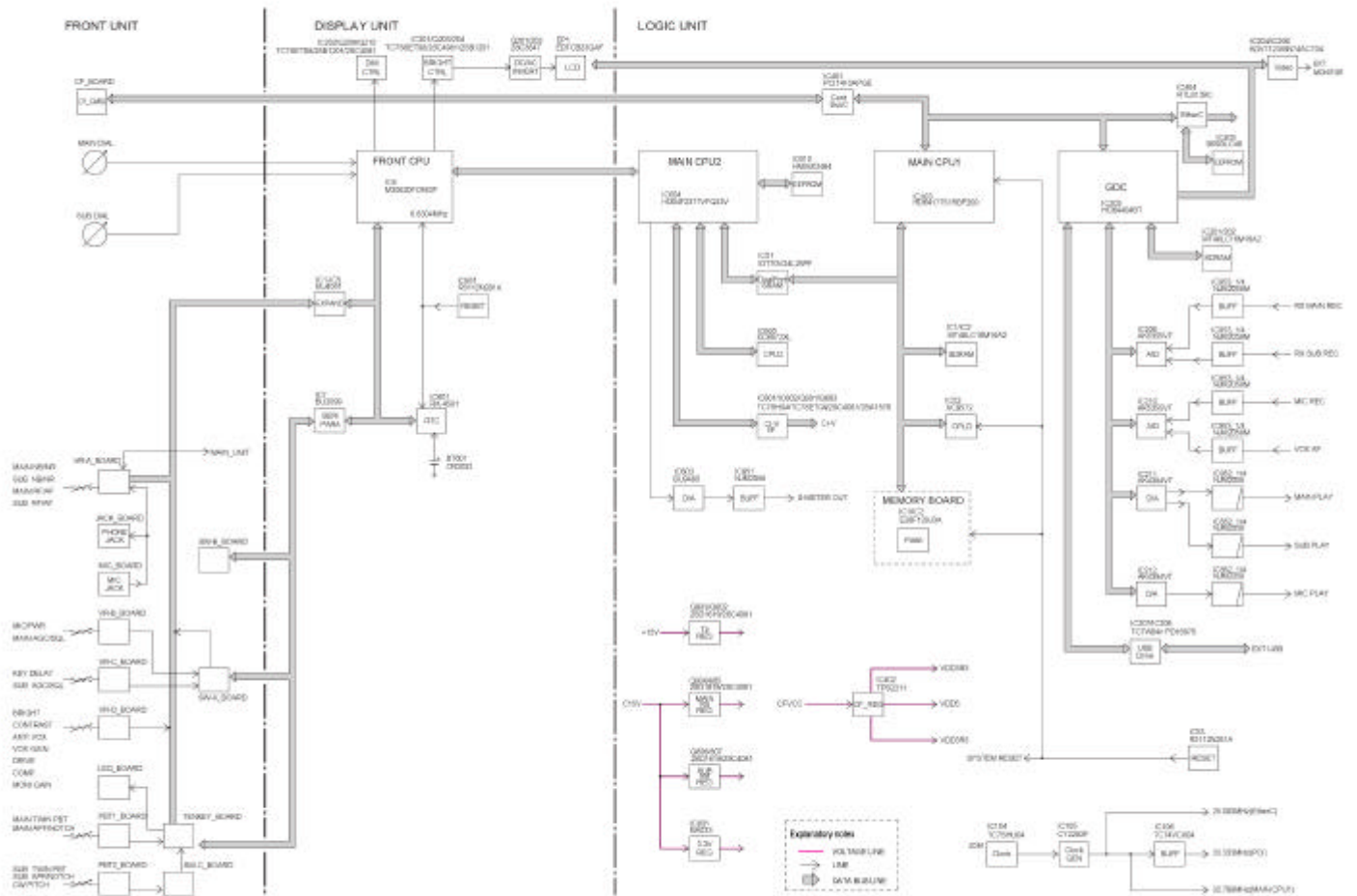
→ BOTTOM VIEW (DC-DC UNIT)



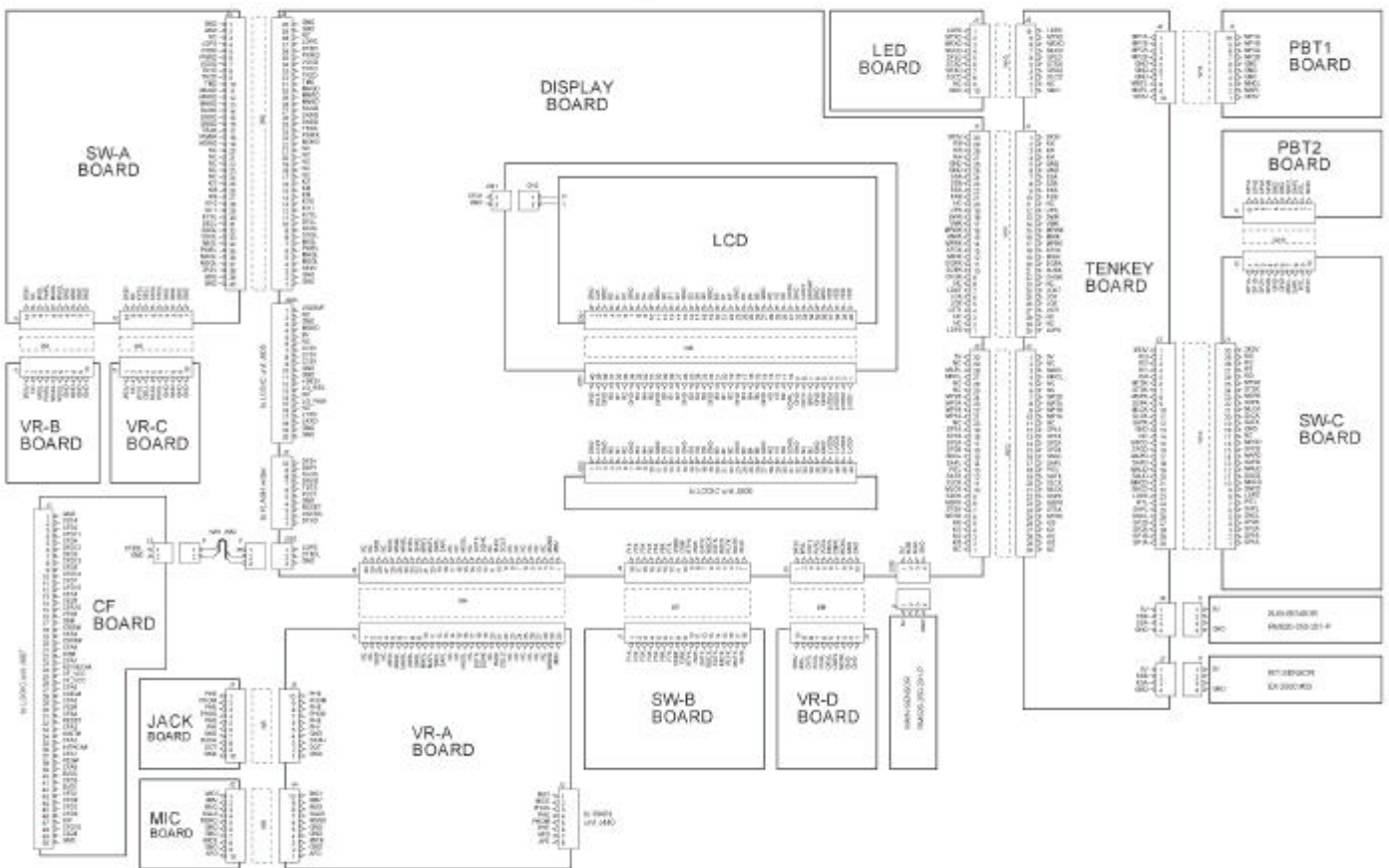
SECTION 9 BLOCK DIAGRAMS

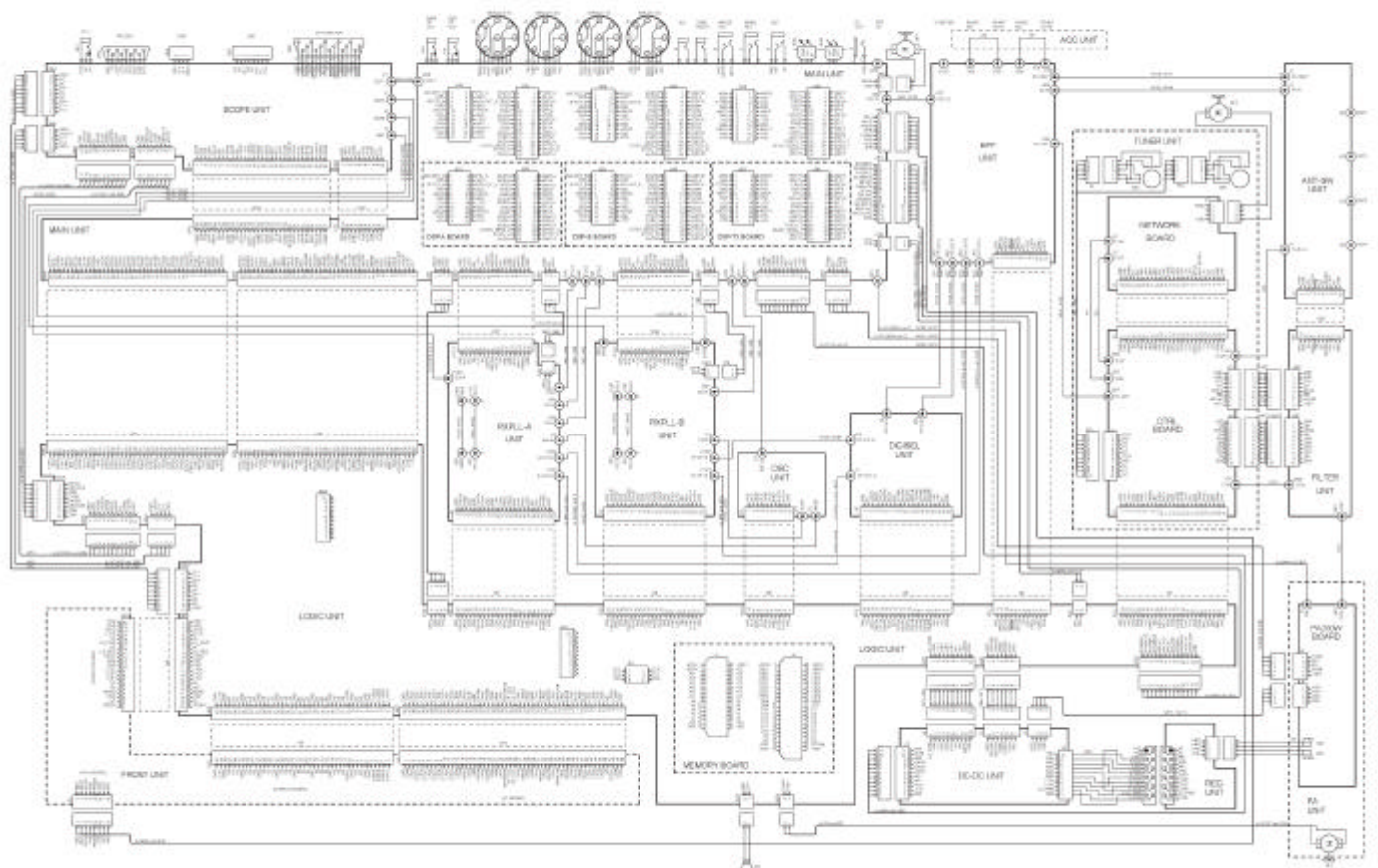






SECTION 10 WIRING DIAGRAMS

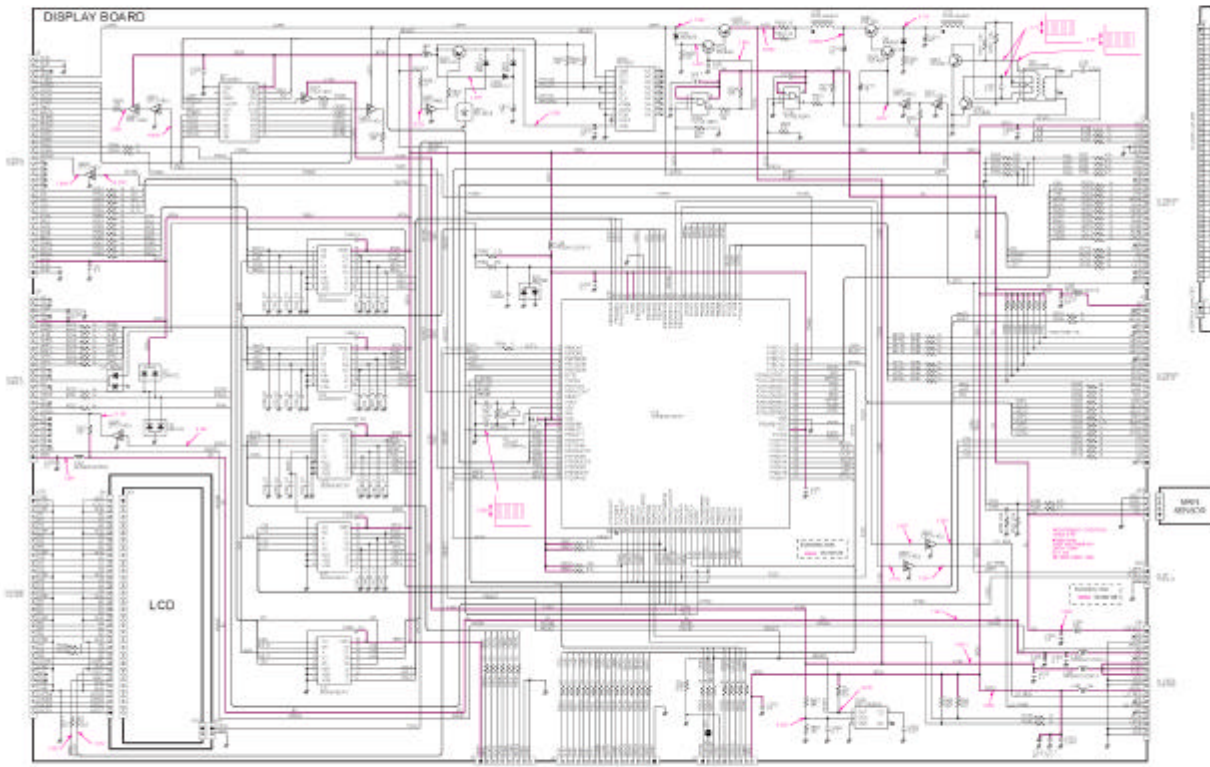




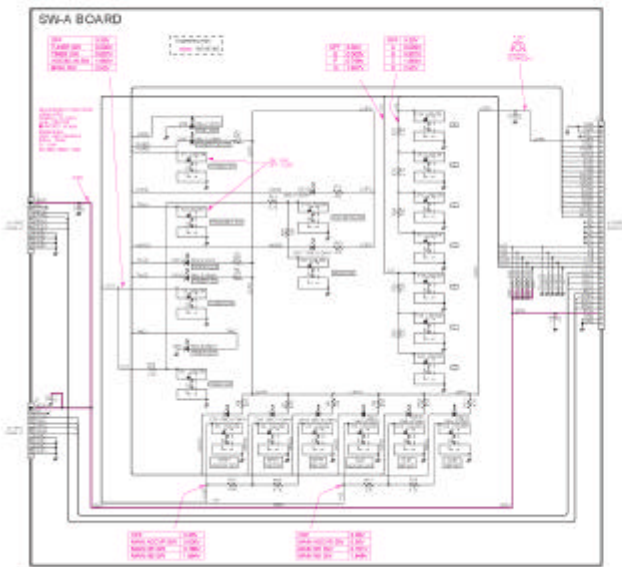
SECTION 11 VOLTAGE DIAGRAMS

11-1 DISPLAY BOARD

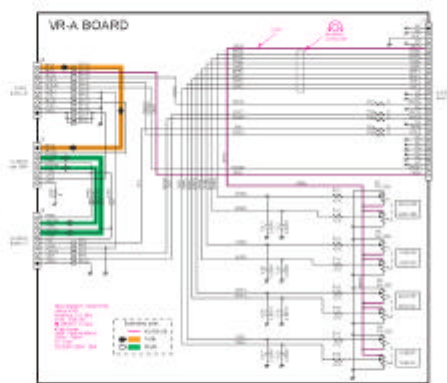
11-2 CF BOARD



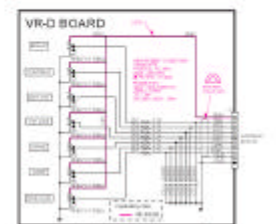
11-3 SW-A BOARD



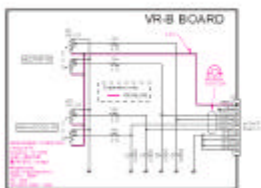
11-6 VR-A BOARD



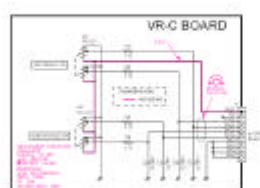
11-9 VR-D BOARD



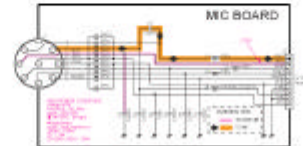
11-4 VR-B BOARD



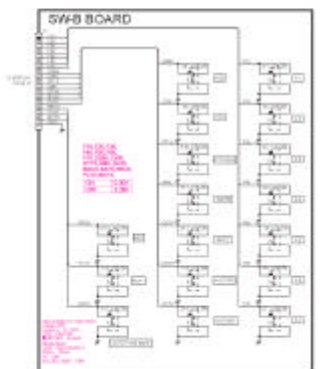
11-5 VR-C BOARD



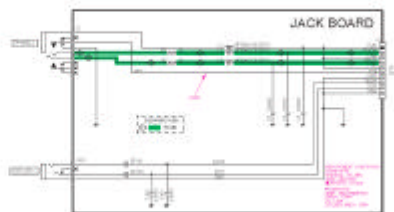
11-7 MIC BOARD



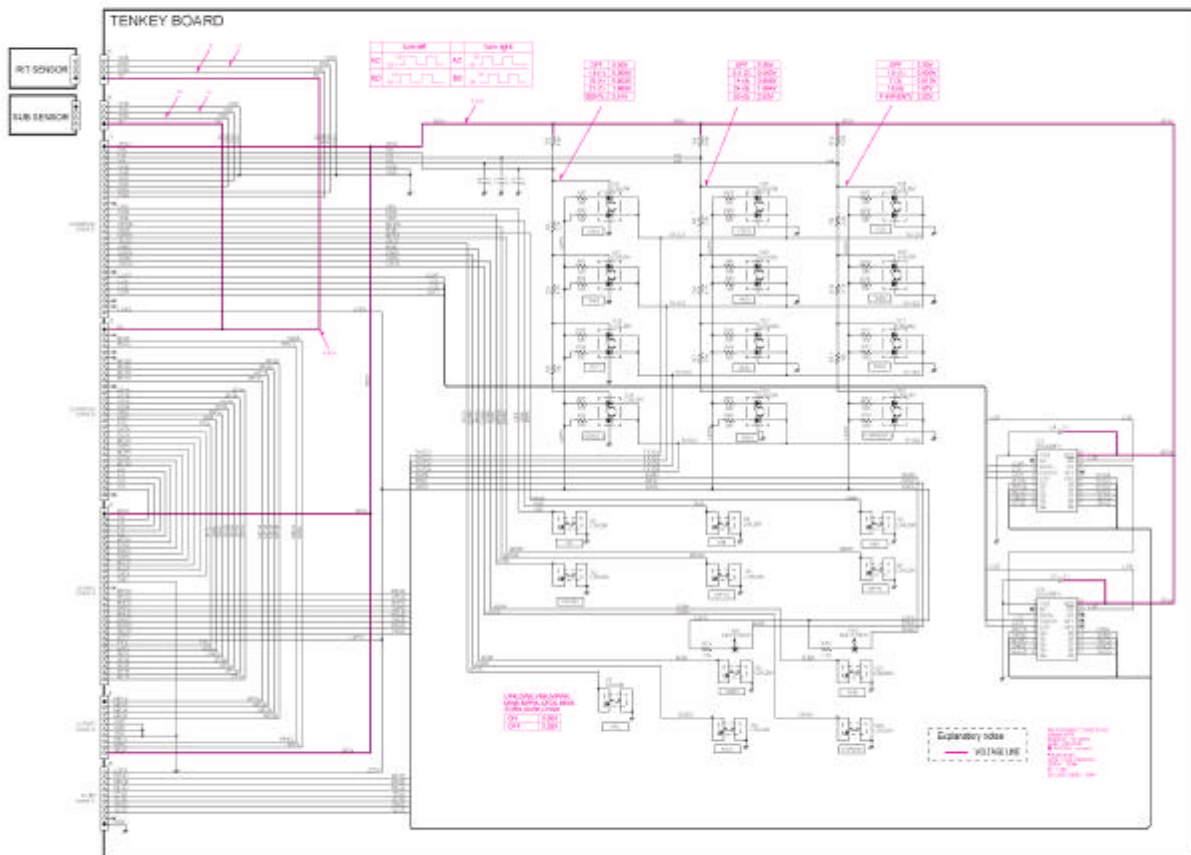
11-10 SW-B BOARD



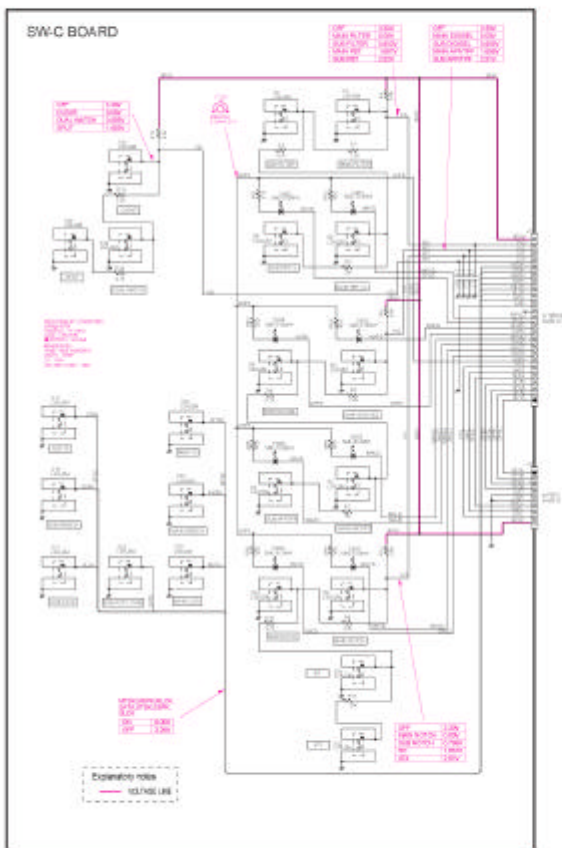
11-8 JACK BOARD



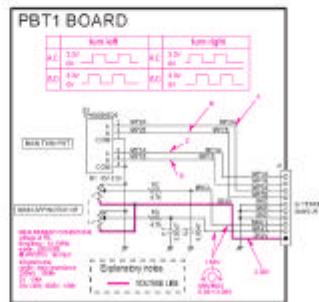
11-11 TENKEY BOARD



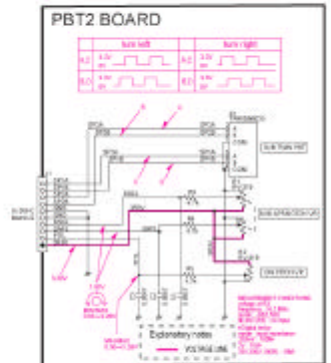
11-12 SW-C BOARD



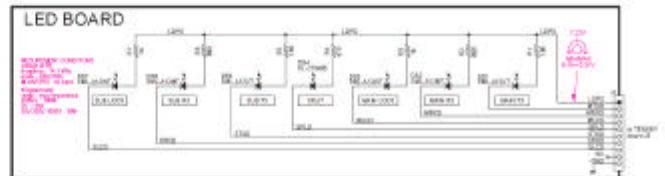
11-13 PBT1 BOARD



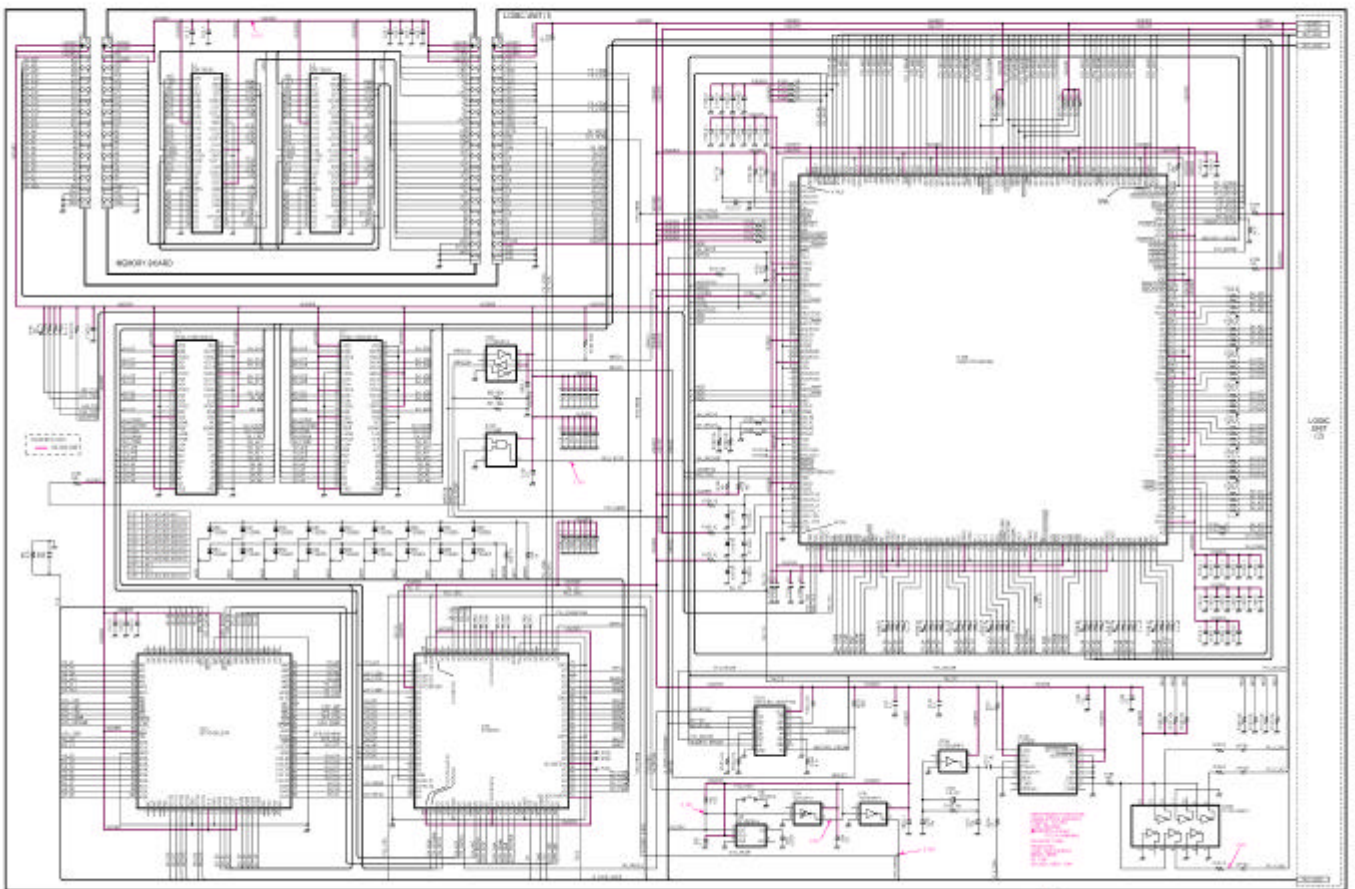
11-14 PBT2 BOARD

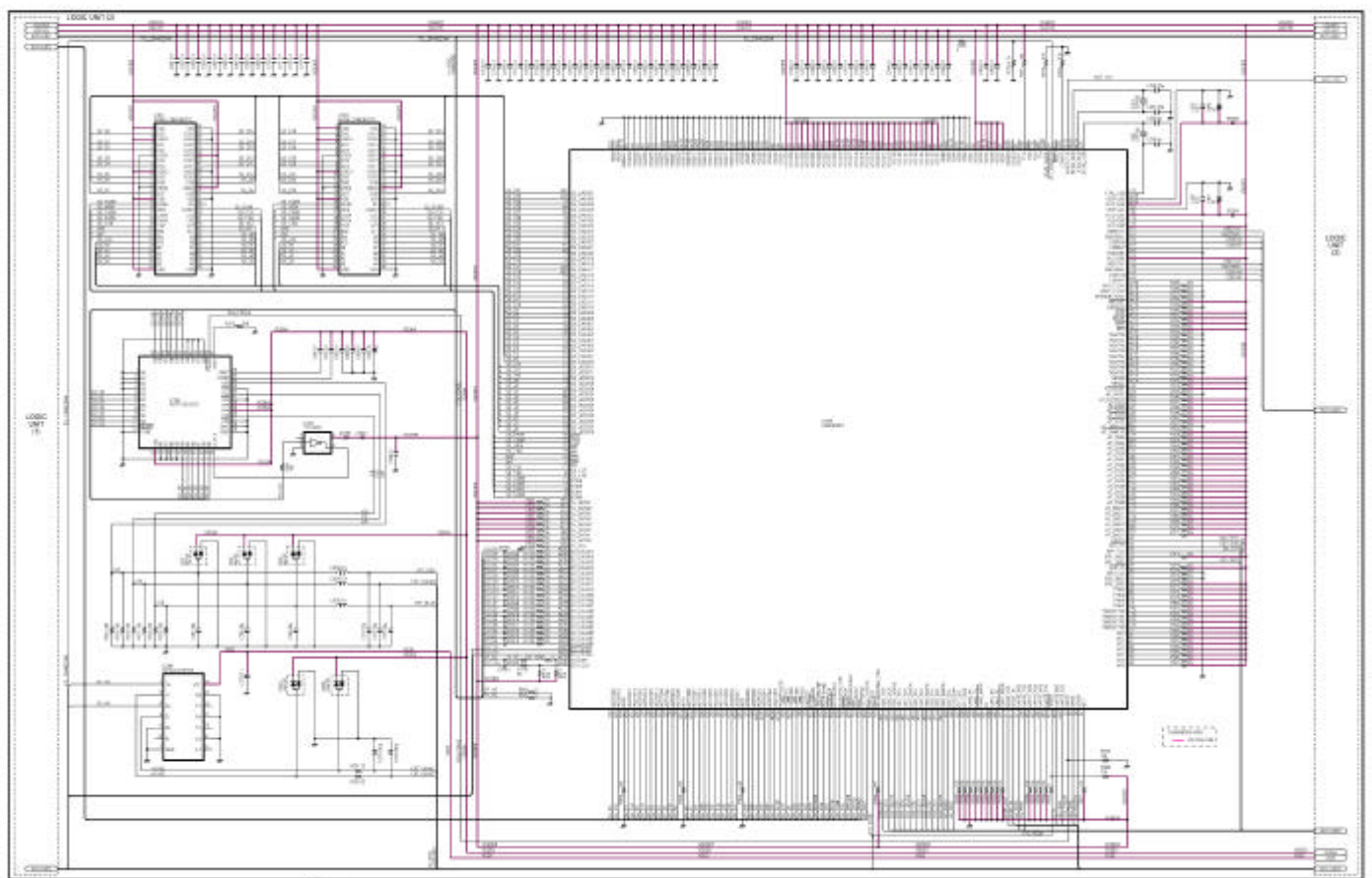


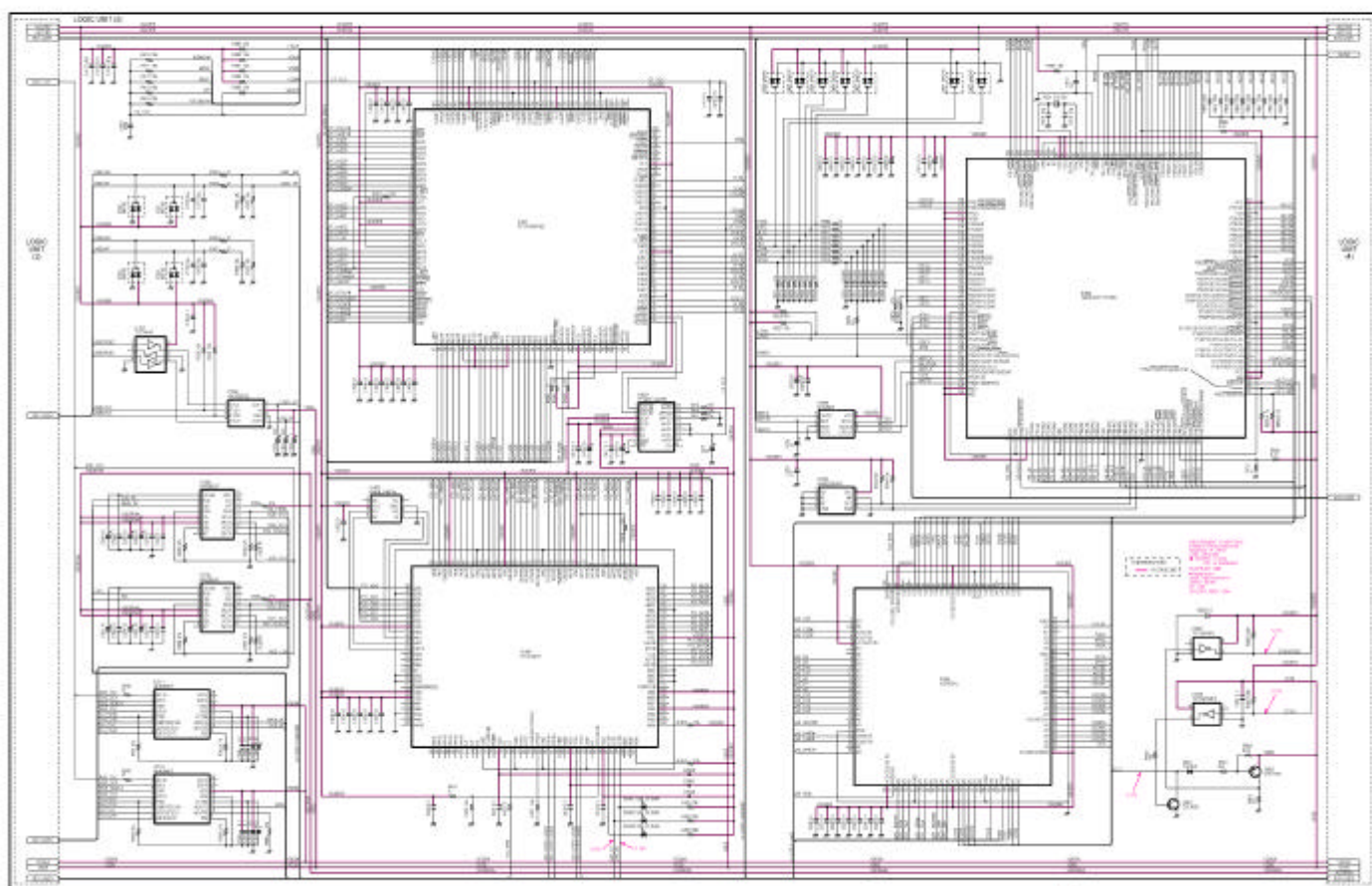
11-15 LED BOARD

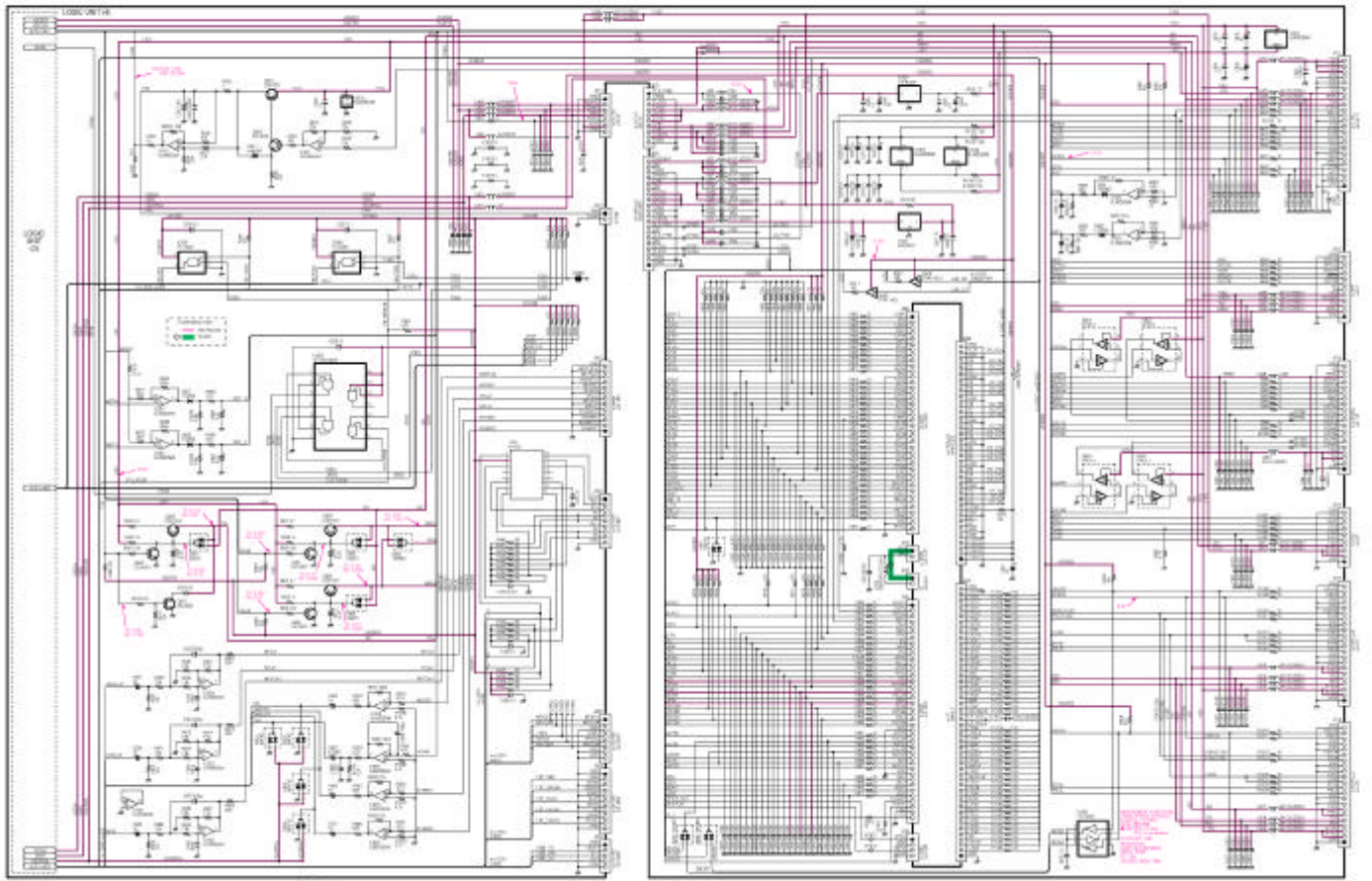


11-16 LOGIC UNIT AND MEMORY BOARD

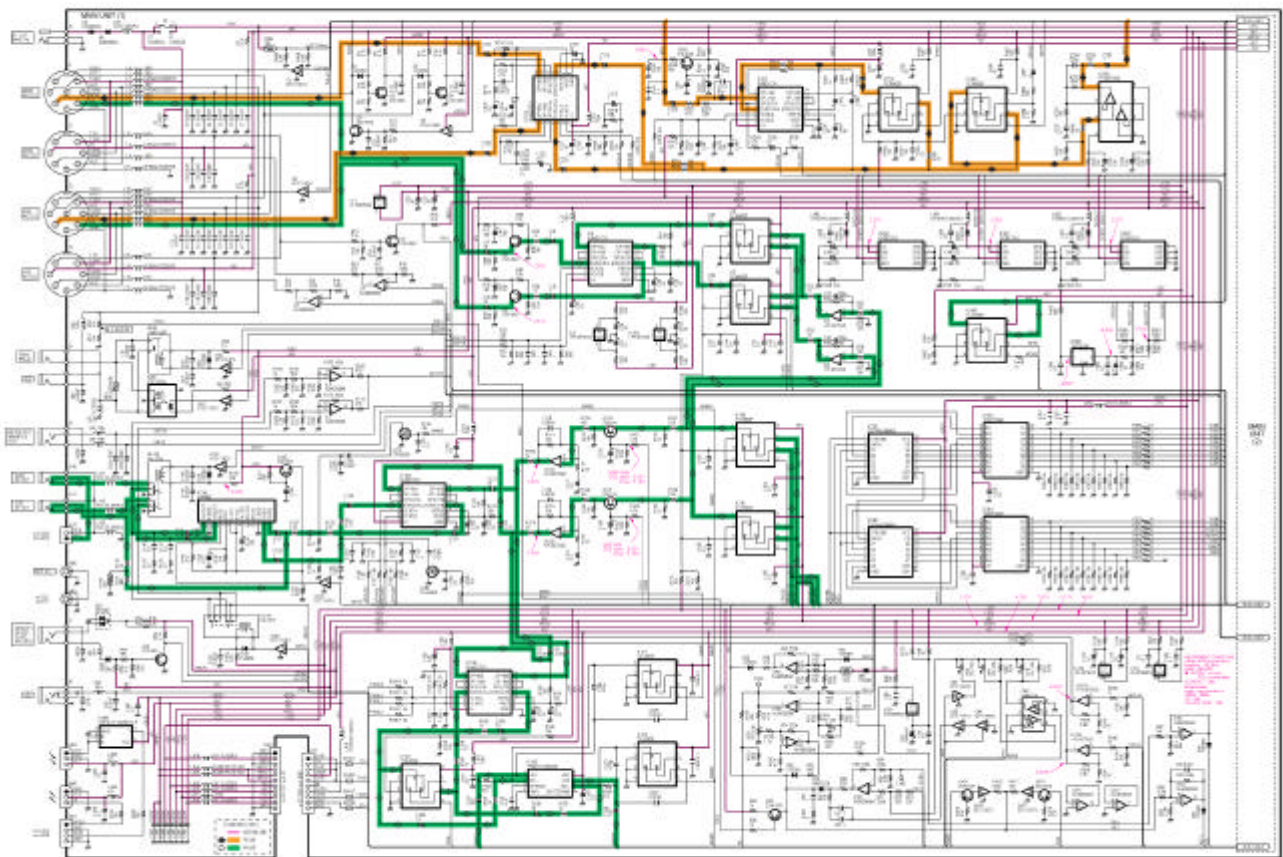


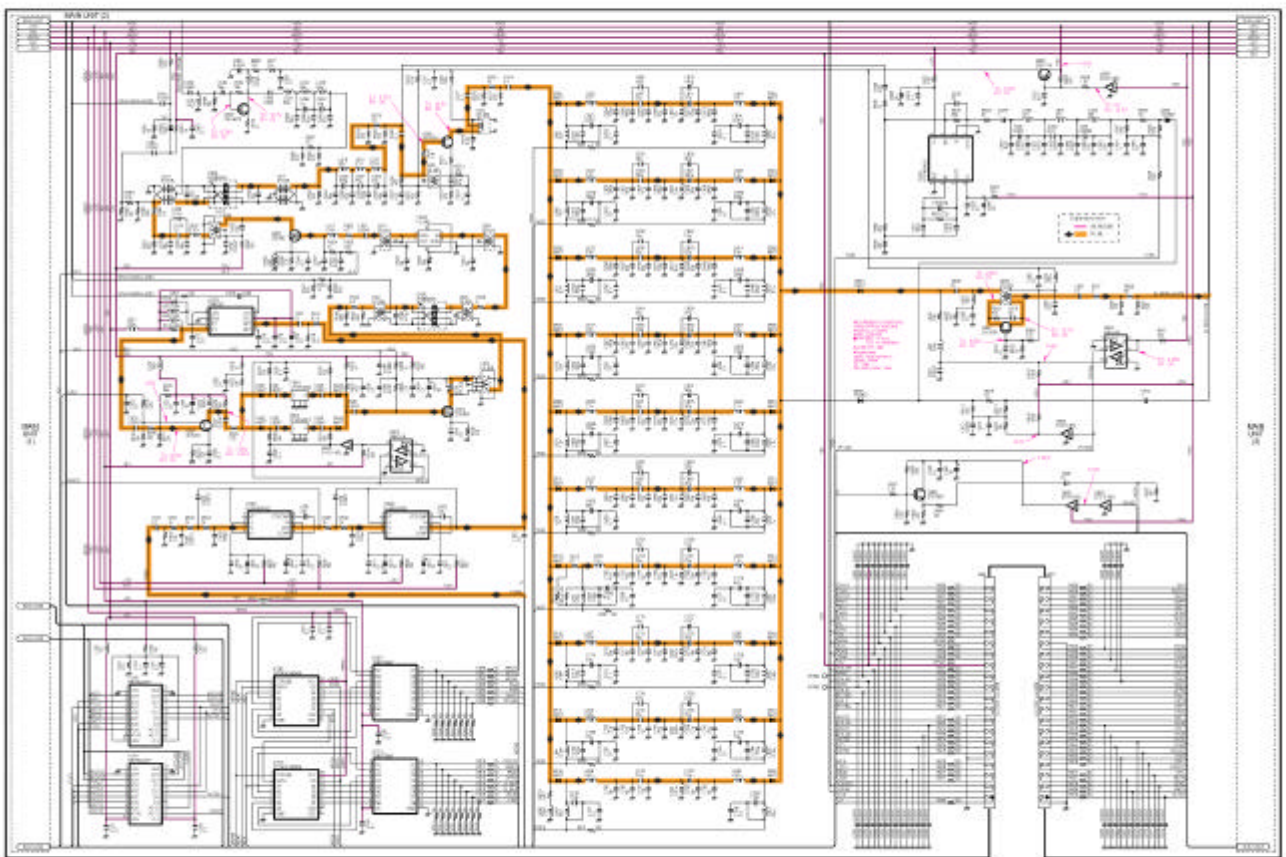


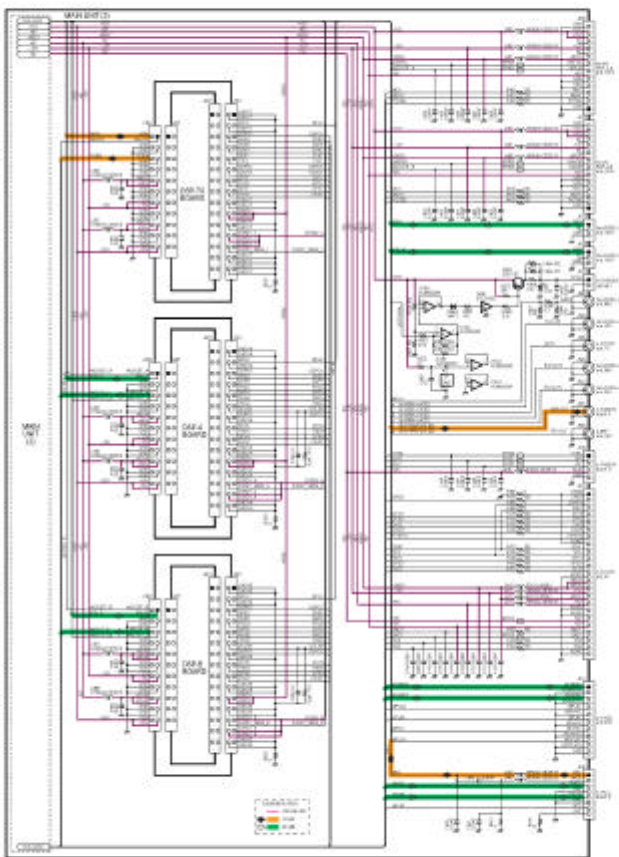




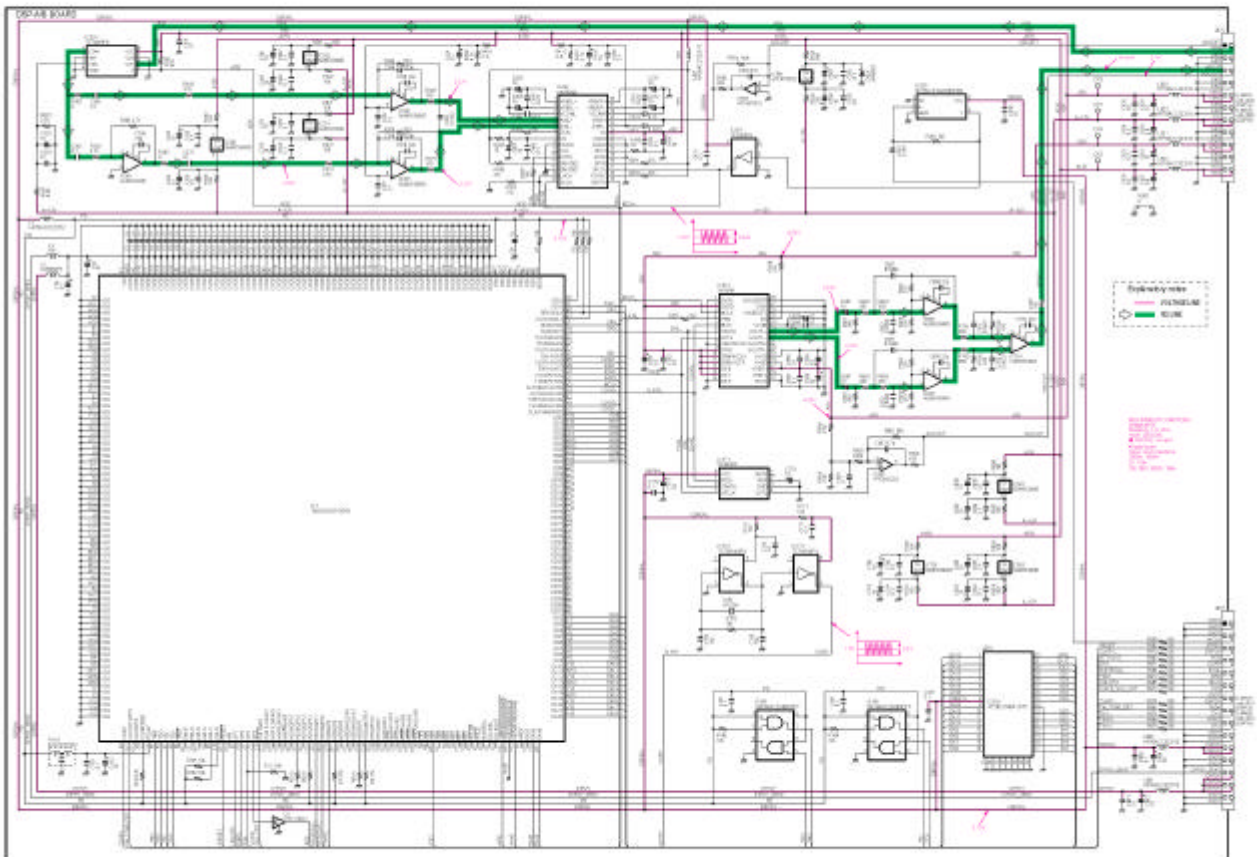
11-17 MAIN UNIT



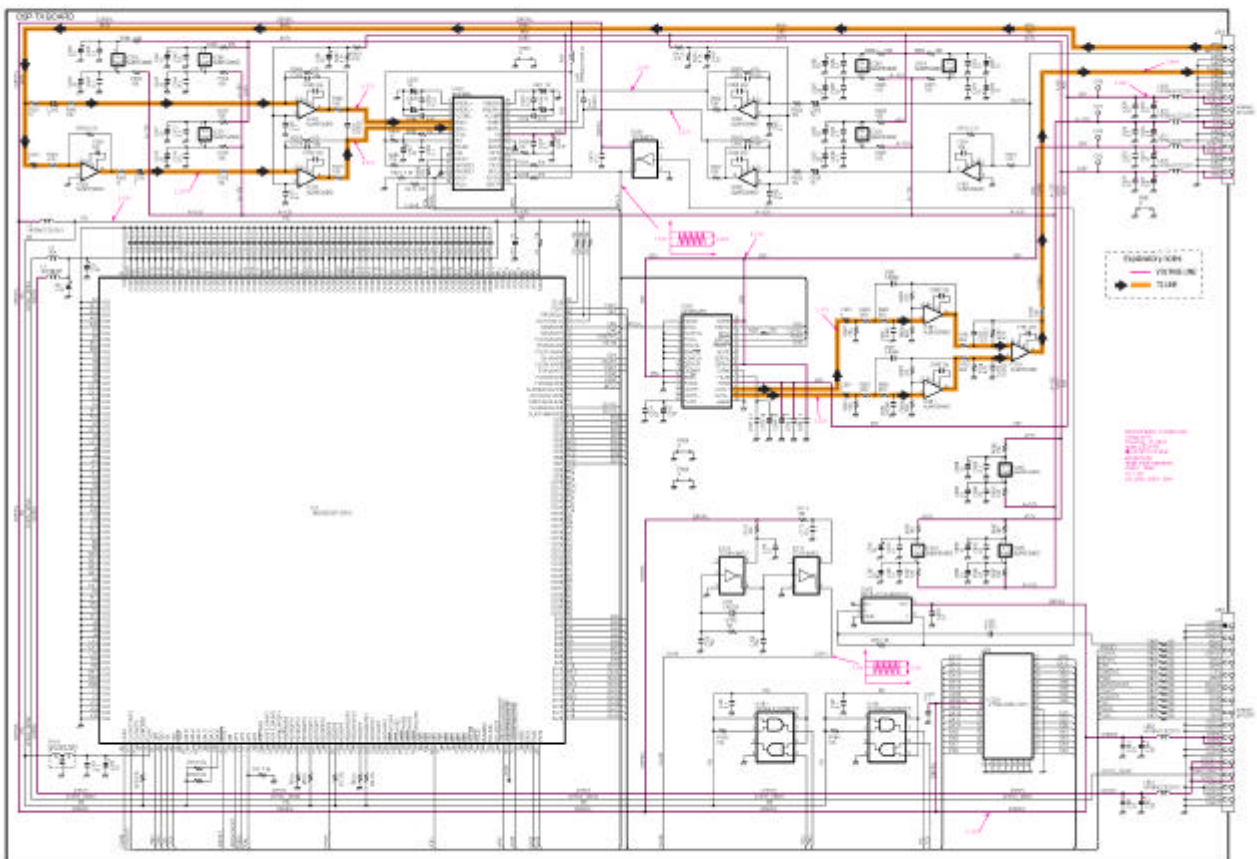




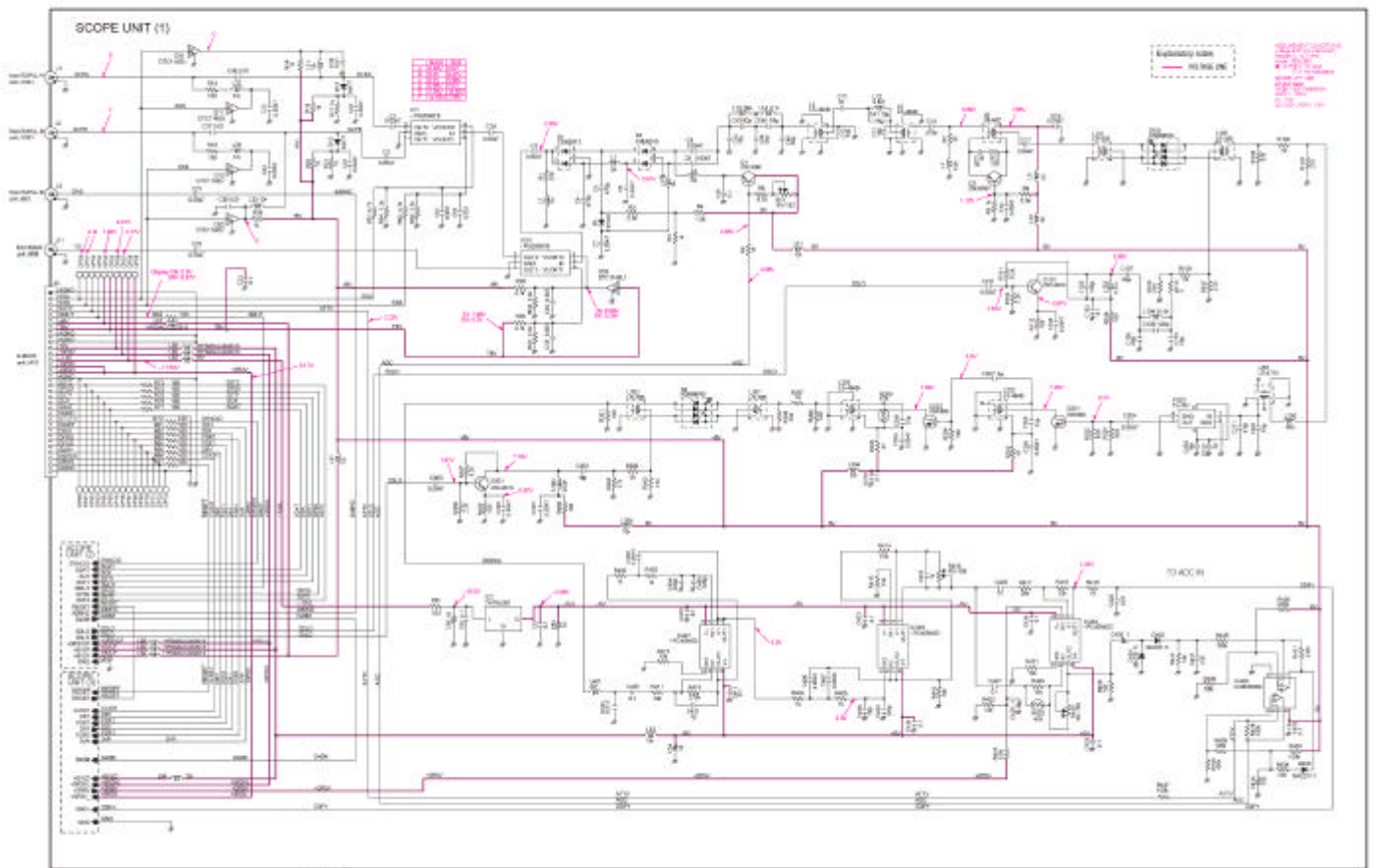
11-18 DSP-A/DSP-B BOARDS

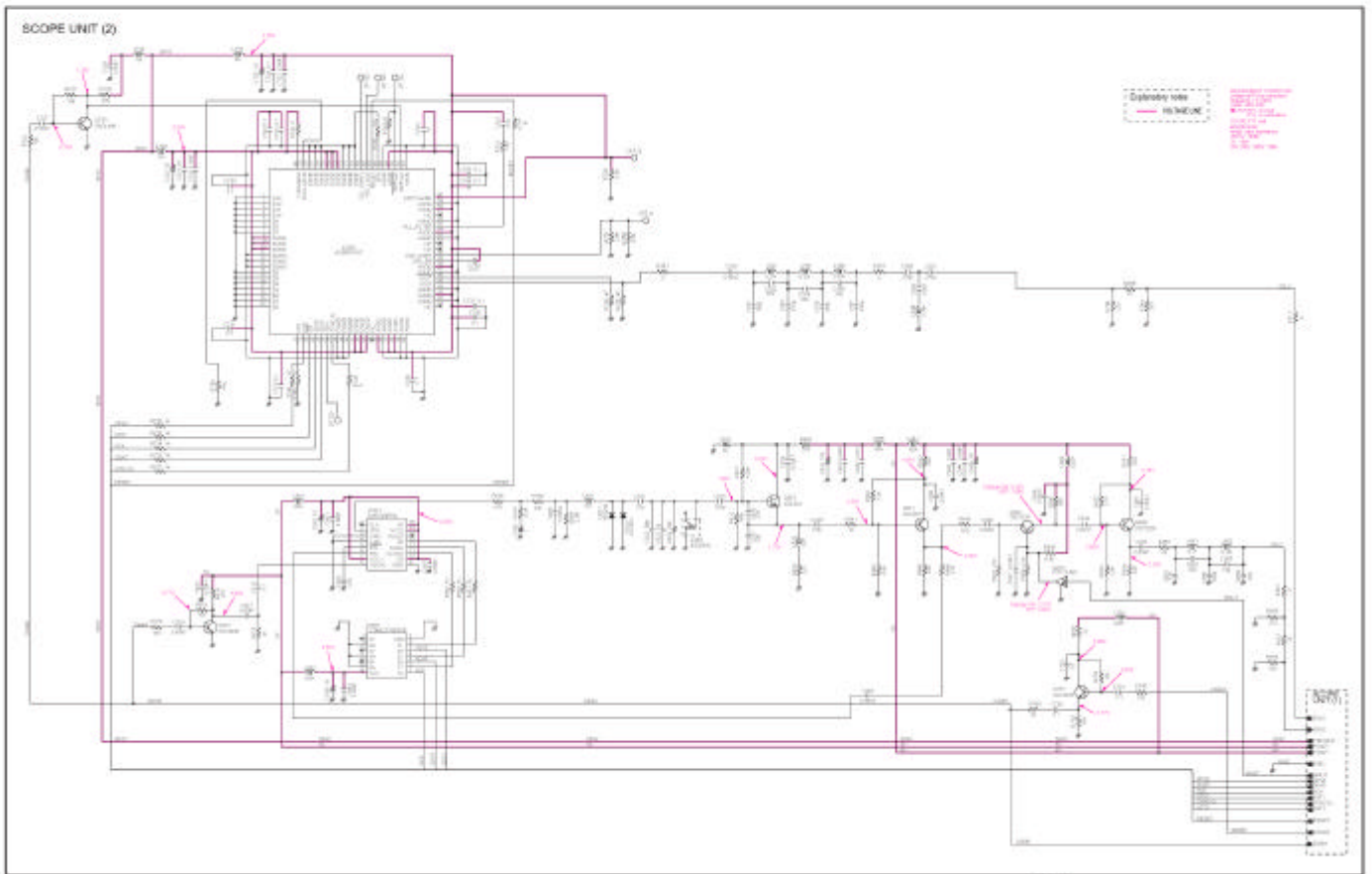


11-19 DSP-TX BOARD

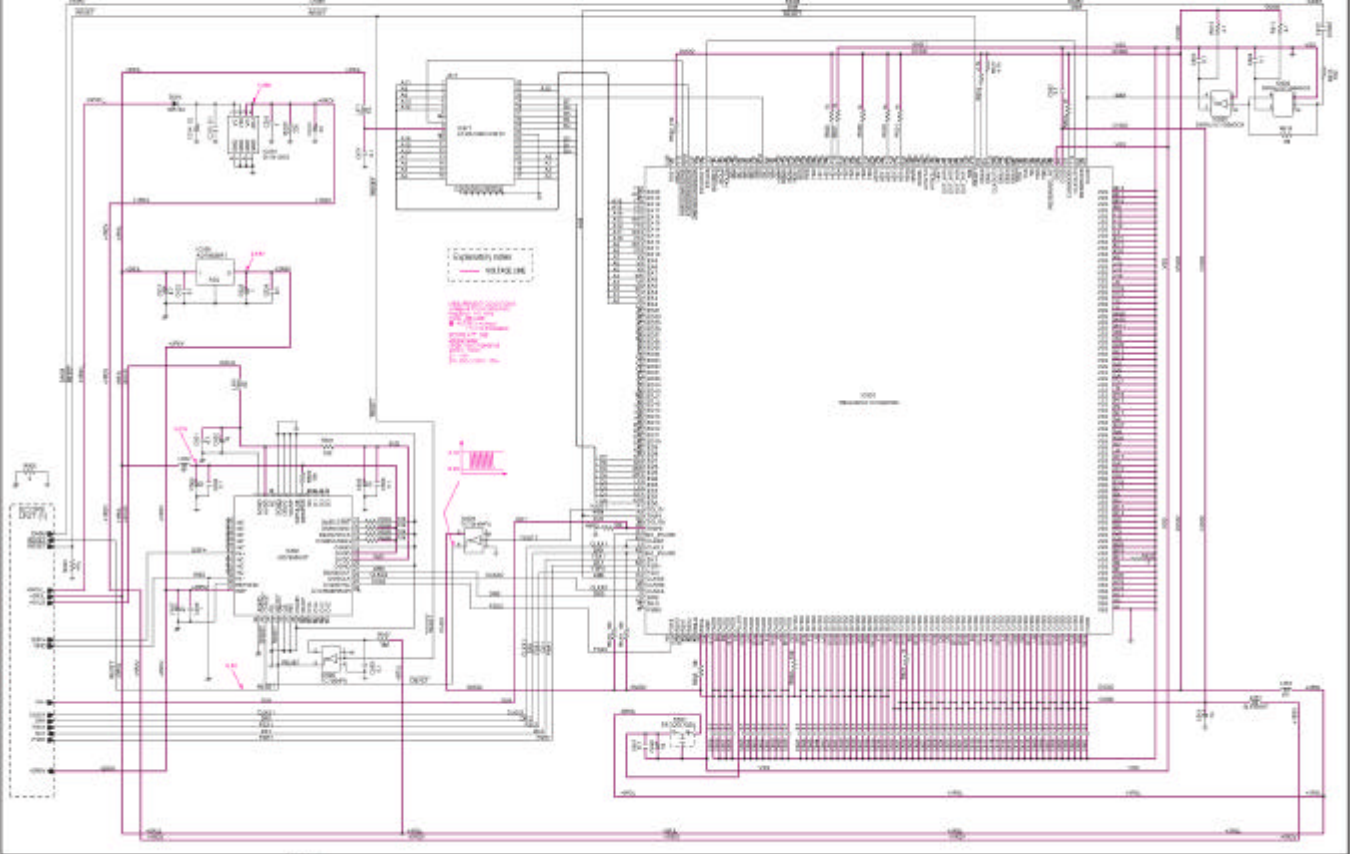


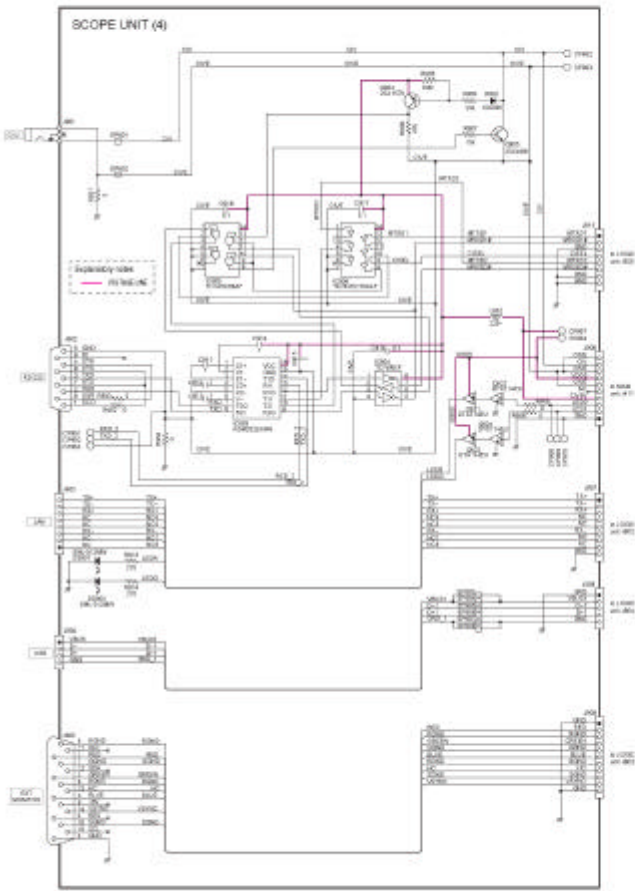
11-20 SCOPE UNIT



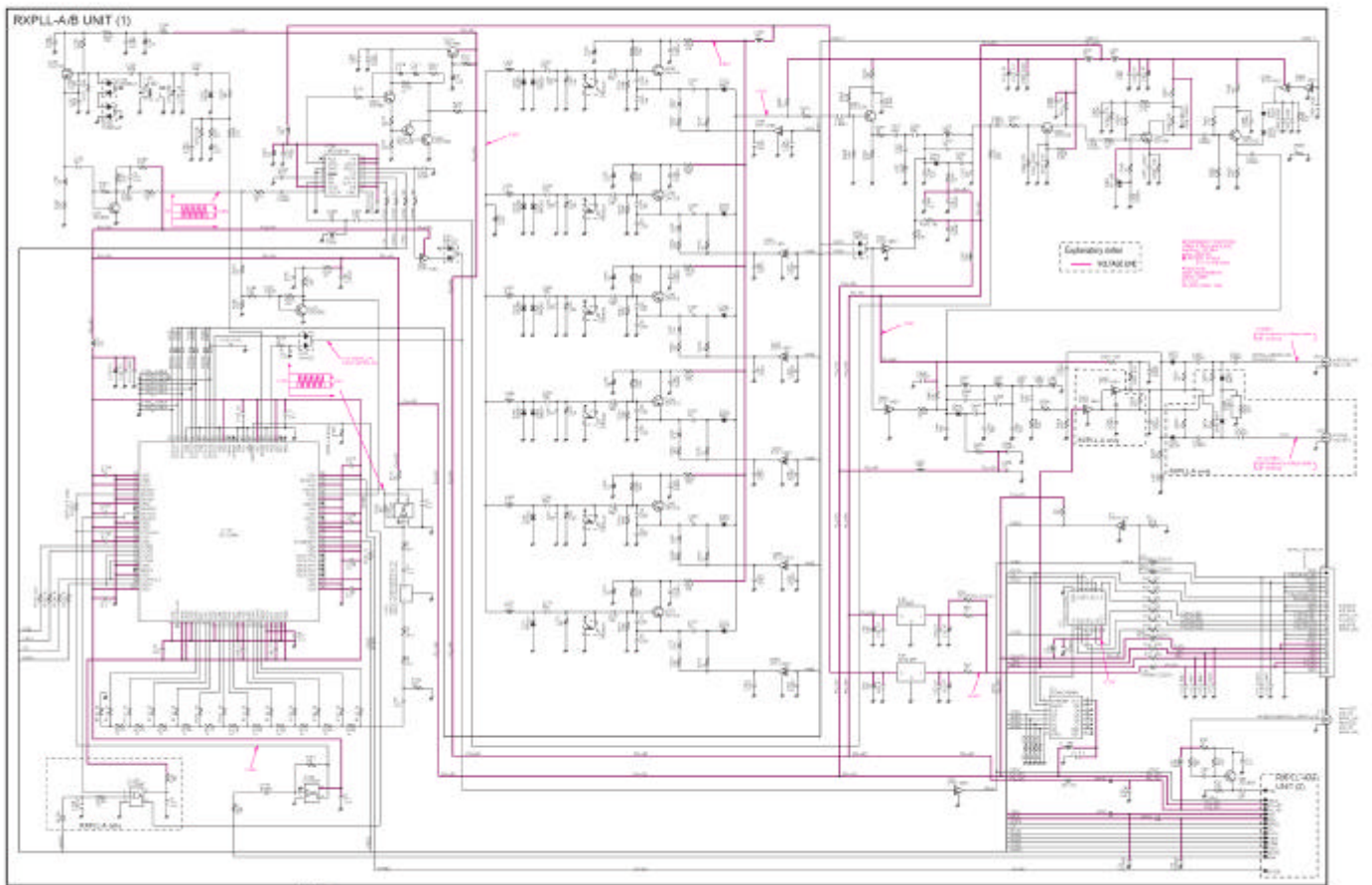


SCOPE UNIT (3)

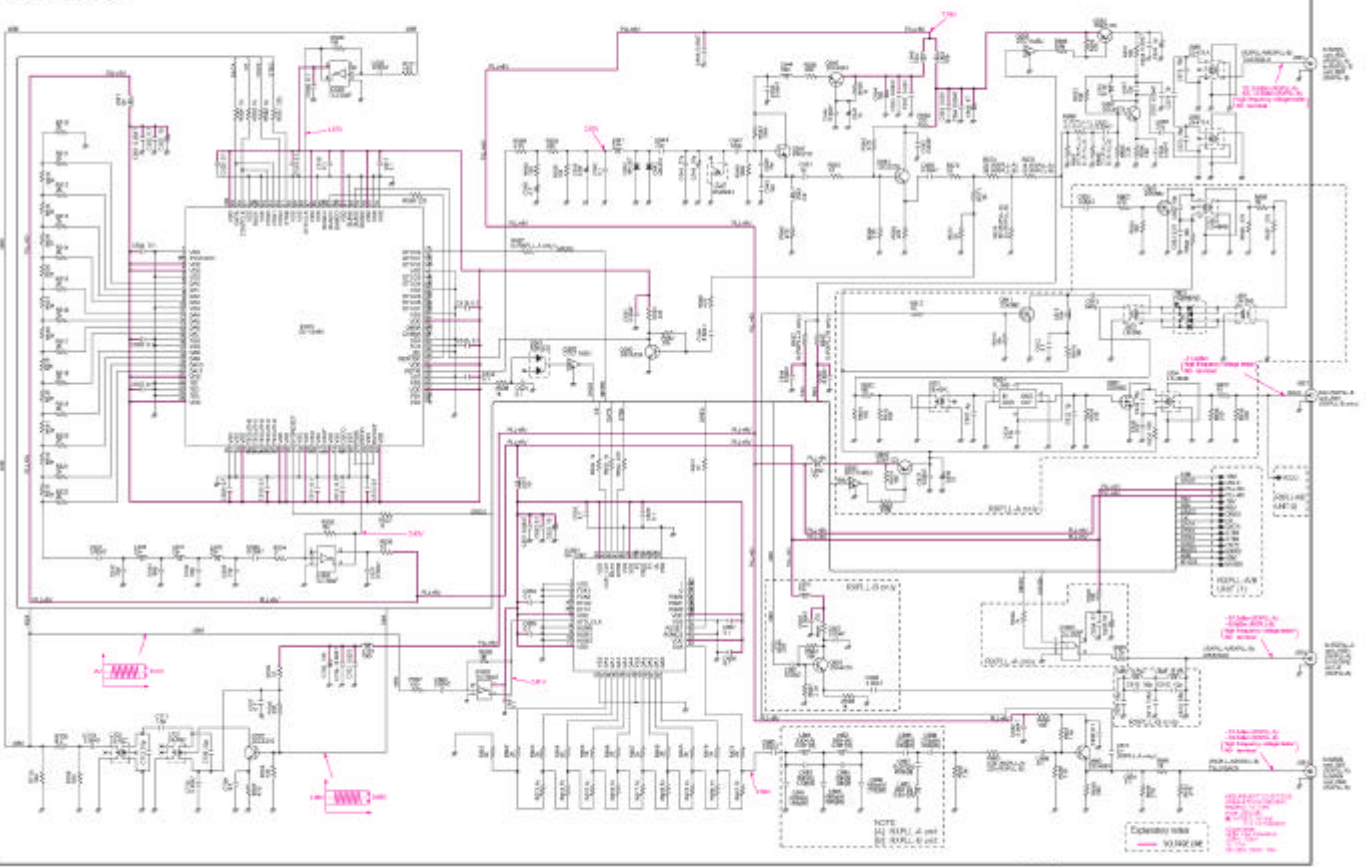


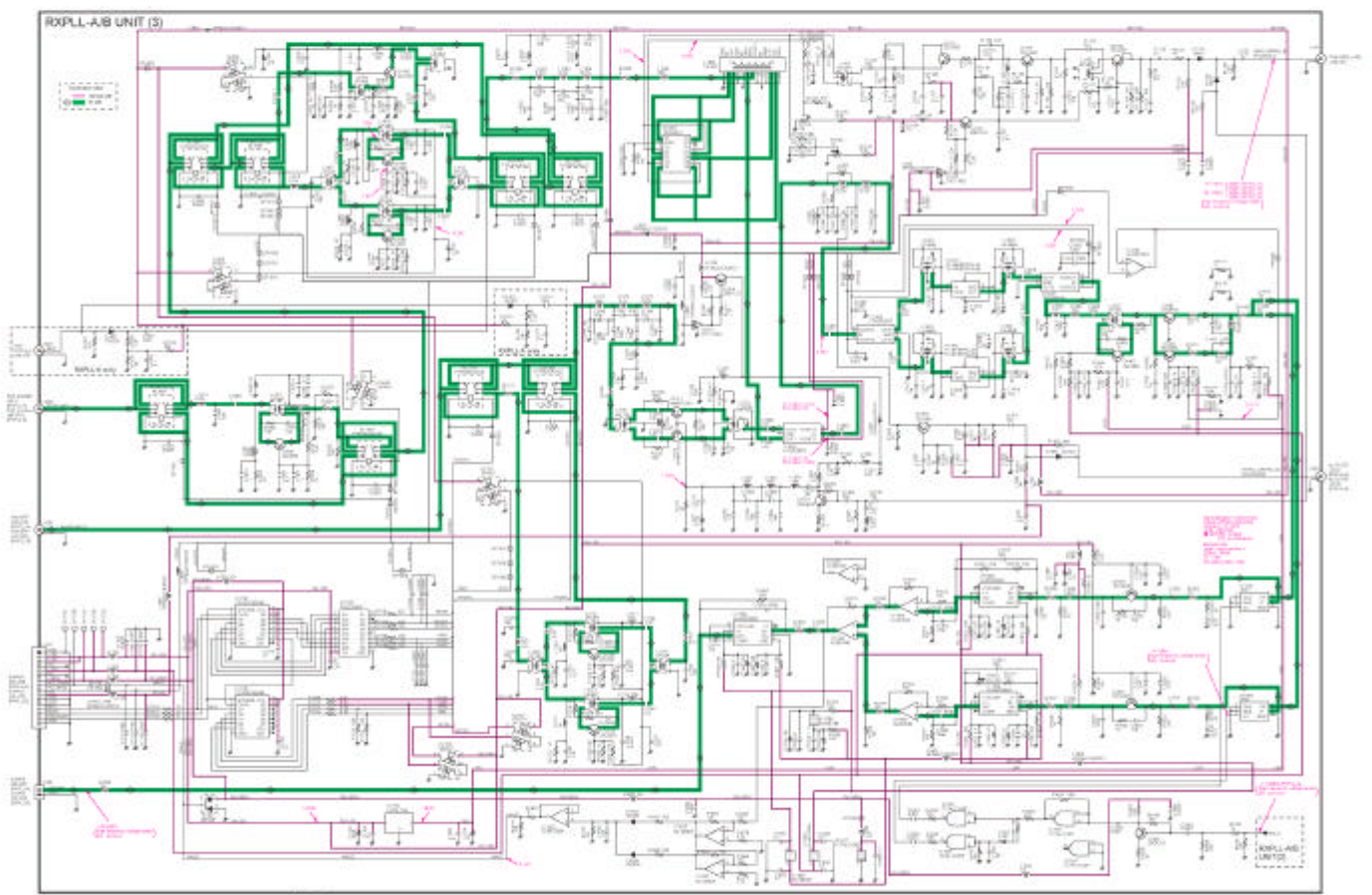


11-21 RXPLL-A/RXPLL-B UNITS

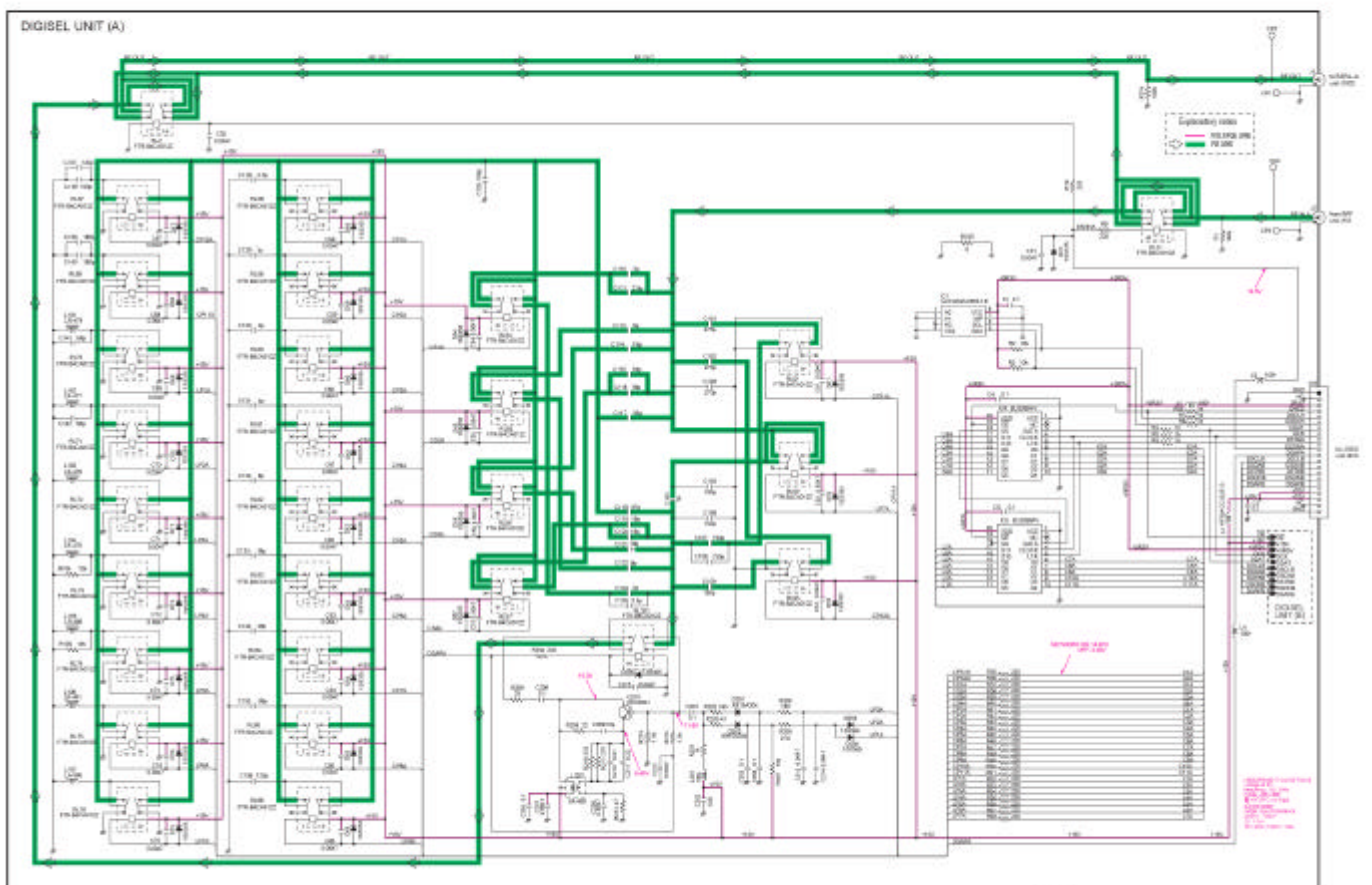


RXPLL-LAB UNIT (2)

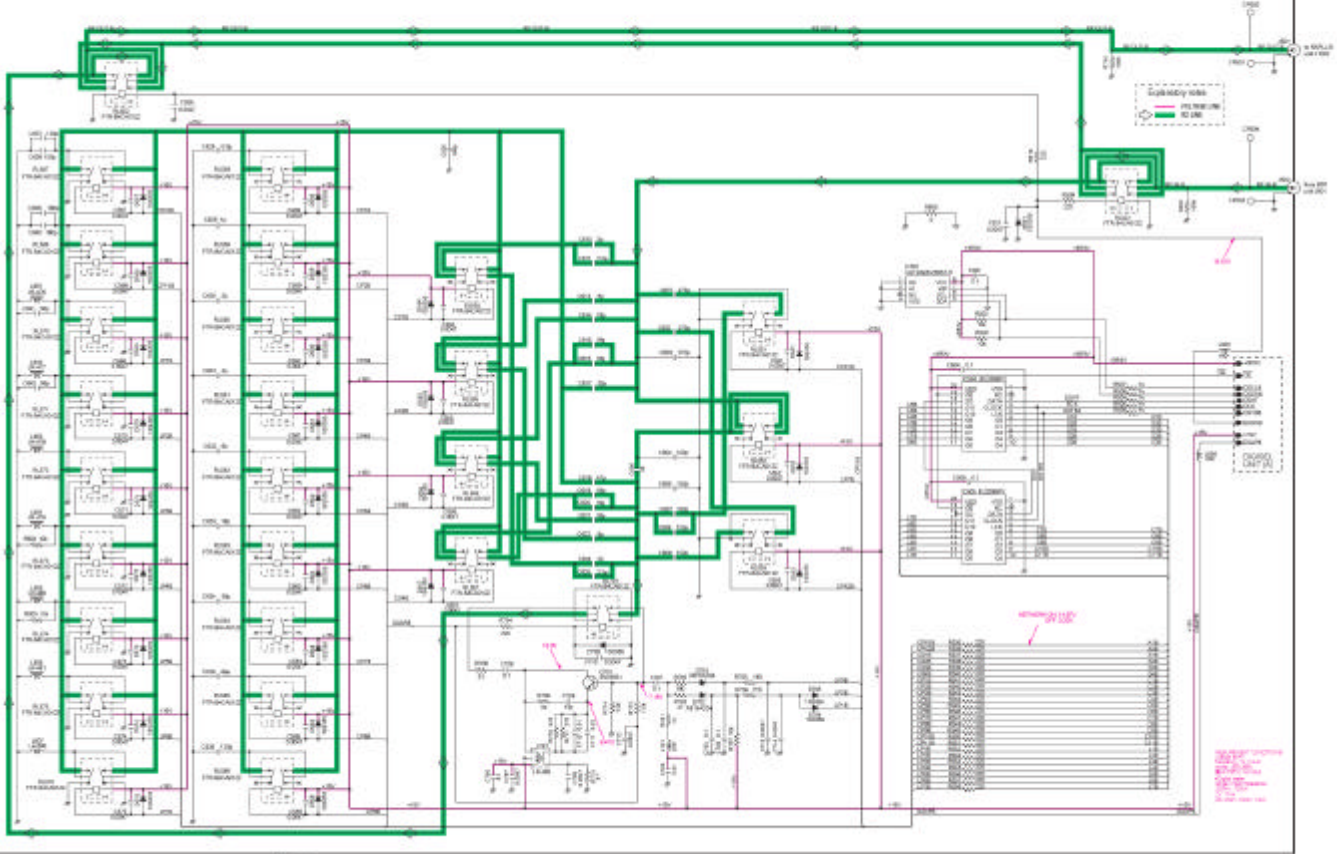




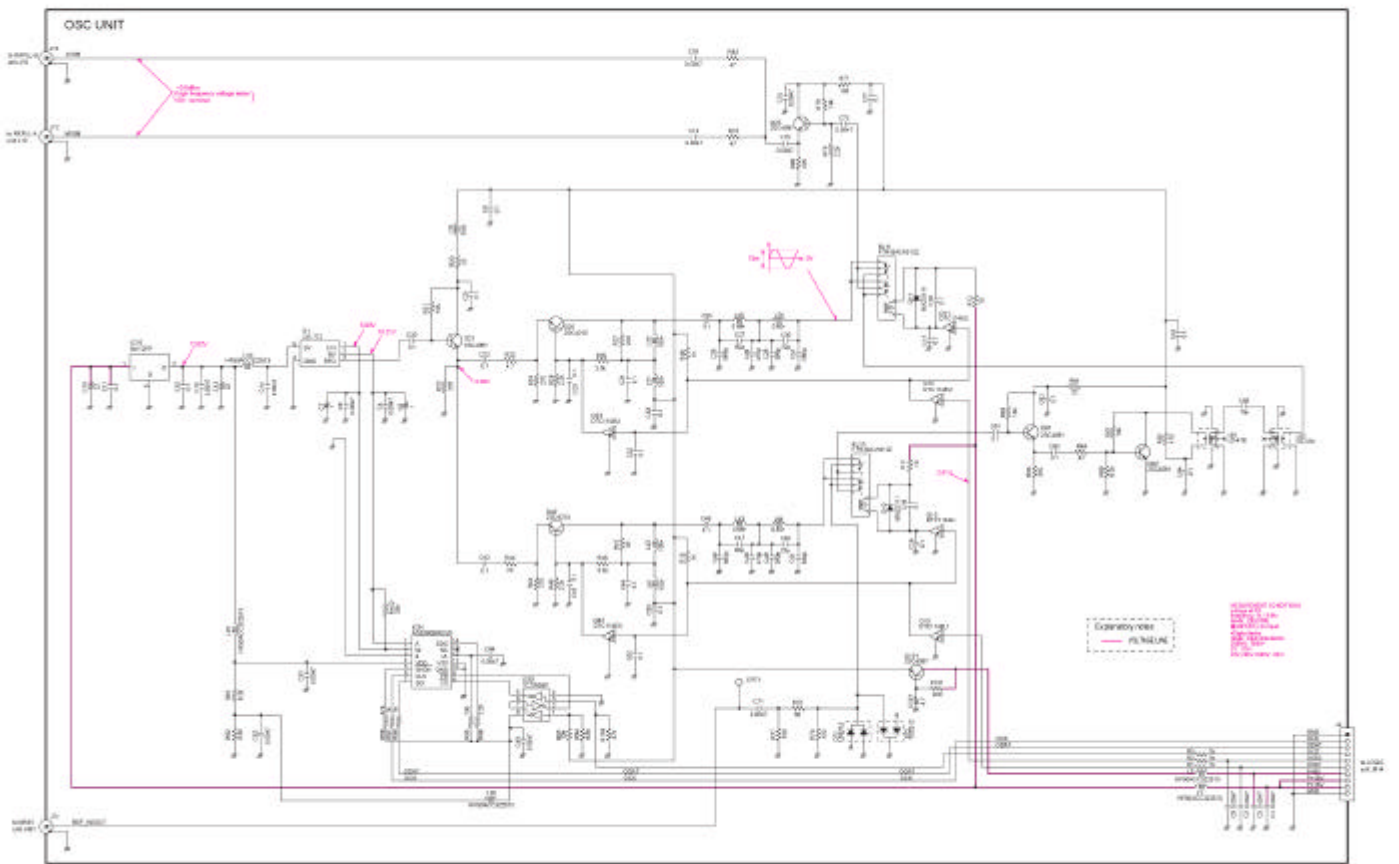
11-22 DIGISEL UNIT



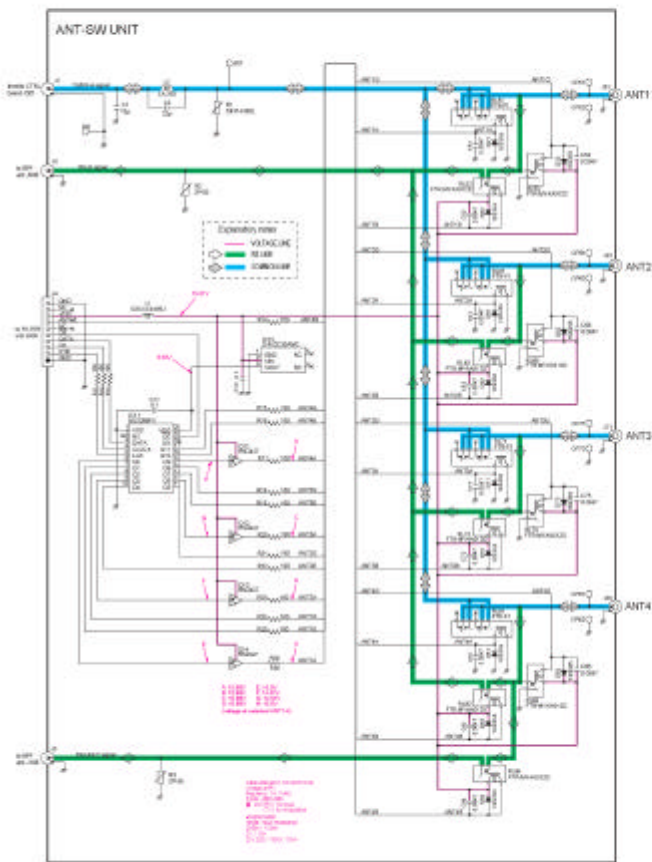
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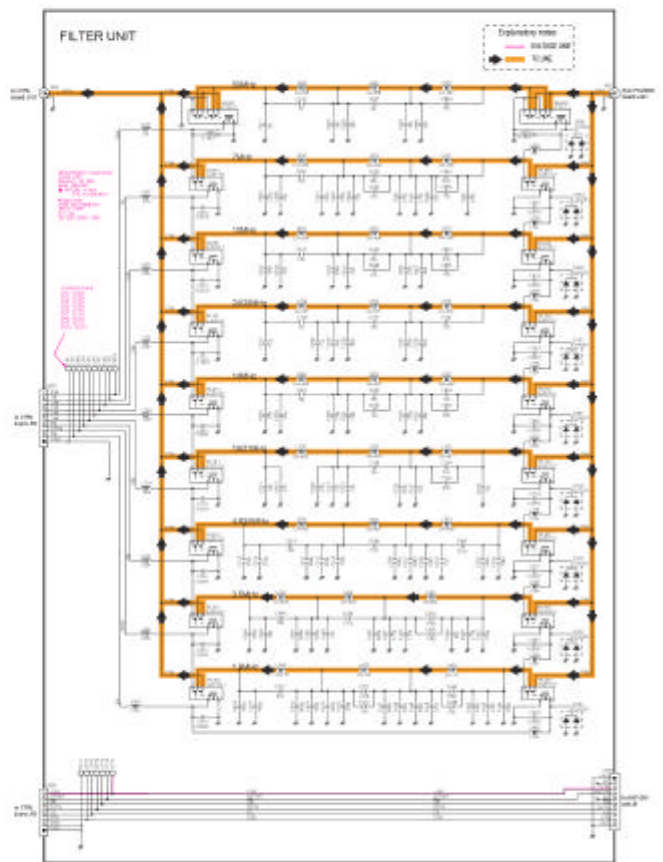
11-23 OSC UNIT



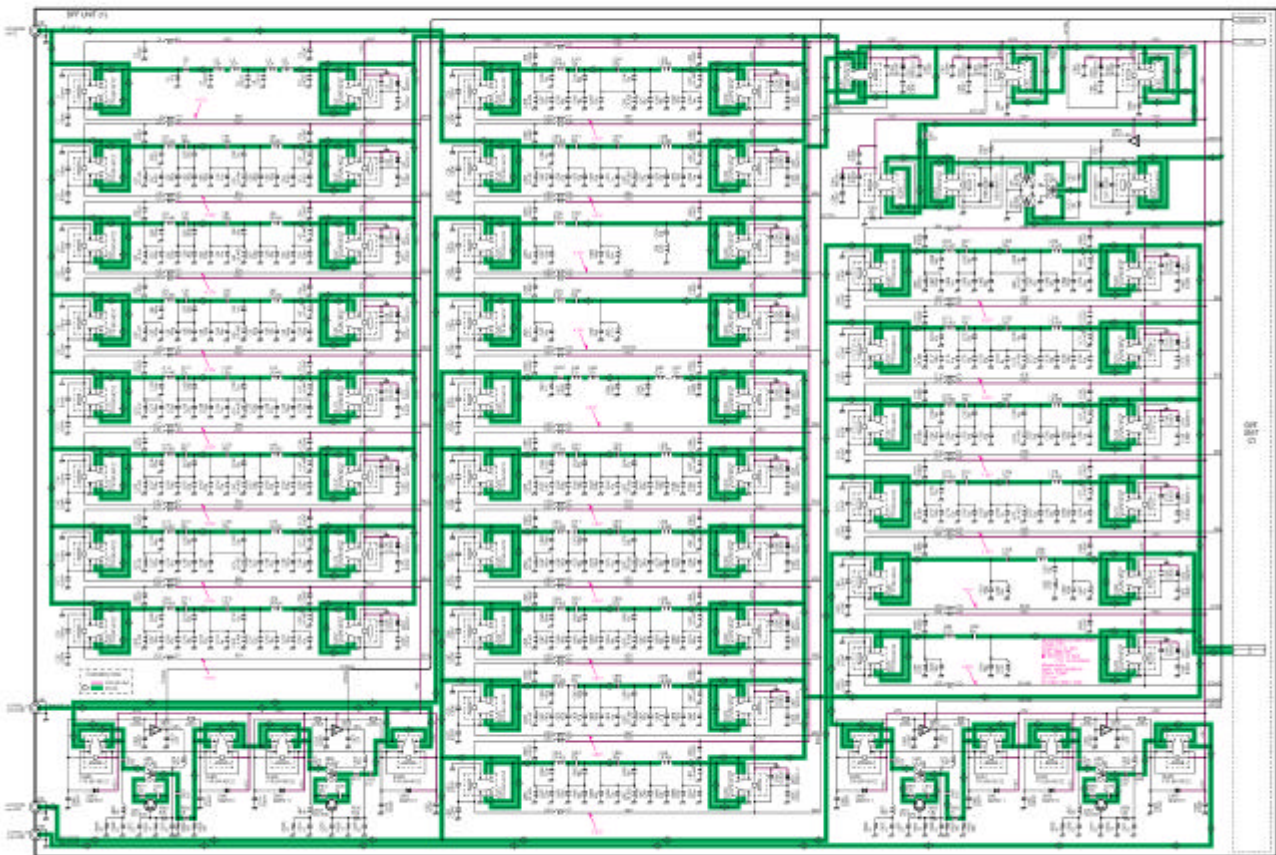
11-24 ANT-SW UNIT



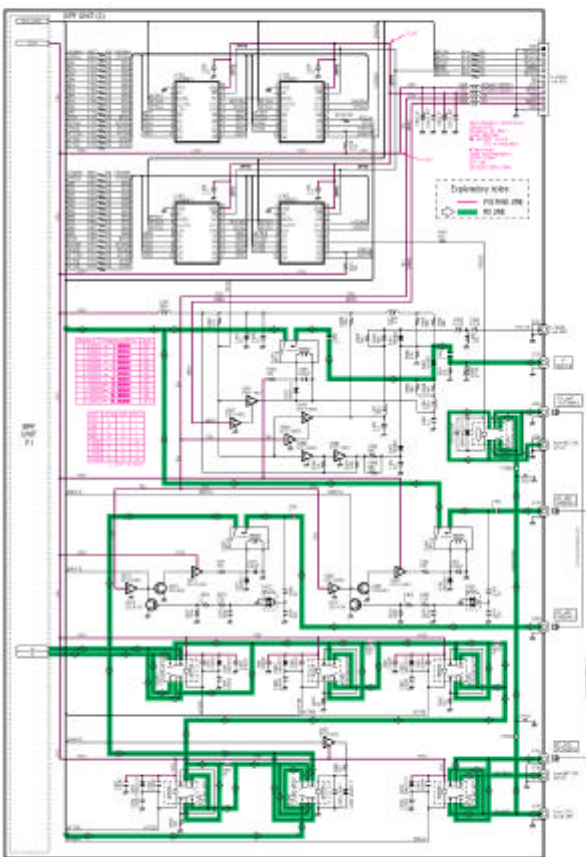
11-25 FILTER UNIT



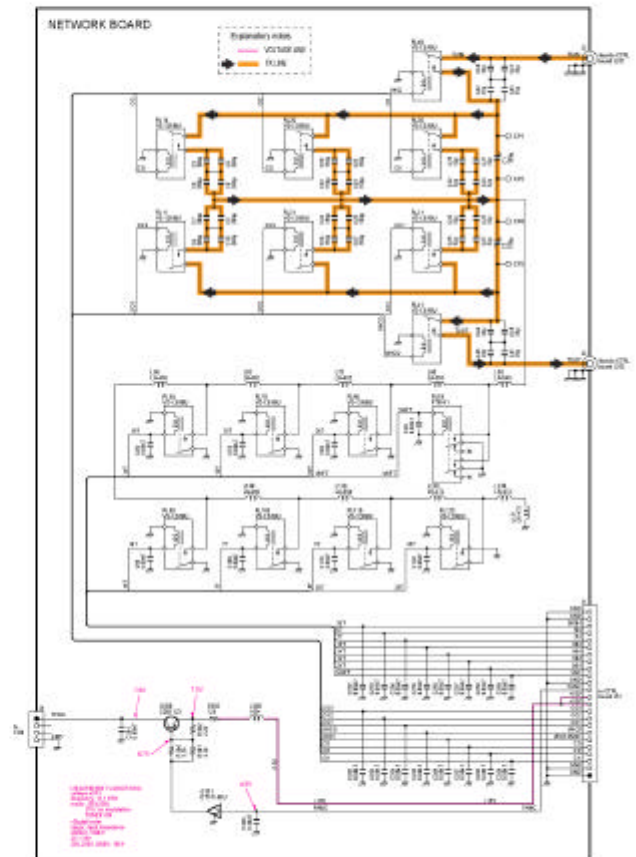
11-26 BPF UNIT



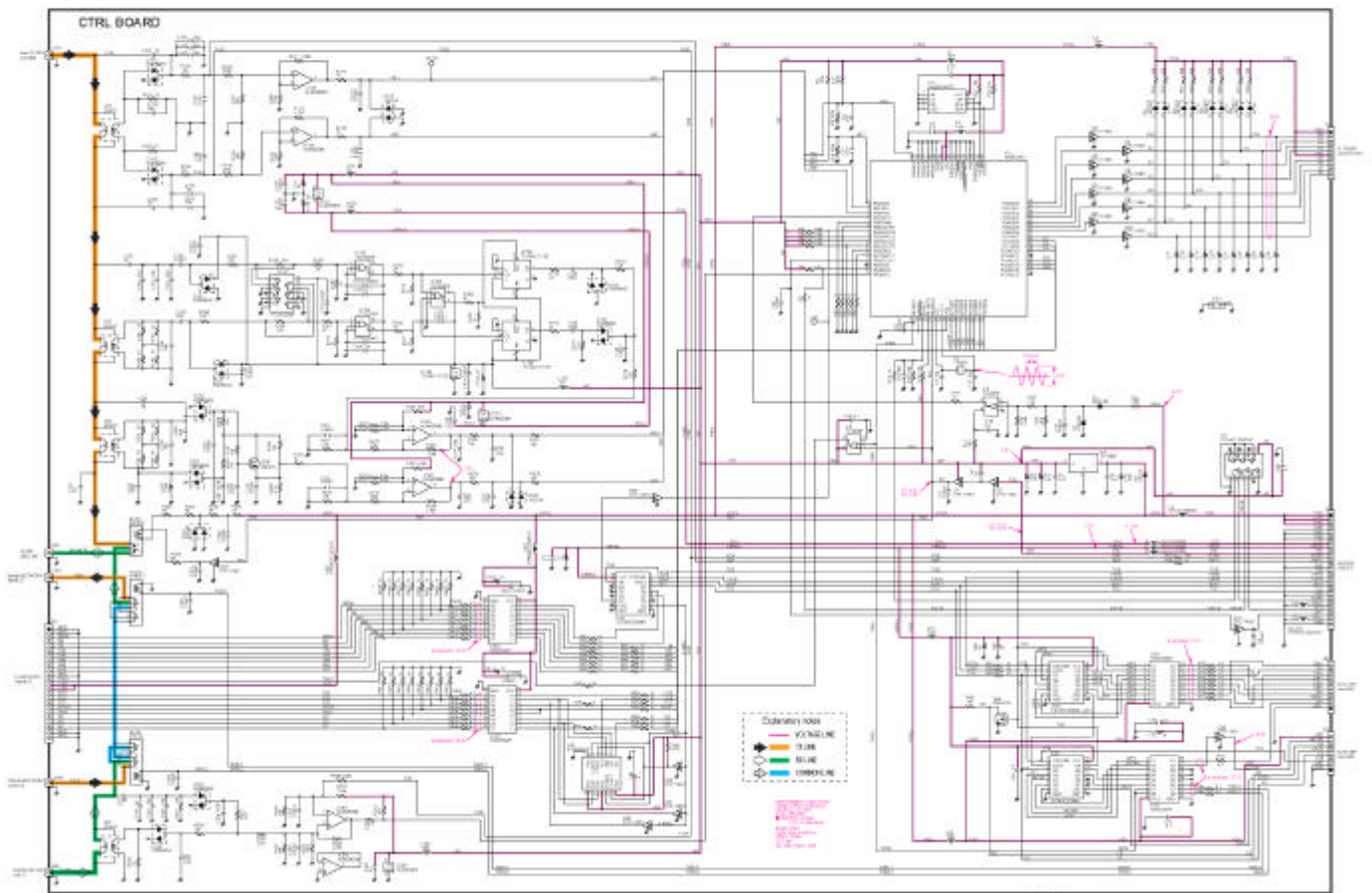
11-27 NETWORK BOARD



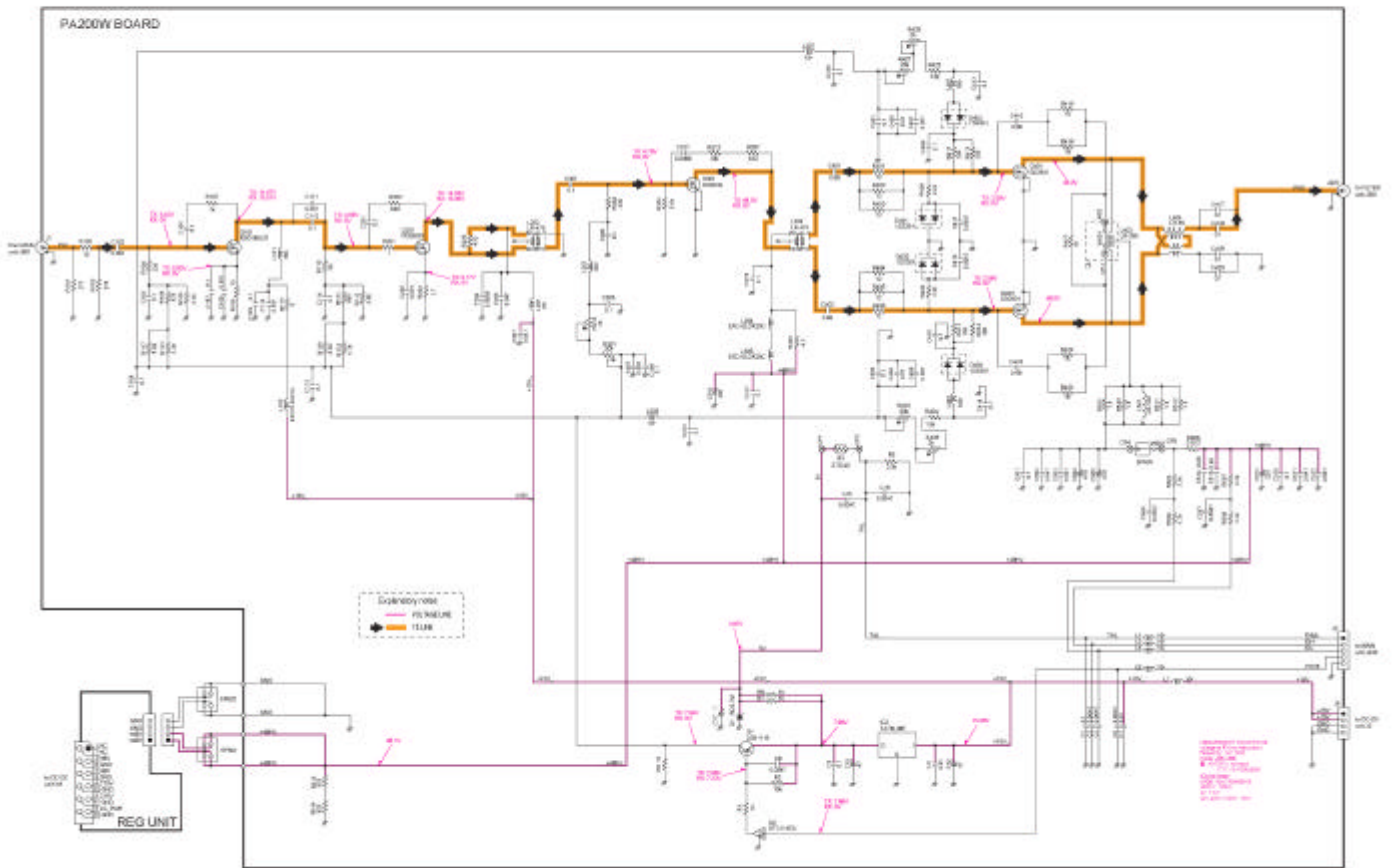
11-26



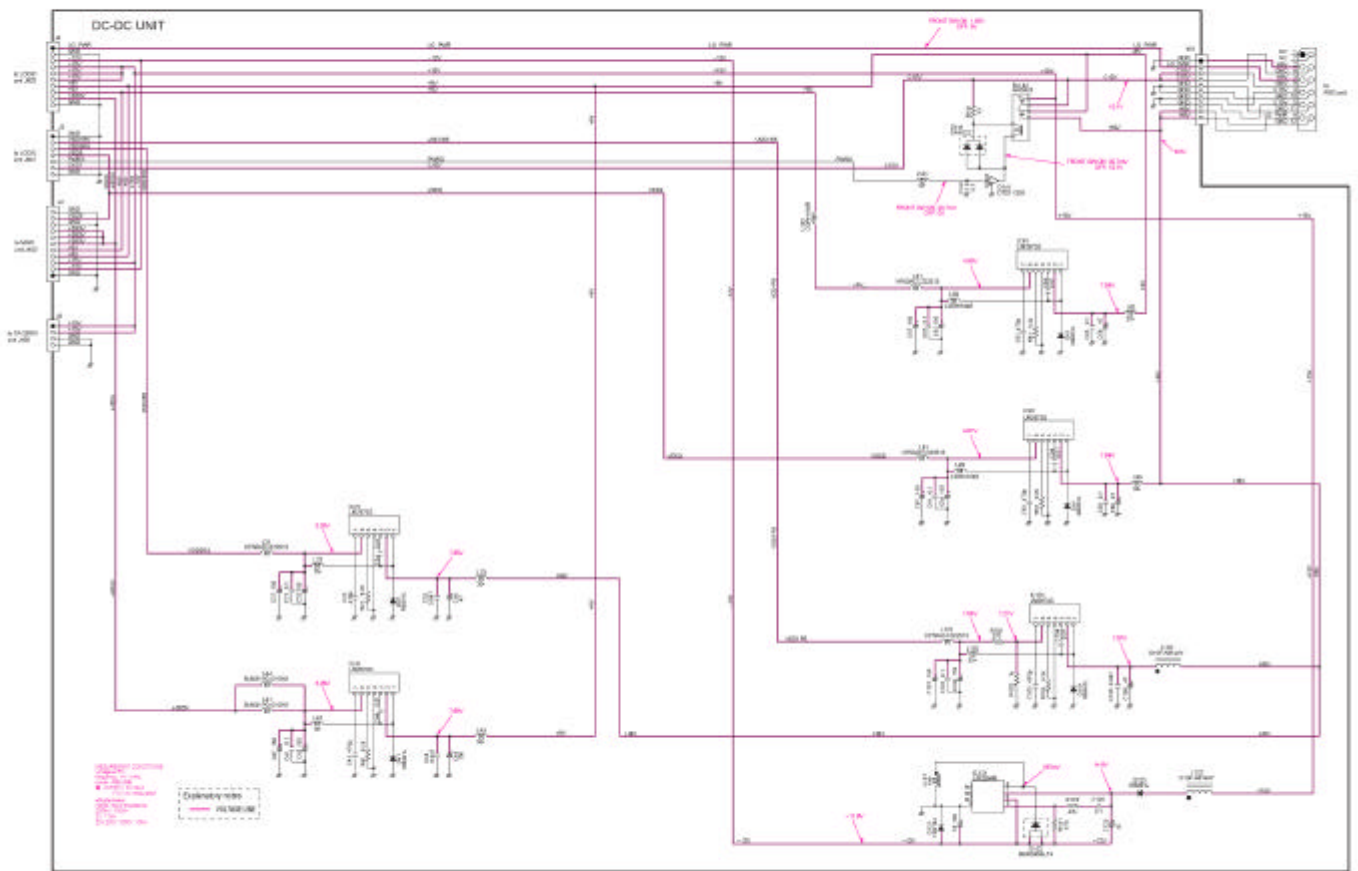
11-26 CTRL BOARD



11-29 PA200W BOARD



11-30 DC-DC UNIT



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