



# SERVICE MANUAL

DUAL BAND FM TRANSCEIVER

# IC-2710H

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## INTRODUCTION

This service manual describes the latest information for the IC-2710H at the time of publication.

MODEL	VERSION NO.	VERSION	SYMBOL
IC-2710H	#02	Europe	EUR
	#03	Italy	ITA
	#05	U.S.A.	USA
	#07	Australia	AUS
	#08	Asia	SEA

## 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>

1180001070 S.IC TA7805F IC-2710H MAIN UNIT 1 piece  
8810009140 Screw PH M2.6 x 6 ZK IC-2710H Bottom cover 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 50 dB or more attenuator between the transceiver and a deviation meter or spectrum analyzer when using such test equipment.
8. **READ** the instructions of test equipment thoroughly before connecting equipment to the transceiver.

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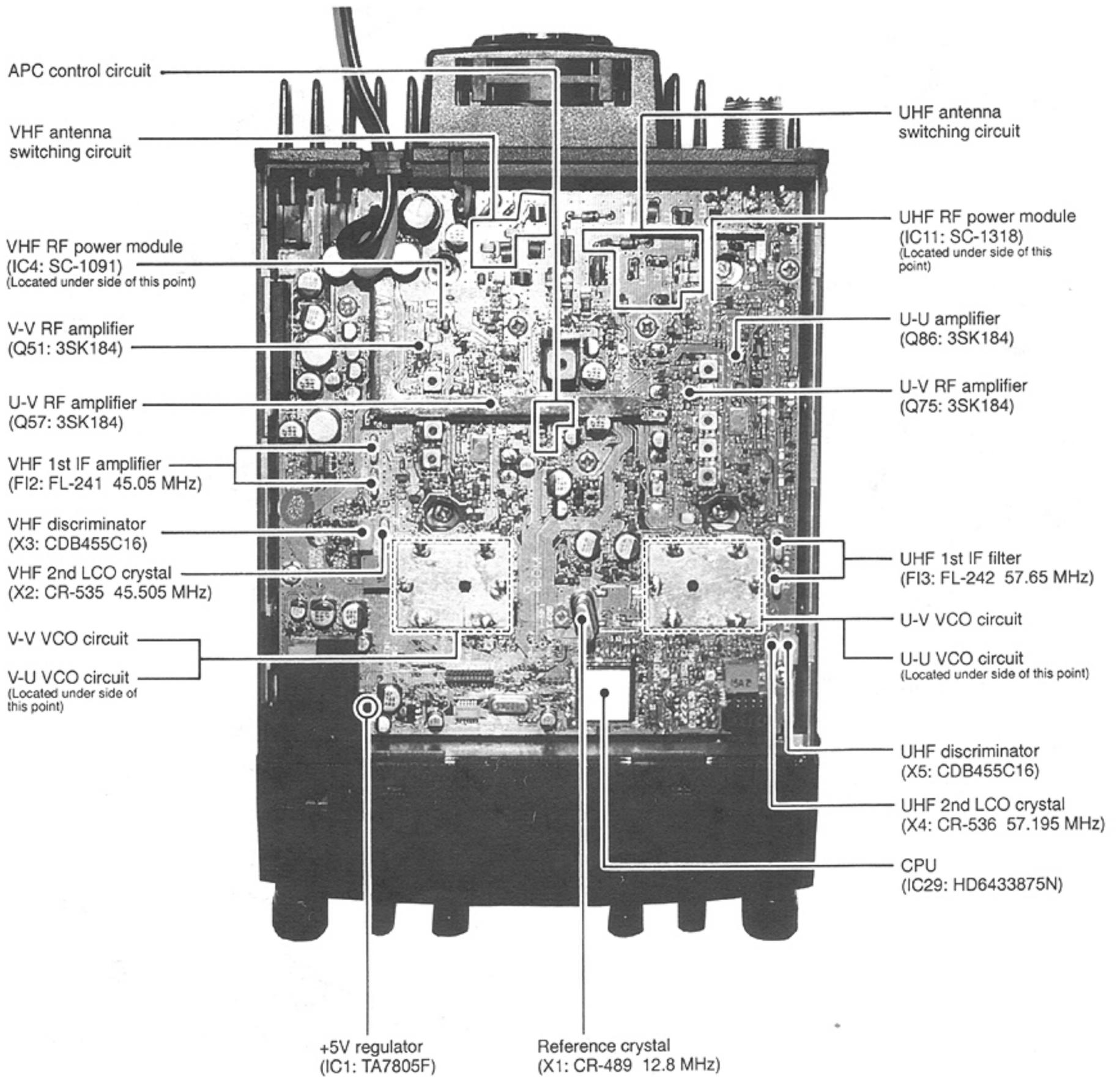
# SECTION 1 SPECIFICATIONS

		144 MHz band	430 (440) MHz band	
GENERAL	Frequency coverage	U.S.A	Tx: 144 MHz–148 MHz Rx: 118 MHz–174 MHz* <sup>1</sup>	440 MHz–450 MHz
		Europe	144 MHz–146 MHz	430 MHz–440 MHz
		S.E. Asia	Tx: 144 MHz–148 MHz Rx: 136 MHz–174 MHz* <sup>1</sup>	430 MHz–440 MHz
		Italy	Tx: 144 MHz–148 MHz Rx: 136 MHz–174 MHz* <sup>1</sup>	Tx: 430 MHz–440 MHz Rx: 400 MHz–479 MHz* <sup>2</sup>
	Guaranteed frequency range: * <sup>1</sup> 144 MHz–148 MHz, * <sup>2</sup> 430 MHz–440 MHz			
	Note (USA only): The avionics band (118–136 MHz) <b>doesn't</b> act via the UHF display.			
	Mode		FM (F3E), AM (USA Rx only, 118–136 MHz)	
	Frequency stability		±10 ppm (–10 °C to +60 °C; +14 °F to +140 °F)	
	Tuning steps		5, 10, 12.5, 15, 20, 25, 30 or 50 kHz	
	External DC power		13.8 V DC ± 15 %	
Current drain (at 13.8 V)	Tx	High power	12.0 A	11.0 A
		Mid. power	6.5 A	6.5 A
		Low power	4.5 A	4.5 A
	Rx	Maximum audio	1.8 A (Both bands at maximum audio.) 1.5 A (Either band squelch closed.)	
Squelch closed		1.2 A		
Usable temperature range		–10 °C to +60 °C (+14 °F to +140 °F)		
Dimensions (Projections not included)		140 (W) × 40 (H) × 212.4 (D) mm 5 1/2 (W) × 1 5/8 (H) × 8 3/8 (D) in		
Antenna connector		SO-239 (50 Ω)		
Weight		1.4 kg; 3.2 lbs		
TRANSMITTER	RF output power (at 13.8 V DC)		High : 50 W Mid. : 10 W Low : 5 W	High : 35 W Mid. : 10 W Low : 5 W
	Modulation system		Variable reactance frequency modulation	
	Max. frequency deviation		±5.0 kHz	
	Spurious emissions		Less than –60 dB	
Microphone connector		8-pin modular plug (600 Ω)		
RECEIVER	Receive system		Double-conversion superheterodyne	
	Intermediate frequencies		1st: 45.05 MHz (for VHF display), 57.65 MHz (for UHF display) 2nd: 455 kHz (The same for both displays.)	
	Sensitivity		Less than 0.16 μV at 12 dB SINAD (typ.) (Even during para-watch operation)	
	Squelch sensitivity		Less than 0.13 μV	
	Selectivity		More than 15 kHz/ –6 dB Less than 30 kHz/ –60 dB	
	Spurious and image rejection ratio		More than 60 dB	
	Audio output power (at 13.8 V)		More than 2.4 W at 10 % distortion with an 8 Ω load	
External speaker connector		2-conductor 3.5 mm (1/8") (8 Ω) × 2 (for VHF and UHF separately)		

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

# SECTION 2 INSIDE VIEWS

## ● MAIN UNIT



## SECTION 3 DISASSEMBLY INSTRUCTIONS

### ● Remove the cover (Fig.3-1)

Unscrew the one screw (A) from the bottom cover, then open the cover.

- Use a flat head screw driver or similar flat instrument to lever the bottom cover open via the 2 openings towards the rear.

⚠ **WARNING!** NEVER attempt to open the cover using your finger nails, this may result in injury.

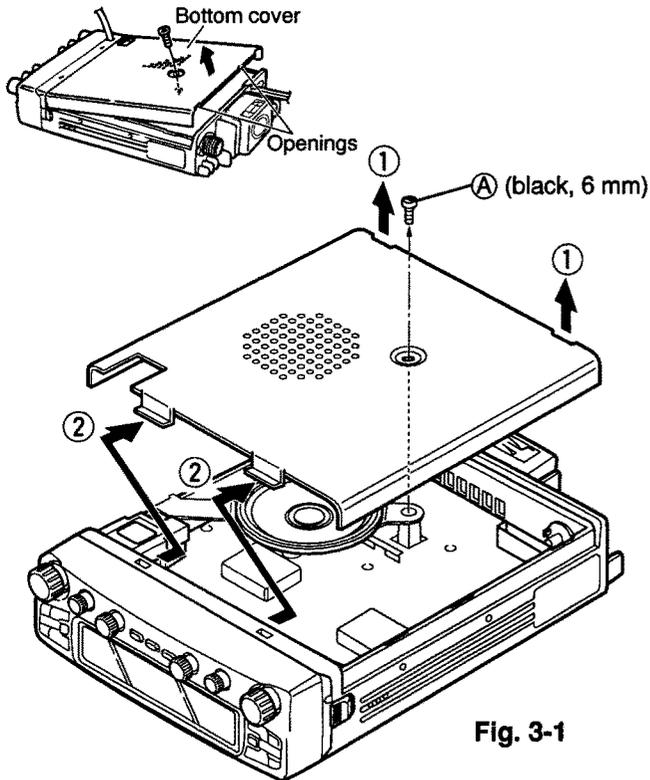


Fig. 3-1

### ● Remove the speaker (Fig.3-2)

Disconnect the speaker connector (J3), then lift up the clip part of the speaker plate, (B) in the direction of the arrow.

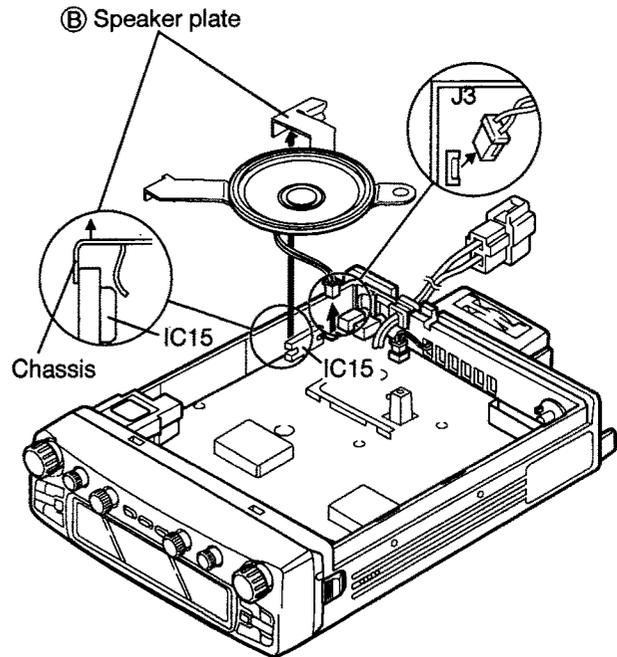


Fig. 3-2

### ● Remove the MAIN unit (Fig.3-3)

Unsolder 3 points from the antenna connector, then unscrew 11 screws (C), and then disconnect the fan motor connector (J4).

Remove the MAIN unit to lift up in the direction of the arrow, (D).

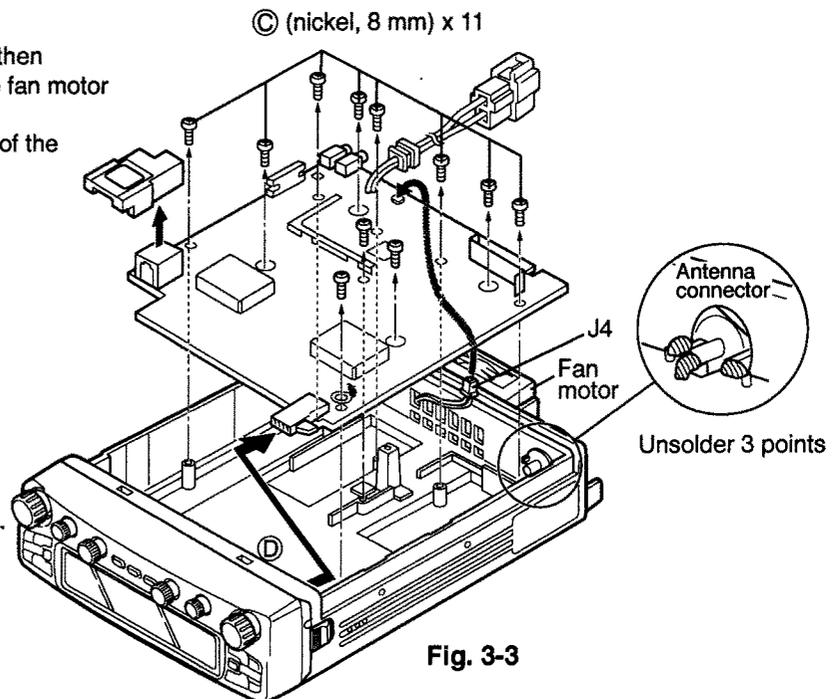


Fig. 3-3

## 4-1 RECEIVER CIRCUITS

### 4-1-1 DUPLEXER CIRCUIT

The transceiver has a duplexer (low-pass and high-pass filters) on the first stage from the antenna connector to separate the signals into VHF and UHF signals. The low-pass filter (L1-L3, C30, C31) is for VHF signals and high-pass filter (L100, L101, C345-C347) is for UHF signals. The separated signals are applied to each RF circuit.

### 4-1-2 VHF ANTENNA SWITCHING CIRCUIT

The antenna switching circuit functions as a low-pass filter while receiving. However, its impedance becomes very high while transmitting by applying a current to D30 and D31. Thus, transmit signals are blocked from entering the receiver circuits. The passed signals are then applied to the RF amplifier circuit.

### 4-1-3 VHF 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 applied to the RF pre-amplifier (Q50) and are then applied to the bandpass filter (L47, L156, C170, C761, C762) via the RF attenuator circuit (D33). The filtered signals are applied to the RF amplifier (Q51) and are then applied to another bandpass filter (D36, D38, D40). The filtered signals are then applied to the RF mixer circuit (Q52).

D36, D38 and D40 track the bandpass filters and are controlled by the PLL lock voltage. These diodes tune the center frequency to obtain good image response rejection.

### 4-1-4 VHF RF ATTENUATOR CIRCUIT

The current flow of the RF attenuator circuit (D33) is controlled by the [SQL] control via the D/A control IC (IC19). When the [SQL] control rotated past the center, the current of D33 is increased. In this case, D33 acts as an attenuator.

### 4-1-5 1ST MIXER AND 1ST IF CIRCUITS

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

The received signals from the VHF RF circuit are mixed with the 1st LO signal (VCO output signal) at the 1st mixer (Q52) to produce a 45.05 MHz 1st IF signal.

The 1st IF signal is applied to a pair of crystal filter (FI2) to suppress out-of-band signals. The filtered 1st IF signal is amplified at the 1st IF amplifier (Q60) and is then applied to the 2nd mixer circuit (IC20).

### 4-1-6 VHF RECEIVING VIA UHF DISPLAY

The transceiver has additional VHF RF and mixer circuits for a V/V para-watch function.

Some of the RF signals from the RF pre-amplifier (Q50) are applied to the V/V RF amplifier (Q75) via the attenuator circuit (D65) and bandpass filter (D66). The amplified signals are mixed with a 1st LO signal at the mixer circuit (Q76) to produce an 57.65 MHz IF signal. The signal is then applied to the UHF IF circuit (IC23 described in section 4-1-11).

The VHF VCO circuit (Q113, Q114) in the UHF PLL circuit generates the 1st LO signal for the V/V para-watch function.

### 4-1-7 2ND IF AND DEMODULATOR CIRCUITS

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

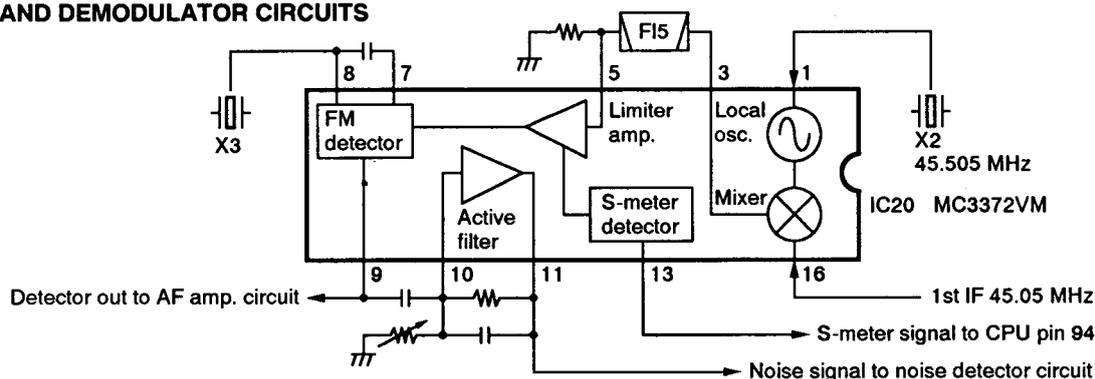
The FM IF IC (IC20) contains the 2nd local oscillator, 2nd mixer, limiter amplifier, noise amplifier, S-meter detector and quadrature detector circuits, etc.

The 1st IF signal (45.05 MHz) from the 1st IF amplifier (Q60) is applied to the 2nd mixer section of IC20 (pin 16), and is mixed with the 2nd LO signal (45.505 MHz) for conversion to a 455 kHz 2nd IF signal at the 2nd mixer section.

The 2nd IF signal (455 kHz) from the 2nd mixer section (IC20 pin 3) passes through the ceramic filter (FI5) where unwanted signals are suppressed. It is then amplified at the limiter amplifier section (IC20 pin 5) and applied to the quadrature detector section (IC20 pin 8 and discriminator X5) to demodulate the 2nd IF signal into AF signals.

AF signals output from IC20 (pin 9) are applied to the AF amplifier circuit via the AF selector (IC22).

## 2ND MIXER AND DEMODULATOR CIRCUITS



#### 4-1-8 AF AMPLIFIER CIRCUIT

The AF amplifier circuit amplifies the detected signals to drive a speaker. For the separate speaker function, a stereo power amplifier is used.

AF signals are passed through the AF switch (Q158), then the AF selector (IC22 pins 10, 11). AF signals from IC22 (pin 11) are applied to the active filter (Q163, Q164) which functions as a high-pass filter to suppress subaudible tone signals for tone squelch operation.

The filtered signals pass through the volume control IC (IC18) and are then applied to the AF power amplifier (IC15 pin 2). The output signals are applied to an external speaker jack (J2) via the "SPA" line. When no plug is connected to the jack, the signals are fed back to the UHF audio input (IC19 pin 5) and combined with the UHF audio. The mixed audio is applied to the other external speaker jack (J1) and then to the internal speaker.

#### 4-1-9 VHF NOISE SQUELCH CIRCUIT

A noise squelch circuit cuts out AF signals when no RF signal is received. By detecting noise components in the AF signal, the squelch circuit switches the AF mute switches.

Some of the noise components in the AF signals from IC20 (pin 9) are passed through the active filter section (IC20 pins 10, 11), and then applied to the noise detector circuit (Q197, D121). The variable resistor (R398) adjusts the input level of the active filter, and the level is used for squelch threshold reference. The detected noise signals are applied to the CPU (IC29 pin 95) via the "VSQL S" line.

The [VHF SQL] (CONTROL unit R38) controls the input level of the sub-CPU (CONTROL unit IC2 pin 6) in DC voltage. The sub-CPU reads the angle of the [VHF SQL] rotation, then send the squelch data to the CPU incorporated in the RDATA. The squelch level is also controlled from the HM-98; the CPU receives squelch data from the HM-98 via the MDATA line.

The applied signals from the noise detector circuit and the CONTROL unit or from the HM-98 are differentiated by the CPU, and then the CPU controls AF mute switches (IC16, Q191) via the "VA MUTE" line.

#### 4-1-10 UHF RF CIRCUIT

The signals from the UHF antenna switching circuit (D75-D77, D90) are applied to the RF pre-amplifier (Q85) and are then applied to the RF amplifier (Q86) via the RF attenuator circuit (D78). The amplified signals are passed through the bandpass filter (FI4), then applied to the 1st mixer circuit.

#### 4-1-11 UHF 1ST MIXER AND 1ST IF CIRCUITS

The amplified signals from the RF amplifier (Q86) are mixed with a 1st LO signal at the mixer circuit (Q87) to produce a 57.65 MHz 1st IF signal. The 1st LO signal is the PLL output which comes from the U-UHF VCO circuit (Q123, D107, D145). The 1st IF signal is passed through a pair of crystal filters (FI3) to suppress out-of-band signals and then amplified at the IF amplifier (Q78).

#### 4-1-12 UHF RECEIVING VIA VHF DISPLAY

The transceiver has additional UHF RF and mixer circuits for a U/U para-watch function.

Some of the RF signals from the RF pre-amplifier (Q85) are applied to the U/U RF amplifier (Q57) via the attenuator circuit (D45). The amplified signals are mixed with a 1st LO signal at the mixer circuit (Q58) to produce an 45.05 MHz IF signal via the bandpass filter (FI1). The signal is then applied to the UHF IF circuit (IC20 described in section 4-1-5).

The UHF VCO circuit (Q33) in the VHF PLL circuit generates the 1st LO signal for the U/U para-watch function.

#### 4-1-13 UHF 2ND IF AND DETECTOR CIRCUITS

The IC23 incorporates the 2nd mixer, 2nd local oscillator, limiter amplifier, noise amplifier, quadrature detector and S-meter detector circuits. The 2nd local oscillator section and X4 generate 57.195 MHz for the 2nd LO signal.

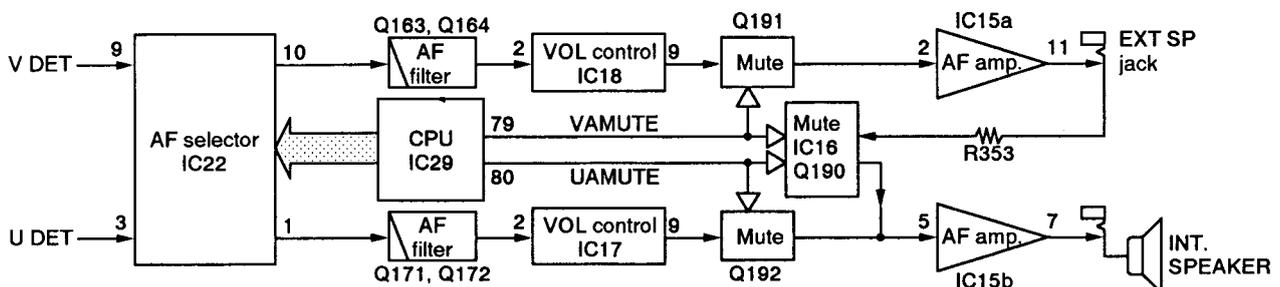
The amplified 1st IF signal is fed to the FM IF IC (IC23 pin 16) where the signal is converted into a 2nd IF signal, then AF signals.

The AF signals output from IC23 (pin 9) pass through the AF switch (Q168), AF selector (IC22 pins 2, 1) and then active filters (Q171, Q172).

#### 4-1-14 UHF NOISE SQUELCH CIRCUIT

A portion of the AF signals from IC23 (pin 9) are passed through the noise amplifier (IC23 pins 10, 11) and detected at Q167 and D123. The detected noise signals are applied to the CPU via the "USQL S" line, for reference. Then the CPU controls AF mute switches (IC16, Q190, Q192) after being differentiated by the squelch level setting.

#### AF SIGNAL LINE



## 4-2 TRANSMITTER CIRCUITS

### 4-2-1 MICROPHONE AMPLIFIER CIRCUIT

The microphone amplifier circuit amplifies audio signals from the microphone to a level needed for the modulation circuit. The microphone amplifier circuit is commonly used for the both VHF and UHF bands.

The AF signals from the microphone are applied to the MIC mute switch (Q178) and then amplified at the Q175. Then the amplified signals are applied to the IDC limiter amplifier (IC25b pin 5). The output signals from the IDC limiter amplifier (IC25b pin 7) are passed through the splatter filter (IC25a pins 3, 1) and then applied to each VCO circuit as a "MOD" signal via the deviation adjustment pot.

### 4-2-2 VHF MODULATION CIRCUIT

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

The "MOD" signal changes the reactance of a diode (D15) to modulate the oscillated signal at the VHF-VCO circuit (Q18, Q19). The VCO output is buffer-amplified at Q17, Q16 and Q15, and is then applied to the transmit/receive switching circuit (D41, D149) via the low-pass filter (L20, C75, C76).

### 4-2-3 VHF DRIVE AMPLIFIER CIRCUIT

The drive amplifier circuit amplifies the VCO oscillated signal to the needed level at the power amplifier.

The signal from the transmit/receive switching circuit (D149) is passed through the "π" type attenuator circuit (R24–R26) and then amplified at the pre-drive amplifier (Q11). The amplified signal is amplified again at the drive amplifier (Q10) to obtain approx. 26 dBm.

### 4-2-4 VHF POWER AMPLIFIER CIRCUIT

IC4 is a power module which provides more than 50 W of output power with a 13.8 V DC power source.

An RF signal from the drive amplifier (Q10) is applied to IC4 (pin 1). The amplified signal from the power amplifier (IC4 pin 4) is then applied to the antenna connector via the transmit/receive switching circuit (D5) and low-pass filter.

### 4-2-5 VHF APC CIRCUIT

The APC circuit protects the power module (IC4) and drive amplifier (Q10) from a mismatched output load and stabilizes transmit output power.

The APC detector circuit (D7 and D6) detects forward signals and rectified signals respectively. The combined voltage is at a minimum level when the antenna is matched at 50 Ω and increases when it is mismatched. The combined voltage is applied to the APC amplifier (IC7) and compared with a reference voltage which is supplied from the D/A control IC (IC19 pin 14).

The output voltage from IC7 (pin 4) is applied to the APC control circuit (Q55, Q56) to control the bias voltage of the PA module (IC9) and drive amplifier (Q10).

### 4-2-6 UHF MODULATION CIRCUIT

The audio signals from the microphone amplifier circuit (described in Section 4-2-1) are applied to the UHF-VCO circuit.

The audio signals change the reactance of a diode (D107) to modulate the oscillated signal at the UHF-VCO circuit (Q123, D145). The oscillated signal is amplified at the buffer amplifiers (Q120–Q122) and is then applied the LO switch circuit (D105, D148).

### 4-2-7 UHF POWER AMPLIFIER CIRCUIT

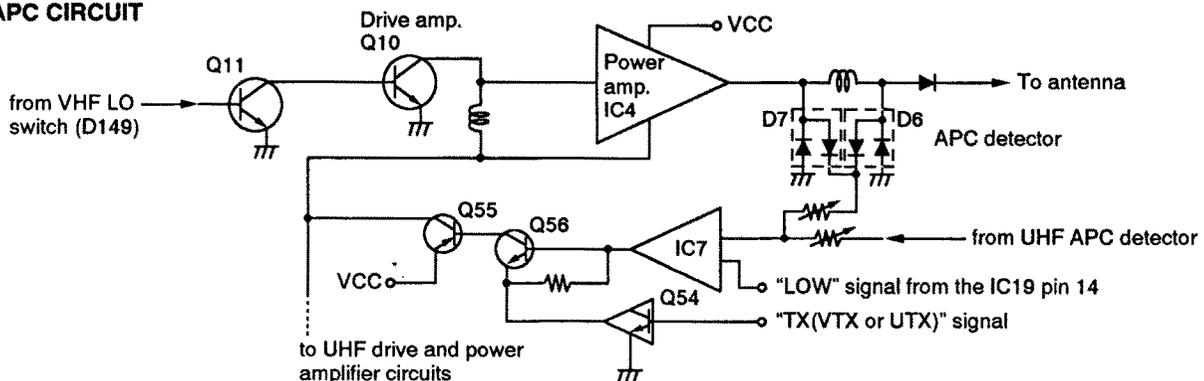
IC11 is a power module which provides a stable 35 W (at 13.8 V DC) of output power.

The pre-drive (Q106, Q107), drive amplifier (Q105) and power amplifier (IC11) amplify the VCO oscillating signal to an output level. The output signal passes through the APC detector circuit (D91, D92) and bandpass filter, and is applied to the antenna connector.

### 4-2-8 UHF APC CIRCUIT

The APC detector circuit (D92 and D91) detects the forward and rectified signals, respectively. IC7 compares the voltages detected by the APC detector with the reference voltages. When the detected voltage exceeds a reference voltage, IC7 reduces the bias current of IC11 (pin 4) using Q56 and Q55 to decrease the RF output power.

VHF APC CIRCUIT



## 4-3 PLL CIRCUITS

### 4-3-1 GENERAL

A PLL circuit provides stable oscillation of the transmit frequency and the receive local frequency. The PLL circuit compares the phase of the divided VCO frequency to the reference frequency. The PLL output frequency is controlled by a crystal oscillator and the divided ratio of the programmable divider.

### 4-3-2 VHF PLL CIRCUITS

#### V-VHF LOOP

The generated signal at the V-VHF VCO (Q18, Q19) is amplified at the buffer-amplifiers (Q17, Q40) and then applied to the PLL IC (IC6 pin 19). The applied signal is divided by serial data from the CPU and phase-detected with the divided reference frequency. The phase difference is output as pulses.

The output signal from IC6 (pin 13) is converted to DC voltages (lock voltage) by the active loop filter (Q41–Q43) and then fed back to the V-VHF VCO circuit to stabilize the VCO frequency.

The lock voltage is also used for the receiver circuit for tracking the bandpass filter center frequency. The lock voltage from Q42 is amplified at the buffer-amplifier (Q35) and then applied to the VHF RF circuit.

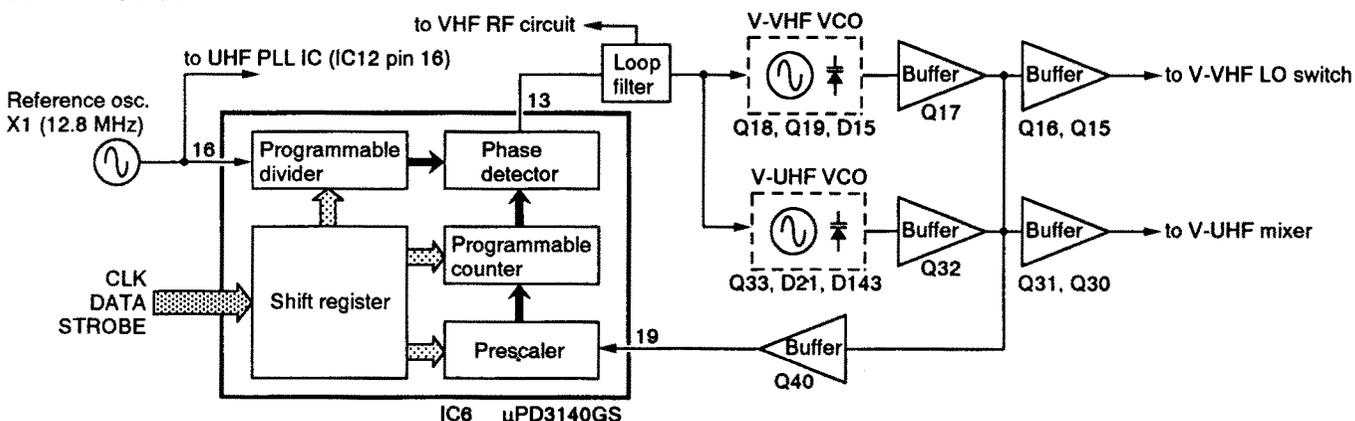
#### V-UHF LOOP

This loop is used for UHF receiver in VHF display while the U/U para-watch function is activated.

The generated signal at the V-UHF VCO (Q33) is amplified at the buffer-amplifiers (Q32, Q40) and then applied to the PLL IC (IC6 pin 19). The applied signals are divided by serial data from the CPU and phase-detected with the divided reference frequency. The phase difference is output as pulses.

The output signal from IC6 (pin 13) is converted to DC voltages (lock voltage) by the active loop filter (Q41–Q43) and then fed back to the V-UHF VCO circuit to stabilize the VCO frequency.

### VHF PLL CIRCUIT



### 4-3-3 UHF PLL CIRCUITS

#### U-UHF LOOP

The generated signal at the U-UHF VCO (Q123) is amplified at the buffer-amplifiers (Q122, Q130) and then applied to the PLL IC (IC12 pin 19). The applied signals are divided by serial data from the CPU and phase-detected with the divided reference frequency. The phase difference is output as pulses.

The output signal from IC12 (pin 13) is converted to DC voltages (lock voltage) by the active loop filter (Q131–Q133) and then fed back to the U-UHF VCO circuit to stabilize the VCO frequency.

#### U-VHF LOOP

This loop is used for VHF receiver in UHF display while the V/V para-watch function is activated.

The generated signal at the U-VHF VCO (Q113, Q114) is amplified at the buffer-amplifiers (Q112, Q130) and then applied to the PLL IC (IC12 pin 19). The applied signals are divided by serial data from the CPU and phase-detected with the divided reference frequency. The phase difference is output as pulses.

The output signal from IC12 (pin 13) is converted to DC voltages (lock voltage) by the active loop filter (Q131–Q133) and then fed back to the U-VHF VCO circuit to stabilize the VCO frequency.

The lock voltage is also used for the receiver circuit for tracking the bandpass filter center frequency. The lock voltage from Q132 is amplified at buffer amplifiers (Q140) and then applied to the VHF circuit.

## 4-4 POWER SUPPLY CIRCUITS

### 4-4-1 VOLTAGE LINES (MAIN UNIT)

Line	Description
HV	The voltage from the external power supply.
13.8 V	The same voltage as the HV line (external power supply) which is controlled by the power switch control circuit (MAIN unit Q3, Q4).
5 V	Common 5 V converted from the HV line by the 5 V regulator circuit (MAIN unit IC1). The circuit outputs the voltage regardless of whether [POWER] switch is ON/OFF.
8 V	Common 8 V converted from the 13.8 V line by the 8 V regulator circuit (MAIN unit IC3). The output voltage is supplied to the VT8 V, UT8 V and V-VR8 V regulator circuits, etc.
V-VR8 V	8 V for V-VHF receiver circuits converted from the 8 V line by the V-V BIAS SEL circuit (MAIN unit Q65, Q68, D56).
V-UR8 V	8 V for V-UHF receiver circuits converted from the 8 V line by the V-U BIAS SEL circuit (MAIN unit Q67, Q69, D57).
U-VR8 V	8 V for U-VHF receiver circuits converted from the 8 V line by the U-V BIAS SEL circuit (MAIN unit Q150, Q154, D115).
U-UR8 V	8 V for U-UHF receiver circuits converted from the 8 V line by the U-U BIAS SEL circuit (MAIN unit Q152, Q155, D82, D116).
VT8 V	8 V for VHF transmitter circuits converted from the 8 V line by the VT8 V regulator circuit (MAIN unit Q25, Q26).
UT8 V	8 V for UHF transmitter circuits converted from the 8 V line by the UT8 V regulator circuit (MAIN unit Q141, Q142).
PLL8 V	Common 8 V for PLL loop circuits converted from the 13.8 V line by the PLL regulator circuit (MAIN unit IC2, D152). The output voltage is supplied to PLL loop filter circuits.
PLL5 V	Common 5 V for PLL circuits converted from the 8 V line by the PLL5 V regulator circuit (MAIN unit Q202, Q203).

## 4-5 PORT ALLOCATIONS

### 4-5-1 CPU (MAIN UNIT)

Pin number	Port name	Description
9	RES	Input port for the reset circuit (MAIN unit IC30, Q184, D147).
11	EDATA	Outputs data signal to the EEPROM (MAIN unit IC31).
12	SCK	Outputs serial clock signal to a PLL and optional units.
13	UNITT	Input port to detect optional tone squelch unit (UT-104) installation. "High": UT-104 is installed.
14	SDATA	Outputs serial data signal to PLL and an optional tone squelch unit (UT-104).
15	OPD	Input port to detect optional DTMF encoder/decoder unit (UT-49) installation. "Low": UT-49 is installed.
16	RXD	Input port for serial signal from the sub-CPU (CONTROL unit IC2).
17	TXD	Output port for serial signal to the sub-CPU (CONTROL unit IC2).
18	PCHK	Input port for [POWER] switch ON signal while a transceiver is turned OFF.
21	EXTMIC	Input port to detect optional wireless microphone (HM-90) connection. "Low": HM-90 is connected.
23	MICIN	Input port for microphone serial data.
25	ETONE	Outputs 1750 Hz Europe tone signal.
26	ECK	Outputs clock signal for the EEPROM IC (MAIN unit IC31).
33	STBV	Outputs strobe signal for the D/A controller (MAIN unit IC19).
34	ADATA	Outputs data signal for the D/A controller (MAIN unit IC19).
35	ACK	Outputs clock signal for the D/A controller (MAIN unit IC19).
36-39	II0-II3	Input ports for initial matrix.
40-42	IS0-IS2	Outputs strobe signal for initial matrix.
44	STBTA	Outputs strobe signal for tone squelch unit (VHF band).
45	TSQLA	Input port for tone squelch detector. "Low": A matched tone signal is received.
46	STBTB	Outputs strobe signal for tone squelch unit (UHF band).

**CPU (MAIN UNIT)**

Pin number	Port name	Description
46	TSQLB	Input port for tone squelch detector. "Low" : A matched tone signal is received.
48	VSTBPL	Outputs strobe signal for VHF PLL circuit.
49	VUNLK	Input port for VHF PLL unlock signal.
50	USTBPL	Outputs strobe signal for UHF PLL circuit.
51	UUNLK	Input port for UHF PLL unlock signal.
52	VCOV	Outputs VHF VCO switch control signal.
53	VCOS	Outputs shift signal for VHF VCO circuit.
54	UVCOV	Outputs UHF VCO switch control signal.
55	UVCOS	Outputs shift signal for UHF VCO circuit.
56	VTX	Outputs transmit signal for VHF band. "High" : While transmitting on VHF band.
57	UTX	Outputs transmit signal for UHF band. "High" : While transmitting on UHF band.
58	FANC	Outputs cooling fan control signal. "High" : While cooling fan is activated.
75	PCTRL	Output port for the power switch control circuit (MAIN unit Q3, Q4). "High" : Power is turned ON.
76	VDMUTE	Outputs mute control signal for VHF demodulated signals. "Low" : VHF demodulated signals are muted.
77	UDMUTE	Outputs mute control signal for UHF demodulated signals. "Low" : UHF demodulated signals are muted.
78	VAMUTE	Outputs mute control signal for VHF AF signals. "High" : VHF AF signals are muted.
79	UAMUTE	Outputs mute control signal for UHF AF signals. "High" : UHF AF signals are muted.
83	MMUTE	Outputs microphone mute signal. "High" : Microphone audio is muted.

**CPU (MAIN UNIT)**

Pin number	Port name	Description
84	StD	Input port for differentiated signal from an optional UT-49. "High" : When a correct DTMF signal is received.
85-88	Q1-Q4	Input ports for DTMF decode signal (BIT0-BIT3) from an optional UT-49.
90	CTCSS	Outputs CTCSS tone signals.
91	DTMFE	Outputs DTMF signals while transmitting, beep audio while receiving.
94	VSM	Input port for VHF S-meter signal.
95	VSQLS	Input port for VHF noise signal.
96	USM	Input port for UHF S-meter signal.
97	USQLS	Input port for UHF noise signal.
98	MU/D	Input port for up/down signal from a microphone.
99	PTT	Input port for PTT switch.

**4-5-2 SUB-CPU (CONTROL UNIT)**

Pin number	Port name	Description
10	DIMMER	Outputs dimmer control signal.
17	LINH	Outputs LCD ON/OFF control signal. "High" : LCD ON
19	RDATA	Output port for serial signal to the CPU (MAIN unit IC29).
20	TDATA	Input port for serial signal from the CPU (MAIN unit IC29).
25	RESET	Input port for reset signal.
26	LDI	Outputs serial data for the LCD (CONTROL unit DS4).
27	LCL	Outputs serial clock for the LCD (CONTROL unit DS4).
78-80	VL1-VL3	Input ports for LCD bias voltage.

# SECTION 5

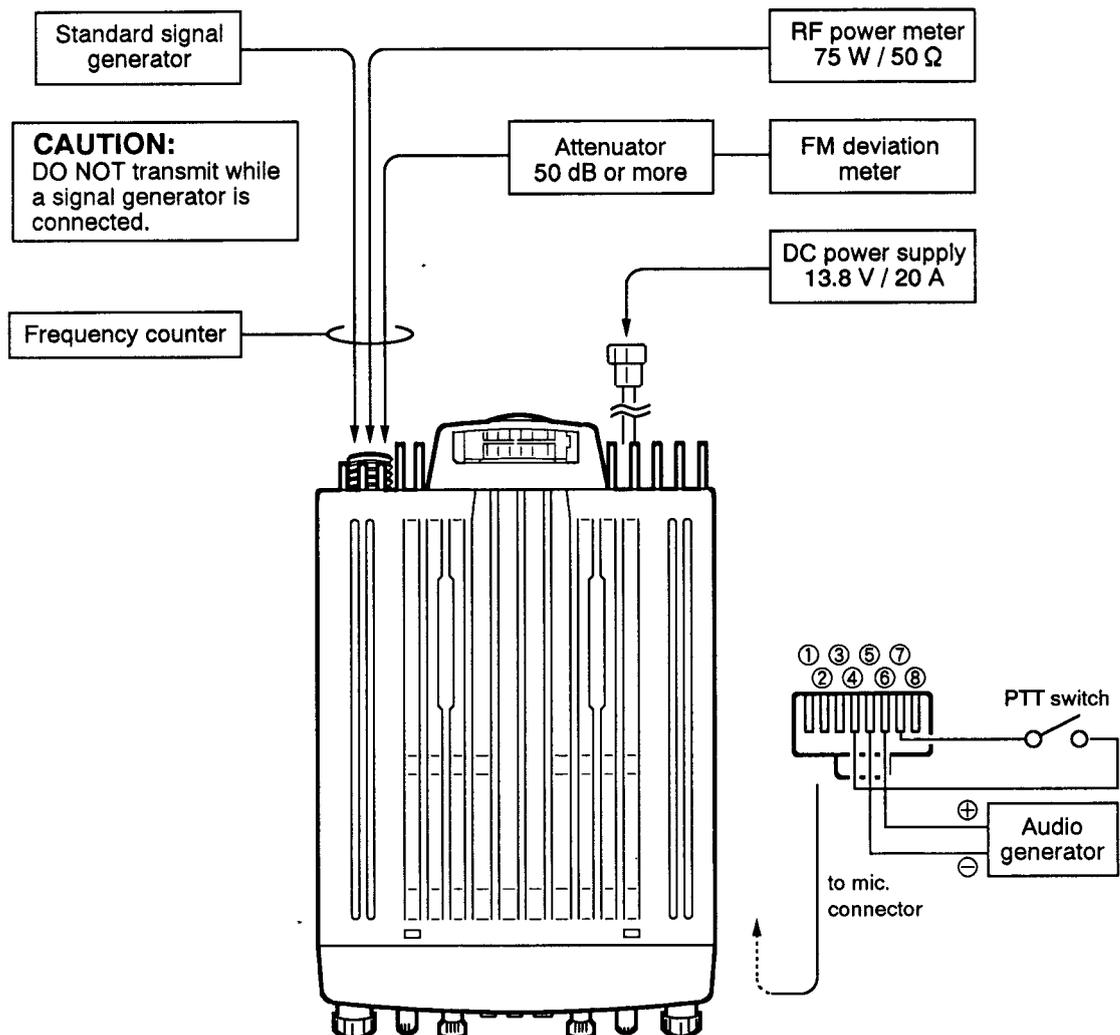
# ADJUSTMENT PROCEDURES

## 5-1 PREPARATION BEFORE SERVICING

### ■ REQUIRED TEST EQUIPMENT

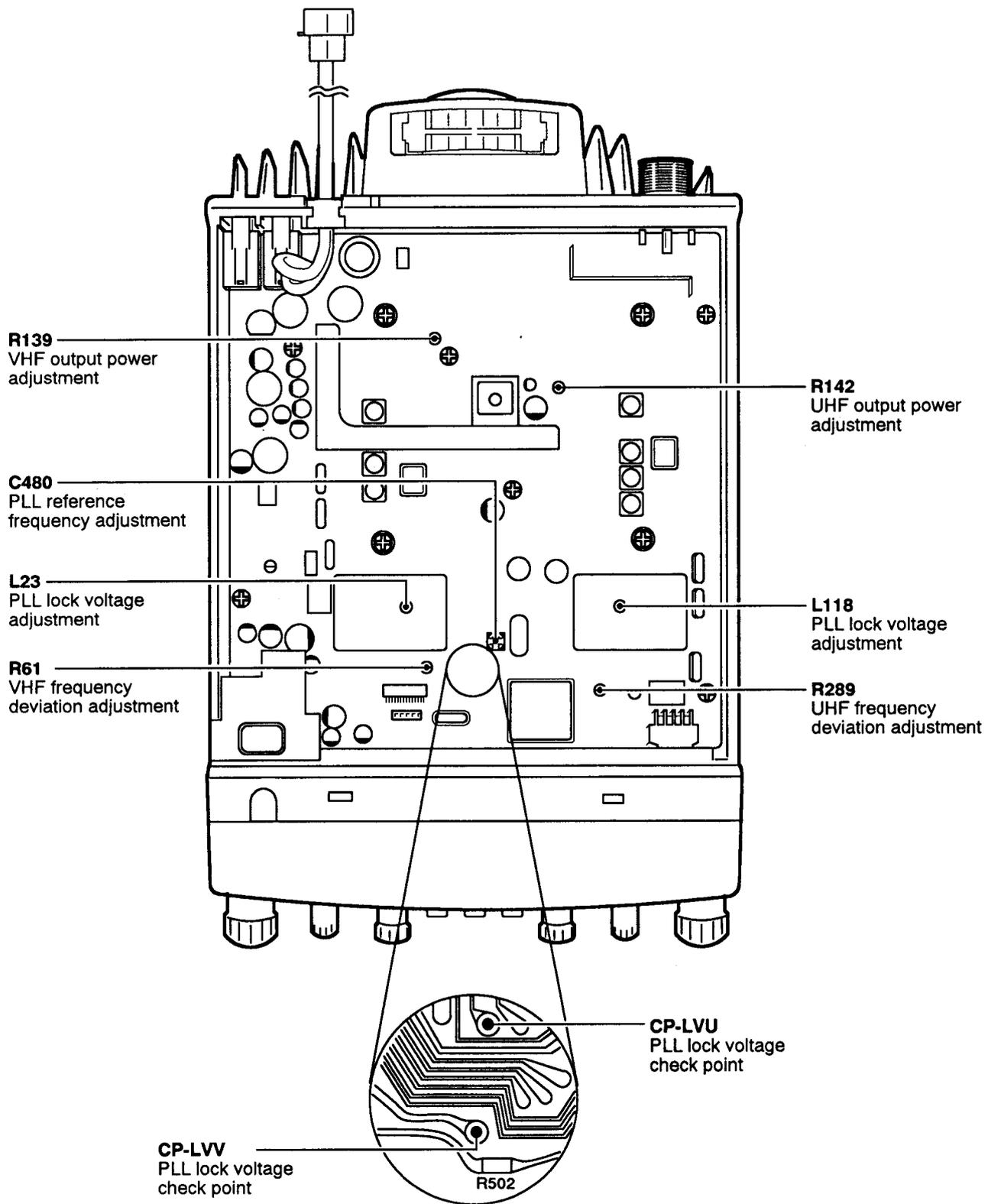
EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
DC power supply	Output voltage : 13.8 V DC Current capacity : 20 A or more	Standard signal generator (SSG)	Frequency range : 100–470 MHz Output level : –129 to –17 dBm (0.079 $\mu$ V to 132 mV)
RF power meter (terminated type)	Measuring range : 1–80 W Frequency range : 100–500 MHz Input impedance : 50 $\Omega$ SWR : 1.2 : 1 or better	DC voltmeter	Input impedance : 50 k $\Omega$ /V DC or better
		Audio generator (AG)	Frequency range : 300–3000 Hz Measuring range : 1–500 mV
Frequency counter	Frequency range : 100–470 MHz Frequency accuracy : $\pm 1$ ppm or better Sensitivity : 100 mV or better	Attenuator	Attenuation : 50 dB or more Capacity : 75 W or more
Oscilloscope	Frequency range : DC–20 MHz Output range : 0.01–20 V	FM deviation meter	Frequency range : 100–470 MHz Measuring range : 0 to $\pm 10$ kHz

### ■ CONNECTIONS



## 5-2 PLL AND TRANSMITTER ADJUSTMENTS

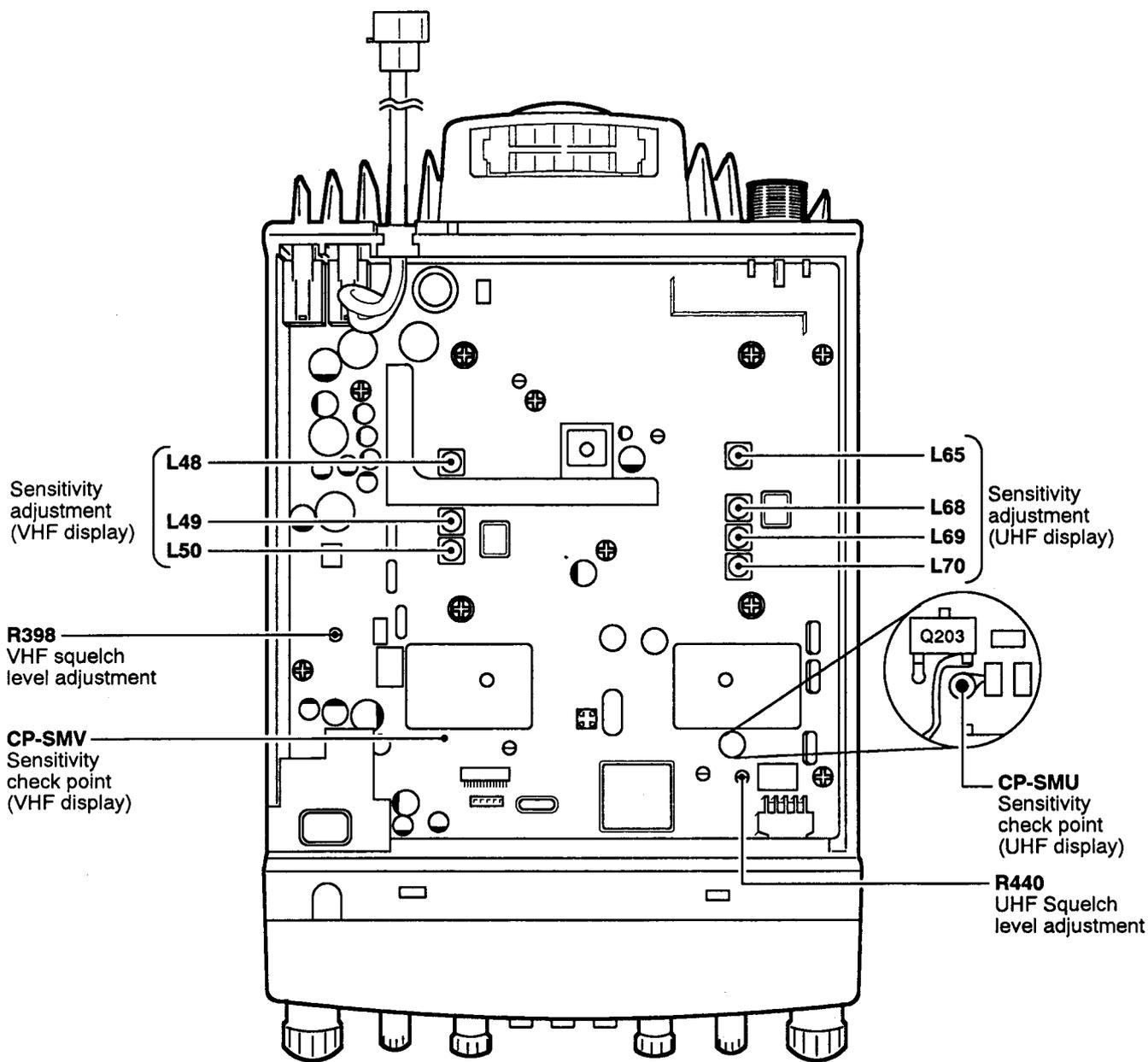
ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT		
		UNIT	LOCATION		UNIT	ADJUST	
PLL LOCK VOLTAGE	1 <ul style="list-style-type: none"> <li>VHF display: 145.000 MHz</li> <li>Receiving</li> </ul>	MAIN	Connect a digital multi-meter or an oscilloscope to the CP-LVV.	2.3 V	MAIN	L23	
	2 <ul style="list-style-type: none"> <li>UHF display: 145.000 MHz</li> <li>Receiving</li> </ul>					Connect a digital multi-meter or an oscilloscope to the CP-LVU.	1.5 V
PLL REFERENCE FREQUENCY	1 <ul style="list-style-type: none"> <li>UHF display: 440.000 MHz</li> <li>Simplex</li> <li>Transmitting</li> </ul>	Rear panel	Loosely couple a frequency counter to the antenna connector.	440.000 MHz	MAIN	C480	
VHF OUTPUT POWER	1 <ul style="list-style-type: none"> <li>VHF display: <ul style="list-style-type: none"> <li>146.000 MHz (USA, SEA versions)</li> <li>145.000 MHz (All other versions)</li> </ul> </li> <li>[HI/LOW] switch: HI</li> <li>Simplex</li> <li>Transmitting</li> </ul>	Rear panel	Connect an RF power meter to the antenna connector.	50 W	MAIN	R139	
	2 <ul style="list-style-type: none"> <li>[HI/LOW] switch: Mid. (Low ★)</li> </ul>					5-20 W	Verify
	3 <ul style="list-style-type: none"> <li>[HI/LOW] switch: Low</li> </ul>					2-10 W	
UHF OUTPUT POWER	1 <ul style="list-style-type: none"> <li>UHF display: <ul style="list-style-type: none"> <li>445.000 MHz (USA version only)</li> <li>435.000 MHz (All other versions)</li> </ul> </li> <li>[HI/LOW] switch: HI</li> <li>Simplex</li> <li>Transmitting</li> </ul>	Rear panel	Connect an RF power meter to the antenna connector.	35 W	MAIN	R142	
	2 <ul style="list-style-type: none"> <li>[HI/LOW] switch: Mid. (Low ★)</li> </ul>					5-20 W	Verify
	3 <ul style="list-style-type: none"> <li>[HI/LOW] switch: Low</li> </ul>					2-10 W	
FREQUENCY DEVIATION	1 <ul style="list-style-type: none"> <li>VHF display: <ul style="list-style-type: none"> <li>146.000 MHz (USA, SEA versions)</li> <li>145.000 MHz (All other versions)</li> </ul> </li> <li>Connect an audio generator to the microphone connector and set as; <ul style="list-style-type: none"> <li>20 mV/1.0 kHz</li> </ul> </li> <li>Set an FM deviation meter as; <ul style="list-style-type: none"> <li>HPF : 50 Hz</li> <li>LPF : 20 kHz</li> <li>De-emphasis : OFF</li> <li>Detector : (P - P)/2</li> </ul> </li> <li>[HI/LOW] switch: HI</li> <li>[CTCSS tone: OFF</li> <li>Simplex</li> <li>Transmitting</li> </ul>	Rear panel	Connect an FM deviation meter to the antenna connector through an attenuator.	± 4.8 kHz	MAIN	R61	
	2 <ul style="list-style-type: none"> <li>UHF display: <ul style="list-style-type: none"> <li>445.000 MHz (USA version only)</li> <li>435.000 MHz (All other versions)</li> </ul> </li> </ul>					R289	



## 5-3 RECEIVER ADJUSTMENT

ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT	
		UNIT	LOCATION		UNIT	ADJUST
VHF SENSITIVITY	1 <ul style="list-style-type: none"> <li>VHF display: 145.000 MHz</li> <li>Connect an SSG to the antenna connector and set as; <ul style="list-style-type: none"> <li>Level : 1 mV* (−47 dBm)</li> <li>Mod. : 1.0 kHz (±3.5 kHz Dev.)</li> </ul> </li> <li>Receiving</li> </ul>	MAIN	Connect a DC volt meter to the CP-SMV.	Maximum DC voltage	MAIN	Adjust in sequence L48, L49 L50
	2 <ul style="list-style-type: none"> <li>UHF display: 145.000 MHz</li> <li>Receiving</li> </ul>		Connect a DC volt multimeter to the CP-SMU.			MAIN
SQUELCH LEVEL	1 <ul style="list-style-type: none"> <li>VHF display: <ul style="list-style-type: none"> <li>146.000 MHz (USA, SEA versions)</li> <li>145.000 MHz (All other versions)</li> </ul> </li> <li>Squelch level : 7 (Use HM-98)</li> <li>R398 : Max. clockwise</li> <li>Connect an SSG to the antenna connector and set as; <ul style="list-style-type: none"> <li>Level : 0.079μV* (−129 dBm)</li> <li>Mod. : 1.0 kHz (±3.5 kHz Dev.)</li> </ul> </li> <li>Receiving</li> </ul>	Speaker		At the point where the AF signal just appears.	MAIN	R398
	2 <ul style="list-style-type: none"> <li>UHF display: <ul style="list-style-type: none"> <li>445.000 MHz (USA version only)</li> <li>435.000 MHz (ALL other versions)</li> </ul> </li> <li>Squelch level : 7 (Use HM-98)</li> <li>R440 : Max. clockwise</li> <li>Receiving</li> </ul>					R440
S-METER	1 <ul style="list-style-type: none"> <li>Connect a JIG to the microphone connector then turn ON the power.</li> <li>Both VHF/UHF displays: <ul style="list-style-type: none"> <li>145.000 MHz</li> </ul> </li> <li>Connect an SSG to the antenna connector and set as; <ul style="list-style-type: none"> <li>Level : 1.0 μV* (−107 dBm)</li> <li>Mod. : 1.0 kHz (±3.5 kHz Dev.)</li> </ul> </li> <li>Receiving</li> </ul>	Front panel		Push and hold the [S. MW] key of either band, and then push and hold the [S. MW] key of the other band. <ul style="list-style-type: none"> <li>Verify that S-meter shows S3 (4 dots) each time.</li> </ul>		
	2 <ul style="list-style-type: none"> <li>VHF display: <ul style="list-style-type: none"> <li>445.000 MHz (USA version only)</li> <li>435.000 MHz (All other versions)</li> </ul> </li> <li>Receiving</li> </ul>	Front panel		Push and hold the [S. MW] key of VHF band. <ul style="list-style-type: none"> <li>Verify that S-meter shows S3 (4 dots) each time.</li> </ul>		
	3 <ul style="list-style-type: none"> <li>UHF display: <ul style="list-style-type: none"> <li>445.000 MHz (USA version only)</li> <li>435.000 MHz (All other versions)</li> </ul> </li> <li>Set an SSG level as; <ul style="list-style-type: none"> <li>1.2 μV* (−105.5 dBm)</li> </ul> </li> <li>Receiving</li> </ul>	Front panel		Push and hold the [S. MW] key of UHF band. <ul style="list-style-type: none"> <li>Verify that S-meter shows S3 (4 dots) each time.</li> </ul>		

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



Sensitivity adjustment (VHF display)

L48  
L49  
L50

R398  
VHF squelch level adjustment

CP-SMV  
Sensitivity check point (VHF display)

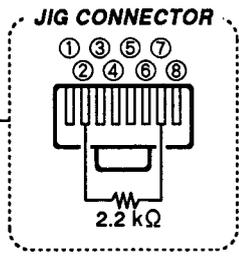
Sensitivity adjustment (UHF display)

L65  
L68  
L69  
L70



CP-SMU  
Sensitivity check point (UHF display)

R440  
UHF Squelch level adjustment



to mic. connector

2.2 kΩ

## SECTION 6

## PARTS LIST

## 6-1 IC-2710H

[CONTROL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
IC1	1130007850	S.IC	LC75823W
IC2	1140005520	S.IC	M38222M2-110HP
IC3	1110003500	S.IC	S-80742SL-A6-T1
IC4	1130005720	S.IC	TC7W04F (TE12L)
IC5	1180000420	S.IC	TA78L05F (TE12R)
Q1	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q2	1520000270	S.TRANSISTOR	2SB1182 TL Q
Q3	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q4	1510000820	S.TRANSISTOR	2SA1576 T107 S
Q5	1530002060	S.TRANSISTOR	2SC4081 T107 R
D2	1750000390	S.DIODE	1SS353 TE-17
D3	1750000390	S.DIODE	1SS353 TE-17
X1	6060000610	S.CERAMIC	EFOS4914E3
R1	7030000320	S.RESISTOR	MCR10EZHZ 330 Ω (331)
R2	70300003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R3	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R4	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R6	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R7	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R8	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R9	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R10	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R11	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R12	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R13	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R14	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R15	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R16	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R17	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R18	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R19	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R20	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R21	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R22	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R23	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R24	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R25	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R26	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R27	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R28	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R30	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R31	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R32	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R33	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R34	7210002840	VARIABLE	RH98N74A-14F-500KB-1729
R35	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R36	7210002840	VARIABLE	RH98N74A-14F-500KB-1729
R37	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R38	7210002840	VARIABLE	RH98N74A-14F-500KB-1729
R39	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R40	7210002840	VARIABLE	RH98N74A-14F-500KB-1729
R41	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R42	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R43	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R44	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R45	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R47	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R48	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R49	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R50	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R51	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R52	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R53	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R54	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R55	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R56	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)

[CONTROL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R57	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R58	7030000060	S.RESISTOR	MCR10EZHZ 2.2 Ω (2R2)
R59	7030000060	S.RESISTOR	MCR10EZHZ 2.2 Ω (2R2)
R60	7030000060	S.RESISTOR	MCR10EZHZ 2.2 Ω (2R2)
R61	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R62	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R63	7030000360	S.RESISTOR	MCR10EZHZ 680 Ω (681)
R64	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
C1	4030010070	S.CERAMIC	C1608 X7S 1C 104K-T-A
C2	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C3	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C4	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C7	4030009000	S.CERAMIC	C2012 JB 1C 224K-T-A
C8	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C9	4510004630	S.ELECTROLITIC	ECEV1CA100SR
C10	4510004630	S.ELECTROLITIC	ECEV1CA100SR
C11	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C12	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C13	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C14	4030006860	S.CERAMIC	C1608 JB 1H 472K-T-A
C15	4030006860	S.CERAMIC	C1608 JB 1H 472K-T-A
C16	4030006860	S.CERAMIC	C1608 JB 1H 472K-T-A
C17	4030006860	S.CERAMIC	C1608 JB 1H 472K-T-A
C18	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C19	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C20	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C21	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C22	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C23	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C24	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C25	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C26	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C27	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C28	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C29	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C30	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C31	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C32	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C33	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C34	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C35	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C36	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C37	4510004630	S.ELECTROLITIC	ECEV1CA100SR
DS1	5080000330	LAMP	HRS-7219A-RE
DS2	5080000330	LAMP	HRS-7219A-RE
DS3	5080000330	LAMP	HRS-7219A-RE
DS4	5030001320	LCD	HLC8763-012300
S1	2250000260	ENCODER	RH90N74AE20-15F-1647
S2	2280001890	S.SWITCH	SKQDPA
S3	2280001890	S.SWITCH	SKQDPA
S4	2280001890	S.SWITCH	SKQDPA
S5	2280001890	S.SWITCH	SKQDPA
S6	2280001890	S.SWITCH	SKQDPA
S7	2280001890	S.SWITCH	SKQDPA
S8	2280001890	S.SWITCH	SKQDPA
S9	2280001890	S.SWITCH	SKQDPA
S10	2280001890	S.SWITCH	SKQDPA
S11	2250000260	ENCODER	RH90N74AE20-15F-1647
J1	6510019310	CONNECTOR	1729 FRONT CONNECTOR
W1	7030003680	S.JUMPER	ERJ3GE JPW V
W2	7030003680	S.JUMPER	ERJ3GE JPW V
W3	7030003680	S.JUMPER	ERJ3GE JPW V
EP1	0910046462	PCB	B 4623B
EP2	8930038350	LCD CONTACT	SRCN-1729-ZNN-510

S.=Surface mount

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
IC1	1180001070	S.IC	TA7805F(TE16L)
IC2	1110002510	S.IC	AN8009M-(E1)
IC3	1180001250	S.IC	TA7808F(TE16L)
IC4	1150000760	IC	SC1091
IC5	1130004200	S.IC	TC4S66F (TE85R)
IC6	1130007610	S.IC	μPD3140GS-E1 (DS8)
IC7	1110002750	S.IC	TA75S01F (TE85R)
IC8	1110001971	S.IC	μPC1676G-T1
IC10	1110001971	S.IC	μPC1676G-T1
IC11	1150001620	IC	SC-1318
IC12	1130007610	S.IC	μPD3140GS-E1 (DS8)
IC13	1130004200	S.IC	TC4S66F (TE85R)
IC15	1110002540	IC	LA4445
IC16	1130003760	S.IC	TC4S81F (TE85R)
IC17	1110003300	S.IC	M5282FP 70CD
IC18	1110003300	S.IC	M5282FP 70CD
IC19	1110003690	S.IC	M62354GP 75EC
IC20	1110003571	S.IC	MC3372SVMEL
IC22	1130008090	S.IC	BU4066BCFV-E1
IC23	1110003571	S.IC	MC3372SVMEL
IC25	1110000960	S.IC	NJM4558M(T1)
IC27	1110002750	S.IC	TA75S01F (TE85R)
IC28	1130006550	S.IC	TC7S08FU (TE85R)
IC29	1140005980	S.IC	HD6433875NA29H
IC30	1110001500	S.IC	S-8054ALR-LN-T1
IC31	1130007290	S.IC	24LC16BT-I/SN
IC32	1130007110	S.IC	TC7W04FU(TE12L)
Q1	1520000200	S.TRANSISTOR	2SB798-T2 DK
Q2	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q3	1520000270	S.TRANSISTOR	2SB1182 TL Q
Q4	1590002110	S.TRANSISTOR	DTC143XU T107
Q10	1530002340	S.TRANSISTOR	2SC2954-T2B
Q11	1530002680	S.TRANSISTOR	2SC3357-T2
Q15	1530002920	S.TRANSISTOR	2SC4228-T2 R25
Q16	1530002920	S.TRANSISTOR	2SC4228-T2 R25
Q17	1530002920	S.TRANSISTOR	2SC4228-T2 R25
Q18	1530002920	S.TRANSISTOR	2SC4228-T2 R25
Q19	1530002920	S.TRANSISTOR	2SC4228-T2 R25
Q20	1590000430	S.TRANSISTOR	DTC144EU T107
Q25	1510000580	S.TRANSISTOR	2SA1362-GR (TE85R)
Q26	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q30	1530002900	S.TRANSISTOR	2SC4228-T2 R45
Q31	1530002900	S.TRANSISTOR	2SC4228-T2 R45
Q32	1530002900	S.TRANSISTOR	2SC4228-T2 R45
Q33	1560000490	S.FET	2SK508 K52 T2B
Q35	1560000530	S.FET	2SK880-GR (TE85R)
Q40	1530002900	S.TRANSISTOR	2SC4228-T2 R45
Q41	1530003000	S.TRANSISTOR	2SC4117-BL (TE85R)
Q42	1530003000	S.TRANSISTOR	2SC4117-BL (TE85R)
Q43	1560000530	S.FET	2SK880-GR (TE85R)
Q44	1590001040	S.TRANSISTOR	DTA113ZU T107
Q45	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q46	1540000420	S.TRANSISTOR	2SD1851-TA
Q47	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q50	1580000480	S.FET	3SK184-S (TX)
Q51	1580000480	S.FET	3SK184-S (TX)
Q52	1580000480	S.FET	3SK184-S (TX)
Q53	1590000430	S.TRANSISTOR	DTC144EU T107
Q54	1590001320	S.TRANSISTOR	DTC143ZU T107
Q55	1510000960	S.TRANSISTOR	2SA1870 TLE
Q56	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q57	1580000480	S.FET	3SK184-S (TX)
Q58	1580000480	S.FET	3SK184-S (TX)
Q59	1590000430	S.TRANSISTOR	DTC144EU T107
Q60	1530002920	S.TRANSISTOR	2SC4228-T2 R25
Q65	1590000980	S.TRANSISTOR	DTB123EK T147
Q66	1590000980	S.TRANSISTOR	DTB123EK T147
Q67	1590000980	S.TRANSISTOR	DTB123EK T147
Q68	1590002270	S.TRANSISTOR	UMG9N TL
Q69	1590000430	S.TRANSISTOR	DTC144EU T107
Q75	1580000480	S.FET	3SK184-S (TX)
Q76	1580000480	S.FET	3SK184-S (TX)
Q77	1590000430	S.TRANSISTOR	DTC144EU T107
Q78	1530002920	S.TRANSISTOR	2SC4228-T2 R25

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
Q85	1580000490	S.FET	3SK166-2-T7
Q86	1580000480	S.FET	3SK184-S (TX)
Q87	1580000480	S.FET	3SK184-S (TX)
Q88	1590000430	S.TRANSISTOR	DTC144EU T107
Q95	1530002900	S.TRANSISTOR	2SC4228-T2 R45
Q96	1580000480	S.FET	3SK184-S (TX)
Q97	1590000430	S.TRANSISTOR	DTC144EU T107
Q98	1530002900	S.TRANSISTOR	2SC4228-T2 R45
Q105	1530002340	S.TRANSISTOR	2SC2954-T2B
Q106	1530002680	S.TRANSISTOR	2SC3357-T2
Q107	1530002920	S.TRANSISTOR	2SC4228-T2 R25
Q110	1530002920	S.TRANSISTOR	2SC4228-T2 R25
Q111	1530002920	S.TRANSISTOR	2SC4228-T2 R25
Q112	1530002920	S.TRANSISTOR	2SC4228-T2 R25
Q113	1530002920	S.TRANSISTOR	2SC4228-T2 R25
Q114	1530002920	S.TRANSISTOR	2SC4228-T2 R25
Q120	1530002900	S.TRANSISTOR	2SC4228-T2 R45
Q121	1530002900	S.TRANSISTOR	2SC4228-T2 R45
Q122	1530002900	S.TRANSISTOR	2SC4228-T2 R45
Q123	1560000490	S.FET	2SK508 K52 T2B
Q130	1530002900	S.TRANSISTOR	2SC4228-T2 R45
Q131	1530003000	S.TRANSISTOR	2SC4117-BL (TE85R)
Q132	1530003000	S.TRANSISTOR	2SC4117-BL (TE85R)
Q133	1560000530	S.FET	2SK880-GR (TE85R)
Q140	1560000530	S.FET	2SK880-GR (TE85R)
Q141	1510000580	S.TRANSISTOR	2SA1362-GR (TE85R)
Q142	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q143	1590001040	S.TRANSISTOR	DTA113ZU T107
Q144	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q145	1540000420	S.TRANSISTOR	2SD1851-TA
Q146	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q147	1590000430	S.TRANSISTOR	DTC144EU T107
Q150	1590000980	S.TRANSISTOR	DTB123EK T147
Q151	1590000980	S.TRANSISTOR	DTB123EK T147
Q152	1590000980	S.TRANSISTOR	DTB123EK T147
Q153	1590000980	S.TRANSISTOR	DTB123EK T147
Q154	1590002270	S.TRANSISTOR	UMG9N TL
Q155	1590002270	S.TRANSISTOR	UMG9N TL
Q156	1530002840	S.TRANSISTOR	2SC4116-Y (TE85R)
Q157	1530002840	S.TRANSISTOR	2SC4116-Y (TE85R)
Q158	1590001450	S.FET	2SJ144-GR (TE85R)
Q159	1590002410	S.TRANSISTOR	UMH2N TN
Q160	1560000530	S.FET	2SK880-GR (TE85R)
Q161	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q162	1590000430	S.TRANSISTOR	DTC144EU T107
Q163	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q164	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q165	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q166	1560000530	S.FET	2SK880-GR (TE85R)
Q167	1560000530	S.FET	2SK880-GR (TE85R)
Q168	1590001450	S.FET	2SJ144-GR (TE85R)
Q169	1560000530	S.FET	2SK880-GR (TE85R)
Q170	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q171	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q172	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q174	1590001450	S.FET	2SJ144-GR (TE85R)
Q175	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q177	1590001450	S.FET	2SJ144-GR (TE85R)
Q178	1590001450	S.FET	2SJ144-GR (TE85R)
Q179	1590000430	S.TRANSISTOR	DTC144EU T107
Q180	1590002420	S.TRANSISTOR	UMD3N TL
Q181	1540000250	S.TRANSISTOR	2SD999-T2 CK
Q182	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q184	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q185	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q186	1510000780	S.TRANSISTOR	2SA1586-Y (TE85R)
Q187	1590002410	S.TRANSISTOR	UMH2N TN
Q190	1530003090	S.TRANSISTOR	2SC4213-B (TE85R)
Q191	1530003090	S.TRANSISTOR	2SC4213-B (TE85R)
Q192	1530003090	S.TRANSISTOR	2SC4213-B (TE85R)
Q193	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q194	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q195	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q196	1560000530	S.FET	2SK880-GR (TE85R)
Q197	1560000530	S.FET	2SK880-GR (TE85R)
Q198	1530002570	S.TRANSISTOR	2SC4405-3-TL

S.=Surface mount

## [MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
Q199	1530002570	S.TRANSISTOR	2SC4405-3-TL
Q200	1530002080	S.TRANSISTOR	2SC4081 T107 R
Q201	1530002080	S.TRANSISTOR	2SC4081 T107 R
Q202	1590000430	S.TRANSISTOR	DTC144EU T107
Q203	1590000980	S.TRANSISTOR	DTB123EK T147
D1	1790000700	DIODE	DSA3A1
D2	1790001000	S.ZENER	MA8082-L(TX)
D3	1730000520	ZENER	RD20E B2
D5	1710000310	DIODE	MI407
D6	1790000980	S.DIODE	MA742(TX)
D7	1790000980	S.DIODE	MA742(TX)
D8	1750000370	S.DIODE	DA221 TL
D9	1750000390	S.DIODE	1SS353 TE-17
D15	1720000370	S.VARICAP	HVU350TRF
D16	1790000620	S.DIODE	MA77(TW)
D21	1720000620	S.VARICAP	1T383A-04-T8A
D25	1750000390	S.DIODE	1SS353 TE-17
D30	1710000730	S.DIODE	MI809-T11
D31	1710000730	S.DIODE	MI809-T11
D32	1750000390	S.DIODE	1SS353 TE-17
D33	1720000240	S.DIODE	1SV172 (TE85R)
D36	1790001290	S.VARICAP	MA304(TX)
D38	1790001290	S.VARICAP	MA304(TX)
D40	1790001290	S.VARICAP	MA304(TX)
D41	1790000620	S.DIODE	MA77(TW)
D45	1720000240	S.DIODE	1SV172 (TE85R)
D46	1790000450	S.DIODE	MA862(TX)
D47	1790001010	S.ZENER	MA8043-L(TX)
D48	1790000450	S.DIODE	MA862(TX)
D49	1790000860	S.DIODE	MA133(TX)
D54	1790001000	S.ZENER	MA8082-L(TX)
D55	1160000080	S.DIODE	DAN202U T107
D56	1750000390	S.DIODE	1SS353 TE-17
D57	1160000080	S.DIODE	DAN202U T107
D60	1160000080	S.DIODE	DAN202U T107
D65	1720000240	S.DIODE	1SV172 (TE85R)
D66	1720000370	S.VARICAP	HVU350TRF
D67	1720000370	S.VARICAP	HVU350TRF
D68	1720000370	S.VARICAP	HVU350TRF
D69	1720000370	S.VARICAP	HVU350TRF
D70	1790000860	S.DIODE	MA133(TX)
D75	1710000730	S.DIODE	MI809-T11
D76	1710000730	S.DIODE	MI809-T11
D77	1750000390	S.DIODE	1SS353 TE-17
D78	1720000240	S.DIODE	1SV172 (TE85R)
D79	1790000450	S.DIODE	MA862(TX)
D81	1790000450	S.DIODE	MA862(TX)
D82	1160000080	S.DIODE	DAN202U T107
D85	1790001010	S.ZENER	MA8043-L(TX)
D90	1710000310	DIODE	MI407
D91	1790000980	S.DIODE	MA742(TX)
D92	1790000980	S.DIODE	MA742(TX)
D93	1750000370	S.DIODE	DA221 TL
D101	1720000370	S.VARICAP	HVU350TRF
D105	1790000450	S.DIODE	MA862(TX)
D106	1790000620	S.DIODE	MA77(TW)
D107	1720000620	S.VARICAP	1T383A-04-T8A
D110	1750000390	S.DIODE	1SS353 TE-17
D114	1790001000	S.ZENER	MA8082-L(TX)
D115	1160000080	S.DIODE	DAN202U T107
D116	1160000080	S.DIODE	DAN202U T107
D120	1790000980	S.DIODE	MA742(TX)
D121	1790000980	S.DIODE	MA742(TX)
D122	1790000980	S.DIODE	MA742(TX)
D123	1790000980	S.DIODE	MA742(TX)
D124	1730002280	S.ZENER	MA8091-M(TX)
D125	1750000390	S.DIODE	1SS353 TE-17
D126	1750000390	S.DIODE	1SS353 TE-17
D127	1750000390	S.DIODE	1SS353 TE-17
D128	1750000390	S.DIODE	1SS353 TE-17 [except USA]
D129	1750000170	S.DIODE	DA115 T107 [EUR], [ITA]
D130	1160000080	S.DIODE	DAN202U T107 [SEA]
D130	1750000180	S.DIODE	DA114 T107 [AUS]

## [MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
D130	1750000170	S.DIODE	DA115 T107 [EUR], [ITA] [USA]
D132	1750000390	S.DIODE	1SS353 TE-17 [USA], [SEA]
D133	1750000390	S.DIODE	1SS353 TE-17 [ITA], [SEA]
D134	1750000390	S.DIODE	1SS353 TE-17 [ITA], [USA] [SEA]
D135	1750000390	S.DIODE	1SS353 TE-17 [EUR], [USA] [AUS], [SEA]
D136	1750000390	S.DIODE	1SS353 TE-17 [EUR], [USA] [AUS], [SEA]
D138	1710000600	DIODE	1SS254 [EUR], [AUS]
D139	1710000600	DIODE	1SS254 [EUR], [ITA] [AUS], [SEA]
D140	1790001000	S.ZENER	MA8082-L(TX)
D141	1750000390	S.DIODE	1SS353 TE-17
D142	1750000390	S.DIODE	1SS353 TE-17
D143	1720000620	S.VARICAP	1T383A-04-T8A
D144	1730002270	S.ZENER	MA8024(TX)
D145	1720000620	S.VARICAP	1T383A-04-T8A
D146	1730002270	S.ZENER	MA8024(TX)
D147	1730002280	S.ZENER	MA8091-M(TX)
D148	1790000620	S.DIODE	MA77(TW)
D149	1790000620	S.DIODE	MA77(TW)
D150	1750000390	S.DIODE	1SS353 TE-17
D151	1750000390	S.DIODE	1SS353 TE-17
D152	1750000390	S.DIODE	1SS353 TE-17
F11	2040001000	S.SAW	EFCH435MWNP1 [except USA]
F11	2040001020	S.SAW	EFCH445MWNP1 [USA]
F12	2010001930	MONOLITHIC	FL-241 (45.050000 MHz)
F13	2010001940	MONOLITHIC	FL-242 (57.65 MHz)
F14	2040001000	S.SAW	EFCH435MWNP1 [except USA]
F14	2040001020	S.SAW	EFCH445MWNP1 [USA]
F15	2020001090	CERAMIC	KBF-455P-15A
F16	2020001090	CERAMIC	KBF-455P-15A
X1	6050009090	XTAL	CR-489 (12.800 MHz)
X2	6050009580	XTAL	CR-535 (45.505000 MHz)
X3	6070000090	DISCRIMINATOR	CDB455C16
X4	6050009590	XTAL	CR-536 (57.195000 MHz)
X5	6070000090	DISCRIMINATOR	CDB455C16
X6	6050009600	S.XTAL	SMD-49 (8.000 MHz)
L1	6110002150	COIL	LA-385
L2	6110001550	COIL	LA-235
L3	6110001610	COIL	LA-244
L4	6170000180	COIL	LW-19
L5	6110001550	COIL	LA-235
L6	6110001550	COIL	LA-235
L10	6200002600	S.COIL	NL 252018T-047J
L11	6200002420	S.COIL	NL 252018T-068J
L12	6200003890	S.COIL	NL 252018T-027J
L13	6200002410	S.COIL	NL 252018T-056J
L14	6200003560	S.COIL	NL 252018T-018J
L20	6200002600	S.COIL	NL 252018T-047J
L21	6200002640	S.COIL	NL 252018T-R15J
L22	6200002600	S.COIL	NL 252018T-047J
L23	6130002420	S.COIL	LB-270
L24	6200001520	S.COIL	MLF2012D R82K-T
L30	6200003560	S.COIL	NL 252018T-018J
L31	6200002580	S.COIL	NL 252018T-033J
L32	6200002580	S.COIL	NL 252018T-033J
L33	6200004950	S.COIL	NL 252018T-1R8J
L34	6200002850	S.COIL	NL 252018T-R82J
L35	6200002350	S.COIL	LQN 1A 27NJ04
L36	6200001520	S.COIL	MLF2012D R82K-T
L40	6110001560	COIL	LA-236
L41	6110001560	COIL	LA-236
L42	6200000070	S.COIL	LQN 2A R15K

S.=Surface mount

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
L43	6200002430	S.COIL	NL 252018T-082J
L44	6200002640	S.COIL	NL 252018T-R15J
L47	6200000070	S.COIL	LQN 2A R15K
L48	6150004360	S.COIL	LS-491
L49	6150004360	S.COIL	LS-491
L50	6150004360	S.COIL	LS-491
L51	6200002180	S.COIL	NL 252018T-R12J
L55	6200003580	S.COIL	NL 252018T-018J
L56	6200002580	S.COIL	NL 252018T-033J
L59	6200003880	S.COIL	NL 252018T-022J
L60	6200001980	S.COIL	NL 252018T-1R0J
L65	6150004490	S.COIL	LS-502
L66	6200002420	S.COIL	NL 252018T-068J
L67	6200000070	S.COIL	LQN 2A R15K
L68	6150004490	S.COIL	LS-502
L69	6150004490	S.COIL	LS-502
L70	6150004490	S.COIL	LS-502
L71	6200000260	S.COIL	LQN 2A R10K
L72	6200001980	S.COIL	NL 252018T-1R0J
L75	6110001520	COIL	LA-232
L76	6110001520	COIL	LA-232
L77	6200002580	S.COIL	NL 252018T-033J
L78	6200002600	S.COIL	NL 252018T-047J
L79	6200003580	S.COIL	NL 252018T-018J
L80	6200002580	S.COIL	NL 252018T-033J
L84	6200003890	S.COIL	NL 252018T-027J
L86	6200002590	S.COIL	NL 252018T-039J
L90	6200002740	S.COIL	LL2012-F6N8K
L91	6200002740	S.COIL	LL2012-F6N8K
L92	6200002450	S.COIL	LL2012-F15NK
L93	6200003390	S.COIL	LL2012-F12NK
L94	6200003390	S.COIL	LL2012-F12NK
L95	6200002450	S.COIL	LL2012-F15NK
L96	6200002440	S.COIL	LL2012-F10NK
L97	6200002440	S.COIL	LL2012-F10NK
L98	6200003390	S.COIL	LL2012-F12NK
L100	6110001520	COIL	LA-232
L101	6110001520	COIL	LA-232
L102	6110002110	COIL	LA-382
L103	6110002130	COIL	LA-383
L104	6170000180	COIL	LW-19
L105	6110001520	COIL	LA-232
L107	6200003870	S.COIL	NL 252018T-015J
L109	6200003530	S.COIL	NL 252018T-012J
L110	6200003860	S.COIL	NL 252018T-010J
L111	6200002580	S.COIL	NL 252018T-033J
L115	6200002800	S.COIL	NL 252018T-047J
L116	6200002640	S.COIL	NL 252018T-R15J
L117	6200002600	S.COIL	NL 252018T-047J
L118	6130002420	S.COIL	LB-270
L119	6200001520	S.COIL	MLF2012D R82K-T
L125	6200003580	S.COIL	NL 252018T-018J
L126	6200002580	S.COIL	NL 252018T-033J
L127	6200004080	S.COIL	MLR1808M 33NJ-T
L128	6200001530	S.COIL	LER 015T 3R3K
L129	6200001570	S.COIL	LER 015T 1R0M
L130	6200002350	S.COIL	LQN 1A 27NJ04
L131	6200002850	S.COIL	NL 252018T-R82J
L140	6200002090	S.COIL	ELJFB 681K-F
L141	6200002090	S.COIL	ELJFB 681K-F
L142	6200002580	S.COIL	NL 252018T-033J
L143	6200004380	S.COIL	LL1808-F18NK
L145	6200002850	S.COIL	NL 252018T-R82J
L146	6200002850	S.COIL	NL 252018T-R82J
L147	6200003890	S.COIL	NL 252018T-027J
L148	6200005950	S.COIL	LQH 3N 2R2M04 (Q20)
L149	6200004920	S.COIL	MLF1808A 2R2K-T
L150	6200004920	S.COIL	MLF1808A 2R2K-T
L151	6200004920	S.COIL	MLF1808A 2R2K-T
L152	6200005950	S.COIL	LQH 3N 2R2M04 (Q20)
L153	6200004920	S.COIL	MLF1808A 2R2K-T
L154	6200001520	S.COIL	MLF2012D R82K-T
L155	6200004920	S.COIL	MLF1808A 2R2K-T
L156	6200002420	S.COIL	NL 252018T-068J

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R1	7030001010	S.RESISTOR	MCR50JZHJ 10 Ω (100)
R2	7030001010	S.RESISTOR	MCR50JZHJ 10 Ω (100)
R3	7030001010	S.RESISTOR	MCR50JZHJ 10 Ω (100)
R4	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R5	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R6	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R7	7030001210	S.RESISTOR	MCR50JZHJ 470 Ω (471)
R10	7030001130	S.RESISTOR	MCR50JZHJ 100 Ω (101)
R11	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R12	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R16	7030001050	S.RESISTOR	MCR50JZHJ 22 Ω (220)
R17	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R18	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R19	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R20	7030000180	S.RESISTOR	MCR10EZHZ 22 Ω (220)
R21	7030000180	S.RESISTOR	MCR10EZHZ 22 Ω (220)
R22	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R23	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R24	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R25	7030003270	S.RESISTOR	ERJ3GEYJ 390 V (39 Ω)
R26	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R28	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R29	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R35	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R36	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R37	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R38	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R39	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R40	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R41	7030003220	S.RESISTOR	ERJ3GEYJ 150 V (15 Ω)
R42	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R43	7030003220	S.RESISTOR	ERJ3GEYJ 150 V (15 Ω)
R44	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R45	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R46	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R47	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R48	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R49	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R50	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R51	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R52	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R53	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R54	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R55	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R56	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R57	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R58	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R59	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R60	7030003540	S.RESISTOR	ERJ3GEYJ 882 V (6.8 kΩ)
R61	7310003600	S.TRIMMER	EVM-1XSX50 B54 (503)
R65	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R66	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R67	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R70	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R71	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R72	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R73	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R74	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R75	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R76	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R77	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R78	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R79	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R80	7030003230	S.RESISTOR	ERJ3GEYJ 180 V (18 Ω)
R81	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R85	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R86	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R90	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R91	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R92	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R93	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)
R94	7030000380	S.RESISTOR	MCR10EZHZ 1 kΩ (102)
R95	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R96	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R97	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R98	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)

S.=Surface mount

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R99	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R100	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R101	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R105	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R106	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R107	7030003600	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R108	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R109	7030004030	S.RESISTOR	ERJ3GEYJ 5R8 V (5.8 Ω)
R110	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω)
R111	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R112	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R114	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R115	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R116	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R117	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R118	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)
R120	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R122	7030003600	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R124	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R125	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R126	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R127	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R130	7030001190	S.RESISTOR	MCR50JZHJ 330 Ω (331)
R131	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R132	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R133	7030003610	S.RESISTOR	ERJ3GEYJ 273 V (27 kΩ)
R134	7030003790	S.RESISTOR	ERJ3GEYJ 824 V (820 kΩ)
R136	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R137	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R138	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R139	7310003580	S.TRIMMER	EVM-1XSX50 B15 (104)
R140	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R142	7310003580	S.TRIMMER	EVM-1XSX50 B15 (104)
R144	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R145	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R146	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R147	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R148	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R149	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R150	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R151	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R152	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R153	7030003300	S.RESISTOR	ERJ3GEYJ 680 V (68 Ω)
R155	7030000220	S.RESISTOR	MCR10EZJHJ 47 Ω (470)
R156	7030000220	S.RESISTOR	MCR10EZJHJ 47 Ω (470)
R159	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R160	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R161	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R162	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R163	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R164	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R165	7030003310	S.RESISTOR	ERJ3GEYJ 820 V (82 Ω)
R166	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R167	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R168	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R169	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R170	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R171	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R172	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R173	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R174	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R175	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R176	7030000240	S.RESISTOR	MCR10EZJHJ 88 Ω (880)
R177	7030000250	S.RESISTOR	MCR10EZJHJ 82 Ω (820)
R180	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R181	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R182	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R183	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R184	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R185	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)
R186	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R187	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R188	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R189	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R190	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R191	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R192	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R193	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R194	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R195	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R196	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R197	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R198	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R199	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R200	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R201	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R202	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R203	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R204	7030000170	S.RESISTOR	MCR10EZJHJ 18 Ω (180)
R205	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R206	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R207	7030003680	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R208	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R211	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R212	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω)
R213	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R214	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R215	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R216	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R217	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R218	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R219	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R220	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R221	7030003300	S.RESISTOR	ERJ3GEYJ 680 V (68 Ω)
R225	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R226	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R227	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R228	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R229	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R231	7030003310	S.RESISTOR	ERJ3GEYJ 820 V (82 Ω)
R232	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R235	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R236	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R237	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R238	7030000220	S.RESISTOR	MCR10EZJHJ 47 Ω (470)
R239	7030000220	S.RESISTOR	MCR10EZJHJ 47 Ω (470)
R240	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R242	7030003270	S.RESISTOR	ERJ3GEYJ 390 V (39 Ω)
R243	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R244	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R245	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R246	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R247	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R248	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R249	7030001130	S.RESISTOR	MCR50JZHJ 100 Ω (101)
R251	7030001010	S.RESISTOR	MCR50JZHJ 10 Ω (100)
R252	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R253	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R255	7030000170	S.RESISTOR	MCR10EZJHJ 18 Ω (180)
R256	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R257	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R261	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R262	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)
R263	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R264	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R265	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R266	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R267	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R268	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R269	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R270	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R271	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R272	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R273	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R274	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R275	7030003220	S.RESISTOR	ERJ3GEYJ 150 V (15 Ω)
R276	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R277	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R278	7030003530	S.RESISTOR	ERJ3GEYJ 582 V (5.8 kΩ)
R279	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R280	7030003530	S.RESISTOR	ERJ3GEYJ 582 V (5.8 kΩ)
R284	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)

S.=Surface mount

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
R285	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R286	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R287	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R288	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R289	7310003600	S.TRIMMER EVM-1XSX50 B54 (503)
R290	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R291	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R292	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R293	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R294	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R295	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)
R296	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R297	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)
R298	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R299	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R300	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R301	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R302	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)
R303	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R304	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R305	7030003240	S.RESISTOR ERJ3GEYJ 220 V (22 Ω)
R306	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R307	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R308	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R309	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R310	7030003650	S.RESISTOR ERJ3GEYJ 563 V (56 kΩ)
R311	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R312	7030003370	S.RESISTOR ERJ3GEYJ 271 V (270 Ω)
R313	7030003490	S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ)
R314	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R315	7030000380	S.RESISTOR MCR10EZJH 1 kΩ (102)
R316	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R317	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R318	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)
R319	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R320	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R321	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R322	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R323	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R324	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)
R325	7030003740	S.RESISTOR ERJ3GEYJ 334 V (330 kΩ)
R326	7030003450	S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ)
R327	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R328	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R329	7030003670	S.RESISTOR ERJ3GEYJ 823 V (82 kΩ)
R330	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)
R331	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R332	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R333	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R350	7030000100	S.RESISTOR MCR10EZJH 4.7 Ω (4R7)
R351	7030000100	S.RESISTOR MCR10EZJH 4.7 Ω (4R7)
R352	7030003570	S.RESISTOR ERJ3GEYJ 123 V (12 kΩ)
R353	7030003770	S.RESISTOR ERJ3GEYJ 564 V (560 kΩ)
R354	7030003350	S.RESISTOR ERJ3GEYJ 181 V (180 Ω)
R355	7030003370	S.RESISTOR ERJ3GEYJ 271 V (270 Ω)
R356	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R357	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R358	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R359	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R360	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R361	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R362	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R363	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R364	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R365	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R366	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R367	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R368	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R369	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R370	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R371	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R372	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R373	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R374	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R375	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R376	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
R377	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R378	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R379	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R380	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R381	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)
R382	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R383	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)
R384	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R385	7510001010	S.THERMISTOR NTCCF2012 4CH 154KCT
R386	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R387	7030003770	S.RESISTOR ERJ3GEYJ 564 V (560 kΩ)
R388	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R389	7030003470	S.RESISTOR ERJ3GEYJ 182 V (1.8 kΩ)
R390	7030003450	S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ)
R391	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R392	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R393	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R394	7030003760	S.RESISTOR ERJ3GEYJ 474 V (47 kΩ)
R395	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R396	7030003430	S.RESISTOR ERJ3GEYJ 821 V (820 Ω)
R397	7510000470	S.THERMISTOR TN20-2V221LT
R398	7310003610	S.TRIMMER EVM-1XSX50 B14 (103)
R399	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R400	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R401	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R402	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R403	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R404	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R405	7030003630	S.RESISTOR ERJ3GEYJ 393 V (39 kΩ)
R406	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R407	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R408	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R409	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R410	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R411	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R412	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R413	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R414	7030003630	S.RESISTOR ERJ3GEYJ 393 V (39 kΩ)
R415	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R416	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R417	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)
R418	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R419	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R420	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R421	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R422	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R423	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R424	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R425	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)
R426	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R427	7510001010	S.THERMISTOR NTCCF2012 4CH 154KCT
R428	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R429	7030003780	S.RESISTOR ERJ3GEYJ 684 V (680 kΩ)
R430	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R431	7030003470	S.RESISTOR ERJ3GEYJ 182 V (1.8 kΩ)
R432	7030003450	S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ)
R433	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R434	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R435	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R436	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R437	7030003430	S.RESISTOR ERJ3GEYJ 821 V (820 Ω)
R438	7510000470	S.THERMISTOR TN20-2V221LT
R439	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R440	7310003610	S.TRIMMER EVM-1XSX50 B14 (103)
R441	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R442	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R443	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R444	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R445	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R446	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R447	7030003630	S.RESISTOR ERJ3GEYJ 393 V (39 kΩ)
R448	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R449	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R450	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R451	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R452	7030003630	S.RESISTOR ERJ3GEYJ 393 V (39 kΩ)

S.=Surface mount

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
R453	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R454	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)
R455	7030003800	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R456	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R457	7030003840	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R458	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R459	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R460	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R461	7030003670	S.RESISTOR ERJ3GEYJ 823 V (82 kΩ)
R462	7030003670	S.RESISTOR ERJ3GEYJ 823 V (82 kΩ)
R463	7030003660	S.RESISTOR ERJ3GEYJ 683 V (68 kΩ)
R464	7030003790	S.RESISTOR ERJ3GEYJ 824 V (820 kΩ)
R465	7030003770	S.RESISTOR ERJ3GEYJ 564 V (560 kΩ)
R466	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R467	7030003740	S.RESISTOR ERJ3GEYJ 334 V (330 kΩ)
R468	7030003790	S.RESISTOR ERJ3GEYJ 824 V (820 kΩ)
R469	7030003750	S.RESISTOR ERJ3GEYJ 394 V (390 kΩ)
R470	7030003390	S.RESISTOR ERJ3GEYJ 391 V (390 Ω)
R471	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R472	7030003420	S.RESISTOR ERJ3GEYJ 681 V (680 Ω)
R473	7030003280	S.RESISTOR ERJ3GEYJ 470 V (47 Ω)
R474	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R475	7030003800	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R476	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R478	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R479	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R480	7030003840	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R481	7030003510	S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ)
R482	7030003510	S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ)
R483	7030003750	S.RESISTOR ERJ3GEYJ 394 V (390 kΩ)
R484	7030003890	S.RESISTOR ERJ3GEYJ 124 V (120 kΩ)
R485	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R486	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R487	7030003390	S.RESISTOR ERJ3GEYJ 391 V (390 Ω)
R488	7030001040	S.RESISTOR MCR50JZHJ 18 Ω (180)
R489	7030000020	S.RESISTOR MCR10EZHJ 1 Ω (010)
R490	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R491	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R492	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R493	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)
R494	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R495	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R496	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R497	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R498	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R499	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R500	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R501	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R502	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R503	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R504	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R505	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R506	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R507	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R508	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R509	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R510	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R511	7410000750	S.ARRAY EXB-V4V 104JV (100 kΩ)
R512	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R513	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R514	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R515	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R516	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R517	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R518	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R519	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R522	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R523	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R524	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R525	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R526	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R527	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)
R528	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R529	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R530	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R531	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
R532	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R533	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R534	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R535	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R536	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R537	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R539	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R540	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R541	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R543	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R544	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R545	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R546	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)
R547	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R548	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R549	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R550	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R551	7030003570	S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)
R552	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R553	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R554	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R555	7030003580	S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)
R556	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R557	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R558	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R559	7410000770	S.ARRAY EXB-V4V 102JV (1 kΩ)
R560	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R561	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R562	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R563	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R564	7030003730	S.RESISTOR ERJ3GEYJ 274 V (270 kΩ)
R565	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)
R566	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R567	7410000750	S.ARRAY EXB-V4V 104JV (100 kΩ)
R568	7410000750	S.ARRAY EXB-V4V 104JV (100 kΩ)
R569	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R570	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R571	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R573	7030003530	S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ)
R574	7030003530	S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ)
R575	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R576	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R578	7030003330	S.RESISTOR ERJ3GEYJ 121 V (120 Ω)
R579	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R580	7030003260	S.RESISTOR ERJ3GEYJ 330 V (33 Ω)
R581	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R582	7030003580	S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)
R583	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R584	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R585	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R587	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R588	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R589	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R590	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R591	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R592	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R593	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)
R594	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R595	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R596	7030003700	S.RESISTOR ERJ3GEYJ 154 V (150 kΩ)
R597	7030003700	S.RESISTOR ERJ3GEYJ 154 V (150 kΩ)
R598	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R599	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R600	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R601	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R602	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R603	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R604	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R605	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R606	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R607	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R608	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R610	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R613	7030000020	S.RESISTOR MCR10EZHJ 1 Ω (010)
R614	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R615	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)

S.=Surface mount

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R616	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 M $\Omega$ )
R617	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 M $\Omega$ )
R618	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 M $\Omega$ )
R619	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 k $\Omega$ )
R620	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 $\Omega$ )
R621	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 $\Omega$ )
R622	7030004030	S.RESISTOR	ERJ3GEYJ 5R6 V (5.6 $\Omega$ )
R623	7030000180	S.RESISTOR	MCR10EZHZ 22 $\Omega$ (220)
R624	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 k $\Omega$ )
R625	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 k $\Omega$ )
R626	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 k $\Omega$ )
R629	7510000390	S.THERMISTOR	TN20-3N153LT
C1	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C2	4030010070	S.CERAMIC	C1608 X7S 1C 104K-T-A
C3	4510004600	ELECTROLITIC	16 MV 1000 HC
C4	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C5	4510004640	S.ELECTROLITIC	ECEV1CA470SP
C6	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C7	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C8	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C9	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C10	4510004640	S.ELECTROLITIC	ECEV1CA470SP
C11	4510004630	S.ELECTROLITIC	ECEV1CA100SR
C12	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C13	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C14	4510004640	S.ELECTROLITIC	ECEV1CA470SP
C16	4510004630	S.ELECTROLITIC	ECEV1CA100SR
C17	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C18	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C19	4510004640	S.ELECTROLITIC	ECEV1CA470SP
C20	4510004630	S.ELECTROLITIC	ECEV1CA100SR
C21	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C30	4030011190	S.CERAMIC	GRM42-6 CH 270J 500PT
C31	4030011200	S.CERAMIC	GRM42-6 CH 300J 500PT
C32	4030011170	S.CERAMIC	GRM42-6 CH 180J 500PT
C33	4030011280	S.CERAMIC	GRM42-6 W5R 102K 500PT
C34	4030011160	S.CERAMIC	GRM42-6 CH 150J 500PT
C35	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C36	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C37	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C38	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C39	4030011250	S.CERAMIC	GRM42-6 W5R 471K 500PT
C40	4030011020	S.CERAMIC	GRM42-6 CK 010C 500PT
C41	4030011110	S.CERAMIC	GRM42-6 CH 090D 500PT
C42	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C43	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C44	4030011020	S.CERAMIC	GRM42-6 CK 010C 500PT
C45	4030011020	S.CERAMIC	GRM42-6 CK 010C 500PT
C46	4030011120	S.CERAMIC	GRM42-6 CH 100D 500PT
C47	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C48	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C49	4030011200	S.CERAMIC	GRM42-6 CH 300J 500PT
C50	4030011290	S.CERAMIC	GRM42-6 CH 240J 500PT
C55	4550006480	S.TANTALUM	TEMSVA 1C 475M-8L
C56	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C57	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C58	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C59	4510004630	S.ELECTROLITIC	ECEV1CA100SR
C60	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C61	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C62	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C63	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C64	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C65	4030006930	S.CERAMIC	C1608 CH 1H 020C-T-A
C66	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C68	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C69	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C75	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C76	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C77	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C78	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C79	4030006950	S.CERAMIC	C1608 CH 1H 040C-T-A
C80	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C81	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
C82	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C83	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C84	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C85	4030006910	S.CERAMIC	C1608 CH 1H 0R5C-T-A
C86	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C87	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C88	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C89	4030006910	S.CERAMIC	C1608 CH 1H 0R5C-T-A
C90	4030006910	S.CERAMIC	C1608 CH 1H 0R5C-T-A
C91	4030006950	S.CERAMIC	C1608 CH 1H 040C-T-A
C92	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C93	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C94	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C95	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C96	4550000530	S.TANTALUM	TESVA 1V 104M1-8L
C97	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C98	4030006860	S.CERAMIC	C2012 JF 1C 105Z-T-A
C99	4030006860	S.CERAMIC	C2012 JF 1C 105Z-T-A
C100	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C101	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C105	4030006860	S.CERAMIC	C2012 JF 1C 105Z-T-A
C106	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C110	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C111	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A
C112	4030006940	S.CERAMIC	C1608 CH 1H 030C-T-A
C113	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C114	4030006940	S.CERAMIC	C1608 CH 1H 030C-T-A
C115	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C116	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C117	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C118	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C119	4030006920	S.CERAMIC	C1608 CH 1H 010C-T-A
C120	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C121	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C122	4030006940	S.CERAMIC	C1608 CH 1H 030C-T-A
C123	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C125	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C126	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C127	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C128	4550000530	S.TANTALUM	TESVA 1V 104M1-8L
C135	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C136	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C137	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C138	4550000530	S.TANTALUM	TESVA 1V 104M1-8L
C139	4030010070	S.CERAMIC	C1608 X7S 1C 104K-T-A
C140	4550002980	S.TANTALUM	TEMSVA 1C 225M-8L
C141	4550002980	S.TANTALUM	TEMSVA 1C 225M-8L
C142	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C143	4550002980	S.TANTALUM	TEMSVA 1C 225M-8L
C144	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C145	4510006220	S.ELECTROLITIC	ECEV1CA101UP
C146	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C148	4030007070	S.CERAMIC	C1608 CH 1H 330J-T-A
C149	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C150	4030006860	S.CERAMIC	C2012 JF 1C 105Z-T-A
C151	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C152	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C153	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C155	4030007060	S.CERAMIC	C1608 CH 1H 270J-T-A
C156	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C157	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C158	4030006930	S.CERAMIC	C1608 CH 1H 020C-T-A
C159	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C160	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C161	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C162	4030006990	S.CERAMIC	C1608 CH 1H 080D-T-A
C163	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C164	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C165	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C166	4030006860	S.CERAMIC	C1608 JB 1H 102K-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	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C174	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C175	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

S.=Surface mount

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
C177	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C178	4030009570	S.CERAMIC C1608 CH 1H 0R3B-T-A
C181	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C182	4030009570	S.CERAMIC C1608 CH 1H 0R3B-T-A
C184	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C185	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C186	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C187	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C188	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C189	4510004640	S.ELECTROLITIC ECEV1CA470SP
C190	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C191	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C193	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C194	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C195	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C196	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C197	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C198	4510004630	S.ELECTROLITIC ECEV1CA100SP
C199	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C200	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C201	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C202	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C203	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C204	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C210	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C211	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C212	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C213	4030006930	S.CERAMIC C1608 CH 1H 020C-T-A
C214	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C215	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C216	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C217	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C218	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C219	4030006930	S.CERAMIC C1608 CH 1H 020C-T-A
C220	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C221	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C222	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C225	4030007070	S.CERAMIC C1608 CH 1H 330J-T-A
C226	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C227	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C229	4030007040	S.CERAMIC C1608 CH 1H 180J-T-A
C231	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C232	4030006930	S.CERAMIC C1608 CH 1H 020C-T-A
C233	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C234	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C235	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C236	4030007010	S.CERAMIC C1608 CH 1H 100D-T-A
C238	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C239	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C240	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C241	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C242	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C243	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C244	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C245	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C246	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C247	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C248	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C249	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C250	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C251	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C252	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C253	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C255	4030006830	S.CERAMIC C1608 SL 1H 331J-T-A
C256	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C257	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C258	4030007080	S.CERAMIC C1608 CH 1H 390J-T-A
C259	4030007050	S.CERAMIC C1608 CH 1H 220J-T-A
C260	4030006960	S.CERAMIC C1608 CH 1H 070D-T-A
C261	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C262	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C263	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C264	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C265	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C266	4030006910	S.CERAMIC C1608 CH 1H 0R5C-T-A
C267	4030006950	S.CERAMIC C1608 CH 1H 040C-T-A

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
C268	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C269	4030006910	S.CERAMIC C1608 CH 1H 0R5C-T-A
C270	4030007100	S.CERAMIC C1608 CH 1H 560J-T-A
C271	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C273	4030006950	S.CERAMIC C1608 CH 1H 040C-T-A
C275	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C276	4030006930	S.CERAMIC C1608 CH 1H 020C-T-A
C277	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C278	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C279	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C280	4030011530	S.CERAMIC C1608 CH 1H 110J-T-A
C281	4030006910	S.CERAMIC C1608 CH 1H 0R5C-T-A
C282	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C283	4030006900	S.CERAMIC C1608 JB 1H 102K-T-A
C284	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C285	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C286	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C290	4030007000	S.CERAMIC C1608 CH 1H 090D-T-A
C291	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C292	4030007040	S.CERAMIC C1608 CH 1H 180J-T-A
C293	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C294	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C295	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C297	4030006930	S.CERAMIC C1608 CH 1H 020C-T-A
C298	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C299	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C300	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C301	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C302	4030006930	S.CERAMIC C1608 CH 1H 020C-T-A
C303	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C304	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C305	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C306	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C307	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C311	4030006950	S.CERAMIC C1608 CH 1H 040C-T-A
C313	4030010780	S.CERAMIC C1608 CH 1H 1R5C-T-A
C314	4030007060	S.CERAMIC C1608 CH 1H 270J-T-A
C315	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C317	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C319	4030006950	S.CERAMIC C1608 CH 1H 040C-T-A
C320	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C321	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C325	4030011030	S.CERAMIC GRM42-6 CK 1R5C 500PT
C326	4030010780	S.CERAMIC C1608 CH 1H 1R5C-T-A
C327	4030010780	S.CERAMIC C1608 CH 1H 1R5C-T-A
C328	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C329	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C330	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C331	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C332	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C334	4030006930	S.CERAMIC C1608 CH 1H 020C-T-A
C335	4030006960	S.CERAMIC C1608 CH 1H 070D-T-A
C336	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C337	4030006930	S.CERAMIC C1608 CH 1H 020C-T-A
C338	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C339	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C340	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C341	4030006990	S.CERAMIC C1608 CH 1H 080D-T-A
C342	4030006930	S.CERAMIC C1608 CH 1H 020C-T-A
C345	4030011090	S.CERAMIC GRM42-6 CH 070D 500PT
C346	4030011060	S.CERAMIC GRM42-6 CH 040C 500PT
C347	4030011110	S.CERAMIC GRM42-6 CH 090D 500PT
C348	4030011100	S.CERAMIC GRM42-6 CH 080D 500PT
C349	4030011070	S.CERAMIC GRM42-6 CH 050C 500PT
C350	4030011250	S.CERAMIC GRM42-6 W5R 471K 500PT
C351	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C355	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C356	4030011250	S.CERAMIC GRM42-6 W5R 471K 500PT
C357	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C358	4030011020	S.CERAMIC GRM42-6 CK 010C 500PT
C359	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C360	4030011120	S.CERAMIC GRM42-6 CH 100D 500PT
C362	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C363	4030011020	S.CERAMIC GRM42-6 CK 010C 500PT
C364	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A

S.=Surface mount

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
C365	4030011120	S.CERAMIC GRM42-6 CH 100D 500PT
C366	4030011070	S.CERAMIC GRM42-6 CH 050C 500PT
C367	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C369	4510004630	S.ELECTROLITIC ECEV1CA100SR
C370	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C372	4030006990	S.CERAMIC C1608 CH 1H 080D-T-A
C373	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C375	4030007000	S.CERAMIC C1608 CH 1H 090D-T-A
C376	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C377	4030006930	S.CERAMIC C1608 CH 1H 020C-T-A
C380	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C381	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C382	4030007010	S.CERAMIC C1608 CH 1H 100D-T-A
C385	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C386	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C387	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C388	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C389	4030006910	S.CERAMIC C1608 CH 1H 0R5C-T-A
C390	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C391	4030007010	S.CERAMIC C1608 CH 1H 100D-T-A
C392	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C393	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C394	4030006910	S.CERAMIC C1608 CH 1H 0R5C-T-A
C395	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C396	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C397	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C398	4030006910	S.CERAMIC C1608 CH 1H 0R5C-T-A
C399	4030006910	S.CERAMIC C1608 CH 1H 0R5C-T-A
C402	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C403	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C404	4550000530	S.TANTALUM TESVA 1V 104M1-8L
C405	4550006480	S.TANTALUM TEMSVA 1C 475M-8L
C410	4030006990	S.CERAMIC C1608 CH 1H 080D-T-A
C411	4030007000	S.CERAMIC C1608 CH 1H 090D-T-A
C412	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C413	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C414	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C416	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C417	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C418	4030006920	S.CERAMIC C1608 CH 1H 010C-T-A
C419	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C420	4030006970	S.CERAMIC C1608 CH 1H 060D-T-A
C421	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C422	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C423	4030011280	S.CERAMIC C1608 CH 1H 271J-T-A
C424	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C425	4550000530	S.TANTALUM TESVA 1V 104M1-8L
C426	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C427	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C428	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C429	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C430	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C431	4030007050	S.CERAMIC C1608 CH 1H 220J-T-A
C432	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C433	4550000530	S.TANTALUM TESVA 1V 104M1-8L
C444	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C445	4550002980	S.TANTALUM TEMSVA 1C 225M-8L
C446	4550002980	S.TANTALUM TEMSVA 1C 225M-8L
C447	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C448	4550002980	S.TANTALUM TEMSVA 1C 225M-8L
C449	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C450	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C451	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C460	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C461	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C462	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C463	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C464	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C465	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C466	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C467	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C468	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C469	4510006220	S.ELECTROLITIC ECEV1CA101UP
C474	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C475	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C476	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
C477	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C478	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C479	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C480	4610001260	S.TRIMMER ECR-JA020 E12W
C481	4030008560	S.CERAMIC C1608 CH 1H 300J-T-A
C482	4030007120	S.CERAMIC C1608 CH 1H 820J-T-A
C483	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C484	4030006920	S.CERAMIC C1608 CH 1H 010C-T-A
C485	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C486	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C487	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C488	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C491	4030007070	S.CERAMIC C1608 CH 1H 330J-T-A
C492	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C493	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C500	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C501	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C502	4510006260	S.ELECTROLITIC ECEV1AA471UP
C503	4510006220	S.ELECTROLITIC ECEV1CA101UP
C504	4510006260	S.ELECTROLITIC ECEV1AA471UP
C505	4510006220	S.ELECTROLITIC ECEV1CA101UP
C506	4510004640	S.ELECTROLITIC ECEV1CA470SP
C507	4510006240	S.ELECTROLITIC ECEV1CA221P
C508	4510004640	S.ELECTROLITIC ECEV1CA470SP
C509	4510006250	S.ELECTROLITIC ECEV1CA331UP
C510	4510005810	S.ELECTROLITIC ECEV1HAR47R
C511	4550003250	S.TANTALUM TEMSVA 1V 474M-8L
C512	4550003250	S.TANTALUM TEMSVA 1V 474M-8L
C513	4510004440	S.ELECTROLITIC ECEV1HA010SR
C514	4510004440	S.ELECTROLITIC ECEV1HA010SR
C515	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C516	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C517	4510004630	S.ELECTROLITIC ECEV1CA100SR
C518	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C519	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C521	4510004630	S.ELECTROLITIC ECEV1CA100SR
C522	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C523	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C525	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C526	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C527	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C528	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C529	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C530	4030007000	S.CERAMIC C1608 CH 1H 090D-T-A
C531	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C532	4030007000	S.CERAMIC C1608 CH 1H 090D-T-A
C533	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C534	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C535	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C536	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C537	4030007160	S.CERAMIC C1608 CH 1H 181J-T-A
C538	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C539	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C540	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C541	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C542	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C543	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C544	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C545	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C546	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C547	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C548	4030007070	S.CERAMIC C1608 CH 1H 330J-T-A
C549	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C550	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C552	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C553	4030005110	S.CERAMIC C2012 JF 1C 473K-T-A
C554	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C556	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C557	4030006860	S.CERAMIC C1608 JB 1C 153K-T-A
C558	4030006900	S.CERAMIC C1608 JB 1C 333K-T-A
C559	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C560	4030006860	S.CERAMIC C1608 JB 1C 153K-T-A
C561	4030008770	S.CERAMIC C1608 JB 1H 562K-T-A
C562	4030008770	S.CERAMIC C1608 JB 1H 562K-T-A
C563	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C564	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A

S.=Surface mount

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
C565	4030007000	S.CERAMIC C1608 CH 1H 090D-T-A
C566	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C567	4030007000	S.CERAMIC C1608 CH 1H 090D-T-A
C568	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C569	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C570	4030007120	S.CERAMIC C1608 CH 1H 820J-T-A
C571	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C572	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C573	4030007160	S.CERAMIC C1608 CH 1H 181J-T-A
C574	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C575	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C576	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C577	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C578	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C579	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C580	4030006880	S.CERAMIC C2012 JF 1C 105Z-T-A
C581	4030006880	S.CERAMIC C1608 JB 1H 102K-T-A
C582	4030006880	S.CERAMIC C1608 JB 1H 102K-T-A
C583	4030006880	S.CERAMIC C1608 JB 1H 102K-T-A
C584	4030007070	S.CERAMIC C1608 CH 1H 330J-T-A
C585	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C586	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C588	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C589	4030005110	S.CERAMIC C2012 JB 1E 473K-T-A
C590	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C592	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C593	4030008860	S.CERAMIC C1608 JB 1C 153K-T-A
C594	4030008900	S.CERAMIC C1608 JB 1C 333K-T-A
C595	4030008860	S.CERAMIC C1608 JB 1C 153K-T-A
C596	4030008770	S.CERAMIC C1608 JB 1H 562K-T-A
C597	4030008770	S.CERAMIC C1608 JB 1H 562K-T-A
C598	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C599	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C600	4030007120	S.CERAMIC C1608 CH 1H 820J-T-A
C601	4030008470	S.CERAMIC C1608 JB 1H 272K-T-A
C602	4030009490	S.CERAMIC C1608 JB 1H 821K-T-A
C603	4510004640	S.ELECTROLITIC ECEV1CA470SP
C604	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C605	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C606	4030007020	S.CERAMIC C1608 CH 1H 120J-T-A
C607	4030008900	S.CERAMIC C1608 JB 1C 333K-T-A
C608	4510004440	S.ELECTROLITIC ECEV1HA010SR
C609	4510004630	S.ELECTROLITIC ECEV1CA100SR
C610	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C611	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C612	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C613	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C614	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C615	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C616	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C617	4510004630	S.ELECTROLITIC ECEV1CA100SR
C618	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C619	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C620	4030007050	S.CERAMIC C1608 CH 1H 220J-T-A
C621	4030007050	S.CERAMIC C1608 CH 1H 220J-T-A
C623	4030009000	S.CERAMIC C2012 JB 1C 224K-T-A
C624	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C625	4510004630	S.ELECTROLITIC ECEV1CA100SR
C626	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C627	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C628	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C629	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C630	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C631	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C632	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C633	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C634	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C635	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C636	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C637	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C638	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C639	4030006860	S.CERAMIC C2012 JF 1C 105Z-T-A
C640	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C641	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C643	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C644	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION
C645	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C646	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C647	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C648	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C649	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C650	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C651	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C652	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C653	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C654	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C655	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C656	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C657	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C658	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C659	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C660	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C661	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C662	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C663	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C664	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C665	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C666	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C667	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C700	4030011080	S.CERAMIC GRM42-6 CH 060D 500PT
C705	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C706	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C707	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C708	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C709	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C710	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C712	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C713	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C714	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C715	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C716	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C717	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C718	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C719	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C720	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C721	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C723	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C724	4030007040	S.CERAMIC C1608 CH 1H 180J-T-A
C725	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C726	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C727	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C728	4510004640	S.ELECTROLITIC ECEV1CA470SP
C729	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C730	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C731	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C732	4030006920	S.CERAMIC C1608 CH 1H 010C-T-A
C733	4030006920	S.CERAMIC C1608 CH 1H 010C-T-A
C734	4030006960	S.CERAMIC C1608 CH 1H 070D-T-A
C735	4030006910	S.CERAMIC C1608 CH 1H 0R5C-T-A
C737	4030010780	S.CERAMIC C1608 CH 1H 1R5C-T-A
C738	4030006990	S.CERAMIC C1608 CH 1H 080D-T-A
C739	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C740	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C743	4030006900	S.CERAMIC C1608 JB 1C 333K-T-A
C745	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C746	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C747	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C748	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C749	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C750	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C751	4030010070	S.CERAMIC C1608 X7S 1C 104K-T-A
C752	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C754	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C755	4550006350	S.TANTALUM TEMSVB2 1A 226M-8L
C756	4550006350	S.TANTALUM TEMSVB2 1A 226M-8L
C761	4030007080	S.CERAMIC C1608 CH 1H 390J-T-A
C762	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C763	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C764	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C765	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C766	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C768	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A

S.=Surface mount

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
C769	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C770	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C771	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C772	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C773	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C774	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C775	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C776	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C777	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C778	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C779	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C780	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C781	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C782	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C783	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C784	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C785	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C786	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C787	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C788	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C789	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C790	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C791	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C792	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C793	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C795	4030006940	S.CERAMIC	C1608 CH 1H 030C-T-A
C796	4030006860	S.CERAMIC	C2012 JF 1C 105Z-T-A
C797	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C798	4030010070	S.CERAMIC	C1608 X7S 1C 104K-T-A
C799	4030010070	S.CERAMIC	C1608 X7S 1C 104K-T-A
J1	6450001440	CONNECTOR	HSJ1403-01-010
J2	6450001440	CONNECTOR	HSJ1403-01-010
J3	6510014790	CONNECTOR	53253-0210
J4	6510007080	CONNECTOR	PI28A-02M
J5	6510016570	S.CONNECTOR	52465-1291
J6	6510013610	S.CONNECTOR	10FM-1.0BP
J7	6510016480	CONNECTOR	52018-8845
J8	6510019320	CONNECTOR	1729 REAR CONNECTOR
W1	8900004880	CABLE	OPC-465
W2	7030003860	S.JUMPER	ERJ3GE JPW V
W3	7120000380	JUMPER	JPW 01 R-01
W4	7120000380	JUMPER	JPW 01 R-1
W5	7120000380	JUMPER	JPW 01 R-01
W14	7030003860	S.JUMPER	ERJ3GE JPW V
W16	7030003860	S.JUMPER	ERJ3GE JPW V
W17	7030003860	S.JUMPER	ERJ3GE JPW V
W18	7120000380	JUMPER	JPW 01 R-01 [ITA], [USA] [SEA]
W19	7030003860	S.JUMPER	ERJ3GE JPW V
W20	7030003860	S.JUMPER	ERJ3GE JPW V
W21	7030003860	S.JUMPER	ERJ3GE JPW V
W22	7030003860	S.JUMPER	ERJ3GE JPW V
W23	7030003860	S.JUMPER	ERJ3GE JPW V
W24	7030003860	S.JUMPER	ERJ3GE JPW V
W25	7030003860	S.JUMPER	ERJ3GE JPW V
W26	7030003860	S.JUMPER	ERJ3GE JPW V
W27	7410000760	S.JUMPER	EXB-V4V JPWV
W28	7030003860	S.JUMPER	ERJ3GE JPW V
W29	7030003860	S.JUMPER	ERJ3GE JPW V
W30	7030003860	S.JUMPER	ERJ3GE JPW V
W32	7030003860	S.JUMPER	ERJ3GE JPW V
W33	7030003860	S.JUMPER	ERJ3GE JPW V
W34	7030003860	S.JUMPER	ERJ3GE JPW V
W35	7030003860	S.JUMPER	ERJ3GE JPW V
W36	7030000010	S.JUMPER	MCR10EZJH JPW (000)
W37	7030003860	S.JUMPER	ERJ3GE JPW V
W38	7030003860	S.JUMPER	ERJ3GE JPW V
W39	7030003860	S.JUMPER	ERJ3GE JPW V
W40	7030003860	S.JUMPER	ERJ3GE JPW V
W41	7030003860	S.JUMPER	ERJ3GE JPW V
W42	7030003860	S.JUMPER	ERJ3GE JPW V
W43	7030003860	S.JUMPER	ERJ3GE JPW V

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
W44	7030003860	S.JUMPER	ERJ3GE JPW V
W45	7030003860	S.JUMPER	ERJ3GE JPW V
W46	7030003860	S.JUMPER	ERJ3GE JPW V
W47	7030003860	S.JUMPER	ERJ3GE JPW V
W48	7030003860	S.JUMPER	ERJ3GE JPW V
W49	7030003970	S.JUMPER	MCR18EZJH JPW (000)
EP1	0910046544	PCB	B 4625D

S.=Surface mount

# 6-2 HM-98

## [MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
IC1	1140005870	S.IC	μPD7584AG-555
IC2	1130002370	S.IC	μPD4028BG-T1
IC3	1110001500	S.IC	S-8054ALR-LN-T1
Q1	1530001940	S.TRANSISTOR	2SC2712-BL (TE85R)
Q2	1590000680	S.TRANSISTOR	DTC114EU T107
Q3	1590001330	S.TRANSISTOR	DTA114EU T107
Q4	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q5	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q6	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q7	1510000770	S.TRANSISTOR	2SA1586-GR (TE85R)
Q8	1530001940	S.TRANSISTOR	2SC2712-BL (TE85R)
Q9	1590000980	S.TRANSISTOR	DTB123EK T147
D1	1790000950	S.ZENER	MA8056-M(TX)
D3	1750000390	S.DIODE	1SS353 TE-17
D4	1750000390	S.DIODE	1SS353 TE-17
D5	1750000390	S.DIODE	1SS353 TE-17
D6	1750000390	S.DIODE	1SS353 TE-17
D7	1750000390	S.DIODE	1SS353 TE-17
D8	1750000390	S.DIODE	1SS353 TE-17
D9	1750000390	S.DIODE	1SS353 TE-17
D10	1750000390	S.DIODE	1SS353 TE-17
D11	1750000390	S.DIODE	1SS353 TE-17
D12	1750000390	S.DIODE	1SS353 TE-17
D13	1750000390	S.DIODE	1SS353 TE-17
D14	1750000390	S.DIODE	1SS353 TE-17
D15	1750000390	S.DIODE	1SS353 TE-17
D16	1730002280	S.ZENER	MA8091-M(TX)
D17	1730002280	S.ZENER	MA8091-M(TX)
D18	1730002280	S.ZENER	MA8091-M(TX)
D19	1750000390	S.DIODE	1SS353 TE-17
X1	6060000530	S.CERAMIC	CSB600J200T
L1	6200001520	S.COIL	MLF2012D R82K-T
L2	6200004920	S.COIL	MLF1608A 2R2K-T
L3	6200004920	S.COIL	MLF1608A 2R2K-T
L4	6200004920	S.COIL	MLF1608A 2R2K-T
L5	6200004920	S.COIL	MLF1608A 2R2K-T
L6	6200001520	S.COIL	MLF2012D R82K-T
R2	7030000390	S.RESISTOR	MCR10EZHZ 1.2 kΩ (122)
R3	7030000390	S.RESISTOR	MCR10EZHZ 1.2 kΩ (122)
R4	7030000340	S.RESISTOR	MCR10EZHZ 470 Ω (471)
R5	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R6	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R7	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R8	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R9	7030003580	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R10	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R11	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R12	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R13	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R14	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R15	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R16	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R18	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R19	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R20	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R21	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R22	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R23	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R24	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R25	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R26	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R27	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R29	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R30	7030003530	S.RESISTOR	ERJ3GEYJ 582 V (5.8 kΩ)

## [MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R31	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R32	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R33	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R34	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R35	7030000390	S.RESISTOR	MCR10EZHZ 1.2 kΩ (122)
R36	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R37	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R38	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R39	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R40	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
C1	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C2	4510006220	S.ELECTROLITIC	ECEV1CA101UP
C3	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C4	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C5	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C9	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C10	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C11	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C12	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C13	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C14	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C15	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C16	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C17	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C18	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C19	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C21	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C22	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C23	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C24	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C25	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C26	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C27	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C29	4510004630	S.ELECTROLITIC	ECEV1CA100SR
C30	4030010070	S.CERAMIC	C1608 X7S 1C 104K-T-A
C31	4510004630	S.ELECTROLITIC	ECEV1CA100SR
DS1	5010000120	S.LED	LN1371G-(TR)
DS2	5010000120	S.LED	LN1371G-(TR)
DS3	5010000120	S.LED	LN1371G-(TR)
DS4	5010000120	S.LED	LN1371G-(TR)
DS5	5010000120	S.LED	LN1371G-(TR)
DS6	5010000120	S.LED	LN1371G-(TR)
DS7	5010000120	S.LED	LN1371G-(TR)
DS8	5010000120	S.LED	LN1371G-(TR)
DS10	5010000150	S.LED	LT1EP53A
DS11	5010000150	S.LED	LT1EP53A
S1	2230000900	S.SWITCH	JPM1990-2013R
J1	6510016480	CONNECTOR	52018-8845
MC1	7700002040	MICROPHONE	KUB2823-011500
EP1	0910046553	PCB	B 4626C

S.=Surface mount

# SECTION 7 MECHANICAL PARTS AND DISASSEMBLY

## 7-1 CABINET PARTS

### [CHASSIS PARTS]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
SP 1	2510000820	Speaker VS-57-0814	1
J 1	6510004880	Antenna connector MR-DSE -01	1
MF1	2710000410	Fan motor 0410-12H	1
MP1	8010016500	1729 CHASSIS	1
MP2	8930039460	1729 A-SP plate	1
MP3	8930038520	1729 OPC plate	1
MP4	8930038510	1729 Release button	1
MP5	8930038500	1729 Button	1
MP6	8810008660	Screws PH B0 M3 X 8 NI-ZU (BT)	2
MP7	8810008660	Screws PH B0 M3 X 8 NI-ZU (BT)	4
MP8	8810008660	Screws PH B0 M3 X 8 NI-ZU (BT)	7
MP9	8810009140	Screw PH M2.6 X 6 ZK	1
MP10	8110005750	1729 Fan cover	1
MP11	8810009110	Screws PH No.0 M2.6 X 16 ZK	4
MP12	8810009140	Screws PH M2.6 X 6 ZK	2
MP13	8110005760	1729 COVER	1
MP17	8930036751	Spring (Y)-1	1
MP18	8930039610	Thermally sheet(C)	1
MP19	8930039610	Thermally sheet(C)	1
MP20	8930039610	Thermally sheet(C)	1
MP21	8930008620	Himelon sheet L	1
MP22	8930008620	Himelon sheet L	2
MP23	8930018810	Himelon sheet AA	3
MP24	8930040330	1729 Spring	1
WS1	8600034860	1729 P01H	1

### [MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J 8	6510019321	1729 Rear connector	1
W 1	8900004880	Cable OPC-465	1
MP1	8930038490	1729 H.V. plate	1
MP2	8510010520	1729 A-VCO case	2
MP3	8930037120	1647 M-holder	2
MP5	8510010010	1647 Filter plate	1
MP7	8510010510	1729 U-U VCO case	1
MP8	8510010500	1729 V-U VCO case	1
MP13	8510010630	1729 U shield plate	1
MP14	8510010680	1729 Grounding plate (EUR, ITA, USA)	1

## 7-2 ACCESSORIES

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
F 1	5210000080	Fuse FGB 20A	1
W 1	Optional products	Cable OPC-346	1
MC1	Optional products	Microphone HM-98	1
MP1	8010016380	Mobile mounting bracket-	1
MP3	8820000530	Knob bolt M4 X 8 NI	4
MP4	8810000470	Mounting bolt M5 X 12(+ -)	4
MP5	8810000950	Screws A0 M5 x 16	4
MP6	8850000150	Flat washer M 5 NI BS	4
MP7	8850000390	Spring washer M 5	4
MP8	8830000120	Nut M 5	4

### [CONTROL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
DS 4	5030001320	LCD HLC8763-012300	1
EP 2	8930038350	LCD contact SRCN-1729-ZNN-510	1
MP 1	8210013291	1729 Reflector	1
MP 2	8930039100	1729 LCD filter	1
MP 4	8930038460	1729 LCD holder	1
MP 5	8210013740	1729 Front panel assembly	1
MP11	8210013280	1729 Rear panel	1
MP12	8810009220	Screws PH B0 M2 X 8 ZK(BT)	2
MP13	8610009840	Knob N234	2
MP15	8610010140	Knob N245	2
MP18	8610010230	Knob N250	2

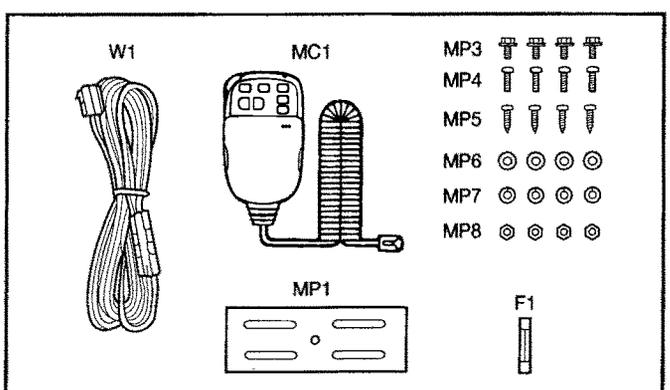
### [HM-98 REMOTE CONTROL MICROPHONE]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP 1	8210013640	1731 Front cover assembly	1
MP 2	8210013330	1731 Rear panel	1
MP 3	8930038530	1731 Key board	1
MP 4	8930039900	1731 PTT button assembly	1
MP 8	8810008640	Screws FH B0 No.1 2 x 4	3
MP 9	8810009370	Screws PH B0 3 X 12 ZK(BT)	2

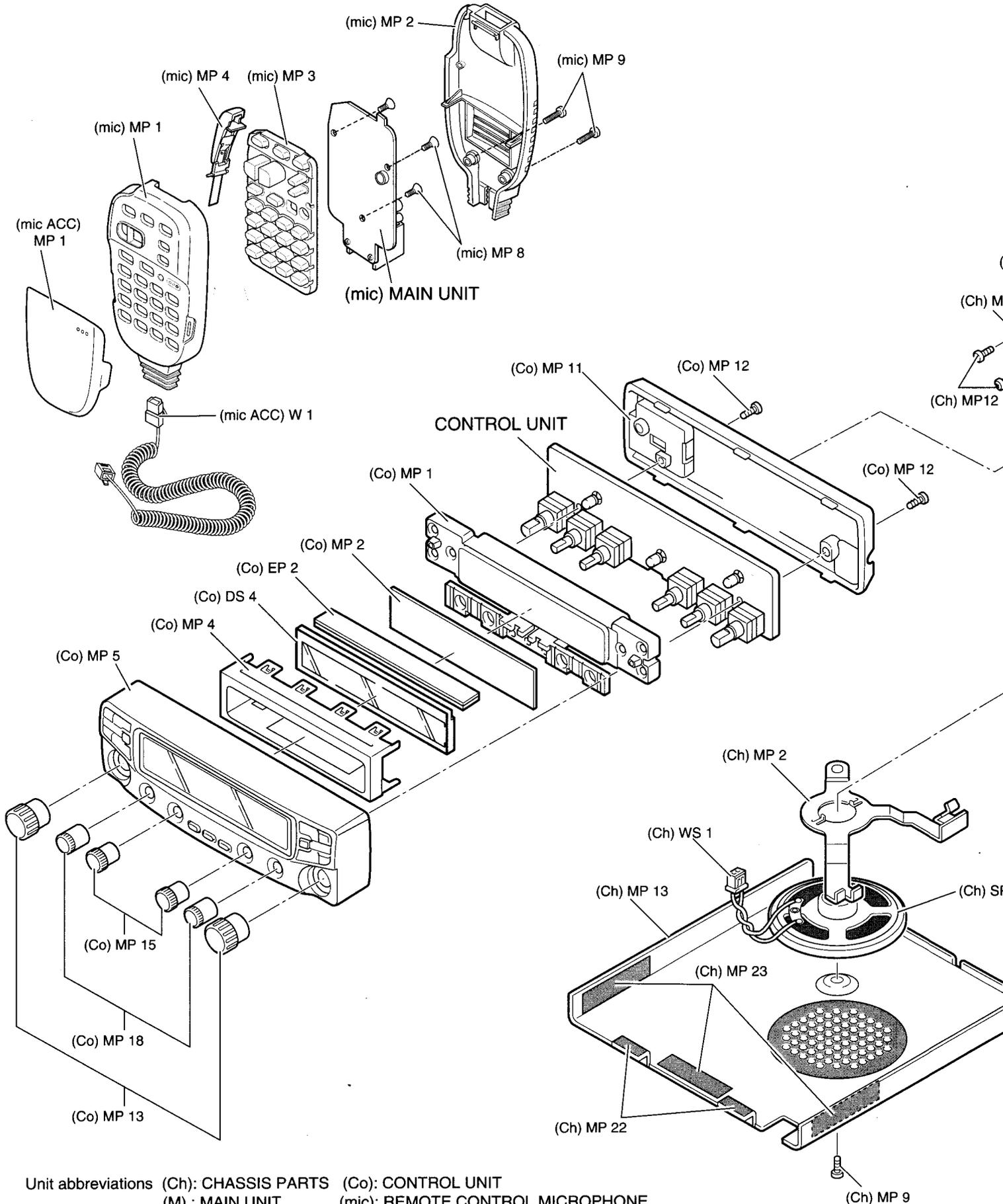
### [ACCESSORIES FOR HM-98]

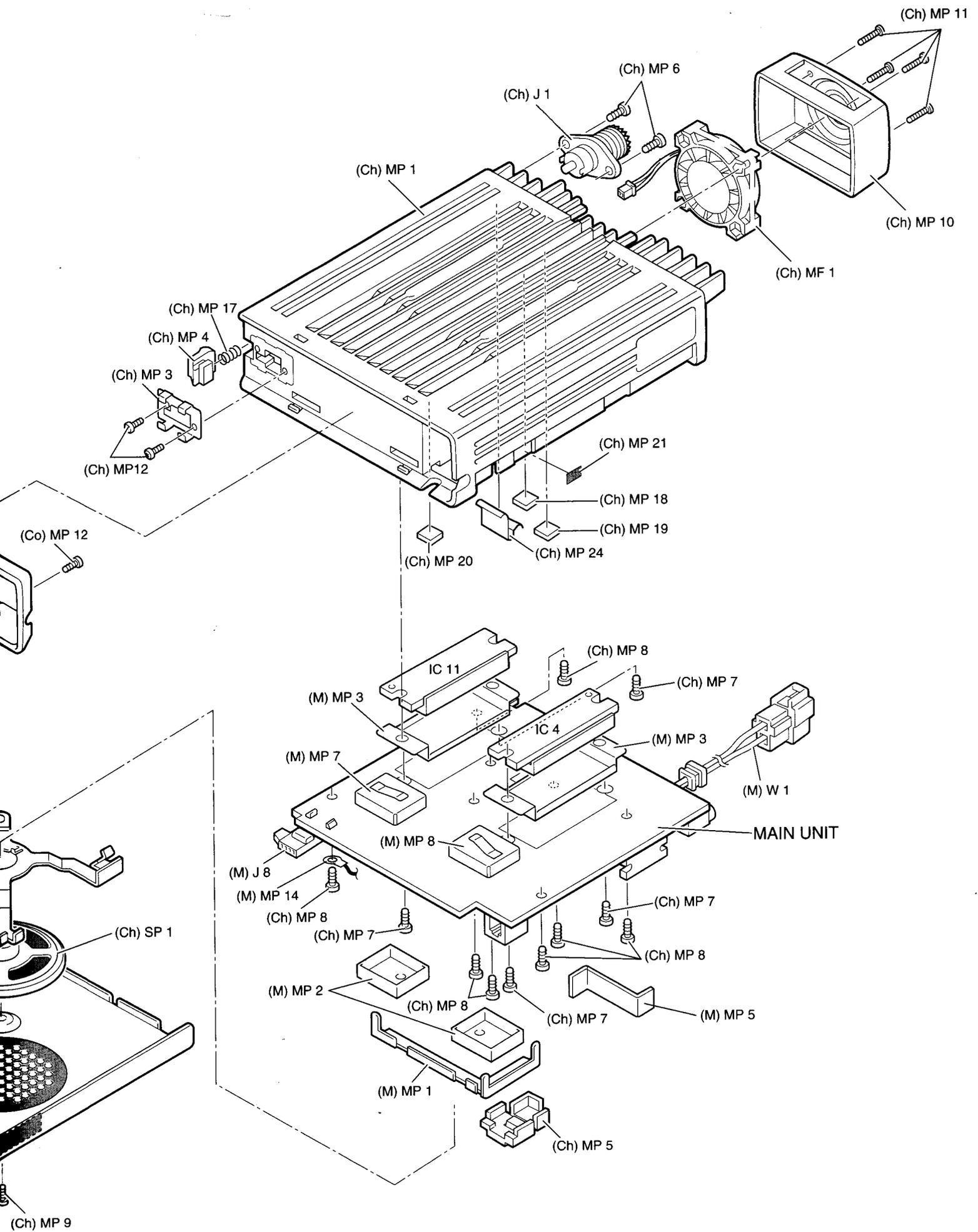
REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP 1	8110005770	1731 Cover	1
W 1	8900006240	OPC-614	1

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



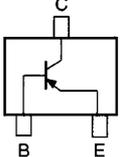
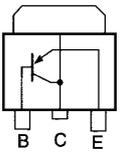
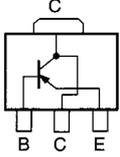
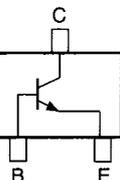
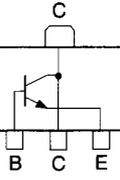
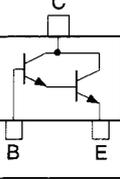
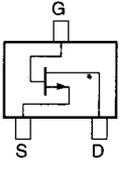
**HM-98 REMOTE CONTROL MICROPHONE**

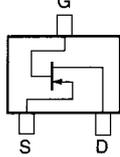
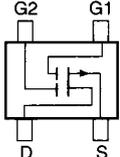
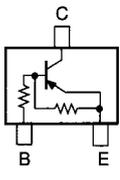
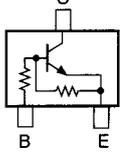
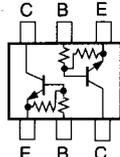
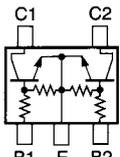
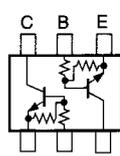




# SECTION 8 SEMI-CONDUCTOR INFORMATIONS

## 8-1 TRANSISTORS

NAME	SYMBOL	INSIDE VIEW
2SA1162 GR 2SA1362 GR 2SA1576 S 2SA1586 Y	SG AEG FS SY	
2SA1870 TLE 2SB1182 TL Q	A1870 B1182	
2SB798 DK	DK	
2SC2712 BL 2SC3770-3 2SC3356 R25 2SC3661 TA 2SC4081 R 2SC4116 Y 2SC4117 BL 2SC4213 B 2SC4215 2SC4226 R25 2SC4228 R45 2SC4403 2SC4405 TL	LL JY3 R25 FY BR LY DL AB QY R25 R45 LY3 OY3	
2SC2954 2SC3357 2SD999 CK	QK RK CK	
2SD1851 TA	XY	
2SK209 BL 2SK508 K52 2SK880 GR/Y 2SK1577-2 2SK1740	XL K52 XG/XY P2 IJ	

NAME	SYMBOL	INSIDE VIEW
2SJ144 GR	VG	
3SK166-2 3SK184 S	K 3R	
DTA113ZU DTA114EU DTA143ZU DTA144EU DTB123EK	111 14 113 16 F12	
DTC114EU DTC143XU DTC143 ZU DTC144EU	24 43 123 26	
UMD3N	D3	
UMG9N	G9	
UMH2N	H2	

## 8-2 DIODES

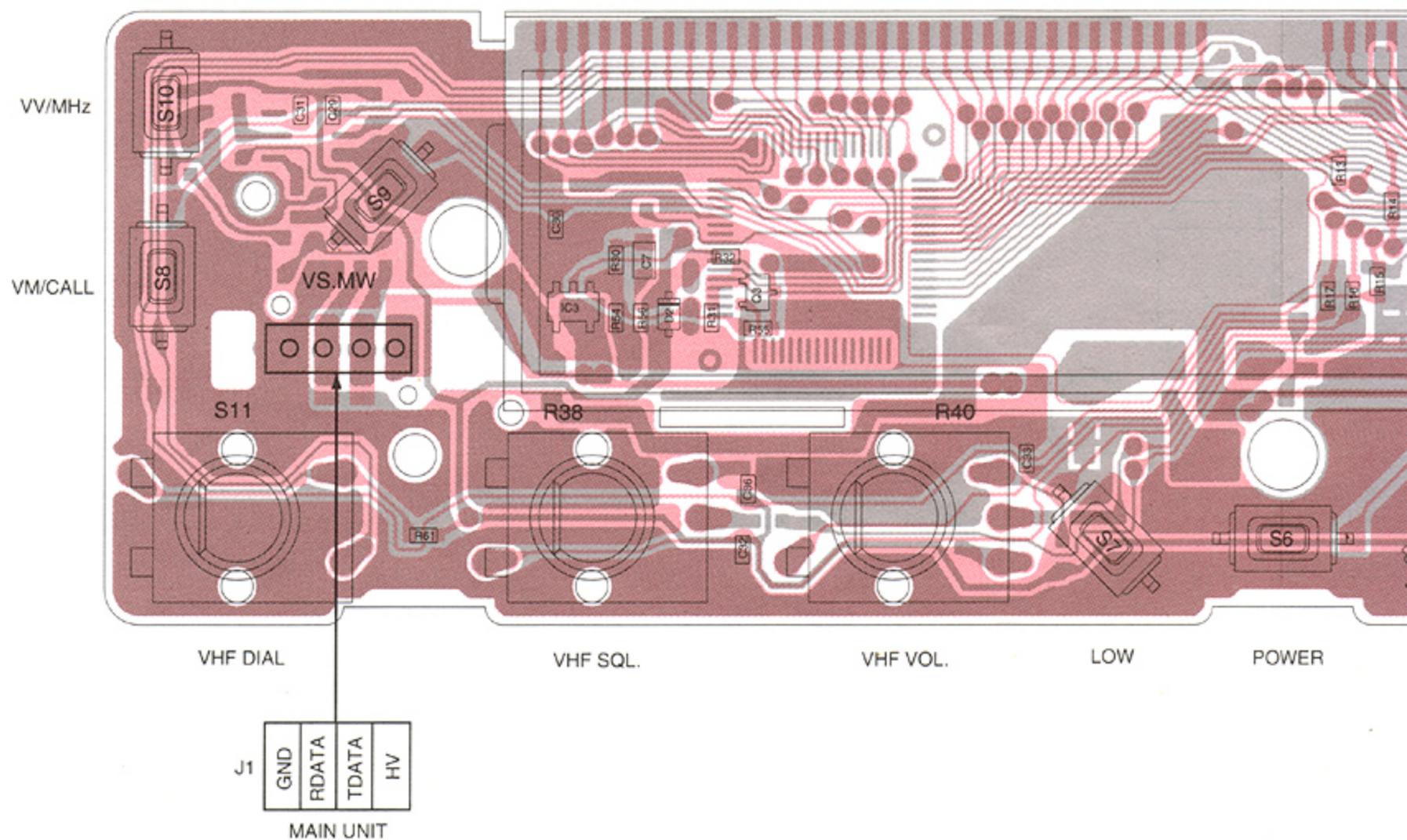
NAME	SYMBOL	INSIDE VIEW
1SV172 DA221 TL MA133 MA742	BE K MP M1U	
DA114	AV	
DA115	AU	
DAN202U	N	
MA862	M1I	
RD20E B2	202	

NAME	SYMBOL	INSIDE VIEW
1SV217 1T363A-04 HVV350TRF MA304	T6 Light blue line 4 7R	
MA8030H MA8024 MA8043L MA8051M MA8056M MA8062L MA8091-M MA8100M	3^0 2.4 4_3 5-1 5-6 6_2 9-1 10-	
1SS353 MA77 MA110 MA729 MI407	C 4B 1A 2B -	
1SS254	Yellow	
MI809	Red dot	

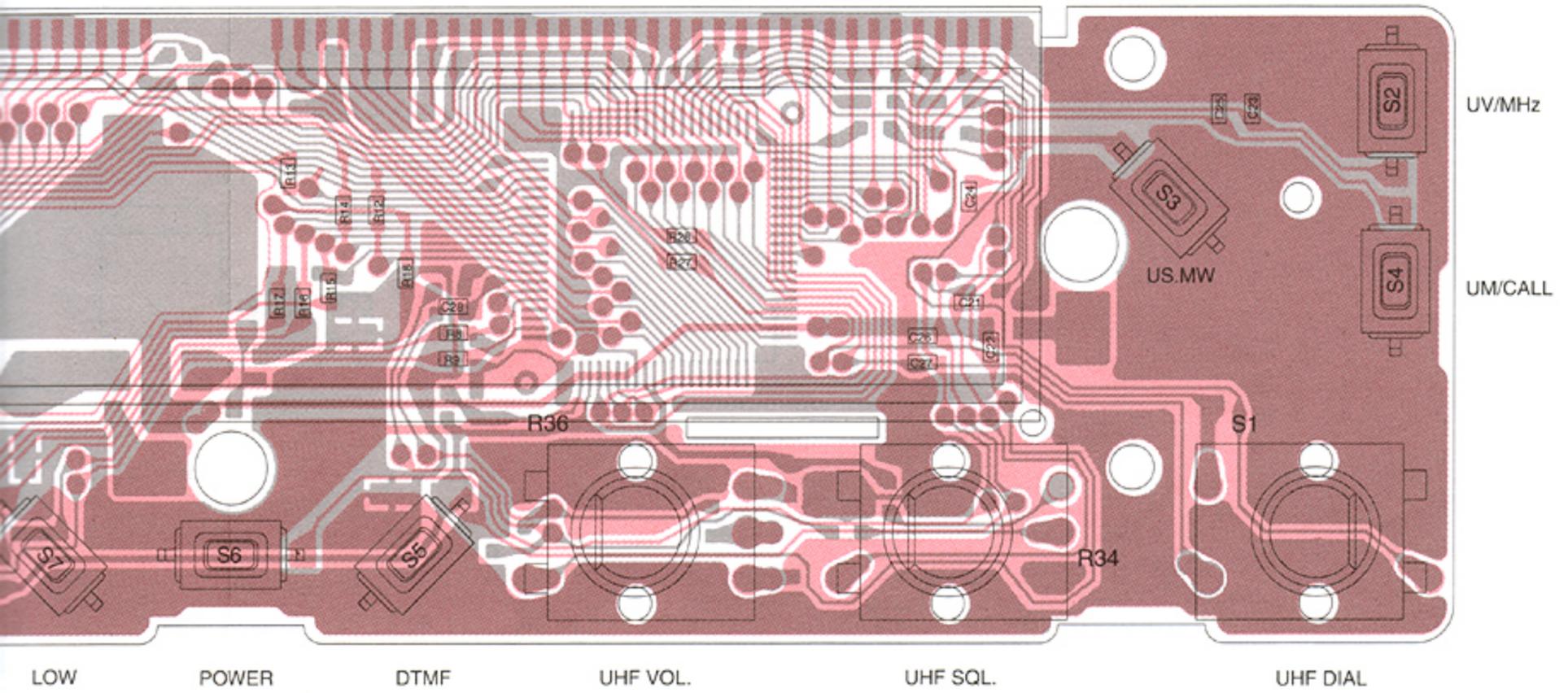
# SECTION 9 BOARD LAYOUTS

## 9-1 CONTROL UNIT

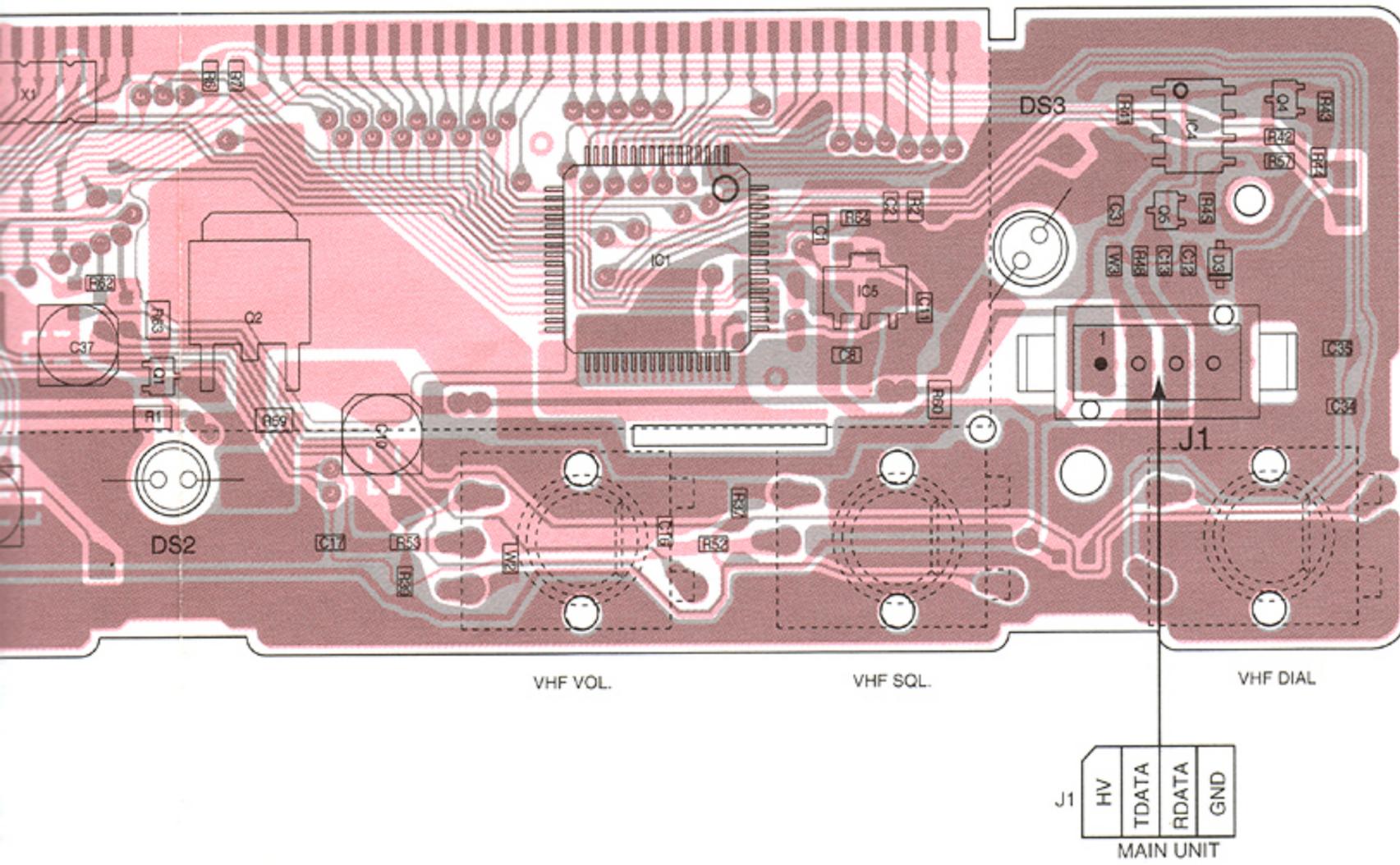
### • CONTROL UNIT (TOP VIEW)



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

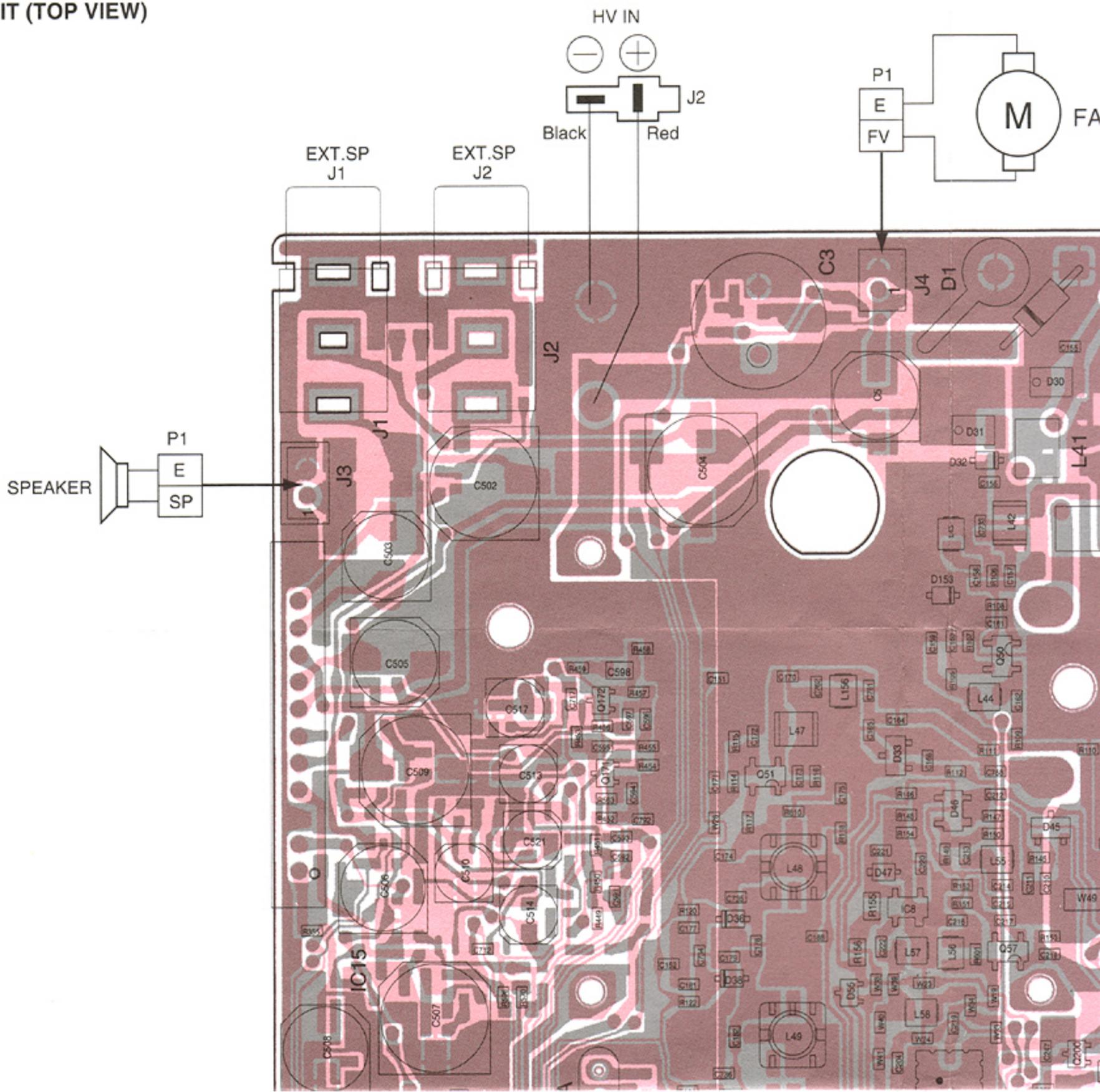




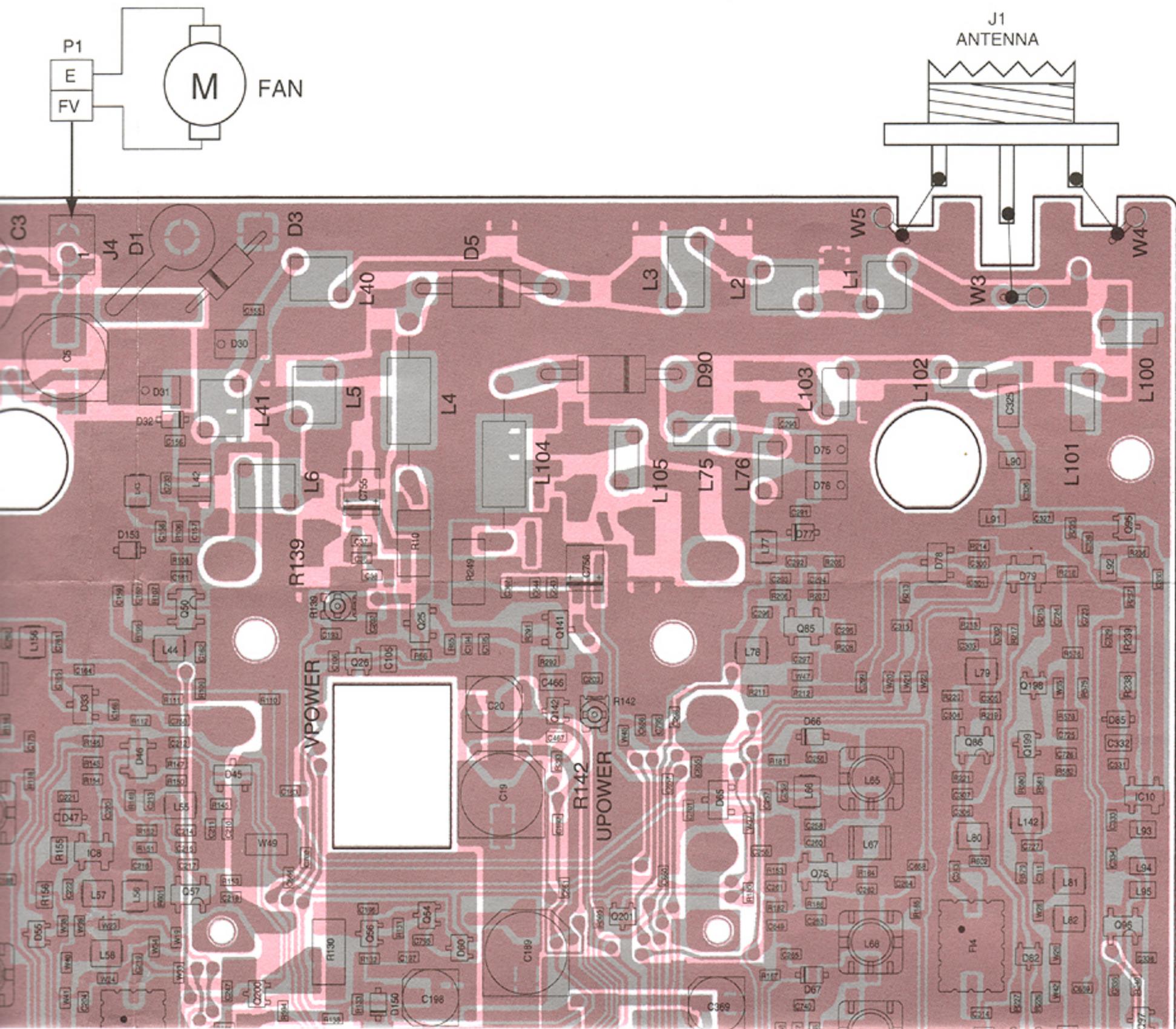


# 9-2 MAIN UNIT

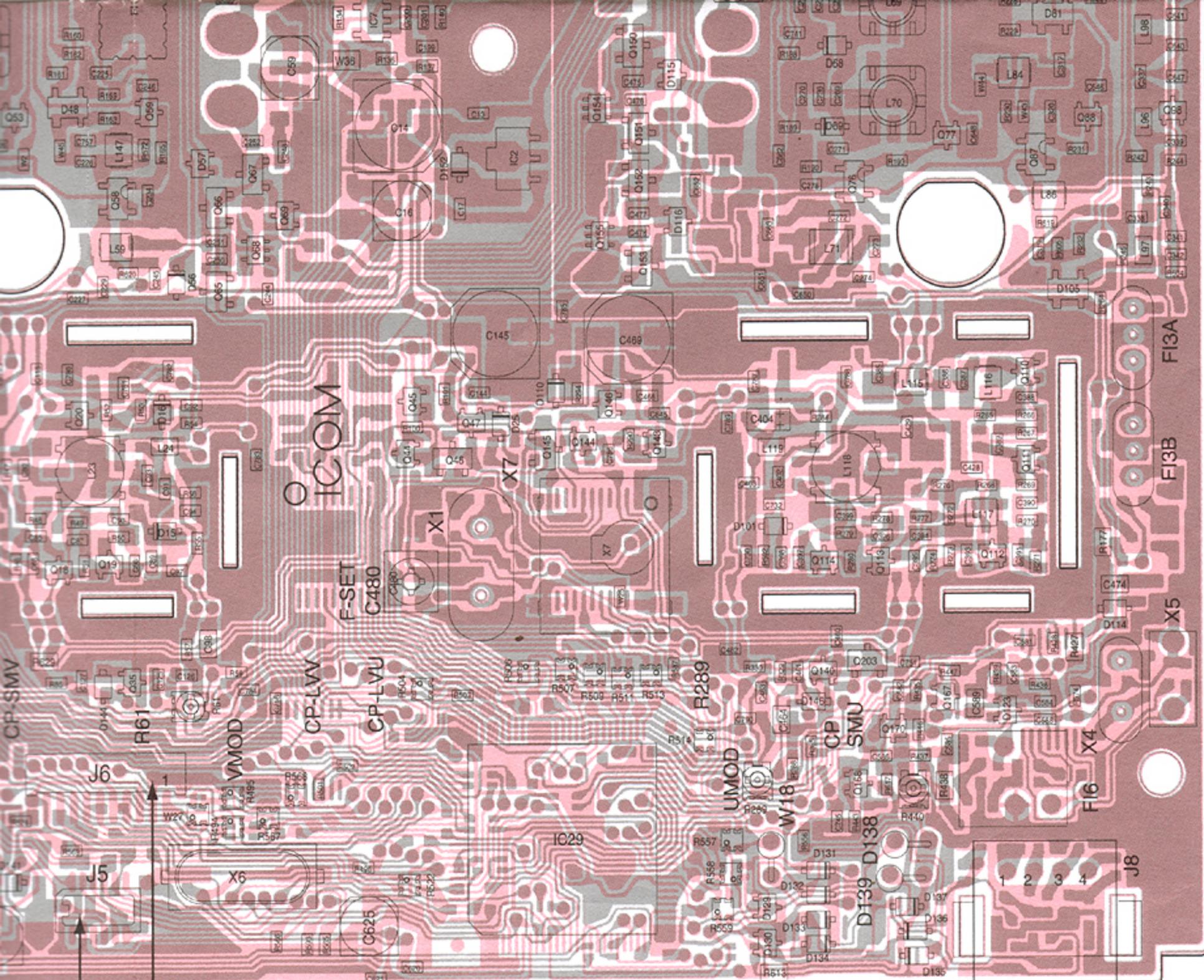
## • MAIN UNIT (TOP VIEW)



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







J5

NC	DETA
GND	TSQLA
STBTB	STBTA
DETB	SCK
5V	SDATA
UNITT	TSQLB

ONE SQL UNIT  
(Optional unit)

J6

1
SID
Q4
Q3
Q2
Q1
TOE
+5
DETO
GND
OPD

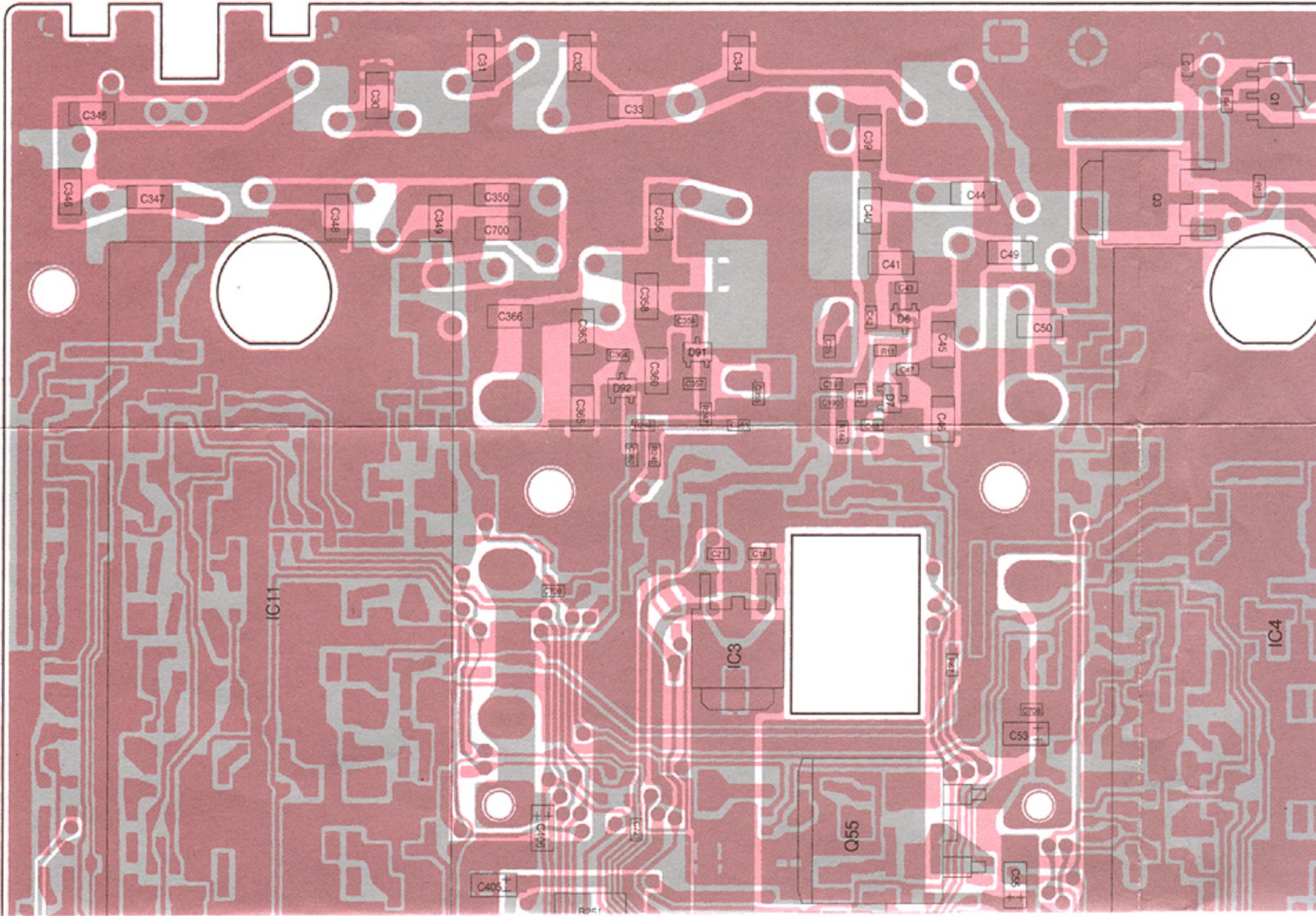
DTMF DECODER UNIT  
(Optional unit)

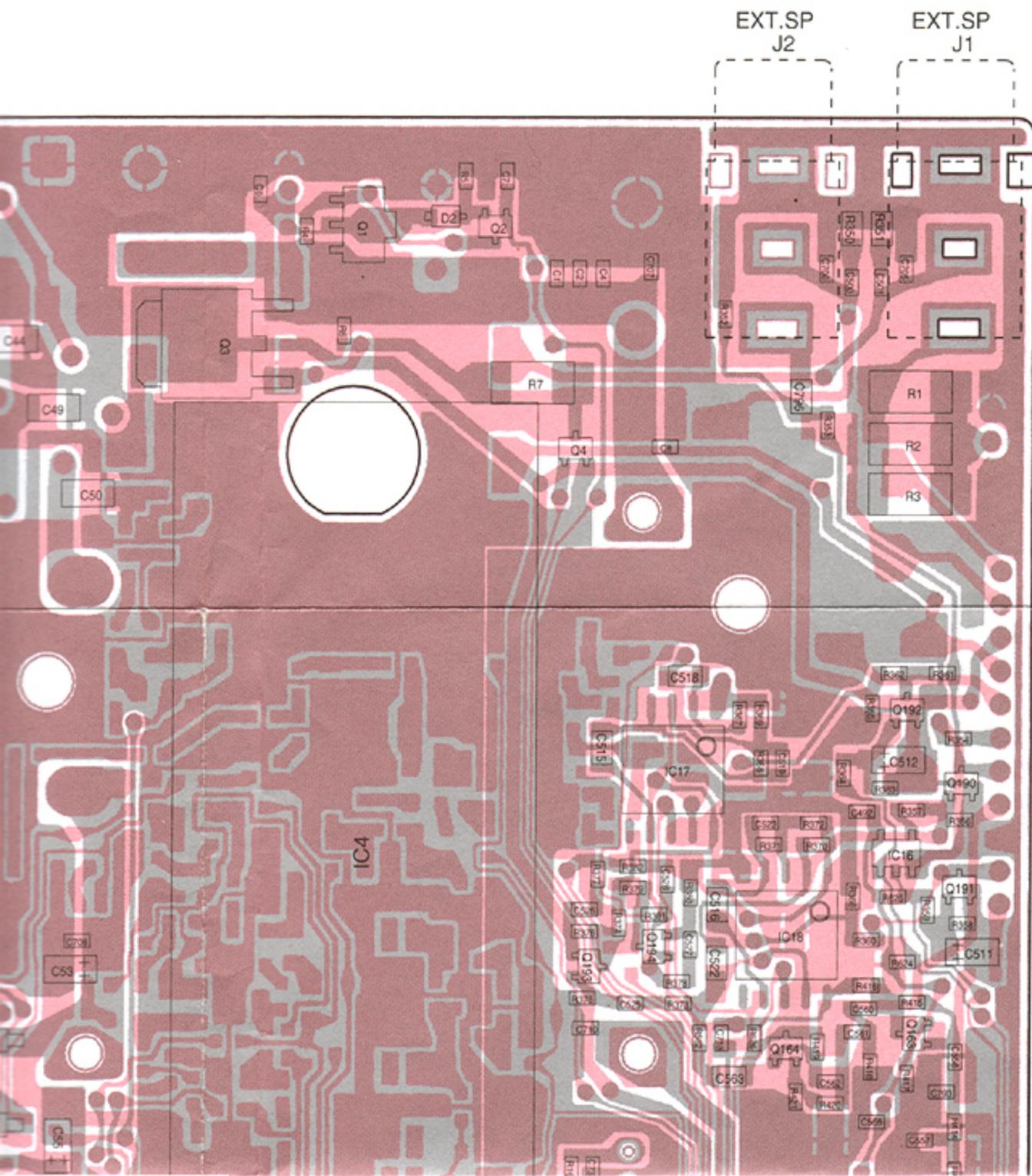
J8

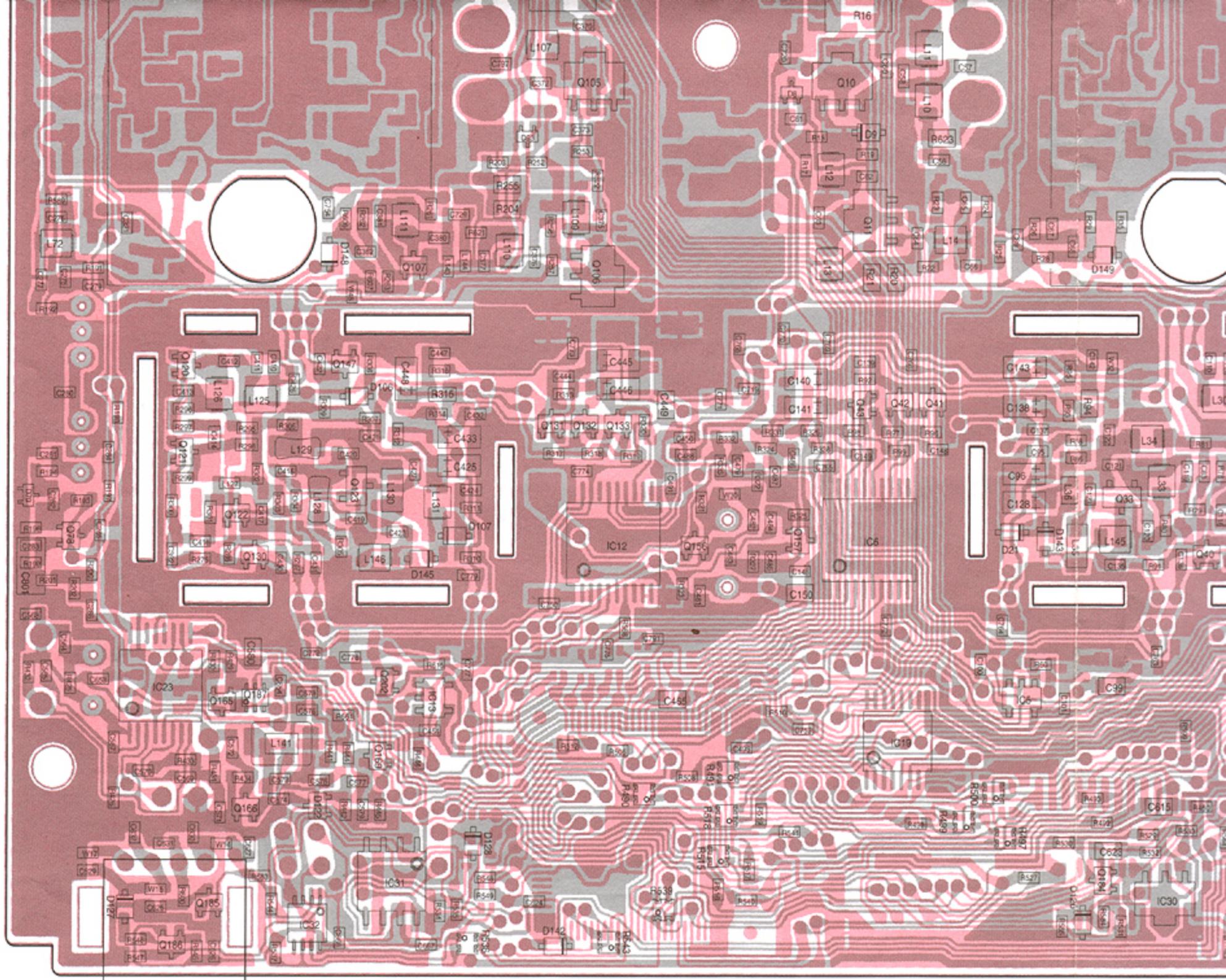
1
2
3
4
HV
TDATA
RDATA
GND

CONTROL UNIT

● MAIN UNIT (BOTTOM VIEW)

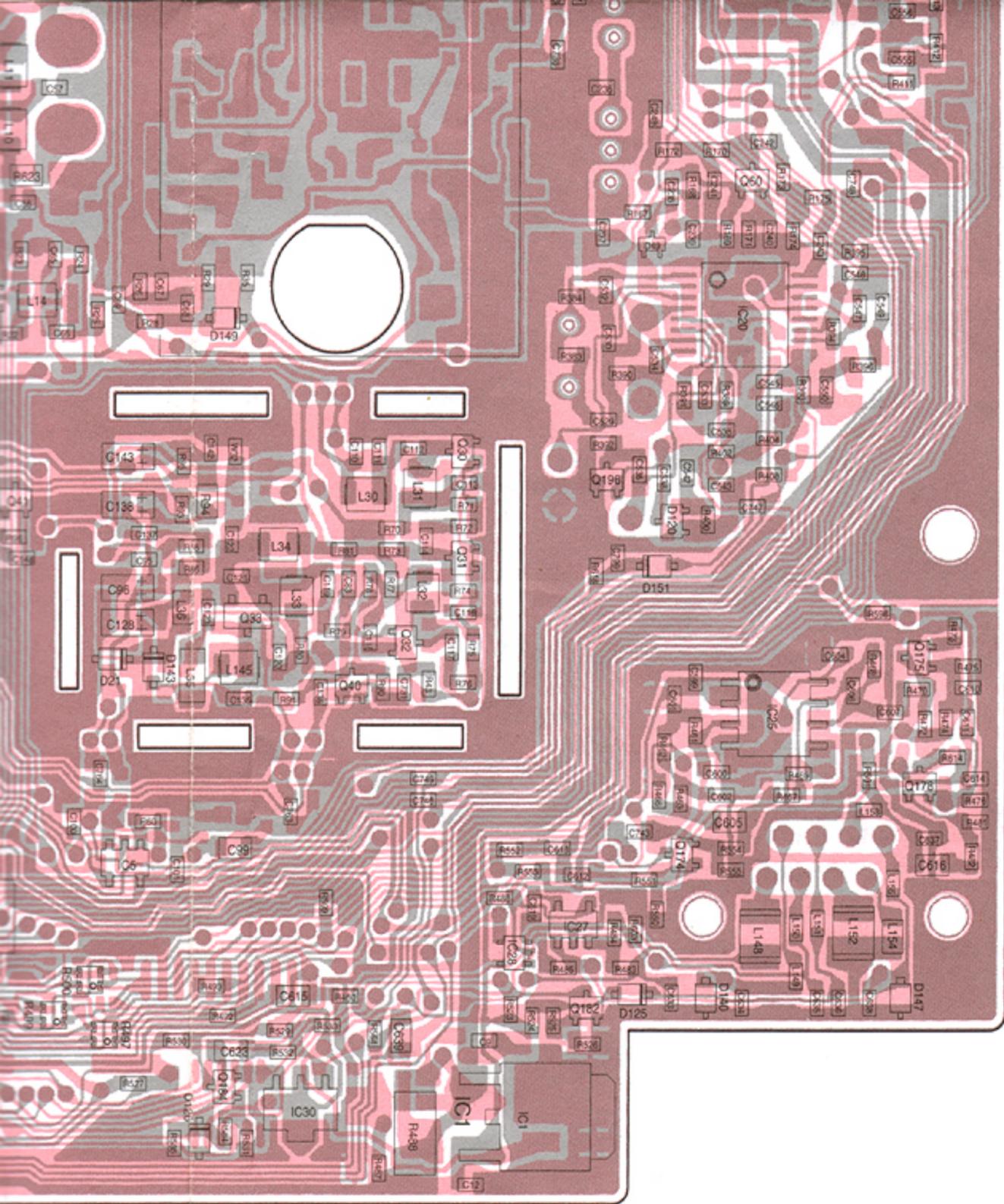






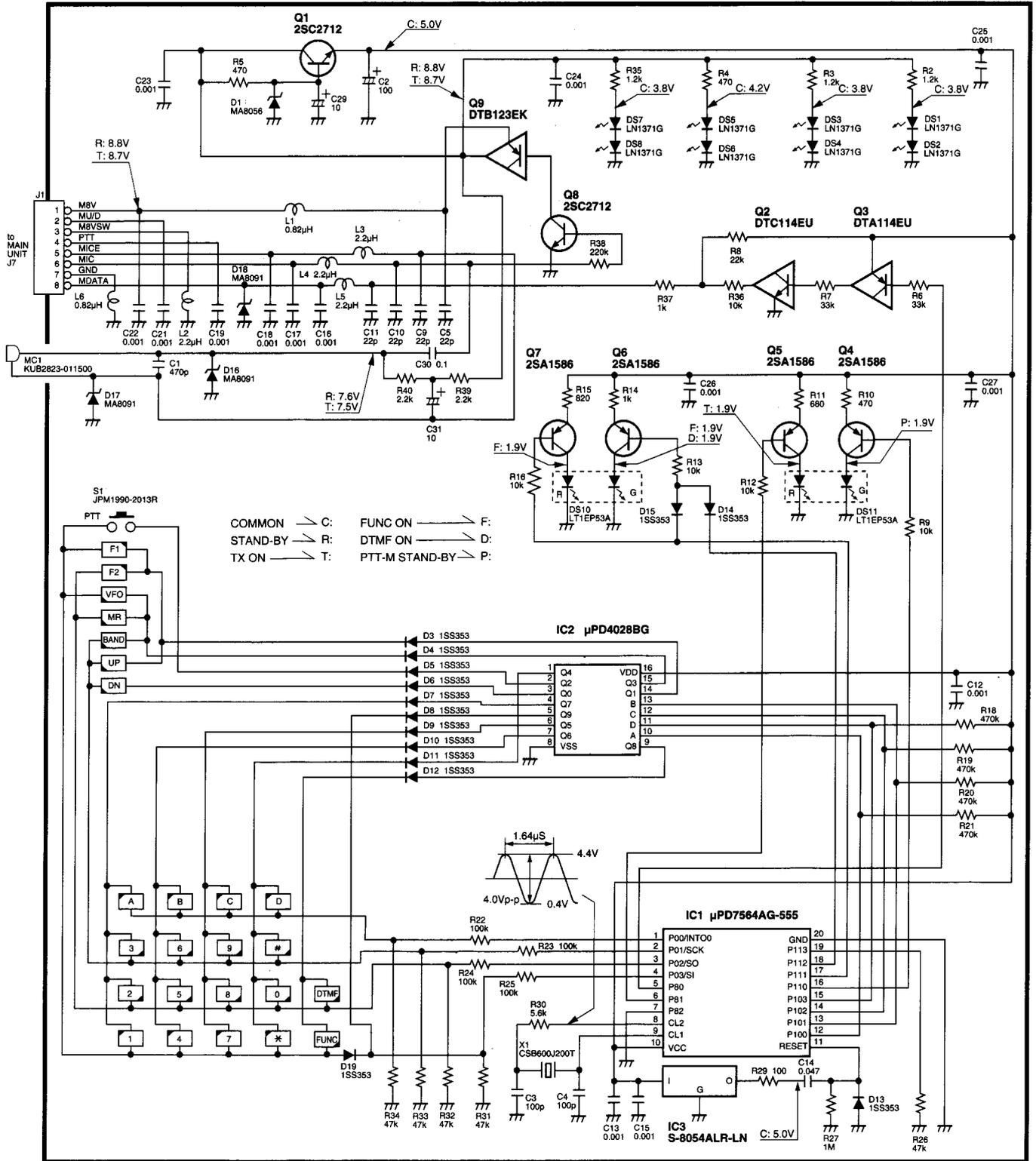
GND
RDATA
TDATA
HV

CONTROL UNIT

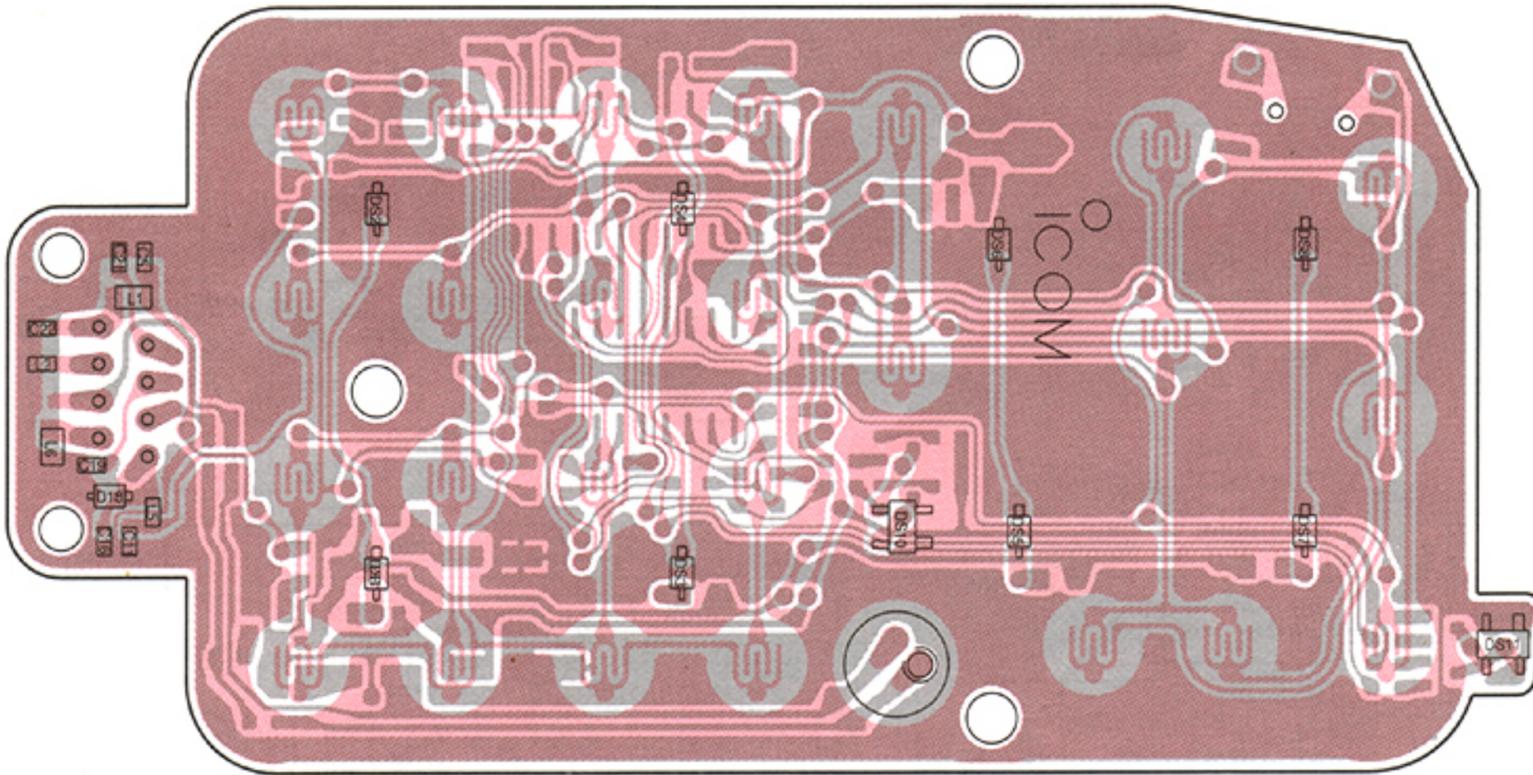


# SECTION 10 OPTIONAL UNITS

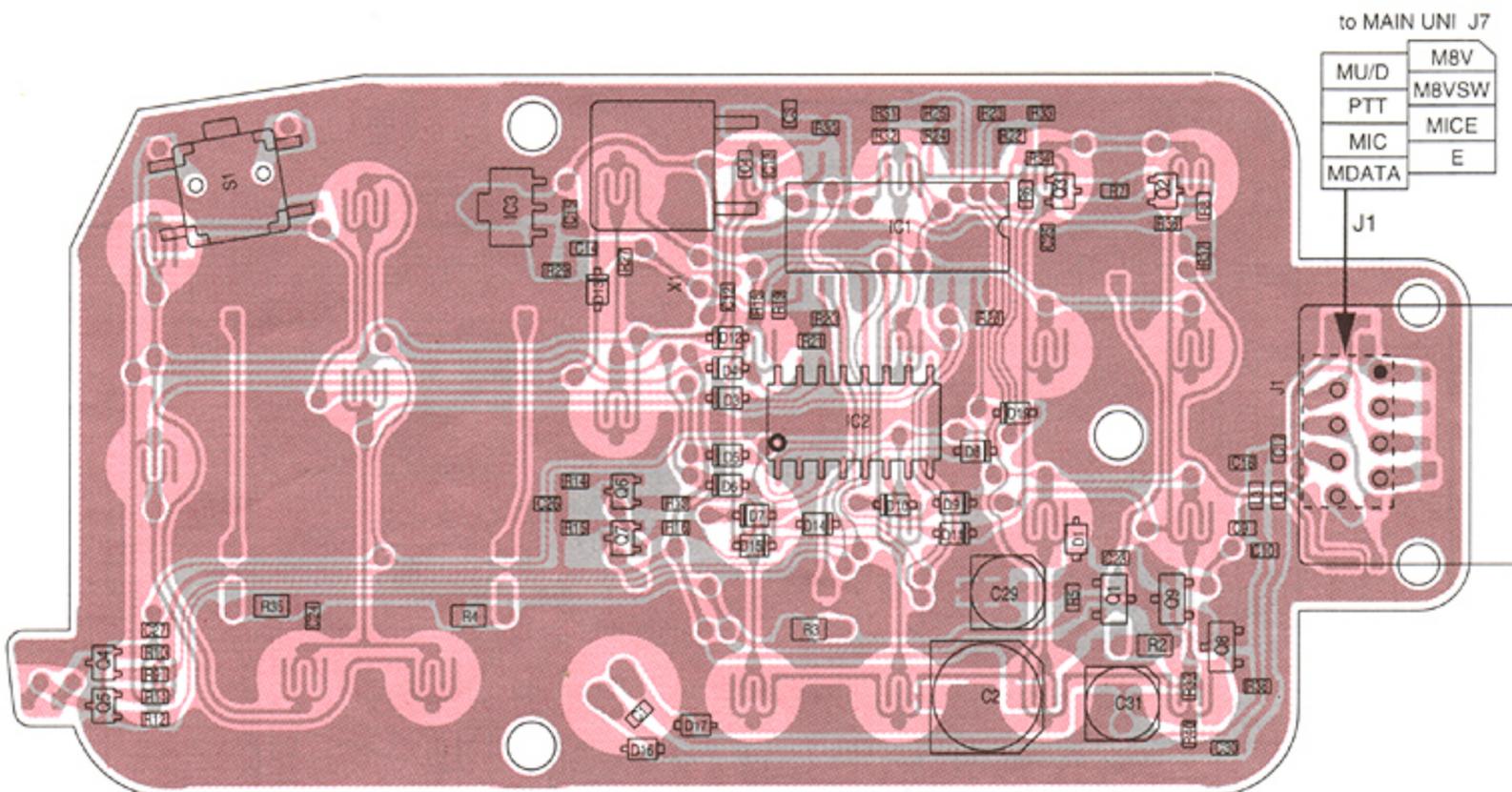
## 10-1 HM-98 REMOTE CONTROL MICROPHONE



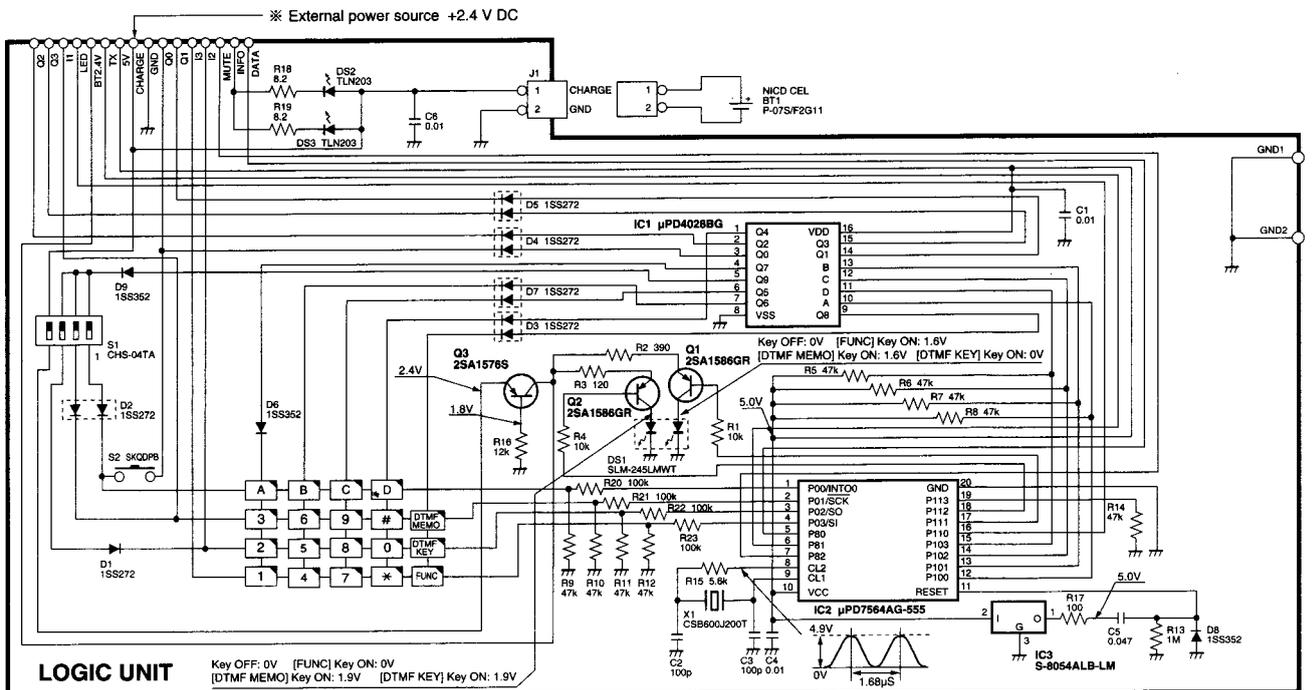
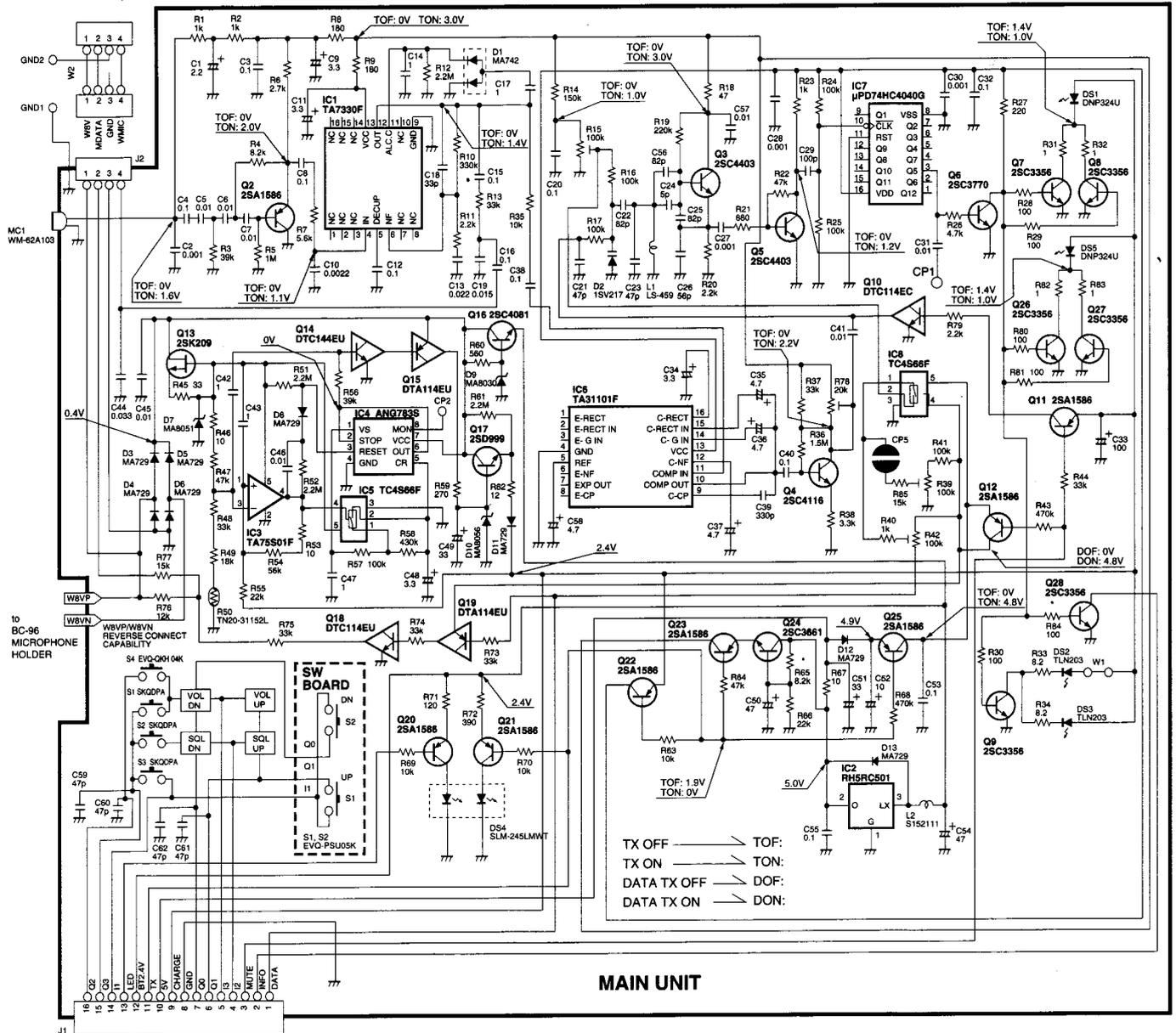
• BOARD LAYOUT (TOP VIEW)



• BOARD LAYOUT (BOTTOM VIEW)

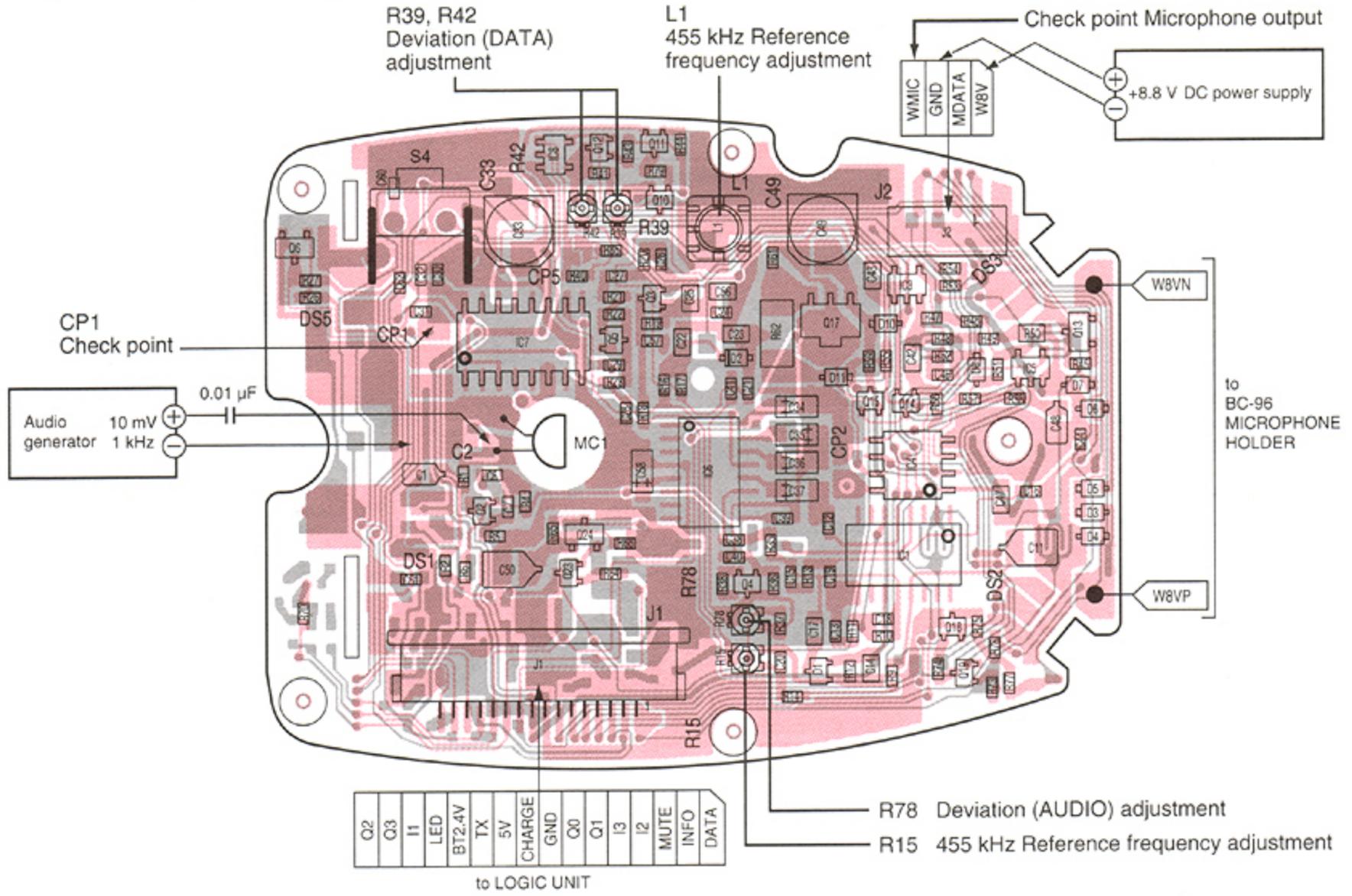


# 10-2 HM-90 CORDLESS MICROPHONE

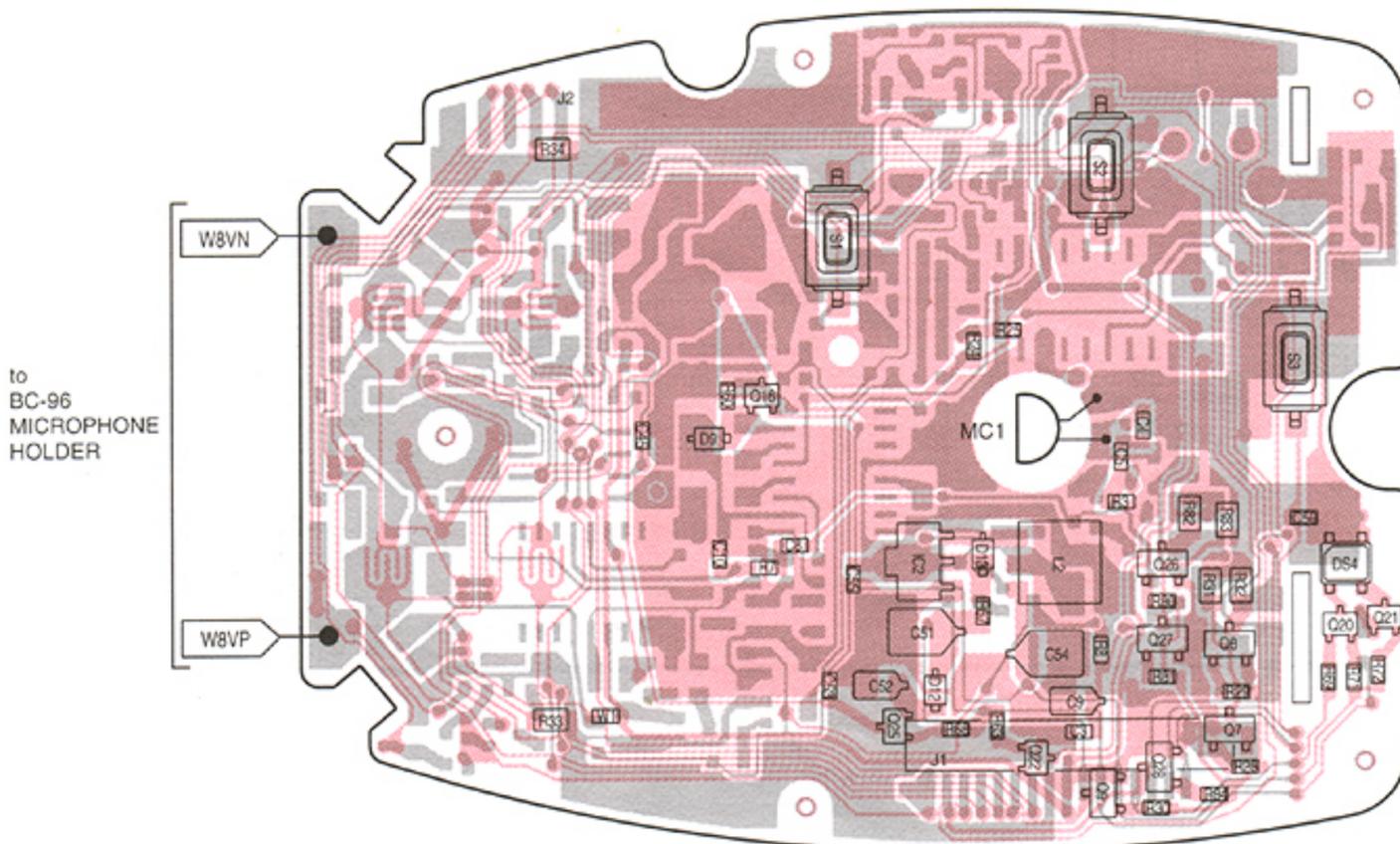


• BOARD LAYOUT

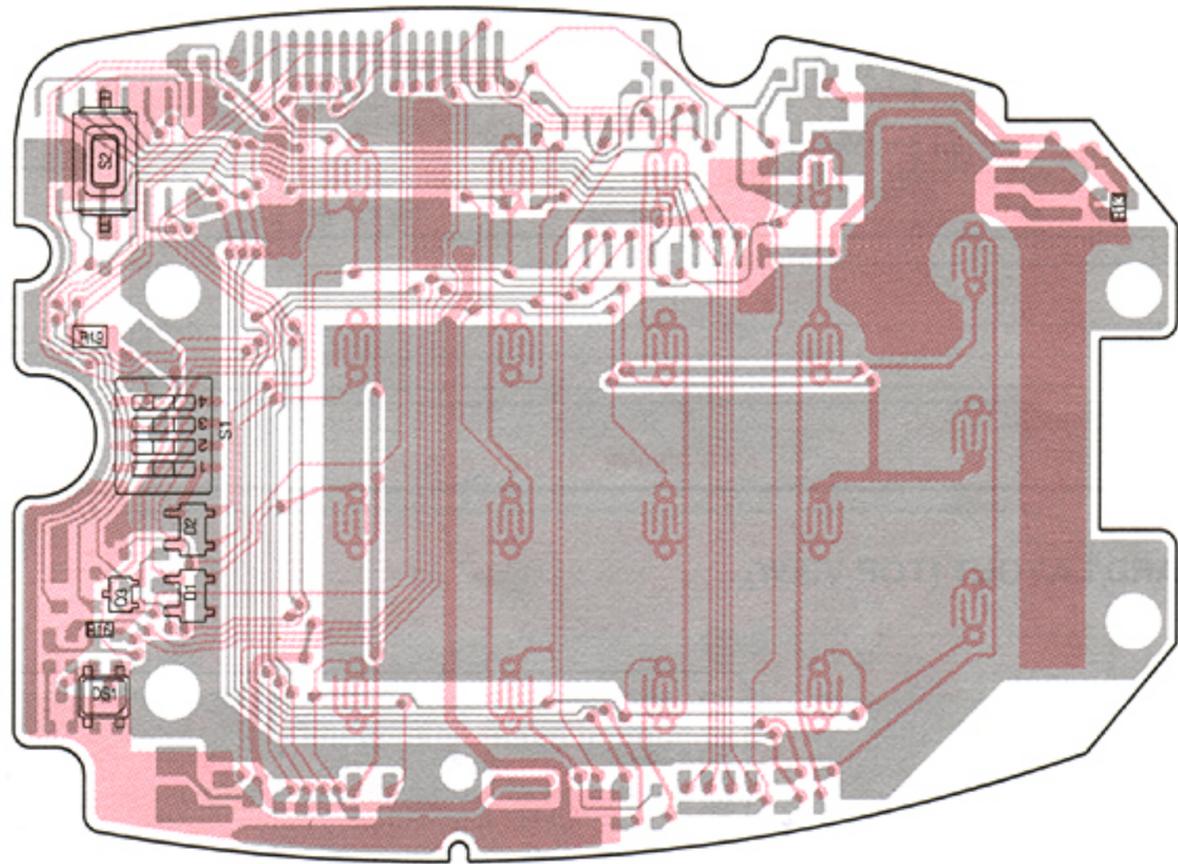
MAIN UNIT (TOP VIEW)



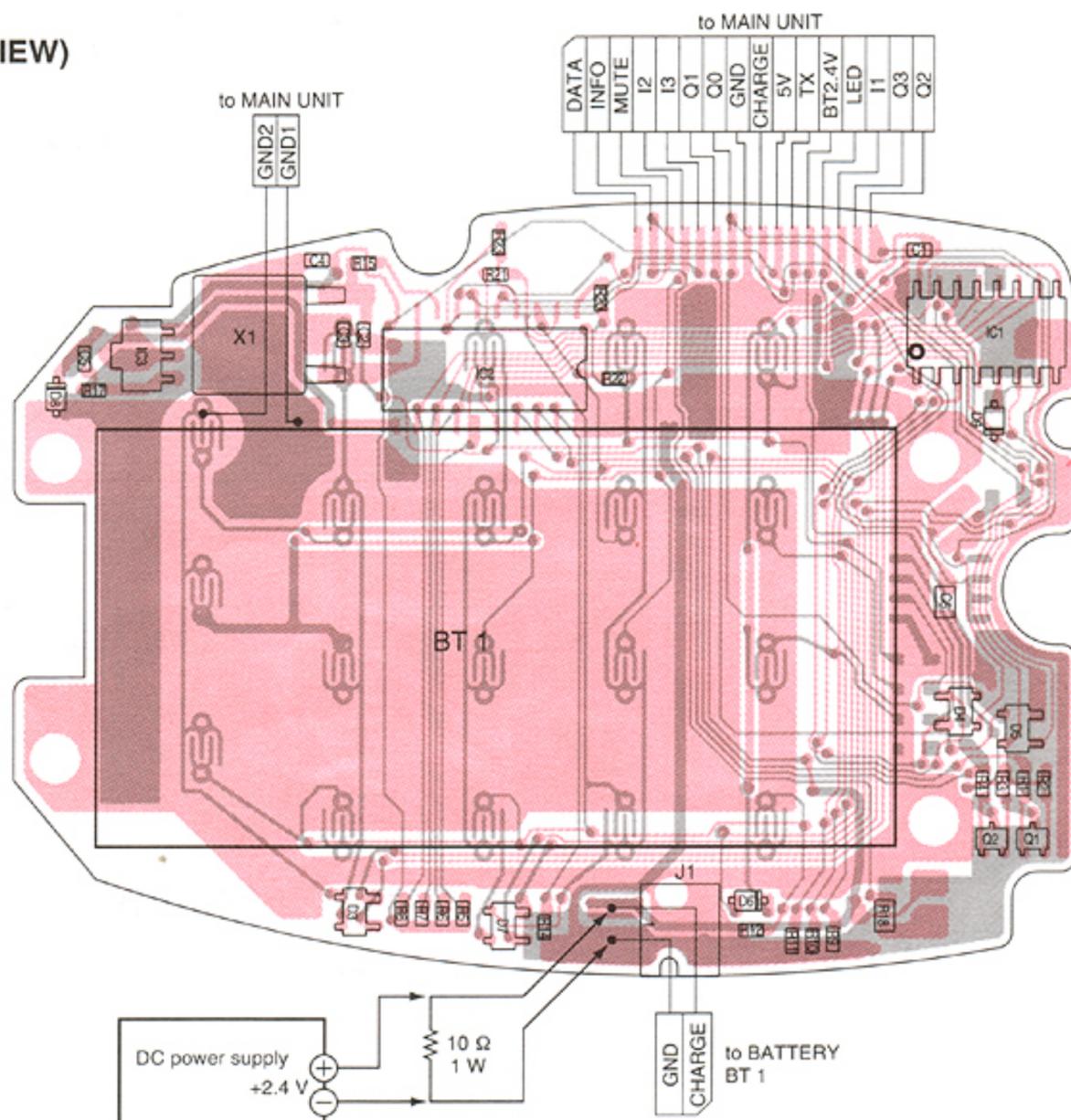
MAIN UNIT (BOTTOM VIEW)



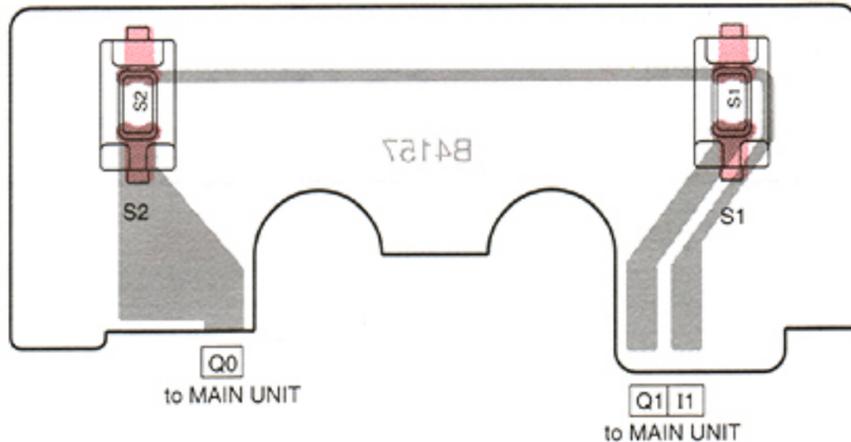
LOGIC UNIT (TOP VIEW)



LOGIC UNIT (BOTTOM VIEW)



## SWITCH BOARD (TOP VIEW)



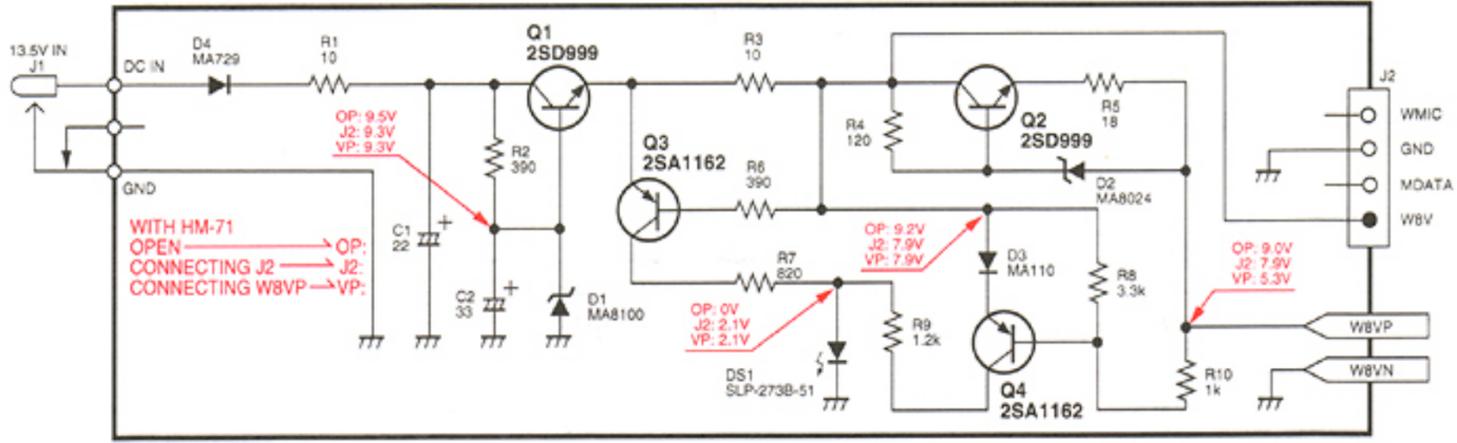
## CORDLESS MICROPHONE ADJUSTMENT

### • PREPARATION

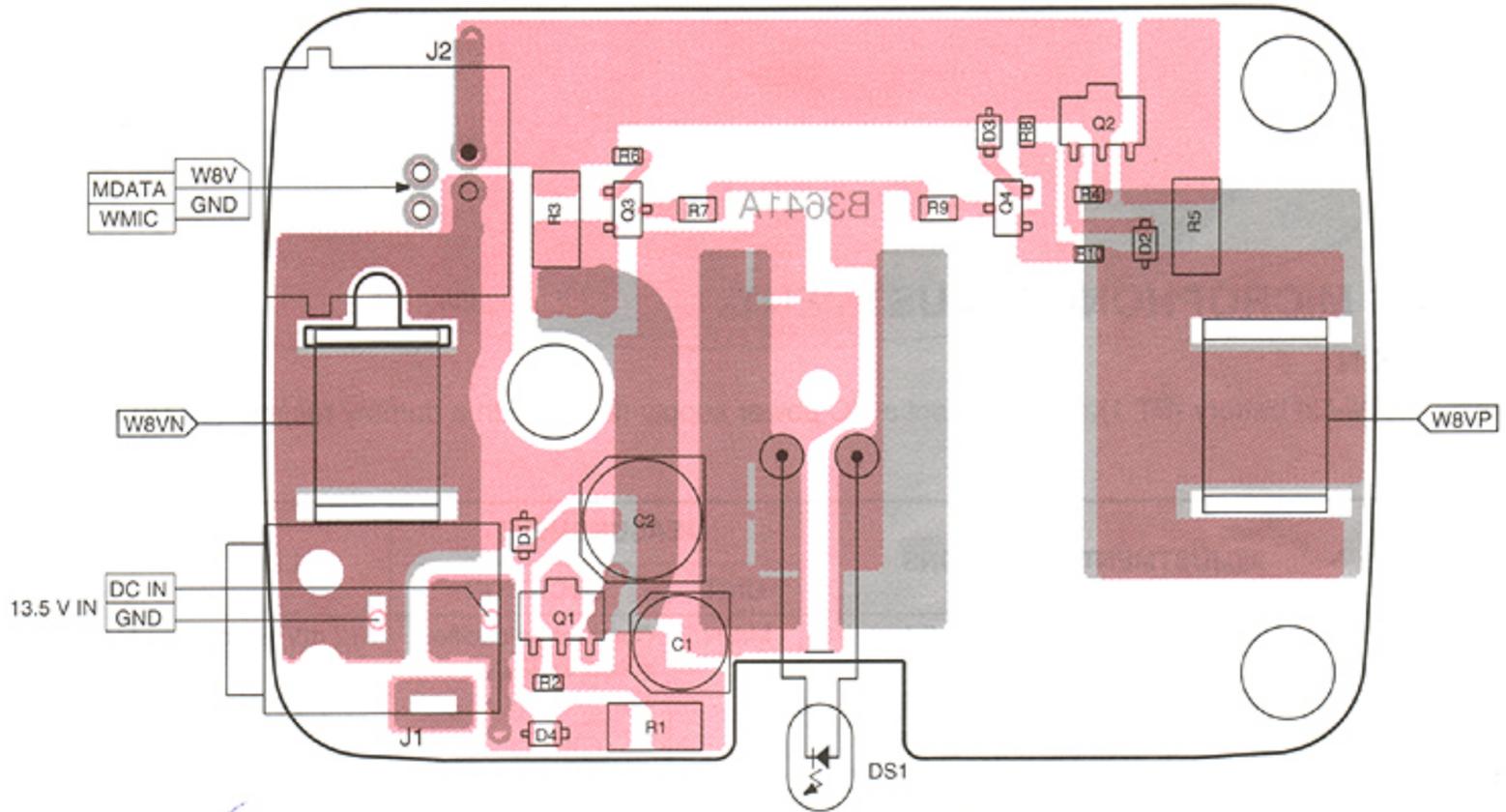
Disconnect the Ni-Cd battery (BT 1), then connect a DC power supply (2.4 V) with a dummy resistor (10  $\Omega$ /1 W) to J1 (LOGIC unit).

ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
MICROPHONE OUTPUT	1	<ul style="list-style-type: none"> <li>● Disconnect a power supply (2.4 V) from J1 (MAIN unit) only.</li> <li>● Remove the microphone (MAIN unit, MC1), then connect an audio generator through the coupling capacitor (0.01 <math>\mu</math>F), and set as : 10 mV/1 kHz</li> <li>● Connect a DC power supply (8.8 V) to W8V line (MAIN unit, J2, pin 1).</li> <li>● Push the [PTT] switch.</li> </ul>	MAIN	Connect an oscilloscope to J2 (WMIC).	12 mV $\pm$ 3 dB	MAIN	Verify
455 kHz REFERENCE FREQUENCY	1	<ul style="list-style-type: none"> <li>● Connect a DC power supply (2.4 V) to J1 (LOGIC unit).</li> <li>● Re-set R15 to the center position.</li> <li>● Push the [PTT] switch.</li> </ul>	MAIN	Connect a frequency counter to CP1.	455.00 kHz	MAIN	L1
DEVIATION (AUDIO)	1	<ul style="list-style-type: none"> <li>● Connect an audio generator to the point between C2 and C4 (MAIN unit) through the coupling capacitor (0.01 <math>\mu</math>F) and set as: 10 mV/1 kHz</li> <li>● Set a modulation analyzer as: HPF : 50 Hz LPF : 20 kHz</li> <li>● Push the [PTT] switch.</li> </ul>	MAIN	Connect a modulation analyzer to CP1.	$\pm$ 4.8 kHz	MAIN	R78
DEVIATION (DATA)	1	<ul style="list-style-type: none"> <li>● Push any key on the keypad.</li> </ul>	MAIN	Connect a modulation analyzer to CP1.	$\pm$ 7.5 kHz	MAIN	R42
	2	<ul style="list-style-type: none"> <li>● Make a soldering bridge at CP 5.</li> <li>● Push any key on the keypad.</li> </ul>			$\pm$ 5.3 kHz		R39

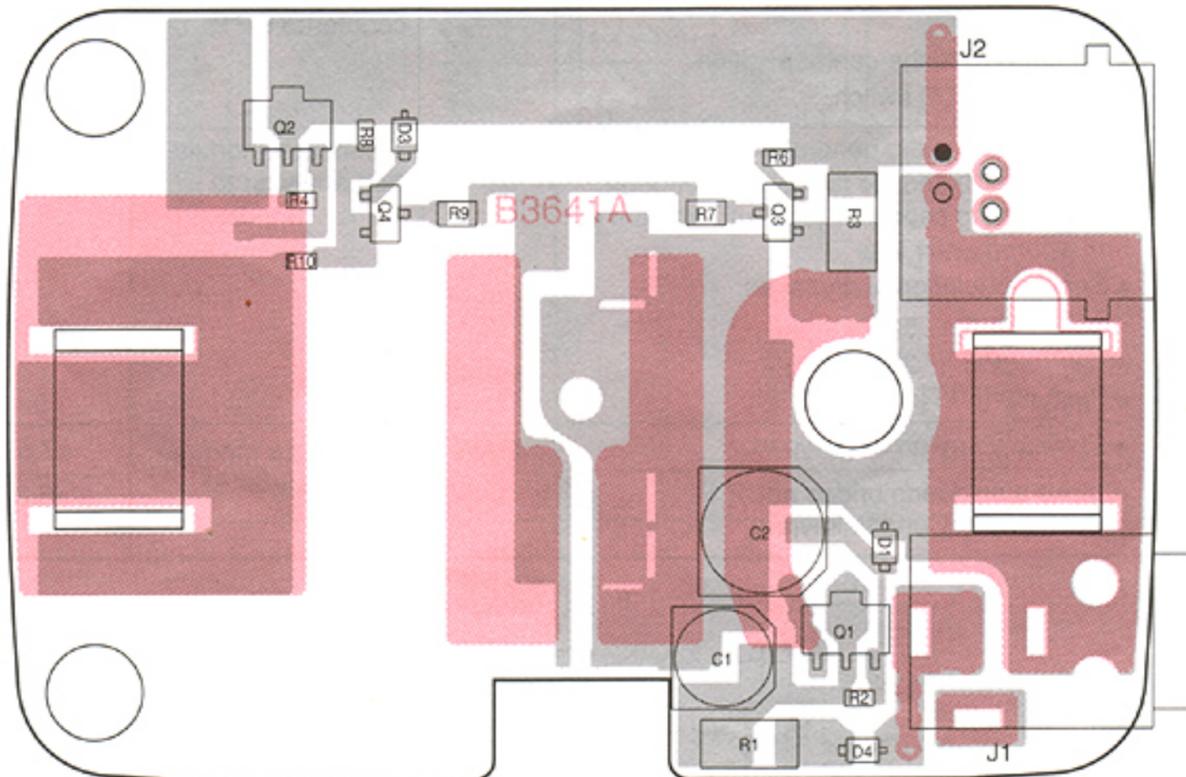
# 10-3 BC-96 MICROPHONE HOLDER



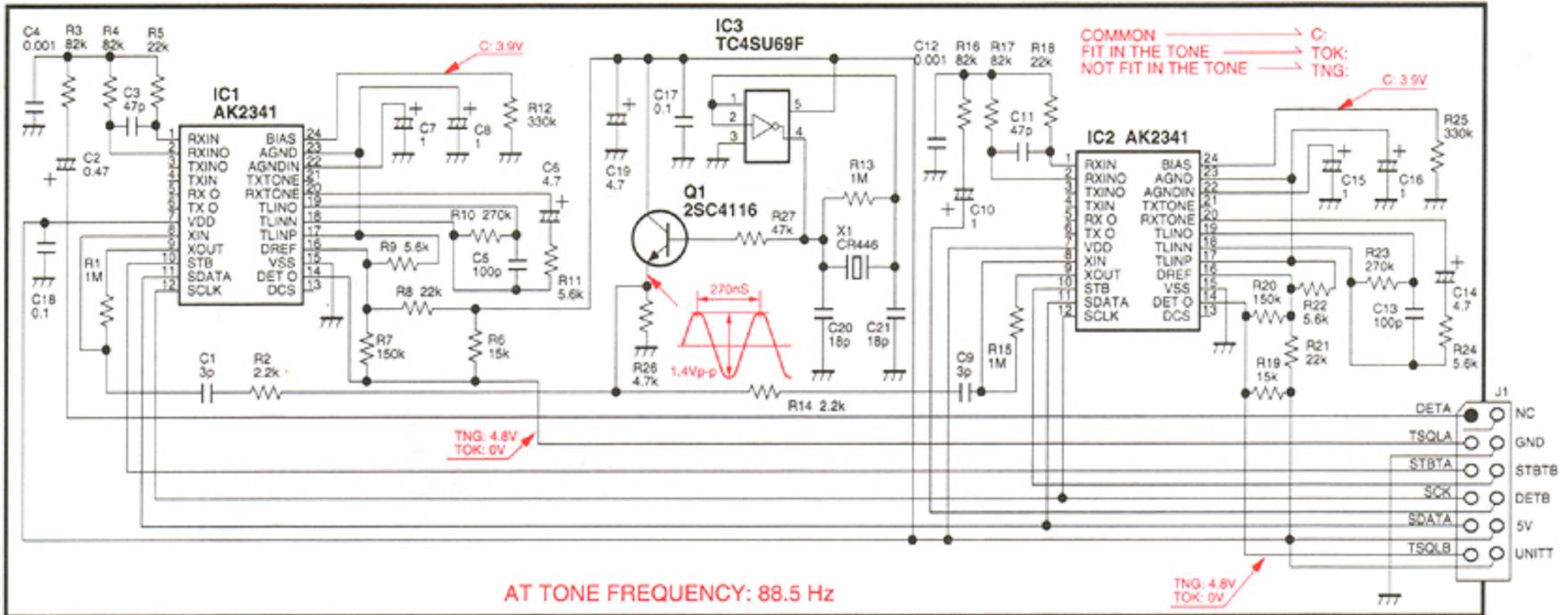
## • BOARD LAYOUT (TOP VIEW)



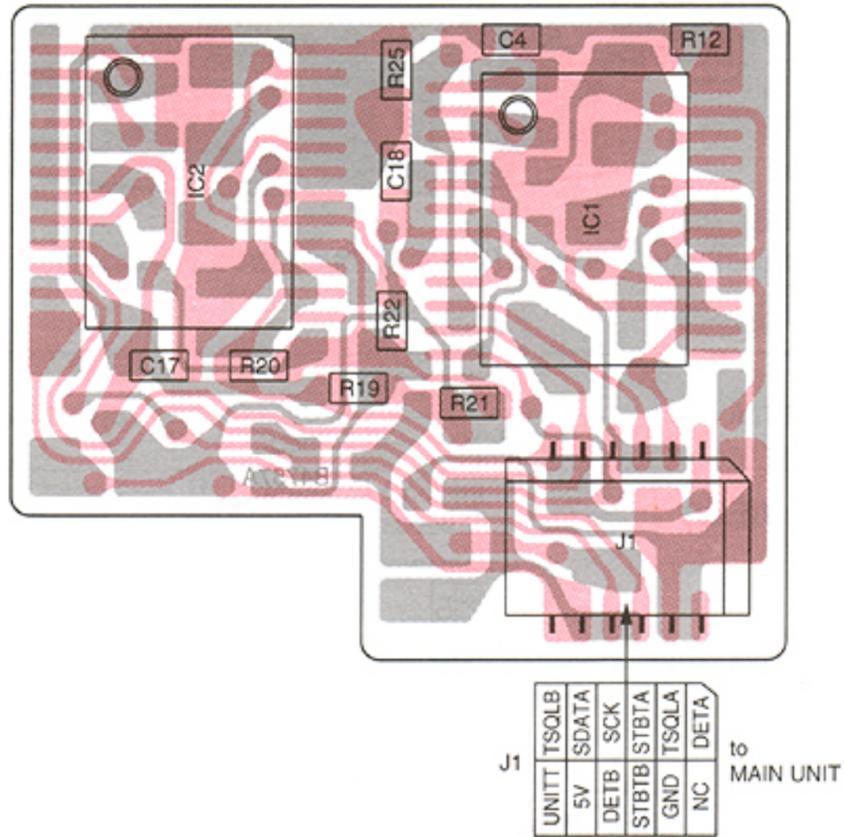
## • BOARD LAYOUT (BOTTOM VIEW)



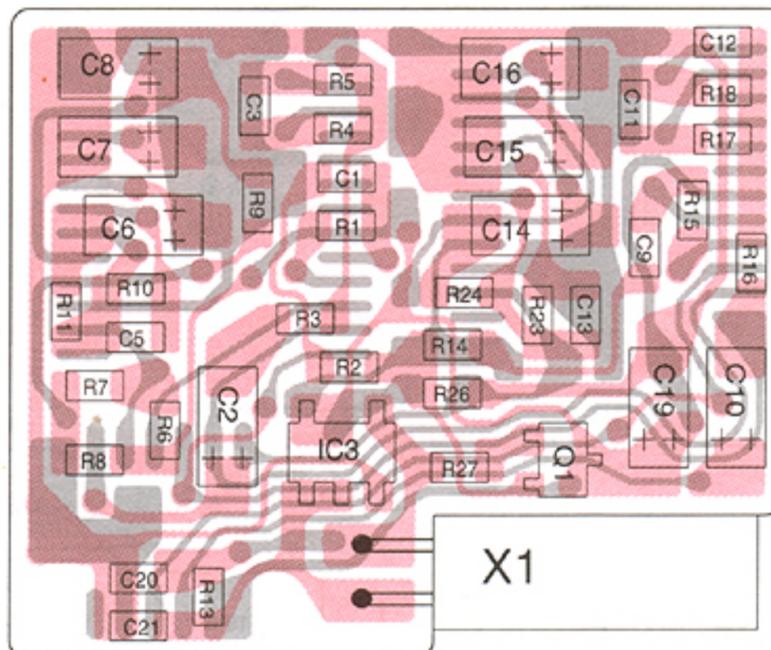
# 10-4 UT-104 TONE SQUELCH UNIT



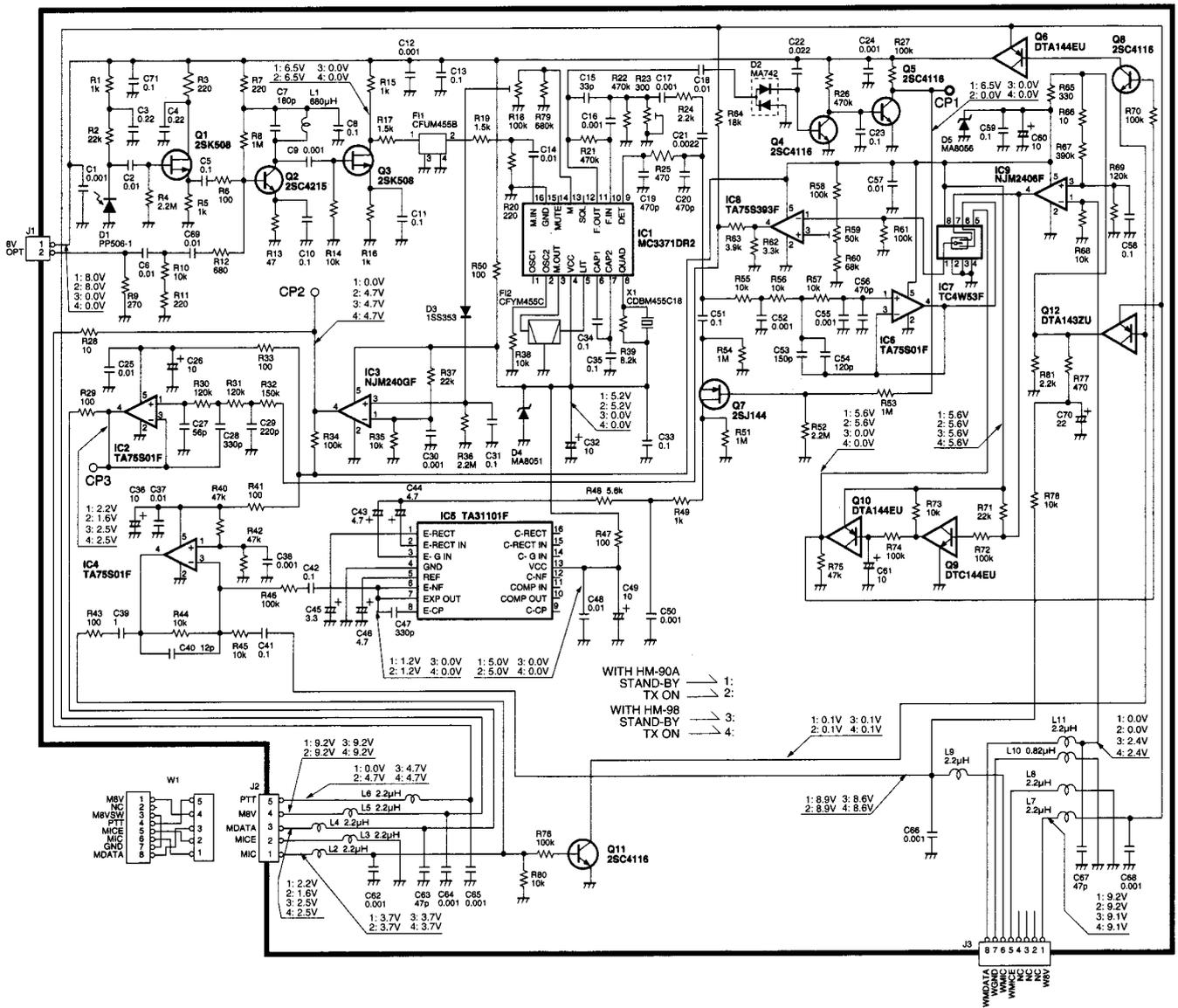
## • BOARD LAYOUT (TOP VIEW)



## • BOARD LAYOUT (BOTTOM VIEW)



# 10-5 EX-1759 INFRARED RECEIVER

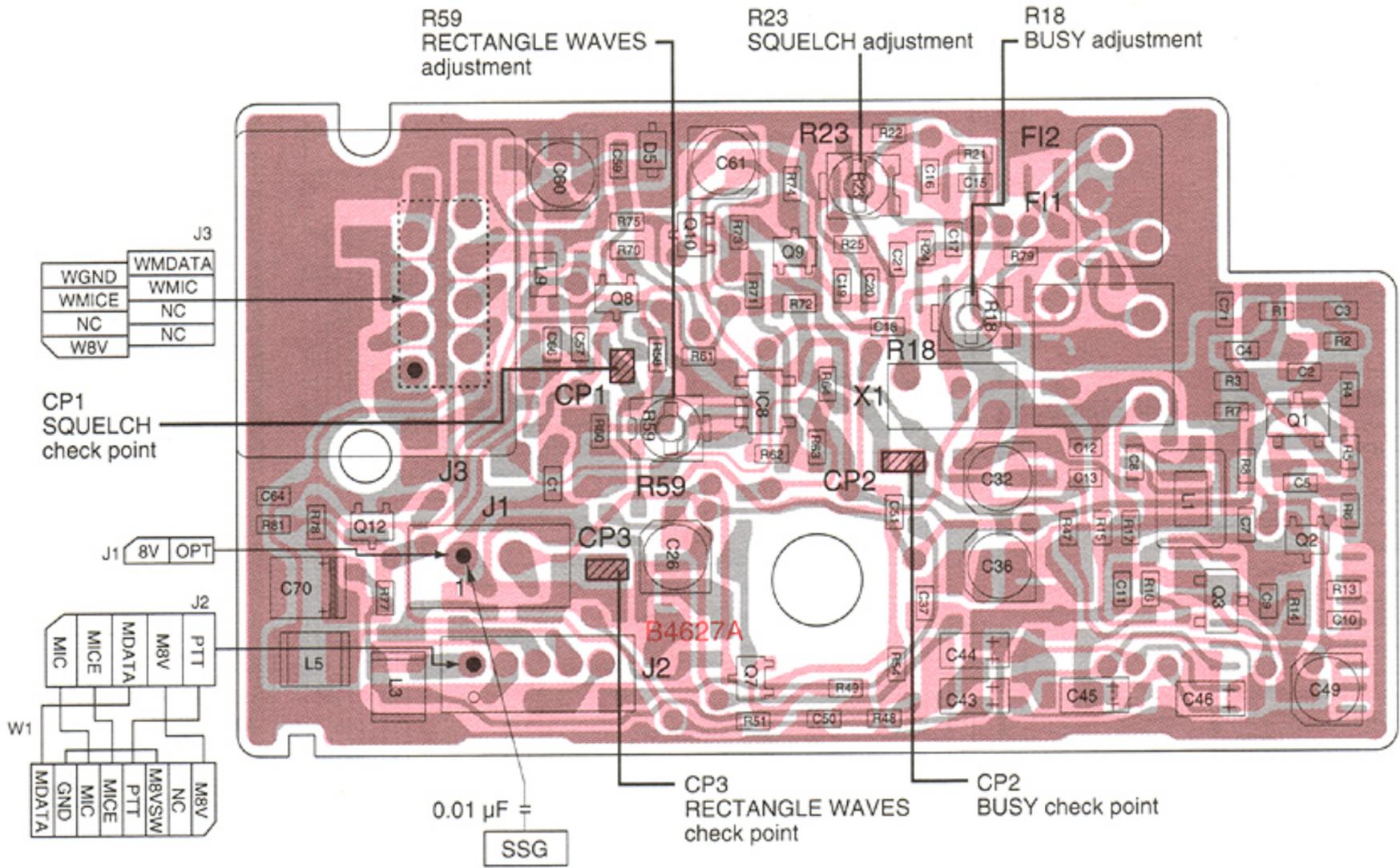


## INFRARED RECEIVER ADJUSTMENT

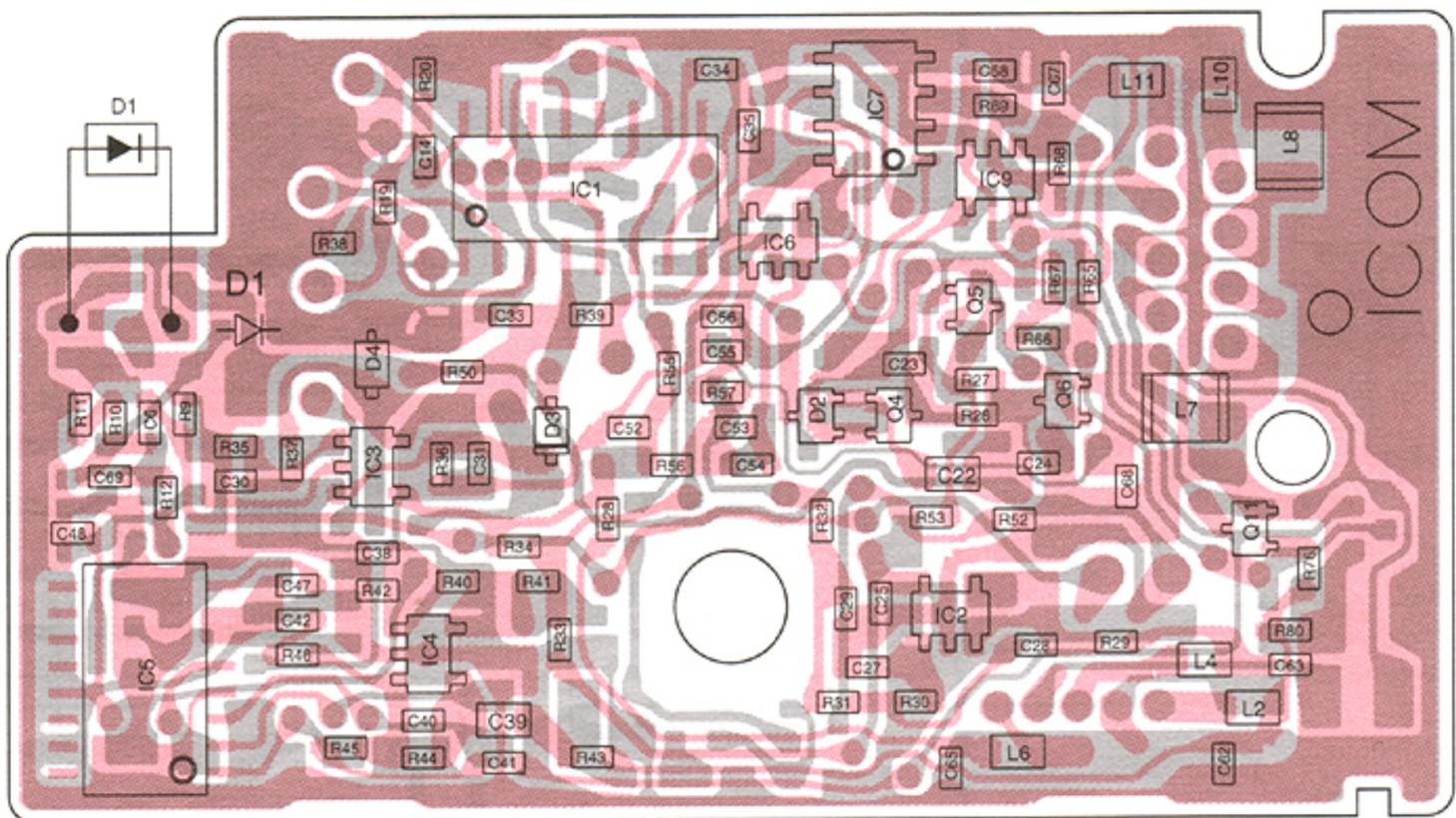
ADJUSTMENT	ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
SQUELCH	1 ● Connect an SSG to the J1 via the coupling capacitor (0.01 μF), and set as: Frequency : 455 kHz Level : 3.2 μV* (-97 dBm) Modulation : 1 kHz Deviation : ± 3.5 kHz	MAIN	Connect an oscilloscope to CP1.	At the point where the signal just becomes high.	MAIN	R23
	2 ● Set an SSG level : 7.1 μV* (-90 dBm)				Low	Verify
BUSY	1 ● Set an SSG level : 18 μV* (-82 dBm)	MAIN	Connect an oscilloscope to CP2.	High	MAIN	R18
	2 ● Set an SSG level OFF.			Low	Verify	
RECTANGLE WAVES	1 ● Set an SSG as: Level : 3.2 mV* (-37 dBm) Deviation : ± 0.3 kHz	MAIN	Connect an oscilloscope to CP3.	1 kHz	MAIN	R59

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

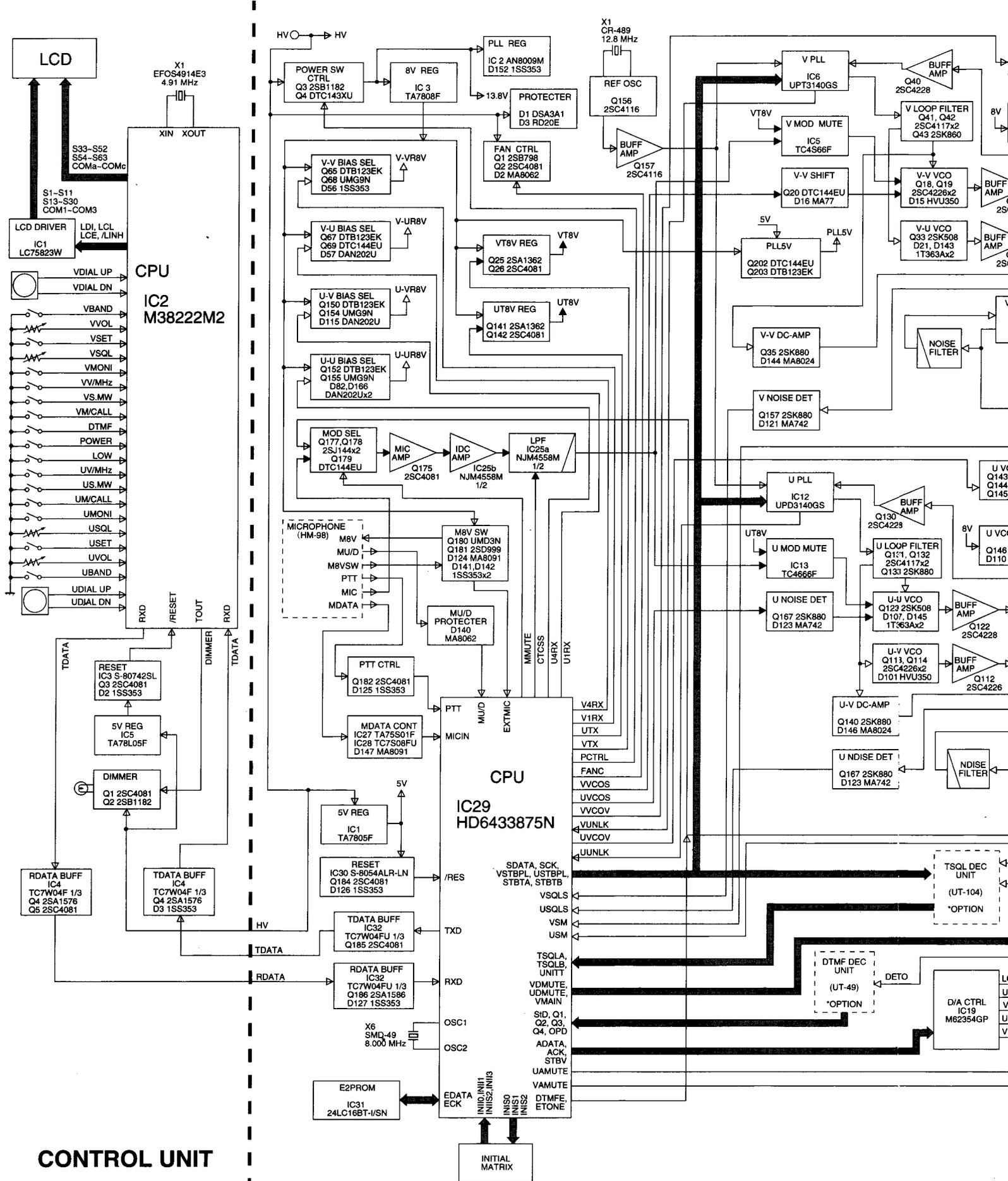
• BOARD LAYOUT  
TOP VIEW



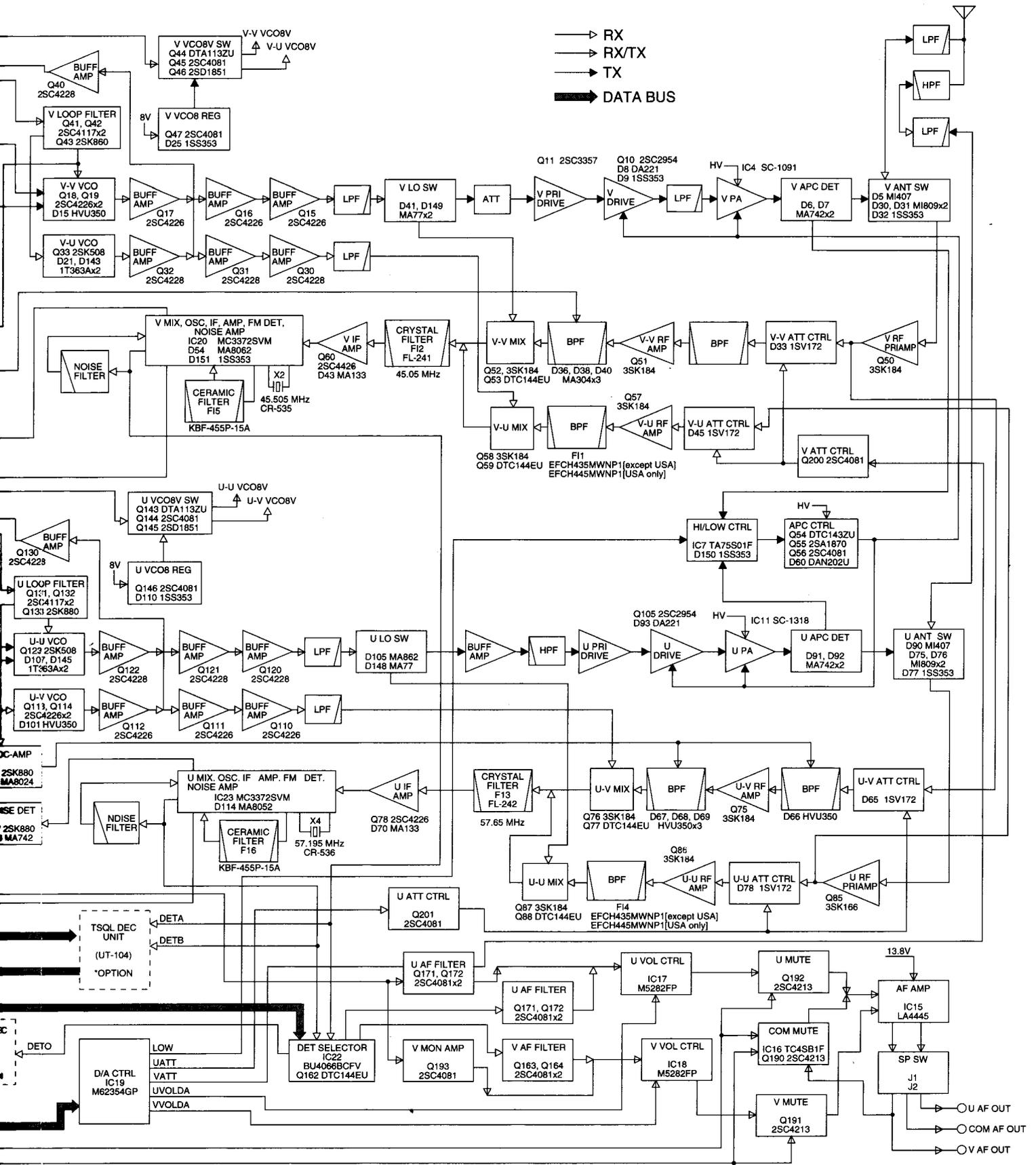
BOTTOM VIEW



# SECTION 11 BLOCK DIAGRAM

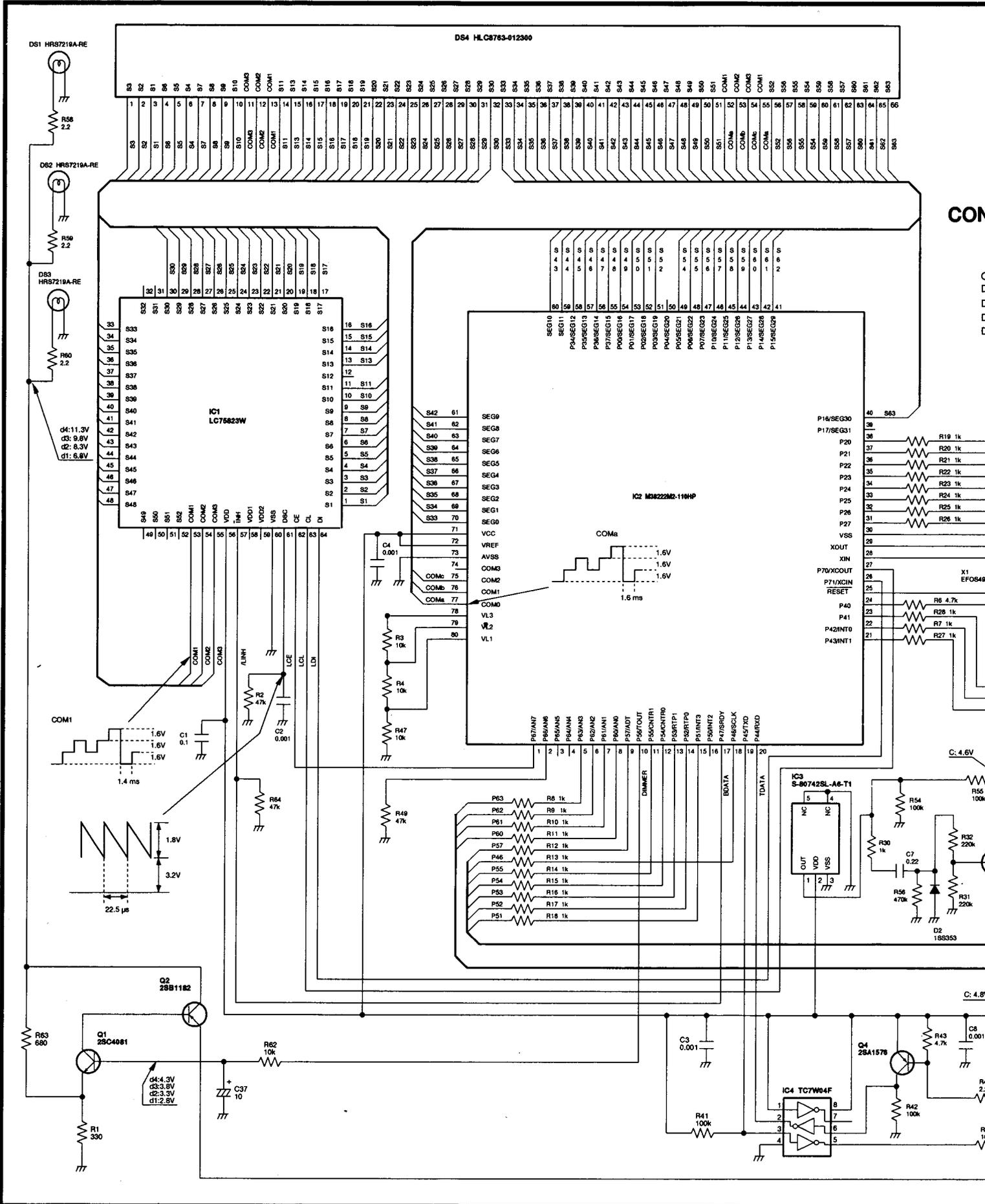


CONTROL UNIT



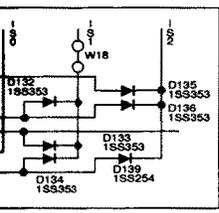
**MAIN UNIT**

# SECTION 12 VOLTAGE DIAGRAMS



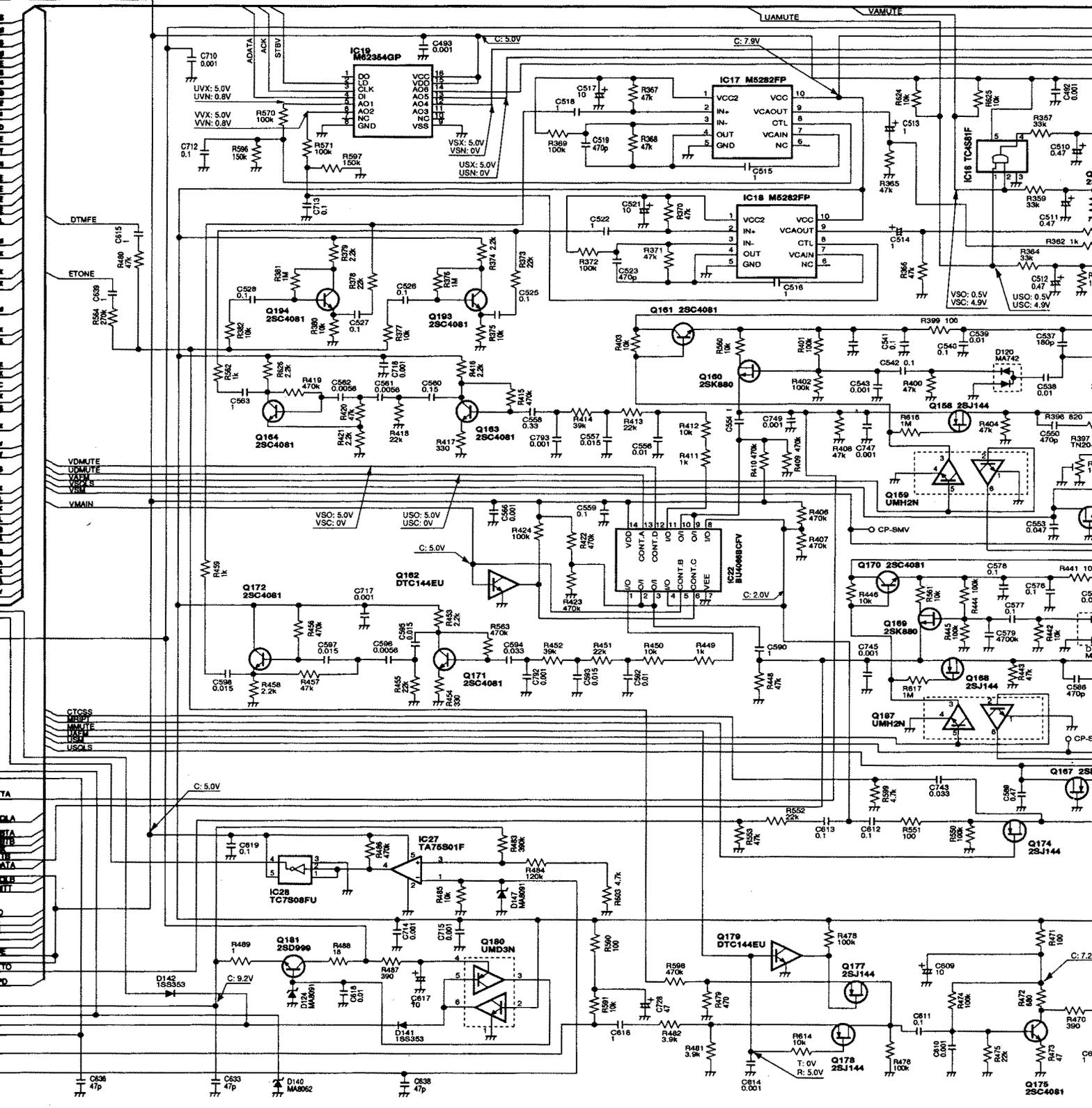






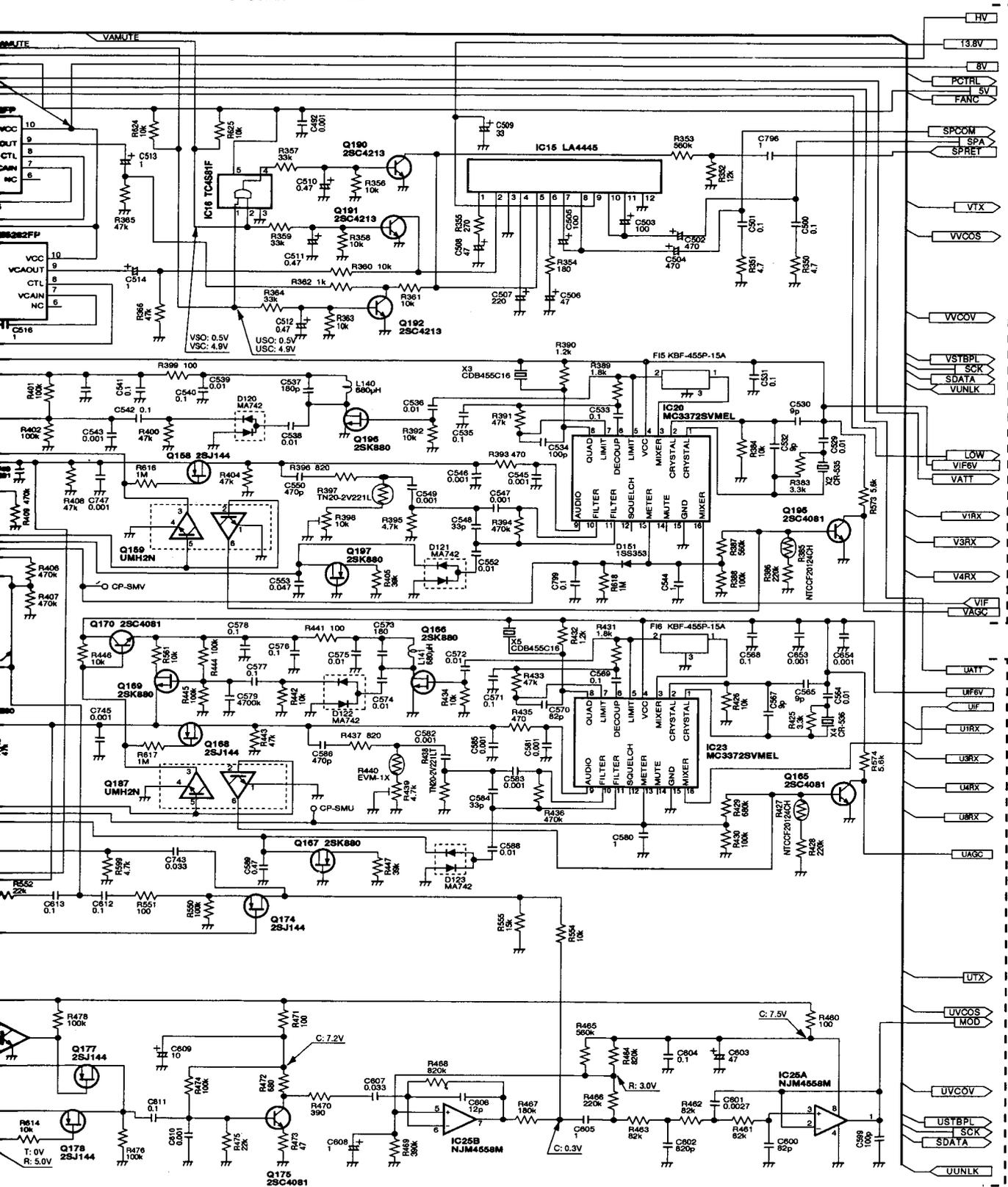
# MAIN UNIT

- COMMON
- RX
- TX
- MIC UP KEY
- MIC DOWN KEY
- V VOL MAX
- V VOL MIN
- U VOL MAX
- U VOL MIN



- C536 47p
- C533 47p
- D140 MA9062
- C538 47p
- C537 100k
- R478 100k
- R477 100k
- R476 10k
- R475 2k
- R474 47k
- R473 390
- R472 50
- R471 100
- R470 47k
- R469 47k
- R468 10k
- R467 10k
- R466 10k
- R465 10k
- R464 10k
- R463 10k
- R462 3.9k
- R461 3.9k
- R460 10k
- R459 100
- R458 47k
- R457 47k
- R456 2k
- R455 2k
- R454 330
- R453 2k
- R452 3k
- R451 22k
- R450 10k
- R449 1k
- R448 1k
- R447 47k
- R446 10k
- R445 10k
- R444 10k
- R443 10k
- R442 10k
- R441 10k
- R440 47k
- R439 10k
- R438 10k
- R437 10k
- R436 10k
- R435 2k
- R434 2k
- R433 47k
- R432 47k
- R431 47k
- R430 47k
- R429 47k
- R428 47k
- R427 47k
- R426 47k
- R425 47k
- R424 100k
- R423 47k
- R422 47k
- R421 47k
- R420 47k
- R419 47k
- R418 2k
- R417 330
- R416 47k
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- R410 47k
- R409 10k
- R408 47k
- R407 47k
- R406 47k
- R405 10k
- R404 47k
- R403 10k
- R402 10k
- R401 10k
- R399 100
- R398 820
- R397 180p
- R396 47k
- R395 47k
- R394 47k
- R393 47k
- R392 1k
- R391 33k
- R390 33k
- R389 47k
- R388 47k
- R387 47k
- R386 47k
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- R384 47k
- R383 10k
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- R379 10k
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- R3 33k
- R2 33k
- R1 33k

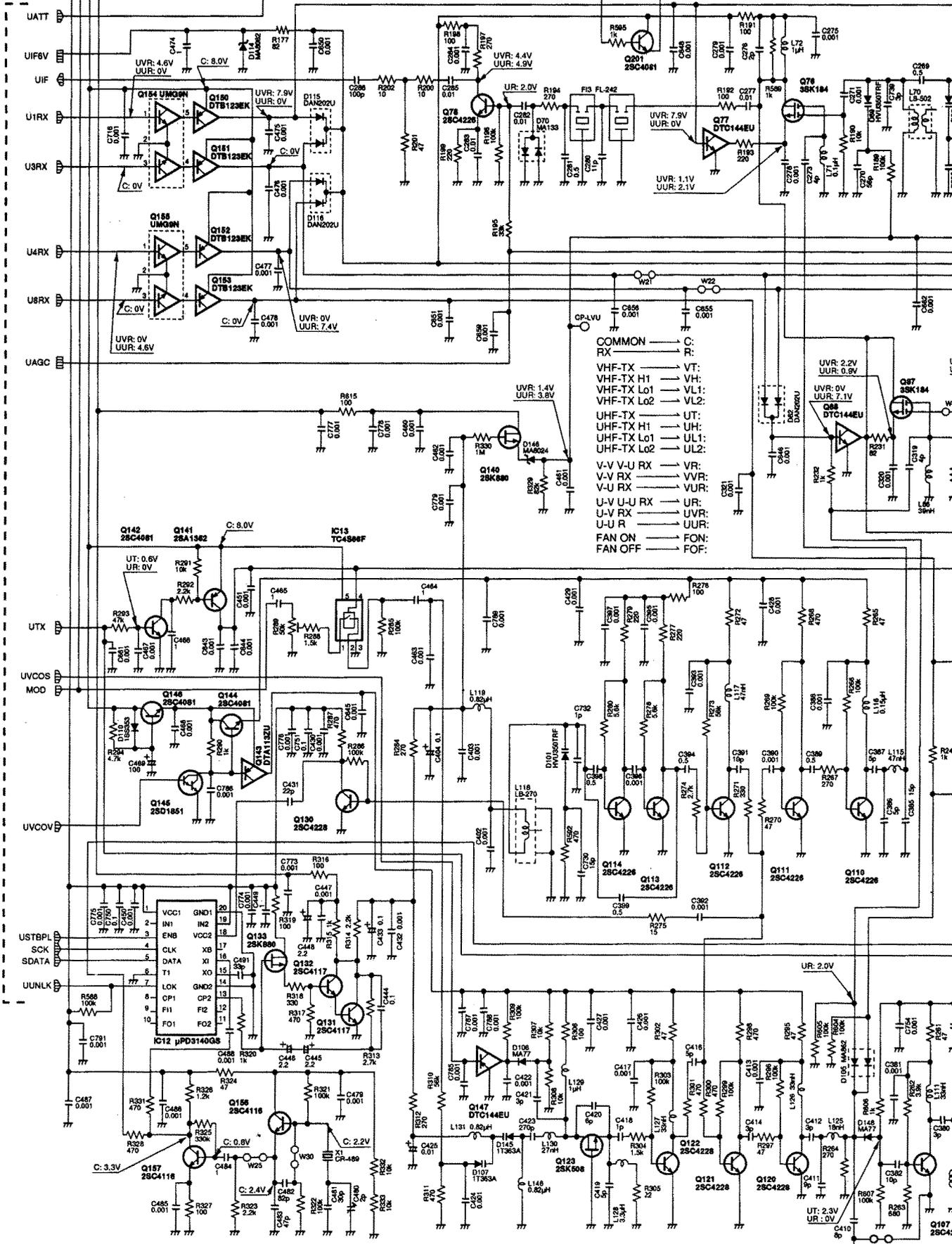
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 RX → R: V SQL MIN → VSN:  
 TX → T: U SQL MAX → USX:  
 MIC UP KEY → MU: U SQL MIN → USN:  
 MIC DOWN KEY → MD: V SQL OPEN → VSO:  
 V VOL MAX → VVX: V SQL CLOSE → VSC:  
 V VOL MIN → VVN: U SQL OPEN → USO:  
 U VOL MAX → UVX: U SQL CLOSE → USC:  
 U VOL MIN → UVN:



to VHF

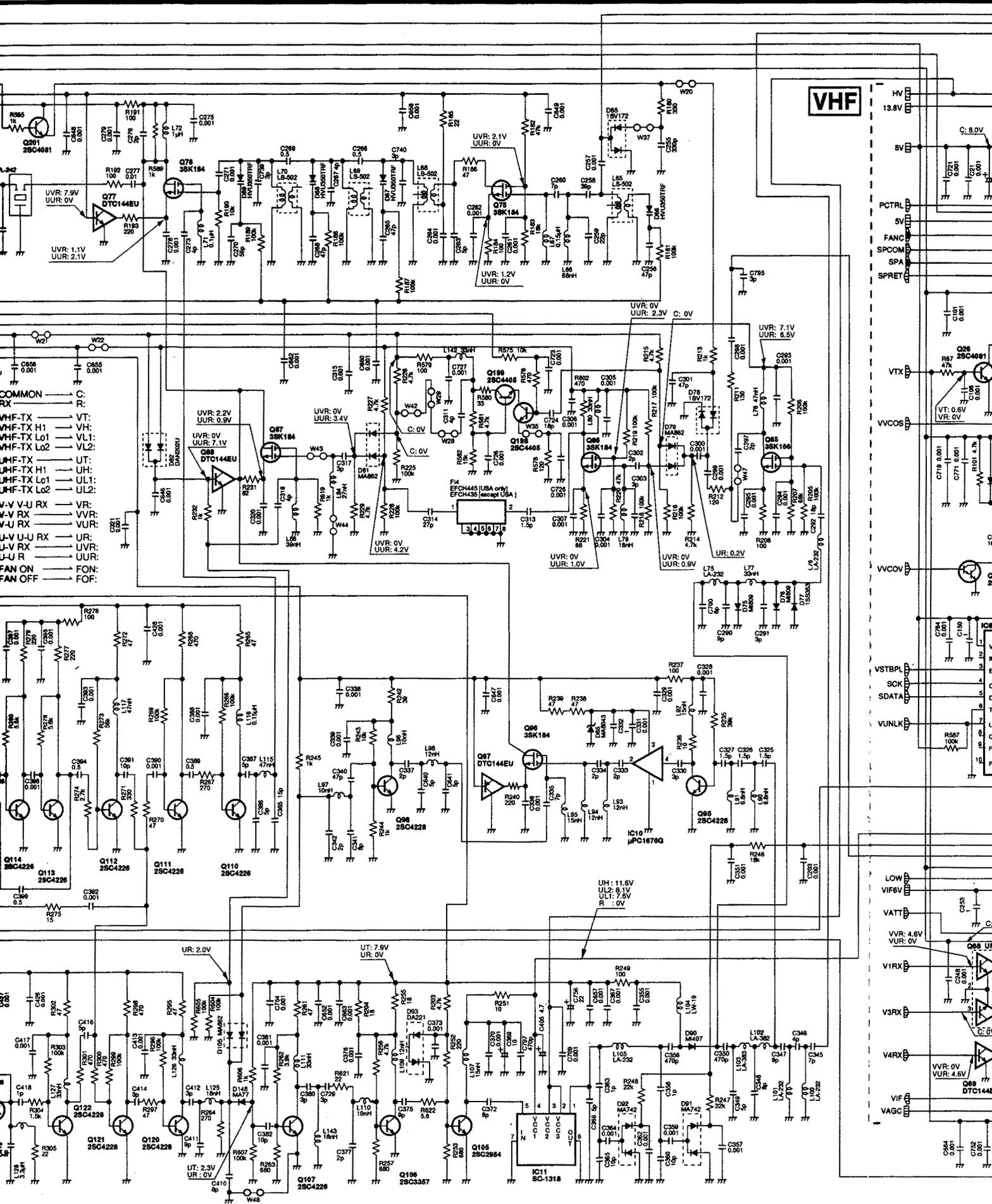
to UHF

# UHF

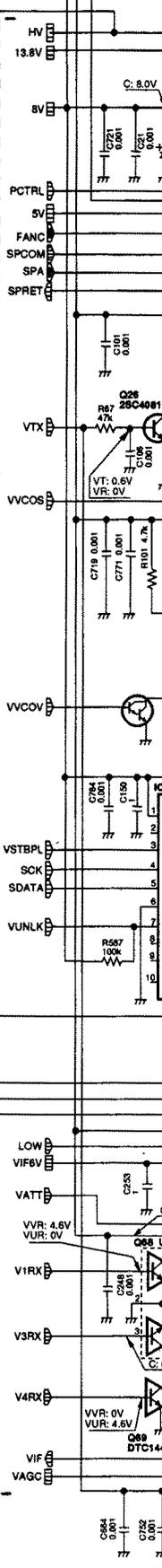


- COMMON C: R:  
 VHF-TX VT:  
 VHF-TX H1 VH:  
 VHF-TX Lo1 VL1:  
 VHF-TX Lo2 VL2:  
 UHF-TX UT:  
 UHF-TX H1 UH:  
 UHF-TX Lo1 UL1:  
 UHF-TX Lo2 UL2:  
 V-V-U RX VR:  
 V-V RX VVR:  
 V-U RX VUR:  
 U-V-U RX UVR:  
 U-V RX UUR:  
 U-U R UUR:  
 FAN ON FON:  
 FAN OFF FOF:

# MAIN UNIT



VHF



- COMMON RX
- VHF-TX H1
- VHF-TX L01
- VHF-TX L02
- VHF-TX H1
- VHF-TX L01
- VHF-TX L02
- V-U RX
- FAN ON
- FAN OFF

UR: 2.0V

UT: 2.3V

UT: 7.9V

UR: 0V

UH: 11.6V

UL: 9.1V

UL: 7.0V

R: 0V

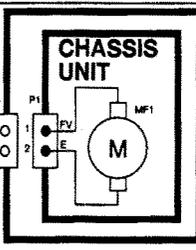
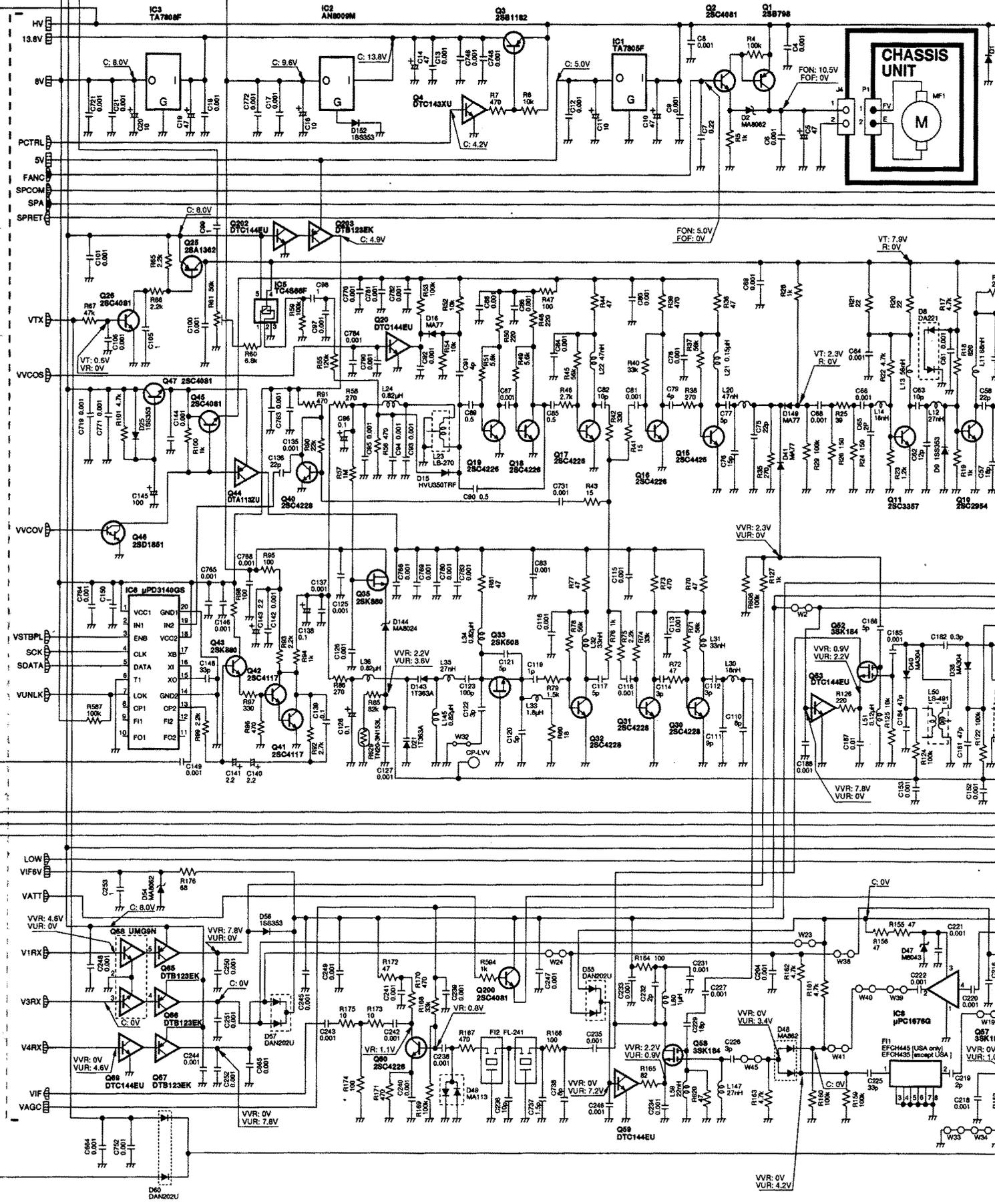
VVR: 4.6V

VUR: 0V

VVR: 0V

VUR: 4.6V

VHF

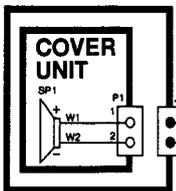
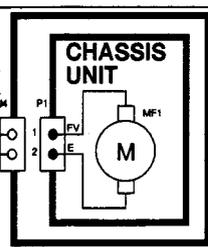
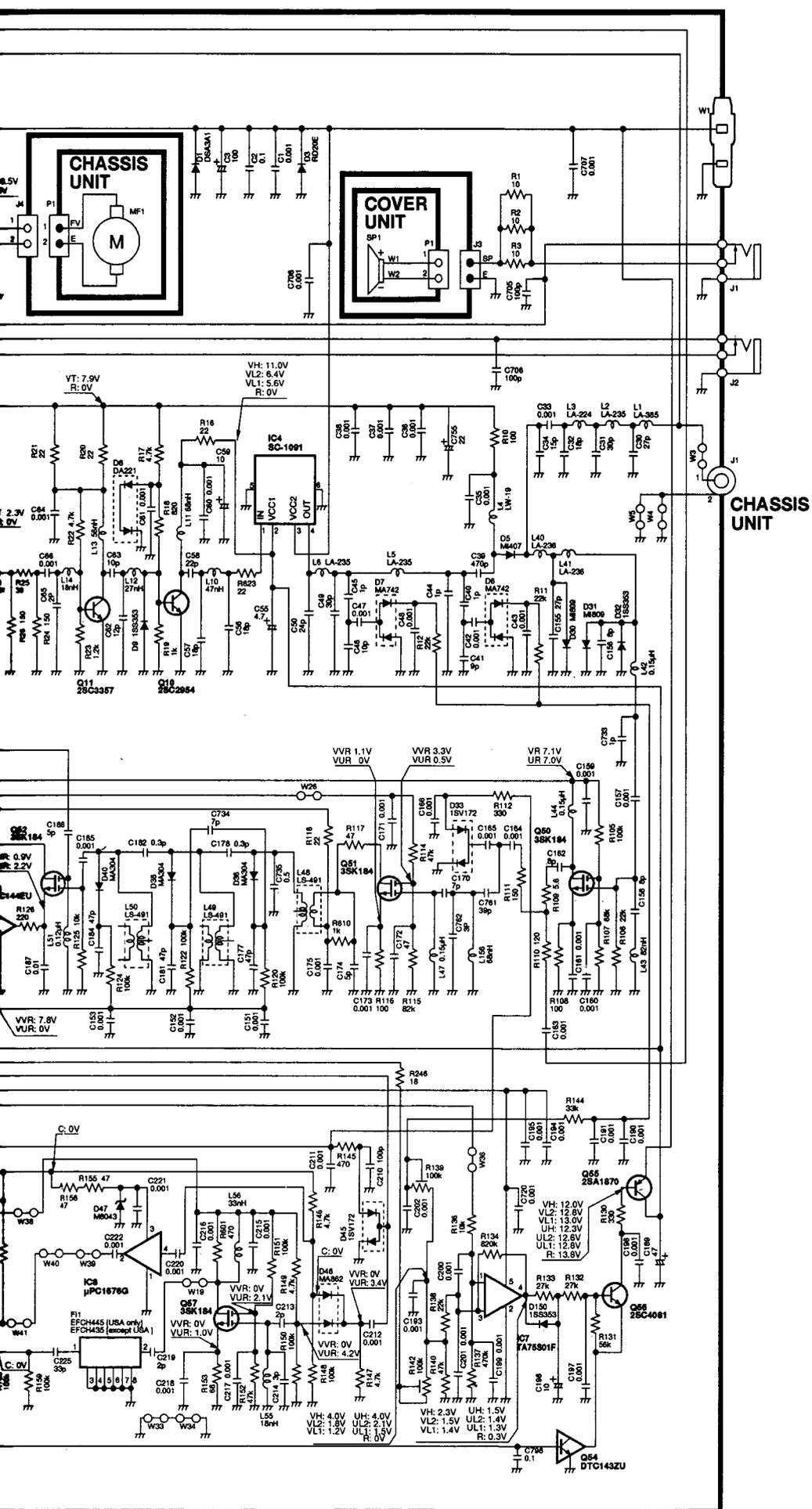


CHASSIS UNIT

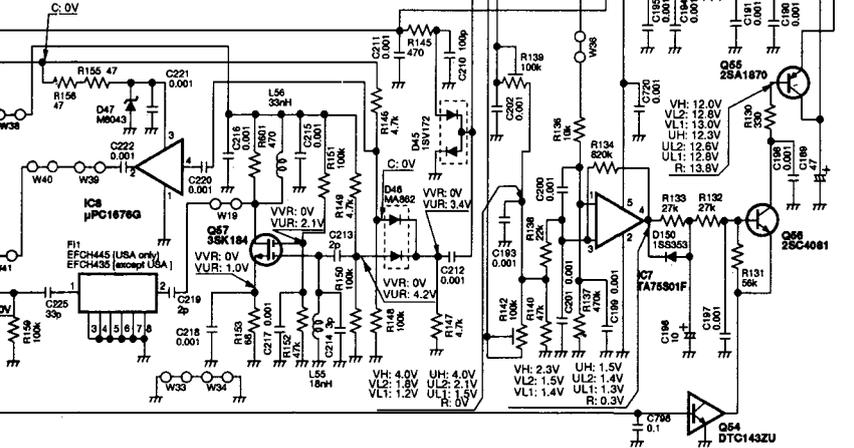
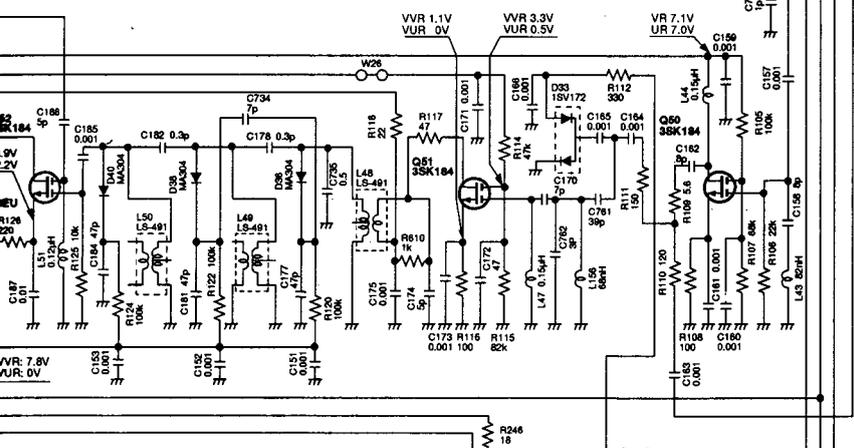
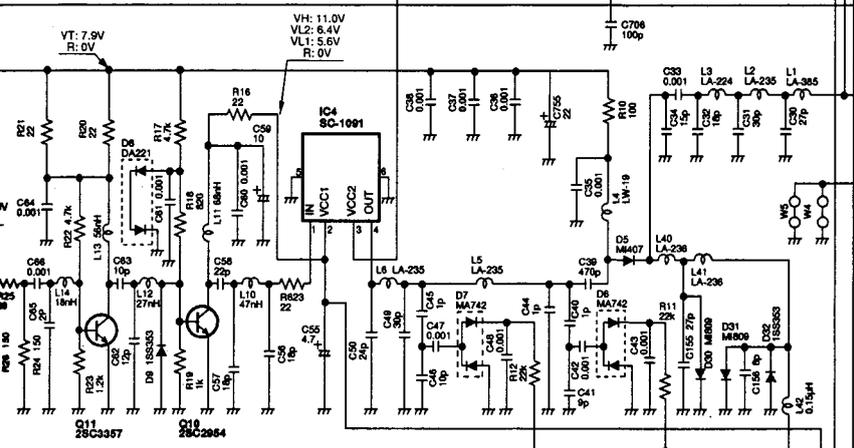
M

T

P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 P13 P14 P15 P16 P17 P18 P19 P20 P21 P22 P23 P24 P25 P26 P27 P28 P29 P30 P31 P32 P33 P34 P35 P36 P37 P38 P39 P40 P41 P42 P43 P44 P45 P46 P47 P48 P49 P50 P51 P52 P53 P54 P55 P56 P57 P58 P59 P60 P61 P62 P63 P64 P65 P66 P67 P68 P69 P70 P71 P72 P73 P74 P75 P76 P77 P78 P79 P80 P81 P82 P83 P84 P85 P86 P87 P88 P89 P90 P91 P92 P93 P94 P95 P96 P97 P98 P99 P100



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Count on us!

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