



# SERVICE MANUAL

HF MARINE TRANSCEIVER

## **IC-M710**

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Icom Inc.

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## INTRODUCTION

This service manual describes the latest service information for the **IC-M710** HF MARINE TRANSCEIVER at the time of publication.

5 versions of the **IC-M710** have been designed. This service manual covers each version.

| VERSION NO. | VERSION    |
|-------------|------------|
| #01         | US General |
| #02         | US Marine  |
| #03         | US GMDSS   |
| #11         | Eur Marine |
| #12         | Eur GMDSS  |

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

## DANGER

**NEVER** connect the transceiver to an AC outlet or to a DC power supply that uses more than 16 V. This will ruin the transceiver.

**DO NOT** expose the transceiver to rain, snow or any liquids.

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

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



## ORDERING PARTS

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

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

### <SAMPLE ORDER>

1110003140 IC LA1150N IC-M710 MAIN UNIT 5 pieces  
8810008560 Screw PH M3 x 8 SUS ZKIC-M710 Rear panel 10 pieces

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

## REPAIR NOTES

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

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## SECTION 1 SPECIFICATIONS

### ■ GENERAL

- Frequency coverage : Receive 0.5000–29.9999 MHz  
Transmit 1.6000–2.9999 MHz 4.0000–4.9999 MHz  
6.0000–6.9999 MHz 8.0000–8.9999 MHz  
12.0000–13.9999 MHz 16.0000–17.9999 MHz  
18.0000–19.9999 MHz 22.0000–22.9999 MHz  
25.0000–27.5000 MHz
- Mode : J3E (USB), H3E, J2B (AFSK), F1B (FSK), R3E, A1A (CW)  
(Available models differ depending on versions.)
- Number of channels : 1136 channels (max.)  
[160 (user programmable), 242 (ITU SSB duplex), 72 (ITU SSB simplex),  
662 (ITU FSK duplex)]
- Antenna impedance : 50  $\Omega$  (nominal)
- Usable temperature range : –30°C to +60°C (–22°F to +140°F)
- Frequency stability :  $\pm 10$  Hz (–30°C to +60°C; –22°F to +140°F)  
( $\pm 20$  Hz above 15 MHz for General and Marine versions)
- Power supply requirement : 13.6 V DC  $\pm 15\%$  Negative ground (U.S.A. versions)  
13.6 V DC  $\pm 15\%$  Floating ground (Europe versions)
- Current drain : Transmit (max. output power) 30 A  
Receive (max. audio output) 2.5 A (U.S.A. versions)  
3 A (Europe versions)
- Dimensions : 291.4 (W)  $\times$  315 (D)  $\times$  116.4 (H) mm  
(Projection not included) [11.3 (W)  $\times$  12.8 (D)  $\times$  4.4 (H) in.]
- Weight : 7.9 kg [17.4 lb.] (U.S.A. versions)  
8.1 kg [17.9 lb.] (Europe versions)

### ■ TRANSMITTER

- Output power (selectable) : U.S.A. versions 150, 60, 20 WPEP (60, 20 W only for 25 MHz band)  
Europe versions 150, 60 WPEP (60 W only for 250 MHz band)
- Spurious emissions : –65 dB (U.S.A. versions)  
–60 dB (Europe versions)
- Carrier suppression : 40 dB
- Unwanted sideband suppression : 55 dB
- Microphone impedance : 600  $\Omega$

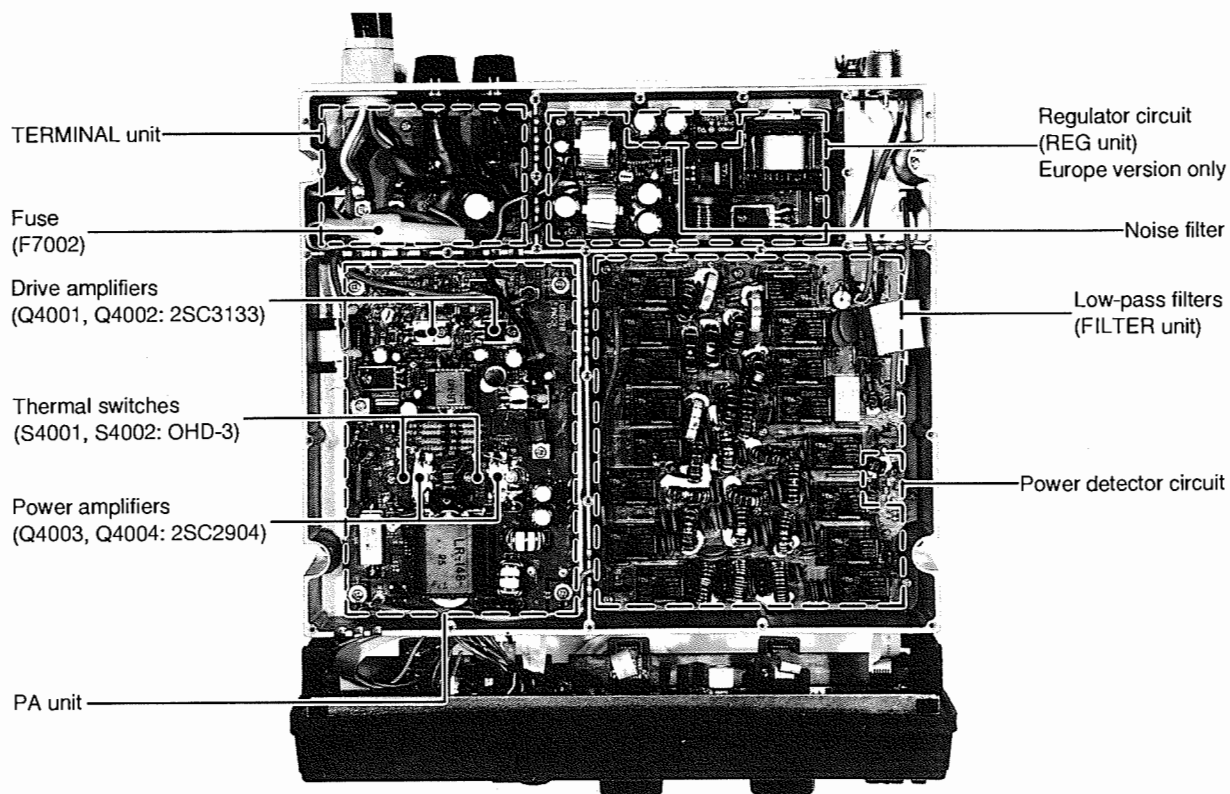
### ■ RECEIVER

- Sensitivity : J3E, R3E, J2B, F1B, A1A (for 12 dB SINAD):  
0.5  $\mu$ V (1.8000–29.9999 MHz)  
1.0  $\mu$ V (1.6000–1.7999 MHz)  
6.3  $\mu$ V (0.5000–1.5999 MHz)  
H3E (for 10 dB S/N): 3.2  $\mu$ V (1.8000–29.9999 MHz)  
6.3  $\mu$ V (1.6000–1.7999 MHz)  
32  $\mu$ V (0.5000–1.5999 MHz)
- Spurious response rejection : 70 dB (1.60000–29.9999 MHz)
- Audio output power : 4.5 W (at 10% distortion with a 4  $\Omega$  load)
- Audio impedance : 4 to 8  $\Omega$
- Clarity variable range :  $\pm 150$  Hz

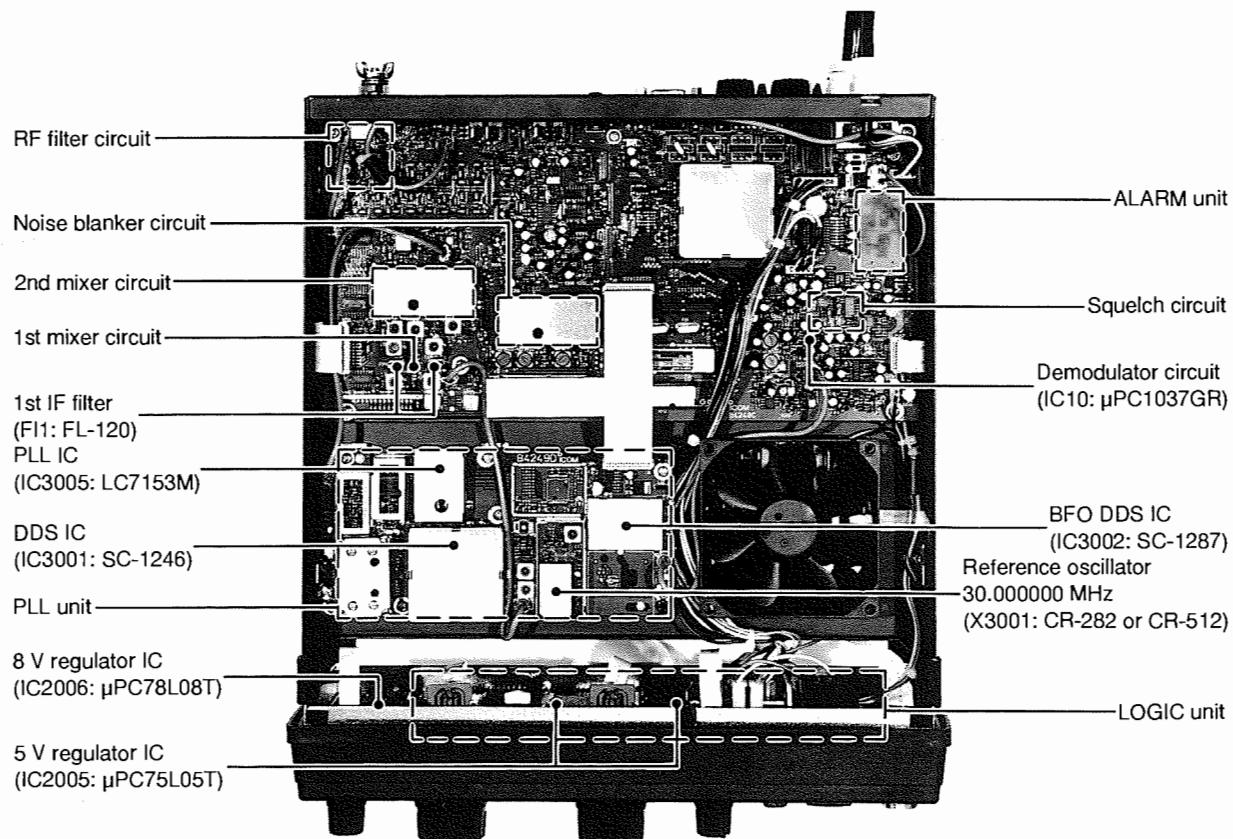
All stated specifications are subject to change without notice or obligation.

## SECTION 2 INSIDE VIEWS

### • PA, FILTER AND TERMINAL UNITS



### • MAIN, PLL AND LOGIC UNITS



## SECTION 3 CIRCUIT DESCRIPTION

### 3-1 RECEIVER CIRCUITS

#### 3-1-1 RF FILTER UNIT (MAIN UNIT)

Received signals from the antenna connector pass through the transmit/receive switching relay (FILTER unit RL4317) and are then applied to the MAIN unit (via J2).

The signals pass through the protection relay (RL2), 1.6 MHz cut-off high-pass filter (C4–C8, L2–L4) and are then applied to one of nine bandpass filters (incl. one low-pass filter for below 2.0 MHz). These filters are selected by the filter control signals (B0–B8) as described in the table below.

The filtered signals pass through the 30 MHz cut-off low-pass filter (L71, L72, C130–134) and are then applied to the 1st mixer circuit (Q6, Q7).

##### • RF FILTERS USED

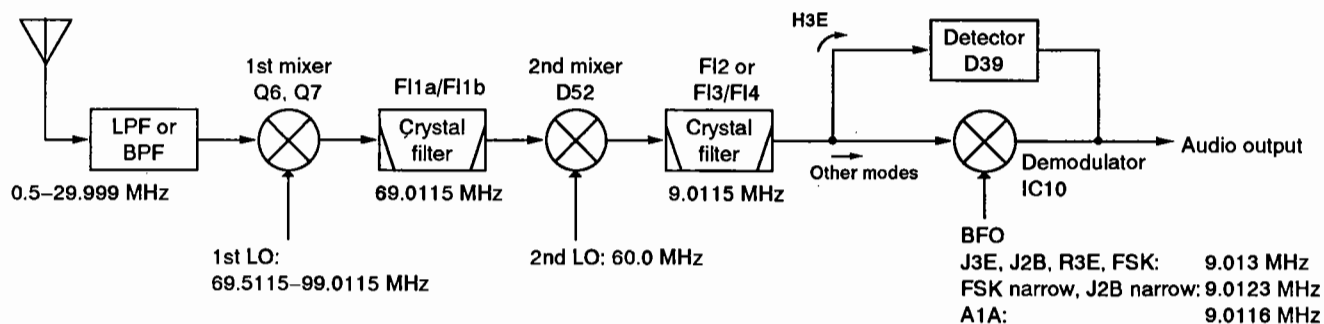
| Frequency (MHz) | Control signal | Entrance coil | Frequency (MHz) | Control signal | Entrance coil |
|-----------------|----------------|---------------|-----------------|----------------|---------------|
| 0.5–1.999       | B0             | L49           | 10–13.999       | B5             | L28           |
| 2–2.999         | B1             | L8            | 14–17.999       | B6             | L33           |
| 3–4.999         | B2             | L13           | 18–19.999       | B7             | L38           |
| 5–6.999         | B3             | L18           | 20–21.999       | B8             | L43           |
| 7–9.999         | B4             | L23           | 22–23.999       |                |               |
|                 |                |               | 24–29.999       |                |               |

#### 3-1-2 1ST MIXER AND IF CIRCUITS (MAIN UNIT)

The 1st mixer circuit converts the received signal into a fixed frequency, 69.0115 MHz 1st IF signal using the PLL output frequency. By changing the PLL frequency, only the desired frequency will be picked up at the pair of crystal filters (F11a, F11b) at the next stage.

The IF amplifier (Q8) and resonator circuits are designed between the filter pair. The PLL output signal (1LO) enters the MAIN unit via J3 and is amplified at Q5 and then applied to the 1st mixer (Q7, Q8).

##### • RECEIVER FREQUENCY CONSTRUCTION



#### 3-1-3 2ND MIXER AND IF CIRCUITS (MAIN UNIT)

The 1st IF signal from the crystal filter (F11b) is converted again into a 9.0115 MHz 2nd IF signal at the 2nd mixer circuit (D52, L66, L67). The 60 MHz 2nd local signal (2LO) enters the MAIN unit from the PLL unit via J4 to be applied to the 2nd mixer.

The 2nd IF signal is passed through the noise blanker gate (D15, D16) and amplified at the 2nd IF amplifier (Q16) and then applied to one of the 9 MHz IF filters as described below. The passed signal is amplified at the two stage 2nd IF amplifiers (Q32, Q33) and is applied to a demodulator circuit (D39 for H3E or IC10 for J3E and others).

##### • 2ND IF FILTERS USED

| Mode                   | Used filter             | Control signal        |
|------------------------|-------------------------|-----------------------|
| J3E, R3E, A1A, FSK     | F12                     | SEL8; low; H3E8: low  |
| H3E                    | F13/F14                 | SEL8; low; H3E8: high |
| FSK narrow, A1A narrow | Optional narrow filter* | SEL8; high; H3E8: low |

\*Built-in to the GMDSS versions

#### 3-1-4 NOISE BLANKER CIRCUIT (MAIN UNIT)

The noise blanker circuit cuts off the IF circuit line at the moment of receiving a pulse-type noise.

A portion of the 2nd IF signal between resonator circuits (L83, L84 after stage of the 2nd mixer, D52) is amplified at the noise amplifiers (Q9, IC8, Q11). The signal is then detected at the noise detector (D17) to convert the noise components to DC voltages.

The signals are then applied to the noise blanker switch (Q13, Q14). At the moment the detected voltage exceeds the Q13's threshold level, Q14 outputs a blanking signal to close the noise blanker gate (D15, D16) by applying reverse-biased voltage. Q15 turns the noise blanker circuit ON and OFF.

The detected voltage is also applied to the noise blanker AGC circuit (Q12, Q10) and is then fed back to the noise amplifier (IC8) as a bias voltage. The noise AGC circuit prevents closure of the noise blanker gate for long periods by non-pulse-type noise. The time constant of the noise blanker AGC circuit is determined by R58 and C114.

### 3-1-5 DEMODULATOR CIRCUIT (MAIN UNIT)

This circuit mixes the 2nd IF and BFO signals to pick up the AF components (except H3E mode). The 2nd IF signal from Q33 is applied to the balanced mixer (IC10 pin 6). The 9.0106–9.013 MHz BFO signal from the PLL unit is also applied to IC10 (pin 8). AF signals are output from pin 3 and are then applied to the AF circuits.

### 3-1-6 H3E DETECTOR CIRCUIT (MAIN UNIT)

The 2nd IF signal from Q33 is applied to the AM detector circuit (D39) to be demodulated into AF signals. The detected signals are amplified at Q45 and are then applied to the AF circuits.

### 3-1-7 AGC CIRCUIT (MAIN UNIT)

The AGC (Automatic Gain Control) circuit reduces IF amplifier gain to prevent the receiver circuit from distorting and to keep the audio output at a constant level.

A portion of the IF signals from the 2nd IF amplifier (Q33) is detected at the AGC detector circuit (D31) and is then applied to the AGC amplifier (Q41) to control the AGC time constant line. The reference voltage of the AGC line is controlled by the "RFG" line which comes from the CPU for the RF gain settings.

When receiving a strong signal, the detected voltage increases and the voltage of the AGC line is decreased by Q41 via the –5 V voltage line. The AGC line is used for the bias voltage of the IF amplifiers (Q8, Q16, Q32, Q33), so that these amplifiers reduce gain.

When the strong signal disappears, the AGC line voltage is released by C245/R268 and C670/R813.

The AGC switch (Q42, D38) turns the AGC circuit OFF when the AGC OFF function activates. The AGC-fast switch (Q131) sets the AGC line as fast-release during scanning, A1A mode selection, and DSC operation.

### 3-1-8 S-METER CIRCUIT (MAIN UNIT)

The S-meter indicates the AGC level on the display, since the AGC level varies with the received signal strength.

The AGC bias voltage (AGC time constant line) from Q41 is inverted and amplified at IC19b. The amplified signal is applied to the CPU via the "RSM" line.

### 3-1-9 AF AMPLIFIER CIRCUITS (MAIN AND LOGIC UNITS)

AF signals from the demodulator or H3E detector circuit pass through the active low-pass filter (IC20b) and squelch gate (IC12a), and are then applied to the electronic volume control (IC36). The CPU (pin 37) outputs the volume control signal (1 to 5 V) according to the [VOLUME] control setting.

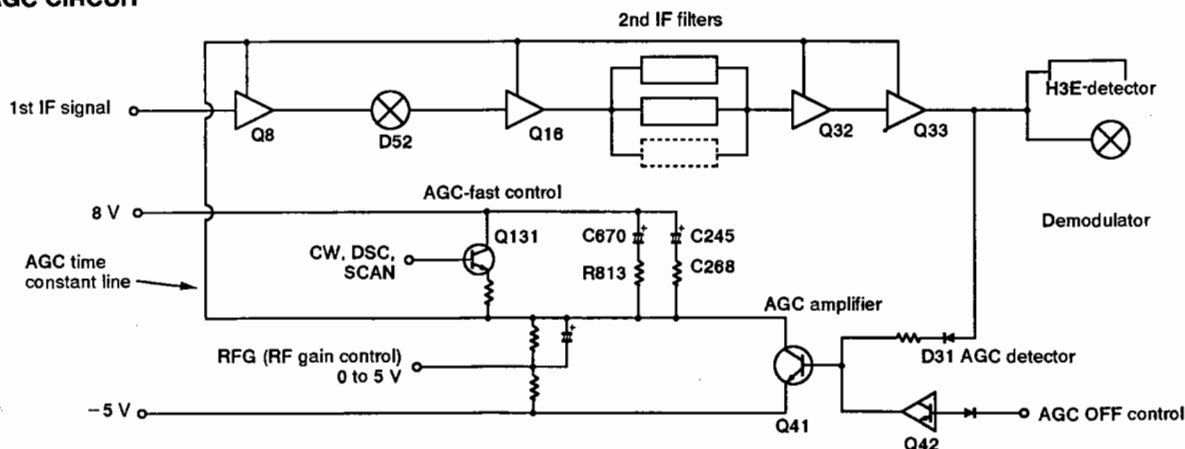
The AF output signals from IC36 (pin 9) are applied to the LOGIC unit via J23. The signals are amplified at the AF power amplifier (IC2007) and then applied to the internal speaker via the microphone connector (pins 3 and 4) and external [SP] jack via the MAIN unit.

The speaker switch relay (RL2001) is connected to the ⊖ terminal of the internal speaker for the [SPEAKER] switch function.

### 3-1-10 SQUELCH CIRCUIT (MAIN UNIT)

The transceiver has two squelch circuits, voice activated squelch for J3E/H3E and S-meter squelch for A1A/FSK.

#### • AGC CIRCUIT



### (1) AF ACTIVATED SQUELCH

A portion of the AF signal from the active low-pass filter (IC20b) is amplified at the limiter amplifier (IC20a) and is then applied to the one-shot multi-vibrator (IC22c, IC22d). The one-shot multi-vibrator functions as an F-V converter which generates a signal only when audio signals are received.

The output signals pass through the NOR gate (IC22b) and then the 3 Hz low-pass filter (IC21a) to remove the remaining noise components. The filtered signal is applied to the window comparator (IC21b). The NOR gate (IC22b) deactivates the audio activated squelch during A1A/FSK/J2B mode operation.

The comparator outputs "High" when the integrated signals exceed the reference voltage. C269, R310 and R780 are used as a time constant circuit. The resulting signal output from IC22a is inverted at Q46 and is then applied to the CPU as the "SQL S" signal. The CPU controls the squelch gate (IC12a) when the "SQL S" signal is received.

### (2) S-METER SQUELCH

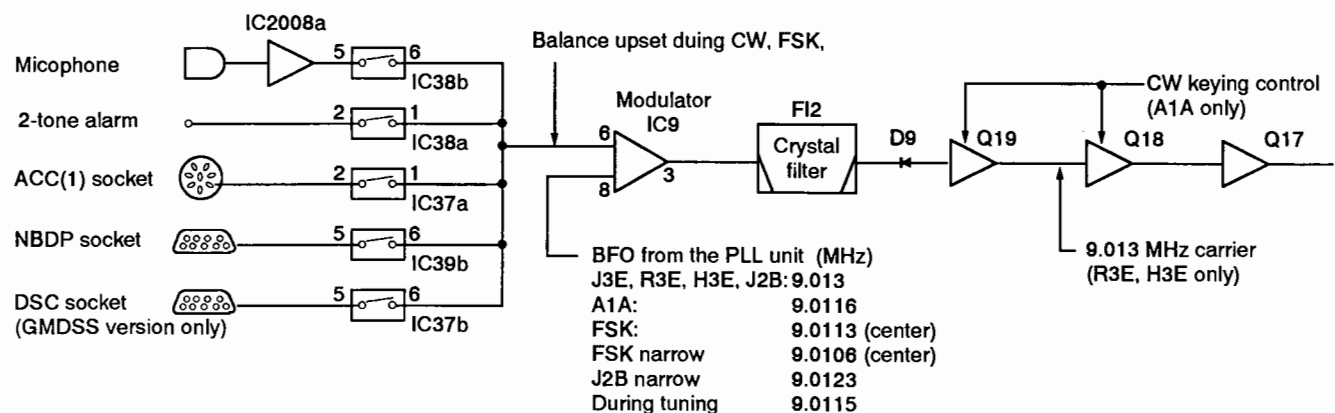
The S-meter signal from IC19b is applied to the squelch comparator (IC19a) to close or open the squelch circuit. The reference voltage is adjusted by R257 and then applied to the  $\ominus$  terminal of the comparator (IC19a). When the S-meter signal exceeds the reference voltage, the comparator outputs "High" to the CPU via IC22a and Q46 in the same manner as the voice activated squelch circuit.

## 3-2 TRANSMITTER CIRCUITS

### 3-2-1 MICROPHONE AMPLIFIER CIRCUIT (LOGIC UNIT)

The AF signals from the [MICROPHONE] connector are amplified at the AF amplifier (IC2008a) and are applied to the balanced modulator (MAIN unit IC9) via the AF switch (IC38b). The microphone AGC circuit (D2008, D2009, Q2009) controls the amplifier gain to prevent signal distortion.

#### • MODULATOR CIRCUIT



External modulation inputs from the ACC, NBDP, DSC sockets or a 2-tone emergency signal from the CPU are applied to the balanced modulator directly via AF switches (IC37-IC39).

### 3-2-2 MODULATION CIRCUIT (MAIN UNIT)

#### (1) J3E AND J2B MODES

The balanced modulator is used for J3E and J2B modes to add the audio signal to the BFO frequency and outputs the IF signal while suppressing the BFO signal.

The AF signals from the microphone amplifier or external audio from the modulation terminals are applied to the balanced modulator (IC9 pin 6). The BFO signal from the PLL unit is applied to IC9 (pin 8) as a carrier signal. A double sideband signal is output from IC9 (pin 3) and is then applied to the 9 MHz filter (F12) to create an SSB signal.

R238 and R239 adjust the balanced level of IC9 for maximum carrier suppression. In J2B mode, the BFO frequency is shifted 1.7 kHz to set the transmit frequency the same as the displayed frequency.

The SSB signal from F12 is amplified at the 9 MHz amplifiers (Q17-Q19) and is then applied to the mixer circuit (D52). The switching diode (D19) is turned ON when R8 voltage disappears.

#### (2) H3E AND R3E MODES

An SSB signal is applied to the IF amplifier (Q18) in the same manner as with J3E/J2B mode. The BFO signal from the PLL unit is amplified at Q30 and is then applied to the IF amplifier (Q18) as a carrier signal to be added to an SSB signal. R211 and R212 adjust the carrier levels in H3E and R3E modes, respectively.

#### (3) A1A AND FSK MODES

The CW8 or FSK8 voltages are applied to the balanced modulator (IC9 pin 6) to upset the balance and create a carrier signal.

In A1A mode, the CW keying circuit (IC18a) controls the bias voltage of the IF amplifiers (Q18, Q19) and T/R switching diode (D19) to switch the carrier transmission.

In FSK mode, BFO frequency is shifted in the PLL unit to create the mark and space frequencies.

### 3-2-3 1ST MIXER CIRCUIT (MAIN UNIT)

The amplified signal from the IF amplifier (Q17) is mixed with a 60 MHz LO signal at the 1st mixer circuit (D52) to produce a 69.0115 MHz IF signal. The mixer is commonly used with the receiver 2nd mixer.

The 69.0115 MHz IF signal passes through the filter (F11b) and is then applied to the 2nd mixer circuit.

### 3-2-4 2ND MIXER CIRCUIT (MAIN UNIT)

The filtered signal is mixed with a PLL output frequency (1LO; 69.5155–99.0155 MHz) at the 2nd mixer circuit (Q3, Q4) to produce an RF signal which is the same frequency as the displayed one.

### 3-2-5 RF FILTER CIRCUIT (MAIN UNIT)

The RF signal passes through the low-pass filter (L55, L56, C89–C93) and is then amplified at the RF amplifier (Q2).

The amplified signal is applied to one of nine RF filters. These RF filters are commonly used with the receiver circuit which consists of eight high-pass filters and one low-pass filter. The filtered signal is amplified at Q1 and is then applied to the PA unit via J1.

### 3-2-6 POWER AMPLIFIER CIRCUIT (PA AND FILTER UNITS)

This circuit provides a stable 150 W (at 13.6 V DC) of output power. The RF signal from the MAIN unit is amplified at the pre-driver (Q4008), drivers (Q4001, Q4002) and power amplifier (Q4003, Q4004).

The driver and power amplifiers form class AB push-pull circuits. Bias voltage to these transistors is produced by diodes (D4001–D4003) which have temperature junctions with the transistors.

The amplified signal is then applied to one of eight low-pass filters to suppress high harmonic components. The filtered signal passes through the power detector circuit (L4341) and transmit/receive switching relay (RL4317) and is then applied to the antenna connector.

### • LOW-PASS FILTERS USED

| Frequency (MHz) | Control signal | Entrance relay | Frequency (MHz) | Control signal | Entrance relay |
|-----------------|----------------|----------------|-----------------|----------------|----------------|
| 0.5–1.999       | L0             | RL4301         | 10–13.999       | L5             | RL4311         |
| 2–2.999         | L1             | RL4303         | 14–17.999       | L6             | RL4313         |
| 3–4.999         | L2             | RL4305         | 18–19.999       |                |                |
| 5–6.999         | L3             | RL4307         | 20–21.999       | L7             | RL4315         |
| 7–9.999         | L4             | RL4309         | 22–23.999       |                |                |
|                 |                |                | 24–29.999       |                |                |

### 3-2-7 ALC CIRCUIT

The transceiver has two ALC (Auto Level Control) loops for constant output power over all marine bands and for high power setting.

#### (1) IF ALC CIRCUIT (MAIN UNIT)

A portion of the IF signals from Q17 is applied to the IF ALC circuit. The signal is amplified at Q126 and then detected at the ALC detector (D46). The detected signal is amplified at the ALC amplifier (IC17b) and is then applied to the comparator (IC17a).

The reference voltage for the comparator is set by R184. The antenna tuning control voltage (TUN8) and low power set signal (POC1) are also affected by the reference voltage to decrease the IF signal level.

The comparator output controls the gate bias of the IF amplifier (Q19), so that the IF signal level is determined by the reference voltage of the comparator (IC17a).

#### (2) RF ALC CIRCUIT (FILTER AND MAIN UNITS)

The RF output power level is detected at D4309 of the power detector circuit (L4341, D4309, D4310) in the FILTER unit. The detected signal ("FOR" signal) is applied to the RF ALC amplifier (IC16a) in the MAIN unit.

The amplified signal enters the transmit gain controller (IC16b) which functions as an inversion amplifier. The gain controller decrease the gain of the IF amplifier (Q2) to constant output power from different amplifier gains which are occurred by their frequency characteristics.

The bias voltage of the RF ALC amplifier (IC16a) is controlled by the low power control signal (POC1 for 20 W, POC2 for 60 W) and APC signal.

### 3-2-8 APC CIRCUIT

The APC (Auto Power Control) circuit protects the power amplifiers on the PA unit from high SWR and excessive current.

#### (1) SWR APC (FILTER AND MAIN UNITS)

The reflected wave signal appears and increases on the antenna connector. When the antenna is mismatched, D4310 of the power detector circuit (D4309, D4310, L4341) in the FILTER unit detects the signal and applies it at the APC amplifier (Q23) in the MAIN unit. The output signal decreases the bias voltage of the RF ALC amplifier to reduce the output power.

#### (2) CURRENT APC (PA AND MAIN UNITS)

The power transistor current is detected from the different voltages between both terminals of a 0.012  $\Omega$  resistor (R4026) on the PA unit. The detected voltage is applied to the differential amplifier (IC4002b). When the current of the final transistors is more than 30 A, the detected voltage is applied to the IC APC amplifier (Q111) in the MAIN unit to reduce the gate-2 voltage of the IF amplifier (Q2) and thus reduce the output power.

### 3-2-9 TEMPERATURE PROTECTION (PA UNIT)

Thermal switches (S4001, S4002) protect the final transistors from excessive temperatures. When the temperature exceeds 50 °C, S4002 is turned ON to start the cooling fan. When the temperature exceeds 110 °C, S4001 is turned ON to control the "POC2" line and sets the power to 60 W.

### 3-2-10 RF METER CIRCUIT (MAIN UNIT)

The output of the ALC amplifier (IC16a) is applied to the CPU (pin 31) to indicate the transmit power level on the display.

For antenna current meter indication, the "ANTC" signal from an optional AT-130E is applied to the CPU (pin 32).

## 3-3 PLL CIRCUIT

### 3-3-1 GENERAL

The PLL unit generates a 1st LO frequency (69.5155–99.0115 MHz), 2nd LO frequency (60 MHz) and a BFO frequency (9.01–9.013 MHz) for the MAIN unit. The 1st LO PLL adopts a mixerless dual loop PLL system. The BFO uses a DDS and a 2nd LO as a fixed frequency double that the crystal oscillator.

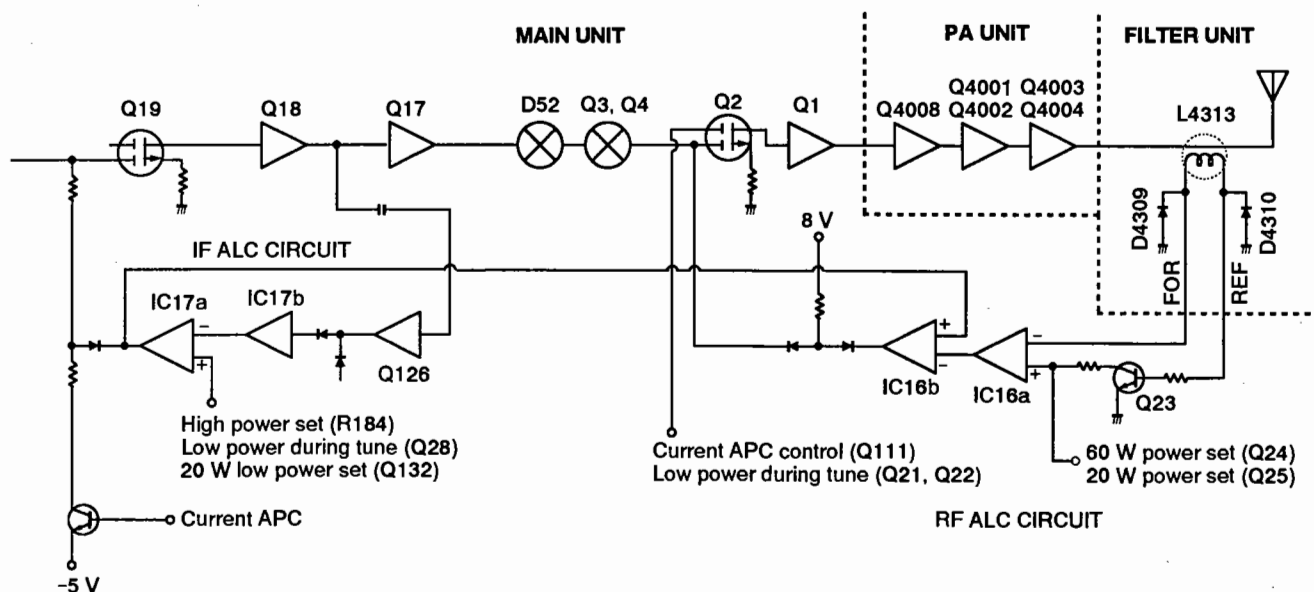
### 3-3-2 1ST LO PLL (PLL UNIT)

The 1st LO PLL contains a main loop and reference loop as a dual loop system. The reference loop generates a 10.65 to 10.75 MHz frequency using a DDS circuit, and the main loop generates a 69.5115 to 99.0115 MHz frequency using the reference loop frequency.

#### (1) REFERENCE LOOP PLL

The oscillated signal at the reference VCO (Q3005, D3003) is amplified at the buffer amplifiers (Q3006, Q3011) and is then applied to the DDS IC (IC3001, pin 46). The signal is then divided and detected on phase with the DDS generated frequency.

### • ALC CIRCUIT



The detected signal output from IC3001 (pin 56) is converted into a DC voltage (lock voltage) at the loop filter (R3018, R3019, C3044) and then fed back to the varactor diode (D3003) in the VCO circuit.

## (2) MAIN LOOP PLL

The oscillated signal at the main loop VCO (Q3003, D3004) is amplified at the buffer amplifiers (Q3004, Q3008) and is then applied to the PLL IC (IC3005, pin 14). The signal is then divided and detected on phase with the reference loop output frequency.

The detected signal output from IC3005 (pins 9, 10) is converted into a DC voltage (lock voltage) at the loop filter and then fed back to the varactor diode (D3004) in the VCO circuit.

The oscillated signal is amplified at the buffer amplifiers (Q3004, Q3021, Q3024) and then applied to the MAIN unit as a 1st LO signal.

## 3-3-3 2ND LO AND REFERENCE OSCILLATOR CIRCUITS

The reference oscillator (X3001, Q3001) generates 30.0 MHz frequency used for the both DDS ICs as a system clock and for the LO output. The oscillated signal is doubled by 2 at Q3002 and picked up the 60 MHz frequency at the resonator circuit (L3004, L3005). The 60 MHz signal is applied to the MAIN unit as a 2nd LO signal.

## 3-3-4 BFO

The DDS IC (IC3002) generates a 10-bit digital signal using the 30 MHz system clock. The digital signal is converted to an analog wave signal at the D/A converter (R3120–R3139). The analog wave is passed through the low-pass filter (L3037, L3038, C3154–C3158) and is then applied to the MAIN unit as the BFO signal.

## 3-4 DC-DC CONVERTER CIRCUIT (REG UNIT; Europe version only)

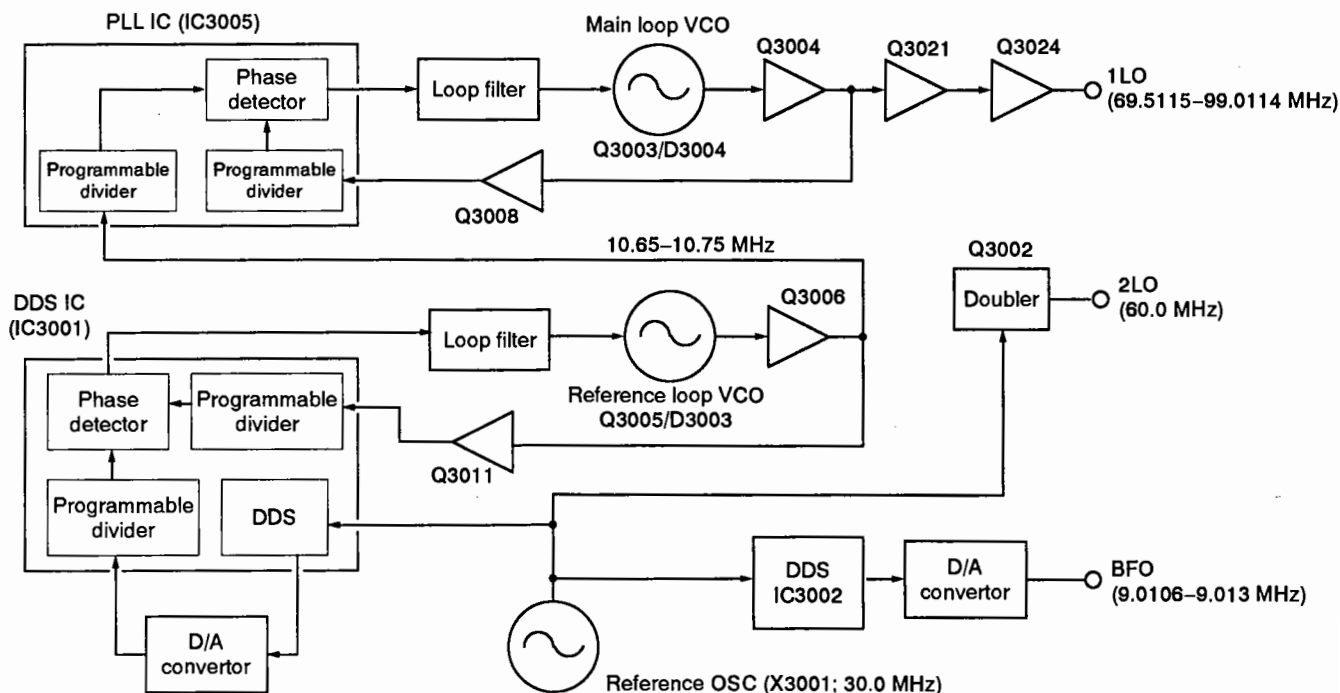
The IC-M710 Europe version employs a floating grounding system which is not connected between the transceiver's ground and  $\ominus$  terminal of the power supply. The PA unit has separate grounding from the other units to obtain floating.

The 13.6 V DC from the the DC power connector passes through the noise filter (L8001, C8001–C8005) and is then applied to the switching transformer (T8001). The MOS FET (Q8001) is turned ON and OFF by D8003 and Q8003 respectively.

IC8001 is a switching control IC which contains a 5 V reference voltage regulator (pin 12, 14), two error amplifiers (pins 1, 2, 3, 15, 16), a saw tooth oscillator (pins 4, 5, 6) and a comparator. The switching frequency is determined by R8008 and C8007 and is set at 36 kHz.

AC voltages appear on the secondary terminals of T8001 and are rectified by D8002. The rectified DC voltages are passed through the noise filter (L8003, C8009, C8010) and are then applied to the MAIN unit as a 13.6 V DC voltage line.

### • PLL CIRCUIT



### 3-5 CPU PORT ALLOCATIONS

#### • MAIN UNIT IC132

| Pin No. | PORT NAME | DESCRIPTION                                                                                                                                    | Pin No. | PORT NAME     | DESCRIPTION                                                                                 |
|---------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------|---------------------------------------------------------------------------------------------|
| 1       | RES       | Input port for the CPU reset signal. When receiving a "LOW" pulse, the CPU is reset.                                                           | 36      | RFG           | Outputs RF gain control signal to the AGC circuit.                                          |
| 10      | RXDO      | Data input port from the sub CPU in the FRONT unit.                                                                                            | 37      | AFG           | Outputs AF gain control signal to the electronic volume control (IC36).                     |
| 11      | TXDO      | Data output port to the sub CPU in the FRONT unit.                                                                                             | 39      | STAT          | Outputs the "tuner start" pulse to an optional AT-130E.                                     |
| 16      | NSEN      | Input port for the NBDP equipment.                                                                                                             | 40      | BEEP          | Outputs a beep signal (1 kHz or 500 Hz).                                                    |
| 17      | POC2      | Outputs low power control signal for 60 W power.                                                                                               | 41      | STB1          | Outputs a strobe signal to the main loop PLL IC (IC3005).                                   |
| 18      | POC1      | Outputs low power control signal for 20 W power.                                                                                               | 42      | STB2          | Outputs a strobe signal to the reference loop DDS IC (IC3001).                              |
| 20      | CWIN      | CW keying input.<br>High: when key is closed.                                                                                                  | 48      | STB3          | Outputs a strobe signal to the BFO PLL IC (IC3002).                                         |
| 21      | ASEN      | Outputs a "SEND" control signal for the ACC (1) and (2) sockets.                                                                               | 49      | DATA          | Outputs data to PLL and DDS ICs.                                                            |
| 22      | CSEN      | Outputs a "SEND" control signal for T8 and R8 voltage line control.<br>Low: for transmit.                                                      | 50      | CK            | Outputs a clock signal to PLL and DDS ICs.                                                  |
| 23      | ALMS      | Outputs an alarm control signal to activate the 2-tone emergency alarm encoder.<br>High: alarm ON.                                             | 51      | SQL C         | Outputs an AF mute signal for squelch function.<br>"High" for squelch closed.               |
| 24      | ALMC      | Outputs a tone switching signal for the 2-tone emergency alarm encoder.<br>High: high tone.                                                    | 52      | NBS           | Outputs a "noise blanker" signal.<br>"High" for noise blanker ON                            |
| 25      | SCL       | Outputs a clock signal to the EEPROM (IC134).                                                                                                  | 53      | AGCS          | Outputs an AGC-OFF signal.<br>"High" for AGC deactivate                                     |
| 26      | SDA       | Data bus line for the EEPROM (IC134).                                                                                                          | 54      | NMS           | Outputs an external NBDP equipment control signal.<br>"Low" during NBDP data output.        |
| 27      | SCL       | Outputs a clock signal to the EEPROM (IC135).                                                                                                  | 55      | P20           | Outputs a strobe signal for an initial matrix.                                              |
| 28      | SDA       | Data bus line for the EEPROM (IC135).                                                                                                          | 57-60   | P17-P14       | Input ports for an initial matrix.                                                          |
| 30      | RSM       | Input port for the S-meter indication.                                                                                                         | 61-64   | PD-PA         | Output band signals for RF LPF and BPF selection.                                           |
| 31      | MFOR      | Input port for the RF-meter indication for U.S.A. version.                                                                                     | 65-67   | J2B, R3E, H3E | Output mode signals.                                                                        |
| 32      | ANTC      | Input port for the antenna current meter indication for Europe version. The ANTC signal can be received when an optional AT-130E is connected. | 68      | KEY           | Input port for an optional AT-130/E.<br>During tuning: "Low".                               |
| 33      | SQLS      | Input port for the squelch detected signal.<br>High: when squelch opens.                                                                       | 69      | CW            | Outputs a mode signal.                                                                      |
| 34      | TRC       | Input port for the transmit/receive switching signal.                                                                                          | 70      | TUNE          | Outputs an antenna tuner tuning control signal for transceiver's power/mode control.        |
| 35      | SCAS      | Input port for scan control signal from the ACC(1) socket.                                                                                     | 71      | FSEL          | Outputs a narrow filter selection signal.<br>"Low" for an optional narrow filter selection. |
|         |           |                                                                                                                                                | 72      | PROG          | Outputs a program scan control signal for "AGC fast" and "audio squelch" deactivation.      |

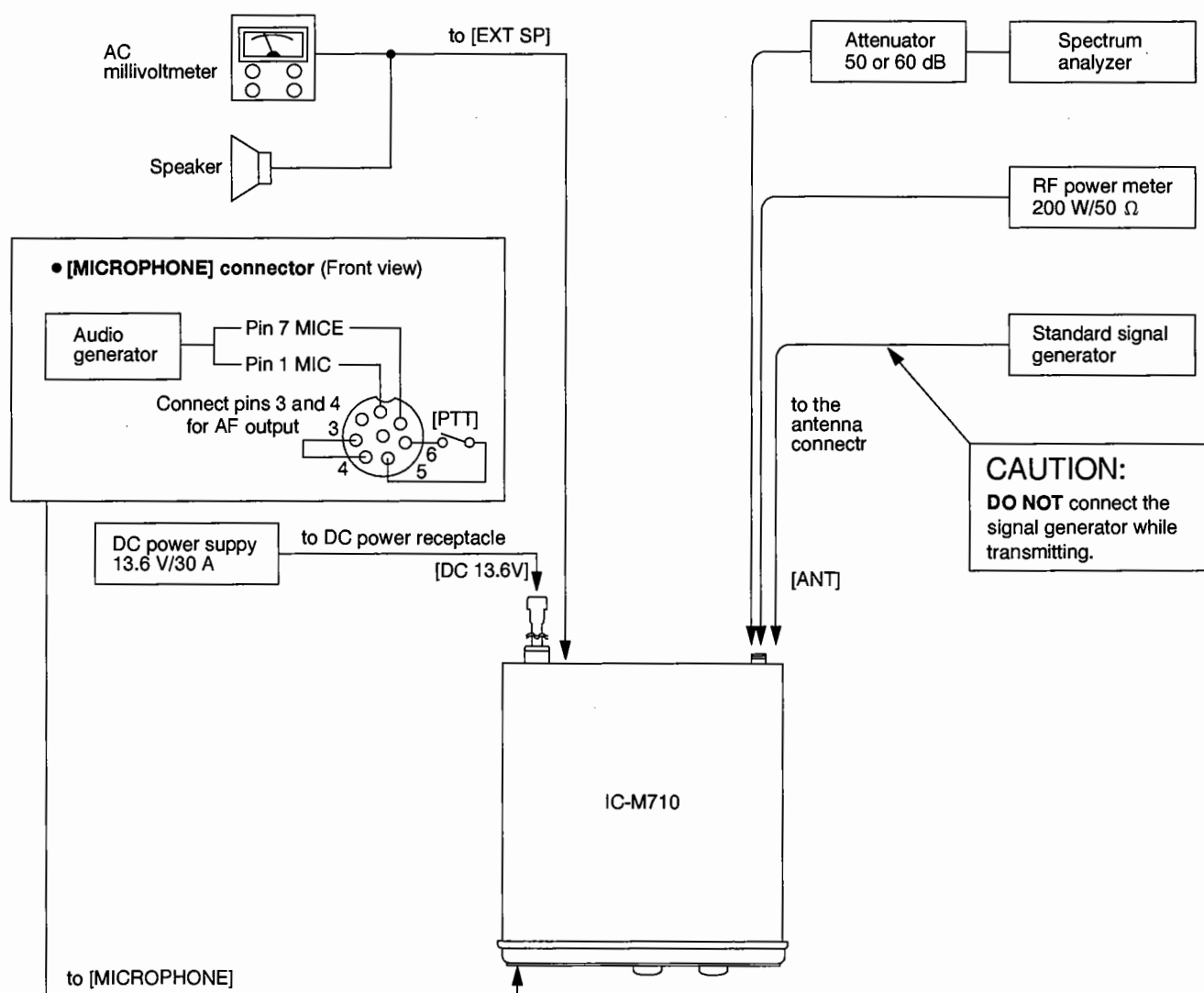
## SECTION 4 ADJUSTMENT PROCEDURES

### 4-1 PREPARATION BEFORE SERVICING

#### ■ REQUIRED TEST EQUIPMENT

| EQUIPMENT                        | GRADE AND RANGE                                                                                                 | EQUIPMENT         | GRADE AND RANGE                                                                   |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------------------------------|
| DC power supply                  | Output voltage : 13.6 V DC<br>Current capacity : 30 A or more                                                   | DC voltmeter      | Input impedance : 50 k $\Omega$ /DC or better                                     |
| RF power meter (terminated type) | Measuring range : 10 - 200 W<br>Frequency : 1.8 - 30 MHz<br>Impedance : 50 $\Omega$<br>SWR : Less than 1.2 : 1  | AC millivoltmeter | Measuring range : 10 mV - 10 V                                                    |
| Frequency counter                | Frequency range : 0.1 - 100 MHz<br>Frequency accuracy : $\pm 1$ ppm or better<br>Sensitivity : 100 mV or better | External speaker  | Impedance : 4 $\Omega$                                                            |
| RF voltmeter                     | Frequency range : 0.1 - 100 MHz<br>Measuring range : 0.01 - 10 V                                                | DC ammeter        | Measurement capability : 1 A / 3 A / 50 A                                         |
| Oscilloscope                     | Frequency range : DC - 100 MHz<br>Measuring range : 0.01 - 10 V                                                 | Audio generator   | Frequency range : 300 - 3000 Hz<br>Output level : 1 - 500 mV                      |
| Standard signal generator (SSG)  | Frequency range : 0.1 - 30 MHz<br>Output level : -127 to -17 dBm<br>(0.1 $\mu$ V - 32 mV)                       | Attenuator        | Power attenuation : 40 or 50 dB<br>Capacity : 150 W or more                       |
|                                  |                                                                                                                 | Spectrum analyzer | Frequency minimum : At least 90 MHz<br>Spectrum bandwidth : $\pm 100$ kHz or more |

#### ■ CONNECTION



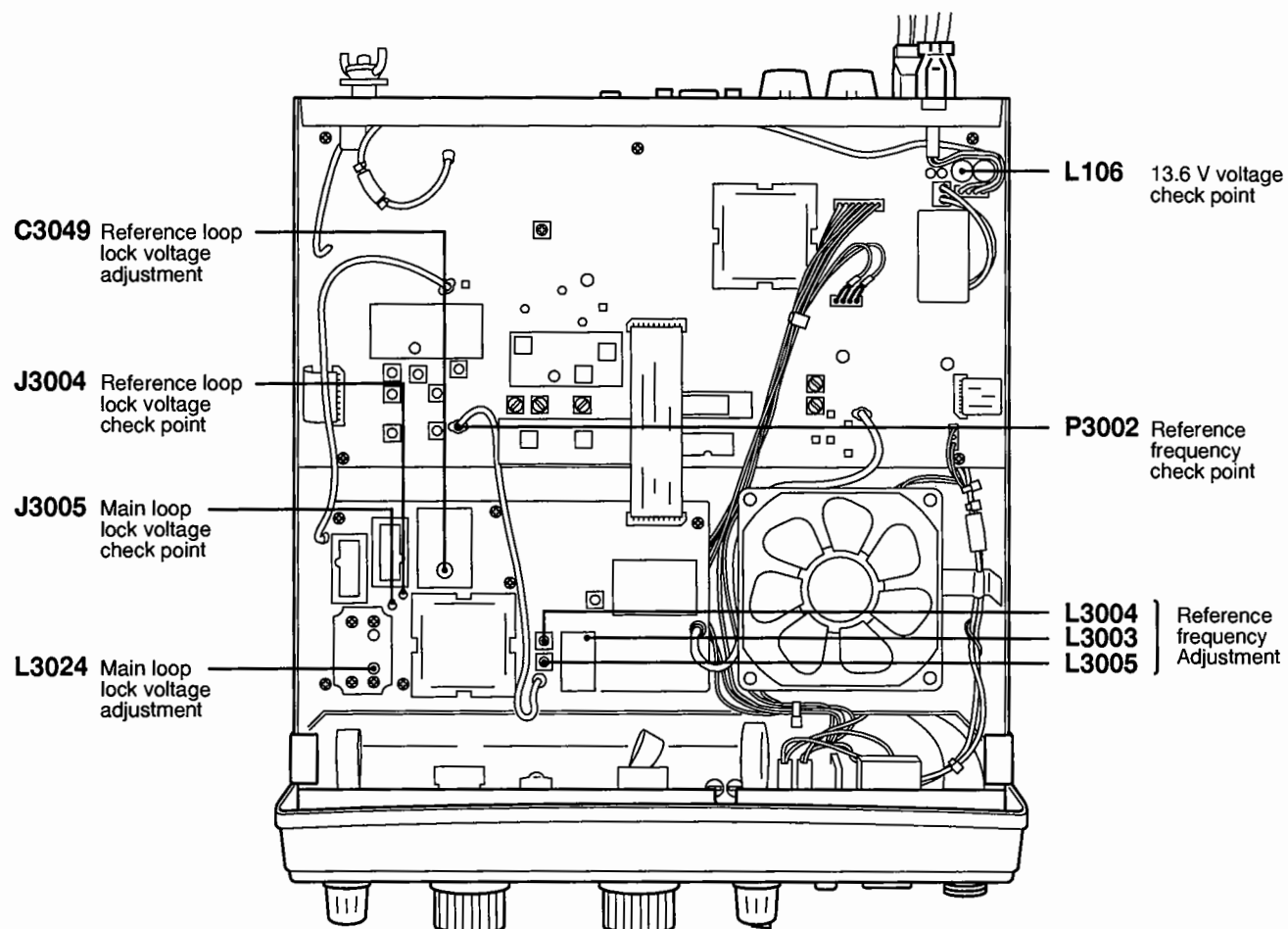
## 4-2 PLL ADJUSTMENT

| ADJUSTMENT                  |   | ADJUSTMENT CONDITIONS                                                                                                    | MEASUREMENT |                                                                                          | VALUE                            | ADJUSTMENT POINT |              |
|-----------------------------|---|--------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------|----------------------------------|------------------|--------------|
|                             |   |                                                                                                                          | UNIT        | LOCATION                                                                                 |                                  | UNIT             | ADJUST       |
| REFERENCE LOOP LOCK VOLTAGE | 1 | <ul style="list-style-type: none"> <li>Displayed frequency: 7.9999 MHz</li> <li>Mode : J3E</li> <li>Receiving</li> </ul> | PLL         | Connect a digital multimeter or oscilloscope to J3004.                                   | 3.2 V                            | PLL              | C3049        |
|                             | 2 | <ul style="list-style-type: none"> <li>Displayed frequency: 0.0300 MHz</li> </ul>                                        |             |                                                                                          | More than 1.5 V                  |                  | Verify       |
| MAIN LOOP LOCK VOLTAGE      | 1 | <ul style="list-style-type: none"> <li>Displayed frequency: 0.5000 MHz</li> <li>Receiving</li> </ul>                     | PLL         | Connect a digital multimeter or oscilloscope to J3005.                                   | 4.0 V                            | PLL              | L3024        |
|                             | 2 | <ul style="list-style-type: none"> <li>Displayed frequency: 29.9999 MHz</li> </ul>                                       |             |                                                                                          | More than 1.0 V                  |                  | Verify       |
| REFERENCE FREQUENCY         | 1 | <ul style="list-style-type: none"> <li>Receiving</li> <li>Wait for 5 min. after power ON.</li> </ul>                     | PLL         | Terminate P3002 to ground with a 50 $\Omega$ resistor. Connect an RF voltmeter to P3002. | Maximum level (More than +2 dBm) | PLL              | L3004, L3005 |
| (Gen, Marine only)          | 2 |                                                                                                                          |             | Connect a frequency counter to P3002.                                                    | 60.000 MHz                       |                  | L3003        |

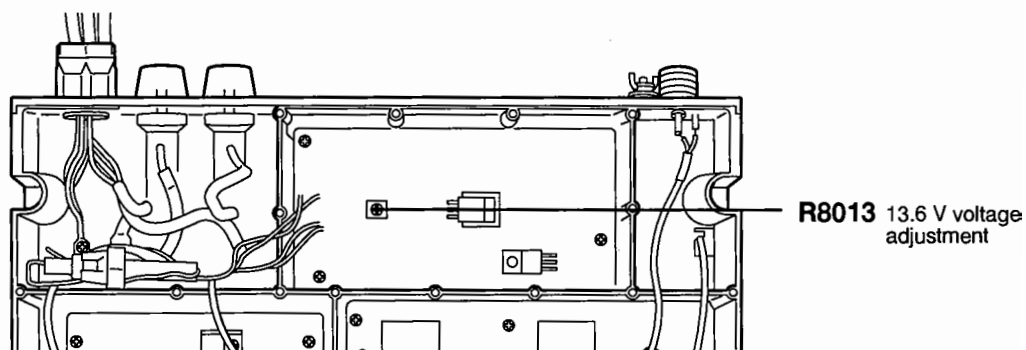
## 4-3 POWER VOLTAGE ADJUSTMENT

| ADJUSTMENT                           |   | ADJUSTMENT CONDITIONS                                            | MEASUREMENT |                                 | VALUE  | ADJUSTMENT POINT |        |
|--------------------------------------|---|------------------------------------------------------------------|-------------|---------------------------------|--------|------------------|--------|
|                                      |   |                                                                  | UNIT        | LOCATION                        |        | UNIT             | ADJUST |
| 13.6 V VOLTAGE (Europe version only) | 1 | <ul style="list-style-type: none"> <li>Turn power ON.</li> </ul> | MAIN        | Connect a DC voltmeter to L106. | 13.6 V | REG              | R8013  |

• MAIN AND PLL UNITS



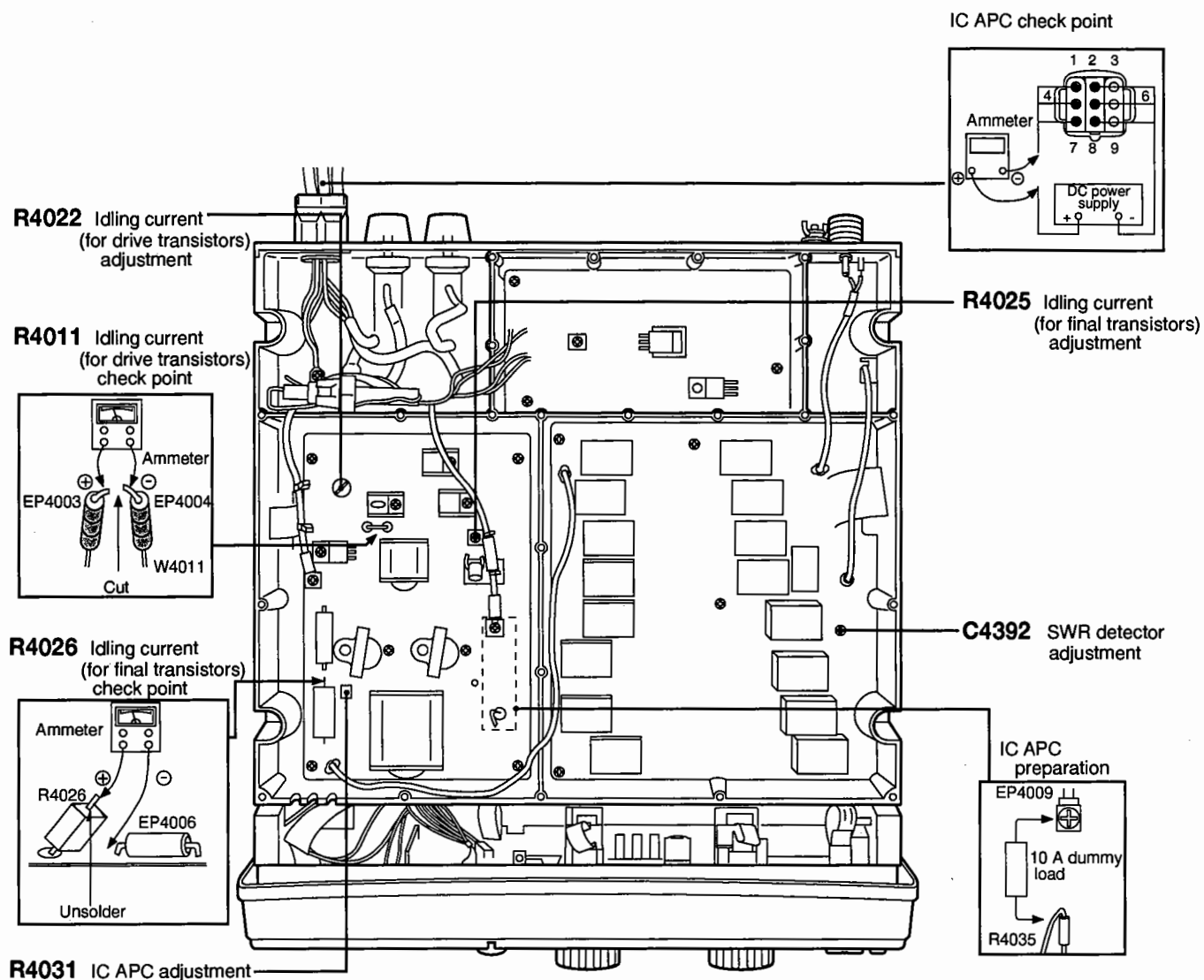
• REG UNIT (Europe version only)



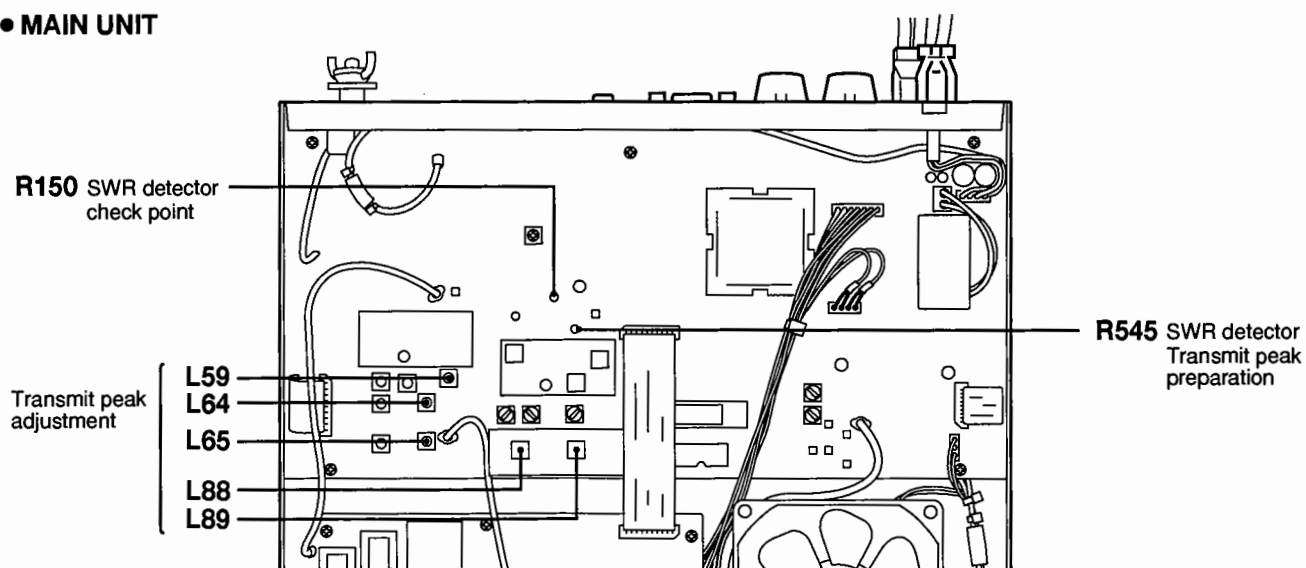
## 4-4 TRANSMITTER ADJUSTMENT

| ADJUSTMENT                                |   | ADJUSTMENT CONDITIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | MEASUREMENT |                                                                                        | VALUE          | ADJUSTMENT POINT |                                            |
|-------------------------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------------|----------------|------------------|--------------------------------------------|
|                                           |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | UNIT        | LOCATION                                                                               |                | UNIT             | ADJUST                                     |
| IDLING CURRENT<br>(For drive transistors) | 1 | <ul style="list-style-type: none"> <li>Displayed frequency: 12.2300 MHz</li> <li>Mode : J3E</li> <li>Apply no signal to the [MICROPHONE] connector.</li> <li>Transmitting</li> </ul>                                                                                                                                                                                                                                                                                                                                      | PA          | Cut the lead wire (W4011) and connect a DC ammeter to the cut points.                  | 100 mA         | PA               | R4022                                      |
|                                           |   | After adjustment, re-solder the lead wire (W4011).                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                        |                |                  |                                            |
| (For final transistors)                   | 2 | <ul style="list-style-type: none"> <li>Displayed frequency: 12.2300 MHz</li> <li>Mode : J3E</li> <li>Apply no signal to the [MICROPHONE] connector.</li> <li>Transmitting</li> </ul>                                                                                                                                                                                                                                                                                                                                      | PA          | Unsolder R4026 and connect the DC ammeter to the unsoldered points.                    | 500 mA         | PA               | R4025                                      |
|                                           |   | After adjustment, re-solder R4026.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                        |                |                  |                                            |
| IC APC                                    | 1 | <ul style="list-style-type: none"> <li>Displayed frequency: 22.0000 MHz</li> <li>Mode : J3E</li> <li>Preset R4031 on the PA unit to the maximum counterclockwise position.</li> <li>Connect a dummy load (10 A) between the lead of R4035 (power line) and EP4009 (power ground) on the PA unit.</li> <li>Connect an audio generator to the [MICROPHONE] connector and set as:<br/>Frequency : 1.5 kHz<br/>Level : 100 mV rms</li> <li>Connect an RF power meter to the [ANT] connector.</li> <li>Transmitting</li> </ul> | Rear panel  | Connect a DC ammeter between the DC power supply and DC power receptacle (DC input +). | 30 A           | PA               | R4031                                      |
|                                           |   | After adjustment, remove the dummy load.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |                                                                                        |                |                  |                                            |
| SWR DETECTOR                              | 1 | <ul style="list-style-type: none"> <li>Displayed frequency: 22.0000 MHz</li> <li>Mode : J3E</li> <li>Ground the lead of R545 on the MAIN unit with a wire.</li> </ul>                                                                                                                                                                                                                                                                                                                                                     | Rear panel  | Connect an RF power meter to the [ANT] connector.                                      | 140 W          | Audio generator  | Output level                               |
|                                           | 2 | <ul style="list-style-type: none"> <li>Connect an audio generator to the [MICROPHONE] connector and set as:<br/>Frequency : 1.5 kHz</li> <li>Transmitting</li> </ul>                                                                                                                                                                                                                                                                                                                                                      | MAIN        | Connect a DC voltmeter to R150                                                         | Minimum level  | FILTER           | C4392                                      |
|                                           |   | After adjustment, remove the wire from R545.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                        |                |                  |                                            |
| TRANSMIT PEAK                             | 1 | <ul style="list-style-type: none"> <li>Displayed frequency: 12.2300 MHz</li> <li>Mode : J3E</li> <li>Ground the lead of R545 on the MAIN unit with a wire.</li> <li>Connect an audio generator to the [MICROPHONE] connector and set as:<br/>Frequency : 1.5 kHz<br/>Level : 3 mV</li> <li>Transmitting</li> </ul>                                                                                                                                                                                                        | Rear panel  | Connect an RF power meter to the [ANT] connector.                                      | Maximum output | MAIN             | Adjust in sequence L89, L88, L65, L64, L59 |
|                                           |   | After adjustment, remove the wire from R545.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                        |                |                  |                                            |

## • PA AND FILTER UNITS



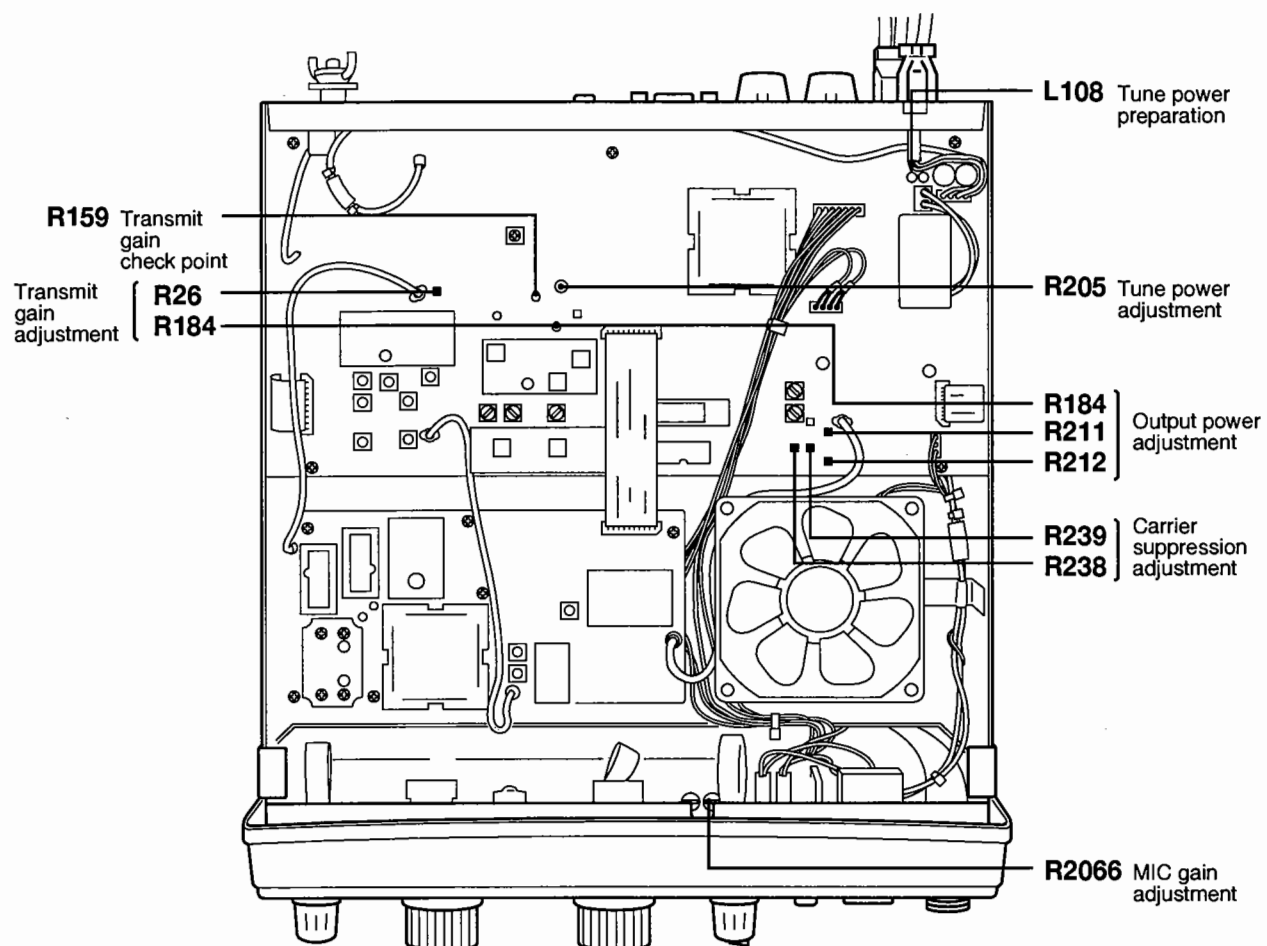
## • MAIN UNIT



## TRANSMITTER ADJUSTMENT (CONTINUED)

| ADJUSTMENT          |   | ADJUSTMENT CONDITIONS                                                                                                                                                                                                                                                                              | MEASUREMENT |                                                                                       | VALUE                                           | ADJUSTMENT POINT |                               |
|---------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------|-------------------------------------------------|------------------|-------------------------------|
|                     |   |                                                                                                                                                                                                                                                                                                    | UNIT        | LOCATION                                                                              |                                                 | UNIT             | ADJUST                        |
| TRANSMIT GAIN       | 1 | <ul style="list-style-type: none"> <li>Displayed frequency: 12.2300 MHz</li> <li>Mode : A1A</li> <li>Transmitting</li> </ul>                                                                                                                                                                       | Rear panel  | Connect an RF power meter to the [ANT] connector.                                     | 140 W                                           | MAIN             | R184                          |
|                     | 2 | <ul style="list-style-type: none"> <li>Displayed frequency: 16.3650 MHz</li> </ul>                                                                                                                                                                                                                 | MAIN        | Connect a digital multimeter to R159.                                                 | 0.5 V                                           |                  | R26                           |
| OUTPUT POWER        | 1 | <ul style="list-style-type: none"> <li>Displayed frequency: 12.2300 MHz</li> <li>Mode : H3E</li> <li>Apply no signal to the [MICROPHONE] connector.</li> <li>Transmitting</li> </ul>                                                                                                               | Rear panel  | Connect an RF power meter to the [ANT] connector.                                     | 50 W                                            | MAIN             | R211                          |
|                     | 2 | <ul style="list-style-type: none"> <li>Displayed frequency: 12.2300 MHz</li> <li>Mode : R3E</li> </ul>                                                                                                                                                                                             |             |                                                                                       | 2.0 W                                           |                  | R212                          |
|                     | 3 | <ul style="list-style-type: none"> <li>Displayed frequency: 12.2300 MHz</li> <li>Mode : A1A</li> </ul>                                                                                                                                                                                             |             |                                                                                       | 140 W                                           |                  | R184                          |
| CARRIER SUPPRESSION | 1 | <ul style="list-style-type: none"> <li>Displayed frequency: 12.2300 MHz</li> <li>Mode : J3E</li> <li>Apply no signal to the [MICROPHONE] connector.</li> <li>Transmitting</li> </ul>                                                                                                               | Rear panel  | Connect a spectrum analyzer or RF voltmeter to the [ANT] connector via an attenuator. | Minimum carrier level<br>(Less than -40 dB)     | MAIN             | Adjust alternately R238, R239 |
| TUNE POWER          | 1 | <ul style="list-style-type: none"> <li>Displayed frequency: 12.2300 MHz</li> <li>Ground L108 (KEY line).</li> </ul>                                                                                                                                                                                | Rear panel  | Connect an RF power meter to the [ANT] connector.                                     | 10 W                                            | MAIN             | R205                          |
| POWER METER         | 1 | <ul style="list-style-type: none"> <li>While pushing the [SQL] and [TX] switches, turn power ON.</li> <li>Displayed frequency: 12.2300 MHz</li> <li>Mode : J3E</li> <li>Connect an audio generator to the [MICROPHONE] connector and set as:<br/>Frequency : 1.5 kHz<br/>Level : 100 mV</li> </ul> | Rear panel  | Connect an RF power meter to the [ANT] connector.                                     | U.S.A. versions: 17 W<br>Europe versions: 120 W | Audio generator  | Output level                  |
|                     | 2 | <ul style="list-style-type: none"> <li>Set the transmit power:<br/>U.S.A. versions : 1 (20 W PEP)<br/>Europe versions : 3 (150 W PEP)</li> <li>Transmitting</li> </ul>                                                                                                                             |             |                                                                                       | Push the [DIMMER] switch.                       | Front panel      | [DIMMER]                      |
| MIC GAIN            | 1 | <ul style="list-style-type: none"> <li>Displayed frequency: 12.2300 MHz</li> <li>Mode : J3E</li> <li>Connect an audio generator to the [MICROPHONE] connector and set as:<br/>Frequency : 1.5 kHz<br/>Level : 10 mV</li> <li>Transmitting</li> </ul>                                               | Rear panel  | Connect an RF power meter to the [ANT] connector.                                     | 100 W                                           | LOGIC            | R2066                         |

● MAIN AND LOGIC UNITS

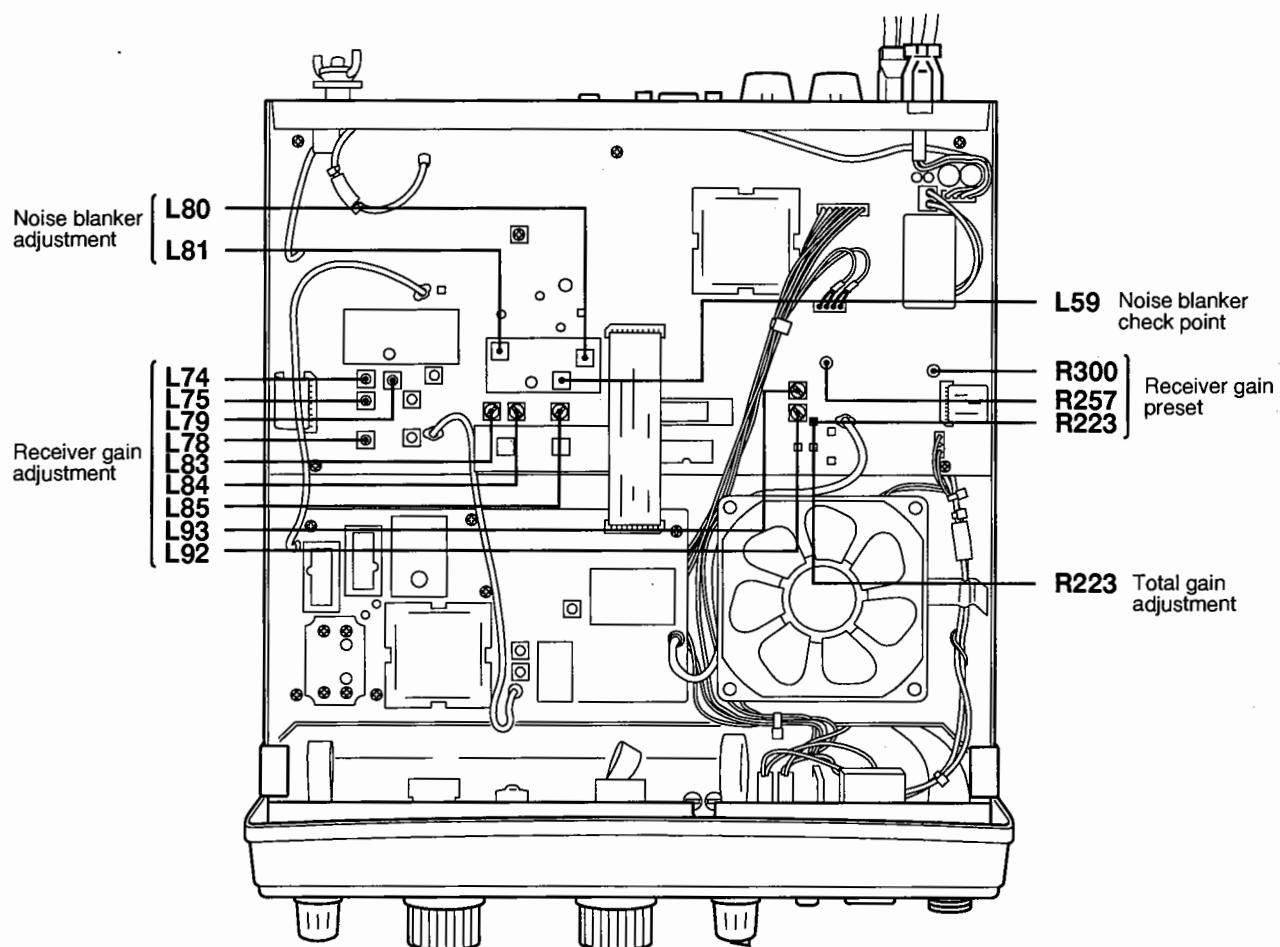


## 4-5 RECEIVER ADJUSTMENT

| ADJUSTMENT    |   | ADJUSTMENT CONDITIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | MEASUREMENT                                                                    |                                                                                 | VALUE                                                                                                                                     | ADJUSTMENT POINT |                                                                |
|---------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------------------------------------------------------|
|               |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | UNIT                                                                           | LOCATION                                                                        |                                                                                                                                           | UNIT             | ADJUST                                                         |
| RECEIVER GAIN | 1 | <ul style="list-style-type: none"> <li>Displayed frequency: 12.2300 MHz</li> <li>Mode : J3E</li> <li>Noise blanker : OFF</li> <li>Squelch : OFF</li> <li>Speaker : OFF</li> <li>AGC : ON</li> <li>RF gain : 9</li> <li>R223 (MAIN unit): Max. clockwise</li> <li>R257 (MAIN unit): Max. counterclockwise</li> <li>R300 (MAIN unit): Center</li> <li>Connect a standard signal generator to the [ANT] connector and set as: <ul style="list-style-type: none"> <li>Frequency: 12.2315 MHz</li> <li>Level : 0.5 <math>\mu</math>V * (-113 dBm)</li> <li>Modulation: OFF</li> </ul> </li> <li>Receiving</li> </ul> | Rear panel                                                                     | Connect an AC millivoltmeter to the [EXT SP] jack with a 4 $\Omega$ dummy load. | Maximum output level                                                                                                                      | MAIN             | Adjust in sequence L74, L75, L78, L79, L83, L84, L85, L92, L93 |
| CLARITY       | 1 | <ul style="list-style-type: none"> <li>While pushing the [SQL] and [CE] switches, turn power ON.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Set the [CLARITY] control to the center position and push the [DIMMER] switch. |                                                                                 |                                                                                                                                           | Front panel      | [CLARITY]                                                      |
| TOTAL GAIN    | 1 | <ul style="list-style-type: none"> <li>Displayed frequency: 12.2300 MHz</li> <li>Mode : J3E</li> <li>Connect a standard signal generator to the [ANT] connector and set as: <ul style="list-style-type: none"> <li>Frequency: 12.2315 MHz</li> <li>Level : 0.32 mV * (-57 dBm)</li> <li>Modulation: OFF</li> </ul> </li> <li>Receiving</li> </ul>                                                                                                                                                                                                                                                               | Rear panel                                                                     | Connect an AC millivoltmeter to the [EXT SP] jack with a 4 $\Omega$ dummy load. | 1.0 V                                                                                                                                     | Front panel      | [VOLUME]                                                       |
|               | 2 | <ul style="list-style-type: none"> <li>Set the signal generator to OFF (no output).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                |                                                                                 | -30 dB (32 mV)                                                                                                                            | MAIN             | R223                                                           |
| S-METER       | 1 | <ul style="list-style-type: none"> <li>While pushing the [SQL] and [RX] switches, turn power ON.</li> <li>Displayed frequency: 12.2300 MHz</li> <li>Mode : J3E</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                       | Function display                                                               | S/RF meter                                                                      | Push the [DIMMER] switch.                                                                                                                 | Front panel      | [DIMMER]                                                       |
|               | 2 | <ul style="list-style-type: none"> <li>Connect a standard signal generator to the [ANT] connector and set as: <ul style="list-style-type: none"> <li>Frequency: 12.2315 MHz</li> <li>Level : 1 mV * (-47 dBm)</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                            |                                                                                |                                                                                 | 7th dot just appears while pushing the [DIMMER].<br> |                  | Verify                                                         |
| NOISE BLANKER | 1 | <ul style="list-style-type: none"> <li>Displayed frequency: 12.2300 MHz</li> <li>Mode : J3E</li> <li>Connect a standard signal generator to the [ANT] connector and set as: <ul style="list-style-type: none"> <li>Frequency: 12.2315 MHz</li> <li>Level : 3.2 <math>\mu</math>V * (-97 dBm)</li> </ul> </li> <li>Add the following signal into the signal generator output.</li> </ul>                                                                                                                                                                                                                         | MAIN                                                                           | Connect an oscilloscope to R59.                                                 | Adjust the maximum noise wave displayed on the oscilloscope.                                                                              | MAIN             | L80, L81                                                       |

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

● MAIN UNIT



# SECTION 5 PARTS LIST

## [FRONT PARTS]

| REF. NO. | ORDER NO.  | DESCRIPTION |                    |
|----------|------------|-------------|--------------------|
| W2807    | 8900005860 | CABLE       | OPC-522            |
| W2808    | 8900005860 | CABLE       | OPC-522            |
| W2809    | 8900005870 | CABLE       | OPC-524            |
| W2810    | 8900005860 | CABLE       | OPC-522            |
| W2811    | 8900005860 | CABLE       | OPC-522            |
| S2801    | 2260002270 | SWITCH      | JPZ2120-0101(TV-3) |
| SP2801   | 2510000870 | SPEAKER     | 77F60N             |
| WS1      | 8600034320 | CABLE       | SX1632 P2801FR     |
| WS2      | 8600034330 | CABLE       | SX1632 P2802FR     |

## [LOGIC UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION  |                 |
|----------|------------|--------------|-----------------|
| IC2001   | 1140005460 | S.IC         | HD6433834A38F   |
| IC2002   | 1140005130 | S.IC         | HD66100F        |
| IC2003   | 1110001550 | S.IC         | S-8054ALB-LM-T1 |
| IC2005   | 1180001480 | S.IC         | μPC78L05T       |
| IC2006   | 1180001490 | S.IC         | μPC78L08T       |
| IC2007   | 1110003950 | IC           | μPC1241H        |
| IC2008   | 1110003910 | S.IC         | NJM4558M(T1)    |
| Q2001    | 1530003410 | S.TRANSISTOR | 2SC1623 L6      |
| Q2002    | 1530003410 | S.TRANSISTOR | 2SC1623 L6      |
| Q2003    | 1520000700 | S.TRANSISTOR | 2SB798-T2 DL    |
| Q2004    | 1520000700 | S.TRANSISTOR | 2SB798-T2 DL    |
| Q2005    | 1530003410 | S.TRANSISTOR | 2SC1623 L6      |
| Q2006    | 1530003410 | S.TRANSISTOR | 2SC1623 L6      |
| Q2007    | 1590002250 | S.TRANSISTOR | DTC114EK T147   |
| Q2008    | 1590002250 | S.TRANSISTOR | DTC114EK T147   |
| Q2009    | 1530003410 | S.TRANSISTOR | 2SC1623 L6      |
| Q2010    | 1540000540 | S.TRANSISTOR | 2SD1448-Z-T1    |
| D2001    | 1750000500 | S.DIODE      | 1SS184 (TE85R)  |
| D2002    | 1730002400 | S.ZENER      | RD11M-T2B1      |
| D2003    | 1750000500 | S.DIODE      | 1SS184 (TE85R)  |
| D2004    | 1750000500 | S.DIODE      | 1SS184 (TE85R)  |
| D2005    | 1750000500 | S.DIODE      | 1SS184 (TE85R)  |
| D2006    | 1750000500 | S.DIODE      | 1SS184 (TE85R)  |
| D2007    | 1750000500 | S.DIODE      | 1SS184 (TE85R)  |
| D2008    | 1750000500 | S.DIODE      | 1SS184 (TE85R)  |
| D2009    | 1750000500 | S.DIODE      | 1SS184 (TE85R)  |
| D2010    | 1750000500 | S.DIODE      | 1SS184 (TE85R)  |
| X2001    | 6050009510 | XTAL         | CR-513          |
| L2002    | 6910009430 | COIL         | BL01RN1-A62-001 |
| L2003    | 6910009430 | COIL         | BL01RN1-A62-001 |
| L2004    | 6200004840 | S.COIL       | NL 322522T-101J |
| L2005    | 6910009430 | COIL         | BL01RN1-A62-001 |
| L2006    | 6200004840 | S.COIL       | NL 322522T-101J |
| L2007    | 6200004840 | S.COIL       | NL 322522T-101J |
| L2008    | 6200004840 | S.COIL       | NL 322522T-101J |
| L2009    | 6200004840 | S.COIL       | NL 322522T-101J |

## [LOGIC UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                    |
|----------|------------|-------------|--------------------|
| R2001    | 7030006810 | S.RESISTOR  | RK73K2AJ 22 kΩ     |
| R2002    | 7030006810 | S.RESISTOR  | RK73K2AJ 22 kΩ     |
| R2003    | 7030006780 | S.RESISTOR  | RK73K2AJ 10 kΩ     |
| R2004    | 7030006860 | S.RESISTOR  | RK73K2AJ 220 Ω     |
| R2005    | 7030006860 | S.RESISTOR  | RK73K2AJ 220 Ω     |
| R2006    | 7030006890 | S.RESISTOR  | RK73K2AJ 1 kΩ      |
| R2007    | 7030006890 | S.RESISTOR  | RK73K2AJ 1 kΩ      |
| R2009    | 7030006830 | S.RESISTOR  | RK73K2AJ 47 kΩ     |
| R2011    | 7030006830 | S.RESISTOR  | RK73K2AJ 47 kΩ     |
| R2012    | 7030006890 | S.RESISTOR  | RK73K2AJ 1M Ω      |
| R2013    | 7030006830 | S.RESISTOR  | RK73K2AJ 47 kΩ     |
| R2014    | 7030006830 | S.RESISTOR  | RK73K2AJ 47 kΩ     |
| R2015    | 7030006890 | S.RESISTOR  | RK73K2AJ 1 kΩ      |
| R2016    | 7030006890 | S.RESISTOR  | RK73K2AJ 1 kΩ      |
| R2017    | 7030006860 | S.RESISTOR  | RK73K2AJ 100 kΩ    |
| R2018    | 7030006890 | S.RESISTOR  | RK73K2AJ 1 kΩ      |
| R2019    | 7030006880 | S.RESISTOR  | RK73K2AJ 470 kΩ    |
| R2020    | 7030006870 | S.RESISTOR  | RK73K2AJ 220 kΩ    |
| R2021    | 7030006870 | S.RESISTOR  | RK73K2AJ 220 kΩ    |
| R2022    | 7030006860 | S.RESISTOR  | RK73K2AJ 100 kΩ    |
| R2039    | 7030006830 | S.RESISTOR  | RK73K2AJ 47 kΩ     |
| R2040    | 7030006820 | S.RESISTOR  | RK73K2AJ 33 kΩ     |
| R2041    | 7030006750 | S.RESISTOR  | RK73K2AJ 4.7 kΩ    |
| R2042    | 7030006830 | S.RESISTOR  | RK73K2AJ 47 kΩ     |
| R2043    | 7030006790 | S.RESISTOR  | RK73K2AJ 15 kΩ     |
| R2044    | 7030006780 | S.RESISTOR  | RK73K2AJ 10 kΩ     |
| R2045    | 7030006780 | S.RESISTOR  | RK73K2AJ 10 kΩ     |
| R2046    | 7030006780 | S.RESISTOR  | RK73K2AJ 10 kΩ     |
| R2047    | 7030007030 | S.RESISTOR  | RK73K2A 5.6 kΩ     |
| R2048    | 7030006890 | S.RESISTOR  | RK73K2AJ 1 kΩ      |
| R2049    | 7030006830 | S.RESISTOR  | RK73K2AJ 47 kΩ     |
| R2054    | 7010006880 | RESISTOR    | RD16X J 47 Ω       |
| R2055    | 7030006780 | S.RESISTOR  | RK73K2AJ 10 kΩ     |
| R2056    | 7010006840 | S.RESISTOR  | RK73M2AJ 1 Ω       |
| R2057    | 7030006890 | S.RESISTOR  | RK73K2AJ 1 kΩ      |
| R2058    | 7010006870 | RESISTOR    | RD16X J 3.3 Ω      |
| R2059    | 7030006750 | S.RESISTOR  | RK73K2AJ 4.7 kΩ    |
| R2060    | 7030006840 | S.RESISTOR  | RK73K2AJ 100 Ω     |
| R2061    | 7030006840 | S.RESISTOR  | RK73K2AJ 100 Ω     |
| R2062    | 7030006730 | S.RESISTOR  | RK73K2AJ 3.3 kΩ    |
| R2063    | 7030006860 | S.RESISTOR  | RK73K2AJ 220 Ω     |
| R2064    | 7030006850 | S.RESISTOR  | RK73K2AJ 82 kΩ     |
| R2065    | 7030006860 | S.RESISTOR  | RK73K2AJ 100 kΩ    |
| R2066    | 7310004240 | TRIMMER     | KVSF839A 10 kΩ     |
| R2067    | 7030006810 | S.RESISTOR  | RK73K2AJ 22 kΩ     |
| R2068    | 7030006840 | S.RESISTOR  | RK73K2AJ 88 kΩ     |
| R2069    | 7030006890 | S.RESISTOR  | RK73K2AJ 1 kΩ      |
| R2070    | 7310004230 | TRIMMER     | KVSF839A 100 kΩ    |
| R2071    | 7030006750 | S.RESISTOR  | RK73K2AJ 4.7 kΩ    |
| R2072    | 7030006860 | S.RESISTOR  | RK73K2AJ 880 Ω     |
| R2073    | 7030006870 | S.RESISTOR  | RK73K2AJ 470 Ω     |
| R2074    | 7030006830 | S.RESISTOR  | RK73K2AJ 47 Ω      |
| R2077    | 7030006800 | S.RESISTOR  | RK73K2AJ 18 kΩ     |
| R2078    | 7030006780 | S.RESISTOR  | RK73K2AJ 10 kΩ     |
| R2079    | 7030006800 | S.RESISTOR  | RK73K2AJ 18 kΩ     |
| R2080    | 7030006780 | S.RESISTOR  | RK73K2AJ 10 kΩ     |
| R2081    | 7030006800 | S.RESISTOR  | RK73K2AJ 18 kΩ     |
| R2082    | 7030006780 | S.RESISTOR  | RK73K2AJ 10 kΩ     |
| R2083    | 7030006800 | S.RESISTOR  | RK73K2AJ 18 kΩ     |
| R2084    | 7030006800 | S.RESISTOR  | RK73K2AJ 18 kΩ     |
| R2085    | 7010006870 | RESISTOR    | RD16S J 47 kΩ      |
| C2001    | 4030011450 | S.CERAMIC   | GRM40 B 104K 50PT  |
| C2002    | 4030011420 | S.CERAMIC   | GRM40 B 472K 50PT  |
| C2003    | 4030011420 | S.CERAMIC   | GRM40 B 472K 50PT  |
| C2004    | 4030011420 | S.CERAMIC   | GRM40 B 472K 50PT  |
| C2005    | 4030011490 | S.CERAMIC   | GRM40 CH 120J 50PT |
| C2006    | 4030011490 | S.CERAMIC   | GRM40 CH 120J 50PT |
| C2007    | 4030011430 | S.CERAMIC   | GRM40 B 103K 50PT  |

S.=Surface mount

## [LOGIC UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION  |                          |
|----------|------------|--------------|--------------------------|
| C2008    | 4510006480 | ELECTROLITIC | QYX1H224J TP             |
| C2009    | 4030011430 | S.CERAMIC    | GRM40 B 103K 50PT        |
| C2012    | 4510006480 | ELECTROLITIC | UVX1E4R7M DA             |
| C2013    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT        |
| C2014    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT        |
| C2015    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT        |
| C2016    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT        |
| C2017    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT        |
| C2018    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT        |
| C2019    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT        |
| C2020    | 4510006570 | ELECTROLITIC | UVR1C102M PA             |
| C2021    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT        |
| C2022    | 4510006630 | ELECTROLITIC | UPF1C471M PH             |
| C2023    | 4030011450 | S.CERAMIC    | GRM40 B 104K 50PT        |
| C2024    | 4510006530 | ELECTROLITIC | UVX1C470M DA             |
| C2025    | 4510006540 | ELECTROLITIC | UVR1C101M DA             |
| C2026    | 4510006530 | ELECTROLITIC | UVX1C470M DA             |
| C2027    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT        |
| C2028    | 4510006520 | ELECTROLITIC | UVX1E220M DA             |
| C2029    | 4510006520 | ELECTROLITIC | UVX1E220M DA             |
| C2030    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT        |
| C2031    | 4510006470 | ELECTROLITIC | UVX1H2R2M DA             |
| C2032    | 4510006490 | ELECTROLITIC | UVX1H010M DA             |
| C2033    | 4510006490 | ELECTROLITIC | UVX1H010M DA             |
| C2034    | 4510006480 | ELECTROLITIC | UVX1E4R7M DA             |
| C2035    | 4510006480 | ELECTROLITIC | UVX1E4R7M DA             |
| C2036    | 4510006530 | ELECTROLITIC | UVX1C470M DA             |
| C2037    | 4510006480 | ELECTROLITIC | UVX1E4R7M DA             |
| C2038    | 4510006500 | ELECTROLITIC | UVX1C100M DA             |
| C2039    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT        |
| C2040    | 4510006530 | ELECTROLITIC | UVX1C470M DA             |
| C2041    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT        |
| C2042    | 4510006530 | ELECTROLITIC | UVX1C470M DA             |
| C2043    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT        |
| C2044    | 4510006500 | ELECTROLITIC | UVX1C100M DA             |
| C2046    | 4510006540 | ELECTROLITIC | UVR1C101M DA             |
| C2047    | 4510006550 | ELECTROLITIC | UVR1C471M PA             |
| C2048    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT        |
| C2049    | 4030011450 | S.CERAMIC    | GRM40 B 104K 50PT        |
| C2050    | 4030011450 | S.CERAMIC    | GRM40 B 104K 50PT        |
| RL2001   | 6330001260 | RELAY        | AG 201344 (DS1E-B-DC12V) |
| W2012    | 7030007010 | S.JUMPER     | MCR10EZHZ JPW            |
| W2013    | 7030007010 | S.JUMPER     | MCR10EZHZ JPW            |
| DS2001   | 5080000360 | LAMP         | HRT-3290A-F 933 09677    |
| DS2002   | 5080000360 | LAMP         | HRT-3290A-F F24          |
| DS2003   | 5080000360 | LAMP         | HRT-3290A-F              |
| DS2004   | 5010000180 | LCD          | DLC-7978P                |
| S2003    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2004    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2005    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2006    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2007    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2008    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2009    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2010    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2011    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2012    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2013    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2014    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2015    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2016    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2017    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2018    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2019    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2020    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2021    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2022    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |
| S2023    | 2260002260 | SWITCH       | SW-158 (SKHHPM)          |

## [LOGIC UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                 |
|----------|------------|-------------|-----------------|
| S2024    | 2260002260 | SWITCH      | SW-158 (SKHHPM) |
| S2025    | 2260002260 | SWITCH      | SW-158 (SKHHPM) |
| S2026    | 2260002260 | SWITCH      | SW-158 (SKHHPM) |
| S2027    | 2260002260 | SWITCH      | SW-158 (SKHHPM) |
| J2007    | 6510018670 | CONNECTOR   | B03B-EH-S       |
| J2008    | 6510018730 | CONNECTOR   | 10FE-BT         |
| J2009    | 6510018720 | CONNECTOR   | 08FE-BT         |
| J2010    | 6510018720 | CONNECTOR   | 08FE-BT         |
| J2011    | 6510018720 | CONNECTOR   | 08FE-BT         |
| J2012    | 6510018720 | CONNECTOR   | 08FE-BT         |
| J2013    | 6510018710 | CONNECTOR   | RTB-1.5-2F      |
| J2014    | 6510018710 | CONNECTOR   | RTB-1.5-2F      |
| WS1      | 8600034340 | CABLE       | P2002*J2002LO   |
| WS2      | 8600034350 | CABLE       | P2003*J2003LO   |
| EP2001   | 0910045063 | PCB         | B 4252C         |

## [SENSOR1 UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |               |
|----------|------------|-------------|---------------|
| S2601    | 2250000280 | ENCODER     | SRB18100 25KC |
| J2601    | 6510018720 | CONNECTOR   | 08FE-BT       |
| EP2601   | 0910044811 | PCB         | B 4366A       |

## [SENSOR2 UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |               |
|----------|------------|-------------|---------------|
| S2701    | 2250000280 | ENCODER     | SRB18100 25KC |
| J2701    | 6510018720 | CONNECTOR   | 08FE-BT       |
| EP2701   | 0910044811 | PCB         | B 4366A       |

## [MIC UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                  |
|----------|------------|-------------|------------------|
| J2301    | 6510009210 | CONNECTOR   | 14RS-8H-MI-AU(F) |
| J2302    | 6510018730 | CONNECTOR   | 10FE-BT          |
| EP2301   | 0910044821 | PCB         | B 4503A          |

## [VR1 UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                        |
|----------|------------|-------------|------------------------|
| R2401    | 7210002750 | VARIABLE    | TP98N937-15F-10KB-1540 |
| J2401    | 6510018720 | CONNECTOR   | 08FE-BT                |
| EP2401   | 0910044832 | PCB         | B 4367B                |

## [VR2 UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                        |
|----------|------------|-------------|------------------------|
| R2501    | 7210002760 | VARIABLE    | TP98N944-15F-10KB-1632 |
| J2501    | 6510018720 | CONNECTOR   | 08FE-BT                |
| EP2501   | 0910044842 | PCB         | B 4508B                |

S.=Surface mount

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION  |                    |
|----------|------------|--------------|--------------------|
| IC4      | 1160000130 | S.IC         | TD62783AF (TP1)    |
| IC5      | 1160000130 | S.IC         | TD62783AF (TP1)    |
| IC6      | 1160000130 | S.IC         | TD62783AF (TP1)    |
| IC8      | 1110003140 | IC           | LA1150N            |
| IC9      | 1110003350 | S.IC         | μPC1037GR-E1(MS)   |
| IC10     | 1110003350 | S.IC         | μPC1037GR-E1(MS)   |
| IC11     | 1130001910 | S.IC         | μPD4011BG-T1       |
| IC12     | 1140003830 | S.IC         | TC4W66F(TE12L)     |
| IC16     | 1110000960 | S.IC         | NJM4558M(T1)       |
| IC17     | 1110000960 | S.IC         | NJM4558M(T1)       |
| IC18     | 1110000960 | S.IC         | NJM4558M(T1)       |
| IC19     | 1110000960 | S.IC         | NJM4558M(T1)       |
| IC20     | 1110000960 | S.IC         | NJM4558M(T1)       |
| IC21     | 1110000960 | S.IC         | NJM4558M(T1)       |
| IC22     | 1130001230 | S.IC         | μPD4001BG-T1       |
| IC23     | 1110001400 | S.IC         | μPC1555G2-T1       |
| IC24     | 1180001250 | S.IC         | TA7808F(TE16L)     |
| IC27     | 1170000280 | S.IC         | TLP121 (GB)        |
| IC31     | 1130002370 | S.IC         | μPD4028BG-T1       |
| IC32     | 1130003760 | S.IC         | TC4S81F (TE85R)    |
| IC33     | 1130003760 | S.IC         | TC4S81F (TE85R)    |
| IC34     | 1130001880 | S.IC         | μPD4069UBG-T1      |
| IC35     | 1130001920 | S.IC         | μPD4071BG-T1       |
| IC36     | 1110003300 | S.IC         | M5282FP 70CD       |
| IC37     | 1140003830 | S.IC         | TC4W66F(TE12L)     |
| IC38     | 1140003830 | S.IC         | TC4W66F(TE12L)     |
| IC39     | 1140003830 | S.IC         | TC4W66F(TE12L)     |
| IC131    | 1180000420 | S.IC         | TA78L05F (TE12R)   |
| IC132    | 1140005470 | S.IC         | HD6433378A52F      |
| IC133    | 1110001550 | S.IC         | S-8054ALB-LM-T1    |
| IC134    | 1140004620 | S.IC         | X24C16S8-2.7       |
| IC135    | 1140004620 | S.IC         | X24C16S8-2.7       |
| Q1       | 1530003150 | S.TRANSISTOR | 2SC4673D-TD        |
| Q2       | 1580000620 | S.FET        | 3SK131-T2 MAS      |
| Q3       | 1580000620 | S.FET        | 3SK131-T2 MAS      |
| Q4       | 1580000620 | S.FET        | 3SK131-T2 MAS      |
| Q5       | 1530003150 | S.TRANSISTOR | 2SC4673D-TD        |
| Q6       | 1580000720 | S.FET        | 2SK2171-4-TD       |
| Q7       | 1580000720 | S.FET        | 2SK2171-4-TD       |
| Q8       | 1580000620 | S.FET        | 3SK131-T2 MAS      |
| Q9       | 1560000330 | S.FET        | 2SK210-GR (TE85R)  |
| Q10      | 1510000770 | S.TRANSISTOR | 2SA1586-GR (TE85R) |
| Q11      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R) |
| Q12      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R) |
| Q13      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R) |
| Q14      | 1590001330 | S.TRANSISTOR | DTA114EU T107      |
| Q15      | 1590000680 | S.TRANSISTOR | DTC114EU T107      |
| Q16      | 1580000620 | S.FET        | 3SK131-T2 MAS      |
| Q17      | 1540000440 | S.TRANSISTOR | 2SD1619-T-TD       |
| Q18      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R) |
| Q19      | 1580000620 | S.FET        | 3SK131-T2 MAS      |
| Q20      | 1590000680 | S.TRANSISTOR | DTC114EU T107      |
| Q21      | 1590000680 | S.TRANSISTOR | DTC114EU T107      |
| Q22      | 1590000680 | S.TRANSISTOR | DTC114EU T107      |
| Q23      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R) |
| Q24      | 1590000680 | S.TRANSISTOR | DTC114EU T107      |
| Q25      | 1590000680 | S.TRANSISTOR | DTC114EU T107      |
| Q26      | 1510000770 | S.TRANSISTOR | 2SA1586-GR (TE85R) |
| Q27      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R) |
| Q28      | 1590000680 | S.TRANSISTOR | DTC114EU T107      |
| Q30      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R) |
| Q31      | 1530003090 | S.TRANSISTOR | 2SC4213-B (TE85R)  |
| Q32      | 1580000620 | S.FET        | 3SK131-T2 MAS      |
| Q33      | 1580000620 | S.FET        | 3SK131-T2 MAS      |
| Q34      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R) |
| Q35      | 1590000680 | S.TRANSISTOR | DTC114EU T107      |
| Q36      | 1590001330 | S.TRANSISTOR | DTA114EU T107      |
| Q40      | 1590000680 | S.TRANSISTOR | DTC114EU T107      |
| Q41      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R) |
| Q42      | 1590000680 | S.TRANSISTOR | DTC114EU T107      |
| Q43      | 1590000680 | S.TRANSISTOR | DTC114EU T107      |
| Q44      | 1590001330 | S.TRANSISTOR | DTA114EU T107      |
| Q45      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R) |
| Q46      | 1590000680 | S.TRANSISTOR | DTC114EU T107      |

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION  |                               |
|----------|------------|--------------|-------------------------------|
| Q52      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q54      | 1540000440 | S.TRANSISTOR | 2SD1619-T-TD                  |
| Q55      | 1590000880 | S.TRANSISTOR | DTC114EU T107                 |
| Q56      | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q57      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q58      | 1530003300 | S.TRANSISTOR | 2SC3647S-TD                   |
| Q59      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q60      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q61      | 1540000440 | S.TRANSISTOR | 2SD1619-T-TD                  |
| Q62      | 1540000440 | S.TRANSISTOR | 2SD1619-T-TD                  |
| Q64      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q65      | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q69      | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q70      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q71      | 1590001330 | S.TRANSISTOR | DTA114EU T107                 |
| Q72      | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q74      | 1590001330 | S.TRANSISTOR | DTA114EU T107                 |
| Q78      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q79      | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q80      | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q82      | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q83      | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q84      | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q101     | 1510000770 | S.TRANSISTOR | 2SA1586-GR (TE85R)            |
| Q102     | 1590000680 | S.TRANSISTOR | DTA114EU T107                 |
| Q103     | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q104     | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q106     | 1510000770 | S.TRANSISTOR | 2SA1586-GR (TE85R)            |
| Q111     | 1510000770 | S.TRANSISTOR | 2SA1586-GR (TE85R)            |
| Q112     | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q113     | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q114     | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q115     | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q118     | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q119     | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q121     | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q122     | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q123     | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q124     | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q125     | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q126     | 1580000330 | S.FET        | 2SK210-GR (TE85R)             |
| Q128     | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q129     | 1590000680 | S.TRANSISTOR | DTC114EU T107                 |
| Q130     | 1590001330 | S.TRANSISTOR | DTA114EU T107                 |
| Q131     | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)            |
| Q132     | 1590000680 | S.TRANSISTOR | DTC114EU T107<br>[except Gen] |
| D1       | 1790000450 | S.DIODE      | MA862(TX)                     |
| D2       | 1790000450 | S.DIODE      | MA862(TX)                     |
| D3       | 1790000620 | S.DIODE      | MA77(TW)                      |
| D4       | 1790000620 | S.DIODE      | MA77(TW)                      |
| D5       | 1790000450 | S.DIODE      | MA862(TX)                     |
| D6       | 1790000450 | S.DIODE      | MA862(TX)                     |
| D7       | 1790000450 | S.DIODE      | MA862(TX)                     |
| D8       | 1790000450 | S.DIODE      | MA862(TX)                     |
| D9       | 1790000450 | S.DIODE      | MA862(TX)                     |
| D10      | 1790000450 | S.DIODE      | MA862(TX)                     |
| D11      | 1790000450 | S.DIODE      | MA862(TX)                     |
| D12      | 1790000450 | S.DIODE      | MA862(TX)                     |
| D13      | 1790000450 | S.DIODE      | MA862(TX)                     |
| D14      | 1790000450 | S.DIODE      | MA862(TX)                     |
| D15      | 1790000450 | S.DIODE      | MA862(TX)                     |
| D16      | 1790000450 | S.DIODE      | MA862(TX)                     |
| D17      | 1790000690 | S.DIODE      | HSM88ASR-TR                   |
| D18      | 1790000620 | S.DIODE      | MA77(TW)                      |
| D19      | 1710000270 | DIODE        | M1204                         |
| D20      | 1750000270 | S.DIODE      | 1SS301 (TE85R)                |
| D21      | 1790000450 | S.DIODE      | MA862(TX)                     |
| D22      | 1790000450 | S.DIODE      | MA862(TX)                     |
| D23      | 1790000450 | S.DIODE      | MA862(TX)                     |
| D24      | 1790000450 | S.DIODE      | MA862(TX)                     |
| D25      | 1790000450 | S.DIODE      | MA862(TX)                     |
| D26      | 1790000450 | S.DIODE      | MA862(TX)                     |

⑨: GMDSS version only S.=Surface mount

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                                |
|----------|------------|-------------|--------------------------------|
| D27      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D28      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D30      | 1790000450 | S.DIODE     | MA862(TX)                      |
| D31      | 1790000690 | S.DIODE     | HSM88ASR-TR                    |
| D32      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D33      | 1790000450 | S.DIODE     | MA862(TX)                      |
| D34      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D35      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D36      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D37      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D38      | 1730000120 | ZENER       | RD6.2E B2                      |
| D39      | 1790000690 | S.DIODE     | HSM88ASR-TR                    |
| D40      | 1750000300 | S.DIODE     | 1SS302 (TE85R)                 |
| D41      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D42      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D43      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D45      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D46      | 1790000690 | S.DIODE     | HSM88ASR-TR                    |
| D47      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D48      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D49      | 1790000450 | S.DIODE     | MA862(TX)                      |
| D50      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D51      | 1790000450 | S.DIODE     | MA862(TX)                      |
| D52      | 1790000690 | S.DIODE     | ND433G                         |
| D53      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D59      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D60      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D61      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D62      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D63      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D65      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D66      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D68      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D69      | 1750000300 | S.DIODE     | 1SS302 (TE85R)                 |
| D70      | 1750000300 | S.DIODE     | 1SS302 (TE85R)                 |
| D73      | 1730000210 | ZENER       | RD9.1E B3                      |
| D74      | 1730000100 | ZENER       | RD5.1E B2                      |
| D75      | 1750000300 | S.DIODE     | 1SS302 (TE85R)                 |
| D76      | 1750000300 | S.DIODE     | 1SS302 (TE85R)                 |
| D79      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D88      | 1790000690 | S.DIODE     | HSM88ASR-TR                    |
| D89      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D90      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D97      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D98      | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D99      | 1790000450 | S.DIODE     | MA862(TX)                      |
| D100     | 1750000300 | S.DIODE     | 1SS302 (TE85R)                 |
| D101     | 1750000300 | S.DIODE     | 1SS302 (TE85R)                 |
| D102     | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D103     | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D201     | 1710000160 | DIODE       | 1SS133                         |
| D202     | 1710000160 | DIODE       | 1SS133                         |
| D203     | 1710000160 | DIODE       | 1SS133                         |
| D204     | 1710000160 | DIODE       | 1SS133 [except Gen]            |
| D205     | 1710000160 | DIODE       | 1SS133                         |
| D206     | 1710000160 | DIODE       | 1SS133                         |
| D207     | 1710000160 | DIODE       | 1SS133 [except Gen]            |
| D209     | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D210     | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D211     | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D212     | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D213     | 1750000300 | S.DIODE     | 1SS302 (TE85R)                 |
| D214     | 1750000300 | S.DIODE     | 1SS302 (TE85R)                 |
| D215     | 1750000300 | S.DIODE     | 1SS302 (TE85R)                 |
| D216     | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D217     | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D218     | 1750000300 | S.DIODE     | 1SS302 (TE85R)                 |
| D220     | 1730000250 | ZENER       | RD12E B2                       |
| D222     | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D223     | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D224     | 1730000500 | ZENER       | RD13E B2                       |
| D225     | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D226     | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D227     | 1750000270 | S.DIODE     | 1SS301 (TE85R)                 |
| D228     | 1750000270 | S.DIODE     | 1SS301 (TE85R)<br>[except Gen] |

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                                |
|----------|------------|-------------|--------------------------------|
| F11      | 2010001010 | FILTER      | 69M15B (FL-120)                |
| F12      | 2010000320 | FILTER      | 9M22D2 (FL-30)<br>[Gen, Mrine] |
|          | 2010000600 | FILTER      | 9M26F (FL-80)<br>[GMDSS]       |
| F13      | 2010000950 | FILTER      | 9M 6A1 (FL-116)                |
| F14      | 2010000950 | FILTER      | 9M 6A1 (FL-116)                |
| F15      | 2010001860 | FILTER      | FL-232 (9.010600MHz)           |
| X2       | 6050008180 | S.XTAL      | CR-410 (9.8304MHz)             |
| T1       | 5920000570 | TRANSFOMER  | 12T01                          |
| T2       | 5920000570 | TRANSFOMER  | 12T01                          |
| T3       | 5920000570 | TRANSFOMER  | 12T01                          |
| T4       | 5920000570 | TRANSFOMER  | 12T01                          |
| L1       | 6140000060 | COIL        | LR-18                          |
| L2       | 6180002480 | COIL        | LAL 03NA 820K                  |
| L3       | 6200002960 | S.COIL      | NL 322522T-4R7J-3              |
| L4       | 6200003100 | S.COIL      | NL 322522T-3R9J-3              |
| L7       | 6200003260 | S.COIL      | NL 322522T-101J                |
| L8       | 6200002960 | S.COIL      | NL 322522T-4R7J-3              |
| L9       | 6200003320 | S.COIL      | NL 322522T-3R3J-3              |
| L10      | 6200003100 | S.COIL      | NL 322522T-3R9J-3              |
| L11      | 6200001850 | S.COIL      | NL 322522T-5R6J                |
| L12      | 6200003260 | S.COIL      | NL 322522T-101J                |
| L13      | 6200002990 | S.COIL      | NL 322522T-2R2J-3              |
| L14      | 6200002990 | S.COIL      | NL 322522T-2R2J-3              |
| L15      | 6200002990 | S.COIL      | NL 322522T-2R2J-3              |
| L16      | 6200003080 | S.COIL      | NL 322522T-1R8J-3              |
| L17      | 6200003260 | S.COIL      | NL 322522T-101J                |
| L18      | 6200003070 | S.COIL      | NL 322522T-1R5J-3              |
| L19      | 6200003070 | S.COIL      | NL 322522T-1R5J-3              |
| L20      | 6200003080 | S.COIL      | NL 322522T-1R8J-3              |
| L21      | 6200003080 | S.COIL      | NL 322522T-1R2J-3              |
| L22      | 6200003260 | S.COIL      | NL 322522T-101J                |
| L23      | 6200001720 | S.COIL      | NL 322522T-1R0J                |
| L24      | 6200001720 | S.COIL      | NL 322522T-1R0J                |
| L25      | 6200001720 | S.COIL      | NL 322522T-1R0J                |
| L26      | 6200003050 | S.COIL      | NL 322522T-R82J-3              |
| L27      | 6200003260 | S.COIL      | NL 322522T-101J                |
| L28      | 6200002980 | S.COIL      | NL 322522T-R56J-3              |
| L29      | 6200002980 | S.COIL      | NL 322522T-R56J-3              |
| L30      | 6200003040 | S.COIL      | NL 322522T-R68J-3              |
| L31      | 6200003040 | S.COIL      | NL 322522T-R68J-3              |
| L32      | 6200003260 | S.COIL      | NL 322522T-101J                |
| L33      | 6200003020 | S.COIL      | NL 322522T-R33J-3              |
| L34      | 6200003030 | S.COIL      | NL 322522T-R47J-3              |
| L35      | 6200003030 | S.COIL      | NL 322522T-R47J-3              |
| L36      | 6200003030 | S.COIL      | NL 322522T-R47J-3              |
| L37      | 6200003260 | S.COIL      | NL 322522T-101J                |
| L38      | 6200003010 | S.COIL      | NL 322522T-R27J-3              |
| L39      | 6200003250 | S.COIL      | NL 322522T-R39J-3              |
| L40      | 6200003250 | S.COIL      | NL 322522T-R39J-3              |
| L41      | 6200002980 | S.COIL      | NL 322522T-R56J-3              |
| L42      | 6200003260 | S.COIL      | NL 322522T-101J                |
| L43      | 6200003020 | S.COIL      | NL 322522T-R33J-3              |
| L44      | 6200003010 | S.COIL      | NL 322522T-R27J-3              |
| L45      | 6200003010 | S.COIL      | NL 322522T-R27J-3              |
| L46      | 6200003020 | S.COIL      | NL 322522T-R33J-3              |
| L49      | 6200001850 | S.COIL      | NL 322522T-5R6J                |
| L50      | 6200002960 | S.COIL      | NL 322522T-4R7J-3              |
| L51      | 6180001710 | COIL        | LAL 03NA 561K                  |
| L52      | 6140002060 | COIL        | LR-225 (RIB3X6.5X3 3A6)        |
| L53      | 6180001710 | COIL        | LAL 03NA 561K                  |
| L54      | 6200003260 | S.COIL      | NL 322522T-101J                |
| L55      | 6200001720 | S.COIL      | NL 322522T-1R0J                |
| L56      | 6200003040 | S.COIL      | NL 322522T-R68J-3              |
| L57      | 6200003260 | S.COIL      | NL 322522T-101J                |
| L58      | 6140002220 | COIL        | LR-270 (TR6X3X2 3A9)           |
| L59      | 6150004270 | COIL        | LS-483A (C-14924)              |
| L60      | 6140000930 | COIL        | LR-116                         |
| L61      | 6200001830 | S.COIL      | NL 322522T-100J                |

Ⓢ: GMDSS version only S.=Surface mount

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                         |
|----------|------------|-------------|-------------------------|
| L62      | 6200003020 | S.COIL      | NL 322522T-R33J-3       |
| L63      | 6200003000 | S.COIL      | NL 322522T-R22J-3       |
| L64      | 6150004280 | COIL        | LS-484B (C-14927)       |
| L65      | 6150004280 | COIL        | LS-484B (C-14927)       |
| L66      | 6140002080 | COIL        | LR-225 (RIB3X6.5X3 3A6) |
| L67      | 6140002080 | COIL        | LR-225 (RIB3X6.5X3 3A6) |
| L69      | 6200003080 | S.COIL      | NL 322522T-1R2J-3       |
| L70      | 6200003080 | S.COIL      | NL 322522T-1R2J-3       |
| L71      | 6200003000 | S.COIL      | NL 322522T-R22J-3       |
| L72      | 6200003010 | S.COIL      | NL 322522T-R27J-3       |
| L73      | 6140000930 | COIL        | LR-118                  |
| L74      | 6150004270 | COIL        | LS-483A (C-14924)       |
| L75      | 6150002430 | COIL        | LS-254                  |
| L76      | 6110001620 | COIL        | LA-245                  |
| L77      | 6200001830 | S.COIL      | NL 322522T-100J         |
| L78      | 6150004280 | COIL        | LS-484B (C-14927)       |
| L79      | 6150004250 | COIL        | LS-471A (C-14922)       |
| L80      | 6150004050 | COIL        | LS-466                  |
| L81      | 6150004050 | COIL        | LS-466                  |
| L82      | 6200003280 | S.COIL      | NL 322522T-101J         |
| L83      | 6150004310 | COIL        | LS-487A (C-14930)       |
| L84      | 6150004290 | COIL        | LS-485A (C-14928)       |
| L85      | 6150004290 | COIL        | LS-485A (C-14928)       |
| L86      | 6200001830 | S.COIL      | NL 322522T-100J         |
| L87      | 6140001600 | COIL        | LR-178                  |
| L88      | 6150001590 | COIL        | LS-175                  |
| L89      | 6150001590 | COIL        | LS-175                  |
| L90      | 6200003140 | S.COIL      | NL 322522T-150J         |
| L91      | 6200003140 | S.COIL      | NL 322522T-150J         |
| L92      | 6150004430 | COIL        | LS-501 (C-14872)        |
| L93      | 6150004300 | COIL        | LS-486A (C-14929)       |
| L94      | 2040000490 | COIL        | EXC-ELDR25C             |
| L95      | 6180000960 | COIL        | LAL 03NA 102K           |
| L96      | 6180000960 | COIL        | LAL 03NA 102K           |
| L100     | 6200003090 | S.COIL      | NL 322522T-2R7J-3       |
| L101     | 2040000490 | COIL        | EXC-ELDR25C             |
| L102     | 2040000490 | COIL        | EXC-ELDR25C             |
| L103     | 2040000490 | COIL        | EXC-ELDR25C             |
| L104     | 2040000490 | COIL        | EXC-ELDR25C             |
| L105     | 6910003570 | COIL        | 2943-866863             |
| L106     | 6910003570 | COIL        | 2943-866863             |
| L107     | 6180001710 | COIL        | LAL 03NA 561K           |
| L108     | 6180001710 | COIL        | LAL 03NA 561K           |
| L115     | 6200003280 | S.COIL      | NL 322522T-101J         |
| L116     | 6200003280 | S.COIL      | NL 322522T-101J         |
| L117     | 6180001710 | COIL        | LAL 03NA 561K           |
| L118     | 6180001710 | COIL        | LAL 03NA 561K           |
| L119     | 6180001710 | COIL        | LAL 03NA 561K           |
| L120     | 6180001710 | COIL        | LAL 03NA 561K           |
| L121     | 6180001710 | COIL        | LAL 03NA 561K           |
| L122     | 6180001710 | COIL        | LAL 03NA 561K           |
| L123     | 6200003020 | S.COIL      | NL 322522T-R33J-3       |
| L124     | 6200003000 | S.COIL      | NL 322522T-R22J-3       |
| L125     | 6200003280 | S.COIL      | NL 322522T-101J         |
| L126     | 6180000990 | COIL        | LAL 04NA 101K           |
| L127     | 6200003280 | S.COIL      | NL 322522T-101J         |
| L129     | 6180000900 | COIL        | LAL 03NA 101K           |
| L130     | 6180000900 | COIL        | LAL 03NA 101K           |
| L131     | 6180000900 | COIL        | LAL 03NA 101K           |
| L132     | 6200003280 | S.COIL      | NL 322522T-101J         |
| L133     | 2040000490 | COIL        | EXC-ELDR25C             |
| L134     | 2040000490 | COIL        | EXC-ELDR25C             |
| L135     | 2040000490 | COIL        | EXC-ELDR25C             |
| L136     | 2040000490 | COIL        | EXC-ELDR25C             |
| L137     | 6200001720 | S.COIL      | NL 322522T-1R0J         |
| L138     | 2040000490 | COIL        | EXC-ELDR25C             |
| L139     | 6200001830 | S.COIL      | NL 322522T-100J         |
| L140     | 6200003280 | S.COIL      | NL 322522T-101J         |
| L141     | 2040000490 | COIL        | EXC-ELDR25C             |
| L142     | 6180000900 | COIL        | LAL 03NA 101K           |
| L143     | 2040000490 | COIL        | EXC-ELDR25C             |
| R1       | 7030003380 | S.RESISTOR  | ERJ3GEYJ 331 V (330 Ω)  |
| R2       | 7010003180 | RESISTOR    | ELR20J 15 Ω             |
| R3       | 7030003380 | S.RESISTOR  | ERJ3GEYJ 331 V (330 Ω)  |

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                         |
|----------|------------|-------------|-------------------------|
| R4       | 7010003200 | RESISTOR    | ELR20J 22 Ω             |
| R5       | 7030003200 | S.RESISTOR  | ERJ3GEYJ 100 V (10 Ω)   |
| R6       | 7030003520 | S.RESISTOR  | ERJ3GEYJ 472 V (4.7 kΩ) |
| R7       | 7010003390 | RESISTOR    | ELR20J 820 Ω            |
| R8       | 7030003400 | S.RESISTOR  | ERJ3GEYJ 471 V (470 Ω)  |
| R9       | 7030003400 | S.RESISTOR  | ERJ3GEYJ 471 V (470 Ω)  |
| R10      | 7030003400 | S.RESISTOR  | ERJ3GEYJ 471 V (470 Ω)  |
| R11      | 7030003360 | S.RESISTOR  | ERJ3GEYJ 221 V (220 Ω)  |
| R12      | 7030003360 | S.RESISTOR  | ERJ3GEYJ 221 V (220 Ω)  |
| R13      | 7030003360 | S.RESISTOR  | ERJ3GEYJ 221 V (220 Ω)  |
| R14      | 7030003360 | S.RESISTOR  | ERJ3GEYJ 221 V (220 Ω)  |
| R15      | 7030003360 | S.RESISTOR  | ERJ3GEYJ 221 V (220 Ω)  |
| R16      | 7030003360 | S.RESISTOR  | ERJ3GEYJ 221 V (220 Ω)  |
| R17      | 7030003360 | S.RESISTOR  | ERJ3GEYJ 221 V (220 Ω)  |
| R18      | 7030003360 | S.RESISTOR  | ERJ3GEYJ 221 V (220 Ω)  |
| R19      | 7030003360 | S.RESISTOR  | ERJ3GEYJ 221 V (220 Ω)  |
| R20      | 7030003440 | S.RESISTOR  | ERJ3GEYJ 102 V (1 kΩ)   |
| R21      | 7030003440 | S.RESISTOR  | ERJ3GEYJ 102 V (1 kΩ)   |
| R22      | 7030003400 | S.RESISTOR  | ERJ3GEYJ 471 V (470 Ω)  |
| R23      | 7030003400 | S.RESISTOR  | ERJ3GEYJ 471 V (470 Ω)  |
| R24      | 7030003400 | S.RESISTOR  | ERJ3GEYJ 471 V (470 Ω)  |
| R25      | 7030003580 | S.RESISTOR  | ERJ3GEYJ 103 V (10 kΩ)  |
| R26      | 7310002670 | S.TRIMMER   | RV-143 (RH03A3AS2) 471  |
| R27      | 7030003440 | S.RESISTOR  | ERJ3GEYJ 102 V (1 kΩ)   |
| R28      | 7010003350 | RESISTOR    | ELR20J 390 Ω            |
| R29      | 7030003480 | S.RESISTOR  | ERJ3GEYJ 222 V (2.2 kΩ) |
| R32      | 7030003380 | S.RESISTOR  | ERJ3GEYJ 331 V (330 Ω)  |
| R33      | 7010003180 | RESISTOR    | ELR20J 15 Ω             |
| R34      | 7030003380 | S.RESISTOR  | ERJ3GEYJ 331 V (330 Ω)  |
| R35      | 7030003480 | S.RESISTOR  | ERJ3GEYJ 222 V (2.2 kΩ) |
| R36      | 7030003640 | S.RESISTOR  | ERJ3GEYJ 473 V (47 kΩ)  |
| R37      | 7010003400 | RESISTOR    | ELR20J 1 kΩ             |
| R38      | 7010003400 | RESISTOR    | ELR20J 1 kΩ             |
| R39      | 7010003180 | RESISTOR    | ELR20J 15 Ω             |
| R41      | 7010003240 | RESISTOR    | ELR20J 47 Ω             |
| R43      | 7030003530 | S.RESISTOR  | ERJ3GEYJ 582 V (5.8 kΩ) |
| R44      | 7030003280 | S.RESISTOR  | ERJ3GEYJ 470 V (47 Ω)   |
| R45      | 7030003480 | S.RESISTOR  | ERJ3GEYJ 152 V (1.5 kΩ) |
| R46      | 7030003200 | S.RESISTOR  | ERJ3GEYJ 100 V (10 Ω)   |
| R47      | 7030003440 | S.RESISTOR  | ERJ3GEYJ 102 V (1 kΩ)   |
| R48      | 7030003520 | S.RESISTOR  | ERJ3GEYJ 472 V (4.7 kΩ) |
| R49      | 7030003440 | S.RESISTOR  | ERJ3GEYJ 102 V (1 kΩ)   |
| R50      | 7030003520 | S.RESISTOR  | ERJ3GEYJ 472 V (4.7 kΩ) |
| R51      | 7030003320 | S.RESISTOR  | ERJ3GEYJ 101 V (100 Ω)  |
| R52      | 7030003680 | S.RESISTOR  | ERJ3GEYJ 104 V (100 kΩ) |
| R53      | 7030003640 | S.RESISTOR  | ERJ3GEYJ 473 V (47 kΩ)  |
| R54      | 7030003640 | S.RESISTOR  | ERJ3GEYJ 473 V (47 kΩ)  |
| R55      | 7030003320 | S.RESISTOR  | ERJ3GEYJ 101 V (100 Ω)  |
| R56      | 7030003440 | S.RESISTOR  | ERJ3GEYJ 102 V (1 kΩ)   |
| R57      | 7030003520 | S.RESISTOR  | ERJ3GEYJ 472 V (4.7 kΩ) |
| R58      | 7030003580 | S.RESISTOR  | ERJ3GEYJ 103 V (10 kΩ)  |
| R59      | 7010004450 | RESISTOR    | R20J 100 kΩ             |
| R60      | 7030003640 | S.RESISTOR  | ERJ3GEYJ 473 V (47 kΩ)  |
| R61      | 7030003540 | S.RESISTOR  | ERJ3GEYJ 682 V (6.8 kΩ) |
| R62      | 7030003380 | S.RESISTOR  | ERJ3GEYJ 331 V (330 Ω)  |
| R63      | 7030003600 | S.RESISTOR  | ERJ3GEYJ 223 V (22 kΩ)  |
| R64      | 7030008520 | S.RESISTOR  | RR0818P-561-D (560 Ω)   |
| R65      | 7030003280 | S.RESISTOR  | ERJ3GEYJ 470 V (47 Ω)   |
| R66      | 7030003200 | S.RESISTOR  | ERJ3GEYJ 100 V (10 Ω)   |
| R67      | 7030003480 | S.RESISTOR  | ERJ3GEYJ 222 V (2.2 kΩ) |
| R68      | 7030003280 | S.RESISTOR  | ERJ3GEYJ 470 V (47 Ω)   |
| R69      | 7030003520 | S.RESISTOR  | ERJ3GEYJ 472 V (4.7 kΩ) |
| R70      | 7030003400 | S.RESISTOR  | ERJ3GEYJ 471 V (470 Ω)  |
| R71      | 7030003400 | S.RESISTOR  | ERJ3GEYJ 471 V (470 Ω)  |
| R72      | 7030003400 | S.RESISTOR  | ERJ3GEYJ 471 V (470 Ω)  |
| R73      | 7030003600 | S.RESISTOR  | ERJ3GEYJ 223 V (22 kΩ)  |
| R74      | 7030003280 | S.RESISTOR  | ERJ3GEYJ 470 V (47 Ω)   |
| R75      | 7010003200 | RESISTOR    | ELR20J 22 Ω             |
| R76      | 7030003600 | S.RESISTOR  | ERJ3GEYJ 223 V (22 kΩ)  |
| R77      | 7030003580 | S.RESISTOR  | ERJ3GEYJ 103 V (10 kΩ)  |
| R79      | 7030003800 | S.RESISTOR  | ERJ3GEYJ 105 V (1 MΩ)   |
| R80      | 7030003320 | S.RESISTOR  | ERJ3GEYJ 101 V (100 Ω)  |
| R81      | 7030003320 | S.RESISTOR  | ERJ3GEYJ 101 V (100 Ω)  |
| R82      | 7030003480 | S.RESISTOR  | ERJ3GEYJ 222 V (2.2 kΩ) |
| R83      | 7030003480 | S.RESISTOR  | ERJ3GEYJ 222 V (2.2 kΩ) |
| R84      | 7030003480 | S.RESISTOR  | ERJ3GEYJ 222 V (2.2 kΩ) |

S.=Surface mount

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                        |
|----------|------------|------------------------------------|
| R85      | 7030003380 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)  |
| R86      | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R87      | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R88      | 7030003630 | S.RESISTOR ERJ3GEYJ 393 V (39 kΩ)  |
| R89      | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) |
| R90      | 7510000290 | THERMISTOR ERT-D2ZGL 301S          |
| R91      | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R92      | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R94      | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R95      | 7010003170 | RESISTOR ELR20J 12 Ω               |
| R96      | 7010003170 | RESISTOR ELR20J 12 Ω               |
| R97      | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R98      | 7010003200 | RESISTOR ELR20J 22 Ω               |
| R99      | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R100     | 7030003530 | S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ) |
| R101     | 7010003200 | RESISTOR ELR20J 22 Ω               |
| R102     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R103     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R104     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R105     | 7030003440 | S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ) |
| R106     | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R107     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R108     | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)  |
| R109     | 7030003480 | S.RESISTOR ERJ3GEYJ 102 V (1.5 kΩ) |
| R110     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R111     | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R112     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R113     | 7030003680 | S.RESISTOR ERJ3GEYJ 102 V (100 kΩ) |
| R114     | 7030003720 | S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) |
| R116     | 7030003480 | S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ) |
| R117     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R118     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R119     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R120     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R121     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R122     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R123     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R124     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R125     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R126     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R127     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R128     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R129     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R130     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R131     | 7010003380 | RESISTOR ELR20J 680 Ω              |
| R132     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R133     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R134     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R135     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R136     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R138     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R139     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R140     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R143     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R149     | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω)   |
| R150     | 7010004270 | RESISTOR R20J 4.7 kΩ               |
| R157     | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)  |
| R158     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R159     | 7010004340 | RESISTOR R20J 15 kΩ                |
| R161     | 7030003840 | S.RESISTOR ERJ3GEYJ 225 V (2.2 MΩ) |
| R162     | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)   |
| R163     | 7030003840 | S.RESISTOR ERJ3GEYJ 225 V (2.2 MΩ) |
| R164     | 7030003720 | S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) |
| R165     | 7030003720 | S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) |
| R166     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R167     | 7030003380 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)  |
| R168     | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) |
| R169     | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) |
| R170     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R171     | 7010003550 | RESISTOR ELR20J 15 kΩ              |
| R172     | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)  |
| R173     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R174     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R175     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R176     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R177     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                                     |
|----------|------------|-------------------------------------------------|
| R183     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)               |
| R184     | 7310002740 | S.TRIMMER RV-150 (RH03A3A14X0FC)103             |
| R185     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)               |
| R186     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)              |
| R187     | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)               |
| R188     | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)               |
| R189     | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)              |
| R190     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)               |
| R191     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)              |
| R192     | 7030003380 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)               |
| R193     | 7030003380 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)               |
| R194     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)              |
| R196     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)              |
| R197     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)               |
| R198     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)               |
| R199     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)               |
| R200     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)               |
| R201     | 7030003380 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)               |
| R202     | 7030003590 | S.RESISTOR ERJ3GEYJ 183 V (18 kΩ)               |
| R204     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)              |
| R205     | 7310000750 | TRIMMER RH0651C14J2WA (103)                     |
| R207     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)               |
| R208     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)              |
| R209     | 7030003580 | S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)               |
| R210     | 7030003340 | S.RESISTOR ERJ3GEYJ 151 V (150 Ω)               |
| R211     | 7310002670 | S.TRIMMER RV-143 (RH03A3AS2) 471                |
| R212     | 7310002630 | S.TRIMMER RV-139 (RH03A3A12) 101                |
| R213     | 7510000240 | THERMISTOR ERT-D2ZGL 332S                       |
| R214     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)               |
| R215     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)                |
| R216     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)              |
| R217     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)               |
| R218     | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)               |
| R219     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)              |
| R220     | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)               |
| R221     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)               |
| R222     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)               |
| R223     | 7310002720 | S.TRIMMER RV-148 (RH03A3AS3X0DA)472             |
| R224     | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)               |
| R225     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)              |
| R226     | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)               |
| R227     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)               |
| R228     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)               |
| R229     | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)               |
| R230     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)              |
| R231     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)               |
| R232     | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ)              |
| R233     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)              |
| R234     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)               |
| R235     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)                |
|          | 7030003420 | S.RESISTOR [Gen, Marine] ERJ3GEYJ 681 V (680 Ω) |
|          |            | [GMDSS]                                         |
| R236     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)               |
| R237     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)              |
| R238     | 7310002740 | S.TRIMMER RV-150 (RH03A3A14X0FC)103             |
| R239     | 7310002740 | S.TRIMMER RV-150 (RH03A3A14X0FC)103             |
| R240     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)               |
| R241     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)              |
| R242     | 7030003280 | S.RESISTOR ERJ3GEYJ 470 V (47 Ω)                |
| R243     | 7010004190 | RESISTOR R20J 1 kΩ                              |
| R244     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)              |
| R245     | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)               |
| R246     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)              |
| R247     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)              |
| R254     | 7030003380 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)               |
| R255     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)              |
| R256     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)                |
| R257     | 7310000750 | TRIMMER RH0651C14J2WA (103)                     |
| R258     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)              |
| R259     | 7030003840 | S.RESISTOR ERJ3GEYJ 225 V (2.2 MΩ)              |
| R261     | 7030003840 | S.RESISTOR ERJ3GEYJ 225 V (2.2 MΩ)              |

S.=Surface mount

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                        |
|----------|------------|------------------------------------|
| R262     | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)   |
| R263     | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)   |
| R264     | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)  |
| R265     | 7030003710 | S.RESISTOR ERJ3GEYJ 184 V (180 kΩ) |
| R266     | 7030003800 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R267     | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)   |
| R268     | 7030003280 | S.RESISTOR ERJ3GEYJ 470 V (47 Ω)   |
| R269     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R270     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R271     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R272     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R273     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R274     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R275     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R276     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R277     | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)  |
| R278     | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)  |
| R279     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R280     | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R281     | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) |
| R282     | 7030003580 | S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)  |
| R283     | 7030003480 | S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ) |
| R284     | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R285     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R286     | 7030003720 | S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) |
| R287     | 7030003650 | S.RESISTOR ERJ3GEYJ 583 V (58 kΩ)  |
| R288     | 7010003300 | RESISTOR ELR20J 150 Ω              |
| R290     | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R291     | 7030006520 | S.RESISTOR RR0816P-581-D (580 Ω)   |
| R292     | 7030003580 | S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)  |
| R293     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R294     | 7030003580 | S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)  |
| R295     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R296     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R297     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R298     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R299     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R300     | 7310000750 | TRIMMER RH0651C14J2WA (103)        |
| R301     | 7030003580 | S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)  |
| R302     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R303     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R304     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R305     | 7030003840 | S.RESISTOR ERJ3GEYJ 225 V (2.2 MΩ) |
| R306     | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)  |
| R307     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R308     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R310     | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)   |
| R324     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R325     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R328     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R329     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R333     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R334     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R335     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R336     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R337     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R338     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R339     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R340     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R342     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R344     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R345     | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R346     | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R348     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R349     | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R350     | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R352     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R353     | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R354     | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R362     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R363     | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) |
| R364     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R365     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R369     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R370     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R371     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                        |
|----------|------------|------------------------------------|
| R372     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R373     | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) |
| R374     | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) |
| R375     | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R376     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R377     | 7010000090 | RESISTOR ELR25J 4.7 Ω              |
| R378     | 7010004190 | RESISTOR R20J 1 kΩ                 |
| R379     | 7010000090 | RESISTOR ELR25J 4.7 Ω              |
| R380     | 7010004190 | RESISTOR R20J 1 kΩ                 |
| R381     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R382     | 7030003720 | S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) |
| R385     | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)  |
| R386     | 7030003530 | S.RESISTOR ERJ3GEYJ 582 V (5.8 kΩ) |
| R387     | 7030003530 | S.RESISTOR ERJ3GEYJ 582 V (5.8 kΩ) |
| R388     | 7030003530 | S.RESISTOR ERJ3GEYJ 582 V (5.8 kΩ) |
| R389     | 7030003590 | S.RESISTOR ERJ3GEYJ 183 V (18 kΩ)  |
| R390     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R391     | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) |
| R392     | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R393     | 7010004690 | RESISTOR R50XJ 47 Ω                |
| R394     | 7030003280 | S.RESISTOR ERJ3GEYJ 470 V (47 Ω)   |
| R395     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R396     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R403     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R404     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R411     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R412     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R413     | 7010003280 | RESISTOR ELR20J 100 Ω              |
| R414     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R415     | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)  |
| R416     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R448     | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R449     | 7010003180 | RESISTOR ELR20J 15 Ω               |
| R450     | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R465     | 7010003200 | RESISTOR ELR20J 22 Ω               |
| R466     | 7010003200 | RESISTOR ELR20J 22 Ω               |
| R467     | 7010003200 | RESISTOR ELR20J 22 Ω               |
| R468     | 7010003200 | RESISTOR ELR20J 22 Ω               |
| R469     | 7010003200 | RESISTOR ELR20J 22 Ω               |
| R470     | 7010003200 | RESISTOR ELR20J 22 Ω               |
| R471     | 7010003200 | RESISTOR ELR20J 22 Ω               |
| R472     | 7010003200 | RESISTOR ELR20J 22 Ω               |
| R481     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R484     | 7010003120 | RESISTOR ELR20J 4.7 Ω              |
| R493     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R494     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R501     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R502     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R503     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R504     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R505     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R506     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R510     | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) |
| R514     | 7010000290 | RESISTOR ELR25J 220 Ω              |
| R515     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R517     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R518     | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R519     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R520     | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R521     | 7010003180 | RESISTOR ELR20J 15 Ω               |
| R522     | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R523     | 7010004690 | RESISTOR R50XJ 47 Ω                |
| R525     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R526     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R527     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R528     | 7030003580 | S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)  |
| R529     | 7070000280 | RESISTOR CRH100X R-02J 2.2 Ω (2R2) |
| R533     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R534     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R535     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R536     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R537     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R538     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R539     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R540     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R541     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |

S.=Surface mount

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                        |
|----------|------------|------------------------------------|
| R542     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R543     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R544     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R545     | 7010004450 | RESISTOR R20J 100 kΩ               |
| R601     | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R602     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R603     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R604     | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) |
| R605     | 7030003720 | S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) |
| R606     | 7030003720 | S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) |
| R607     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R608     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R609     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R610     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R611     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R612     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R633     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R634     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R635     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R636     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R637     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R638     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R639     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R640     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R641     | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) |
| R642     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R646     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R647     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R648     | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R650     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R651     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R652     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R653     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R654     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R655     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R657     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R658     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R659     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R663     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R664     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R670     | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)  |
| R671     | 7030003540 | S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ) |
| R672     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R673     | 7030003590 | S.RESISTOR ERJ3GEYJ 183 V (18 kΩ)  |
| R674     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R675     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R676     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R677     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R678     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R679     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R680     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R681     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R682     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R683     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R684     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R690     | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω)   |
| R691     | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω)   |
| R692     | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω)   |
| R693     | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω)   |
| R694     | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω)   |
| R695     | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω)   |
| R696     | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω)   |
| R697     | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω)   |
| R698     | 7010003380 | RESISTOR ELR20J 680 Ω              |
| R699     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R700     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R701     | 7010003830 | RESISTOR R20J 1 Ω                  |
| R702     | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R703     | 7030003580 | S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)  |
| R704     | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) |
| R705     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R706     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R707     | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)  |
| R708     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R709     | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)  |
| R714     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                        |
|----------|------------|------------------------------------|
| R715 ⑨   | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)  |
| R716 ⑨   | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R717 ⑨   | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R718 ⑨   | 7030003580 | S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)  |
| R719     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R720     | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)  |
| R721     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R722     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R723     | 7030003580 | S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)  |
| R724     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R725     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R726     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R728 ⑨   | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R729     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R730     | 7010003170 | RESISTOR ELR20J 12 Ω               |
| R731     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R732     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R733     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R734     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R735     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R736     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R738     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R739     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R740     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R741     | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)  |
| R742     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R743     | 7010004230 | RESISTOR R20J 2.2 kΩ               |
| R744 ⑨   | 7030006520 | S.RESISTOR RR0816P-561-D (560 Ω)   |
| R745 ⑨   | 7030006520 | S.RESISTOR RR0816P-561-D (560 Ω)   |
| R746 ⑨   | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R747 ⑨   | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R748 ⑨   | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R749 ⑨   | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R750 ⑨   | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R751 ⑨   | 7030006520 | S.RESISTOR RR0816P-561-D (560 Ω)   |
| R752     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R753     | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R754     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R755     | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R756     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R757     | 7030006520 | S.RESISTOR RR0816P-561-D (560 Ω)   |
| R760 ⑨   | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R761 ⑨   | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R763 ⑨   | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R764     | 7030003620 | S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)  |
| R765     | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R766     | 7030003200 | S.RESISTOR ERJ3GEYJ 100 V (10 Ω)   |
| R771     | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R772     | 7030003530 | S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ) |
| R773     | 7030003530 | S.RESISTOR ERJ3GEYJ 562 V (5.6 kΩ) |
| R774     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R777     | 7030003760 | S.RESISTOR ERJ3GEYJ 474 V (470 kΩ) |
| R778     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R779     | 7030003720 | S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) |
| R780     | 7030003720 | S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) |
| R781     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R782     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R783     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R784     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R785     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R786     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R787     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R788     | 7010004320 | RESISTOR R20J 10 kΩ                |
| R789     | 7030003340 | S.RESISTOR ERJ3GEYJ 151 V (150 Ω)  |
| R790     | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R791     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R792     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R793     | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R794     | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)  |
| R796     | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R797     | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R798     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R799     | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R800     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R801     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R802     | 7010004320 | RESISTOR R20J 10 kΩ                |

⑨: GMDSS version only S.=Surface mount

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                        |
|----------|------------|------------------------------------|
| R803     | 7510000540 | THERMISTOR ERT-D2ZGL 171S          |
| R804     | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R805     | 7030003670 | S.RESISTOR ERJ3GEYJ 823 V (82 kΩ)  |
| R806     | 7030003720 | S.RESISTOR ERJ3GEYJ 224 V (220 kΩ) |
| R807     | 7510000300 | THERMISTOR ERT-D2ZGL 801S          |
| R808     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R809     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R810     | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R811     | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R812     | 7010004450 | RESISTOR R20J 100 kΩ               |
| R813     | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R820     | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R821     | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| C2       | 4030008920 | S.CERAMIC C1808 JB 1C 473K-T-A     |
| C3       | 4030006880 | S.CERAMIC C1808 JB 1H 472K-T-A     |
| C4       | 4030006870 | S.CERAMIC C1808 JB 1H 222K-T-A     |
| C5       | 4030006900 | S.CERAMIC C1808 JB 1E 103K-T-A     |
| C6       | 4030010020 | S.CERAMIC C1808 JB 1H 122K-T-A     |
| C7       | 4030008660 | S.CERAMIC C1808 JB 1C 153K-T-A     |
| C8       | 4030006870 | S.CERAMIC C1808 JB 1H 222K-T-A     |
| C9       | 4030008920 | S.CERAMIC C1808 JB 1C 473K-T-A     |
| C10      | 4030008920 | S.CERAMIC C1808 JB 1C 473K-T-A     |
| C11      | 4030006870 | S.CERAMIC C1808 JB 1H 222K-T-A     |
| C12      | 4030006810 | S.CERAMIC C1808 SL 1H 271J-T-A     |
| C13      | 4030009970 | S.CERAMIC C1808 JB 1H 123K-T-A     |
| C14      | 4030008920 | S.CERAMIC C1808 JB 1C 473K-T-A     |
| C15      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A    |
| C16      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A    |
| C17      | 4030009980 | S.CERAMIC C1808 JB 1H 123K-T-A     |
| C18      | 4030010750 | S.CERAMIC C1808 CH 1H 201J-T-A     |
| C19      | 4030009980 | S.CERAMIC C1808 JB 1H 152K-T-A     |
| C20      | 4030008470 | S.CERAMIC C1808 JB 1H 272K-T-A     |
| C21      | 4030008850 | S.CERAMIC C1808 JB 1C 123K-T-A     |
| C22      | 4030009980 | S.CERAMIC C1808 JB 1H 152K-T-A     |
| C23      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A    |
| C24      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A    |
| C25      | 4030010040 | S.CERAMIC C1808 JB 1H 561K-T-A     |
| C26      | 4030007140 | S.CERAMIC C1808 CH 1H 121J-T-A     |
| C27      | 4030010040 | S.CERAMIC C1808 JB 1H 561K-T-A     |
| C28      | 4030009980 | S.CERAMIC C1808 JB 1H 152K-T-A     |
| C29      | 4030006880 | S.CERAMIC C1808 JB 1H 472K-T-A     |
| C30      | 4030006860 | S.CERAMIC C1808 JB 1H 102K-T-A     |
| C31      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A    |
| C32      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A    |
| C33      | 4030010040 | S.CERAMIC C1808 JB 1H 561K-T-A     |
| C34      | 4030007130 | S.CERAMIC C1808 CH 1H 101J-T-A     |
| C35      | 4030006850 | S.CERAMIC C1808 JB 1H 471K-T-A     |
| C36      | 4030010040 | S.CERAMIC C1808 JB 1H 561K-T-A     |
| C37      | 4030009970 | S.CERAMIC C1808 JB 1H 182K-T-A     |
| C38      | 4030006850 | S.CERAMIC C1808 JB 1H 471K-T-A     |
| C39      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A    |
| C40      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A    |
| C41      | 4030006850 | S.CERAMIC C1808 JB 1H 471K-T-A     |
| C42      | 4030007100 | S.CERAMIC C1808 CH 1H 560J-T-A     |
| C43      | 4030006830 | S.CERAMIC C1808 SL 1H 331J-T-A     |
| C44      | 4030006850 | S.CERAMIC C1808 JB 1H 471K-T-A     |
| C45      | 4030006870 | S.CERAMIC C1808 JB 1H 222K-T-A     |
| C46      | 4030006830 | S.CERAMIC C1808 SL 1H 331J-T-A     |
| C47      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A    |
| C48      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A    |
| C49      | 4030006830 | S.CERAMIC C1808 SL 1H 331J-T-A     |
| C50      | 4030007080 | S.CERAMIC C1808 CH 1H 390J-T-A     |
| C51      | 4030007150 | S.CERAMIC C1808 CH 1H 151J-T-A     |
| C52      | 4030006810 | S.CERAMIC C1808 SL 1H 271J-T-A     |
| C53      | 4030006870 | S.CERAMIC C1808 JB 1H 222K-T-A     |
| C54      | 4030007170 | S.CERAMIC C1808 CH 1H 221J-T-A     |
| C55      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A    |
| C56      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A    |
| C57      | 4030011280 | S.CERAMIC C1808 CH 1H 271J-T-A     |
| C58      | 4030007080 | S.CERAMIC C1808 CH 1H 390J-T-A     |
| C59      | 4030007140 | S.CERAMIC C1808 CH 1H 121J-T-A     |
| C60      | 4030006810 | S.CERAMIC C1808 SL 1H 271J-T-A     |
| C61      | 4030009980 | S.CERAMIC C1808 JB 1H 152K-T-A     |
| C62      | 4030007160 | S.CERAMIC C1808 CH 1H 181J-T-A     |

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                     |
|----------|------------|---------------------------------|
| C63      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A |
| C64      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A |
| C65      | 4030007160 | S.CERAMIC C1808 CH 1H 181J-T-A  |
| C66      | 4030007030 | S.CERAMIC C1808 CH 1H 150J-T-A  |
| C67      | 4030007130 | S.CERAMIC C1808 CH 1H 101J-T-A  |
| C68      | 4030007160 | S.CERAMIC C1808 CH 1H 181J-T-A  |
| C69      | 4030009980 | S.CERAMIC C1808 JB 1H 152K-T-A  |
| C70      | 4030007150 | S.CERAMIC C1808 CH 1H 151J-T-A  |
| C71      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A |
| C72      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A |
| C73      | 4030007150 | S.CERAMIC C1808 CH 1H 151J-T-A  |
| C74      | 4030007040 | S.CERAMIC C1808 CH 1H 180J-T-A  |
| C75      | 4030007130 | S.CERAMIC C1808 CH 1H 101J-T-A  |
| C76      | 4030007150 | S.CERAMIC C1808 CH 1H 151J-T-A  |
| C77      | 4030006860 | S.CERAMIC C1808 JB 1H 102K-T-A  |
| C78      | 4030007130 | S.CERAMIC C1808 CH 1H 151J-T-A  |
| C79      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A |
| C80      | 4030008920 | S.CERAMIC C1808 JB 1C 473K-T-A  |
| C81      | 4030008920 | S.CERAMIC C1808 JB 1C 473K-T-A  |
| C82      | 4030006860 | S.CERAMIC C1808 JB 1H 472K-T-A  |
| C83      | 4030008920 | S.CERAMIC C1808 JB 1C 473K-T-A  |
| C84      | 4030008920 | S.CERAMIC C1808 JB 1C 473K-T-A  |
| C85      | 4030006880 | S.CERAMIC C1808 JB 1H 472K-T-A  |
| C86      | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A |
| C87      | 4030006880 | S.CERAMIC C1808 JB 1H 472K-T-A  |
| C88      | 4030008920 | S.CERAMIC C1808 JB 1C 473K-T-A  |
| C89      | 4030007030 | S.CERAMIC C1808 CH 1H 150J-T-A  |
| C90      | 4030006960 | S.CERAMIC C1808 CH 1H 050C-T-A  |
| C91      | 4030007080 | S.CERAMIC C1808 CH 1H 390J-T-A  |
| C92      | 4030007040 | S.CERAMIC C1808 CH 1H 180J-T-A  |
| C93      | 4030007050 | S.CERAMIC C1808 CH 1H 470J-T-A  |
| C94      | 4030008920 | S.CERAMIC C1808 JB 1C 473K-T-A  |
| C95      | 4030008920 | S.CERAMIC C1808 JB 1C 473K-T-A  |
| C96      | 4030006960 | S.CERAMIC C1808 CH 1H 050C-T-A  |
| C98      | 4030006860 | S.CERAMIC C1808 JB 1H 472K-T-A  |
| C99      | 4030006880 | S.CERAMIC C1808 JB 1H 472K-T-A  |
| C100     | 4030006880 | S.CERAMIC C1808 JB 1H 472K-T-A  |
| C101     | 4030007090 | S.CERAMIC C1808 CH 1H 470J-T-A  |
| C102     | 4030007090 | S.CERAMIC C1808 CH 1H 470J-T-A  |
| C103     | 4030007170 | S.CERAMIC C1808 CH 1H 221J-T-A  |
| C104     | 4030008930 | S.CERAMIC C1808 CH 1H 020C-T-A  |
| C106     | 4030006880 | S.CERAMIC C1808 JB 1H 472K-T-A  |
| C107     | 4030006880 | S.CERAMIC C1808 JB 1H 472K-T-A  |
| C108     | 4030006880 | S.CERAMIC C1808 JB 1H 472K-T-A  |
| C109     | 4030006880 | S.CERAMIC C1808 JB 1H 472K-T-A  |
| C110     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C111     | 4030006860 | S.CERAMIC C1808 JB 1H 102K-T-A  |
| C112     | 4030006880 | S.CERAMIC C1808 JB 1H 472K-T-A  |
| C113     | 4030008920 | S.CERAMIC C1808 JB 1C 473K-T-A  |
| C114     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C115     | 4030007140 | S.CERAMIC C1808 CH 1H 121J-T-A  |
| C116     | 4030007050 | S.CERAMIC C1808 CH 1H 220J-T-A  |
| C117     | 4510003910 | ELECTROLITIC 18 MV 47 HW        |
| C118     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C119     | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A |
| C120     | 4030006880 | S.CERAMIC C1808 JB 1H 472K-T-A  |
| C121     | 4030007030 | S.CERAMIC C1808 CH 1H 150J-T-A  |
| C122     | 4030007030 | S.CERAMIC C1808 CH 1H 150J-T-A  |
| C123     | 4030007040 | S.CERAMIC C1808 CH 1H 180J-T-A  |
| C125     | 4030006810 | S.CERAMIC C1808 SL 1H 271J-T-A  |
| C126     | 4030007100 | S.CERAMIC C1808 CH 1H 560J-T-A  |
| C127     | 4030006880 | S.CERAMIC C1808 JB 1H 472K-T-A  |
| C128     | 4030006830 | S.CERAMIC C1808 SL 1H 331J-T-A  |
| C129     | 4030006830 | S.CERAMIC C1808 SL 1H 331J-T-A  |
| C130     | 4030007120 | S.CERAMIC C1808 CH 1H 820J-T-A  |
| C131     | 4030007030 | S.CERAMIC C1808 CH 1H 150J-T-A  |
| C132     | 4030007150 | S.CERAMIC C1808 CH 1H 151J-T-A  |
| C133     | 4030007010 | S.CERAMIC C1808 CH 1H 100D-T-A  |
| C134     | 4030007120 | S.CERAMIC C1808 CH 1H 820J-T-A  |
| C135     | 4030008920 | S.CERAMIC C1808 JB 1C 473K-T-A  |
| C136     | 4030007010 | S.CERAMIC C1808 CH 1H 100D-T-A  |
| C137     | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A |
| C138     | 4030010070 | S.CERAMIC C1808 X7S 1C 104K-T-A |
| C139     | 4030007000 | S.CERAMIC C1808 CH 1H 090D-T-A  |
| C140     | 4030008920 | S.CERAMIC C1808 JB 1C 473K-T-A  |
| C141     | 4030006880 | S.CERAMIC C1808 JB 1H 472K-T-A  |

S.=Surface mount

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                     |
|----------|------------|---------------------------------|
| C142     | 4030007030 | S.CERAMIC C1608 CH 1H 150J-T-A  |
| C143     | 4030006960 | S.CERAMIC C1608 CH 1H 050C-T-A  |
| C144     | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C145     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C146     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C147     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C148     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C149     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C150     | 4030006990 | S.CERAMIC C1608 CH 1H 080D-T-A  |
| C151     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C152     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C153     | 4030006930 | S.CERAMIC C1608 CH 1H 020C-T-A  |
| C154     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C155     | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C156     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C157     | 4030006880 | S.CERAMIC C1608 JB 1H 471K-T-A  |
| C158     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C159     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C160     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C161     | 4030006850 | S.CERAMIC C1608 JB 1H 471K-T-A  |
| C162     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C163     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C164     | 4510004490 | ELECTROLITIC 25 MV 22 HW        |
| C165     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C166     | 4510004490 | ELECTROLITIC 25 MV 22 HW        |
| C167     | 4030007010 | S.CERAMIC C1608 CH 1H 100D-T-A  |
| C168     | 4510003970 | ELECTROLITIC 50 MV 2R2 HW       |
| C169     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C170     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C171     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C172     | 4030006930 | S.CERAMIC C2012 JB 1C 563K-T-A  |
| C173     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C174     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C175     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C176     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C177     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C178     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C179     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C180     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C181     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C182     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C183     | 4030007030 | S.CERAMIC C1608 CH 1H 150J-T-A  |
| C184     | 4030006990 | S.CERAMIC C1608 CH 1H 080D-T-A  |
| C185     | 4030007030 | S.CERAMIC C1608 CH 1H 150J-T-A  |
| C186     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C187     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C188     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C189     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C190     | 4030006900 | S.CERAMIC C1608 JB 1E 103K-T-A  |
| C191     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C192     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C193     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C194     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C195     | 4030006900 | S.CERAMIC C1608 JB 1E 103K-T-A  |
| C196     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C197     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C198     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C199     | 4510003910 | ELECTROLITIC 16 MV 47 HW        |
| C200     | 4030006830 | S.CERAMIC C1608 SL 1H 331J-T-A  |
| C201     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C202     | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T-A  |
| C203     | 4030007050 | S.CERAMIC C1608 CH 1H 220J-T-A  |
| C204     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C205     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C206     | 4510003910 | ELECTROLITIC 16 MV 47 HW        |
| C207     | 4510003950 | ELECTROLITIC 50 MV R47 HW       |
| C208     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C209     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C210     | 4510003910 | ELECTROLITIC 16 MV 47 HW        |
| C211     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C212     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C213     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C214     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C215     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C216     | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T-A  |
| C217     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                     |
|----------|------------|---------------------------------|
| C218     | 4510004490 | ELECTROLITIC 25 MV 22 HW        |
| C222     | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T-A  |
| C225     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C226     | 4510004490 | ELECTROLITIC 25 MV 22 HW        |
| C228     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C229     | 4030006850 | S.CERAMIC C1608 JB 1H 471K-T-A  |
| C230     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C231     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C232     | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C234     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C235     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C236     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C237     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C238     | 4030007130 | S.CERAMIC C1608 CH 1H 101J-T-A  |
| C239     | 4030007150 | S.CERAMIC C1608 CH 1H 151J-T-A  |
| C240     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C241     | 4030007150 | S.CERAMIC C1608 CH 1H 151J-T-A  |
| C242     | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T-A  |
| C243     | 4510004490 | ELECTROLITIC 25 MV 22 HW        |
| C244     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C245     | 4510003970 | ELECTROLITIC 50 MV 2R2 HW       |
| C246     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C247     | 4030006830 | S.CERAMIC C1608 SL 1H 331J-T-A  |
| C248     | 4030006860 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C249     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C250     | 4510003910 | ELECTROLITIC 16 MV 47 HW        |
| C251     | 4510004490 | ELECTROLITIC 25 MV 22 HW        |
| C252     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C253     | 4030006930 | S.CERAMIC C2012 JB 1C 563K-T-A  |
| C254     | 4510004950 | ELECTROLITIC 50 MV R47 SWNP     |
| C256     | 4030006980 | S.CERAMIC C1608 JB 1H 152K-T-A  |
| C257     | 4310000610 | MYLAR 50 F2D 472J               |
| C258     | 4510003940 | ELECTROLITIC 25 MV 4R7 HW       |
| C259     | 4030007170 | S.CERAMIC C1608 CH 1H 221J-T-A  |
| C260     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C261     | 4510003910 | ELECTROLITIC 16 MV 47 HW        |
| C262     | 4310000360 | MYLAR 50 F2D 103J               |
| C263     | 4510004990 | ELECTROLITIC 16 MV 100 HC       |
| C264     | 4310000360 | MYLAR 50 F2D 103J               |
| C265     | 4510004910 | ELECTROLITIC 16 MV 10 SWNP      |
| C266     | 4510003940 | ELECTROLITIC 25 MV 4R7 HW       |
| C267     | 4510003950 | ELECTROLITIC 50 MV R47 HW       |
| C268     | 4510003910 | ELECTROLITIC 16 MV 47 HW        |
| C269     | 4510003970 | ELECTROLITIC 50 MV 2R2 HW       |
| C270     | 4510003940 | ELECTROLITIC 25 MV 4R7 HW       |
| C271     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C275     | 4510003910 | ELECTROLITIC 16 MV 47 HW        |
| C276     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C277     | 4510003940 | ELECTROLITIC 25 MV 4R7 HW       |
| C278     | 4510005250 | ELECTROLITIC 50 MV 2R2 SWNP     |
| C279     | 4510005250 | ELECTROLITIC 50 MV 2R2 SWNP     |
| C280     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C281     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C282     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C283     | 4030006900 | S.CERAMIC C1608 JB 1E 103K-T-A  |
| C284     | 4030006900 | S.CERAMIC C1608 JB 1E 103K-T-A  |
| C285     | 4510003950 | ELECTROLITIC 50 MV R47 HW       |
| C286     | 4510003950 | ELECTROLITIC 50 MV R47 HW       |
| C287     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C288     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C289     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C290     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C293     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C294     | 4310000380 | MYLAR 50 F2D 153J               |
| C295     | 4310000380 | MYLAR 50 F2D 153J               |
| C296     | 4310000380 | MYLAR 50 F2D 153J               |
| C297     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C298     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C299     | 4510003790 | ELECTROLITIC 16 MV 10 SW        |
| C300     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C301     | 4510003790 | ELECTROLITIC 16 MV 10 SW        |
| C302     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C303     | 4510003850 | ELECTROLITIC 50 MV 2R2 SW       |
| C304     | 4510003840 | ELECTROLITIC 50 MV 1 SW         |
| C305     | 4550000340 | TANTALUM DN 1C 100M             |
| C306     | 4030006900 | S.CERAMIC C1608 JB 1E 103K-T-A  |

S.=Surface mount

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                     |
|----------|------------|---------------------------------|
| C307     | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C317     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C319     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C320     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C321     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C322     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C323     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C324     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C325     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C326     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C343     | 4510003940 | ELECTROLITIC 25 MV 4R7 HW       |
| C361     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C362     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C363     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C364     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C374     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C387     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C397     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C398     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C401     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C403     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C408     | 4030007130 | S.CERAMIC C1608 CH 1H 101J-T-A  |
| C409     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C410     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C411     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C412     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C413     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C414     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C416     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C417     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C418     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C419     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C420     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C421     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C434     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C435     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C436     | 4510003970 | ELECTROLITIC 50 MV 2R2 HW       |
| C437     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C438     | 4030007030 | S.CERAMIC C1608 CH 1H 150J-T-A  |
| C439     | 4030007010 | S.CERAMIC C1608 CH 1H 100D-T-A  |
| C444     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C446     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C449     | 4510003940 | ELECTROLITIC 25 MV 4R7 HW       |
| C450     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C451     | 4510003940 | ELECTROLITIC 25 MV 4R7 HW       |
| C452     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C454     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C455     | 4510004590 | ELECTROLITIC 16 MV 470 HC       |
| C456     | 4030007010 | S.CERAMIC C1608 CH 1H 100D-T-A  |
| C457     | 4030008920 | S.CERAMIC C1608 CH 1H 010C-T-A  |
| C458     | 4030007010 | S.CERAMIC C1608 CH 1H 100D-T-A  |
| C459     | 4030008970 | S.CERAMIC C1608 CH 1H 080D-T-A  |
| C460     | 4030008920 | S.CERAMIC C1608 CH 1H 010C-T-A  |
| C461     | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C462     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C463     | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C464     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C501     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C502     | 4510004470 | ELECTROLITIC FYLOH 473Z         |
| C503     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C504     | 4510003820 | ELECTROLITIC 50 MV R22 SW       |
| C507     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C508     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C509     | 4030007020 | S.CERAMIC C1608 CH 1H 120J-T-A  |
| C510     | 4030007020 | S.CERAMIC C1608 CH 1H 120J-T-A  |
| C511     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C512     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C513     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C514     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C515     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C516     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C517     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C518     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C519     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C520     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C521     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                     |
|----------|------------|---------------------------------|
| C522     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C523     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C524     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C525     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C526     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C527     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C528     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C531     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C532     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C533     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C534     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C535     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C538     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C539     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C542     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C543     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C544     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C546     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C547     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C548     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C550     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C551     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C555     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C558     | 4510003910 | ELECTROLITIC 16 MV 47 HW        |
| C559     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C560     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C561     | 4030007130 | S.CERAMIC C1608 CH 1H 101J-T-A  |
| C562     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C564     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C565     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C568     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C569     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C571     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C572     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C573     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C574     | 4030007130 | S.CERAMIC C1608 CH 1H 101J-T-A  |
| C579     | 4030008920 | S.CERAMIC C1608 JB 1C 473K-T-A  |
| C581     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C582     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C583     | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C584     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C585     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C593     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C594     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C595     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C597     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C598     | 4510003950 | ELECTROLITIC 50 MV R47 HW       |
| C599     | 4510005000 | ELECTROLITIC 16 MV 220 HC       |
| C600     | 4510004910 | ELECTROLITIC 16 MV 10 SWNP      |
| C601     | 4510004910 | ELECTROLITIC 16 MV 10 SWNP      |
| C602     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C603     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C604     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C605     | 4510004490 | ELECTROLITIC 25 MV 22 HW        |
| C606     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C607     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C608     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C609     | 4510004490 | ELECTROLITIC 25 MV 22 HW        |
| C610     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C611     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C613     | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C614     | 4510003980 | ELECTROLITIC 50 MV 1 HW         |
| C616     | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C618     | 4030007030 | S.CERAMIC C1608 CH 1H 150J-T-A  |
| C620     | 4030008920 | S.CERAMIC C1608 CH 1H 010C-T-A  |
| C622     | 4030006850 | S.CERAMIC C1608 JB 1H 471K-T-A  |
| C623     | 4030009980 | S.CERAMIC C1608 JB 1H 152K-T-A  |
| C624     | 4030007140 | S.CERAMIC C1608 CH 1H 121J-T-A  |
| C625     | 4030006870 | S.CERAMIC C1608 JB 1H 222K-T-A  |
| C626     | 4030007130 | S.CERAMIC C1608 CH 1H 101J-T-A  |
| C627     | 4030006810 | S.CERAMIC C1608 SL 1H 271J-T-A  |
| C628     | 4030007030 | S.CERAMIC C1608 CH 1H 150J-T-A  |
| C629     | 4030006850 | S.CERAMIC C1608 JB 1C 123K-T-A  |
| C631     | 4510003940 | ELECTROLITIC 25 MV 4R7 HW       |
| C632     | 4510005260 | ELECTROLITIC 25 MV 10 HW        |
| C633     | 4030006920 | S.CERAMIC C1608 JB 1C 473K-T-A  |

⑨: GMDSS version only S.=Surface mount

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION  |                                    |
|----------|------------|--------------|------------------------------------|
| C834     | 4030008920 | S.CERAMIC    | C1808 JB 1C 473K-T-A               |
| C835     | 4510004140 | ELECTROLITIC | 50 MV 10 HW                        |
| C837     | 4030006880 | S.CERAMIC    | C1808 JB 1H 102K-T-A               |
| C839     | 4030009980 | S.CERAMIC    | C1808 JB 1H 152K-T-A               |
| C840     | 4030006880 | S.CERAMIC    | C1808 JB 1H 472K-T-A               |
| C841     | 4030006880 | S.CERAMIC    | C1808 JB 1H 472K-T-A               |
| C842     | 4030006880 | S.CERAMIC    | C1808 JB 1H 472K-T-A               |
| C843     | 4030006880 | S.CERAMIC    | C1808 JB 1H 472K-T-A               |
| C844     | 4030006880 | S.CERAMIC    | C1808 JB 1H 472K-T-A               |
| C845     | 4030006880 | S.CERAMIC    | C1808 JB 1H 472K-T-A               |
| C846     | 4030006880 | S.CERAMIC    | C1808 JB 1H 102K-T-A               |
| C847     | 4030006850 | S.CERAMIC    | C1808 JB 1H 471K-T-A               |
| C848     | 4030006880 | S.CERAMIC    | C1808 JB 1H 472K-T-A               |
| C849     | 4030010070 | S.CERAMIC    | C1808 X7S 1C 104K-T-A              |
| C850     | 4040000690 | BARRIERLAYR  | UAT 08X 473K                       |
| C851     | 4030007050 | S.CERAMIC    | C1808 CH 1H 220J-T-A               |
| C852     | 4030010070 | S.CERAMIC    | C1808 X7S 1C 104K-T-A              |
| C853     | 4030010070 | S.CERAMIC    | C1808 X7S 1C 104K-T-A              |
| C854     | 4030006880 | S.CERAMIC    | C1808 JB 1H 472K-T-A               |
| C855     | 4030010070 | S.CERAMIC    | C1808 X7S 1C 104K-T-A              |
| C856     | 4030010070 | S.CERAMIC    | C1808 X7S 1C 104K-T-A              |
| C857     | 4030010070 | S.CERAMIC    | C1808 X7S 1C 104K-T-A              |
| C858     | 4030010070 | S.CERAMIC    | C1808 X7S 1C 104K-T-A              |
| C859     | 4030010070 | S.CERAMIC    | C1808 X7S 1C 104K-T-A              |
| C860     | 4030010070 | S.CERAMIC    | C1808 X7S 1C 104K-T-A              |
| C861     | 4030010070 | S.CERAMIC    | C1808 X7S 1C 104K-T-A              |
| C862     | 4030010070 | S.CERAMIC    | C1808 X7S 1C 104K-T-A              |
| C863     | 4030007050 | S.CERAMIC    | C1808 CH 1H 220J-T-A               |
| C864     | 4030006880 | S.CERAMIC    | C1808 JB 1H 472K-T-A               |
| C865     | 4030006880 | S.CERAMIC    | C1808 JB 1H 472K-T-A               |
| C866     | 4030006880 | S.CERAMIC    | C1808 JB 1H 472K-T-A               |
| C867     | 4030006880 | S.CERAMIC    | C1808 JB 1H 472K-T-A               |
| C868     | 4030006880 | S.CERAMIC    | C1808 JB 1H 472K-T-A               |
| C869     | 4030006880 | S.CERAMIC    | C1808 JB 1H 472K-T-A               |
| C870     | 4510004140 | ELECTROLITIC | 50 MV 10 HW                        |
| C871     | 4510004990 | ELECTROLITIC | 16 MV 100 HC                       |
| C872     | 4510004990 | ELECTROLITIC | 16 MV 100 HC                       |
| C873     | 4510004990 | ELECTROLITIC | 16 MV 100 HC                       |
| C874     | 4510003840 | ELECTROLITIC | 50 MV 1 SW                         |
| C875     | 4010006900 | CERAMIC      | HE80SJ YB 472K 50V                 |
| C876     | 4010006900 | CERAMIC      | HE80SJ YB 472K 50V                 |
| C877     | 4010006900 | CERAMIC      | HE80SJ YB 472K 50V                 |
| C878     | 4010006900 | CERAMIC      | HE80SJ YB 472K 50V                 |
| C879     | 4010006900 | CERAMIC      | HE80SJ YB 472K 50V                 |
| C880     | 4010006900 | CERAMIC      | HE80SJ YB 472K 50V                 |
| C881     | 4010006900 | CERAMIC      | HE80SJ YB 472K 50V                 |
| RL2      | 6330000110 | RELAY        | FBR22D12-P                         |
| W1       | 7120000020 | JUMPER       | JPW 02H                            |
| W5       | 7030003880 | S.JUMPER     | ERJ3GE JPW V                       |
| W6       | 7030003880 | S.JUMPER     | ERJ3GE JPW V                       |
| W7       | 7030003880 | S.JUMPER     | ERJ3GE JPW V                       |
| W8       | 7030003880 | S.JUMPER     | ERJ3GE JPW V                       |
| W9       | 7030003880 | S.JUMPER     | ERJ3GE JPW V                       |
| W10      | 7030003880 | S.JUMPER     | ERJ3GE JPW V [USA only]            |
| W11      | 7120000010 | JUMPER       | JPW 02A<br>[Gen, Marine only]      |
| W11      | 7120000010 | JUMPER       | JPW 02A<br>[Gen, Marine only]      |
| W12      | 7030003880 | S.JUMPER     | ERJ3GE JPW V<br>[Gen, Marine only] |
| W13      | 7120000010 | JUMPER       | JPW 02A<br>[Gen, Marine only]      |
| W14      | 7030003880 | S.JUMPER     | ERJ3GE JPW V<br>[Gen, Marine only] |
| W17      | 7030003880 | S.JUMPER     | ERJ3GE JPW V                       |
| W18      | 7030003880 | S.JUMPER     | ERJ3GE JPW V                       |
| W23      | 7030003880 | S.JUMPER     | ERJ3GE JPW V                       |
| W24      | 7030003880 | S.JUMPER     | ERJ3GE JPW V                       |
| S9       | 2220000520 | SWITCH       | ESD-11V120                         |
| S11      | 2220000520 | SWITCH       | ESD-11V120                         |

©: Europe version only

## [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                             |
|----------|------------|-------------|-----------------------------|
| J1       | 6510017150 | CONNECTOR   | TMP-S01X-C1                 |
| J2       | 6510017150 | CONNECTOR   | TMP-S01X-C1                 |
| J3       | 6510007020 | CONNECTOR   | TMP-J01X-V8                 |
| J4       | 6510007020 | CONNECTOR   | TMP-J01X-V8                 |
| J5       | 6510007020 | CONNECTOR   | TMP-J01X-V8                 |
| J6       | 6450001240 | CONNECTOR   | HLJ4306-01-3000             |
| J7       | 6450001440 | CONNECTOR   | HSJ1403-01-010              |
| J9       | 6510017660 | CONNECTOR   | 52045-1645                  |
| J11      | 6510017990 | CONNECTOR   | DELC-J9SAF-20L9             |
| J12      | 6450001580 | CONNECTOR   | TCS5073-28-4151             |
| J13      | 6450001590 | CONNECTOR   | TCS5073-17-4151             |
| J15      | 6510003400 | CONNECTOR   | B04B-EH-S                   |
| J16      | 6510003430 | CONNECTOR   | B07B-EH-S                   |
| J19      | 6510017660 | CONNECTOR   | 52045-1645                  |
| J20      | 6510003390 | CONNECTOR   | B03B-EH-S                   |
| J22      | 6510017650 | CONNECTOR   | 52045-1045                  |
| J23      | 6510003400 | CONNECTOR   | B04B-EH-S                   |
| J29      | 6510018150 | S.CONNECTOR | 4-175638-0                  |
| J30      | 6510017950 | S.CONNECTOR | 4-175638-4                  |
| J31      | 6510017990 | CONNECTOR   | DELC-J9SAF-20L9             |
| J32      | 6510010020 | CONNECTOR   | RTB-1.5-2F                  |
| J33      | 6450001560 | CONNECTOR   | PD-72<br>[Gen, Marine only] |
| EP1      | 0910043963 | PCB         | B 4248C                     |

## [PLL UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION  |                                    |
|----------|------------|--------------|------------------------------------|
| IC3001   | 1140003641 | S.IC         | SC-1248                            |
| IC3002   | 1140004550 | S.IC         | SC1287                             |
| IC3003   | 1180001070 | S.IC         | TA7805F(TE16L)                     |
| IC3004   | 1130004830 | S.IC         | TC7SU04F (TE85R)                   |
| IC3005   | 1130007660 | S.IC         | LC7153M-TLM                        |
| IC3006   | 1130004830 | S.IC         | TC7SU04F (TE85R)                   |
| IC3008   | 1130004830 | S.IC         | TC7SU04F (TE85R)                   |
| Q3001    | 1530002600 | S.TRANSISTOR | 2SC4215-O (TE85R)                  |
| Q3002    | 1530002600 | S.TRANSISTOR | 2SC4215-O (TE85R)                  |
| Q3003    | 1560000720 | S.FET        | 2SK2171-4-TD                       |
| Q3004    | 1530002600 | S.TRANSISTOR | 2SC4215-O (TE85R)                  |
| Q3005    | 1560000330 | S.FET        | 2SK210-GR (TE85R)                  |
| Q3006    | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)                 |
| Q3007    | 1530002600 | S.TRANSISTOR | 2SC4215-O (TE85R)                  |
| Q3008    | 1530002600 | S.TRANSISTOR | 2SC4215-O (TE85R)                  |
| Q3009    | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)                 |
| Q3010    | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)                 |
| Q3011    | 1530002600 | S.TRANSISTOR | 2SC4215-O (TE85R)                  |
| Q3021    | 1530002600 | S.TRANSISTOR | 2SC4215-O (TE85R)                  |
| Q3022    | 1590001330 | S.TRANSISTOR | DTA114EU T107                      |
| Q3024    | 1530002600 | S.TRANSISTOR | 2SC4215-O (TE85R)                  |
| Q3025    | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)                 |
| D3001    | 1750000270 | S.DIODE      | 1SS301 (TE85R)                     |
| D3002    | 1750000270 | S.DIODE      | 1SS301 (TE85R)                     |
| D3003    | 1790000540 | S.VARICAP    | MA338(TX)                          |
| D3004    | 1720000540 | S.VARICAP    | HVM17-01TR                         |
| D3005    | 1750000070 | S.DIODE      | 1SS226 (TE85R)                     |
| D3006    | 1790000620 | S.DIODE      | MA77(TW)                           |
| D3015    | 1790000490 | S.DIODE      | HSM88AS-TR                         |
| D3016    | 1790000490 | S.DIODE      | HSM88AS-TR                         |
| FI3001   | 2020001140 | S.CERAMIC    | SFECA10.7MA-5-A                    |
| X3001    | 6050005770 | XTAL         | CR-282 [Gen, Marine]               |
|          | 6050009380 | XTAL         | CR-512 POCO (30.000MHz)<br>[GMDSS] |

©: GMDSS version only S.=Surface mount

## [PLL UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                        |
|----------|------------|------------------------------------|
| L3001    | 6200001830 | S.COIL NL 322522T-100J             |
| L3002    | 6170000230 | COIL LW-25 <i>92413962</i>         |
| L3003    | 6150004370 | COIL LS-472C (C-15045)             |
| L3004    | 6150004250 | COIL LS-471A (C-14922)             |
| L3005    | 6150004250 | COIL LS-471A (C-14922)             |
| L3007    | 6200003260 | S.COIL NL 322522T-101J             |
| L3008    | 6180001220 | COIL LAL 04NA 100K                 |
| L3009    | 6200003260 | S.COIL NL 322522T-101J             |
| L3010    | 6200003100 | S.COIL NL 322522T-3R9J-3           |
| L3011    | 6200003260 | S.COIL NL 322522T-101J             |
| L3012    | 6200003260 | S.COIL NL 322522T-101J             |
| L3013    | 6130001850 | COIL LB-185                        |
| L3015    | 6200001830 | S.COIL NL 322522T-100J             |
| L3016    | 6200003260 | S.COIL NL 322522T-101J             |
| L3017    | 6200001830 | S.COIL NL 322522T-100J             |
| L3019    | 6200001830 | S.COIL NL 322522T-100J             |
| L3020    | 6170000180 | COIL LW-19                         |
| L3021    | 6170000230 | COIL LW-25                         |
| L3022    | 6200003260 | S.COIL NL 322522T-101J             |
| L3023    | 6200003260 | S.COIL NL 322522T-101J             |
| L3024    | 6190001090 | COIL MC138-E544EN-110184           |
| L3028    | 6200003260 | S.COIL NL 322522T-101J             |
| L3028    | 6200003260 | S.COIL NL 322522T-101J             |
| L3035    | 6200003430 | S.COIL NL 322522T-R10J             |
| L3036    | 6200003430 | S.COIL NL 322522T-R10J             |
| L3037    | 6200003120 | S.COIL NL 322522T-8R2J             |
| L3038    | 6200001830 | S.COIL NL 322522T-100J             |
| L3040    | 6200003320 | S.COIL NL 322522T-3R3J-3           |
| L3041    | 2040000490 | COIL EXC-ELDR25C                   |
| L3042    | 2040000490 | COIL EXC-ELDR25C                   |
| L3043    | 6200003420 | S.COIL NL 322522T-R15J-3           |
| L3044    | 6200003430 | S.COIL NL 322522T-R10J             |
| L3045    | 6180000880 | COIL LAL 03NA 100K                 |
| L3046    | 6200001830 | S.COIL NL 322522T-100J             |
| L3047    | 6200001830 | S.COIL NL 322522T-100J             |
| R3001    | 7030003580 | S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)  |
| R3002    | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R3003    | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R3005    | 7030003280 | S.RESISTOR ERJ3GEYJ 470 V (47 Ω)   |
| R3006    | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R3007    | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R3008    | 7030003580 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R3009    | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)  |
| R3010    | 7080001250 | RESISTOR CRH100X R-02J 22 Ω (220)  |
| R3011    | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R3012    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3014    | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)   |
| R3017    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3018    | 7030003430 | S.RESISTOR ERJ3GEYJ 821 V (820 Ω)  |
| R3019    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3020    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3021    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3022    | 7030005390 | S.RESISTOR RR0818P-102-D (1 kΩ)    |
| R3023    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3024    | 7030005390 | S.RESISTOR RR0818P-102-D (1 kΩ)    |
| R3025    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3028    | 7030005390 | S.RESISTOR RR0818P-102-D (1 kΩ)    |
| R3027    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3028    | 7030005390 | S.RESISTOR RR0818P-102-D (1 kΩ)    |
| R3029    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3030    | 7030005390 | S.RESISTOR RR0818P-102-D (1 kΩ)    |
| R3031    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3032    | 7030005390 | S.RESISTOR RR0818P-102-D (1 kΩ)    |
| R3033    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3034    | 7030005380 | S.RESISTOR RR0818P-102-B (1 kΩ)    |
| R3035    | 7030005370 | S.RESISTOR RR0818P-202-B (2 kΩ)    |
| R3036    | 7030005380 | S.RESISTOR RR0818P-102-B (1 kΩ)    |
| R3037    | 7030005370 | S.RESISTOR RR0818P-202-B (2 kΩ)    |
| R3038    | 7030005380 | S.RESISTOR RR0818P-102-B (1 kΩ)    |
| R3039    | 7030005370 | S.RESISTOR RR0818P-202-B (2 kΩ)    |
| R3040    | 7030005380 | S.RESISTOR RR0818P-102-B (1 kΩ)    |
| R3041    | 7030005370 | S.RESISTOR RR0818P-202-B (2 kΩ)    |
| R3042    | 7030005380 | S.RESISTOR RR0818P-102-B (1 kΩ)    |
| R3043    | 7030005370 | S.RESISTOR RR0818P-202-B (2 kΩ)    |

## [PLL UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                        |
|----------|------------|------------------------------------|
| R3044    | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R3045    | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)   |
| R3046    | 7030003570 | S.RESISTOR ERJ3GEYJ 123 V (12 kΩ)  |
| R3048    | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)  |
| R3050    | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)  |
| R3052    | 7030003340 | S.RESISTOR ERJ3GEYJ 151 V (150 Ω)  |
| R3053    | 7030003270 | S.RESISTOR ERJ3GEYJ 390 V (39 Ω)   |
| R3054    | 7030003340 | S.RESISTOR ERJ3GEYJ 151 V (150 Ω)  |
| R3055    | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R3056    | 7030003650 | S.RESISTOR ERJ3GEYJ 563 V (56 kΩ)  |
| R3057    | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)  |
| R3060    | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R3061    | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R3062    | 7030003680 | S.RESISTOR ERJ3GEYJ 104 V (100 kΩ) |
| R3063    | 7030003340 | S.RESISTOR ERJ3GEYJ 151 V (150 Ω)  |
| R3064    | 7030003690 | S.RESISTOR ERJ3GEYJ 124 V (120 kΩ) |
| R3065    | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R3066    | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R3067    | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R3068    | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R3069    | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R3070    | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R3071    | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R3072    | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R3073    | 7030003500 | S.RESISTOR ERJ3GEYJ 332 V (3.3 kΩ) |
| R3074    | 7030003600 | S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)  |
| R3077    | 7030003430 | S.RESISTOR ERJ3GEYJ 821 V (820 Ω)  |
| R3079    | 7030003800 | S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)   |
| R3080    | 7030003650 | S.RESISTOR ERJ3GEYJ 563 V (56 kΩ)  |
| R3081    | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R3082    | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R3083    | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R3084    | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R3085    | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R3086    | 7030003560 | S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)  |
| R3087    | 7030003240 | S.RESISTOR ERJ3GEYJ 220 V (22 Ω)   |
| R3089    | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R3090    | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R3091    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3092    | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R3093    | 7030003630 | S.RESISTOR ERJ3GEYJ 393 V (39 kΩ)  |
| R3094    | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R3095    | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R3096    | 7030003480 | S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ) |
| R3097    | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R3098    | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R3099    | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R3100    | 7030003350 | S.RESISTOR ERJ3GEYJ 181 V (180 Ω)  |
| R3103    | 7030003280 | S.RESISTOR ERJ3GEYJ 470 V (47 Ω)   |
| R3104    | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R3105    | 7030003430 | S.RESISTOR ERJ3GEYJ 821 V (820 Ω)  |
| R3120    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3121    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3122    | 7030005390 | S.RESISTOR RR0818P-102-D (1 kΩ)    |
| R3123    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3124    | 7030005390 | S.RESISTOR RR0818P-102-D (1 kΩ)    |
| R3125    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3126    | 7030005390 | S.RESISTOR RR0818P-102-D (1 kΩ)    |
| R3127    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3128    | 7030005390 | S.RESISTOR RR0818P-102-D (1 kΩ)    |
| R3129    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3130    | 7030005390 | S.RESISTOR RR0818P-102-D (1 kΩ)    |
| R3131    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3132    | 7030005390 | S.RESISTOR RR0818P-102-D (1 kΩ)    |
| R3133    | 7030005400 | S.RESISTOR RR0818P-202-D (2 kΩ)    |
| R3134    | 7030005380 | S.RESISTOR RR0818P-102-B (1 kΩ)    |
| R3135    | 7030005370 | S.RESISTOR RR0818P-202-B (2 kΩ)    |
| R3136    | 7030005380 | S.RESISTOR RR0818P-102-B (1 kΩ)    |
| R3137    | 7030005370 | S.RESISTOR RR0818P-202-B (2 kΩ)    |
| R3138    | 7030005380 | S.RESISTOR RR0818P-102-B (1 kΩ)    |
| R3139    | 7030005370 | S.RESISTOR RR0818P-202-B (2 kΩ)    |
| R3140    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3141    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3142    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3143    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3144    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |

S.=Surface mount

## [PLL UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                        |
|----------|------------|------------------------------------|
| R3145    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3146    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3147    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3148    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3168    | 7030003520 | S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ) |
| R3173    | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R3174    | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R3176    | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R3177    | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R3178    | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R3179    | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R3180    | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R3181    | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R3183    | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R3184    | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R3186    | 7030003460 | S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ) |
| R3187    | 7030003640 | S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)  |
| R3188    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3189    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3190    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3191    | 7030003440 | S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)   |
| R3193    | 7030003430 | S.RESISTOR ERJ3GEYJ 821 V (820 Ω)  |
| R3194    | 7030003460 | S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ) |
| R3195    | 7030003380 | S.RESISTOR ERJ3GEYJ 331 V (330 Ω)  |
| R3196    | 7030003400 | S.RESISTOR ERJ3GEYJ 471 V (470 Ω)  |
| R3197    | 7030003490 | S.RESISTOR ERJ3GEYJ 272 V (2.7 kΩ) |
| R3198    | 7030003320 | S.RESISTOR ERJ3GEYJ 101 V (100 Ω)  |
| R3199    | 7030003360 | S.RESISTOR ERJ3GEYJ 221 V (220 Ω)  |
| R3200    | 7030003460 | S.RESISTOR ERJ3GEYJ 152 V (1.5 kΩ) |
| C3001    | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T-A     |
| C3002    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3003    | 4030007850 | S.CERAMIC C1608 SH 1H 820J-T-A     |
| C3004    | 4030007870 | S.CERAMIC C1608 SH 1H 121J-T-A     |
| C3005    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3006    | 4510005600 | S.ELECTROLITIC ECEV1CS100SR        |
| C3007    | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A     |
| C3008    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3009    | 4030007030 | S.CERAMIC C1608 CH 1H 150J-T-A     |
| C3010    | 4030006910 | S.CERAMIC C1608 CH 1H 0R5C-T-A     |
| C3011    | 4030007030 | S.CERAMIC C1608 CH 1H 150J-T-A     |
| C3012    | 4510004630 | S.ELECTROLITIC ECEV1CA100SR        |
| C3013    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3014    | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A     |
| C3015    | 4510005600 | S.ELECTROLITIC ECEV1CS100SR        |
| C3016    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3017    | 4510004630 | S.ELECTROLITIC ECEV1CA100SR        |
| C3018    | 4510004640 | S.ELECTROLITIC ECEV1CA470SP        |
| C3019    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3020    | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A     |
| C3021    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3023    | 4510004640 | S.ELECTROLITIC ECEV1CA470SP        |
| C3024    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3025    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3026    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3027    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3030    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3031    | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A    |
| C3032    | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A    |
| C3033    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3034    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3035    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3036    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3037    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3038    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3039    | 4030010000 | S.CERAMIC C1608 CH 1H 510J-T-A     |
| C3040    | 4030006960 | S.CERAMIC C1608 CH 1H 050C-T-A     |
| C3041    | 4030010000 | S.CERAMIC C1608 CH 1H 510J-T-A     |
| C3042    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3043    | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A     |
| C3044    | 4550000730 | S.TANTALUM TESVA 0J 225M1-8L       |
| C3045    | 4030007010 | S.CERAMIC C1608 CH 1H 100D-T-A     |
| C3046    | 4030007080 | S.CERAMIC C1608 CH 1H 390J-T-A     |
| C3047    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A     |
| C3048    | 4030011570 | S.CERAMIC CM105 CH 101G 50AT       |

## [PLL UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                     |
|----------|------------|---------------------------------|
| C3049    | 4610001270 | S.TRIMMER ECR-JA010 A12W        |
| C3050    | 4030007150 | S.CERAMIC C1608 CH 1H 151J-T-A  |
| C3052    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3053    | 4510005600 | S.ELECTROLITIC ECEV1CS100SR     |
| C3054    | 4030007150 | S.CERAMIC C1608 CH 1H 151J-T-A  |
| C3055    | 4030007150 | S.CERAMIC C1608 CH 1H 151J-T-A  |
| C3056    | 4030007010 | S.CERAMIC C1608 CH 1H 100D-T-A  |
| C3059    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3060    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3061    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3062    | 4510005600 | S.ELECTROLITIC ECEV1CS100SR     |
| C3063    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3064    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3065    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3066    | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C3067    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3068    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3069    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3070    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3071    | 4030007130 | S.CERAMIC C1608 CH 1H 101J-T-A  |
| C3072    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3073    | 4510005600 | S.ELECTROLITIC ECEV1CS100SR     |
| C3077    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3083    | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C3084    | 4550003250 | S.TANTALUM TEMSVA 1V 474M-8L    |
| C3085    | 4550006050 | S.TANTALUM TEMSVA 0J 106M8L     |
| C3086    | 4340000100 | S.MYLAR ECHU 1C 473JB5          |
| C3087    | 4510005600 | S.ELECTROLITIC ECEV1CS100SR     |
| C3088    | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C3089    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3090    | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C3091    | 4030007130 | S.CERAMIC C1608 CH 1H 101J-T-A  |
| C3092    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3093    | 4510004590 | ELECTROLITIC 16 MV 470 HC       |
| C3094    | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C3095    | 4030010070 | S.CERAMIC C1608 X7S 1C 104K-T-A |
| C3096    | 4510004590 | ELECTROLITIC 16 MV 470 HC       |
| C3097    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3098    | 4030006920 | S.CERAMIC C1608 CH 1H 010C-T-A  |
| C3099    | 4030006880 | S.CERAMIC C1608 CH 1H 102K-T-A  |
| C3100    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3101    | 4030006930 | S.CERAMIC C1608 CH 1H 020C-T-A  |
| C3102    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3105    | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C3106    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3107    | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C3108    | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C3109    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3110    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3111    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3114    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3124    | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T-A  |
| C3125    | 4030006880 | S.CERAMIC C1608 JB 1H 102K-T-A  |
| C3129    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3130    | 4030007110 | S.CERAMIC C1608 CH 1H 680J-T-A  |
| C3132    | 4030006960 | S.CERAMIC C1608 CH 1H 050C-T-A  |
| C3133    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3135    | 4030007060 | S.CERAMIC C1608 CH 1H 270J-T-A  |
| C3136    | 4030007020 | S.CERAMIC C1608 CH 1H 120J-T-A  |
| C3137    | 4030007060 | S.CERAMIC C1608 CH 1H 270J-T-A  |
| C3138    | 4030006980 | S.CERAMIC C1608 CH 1H 070D-T-A  |
| C3139    | 4030007040 | S.CERAMIC C1608 CH 1H 180J-T-A  |
| C3141    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3142    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3143    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3144    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3145    | 4030006880 | S.CERAMIC C1608 CH 1H 472K-T-A  |
| C3154    | 4030007040 | S.CERAMIC C1608 CH 1H 180J-T-A  |
| C3155    | 4030007000 | S.CERAMIC C1608 CH 1H 090D-T-A  |
| C3156    | 4030007060 | S.CERAMIC C1608 CH 1H 270J-T-A  |
| C3157    | 4030006960 | S.CERAMIC C1608 CH 1H 050C-T-A  |
| C3158    | 4030006880 | S.CERAMIC C1608 CH 1H 300J-T-A  |
| C3161    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3164    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3165    | 4030006880 | S.CERAMIC C1608 JB 1H 472K-T-A  |
| C3170    | 4030007090 | S.CERAMIC C1608 CH 1H 470J-T-A  |

S.=Surface mount

## [PLL UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                                    |
|----------|------------|-------------|------------------------------------|
| C3171    | 4030011280 | S.CERAMIC   | C1608 CH 1H 271J-T-A               |
| C3173    | 4030006880 | S.CERAMIC   | C1608 JB 1H 472K-T-A               |
| C3174    | 4030006880 | S.CERAMIC   | C1608 JB 1H 472K-T-A               |
| C3175    | 4030006880 | S.CERAMIC   | C1608 JB 1H 472K-T-A               |
| C3177    | 4030006880 | S.CERAMIC   | C1608 JB 1H 472K-T-A               |
| C3178    | 4030006880 | S.CERAMIC   | C1608 JB 1H 472K-T-A               |
| C3179    | 4030006880 | S.CERAMIC   | C1608 JB 1H 472K-T-A               |
| C3180    | 4030006880 | S.CERAMIC   | C1608 JB 1H 472K-T-A               |
| C3181    | 4030006880 | S.CERAMIC   | C1608 JB 1H 472K-T-A               |
| C3182    | 4030006880 | S.CERAMIC   | C1608 JB 1H 102K-T-A               |
| C3183    | 4030007130 | S.CERAMIC   | C1608 CH 1H 101J-T-A               |
| C3184    | 4030006880 | S.CERAMIC   | C1608 JB 1H 472K-T-A               |
| C3185    | 4030006880 | S.CERAMIC   | C1608 JB 1H 472K-T-A               |
| W3007    | 7030003860 | S.JUMPER    | ERJ3GE JPW V                       |
| W3008    | 7030003860 | S.JUMPER    | ERJ3GE JPW V                       |
| J3001 ⑨  | 6510007900 | CONNECTOR   | TBP-P01X-A1 [Eur only]             |
| J3002 ⑨  | 6510007900 | CONNECTOR   | TBP-P01X-A1 [Eur only]             |
| J3003 ⑨  | 6510007900 | CONNECTOR   | TBP-P01X-A1 [Eur only]             |
| J3004    | 6510003080 | CONNECTOR   | RT01T-1.0B                         |
| J3005    | 6510003080 | CONNECTOR   | RT01T-1.0B                         |
| J3006    | 6910003140 | CONNECTOR   | IMSA-9202B-1-02T                   |
| J3007    | 6510017660 | CONNECTOR   | 52045-1645                         |
| P3001 ⑨  | 6510003240 | CONNECTOR   | TMP-P01X-A1 [Eur only]             |
| P3002 ⑨  | 6510003240 | CONNECTOR   | TMP-P01X-A1 [Eur only]             |
| P3003 ⑨  | 6510003240 | CONNECTOR   | TMP-P01X-A1 [Eur only]             |
| P3004    | 6910003120 | CONNECTOR   | IMSA-9206H-T<br>[Gen, Marine only] |
| P3004    | 6910003120 | CONNECTOR   | IMSA-9206H-T<br>[Gen, Marine only] |
| P3004    | 6910003120 | CONNECTOR   | IMSA-9206H-T<br>[Gen, Marine only] |
| WS1      | 8970022070 | CABLE       | SX1632 1.5D (3)/PL                 |
| EP3001   | 0910044664 | PCB         | B 4249D                            |

## [PA UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION  |                               |
|----------|------------|--------------|-------------------------------|
| IC4001   | 1110003940 | IC           | TA7808S                       |
| IC4002   | 1110003910 | S.IC         | NJM4558M(T1)                  |
| IC4003   | 1170000300 | S.IC         | PS2701-1                      |
| IC4004   | 1170000300 | S.IC         | PS2701-1                      |
| Q4001    | 1530003400 | TRANSISTOR   | 2SC3133                       |
| Q4002    | 1530003400 | TRANSISTOR   | 2SC3133                       |
| Q4003    | 1530003390 | TRANSISTOR   | 2SC2904                       |
| Q4004    | 1530003390 | TRANSISTOR   | 2SC2904                       |
| Q4005    | 1510000940 | S.TRANSISTOR | 2SA1037K WT T147 R            |
| Q4006    | 1540000530 | TRANSISTOR   | 2SD1585K                      |
| Q4007    | 1530003410 | S.TRANSISTOR | 2SC1823 L6                    |
| Q4008    | 1530003380 | TRANSISTOR   | 2SC1971                       |
| D4001    | 1790001390 | VARISTOR     | MA29B                         |
| D4002    | 1790001390 | VARISTOR     | MA29B                         |
| D4003    | 1790001390 | VARISTOR     | MA29B                         |
| D4004    | 1710000810 | S.DIODE      | DF30SC4M-4062<br>91211175 321 |
| L4001    | 6140002350 | COIL         | LR-274 (RIB4X7X5 3A8)         |

## [PA UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                         |
|----------|------------|-------------|-------------------------|
| L4003    | 6140002780 | COIL        | LR-315 (SK-8MD-10Y 130) |
| L4004    | 6140002980 | COIL        | LR-143                  |
| L4005    | 2040000900 | COIL        | EXC-ELDR25C             |
| L4006    | 6140002220 | COIL        | LR-270 (TR6X3X2 3A9)    |
| L4007    | 2040000900 | COIL        | EXC-ELDR25C             |
| L4008    | 6140002970 | COIL        | LR-83                   |
| L4010    | 6140002990 | COIL        | LR-148                  |
| L4011    | 2040000900 | COIL        | EXC-ELDR25C             |
| L4012    | 6170000140 | COIL        | LW-15                   |
| L4013    | 6140002780 | COIL        | LR-315 (SK-8MD-10Y 130) |
| L4014    | 6200004840 | S.COIL      | NL 322522T-101J         |
| L4016    | 6180003060 | COIL        | LAL 04NA 100K           |
| L4018    | 2040000900 | COIL        | EXC-ELDR25C             |
| L4020    | 6200004840 | S.COIL      | NL 322522T-101J         |
| L4021    | 6200004840 | S.COIL      | NL 322522T-101J         |
| L4022    | 6200004840 | S.COIL      | NL 322522T-101J         |
| L4023    | 6180003060 | COIL        | LAL 04NA 100K           |
| R4004    | 7010006830 | RESISTOR    | RD25XJ 47 Ω             |
| R4005    | 7010006830 | RESISTOR    | RD25XJ 47 Ω             |
| R4006    | 7030006990 | S.RESISTOR  | RK73K3AJ 68 Ω           |
| R4007    | 7030006990 | S.RESISTOR  | RK73K3AJ 68 Ω           |
| R4008    | 7070000800 | RESISTOR    | RSSX1 J 3.3 Ω           |
| R4009    | 7070000800 | RESISTOR    | RSSX1 J 3.3 Ω           |
| R4010    | 7070000800 | RESISTOR    | RSSX1 J 3.3 Ω           |
| R4011    | 7070000800 | RESISTOR    | RSSX1 J 3.3 Ω           |
| R4012    | 7070000800 | RESISTOR    | RSSX1 J 3.3 Ω           |
| R4013    | 7070000800 | RESISTOR    | RSSX1 J 3.3 Ω           |
| R4014    | 7010006820 | RESISTOR    | RD50SS J 10 Ω           |
| R4015    | 7010006820 | RESISTOR    | RD50SS J 10 Ω           |
| R4016    | 7070000790 | RESISTOR    | RSSX1 J 2.2 Ω           |
| R4017    | 7070000790 | RESISTOR    | RSSX1 J 2.2 Ω           |
| R4018    | 7030006750 | S.RESISTOR  | RK73K2AJ 4.7 kΩ         |
| R4019    | 7030006750 | S.RESISTOR  | RK73K2AJ 4.7 kΩ         |
| R4020    | 7010006810 | RESISTOR    | RD50SS J 150 Ω          |
| R4022    | 7310004210 | TRIMMER     | KVSF687A 100 Ω          |
| R4023    | 7070000810 | RESISTOR    | RSS1 J 10 Ω             |
| R4024    | 7030006650 | S.RESISTOR  | RK73K2AJ 180 Ω          |
| R4025    | 7310004220 | TRIMMER     | KVSF637A 470 Ω          |
| R4026    | 7100000840 | RESISTOR    | 5 S1 0.012 Ω (J)        |
| R4027    | 7030006840 | S.RESISTOR  | RK73K2AJ 68 kΩ          |
| R4028    | 7030006840 | S.RESISTOR  | RK73K2AJ 68 kΩ          |
| R4029    | 7030006820 | S.RESISTOR  | RK73K2AJ 33 kΩ          |
| R4030    | 7030006820 | S.RESISTOR  | RK73K2AJ 33 kΩ          |
| R4031    | 7310004200 | TRIMMER     | KVSF637A 4.7 kΩ         |
| R4032    | 7030006890 | S.RESISTOR  | RK73K2AJ 1M Ω           |
| R4033    | 7030006780 | S.RESISTOR  | RK73K2AJ 10 kΩ          |
| R4034    | 7010006800 | RESISTOR    | RD25XJ 270 Ω            |
| R4035    | 7070000780 | RESISTOR    | RSSX2 J 4.7 Ω           |
| R4036    | 7010006790 | RESISTOR    | RD25XJ 470 Ω            |
| R4039    | 7010006780 | RESISTOR    | RD25XJ 4.7 Ω            |
| R4040    | 7030007000 | S.RESISTOR  | RK73K3AJ 100 Ω          |
| R4044    | 7010006790 | RESISTOR    | RD25XJ 470 Ω            |
| R4045    | 7030007020 | S.RESISTOR  | RK73M2AJ 10 Ω           |
| R4046    | 7030006650 | S.RESISTOR  | RK73K2AJ 180 Ω          |
| R4047    | 7010006770 | RESISTOR    | RD25XJ 2.2 Ω            |
| R4048    | 7010006780 | RESISTOR    | RD25XJ 2.7 Ω            |
| R4049    | 7010006850 | RESISTOR    | RD25XJ 180 Ω            |
| R4050    | 7010006750 | RESISTOR    | RD25XJ 2.2 kΩ           |
| R4051    | 7030006870 | S.RESISTOR  | RK73K2AJ 470 Ω          |
| R4052    | 7030007040 | S.RESISTOR  | RK73M2AJ 12 Ω           |
| R4053    | 7030006870 | S.RESISTOR  | RK73K2AJ 470 Ω          |
| C4003    | 4010007940 | CERAMIC     | HM11SJ SL 301J 500V     |
| C4004    | 4010007940 | CERAMIC     | HM11SJ SL 301J 500V     |
| C4006    | 4310000950 | MYLAR       | QYX1H103J TP            |
| C4007    | 4310000950 | MYLAR       | QYX1H103J TP            |
| C4008    | 4030011390 | S.CERAMIC   | GRM40 CH 331J 50PT      |
| C4009    | 4030011460 | S.CERAMIC   | GR111 CH 102K 50PB      |
| C4010    | 4030011470 | S.CERAMIC   | GR44 CH 682K            |
| C4011    | 4030011470 | S.CERAMIC   | GR44 CH 682K            |
| C4012    | 4010007970 | CERAMIC     | HM13SJ SL 471J 500V     |
| C4013    | 4030011480 | S.CERAMIC   | GR111 CH 102K 50PB      |
| C4014    | 4030011480 | S.CERAMIC   | GR111 CH 102K 50PB      |

S.=Surface mount

## [PA UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION  |                             |
|----------|------------|--------------|-----------------------------|
| C4015    | 4030011470 | S.CERAMIC    | GR44 CH 682K                |
| C4016    | 4030011470 | S.CERAMIC    | GR44 CH 682K                |
| C4018    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT           |
| C4019    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT           |
| C4020    | 4510006530 | ELECTROLITIC | UVX1C470M DA                |
| C4021    | 4510006540 | ELECTROLITIC | UVR1C101M DA                |
| C4022    | 4030011440 | S.CERAMIC    | GRM40 B 473K 50PT           |
| C4023    | 4510006560 | ELECTROLITIC | UVR1E471M PA                |
| C4024    | 4030011440 | S.CERAMIC    | GRM40 B 473K 50PT           |
| C4026    | 4510006510 | ELECTROLITIC | UVX1E100M DA                |
| C4027    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT           |
| C4028    | 4510006570 | ELECTROLITIC | UVR1C102M PA                |
| C4029    | 4030011440 | S.CERAMIC    | GRM40 B 473K 50PT           |
| C4030    | 4030011440 | S.CERAMIC    | GRM40 B 473K 50PT           |
| C4031    | 4030011440 | S.CERAMIC    | GRM40 B 473K 50PT           |
| C4032    | 4030011370 | S.CERAMIC    | GRM40 CH 101J 50PT          |
| C4033    | 4030011480 | S.CERAMIC    | GR44 Y5V 684Z               |
| C4034    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT           |
| C4035    | 4510006580 | ELECTROLITIC | UVR1E102M PA                |
| C4036    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT           |
| C4038    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT           |
| C4041    | 4030011450 | S.CERAMIC    | GRM40 B 104K 50PT           |
| C4042    | 4030011450 | S.CERAMIC    | GRM40 B 104K 50PT           |
| C4043    | 4030011450 | S.CERAMIC    | GRM40 B 104K 50PT           |
| C4044    | 4030011450 | S.CERAMIC    | GRM40 B 104K 50PT           |
| C4045    | 4320001020 | DIP MICA     | KD20C 472J5                 |
| C4046    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT           |
| C4047    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT           |
| C4048    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT           |
| C4050    | 4510006580 | ELECTROLITIC | UVR1E102M PA                |
| C4051    | 4510006550 | ELECTROLITIC | UVR1C471M PA                |
| C4052    | 4510006510 | ELECTROLITIC | UVX1E100M DA                |
| C4053    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT           |
| C4054    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT           |
| C4055    | 4030011480 | S.CERAMIC    | GR111 CH 102K 50PB          |
| C4056    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT           |
| C4057    | 4320001040 | DIP MICA     | KD20C 681J5                 |
| C4059    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT           |
| C4063    | 4510006550 | ELECTROLITIC | UVR1C471M PA                |
| C4064    | 4030011380 | S.CERAMIC    | GRM40 CH 221J 50PT          |
| C4065    | 4040000710 | BARRIERLAYR  | UAT 08X 473K                |
| C4066    | 4040000710 | BARRIERLAYR  | UAT 08X 473K                |
| C4067    | 4040000710 | BARRIERLAYR  | UAT 08X 473K                |
| C4068    | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT           |
| C4069    | 4030011440 | S.CERAMIC    | GRM40 B 473K 50PT           |
| C4070    | 4030011500 | S.CERAMIC    | GRM40 B 102K 50PT           |
| C4071    | 4030011360 | S.CERAMIC    | GRM40 CH 330J 50PT          |
| C4072    | 4030011450 | S.CERAMIC    | GRM40 B 104K 50PT           |
| C4073    | 4030011450 | S.CERAMIC    | GRM40 B 104K 50PT           |
| C4074    | 4030011450 | S.CERAMIC    | GRM40 B 104K 50PT           |
| C4075    | 4030011450 | S.CERAMIC    | GRM40 B 104K 50PT           |
| C4076    | 4030011450 | S.CERAMIC    | GRM40 B 104K 50PT           |
| C4077    | 4030011500 | S.CERAMIC    | GRM40 B 102K 50PT           |
| C4078    | 4030011450 | S.CERAMIC    | GRM40 B 104K 50PT           |
| C4079    | 4030011370 | S.CERAMIC    | GRM40 CH 101J 50PT          |
| W4001    | 6910009340 | JUMPER       | JPW-02A                     |
| W4002    | 6910009340 | JUMPER       | JPW-02A                     |
| W4003    | 6910009340 | JUMPER       | JPW-02A                     |
| W4004    | 6910009340 | JUMPER       | JPW-02A                     |
| S4001    | 6910009320 | THERMAL      | OHD-3 110M                  |
| S4002    | 6910009310 | THERMAL      | OHD-3 50M                   |
| J4002    | 6510018760 | CONNECTOR    | TMP-J01X-V6                 |
| J4003    | 6510018730 | CONNECTOR    | 10FE-BT                     |
| J4004    | 6510018700 | CONNECTOR    | RT01T-1.0B                  |
| J4005    | 6510018700 | CONNECTOR    | RT01T-1.0B                  |
| WS1      | 8970021930 | CABLE        | SX1632 J lead set (1)/PA150 |
| WS2      | 8970021940 | CABLE        | SX1632 1.5D(1)/PA150        |

## [PA UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |             |
|----------|------------|-------------|-------------|
| EP4001   | 0910045044 | PCB         | B 4250D     |
| EP4003   | 6910009350 | BEAD        | FSOH050RN01 |
| EP4004   | 6910009350 | BEAD        | FSOH050RN01 |
| EP4006   | 6910009360 | BEAD        | FSOH070RN   |
| EP4008   | 6510018840 | TERMINAL    | F4053A      |
| EP4009   | 6510018840 | TERMINAL    | F4053A      |

## [FILTER UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                       |
|----------|------------|-------------|-----------------------|
| Q4301    | 1590002240 | TRANSISTOR  | DTC114ES TP           |
| D4301    | 1710000820 | DIODE       | 1SS133 T77            |
| D4302    | 1710000820 | DIODE       | 1SS133 T77            |
| D4303    | 1710000820 | DIODE       | 1SS133 T77            |
| D4304    | 1710000820 | DIODE       | 1SS133 T77            |
| D4305    | 1710000820 | DIODE       | 1SS133 T77            |
| D4306    | 1710000820 | DIODE       | 1SS133 T77            |
| D4307    | 1710000820 | DIODE       | 1SS133 T77            |
| D4308    | 1710000820 | DIODE       | 1SS133 T77            |
| D4309    | 1790001380 | DIODE       | 1SS237                |
| D4310    | 1790001380 | DIODE       | 1SS237                |
| D4311    | 1710000820 | DIODE       | 1SS133 T77            |
| L4301    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4302    | 6140002950 | COIL        | LR-226                |
| L4303    | 6140002960 | COIL        | LR-227                |
| L4304    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4305    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4306    | 6140002900 | COIL        | LR-263                |
| L4307    | 6140002820 | COIL        | LR-235                |
| L4308    | 6140002830 | COIL        | LR-236                |
| L4309    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4310    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4311    | 6140002850 | COIL        | LR-238                |
| L4312    | 6140002820 | COIL        | LR-235                |
| L4313    | 6140002820 | COIL        | LR-235                |
| L4314    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4315    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4316    | 6140002840 | COIL        | LR-237                |
| L4317    | 6140002900 | COIL        | LR-263                |
| L4318    | 6140002900 | COIL        | LR-263                |
| L4319    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4320    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4321    | 6140002860 | COIL        | LR-241                |
| L4322    | 6140002840 | COIL        | LR-237                |
| L4323    | 6140002840 | COIL        | LR-237                |
| L4324    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4325    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4327    | 6140002880 | COIL        | LR-243                |
| L4328    | 6140002870 | COIL        | LR-242                |
| L4329    | 6140002870 | COIL        | LR-242                |
| L4330    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4331    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4332    | 6140002670 | COIL        | LR-242                |
| L4333    | 6140002870 | COIL        | LR-242                |
| L4334    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4335    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4336    | 6140002890 | COIL        | LR-262                |
| L4337    | 6140002890 | COIL        | LR-262                |
| L4338    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4339    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4340    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4341    | 6140002530 | COIL        | LR-291 (TR10X5X5 3A6) |
| L4342    | 6140001460 | COIL        | LR-170                |
| L4343    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4344    | 6180003050 | COIL        | LAL 03NA 101K         |
| L4345    | 6140002830 | COIL        | LR-236                |

S.=Surface mount

## [FILTER UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                     |
|----------|------------|-------------|---------------------|
| R4301    | 7010008650 | RESISTOR    | RD16S J 22 kΩ       |
| R4302    | 7010008710 | RESISTOR    | RD16X J 100 kΩ      |
| R4303    | 7010008640 | RESISTOR    | RD16S J 10 kΩ       |
| R4304    | 7010008710 | RESISTOR    | RD16X J 100 kΩ      |
| R4305    | 7010008700 | RESISTOR    | RD16X J 22 kΩ       |
| R4306    | 7010008640 | RESISTOR    | RD16S J 10 kΩ       |
| R4307    | 7010008740 | RESISTOR    | RD50SS J 68 Ω       |
| R4308    | 7010008730 | RESISTOR    | RD25S J 10 Ω        |
| R4309    | 7540000110 | ABSORBER    | SRVH-350L           |
| R4312    | 7010008630 | RESISTOR    | RD16S J 4.7 kΩ      |
| R4313    | 7010008690 | RESISTOR    | RD16X J 4.7 kΩ      |
| R4314    | 7010008720 | RESISTOR    | RD16X J 1M Ω        |
|          |            |             |                     |
| C4301    | 4040000700 | BARRIERLAYR | UZE 08X 104M        |
| C4302    | 4320000990 | DIP MICA    | KD20C 102J5         |
| C4303    | 4010007970 | CERAMIC     | HM13SJ SL 471J 500V |
| C4304    | 4010007970 | CERAMIC     | HM13SJ SL 471J 500V |
| C4305    | 4320001000 | DIP MICA    | KD20C 222J5         |
| C4306    | 4010007940 | CERAMIC     | HM11SJ SL 301J 500V |
| C4307    | 4010007930 | CERAMIC     | HM95SJ SL 271J 500V |
| C4308    | 4320001010 | DIP MICA    | KD20C 272J5         |
| C4309    | 4010007890 | CERAMIC     | HM95SJ SL 181J 500V |
| C4310    | 4010007750 | CERAMIC     | HM60SJ CH 100D 500V |
| C4311    | 4010007960 | CERAMIC     | HM11SJ SL 391J 500V |
| C4312    | 4010007960 | CERAMIC     | HM11SJ SL 391J 500V |
| C4313    | 4010007950 | CERAMIC     | HM11SJ SL 331J 500V |
| C4314    | 4010007960 | CERAMIC     | HM11SJ SL 391J 500V |
| C4315    | 4040000700 | BARRIERLAYR | UZE 08X 104M        |
| C4316    | 4040000700 | BARRIERLAYR | UZE 08X 104M        |
| C4317    | 4010007780 | CERAMIC     | HM60SJ SL 300J 500V |
| C4318    | 4010007950 | CERAMIC     | HM11SJ SL 331J 500V |
| C4319    | 4010007970 | CERAMIC     | HM13SJ SL 471J 500V |
| C4320    | 4010007950 | CERAMIC     | HM11SJ SL 331J 500V |
| C4321    | 4010007930 | CERAMIC     | HM95SJ SL 271J 500V |
| C4322    | 4010007930 | CERAMIC     | HM95SJ SL 271J 500V |
| C4323    | 4010007930 | CERAMIC     | HM95SJ SL 271J 500V |
| C4324    | 4010007970 | CERAMIC     | HM13SJ SL 471J 500V |
| C4325    | 4010007970 | CERAMIC     | HM13SJ SL 471J 500V |
| C4326    | 4010007970 | CERAMIC     | HM13SJ SL 471J 500V |
| C4327    | 4010007930 | CERAMIC     | HM95SJ SL 271J 500V |
| C4328    | 4010007950 | CERAMIC     | HM11SJ SL 331J 500V |
| C4329    | 4010007950 | CERAMIC     | HM11SJ SL 331J 500V |
| C4330    | 4010007970 | CERAMIC     | HM13SJ SL 471J 500V |
| C4331    | 4010007960 | CERAMIC     | HM11SJ SL 391J 500V |
| C4332    | 4010007950 | CERAMIC     | HM11SJ SL 331J 500V |
| C4333    | 4010007870 | CERAMIC     | HM74SJ SL 121J 500V |
| C4334    | 4010007870 | CERAMIC     | HM74SJ SL 121J 500V |
| C4335    | 4010007960 | CERAMIC     | HM11SJ SL 391J 500V |
| C4336    | 4010007960 | CERAMIC     | HM11SJ SL 391J 500V |
| C4337    | 4010007820 | CERAMIC     | HM60SJ SL 680J 500V |
| C4338    | 4040000700 | BARRIERLAYR | UZE 08X 104M        |
| C4339    | 4010007660 | CERAMIC     | HE80SJ YB 472K 50V  |
| C4340    | 4010007910 | CERAMIC     | HM95SJ SL 221J 500V |
| C4341    | 4010007950 | CERAMIC     | HM11SJ SL 331J 500V |
| C4342    | 4010007950 | CERAMIC     | HM11SJ SL 331J 500V |
| C4343    | 4010007960 | CERAMIC     | HM11SJ SL 391J 500V |
| C4344    | 4010007990 | CERAMIC     | HM74SJ SL 151J 500V |
| C4345    | 4010007950 | CERAMIC     | HM11SJ SL 331J 500V |
| C4346    | 4010007970 | CERAMIC     | HM13SJ SL 471J 500V |
| C4347    | 4010007850 | CERAMIC     | HM60SJ SL 101J 500V |
| C4348    | 4010007940 | CERAMIC     | HM11SJ SL 301J 500V |
| C4349    | 4010007660 | CERAMIC     | HE80SJ YB 472K 50V  |
| C4350    | 4010007660 | CERAMIC     | HE80SJ YB 472K 50V  |
| C4351    | 4010007890 | CERAMIC     | HM95SJ SL 181J 500V |
| C4352    | 4010007950 | CERAMIC     | HM11SJ SL 331J 500V |
| C4353    | 4010007870 | CERAMIC     | HM74SJ SL 121J 500V |
| C4354    | 4010007930 | CERAMIC     | HM95SJ SL 271J 500V |
| C4355    | 4010007940 | CERAMIC     | HM11SJ SL 301J 500V |
| C4356    | 4010007810 | CERAMIC     | HM60SJ SL 560J 500V |
| C4357    | 4010007740 | CERAMIC     | HM60SJ SL 050C 500V |
| C4358    | 4010007940 | CERAMIC     | HM11SJ SL 301J 500V |
| C4359    | 4010007660 | CERAMIC     | HE80SJ YB 472K 50V  |
| C4360    | 4010007660 | CERAMIC     | HE80SJ YB 472K 50V  |
| C4361    | 4010007960 | CERAMIC     | HM11SJ SL 391J 500V |
| C4362    | 4010007870 | CERAMIC     | HM74SJ SL 121J 500V |

## [FILTER UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION  |                      |
|----------|------------|--------------|----------------------|
| C4363    | 4010007960 | CERAMIC      | HM11SJ SL 391J 500V  |
| C4364    | 4010007840 | CERAMIC      | HM60SJ SL 820J 500V  |
| C4365    | 4010007910 | CERAMIC      | HM95SJ SL 221J 500V  |
| C4366    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V   |
| C4367    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V   |
| C4368    | 4010007930 | CERAMIC      | HM95SJ SL 271J 500V  |
| C4369    | 4010007850 | CERAMIC      | HM60SJ SL 101J 500V  |
| C4370    | 4010007950 | CERAMIC      | HM11SJ SL 331J 500V  |
| C4371    | 4010007820 | CERAMIC      | HM60SJ SL 680J 500V  |
| C4372    | 4010007840 | CERAMIC      | HM60SJ SL 820J 500V  |
| C4373    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V   |
| C4374    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V   |
| C4375    | 4010007870 | CERAMIC      | HM74SJ SL 121J 500V  |
| C4376    | 4010008010 | CERAMIC      | HM60SJ SL 330J 500V  |
| C4377    | 4010007910 | CERAMIC      | HM95SJ SL 221J 500V  |
| C4378    | 4010007800 | CERAMIC      | HM60SJ SL 470J 500V  |
| C4379    | 4010007870 | CERAMIC      | HM74SJ SL 121J 500V  |
| C4380    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V   |
| C4381    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V   |
| C4382    | 4010007990 | CERAMIC      | HM74SJ SL 151J 500V  |
| C4383    | 4010007760 | CERAMIC      | HM60SJ SL 220J 500V  |
| C4384    | 4010007940 | CERAMIC      | HM11SJ SL 301J 500V  |
| C4385    | 4010007800 | CERAMIC      | HM60SJ SL 470J 500V  |
| C4386    | 4010007990 | CERAMIC      | HM74SJ SL 151J 500V  |
| C4387    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V   |
| C4388    | 4010007710 | CERAMIC      | HE40SJ YB 471K 50V   |
| C4389    | 4010007710 | CERAMIC      | HE40SJ YB 471K 50V   |
| C4390    | 4010007700 | CERAMIC      | HE90SJ SL 471J 50V   |
| C4391    | 4010007700 | CERAMIC      | HE90SJ SL 471J 50V   |
| C4392    | 4610002040 | TRIMMER      | ECR-HA030E41         |
| C4393    | 4010007690 | CERAMIC      | HE80SJ SL 181J 50V   |
| C4394    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V   |
| C4395    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V   |
| C4396    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V   |
| C4398    | 4010007730 | CERAMIC      | HM17SJ YB 103K 500V  |
| C4399    | 4010007730 | CERAMIC      | HM17SJ YB 103K 500V  |
| C4400    | 4010007680 | CERAMIC      | HE50SJ SL 101J 50V   |
| C4401    | 4010007670 | CERAMIC      | HE40SJ SL 180J 50V   |
| C4402    | 4010007680 | CERAMIC      | HE50SJ SL 101J 50V   |
| C4404    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V   |
| C4408    | 4040000710 | BARRIERLAYR  | UAT 08X 473K         |
| C4407    | 4510006510 | ELECTROLITIC | UVX1E100M DA         |
| C4408    | 4010007800 | CERAMIC      | HM60SJ SL 470J 500V  |
| C4409    | 4010007750 | CERAMIC      | HM60SJ CH 100D 500V  |
| C4410    | 4010007870 | CERAMIC      | HM74SJ SL 121J 500V  |
| C4411    | 4010007750 | CERAMIC      | HM60SJ CH 100D 500V  |
| C4412    | 4010007840 | CERAMIC      | HM60SJ SL 820J 500V  |
| C4413    | 4010007810 | CERAMIC      | HM60SJ SL 560J 500V  |
| C4414    | 4010007750 | CERAMIC      | HM60SJ CH 100D 500V  |
| C4415    | 4010007850 | CERAMIC      | HM60SJ SL 101J 500V  |
| C4416    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V   |
| C4417    | 4010007850 | CERAMIC      | HM60SJ SL 101J 500V  |
| C4418    | 4010008000 | CERAMIC      | HM60SJ SL 040C 500V  |
|          |            |              |                      |
| RL4301   | 6330001280 | RELAY        | AJS1345              |
| RL4302   | 6330001280 | RELAY        | AJS1345              |
| RL4303   | 6330001280 | RELAY        | AJS1345              |
| RL4304   | 6330001280 | RELAY        | AJS1345              |
| RL4305   | 6330001280 | RELAY        | AJS1345              |
| RL4306   | 6330001280 | RELAY        | AJS1345              |
| RL4307   | 6330001280 | RELAY        | AJS1345              |
| RL4308   | 6330001280 | RELAY        | AJS1345              |
| RL4309   | 6330001280 | RELAY        | AJS1345              |
| RL4310   | 6330001280 | RELAY        | AJS1345              |
| RL4311   | 6330001280 | RELAY        | AJS1345              |
| RL4312   | 6330001280 | RELAY        | AJS1345              |
| RL4313   | 6330001280 | RELAY        | AJS1345              |
| RL4314   | 6330001280 | RELAY        | AJS1345              |
| RL4315   | 6330001280 | RELAY        | AJS1345              |
| RL4316   | 6330001280 | RELAY        | AJS1345              |
| RL4317   | 6330001270 | RELAY        | AGP 2013(DSP1-DC12V) |
|          |            |              |                      |
| W4301    | 6910009420 | JUMPER       | IPS-1041-2           |
| W4312    | 6910009410 | JUMPER       | IPS-1041-4           |

S.=Surface mount

# [FILTER UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION |                    |
|----------|------------|-------------|--------------------|
| W4313    | 6910009410 | JUMPER      | IPS-1041-4         |
| W4314    | 6910009410 | JUMPER      | IPS-1041-4         |
| W4319    | 6910009340 | JUMPER      | JPW-02A            |
| W4320    | 6910009410 | JUMPER      | IPS-1041-4         |
| W4321    | 6910009410 | JUMPER      | IPS-1041-4         |
| J4303    | 6510018740 | CONNECTOR   | 16FE-BT-M          |
| J4304    | 6510018760 | CONNECTOR   | TMP-J01X-V6        |
| WS1      | 8970021920 | CABLE       | SX1632 1.5D (2)/FI |
| EP4301   | 0910045053 | PCB         | B 4251C            |

# [ALARM UNIT] (except General version)

| REF. NO. | ORDER NO.  | DESCRIPTION |                      |
|----------|------------|-------------|----------------------|
| C5001    | 4550006140 | S.TANTALUM  | ECST1EY474R          |
| C5002    | 4550006210 | S.TANTALUM  | ECST1CX108R          |
| C5004    | 4030006880 | S.CERAMIC   | C1608 JB 1H 472K-T-A |
| C5005    | 4030007090 | S.CERAMIC   | C1608 CH 1H 470J-T-A |
| C5006    | 4030007090 | S.CERAMIC   | C1608 CH 1H 470J-T-A |
| C5007    | 4030006880 | S.CERAMIC   | C1608 JB 1H 102K-T-A |
| C5008    | 4030006850 | S.CERAMIC   | C1608 JB 1H 471K-T-A |
| J5001    | 6510018160 | S.CONNECTOR | 4-175643-0           |
| J5002    | 6510018170 | S.CONNECTOR | 4-175643-4           |
| EP5001   | 0910045601 | PCB         | B 4368A              |

# [CHASSIS PARTS]

| REF. NO. | ORDER NO.  | DESCRIPTION |          |
|----------|------------|-------------|----------|
| F4601    | 5220000280 | HOLDER      | FH-052S  |
| F4602    | 5220000280 | HOLDER      | FH-052S  |
| F4603    | 5210000500 | FUSE        | FGB 30A  |
| F4604    | 5210000500 | FUSE        | FGB 30A  |
| W4603    | 8900005900 | CABLE       | OPC-569  |
| W4604    | 8900005880 | CABLE       | OPC-564  |
| W4605    | 8900005890 | CABLE       | OPC-565  |
| J4601    | 6510018780 | CONNECTOR   | MR-DS 01 |

# [REG UNIT] (Europe version only)

| REF. NO. | ORDER NO.  | DESCRIPTION  |                 |
|----------|------------|--------------|-----------------|
| IC8001   | 1110003920 | S.IC         | μPC494GS        |
| IC8002   | 1110003900 | S.IC         | μPC10937        |
| IC8003   | 1170000300 | S.IC         | PS2701-1        |
| Q8001    | 1560000860 | S.FET        | 2SK2286         |
| Q8003    | 1510000950 | S.TRANSISTOR | 2SA1213-Y       |
| D8002    | 1790001370 | DIODE        | SF10SC6         |
| D8003    | 1790001380 | DIODE        | 1SS237          |
| T8001    | 5920000440 | TRANSFORMER  | TO-25           |
| T8002    | 5920000610 | TRANSFORMER  | TC-4            |
| L8001    | 5920000450 | COIL         | FK-080E-1020    |
| L8003    | 5920000450 | COIL         | FK-080E-1020    |
| R8001    | 7030006720 | S.RESISTOR   | RK73K2AJ 2.7 kΩ |
| R8002    | 7030006750 | S.RESISTOR   | RK73K2AJ 4.7 kΩ |
| R8003    | 7030006770 | S.RESISTOR   | RK73K2AJ 8.2 kΩ |
| R8004    | 7030006700 | S.RESISTOR   | RK73K2AJ 1.2 kΩ |
| R8005    | 7030006750 | S.RESISTOR   | RK73K2AJ 4.7 kΩ |
| R8006    | 7030006750 | S.RESISTOR   | RK73K2AJ 4.7 kΩ |
| R8007    | 7030006760 | S.RESISTOR   | RK73K2AJ 6.8 kΩ |
| R8008    | 7030006730 | S.RESISTOR   | RK73K2AJ 3.3 kΩ |
| R8009    | 7030006940 | S.RESISTOR   | RK73K2HJ 47 Ω   |
| R8010    | 7030006980 | S.RESISTOR   | RK73K2HJ 470 Ω  |
| R8011    | 7030006750 | S.RESISTOR   | RK73K2AJ 4.7 kΩ |
| R8012    | 7030006640 | S.RESISTOR   | RK73K2AJ 100 Ω  |
| R8013    | 7310004190 | TRIMMER      | KVSF637A 1 kΩ   |
| R8014    | 7030006740 | S.RESISTOR   | RK73K2AJ 3.9 kΩ |
| R8015    | 7030006690 | S.RESISTOR   | RK73K2AJ 1 kΩ   |
| R8016    | 7030006620 | S.RESISTOR   | RK73K2AJ 33 Ω   |
| R8019    | 7030006670 | S.RESISTOR   | RK73K2AJ 470 Ω  |
| R8020    | 7030006690 | S.RESISTOR   | RK73K2AJ 1 kΩ   |

# [TERMINAL UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION  |                    |
|----------|------------|--------------|--------------------|
| C7001    | 4510006610 | ELECTROLITIC | UVR1C472M HA       |
| C7002    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V |
| C7003    | 4010007980 | CERAMIC      | HE80SJ YB 222K 50V |
| C7004    | 4010007980 | CERAMIC      | HE80SJ YB 222K 50V |
| C7005    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V |
| C7006    | 4010007660 | CERAMIC      | HE80SJ YB 472K 50V |
| J7001    | 6510018710 | CONNECTOR    | RTB-1.5-2F         |
| EP7001   | 0910044563 | PCB          | B 4421C            |
| EP7003   | 6510018840 | TERMINAL     | F4053A             |
| EP7004   | 6510018840 | TERMINAL     | F4053A             |
| EP7009   | 6910009550 | BEAD         | FSOH090RN          |

# [ALARM UNIT] (except General version)

| REF. NO. | ORDER NO.  | DESCRIPTION  |                         |
|----------|------------|--------------|-------------------------|
| IC5001   | 1130007800 | S.IC         | S-7116AF-TF             |
| Q5001    | 1530002690 | S.TRANSISTOR | 2SC4116-GR (TE85R)      |
| X5001    | 6060000150 | S.CERAMIC    | CSAC3.58MGC300CD        |
| X5002    | 6060000150 | S.CERAMIC    | CSAC3.58MGC300CD        |
| R5001    | 7030003620 | S.RESISTOR   | ERJ3GEYJ 333 V (33 kΩ)  |
| R5002    | 7030003640 | S.RESISTOR   | ERJ3GEYJ 473 V (47 kΩ)  |
| R5003    | 7030003440 | S.RESISTOR   | ERJ3GEYJ 102 V (1 kΩ)   |
| R5004    | 7030003640 | S.RESISTOR   | ERJ3GEYJ 473 V (47 kΩ)  |
| R5005    | 7030003440 | S.RESISTOR   | ERJ3GEYJ 102 V (1 kΩ)   |
| R5006    | 7030003680 | S.RESISTOR   | ERJ3GEYJ 104 V (100 kΩ) |
| R5007    | 7030003710 | S.RESISTOR   | ERJ3GEYJ 184 V (180 kΩ) |
| R5008    | 7030003440 | S.RESISTOR   | ERJ3GEYJ 102 V (1 kΩ)   |
| R5009    | 7030003440 | S.RESISTOR   | ERJ3GEYJ 102 V (1 kΩ)   |
| R5010    | 7030003640 | S.RESISTOR   | ERJ3GEYJ 473 V (47 kΩ)  |

|        |            |              |                   |
|--------|------------|--------------|-------------------|
| C8001  | 4510006550 | ELECTROLITIC | UVR1C471M PA      |
| C8002  | 4030011440 | S.CERAMIC    | GRM40 B 473K 50PT |
| C8003  | 4560000140 | CERAMIC      | D67X5T 1E 684M51  |
| C8004  | 4510006590 | ELECTROLITIC | UPF1E102M RH      |
| C8005  | 4510006590 | ELECTROLITIC | UPF1E102M RH      |
| C8006  | 4510006500 | ELECTROLITIC | UVX1C100M DA      |
| C8007  | 4310000950 | MYLAR        | QYX1H103J TP      |
| C8008  | 4030011420 | S.CERAMIC    | GRM40 B 472K 50PT |
| C8009  | 4510006590 | ELECTROLITIC | UPF1E102M RH      |
| C8010  | 4510006590 | ELECTROLITIC | UPF1E102M RH      |
| C8011  | 4560000140 | CERAMIC      | D67X5T 1E 684M51  |
| C8012  | 4030011410 | S.CERAMIC    | GRM40 B 222K 50PT |
| C8013  | 4510006600 | ELECTROLITIC | UVR1C222M HA      |
| C8014  | 4560000140 | CERAMIC      | D67X5T 1E 684M51  |
| C8015  | 4560000140 | CERAMIC      | D67X5T 1E 684M51  |
| EP8001 | 0910045072 | PCB          | B 4420B           |

S.=Surface mount

## SECTION 6 MECHANICAL PARTS AND DISASSEMBLY

### [MAIN UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                          | QTY. |
|----------|------------|--------------------------------------|------|
| MP1      | 8510000230 | 220 shield case                      | 1    |
| MP2      | 8510000241 | 220 shield case cover -1             | 1    |
| MP3      | 8510002200 | VCO case                             | 1    |
| MP4      | 8510000230 | 220 shield case                      | 1    |
| MP5      | 8510008300 | 963 DDS shield case                  | 1    |
| MP6      | 8510008310 | 963 DDS shield cover                 | 1    |
| MP8      | 8510001060 | Shield case                          | 1    |
| MP9      | 8510001740 | Shield case upper cover              | 1    |
| MP10     | 8930011830 | 9M filter fitting (Gen, Marine only) | 1    |
| MP11     | 8510004640 | 220 shield plate (C)                 | 1    |
| MP12     | 8930005440 | Insulation plate (E)                 | 1    |
| MP13     | 8510004640 | 220 shield plate (C)                 | 1    |
| MP14     | 8930005440 | Insulation plate (E)                 | 1    |
| MP15     | 8510000241 | 220 shield case cover -1             | 1    |

### [CHASSIS PARTS]

| REF. NO. | ORDER NO.  | DESCRIPTION                             | QTY. |
|----------|------------|-----------------------------------------|------|
| W1003    | 8900005330 | Flat cable OPC-526 (N: 16, L: 100)      | 1    |
| W1012    | 8900005680 | Cable OPC-567 [TUNER] (incl. nut)       | 1    |
| MF1001   | 2710000520 | Fan SB0812H-ICOM-00 (Gen, Marine)       | 1    |
|          | 2710000570 | Fan VFA-8018-BH10-1000 (GMDSS)          | 1    |
| MP1003   | 8010015770 | 1632 main chassis (Gen, Marine)         | 1    |
|          | 8010016210 | 1632 main chassis (A) (GMDSS)           | 1    |
| MP1004   | 8930035801 | Rubber foot (J) -1                      | 4    |
| MP1005   | 8850001410 | Flat washer M5 SUS                      | 3    |
| MP1006   | 8850001480 | Spring washer M5 SUS                    | 1    |
| MP1007   | 8830001030 | Nut M5 SUS                              | 1    |
| MP1008   | 8830001080 | Wing nut M5 SUS                         | 1    |
| MP1010   | 8810008720 | Screw PH BT M3 x 6 NI                   | 7    |
| MP1011   | 8810008720 | Screw PH BT M3 x 6 NI                   | 7    |
| MP1015   | 8810008940 | Screw PH BT M4 x 12 NI                  | 4    |
| MP1018   | 8110005511 | 1632 cover -1 (Gen, Marine)             | 1    |
|          | 8110005560 | 1632 G-cover (GMDSS)                    | 1    |
| MP1020   | 8210012220 | 1632 rear panel (Gen, Marine)           | 1    |
|          | 8210012440 | 1632 G-rear panel (GMDSS)               | 1    |
| MP1022   | 8930035780 | 1632 rear seal (Gen, Marine)            | 1    |
|          | 8930036380 | 1632 G-rear seal (GMDSS)                | 1    |
| MP1024   | 8930035750 | 1632 connector plate (Gen, Marine)      | 1    |
|          | 8930036840 | 1632 G-connector plate (GMDSS)          | 1    |
| MP1026   | 8930035740 | Seal (GMDSS only)                       | 1    |
| MP1027   | 8930035760 | Seal (GMDSS only)                       | 1    |
| MP1028   | 8930035730 | Plate (GMDSS only)                      | 1    |
| MP1029   | 8810008560 | Screw PH M3 x 8 SUS ZK                  | 1    |
| MP1030   | 8810008560 | Screw PH M3 x 8 SUS ZK                  | 4    |
| MP1031   | 8810008850 | Cap bolt M4 x 8 ZK (Gen, Marine)        | 4    |
|          | 8810008910 | Screw PH M4 x 25 NI (GMDSS)             | 4    |
| MP1038   | 8810008560 | Screw PH M3 x 8 SUS ZK                  | 9    |
| MP1040   | 8810008890 | Screw FH M3 x 6 NI                      | 4    |
| MP1043   | 8810008560 | Screw PH M3 x 8 SUS ZK (GMDSS only)     | 4    |
| MP1044   | 8930037050 | Sheet (GMDSS only)                      | 4    |
| MP1045   | 8930037030 | 1562 stand-off (Gen, Marine)            | 2    |
|          | 8930037030 | 1562 stand-off (GMDSS)                  | 4    |
| MP1046   | 8930036390 | 1562 CA-plate (GMDSS only)              | 2    |
| MP1047   | 8810008800 | Screw PH UNC No. 4 x 4 SUS (GMDSS only) | 4    |
| MP1050   | 8930037900 | Sheet BB                                | 1    |
| MP1051   | 8930037910 | Sheet BC                                | 4    |

### [LOGIC UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                     | QTY. |
|----------|------------|---------------------------------|------|
| DS2004   | 5010000180 | LCD DLC-7978P (HTN transparent) | 1    |
| MP2001   | 8410002000 | 1632 heat sink plate            | 1    |
| MP2002   | 8930035620 | 1632 LCD holder                 | 1    |
| MP2003   | 8930036280 | 1632 LCD lower filter           | 1    |
| MP2004   | 8930036310 | 1632 LCD upper filter           | 1    |

### [LOGIC UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION        | QTY. |
|----------|------------|--------------------|------|
| MP2006   | 8810008890 | Screw FH M3 x 6 NI | 1    |
| MP2007   | 8830001060 | Nut M3 NI          | 1    |
| MP2008   | 8930036570 | 1632 lamp rubber   | 3    |

### [MIC UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                                                     | QTY. |
|----------|------------|-----------------------------------------------------------------|------|
| J2301    | 6510009210 | Connector 14RS-8H-MI-AU (F)<br>[MICROPHONE] (incl. nut, washer) | 1    |

### [VR1 UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                                                              | QTY. |
|----------|------------|--------------------------------------------------------------------------|------|
| R2401    | 7210002750 | Variable resistor TP96N937-15F-10KB-1540<br>[VOLUME] (incl. nut, washer) | 1    |

### [VR2 UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                                                               | QTY. |
|----------|------------|---------------------------------------------------------------------------|------|
| R2501    | 7210002760 | Variable resistor TP96N944-15F-10KB-1632<br>[CLARITY] (incl. nut, washer) | 1    |

### [SENSOR1 UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                                          | QTY. |
|----------|------------|------------------------------------------------------|------|
| S2601    | 2250000280 | Encoder SRB18100 25KC [GROUP]<br>(incl. nut, washer) | 1    |

### [SENSOR2 UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION                                            | QTY. |
|----------|------------|--------------------------------------------------------|------|
| S2701    | 2250000280 | Encoder SRB18100 25KC [CHANNEL]<br>(incl. nut, washer) | 1    |

### [FRONT PARTS]

| REF. NO. | ORDER NO.  | DESCRIPTION                        | QTY. |
|----------|------------|------------------------------------|------|
| S2801    | 2260002270 | Switch JPZ2120-0101 (TV-3) [POWER] | 1    |
| W2807    | 8900005860 | Flat cable OPC-522 (N: 6, L: 100)  | 1    |
| W2808    | 8900005860 | Flat cable OPC-522 (N: 6, L: 100)  | 1    |
| W2809    | 8900005870 | Flat cable OPC-524 (N: 10, L: 150) | 1    |
| W2810    | 8900005860 | Flat cable OPC-522 (N: 6, L: 100)  | 1    |
| W2811    | 8900005860 | Flat cable OPC-522 (N: 6, L: 100)  | 1    |
| MP2801   | 8210012190 | 1632 front panel (GMDSS)           | 1    |
|          | 8210012340 | 1632 front panel (A) (Gen, Marine) | 1    |
| MP2802   | 8310035580 | 1632 window plate                  | 1    |
| MP2803   | 8930035591 | 1632 3-key -1                      | 1    |
| MP2804   | 8930035600 | 1632 4-key                         | 1    |
| MP2805   | 8930035610 | 1632 14-key                        | 1    |
| MP2806   | 8930035640 | 1632 power key                     | 1    |
| MP2807   | 8930035650 | 1632 1-key                         | 1    |
| MP2808   | 8930035660 | 1632 2-key                         | 1    |
| MP2809   | 8610009750 | Knob N232                          | 2    |
| MP2810   | 8610009760 | Knob N233                          | 2    |
| MP2811   | 8210012200 | 1632 mask plate (Gen only)         | 1    |
| MP2812   | 8930035580 | 1632 sensor seal                   | 2    |
| MP2813   | 8930035570 | 1632 knob plate                    | 1    |

## [FRONT PARTS]

| REF. NO. | ORDER NO.  | DESCRIPTION           | QTY. |
|----------|------------|-----------------------|------|
| MP2814   | 8930035671 | 1632 SP net -1        | 1    |
| MP2815   | 8930035660 | 1632 dust sheet       | 1    |
| MP2816   | 8930035630 | 1632 front seal       | 1    |
| MP2817   | 8930034950 | O-ring SO-008-17      | 2    |
| MP2818   | 8010016022 | 1632 sub chassis -2   | 1    |
| MP2819   | 8810008900 | Screw PH M3 x 6 NI    | 4    |
| MP2820   | 8810008720 | Screw PH BT M3 x 6 NI | 7    |
| MP2821   | 8930036350 | 1632 T-key            | 1    |
| MP2822   | 8930036320 | 1632 key spacer       | 1    |
| MP2823   | 8810008890 | Screw FH M3 X 6 NI    | 2    |
| MP2824   | 8610009240 | Knob spring No. 7800P | 2    |
| MP2825   | 8930032370 | Shaft tape (A)        | 2    |
| SP2801   | 2510000870 | Speaker 77F60N        | 1    |

## [PLL UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION            | QTY. |
|----------|------------|------------------------|------|
| MP3001   | 8510009220 | 1386 shield case       | 1    |
| MP3002   | 8510009860 | 1632 shield cover      | 1    |
| MP3003   | 8510008300 | 963 DDS shield case    | 1    |
| MP3004   | 8510008310 | 963 DDS shield cover   | 1    |
| MP3005   | 8510000230 | 220 shield case        | 1    |
| MP3006   | 8510000881 | 194 VCO case -1        | 1    |
| MP3007   | 8510006510 | 194 VCO case cover (E) | 1    |
| MP3008   | 8510005330 | Coil case              | 1    |
| MP3010   | 8810008860 | Setscrew A 2.6 x 5     | 4    |
| MP3011   | 8510002200 | VCO case               | 1    |
| MP3012   | 8510006941 | DTMF shield case -1    | 1    |
| MP3013   | 8510002200 | VCO case               | 1    |
| MP3014   | 8510000210 | 194 shield plate       | 1    |
| MP3015   | 8930005570 | Insulation plate (U)   | 1    |

## [PA UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION               | QTY. |
|----------|------------|---------------------------|------|
| MP4001   | 8860000110 | Ground lug B 3 (M4) AG BS | 1    |
| MP4002   | 8860000110 | Ground lug B 3 (M4) AG BS | 1    |

## [FILTER UNIT]

| REF. NO. | ORDER NO.  | DESCRIPTION       | QTY. |
|----------|------------|-------------------|------|
| MP4301   | 8930014140 | Ground spring (D) | 1    |

## [PA PARTS]

| REF. NO. | ORDER NO.  | DESCRIPTION                             | QTY. |
|----------|------------|-----------------------------------------|------|
| F4601    | 5220000280 | Fuse holder FH-052S (incl. nut, washer) | 1    |
| F4602    | 5220000280 | Fuse holder FH-052S (incl. nut, washer) | 1    |
| F4603    | 5210000500 | Fuse FGB 30 A                           | 1    |
| F4604    | 5210000500 | Fuse FGB 30 A                           | 1    |
| J4601    | 6510018780 | Connector MR-DS 01 [ANTENNA]            | 1    |
| W4603    | 8900005900 | Cable OPC-569 [DC POWER]                | 1    |
| W4604    | 8900005880 | Flat cable OPC-564 (N: 16, L: 220)      | 1    |
| W4605    | 8900005890 | Flat cable OPC-565 (N: 10, L: 220)      | 1    |
| EP4603   | 6910009370 | P101 KD insulation sheet (Eur only)     | 1    |
| EP4604   | 6910009370 | P101 KD insulation sheet (Eur only))    | 1    |
| EP4605   | 6910009370 | P101 KD insulation sheet                | 1    |
| EP4607   | 6910009380 | B312D insulation bushing (Eur only))    | 1    |
| EP4608   | 6910009380 | B312D insulation bushing (Eur only))    | 1    |
| EP4609   | 6910009380 | B312D insulation bushing                | 1    |
| EP4611   | 8930024970 | 1241 insulation sheet (Eur Marine only) | 1    |
|          | 8930037020 | Insulation sheet (Eur GMDSS only)       | 1    |
| EP4612   | 8930024970 | 1241 insulation sheet (Eur Marine only) | 1    |
|          | 8930037020 | Insulation sheet (Eur GMDSS only)       | 1    |

## [PA PARTS]

| REF. NO. | ORDER NO.  | DESCRIPTION                      | QTY. |
|----------|------------|----------------------------------|------|
| MP4601   | 8810008720 | Screw PH BT M3 x 6 NI            | 4    |
| MP4602   | 8810008720 | Screw PH BT M3 x 6 NI (Eur only) | 3    |
| MP4603   | 8810008720 | Screw PH BT M3 x 6 NI            | 4    |
| MP4604   | 8810008720 | Screw PH BT M3 x 6 NI            | 8    |
| MP4605   | 8810008560 | Screw PH M3 x 8 SUS ZK           | 2    |
| MP4608   | 8410002010 | 1632 heat sink                   | 1    |
| MP4609   | 8110005391 | 1632 PA cover -1                 | 1    |
| MP4610   | 8930035790 | 1632 ANT plate                   | 1    |
| MP4611   | 8810008720 | Screw PH BT M3 x 6 NI            | 25   |
| MP4612   | 8810008900 | Screw PH M3 x 6 NI               | 1    |
| MP4613   | 8810008900 | Screw PH M3 x 6 NI               | 1    |
| MP4614   | 8810008900 | Screw PH M3 x 6 NI               | 1    |
| MP4615   | 8810008900 | Screw PH M3 x 6 NI               | 1    |
| MP4616   | 8810008900 | Screw PH M3 x 6 NI               | 1    |
| MP4617   | 8810008880 | Setscrew H 2.6 x 16 NI           | 1    |
| MP4618   | 8810008870 | Setscrew H 2.6 x 10 NI           | 1    |
| MP4619   | 8810008870 | Setscrew H 2.6 x 10 NI           | 1    |
| MP4620   | 8810008880 | Setscrew H 2.6 x 16 NI           | 1    |
| MP4623   | 8810008900 | Screw PH M3 x 6 NI (Eur only)    | 1    |
| MP4628   | 8850001460 | 1632 washer                      | 4    |
| MP4629   | 8930034300 | 1542 ANT seal (GMDSS only)       | 1    |
| MP4630   | 8930035770 | Seal (GMDSS only)                | 1    |
| MP4631   | 8810008900 | Screw PH M3 x 6 NI               | 2    |
| MP4632   | 8810008900 | Screw PH M3 x 6 NI               | 2    |
| MP4633   | 8930036290 | 1632 FH-A seal (GMDSS only)      | 2    |
| MP4634   | 8930036300 | 1632 FH-B seal                   | 2    |
| MP4635   | 8930015750 | Sheet (S)                        | 1    |
| MP4636   | 8930037870 | 1632 PA-A sheet                  | 4    |
| MP4637   | 8930037880 | 1632 PA-B sheet T                | 4    |

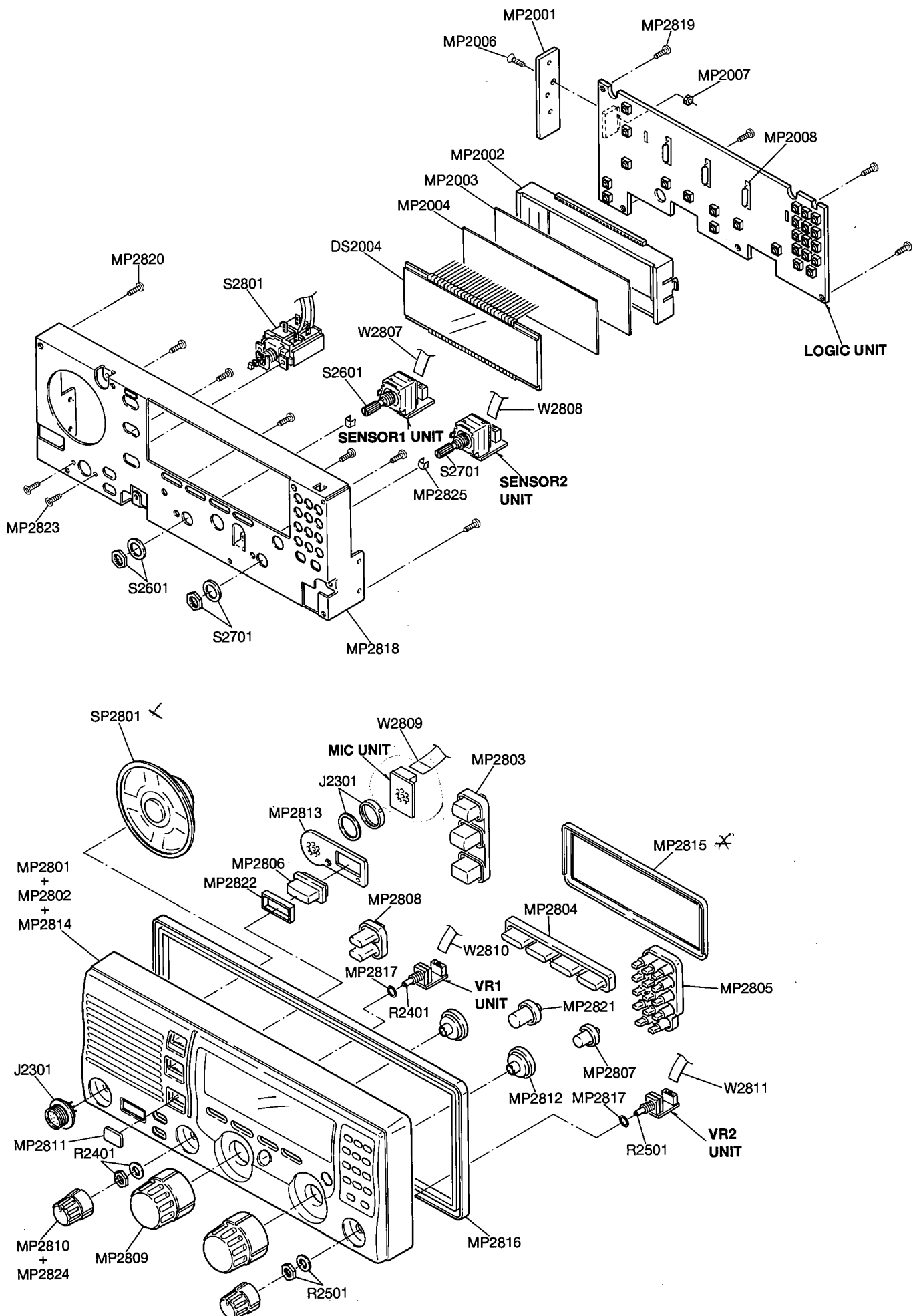
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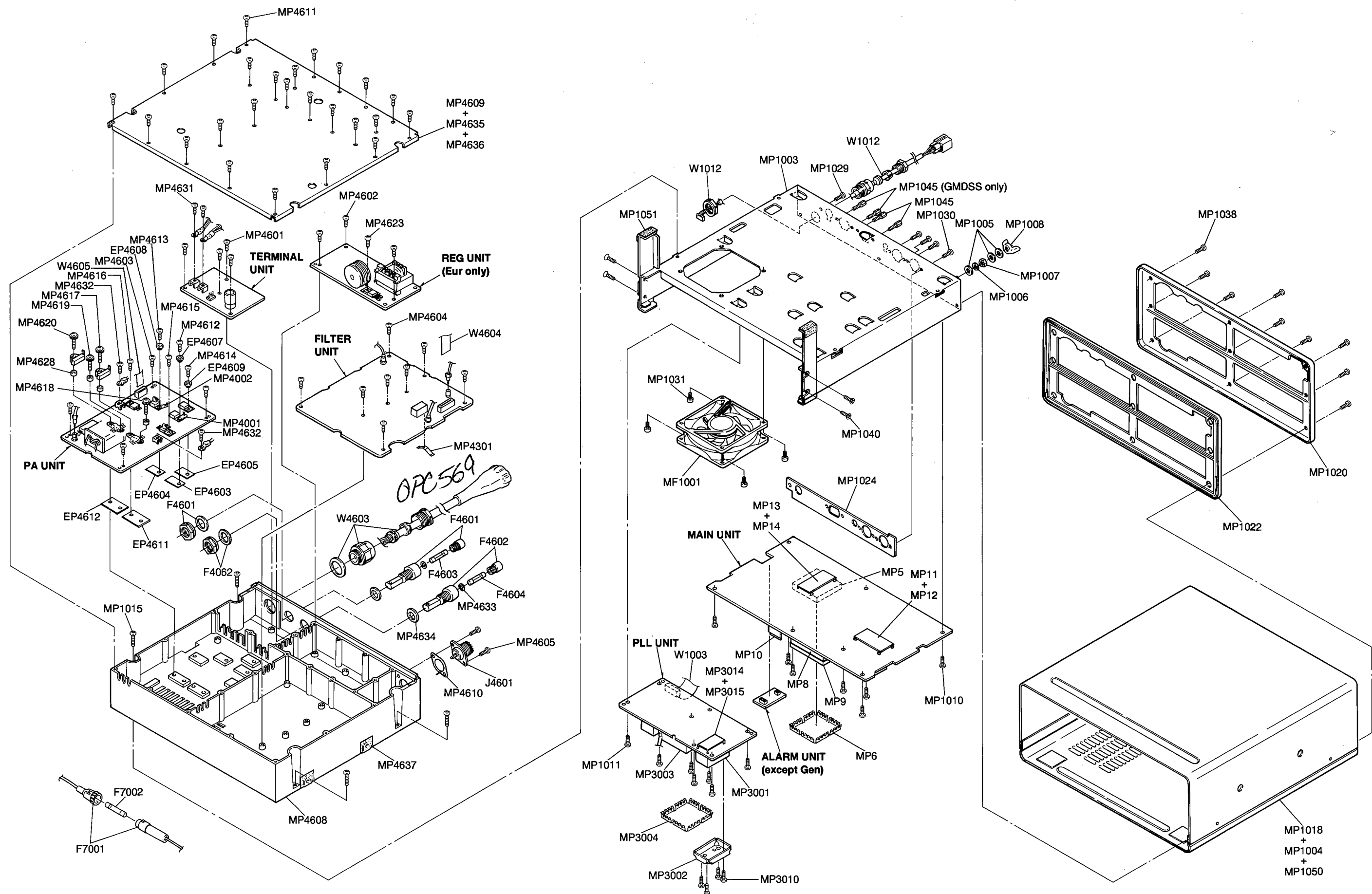
| REF. NO. | ORDER NO.  | DESCRIPTION          | QTY. |
|----------|------------|----------------------|------|
| F7001    | 5220000290 | Fuse holder TFH-S30r | 1    |
| F7002    | 5210000490 | Fuse FGB 5 A         | 1    |

## [UNPACKING]

| REF. NO. | ORDER NO.  | DESCRIPTION                                     | QTY. |
|----------|------------|-------------------------------------------------|------|
| F1201    | 5210000090 | Spare fuse FGB 30 A                             | 2    |
| F1202    | 5210000060 | Spare fuse FGB 5 A                              | 2    |
| J1201    | 6450001270 | DIN connector TCP0577-71-5201                   | 1    |
| J1202    | 6450001280 | DIN connector TCP0587-71-5401                   | 1    |
| J1203    | 5610000040 | Speaker plug AP321                              | 1    |
| P1201    | 5610000150 | Tuner connector CL07A04M                        | 1    |
| P1202    | 5610000160 | Pin for tuner connector 215001-2M               | 4    |
| W1201    | 8900005690 | DC power cable OPC-568                          | 1    |
| EP1202   | 6910009540 | Insulation sheet WS07MF-0A                      | 4    |
| EP1204   | 6910009390 | DIN connector cover TCP9426-01-010 (GMDSS only) | 2    |
| MC1201   | 7700001980 | Microphone EM-101                               | 1    |
| MP1203   | 8850001410 | Flat washer M5 SUS                              | 4    |
| MP1207   | 8830001070 | Nut M6 SUS                                      | 8    |
| MP1208   | 8850001490 | Spring washer M6 SUS                            | 4    |
| MP1211   | 8010016140 | 1632 mounting bracket                           | 1    |
| MP1212   | 8810008920 | Screw PH A0 M6 x 30 SUS                         | 4    |
| MP1214   | 8810008510 | Screw PH A M3.5 x 30 SUS                        | 2    |
| MP1215   | 8850001500 | Flat washer M6 (7 x 19 x 1.0) SUS               | 8    |
| MP1216   | 8820000170 | Bracket knob (A) M5 x 10 SUS                    | 4    |
| MP1217   | 8930036560 | 1632 cushion rubber                             | 4    |
| MP1218   | 8950004140 | 1632 MIC hanger                                 | 1    |
| MP1219   | 8810008840 | Allen bolt M6 x 50 SUS                          | 4    |

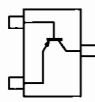
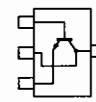
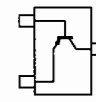
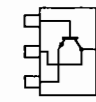
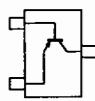
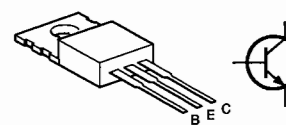
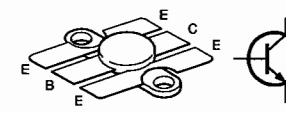
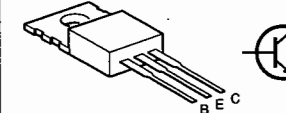
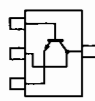
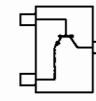
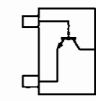
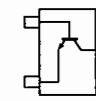
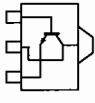
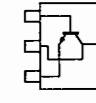
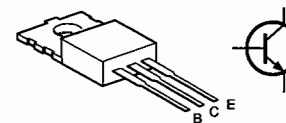
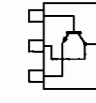
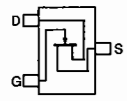
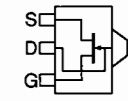
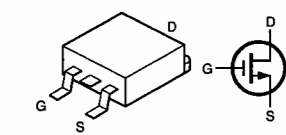
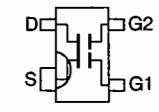
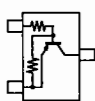
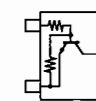
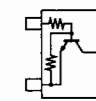
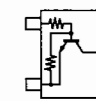
**Screw abbreviations** BT, A0, A: Self-tapping  
 PH: Pan head FH: Flat head  
 NI: Nickel SUS: Stainless  
 ZK: Black



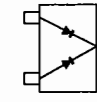
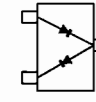
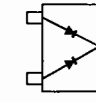
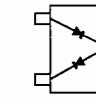
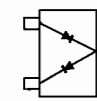
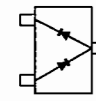
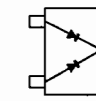
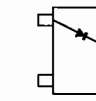
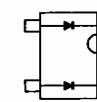
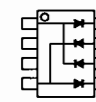
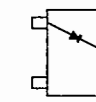
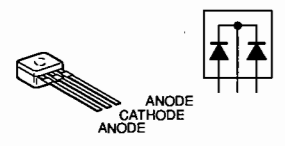


## SECTION 7 SEMI-CONDUCTOR INFORMATION

### • TRANSISTOR AND FET'S

|                                                                                                                            |                                                                                                                                |                                                                                                                           |                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>2SA1037K R</b><br>(Symbol: FR)<br>     | <b>2SA1213Y</b><br>(Symbol: NY)<br>           | <b>2SA1586 GR</b><br>(Symbol: SG)<br>   | <b>2SB789 DL</b><br>(Symbol: DL)<br>     |
| <b>2SC1623</b><br>(Symbol: No Symbol)<br> | <b>2SC1971</b><br>(Symbol: 43F)<br>           | <b>2SC2904</b><br>                      | <b>2SC3133</b><br>                       |
| <b>2SC3647S</b><br>(Symbol: CC)<br>       | <b>2SC4116 GR</b><br>(Symbol: LG)<br>         | <b>2SC4213 B</b><br>(Symbol: AB)<br>    | <b>2SC4215 O</b><br>(Symbol: QO)<br>     |
| <b>2SC4673D</b><br>(Symbol: CO)<br>     | <b>2SD1448 Z</b><br>(Symbol: 46)<br>        | <b>2SD1585K</b><br>                   | <b>2SD1619 T</b><br>(Symbol: DB)<br>   |
| <b>2SK210 GR</b><br>(Symbol: YG)<br>    | <b>2SK2171 4</b><br>(Symbol: No Symbol)<br> | <b>2SK2286</b><br>                    | <b>3SK131 MAS</b><br>(Symbol: VIT)<br> |
| <b>DTA114EU</b><br>(Symbol: 14)<br>     | <b>DTC114EK</b><br>(Symbol: 24)<br>         | <b>DTC114ES</b><br>(Symbol: E.SK)<br> | <b>DTC114EU</b><br>(Symbol: 24)<br>    |

### • DIODES

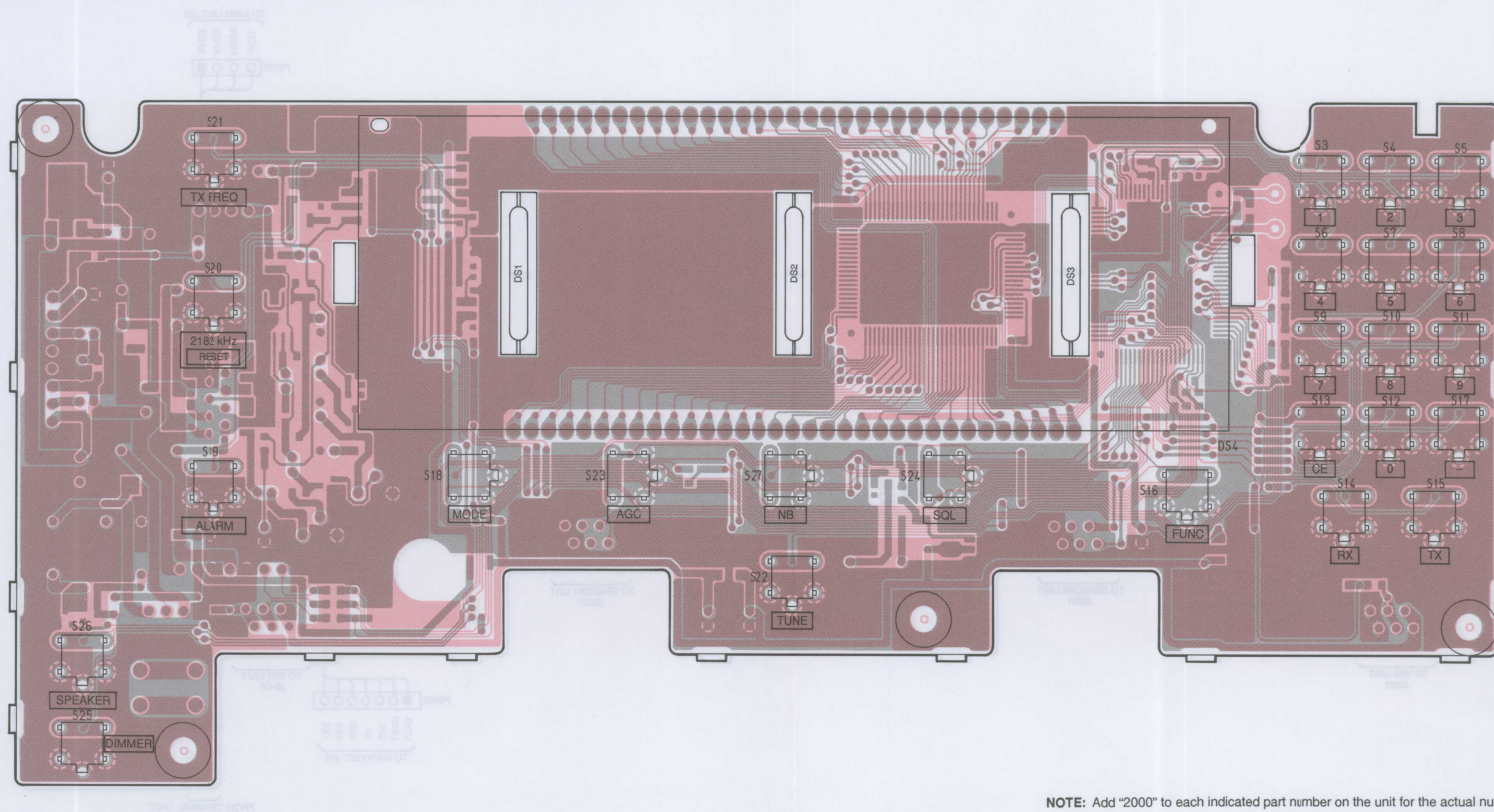
|                                                                                                                       |                                                                                                                        |                                                                                                                           |                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>1SS184</b><br>(Symbol: B3)<br>  | <b>1SS226</b><br>(Symbol: C3)<br>   | <b>1SS301</b><br>(Symbol: B3)<br>      | <b>1SS302</b><br>(Symbol: C3)<br> |
| <b>HSM88AS</b><br>(Symbol: C1)<br> | <b>HSM88ASR</b><br>(Symbol: C3)<br> | <b>HVM17 01TR</b><br>(Symbol: TE)<br>  | <b>MA29B</b><br>(Symbol: Y)<br>   |
| <b>MA862</b><br>(Symbol: M1I)<br>  | <b>ND433G</b><br>(Symbol: 433)<br>  | <b>RD11M T2B1</b><br>(Symbol: L1T)<br> | <b>SF10SC6</b><br>               |

## SECTION 8 BOARD LAYOUTS

### 8-1 LOGIC UNIT

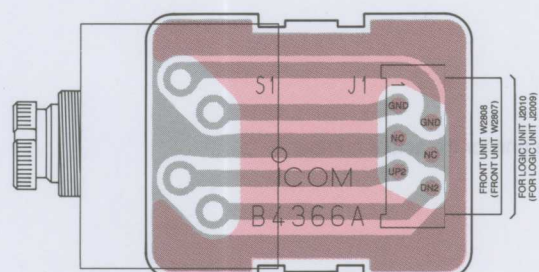
#### • LOGIC UNIT

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



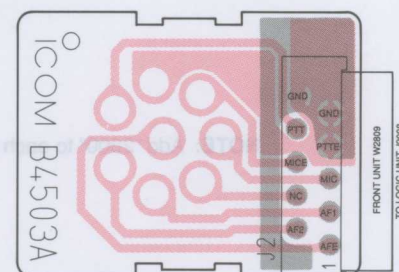
**NOTE:** Add "2000" to each indicated part number on the unit for the actual number.

#### • SENSOR 1/2 UNITS



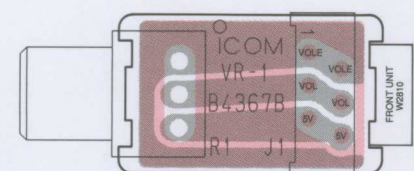
**NOTE:** Add "2600" to each indicated part number on the SENSOR1 unit for the actual number.  
**NOTE:** Add "2700" to each indicated part number on the SENSOR2 unit for the actual number.

#### • MIC UNIT



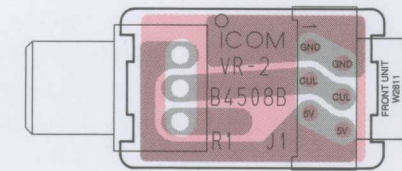
**NOTE:** Add "2300" to each indicated part number on the unit for the actual number.

#### • VR1 UNIT



**NOTE:** Add "2400" to each indicated part number on the unit for the actual number.

#### • VR2 UNIT



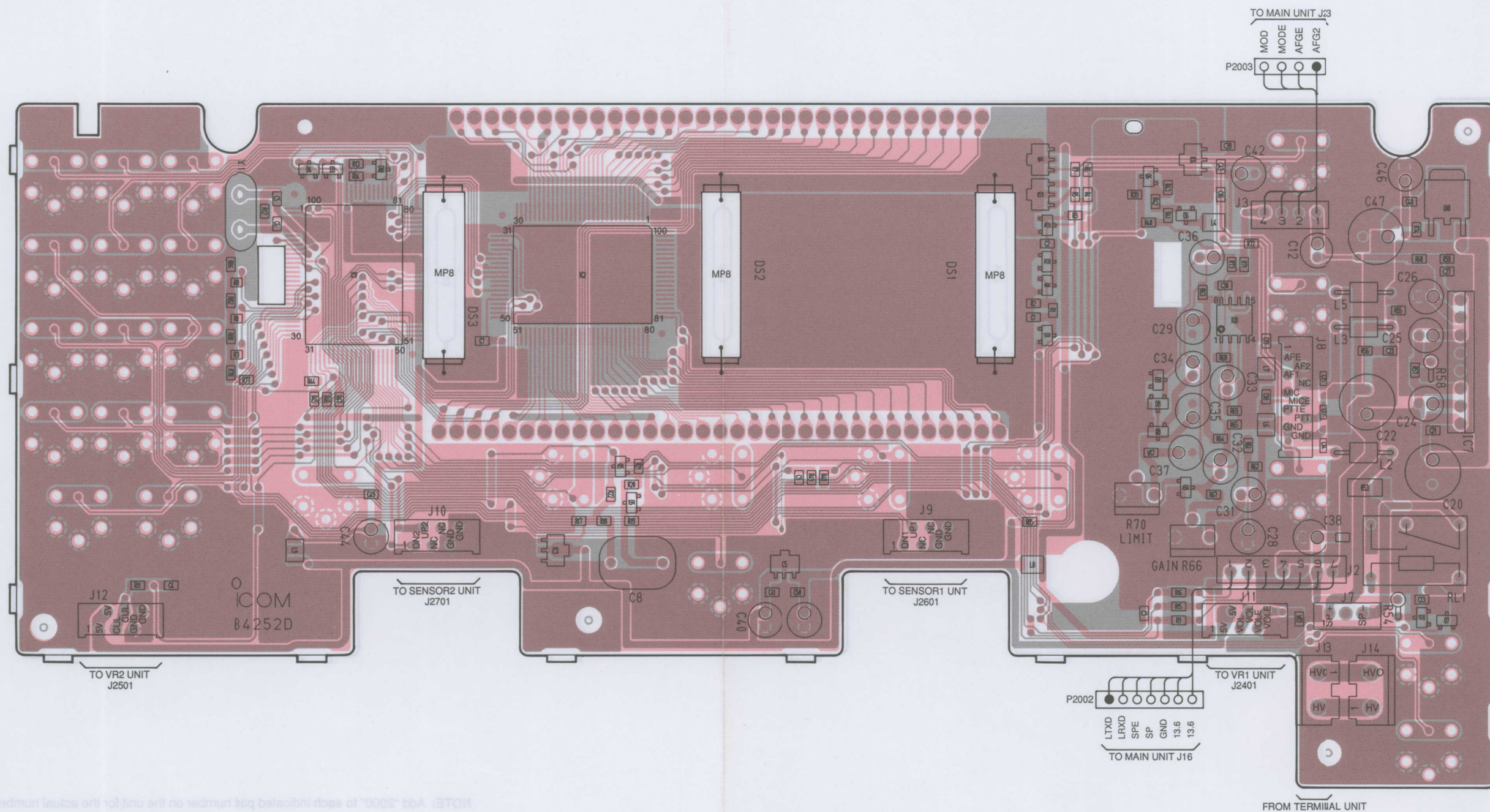
**NOTE:** Add "2500" to each indicated part number on the unit for the actual number.

• LOGIC UNIT

The combination of this page and the next page will result in the same configuration as the actual P.C. Board.

SECTION 8 BOARD LAYOUTS

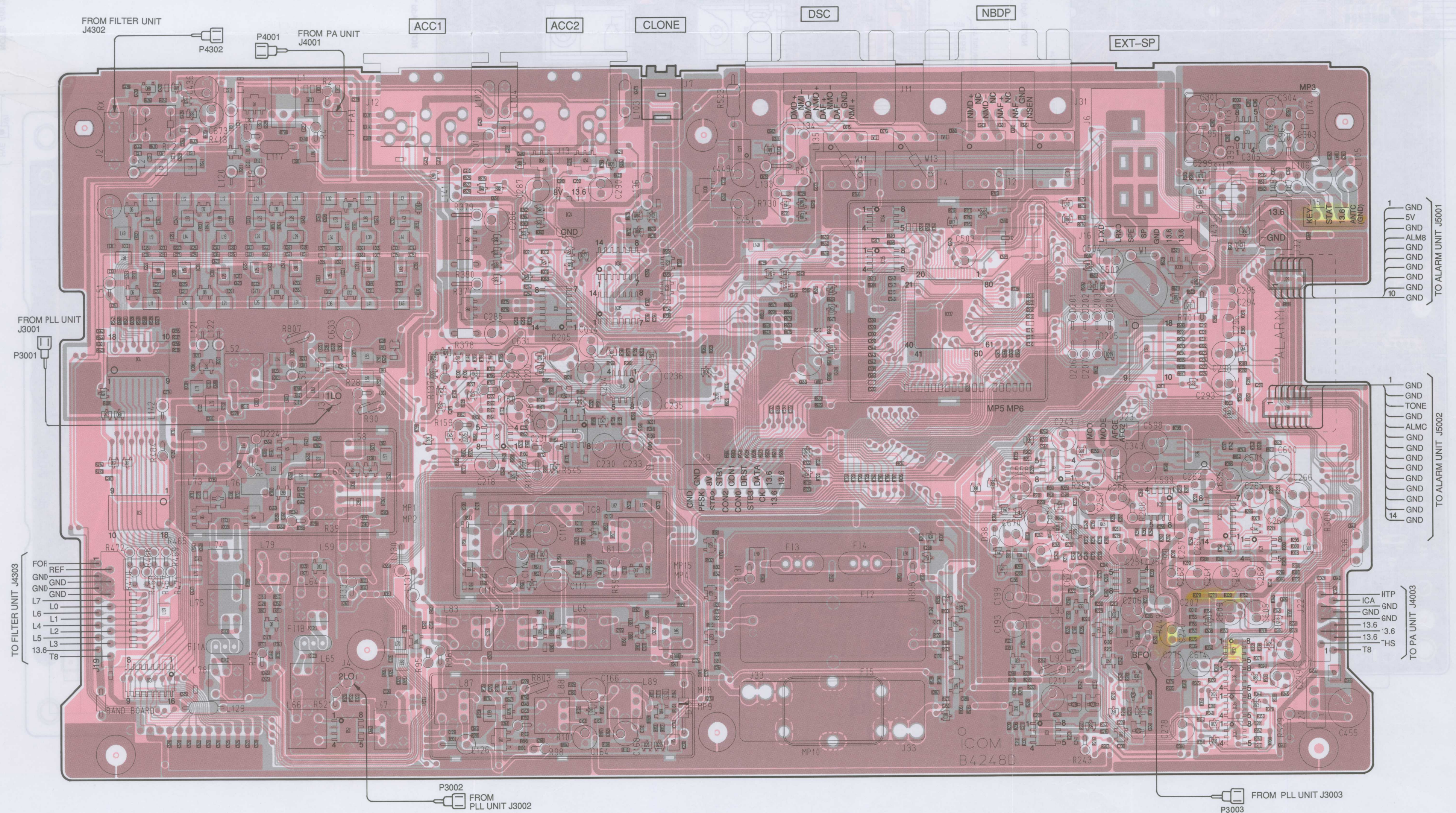
8-1 LOGIC UNIT  
LOGIC UNIT



NOTE: Add "2000" to each indicated part number on the unit for the actual number.

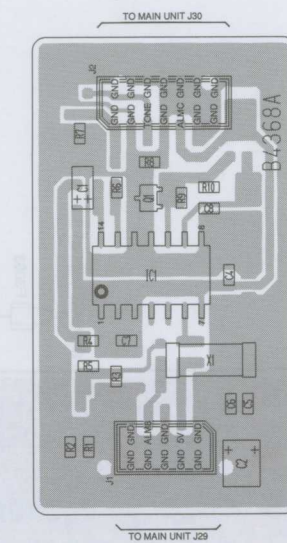
## 8-2 MAIN UNIT

### • MAIN UNIT

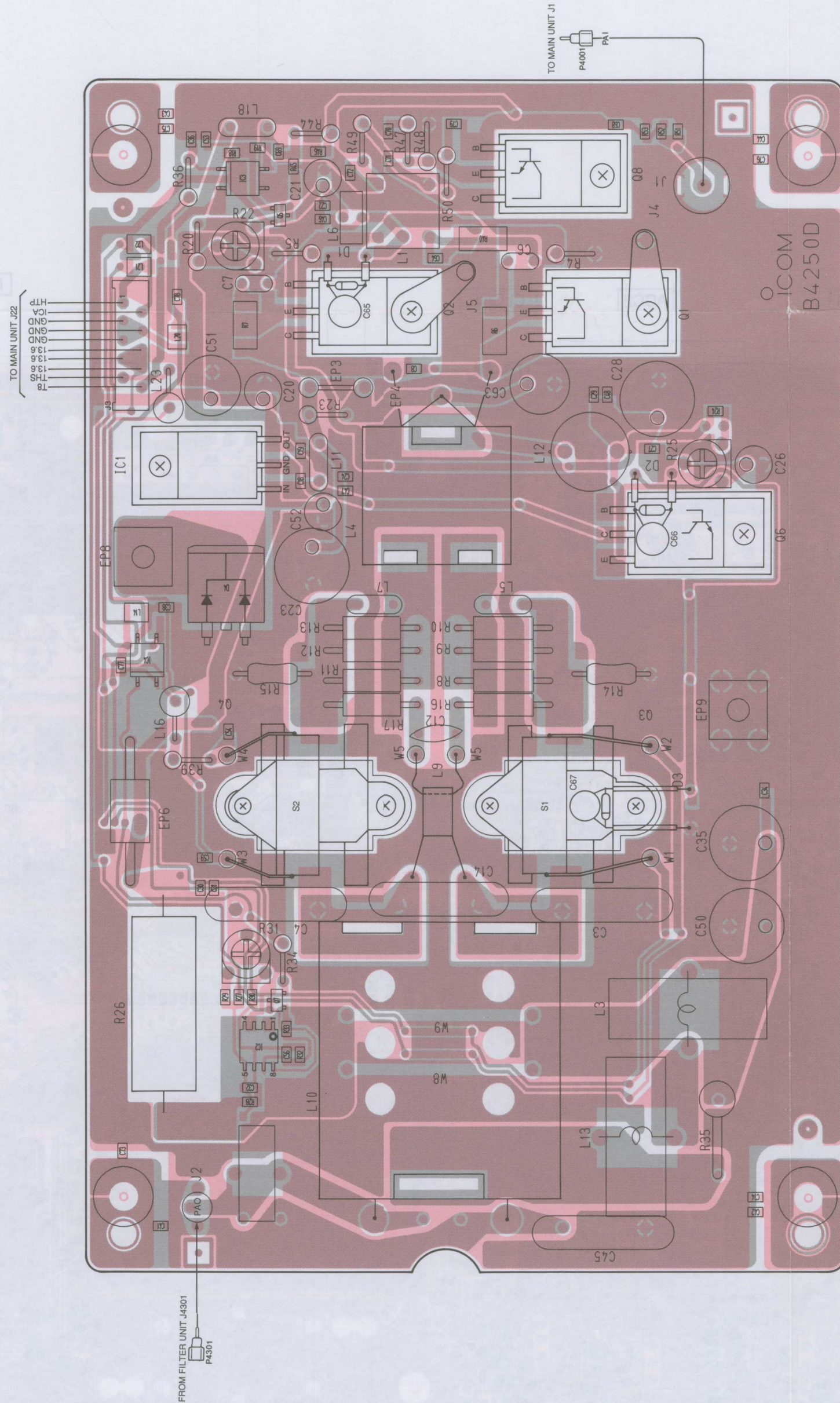


### • ALARM UNIT

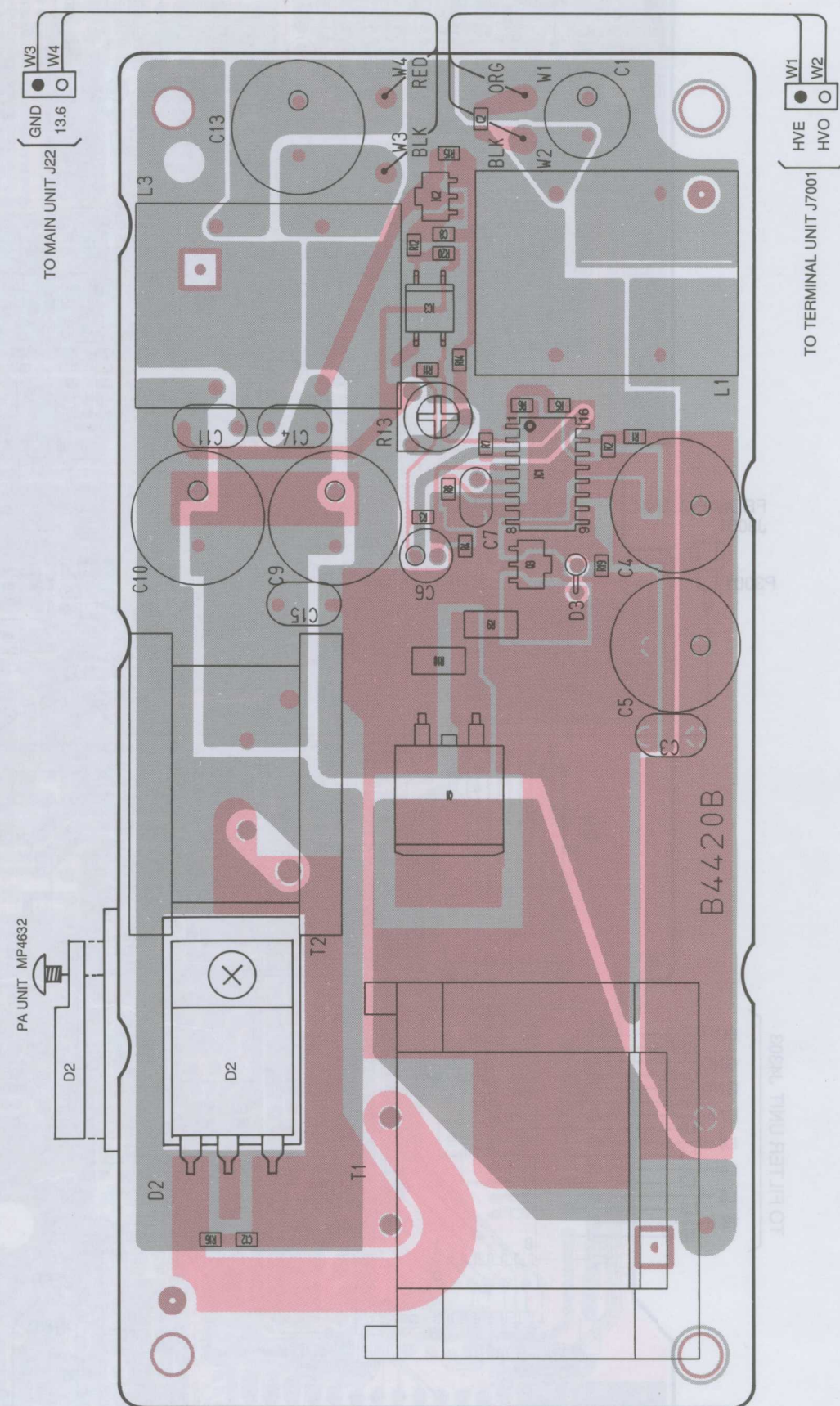
NOTE: Add "5000" to each indicated part number on the ALARM unit for the actual number.



● PA UNIT



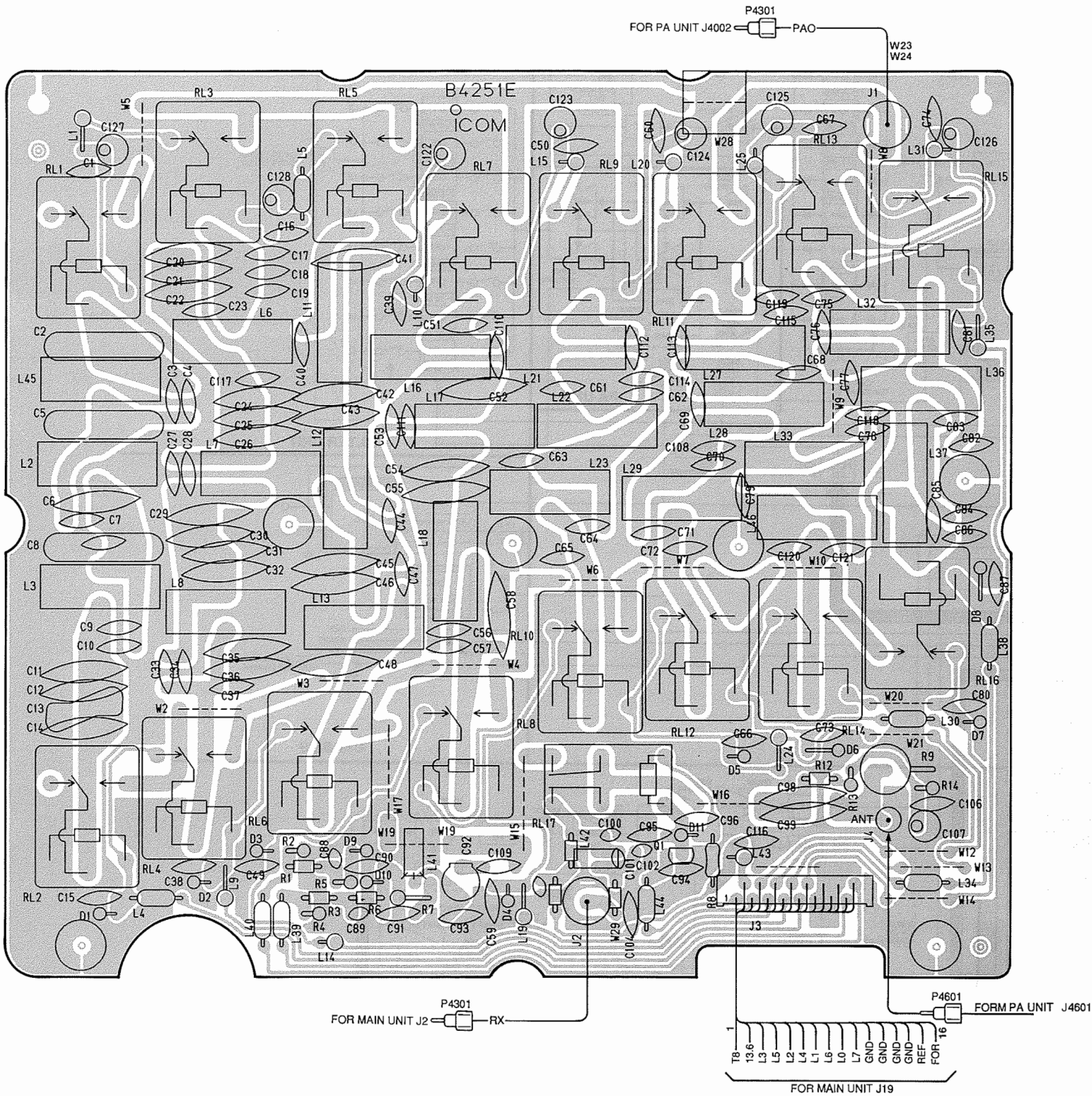
● REG UNIT (Europe version only)



**NOTE:** Add "8000" to each indicated part number on the unit for the actual number.

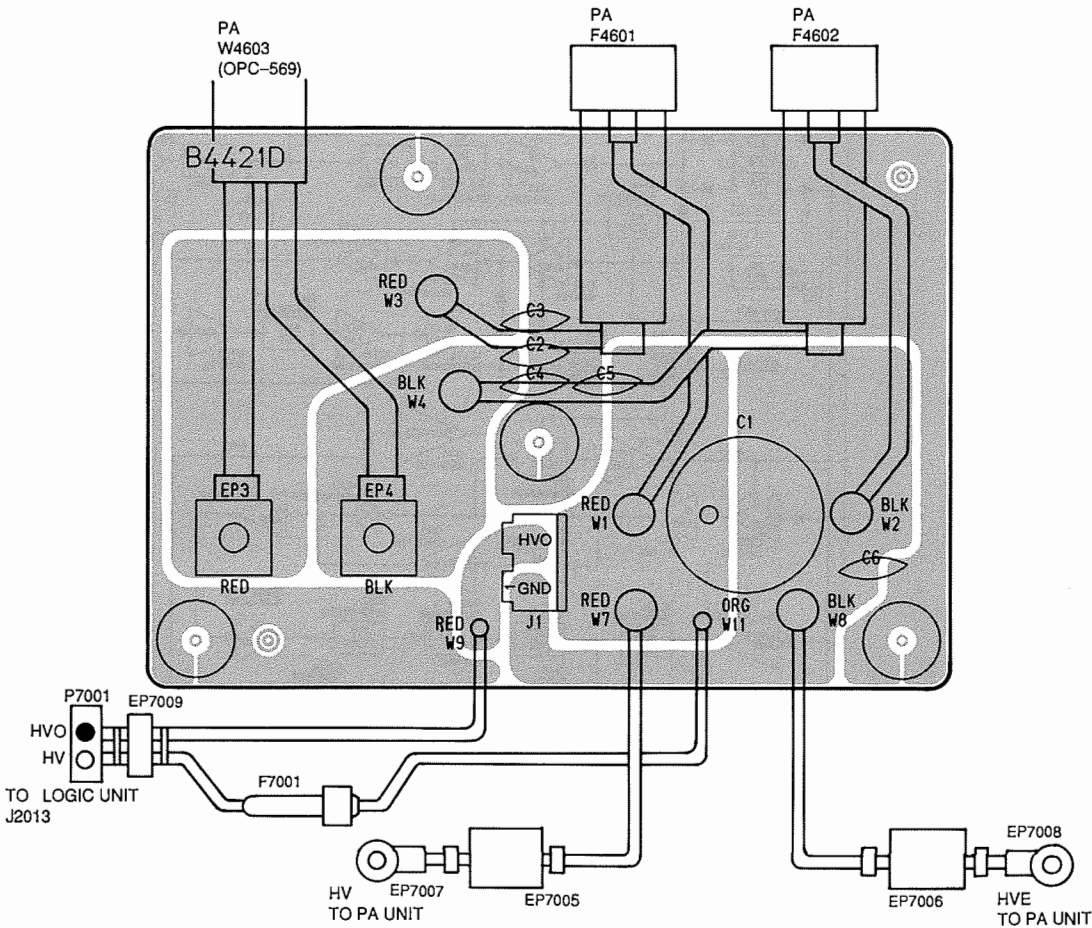
8-4 FILTER AND TERMINAL UNITS

● FILTER UNIT



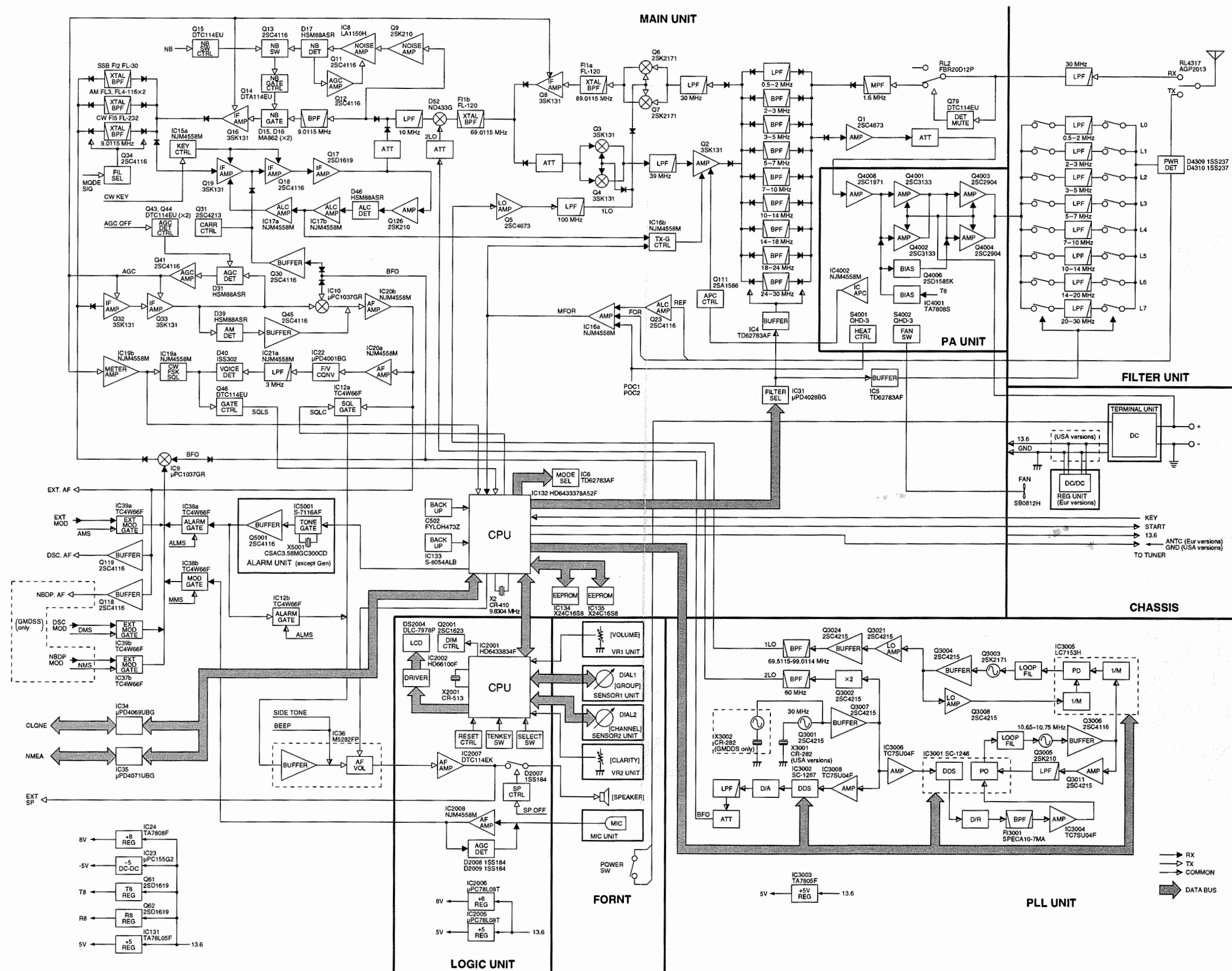
NOTE: Add "4300" to each indicated part number on the unit for the actual number.

● TERMINAL UNIT

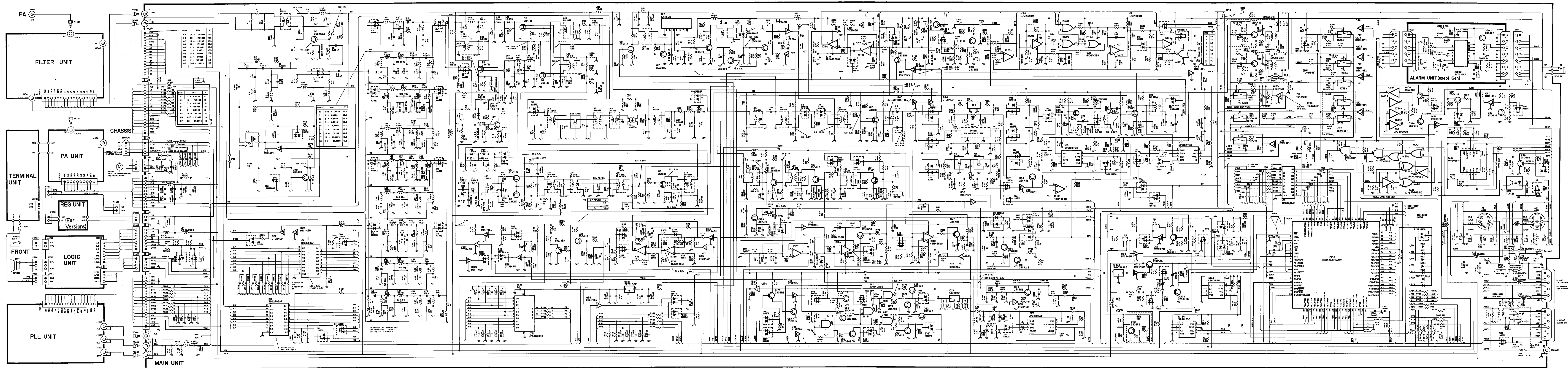


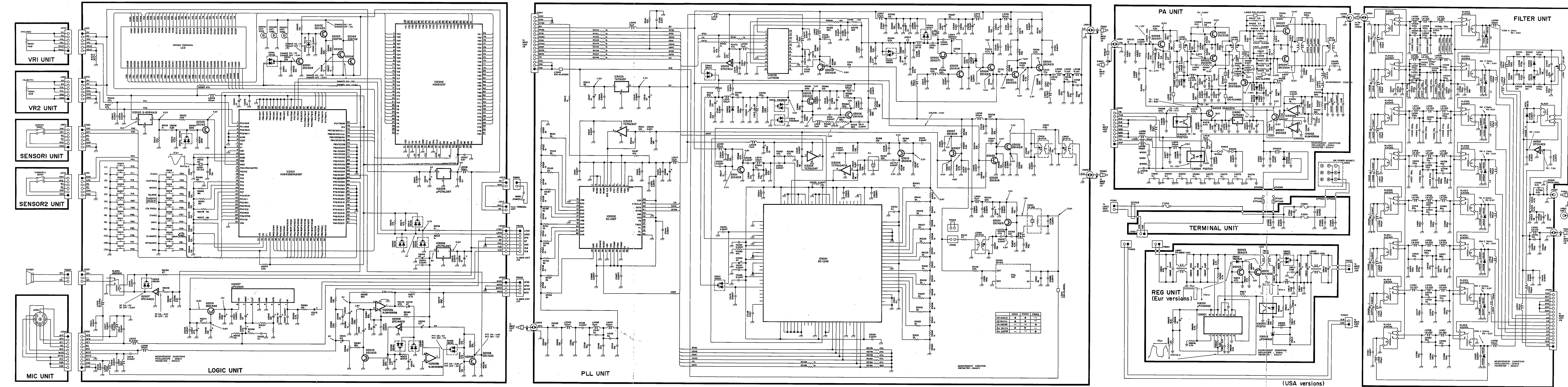
NOTE: Add "7000" to each indicated part number on the unit for the actual number.

## SECTION 9 BLOCK DIAGRAM



## SECTION 10 VOLTAGE DIAGRAM





## Icom Inc.

6-9-16, Kamihigashi, Hirano-ku, Osaka 547, Japan  
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Zac de la Plaine, Rue Brindejonc des Moulinais  
BP 5804, 31505 Toulouse Cedex, France  
Phone : 61. 36. 03. 03  
Fax : 61. 36. 03. 00  
Telex : 521515 ICOM FRA

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