

ICOM

**SERVICE
MANUAL**

UHF SRBR

IC-F4SR

INTRODUCTION

This service manual describe the latest information for the IC-F4SR at the time of publication.

DANGER

NEVER connect the transceiver 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 transceiver to rain, snow or any liquids.

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

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

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>

1110001810 S.IC TA7368F IC-F4SR MAIN UNIT 1 piece
8810009510 Screw B0 2 x 4 NI-ZU IC-F4SR MAIN PCB 6 pieces

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



REPAIR NOTES

1. Make sure a problem is internal before disassembling the transceiver.
2. DO NOT open the transceiver until the transceiver is disconnected from its power source.
3. DO NOT force any of the variable components. Turn them slowly and smoothly.
4. DO NOT short any circuits or electronic parts. An insulated tuning tool MUST be used for all adjustments.
5. DO NOT keep power ON for a long time when the transceiver is defective.
6. DO NOT transmit power into a signal generator or a sweep generator.
7. ALWAYS connect a 40 dB or 50 dB attenuator between the transceiver and a deviation meter or spectrum analyser when using such test equipment.
8. READ the instructions of test equipment thoroughly before connecting equipment to the transceiver.

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SECTION 1 SPECIFICATIONS

■ GENERAL

- Frequency coverage : 461.2625–461.4875 MHz [UK]
446.9500–446.9875 MHz [FRA]
444.6000–444.9750 MHz [SWE]
- Mode : 16K0F3E [SWE]
8K50F3E [UK], [FRA]
- Acceptable power supply : 9.6 V DC nominal (negative ground)
- Usable temperature range : –20°C to +55°C
- Frequency stability : ±2.0 kHz [SWE]
±1.5 kHz [UK], [FRA]
- Current drain (approx.) : Transmit 0.9 A
Receive stand-by 60 mA
max. audio 250 mA
power saved 20 mA
- Antenna impedance : 50 Ω nominal
- Dimensions (projections not included) : 57(W) × 140(H) × 37(D) mm
- Weight (with BP-195) : 370 g

■ TRANSMITTER

- Output power (at 9.6 V DC) : 0.5 W ERP (1.5 W)
- Modulation : Variable reactance frequency modulation
- Maximum frequency deviation : ±5.0 kHz [SWE]
±2.5 kHz [UK], [FRA]
- Spurious emissions : 0.25 μW
- Adjacent channel power : 70 dB [SWE]
60 dB [UK], [FRA]
- Residual modulation : 40 dB
- Limiting charact of modulation : 70–100 % of maximum deviation
- External microphone connector : 3-conductor 2.5 (d) mm/2 kΩ

■ RECEIVER

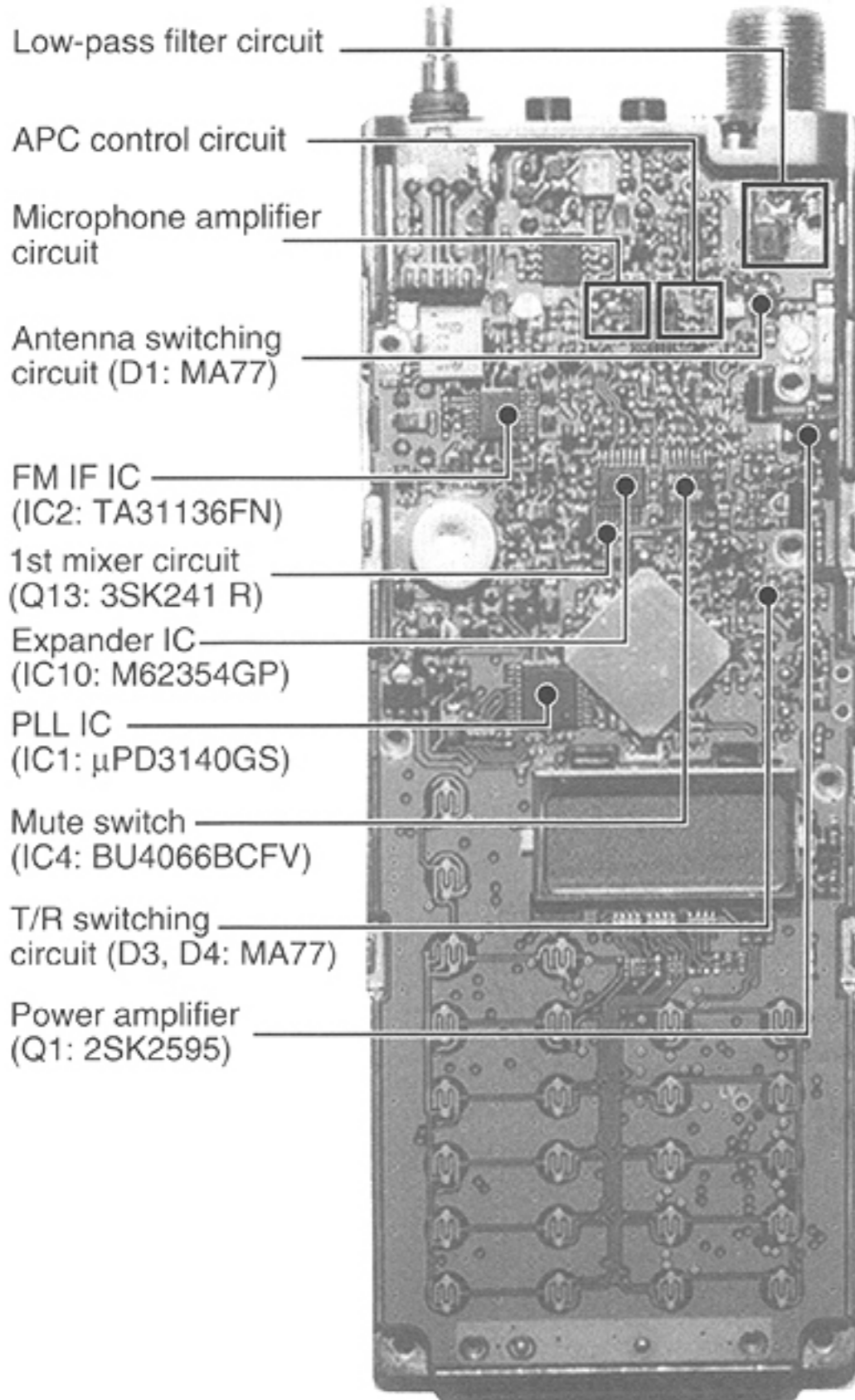
- Receive system : Double conversion superheterodyne system
- Intermediate frequencies : 1st 46.35 MHz
2nd 450 kHz
- Sensitivity : 0.30 μV at 12 dB SINAD
0.79 μV emf at 20 dB SINAD
- Squelch sensitivity : 0.30 μV typical (at threshold)
- Adjacent channel selectivity : 70 dB [SWE]
60 dB [UK], [FRA]
- Spurious response : 70 dB
- Intermodulation rejection ratio : 65 dB
- Hum and noise : 40 dB
- Audio output power (at 9.6 V DC) : 500 mW typical at 10 % distortion with an 8 Ω load
- External speaker connector : 3-conductor 3.5 (d) mm/8 Ω

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

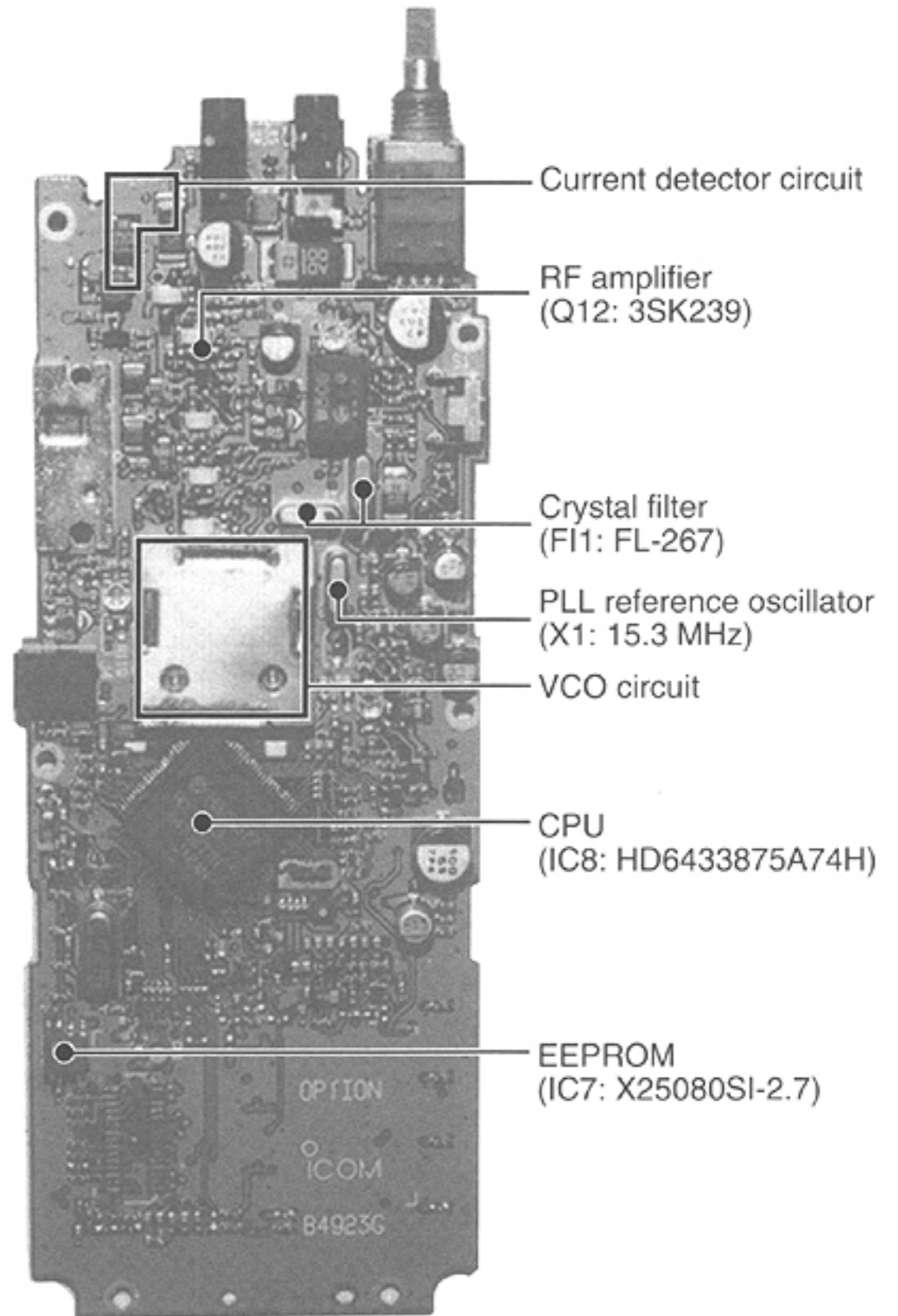
SECTION 2 INSIDE VIEWS

• MAIN UNIT

TOP VIEW



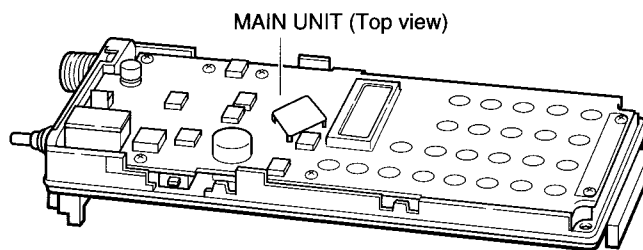
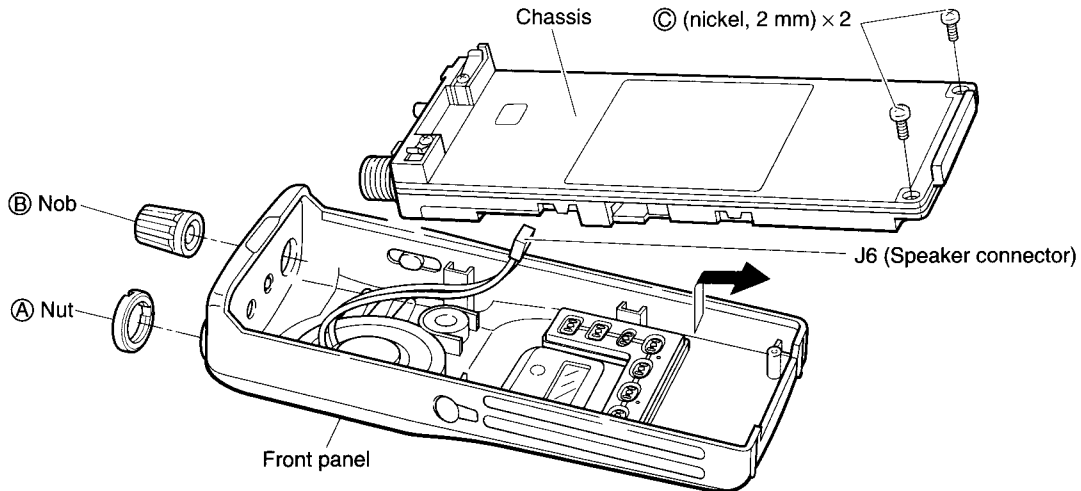
BOTTOM VIEW



SECTION 3 DISASSEMBLY INSTRUCTIONS

• Removing the chassis panel

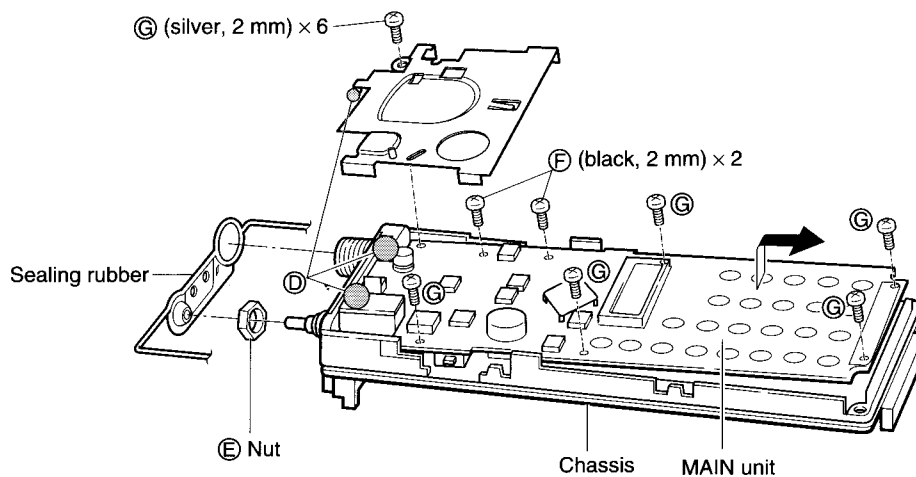
- ① Unscrew 1 nut (A), and remove 1 nob (B).
- ② Unscrew 2 screws, (C).
- ③ Take off the chassis in the direction of the arrow.
- ④ Unplug J6 to separate front panel and chassis.



[chassis panel]

• Removing the MAIN unit

- ① Remove the sealing rubber.
- ② Unsolder 3 points (D) and unscrew 1 nut (E).
- ③ Unscrew 2 screws, (F), and 6 screws (G) (silver, 2 mm), to separate the chassis and MAIN unit.
- ④ Take off the MAIN unit in the direction of the arrow.



SECTION 4 CIRCUIT DESCRIPTION

4-1 RECEIVER CIRCUITS

4-1-1 ANTENNA SWITCHING CIRCUIT

Received signals are passed through the low-pass filter (L1–L3, C3, C5, C7). The filtered signals are applied to the ¼ type antenna switching circuit (D406, D8).

The antenna switching circuit functions as a low-pass filter while receiving. However, its impedance becomes very high while D406 and D8 are turned ON (transmitting). Thus transmit signals are blocked from entering the receiver circuits. The passed signals are then applied to the RF amplifier circuit.

4-1-2 RF CIRCUIT

The RF circuit amplifies signals within the range of frequency coverage and filters out-of-band signals.

The signals from the antenna switching circuit are amplified at the RF amplifier (Q12) after passing through the tuneable bandpass filter (D10, L413, C79). The amplified signals are applied to the 1st mixer circuit (Q13) after out-of-band signals are suppressed at the tuneable bandpass filter (D11, D12, D401, C94).

Varactor diodes are employed at the bandpass filters that track the filters and are controlled by the CPU (IC8) via the expander IC (IC10) using T1–T4 signals. These diodes tune the centre frequency of an RF passband for wide bandwidth receiving and good image response rejection.

4-1-3 1ST MIXER AND 1ST IF CIRCUITS

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

The signals from the RF circuit are mixed at the 1st mixer (Q13) with a 1st LO signal coming from the VCO circuit to produce a 46.35 MHz 1st IF signal.

The 1st IF signal is applied to a pair of crystal filters (F11) to suppress out-of-band signals. The filtered 1st IF signal is applied to the IF amplifier (Q400), then applied to the 2nd mixer circuit (IC2, pin 16).

4-1-4 2ND IF AND DEMODULATOR CIRCUITS

The 2nd mixer circuit converts the 1st IF signal to a 2nd IF signal. A double conversion superheterodyne system (which converts receive signals twice) improves the image rejection ratio and obtains stable receiver gain.

The 1st IF signal from the IF amplifier is applied to the 2nd mixer section of the FM IF IC (IC2, pin 16), and is mixed with the 2nd LO signal to be converted to a 450 kHz 2nd IF signal.

The FM IF IC contains the 2nd mixer, limiter amplifier, quadrature detector and active filter circuits. A 2nd LO signal (45.9 MHz) is produced at the PLL circuit by dividing its reference frequency.

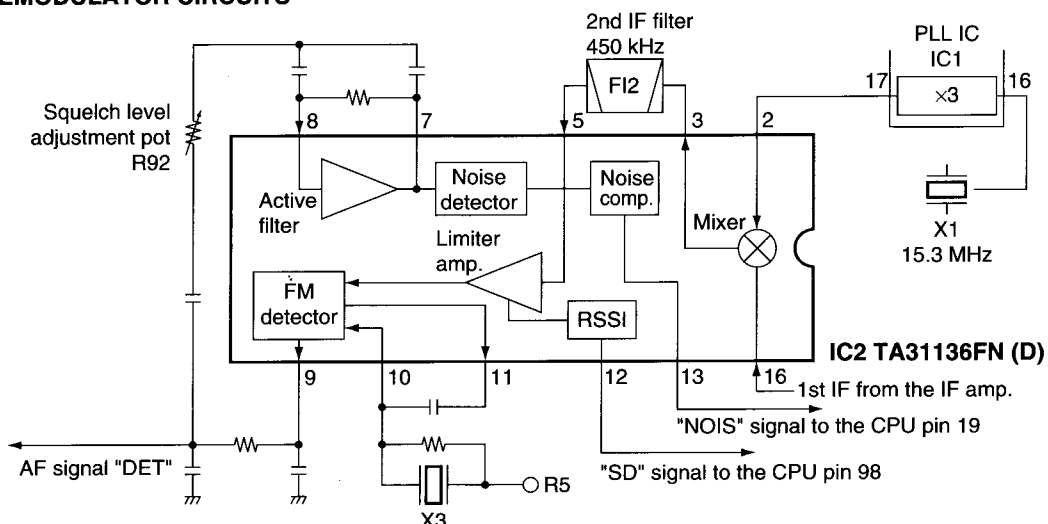
The 2nd IF signal from the 2nd mixer (IC2, pin 3) passes through a ceramic filter (F12) to remove unwanted heterodyned frequencies. It is then amplified at the limiter amplifier (IC2, pin 5) and applied to the quadrature detector (IC2, pins 10, 11) to demodulate the 2nd IF signal into AF signals.

4-1-5 AF CIRCUIT

AF signals from the demodulator circuit are applied to the analog switch (IC4, pin 1) via the high-pass filter (IC3b, pins 6, 7). The switched signals from pin 2 of the analog switch are passed through the low-pass filter (IC3d, pins 13, 14). The filtered signals are fed back to the analog switch (IC4, pins 10, 11) then applied to the AF power amplifier (IC5, pin 4) after passing through the [VOL] control (VR board, R1).

The AF power amplifier (IC5) amplifies the applied AF signals to a level needed to drive a speaker. The amplified AF signals are output from pin 10 and applied to the internal speaker (SP1) via the external [SP] jack (J3).

•2nd IF AND DEMODULATOR CIRCUITS



4-1-6 SQUELCH CIRCUIT

A squelch circuit cuts out AF signals when no RF signals are received. By detecting noise components in the AF signals, the CPU controls one of the analog switches (IC4, pin 1, 2) as an AF mute switch.

A portion of the AF signals from the FM IF IC (IC2, pin 9) are applied to the active filter section (IC2, pin 8) where noise components are amplified and detected with an internal noise detector. The squelch level adjustment pot (R92) is connected in parallel to the active filter input (pin 8) to control the input noise level.

The active filter section amplifies noise components. The filtered signals are rectified at the noise detector section and converted into "NOIS" (pulse type) signals at the noise comparator section. The "NOIS" signal is applied to the CPU (IC8, pin 19).

The CPU detects the receiving signal strength from the number of the pulses, and outputs an "RM" signal from pin 43. This signal controls the mute switch (IC4) to cut the AF signal line.

4-2 TRANSMITTER CIRCUITS

4-2-1 MICROPHONE AMPLIFIER CIRCUIT

The microphone amplifier circuit amplifies audio signals with +6 dB/octave pre-emphasis characteristics from the microphone to a level needed for the modulation circuit.

The AF signals from the microphone are applied to the microphone amplifier circuit (IC3c, pin 10). The amplified AF signals are passed through the low-pass filter circuit (IC3d, pins 13, 14) via the analog switch (IC4, pins 3, 4). The filtered AF signals are applied to the modulator circuit after being passed through the analog switch (IC4, pins 8, 9) and the deviation adjustment pot (R119).

4-2-2 MODULATION CIRCUIT

The modulation circuit modulates the VCO oscillating signal (RF signal) using the microphone audio signal.

The audio signals change the reactance of a diode (D404) to modulate an oscillated signal at the VCO circuit (Q7, Q8). The oscillated signal is amplified at the buffer-amplifiers (Q4, Q6), then applied to the T/R switching circuit (D3, D4).

4-2-3 DRIVE/POWER AMPLIFIER CIRCUITS

The signal from the VCO circuit passes through the T/R switching circuit (D3) and is amplified at the buffer (Q3, Q403), drive (Q2) and power (Q1) amplifiers to obtain 1.5 W of RF power (at 9.6 V DC). The amplified signal passes through the antenna switching circuit (D1), and low-pass filter and is then applied to the antenna connector.

The bias current of the drive (Q2) and the power amplifier (Q1) is controlled by the APC circuit.

4-2-4 CURRENT DETECTOR CIRCUIT

The current detector circuit (Q9, Q28) detects the total driving current of the drive and the power amplifiers, using the current sensor (R161). The differential amplifier (Q9) detects the voltage difference of the current sensor input and output voltages, then outputs control voltage to the CPU (IC8, pin 97).

4-2-5 POWER DETECTOR CIRCUIT

The power detector circuit (D2) detects the transmit power output level and converts it to DC voltage. The detected signal is applied to the APC circuit.

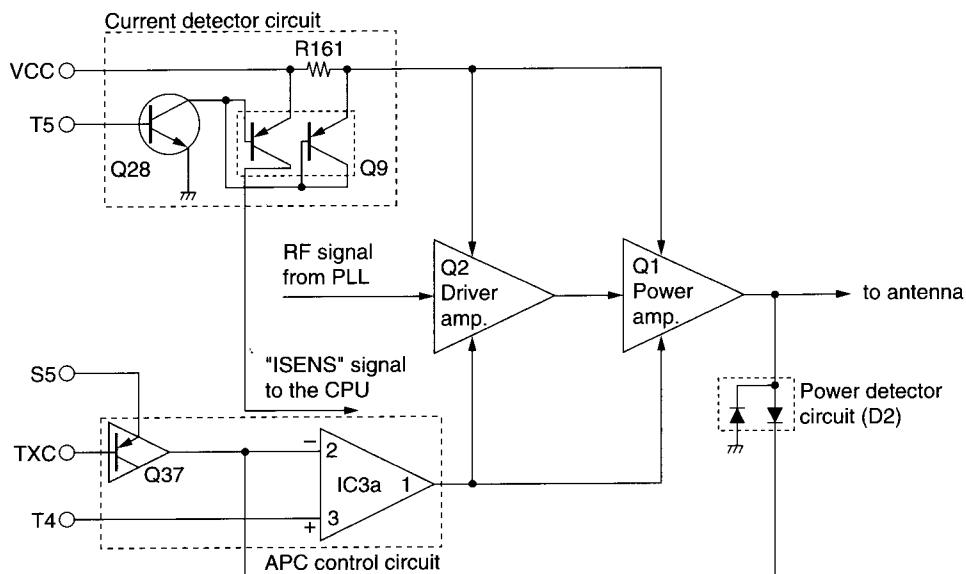
4-2-6 APC CIRCUIT

The APC circuit (IC3a, Q37) provides stable output power from the power amplifier even when the input voltage changes.

The signal output from the power detector circuit (D2) is applied to the differential amplifier (IC3a, pin 2), and the "T4" signal from the expander (IC10, pin 14), controlled by the CPU (IC8), is applied to the other input for reference.

When the output power is increased, input voltage of the differential amplifier (pin 2) will be increased. In such cases, the differential amplifier output voltage (pin 1) is decreased to reduce the bias voltage for the drive and power amplifiers.

• APC circuit



4-3 PLL CIRCUIT

A PLL circuit provides stable oscillation of the transmit frequency and receive 1st LO frequency. The PLL output compares the phase of the divided VCO frequency to the reference frequency. The PLL output frequency is controlled by the divided ratio (N-data) of a programmable divider.

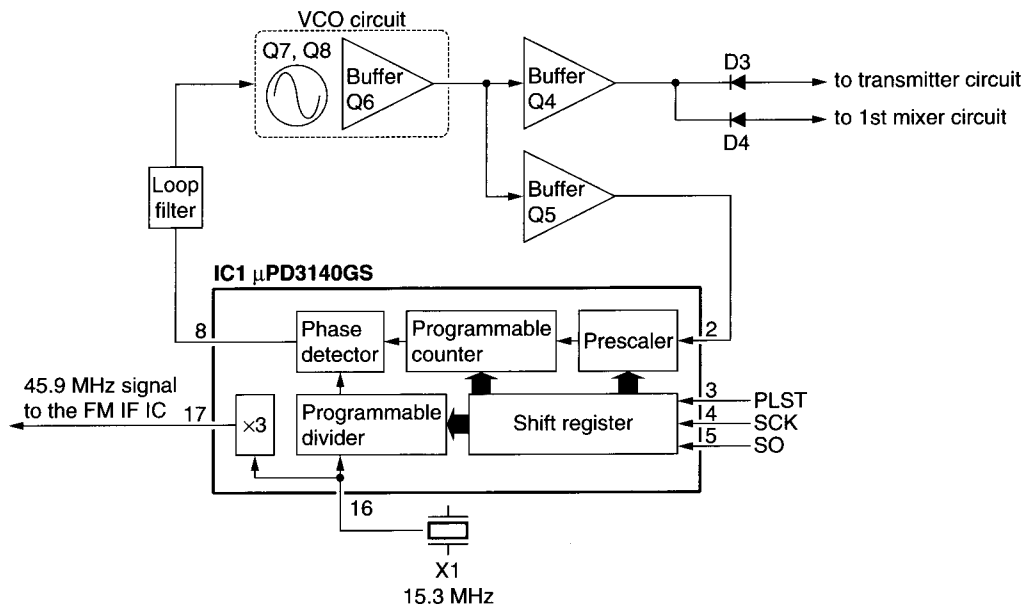
The PLL circuit contains the VCO circuit (Q7, Q8). The oscillated signal is amplified at the buffer-amplifiers (Q5, Q6) and then applied to the PLL IC (IC1, pin 2).

The PLL IC (IC1) contains a prescaler, programmable counter, phase detector and charge pump, etc. The entered signal is divided at the prescaler and programmable counter section by the N-data ratio from the CPU. The divided signal is detected on phase at the phase detector using the reference frequency.

If the oscillated signal drifts, its phase changes from that of the reference frequency, causing a lock voltage change to compensate for the drift in the oscillated frequency.

A portion of the VCO signal is amplified at the buffer-amplifier (Q4) and is then applied to the receive 1st mixer or transmit buffer-amplifier circuit via the T/R switching diode (D3, D4).

• PLL circuit



4-4 POWER SUPPLY CIRCUITS

VOLTAGE LINE

Line	Description
HV	The voltage from the attached battery pack.
VCC	The same voltage as the HV line (battery voltage) which is controlled by the power switch ([VOL] control).
CPU5	Common 5 V converted from the VCC line by the reference regulator circuit (IC6). The output voltage is applied to the CPU (IC8) and the 5V regulator circuit.
5V	Common 5 V converted from the VCC line by the 5 V regulator circuit (Q18, Q19) using the reference regulator (IC6).
T5	5 V for transmitter circuits regulated by the T5 regulator circuit (Q22).
R5	5 V for receiver circuits regulated by the R5 regulator circuit (Q21).
S5	Common 5 V converted from the 5V line by the S5 regulator circuit (Q20).

4-5 PORT ALLOCATIONS

4-5-1 CPU (IC8)

Pin number	Port name	Description
1	CTCIN	Input port for CTCSS/DTCS signals.
12	SCK	Outputs clock signal to the PLL IC (IC1), EEPROM (IC7) and output expander IC (IC10), etc.
13	SI	Input port for the data signal from EEPROM (IC7), etc.
14	SO	Outputs data signal to the PLL IC (IC1), EEPROM (IC7) and output expander IC (IC10), etc.
15	UNLK	Input port for PLL unlock signal from the PLL IC (IC1). High: While unlock.
18	PLST	Outputs strobe signals to the PLL IC (IC1).
19	NOIS	Input port for noise signals (pulse type) from the FM IF IC (IC2).
26	CONT	Outputs LCD contrast control signal. High: When normal level is selected
36–41	KS0–KS5	Output ports for key matrix.
42	MM	Outputs mic. mute control signal. High: When muted
43	RM	Outputs RX mute control signal. High: When squelched, etc.
44–47	KR0–KR3	Input ports for key matrix.
48	R5C	Outputs R5 regulator control signal. Low: While receiving
49	S5C	Outputs S5 regulator control signal. Low: While power is ON
50	TXC	Outputs T5 regulator control signal. High: While transmitting
51	T5C	Outputs T5 regulator control signal. Low: While transmitting
52	LIGHT	Outputs LCD backlight control signal. High: Lights ON
53	AFON	Outputs the regulator circuit for the AF power amplifier control signal. High: While AF amp. is activated.
54	DST	Outputs strobe signals to the output expander IC (IC10).
60–62	CTDA0–CTDA2	Outputs CTCSS and DTCS encode signals (3-bit, D/A type).
63	DUSE	Outputs filter switch control signal for the CTCSS and DTCS (Q38). High: DTCS is activated.
90	MTONE	Output port for: Beep audio while receiving. 2/5-tone signals while transmitting.

4-5-2 OUTPUT EXPANDER IC (IC10)

Pin number	Port name	Description
2	DST	Input port for strobe signals.
3	SCK	Input port for clock signal.
4	SO	Input port for data signal.
11–13	T1–T3	Output tuneable bandpass filter control voltage.
14	T4	Output port for: Tuneable bandpass filter control signal while receiving RF output power reference signal while transmitting

SECTION 5 ADJUSTMENT PROCEDURES

5-1 PREPARATION

■ REQUIRED TEST EQUIPMENT

EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
DC power supply	Output voltage : 9.6 V DC Current capacity : 3 A or more	Audio generator	Frequency range : 300–3000 Hz Output level : 1–500 mV
RF power meter (terminated type)	Measuring range : 1–10 W Frequency range : 120–500 MHz Impedance : 50 Ω SWR : Less than 1.2 : 1	Attenuator	Power attenuation : 40 or 50 dB Capacity : 10 W or more
Frequency counter	Frequency range : 0.1–500 MHz Frequency accuracy : ±1 ppm or better Sensitivity : 100 mV or better	Standard signal generator (SSG)	Frequency range : 120–500 MHz Output level : 0.1 μV–32 mV (–127 to –17 dBm)
FM deviation meter	Frequency range : 30–500 MHz Measuring range : 0 to ±5 kHz	DC voltmeter	Input impedance : 50 kΩ/V DC or better
Digital multimeter	Input impedance : 10 MΩ/V DC or better	Oscilloscope	Frequency range : DC–20 MHz Measuring range : 0.01–20 V
		AC millivoltmeter	Measuring range : 10 mV–10 V

■ TRIMMER ADJUSTMENT

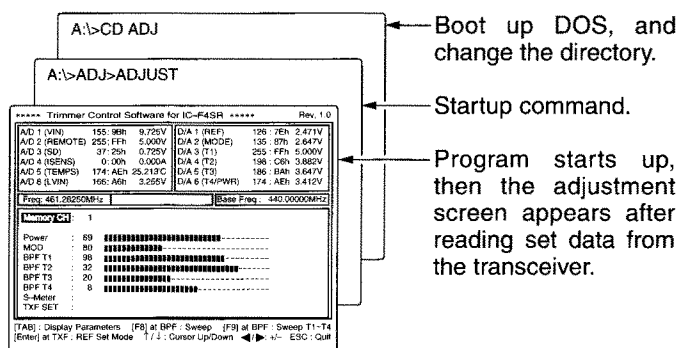
When you adjust the contents on page 5-4, TRIMMER ADJUSTMENT, the optional EX-2126 FIELD PROGRAMMING SOFTWARE (Rev. 1.0 or later) and OPC-478 CLONING CABLE are required.

• STARTING TRIMMER ADJUSTMENT

Turn ON power to the transceiver, connect a computer to the [SP] jack using the optional OPC-478 CLONING CABLE, then start up the “ADJUST” program in EX-2126.

• STARTING THE PROGRAM

- ① Boot up DOS.
- ② Insert the EX-2126 backup disk into drive A.
- ③ Type the following to start up the program:
ADJ>ADJUST [Enter]
 - The adjustment screen appears after reading set data from the transceiver.
- ④ After the adjustment screen appears, set or modify the data as desired.



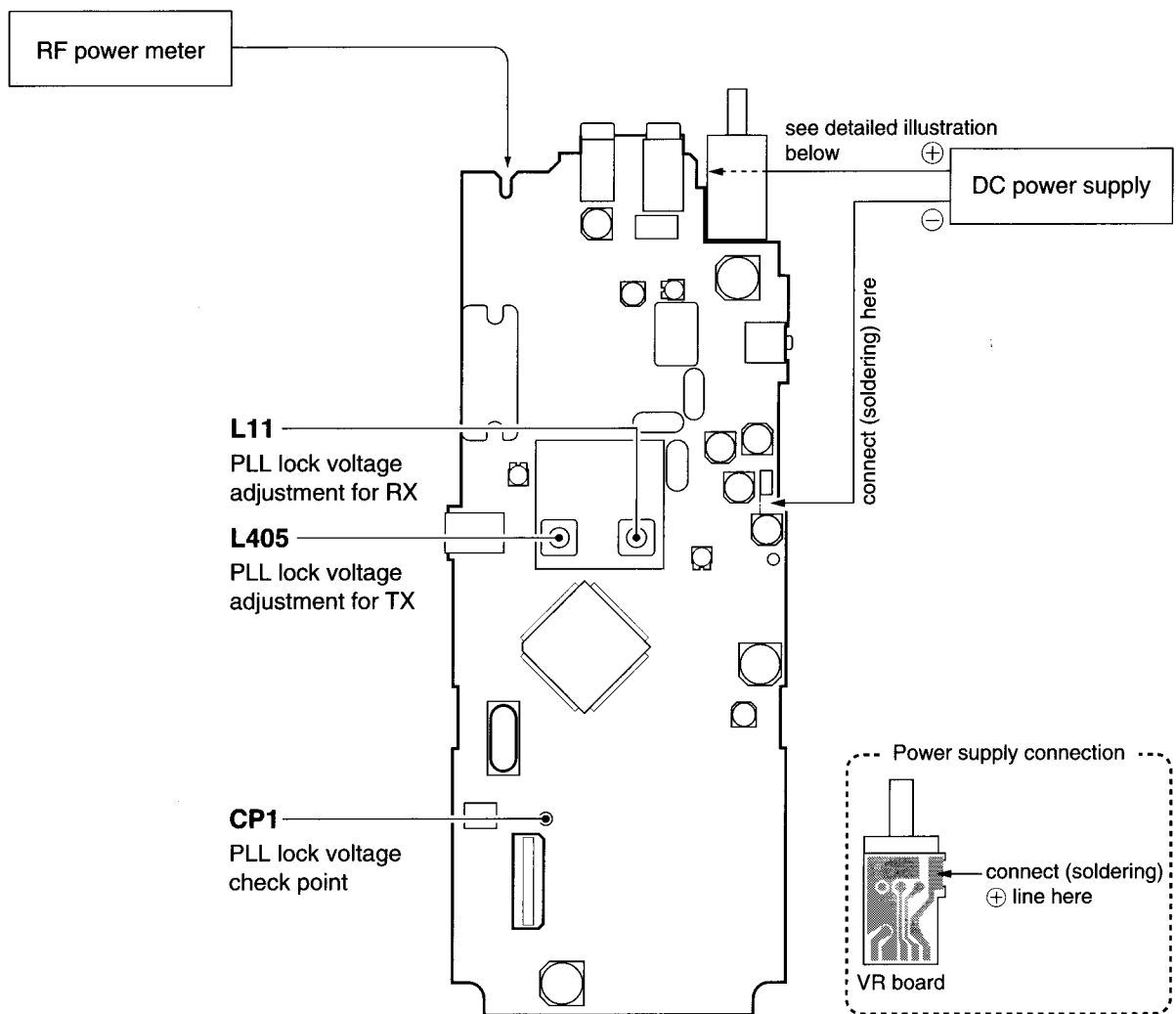
NOTE: When the EEPROM (IC7) is replaced or the transceiver displays an error message and beeps, the following operation is necessary before starting the ADJUSTMENT.

1. Download the programmed data using the EX-2126 FIELD PROGRAMMING SOFTWARE (Rev. 1.0 or later) from an exact same version of the transceiver, then save it. (See the instructions for detailed operation.)
2. Set the cursor to the [MODEL] and push the [↓] key on the computer keyboard.
3. Type “RESERVE” then push [Enter].
“Reserved” indicator flashes at the right hand, top corner on the computer screen.
4. Connect the transceiver which has been repaired, then write the data to the transceiver.

5-2 PLL ADJUSTMENT


ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT	
		UNIT	LOCATION		UNIT	ADJUST
PLL LOCK VOLTAGE	1 • Operating freq.: 461.4750 MHz (UK) 446.9750 MHz (FRA) 444.8000 MHz (SWE) • Receiving	MAIN	Connect a multimeter to check point CP1.	3.3 V [UK] 2.0 V [FRA] 1.8 V [SWE]	MAIN	L11
	2 • Transmitting					L405

• MAIN unit



5-3 TRIMMER ADJUSTMENT

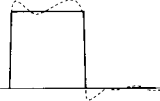
Select an item using [↑]/[↓] keys on the connected computer keyboard.

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	OPERATION
		UNIT	LOCATION		
REFERENCE FREQUENCY	1 <ul style="list-style-type: none"> • Operating freq. : 461.4750 MHz (UK) 446.9750 MHz (FRA) 444.8000 MHz (SWE) • Transmitting 	Top panel	Loosely couple a frequency counter to the antenna connector.	461.47500 MHz (UK) 446.97500 MHz (FRA) 444.80000 MHz (SWE)	Push [←] or [→] keys on the computer key board.
OUTPUT POWER	1 <ul style="list-style-type: none"> • Operating freq. : 461.4750 MHz (UK) 446.9750 MHz (FRA) 444.8000 MHz (SWE) • Transmitting 	Top panel	Connected computer screen "Power (Hi)".	180	Push [←] or [→] keys on the computer key board.
	2 <ul style="list-style-type: none"> • Transmitting 		Connect an RF power meter to the antenna connector.	Maximum output	Adjust C467 on the MAIN unit. (see detailed illustration at right)
BPF1-BPF4	1 <ul style="list-style-type: none"> • Operating freq. : 461.4750 MHz (UK) 446.9750 MHz (FRA) 444.8000 MHz (SWE) • Set an SSG as: Level : 10 μV* (-87 dBm) Modulation : 1 kHz Deviation : \pm1.75 kHz (UK, FRA) \pm3.5 kHz (SWE) • Receiving 	Top panel	Connect an SSG to the antenna connector and a SINAD meter with an 8 Ω load to the [SP] jack.	Minimum distortion level	Push [←] or [→] keys on the computer key board.
	CONVENIENT: The BPF1-BPF4 can be adjusted automatically. ①-1 Set each to 0, then push the [F9] key. (The cursor must be set to the BPF1 position.) ②-1 The connected PC tunes BPF1-BPF4 to peak levels. or ③-2 Set the cursor to one of BPF1, 2, 3 or 4 as desired. ④-2 Push [F8] to start tuning. ⑤-2 Repeat ①-2 and ②-2 to perform additional BPF tuning.				
S-METER	1 <ul style="list-style-type: none"> • Operating freq. : 461.4750 MHz (UK) 446.9750 MHz (FRA) 444.8000 MHz (SWE) • Set an SSG as: Level : 0.5 μV* (-113 dBm) Modulation : OFF • Receiving 	Top panel	Connect an SSG to the antenna connector and a SINAD meter with an 8 Ω load to the [SP] jack.	Display shows 	Push [Enter] key on the computer key-board.

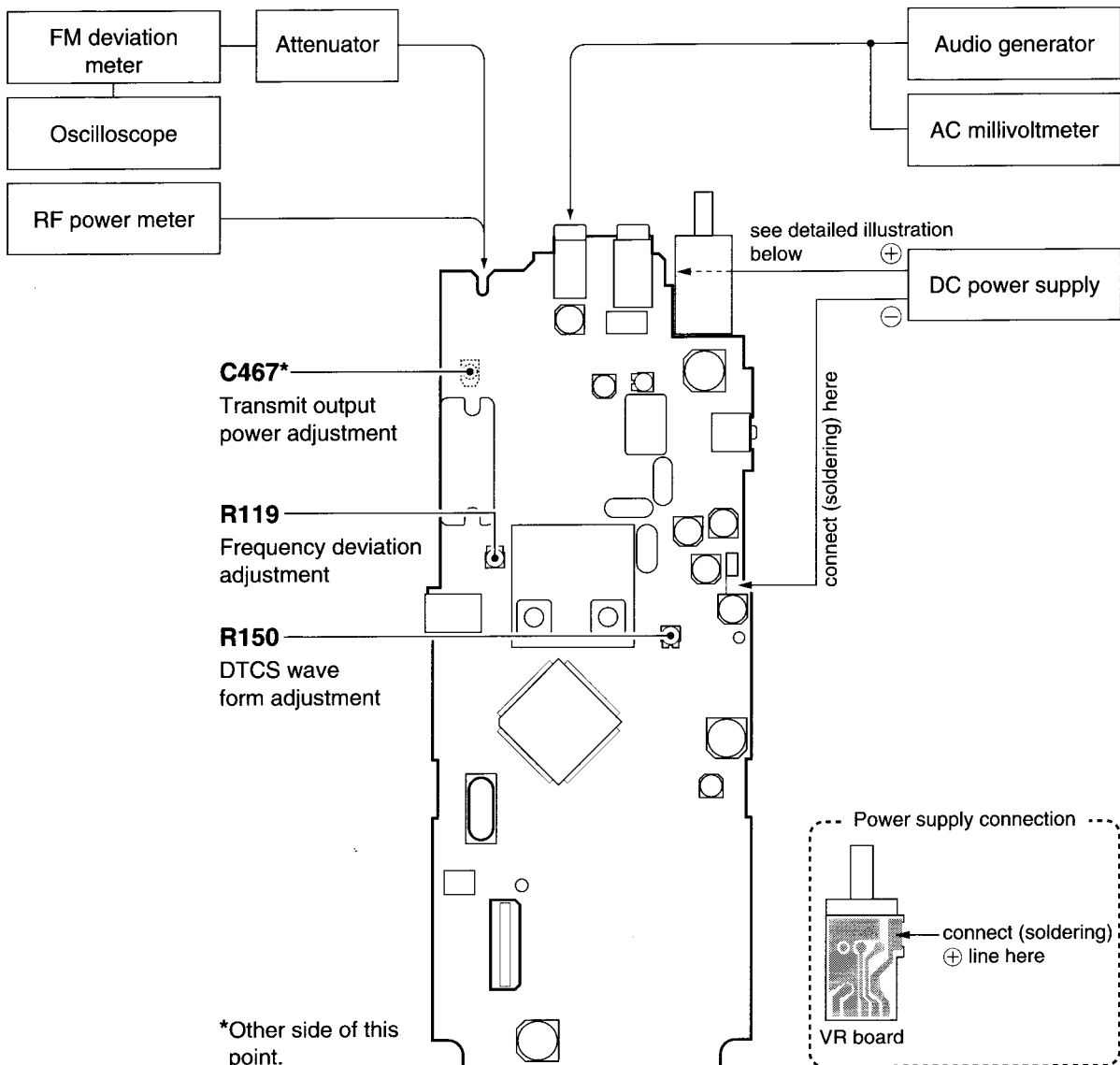
*The output level of the standard signal generator (SSG) is indicated as SSG's open circuit.

5-4 TRANSMITTER ADJUSTMENT

The following adjustment must be performed after "REFERENCE FREQUENCY ADJUSTMENT" in section 5-3.

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT	
		UNIT	LOCATION		UNIT	ADJUST
FM DEVIATION	1 <ul style="list-style-type: none"> • Operating freq. : 461.4750 MHz (UK) 446.9750 MHz (FRA) 444.8000 MHz (SWE) • Connect an audio generator to the [MIC] jack and set as: 1 kHz/150 mV • Set an FM deviation meter as: HPF : OFF LPF : 20 kHz De-emphasis : OFF Detector : (P-P)/2 • Transmitting 	Top panel	Connect an FM deviation meter to the antenna connector through an attenuator.	±2.1 kHz (UK, FRA) ±4.1 kHz (SWE)	MAIN	R119
DTCS WAVE FORM	1 <ul style="list-style-type: none"> • Operating freq. : 461.4750 MHz (UK) 446.9750 MHz (FRA) 444.8000 MHz (SWE) • No audio applied to the [MIC] jack. • DTCS code : 007 • Transmitting 	Top panel	Connect an FM deviation meter with an oscilloscope to the antenna connector through an attenuator.	Set to flat wave form 	MAIN	R150

• MAIN unit

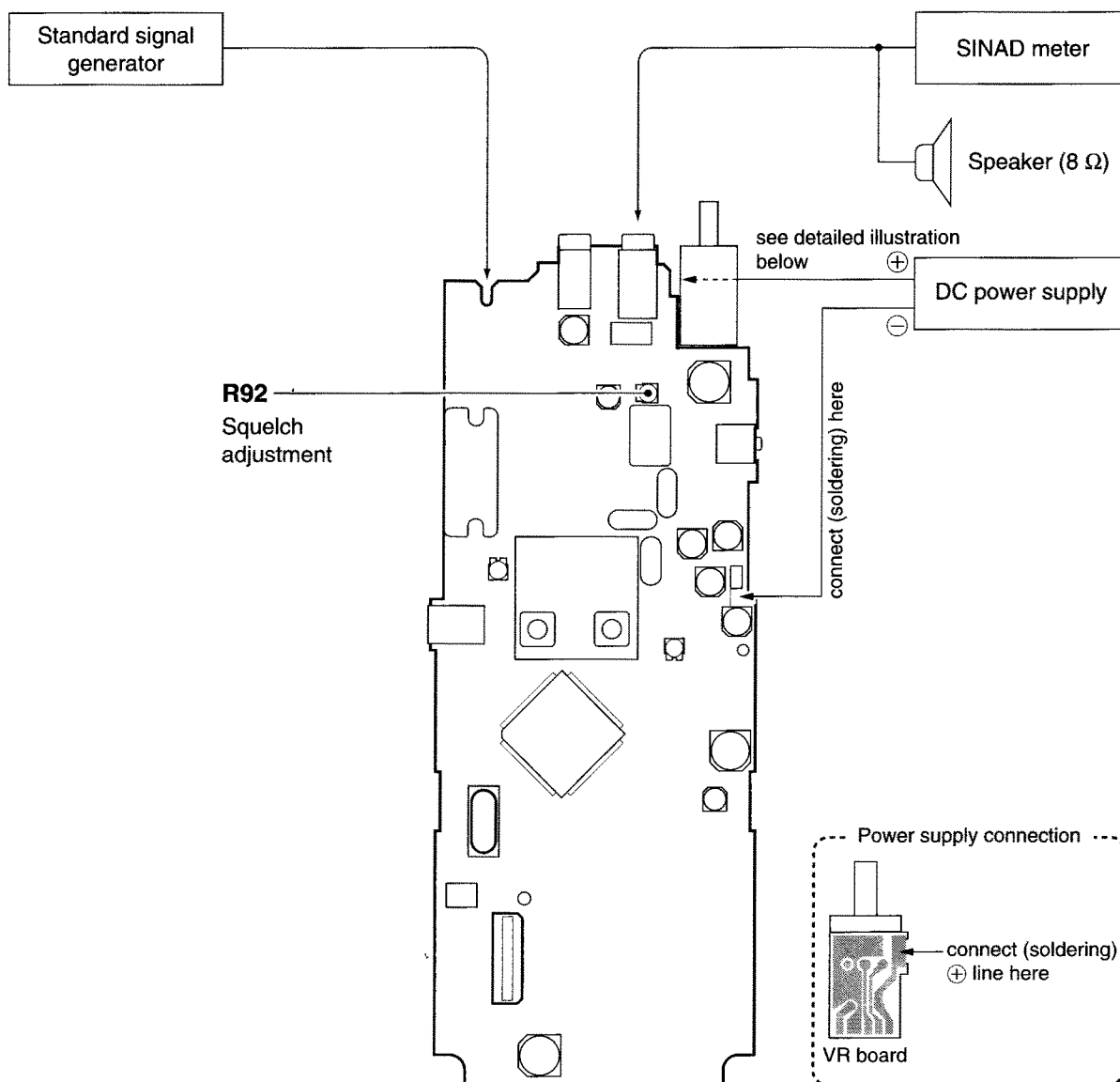


5-5 RECEIVER ADJUSTMENT

The following adjustment must be performed after "BPF1–BPF4 ADJUSTMENT" in section 5-3.

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT	
		UNIT	LOCATION		UNIT	ADJUST
SQUELCH LEVEL	<ul style="list-style-type: none"> • Operating freq.: 461.4750 MHz (UK) 446.9750 MHz (FRA) 444.8000 MHz (SWE) • Set the SSG as: Modulation : 1kHz Deviation : ±1.75 kHz (UK, FRA) ±3.5 kHz (SWE) • Receiving 	Top panel	Connect an SSG to the antenna connector and SINAD meter with an 8 Ω load to the [SP] jack.	12 dB SINAD	SSG	Output level
	<ul style="list-style-type: none"> • Turn R92 clockwise to close squelch. • Receiving 	Top panel		At the point where the audio signals just appears.	MAIN	R92

• MAIN unit



SECTION 6 PARTS LIST

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1130007610	S.IC	μPD3140GS-E1 (DS8)
IC2	1110003490	S.IC	TA31136FN(D,EL)
IC3	1110003780	S.IC	NJM2902V-TE1
IC4	1130008090	S.IC	BU4066BCFV-E1
IC5	1110001810	S.IC	TA7368F(TP1)
IC6	1180001080	S.IC	S-81250PG-PD
IC7	1140005620	S.IC	X25080SI-2.7
IC8	1140007130	S.IC	HD6433875A74H
IC10	1110003690	S.IC	M62354GP 75EC
IC11	1110003500	S.IC	S-80742SL-A6-T1
Q1	1560000950	S.FET	2SK2595AXTB
Q2	1560000960	S.FET	2SK2596BXTL
Q3	1530002620	S.TRANSISTOR	2SC3585 R44-T2B
Q4	1530003310	S.TRANSISTOR	2SC5107-O (TE85R)
Q5	1530003310	S.TRANSISTOR	2SC5107-O (TE85R)
Q6	1530003310	S.TRANSISTOR	2SC5107-O (TE85R)
Q7	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q8	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q9	1590002160	S.TRANSISTOR	XP6401-(TX)
Q11	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q12	1580000610	S.FET	3SK239XR-TL
Q13	1580000680	S.FET	3SK241-R(TX)
Q15	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q16	1590001190	S.TRANSISTOR	XP6501-(TX).AB
Q17	1590002530	S.TRANSISTOR	UN911H(TX)
Q18	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q19	1590001190	S.TRANSISTOR	XP6501-(TX).AB
Q20	1510000580	S.TRANSISTOR	2SA1362-GR (TE85R)
Q21	1510000580	S.TRANSISTOR	2SA1362-GR (TE85R)
Q22	1510000580	S.TRANSISTOR	2SA1362-GR (TE85R)
Q23	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q25	1530000160	S.TRANSISTOR	2SC2712-Y (TE85RTEM)
Q26	1590000430	S.TRANSISTOR	DTC144EU T107
Q27	1520000460	S.TRANSISTOR	2SB1132 T100 R
Q28	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q31	1590000660	S.TRANSISTOR	DTC144TU T107
Q33	1590001650	S.TRANSISTOR	XP4601(TX)
Q34	1560000540	S.FET	2SK880-Y (TE85R)
Q35	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q36	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q37	1590000720	S.TRANSISTOR	DTA144EU T107
Q38	1590000430	S.TRANSISTOR	DTC144EU T107
Q400	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q401	1590001400	S.TRANSISTOR	XP1214(TX)
Q402	1590000430	S.TRANSISTOR	DTC144EU T107
Q403	1530003310	S.TRANSISTOR	2SC5107-O (TE85R)
Q404	1530002850	S.TRANSISTOR	2SC4116-BL (TE85R)
Q405	1590000430	S.TRANSISTOR	DTC144EU T107
D1	1790000620	S.DIODE	MA77(TW)
D2	1790000490	S.DIODE	HSM88AS-TR
D3	1790000620	S.DIODE	MA77(TW)
D4	1790000620	S.DIODE	MA77(TW)
D5	1720000370	S.VARICAP	HVU350TRF
D7	1720000670	S.VARICAP	HVU17TRF
D8	1790000620	S.DIODE	MA77(TW)
D10	1720000370	S.VARICAP	HVU350TRF
D11	1720000370	S.VARICAP	HVU350TRF
D12	1720000370	S.VARICAP	HVU350TRF
D15	1790001280	S.DIODE	MA111(TX)
D16	1790001200	S.DIODE	MA6S121(TX)
D17	1790001200	S.DIODE	MA6S121(TX)
D24	1750000130	S.DIODE	DA204U T107
D25	1790000670	S.DIODE	SB07-03C-TB
D26	1160000060	S.DIODE	DAN202U T107
D27	1750000130	S.DIODE	DA204U T107
D400	1790001210	S.DIODE	1SS375-TL
D401	1720000370	S.VARICAP	HVU350TRF
D402	1790001210	S.DIODE	1SS375-TL
D403	1720000370	S.VARICAP	HVU350TRF
D404	1720000520	S.VARICAP	1T365-01-T8A
D405	1720000360	S.DIODE	HSU88TRF
D406	1790000620	S.DIODE	MA77(TW)

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION		
F11	2010002100	XTAL	FL-267 (46.35 MHz)	[UK], [FRA]
	2010002120	XTAL	FL-271 (46.35 MHz)	[SW]
F12	2020001270	CERAMIC	CFWM450E	[SW]
	2020001410	CERAMIC	CFWM450G	[UK], [FRA]
X1	6050009990	XTAL	CR-576 (15.3 MHz)	
X2	6050008840	S.XTAL	CR-463 (6.8 MHz)	
X3	6070000210	S.DISCRIMINATOR	CDBCA450CX24	
L1	6200005780	S.COIL	33CS-Y655LY-03K=P3	
L2	6200005770	S.COIL	33CS-Y655LY-04K=P3	
L3	6200005770	S.COIL	33CS-Y655LY-04K=P3	
L5	6110003230	S.COIL	LA-515	
L6	6200006770	S.COIL	ELJRE 1N5Z-F	
L7	6200005670	S.COIL	ELJRE 12NG-F	
L8	6200005400	S.COIL	LL1608-F27NJ	
L9	6200005400	S.COIL	LL1608-F27NJ	
L11	6200003690	S.COIL	MC152-E558ANA-100051=P3	
L12	6200003550	S.COIL	MLF1608A 4R7K-T	
L13	6200003960	S.COIL	MLF1608A 1R0K-T	
L14	6200002450	S.COIL	LL2012-F15NK	
L15	6200002100	S.COIL	LQN 1A 17NJ04	
L17	6200002320	S.COIL	LQN 1A 8N8J04	
L18	6200002320	S.COIL	LQN 1A 8N8J04	
L19	6200002320	S.COIL	LQN 1A 8N8J04	
L20	6200004480	S.COIL	MLF1608D R82K-T	
L21	6200005430	S.COIL	LL1608-F47NJ	
L22	6200004660	S.COIL	MLF1608A 1R8K-T	
L24	6200004480	S.COIL	MLF1608D R82K-T	
L25	6200004480	S.COIL	MLF1608D R82K-T	
L26	6200003590	S.COIL	EXCCL3225U1	
L27	6200003590	S.COIL	EXCCL3225U1	
L400	6200003540	S.COIL	MLF1608D R22K-T	
L401	6200002100	S.COIL	LQN 1A 17NJ04	
L402	6200002320	S.COIL	LQN 1A 8N8J04	
L403	6200004780	S.COIL	MLF1608A 1R5K-T	
L404	6200004780	S.COIL	MLF1608A 1R5K-T	
L405	6200004110	S.COIL	MC152-E558ANA-100050	
L406	6200004780	S.COIL	MLF1608A 1R5K-T	
L407	6200003550	S.COIL	MLF1608A 4R7K-T	
L409	6200003550	S.COIL	MLF1608A 4R7K-T	
L410	6200003960	S.COIL	MLF1608A 1R0K-T	
L411	6200005400	S.COIL	LL1608-F27NJ	
L412	6200003960	S.COIL	MLF1608A 1R0K-T	
L413	6200005370	S.COIL	LL1608-F15NK	
L414	6200003540	S.COIL	MLF1608D R22K-T	
L415	6200007220	S.COIL	EXCCL4532U1	
L416	6200003540	S.COIL	MLF1608D R22K-T	
R1	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)	
R2	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
R3	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	
R5	7030000220	S.RESISTOR	MCR10EZHU 47 Ω (470)	
R7	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)	
R8	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	
R9	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
R12	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
R13	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)	
R14	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)	
R15	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)	
R17	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	
R18	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)	
R19	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)	
R20	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)	
R21	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	
R22	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)	
R23	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	
R32	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)	
R33	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)	
R34	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	
R40	7030003780	S.RESISTOR	ERJ3GEYJ 684 V (680 kΩ)	
R41	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)	
R42	7410000950	S.ARRAY	EXB-V8V 102JV	
R44	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)	

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
R45	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R46	7030004050	S.RESISTOR ERJ3GEYJ 1R0 V (1 Ω)
R48	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R49	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R50	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R51	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R52	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R53	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R54	7030003700	S.RESISTOR ERJ3GEYJ 154 V (150 kΩ)
R55	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R59	7030003340	S.RESISTOR ERJ3GEYJ 151 V (150 Ω)
R62	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R63	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R64	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R65	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R66	7030003700	S.RESISTOR ERJ3GEYJ 154 V (150 kΩ)
R67	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R68	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R69	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R70	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R72	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R75	7030003370	S.RESISTOR ERJ3GEYJ 271 V (270 Ω)
R77	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R82	7030003450	S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ) [SW]
	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) [UK], [FRA]
R83	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)
R84	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)
R85	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R86	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) [UK], [FRA]
	7030003690	S.RESISTOR ERJ3GEYJ 124 V (120 kΩ) [SW]
R87	7030003470	S.RESISTOR ERJ3GEYJ 182 V (1.8 kΩ) [SW]
	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) [UK], [FRA]
R88	7030003690	S.RESISTOR ERJ3GEYJ 124 V (120 kΩ)
R89	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R90	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ) [UK], [FRA]
	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ) [SW]
R92	7310004110	S.TRIMMER EVM-1YSX50 B54 (503)
R93	7030003610	S.RESISTOR ERJ3GEYJ 273 V (27 kΩ)
R94	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)
R95	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)
R96	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R97	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R98	7030003880	S.RESISTOR ERJ3GEYJ 244 V (240 kΩ)
R99	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R100	7030003470	S.RESISTOR ERJ3GEYJ 182 V (1.8 kΩ)
R101	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)
R102	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)
R103	7030003590	S.RESISTOR ERJ3GEYJ 183 V (18 kΩ)
R104	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R105	7030003370	S.RESISTOR ERJ3GEYJ 271 V (270 Ω) [SW]
	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω) [UK], [FRA]
R107	7030003690	S.RESISTOR ERJ3GEYJ 124 V (120 kΩ) [UK], [FRA]
	7030003730	S.RESISTOR ERJ3GEYJ 274 V (270 kΩ) [SW]
R108	7030003700	S.RESISTOR ERJ3GEYJ 154 V (150 kΩ) [SW]
	7030003710	S.RESISTOR ERJ3GEYJ 184 V (180 kΩ) [UK], [FRA]
R109	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R112	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R113	7030003660	S.RESISTOR ERJ3GEYJ 683 V (68 kΩ)
R114	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R115	7030003690	S.RESISTOR ERJ3GEYJ 124 V (120 kΩ)
R116	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R117	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R118	7030004050	S.RESISTOR ERJ3GEYJ 1R0 V (1 Ω)
R119	7310004090	S.TRIMMER EVM-1YSX50 B14 (103)
R120	7030003660	S.RESISTOR ERJ3GEYJ 683 V (68 kΩ)
R121	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R122	7030003490	S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ)
R123	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)
R125	7030003610	S.RESISTOR ERJ3GEYJ 273 V (27 kΩ)
R126	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R127	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)
R128	7030003200	S.RESISTOR ERJ3GEYJ 100 V (10 Ω)
R130	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R131	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R132	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R133	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R134	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R135	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R137	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R139	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R141	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
R142	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R144	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R146	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R147	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R148	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R149	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R150	7310004110	S.TRIMMER EVM-1YSX50 B54 (503)
R153	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R154	7030003540	S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ)
R155	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R156	7030000160	S.RESISTOR MCR10EZHJ 15 Ω (150)
R157	7030000160	S.RESISTOR MCR10EZHJ 15 Ω (150)
R158	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R159	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R160	7030003340	S.RESISTOR ERJ3GEYJ 151 V (150 Ω)
R161	7030007330	S.RESISTOR ERJ1WRSJR15U (0.15 Ω)
R162	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R163	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R164	7030003490	S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ)
R165	7030003470	S.RESISTOR ERJ3GEYJ 182 V (1.8 kΩ)
R166	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R167	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R168	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R169	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R170	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R174	7030003580	S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)
R176	7030003510	S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ)
R178	7030003510	S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ)
R181	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R182	7510000910	S.THERMISTOR NTCCF2012 4AH 473KC-T
R183	7030003410	S.RESISTOR ERJ3GEYJ 561 V (560 Ω)
R184	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R185	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R186	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R190	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R191	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R192	7030003650	S.RESISTOR ERJ3GEYJ 563 V (56 kΩ)
R193	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R194	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R195	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R196	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R197	7030003710	S.RESISTOR ERJ3GEYJ 184 V (180 kΩ)
R199	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R200	7030003360	S.RESISTOR ERJ3GEYJ 221 V (220 Ω)
R202	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R203	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R204	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)
R205	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R207	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R208	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R209	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R210	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R214	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R215	7030005520	S.RESISTOR RR0816R-334-D (330 kΩ)
R216	7030005630	S.RESISTOR RR0816R-154-D (150 kΩ)
R218	7030003660	S.RESISTOR ERJ3GEYJ 683 V (68 kΩ)
R220	7030003730	S.RESISTOR ERJ3GEYJ 274 V (270 kΩ)
R221	7030003740	S.RESISTOR ERJ3GEYJ 334 V (330 kΩ)
R224	7030003610	S.RESISTOR ERJ3GEYJ 273 V (27 kΩ) [SW]
	7030003660	S.RESISTOR ERJ3GEYJ 683 V (68 kΩ) [UK], [FRA]
R225	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R226	7410000950	S.ARRAY EXB-V8V 102JV
R227	7030004050	S.RESISTOR ERJ3GEYJ 1R0 V (1 Ω)
R228	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R229	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R230	7030003650	S.RESISTOR ERJ3GEYJ 563 V (56 kΩ)
R231	7030003710	S.RESISTOR ERJ3GEYJ 184 V (180 kΩ)
R234	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R235	7030003780	S.RESISTOR ERJ3GEYJ 683 V (680 kΩ)
R236	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R237	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R400	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R401	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R402	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R403	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)
R404	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R405	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R406	7030003330	S.RESISTOR ERJ3GEYJ 121 V (120 Ω) [UK], [FRA]
	7030003390	S.RESISTOR ERJ3GEYJ 391 V (390 Ω) [SW]
R407	7030003690	S.RESISTOR ERJ3GEYJ 124 V (120 kΩ)
R408	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R409	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R410	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R411	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R412	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R413	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)
R414	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R415	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R416	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R417	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R419	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)
R420	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R421	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R422	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R424	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R425	7410000950	S.ARRAY	EXB-V8V 102JV
R426	7410000950	S.ARRAY	EXB-V8V 102JV
R427	7410000770	S.ARRAY	EXB-V4V 102JV (1 kΩ)
R428	7410000950	S.ARRAY	EXB-V8V 102JV
R429	7410000950	S.ARRAY	EXB-V8V 102JV
R430	7410000950	S.ARRAY	EXB-V8V 102JV
R431	7410000770	S.ARRAY	EXB-V4V 102JV (1 kΩ)
R432	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R433	7410000950	S.ARRAY	EXB-V8V 102JV
R434	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R436	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)
R437	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R438	7030003740	S.RESISTOR	ERJ3GEYJ 334 V (330 kΩ)
R439	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R440	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R441	7510000930	S.THERMISTOR	NTCCF2012 3NH 103KC-T
R442	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R443	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R444	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R445	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R446	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R447	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R448	7030003210	S.RESISTOR	ERJ3GEYJ 120 V (12 Ω)
R449	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R450	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R451	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R452	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R453	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ) [SW]
	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ) [UK], [FRA]
R454	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R455	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ) [SW]
	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ) [UK], [FRA]
R456	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R457	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R458	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R459	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R460	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R461	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R464	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R465	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)
R466	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R468	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R469	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
C3	4030007020	S.CERAMIC	C1608 CH 1H 120J-TA
C5	4030006990	S.CERAMIC	C1608 CH 1H 080D-TA
C7	4030009910	S.CERAMIC	C1608 CH 1H 040B-TA
C8	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C9	4030006850	S.CERAMIC	C1608 JB 1H 471K-TA
C10	4030006850	S.CERAMIC	C1608 JB 1H 471K-TA
C11	4030004850	S.CERAMIC	C2012 CH 1H 080D-TA
C13	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C14	4030006900	S.CERAMIC	C1608 JB 1E 103K-TA
C15	4030009990	S.CERAMIC	C1608 CH 1H 200J-TA
C17	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C18	4030006850	S.CERAMIC	C1608 JB 1H 471K-TA
C19	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C20	4030006850	S.CERAMIC	C1608 JB 1H 471K-TA
C21	4510005310	S.ELECTROLYTIC	ECEV1CA220SR
C22	4030006990	S.CERAMIC	C1608 CH 1H 080J-TA
C24	4030006850	S.CERAMIC	C1608 JB 1H 471K-TA
C25	4030009910	S.CERAMIC	C1608 CH 1H 040B-TA
C26	4030006850	S.CERAMIC	C1608 JB 1H 471K-TA
C27	4030009920	S.CERAMIC	C1608 CH 1H 050B-TA
C28	4030007020	S.CERAMIC	C1608 CH 1H 120J-TA
C30	4030007020	S.CERAMIC	C1608 CH 1H 120J-TA
C31	4030009920	S.CERAMIC	C1608 CH 1H 050B-TA

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C32	4030006850	S.CERAMIC	C1608 JB 1H 471K-TA
C33	4030006850	S.CERAMIC	C1608 JB 1H 471K-TA
C42	4030006850	S.CERAMIC	C1608 JB 1H 471K-TA
C47	4550006360	S.TANTALUM	ECST1VY104R
C48	4550006450	S.TANTALUM	ECST1EY105R
C51	4030007010	S.CERAMIC	C1608 CH 1H 100D-TA
C52	4030006900	S.CERAMIC	C1608 JB 1E 103K-TA
C53	4030009920	S.CERAMIC	C1608 CH 1H 050B-TA
C54	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C55	4030006900	S.CERAMIC	C1608 JB 1E 103K-TA
C56	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C57	4030007050	S.CERAMIC	C1608 CH 1H 220J-TA
C58	4030007130	S.CERAMIC	C1608 CH 1H 101J-TA
C59	4030007130	S.CERAMIC	C1608 CH 1H 101J-TA
C60	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C61	4030011770	S.CERAMIC	C1608 CH 1H 060B-TA
C62	4030011770	S.CERAMIC	C1608 CH 1H 060B-TA
C63	4030007100	S.CERAMIC	C1608 CH 1H 560J-TA
C64	4030007020	S.CERAMIC	C1608 CH 1H 120J-TA
C65	4030009910	S.CERAMIC	C1608 CH 1H 040B-TA
C66	4030009910	S.CERAMIC	C1608 CH 1H 040B-TA
C67	4030009530	S.CERAMIC	C1608 CH 1H 030B-TA
C69	4030007070	S.CERAMIC	C1608 CH 1H 330J-TA
C70	4030006900	S.CERAMIC	C1608 JB 1E 103K-TA
C71	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C72	4550006320	S.TANTALUM	ECST0JY475R
C73	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C75	4030006900	S.CERAMIC	C1608 JB 1E 103K-TA
C76	4030006980	S.CERAMIC	C1608 CH 1H 070D-TA
C77	4030007100	S.CERAMIC	C1608 CH 1H 560J-TA
C78	4030006980	S.CERAMIC	C1608 CH 1H 070D-TA
C79	4030009550	S.CERAMIC	C1608 CH 1H 2R5B-TA
C84	4030007090	S.CERAMIC	C1608 CH 1H 470J-TA
C85	4030011770	S.CERAMIC	C1608 CH 1H 060B-TA
C86	4030009920	S.CERAMIC	C1608 CH 1H 050B-TA
C87	4030007090	S.CERAMIC	C1608 CH 1H 470J-TA
C88	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C89	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-TA
C90	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C91	4030006980	S.CERAMIC	C1608 CH 1H 070D-TA
C92	4030006980	S.CERAMIC	C1608 CH 1H 070D-TA
C93	4030007090	S.CERAMIC	C1608 CH 1H 470J-TA
C94	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-TA
C95	4030007090	S.CERAMIC	C1608 CH 1H 470J-TA
C96	4030006980	S.CERAMIC	C1608 CH 1H 070D-TA
C97	4030009920	S.CERAMIC	C1608 CH 1H 050B-TA
C98	4030007050	S.CERAMIC	C1608 CH 1H 220J-TA
C99	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C105	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C106	4030007010	S.CERAMIC	C1608 CH 1H 100D-TA [SW]
	4030011770	S.CERAMIC	C1608 CH 1H 060B-TA [UK], [FRA]
C107	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C108	4030006900	S.CERAMIC	C1608 JB 1E 103K-TA
C109	4030006990	S.CERAMIC	C1608 CH 1H 080D-TA [UK], [FRA]
	4030007010	S.CERAMIC	C1608 CH 1H 100D-TA [SW]
C112	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C113	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C114	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C115	4030007130	S.CERAMIC	C1608 CH 1H 101J-TA
C116	4030007100	S.CERAMIC	C1608 CH 1H 560J-TA [SW]
	4030007130	S.CERAMIC	C1608 CH 1H 101J-TA [UK], [FRA]
C117	4550006320	S.TANTALUM	ECST0JY475R
C118	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C120	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C121	4030007170	S.CERAMIC	C1608 CH 1H 221J-TA
C122	4030007170	S.CERAMIC	C1608 CH 1H 221J-TA
C123	4030006860	S.CERAMIC	C1608 JB 1H 102K-TA
C124	4030006900	S.CERAMIC	C1608 JB 1E 103K-TA
C125	4030009980	S.CERAMIC	C1608 JB 1H 152K-TA
C126	4030010770	S.CERAMIC	C1608 JB 1H 392K-TA
C128	4030008680	S.CERAMIC	C2012 JF 1C 105Z-TA
C129	4550006680	S.TANTALUM	ECST0JY156R
C131	4030006900	S.CERAMIC	C1608 JB 1E 103K-TA
C132	4030006880	S.CERAMIC	C1608 JB 1H 472K-TA
C133	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C134	4030007150	S.CERAMIC	C1608 CH 1H 151J-TA [SW]
	4030007170	S.CERAMIC	C1608 CH 1H 221J-TA [UK], [FRA]
C135	4030007130	S.CERAMIC	C1608 CH 1H 101J-TA [SW]
	4030007140	S.CERAMIC	C1608 CH 1H 121J-TA [UK], [FRA]
C136	4030006880	S.CERAMIC	C1608 JB 1H 472K-TA
C137	4030008900	S.CERAMIC	C1608 JB 1C 333K-TA

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
C139	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C140	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C141	4030008630	S.CERAMIC C1608 JF 1C 104Z-TA
C142	4030008630	S.CERAMIC C1608 JF 1C 104Z-TA
C143	4030007130	S.CERAMIC C1608 CH 1H 101J-TA
C144	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C145	4510004630	S.ELECTROLYTIC ECEV1CA100SR
C146	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C147	4030008630	S.CERAMIC C1608 JF 1C 104Z-TA
C148	4030008630	S.CERAMIC C1608 JF 1C 104Z-TA
C149	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C150	4550006200	S.TANTALUM ECST0JY106R
C151	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C152	4030008920	S.CERAMIC C1608 JB 1C 473K-TA
C153	4550006670	S.TANTALUM ECST1AD107R
C154	4550006200	S.TANTALUM ECST0JY106R
C155	4510004630	S.ELECTROLYTIC ECEV1CA100SR
C156	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C157	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C158	4510005320	S.ELECTROLYTIC ECEV0JA101SP
C159	4550006320	S.TANTALUM ECST0JY475R
C160	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C161	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C162	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C163	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C164	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C165	4030006850	S.CERAMIC C1608 JB 1H 471K-TA
C166	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C167	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C168	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C169	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C170	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C171	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C172	4030006850	S.CERAMIC C1608 JB 1H 471K-TA
C173	4510004640	S.ELECTROLYTIC ECEV1CA470SP
C174	4510005430	S.ELECTROLYTIC ECEV0JA220SR
C175	4510005430	S.ELECTROLYTIC ECEV0JA220SR
C176	4550006370	S.TANTALUM ECST0JX226R
C177	4510005430	S.ELECTROLYTIC ECEV0JA220SR
C179	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C180	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C181	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C182	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C183	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C184	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C185	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C186	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C187	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C189	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C190	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C192	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C193	4030006990	S.CERAMIC C1608 CH 1H 080D-TA
C194	4030007020	S.CERAMIC C1608 CH 1H 120J-TA
C195	4030007080	S.CERAMIC C1608 CH 1H 390J-TA
C196	4030006850	S.CERAMIC C1608 JB 1H 471K-TA
C197	4030006850	S.CERAMIC C1608 JB 1H 471K-TA
C199	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C200	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C201	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C202	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C204	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C205	4030007040	S.CERAMIC C1608 CH 1H 180J-TA
C206	4030009570	S.CERAMIC C1608 CH 1H 0R3B-TA
C207	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C208	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C209	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C210	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C211	4550006320	S.TANTALUM ECST0JY475R
C212	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C213	4550006320	S.TANTALUM ECST0JY475R
C214	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C217	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C218	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C221	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C222	4030008770	S.CERAMIC C1608 JB 1H 562K-TA
C223	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C224	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C225	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C226	4030009630	S.CERAMIC C1608 JB 1H 822K-TA
C227	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C228	4030009490	S.CERAMIC C1608 JB 1H 821K-TA

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
C229	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C230	4550006140	S.TANTALUM ECST1EY474R
C231	4030008630	S.CERAMIC C1608 JF 1C 104Z-TA
C232	4030008630	S.CERAMIC C1608 JF 1C 104Z-TA
C233	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C234	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C237	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C238	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C239	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C240	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C241	4550006200	S.TANTALUM ECST0JY106R
C242	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C243	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C244	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C245	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C247	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C248	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C249	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C250	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C251	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C252	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C253	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C254	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C255	4030007050	S.CERAMIC C1608 CH 1H 220J-TA
C256	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C257	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C400	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C401	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C402	4030006990	S.CERAMIC C1608 CH 1H 080D-TA
C403	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C404	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C405	4030011770	S.CERAMIC C1608 CH 1H 060B-TA
C406	4030006990	S.CERAMIC C1608 CH 1H 080D-TA
C407	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C408	4030006850	S.CERAMIC C1608 JB 1H 471K-TA
C410	4030006980	S.CERAMIC C1608 CH 1H 070D-TA
C411	4030009570	S.CERAMIC C1608 CH 1H 0R3B-TA
C412	4030008200	S.CERAMIC C1608 UJ 1H 050C-TA
C413	4030006980	S.CERAMIC C1608 CH 1H 070D-TA
C414	4030006990	S.CERAMIC C1608 CH 1H 080D-TA
C415	4030006900	S.CERAMIC C1608 JB 1E 103K-TA
C416	4030006850	S.CERAMIC C1608 JB 1H 471K-TA
C417	4030009500	S.CERAMIC C1608 CH 1H 0R5B-TA
C418	4030007000	S.CERAMIC C1608 CH 1H 090J-TA
C419	4030009560	S.CERAMIC C1608 CH 1H R75B-TA
C421	4030008210	S.CERAMIC C1608 UJ 1H 060D-TA
C422	4030006980	S.CERAMIC C1608 CH 1H 070D-TA
C423	4030011770	S.CERAMIC C1608 CH 1H 060B-TA
C424	4030006850	S.CERAMIC C1608 JB 1H 471K-TA
C426	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C427	4030009500	S.CERAMIC C1608 CH 1H 0R5B-TA
C428	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C429	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C430	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C431	4550006300	S.TANTALUM ECST1AY475R
C432	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C433	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C434	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C435	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C436	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C438	4030008630	S.CERAMIC C1608 JF 1C 104Z-TA
C439	4030008630	S.CERAMIC C1608 JF 1C 104Z-TA
C440	4030008630	S.CERAMIC C1608 JF 1C 104Z-TA
C441	4030008630	S.CERAMIC C1608 JF 1C 104Z-TA
C442	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C443	4030008920	S.CERAMIC C1608 JB 1C 473K-TA
C444	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C446	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C447	4510004420	S.ELECTROLYTIC ECEV0JV330SR
C448	4030007030	S.CERAMIC C1608 CH 1H 150J-TA
C449	4030007090	S.CERAMIC C1608 CH 1H 470J-TA
C450	4030009510	S.CERAMIC C1608 CH 1H 010B-TA [SW]
	4030009520	S.CERAMIC C1608 CH 1H 020B-TA [UK], [FRA]
C451	4030006990	S.CERAMIC C1608 CH 1H 080D-TA [SW]
	4030009990	S.CERAMIC C1608 CH 1H 200J-TA [UK], [FRA]
C452	4030009530	S.CERAMIC C1608 CH 1H 030B-TA
C454	4030006860	S.CERAMIC C1608 JB 1H 102K-TA
C455	4030007010	S.CERAMIC C1608 CH 1H 100D-TA
C456	4550006200	S.TANTALUM ECST0JY106R
C457	4030009520	S.CERAMIC C1608 CH 1H 020B-TA
C458	4030007090	S.CERAMIC C1608 CH 1H 470J-TA

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C459	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C460	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A [UK], [FRA]
	4030009970	S.CERAMIC	C1608 JB 1H 182K-T-A [SW]
C463	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C464	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C465	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C466	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C467	4610001590	S.TRIMMER	TZC03R100A110 10P
C468	4030008680	S.CERAMIC	C2012 JF 1C 105Z-T-A
C469	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C470	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C471	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C472	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C473	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C474	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C475	4030009540	S.CERAMIC	C1608 CH 1H 1R5B-T-A
C476	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C477	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C479	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C481	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C482	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C483	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C486	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C487	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C488	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C489	4030008860	S.CERAMIC	C1608 JB 1C 153K-T-A
C490	4030007170	S.CERAMIC	C1608 CH 1H 221J-T-A
C491	4550006450	S.TANTALUM	ECST1EY105R
C492	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C493	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C495	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C496	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C497	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C498	4030007100	S.CERAMIC	C1608 CH 1H 560J-T-A
C499	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
DS1	5030001460	LCD	LM-1462B
DS2	5010000160	S.LED	LNJ310M6URA
DS3	5010000160	S.LED	LNJ310M6URA
DS4	5040002190	S.LED	LNJ808R8ERA
S1	2230000990	SWITCH	EVQ-PJ705K
J2	6450001680	CONNECTOR	HSJ1122-010010
J3	6450001690	CONNECTOR	HSJ1456-01-220
J4	6450000870	CONNECTOR	HEC2711-01-020
J6	6510007080	CONNECTOR	PI28A-02
J7	6910010850	CONNECTOR	IMSA-9230B-1-05Z080-T
W1	7030003860	S.JUMPER	ERJ3GE JPW V
W2	7030003860	S.JUMPER	ERJ3GE JPW V
W6	7120000480	S.JUMPER	MJP-0.4-T
SP1	2510000960	SPEAKER	K036NA500-26
MC1	7700002160	MICROPHONE	KUC3523-040245
EP1	0910048567	PCB	B 4923G
EP2	8930042590	LCD CONTACT	SRCN-1922-SP-N-W

[VR BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
R1	7210002950	VARIABLE	RV-312
EP1	0910048851	PCB	B 4968A

S.=Surface mount

SECTION 7 MECHANICAL PARTS AND DISASSEMBLY

7-1 CABINET PARTS

[CHASSIS PARTS]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8010017200	2078 Chassis	1
MP2	8210015160	2066 Front panel (A) assembly	1
MP4	8210014330	1922 Contact base	1
MP5	8610010420	Knob N-261	1
MP6	8930046390	2065 7-key (C)	1
MP7	8930042070	1922 MIC cap	1
MP9	8930042030	1922 Main seal	1
MP11	8930042050	1922 DC cap	1
MP12	8930042090	1922 Plus terminal	1
MP13	8930042080	1922 Minus terminal	1
MP17	8310043270	1922 Window plate (G)	1
MP19	8930046060	2068 Rear sheet (A)	1
MP21	8930042350	1922 MIC sheet	1
MP24	8830001250	Nut	1
MP25	8830001010	Hex nut (A)	1
MP26	8810000100	Screw PH M2 x 4 ZK	2
MP27	8810009510	Screw B0 2 x 4 NI-ZU (BT)	6
MP28	8810009510	Screw PH B0 2 x 4 NI-ZU (BT)	1
MP29	8810009510	Screw PH B0 2 x 4 NI-ZU (BT)	2
MP30	8810009560	Screw PH B0 2 x 6 ZK (BT)	2
MP31	8810009560	Screw PH B0 2 x 6 ZK (BT)	2
MP34	8930043210	1922 A-rear sheet	1
MP36	8950004670	ANT connector-101	1
MP37	8510011260	1923 Shield cover	1
MP38	8930043760	1923 MIC seal	1
MP40	8930043610	Isolating plate (EZ)	1

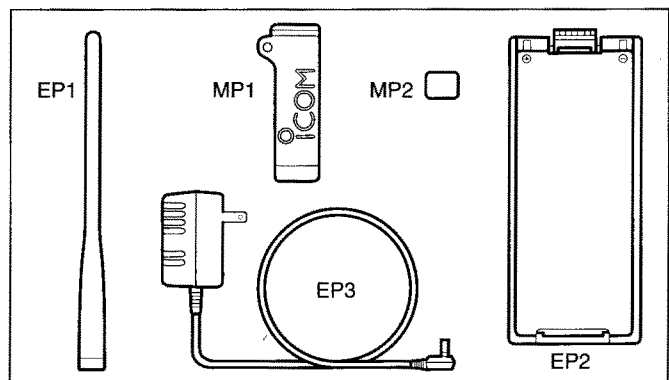
Screw abbreviations: PH: Pan head A0, B0: Self-tapping
NI: Nickel ZK: Black

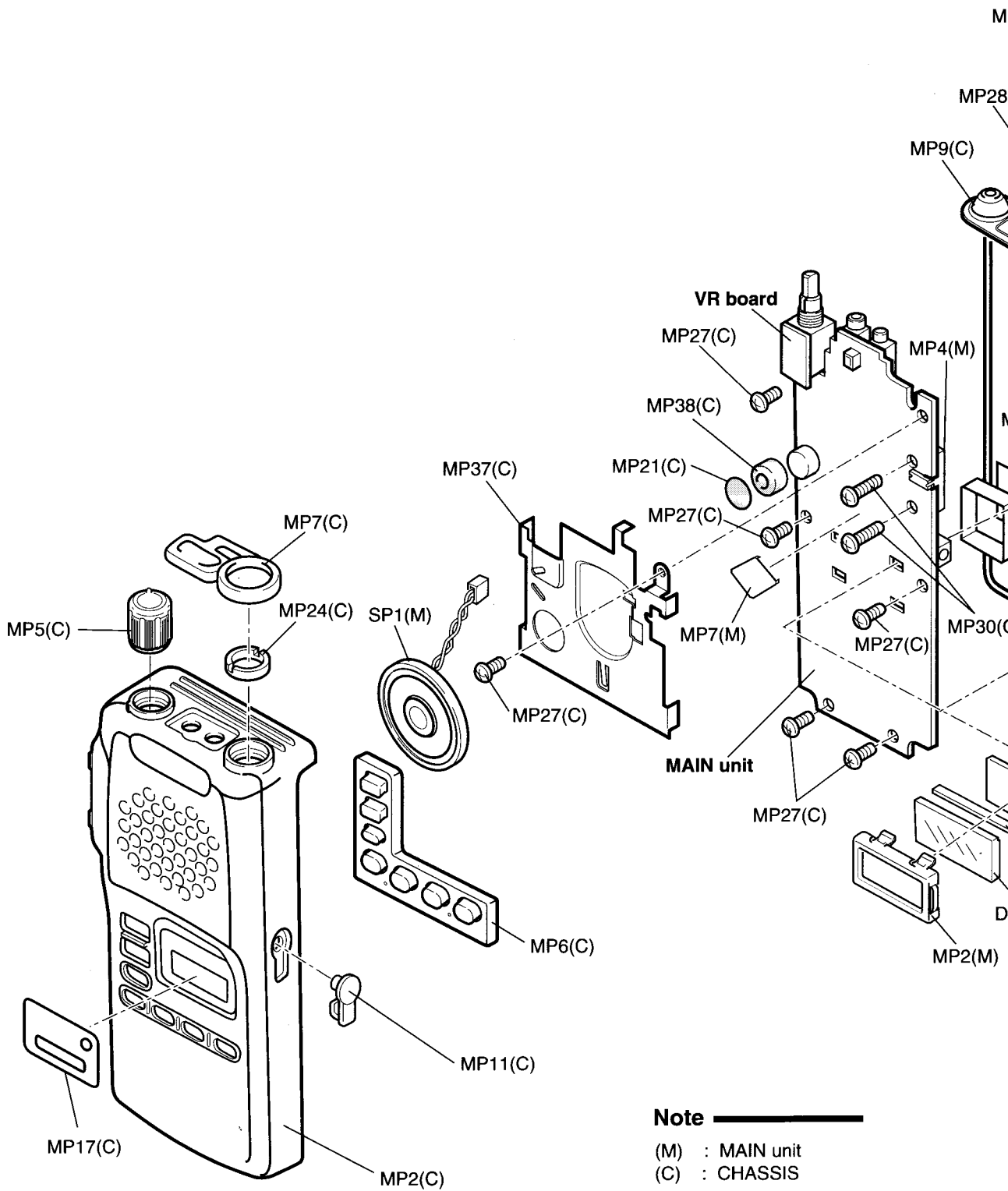
[MAIN UNIT]

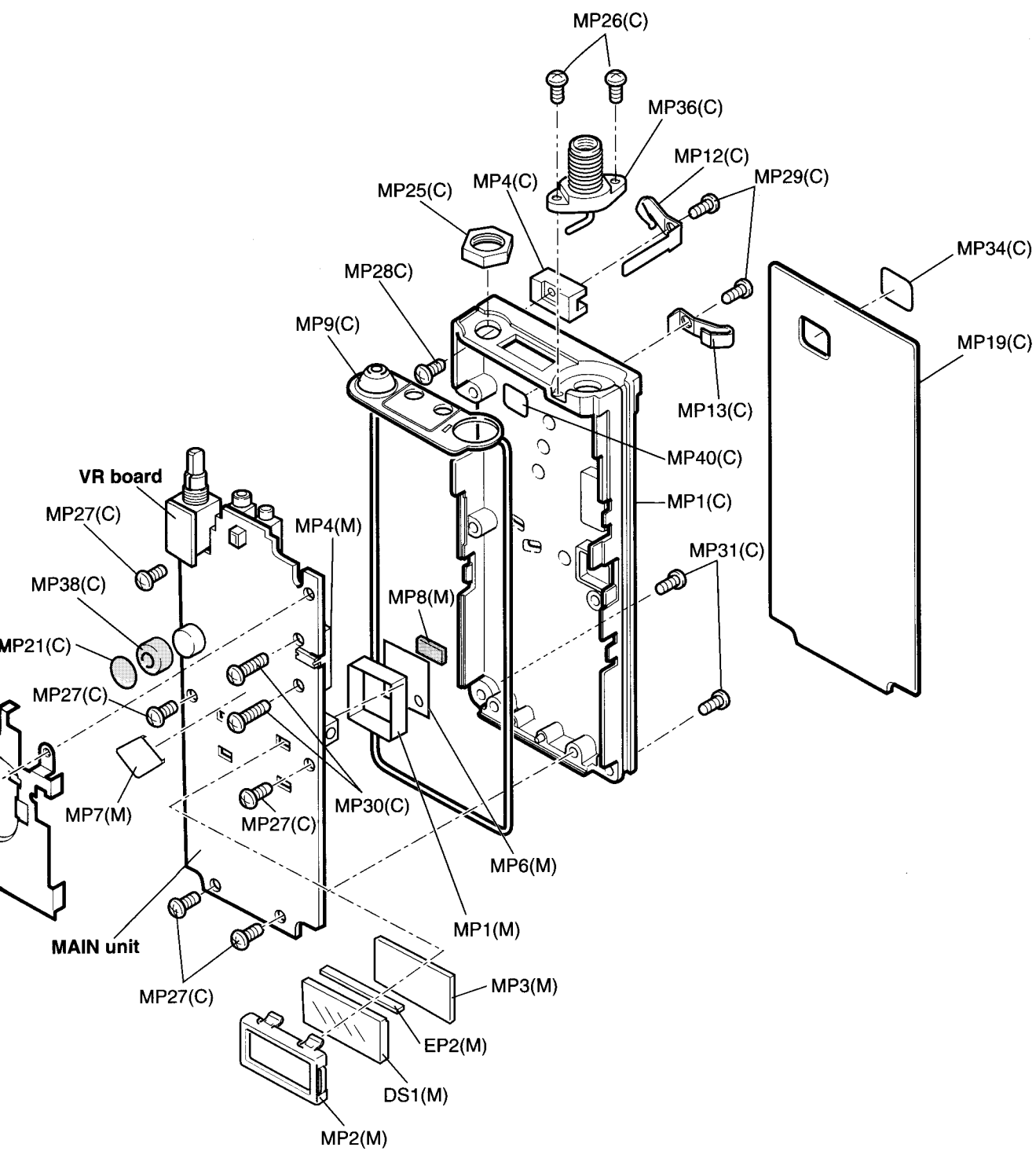
REF NO.	ORDER NO.	DESCRIPTION	QTY.
DS1	5030001460	LCD LM-1462B	1
EP2	8930042590	LCD contact SRCN-1922-SP-N-W	1
MP1	8510011111	1922 VCO case-1	1
MP2	8930042060	1922 LCD holder	1
MP3	8210014380	1922 Reflector	1
MP4	8410002080	1922 PA heatsink	1
MP6	8510011180	1922 VCO cover	1
MP7	8510011230	1923 VCO shield	1
MP8	8930046590	Sponge (FO)	1
SP1	2510000960	K036NA500-26A27	1

7-2 ACCESSORIES

REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	Optional product	Antenna FA-SC56U-1	1
EP2	Optional product	Battery BP-195	1
EP3	Optional product	Wall charger BC-110D [FRA], [SWE]	1
MP1	Optional product	MB-68	1
MP2	8930043210	1922 A-rear sheet	1





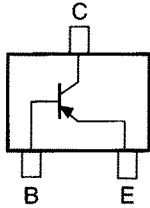
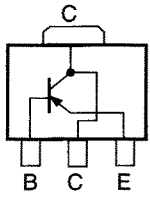
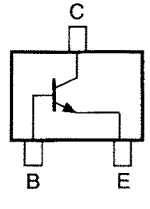
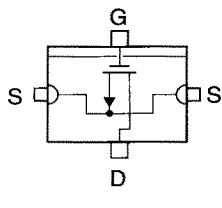
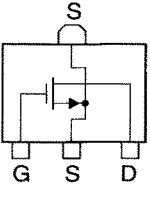
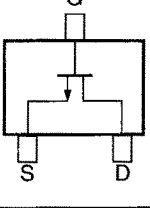
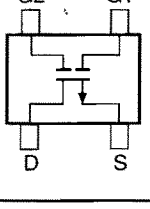


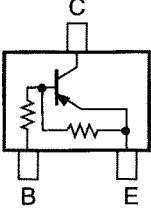
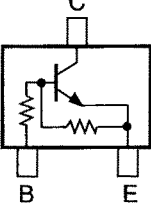
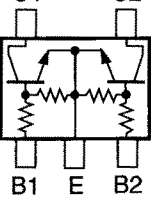
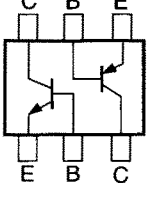
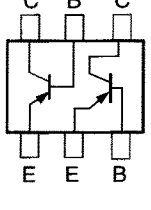
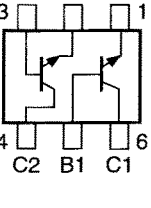
Note _____

- (M) : MAIN unit
- (C) : CHASSIS

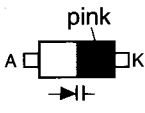
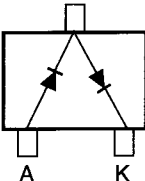
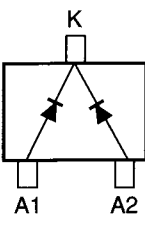

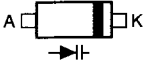


SECTION 8 SEMI-CONDUCTOR INFORMATION

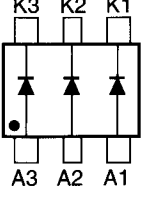
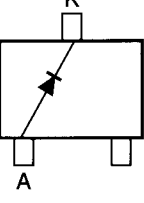
8 - 1 CABINET PARTS

NAME	SYMBOL	INSIDE VIEW
2SA1362-GR	AEG	
2SB1132 - R	BAR	
2SC2712 - Y 2SC3585 R44 2SC4081 - R 2SC4116-BL 2SC4215 - O 2SC4226 - R25 2SC5107 - O	LY R44 BR LB QO R25 MFO	
2SK2595AXTB	AX	
2SK2596BXTL	BX	
2SK880 - Y	XY	
3SK239XR - TL 3SK241-R	XR DU	

NAME	SYMBOL	INSIDE VIEW
DTA144EU UN911H	16 6P	
DTC144EU	26	
XP1214	9H	
XP4601	5C	
XP6401	5O	
XP6501 - AB	5N	

8 - 2 DIODES

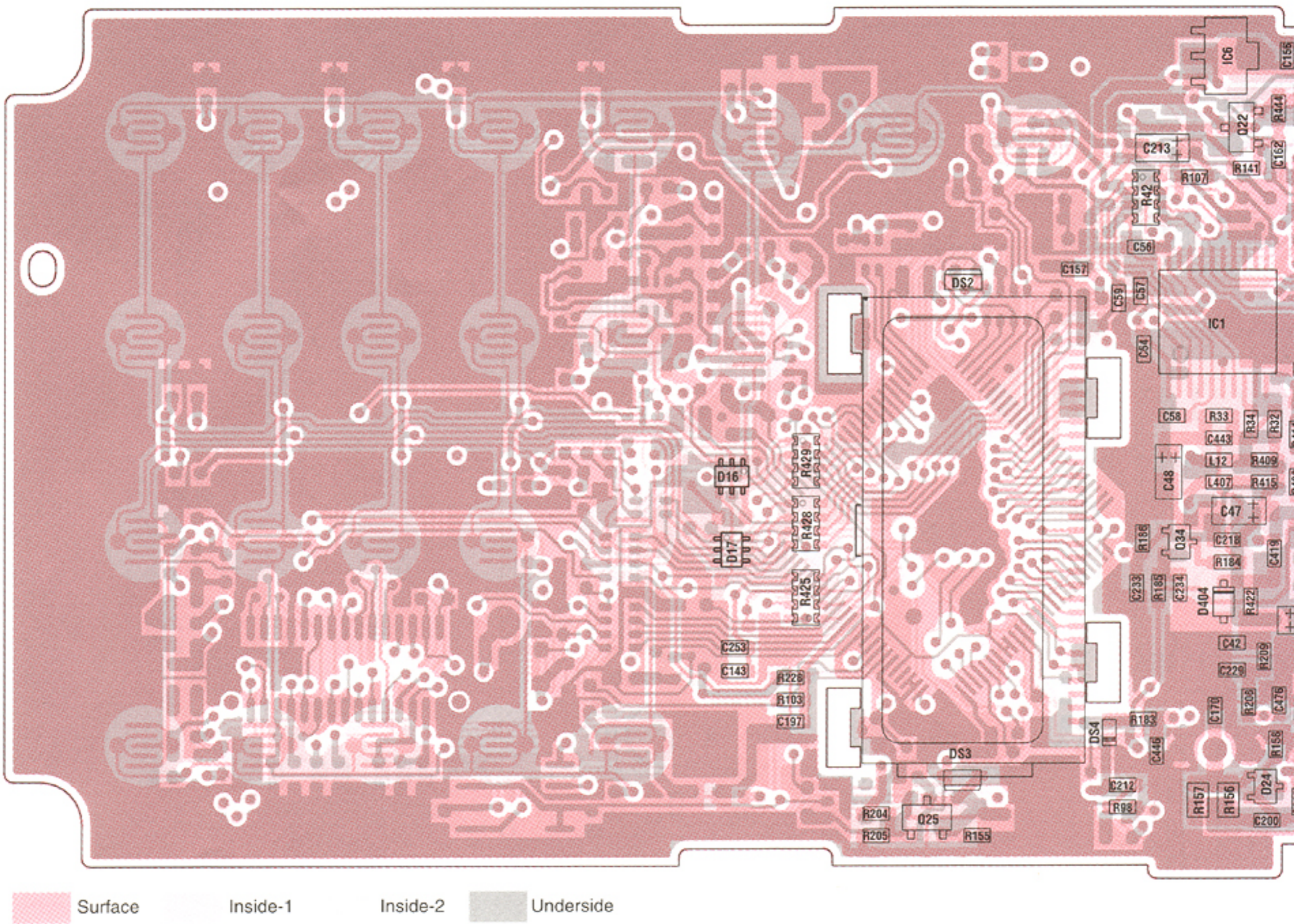
NAME	SYMBOL	INSIDE VIEW
1T365-01	pink line	
1SS375 DA204U HSM88AS	FH K C1	
DAN202U	N	
HSU88TRF HVU17TRF	9 E	
HVU350TRF	4	
MA77	4B	
MA111	1B	

NAME	SYMBOL	INSIDE VIEW
MA6S121	M2D	
SB07-03C-TB	J	

SECTION 9 BOARD LAYOUTS

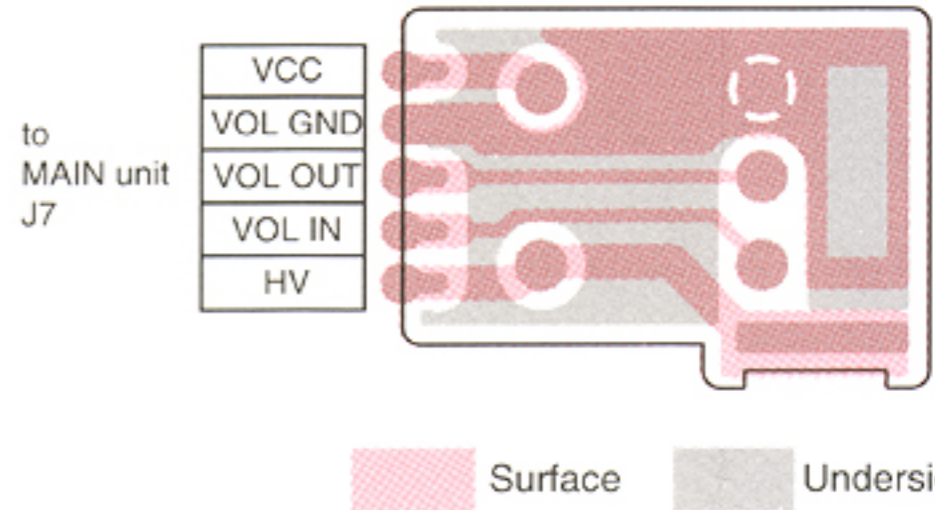
9 - 1 MAIN UNIT

• TOP VIEW

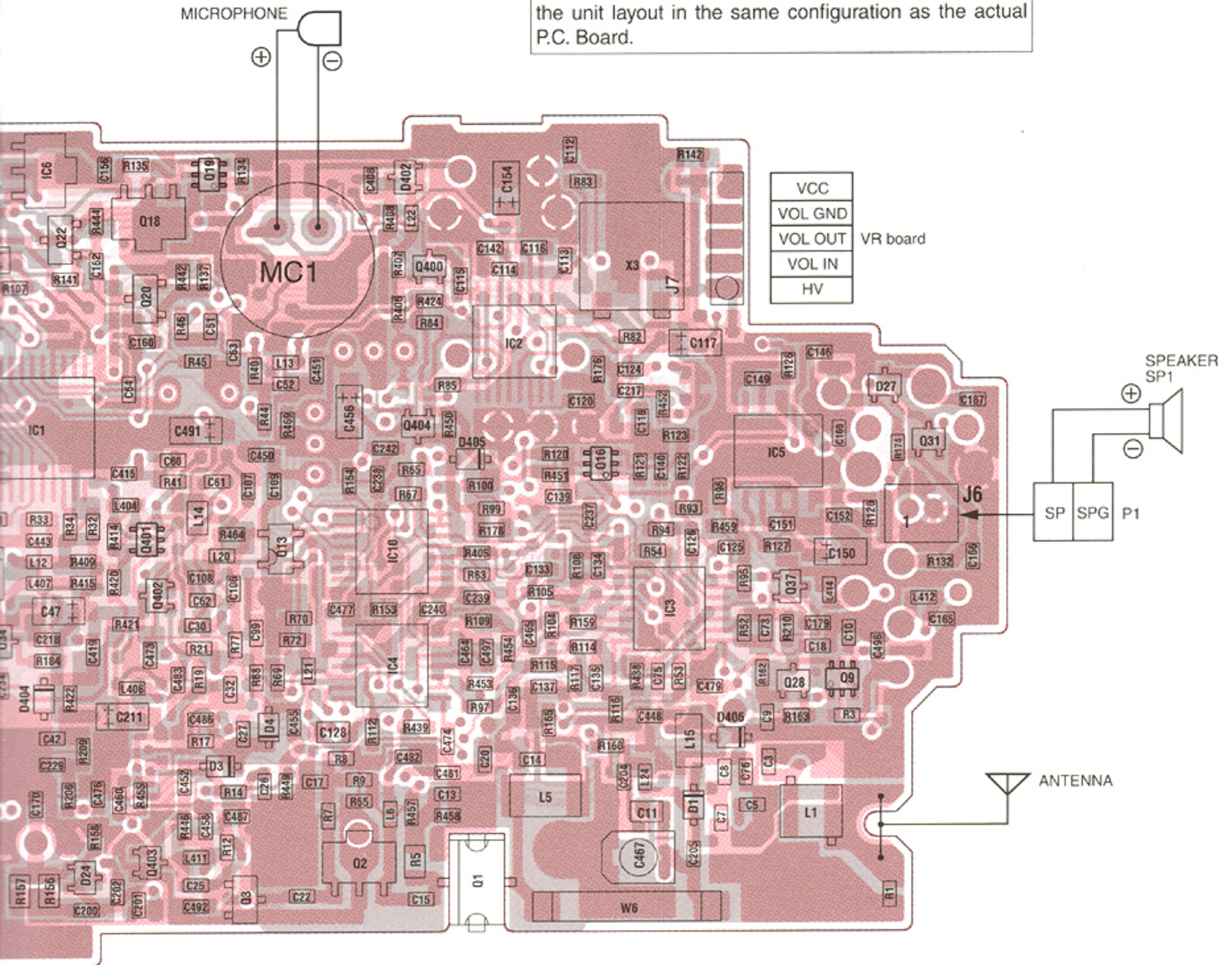


9 - 2 VR BOARD (common)

• TOP VIEW

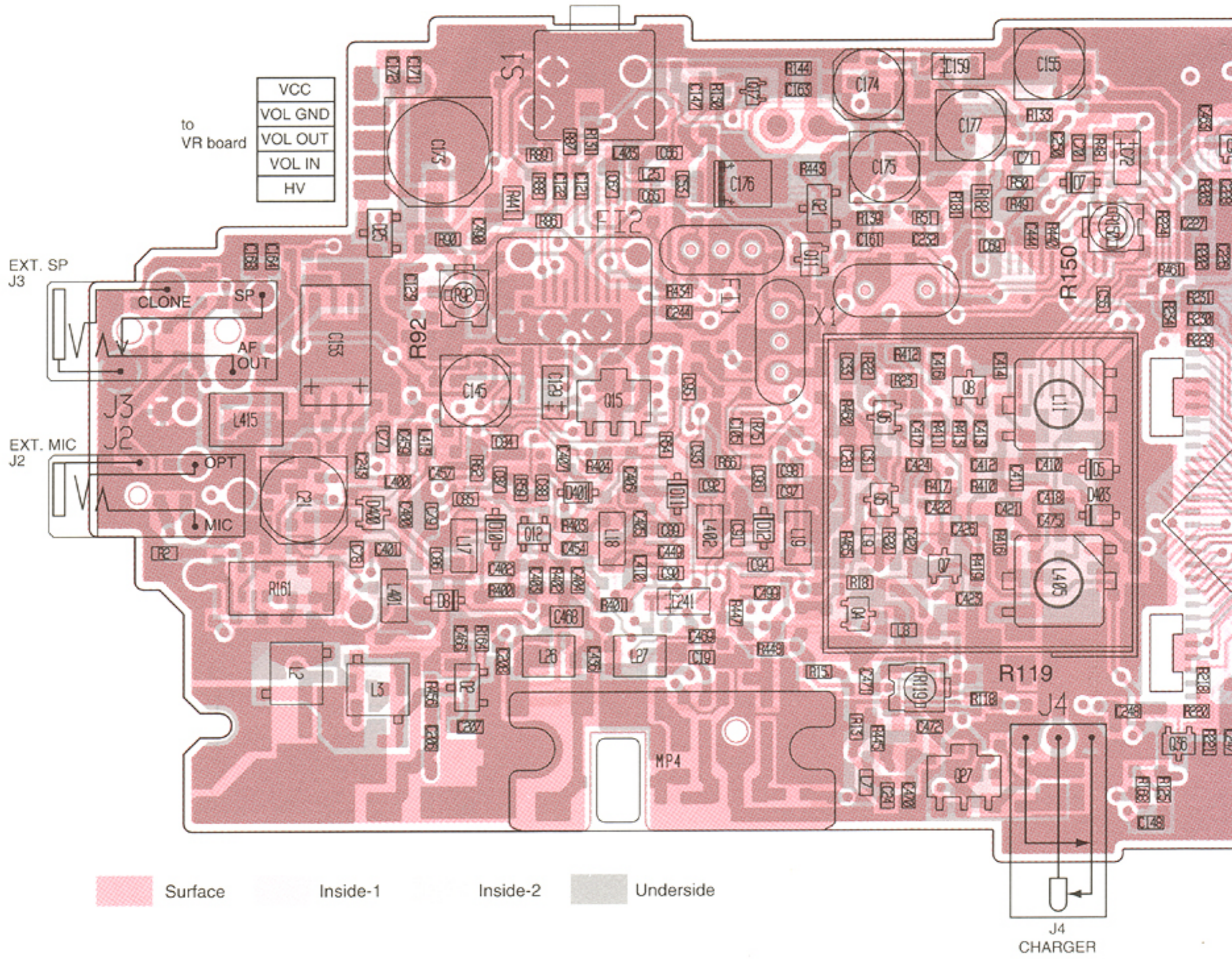


The combination of this page and the next page shows the unit layout in the same configuration as the actual P.C. Board.

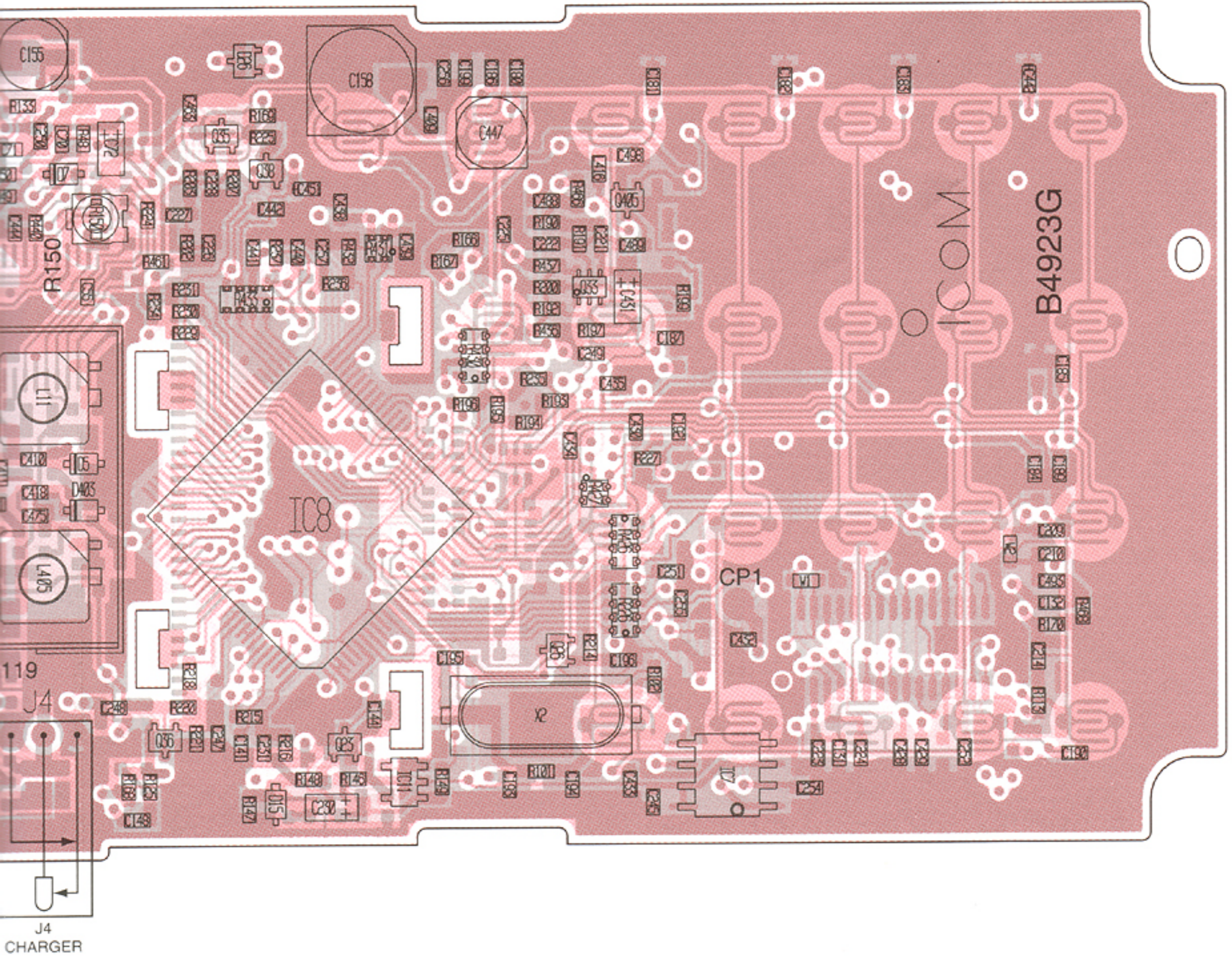


• BOTTOM VIEW

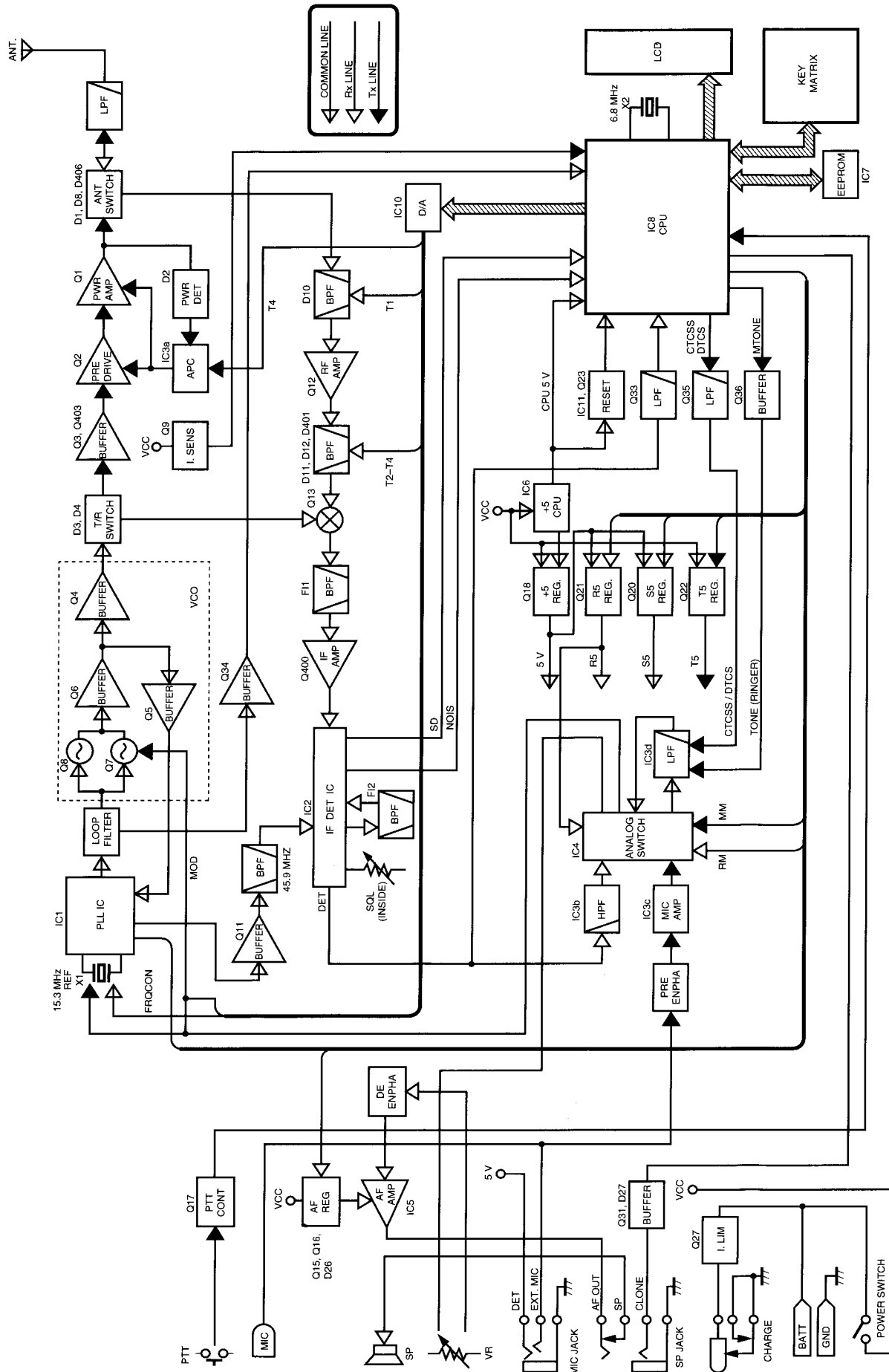
PTT SWITCH



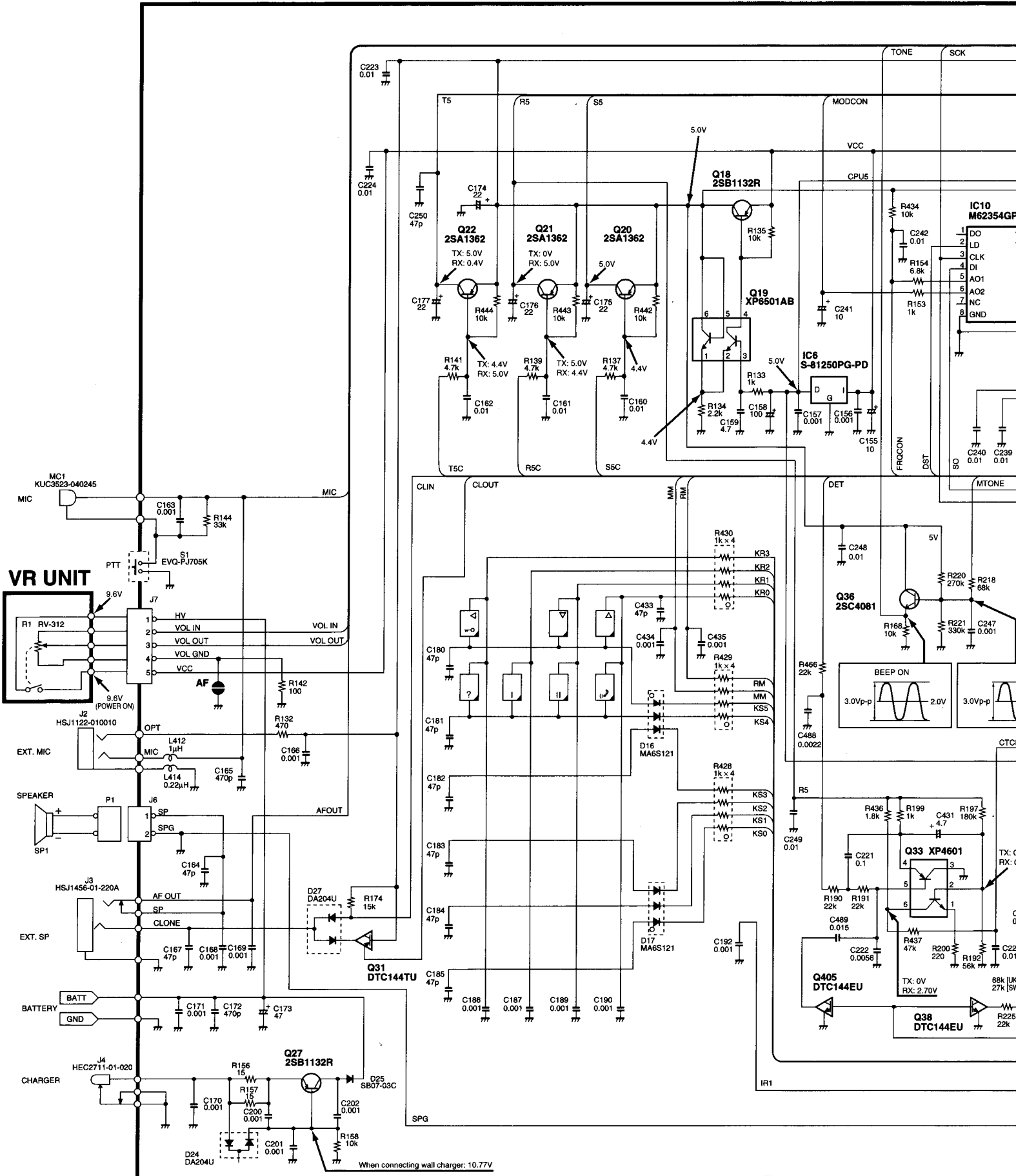
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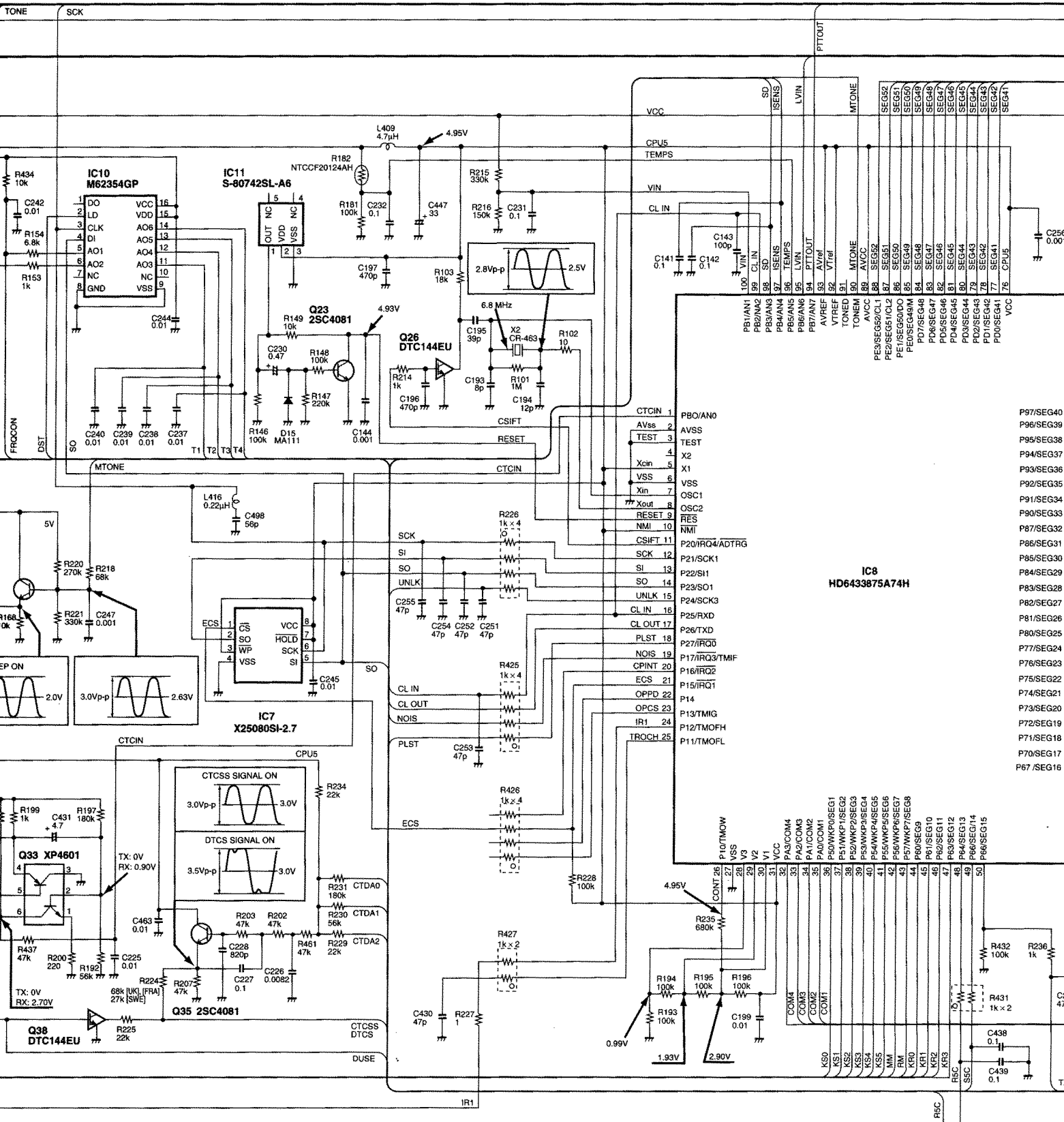


SECTION 10 BLOCK DIAGRAM

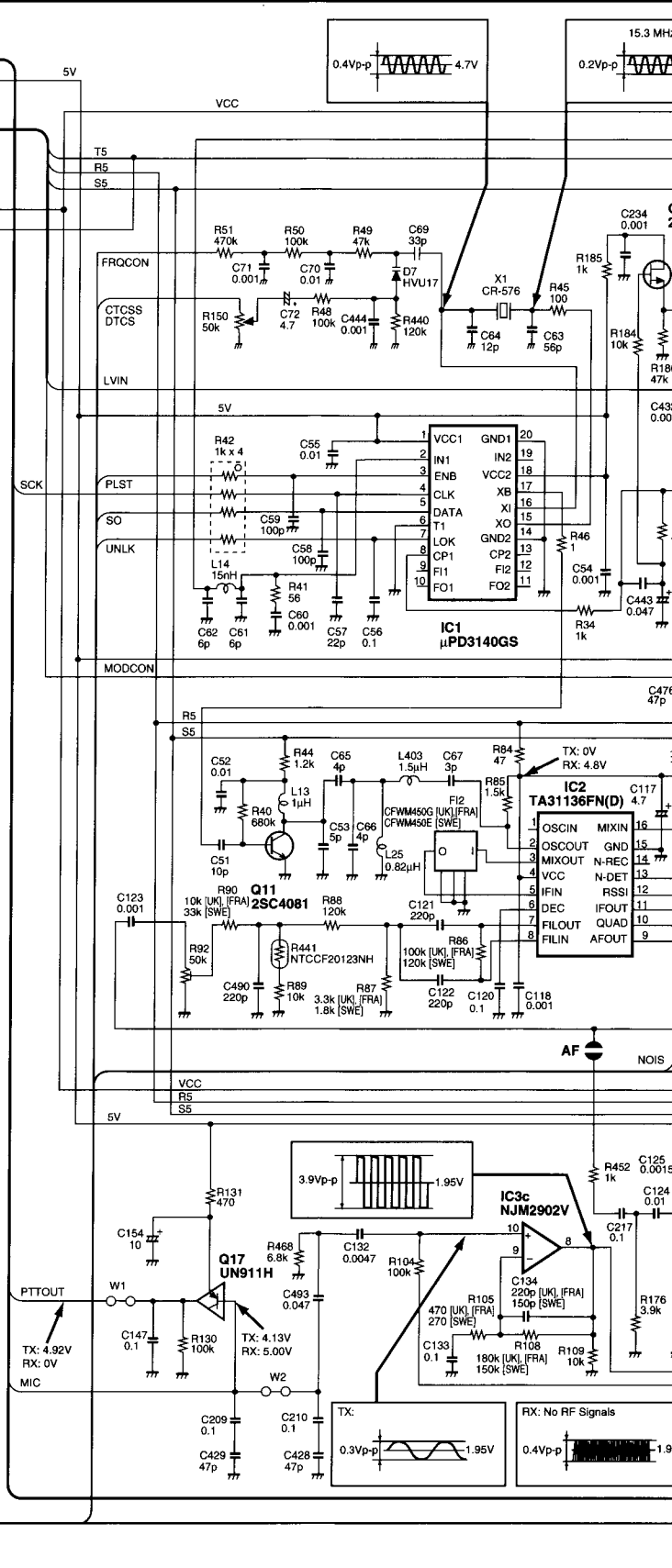
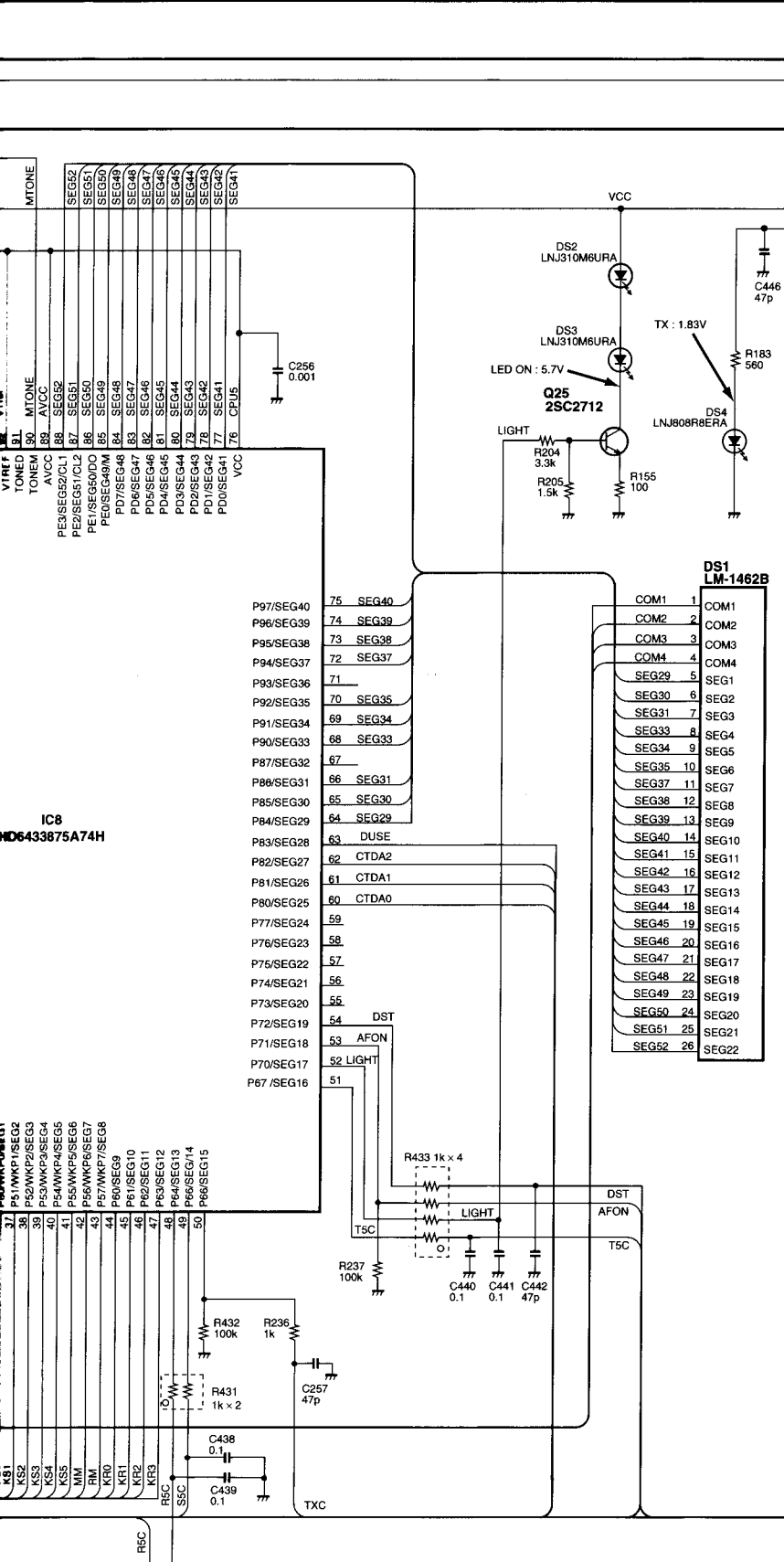


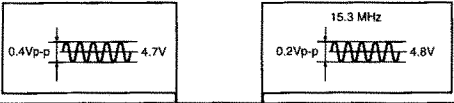
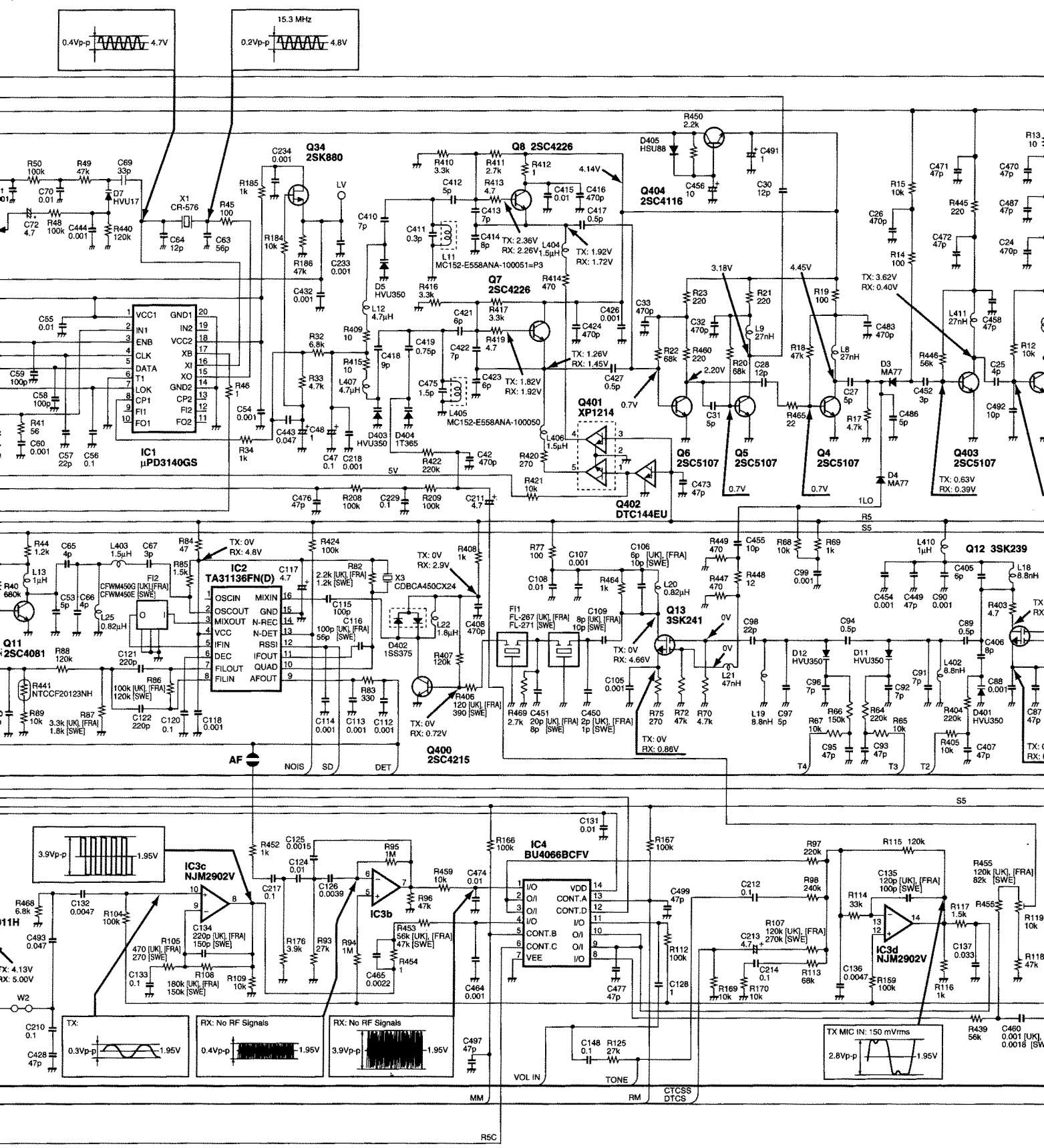
SECTION 11 VOLTAGE DIAGRAM



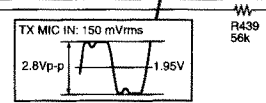
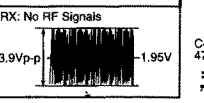
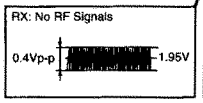
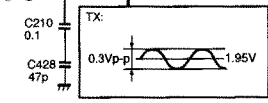


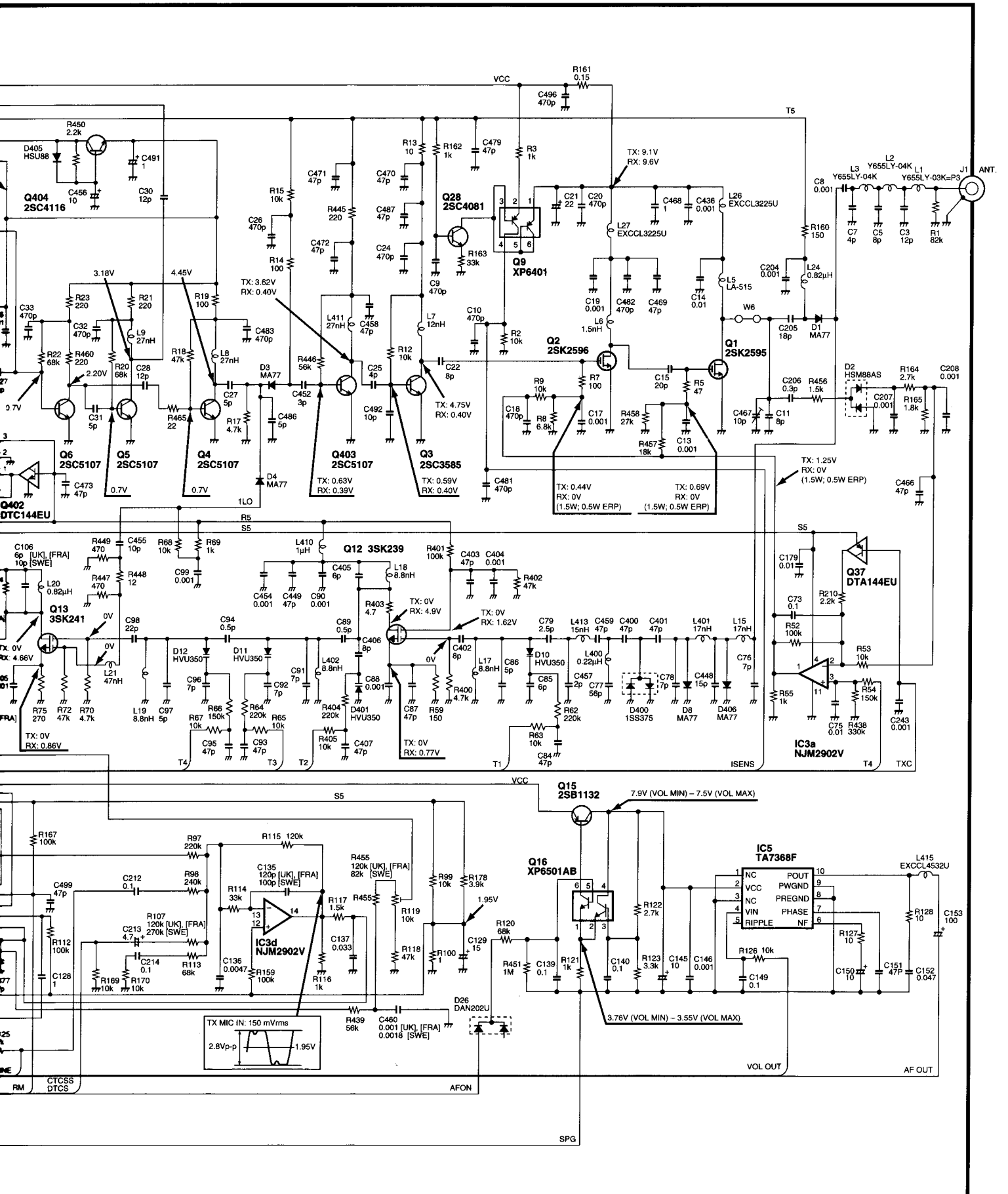
MAIN UNIT





AF NOIS SD DET





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