



# SERVICE MANUAL

VHF MARINE TRANSCEIVER  
**IC-GM651**

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S-14501XZ-C1  
Apr. 2008

Icom Inc.

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## INTRODUCTION

This service manual describes the latest service information for the **IC-GM651** VHF MARINE TRANSCEIVER at the time of publication.

MODEL	VERSION
IC-GM651	EUR

### UNIT ABBREVIATIONS:

F=FRONT UNIT  
M=MAIN UNIT  
AF=AF UNIT  
L=LOGIC UNIT  
V=VR UNIT  
D=DIAL UNIT  
S=SQL UNIT  
CH=CHASSIS PARTS

## CAUTION

**NEVER** connect the transceiver to an AC outlet or to a DC power supply that uses more than specified. This will ruin the transceiver.

**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.

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 parts numbers
2. Component name
3. Equipment model name and unit name
4. Quantity required

### <ORDER EXAMPLE>

1110003491 S.IC TA31136FNG IC-GM651 MAIN UNIT 5 pieces  
8820001210 Screw 2438 screw IC-GM651 Top cover 10 pieces

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

## 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 test equipment thoroughly before connecting a test equipment to the transceiver.

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# SECTION 1

# SPECIFICATIONS

## ◇ General

- Frequency coverage : TX 156.000–161.450 MHz  
RX 156.000–163.425 MHz
- Mode : FM (16K0G3E), DSC (16K0G2B)
- Current drain (at 24 V) : TX high (25 W) 3.5 A  
Max. audio 1 A
- Power supply requirement : 12/24 V DC (10.8 to 31.2 V)
- Frequency stability : ±5 ppm
- Operating temp. range : –15°C to +55°C
- Antenna impedance : 50 Ω nominal
- Input impedance (Hand mic) : 2 kΩ
- Output impedance (audio) : 4 Ω
- VDR interface
  - Impedance : Ballanced 600 Ω
  - Ground : Floating
  - Audio level : TX –4 dBm (typical)  
(at 1 kHz, ±3 kHz deviation)  
RX –3 dBm (typical)  
(at 1 kHz, ±3 kHz deviation)
- Dimensions (Projections not included)
  - IC-GM651 : 220(W) × 110(H) × 109.4(D) mm
  - PS-250 : 250(W) × 67(H) × 200(D) mm
- Weight
  - IC-GM651 : Approx. 1600 g
  - PS-250 : Approx. 2100 g

## ◇ Transmitter

- RF output power : 25 W and 1 W
- Modulation system : Variable reactance frequency modulation
- Max. frequency deviation : ±5.0 kHz
- Spurious emissions : Less than 0.25 μW
- Adjacent channel power : More than 70 dB
- Audio harmonic distortion : Less than 10%  
(at 1 kHz, 60% deviation)
- Residual modulation : More than 40 dB
- Audio frequency response : +1 to –3 dB of 6 dB/octave  
range from 300 Hz to 3000 Hz

## ◇ Receiver

- Receive system : Double conversion superheterodyne
- Sensitivity (20 dB SINAD) : –5 dBμ emf (typical)  
–5 dBμ emf (typical) (CH 70 receiver)
- Squelch sensitivity : Less than –2 dBμ emf
- Spurious response : More than 73 dB
- Intermodulation : More than 75 dB
- Adjacent channel selectivity : More than 75 dB
- Hum and noise : More than 45 dB
- Audio output power : 2.0 W at 10% distortion with a 4 Ω  
load

\* This specification is described when the IC-GM651 is used with the PS-250.

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

## ■ VHF MARINE CHANNEL LIST

### • International channels

CH	Frequency (MHz)		CH	Frequency (MHz)		CH	Frequency (MHz)		CH	Frequency (MHz)		CH	Frequency (MHz)		CH	Frequency (MHz)	
	Transmit	Receive		Transmit	Receive		Transmit	Receive		Transmit	Receive		Transmit	Receive		Transmit	Receive
01	156.050	160.650	11	156.550	156.550	21	157.050	161.650	62	156.125	160.725	72	156.625	156.625	82	157.125	161.725
02	156.100	160.700	12	156.600	156.600	22	157.100	161.700	63	156.175	160.775	73	156.675	156.675	83	157.175	161.775
03	156.150	160.750	13	156.650	156.650	23	157.150	161.750	64	156.225	160.825	74	156.725	156.725	84	157.225	161.825
04	156.200	160.800	14	156.700	156.700	24	157.200	161.800	65	156.275	160.875	75 <sup>*3</sup>	156.775	156.775	85	157.275	161.875
05	156.250	160.850	15 <sup>*2</sup>	156.750	156.750	25	157.250	161.850	66	156.325	160.925	76 <sup>*3</sup>	156.825	156.825	86	157.325	161.925
06	156.300	156.300	16	156.800	156.800	26	157.300	161.900	67	156.375	156.375	77	156.875	156.875	87	157.375	157.375
07	156.350	160.950	17 <sup>*2</sup>	156.850	156.850	27	157.350	161.950	68	156.425	156.425	78	156.925	161.525	88	157.425	157.425
08	156.400	156.400	18	156.900	161.500	28	157.400	162.000	69	156.475	156.475	79	156.975	161.575			
09	156.450	156.450	19	156.950	161.550	60	156.025	160.625	70 <sup>*1</sup>	156.525	156.525	80	157.025	161.625			
10	156.500	156.500	20	157.000	161.600	61	156.075	160.675	71	156.575	156.575	81	157.075	161.675			

<sup>\*1</sup>DSC operation only.

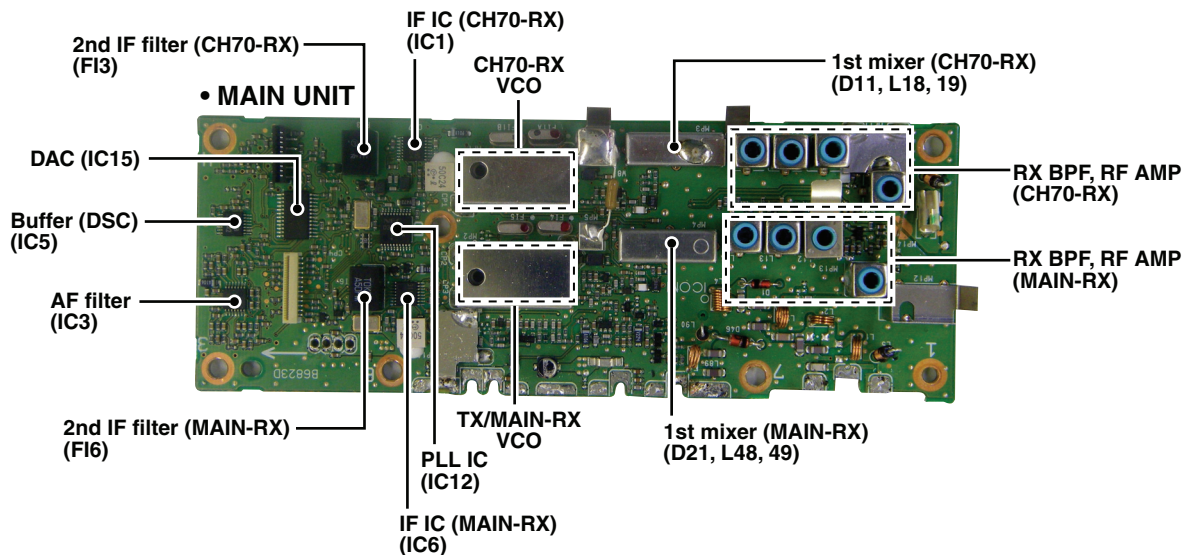
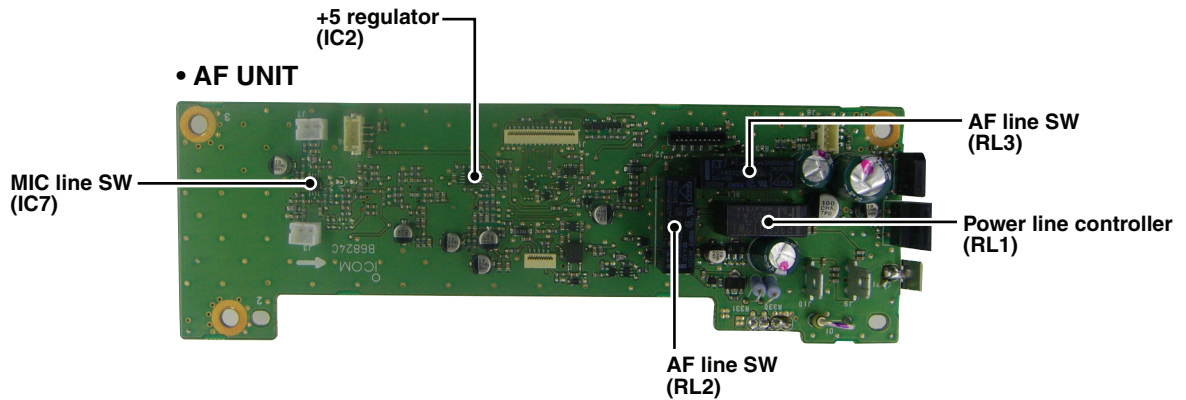
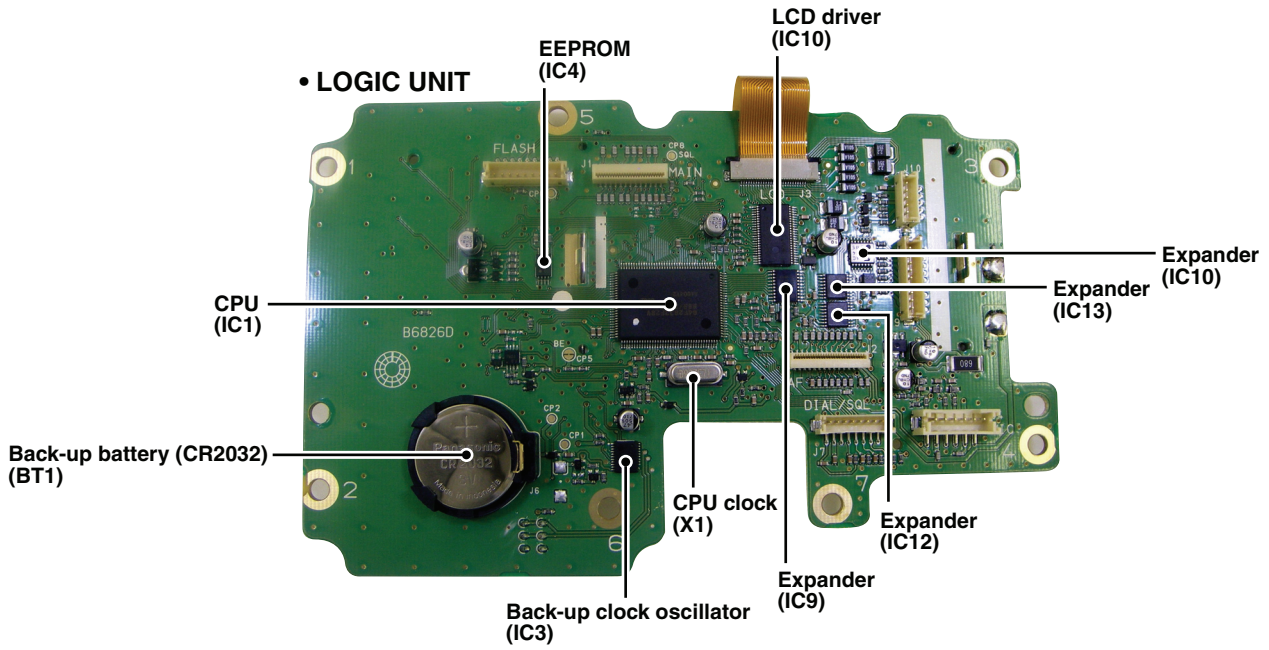
<sup>\*2</sup>Channels 15 and 17 may also be used for on-board communications provided the effective radiated power does not exceed 1 W, and subject to the national regulations of the administration concerned when these channels are used in its territorial waters.

<sup>\*3</sup>1 W only.

The use of these channels should be restricted to navigation-related communications only and all precautions should be taken to avoid harmful interference to channel 16, e.g. by limiting the output power to 1 W or by means of geographical separation.

# SECTION 2

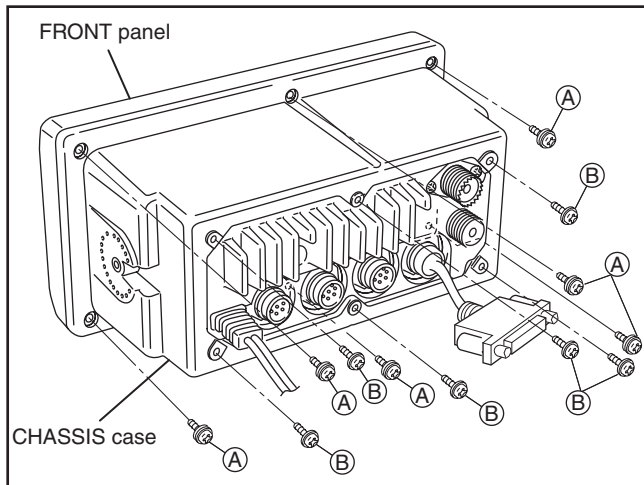
# INSIDE VIEWS



# SECTION 3 DISASSEMBLY INSTRUCTION

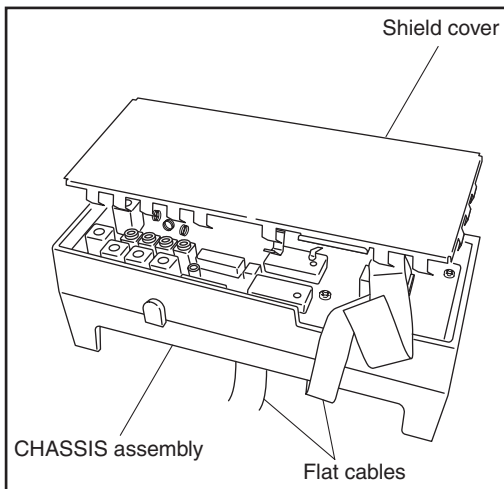
## 1. Removing the CHASSIS case

- ① Unscrew 6 screws (A) from the bottom of the FRONT panel.
- ② Unscrew 6 screws (B) from the rear, and remove the CHASSIS case.



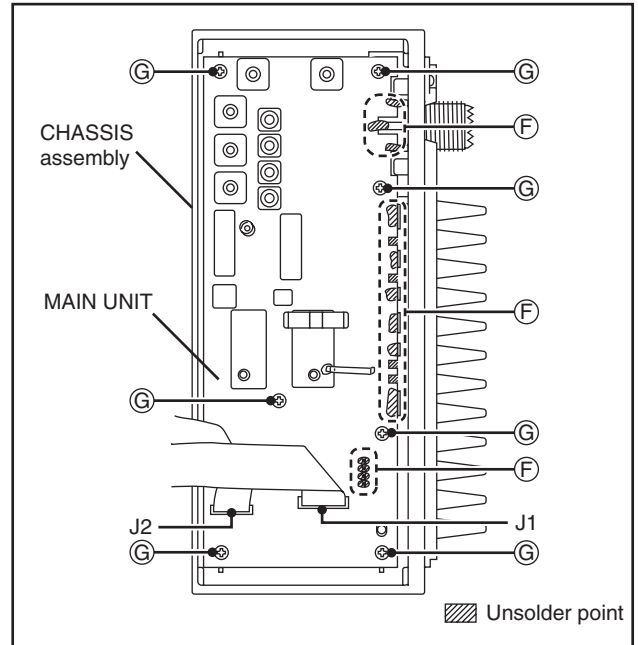
## 2. Removing the front panel

- ① Remove the shield cover from the CHASSIS assembly.
- ② Disconnect flat cables between FRONT panel and CHASSIS assembly, then separate the FRONT panel from the CHASSIS assembly.



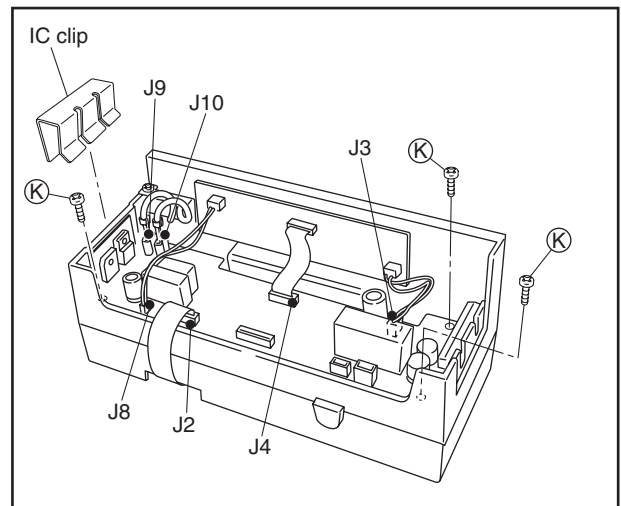
## 3. Removing the MAIN UNIT

- ① Unscrew 7 screws (G) from the MAIN UNIT.
- ② Unsolder (F) (at the PA module and the bottom of antenna connector).
- ③ Disconnect flat cables from J1 and J2.
- ④ Take out the MAIN UNIT from the CHASSIS assembly.



## 4. Removing the AF UNIT

- ① Remove the IC clip.
- ③ Disconnect cables from J2–J5, J8, J9 and J10.
- ④ Unscrew 3 screws from the AF UNIT.
- ⑤ Take out the AF UNIT from the CHASSIS assembly.





## 4-1 RECEIVER CIRCUITS

### • ANTENNA SW (MAIN-RX)

RF signals from the MAIN-RX antenna are passed through the LPF (L1, 2, C1, 3, 5) and antenna SW (D1, 46, L3, 4, C7-9), then applied to the RF AMP (Q1).

### • RF AMP (MAIN-RX)

RF signals from the antenna SW are passed through the tuned BPF (D4, L11, C15-17), and applied to the "gate-1" terminal of Q1 via C18. The amplified RX signals are passed through the 3-staged tuned BPF (D5-10, L12-14, C30-41) to remove unwanted out-of-band signals. The filtered RX signals are applied to the 1st mixer (D21, L48, 49).

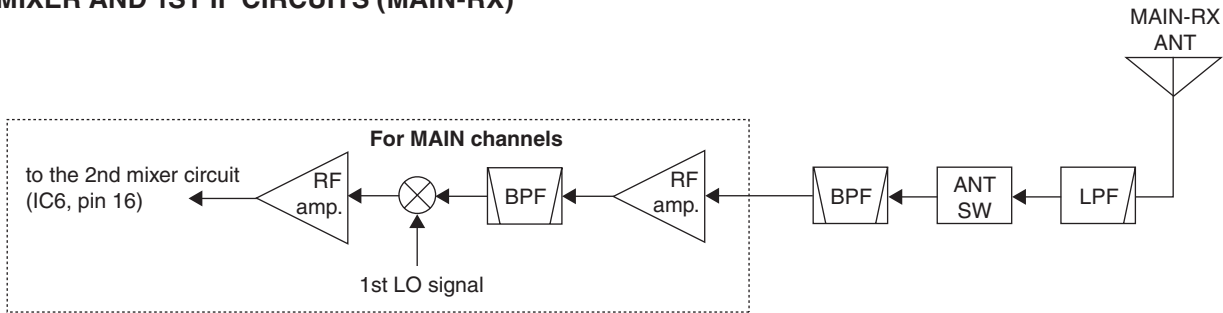
### • 1ST IF AMP AND FILTER (MAIN-RX)

The filtered RX signals are mixed with the 1st LO signals to produce the 21.7 MHz 1st IF signal. The 1st IF signal is amplified by 1st IF AMP (Q8, 9), and filtered by the crystal filters (FI4, 5) to remove unwanted out-of-band signals. The filtered 1st IF signal is amplified by another 1st IF AMP (Q10), then applied to the IF IC (IC6).

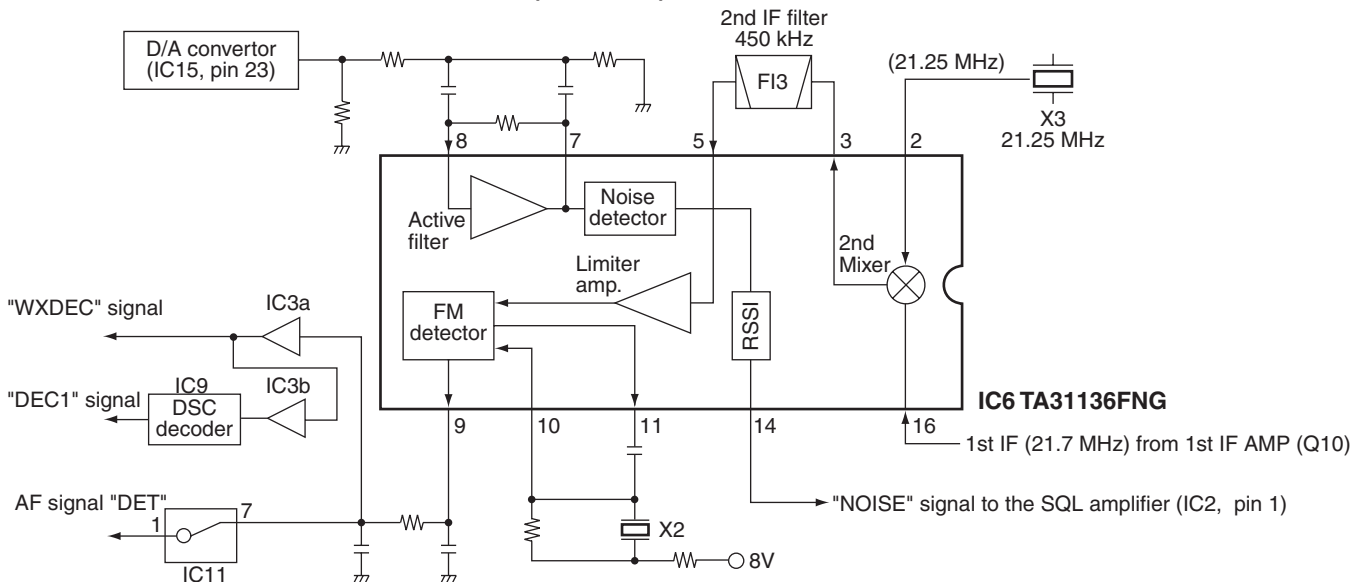
### • 2ND IF AND DEMODULATOR CIRCUITS (MAIN-RX)

The applied 1st IF signal is mixed with the 21.25 MHz 2nd LO signal which is generated by the internal oscillator and X3, to produce the 450 kHz 2nd IF signal. The 2nd IF signal is output from pin 3, and passed through the external ceramic filter (FI4, 5) to remove unwanted signals. The filtered 2nd IF signal is reapplied to the IF IC from pin 5, then FM-demodulated by the quadrature detector with the discriminator (X2).

### • 1ST MIXER AND 1ST IF CIRCUITS (MAIN-RX)



### • 2ND IF AND DEMODULATOR CIRCUITS (MAIN-RX)



The demodulated AF signals are output from pin 9, and applied to the AF circuits on the AF UNIT.

### • AF CIRCUIT (MAIN-RX)

The demodulated AF signals "DET" from the MAIN UNIT are passed through the de-emphasis circuit to obtain -6 dB/oct of audio frequency response. The AF signals are then passed through the BPF (Q11, 12, R32-40, C42-46), AF mute SW (Q13) and the [VOL] control (R1), before being applied to the AF power AMP (IC3). AF signals are power-amplified to obtain 5 W (max.) of audio output power.

The power-amplified AF signals are applied to the internal/external speaker via AF SWs (RL2 or RL3).

### • SQUELCH CIRCUIT (MAIN-RX)

A portion of the demodulated AF signals from the IF IC (IC6) are applied to the DAC (IC15) via C89 and adjusted its level, then applied to the noise AMP.

The noise AMP is composed by the internal OP AMP of IF IC (IC6) and external components (R164-166, C162, 163), and amplifies the noise components (around 30 kHz signals) only. The amplified noise components are converted into the DC voltage whose voltage is in proportion to the noise signal level, then output from pin 14 as the noise detect signal.

The noise detect signal is amplified by the DC AMP (IC2), and applied to the A/D port of the CPU (LOGIC; IC1) as the comparison voltage for the squelch open/close control.

**• RF AMP (CH70-RX)**

RX signals from the CH70-RX antenna are passed through the tuned BPF (D20, L32, C401, 403), and applied to the "gate-1" terminal of RF AMP (Q7) via C404. The amplified RX signals are passed through the 3-staged fixed BPF (L33–35, C415–420, 422, 423) to remove unwanted out-of-band signals. The filtered RX signals are applied to the 1st mixer (D11, L18, 19).

The 2nd IF signal is output from pin 3, and passed through the external ceramic filter (F13) to remove unwanted signals. The filtered 2nd IF signal is reapplied to the IF IC from pin 5, then FM-demodulated by the quadrature detector with the discriminator (X1).

The demodulated AF signals are output from pin 9 to the AF circuits.

**• 1ST IF AMP AND FILTER (CH70-RX)**

The filtered RX signals are mixed with the 1st LO signal to produce the 30.15 MHz 1st IF signal. The 1st IF signal is amplified by 1st IF AMP (Q3, 4), and filtered by the crystal filters (F11A, 1B) to remove unwanted out-of-band signals, and amplified again by another 1st IF AMP (Q2), then applied to the IF IC (IC1).

**• DSC DECODER (CH70-RX)**

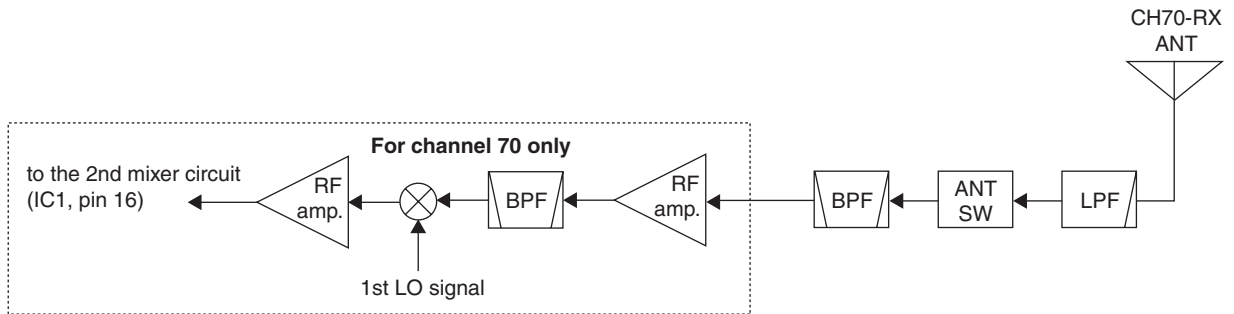
Demodulated AF signals from the IF IC (IC1) are passed through the BPF (IC3a, IC3b, R72–81, C103–109) to remove unwanted signals. The filtered AF signals are applied to the FSK demodulator (IC4) to be decoded into the serial data (DSC code), then applied to the CPU (LOGIC; IC1). The CPU interpret whether the applied DSC code is expected one or not, then the CPU controls DSC function as programmed.

**• 2ND IF AND DEMODULATOR CIRCUITS (CH70-RX)**

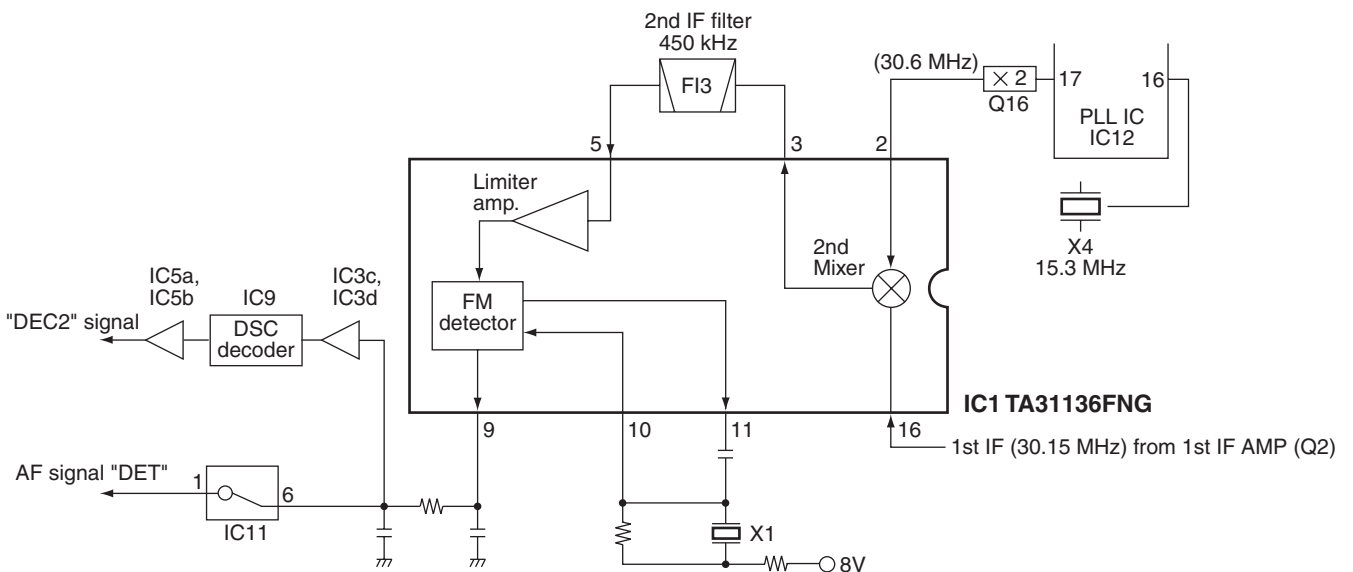
The 1st IF signal is mixed with the 30.6 MHz 2nd LO signal to produce the 450 kHz 2nd IF signal.

The PLL reference frequency signal which is generated by IC12 and X4 is doubled by Q16 and used as the 2nd LO signal.

**• 1ST MIXER AND 1ST IF CIRCUITS (CH70-RX)**



**• 2ND IF AND DEMODULATOR CIRCUITS (CH70-RX)**





## 4-2 TRANSMITTER CIRCUITS

### • TX AF CIRCUIT (AF UNIT)

The audio signals from the connected microphone are passed through the MIC SW (IC7) and pre-emphasis circuit (R73, C77) to obtain +6 dB/oct of audio frequency response, then amplified by the MIC AMP (IC9b). The amplified MIC signals are amplified and amplitude-limited by (IC8a), and passed through the splatter filter (IC8b) to remove unwanted 3 kHz and higher signals, then applied to the modulation circuit on the MAIN UNIT as the modulation signals "MOD."

### • MODULATION CIRCUIT (MAIN UNIT)

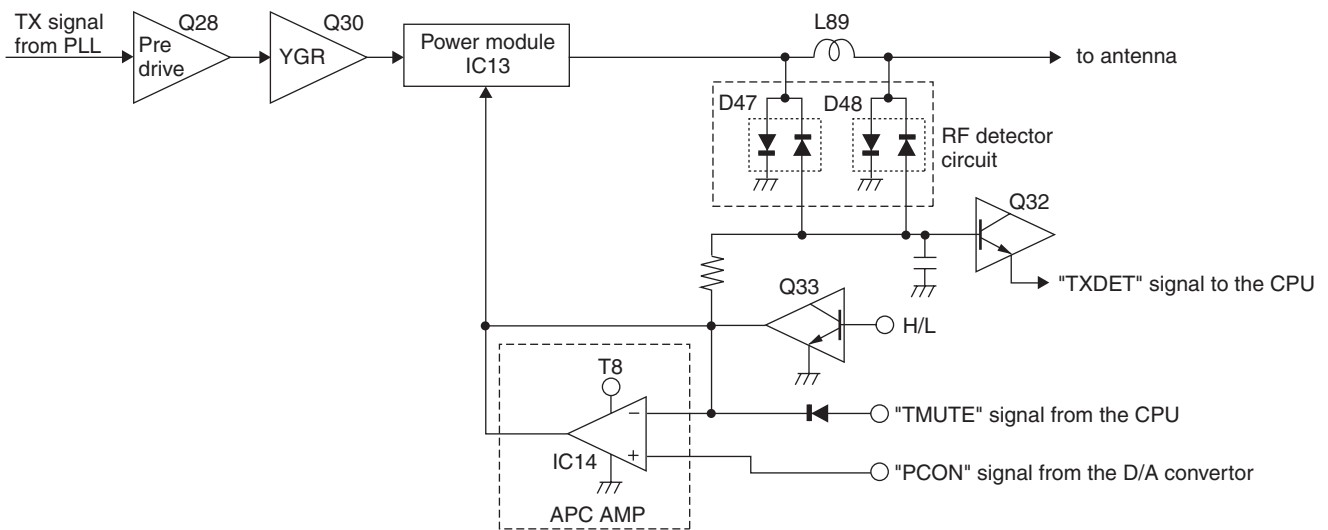
The modulation signals from the AF UNIT are passed through the DAC (IC15) for deviation adjustment. The level-adjusted modulation signals are applied to the D37 of TX VCO for FM modulation.

### • DRIVER AMP

The output signal of TX VCO is buffer-amplified by Q19 and Q27, and passed through the LO SW (D43), then amplified by pre-driver (Q28) and YGR (Q30) amplifiers to obtain input level of the RF power module (IC13).

Q37 controls the APC AMP (IC14) with "TMUTE" signal to terminate transmission, to prevent unexpected emission; when the PLL is unlocked, etc.

### • APC CIRCUITS



### • TX POWER AMP

IC13 is an RF power module and provides 25 W of RF output power with 50 mW input, and the output power is controlled by the voltage applied to pin 2.

### • APC (Automatic Power Controller)

The TX power voltages are detected at the both input and output terminals of L89, and are rectified by D47 and D48 respectively. The rectified voltages are combined, and then applied to the APC AMP (IC14) as the TX power reference. The APC compares the rectified voltage and the TX power setting voltage. The resulting voltage controls the gain of IC13 to keep the TX power stable.

### • ANT SW AND HARMONIC FILTER (LPF)

The TX signal which power-amplified by TX power AMP (IC13) is passed through the ANT SW (D46) and LPF before being emitted from the antenna. The LPF (L1, 2, 89, C1, 3, 5, 361, 364) is a harmonic filter and removes the harmonic components in the TX signal effectively.

## 4-3 FREQUENCY SYNTHESIZER CIRCUITS

### • VCO

This transceiver has two VCOs; one is the TX/RX VCO generates both of TX signal and 1st LO signals (MAIN-RX), and another is CH70-RX VCO generates 1st LO signal for CH70-RX. Switching D41 by Q21 and Q22, the oscillating frequency of TX/MAIN-RX VCO is shifted.

### MAIN-RX VCO

The output signal of TX/RX VCO is buffer-amplified by Q19 and Q27. In transmitting, the VCO output signal is applied to the TX amplifiers via LO SW (D43), and in receiving, applied to the 1st mixer (for MAIN-RX; D21). A portion of the VCO output signal which is buffer-amplified by Q19 is also applied to the PLL IC (IC12) via buffer (Q15).

### CH70-RX VCO

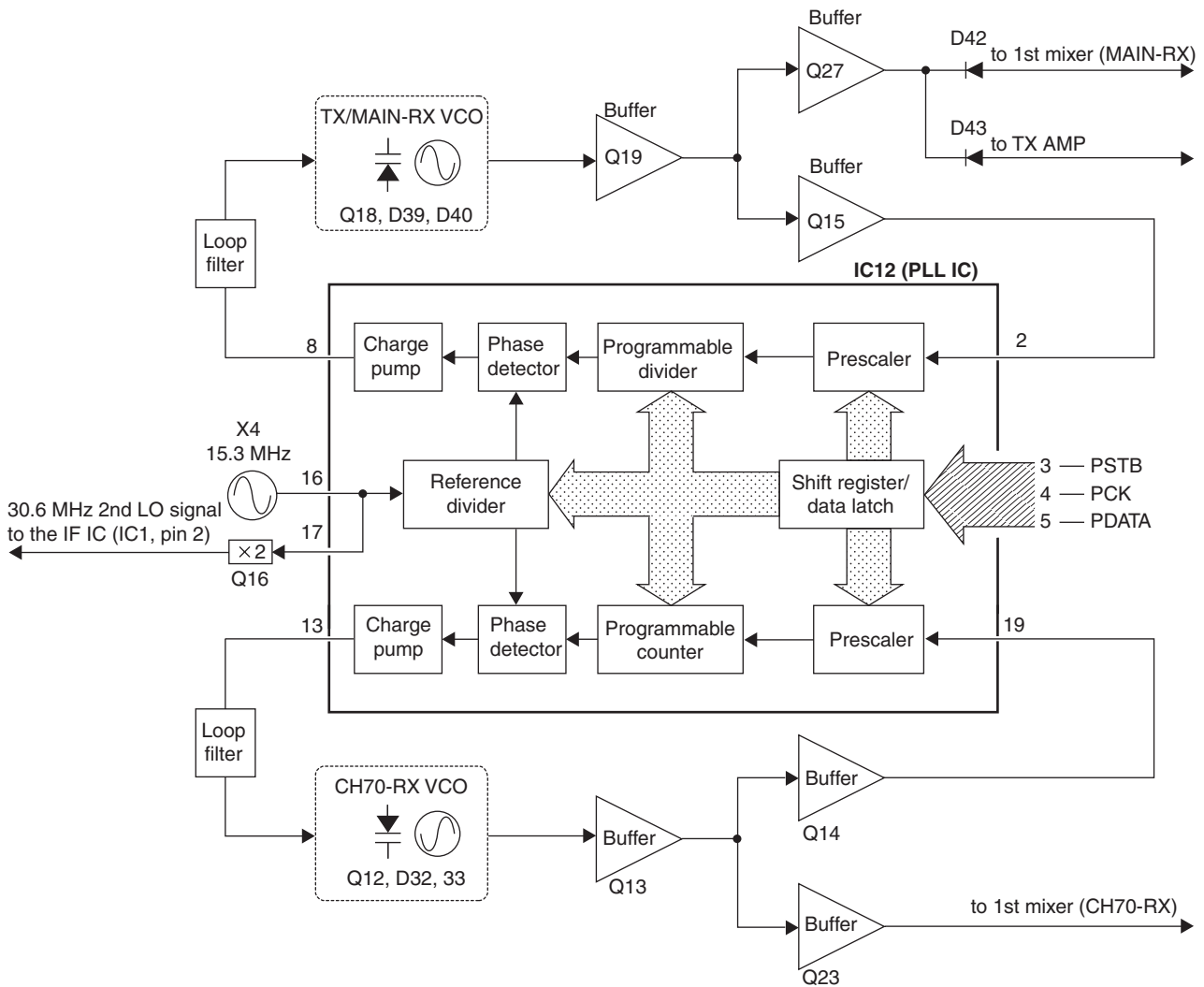
The output signal of CH70-RX VCO is buffered by Q13 and Q23, then applied to the 1st mixer (for CH70-RX; D11) as the 1st LO signal. A portion of the CH70-RX VCO output which are amplified by Q13 are applied to the PLL IC (IC12) via the buffer (Q14).

### • PLL

IC12 is a dual PLL IC which contains prescaler, programmable counter, phase comparator and charge pump, and uses the 15.3 MHz signal generated by internal oscillator with X4 as reference frequency.

The loop filter for MAIN-RX VCO is composed by R217–219, C247, 249, 278, and for CH70-RX VCO is R182, 213, 214, C248, 225. These loop filter is designed to provide short lock-up time.

### • FREQUENCY SYNTHESIZER CIRCUITS



## 4-4 PORT ALLOCATIONS

### • CPU (LOGIC: IC1)

LINE NAME	DESCRIPTION	I/O
LRESETB	LCD driver reset signal.	OUT
LRS	LCD driver RS.	OUT
LWR	LCD driver WR.	OUT
LCS1B	LCD driver CS1B.	OUT
LDB0-LDB7	LCD driver data.	OUT
KDTRS	[Distress] key.	IN
KCLR	[CLR] key.	IN
KF	[F] key.	IN
KCE	[CE] key.	IN
KENT	[ENT] key.	IN
KCH16	[CH16] key.	IN
KCH	[CH] key.	IN
KHL	[H/L] key.	IN
KMENU	[MENU] key.	IN
K1-K0	Keypad.	IN
DIAL1-DIAL4	[DIAL] (Rotary encoder).	IN
UNLK	PLL unlock signal. L=Unlocked.	IN
PDATA	PLL data.	OUT
PCK	PLL clock.	OUT
PSTB	PLL strobe.	OUT
DATANM	NMEA signal.	IN
DATAMN	NMEA signal.	OUT
DATAMC	Clone data.	IN
EDATA	EEPROM data.	I/O
ECK	EEPROM clock.	OUT
EXTSTB	Expander strobe.	OUT
EXTOE	Expander load enable.	OUT
DASTB	DAC strobe.	OUT
MTUNE	BPF(MAIN-RX) tuning voltage. (0 V in transmitting)	OUT
DIM	Backlit brightness control.	OUT
BEEP	Beep sound (square wave).	OUT
DSC	DSC signals for encoding.	OUT
WXDEC	Decoded WX alert signal.	IN
SQLV	[SQL] dial.	IN
LBAT	Battery voltage (divided voltage).	IN
TXDET	Transmission detect.	IN
TEMP	Internal temperature.	IN
KEYM	External microphone's key. 2.02 V=[UP] key is pushed. 3.00 V=[DOWN] key is pushed. 3.84 V=[H/L] key is pushed.	IN
SQL	Noise signal level from IF IC.	IN
PTT	External [PTT] key (HM-126).	IN
HANG	Hook up detect (HM-126).	IN
HSHANG	Hook up detect (handset).	IN
SEND	T8 line (TX power line) control signal. H=During transmitting.	OUT
MIC/DSC	Modulation source select. H=DSC signal. L=MIC signal.	OUT
RCV	R8 line (RX power line) control. H=During receiving.	OUT
INTSP	Speaker select. H=Internal speaker.	OUT
HSSP	Handset through control. H=Handset through.	OUT
PRABSY	Printer control. ("busy")	IN
PRAERR	Printer control. ("error")	IN
PRACK	Printer control. ("clock")	IN
PRSTB	Printer control. ("strobe")	OUT
PRD0-PRD7	Printer control. ("data")	OUT

### • EXPANDER (LOGIC: IC13)

LINE NAME	DESCRIPTION	I/O
TMUTE	TX mute control. H=TX mute.	OUT
H/L	TX power select. H=25 W (High power).	OUT
RMUTE	AF line disconnection (AF mute) control. H=Line disconnected (AF mute).	OUT

### • DAC (MAIN: IC15)

LINE NAME	DESCRIPTION	I/O
DAFREQ	BPF tuning voltage.	OUT
DAMIC	Level-adjusted MIC signals.	OUT
DADEV	Level-adjusted modulation signals.	OUT
DAPCON	TX power setting voltage.	OUT
DASQLM	Level-adjusted AF signal for squelch detect.	OUT

## 4-5 VOLTAGE LINES

LINE NAME	DESCRIPTION
HV	Voltage from connected power supply.
VCC	Same voltage as HV line. Supplied to the AF power AMP, TX power AMP, etc.
8V	Common 8 V. Supplied to the VCOs (via the ripple filter), IF ICs, receive circuits (CH70-RX), etc.
L5V	Logic 5 V. Supplied to the CPU, EEPROM, etc.
T8	Transmit 8 V. Supplied to the APC circuit, pre-drive and drive AMPs.
R8	Receive 8 V. Supplied to the RF AMP, mixer and IF AMP (MAIN-RX), etc.

# SECTION 5 ADJUSTMENT PROCEDURE

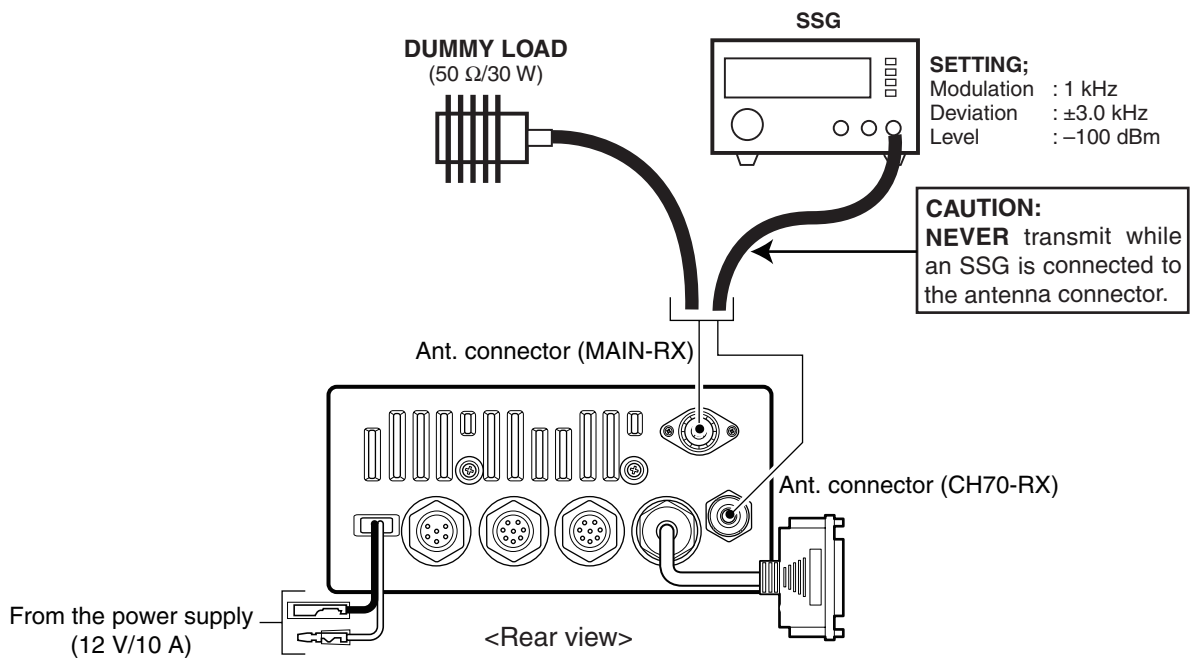
## 5-1 PREPARATION

### ■ REQUIRED EQUIPMENTS

EQUIPMENT	SPECIFICATION	EQUIPMENT	SPECIFICATION
Power supply	Output voltage : 12 V DC Current capacity : More than 10 A	Standard signal generator (SSG)	Frequency range : 0.1–300 MHz Output level : 0.1 mV to 32 mV (–127 to –17 dBm)
Dummy load	Impedance : 50 Ω Capacity : More than 30 W	Digital voltmeter	Measurement range : 0.1–10 V

### ■ CONNECTION

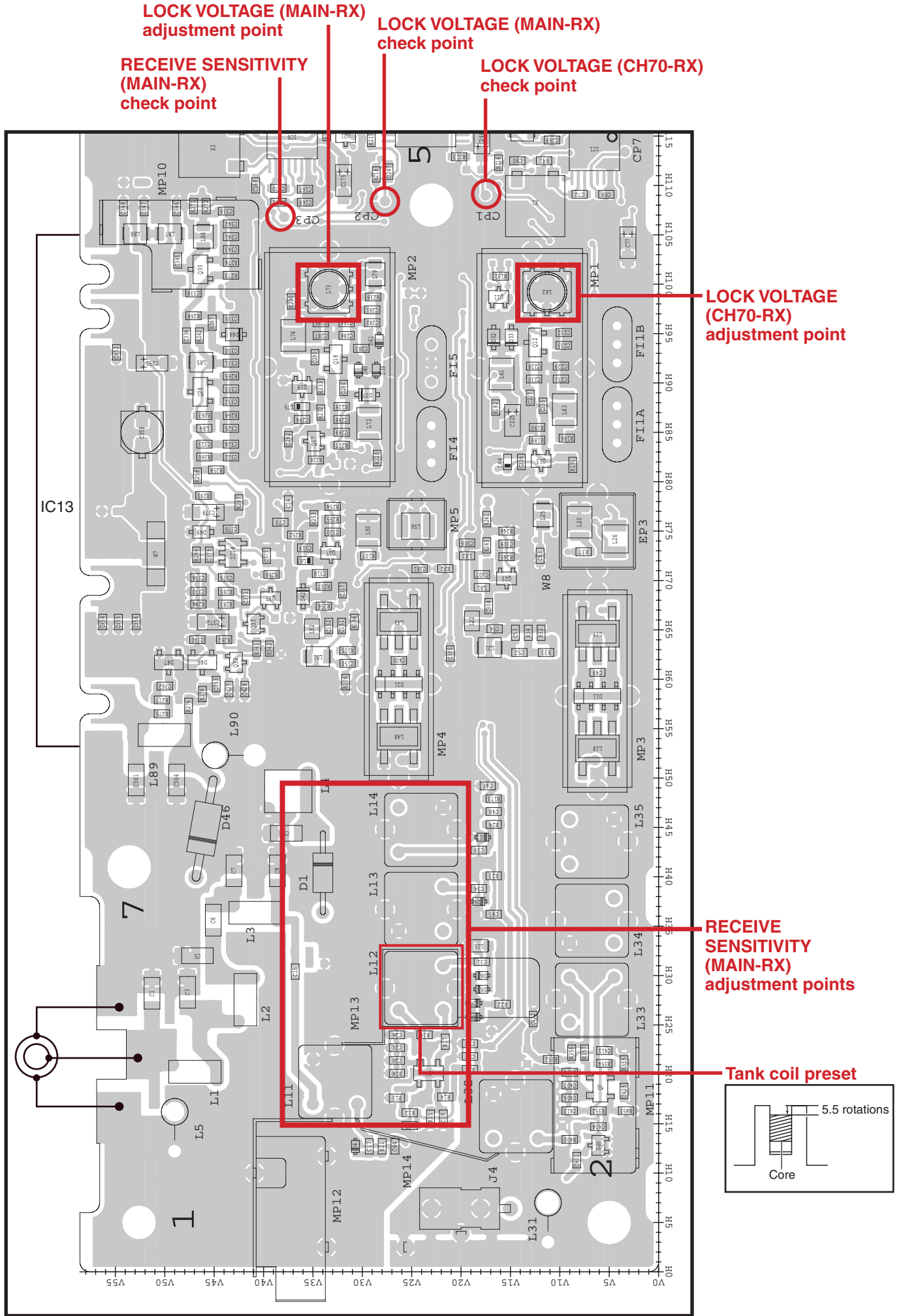
**NOTE:** Before starting adjustment, remove the CHASSIS case to expose the top side of MAIN UNIT. See “DIS-ASSEMBLY INSTRUCTION” for removal.



**5-2 ADJUSTMENT** (see the next page for the location)

ADJUSTMENT	ADJUSTMENT CONDITION	OPERATION	ADJUSTMENT ITEM/POINT	VALUE
<b>LOCK VOLTAGE (MAIN-RX)</b> -adjustment-	1 • Frequency : 163.425 MHz • Receiving	• Connect a Digital voltmeter to the <b>CP2</b> on the MAIN UNIT.	L73 (MAIN UNIT)	3.0–3.2 V
-verification-	2 • Frequency : 156.000 MHz • Transmitting	1) Connect a Dummy Load to the antenna connector (MAIN-RX). 2) Connect a Digital voltmeter to the <b>CP2</b> on the MAIN UNIT.	(Verify)	1.4–2.3 V
<b>(CH70-RX)</b>	3 • Frequency : 156.525 MHz • Receiving	• Connect a Digital voltmeter to the <b>CP1</b> on the MAIN UNIT.	L62 (MAIN UNIT)	2.0–2.2 V
<b>SENSITIVITY (MAIN-RX)</b> -preparation	1 –	1) Connect an SSG to the antenna connector (MAIN-RX) and set as; • Freq. : 159.050 MHz • Mod. freq. : 1 kHz • Dev. : ±3.0 kHz • Level : –100 dBm • CCITT : ON 2) Set L12 to the preset point as; • 5.5 rotations from the top of the tank coil. (see the next page)	–	–
-adjustment-	2 • Frequency : 159.050 MHz • Receiving	• Connect a Digital voltmeter to the <b>CP3</b> on the MAIN UNIT.	L11→L14→L13→ L14→L13→L12 (in sequence)	Max. voltage

• LOCATION





# SECTION 6

# PARTS LIST

## [FRONT UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
W1	8900016700	CBL OPC-1775 <JU>		
W2	7120000470	JMP ERDS2T0		
W3	7120000470	JMP ERDS2T0		

## [LOGIC UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
IC1	1140014662	S.IC HD64F2633RF28V	B	80/53
IC2	1110005771	S.IC S-80942CNMC-G9CT2G	B	88.3/36.4
IC3	1130011551	S.IC RX-4581NB-F	B	88.7/23.5
IC4	1140008650	S.IC HN58X2464TI	B	104.6/61
IC5	1180002380	S.IC S-817B33AMC-CWW-T2G	B	51.9/61.8
IC6	1130013200	S.IC TC74LCXR164245 (E,F)	B	58.5/67
IC8	1180003320	S.REG NJM2830U1-05-TE1-#ZZZB	B	34.7/44.7
IC9	1130012940	S.IC TC74ACT245FT (EL)	B	56.5/56.7
IC10	1130012950	S.IC TC74ACT04FT (EL)	B	41/63.3
IC11	1130007111	S.IC TC7W04FU (TE12L,F)	B	110.7/43
IC12	1130011760	S.IC CD4094BPWR	B	46.5/51
IC13	1130011760	S.IC CD4094BPWR	B	46.5/56.6
IC14	1130007021	S.IC TC7S66FU (TE85L,F)	B	40.7/51.5
Q1	1510001090	S.TR KTA2015Y-RTK/P	B	97.9/22.1
Q2	1530003900	S.TR KTC4075 BL-RTK/P	B	95/19.7
Q4	1510000771	S.TR 2SA1586-GR (TE85L,F)	B	113.7/42
Q5	1530002691	S.TR 2SC4116-GR (TE85R,F)	B	107.2/37.5
Q15	1530003900	S.TR KTC4075 BL-RTK/P	B	113.9/59
Q16	1530003900	S.TR KTC4075 BL-RTK/P	B	113.9/61.6
Q17	1520000840	S.TR KTA1664Y-RTF/P	B	118.3/60.2
D1	1750001320	S.DIO KDS4148U RTK/P	B	102.9/24
D3	1730002360	S.ZEN MA8062-M (TX)	B	22.9/35.9
D4	1730002360	S.ZEN MA8062-M (TX)	B	26.4/35.9
D5	1730002360	S.ZEN MA8062-M (TX)	B	29.7/37.7
D6	1750001320	S.DIO KDS4148U RTK/P	B	80.3/33.5
D7	1790001670	S.DIO RB706F-40T106	B	39.9/70
D8	1790001670	S.DIO RB706F-40T106	B	39.9/72.5
D9	1790001670	S.DIO RB706F-40T106	B	39.1/75
D10	1750000550	S.DIO 1SS355 TE-17	B	107.2/39.7
D11	1790001670	S.DIO RB706F-40T106	B	65.8/38.8
X1	6050011090	S.XTL CR-691 (9.8304 MHz)	B	75.3/39.4
L1	6200005011	S.COL NLV25T-100J	B	57.2/50.6
L2	6200005011	S.COL NLV25T-100J	B	40/58.1
R1	7030003620	S.RES ERJ3GEYJ 333 V (33 k)	B	95/21.9
R2	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	93/19.7
R3	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)	B	97.9/18.8
R4	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	104.7/66.5
R5	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	103.4/66.5
R7	7030010440	S.RES ERJ1TYJ 680U (68)	B	20.1/41
R8	7030003570	S.RES ERJ3GEYJ 123 V (12 k)	B	86.7/40.1
R9	7030003620	S.RES ERJ3GEYJ 333 V (33 k)	B	85.1/37
R10	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	85.9/35
R11	7030003860	S.RES ERJ3GE JPW V	B	88.4/39.4
R12	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	66.3/68.3
R13	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	66.3/67
R14	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	66.3/65.7
R15	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	65.8/63.8
R16	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	65.8/62.5
R17	7030003500	S.RES ERJ3GEYJ 332 V (3.3 k)	B	84/41.9
R18	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	96.8/40.7
R19	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	93.7/27.6
R20	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	93.7/26.3
R21	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	79.7/74.4
R22	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	79.1/77.2
R23	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	104.5/68.6
R24	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)	B	83.2/68.2
R25	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)	B	99.6/40.7
R26	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)	B	73.6/74.3
R27	7030003570	S.RES ERJ3GEYJ 123 V (12 k)	B	71.1/64.2
R28	7030003570	S.RES ERJ3GEYJ 123 V (12 k)	B	69.8/64.2
R29	7030003570	S.RES ERJ3GEYJ 123 V (12 k)	B	68.5/64.2
R31	7030003200	S.RES ERJ3GEYJ 100 V (10)	B	104/40.6
R32	7030003620	S.RES ERJ3GEYJ 333 V (33 k)	B	108.3/42.1
R33	7030003540	S.RES ERJ3GEYJ 682 V (6.8 k)	B	113.7/44.3
R34	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	110.9/39.5
R36	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	111/46.6
R37	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	109.3/76.1
R38	7030003590	S.RES ERJ3GEYJ 183 V (18 k)	B	110.1/38.2
R39	7030003330	S.RES ERJ3GEYJ 121 V (120)	B	93.6/88.2
R40	7030003330	S.RES ERJ3GEYJ 121 V (120)	B	57.7/88.2
R41	7030003630	S.RES ERJ3GEYJ 393 V (39 k)	B	110.7/58.3
R42	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	110.7/59.6
R43	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	110.7/62.2
R44	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	114.3/63.5
R45	7030003500	S.RES ERJ3GEYJ 332 V (3.3 k)	B	110.7/63.5
R46	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	128/51.9

## [LOGIC UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R47	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	103.8/13
R48	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	107.1/49.6
R49	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	34.2/22.3
R50	7030003330	S.RES ERJ3GEYJ 121 V (120)	B	30.8/32.9
R51	7030003330	S.RES ERJ3GEYJ 121 V (120)	B	63.3/36.6
R52	7030005631	S.RES ERA3YKD 154V (150 k)	B	67.1/34.2
R53	7030005681	S.RES ERA3YKD 473V (47 k)	B	65.8/35.8
R55	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	35.6/22.3
R56	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	38.2/22.3
R57	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	40.8/22.3
R58	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	43.4/22.3
R61	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	78.4/71.6
R62	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	33.6/34.6
R63	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	30.8/34.6
R64	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	22.6/33.5
R65	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	24.6/33.5
R66	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	28.6/33.5
R67	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	73.6/75.6
R68	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	75.5/77.6
R70	7030003800	S.RES ERJ3GEYJ 105 V (1 M)	B	62.7/49.6
R71	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	58.9/46.8
R72	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	60.2/46.8
R73	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	64.9/44
R74	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	68.2/42.9
R75	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	66.6/50.1
R76	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	64.9/49.6
R77	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	62.8/46.8
R78	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	63/52.3
R79	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	63.2/53.6
R80	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	51.8/49.5
R83	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	82/71.7
R84	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	36.8/55.6
R85	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	36.8/57
R86	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	36.8/58.4
R87	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	36.8/59.8
R88	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	36.8/61.2
R89	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	36.8/62.6
R90	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	36.8/64
R91	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	36.8/65.4
R92	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	35.9/69.8
R93	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	36/71.2
R94	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	36/74
R95	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	39.9/68.1
R96	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	36/72.6
R97	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	36/75.4
R98	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	54.8/51.7
R99	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	56.8/52.5
R100	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	40.9/55.4
C2	4030011600	S.CER C1608 JB 1E 104K-T	B	106.1/66.5
C3	4030011600	S.CER C1608 JB 1E 104K-T	B	99.7/24
C4	4030008890	S.CER C1608 JB 1H 273K-T	B	88.3/33.9
C5	4510008560	S.ELE EEE1HAR47SR	B	88.1/30.8
C6	4030006900	S.CER C1608 JB 1H 103K-T	B	84.3/35
C7	4030011600	S.CER C1608 JB 1E 104K-T	B	78/65.3
C8	4030011600	S.CER C1608 JB 1E 104K-T	B	74.9/63.5
C9	4510008970	S.ELE EEEHB1C100R	B	70.8/68.6
C11	4030011600	S.CER C1608 JB 1E 104K-T	B	94.9/47.8
C12	4030011600	S.CER C1608 JB 1E 104K-T	B	93.6/47.8
C15	4030006850	S.CER C1608 JB 1H 471K-T	B	84/39.1
C16	4030011600	S.CER C1608 JB 1E 104K-T	B	86.1/42.6
C17	4030011600	S.CER C1608 JB 1E 104K-T	B	82.4/41.9
C18	4030007060	S.CER C1608 CH 1H 270J-T	B	77.4/42.7
C19	4030007060	S.CER C1608 CH 1H 270J-T	B	80.5/42.7
C20	4030011600	S.CER C1608 JB 1E 104K-T	B	74.6/42.7
C21	4030006900	S.CER C1608 JB 1H 103K-T	B	71.8/42.7
C25	4030011600	S.CER C1608 JB 1E 104K-T	B	110.7/60.9
C26	4510008970	S.ELE EEEHB1C100R	B	118.8/65.2
C27	4030011600	S.CER C1608 JB 1E 104K-T	B	119/68.3
C31	4030006900	S.CER C1608 JB 1H 103K-T	B	112.5/47.9
C34	4030006900	S.CER C1608 JB 1H 103K-T	B	63.6/34.2
C37	4030006900	S.CER C1608 JB 1H 103K-T	B	49.9/21.6
C38	4030011600	S.CER C1608 JB 1E 104K-T	B	47.7/22.3
C39	4030006860	S.CER C1608 JB 1H 102K-T	B	44.7/22.3
C40	4030006860	S.CER C1608 JB 1H 102K-T	B	42.1/22.3
C41	4030006860	S.CER C1608 JB 1H 102K-T	B	39.5/22.3
C42	4030006860	S.CER C1608 JB 1H 102K-T	B	36.9/22.3
C46	4030006900	S.CER C1608 JB 1H 103K-T	B	26.1/37.5
C47	4030006850	S.CER C1608 JB 1H 471K-T	B	23.2/37.5
C48	4030006900	S.CER C1608 JB 1H 103K-T	B	29.6/36
C49	4030007090	S.CER C1608 CH 1H 470J-T	B	26.6/22.5
C50	4030007090	S.CER C1608 CH 1H 470J-T	B	22/22.9
C51	4030007130	S.CER C1608 CH 1H 101J-T	B	15.1/45.1
C52	4030007130	S.CER C1608 CH 1H 101J-T	B	12.9/64.4
C55	4030011600	S.CER C1608 JB 1E 104K-T	B	52.8/65.8
C56	4510008970	S.ELE EEEHB1C100R	B	48.2/65.2
C57	4030011600	S.CER C1608 JB 1E 104K-T	B	66.3/71
C58	4030006900	S.CER C1608 JB 1H 103K-T	B	66.3/69.7
C59	4030006900	S.CER C1608 JB 1H 103K-T	B	52.4/70.7
C60	4030006900	S.CER C1608 JB 1H 103K-T	B	65.8/61.2
C61	4550007370	S.TAN F931V225MBA BMA	B	46.4/69.3
C62	4550007370	S.TAN F931V225MBA BMA	B	36/84.6
C63	4550007370	S.TAN F931V225MBA BMA	B	36/81.3
C64	4550007370	S.TAN F931V225MBA BMA	B	46.4/72.7
C65	4550007650	S.TAN F931V105MAA BMA	B	43.3/85.2
C66	4550007650	S.TAN F931V105MAA BMA	B	43.3/83.1
C67	4550007650	S.TAN F931V105MAA BMA	B	43.3/81

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

[LOGIC UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C68	4550007650	S.TAN F931V105MAABMA	B	43.3/78.9
C69	4550007650	S.TAN F931V105MAABMA	B	43.3/76.8
C71	4030006860	S.CER C1608 JB 1H 102K-T	B	36.1/41
C72	4510008970	S.ELE EEEHB1C100R	B	34.5/37.9
C73	4030006900	S.CER C1608 JB 1H 103K-T	B	33.3/41
C74	4510008970	S.ELE EEEHB1C100R	B	29.6/43.4
C75	4030006860	S.CER C1608 JB 1H 102K-T	B	65.4/46.8
C76	4030006860	S.CER C1608 JB 1H 102K-T	B	64.1/46.8
C77	4030006860	S.CER C1608 JB 1H 102K-T	B	61.5/46.8
C78	4030006860	S.CER C1608 JB 1H 102K-T	B	66.6/53.6
C79	4030006860	S.CER C1608 JB 1H 102K-T	B	65.3/54
C80	4030006860	S.CER C1608 JB 1H 102K-T	B	68.2/41.6
C81	4030006860	S.CER C1608 JB 1H 102K-T	B	62.8/44.4
C82	4030006860	S.CER C1608 JB 1H 102K-T	B	60.7/50
C92	4030006900	S.CER C1608 JB 1H 103K-T	B	53.1/49.5
C93	4030006900	S.CER C1608 JB 1H 103K-T	B	51.5/4.7
C103	4030007090	S.CER C1608 CH 1H 470J-T	B	92.8/84.3
C104	4030007090	S.CER C1608 CH 1H 470J-T	B	93.6/74.5
C106	4030007090	S.CER C1608 CH 1H 470J-T	B	92.3/74.5
C108	4030007090	S.CER C1608 CH 1H 470J-T	B	91.7/74.5
C109	4030007090	S.CER C1608 CH 1H 470J-T	B	90.5/84.3
C112	4030007090	S.CER C1608 CH 1H 470J-T	B	89.2/74.5
C113	4030007090	S.CER C1608 CH 1H 470J-T	B	87.9/84.3
C114	4030007090	S.CER C1608 CH 1H 470J-T	B	87.9/74.5
C115	4030007090	S.CER C1608 CH 1H 470J-T	B	86.6/84.3
C117	4030006860	S.CER C1608 JB 1H 102K-T	B	85.3/84.3
C118	4030006860	S.CER C1608 JB 1H 102K-T	B	86.2/74.5
C120	4030007090	S.CER C1608 CH 1H 470J-T	B	84.9/74.5
C121	4030007090	S.CER C1608 CH 1H 470J-T	B	83.6/84.3
C122	4030007090	S.CER C1608 CH 1H 470J-T	B	83.6/74.5
C123	4030007090	S.CER C1608 CH 1H 470J-T	B	82.3/84.3
C124	4030006860	S.CER C1608 JB 1H 102K-T	B	82.3/74.5
C126	4030006860	S.CER C1608 JB 1H 102K-T	B	81.7/4.5
C131	4030007090	S.CER C1608 CH 1H 470J-T	B	40.8/37.5
C132	4030007090	S.CER C1608 CH 1H 470J-T	B	42/46.7
C133	4030007090	S.CER C1608 CH 1H 470J-T	B	42.1/37.5
C137	4030007090	S.CER C1608 CH 1H 470J-T	B	44.1/37.5
C138	4030007090	S.CER C1608 CH 1H 470J-T	B	43.8/46.7
C139	4030007090	S.CER C1608 CH 1H 470J-T	B	45.4/37.5
C140	4030007090	S.CER C1608 CH 1H 470J-T	B	45.1/46.7
C141	4030007090	S.CER C1608 CH 1H 470J-T	B	46.7/37.5
C142	4030007090	S.CER C1608 CH 1H 470J-T	B	46.4/46.7
C143	4030007090	S.CER C1608 CH 1H 470J-T	B	48/37.5
C144	4030007090	S.CER C1608 CH 1H 470J-T	B	47.7/46.7
C145	4030007090	S.CER C1608 CH 1H 470J-T	B	49.3/37.5
C146	4030007090	S.CER C1608 CH 1H 470J-T	B	49/46.7
C147	4030007090	S.CER C1608 CH 1H 470J-T	B	50.6/37.5
C148	4030007090	S.CER C1608 CH 1H 470J-T	B	50.3/46.7
C150	4030007090	S.CER C1608 CH 1H 470J-T	B	51.6/46.7
C151	4030006860	S.CER C1608 JB 1H 102K-T	B	51.9/37.5
C152	4030007090	S.CER C1608 CH 1H 470J-T	B	53.1/46.7
C155	4030007090	S.CER C1608 CH 1H 470J-T	B	45/35.6
C156	4030007090	S.CER C1608 CH 1H 470J-T	B	54.9/46.7
C157	4030011600	S.CER C1608 JB 1E 104K-T	B	59.6/52
C158	4030011600	S.CER C1608 JB 1E 104K-T	B	38.9/55.4
C159	4030006860	S.CER C1608 JB 1H 102K-T	B	36/77
J1	6510023361	S.CNR 26FLT-SM2-TB (LF) (SN)	B	87.5/78.9
J2	6510023511	S.CNR 28FLT-SM2-TB (LF) (SN)	B	49/42
J3	6510023391	S.CNR 27FLZ-SM2-TB (LF) (SN)	B	58.6/80.4
J4	6510023261	S.CNR B6B-PH-SM4-TB (LF) (SN)	B	23.6/29.2
J6	6510021861	CNR BH-800.4GG <LTC>		
J7	6510019421	S.CNR B8B-ZR-SM4-TF (LF) (SN)	B	43.9/29.1
J8	6510021261	S.CNR B9B-ZR-SM4-TF (LF) (SN)	B	108/79.1
J9	6510021261	S.CNR B9B-ZR-SM4-TF (LF) (SN)	B	31.5/58
J10	6510025760	S.CNR B5B-ZR-SM4-TF (LF) (SN)	B	31.5/74
DS1	5030003010	LCD KMC12864-W-00-SPI <VKH>		
DS2	5040002660	S.LED FY1101F-TR (LED)	T	88.6/36.7
DS3	5040002660	S.LED FY1101F-TR (LED)	T	76.6/36.7
DS4	5040002660	S.LED FY1101F-TR (LED)	T	64.6/36.7
DS5	5040002660	S.LED FY1101F-TR (LED)	T	52.6/36.7
DS6	5040002660	S.LED FY1101F-TR (LED)	T	40.6/36.7
DS7	5040002660	S.LED FY1101F-TR (LED)	T	28.6/36.7
DS8	5040002310	S.LED SML-311YTT86	T	106.3/39.8
DS9	5040002310	S.LED SML-311YTT86	T	102.9/27
DS10	5040002310	S.LED SML-311YTT86	T	31.3/27
DS11	5040002310	S.LED SML-311YTT86	T	106.3/77.1
DS12	5040002310	S.LED SML-311YTT86	T	106.3/64.9
DS13	5040002310	S.LED SML-311YTT86	T	106.3/52.7
DS14	5040002310	S.LED SML-311YTT86	T	131.2/39.8
DS15	5040002310	S.LED SML-311YTT86	T	133.1/18.2
DS16	5040002310	S.LED SML-311YTT86	T	107/13.8
DS17	5040002310	S.LED SML-311YTT86	T	131.2/77.1
DS18	5040002310	S.LED SML-311YTT86	T	131.2/64.9
DS19	5040002310	S.LED SML-311YTT86	T	131.2/52.7
DS20	5040002660	S.LED FY1101F-TR (LED)	T	28.6/88.2
DS21	5040002660	S.LED FY1101F-TR (LED)	T	40.6/88.2
DS22	5040002660	S.LED FY1101F-TR (LED)	T	52.6/88.2
DS23	5040002660	S.LED FY1101F-TR (LED)	T	64.6/88.2
DS24	5040002660	S.LED FY1101F-TR (LED)	T	76.6/88.2
DS25	5040002660	S.LED FY1101F-TR (LED)	T	88.6/88.2
S1	2230000250	SW SPPH22014A		
BT1	3020000110	LTM CR2032		

[DIAL UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
S1	2250000470	ECR EVQ-V9C00116E		
W1	8900011721	CBL OPC-1187A <TJM>		

[VR UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R1	7210003080	VAR TP96N97-15F-10KA-2345		
W1	8900015960	CBL OPC-1186A <TJM>		

[SQL UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R1	7210002360	VAR TP96N97-15F-10KB-1301		

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

[MAIN UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
IC1	1110003491	S.IC TA31136FNG (D,EL)	T	113.7/6.5
IC2	1120002830	S.IC NJM2125F-TE1-#FZZB	T	147.9/9.3
IC3	1110003780	S.IC NJM2902V-TE1-#ZZZB	T	151.4/38.7
IC4	1110003650	S.IC NJM2211M-TE1-#ZZZB	B	149.7/31.6
IC5	1130011120	S.IC BU4584BFV-E2	T	151.8/22.9
IC6	1110003491	S.IC TA31136FNG (D,EL)	T	114.9/37.1
IC9	1110003650	S.IC NJM2211M-TE1-#ZZZB	B	149.7/44.6
IC11	1130005641	S.IC TCAW53F (TE12L,F)	B	153.1/16.3
IC12	1130007611	S.IC UPD3140GS-E1-A	T	117.4/23.6
IC13	1150002082	S.IC RA35H1516M-121	T	
IC14	1110002400	S.IC NJM2107F-TE1-#ZZZB	T	72.8/43.1
IC15	1190000350	S.IC M62363FP-650C	T	138.5/20.9
Q1	1580000701	S.FET 3SK292 (TE85R,F)	T	20.1/23.3
Q2	1530002601	S.TR 2SC4215-O (TE85R,F)	B	101.6/4.1
Q3	1560000990	S.FET PMBFJ310	B	71.4/3.3
Q4	1560000990	S.FET PMBFJ310	B	71.4/9.1
Q7	1580000701	S.FET 3SK292 (TE85R,F)	T	18.7/5.9
Q8	1560000990	S.FET PMBFJ310	B	72.1/28.4
Q9	1560000990	S.FET PMBFJ310	B	70.2/23.3
Q10	1530002601	S.TR 2SC4215-O (TE85R,F)	B	99.5/23.4
Q11	1530002851	S.TR 2SC4116-BL (TE85R,F)	T	98.7/16.2
Q12	1560000990	S.FET PMBFJ310	T	94.1/12.5
Q13	1530002601	S.TR 2SC4215-O (TE85R,F)	T	82.1/11.9
Q14	1530002601	S.TR 2SC4215-O (TE85R,F)	B	80.8/8
Q15	1530002601	S.TR 2SC4215-O (TE85R,F)	B	86.2/38.5
Q16	1530002851	S.TR 2SC4116-BL (TE85R,F)	T	124.7/14.3
Q17	1530002851	S.TR 2SC4116-BL (TE85R,F)	T	84.1/34.9
Q18	1560000990	S.FET PMBFJ310	T	92.4/32.7
Q19	1530002601	S.TR 2SC4215-O (TE85R,F)	T	89.6/36.1
Q21	1590003670	S.TR KRA304-RTK/P	T	115/31.7
Q22	1590003580	S.TR KRC404 RTK/P	T	117.8/32.1
Q23	1530003421	S.TR 2SC5110-O (TE85R,F)	T	70.2/15.4
Q27	1530003421	S.TR 2SC5110-O (TE85R,F)	T	72.8/33.2
Q28	1530002241	S.TR 2SC3775-3-TB-E	T	89.1/46.4
Q30	1530002241	S.TR 2SC3775-3-TB-E	T	101.5/46.4
Q32	1590003590	S.TR KRC414 RTK/P	T	61.7/42.8
Q33	1590003580	S.TR KRC404 RTK/P	T	65.6/41
Q35	1510001090	S.TR KTA2015Y-RTK/P	T	129.5/41.4
Q36	1590003580	S.TR KRC404 RTK/P	T	132.9/42.3
Q37	1590003590	S.TR KRC414 RTK/P	T	68.2/39.3
Q38	1590001170	S.TR XP1501-(TX).AB	T	132.9/10.8
Q39	1510001090	S.TR KTA2015Y-RTK/P	T	129.8/10.8
D1	1710001081	DIO L308CCB		
D4	1750001190	S.VCP KDV214E RTK/P	T	12.7/30.7
D5	1750001190	S.VCP KDV214E RTK/P	T	28.6/17.9
D6	1750001190	S.VCP KDV214E RTK/P	T	30/17.9
D7	1750001190	S.VCP KDV214E RTK/P	T	27.2/18.7
D8	1750001190	S.VCP KDV214E RTK/P	T	25.8/18.7
D9	1750001190	S.VCP KDV214E RTK/P	T	37.5/18.2
D10	1750001190	S.VCP KDV214E RTK/P	T	44/17.8
D11	1750000431	S.DIO HSB88WSTR-E	T	58.3/6.2
D12	1790001330	S.ZEN MA8036-L (TX)	B	113.7/7.4
D15	1790000980	S.DIO MA742 (TX)	B	97/1.6
D20	1790001211	S.DIO IS5375-TL-E	T	12.8/6.1
D21	1750000431	S.DIO HSB88WSTR-E	T	59.5/26.3
D22	1790001330	S.ZEN MA8036-L (TX)	B	122.8/34.8
D32	1720000261	S.VCP 1SV214 (TPH2,F)	T	94.6/16.7
D33	1720000261	S.VCP 1SV214 (TPH2,F)	T	94.6/14.9
D35	1720000661	S.VCP 1SV288 (TPH2,F)	T	129.2/18.5
D37	1720000261	S.VCP 1SV214 (TPH2,F)	T	88.8/29.5
D39	1720000811	S.VCP HVC358BTRF-E	T	91.3/28.6
D40	1720000811	S.VCP HVC358BTRF-E	T	91.3/30.4
D41	1790001621	S.DIO 1SV308 (TPL3,F)	T	94.3/28.3
D42	1790000620	S.DIO MA77 (TX)	T	68.4/36
D43	1790000620	S.DIO MA77 (TX)	B	71.8/37
D44	1750001320	S.DIO KDS4148U RTK/P	T	94.9/43
D46	1710001061	DIO L407CDB		
D47	1790000691	S.DIO HSM88ASRTR-E	T	61.7/49.6
D48	1790000691	S.DIO HSM88ASRTR-E	T	61.7/46.2
D49	1730002320	S.ZEN MA8051-M (TX)	T	74.9/46.3
F11	2030000580	MLH FL-404 (30.15 MHz)		
F13	2020001270	CER CFWLB450KE2A-B0		
F14	2030000350	MLH 21R15AB (FL-368)		
F15	2030000350	MLH 21R15AB (FL-368)		
F16	2020001840	CER ALFYM450F=K		
X1	6070000191	S.DCR CDBKB450KCA24-R0	T	108.1/12.5
X2	6070000191	S.DCR CDBKB450KCA24-R0	T	113.8/45.3
X3	6050011590	S.XTL CR-744 (21.25 MHz)	T	123.4/43.5
X4	6050011070	S.XTL CR-664A (15.300 MHz)	T	124.6/20.6
L1	6110001600	COL LA-243		
L3	6110001600	COL LA-243		
L4	6110001580	COL LA-238		
L5	6170000230	COL LW-25		
L11	6150003821	COL LS-440-LF		
L12	6150003821	COL LS-440-LF		
L13	6150003821	COL LS-440-LF		
L14	6150003821	COL LS-440-LF		
L15	6200007360	S.COL ELJND R47J	T	33/18.2
L18	6130002961	S.COL #617DB-1327=P3	T	53/6.2
L19	6130002961	S.COL #617DB-1327=P3	T	64.6/6.2
L20	6200001831	S.COL NLV32T-100J	T	75.9/8
L21	6200002160	S.COL ELJNC 82NK-F	T	63.2/17.1
L22	6200008090	S.COL LQW2BHN68NJ03L	T	65.9/18.9

[MAIN UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
L25	6200002861	S.COL NLV25T-4R7J	T	76.6/11.7
L26	6200010520	S.COL C2520C-R75-G-A (0.75U)	T	74.2/4.4
L31	6170000230	COL LW-25		
L32	6150003821	COL LS-440-LF		
L33	6150003821	COL LS-440-LF		
L34	6150003821	COL LS-440-LF		
L35	6150003821	COL LS-440-LF		
L48	6170002961	S.COL #617DB-1327=P3	T	54.2/26.3
L49	6130002961	S.COL #617DB-1327=P3	T	65.8/26.3
L50	6200001831	S.COL NLV32T-100J	T	75.1/29.4
L51	6200002160	S.COL ELJNC 82NK-F	T	62.3/34.5
L52	6200008090	S.COL LQW2BHN68NJ03L	T	65.1/35.1
L55	6200002861	S.COL NLV25T-4R7J	T	74.9/31.7
L56	6200010440	S.COL C2520C-1R2G-A (1.2U)	T	75.5/24.6
L57	6200003071	S.COL NLV32T-1R5J	B	78.1/21.8
L61	6200003101	S.COL NLV32T-3R9J	T	90.9/15.9
L62	6130002371	S.COL LB-258-LF	T	99.2/11.3
L63	6200002991	S.COL NLV32T-2R2J	T	87.3/9.5
L64	6200009560	S.COL MLG1608B R10J-T	T	82/15.3
L65	6200009560	S.COL MLG1608B R10J-T	B	77.8/9.7
L66	6200006991	S.COL ELJRE 56NGFA	B	85.3/6.8
L67	6200009560	S.COL MLG1608B R10J-T	B	88.2/38.6
L68	6200001981	S.COL NLV25T-1R0J	T	120.6/14.8
L69	6200001981	S.COL NLV25T-1R0J	T	115.5/13.8
L70	6200006991	S.COL ELJRE 56NGFA	B	98.1/39.3
L72	6200003321	S.COL NLV32T-3R3J	T	85.9/29.3
L73	6130002371	S.COL LB-258-LF	T	99.5/33.4
L74	6200003091	S.COL NLV32T-2R7J	T	94.8/37
L75	6200009560	S.COL MLG1608B R10J-T	T	87.6/36.1
L79	6200003281	S.COL NLV25T-2R2J	T	101/28.7
L81	6200011041	S.COL LL1608-FSLR18J	T	69.3/17.9
L83	6200009560	S.COL MLG1608B R10J-T	T	72/35.8
L84	6200005741	S.COL ELJRE 47NGFA	T	85.4/46
L85	6200002421	S.COL NLV25T-068J	T	92.1/46.3
L86	6200002431	S.COL NLV25T-082J	T	104.8/46.1
L87	6200002601	S.COL NLV25T-047J	T	105.1/49.5
L88	6200002601	S.COL NLV25T-047J	T	105.1/53
L89	6110001600	COL LA-243		
L90	6170000230	COL LW-25		
L91	6200008950	S.COL LQH32MN221K23L	B	128.7/19
L92	6200011041	S.COL LL1608-FSLR18J	T	72.5/19.4
R7	7030010250	S.RES ERJ1TYJ 0R00U	B	108/51.2
R8	7030010250	S.RES ERJ1TYJ 0R00U	B	104.1/44.6
R9	7030010250	S.RES ERJ1TYJ 0R00U	B	88.9/44.6
R10	7030010250	S.RES ERJ1TYJ 0R00U	B	84.5/51.2
R11	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	20.5/19.1
R12	7030003620	S.RES ERJ3GEYJ 333 V (33 k)	T	16.1/25.2
R13	7030003580	S.RES ERJ3GEYJ 153 V (15 k)	T	17.6/26.5
R14	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	17.7/21.2
R15	7030003620	S.RES ERJ3GEYJ 333 V (33 k)	T	15.6/23.1
R16	7030003420	S.RES ERJ3GEYJ 681 V (680)	T	24/23.7
R17	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	T	23.3/21.6
R18	7030003280	S.RES ERJ3GEYJ 470 V (47)	T	20.1/26.5
R21	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	12.7/28.8
R22	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	27.1/15.8
R23	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	40.1/16.7
R24	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	45.3/16.7
R32	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	64.7/11.9
R33	7030003200	S.RES ERJ3GEYJ 100 V (10)	T	62.7/11.4
R34	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	64.7/13.2
R37	7030003240	S.RES ERJ3GEYJ 220 V (22)	T	72.9/7.7
R38	7030003500	S.RES ERJ3GEYJ 332 V (3.3 k)	B	74.4/3.3
R39	7030003200	S.RES ERJ3GEYJ 100 V (10)	B	78.1/4.1
R40	7030003400	S.RES ERJ3GEYJ 471 V (470)	B	109.5/11.8
R41	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	112.5/11.6
R43	7030003390	S.RES ERJ3GEYJ 391 V (390)	B	112.5/13.6
R47	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	T	118.3/5.5
R59	7030003460	S.RES ERJ3GEYJ 152 V (1.5 k)	T	133.2/22.9
R61	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	145.1/5.7
R62	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	148.2/5.6
R63	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	151.6/9.7
R64	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	153.5/10.4
R65	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	154.8/11.7
R66	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	152.1/11.7
R67	7030003860	S.RES ERJ3GE JPW V	T	149.7/6.9
R71	7030003280	S.RES ERJ3GEYJ 470 V (47)	T	146/27.1
R72	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	146.8/29
R73	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	148.6/27.8
R74	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	145.7/31.1
R75	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	148.1/31.4
R76	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	150.5/31
R77	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	157/33.6
R78	7030003550	S.RES ERJ3GEYJ 822 V (8.2 k)	T	157.1/29.7
R79	7030003460	S.RES ERJ3GEYJ 152 V (1.5 k)	T	155/32.9
R80	7030003760	S.RES ERJ3GEYJ 474 V (470 k)	T	153.7/30
R81	7030003760	S.RES ERJ3GEYJ 474 V (470 k)	T	152/28.2
R83	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	T	157.8/31.7
R84	7030003760	S.RES ERJ3GEYJ 474 V (470 k)	T	146.6/37.4
R85	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	151.9/21.2
R86	7030003280	S.RES ERJ3GEYJ 470 V (47)	T	149/18.6
R87	7030003380	S.RES ERJ3GEYJ 331 V (330)	B	151.9/22.8
R88	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	156.3/33
R89	7030003630	S.RES ERJ3GEYJ 393 V (39 k)	B	156.3/29.8
R90	7030003580	S.RES ERJ3GEYJ 153 V (15 k)	B	155.6/28.2
R91	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	B	156.3/26.6
R95	7030003420	S.RES ERJ3GEYJ 681 V (680)	B	98.4/4.3
R96	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	102.6/2.2
R97	7030003380	S.RES ERJ3GEYJ 331 V (330)	B	105.3/2.9
R98	7030003500	S.RES ERJ3GEYJ 332 V (3.3 k)	B	102.2/8
R104	7030003370	S.RES ERJ3GEYJ 271 V (270)	T	65.8/30.8
R105	7030003230	S.RES ERJ3GEYJ 180 V (18)	T	62.9/31.5
R106	7030003370	S.RES ERJ3GEYJ 271 V (		



[MAIN UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R107	7030003240	S.RES ERJ3GEYJ 220 V (22)	T	72.5/29.4
R108	7030003500	S.RES ERJ3GEYJ 332 V (3.3 k)	B	74.1/22.6
R109	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	81.3/25
R111	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	108.3/38.5
R112	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	B	112.1/38.3
R113	7030003390	S.RES ERJ3GEYJ 391 V (390)	T	115.3/33.6
R116	7030003200	S.RES ERJ3GEYJ 100 V (10)	T	117.7/42.8
R117	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	120.9/46.1
R120	7030003460	S.RES ERJ3GEYJ 152 V (1.5 k)	B	96.5/22.7
R121	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	118.5/44.8
R122	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	98.5/21.4
R123	7030003380	S.RES ERJ3GEYJ 331 V (330)	B	102.7/22.2
R124	7030003500	S.RES ERJ3GEYJ 332 V (3.3 k)	B	98.8/19.8
R142	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	146.8/44.3
R143	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	148.1/48.3
R144	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	147.9/46.4
R145	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	148.1/44.5
R146	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	150.5/46.4
R147	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	155.6/40.9
R148	7030003550	S.RES ERJ3GEYJ 822 V (8.2 k)	T	156.3/47.2
R149	7030003460	S.RES ERJ3GEYJ 152 V (1.5 k)	T	155/44.5
R150	7030003760	S.RES ERJ3GEYJ 474 V (470 k)	T	153.7/47.2
R151	7030003760	S.RES ERJ3GEYJ 474 V (470 k)	T	152.1/49
R154	7030003760	S.RES ERJ3GEYJ 474 V (470 k)	T	146.6/40
R155	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	B	154.7/21.2
R157	7030003380	S.RES ERJ3GEYJ 331 V (330)	T	156.3/20.1
R158	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	B	155.5/46.1
R159	7030003630	S.RES ERJ3GEYJ 393 V (39 k)	B	155.6/43.2
R160	7030003580	S.RES ERJ3GEYJ 153 V (15 k)	B	156.3/41.6
R161	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	B	155.7/40
R163	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	150.7/16.2
R164	7030003760	S.RES ERJ3GEYJ 474 V (470 k)	B	117.3/38.9
R165	7030003430	S.RES ERJ3GEYJ 821 V (820)	B	117.1/33.5
R166	7030003620	S.RES ERJ3GEYJ 333 V (33 k)	B	118.7/33.5
R173	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	47.9/16.7
R181	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	100.8/16
R182	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	87.5/16.5
R185	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	96.8/11.7
R186	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)	B	84.9/9.3
R188	7030003380	S.RES ERJ3GEYJ 331 V (330)	B	84/17.9
R189	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)	T	84.2/12.3
R190	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)	T	85.5/12.3
R191	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	81.7/8.7
R192	7030003420	S.RES ERJ3GEYJ 681 V (680)	B	75.2/12.8
R193	7030003660	S.RES ERJ3GEYJ 683 V (68 k)	B	77.4/12.8
R194	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	88.9/8.3
R195	7030003300	S.RES ERJ3GEYJ 680 V (68)	B	95/7.4
R196	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	114.1/18.5
R201	7030003420	S.RES ERJ3GEYJ 681 V (680)	B	81.8/39.2
R202	7030003660	S.RES ERJ3GEYJ 683 V (68 k)	B	83.9/38.4
R203	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	102.1/38
R204	7030003300	S.RES ERJ3GEYJ 680 V (68)	B	104.1/38.7
R205	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	114.7/28.8
R207	7030003760	S.RES ERJ3GEYJ 474 V (470 k)	T	131.3/19.5
R208	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	T	129.7/22.2
R209	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	121.8/22.2
R212	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	119.8/29.7
R213	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	112.9/20.4
R214	7030003610	S.RES ERJ3GEYJ 273 V (27 k)	T	112.3/16.2
R217	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	T	114.7/29.1
R218	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	T	111.1/28.6
R219	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)	B	83.5/27
R220	7030003260	S.RES ERJ3GEYJ 330 V (33)	T	82.4/28.5
R221	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)	T	120.4/17.1
R222	7030003760	S.RES ERJ3GEYJ 474 V (470 k)	T	123.1/16.2
R226	7030003600	S.RES ERJ3GEYJ 223 V (22 k)	T	82.2/34.7
R227	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	T	83.7/32.1
R228	7030003620	S.RES ERJ3GEYJ 333 V (33 k)	T	87.6/32.1
R230	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)	T	98.2/37.2
R232	7030003420	S.RES ERJ3GEYJ 681 V (680)	T	87/34.2
R233	7030003660	S.RES ERJ3GEYJ 683 V (68 k)	T	89.6/34.2
R236	7030001150	S.RES MCR50JZHJ 150 (151)	B	57.6/40.6
R238	7030003460	S.RES ERJ3GEYJ 152 V (1.5 k)	T	98.7/28.9
R239	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	B	101.2/31
R241	7030003280	S.RES ERJ3GEYJ 470 V (47)	T	76.2/17.4
R243	7030003500	S.RES ERJ3GEYJ 332 V (3.3 k)	T	73.5/17.4
R244	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	T	75/15.4
R245	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	72.4/15.4
R251	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	80.7/36.3
R252	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	74.6/36.8
R253	7030003500	S.RES ERJ3GEYJ 332 V (3.3 k)	T	76.3/34.9
R254	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	T	77.5/33
R255	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	76.2/33
R256	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	T	67.4/33.9
R257	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	69.4/33.9
R258	7030003270	S.RES ERJ3GEYJ 390 V (39)	T	81.2/44.8
R259	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	T	80.6/46.7
R260	7030003390	S.RES ERJ3GEYJ 391 V (390)	T	82.5/46
R262	7030003200	S.RES ERJ3GEYJ 100 V (10)	T	94.8/46.5
R263	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	86.7/46
R264	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	86.7/43.3
R265	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	90.7/43.3
R267	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	96.1/45.2
R268	7030003310	S.RES ERJ3GEYJ 820 V (82)	T	96.8/47.1
R271	7030003240	S.RES ERJ3GEYJ 220 V (22)	T	107.9/47.1
R272	7030003240	S.RES ERJ3GEYJ 220 V (22)	T	107.9/45.8
R273	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	100.9/43.3
R274	7030003310	S.RES ERJ3GEYJ 820 V (82)	T	102.2/43.3
R275	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	56.5/50.3
R276	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	57.3/47.6
R277	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)	T	57.9/50.3
R278	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)	T	58.5/46.2
R282	7030003550	S.RES ERJ3GEYJ 822 V (8.2 k)	T	64/44
R283	7030003460	S.RES ERJ3GEYJ 152 V (1.5 k)	T	67.6/43.8

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REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R284	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	T	67.6/46.6
R285	7030003500	S.RES ERJ3GEYJ 332 V (3.3 k)	T	68.9/43.8
R286	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	72.6/46.8
R287	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	77.9/42.5
R288	7030003800	S.RES ERJ3GEYJ 105 V (1 M)	T	70.6/39.2
R290	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	78.6/46.1
R291	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	144.4/16.5
R292	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	132.2/16.5
R293	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	132.5/28.1
R296	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	129.4/39.3
R297	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	T	130.8/43.5
R299	7410000950	S.ARY EXB-V8V 102JV	T	123.8/26.1
R302	7510001661	S.TMR NTCG16 4LH 473JT	T	127.6/23.1
R303	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	132.9/13.5
R304	7030003540	S.RES ERJ3GEYJ 682 V (6.8 k)	T	130.1/13.5
R305	7030003760	S.RES ERJ3GEYJ 474 V (470 k)	T	133/7.9
R306	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	T	134.6/28.8
R308	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	T	135.6/30.2
R309	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	142.8/31.2
R310	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	T	135.6/31.5
R311	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	142.8/32.5
R312	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	T	135.6/32.8
R313	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	T	134.1/34.1
R314	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	T	142.8/33.9
R315	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	T	142.8/35.3
R316	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	T	132/35.8
R319	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	T	142.9/38.8
R320	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	T	134.4/39.1
R321	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	134.4/40.4
R322	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	135.7/41.7
R323	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	T	142.8/41.4
R324	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	138.4/3.5
R325	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	T	137.8/6.7
R326	7030003860	S.RES ERJ3GE JPW V	T	136.1/13.1
R327	7030003860	S.RES ERJ3GE JPW V	T	143.9/14.6
R328	7030003860	S.RES ERJ3GE JPW V	T	138.4/13.8
R329	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	T	135.2/27.5
R341	7030003600	S.RES ERJ3GEYJ 223 V (22 k)	T	63.1/40.7
R342	7030003600	S.RES ERJ3GEYJ 223 V (22 k)	T	63.1/39.4
R351	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	21.5/10.9
R352	7030003620	S.RES ERJ3GEYJ 333 V (33 k)	T	16.3/6.1
R353	7030003580	S.RES ERJ3GEYJ 153 V (15 k)	T	16.3/3.3
R354	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	21.1/5.5
R355	7030003620	S.RES ERJ3GEYJ 333 V (33 k)	T	21.1/3.5
R356	7030003420	S.RES ERJ3GEYJ 681 V (680)	T	22.2/8.8
R357	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	T	22.2/7.5
R358	7030003280	S.RES ERJ3GEYJ 470 V (47)	T	20.2/9
R400	7030003860	S.RES ERJ3GE JPW V	T	13.4/9
C1	4030011070	S.CER GRM31M2C2H5R0CY21L	T	28.2/51.3
C3	4030011190	S.CER GRM31M2C2H270JV01L	T	28.3/47.7
C5	4030011170	S.CER GRM31M2C2H180JV01L	T	32/46.7
C6	4030017200	S.CER GRM31BR32J102KY01L	T	35.6/45.1
C7	4030011210	S.CER GRM31M2C2H330JV01L	T	40.6/43
C8	4030011190	S.CER GRM31M2C2H270JV01L	T	40.6/38.6
C9	4030018350	S.CER GRM31A5C2J151JW01D	T	44.4/37.7
C15	4030006990	S.CER C1608 CH 1H 080D-T	T	30.4/36.8
C16	4030009520	S.CER C1608 CH 1H 020B-T	B	20.3/29.7
C17	4030011770	S.CER C1608 CH 1H 060B-T	T	12.7/29.3
C18	4030009540	S.CER C1608 CH 1H 1R5B-T	B	18.7/28.2
C19	4030011600	S.CER C1608 JB 1E 104K-T	T	15.6/21.8
C20	4030006860	S.CER C1608 JB 1E 102K-T	T	21.4/26.5
C21	4030011600	S.CER C1608 JB 1E 104K-T	T	22.7/26.5
C25	4030011600	S.CER C1608 JB 1E 104K-T	T	14.8/25.2
C26	4030006900	S.CER C1608 JB 1H 103K-T	T	24/26.5
C27	4030006860	S.CER C1608 JB 1H 102K-T	T	21.8/19.1
C28	4030006900	S.CER C1608 JB 1H 103K-T	T	23.1/19.1
C30	4030009350	S.CER C1608 CH 1H 3R5B-T	B	31.5/20
C31	4030006990	S.CER C1608 CH 1H 080D-T	T	31.4/17.9
C32	4030009350	S.CER C1608 CH 1H 3R5B-T	B	28.9/24
C33	4030006860	S.CER C1608 JB 1H 102K-T	B	32.1/24
C34	4030007020	S.CER C1608 CH 1H 120J-T	T	38.8/18.2
C35	4030009550	S.CER C1608 CH 1H 2R5B-T	B	36.8/24.7
C36	4030009500	S.CER C1608 CH 1H 0R5B-T	B	39.2/24
C37	4030009530	S.CER C1608 CH 1H 030B-T	B	42.3/24
C38	4030009550	S.CER C1608 CH 1H 2R5B-T	B	44.7

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REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C78	4030006900	S.CER C1608 JB 1H 103K-T	B	117.1/6
C79	4030017490	S.CER C1608 JB 1A 105K-T	B	113.9/4.4
C80	4030006900	S.CER C1608 JB 1H 103K-T	T	112.5/14.3
C81	4030006860	S.CER C1608 JB 1H 102K-T	B	117.1/7.3
C83	4030011600	S.CER C1608 JB 1E 104K-T	T	118.3/10.4
C89	4030011600	S.CER C1608 JB 1E 104K-T	T	131.2/23.5
C90	4030006860	S.CER C1608 JB 1H 102K-T	B	104.6/5
C91	4030006900	S.CER C1608 JB 1H 103K-T	B	100.7/6
C92	4030006900	S.CER C1608 JB 1H 103K-T	B	104.6/9
C93	4030011600	S.CER C1608 JB 1E 104K-T	T	147.1/4.3
C94	4030011810	S.CER C1608 JB 1A 224K-T	T	150.3/9.7
C95	4030011600	S.CER C1608 JB 1E 104K-T	T	148.4/11.7
C96	4030006860	S.CER C1608 JB 1H 102K-T	B	99.9/2.2
C98	4550007520	S.TAN F931A106MAABMA	T	156.9/35.3
C99	4030011600	S.CER C1608 JB 1E 104K-T	T	155.4/37
C100	4030011600	S.CER C1608 JB 1E 104K-T	T	144.9/43.9
C102	4030011600	S.CER C1608 JB 1E 104K-T	T	144.8/29.8
C103	4030008850	S.CER C1608 JB 1H 123K-T	T	149.9/27.8
C104	4030008900	S.CER C1608 JB 1H 333K-T	T	150.7/32.9
C105	4030008900	S.CER C1608 JB 1H 333K-T	T	149.4/32.9
C106	4030006850	S.CER C1608 JB 1H 471K-T	T	151.5/29.6
C107	4030006900	S.CER C1608 JB 1H 103K-T	T	156.5/31.7
C108	4030006900	S.CER C1608 JB 1H 103K-T	T	155/30.2
C109	4030006900	S.CER C1608 JB 1H 103K-T	T	153.7/32.9
C111	4030008920	S.CER C1608 JB 1H 473K-T	T	157.3/37.4
C112	4030011810	S.CER C1608 JB 1A 224K-T	T	147.9/37.4
C113	4030011600	S.CER C1608 JB 1E 104K-T	T	151.1/19.4
C114	4030006850	S.CER C1608 JB 1H 471K-T	B	154.5/22.8
C115	4030006870	S.CER C1608 JB 1H 222K-T	B	156.3/36.1
C116	4030006900	S.CER C1608 JB 1H 103K-T	B	157.1/31.4
C117	4030011600	S.CER C1608 JB 1E 104K-T	B	155.6/34.6
C118	4340000310	S.MLR ECHU 1C 333JX5	B	151.6/24.8
C119	4030017490	S.CER C1608 JB 1A 105K-T	T	135.2/8.9
C120	4030006860	S.CER C1608 JB 1H 102K-T	B	140.5/47
C150	4030006860	S.CER C1608 JB 1H 102K-T	T	61.6/31.5
C151	4030007060	S.CER C1608 CH 1H 270J-T	T	65.4/32.1
C152	4030008560	S.CER C1608 CH 1H 300J-T	T	65.4/33.4
C155	4030006900	S.CER C1608 JB 1H 103K-T	B	68/28.4
C157	4030006900	S.CER C1608 JB 1H 103K-T	B	75.7/28.7
C158	4030006860	S.CER C1608 JB 1H 102K-T	B	77.9/26.9
C159	4030011770	S.CER C1608 CH 1H 060B-T	B	75.6/25.6
C160	4030018400	S.CER CM105 CH 330G 50AT	B	74.9/26.9
C161	4030006900	S.CER C1608 JB 1H 103K-T	T	71.2/24.2
C162	4030011280	S.CER C1608 CH 1H 271J-T	B	118.9/38.9
C163	4030011280	S.CER C1608 CH 1H 271J-T	B	118.1/36.5
C165	4030009920	S.CER C1608 CH 1H 050B-T	B	87.9/24.5
C166	4030006900	S.CER C1608 JB 1H 103K-T	B	102.1/24.6
C167	4030011600	S.CER C1608 JB 1E 104K-T	T	109.6/35.8
C168	4030006860	S.CER C1608 JB 1H 102K-T	T	110/40.8
C169	4030006860	S.CER C1608 JB 1H 102K-T	T	108.3/35.8
C170	4030007120	S.CER C1608 CH 1H 820J-T	T	109.7/38.5
C171	4030007090	S.CER C1608 CH 1H 470J-T	B	109.5/39.6
C172	4030011600	S.CER C1608 JB 1E 104K-T	T	130.2/37.2
C175	4550007520	S.TAN F931A106MAABMA	T	110.5/31.9
C176	4030006900	S.CER C1608 JB 1H 103K-T	B	114.5/39.2
C177	4030017490	S.CER C1608 JB 1A 105K-T	B	112.3/35.9
C178	4030006900	S.CER C1608 JB 1H 103K-T	B	114.7/33.5
C179	4030006860	S.CER C1608 JB 1H 102K-T	B	114.5/36
C182	4030011600	S.CER C1608 JB 1E 104K-T	B	123/38.6
C183	4030007100	S.CER C1608 CH 1H 560J-T	T	119.1/42.8
C184	4030007090	S.CER C1608 CH 1H 470J-T	T	118.2/40.9
C186	4550007520	S.TAN F931A106MAABMA	B	146/25
C187	4030011600	S.CER C1608 JB 1E 104K-T	T	146/42.6
C190	4030011600	S.CER C1608 JB 1E 104K-T	T	146/47.6
C191	4030008850	S.CER C1608 JB 1H 123K-T	T	149.4/48.3
C192	4030008900	S.CER C1608 JB 1H 333K-T	T	150.7/44.5
C193	4030008900	S.CER C1608 JB 1H 333K-T	T	149.4/44.5
C194	4030006850	S.CER C1608 JB 1H 471K-T	T	151.3/47.7
C195	4030006900	S.CER C1608 JB 1H 103K-T	T	156.3/44.5
C196	4030006900	S.CER C1608 JB 1H 103K-T	T	155/47.2
C197	4030006900	S.CER C1608 JB 1H 103K-T	T	153.7/44.5
C199	4030006860	S.CER C1608 JB 1H 102K-T	B	101.3/21.4
C200	4030006860	S.CER C1608 JB 1H 102K-T	B	80.1/10.5
C201	4030008920	S.CER C1608 JB 1H 473K-T	T	155.3/42.3
C202	4030011810	S.CER C1608 JB 1A 224K-T	T	147.9/40
C204	4030006850	S.CER C1608 JB 1H 471K-T	T	153.9/19.4
C205	4030006870	S.CER C1608 JB 1H 222K-T	B	156.3/49
C206	4030006900	S.CER C1608 JB 1H 103K-T	B	156.3/44.8
C207	4030011600	S.CER C1608 JB 1E 104K-T	B	155.5/47.7
C208	4340000310	S.MLR ECHU 1C 333JX5	B	154.3/38.1
C209	4030011600	S.CER C1608 JB 1E 104K-T	B	147.2/38.1
C221	4030017490	S.CER C1608 JB 1A 105K-T	B	101.7/14.9
C222	4030006860	S.CER C1608 JB 1H 102K-T	B	99.7/13.3
C223	4030011600	S.CER C1608 JB 1E 104K-T	B	99.7/11.7
C224	4550007520	S.TAN F931A106MAABMA	B	99.8/16.9
C225	4550000510	S.TAN TEESVA 1V 473M8R	T	86.2/14.8
C227	4030009520	S.CER C1608 CH 1H 020B-T	T	88.5/13
C228	4030008270	S.CER C1608 UJ 1H 180J-T	T	91.7/12.6
C229	4030008270	S.CER C1608 UJ 1H 180J-T	T	91.7/9.9
C230	4030007040	S.CER C1608 CH 1H 180J-T	T	90.4/12.6
C231	4030007040	S.CER C1608 CH 1H 180J-T	T	90.4/9.9
C232	4030006870	S.CER C1608 JB 1H 222K-T	T	95.1/9.6
C233	4030006900	S.CER C1608 JB 1H 103K-T	T	93.8/9.6
C235	4030009530	S.CER C1608 CH 1H 030B-T	T	87.7/11.7
C236	4030006870	S.CER C1608 JB 1H 222K-T	T	82/13.9
C237	4030007020	S.CER C1608 CH 1H 120J-T	B	79.8/17.3
C239	4030007060	S.CER C1608 CH 1H 270J-T	B	84.6/9
C240	4030007060	S.CER C1608 CH 1H 270J-T	B	87.3/7.6
C241	4030009920	S.CER C1608 CH 1H 050B-T	B	77/16.5
C242	4030009990	S.CER C1608 CH 1H 200J-T	B	83/7.6
C243	4030006860	S.CER C1608 JB 1H 102K-T	B	116.9/18.5
C244	4030011810	S.CER C1608 JB 1A 224K-T	B	119.8/25.4
C245	4030006860	S.CER C1608 JB 1H 102K-T	B	120.3/27
C246	4030006900	S.CER C1608 JB 1H 103K-T	T	117.3/28.8

[MAIN UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C247	4030011600	S.CER C1608 JB 1E 104K-T	T	111.4/27.3
C248	4550000510	S.TAN TEESVA 1V 473M8R	T	114.8/17.9
C249	4550007390	S.TAN F931C225MAABMA	B	113.5/25.1
C251	4030009920	S.CER C1608 CH 1H 050B-T	B	84.7/35.9
C252	4030006860	S.CER C1608 JB 1H 102K-T	B	89.5/37.8
C253	4030009990	S.CER C1608 CH 1H 200J-T	B	94.3/39.3
C254	4030006860	S.CER C1608 JB 1H 102K-T	B	117.4/28.8
C255	4030007080	S.CER C1608 CH 1H 390J-T	T	121.8/19.9
C256	4030009910	S.CER C1608 CH 1H 040B-T	T	127.6/18.9
C257	4030007110	S.CER C1608 CH 1H 680J-T	T	128.4/20.9
C258	4030006860	S.CER C1608 JB 1H 102K-T	T	131.1/20.9
C259	4030007060	S.CER C1608 CH 1H 270J-T	B	96.2/38.6
C260	4030007060	S.CER C1608 CH 1H 270J-T	B	100/38.6
C261	4030006860	S.CER C1608 JB 1H 102K-T	B	119.7/20
C262	4030011600	S.CER C1608 JB 1E 104K-T	B	116/22.5
C263	4030006900	S.CER C1608 JB 1H 103K-T	B	123.2/19.4
C264	4030009920	S.CER C1608 CH 1H 050B-T	T	119/18.4
C265	4030006900	S.CER C1608 JB 1H 103K-T	T	122.5/14.1
C266	4030007040	S.CER C1608 CH 1H 180J-T	T	118.7/13
C267	4030009530	S.CER C1608 CH 1H 030B-T	T	118.1/15
C268	4030007040	S.CER C1608 CH 1H 180J-T	T	117.4/13
C269	4030007010	S.CER C1608 CH 1H 100D-T	T	114.6/10.8
C271	4550007520	S.TAN F931A106MAABMA	B	83.5/31.4
C272	4030006860	S.CER C1608 JB 1H 102K-T	B	91/34.2
C273	4030011600	S.CER C1608 JB 1E 104K-T	B	91/32
C274	4550007520	S.TAN F931A106MAABMA	B	85.6/33.8
C275	4030006860	S.CER C1608 JB 1H 102K-T	B	139.7/21.1
C276	4030007090	S.CER C1608 CH 1H 470J-T	B	86.6/27.6
C277	4030017490	S.CER C1608 JB 1A 105K-T	B	85.5/29.4
C278	4550000530	S.TAN TEESVA 1V 104M8R	B	81.2/28.9
C280	4030009510	S.CER C1608 CH 1H 010B-T	T	89.5/31.9
C281	4030009520	S.CER C1608 CH 1H 020B-T	T	97.4/29
C282	4030011770	S.CER C1608 CH 1H 060B-T	T	96.1/20
C283	4030009500	S.CER C1608 CH 1H 0R5B-T	T	93.5/30.1
C284	4030011770	S.CER C1608 CH 1H 060B-T	T	96.1/31.6
C285	4030011770	S.CER C1608 CH 1H 060B-T	T	96.1/34.2
C286	4030011770	S.CER C1608 CH 1H 060B-T	T	94.8/31.6
C287	4030011770	S.CER C1608 CH 1H 060B-T	T	94.8/34.2
C288	4030006870	S.CER C1608 JB 1H 222K-T	T	86.3/32.1
C289	4030006900	S.CER C1608 JB 1H 103K-T	T	85/32.1
C290	4030009500	S.CER C1608 CH 1H 0R5B-T	T	92.6/34.8
C292	4030007020	S.CER C1608 CH 1H 120J-T	T	84.3/37.5
C294	4030006870	S.CER C1608 JB 1H 222K-T	T	86.3/36.1
C295	4030006860	S.CER C1608 JB 1H 102K-T	B	101.2/29.1
C305	4030006860	S.CER C1608 JB 1H 102K-T	T	62.6/21.1
C306	4030006860	S.CER C1608 JB 1H 102K-T	T	73.8/19.4
C307	4030006860	S.CER C1608 JB 1H 102K-T	T	70.6/17.9
C308	4030007010	S.CER C1608 CH 1H 100D-T	T	67.4/17.2
C309	4030006860	S.CER C1608 JB 1H 102K-T	T	73.7/15.4
C316	4030006860	S.CER C1608 JB 1H 102K-T	B	69/32.2
C317	4030006860	S.CER C1608 JB 1H 102K-T	T	69/32
C318	4030007040	S.CER C1608 CH 1H 180J-T	T	70.7/34.3
C319	4030006860	S.CER C1608 JB 1H 102K-T	T	73.3/35.8
C320	4030006860	S.CER C1608 JB 1H 102K-T	T	74.9/33
C322	4030006860	S.CER C1608 JB 1H 102K-T	T	82.5/43.3
C323	4030007090	S.CER C1608 CH 1H 470J-T	T	83.8/46
C324	4030007040	S.CER C1608 CH 1H 180J-T	T	83.8/43.3
C325	4030007040	S.CER C1608 CH 1H 180J-T	T	85.4/43.3
C330	4030006860	S.CER C1608 JB 1H 102K-T	T	93.3/43.3
C331	4030006860	S.CER C1608 JB 1H 102K-T	T	92/43.3
C332	4030007090	S.CER C1608 CH 1H 470J-T	T	88.1/43.3
C333	4030006860	S.CER C1608 JB 1H 102K-T	T	89.4/43.3
C334	4030009990	S.CER C1608 CH 1H 200J-T	T	94.8/47.8
C335	4030006860	S.CER C1608 JB 1H 102K-T	T	96.5/43.3
C338	4030009530	S.CER C1608 CH 1H 030B-T	T	99.1/47.1
C339	4030006860	S.CER C1608 JB 1H 102K-T	T	107.4/43.8
C341	4030007090	S.CER C1608 CH 1H 470J-T	T	104.8/43.3
C342	4030006850	S.CER C1608 JB 1H 471K-T	T	106.1/43.7
C343	4030006860	S.CER C1608 JB 1H 102K-T	T	103.5/43.3
C345	4030007050	S.CER C1608 CH 1H 220J-T	T	102.4/48.7
C346	4030007040	S.CER C1608 CH 1H 180J-T	T	107.7/48.8
C347	4030007080	S.CER C1608 CH 1H 390J-T	T	107.7/52.1
C348	4030007040	S.C		

[MAIN UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C401	4030006990	S.CER C1608 CH 1H 080D-T	T	11.3/8.3
C403	4030011770	S.CER C1608 CH 1H 060B-T	B	15.7/14.4
C404	4030009520	S.CER C1608 CH 1H 020B-T	T	14.7/6.1
C405	4030006860	S.CER C1608 JB 1H 102K-T	T	18.3/3.5
C406	4030006860	S.CER C1608 JB 1H 102K-T	T	17.6/9
C407	4030011600	S.CER C1608 JB 1E 104K-T	T	18.9/9
C410	4030006860	S.CER C1608 JB 1H 102K-T	T	16.3/9
C411	4030006860	S.CER C1608 JB 1H 102K-T	T	22.4/5.5
C412	4030006860	S.CER C1608 JB 1H 102K-T	T	25.6/12.7
C415	4030006980	S.CER C1608 CH 1H 070D-T	B	24.5/7
C416	4030009540	S.CER C1608 CH 1H 1R5B-T	B	31.5/7
C417	4030006980	S.CER C1608 CH 1H 070D-T	B	36.1/6.3
C418	4030009510	S.CER C1608 CH 1H 010B-T	B	37.6/7.8
C419	4030009500	S.CER C1608 CH 1H 0R5B-T	B	40.7/7
C420	4030006990	S.CER C1608 CH 1H 080D-T	B	43.3/7
C422	4030006990	S.CER C1608 CH 1H 080D-T	B	48.8/8.4
C423	4030009520	S.CER C1608 CH 1H 020B-T	B	52/8.4
C427	4030006860	S.CER C1608 JB 1H 102K-T	T	59/43.5
C428	4030006860	S.CER C1608 JB 1H 102K-T	T	59/41.9
C431	4030006860	S.CER C1608 JB 1H 102K-T	T	145.3/25.3
C432	4030006860	S.CER C1608 JB 1H 102K-T	T	132.3/31.6
C433	4030006860	S.CER C1608 JB 1H 102K-T	B	143/33.4
C434	4030006860	S.CER C1608 JB 1H 102K-T	T	135.7/43
C435	4030006860	S.CER C1608 JB 1H 102K-T	B	143.9/40.7
C436	4030006850	S.CER C1608 JB 1H 471K-T	B	141.7/2.6
C437	4030006850	S.CER C1608 JB 1H 471K-T	T	134.5/5.5
C438	4030006850	S.CER C1608 JB 1H 471K-T	T	145.6/12.8
C439	4030006860	S.CER C1608 JB 1H 102K-T	B	123.3/16.9
C440	4030006860	S.CER C1608 JB 1H 102K-T	B	143.7/16.3
C441	4030006860	S.CER C1608 JB 1H 102K-T	B	140.6/10.3
J1	6510023361	S.CNR 26FLT-SM2-TB (LF) (SN)	T	139.2/36.2
J2	6510022621	S.CNR 10FMM-BMTR-A-TBT (LF) (SN)	T	141.4/8.2
J4	6510018450	CNR TMP-S01X-B1		
W7	7030010840	S.JMP MJP-0.2-T	T	72.7/50.9
W8	7120000490	JMP ERD25T0		
EP2	6910013370	S.BEA BLM18BB221SN1D	T	71.2/21.6
EP3	6910002161	CAS CASE-BM7H-LF		

[AF UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
IC1	1180003150	REG KIA7808API-U/PF		
IC2	1180000421	S.IC TA78L05F (TE12R,F)	T	37.2/31.5
IC3	1110003091	IC LA4425A-E		
IC6	1130007021	S.IC TC7S66FU (TE85L,F)	T	75.3/18
IC7	1130009581	S.IC TC7W66FU (TE12L,F)	T	129.5/18
IC8	1110000960	S.IC NJM4558M-TE1-#FMZB	B	108/20
IC9	1110000960	S.IC NJM4558M-TE1-#FMZB	B	119.5/20
IC10	1110007340	S.IC NJM3414AM-TE1-#FMZB	B	94/25
IC11	1130007431	S.IC TC7S14FU (TE85R,F)	T	73/26.9
IC12	1170000352	S.IC PC357N6J000F	T	72.5/32.5
IC13	1120003060	S.IC ADM4853ARZ-REEL7	B	74.5/34.2
IC14	1130006441	S.IC TC7S08F (TE85R,F)	B	68/35.5
IC15	1130008511	S.IC TC7W53FU (TE12L,F)	T	95/16.5
IC16	1120002830	S.IC NJM2125F-TE1-#FZZB	T	73.6/14.9
Q1	1520000840	S.TR KTA1664Y-RTF/P	T	37.2/39
Q2	1590003580	S.TR KRC404 RTK/P	T	42.3/38.6
Q4	1590000430	S.TR DTC144EUA T106	T	78.6/20.3
Q5	1590000720	S.TR DTA144EUA T106	T	82.2/17.7
Q7	1530003960	S.TR KTC2875-B-RTK/P	T	64/4.9
Q9	1530003900	S.TR KTC4075 BL-RTK/P	T	57.4/30.1
Q10	1530003900	S.TR KTC4075 BL-RTK/P	T	37/9.7
Q11	1530003900	S.TR KTC4075 BL-RTK/P	T	62.6/19.2
Q12	1530003900	S.TR KTC4075 BL-RTK/P	T	69.8/21.4
Q13	1590001391	S.FET 2SJ144-Y (TE85R,F)	T	88.6/15
Q14	1590002160	S.TR XP6401-(TX)	T	61.1/36.8
Q15	1530003900	S.TR KTC4075 BL-RTK/P	T	64.2/36.8
D1	1790000700	DIO DSA3A1		
D3	1750001320	S.DIO KDS4148U RTK/P	B	21.9/21.6
D5	1160000080	S.DIO DAP202K T146	T	67.4/5
D6	1750001320	S.DIO KDS4148U RTK/P	T	56.5/33.1
D7	1750001320	S.DIO KDS4148U RTK/P	T	40.3/10.1
D8	1730002360	S.ZEN MA8062-M (TX)	T	129.5/12.5
D9	1730002360	S.ZEN MA8062-M (TX)	T	134.1/23.4
D12	1750001320	S.DIO KDS4148U RTK/P	T	72.5/39
D13	1750001320	S.DIO KDS4148U RTK/P	T	70/4.9
D14	1790000990	S.ZEN MA8051-H (TX)	T	62.6/33.3
R1	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	37.2/42.4
R2	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	T	40.4/38.9
R11	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	68.2/7.4
R12	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	65.4/7.4
R13	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	62.6/7.4
R15	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	6.4/10.2
R16	7030003800	S.RES ERJ3GEYJ 105 V (1 M)	B	28.6/3.7
R17	7030003600	S.RES ERJ3GEYJ 223 V (22 k)	B	31/2.9
R18	7030003600	S.RES ERJ3GEYJ 223 V (22 k)	B	26.3/3.7
R19	7030000100	S.RES MCR10EZHZJ 4.7 (4R7)	T	5.8/13
R20	7030003590	S.RES ERJ3GEYJ 183 V (18 k)	T	60.4/29.5
R21	7030003590	S.RES ERJ3GEYJ 183 V (18 k)	T	34.8/9.6
R22	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	B	31/4.5
R23	7030003800	S.RES ERJ3GEYJ 105 V (1 M)	B	29.5/6.1
R31	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	59.6/12.6
R32	7030003550	S.RES ERJ3GEYJ 822 V (8.2 k)	T	59.6/17.3
R33	7030003380	S.RES ERJ3GEYJ 331 V (330)	T	59.6/18.6
R34	7030003770	S.RES ERJ3GEYJ 564 V (560 k)	T	61.7/21.9
R35	7030003710	S.RES ERJ3GEYJ 184 V (180 k)	T	59.6/12.9
R36	7030003490	S.RES ERJ3GEYJ 272 V (2.7 k)	T	63.1/21.9
R37	7030003620	S.RES ERJ3GEYJ 333 V (33 k)	T	65.6/19.2
R38	7030003620	S.RES ERJ3GEYJ 333 V (33 k)	T	67.7/19.9
R39	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	59.6/22.8
R40	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)	T	68.8/17.9
R41	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	87.7/18
R42	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	89/18
R43	7030003760	S.RES ERJ3GEYJ 474 V (470 k)	T	86.5/13.6
R44	7030003280	S.RES ERJ3GEYJ 470 V (47)	T	71.7/21.7
R49	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	133.2/16.1
R50	7030003490	S.RES ERJ3GEYJ 272 V (2.7 k)	T	131.9/13.3
R52	7030003490	S.RES ERJ3GEYJ 272 V (2.7 k)	T	132.6/20.4
R53	7030003800	S.RES ERJ3GEYJ 105 V (1 M)	T	127.8/21.7
R54	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	78.1/13.5
R55	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	83.2/3.7
R56	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	131.6/24.3
R61	7030003280	S.RES ERJ3GEYJ 470 V (47)	T	88/33.5
R62	7030003550	S.RES ERJ3GEYJ 822 V (8.2 k)	T	106.7/26.4
R63	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	105.4/30.5
R64	7030003570	S.RES ERJ3GEYJ 123 V (12 k)	T	106.7/30.5
R65	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	73.2/11.7
R67	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	76/15.4
R68	7030003800	S.RES ERJ3GEYJ 105 V (1 M)	T	73.2/19.1
R69	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	78.2/18.4
R70	7030003800	S.RES ERJ3GEYJ 105 V (1 M)	T	126.7/14.2
R71	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	125.7/21.2
R72	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	127/19.6
R73	7030003570	S.RES ERJ3GEYJ 123 V (12 k)	T	122.5/20.5
R74	7030003600	S.RES ERJ3GEYJ 223 V (22 k)	T	122.5/21.8
R75	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	T	114.2/21.6
R76	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	119.1/18.7
R82	7030010290	S.RES ERJ3GEYF 273 V (27 k)	T	107.3/14.4
R83	7030003340	S.RES ERJ3GEYJ 151 V (150)	T	111/21.5
R84	7030003690	S.RES ERJ3GEYJ 124 V (120 k)	T	111/18.9
R85	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	110.1/17.1
R86	7030010310	S.RES ERJ3GEYF 223 V (22 k)	T	110.1/15.7
R88	7030003660	S.RES ERJ3GEYJ 683 V (68 k)	T	107.3/15.7
R89	7030003670	S.RES ERJ3GEYJ 823 V (82 k)	T	104.5/17.1
R90	7030003670	S.RES ERJ3GEYJ 823 V (82 k)	T	104.5/18.9
R91	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	104.5/21.5
R92	7030003500	S.RES ERJ3GEYJ 332 V (3.3 k)	T	102.4/20.7
R98	7030003600	S.RES ERJ3GEYJ 223 V (22 k)	T	118.2/16
R99	7030003880	S.RES ERJ3GEYJ 244 V (240 k)	T	116.2/16.8

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



[AF UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R100	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	116.2/14.2
R103	7030003600	S.RES ERJ3GEYJ 223 V (22 k)	T	91.6/22.4
R104	7030003670	S.RES ERJ3GEYJ 823 V (82 k)	T	90.3/25.2
R105	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	92.9/25.2
R106	7030003800	S.RES ERJ3GEYJ 105 V (1 M)	T	95.8/19
R107	7030003800	S.RES ERJ3GEYJ 105 V (1 M)	T	91.6/18.2
R108	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	97.5/14.1
R111	7030003280	S.RES ERJ3GEYJ 470 V (47)	T	88/28.3
R112	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	95.5/28.1
R113	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	95.5/30.9
R114	7030003720	S.RES ERJ3GEYJ 224 V (220 k)	T	94.2/30.9
R115	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	T	92.3/20.3
R222	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	75.6/37.4
R223	7030003540	S.RES ERJ3GEYJ 682 V (6.8 k)	T	70.8/26.9
R224	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	T	66.8/32.1
R225	7030003640	S.RES ERJ3GEYJ 473 V (47 k)	T	78.9/30.6
R226	7030003560	S.RES ERJ3GEYJ 103 V (10 k)	T	77.2/28
R314	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	28.3/8.7
R315	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	27/8.7
R322	7030003680	S.RES ERJ3GEYJ 104 V (100 k)	T	85.5/32.3
R328	7030004050	S.RES ERJ3GEYJ 1R0 V (1)	B	7.1/12.3
R329	7030003860	S.RES ERJ3GE JPW V	T	58.8/7.8
R330	7120000540	RES ERX1SZG R10		
R331	7120000540	RES ERX1SZG R10		
R332	7030006521	S.RES ERA3YED 561V (560)	T	57.5/36.5
R333	7030006091	S.RES ERA3YED 822V (8.2 k)	T	61/34.9
R334	7030003440	S.RES ERJ3GEYJ 102 V (1 k)	T	66.4/35.4
R335	7030003580	S.RES ERJ3GEYJ 153 V (15 k)	T	67.2/37.5
C1	4030007090	S.CER C1608 CH 1H 470J-T	T	14.9/38.4
C2	4030006860	S.CER C1608 JB 1H 102K-T	T	14.9/37.1
C3	4030007090	S.CER C1608 CH 1H 470J-T	T	14.9/35.8
C4	4030006900	S.CER C1608 JB 1H 103K-T	T	17.6/34.2
C5	4030006850	S.CER C1608 JB 1H 471K-T	T	24.8/34.2
C6	4030006860	S.CER C1608 JB 1H 102K-T	T	9.6/33.4
C7	4030007090	S.CER C1608 CH 1H 470J-T	T	9.6/32.1
C8	4030006860	S.CER C1608 JB 1H 102K-T	T	19.8/27.2
C9	4030007090	S.CER C1608 CH 1H 470J-T	T	21.1/27.2
C10	4510007480	ELE 16 ME 470 CA		
C11	4030007090	S.CER C1608 CH 1H 470J-T	T	58.8/9.1
C12	4030006900	S.CER C1608 JB 1H 103K-T	T	58.8/6.5
C21	4510008970	S.ELE EEEHB1C100R	T	9.1/23
C22	4030011600	S.CER C1608 JB 1E 104K-T	T	5.5/23.8
C23	4510009340	S.ELE EEEHA1C101WP	T	18.6/22.3
C24	4030011600	S.CER C1608 JB 1E 104K-T	T	13.5/25
C25	4030006900	S.CER C1608 JB 1H 103K-T	T	45.4/32.2
C26	4510008970	S.ELE EEEHB1C100R	T	42.3/32.2
C27	4030006860	S.CER C1608 JB 1H 102K-T	T	44.2/37.2
C28	4030007090	S.CER C1608 CH 1H 470J-T	B	3.2/16.7
C29	4030007090	S.CER C1608 CH 1H 470J-T	B	4.8/15.1
C30	4030007090	S.CER C1608 CH 1H 470J-T	B	3.2/13.6
C31	4030017490	S.CER C1608 JB 1A 105K-T	B	34.8/2.9
C32	4030006900	S.CER C1608 JB 1H 103K-T	B	34.1/4.5
C33	4030017490	S.CER C1608 JB 1A 105K-T	T	23/3.1
C34	4030006850	S.CER C1608 JB 1H 471K-T	T	4.4/10.8
C35	4030011600	S.CER C1608 JB 1E 104K-T	T	3.7/17.9
C36	4510007480	ELE 16 ME 470 CA		
C37	4510007470	ELE 16 ME 1000 CA		
C38	4030011600	S.CER C1608 JB 1E 104K-T	T	5.4/14.6
C39	4030006850	S.CER C1608 JB 1H 471K-T	T	45.5/24
C40	4030007090	S.CER C1608 CH 1H 470J-T	T	3.4/13.6
C41	4550000530	S.TAN TEESVA 1V 104M8R	T	59.5/14.3
C42	4030008890	S.CER C1608 JB 1H 273K-T	T	59.6/16
C43	4030008890	S.CER C1608 JB 1H 273K-T	T	59.6/19.9
C44	4030006870	S.CER C1608 JB 1H 222K-T	T	69.8/19.2
C45	4030010040	S.CER C1608 JB 1H 561K-T	T	65.6/20.5
C46	4510008970	S.ELE EEEHB1C100R	T	66.5/24.1
C47	4030011810	S.CER C1608 JB 1A 224K-T	T	76.5/22.9
C48	4030017490	S.CER C1608 JB 1A 105K-T	T	112.1/11
C49	4030006900	S.CER C1608 JB 1H 103K-T	T	88.6/12.8
C51	4510008970	S.ELE EEEHB1C100R	T	136.3/13.8
C52	4030006870	S.CER C1608 JB 1H 222K-T	T	129.5/9.4
C53	4030006850	S.CER C1608 JB 1H 471K-T	T	129.5/10.8
C54	4030011600	S.CER C1608 JB 1E 104K-T	T	131.9/16.1
C55	4030011600	S.CER C1608 JB 1E 104K-T	T	129.5/14.2
C56	4030006850	S.CER C1608 JB 1H 471K-T	T	133.9/21.7
C57	4030011600	S.CER C1608 JB 1E 104K-T	T	131.1/21.7
C58	4030006870	S.CER C1608 JB 1H 222K-T	T	133.7/25.1
C65	4030011600	S.CER C1608 JB 1E 104K-T	T	70.3/16.2
C66	4030006860	S.CER C1608 JB 1H 102K-T	T	71.1/14.1
C67	4030011600	S.CER C1608 JB 1E 104K-T	T	80.7/19.7
C71	4030006860	S.CER C1608 JB 1H 102K-T	T	87/35.6
C72	4510008970	S.ELE EEEHB1C100R	T	92.6/35.2
C73	4030011600	S.CER C1608 JB 1E 104K-T	T	88.9/35.6
C77	4030011600	S.CER C1608 JB 1E 104K-T	T	122.5/19.2
C78	4030009580	S.CER C1608 JB 1H 681K-T	T	122.5/23.1
C79	4030011600	S.CER C1608 JB 1E 104K-T	T	116.9/24.2
C80	4030006900	S.CER C1608 JB 1H 103K-T	T	116.9/22.8
C81	4030006860	S.CER C1608 JB 1H 102K-T	T	128.1/23.8
C82	4030007140	S.CER C1608 CH 1H 121J-T	T	111/20.2
C83	4030011600	S.CER C1608 JB 1E 104K-T	T	109.5/22.8
C84	4030011600	S.CER C1608 JB 1E 104K-T	T	115.5/19.5
C85	4030006860	S.CER C1608 JB 1H 102K-T	T	107.3/17.1
C86	4030010770	S.CER C1608 JB 1H 392K-T	T	104.5/20.2
C87	4030007120	S.CER C1608 CH 1H 820J-T	T	107.3/20.2
C88	4030011600	S.CER C1608 JB 1E 104K-T	T	98.7/16.5
C89	4030008890	S.CER C1608 JB 1H 273K-T	T	101.1/20.7
C90	4030006900	S.CER C1608 JB 1H 103K-T	T	105.4/23.6
C91	4030011600	S.CER C1608 JB 1E 104K-T	T	107.5/24.1
C92	4030006900	S.CER C1608 JB 1H 103K-T	T	104.1/30.5
C93	4030011600	S.CER C1608 JB 1E 104K-T	T	105.4/26.4
C94	4510008970	S.ELE EEEHB1C100R	T	109.8/28.5
C97	4030011600	S.CER C1608 JB 1E 104K-T	T	94.2/25.2

[AF UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C98	4030006900	S.CER C1608 JB 1H 103K-T	T	94.2/28.1
C99	4510008970	S.ELE EEEHB1C100R	T	91.1/29.7
C100	4510008970	S.ELE EEEHB1C100R	T	99.2/30.5
C101	4030011600	S.CER C1608 JB 1E 104K-T	T	119.5/14.5
C102	4030007110	S.CER C1608 CH 1H 680J-T	T	116.2/15.5
C103	4030011600	S.CER C1608 JB 1E 104K-T	T	91.9/14.1
C104	4030011600	S.CER C1608 JB 1E 104K-T	T	90.3/19.5
C105	4030011600	S.CER C1608 JB 1E 104K-T	T	92.9/22.4
C106	4030007130	S.CER C1608 CH 1H 101J-T	T	91.6/25.2
C107	4550006250	S.TAN TEESVA 1A 106M8R	T	84.2/28
C108	4030006860	S.CER C1608 JB 1H 102K-T	T	82.9/29.7
C220	4030011600	S.CER C1608 JB 1E 104K-T	T	75.2/26.9
C221	4030006900	S.CER C1608 JB 1H 103K-T	T	75.2/29.7
C222	4030006880	S.CER C1608 JB 1H 472K-T	T	72.5/37.4
C225	4030006900	S.CER C1608 JB 1H 103K-T	T	75.2/32.8
C226	4030006900	S.CER C1608 JB 1H 103K-T	T	68.1/32.1
C227	4030006860	S.CER C1608 JB 1H 102K-T	T	79.9/28
C269	4030006860	S.CER C1608 JB 1H 102K-T	T	24.8/8.7
C270	4030007090	S.CER C1608 CH 1H 470J-T	T	20.6/6.6
C271	4030006860	S.CER C1608 JB 1H 102K-T	T	22.7/7.6
C272	4030006860	S.CER C1608 JB 1H 102K-T	B	17.4/5.7
C273	4030006860	S.CER C1608 JB 1H 102K-T	T	115.1/5.5
C274	4030006860	S.CER C1608 JB 1H 102K-T	T	117.3/11
C275	4030006860	S.CER C1608 JB 1H 102K-T	T	39.4/4.6
C276	4030006860	S.CER C1608 JB 1H 102K-T	T	38.7/7.2
C277	4030006860	S.CER C1608 JB 1H 102K-T	T	52.6/13.8
C278	4030006860	S.CER C1608 JB 1H 102K-T	T	49.2/11.3
C279	4030006850	S.CER C1608 JB 1H 471K-T	T	52/11.7
C280	4030006850	S.CER C1608 JB 1H 471K-T	T	56.8/11.3
RL1	6330001670	RLY FTR-P3CP012W1		
RL2	6330001620	RLY FTR-F3AA012E		
RL3	6330001620	RLY FTR-F3AA012E		
J1	6510023511	S.CNR 28FLT-SM2-TB (LF) (SN)	T	80/7.2
J2	6510022621	S.CNR 10FMN-BMTTR-A-TBT (LF) (SN)	T	46.5/7.6
J3	6510023541	CNR B2B-PH-K-S (LF) (SN)		
J4	6510025141	S.CNR 10FLT-SM2-TB (LF) (SN)	T	80/34
J5	6510023421	CNR SB4P-HVQ-A (LF) (SN)		
J6	6510019371	S.CNR B3B-ZR-SM4-TF (LF) (SN)	T	120.3/7
J7	6510023541	CNR B2B-PH-K-S (LF) (SN)		
J8	6510019371	S.CNR B3B-ZR-SM4-TF (LF) (SN)	T	17.7/6.9
J9	6510020800	CNR OP-10		
J10	6510020800	CNR OP-10		
EP2	6910013370	S.BEA BLM18BB221SN1D	T	113.8/5.5
EP3	6910013370	S.BEA BLM18BB221SN1D	T	115/11
EP4	6910013370	S.BEA BLM18BB221SN1D	T	94.7/14.1
EP6	6910014690	S.BEA MPZ1608S221A-T	T	12.7/7.3
EP7	6910014690	S.BEA MPZ1608S221A-T	T	6.4/16.6
EP8	6910018270	S.BEA MMZ1608Y301CT	T	131.5/10.1
EP10	6910018270	S.BEA MMZ1608Y301CT	T	119.7/20.7
EP11	6910018270	S.BEA MMZ1608Y301CT	T	90.3/22.4
EP12	6910018270	S.BEA MMZ1608Y301CT	T	87.1/26.3

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

**[CONNECT UNIT]**

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
D8	1730002360	S.ZEN MA8062-M (TX)	T	45.7/17.7
D12	1750001320	S.DIO KDS4148U RTK/P	T	61/17
D13	1730002360	S.ZEN MA8062-M (TX)	T	63/17
D15	1750001320	S.DIO KDS4148U RTK/P	T	72/21.5
D16	1790001810	S.VSR AVR-M1005C080MTABB	T	72.5/16
L1	5920000570	TSM 12T01		
R2	7030003200	S.RES ERJ3GEYJ 100 V (10)	T	33.4/11.1
R5	7030003200	S.RES ERJ3GEYJ 100 V (10)	T	32/5.3
R8	7030003200	S.RES ERJ3GEYJ 100 V (10)	T	43/15.5
R15	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	72/18
R16	7030003410	S.RES ERJ3GEYJ 561 V (560)	T	50/5
R17	7030003420	S.RES ERJ3GEYJ 681 V (680)	T	52.8/5
C2	4030006860	S.CER C1608 JB 1H 102K-T	T	32.5/8.4
C5	4030006860	S.CER C1608 JB 1H 102K-T	T	32/6.6
C9	4030006850	S.CER C1608 JB 1H 471K-T	T	44/17.7
C12	4030006860	S.CER C1608 JB 1H 102K-T	T	61/9.2
C15	4030006860	S.CER C1608 JB 1H 102K-T	T	73.4/18
J1	6510022440	CNR LTW-8MP-C NUT,GASKET		
J2	6510022440	CNR LTW-8MP-C NUT,GASKET		
J3	6510023320	CNR LTWD-06PMMP-LC <LIA>!		
J4	6510025141	S.CNR 10FLT-SM2-TB (LF) (SN)	T	54.5/21.5
W1	8900016690	CBL OPC-1772 <TJM>		

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.
C1	4010006850	470P 50V HE YB	1
J1	6510004880	MR-DSE-01	1
W1**	8900015950	OPC-1175A	1
W3**	8900016720	OPC-1781	1
W4**	8900011811	OPC-1197A-1	1
W5**	8900011821	OPC-1198A-1	1
W6**	8900011831	OPC-1200A-1	1
W8**	8900016740	OPC-1787	1
W9**	8900017610	OPC-1875	1
MP1	8010021010	3075 CHASSIS	1
MP2	8210019201	2577 REAR PANEL (C) (Incl. MP18)	1
MP3	8930058271	2577 F-PACKING-1	1
MP4	8930058260	2577 R-PACKING	1
MP5	8930058460	2577 BUSH PLATE	1
MP6	8110007800	2577 MODULE COVER	1
MP7	8930058480	2577 MODULE PLATE	1
MP8	8510014900	2577 SHIELD COVER	1
MP9	8930034300	1542 ANT SEAL	1
MP10	8930058780	2577 SHEET	1
MP11	8810008661	SCREW BT B0 3X8 NI-ZC3 (BT)	7
MP12	8810008661	SCREW BT B0 3X8 NI-ZC3 (BT)	3
MP13	8820001210	2438 SCREW	6
MP14	8820001210	2438 SCREW	6
MP15	8820001210	2438 SCREW	2
MP16	8820001210	2438 SCREW	2
MP18	8830001731	ULTRASERT UD-45058-CD NI	2
MP19	8930052290	O-RING (AD)	8
MP20	8930058450	2577 IC CLIP	1
MP22	8930049040	INSULATION SHEET (FQ)	1
MP23	8930055040	2438 CAP	3
MP25	8930075630	THERMALLY SHEET (BL)	1
MP26	8810008661	SCREW BT B0 3X8 NI-ZC3 (BT)	1
MP27	8930072080	2914 CONNECTOR SEAL	3
MP28	8810003361	SETSCREW (C) 3X6 ZC3	1
MP31	8810008980	HEX HEAD BOLT (+) M4X8 SUS (GND screw)	1
MP32	8850000170	FLAT WASHER M4 SUS	2
MP33	8850000490	S-WASHER M4 SUS	1
MP34	6950000480	DB-25S-DC1 (Printer connector cover)	1
MP35*	6910014760	OG-503040	2

## [FRONT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
SP1	2510001210	066P0804	1
W1*	8900016700	OPC-1775	1
W2*	7120000470	ERDS2T0	1
W3*	7120000470	ERDS2T0	1
MP1	8210024450	2577 FRONT PANEL (G) (Incl. SP1, MP2, 3, 5, 8-11, 15, 23)	1
MP2*	8930059450	2577 2-KEY (A)	1
MP3	8310070730	2577 WINDOW PLATE (G)	1
MP5*	8930073810	2577 18-KEY (D)	1
MP8	8930052030	2345 SPRING	1
MP9	8930052010	2345 SHAFT	1
MP10	8930052020	2345 SHAFT ANGLE	1
MP11	8110007160	2345 COVER	1
MP12	8610011240	KNOB N-295 (Incl. MP16)	1
MP13	8610011240	KNOB N-295	1
MP14	8610011210	KNOB N-293	1
MP15	8830001351	SONIC LOCK SL-M3-5.8-CD	6
MP16	8610009240	KNOB SPRING NO.7800P	2
MP17	8930059540	COMPRESSION RING R102-P	1
MP18	8810008661	SCREW BT B0 3X8 NI-ZC3 (BT)	7
MP19	8930059200	O-RING (AT)	1
MP20*	8930053030	2345 EAR TH PLATE	1
MP21	8850001981	PLAIN WASHER M10 10X16X0.8 ZC3	1
MP22	8930052280	O-RING (AC)	2
MP23	8930058790	2577 SP NET	1
MP24	8930055040	2438 CAP	1

## [LOGIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510023361	26FLT-SM2-TB (LF) (SN)	1
J2*	6510023511	28FLT-SM2-TB (LF) (SN)	1
J3*	6510023391	27FLZ-SM2-TB (LF) (SN)	1
J4*	6510023261	B6B-PH-SM4-TB (LF) (SN)	1
J6	6510021861	BH-800-4GG	1
J7*	6510019421	B8B-ZR-SM4-TF (LF) (SN)	1
J8*	6510021261	B9B-ZR-SM4-TF (LF) (SN)	1
J9*	6510021261	B9B-ZR-SM4-TF (LF) (SN)	1
J10*	6510025760	B5B-ZR-SM4-TF (LF) (SN)	1
DS1	5030003010	KMC12864-W-00-SPI	1
S1	2230000250	SPPH22014A	1
BT1*	3020000110	CR2032	1
MP1	8930058440	2577 LCD HOLDER	1
MP2	8210019060	2577 REFLECTOR	1
MP3	8930058910	2577 LCD SHEET	1
MP4	8930058900	RUBBER SHEET (BB)	2

## [MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510023361	26FLT-SM2-TB (LF) (SN)	1
J2*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1
J4*	6510018450	TMP-S01X-B1	1
W7*	7030010840	MJP-0.2-T	1
W8*	7120000490	ERD25T0	1
EP3	6910002161	CASE-BM7H-LF	1
MP1	8510014870	2577 RX-VCO CASE	1
MP2	8510014880	2577 TX-VCO CASE	1
MP3	8510014890	2577 DBM CASE	1
MP4	8510014890	2577 DBM CASE	1
MP5	8510015100	2577 SHIELD CASE	1
MP6	8930059350	2577 EARTH PLATE	1
MP8	8930005320	FILTER SPACER	3
MP9	8930063240	2577 EARTH SPRING	1
MP10	8930071140	2577 A-EARTH PLATE	1
MP11	8510018960	3075 SHIELD PLATE	1
MP12	8930076800	3075 C-EARTH SPRING	1
MP13	8930075850	3075 B-EARTH SPRING	1

## [AF UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510023511	28FLT-SM2-TB (LF) (SN)	1
J2*	6510022621	10FMN-BMTTR-A-TBT (LF) (SN)	1
J3	6510023541	B2B-PH-K-S (LF) (SN)	1
J4*	6510025141	10FLT-SM2-TB (LF) (SN)	1
J5	6510023421	SB4P-HVQ-A (LF) (SN)	1
J6*	6510019371	B3B-ZR-SM4-TF (LF) (SN)	1
J7	6510023541	B2B-PH-K-S (LF) (SN)	1
J8*	6510019371	B3B-ZR-SM4-TF (LF) (SN)	1
J9	6510020800	OP-10	1
J10	6510020800	OP-10	1
MP1*	8930070520	2914 S-EARTH SPRING	1

## [CONNECT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510022440	LTW-8MP-C	1
J2	6510022440	LTW-8MP-C	1
J3	6510023320	LTWD-06PMMP-LC	1
J4*	6510025141	10FLT-SM2-TB (LF) (SN)	1
W1**	8900016690	OPC-1772	1

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

\*\* : Refer to "GENERAL WIRING" for the connection.

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

**[DIAL UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	QTY.
S1	2250000470	EVQV9C00116E (NUT)	1
W1	8900011721	OPC-1187A	1

**[SQL UNIT]**

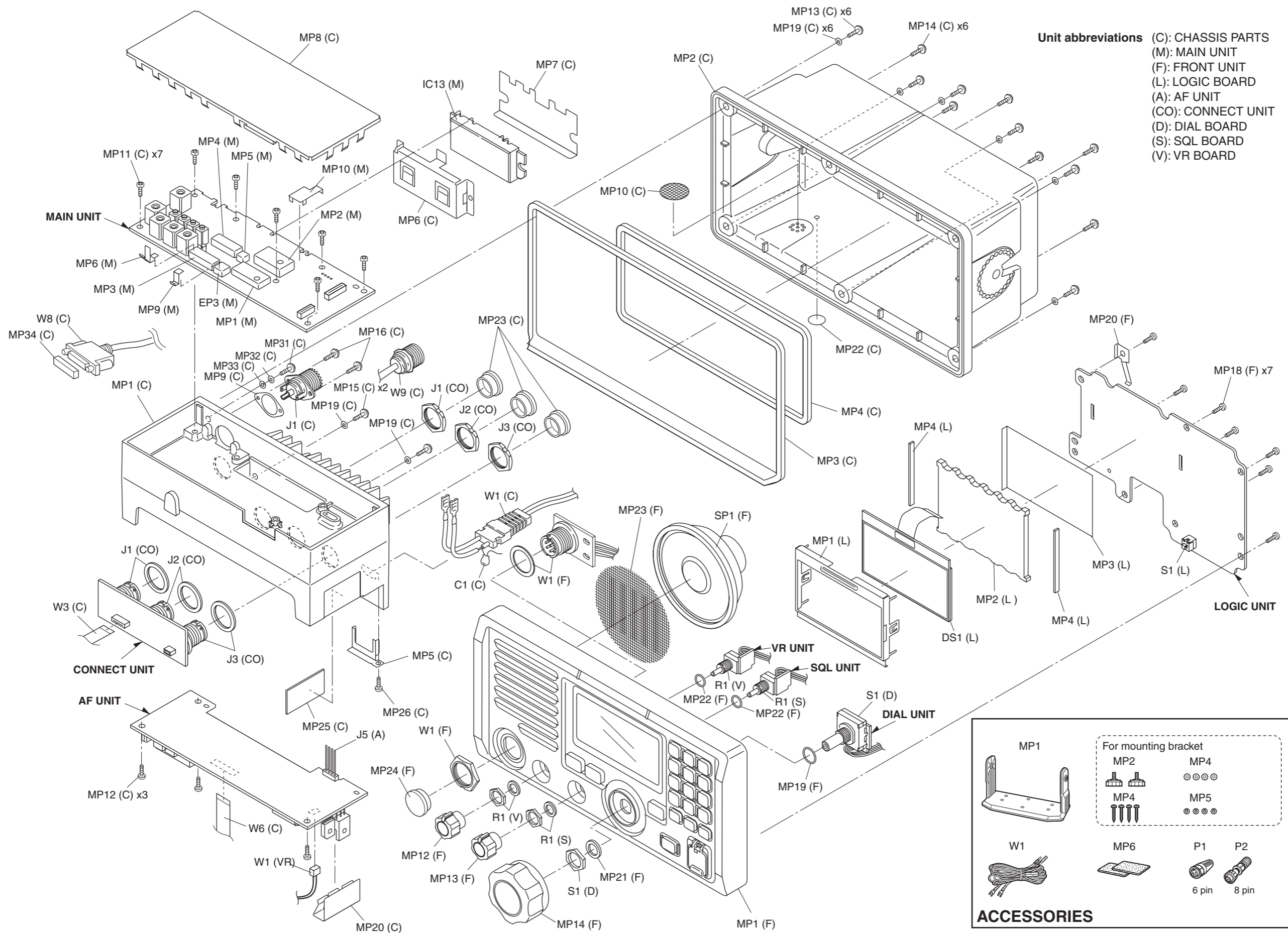
REF NO.	ORDER NO.	DESCRIPTION	QTY.
R1	7210002360	TP96N97 15F-10KB-1301	1

**[VR UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	QTY.
R1	7210003080	TP96N97-15F-10KA-2345	1
W1	8900015960	OPC-1186A	1

**[ACCESSORIES]**

REF NO.	ORDER NO.	DESCRIPTION	QTY.
P1	6510023310	LTWD-06BFFA-L180	1
P2	5610000480	LTWBD-08BFFA-LL7001	1
W1	8900017200	OPC-1842	1
MP1	8010018860	2455 BRACKET	1
MP2	8610010561	2040 KNOB BOLT-1	2
MP3	8810001490	SCREW BT A0 5X20 SUS	4
MP4	8850000180	FLAT WASHER M5 SUS	4
MP5	8850000500	S-WASHER M5 SUS	4
MP6	8930059480	SPONGE (GZ)	2

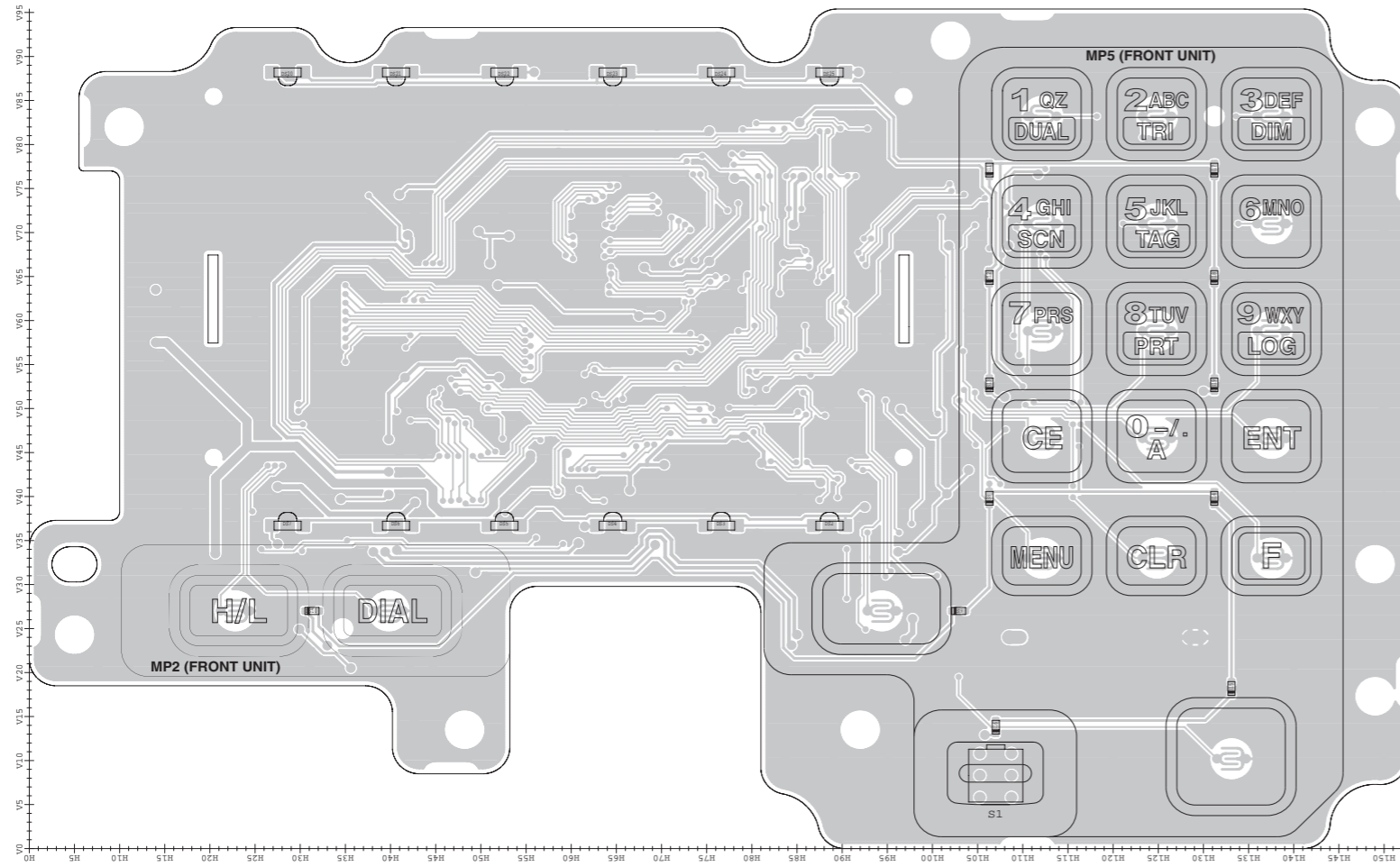




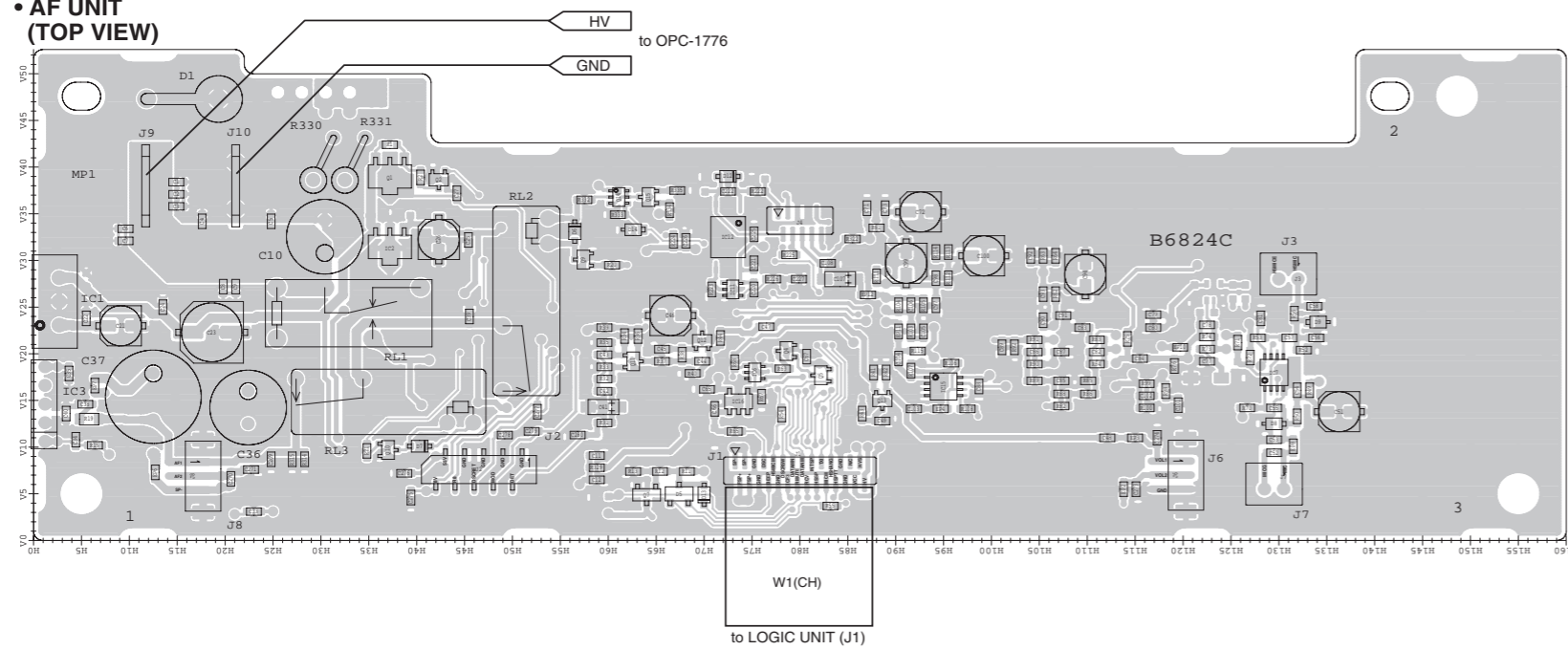
# SECTION 8

# BOARD LAYOUTS

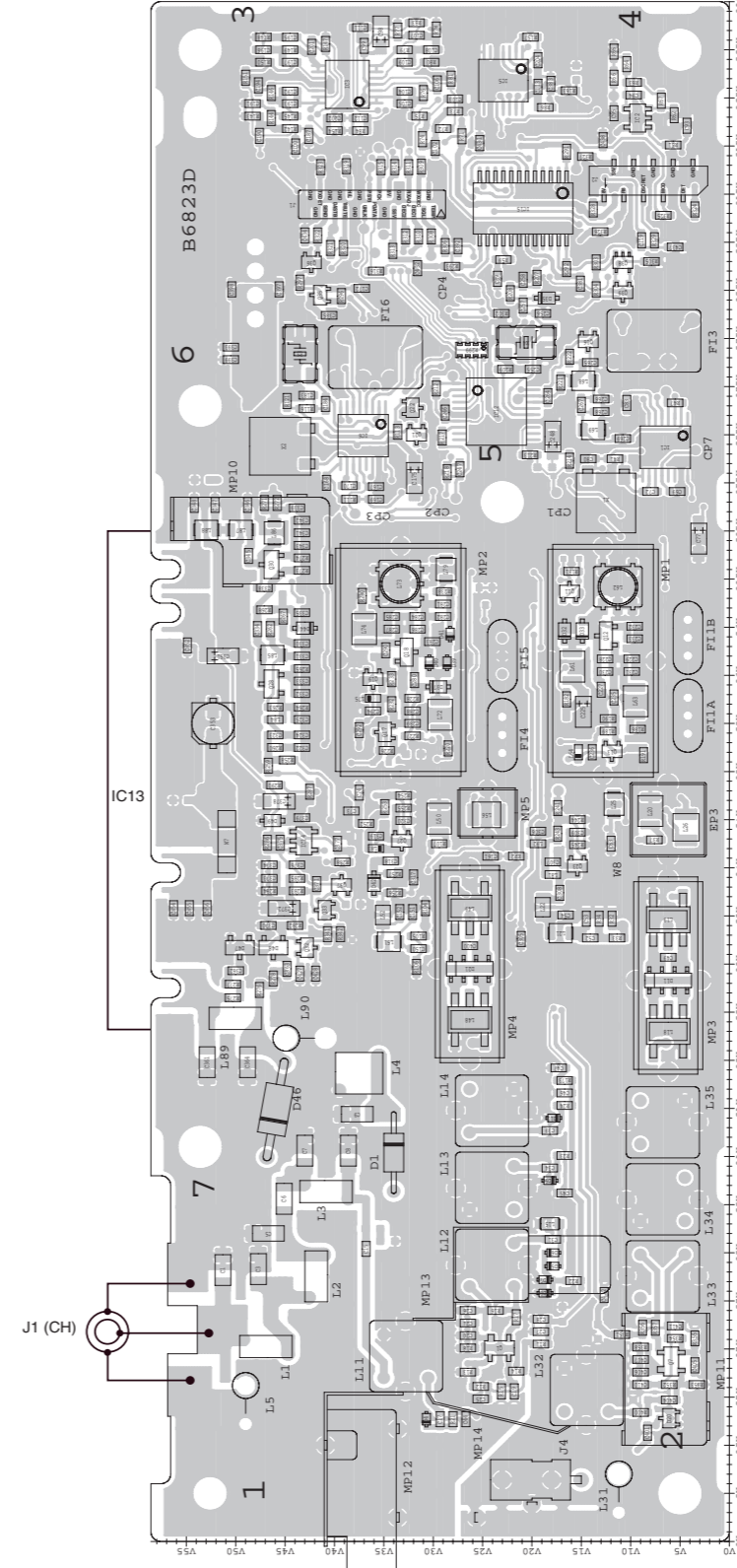
• LOGIC UNIT (TOP VIEW)



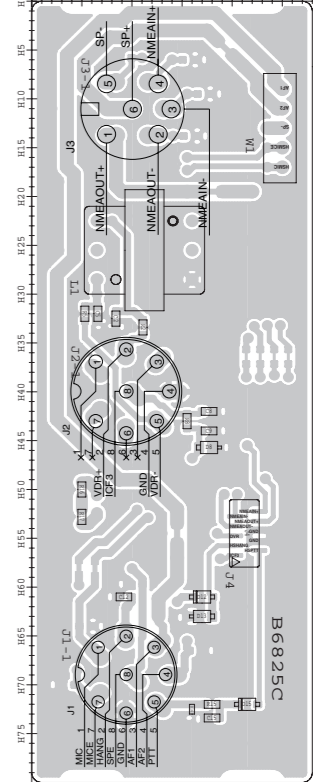
• AF UNIT (TOP VIEW)



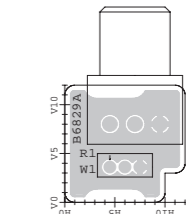
• MAIN UNIT (TOP VIEW)



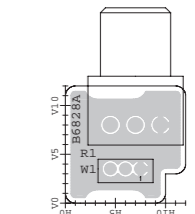
• CONNECT UNIT (TOP VIEW)



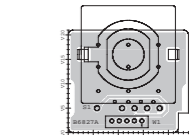
• SQL UNIT (TOP VIEW)



• VR UNIT (TOP VIEW)



• DIAL UNIT (TOP VIEW)

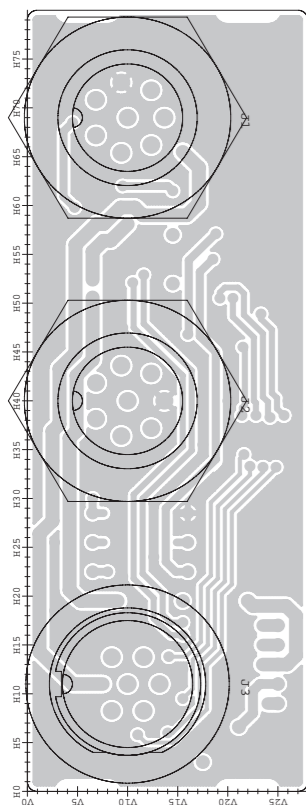


The combination of this side and the bottom side shows the board layout in the same configuration as the actual P.C.Board.

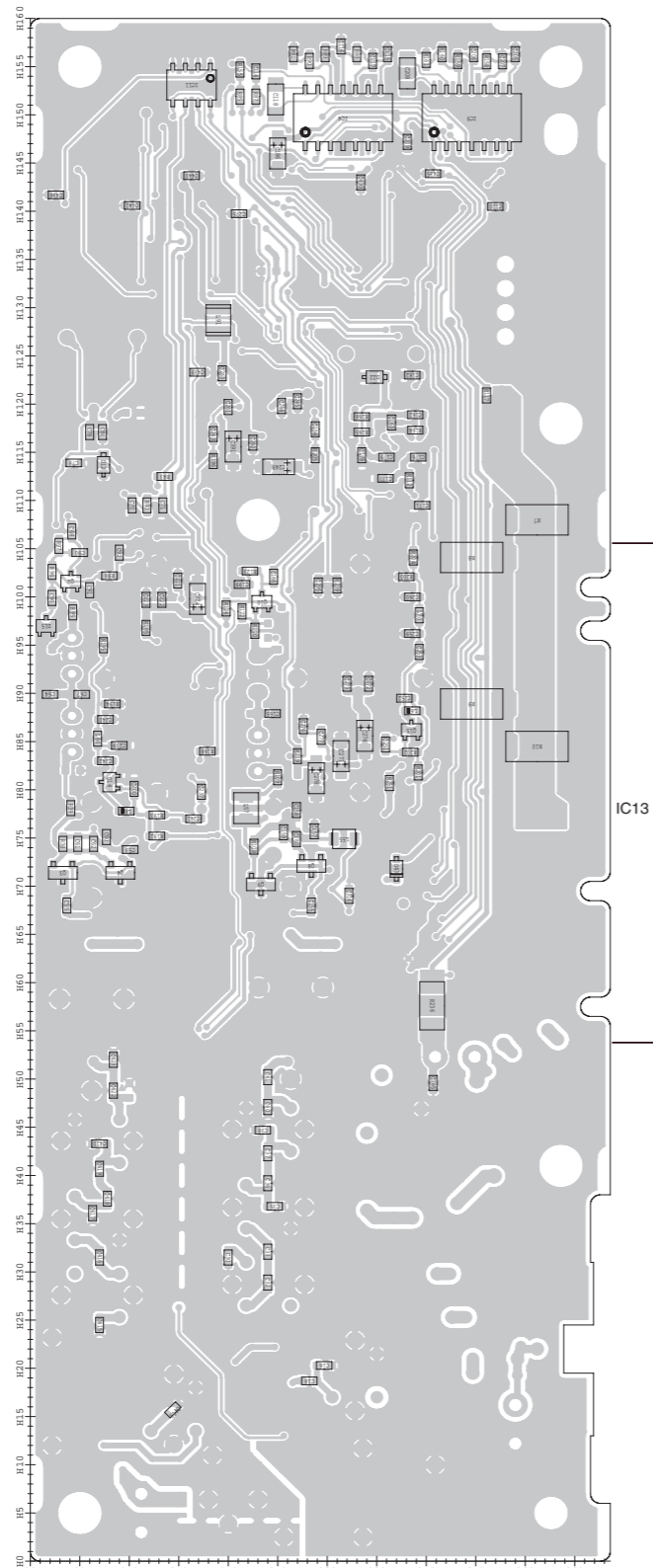


The combination of this side and the bottom side shows the board layout in the same configuration as the actual P.C.Board.

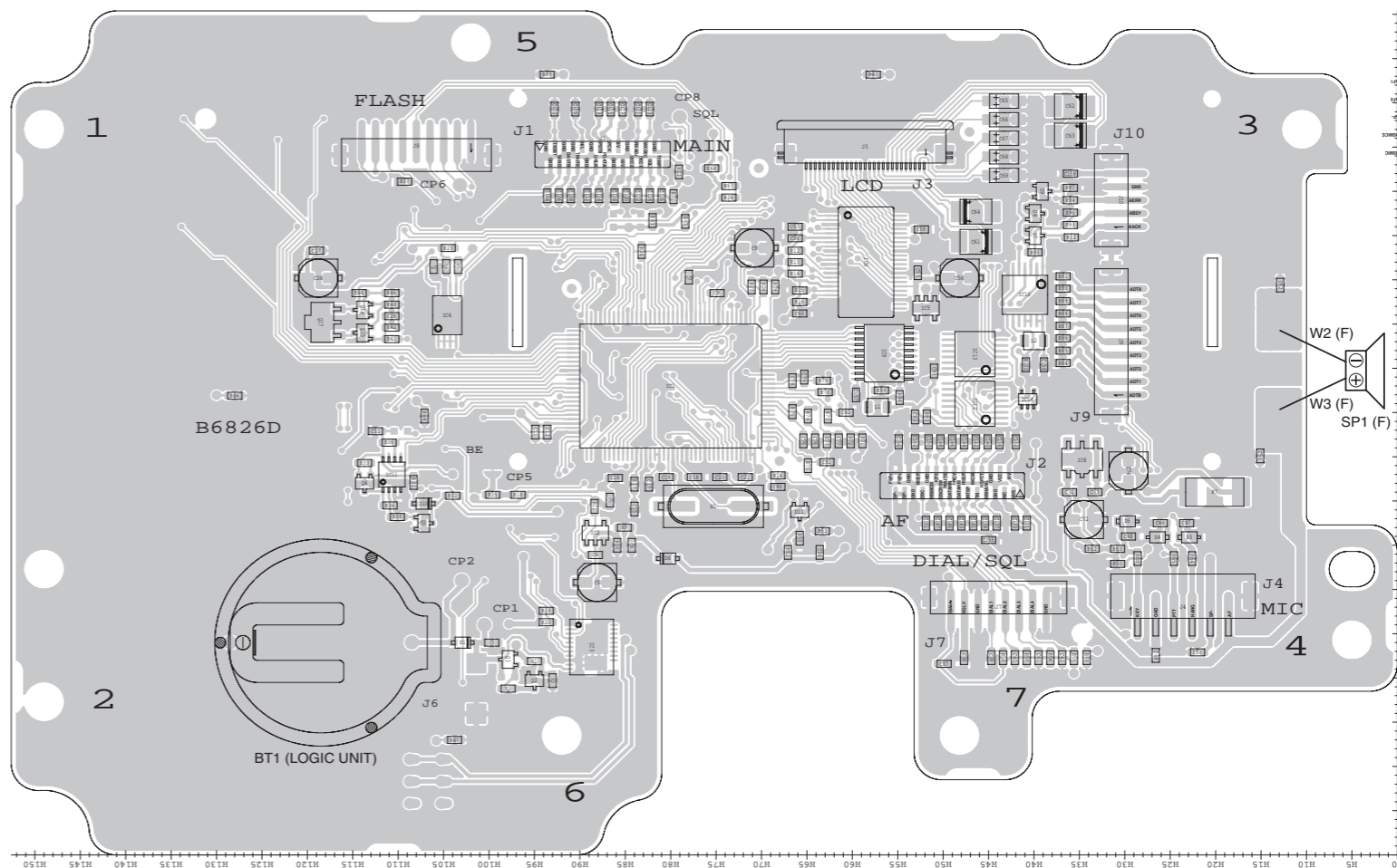
• CONNECT UNIT  
(BOTTOM VIEW)



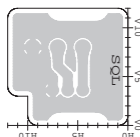
• MAIN UNIT  
(BOTTOM VIEW)



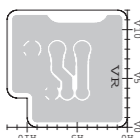
• LOGIC UNIT  
(BOTTOM VIEW)



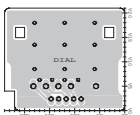
• SQL UNIT  
(BOTTOM VIEW)



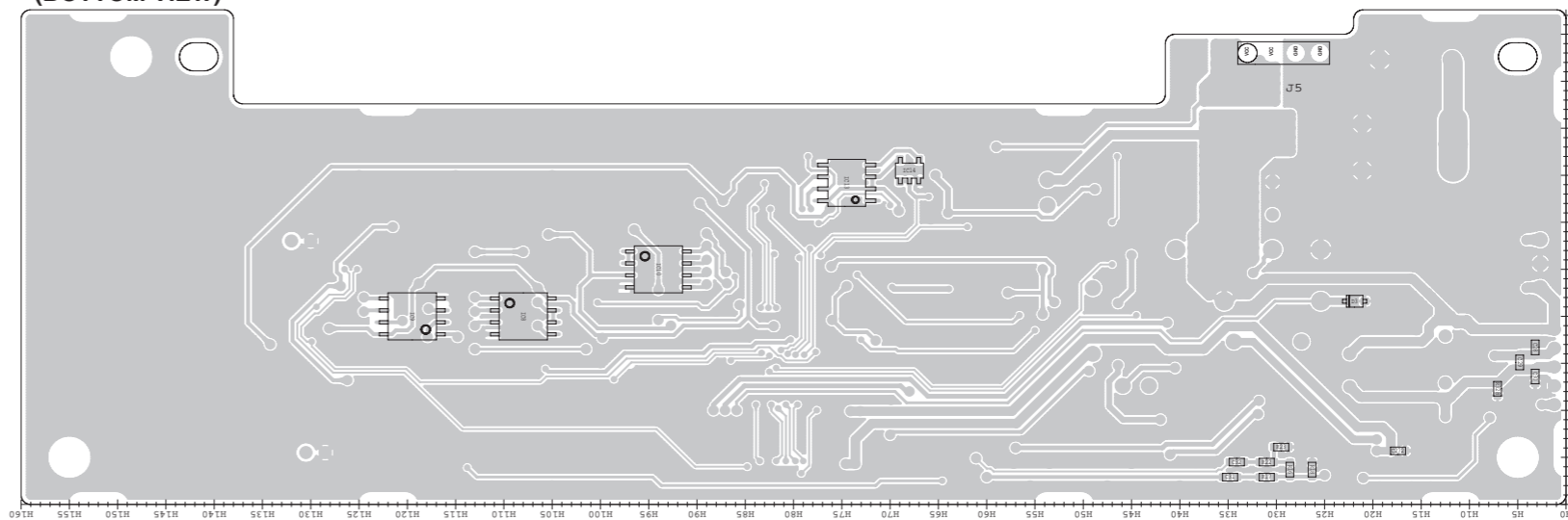
• VR UNIT  
(BOTTOM VIEW)



• DIAL UNIT  
(BOTTOM VIEW)

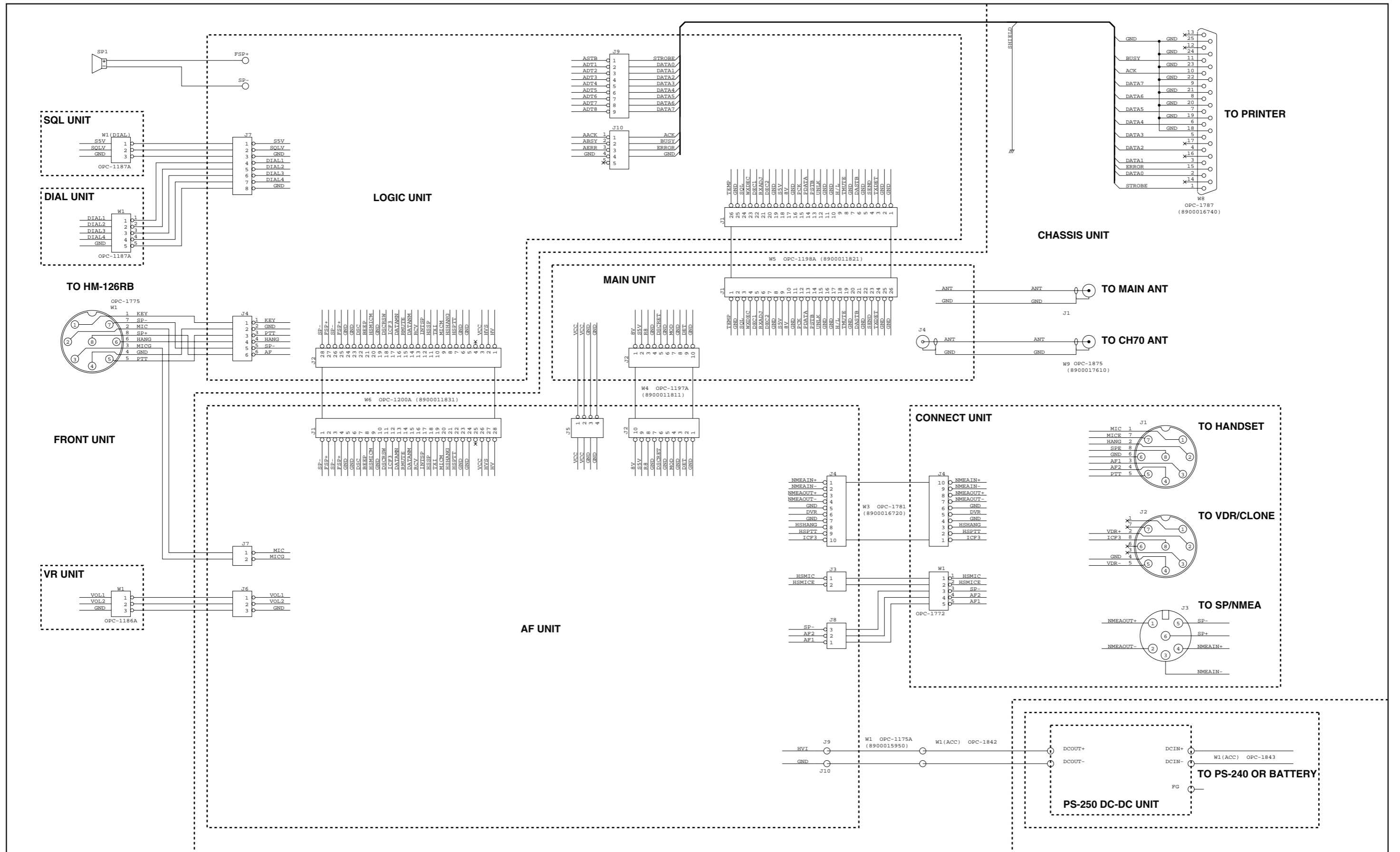


• AF UNIT  
(BOTTOM VIEW)



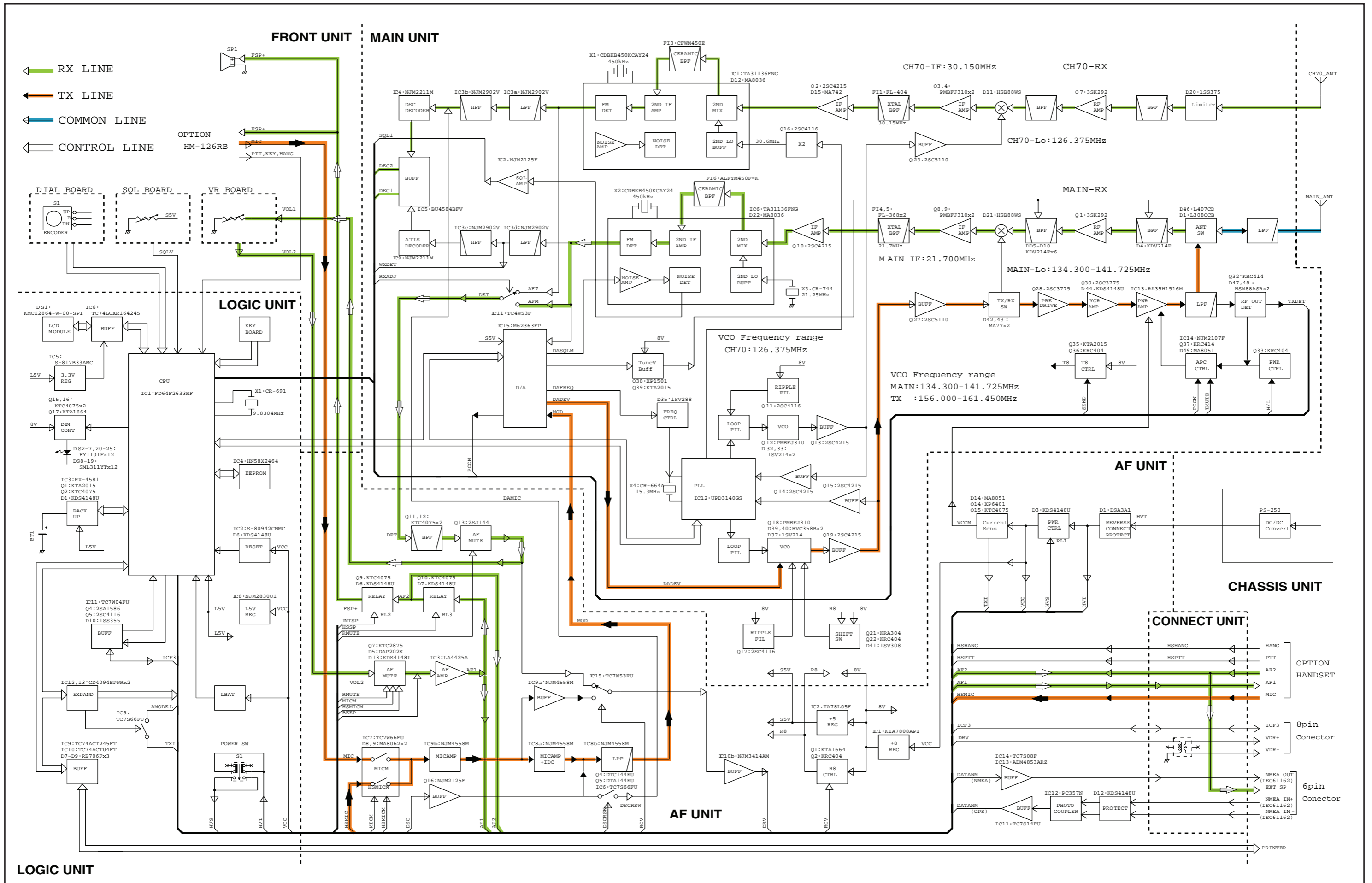
SECTION 9

GENERAL WIRING



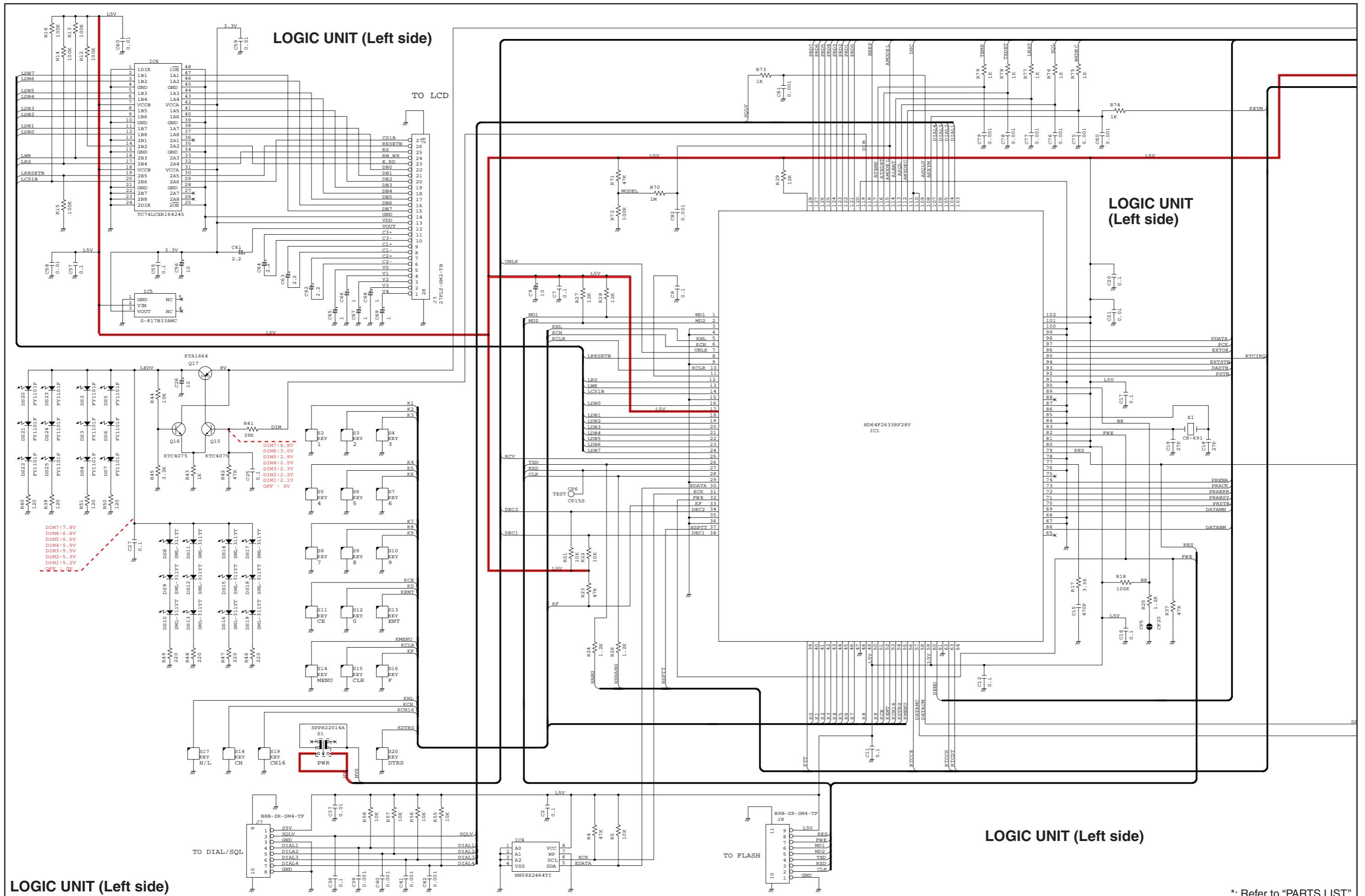
# SECTION 10

# BLOCK DIAGRAM

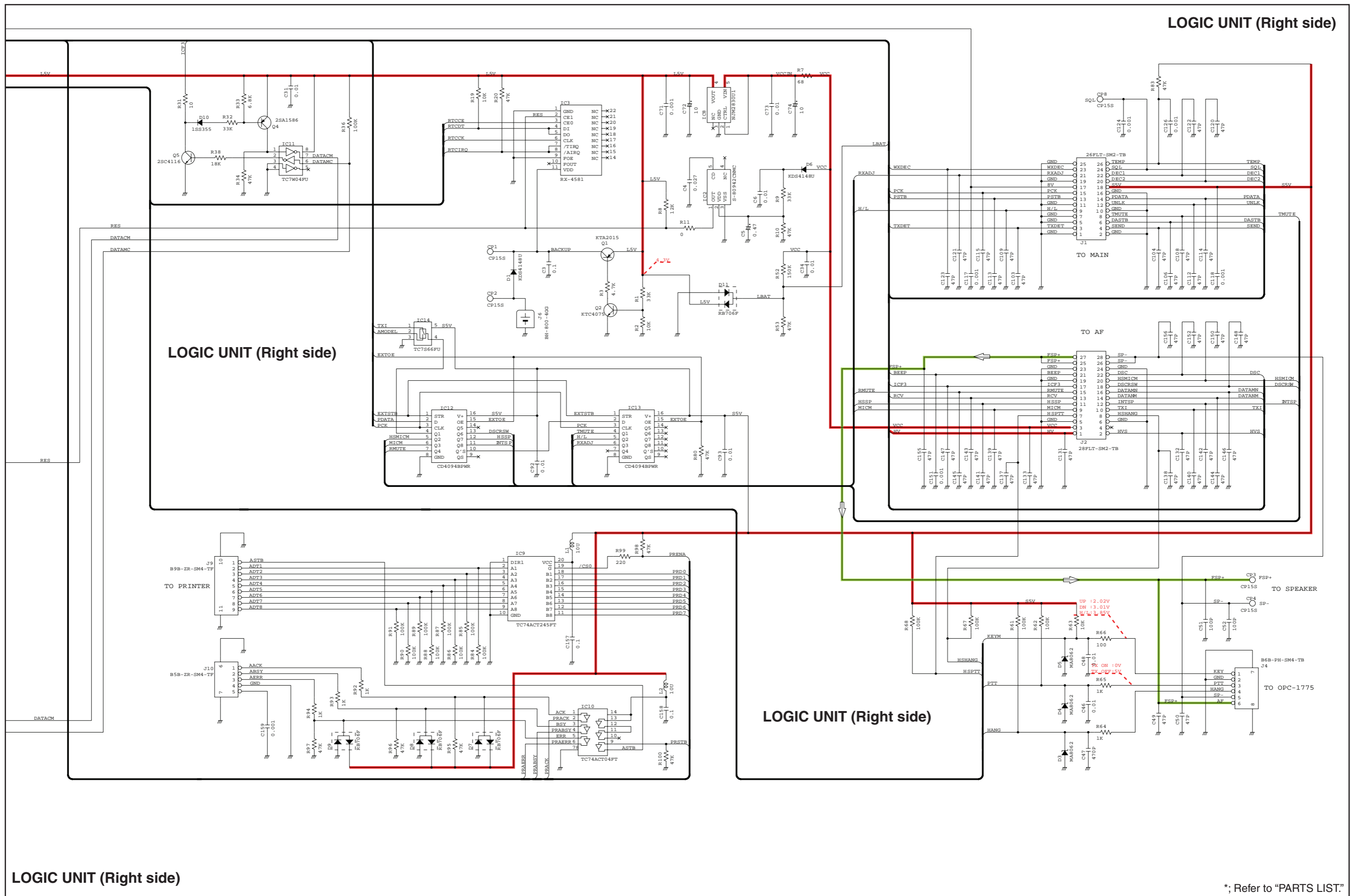


# SECTION 11

# VOLTAGE DIAGRAM



\*. Refer to "PARTS LIST."



LOGIC UNIT (Right side)

LOGIC UNIT (Right side)

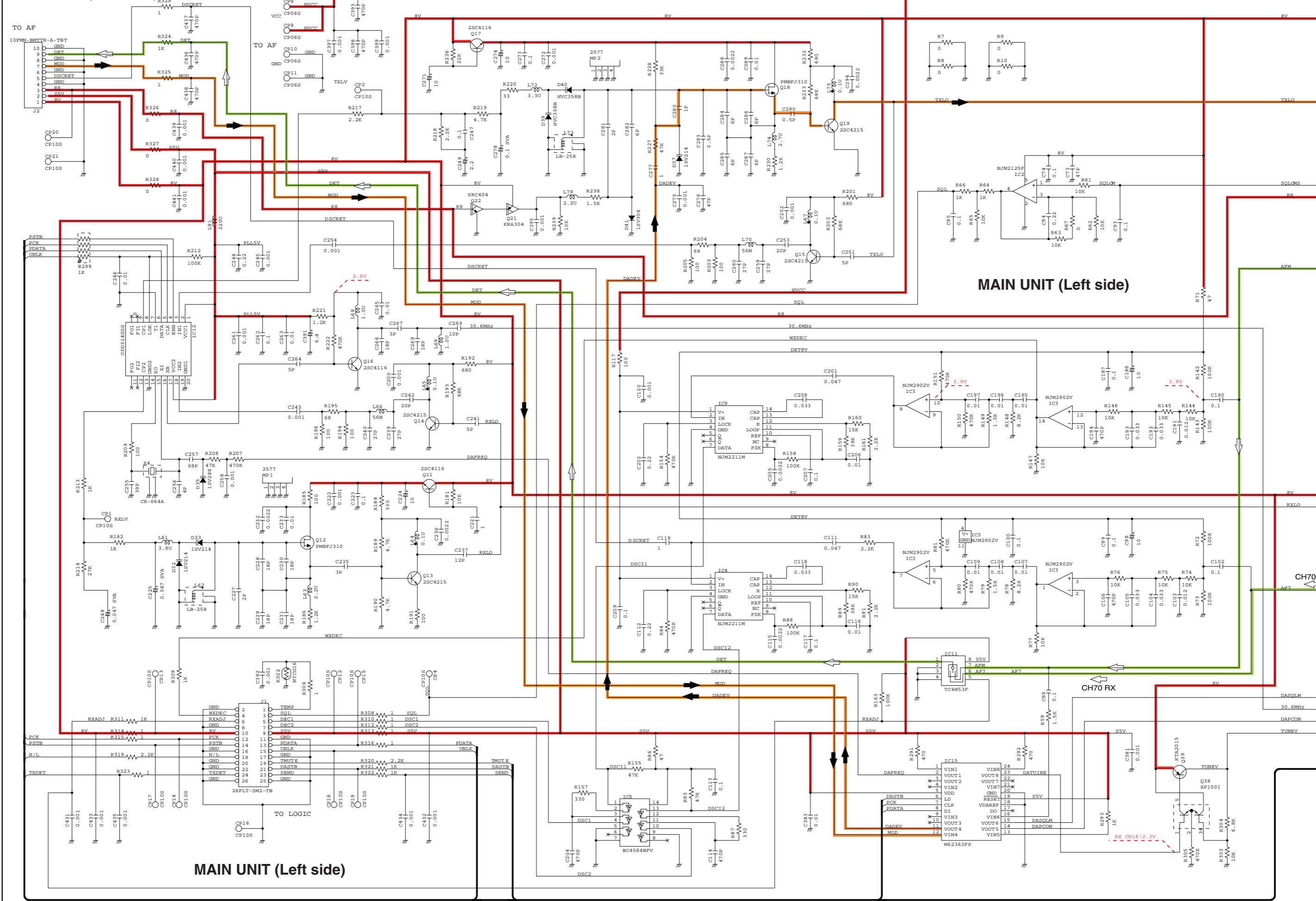
LOGIC UNIT (Right side)

LOGIC UNIT (Right side)

\*; Refer to "PARTS LIST"

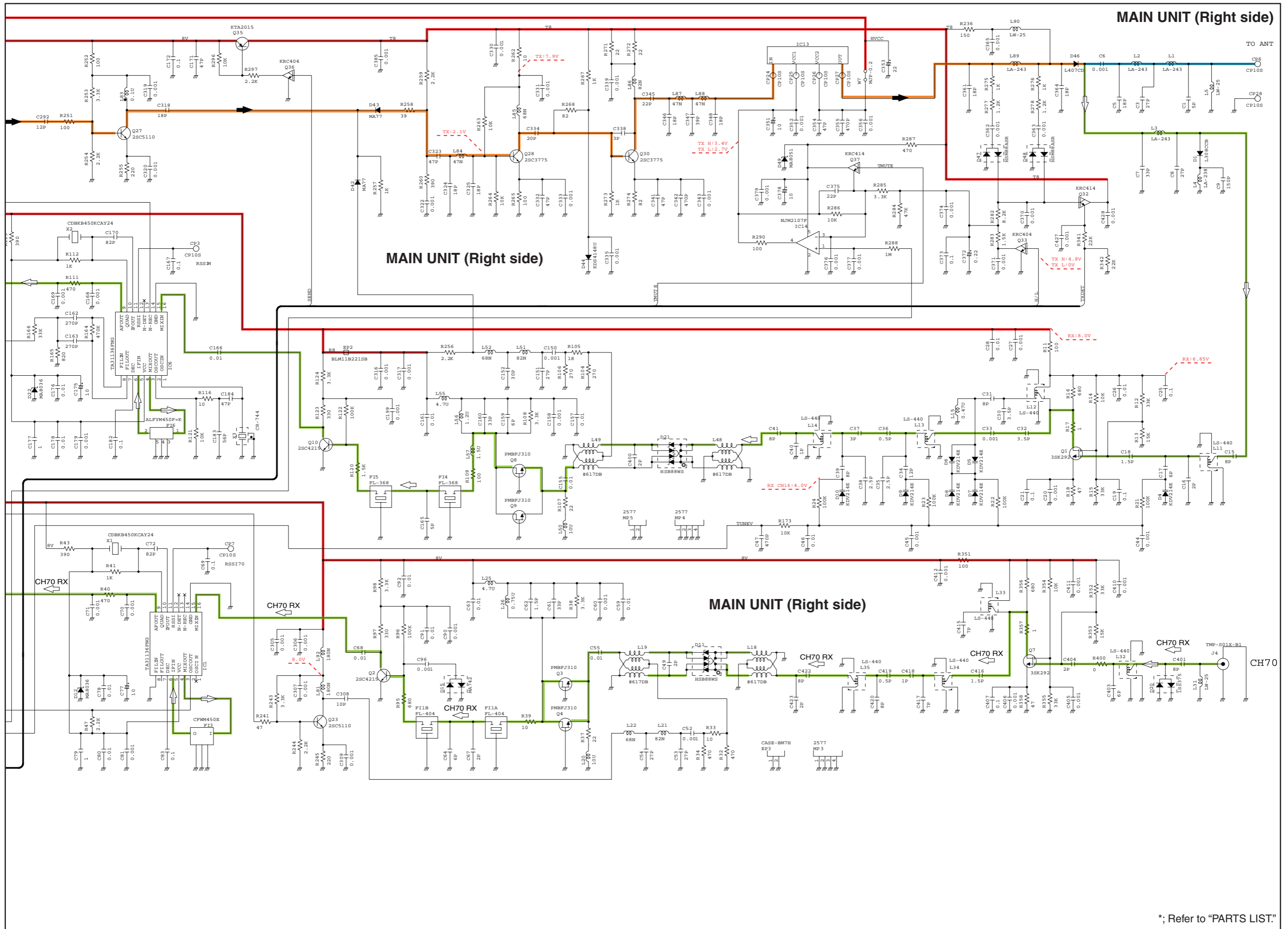


MAIN UNIT (Left side)



MAIN UNIT (Left side)

\*; Refer to "PARTS LIST."



**MAIN UNIT (Right side)**

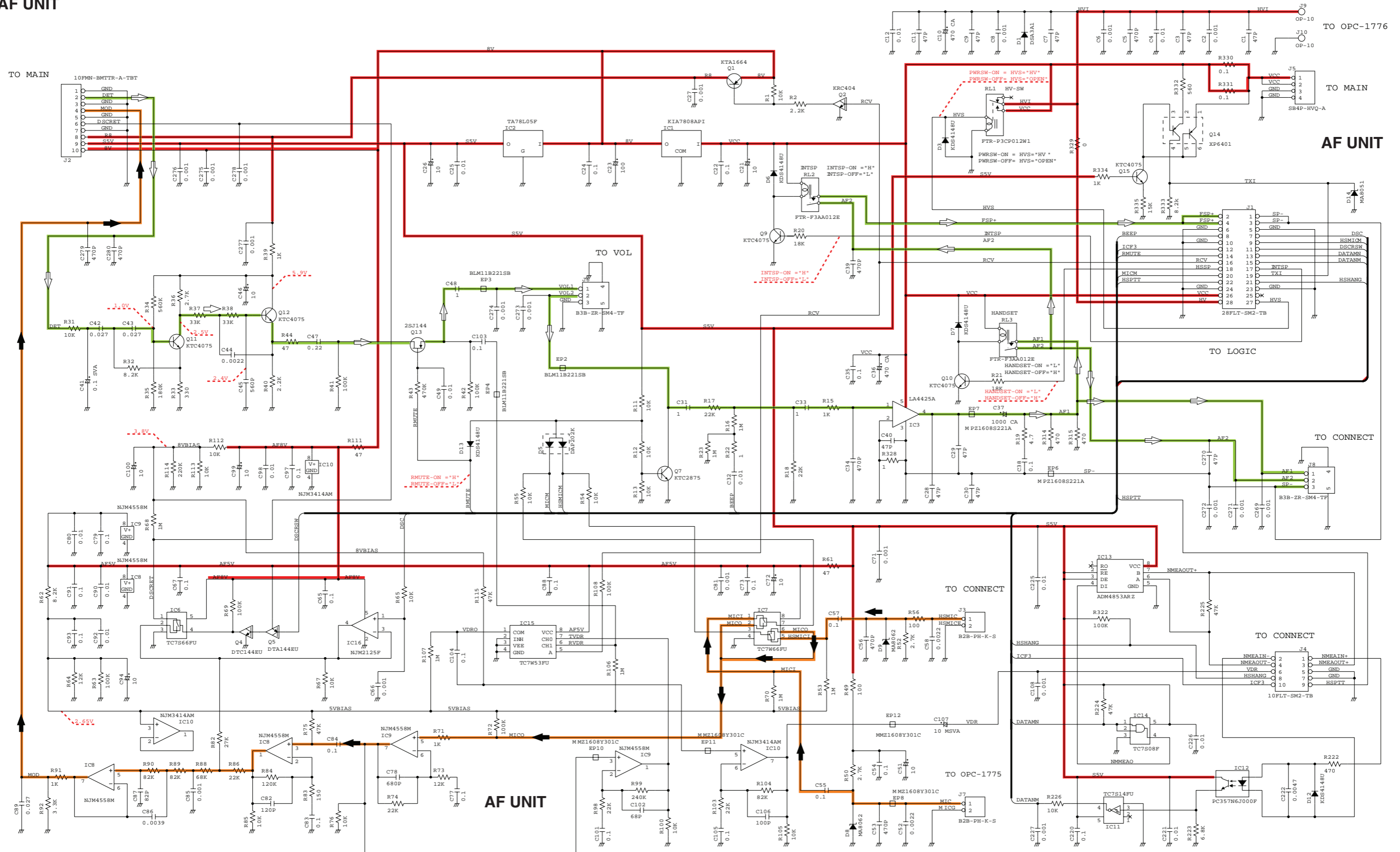
**MAIN UNIT (Right side)**

**MAIN UNIT (Right side)**

\*; Refer to "PARTS LIST."

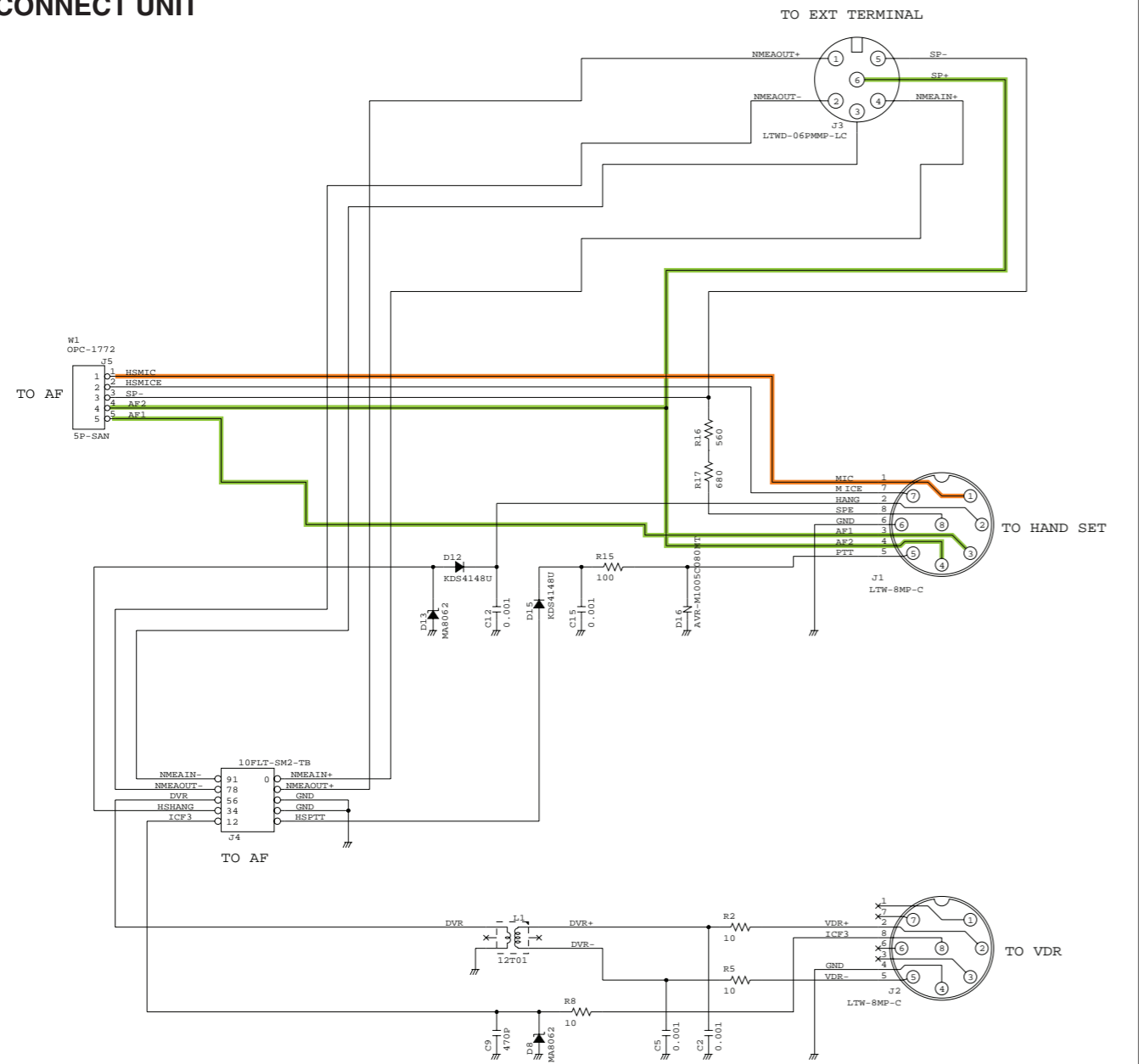


**AF UNIT**



\*; Refer to "PARTS LIST."

# CONNECT UNIT



\*; Refer to "PARTS LIST."

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