



SERVICE MANUAL

UHF TRANSCEIVERS

IC-F4001
IC-F4002
IC-F4003
IC-F4006
IC-F4008

S-14617XZ-C1
Nov. 2009

Icom Inc.

INTRODUCTION

This service manual describes the latest technical information for the **IC-F4001/IC-F4002/IC-F4003/IC-F4006/IC-F4008 UHF TRANSCEIVERS** at the time of publication.

MODEL	VERSION	CHANNEL SPACING (kHz)	FREQUENCY RANGE (MHz)
IC-F4001	USA-11	12.5/25.0	400–470
	USA-12		
	USA-13		
IC-F4002	EUR-21	12.5/20.0/25.0	
	EUR-22		
	EUR-23		
	UK-01	12.5/25.0	
	UK-02		
	UK-03		
IC-F4003	EXP-11	12.5/25.0	
	EXP-12		
	EXP-13		
	EXP-21		
	EXP-22		
	EXP-23		
	EXP-01		
	EXP-03		
	EXP-31		
	AUS-21		
	AUS-22		
	AUS-23		
	IC-F4006		RUS-21
RUS-22			
RUS-23			
IC-F4008	CHN-31		

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

ORDERING PARTS

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

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

<ORDER EXAMPLE>

1110003491 S.IC TA31136FNG IC-F4001 MAIN UNIT 5 pieces
8820001210 Screw 2438 screw IC-F4003 Top cover 10 pieces

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

CAUTION

NEVER connect the transceiver to an AC outlet or to a DC power supply that uses more than the specified voltage. 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.



REPAIR NOTES

1. Make sure that the 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 Standard Signal Generator or a Sweep Generator.
7. **ALWAYS** connect a 50 dB to 60 dB attenuator between the transceiver and a Deviation Meter or Spectrum Analyzer when using such test equipment.
8. **READ** the instructions of the test equipment thoroughly before connecting it to the transceiver.

TABLE OF CONTENTS

SECTION 1 SPECIFICATIONS

SECTION 2 INSIDE VIEWS

SECTION 3 DISASSEMBLY INSTRUCTION

SECTION 4 CIRCUIT DESCRIPITON

4-1	RECEIVER CIRCUITS.....	4-1
4-2	TRANSMITTER CIRCUITS.....	4-2
4-3	FREQUENCY SYNTHESIZER CIRCUITS.....	4-3
4-4	VOLTAGE BLOCK DIAGRAM.....	4-3
4-5	PORT ALLOCATIONS.....	4-4

SECTION 5 ADJUSTMENT PROCEDURES

5-1	PREPARATION.....	5-1
5-2	FREQUENCY ADJUSTMENT.....	5-5
5-3	TRANSMIT ADJUSTMENT.....	5-6
5-4	RECEIVE ADJUSTMENT.....	5-7

SECTION 6 PARTS LIST

SECTION 7 MECHANICAL PARTS

SECTION 8 BOARD LAYOUTS

SECTION 9 BLOCK DIAGRAM

SECTION 10 VOLTAGE DIAGRAM

■ GENERAL

• Frequency range	: 400–470 MHz	
• Number of conventional channels	: 16 channels	
• Type of emission	: [EUR] Wide: 16K0F3E (25.0 kHz) Middle: 14K0F3E (20.0 kHz) Narrow: 8K50F3E (12.5 kHz) Except [EUR] Wide: 16K0F3E (25.0 kHz) Narrow: 11K0F3E (12.5 kHz)	
• Antenna impedance	: 50 Ω (Nominal)	
• Operating temperature range	: –30°C to +60°C; –22°F to +140°F –25°C to +55°C	Except [EUR], [UK] [EUR], [UK]
• Power supply voltage	: Specified Icom's battery packs only (7.2 V DC; negative ground)	
• Current drain (Approx.)	: Receiving 70 mA (stand-by) 330 mA (max. audio) Transmitting 1.3 A (at 4.0 W)	
• Dimensions (Projections not included)	: With BP-264 58.6 (W)×111.0 (H)×31.0 (D) mm; 2 5/16 (W)×4 3/8 (H)×1 7/32 (D) in. With BP-265 58.6 (W)×111.0 (H)×35.5 (D) mm; 2 5/16 (W)×4 3/8 (H)×1 13/32 (D) in.	
• Weight	: With BP-264 Approx. 330 g; 11 21/32 oz. With BP-265 Approx. 270 g; 9 17/32 oz.	
• Intermediate frequency	: 1st 46.35 MHz 2nd 450 kHz	
• Output impedance (Audio)	: 8 Ω	
• Input impedance (Audio)	: 2.2 kΩ	

■ TRANSMITTER

• Output power	: 4 W	
• Modulation	: Variable reactance frequency modulation	
• Maximum frequency deviation	: Narrow ±2.5 kHz Middle ±4.0 kHz Wide ±5.0 kHz	
• Frequency stability	: ±2.5 ppm	
• Spurious emissions	: 70 dB min. 0.25 μW (≤1 GHz), 1.0 μW (>1 GHz)	Except [EUR], [UK] [EUR], [UK]
• Adjacent channel power	: Narrow 60 dB min., 66 dB typ. Middle 70 dB min., 73 dB typ. Wide 70 dB min., 73 dB typ.	
• Audio harmonic distortion	: Wide, Middle 1.0% typ. at AF 1 kHz 40 % deviation Narrow 1.5% typ. at AF 1 kHz 40 % Deviation	
• FM hum and Noise (Except [EUR], [UK]) (Without CCITT FILTER)	: Narrow 34 dB min., 40 dB typ. Wide 40 dB min., 46 dB typ.	
• Residual modulation ([EUR], [UK]) (With CCITT FILTER)	: Narrow 40 dB min. Middle 43 dB min. Wide 45 dB min.	
• Limiting charact of modulator	: 60–100% of max. deviation	

RECEIVER

• Sensitivity	: 0.25 μ V typ. at 12 dB SINAD -4 dB μ V (EMF) typ. at 20 dB SINAD	Except [EUR], [UK] [EUR], [UK]
• Squelch sensitivity (at threshold)	: 0.25 μ V typ. -4 dB μ V (EMF) typ.	Except [EUR], [UK] [EUR], [UK]
• Intermodulation	: 70 dB min. 74 dB typ. 65 dB min.	Except [EUR], [UK] [EUR], [UK]
• Spurious response	: 70 dB min.	
• Audio output power	: 0.8 W typ. at 5% distortion with 12 Ω (Int. speaker) 0.4 W typ. at 5% distortion with 8 Ω (Ext. speaker)	
• Hum and noise (Except [EUR], [UK]) (Without CCITT Filter)	: Narrow 34 dB min. 47 dB typ. Wide 40 dB min. 52 dB typ.	
• Hum and noise ([EUR], [UK]) (With CCITT Filter)	: Narrow 40 dB min. Middle 43 dB min. Wide 45 dB min.	
• Adjacent channel selectivity	: Narrow 60 dB min. 65 dB typ. Middle 70 dB min. 73 dB typ. Wide 70 dB min. 73 dB typ.	

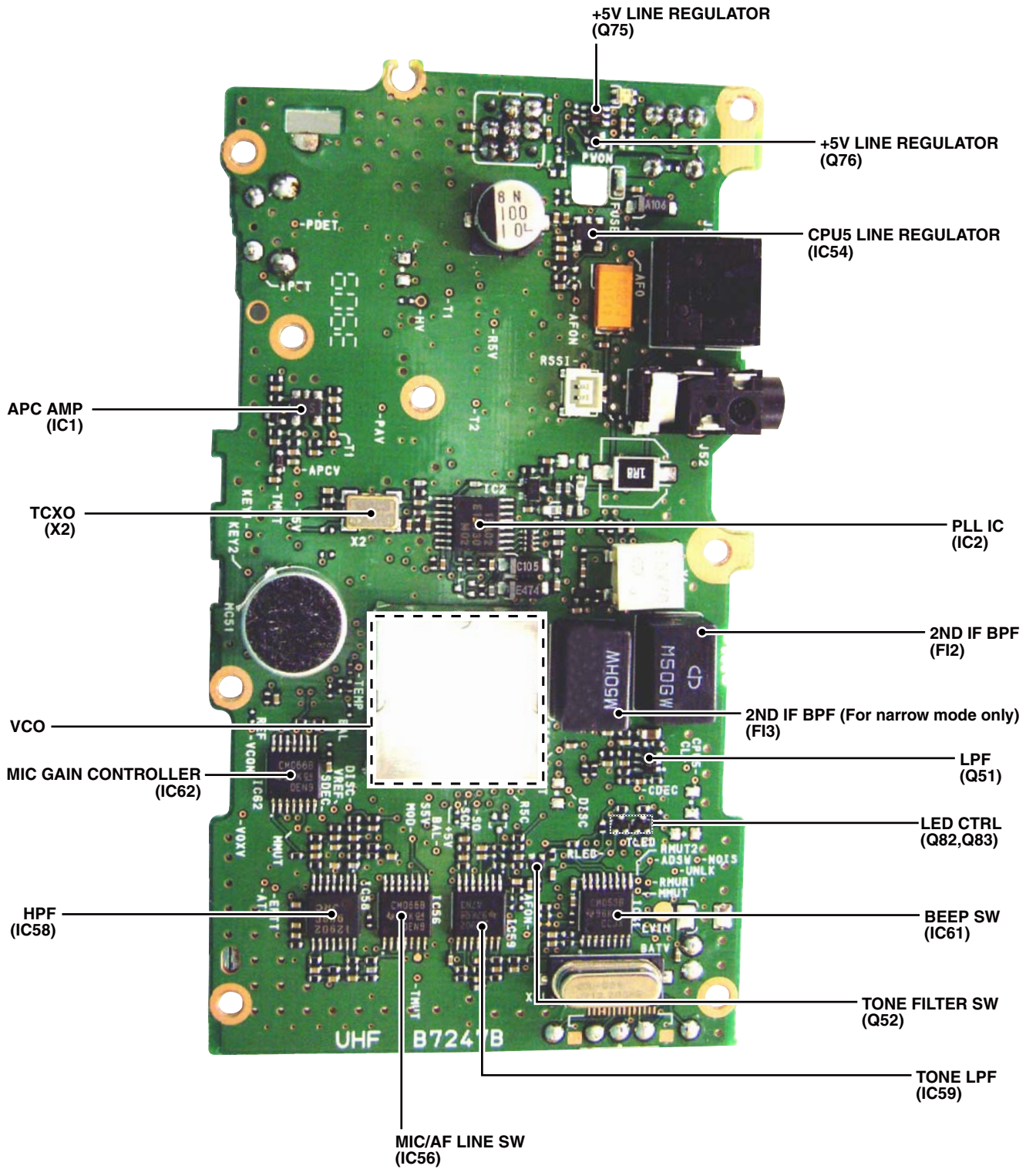
Specifications are measured in accordance with TIA/EIA-603B or EN 300 086

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

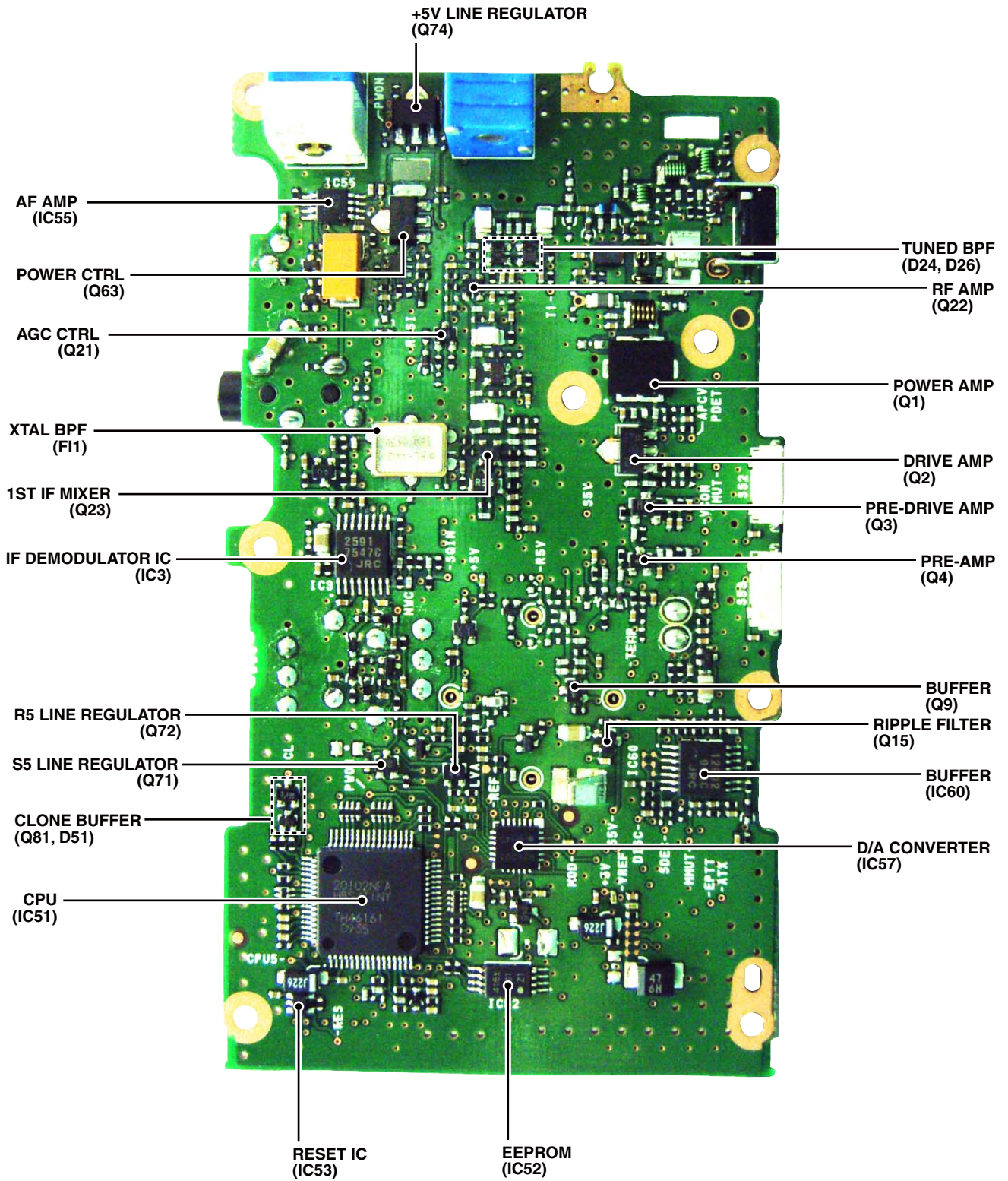
SECTION 2

INSIDE VIEWS

• MAIN-A UNIT (TOP VIEW)



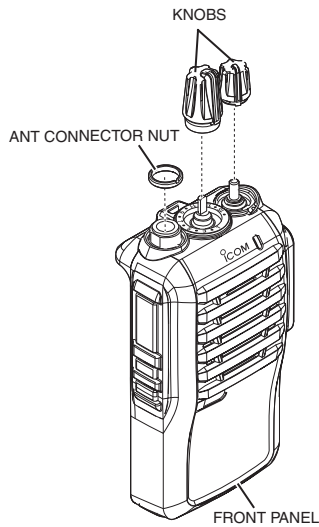
• MAIN-A UNIT
(BOTTOM VIEW)



SECTION 3 DISASSEMBLY INSTRUCTION

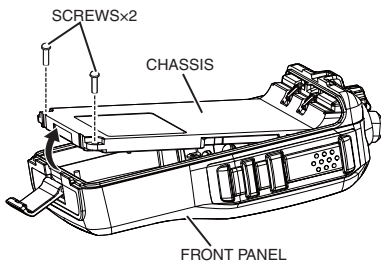
1. REMOVING THE CHASSIS

1) Remove the ANT connector nut and 2 knobs.

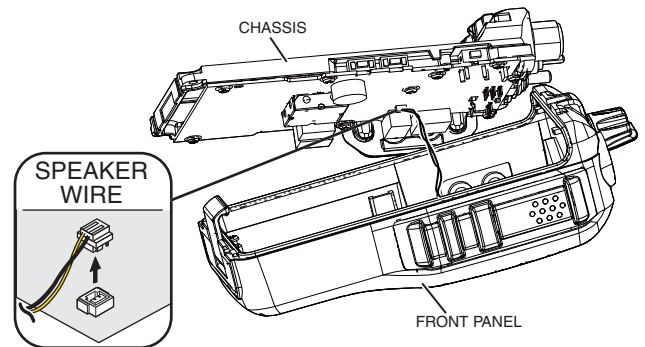


2) Remove 2 screws from the bottom of the CHASSIS.
3) Lift the bottom of the CHASSIS up in the direction of the arrow.

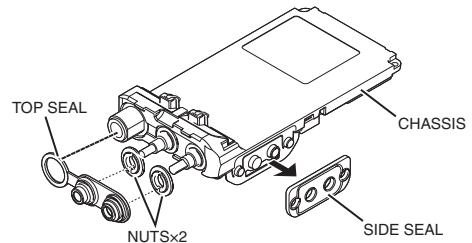
BE CAREFUL to not pull out the **speaker wire** when separating the CHASSIS and the FRONT PANEL.



4) CAREFULLY lift the chassis out of the FRONT PANEL and turn it over in order to unplug the speaker wire.



5) Remove the seals and nuts from the CHASSIS.

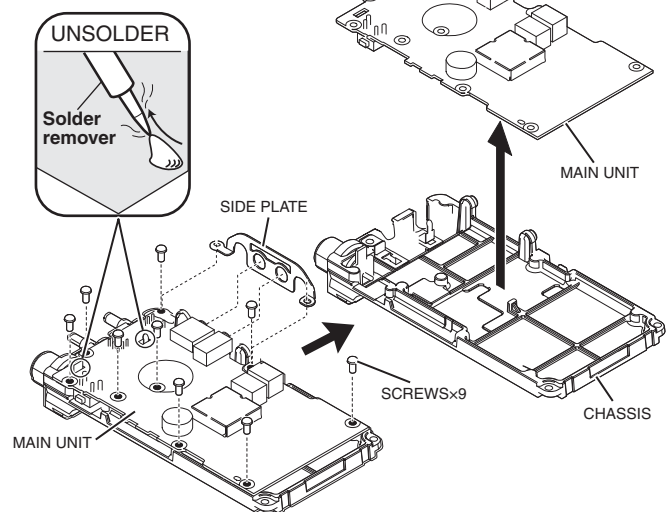
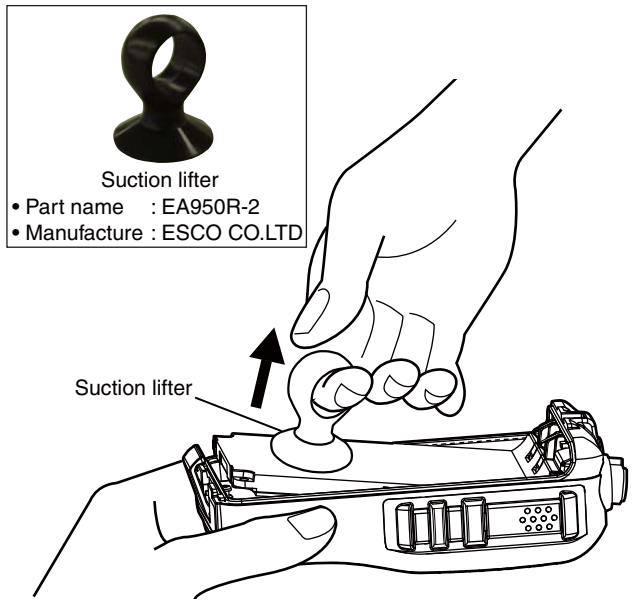


2. REMOVING THE MAIN UNIT

1) Remove the 9 screws and the side plate from the MAIN UNIT.
2) Unsolder the 2 points shown, and then remove the MAIN UNIT.

For easy separation of the CHASSIS

Use a suction lifter to lift the bottom of the CHASSIS up.



(Continued to the right above)

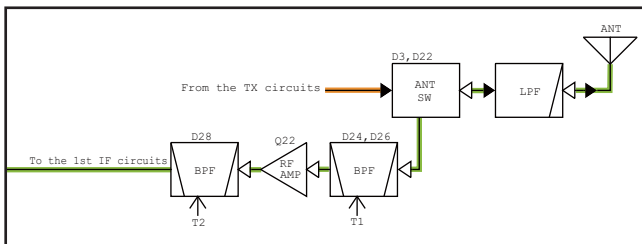
4-1 RECEIVER CIRCUITS

RF CIRCUITS

The RX signal from the antenna is passed through the LPP and antenna SW, then filtered by the 2-staged tuned BPF to eliminate unwanted out-of-band signal. The filtered RX signal is amplified by the RF AMP, and filtered by another 2-staged tuned BPF to obtain a good image response, then applied to the 1st IF circuits.

The tuned BPFs are tuned to the RX frequency by applying adequate tuning voltages; "T1" and "T2" to the variable capacitors.

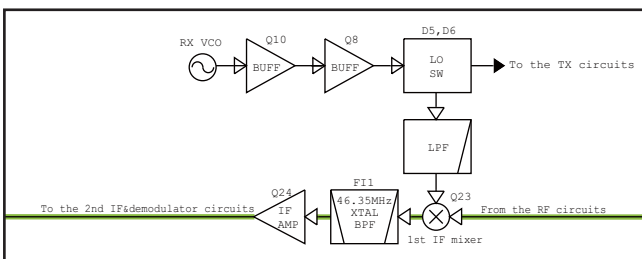
• RF CIRCUITS



1ST IF CIRCUITS

The RX signal from the RF circuits is applied to the 1st IF mixer and mixed with the 1st LO signal from the RX VCO, resulting in the 46.35 MHz 1st IF signal. The 1st IF signal is filtered by the crystal filter, amplified by the 1st IF AMP, then applied to the 2nd IF circuits.

• 1ST IF CIRCUITS



2ND IF CIRCUITS AND DEMODULATOR

The signal from the 1st IF circuits is applied to the IF demodulator IC which contains the 2nd IF mixer, 2nd IF AMP, FM detector, etc. in its package.

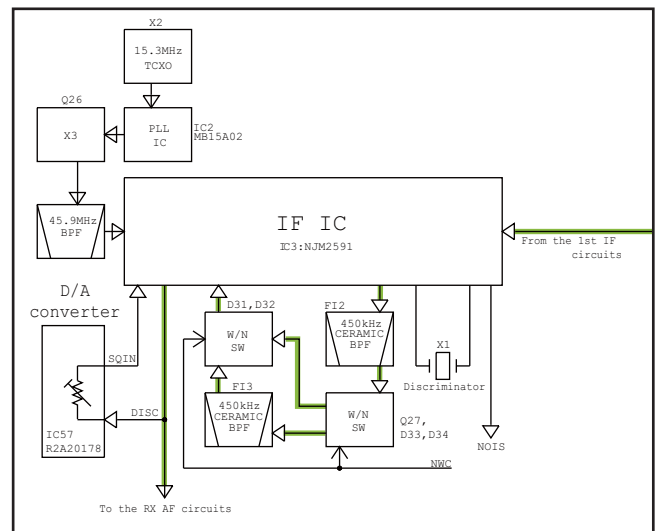
The 1st IF signal is applied to the 2nd IF mixer and mixed with the 2nd LO signal resulting in the 450 kHz 2nd IF signal.

The 2nd LO signal is generated by tripling the 15.3 MHz reference frequency signal oscillated by the reference frequency oscillator (TCXO).

The converted 2nd IF signal is filtered by the crystal filter/filters to eliminate unwanted signal, and amplified by the 2nd IF AMP, then demodulated by the detector circuit which employs a discriminator as the phase shifter.

The demodulated AF signal is applied to the RX AF circuits.

• 2ND IF CIRCUITS

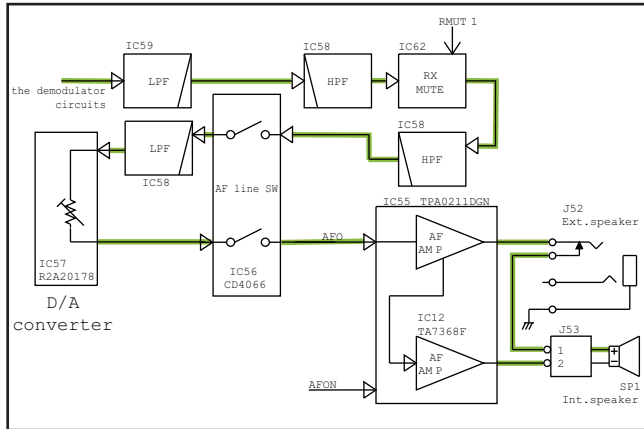


RX AF CIRCUITS

The demodulated AF signal from the IF demodulator IC is passed through the LPF, HPF which attenuates frequencies 300 Hz and below. The filtered AF signal is passed through the AF line SW, HPF which additionally attenuates frequencies 300 Hz and below, de-emphasis circuit which provides -6 dB/oct of frequency response. The de-emphasized AF signal is passed through the AF SW, LPF which attenuates frequencies 3 kHz and above, is adjusted in level by the D/A converter. The level-adjusted AF signal is then applied to the AF power AMP via the AF line SW.

The amplified AF signal is applied to the internal or external speaker.

• RX AF CIRCUITS



4-2 TRANSMITTER CIRCUITS

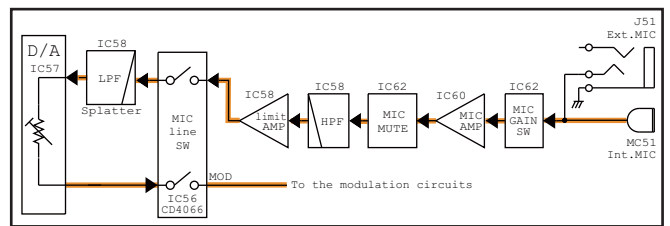
TX AF CIRCUITS

The audio signal from the internal or external microphone (MIC signal) is passed through the MIC gain SW and applied to the MIC AMP. The amplified MIC signal is passed through the MIC mute SW, HPF which attenuates frequencies 300 Hz and below. The filtered MIC signal is passed through the pre-emphasis circuit which provides +6 dB/oct of frequency response, then they applied to the limiter AMP.

The amplitude-limited MIC signal is passed through the MIC line SW, and applied to the splatter filter, which attenuate harmonics in the MIC signal to prevent exceeding permissible deviation.

The filtered MIC signal is applied to the D/A converter which adjusts its level (=deviation). The level-adjusted MIC signal is applied to the TX VCO as the modulation signal.

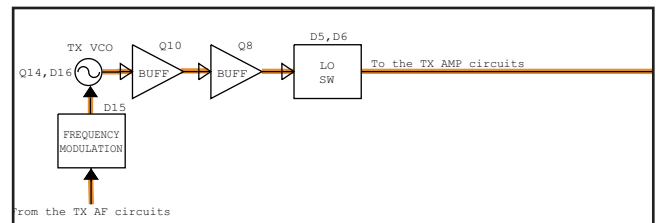
• TX AF CIRCUITS



MODULATION CIRCUIT

The modulation signal from the TX AF circuits is applied to D15 of the TX VCO to frequency-modulate it. The frequency-modulated signal from the TX VCO is buffer-amplified by two buffers, and applied to the TX AMP circuits via the TX/RX SW (D5).

• MODULATION CIRCUITS



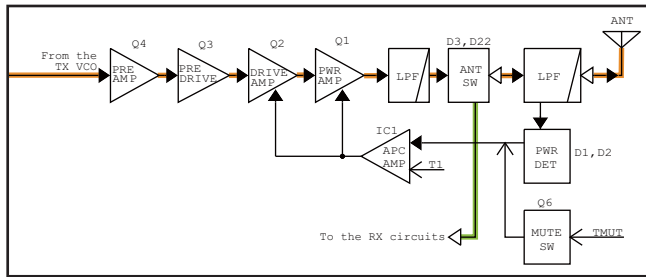
TX AMPLIFIERS

The buffer amplified signal from the LO SW (D5) is amplified by; the pre-AMP, pre-drive AMP, drive AMP, and power AMP in sequence, to obtain TX power. The amplified TX signal is passed through the antenna SW and the LPF, which eliminates harmonics, and then fed to the antenna.

APC CIRCUITS

D1 and D2 rectify a portion of the TX signal to direct current, and the APC AMP compares the voltage and the TX power control reference voltage, "T1." The resulting voltage controls the gain of the power and drive AMPs to keep the TX power constant.

• TX AMPLIFIERS AND APC CIRCUIT



4-3 FREQUENCY SYNTHESIZER CIRCUITS

The RX VCO is composed of Q13, D11 and D12. The VCO output signal is buffer-amplified by two buffers and applied to the 1st IF mixer, via the LO SW (D6) and the LPF.

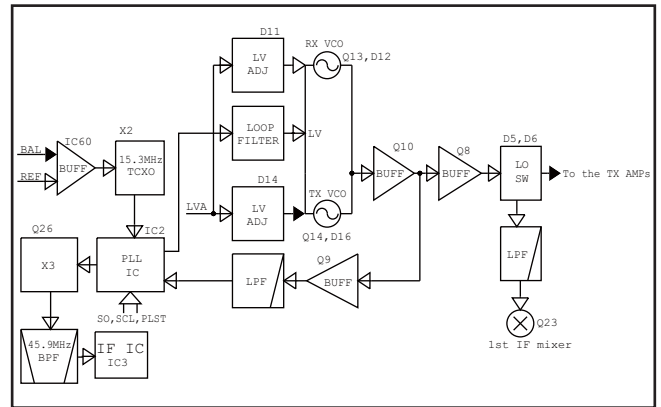
The TX VCO is composed of Q14 and D14–D16. The VCO output signal is buffer-amplified by two buffers and applied to the 1st IF mixer, via the LO SW (D6) and the LPF.

A portion of oscillated signal from each VCO is fed back to the PLL IC via the buffer and the LPF.

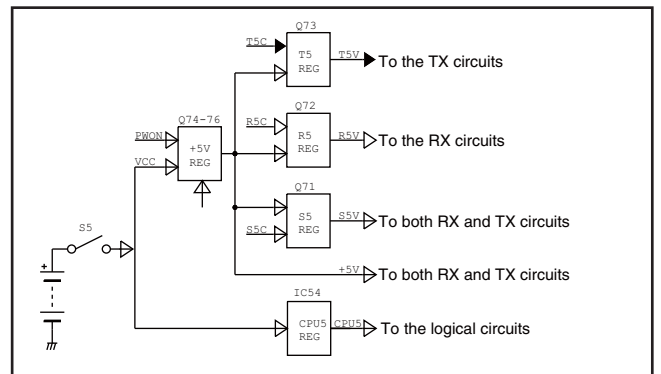
The applied VCO output signal is divided and phase-compared with a 15.3 MHz reference frequency signal from the TCXO, which is also divided. The resulting signal is output from the PLL IC, and DC-converted by the loop filter, and then applied to the VCO as the lock voltage.

When the oscillation frequency drifts, its phase changes from that of the reference frequency, causing a lock voltage change to compensate for the drift in the VCO oscillating frequency.

• FREQUENCY SYNTHESIZER CIRCUITS



4-4 VOLTAGE BLOCK DIAGRAM



4-5 PORT ALLOCATIONS

• CPU (IC51)

PIN NO.	LINE NAME	DESCRIPTION	I/O
1	CDEC	Tone signal (CTCSS/DTCS) decoding input.	I
2	STONE	Tone signal (5/2 TONE, DTMF, BISS) decoding/encoding .	I/O
13	CSFT	Clock frequency shift. H=Clock frequency is shifted.	O
14	NWC	RX mode (narrow/wide) switching. L=While receiving in the narrow mode	O
15	EPTT	External PTT input. H=An external PTT is pushed.	I
16	ATX	Automatic TX control for VOX mode. H=Microphone input is detected.	O
17	BEEP	Beep sounds. (Square waves)	O
18	AFON	AF power AMP control. H=AF power AMP (IC55) is activated.	O
19	SCK	Common clock.	O
20	SO	Common serial data.	O
22	KEY2	[UPPER] key input. L=Pushed	I
23	KEY1	[LOWER] key input. L=Pushed	I
24	PLST	PLL strobe. H=Load enable.	I/O
25	DAST	D/A converter strobe. H=Load enable.	I/O
26	ESDA	EEPROM data.	I/O
27	ESCL	EEPROM clock.	I/O
28	R5C	Power supply switching control. H=Supplying current to the receiver circuits ("R5"line).	O
29	T5C	Power supply switching control. H=Supplying current to the transmitter circuits ("T5"line).	O
30	S5C	Power supply switching control. H=Supplying current to the RX/ TX common circuits ("S5"line).	O
31	PWON	Power supply switching control. H=The transceiver's power is ON.	O
32	IPTT	Internal PTT input. L=PTT pushed.	I
33, 34, 36	CENC2, CENC1, CENC0	CTCSS/DTCS signal.	O
37-40	CBI0-CBI3	[ROTARY SELECTOR] input.	I
41	DUSE	Frequency response switching. H=DTCS encoding	O
42	RLED	Busy LED (Green) control. L=LED lights. (Squelch open)	O
43	TLED	Busy LED (Red) control. L=LED lights. (Transmit)	O
47	MGC0	MIC gain control.	O
48	MGC1	MIC gain control.	O
49	CLI	Cloning data.	I
50	CLO		O

PIN NO.	LINE NAME	DESCRIPTION	I/O
51	ADSW	A/D conversion select. H=RSSI input, L=BATV input	O
53	NOIS	Noise level detect. H=Squelch close	I
54	UNLK	PLL unlock detect.	I
55	RMUT2	RX AF mute switch control. L=AF mute.	O
56	RMUT1	RX AF mute switch control. L=AF mute.	O
57	MMUT	MIC mute switch control. L=MIC mute.	O
58	TMUT	Transmission mute. L=TX inhibit.	O
59	MDET	External microphone connection detect.	I
60	LVIN	Lock voltage input.	I
61	TEMP	Temperature sensing voltage.	I
62	AFVI	[VOLUME CONTROL] input.	I
63	VOXV	Microphone input sensing voltage.	I
64	AD5	Remaining battery voltage. (or) RSSI voltage. (The input signal depends on the status of pin 51.)	I

• D/A CONVERTER (IC57)

PIN No.	LINE NAME	DESCRIPTION
23	T1 (TXPO)	BPF tuning voltage TX power control
24	T2	BPF tuning voltage
7	REF	Reference frequency adjust voltage.
8	LVA	Additional lock voltage adjustment.
11	SQLC	Squelch threshold setting.
12	TENC	CTCSS deviation adjustment.
19	BAL	DTCS balance.
20	VRAF	Max. deviation/AF volume adjustment.

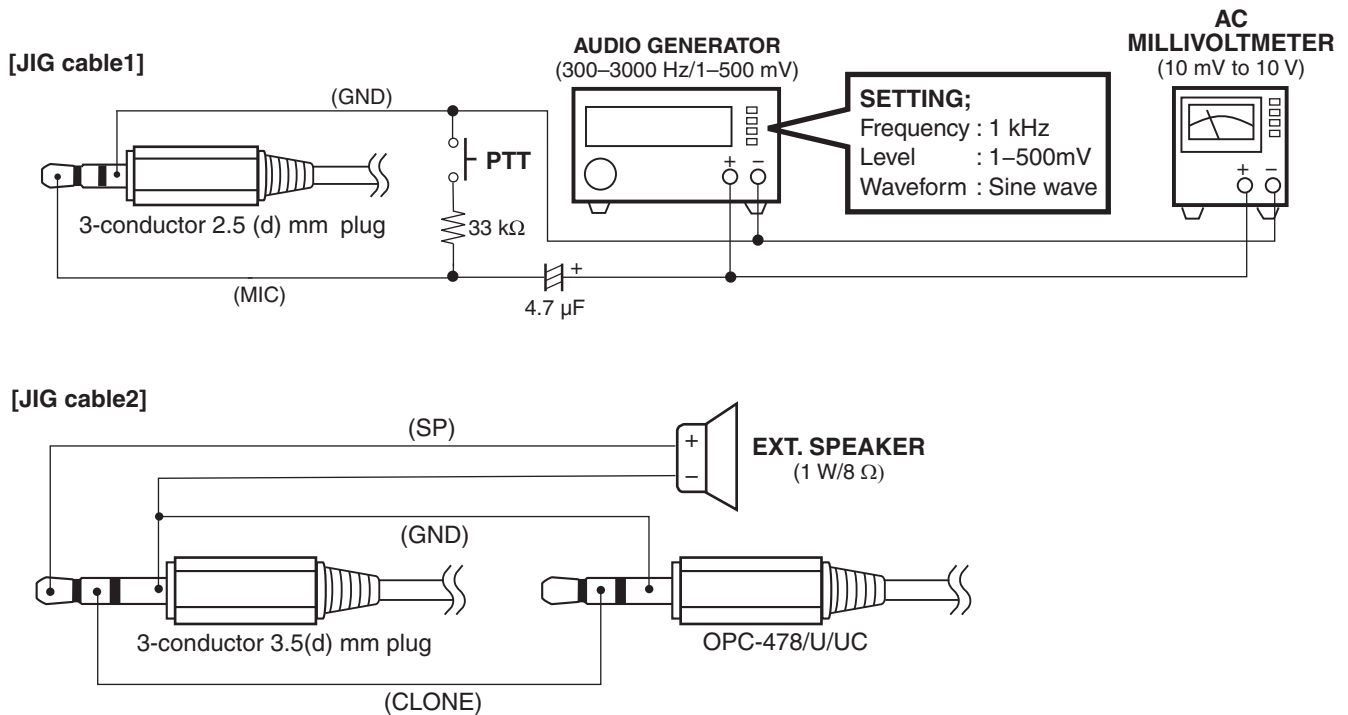
SECTION 5 ADJUSTMENT PROCEDURE

5-1 PREPARATION

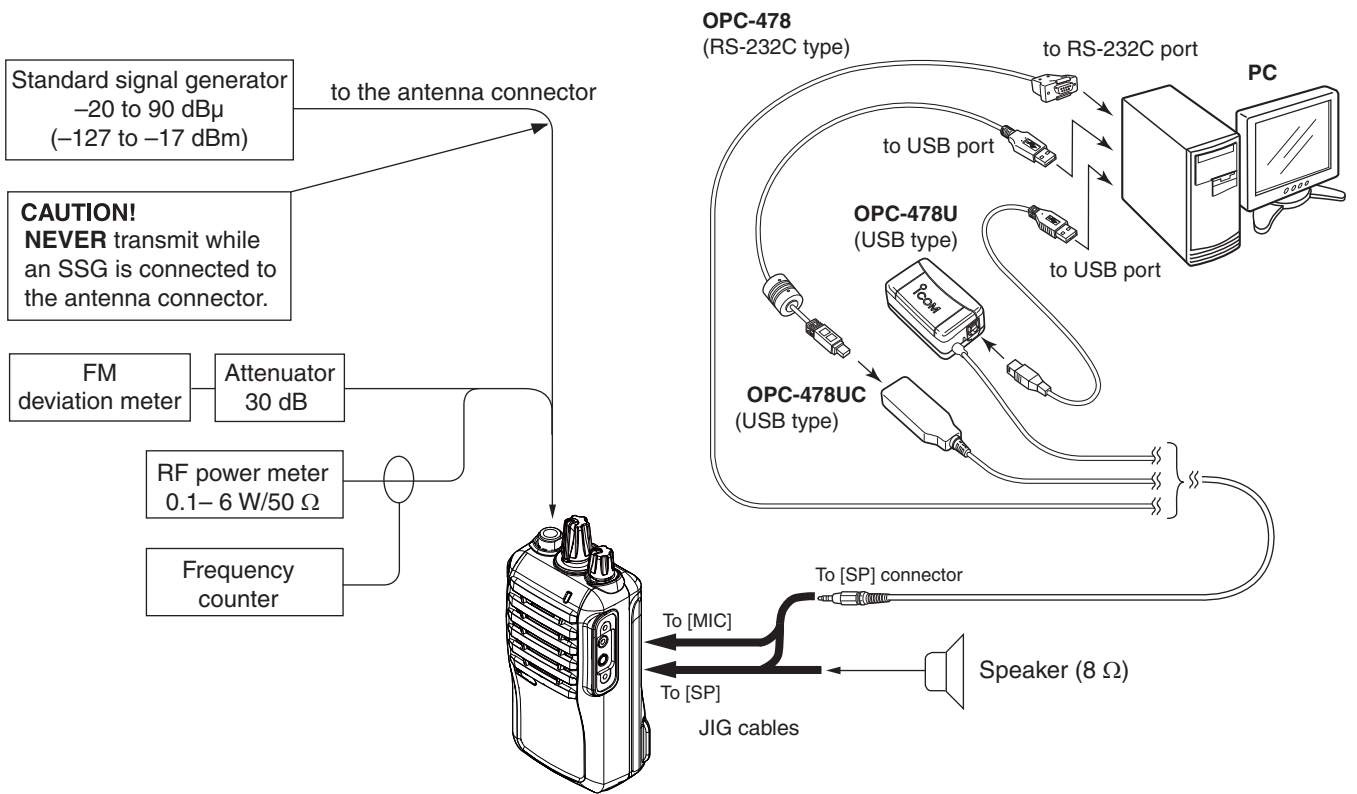
REQUIRED EQUIPMENTS

EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
Cloning software	CS-F3000 CLONING SOFTWARE (Revision 1.0 or later)	JIG cable	Modified OPC-478/U/UC (See the illustrated below)
RF power meter (50 Ω terminated)	Measuring range : 0.1–6 W Frequency range : 100–600 MHz SWR : Less than 1.2 : 1	Frequency counter	Frequency range : 0.1–600 MHz Frequency accuracy : ±1 ppm or better Input level : Less than 1 mW
Modulation Analyzer	Frequency range : 30–600 MHz Measuring range : 0 to ±10 kHz	Standard signal generator (SSG)	Frequency range : 0.1–600 MHz Output level : –20 to 90 dBμ (–127 to –17 dBm)
AC millivoltmeter	Measuring range : 10 mV to 10 V		
Oscilloscope	Frequency range : DC–20 MHz Measuring range : 0.01–20 V	Attenuator	Power attenuation : 30 dB Capacity : More than 6 W
Audio generator (AG)	Frequency range : 300–3000 Hz Output level : 1–500 mV	External speaker	Input impedance : 8 Ω Capacity : More than 1 W

JIG CABLE



CONNECTION




ADJUSTMENT CHANNELS

Before starting the adjustments, use the cloning software to create the same cloning file as shown below, then upload it into the transceiver.

CH	Atr	Inh	Frequency (MHz)			W/N	SQL Tight	C. Tone			RF PWR	PWR Save	Lock out
			RX	TX	TX Inh			RX	TX	TOT			
1	AB		400.000000	<-		W				L1	ON		
2			470.000000	<-		W				L1	ON		
3			470.000000	<-		W				L1	ON		
4			435.000000	<-		W				H	ON		
5			435.000000	<-		W				L2	ON		
6			435.000000	<-		W				L1	ON		
7			435.000000	<-		W		,007N		L1	ON		
8			435.000000	<-		N				L1	ON		
9			435.000000	<-		W				L1	ON		
10			435.000000	<-		W		,225.7		L1	ON		
11			435.000000	<-		W				L1	ON		
12			400.000000	<-		N				L1	ON		
13													
14													
15													
16													

CONVENIENT: The same cloning file is available.

Right-click  below, and select "Save Embedded File to Disk."




For [EUR] versions:

When adjusting "Deviation" in the middle band, change the bandwidth to "Middle" as shown below.

The screenshot shows the software interface for F4000mid.tst - CS-F2000. The 'Others' section is expanded, and the 'Wide Band Width' is set to 'Middle'. A red box highlights the 'Middle' option, and a red arrow points to it with the text 'Select "Middle"'. Other settings visible include 'Beat Cancel' set to 'Auto', 'Forced Narrow' set to 'Wide', and 'Forced Narrow Change' set to 'Middle'.

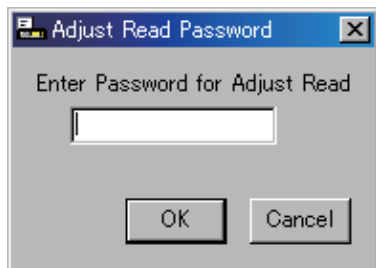
ADJUSTMENT UTILITY

Click  or [Read <- TR] in the [Adjust] menu to open the "Adjust Utility" window as shown below.

Click to open the "I/O Check window"

Setting	
CH No.	1 RX=400.05000, TX=400.05000 RF Power=Low1, Mode=Narrow
Adjust	
Power (Hi)	171 [#####-----]
Power (L2)	116 [#####-----]
Power (L1)	50 [###-----]
BAL	108 [#####-----]
MOD N	87 [#####-----]
MOD Ratio	126 [#####-----]
CTCSS/DTCS	111 [#####-----]
SQUELCH	63 [###-----]
REF	125 [#####-----]
BPF ALL	[#-----] [Enter] to Sweep
BPF T1	15 [#####-----] [Enter] to Sweep
BPF T2	47 [#####-----] [Enter] to Sweep
RX LVA	125 [#####-----] [Enter] to Sweep
TX LVA	99 [#####-----] [Enter] to Sweep
LV(RX LVA)	51 1.00V
LV(TX LVA)	51 1.00V
Password	

If the below window appears, the utility is password-protected. Enter the password to open the "Adjust Utility" window.



5-2 FREQUENCY ADJUSTMENTS

- 1) Select an adjustment item using [↑]/[↓] on the PC's keyboard.
- 2) Set or modify the adjustment value as specified using [←]/[→] on the PC's keyboard, then push [ENTER].

ADJUSTMENT	TRANSCEIVER'S CONDITION	OPERATION	ADJUSTMENT ITEM	VALUE
PLL LOCK VOLTAGE -Adjustment-	1	-	-	-
(RX)	• CH. : 1 • Receiving	• Select the item [RX LVA], then push [ENTER].	[RX LVA]	1.0 V
(TX)	• CH. : 1 • Transmitting	• Select the item [TX LVA], then push [ENTER].	[TX LVA]	1.0 V
PLL LOCK VOLTAGE -Verify- (RX)	• CH. : 2 • Receiving	• Click the [Reload (F5)] button to check on the "I/O Check window" as illustrated below.	[LVIN] (On the "I/O Check window")	3.0–4.0 V (Verify)
(TX)	• CH. : 2 • Transmitting			2.7–3.9 V (Verify)
REFERENCE FREQUENCY	• CH. : 3 • Transmitting	• Loosely couple a frequency counter to the antenna connector.	[REF]	470.0000 MHz (±300 Hz)

• I/O Check window

Input	Dec	Hex	Data
VIN	215	D7	8.43V
TEMPS	189	BD	31.75°C
LVIN	48	30	*** V
SD	30	1E	0.59V

Output	Dec	Hex	Data
T1/POW	15	F	0.29V
BPF T2	47	2F	0.92V
REF	130	82	2.55V
MOD BAL	0	0	0.00%
Dev	0	0	0.00V
CTCSS	91	5B	1.78V
SQL Lev	0	0	0.00V
LVA	125	7D	2.45V

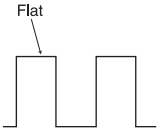
Lock voltage

(The values shown above are example only.
Each transceiver has own values.)

5-3 TRANSMIT ADJUSTMENTS

1) Select an adjustment item using [↑]/[↓] on the PC's keyboard.

2) Set or modify the adjustment value as specified using [←]/[→] on the PC's keyboard, then push [ENTER].

ADJUSTMENT	TRANSCEIVER'S CONDITION	OPERATION	ADJUSTMENT ITEM	VALUE
TX OUTPUT POWER (Hi power)	1 • CH. : 4 • Transmitting	• Connect an RF power meter to the antenna connector.	[Power (Hi)]	4.0 W
(L2 power)	2 • CH. : 5 • Transmitting		[Power (L2)]	2.0 W
(L1 power)	3 • CH. : 6 • Transmitting		[Power (L1)]	1.0 W
MODULATION BALANCE	1 • CH. : 7 • Transmitting	• Connect a modulation analyzer with an oscilloscope to the antenna connector through an attenuator.	[BAL]	Square waveform 
FM DEVIATION (Narrow mode)	1 • CH. : 8 • Transmitting	• Connect a modulation analyzer to the antenna connector through an attenuator.	[MOD N C]	±2.05 to ±2.15 kHz
(Middle mode)*	2 • CH. : 9 • Transmitting		[MOD M C]	±3.25 to ±3.35 kHz
(Wide mode)	3 • CH. : 9 • Transmitting		[MOD W C]	±4.05 to ±4.15 kHz
CTCSS/DTCS DEVIATION	1 • CH. : 10 • Transmitting	• Connect a modulation analyzer to the antenna connector through an attenuator.	[CTCSS/DTCS]	±0.65 to ±0.75 kHz

*; [EUR] versions only

5-4 RECEIVE ADJUSTMENTS

1) Select an adjustment item using [\uparrow]/[\downarrow] on the PC's keyboard.

2) Set or modify the adjustment value as specified using [\leftarrow]/[\rightarrow] on the PC's keyboard, then push [ENTER].

ADJUSTMENT		TRANSCIVER'S CONDITION	OPERATION	ADJUSTMENT ITEM	VALUE
RX SENSITIVITY	1	<ul style="list-style-type: none"> • CH. : 11 • Receiving 	1) Connect an SSG to the antenna connector and set it as; Frequency : 435 MHz Level* : 20 dB μ (-87 dBm) Modulation : 1 kHz Deviation : \pm 3 kHz 2) Put the cursor on the adjustment item, then push [ENTER].	[BPF ALL]	(Automatic adjustment)
SQUELCH	1	<ul style="list-style-type: none"> • CH. : 12 • Receiving 	1) Connect an SSG to the antenna connector and set it as; Frequency : 400 MHz Level* : -13 dB μ (-120 dBm) Modulation : 1 kHz Deviation : \pm 1.5 kHz 2) Once close the squelch by increasing [SQL] value, then decrease the value to open the squelch. 3) Push [ENTER] key to store the value.	[SQL]	(Automatic adjustment)

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

SECTION 6

PARTS LIST

[MAIN-A UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
IC1	1110002751	S.IC TA75S01F(TE85R,F)	T	32.5/8.8
IC2	1140005991	S.IC MB15A02PFV1-G-BND-ERE1	T	42.9/24.7
IC3	1110007320	S.IC NJM2591V-TE-#ZZZB	B	45.8/38.9
IC51	1140015230	S.IC R4F20102NFA (EMPTY)	B	77.7/38
IC52	1130015240	S.IC R1EX24016ATA00A	B	85/25.2
IC53	1110007620	S.IC NJU7704F3-42A-TE-1-#ZZZB	B	87.6/44.6
IC54	1180003600	S.REG NJM2871BF05-TE-1-#ZZZB	T	15.6/34.8
IC55	1110007610	S.IC TPA0211DGNR	B	13.8/42.1
IC56	1130011770	S.IC CD4066BPWR	T	80.1/18.8
IC57	1110007550	S.IC R2A20178NP	B	72.5/24.5
IC58	1110005340	S.IC NJM12902V-TE-1-#ZZZB	T	80.1/12
IC59	1110006350	S.IC LM2902PWR	T	80.1/19.2
IC60	1110005340	S.IC NJM12902V-TE-1-#ZZZB	B	65.1/7.5
IC61	1140013200	S.IC CD4053BPWR	T	80.1/38.3
IC62	1130011770	S.IC CD4066BPWR	T	66.7/8.1
Q1	1560001700	S.FET RD07MUS2B-T112	B	28.6/13.5
Q2	1560001241	S.FET RD01MUS1-T113	B	36.1/14.4
Q3	1530000371	S.TRA 2SC3356-T1B S (R25)	B	41.3/12.9
Q4	1530003311	S.TRA 2SC5107-O(TE85R,F)	B	46.2/13.4
Q6	1590004050	S.TRA LDTA144EET1G <SLVJ>	T	33.3/5.9
Q8	1530003311	S.TRA 2SC5107-O(TE85R,F)	T	55.6/18.6
Q9	1530003311	S.TRA 2SC5107-O(TE85R,F)	B	58.1/19.4
Q10	1530003311	S.TRA 2SC5107-O(TE85R,F)	T	61/19.1
Q11	1590004070	S.TRA LDTC144EET1G <SLVJ>	B	50.8/25.2
Q12	1590004070	S.TRA LDTC144EET1G <SLVJ>	B	63/23.6
Q13	1530002920	S.TRA 2SC4226-T1 R25	T	56.5/22.6
Q14	1530002920	S.TRA 2SC4226-T1 R25	T	62.2/22.3
Q15	1530002851	S.TRA 2SC4116-BL(TE85R,F)	B	62.7/16.2
Q17	1560000541	S.FET 2SK880-Y(T5RICOM,F)	B	52.6/29.5
Q19	1590004070	S.TRA LDTC144EET1G <SLVJ>	B	63.5/33.6
Q21	1560000841	S.FET 2SK1829(TE85R,F)	B	25.7/31.5
Q22	1580000731	S.FET 3SK293(TE85L,F)	B	21.2/29
Q23	1580000731	S.FET 3SK293(TE85L,F)	B	36.4/27.3
Q24	1530002601	S.TRA 2SC4215-O(TE85R,F)	B	38.3/42.6
Q25	1590004070	S.TRA LDTC144EET1G <SLVJ>	T	49.3/35.1
Q26	1530002851	S.TRA 2SC4116-BL(TE85R,F)	T	39.6/30.1
Q27	1590004050	S.TRA LDTA144EET1G <SLVJ>	B	56/36.4
Q51	1590001650	S.TRA XP4601(TX)	T	65.5/42
Q52	1590004070	S.TRA LDTC144EET1G <SLVJ>	T	75.4/31.4
Q58	1590003431	S.TRA UNR911HG0L	B	54.9/7.1
Q59	1590004070	S.TRA LDTC144EET1G <SLVJ>	B	49.1/7.3
Q63	1520000460	S.TRA 2SB1132 T100 R	B	15.1/35.5
Q64	1590001190	S.TRA XP6501-(TX).AB	B	19.3/36
Q71	1510001090	S.TRA KTA2015Y-RTK/P	B	65.1/36.6
Q72	1510000771	S.TRA 2SA1586-GR(TE85L,F)	B	65.7/30.3
Q73	1510001090	S.TRA KTA2015Y-RTK/P	B	78.6/23.8
Q74	1520000460	S.TRA 2SB1132 T100 R	B	5.3/34.4
Q75	1590001190	S.TRA XP6501-(TX).AB	T	4.5/35.2
Q76	1590004070	S.TRA LDTC144EET1G <SLVJ>	T	6.8/35.2
Q81	1590003271	S.TRA UNR9210G0L	B	70.5/45.8
Q82	1590004050	S.TRA LDTA144EET1G <SLVJ>	T	71.6/39.5
Q83	1590004050	S.TRA LDTA144EET1G <SLVJ>	T	71.6/41.6
Q84	1590004070	S.TRA LDTC144EET1G <SLVJ>	B	19.2/44.1
Q85	1590004070	S.TRA LDTC144EET1G <SLVJ>	B	22.4/44.1
D1	1750001800	S.DIO RB886CS T2RA	B	13.8/6.6
D2	1750001800	S.DIO RB886CS T2RA	B	13.8/10.5
D3	1750001890	S.DIO HVD142AKRF-E	B	15.7/14.8
D5	1750001890	S.DIO HVD142AKRF-E	B	49.6/15.2
D6	1750001890	S.DIO HVD142AKRF-E	B	49.6/16.6
D11	1750001550	S.VAR HVD376BKRF-E	T	56.8/26.4
D12	1750001840	S.VAR HVD350BKRF-E	T	54/28.7
D14	1750001550	S.VAR HVD376BKRF-E	T	60.4/26.1
D15	1750001650	S.VAR 1SV309(TPH3,F)	T	64.6/28.2
D16	1750001840	S.VAR HVD350BKRF-E	T	62.5/28.2
D18	1750001810	S.DIO L1SS400T1G <SLVJ>	T	46.3/32.6
D21	1750001810	S.DIO L1SS400T1G <SLVJ>	B	28.1/33.3
D22	1750001890	S.DIO HVD142AKRF-E	B	15.7/18.3
D24	1750001780	S.VAR HVB350BYPTL-E	B	18.1/23.8
D26	1750001780	S.VAR HVB350BYPTL-E	B	18.1/26.7
D28	1750001780	S.VAR HVB350BYPTL-E	B	29.2/26.7
D31	1750001790	S.DIO 1SS390 TE61	B	54.1/39.8
D32	1750001790	S.DIO 1SS390 TE61	B	51.7/36.8
D33	1750001790	S.DIO 1SS390 TE61	B	56.7/39.8
D34	1750001790	S.DIO 1SS390 TE61	B	58.1/38.5
D35	1750001810	S.DIO L1SS400T1G <SLVJ>	T	37.5/6.3
D51	1750001820	S.DIO LRB706F-40T1G <SLVJ>	B	67.9/45.8
D52	1750001790	S.DIO 1SS390 TE61	B	87/33.7
D53	1750001810	S.DIO L1SS400T1G <SLVJ>	B	69.1/3.1
D55	1750001810	S.DIO L1SS400T1G <SLVJ>	B	21.9/33.8
FI1	2030000870	S.MON MFT46.3P3 46.350 MHz (FL-442)	B	36.2/34.6
FI2	2020002460	CER LTM450GW <JJE>		
FI3	2020002570	CER LTM450HW <JJE>		
X1	6070000310	S.DIS JTBM450CX70 <JJE>	T	47.6/40.9
X2	6050012050	S.XTA CR-794 TTS14VSB-A6 15.3 MHz	T	41.9/15
X51	6050012730	S.XTA CR-864 (SMD-49/12.288 MHz) <JJE>	T	86.9/38.5
L1	6200012490	S.COI 0.30-0.9-6TR 13.6N <COMO>	B	9.5/7.5
L2	6200012490	S.COI 0.30-0.9-6TR 13.6N <COMO>	B	10.6/10.5

[MAIN-A UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
L3	6200013010	S.COI 0.30-0.9-5TL 10.3N <COMO>	B	12.7/13.4
L4	6200002851	S.COI NLV25T-R82J	B	18.2/16.6
L5	6200012610	S.COI 0.40-0.9-2TL 2.8N <COMO>	B	18.2/13.4
L6	6200012610	S.COI 0.40-0.9-2TL 2.8N <COMO>	B	20.7/13.4
L7	6200012980	S.COI 0.40-1.4-5TR 18.3N <COMO>	B	23.6/13.4
L8	6200013860	S.COI MLK1005S12NJT	B	41/10.7
L9	6200013840	S.COI MLK1005S18NJT	B	45.5/10.7
L11	6200010850	S.COI LQW18AN22NG00D (LQW1608A22NG00)	B	13.9/16.6
L13	6200007700	S.COI LQW2BHN22NJ03L	B	15.1/22.4
L14	6200007700	S.COI LQW2BHN22NJ03L	B	15.2/28.1
L15	6200007680	S.COI LQW2BHN12NJ03L	B	25.8/27.6
L16	6200007680	S.COI LQW2BHN12NJ03L	B	32.7/27.6
L18	6200013800	S.COI MLK1005S39NJT	B	36.4/23.5
L19	6200013780	S.COI MLK1005S56NJT	B	34.4/25.1
L20	6200004770	S.COI ELJNC R56J-F	B	39.4/27.7
L23	6200012170	S.COI MLG1608SR18J-T	T	39.4/34.6
L24	6200012170	S.COI MLG1608SR18J-T	T	41.5/31.8
L31	6200013810	S.COI MLK1005S33NJT	T	53.8/17.7
L32	6200013810	S.COI MLK1005S33NJT	B	56.3/20.4
L33	6200013830	S.COI MLK1005S22NJT	T	59.2/18.3
L35	6190002030	S.COI MLG1608S 1R0J-T	B	59.1/26.6
L36	6200013580	S.COI 0.30-0.9-4TR 5PER <COMO>	T	54.3/26.1
L37	6190002030	S.COI MLG1608S 1R0J-T	T	56.5/28.7
L40	6200013630	S.COI 0.30-0.9-3TR 5.8N 5PER <COMO>	T	63.8/24.9
L41	6200011860	S.COI LQW18ANR47G00D	T	58.9/27.4
L42	6190002030	S.COI MLG1608S 1R0J-T	T	60.5/28.8
L47	6200013840	S.COI MLK1005S18NJT	B	51.3/20.4
L48	6200013990	S.COI MLK1005S1N0ST	B	32.7/13.1
R1	7030005070	S.RES ERJ2GEJ 683 X (68K)	B	7.2/5.5
R2	7030009140	S.RES ERJ2GEJ 272 X (2.7K)	B	12.5/8.9
R3	7030005120	S.RES ERJ2GEJ 102 X (1K)	B	14.1/8
R4	7030005120	S.RES ERJ2GEJ 102 X (1K)	B	14.1/8.9
R5	7030009140	S.RES ERJ2GEJ 272 X (2.7K)	B	12.5/10.9
R6	7030004990	S.RES ERJ2GEJ 47 X (220)	B	20.3/17.9
R11	7030009140	S.RES ERJ2GEJ 272 X (2.7K)	T	29.9/5.9
R12	7030005050	S.RES ERJ2GEJ 103 X (10K)	T	31.7/5.9
R13	7030005090	S.RES ERJ2GEJ 104 X (100K)	T	32.6/11.3
R14	7030005310	S.RES ERJ2GEJ 124 X (120K)	T	30.8/11.3
R15	7030005170	S.RES ERJ2GEJ 474 X (470K)	T	34.8/5.9
R16	7030005530	S.RES ERJ2GEJ 100 X (10)	T	35.7/9.6
R17	7030008280	S.RES ERJ2GEJ 271 X (270)	T	34.8/7.6
R18	7030005120	S.RES ERJ2GEJ 102 X (1K)	T	35.7/7.6
R21	7030005530	S.RES ERJ2GEJ 100 X (10)	B	33.2/10.8
R22	7030005040	S.RES ERJ2GEJ 472 X (4.7K)	B	34.1/9.1
R23	7030005060	S.RES ERJ2GEJ 333 X (33K)	B	32.3/9.1
R26	7030004970	S.RES ERJ2GEJ 470 X (47)	B	38.2/10.8
R27	7030005040	S.RES ERJ2GEJ 472 X (4.7K)	B	38.2/9.1
R29	7030004970	S.RES ERJ2GEJ 470 X (47)	B	41/9.8
R30	7030005220	S.RES ERJ2GEJ 223 X (22K)	B	41.8/15.1
R31	7030004980	S.RES ERJ2GEJ 101 X (100)	B	45.5/9.8
R32	7030005220	S.RES ERJ2GEJ 223 X (22K)	B	45.7/15.2
R33	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	49.6/13.1
R34	7030004980	S.RES ERJ2GEJ 101 X (100)	B	49.6/14
R35	7030005040	S.RES ERJ2GEJ 472 X (4.7K)	B	51.8/16.6
R41	7030005530	S.RES ERJ2GEJ 100 X (10)	T	57.4/17.7
R42	7030005070	S.RES ERJ2GEJ 683 X (68K)	T	57.4/19.3
R43	7030004980	S.RES ERJ2GEJ 101 X (100)	B	54.5/18.8
R44	7030005090	S.RES ERJ2GEJ 104 X (100K)	B	59.9/18.9
R45	7030004980	S.RES ERJ2GEJ 101 X (100)	T	63.2/17.9
R46	7030005090	S.RES ERJ2GEJ 104 X (100K)	T	62.8/19.3
R51	7030005010	S.RES ERJ2GEJ 68 X (680)	B	52.8/25.2
R52	7030008370	S.RES ERJ2GEJ 561 X (560)	B	61.5/22.3
R53	7030006020	S.RES RR0510P-682-D (6.8K)	T	58.3/23.8
R54	7030006020	S.RES RR0510P-682-D (6.8K)	T	58.1/25.4
R55	7030006020	S.RES RR0510P-682-D (6.8K)	T	59.5/23.8
R56	7030006020	S.RES RR0510P-682-D (6.8K)	T	60.3/25.1
R57	7030009320	S.RES ERJ2GEJ 47 X (4.7)	T	61.9/24.7
R63	7030005220	S.RES ERJ2GEJ 223 X (22K)	B	62.6/27.7
R64	7030005530	S.RES ERJ2GEJ 100 X (10)	T	64.2/26.4
R65	7030005600	S.RES ERJ2GEJ 273 X (27K)	B	64.4/26.1
R66	7030005100	S.RES ERJ2GEJ 154 X (150K)	B	65.4/26.1
R67	7030007290	S.RES ERJ2GEJ 222 X (2.2K)	B	60.9/16.4
R68	7030005170	S.RES ERJ2GEJ 474 X (470K)	B	62.6/29.9
R70	7030005310	S.RES ERJ2GEJ 124 X (120K)	B	62.6/31.8
R71	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	50.3/29.5
R72	7030004980	S.RES ERJ2GEJ 101 X (100)	B	49.9/27.9
R73	7030005040	S.RES ERJ2GEJ 472 X (4.7K)	B	55.6/30.5
R76	7030005120	S.RES ERJ2GEJ 102 X (1K)	T	49.1/25.5
R77	7030008410	S.RES ERJ2GEJ 392 X (3.9K)	T	46.7/25.5
R78	7030005120	S.RES ERJ2GEJ 102 X (1K)	T	46.7/24.3
R80	7410001130	S.ARR EXB28V102JX	T	44.4/29.9
R81	7030005100	S.RES ERJ2GEJ 154 X (150K)	B	62/35.3
R82	7030005050	S.RES ERJ2GEJ 103 X (10K)	T	40.1/19.4
R83	7030005580	S.RES ERJ2GEJ 560 X (56)	T	46.7/20.9
R87	7030005090	S.RES ERJ2GEJ 104 X (100K)	T	63.5/27.7
R88	7510001730	S.THE ERTJOEP 473J	T	56.6/13.3
R89	7030010080	S.RES ERJ2RHD 104 X (100K)	T	58.3/13.3
R101	7030005110	S.RES ERJ2GEJ 224 X (220K)	B	28.1/32.1
R102	7030005170	S.RES ERJ2GEJ 474 X (470K)	B	25.8/33.3
R103	7030008400	S.RES ERJ2GEJ 182 X (1.8K)	B	28.1/30.9
R104	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	18.1/21.8
R105	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	20.3/27.2
R106	7030005240	S.RES ERJ2GEJ 473 X (47K)	B	18.3/29
R107	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	20.2/31

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)
S.=Surface mount

[MAIN-A UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R108	7030005080	S.RES ERJ2GEJ 823 X (82K)	B	19.2/29
R109	7030005530	S.RES ERJ2GEJ 100 X (10)	B	21.2/31
R110	7030004980	S.RES ERJ2GEJ 101 X (100)	B	22.1/25.4
R112	7030004970	S.RES ERJ2GEJ 470 X (47)	B	25.8/25.4
R113	7030007300	S.RES ERJ2GEJ 332 X (3.3K)	B	24.2/28.5
R114	7030005090	S.RES ERJ2GEJ 104 X (100K)	B	27.4/26.8
R115	7030005090	S.RES ERJ2GEJ 104 X (100K)	B	31/26.8
R116	7030005310	S.RES ERJ2GEJ 124 X (120K)	B	35.4/29.3
R117	7030005090	S.RES ERJ2GEJ 104 X (100K)	B	33.4/25.1
R118	7030005310	S.RES ERJ2GEJ 124 X (120K)	B	36.4/25.1
R119	7030005100	S.RES ERJ2GEJ 154 X (150K)	B	36.4/29.3
R120	7030005710	S.RES ERJ2GEJ 121 X (120)	B	39.4/25.1
R121	7030007300	S.RES ERJ2GEJ 332 X (3.3K)	B	41.2/27.7
R122	7030004970	S.RES ERJ2GEJ 470 X (47)	B	43.3/25.1
R123	7030005530	S.RES ERJ2GEJ 100 X (10)	B	39.2/29.8
R125	7030008370	S.RES ERJ2GEJ 561 X (560)	B	35.6/40.8
R126	7030007290	S.RES ERJ2GEJ 222 X (2.2K)	B	39/40.8
R127	7030005090	S.RES ERJ2GEJ 104 X (100K)	B	37.3/40.8
R128	7030005010	S.RES ERJ2GEJ 681 X (680)	B	39.1/44.4
R132	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	47.4/17.6
R134	7030005090	S.RES ERJ2GEJ 104 X (100K)	B	40.4/40.3
R135	7030007290	S.RES ERJ2GEJ 222 X (2.2K)	T	43/36.7
R136	7030007290	S.RES ERJ2GEJ 222 X (2.2K)	T	43/37.6
R137	7030008410	S.RES ERJ2GEJ 392 X (3.9K)	T	45.7/35.1
R138	7030005000	S.RES ERJ2GEJ 471 X (470)	B	43/35.5
R139	7030005090	S.RES ERJ2GEJ 104 X (100K)	B	48.3/35.5
R140	7030008410	S.RES ERJ2GEJ 392 X (3.9K)	B	46.5/34.6
R141	7030005240	S.RES ERJ2GEJ 473 X (47K)	B	46.5/33.7
R142	7030005090	S.RES ERJ2GEJ 104 X (100K)	B	46.5/31.9
R143	7030005040	S.RES ERJ2GEJ 472 X (4.7K)	B	48.3/32.8
R146	7030004970	S.RES ERJ2GEJ 470 X (47)	B	45.6/44
R147	7030005030	S.RES ERJ2GEJ 152 X (1.5K)	B	47.1/42.2
R148	7030005120	S.RES ERJ2GEJ 102 X (1K)	T	37.8/31.4
R149	7030007060	S.RES ERJ2GEJ 684X (680K)	T	37.8/29.6
R151	7030005600	S.RES ERJ2GEJ 273 X (27K)	B	51.7/39
R152	7030005210	S.RES ERJ2GEJ 822 X (8.2K)	B	53.9/35.1
R153	7030007300	S.RES ERJ2GEJ 332 X (3.3K)	B	55.5/38.5
R154	7030005210	S.RES ERJ2GEJ 822 X (8.2K)	B	57.5/36.9
R155	7030005600	S.RES ERJ2GEJ 273 X (27K)	B	58.8/39.8
R156	7030005120	S.RES ERJ2GEJ 102 X (1K)	B	20.3/21.8
R157	7030005120	S.RES ERJ2GEJ 102 X (1K)	B	31/25.1
R158	7030005120	S.RES ERJ2GEJ 102 X (1K)	B	59.4/35.7
R159	7030005290	S.RES ERJ2GEJ 682 X (6.8K)	B	29.7/23.8
R301	7030007340	S.RES ERJ2GEJ 153 X (15K)	B	68.4/12.4
R302	7030008010	S.RES ERJ2GEJ 123 X (12K)	B	66.6/12.4
R303	7030005720	S.RES ERJ2GEJ 563 X (56K)	B	67.5/12.4
R304	7030005030	S.RES ERJ2GEJ 152 X (1.5K)	B	69.3/10.7
R310	7030005220	S.RES ERJ2GEJ 223 X (22K)	T	66.2/36.7
R311	7030005220	S.RES ERJ2GEJ 223 X (22K)	T	64.6/37.9
R312	7030005220	S.RES ERJ2GEJ 223 X (22K)	T	64.6/39.6
R313	7030007300	S.RES ERJ2GEJ 332 X (3.3K)	T	62.6/39.6
R314	7030006610	S.RES ERJ2GEJ 394 X (390K)	T	63.7/41.2
R315	7030005080	S.RES ERJ2GEJ 823 X (82K)	T	63.7/42.8
R316	7030005000	S.RES ERJ2GEJ 471 X (470)	T	67.3/42.8
R317	7030005290	S.RES ERJ2GEJ 682 X (6.8K)	T	66.4/39.6
R318	7030005050	S.RES ERJ2GEJ 103 X (10K)	T	67.3/39.6
R321	7030007340	S.RES ERJ2GEJ 153 X (15K)	T	73.7/27.7
R322	7030008300	S.RES ERJ2GEJ 184 X (180K)	B	69.1/33
R323	7030005720	S.RES ERJ2GEJ 563 X (56K)	B	70/33
R324	7030005220	S.RES ERJ2GEJ 223 X (22K)	B	70.9/33
R325	7030005290	S.RES ERJ2GEJ 682 X (6.8K)	T	72.8/29.5
R326	7030005240	S.RES ERJ2GEJ 473 X (47K)	T	73.7/29.5
R327	7030005240	S.RES ERJ2GEJ 473 X (47K)	T	75.5/29.5
R328	7030005240	S.RES ERJ2GEJ 473 X (47K)	T	75.5/27.7
R329	7030005040	S.RES ERJ2GEJ 472 X (4.7K)	T	77.9/29.5
R330	7030005090	S.RES ERJ2GEJ 104 X (100K)	T	74.5/32.9
R331	7030005240	S.RES ERJ2GEJ 473 X (47K)	T	77.4/31.6
R341	7030005070	S.RES ERJ2GEJ 683 X (68K)	T	84.8/31.1
R342	7030005070	S.RES ERJ2GEJ 683 X (68K)	T	84.8/29.4
R343	7030005070	S.RES ERJ2GEJ 683 X (68K)	T	84.8/27.7
R344	7030005070	S.RES ERJ2GEJ 683 X (68K)	T	86.6/27.7
R345	7030005070	S.RES ERJ2GEJ 683 X (68K)	T	85.7/26
R346	7030005240	S.RES ERJ2GEJ 473 X (47K)	T	85.7/24.3
R347	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	81.3/15.4
R348	7030005090	S.RES ERJ2GEJ 104 X (100K)	T	82.3/34.6
R349	7030005160	S.RES ERJ2GEJ 105 X (1M)	T	83.2/34.6
R350	7030005050	S.RES ERJ2GEJ 103 X (10K)	T	86.6/24.3
R351	7030008290	S.RES ERJ2GEJ 183 X (18K)	T	75.5/24.3
R352	7030005050	S.RES ERJ2GEJ 103 X (10K)	T	71.8/12
R353	7030005210	S.RES ERJ2GEJ 822 X (8.2K)	T	72.7/10.2
R354	7030005160	S.RES ERJ2GEJ 105 X (1M)	T	75.4/10.2
R355	7030005050	S.RES ERJ2GEJ 103 X (10K)	T	73.7/24.3
R359	7030005210	S.RES ERJ2GEJ 822 X (8.2K)	B	56.1/10.5
R360	7030007290	S.RES ERJ2GEJ 222 X (2.2K)	B	56.1/9.6
R361	7030005000	S.RES ERJ2GEJ 471 X (470)	B	51.5/43.9
R362	7030005060	S.RES ERJ2GEJ 333 X (33K)	B	25.6/7.5
R363	7030005000	S.RES ERJ2GEJ 471 X (470)	B	57.8/8.7
R364	7030005090	S.RES ERJ2GEJ 104 X (100K)	T	59.5/5.5
R366	7030005100	S.RES ERJ2GEJ 154 X (150K)	B	57.8/9.6
R368	7030005700	S.RES ERJ2GEJ 274 X (270K)	B	61.7/8.7
R369	7030005100	S.RES ERJ2GEJ 154 X (150K)	T	61.7/10.4
R370	7030005170	S.RES ERJ2GEJ 474 X (470K)	T	61.7/11
R371	7030005290	S.RES ERJ2GEJ 682 X (6.8K)	T	74.5/8.4
R372	7030009290	S.RES ERJ2GEJ 562 X (5.6K)	T	80.2/8.4
R373	7030005080	S.RES ERJ2GEJ 823 X (82K)	T	84.7/10.2
R374	7030008410	S.RES ERJ2GEJ 392 X (3.9K)	T	86.5/10.2
R375	7030005000	S.RES ERJ2GEJ 471 X (470)	T	85.6/12
R377	7030005060	S.RES ERJ2GEJ 333 X (33K)	T	84.7/13.8
R378	7030005050	S.RES ERJ2GEJ 103 X (10K)	T	86.5/15.6
R379	7030005700	S.RES ERJ2GEJ 274 X (270K)	T	84.7/15.6
R381	7030005700	S.RES ERJ2GEJ 274 X (270K)	T	70.9/15.6
R382	7030005170	S.RES ERJ2GEJ 474 X (470K)	T	71.8/13.8
R383	7030008310	S.RES ERJ2GEJ 564 X (560K)	T	70.9/13.8
R384	7030005090	S.RES ERJ2GEJ 104 X (100K)	T	80.9/15.4
R385	7030005310	S.RES ERJ2GEJ 124 X (120K)	T	74.5/13.8

[MAIN-A UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R386	7030005060	S.RES ERJ2GEJ 333 X (33K)	T	73.6/13.8
R387	7030005030	S.RES ERJ2GEJ 152 X (1.5K)	T	73.6/15.6
R388	7030008010	S.RES ERJ2GEJ 123 X (12K)	B	78.8/13.7
R389	7030005800	S.RES RR0510P-102-D (1K)	B	77.9/13.7
R390	7030005810	S.RES RR0510P-152-D (1.5K)	B	72.7/15.5
R391	7030007290	S.RES ERJ2GEJ 222 X (2.2K)	T	74.5/15.6
R393	7030005700	S.RES ERJ2GEJ 274 X (270K)	B	61.7/7.8
R394	7030005090	S.RES ERJ2GEJ 104 X (100K)	B	60.8/6.2
R395	7030005310	S.RES ERJ2GEJ 124 X (120K)	B	60.8/7.8
R396	7030005700	S.RES ERJ2GEJ 274 X (270K)	B	61.7/6.2
R397	7030008300	S.RES ERJ2GEJ 184 X (180K)	B	60.8/4.6
R398	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	61.7/9.4
R401	7030005120	S.RES ERJ2GEJ 102 X (1K)	T	66.2/35.8
R402	7030005000	S.RES ERJ2GEJ 471 X (470)	B	68.5/22.5
R403	7030010040	S.RES ERJ2GEJ-JPW	B	67.5/28.7
R406	7030005090	S.RES ERJ2GEJ 104 X (100K)	B	12.7/45.6
R408	7030004980	S.RES ERJ2GEJ 101 X (100)	B	35.6/46.3
R412	7030005040	S.RES ERJ2GEJ 472 X (4.7K)	B	16.8/38.3
R413	7030005090	S.RES ERJ2GEJ 104 X (100K)	T	19.8/32.2
R414	7030005230	S.RES ERJ2GEJ 334 X (330K)	B	21.5/34.9
R416	7030005120	S.RES ERJ2GEJ 102 X (1K)	B	21.5/35.8
R417	7030007340	S.RES ERJ2GEJ 153 X (15K)	B	21.3/37.1
R418	7030005120	S.RES ERJ2GEJ 102 X (1K)	B	19.8/37.9
R420	7030005090	S.RES ERJ2GEJ 104 X (100K)	T	79.6/32.3
R421	7210003061	VAR TP76N00N-15F-A103-2251A		
R423	7030005090	S.RES ERJ2GEJ 104 X (100K)	T	6.9/37.8
R424	7030005090	S.RES ERJ2GEJ 104 X (100K)	T	5.2/38.7
R426	7030007340	S.RES ERJ2GEJ 153 X (15K)	B	69.3/6.3
R427	7030005230	S.RES ERJ2GEJ 334 X (330K)	B	68.4/4.6
R428	7030005030	S.RES ERJ2GEJ 152 X (1.5K)	B	65.1/3.1
R429	7030006610	S.RES ERJ2GEJ 394 X (390K)	B	66.8/3.1
R430	7030005160	S.RES ERJ2GEJ 105 X (1M)	B	71.7/3.1
R431	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	66.6/30.8
R432	7030005040	S.RES ERJ2GEJ 472 X (4.7K)	B	70.5/30.9
R433	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	67.5/30.3
R434	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	70.5/30
R435	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	76.8/24.5
R436	7030005040	S.RES ERJ2GEJ 472 X (4.7K)	B	75.4/30
R437	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	8.4/34.7
R438	7030007290	S.RES ERJ2GEJ 222 X (2.2K)	T	4.8/33.3
R439	7030007290	S.RES ERJ2GEJ 222 X (2.2K)	T	83.8/2.4
R440	7030009280	S.RES ERJ2GEJ 391 X	B	17.5/43.6
R441	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	20.8/43.6
R442	7030007280	S.RES ERJ2GEJ 331 X (330)	B	20.2/33.7
R451	7030005530	S.RES ERJ2GEJ 100 X (10)	B	85.2/37.3
R453	7030008010	S.RES ERJ2GEJ 123 X (12K)	B	87.9/35.2
R454	7030005220	S.RES ERJ2GEJ 223 X (22K)	B	87/32.2
R455	7030008010	S.RES ERJ2GEJ 123 X (12K)	B	86.1/35.2
R456	7030005050	S.RES ERJ2GEJ 103 X (10K)	B	87.6/42.7
R457	7030005040	S.RES ERJ2GEJ 472 X (4.7K)	T	80.7/35
R458	7030005120	S.RES ERJ2GEJ 102 X (1K)	B	81.3/30
R459	7030005120	S.RES ERJ2GEJ 102 X (1K)	B	80.4/30
R460	7410001140	S.ARR EXB28V104JX	B	77.7/30
R461	7030005040	S.RES ERJ2GEJ 472 X (4.7K)	B	84/30.8
R462	7030005040	S.RES ERJ2GEJ 472 X (4.7K)	B	84/29.9
R463	7030005050	S.RES ERJ2GEJ 103 X (10K)	T	71.8/37.7
R464	7030005090	S.RES ERJ2GEJ 104 X (100K)	T	73.4/34.8
R466	7410001140	S.ARR EXB28V104JX	B	69.5/40
R467	7410001140	S.ARR EXB28V104JX	B	69.5/37
R468	7030008400	S.RES ERJ2GEJ 182 X (1.8K)	T	70/41.6
R469	7030009280	S.RES ERJ2GEJ 391 X	T	70/39.5
R470	7030005090	S.RES ERJ2GEJ 104 X (100K)	B	74.7/46.1
R471	7030007340	S.RES ERJ2GEJ 153 X (15K)	B	72.6/45.4
R472	7030005090	S.RES ERJ2GEJ 104 X (100K)	B	72.6/47.2
R473	7410001140	S.ARR EXB28V104JX	B	77.7/46.1
R474	7030007340	S.RES ERJ2GEJ 153 X (15K)	B	72.6/46.3
R475	7030005090	S.RES ERJ2GEJ 104 X (100K)	B	79.5/30
R476	7030005120	S.RES ERJ2GEJ 102 X (1K)	B	75.9/46.1
R477	7030005120	S.RES ERJ2GEJ 102 X (1K)	B	85.2/34.5
C1	4030011650	S.CER C1005 CH 1H 1R5B-T	B	8.5/5.7
C2	4030009720	S.CER C1005 CH 1H 080C-T	B	10.6/5.7
C3	4030011630	S.CER C1005 CH 1H 0R5B-T	B	12.5/8
C4	4030011650	S.CER C1005 CH 1H 1R5B-T	B	9.1/10.5
C5	4030009720	S.CER C1005 CH 1H 080C-T	B	10.7/14.9
C6	4030011630	S.CER C1005 CH 1H 0R5B-T	B	12.5/10
C7	4030019740	S.CER C1005 JB 1H 102K-T	B	14.9/6.6
C8	4030011670	S.CER C1005 CH 1H 2R5B-T	B	12.4/14.9

[MAIN-A UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C53	4030014260	S.CER C1005 JB 1H 331K-T	B	42.7/10.7
C54	4030019740	S.CER C1005 JB 1H 102K-T	B	42.7/9.8
C55	4030009740	S.CER C1005 CH 1H 100C-T	B	39.1/12.5
C57	4030014260	S.CER C1005 JB 1H 331K-T	B	37.3/10.8
C59	4030019650	S.CER C1005 CH 1H 050B-T	B	43.7/14
C60	4030011320	S.CER C1005 CH 1H 470J-T	B	45.5/8.9
C61	4030019740	S.CER C1005 JB 1H 102K-T	B	47.2/11.6
C62	4030009720	S.CER C1005 CH 1H 080C-T	B	45.5/11.6
C63	4030019650	S.CER C1005 CH 1H 050B-T	B	47.4/15.2
C64	4030019740	S.CER C1005 JB 1H 102K-T	B	49.6/12.1
C65	4030019740	S.CER C1005 JB 1H 102K-T	B	51.2/14
C71	4030009740	S.CER C1005 CH 1H 100C-T	T	52.9/17.7
C72	4030019740	S.CER C1005 JB 1H 102K-T	B	55.4/17.1
C73	4030019740	S.CER C1005 JB 1H 102K-T	T	53.8/19.3
C74	4030019650	S.CER C1005 CH 1H 050B-T	T	58.3/19.3
C76	4030019740	S.CER C1005 JB 1H 102K-T	B	56.3/18.8
C77	4030019740	S.CER C1005 JB 1H 102K-T	B	64.6/19.3
C78	4030019740	S.CER C1005 JB 1H 102K-T	T	59.2/19.9
C79	4030019930	S.CER C1005 JB 1A 104K-T	B	64.5/16.4
C80	4030014260	S.CER C1005 JB 1H 331K-T	B	61.5/23.6
C81	4030011680	S.CER C1005 CH 1H 030B-T	T	58.3/17.7
C82	4030011320	S.CER C1005 CH 1H 470J-T	B	55.4/18.8
C83	4030011720	S.CER C1005 CH 1H R75B-T	T	58.3/22.2
C84	4030014260	S.CER C1005 JB 1H 331K-T	T	54.4/22.7
C85	4030019740	S.CER C1005 JB 1H 102K-T	T	54.4/21.8
C86	4030009710	S.CER C1005 CH 1H 070C-T	T	56.5/24.5
C87	4030009830	S.CER C1005 CH 1H 180J-T	T	54.4/23.6
C88	4030009830	S.CER C1005 CH 1H 180J-T	T	56.5/25.4
C89	4030009790	S.CER C1005 CH 1H 330J-T	T	56.8/27.6
C90	4030011650	S.CER C1005 CH 1H 1R5B-T	T	53.6/27.6
C91	4030019970	S.CER C1005 JB 0J 105K-T	B	59.6/28.9
C92	4030010080	S.CER C1005 CH 1H 240J-T	T	55.2/27.6
C93	4030014260	S.CER C1005 JB 1H 331K-T	B	57.6/29.4
C94	4030011320	S.CER C1005 CH 1H 470J-T	T	49.1/26.4
C101	4030011630	S.CER C1005 CH 1H 0R5B-T	T	59.5/22.2
C102	4030019930	S.CER C1005 JB 1A 104K-T	T	64.2/20.6
C103	4030019740	S.CER C1005 JB 1H 102K-T	T	64.2/21.5
C104	4030011700	S.CER C1005 CH 1H 040B-T	T	60.4/23.8
C105	4030009730	S.CER C1005 CH 1H 090C-T	T	64.2/22.4
C106	4030009760	S.CER C1005 CH 1H 150J-T	T	61.9/25.1
C107	4030009790	S.CER C1005 CH 1H 330J-T	T	60.6/27.4
C108	4030019650	S.CER C1005 CH 1H 050B-T	T	64.2/23.3
C109	4030019740	S.CER C1005 JB 1H 102K-T	B	61.7/29.9
C110	4030011630	S.CER C1005 CH 1H 0R5B-T	T	62.6/26.4
C111	4030020040	S.CER C1005 CH 1H 200J-T	T	61.5/27.4
C116	4030019970	S.CER C1005 JB 0J 105K-T	B	64.4/27.7
C117	4030013880	S.CER C1005 JB 1H 222K-T	B	63.5/27.7
C118	4030011320	S.CER C1005 CH 1H 470J-T	B	65.9/24.9
C120	4030019740	S.CER C1005 JB 1H 102K-T	B	61.7/31.8
C121	4030019490	S.CER C2012 JB 1A 106K-T	B	61.9/19.3
C122	4030019810	S.CER C1005 JB 1E 103K-T	B	60.9/14.8
C123	4030019740	S.CER C1005 JB 1H 102K-T	B	48.1/27.9
C124	4030019740	S.CER C1005 JB 1H 102K-T	B	54.7/30.5
C127	4030013890	S.CER C1005 JB 1H 152K-T	B	63.5/29.9
C132	4550000270	S.TAN TEESVA 1E 474M8R	T	48.9/29.5
C133	4030019900	S.CER C1005 JB 1A 473K-T	T	46.7/26.4
C134	4550000460	S.TAN TEESVA 1C 105M8R	T	46.7/29.5
C141	4030009840	S.CER C1005 CH 1H 060C-T	B	55.4/20.4
C142	4030009710	S.CER C1005 CH 1H 070C-T	B	53.5/18.8
C147	4030009710	S.CER C1005 CH 1H 070C-T	B	51.3/19.5
C149	4030019740	S.CER C1005 JB 1H 102K-T	T	46.7/21.8
C150	4030019740	S.CER C1005 JB 1H 102K-T	T	43.1/20.3
C152	4030019740	S.CER C1005 JB 1H 102K-T	T	43.1/18.5
C153	4030011320	S.CER C1005 CH 1H 470J-T	T	44.5/32.6
C154	4030011320	S.CER C1005 CH 1H 470J-T	T	47.6/32.6
C155	4030011320	S.CER C1005 CH 1H 470J-T	T	42.7/32.6
C156	4030019930	S.CER C1005 JB 1A 104K-T	T	48.6/32.6
C157	4030019810	S.CER C1005 JB 1E 103K-T	T	41/19.4
C158	4030009740	S.CER C1005 CH 1H 100C-T	T	39.2/19.4
C159	4030019930	S.CER C1005 JB 1A 104K-T	T	40.1/10.9
C160	4030019740	S.CER C1005 JB 1H 102K-T	T	41.9/10.9
C171	4030011700	S.CER C1005 CH 1H 040B-T	B	15.3/16
C172	4030011660	S.CER C1005 CH 1H 020B-T	B	15.3/17.2
C173	4030019740	S.CER C1005 JB 1H 102K-T	B	13.9/18.8
C175	4030011320	S.CER C1005 CH 1H 470J-T	B	13.9/20.5
C176	4030009780	S.CER C1005 CH 1H 270J-T	B	15.8/23.9
C177	4030009840	S.CER C1005 CH 1H 060C-T	B	15.8/24.8
C178	4030011660	S.CER C1005 CH 1H 020B-T	B	14.5/25.2
C179	4030009840	S.CER C1005 CH 1H 060C-T	B	15.8/25.7
C180	4030009780	S.CER C1005 CH 1H 270J-T	B	15.8/26.6
C181	4030009710	S.CER C1005 CH 1H 070C-T	B	17.4/29
C182	4030019740	S.CER C1005 JB 1H 102K-T	B	20.3/22.7
C183	4030019740	S.CER C1005 JB 1H 102K-T	B	20.3/25.4
C184	4030019930	S.CER C1005 JB 1A 104K-T	B	20.3/26.3
C186	4030019930	S.CER C1005 JB 1A 104K-T	B	19.2/31
C188	4030019740	S.CER C1005 JB 1H 102K-T	B	23.2/31
C189	4030019740	S.CER C1005 JB 1H 102K-T	B	23.9/25.4
C192	4030019740	S.CER C1005 JB 1H 102K-T	B	23.9/27.2
C194	4030019740	S.CER C1005 JB 1H 102K-T	B	22.1/27.2
C195	4030011670	S.CER C1005 CH 1H 2R5B-T	B	23.2/28.5
C196	4030009750	S.CER C1005 CH 1H 120J-T	B	27.4/28.5
C197	4030011630	S.CER C1005 CH 1H 0R5B-T	B	29.2/28.9
C198	4030009750	S.CER C1005 CH 1H 120J-T	B	31/28.5
C199	4030011670	S.CER C1005 CH 1H 2R5B-T	B	34.4/26.8
C200	4030009760	S.CER C1005 CH 1H 150J-T	B	34.4/28.5
C201	4030019740	S.CER C1005 JB 1H 102K-T	B	31.5/23.8
C203	4030019930	S.CER C1005 JB 1A 104K-T	B	29.7/24.7
C206	4030011320	S.CER C1005 CH 1H 470J-T	B	47.4/16.6
C208	4030011660	S.CER C1005 CH 1H 020B-T	B	37.4/23.5
C209	4030011660	S.CER C1005 CH 1H 020B-T	B	35.4/23.5
C210	4030019650	S.CER C1005 CH 1H 050B-T	B	35.4/25.1
C212	4030019740	S.CER C1005 JB 1H 102K-T	B	34.4/23.5
C213	4030011320	S.CER C1005 CH 1H 470J-T	B	38.4/25.1
C214	4030019740	S.CER C1005 JB 1H 102K-T	B	37.4/25.1
C215	4030009830	S.CER C1005 CH 1H 180J-T	B	42.2/27.7

[MAIN-A UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C216	4030019740	S.CER C1005 JB 1H 102K-T	B	41.4/25.1
C217	4030019810	S.CER C1005 JB 1E 103K-T	B	40.4/25.1
C218	4030019810	S.CER C1005 JB 1E 103K-T	B	37.6/29.8
C220	4030009710	S.CER C1005 CH 1H 070C-T	B	40.4/34.6
C221	4030011320	S.CER C1005 CH 1H 470J-T	B	42.4/25.1
C223	4030019740	S.CER C1005 JB 1H 102K-T	B	43.3/23.5
C224	4030019740	S.CER C1005 JB 1H 102K-T	B	45.7/17.6
C225	4030019810	S.CER C1005 JB 1E 103K-T	B	39/39.8
C226	4030019810	S.CER C1005 JB 1E 103K-T	B	37.3/44.4
C227	4030019810	S.CER C1005 JB 1E 103K-T	B	35.6/41.8
C228	4030011630	S.CER C1005 CH 1H 0R5B-T	B	35.6/39.8
C231	4030010250	S.CER C1005 CH 1H 101J-T	B	40.9/41.8
C232	4030009770	S.CER C1005 CH 1H 220J-T	T	43/38.6
C233	4030019740	S.CER C1005 JB 1H 102K-T	B	40.9/39
C234	4030019810	S.CER C1005 JB 1E 103K-T	T	47.3/35.1
C235	4030019490	S.CER C2012 JB 1A 106K-T	B	44.5/42.6
C236	4030019740	S.CER C1005 JB 1H 102K-T	B	47.1/43.1
C238	4030019740	S.CER C1005 JB 1H 102K-T	B	41.3/40.3
C239	4030014260	S.CER C1005 JB 1H 331K-T	T	43/39.6
C240	4030019740	S.CER C1005 JB 1H 102K-T	B	44.7/35.5
C241	4030011320	S.CER C1005 CH 1H 470J-T	B	46.5/32.8
C242	4030019680	S.CER C1005 CH 1H 181J-T	B	48.3/34.6
C243	4030019680	S.CER C1005 CH 1H 181J-T	B	46.5/35.5
C244	4030019930	S.CER C1005 JB 1A 104K-T	B	50.2/37
C251	4030011680	S.CER C1005 CH 1H 030B-T	T	41.5/34.6
C252	4030010090	S.CER C1005 CH 1H 560J-T	T	39.4/33.4
C253	4030009840	S.CER C1005 CH 1H 060C-T	T	41.5/33.6
C254	4030010090	S.CER C1005 CH 1H 560J-T	T	39.4/32.6
C255	4030019810	S.CER C1005 JB 1E 103K-T	T	41.5/29.5
C256	4030009740	S.CER C1005 CH 1H 100C-T	T	39.2/24.6
C257	4030019810	S.CER C1005 JB 1E 103K-T	T	36.9/31.4
C261	4030019930	S.CER C1005 JB 1A 104K-T	B	50.5/38.6
C262	4030019810	S.CER C1005 JB 1E 103K-T	B	50.2/40.7
C263	4030019810	S.CER C1005 JB 1E 103K-T	B	57.1/41.5
C264	4030019810	S.CER C1005 JB 1E 103K-T	B	53.9/36
C265	4030019810	S.CER C1005 JB 1E 103K-T	B	58.7/36.9
C266	4030019810	S.CER C1005 JB 1E 103K-T	B	57.4/35.1
C267	4030019930	S.CER C1005 JB 1A 104K-T	T	50.9/34.6
C301	4030019930	S.CER C1005 JB 1A 104K-T	B	69.3/12.4
C302	4030019850	S.CER C1005 JB 1E 183K-T	B	66.6/14.1
C303	4030019690	S.CER C1005 CH 1H 221J-T	B	68.4/10.7
C304	4030019460	S.CER C1608 JB 0J 106M-T	T	62.6/42
C305	4030019900	S.CER C1005 JB 1A 473K-T	T	76.4/32.9
C306	4030019890	S.CER C1005 JB 1A 393K-T	T	65.5/37.9
C307	4030019930	S.CER C1005 JB 1A 104K-T	T	63.5/39.6
C308	4030019800	S.CER C1005 JB 1H 682K-T	T	65.5/39.6
C309	4030019860	S.CER C1005 JB 1E 223K-T	T	67.3/41.2
C310	4030019930	S.CER C1005 JB 1A 104K-T	T	62.6/37.9
C312	4030019850	S.CER C1005 JB 1E 183K-T	T	74.6/29.5
C313	4030019930	S.CER C1005 JB 1A 104K-T	T	77/29.5
C314	4030019750	S.CER C1005 JB 1H 122K-T	T	74.6/26
C316	4030019930	S.CER C1005 JB 1A 104K-T	T	77.4/30.7
C318	4030019810	S.CER C1005 JB 1E 103K-T	B	70.6/28.7
C321	4030019740	S.CER C1005 JB 1H 102K-T	T	85.7/29.4
C322	4030019740	S.CER C1005 JB 1H 102K-T	T	85.7/27.7
C323	4030019710	S.CER C1005 JB 1H 391K-T	T	84.8/26
C324	4030019810	S.CER C1005 JB 1E 103K-T	T	86.6/26
C325	4030011320	S.CER C1005 CH 1H 470J-T	T	87.5/26
C326	4030019810	S.CER C1005 JB 1E 103K-T	T	71.8/15.6
C328	4030019970	S.CER C1005 JB 0J 105K-T	T	72.8/24.3
C329	4030013910	S.CER C1005 JB 1H 472K-T	T	74.6/24.3
C330	4030019810	S.CER C1005 JB 1E 103K-T	T	72.7/18.8
C331	4030019810	S.CER C1005 JB 1E 103K-T	T	72.7/12
C332	4030013910	S.CER C1005 JB 1H 472K-T	T	73.6/10.2
C333	4030013910	S.CER C1005 JB 1H 472K-T	T	74.5/10.2
C334	4030019740	S.CER C1005 JB 1H 102K-T	B	15/46.6
C335	4030019740	S.CER C1005 JB 1H 102K-T	B	26/43.9
C336	4030019970	S.CER C1005 JB 0J 105K-T	B	56.1/8.7
C337	4030019740	S.CER C1005 JB 1H 102K-T	B	52.5/7.5
C338	4030019740	S.CER C1005 JB 1H 102K-T	B	50.7/7.5
C339	4030019740	S.CER C1005 JB 1H 102K-T	B	53.4/7.5
C340	4030019930	S.CER C1005 JB 1A 104K-T	B	57.8/10.5

[MAIN-A UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C391	4030011320	S.CER C1005 CH 1H 470J-T	B	37.3/46.3
C393	4520000020	S.NIO NOJC227M006	B	19.8/40.9
C395	4520000020	S.NIO NOJC227M006	T	21.7/37.1
C397	4030019740	S.CER C1005 JB 1H 102K-T	T	26/36.5
C398	4030019740	S.CER C1005 JB 1H 102K-T	B	12.2/32
C399	4030019930	S.CER C1005 JB 1A 104K-T	B	22.2/37.1
C400	4550006250	S.TAN TEESVA 1A 106M8R	T	12.9/40.8
C401	4030019930	S.CER C1005 JB 1A 104K-T	B	12.2/37.6
C403	4030019930	S.CER C1005 JB 1A 104K-T	B	15.8/39.6
C404	4030019930	S.CER C1005 JB 1A 104K-T	B	12.2/38.5
C405	4030019970	S.CER C1005 JB 0J 105K-T	B	19.3/33.7
C406	4030019740	S.CER C1005 JB 1H 102K-T	T	20.7/32.2
C408	4030019930	S.CER C1005 JB 1A 104K-T	T	5.2/37.8
C410	4030019740	S.CER C1005 JB 1H 102K-T	T	11.3/39.3
C412	4030019740	S.CER C1005 JB 1H 102K-T	T	6.5/42.8
C413	4030019740	S.CER C1005 JB 1H 102K-T	T	6.8/44.8
C414	4030019740	S.CER C1005 JB 1H 102K-T	T	8.1/23.1
C415	4030019740	S.CER C1005 JB 1H 102K-T	T	6.5/30.8
C416	4030019740	S.CER C1005 JB 1H 102K-T	T	6.1/23.1
C417	4030019740	S.CER C1005 JB 1H 102K-T	T	3.7/30.8
C421	4030019930	S.CER C1005 JB 1A 104K-T	T	75.4/12
C423	4030019810	S.CER C1005 JB 1E 103K-T	B	65.2/38.4
C424	4030019740	S.CER C1005 JB 1H 102K-T	T	63.8/34.4
C426	4030019810	S.CER C1005 JB 1E 103K-T	B	69/30.3
C427	4030019930	S.CER C1005 JB 1A 104K-T	T	73.7/26
C429	4030019810	S.CER C1005 JB 1E 103K-T	B	77.2/25.7
C430	4030019930	S.CER C1005 JB 1A 104K-T	T	65.9/11.4
C431	4510009870	S.ELE 10 CE 100 LD	T	14.7/27.1
C432	4030019740	S.CER C1005 JB 1H 102K-T	T	14.3/31.7
C433	4030019930	S.CER C1005 JB 1A 104K-T	T	16.2/32.2
C434	4030019810	S.CER C1005 JB 1E 103K-T	T	14.3/32.6
C435	4030019740	S.CER C1005 JB 1H 102K-T	T	18/32.2
C436	4550007320	S.TAN F930J226MAABMA	B	85.2/44.4
C437	4030019930	S.CER C1005 JB 1A 104K-T	T	17.1/32.2
C451	4030009790	S.CER C1005 CH 1H 330J-T	B	86.6/38.5
C452	4030009740	S.CER C1005 CH 1H 100C-T	B	86.1/37.3
C453	4030009770	S.CER C1005 CH 1H 220J-T	B	87/35.2
C454	4030019930	S.CER C1005 JB 1A 104K-T	B	86.1/32.2
C456	4030019930	S.CER C1005 JB 1A 104K-T	B	87.9/32.2
C457	4030019870	S.CER C1005 JB 1A 273K-T	B	86.8/46.9
C458	4030019930	S.CER C1005 JB 1A 104K-T	T	84.7/45.5
C459	4030019930	S.CER C1005 JB 1A 104K-T	B	85.2/40.6
C460	4030019930	S.CER C1005 JB 1A 104K-T	B	79.5/46.1
C461	4030019930	S.CER C1005 JB 1A 104K-T	B	80.4/46.1
C462	4030019930	S.CER C1005 JB 1A 104K-T	B	81.3/46.1
C465	4030019930	S.CER C1005 JB 1A 104K-T	T	77.4/35
C466	4030019810	S.CER C1005 JB 1E 103K-T	T	79/35
C467	4030019930	S.CER C1005 JB 1A 104K-T	B	85.2/32.2
J51	6450000131	CON HSJ1102-018540		
J52	6450002250	CON HSJ1456-010320		
J53	6510021901	S.CON BM02B-ASRS-TF(LF)(SN)	T	30.5/34.5
F51	5210000970	S.FUS ERBSE3R00U	T	10.7/37.6
DS51	5040002670	S.LED CL-165HR/YG	T	2.6/37.9
MC51	7700002920	MIC EM9745P-38-G-01 <HOR>		
S51	2260001900	SWI SW-149 (SKHLLD)		
S52	2260002800	S.SWI SW-167 (SKQTLAE010)	B	39.2/1.8
S53	2260002800	S.SWI SW-167 (SKQTLAE010)	B	48.7/1.8
S54	2250000670	ENC TP70TF5169-15.9F-3285		
EP3	6910018460	S.BEA MMZ1005Y102C-T	T	63.7/19.3
EP4	6910018460	S.BEA MMZ1005Y102C-T	T	41.9/19.4
EP5	6910018460	S.BEA MMZ1005Y102C-T	T	41/10.9
EP6	6910014730	S.BEA MPZ2012S331A-T	B	22.4/17
EP11	6910021240	S.BEA MMZ1005A152ET	T	54.9/24.5
EP14	6910021240	S.BEA MMZ1005A152ET	T	60.4/22.2
EP51	6910018460	S.BEA MMZ1005Y102C-T	B	20.3/46.6
MP3	8510016471	S.CAS 2775 VCO CASE-1	T	58.8/23.2
MP4	6910014760	S.PLA OG-503040	B	66.8/18.4
MP5	6910014760	S.PLA OG-503040	B	17.9/9.5

M.=Mounted side (T: Mounted on the Top side, B: Mounted on the Bottom side)
S.=Surface mount

SECTION 7

MECHANICAL PARTS

[CHASSIS PARTS]

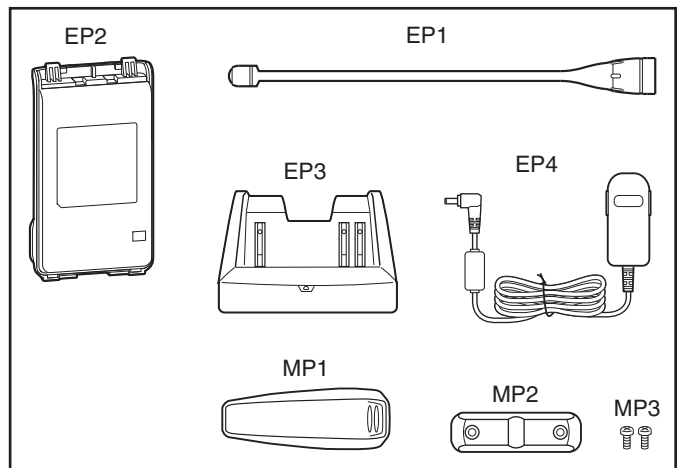
REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6910021491	ANT CONNECTOR 106-1	1
SP1	2510001560	045P01202-02	1
W1	8900009640	OPC-963	1
EP1	0910065992	B-7262B	1
MP1	8010021710	3285 CHASSIS	1
MP2	8210026010	3285 FRONT PANEL (Incl. MP3-9)	1
MP3	8210025830	3285 PTT PANEL	1
MP4	8930080110	3285 PTT BUTTON	1
MP5	8930080130	3285 PTT RUBBER	1
MP6	8930079890	3285 LOCK PLATE	1
MP7	8210025800	3285 BOTTOM PANEL	1
MP8	8930080380	3285 SHAFT	1
MP9	8930080180	SP NET (F)	1
MP10	8930080170	3285 NAME SHEET	1
MP11	8930080120	3285 LENS	1
MP12	8930080620	O-RING (CF)	1
MP13	8930080630	3285 SP PLATE	1
MP14	8930042350	1922 MIC SHEET	1
MP15	8930080410	3285 MIC SPONGE	1
MP16	8930079900	3285 TERMINAL HOLDER	1
MP17	8930080100	3285 PLUS TERMINAL	1
MP18	8930080400	3285 MINUS TERMINAL	1
MP19	8930069710	THERMALLY SHEET (BC)	1
MP20	8830003390	VR NUT (AB)	2
MP21	8930080090	3285 SIDE PLATE	1
MP22	8930080150	3285 SIDE SEAL	1
MP23	8930080140	3285 TOP SEAL	1
MP24	8830003440	3285 ANT NUT	1
MP25	8610014180	KNOB N-389 (Incl. MP26)	1
MP26	8610007510	KNOB SPRING NO.7800	1
MP27	8610014190	KNOB N-390	1
MP28	8610007920	KNOB SPRING NO.1500	1
MP31	8810008761	SCREW BT B0 2X8 NI-ZC3 (BT)	2
MP32	8810009511	SCREW BT B0 2X4 NI-ZC3 (BT)	9
MP33	8810009511	SCREW BT B0 2X4 NI-ZC3 (BT)	1
MP34	8810009181	OTAP 1FLAT WASHER B0 2X5 NI-ZC3 (BT)	2

[MAIN-A UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J51	6450000131	HSJ1102-018540	1
J52	6450002250	HSJ1456-010320	1
J53*	6510021901	BM02B-ASRS-TF (LF) (SN)	1
MC51	7700002920	EM9745P-38-G-01	1
S51	2260001900	SW-149 (SKHLLD)	1
S52*	2260002800	SW-167 (SKQT)	1
S53*	2260002800	SW-167 (SKQT)	1
S54	2250000670	TP70TF5169-15.9F-3285	1
MP2	8510016461	2775 VCO COVER-1	1
MP3*	8510016471	2775 VCO CASE-1	1
MP4*	6910014760	OG-503040	1
MP5*	6910014760	OG-503040	1
MP6	8930080760	SPONGE (KT)	1
MP7	8930080770	INSULATION SHEET (MQ)	1

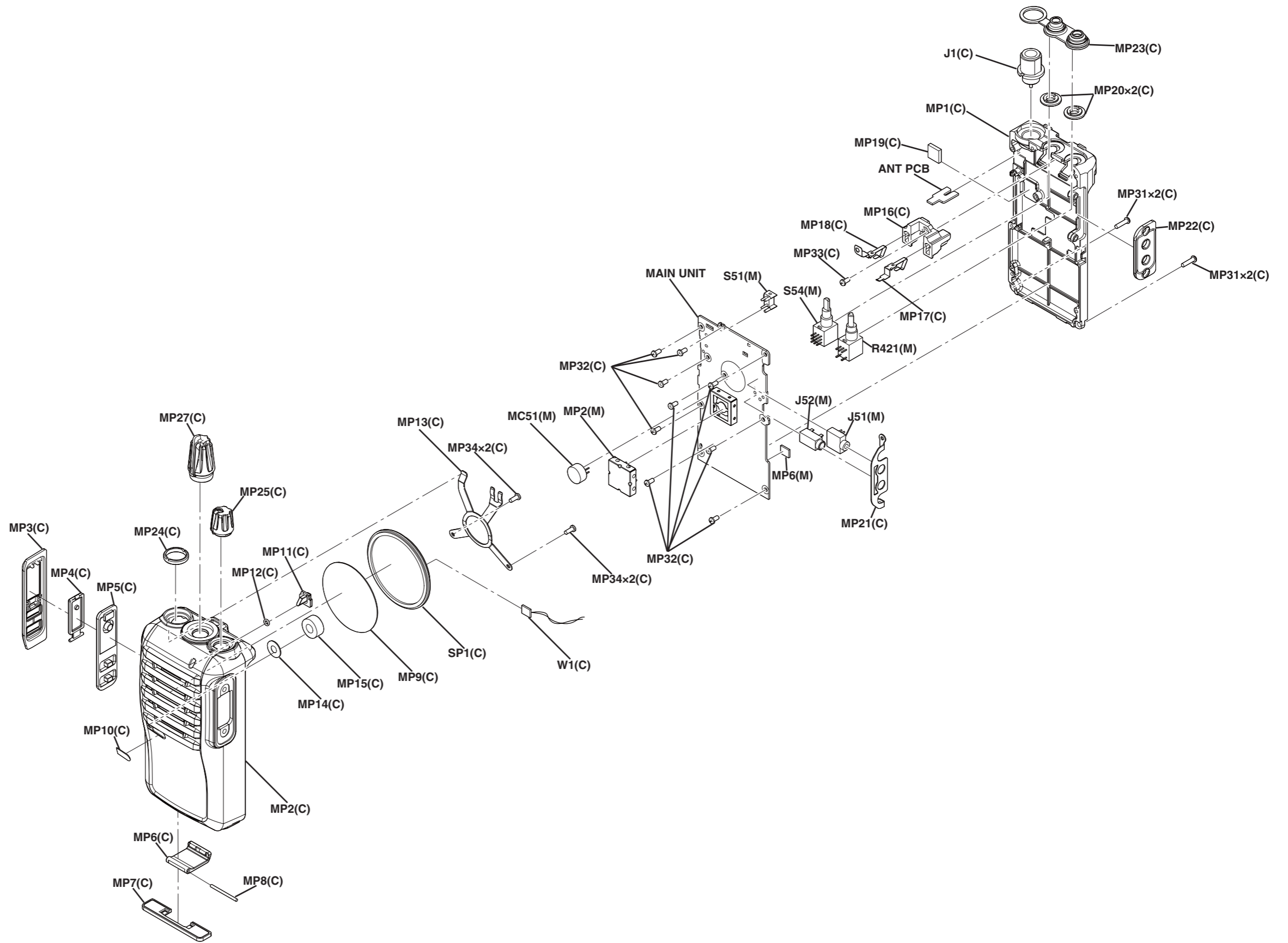
[ACCESSORIES]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	(Optional)	FA-SC57U-1	1
EP2	(Optional)	BP-264 EXP [USA-11], [USA-12], [EUR-21], [EUR-22], [UK-01], [UK-02], [EXP-11], [EXP-12], [EXP-21], [EXP-22], [EXP-01], [AUS-21], [AUS-22], [RUS-21], [RUS-22]	1
	(Optional)	BP-265 [USA-13], [EUR-23], [UK-03], [EXP-13], [EXP-23], [EXP-03], [AUS-23], [RUS-23]	1
EP3	(Optional)	BC-191 EXP [USA-11], [EUR-21], [UK-01], [EXP-11], [EXP-21], [AUS-21], [RUS-21]	1
	(Optional)	BC-192 EXP [USA-12], [EUR-22], [UK-02], [EXP-12], [EXP-22], [AUS-22], [RUS-22]	1
	(Optional)	BC-193 EXP [USA-13], [EUR-23], [UK-03], [EXP-13], [EXP-23], [AUS-23], [RUS-23]	1
EP4	(Optional)	BC-123SA (L) [USA-11], [USA-13], [EUR-22], [EXP-11], [EXP-13], [EXP-22], [RUS-22]	1
	(Optional)	BC-147SA [USA-12], [USA-12], [EXP-12]	1
	(Optional)	BC-123SE (L) [EUR-21], [EUR-23], [EXP-21], [EXP-23], [RUS-21], [RUS-23]	1
	(Optional)	BC-123SV (L) [AUS-21], [AUS-23], [RUS-23]	1
	(Optional)	BC-147SV [AUS-22]	1
MP1	(Optional)	MB-124	1
MP2	8210025840	3285 JACK PANEL	1
MP3	8810004861	SCREW PH M2X6 ZK3	2



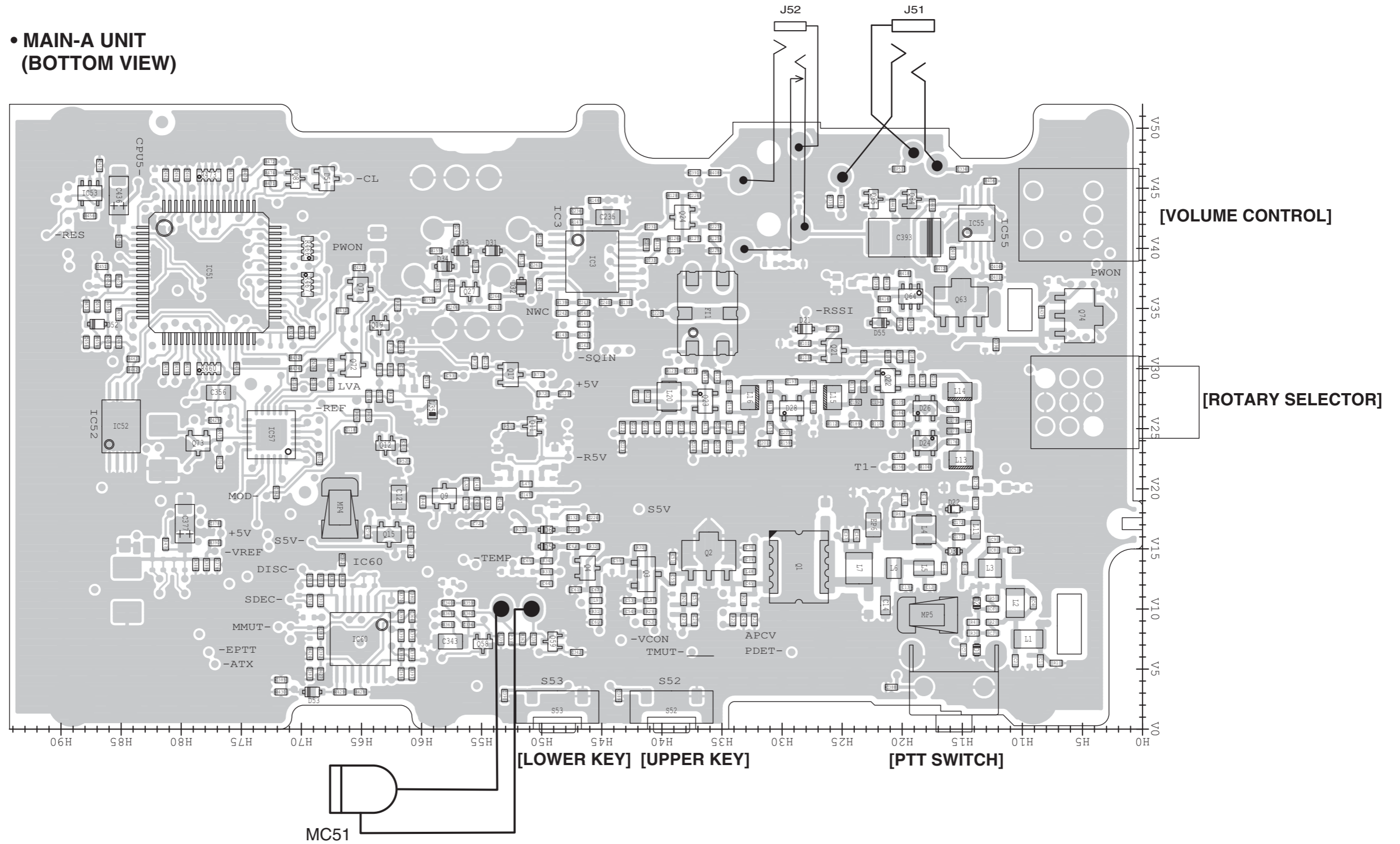
*: Refer to "BOARD LAYOUTS" for the location.

Screw abbreviations A, B0, BT: Self-tapping PH: Pan head ZK: Black NI-ZU: Nickel-Zinc SUS: Stainless



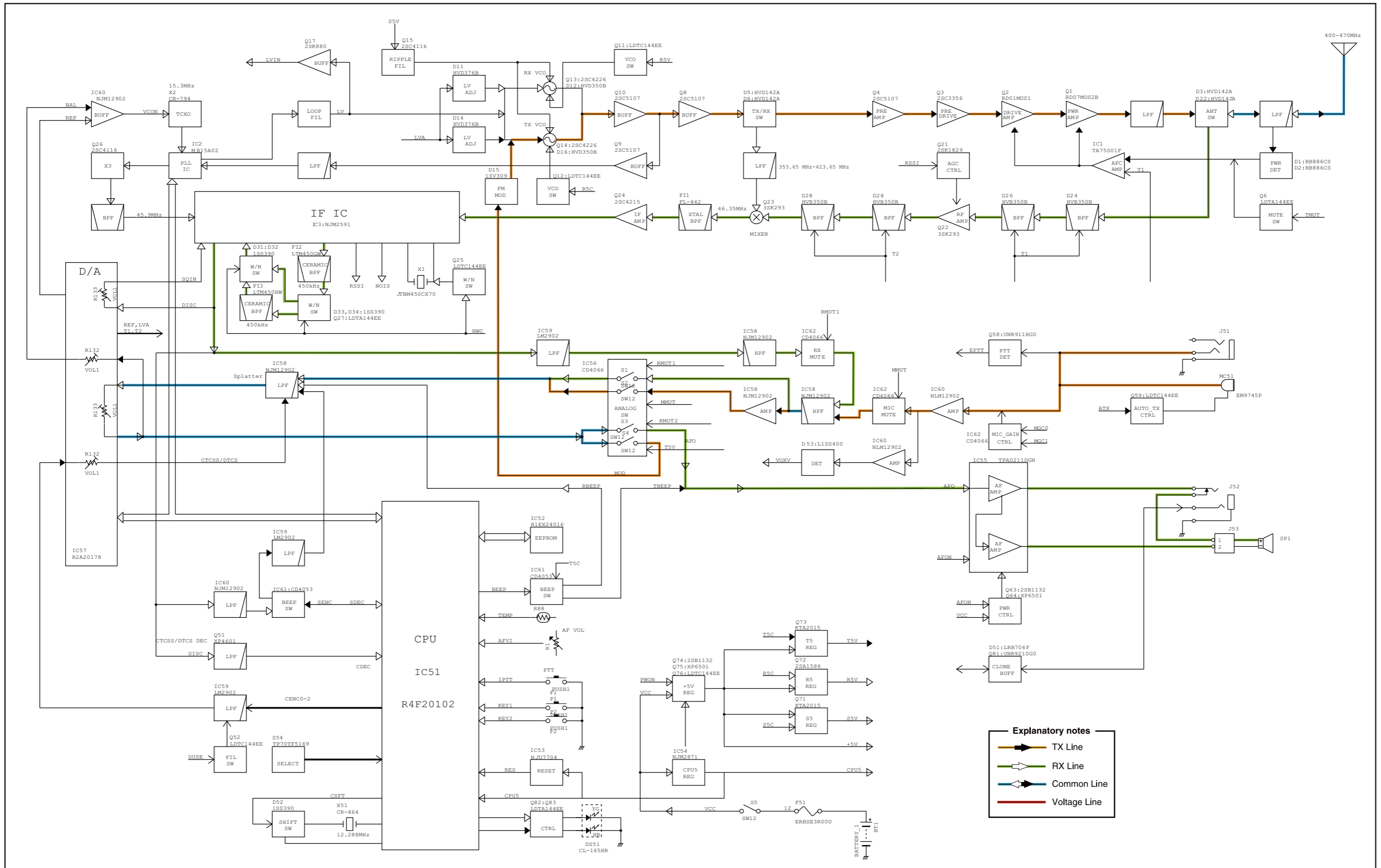
UNIT ABBREVIATIONS
 (C): CHASSIS PARTS
 (M): MAIN-A UNIT

• MAIN-A UNIT
(BOTTOM VIEW)



SECTION 9

BLOCK DIAGRAM



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