ICOM

SERVICE MANUAL

VHF TRUNKED RADIO

IC-F35

UHF TRUNKED RADIO

IC-F45

Icom Inc.

INTRODUCTION

This service manual describes the latest information for the **IC-F35** VHF TRUNKED RADIO **IC-F45** UHF TRUNKED RADIO at the time of publication.

DANGER

NEVER connect the transceiver to an AC outlet or to a DC power supply that uses more than 9 V. This will ruin the transceiver.
DO NOT expose the transceiver to rain, snow or any liquids.
DO NOT reverse the polarities of the power supply when connecting the transceiver.
DO NOT apply an RF signal of more than 20 dBm (100 mW) to the antenna connector. This could damage the transceiver's front end.

INTRINSICALLY SAFE QUALIFICATION

When servicing intrinsically safe versions of the **IC-F35 / IC-F45**, the following conditions must be met.
Failing to satisfy any of these conditions will invalidate the INTRINSICALLY SAFE certification.

1. Servicing the transceiver should only be undertaken by suitably qualified personnel in a non-hazardous area. Never attempt to remove the case in a hazardous area.
2. **ONLY** the approved battery, ICOM's CM-140 may be used.
3. **USE ONLY** safety critical components as specified in the parts list (SECTIONS 7), should replacement of any item be necessary.

ORDERING PARTS

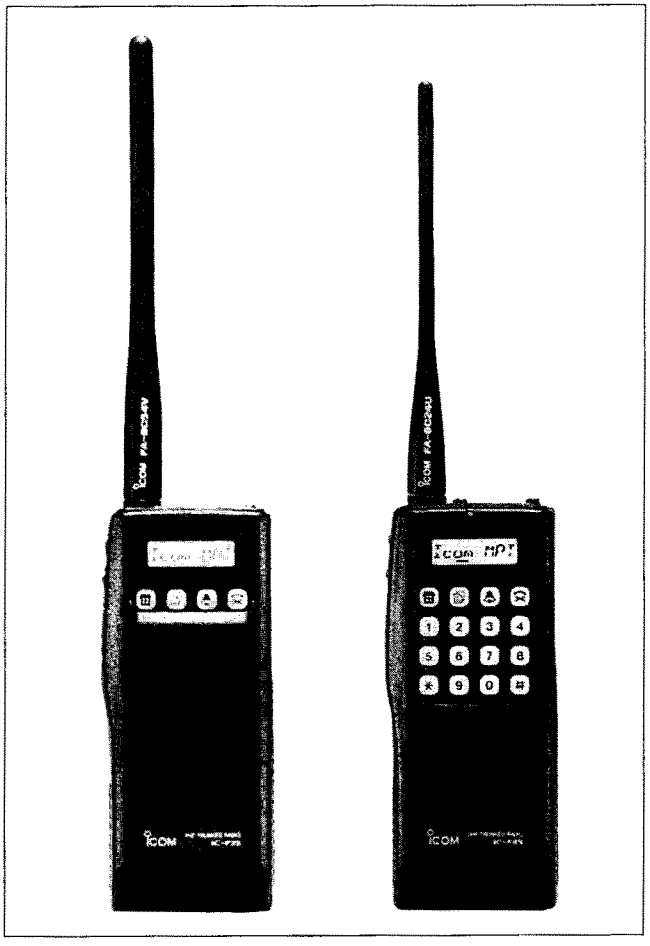
Be sure to include the following four points when ordering replacement parts:

1. 10-digit order numbers
2. Component part number and name
3. Equipment model name and unit name
4. Quantity required

<SAMPLE ORDER>

1110003490	S.IC	TA31136FN (D)	IC-F35	MAIN UNIT	5 pieces
8810008210	Screw	PH M3 x 7 ZK	IC-F35	Top panel	10 pieces

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



REPAIR NOTES

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

EXPLICIT DEFINITIONS

Model		Frequency coverrage
IC-F35	L-band	136–155 MHz
	H-band	146–174 MHz
IC-F45	L-band	400–430 MHz
	H-band	440–470 MHz

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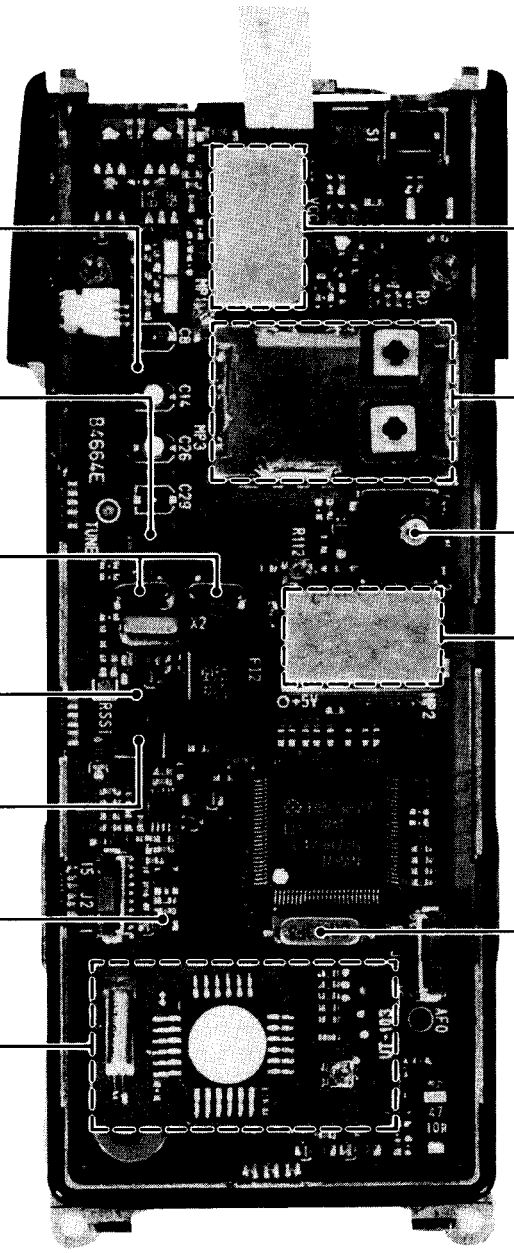
SECTION 1 SPECIFICATIONS

		IC-F35	IC-F45
GENERAL	Frequency coverage	136–155 MHz (L-band) 146–174 MHz (H-band)	400–430 MHz (L-band) 440–470 MHz (H-band)
	Mode	8K50F3E/F2D (12.5 kHz type), 16K0F3E/F2D (25 kHz type)	
	Number of channels	Up to 1024 (Trunking channel), 5 (Conventional channel)	
	Power supply requirement	7.5 V DC ±15 % (negative ground)	
	Current drain	Receive standby: 65 mA max. audio: 450 mA Transmit at 5 W: 2.5 A	
	Frequency stability	±1500 Hz	
	Usable temperature range	-25 ℃ to +55 ℃	
	Antenna impedance	50 Ω (nominal)	
	Dimensions	58(W) × 140(H) × 40(D) mm	
	Weight (with CM-140)	510 g	500 g
RECEIVER	Measurement method	ETS-300-086	
	Receive system	Double conversion superheterodyne	
	Intermediate frequencies	1st: 45.15 MHz 2nd: 455 kHz	
	Sensitivity (20 dB SINAD)	0.8 dBμV (1.1 μV) emf	
	Squelch threshold sensitivity	-6 dBμV (0.5 μV) emf (During conventional use)	
	Adjacent channel selectivity	60 dB (12.5 kHz type) 70 dB (25 kHz type)	
	Spurious response rejection	70 dB	
	Intermodulation rejection	65 dB	
	Ham and noise	40 dB	
	Audio frequency response	+1 dB to -3 dB in a 6 dB/octave range with 300 Hz to 2550 Hz input (12.5 kHz type) 300 Hz to 3000 Hz input (25 kHz type)	
	Audio output power	500 mW at 10 % distortion with an 8 Ω load.	
TRANSMITTER	Measurement method	ETS-300-086	
	RF output power	5 W and dealer programmable low power	
	Modulation system	Variable reactance frequency modulation	
	Max. frequency deviation	±2.5 kHz (12.5 kHz type), ±5.0 kHz (25 kHz type)	
	Spurious emissions	0.25 μW	
	Adjacent channel power	60 dB (12.5 kHz type) 70 dB (25 kHz type)	
	Audio frequency responce	+1 dB to -3 dB in a 6 dB/octave range with 300 Hz to 2550 Hz input (12.5 kHz type) 300 Hz to 3000 Hz input (25 kHz type)	
	Residual modulation	40 dB	
	Audio harmonic distortion	10 %	
	Microphone impedance	1.2 kΩ	

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

SECTION 2 INSIDE VIEWS

● **IC-F35/F45**

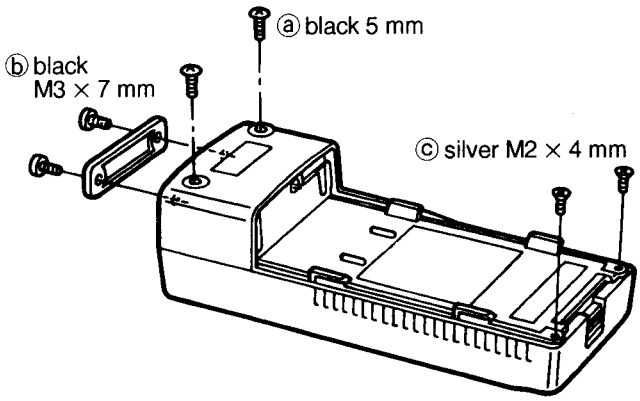


*Located under side of the point

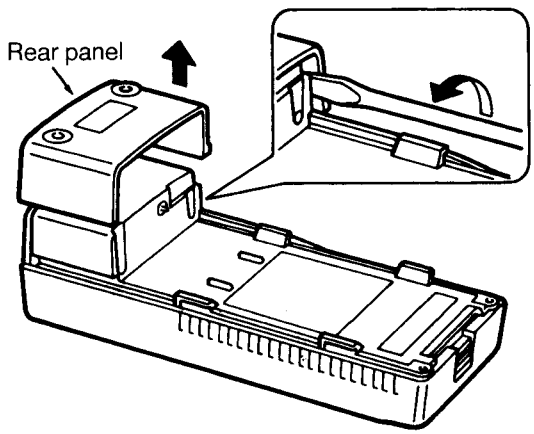
SECTION 3 DISASSEMBLY INSTRUCTIONS

• SEPARATING THE CHASSIS AND FRONT PANEL

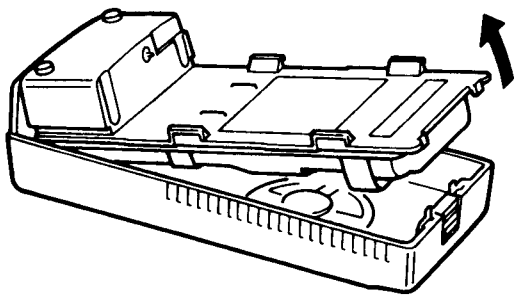
① Unscrew 2 screws ⓐ from the rear panel, and 2 screws ⓑ from the top panel.
② Remove the multi-connector cover from the top panel.
③ Unscrew 2 screws ⓒ from the chassis.



④ Use a screwdriver or similar shaped instrument, to release the latching tabs inside the rear panel; then, remove the panel.



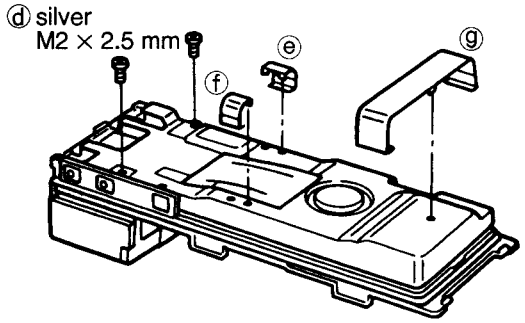
⑤ Separate the internal chassis from the front panel.
⑥ Disconnect the cable coming from the front panel, from its connector.
• Be careful, release the tab before pulling the cable free.



• OPENING THE SHIELD CASE

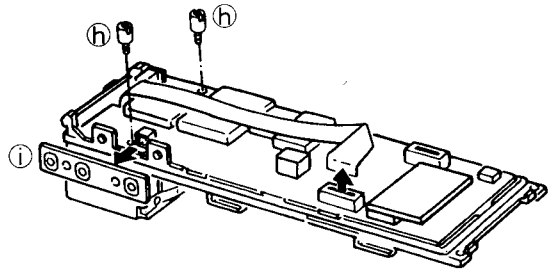
① Set the shield case rear side down so that the shield cover is visible.
② Unscrew 2 screws ⓓ from the shield cover.
③ Remove 3 cover latches ⓔ, ⓕ and ⓖ, then open the shield case.

NOTE: The cover latch ⓕ is longer than ⓔ. Match the projections on the latches to the shield cover holes when reassembling the cover.



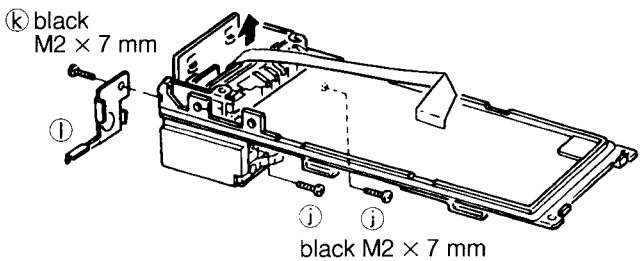
• REMOVING THE MAIN UNIT

① Unplug flexible cables.
• Be careful, release the tab before pulling the cable free.
② Unscrew 2 stand-off ⓗ from the MAIN unit.
③ Remove the PTT board ⓘ, then lift up the MAIN unit.



• REMOVING THE PA BLOCK

① Unscrew 2 screws ⓙ from the PA heatsink.
② Unscrew 1 screw ⓚ and metal plate ⓛ from the transceiver's top.
③ Lift up the PA block from the internal chassis.



SECTION 4 CIRCUIT DESCRIPTION

4-1 RECEIVER CIRCUITS

4-1-1 ANTENNA SWITCHING CIRCUIT (PA UNIT)

The antenna switching circuit functions as a low-pass filter while receiving and a resonator circuit while transmitting. The circuit does not allow transmit signals to enter receiver circuits.

Received signals enter the antenna terminal, or multi-connector (J1) and pass through the low-pass filter on the LPF board. The filtered signals are passed through the $\lambda/4$ type antenna switching circuit (LPF board; D1, L2, L3) and applied to the MAIN unit.

4-1-2 RF CIRCUIT (MAIN UNIT)

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

• IC-F35

The signals from the antenna switching circuit pass through the low-pass filter (L1, L2, C2–C6). The filtered signals are amplified at the RF amplifier (Q1) and then enter the two-stage band pass filter (D3, D4, L4, L7, C14, C26) to suppress unwanted signals.

D3 and D4 employ varactor diodes, that are controlled by the PLL lock voltage, to track the bandpass filter. These varactor diodes tune the center frequency of an RF passband for wide bandwidth receiving and good image response rejection.

• IC-F45

The signals from the antenna switching circuit are applied to the RF amplifier (Q1) via the bandpass filter (D2, L2, L3, C8, C9). The amplified signals pass through the bandpass filter (D3–D5, L4, L7, L8, C14, C26, C29) to suppress out-of-band signals.

D2–D5 are varactor diodes that tune the center frequency of an RF passband for wide bandwidth receiving and good image response rejection.

4-1-3 1ST MIXER and 1ST IF CIRCUITS (MAIN UNIT)

The 1st mixer circuit (Q2) converts the received signal to a fixed frequency of the 1st IF signal with the PLL output frequency. By changing the PLL frequency, only the desired frequency will be passed through a pair of crystal filters at the next stage of the 1st mixer.

The RF signals from the bandpass filter are mixed at the 1st mixer circuit (Q2) with the 1st LO signal coming from the RX VCO circuit through the buffer amplifier (Q3) to produce the 1st IF signals. The 1st IF signal is applied to a pair of crystal filters (FI1) in order to obtain wide selection capability and to pass only the desired signals. The filtered signal is amplified at the 1st IF amplifier (Q4) and then applied to the 2nd IF circuit.

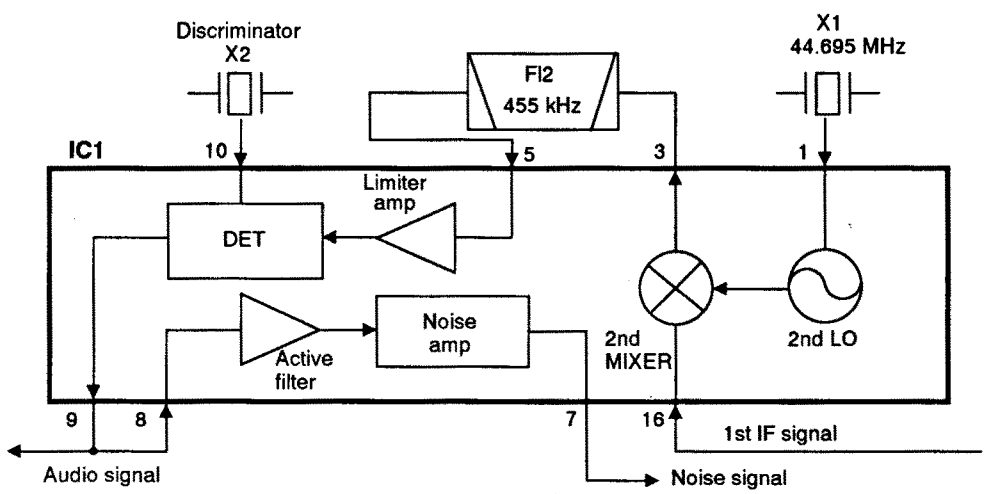
4-1-4 2ND IF and DEMODULATOR CIRCUITS (MAIN UNIT)

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

The 1st IF signal from the buffer amplifier (Q4) is applied to the 2nd mixer section of the FM IF IC (IC1, pin 16) and is then mixed with the 2nd LO signal for conversion to the 455 kHz 2nd IF signal.

IC1 contains the 2nd mixer, local oscillator, limiter amplifier, quadrature detector, active filter and noise amplifier circuit. The local oscillator section and X1 generate 44.695 MHz for the 2nd LO signal.

• 2ND IF AND DEMODULATOR CIRCUITS



The 2nd IF signal from the 2nd mixer (IC1, pin 3) passes through the high-quality ceramic filter (FI2) to suppress unwanted heterodyned frequency signals. It is then amplified at the limiter amplifier section (IC1, pin 5) and applied to the quadrature detector section (IC1, pin 10) to demodulate the 2nd IF signal into AF signals. The AF signals are output from pin 9.

4-1-5 AF CIRCUIT (MAIN UNIT)

The AF circuit de-emphasizes the demodulated signal with - 6 dB/octave and power-amplifies the AF signals to drive a speaker. The AF circuit includes an AF mute circuit for the squelch.

The AF signals from the FM IF IC (IC1, pin 9) are amplified at the AF amplifier (IC2) and are then applied to the highpass filter (IC3a). The characteristics of the high-pass filter (IC3a) are controlled by the "HFSW" signal. When "HFSW" is "High" the cut off frequency is shifted higher to remove CTCSS signals.

The filtered signals from the high-pass filter (IC3, pin1) are passed through the de-emphasis circuit (IC3b). This de-emphasis circuit is an integrated circuit with frequency characteristics of - 6 dB/octave. They are then applied to the level controller (IC7, pin 16) via the AF mute switch (Q6).

Output signals from the level controller (IC7, pin 15) are applied to the AF power amplifier (IC5) to drive the speaker.

4-1-6 SQUELCH CIRCUIT (MAIN UNIT)

• NOISE SQUELCH

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

A portion of the AF signals from (IC1, pin 9) are applied to the active filter in (IC1, pin 8). Noise components of about 20 kHz are amplified and output from pin 7 (IC1).

The noise signals from (IC1, pin 7) are passed through a level controller (IC7 pins 21, 22) and are then converted to a pulse signal (NOIS) at Q13 and Q14.

The "NOIS" signal from Q13 is applied to the CPU (IC17 pin 19). The CPU then analyzes the noise condition and controls the "AMUT" and "APSW" ports to cut off the AF signal using AF switches (Q6, Q11).

• CTCSS

A portion of the AF signals from the AF amplifier (IC2a) pass through the low-pass filters (IC4a/b) and are then applied to the CTCSS decoder inside the CPU (IC17 pin 98) to control the "AMUT" and "APSW" ports.

4-2 TRANSMITTER CIRCUITS

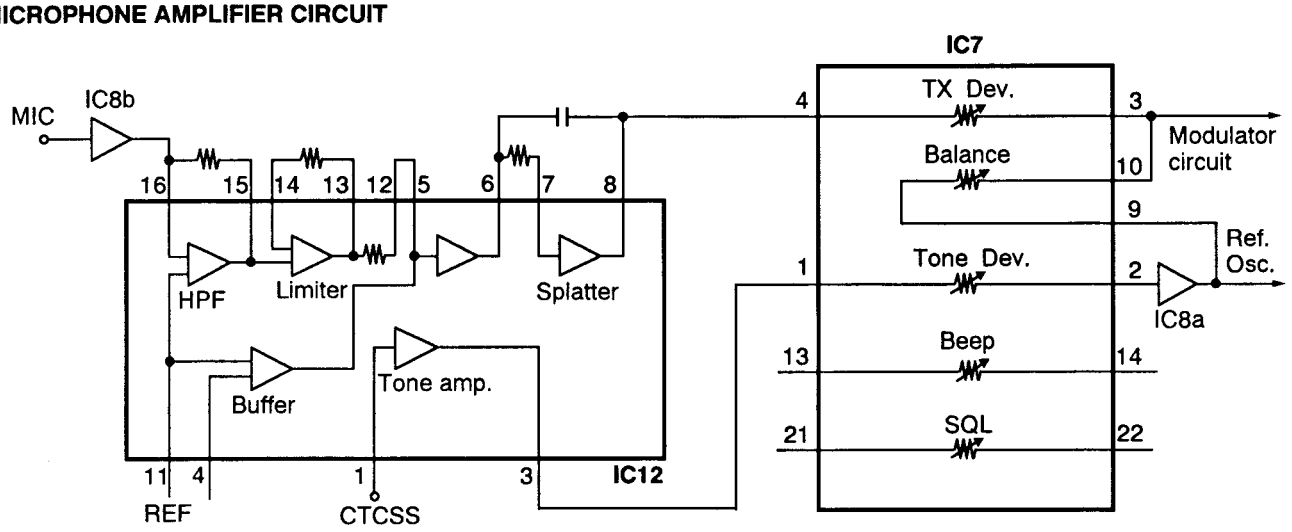
4-2-1 MICROPHONE AMPLIFIER CIRCUIT (MAIN UNIT)

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

The AF signals from the built-in microphone (FRONT unit, MC1) or from the multi-connector (external microphone) are passed through the MIC switch (IC13) and applied to the pre-amplifier (IC8b). The amplified signals are applied to the limiter amplifier section of the microphone amplifier (IC12).

The entered signals (IC12, pin 16) are pre-emphasized with +6 dB/octave at a limiter amplifier, then passed through a splatter filter. The output signals from pin 8 (IC12) pass through the level controller (IC7, pin 3, 4) and are then applied to the modulation circuit after being amplified at Q17.

• MICROPHONE AMPLIFIER CIRCUIT



4-2-2 MODULATION CIRCUIT (MAIN UNIT)

The modulation circuit modulates the VCO oscillating signal and reference oscillator using the microphone audio signals to obtain highly linear modulation.

The AF signals from Q17 change the reactance of a varactor diode (D16) to modulate the oscillated signal at the TX VCO circuit (Q27, D12–D15 for F35; Q27, D12, D14 for F45). The modulated signal is amplified at the buffer-amplifiers (Q29, Q31) and is then applied to the drive amplifier circuit.

CTCSS signals from the CPU (IC17 pin 32–35) are applied to the microphone amplifier (IC12, pin 1). The amplified signals from the microphone amplifier (IC12, pin 3) pass through the level controller (IC7 pins 1, 2) and are then applied to the VCO via the LPF (IC8a) and level controller (IC7, pins 10, 11).

4-2-3 DRIVE AMPLIFIER CIRCUIT (MAIN UNIT)

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

The signal from the buffer-amplifier (Q31) passes through the low-pass filter and is applied to the drive amplifier (Q32 for F35, Q33 via the buffer-amplifier Q32 for F45). The amplified signal is applied to the RF power amplifier.

4-2-4 RF POWER AMPLIFIER (PA UNIT)

IC11 is the power module which provides a stable 5 W of output power.

The RF signal from the drive amplifier (MAIN unit, Q32 for F35, Q33 for F45) is applied to the power amplifier (IC11, pin 1). The amplified signal is output from pin 5 and is applied to the antenna connector through the output power detector and antenna switching circuits.

4-2-5 APC CIRCUIT (MAIN AND PA UNITS)

The APC (Automatic Power Control) circuit protects the power module (PA unit IC1) and the drive amplifier (MAIN unit, Q33; IC-F45 only) from a mismatched output load. Also, the APC circuit controls the gain of the power module and the drive amplifier (IC-F45 only) in order for the transceiver to output a constant RF power even when the supplied voltage shifts, etc.

The APC detector circuit (PA unit, D3, D4) detects forward signals and rectified signals, respectively. The combined voltage is at a minimum level when the antenna is matched at 50Ω and increases when it is mismatched. The combined voltage is applied to the inverse amplifier (IC21b) and compared with a reference voltage which is supplied from the level controller (IC7, pin11).

The output voltage from the inverse amplifier (IC21b, pin7) is applied to the APC control circuit (Q42) to control the bias voltage of the power module (PA unit, IC1) and the drive amplifier (Q33; IC-F45 only).

4-3 PLL CIRCUITS

4-3-1 PLL CIRCUIT (MAIN UNIT)

A PLL circuit provides stable oscillation of the transmit frequency and the receive 1st LO frequency. The PLL circuit consists of the PLL IC (IC10), charge pump, loop filter and reference oscillator and employs a pulse swallow counter.

Signals from the VCO circuit are amplified at the buffer-amplifiers (Q29, Q30) and are prescaled in the PLL IC (IC10) based on the divided ratio (N-data). The PLL IC detects the out-of-step phase using the reference and outputs it from pin 13. The output signal is passed through the charge pump (Q20–Q23) and loop filters (R151/C127, R157/C125), and is then applied to the VCO circuit as the lock voltage.

The accelerator switch (IC9a/b) selects the effective loop filter to accelerate the lock up speed.

The lock voltage is also used for the receiver tunable bandpass filters to match the filter's center frequency to the desired receive frequency. The lock voltage is amplified at the buffer amplifier (Q24) and is then applied to the bandpass filters (D3, D4 for F35, D2–D5 for F45).

4-3-2 REFERENCE OSCILLATOR CIRCUIT (MAIN UNIT)

The reference oscillator circuit (X3) generates the reference frequency which is stabilized within the temperature range -30℃ to +55℃. The reference frequency is applied to the PLL IC (IC10, pin 16).

4-3-3 VCO CIRCUIT (MAIN UNIT)

• IC-F35

The VCO circuit contains a separate RX VCO (Q25, D8–D11) and TX VCO (Q27, D12–D15). The oscillated signal is amplified at the buffer-amplifiers (Q29, Q31) and is then applied to the T/R switching circuit (D18). Then the RX signal is applied to the 1st mixer (Q2) via the amplifier (Q3) and the TX signal to the driver (Q32).

A portion of the signal from Q29 is amplified at the buffer amplifier (Q30) and is then fed back to the PLL IC (IC10 pin 18) as the comparison signal.

• IC-F45

The RX VCO consists of Q25, D8 and D10, and the TX VCO consists of Q27, D12 and D14. The oscillated signal is applied to the T/R switching circuit (D18) after being amplified at the buffer-amplifiers (Q29, Q31). The RX signal is applied to the 1st mixer (Q2) via the amplifier (Q3) and the TX signal to the buffer-amplifier (Q32).

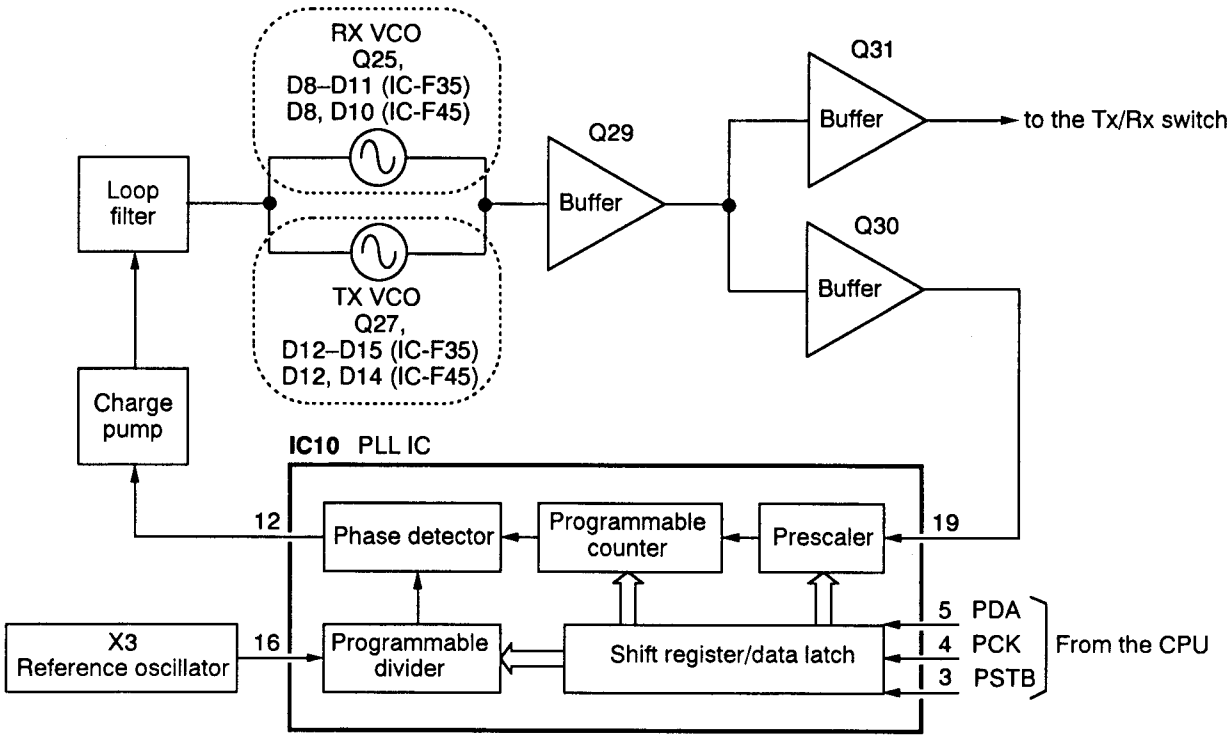
The amplified VCO signal from the buffer amplifier (Q29) is fed back to the PLL IC (IC10 pin 18) for comparison with the reference signal via the buffer amplifier (Q30).

4-4 POWER SUPPLY CIRCUITS

4-4-1 VOLTAGE LINES (MAIN UNIT)

LINE	DESCRIPTION
HV	DC 7.5 V from the attached battery pack through filters and fuse on the EF board.
VCC	The same voltage as the HV line passes through the [POWER] switch (CHASSIS, R1) .
REF5V	Common 5 V converted from the HV line at the 5V regulator circuit (IC20).
+5V	Common 5 V converted from the VCC line at the +5V regulator circuit (Q45, Q46 and D30).
R5V	Receive 5 V converted from the VCC line at the R5V regulator circuit (Q47, Q48 and D31). The REF5V is applied for reference voltage.
T5V	Transmit 5 V converted from the VCC line at the T5V regulator circuit (Q51, Q52 and D33).
MT5V	Transmit 5 V converted from the VCC line at the MT5V regulator circuit (Q49 and Q50).
CPU5	The same voltage as the REF5V line passes through L39.
+12V	Common 12V converted from the +5V line at the 12V DC-DC converter circuit (IC18, Q41, D23–D26).

• PLL CIRCUIT



4-5 PORT ALLOCATIONS

4-5-1 CPU (IC17 ON THE MAIN UNIT)

PIN No.	PORT NAME	DESCRIPTION
1	LBAT	A/D input port for low battery voltage detection.
9	RES	Input port for reset signal.
11	SHIFT	Outputs CPU clock shift signal.
12	CCK	Outputs clock signal to the MODEM and TENKEY unit.
13	CSI	Input port for clock signal from the MODEM and TENKEY unit.
14	CSO	Outputs data signal to the MODEM and TENKEY unit.
16, 18	CLI	Input ports for clone data.
17	CLO	Output port for clone data.
19	NOIS	Noise pulse input port for the squelch control.
21	POSW	Input port for the power switch. Low: Power switch is pushed
24	CRES	Output port for reset signal to IC1 on the TENKEY unit.
32–35	CTN3–CTN0	Outputs CTCSS signals.
36	PTTO	Outputs PTT control signal to the MODEM unit. Low: While PTT is pushed
39	PTTI	Input port for the PTT control signal from the MODEM unit. Low: While PTT is pushed
42	ECK	Outputs clock signals to EEPROMs.
43	ESI	Input port for serial data from EEPROMs.
44	ESO	Outputs serial data to EEPROMs.
47	PDA	Outputs serial data to the PLL IC (IC10).
48	PCK	Outputs clock signals to the PLL IC (IC10).
49	UNLK	Input port for the PLL unlock signal. High: PLL unlock
50	PSTB	Outputs a strobe signal to the PLL IC (IC10).
51	PLLT	Output port for a PLL acceleration signal. High: Turbo ON
53	DDA	Outputs serial data to the level controller (IC7).
54	DCK	Outputs clock signals to the level controller (IC7).
55	DSTB	Outputs a strobe signal to the level controller (IC7).
58	HFSW	Outputs a selecting signal of RX HPF characteristics. High: Filters out CTCSS frequency
60	TMUT	Outputs Tx mute signal. High: Tx mute

PIN No.	PORT NAME	DESCRIPTON
63	APSW	Outputs mute switch (Q11) control signal. High: Mutes received audio
65	VTX	Outputs TX VCO and T5V regulator circuits control signal. During TX: Low
66	VRX	Outputs RX VCO and R5V regulator circuits control signal. During RX: Low
67	PWON	Outputs POWER SW circuit control signal. High: During power ON
71	S1	Input port for programmable key (DOWN).
72	S2	Input port for programmable key (UP).
77	5VR	Input port for connection of the multi-connecter detection. Low: Connected Head set
79	MCON	Output port for MIC mute control signals. Low: Mutes microphone audio
80	AMUT	Outputs mute switch (Q6) control signal. High: Mutes receive audio
90	BEEP	Output port for the beep audio signals.
97	THRM	Input port for the transceiver's internal temperature signal data.
98	CDEC	Input port for CTCSS signals.
99	RSSI	Input port for Rx signal strength level.
100	VOXV	A/D input port for VOX's over modulation detection. High: Loud voice

SECTION 5 ADJUSTMENT PROCEDURES

5-1 PREPARATION

The transceiver can be adjusted by sending an adjustment command to the cloning terminal via a PC. All adjustments in this section must use conventional channels. The EX-1911 (optional programming software) is necessary to program the frequency data in the conventional channels and to stock the tranceiver's original adjustment data.

■ REQUIRED ITEMS

The following hardware and software are required for trimmer adjustment:
- IBM PC/AT or PS/2 compatible computer with an RS-232C serial port
- MS-DOS, PC-DOS or IBM DOS ver. 5.02 or higher
- ADJUSTMENT PROGRAM
- OPC-427

■ ENTERING CONVENTIONAL MODE

① Turn the transceiver power OFF.

② Connect the transceiver and PC using a jig cable.

③ While pushing [ ], turn power ON.

NOTE: For making adjustments without a computer i.e. PLL ADJUSTMENT and RECEIVER ADJUSTMENT, or for returning to trunking mode, use steps ① and ③ only.

■ STARTING THE PROGRAM

Before using the program, make a copy of the original disk on your hard disk. Operate the program using the hard disk copy for convenience, and keep the original in a safe place.

① Boot up DOS.

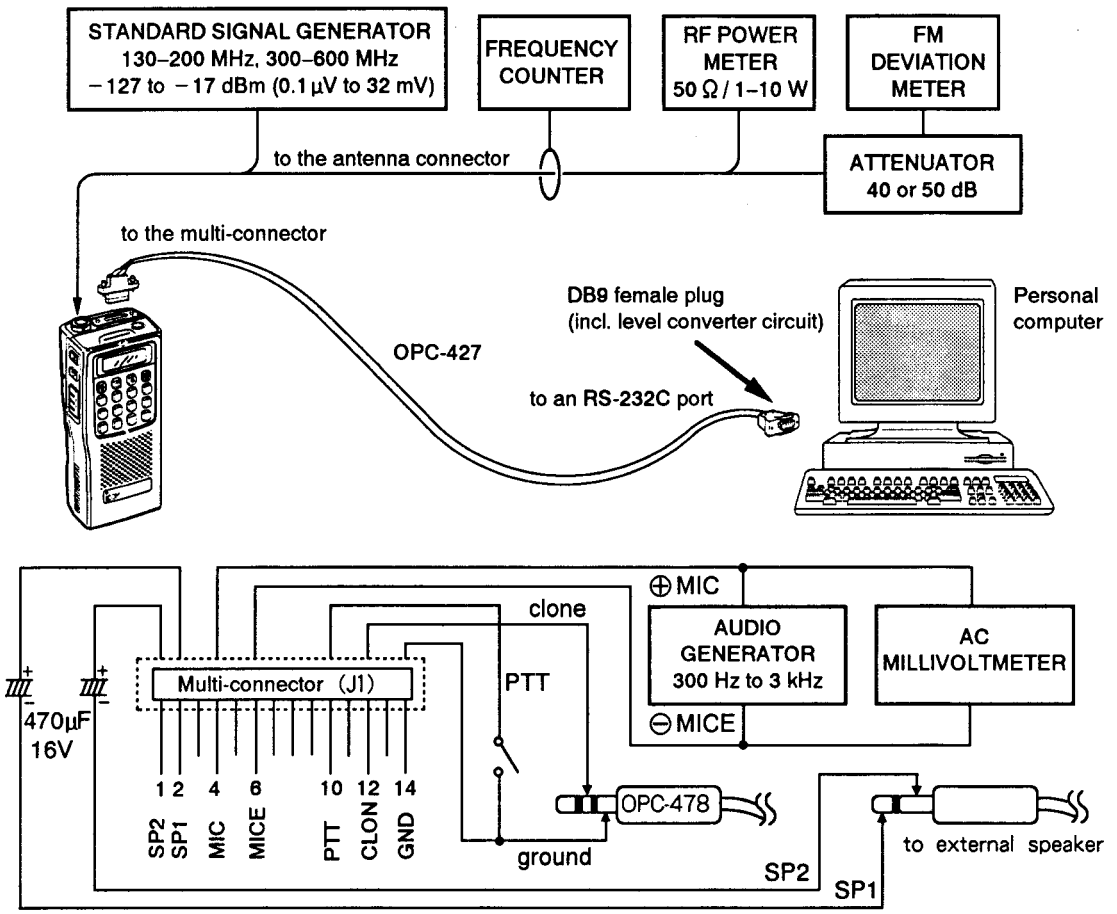
② Type the following to start the adjustment program:
TRIMMER [Enter]

③ Set the cursor to the adjustment item using the [↑]/[↓] keys.

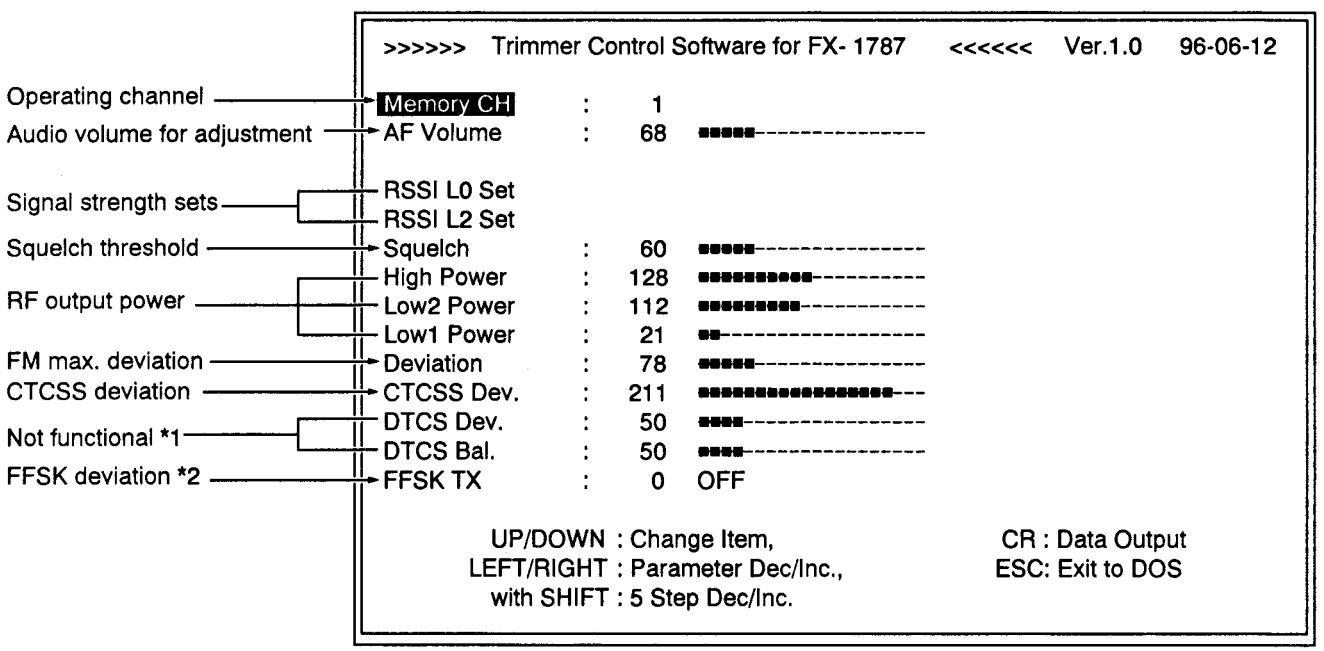
④ Adjust the item between 0 to 255 using the [←]/[→] keys (refer to SECTION 5-4 for IC-F35, SECTION 5-7 for IC-F45).

NOTE: The PTT switch is necessary to transmit the transceiver while transmit items, except FFSK TX, are adjusted. (FFSK TX item transmits automatically when pushing the [Space] key.)

■ CONNECTIONS



■ PROGRAM SCREEN



Above values are examples only.

*1: DTCS Dev./DTCS Bal. are not optional commands for IC-F35/F45 and must be fixed to [50], otherwise CTCSS Dev. is affected.

CAUTION *2: Do not set the cursor to FFSK TX when an SSG is connected, because this function transmits without the PTT switch.

5-2 IC-F35 PLL ADJUSTMENT

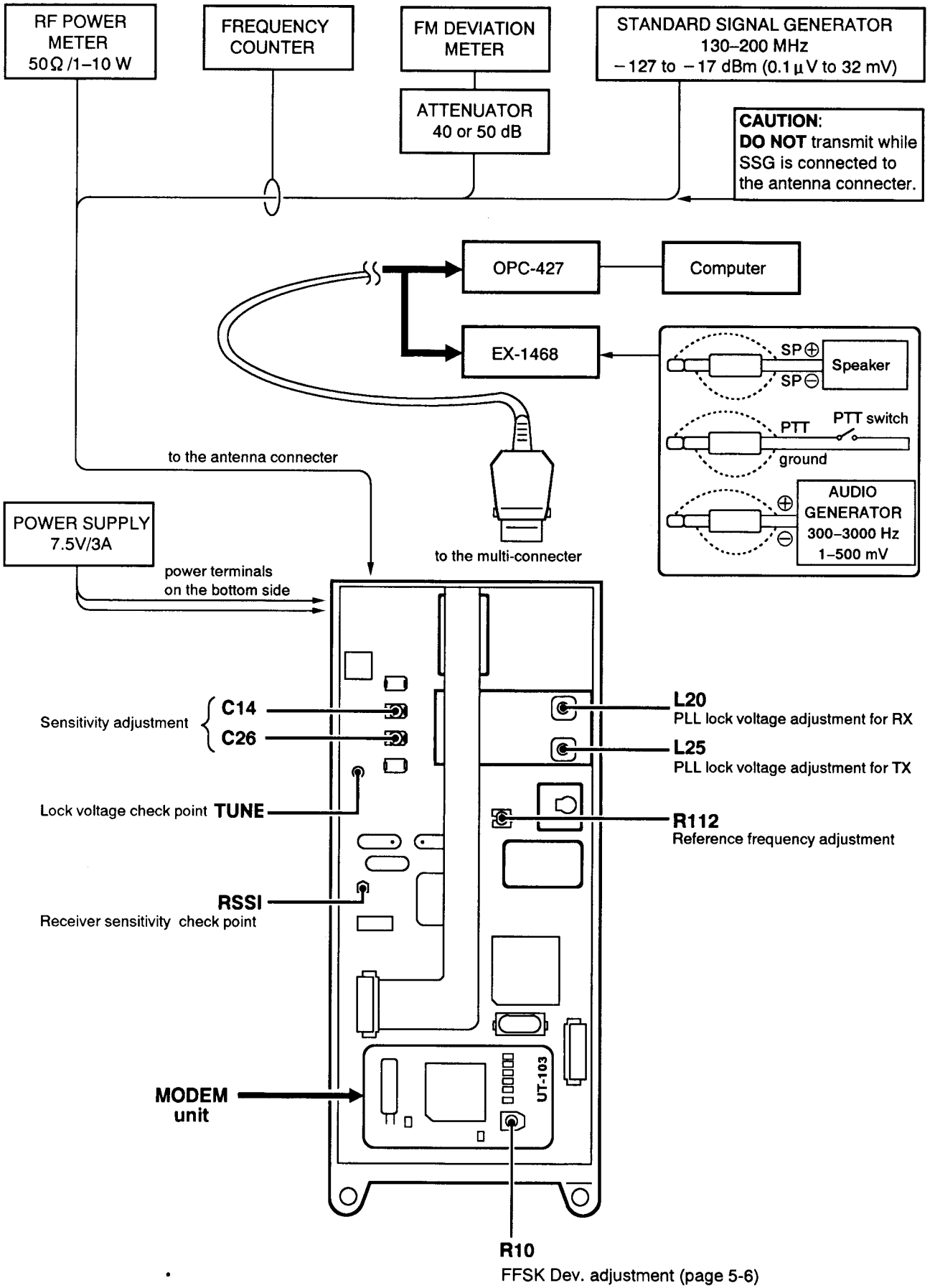
ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
PLL LOCK VOLTAGE	1	• Operating frequency:136.000 MHz • Receiving	MAIN	Connect the digital multimeter or oscilloscope to the check point "TUNE."	2.0 V	MAIN	L20
	2	• Operating frequency: 136.000 MHz [L-band] 146.000 MHz [H-band] • Transmitting					L25
	3	• Operating frequency: 155.000 MHz [L-band] 174.000 MHz [H-band] • Receiving			9.5±1.5 V		Verify
	4	• Transmitting					
PLL REFERENCE FREQUENCY	1	• Operating frequency: 155.000 MHz [L-band] 174.000 MHz [H-band] • Transmitting	TOP	Loosely couple the frequency counter to the antenna connector.	155.0000 MHz [L-band] 174.0000 MHz [H-band]	MAIN	R112

5-3 IC-F35 RECEIVER ADJUSTMENT

NOTE: When receiver sensitivity adjustment is changed, RSSI L0/L2 must be reset.

ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
RECEIVER SENSITIVITY	1	• Operating frequency: 136.000 MHz [L-band] 146.000 MHz [H-band] • Connect the SSG to the antenna connector and set as: Level : 32 μV* (−77 dBm) Modulation: 1 kHz Deviation : ±3.5 kHz [25 kHz type] ±1.75 kHz [12.5 kHz type] • Connect an 8 Ω load to the external speaker jack. • Receiving	MAIN	Connect the analog tester or oscilloscope to the check point "RSSI."	Maximum voltage	MAIN	Adjust in sequence C14, C26

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


RF POWER METER 50Ω/1–10 W
FREQUENCY COUNTER
FM DEVIATION METER
ATTENUATOR 40 or 50 dB
STANDARD SIGNAL GENERATOR 130–200 MHz −127 to −17 dBm (0.1 µV to 32 mV)
CAUTION: DO NOT transmit while SSG is connected to the antenna connecter.
OPC-427
Computer
EX-1468
SP⊕
SP⊖
Speaker
PTT
PTT switch
ground
AUDIO GENERATOR 300–3000 Hz 1–500 mV
to the antenna connecter
to the multi-connecter
POWER SUPPLY 7.5V/3A
power terminals on the bottom side
Sensitivity adjustment
C14
C26
Lock voltage check point TUNE
RSSI
Receiver sensitivity check point
MODEM unit
UT-103
L20
PLL lock voltage adjustment for RX
L25
PLL lock voltage adjustment for TX
R112
Reference frequency adjustment
R10
FFSK Dev. adjustment (page 5-6)

5-4 IC-F35 TRIMMER ADJUSTMENT

NOTE: RSSI L0/L2 must be set after "RECEIVER SENSITIVITY" in section 5-3.

ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT	VALUE	OPERATION
RSSI L0/L2	1	• Operating frequency: 136.000 MHz [L-band] 146.000 MHz [H-band] • Connect the SSG to the antenna connector and set as: Level : 0.45 μV* (−114 dBm) Modulation: 1 kHz Deviation : ±3.5 kHz [25 kHz type] ±1.75 kHz [12.5 kHz type] • Set the cursor to "RSSI L0 Set" on the screen of the connected computer. • Receiving			Push [Enter] on the computer keyboard.
	2	• Level : 14 μV* (−84 dBm) • Set the cursor to "RSSI L2 Set" on the screen of the connected computer. • Receiving			
SQUELCH	1	• Operating frequency: 136.000 MHz [L-band] 146.000 MHz [H-band] • Connect the SSG to the antenna connector and set as: Level : ANY Modulation: 1 kHz Deviation : ±3.5 kHz [25 kHz type] ±1.75 kHz [12.5 kHz type] • Receiving	Connect the SINAD meter to the external speaker jack with an 8Ω load.	8 dB SINAD	SSG's output level.
	2	• Set the cursor to "Squelch" on the screen of the connected computer. • Receiving	Connected speaker	At the point where the audio noise just appears.	[⬅]/[➡] on the computer keyboard.
	3	• Level : 1mV* (−47 dBm) • Turn SSG output OFF. • Receiving		Squelch delay is less than 1 sec.	Verify
OUTPUT POWER	1	• Operating frequency: 155.000 MHz [L-band] 174.000 MHz [H-band] • Output power set : High • Set the cursor to "High Power" on the screen of the connected computer. • Transmitting	Connect the RF power meter to the antenna connector.	5 W	[⬅]/[➡] on the computer keyboard.
	2	• Output power set : Low2 • Set the cursor to "Low2 Power" on the screen of the connected computer. • Transmitting		2 W	
	3	• Output power set : Low1 • Set the cursor to "Low1 Power" on the screen of the connected computer. • Transmitting		1 W	
	NOTE: Each power adjustment must be adjusted on the proper channel (High/Low2/Low1), otherwise test equipment readings for the power will be misreading.				

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

IC-F35 TRIMMER ADJUSTMENT (CONTINUED)

ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT	VALUE	OPERATION
FM DEVIATION	1	• Operating frequency: 136.000 MHz [L-band] 146.000 MHz [H-band] • Apply an AF signal to the [MIC] jack: 1 kHz / 100 mV • Connect the FM deviation meter to the antenna connector and set as: HPF : OFF LPF : 20 kHz De-emphasis: OFF Detector : (P – P)/2 • Set the cursor to "Deviation" on the screen of the connected computer. • Transmitting	Connect the FM deviation meter to the antenna connector through the attenuator.	±4.2 kHz [25 kHz type] ±2.1 kHz [12.5 kHz type]	[←]/[→] on the computer keyboard.
CTCSS DEVIATION	1	• Operating frequency: 136.000 MHz [L-band] 146.000 MHz [H-band] • No signal applied to the [MIC] jack. • Tone frequency : 67.0 Hz • Set the cursor to "CTCSS Dev." on the screen of the connected computer. • Transmitting	Connect the FM deviation meter to the antenna connector through the attenuator.	±0.5 kHz [25 kHz type] ±0.3 kHz [12.5 kHz type]	[←]/[→] on the computer keyboard.
FFSK DEVIATION	1	• Operating frequency: 136.000 MHz [L-band] 146.000 MHz [H-band] • No signal applied to the [MIC] jack. • Connect the FM deviation meter to the antenna connector and set as: HPF : OFF LPF : 20 kHz De-emphasis: OFF Detector : (P – P)/2 • Set the cursor to "FFSK TX" on the screen of the connected computer. • Push the [Space] key on the computer keyboard to transmit.	Connect the FM deviation meter to the antenna connector through the attenuator.	±3.0kHz [25 kHz type] ±1.5 kHz [12.5 kHz type]	R10 (MODEM unit) see page 5-4

5-5 IC-F45 PLL ADJUSTMENT

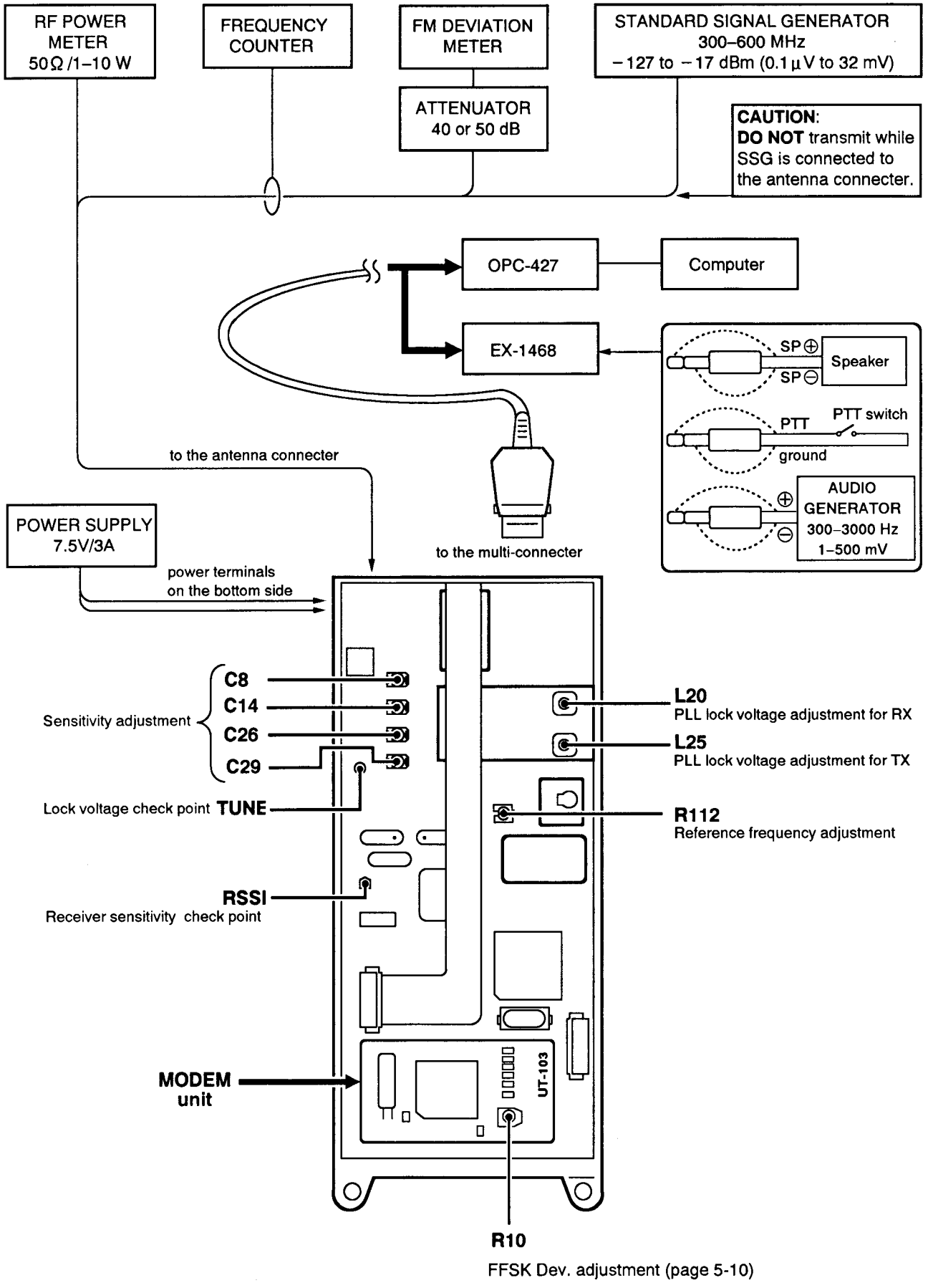
ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
PLL LOCK VOLTAGE	1	• Operating frequency: 400.000 MHz [L-band] 440.000 MHz [H-band] • Receiving	MAIN	Connect the digital multi-meter or oscilloscope to the check point "TUNE."	2.0 V	MAIN	L20
	2	• Transmitting					L25
	3	• Operating frequency: 430.000 MHz [L-band] 470.000 MHz [H-band] • Receiving			8.5 ±1.5 V		Verify
	4	• Transmitting					
PLL REFERENCE FREQUENCY	1	• Operating frequency : 430.000 MHz [L-band] 470.000 MHz [H-band] • Transmitting	TOP	Loosely couple the frequency counter to the antenna connector.	430.0000 MHz [L-band] 470.0000 MHz [H-band]	MAIN	R112

5-6 IC-F45 RECEIVER ADJUSTMENT

NOTE: When receiver sensitivity adjustment is changed, RSSI L0/L2 must be reset.

ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
RECEIVER SENSITIVITY	1	• Operating frequency : 400.000 MHz [L-band] 440.000 MHz [H-band] • Connect the SSG to the antenna connector and set as: Level : 32 μV* (−77 dBm) Modulation: 1 kHz Deviation : ±3.5 kHz [25 kHz type] ±1.75 kHz [12.5 kHz type] • Connect an 8 Ω load to the external speaker jack. • Receiving	MAIN	Connect the analog tester or oscilloscope to the check point "RSSI."	Maximum voltage	MAIN	Adjust in sequence C8, C14, C26, C29

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


RF POWER METER 50Ω/1–10 W
FREQUENCY COUNTER
FM DEVIATION METER
ATTENUATOR 40 or 50 dB
STANDARD SIGNAL GENERATOR 300–600 MHz –127 to –17 dBm (0.1μV to 32 mV)
CAUTION: DO NOT transmit while SSG is connected to the antenna connecter.
OPC-427
Computer
EX-1468
SP⊕
SP⊖
Speaker
PTT
PTT switch
ground
AUDIO GENERATOR 300–3000 Hz 1–500 mV
to the antenna connecter
to the multi-connecter
POWER SUPPLY 7.5V/3A
power terminals on the bottom side
C8
C14
C26
C29
Sensitivity adjustment
Lock voltage check point TUNE
RSSI
Receiver sensitivity check point
MODEM unit
UT-103
L20
PLL lock voltage adjustment for RX
L25
PLL lock voltage adjustment for TX
R112
Reference frequency adjustment
R10
FFSK Dev. adjustment (page 5-10)

5-7 IC-F45 TRIMMER ADJUSTMENT

NOTE: RSSI L0/L2 must be set after "RECEIVER SENSITIVITY" in section 5-6.

ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT	VALUE	OPERATION
RSSI L0/L2	1	• Operating frequency: 400.000 MHz [L-band] 440.000 MHz [H-band] • Connect the SSG to the antenna connector and set as: Level : 0.45 μV* (−114 dBm) Modulation: 1 kHz Deviation : ±3.5 kHz [25 kHz type] ±1.75 kHz [12.5 kHz type] • Set the cursor to "RSSI L0 Set" on the screen of the connected computer. • Receiving			Push [Enter] on the computer keyboard.
	2	• Level : 14 μV* (−84 dBm) • Set the cursor to "RSSI L2 Set" on the screen of the connected computer. • Receiving			
SQUELCH	1	• Operating frequency: 400.000 MHz [L-band] 440.000 MHz [H-band] • Connect the SSG to the antenna connector and set as: Level : ANY Modulation: 1 kHz Deviation : ±3.5 kHz [25 kHz type] ±1.75 kHz [12.5 kHz type] • Receiving	Connect the SINAD meter to the external speaker jack with an 8Ω load.	8 dB SINAD	SSG's output level.
	2	• Set the cursor to "Squelch" on the screen of the connected computer. • Receiving	Connected speaker	At the point where the audio noise just appears.	[←]/[→] on the computer keyboard.
	3	• Level : 1mV* (−47 dBm) • Turn SSG output OFF. • Receiving		Squelch delay is less than 1 sec.	Verify
OUTPUT POWER	1	• Operating frequency: 400.000 MHz [L-band] 440.000 MHz [H-band] • Output power set : High • Set the cursor to "High Power" on the screen of the connected computer. • Transmitting	Connect the RF power meter to the antenna connector.	5.5 W	[←]/[→] on the computer keyboard.
	2	• Output power set : Low2 • Set the cursor to "Low2 Power" on the screen of the connected computer. • Transmitting		2 W	
	3	• Output power set : Low1 • Set the cursor to "Low1 Power" on the screen of the connected computer. • Transmitting		1 W	
	NOTE: Each power adjustment must be adjusted on the proper channel (High/Low2/Low1), otherwise test equipment readings for the power will be misreading.				

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

IC-F45 TRIMMER ADJUSTMENT (CONTINUED)

ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT	VALUE	OPERATION
FM DEVIATION	1	• Operating frequency: 400.000 MHz [L-band] 490.000 MHz [H-band] • Apply an AF signal to the [MIC] jack: 1 kHz / 100 mV • Connect the FM deviation meter to the antenna connector and set as: HPF : OFF LPF : 20 kHz De-emphasis: OFF Detector : (P – P)/2 • Set the cursor to "Deviation" on the screen of the connected computer. • Transmitting	Connect the FM deviation meter to the antenna connector through the attenuator.	±4.2 kHz [25 kHz type] ±2.1 kHz [12.5 kHz type]	[⬅]/[➡] on the computer keyboard.
CTCSS DEVIATION	1	• Operating frequency: 400.000 MHz [L-band] 440.000 MHz [H-band] • No signal applied to the [MIC] jack. • Tone frequency : 67.0 Hz • Set the cursor to "CTCSS Dev." on the screen of the connected computer. • Transmitting	Connect the FM deviation meter to the antenna connector through the attenuator.	±0.5 kHz [25 kHz type] ±0.3 kHz [12.5 kHz type]	[⬅]/[➡] on the computer keyboard.
FFSK DEVIATION	1	• Operating frequency: 400.000 MHz [L-band] 440.000 MHz [H-band] • No signal applied to the [MIC] jack. • Connect the FM deviation meter to the antenna connector and set as: HPF : OFF LPF : 20 kHz De-emphasis: OFF Detector : (P – P)/2 • Set the cursor to the "FFSK TX" on the screen of the connected computer. • Push the [Space] key on the computer keyboard to transmit.	Connect the FM deviation meter to the antenna connector through the attenuator.	±3.0 kHz [25 kHz type] ±1.5 kHz [12.5 kHz type]	R10 (MODEM unit) see page 5-8

SECTION 6 PARTS LIST

[PA UNIT] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION		
IC1	1150001230	IC	SC-1224	[L-band]
	1150001240	IC	SC-1223	[H-band]
D1	1790000670	S.DIODE	SB07-03C-TB	
D2	1790000450	S.DIODE	MA862(TX)	
D3	1790001210	S.DIODE	1SS375-TL	
D4	1790001210	S.DIODE	1SS375-TL	
D5	1790001210	S.DIODE	1SS375-TL	
L1	6200003960	S.COIL	MLF1608A 1R0K-T	
L4	6200004440	S.COIL	ELJFC 4R7M-F	
L5	6200001640	S.COIL	ELJNC 10NK-F	
L6	6200001640	S.COIL	ELJNC 10NK-F	
L7	6200003850	S.COIL	36CS-656LZ-09K=P3	
L8	6200003750	S.COIL	36CS-656LZ-08K=P3	
L9	6200003750	S.COIL	36CS-656LZ-08K=P3	
L10	6200003830	S.COIL	DCS3120-015A TR	
L11	6200007140	S.COIL	BLM11B601S	
L12	6200007140	S.COIL	BLM11B601S	
R1	7030000270	S.RESISTOR	MCR10EZHJ 120 Ω (121)	
R2	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)	
R3	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)	
R4	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)	
R5	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)	
R6	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	
R7	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)	
C1	4030009580	S.CERAMIC	C1608 JB 1H 681K-T-A	
C2	4030009580	S.CERAMIC	C1608 JB 1H 681K-T-A	
C3	4030007030	S.CERAMIC	C1608 CH 1H 150D-T-A	[L-band]
	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A	[H-band]
C4	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C5	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C6	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C7	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L	
C8	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C9	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A	
C10	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A	
C11	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L	
C12	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A	
C13	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A	
C14	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C15	4550006480	S.TANTALUM	TEMSVA 1C 475M-8L	[L-band] only
C16	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A	
C17	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A	
C18	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C19	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A	
C21	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C22	4030007050	S.CERAMIC	C1608 CH 1H 220J-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	4030007020	S.CERAMIC	C1608 CH 1H 120D-T-A	[L-band]
	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A	[H-band]
C27	4030007020	S.CERAMIC	C1608 CH 1H 120D-T-A	[L-band]
	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A	[H-band]
C28	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	

[PA UNIT] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION	
C29	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [L-band]
	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A [H-band]
C30	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C31	4030007050	S.CERAMIC	C1608 CH 1H 220D-T-A [L-band]
	4030007040	S.CERAMIC	C1608 CH 1H 180D-T-A [H-band]
C32	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A [L-band]
	4030006970	S.CERAMIC	C1608 CH 1H 060D-T-A [H-band]
C33	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C34	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C36	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C37	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C38	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C39	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C40	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C41	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C42	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C43	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C44	4030009530	S.CERAMIC	C1608 CH 1H 030B-T-A
C45	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C46	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
J1	6510016370	S.CONNECTOR	AXR91010301
J2	6510019770	S.CONNECTOR	FH12-15S-0.5SV
W1	8900007180	CABLE	OPC-696
W2	7030003860	S.JUMPER	ERJ3GE JPW V
EP1	0910047423	PCB	B 4667C

[LPF BOARD] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION	
D1	1790000450	S.DIODE	MA862(TX)
L1	6200003300	S.COIL	ELJNC R22K-F
L2	6200003670	S.COIL	ELJNC 68NK-F
L3	6200003670	S.COIL	ELJNC 68NK-F
R1	7030000370	S.RESISTOR	MCR10EZHJ 820 Ω (821)
R2	7030000110	S.RESISTOR	MCR10EZHJ 5.6 Ω (5R6)
R3	7030000370	S.RESISTOR	MCR10EZHJ 820 Ω (821)
C1	4030007100	S.CERAMIC	C1608 CH 1H 560J-T-A
C2	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C3	4030007030	S.CERAMIC	C1608 CH 1H 150D-T-A [L-band]
	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A [H-band]
C4	4030008560	S.CERAMIC	C1608 CH 1H 300D-T-A [L-band]
	4030007040	S.CERAMIC	C1608 CH 1H 180D-T-A [H-band]

S.=Surface mount

[LPF BOARD] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION	
J1	6510019200	S.CONNECTOR	53268-0891
EP1	6910006550	LEADFRAM	HFB2.0-0.9-8 (K)
EP2	0910048690	PCB	B 4953

[ANT BOARD] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION	
EP1	0910047851	PCB	B 4670A

[MAIN UNIT] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION	
IC1	1110003490	S.IC	TA31136FN(D,EL)
IC2	1130006920	S.IC	TA75W01FU (TE12L)
IC3	1130006920	S.IC	TA75W01FU (TE12L)
IC4	1130006920	S.IC	TA75W01FU (TE12L)
IC5	1110002420	S.IC	NJM2073M(T1)
IC6	1110002750	S.IC	TA75S01F (TE85R)
IC7	1190000350	S.IC	M62363FP-850C
IC8	1130006920	S.IC	TA75W01FU (TE12L)
IC9	1130007300	S.IC	TC4W66FU(TE12L)
IC10	1130007610	S.IC	μPD3140GS-E1 (DS8)
IC12	1110003410	S.IC	μPC5023GR-043-GJG-T2
IC13	1130006220	S.IC	TC4W53FU (TE12L)
IC14	1110002750	S.IC	TA75S01F (TE85R)
IC15	1130007110	S.IC	TC7W04FU(TE12L)
IC16	1190000340	S.IC	X25160S(5V)
IC17	1140003750	S.IC	HD6473877H (Z-TAT)
IC18	1130007110	S.IC	TC7W04FU(TE12L)
IC19	1110003500	S.IC	S-80742SL-A6-T1
IC20	1180001080	S.IC	S-81250PG-PD-T1
IC21	1110003800	S.IC	NJM2904V-TE1
IC22	1190000490	S.IC	X25642S8I-2.76T
Q1	1580000610	S.FET	3SK239XR-TL
Q2	1580000490	S.FET	3SK166-2-T7
Q3	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q4	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q5	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q6	1590000990	S.TRANSISTOR	DTC363EK T147
Q9	1520000450	S.TRANSISTOR	2SB1132 T100 Q
Q10	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q11	1590000720	S.TRANSISTOR	DTA144EU T107
Q13	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q14	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q17	1560000540	S.FET	2SK880-Y (TE85R)
Q18	1590001660	S.TRANSISTOR	XP4312(TX)
Q20	1510000510	S.TRANSISTOR	2SA1576 T107 R
Q21	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q22	1590002350	S.TRANSISTOR	UMW2N TL
Q23	1590002340	S.TRANSISTOR	UMS2N TL
Q24	1560000540	S.FET	2SK880-Y (TE85R)
Q25	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q26	1590000430	S.TRANSISTOR	DTC144EU T107
Q27	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q28	1590000430	S.TRANSISTOR	DTC144EU T107
Q29	1530003420	S.TRANSISTOR	2SC5110-O (TE85R)
Q30	1530003420	S.TRANSISTOR	2SC5110-O (TE85R)
Q31	1530003420	S.TRANSISTOR	2SC5110-O (TE85R)
Q32	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q36	1590001660	S.TRANSISTOR	XP4312(TX)
Q38	1590000430	S.TRANSISTOR	DTC144EU T107
Q40	1530002060	S.TRANSISTOR	2SC4081 T107 R

[MAIN UNIT] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION		
Q41	1560000810	S.FET	2SK1069-4-TL	
Q42	1590002140	S.FET	2SJ316-TD	
Q43	1590002140	S.FET	2SJ316-TD	
Q44	1590000430	S.TRANSISTOR	DTC144EU T107	
Q45	1520000450	S.TRANSISTOR	2SB1132 T100 Q	
Q46	1530002060	S.TRANSISTOR	2SC4081 T107 R	
Q47	1510000510	S.TRANSISTOR	2SA1576 T107 R	
Q48	1530002060	S.TRANSISTOR	2SC4081 T107 R	
Q49	1520000450	S.TRANSISTOR	2SB1132 T100 Q	
Q50	1530002060	S.TRANSISTOR	2SC4081 T107 R	
Q51	1510000510	S.TRANSISTOR	2SA1576 T107 R	
Q52	1530002060	S.TRANSISTOR	2SC4081 T107 R	
Q53	1530002060	S.TRANSISTOR	2SC4081 T107 R	
Q54	1590000430	S.TRANSISTOR	DTC144EU T107	
Q55	1590000720	S.TRANSISTOR	DTA144EU T107	
D1	1790001210	S.DIODE	1SS375-TL	
D3	1720000270	S.VARICAP	1SV217 (TPH2)	
D4	1720000270	S.VARICAP	1SV217 (TPH2)	
D7	1750000550	S.DIODE	1SS355 TE-17	
D8	1720000270	S.VARICAP	1SV217 (TPH2)	
D9	1720000270	S.VARICAP	1SV217 (TPH2)	
D10	1720000270	S.VARICAP	1SV217 (TPH2)	
D11	1720000270	S.VARICAP	1SV217 (TPH2)	
D12	1720000270	S.VARICAP	1SV217 (TPH2)	
D13	1720000270	S.VARICAP	1SV217 (TPH2)	
D14	1720000270	S.VARICAP	1SV217 (TPH2)	
D15	1720000270	S.VARICAP	1SV217 (TPH2)	
D16	1720000260	S.VARICAP	1SV214 (TPH2)	
D18	1790000450	S.DIODE	MA862(TX)	
D20	1790001200	S.DIODE	MA6S121(TX)	
D21	1750000550	S.DIODE	1SS355 TE-17	
D22	1750000550	S.DIODE	1SS355 TE-17	
D23	1730002370	S.ZENER	MA8120-H(TX)	
D24	1750000550	S.DIODE	1SS355 TE-17	
D25	1750000130	S.DIODE	DA204U T107	
D26	1750000550	S.DIODE	1SS355 TE-17	
D27	1750000550	S.DIODE	1SS355 TE-17	
D28	1720000360	S.DIODE	HSU88TRF	
D29	1750000550	S.DIODE	1SS355 TE-17	
D30	1750000550	S.DIODE	1SS355 TE-17	
D31	1750000550	S.DIODE	1SS355 TE-17	
D33	1750000550	S.DIODE	1SS355 TE-17	
D34	1750000550	S.DIODE	1SS355 TE-17	
D36	1750000130	S.DIODE	DA204U T107	
D37	1750000130	S.DIODE	DA204U T107	
D38	1750000550	S.DIODE	1SS355 TE-17	
FI1	2010001810	XTAL	FL-226	
FI2	2020000710	CERAMIC	CFWM455G	
X1	6070000130	DISCR.	CDBM455C24	
X2	6050008850	XTAL	CR-464 (44.695 MHz)	
X3	6050009140	S.XTAL	CR-483 (12.8 MHz)	
X4	6050008840	S.XTAL	CR-483 (6.8 MHz)	
L1	6200002370	S.COIL	LQN 1A 39NJ04	
L2	6200002370	S.COIL	LQN 1A 39NJ04	
L4	6200002820	S.COIL	LQN 1A 47NJ04	[L-band]
	6200002370	S.COIL	LQN 1A 39NJ04	[H-band]
L5	6200003960	S.COIL	MLF1608A 1R0K-T	
L6	6200003960	S.COIL	MLF1608A 1R0K-T	
L7	6200002820	S.COIL	LQN 1A 47NJ04	[L-band]
	6200002360	S.COIL	LQN 1A 33NJ04	[H-band]
L9	6200003670	S.COIL	ELJNC 68NK-F	
L10	6200001770	S.COIL	ELJNC 47NK-F	
L11	6200003670	S.COIL	ELJNC 68NK-F	
L12	6200005190	S.COIL	MLF1608D R56K-T	
L14	6200004920	S.COIL	MLF1608A 2R2K-T	
L15	6200003550	S.COIL	MLF1608A 4R7K-T	
L18	6200005190	S.COIL	MLF1608D R56K-T	
L19	6200004990	S.COIL	LQH 1N R68M	

S.=Surface mount

[MAIN UNIT] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION	
L20	6200006700	S.COIL	MC152-E558CNA-100034=P3
L23	6200004880	S.COIL	ELJFC 3R3K-F
L24	6200004250	S.COIL	LQH 1N 4R7K
L25	6200003720	S.COIL	MC152-E558CNA-100035=P3
L27	6200004880	S.COIL	ELJFC 3R3K-F
L28	6200002160	S.COIL	ELJNC 82NK-F
L29	6200001770	S.COIL	ELJNC 47NK-F
L30	6200002160	S.COIL	ELJNC 82NK-F
L31	6200004650	S.COIL	MLR1608M 68NJ-T
L32	6200004880	S.COIL	ELJFC 3R3K-F
L34	6200004510	S.COIL	MLR1608M 47NJ-T
L35	6200004650	S.COIL	MLR1608M 68NJ-T
L36	6200001960	S.COIL	ELJFC R56MF
L37	6200005190	S.COIL	MLF1608D R56K-T
L39	6200004440	S.COIL	ELJFC 4R7M-F
L40	6200004440	S.COIL	ELJFC 4R7M-F
L41	6200004440	S.COIL	ELJFC 4R7M-F
L43	6200001960	S.COIL	ELJFC R56MF
L44	6200003540	S.COIL	MLF1608D R22K-T
L45	6200004700	S.COIL	MLR1608M R10K-T
L48	6200004510	S.COIL	MLR1608M 47NJ-T
L49	6200004700	S.COIL	MLR1608M R10K-T
R2	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R3	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R4	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R5	7030003350	S.RESISTOR	ERJ3GEYJ 181 V (180 Ω)
R6	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R7	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R9	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R10	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R14	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R15	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R16	7030003230	S.RESISTOR	ERJ3GEYJ 180 V (18 Ω)
R17	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R18	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R19	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R21	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)
R22	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R23	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R24	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R25	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R26	7030003750	S.RESISTOR	ERJ3GEYJ 394 V (390 kΩ)
R27	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R28	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R29	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R30	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R31	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R32	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R33	7030004270	S.RESISTOR	ERJ3EKF 4121 V (4.12 kΩ)
R34	7030005490	S.RESISTOR	RR0816R-363-D (36 kΩ)
R35	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R36	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R37	7030004850	S.RESISTOR	ERJ3GEYF 913 V (91 kΩ)
R38	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R39	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R40	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R41	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R42	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R43	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R47	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R48	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R49	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R50	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R51	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R52	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R55	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R56	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R57	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R58	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R59	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R60	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R61	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R62	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R63	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)

[MAIN UNIT] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION	
R64	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R65	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R66	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R67	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R68	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R69	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R70	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R71	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R72	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R73	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R75	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R76	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R77	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R78	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R79	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R80	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R81	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R82	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R83	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R93	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R95	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R96	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R97	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R98	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R99	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R100	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R101	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R102	7510000920	S.THERMISTOR	NTCCF2012 4CH 104KC-T
R103	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R104	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R109	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R111	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R112	7310003910	S.TRIMMER	MVR32HXBR N502 (5K)
R113	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R114	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R115	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ)
R116	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R117	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R118	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R119	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R120	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R123	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R124	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R125	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R126	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R127	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)
R129	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)
R130	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R131	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R132	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R133	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R134	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R137	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R138	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R139	7030003750	S.RESISTOR	ERJ3GEYJ 394 V (390 kΩ)
R140	7030003830	S.RESISTOR	ERJ3GEYJ 185 V (1.8 MΩ)
R141	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R142	7030003740	S.RESISTOR	ERJ3GEYJ 334 V (330 kΩ)
R143	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R144	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R145	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R146	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R147	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R148	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R149	7510000860	S.THERMISTOR	NTCCF2012 3FH 222KC-T
R150	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R151	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R154	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R155	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R156	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R157	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R158	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R159	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R160	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R161	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R162	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)

S.=Surface mount

[MAIN UNIT] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION	
R163	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R164	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R165	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R167	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R168	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R169	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R170	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)
R171	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R172	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R173	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)
R174	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R175	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R176	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R177	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R178	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)
R179	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R180	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R181	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R183	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R184	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R185	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R186	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ)
R187	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ)
R188	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R189	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R190	7030003230	S.RESISTOR	ERJ3GEYJ 180 V (18 Ω)
R191	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R192	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R193	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R194	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)
R195	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R196	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R197	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)
R198	7030003310	S.RESISTOR	ERJ3GEYJ 820 V (82 Ω)
R204	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R205	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R206	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R207	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R208	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R209	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R210	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R211	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R212	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R214	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R215	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R216	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R217	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R218	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R221	7510000900	S.THERMISTOR	NTCCF2012 3SH 223KC-T
R222	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R223	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R224	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R225	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R226	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R227	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R228	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R229	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R230	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R231	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R232	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R233	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R234	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R235	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R236	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R237	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R238	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R239	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R240	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R241	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R242	7030003760	S.RESISTOR	ERJ3GEYJ 474 V (470 kΩ)
R243	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R244	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R245	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R246	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R247	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R249	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)

[MAIN UNIT] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION	
R250	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R251	7030003830	S.RESISTOR	ERJ3GEYJ 185 V (1.8 MΩ)
R252	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R253	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R254	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R255	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R256	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R257	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R258	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R259	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R260	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R261	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R262	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R263	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R264	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R266	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R267	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R268	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R269	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R270	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R271	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R273	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R274	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R275	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R276	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R278	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R279	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R280	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R281	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R282	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R283	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R284	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R285	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R286	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)
R287	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R288	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R289	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R290	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R292	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R293	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R294	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R296	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R298	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R299	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R301	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R303	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R304	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R305	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R306	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R307	7030003290	S.RESISTOR	ERJ3GEYJ 560 V (56 Ω)
R308	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
C1	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C2	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A
C3	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C4	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C5	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C6	4030006970	S.CERAMIC	C1608 CH 1H 060D-T-A
C7	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C10	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C11	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C12	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C13	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C14	4610001900	S.TRIMMER	CTZ3E-05A-W1 [L-band]
	4610001910	S.TRIMMER	CTZ3E-10A-W1 [H-band]
C16	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C17	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C18	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C19	4030007080	S.CERAMIC	C1608 CH 1H 390J-T-A [L-band]
	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A [H-band]
C20	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C21	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

S.=Surface mount

[MAIN UNIT] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION	
C22	4030007070	S.CERAMIC	C1608 CH 1H 330J-T-A [L-band]
	4030007120	S.CERAMIC	C1608 CH 1H 820J-T-A [H-band]
C23	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C24	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C25	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C26	4610001900	S.TRIMMER	CTZ3E-05A-W1 [L-band]
	4610001910	S.TRIMMER	CTZ3E-10A-W1 [H-band]
C27	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C30	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [L-band]
	4030009550	S.CERAMIC	C1608 CH 1H 2R5B-T-A [H-band]
C31	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C32	4030009990	S.CERAMIC	C1608 CH 1H 200J-T-A
C33	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C34	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C35	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C36	4030007020	S.CERAMIC	C1608 CH 1H 120D-T-A [L-band]
	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [H-band]
C37	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C38	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C39	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C40	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C41	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C42	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C43	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C44	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C45	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C46	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C47	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C48	4030007120	S.CERAMIC	C1608 CH 1H 820J-T-A
C49	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C50	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C51	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C54	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C55	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C56	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C57	4030007150	S.CERAMIC	C1608 CH 1H 151J-T-A
C58	4030007150	S.CERAMIC	C1608 CH 1H 151J-T-A
C59	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C60	4030011310	S.CERAMIC	C2012 JB 1A 564K-T-A
C61	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C64	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C65	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C66	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C67	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C68	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C69	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C70	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C71	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C72	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C75	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C76	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C78	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C79	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C80	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C81	4030008870	S.CERAMIC	C1608 JB 1C 183K-T-A
C82	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C83	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C87	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C89	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C90	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C91	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C92	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C93	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C94	4550006720	S.TANTALUM	TEMSVC 1A 476M-12L
C95	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C96	4030009660	S.CERAMIC	C1608 JF 1C 224Z-T-A
C97	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C98	4030008880	S.CERAMIC	C1608 JB 1C 223K-T-A
C99	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C100	4550002890	S.TANTALUM	TESVA 1A 225M1-8L

[MAIN UNIT] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION	
C101	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C102	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C103	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C104	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C105	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C106	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C113	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C114	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C115	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C116	4030009880	S.CERAMIC	C1608 JB 1H 682K-T-A
C117	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C118	4030011330	S.CERAMIC	C1608 CH 1H 391J-T-A
C119	4030011310	S.CERAMIC	C2012 JB 1A 564K-T-A
C122	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C123	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C125	4550002980	S.TANTALUM	TEMSVA 1C 225M-8L
C126	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C127	4550000550	S.TANTALUM	TESVA 1V 224M1-8L
C128	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C129	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C130	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C131	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C132	4550006480	S.TANTALUM	TEMSVA 1C 475M-8L
C134	4030011310	S.CERAMIC	C2012 JB 1A 564K-T-A
C136	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C137	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C138	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C139	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C140	4030007060	S.CERAMIC	C1608 CH 1H 270J-T-A
C141	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C143	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C144	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C145	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C146	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C147	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C148	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C149	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-T-A
C150	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C151	4030009350	S.CERAMIC	C1608 CH 1H 3R5B-T-A
C152	4030007090	S.CERAMIC	C1608 CH 1H 470D-T-A [L-band]
	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A [H-band]
C153	4030007030	S.CERAMIC	C1608 CH 1H 150D-T-A [L-band]
	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A [H-band]
C154	4030007030	S.CERAMIC	C1608 CH 1H 150D-T-A [L-band]
	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A [H-band]
C155	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C156	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-T-A
C157	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C160	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C161	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C162	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C163	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C165	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C166	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C167	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C168	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C169	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A
C170	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C171	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C172	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C173	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C174	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C175	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C176	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C177	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C178	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C179	4030007070	S.CERAMIC	C1608 CH 1H 330J-T-A
C180	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C181	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C182	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

S.=Surface mount

[MAIN UNIT] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION	
C183	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C191	4030007070	S.CERAMIC	C1608 CH 1H 330J-T-A
C192	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C193	4030009650	S.CERAMIC	C1608 CH 1H 240J-T-A
C194	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C195	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C196	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C197	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C199	4030008870	S.CERAMIC	C1608 JB 1C 183K-T-A
C200	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C201	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C202	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C203	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C204	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C206	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C207	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C208	4550000510	S.TANTALUM	TESVA 1V 473M1-8L
C209	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C210	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C211	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C212	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C213	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C214	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C215	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C216	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C217	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C218	4030008870	S.CERAMIC	C1608 JB 1C 183K-T-A
C219	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C220	4030008870	S.CERAMIC	C1608 JB 1C 183K-T-A
C221	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C222	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C223	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C224	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C226	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C227	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C228	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C229	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C230	4030007110	S.CERAMIC	C1608 CH 1H 680J-T-A
C232	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C233	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C234	4550000270	S.TANTALUM	TESVA 1E 474M1-8L
C235	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C237	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
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	4030011310	S.CERAMIC	C2012 JB 1A 564K-T-A
C243	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C244	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C245	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C246	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C247	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C248	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C249	4550006480	S.TANTALUM	TEMSVA 1C 475M-8L [L-band] only
C250	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C251	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C252	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C253	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C258	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C259	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C260	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C261	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C262	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C263	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C264	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C265	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C266	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C269	4550003220	S.TANTALUM	TEMSVA 1E 105M-8L
C270	4550003220	S.TANTALUM	TEMSVA 1E 105M-8L
C271	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C272	4550003220	S.TANTALUM	TEMSVA 1E 105M-8L
C273	4030008680	S.CERAMIC	C2012 JF 1C 105Z-T-A
C274	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C275	4030008680	S.CERAMIC	C2012 JF 1C 105Z-T-A
C276	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A

[MAIN UNIT] (IC-F35 only)

REF. NO.	ORDER NO.	DESCRIPTION	
C277	4030008680	S.CERAMIC	C2012 JF 1C 105Z-T-A
C278	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C279	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C280	4030007060	S.CERAMIC	C1608 CH 1H 270J-T-A
C281	4030008560	S.CERAMIC	C1608 CH 1H 300D-T-A [L-band]
	4030007060	S.CERAMIC	C1608 CH 1H 270J-T-A [H-band]
C283	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C284	4030011310	S.CERAMIC	C2012 JB 1A 564K-T-A
C286	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C287	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C289	4030009540	S.CERAMIC	C1608 CH 1H 1R5B-T-A
C293	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C294	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C295	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C296	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C297	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C298	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C299	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C301	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C302	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C303	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C304	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C305	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C306	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C307	4550006110	S.TANTALUM	TEMSVB2 0J 336M8L
C308	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C309	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C315	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C316	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C317	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C318	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C319	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C320	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C321	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C322	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C323	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C324	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C325	4550006080	S.TANTALUM	TEMSVB2 1C 106M-8L
C326	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C335	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C336	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
S1	2230000980	SWITCH	SKHLLB
J1	6510019190	S.CONNECTOR	52365-0891
J2	6510019770	S.CONNECTOR	FH12-15S-0.5SV
J3	6510018410	S.CONNECTOR	53263-0690
J4	6510019770	S.CONNECTOR	FH12-15S-0.5SV
J5	6510018430	S.CONNECTOR	AXN330C038P
W1	7030003860	S.JUMPER	ERJ3GE JPW V
W2	7030003860	S.JUMPER	ERJ3GE JPW V
EP1	0910046475	PCB	B 4664E

[PTT BOARD] (Common)

REF. NO.	ORDER NO.	DESCRIPTION	
S1	2260002280	S.SWITCH	EVQPA101K
S2	2260002280	S.SWITCH	EVQPA101K
S4	2260002280	S.SWITCH	EVQPA101K
J1	6510017600	S.CONNECTOR	52357-0690
EP1	0910048427	PCB	B 3990G

S.=Surface mount

F35

F45

[EF BOARD] (Common)

REF. NO.	ORDER NO.	DESCRIPTION	
FI1	2040000790	S.LC	EXCCET103U
FI2	2040000790	S.LC	EXCCET103U
C1	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C2	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
F1	5210000550	S.FUSE	TR3216CP-3
EP1	0910047411	PCB	B 4666A

[FRONT UNIT] (Common)

REF. NO.	ORDER NO.	DESCRIPTION	
MC1	7700001820	MICROPHONE	EM-123H

[TENKEY BOARD] (Common)

REF. NO.	ORDER NO.	DESCRIPTION	
IC1	1140004230	S.IC	HD404812A44H
X1	6060000550	S.CERAMIC	PBRC 3.58AR
R1	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R2	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R3	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R4	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R5	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R6	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R7	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R8	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R9	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R10	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R11	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R12	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R13	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R14	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R15	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R16	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R17	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R18	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R19	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R20	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R21	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω)
R22	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R23	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R24	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
C1	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C2	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C3	4550006110	S.TANTALUM	TEMSVB2 0J 336M8L
C4	4030007070	S.CERAMIC	C1608 CH 1H 330J-T-A
C5	4030007070	S.CERAMIC	C1608 CH 1H 330J-T-A
C6	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C7	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C8	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C9	4030008630	S.CERAMIC	C1608 JF 1C 104Z-T-A
C10	4550006110	S.TANTALUM	TEMSVB2 0J 336M8L
C11	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C13	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

[TENKEY BOARD] (Common)

REF. NO.	ORDER NO.	DESCRIPTION	
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	5040001950	S.LED	SML-110LT T86
DS6	5030001380	LCD	LD-B4548J
DS7	5010000160	S.LED	LNJ310M6URA
DS8	5010000160	S.LED	LNJ310M6URA
J1	6510019780	S.CONNECTOR	FH12A-15S-0.5SH
W1	7030003860	S.JUMPER	ERJ3GE JPW V
W2	7030003860	S.JUMPER	ERJ3GE JPW V
W3	7030003860	S.JUMPER	ERJ3GE JPW V
W4	8900007190	CABLE	ERJ3GE JPW V
EP1	0910047403	PCB	B 4665C
EP3	8930034750	LCD CONTACT	SRCN-1556 ZSS

[MODEM UNIT] (Common)

REF. NO.	ORDER NO.	DESCRIPTION	
EP1	optional product	UNIT BOARD	UT-103

[PA UNIT] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION		
IC1	1150001290	IC	M57786L	[L-band]
	1150001440	IC	M57786M/SC1274	[H-band]
D1	1790000670	S.DIODE	SB07-03C-TB	
D2	1790000450	S.DIODE	MA862(TX)	
D3	1790001210	S.DIODE	1SS375-TL	
D4	1790001210	S.DIODE	1SS375-TL	
D5	1790001210	S.DIODE	1SS375-TL	
L1	6200003960	S.COIL	MLF1608A 1R0K-T	
L4	6200004440	S.COIL	ELJFC 4R7M-F	
L5	6200001640	S.COIL	ELJNC 10NK-F	
L6	6200001640	S.COIL	ELJNC 10NK-F	
L7	6200005780	S.COIL	33CS-Y655LY-03K=P3	
L8	6200005780	S.COIL	33CS-Y655LY-03K=P3	
L9	6200005770	S.COIL	33CS-Y655LY-04K=P3	
L10	6200003770	S.COIL	DCS3220-045A TR	
L11	6200007140	S.COIL	BLM11B601S	
R1	7030000270	S.RESISTOR	MCR10EZHJ 120 Ω (121)	
R2	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)	
R3	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)	
R4	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)	
R5	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)	
R6	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)	
R7	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)	
C1	4030009580	S.CERAMIC	C1608 JB 1H 681K-T-A	
C2	4030009580	S.CERAMIC	C1608 JB 1H 681K-T-A	
C3	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A	
C4	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C5	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C6	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C7	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L	

S.=Surface mount

[PA UNIT] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION	
C8	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C9	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C10	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C11	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C12	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C13	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C14	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C15	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L [L-band]
	4550006480	S.TANTALUM	TEMSVA 1C 475M-8L [H-band]
C16	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C17	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C18	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C19	4030009500	S.CERAMIC	C1608 CH 1H 0R5B-T-A
C20	4030007070	S.CERAMIC	C1608 CH 1H 330J-T-A
C21	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
C26	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A
C27	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A
C28	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C29	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A
C30	4030009550	S.CERAMIC	C1608 CH 1H 2R5B-T-A
C31	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A
C32	4030009920	S.CERAMIC	C1608 CH 1H 050B-T-A
C33	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C34	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C35	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A [L-band]
	4030009540	S.CERAMIC	C1608 CH 1H 1R5B-T-A [H-band]
C36	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C37	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C38	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C39	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C40	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C41	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C42	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C43	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C47	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
J1	6510016370	S.CONNECTOR	AXR91010301
J2	6510019770	S.CONNECTOR	FH12-15S-0.5SV
W1	8900007180	CABLE	OPC-696
EP1	0910048124	PCB	B 4672D

[LPF BOARD] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION	
D1	1790000450	S.DIODE	MA862(TX)
D2	1790000670	S.DIODE	SB07-03C-TB
L1	6200003300	S.COIL	ELJNC R22K-F
L2	6200001760	S.COIL	ELJNC 22NK-F
L3	6200001760	S.COIL	ELJNC 22NK-F
L4	6200003050	S.COIL	NL 322522T-R82J-3
R1	7030000370	S.RESISTOR	MCR10EZHJ 820 Ω (821)
R2	7030000110	S.RESISTOR	MCR10EZHJ 5.6 Ω (5R6)
R3	7030000370	S.RESISTOR	MCR10EZHJ 820 Ω (821)
C1	4030007100	S.CERAMIC	C1608 CH 1H 560J-T-A
C2	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

[LPF BOARD] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION	
C3	4030009520	S.CERAMIC	C1608 CH 1H 020B-T-A
C4	4030009910	S.CERAMIC	C1608 CH 1H 040B-T-A
C5	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
J1	6510019200	S.CONNECTOR	53268-0891
EP1	6910006550	LEADFRAM	HFB2.0-0.9-8 (K)
EP2	0910048434	PCB	B 4668D

[ANT BOARD] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION		
L1	6200002320	S.COIL	LQN 1A 8N8J04	[L-band]
	6200002330	S.COIL	LQN 1A 15NJ04	[H-band]
EP1	0910047861	PCB	B 4675A	

[MAIN UNIT] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION	
IC1	1110003490	S.IC	TA31136FN(D,EL)
IC2	1130006920	S.IC	TA75W01FU (TE12L)
IC3	1130006920	S.IC	TA75W01FU (TE12L)
IC4	1130006920	S.IC	TA75W01FU (TE12L)
IC5	1110002420	S.IC	NJM2073M(T1)
IC6	1110002750	S.IC	TA75S01F (TE85R)
IC7	1190000350	S.IC	M62363FP-650C
IC8	1130006920	S.IC	TA75W01FU (TE12L)
IC9	1130007300	S.IC	TC4W66FU(TE12L)
IC10	1130007610	S.IC	μPD3140GS-E1 (DS8)
IC12	1110003410	S.IC	μPC5023GR-043-GJG-T2
IC13	1130006220	S.IC	TC4W53FU (TE12L)
IC14	1110002750	S.IC	TA75S01F (TE85R)
IC15	1130007110	S.IC	TC7W04FU(TE12L)
IC16	1190000340	S.IC	X25160S(5V)
IC17	1140003750	S.IC	HD6473877H (Z-TAT)
IC18	1130007110	S.IC	TC7W04FU(TE12L)
IC19	1110003500	S.IC	S-80742SL-A6-T1
IC20	1180001080	S.IC	S-81250PG-PD-T1
IC21	1110003800	S.IC	NJM2904V-TE1
IC22	1190000490	S.IC	X25642S8I-2.7ST
Q1	1580000610	S.FET	3SK239XR-TL
Q2	1580000490	S.FET	3SK166-2-T7
Q3	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q4	1530002600	S.TRANSISTOR	2SC4215-O (TE85R)
Q5	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q6	1590000990	S.TRANSISTOR	DTC363EK T147
Q9	1520000450	S.TRANSISTOR	2SB1132 T100 Q
Q10	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q11	1590000720	S.TRANSISTOR	DTA144EU T107
Q13	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q14	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q17	1560000540	S.FET	2SK880-Y (TE85R)
Q18	1590001660	S.TRANSISTOR	XP4312(TX)
Q20	1510000510	S.TRANSISTOR	2SA1576 T107 R
Q21	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q22	1590002350	S.TRANSISTOR	UMW2N TL
Q23	1590002340	S.TRANSISTOR	UMS2N TL
Q24	1560000540	S.FET	2SK880-Y (TE85R)
Q25	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q26	1590000430	S.TRANSISTOR	DTC144EU T107

S.=Surface mount

[MAIN UNIT] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION	
Q27	1530002920	S.TRANSISTOR	2SC4226-T2 R25
Q28	1590000680	S.TRANSISTOR	DTC114EU T107
Q29	1530003420	S.TRANSISTOR	2SC5110-O (TE85R)
Q30	1530003420	S.TRANSISTOR	2SC5110-O (TE85R)
Q31	1530003420	S.TRANSISTOR	2SC5110-O (TE85R)
Q32	1530003420	S.TRANSISTOR	2SC5110-O (TE85R)
Q33	1530002680	S.TRANSISTOR	2SC3357-T2
Q36	1590001660	S.TRANSISTOR	XP4312(TX)
Q38	1590000430	S.TRANSISTOR	DTC144EU T107
Q40	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q41	1560000810	S.FET	2SK1069-4-TL
Q42	1590002140	S.FET	2SJ316-TD
Q43	1590002140	S.FET	2SJ316-TD
Q44	1590000430	S.TRANSISTOR	DTC144EU T107
Q45	1520000450	S.TRANSISTOR	2SB1132 T100 Q
Q46	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q47	1510000510	S.TRANSISTOR	2SA1576 T107 R
Q48	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q49	1520000450	S.TRANSISTOR	2SB1132 T100 Q
Q50	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q51	1510000510	S.TRANSISTOR	2SA1576 T107 R
Q52	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q53	1530002060	S.TRANSISTOR	2SC4081 T107 R
Q54	1590000430	S.TRANSISTOR	DTC144EU T107
Q55	1590000720	S.TRANSISTOR	DTA144EU T107
D1	1790001210	S.DIODE	1SS375-TL
D2	1720000500	S.VARICAP	1SV230(TPH3)
D3	1720000500	S.VARICAP	1SV230(TPH3)
D4	1720000500	S.VARICAP	1SV230(TPH3)
D5	1720000500	S.VARICAP	1SV230(TPH3)
D7	1750000550	S.DIODE	1SS355 TE-17
D8	1720000270	S.VARICAP	1SV217 (TPH2)
D10	1720000270	S.VARICAP	1SV217 (TPH2)
D12	1720000270	S.VARICAP	1SV217 (TPH2)
D14	1720000270	S.VARICAP	1SV217 (TPH2)
D16	1720000370	S.VARICAP	HVU350TRF
D18	1790000450	S.DIODE	MA862(TX)
D20	1790001200	S.DIODE	MA6S121(TX)
D21	1750000550	S.DIODE	1SS355 TE-17
D22	1750000550	S.DIODE	1SS355 TE-17
D23	1730002370	S.ZENER	MA8120-H(TX)
D24	1750000550	S.DIODE	1SS355 TE-17
D25	1750000130	S.DIODE	DA204U T107
D26	1750000550	S.DIODE	1SS355 TE-17
D27	1750000550	S.DIODE	1SS355 TE-17
D28	1720000360	S.DIODE	HSU88TRF
D29	1750000550	S.DIODE	1SS355 TE-17
D30	1750000550	S.DIODE	1SS355 TE-17
D31	1750000550	S.DIODE	1SS355 TE-17
D33	1750000550	S.DIODE	1SS355 TE-17
D34	1750000550	S.DIODE	1SS355 TE-17
D36	1750000130	S.DIODE	DA204U T107
D37	1750000130	S.DIODE	DA204U T107
D38	1750000550	S.DIODE	1SS355 TE-17
FI1	2010001810	XTAL	FL-226
FI2	2020000710	CERAMIC	CFWM455G
X1	6070000130	DISCR.	CDBM455C24
X2	6050008850	XTAL	CR-464 (44.695 MHz)
X3	6050009140	S.XTAL	CR-483 (12.8 MHz)
X4	6050008840	S.XTAL	CR-463 (6.8 MHz)
L2	6200002330	S.COIL	LQN 1A 15NJ04
L3	6200002320	S.COIL	LQN 1A 8N8J04
L4	6200002320	S.COIL	LQN 1A 8N8J04
L5	6200003960	S.COIL	MLF1608A 1R0K-T
L6	6200003960	S.COIL	MLF1608A 1R0K-T
L7	6200002320	S.COIL	LQN 1A 8N8J04
L8	6200002320	S.COIL	LQN 1A 8N8J04
L9	6200003440	S.COIL	ELJNC 39NK-F

[MAIN UNIT] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION	
L10	6200001650	S.COIL	ELJNC 18NK-F
L11	6200001960	S.COIL	ELJFC R56MF
L12	6200005190	S.COIL	MLF1608D R56K-T
L14	6200004920	S.COIL	MLF1608A 2R2K-T
L15	6200003550	S.COIL	MLF1608A 4R7K-T
L18	6200005190	S.COIL	MLF1608D R56K-T
L19	6200004990	S.COIL	LQH 1N R68M
L20	6200003690	S.COIL	MC152-E558ANA-100051=P3
L23	6200001620	S.COIL	ELJFC 1R0K-F
L24	6200004990	S.COIL	LQH 1N R68M
L25	6200003690	S.COIL	MC152-E558ANA-100051=P3
L27	6200001630	S.COIL	ELJNC R10K-F
L28	6200001760	S.COIL	ELJNC 22NK-F
L29	6200001750	S.COIL	ELJNC 15NK-F
L30	6200001760	S.COIL	ELJNC 22NK-F
L31	6200004060	S.COIL	MLR1608M 18NJ-T
L32	6200001960	S.COIL	ELJFC R56MF
L33	6200001760	S.COIL	ELJNC 22NK-F
L34	6200004060	S.COIL	MLR1608M 18NJ-T
L35	6200004220	S.COIL	MLR1608M 27NJ-T
L36	6200001960	S.COIL	ELJFC R56MF
L37	6200005190	S.COIL	MLF1608D R56K-T
L39	6200004440	S.COIL	ELJFC 4R7M-F
L40	6200004440	S.COIL	ELJFC 4R7M-F
L41	6200004440	S.COIL	ELJFC 4R7M-F
L43	6200001960	S.COIL	ELJFC R56MF
L44	6200003540	S.COIL	MLF1608D R22K-T
L45	6200004510	S.COIL	MLR1608M 47NJ-T
L47	6200004070	S.COIL	MLR1608M 22NJ-T
L48	6200004060	S.COIL	MLR1608M 18NJ-T
L49	6200004700	S.COIL	MLR1608M R10K-T
R1	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R2	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R3	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R4	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R5	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R6	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R7	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R8	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R9	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R10	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R14	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R15	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R16	7030003230	S.RESISTOR	ERJ3GEYJ 180 V (18 Ω)
R17	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R18	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R19	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R21	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)
R22	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R23	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R24	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R25	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R26	7030003750	S.RESISTOR	ERJ3GEYJ 394 V (390 kΩ)
R27	7030003540	S.RESISTOR	ERJ3GEYJ 682 V (6.8 kΩ)
R28	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R29	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R30	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R31	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R32	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R33	7030004270	S.RESISTOR	ERJ3EKF 4121 V (4.12 kΩ)
R34	7030005490	S.RESISTOR	RR0816R-363-D (36 kΩ)
R35	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R36	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R37	7030004850	S.RESISTOR	ERJ3GEYF 913 V (91 kΩ)
R38	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R39	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R40	7030004870	S.RESISTOR	ERJ3GEYF 224 V (220 kΩ)
R41	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R42	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R43	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R47	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R48	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R49	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R50	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)

S.=Surface mount

[MAIN UNIT] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION	
R51	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R52	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R55	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R56	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R57	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R58	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R59	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R60	7030003420	S.RESISTOR	ERJ3GEYJ 681 V (680 Ω)
R61	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R62	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R63	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R64	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R65	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R66	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R67	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R68	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R69	7030003380	S.RESISTOR	ERJ3GEYJ 331 V (330 Ω)
R70	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R71	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R72	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R73	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R75	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R76	7030003710	S.RESISTOR	ERJ3GEYJ 184 V (180 kΩ)
R77	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R78	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R79	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R80	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R81	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R82	7030003660	S.RESISTOR	ERJ3GEYJ 683 V (68 kΩ)
R83	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R93	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R95	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R96	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R97	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R98	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R99	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R100	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R101	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R102	7510000920	S.THERMISTOR	NTCCF2012 4CH 104KC-T
R103	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R104	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R109	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R111	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R112	7310003910	S.TRIMMER	MVR32HXBR N502 (5K)
R113	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R114	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R115	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ)
R116	7030004050	S.RESISTOR	ERJ3GEYJ 1R0 V (1 Ω)
R117	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R118	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R119	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R120	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R123	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R124	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R125	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R126	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R127	7030003470	S.RESISTOR	ERJ3GEYJ 182 V (1.8 kΩ)
R129	7030003410	S.RESISTOR	ERJ3GEYJ 561 V (560 Ω)
R130	7030003670	S.RESISTOR	ERJ3GEYJ 823 V (82 kΩ)
R131	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R132	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R133	7030003650	S.RESISTOR	ERJ3GEYJ 563 V (56 kΩ)
R134	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R137	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R138	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R139	7030003750	S.RESISTOR	ERJ3GEYJ 394 V (390 kΩ)
R140	7030003830	S.RESISTOR	ERJ3GEYJ 185 V (1.8 MΩ)
R141	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R142	7030003740	S.RESISTOR	ERJ3GEYJ 334 V (330 kΩ)
R143	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R144	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R145	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R146	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R147	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R148	7030003510	S.RESISTOR	ERJ3GEYJ 392 V (3.9 kΩ)
R149	7510000860	S.THERMISTOR	NTCCF2012 3FH 222KC-T

[MAIN UNIT] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION	
R150	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R151	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R154	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R155	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R156	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R157	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R158	7030003580	S.RESISTOR	ERJ3GEYJ 153 V (15 kΩ)
R159	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R160	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R161	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R162	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R163	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω)
R164	7030003630	S.RESISTOR	ERJ3GEYJ 393 V (39 kΩ)
R165	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R167	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R168	7030003600	S.RESISTOR	ERJ3GEYJ 223 V (22 kΩ)
R169	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R170	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)
R171	7030003430	S.RESISTOR	ERJ3GEYJ 821 V (820 Ω) [L-band]
	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω) [H-band]
R172	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R173	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R174	7030003700	S.RESISTOR	ERJ3GEYJ 154 V (150 kΩ)
R175	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ) [L-band]
	7030003570	S.RESISTOR	ERJ3GEYJ 123 V (12 kΩ) [H-band]
R176	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R177	7030003530	S.RESISTOR	ERJ3GEYJ 562 V (5.6 kΩ)
R178	7030004040	S.RESISTOR	ERJ3GEYJ 4R7 V (4.7 Ω)
R179	7030003330	S.RESISTOR	ERJ3GEYJ 121 V (120 Ω) [L-band]
	7030003320	S.RESISTOR	ERJ3GEYJ 101 V (100 Ω) [H-band]
R180	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R181	7030003360	S.RESISTOR	ERJ3GEYJ 221 V (220 Ω)
R183	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R184	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R185	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R186	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R188	7030003390	S.RESISTOR	ERJ3GEYJ 391 V (390 Ω)
R189	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R190	7030003230	S.RESISTOR	ERJ3GEYJ 180 V (18 Ω)
R191	7030003370	S.RESISTOR	ERJ3GEYJ 271 V (270 Ω)
R192	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R193	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R194	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)
R195	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R196	7030003490	S.RESISTOR	ERJ3GEYJ 272 V (2.7 kΩ)
R197	7030003310	S.RESISTOR	ERJ3GEYJ 820 V (82 Ω)
R199	7030000100	S.RESISTOR	MCR10EZHJ 4.7 Ω (4R7)
R200	7030003500	S.RESISTOR	ERJ3GEYJ 332 V (3.3 kΩ)
R201	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R202	7030003240	S.RESISTOR	ERJ3GEYJ 220 V (22 Ω)
R204	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R205	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R206	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R207	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R208	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R209	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R210	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R211	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R212	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R214	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R215	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R216	7030003200	S.RESISTOR	ERJ3GEYJ 100 V (10 Ω)
R217	7030003620	S.RESISTOR	ERJ3GEYJ 333 V (33 kΩ)
R218	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R221	7510000900	S.THERMISTOR	NTCCF2012 3SH 223KC-T
R222	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R223	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R224	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R225	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)
R226	7030003680	S.RESISTOR	ERJ3GEYJ 104 V (100 kΩ)

S.=Surface mount

F45

[MAIN UNIT] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION
R227	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R228	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R229	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R230	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R231	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R232	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R233	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R234	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R235	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R236	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R237	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R238	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R239	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R240	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R241	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R242	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R243	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R244	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R245	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R246	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R247	7030003500	S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)
R249	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R250	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R251	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)
R252	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R253	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R254	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R255	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R256	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R257	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R258	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R259	7030003540	S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ)
R260	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R261	7030003460	S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ)
R262	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R263	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R264	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R266	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R267	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R268	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R269	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R270	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R271	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R273	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R274	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R275	7030003530	S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ)
R276	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R278	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R279	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R280	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R281	7030004050	S.RESISTOR ERJ3GEYJ 1R0 V (1 Ω)
R282	7030004050	S.RESISTOR ERJ3GEYJ 1R0 V (1 Ω)
R283	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R284	7030003540	S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ)
R285	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R286	7030004040	S.RESISTOR ERJ3GEYJ 4R7 V (4.7 Ω)
R287	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R288	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R289	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R290	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R292	7030003320	S.RESISTOR ERJ3GEYJ 101 V (100 Ω)
R293	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R294	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R296	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R298	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R299	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R301	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R302	7030003240	S.RESISTOR ERJ3GEYJ 220 V (22 Ω)
R303	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R304	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R305	7030003590	S.RESISTOR ERJ3GEYJ 183 V (18 kΩ)
R306	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R308	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)

[MAIN UNIT] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION
C1	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C3	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C6	4030006930	S.CERAMIC C1608 CH 1H 020C-T-A
C7	4030006940	S.CERAMIC C1608 CH 1H 030C-T-A
C8	4610001910	S.TRIMMER CTZ3E-10A-W1 [L-band]
	4610001900	S.TRIMMER CTZ3E-05A-W1 [H-band]
C9	4030007000	S.CERAMIC C1608 CH 1H 090D-T-A
C10	4030006990	S.CERAMIC C1608 CH 1H 080D-T-A
C11	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C12	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C13	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C14	4610001910	S.TRIMMER CTZ3E-10A-W1 [L-band]
	4610001900	S.TRIMMER CTZ3E-05A-W1 [H-band]
C16	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C17	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C18	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C19	4030007000	S.CERAMIC C1608 CH 1H 090D-T-A
C20	4030009510	S.CERAMIC C1608 CH 1H 010B-T-A
C21	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C22	4030007000	S.CERAMIC C1608 CH 1H 090D-T-A
C23	4030006900	S.CERAMIC C1608 JB 1E 103K-T-A
C24	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C25	4030010740	S.CERAMIC C1608 JB 1A 104K-T-A
C26	4610001910	S.TRIMMER CTZ3E-10A-W1 [L-band]
	4610001900	S.TRIMMER CTZ3E-05A-W1 [H-band]
C27	4030009510	S.CERAMIC C1608 CH 1H 010B-T-A
C28	4030007000	S.CERAMIC C1608 CH 1H 090D-T-A
C29	4610001910	S.TRIMMER CTZ3E-10A-W1 [L-band]
	4610001900	S.TRIMMER CTZ3E-05A-W1 [H-band]
C30	4030007010	S.CERAMIC C1608 CH 1H 100D-T-A
C31	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C32	4030009990	S.CERAMIC C1608 CH 1H 200J-T-A
C33	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C34	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C35	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C36	4030006950	S.CERAMIC C1608 CH 1H 040C-T-A
C37	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C38	4030006960	S.CERAMIC C1608 CH 1H 050C-T-A
C39	4030006970	S.CERAMIC C1608 CH 1H 060D-T-A
C40	4030007010	S.CERAMIC C1608 CH 1H 100D-T-A
C41	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C42	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C43	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C44	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C45	4030007090	S.CERAMIC C1608 CH 1H 470J-T-A
C46	4550002890	S.TANTALUM TESVA 1A 225M1-8L
C47	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C48	4030007120	S.CERAMIC C1608 CH 1H 820J-T-A
C49	4030007130	S.CERAMIC C1608 CH 1H 101J-T-A
C50	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C51	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C54	4030006980	S.CERAMIC C1608 CH 1H 070D-T-A
C55	4030007030	S.CERAMIC C1608 CH 1H 150J-T-A
C56	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C57	4030007150	S.CERAMIC C1608 CH 1H 151J-T-A
C58	4030007150	S.CERAMIC C1608 CH 1H 151J-T-A
C59	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C60	4030011310	S.CERAMIC C2012 JB 1A 564K-T-A
C61	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C64	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C65	4550002890	S.TANTALUM TESVA 1A 225M1-8L
C66	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A
C67	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C68	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C69	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C70	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C71	4030008920	S.CERAMIC C1608 JB 1C 473K-T-A
C72	4030010740	S.CERAMIC C1608 JB 1A 104K-T-A
C75	4550002890	S.TANTALUM TESVA 1A 225M1-8L
C76	4030010740	S.CERAMIC C1608 JB 1A 104K-T-A
C78	4030010740	S.CERAMIC C1608 JB 1A 104K-T-A
C79	4550002890	S.TANTALUM TESVA 1A 225M1-8L
C80	4030006860	S.CERAMIC C1608 JB 1H 102K-T-A
C81	4030008870	S.CERAMIC C1608 JB 1C 183K-T-A
C82	4030010740	S.CERAMIC C1608 JB 1A 104K-T-A
C83	4030006850	S.CERAMIC C1608 JB 1H 471K-T-A

S.=Surface mount

[MAIN UNIT] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION	
C87	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C89	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C90	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C91	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C92	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C93	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C94	4550006720	S.TANTALUM	TEMSVC 1A 476M-12L
C95	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C96	4030009660	S.CERAMIC	C1608 JF 1C 224Z-T-A
C97	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C98	4030008880	S.CERAMIC	C1608 JB 1C 223K-T-A
C99	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C100	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C101	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C102	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C103	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C104	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C105	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C108	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C113	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C114	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C115	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C116	4030009880	S.CERAMIC	C1608 JB 1H 682K-T-A
C117	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C118	4030011330	S.CERAMIC	C1608 CH 1H 391J-T-A
C119	4030011310	S.CERAMIC	C2012 JB 1A 564K-T-A
C122	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C123	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C125	4550002980	S.TANTALUM	TEMSVA 1C 225M-8L
C126	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C127	4550000550	S.TANTALUM	TESVA 1V 224M1-8L
C128	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C129	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C130	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C131	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C132	4550006480	S.TANTALUM	TEMSVA 1C 475M-8L
C134	4030011310	S.CERAMIC	C2012 JB 1A 564K-T-A
C136	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C137	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C138	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C139	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C140	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [L-band]
	4030006970	S.CERAMIC	C1608 CH 1H 060D-T-A [H-band]
C141	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C143	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [L-band]
	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A [H-band]
C144	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C145	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C146	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C147	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C148	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C149	4030009560	S.CERAMIC	C1608 CH 1H R75B-T-A
C150	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C151	4030009560	S.CERAMIC	C1608 CH 1H R75B-T-A
C152	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A [L-band]
	4030006940	S.CERAMIC	C1608 CH 1H 030C-T-A [H-band]
C153	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C154	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A [L-band]
	4030006970	S.CERAMIC	C1608 CH 1H 060D-T-A [H-band]
C155	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C156	4030009570	S.CERAMIC	C1608 CH 1H 0R3B-T-A
C157	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C160	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C161	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C162	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C163	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C165	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C166	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

[MAIN UNIT] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION	
C167	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C168	4030007040	S.CERAMIC	C1608 CH 1H 180J-T-A
C169	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A
C170	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C171	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C172	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C173	4030007000	S.CERAMIC	C1608 CH 1H 090D-T-A
C174	4030006970	S.CERAMIC	C1608 CH 1H 060D-T-A
C175	4030006970	S.CERAMIC	C1608 CH 1H 060D-T-A
C176	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C177	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C178	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C179	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [L-band]
	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A [H-band]
C180	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C181	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C182	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [L-band]
	4030006950	S.CERAMIC	C1608 CH 1H 040C-T-A [H-band]
C183	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C187	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C188	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C190	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C191	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C192	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A [L-band]
	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A [H-band]
C193	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A [L-band]
	4030007010	S.CERAMIC	C1608 CH 1H 100D-T-A [H-band]
C194	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C195	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C196	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C197	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C199	4030008870	S.CERAMIC	C1608 JB 1C 183K-T-A
C200	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C201	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C202	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C203	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C204	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C206	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C207	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C208	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C209	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C210	4030007140	S.CERAMIC	C1608 CH 1H 121J-T-A
C211	4030006870	S.CERAMIC	C1608 JB 1H 222K-T-A
C212	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C213	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C214	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C215	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C216	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C217	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C218	4030008870	S.CERAMIC	C1608 JB 1C 183K-T-A
C219	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C220	4030008870	S.CERAMIC	C1608 JB 1C 183K-T-A
C221	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C222	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C223	4550002890	S.TANTALUM	TESVA 1A 225M1-8L
C224	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C226	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C227	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C228	4030007050	S.CERAMIC	C1608 CH 1H 220J-T-A
C229	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C230	4030007110	S.CERAMIC	C1608 CH 1H 680J-T-A
C232	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C233	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C234	4550000270	S.TANTALUM	TESVA 1E 474M1-8L
C235	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C237	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C238	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C239	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

S.=Surface mount

[MAIN UNIT] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION	
C240	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C241	4030011310	S.CERAMIC	C2012 JB 1C 564K-T-A
C242	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C243	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C244	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C245	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C246	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C247	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C248	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C249	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L [L-band]
	4550006480	S.TANTALUM	TEMSVA 1C 475M-8L [H-band]
C250	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C251	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C252	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C253	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C258	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C259	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C260	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C261	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C262	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C263	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C264	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C265	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C266	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C269	4550003220	S.TANTALUM	TEMSVA 1E 105M-8L
C270	4550003220	S.TANTALUM	TEMSVA 1E 105M-8L
C271	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C272	4550003220	S.TANTALUM	TEMSVA 1E 105M-8L
C273	4030008680	S.CERAMIC	C2012 JF 1C 105Z-T-A
C274	4030007130	S.CERAMIC	C1608 CH 1H 101J-T-A
C275	4030008680	S.CERAMIC	C2012 JF 1C 105Z-T-A
C276	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C277	4030008680	S.CERAMIC	C2012 JF 1C 105Z-T-A
C278	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C279	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C280	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A
C281	4030006970	S.CERAMIC	C1608 CH 1H 060D-T-A
C283	4030009540	S.CERAMIC	C1608 CH 1H 1R5B-T-A
C284	4030011310	S.CERAMIC	C2012 JB 1A 564K-T-A
C286	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C287	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C289	4030009540	S.CERAMIC	C1608 CH 1H 1R5B-T-A
C293	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C294	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C295	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C296	4030009510	S.CERAMIC	C1608 CH 1H 010B-T-A
C297	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C298	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C299	4550006250	S.TANTALUM	TEMSVA 1A 106M-8L
C301	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C302	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C303	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C304	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C305	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C306	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C307	4550006110	S.TANTALUM	TEMSVB2 0J 336M8L
C308	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C309	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C310	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C311	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C312	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C313	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C315	4030006980	S.CERAMIC	C1608 CH 1H 070D-T-A [L-band]
	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A [H-band]
C316	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C317	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C318	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A
C319	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C320	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C321	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A
C322	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C323	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

[MAIN UNIT] (IC-F45 only)

REF. NO.	ORDER NO.	DESCRIPTION		
C324	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
C325	4550006080	S.TANTALUM	TEMSVB2 1C 106M-8L	
C326	4030010740	S.CERAMIC	C1608 JB 1A 104K-T-A	
C327	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A	
C328	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A	
C329	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A	
C330	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A	
C331	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A	
C332	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A	
C333	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A	
C334	4030007090	S.CERAMIC	C1608 CH 1H 470J-T-A	
C335	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A	
C336	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A	
S1	2230000980	SWITCH	SKHLLB	
J1	6510019190	S.CONNECTOR	52365-0891	
J2	6510019770	S.CONNECTOR	FH12-15S-0.5SV	
J3	6510018410	S.CONNECTOR	53263-0690	
J4	6510019770	S.CONNECTOR	FH12-15S-0.5SV	
J5	6510018430	S.CONNECTOR	AXN330C038P	
W1	7030003860	S.JUMPER	ERJ3GE JPW V	[H-band]
W3	7030003860	S.JUMPER	ERJ3GE JPW V	[H-band]
EP1	0910046474	PCB	B 4664D	

S.=Surface mount

SECTION 7 MECHANICAL PARTS

[CHASSIS UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	8930037740	1327 L-contact	1
MP1	8010016770	1789 Chassis	1
MP3	8210009380	1327 Rear panel	1
MP7	8930032870	1327 PTT spring	1
MP10	8930029520	1327 Main seal	1
MP12	8510010820	1789 Contact plate	1
MP14	8930029450	1327 Shield spring	1
MP15	8010016800	1789 Sub chassis	1
MP16	8510008472	1327 Shield-2	1
MP17	8810006060	Screw BO No. 0-1 M2 x 4	2
MP20	8810003710	Icom screw (B) 5	2
MP23	8930030990	O-ring (N)	1
MP24	8930030910	1327 E-contact	1
MP25	8810006610	Screw PH No. 0-1 M2 x 2.5 NI	1
MP26	8810006610	Screw PH No. 0-1 M2 x 2.5 NI	2
MP27	8810005100	Screw PH No. 0-1 M2 x 7 ZK	3
MP28	8820000801	1327 Screw-1	2
MP30	8930031900	1327 ANT spring	1
MP31	8930031911	1327 Side spring-1	1
MP32	8930031991	1327 L-spring-1	1
MP34	8930032010	1327 SP sponge	1
MP35	8210009420	1327 Jack plate	1
MP36	8810008210	Screw PH M3 x 7 ZK	2
MP37	8930039610	Thermally sheet (C)	1
MP40	8930033130	1327 AL sheet	1
MP41	8930010600	Sponge (AX)	1
MP44	8930042310	Rubber sheet (AB)	1

[FRONT UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MC1	7700001820	Microphone EM-123H	1
SP1	2510000650	Speaker EAS-3P127D	1
MP1	8210014410	1327 Front panel-1 assembly F35 (incl. SP1)	1
	8210014420	1327 Front panel-1 assembly F45 (incl. SP1)	1
MP12	8930040201	1332 Key board (A)-1	1
MP18	8810001710	Screw PH BO No. 0-3 M1.4 x 3.5 ZK	4
MP23	8930032881	1327 MIC seal-1	1
MP33	8930027980	Isolation sheet (F)	1

[EF BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8810006610	Screw PH No. 0-1 M2 x 2.5 NI	2

[MAIN UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8510010810	1789 DC-DC case	1
MP2	8510010810	1789 DC-DC case	1
MP3	8510009160	1332 VCO case	1
MP4	8510009170	1332 VCO cover	1
MP5	8510005070	599 Shield plate	1
MP6	8510008251	1366 Shield plate-1 (IC-F35 only)	1
MP7	8930034430	1327 VCO spring (IC-F45 only)	1
MP8	8930042650	1790 P.C.B plate	1
MP10	8930043310	Rubber sheet (AI) (IC-F45 only)	1

[PA UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510016370	Multi-connector AXR91010301	1
MP1	8930029551	1327 EF spring-1	1
MP2	8810005100	Screw PH No. 0-1 M2 x 7 ZK	2
MP3	8930033260	1332 M-holder	1

[ANT BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8930029511	1327 ANT plate-1	1

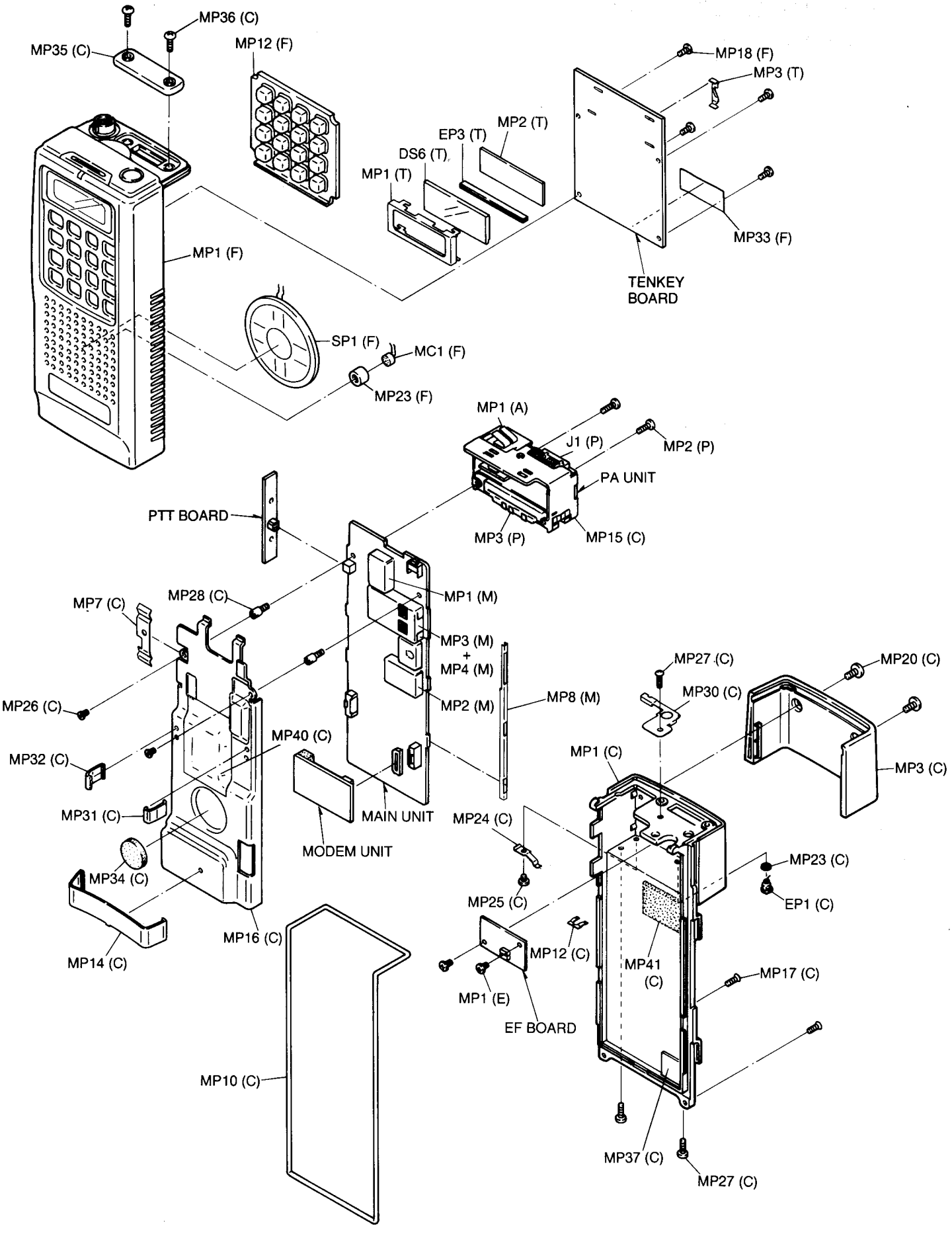
[TENKEY BOARD]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
DS6	5030001380	LCD LD-B4548J	1
EP3	8930034750	LCD Contact SRCN-1556-ZSS	1
MP1	8930029480	1332 LCD holder	1
MP2	8930031000	1332 LCD sheet	1
MP3	8930032480	1332 LCD spring	1

[ACCESSORIES]

REF. NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	optional product	FA-SC24V flexible antenna for F35 L-band	1
	optional product	FA-SC54V flexible antenna for F35 H-band	1
	optional product	FA-SC24U flexible antenna for F45 L-band	1
	optional product	FA-SC56U flexible antenna for F45 H-band	1
EP2	optional product	CM-140 BATTERY PACK	1
MP1	8210014010	1789 Front plate	1

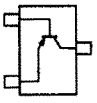
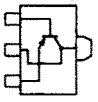
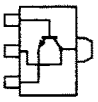
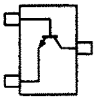
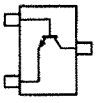
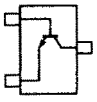
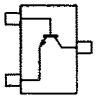
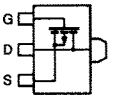
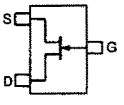
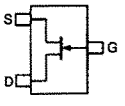
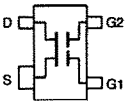
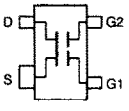
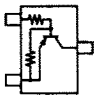
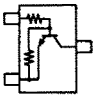
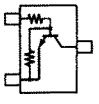
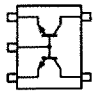
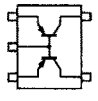
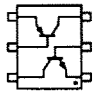
Screw abbreviations BO: Self-tapping PH:Pan head NI: Nickel ZK: Black



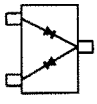
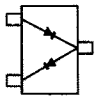
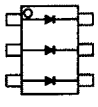
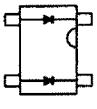
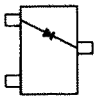
Unit abbreviations (C): CHASSIS UNIT (F): FRONT UNIT (E): EF BOARD (M): MAIN UNIT
(P): PA UNIT (A): ANT BOARD (T): TENKEY BOARD

SECTION 8 SEMI-CONDUCTOR INFORMATION

• TRANSISTORS AND FET'S

2SA1576 R (Symbol: FR) 	**2SB1132 Q** (Symbol: BA) 	**2SC3357** (Symbol: RK) 	**2SC4081 R** (Symbol: BR) 	**2SC4215 O** (Symbol: QO) 
2SC4226 R25 (Symbol: R25) 	**2SC5110 O** (Symbol: MGO) 	**2SJ316 TD** (Symbol: JG) 	**2SK1069 4 TL** (Symbol: FJ) 	**2SK880 Y** (Symbol: XY) 
2SK166 2 (Symbol: K) 	**3SK239XR** (Symbol: XR) 	**DTA144EU** (Symbol: 16) 	**DTC144EU** (Symbol: 26) 	**DTC363EK** (Symbol: H27) 
UMS2N TL (Symbol: S2) 	**UMW2N TL** (Symbol: W2) 	**XP4312** (Symbol: 7T) 		

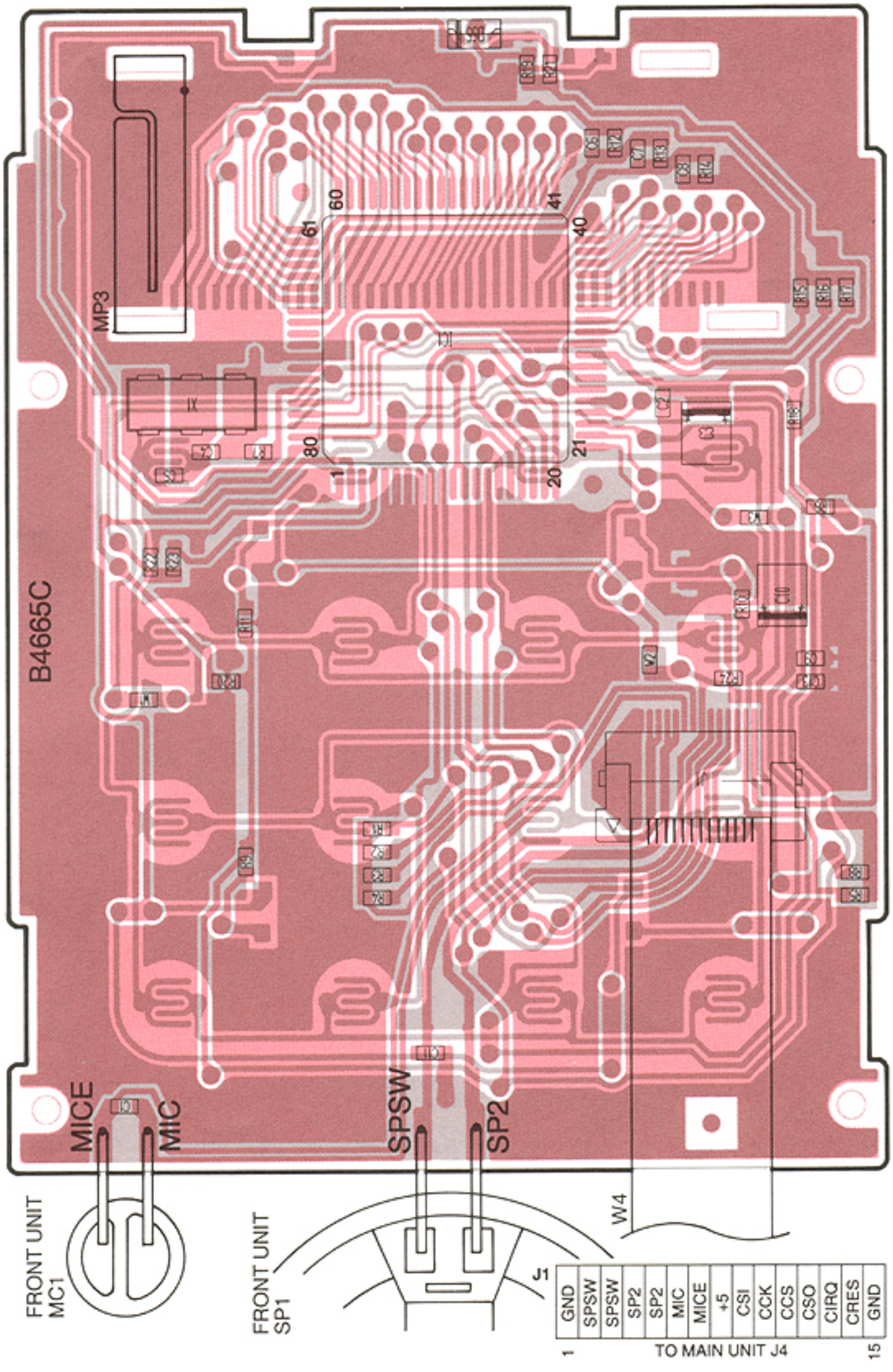
• DIODES

1SS375 TL (Symbol: FH) 	**DA204U** (Symbol: K) 	**MA6S121** (Symbol: M2D) 	**MA862** (Symbol: M1I) 	**SB07-03C** (Symbol: J) 

SECTION 9 BOARD LAYOUTS

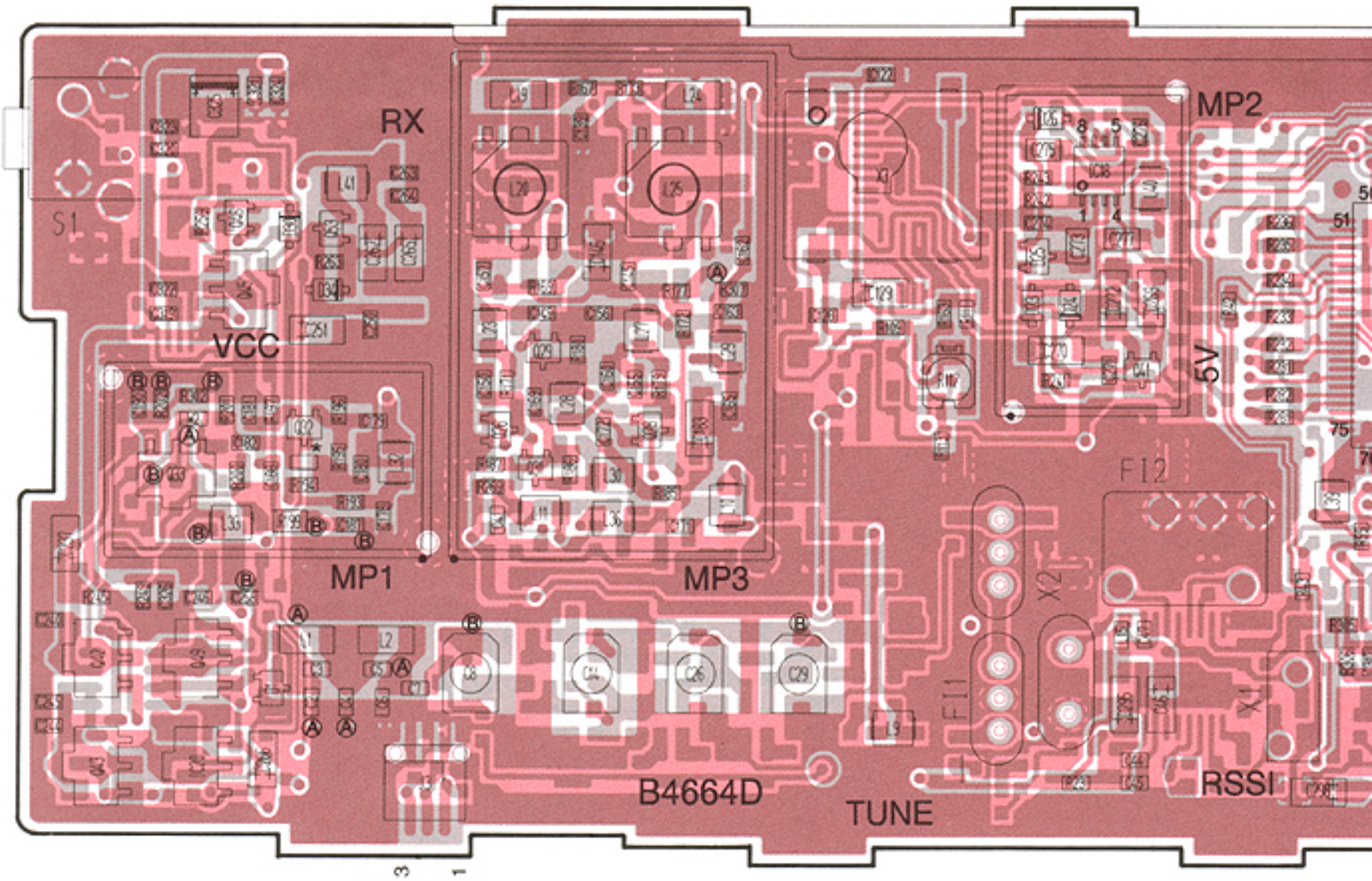
9-1 IC-F35/F45 MAIN UNIT, TENKEY, EF AND PTT BOARD

• TENKEY BOARD (COMMON)



J4

• MAIN UNIT (COMMON)

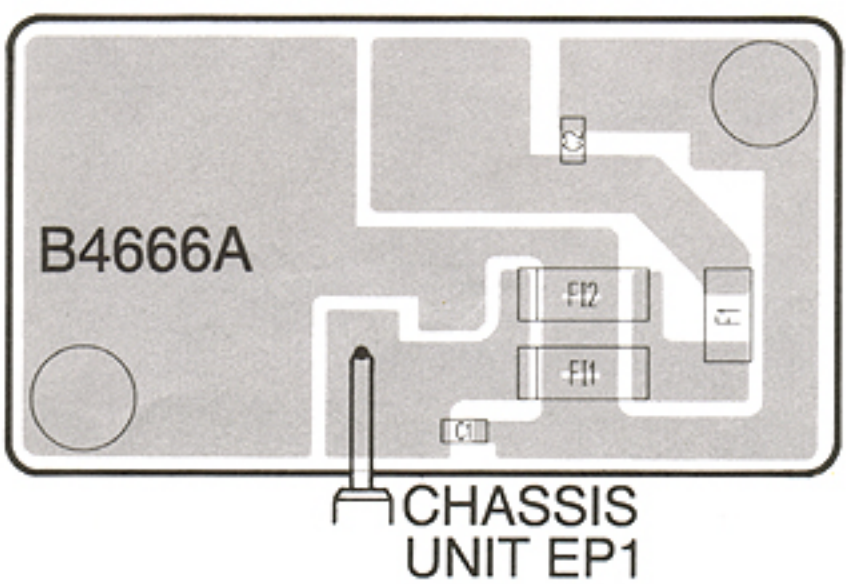


J3

3	2	1
GND	GND	GND
DOWN	UP	PTT
6		4

TO PTT
BOARD J1

• EF BOARD (COMMON)



TO TENKEY BOARD J1

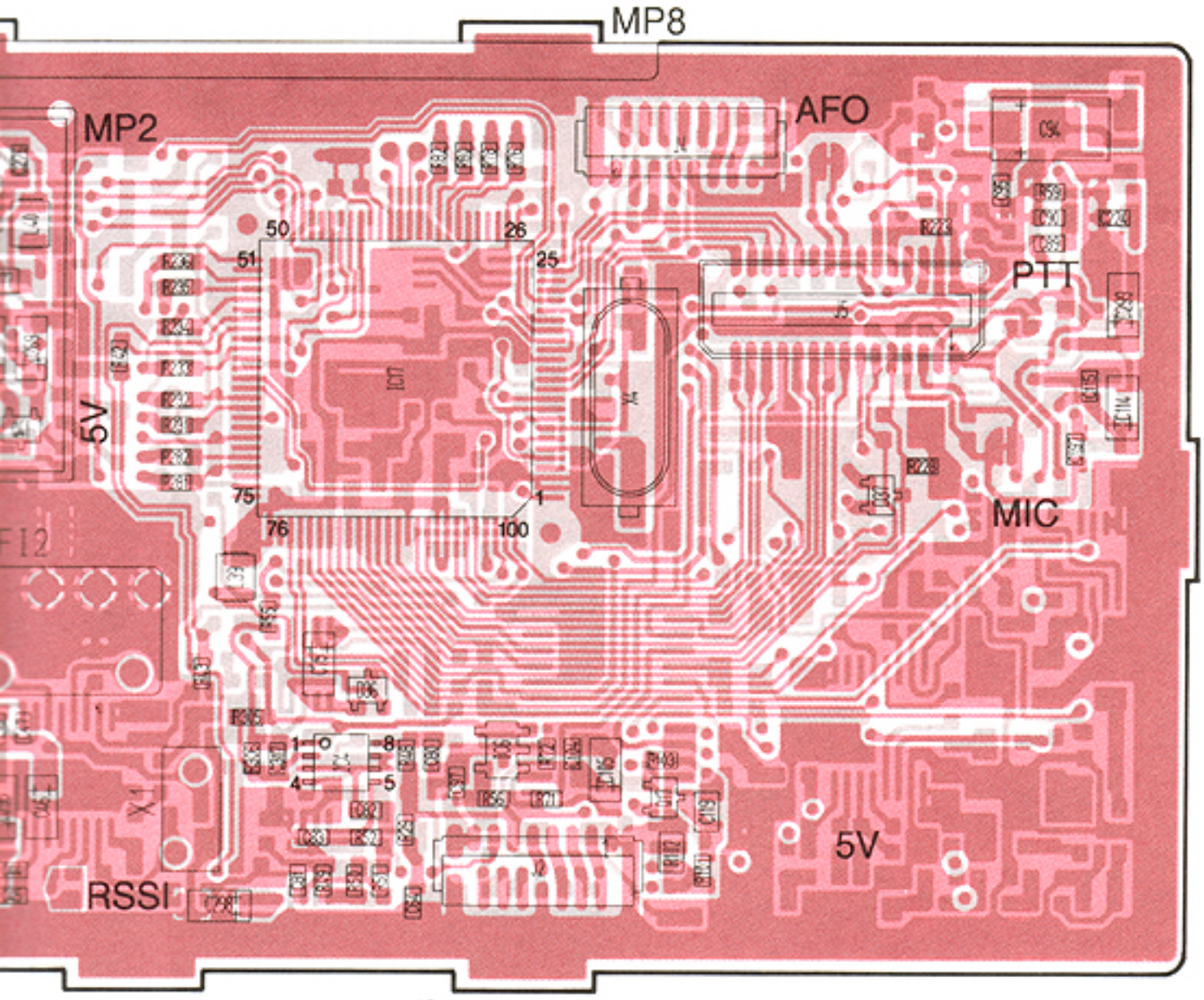
J4

2								14
CRES	CSO	CCK	+5	MIC	SP2	SPSW		
GND	CIRQ	CCS	CSI	MICE	SP2	SPSW	GND	
1								15

TO MODEM UNIT

J5

16														30
SCK	SI	SO	CIRQ	CCS	NC	AF OUT	DISC	RMUT	NC	AF ON	MMUT	VCC	+5V	GND
OPV1	OPV2	OPV3	GND	OPT3	OPT2	OPT1	SIG OUT	MDWN	BUSY	AUX	MIC IN	MIC OUT	PTT OUT	PTT IN
15														1



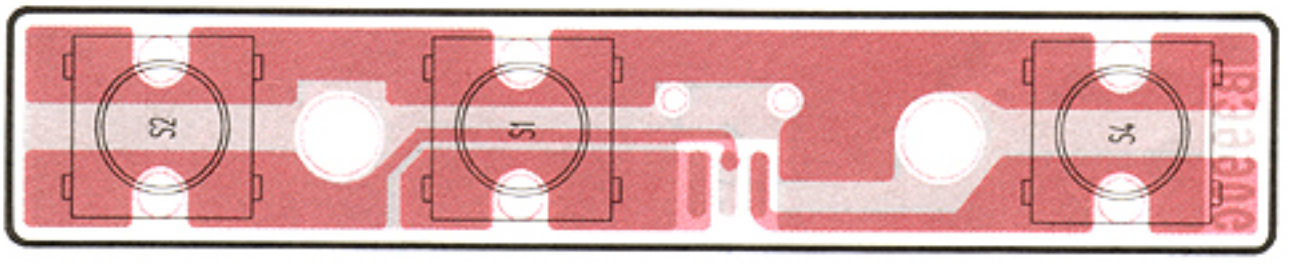
J2

15								1
GND	CLON	+5V	MIC	SP2	SP1	SPSW	GND	
AUX	EPTT	5VR	MICE	SP2	SP1	SPSW		
14								2

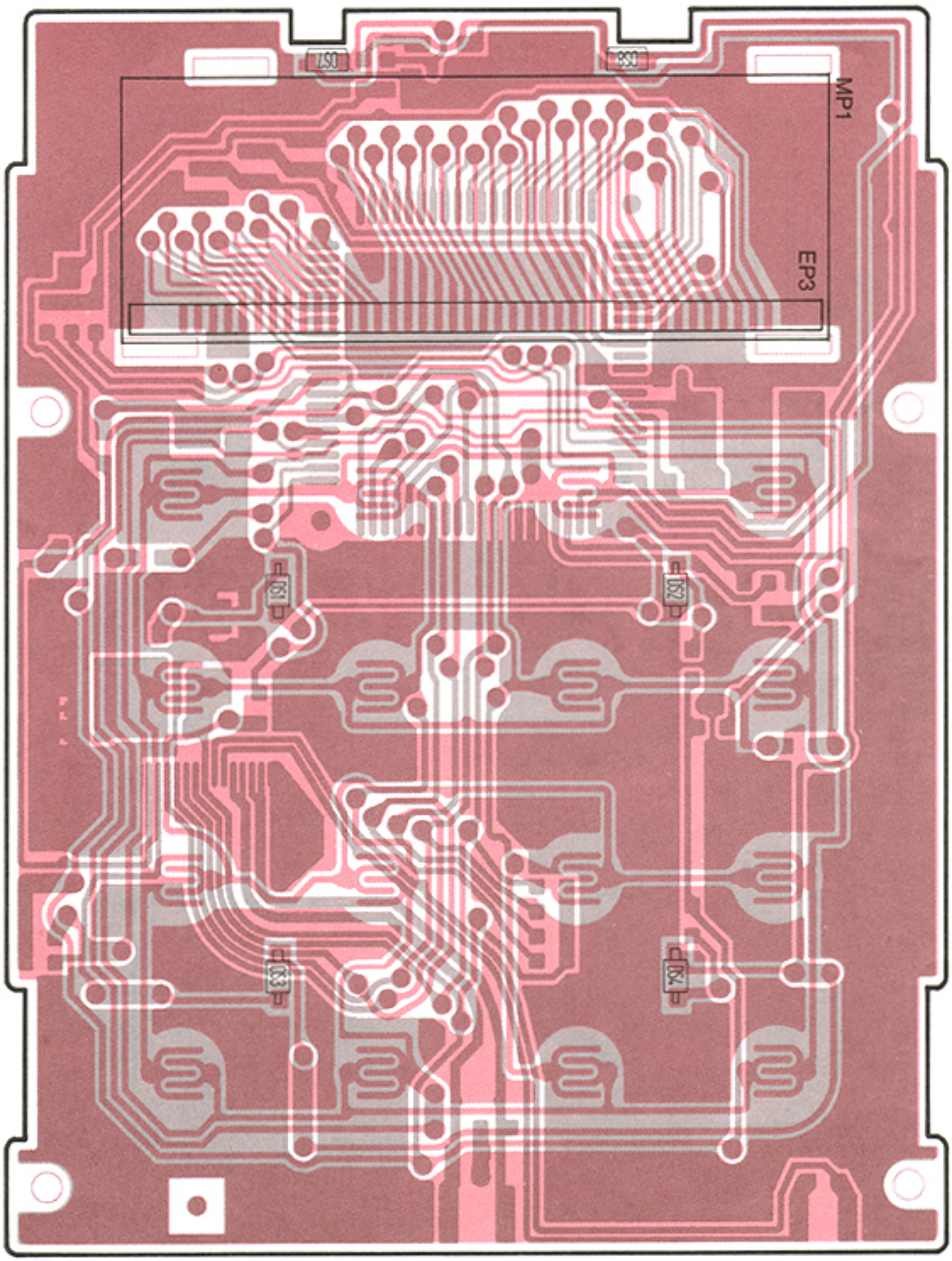
TO PA UNIT J2

Ⓐ IC-F35 only
Ⓑ IC-F45 only

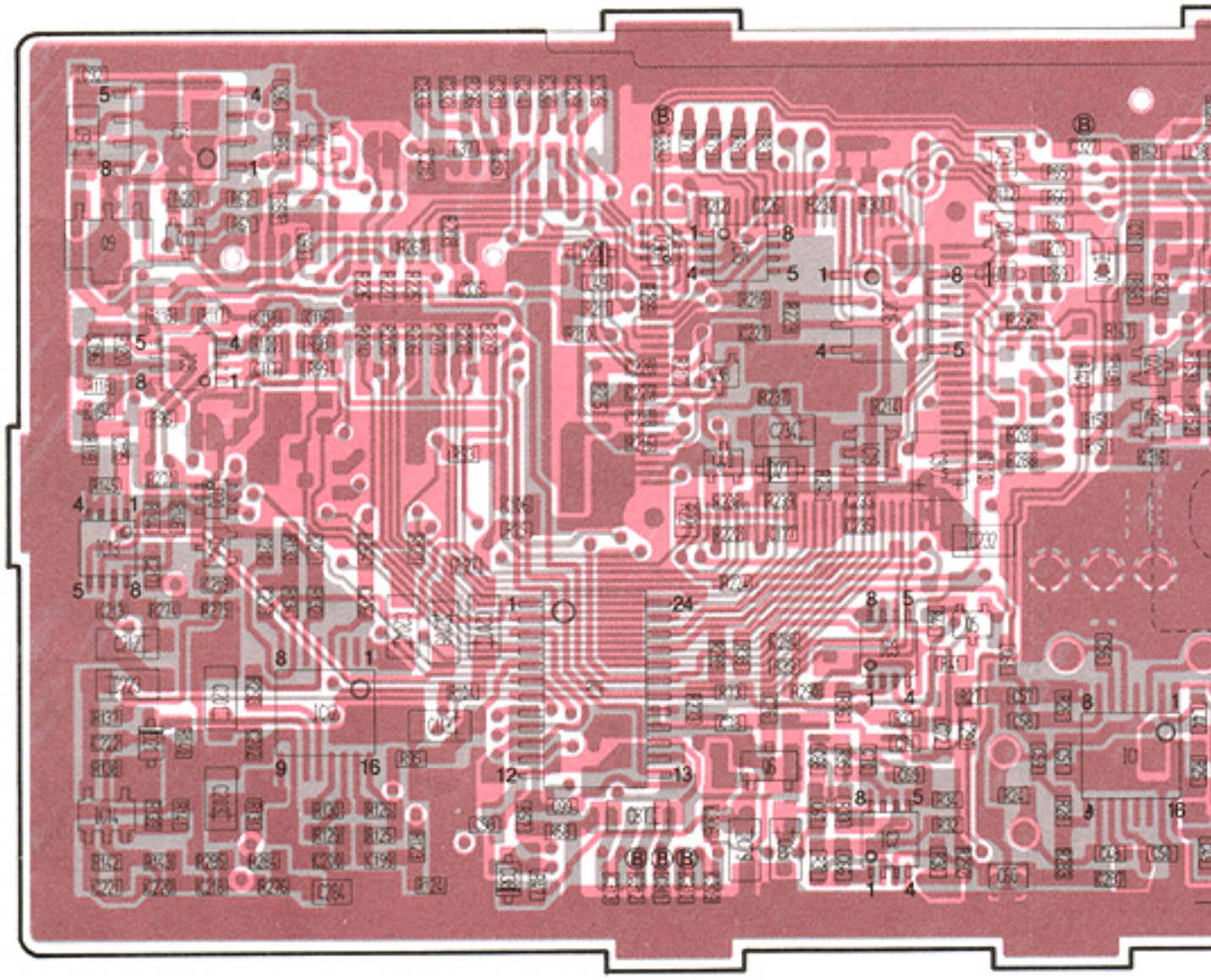
• PTT BOARD (COMMON)



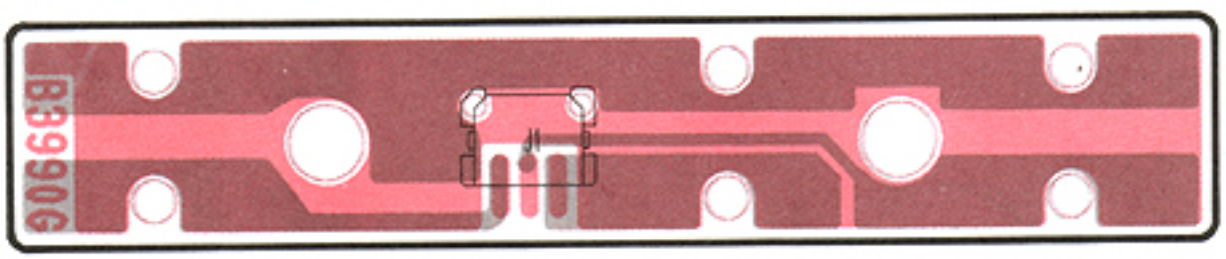
● TENKEY BOARD (COMMON)

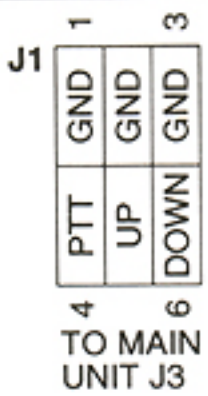


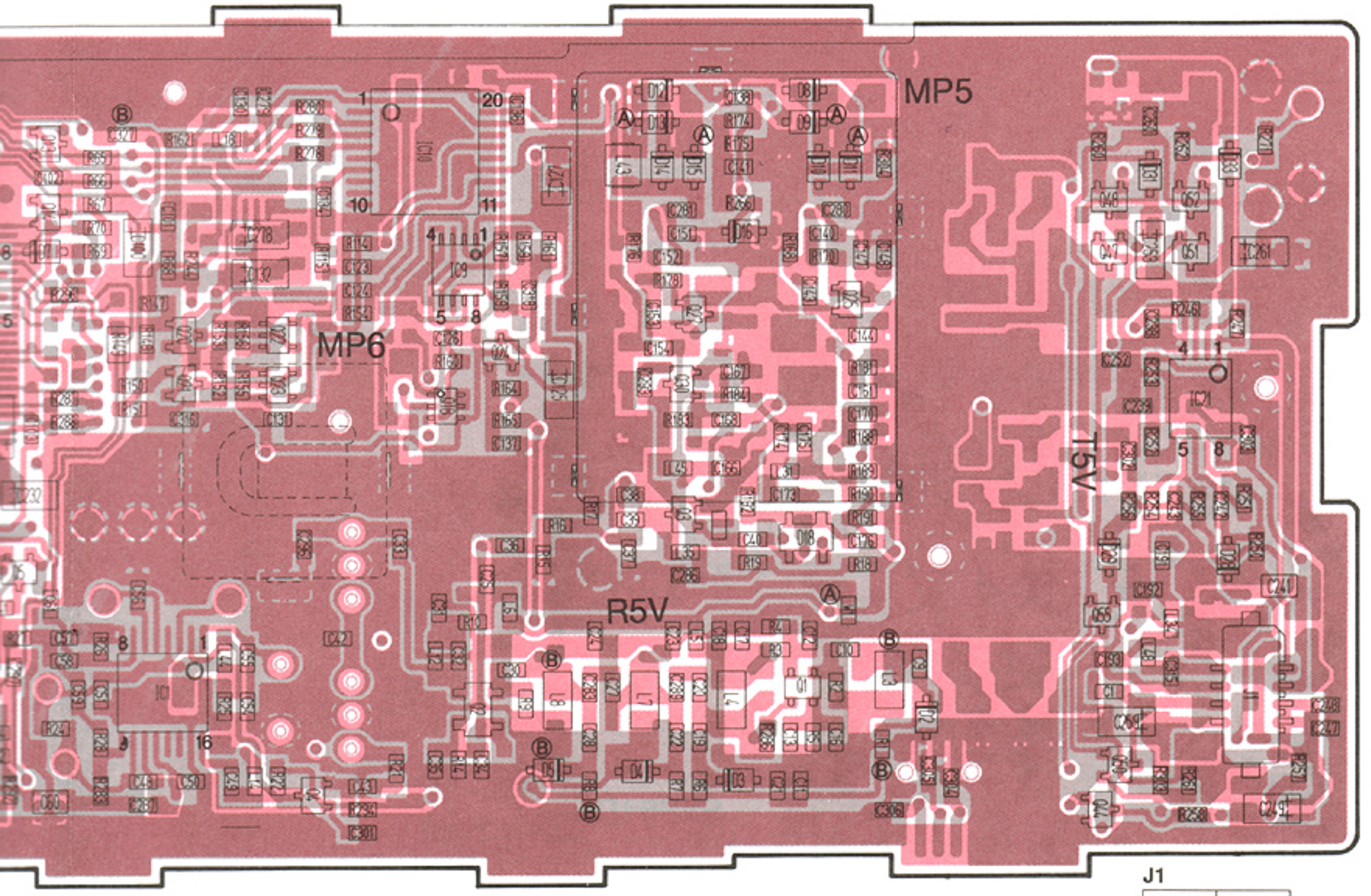
● MAIN UNIT (COMMON)



● PTT BOARD (COMMON)







Ⓐ IC-F35 only
Ⓑ IC-F45 only

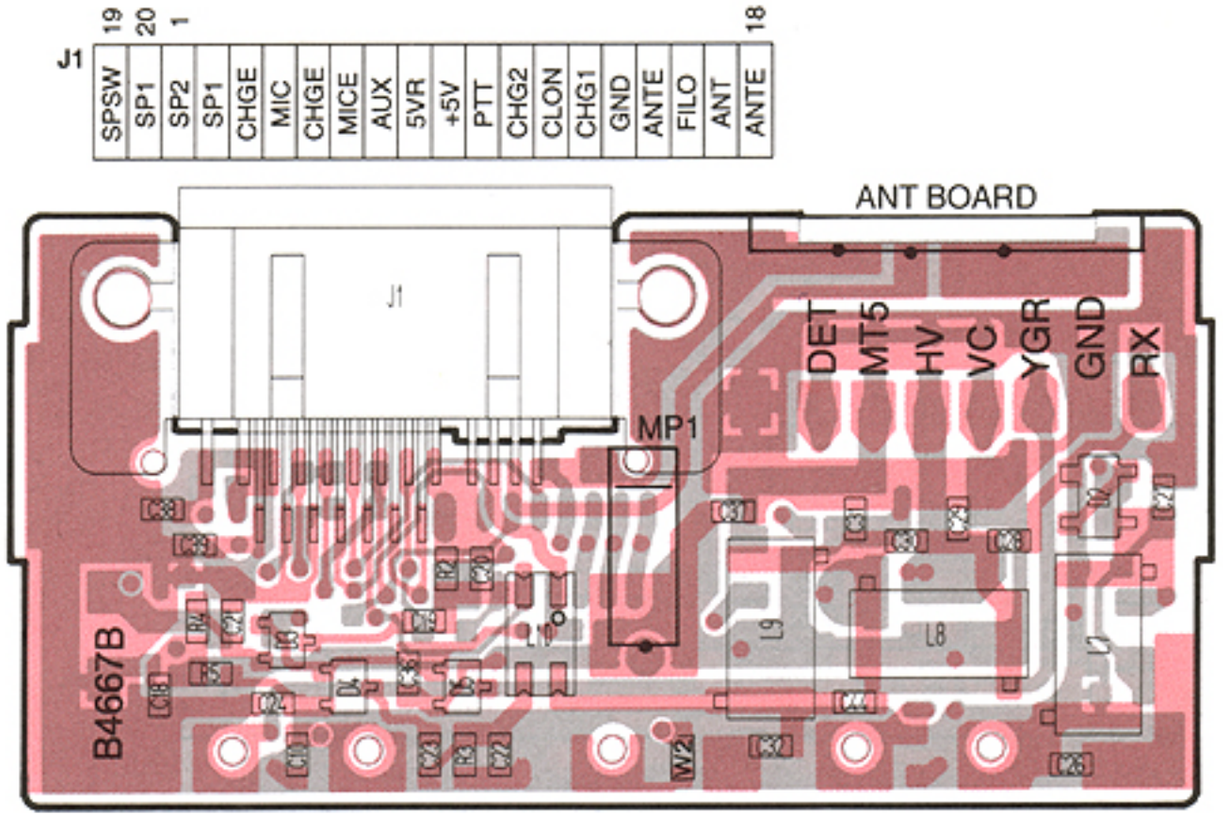
J1

8	YGR	DET	1
	GND	VCC1	
	RX	HV	
5	MT5V	HV	4

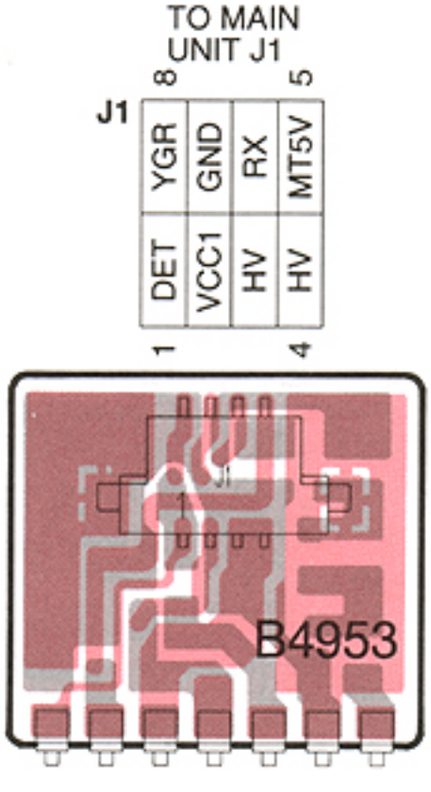
TO LPF BOARD J1

9-2 PA UNIT, LPF AND ANT BOARD

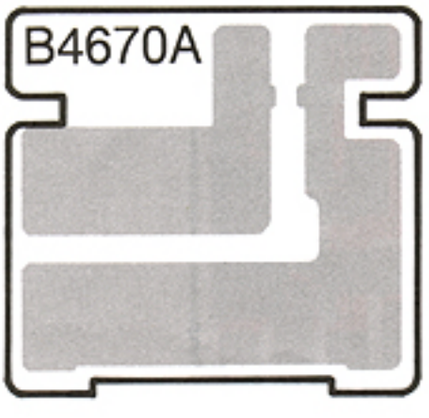
• IC-F35 PA UNIT



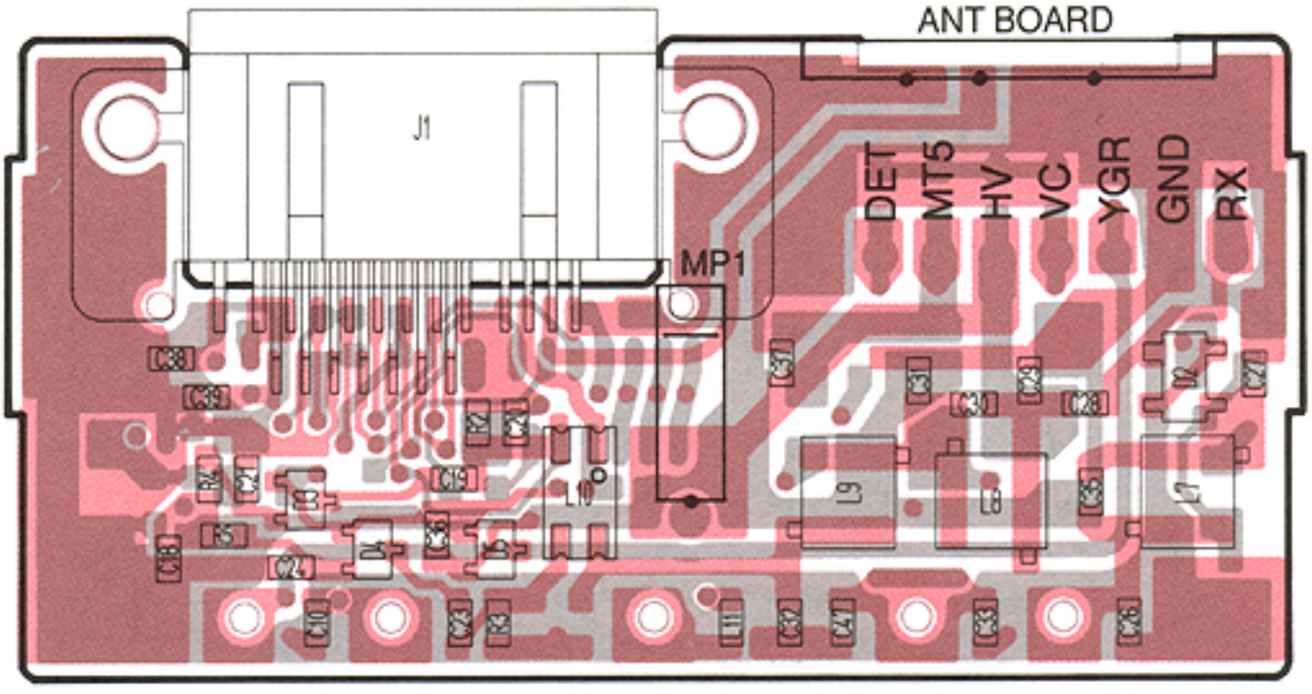
• IC-F35 LPF BOARD



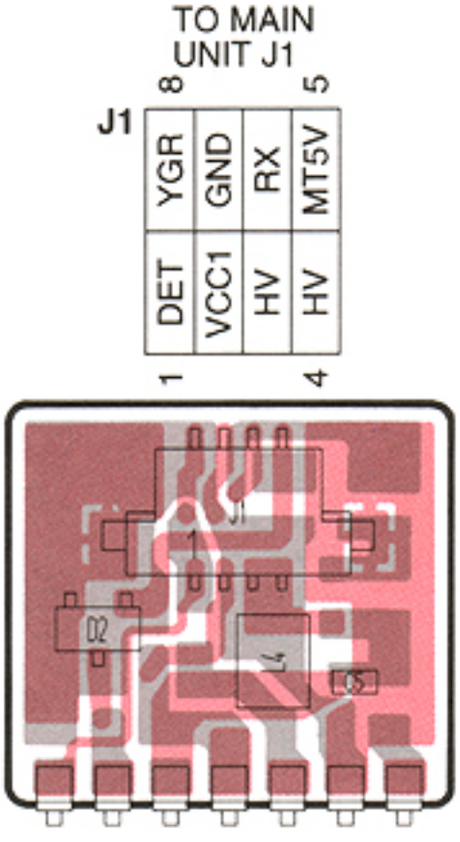
• IC-F35 ANT BOARD



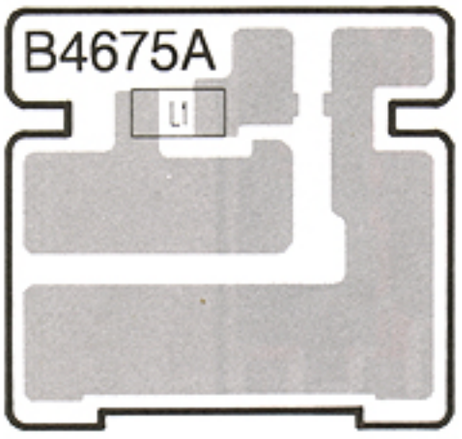
● IC-F45 PA UNIT



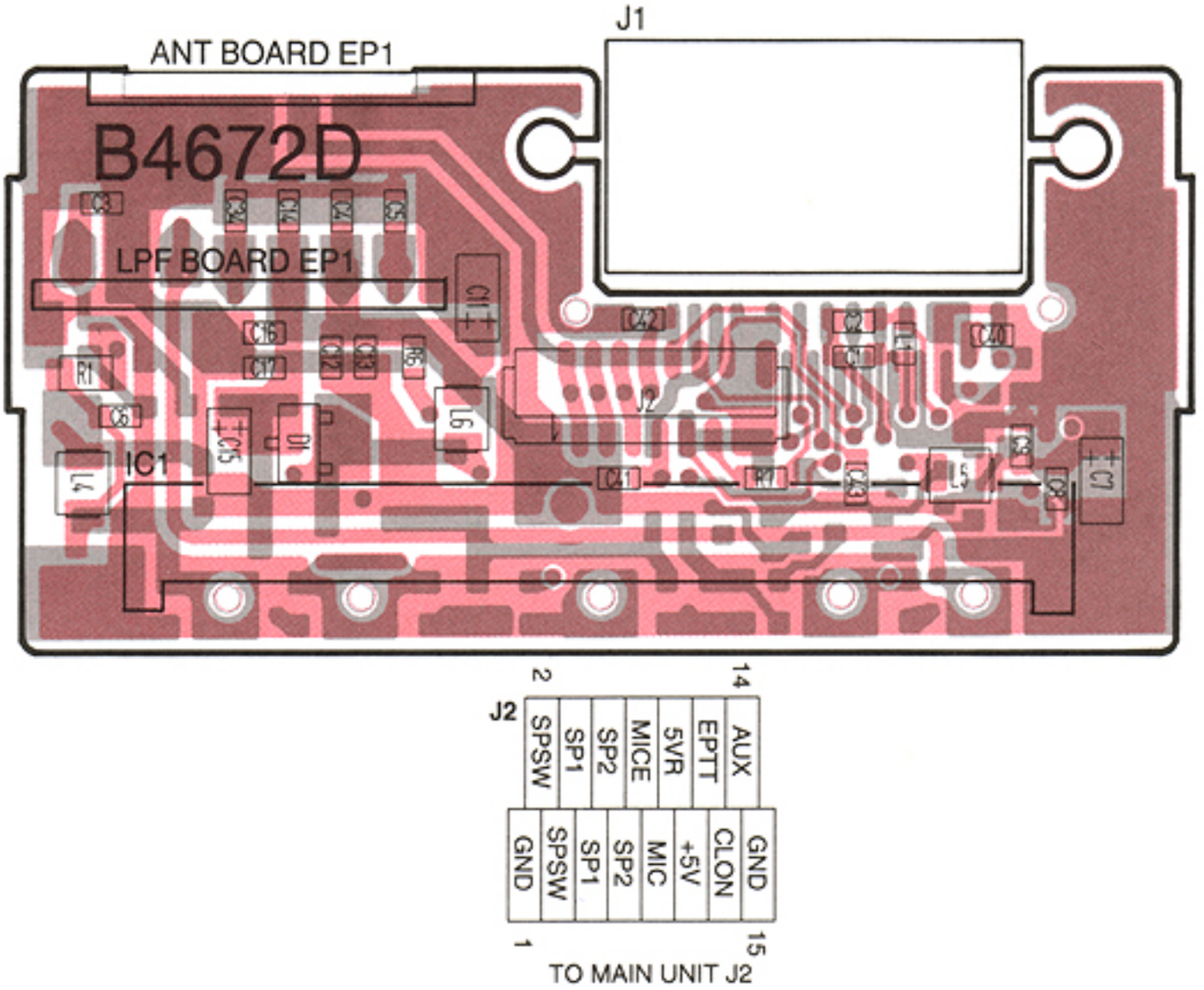
● IC-F45 LPF BOARD



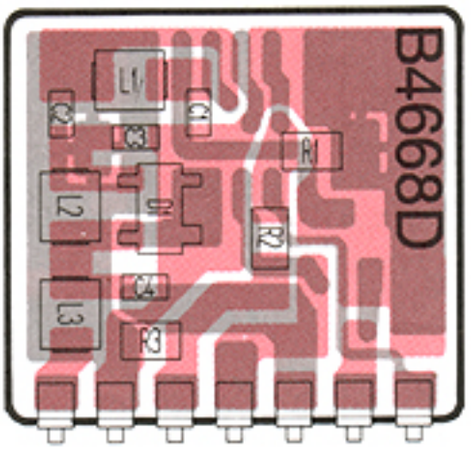
● IC-F45 ANT BOARD



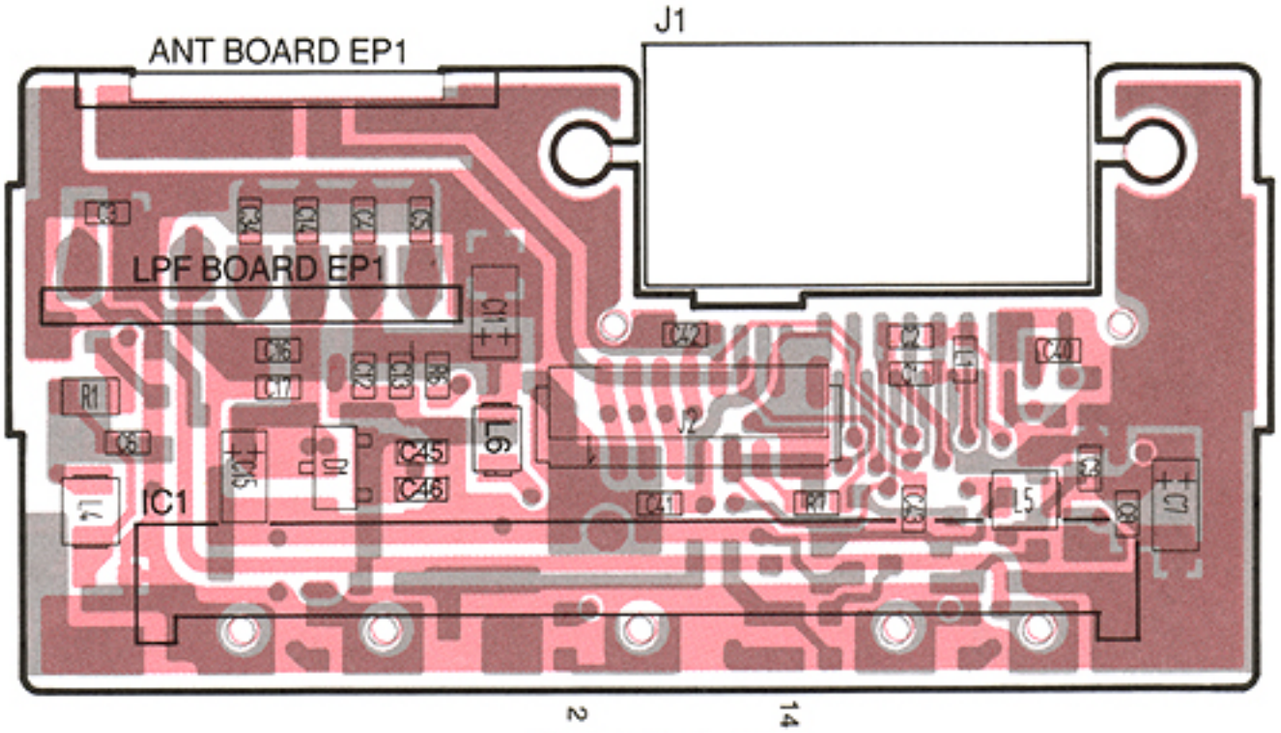
● IC-F45 PA UNIT

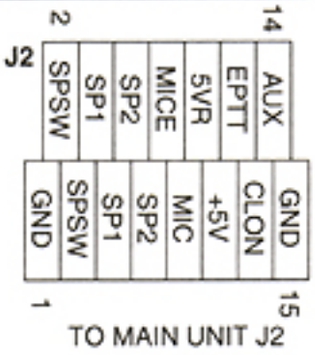


● IC-F45 LPF BOARD



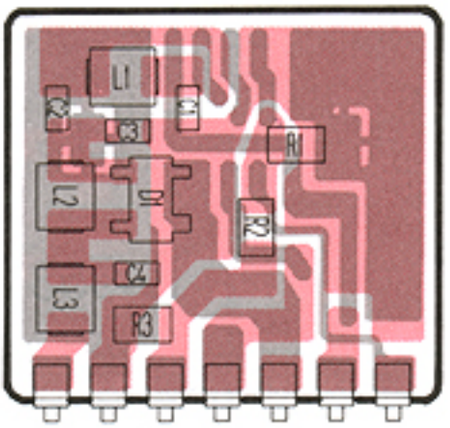
● IC-F35 PA UNIT





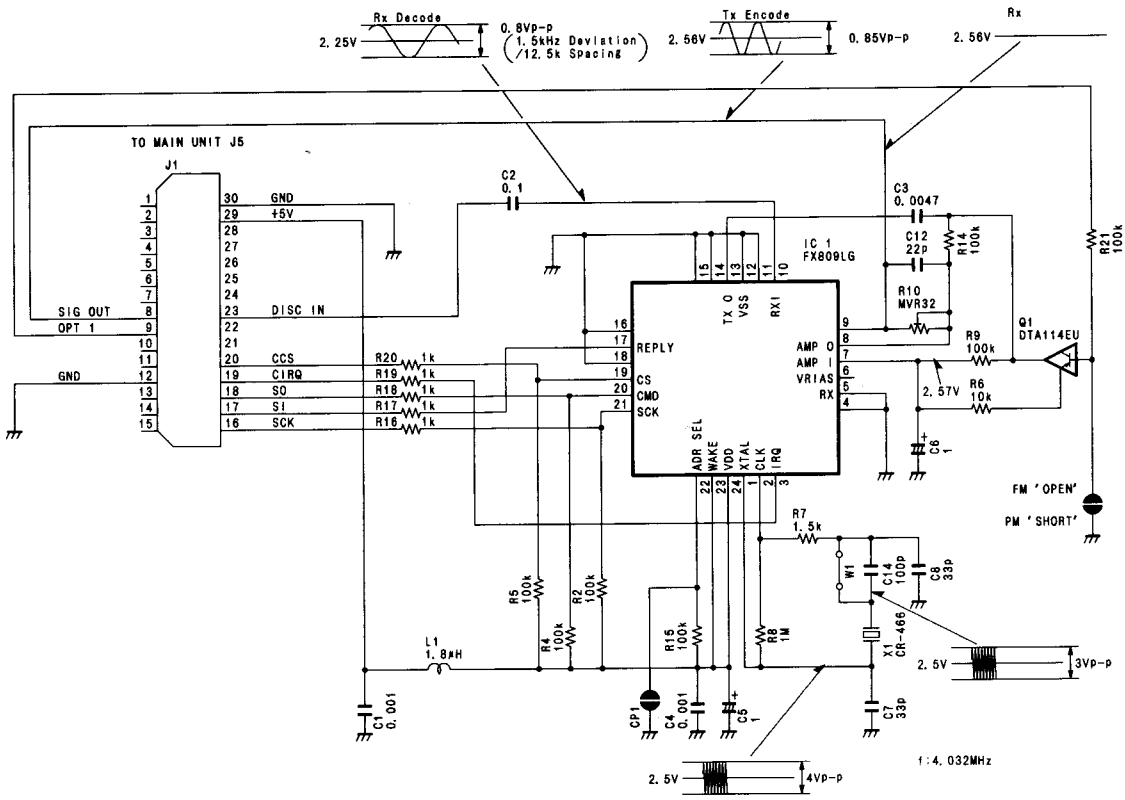
TO MAIN UNIT J2

● IC-F35 LPF BOARD



SECTION 10 MODEM UNIT

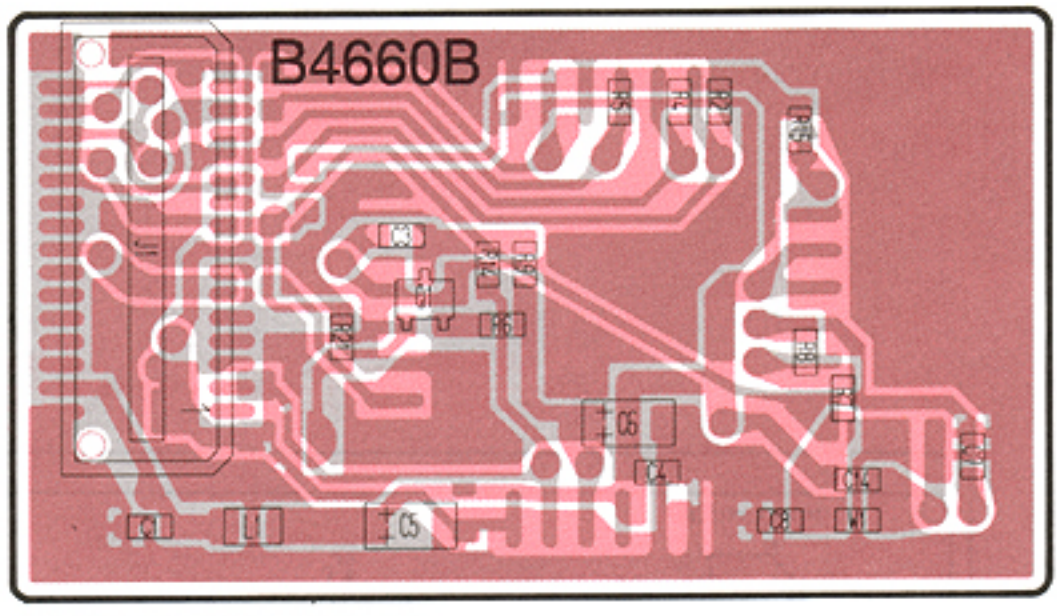
10-1 VOLTAGE DIAGRAM

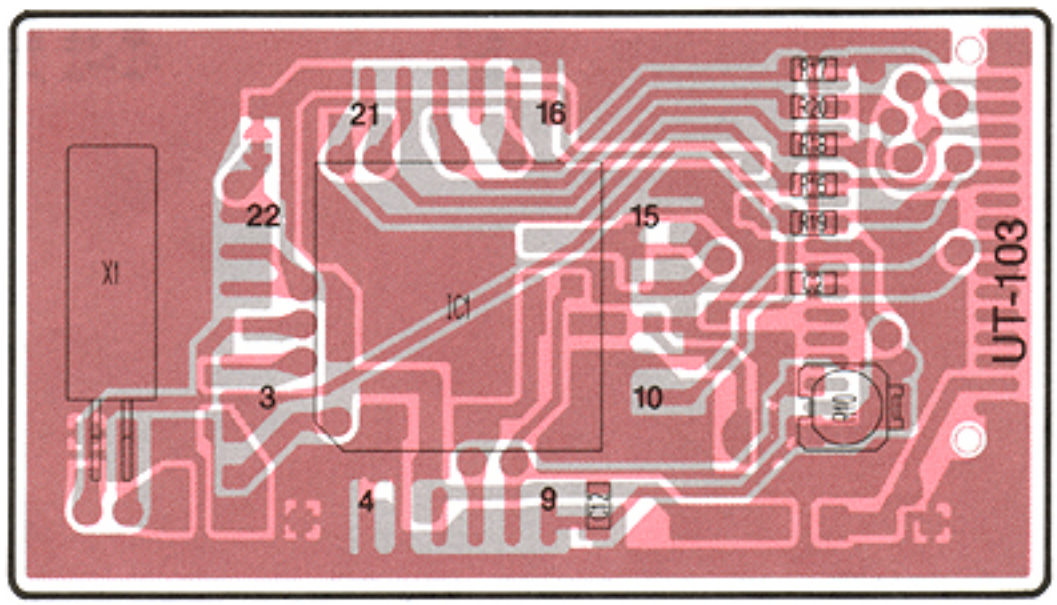


10-2 BOARD LAYOUT

J1

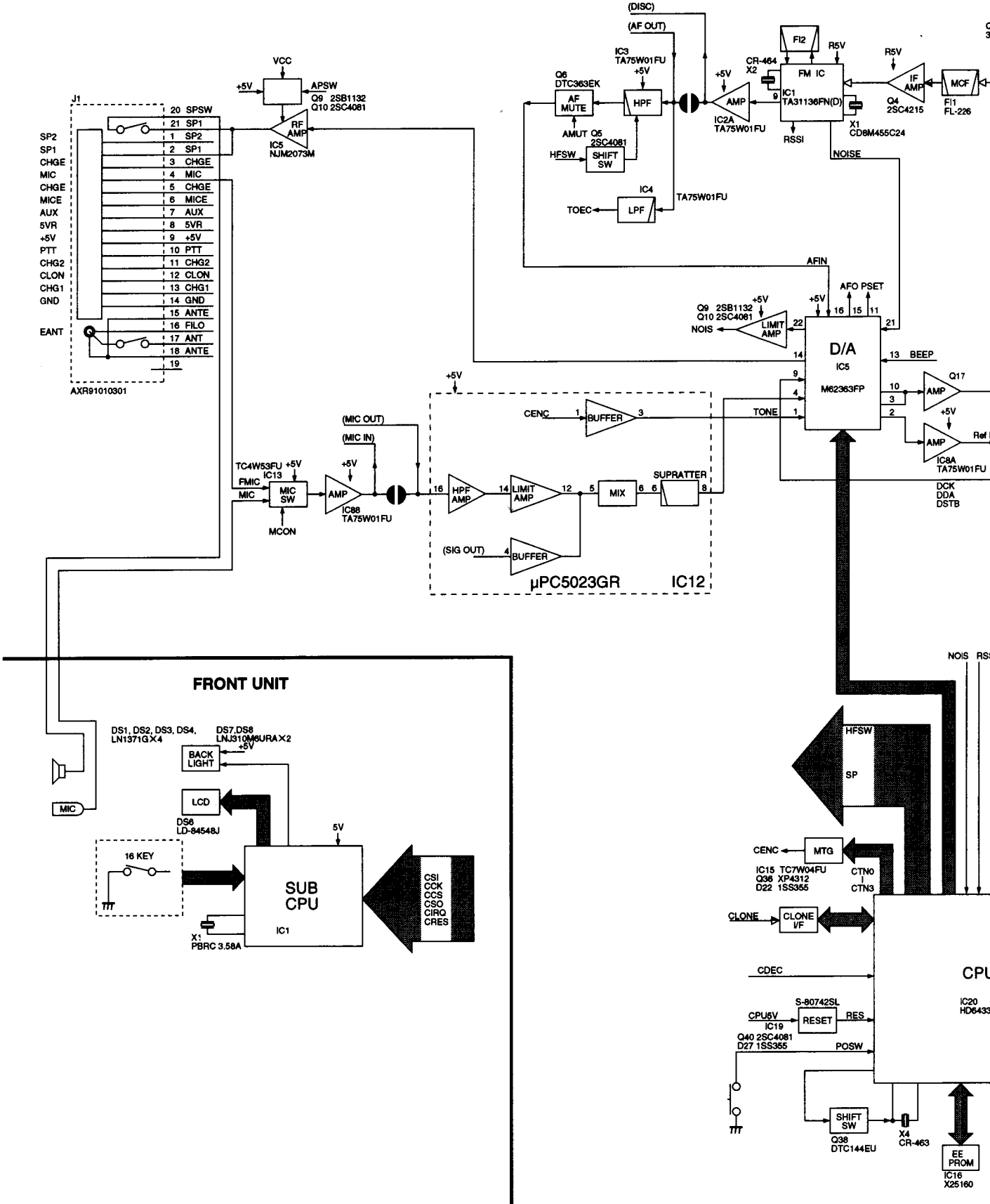
30	GND	NC	1
	CPU5V	NC	
	NC	NC	
	NC	NC	
	NC	NC	
	NC	NC	
	NC	NC	
TO MAIN UNIT J5	DISC	SIG OUT	
	NC	OPT 1	
	NC	NC	
	CCS	NC	
	CIRQ	GND	
	SO	NC	
	SI	NC	
16	SCK	NC	15

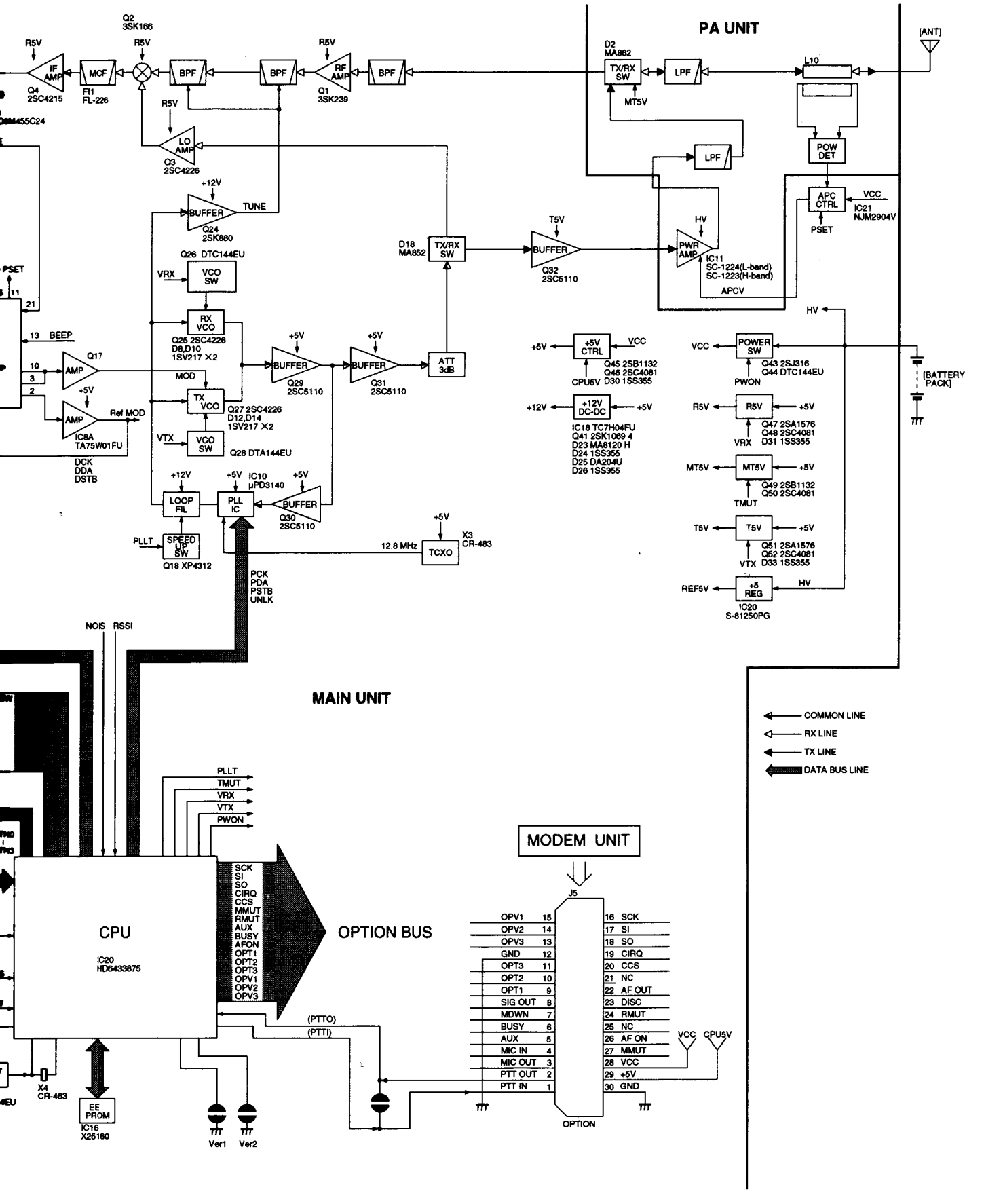




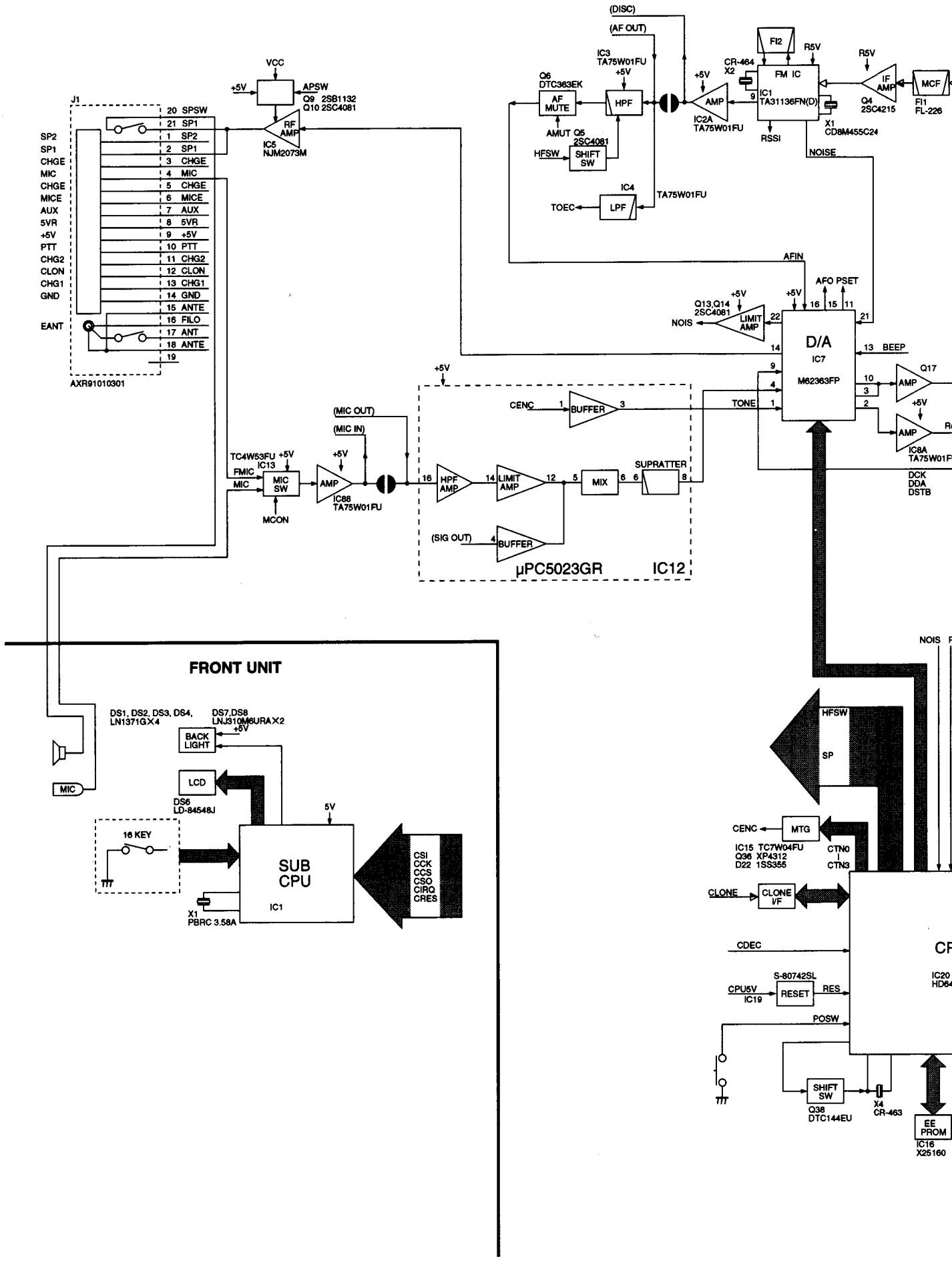
SECTION 11 BLOCK DIAGRAM

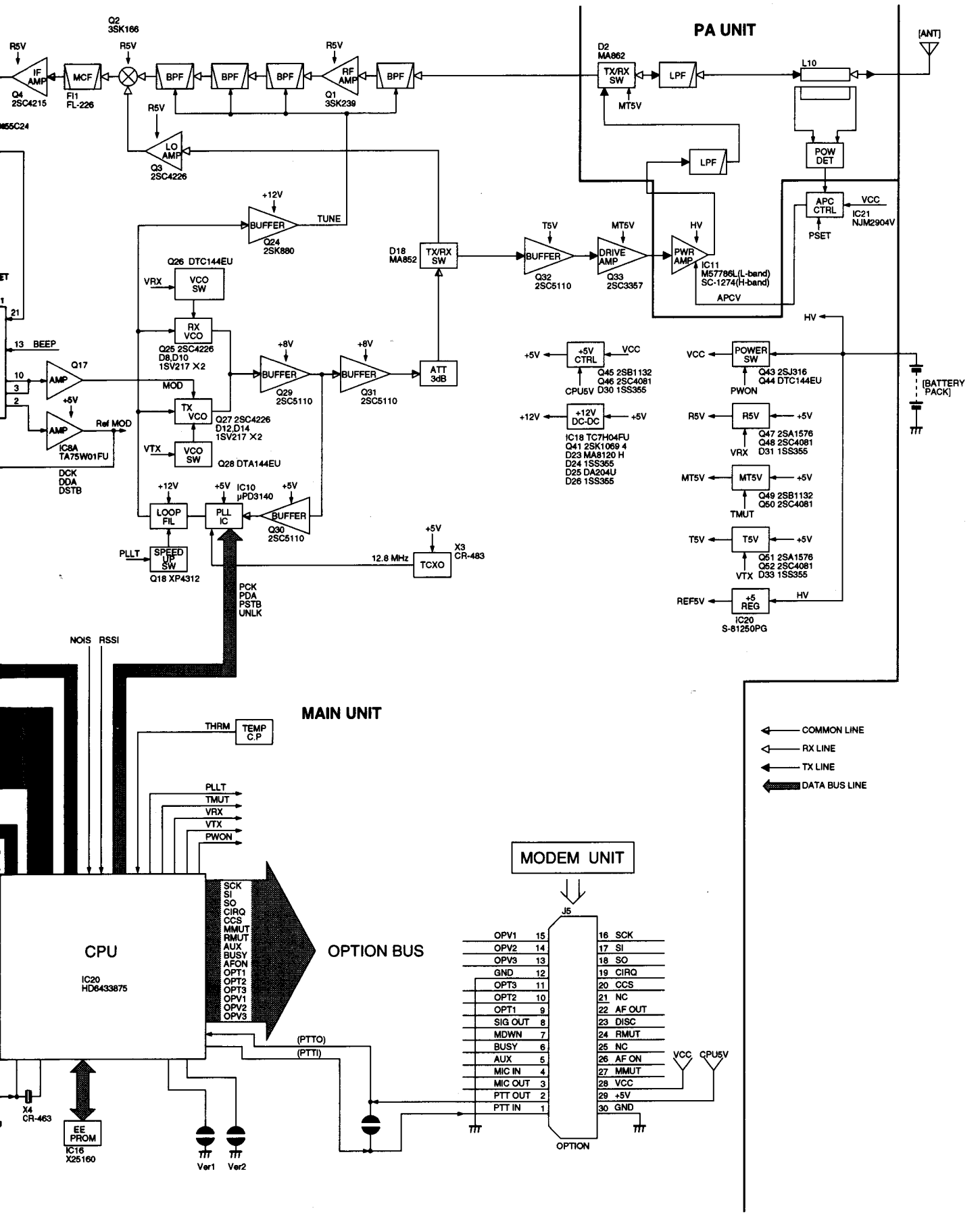
11-1 IC-F35




PA UNIT
[ANT]
R5V
Q2
3SK166
IF AMP
Q4
2SC4215
MCF
FI1
FL-226
BPF
RF AMP
Q1
3SK239
D2
MA862
TX/RX SW
MT5V
LPF
L10
POW DET
LO AMP
Q3
2SC4226
+12V
BUFFER
TUNE
Q24
2SK880
APC CTRL
VCC
IC21
NJM2904V
PSET
T5V
HV
D18
MA852
BUFFER
Q32
2SC5110
PWR AMP
IC11
SC-1224(L-band)
SC-1223(H-band)
APCV
Q26 DTC144EU
VRX
VCO SW
RX VCO
Q25 2SC4226
D8,D10
1SV217 ×2
13 BEEP
Q17
AMP
MOD
+5V
BUFFER
Q29
2SC5110
ATT
3dB
+5V CTRL
Q45 2SB1132
Q46 2SC4081
D30 1SS355
CPU5V
+12V DC-DC
IC18 TC7H04FU
Q41 2SK1069 4
D23 MA8120 H
D24 1SS355
D25 DA204U
D26 1SS355
POWER SW
Q43 2SJ316
Q44 DTC144EU
PWON
[BATTERY PACK]
R5V
Q47 2SA1576
Q48 2SC4081
D31 1SS355
VRX
MT5V
Q49 2SB1132
Q50 2SC4081
TMUT
T5V
Q51 2SA1576
Q52 2SC4081
D33 1SS355
VTX
REF5V
+5 REG
IC20
S-81250PG
TX VCO
Q27 2SC4226
D12,D14
1SV217 ×2
Ref MOD
IC8A
TA75W01FU
DCK
DDA
DSTB
VTX
VCO SW
Q28 DTA144EU
IC10
μPD3140
LOOP FIL
PLL IC
Q30
2SC5110
PLLT
SPEED UP SW
Q18 XP4312
12.8 MHz
TCXO
X3
CR-483
PCK
PDA
PSTB
UNLK
NOIS
RSSI
MAIN UNIT
COMMON LINE
RX LINE
TX LINE
DATA BUS LINE
PLLT
TMUT
VRX
VTX
PWON
MODEM UNIT
J5
CPU
IC20
HD6433875
SCK
SI
SO
CIRQ
CCS
MMUT
RMUT
AUX
BUSY
AFON
OPT1
OPT2
OPT3
OPV1
OPV2
OPV3
OPTION BUS
(PTTO)
(PTTI)
OPV1 15
OPV2 14
OPV3 13
GND 12
OPT3 11
OPT2 10
OPT1 9
SIG OUT 8
MDWN 7
BUSY 6
AUX 5
MIC IN 4
MIC OUT 3
PTT OUT 2
PTT IN 1
16 SCK
17 SI
18 SO
19 CIRQ
20 CCS
21 NC
22 AF OUT
23 DISC
24 RMUT
25 NC
26 AF ON
27 MMUT
28 VCC
29 +5V
30 GND
OPTION
X4
CR-463
EE PROM
IC16
X25160
Ver1
Ver2

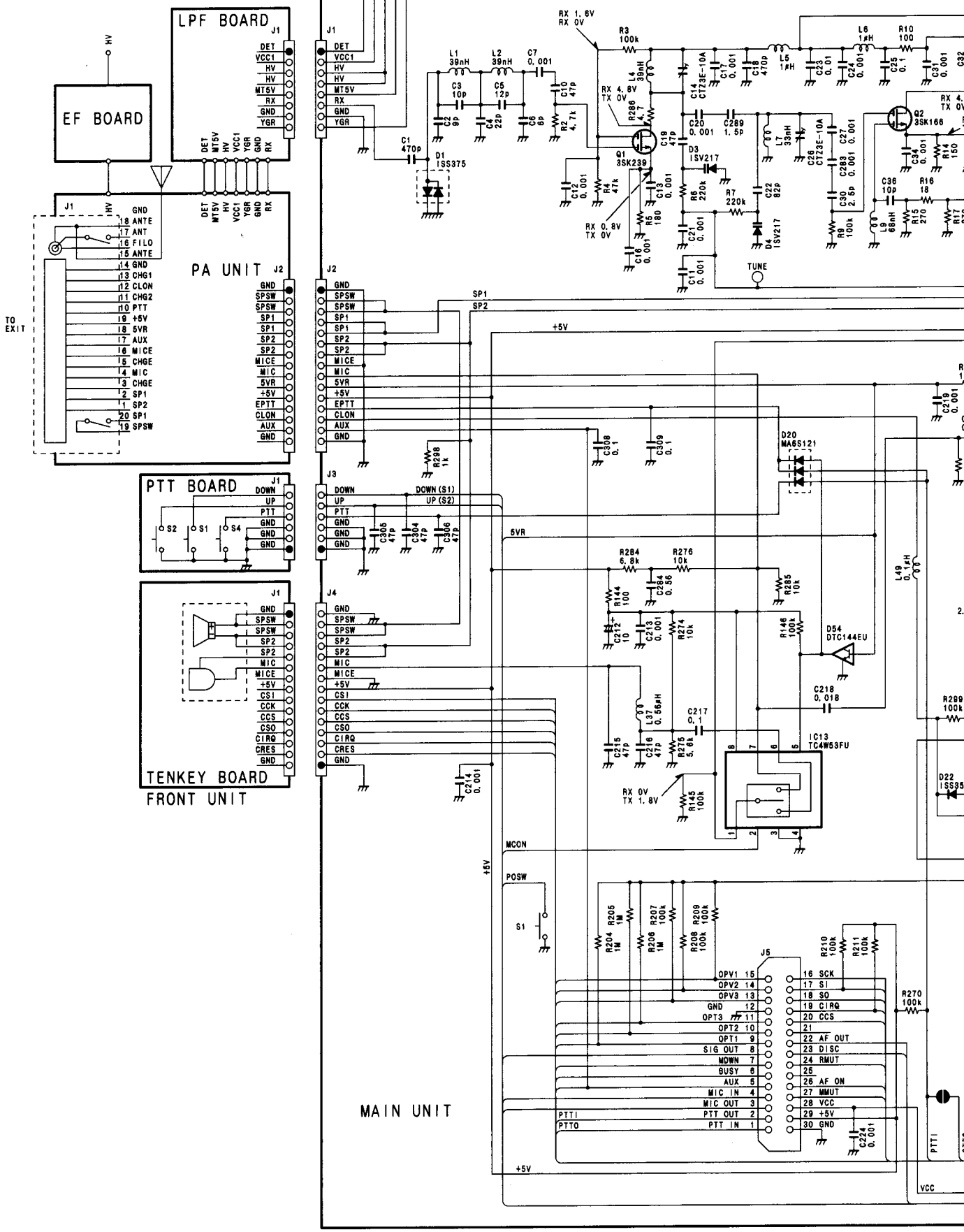
11-2 IC-F45

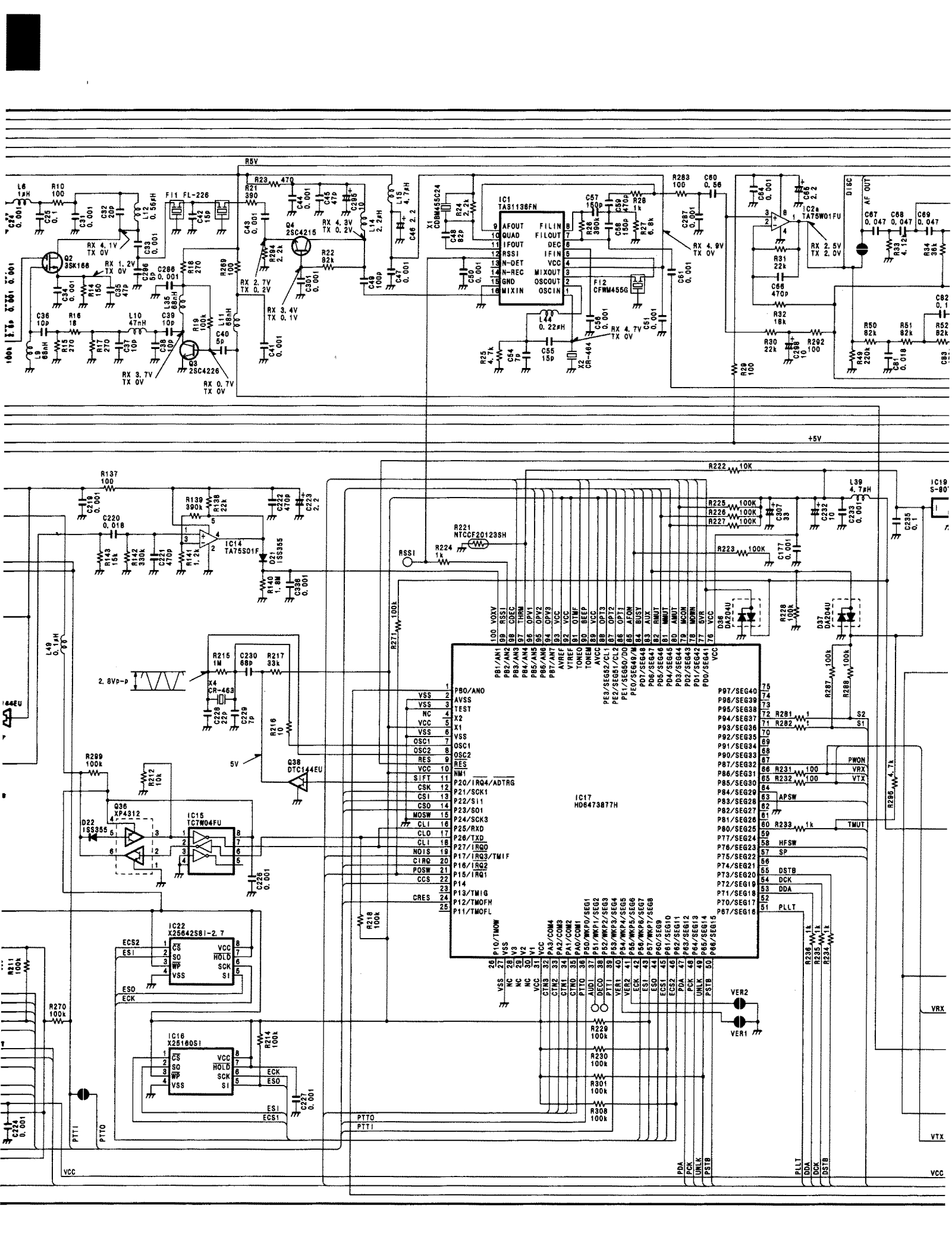

(DISC)
(AF OUT)
FI2
R5V
IC3 TA75W01FU
+5V
CR-464 X2
FM IC
IC1 TA31136FN(D)
IF AMP
MCF
FI1 FL-226
Q6 DTC363EK
AF MUTE
HPF
AMP
IC2A TA75W01FU
Q4 2SC4215
X1 CD8M455C24
RSSI
NOISE
AMUT Q5 2SC4081
HFSW
SHIFT SW
IC4
TA75W01FU
TOEC
LPF
VCC
APSW
Q9 2SB1132
Q10 2SC4081
RF AMP
IC5 NJM2079M
J1
20 SPSW
21 SP1
1 SP2
2 SP1
3 CHGE
4 MIC
5 CHGE
6 MICE
7 AUX
8 5VR
9 +5V
10 PTT
11 CHG2
12 CLON
13 CHG1
14 GND
15 ANTE
16 FILO
17 ANT
18 ANTE
19
SP2
SP1
CHGE
MIC
CHGE
MICE
AUX
5VR
+5V
PTT
CHG2
CLON
CHG1
GND
EANT
AXR91010301
AFIN
AFO PSET
Q13,Q14 2SC4081
NOIS
LIMIT AMP
D/A
IC7
M62363FP
13 BEEP
Q17
AMP
IC8A TA75W01FU
DCK
DDA
DSTB
CENC
BUFFER
TONE
(MIC OUT)
(MIC IN)
TC4W53FU
IC13
FMIC
MIC
MIC SW
MCON
IC88 TA75W01FU
HPF AMP
LIMIT AMP
MIX
SUPRATTER
(SIG OUT)
µPC5023GR
IC12
FRONT UNIT
DS1, DS2, DS3, DS4, LN1371GX4
DS7,DS8 LNJ310M6URAX2
BACK LIGHT
LCD
DS6 LD-84548J
MIC
16 KEY
SUB CPU
IC1
X1 PBRC 3.58A
CSI
CCK
CCS
CSO
CIRQ
CRES
HFSW
SP
CENC
MTG
IC15 TC7W04FU
Q36 XP4312
D22 1SS355
CTN0
CTN3
CLONE
CLONE I/F
CDEC
S-80742SL
CPU5V
IC19
RESET
RES
POSW
SHIFT SW
Q38 DTC144EU
X4 CR-463
EE PROM
IC16 X25160

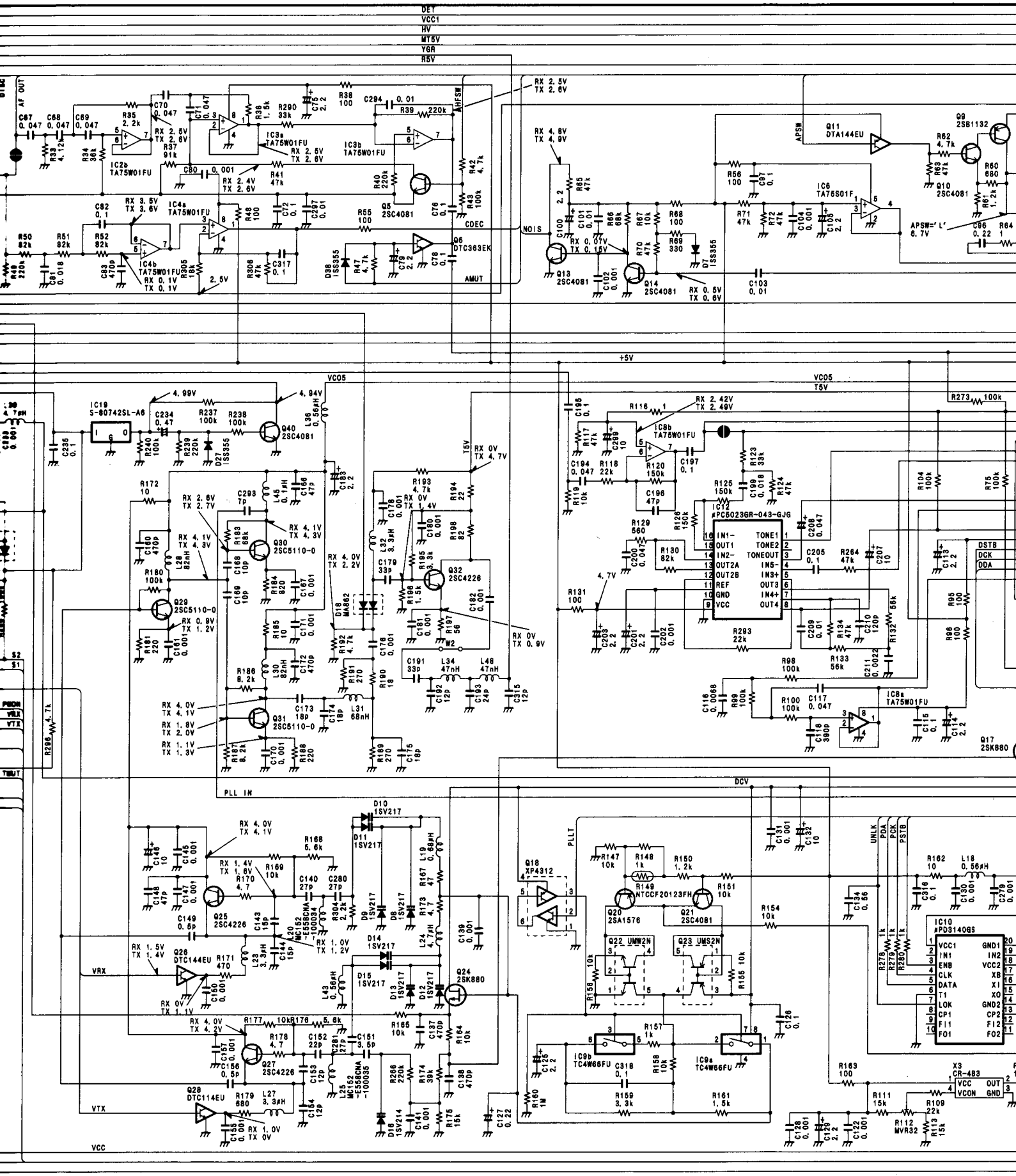

PA UNIT
MAIN UNIT
MODEM UNIT
[ANT]
L10
D2 MA862
TX/RX SW
LPF
MT5V
POW DET
APC CTRL
VCC
IC21 NJM2904V
PSET
IF AMP
Q4 2SC4215
MCF
FI1 FL-226
BPF
RF AMP
Q1 3SK239
Q2 3SK166
LO AMP
Q3 2SC4226
R5V
+12V
BUFFER
TUNE
Q24 2SK880
D18 MA852
T5V
DRIVE AMP
Q33 2SC3357
Q32 2SC5110
HV
PWR AMP
IC11 M57786L(L-band) SC-1274(H-band)
APCV
Q26 DTC144EU
VRX
VCO SW
RX VCO
Q25 2SC4226 D8,D10 1SV217 ×2
13 BEEP
Q17
AMP
MOD
TX VCO
Q27 2SC4226 D12,D14 1SV217 ×2
VTX
Q28 DTA144EU
Ref MOD
IC8A TA75W01FU
DCK DDA DSTB
+8V
Q29 2SC5110
Q31 2SC5110
ATT 3dB
+5V CTRL
Q45 2SB1132 Q46 2SC4081
CPU5V
D30 1SS355
+12V DC-DC
IC18 TC7H04FU
Q41 2SK1069 4
D23 MA8120 H
D24 1SS355
D25 DA204U
D26 1SS355
POWER SW
Q43 2SJ316 Q44 DTC144EU
PWON
R5V
Q47 2SA1576 Q48 2SC4081 D31 1SS355
VRX
MT5V
Q49 2SB1132 Q50 2SC4081
TMUT
T5V
Q51 2SA1576 Q52 2SC4081 D33 1SS355
VTX
REF5V
+5 REG
IC20 S-81250PG
[BATTERY PACK]
IC10 µPD3140
LOOP FIL
PLL IC
Q30 2SC5110
PLLT
SPEED UP SW
Q18 XP4312
12.8 MHz
TCXO
X3 CR-483
PCK PDA PSTB UNLK
NOIS RSSI
THRM
TEMP C.P
PLLT TMUT VRX VTX PWON
CPU
IC20 HD6433875
SCK SI SO CIRQ CCS MMUT RMUT AUX BUSY AFON OPT1 OPT2 OPT3 OPV1 OPV2 OPV3
OPTION BUS
(PTTO)
(PTTI)
X4 CR-463
EE PROM
IC16 X25160
Ver1
Ver2
J5
OPV1 15
OPV2 14
OPV3 13
GND 12
OPT3 11
OPT2 10
OPT1 9
SIG OUT 8
MDWN 7
BUSY 6
AUX 5
MIC IN 4
MIC OUT 3
PTT OUT 2
PTT IN 1
16 SCK
17 SI
18 SO
19 CIRQ
20 CCS
21 NC
22 AF OUT
23 DISC
24 RMUT
25 NC
26 AF ON
27 MMUT
28 VCC
29 +5V
30 GND
OPTION
VCC
CPU5V
COMMON LINE
RX LINE
TX LINE
DATA BUS LINE

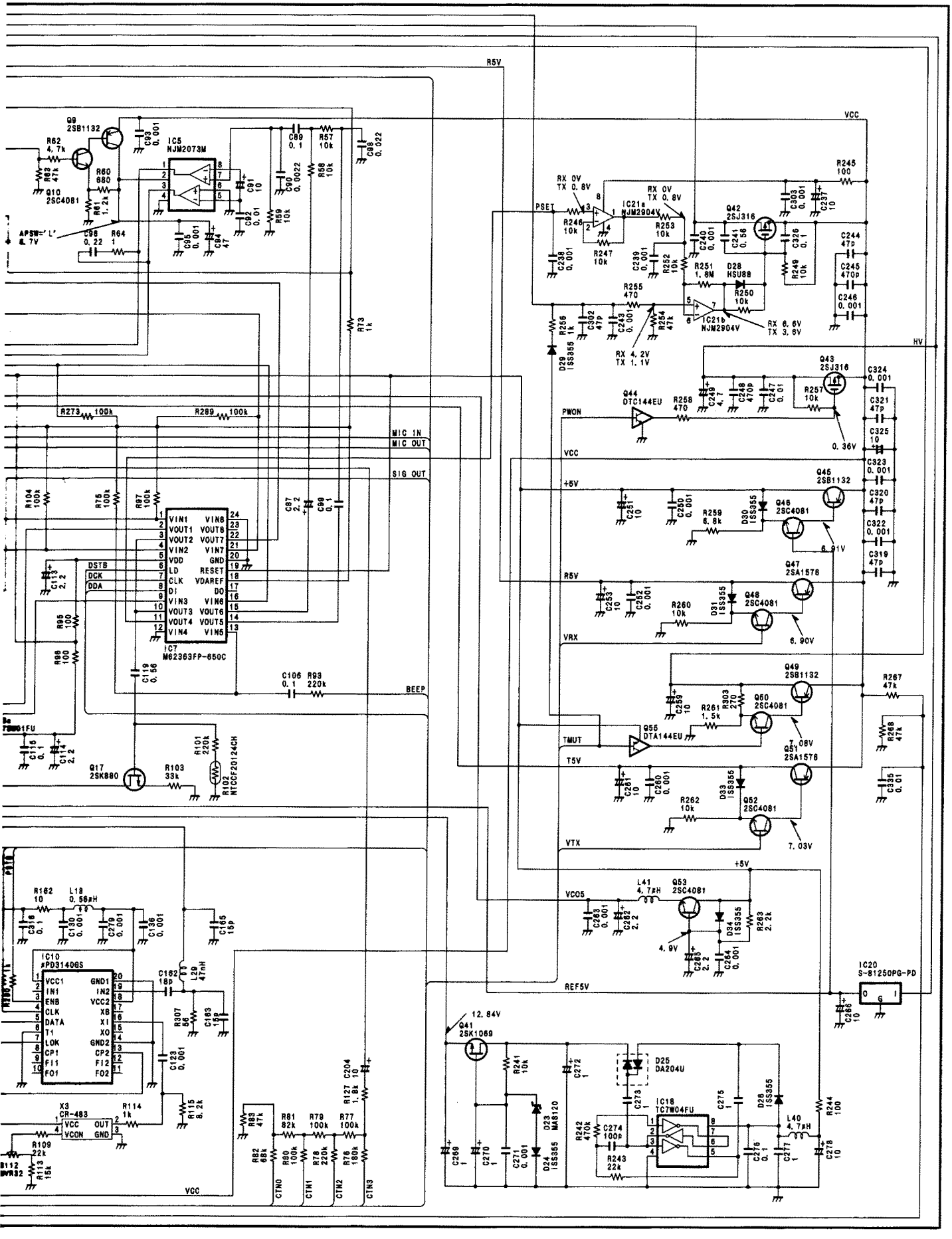
SECTION 12 VOLTAGE DIAGRAM

12-1 IC-F35 MAIN UNIT

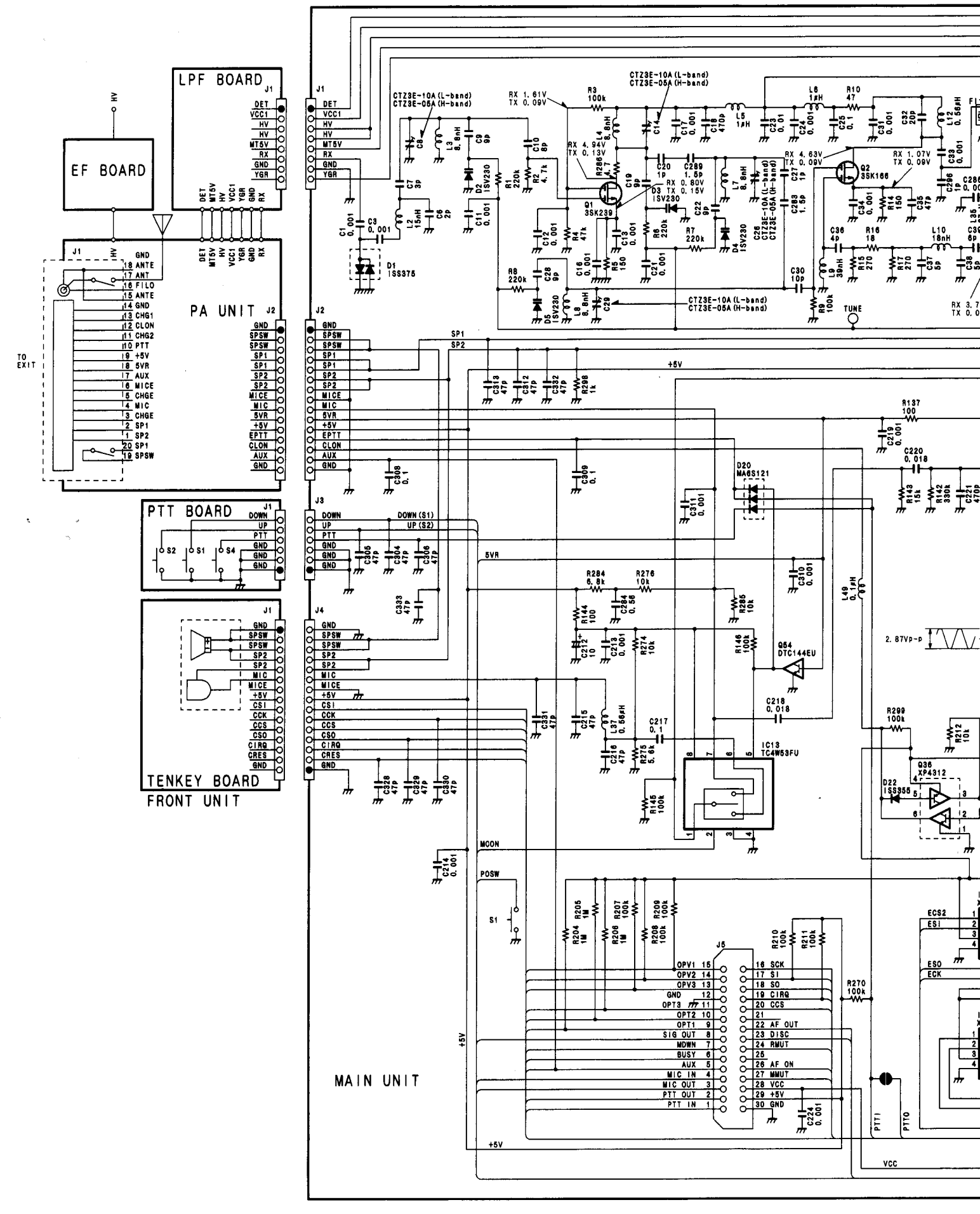


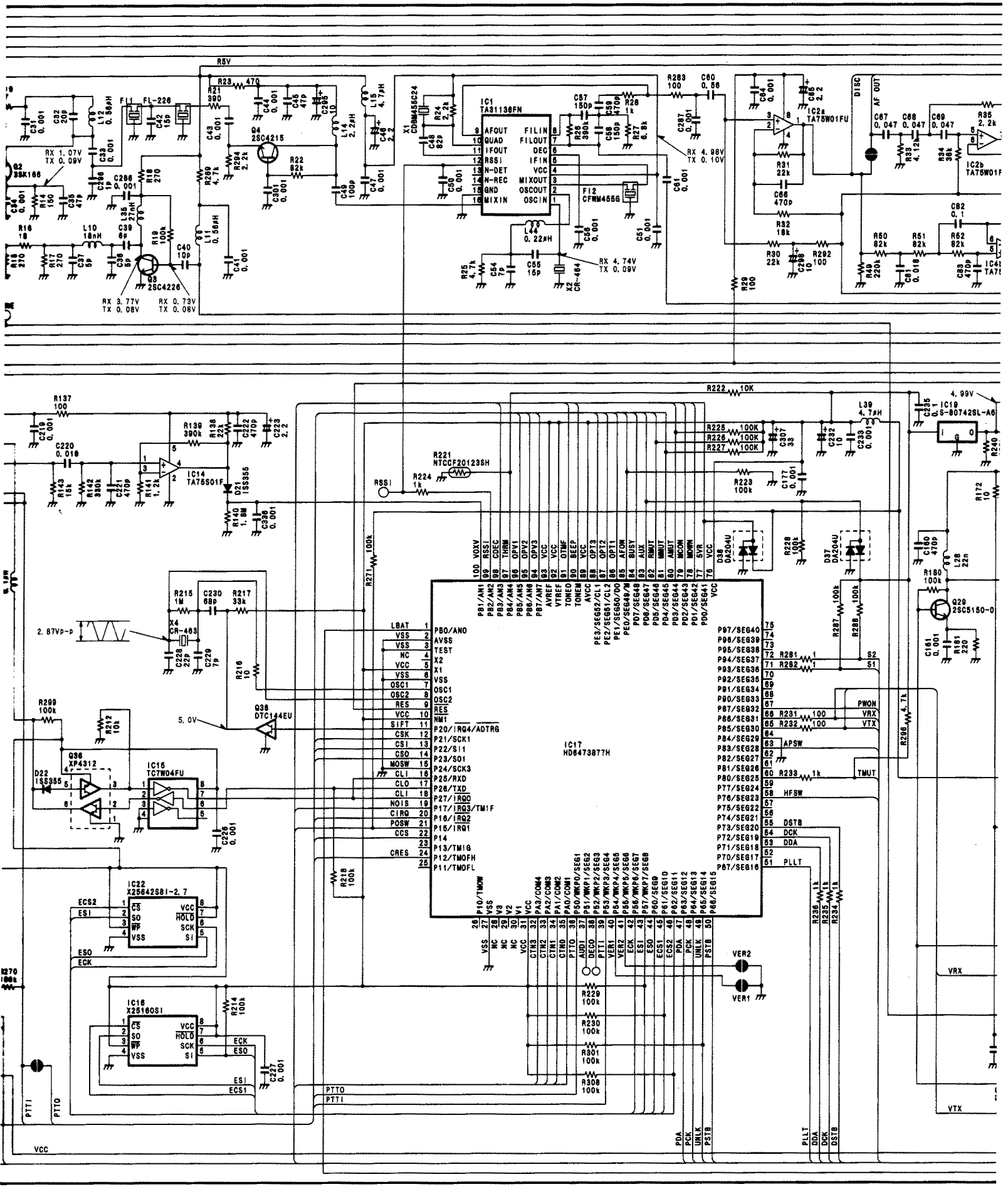

R5V
IC1 TA31136FN
AFOUT FILIN
QUAD FILOUT
IFOUT DEC
RSSI IFIN
N-DET VCC
N-REC MIXOUT
GND OSCOUT
MIXIN OSCIN
IC2a TA75W01FU
IC2b TA75W01FU
Q2 2SK168
Q3 2SC4226
Q4 2SC4215
X1 CDBM455C24
X2 CR-464
F11 FL-226
F12 CFWM455G
RX 4.1V TX 0V
RX 1.2V TX 0V
RX 3.7V TX 0V
RX 0.7V TX 0V
RX 2.7V TX 0.2V
RX 4.3V TX 0.2V
RX 3.4V TX 0.1V
RX 4.7V TX 0V
RX 4.9V TX 0V
RX 2.5V TX 2.0V
DISC
AF OUT
+5V
RSSI
IC14 TA75S01F
IC15 TC7W04FU
IC16 X25160SI
IC17 HD6473877H
IC22 X25642S8I-2.7
Q36 XP4312
Q38 DTC144EU
D21 1SS355
D22 1SS355
D36 DA204U
D37 DA204U
X4 CR-463
2.8Vp-p
5V
PWON
VRX
VTX
APSW
HFSW
SP
TMUT
DSTB
DCK
DDA
PLLT
S1
S2
VER1
VER2
ECS2
ESI
ESO
ECK
ECS1
PTTI
PTTO
VCC

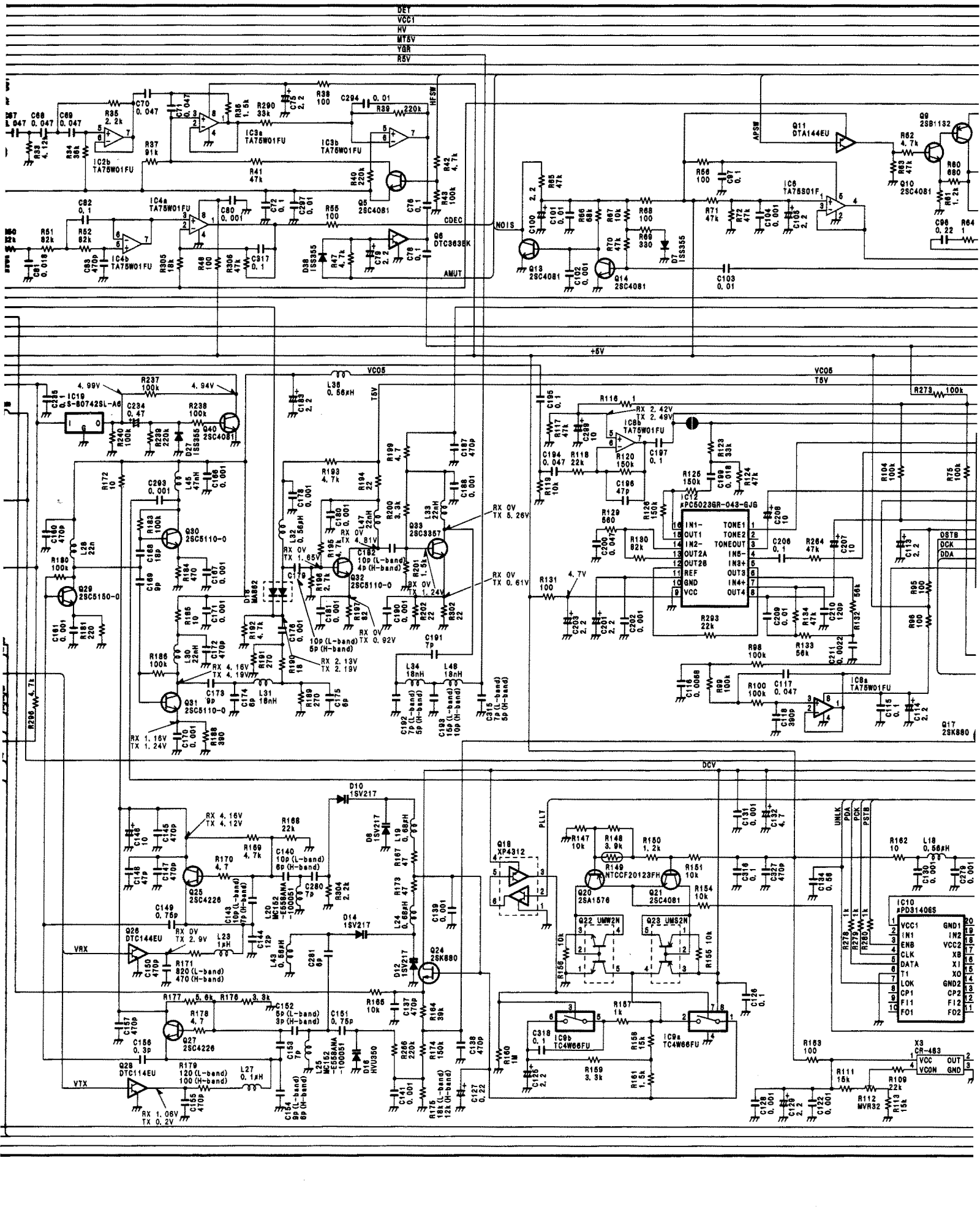

DET
VCC1
HV
MT5V
Y6R
R5V
AF OUT
IC2b TA75W01FU
IC3a TA75W01FU
IC3b TA75W01FU
IC4a TA75W01FU
IC4b TA75W01FU
Q5 2SC4081
Q6 DTC363EK
CDEC
AMUT
AHFSW
NOIS
APSW
Q11 DTA144EU
Q9 2SB1132
Q10 2SC4081
IC6 TA76S01F
APSW='L' 6.7V
Q13 2SC4081
Q14 2SC4081
RX 0.07V TX 0.15V
RX 0.5V TX 0.6V
RX 2.5V TX 2.6V
RX 4.6V TX 4.9V
RX 3.5V TX 3.6V
RX 2.4V TX 2.6V
RX 0.1V TX 0.1V
2.5V
+5V
VCO5
T5V
IC19 S-80742SL-A6
Q40 2SC4081
D27 1SS355
4.99V
4.94V
RX 0V TX 4.7V
RX 2.42V TX 2.49V
IC8b TA75W01FU
IC12 #PC5023GR-043-GJG
TONE1
TONE2
TONEOUT
IN5-
IN3+
OUT3
IN4+
OUT4
IN1-
OUT1
IN2-
OUT2A
OUT2B
REF
GND
VCC
DSTB
DCK
DDA
4.7V
RX 2.6V TX 2.7V
RX 4.1V TX 4.3V
RX 0.9V TX 1.2V
RX 4.1V TX 4.3V
RX 4.0V TX 2.2V
RX 0V TX 0.9V
Q29 2SC5110-0
Q30 2SC5110-0
Q31 2SC5110-0
Q32 2SC4226
D18 MA862
W2
RX 4.0V TX 4.1V
RX 1.8V TX 2.0V
RX 1.1V TX 1.3V
PLL IN
DCV
PLLT
VRX
VTX
VCC
Q18 XP4312
Q20 2SA1576
Q21 2SC4081
Q22 UMW2N
Q23 UMS2N
Q24 2SK880
Q25 2SC4226
Q26 DTC144EU
Q27 2SC4226
Q28 DTC114EU
Q17 2SK880
RX 4.0V TX 4.1V
RX 1.4V TX 1.6V
RX 1.5V TX 1.4V
RX 0V TX 1.1V
RX 1.0V TX 1.2V
RX 4.0V TX 4.2V
RX 1.0V TX 0V
D10 1SV217
D11 1SV217
D14 1SV217
D15 1SV217
IC9b TC4W66FU
IC9a TC4W66FU
IC10 #PD3140GS
VCC1
IN1
ENB
CLK
DATA
T1
LOK
CP1
F11
FO1
GND1
IN2
VCC2
XB
XI
XO
GND2
CP2
F12
FO2
UNLK
PDA
PCK
PSTB
X3 CR-483
VCC
VCON
OUT
GND
MVR32

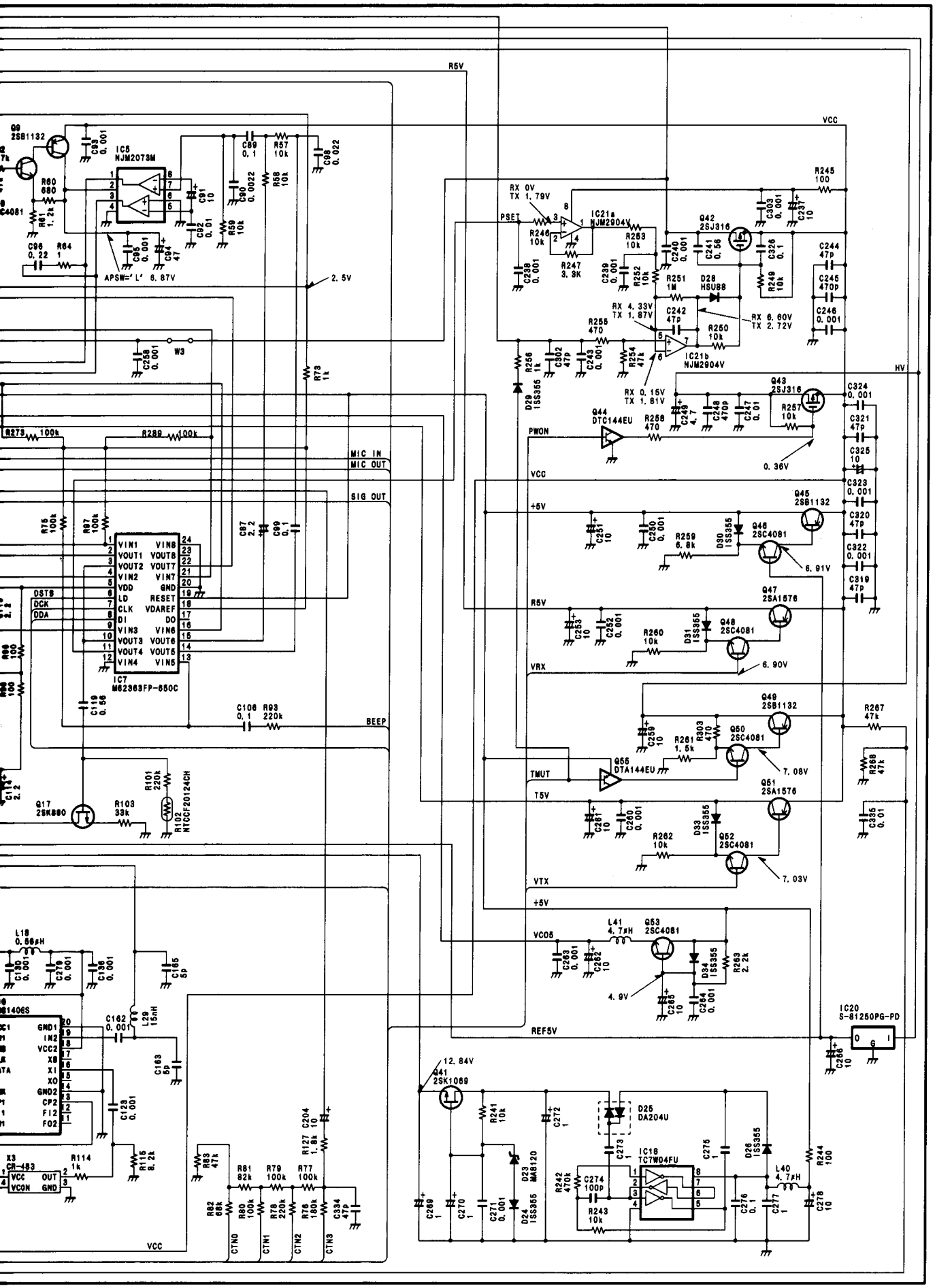

R5V
VCC
HV
Q9 2SB1132
R62 4.7k
R63 47k
R60 680
Q10 2SC4081
R61 1.2k
IC5 NJM2073M
C93 0.001
C89 0.1
R57 10k
C98 0.022
C90 0.0022
R58 10k
C91 10
C92 0.01
R59 10k
C96 0.001
C84 47
C95 0.22
R64 1
APSW='L' 6.7V
R73 1k
RX 0V TX 0.8V
PSET
IC21a NJM2904V
R246 10k
R247 10k
R253 10k
R245 100
C303 0.001
C237 10
Q42 2SJ316
C240 0.001
C241 0.56
C326 0.1
C244 47p
C245 470p
C246 0.001
C238 0.001
C239 0.001
R252 10k
R251 1.8M
D28 HSU88
R249 10k
R250 10k
R255 470
R256 1k
C302 47p
C243 0.001
R254 47k
IC21b NJM2904V
RX 6.6V TX 3.6V
D29 1SS355
RX 4.2V TX 1.1V
Q43 2SJ316
C324 0.001
C321 47p
C325 10
0.36V
Q44 DTC144EU
R258 470
C249 4.7
C248 470p
C247 0.01
R257 10k
PWON
VCC
+5V
C323 0.001
C320 47p
C322 0.001
C319 47p
Q45 2SB1132
Q46 2SC4081
6.91V
C251 10
C250 0.001
R259 6.8k
D30 1SS355
R273 100k
R289 100k
MIC IN
MIC OUT
SIG OUT
R104 100k
R75 100k
R97 100k
C87 2.2
C99 0.1
IC7 M62363FP-650C
VIN1 VOUT1 VOUT2 VIN2 VDD LD CLK DI VIN3 VOUT3 VOUT4 VIN4 VIN8 VOUT8 VOUT7 VIN7 GND RESET VDAREF DO VIN6 VOUT6 VOUT5 VIN5
DSTB
DCK
DDA
C113 2.2
R95 100
R98 100
C119 0.56
C106 0.1
R93 220k
BEEP
C115 0.1
C114 2.2
Q17 2SK880
R103 33k
R101 220k
R102 MTCCF20124CH
R5V
Q47 2SA1576
Q48 2SC4081
6.90V
C253 10
C252 0.001
R260 10k
D31 1SS355
VRX
Q49 2SB1132
Q50 2SC4081
7.08V
R267 47k
R268 47k
C259 10
R261 1.5k
R303 270
Q55 DTA144EU
TMUT
T5V
Q51 2SA1576
C335 0.01
C261 10
C260 0.001
D33 1SS355
R262 10k
Q52 2SC4081
7.03V
VTX
R162 10
L18 0.56μH
C316 0.1
C130 0.001
C270 0.001
C136 0.001
C165 15p
IC10 μPD31406S
VCC1 IN1 ENB CLK DATA T1 LOK CP1 FI1 FO1 GND1 IN2 VCC2 XB XI XO GND2 CP2 FI2 FO2
C162 18p
L29 47nH
R307 56
C163 15p
C123 0.001
X3 CR-483
VCC VCON OUT GND
R114 1k
R115 8.2k
R109 22k
B112 SVR32
R113 15k
R83 47k
R82 68k
R81 82k
R80 100k
R79 100k
R78 220k
R77 100k
R76 180k
R127 1.8k
C204 10
CTN0
CTN1
CTN2
CTN3
VCC
+5V
VCO5
L41 4.7μH
Q53 2SC4081
4.9V
C283 0.001
C282 2.2
D34 1SS355
R283 2.2k
C265 2.2
C264 0.001
IC20 S-81250PG-PD
C286 10
REF5V
12.84V
Q41 2SK1069
R241 10k
C272 1
D25 DA204U
C273 1
C275 1
D26 1SS355
IC18 TC7W04FU
R242 470k
C274 100p
R243 22k
D23 MA8120
D24 1SS355
C269 1
C270 1
C271 0.001
C276 0.1
C277 1
L40 4.7μH
R244 100
C278 10

12-2 IC-F45 MAIN UNIT

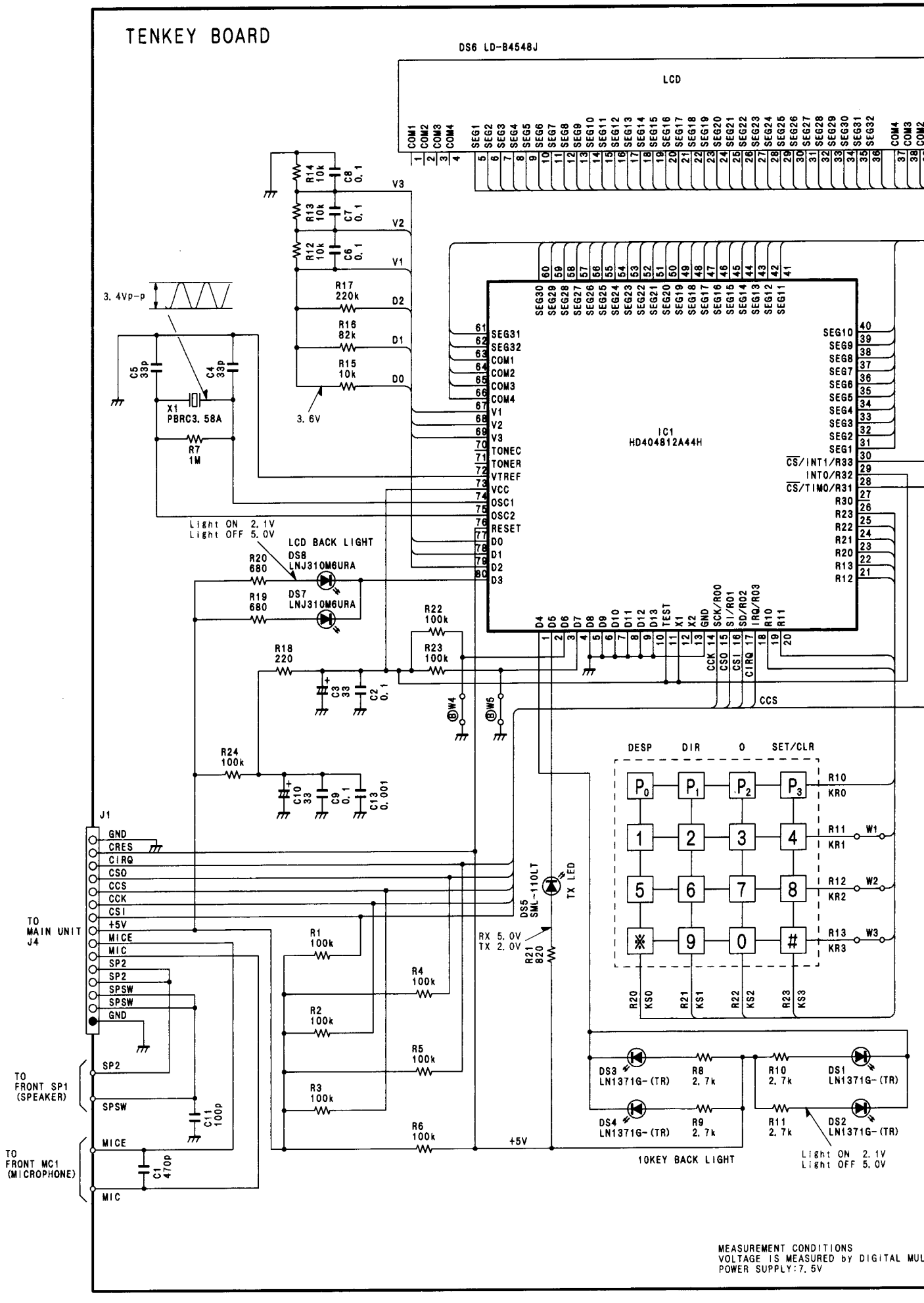


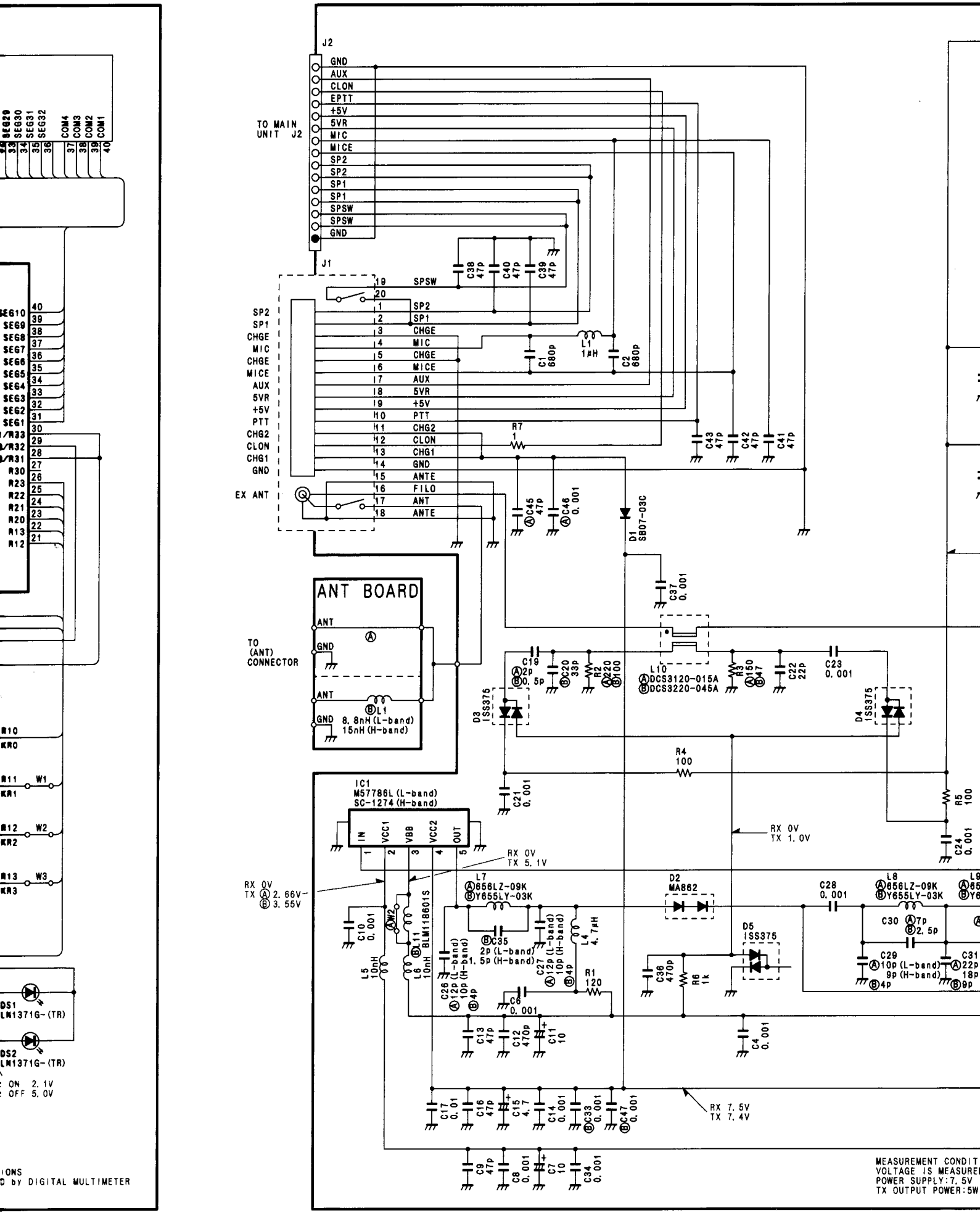

R5V
IC1 TA31136FN
AFOUT FILIN
QUAD FILOUT
IFOUT DEC
RSSI IFIN
N-DET VCC
N-REC MIXOUT
GND OSCOUT
MIXIN OSCIN
IC2a TA75W01FU
IC2b TA75W01F
DISC
AF OUT
IC10 0.S-80742SL-A6
IC14 TA75S01F
IC17 HD6473877H
IC15 TC7W04FU
IC22 X25642S8I-2.7
IC16 X25160SI
Q4 2SC4215
Q8 2SC4226
Q29 2SC5150-O
Q36 XP4312
Q38 DTC144EU
D21 1SS355
D22 1SS355
D36 DA204U
D37 DA204U
F11 FL-226
F12 CFWM455G
X1 CDBM455C24
X2 CR-464
X4 CR-463
RSSI
PTTI
PTTO
VCC
VER1
VER2
PDA
PCK
UNLK
PSTB
DCK
DDA
DSTB
PLLT
VRX
VTX
PWON
APSW
TMUT
HFSW
ECS1
ECS2
ESI
ESO
ECK
RX 1.07V TX 0.09V
RX 3.77V TX 0.08V
RX 0.73V TX 0.08V
RX 4.98V TX 0.10V
RX 4.74V TX 0.09V
2.87Vp-p
5.0V
4.99V

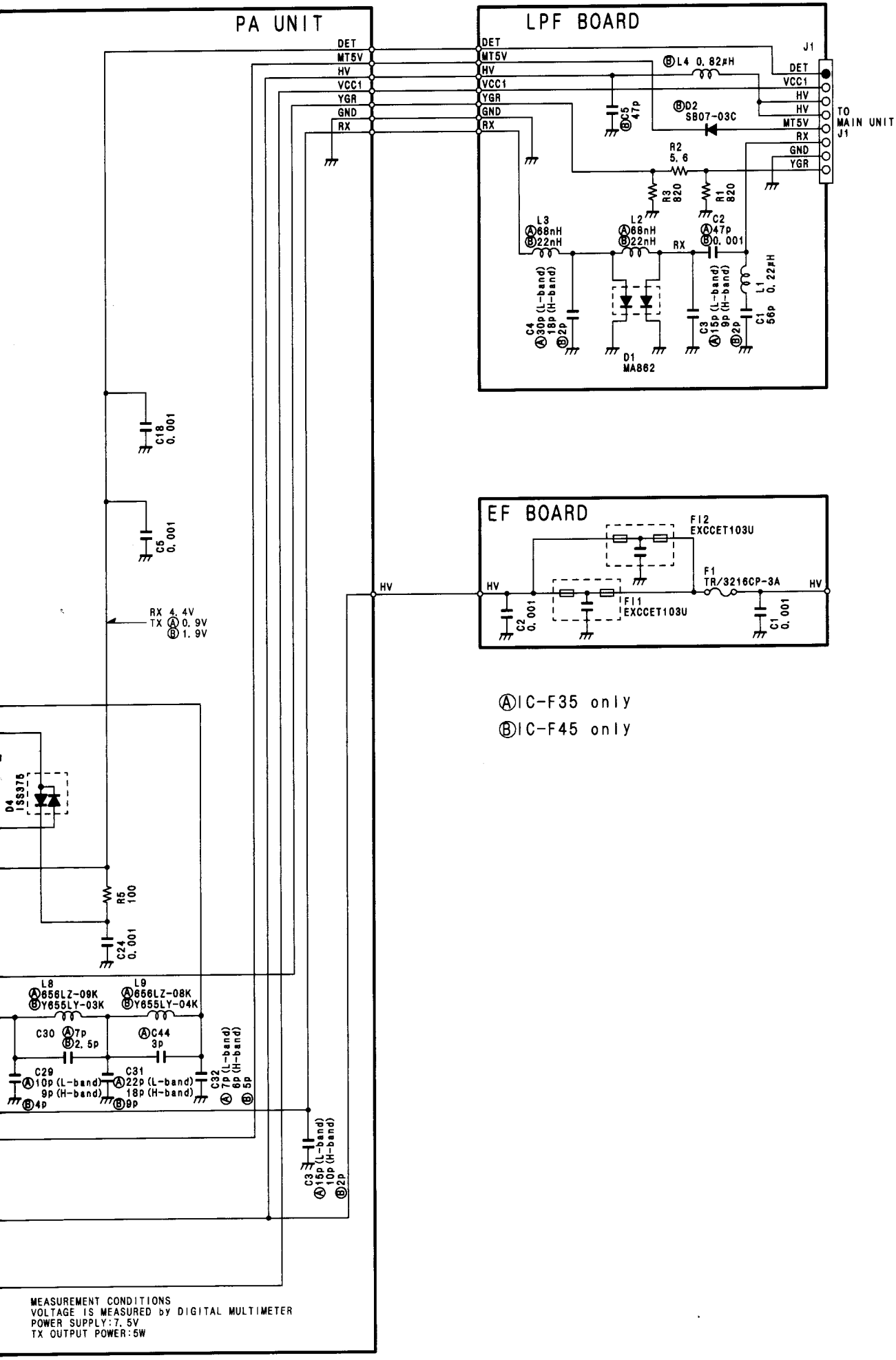

DET
VCC1
HV
MT5V
YGR
R5V
HFSW
APSW
CDEC
NOIS
AMUT
+5V
VCO5
T5V
DCV
PLLT
VRX
VTX
DSTB
DCK
DDA
UNLK
PDA
PCK
PSTB
IC1 S-80742SL-A6
IC2b TA75W01FU
IC3a TA75W01FU
IC3b TA75W01FU
IC4a TA75W01FU
IC4b TA75W01FU
IC5 TA75S01F
IC6 TA75S01F
IC8a TA75W01FU
IC8b TA75W01FU
IC9a TC4W66FU
IC9b TC4W66FU
IC10 μPD31406S
IC12 μPC5023GR-043-GJG
Q5 2SC4081
Q6 DTC363EK
Q9 2SB1132
Q10 2SC4081
Q11 DTA144EU
Q13 2SC4081
Q14 2SC4081
Q17 2SK880
Q18 XP4312
Q20 2SA1576
Q21 2SC4081
Q22 UMW2N
Q23 UMS2N
Q24 2SK880
Q25 2SC4226
Q26 DTC144EU
Q27 2SC4226
Q28 DTC114EU
Q29 2SC5150-0
Q30 2SC5110-0
Q31 2SC5110-0
Q32 2SC5110-0
Q33 2SC3357
Q40 2SC4081
D7 1SS355
D10 1SV217
D12 1SV217
D14 1SV217
D16 HVU350
X3 CR-463


R5V
VCC
HV
IC5 NJM2073M
APSW="L" 6.87V
2.5V
W3
IC7 M62363FP-650C
VIN1 VIN8
VOUT1 VOUT8
VOUT2 VOUT7
VIN2 VIN7
VDD GND
LD RESET
CLK VDAREF
DI DO
VIN3 VIN6
VOUT3 VOUT6
VOUT4 VOUT5
VIN4 VIN5
DSTB
DCK
DDA
MIC IN
MIC OUT
SIG OUT
BEEP
Q17 2SK880
R101 220k
R102 NTCCF20124CH
R103 33k
RX 0V
TX 1.79V
PSET
IC21a NJM2904V
IC21b NJM2904V
RX 4.33V
TX 1.87V
RX 6.60V
TX 2.72V
RX 0.15V
TX 1.81V
D28 HSU88
D29 1SS355
Q42 2SJ316
Q43 2SJ316
Q44 DTC144EU
PWON
0.36V
Q45 2SB1132
Q46 2SC4081
6.91V
D30 1SS355
Q47 2SA1576
Q48 2SC4081
6.90V
D31 1SS355
VRX
Q49 2SB1132
Q50 2SC4081
7.08V
Q55 DTA144EU
TMUT
T5V
Q51 2SA1576
Q52 2SC4081
7.03V
D33 1SS355
VTX
+5V
VCO5
L41 4.7μH
Q53 2SC4081
4.9V
D34 1SS355
REF5V
IC20 S-81250PG-PD
12.84V
Q41 2SK1069
D25 DA204U
D23 MA8120
D24 1SS355
IC18 TC7W04FU
D26 1SS355
L40 4.7μH
X3 CR-483
VCC OUT
VCON GND
CTN0
CTN1
CTN2
CTN3

12-3 TENKEY AND PA BOARD (COMMON)




J2
GND
AUX
CLON
EPTT
+5V
5VR
MIC
MICE
SP2
SP2
SP1
SP1
SPSW
SPSW
GND
TO MAIN UNIT J2
J1
SP2
SP1
CHGE
MIC
CHGE
MICE
AUX
5VR
+5V
PTT
CHG2
CLON
CHG1
GND
EX ANT
ANT BOARD
ANT
GND
ANT
GND
TO (ANT) CONNECTOR
L1 8.8nH (L-band) 15nH (H-band)
IC1 M57786L (L-band) SC-1274 (H-band)
IN VCC1 VBB VCC2 OUT
L7 656LZ-09K Y655LY-03K
L8 656LZ-09K Y655LY-03K
L10 DCS3120-015A DCS3220-045A
D1 SB07-03C
D2 MA862
D3 ISS375
D4 ISS375
D5 ISS375
RX 0V TX 2.66V 3.55V
RX 0V TX 5.1V
RX 0V TX 1.0V
RX 7.5V TX 7.4V
MEASUREMENT CONDIT
VOLTAGE IS MEASURE
POWER SUPPLY: 7.5V
TX OUTPUT POWER: 5W


PA UNIT
DET
MT5V
HV
VCC1
YGR
GND
RX
LPF BOARD
J1
TO MAIN UNIT J1
Ⓑ L4 0.82μH
Ⓑ D2 SB07-03C
C5 47p
R2 5.6
R3 820
R1 820
L3 Ⓐ68nH Ⓑ22nH
L2 Ⓐ68nH Ⓑ22nH
C2 Ⓐ47p Ⓑ0.001
C4 Ⓐ30p (L-band) 18p (H-band) Ⓑ2p
C3 Ⓐ15p (L-band) 9p (H-band)
C1 56p
L1 0.22μH
D1 MA862
EF BOARD
F12 EXCCET103U
F1 TR/3216CP-3A
F11 EXCCET103U
C2 0.001
C1 0.001
C18 0.001
C5 0.001
RX 4.4V
TX Ⓐ0.9V Ⓑ1.9V
D4 1SS375
R5 100
C24 0.001
L8 Ⓐ656LZ-09K Ⓑ656LZ-08K
L9 Ⓐ656LZ-08K Ⓑ655LY-04K
C30 Ⓐ7p Ⓑ2.5p
Ⓐ C44 3p
C29 Ⓐ10p (L-band) 9p (H-band) Ⓑ4p
C31 Ⓐ22p (L-band) 18p (H-band) Ⓑ9p
C32 7p (L-band) 6p (H-band) Ⓐ Ⓑ 5p
C3 Ⓐ15p (L-band) 10p (H-band) Ⓑ2p
Ⓐ IC-F35 only
Ⓑ IC-F45 only
MEASUREMENT CONDITIONS
VOLTAGE IS MEASURED by DIGITAL MULTIMETER
POWER SUPPLY:7.5V
TX OUTPUT POWER:5W

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