SERVICE MANUAL

COMMUNICATION
RECEIVER FOR COMPUTER

IC-PCR100

Icom Inc.

INTRODUCTION

This service manual describe the latest service information for the IC-PCR100 COMMUNICATION RECEIVER FOR COMPUTER at the time of publication.

MODEL	VERSION	SYMBOL
IC-PCR100	Europe	EUR
	U.K.	UK
	Canada	CAN
	U.S.A-1	USA-1
	Other	OTH

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

DANGER

NEVER connect the receiver to an AC outlet or to a DC power supply that uses more than 16 V. Such a connection could cause a fire hazard and/or electric shock.

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

DO NOT reverse the polarities of the power supply when connecting the receiver.

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

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>

1130004200 S.IC TC4S66F IC-PCR100 MAIN UNIT 1 piece
8810008660 Screw PH B0 3 × 8 NI-ZU IC-PCR100 CHASSIS 4 pieces

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

REPAIR NOTES

1. Make sure a problem is internal before disassembling the receiver.
2. **DO NOT** open the receiver until the receiver is disconnected from its power source.
3. **DO NOT** force any of the variable components. Turn them slowly and smoothly.
4. **DO NOT** short any circuits or electronic parts. An insulated tuning tool MUST be used for all adjustments.
5. **DO NOT** keep power ON for a long time when the receiver is defective.
6. **READ** the instructions of test equipment thoroughly before connecting equipment to the receiver.

TABLE OF CONTENTS

SECTION 1 SPECIFICATIONS

■ GENERAL

• Frequency range :

Version	Frequency Range (MHz)
U.S.A.-1	0.010 – 823.999* 849.001 – 868.999 894.001 – 1300.000
Europe, U.K. Canada Other	0.010 – 1300.000*

*Specifications guaranteed 0.5–1300 MHz only

• Mode : AM, FM, WFM

• Frequency stability : ±5 ppm (at 1300 MHz: ±0˚C to +50˚C; +32˚F to +122˚F)

• Frequency resolution : 1 kHz (minimum)

• Power supply requirement : 13.8 V DC ±15 % for receiver unit; or supplied AC adaptor (negative ground)

• Current drain (at 13.8 V DC) : Power ON (PC power OFF) 0.1 A
Max. audio 0.7 A
Standby (squelched) 0.6 A

• Usable temperature range : ±0˚C to +50˚C; +32˚F to +122˚F

• Antenna connector : BNC (50 Ω)

• RS-232C connector : D-sub 9-pin (female)

• Dimensions : 131(W)×35(H)×164.1(D) mm;
5 5/32(W)×1 3/8(H)×6 15/32(D) inch

• Weight : approx. 0.5 kg; 1 lb 2 oz

■ RECEIVER

• Receive system : Triple-conversion superheterodyne

• Intermediate frequency : 1st 266.7 MHz
2nd 10.7 MHz
3rd 450 kHz (except WFM)

• Sensitivity (typical)* :

Frequency [MHz]	FM	WFM	AM
0.5 – 1.799	—	—	2.5 µV
1.8 – 27.999			1.8 µV
28.0 – 29.999	0.5 µV		
30.0 – 49.999			
50.0 – 699.999	0.32 µV	0.79 µV	1.0 µV
700.0 –1300.000	0.4 µV	1.0 µV	1.3 µV

*FM and WFM are measured at 12 dB SINAD; AM is measured at 10 dB S/N.; 230 kHz (for WFM), 15 kHz (for FM) and 6 kHz (for AM) passband widths are selected.

• Squelch sensitivity (at threshold) :

Frequency [MHz]	FM	WFM	AM
0.5 – 1.799	—	—	1.8 µV
1.8 – 27.999			0.89 µV
28.0 – 29.999	0.63 µV		
30.0 – 49.999			
50.0 – 699.999	0.5 µV	5.6 µV	0.71 µV
700.0 –1300.000	0.63 µV	10 µV	0.89 µV

• Selectivity (typical) : WFM 230 kHz/–6 dB
WFM/FM/AM 50 kHz/–6 dB
FM/AM 15 kHz/–6dB
FM/AM/SSB/CW 6 kHz/–6 dB

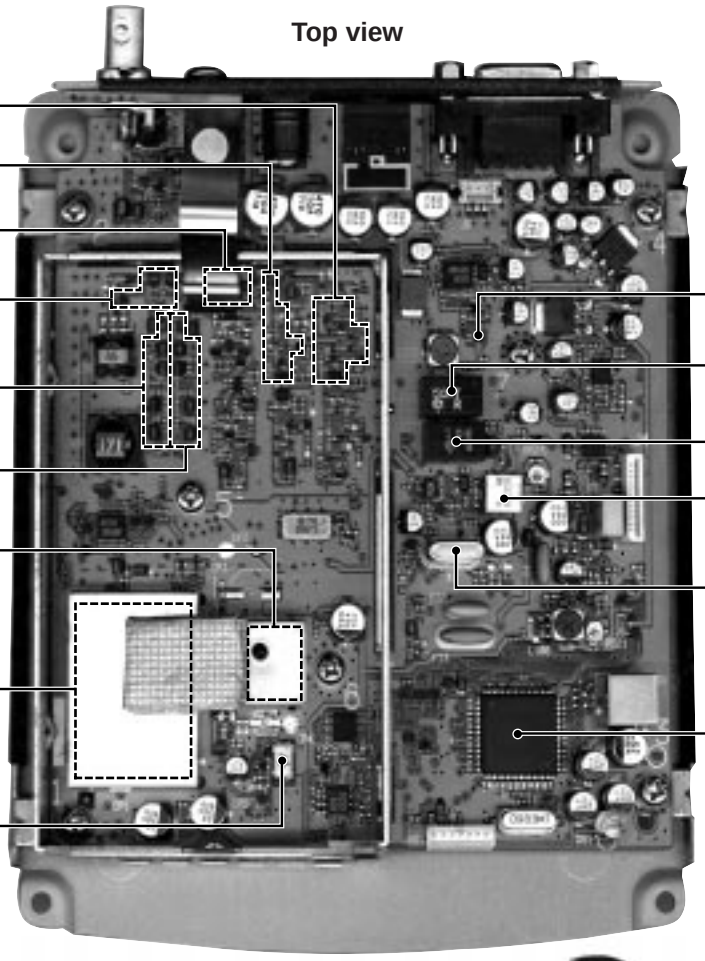
• Max audio output (at 10% distortion with an 8Ω load) : Mono 200 mW
Stereo 100 mW

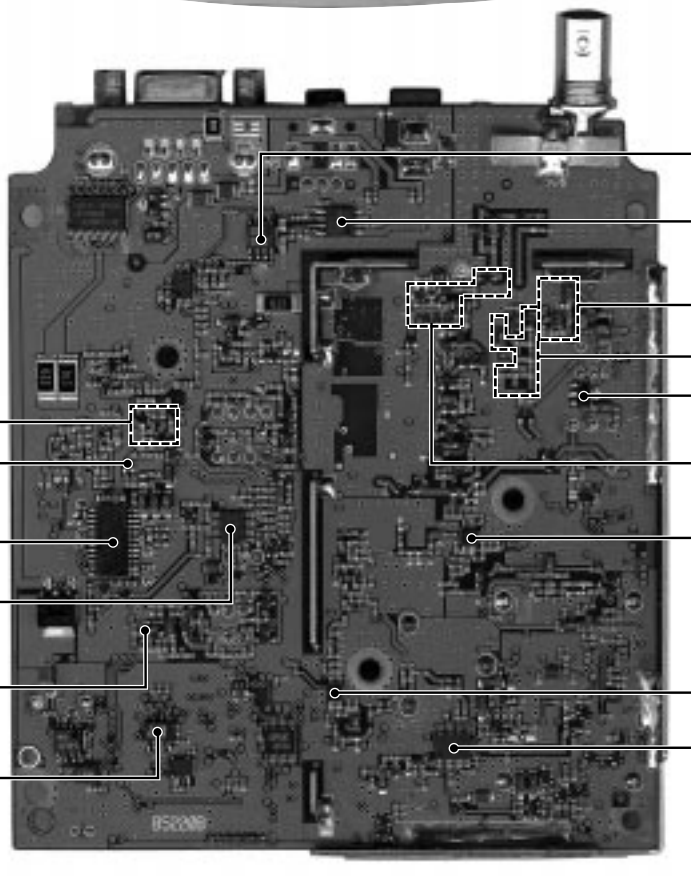
• External speaker connector : 3-conductor 3.5(d) mm (1/8")/4–8 Ω

SECTION 2 INSIDE VIEWS

● MAIN UNIT

Top view



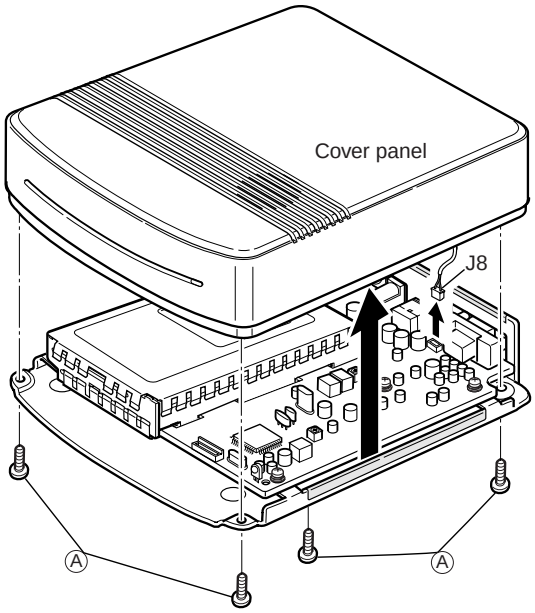


Bottom view

SECTION 3 DISASSEMBLY INSTRUCTIONS

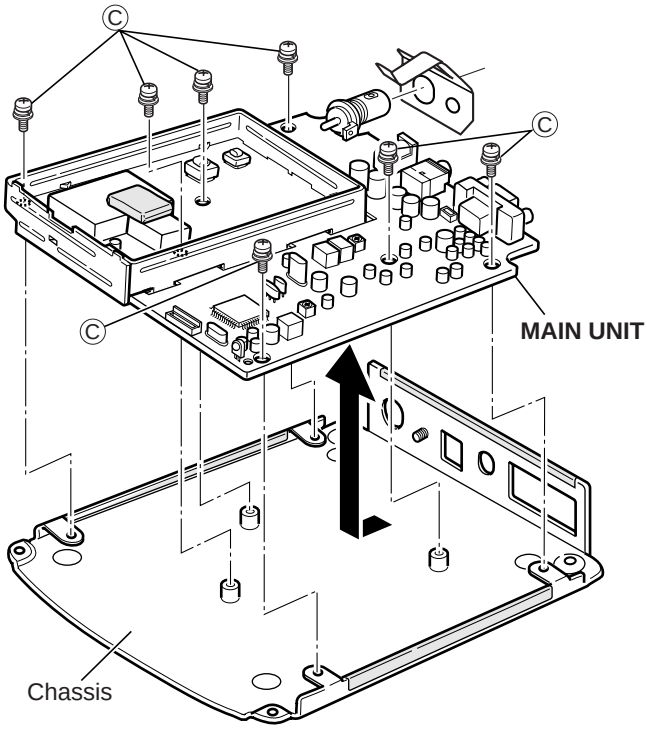
• Removing the cover panel

① Unscrew 4 screws, Ⓐ.
② Disconnect the speaker jack J8.
③ Remove the cover panel in the direction of the arrow.



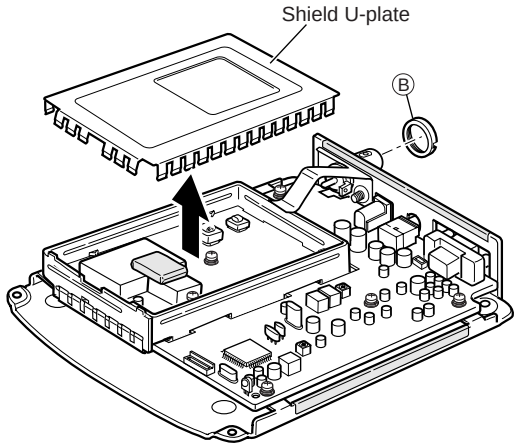
• Removing the MAIN unit

① Unscrew 7 screws from the MAIN unit, Ⓒ (set screw, 3 mm), to separate the chassis and unit.
② Remove the unit in the direction of the arrow.



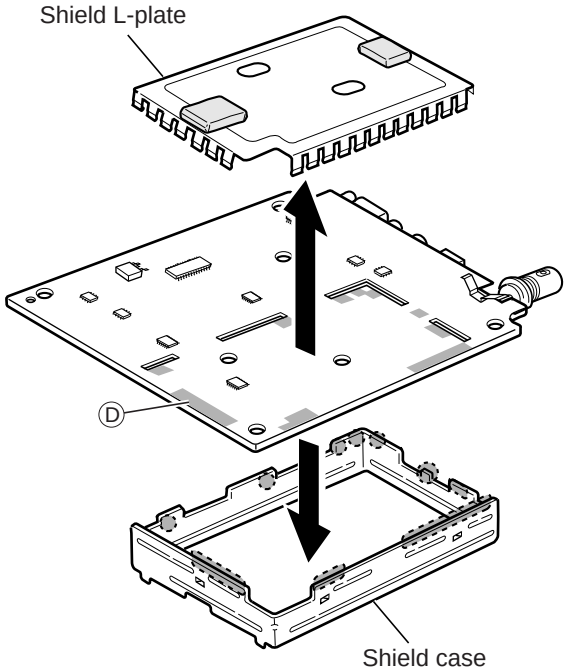
• Removing the antenna plug and shield U-plate

① Unscrew the nut, Ⓑ.
② Remove the shield cover in the direction of the arrow.



• Removing the shield plate

① Remove the shield plate in the direction of the arrow.
② Unsolder 9 points, Ⓓ, to separate the shield plate and MAIN unit.



SECTION 4 CIRCUIT DESCRIPTION

4-1 RECEIVER CIRCUITS

4-1-1 RF ATTENUATOR CIRCUIT

The attenuator circuit attenuates the signal strength to approx. 20 dB to protect the RF amplifier from distortion when excessively strong signals are received.

The RF signals from the antenna connector are passed through or bypass the “L” type attenuator (R1, R3). The signals are then applied to the RF filter circuit.

4-1-2 RF FILTER CIRCUIT

The applied signals pass through either the low-pass filter or the high-pass filter circuits via the band switching diodes.

• RF signals below 50 MHz

The RF signals below 50 MHz are passed through the low-pass filter (L1, L2, C7–C11) via the band switching diode (D2). The filtered signals are applied to the HF RF circuit.

• RF signals above 50 MHz

The RF signals above 50 MHz are applied to the high-pass filter (L172, C477, C478) after passing through the band switching diode (D4). The filtered signals are then applied to the VHF/UHF RF circuit.

4-1-3 HF RF CIRCUIT

The HF RF circuit amplifies the received signals within the range 0.01–50 MHz and filters out-of-band signals.

The HF RF circuit consists of three low-pass filters, three high-pass filters and one RF amplifier.

The filtered signals below 1.8 MHz from the RF filter circuit are passed through the low-pass filter (L3, L4, C14–C16) between the band swithing diodes (D6, D35), and are then applied to the 1st mixer circuit (IC4) directly.

The 1.8–14.999 MHz signals pass through the low-pass filter (L6, L7, C21–C25) and high-pass filter (L8, L9, C26–C30) between the band switching diodes (D3, D7), and are then applied to the 1st mixer circuit after being amplified at the RF amplifier (Q12).

The 15–29.999 MHz signals pass through the low-pass filter (L10, L11, C33–C37) and high-pass filter (L11, L12, C38–C42) between the band switching diodes (D90, D91), and are then applied to the 1st mixer circuit via the RF amplifier circuit (Q12).

The 30–49.999 MHz signals pass through the high-pass filter (L14, L15, C45–C49) between the band switching diodes (D8, D5), and are then applied to the 1st mixer circuit via the RF amplifier circuit (Q12).

• Filters

Receive freq. (MHz)	SW diode	Filter select signal	Components
0.01–1.799	D6, D35	B0	L3–L5, C14–C17
1.8–14.999	D3, D7	B1	L6–L9, C21–C30
15.0–29.999	D90, D91	B2	L10–L13, C33–C42
30.0–49.999	D8, D5	B3	L14, L15, C45–C49

4-1-4 VHF/UHF RF CIRCUIT

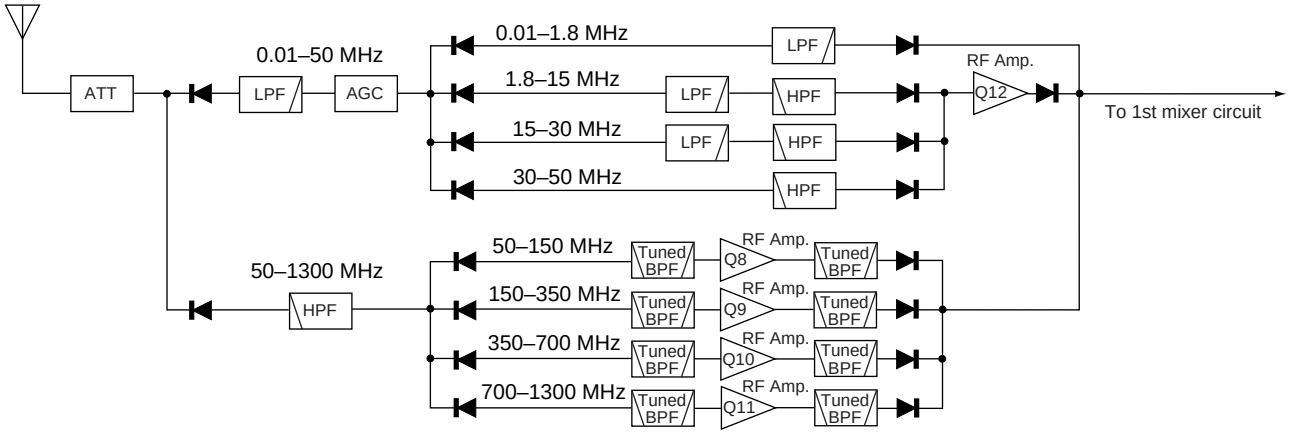
The VHF/UHF RF circuit amplifies the received signals within the range 50–1300 MHz and filters out-of-band signals.

The VHF/UHF RF circuit consists of 4 bands of filter circuits with an RF amplifier for each.

The 50–149.999 MHz signals from the RF filter pass through high-pass filter (D11, L17, C53–C55, D12, D82, D83, L18, C57) via the band switching diode (D10), and are then amplified at the RF amplifier (Q8) between the tunable bandpass filters (D13, D80, L19–L21, D14, D81, L23–L25). The filtered signals are applied to the 1st mixer circuit (IC4) via the band switching diode (D15).

For improving the characteristic of the bandpass filter circuit, the shift switch (Q31) shifts the cut off frequency of the high-pass filter (D12, D82, D83, L18, C57). The shift switch (Q31) is controlled by the VCO 1 signal from the CPU (IC21).

• RF filter and amplifier circuits



The 150–349.999 MHz signals from the band switching diode (D16) pass through the high-pass filter (L27–L29, C69–C74) and tunable bandpass filter (D18, L31–L33), and are then amplified at the RF amplifier (Q9) and pass through another tunable bandpass filter (D19, L35–L37). The filtered signals are applied to the 1st mixer circuit (IC4) via the band switching diode (D20).

The 350–699.999 MHz signals from the band switching diode (D21) pass through the high-pass filter (L40, C92–C94) and tunable bandpass filter (D22, D23, L41, L42). The filtered signals are then amplified at the RF amplifier (Q10) and pass through the tunable bandpass filters (D24, D77, L45–L47). The filtered signals are applied to the 1st mixer circuit (IC4) via the band switching diode (D25).

The 700–1300 MHz signals from the band switching diode (D26) pass through the high-pass filter (L141, C110, C606) and 2-stage tunable bandpass filters (D27, D28, L163, D29, D30, L51–L53). The filtered signals are then amplified at the RF amplifier (Q11) and pass through the tunable bandpass filters (D31, D32, L56, L178). The filtered signals are applied to the 1st mixer circuit (IC4) via the band switching diode (D33).

The tunable bandpass filters employ varactor diodes to tune the center frequency of the RF passband for wide bandwidth receiving and good image response rejection. These diodes are controlled by TUNV signal from the CPU (IC21, pin 54) via the tune controller (IC22b).

• Tunable bandpass filters

Receive freq. (MHz)	BPF select signal	Varactor diodes	RF amp.
50.0–149.999	B4	D11–D14, D80–D83	Q8
150.0–349.999	B5	D18, D19	Q9
350.0–699.999	B6	D22–D24, D77	Q10
700.0–1300.0	B7	D27–D32	Q11

4-1-5 1ST MIXER CIRCUIT

The 1st mixer circuit converts the received RF signals into a fixed frequency of the 1st IF signal with a PLL output frequency. By changing the PLL frequency, only the desired frequency will pass through the bandpass filters at the next stage of the 1st mixer.

The filtered RF signals are mixed with 1st LO signals at the 1st mixer circuit (IC4) to produce a 266.7 MHz 1st IF signal. The 1st IF signal is output from pin 5, and passed through the bandpass filter (FI1) to suppress unwanted harmonic components. The filtered 1st IF signal is applied to the IF circuit.

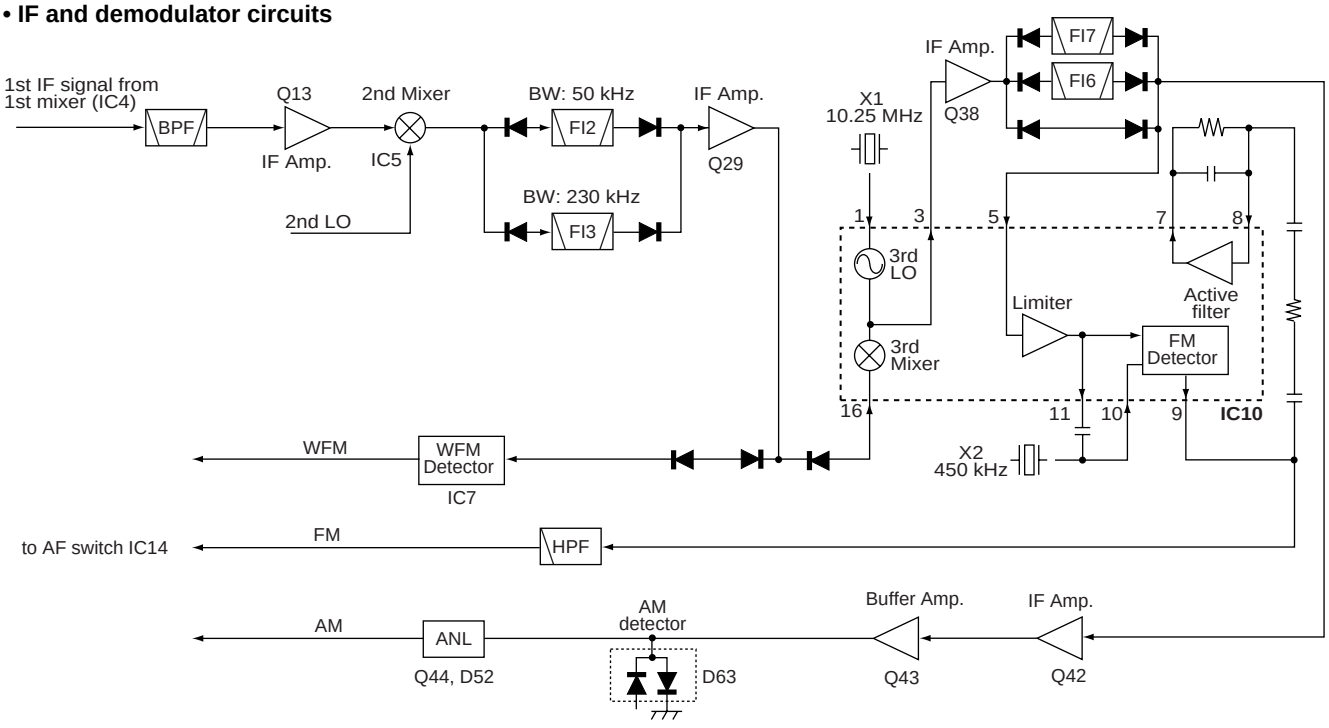
The 1st LO signals are generated at the VCO 1 (Q14, Q15) or VCO 2 (Q18, Q19) circuit (according to the receiving frequency band) and are amplified at the buffer amplifier (IC26). The amplified signals are then applied to the 1st mixer (IC4, pin 2) directly or passed through the divider circuit (IC6).

4-1-6 1ST IF AND 2ND MIXER CIRCUITS

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

The filtered 266.7 MHz 1st IF signal from the bandpass filter (FI1) is amplified at the 1st IF amplifier (Q13) then mixed with the 2nd LO signal at the 2nd mixer circuit (IC5) to produce a 10.7 MHz 2nd IF signal. The 2nd IF signal is passed through either 2 bandpass filters (FI2 or FI3; depending on the selected mode and bandwidth). The filtered 2nd IF signal is amplified at the IF amplifier (Q29), then applied to the WFM demodulator or 3rd IF circuit.

• IF and demodulator circuits



4-1-7 3RD MIXER CIRCUIT

The 3rd mixer circuit mixes the 2nd IF signal and 3rd LO signal to produce a 450 kHz 3rd IF signal (except WFM mode).

The 10.7 MHz 2nd IF signal from the IF amplifier (Q29) is applied to the 3rd mixer section in the FM IF IC (IC10, pin 16). The applied signal is mixed with a 3rd LO signal generated by X1 (10.25 MHz) to produce a 450 kHz 3rd IF signal.

The 3rd IF signal is output from pin 3, and passed through one of 2 bandpass filters (FI6 or FI7) or bypassed, according to the selected mode after being amplified at the IF amplifier (Q38). The filtered or bypassed signal is applied to the each demodulator circuit (except WFM mode).

• Bandpass filter selection

Modes	Bandpass filter	Passband width
AM	FI6	6 kHz
FM	FI7	15 kHz

4-1-8 DEMODULATOR CIRCUITS

The demodulator circuit converts the 2nd IF signal into AF signals. 3 separate demodulator circuits are employed for each mode.

(1) WFM mode

The 10.7 MHz 2nd IF signal from the IF amplifier (Q29) is applied to the WFM demodulator circuit (IC7, pin 1).

The IF signal is applied to the quadrature detector section (IC7, pin 11) to demodulate AF signals. The demodulated AF signals are output from pin 14, 15, and are then applied to the AF switch circuit.

(2) FM mode

The filtered or bypassed 3rd IF signal is applied to the quadrature detector section in the FM IF IC (IC10, pin 10) then mixed with the signal generated by the discriminator (X2) to demodulate AF signals. The AF signals are output from pin 9 and applied to the AF switch circuit via the high-pass filter circuit (IC11).

(3) AM mode

The filtered 3rd IF signal from the one of 2 bandpass filters (FI6 or FI7) is amplified at the IF and buffer amplifiers (Q42, Q43). The amplified IF signal is applied to the AM detector circuit (D63) to be converted into AF signals, and the AF signals are applied to the AF switch circuit.

4-1-9 AF SWITCH CIRCUIT

The demodulated AF signals from the demodulator circuits are applied to the AF switch (IC14). This consists of 4 analog switches which are selected with a mode signal from the CPU (IC21) via the I/O expander (IC3). The switched AF signals are applied to the AF circuit.

4-1-10 AF CIRCUIT

The AF signals from the AF switch circuit are passed through the AF mute switch and then amplified at the AF power amplifier circuit.

The AF signals from the AF switch are applied to the electronic volume control circuit (IC23, pin 1). The level controlled AF signals are output from pin 2 and applied to the AF power amplifier (IC25, pin 6). The power amplified AF signals are applied to the internal speaker via the [EXT SP] jack.

The electronic volume control circuit controls AF gain, therefore, the AF output level varies according to the [VOL] setting and also the squelch conditions.

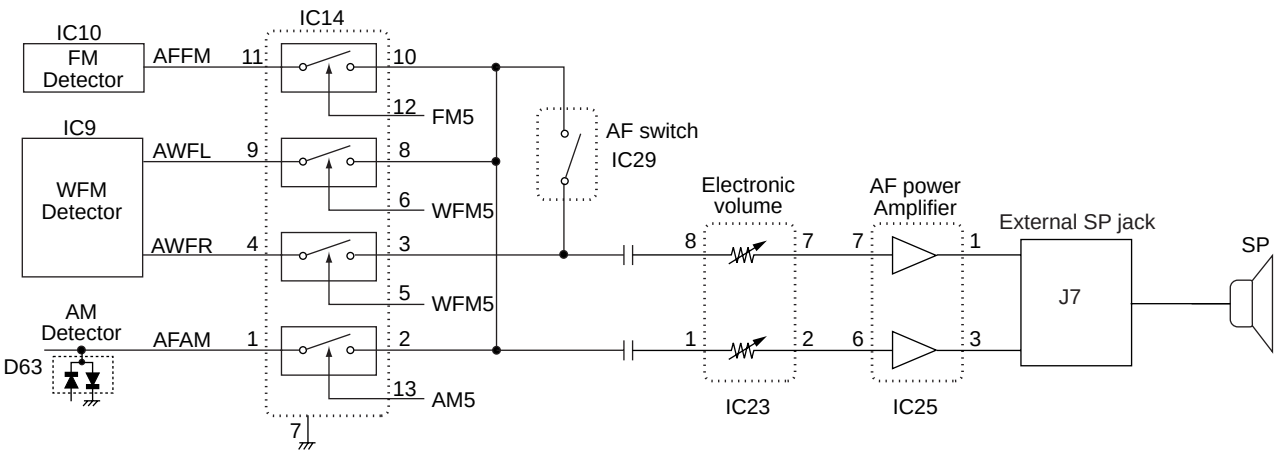
4-1-11 SQUELCH CIRCUIT

A squelch circuit cuts out AF signals when no RF signal is received or when the S-meter signal is lower than the [SQUELCH] control setting level. By detecting noise components in the AF signals, the CPU controls the electronic volume control circuit.

• NOISE SQUELCH

Some noise components in the AF signals from pin 9 of the FM IF IC (IC10) are applied to the noise amplifier section in the IC (IC10, pin 8). The amplified signals are output from pin 7. The output signals are applied to the noise and buffer amplifiers (Q58, Q59) and rectified at the noise detector (D89) to be converted into DC voltage, then applied to the CPU (IC21, pin 60) as an NOIN signal.

• Squelch and AF amplifier circuits



• S-METER SQUELCH

The S-meter signal is applied to the CPU from the meter amplifier circuit (IC13a) via the SMAD line, and also the S-meter squelch setting level is applied to the CPU. The CPU compares these signals, then outputs a control signal to the electronic volume control circuit (IC23) to cut out AF signals.

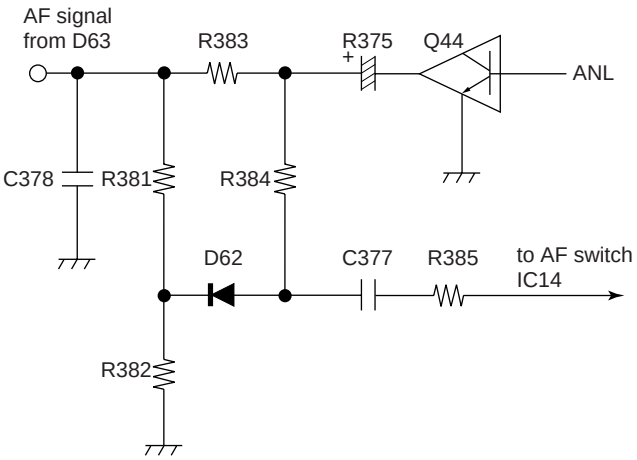
4-1-12 AUTOMATIC NOISE LIMITER CIRCUIT

The ANL (Automatic Noise Limiter) circuit (D62, Q44, R381–R384) reduces pulse noises. The ANL function activates only when AM mode is selected.

The AM detector output signal from D63 is applied to the cathode of D62 passing through R381 where it is divided by R381 and R382. The signal is also applied to the anode of D62, passing through R383 and R384.

When the ANL function is activated (Q44 is ON), C375 is grounded. The detector output, including pulse noise, is applied to the cathode of D62 only. If pulse noises are received, the cathode voltage of D62 becomes higher than the anode voltage and D62 turns OFF. Thus, while pulse noises are received, the detected signal is not applied to the AF switch(IC14).

• Automatic noise limiter circuit



4-1-13 AGC CIRCUIT

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

An RSSI signal is used for AGC function from the WFM IF IC (IC7, pin 20) while in WFM mode, or used from the FM IF IC (IC10, pin 12) while in FM, AM (except WFM) mode.

The RSSI output signal is amplified at the AGC amplifier (Q33) during WFM operation. In other modes, the RSSI signal is amplified at the AGC amplifier (Q45), and passes through the time constant circuit (Q46, Q47, R284, R290, R291, C372, C373, C905) and is then applied to the IF amplifiers (Q13, Q39). The AGC control signal is applied to the VHF/UHF tunable bandpass filters after being amplified at the VHF/UHF AGC amplifier (IC13b).

AGC speed is controlled by changing the time constant at the AGC control line with resistors (R284, R290, R291) and capacitors (C372, C373, C905). R290 and C372 are used for AGC slow, and R284 and C905 are used for AGC fast mode's time constant. However, R291 and C373 are connected to the AGC control line while scanning to obtain the fastest AGC response.

4-1-14 S-METER CIRCUIT

The S-meter circuit indicates the relative received signal strength while receiving and changes depending on the received signal strength.

A portion of the AGC signal is applied to the meter amplifier circuit (IC13a). The amplified signal is then applied to the CPU (IC21, pins 64) as an SMAD signal to drive the S-meter.

The SMAD signal is also used for noise and S-meter squelch operation by comparison with the [SQUELCH] control setting level and received signal strength at the CPU.

4-2 PLL CIRCUITS

4-2-1 GENERAL

The PLL circuit provides stable oscillation of the 1st and 2nd local frequencies. The PLL circuit consists of the PLL IC, charge pump, loop filter and reference oscillator and employs a pulse swallow counter.

4-2-2 1ST LO LOOP

The 1st LO circuit generates the 1st LO frequencies, and the signals are applied to the 1st mixer circuit.

The generated signal from VCO 1 (Q14, Q15) or VCO 2 (Q18, Q19) is applied to the prescaler section in the PLL IC (IC8, pin 8) after being amplified at the buffer amplifiers (IC26, Q27). The applied signal is prescaled in the PLL IC based on the divided ratio (N-data) to produce approx. 50 kHz signals which are applied to the phase detector section.

The generated reference signal from the reference oscillator (X5; 12.8 MHz) is applied to the programmable divider section in the PLL IC (IC8, pin 1). The applied signal is prescaled in the PLL IC based on the divided ratio (1/256) to produce approx. 50 kHz phase signals. The reference phase signals are applied to the phase detector section.

The phase detector section compares 2 of the applied phase signals. The phase detected signals are passed through the charge pump section and then output from pin 4 of the PLL IC. The output signals are applied to the loop filter circuit (Q25, Q26) to be converted into DC voltage as a PLL lock voltage. The lock voltage is applied to the CPU (IC22, pin 61) via the buffer amplifer (Q24) as an L1AD signal to control the VHF/UHF tunable bandpass filter.

4-2-3 2ND LO LOOP

The 2nd LO circuit generates the 2nd LO frequencies, and the signals are applied to the 2nd mixer circuit.

The generated signal at the VCO 3 (Q34) enters the PLL IC (IC8, pin 13) via the buffer amplifier (Q35), is divided ath the programmable divider seiction and is then applied to the phase detector section.

The phase detector compares the input signal with a reference frequency, and then outputs the out-of-phase signal (pulse-type signals) from pin17

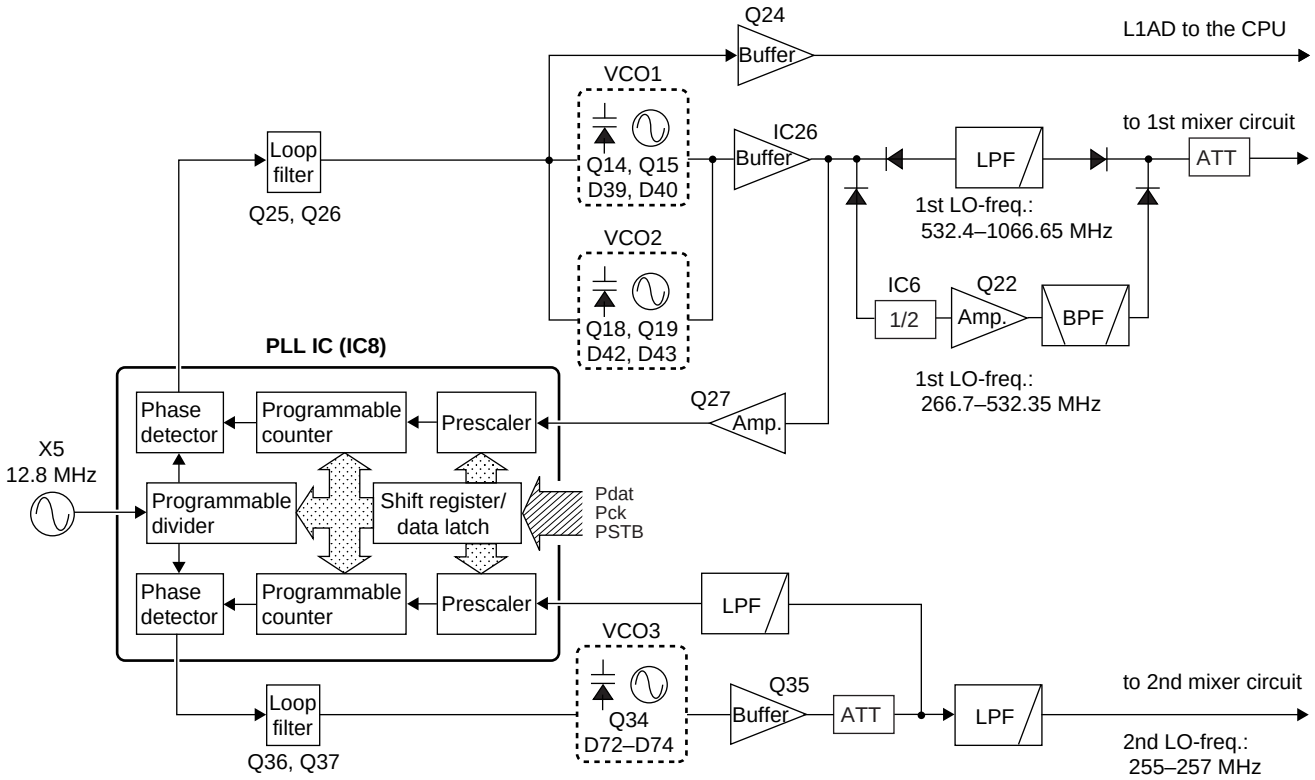
The pulse-type signal is converted into DC voltage (lock voltage) at the loop filter (Q36, Q37), and then applied to the VCO 3 to stabilize the oscillated frequency.

4-3 POWER SUPPLY CIRCUITS

4-3-1 VOLTAGE LINES

Line	Description
ACHV	The voltage from a DC power supply.
HV	The same voltage as the ACHV line which is controlled by the [POWER] switch.
+5	Common 5 V line converted from the HV line by the +5 regulator circuit (IC16).
+8	Common 8 V line converted from the HV line by the +8 regulator circuit (IC17).
+33	Common 33 V line converted from the HV line by the 33 V DC-DC convertor circuit (IC18). The output voltage is applied to the PLL circuit.
L+5	Common 5 V line converted from the ACHV line by the L+5 regulator circuit (IC15).

• PLL circuit



4-4 PORT ALLOCATIONS

4-4-1 CPU (IC20)

Pin number	Port name	Description
1	FMST	Input port from WFM IC (IC7, pin 7) for the stereo indicator.
8, 9	OSC1, OSC2	Input ports for the CPU system clock oscillator (X6; 9.8304 MHz).
10	RES	Input port for the reset signal.
17	POCO	Outputs power switching circuit control signal. High : While turning power ON.
18	ATTC	Outputs attenuator control signals. Low : When attenuator function is ON.
19	SCAN	Outputs AGC time constant control signals. High : While scanning (fastest AGC speed).
20	AGCS	Outputs AGC time constant control signals. Low : When WFM or FM mode is selected (AGC-fast).
21	ANL	Outputs ANL control signals. High : While ANL fuction is ON. (AM mode only)
22	SWAF	Outputs AF mixing control signal for the stereo audio.
23, 24	MST1, MST2	Outputs strobe signals for the output expander ICs (IC1, IC3).
25	AFDT	Outputs data signal for the electronic volume IC (IC23).
26	MSI	Input port for serial signal from the EEPROM IC (IC20).
27	MSO	Outputs data signal for the EEPROM IC (IC20) and output expander ICs (IC1, IC3).
28	Mck	Outputs clock signal for the EEPROM IC (IC20) and output expander ICs (IC1, IC3).
29	ECS	Outputs chip select signal to the EEPROM IC (IC20).
34	PFL2	Outputs 1st LO filter select signals. High : When frequencies from 0.01 to 265.699 MHz are displayed. Low : When frequencies from 265.7 to 1300.0 MHz are displayed.
35	VSF1	Outputs VCO1 shift signals.
36	VSF2	Outputs VCO2 shift signals.

CPU (IC20) — continued

Pin number	Port name	Description
37, 38	VCO1, VCO2	Output VCO2/VCO1 select signals. Display freq. [MHz] / Selected VCO / VCO freq. [MHz] 0.01–108.299 / VCO1 / 533.40–749.90 108.3–265.699 / VCO2 / 750.00–1064.70 265.7–266.699 / VCO1 / 533.40–534.35 266.7–267.699 / VCO1 / 532.40–533.35 267.7–483.299 / VCO1 / 534.40–749.95 483.3–799.999 / VCO2 / 750.00–1066.65 800.0–1016.699 / VCO1 / 533.30–749.95 1016.7–1300.000 / VCO2 / 750.00–1033.300
39	DST1	Outputs strobe signals for reference frequency and VXO frequency.
41	PSTB	Outputs strobe signals for the PLL IC (IC8).
42	Pdat	Outputs serial data signals for the PLL IC (IC8).
43	Pck	Outputs serial clock signal for the PLL IC (IC8).
48	RXD	Input port for data signal from the connected PC via the RS-232C interface IC (IC9).
49	TXD	Outputs data signal to the connected PC via the RS-232C interface IC (IC9).
54	TUNE	Outputs tunable bandpass filter control voltage.
59	LCT	Input port for unlock signal from the PLL IC (IC8). Low : PLL unlock
60	NOIN	Input port signal strength detection signal (NOIN; pulse-type).
61	L1AD	Input port for 1st LO PLL lock voltage.
62	CTAD	Input port for the CTCSS decoded signal.
63	SMAD	Input port for S-meter signal.

4-4-2 OUTPUT EXPANDER IC

(1) IC1

Pin number	Port name	Description
4	B0C	Outputs low-pass filter select signal. High: When frequencies below 1.8 MHz are displayed.
5	B1C	Outputs bandpass filter select signal. High: When frequencies from 1.8 to 14.999 MHz are displayed.
6	B2C	Outputs bandpass filter select signal. High: When frequencies from 15.0 to 29.999 MHz are displayed.
7	B3C	Outputs bandpass filter select signal. High: When frequencies from 30.0 to 49.999 MHz are displayed.
11	B7C	Outputs bandpass filter select signal. High: When frequencies from 700.0 to 1300.0 MHz are displayed.
12	B6C	Outputs bandpass filter select signal. High: When frequencies from 350.0 to 699.999 MHz are displayed.
13	B5C	Outputs bandpass filter select signal. High: When frequencies from 150.0 to 349.999 MHz are displayed.
14	B4C	Outputs bandpass filter select signal. High: When frequencies from 50.0 to 149.999 MHz are displayed.

(2) IC3

Pin number	Port name	Description
4–6	FL1–FL3	Output 450 kHz IF filter select signals. SW signal / Bandpass filter / Passband width FL1 / FI6 / 6 kHz FL2 / FI7 / 15 kHz FL3 / By-pass / —
7, 14	FL4, FL5	Output 10.7 MHz IF filter select signals. SW signal / Bandpass filter / Passband width FL4 / FI2 / 50 kHz FL5 / FI3 / 230 kHz
11	AM5	Outputs AM mode select signals. High: When AM mode is selected.
12	FM	Outputs FM mode select signals. High: When FM mode is selected.
13	WFM	Outputs WFM mode select signals. High: When WFM mode is selected.

SECTION 5 ADJUSTMENT PROCEDURES

5-1 PREPARATION BEFORE SERVICING

The receiver (IC-PCR100) can be adjusted by sending adjustment data to the RS-232C port via a PC. Most of the adjustments in this section must use **EX-2206,** an adjustment program for IC-PCR100. The software that comes with the IC-PCR100 is not necessary for adjustments in this section.

■ SYSTEM REQUIREMENTS

- IBM PC compatible computer
- An RS-232C serial port (38400 bps or faster)
- Microsoft Windows 95 or Windows 98
- Intel i486DX4 processor or faster (pentium 100 MHz or faster recommended)
- At least 16 MB RAM
- At least 10 MB of hard disk space
- 640 × 480 pixel display (800 × 600 pixel display recommended)

■ SOFTWARE INSTALLATION

NOTE: Before using the program, make a backup copy of the original disk. After making a backup copy, keep the original disk in a safe place.

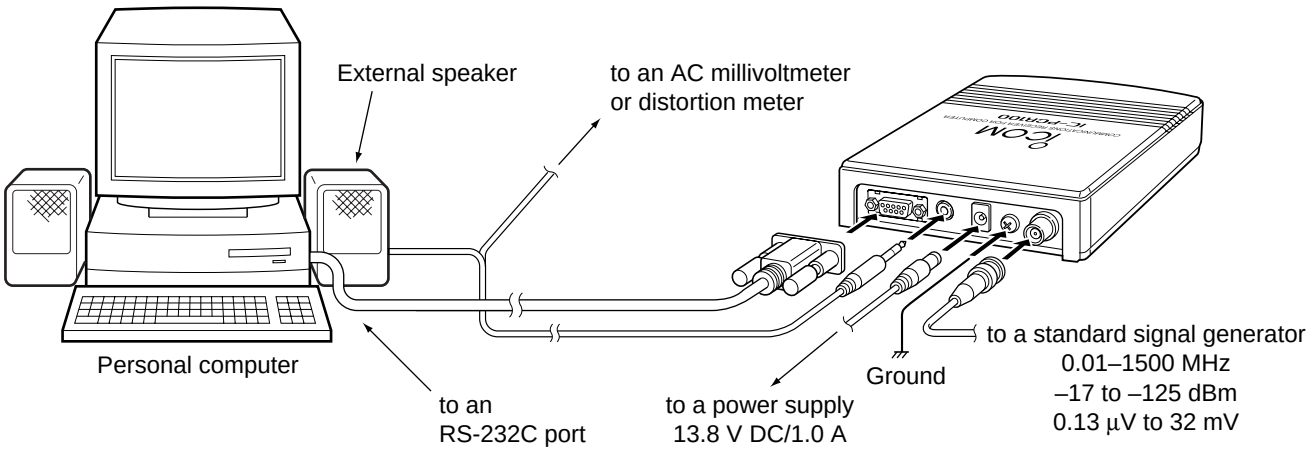
① Boot up Windows.
 - Quit all applications when Windows is running.
② Insert the backup disk 1 into the appropriate floppy drive.
③ Select 'Run' from the [Start] menu.
④ Type the setup program name using the full path name, then push the [Enter] key. (A:\ setup [Enter])
⑤ Follow the prompts.
⑥ Program group 'IC-PCR100' appears in the 'Programs' folder of the [Start] menu.

■ OPERATING INSTRUCTIONS

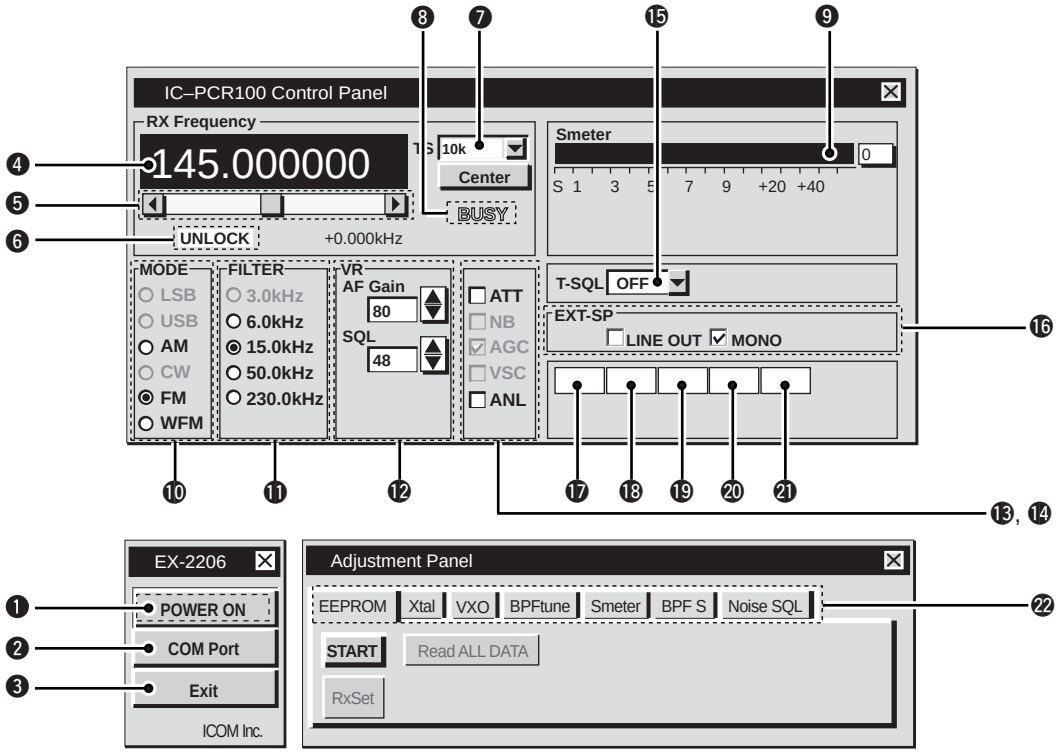
The adjustment program window contains 3 panels; the Power Panel, Control Panel and Adjustment Panel. The Power Panel will appear at start up the program.

① Connect IC-PCR100 and PC with an RS-232C serial cable.
② Boot up Windows.
③ Click the "EX-2206 for IC-PCR100" in the program group 'IC-PCR100' to start the program.
 • The Power Panel appears.
④ Click "POWER ON" on the Power panel.
 • Control Panel and Adjustment Panel appear.
⑤ Click "START" on the Adjustment Panel when starting the SOFTWARE adjustment.
 • Data panel appears at the bottom side of the Adjustment panel.
⑥ Click "Read ALL DATA" on the Adjustment Panel.
 • Application reads adjustment data of the connected receiver.
⑦ Set or modify adjustment data as desired. See the following SOFTWARE adjustments.

■ BASIC CONNECTION



■ PANEL DESCRIPTIONS



• POWER PANEL

❶ POWER button
Turns IC-PCR100 on and off.

❷ COM port button
Used to select a COM port.

❸ EXIT button
Quits the program.

• CONTROL PANEL

❹ FREQENCY indication
Indicates or inputs the receive frequency.

❺ FREQUENCY scroll bar
Used to change the receive frequency. Moving the button to the right increases the frequency; to the left decreases the frequency.

❻ UNLOCK indicator
Appears when the PLL is unlocked.

❼ Tuning step button
Used to change the tuning step.

❽ BUSY indicator
Appears when receiving a signal or when signal noise opens the squelch.

❾ S-meter indicator
Indicates the receive signal strength.

❿ Receive mode buttons
Select a receive mode.

⓫ FILTER (IF filter) buttons
Change the IF filter in use.

⓬ Volume buttons
Adjust the audio output, squelch level.

⓭ ATT (Attenuator) button
Turns the attenuator on and off.

⓱ ANL (Automatic noise limiter) button
Turns the ANL function on and off. The ANL removes noise components from an AM signal.

⓯ T-SQL (Tone squelch) button
Indicates or selects tone frequency for the tone squelch.

⓰ External speaker button
Indicates or select external speaker.

⓱ AD1 indicator
No function

⓲ AD2 (SMAD) indicator
Indicates voltage level for the S-meter.

⓳ AD3 (CTAD) indicator
Indicates voltage level for the CTCSS decoded signal.

⓴ AD4 (L1AD) indicator
Indicates the 1st LO PLL lock voltage level.

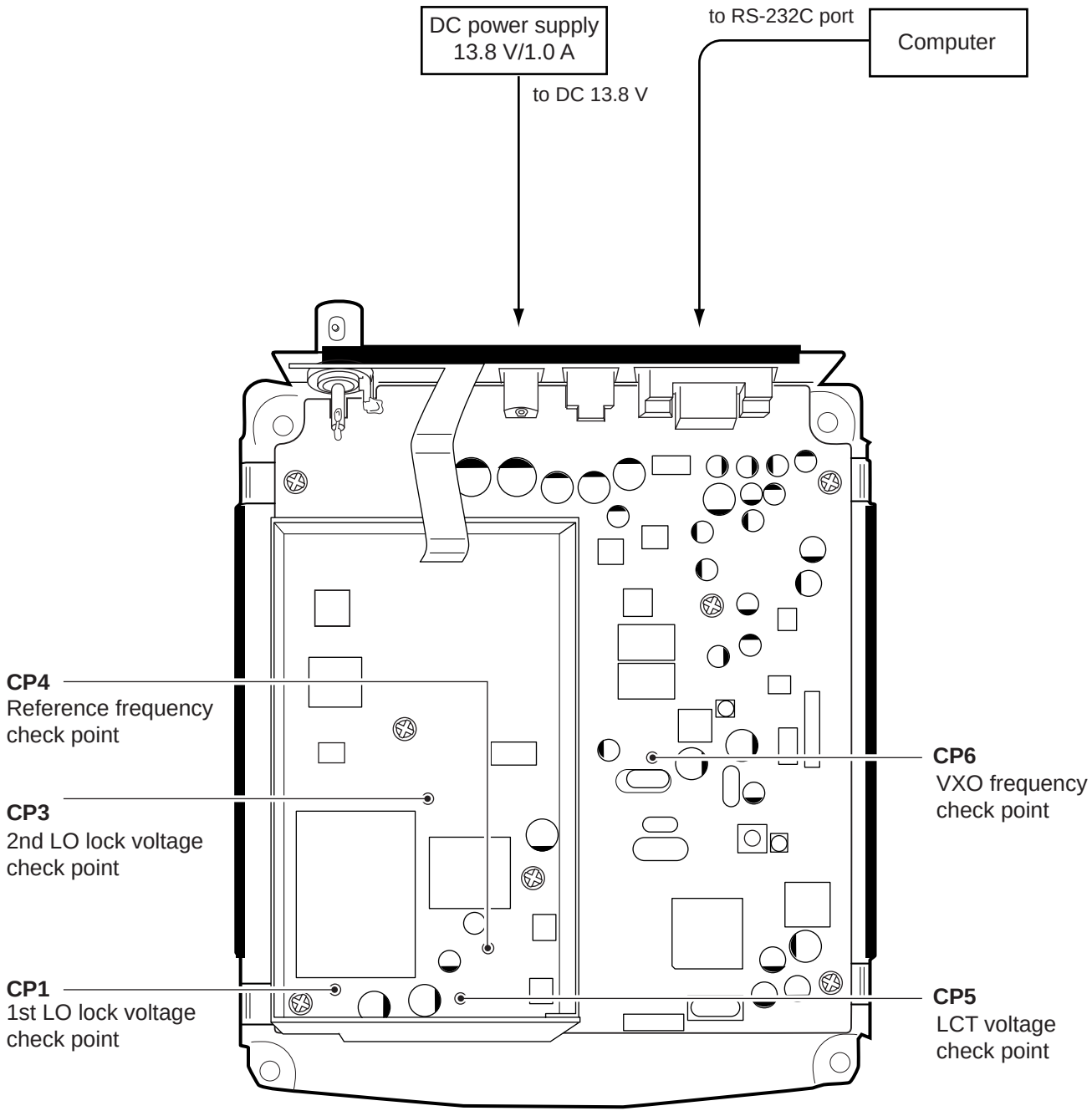
㉑ AD5 (NOIN) indicator
Indicates noise pulse voltage level for the noise squelch.

• ADJUSTMENT PANEL

㉒ Item select buttons
Used to select the adjustment items.

5-2 PLL ADJUSTMENTS

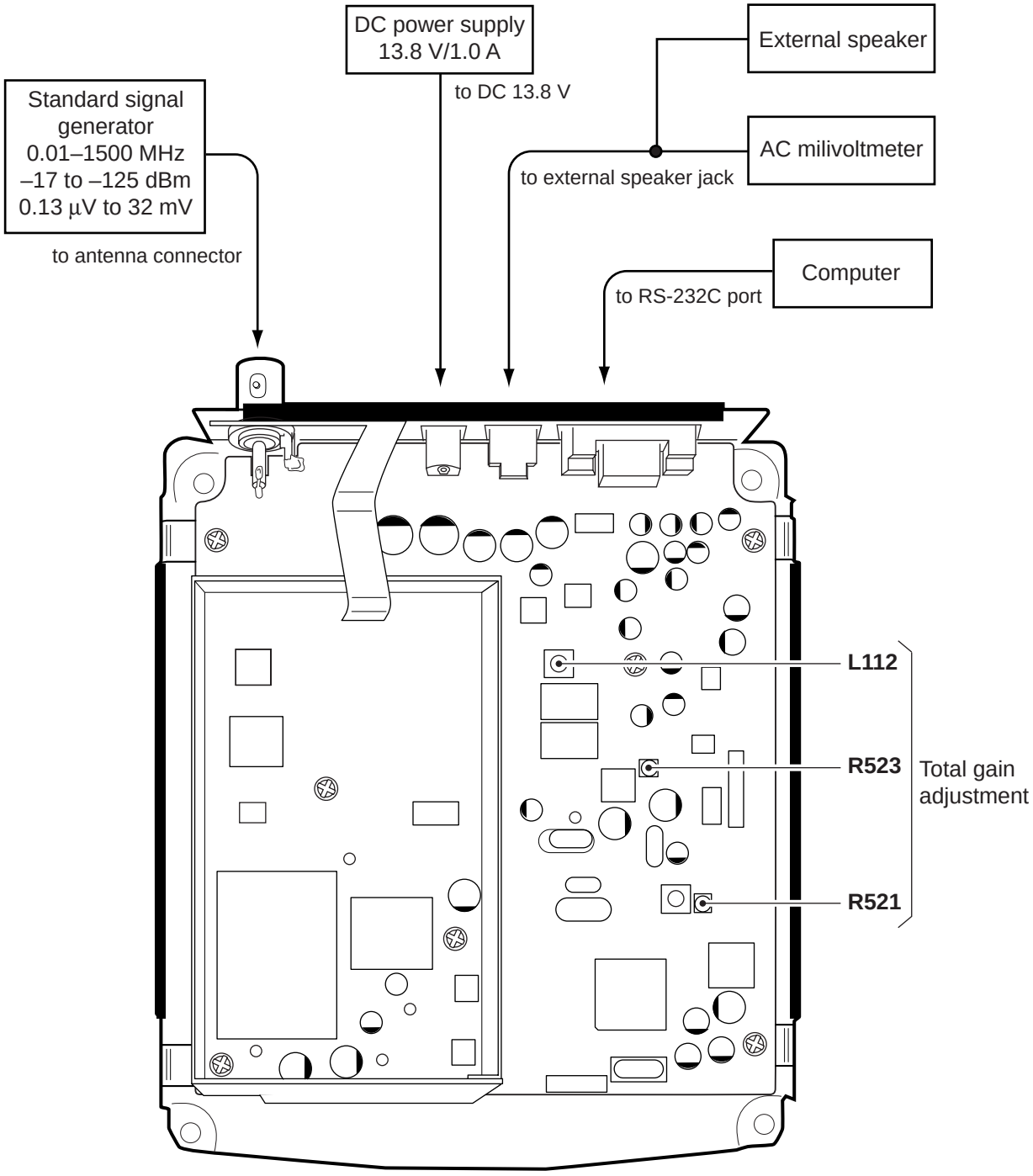
ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT
			UNIT	LOCATION		
REFERENCE FREQUENCY	1	• Display freq. : 800.0000 MHz	MAIN	Connect a frequency counter to check point CP4.	256.0000 MHz	Use the adjustment software. **(see page 5-7)**
VXO FREQUENCY	1	• Display freq. : 100.0040 MHz	MAIN	Connect a frequency counter to check point CP6.	10.2510 MHz	Use the adjustment software. **(see page 5-7)**
	2	• Display freq. : 100.0025 MHz			10.2525 MHz	
	3	• Display freq. : 100.0000 MHz			10.2550 MHz	
	4	Repeat steps 1–3 several times.				
	5	• Display freq. : 800.0000 MHz	MAIN	Connect a frequency counter to check point CP6.	10.2500 MHz	Use the adjustment software. **(see page 5-7)**
	6	• Display freq. : 800.0025 MHz			10.2525 MHz	
	7	• Display freq. : 800.0040 MHz			10.2540 MHz	
	8	Repeat steps 5–7 several times.				
1ST LO PLL LOCK VOLTAGE	1	• Display freq. : 265.7000 MHz	MAIN	Connect a digital multi-meter or oscilloscope to check point CP1.	1.5–5.5 V	Verify
	2	• Display freq. : 383.2000 MHz			13.5–17.7 V	
	3	• Display freq. : 383.3000 MHz			2.5–6.5 V	
	4	• Display freq. : 483.2000 MHz			10.5–14.5 V	
	5	• Display freq. : 483.3000 MHz			1.0–5.0 V	
	6	• Display freq. : 633.2000 MHz			12.5–17.7 V	
	7	• Display freq. : 633.3000 MHz			5.0–9.0 V	
	8	• Display freq. : 799.9000 MHz			14.0–19.2 V	
2ND LO PLL LOCK VOLTAGE	1	• Display freq. : 265.0000 MHz	MAIN	Connect a digital multi-meter or oscilloscope to check point CP3.	2.4–6.4 V	Verify
	2	• Display freq. : 266.0000 MHz			2.5–6.5 V	
	3	• Display freq. : 267.0000 MHz			2.3–6.3 V	
LCT TERMINAL	1	• Display freq. : Any frequency of the 1st LO and 2nd LO are locked.	MAIN	Connect a digital multi-meter or oscilloscope to check point CP5.	Less than 1.5 V	Verify


DC power supply
13.8 V/1.0 A
to DC 13.8 V
to RS-232C port
Computer
CP4
Reference frequency
check point
CP3
2nd LO lock voltage
check point
CP1
1st LO lock voltage
check point
CP6
VXO frequency
check point
CP5
LCT voltage
check point

5-3 IF PEAK AND TOTAL GAIN ADJUSTMENTS

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
IF PEAK	1	• Display freq. : 130.0200 MHz • Mode : FM • AGC : ON • Filter : 15 kHz • R521, R523 : Center • Connect a standard signal generator to [ANT] and set as: Frequency : 130.0200 MHz Level : 50 µV* (–73 dBm) Modulation : OFF • Receiving			Maximum S-meter level	Use the adjustment software. **(see page 5-7, Tuned BPF)**	
	2	• Display freq. : 149.9800 MHz • Set an SSG as : Frequency : 149.9800 MHz • Receiving					
TOTAL GAIN	1	• Display freq. : 149.9700 MHz • Mode : AM • Filter : 6.0 kHz • Set an SSG as : Frequency : 149.97000 MHz Level : 1.8 µV* (–102 dBm) Modulation : 1 kHz Deviation : 70 % • Receiving	Rear Panel	Connect an AC millivoltmeter to the [EXT SP] jack with an 8 Ω dummy load.	Maximum AF level	MAIN	L112
	2	• Mode : FM • Filter : 15.0 kHz • Set an SSG as : Mode : FM Level : 1.0 mV* (–47 dBm) Modulation : 1 kHz Deviation : 3.5 kHz • Receiving			Any AF level	Computer display	AF Gain
	3	• Mode : AM • Filter : 6.0 kHz • Set an SSG as : Level : 1.0 mV* (–47 dBm) Modulation : 1 kHz Deviation : 70 % • Receiving			+1 dB of AF level difference as step 2	MAIN	R523
	4	• Set an SSG as : Level : 100 mV* (–7 dBm) Modulation : 1 kHz Deviation : 70 % • Receiving	Rear panel	Connect a distortion meter to the [EXT SP] jack with an 8 Ω dummy load.	10 % distortion	MAIN	R521

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


DC power supply
13.8 V/1.0 A
to DC 13.8 V
External speaker
AC milivoltmeter
to external speaker jack
Standard signal
generator
0.01–1500 MHz
–17 to –125 dBm
0.13 µV to 32 mV
to antenna connector
Computer
to RS-232C port
L112
R523
R521
Total gain
adjustment

5-4 SOFTWARE ADJUSTMENT

ADJUSTMENT		ADJUSTMENT CONDITION	OPERATION
REFERENCE FREQUENCY	1	• Click adjustment item [Xtal] on the Adjustment Panel. • Connect a frequency counter to check point CP4 on the MAIN unit. • Display frequency : 800.0000 MHz	• Click "▲" or "▼" to set reference frequency to 256.0000 MHz.
VXO FREQUENCY	1	• Click adjustment item [VXO] on the adjustment panel. • Connect a frequency counter to check point CP6 on the MAIN unit. • Display frequency : 100.0040 MHz	• Click "▲" or "▼" to set VXO frequency to 10.2510 MHz.
	2	• Display frequency : 100.0025 MHz	• Click "▲" or "▼" to set VXO frequency to 10.2525 MHz.
	3	• Display frequency : 100.0000 MHz	• Click "▲" or "▼" to set VXO frequency to 10.2550 MHz.
	4	Repeat steps 1–3 several times.	
	5	• Display frequency : 800.0000 MHz	• Click "▲" or "▼" to set VXO frequency to 10.2500 MHz.
	6	• Display frequency : 800.0025 MHz	• Click "▲" or "▼" to set VXO frequency to 10.2525 MHz.
	7	• Display frequency : 800.0040 MHz	• Click "▲" or "▼" to set VXO frequency to 10.2540 MHz.
	8	Repeat steps 1–3 several times.	
TUNED BPF	1	• Click adjustment item [BPFtune] on the Adjustment Panel. • Select "BPF 4-1" at the left side of Adjustment Panel. • Manual/Auto Tune: Manual • Set an SSG as : Frequency : 50.02 MHz Level : 50 µV* (–73 dBm) Modulation : OFF • Receiving	• Move the scroll bar at the bottom side of Adjustment Panel, and set maximum S-meter level on the Control Panel. • Then, click "Write" switch to store into memory.
	2	• Same operation as step 1 for the listed frequencies. BPF 4-2 – 58.28 MHz BPF 4-3 – 58.32 MHz BPF 4-4 – 88.02 MHz BPF 4-5 – 108.28 MHz BPF 4-6 – 108.32 MHz BPF 4-7 – 130.02 MHz BPF 4-8 – 149.98 MHz BPF 5-1 – 150.02 MHz BPF 5-2 – 183.28 MHz BPF 5-3 – 183.32 MHz BPF 5-4 – 216.02 MHz BPF 5-5 – 265.68 MHz BPF 5-6 – 265.72 MHz BPF 5-7 – 300.02 MHz BPF 5-8 – 349.98 MHz BPF 6-1 – 350.02 MHz BPF 6-2 – 383.28 MHz BPF 6-3 – 383.32 MHz BPF 6-4 – 433.32 MHz BPF 6-5 – 483.28 MHz BPF 6-6 – 483.32 MHz BPF 6-7 – 558.32 MHz BPF 6-8 – 633.28 MHz BPF 6-9 – 633.32 MHz BPF 6-10 – 699.98 MHz BPF 7-1 – 700.02 MHz BPF 7-2 – 750.02 MHz BPF 7-3 – 799.98 MHz BPF 7-4 – 800.02 MHz BPF 7-5 – 916.68 MHz BPF 7-6 – 916.72 MHz BPF 7-7 – 1016.68 MHz BPF 7-8 – 1016.72 MHz BPF 7-9 – 1166.68 MHz BPF 7-10 – 1166.72 MHz BPF 7-11 – 1299.98 MHz • Receiving	
S-METER	1	• Click adjustment item [Smeter] on the Adjustment Panel. • Select "FM S0" at the left side of Adjustment Panel. • Set an SSG as : Frequency : 149.9700 MHz Mode : FM Level : 0.5 µV* (–113 dBm) Modulation : OFF • Receiving	• Click "Write" switch to store sampled data into memory.

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

SOFTWARE ADJUSTMENT (continued)

<table>
<tr><th colspan="2">ADJUSTMENT</th><th>ADJUSTMENT CONDITION</th><th>OPERATION</th></tr>
<tr><td>S-METER</td><td>2</td><td colspan="2">• Same operation as step 1 for the listed levels.
• Set an SSG as:
FM S3 : 1.3 µV* (–105 dBm)
FM S5 : 3.2 µV* (–97 dBm)
FM S7 : 13 µV* (–85 dBm)
FM S9 : 50 µV* (–73 dBm)
FM S9+20 : 180 µV* (–62 dBm)
FM S9+40 : 630 µV* (–51 dBm)
FM S9+60 : 2.5 mV* (–39 dBm)
WFM S0 : 0.79 µV* (–109 dBm)
WFM S3 : 1.6 µV* (–103 dBm)
WFM S5 : 3.2 µV* (–97 dBm)
WFM S7 : 13 µV* (–85 dBm)
WFM S9 : 50 µV* (–73 dBm)
WFM S9+20 : 180 µV* (–62 dBm)
WFM S9+40 : 630 µV* (–51 dBm)
WFM S9+60 : 2.5 mV* (–39 dBm)
• Receiving</td></tr>
<tr><td rowspan="2">S-METER FLAT</td><td>1</td><td>• Click adjustment item [BPF S] on the Adjustment Panel.
• Select “BPF0” at the left side of Adjustment Panel.
• Set an SSG as :
Frequency : 1.02 MHz
Level : 50 µV* (–73 dBm)
Modulation : OFF
• Receiving</td><td>• Click “Write” switch to store sampled data into memory.</td></tr>
<tr><td>2</td><td colspan="2">• Same adjustment as step 1 for the listed BPFs frequencies.
BPF 1 – 7.02 MHz
BPF 2 – 21.02 MHz
BPF 3 – 40.02 MHz
BPF 4-1 – 50.02 MHz
BPF 4-2 – 58.28 MHz
BPF 4-3 – 58.32 MHz
BPF 4-4 – 88.02 MHz
BPF 4-5 – 108.28 MHz
BPF 4-6 – 108.32 MHz
BPF 4-7 – 130.02 MHz
BPF 4-8 – 149.98 MHz
BPF 5-1 – 150.02 MHz
BPF 5-2 – 183.28 MHz
BPF 5-3 – 183.32 MHz
BPF 5-4 – 216.02 MHz
BPF 5-5 – 265.68 MHz
BPF 5-6 – 265.72 MHz
BPF 5-7 – 300.02 MHz
BPF 5-8 – 349.98 MHz
BPF 6-1 – 350.02 MHz
BPF 6-2 – 383.28 MHz
BPF 6-3 – 383.32 MHz
BPF 6-4 – 433.32 MHz
BPF 6-5 – 483.28 MHz
BPF 6-6 – 483.32 MHz
BPF 6-7 – 558.32 MHz
BPF 6-8 – 633.28 MHz
BPF 6-9 – 633.32 MHz
BPF 6-10 – 699.98 MHz
BPF 7-1 – 700.02 MHz
BPF 7-2 – 750.02 MHz
BPF 7-3 – 799.98 MHz
BPF 7-4 – 800.02 MHz
BPF 7-5 – 916.68 MHz
BPF 7-6 – 916.72 MHz
BPF 7-7 – 1016.68 MHz
BPF 7-8 – 1016.72 MHz
BPF 7-9 – 1166.68 MHz
BPF 7-10 – 1166.72 MHz
BPF 7-11 – 1299.98 MHz
• Receiving</td></tr>
<tr><td rowspan="4">NOISE SQUELCH</td><td>1</td><td>• Click adjustment item [Noise SQL] on the Adjustment Panel.
• Display frequency : 149.9700 MHz
• Mode : FM
• Filter : 15 kHz
• Set an SSG as :
Frequency : 149.9700 MHz
Mode : FM
Level : 0.16 µV* (–123 dBm)
Modulation : 1 kHz
Deviation : 3.5 kHz
• Receiving</td><td>• Select “Thresh 15 k” and click “Write” switch for Thresh level.</td></tr>
<tr><td>2</td><td>• Set an SSG as :
Level : 0.5 µV* (–113 dBm)
• Receiving</td><td>• Select “Tight 15 k” and click “Write” switch for Tight level.</td></tr>
<tr><td>3</td><td>• Filter : 6 kHz
• Set an SSG as :
Level : 0.16 µV* (–123 dBm)
Modulation : 1 kHz
Deviation : 1.75 kHz
• Receiving</td><td>• Select “Thresh 6 k” and click “Write” switch for Thresh level.</td></tr>
<tr><td>4</td><td>• Set an SSG as :
Level : 0.5 µV* (–115 dBm)
• Receiving</td><td>• Select “Tight 6 k” and click “Write” switch for Tight level.</td></tr>
</table>

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

SECTION 6 PARTS LIST

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1130007510	S.IC	BU4094BCFV-E1
IC3	1130007510	S.IC	BU4094BCFV-E1
IC4	1110004470	S.IC	µPC2721GV-E1
IC5	1110004470	S.IC	µPC2721GV-E1
IC6	1110004610	S.IC	µPB1508GV-E1
IC7	1190000920	S.IC	LA1832M-TE-L
IC8	1190000930	S.IC	MC145220DT-R2
IC9	1120002570	S.IC	µPD4723GS-GJG-E1
IC10	1110003200	S.IC	TA31136FN (EL)
IC11	1110003800	S.IC	NJM2904V-TE1
IC13	1110003800	S.IC	NJM2904V-TE1
IC14	1130008090	S.IC	BU4066BCFV-E1
IC15	1180000970	S.IC	AN78L05M-(E1)
IC16	1180001070	S.IC	TA7805F (TE16L)
IC17	1180001250	S.IC	TA7808F (TE16L)
IC18	1110002350	S.IC	BA6161F
IC19	1110004450	S.IC	PST592DMT
IC20	1130008340	S.IC	X25020SI-2.7T6
IC21	1140007790	S.IC	HD6433644A13H [USA-1]
	1140007780	S.IC	HD6433644A12H except [USA-1]
IC22	1120002170	S.IC	M5223FP
IC23	1110004490	S.IC	M62429FP 700C
IC24	1110003800	S.IC	NJM2904V-TE1
IC25	1110002420	S.IC	NJM2073M-T1
IC26	1110004080	S.IC	µPC2709T-E3
IC27	1130004200	S.IC	TC4S66F (TE85R)
IC29	1130004200	S.IC	TC4S66F (TE85R)
IC30	1110003690	S.IC	M62354GP 75EC
IC31	1130004200	S.IC	TC4S66F (TE85R)
Q1	1530003280	S.TRANSISTOR	2SC4211-6-TL
Q2	1590000430	S.TRANSISTOR	DTC144EUA T106
Q3	1590000720	S.TRANSISTOR	DTA144EUA T106
Q4	1590002010	S.TRANSISTOR	XP1114 (TX)
Q5	1590002010	S.TRANSISTOR	XP1114 (TX)
Q6	1590002010	S.TRANSISTOR	XP1114 (TX)
Q7	1590002010	S.TRANSISTOR	XP1114 (TX)
Q8	1580000630	S.FET	3SK228XR-TL
Q9	1580000630	S.FET	3SK228XR-TL
Q10	1580000630	S.FET	3SK228XR-TL
Q11	1580000630	S.FET	3SK228XR-TL
Q12	1560000720	S.FET	2SK2171-4-TD
Q13	1580000540	S.FET	3SK131-T2-LA
Q14	1530003550	S.TRANSISTOR	2SC5193-T1
Q15	1530003550	S.TRANSISTOR	2SC5193-T1
Q17	1590000680	S.TRANSISTOR	DTC114EUA T106
Q18	1530003550	S.TRANSISTOR	2SC5193-T1
Q19	1530003550	S.TRANSISTOR	2SC5193-T1
Q20	1590000680	S.TRANSISTOR	DTC114EUA T106
Q21	1590001330	S.TRANSISTOR	DTA114EUA T106
Q22	1530003450	S.TRANSISTOR	2SC4835-R (TX)
Q23	1590000720	S.TRANSISTOR	DTA144EUA T106
Q24	1560000540	S.FET	2SK880-Y (TE85R)
Q25	1560000540	S.FET	2SK880-Y (TE85R)
Q26	1530003000	S.TRANSISTOR	2SC4117-BL (TE85R)
Q27	1530003450	S.TRANSISTOR	2SC4835-R (TX)
Q29	1580000540	S.FET	3SK131-T2-LA
Q30	1590002010	S.TRANSISTOR	XP1114 (TX)
Q31	1530003450	S.TRANSISTOR	2SC4835-R (TX)
Q32	1590000430	S.TRANSISTOR	DTC144EUA T106
Q33	1530003000	S.TRANSISTOR	2SC4117-BL (TE85R)
Q34	1530003550	S.TRANSISTOR	2SC5193-T1
Q35	1530003450	S.TRANSISTOR	2SC4835-R (TX)
Q36	1560000540	S.FET	2SK880-Y (TE85R)
Q37	1530003000	S.TRANSISTOR	2SC4117-BL (TE85R)
Q38	1560000560	S.FET	2SK882-GR (TE85L)
Q39	1590000430	S.TRANSISTOR	DTC144EUA T106
Q40	1530003280	S.TRANSISTOR	2SC4211-6-TL
Q41	1590001650	S.TRANSISTOR	XP4601 (TX)
Q42	1560000560	S.FET	2SK882-GR (TE85L)
Q43	1530003280	S.TRANSISTOR	2SC4211-6-TL
Q44	1590000680	S.TRANSISTOR	DTC114EUA T106
Q45	1530003280	S.TRANSISTOR	2SC4211-6-TL
Q46	1510000880	S.TRANSISTOR	2SA1622-6-TL

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
Q47	1510000880	S.TRANSISTOR	2SA1622-6-TL
Q48	1590001770	S.TRANSISTOR	XP1213 (TX)
Q49	1530003280	S.TRANSISTOR	2SC4211-6-TL
Q51	1590002010	S.TRANSISTOR	XP1114 (TX)
Q52	1590001330	S.TRANSISTOR	DTA114EUA T106
Q54	1520000650	S.TRANSISTOR	2SB1201-S-TL
Q55	1590000430	S.TRANSISTOR	DTC144EUA T106
Q56	1590001960	S.TRANSISTOR	XP4311 (TX)
Q57	1590001960	S.TRANSISTOR	XP4311 (TX)
Q58	1530003280	S.TRANSISTOR	2SC4211-6-TL
Q59	1530003280	S.TRANSISTOR	2SC4211-6-TL
Q61	1590002010	S.TRANSISTOR	XP1114 (TX)
Q64	1590001960	S.TRANSISTOR	XP4311 (TX)
Q66	1530003280	S.TRANSISTOR	2SC4211-6-TL
Q67	1530003280	S.TRANSISTOR	2SC4211-6-TL
Q70	1590000680	S.TRANSISTOR	DTC114EUA T106
Q71	1530003280	S.TRANSISTOR	2SC4211-6-TL
Q72	1530003280	S.TRANSISTOR	2SC4211-6-TL
D1	1750000580	S.DIODE	1SV307 (TPH3)
D2	1750000580	S.DIODE	1SV307 (TPH3)
D3	1790000620	S.DIODE	MA77 (TX)
D4	1750000580	S.DIODE	1SV307 (TPH3)
D5	1790000620	S.DIODE	MA77 (TX)
D6	1790000620	S.DIODE	MA77 (TX)
D7	1790000620	S.DIODE	MA77 (TX)
D8	1790000620	S.DIODE	MA77 (TX)
D9	1750000580	S.DIODE	1SV307 (TPH3)
D10	1750000580	S.DIODE	1SV307 (TPH3)
D11	1720000660	S.VARICAP	1SV288 (TPH2)
D12	1720000660	S.VARICAP	1SV288 (TPH2)
D13	1720000660	S.VARICAP	1SV288 (TPH2)
D14	1720000660	S.VARICAP	1SV288 (TPH2)
D15	1750000580	S.DIODE	1SV307 (TPH3)
D16	1750000580	S.DIODE	1SV307 (TPH3)
D18	1720000270	S.VARICAP	1SV217 (TPH2)
D19	1720000270	S.VARICAP	1SV217 (TPH2)
D20	1750000580	S.DIODE	1SV307 (TPH3)
D21	1750000580	S.DIODE	1SV307 (TPH3)
D22	1720000270	S.VARICAP	1SV217 (TPH2)
D23	1720000500	S.VARICAP	1SV230 (TPH3)
D24	1720000500	S.VARICAP	1SV230 (TPH3)
D25	1750000580	S.DIODE	1SV307 (TPH3)
D26	1750000580	S.DIODE	1SV307 (TPH3)
D27	1720000500	S.VARICAP	1SV230 (TPH3)
D28	1720000500	S.VARICAP	1SV230 (TPH3)
D29	1720000500	S.VARICAP	1SV230 (TPH3)
D30	1720000500	S.VARICAP	1SV230 (TPH3)
D31	1720000500	S.VARICAP	1SV230 (TPH3)
D32	1720000500	S.VARICAP	1SV230 (TPH3)
D33	1750000580	S.DIODE	1SV307 (TPH3)
D34	1750000520	S.DIODE	DAN222TL
D35	1750000580	S.DIODE	1SV307 (TPH3)
D36	1750000580	S.DIODE	1SV307 (TPH3)
D37	1790000620	S.DIODE	MA77 (TX)
D38	1790000620	S.DIODE	MA77 (TX)
D39	1750000580	S.DIODE	1SV307 (TPH3)
D40	1720000260	S.VARICAP	1SV214 (TPH2)
D41	1750000580	S.DIODE	1SV307 (TPH3)
D42	1750000580	S.DIODE	1SV307 (TPH3)
D43	1720000260	S.VARICAP	1SV214 (TPH2)
D44	1750000580	S.DIODE	1SV307 (TPH3)
D46	1790000620	S.DIODE	MA77 (TX)
D47	1790000620	S.DIODE	MA77 (TX)
D48	1720000500	S.VARICAP	1SV230 (TPH3)
D49	1790000620	S.DIODE	MA77 (TX)
D50	1790000620	S.DIODE	MA77 (TX)
D51	1750000550	S.DIODE	1SS355 TE-17
D53	1750000550	S.DIODE	1SS355 TE-17
D54	1790000620	S.DIODE	MA77 (TX)
D56	1750000630	S.VARICAP	HVU359TRF
D57	1790000620	S.DIODE	MA77 (TX)
D58	1790000620	S.DIODE	MA77 (TX)
D59	1790000620	S.DIODE	MA77 (TX)
D60	1790000620	S.DIODE	MA77 (TX)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
D61	1750000520	S.DIODE	DAN222TL
D62	1750000550	S.DIODE	1SS355 TE-17
D63	1790001560	S.DIODE	1SS372 (TE85R)
D64	1750000550	S.DIODE	1SS355 TE-17
D65	1750000550	S.DIODE	1SS355 TE-17
D68	1710000840	S.DIODE	1SR154-400 TE25
D70	1750000550	S.DIODE	1SS355 TE-17
D72	1720000270	S.VARICAP	1SV217 (TPH2)
D73	1720000270	S.VARICAP	1SV217 (TPH2)
D74	1720000270	S.VARICAP	1SV217 (TPH2)
D75	1750000580	S.DIODE	1SV307 (TPH3)
D77	1720000270	S.VARICAP	1SV217 (TPH2)
D80	1720000660	S.VARICAP	1SV288 (TPH2)
D81	1720000660	S.VARICAP	1SV288 (TPH2)
D82	1720000660	S.VARICAP	1SV288 (TPH2)
D83	1720000660	S.VARICAP	1SV288 (TPH2)
D87	1750000520	S.DIODE	DAN222TL
D88	1750000630	S.VARICAP	HVU359TRF
D89	1790001560	S.DIODE	1SS372 (TE85R)
D90	1790000620	S.DIODE	MA77 (TX)
D91	1790000620	S.DIODE	MA77 (TX)
D92	1790000620	S.DIODE	MA77 (TX)
D93	1790000620	S.DIODE	MA77 (TX)
D94	1790000620	S.DIODE	MA77 (TX)
D95	1790000620	S.DIODE	MA77 (TX)
D96	1790000620	S.DIODE	MA77 (TX)
D97	1790000620	S.DIODE	MA77 (TX)
D98	1790000620	S.DIODE	MA77 (TX)
D99	1790000620	S.DIODE	MA77 (TX)
D100	1790000620	S.DIODE	MA77 (TX)
D101	1730002540	S.ZENER	MA8130-L (TX)
D102	1750000550	S.DIODE	1SS355 TE-17
D103	1750000550	S.DIODE	1SS355 TE-17
D104	1750000550	S.DIODE	1SS355 TE-17
FI1	2040001270	S.SAW	EFCH266MWNT1
FI2	2020001440	CERAMIC	SFE10.7MV
FI3	2020001450	CERAMIC	SFT10.7MS2-A
FI6	2020001460	CERAMIC	CFWS450HT
FI7	2020001210	CERAMIC	CFWS450E
X1	6050010600	XTAL	CR-630 (10.250 MHz)
X2	6070000210	S.DISCRIMINATOR	CDBCA450CX24
X3	6060000710	CERAMIC	CSB456F15
X4	6070000220	DISCRIMINATOR	CDA10.7MG46-A
X5	6050010590	S.XTAL	CR-629 (12.8000 MHz)
X6	6050009870	S.XTAL	CR-567 (9.8304 MHz)
L1	6200001920	S.COIL	ELJNC R15K-F
L2	6200002520	S.COIL	ELJNC R18K-F
L3	6200004900	S.COIL	ELJFC 5R6K-F
L4	6200004900	S.COIL	ELJFC 5R6K-F
L5	6200005500	S.COIL	NL 322522T-471J
L6	6200005540	S.COIL	ELJNC R47K-F
L7	6200005200	S.COIL	ELJNC R68K-F
L8	6200007380	S.COIL	ELJFC 8R2K-F
L9	6200007830	S.COIL	ELJFC 4R7K-F
L10	6200003350	S.COIL	ELJNC R27K-F
L11	6200002920	S.COIL	ELJNC R33K-F
L12	6200005540	S.COIL	ELJNC R47K-F
L13	6200005540	S.COIL	ELJNC R47K-F
L14	6200003300	S.COIL	ELJNC R22K-F
L15	6200003350	S.COIL	ELJNC R27K-F
L16	6200005550	S.COIL	ELJFC 100K-F
L17	6200007820	S.COIL	ELJND R33J 0.33U
L18	6200001630	S.COIL	ELJNC R10K-F
L19	6200007340	S.COIL	ELJND R22J 0.22U
L20	6200007290	S.COIL	ELJND 56NJF
L21	6200007280	S.COIL	ELJND 47NJF
L22	6200002240	S.COIL	ELJFC 2R2K-F
L23	6200007290	S.COIL	ELJND 56NJF
L24	6200007280	S.COIL	ELJND 47NJF
L25	6200007300	S.COIL	ELJND 68NJF
L26	6200005550	S.COIL	ELJFC 100K-F
L27	6200007280	S.COIL	ELJND 47NJF
L28	6200007280	S.COIL	ELJND 47NJF
L29	6200007280	S.COIL	ELJND 47NJF
L31	6200007290	S.COIL	ELJND 56NJF

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
L32	6200007070	S.COIL	ELJND 15NKF
L33	6200007070	S.COIL	ELJND 15NKF
L34	6200004770	S.COIL	ELJNC R56J-F
L35	6200005690	S.COIL	ELJRE 18NG-F
L36	6200005690	S.COIL	ELJRE 18NG-F
L37	6200007290	S.COIL	ELJND 56NJF
L38	6200001620	S.COIL	ELJFC 1R0K-F
L39	6200005540	S.COIL	ELJNC R47K-F
L40	6200005690	S.COIL	ELJRE 18NG-F
L41	6200005700	S.COIL	ELJRE 22NG-F
L42	6200005700	S.COIL	ELJRE 22NG-F
L44	6200001630	S.COIL	ELJNC R10K-F
L45	6200005650	S.COIL	ELJRE 8N2Z-F
L46	6200005650	S.COIL	ELJRE 8N2Z-F
L47	6200005700	S.COIL	ELJRE 22NG-F
L48	6200005540	S.COIL	ELJNC R47K-F
L49	6200006980	S.COIL	ELJRE R10G-F
L51	6200005630	S.COIL	ELJRE 5N6Z-F
L52	6200006770	S.COIL	ELJRE 1N5Z-F
L53	6200005590	S.COIL	ELJRE 2N7Z-F
L54	6200006980	S.COIL	ELJRE R10G-F
L56	6200005630	S.COIL	ELJRE 5N6Z-F
L58	6200006980	S.COIL	ELJRE R10G-F
L59	6140000640	COIL	LR-86
L60	6200002240	S.COIL	ELJFC 2R2K-F
L61	6140001500	COIL	LR-171
L63	6200005740	S.COIL	ELJRE 47NG-F
L64	6200005720	S.COIL	ELJRE 33NG-F
L65	6200001620	S.COIL	ELJFC 1R0K-F
L66	6200005620	S.COIL	ELJRE 4N7Z-F
L67	6200005650	S.COIL	ELJRE 8N2Z-F
L68	6200001620	S.COIL	ELJFC 1R0K-F
L69	6200001620	S.COIL	ELJFC 1R0K-F
L70	6200005720	S.COIL	ELJRE 33NG-F
L71	6200005680	S.COIL	ELJRE 15NG-F
L72	6200005680	S.COIL	ELJRE 15NG-F
L73	6200003300	S.COIL	ELJNC R22K-F
L74	6200006040	S.COIL	LQP11A 5N6C14
L75	6200006070	S.COIL	LQP11A 10NG14
L76	6200006070	S.COIL	LQP11A 10NG14
L77	6200005700	S.COIL	ELJRE 22NG-F
L78	6200003300	S.COIL	ELJNC R22K-F
L79	6200001630	S.COIL	ELJNC R10K-F
L80	6200006020	S.COIL	LQP11A 3N9C14
L81	6200006040	S.COIL	LQP11A 5N6C14
L82	6200006040	S.COIL	LQP11A 5N6C14
L83	6200005660	S.COIL	ELJRE 10NG-F
L84	6200001630	S.COIL	ELJNC R10K-F
L85	6200001620	S.COIL	ELJFC 1R0K-F
L87	6200007420	S.COIL	ELJFC 101K-F 100U
L90	6200003950	S.COIL	HF50ACC 322513-T
L91	6180002650	COIL	RCR-875D-472K
L92	6200003520	S.COIL	ELJFB 102K-F
L93	6200007840	S.COIL	LQN6C101M04
L95	6200003950	S.COIL	HF50ACC 322513-T
L96	6200003950	S.COIL	HF50ACC 322513-T
L102	6200007410	S.COIL	ELJFC 470K-F 47U
L108	6150004880	S.COIL	LS-513
L110	6200003230	S.COIL	NL 322522T-181J
L112	6150004840	S.COIL	LS-510
L124	6200002520	S.COIL	ELJNC R18K-F
L125	6200006150	S.COIL	LQP21A 47NG14
L126	6200006140	S.COIL	LQP21A 39NG14
L127	6200002240	S.COIL	ELJFC 2R2K-F
L128	6200002240	S.COIL	ELJFC 2R2K-F
L129	6200005710	S.COIL	ELJRE 27NG-F
L130	6200005720	S.COIL	ELJRE 33NG-F
L131	6200005720	S.COIL	ELJRE 33NG-F
L138	6200001620	S.COIL	ELJFC 1R0K-F
L139	6200006380	S.COIL	ELJFC 150K 15U
L141	6200005690	S.COIL	ELJRE 18NG-F
L142	6200005690	S.COIL	ELJRE 18NG-F
L143	6200001620	S.COIL	ELJFC 1R0K-F
L144	6200001620	S.COIL	ELJFC 1R0K-F
L145	6200005500	S.COIL	NL 322522T-471J
L146	6200005500	S.COIL	NL 322522T-471J
L147	6200007420	S.COIL	ELJFC 101K-F 100U
L148	6200005550	S.COIL	ELJFC 100K-F
L149	6200005550	S.COIL	ELJFC 100K-F
L150	6200005740	S.COIL	ELJRE 47NG-F
L152	6200005680	S.COIL	ELJRE 15NG-F
L153	6200005740	S.COIL	ELJRE 47NG-F

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
L154	6200005680	S.COIL	ELJRE 15NG-F
L155	6200005680	S.COIL	ELJRE 15NG-F
L156	6200005690	S.COIL	ELJRE 18NG-F
L157	6200005690	S.COIL	ELJRE 18NG-F
L158	6200005720	S.COIL	ELJRE 33NG-F
L160	6200005700	S.COIL	ELJRE 22NG-F
L161	6200001620	S.COIL	ELJFC 1R0K-F
L162	6200002240	S.COIL	ELJFC 2R2K-F
L163	6200005690	S.COIL	ELJRE 18NG-F
L167	6200006980	S.COIL	ELJRE R10G-F
L168	6200006980	S.COIL	ELJRE R10G-F
L169	6200005500	S.COIL	NL 322522T-471J
L170	6200005500	S.COIL	NL 322522T-471J
L171	6200005500	S.COIL	NL 322522T-471J
L172	6200002520	S.COIL	ELJNC R18K-F
L173	6200005620	S.COIL	ELJRE 4N7Z-F
L174	6200005600	S.COIL	ELJRE 3N3Z-F
L176	6200005630	S.COIL	ELJRE 5N6Z-F
L177	6200002890	S.COIL	ELJFC 220K-F
L178	6200005630	S.COIL	ELJRE 5N6Z-F
L179	6200005500	S.COIL	NL 322522T-471J
L180	6200005700	S.COIL	ELJRE 22NG-F
L181	6200005700	S.COIL	ELJRE 22NG-F
R1	7030000330	S.RESISTOR	MCR10EZHJ 390 Ω (391)
R2	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R3	7030000230	S.RESISTOR	MCR10EZHJ 56 Ω (560)
R5	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R6	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R8	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R9	7030000020	S.RESISTOR	MCR10EZHJ 1 Ω (010)
R14	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R15	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R17	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R19	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R20	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R22	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R23	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R24	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R26	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)
R28	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R29	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R30	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R33	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R34	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R35	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R36	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)
R38	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R39	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R43	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R44	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R45	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)
R47	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R48	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R49	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R50	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R53	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R54	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R55	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)
R57	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R59	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R72	7030003310	S.RESISTOR	ERJ3GEYJ 820 V (82 Ω)
R73	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R74	7030007680	S.RESISTOR	ERJ8ENF 47R0V (47 Ω)
R75	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R76	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R77	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R79	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R80	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R81	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R82	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R83	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R84	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R87	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R88	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R89	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R90	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R92	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R93	7030003230	S.RESISTOR	ERJ3GEYJ 180 V (18 Ω)
R94	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R95	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R96	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R97	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R98	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R99	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R100	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R101	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R102	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R103	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R104	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R106	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R108	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R109	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R110	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R111	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R112	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R113	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R114	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R116	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R122	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R125	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R126	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R127	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R128	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R129	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R130	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R131	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R132	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R133	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R134	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R135	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R136	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R137	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R138	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R139	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R140	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R141	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R145	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R149	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R150	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R151	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R152	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R153	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R154	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R155	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R156	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R157	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R158	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R159	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R160	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R175	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R176	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R177	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R179	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R181	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R182	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R183	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R184	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R185	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R197	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R198	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R199	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R202	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R204	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R206	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R207	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R209	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R219	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R220	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R221	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R222	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R223	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R224	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R225	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R226	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R227	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R228	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R229	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R230	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R231	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R232	7030003350	S.RESISTOR	ERJ3GEYJ 181 V (180 Ω)
R233	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R234	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R235	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R240	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R241	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R242	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R243	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R245	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R246	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R247	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)
R248	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R249	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R250	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R251	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R252	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R253	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R256	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R257	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R258	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R259	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R260	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R261	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R262	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)
R263	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R264	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R266	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R267	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R268	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R270	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R271	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R272	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R274	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R275	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R277	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R278	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R279	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R281	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R282	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R284	7030003840	S.RESISTOR	ERJ3GEYJ 225 V (2.2 MΩ)
R285	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R288	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R289	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R290	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R291	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R292	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R293	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R310	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R311	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R312	7030003780	S.RESISTOR	ERJ3GEYJ 684 V (680 kΩ)
R313	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ)
R314	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R315	7030003840	S.RESISTOR	ERJ3GEYJ 225 V (2.2 MΩ)
R316	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R319	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R321	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R328	7030007990	S.RESISTOR	ERJ12YJ820H (82 Ω)
R329	7030006080	S.RESISTOR	ERJ1WYJ220H (22 Ω)
R330	7030008380	S.RESISTOR	ERJ1WYJ270H (27 Ω)
R331	7030007850	S.RESISTOR	ERJ8EN 1001V (1 kΩ)
R332	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R334	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R335	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R337	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R345	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R347	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R349	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R350	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R351	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R352	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R353	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R354	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R355	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R356	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R357	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R358	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R359	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R360	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R361	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R362	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R363	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R364	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R365	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R366	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R367	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R368	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R369	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R371	7030008380	S.RESISTOR	ERJ1WYJ270H (27 Ω)
R375	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R376	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R377	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R378	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R380	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R381	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R382	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R383	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R384	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R385	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R386	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R387	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R388	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R389	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R390	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R391	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R392	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R393	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R395	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R396	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)
R397	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R398	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R399	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R400	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R401	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R402	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R403	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R404	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R405	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)
R406	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R407	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R412	7030003230	S.RESISTOR	ERJ3GEYJ 180 V (18 Ω)
R413	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R419	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R449	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R450	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R452	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R453	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R454	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R455	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R457	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R463	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R467	7030005870	S.RESISTOR	RR0816R-104-D (100 kΩ)
R468	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R469	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R470	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)
R471	7030003230	S.RESISTOR	ERJ3GEYJ 180 V (18 Ω)
R473	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)
R474	7030003270	S.RESISTOR	ERJ3GEYJ 390 V (39 Ω)
R475	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R476	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R477	7030003270	S.RESISTOR	ERJ3GEYJ 390 V (39 Ω)
R478	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R480	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R481	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R482	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R485	7030003300	S.RESISTOR	ERJ3GEYJ 680 V (68 Ω)
R486	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R487	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R488	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R489	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R494	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R496	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)
R497	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R501	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R502	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R503	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R504	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R505	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R506	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R512	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R513	7030003230	S.RESISTOR	ERJ3GEYJ 180 V (18 Ω)
R514	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R515	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R516	7510000920	S.THERMISTOR	NTCCF2012 4CH 104KC-T
R517	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R518	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R520	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R521	7310004030	S.TRIMMER	EVM-1YSX50 B12 (101)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R523	7310004110	S.TRIMMER	EVM-1YSX50 B54 (503)
R525	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R526	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R527	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R528	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)
R529	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R531	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R532	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R533	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R534	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R536	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R537	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R538	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R539	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R540	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R542	7510000900	S.THERMISTOR	NTCCF2012 3SH 223KC-T
R544	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)
R545	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R546	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R548	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R549	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R554	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R556	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R557	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R558	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R560	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R562	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R564	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R565	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ)
R566	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R567	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ)
R568	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R584	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R585	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R586	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R587	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R588	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R589	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R590	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R591	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R592	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R593	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R595	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R596	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R597	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R598	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R599	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R606	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R607	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R611	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R612	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R613	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R614	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R616	7510000780	S.THERMISTOR	NTCCF2012 3SH 333KC-T
R617	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R618	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R621	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R622	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R623	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R624	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R625	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R626	7510000900	S.THERMISTOR	NTCCF2012 3SH 223KC-T
R627	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R628	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R629	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R630	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R631	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
C1	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C2	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C3	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C4	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C5	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C6	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C7	4030009990	S.CERAMIC	C1608 CH 1H 200J-T-A
C8	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C9	4030008560	S.CERAMIC	C1608 CH 1H 300J-T-A
C10	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C11	4030007100	S.CERAMIC	C1608 CH 1H 560J-T-A
C12	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C13	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C14	4030011280	S.CERAMIC	C1608 CH 1H 271J-T-A
C15	4030009980	S.CERAMIC	C1608 JB 1H 152K-T-A
C16	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C17	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C18	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C19	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C20	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C21	4030007120	S.CERAMIC	C1608 CH 1H 820J-T-A
C22	4030007060	S.CERAMIC	C1608 CH 1H 270J-T-A
C23	4030007150	S.CERAMIC	C1608 CH 1H 151J-T-A
C24	4030010760	S.CERAMIC	C1608 CH 1H 331J-T-A
C25	4030007160	S.CERAMIC	C1608 CH 1H 181J-T-A
C26	4030008650	S.CERAMIC	C1608 JB 1H 332K-T-A
C27	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C28	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C29	4030008470	S.CERAMIC	C1608 JB 1H 272K-T-A
C30	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C31	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C32	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C33	4030007080	S.CERAMIC	C1608 CH 1H 390J-T-A
C34	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C35	4030007080	S.CERAMIC	C1608 CH 1H 390J-T-A
C36	4030007150	S.CERAMIC	C1608 CH 1H 151J-T-A
C37	4030007120	S.CERAMIC	C1608 CH 1H 820J-T-A
C38	4030007170	S.CERAMIC	C1608 CH 1H 221J-T-A
C39	4030007160	S.CERAMIC	C1608 CH 1H 181J-T-A
C40	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C41	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C42	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C43	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C44	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C45	4030007170	S.CERAMIC	C1608 CH 1H 221J-T-A
C46	4030007110	S.CERAMIC	C1608 CH 1H 680J-T-A
C47	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C48	4030009980	S.CERAMIC	C1608 JB 1H 152K-T-A
C49	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C50	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C51	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C52	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C53	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C54	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C55	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C56	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C57	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C58	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C59	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C60	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C61	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C62	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C63	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C64	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C65	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C66	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C67	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C68	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C69	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C70	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C71	4030009990	S.CERAMIC	C1608 CH 1H 200J-T-A
C72	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C73	4030007100	S.CERAMIC	C1608 CH 1H 560J-T-A
C74	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C75	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C76	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C78	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C79	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C80	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C81	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C82	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C83	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C84	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C85	4030009530	S.CERAMIC	C1608 CH 1H 030B-T-A
C87	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C88	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C89	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C91	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C92	4030008750	S.CERAMIC	C1608 CH 1H 360J-T-A
C93	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C94	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C95	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C97	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C98	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C99	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C100	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C101	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C102	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C103	4030009530	S.CERAMIC	C1608 CH 1H 030B-T-A
C104	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C106	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C107	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C108	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C109	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C110	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C111	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C112	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C113	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C114	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C115	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C116	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C117	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C118	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C119	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C120	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C121	4030011770	S.CERAMIC	C1608 CH 1H 060B-T-A
C122	4030009350	S.CERAMIC	C1608 CH 1H 3R5B-T-A
C123	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C125	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C126	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C127	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C128	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C129	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C130	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C131	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C132	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C133	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C134	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C135	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C136	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C137	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C138	4030008560	S.CERAMIC	C1608 CH 1H 300J-T-A
C139	4030011810	S.CERAMIC	C1608 JB 1A 224K-T-N
C140	4030011770	S.CERAMIC	C1608 CH 1H 060B-T-A
C141	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C142	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C143	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C144	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C145	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C146	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C147	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C148	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C149	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C150	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C151	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C152	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C153	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C154	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C155	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C156	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C157	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A
C158	4030009560	S.CERAMIC	C1608 CH 1H R75B-T-A
C159	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A
C160	4030009530	S.CERAMIC	C1608 CH 1H 030B-T-A
C161	4030009550	S.CERAMIC	C1608 CH 1H 2R5B-T-A
C162	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C163	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C164	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C165	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C166	4030009540	S.CERAMIC	C1608 CH 1H 1R5B-T-A
C167	4030009510	S.CERAMIC	C1608 CH 1H 010B-T-A
C168	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A
C169	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C170	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C171	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C172	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C173	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C174	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C175	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C176	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C177	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C178	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C179	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C180	4030009510	S.CERAMIC	C1608 CH 1H 010B-T-A
C181	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C182	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C183	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C184	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C185	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-T-A
C186	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C187	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C188	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C189	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C190	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C191	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C192	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C193	4510006220	S.ELECTROLYTIC	ECEV1CA101UP
C194	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C195	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-T-A
C196	4030009530	S.CERAMIC	C1608 CH 1H 030B-T-A
C197	4030009530	S.CERAMIC	C1608 CH 1H 030B-T-A
C198	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C199	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C200	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C201	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C202	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C203	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-T-A
C204	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C205	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C206	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C207	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C208	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C209	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C210	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C211	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C212	4030012600	S.CERAMIC	C2012 JB 1A 105M-T-A
C213	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C214	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C215	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C216	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C217	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C218	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C219	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C220	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C221	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C222	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C223	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C224	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C225	4510006210	S.ELECTROLYTIC	ECEV1VA330UP
C226	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C227	4510006210	S.ELECTROLYTIC	ECEV1VA330UP
C228	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C229	4550000550	S.TANTALUM	TESVA 1V 224M1-8L
C230	4550000550	S.TANTALUM	TESVA 1V 224M1-8L
C231	4550000510	S.TANTALUM	TESVA 1V 473M1-8L
C232	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C233	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C234	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C235	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C236	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C237	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C238	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C239	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C240	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C241	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C242	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C243	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C244	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C245	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A
C246	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C247	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C248	4030007110	S.CERAMIC	C1608 CH 1H 680J-T-A
C249	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C250	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C251	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C252	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C253	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C254	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C255	4550000460	S.TANTALUM	TESVA 1C 105M1-8L
C256	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C258	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C260	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C261	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C262	4510006210	S.ELECTROLYTIC	ECEV1VA330UP
C263	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C264	4550000510	S.TANTALUM	TESVA 1V 473M1-8L
C266	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C267	4550000550	S.TANTALUM	TESVA 1V 224M1-8L
C268	4550000550	S.TANTALUM	TESVA 1V 224M1-8L

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C269	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C271	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C272	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C273	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C274	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C275	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C276	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C277	4510006220	S.ELECTROLYTIC	ECEV1CA101UP
C278	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C279	4030009510	S.CERAMIC	C1608 CH 1H 010B-T-A
C280	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C281	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C282	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C284	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C285	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A
C286	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C287	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C289	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C290	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C291	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C292	4030012600	S.CERAMIC	C2012 JB 1A 105M-T-A
C293	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C294	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C296	4550000460	S.TANTALUM	TESVA 1C 105M1-8L
C297	4550000460	S.TANTALUM	TESVA 1C 105M1-8L
C298	4510006220	S.ELECTROLYTIC	ECEV1CA101UP
C299	4550000460	S.TANTALUM	TESVA 1C 105M1-8L
C300	4550000460	S.TANTALUM	TESVA 1C 105M1-8L
C301	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C304	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C305	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C306	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C307	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C308	4030011280	S.CERAMIC	C1608 CH 1H 271J-T-A
C309	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C310	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C313	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C314	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C315	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C316	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C317	4030011330	S.CERAMIC	C1608 CH 1H 391J-T-A
C318	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C319	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C320	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C324	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C325	4030011330	S.CERAMIC	C1608 CH 1H 391J-T-A
C326	4030011330	S.CERAMIC	C1608 CH 1H 391J-T-A
C327	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C328	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C329	4510006220	S.ELECTROLYTIC	ECEV1CA101UP
C330	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C331	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C335	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C336	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C337	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C341	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C342	4030008880	S.CERAMIC	C1608 JB 1C 223K-T-A
C343	4030008880	S.CERAMIC	C1608 JB 1C 223K-T-A
C344	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C345	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C346	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C347	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C348	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C349	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C350	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C351	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C352	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C353	4030011310	S.CERAMIC	C2012 JB 1A 564K-T-A
C354	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C355	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C357	4030008770	S.CERAMIC	C1608 JB 1H 562K-T-A
C358	4510004650	S.ELECTROLYTIC	ECEV1EA4R7SR
C359	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C360	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C362	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C363	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C365	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C366	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C367	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C372	4510005870	S.ELECTROLYTIC	ECEV1HA3R3SR
C373	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C374	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C375	4550000550	S.TANTALUM	TESVA 1V 224M1-8L
C376	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C377	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C378	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C387	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C388	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C389	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C390	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C391	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C397	4030007170	S.CERAMIC	C1608 CH 1H 221J-T-A
C398	4030007170	S.CERAMIC	C1608 CH 1H 221J-T-A
C399	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C400	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C402	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C403	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C406	4510004650	S.ELECTROLYTIC	ECEV1EA4R7SR
C407	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C408	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C409	4510006220	S.ELECTROLYTIC	ECEV1CA101UP
C410	4510004650	S.ELECTROLYTIC	ECEV1EA4R7SR
C411	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C412	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C413	4510005300	S.ELECTROLYTIC	ECEV1AA330SR
C414	4510004650	S.ELECTROLYTIC	ECEV1EA4R7SR
C415	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C416	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C417	4510005300	S.ELECTROLYTIC	ECEV1AA330SR
C418	4510005630	S.ELECTROLYTIC	ECEV1EA330SP
C419	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C420	4510005360	S.ELECTROLYTIC	ECEV1HA4R7SR
C421	4510005360	S.ELECTROLYTIC	ECEV1HA4R7SR
C422	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C423	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C424	4510005360	S.ELECTROLYTIC	ECEV1HA4R7SR
C430	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C431	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C433	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C434	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C435	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C438	4030004750	S.CERAMIC	C2012 JB 1H 103K-T-A
C441	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C442	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C443	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C446	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C447	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C449	4510006220	S.ELECTROLYTIC	ECEV1CA101UP
C450	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C451	4510006220	S.ELECTROLYTIC	ECEV1CA101UP
C452	4510006220	S.ELECTROLYTIC	ECEV1CA101UP
C453	4510006260	S.ELECTROLYTIC	ECEV1AA471UP
C454	4510006260	S.ELECTROLYTIC	ECEV1AA471UP
C455	4030011810	S.CERAMIC	C1608 JB 1A 224K-T-N
C456	4030011810	S.CERAMIC	C1608 JB 1A 224K-T-N
C457	4030012610	S.CERAMIC	C2012 JB 1C 474K-T-A
C458	4030010760	S.CERAMIC	C1608 CH 1H 331J-T-A
C459	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C460	4030010760	S.CERAMIC	C1608 CH 1H 331J-T-A
C461	4030012610	S.CERAMIC	C2012 JB 1C 474K-T-A
C462	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C463	4030012610	S.CERAMIC	C2012 JB 1C 474K-T-A
C464	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C465	4030012610	S.CERAMIC	C2012 JB 1C 474K-T-A
C466	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C467	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C468	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C469	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C470	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C473	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C474	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C477	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C478	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C479	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C481	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C482	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C483	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C488	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A
C490	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C491	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C493	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C496	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C500	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C501	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C502	4030007120	S.CERAMIC	C1608 CH 1H 820J-T-A
C504	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C506	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C507	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C508	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A
C509	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C511	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C512	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C513	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C514	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C515	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C516	4550000510	S.TANTALUM	TESVA 1V 473M1-8L
C517	4030010760	S.CERAMIC	C1608 CH 1H 331J-T-A
C518	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C519	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C520	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C522	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A
C523	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C524	4030012600	S.CERAMIC	C2012 JB 1A 105M-T-A
C525	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C526	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C527	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C528	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C530	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C531	4030012600	S.CERAMIC	C2012 JB 1A 105M-T-A
C532	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C536	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C537	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C538	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C539	4550003080	S.TANTALUM	TEMSVA 1A 335M-8L
C541	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C542	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C543	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C546	4030009510	S.CERAMIC	C1608 CH 1H 010B-T-A
C548	4030009510	S.CERAMIC	C1608 CH 1H 010B-T-A
C549	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C550	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C551	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C552	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C553	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C554	4030011810	S.CERAMIC	C1608 JB 1A 224K-T-N
C556	4550003080	S.TANTALUM	TEMSVA 1A 335M-8L
C559	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C600	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C601	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C602	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C603	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C606	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C607	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C608	4030009510	S.CERAMIC	C1608 CH 1H 010B-T-A
C609	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C610	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C611	4550000460	S.TANTALUM	TESVA 1C 105M1-8L
C613	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C614	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C615	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C616	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C617	4550000550	S.TANTALUM	TESVA 1V 224M1-8L
C618	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C619	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C622	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C623	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C624	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C625	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C626	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C627	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C628	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C629	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C630	4030011810	S.CERAMIC	C1608 JB 1A 224K-T-N
C631	4030009550	S.CERAMIC	C1608 CH 1H 2R5B-T-A
C632	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C633	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
J3	6510021240	CONNECTOR	DELC-J9SAF-23L9
J4	6510020520	S.CONNECTOR	52808-1290
J5	6450000410	CONNECTOR	HEC0470-01-630
J7	6450001960	CONNECTOR	HSJ0913-01-120
J8	6510019370	S.CONNECTOR	B3B-ZR-SM3-TF

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
DS1	5040002440	LED	MPY4361F
W1	7030003860	S.JUMPER	ERJ3GE JPW V except [USA-1]
W2	7030003860	S.JUMPER	ERJ3GE JPW V [USA-1] only
W3	7030003860	S.JUMPER	ERJ3GE JPW V
W4	7120000470	JUMPER	ERDS2T0
W6	7030003860	S.JUMPER	ERJ3GE JPW V
W7	7030003860	S.JUMPER	ERJ3GE JPW V
W8	7030003860	S.JUMPER	ERJ3GE JPW V
W9	7030003860	S.JUMPER	ERJ3GE JPW V
W14	7030003860	S.JUMPER	ERJ3GE JPW V
W15	7030003860	S.JUMPER	ERJ3GE JPW V
EP1	0910050582	PCB	B 5220B

S.=Surface mount

SECTION 7 MECHANICAL PARTS AND DISASSEMBLY

7-1 CABINET PARTS

[CHASSIS]

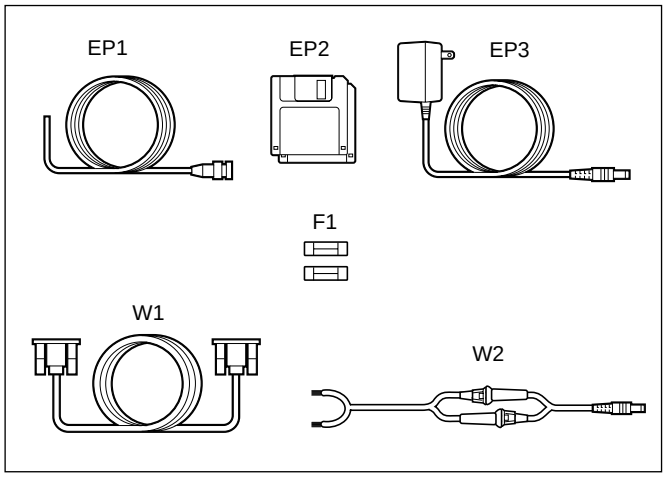
REF NO.	ORDER NO.	DESCRIPTION	QTY.
J 1	6510015550	Connector BNC-R117 (incl. nut)	1
MP 1	8110006550	2197 Cover	1
MP 2	8010017560	2197 Chassis	1
MP 3	8510011930	2197 Shield U-plate	1
MP 4	8510011910	2197 Shield L-plate	1
MP 6	8930039620	Leg cushion (A)	4
MP 7	8930011900	SP net (A)	1
MP 9	8810008660	Screw PH B0 3 × 8 NI-ZU	4
MP10	8810007230	Set screw (H) M3 × 8	7
MP12	8850001560	Star washer M4	1
MP13	8850000140	Flat washer M4 NI BS	1
MP14	8810009880	Hexagon bolt M4 × 8 NI	1
MP24	8930041500	1887 Lenz	1
MP27	8930048610	2197 A-Sponge	1
MP29	8930048440	2197 Plate	1
MP30	8930048400	2197 Sponge	1
MP31	8930048390	Himeron seat (BZ)	3
MP32	8930048900	Rubber sheet	1
SP 1	2510000960	Speaker	1

[MAIN UNIT]

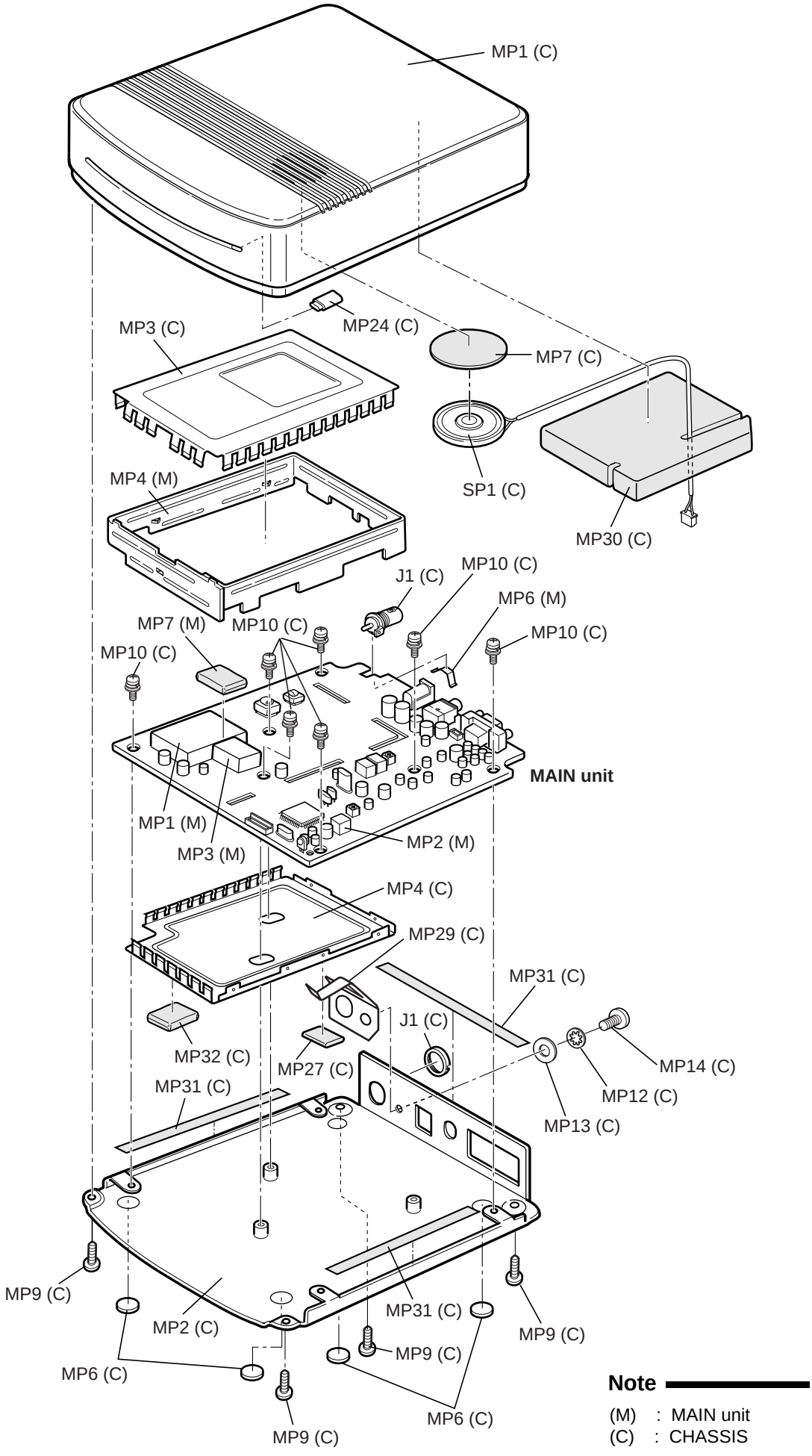
REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP 1	8510006941	DTMF Shield case-1	1
MP 2	8930044920	2032 Coil cover	1
MP 3	8510004190	443 Prescaler shield case	1
MP 4	8510011921	2197 Shild case-1	1
MP 6	8930014140	Grounding spring (D)	1
MP 7	8930045920	2056 Sponge	1

7-2 ACCESSORIES

REF NO.	ORDER NO.	DESCRIPTION	QTY.
F1	5210000040	Fuse FGB 2A [UK] only	2
W1	8900007650	RS-232C cable OPC-743	1
W2	8900001410	DC cable OPC-131 [UK] only	1
EP1	3310002187	2197 Antenna	1
EP2		3.5" FD 40MF2HDGEDV	1set
EP3	Optional product	AC adaptor BC-123A [USA-1] [CAN]	1
		AC adaptor BC-123E [EUR] [OTH]	1



Screw abbreviations: PH: Pan head B0: Tapping screw
NI: Nickel ZK: Black

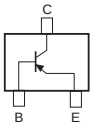
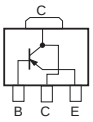
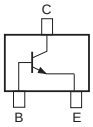
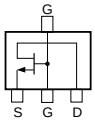
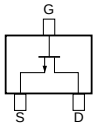
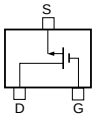
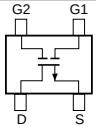


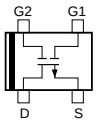
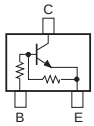
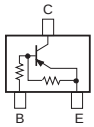
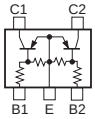
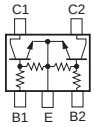
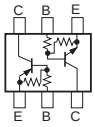
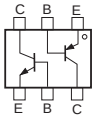
Note

(M) : MAIN unit
(C) : CHASSIS

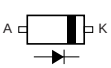
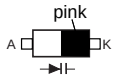
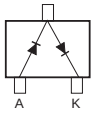
SECTION 8 SEMI-CONDUCTOR INFORMATION

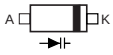
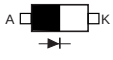
8-1 TRANSISTORS AND FET'S

NAME	SYMBOL	INSIDE VIEW
2SA1622-6-TL	M6	
2SB1123T-TD	BF	
2SC4117-BL 2SC4211-6 2SC4835-R 2SC5193-T1	DL L6 3M T88	
2SK2171-4	KM	
2SK880-Y	XY	
2SK882-GR	TG	
3SK131-T2	V12	

NAME	SYMBOL	INSIDE VIEW
3SK228XR	XR	
DTA114EU	26	
DTA144EU	16	
XP1114	7Q	
XP1213	9L	
XP4311	7X	
XP4601	5C	

8-2 DIODES

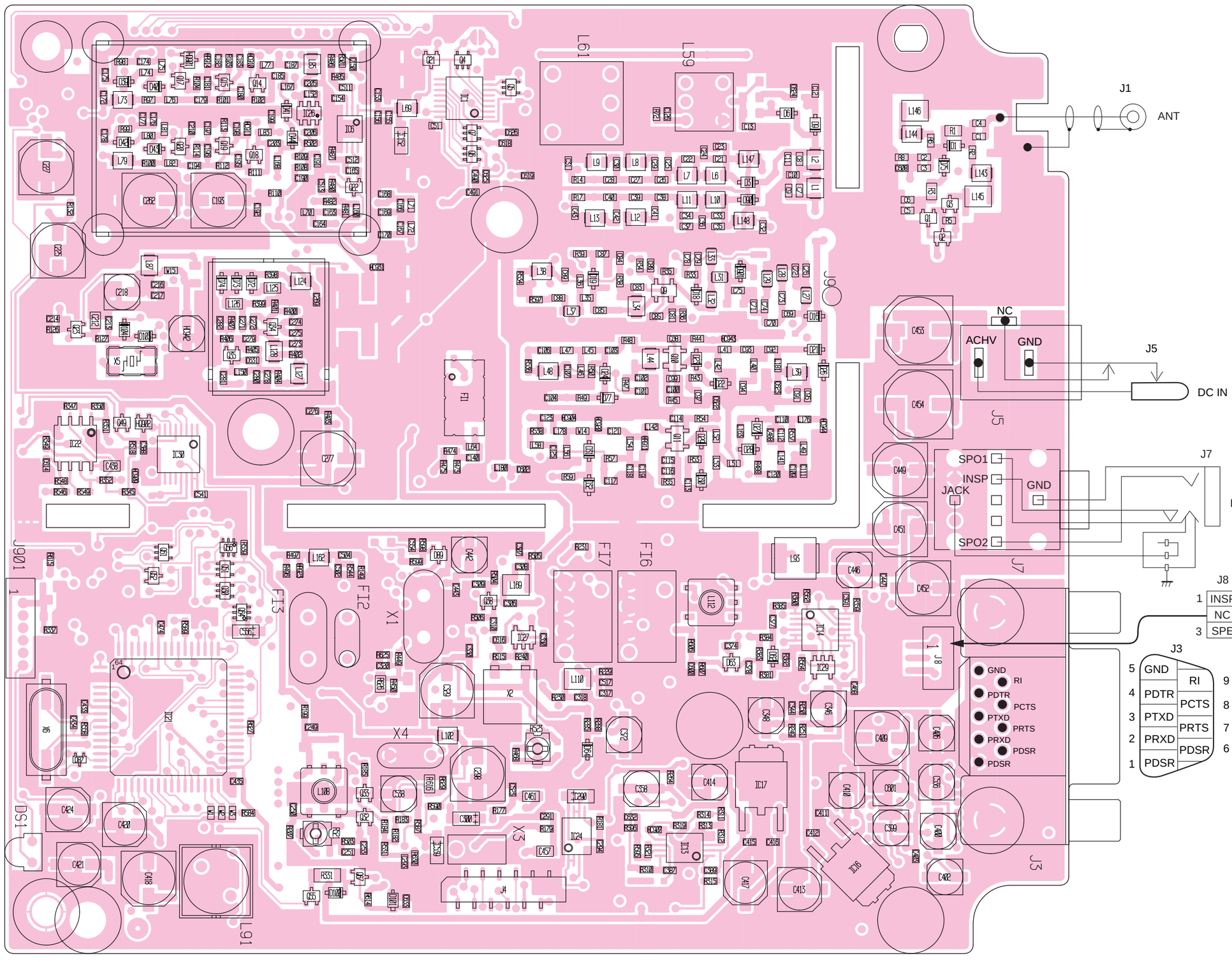
NAME	SYMBOL	INSIDE VIEW
1SR154-400 1SS355 1SV307 DAN222TL	14 A TX N-4	
1SV214 1SV230 1SV288	T1 T7 TJ	
1SS372	N9	

NAME	SYMBOL	INSIDE VIEW
1SV217	T6	
MA77	4B	

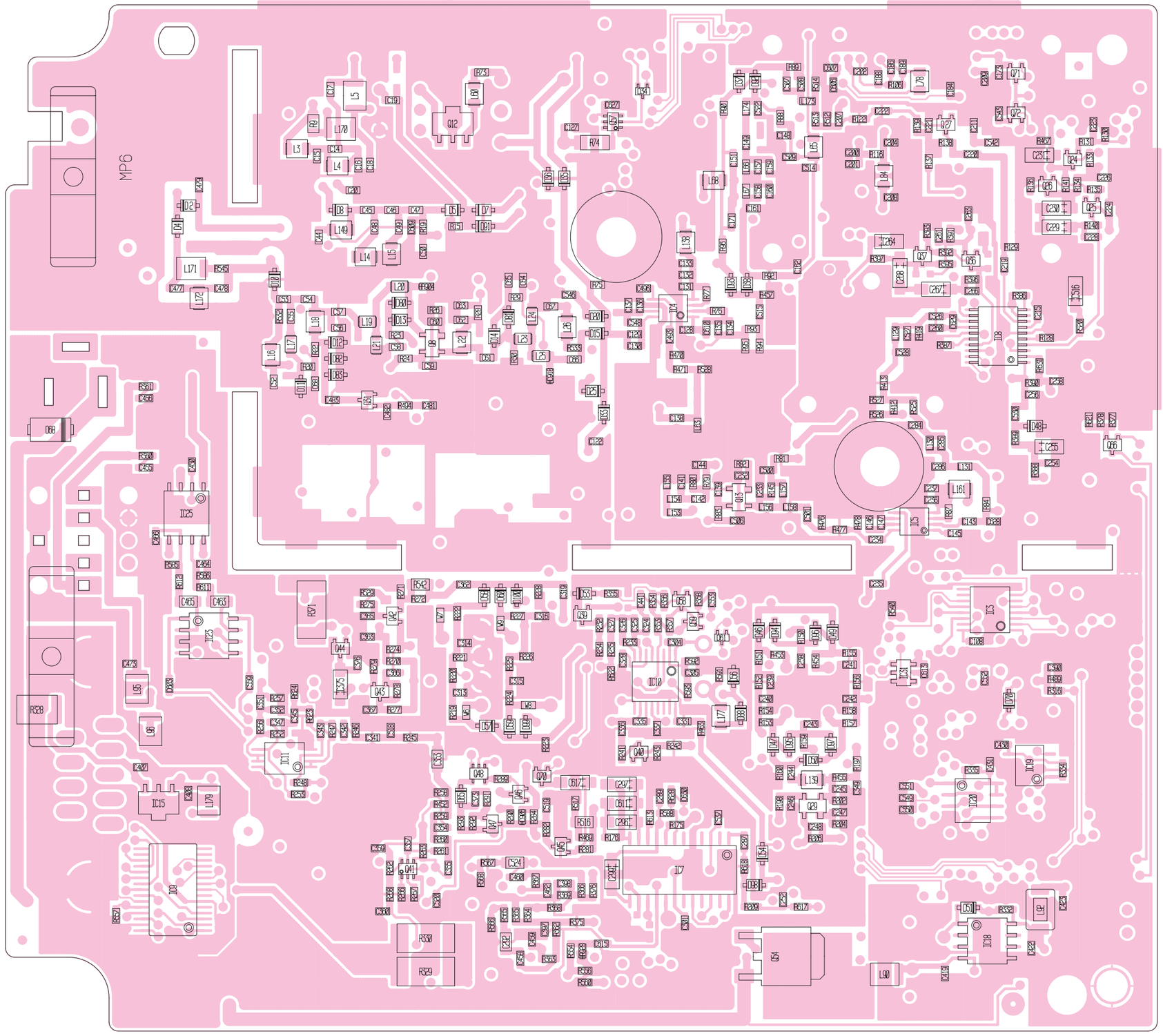
SECTION 9 BOARD LAYOUTS

9-1 MAIN UNIT

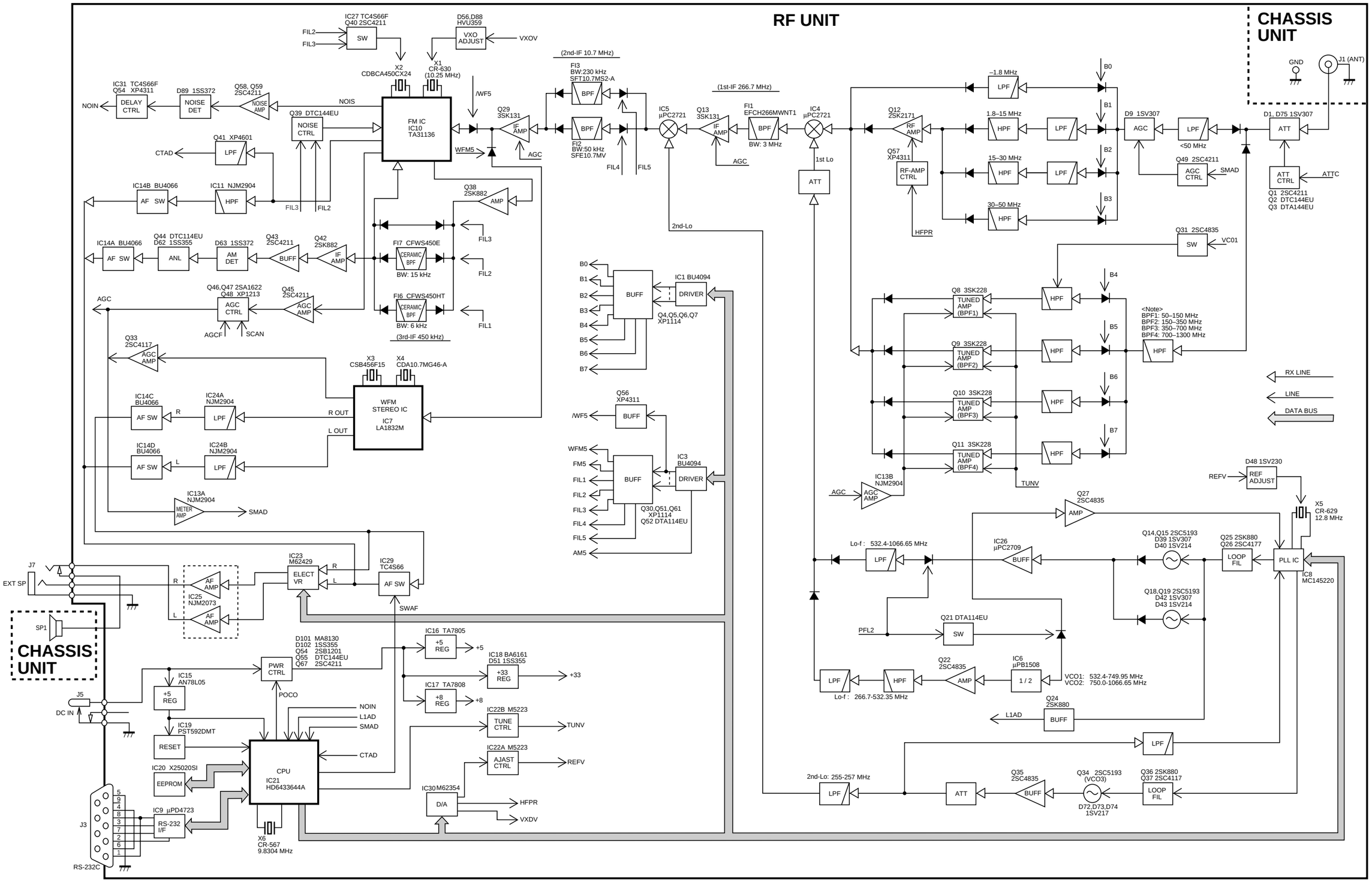
• TOP VIEW



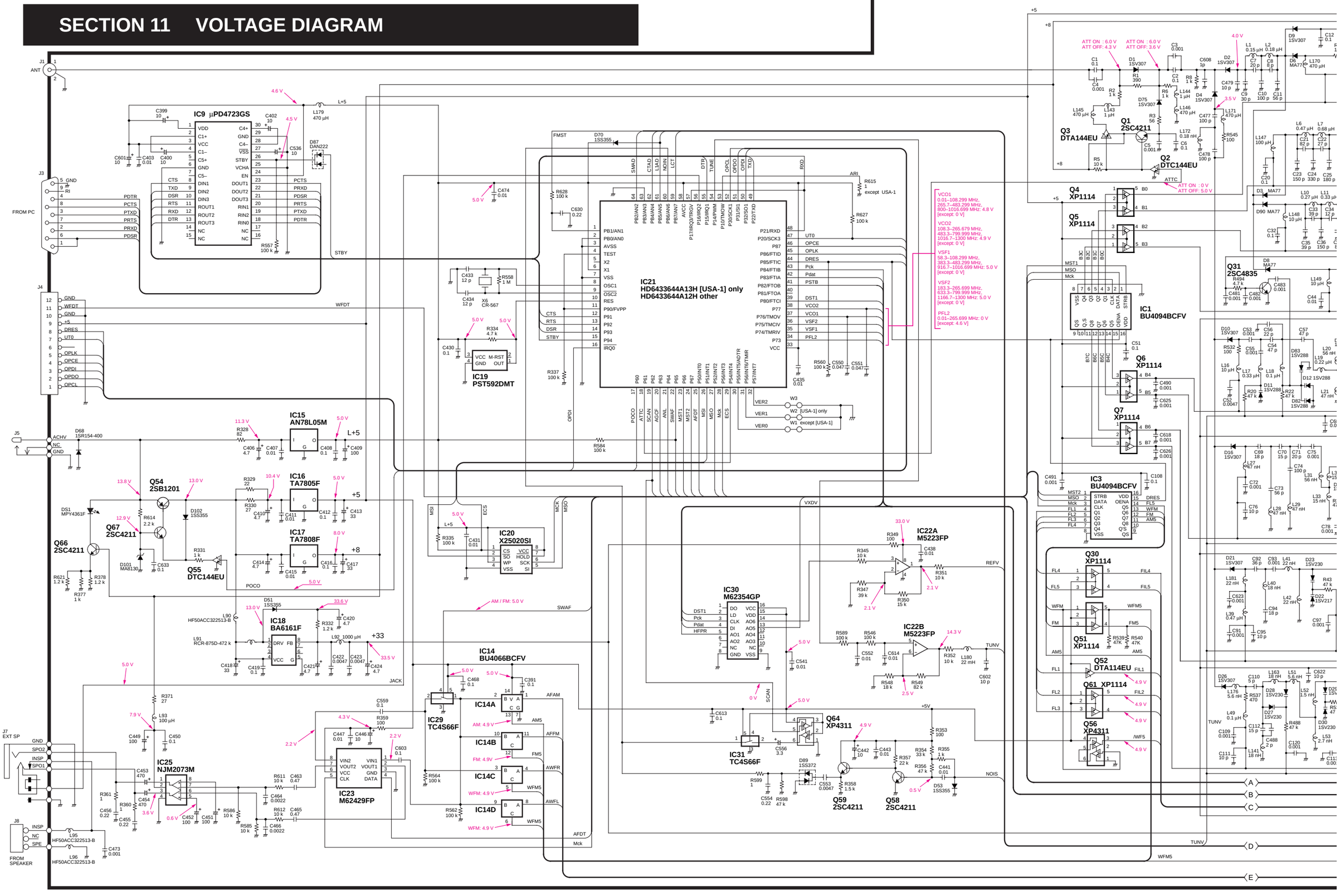
• **BOTTOM VIEW**



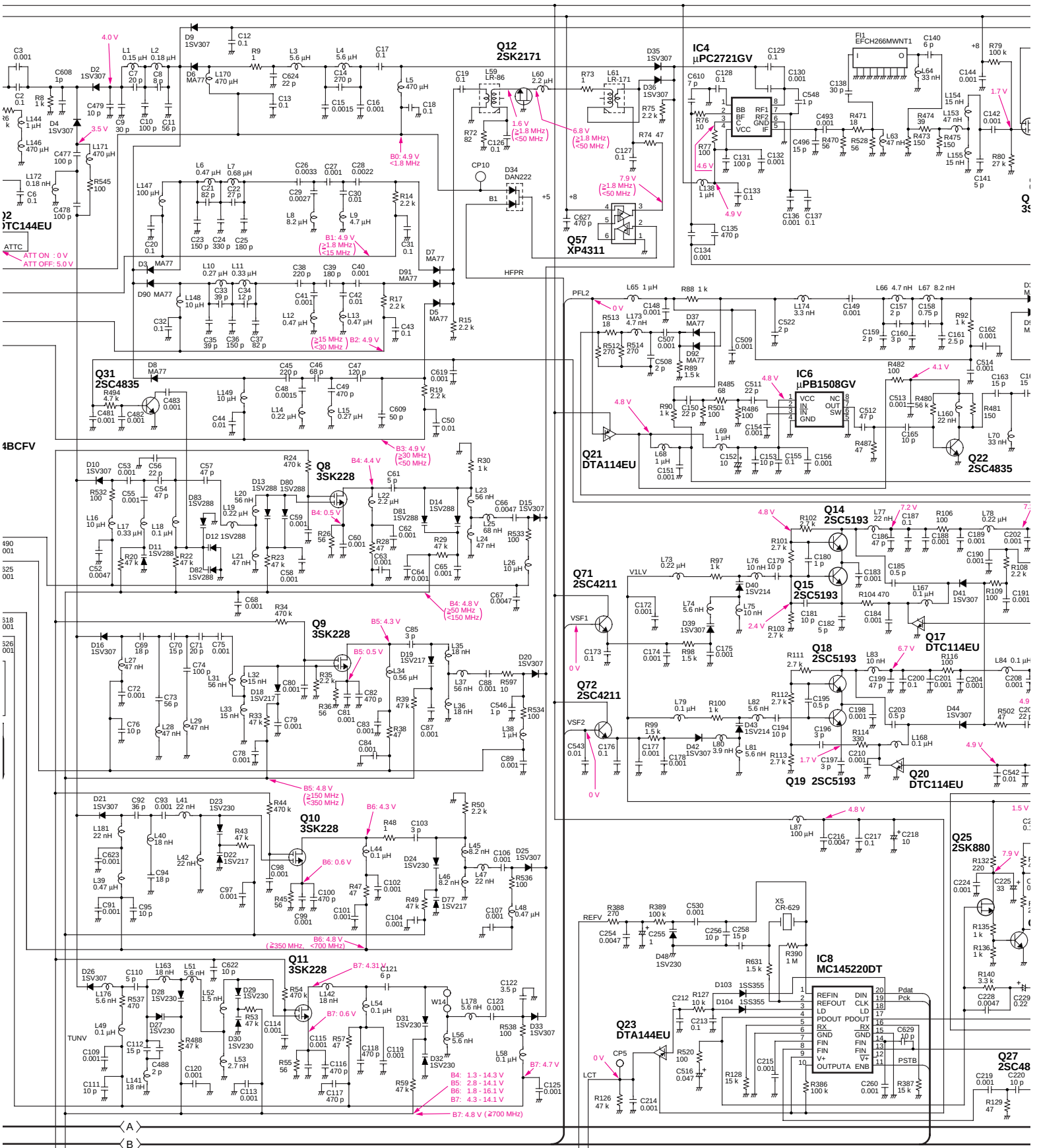
SECTION 10 BLOCK DIAGRAM



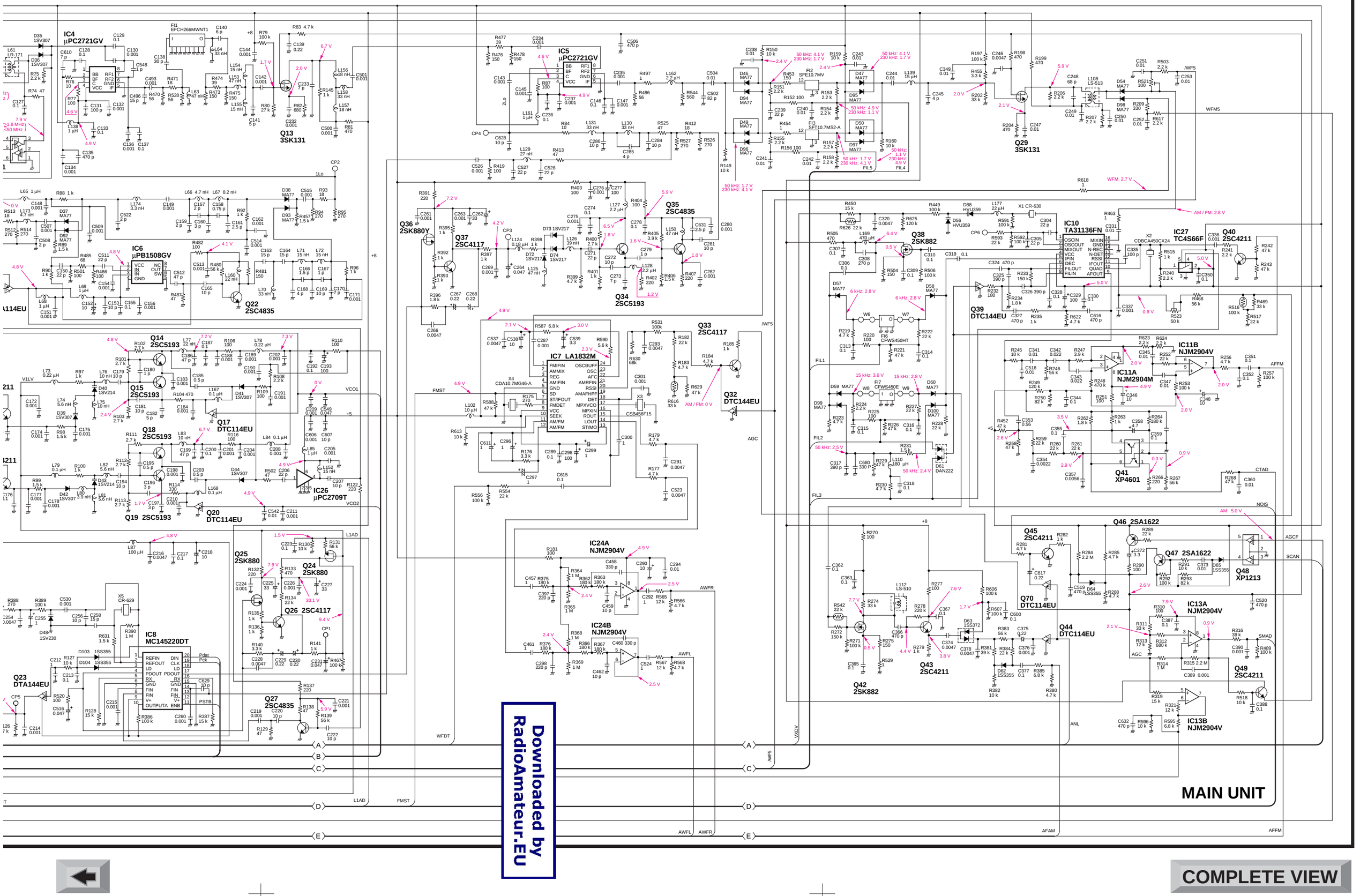
SECTION 11 VOLTAGE DIAGRAM



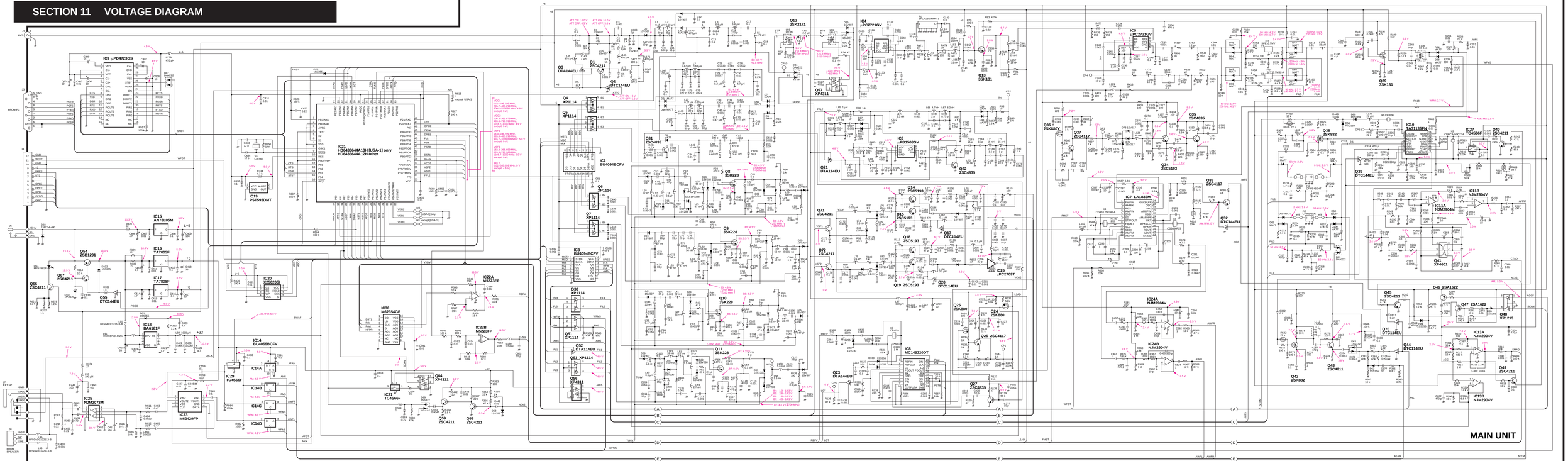
COMPLETE VIEW



COMPLETE VIEW


IC4 µPC2721GV
IC5 µPC2721GV
IC6 µPB1508GV
IC7 LA1832M
IC8 MC145220DT
IC10 TA31136FN
IC11A NJM2904V
IC11B NJM2904V
IC13A NJM2904V
IC13B NJM2904V
IC24A NJM2904V
IC24B NJM2904V
IC26 µPC2709T
IC27 TC4S66F
Q13 3SK131
Q22 2SC4835
Q23 DTA144EU
Q24 2SK880
Q25 2SK880
Q26 2SC4117
Q27 2SC4835
Q29 3SK131
Q33 2SC4117
Q34 2SC5193
Q35 2SC4835
Q36 2SK880V
Q37 2SC4117
Q38 2SK882
Q39 DTC144EU
Q40 2SC4211
Q41 XP4601
Q42 2SK882
Q43 2SC4211
Q44 DTC144EU
Q45 2SC4211
Q46 2SA1622
Q47 2SA1622
Q48 XP1213
Q49 2SC4211
Q70 DTC144EU
Q114EU
Q211
Q14 2SC5193
Q15 2SC5193
Q17 DTC114EU
Q18 2SC5193
Q19 2SC5193
Q20 DTC114EU
MAIN UNIT
COMPLETE VIEW
Downloaded by RadioAmateur.EU

SECTION 11 VOLTAGE DIAGRAM



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