



SERVICE MANUAL

HF MARINE TRANSCEIVER

IC-M600

(EUROPE VERSION)

INTRODUCTION

This service manual describes the latest service information for the **IC-M600 HF MARINE TRANSCEIVER** at the time of publication.

VERSION NO.	VERSION	SYMBOL
#11	United Kingdom	UK
#12	France	FRA
#13	Italy	ITA
#14	Germany	FRG
#15	Sweden	SWE
#16	Holland	HOL
#17	Australia	AUS
#18	Spain	ESP



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>

1790000050 IC ND487C1-3R IC-M600 MAIN UNIT 5 pieces
8810002170 Screw FHM3x6 IC-M600 Chassis 10 pieces

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

DANGER

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

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

DO NOT reverse the polarities of the DC 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 the 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 : 0.5000-30.0000 MHz continuously
Transmit : 1.6000-1.9999 MHz
2.0000- 2.9999 MHz
4.0000- 4.9999 MHz
6.0000- 6.9999 MHz
8.0000- 8.9999 MHz
12.0000-13.9999 MHz
16.0000-17.9999 MHz
18.0000-19.9999 MHz
22.0000-22.9999 MHz
- Mode : J3E (USB), H3E, R3E
- Antenna impedance : 50 Ω (unbalanced)
- Power supply requirement : 13.6 V \pm 15 % DC (negative ground)
- Current drain : Receive : 3 A at max. audio output
Transmit : 30 A at max. RF output power
- Usable temperature range : -30 $^{\circ}$ C to +60 $^{\circ}$ C (-22 $^{\circ}$ F to +140 $^{\circ}$ F)
- Frequency stability : \pm 20 Hz (-30 $^{\circ}$ C to +60 $^{\circ}$ C; -22 $^{\circ}$ F to +140 $^{\circ}$ F)
- Dimensions : 287 (W) \times 90 (H) \times 233 (D) mm
11.3 (W) \times 3.5 (H) \times 9.2 (D) in
(Projections not included)
- Weight : 6.75 kg (14.9 lb)

■ TRANSMITTER

- Output power (PEP) : High 150 W Low 60 W
- Spurious emissions : 60 dB below peak 150 W output power
50 dB below peak 60 W output power
- Carrier suppression (J3E) : 40 dB below peak 150 W output power
- Unwanted sideband suppression : 55 dB below peak 150 W output power (with 1500 Hz AF input)
- Microphone impedance : 600 Ω

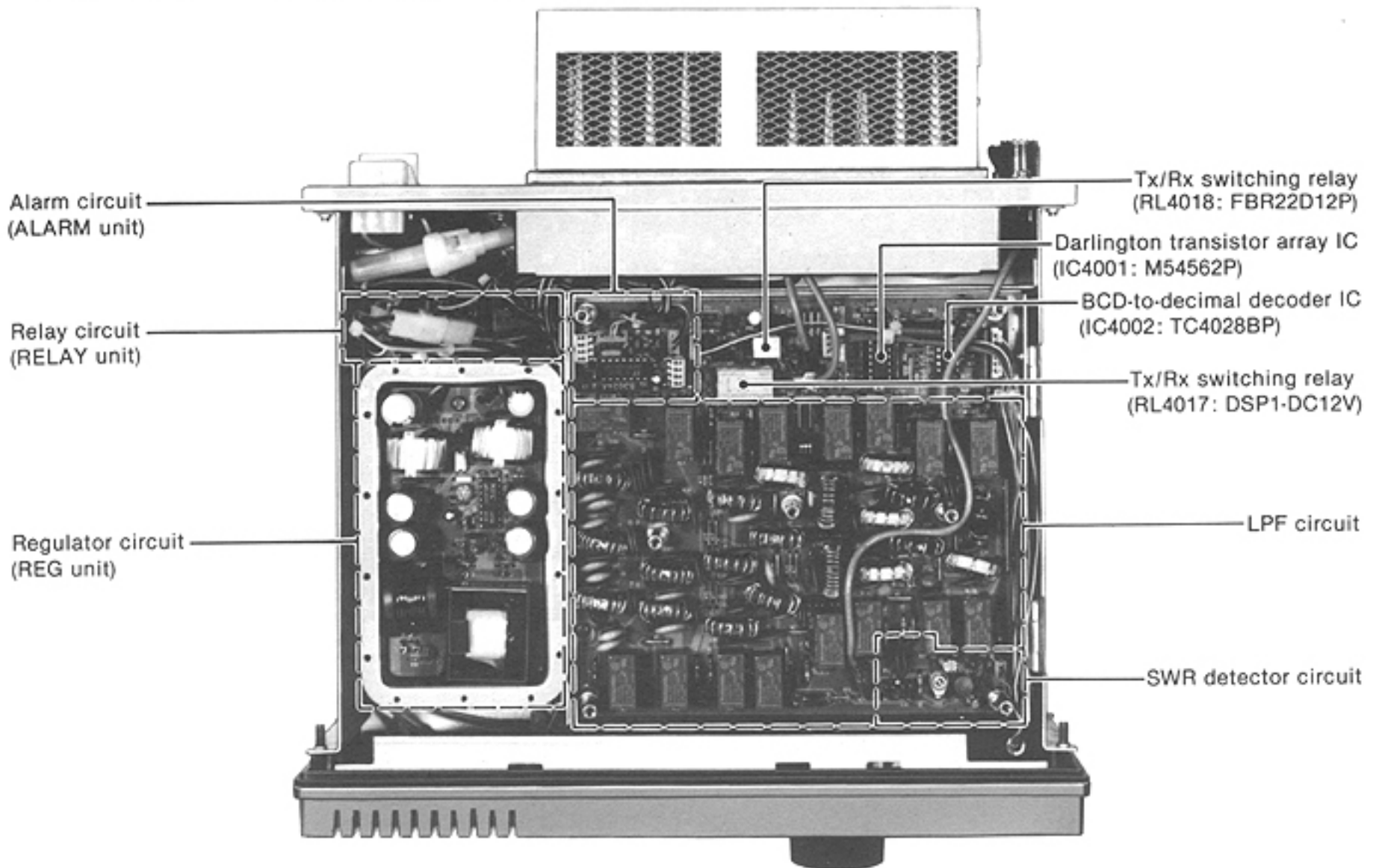
■ RECEIVER

- Sensitivity (for 12 dB SINAD) : J3E, R3E : 0.5- 2.0 MHz 6.3 μ V (-91 dBm)
2.0-30.0 MHz 0.5 μ V (-113 dBm)
H3E : 0.5- 2.0 MHz 30 μ V (-77 dBm)
2.0-30.0 MHz 3.16 μ V (-97 dBm)
- Spurious response rejection : -70 dB
- Audio output power : 5.0 W with a 4 Ω load
- Audio output impedance : 4-8 Ω
- Clarity variable range : \pm 150 Hz in 10 Hz steps

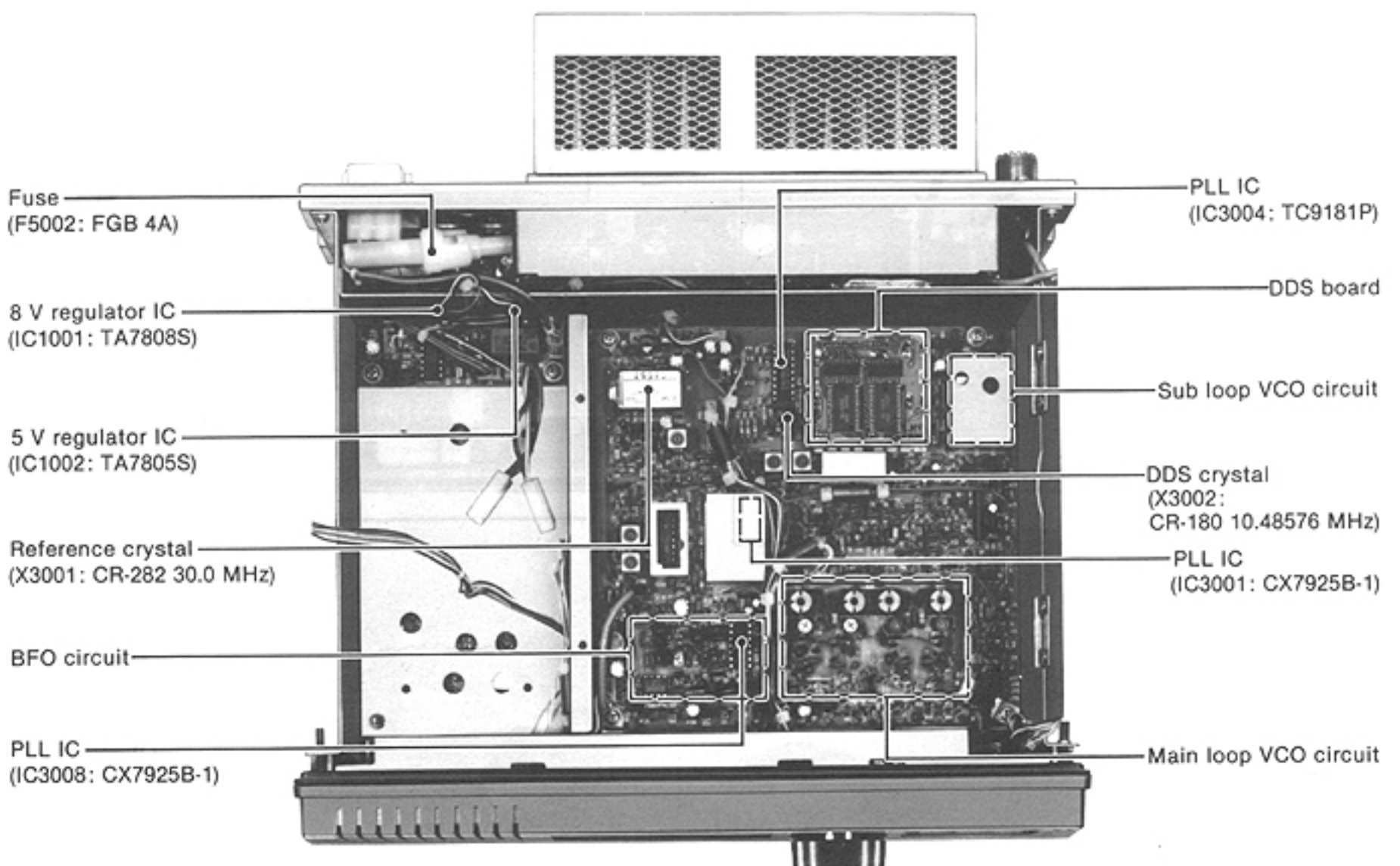
All stated specifications are subject to change without notice or obligation.

SECTION 2 INSIDE VIEWS

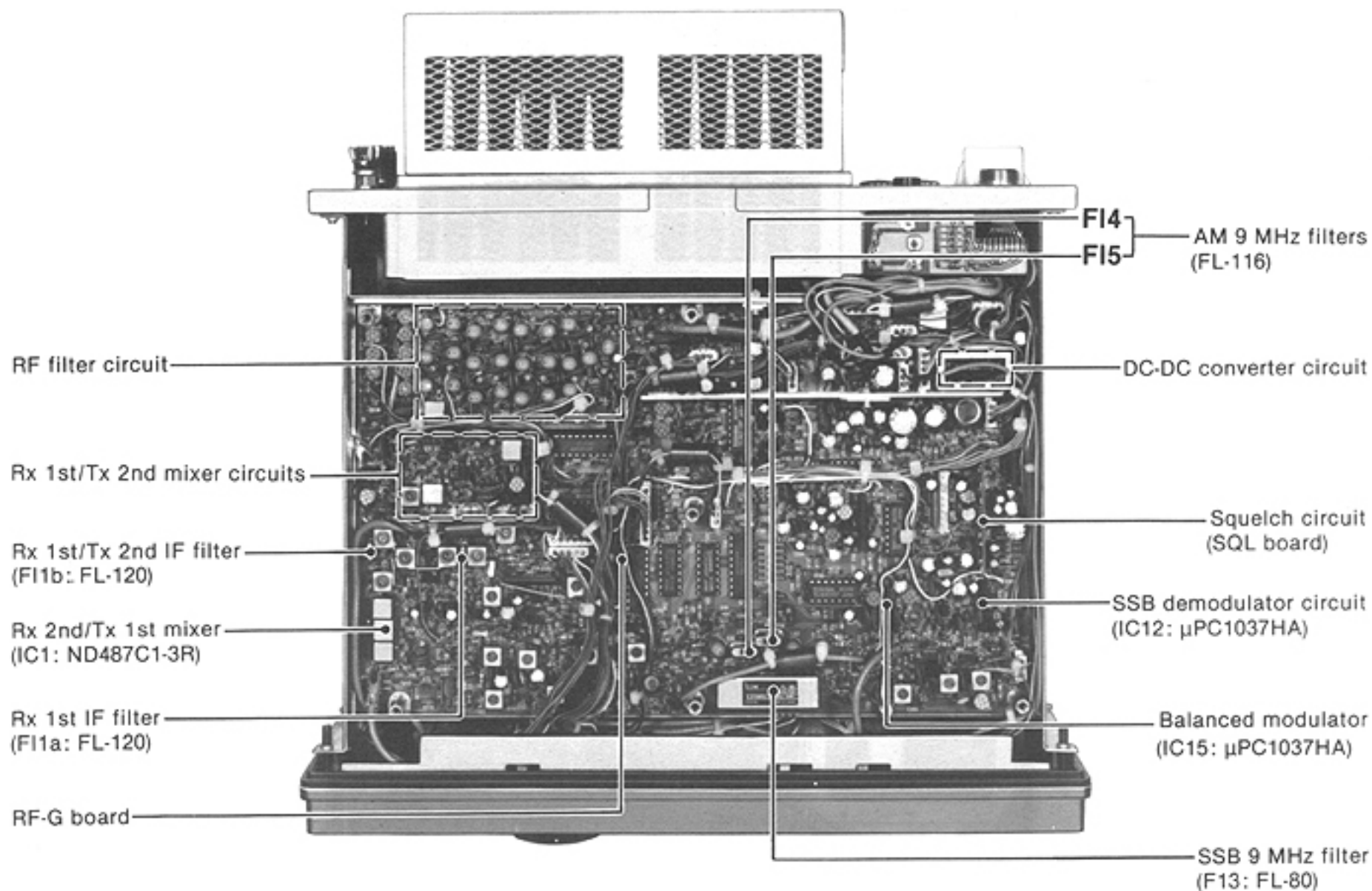
• FILTER, ALARM, RELAY AND REG UNITS



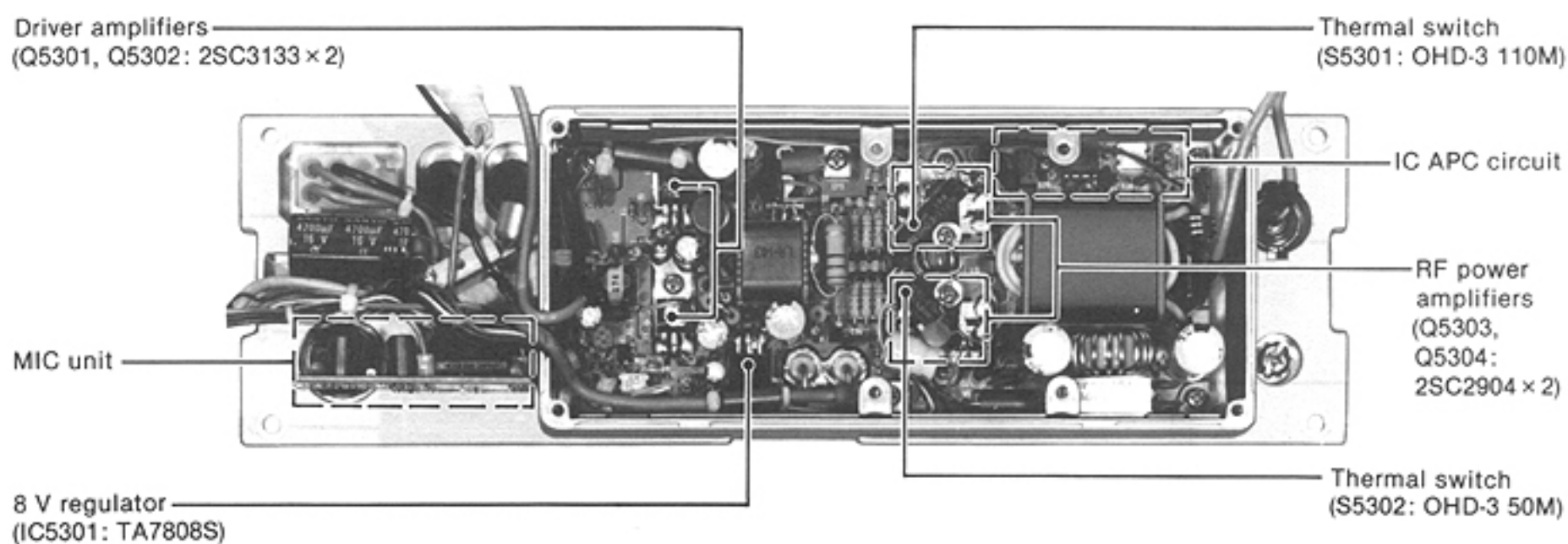
• CHASSIS, REAR AND PLL UNITS



• MAIN UNIT



• PA AND MIC UNITS



SECTION 3 CIRCUIT DESCRIPTION

3-1 RECEIVER CIRCUITS

3-1-1 RF SWITCHING CIRCUIT (FILTER UNIT)

Received signals from the antenna connector pass through one of the 8 Chebyshev low-pass filters, the transmit/receive switching relay circuit (RL4017, RL4018), and the 30 MHz cut-off low-pass filter (L4051, C4072-C4074). The filtered signals are applied to an RF circuit on the MAIN unit through J2.

The low-pass filters are designed for suppressing transmitter higher harmonic.

3-1-2 RF FILTER CIRCUIT (MAIN UNIT)

The signals from the antenna switching circuit are applied to the 1.6 MHz cut-off high-pass filter (L1, L2, C1-C5, C52) to suppress strong signals below 1.6 MHz such as those from a broadcasting station. The filtered signals pass through the transmit/receive switching diode (D1) and are then applied to one of the 8 high-pass filters or 1 low-pass filter. The signals above 2 MHz pass through a high-pass filter and the signals below 2 MHz pass through a low-pass filter.

These filters are selected by the filter switching signals (B0-B7, 24M). The BCD code signals from the LOGIC unit are converted to decimal code signals at IC3 on the MAIN unit and are then current-amplified at the Darlington transistor array (IC6). The amplified current is applied to one of the high-pass filters or to the low-pass filter to turn ON the switching diodes (D3-D18, D94, D95, D105).

The filtered signals pass through the transmit/receive switching diode (D19) and are then applied to the 30 MHz cut-off low-pass filter (L43, L44, C42-C46). The filtered signals are applied to the 1st mixer circuit (Q4, Q5).

• USED RF FILTER

BAND	CONTROL SIGNAL	ENTRANCE DIODE	BAND	CONTROL SIGNAL	ENTRANCE DIODE
0.5-2 MHz	B0	D94	10-14 MHz	B5	D13
2-3 MHz	B1	D3	14-18 MHz	B6	D15
3-5 MHz	B2	D5	18-24 MHz	B7	D17
5-7 MHz	B3	D7	24-30 MHz	24M	D10
7-10 MHz	B4	D11			

Table 1

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

The 1st mixer circuit converts the received signal to a fixed frequency of the 69.0115 MHz 1st IF signal with a PLL output frequency. By changing the PLL frequency, only the desired frequency will be passed through a pair of crystal filters at the next stage of the 1st mixer.

The signals from an RF filter are mixed at the 1st mixer circuit (Q4, Q5) with a 69.5155-99.0115 MHz 1st LO signal from the PLL unit to produce a 69.0115 MHz 1st IF signal. The 1st LO signal comes from the PLL unit via J3 and is amplified at Q15 and then passed through the 100 MHz cut-off low-pass filter (L71, L72, C113, C119-C121). The filtered signal is applied to the 1st mixer circuit (Q4, Q5).

The 1st mixer circuit (Q4, Q5) employs a balanced mixer with a low-noise junction FETs (2SK125×2) to expand the dynamic range.

The 69.0115 MHz 1st IF signal passes through a resonant circuit (L46, L47) and a crystal filter (F11a) and is then amplified at the 1st IF amplifier (Q6). AGC bias voltage is applied to the 2nd gate of the IF amplifier (Q6) to control its gain by the AGC circuit.

The amplified signal passes through the transmit/receive switching diode (D20) and the crystal filter (F11b) and is then applied to a 2nd IF circuit through a resonant circuit (L51, L52). F11a and F11b form a pair of crystal filters in order to obtain high selection capability and to pass only the desired signals.

• RECEIVER CIRCUITS

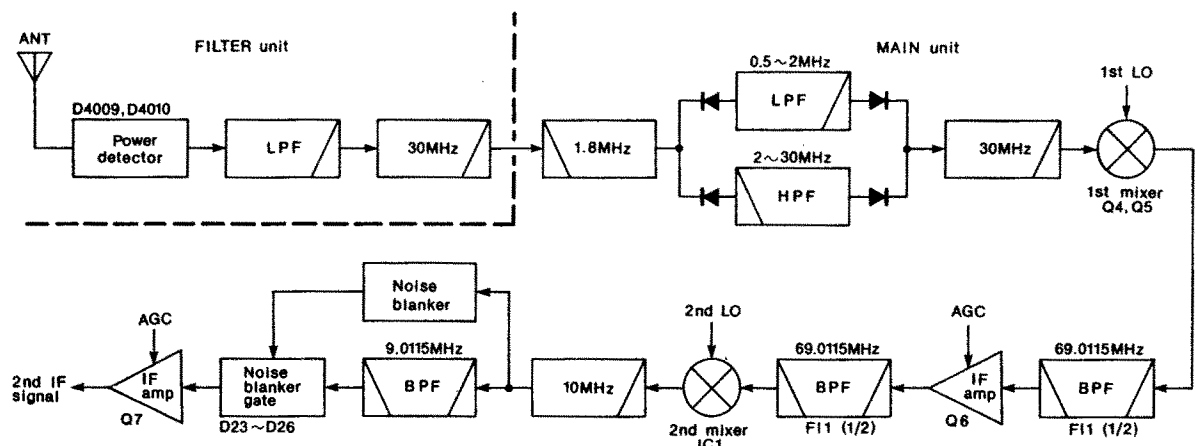


Fig. 1

3-1-4 2ND MIXER AND IF CIRCUITS (MAIN UNIT)

The 2nd mixer circuit converts the 1st IF signal to a 2nd IF signal.

The 69.0115 MHz 1st IF signal is mixed at the 2nd mixer circuit (IC1) with a 60.0 MHz 2nd LO signal from the PLL unit to produce a 9.0115 MHz 2nd IF signal. IC1 employs a DBM (Double Balanced Mixer). The 2nd LO signal comes from the PLL unit via J4 and passes through a T-type attenuator (R297-R299) and is then applied to the 2nd mixer circuit (IC1).

The 9.0115 MHz 2nd IF signal passes through the 10 MHz low-pass filter (L54-L56, C64-C68, C76) and 9 MHz bandpass filter (L57, L58) and is then applied to the noise blanker gate (D23-D26; described later).

The signal passed through the noise blanker gate is amplified at the 2nd IF amplifier (Q7) and is then applied to one of two 9 MHz filters (FI3 for SSB mode, FI4/FI5 for AM mode). The filters are selected by the mode selecting signal (H3E).

The filtered signal passes through the transmit/receive switching diode (D58) and is then amplified at the 2nd IF amplifier (Q37). The amplifier gain of the 2nd IF amplifiers (Q7, Q37) is controlled by the AGC bias voltage.

The amplified signal is re-amplified at Q36 and is then applied to a low-impedance converter (Q60). R19, which is connected to the gate of Q36, improves the temperature characteristics of the receiver gain. R166 adjusts the receiver gain. The resulting signal is applied to the demodulator and the AGC circuits.

3-1-5 NOISE BLANKER CIRCUIT (MAIN UNIT)

The noise blanker circuit effectively reduces interference from pulse-type noise generated by motors and dynamos, etc.

A portion of the 2nd IF signal from L58 is amplified at the noise amplifiers (Q16, IC2). The signal is then detected at the noise detector (D40, D41) to convert the IF signal to noise components. The signals are then applied to a noise blanker switch (Q19, Q20).

At the moment the detected voltage exceeds the threshold level, Q20 outputs a blanking signal to close the noise blanker gate (D23-D26) by applying reverse-biased voltage. Q21 turns the noise blanker circuit ON or OFF.

The detected voltage is also applied to a noise blanker AGC circuit (Q17, Q18) and is then fed back to the noise amplifier (IC2) as a bias voltage. The time constant of the noise blanker AGC circuit is determined by R105 and C139.

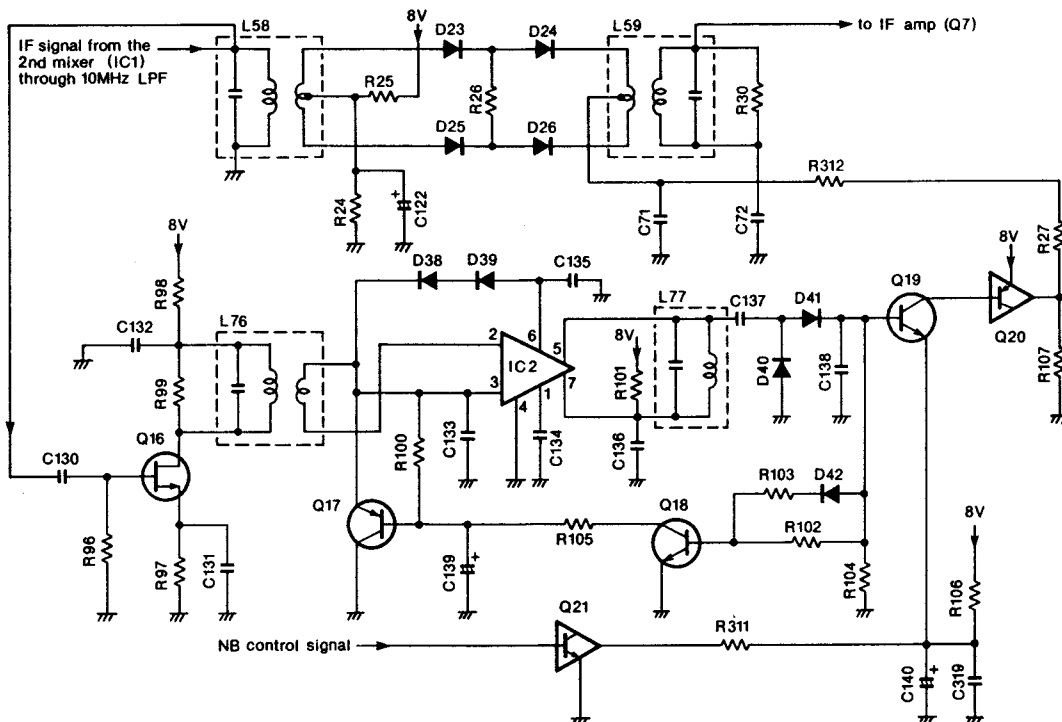
3-1-6 SSB DEMODULATOR CIRCUITS (MAIN UNIT)

This circuit demodulates the 2nd IF signal into an AF signal using a BFO oscillator.

The 2nd IF signal from the low-impedance converter (Q60) is applied to the SSB demodulator circuit (IC12, pin 5) and is then mixed with the 9.01-9.013 MHz BFO signal from the PLL unit to be demodulated into an AF signal. The AF signal is output from IC12 (pin 3) and is then applied to the AF circuit on the SQL board.

The 9.01-9.013 MHz BFO signal from the PLL unit passes through D57 and is then applied to the SSB demodulator circuit (IC12, pin 7).

• NOISE BLANKER CIRCUIT



3-1-7 AM DEMODULATOR CIRCUIT (MAIN UNIT)

The 2nd IF signal from the low-impedance converter (Q60) is applied to the AM demodulator circuit (D61) to be demodulated into an AF signal and is then buffer-amplified at Q39. The amplified signal is applied to the AF circuit on the SQL board.

3-1-8 AGC CIRCUIT (MAIN UNIT)

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

The receiver gain is determined by the voltage on the AGC time constant line (Q34, collector) which is usually set by the resistance ratio in RF-G board.

The 2nd IF signal from the low-impedance converter (Q60) is detected at the AGC detector circuit (D44, D56) and is then applied to the DC amplifier (Q34). -5 V is applied to the Q34 emitter to activate the AGC line on the minus voltage.

When receiving a strong signal, the detected voltage increases and the voltage of the time constant line is decreased by the DC amplifier (Q34). As the time constant line is used for the bias voltage of the IF amplifier (Q6, Q7, Q37), IF amplifier gain is decreased.

When the strong signal disappears, the time constant line voltage is released by R143/C164 and R255/C165.

3-1-9 S-METER CIRCUIT (MAIN AND LOGIC UNITS)

The S-meter circuit indicates the relative received signal strength, while receiving, on the function display.

The AGC bias voltage (time constant line) from Q34 is inverted and amplified at IC22a. The amplified signal passes through the S/RF meter switching IC (IC21d) and is then applied to the CPU (IC2301, pin 49) on the LOGIC unit through the "MET" line.

IC21d and IC21c are used as a meter switching circuit and are controlled by the "R8" and "T8" lines.

• AGC CIRCUIT

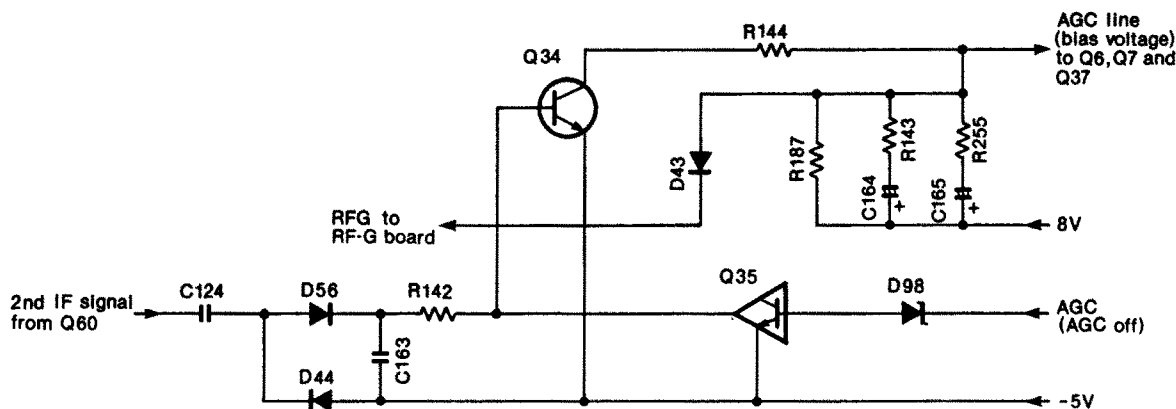


Fig. 3

3-1-10 AF AMPLIFIER CIRCUIT (SQL BOARD AND MAIN UNIT)

The AF signal passes through an active low-pass filter (IC503a) on the SQL board. The filtered signal is applied to the squelch gate (IC21a, pin 1) on the MAIN unit. IC21a is controlled by the "SQLS" signal from the SQL board. When the squelch is closed, Q38 is turned ON and IC21a cuts the AF signal as the AF mute switch. The AF signal from the squelch gate (IC21a) is applied to the electric volume IC (IC14, pin 3).

One of two channels in IC14 is used for audio attenuation from 0 dB to -66 dB in 2 dB steps. The control signals (CK, DT, VST) from the CPU (IC2301) on the LOGIC unit are applied to IC14.

The AF signal is output from IC14 (pin 2) and is then buffer-amplified at IC17b. The amplified signal is re-applied to IC14 (pin 5) and is then output from IC14 (pin 6). The AF signal is amplified at Q61 and is then power-amplified at IC13 to drive an internal or external speaker. The power-amplified signals pass through the [MIC] connector and are then applied to the internal speaker.

3-1-11 SQUELCH CIRCUIT (SQL BOARD AND MAIN UNIT)

By detecting audio components in the AF signals, the squelch circuit opens the squelch gate on the AF signal line.

A portion of the AF signal from IC503a (pin 1) in the SQL board is amplified at the limiter amplifier (IC503b) and is then applied to the one-shot multi-vibrator (IC501b, IC501d).

The one-shot multi-vibrator functions as an F-V converter which generates a signal only when audio signals are received. The output signals are integrated and then passed through the low-pass filter (3 kHz) to remove the remaining noise components. The filtered signal is applied to the window comparator (IC502b).

The comparator outputs "HIGH" when the integrated signals exceed the reference voltage. C264 and R502 are used as a time constant circuit. The resulting signal is output from IC501c (pin 10) as the "SQL" signal and is then applied to the squelch gate (IC21a) through the switching transistor (Q38).

3-2 TRANSMITTER CIRCUITS

3-2-1 MICROPHONE AMPLIFIER CIRCUIT (MIC AND MAIN UNITS)

The AF signals from the [MIC] connector pass through the MIC unit and are then applied to the microphone amplifier (IC17a, pin 3) on the MAIN unit via the input level control pot (R215). The amplified signals pass through the audio switch (IC16) and are then applied to the balanced modulator (IC15).

The microphone AGC circuit (D63, D64 Q40) controls the amplifier gain to prevent signal distortion.

3-2-2 BALANCED MODULATOR CIRCUIT (MAIN UNIT)

The balanced modulator circuit adjusts the audio signal on the BFO frequency and outputs the IF signal while suppressing the BFO signal.

The AF signals from the microphone amplifier circuit are applied to the balanced modulator circuit (IC15, pin 5). The 9.01-9.013 MHz BFO signal from the PLL unit passes through D93 and D65 and is then applied to IC15 (pin 7) as a carrier signal. A double sideband signal is output from IC15 (pin 3) and is then applied to a 9 MHz filter (F13) to create an SSB signal through the transmit/receive switching diode (D59).

R225 and R227 adjust the balance level of IC15 for maximum carrier suppression.

In H3E and R3E modes, the 9.01-9.013 MHz BFO signal from the PLL unit passes through D93, D104, D54 and is then applied to the 1st gate of the IF amplifier (Q55) as a carrier signal. R129 and R126 adjust the carrier level in H3E or R3E mode respectively.

The SSB signal from the 9 MHz filter (F13) passes through the transmit/receive switching diode (D55) and is then amplified at Q56 and Q55.

The bias voltage of Q56 is controlled by the ALC (Auto Level Control) circuit to keep the selected output level. The bias voltage of Q55 is controlled by the APC (Auto Power Control) circuit to reduce the output power when the antenna impedance is mismatched or when the current of the final transistors exceeds the limit values.

The amplified signal passes through the 10 MHz low-pass filter (L54-L56, C64-C68, C76) and is then applied to the mixer circuit (IC1).

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

The filtered signal is mixed with a 60 MHz 1st LO signal at the 1st mixer circuit (IC1) to produce a 69.0115 MHz 1st IF signal. This 1st mixer is commonly used with the receive 2nd mixer. The 1st LO signal comes from the PLL unit via J4.

The 69.0115 MHz 1st IF signal passes through a crystal filter (F11b) and is then applied to the 2nd mixer circuit (Q13, Q14).

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

The filtered signal is mixed with a 69.5155-99.0115 MHz 2nd LO signal at the 2nd mixer circuit (Q13, Q14) to produce an RF signal which is the same frequency as the displayed frequency.

The 2nd LO signal comes from the PLL unit via J3 is amplified at Q15 and is then passed through the 100 MHz cut-off low-pass filter (L71, L72, C113, C119-C121). The filtered LO signal is applied to the 2nd mixer circuit (Q13, Q14).

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

The RF signal passes through the 39 MHz cut-off low-pass filter (L66, L67, C107-C111) where unwanted LO emission is reduced and is then amplified at the RF amplifier (Q9). The bias voltage of Q9 is adjusted with a gain setting pot (R62-R65, R74 or R76-R78) to obtain desired output power on each band.

The amplified signal is applied to one of nine RF filters via D37. These RF filters are commonly used with the receiver circuit which consists of eight high-pass filters and one low-pass filter.

The filtered signal is then applied to the pre-driver (Q23) via D2.

3-2-6 DRIVE AMPLIFIER CIRCUIT (MAIN UNIT)

The signal from the RF filter circuit is amplified at the pre-driver (Q23) and the driver (Q24). The amplified signal passes through the 30 MHz cut-off low-pass filter (L111, C93, C99, C100) and is then applied to the PA unit via J1.

3-2-7 RF POWER AMPLIFIER (PA UNIT)

This circuit provides a stable 150 W (at DC 13.6 V) of output power. The RF signal from the MAIN unit is amplified at the driver (Q5301, Q5302) and power amplifier (Q5303, Q5304).

The driver and power amplifier form class AB push pull circuits. Bias voltages of these transistors are produced by diodes (D5301, D5302, D5303) which have temperature junctions with the transistors. Idling current of the driver and power amplifier is adjusted by R5322 and R5325 respectively.

The amplified signal is then applied to the FILTER unit via P5302.

3-2-8 LOW-PASS FILTER (FILTER UNIT)

The signal from the PA unit passes through the transmit/receive switching relay (RL4017, RL4018) and is then applied to one of the eight Chebyshev low-pass filters to suppress high harmonic components by more than 60 dB. The filtered signals pass through the power detector circuit (L4041) and are then applied to the antenna connector.

3-2-9 ALC CIRCUIT (FILTER AND MAIN UNITS)

The ALC (Auto Level Control) circuit selects one of three output power levels (Po-3, Po-2 or Po-1) by comparing the detected "FOR" signal level and the ALC reference level.

The RF power signal level is detected at D4010 of the power detector circuit (L4041, D4009, D4010) in the FILTER unit. The signal level ("FOR" signal) is applied to the ALC comparator (IC23) in the MAIN unit.

When the "FOR" signal (pin 2) exceeds the ALC reference voltage (pin 3), IC23 decreases the ALC time constant line voltage. This voltage is used in the IF amplifier (Q56) as a bias voltage to reduce the output power until the input voltage pin 2 reaches the same level as pin 3. The "ALC" line is connected to the "EALC" line for external ALC input from the [ACC2] connector.

When "Po-2" or "Po-1" is selected, Q26 is turned ON to reduce the ALC reference voltage. Hence, low output power is obtained.

When selecting H3E mode or the 28 MHz band, a control signal turns ON Q26.

3-2-10 RF METER CIRCUIT (MAIN AND LOGIC UNITS)

The RF meter circuit indicates the RF output power level while transmitting on the function display.

The "ANTC" signal from the optional antenna tuner is applied to the Po meter amplifier (IC22b, pin 5) and is then detected at D46. The detected signal ("POM") passes through the S/RF meter switching IC (IC21c) and is then applied to the CPU (IC2301, pin 49) on the LOGIC unit through the "MET" signal line. The "POM" voltage line is selected with the "T8" voltage line.

3-2-11 APC CIRCUIT (MAIN UNIT)

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

The reflected wave signal appears and increases on the antenna connector. When the antenna is mismatched, D4009 of the power detector circuit (L4041, D4009, D4010) in the FILTER unit detects the signal and applies it to the reflected buffer (Q30) in the MAIN unit as the "REF" signal.

When the "REF" signal level increases, Q30 decreases the APC line voltage. The APC line voltage is used at the IF amplifier (Q55) as a bias voltage to reduce the output power during high SWR conditions.

For the IC APC, the power transistor current is obtained by detecting the voltage which appears at both terminals of a 0.012 Ω resistor (R5326) on the PA unit. The detected voltage is applied to the differential amplifier (IC5302). When the current of the final transistors is more than 30 A, the detected voltage is applied to the IC APC amplifier (Q29) in the MAIN unit to reduce the APC line voltage and thus reduce the output power.

Power reduction for an optional antenna tuner is controlled on the APC line voltage. While the "TUN" signal appears, the carrier control circuit (Q31, Q32) reduces the output power to 10 W using the APC line voltage.

3-2-12 FAN CONTROL CIRCUIT (PA UNIT)

The thermal switches (S5301, S5302) detect the temperature of the RF power amplifiers (Q5303, Q5304) and control the fan speed.

TEMPERATURE °C (°F)		Below 50 (122)	50-90 (122-194)	Above 90 (194)
THERMAL SWITCH	S5301	OFF	OFF	ON
	S5302	OFF	ON	ON
COOLING FAN SPEED	RECEIVE	STOP	LOW	MID
	TRANSMIT	STOP	MID HIGH	HIGH

Table 2

• ALC CIRCUIT

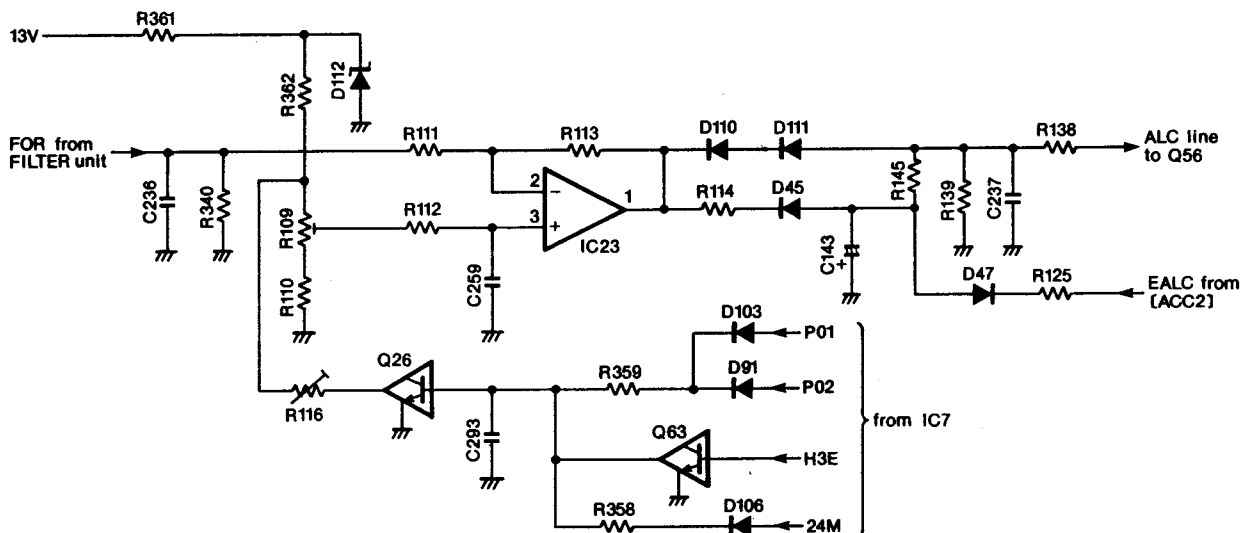


Fig. 4

3-3 PLL CIRCUITS

3-3-1 GENERAL

The PLL unit generates a 1st LO signal (69.5155-99.0115 MHz), a 2nd LO signal (60 MHz) and a BFO signal (9.01-9.013 MHz) for the MAIN unit. The IC-M600 uses a dual loop PLL system for the 1st LO oscillator and single loop PLL system for the BFO oscillator.

The main loop PLL contains 4 VCO circuits for all HF marine band coverage within 500 kHz steps. The sub loop PLL employs DDS (Direct Digital Synthesizer) system which ensures a rapid lockup time and high quality frequency oscillation for 500 kHz coverage within 100 Hz steps.

3-3-2 1ST LO PLL CIRCUIT (PLL UNIT AND DDS BOARD)

The 1st LO circuit employs a dual loop PLL system. One of four VCO oscillation signals (main loop) is mixed with the sub loop PLL output. The mixed signal is applied to the PLL IC (IC3001) where the signal is then divided by a programmable divider and compared with the reference frequency. The phase detected signal is converted to the lock voltage at the active loop filter (Q3001, Q3002) and is then fed back to a VCO circuit to control the oscillation frequency.

In the sub loop PLL, the programmable dividing and phase detection are performed by digital processing in the DDS board. The sub loop, therefore, ensures a high speed and high quality signal can be generated. On the other hand, the main loop PLL generates 500 kHz steps — this means high speed PLL can be accomplished — and 100 Hz steps are processed by the DDS. The quality of the dual loop PLL circuit is determined by the sub loop PLL.

3-3-3 MAIN LOOP CIRCUIT (PLL UNIT)

One of four VCO circuits is switched by the VCO switching signal ("VCO1"-"VCO4"). The oscillated signal is buffer-amplified at Q3011 and Q3012 and is passed through the bandpass filter (L3014-L3017, C3061-C3065) and then applied to the mixer (IC3002, pin 7). The sub loop PLL output signal is also applied to the mixer (IC3002, pin 5). The mixed signal passes through the low-pass filter (L3019-L3021, C3072-C3078) and then applied to a bandpass filter.

The main loop PLL has two bandpass filters for VCO1/VCO2 oscillation frequencies (L3022, L3023, C3082-C3086) and VCO3/VCO4 frequencies (L3025, L3026, C3090-C3093, C3132). In addition, while VCO3 is used, D3026 is turned ON to ignore changing filter characteristics of C3132. The filtered signal is buffer-amplified at Q3017 and Q3018 and is then applied to the PLL IC (IC3001, pin 13).

The entered signal is divided at the programmable divider section in IC3001 and is then phase detected at the phase comparator section with the reference frequency (described later). The phase detected signal is output from pin 7 and is then converted to a DC voltage (lock voltage) by the active loop filter (Q3001, Q3002). The lock voltage is applied to one of the varactor diodes (D3002-D3005) in the VCO circuits to change the capacitance of these diodes and control the oscillation frequency.

The VCO oscillating signal is then buffer-amplified at the buffer amplifiers (Q3011, Q3013, Q3030, Q3014) and is then applied to the MAIN unit as a 1st LO signal.

VCO	DISPLAYED FREQUENCY	OSCILLATING FREQUENCY
VCO1	0.1-6.9999 MHz	69.0215-77.0114 MHz
VCO2	7.0-13.9999 MHz	77.0115-83.0114 MHz
VCO3	14.0-21.9999 MHz	83.0115-91.0114 MHz
VCO4	22.0-30.0000 MHz	91.0115-99.0115 MHz

Table 3

• FREQUENCY CONSTRUCTION

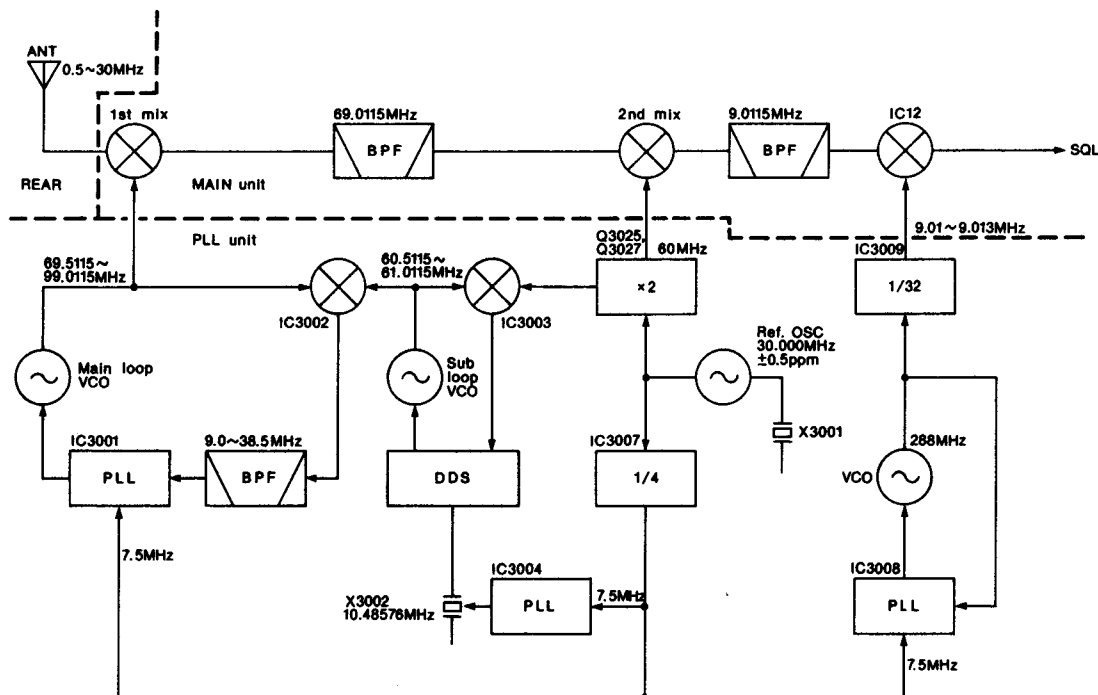


Fig. 5

3-3-4 SUB LOOP CIRCUIT (PLL UNIT AND DDS BOARD)

The oscillated signal at the sub loop VCO (Q3019; 60.5115-61.0015 MHz) is amplified at the buffer amplifiers (Q3020, Q3021) and is then applied to the mixer (IC3003, pin 5). The 60 MHz signal (commonly used with the reference frequency) is also applied to this mixer (IC3003, pin 7).

The mixed signal (0.5115-1.0115 MHz) passes through the low-pass filter (L3030, C3131) and is amplified at Q3023. The signal is then applied to the DDS board.

The DDS board performs the signal sampling and generates digital sine wave and digital phase detection. The output signal from the DDS board are applied to the varactor diode (D3019) in the VCO circuit to control the oscillation frequency. A single loop PLL is used for the sub loop reference frequency. A 10.48576 MHz frequency is oscillated at the crystal (X3002) and is phase detected with a 7.5 MHz high stable reference frequency (30 MHz from X3001 divided by 4) at the PLL IC (IC3004). The off-phase signal is applied to the varactor diode (D3028) to compensate for frequency drifting of X3002.

3-3-5 REFERENCE OSCILLATOR CIRCUIT (PLL UNIT)

The IC-M600 employs the constant temperature oven-type crystal unit (X3001) which oscillates 30 MHz within ± 0.5 ppm (-30°C to $+60^{\circ}\text{C}$; -22°F to $+140^{\circ}\text{F}$). The oscillated signal is times 2 at Q3025 and Q3027 as a 2nd LO signal and sub loop conversion respectively. Also the signal is divided by 4 at IC3007 for the reference frequency of the main loop and sub loop reference PLL. Thus, as all oscillation of the IC-M600 is controlled by this highly stable reference oscillator, very accurate frequency stability is obtained.

3-3-6 BFO CIRCUIT (PLL UNIT)

The BFO (Beat Frequency Oscillator) circuit provides a beat frequency signal to the SSB demodulator (IC12) and the double balanced modulator (IC15) on the MAIN unit. The BFO circuit employs single PLL system and consists of the VCO (Q3028, D3024), PLL IC (IC3008), and loop filter (Q3035, Q3036).

The 288 MHz oscillated signal at the VCO (Q3028, D3024) is applied to the PLL IC (IC3008, pin 10) where the signal is divided at the programmable divider section and is phase-detected with the reference frequency at the phase-comparator section.

The output signal from the PLL IC (IC3008, pin 7) is converted to DC voltage by the loop filter (Q3035, Q3036) and is fed back to the varactor diode (D3023) in the VCO circuit. The output frequency is therefore controlled by the ratio of the programmable divider.

The VCO output signal is divided by $1/32$ at IC3009 to obtain 9.01-9.013 of BFO frequency and is then applied to the MAIN unit.

3-4 LOGIC CIRCUITS

3-4-1 GENERAL

The LOGIC circuits consist of an 8-bit CMOS CPU (IC2301) and a 2 k-bit CMOS EEPROM (Electrically Erasable Programmable Read-only Memory, IC2304). The CPU (IC2301) contains a 16 k-byte mask ROM (Read-only Memory) and a 512 k-byte RAM (Random Access Memory). The backup capacitor (C2301) is used as the CPU memory back-up and is good for a week after the [POW] switches are turned OFF. The memory contents are written in the EEPROM (IC2304). The memory contents, therefore, will not be erased even when no power is applied to the CPU for 1 week. When the ROM writer is connected to J2310, all contents of the user channels are directly written into the EEPROM (IC2304).

3-4-2 RESET AND MEMORY BACKUP CIRCUITS (LOGIC UNIT)

This circuit resets the CPU (IC2301) with a reset IC (IC2306). The reset IC (IC2306) outputs "HIGH" when the [POW] switches are turned ON and the "+5V" line exceeds its threshold voltage. The output signal is converted to a pulse signal by Q2302. The pulse signal is inverted by Q2301 and a "LOW" pulse signal is applied to the CPU RESET port (pin 6).

When the [POW] switches are turned OFF, the RESET port of the CPU (IC2301, pin 6) becomes "LOW" before the "+5V" line goes down. When the CPU P21 port (pin 29) receives "LOW," the CPU enters the backup condition. At this time Q2302 and Q2301 are turned OFF and the backup capacitor applies backup voltage to the CPU.

• RESET AND MEMORY BACKUP CIRCUITS

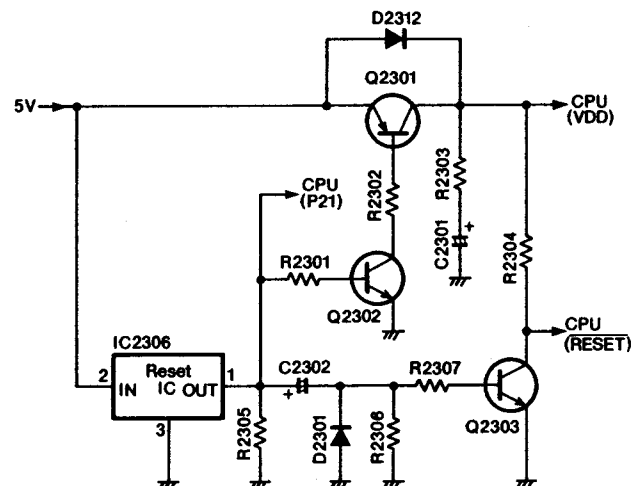


Fig. 6

3-4-3 DIMMER CIRCUIT (LOGIC UNIT)

The dimmer circuit (Q2304-Q2306, Q2314, Q2315) drives the backlights (DS2302, DS2303) and ensures that brightness does not change even with a change in the power supply.

The brightness of the function display is determined by the output level in the CPU (IC2301, pin 57). When the CPU (IC2301, pin 57) changes its output level, Q2304 changes the base voltage. Therefore, the collector voltage (Q2314, Q2315) changes. The brightness of the backlights (DS2302, DS2303) is controlled by the collector voltage (Q2314, Q2315).

3-5 OTHER CIRCUITS

3-5-1 T/R SWITCHING CIRCUIT (MAIN UNIT)

While transmitting, pins 2 and 4 of IC11 become "LOW." At this time, Q45 turns ON and then Q44 turns OFF. The emitter of Q42 outputs "T8" voltage.

While receiving, pins 2 and 4 of IC11 become "HIGH." At this time, Q45 turns OFF and then Q44 turns ON. The emitter of Q43 outputs "R8" voltage.

Q47 outputs the T/R control switching signal, the "TRC" signal and the "RLC" signal.

3-5-2 DC-DC CONVERTER CIRCUIT (MAIN UNIT)

12.0 V DC is applied to the DC-DC converter circuit (IC10). IC10 is used as a stable multi-vibrator. The timing resistors (R276, R277) charge the timing condenser (C228) and program the output duty cycle. The output voltage from IC10 (pin 6) is rectified at D74 and D75. The rectified voltage passes through the smoothing condenser (C231) and obtains a stable -5 V DC at D76. -5 V DC is applied to the ALC and AGC circuits.

3-5-3 ALARM CIRCUIT (ALARM UNIT)

When the [ALM] switched is pushed, the CPU (IC2301, pin 19) on the LOGIC unit becomes "HIGH." The "HIGH" signal is applied to the tone encoder IC (IC4501, pin 2) on the ALARM unit. IC4501 encodes the tone frequency signals of 1300 Hz or 2200 Hz. The output frequency is determined by IC4501 (pins 8, 9, 12-14). The input data from IC4501 (pins 8, 9, 12-14) is applied to the programmable counter section of IC4501. A 3.579545 MHz reference frequency from X4501 is applied to a programmable counter section of IC4501.

The divided signal is output from IC4501 (pin 1) and is then applied to the tone output amplifier (Q4501). The amplified signal is applied to the MAIN unit through the "TONE" signal line.

3-5-4 POWER SWITCH CIRCUIT (RELAY UNIT)

This circuit opens and closes the 13 V power source lines.

When either [POW] switch is pushed, the input level of IC6001c becomes "HIGH" and outputs the "HIGH" signal. Therefore, Q6001 is turned ON and then RL6001 is turned ON. When both [POW] switches are pushed simultaneously, IC6001d turns power OFF.

3-5-5 REGULATOR CIRCUIT (REG UNIT)

(1) DC/AC CONVERTER

When either [POW] switch is pushed, DC voltage from P7001 is applied to the noise filter (L7001, C7001-C7005), the transformer (T7001) and is then converted to AC voltage at Q7001 and Q7002. D7003 and Q7003 turn Q7001 and Q7002 ON and OFF respectively using the switching outputs from IC7001 (pins 9 and 10).

IC7001 contains the 5 V reference voltage circuit, two differential amplifier circuits and the pulse oscillator. The switching frequency is set at 25 kHz by R7008 and C7007.

AC voltage from T7001 is rectified by D2 and is then converted to DC voltage at L7002, C7009 and C7010. DC voltage passes through the noise filter (L7003, C7013) and is then applied to MAIN unit.

(2) VOLTAGE CONTROLLER

DC voltage, which is divided at R7001 and R7002, is compared with the reference voltage at the differential amplifier in IC7001. IC7001 ensures the stable output from pins 9 and 10 by changing the output duty cycle on the switching waveform according to the input level.

The rectified voltage at D7002 passes through the shunt regulator (R7013-R7015, IC7002), the photo coupler (IC3) and is then compared with the reference voltage at the another differential amplifier in IC7001. The differential amplifier controls the output duty cycle on the switching waveform according to the increase and decrease of output current.

SECTION 4 ADJUSTMENT PROCEDURES

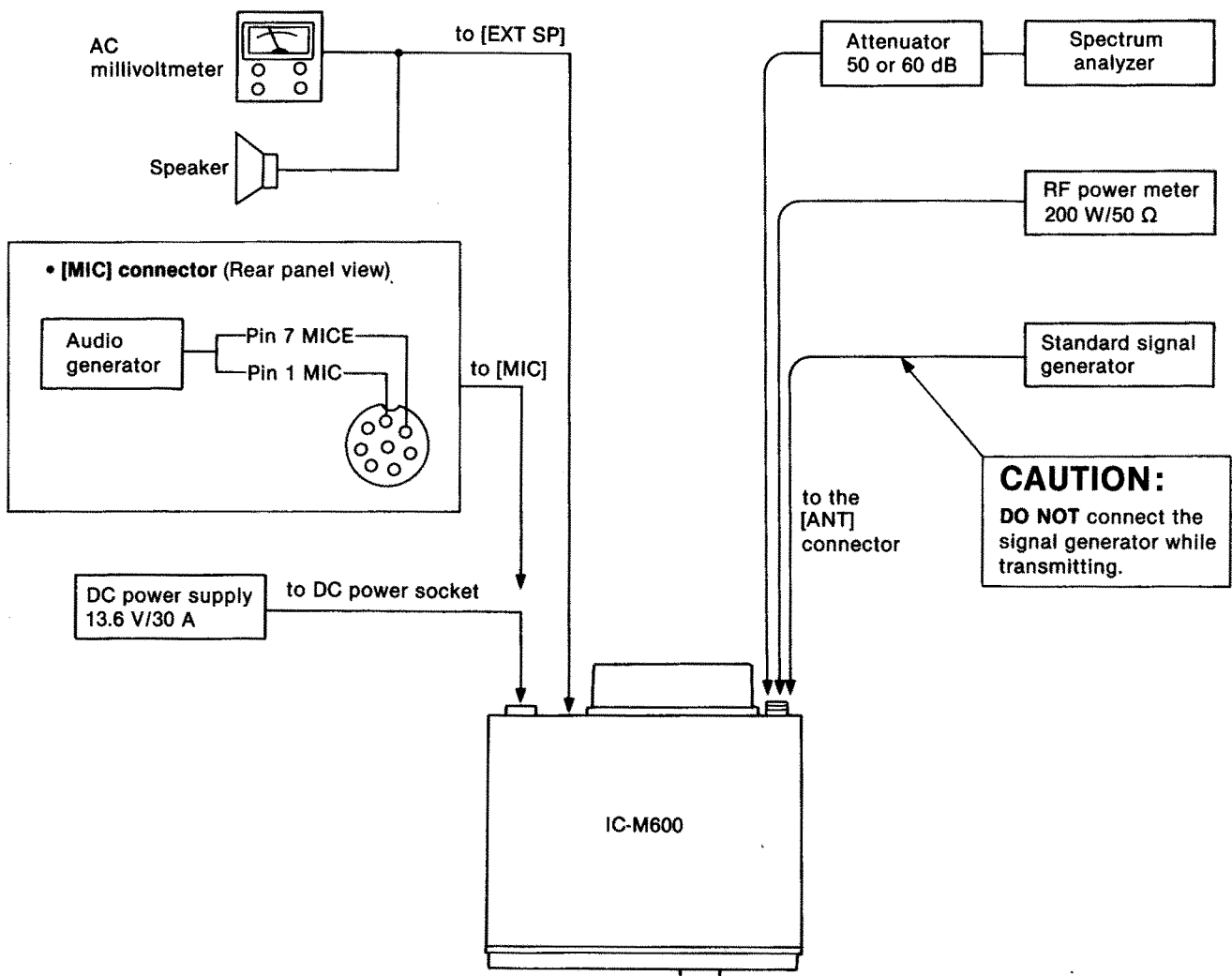
4-1 PREPARATION BEFORE SERVICING

■ REQUIRED TEST EQUIPMENT

EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
DC power supply	Output voltage : 13.6 V DC Current capacity : 30 A or more	DC voltmeter	Input impedance : 50 k Ω /DC or better
RF power meter (terminated type)	Measuring range : 10-200 W Frequency : 1.8-30 MHz Impedance : 50 Ω SWR : Less than 1.2 : 1	AC millivoltmeter	Measuring range : 10 mV-10 V
Frequency counter	Frequency range : 0.1-100 MHz Frequency accuracy : ± 1 ppm or better Sensitivity : 100 mV or better	External speaker	Impedance : 4 Ω
RF voltmeter	Frequency range : 0.1-100 MHz Measuring range : 0.01-10 V	Ammeter	Measurement capability: 1 A/3 A/50 A
Oscilloscope	Frequency range : DC-20 MHz Measuring range : 0.01-10 V	Audio generator	Frequency range : 300-3000 Hz Output level : 1-500 mV
Standard signal generator (SSG)	Frequency range : 0.1-30 MHz Output level : -127 to -17 dBm (0.1 μ V-32 mV)	Attenuator	Power attenuation : 40 or 50 dB Capacity : 150 W or more
		Spectrum analyzer	Frequency minimum : At least 90 MHz Spectrum bandwidth : ± 100 kHz or more

CW: Clockwise CCW: Counterclockwise

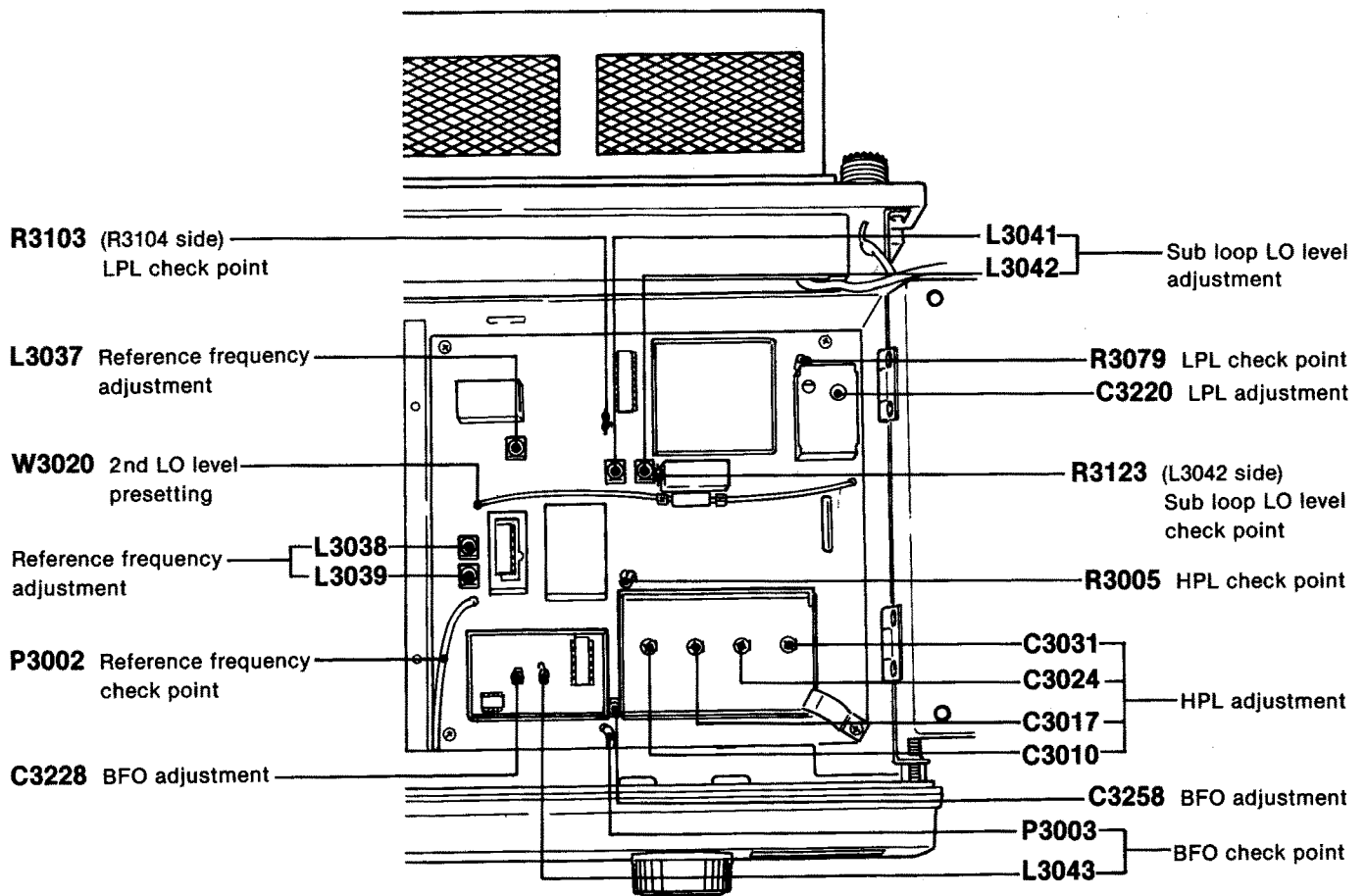
■ CONNECTION



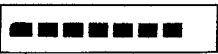
4-2 PLL ADJUSTMENT

ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT			
			UNIT	LOCATION		UNIT	ADJUST		
REFERENCE FREQUENCY	1	<ul style="list-style-type: none"> • Displayed frequency: 14.0000 MHz • Mode : J3E • Ground W3020. • Receiving 	PLL	Terminate P3002 to ground with a 50 Ω resistor. Connect the RF voltmeter to P3002.	Maximum level	PLL	L3038, L3039		
	2			Connect the frequency counter to P3002.			60.0000 MHz	L3037	
	3			Connect the RF voltmeter to P3002.			Maximum level	L3038, L3039	
	4			Connect the RF voltmeter to R3123 (L3042 side).			Maximum level	L3041, L3042	
	5			After adjustment, fix the W3020 in the same place.					
LPL	1	<ul style="list-style-type: none"> • Displayed frequency: 14.0000 MHz • Mode : J3E • Receiving 	PLL	Connect the DC voltmeter to R3103 (R3104 side).	1 V-4 V	PLL	Verify		
	2			Connect the DC voltmeter to R3079.			2.0 V	C3220	
HPL	1	<ul style="list-style-type: none"> • Displayed frequency: 6.9999 MHz • Mode : J3E • Receiving 	PLL	Connect the DC voltmeter to R3005.	6.5 V	PLL	C3010		
	2						• Displayed frequency: 13.9999 MHz	6.5 V	C3017
	3						• Displayed frequency: 21.9999 MHz	6.5 V	C3024
	4						• Displayed frequency: 30.0000 MHz	6.5 V	C3031
BFO	1	<ul style="list-style-type: none"> • Displayed frequency: 14.0000 MHz • Mode : J3E • Receiving 	PLL	Connect the DC voltmeter to L3043.	2.6 V	PLL	C3228		
	2			Terminate P3003 to ground with a 50 Ω resistor. Connect the RF voltmeter to P3003.			-16 dBm	C3258	

• PLL UNIT

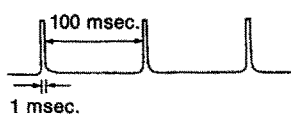


4-3 RECEIVER ADJUSTMENT

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
RECEIVER GAIN	1 <ul style="list-style-type: none"> • Displayed frequency: 12.2300 MHz • Mode : J3E • Noise blanker : OFF • Squelch : OFF • Speaker : OFF • AGC : ON • R166 (MAIN) : CW • R10 and R322 (MAIN): Center • Connect the SSG to the [ANT] connector and set as: <ul style="list-style-type: none"> Frequency : 12.2315 MHz Level : 0.5 μV* (−113 dBm) Modulation: OFF • Receiving 	Rear panel	Connect the AC millivoltmeter to the [EXT SP] jack with a 4 Ω load.	Maximum audio output level	MAIN	Adjust in sequence L46, L47, L48, L49, L57, L58, L59, L60, L26, L83, L82
MIXER BALANCE	1 <ul style="list-style-type: none"> • Displayed frequency: 500.0 kHz • Mode : J3E • Connect the SSG to the [ANT] connector and set as: <ul style="list-style-type: none"> Level : OFF • Receiving 	Rear panel	Connect the AC millivoltmeter to the [EXT SP] jack with a 4 Ω load.	Minimum audio output level	MAIN	R10
TOTAL GAIN	1 <ul style="list-style-type: none"> • Displayed frequency: 12.2300 MHz • Mode : J3E • Connect the SSG to the [ANT] connector and set as: <ul style="list-style-type: none"> Frequency : 12.2315 MHz Level : 0.32 mV* (−57 dBm) Modulation: OFF • Receiving 	Rear panel	Connect the AC millivoltmeter to the [EXT SP] jack with a 4 Ω load.	1.0 V (or 0 dB)	Front panel	[VOL] switch
	2 <ul style="list-style-type: none"> • Set the SSG: <ul style="list-style-type: none"> Level : OFF 			−30 dB	MAIN	R166
S-INDICATOR	1 <ul style="list-style-type: none"> • Displayed frequency: 12.2300 MHz • Mode : J3E • Connect the SSG to the [ANT] connector and set as: <ul style="list-style-type: none"> Frequency : 12.2315 MHz Level : 3.16 mV* (−37 dBm) Modulation: OFF • Receiving 	Function display	S-indicator	7 dots just appear. 	MAIN	R201

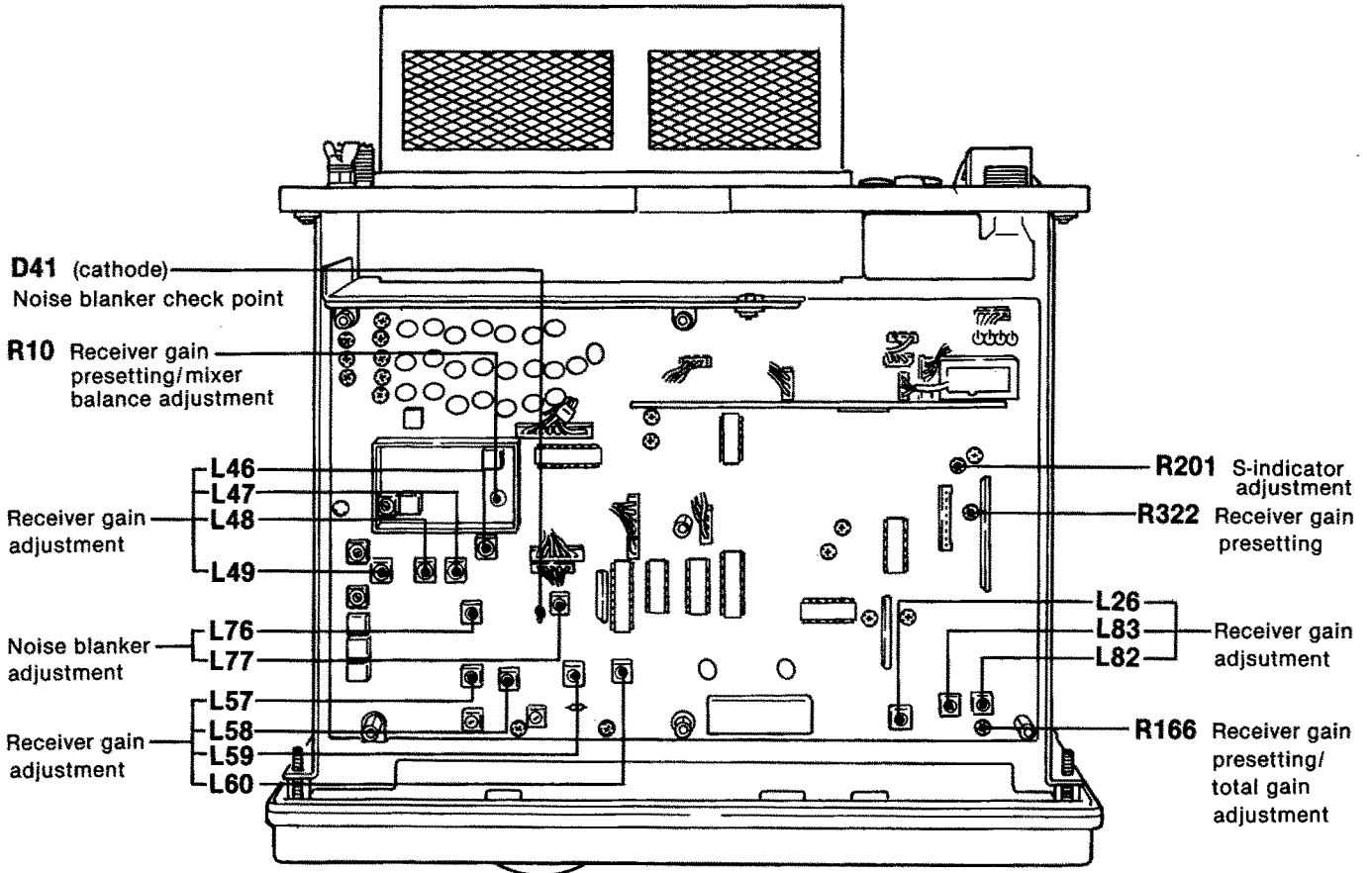
*This output level of the standard signal generator (SSG) is indicated as SSG's open circuit.

RECEIVER ADJUSTMENT (CONTINUED)

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
NOISE BLANKER	1 <ul style="list-style-type: none"> • Displayed frequency: 12.2300 MHz • Mode : J3E • Noise blanker : OFF • Connect the SSG to the [ANT] connector and set as: Frequency : 12.2315 MHz Level : 3.2 μV^* (-97 dBm) Add the following signal into the signal generator output. 	MAIN	Connect the oscilloscope to the cathode of D41.	Adjust the maximum noise wave displayed on the oscilloscope.	MAIN	L76, L77

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

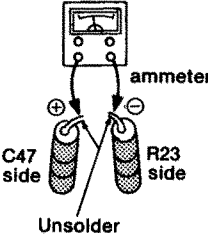
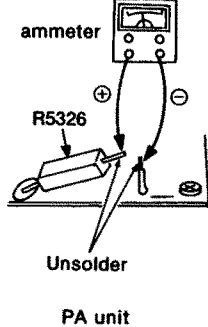
• MAIN UNIT



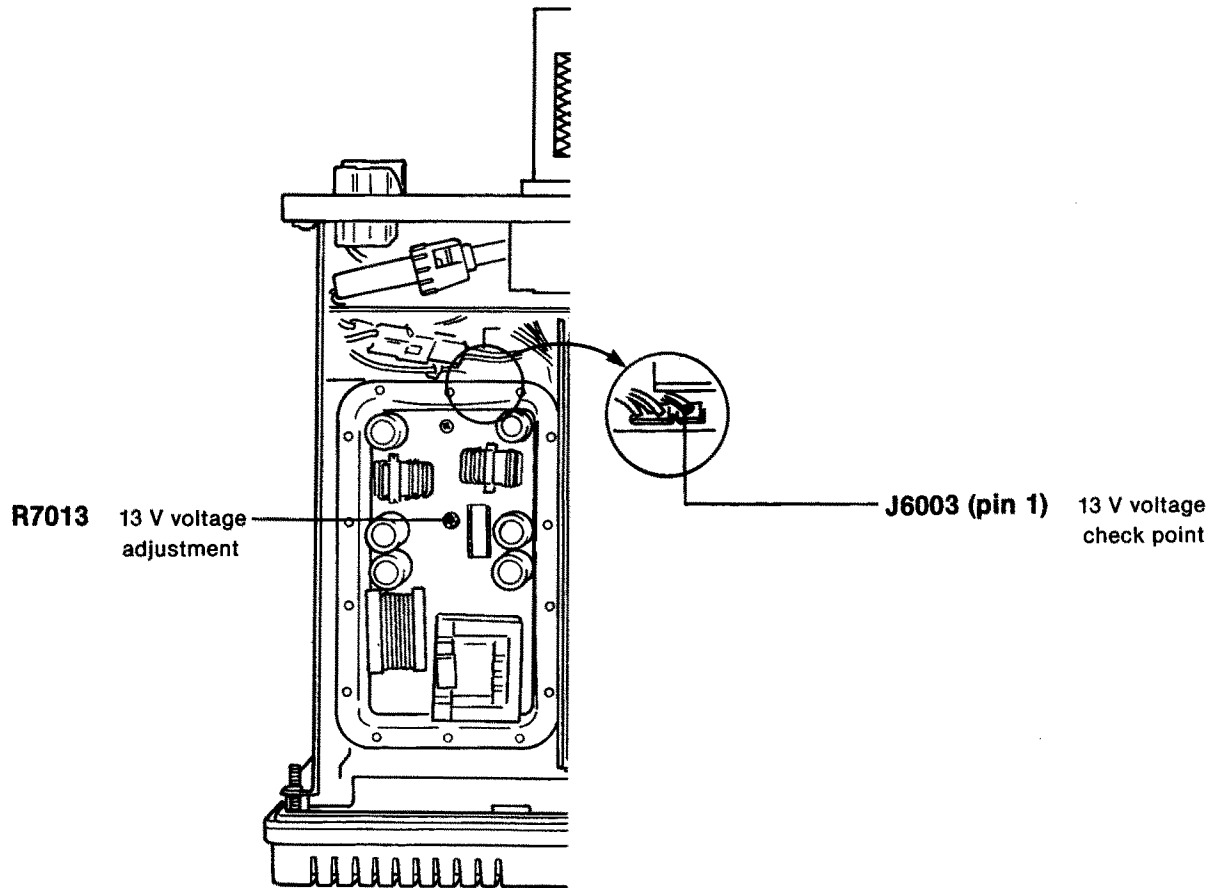
4-4 POWER VOLTAGE ADJUSTMENT

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
13 V VOLTAGE	1	RELAY	Connect the DC voltmeter to J6003 pin 1.	13.6 V	REG	R7013

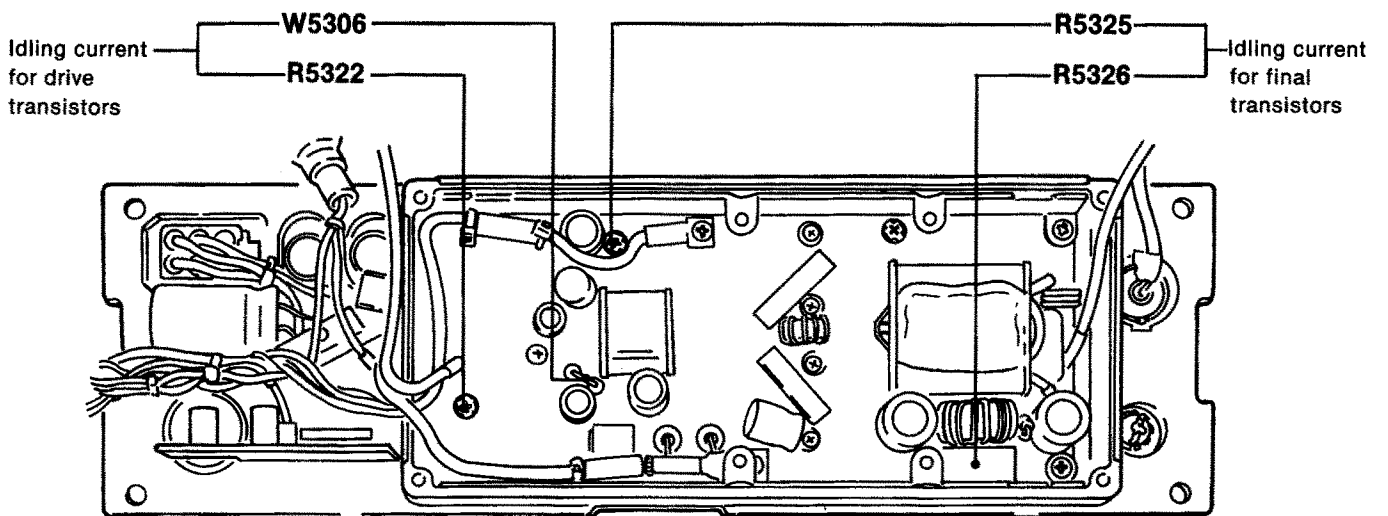
4-5 TRANSMITTER ADJUSTMENT

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
IDLING CURRENT (For drive transistors)	1	PA	Unsolder W5306 and connect the ammeter to the unsoldered points. 	100 mA	PA	R5322
(For final transistors)	2		Unsolder R5326 and connect the ammeter to the unsoldered points. 			
After adjustment, re-solder W5306 and R5326.						

• REALY AND REG UNITS



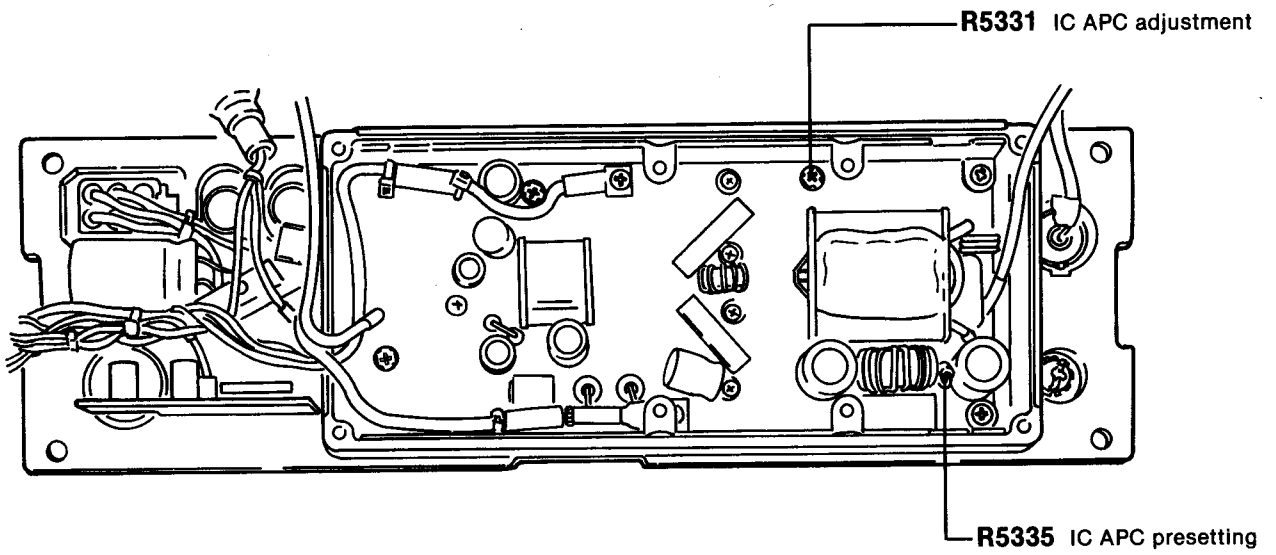
• PA UNIT



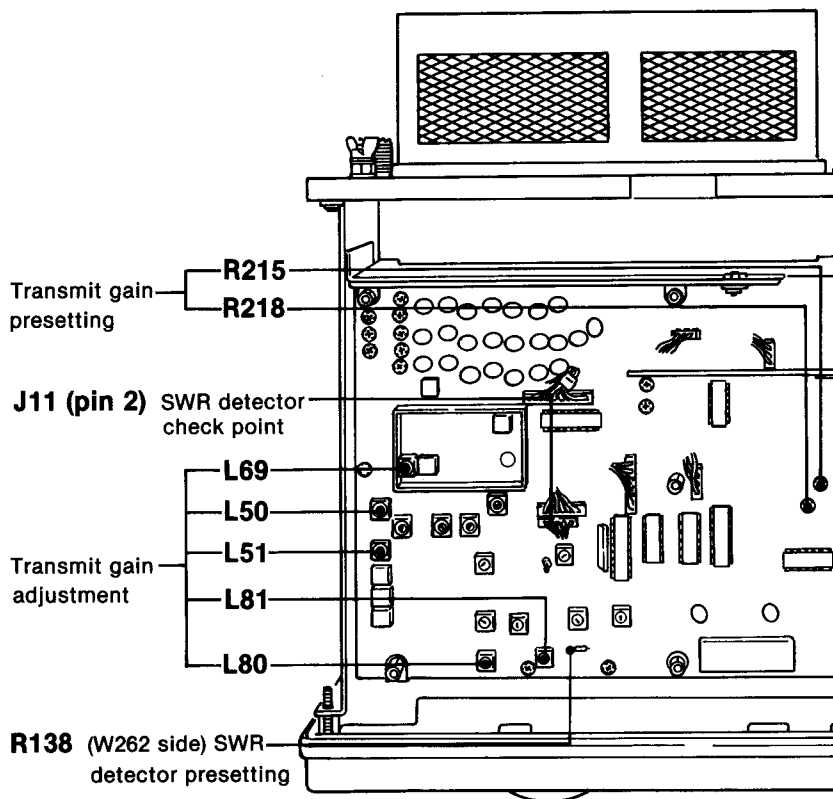
TRANSMITTER ADJUSTMENT (CONTINUED)

ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
IC APC	1	<ul style="list-style-type: none"> • Displayed frequency: 22.0000 MHz • Mode : J3E • R5331 (PA unit) : Max CW as preset • Connect 10 A load to the lead of R5335 on the PA unit and the ground. • Connect the audio generator to the [MIC] connector and set as: Level : 100 mV RMS Frequency : 1.5 kHz • Connect the RF power meter to the [ANT] connector. • Transmitting 	Rear panel	Connect the ammeter between the DC power supply and IC-M600.	30 A	PA	R5331
SWR DETECTOR	1	<ul style="list-style-type: none"> • Displayed frequency: 22.0000 MHz • Mode : J3E • Set the transmit power: Po-3 (Push [FUNC], [TX] and [3] in sequence.) 	Rear panel	Connect the RF power meter to the [ANT] connector.	150 W	Audio generator	Output level
	2	<ul style="list-style-type: none"> • Ground the lead of R138 (W262 side) on the MAIN unit with a wire. • Connect the audio generator to the [MIC] connector and set as: Frequency : 1.5 kHz • Transmitting 	MAIN	Connect the DC voltmeter to J11 pin 2.	Minimum	FILTER	C4063
	3	After adjustment, remove the wire from R138.					
TRANSMIT GAIN	1	<ul style="list-style-type: none"> • Displayed frequency: 6.200 MHz • Mode : J3E • Set the transmit power: Po-3 (Push [FUNC], [TX], and [3] in sequence.) • R109, R116, R129 : CW • R62-R65, R74, R76-R78, R126, R218 : CCW • R215 : Center (See P.4-11 for location) • Connect the audio generator to the [MIC] connector and set as: Level : 5 mV RMS Frequency : 1.5 kHz • Transmitting 	Rear panel	Connect the RF power meter to the [ANT] connector.	Maximum level	MAIN	L50, L51, L69, L80, L81

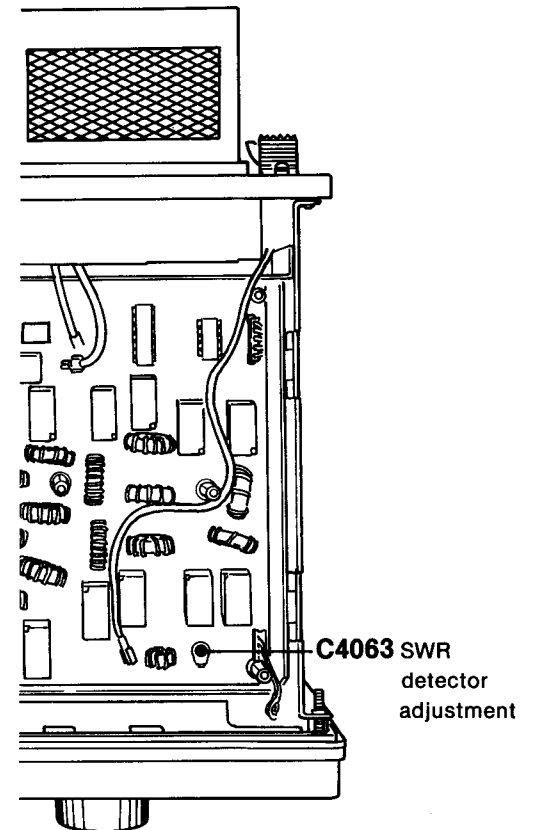
• PA UNIT



• MAIN UNIT



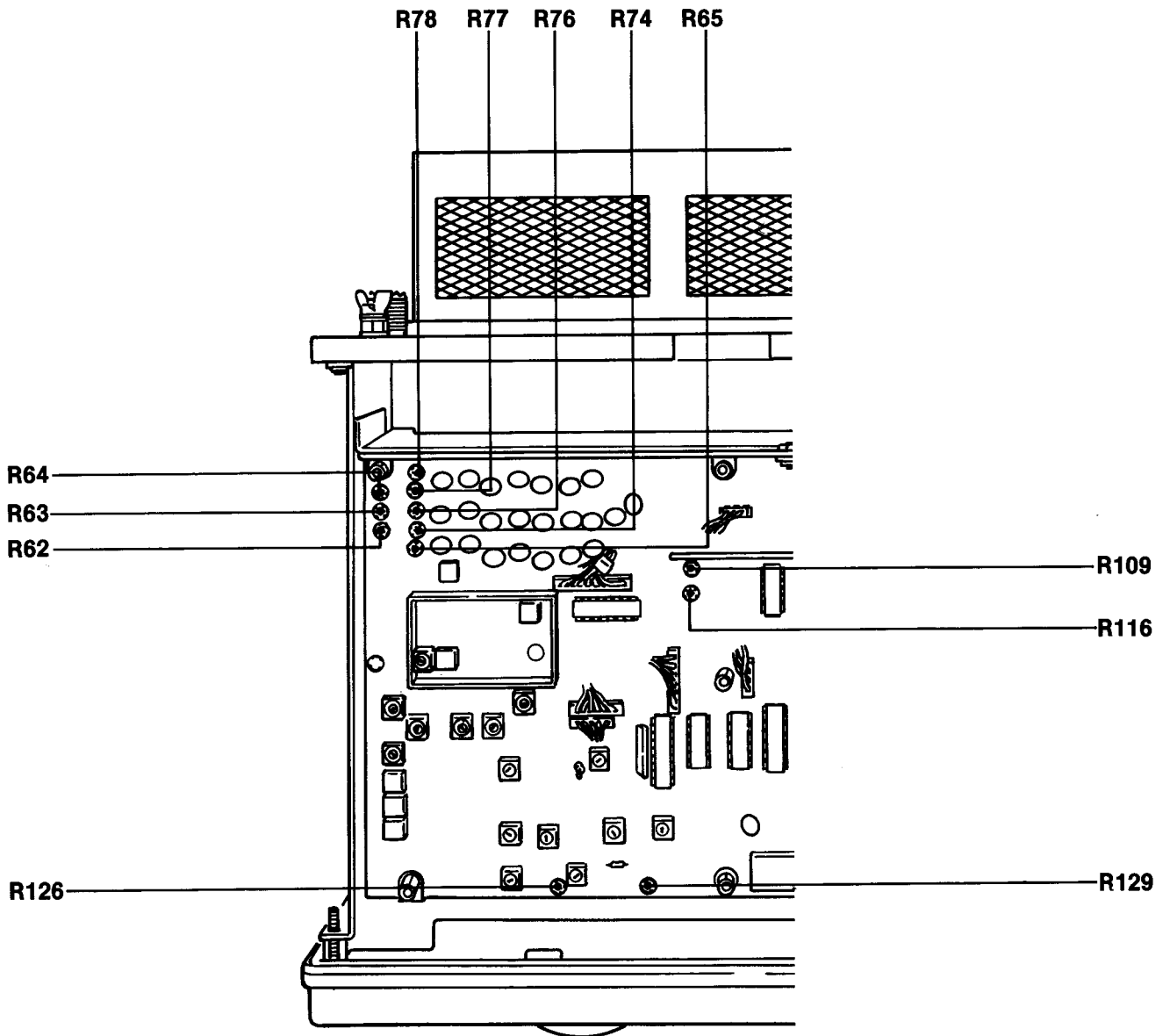
• FILTER UNIT




TRANSMITTER ADJUSTMENT (CONTINUED)

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT		
		UNIT	LOCATION		UNIT	ADJUST	
OUTPUT POWER	1	<ul style="list-style-type: none"> • Displayed frequency: 2.1820 MHz • Mode : H3E • Apply no signal to the [MIC] connector. • Transmitting 	Rear panel	Connect the RF power meter to the [ANT] connector.	50 W	MAIN	R126
	2	<ul style="list-style-type: none"> • Displayed frequency: 2.1820 MHz • Mode : R3E 			2.4 W		R129
	3	<ul style="list-style-type: none"> • Displayed frequency: 4.0650 MHz • Mode : R3E 			2.4 W		R62
	4	<ul style="list-style-type: none"> • Displayed frequency: 6.2000 MHz • Mode : R3E 			2.4 W		R63
	5	<ul style="list-style-type: none"> • Displayed frequency: 8.1950 MHz • Mode : R3E 			2.4 W		R64
	6	<ul style="list-style-type: none"> • Displayed frequency: 12.2300 MHz • Mode : R3E 			2.4 W		R65
	7	<ul style="list-style-type: none"> • Displayed frequency: 16.3600 MHz • Mode : R3E 			2.4 W		R74
	8	<ul style="list-style-type: none"> • Displayed frequency: 18.7800 MHz • Mode : R3E 			2.4 W		R76
	9	<ul style="list-style-type: none"> • Displayed frequency: 22.0000 MHz • Mode : R3E 			2.4 W		R77
	10	<ul style="list-style-type: none"> • Displayed frequency: 1.6050 MHz • Mode : R3E 			2.4 W		R78
11	Repeat steps 2~10 (several times).						
12	<ul style="list-style-type: none"> • Displayed frequency: 2.1820 MHz • Mode : J3E • Connect the audio generator to the [MIC] connector and set as: Level : 100 mV RMS Frequency : 1.5 kHz • Transmitting 	Rear panel	Connect the RF power meter to the [ANT] connector.	130 W	MAIN	R109	
13	<ul style="list-style-type: none"> • Set the transmit power: Po-2 (Push [FUNC], [TX] and [2] in sequence.) • Transmitting 			70 W		R116	
14	<ul style="list-style-type: none"> • Set the transmit power: Po-1 (Push [FUNC], [TX] and [1] in sequence.) • Transmitting 			70 W		Verify	
15	Reset the transmit power to Po-3 condition.						

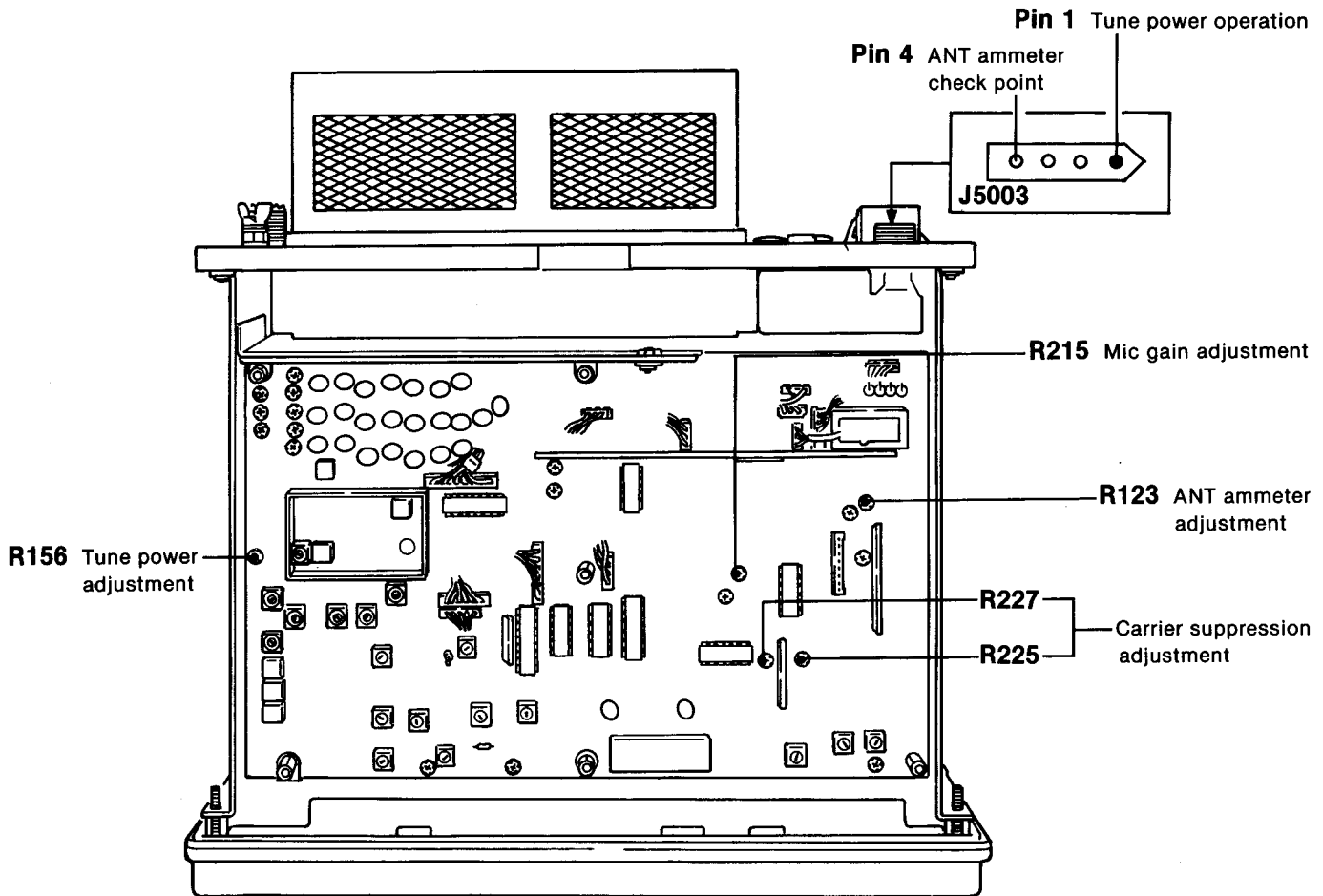
• MAIN UNIT



TRANSMITTER ADJUSTMENT (CONTINUED)

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
CARRIER SUPPRESSION	1 <ul style="list-style-type: none"> • Displayed frequency: 12.2300 MHz • Mode : J3E • Apply no signal to the [MIC] connector. • Transmitting 	Rear panel	Connect the spectrum analyzer to the [ANT] connector via the attenuator.	Minimum carrier level (Less than -40 dB)	MAIN	R225, R227 (Alternately adjust)
MIC GAIN	1 <ul style="list-style-type: none"> • Displayed frequency: 12.2300 MHz • Mode : J3E • Connect the audio generator to the [MIC] connector and set as: Level : 10 mV RMS Frequency : 1.5 kHz • Transmitting 	Rear panel	Connect the RF power meter to the [ANT] connector.	70 W	MAIN	R215
ANT AMMETER	1 <ul style="list-style-type: none"> • Displayed frequency: 12.2300 MHz • Mode : J3E • Apply 4 V to J5003 (pin 4) on the rear panel. • Transmitting 	Function display	RF indicator	2 dots 	MAIN	R123
TUNE POWER	1 <ul style="list-style-type: none"> • Displayed frequency: 12.2300 MHz • Mode : J3E • Push the [TUNE] switch. • Ground J5003 (pin 1) on the rear panel within 5 sec. 	Rear panel	Connect the RF power meter to the [ANT] connector.	10 W	MAIN	R156

• MAIN UNIT



SECTION 5 PARTS LIST

[CHASSIS PARTS]

REF. NO.	ORDER NO.	DESCRIPTION	
IC1001	1110002030	IC	TA7808S
IC1002	1110002020	IC	TA7805S

[REG UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
IC7001	1110001950	IC	μPC494C
IC7002	1110002260	IC	μPC1093J
IC7003	1170000190	IC	TLP521-1 (BL)
Q7001	1560000580	FET	2SK811
Q7002	1560000580	FET	2SK811
Q7003	1510000410	TRANSISTOR	2SA933S S
D7002	1790000270	DIODE	ESAC85-009
D7003	1790000070	DIODE	1SS237
L7001	5920000450	COIL	FK-080E-1020
L7002	5920000110	TRANSFORMER	TC-4
L7003	5920000450	COIL	FK-080E-1020
R7001	7010001200	RESISTOR	R25XJ 2.7 kΩ
R7002	7010003480	RESISTOR	ELR20J 4.7 kΩ
R7003	7010003520	RESISTOR	ELR20J 8.2 kΩ
R7004	7010003410	RESISTOR	ELR20J 1.2 kΩ
R7005	7010003480	RESISTOR	ELR20J 4.7 kΩ
R7006	7010003480	RESISTOR	ELR20J 4.7 kΩ
R7007	7010003510	RESISTOR	ELR20J 6.8 kΩ
R7008	7010003460	RESISTOR	ELR20J 3.3 kΩ
R7009	7010004690	RESISTOR	R50XJ 47 Ω
R7010	7010004780	RESISTOR	R50XJ 470 Ω
R7011	7010003480	RESISTOR	ELR20J 4.7 kΩ
R7012	7010003300	RESISTOR	ELR20J 150 Ω
R7013	7310000710	TRIMMER	RH0651C13J1YA (102)
R7014	7010003470	RESISTOR	ELR20J 3.9 kΩ
R7015	7010003400	RESISTOR	ELR20J 1 kΩ
R7016	7010003220	RESISTOR	ELR20J 33 Ω
R7017	7010004690	RESISTOR	R50XJ 47 Ω
R7018	7010004780	RESISTOR	R50XJ 470 Ω
R7019	7010003360	RESISTOR	ELR20J 470 Ω
R7020	7010003400	RESISTOR	ELR20J 1 kΩ
C7001	4510002380	ELECTROLYTIC	16 SS 470 μF (10X12.5)
C7002	4040000250	BARRIER	UAT 08X 473M
C7003	4560000050	CERAMIC	D67X5T 1E 684M51
C7004	4510000130	ELECTROLYTIC	ECEA1CG102S
C7005	4510000130	ELECTROLYTIC	ECEA1CG102S
C7006	4510001100	ELECTROLYTIC	16 MS7 10 μF
C7007	4310000360	MYLER	50 F2D 103J
C7008	4010000520	CERAMIC	DD108 B 472K 50V
C7009	4510000130	ELECTROLYTIC	ECEA1CG102S
C7010	4510000130	ELECTROLYTIC	ECEA1CG102S
C7011	4560000050	CERAMIC	D67X5T 1E 684M51
C7012	4010000510	CERAMIC	DD106 B 222K 50V

[REG UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
C7013	4510003090	ELECTROLYTIC	16 SS 2200 μF
C7014	4560000050	CERAMIC	D67X5T 1E 684M51
C7015	4560000050	CERAMIC	D67X5T 1E 684M51
T7001	5920000440	TRANSFORMER	TO-25
J7001	6510003100	CONNECTOR	RT01T-1.3B
J7002	6510003100	CONNECTOR	RT01T-1.3B
J7003	6510003100	CONNECTOR	RT01T-1.3B
J7004	6510003100	CONNECTOR	RT01T-1.3B
J7005	6510003100	CONNECTOR	RT01T-1.3B
J7006	6510003100	CONNECTOR	RT01T-1.3B
J7007	6510003100	CONNECTOR	RT01T-1.3B
J7008	6510003100	CONNECTOR	RT01T-1.3B
J7009	6510003100	CONNECTOR	RT01T-1.3B
EP7001	0910028424	PCB	B 2865D (REG)

[FRONT PARTS]

REF. NO.	ORDER NO.	DESCRIPTION	
SP2001	2510000440	SPEAKER	77F60N
W2003	9060700050	CABLE	UL2468 8P FLAT CABLE
W2004	9060700050	CABLE	UL2468 8P FLAT CABLE

[LOGIC UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
IC2301	1140003360	S. IC	μPD78214GC-466-AB8
IC2302	1130004930	S. IC	μPD7225GB-3B7
IC2303	1130004930	S. IC	μPD7225GB-3B7
IC2304	1130005830	S. IC	X24C16S
IC2305	1180000420	S. IC	TA78L05F (TE12R)
IC2306	1110001550	S. IC	S-8054ALB-LM-T1
IC2307	1130004200	S. IC	TC4S66F (TE85R)
IC2308	1130004200	S. IC	TC4S66F (TE85R)
Q2301	1510000500	S. TRANSISTOR	2SA1162-GR (TE85R)
Q2302	1530001950	S. TRANSISTOR	2SC2712-GR (TE85R)
Q2303	1530000160	S. TRANSISTOR	2SC2712-Y (TE85RTEM)
Q2304	1530000160	S. TRANSISTOR	2SC2712-Y (TE85RTEM)
Q2305	1530000160	S. TRANSISTOR	2SC2712-Y (TE85RTEM)

S. = Surface mount

[LOGIC UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
Q2306	1530000160	S. TRANSISTOR	2SC2712-Y (TE85RTEM)
Q2310	1590000840	S. TRANSISTOR	IMX1 T110
Q2311	1590000840	S. TRANSISTOR	IMX1 T110
Q2312	1590000840	S. TRANSISTOR	IMX1 T110
Q2313	1590000840	S. TRANSISTOR	IMX1 T110
Q2314	1520000180	S. TRANSISTOR	2SB798-T2 DL
Q2315	1520000180	S. TRANSISTOR	2SB798-T2 DL
Q2316	1590000630	S. TRANSISTOR	RN1403 (TE85R)
Q2317	1590000630	S. TRANSISTOR	RN1403 (TE85R)
D2301	1750000050	S. DIODE	1SS193 (TE85R)
D2302	1750000050	S. DIODE	1SS193 (TE85R)
D2303	1750000050	S. DIODE	1SS193 (TE85R)
D2306	1710000160	DIODE	1SS133 (#13)
D2308	1710000160	DIODE	1SS133
D2311	1750000050	S. DIODE	1SS193 (TE85R)
D2312	1750000200	S. DIODE	1SS319 (TE85R)
D2313	1750000050	S. DIODE	1SS193 (TE85R)
D2314	1730000870	S. ZENER	RD11M-T2B1
D2315	1750000050	S. DIODE	1SS193 (TE85R)
X2301	6050006930	XTAL	RF-4A3 FAT NKD (9.8304M)
R2301	7030000620	S. RESISTOR	MCR10EZHZ 100 kΩ (104)
R2302	7030000420	S. RESISTOR	MCR10EZHZ 2.2 kΩ (222)
R2303	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2304	7030000620	S. RESISTOR	MCR10EZHZ 100 kΩ (104)
R2305	7030000620	S. RESISTOR	MCR10EZHZ 100 kΩ (104)
R2306	7030000660	S. RESISTOR	MCR10EZHZ 220 kΩ (224)
R2307	7030000620	S. RESISTOR	MCR10EZHZ 100 kΩ (104)
R2308	7030000500	S. RESISTOR	MCR10EZHZ 10 kΩ (103)
R2309	7030000500	S. RESISTOR	MCR10EZHZ 10 kΩ (103)
R2310	7030000500	S. RESISTOR	MCR10EZHZ 10 kΩ (103)
R2311	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2312	7030000500	S. RESISTOR	MCR10EZHZ 10 kΩ (103)
R2313	7030000500	S. RESISTOR	MCR10EZHZ 10 kΩ (103)
R2314	7030000500	S. RESISTOR	MCR10EZHZ 10 kΩ (103)
R2315	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2317	7030000460	S. RESISTOR	MCR10EZHZ 4.7 kΩ (472)
R2318	7030000460	S. RESISTOR	MCR10EZHZ 4.7 kΩ (472)
R2319	7030000540	S. RESISTOR	MCR10EZHZ 22 kΩ (223)
R2320	7030000540	S. RESISTOR	MCR10EZHZ 22 kΩ (223)
R2321	7030000580	S. RESISTOR	MCR10EZHZ 47 kΩ (473)
R2322	7030000580	S. RESISTOR	MCR10EZHZ 47 kΩ (473)
R2323	7030000580	S. RESISTOR	MCR10EZHZ 47 kΩ (473)
R2324	7030000580	S. RESISTOR	MCR10EZHZ 47 kΩ (473)
R2325	7030000580	S. RESISTOR	MCR10EZHZ 47 kΩ (473)
R2326	7030000370	S. RESISTOR	MCR10EZHZ 820 Ω (821)
R2327	7030000500	S. RESISTOR	MCR10EZHZ 10 kΩ (103)
R2328	7030000500	S. RESISTOR	MCR10EZHZ 10 kΩ (103)
R2330	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2331	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2332	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2333	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2334	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2335	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2336	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2337	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2338	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2339	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2340	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2341	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2342	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2343	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2344	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2345	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2346	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2347	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2348	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2349	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2350	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)

[LOGIC UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R2351	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2357	7030000580	S. RESISTOR	MCR10EZHZ 47 kΩ (473)
R2358	7030000580	S. RESISTOR	MCR10EZHZ 47 kΩ (473)
R2359	7030000580	S. RESISTOR	MCR10EZHZ 47 kΩ (473)
R2360	7030000580	S. RESISTOR	MCR10EZHZ 47 kΩ (473)
R2361	7030000580	S. RESISTOR	MCR10EZHZ 47 kΩ (473)
R2362	7030000580	S. RESISTOR	MCR10EZHZ 47 kΩ (473)
R2363	7030000500	S. RESISTOR	MCR10EZHZ 10 kΩ (103)
R2364	7030000500	S. RESISTOR	MCR10EZHZ 10 kΩ (103)
R2365	7030000580	S. RESISTOR	MCR10EZHZ 47 kΩ (473)
R2366	7030000700	S. RESISTOR	MCR10EZHZ 470 kΩ (474)
R2368	7030000660	S. RESISTOR	MCR10EZHZ 220 kΩ (224)
R2369	7030000410	S. RESISTOR	MCR10EZHZ 1.8 kΩ (182)
R2370	7030000670	S. RESISTOR	MCR10EZHZ 270 kΩ (274)
R2371	7030000460	S. RESISTOR	MCR10EZHZ 4.7 kΩ (472)
R2372	7030000660	S. RESISTOR	MCR10EZHZ 220 kΩ (224)
R2373	7030000410	S. RESISTOR	MCR10EZHZ 1.8 kΩ (182)
R2374	7030000670	S. RESISTOR	MCR10EZHZ 270 kΩ (274)
R2375	7030000460	S. RESISTOR	MCR10EZHZ 4.7 kΩ (472)
R2376	7030000660	S. RESISTOR	MCR10EZHZ 220 kΩ (224)
R2377	7030000410	S. RESISTOR	MCR10EZHZ 1.8 kΩ (182)
R2378	7030000670	S. RESISTOR	MCR10EZHZ 270 kΩ (274)
R2379	7030000460	S. RESISTOR	MCR10EZHZ 4.7 kΩ (472)
R2380	7030000660	S. RESISTOR	MCR10EZHZ 220 kΩ (224)
R2381	7030000410	S. RESISTOR	MCR10EZHZ 1.8 kΩ (182)
R2382	7030000670	S. RESISTOR	MCR10EZHZ 270 kΩ (274)
R2383	7030000460	S. RESISTOR	MCR10EZHZ 4.7 kΩ (472)
R2384	7030000580	S. RESISTOR	MCR10EZHZ 47 kΩ (473)
R2385	7030000580	S. RESISTOR	MCR10EZHZ 47 kΩ (473)
R2387	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2388	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2389	7030000500	S. RESISTOR	MCR10EZHZ 10 kΩ (103)
R2390	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2391	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R2392	7030000300	S. RESISTOR	MCR10EZHZ 220 Ω (221)
R2393	7030000300	S. RESISTOR	MCR10EZHZ 220 Ω (221)
R2394	7030000300	S. RESISTOR	MCR10EZHZ 220 Ω (221)
R2395	7030000300	S. RESISTOR	MCR10EZHZ 220 Ω (221)
C2301	4510004470	ELECTROLYTIC	FYLOH 473Z
C2302	4550000980	S. TANTALUM	TESVA 1E 334M1-8L
C2303	4030004550	S. CERAMIC	C2012 SL 1H 330J-T-A
C2304	4030004550	S. CERAMIC	C2012 SL 1H 330J-T-A
C2305	4030004760	S. CERAMIC	C2012 JF 1E 104Z-T-A
C2306	4030004760	S. CERAMIC	C2012 JF 1E 104Z-T-A
C2308	4030004760	S. CERAMIC	C2012 JF 1E 104Z-T-A
C2310	4030004760	S. CERAMIC	C2012 JF 1E 104Z-T-A
C2311	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2312	4550000450	S. TANTALUM	TESVC 1C 106M-12L
C2313	4550000770	S. TANTALUM	TESVC 0J 226M-12L
C2314	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2315	4030004470	S. CERAMIC	C2012 SL 1H 100D-T-A
C2316	4030004470	S. CERAMIC	C2012 SL 1H 100D-T-A
C2317	4030004470	S. CERAMIC	C2012 SL 1H 100D-T-A
C2318	4030004470	S. CERAMIC	C2012 SL 1H 100D-T-A
C2319	4030004470	S. CERAMIC	C2012 SL 1H 100D-T-A
C2320	4030004470	S. CERAMIC	C2012 SL 1H 100D-T-A
C2321	4030004470	S. CERAMIC	C2012 SL 1H 100D-T-A
C2322	4030004470	S. CERAMIC	C2012 SL 1H 100D-T-A
C2323	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2324	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2325	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2326	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2327	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2328	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2329	4030004760	S. CERAMIC	C2012 JF 1E 104Z-T-A
C2330	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2331	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2332	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2333	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2334	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2335	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2336	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2337	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A

S. = Surface mount

[LOGIC UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
C2338	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
C2339	4030004740	S. CERAMIC	C2012 JB 1H 472K-T-A
DS2301	5030000610	LCD	LF-7664J [FUNCHION DISPLAY]
DS2302	5080000150	LAMP	HRS-7219A
DS2303	5080000150	LAMP	HRS-7219A
S2301	2220000360	SWITCH	ESD-1111212 (Start port level)
S2302	2220000360	SWITCH	ESD-1111212 (Key port input)
J2304	6510003450	CONNECTOR	B09B-EH-S
J2305	6510003410	CONNECTOR	B05B-EH-S
J2307	6510010040	CONNECTOR	52011-0810
J2308	6510010040	CONNECTOR	52011-0810
J2309	6510003400	CONNECTOR	B04B-EH-S
J2310	6510002270	CONNECTOR	TL25P05V1
J2311	6510003400	CONNECTOR	B04B-EH-S
J2312	6510003400	CONNECTOR	B04B-EH-S
EP2301	0910028815	PCB	B 2859E (LOGIC)
EP2302	8930012890	LCD CONTACT	SRCN-607

[SW UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
D2601	1710000160	DIODE	1SS133
D2602	1710000160	DIODE	1SS133
D2603	1710000160	DIODE	1SS133
D2604	1710000160	DIODE	1SS133
D2605	1710000160	DIODE	1SS133
D2606	1710000160	DIODE	1SS133
D2607	1710000160	DIODE	1SS133
D2608	1710000160	DIODE	1SS133
D2609	1710000160	DIODE	1SS133
D2610	1710000160	DIODE	1SS133
D2611	1710000160	DIODE	1SS133
D2612	1710000160	DIODE	1SS133
D2613	1710000160	DIODE	1SS133
D2614	1710000160	DIODE	1SS133
D2615	1710000160	DIODE	1SS133
D2616	1710000160	DIODE	1SS133
D2617	1710000160	DIODE	1SS133
D2618	1710000160	DIODE	1SS133
D2619	1710000160	DIODE	1SS133
D2620	1710000160	DIODE	1SS133
D2621	1710000160	DIODE	1SS133
D2622	1710000160	DIODE	1SS133
D2623	1710000160	DIODE	1SS133
R2601	7010004230	RESISTOR	R20J 2.2 kΩ
R2602	7010004230	RESISTOR	R20J 2.2 kΩ
R2603	7010004230	RESISTOR	R20J 2.2 kΩ
R2604	7010004230	RESISTOR	R20J 2.2 kΩ
R2605	7010004230	RESISTOR	R20J 2.2 kΩ
R2606	7010004230	RESISTOR	R20J 2.2 kΩ
R2607	7010004230	RESISTOR	R20J 2.2 kΩ
R2608	7010004230	RESISTOR	R20J 2.2 kΩ
R2609	7010004230	RESISTOR	R20J 2.2 kΩ

[SW UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R2610	7010004230	RESISTOR	R20J 2.2 kΩ
R2611	7010004230	RESISTOR	R20J 2.2 kΩ
R2612	7010004230	RESISTOR	R20J 2.2 kΩ
R2613	7010004230	RESISTOR	R20J 2.2 kΩ
R2614	7010004230	RESISTOR	R20J 2.2 kΩ
R2615	7010004230	RESISTOR	R20J 2.2 kΩ
R2616	7010004230	RESISTOR	R20J 2.2 kΩ
R2617	7010004230	RESISTOR	R20J 2.2 kΩ
R2618	7010004230	RESISTOR	R20J 2.2 kΩ
R2619	7010004230	RESISTOR	R20J 2.2 kΩ
R2620	7010004230	RESISTOR	R20J 2.2 kΩ
R2621	7010004230	RESISTOR	R20J 2.2 kΩ
R2622	7010004230	RESISTOR	R20J 2.2 kΩ
R2623	7010004230	RESISTOR	R20J 2.2 kΩ
R2624	7010004230	RESISTOR	R20J 2.2 kΩ
R2625	7010004230	RESISTOR	R20J 2.2 kΩ
S2601	2260000871	SWITCH	SKHQFC013B [TUNE]
S2602	2260000851	SWITCH	SKHQFA018B [ALM]
S2603	2260000871	SWITCH	SKHQFC013B [MODE]
S2604	2260000851	SWITCH	SKHQFA018B [2182]
S2605	2260000871	SWITCH	SKHQFC013B [CE]
S2606	2260000871	SWITCH	SKHQFC013B [TXF]
S2607	2260000871	SWITCH	SKHQFC013B [DIM (1)]
S2608	2260000871	SWITCH	SKHQFC013B [6]
S2609	2260000871	SWITCH	SKHQFC013B [SQL (2)]
S2610	2260000871	SWITCH	SKHQFC013B [7]
S2611	2260000871	SWITCH	SKHQFC013B [NB (3)]
S2612	2260000871	SWITCH	SKHQFC013B [8]
S2613	2260000871	SWITCH	SKHQFC013B [SP (4)]
S2614	2260000871	SWITCH	SKHQFC013B [9]
S2615	2260000871	SWITCH	SKHQFC013B [AGC (5)]
S2616	2260000871	SWITCH	SKHQFC013B [0]
S2617	2260000861	SWITCH	SKHQFB015B [RX]
S2618	2260000861	SWITCH	SKHQFB015B [TX]
S2619	2260000861	SWITCH	SKHQFB015B [FUNC]
S2620	2260000861	SWITCH	SKHQFB015B [CLAR (UP)]
S2621	2260000861	SWITCH	SKHQFB015B [CLAR (DN)]
S2622	2260000861	SWITCH	SKHQFB015B [VOL (UP)]
S2623	2260000861	SWITCH	SKHQFB015B [VOL (DN)]
S2624	2260000851	SWITCH	SKHQFA018B [POW]
S2625	2260000851	SWITCH	SKHQFA018B [POW]
J2601	6510010040	CONNECTOR	52011-0810
J2602	6510010040	CONNECTOR	52011-0810
EP2601	0910028752	PCB	B 2858B (SW)

[DIAL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
S2901	2250000020	ENCODER	SRB18100 25KC [MAIN DIAL]
EP2901	0910017872	PCB	B 1700B (DIAL)

S.=Surface mount

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
IC1	1790000050	IC	ND487C1-3R
IC2	1110001310	IC	μPC577HA
IC3	1130000070	IC	TC4028BP
IC4	1130000180	IC	TC4094BP
IC5	1130000180	IC	TC4094BP
IC6	1120000970	IC	M54562P
IC7	1120000970	IC	M54562P
IC8	1120000970	IC	M54562P
IC9	1110002030	IC	TA7808S
IC10	1110000240	IC	BA222-V
IC11	1130000030	IC	TC4011BP
IC12	1110001320	IC	μPC1037HA
IC13	1110000890	IC	μPC1241H
IC14	1130003060	IC	TC9154AP
IC15	1110001320	IC	μPC1037HA
IC16	1130000120	IC	TC4066BP
IC17	1110002500	IC	M5218AL
IC18	1160000010	IC	DAN401
IC19	1160000010	IC	DAN401
IC21	1130000120	IC	TC4066BP
IC22	1110002500	IC	M5218AL
IC23	1110002500	IC	M5218AL
Q1	1590000340	TRANSISTOR	RN1202
Q2	1590000340	TRANSISTOR	RN1202
Q3	1590000340	TRANSISTOR	RN1202
Q4	1560000130	FET	2SK125
Q5	1560000130	FET	2SK125
Q6	1580000020	FET	3SK101-Y
Q7	1580000010	FET	3SK101-GR
Q8	1590000340	TRANSISTOR	RN1202
Q9	1580000010	FET	3SK101-GR
Q13	1580000010	FET	3SK101-GR
Q14	1580000010	FET	3SK101-GR
Q15	1530000810	TRANSISTOR	2SC2053
Q16	1560000080	FET	2SK192A-Y
Q17	1510000080	TRANSISTOR	2SA1048-GR
Q18	1530000110	TRANSISTOR	2SC2458-GR
Q19	1530000110	TRANSISTOR	2SC2458-GR
Q20	1590000360	TRANSISTOR	RN2202
Q21	1590000340	TRANSISTOR	RN1202
Q22	1590000340	TRANSISTOR	RN1202
Q23	1530000810	TRANSISTOR	2SC2053
Q24	1530000790	TRANSISTOR	2SC1971
Q26	1590000340	TRANSISTOR	RN1202
Q29	1510000080	TRANSISTOR	2SA1048-GR
Q30	1530000110	TRANSISTOR	2SC2458-GR
Q31	1590000360	TRANSISTOR	RN2202
Q32	1530000110	TRANSISTOR	2SC2458-GR
Q33	1590000340	TRANSISTOR	RN1202
Q34	1530000110	TRANSISTOR	2SC2458-GR
Q35	1590000340	TRANSISTOR	RN1202
Q36	1560000100	FET	2SK241-Y
Q37	1580000020	FET	3SK101-Y
Q38	1590000340	TRANSISTOR	RN1202
Q39	1530000110	TRANSISTOR	2SC2458-GR
Q40	1530000110	TRANSISTOR	2SC2458-GR
Q41	1590000340	TRANSISTOR	RN1202
Q42	1540000070	TRANSISTOR	2SD468C
Q43	1540000070	TRANSISTOR	2SD468C
Q44	1530000110	TRANSISTOR	2SC2458-GR
Q45	1530000110	TRANSISTOR	2SC2458-GR
Q46	1590000350	TRANSISTOR	RN1204
Q47	1530000110	TRANSISTOR	2SC2458-GR
Q48	1530000110	TRANSISTOR	2SC2458-GR
Q49	1530000180	TRANSISTOR	2SC2878-B
Q50	1590000360	TRANSISTOR	RN2202
Q51	1530000410	TRANSISTOR	2SC1214C
Q52	1530000110	TRANSISTOR	2SC2458-GR
Q55	1580000010	FET	3SK101-GR
Q56	1560000100	FET	2SK241-Y
Q57	1590000340	TRANSISTOR	RN1202
Q58	1530000180	TRANSISTOR	2SC2878-B
Q60	1530000110	TRANSISTOR	2SC2458-GR

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
Q61	1530000110	TRANSISTOR	2SC2458-GR
Q63	1590000340	TRANSISTOR	RN1202
Q67	1530000110	TRANSISTOR	2SC2458-GR
D1	1710000050	DIODE	1SS53
D2	1710000050	DIODE	1SS53
D3	1710000050	DIODE	1SS53
D4	1710000050	DIODE	1SS53
D5	1710000050	DIODE	1SS53
D6	1710000050	DIODE	1SS53
D7	1710000050	DIODE	1SS53
D8	1710000050	DIODE	1SS53
D9	1710000050	DIODE	1SS53
D10	1710000050	DIODE	1SS53
D11	1710000050	DIODE	1SS53
D12	1710000050	DIODE	1SS53
D13	1710000050	DIODE	1SS53
D14	1710000050	DIODE	1SS53
D15	1710000050	DIODE	1SS53
D16	1710000050	DIODE	1SS53
D17	1710000050	DIODE	1SS53
D18	1710000050	DIODE	1SS53
D19	1710000050	DIODE	1SS53
D20	1710000580	DIODE	1SS265
D21	1710000580	DIODE	1SS265
D22	1710000050	DIODE	1SS53
D23	1710000580	DIODE	1SS265
D24	1710000580	DIODE	1SS265
D25	1710000580	DIODE	1SS265
D26	1710000580	DIODE	1SS265
D27	1710000050	DIODE	1SS53
D28	1710000050	DIODE	1SS53
D29	1710000050	DIODE	1SS53
D30	1710000050	DIODE	1SS53
D31	1710000050	DIODE	1SS53
D32	1710000050	DIODE	1SS53
D33	1710000050	DIODE	1SS53
D34	1710000050	DIODE	1SS53
D35	1710000050	DIODE	1SS53
D36	1710000160	DIODE	1SS133
D37	1710000580	DIODE	1SS265
D38	1710000160	DIODE	1SS133
D39	1710000160	DIODE	1SS133
D40	1710000330	DIODE	1K60
D41	1710000330	DIODE	1K60
D42	1710000160	DIODE	1SS133
D43	1710000160	DIODE	1SS133
D44	1710000330	DIODE	1K60
D45	1710000050	DIODE	1SS53
D46	1710000160	DIODE	1SS133
D47	1710000040	DIODE	1S953
D48	1710000160	DIODE	1SS133
D49	1710000160	DIODE	1SS133
D50	1710000160	DIODE	1SS133
D51	1710000050	DIODE	1SS53
D52	1710000160	DIODE	1SS133
D53	1710000050	DIODE	1SS53
D54	1710000050	DIODE	1SS53
D55	1710000050	DIODE	1SS53
D56	1710000330	DIODE	1K60
D57	1710000050	DIODE	1SS53
D58	1710000050	DIODE	1SS53
D59	1710000050	DIODE	1SS53
D60	1710000160	DIODE	1SS133
D61	1710000330	DIODE	1K60
D62	1710000160	DIODE	1SS133
D63	1710000160	DIODE	1SS133
D64	1710000160	DIODE	1SS133
D65	1710000050	DIODE	1SS53
D66	1710000160	DIODE	1SS133
D67	1710000160	DIODE	1SS133
D68	1710000160	DIODE	1SS133
D69	1710000160	DIODE	1SS133
D70	1710000160	DIODE	1SS133

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
D71	1710000160	DIODE	1SS133
D72	1710000160	DIODE	1SS133
D73	1710000160	DIODE	1SS133
D74	1710000160	DIODE	1SS133
D75	1710000160	DIODE	1SS133
D76	1730000100	ZENER	RD5.1E B2
D77	1710000160	DIODE	1SS133
D78	1710000160	DIODE	1SS133
D79	1710000160	DIODE	1SS133
D80	1710000160	DIODE	1SS133
D87	1710000160	DIODE	1SS133
D88	1710000160	DIODE	1SS133
D89	1710000160	DIODE	1SS133
D90	1710000160	DIODE	1SS133
D91	1710000160	DIODE	1SS133
D92	1710000030	DIODE	1S1555
D93	1710000050	DIODE	1SS53
D94	1710000050	DIODE	1SS53
D95	1710000050	DIODE	1SS53
D97	1710000160	DIODE	1SS133
D98	1730000120	ZENER	RD6.2E B2
D99	1710000030	DIODE	1S1555
D100	1710000030	DIODE	1S1555
D101	1710000160	DIODE	1SS133
D103	1710000160	DIODE	1SS133
D104	1710000050	DIODE	1SS53
D105	1710000050	DIODE	1SS53
D106	1710000160	DIODE	1SS133
D107	1710000160	DIODE	1SS133
D108	1710000160	DIODE	1SS133
D109	1710000030	DIODE	1S1555
D110	1710000050	DIODE	1SS53
D111	1710000050	DIODE	1SS53
D112	1730000250	ZENER	RD12E B2
D113	1710000050	DIODE	1SS53
D114	1710000050	DIODE	1SS53
F11	2010001010	FILTER	69M15B (FL-120)
F13	2010000600	FILTER	9M26F (FL-80)
F14	2010000950	FILTER	9M 6A1 (FL-116)
F15	2010000950	FILTER	9M 6A1 (FL-116)
L1	6180000860	COIL	LAL 03NA 5R6K
L2	6180000850	COIL	LAL 03NA 4R7K
L3	6180001710	COIL	LAL 03NA 561K
L4	6180002720	COIL	EL0606SKI-R33J (A)
L5	6180002710	COIL	EL0606SKI-R47J (A)
L6	6180000900	COIL	LAL 03NA 101K
L7	6180000900	COIL	LAL 03NA 101K
L8	6180002070	COIL	EL0606SKI-3R9K
L9	6180000900	COIL	LAL 03NA 101K
L10	6180002050	COIL	EL0606SKI-2R7K
L11	6180002470	COIL	LAL 03NA 471K
L12	6180002060	COIL	EL0606SKI-3R3K
L13	6180002030	COIL	EL0606SKI-1R8K
L14	6180000900	COIL	LAL 03NA 101K
L15	6180002010	COIL	EL0606SKI-1R2K
L16	6180000900	COIL	LAL 03NA 101K
L17	6180002030	COIL	EL0606SKI-1R8K
L18	6180002010	COIL	EL0606SKI-1R2K
L19	6180000900	COIL	LAL 03NA 101K
L20	6180002000	COIL	EL0606SKI-1R0K
L21	6180000900	COIL	LAL 03NA 101K
L22	6180002020	COIL	EL0606SKI-1R5K
L23	6180000900	COIL	LAL 03NA 101K
L24	6180002750	COIL	EL0606SKI-R68J (A)
L25	6180002710	COIL	EL0606SKI-R47J (A)
L26	6150001590	COIL	LS-175
L27	6180002750	COIL	EL0606SKI-R68J (A)
L28	6180000900	COIL	LAL 03NA 101K
L29	6180002710	COIL	EL0606SKI-R47J (A)
L30	6180002720	COIL	EL0606SKI-R33J (A)
L31	6180002480	COIL	LAL 03NA 820K

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
L32	6180002710	COIL	EL0606SKI-R47J (A)
L33	6180000900	COIL	LAL 03NA 101K
L34	6180002730	COIL	EL0606SKI-R39J (A)
L35	6180002740	COIL	EL0606SKI-R27J (A)
L36	6180000990	COIL	LAL 04NA 101K
L37	6180002730	COIL	EL0606SKI-R39J (A)
L38	6180000900	COIL	LAL 03NA 101K
L39	6180002720	COIL	EL0606SKI-R33J (A)
L40	6180002710	COIL	EL0606SKI-R47J (A)
L41	6180000900	COIL	LAL 03NA 101K
L42	6180002720	COIL	EL0606SKI-R33J (A)
L43	6180000690	COIL	LAL 03NA R22M
L44	6180000700	COIL	LAL 03NA R27M
L45	6140002060	COIL	LR-225
L46	6150001770	COIL	LS-198
L47	6150002430	COIL	LS-254
L48	6150002430	COIL	LS-254
L49	6150000990	COIL	LS-114
L50	6150002430	COIL	LS-254
L51	6150002430	COIL	LS-254
L52	6140002060	COIL	LR-225
L53	6140002060	COIL	LR-225
L54	6180000700	COIL	LAL 03NA R27M
L55	6180000780	COIL	LAL 03NA 1R2M
L56	6180000780	COIL	LAL 03NA 1R2M
L57	6150001470	COIL	LS-163
L58	6150000700	COIL	LS-90A
L59	6150000700	COIL	LS-90A
L60	6150003350	COIL	LS-367
L61	6180002640	COIL	EL0606SKI-150J
L62	6180002640	COIL	EL0606SKI-150J
L63	6110001580	COIL	LA-238
L64	6140002060	COIL	LR-225
L65	6180002470	COIL	LAL 03NA 471K
L66	6180000770	COIL	LAL 03NA 1R0M
L67	6180000750	COIL	LAL 03NA R68M
L68	6140002220	COIL	LR-270
L69	6150001770	COIL	LS-198
L70	6140001600	COIL	LR-178
L71	6140001460	COIL	LR-170
L72	6140001460	COIL	LR-170
L73	6180000880	COIL	LAL 03NA 100K
L74	6180000880	COIL	LAL 03NA 100K
L75	6180000690	COIL	LAL 03NA R22M
L76	6150001590	COIL	LS-175
L77	6150001590	COIL	LS-175
L78	6180000900	COIL	LAL 03NA 101K
L79	6180000900	COIL	LAL 03NA 101K
L80	6150001590	COIL	LS-175
L81	6150001590	COIL	LS-175
L82	6150001590	COIL	LS-175
L83	6150001470	COIL	LS-163
L84	6170000140	COIL	LW-15
L85	6180000900	COIL	LAL 03NA 101K
L86	6180000960	COIL	LAL 03NA 102K
L87	6180000900	COIL	LAL 03NA 101K
L88	6180000900	COIL	LAL 03NA 101K
L89	6180000900	COIL	LAL 03NA 101K
L90	6180000900	COIL	LAL 03NA 101K
L91	6180000850	COIL	LAL 03NA 4R7K
L92	6180000900	COIL	LAL 03NA 101K
L93	6910000670	COIL	BT01RN1-A61-001
L94	6910000670	COIL	BT01RN1-A61-001
L95	6910000670	COIL	BT01RN1-A61-001
L96	6910000670	COIL	BT01RN1-A61-001
L97	6180000880	COIL	LAL 03NA 100K
L98	6180000900	COIL	LAL 03NA 101K
L99	6180000900	COIL	LAL 03NA 101K
L100	6180000900	COIL	LAL 03NA 101K
L101	6180000900	COIL	LAL 03NA 101K
L102	6180000900	COIL	LAL 03NA 101K
L103	6180000900	COIL	LAL 03NA 101K
L104	6180000900	COIL	LAL 03NA 101K
L105	6180000900	COIL	LAL 03NA 101K
L106	6180000900	COIL	LAL 03NA 101K

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
L107	6180000900	COIL	LAL 03NA 101K
L108	6180000900	COIL	LAL 03NA 101K
L109	6140000930	COIL	LR-116
L110	6140002440	COIL	LR-277
L111	6140001260	COIL	LR-151
L112	6180001710	COIL	LAL 03NA 561K
L113	6910000670	COIL	BT01RN1-A61-001
L114	6180001440	COIL	RFC S4 101K
L115	6180000880	COIL	LAL 03NA 100K
L116	6180000880	COIL	LAL 03NA 100K
L117	6180000690	COIL	LAL 03NA R22M
L118	6180000900	COIL	LAL 03NA 101K
L119	6180000900	COIL	LAL 03NA 101K
L120	6180000900	COIL	LAL 03NA 101K
L121	6180000900	COIL	LAL 03NA 101K
L122	6180000880	COIL	LAL 03NA 100K
L123	6180000900	COIL	LAL 03NA 101K
L124	6180000900	COIL	LAL 03NA 101K
L125	6180001710	COIL	LAL 03NA 561K
L126	6180000770	COIL	LAL 03NA 1R0M
L127	6180000900	COIL	LAL 03NA 101K
L128	6180000880	COIL	LAL 03NA 100K
L129	6180000740	COIL	LAL 03NA R56M
L130	6180000990	COIL	LAL 04NA 101K
L132	6180000900	COIL	LAL 03NA 101K
L133	6180000900	COIL	LAL 03NA 101K
L134	6180000900	COIL	LAL 03NA 101K
L135	6180000900	COIL	LAL 03NA 101K
L136	6180000900	COIL	LAL 03NA 101K
L138	6180000900	COIL	LAL 03NA 101K
L139	6180000900	COIL	LAL 03NA 101K
L140	6180000900	COIL	LAL 03NA 101K
L141	6180000900	COIL	LAL 03NA 101K
L142	6180000880	COIL	LAL 03NA 100K
L143	6180000900	COIL	LAL 03NA 101K
L144	6180000880	COIL	LAL 03NA 100K
L145	6180000880	COIL	LAL 03NA 100K
L146	6180001220	COIL	LAL 04NA 100K
L147	6180000850	COIL	LAL 03NA 4R7K
L148	6180000770	COIL	LAL 03NA 1R0M
R1	7010003480	RESISTOR	ELR20J 4.7 kΩ
R2	7010004370	RESISTOR	R20J 22 kΩ
R3	7010004160	RESISTOR	R20J 560 Ω
R4	7010003370	RESISTOR	ELR20J 560 Ω
R5	7010004270	RESISTOR	R20J 4.7 kΩ
R6	7010004370	RESISTOR	R20J 22 kΩ
R7	7010004160	RESISTOR	R20J 560 Ω
R8	7010003280	RESISTOR	ELR20J 100 Ω
R9	7010004160	RESISTOR	R20J 560 Ω
R10	7310000740	TRIMMER	RH0651CS3J2KA (472)
R11	7010003320	RESISTOR	ELR20J 220 Ω
R12	7010003530	RESISTOR	ELR20J 10 kΩ
R13	7010000990	RESISTOR	R25XJ 47 Ω
R14	7010004570	RESISTOR	R20J 1 MΩ
R15	7010003600	RESISTOR	ELR20J 33 kΩ
R16	7010003370	RESISTOR	ELR20J 560 Ω
R18	7010004070	RESISTOR	R20J 100 Ω
R19	7510000240	THERMISTOR	ERT-D2ZGL 332S
R20	7010004270	RESISTOR	R20J 4.7 kΩ
R21	7010004270	RESISTOR	R20J 4.7 kΩ
R22	7010003240	RESISTOR	ELR20J 47 Ω
R23	7010004230	RESISTOR	R20J 2.2 kΩ
R24	7010003440	RESISTOR	ELR20J 2.2 kΩ
R25	7010004230	RESISTOR	R20J 2.2 kΩ
R26	7010003320	RESISTOR	ELR20J 220 Ω
R27	7010004000	RESISTOR	R20J 27 Ω
R28	7010004390	RESISTOR	R20J 33 kΩ
R29	7010001110	RESISTOR	R25XJ 470 Ω
R30	7010003580	RESISTOR	ELR20J 22 kΩ
R31	7510000560	THERMISTOR	ERT-D2ZGL 801S
R32	7010004180	RESISTOR	R20J 820 Ω
R34	7010001030	RESISTOR	R25XJ 100 Ω
R35	7010003530	RESISTOR	ELR20J 10 kΩ

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R36	7010001280	RESISTOR	R25XJ 10 kΩ
R37	7010004320	RESISTOR	R20J 10 kΩ
R38	7010003510	RESISTOR	ELR20J 6.8 kΩ
R39	7010004190	RESISTOR	R20J 1 kΩ
R40	7010003440	RESISTOR	ELR20J 2.2 kΩ
R41	7010001030	RESISTOR	R25XJ 100 Ω
R42	7010003470	RESISTOR	ELR20J 3.9 kΩ
R43	7010004260	RESISTOR	R20J 3.9 kΩ
R44	7010003530	RESISTOR	ELR20J 10 kΩ
R45	7010001280	RESISTOR	R25XJ 10 kΩ
R46	7010001140	RESISTOR	R25XJ 820 Ω
R47	7010004230	RESISTOR	R20J 2.2 kΩ
R48	7010003440	RESISTOR	ELR20J 2.2 kΩ
R49	7010001030	RESISTOR	R25XJ 100 Ω
R50	7010004230	RESISTOR	R20J 2.2 kΩ
R51	7010004370	RESISTOR	R20J 22 kΩ
R52	7010003480	RESISTOR	ELR20J 4.7 kΩ
R53	7010003310	RESISTOR	ELR20J 180 Ω
R54	7010003410	RESISTOR	ELR20J 1.2 kΩ
R55	7010003940	RESISTOR	R20J 8.2 Ω
R56	7010004160	RESISTOR	R20J 560 Ω
R57	7010003990	RESISTOR	R20J 22 Ω
R58	7010003350	RESISTOR	ELR20J 390 Ω
R59	7010003290	RESISTOR	ELR20J 120 Ω
R60	7010003910	RESISTOR	R20J 4.7 Ω
R61	7410000170	ARRAY	RMX- 8 102K
R62	7310001910	TRIMMER	RH0621C 22K (223)
R63	7310001910	TRIMMER	RH0621C 22K (223)
R64	7310001910	TRIMMER	RH0621C 22K (223)
R65	7310001910	TRIMMER	RH0621C 22K (223)
R66	7010004370	RESISTOR	R20J 22 kΩ
R67	7010003480	RESISTOR	ELR20J 4.7 kΩ
R68	7010003360	RESISTOR	ELR20J 470 Ω
R69	7010003340	RESISTOR	ELR20J 330 Ω
R70	7010003350	RESISTOR	ELR20J 390 Ω
R71	7010004190	RESISTOR	R20J 1 kΩ
R72	7010003320	RESISTOR	ELR20J 220 Ω
R73	7510000210	THERMISTOR	ERT-D2FGL 102S
R74	7310001910	TRIMMER	RH0621C 22K (223)
R75	7510000610	THERMISTOR	ERT-D2ZGL 351S
R76	7310001910	TRIMMER	RH0621C 22K (223)
R77	7310001910	TRIMMER	RH0621C 22K (223)
R78	7310001910	TRIMMER	RH0621C 22K (223)
R79	7010004280	RESISTOR	R20J 5.6 kΩ
R80	7010003660	RESISTOR	ELR20J 100 kΩ
R81	7010003660	RESISTOR	ELR20J 100 kΩ
R82	7010003480	RESISTOR	ELR20J 4.7 kΩ
R83	7010003260	RESISTOR	ELR20J 68 Ω
R84	7010004050	RESISTOR	R20J 68 Ω
R85	7010004230	RESISTOR	R20J 2.2 kΩ
R86	7010003530	RESISTOR	ELR20J 10 kΩ
R87	7510000260	THERMISTOR	ERT-D2ZGL 102S
R89	7010000970	RESISTOR	R25XJ 33 Ω
R90	7010003240	RESISTOR	ELR20J 47 Ω
R91	7010003260	RESISTOR	ELR20J 68 Ω
R92	7010003160	RESISTOR	ELR20J 10 Ω
R93	7010004170	RESISTOR	R20J 680 Ω
R94	7010003480	RESISTOR	ELR20J 4.7 kΩ
R95	7010003530	RESISTOR	ELR20J 10 kΩ
R96	7010003660	RESISTOR	ELR20J 100 kΩ
R97	7010003300	RESISTOR	ELR20J 150 Ω
R98	7010003280	RESISTOR	ELR20J 100 Ω
R99	7010003620	RESISTOR	ELR20J 47 kΩ
R100	7010003660	RESISTOR	ELR20J 100 kΩ
R101	7010004070	RESISTOR	R20J 100 Ω
R102	7010003620	RESISTOR	ELR20J 47 kΩ
R103	7010004270	RESISTOR	R20J 4.7 kΩ
R104	7010003660	RESISTOR	ELR20J 100 kΩ
R105	7010003530	RESISTOR	ELR20J 10 kΩ
R106	7010003510	RESISTOR	ELR20J 6.8 kΩ
R107	7010004190	RESISTOR	R20J 1 kΩ
R109	7310000660	TRIMMER	RH0621C14J19A (103)
R110	7010003550	RESISTOR	ELR20J 15 kΩ
R111	7010003660	RESISTOR	ELR20J 100 kΩ
R112	7010004450	RESISTOR	R20J 100 kΩ

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
R113	7010003780	RESISTOR ELR20J 1 MΩ
R114	7010003360	RESISTOR ELR20J 470 Ω
R115	7010003530	RESISTOR ELR20J 10 kΩ
R116	7310003530	TRIMMER RH0621C15J (104)
R118	7010003660	RESISTOR ELR20J 100 kΩ
R119	7010004560	RESISTOR R20J 820 kΩ
R120	7010003670	RESISTOR ELR20J 120 kΩ
R121	7010003760	RESISTOR ELR20J 680 kΩ
R122	7010003400	RESISTOR ELR20J 1 kΩ
R123	7310000650	TRIMMER RH0621CN3J0SA (332)
R125	7010003400	RESISTOR ELR20J 1 kΩ
R126	7310003140	TRIMMER RH0621CN2J (331)
R127	7010004090	RESISTOR R20J 150 Ω
R128	7010004320	RESISTOR R20J 10 kΩ
R129	7310001600	TRIMMER RH0621C12J01A (101)
R130	7010001190	RESISTOR R25XJ 2.2 kΩ
R131	7010004070	RESISTOR R20J 100 Ω
R132	7510000230	THERMISTOR ERT-D2ZGL 251S
R133	7010001360	RESISTOR R25XJ 47 kΩ
R134	7010003360	RESISTOR ELR20J 470 Ω
R135	7010003400	RESISTOR ELR20J 1 kΩ
R136	7010001030	RESISTOR R25XJ 100 Ω
R137	7010000990	RESISTOR R25XJ 47 Ω
R138	7010004320	RESISTOR R20J 10 kΩ
R139	7010003780	RESISTOR ELR20J 1 MΩ
R140	7010003280	RESISTOR ELR20J 100 Ω
R141	7010001030	RESISTOR R25XJ 100 Ω
R142	7010004270	RESISTOR R20J 4.7 kΩ
R143	7010003400	RESISTOR ELR20J 1 kΩ
R144	7010004150	RESISTOR R20J 470 Ω
R145	7010003660	RESISTOR ELR20J 100 kΩ
R146	7010003580	RESISTOR ELR20J 22 kΩ
R147	7010004230	RESISTOR R20J 2.2 kΩ
R148	7010003580	RESISTOR ELR20J 22 kΩ
R149	7010003400	RESISTOR ELR20J 1 kΩ
R150	7010004120	RESISTOR R20J 270 Ω
R151	7010004370	RESISTOR R20J 22 kΩ
R152	7010003320	RESISTOR ELR20J 220 Ω
R153	7010003580	RESISTOR ELR20J 22 kΩ
R154	7010000620	RESISTOR ELR25J 82 kΩ
R155	7010003700	RESISTOR ELR20J 220 kΩ
R156	7310000760	TRIMMER RH0651CJ4J01A (223)
R158	7010004270	RESISTOR R20J 4.7 kΩ
R159	7010003460	RESISTOR ELR20J 3.3 kΩ
R160	7010004070	RESISTOR R20J 100 Ω
R161	7010003400	RESISTOR ELR20J 1 kΩ
R162	7010004270	RESISTOR R20J 4.7 kΩ
R163	7010004070	RESISTOR R20J 100 Ω
R165	7010004320	RESISTOR R20J 10 kΩ
R166	7310000750	TRIMMER RH0651C14J2WA (103)
R169	7010003600	RESISTOR ELR20J 33 kΩ
R170	7010003600	RESISTOR ELR20J 33 kΩ
R171	7010004150	RESISTOR R20J 470 Ω
R172	7010004320	RESISTOR R20J 10 kΩ
R173	7010003480	RESISTOR ELR20J 4.7 kΩ
R174	7010003530	RESISTOR ELR20J 10 kΩ
R175	7010003040	RESISTOR ELR20J 1 Ω
R176	7010004190	RESISTOR R20J 1 kΩ
R177	7010003100	RESISTOR ELR20J 3.3 Ω
R178	7010003320	RESISTOR ELR20J 220 Ω
R179	7010003530	RESISTOR ELR20J 10 kΩ
R180	7010003530	RESISTOR ELR20J 10 kΩ
R181	7010003530	RESISTOR ELR20J 10 kΩ
R184	7010004270	RESISTOR R20J 4.7 kΩ
R186	7010003660	RESISTOR ELR20J 100 kΩ
R187	7010003780	RESISTOR ELR20J 1 MΩ
R188	7010003660	RESISTOR ELR20J 100 kΩ
R189	7010003490	RESISTOR ELR20J 5.6 kΩ
R190	7010003280	RESISTOR ELR20J 100 Ω
R191	7010003400	RESISTOR ELR20J 1 kΩ
R192	7010003340	RESISTOR ELR20J 330 Ω
R193	7010003610	RESISTOR ELR20J 39 kΩ
R194	7010003660	RESISTOR ELR20J 100 kΩ
R195	7010003660	RESISTOR ELR20J 100 kΩ
R196	7010003620	RESISTOR ELR20J 47 kΩ

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
R197	7010003480	RESISTOR ELR20J 4.7 kΩ
R198	7010003480	RESISTOR ELR20J 4.7 kΩ
R199	7010003660	RESISTOR ELR20J 100 kΩ
R200	7010003360	RESISTOR ELR20J 470 Ω
R201	7310000660	TRIMMER RH0621C14J19A (103)
R202	7010003510	RESISTOR ELR20J 6.8 kΩ
R203	7010003700	RESISTOR ELR20J 220 kΩ
R204	7010003820	RESISTOR ELR20J 3.3 MΩ
R205	7010004510	RESISTOR R20J 330 kΩ
R206	7010004580	RESISTOR R20J 1.2 MΩ
R207	7010003720	RESISTOR ELR20J 330 kΩ
R208	7010004550	RESISTOR R20J 680 kΩ
R209	7010003280	RESISTOR ELR20J 100 Ω
R210	7010000430	RESISTOR ELR25J 3.3 kΩ
R211	7010003400	RESISTOR ELR20J 1 kΩ
R212	7010004370	RESISTOR R20J 22 kΩ
R213	7010003320	RESISTOR ELR20J 220 Ω
R214	7010004440	RESISTOR R20J 82 kΩ
R215	7310000750	TRIMMER RH0651C14J2WA (103)
R216	7010003640	RESISTOR ELR20J 68 kΩ
R217	7010003660	RESISTOR ELR20J 100 kΩ
R218	7310003530	TRIMMER RH0621C15J (104)
R220	7010003360	RESISTOR ELR20J 470 Ω
R221	7010001230	RESISTOR R25XJ 4.7 kΩ
R222	7010003380	RESISTOR ELR20J 680 Ω
R223	7010003480	RESISTOR ELR20J 4.7 kΩ
R224	7010004190	RESISTOR R20J 1 kΩ
R225	7310000660	TRIMMER RH0621C14J19A (103)
R226	7010004450	RESISTOR R20J 100 kΩ
R227	7310000660	TRIMMER RH0621C14J19A (103)
R228	7010004490	RESISTOR R20J 220 kΩ
R229	7010004090	RESISTOR R20J 150 Ω
R230	7010003440	RESISTOR ELR20J 2.2 kΩ
R231	7010003530	RESISTOR ELR20J 10 kΩ
R232	7010003400	RESISTOR ELR20J 1 kΩ
R233	7010004190	RESISTOR R20J 1 kΩ
R234	7010004450	RESISTOR R20J 100 kΩ
R235	7010004450	RESISTOR R20J 100 kΩ
R236	7010003530	RESISTOR ELR20J 10 kΩ
R237	7010003400	RESISTOR ELR20J 1 kΩ
R238	7010003400	RESISTOR ELR20J 1 kΩ
R239	7010003400	RESISTOR ELR20J 1 kΩ
R240	7010003400	RESISTOR ELR20J 1 kΩ
R241	7010003400	RESISTOR ELR20J 1 kΩ
R250	7010004190	RESISTOR R20J 1 kΩ
R251	7010004190	RESISTOR R20J 1 kΩ
R252	7010003400	RESISTOR ELR20J 1 kΩ
R253	7010003400	RESISTOR ELR20J 1 kΩ
R254	7410000080	ARRAY RMX- 4 473K
R255	7010003240	RESISTOR ELR20J 47 Ω
R256	7010003740	RESISTOR ELR20J 470 kΩ
R257	7010004530	RESISTOR R20J 470 kΩ
R258	7010003400	RESISTOR ELR20J 1 kΩ
R259	7010003530	RESISTOR ELR20J 10 kΩ
R260	7010003620	RESISTOR ELR20J 47 kΩ
R261	7010000090	RESISTOR ELR25J 4.7 Ω
R262	7010000370	RESISTOR ELR25J 1 kΩ
R263	7010000090	RESISTOR ELR25J 4.7 Ω
R264	7010000370	RESISTOR ELR25J 1 kΩ
R265	7010003530	RESISTOR ELR20J 10 kΩ
R266	7010003740	RESISTOR ELR20J 470 kΩ
R267	7010003530	RESISTOR ELR20J 10 kΩ
R268	7010003740	RESISTOR ELR20J 470 kΩ
R269	7010003660	RESISTOR ELR20J 100 kΩ
R270	7010004170	RESISTOR R20J 680 Ω
R271	7010004230	RESISTOR R20J 2.2 kΩ
R272	7010003440	RESISTOR ELR20J 2.2 kΩ
R273	7010003400	RESISTOR ELR20J 1 kΩ
R274	7010004310	RESISTOR R20J 8.2 kΩ
R275	7010003240	RESISTOR ELR20J 47 Ω
R276	7010003530	RESISTOR ELR20J 10 kΩ
R277	7010003660	RESISTOR ELR20J 100 kΩ
R278	7010004030	RESISTOR R20J 47 Ω
R279	7010004030	RESISTOR R20J 47 Ω
R280	7010003520	RESISTOR ELR20J 8.2 kΩ

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R281	7010004230	RESISTOR	R20J 2.2 kΩ
R282	7010003440	RESISTOR	ELR20J 2.2 kΩ
R283	7010004190	RESISTOR	R20J 1 kΩ
R284	7010004250	RESISTOR	R20J 3.3 kΩ
R285	7010003530	RESISTOR	ELR20J 10 kΩ
R286	7010003600	RESISTOR	ELR20J 33 kΩ
R287	7010003400	RESISTOR	ELR20J 1 kΩ
R288	7010001030	RESISTOR	R25XJ 100 Ω
R289	7010003480	RESISTOR	ELR20J 4.7 kΩ
R290	7010003400	RESISTOR	ELR20J 1 kΩ
R291	7010003530	RESISTOR	ELR20J 10 kΩ
R292	7010003530	RESISTOR	ELR20J 10 kΩ
R293	7010001230	RESISTOR	R25XJ 4.7 kΩ
R294	7010003400	RESISTOR	ELR20J 1 kΩ
R295	7010003400	RESISTOR	ELR20J 1 kΩ
R296	7010001320	RESISTOR	R25XJ 22 kΩ
R297	7010003940	RESISTOR	R20J 8.2 Ω
R298	7010004090	RESISTOR	R20J 150 Ω
R299	7010003940	RESISTOR	R20J 8.2 Ω
R300	7410000120	ARRAY	RMX- 6 104K
R301	7010003320	RESISTOR	ELR20J 220 Ω
R302	7010003320	RESISTOR	ELR20J 220 Ω
R303	7010003320	RESISTOR	ELR20J 220 Ω
R304	7010003320	RESISTOR	ELR20J 220 Ω
R305	7010003320	RESISTOR	ELR20J 220 Ω
R306	7010003320	RESISTOR	ELR20J 220 Ω
R307	7010003320	RESISTOR	ELR20J 220 Ω
R308	7010003400	RESISTOR	ELR20J 1 kΩ
R309	7010001070	RESISTOR	R25XJ 220 Ω
R311	7010003360	RESISTOR	ELR20J 470 Ω
R312	7010000950	RESISTOR	R25XJ 22 Ω
R315	7010004190	RESISTOR	R20J 1 kΩ
R316	7010003400	RESISTOR	ELR20J 1 kΩ
R317	7010004230	RESISTOR	R20J 2.2 kΩ
R318	7010004190	RESISTOR	R20J 1 kΩ
R319	7010003530	RESISTOR	ELR20J 10 kΩ
R320	7010003560	RESISTOR	ELR20J 18 kΩ
R321	7010003440	RESISTOR	ELR20J 2.2 kΩ
R322	7310000750	TRIMMER	RH0651C14J2WA (103)
R323	7010004340	RESISTOR	R20J 15 kΩ
R339	7010003080	RESISTOR	ELR20J 2.2 Ω
R340	7010003530	RESISTOR	ELR20J 10 kΩ
R341	7010003240	RESISTOR	ELR20J 47 Ω
R342	7010004070	RESISTOR	R20J 100 Ω
R346	7010003320	RESISTOR	ELR20J 220 Ω
R347	7010003340	RESISTOR	ELR20J 330 Ω
R348	7010003530	RESISTOR	ELR20J 10 kΩ
R350	7010003400	RESISTOR	ELR20J 1 kΩ
R352	7010003680	RESISTOR	ELR20J 150 kΩ
R353	7010003680	RESISTOR	ELR20J 150 kΩ
R354	7010003360	RESISTOR	ELR20J 470 Ω
R355	7010003360	RESISTOR	ELR20J 470 Ω
R356	7010004110	RESISTOR	R20J 220 Ω
R357	7010004140	RESISTOR	R20J 390 Ω
R358	7010003400	RESISTOR	ELR20J 1 kΩ
R359	7010004190	RESISTOR	R20J 1 kΩ
R360	7010003390	RESISTOR	ELR20J 820 Ω
R361	7010004190	RESISTOR	R20J 1 kΩ
R362	7010003670	RESISTOR	ELR20J 120 kΩ
C1	4040000100	BARRIER	UAT 04X 182K
C2	4040000150	BARRIER	UAT 05X 472K
C3	4040000070	BARRIER	UAT 04X 102K
C4	4040000190	BARRIER	UAT 05X 103K
C5	4040000090	BARRIER	UAT 04X 152K
C6	4040000260	BARRIER	UZE 08X 104M
C7	4040000260	BARRIER	UZE 08X 104M
C8	4010000380	CERAMIC	DD107 SL 221J 50V
C9	4010000330	CERAMIC	DD105 SL 101J 50V
C10	4010000360	CERAMIC	DD106 SL 181J 50V
C11	4010000520	CERAMIC	DD108 B 472K 50V
C12	4040000150	BARRIER	UAT 05X 472K
C13	4040000250	BARRIER	UAT 08X 473M
C14	4040000090	BARRIER	UAT 04X 152K

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
C15	4040000100	BARRIER	UAT 04X 182K
C16	4040000250	BARRIER	UAT 08X 473M
C17	4040000250	BARRIER	UAT 08X 473M
C18	4040000070	BARRIER	UAT 04X 102K
C19	4040000070	BARRIER	UAT 04X 102K
C20	4040000250	BARRIER	UAT 08X 473M
C21	4040000250	BARRIER	UAT 08X 473M
C22	4010000430	CERAMIC	DD109 SL 471J 50V
C23	4010000420	CERAMIC	DD108 SL 391J 50V
C24	4040000250	BARRIER	UAT 08X 473M
C25	4010000430	CERAMIC	DD109 SL 471J 50V
C26	4010000430	CERAMIC	DD109 SL 471J 50V
C27	4040000250	BARRIER	UAT 08X 473M
C28	4040000250	BARRIER	UAT 08X 473M
C29	4010000400	CERAMIC	DD107 SL 301J 50V
C30	4010000400	CERAMIC	DD107 SL 301J 50V
C31	4040000250	BARRIER	UAT 08X 473M
C32	4040000250	BARRIER	UAT 08X 473M
C33	4010000370	CERAMIC	DD106 SL 201J 50V
C34	4010000370	CERAMIC	DD106 SL 201J 50V
C35	4040000250	BARRIER	UAT 08X 473M
C36	4040000250	BARRIER	UAT 08X 473M
C37	4010000360	CERAMIC	DD106 SL 181J 50V
C38	4010000360	CERAMIC	DD106 SL 181J 50V
C39	4040000250	BARRIER	UAT 08X 473M
C40	4040000250	BARRIER	UAT 08X 473M
C41	4040000260	BARRIER	UZE 08X 104M
C42	4010000320	CERAMIC	DD104 SL 820J 50V
C43	4010000210	CERAMIC	DD104 SL 300J 50V
C44	4010000350	CERAMIC	DD106 SL 151J 50V
C45	4010000120	CERAMIC	DD104 SL 100D 50V
C46	4010000320	CERAMIC	DD104 SL 820J 50V
C47	4040000260	BARRIER	UZE 08X 104M
C48	4010000520	CERAMIC	DD108 B 472K 50V
C49	4040000260	BARRIER	UZE 08X 104M
C50	4040000260	BARRIER	UZE 08X 104M
C51	4010000050	CERAMIC	DD104 SL 030C 50V
C52	4040000130	BARRIER	UAT 05X 332K
C53	4040000260	BARRIER	UZE 08X 104M
C54	4010000100	CERAMIC	DD104 SL 080D 50V
C55	4020000500	CYLINDER	UP050 SL 8R2K
C56	4020000650	CYLINDER	EP050 X 472M
C57	4040000150	BARRIER	UAT 05X 472K
C59	4010000100	CERAMIC	DD104 SL 080D 50V
C60	4010000520	CERAMIC	DD108 B 472K 50V
C61	4040000150	BARRIER	UAT 05X 472K
C62	4010000100	CERAMIC	DD104 SL 080D 50V
C63	4010000100	CERAMIC	DD104 SL 080D 50V
C64	4010000280	CERAMIC	DD104 SL 560J 50V
C65	4010000520	CERAMIC	DD108 B 472K 50V
C66	4010000420	CERAMIC	DD108 SL 391J 50V
C67	4010000390	CERAMIC	DD107 SL 271J 50V
C68	4010000410	CERAMIC	DD107 SL 331J 50V
C69	4010000520	CERAMIC	DD108 B 472K 50V
C70	4020000360	CYLINDER	UP050 SL 2R2K
C71	4010000520	CERAMIC	DD108 B 472K 50V
C72	4010000520	CERAMIC	DD108 B 472K 50V
C73	4010000300	CERAMIC	DD104 SL 680J 50V
C74	4040000150	BARRIER	UAT 05X 472K
C75	4010000520	CERAMIC	DD108 B 472K 50V
C76	4010000410	CERAMIC	DD107 SL 331J 50V
C77	4040000150	BARRIER	UAT 05X 472K
C78	4510004450	ELECTROLYTIC	50 MV R47 NPDW
C79	4020000770	CYLINDER	UP050 SL 200J
C80	4040000150	BARRIER	UAT 05X 472K
C81	4040000150	BARRIER	UAT 05X 472K
C82	4040000150	BARRIER	UAT 05X 472K
C83	4010000520	CERAMIC	DD108 B 472K 50V
C84	4040000150	BARRIER	UAT 05X 472K
C85	4010000150	CERAMIC	DD104 SL 150J 50V
C86	4010000100	CERAMIC	DD104 SL 080D 50V
C87	4010000150	CERAMIC	DD104 SL 150J 50V
C88	4040000150	BARRIER	UAT 05X 472K
C89	4010000520	CERAMIC	DD108 B 472K 50V
C90	4010000520	CERAMIC	DD108 B 472K 50V

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
C91	4040000150	BARRIER UAT 05X 472K
C92	4010000520	CERAMIC DD108 B 472K 50V
C93	4010000300	CERAMIC DD104 SL 680J 50V
C94	4010000520	CERAMIC DD108 B 472K 50V
C95	4010000520	CERAMIC DD108 B 472K 50V
C96	4010000520	CERAMIC DD108 B 472K 50V
C97	4510001120	ELECTROLYTIC 25 MS7 4R7 µF
C98	4040000150	BARRIER UAT 05X 472K
C99	4010000320	CERAMIC DD104 SL 820J 50V
C100	4010000320	CERAMIC DD104 SL 820J 50V
C101	4040000150	BARRIER UAT 05X 472K
C102	4040000260	BARRIER UZE 08X 104M
C103	4040000260	BARRIER UZE 08X 104M
C104	4040000260	BARRIER UZE 08X 104M
C105	4040000260	BARRIER UZE 08X 104M
C106	4040000260	BARRIER UZE 08X 104M
C107	4010000210	CERAMIC DD104 SL 300J 50V
C108	4010000080	CERAMIC DD104 SL 060D 50V
C109	4010000240	CERAMIC DD104 SL 390J 50V
C110	4010000160	CERAMIC DD104 SL 180J 50V
C111	4010000180	CERAMIC DD104 SL 220J 50V
C112	4010000520	CERAMIC DD108 B 472K 50V
C113	4010000180	CERAMIC DD104 SL 220J 50V
C114	4010000070	CERAMIC DD104 SL 050C 50V
C115	4010000500	CERAMIC DD104 B 102K 50V
C116	4010000500	CERAMIC DD104 B 102K 50V
C117	4020000250	CYLINDER UP125 X 472M
C118	4010000460	CERAMIC DD104 B 471K 50V
C119	4010000040	CERAMIC DD104 SL 020C 50V
C120	4010000120	CERAMIC DD104 SL 100D 50V
C121	4010000020	CERAMIC DD104 SL 010C 50V
C122	4510002810	ELECTROLYTIC 16 SS 47 µF
C123	4010000460	CERAMIC DD104 B 471K 50V
C124	4010000350	CERAMIC DD106 SL 151J 50V
C125	4040000150	BARRIER UAT 05X 472K
C126	4010000500	CERAMIC DD104 B 102K 50V
C127	4010000260	CERAMIC DD104 SL 470J 50V
C128	4010000340	CERAMIC DD105 SL 121J 50V
C129	4040000150	BARRIER UAT 05X 472K
C130	4020000040	CYLINDER UP125 SL 3R3K
C131	4040000150	BARRIER UAT 05X 472K
C132	4040000150	BARRIER UAT 05X 472K
C133	4040000150	BARRIER UAT 05X 472K
C134	4040000150	BARRIER UAT 05X 472K
C135	4040000150	BARRIER UAT 05X 472K
C136	4040000150	BARRIER UAT 05X 472K
C137	4010000340	CERAMIC DD105 SL 121J 50V
C138	4010000180	CERAMIC DD104 SL 220J 50V
C139	4510001100	ELECTROLYTIC 16 MS7 10 µF
C140	4510002810	ELECTROLYTIC 16 SS 47 µF
C142	4010000380	CERAMIC DD107 SL 221J 50V
C143	4510001160	ELECTROLYTIC 50 MS7 1 µF
C144	4040000150	BARRIER UAT 05X 472K
C145	4510002760	ELECTROLYTIC 10 SS 470 µF
C146	4510001150	ELECTROLYTIC 50 MS7 R47 µF
C147	4040000150	BARRIER UAT 05X 472K
C148	4040000150	BARRIER UAT 05X 472K
C149	4010000500	CERAMIC DD104 B 102K 50V
C150	4040000250	BARRIER UAT 08X 473M
C151	4020000520	CYLINDER UP050 B 221K
C152	4040000250	BARRIER UAT 08X 473M
C153	4510002850	ELECTROLYTIC 25 SS 22 µF
C154	4010000520	CERAMIC DD108 B 472K 50V
C155	4040000250	BARRIER UAT 08X 473M
C156	4010000740	CERAMIC DD104 CH 150J 50V
C157	4040000150	BARRIER UAT 05X 472K
C158	4040000250	BARRIER UAT 08X 473M
C159	4010000100	CERAMIC DD104 SL 080D 50V
C160	4010000520	CERAMIC DD108 B 472K 50V
C161	4510002840	ELECTROLYTIC 25 SS 10 µF
C162	4040000250	BARRIER UAT 08X 473M
C163	4010000410	CERAMIC DD107 SL 331J 50V
C164	4510001100	ELECTROLYTIC 16 MS7 10 µF
C165	4510001170	ELECTROLYTIC 50 MS7 2R2 µF
C166	4510004530	ELECTROLYTIC 25 MV 4R7 NPDW

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
C167	4310000450	MYLER 50 F2D 563J
C168	4510001150	ELECTROLYTIC 50 MS7 R47 µF
C169	4510002810	ELECTROLYTIC 16 SS 47 µF
C170	4010000520	CERAMIC DD108 B 472K 50V
C171	4040000150	BARRIER UAT 05X 472K
C172	4010000080	CERAMIC DD104 SL 060D 50V
C173	4010000180	CERAMIC DD104 SL 220J 50V
C174	4510002730	ELECTROLYTIC 10 SS 100 µF
C175	4510001150	ELECTROLYTIC 50 MS7 R47 µF
C176	4010000520	CERAMIC DD108 B 472K 50V
C177	4040000260	BARRIER UZE 08X 104M
C178	4040000250	BARRIER UAT 08X 473M
C180	4040000260	BARRIER UZE 08X 104M
C181	4010000520	CERAMIC DD108 B 472K 50V
C182	4040000260	BARRIER UZE 08X 104M
C183	4510004580	ELECTROLYTIC 16 MV 470 AG
C184	4510002810	ELECTROLYTIC 16 SS 47 µF
C185	4510003040	ELECTROLYTIC 16 SS 100 µF
C186	4510002900	ELECTROLYTIC 25 SS 470 µF
C187	4510004600	ELECTROLYTIC 16 MV 1000 HC
C188	4510002810	ELECTROLYTIC 16 SS 47 µF
C189	4040000260	BARRIER UZE 08X 104M
C190	4510001140	ELECTROLYTIC 50 MS7 R22 µF
C191	4510003040	ELECTROLYTIC 16 SS 100 µF
C192	4510001150	ELECTROLYTIC 50 MS7 R47 µF
C193	4510001150	ELECTROLYTIC 50 MS7 R47 µF
C194	4040000250	BARRIER UAT 08X 473M
C195	4510002850	ELECTROLYTIC 25 SS 22 µF
C196	4040000260	BARRIER UZE 08X 104M
C197	4010000500	CERAMIC DD104 B 102K 50V
C198	4010000410	CERAMIC DD107 SL 331J 50V
C199	4010000520	CERAMIC DD108 B 472K 50V
C200	4510002850	ELECTROLYTIC 25 SS 22 µF
C201	4510001170	ELECTROLYTIC 50 MS7 2R2 µF
C202	4510001160	ELECTROLYTIC 50 MS7 1 µF
C203	4510001160	ELECTROLYTIC 50 MS7 1 µF
C204	4510001120	ELECTROLYTIC 25 MS7 4R7 µF
C205	4510001120	ELECTROLYTIC 25 MS7 4R7 µF
C206	4510002810	ELECTROLYTIC 16 SS 47 µF
C207	4510001120	ELECTROLYTIC 25 MS7 4R7 µF
C208	4010000460	CERAMIC DD104 B 471K 50V
C209	4510004840	ELECTROLYTIC 50 MV 2R2 NPDW
C210	4510002810	ELECTROLYTIC 16 SS 47 µF
C211	4040000260	BARRIER UZE 08X 104M
C212	4040000260	BARRIER UZE 08X 104M
C213	4040000150	BARRIER UAT 05X 472K
C214	4040000260	BARRIER UZE 08X 104M
C215	4010000520	CERAMIC DD108 B 472K 50V
C216	4020000250	CYLINDER UP125 X 472M
C217	4020000850	CYLINDER EP050 Y 103M
C218	4510002810	ELECTROLYTIC 16 SS 47 µF
C219	4510001150	ELECTROLYTIC 50 MS7 R47 µF
C220	4040000190	BARRIER UAT 05X 103K
C221	4510001150	ELECTROLYTIC 50 MS7 R47 µF
C222	4040000190	BARRIER UAT 05X 103K
C223	4040000150	BARRIER UAT 05X 472K
C224	4510002810	ELECTROLYTIC 16 SS 47 µF
C225	4040000260	BARRIER UZE 08X 104M
C226	4510002810	ELECTROLYTIC 16 SS 47 µF
C227	4550000340	TANTALUM DN 1C 100M
C228	4310000330	MYLER 50 F2D 102J
C229	4550000340	TANTALUM DN 1C 100M
C230	4550000340	TANTALUM DN 1C 100M
C231	4550000350	TANTALUM DN 1V 010M
C232	4550000400	TANTALUM DN 1C 2R2M
C233	4010000520	CERAMIC DD108 B 472K 50V
C234	4040000150	BARRIER UAT 05X 472K
C235	4530000050	ARRAY B5RC0126-32N
C236	4040000150	BARRIER UAT 05X 472K
C237	4040000150	BARRIER UAT 05X 472K
C238	4310000440	MYLER 50 F2D 473J
C239	4510002830	ELECTROLYTIC 25 SS 4R7 µF
C240	4510002730	ELECTROLYTIC 10 SS 100 µF
C241	4040000150	BARRIER UAT 05X 472K
C242	4040000150	BARRIER UAT 05X 472K

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
C243	4530000050	ARRAY	B5RC0126-32N
C244	4040000150	BARRIER	UAT 05X 472K
C245	4040000260	BARRIER	UZE 08X 104M
C250	4040000150	BARRIER	UAT 05X 472K
C256	4040000150	BARRIER	UAT 05X 472K
C258	4040000250	BARRIER	UAT 08X 473M
C259	4040000150	BARRIER	UAT 05X 472K
C260	4040000150	BARRIER	UAT 05X 472K
C261	4040000260	BARRIER	UZE 08X 104M
C262	4040000150	BARRIER	UAT 05X 472K
C263	4510001100	ELECTROLYTIC	16 MS7 10 µF
C264	4510002950	ELECTROLYTIC	50 SS 2R2 µF
C265	4510004450	ELECTROLYTIC	50 MV R47 NPDW
C266	4510002830	ELECTROLYTIC	25 SS 4R7 µF
C267	4510004910	ELECTROLYTIC	16 MV 10 SWNP
C271	4510001120	ELECTROLYTIC	25 MS7 4R7 µF
C276	4040000150	BARRIER	UAT 05X 472K
C277	4010000520	CERAMIC	DD108 B 472K 50V
C278	4040000250	BARRIER	UAT 08X 473M
C279	4040000150	BARRIER	UAT 05X 472K
C280	4040000090	BARRIER	UAT 04X 152K
C281	4010000410	CERAMIC	DD107 SL 331J 50V
C282	4510001120	ELECTROLYTIC	25 MS7 4R7 µF
C283	4040000150	BARRIER	UAT 05X 472K
C284	4510002790	ELECTROLYTIC	16 SS 22 µF
C285	4010000520	CERAMIC	DD108 B 472K 50V
C286	4010000430	CERAMIC	DD109 SL 471J 50V
C287	4530000170	ARRAY	B7ZC0714-32N
C288	4040000150	BARRIER	UAT 05X 472K
C289	4010000520	CERAMIC	DD108 B 472K 50V
C290	4040000150	BARRIER	UAT 05X 472K
C292	4040000150	BARRIER	UAT 05X 472K
C293	4040000150	BARRIER	UAT 05X 472K
C295	4040000150	BARRIER	UAT 05X 472K
C296	4010000520	CERAMIC	DD108 B 472K 50V
C297	4040000150	BARRIER	UAT 05X 472K
C298	4510001100	ELECTROLYTIC	16 MS7 10 µF
C300	4510001100	ELECTROLYTIC	16 MS7 10 µF
C301	4040000250	BARRIER	UAT 08X 473M
C302	4010000400	CERAMIC	DD107 SL 301J 50V
C303	4010000410	CERAMIC	DD107 SL 331J 50V
C304	4020000510	CYLINDER	UP050 B 121K
C305	4010000380	CERAMIC	DD107 SL 221J 50V
C306	4040000150	BARRIER	UAT 05X 472K
C307	4020000670	CYLINDER	UP050 SL 470J
C308	4040000150	BARRIER	UAT 05X 472K
C309	4010000520	CERAMIC	DD108 B 472K 50V
C310	4040000260	BARRIER	UZE 08X 104M
C311	4020000440	CYLINDER	UP050 B 821K
C312	4010000500	CERAMIC	DD104 B 102K 50V
C314	4010000460	CERAMIC	DD104 B 471K 50V
C315	4010000460	CERAMIC	DD104 B 471K 50V
C316	4010000460	CERAMIC	DD104 B 471K 50V
C317	4010000460	CERAMIC	DD104 B 471K 50V
C318	4010000460	CERAMIC	DD104 B 471K 50V
C319	4010000460	CERAMIC	DD104 B 471K 50V
C320	4010000460	CERAMIC	DD104 B 471K 50V
C321	4510002870	ELECTROLYTIC	25 SS 100 µF
C322	4040000150	BARRIER	UAT 05X 472K
C323	4040000150	BARRIER	UAT 05X 472K
C324	4010000460	CERAMIC	DD104 B 471K 50V
C325	4010000210	CERAMIC	DD104 SL 300J 50V
C326	4040000250	BARRIER	UAT 08X 473M
C327	4010000520	CERAMIC	DD108 B 472K 50V
C328	4040000150	BARRIER	UAT 05X 472K
C329	4010000460	CERAMIC	DD104 B 471K 50V
C330	4010000280	CERAMIC	DD104 SL 560J 50V
RL1	6330000110	RELAY	FBR22D12-P
J1	6510003250	CONNECTOR	TMP-J01X-A2
J2	6510003250	CONNECTOR	TMP-J01X-A2
J3	6510003250	CONNECTOR	TMP-J01X-A2

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
J4	6510003250	CONNECTOR	TMP-J01X-A2
J5	6510003250	CONNECTOR	TMP-J01X-A2
J6	6510002280	CONNECTOR	TL25P06V1
J7	6510002300	CONNECTOR	TL25P08V1
J8	6510003440	CONNECTOR	B08B-EH-S
J9	6510002250	CONNECTOR	TL25P03V1
J10	6510002260	CONNECTOR	TL25P04V1
J11	6510002270	CONNECTOR	TL25P05V1
J12	6510002250	CONNECTOR	TL25P03V1
J13	6510002270	CONNECTOR	TL25P05V1
J14	6510002250	CONNECTOR	TL25P03V1
J15	6510002280	CONNECTOR	TL25P06V1
J16	6510002250	CONNECTOR	TL25P03V1
J17	6510002290	CONNECTOR	TL25P07V1
J18	6510002250	CONNECTOR	TL25P03V1
J19	6510002250	CONNECTOR	TL25P03V1
J21	6510002250	CONNECTOR	TL25P03V1
EP1	0910036033	PCB	B 3597C (MAIN)
EP5	6910000630	BEAD	FSOH070RN
EP6	6910000630	BEAD	FSOH070RN

[SQL BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	
IC501	1130001230	S. IC	µPD4001BG-T1
IC502	1110000960	S. IC	NJM4558M (T1)
IC503	1110000960	S. IC	NJM4558M (T1)
Q501	1590000630	S. TRANSISTOR	RN1403 (TE85R)
Q502	1590000630	S. TRANSISTOR	RN1403 (TE85R)
D501	1750000070	S. DIODE	1SS226 (TE85R)
D502	1750000070	S. DIODE	1SS226 (TE85R)
R501	7030000620	S. RESISTOR	MCR10EZHZ 100 kΩ (104)
R502	7030001600	S. RESISTOR	MCR10EZHZ 1.2 MΩ (125)
R503	7030000690	S. RESISTOR	MCR10EZHZ 390 kΩ (394)
R504	7030000600	S. RESISTOR	MCR10EZHZ 68 kΩ (683)
R505	7030000380	S. RESISTOR	MCR10EZHZ 1 kΩ (102)
R506	7030000460	S. RESISTOR	MCR10EZHZ 4.7 kΩ (472)
R507	7030000560	S. RESISTOR	MCR10EZHZ 33 kΩ (333)
R508	7030000540	S. RESISTOR	MCR10EZHZ 22 kΩ (223)
R509	7030000340	S. RESISTOR	MCR10EZHZ 470 Ω (471)
R510	7030000350	S. RESISTOR	MCR10EZHZ 560 Ω (561)
R511	7030000620	S. RESISTOR	MCR10EZHZ 100 kΩ (104)
R512	7030000500	S. RESISTOR	MCR10EZHZ 10 kΩ (103)
R513	7030000620	S. RESISTOR	MCR10EZHZ 100 kΩ (104)
R514	7030000520	S. RESISTOR	MCR10EZHZ 15 kΩ (153)
R515	7030000590	S. RESISTOR	MCR10EZHZ 56 kΩ (563)
R516	7030000500	S. RESISTOR	MCR10EZHZ 10 kΩ (103)
R517	7030000660	S. RESISTOR	MCR10EZHZ 220 kΩ (224)
R518	7030000460	S. RESISTOR	MCR10EZHZ 4.7 kΩ (472)
R519	7030000520	S. RESISTOR	MCR10EZHZ 15 kΩ (153)
R520	7030000400	S. RESISTOR	MCR10EZHZ 1.5 kΩ (152)
R521	7030000500	S. RESISTOR	MCR10EZHZ 10 kΩ (103)
R522	7030000280	S. RESISTOR	MCR10EZHZ 150 Ω (151)
R523	7030000520	S. RESISTOR	MCR10EZHZ 15 kΩ (153)
R524	7030000550	S. RESISTOR	MCR10EZHZ 27 kΩ (273)
R525	7030000550	S. RESISTOR	MCR10EZHZ 27 kΩ (273)

S.=Surface mount

[SQL BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	
C501	4030009300	S. MYLAR	ECWU 1C 103JA5
C502	4030009300	S. MYLAR	ECWU 1C 103JA5
C503	4030004660	S. CERAMIC	C2012 SL 1H 221J-T-A
C504	4030009310	S. MYLAR	ECWU 1C 472JA5
C505	4030003590	S. CERAMIC	GRM40 B 152K 50PT
W501	7030000010	S. JUMPER	MCR10EZHZ JPW (000)
W502	7030000010	S. JUMPER	MCR10EZHZ JPW (000)
EP501	6910002720	LEADFRAME	HFB2.54-0.9-8 (N)
EP502	0910036040	PCB	B 3604 (SQL)

[RF-G BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	
R701	7030000360	S. RESISTOR	MCR10EZHZ 680 Ω (681)
R702	7030000360	S. RESISTOR	MCR10EZHZ 680 Ω (681)
R703	7030000360	S. RESISTOR	MCR10EZHZ 680 Ω (681)
R704	7030000480	S. RESISTOR	MCR10EZHZ 6.8 kΩ (682)
R705	7030000480	S. RESISTOR	MCR10EZHZ 6.8 kΩ (682)
R706	7030000480	S. RESISTOR	MCR10EZHZ 6.8 kΩ (682)
R707	7030000480	S. RESISTOR	MCR10EZHZ 6.8 kΩ (682)
R708	7030000440	S. RESISTOR	MCR10EZHZ 3.3 kΩ (332)
R709	7030000440	S. RESISTOR	MCR10EZHZ 3.3 kΩ (332)
R710	7030000440	S. RESISTOR	MCR10EZHZ 3.3 kΩ (332)
R711	7030000460	S. RESISTOR	MCR10EZHZ 4.7 kΩ (472)
EP701	0910032982	PCB	B 3349B (RF-G)
EP702	6910002720	LEADFRAME	HFB2.54-0.9-8 (N)

[PLL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
IC3001	1130005730	IC	CX7925B-1
IC3002	1110001320	IC	μPC1037HA
IC3003	1110001320	IC	μPC1037HA
IC3004	1130002960	IC	TC9181P
IC3007	1120001620	IC	M74ALS74AP
IC3008	1130005730	IC	CX7925B-1
IC3009	1110001560	IC	MB504LP-G
Q3001	1530000940	TRANSISTOR	2SC1571G
Q3002	1530000940	TRANSISTOR	2SC1571G
Q3003	1560000090	FET	2SK192A-GR
Q3004	1560000090	FET	2SK192A-GR
Q3005	1560000090	FET	2SK192A-GR
Q3006	1560000090	FET	2SK192A-GR
Q3007	1590000340	TRANSISTOR	RN1202
Q3008	1590000340	TRANSISTOR	RN1202
Q3009	1590000340	TRANSISTOR	RN1202
Q3010	1590000340	TRANSISTOR	RN1202

[PLL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
Q3011	1530000150	TRANSISTOR	2SC2668-O
Q3012	1530000150	TRANSISTOR	2SC2668-O
Q3013	1530000150	TRANSISTOR	2SC2668-O
Q3014	1530000150	TRANSISTOR	2SC2668-O
Q3015	1590000340	TRANSISTOR	RN1202
Q3016	1590000340	TRANSISTOR	RN1202
Q3017	1530000150	TRANSISTOR	2SC2668-O
Q3018	1530000150	TRANSISTOR	2SC2668-O
Q3019	1560000090	FET	2SK192A-GR
Q3020	1530000150	TRANSISTOR	2SC2668-O
Q3021	1530000150	TRANSISTOR	2SC2668-O
Q3022	1530000150	TRANSISTOR	2SC2668-O
Q3023	1530000150	TRANSISTOR	2SC2668-O
Q3024	1530000150	TRANSISTOR	2SC2668-O
Q3025	1530000150	TRANSISTOR	2SC2668-O
Q3026	1530000150	TRANSISTOR	2SC2668-O
Q3027	1530000150	TRANSISTOR	2SC2668-O
Q3028	1560000130	FET	2SK125
Q3030	1530000100	TRANSISTOR	2SC2458-Y
Q3031	1510000070	TRANSISTOR	2SA1048-Y
Q3032	1530000591	TRANSISTOR	2SC2785 EL
Q3033	1530000100	TRANSISTOR	2SC2458-Y
Q3034	1510000080	TRANSISTOR	2SA1048-GR
Q3035	1560000040	FET	2SK30ATM-Y
Q3036	1530000940	TRANSISTOR	2SC1571G
Q3038	1530000591	TRANSISTOR	2SC2785 EL
Q3039	1530001740	TRANSISTOR	2SC3327-B
Q3040	1530000100	TRANSISTOR	2SC2458-Y
D3001	1710000050	DIODE	1SS53
D3002	1720000120	VARICAP	FC52M
D3003	1720000050	VARICAP	1SV50E
D3004	1720000050	VARICAP	1SV50E
D3005	1720000050	VARICAP	1SV50E
D3006	1730000100	ZENER	RD5.1E B2
D3007	1710000050	DIODE	1SS53
D3008	1710000050	DIODE	1SS53
D3009	1710000050	DIODE	1SS53
D3010	1710000050	DIODE	1SS53
D3011	1710000050	DIODE	1SS53
D3012	1710000050	DIODE	1SS53
D3013	1710000050	DIODE	1SS53
D3014	1710000050	DIODE	1SS53
D3015	1710000160	DIODE	1SS133
D3016	1710000160	DIODE	1SS133
D3017	1710000160	DIODE	1SS133
D3018	1710000160	DIODE	1SS133
D3019	1720000120	VARICAP	FC52M
D3020	1790000070	DIODE	1SS237
D3021	1730000100	ZENER	RD5.1E B2
D3022	1730000100	ZENER	RD5.1E B2
D3023	1720000050	VARICAP	1SV50E
D3024	1790000070	DIODE	1SS237
D3025	1710000160	DIODE	1SS133
D3026	1710000050	DIODE	1SS53
D3027	1710000160	DIODE	1SS133
D3028	1720000050	VARICAP	1SV50E
D3029	1710000050	DIODE	1SS53
D3030	1730000120	ZENER	RD6.2E B2
D3031	1730000100	ZENER	RD5.1E B2
D3032	1720000050	VARICAP	1SV50E
X3001	6050005770	XTAL	CR-282
X3002	6050003230	XTAL	CR-180
L3001	6180000900	COIL	LAL 03NA 101K
L3002	6140002220	COIL	LR-270
L3003	6130000990	COIL	LB-135
L3004	6140002220	COIL	LR-270
L3005	6130000990	COIL	LB-135
L3006	6140002220	COIL	LR-270
L3007	6130000990	COIL	LB-135

S.=Surface mount

[PLL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
L3008	6140002220	COIL	LR-270
L3009	6130000990	COIL	LB-135
L3010	6170000230	COIL	LW-25
L3011	6170000230	COIL	LW-25
L3012	6170000230	COIL	LW-25
L3013	6170000230	COIL	LW-25
L3014	6180000740	COIL	LAL 03NA R56M
L3015	6180000700	COIL	LAL 03NA R27M
L3016	6180000710	COIL	LAL 03NA R33M
L3017	6180000690	COIL	LAL 03NA R22M
L3018	6180000880	COIL	LAL 03NA 100K
L3019	6180000690	COIL	LAL 03NA R22M
L3020	6180000700	COIL	LAL 03NA R27M
L3021	6180000720	COIL	LAL 03NA R39M
L3022	6180000710	COIL	LAL 03NA R33M
L3023	6180000710	COIL	LAL 03NA R33M
L3024	6180000900	COIL	LAL 03NA 101K
L3025	6110001640	COIL	LA-247
L3026	6180000710	COIL	LAL 03NA R33M
L3027	6140002220	COIL	LR-270
L3028	6150003100	COIL	LS-316
L3029	6180000850	COIL	LAL 03NA 4R7K
L3030	6180000850	COIL	LAL 03NA 4R7K
L3031	6180000900	COIL	LAL 03NA 101K
L3032	6180000900	COIL	LAL 03NA 101K
L3033	6180000880	COIL	LAL 03NA 100K
L3034	6180001480	COIL	LAL 03NA 120K
L3035	6180000900	COIL	LAL 03NA 101K
L3036	6170000230	COIL	LW-25
L3037	6150000760	COIL	LS-94
L3038	6150000990	COIL	LS-114
L3039	6150000990	COIL	LS-114
L3040	6180000880	COIL	LAL 03NA 100K
L3041	6150000990	COIL	LS-114
L3042	6150000990	COIL	LS-114
L3043	6170000230	COIL	LW-25
L3044	6130001780	COIL	LB-180
L3045	6180000900	COIL	LAL 03NA 101K
L3046	6180000770	COIL	LAL 03NA 1R0M
L3047	6180000780	COIL	LAL 03NA 1R2M
L3048	6180000780	COIL	LAL 03NA 1R2M
L3049	6180000880	COIL	LAL 03NA 100K
L3050	6180000900	COIL	LAL 03NA 101K
L3051	6910000670	COIL	BT01RN1-A61-001
L3052	6910000670	COIL	BT01RN1-A61-001
L3053	6910000670	COIL	BT01RN1-A61-001
L3054	6180000690	COIL	LAL 03NA R22M
L3055	6180000900	COIL	LAL 03NA 101K
L3056	6180000880	COIL	LAL 03NA 100K
L3057	6180000760	COIL	LAL 03NA R82M
L3058	6110002000	COIL	LA-226
L3059	6110001560	COIL	LA-236
L3060	6170000140	COIL	LW-15
L3061	6910000670	COIL	BT01RN1-A61-001
L3063	6180000880	COIL	LAL 03NA 100K
L3064	6180000880	COIL	LAL 03NA 100K
L3065	6180000880	COIL	LAL 03NA 100K
L3066	6180000880	COIL	LAL 03NA 100K
L3067	6180002290	COIL	LAL 03NA 330K
L3068	6180000900	COIL	LAL 03NA 101K
L3069	6910000670	COIL	BT01RN1-A61-001
L3070	6910000670	COIL	BT01RN1-A61-001
L3071	6910000670	COIL	BT01RN1-A61-001
L3072	6180000900	COIL	LAL 03NA 101K
L3073	6180000900	COIL	LAL 03NA 101K
R3001	7010003460	RESISTOR	ELR20J 3.3 kΩ
R3002	7010003410	RESISTOR	ELR20J 1.2 kΩ
R3003	7010003400	RESISTOR	ELR20J 1 kΩ
R3004	7010001190	RESISTOR	R25XJ 2.2 kΩ
R3005	7010001190	RESISTOR	R25XJ 2.2 kΩ
R3006	7010004190	RESISTOR	R20J 1 kΩ
R3007	7010004100	RESISTOR	R20J 180 Ω
R3008	7010003680	RESISTOR	ELR20J 150 kΩ

[PLL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R3009	7010003660	RESISTOR	ELR20J 100 kΩ
R3010	7010004470	RESISTOR	R20J 150 kΩ
R3011	7010003660	RESISTOR	ELR20J 100 kΩ
R3012	7010004470	RESISTOR	R20J 150 kΩ
R3013	7010003660	RESISTOR	ELR20J 100 kΩ
R3014	7010003680	RESISTOR	ELR20J 150 kΩ
R3015	7010003660	RESISTOR	ELR20J 100 kΩ
R3016	7010003300	RESISTOR	ELR20J 150 Ω
R3017	7010003460	RESISTOR	ELR20J 3.3 kΩ
R3018	7010004190	RESISTOR	R20J 1 kΩ
R3019	7010004090	RESISTOR	R20J 150 Ω
R3020	7010004250	RESISTOR	R20J 3.3 kΩ
R3021	7010004190	RESISTOR	R20J 1 kΩ
R3022	7010003300	RESISTOR	ELR20J 150 Ω
R3023	7010003460	RESISTOR	ELR20J 3.3 kΩ
R3024	7010004190	RESISTOR	R20J 1 kΩ
R3025	7010004090	RESISTOR	R20J 150 Ω
R3026	7010004250	RESISTOR	R20J 3.3 kΩ
R3027	7010004190	RESISTOR	R20J 1 kΩ
R3028	7010004010	RESISTOR	R20J 33 Ω
R3029	7010003320	RESISTOR	ELR20J 220 Ω
R3030	7010003420	RESISTOR	ELR20J 1.5 kΩ
R3031	7010003340	RESISTOR	ELR20J 330 Ω
R3032	7010003200	RESISTOR	ELR20J 22 Ω
R3033	7010000990	RESISTOR	R25XJ 47 Ω
R3034	7010004110	RESISTOR	R20J 220 Ω
R3035	7010003580	RESISTOR	ELR20J 22 kΩ
R3036	7010003530	RESISTOR	ELR20J 10 kΩ
R3037	7010003360	RESISTOR	ELR20J 470 Ω
R3038	7010004070	RESISTOR	R20J 100 Ω
R3039	7010003280	RESISTOR	ELR20J 100 Ω
R3040	7010003530	RESISTOR	ELR20J 10 kΩ
R3041	7010003530	RESISTOR	ELR20J 10 kΩ
R3042	7010003280	RESISTOR	ELR20J 100 Ω
R3043	7010003320	RESISTOR	ELR20J 220 Ω
R3044	7010003580	RESISTOR	ELR20J 22 kΩ
R3045	7010003530	RESISTOR	ELR20J 10 kΩ
R3046	7010003360	RESISTOR	ELR20J 470 Ω
R3047	7010003280	RESISTOR	ELR20J 100 Ω
R3048	7010003400	RESISTOR	ELR20J 1 kΩ
R3049	7010004070	RESISTOR	R20J 100 Ω
R3050	7010003440	RESISTOR	ELR20J 2.2 kΩ
R3051	7010003200	RESISTOR	ELR20J 22 Ω
R3052	7010004110	RESISTOR	R20J 220 Ω
R3053	7010004230	RESISTOR	R20J 2.2 kΩ
R3054	7010004320	RESISTOR	R20J 10 kΩ
R3055	7010003530	RESISTOR	ELR20J 10 kΩ
R3056	7010004230	RESISTOR	R20J 2.2 kΩ
R3057	7010003320	RESISTOR	ELR20J 220 Ω
R3058	7010003440	RESISTOR	ELR20J 2.2 kΩ
R3059	7010003280	RESISTOR	ELR20J 100 Ω
R3060	7010003440	RESISTOR	ELR20J 2.2 kΩ
R3061	7010003320	RESISTOR	ELR20J 220 Ω
R3062	7010003440	RESISTOR	ELR20J 2.2 kΩ
R3063	7010003280	RESISTOR	ELR20J 100 Ω
R3064	7010003440	RESISTOR	ELR20J 2.2 kΩ
R3065	7010003200	RESISTOR	ELR20J 22 Ω
R3066	7010003320	RESISTOR	ELR20J 220 Ω
R3067	7010003320	RESISTOR	ELR20J 220 Ω
R3068	7010003580	RESISTOR	ELR20J 22 kΩ
R3069	7010003490	RESISTOR	ELR20J 5.6 kΩ
R3070	7010003410	RESISTOR	ELR20J 1.2 kΩ
R3071	7010003320	RESISTOR	ELR20J 220 Ω
R3072	7010003530	RESISTOR	ELR20J 10 kΩ
R3073	7010003480	RESISTOR	ELR20J 4.7 kΩ
R3074	7010003400	RESISTOR	ELR20J 1 kΩ
R3075	7010004190	RESISTOR	R20J 1 kΩ
R3076	7010004190	RESISTOR	R20J 1 kΩ
R3077	7010004190	RESISTOR	R20J 1 kΩ
R3078	7010004070	RESISTOR	R20J 100 Ω
R3079	7010001230	RESISTOR	R25XJ 4.7 kΩ
R3080	7010003280	RESISTOR	ELR20J 100 Ω
R3081	7010003660	RESISTOR	ELR20J 100 kΩ
R3082	7010003280	RESISTOR	ELR20J 100 Ω
R3083	7010003530	RESISTOR	ELR20J 10 kΩ

[PLL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R3084	7010003530	RESISTOR	ELR20J 10 kΩ
R3085	7010003340	RESISTOR	ELR20J 330 Ω
R3086	7010003580	RESISTOR	ELR20J 22 kΩ
R3087	7010003580	RESISTOR	ELR20J 22 kΩ
R3088	7010003400	RESISTOR	ELR20J 1 kΩ
R3089	7010003320	RESISTOR	ELR20J 220 Ω
R3090	7010003280	RESISTOR	ELR20J 100 Ω
R3091	7010003580	RESISTOR	ELR20J 22 kΩ
R3092	7010003580	RESISTOR	ELR20J 22 kΩ
R3093	7010003400	RESISTOR	ELR20J 1 kΩ
R3094	7010001070	RESISTOR	R25XJ 220 Ω
R3095	7010004110	RESISTOR	R20J 220 Ω
R3096	7010003440	RESISTOR	ELR20J 2.2 kΩ
R3097	7010003620	RESISTOR	ELR20J 47 kΩ
R3098	7010003440	RESISTOR	ELR20J 2.2 kΩ
R3099	7010004150	RESISTOR	R20J 470 Ω
R3100	7010004190	RESISTOR	R20J 1 kΩ
R3101	7010004190	RESISTOR	R20J 1 kΩ
R3102	7010004190	RESISTOR	R20J 1 kΩ
R3103	7010001320	RESISTOR	R25XJ 22 kΩ
R3104	7010003530	RESISTOR	ELR20J 10 kΩ
R3105	7010004110	RESISTOR	R20J 220 Ω
R3106	7010003530	RESISTOR	ELR20J 10 kΩ
R3107	7010003480	RESISTOR	ELR20J 4.7 kΩ
R3108	7010004150	RESISTOR	R20J 470 Ω
R3109	7010004030	RESISTOR	R20J 47 Ω
R3110	7010003990	RESISTOR	R20J 22 Ω
R3111	7010004070	RESISTOR	R20J 100 Ω
R3112	7010003580	RESISTOR	ELR20J 22 kΩ
R3113	7010003530	RESISTOR	ELR20J 10 kΩ
R3114	7010003320	RESISTOR	ELR20J 220 Ω
R3115	7010004030	RESISTOR	R20J 47 Ω
R3116	7010003550	RESISTOR	ELR20J 15 kΩ
R3117	7010004190	RESISTOR	R20J 1 kΩ
R3118	7010000950	RESISTOR	R25XJ 22 Ω
R3119	7010004070	RESISTOR	R20J 100 Ω
R3120	7010003580	RESISTOR	ELR20J 22 kΩ
R3121	7010003530	RESISTOR	ELR20J 10 kΩ
R3122	7010003320	RESISTOR	ELR20J 220 Ω
R3123	7010004070	RESISTOR	R20J 100 Ω
R3124	7010004190	RESISTOR	R20J 1 kΩ
R3125	7010004190	RESISTOR	R20J 1 kΩ
R3126	7010004190	RESISTOR	R20J 1 kΩ
R3127	7010001030	RESISTOR	R25XJ 100 Ω
R3128	7010003400	RESISTOR	ELR20J 1 kΩ
R3129	7010004190	RESISTOR	R20J 1 kΩ
R3130	7010003740	RESISTOR	ELR20J 470 kΩ
R3131	7010004080	RESISTOR	R20J 120 Ω
R3133	7010003340	RESISTOR	ELR20J 330 Ω
R3142	7010003400	RESISTOR	ELR20J 1 kΩ
R3143	7010004490	RESISTOR	R20J 220 kΩ
R3144	7010003620	RESISTOR	ELR20J 47 kΩ
R3146	7010004370	RESISTOR	R20J 22 kΩ
R3147	7010003580	RESISTOR	ELR20J 22 kΩ
R3148	7010003820	RESISTOR	ELR20J 3.3 MΩ
R3149	7010003480	RESISTOR	ELR20J 4.7 kΩ
R3150	7410000150	ARRAY	RMX- 6 473K
R3151	7010003530	RESISTOR	ELR20J 10 kΩ
R3152	7010003280	RESISTOR	ELR20J 100 Ω
R3153	7010003360	RESISTOR	ELR20J 470 Ω
R3154	7010004190	RESISTOR	R20J 1 kΩ
R3155	7010004230	RESISTOR	R20J 2.2 kΩ
R3156	7010003400	RESISTOR	ELR20J 1 kΩ
R3160	7010003280	RESISTOR	ELR20J 100 Ω
R3162	7010004270	RESISTOR	R20J 4.7 kΩ
R3163	7010001150	RESISTOR	R25XJ 1 kΩ
R3164	7010001150	RESISTOR	R25XJ 1 kΩ
R3165	7010001150	RESISTOR	R25XJ 1 kΩ
R3166	7010004110	RESISTOR	R20J 220 Ω
R3167	7010003280	RESISTOR	ELR20J 100 Ω
R3168	7010003620	RESISTOR	ELR20J 47 kΩ
R3169	7010004410	RESISTOR	R20J 47 kΩ
R3170	7010003620	RESISTOR	ELR20J 47 kΩ
R3171	7010004310	RESISTOR	R20J 8.2 kΩ
R3172	7510000071	THERMISTOR	ERT-D2ZHL 503S

[PLL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R3173	7010003660	RESISTOR	ELR20J 100 kΩ
R3174	7010004150	RESISTOR	R20J 470 Ω
R3175	7010003400	RESISTOR	ELR20J 1 kΩ
R3176	7010003400	RESISTOR	ELR20J 1 kΩ
R3177	7010003780	RESISTOR	ELR20J 1 MΩ
R3178	7010004150	RESISTOR	R20J 470 Ω
R3179	7010003360	RESISTOR	ELR20J 470 Ω
R3180	7010004230	RESISTOR	R20J 2.2 kΩ
R3181	7010003530	RESISTOR	ELR20J 10 kΩ
R3182	7010004250	RESISTOR	R20J 3.3 kΩ
C3001	4010000500	CERAMIC	DD104 B 102K 50V
C3002	4550002310	TANTALUM	DN 1E 1R5M
C3003	4550002310	TANTALUM	DN 1E 1R5M
C3004	4510002700	ELECTROLYTIC	10 SS 22 μF
C3005	4010000500	CERAMIC	DD104 B 102K 50V
C3006	4040000150	BARRIER	UAT 05X 472K
C3007	4040000250	BARRIER	UAT 08X 473M
C3008	4010000880	CERAMIC	DD106 CH 560J 50V
C3009	4010000800	CERAMIC	DD105 CH 270J 50V
C3010	4610001130	TRIMMER	CVSSA1001
C3011	4010000880	CERAMIC	DD106 CH 560J 50V
C3012	4010000720	CERAMIC	DD104 CH 120J 50V
C3013	4010000720	CERAMIC	DD104 CH 120J 50V
C3014	4010000520	CERAMIC	DD108 B 472K 50V
C3015	4010000880	CERAMIC	DD106 CH 560J 50V
C3016	4010000740	CERAMIC	DD104 CH 150J 50V
C3017	4610001130	TRIMMER	CVSSA1001
C3018	4010000860	CERAMIC	DD106 CH 470J 50V
C3019	4010000720	CERAMIC	DD104 CH 120J 50V
C3020	4010000720	CERAMIC	DD104 CH 120J 50V
C3021	4010000520	CERAMIC	DD108 B 472K 50V
C3022	4010000860	CERAMIC	DD106 CH 470J 50V
C3023	4010000700	CERAMIC	DD104 CH 100D 50V
C3024	4610001000	TRIMMER	CVSSA0701
C3025	4010000860	CERAMIC	DD106 CH 470J 50V
C3026	4010000720	CERAMIC	DD104 CH 120J 50V
C3027	4010000720	CERAMIC	DD104 CH 120J 50V
C3028	4010000520	CERAMIC	DD108 B 472K 50V
C3029	4010000840	CERAMIC	DD105 CH 390J 50V
C3030	4010000670	CERAMIC	DD104 CH 070D 50V
C3031	4610001000	TRIMMER	CVSSA0701
C3032	4010000820	CERAMIC	DD105 CH 330J 50V
C3033	4010000650	CERAMIC	DD104 CH 050C 50V
C3034	4010000650	CERAMIC	DD104 CH 050C 50V
C3035	4010000520	CERAMIC	DD108 B 472K 50V
C3036	4010000520	CERAMIC	DD108 B 472K 50V
C3037	4510002700	ELECTROLYTIC	10 SS 22 μF
C3038	4010000050	CERAMIC	DD104 SL 030C 50V
C3039	4010000520	CERAMIC	DD108 B 472K 50V
C3040	4010000500	CERAMIC	DD104 B 102K 50V
C3041	4010000050	CERAMIC	DD104 SL 030C 50V
C3042	4010000520	CERAMIC	DD108 B 472K 50V
C3043	4010000500	CERAMIC	DD104 B 102K 50V
C3044	4010000050	CERAMIC	DD104 SL 030C 50V
C3045	4010000520	CERAMIC	DD108 B 472K 50V
C3046	4010000500	CERAMIC	DD104 B 102K 50V
C3047	4010000050	CERAMIC	DD104 SL 030C 50V
C3048	4010000520	CERAMIC	DD108 B 472K 50V
C3049	4010000500	CERAMIC	DD104 B 102K 50V
C3050	4040000150	BARRIER	UAT 05X 472K
C3051	4010000500	CERAMIC	DD104 B 102K 50V
C3052	4010000500	CERAMIC	DD104 B 102K 50V
C3053	4040000150	BARRIER	UAT 05X 472K
C3054	4040000150	BARRIER	UAT 05X 472K
C3055	4010000260	CERAMIC	DD104 SL 470J 50V
C3056	4040000150	BARRIER	UAT 05X 472K
C3057	4010000340	CERAMIC	DD105 SL 121J 50V
C3058	4040000150	BARRIER	UAT 05X 472K
C3059	4040000150	BARRIER	UAT 05X 472K
C3060	4010000200	CERAMIC	DD104 SL 270J 50V
C3061	4010000100	CERAMIC	DD104 SL 080D 50V
C3062	4010000260	CERAMIC	DD104 SL 470J 50V
C3063	4010000070	CERAMIC	DD104 SL 050C 50V

[PLL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
C3064	4010000050	CERAMIC DD104 SL 030C 50V
C3065	4010000140	CERAMIC DD104 SL 120J 50V
C3066	4010000500	CERAMIC DD104 B 102K 50V
C3067	4010000520	CERAMIC DD108 B 472K 50V
C3068	4510001100	ELECTROLYTIC 16 MS7 10 µF
C3069	4010000460	CERAMIC DD104 B 471K 50V
C3070	4040000250	BARRIER UAT 08X 473M
C3071	4040000250	BARRIER UAT 08X 473M
C3072	4010000200	CERAMIC DD104 SL 270J 50V
C3073	4010000220	CERAMIC DD104 SL 330J 50V
C3074	4010000320	CERAMIC DD104 SL 820J 50V
C3075	4010000160	CERAMIC DD104 SL 180J 50V
C3076	4010000330	CERAMIC DD105 SL 101J 50V
C3077	4010000080	CERAMIC DD104 SL 060D 50V
C3078	4010000280	CERAMIC DD104 SL 560J 50V
C3079	4010000520	CERAMIC DD108 B 472K 50V
C3080	4040000250	BARRIER UAT 08X 473M
C3081	4040000250	BARRIER UAT 08X 473M
C3082	4010000380	CERAMIC DD107 SL 221J 50V
C3083	4010000180	CERAMIC DD104 SL 220J 50V
C3084	4010000390	CERAMIC DD107 SL 271J 50V
C3085	4010000260	CERAMIC DD104 SL 470J 50V
C3086	4010000360	CERAMIC DD106 SL 181J 50V
C3087	4040000150	BARRIER UAT 05X 472K
C3088	4040000250	BARRIER UAT 08X 473M
C3089	4040000150	BARRIER UAT 05X 472K
C3090	4010000340	CERAMIC DD105 SL 121J 50V
C3091	4010000160	CERAMIC DD104 SL 180J 50V
C3092	4010000340	CERAMIC DD105 SL 121J 50V
C3093	4010000340	CERAMIC DD105 SL 121J 50V
C3094	4010000500	CERAMIC DD104 B 102K 50V
C3095	4010000340	CERAMIC DD105 SL 121J 50V
C3096	4040000250	BARRIER UAT 08X 473M
C3097	4010000500	CERAMIC DD104 B 102K 50V
C3098	4010000460	CERAMIC DD104 B 471K 50V
C3099	4040000250	BARRIER UAT 08X 473M
C3100	4040000250	BARRIER UAT 08X 473M
C3101	4040000250	BARRIER UAT 08X 473M
C3102	4040000250	BARRIER UAT 08X 473M
C3103	4040000250	BARRIER UAT 08X 473M
C3104	4010000520	CERAMIC DD108 B 472K 50V
C3105	4010000520	CERAMIC DD108 B 472K 50V
C3106	4010000460	CERAMIC DD104 B 471K 50V
C3107	4010000520	CERAMIC DD108 B 472K 50V
C3108	4040000260	BARRIER UZE 08X 104M
C3109	4550000350	TANTALUM DN 1V 010M
C3110	4510002870	ELECTROLYTIC 25 SS 100 µF
C3111	4010000780	CERAMIC DD104 CH 220J 50V
C3112	4010000880	CERAMIC DD106 CH 560J 50V
C3113	4010000900	CERAMIC DD107 CH 680J 50V
C3114	4010000740	CERAMIC DD104 CH 150J 50V
C3115	4010000720	CERAMIC DD104 CH 120J 50V
C3116	4010000600	CERAMIC DD104 CK 010C 50V
C3117	4010000520	CERAMIC DD108 B 472K 50V
C3118	4510001100	ELECTROLYTIC 16 MS7 10 µF
C3119	4040000150	BARRIER UAT 05X 472K
C3120	4040000150	BARRIER UAT 05X 472K
C3121	4010000520	CERAMIC DD108 B 472K 50V
C3122	4040000150	BARRIER UAT 05X 472K
C3123	4010000520	CERAMIC DD108 B 472K 50V
C3124	4040000150	BARRIER UAT 05X 472K
C3125	4040000150	BARRIER UAT 05X 472K
C3126	4040000150	BARRIER UAT 05X 472K
C3127	4040000150	BARRIER UAT 05X 472K
C3128	4510001100	ELECTROLYTIC 16 MS7 10 µF
C3129	4040000150	BARRIER UAT 05X 472K
C3130	4530000050	ARRAY B5RC0126-32N
C3131	4010000380	CERAMIC DD107 SL 221J 50V
C3132	4010000360	CERAMIC DD106 SL 181J 50V
C3133	4040000150	BARRIER UAT 05X 472K
C3134	4040000150	BARRIER UAT 05X 472K
C3135	4510001100	ELECTROLYTIC 16 MS7 10 µF
C3136	4040000150	BARRIER UAT 05X 472K
C3137	4040000150	BARRIER UAT 05X 472K
C3138	4040000150	BARRIER UAT 05X 472K

[PLL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
C3139	4510002780	ELECTROLYTIC 16 SS 10 µF
C3140	4040000150	BARRIER UAT 05X 472K
C3141	4010000860	CERAMIC DD106 CH 470J 50V
C3142	4010000800	CERAMIC DD105 CH 270J 50V
C3143	4040000150	BARRIER UAT 05X 472K
C3144	4510002780	ELECTROLYTIC 16 SS 10 µF
C3145	4040000150	BARRIER UAT 05X 472K
C3146	4040000150	BARRIER UAT 05X 472K
C3147	4510001100	ELECTROLYTIC 16 MS7 10 µF
C3148	4010000520	CERAMIC DD108 B 472K 50V
C3149	4510002780	ELECTROLYTIC 16 SS 10 µF
C3150	4510002810	ELECTROLYTIC 16 SS 47 µF
C3151	4040000150	BARRIER UAT 05X 472K
C3152	4510002810	ELECTROLYTIC 16 SS 47 µF
C3153	4010000520	CERAMIC DD108 B 472K 50V
C3154	4510002790	ELECTROLYTIC 16 SS 22 µF
C3155	4010000520	CERAMIC DD108 B 472K 50V
C3157	4010003100	CERAMIC DD106 TH 820J 50V
C3158	4010000520	CERAMIC DD108 B 472K 50V
C3159	4010003120	CERAMIC DD107 TH 101J 50V
C3160	4010000500	CERAMIC DD104 B 102K 50V
C3161	4040000150	BARRIER UAT 05X 472K
C3162	4010000150	CERAMIC DD104 SL 150J 50V
C3163	4010000520	CERAMIC DD108 B 472K 50V
C3164	4010000010	CERAMIC DD104 SL 0R5C 50V
C3165	4010000120	CERAMIC DD104 SL 100D 50V
C3166	4010000500	CERAMIC DD104 B 102K 50V
C3167	4010000260	CERAMIC DD104 SL 470J 50V
C3168	4510001100	ELECTROLYTIC 16 MS7 10 µF
C3169	4040000150	BARRIER UAT 05X 472K
C3170	4010000520	CERAMIC DD108 B 472K 50V
C3171	4040000150	BARRIER UAT 05X 472K
C3172	4010000150	CERAMIC DD104 SL 150J 50V
C3173	4010000520	CERAMIC DD108 B 472K 50V
C3174	4010000010	CERAMIC DD104 SL 0R5C 50V
C3175	4010000500	CERAMIC DD104 B 102K 50V
C3176	4040000260	BARRIER UZE 08X 104M
C3177	4010000520	CERAMIC DD108 B 472K 50V
C3178	4550000010	TANTALUM DN 1C 4R7M
C3179	4550000010	TANTALUM DN 1C 4R7M
C3180	4010002820	CERAMIC DD104 TH 040C 50V
C3181	4010002820	CERAMIC DD104 TH 040C 50V
C3182	4010000620	CERAMIC DD104 CK 020C 50V
C3183	4010000630	CERAMIC DD104 CJ 030C 50V
C3184	4010000630	CERAMIC DD104 CJ 030C 50V
C3185	4510002740	ELECTROLYTIC 10 SS 220 µF
C3187	4040000150	BARRIER UAT 05X 472K
C3188	4010000040	CERAMIC DD104 SL 020C 50V
C3191	4010000500	CERAMIC DD104 B 102K 50V
C3192	4040000150	BARRIER UAT 05X 472K
C3194	4010000520	CERAMIC DD108 B 472K 50V
C3196	4510002810	ELECTROLYTIC 16 SS 47 µF
C3197	4010000520	CERAMIC DD108 B 472K 50V
C3198	4010000500	CERAMIC DD104 B 102K 50V
C3199	4010000500	CERAMIC DD104 B 102K 50V
C3200	4010001040	CERAMIC DD112 CH 271J 50V
C3201	4010000890	CERAMIC DD106 CH 620J 50V
C3202	4040000440	BARRIER RAU 06SA 561K
C3203	4010000850	CERAMIC DD106 CH 430J 50V
C3204	4010002790	CERAMIC DD112 SH 331J 50V
C3205	4010000740	CERAMIC DD104 CH 150J 50V
C3206	4010001000	CERAMIC DD110 CH 181J 50V
C3207	4010000840	CERAMIC DD105 CH 390J 50V
C3208	4040000150	BARRIER UAT 05X 472K
C3209	4040000150	BARRIER UAT 05X 472K
C3210	4550001040	TANTALUM DN 1C 3R3M
C3211	4040000150	BARRIER UAT 05X 472K
C3212	4010000520	CERAMIC DD108 B 472K 50V
C3213	4510001170	ELECTROLYTIC 50 MS7 2R2 µF
C3214	4040000150	BARRIER UAT 05X 472K
C3216	4010000520	CERAMIC DD108 B 472K 50V
C3217	4010000520	CERAMIC DD108 B 472K 50V
C3218	4040000150	BARRIER UAT 05X 472K
C3219	4510001100	ELECTROLYTIC 16 MS7 10 µF
C3220	4610001470	TRIMMER CV38D 2001E

[PLL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
C3221	4010000120	CERAMIC	DD104 SL 100D 50V
C3222	4040000260	BARRIER	UZE 08X 104M
C3223	4010000460	CERAMIC	DD104 B 471K 50V
C3224	4510002740	ELECTROLYTIC	10 SS 220 µF
C3225	4010001020	CERAMIC	DD111 CH 221J 50V
C3226	4010000860	CERAMIC	DD106 CH 470J 50V
C3227	4010000980	CERAMIC	DD109 CH 151J 50V
C3228	4610001800	TRIMMER	ECR-LA006 A12
C3229	4510002790	ELECTROLYTIC	16 SS 22 µF
C3230	4010000220	CERAMIC	DD104 SL 330J 50V
C3231	4010000220	CERAMIC	DD104 SL 330J 50V
C3232	4010000280	CERAMIC	DD104 SL 560J 50V
C3233	4010000120	CERAMIC	DD104 SL 100D 50V
C3234	4010000240	CERAMIC	DD104 SL 390J 50V
C3235	4010000460	CERAMIC	DD104 B 471K 50V
C3236	4010000460	CERAMIC	DD104 B 471K 50V
C3237	4010000460	CERAMIC	DD104 B 471K 50V
C3238	4040000150	BARRIER	UAT 05X 472K
C3239	4040000150	BARRIER	UAT 05X 472K
C3241	4010000460	CERAMIC	DD104 B 471K 50V
C3242	4040000250	BARRIER	UAT 08X 473M
C3243	4010000500	CERAMIC	DD104 B 102K 50V
C3244	4040000150	BARRIER	UAT 05X 472K
C3245	4040000150	BARRIER	UAT 05X 472K
C3246	4010000520	CERAMIC	DD108 B 472K 50V
C3247	4010000460	CERAMIC	DD104 B 471K 50V
C3248	4010000460	CERAMIC	DD104 B 471K 50V
C3249	4040000250	BARRIER	UAT 08X 473M
C3250	4010000100	CERAMIC	DD104 SL 080D 50V
C3251	4040000150	BARRIER	UAT 05X 472K
C3253	4040000150	BARRIER	UAT 05X 472K
C3254	4040000150	BARRIER	UAT 05X 472K
C3255	4010000780	CERAMIC	DD104 CH 220J 50V
C3256	4010000460	CERAMIC	DD104 B 471K 50V
C3257	4040000150	BARRIER	UAT 05X 472K
C3258	4610001480	TRIMMER	CV38E 3001E
C3259	4040000150	BARRIER	UAT 05X 472K
C3260	4040000150	BARRIER	UAT 05X 472K
C3261	4040000150	BARRIER	UAT 05X 472K
C3262	4040000150	BARRIER	UAT 05X 472K
C3263	4040000260	BARRIER	UZE 08X 104M
C3264	4010000860	CERAMIC	DD106 CH 470J 50V
C3265	4010000860	CERAMIC	DD106 CH 470J 50V
C3266	4010000260	CERAMIC	DD104 SL 470J 50V
C3267	4550000320	TANTALUM	DN 1V 0R1M
EP3001	0910028636	PCB	B 2861F (PLL)
EP3005	6910000630	BEAD	FSOH070RN

[DDS BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	
IC3501	1140000500	S. IC	SC1051
IC3502	1130005570	S. IC	SC1052
IC3503	1130005580	S. IC	SC1053
IC3504	1130006580	S. IC	TC74HCT374AF (TP1)
IC3505	1130006580	S. IC	TC74HCT374AF (TP1)
IC3506	1130003830	S. IC	TC7S04F (TE85R)
L3501	6200000040	S. COIL	LQN 5N 331K
L3502	6200000040	S. COIL	LQN 5N 331K
L3503	6200000040	S. COIL	LQN 5N 331K

[DDS BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	
R3503	7030000420	S. RESISTOR	MCR10EZHZJ 2.2 kΩ (222)
R3504	7410000320	ARRAY	GF 5096
R3505	7030000500	S. RESISTOR	MCR10EZHZJ 10 kΩ (103)
R3506	7030000500	S. RESISTOR	MCR10EZHZJ 10 kΩ (103)
R3507	7030000500	S. RESISTOR	MCR10EZHZJ 10 kΩ (103)
C3503	4030001150	S. CERAMIC	GRM40 F 104Z 25PT
C3507	4030000720	S. CERAMIC	GRM40 SL 680J 50PT
C3508	4030000560	S. CERAMIC	GRM40 SL 020C 50PT
C3509	4030000750	S. CERAMIC	GRM40 SL 121J 50PT
C3510	4030000610	S. CERAMIC	GRM40 SL 070D 50PT
C3511	4030000750	S. CERAMIC	GRM40 SL 121J 50PT
C3512	4030000640	S. CERAMIC	GRM40 SL 120J 50PT
C3513	4030000720	S. CERAMIC	GRM40 SL 680J 50PT
C3514	4030001150	S. CERAMIC	GRM40 F 104Z 25PT
C3515	4030001150	S. CERAMIC	GRM40 F 104Z 25PT
C3516	4030001150	S. CERAMIC	GRM40 F 104Z 25PT
C3517	4030001150	S. CERAMIC	GRM40 F 104Z 25PT
C3519	4030001100	S. CERAMIC	GRM40 B 102K 50PT
C3520	4030001100	S. CERAMIC	GRM40 B 102K 50PT
C3521	4030001150	S. CERAMIC	GRM40 F 104Z 25PT
J3501	6510004950	CONNECTOR	3022-06B
J3502	6510004960	CONNECTOR	3022-02B
EP3501	0910028230	PCB	B 2853 (DDS)

[FILTER UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
IC4001	1120000970	IC	M54562P
IC4002	1130000070	IC	TC4028BP
Q4001	1530000110	TRANSISTOR	2SC2458-GR
Q4002	1590000340	TRANSISTOR	RN1202
Q4003	1590000340	TRANSISTOR	RN1202
D4001	1710000030	DIODE	1S1555
D4002	1710000030	DIODE	1S1555
D4003	1710000030	DIODE	1S1555
D4004	1710000030	DIODE	1S1555
D4005	1710000030	DIODE	1S1555
D4006	1710000030	DIODE	1S1555
D4007	1710000030	DIODE	1S1555
D4008	1710000030	DIODE	1S1555
D4009	1710000330	DIODE	1K60
D4010	1710000330	DIODE	1K60
D4011	1710000030	DIODE	1S1555
D4012	1790000240	DIODE	1SS99
D4013	1710000050	DIODE	1SS53
D4014	1710000160	DIODE	1SS133
D4015	1710000160	DIODE	1SS133
D4016	1710000160	DIODE	1SS133
D4018	1710000160	DIODE	1SS133
D4019	1710000160	DIODE	1SS133
D4021	1710000160	DIODE	1SS133
FI4001	2040000210	FILTER	EXC-EMT103DC

S.=Surface mount

[FILTER UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
L4001	6180000900	COIL	LAL 03NA 101K
L4002	6180000900	COIL	LAL 03NA 101K
L4003	6180000900	COIL	LAL 03NA 101K
L4004	6180000900	COIL	LAL 03NA 101K
L4005	6180000900	COIL	LAL 03NA 101K
L4006	6180000900	COIL	LAL 03NA 101K
L4007	6180000900	COIL	LAL 03NA 101K
L4008	6180000900	COIL	LAL 03NA 101K
L4009	6180000900	COIL	LAL 03NA 101K
L4010	6180000900	COIL	LAL 03NA 101K
L4011	6180000900	COIL	LAL 03NA 101K
L4012	6180000900	COIL	LAL 03NA 101K
L4013	6180000900	COIL	LAL 03NA 101K
L4014	6180000900	COIL	LAL 03NA 101K
L4015	6180000900	COIL	LAL 03NA 101K
L4016	6180000900	COIL	LAL 03NA 101K
L4017	6140002340	COIL	LR-263
L4018	6140002230	COIL	LR-235
L4019	6140002240	COIL	LR-236
L4020	6140002260	COIL	LR-238
L4021	6140002230	COIL	LR-235
L4022	6140002230	COIL	LR-235
L4023	6140002250	COIL	LR-237
L4024	6140002340	COIL	LR-263
L4025	6140002340	COIL	LR-263
L4026	6140002280	COIL	LR-241
L4027	6140002250	COIL	LR-237
L4028	6140002250	COIL	LR-237
L4029	6140002280	COIL	LR-241
L4030	6140002270	COIL	LR-240
L4031	6140002270	COIL	LR-240
L4032	6140002300	COIL	LR-243
L4033	6140002290	COIL	LR-242
L4034	6140002320	COIL	LR-261
L4035	6140002330	COIL	LR-262
L4036	6140001990	COIL	LR-226
L4037	6140002000	COIL	LR-227
L4038	6180000450	COIL	RFC L6 222K
L4039	6180000900	COIL	LAL 03NA 101K
L4040	6180000900	COIL	LAL 03NA 101K
L4041	6140000100	COIL	LR-22A
L4042	6180000900	COIL	LAL 03NA 101K
L4051	6140001460	COIL	LR-170
L4052	6180000900	COIL	LAL 03NA 101K
L4053	6110002730	COIL	LA-471
R4001	7010003580	RESISTOR	ELR20J 22 kΩ
R4002	7010003660	RESISTOR	ELR20J 100 kΩ
R4003	7010003580	RESISTOR	ELR20J 22 kΩ
R4004	7010003660	RESISTOR	ELR20J 100 kΩ
R4005	7010004700	RESISTOR	R50XJ 68 Ω
R4006	7010004370	RESISTOR	R20J 22 kΩ
R4007	7010004320	RESISTOR	R20J 10 kΩ
R4008	7010004320	RESISTOR	R20J 10 kΩ
R4009	7010005000	RESISTOR	R50XJ 4.7 kΩ
R4010	7010005000	RESISTOR	R50XJ 4.7 kΩ
R4011	7010003780	RESISTOR	ELR20J 1 MΩ
R4012	7410000180	ARRAY	RMX- 8 103K
R4013	7410000180	ARRAY	RMX- 8 103K
R4014	7010003950	RESISTOR	R20J 10 Ω
R4015	7540000010	ABSORBER	DSA-301LA
R4016	7010004190	RESISTOR	R20J 1 kΩ
R4017	7010004190	RESISTOR	R20J 1 kΩ
R4018	7010004190	RESISTOR	R20J 1 kΩ
R4019	7010004190	RESISTOR	R20J 1 kΩ
R4020	7010004190	RESISTOR	R20J 1 kΩ
R4021	7010003600	RESISTOR	ELR20J 33 kΩ
R4022	7010004320	RESISTOR	R20J 10 kΩ
R4023	7010004030	RESISTOR	R20J 47 Ω
C4001	4010000520	CERAMIC	DD108 B 472K 50V
C4002	4010000520	CERAMIC	DD108 B 472K 50V
C4003	4010000520	CERAMIC	DD108 B 472K 50V

[FILTER UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
C4004	4010000520	CERAMIC	DD108 B 472K 50V
C4005	4010000520	CERAMIC	DD108 B 472K 50V
C4006	4010000520	CERAMIC	DD108 B 472K 50V
C4007	4010000520	CERAMIC	DD108 B 472K 50V
C4008	4010000520	CERAMIC	DD108 B 472K 50V
C4009	4010000520	CERAMIC	DD108 B 472K 50V
C4010	4010000520	CERAMIC	DD108 B 472K 50V
C4011	4010000520	CERAMIC	DD108 B 472K 50V
C4012	4010000520	CERAMIC	DD108 B 472K 50V
C4013	4010000520	CERAMIC	DD108 B 472K 50V
C4014	4010000520	CERAMIC	DD108 B 472K 50V
C4015	4010000520	CERAMIC	DD108 B 472K 50V
C4016	4010000520	CERAMIC	DD108 B 472K 50V
C4017	4010005020	CERAMIC	DE1205 SL 391J 1KV
C4018	4010004010	CERAMIC	DD09 SL 101K 500V
C4019	4010004100	CERAMIC	DD14 SL 331K 500V
C4020	4010004080	CERAMIC	DD12 SL 271K 500V
C4021	4010004460	CERAMIC	DE1310 SL 471J 1KV
C4022	4010004100	CERAMIC	DD14 SL 331K 500V
C4023	4010004100	CERAMIC	DD14 SL 331K 500V
C4024	4010004460	CERAMIC	DE1310 SL 471J 1KV
C4025	4010004030	CERAMIC	DD10 SL 121K 500V
C4026	4010004460	CERAMIC	DE1310 SL 471J 1KV
C4027	4010004060	CERAMIC	DD12 SL 201K 500V
C4028	4010005020	CERAMIC	DE1205 SL 391J 1KV
C4029	4010004100	CERAMIC	DD14 SL 331K 500V
C4030	4010004070	CERAMIC	DD12 SL 221K 500V
C4031	4010004090	CERAMIC	DD14 SL 301K 500V
C4032	4010003980	CERAMIC	DD09 SL 560K 500V
C4033	4010004090	CERAMIC	DD14 SL 301K 500V
C4034	4010004030	CERAMIC	DD10 SL 121K 500V
C4035	4010004460	CERAMIC	DE1310 SL 471J 1KV
C4036	4010004070	CERAMIC	DD12 SL 221K 500V
C4037	4010003980	CERAMIC	DD09 SL 560K 500V
C4038	4010005020	CERAMIC	DE1205 SL 391J 1KV
C4039	4010004030	CERAMIC	DD10 SL 121K 500V
C4040	4010005310	CERAMIC	DD10 SL 391K 500V
C4041	4010004050	CERAMIC	DD12 SL 181K 500V
C4042	4010003950	CERAMIC	DD06 SL 330K 500V
C4043	4010004090	CERAMIC	DD14 SL 301K 500V
C4044	4010003990	CERAMIC	DD09 SL 680K 500V
C4045	4010004080	CERAMIC	DD12 SL 271K 500V
C4046	4010004040	CERAMIC	DD10 SL 151K 500V
C4047	4010003910	CERAMIC	DD06 SL 220K 500V
C4048	4010004080	CERAMIC	DD12 SL 271K 500V
C4049	4010003980	CERAMIC	DD09 SL 560K 500V
C4050	4010004070	CERAMIC	DD12 SL 221K 500V
C4051	4010004030	CERAMIC	DD10 SL 121K 500V
C4052	4010003910	CERAMIC	DD06 SL 220K 500V
C4053	4010004070	CERAMIC	DD12 SL 221K 500V
C4054	4010003990	CERAMIC	DD09 SL 680K 500V
C4055	4010004060	CERAMIC	DD12 SL 201K 500V
C4056	4320000290	DIP MICA	DM20C 152J5
C4057	4010004070	CERAMIC	DD12 SL 221K 500V
C4058	4320000330	DIP MICA	DM20C 272J5
C4059	4320000210	DIP MICA	DM19C 561J5
C4060	4320000310	DIP MICA	DM20C 182J5
C4061	4010000330	CERAMIC	DD105 SL 101J 50V
C4062	4010000330	CERAMIC	DD105 SL 101J 50V
C4063	4610000270	TRIMMER	ECV-12W 20X32E
C4064	4010000380	CERAMIC	DD107 SL 221J 50V
C4065	4010000520	CERAMIC	DD108 B 472K 50V
C4066	4010000120	CERAMIC	DD104 SL 100D 50V
C4067	4010000150	CERAMIC	DD104 SL 150J 50V
C4068	4040000250	BARRIER	UAT 08X 473M
C4069	4510002950	ELECTROLYTIC	50 SS 2R2 μF
C4070	4010000520	CERAMIC	DD108 B 472K 50V
C4071	4040000150	BARRIER	UAT 05X 472K
C4072	4010000330	CERAMIC	DD105 SL 101J 50V
C4073	4010000330	CERAMIC	DD105 SL 101J 50V
C4074	4010000160	CERAMIC	DD104 SL 180J 50V
C4075	4010000520	CERAMIC	DD108 B 472K 50V
C4076	4040000250	BARRIER	UAT 08X 473M
C4077	4510002840	ELECTROLYTIC	25 SS 10 μF
C4078	4010000590	CERAMIC	DD110 F 473Z 50V

[FILTER UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
C4079	4010000590	CERAMIC	DD110 F 473Z 50V
C4080	4010000520	CERAMIC	DD108 B 472K 50V
C4081	4010004060	CERAMIC	DD12 SL 201K 500V
C4082	4010004020	CERAMIC	DD09 SL 111K 500V
C4083	4010003820	CERAMIC	DD06 SL 050C 500V
C4084	4010000520	CERAMIC	DD108 B 472K 50V
C4085	4010003990	CERAMIC	DD09 SL 680K 500V
C4086	4010005020	CERAMIC	DE1205 SL 391J 1KV
C4087	4010004460	CERAMIC	DE1310 SL 471J 1KV
C4088	4010005020	CERAMIC	DE1205 SL 391J 1KV
C4089	4010004100	CERAMIC	DD14 SL 331K 500V
C4090	4010004080	CERAMIC	DD12 SL 271K 500V
C4091	4010004460	CERAMIC	DE1310 SL 471J 1KV
C4092	4010004460	CERAMIC	DE1310 SL 471J 1KV
C4093	4010004100	CERAMIC	DD14 SL 331K 500V
C4094	4010004070	CERAMIC	DD12 SL 221K 500V
C4095	4010004460	CERAMIC	DE1310 SL 471J 1KV
C4096	4010004100	CERAMIC	DD14 SL 331K 500V
C4097	4010004100	CERAMIC	DD14 SL 331K 500V
C4098	4010004080	CERAMIC	DD12 SL 271K 500V
C4099	4530000150	ARRAY	B7ZC0711-32N
C4100	4010000520	CERAMIC	DD108 B 471K 50V
C4101	4010003940	CERAMIC	DD06 SL 300K 500V
C4102	4040000260	BARRIER	UZE 08X 104M
C4103	4010000430	CERAMIC	DD109 SL 471J 50V
C4104	4010000460	CERAMIC	DD104 B 471K 50V
C4105	4040000260	BARRIER	UZE 08X 104M
C4106	4020000650	CYLINDER	EP050 X 472M
C4107	4020000650	CYLINDER	EP050 X 472M
C4108	4010003910	CERAMIC	DD06 SL 220K 500V
C4109	4010004050	CERAMIC	DD12 SL 181K 500V
RL4001	6330000990	RELAY	APQ 3315
RL4002	6330000990	RELAY	APQ 3315
RL4003	6330000990	RELAY	APQ 3315
RL4004	6330000990	RELAY	APQ 3315
RL4005	6330000990	RELAY	APQ 3315
RL4006	6330000990	RELAY	APQ 3315
RL4007	6330000990	RELAY	APQ 3315
RL4008	6330000990	RELAY	APQ 3315
RL4009	6330000990	RELAY	APQ 3315
RL4010	6330000990	RELAY	APQ 3315
RL4011	6330000990	RELAY	APQ 3315
RL4012	6330000990	RELAY	APQ 3315
RL4013	6330000990	RELAY	APQ 3315
RL4014	6330000990	RELAY	APQ 3315
RL4015	6330000990	RELAY	APQ 3315
RL4016	6330000990	RELAY	APQ 3315
RL4017	6330000780	RELAY	AGP 2013 (DSP1-DC12V)
RL4018	6330000110	RELAY	FBR22D12-P
J4001	6510002280	CONNECTOR	TL25P06V1
J4004	6510003250	CONNECTOR	TMP-J01X-A2
J4006	6510003250	CONNECTOR	TMP-J01X-A2
J4007	6510007040	CONNECTOR	3022-04B
J4008	6510007040	CONNECTOR	3022-04B
J4009	6510003430	CONNECTOR	B07B-EH-S
EP4001	0910028648	PCB	B 2864H (FILTER)

[ALARM UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
IC4501	1130000950	IC	S-7116A
Q4501	1530000040	TRANSISTOR	2SC1815-Y
X4501	6060000060	CERAMIC	CSA3.58MG18
R4501	7010003620	RESISTOR	ELR20J 47 kΩ
R4502	7010003400	RESISTOR	ELR20J 1 kΩ
R4503	7010003620	RESISTOR	ELR20J 47 kΩ
R4504	7010004190	RESISTOR	R20J 1 kΩ
R4505	7010003620	RESISTOR	ELR20J 47 kΩ
R4506	7010003400	RESISTOR	ELR20J 1 kΩ
R4507	7010003660	RESISTOR	ELR20J 100 kΩ
R4508	7010003690	RESISTOR	ELR20J 180 kΩ
R4509	7010003400	RESISTOR	ELR20J 1 kΩ
C4501	4010000500	CERAMIC	DD104 B 102K 50V
C4502	4010000460	CERAMIC	DD104 B 471K 50V
C4503	4550000360	TANTALUM	DN 1V R47M
C4504	4550000350	TANTALUM	DN 1V 010M
C4505	4510001100	ELECTROLYTIC	16 MS7 10 μF
C4506	4040000150	BARRIER	UAT 05X 472K
C4507	4010000260	CERAMIC	DD104 SL 470J 50V
C4508	4010000260	CERAMIC	DD104 SL 470J 50V
J4503	6510001150	CONNECTOR	5124-04BHPB
J4504	6510001150	CONNECTOR	5124-04BHPB
EP4501	0910029592	PCB	B 3024B (ALARM)

[REAR PARTS]

REF. NO.	ORDER NO.	DESCRIPTION	
C5001	4510004970	ELECTROLYTIC	16 MV 4700 HW
C5002	4310000480	MYLER	50 F2D 104J
F5002	5210000130	FUSE	FGB 4A
J5001	6510004880	CONNECTOR	MR-DS-E 01 [ANT]
J5004	6510009210	CONNECTOR	14RS-8H-MI-AU (F) [MIC]
EP5013	8930021010	PLUG	DOMED PLUG DP-500

[PA UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
IC5301	1110002030	IC	TA7808S
IC5302	1110000540	IC	NJM4558D
IC5303	1170000120	IC	TLP531 GR
IC5304	1170000120	IC	TLP531 GR
Q5301	1530000190	TRANSISTOR	2SC3133
Q5302	1530000190	TRANSISTOR	2SC3133
Q5303	1530000200	TRANSISTOR	2SC2904
Q5304	1530000200	TRANSISTOR	2SC2904
Q5305	1510000070	TRANSISTOR	2SA1048-Y
Q5306	1540000200	TRANSISTOR	2SD1406 Y
Q5307	1530000110	TRANSISTOR	2SC2458-GR
D5301	1790000710	VARIATOR	MA29B
D5302	1790000710	VARIATOR	MA29B
D5303	1790000710	VARIATOR	MA29B
D5304	1710000010	DIODE	15CD11
D5305	1710000010	DIODE	15CD11
L5301	6140002350	COIL	LR-274
L5304	6140001180	COIL	LR-143
L5305	6910000670	COIL	BT01RN1-A61-001
L5306	6140002220	COIL	LR-270
L5307	6910000670	COIL	BT01RN1-A61-001
L5309	6140000610	COIL	LR-83
L5310	6140001190	COIL	LR-144
L5311	6910000670	COIL	BT01RN1-A61-001
L5312	6170000140	COIL	LW-15
L5313	6140001210	COIL	LR-146
L5314	6180000900	COIL	LAL 03NA 101K
L5315	6180000900	COIL	LAL 03NA 101K
L5316	6180001220	COIL	LAL 04NA 100K
L5317	6110001930	COIL	LA-102
R5301	7010000150	RESISTOR	ELR25J 15 Ω
R5304	7010004030	RESISTOR	R20J 47 Ω
R5305	7010004030	RESISTOR	R20J 47 Ω
R5306	7010004700	RESISTOR	R50XJ 68 Ω
R5307	7010004700	RESISTOR	R50XJ 68 Ω
R5308	7070000320	RESISTOR	CRH100X R-02J 3.3 Ω (3R3)
R5309	7070000320	RESISTOR	CRH100X R-02J 3.3 Ω (3R3)
R5310	7070000320	RESISTOR	CRH100X R-02J 3.3 Ω (3R3)
R5311	7070000320	RESISTOR	CRH100X R-02J 3.3 Ω (3R3)
R5312	7070000320	RESISTOR	CRH100X R-02J 3.3 Ω (3R3)
R5313	7070000320	RESISTOR	CRH100X R-02J 3.3 Ω (3R3)
R5314	7010004650	RESISTOR	R50XJ 10 Ω
R5315	7010004650	RESISTOR	R50XJ 10 Ω
R5316	7070000280	RESISTOR	CRH100X R-02J 2.2 Ω (2R2)
R5317	7070000280	RESISTOR	CRH100X R-02J 2.2 Ω (2R2)
R5318	7010003530	RESISTOR	ELR20J 10 kΩ
R5319	7010003440	RESISTOR	ELR20J 2.2 kΩ
R5320	7010003300	RESISTOR	ELR20J 150 Ω
R5321	7010000330	RESISTOR	ELR25J 470 Ω
R5322	7310001600	TRIMMER	RH0621C12J01A (101)
R5323	7070000310	RESISTOR	CRH100X R-02J 10 Ω (100)
R5324	7010004150	RESISTOR	R20J 470 Ω
R5325	7310003140	TRIMMER	RH0621CN2J (331)
R5326	7100000640	RESISTOR	5 SI 0.012 Ω (J)
R5327	7080000350	RESISTOR	CRB25FX 68 kΩ
R5328	7080000350	RESISTOR	CRB25FX 68 kΩ
R5329	7080000320	RESISTOR	CRB25FX 33 kΩ
R5330	7080000320	RESISTOR	CRB25FX 33 kΩ

[PA UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R5331	7310001250	TRIMMER	RH0621CS3J2NA (472)
R5332	7080000630	RESISTOR	CRB25FX 1 MΩ
R5333	7010003530	RESISTOR	ELR20J 10 kΩ
R5334	7010003330	RESISTOR	ELR20J 270 Ω
R5335	7070000250	RESISTOR	CRH200 R-02J 4.7 Ω (4R7)
R5336	7010003360	RESISTOR	ELR20J 470 Ω
R5337	7010003740	RESISTOR	ELR20J 470 kΩ
R5338	7010003620	RESISTOR	ELR20J 47 kΩ
R5339	7010000870	RESISTOR	R25XJ 4.7 Ω
R5340	7070000270	RESISTOR	CRH100X R-02J 100 Ω (101)
R5341	7070000480	RESISTOR	CRH300 R-02J 10 Ω (100)
R5342	7070000280	RESISTOR	CRH100X R-02J 2.2 Ω (2R2)
C5303	4320000260	DIP MICA	DM20C 681J5
C5304	4320000260	DIP MICA	DM20C 681J5
C5306	4310000360	MYLER	50 F2D 103J
C5307	4310000360	MYLER	50 F2D 103J
C5308	4010000410	CERAMIC	DD107 SL 331J 50V
C5309	4030003310	S. CERAMIC	GR111 CH 102K 50PB
C5310	4030001370	S. CERAMIC	GR44 CH 682K
C5311	4030001370	S. CERAMIC	GR44 CH 682K
C5312	4010004120	CERAMIC	DD07 B 102K 500V
C5313	4030003310	S. CERAMIC	GR111 CH 102K 50PB
C5314	4030003310	S. CERAMIC	GR111 CH 102K 50PB
C5315	4030001370	S. CERAMIC	GR44 CH 682K
C5316	4030001370	S. CERAMIC	GR44 CH 682K
C5318	4010000520	CERAMIC	DD108 B 472K 50V
C5319	4040000150	BARRIER	UAT 05X 472K
C5320	4510002810	ELECTROLYTIC	16 SS 47 μF
C5321	4510003040	ELECTROLYTIC	16 SS 100 μF
C5322	4040000250	BARRIER	UAT 08X 473M
C5323	4510002900	ELECTROLYTIC	25 SS 470 μF
C5324	4040000250	BARRIER	UAT 08X 473M
C5326	4510002780	ELECTROLYTIC	16 SS 10 μF
C5327	4040000150	BARRIER	UAT 05X 472K
C5328	4510002820	ELECTROLYTIC	16 SS 1000 μF
C5329	4040000250	BARRIER	UAT 08X 473M
C5330	4040000250	BARRIER	UAT 08X 473M
C5331	4040000250	BARRIER	UAT 08X 473M
C5332	4010000330	CERAMIC	DD105 SL 101J 50V
C5333	4030001420	S. CERAMIC	GR44 Y5V 684Z
C5334	4010000520	CERAMIC	DD108 B 472K 50V
C5335	4510002910	ELECTROLYTIC	25 SS 1000 μF
C5336	4040000150	BARRIER	UAT 05X 472K
C5337	4040000150	BARRIER	UAT 05X 472K
C5338	4040000150	BARRIER	UAT 05X 472K
C5339	4040000150	BARRIER	UAT 05X 472K
C5340	4010000520	CERAMIC	DD108 B 472K 50V
C5341	4040000260	BARRIER	UZE 08X 104M
C5342	4040000260	BARRIER	UZE 08X 104M
C5343	4040000260	BARRIER	UZE 08X 104M
C5344	4040000260	BARRIER	UZE 08X 104M
C5345	4320000340	DIP MICA	DM20C 472J5
C5346	4040000150	BARRIER	UAT 05X 472K
C5347	4040000150	BARRIER	UAT 05X 472K
C5348	4040000150	BARRIER	UAT 05X 472K
C5350	4510002910	ELECTROLYTIC	25 SS 1000 μF
C5351	4510002760	ELECTROLYTIC	10 SS 470 μF
C5352	4550000340	TANTALUM	DN 1C 100M
C5353	4040000150	BARRIER	UAT 05X 472K
C5354	4040000150	BARRIER	UAT 05X 472K
C5355	4030003310	S. CERAMIC	GR111 CH 102K 50PB
C5356	4040000150	BARRIER	UAT 05X 472K
C5357	4030003310	S. CERAMIC	GR111 CH 102K 50PB
C5359	4010000520	CERAMIC	DD108 B 472K 50V
C5360	4510002380	ELECTROLYTIC	16 SS 470 μF (10X12.5)
C5361	4010003990	CERAMIC	DD09 SL 680K 500V
C5362	4010003990	CERAMIC	DD09 SL 680K 500V
C5363	4510004590	ELECTROLYTIC	16 MV 470 HC
C5364	4010000380	CERAMIC	DD107 SL 221J 50V

S. = Surface mount

[PA UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
C5365	4040000250	BARRIER	UAT 08X 473M
C5366	4040000250	BARRIER	UAT 08X 473M
C5367	4040000250	BARRIER	UAT 08X 473M
S5301	6910006900	THERMAL	OHD-3 110M
S5302	6910000050	THERMAL	OHD-3 50M
EP5301	0910036332	PCB	B 3598B (PA)
EP5302	6910000600	BEAD	FSOH050RN
EP5303	6910000600	BEAD	FSOH050RN
EP5304	6910000600	BEAD	FSOH050RN
EP5305	6910000600	BEAD	FSOH050RN
EP5306	6910000630	BEAD	FSOH070RN
EP5308	5610000060	CONNECTOR	P-423
EP5309	5610000060	CONNECTOR	P-423
EP5310	6910000600	BEAD	FSOH050RN
EP5311	6910000600	BEAD	FSOH050RN
EP5312	6910000600	BEAD	FSOH050RN

[MIC UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
L5901	6180001440	COIL	RFC S4 101K
L5902	6180001440	COIL	RFC S4 101K
L5903	6910000670	COIL	BT01RN1-A61-001
L5904	6910000670	COIL	BT01RN1-A61-001
L5905	6910000670	COIL	BT01RN1-A61-001
L5906	6180000900	COIL	LAL 03NA 101K
C5901	4530000050	ARRAY	B5RC0126-32N
C5902	4040000150	BARRIER	UAT 05X 472K
C5903	4040000150	BARRIER	UAT 05X 472K
C5904	4040000150	BARRIER	UAT 05X 472K
C5905	4040000150	BARRIER	UAT 05X 472K
J5901	6450001240	CONNECTOR	HLJ4306-01-3000
EP5901	0910028593	PCB	B 2863C (MIC)
EP5902	0910029531	FPC	B 3009A

[RELAY UNIT]

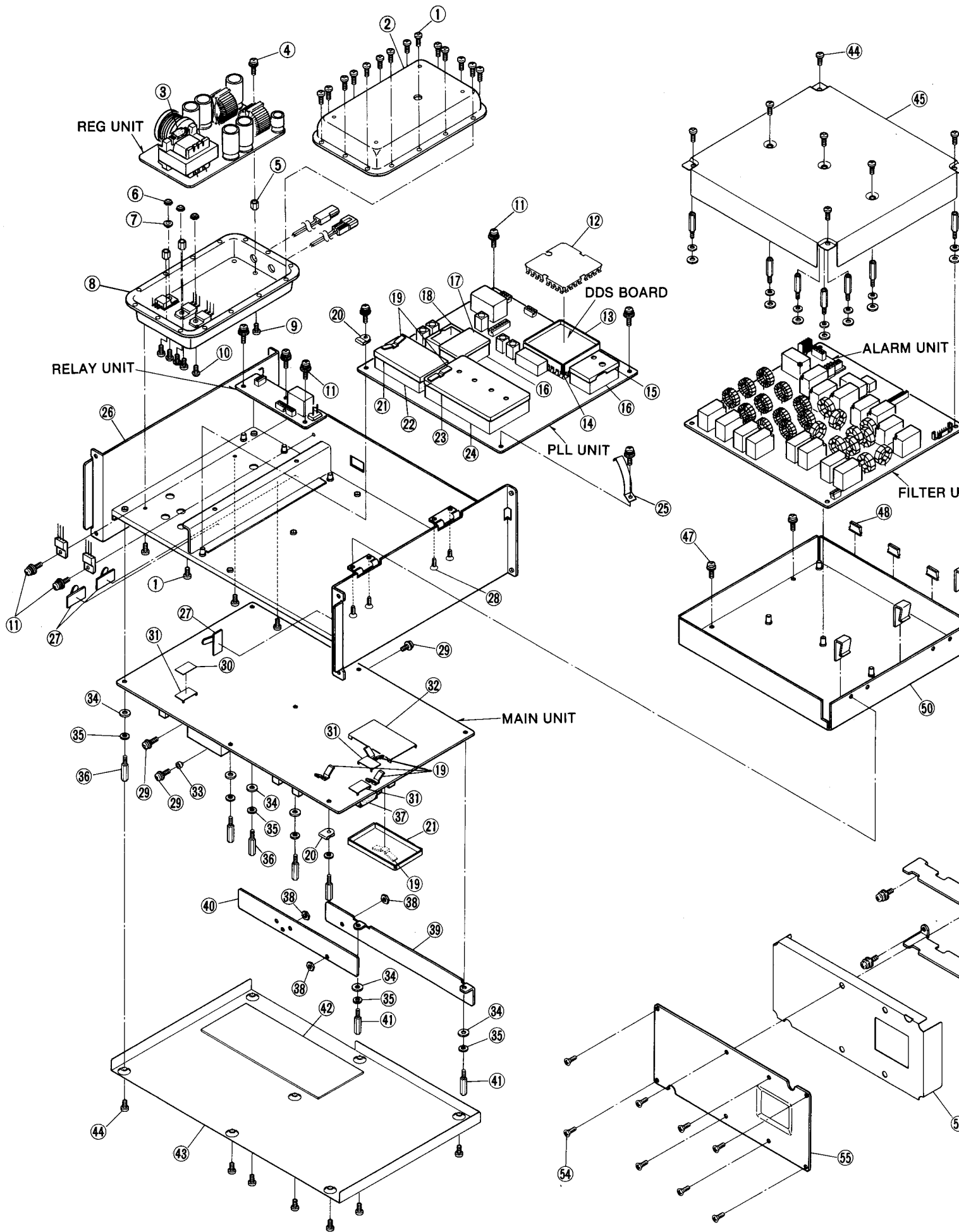
REF. NO.	ORDER NO.	DESCRIPTION	
IC6001	1130000720	IC	μPD4081BC
Q6001	1530000180	TRANSISTOR	2SC2878-B
Q6002	1590000350	TRANSISTOR	RN1204
D6001	1710000050	DIODE	1SS53
D6002	1730000270	ZENER	RD16E B2
D6003	1710000160	DIODE	1SS133
D6004	1710000160	DIODE	1SS133
D6005	1710000160	DIODE	1SS133
D6006	1710000160	DIODE	1SS133
D6007	1710000160	DIODE	1SS133
R6001	7010003550	RESISTOR	ELR20J 15 kΩ
R6002	7010004530	RESISTOR	R20J 470 kΩ
R6003	7010003280	RESISTOR	ELR20J 100 Ω
R6004	7010004410	RESISTOR	R20J 47 kΩ
R6005	7010004410	RESISTOR	R20J 47 kΩ
R6006	7010003740	RESISTOR	ELR20J 470 kΩ
R6007	7010004410	RESISTOR	R20J 47 kΩ
R6008	7010004410	RESISTOR	R20J 47 kΩ
R6009	7010003620	RESISTOR	ELR20J 47 kΩ
R6010	7010003740	RESISTOR	ELR20J 470 kΩ
R6011	7010003620	RESISTOR	ELR20J 47 kΩ
C6001	4010000520	CERAMIC	DD108 B 472K 50V
C6002	4010000520	CERAMIC	DD108 B 472K 50V
C6003	4040000150	BARRIER	UAT 05X 472K
C6004	4040000260	BARRIER	UZE 08X 104M
C6005	4040000260	BARRIER	UZE 08X 104M
C6006	4040000260	BARRIER	UZE 08X 104M
C6007	4510002870	ELECTROLYTIC	25 SS 100 μF
RL6001	6330000640	RELAY	OJE-SH-112DM
J6001	6510010020	CONNECTOR	RTB-1.5-2F
EP6001	0910028602	PCB	B 2866B (RELAY)

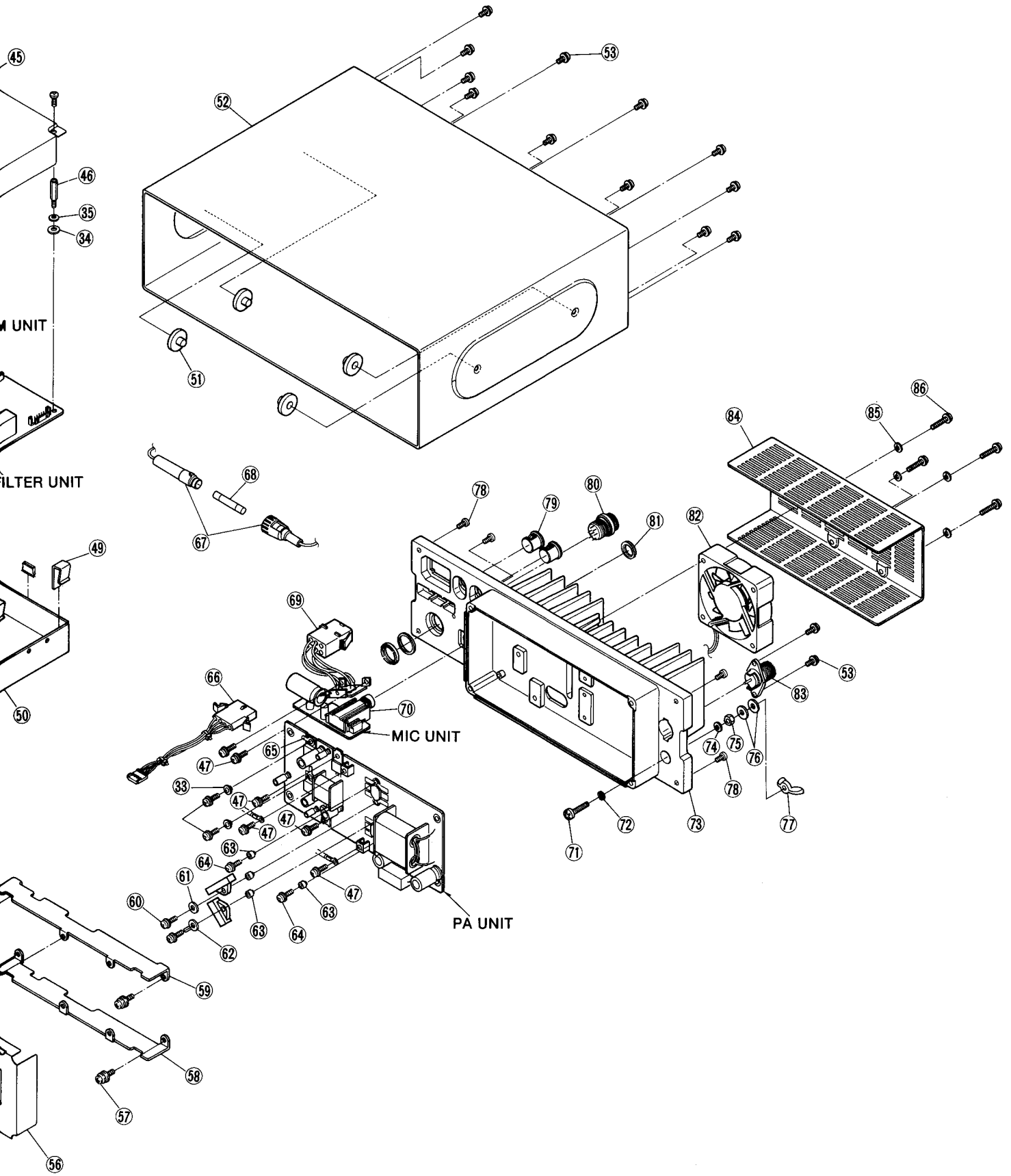
SECTION 6 MECHANICAL PARTS AND DISASSEMBLY

6-1 CHASSIS PARTS

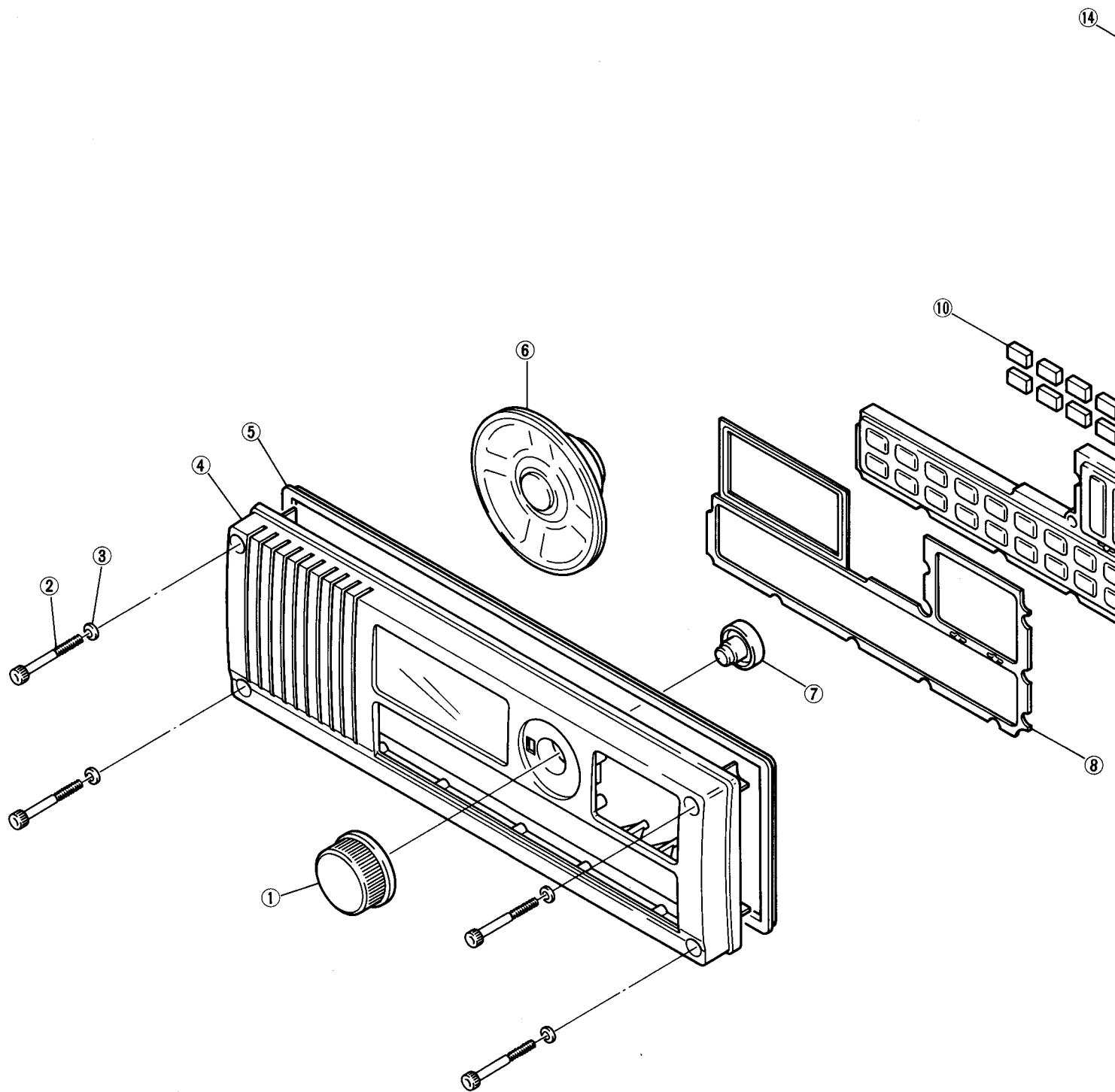
LABEL NUMBER	ORDER NO.	DESCRIPTION	QTY.	LABEL NUMBER	ORDER NO.	DESCRIPTION	QTY.
①	8810001350	Screw PH B1 M3 × 6	18	④⑤	8510007321	Filter shield plate -1	1
②	8010005130	Caes (D)	1	④⑥	8930021810	Stand-off (BE)	7
③	8930001510	Sponge (V)	1	④⑦	8810003160	Setscrew (A) M3 × 6	7
④	8810003150	Setscrew (A) M3 × 5	1	④⑧	8950002400	Metal clip (small)	3
⑤	8930000660	Spacing nut (P)	3	④⑨	8930020650	IC clip	3
⑥	8830000180	Nut M2.6 NI BS	3	⑤⑩	8010010741	Filter chassis -1	1
⑦	8850000830	Insulate washer (H)	1	⑤⑪	8930020040	Rubber seal	4
⑧	8010005120	Case (C)	1	⑤⑫	8110004900	912 cover (B)	1
⑨	8810000210	Screw PH M3 × 4	3	⑤⑬	8810007810	Setscrew (H) M3 × 6 SUS	14
⑩	8810002630	Screw BuH M2.6 × 8 NI BS	3	⑤⑭	8810002170	Screw FH M3 × 6	8
⑪	8810003360	Setscrew (C) M3 × 6	9	⑤⑮	8930019970	Shield case plate	1
⑫	8510005320	DDS shield case top cover	1	⑤⑯	8510007330	PA shield plate	1
⑬	8510005310	DDS shield case	1	⑤⑰	8810003370	Setscrew (C) M3 × 8	4
⑭	8510005370	DDS shield case bottom cover	1	⑤⑱	8930021250	L-support plate	1
⑮	8510002660	194 VCO case cover (C)	1	⑤⑲	8930021240	U-support plate	1
⑯	8510000881	194 VCO case -1	2	⑥①	8810006600	Setscrew (A) M2.6 × 15	1
⑰	8510003460	194 VCO case cover (A)	1	⑥②	8850000120	Flat washer M2.6 NI BS	1
⑱	8510002200	VCO case	1	⑥③	8860000100	Grounding lug (B) 2 (M2.6) AG BS	1
⑲	8930014140	Grounding spring (D)	6	⑥④	8930020810	Insulate washer (M)	4
⑳	8930026070	Cord stopper (A)	2	⑥⑤	8810006590	Setscrew (A) M2.6 × 10	1
㉑	8510001101	Shield case (A) cover (A) -1	2	⑥⑥	8860000110	Grounding lug (B) 3 (M4) AG BS	2
㉒	8510001080	Shield case (A)	1	⑥⑦	6510001920	Connector 1490R [TUNER]	1
㉓	8510001340	79 shield case cover	1	⑥⑧	5220000110	Fuse holder TFH-S30	1
㉔	8510001330	79 shield case	1	⑥⑨	5210000130	Fuse FGB 4A	1
㉕	8930004070	Grounding spring (C)	1	⑦①	6510003810	Connector LR-06 [DC 13.6V]	1
㉖	8010010751	Main chassis -1	1	⑦②	6450001240	Connector HLJ4306-01-3000 [EXT SP]	1
㉗	8950002460	Wire sticker S-10 silver	3	⑦③	8810001980	Screw PH M5 × 16 NI BS	1
㉘	8810002160	Screw FH M3 × 5	4	⑦④	8850000590	Star washer M5	1
㉙	8810003170	Setscrew (A) M3 × 8	3	⑦⑤	8410001580	912 heatsink	1
㉚	8930008680	Insulate plate AH	1	⑦⑥	8850000440	Spring washer M5 NI	1
㉛	8510002280	VCO shield plate (A)	3	⑦⑦	8830000210	Nut M5 NI BS	1
㉜	8510004370	506 shield plate	1	⑦⑧	8850000150	Flat washer M5 NI BS	2
㉝	6910000310	B312D insulate bush	3	⑦⑨	8830000360	Butterfly nut M5 NI	1
㉞	8850000130	Flat washer M3 (3 × 8 × 0.5) NI BS	13	⑦⑩	8810006580	Setscrew (A) M4 × 10 SUS	4
㉟	8850000420	Spring washer M3 NI	14	⑦⑪	8930021010	Domed plug DP-500	2
㊱	8930000190	Stand-off (O)	5	⑧①	6510009210	Connector 14RS-8H-MI-AU (F) [MIC]	1
㊲	8930015870	Sponge (BQ)	1	⑧②	6450001180	Connector nut HLJ0999-01-140	1
㊳	8830000100	Nut M3	3	⑧③	2710000360	Fan FBA06A12H	1
㊴	8410001650	Main heatsink	1	⑧④	6510004880	Connector MR-DS-E 01 [ANT]	1
㊵	8410000770	AF heatsink -1	1	⑧⑤	8010013130	1241 PA cover	1
㊶	8930021800	Stand-off (BD)	2	⑧⑥	8850000480	Spring washer M3 SUS	4
㊷	8930005460	Insulate plate G	1	⑧⑦	8810007220	Screw PH M3 × 35 SUS	4
㊸	8510007310	Main shield plate	1				
㊹	8810000230	Screw PH M3 × 6	14				

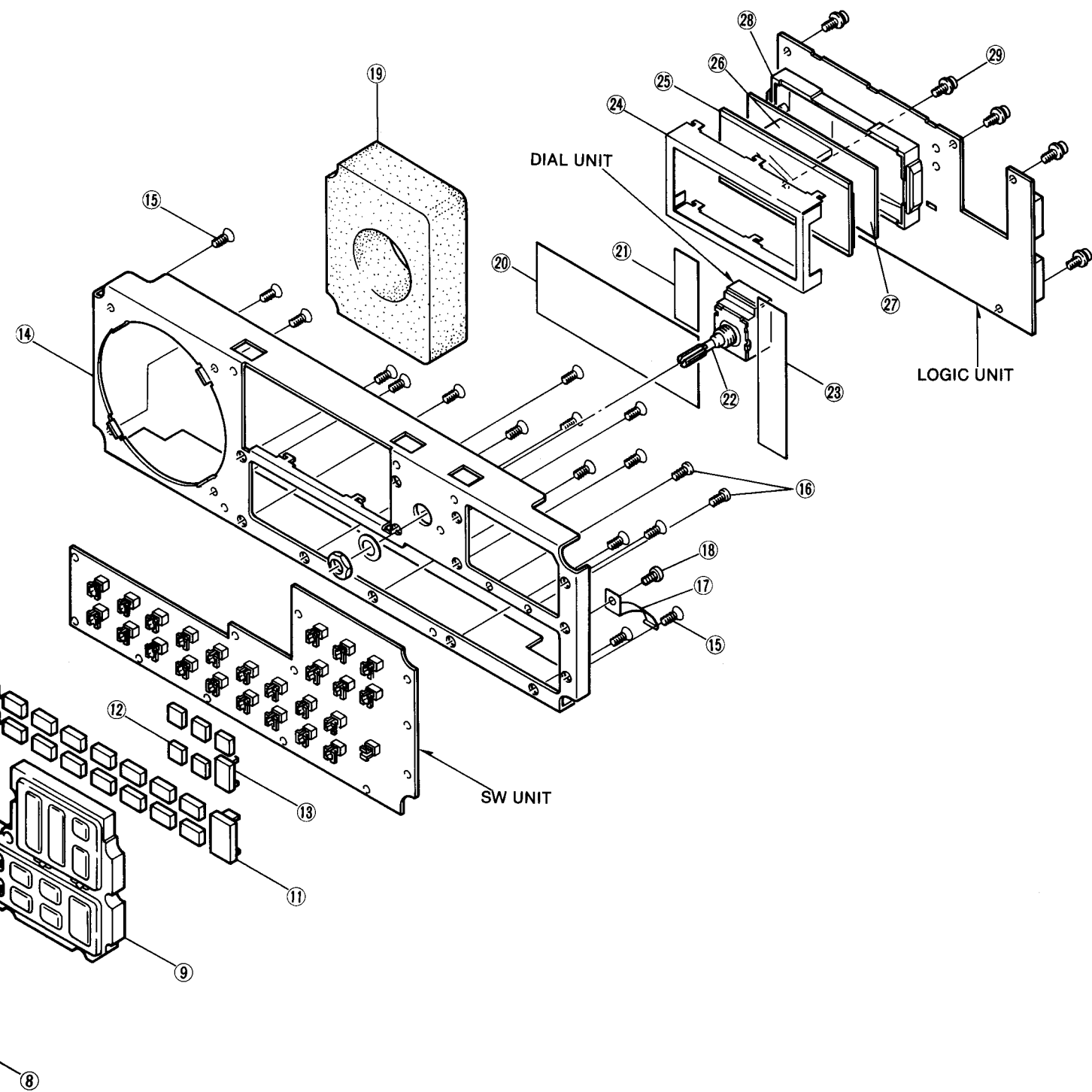
Screw abbreviations PH: Pan head FH: Flat head BuH: Button head B1: Self-tapping NI: Nickel BS: Brass
SUS: Stainless





6-2 FRONT PARTS AND ACCESSORIES





• FRONT PARTS

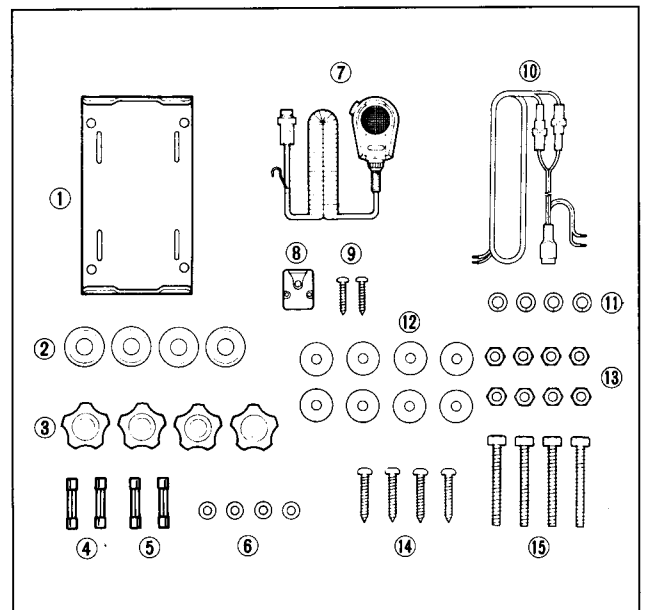
LABEL NUMBER	ORDER NO.	DESCRIPTION	QTY.
①	8610004240	Knob N129 [MAIN DIAL]	1
②	8810004880	Cap bolt M4 × 35 SUS ZK	4
③	8930002790	O ring (F)	4
④	8210007680	607 front panel (C)	1
⑤	8010007050	Front spacer	1
⑥	2510000440	Speaker 77F60N	1
⑦	8930002860	Rubber seal (A)	1
⑧	8010007060	Front seal	1
⑨	8930023211	Switch spacer -1	1
⑩	8610004270	Knob K109 [TUNE], [MODE], etc.	18
⑪	8610004250	Knob K111 [FUNC]	1
⑫	8610004280	Knob K108 [CLAR (UP)], [CLAR (DN)], etc.	5
⑬	8610004260	Knob K110 [POW]	1
⑭	8010007100	Sub chassis	1
⑮	8810004220	Screw FH B0 M3 × 8	16
⑯	8810001720	Screw PH B0 No.0-3 M1.4 × 4	2
⑰	8930017190	Grounding spring (F)	1
⑱	8810001120	Screw PH B0 M3 × 8	1
⑲	8930012860	Speaker sponge	1
⑳	8930018760	Insulate plate BR	1
㉑	8930016670	Insulate plate BH	1
㉒	2250000020	Switch SRB18100 25KC [MAIN DIAL]	1
㉓	8930018740	Insulate plate BS	1
㉔	8930012260	607 LCD holder	1
㉕	5030000610	LCD LF-7664J	1
㉖	8930012890	LCD contact SRCN-607	2
㉗	8310012250	607 filter	1
㉘	8010007020	607 LCD reflector	1
㉙	8810003360	Setscrew (C) M3 × 6	5

Screw abbreviations PH: Pan head FH: Flat head B0: Self-tapping SUS: Stainless ZK: Black

• ACCESSORIES

LABEL NUMBER	ORDER NO.	DESCRIPTION	QTY.
①	8010007121	Mounting bracket-1	1
②	8930002400	Rubber foot	4
③	8820000170	Mounting knob (A) M5 × 10 SUS	4
④	5210000090	Spare fuse FGB 30A	2
⑤	5210000130	Spare fuse FGB 4A	2
⑥	8850000180	Flat washer M5 SUS	4
⑦	7700000840	Microphone EM-48 (M204D40I0814)	1
⑧	8930009120	Microphone hanger	1
⑨	8810001470	Screw PH A M3.5 × 30 SUS	2
⑩	8900000530	DC power cable OPC-077	1
⑪	8850000510	Spring washer M6 SUS	4
⑫	8850000200	Flat washer M6 (6 × 20 × 1.5) SUS	8
⑬	8830000260	Nut M6 SUS	8
⑭	8810001500	Screw PH A M6 × 30 SUS	4
⑮	8810003500	Hex head bolt M6 × 50 SUS	4

Screw abbreviations PH: Pan head A: Self-tapping
SUS: Stainless

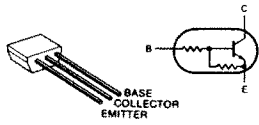


SECTION 7 BOARD LAYOUTS

7-1 MAIN UNIT AND SQL AND RF-G BOARDS

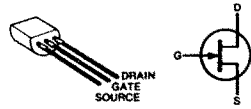
• MAIN UNIT

RN1202



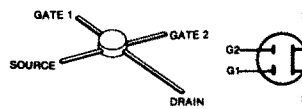
Q1, Q2, Q3, Q8, Q21,
Q22, Q26, Q33, Q35,
Q38, Q41, Q57, Q63

2SK125



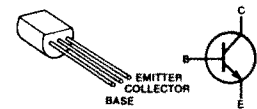
Q4, Q5

3SK101



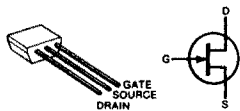
Q6, Q7, Q9, Q13, Q14,
Q37, Q55

2SC2053



Q15, Q23

2SK192A



Q16

2SA1048



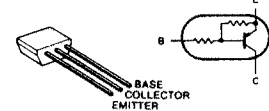
Q17, Q29

2SC2458



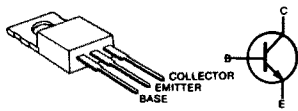
Q18, Q19, Q30, Q32,
Q34, Q39, Q40, Q44,
Q45, Q47, Q48, Q52,
Q60, Q61, Q67

RN2202



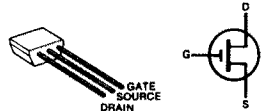
Q20, Q31, Q50

2SC1971



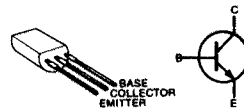
Q24

2SK241



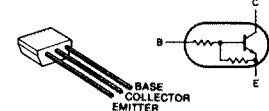
Q36, Q56

2SD468



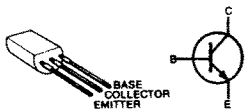
Q42, Q43

RN1204



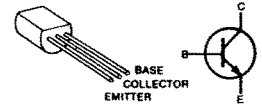
Q46

2SC2878



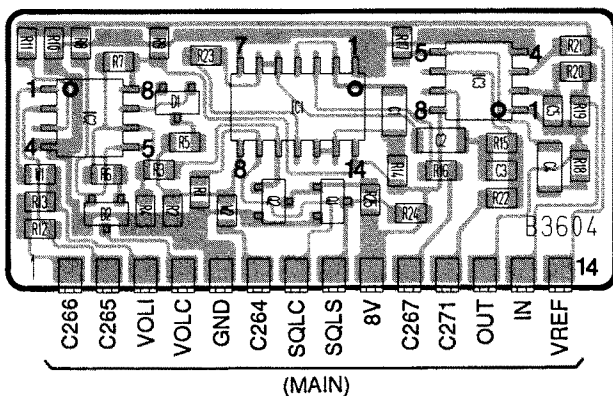
Q49, Q58

2SC1214



Q51

• SQL BOARD

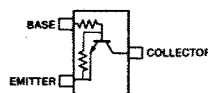


(MAIN)

• RF-G BOARD

RN1403

(Symbol: XC)



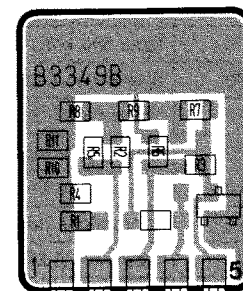
Q501, Q502

1SS226

(Symbol: C3)



D501, D502

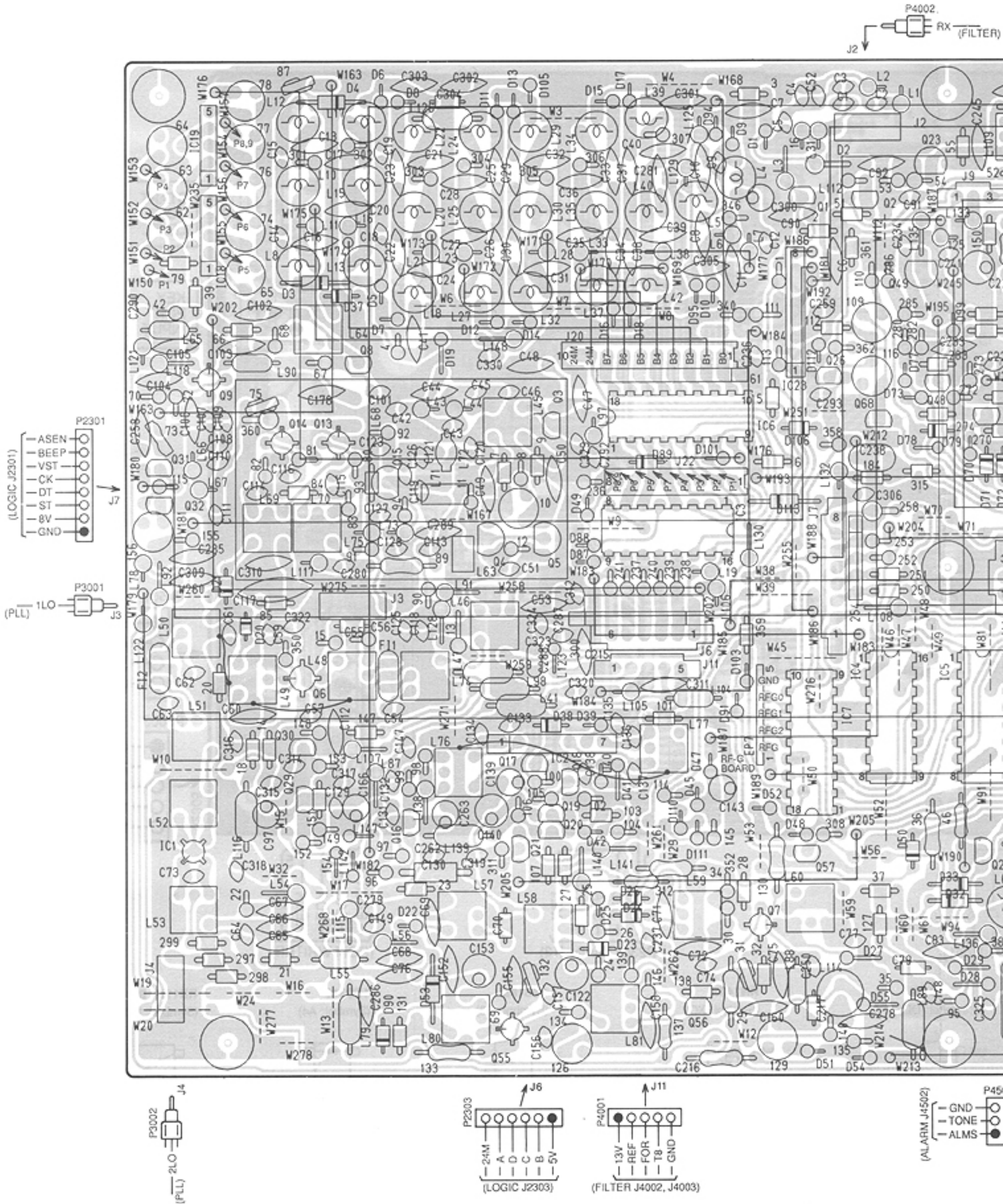


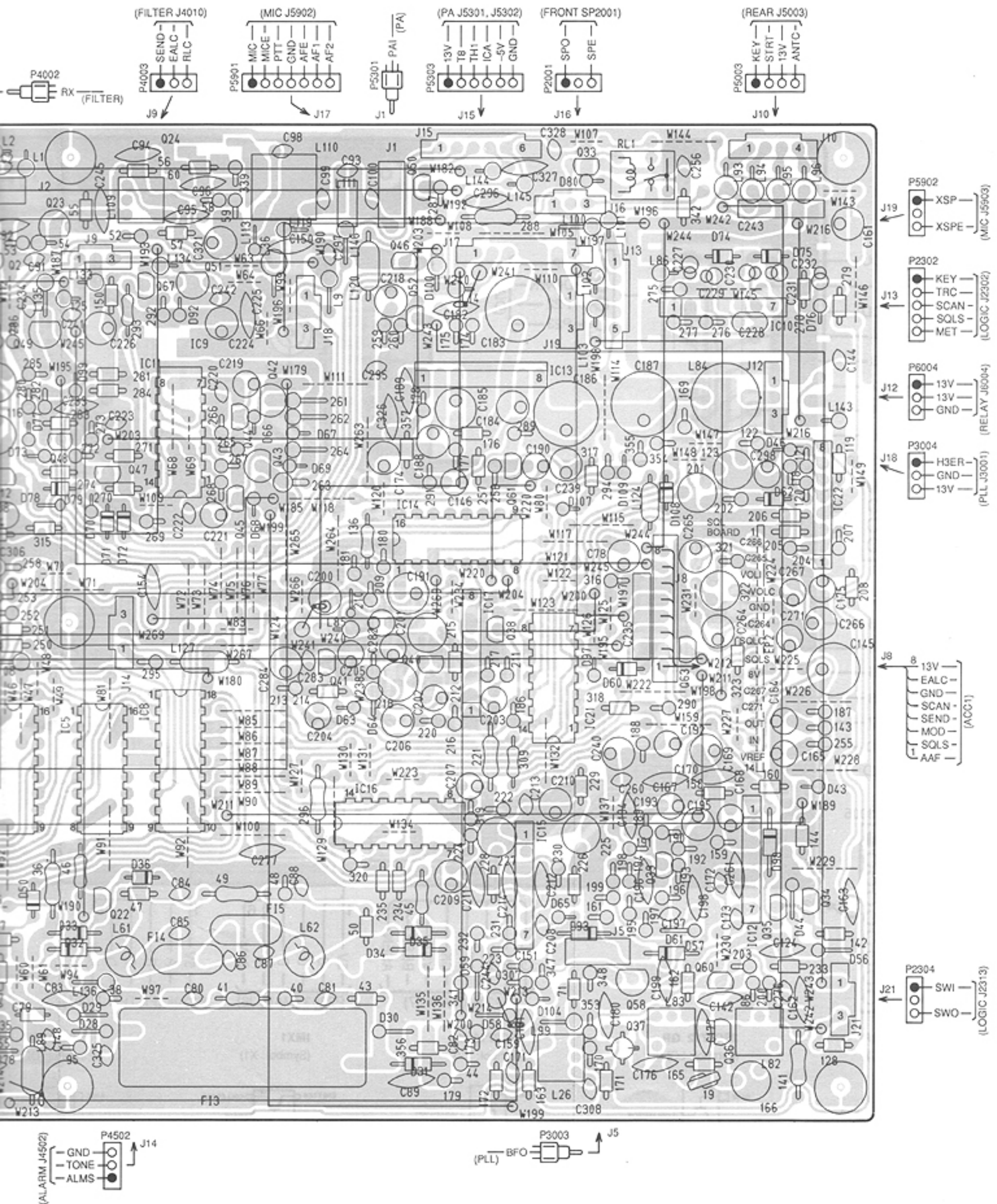
(MAIN)

NOTE: Add "500" to each indicated part number on the unit for the actual part number.

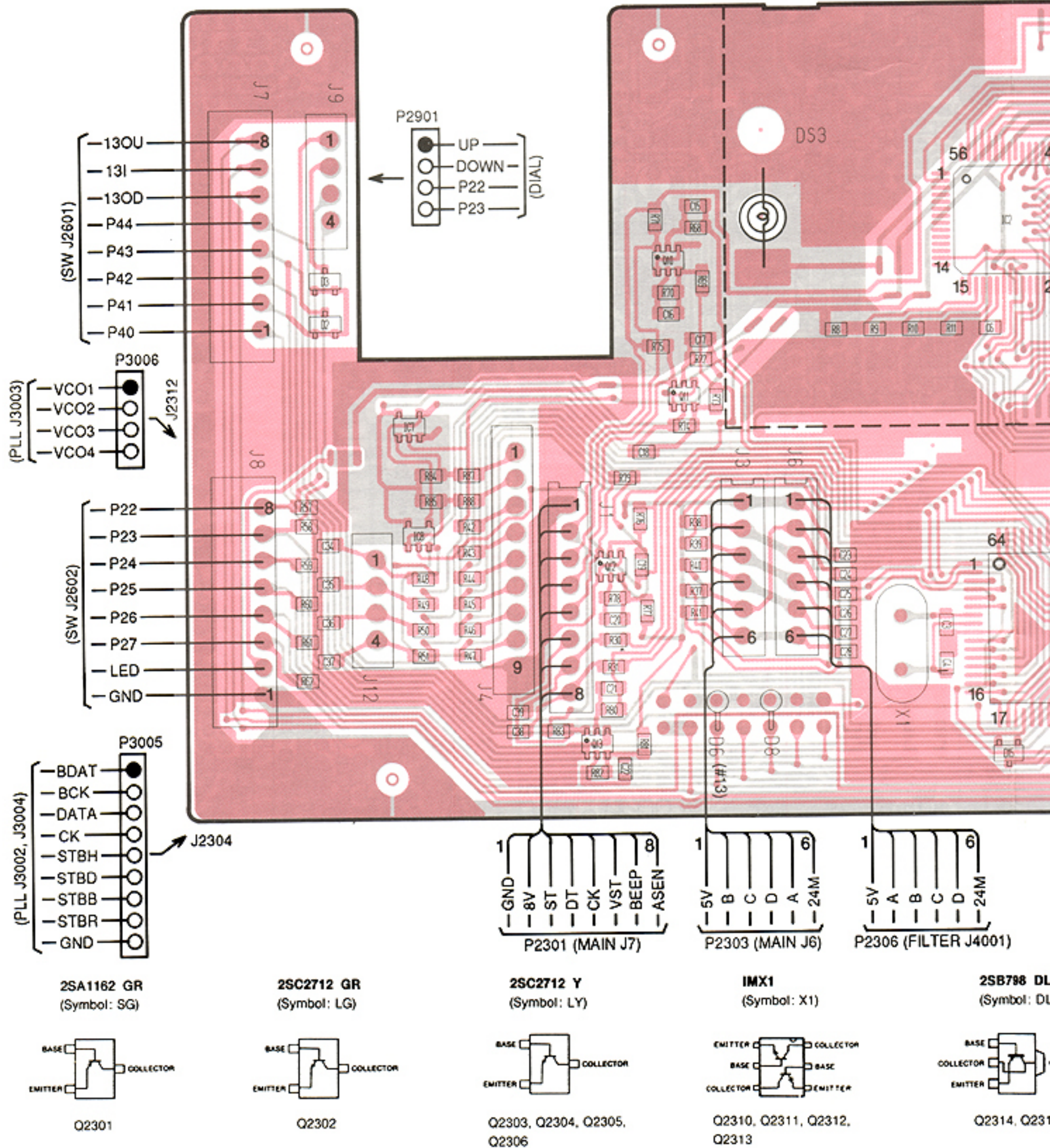
NOTE: Add "700" to each indicated part number on the unit for the actual part number.

• MAIN UNIT

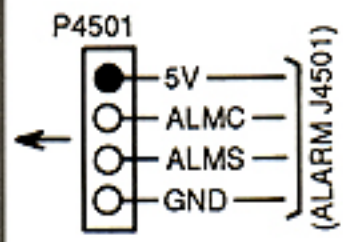
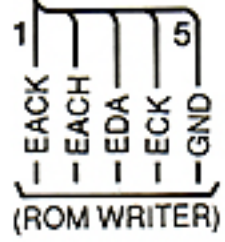
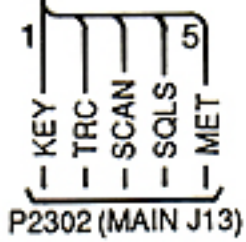
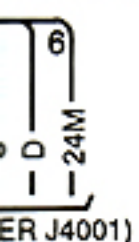
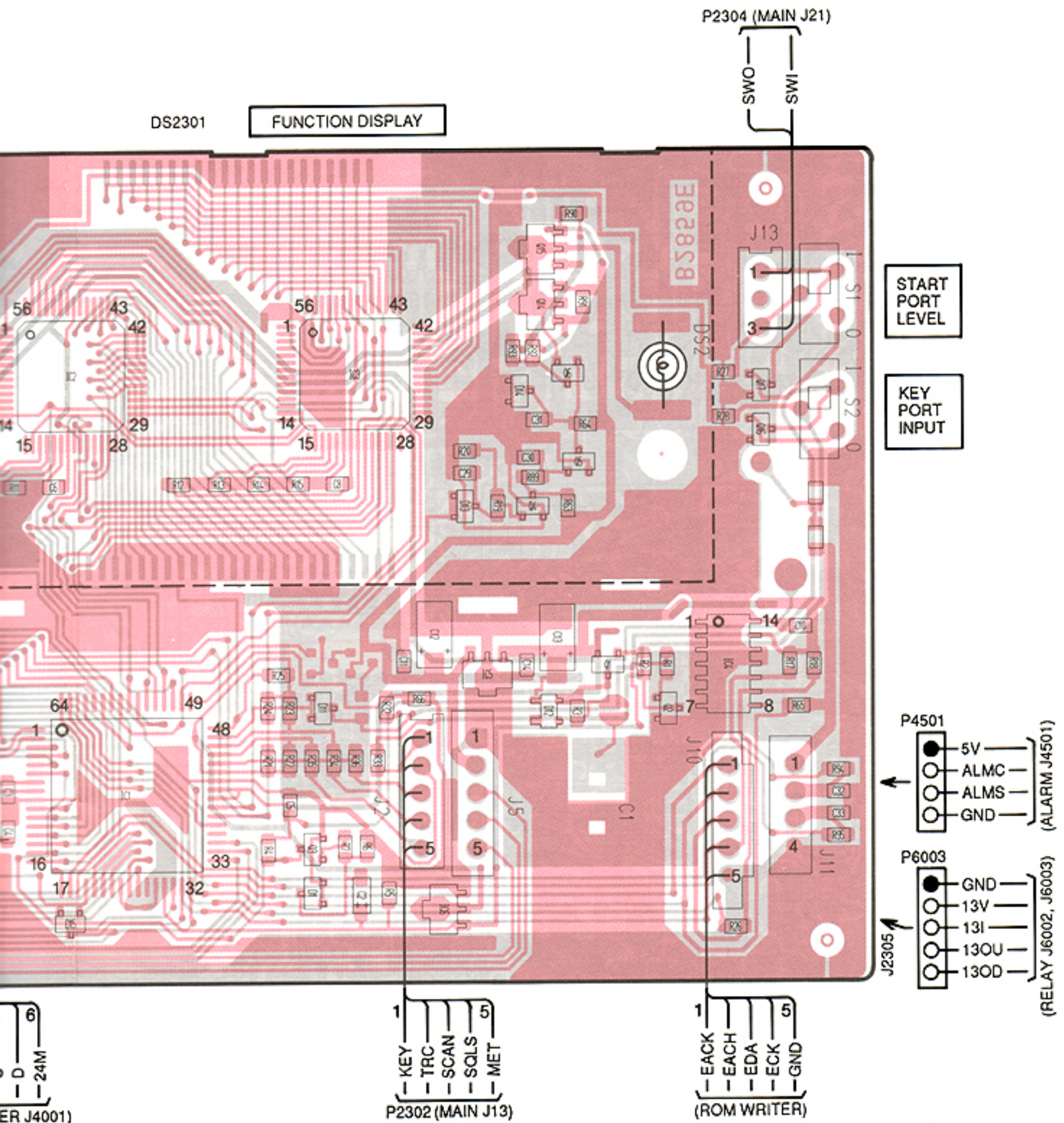




7-2 LOGIC UNIT



NOTE: Add "2300" to each indicated part number on the unit for the actual part number.

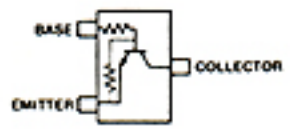


2SB798 DL
(Symbol: DL)



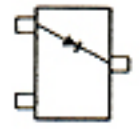
Q2314, Q2315

RN1403
(Symbol: XC)



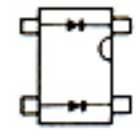
Q2316, Q2317

1SS193
(Symbol: F3)



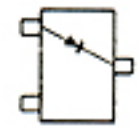
D2301, D2302, D2303,
D2311, D2313, D2315

1SS319
(Symbol: A4)



D2312

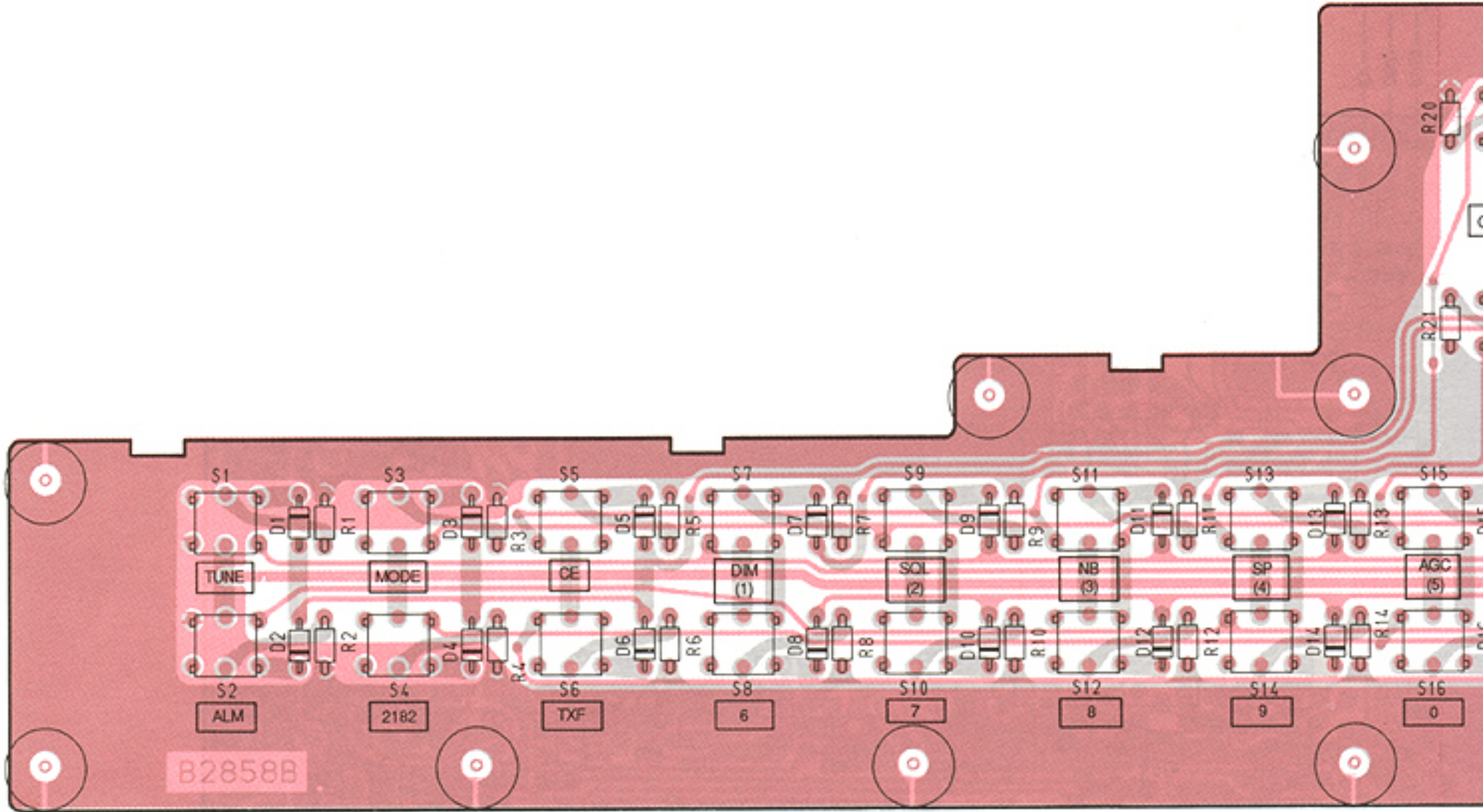
RD11M B1
(Symbol: 111)



D2314

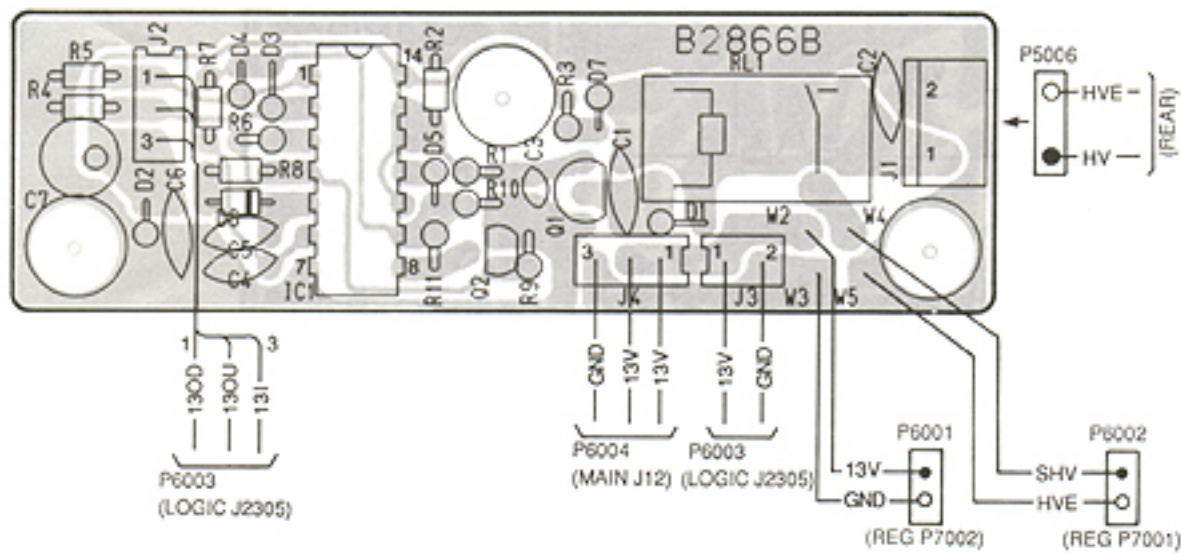
7-3 SW, DIAL, RELAY AND REG UNITS

• SW UNIT



NOTE: Add "2600" to each indicated part number on the unit for the actual part number.

• RELAY UNIT



NOTE: Add "6000" to each indicated part number on the unit for the actual part number.

2SC2878



Q6001

RN1204



Q6002

• R

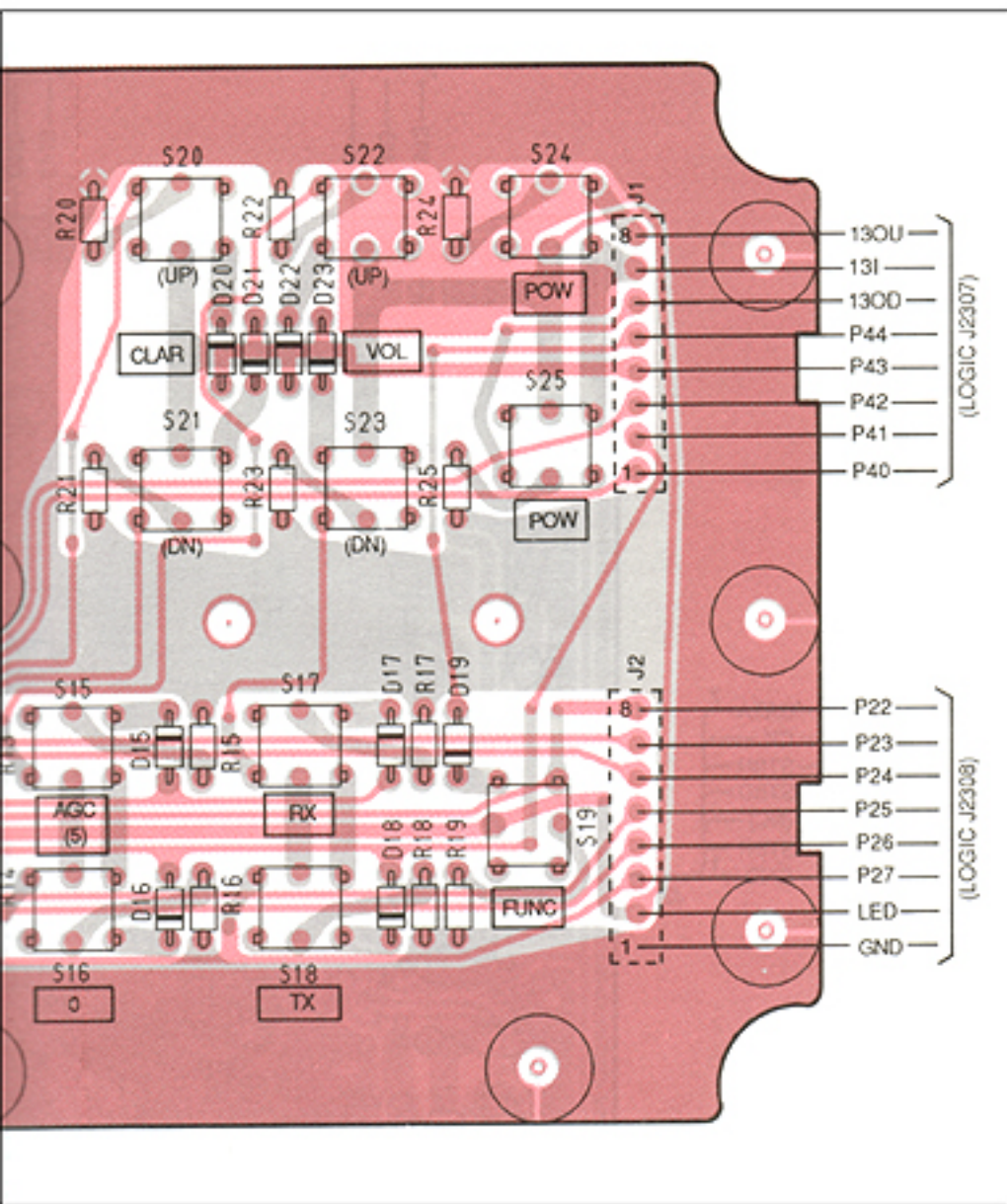
P7

(REL

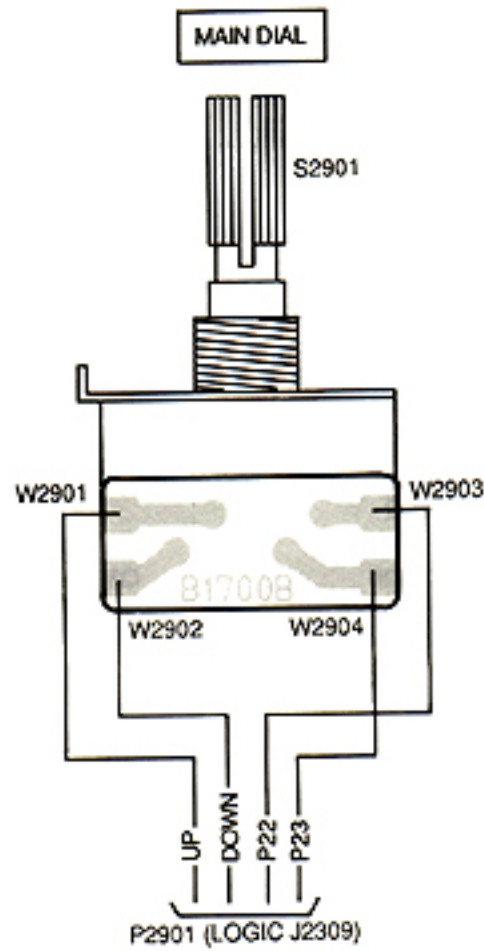
P7

(REL

NOT

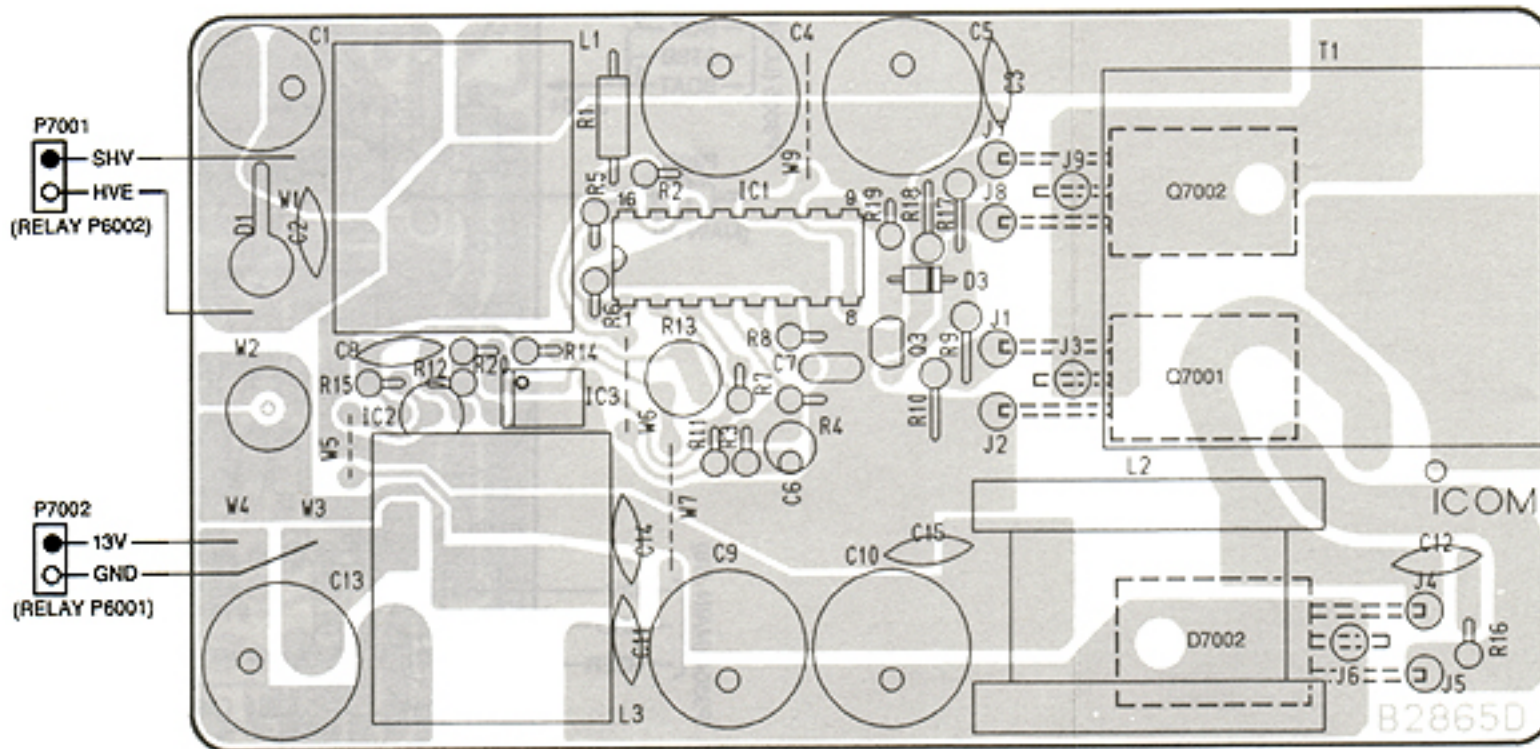


• DIAL UNIT

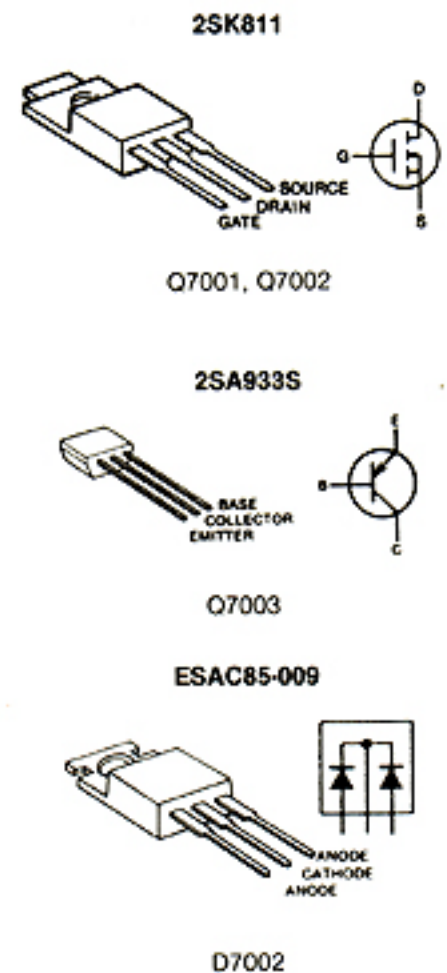


NOTE: Add "2900" to each indicated part number on the unit for the actual part number.

• REG UNIT



NOTE: Add "7000" to each indicated part number on the unit for the actual part number.



7-4 PLL UNIT AND DDS BOARD

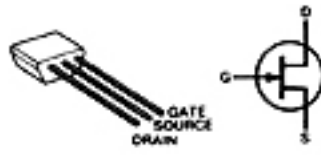
• PLL UNIT

2SC1571



Q3001, Q3002, Q3036

2SK192A



Q3003, Q3004, Q3005,
Q3006, Q3019

RN1202



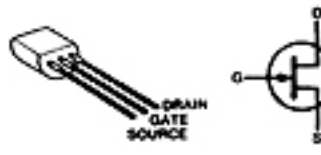
Q3007, Q3008, Q3009,
Q3010, Q3015, Q3016

2SC2668



Q3011, Q3012, Q3013,
Q3014, Q3017, Q3018,
Q3020, Q3021, Q3022,
Q3023, Q3024, Q3025,
Q3026, Q3027

2SK125



Q3028

2SC2458



Q3030, Q3033, Q3040

2SA1048



Q3031, Q3034

2SC2785



Q3032, Q3038

2SK30ATM



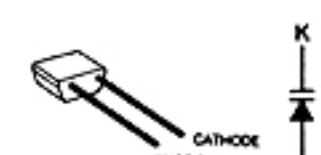
Q3035

2SC3327

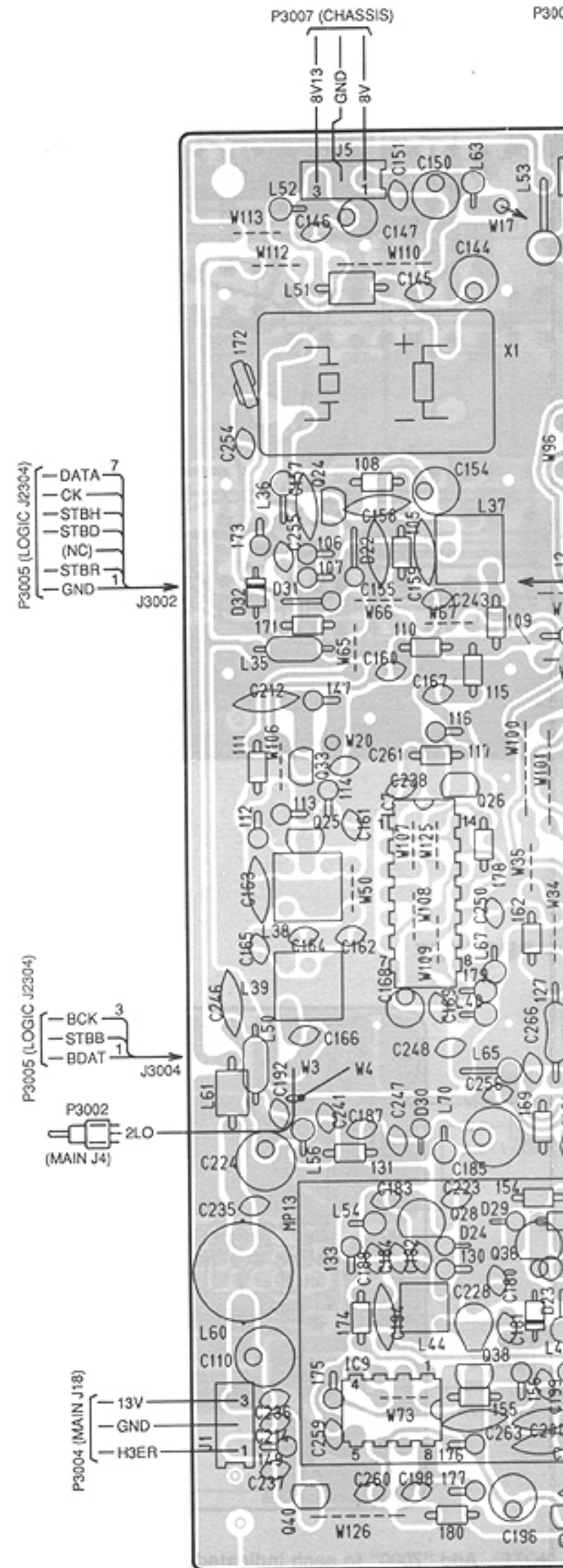


Q3039

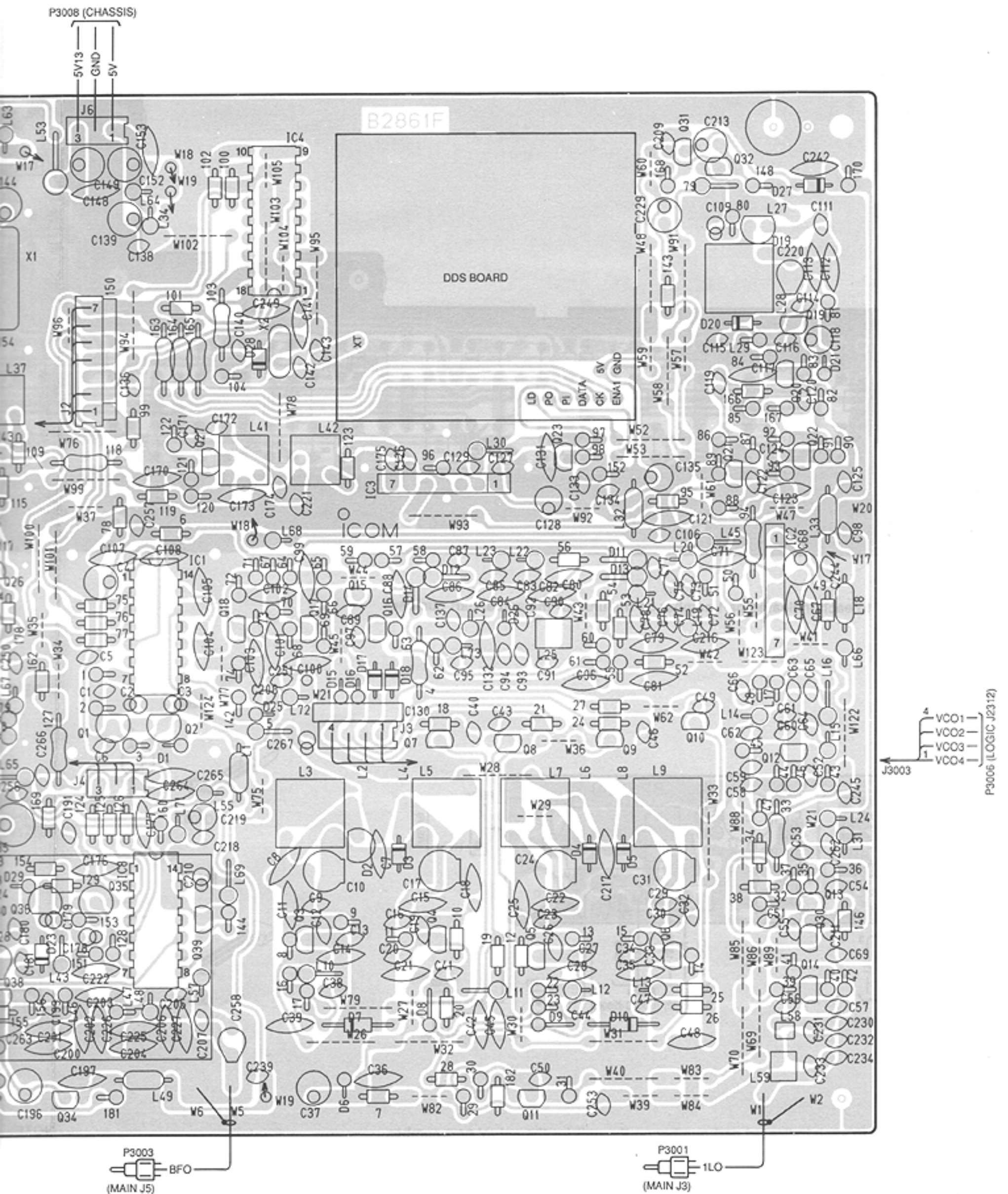
FC52M



D3002, D3019



NOTE: Add "3000" to each indicated part number c

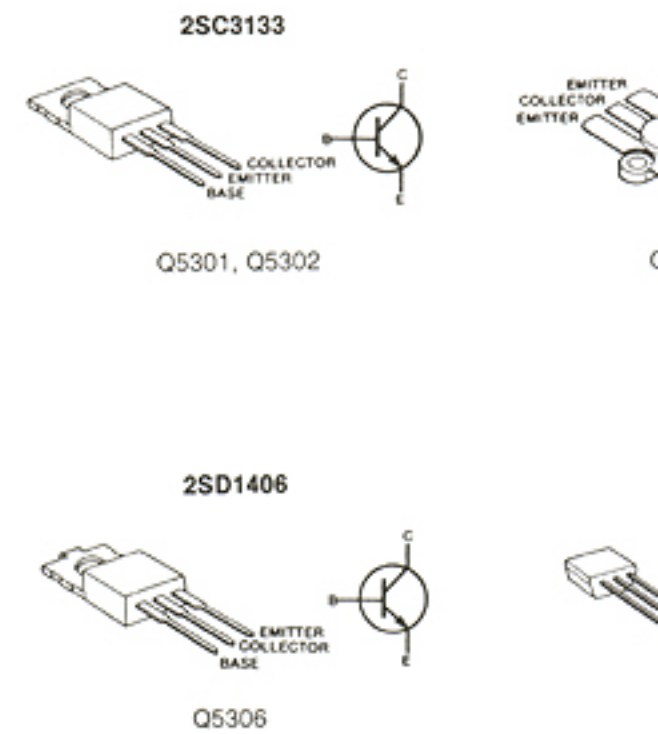
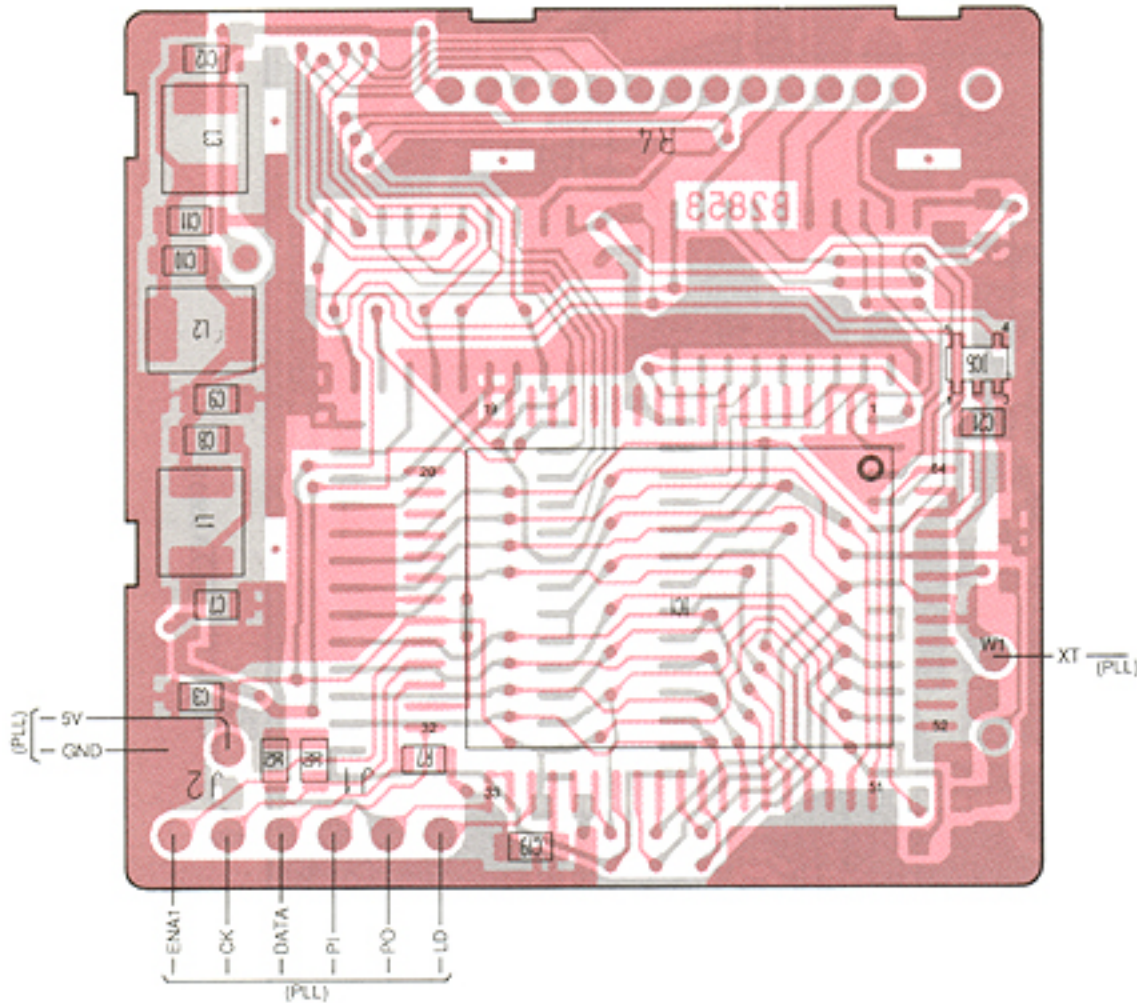
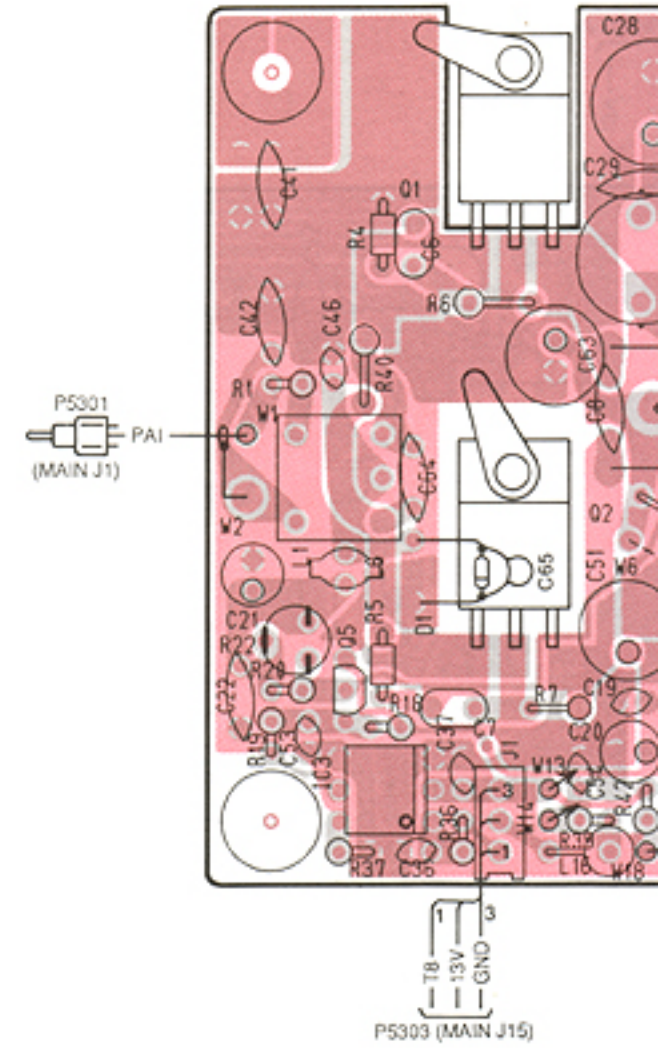
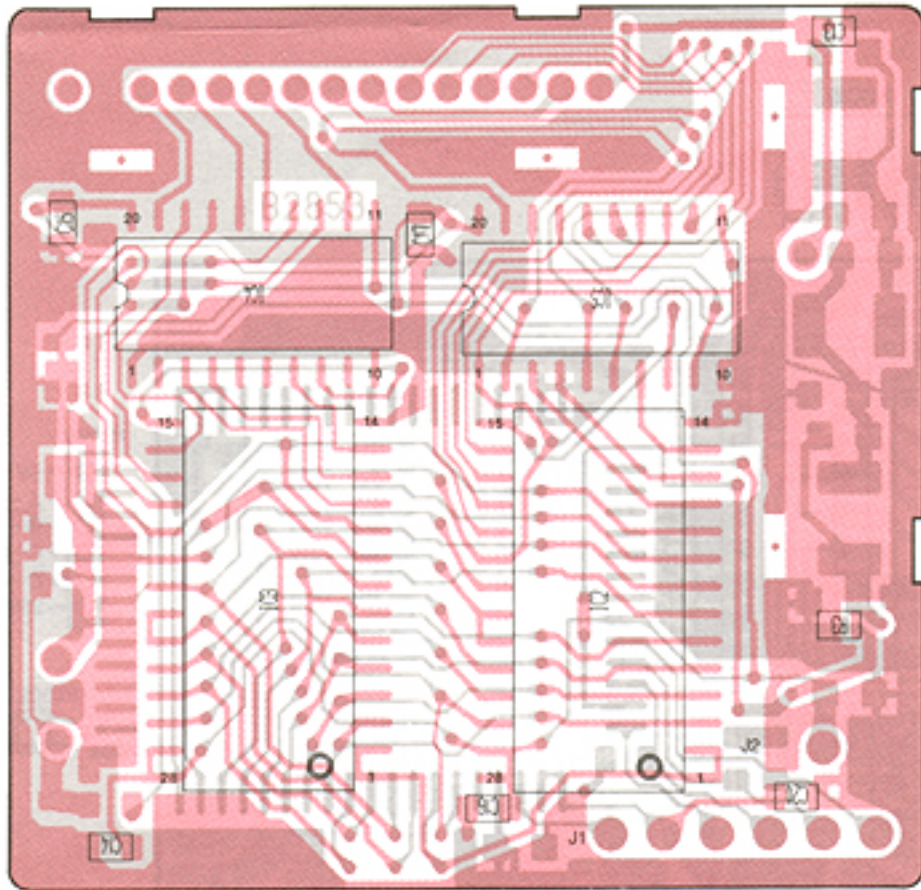


number on the unit for the actual part number.

7-5 PA AND MIC UNITS

• DDS BOARD

• PA UNIT

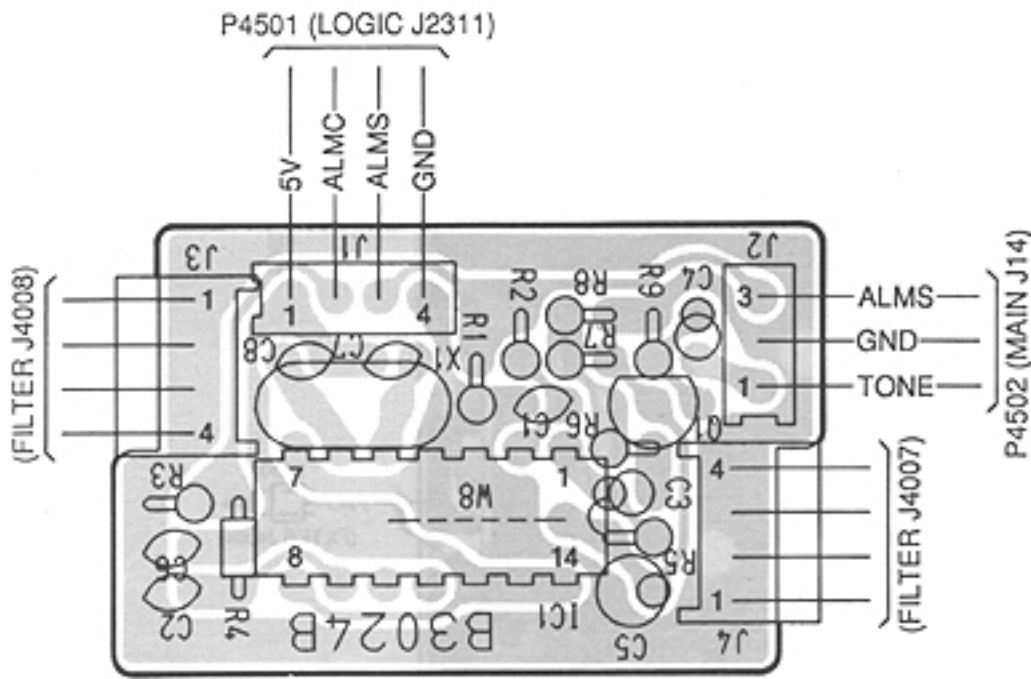


NOTE: Add "5300" to each indicated part number.

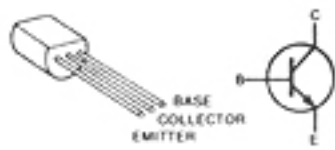
NOTE: Add "3500" to each indicated part number on the unit for the actual part number.

7-6 FILTER AND ALARM UNITS

• ALARM UNIT



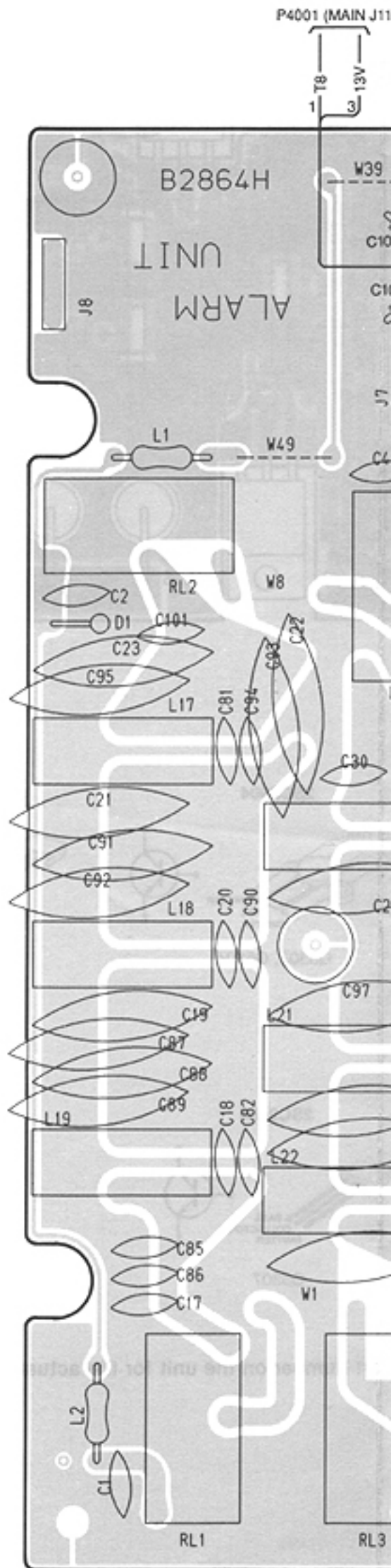
2SC1815 Y



Q4501

NOTE: Add "4500" to each indicated part number on the unit for the actual part number.

• FILTER UNIT

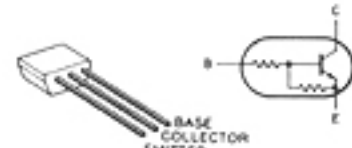


2SC2458



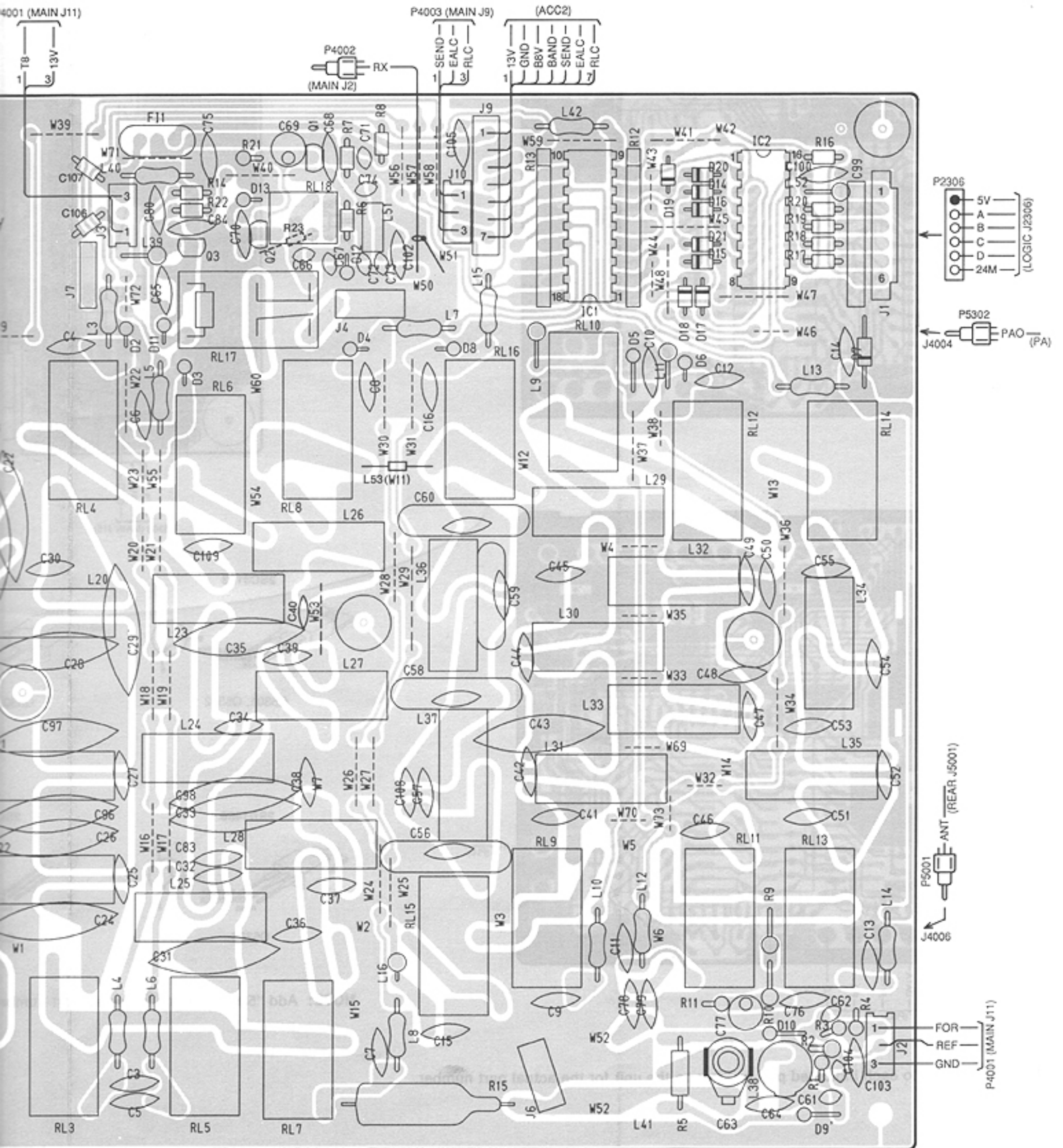
Q4001

RN1202

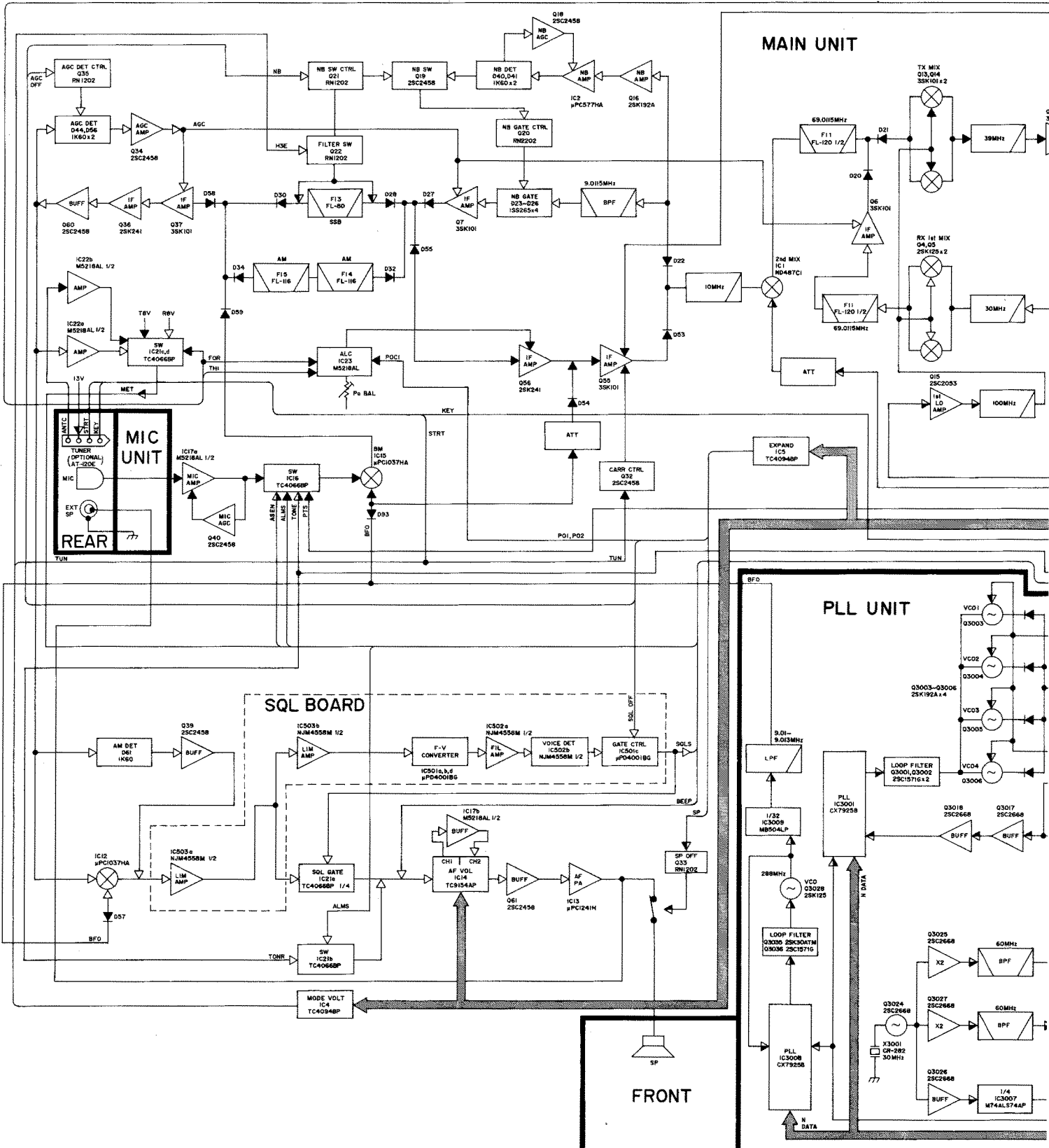


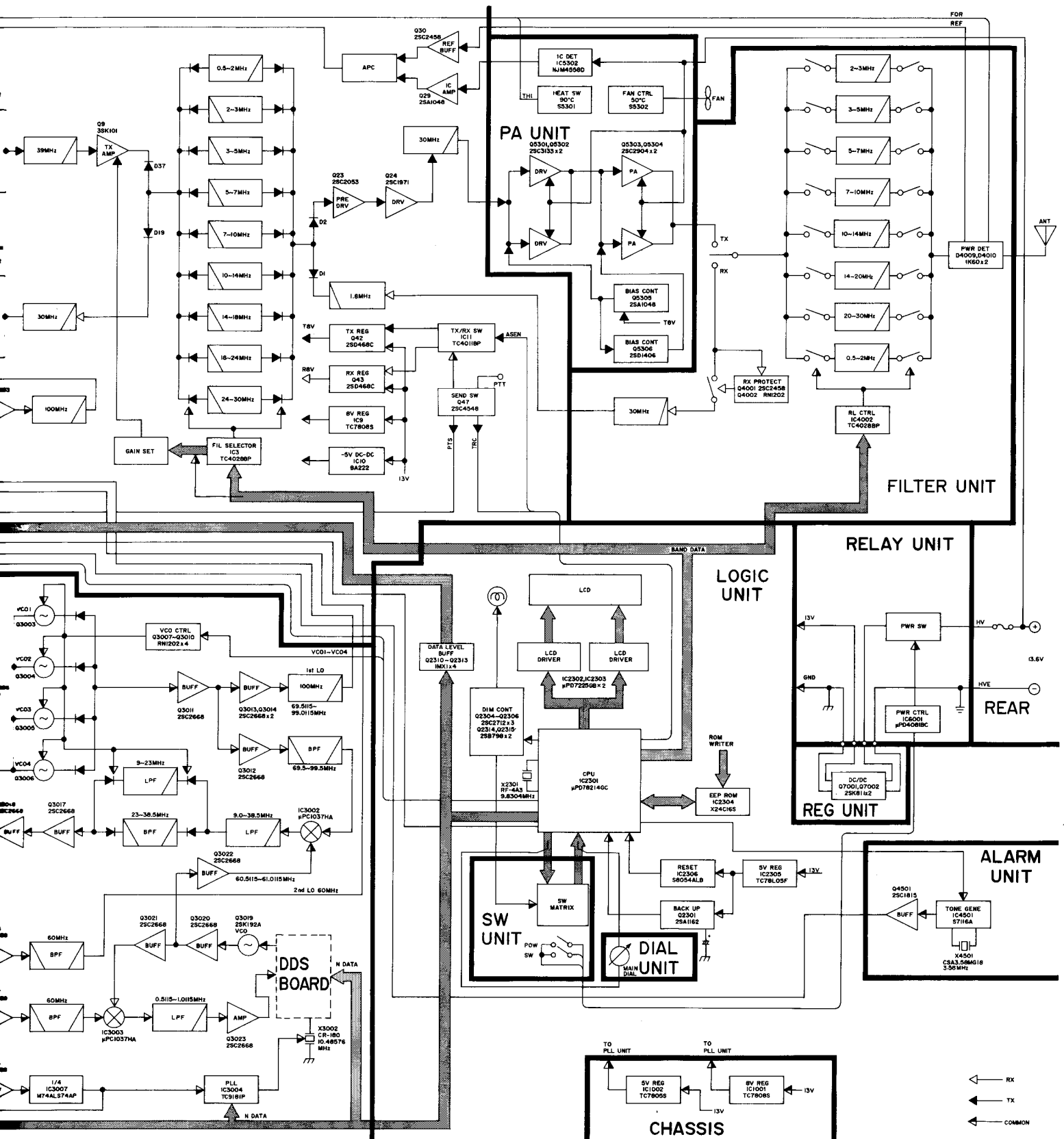
Q4002, Q4003

NOTE: Add "4000" to each indicated part number on the u

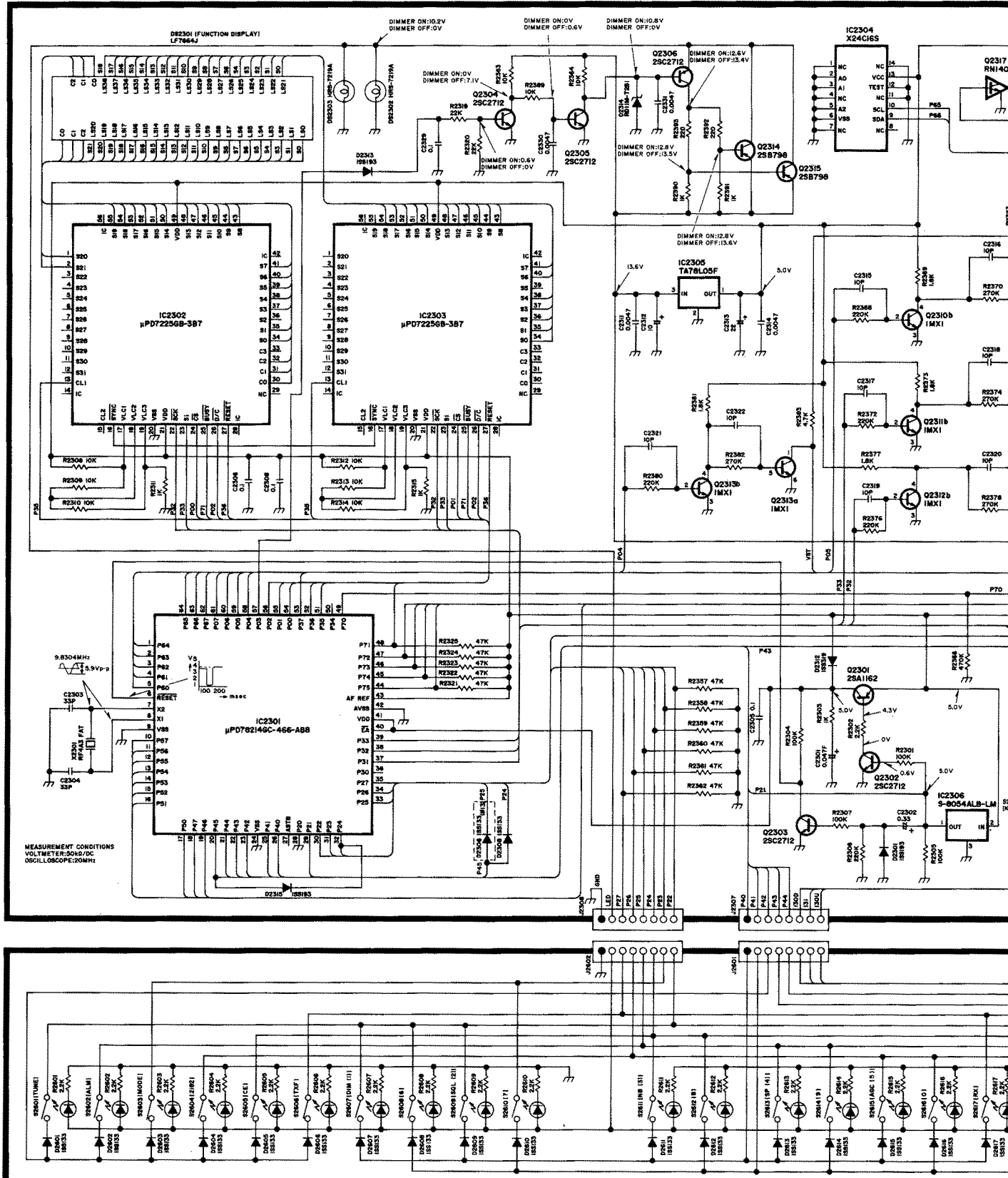


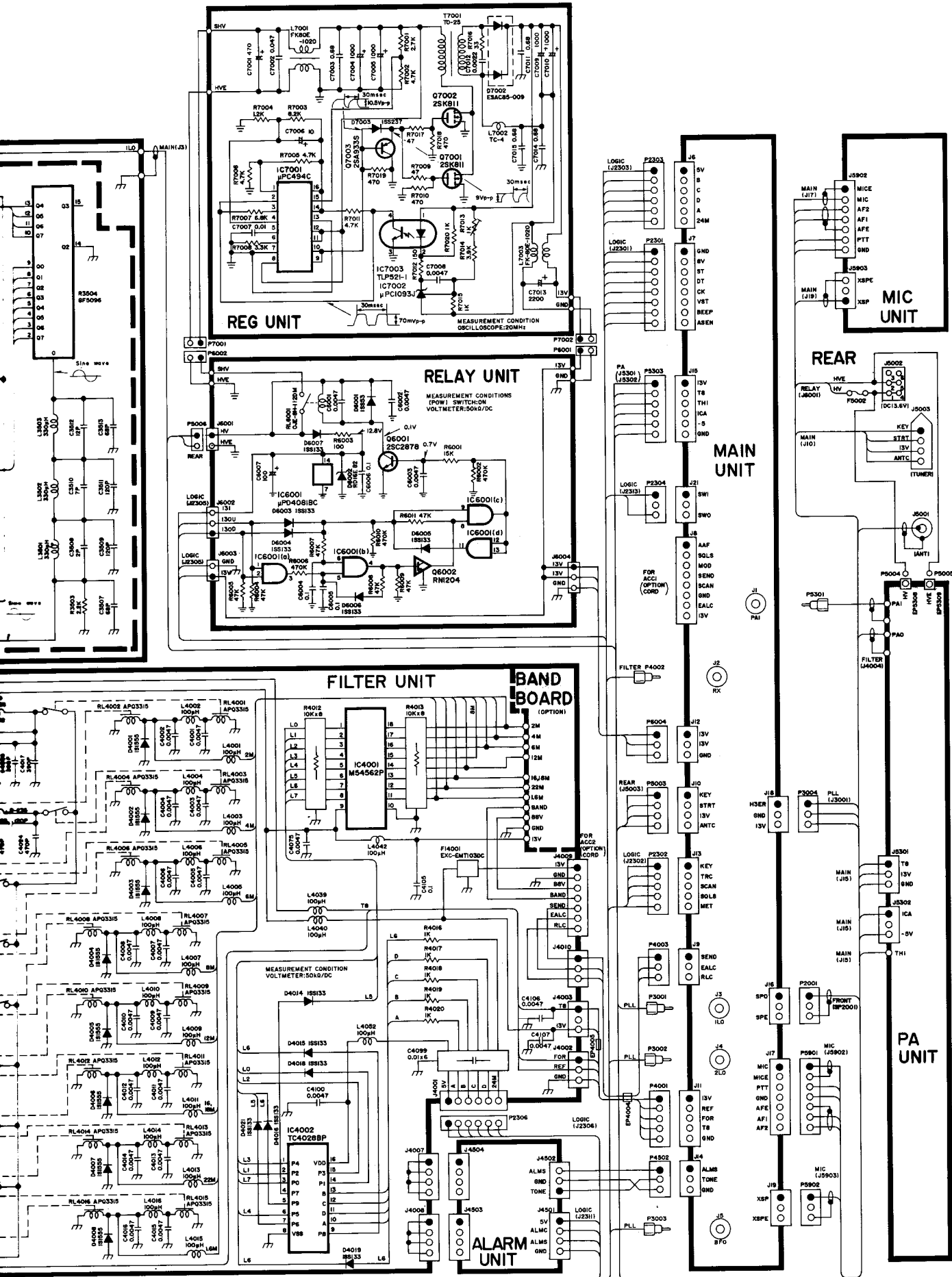
SECTION 8 BLOCK DIAGRAM

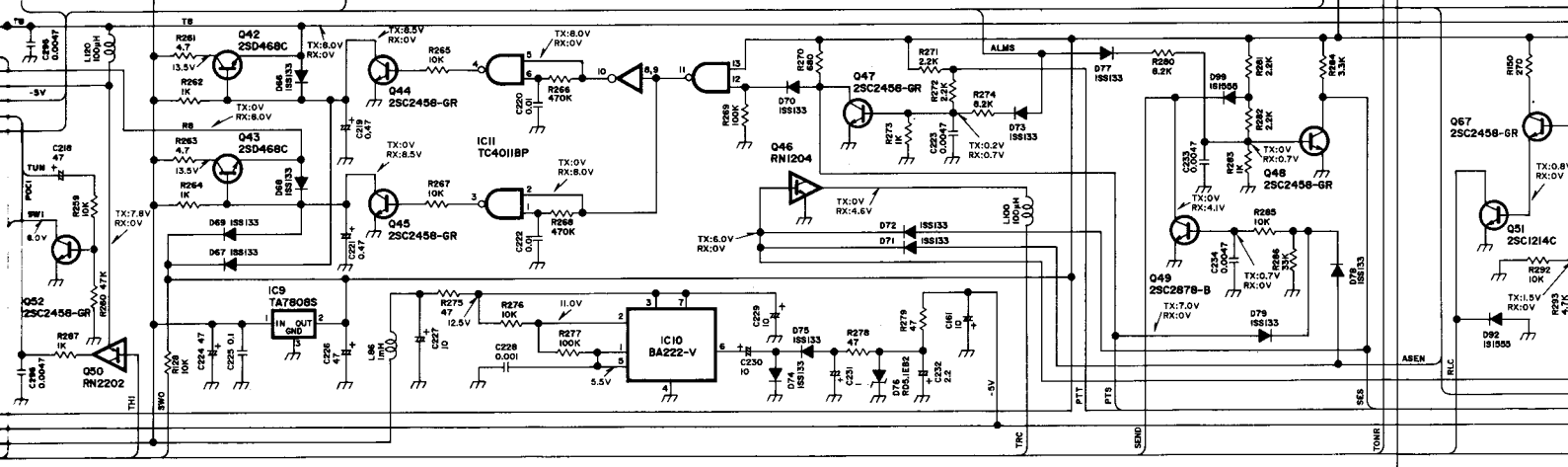
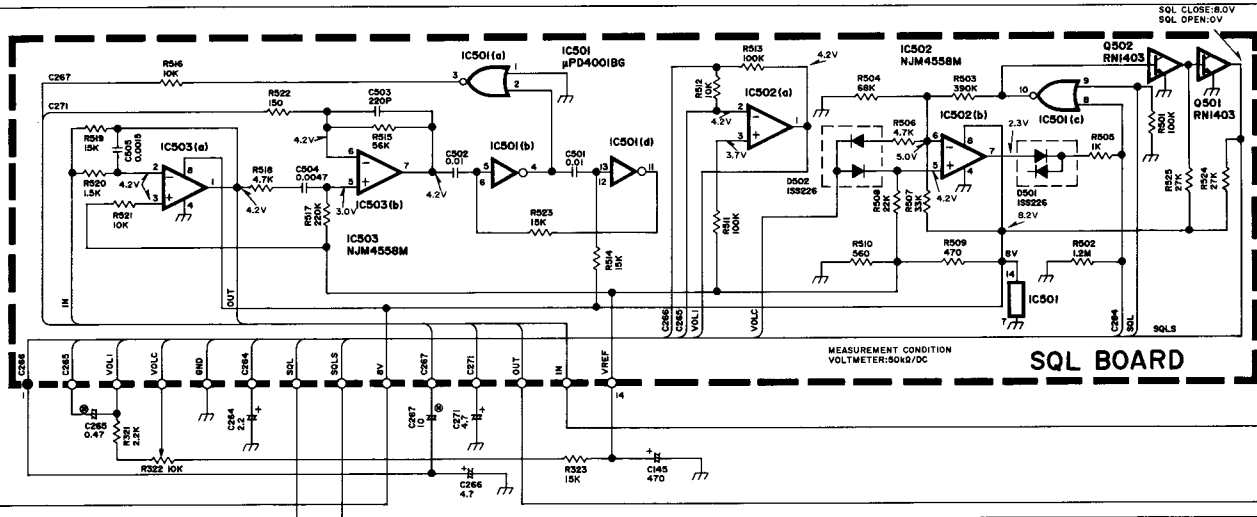
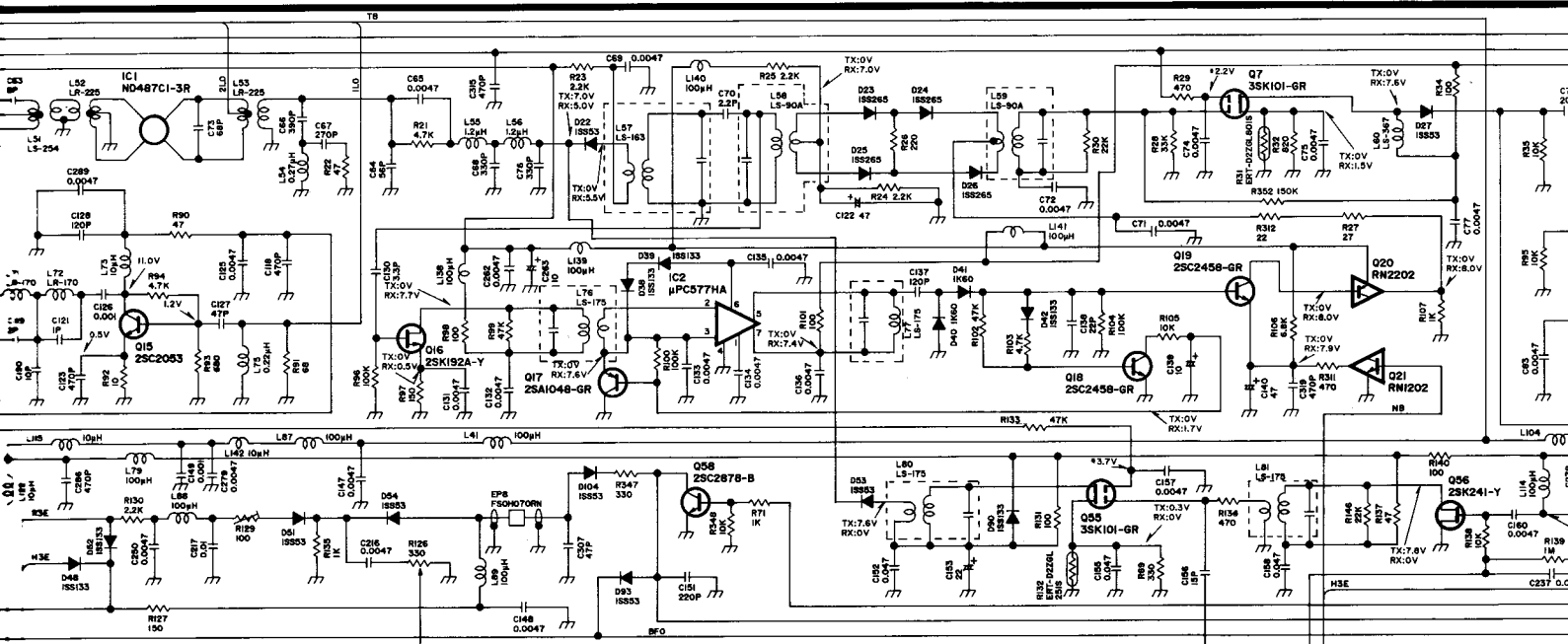


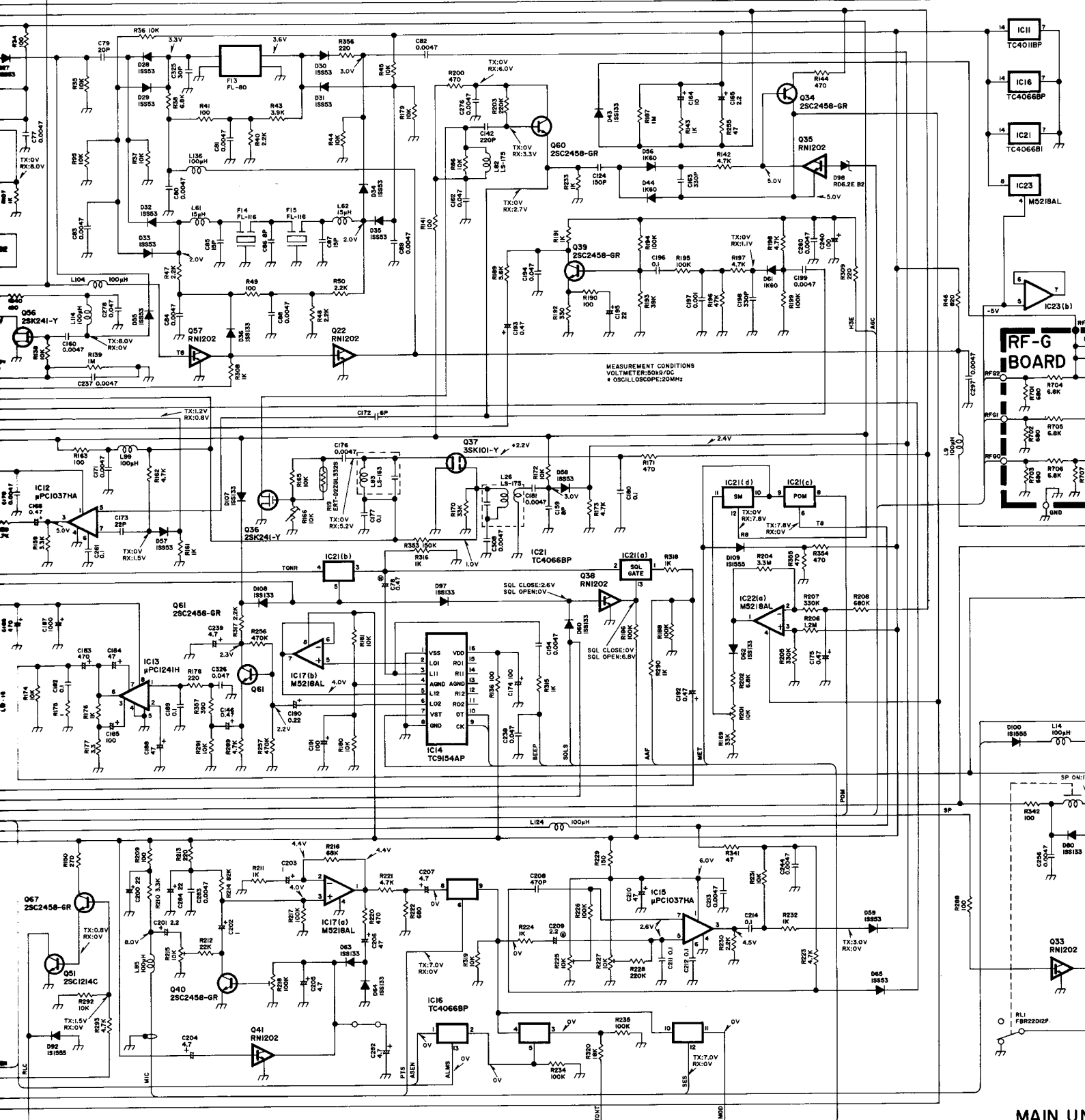


SECTION 9 VOLTAGE DIAGRAM





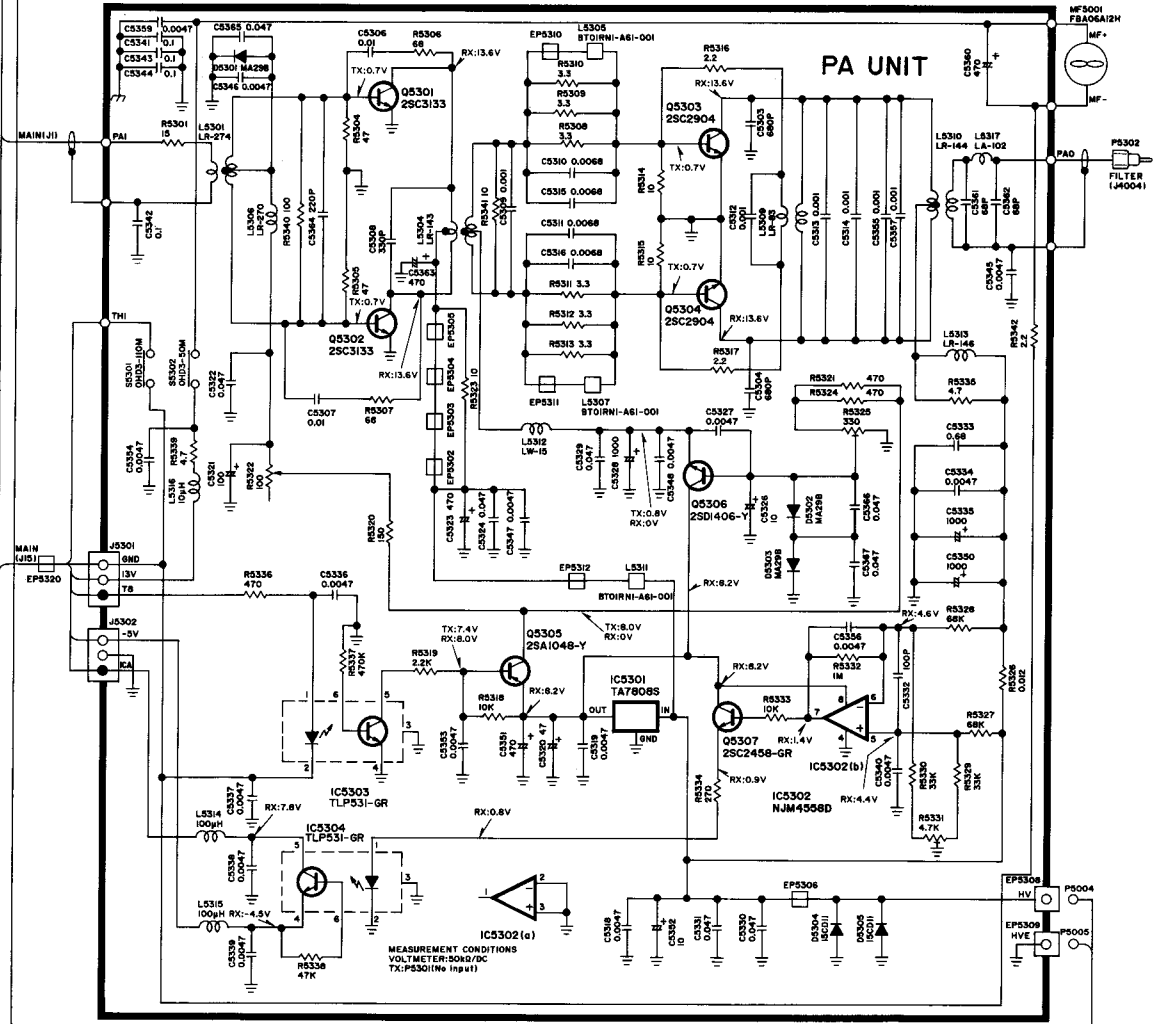
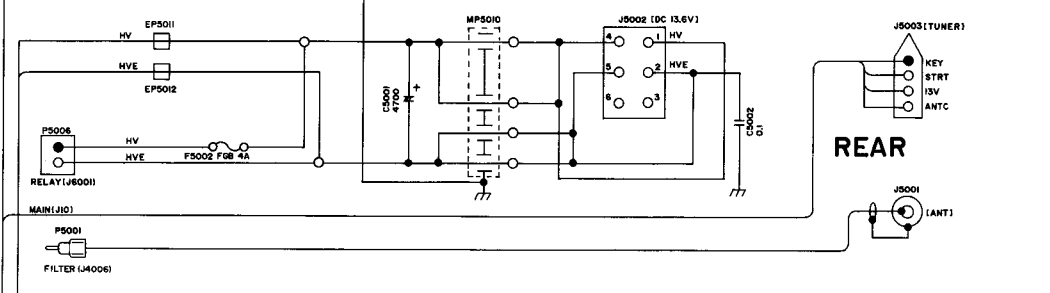
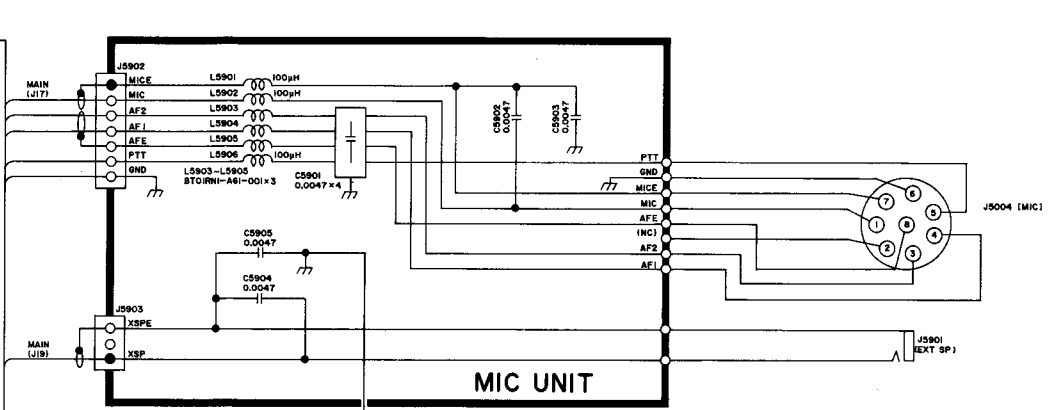
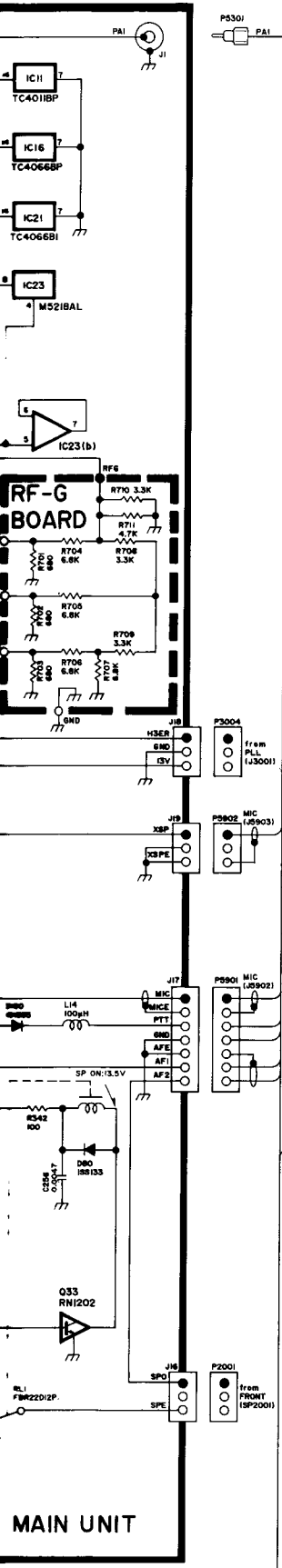




MEASUREMENT CONDITIONS
 VOLTMETER:50kΩ/DC
 OSCILLOSCOPE:20MHz

RF-G BOARD

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