



SERVICE MANUAL

HF/VHF/UHF ALL MODE TRANSCEIVER
IC-706MKII

S-14411XZ-C1
June, 2007

Icom Inc.

INTRODUCTION

This service manual describes the latest service information for the **IC-706MKIIG HF/VHF/UHF ALL MODE TRANSCEIVER** at the time of publication.

MODEL	VERSION	UT-106
IC-706MKIIG	USA	Available as an option
	EUR	
	FRA	
	ESP	
	OTH	
	ITA	
	ITR	
	CHN	Built-in
	USA-1	
	EUR-1	
	FRA-1	
	ESP-1	
	OTH-1	
	ITA-1	
ITR-1		
CHN-1		

CAUTION

NEVER connect the transceiver to an AC outlet or to a DC power supply that uses more than 13.8 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.

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



ORDERING PARTS

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

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

<ORDER EXAMPLE>

1110003491 S.IC TA31136FNG IC-706MKIIG MAIN UNIT 5 pieces
8820001210 Screw 2438 screw IC-706MKIIG Top cover 10 pieces

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

REPAIR NOTES

1. Make sure the problem is internal before disassembling the transceiver.
2. **DO NOT** open the transceiver until the transceiver is disconnected from its power source.
3. **DO NOT** force any of the variable components. Turn them slowly and smoothly.
4. **DO NOT** short any circuits or electronic parts. An insulated tuning tool **MUST** be used for all adjustments.
5. **DO NOT** keep power ON for a long time when the transceiver is defective.
6. **DO NOT** transmit power into a Standard Signal Generator or a Sweep Generator.
7. **ALWAYS** connect a 50 dB to 60 dB attenuator between the transceiver and a Deviation Meter or Spectrum Analyzer when using such test equipment.
8. **READ** the instructions of test equipment thoroughly before connecting a test equipment to the transceiver.

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SECTION 1

SPECIFICATIONS

GENERAL

- Frequency coverage :
 - Receive 0.030 – 200.000 MHz*
 - 430.000 – 470.000 MHz*
 - Transmit 1.800 – 1.999 MHz*
 - 3.500 – 3.999 MHz*
 - 7.000 – 7.300 MHz*
 - 10.100 – 10.150 MHz
 - 14.000 – 14.350 MHz
 - 18.068 – 18.168 MHz
 - 21.000 – 21.450 MHz
 - 24.890 – 24.990 MHz
 - 28.000 – 29.700 MHz
 - 50.000 – 54.000 MHz*
 - 144.000 – 148.000 MHz*
 - 430.000 – 450.000 MHz*
- *Depending on version.
- Mode : USB, LSB, CW, RTTY (FSK), AM, FM, WFM (WFM is for receiver only)
- Number of memory ch. : 107 (99 regular, 6 scan edges, 1 call)
- Antenna connector : SO-239 × 2
(for HF/50 MHz and 144/440 MHz)/50 Ω
- Power supply requirement : 13.8 V DC ±15% (negative ground)
- Frequency stability : Less than ± 7 ppm from 1 min. to 60 min. after power ON. After that, rate of stability less than ±1 ppm/hr. at +25°C (+77°F). Temperature fluctuations 0°C to +50°C (+32°F to +122°F) less than ± 5 ppm.
- Current consumption :
 - Transmit max. power 20 A
 - Receive standby 1.8 A
 - max. audio 2.0 A
- Usable temperature range : -10°C to +60°C (+14°F to +140°F)
- Dimensions : 167(W) × 58(H) × 200(D) mm
(projections not included) 6⁹/₁₆(W) × 2⁹/₃₂(H) × 7⁷/₈(D) inch
- Weight : 2.45 kg (5 lb 6 oz)
- CI-V connector : 2-conductor 3.5 (d) mm (1/8")/8 Ω
- ACC connector : 13-pin

TRANSMITTER

- Output power :
 - 1.8–50 MHz band SSB/CW/RTTY/FM 5–100 W
 - AM 2–40 W
 - 144 MHz band SSB/CW/RTTY/FM 5–50 W
 - AM 2–20 W
 - 440 MHz band SSB/CW/RTTY/FM 2–20 W
 - AM 2–8 W
- Modulation system :
 - SSB Balanced modulation
 - AM Low level modulation
 - FM Variable reactance modulation
- Spurious emissions :
 - Below 47.5 MHz Less than -50 dB (typical)
 - Above 47.5 MHz Less than -60 dB
- Carrier suppression : More than 40 dB
- Unwanted sideband supp. : More than 50 dB
- Microphone connector : 8-pin modular jack (600 Ω)
- KEY connector : 3-conductor 6.35 (d) mm (1/4")
- RTTY connector : 3-conductor 3.5 (d) mm (1/8")

RECEIVER

- Receive system :
 - SSB/CW/AM/WFM Double superheterodyne
 - FM Triple superheterodyne

- Intermediate frequencies :

MODE	1st IF	2nd IF	3rd IF
SSB/AM-N/FM	69.0115 MHz	9.0115 MHz	455 kHz*
AM/FM-N	69.0100 MHz	9.0100 MHz	455 kHz*
CW	69.0106 MHz	9.0106 MHz	—
RTTY	69.0105 MHz	9.0105 MHz	—
WFM	70.7000 MHz	10.7000 MHz	—

*FM or FM-N mode only

- Receive sensitivity : (pre-amp ON)

FREQUENCY	SSB/CW/RTTY	AM	FM
0.5 – 1.8 MHz	—	13 μV	—
1.8 – 28 MHz*	0.16 μV	2 μV	—
28 – 29.999 MHz	0.16 μV	2 μV	0.5 μV
50 MHz band	0.13 μV	1 μV	0.25 μV
144 MHz band	0.11 μV	1 μV	0.18 μV
440 MHz band	0.11 μV	1 μV	0.18 μV

Note: SSB, CW and AM modes are measured at 10 dB S/N; FM mode at 12 dB SINAD.

*Except 4–4.5 MHz, 8–9 MHz.

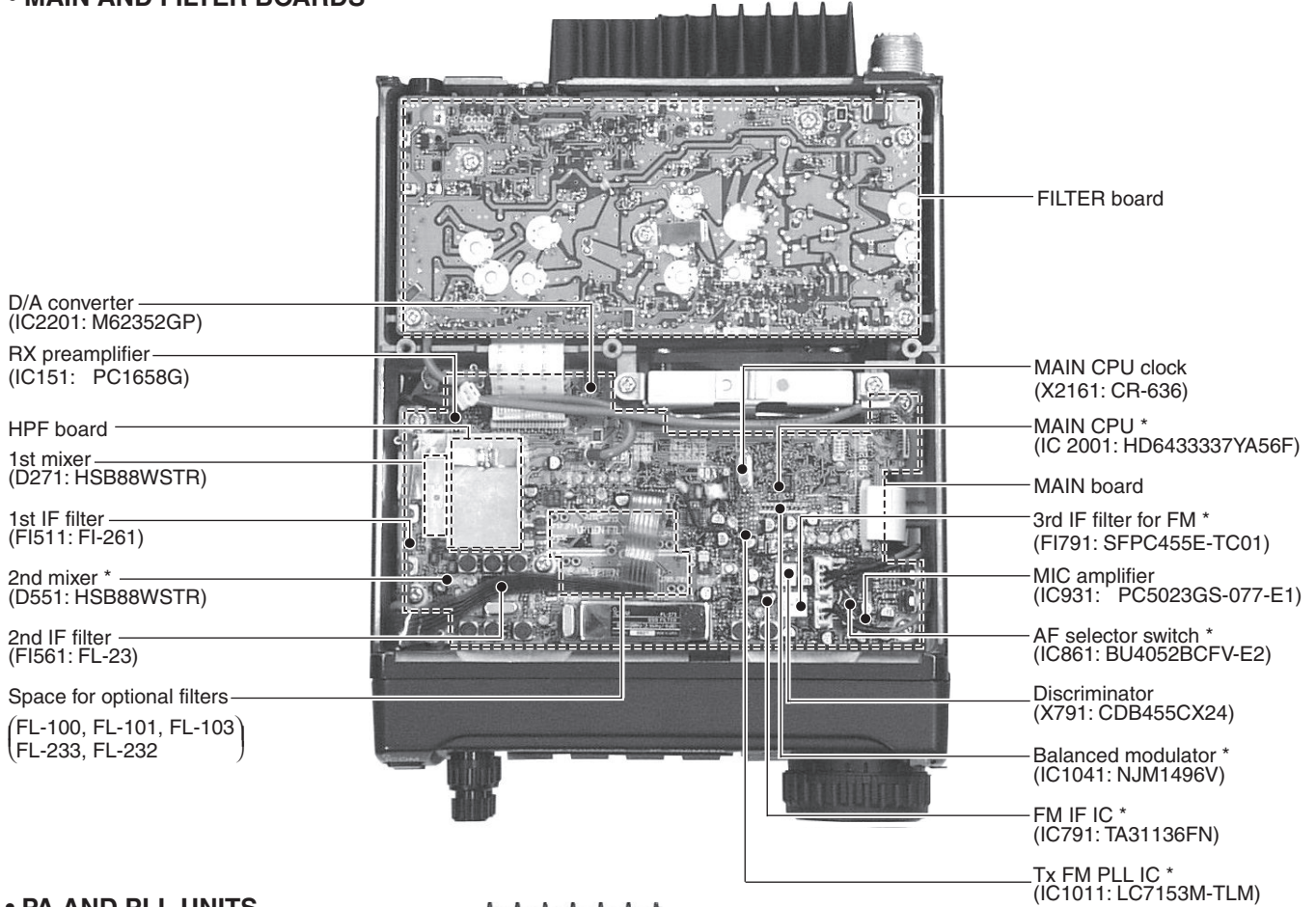
- Squelch Sensitivity : (pre-amp ON)
 - SSB Less than 5.6 μV
 - FM Less than 0.32 μV
- Selectivity* :
 - SSB, CW, RTTY More than 2.4 kHz/-6 dB
 - Less than 4.8 kHz/-60 dB
 - AM/FM-N More than 8.0 kHz/-6 dB
 - Less than 30 kHz/-40 dB
 - FM More than 12 kHz/-6 dB
 - Less than 30 kHz/-60 dB
- *Without an optional filter unit and with mid bandwidth selected.
- Spurious and image rejection ratio:
 - HF band 70dB
 - 50 MHz band 65 dB (except IF through)
 - 144/440 MHz band 65 dB
- Audio output power : More than 2.0 W at 10% distortion
(at 13.8 V DC) with an 8 Ω load
- RIT variable range : ± 9.99 kHz
- PHONES connector : 3-conductor 3.5 (d) mm (1/8")/8 Ω
- EXT SP connector : 2-conductor 3.5 (d) mm (1/8")/8 Ω

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

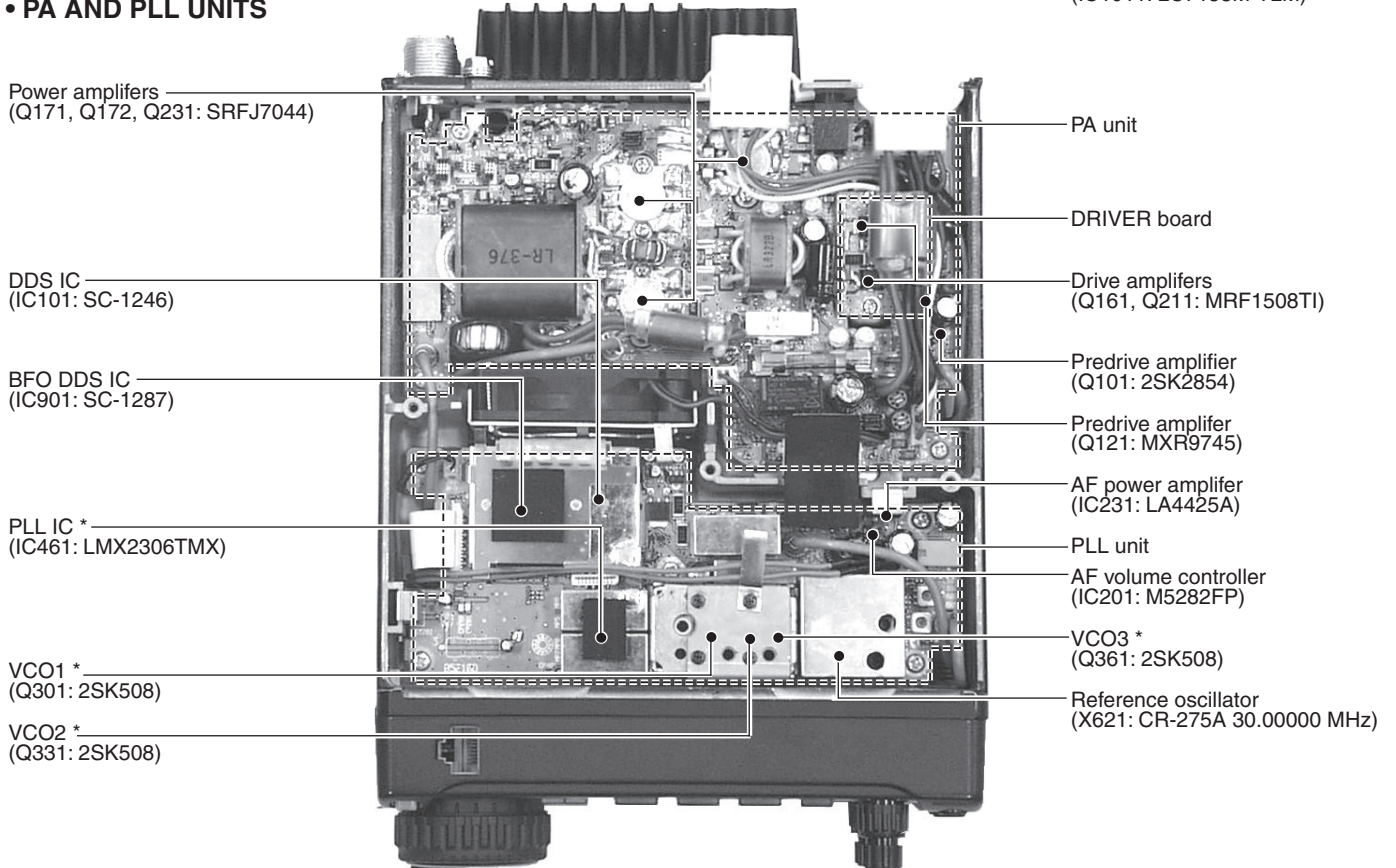
SECTION 2

INSIDE VIEWS

• MAIN AND FILTER BOARDS



• PA AND PLL UNITS



*Located under side of the point

3-1 RECEIVER CIRCUITS

3-1-1 HF/50 MHz RF CIRCUIT

(FILTER, MAIN AND HPF BOARDS)

HF/50 MHz RF filters pass only the desired band signals and suppress any undesired band signals. The HF/50 MHz RF circuit has 7 low-pass filters and 8 high-pass filters for specified band use.

HF/50 MHz RF signals from the [ANT1] connector, pass through one of 7 low-pass filters as below, the transmit/receive switching relay (FILTER board; RL1) and low-pass filter (FILTER board; L1, L2, C1–C5), and are then applied to the MAIN board via J1 (FILTER board).

• Used RF low-pass filter (FILTER board)

Frequency (MHz)	Control signal	Entrance coil	Frequency (MHz)	Control signal	Entrance coil
0.03–2 MHz	L1	RL15	15–22 MHz	L5	RL11
2–4 MHz	L2	RL13	22–30 MHz	L6	RL7
4–8 MHz	L3	RL5	30–60 MHz	L7	RL3
8–15 MHz	L4	RL9			

The signals from the FILTER board are applied to or bypass the 20 dB attenuator (R122, R125, R126). The signals pass through the high-pass filter (L132, L133, C132–C137) to suppress strong signals below 1.6 MHz and are then applied to the HPF board via the “SAF” terminal.

(1) 0.03–2 MHz and 30–40 MHz

The signals pass through a low-pass filter (L101, L102, C101–C105), and then applied to the preamplifier circuit on the MAIN board.

(2) 2–30 MHz

The signals from the low-pass filter (L101, L102, C101–C105) are applied to one of 6 high-pass filters as at right above and are then applied to the preamplifier circuit on the MAIN board.

(3) 40–60 MHz

The signals pass through the low-pass filter (L172, L173, C172–C176) and the high-pass filter (L174, L175, C177–C181) via D171 and are then applied to the preamplifier circuit on the MAIN board.

• Used RF high-pass filter (HPF board)

Frequency (MHz)	Control signal	Entrance coil	Frequency (MHz)	Control signal	Entrance coil
0.03–2 MHz	THH	D111	15–22 MHz	L5H	D151
2–4 MHz	L2H	D121	22–30 MHz	L6H	D161
4–8 MHz	L3H	D131	30–40 MHz	THH	D111
8–15 MHz	L4H	D141	40–60 MHz	B7H	D171

3-1-2 VHF AND UHF RF CIRCUITS (PA UNIT)

The VHF and UHF RF circuits pass and amplify only the desired band signals and suppresses any undesired band signals. The both RF circuits have a preamplifier and band-pass filters respectively.

• VHF RF CIRCUIT

The VHF RF signals from the [ANT2] connector pass through the low-pass filter (L263–L265, C274–C276) and antenna switching circuit (D291–D293). The signals are applied to the bandpass filter (D403, D409, D408), and are then amplified at the preamplifier circuit (Q403). The amplified signals are then applied to the another bandpass filter (D407, D406, D410).

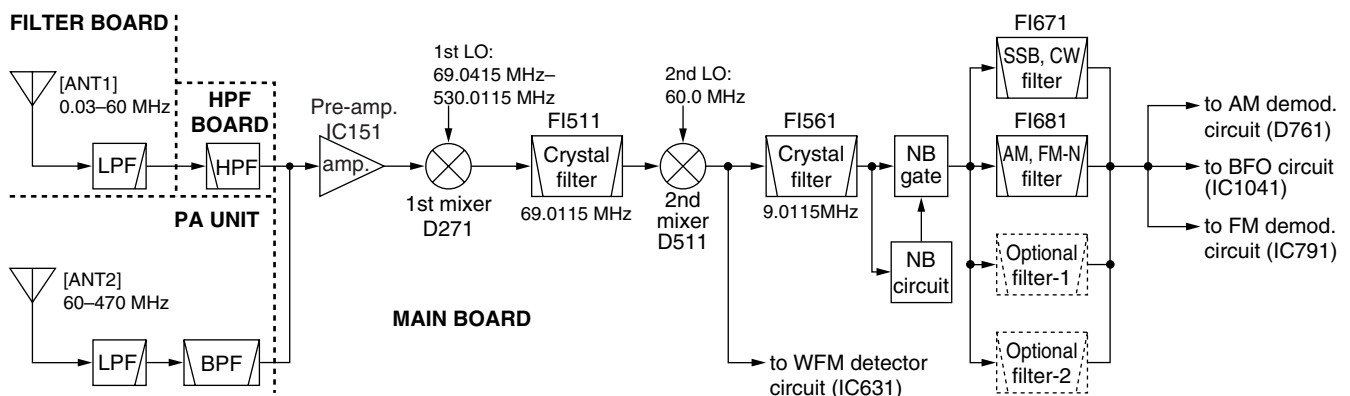
• UHF RF CIRCUIT

The UHF RF signals from the [ANT2] connector pass through the high-pass filter (L316, L317, C326–C327), low-pass filter (L313–L315, C322–C324) and antenna switching circuit (D341, D342, D343). The signals are amplified at the preamplifier circuit (Q453) between the 2 bandpass filters (D454, D453 and D454, D456).

The filtered signals are applied to the MAIN board via J481 (PA unit) and are then applied to the preamplifier circuit.

D403, D408, D409, D406, D407, D410, D454, D453, D454 and D456 are varactor diodes that tune the center frequency of an RF passband for wide bandwidth receiving and good image response rejection. On the VHF band, receiving signals are above 129 MHz, the switching diodes (D404, D405) are turned off by the control signal “2MBL” from PLL unit, then the varactor diodes (D408, D407) are disconnected.

• RECEIVER CONSTRUCTION



3-1-3 PREAMPLIFIER CIRCUIT (MAIN BOARD)

The preamplifier circuit in the IC-706MKIIG has approx. 15dB gain over a wide-band frequency range.

When the preamplifier is turned ON, the signals from the RF circuit are applied to the preamplifier (IC151) via D2182. Amplified or bypassed signals are applied to the 1st mixer circuit (D271).

3-1-4 1ST MIXER CIRCUIT (MAIN BOARD)

The 1st mixer circuit mixes the receive signals with the 1st LO signal to convert the receive signal frequencies to a 69 or 70.7 MHz 1st IF signal.

The signals from the preamplifier circuit, or signals which bypass the preamplifier, are passed through a low-pass filter and then applied to the 1st mixer (D271).

The 1st LO signals (69.0415–539.0115 MHz) enter the MAIN board from the PLL unit via J281. The LO signal is amplified at IC281, filtered by a low-pass filter, and then, applied to the 1st mixer.

• 1st IF frequency

Mode	1st IF
SSB/AM-N/FM	69.0115 MHz
AM/FM-N	69.0100 MHz
CW	69.0106 MHz
RTTY	69.0105 MHz
WFM	70.7000 MHz

3-1-5 1ST IF CIRCUIT (MAIN BOARD)

The 1st IF circuit filters and amplifies the 1st IF signals. The 1st IF signals are applied to a Crystal Filter (FI511) to suppress out-of-band signals.

The 69 MHz 1st IF signals (except WFM) pass through the crystal filter (FI511), however, the 70.7 MHz 1st IF signal (WFM) passes through a bandpass filter (L501–L505, C501–C506). Then the filtered signals are applied to the IF amplifier (IC521).

The AGC voltage is supplied to the transmit/receive switching circuit (D521, D522) and D521/D522 function as PIN attenuators for AGC operation.

The amplified signals are then applied to the 2nd mixer circuit (D551) via the bandpass filter (L542–L546, C542–C545).

3-1-6 2ND MIXER CIRCUIT (MAIN BOARD)

The 2nd mixer circuit mixes the 1st IF signals and 2nd LO signal (60.00 MHz) to convert the 1st IF to a 2nd IF.

The 1st IF signals from the band pass filter (L542–L546, C542–C545) are converted to 9 MHz or 10.7 MHz 2nd IF signals at the 2nd mixer (D551).

The 2nd IF signals are applied to the bandpass filter (FI561) to suppress undesired signals, such as the 2nd LO signal, and are then applied to the noise blanker gate (D561, D562).

• 2nd IF frequency

Mode	2nd IF
SSB/AM-N/FM	9.0115 MHz
AM/FM-N	9.0100 MHz
CW	9.0106 MHz
RTTY	9.0105 MHz
WFM	10.7000 MHz

While in WFM mode, the IF signals pass through the low-pass filter (L601, C601–C603), IF amplifiers (Q601, Q611), ceramic filter (FI611). The signals are then applied to the WFM demodulator circuit (IC631).

3-1-7 NOISE BLANKER CIRCUIT (MAIN BOARD)

The noise blanker circuit detects pulse type noise, and turns OFF the signal line when noise appears.

A portion of the signals from FI561 are amplified at the noise amplifiers (Q621, Q632, amplifier section of IC631), then detected at the noise detector (D632) to convert the noise components to DC voltages.

The converted voltages are then applied to the noise blanker switch (Q634, Q635). At the moment the detected voltage exceeds Q634's threshold level, Q635 outputs a blanking signal to close the noise blanker gate (D561, D562) by applying reverse-biased voltage.

The detected voltage from D632 is also applied to the noise blanker AGC circuit (Q631, Q633) and is then fed back to the noise amplifier (IC631) 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 R637.

The 2nd IF signals from the noise blanker gate are then applied to the 2nd IF circuit.

3-1-8 2ND IF CIRCUIT

The 2nd IF circuit amplifies and filters the 2nd IF signals.

The 2nd IF signals from the noise blanker gate (D561, D562) are amplified at the IF amplifier (IC571) via the Tx/Rx switch (D572) and applied to a 2nd IF filter as shown below.

The filtered or bypassed signals are applied to the buffer amplifier (Q721), IF amplifiers (Q731, Q741) and buffer amplifier (Q751) to obtain a detectable level at the demodulator circuit

• Used 2nd IF filter

Mode	Used filter	Control signal
SSB, CW, RTTY AM nar.	FL-272 (FI671)	2F23
AM, FM nar.	FL-94 (FI681)	2F80
FM	Bypassed	2FTH
SSB nar.	Optional FL-223	OP1 or OP2
CW nar., RTTY nar.	Optional FL-100, FL101, FL-223, FL-232	OP1 or OP2
SSB wide, CW wide, RTTY wide	Optional FL-103	OP1 or OP2

The amplified signals from the buffer amplifier (Q751) are shared between the SSB/CW/RTTY detector (IC841), AM detector (D761) and AGC detector (D771). Output signals from the buffer amplifier (Q721) are applied to the FM IF IC (IC791).

3-1-9 IF SHIFT CIRCUIT (MAIN BOARD)

The IF shift circuit shifts the center frequency of IF signals to electronically shift the center frequency.

The IF shift circuit shifts the 1st LO and BFO within ± 1.2 kHz in SSB/CW/RTTY modes or ± 250 Hz in CW-N/RTTY-N modes. As a result, the 2nd IF (also 1st IF) is shifted from the center frequency of the 2nd IF filter (F1671, F1681 or optional IF filters). This means 2nd IF signals do not pass through the center of the 2nd IF filter. Therefore, the higher or lower frequency components of the IF are cut out. Since the BFO frequency is also shifted the same value as the 1st IF, frequency is corrected at the detector.

In the IC-706MKIIG, the 1st LO frequency is shifted to change the 2nd IF because a fixed 2nd LO frequency (60 MHz) is used. The 1st IF filter (F1671) and crystal filter (F1561) have 15 kHz pass-band widths, and do not affect IF shift operation.

3-1-10 AGC CIRCUIT (MAIN BOARD)

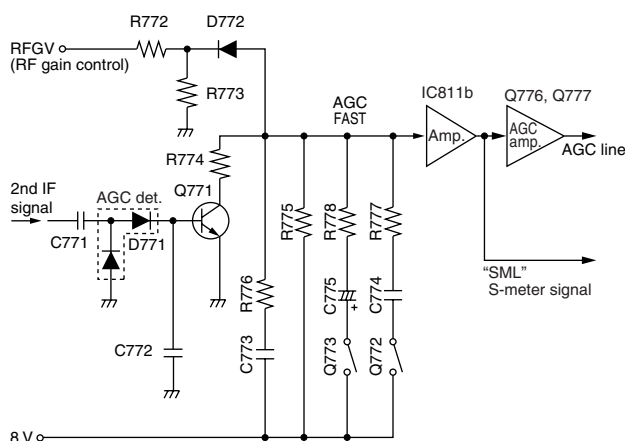
The AGC (Automatic Gain Control) circuit reduces IF amplifier gain to keep the audio output at a constant level. The receiver gain is determined by the voltage on the AGC line (Q776 collector).

The 2nd IF signal from the buffer amplifier (Q751) is detected at the AGC detector (D771) and applied to the AGC amplifier (IC811b). IC811b sets the receiver gain with the [RF/SQL] control via the "RFGV" signal line.

When receiving strong signals, the detected voltage increases and the AGC voltage decreases via the DC amplifier (Q776). The AGC voltage is used for the bias voltage of the transmit/receive switching PIN diodes (D521, D522, D572, D573) to attenuate the received signals.

When AGC slow is selected, C775 and R778 are connected in parallel to obtain appropriate AGC characteristics.

• AGC CIRCUIT



3-1-11 S-METER CIRCUIT (MAIN BOARD)

The S-meter circuit indicates the relative received signal strength while receiving by utilizing the AGC voltage which changes depending on the received signal strength.

The output voltage of the AGC amplifier (IC811b, pin 7) is applied to the main CPU (IC2001, pin 36) as an S-meter signal via the analog switch (IC2101, pins 5, 3) as the "SML" signal. The FM S-meter signal from the FM IF IC (IC791, pin 12) is also applied to the analog switch (IC2101, pin 5) via the meter amplifier (Q774).

The S-meter signal from the main CPU (IC2001) is applied to the sub CPU and is then displayed on the S-meter read-out.

3-1-12 SQUELCH CIRCUIT (MAIN BOARD)

The squelch circuit mutes audio output when the S-meter signal is lower than the [RF/SQL] control setting level.

The S-meter signal is applied to the main CPU (IC2001, pin 36) in SSB/CW/RTTY modes and is compared with the threshold level set by the [RF/SQL] control. The [RF/SQL] setting is picked up at the sub CPU (DISPLAY board; IC1, pin 99). The main CPU compares the S-meter signal and [RF/SQL] setting, and controls the AF selector switch (IC861) to cut out AF signals via IC2122a.

In FM mode, a portion of the AF signals from the FM IF IC (IC791, pin 9) are applied to the active filter section (pin 8) where noise components above 20 kHz are amplified. The signals are rectified at the noise detector section and then output from pin 14. The noise squelch signal from pin 14 is applied to the main CPU (IC2001, pin 31) via the analog switch (IC2101, pins 14, 13) as the "NSQL" signal. The CPU then controls the AF selector switch (IC861).

3-1-13 DEMODULATOR CIRCUITS (MAIN BOARD)

(1) SSB/CW/RTTY modes

The 2nd IF signals from the buffer amplifier (Q751) are mixed with the BFO signal from the PLL unit at the product detector (IC841, pin 6). The detected AF signals from IC841 (pin 1) are applied to the AF selector switch (IC861, pin 12).

(2) AM mode

The 2nd IF signals from the buffer amplifier (Q751) are detected at the AM detector (D761). The detected AF signal is applied to the AF selector switch (IC861, pin 15).

(3) FM/FM NARROW modes

The 2nd IF signals from the buffer amplifier (Q721) are applied to the FM IF IC (IC791, pin 16) where the IF signals are converted into 455 kHz IF signals. The signals pass through F1791 and are applied to the quadrature detector section. X791 is used for quadrature detector. The detected AF signals from pin 9 are then applied to the AF selector switch (IC861, pin 14) via the de-emphasis circuit (IC811a).

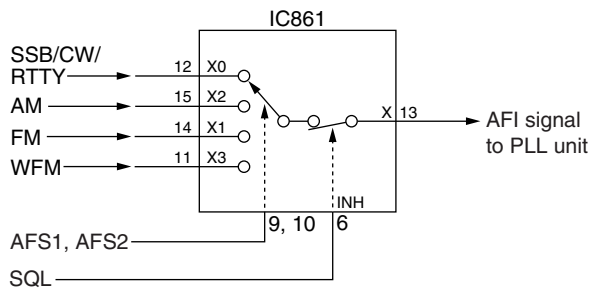
(4) WFM mode

The 2nd IF signals from the IF amplifier (Q611) are applied to the WFM demodulator circuit (IC631, pins 2, 3) where the IF signals are converted into AF signals. The detected AF signals from pin 8 are then applied to the AF selector switch (IC861, pin 11).

3-1-14 AF SELECTOR SWITCH (MAIN BOARD)

The AF signals from one of the detector circuits are applied to the AF selector switch (IC861). IC861 consists of dual 4-channel analog switches which are selected with a mode signal and the squelch control signal.

• AF selector switch



3-1-15 AF AMPLIFIER CIRCUIT (PLL UNIT)

The AF amplifier amplifies the demodulated signal to a suitable driving level for the speaker.

The AF signals from the AF selector switch (MAIN board; IC861) are applied to the PLL unit via the "AFI" signal line. The CW side tone/beep tone and optional synthesized voice are also applied to the PLL unit via the "AFBP" signal line.

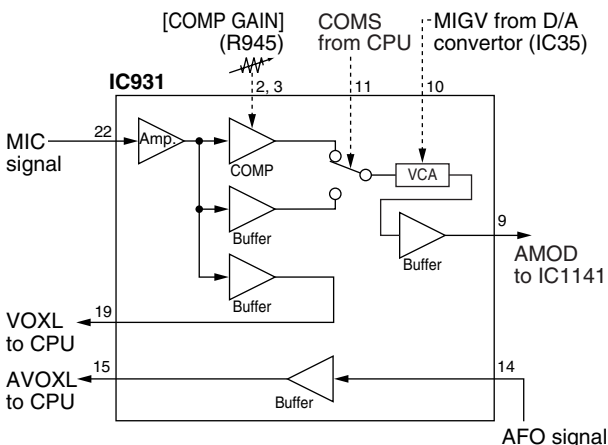
The AF signals from the MAIN board are applied to the VCA (Voltage Controlled Amplifier) circuit (IC201). The AF gain setting from the main CPU is converted to DC voltage at the D/A converter (MAIN board IC2201) and applied to the VCA control terminal (IC201, pin 8) via the "AFGC" signal line. The output AF signal from IC201 (pin 9) is power-amplified at IC231 to drive the speaker.

3-2 TRANSMITTER CIRCUITS

3-2-1 MICROPHONE AMPLIFIER CIRCUIT (MAIN BOARD)

The microphone amplifier circuit amplifies microphone input signals and outputs the amplified signals to the balanced modulator or FM modulation circuit.

• Microphone amplifier



Audio signals from the front or rear panel [MIC] connector enter the microphone amplifier IC (IC931, pin 22) and are then amplified at the microphone amplifier or speech compressor section. Compression level is adjusted with the [COMP GAIN] control (R945).

The amplified or compressed signals are applied to the VCA section of IC931. The microphone gain setting from the D/A converter (IC2201, pin 2) is applied to the VCA control terminal (IC931, pin 10). The resulting signals from pin 9 are then applied to the buffer amplifier (Q961) via the analog switch (IC1141). External modulation input from the [ACC] socket (pin 11) is also applied to Q961.

While in SSB mode, the amplified signals from the buffer amplifier (Q961) are passed through the AF selector switch (IC971) and are then applied to the balanced modulator (IC1041).

While in AM/FM mode, the amplified signals from the buffer amplifier (Q961) are applied to the limiter amplifier (IC981a) and splatter filter (IC981b). The signals are then applied to the AF selector switch (IC971) in AM mode or to the varactor diode (D1012) in FM mode.

3-2-2 VOX CIRCUIT (MAIN BOARD)

The VOX (Voice-Operated-Transmission) circuit sets transmitting conditions according to voice input.

When the VOX function is activated, the microphone signals from IC931 (pin 19) are applied to the VOX comparator section in the main CPU (IC2001, pin 32) via the VOXL line.

A portion of the power amplified AF signals from the AF power amplifier (PLL unit; IC231) are amplified at the buffer amplifier (IC931, pins 14, 15) and applied to the anti-VOX comparator section in the main CPU (IC2001, pin 33) via the AVXL line.

Then the main CPU compares these and controls the transmitter circuit.

3-2-3 BALANCED MODULATOR (MAIN BOARD)

The balanced modulator converts the AF signals from the microphone amplifier to a 9 MHz IF signal with a BFO (Beat Frequency Oscillator) signal.

Microphone signals from the AF selector switch (IC971) are applied to the balanced modulator (IC1041, pin 1). The BFO signal from the PLL unit is applied to IC1041 (pin 10) as a carrier signal.

IC1041 is a double balanced mixer IC and outputs a double side band (DSB) signal with -40 dB of carrier suppression. R1045 adjusts the balanced level of IC1041 for maximum carrier suppression. The resulting signal passes through a 9 MHz IF filter (FI671 in SSB/CW/RTTY modes) to suppress unwanted side-band signals.

In AM mode, R1042 is connected to upset the balance of IC1041 via Q1041 for leaking the BFO signal as a carrier signal. The CW keying/RTTY TX signal is applied to IC1041 pin 1.

3-2-4 FM MODULATION CIRCUIT (MAIN BOARD)

The microphone signals from Q961 are applied to the limiter amplifier (IC981a) and the splatter filter (IC981b). The 1750 Hz European tone signal from the main CPU (IC2001 pin 40) is also applied to IC981a pin 2 for European repeaters. The sub-audible tone signal (67.0–254.1 Hz) from the main CPU (IC2001 pin 37) is also applied to IC981b pin 5 for repeater use.

The resulting signals are applied to the VCO circuit (Q1011, D1012) via R1002 to change the reactance of the varactor diode (D1012) for FM modulation. The modulated signal is amplified at the buffer amplifier (Q1013) and bypasses the 9 MHz IF filter.

3-2-5 TRANSMITTER IF CIRCUIT (MAIN BOARD)

The 9 MHz IF signal from the modulation circuit passes through the 9 MHz IF filter (FI671 in SSB/CW/RTTY modes; FI681 in AM/FM-N modes; through in FM mode). The signal is amplified at IC571, and then passes through the total gain adjustment volume (R579), and the crystal filter (FI561). The signal is then applied to the 2nd mixer (D551).

The signal is mixed with the 2nd LO signal (60 MHz) and converted to a 69 MHz IF signal at the 2nd mixer (D551). The 69 MHz IF signal passes through a bandpass filter, IF amplifier (IC521) and 69 MHz IF filter (FI511), and is then converted to the displayed frequency at the 1st mixer (D271) with the 1st LO signal. The mixers (D271, D551) and IF amplifiers (IC521, IC571) are used commonly for both receiving and transmitting.

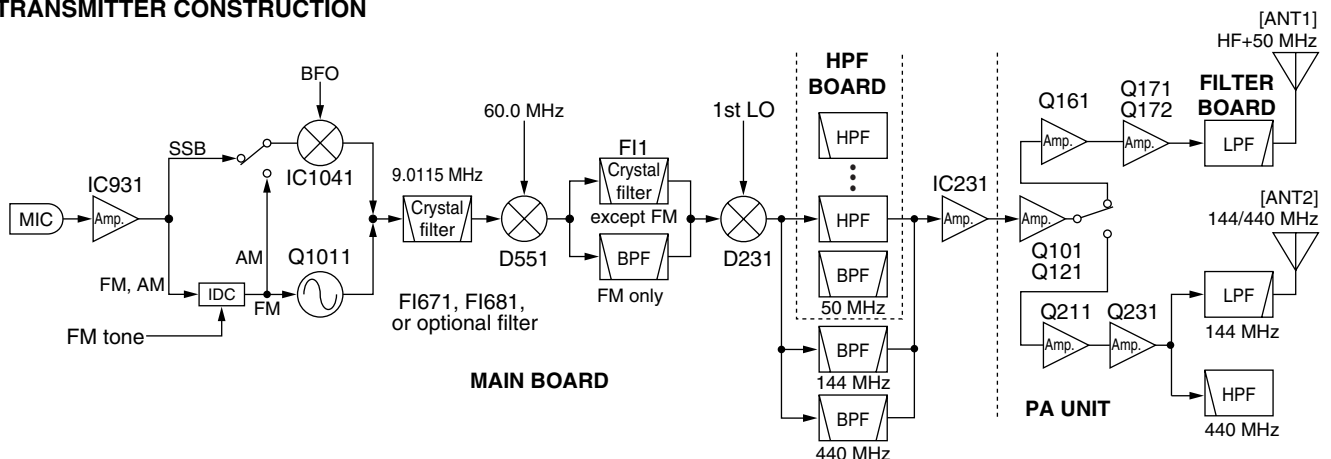
The ALC voltage is supplied to the transmit/receive switching circuit (D521/D522 and D572/D573). D521/D522 and D572/D573 function as PIN attenuators for ALC operation.

3-2-6 RF CIRCUIT (PA UNIT, MAIN AND HPF BOARD)

The RF circuit amplifies the displayed frequency signal to obtain 100 W of RF output power for HF/50 MHz bands and 50 W for the 144 MHz band, 20 W for the 440 MHz band.

The HF/50 MHz RF signals from the 1st mixer (D271) via the low-pass filter enter the HPF board and then pass through one of 8 high-pass filters (Refer to 3-1 for used RF high-pass filter). The 50 MHz RF signals pass through a low-pass filter additionally. The filtered signals return to the MAIN board, are amplified at the YGR amplifier (IC231), and are then applied to the PA unit.

• TRANSMITTER CONSTRUCTION



The 144 MHz RF signals from the 1st mixer (D271) via the low-pass filter (L251–253, C253–259) bypass the filters and pass through the bandpass filter (L182–L184, L195, L196, C181–C186, C195–C197) in the MAIN board. The signals are amplified at the RF amplifier (IC221) and YGR amplifier (IC231) and are then applied to the PA unit.

The 440 MHz RF signals from the 1st mixer (D271) via the low-pass filter (L251–253, C253–259) are amplified at RF amplifier (IC222) and passed through the bandpass filter (FI371–FI373) in the MAIN board. The filtered signal is amplified at the YGR amplifier (IC231) and is applied to the PA unit.

The signals from IC231 enter the PA unit and is amplified at the drive amplifiers (Q101, Q121) in sequence. The amplified signals are applied to the band switch (RL1).

The HF/50 MHz RF signals from the band switch (RL1) are amplified at the drive (DRIVER board; Q161) and power (Q171, Q172) amplifiers to obtain a stable 100 W of RF output power. The power-amplified signals are then applied to the [ANT1] connector via one of the 7 low-pass filters in the FILTER board.

For the 144/440 MHz RF signals from the band switch (RL1), 50 W for 144 MHz band or 20 W for 440 MHz band of RF output power is obtained at the drive (DRIVER board; Q211) and power amplifier (Q231). The power-amplified signals are applied to the [ANT2] connector via the antenna switching circuit and low-pass (144 MHz band) or high pass (440 MHz band) filters.

3-2-7 ALC CIRCUIT (MAIN BOARD)

The ALC (Automatic Level Control) circuit reduces the gain of IF amplifiers in order for the transceiver to output a constant RF power set by the RF power setting even when the supplied voltage shifts, etc.

The HF/50 MHz RF power signal level is detected at the power detector (FILTER board; D9), buffer-amplified at IC1b and applied to the MAIN board as the “HFOR” voltage.

The 144 MHz and 440 MHz RF power signals are detected at the power detectors (PA unit; D262, D263) and (PA unit; D312, D313) respectively. The detected signals are applied to the MAIN board as the “VFOR” or “UFOR” voltages.

The “FOR”, “VFOR” and “UFOR” voltages are combined to the “FORL” voltage and then applied to IC1091b (pin 6). The “POCV” voltage from the D/A converter (IC2201, pin 3), determined by the RF power setting, is applied to IC1091b (pin 5) as the reference voltage.

When the “FORL” voltage exceeds the “POCV” voltage, ALC bias voltage from IC1091a (pin 1) controls the PIN diodes (D521, D522, D572, D573) using Q1092. This adjusts the output power to the level determined by the RF power setting until the “FORL” and “POCV” voltages are equalized.

In AM mode, IC1091a operates as an averaging ALC amplifier with Q1091 and C1091. Q1071 turns ON and the “POCV” voltage is shifted for 40 W AM output power (maximum, 20 W for 144 MHz band, 8 W for 440 MHz band) through R1080.

The ALC bias voltage from IC1091a is also applied to the main CPU (IC2001 pin 34) as the “ALCL” voltage for ALC meter indication.

An external ALC input (minus voltage) from the [ACC] socket (pin 6) is shifted to plus voltage at D1131 and is applied to the buffer amplifier (Q1131). External ALC operation is identical to that of the internal ALC.

3-2-8 APC CIRCUIT (MAIN BOARD)

The APC (Automatic Power Control) circuit protects the power amplifiers on the PA unit from high SWR and excessive current for the HF/50 MHz band.

The reflected wave signal appears and increases on the antenna connector when the antenna is mismatched. The HF/50 MHz reflected signal level is detected at D10 (FILTER board), and is amplified at the APC amplifier (IC1091c) and applied to the ALC circuit as the reference voltage.

For the current APC, the driving current at the power amplifier is detected in the voltages (“ICH” and “ICL”) which appear at both terminals of a 0.012 Ω resistor (R201) on the PA unit. The detected voltages are applied to the differential amplifier (IC1091d, pins 13, 12). When the current of the power amplifier exceeds 22 A, IC1091d controls the ALC line via IC1091a to prevent excessive current flow.

3-2-9 RF, ALC, SWR METER CIRCUITS (MAIN BOARD)

While transmitting, RF, ALC or SWR meter readings are available and can be selected with the [MET] switch.

(1) Power meter

The “FOR”, “VFOR” and “UFOR” voltages are combined to the “FORL” voltage, and it is then applied to the main CPU (IC2001, pin 35) via the analog switch (IC2101, pins 11, 13) for indicating the output power.

(2) ALC meter

The ALC bias voltage from IC1091a pin 1 is applied to the main CPU (IC2001, pin 34) via the “ALCV” signal line for indicating the ALC level.

(3) SWR meter

The “FORL” and “REFL” voltages are applied to the main CPU (IC2001, pins 32 and 36) via the analog switch (IC2101, pins 11, 13 and 4, 3) respectively. The main CPU compares the ratio of “FORV” to “REFV” voltage and indicates the SWR for the [ANT1] connector.

3-3 PLL CIRCUITS

3-3-1 GENERAL

The PLL unit generates a 1st LO frequency (69.0415–530.0115 MHz), a 2nd LO frequency (60 MHz), a BFO frequency (9.01 MHz), an FM 3rd LO frequency (9.4665/9.4650 MHz) and a TX FM PLL reference frequency (9.0115/9.0100 MHz).

The 1st LO PLL adopts a mixer-less dual loop PLL system and has 3 VCO circuits. The BFO uses a DDS and the 2nd LO uses a fixed frequency double that of the crystal oscillator.

3-3-2 1ST LO PLL CIRCUIT

The 1st LO PLL contains a main loop and reference loop forming a dual loop system.

The reference loop generates a 10.6605 to 10.683 MHz frequency using a DDS circuit, and the main loop generates a 69.0415 to 269.50575 MHz frequency using the reference loop frequency.

While operating on 60 MHz and above, the output is doubled at D531 for oscillating a wide frequency range.

(1) REFERENCE LOOP PLL

The oscillated signal at the reference VCO (Q1, D1) is amplified at the amplifiers (Q21, Q51) and is then applied to the DDS IC (IC101, pin 46). The signal is then divided and detected on phase with the DDS generated frequency.

The detected signals output from IC101 (pin 56) is converted into a DC voltage (lock voltage) at the loop filter (R133, R134, C133) and then fed back to the varactor diode (D1) in the VCO circuit.

(2) MAIN LOOP PLL

The oscillated signal at one of the main loop VCOs (Q301, Q331, Q361) is amplified at the buffer amplifiers (Q10) and is then applied to the PLL IC (IC461, pin 6). The signal is then divided and detected on phase with the reference loop output frequency.

The detected signal output from the PLL IC (IC461, pin 2) is converted into a DC voltage (lock voltage) at the active loop filter and then fed back to one of the varactor diodes (D301, D331, D361) in the VCO circuits. While operating on 60 MHz and above, the VCO output is doubled at the doubler circuit (D531) and amplified at the amplifier (IC541).

The oscillated signal passes through a low-pass or band-pass filter and is then applied to the MAIN board as a 1st LO signal.

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

The reference oscillator (X621, Q621) generates a 30.0 MHz frequency used for the 1st LO and BFO circuits as a system clock and for the 2nd LO signal.

The oscillated signal is amplified at the buffer amplifier (Q661), and is doubled at Q681 and the 60 MHz frequency is picked up at the bandpass filter (L681, L682). The 60 MHz signal is applied to the MAIN board as a 2nd LO signal.

3-3-4 BFO CIRCUIT

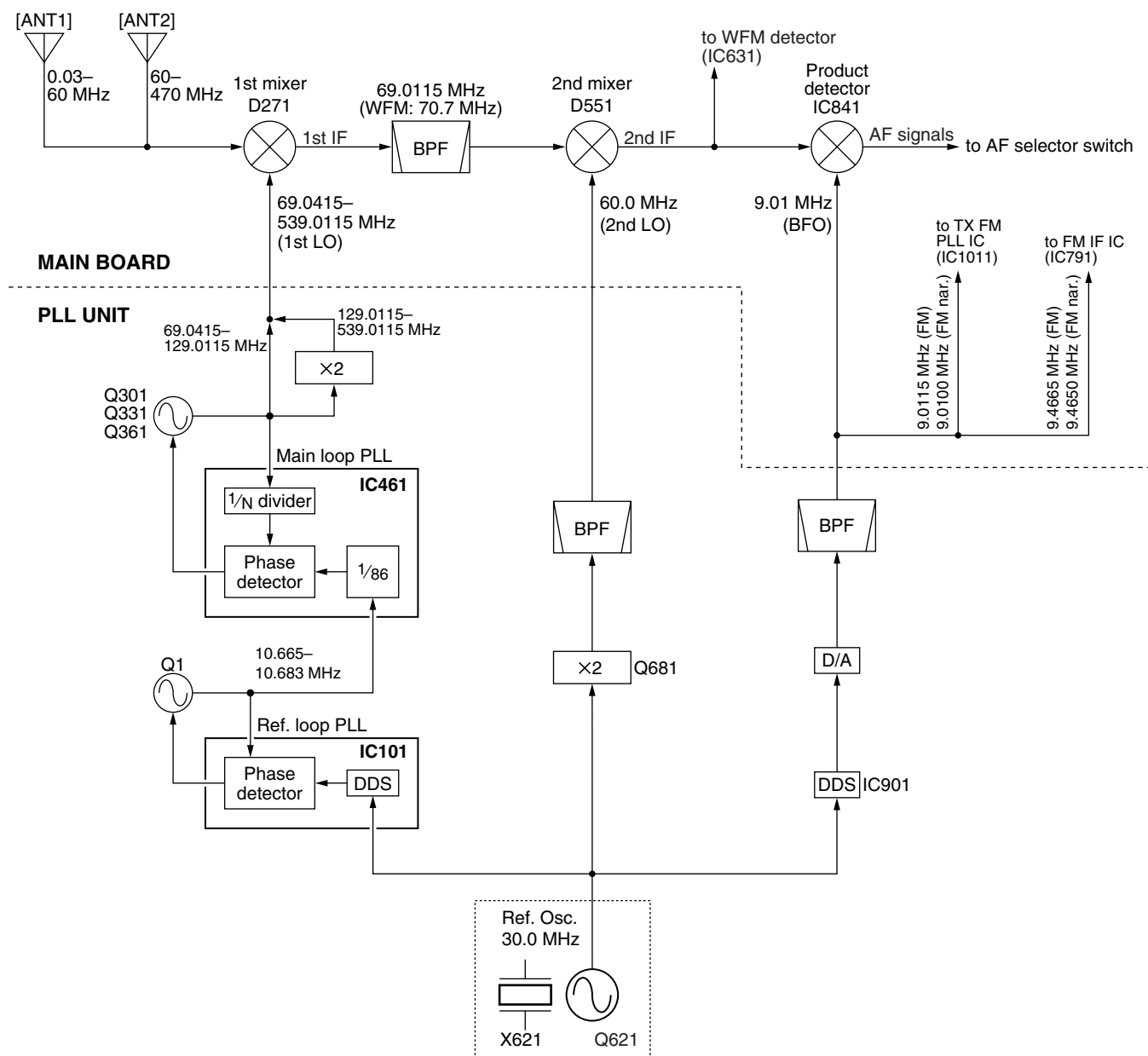
The DDS IC (IC901) generates a 10-bit digital signal. The signal is converted into an analog wave signal at the D/A converter (R951–R970). The analog wave is passed through the high-pass filter and low-pass filter. The 9 MHz BFO signal is then applied to the MAIN board via the “BFO” signal line.

While transmitting in RTTY mode, the RTTY keying signal is applied to IC901 pin 3 to shift the generated frequency and to obtain 2 frequencies for FSK operation.

While receiving in FM or FM narrow mode, the BFO circuit generates a 9.4665 MHz frequency as the 3rd LO signal.

While transmitting in FM or FM narrow mode, the BFO circuit generates a 9.0115 MHz or 9.0100 MHz frequency as the TX FM PLL reference frequency, respectively.

• FREQUENCY CONSTRUCTION



• BFO frequency

Mode	RX BFO/3rd LO frequency [MHz]	TX BFO/FM PLL ref. frequency [MHz]
USB	9.0130	9.0130
LSB	9.0100	9.0100
CW	9.0106 (-CW pitch frequency)	9.0106 (-CW pitch frequency)
CW-R	9.0106 (+CW pitch frequency)	9.0106 (+CW pitch frequency)
RTTY	9.008375 (2125 Hz tone) 9.008885 (1615 Hz tone)	9.0105 (MARK)
AM	No output	9.0100
FM	9.4665 (3rd LO)	9.0115 (PLL ref.)
FM nar.	9.4650 (3rd LO)	9.0100 (PLL ref.)
WFM	No output	No output

IF shift: Center, RTTY: Normal polarity

3-4 LOGIC CIRCUITS

3-4-1 BAND SELECTION DATA (MAIN BOARD AND PLL UNIT)

To select the correct RF low-pass filter, high-pass filter and VCOs on the PLL unit, the CPU outputs the following band selection data from the I/O expander (MAIN board; IC2231, IC2232), the D/A converter (MAIN board; IC2201) or DDS IC (PLL unit; IC101) depending on the display frequency.

The D/A converter output from IC2201 (pin 18) is doubled at IC891d to obtain the band voltage for external equipment.

• Band selection data

Frequency [MHz]	IC2231, IC2232 (MAIN)		IC2201 (MAIN)	IC101 (PLL)	
	HPF BPF	LPF LPF	1/2 band voltage	VCO	LPF BPF
0.03– 1.999999	L1	L1	3.70 V	VCO1	LOF1
2.0– 3.999999	L2	L2	3.19 V		
4.0– 7.999999	L3	L3	2.68 V		
8.0– 10.999999	L4	L4	0 V		
11.0– 14.999999			2.18 V		
15.0– 21.999999	L5	L5	1.69 V		
22.0– 29.999999	L6	L6	1.19 V	VCO2	LOF2
30.0– 39.999999	B7W	L7	0.96 V		
40.0– 59.999999	B7				
60.0–128.999999	B8	L8		VCO1	LOF3
129.0–143.999999				VCO2	LOF4
144.0–148.000000				VCO2	LOF5
148.000001– 199.999999				VCO2	LOF4
400.000000– 470.000000	B9	B9	VCO3	LOF6	

3-4-2 SUB CPU PORT ALLOCATIONS (DISPLAY board; IC1)

Pin number	Port name	Description
1	SFTL	Input port for the [SHIFT] control.
18	PTTS	Outputs a PTT signal. Low : While transmitting.
19, 20	BU1S, BU2S	Outputs display backlight control signal.
80	PHNK	Input port for the [PHONES] jack connection detection. High : When the headphone or external speaker is connected to the [PHONES] jack.
81	RSK	Input port for the [RIT] switch.
96	PTTL	Input port for the [PTT] switch on the microphone.
97	FUDL	Input port for the microphone up/down signal.
98	AFGL	Input port for the [AF] control.
99	SQLL	Input port for the [RF/SQL] control.

3-4-3 I/O EXPANDER PORT ALLOCATIONS (MAIN board; IC2221)

Pin number	Port name	Description																			
4	MODS	Outputs select signal for the Tx AF selector switch (IC1141). High : When AM and SSB modes are selected.																			
5	AMS	Outputs AM mode select signal. High : When AM mode is selected.																			
6	FMS	Outputs FM and FM-N modes select signal. High : When FM and FM-N modes are selected.																			
7	WFMS	Outputs WFM mode select signal. High : When WFM mode is selected.																			
11, 12	AFS1, AFS2	Output select signals for the Rx AF selector switch (IC861). <table border="1" style="margin-left: 20px;"> <thead> <tr> <th rowspan="2">PORT</th> <th colspan="4">MODE</th> </tr> <tr> <th>WFM</th> <th>FM</th> <th>AM</th> <th>SSB/CW/RTTY</th> </tr> </thead> <tbody> <tr> <td>AFS1</td> <td>High</td> <td>High</td> <td>Low</td> <td>Low</td> </tr> <tr> <td>AFS2</td> <td>High</td> <td>High</td> <td>Low</td> <td>Low</td> </tr> </tbody> </table>	PORT	MODE				WFM	FM	AM	SSB/CW/RTTY	AFS1	High	High	Low	Low	AFS2	High	High	Low	Low
PORT	MODE																				
	WFM	FM	AM	SSB/CW/RTTY																	
AFS1	High	High	Low	Low																	
AFS2	High	High	Low	Low																	
13	UNFM	Outputs non-FM mode select signal. High : When SSB/CW/RTTY/AM modes are selected.																			
14	MINH	Outputs an audio mute signal for the analog switch (IC971). High : While transmitting in CW/RTTY modes.																			

**3-4-4 MAIN CPU PORT ALLOCATIONS
(MAIN unit; IC2001)**

Pin number	Port name	Description
13	DASK	Input port for the external paddle (DASH). Low : During key down
14	DOTK	Input port for the external paddle (DOT) or straight key. Low : During key down
15	UNLK	Input port for the PLL unlock signal from the DDS IC (PLL unit; IC101) and PLL IC (PLL unit; IC461). Low : while PLL unlock
16	TKEY	Input port for transmit control signal from the optional AT-180/AH-4 antenna tuners.
17	TCON	Input port for the optional antenna tuner connection detection. High : When the optional antenna tuner is connected.
18	SQSS	Outputs a squelch control signal for the external unit.
19	PWK	Input port for the [POWER] switch. Low : When the [POWER] switch is pushed.
20	POWS	Outputs the switching relay (PA unit; RL591) control signal. High : While power is ON.
21	ATST	Outputs start signal for the optional AT-180 antenna tuner.
22	BEEP	Output port : Beep audio signals while receiving. : CW side tone signals while transmitting.
23	AHST	Outputs start signal for the optional AH-4
24	AFMS	Outputs squelch mute control signal, applied to the AF mute switch (MAIN board; Q772). Low : While squelch is closed.
30	CTCV	Input port for the CTCSS decode signal from the low-pass filter (IC811C).
31	SNDL	Input port from the [RTTY] or [MIC] connector. High : While transmitting.
32	VOXL	Input port for the VOX voltage.
33	AVXL	Input port for the anti-VOX voltage.
34	ALCV	ALC level input port for the ALC meter indication.
37	TONE	Outputs subaudible tone signals.
39	SPBK	Input port for the optional UT-102 (Voice synthesizer unit) activation signal. High : During speech synthesis.

(MAIN unit; IC2001)–Continued

Pin number	Port name	Description
40	ETON	Outputs 1750 Hz European tone signal.
41	MSST	Outputs a strobe signal for the optional UT-102 (Voice synthesizer unit).
42	MDT	Outputs serial data for the I/O expanders, optional AT-180/UT-102.
43	MCK	Outputs a clock signal for the I/O expanders, optional AT-180/ UT-102.
44	BSTB	Outputs a strobe signal for the I/O expander ICs (IC2231, IC2232).
45	DSST	Outputs a strobe signal for the I/O expander ICs (IC2221, IC2222).
46	ASTB	Outputs a strobe signal for the D/A converter IC (IC2201).
48	PBST	Outputs a strobe signal for the BFO DDS IC (PLL unit; IC901).
49–51	CON2–CON0	Output mode control signals for the 1st LO DDS IC (PLL unit; IC101).
52	PDST	Outputs a strobe signal for the 1st LO DDS IC (PLL unit; IC101).
53	PMST	Outputs a strobe signal for the 1st LO PLL IC (PLL unit; IC461).
54	PDT	Outputs serial data for the DDS ICs (PLL unit; IC101, IC901) and PLL IC (PLL unit; IC461).
55	PCK	Outputs a clock signal for the DDS ICs (PLL unit; IC101, IC901) and PLL IC (PLL unit; IC461).
61	AFGS	Outputs AGC rate select signal Low : When AGC fast is selected.
62	NBS	Outputs the NB switch (Q635) control signal. High : When the [NB] is turned ON, except FM/WFM modes.
63	ATTS	Outputs the attenuator circuit control signal. High : When the [ATT] is turned ON.
71	FMST	Outputs a strobe signal for the TX FM PLL IC (IC1011).
74	SNDS	Input port for transmit/receive switching signals for the [ACC] connector. Low : While transmitting.
75	KDS	Outputs a CW keying signal or RTTY TX signal.
78	LTXD	Output port for CI-V bus line.
79	LRXD	Input port for CI-V bus line.

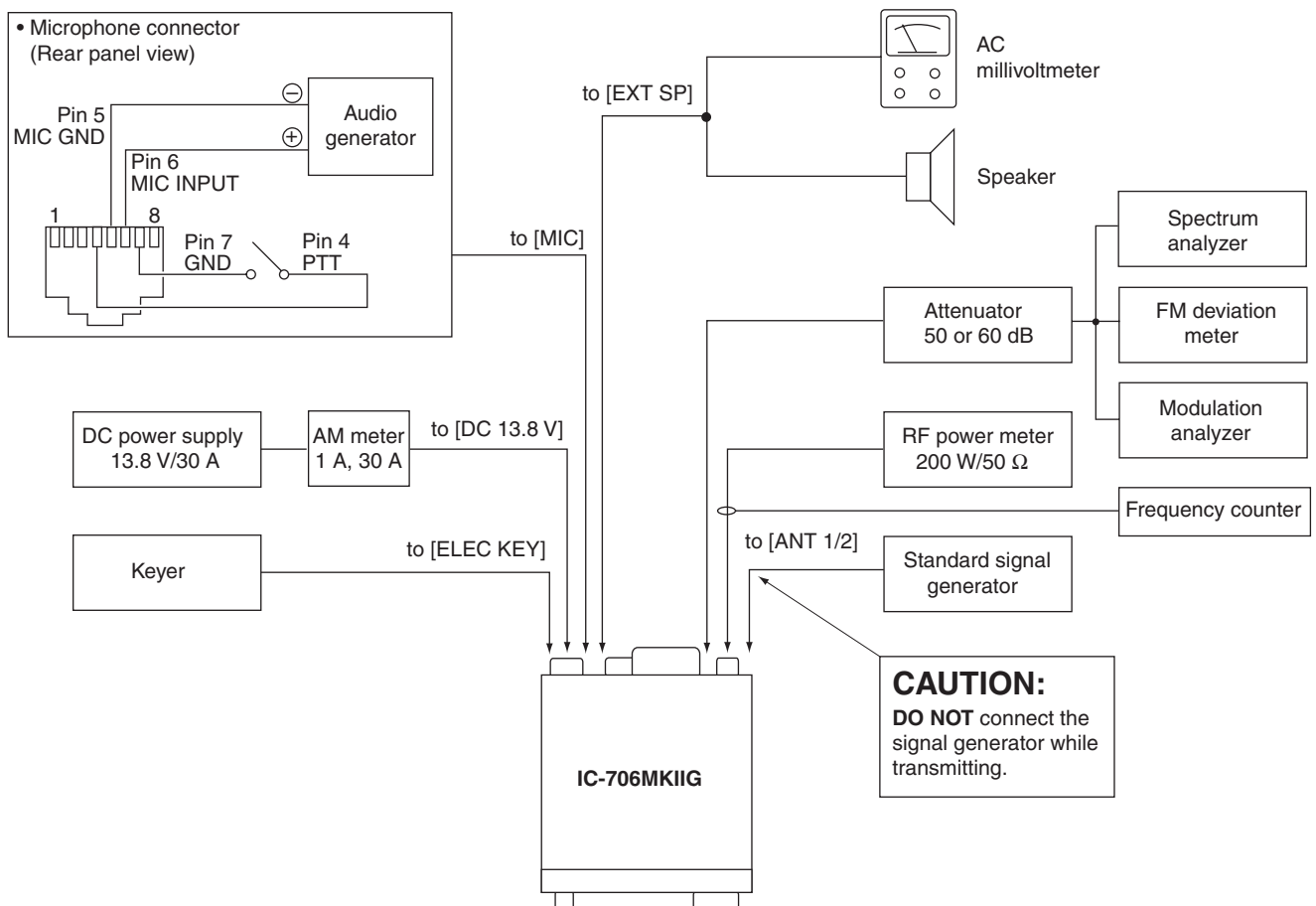
SECTION 4 ADJUSTMENT PROCEDURE

4-1 PREPARATION BEFORE SARVICING

• REQUIRED TEST EQUIPMENT

EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RENG
DC power supply	Output voltage : 13.8 V DC Current capacity : 30 A or more	Distortion meter	Frequency range : 1 kHz \pm 10 % Measuring range : 1–100 %
RF power meter (terminated type)	Measuring range : 10–200 W Frequency range : 1.8–500 MHz Impedance : 50 Ω SWR : Less than 1.2 : 1	Oscilloscope	Frequency range : DC–100 MHz Measuring range : 0.01–10 V
Frequency counter	Frequency range : 0.1–500 MHz Frequency accuracy : \pm 1 ppm or better Sensitivity : 100 mV or better	Digital multimeter	Input impedance : 10 M Ω /DC or better
RF voltmeter	Frequency range : 0.1–500 MHz Measuring range : 0.01–10 V	AC millivoltmeter	Measuring range : 10 mV–10 V
Standard signal generator (SSG)	Frequency range : 0.1–30 MHz Output level : 0.1 μ V–32 mV (–127 to –17 dBm)	DC voltmeter	Input impedance : 50 k Ω /V DC or better
FM deviation meter	Frequency range : 0–500 MHz Measuring range : 0 to \pm 5 kHz	DC ammeter	Measurement capability: 1 A/50 A
Modulation analyzer	Frequency range : At least 500 MHz Measuring range : 0–100 %	Audio generator	Frequency range : 300–3000 Hz Measuring range : 1–500 mV
		Spectrum analyzer	Frequency range : At least 1000 MHz Spectrum bandwidth : 100 kHz or more
		Attenuator	Power attenuation : 50 or 60 dB Capacity : 150 W or more
		External speaker	Input impedance : 8 Ω Capacity : 5 W or more

• CONNECTIONS



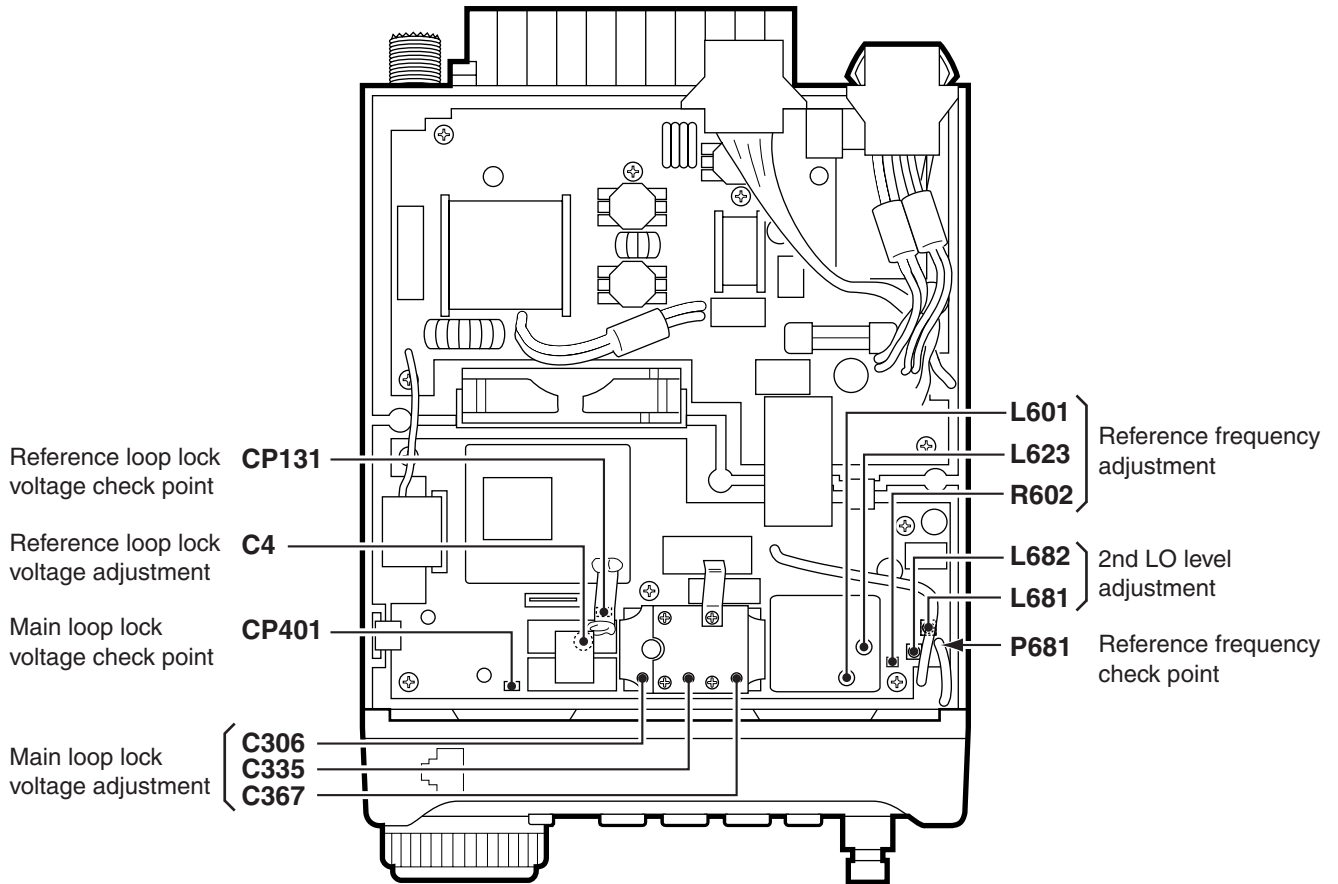
4-2 PLL ADJUSTMENTS

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT		
		UNIT	LOCATION		UNIT	ADJUST	
REFERENCE FREQUENCY	1	<ul style="list-style-type: none"> • Display frequency: Any • L623 (PLL unit) : Center • Receiving 	PLL	Connect an RF voltmeter to check point P681.	Maximum level (0 dB or more)	PLL	L681, L682
	2			Connect a frequency counter to check point P681.			60.000000 MHz
REFERENCE LOOP LOCK VOLTAGE	1	<ul style="list-style-type: none"> • Display frequency: 0.0300 MHz • Mode : USB • Receiving 	PLL	Connect a digital multimeter or oscilloscope to check point CP131.	2.0 V	PLL	C4
MAIN LOOP LOCK VOLTAGE	1	<ul style="list-style-type: none"> • Display frequency: 128.99999 MHz • Mode : USB • Receiving 	PLL	Connect a digital multimeter or oscilloscope to check point CP401.	4.0 V	PLL	C306
	2	<ul style="list-style-type: none"> • Display frequency: 199.99999 MHz • Mode : USB • Receiving 			4.0 V		C335
	3	<ul style="list-style-type: none"> • Display frequency: 470.00000 MHz • Mode : USB • Receiving 			4.0 V		C367

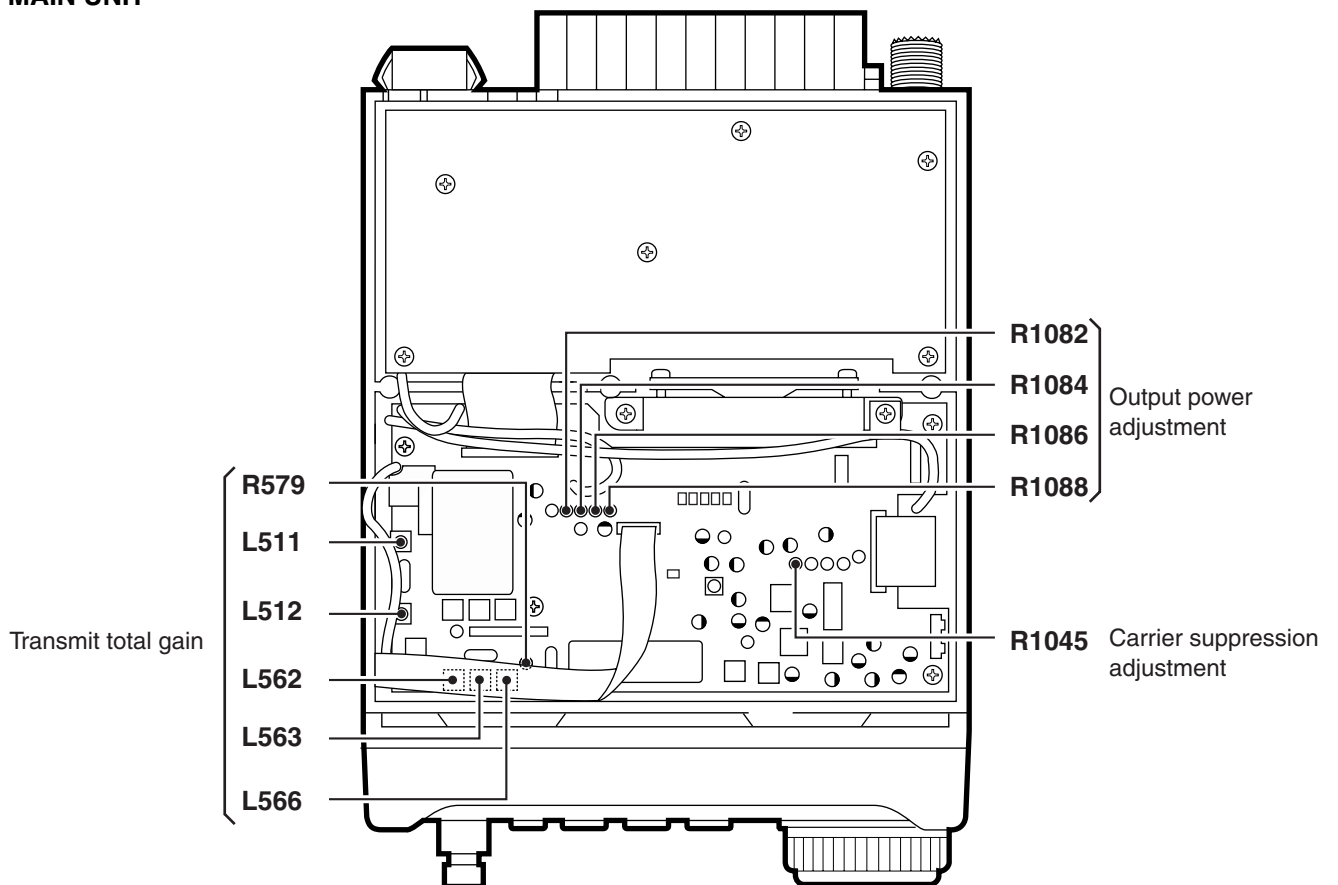
4-3 TRANSMITTER ADJUSTMENTS

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT			
		UNIT	LOCATION		UNIT	ADJUST		
TRANSMIT TOTAL GAIN	1	<ul style="list-style-type: none"> • Display frequency: 14.10000 MHz • Mode : USB • [Q1 RF POWER] : H • Connect an audio generator to [MIC] connector and set as: 1.5 kHz/3 mV • Transmitting 	Rear Panel	Connect an RF power meter to [ANT1] connector.	Maximum RF power	MAIN	L511, L512, L562, L563, L566	
	2						• Transmitting	50 W
OUTPUT POWER	1	<ul style="list-style-type: none"> • Display frequency: 14.10000 MHz • Mode : USB • [Q2 MIC GAIN] : 5 • Connect an audio generator to [MIC] connector and set as: 1.5 kHz/30 mV • Transmitting 	Rear Panel	Connect an RF power meter to [ANT1] connector.	100 W	MAIN	R1082	
	2	<ul style="list-style-type: none"> • Display frequency: 52.00000 MHz • Transmitting 			100 W		R1084	
	3	<ul style="list-style-type: none"> • Display frequency: 145.00000 MHz • Transmitting 			Connect an RF power meter to [ANT2] connector.		50 W	R1086
	4	<ul style="list-style-type: none"> • Display frequency: 435.00000 MHz • Transmitting 			20 W		R1088	
CARRIER SUPPRESSION	1	<ul style="list-style-type: none"> • Display frequency: 14.10000 MHz • Mode : USB and LSB • Apply no signal to [MIC] connector. • Transmitting 	Rear Panel	Connect a spectrum analyzer to [ANT1] connector via an attenuator.	Minimum carrier level	MAIN	R1045	

• PLL AND PA UNITS



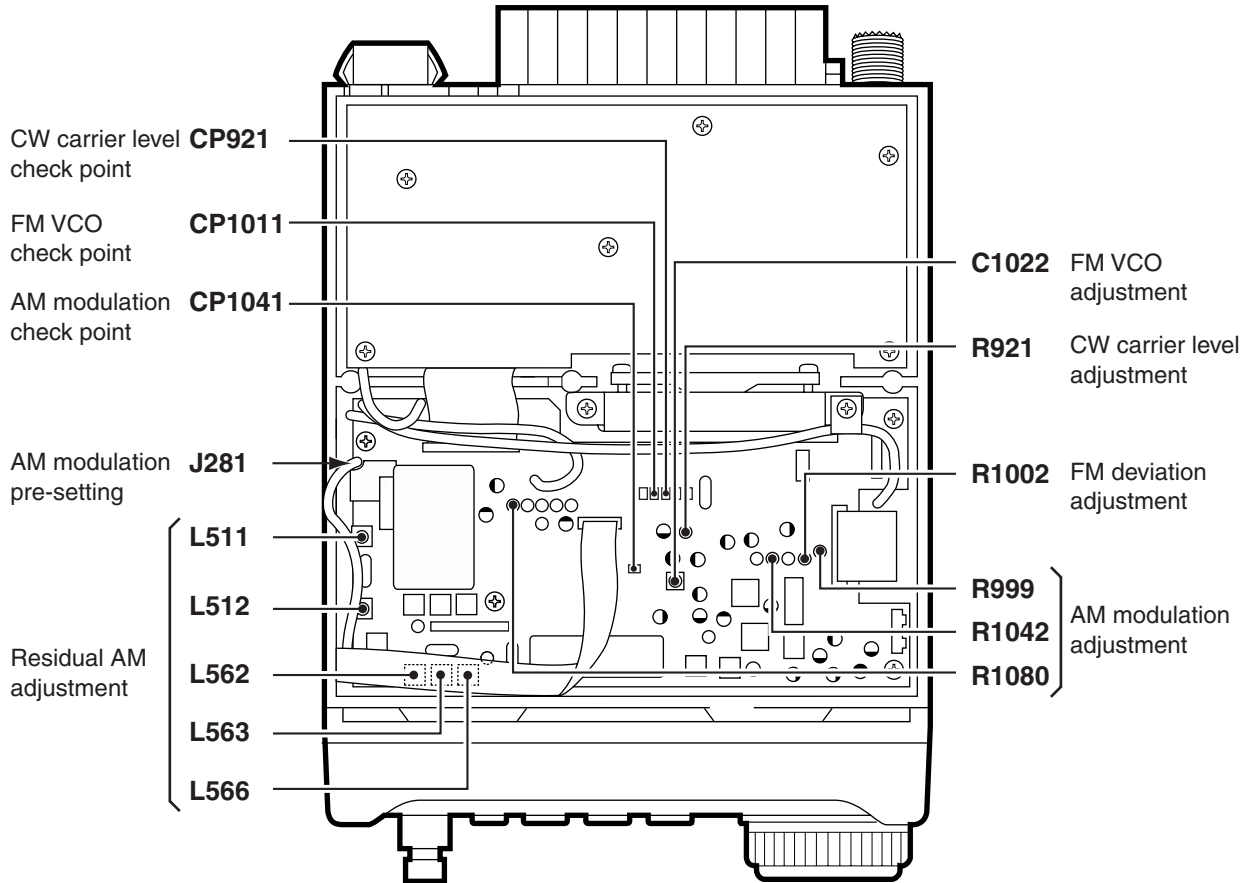
• MAIN UNIT



TRANSMITTER ADJUSTMENTS (continued)

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
FM VCO	1 <ul style="list-style-type: none"> • Display frequency: 29.10000 MHz • Mode : FM • [Q1 RF POWER] : H • [M4 TON] : OFF • Apply no signal to [MIC] connector. • Transmitting 	MAIN	Connect a digital multimeter to check point CP1011.	1.8 V	MAIN	C1022
FM DEVIATION	1 <ul style="list-style-type: none"> • Display frequency: 29.10000 MHz • Mode : FM • [Q1 RF POWER] : H • [M4 TON] : OFF • [Q2 MIC GAIN] : 5 • Connect an audio generator to [MIC] connector and set as: 1 kHz/30 mV • Transmitting 	Rear Panel	Connect an FM deviation meter to [ANT1] connector via an attenuator.	±4.5 kHz	MAIN	R1002
RESIDUAL AM	1 <ul style="list-style-type: none"> • Display frequency: 29.10000 MHz • Mode : FM • [Q1 RF POWER] : H • [M4 TON] : OFF • [Q2 MIC GAIN] : 5 • Connect an audio generator to [MIC] connector and set as: 1 kHz/30 mV and OFF • Transmitting 		Connect an RF power meter to [ANT1] connector.	Minimum power difference with modulation and unmodulation.	MAIN	adjust in sequence L511, L512, then adjust L562, L563, L566.
	2	After adjustment, verify the TRANSMIT TOTAL GAIN and OUTPUT POWER adjustments.				
AM MODULATION	1 <ul style="list-style-type: none"> • Display frequency: 14.10000 MHz • Mode : AM • [Q1 RF POWER] : H • [Q2 MIC GAIN] : 5 • Disconnect the plug from J281 on the MAIN board. • Apply no signal to [MIC] connector. • Transmitting 	MAIN	Connect an oscilloscope to check point CP1041.	100 mVp-p	MAIN	R1042
	2 <ul style="list-style-type: none"> • Connect the plug to J281 on the MAIN board. • Apply no signal to [MIC] connector. • Transmitting 	Rear Panel	Connect an RF power meter to [ANT1] connector.	35 W		R1080
	3 <ul style="list-style-type: none"> • Connect an audio generator to [MIC] connector and set as: 1 kHz/30 mV • Transmitting 		Connect a modulation analyzer to [ANT1] connector via an attenuator.	90 % modulation		R999
CW CARRIER LEVEL	1 <ul style="list-style-type: none"> • Display frequency: 14.10000 MHz • Mode : CW • [Q1 RF POWER] : H • [Q5 KEY SPEED]: 60 • [M4 BRK] : BK (semi break-in) • CW paddle : n • Connect an RF power meter to [ANT1] connector. • Transmit dots for a while using a paddle. 		Connect an oscilloscope to check point CP921 and [ANT1] connector.	At the point where the CW carrier completely comes up in a 10 msec. delay after CP921 voltage comes up.	MAIN	R921

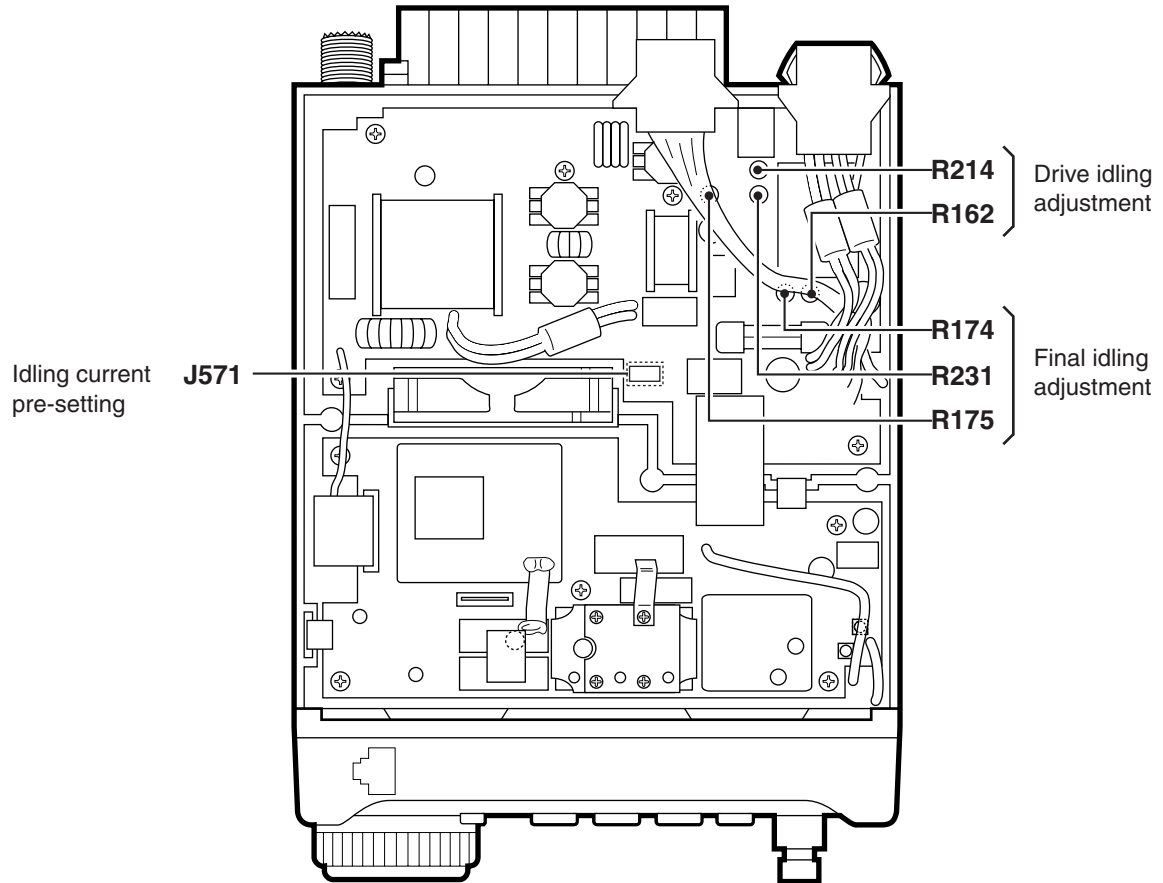
• MAIN UNIT



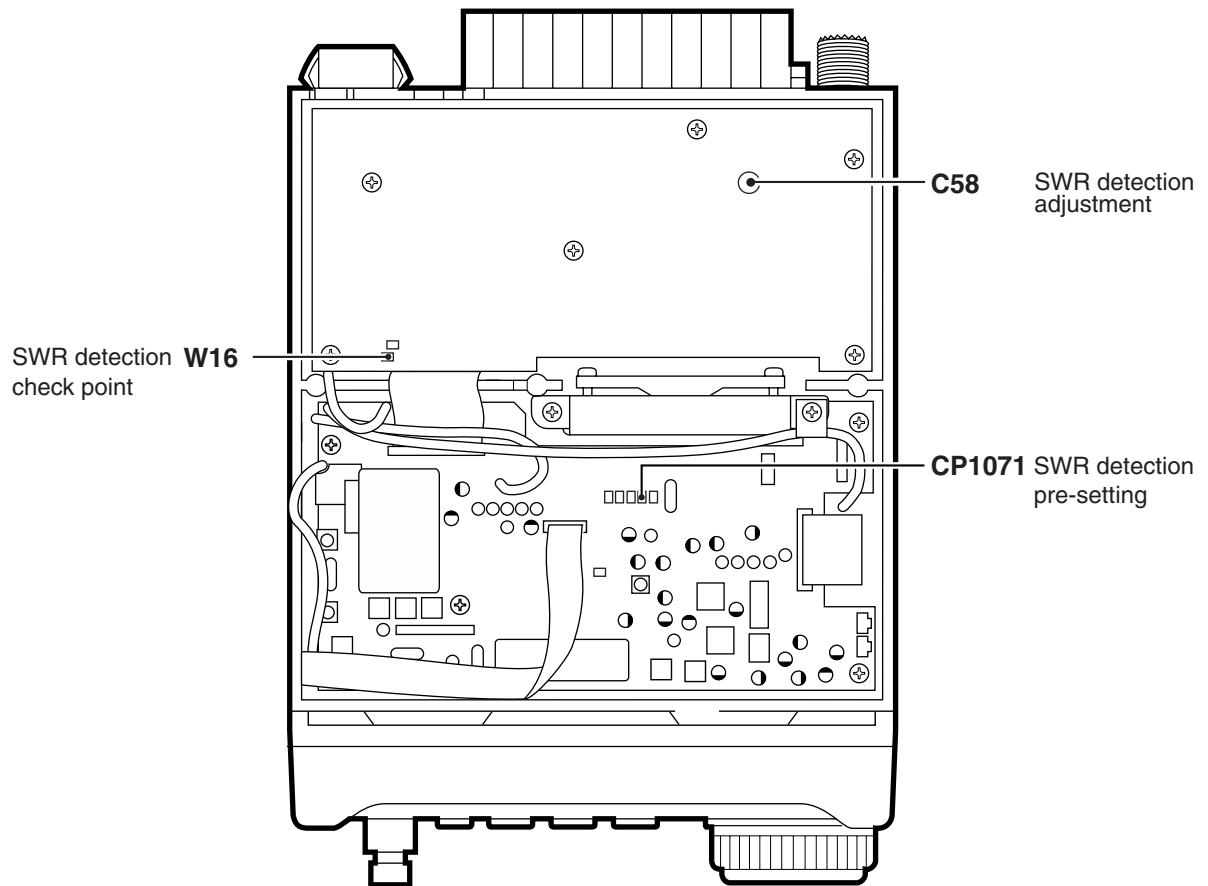
TRANSMITTER ADJUSTMENTS (continued)

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT			
		UNIT	LOCATION		UNIT	ADJUST		
IDLING CURRENT (for drive amplifiers)	1	<ul style="list-style-type: none"> • Display frequency: 14.10000 MHz • Mode : USB • [Q2 MIC GAIN] : 1 (minimum) • turn R162, R174, R175, R214, R231 (on the PA unit) to maximum counterclockwise position. • Disconnect the plug from J571 on the PA unit. • Transmitting 	PA	Connect a DC ammeter between the DC power supply and transceiver's DC power socket (P601 on the PA unit).	0.5 A increase from that R162 is in maximum counterclockwise position.	PA	R162	
	2	<ul style="list-style-type: none"> • Display frequency: 145.10000 MHz • Mode : USB • [Q2 MIC GAIN] : 1 (minimum) • Transmitting 			1.0 A increase from step 1.		R214	
	(for final amplifiers)	3	<ul style="list-style-type: none"> • Display frequency: 14.10000 MHz • Mode : USB • [Q2 MIC GAIN] : 1 (minimum) • Transmitting 			1.0 A increase from that R174 is in maximum counterclockwise position.		R174
		4	<ul style="list-style-type: none"> • Transmitting 			1.0 A increase from step 3.		R175
		5	<ul style="list-style-type: none"> • Display frequency: 145.10000 MHz • Mode : USB • [Q2 MIC GAIN] : 1 (minimum) • Transmitting 			2.0 A increase from step 4.		R231
SWR DETECTION	1	<ul style="list-style-type: none"> • Display frequency: 14.10000 MHz • Mode : USB • Ground CP1071 on the MAIN board. • Connect an audio generator to [MIC] connector and set as: 1.5 kHz/30 mV • Transmitting 	Rear Panel	Connect an RF power meter to [ANT1] connector.	100 W	Quick set mode	Q2 MIC GAIN	
	2	<ul style="list-style-type: none"> • Transmitting 	FILTER	Connect a digital multimeter to check point W16.	Minimum voltage	FILTER	C58	
	3	After remove the jumper wire from CP1071 on the MAIN board.						

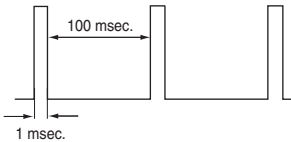
• PA UNIT



• MAIN AND FILTER UNITS

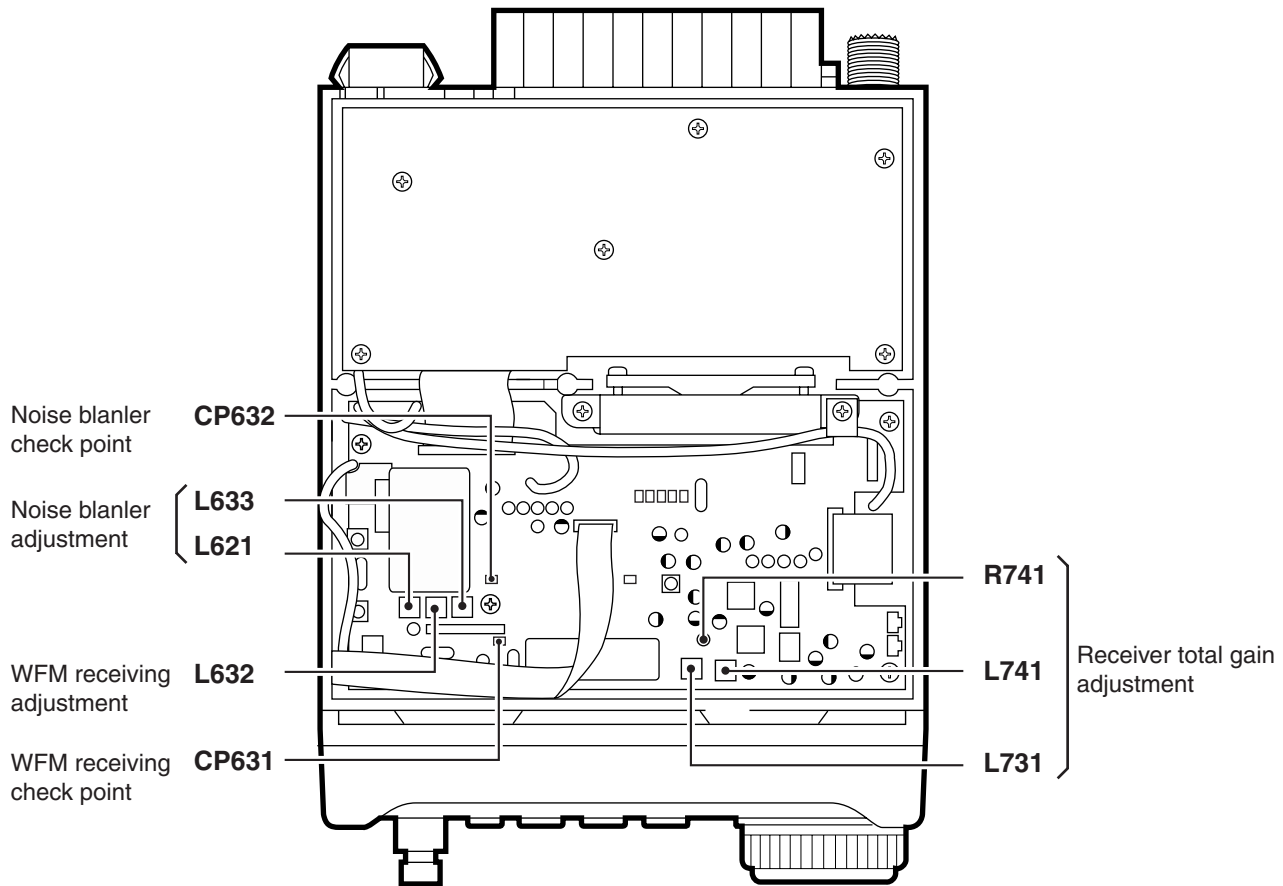


4-4 RECEIVER ADJUSTMENTS

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
RECEIVER TOTAL GAIN	1 <ul style="list-style-type: none"> • Display freq. : 14.10000 MHz • Mode : USB • [RIT] : OFF • [M4 AGC] : Fast (F AGC) • [M3 NB] : OFF • [P.AMP/ATT] : Preamp ON • Connect a standard signal generator to the [ANT1] connector and set as: <ul style="list-style-type: none"> Frequency : 14.10150 MHz Level : 0.5 μV* (-113 dBm) Modulation : OFF • Receiving 	Rear Panel	Connect an AC millivoltmeter to the [EXT SP] jack with an 8 Ω dummy load.	Muximum AF output level	MAIN	L731, L741
	2 <ul style="list-style-type: none"> • [P.AMP/ATT] : Preamp OFF • Set an SSG as: <ul style="list-style-type: none"> Frequency : 14.10150 MHz Level : 500 μV* (-53 dBm) and OFF Modulation : OFF • Receiving 	Rear Panel	Connect an AC millivoltmeter to the [EXT SP] jack with a 8 Ω dummy load.	30 dB of AF level difference	MAIN	R741
WFM RECEIVING	1 <ul style="list-style-type: none"> • Display freq. : 14.10000 MHz • Mode : WFM • Set an SSG as: <ul style="list-style-type: none"> Frequency : 14.10000 MHz Level : 500 μV* (-53 dBm) Modulation : OFF • Receiving 	MAIN	Connect a digital multimeter or oscilloscope to check point CP631.	4.0 V	MAIN	L632
NOISE BLANKER	1 <ul style="list-style-type: none"> • Display freq. : 14.10000 MHz • Mode : USB • [P.AMP/ATT] : Preamp ON • [M3 NB] : OFF • R623 (MAIN) : Center • Connect an SSG to the [ANT1] connector and set as: <ul style="list-style-type: none"> Frequency : 14.1015 MHz Level : 18 μV* (-82 dBm) Modulation : OFF and apply the following signal to the [ANT1] connector.  <ul style="list-style-type: none"> • Receiving 	MAIN	Connect an oscilloscope to check point CP632.	Adjust the maximum noise wave displayed on the oscilloscope.	MAIN	L621, L633
	2 <ul style="list-style-type: none"> • [M3 NB] : ON • Set an SSG as: <ul style="list-style-type: none"> Level : 10 μV* (-87 dBm) Modulation : OFF • Receiving 					

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

• MAIN UNIT



4-5 SET MODE ADJUSTMENT

ADJUSTMENT	ADJUSTMENT CONDITION	DISPLAY	OPERATION
ENTERING ADJUSTMENT SET MODE	1 <ul style="list-style-type: none"> • Enter adjustment set mode: <ol style="list-style-type: none"> ① Turn power OFF. ② Terminate the [REMOTE] jack with a 3.5(d) mm mini-plug. ③ While pushing [P.AMP/ATT] and [TUNE/CALL], turn power ON. 		<p>Push [F-3 (TX)] to enter the TX adjustment setting mode.</p> <p>Then advance to the following setting, or push [UP]/[DN] to scroll the display.</p>
Id APC	1 <ul style="list-style-type: none"> • Connect an RF power meter to [ANT1] connector. • Connect a DC ammeter between the DC power supply and transceiver's DC power socket (P601 on the PA unit). • Transmit using an external PTT switch. 	SET IdAPC	<p>Set a total current at 15 A by adjusting R1125 on the MAIN board.</p> <p>Push [MENU] to set the "SET IdAPC" after returning receiving condition.</p>
FILTER CALIBRATION	1 <ul style="list-style-type: none"> • Connect an RF power meter to [ANT1] connector. 	GO FILTER CAL	<p>Push and hold [MENU (GO)] to make the calibration.</p> <ul style="list-style-type: none"> • Transceiver transmits for a while.
POWER METER (14 MHz)	1 <ul style="list-style-type: none"> • Connect an RF power meter to [ANT1] connector. • Transmit using an external PTT switch. 	SET 90 %	Set to 90 W using [MAIN DIAL], then push [MENU] while transmitting.
	2 <ul style="list-style-type: none"> • Transmit using an external PTT switch. 	SET 50 %	Set to 50 W using [MAIN DIAL], then push [MENU] while transmitting.
TUNING POWER (14 MHz)	1 <ul style="list-style-type: none"> • Connect an RF power meter to [ANT1] connector. • Transmit using an external PTT switch. 	SET TUNE Po	Set to 10 W using [MAIN DIAL], then push [MENU] while transmitting.
	2 <ul style="list-style-type: none"> • Transmit using an external PTT switch. 	SET TUNE Po	Set to 10 W using [MAIN DIAL], then push [MENU] while transmitting.
POWER METER (145 MHz)	1 <ul style="list-style-type: none"> • Connect an RF power meter to [ANT2] connector. • Transmit using an external PTT switch. 	SET 90 %	Set to 45 W using [MAIN DIAL], then push [MENU] while transmitting.
	2 <ul style="list-style-type: none"> • Transmit using an external PTT switch. 	SET 50 %	Set to 25 W using [MAIN DIAL], then push [MENU] while transmitting.
POWER METER (430 MHz)	1 <ul style="list-style-type: none"> • Connect an RF power meter to [ANT2] connector. • Transmit using an external PTT switch. 	SET 90 %	Set to 18 W using [MAIN DIAL], then push [MENU] while transmitting.
	2 <ul style="list-style-type: none"> • Transmit using an external PTT switch. 	SET 50 %	Set to 10 W using [MAIN DIAL], then push [MENU] while transmitting.
ALC METER	1 <ul style="list-style-type: none"> • Connect an RF power meter to [ANT1] connector. • Connect an audio generator to [MIC] connector and set as : Level : 1.5 kHz/30mV • Transmit using an external PTT switch. 	ALC START	Push and hold [MENU] to set ALC reference level while transmitting.
SWR METER	1 <ul style="list-style-type: none"> • Connect a 50 Ω dummy load or power meter to [ANT1] connector. 	SWR 1 LOAD	Push [MENU] to set SWR reference level.
	2 <ul style="list-style-type: none"> • Connect a 50 Ω dummy load or power meter to [ANT1] connector. 	SWR 2 LOAD	<p>Push [MENU] to set SWR2 level.</p> <ul style="list-style-type: none"> • The display returns to the same as the ADJUSTMENT SET MODE above.
Push [F-1 (EXIT)] to exit adjustment set mode.			

SET MODE ADJUSTMENT (continued)

ADJUSTMENT	ADJUSTMENT CONDITION	DISPLAY	OPERATION
ENTERING ADJUSTMENT SET MODE	1 <ul style="list-style-type: none"> Enter adjustment set mode: <ol style="list-style-type: none"> Turn power OFF. Terminate the [REMOTE] jack with a 3.5(d) mm mini-plug. While pushing [P.AMP/ATT] and [TUNE/CALL], turn power ON. 		<p>Push [F-2 (RX)] to enter the RX adjustment setting mode.</p> <p>Then advance to the following setting, or push [UP]/[DN] to scroll the display.</p>
SENSITIVITY	1 <ul style="list-style-type: none"> Connect a standard signal generator to [ANT2] and set as: <ul style="list-style-type: none"> Frequency : 60.05150 MHz Modulation : OFF Receiving 		<p>Set a connected SSG's level at 10 dB of S/N ratio with AC millivoltmeter.</p>
	2 <ul style="list-style-type: none"> Receiving 		<p>Set maximum AF level using the [MAIN DIAL], then push [MENU] to set the "VHF1 BPF1 L".</p>
	3 <ul style="list-style-type: none"> Same operation as step 2 for the listed BPFs. Set an SSG as: <ul style="list-style-type: none"> Modulation : OFF VHF1 BPF2 L : 60.05150 MHz VHF1 BPF1 M : 90.50150 MHz VHF1 BPF1 H : 128.9515 MHz VHF2 BPF1 L : 129.1015 MHz VHF2 BPF1 M : 145.1515 MHz VHF2 BPF1 H : 170.0015 MHz UHF BPF1 L : 400.0015 MHz UHF BPF1 M : 435.1515 MHz UHF BPF1 H : 470.0015 MHz Receiving 	<ul style="list-style-type: none"> VHF1 BPF2 M : Same as left VHF1 BPF2 H : Same as left VHF2 BPF2 L : Same as left VHF2 BPF2 M : Same as left VHF2 BPF2 H : Same as left UHF BPF2 L : Same as left UHF BPF2 M : Same as left UHF BPF2 H : Same as left 	
S-METER	1 <ul style="list-style-type: none"> Connect an SSG to [ANT1] connector and set as: <ul style="list-style-type: none"> Frequency : 14.1515 MHz Level : OFF Receiving 		<p>Push [MENU] to set the "S0 level".</p>
	2 <ul style="list-style-type: none"> Set an SSG as : <ul style="list-style-type: none"> Level : 50 μV (-73 dBm) Modulation : OFF Receiving 		<p>Push [MENU] to set the "S9 level".</p>
	3 <ul style="list-style-type: none"> Set an SSG as : <ul style="list-style-type: none"> Level : 50 mV (-13 dBm) Modulation : OFF Receiving 		<p>Push [MENU] to set the "+60 dB level".</p> <ul style="list-style-type: none"> The display returns to the same as the ADJUSTMENT SET MODE above.
	<p>Push [F-1 (EXIT)] to exit adjustment set mode.</p>		

SECTION 5

PARTS LIST

[FRONT UNIT]

REF NO.	ORDER NO.	DESCRIPTION
W1	8900006040	CBL OPC-593 (N:13 L:50)
W2	8900006252	CBL OPC-610B
EP1	6910013810	E.OTH RMS20-100-201-1C

[DISPLAY UNIT]

REF NO.	ORDER NO.	DESCRIPTION
IC1	1140009731	S.IC HD6433832SD78HV (SX-2177S)
IC2	1130007960	S.IC SED1522FOC (QFP15-100PIN)
IC3	1130011130	S.IC BU4030BF-E2
IC4	1110005781	S.IC S-80945CLMC-G7FG
IC5	1110005761	S.IC S-812C50AUA-C3E-G
Q1	1590002310	S.TR DTC114EE TL
Q2	1520000460	S.TR 2SB1132 T100 R
Q3	1530002060	S.TR 2SC4081 T106 R
Q4	1540000441	S.TR 2SD1619T-TD-E
Q8	1590002370	S.TR XP4111 (TX)
Q9	1590001870	S.TR DTA114EE TL
Q10	1530002060	S.TR 2SC4081 T106 R
Q11	1520000380	TR 2SB1143 S
Q12	1590002370	S.TR XP4111 (TX)
Q13	1520000460	S.TR 2SB1132 T100 R
Q14	1530002060	S.TR 2SC4081 T106 R
Q15	1590001870	S.TR DTA114EE TL
Q16	1590002771	S.FET CPH3404-TL-E
D1	1750000370	S.DIO DA221 TL
D2	1750000370	S.DIO DA221 TL
D3	1750000370	S.DIO DA221 TL
D5	1790001250	S.DIO MA2S111-(TX)
D6	1790001250	S.DIO MA2S111-(TX)
D7	1160000140	S.DIO DAP222 TL
D9	1790001250	S.DIO MA2S111-(TX)
D10	1790001250	S.DIO MA2S111-(TX)
D11	1160000060	S.DIO DAN202U T106
D12	1790001250	S.DIO MA2S111-(TX)
D13	1160000060	S.DIO DAN202U T106
D14	1160000140	S.DIO DAP222 TL
D15	1160000140	S.DIO DAP222 TL
D16	1160000140	S.DIO DAP222 TL
X1	6050009661	S.XTL MA-406 (9.8304 MHz-F)
L1	6200003261	S.COL NLV32T-101J
L2	6200003950	S.COL HF50ACC 322513-T
L3	6200003950	S.COL HF50ACC 322513-T
L4	6200003950	S.COL HF50ACC 322513-T
L5	6200003950	S.COL HF50ACC 322513-T
R1	7030003340	S.RES ERJ3GEYJ 151 V (150)
R2	7030003400	S.RES ERJ3GEYJ 471 V (470)
R3	7030003400	S.RES ERJ3GEYJ 471 V (470)
R4	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R5	7030003340	S.RES ERJ3GEYJ 151 V (150)
R6	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R7	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R8	7030003590	S.RES ERJ3GEYJ 183 V (18 k)
R9	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R10	7030003590	S.RES ERJ3GEYJ 183 V (18 k)
R11	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R12	7030003590	S.RES ERJ3GEYJ 183 V (18 k)
R13	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R14	7030003590	S.RES ERJ3GEYJ 183 V (18 k)
R15	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R16	7030003590	S.RES ERJ3GEYJ 183 V (18 k)
R17	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R18	7030003590	S.RES ERJ3GEYJ 183 V (18 k)
R19	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R20	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R21	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R22	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R23	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R24	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R25	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R26	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R27	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R29	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R30	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R33	7030006190	S.RES ERJ12J2R2U (2.2)
R36	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R37	7030003600	S.RES ERJ3GEYJ 223 V (22 k)
R38	7030007110	S.RES MCR18EZHJ 100
R39	7030007110	S.RES MCR18EZHJ 100
R40	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R41	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R42	7030003440	S.RES ERJ3GEYJ 102 V (1 k)

[DISPLAY UNIT]

REF NO.	ORDER NO.	DESCRIPTION
R44	7030003500	S.RES ERJ3GEYJ 332 V (3.3 k)
R45	7030003500	S.RES ERJ3GEYJ 332 V (3.3 k)
R46	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)
R47	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R49	7030003360	S.RES ERJ3GEYJ 221 V (220)
R50	7030003800	S.RES ERJ3GEYJ 105 V (1 M)
R51	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R52	7030003720	S.RES ERJ3GEYJ 224 V (220 k)
R53	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R54	7030003800	S.RES ERJ3GEYJ 105 V (1 M)
R55	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R56	7030003720	S.RES ERJ3GEYJ 224 V (220 k)
R57	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R58	7030003800	S.RES ERJ3GEYJ 105 V (1 M)
R65	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R66	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R67	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R68	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R69	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R70	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R71	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R72	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R73	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R74	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R75	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R76	7030003840	S.RES ERJ3GEYJ 225 V (2.2 M)
R83	7030003600	S.RES ERJ3GEYJ 223 V (22 k)
R84	7030003600	S.RES ERJ3GEYJ 223 V (22 k)
R85	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R92	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R93	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R95	7030003200	S.RES ERJ3GEYJ 100 V (10)
R96	7030003200	S.RES ERJ3GEYJ 100 V (10)
R97	7030003390	S.RES ERJ3GEYJ 391 V (390)
R98	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)
R99	7030003340	S.RES ERJ3GEYJ 151 V (150)
R100	7030003800	S.RES ERJ3GEYJ 105 V (1 M)
R101	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R102	7030003720	S.RES ERJ3GEYJ 224 V (220 k)
R103	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R104	7030003800	S.RES ERJ3GEYJ 105 V (1 M)
R105	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R106	7030003720	S.RES ERJ3GEYJ 224 V (220 k)
R107	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R108	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R109	7030003420	S.RES ERJ3GEYJ 681 V (680)
R110	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R111	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)
R112	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)
R113	7030003420	S.RES ERJ3GEYJ 681 V (680)
R114	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R115	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R116	7030003430	S.RES ERJ3GEYJ 821 V (820)
R117	7030003420	S.RES ERJ3GEYJ 681 V (680)
R118	7030003460	S.RES ERJ3GEYJ 152 V (1.5 k)
R119	7030003420	S.RES ERJ3GEYJ 681 V (680)
R120	7030003460	S.RES ERJ3GEYJ 152 V (1.5 k)
R121	7030003470	S.RES ERJ3GEYJ 182 V (1.8 k)
R122	7030003420	S.RES ERJ3GEYJ 681 V (680)
R123	7030003390	S.RES ERJ3GEYJ 391 V (390)
R124	7030003390	S.RES ERJ3GEYJ 391 V (390)
R125	7030003390	S.RES ERJ3GEYJ 391 V (390)
R126	7030003390	S.RES ERJ3GEYJ 391 V (390)
R127	7030003390	S.RES ERJ3GEYJ 391 V (390)
R128	7030003390	S.RES ERJ3GEYJ 391 V (390)
R129	7030003390	S.RES ERJ3GEYJ 391 V (390)
R130	7030003390	S.RES ERJ3GEYJ 391 V (390)
R131	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)
R132	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)
R133	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)
R134	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)
R135	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)
R136	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)
R137	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)
R138	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)
R140	7030003430	S.RES ERJ3GEYJ 821 V (820)
R141	7030003430	S.RES ERJ3GEYJ 821 V (820)
R142	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
C1	4030006880	S.CER C1608 JB 1H 472K-T
C2	4030006880	S.CER C1608 JB 1H 472K-T
C4	4030006880	S.CER C1608 JB 1H 472K-T
C5	4030012610	S.CER C2012 JB 1C 474K-T
C7	4030006880	S.CER C1608 JB 1H 472K-T
C8	4030006880	S.CER C1608 JB 1H 472K-T
C9	4030006880	S.CER C1608 JB 1H 472K-T
C10	4030007020	S.CER C1608 CH 1H 120J-T
C11	4030007020	S.CER C1608 CH 1H 120J-T
C12	4030011600	S.CER C1608 JB 1E 104K-T
C13	4030011600	S.CER C1608 JB 1E 104K-T
C14	4030011600	S.CER C1608 JB 1E 104K-T
C15	4030006860	S.CER C1608 JB 1H 102K-T
C16	4030006860	S.CER C1608 JB 1H 102K-T
C18	4030015170	S.CER C3216 JB 0J 475M-T
C19	4030011600	S.CER C1608 JB 1E 104K-T
C20	4030015170	S.CER C3216 JB 0J 475M-T
C21	4550002980	S.TAN TEESVA 1C 225M8R

S.=Surface mount

[DISPLAY UNIT]

REF NO.	ORDER NO.	DESCRIPTION
C22	4030011600	S.CER C1608 JB 1E 104K-T
C23	4030011600	S.CER C1608 JB 1E 104K-T
C24	4550002980	S.TAN TEESVA 1C 225M8R
C25	4030011600	S.CER C1608 JB 1E 104K-T
C26	4030011600	S.CER C1608 JB 1E 104K-T
C27	4550002980	S.TAN TEESVA 1C 225M8R
C28	4550002980	S.TAN TEESVA 1C 225M8R
C29	4030011600	S.CER C1608 JB 1E 104K-T
C30	4030006880	S.CER C1608 JB 1H 472K-T
C31	4030006880	S.CER C1608 JB 1H 472K-T
C32	4030006880	S.CER C1608 JB 1H 472K-T
C33	4030006880	S.CER C1608 JB 1H 472K-T
C34	4030006850	S.CER C1608 JB 1H 471K-T
C35	4030006860	S.CER C1608 JB 1H 102K-T
C36	4030006860	S.CER C1608 JB 1H 102K-T
C37	4030011600	S.CER C1608 JB 1E 104K-T
C38	4030008890	S.CER C1608 JB 1H 273K-T
C39	4030011600	S.CER C1608 JB 1E 104K-T
C40	4030011600	S.CER C1608 JB 1E 104K-T
C41	4030011600	S.CER C1608 JB 1E 104K-T
C42	4030006880	S.CER C1608 JB 1H 472K-T
J1	6510019121	S.CNR S8B-PH-SM4-TB (LF) (SN)
J2	6450001630	CNR HSJ1406-01-050
J3	6510018891	S.CNR 52559-1370 (1390)
DS1	5040002020	S.LED CL-170UR-CD-T
DS2	5040002010	S.LED CL-170PG-CD-T
DS3	5040002020	S.LED CL-170UR-CD-T
DS4	5030001670	LCD DLC-8309YBGF
DS5	5030001290	LED D2264
S1	2260002250	S.SW LS22BB-2SD-PG-T
S2	2260002250	S.SW LS22BB-2SD-PG-T
S3	2260002540	S.SW SKQHFC
S4	2260002540	S.SW SKQHFC
S5	2260002540	S.SW SKQHFC
S6	2260002540	S.SW SKQHFC
S7	2260002540	S.SW SKQHFC
S8	2260002540	S.SW SKQHFC
S9	2260002540	S.SW SKQHFC
S10	2260002540	S.SW SKQHFC
S11	2260002550	S.SW SKQHFFH
S12	2260002550	S.SW SKQHFFH
S13	2260002250	S.SW LS22BB-2SD-PG-T
S14	2260001680	S.SW SKQDPB
W1	7030003860	S.RES ERJ3GE JPW V
W2	7120000470	JMP ERDS2TO
W3	7120000470	JMP ERDS2TO
EP2	8930039790	LCT SRCN-1691-ZSS-505

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
IC151	1110003970	S.IC uPC1658G-E1
IC221	1110004101	S.IC TA4001F (TE85L,F)
IC222	1110004091	S.IC TA4002F (TE85L,F)
IC231	1110004080	S.IC uPC2709T-E3
IC281	1110004080	S.IC uPC2709T-E3
IC351	1160000161	S.IC TD62783AFNG (5,S,EL)
IC521	1110003310	S.IC uPC1688G-T1
IC571	1110003960	S.IC uPC2713T-E3
IC631	1110003141	IC LA1150N-E
IC791	1110003491	S.IC TA31136FNG (D,EL)
IC811	1110003780	S.IC NJM2902V-TE1
IC841	1110004870	S.IC TA4101F (TE12L,F)
IC861	1130009100	S.IC BU4052BCFV-E2
IC891	1110003780	S.IC NJM2902V-TE1
IC931	1140005281	S.IC uPC5023GS-077-E1-A
IC971	1130006221	S.IC TC4W53FU (TE12L,F)
IC981	1110003870	S.IC NJM2058M-TE1
IC1011	1130007661	S.IC LC7153M-TLM-E
IC1041	1110004840	S.IC NJM1496V-TE1
IC1091	1110003780	S.IC NJM2902V-TE1
IC1141	1130009100	S.IC BU4052BCFV-E2
IC2001	1140008301	S.IC HD643337YA61FV (SX-2177)
	1140009941	S.IC HD64F3337YF16V (SX-2177B)
IC2101	1130009100	S.IC BU4052BCFV-E2
IC2121	1130011281	S.IC CAT25C64V1-TE13
IC2122	1130007111	S.IC TC7W04FU (TE12L,F)
IC2131	1130003761	S.IC TC4S81F (TE85R,F)
IC2161	1110005771	S.IC S-80942CNMC-G9CT2G
IC2201	1110004310	S.IC M62352GP 75EC
IC2202	1110003780	S.IC NJM2902V-TE1
IC2221	1130007570	S.IC BU4094BCFV-E2
IC2222	1130007570	S.IC BU4094BCFV-E2
IC2231	1130005491	S.IC TC74HC4094AF (F)
IC2232	1130007570	S.IC BU4094BCFV-E2
IC2241	1160000131	S.IC TD62783AFG (S,EL)
Q111	1590002310	S.TR DTC114EE TL
Q112	1590002310	S.TR DTC114EE TL
Q121	1590002310	S.TR DTC114EE TL
Q122	1590001870	S.TR DTA114EE TL
Q131	1590002310	S.TR DTC114EE TL
Q132	1590002310	S.TR DTC114EE TL
Q133	1590001870	S.TR DTA114EE TL
Q151	1590002310	S.TR DTC114EE TL
Q271	1590001330	S.TR DTA114EUA T106
Q351	1590002480	S.TR UMC3N TR
Q352	1590002480	S.TR UMC3N TR
Q353	1590002480	S.TR UMC3N TR
Q354	1590002480	S.TR UMC3N TR
Q521	1590002310	S.TR DTC114EE TL
Q522	1590002310	S.TR DTC114EE TL
Q571	1590002310	S.TR DTC114EE TL
Q572	1530002060	S.TR 2SC4081 T106 R
Q573	1530002060	S.TR 2SC4081 T106 R
Q601	1530002060	S.TR 2SC4081 T106 R
Q611	1530002060	S.TR 2SC4081 T106 R
Q621	1560000561	S.FET 2SK882-GR (TE85L,F)
Q631	1510000510	S.TR 2SA1576A T106R
Q632	1560000561	S.FET 2SK882-GR (TE85L,F)
Q633	1530002060	S.TR 2SC4081 T106 R
Q634	1530002060	S.TR 2SC4081 T106 R
Q635	1590002310	S.TR DTC114EE TL
Q636	1590001330	S.TR DTA114EUA T106
Q721	1530002060	S.TR 2SC4081 T106 R
Q731	1580000601	S.FET 3SK126-O (TE85R,F)
Q732	1590002480	S.TR UMC3N TR
Q741	1560000561	S.FET 2SK882-GR (TE85L,F)
Q751	1530002060	S.TR 2SC4081 T106 R
Q771	1530002060	S.TR 2SC4081 T106 R
Q772	1590002760	S.TR UMC1NTR
Q773	1590002760	S.TR UMC1NTR
Q774	1530002060	S.TR 2SC4081 T106 R
Q776	1530002060	S.TR 2SC4081 T106 R
Q777	1510000510	S.TR 2SA1576A T106R
Q921	1590002310	S.TR DTC114EE TL
Q961	1530002060	S.TR 2SC4081 T106 R
Q981	1590002310	S.TR DTC114EE TL
Q982	1590002310	S.TR DTC114EE TL
Q1011	1560000331	S.FET 2SK210-GR (TE85R,F)
Q1012	1590002310	S.TR DTC114EE TL
Q1013	1530002060	S.TR 2SC4081 T106 R
Q1041	1590002310	S.TR DTC114EE TL
Q1061	1510000510	S.TR 2SA1576A T106R
Q1062	1530002060	S.TR 2SC4081 T106 R
Q1071	1590002310	S.TR DTC114EE TL
Q1072	1590002310	S.TR DTC114EE TL
Q1073	1590002310	S.TR DTC114EE TL
Q1074	1590002310	S.TR DTC114EE TL
Q1075	1590002310	S.TR DTC114EE TL
Q1091	1590002310	S.TR DTC114EE TL
Q1092	1530002060	S.TR 2SC4081 T106 R
Q1101	1590002310	S.TR DTC114EE TL
Q1131	1510000510	S.TR 2SA1576A T106R
Q2001	1590001870	S.TR DTA114EE TL
Q2131	1590002310	S.TR DTC114EE TL
Q2141	1590002310	S.TR DTC114EE TL
Q2171	1510000510	S.TR 2SA1576A T106R
Q2172	1530002060	S.TR 2SC4081 T106 R
Q2221	1590002480	S.TR UMC3N TR
Q2222	1590002480	S.TR UMC3N TR
Q2223	1590002480	S.TR UMC3N TR
Q2224	1590002480	S.TR UMC3N TR
Q2225	1590002480	S.TR UMC3N TR

[Others]
[ITR]

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
Q2226	1590002310	S.TR DTC114EE TL
Q2227	1590002310	S.TR DTC114EE TL
D111	1750000641	S.DIO 1SV312 (TE85L,F)
D112	1750000641	S.DIO 1SV312 (TE85L,F)
D123	1790001250	S.DIO MA2S111-(TX)
D131	1790001621	S.DIO 1SV308 (TPL3,F)
D132	1790001611	S.DIO 1SS385 (TE85L,F)
D133	1790001250	S.DIO MA2S111-(TX)
D141	1790001621	S.DIO 1SV308 (TPL3,F)
D142	1750000641	S.DIO 1SV312 (TE85L,F)
D143	1790001621	S.DIO 1SV308 (TPL3,F)
D151	1790001621	S.DIO 1SV308 (TPL3,F)
D152	1790001621	S.DIO 1SV308 (TPL3,F)
D153	1790001621	S.DIO 1SV308 (TPL3,F)
D222	1750000641	S.DIO 1SV312 (TE85L,F)
D224	1790001621	S.DIO 1SV308 (TPL3,F)
D251	1790001621	S.DIO 1SV308 (TPL3,F)
D252	1790001621	S.DIO 1SV308 (TPL3,F)
D261	1790001621	S.DIO 1SV308 (TPL3,F)
D262	1790001621	S.DIO 1SV308 (TPL3,F)
D271	1750000431	S.DIO HSB88WSTR-E
D272	1790001621	S.DIO 1SV308 (TPL3,F)
D273	1790001621	S.DIO 1SV308 (TPL3,F)
D274	1790001621	S.DIO 1SV308 (TPL3,F)
D275	1790001621	S.DIO 1SV308 (TPL3,F)
D276	1790001621	S.DIO 1SV308 (TPL3,F)
D351	1750000520	S.DIO DAN222TL
D352	1750000520	S.DIO DAN222TL
D500	1790001621	S.DIO 1SV308 (TPL3,F)
D501	1790001621	S.DIO 1SV308 (TPL3,F)
D502	1790000450	S.DIO MA862 (TX)
D521	1750000971	S.DIO CPH5513-TL-E
D522	1750000971	S.DIO CPH5513-TL-E
D551	1750000431	S.DIO HSB88WSTR-E
D552	1790000450	S.DIO MA862 (TX)
D561	1790000450	S.DIO MA862 (TX)
D562	1790000450	S.DIO MA862 (TX)
D571	1790001260	S.DIO MA2S077-(TX)
D572	1750000971	S.DIO CPH5513-TL-E
D573	1750000971	S.DIO CPH5513-TL-E
D574	1790001250	S.DIO MA2S111-(TX)
D621	1790000450	S.DIO MA862 (TX)
D622	1790001250	S.DIO MA2S111-(TX)
D631	1750000520	S.DIO DAN222TL
D632	1790001211	S.DIO 1SS375-TL-E
D633	1790001250	S.DIO MA2S111-(TX)
D634	1790001250	S.DIO MA2S111-(TX)
D671	1790000450	S.DIO MA862 (TX)
D672	1790000450	S.DIO MA862 (TX)
D681	1790000450	S.DIO MA862 (TX)
D682	1790000450	S.DIO MA862 (TX)
D683	1790001250	S.DIO MA2S111-(TX)
D691	1790000450	S.DIO MA862 (TX)
D692	1790000450	S.DIO MA862 (TX)
D701	1790000450	S.DIO MA862 (TX)
D702	1790000450	S.DIO MA862 (TX)
D711	1790000450	S.DIO MA862 (TX)
D712	1790000450	S.DIO MA862 (TX)
D721	1790000450	S.DIO MA862 (TX)
D761	1790001211	S.DIO 1SS375-TL-E
D771	1790001211	S.DIO 1SS375-TL-E
D772	1790001250	S.DIO MA2S111-(TX)
D791	1790000450	S.DIO MA862 (TX)
D861	1790001240	S.DIO MA2S728-(TX)
D921	1750000520	S.DIO DAN222TL
D923	1790001250	S.DIO MA2S111-(TX)
D931	1750000370	S.DIO DA221 TL
D932	1750000370	S.DIO DA221 TL
D981	1790001611	S.DIO 1SS385 (TE85L,F)
D1011	1790001250	S.DIO MA2S111-(TX)
D1012	1720000590	S.VCP MA357 (TX)
D1013	1790001211	S.DIO 1SS375-TL-E
D1014	1790001211	S.DIO 1SS375-TL-E
D1041	1790001250	S.DIO MA2S111-(TX)
D1042	1790000450	S.DIO MA862 (TX)
D1061	1730002510	S.ZEN MA8027-H (TX)
D1071	1790001250	S.DIO MA2S111-(TX)
D1072	1790001240	S.DIO MA2S728-(TX)
D1073	1790001240	S.DIO MA2S728-(TX)
D1074	1790001611	S.DIO 1SS385 (TE85L,F)
D1075	1790001250	S.DIO MA2S111-(TX)
D1076	1790001040	S.ZEN MA8033-L (TX)
D1077	1790001040	S.ZEN MA8033-L (TX)
D1078	1790001240	S.DIO MA2S728-(TX)
D1091	1160000140	S.DIO DAP222 TL
D1111	1790001611	S.DIO 1SS385 (TE85L,F)
D1112	1790001611	S.DIO 1SS385 (TE85L,F)
D1113	1160000140	S.DIO DAP222 TL
D1114	1790001611	S.DIO 1SS385 (TE85L,F)
D1131	1790001330	S.ZEN MA8036-L (TX)
D1132	1160000140	S.DIO DAP222 TL
D1161	1790001611	S.DIO 1SS385 (TE85L,F)
D2001	1750000370	S.DIO DA221 TL
D2002	1750000370	S.DIO DA221 TL
D2025	1790001250	S.DIO MA2S111-(TX) [ESP], [ITR], [EUR-1], [ESP-1], [ITR-1] only
D2026	1790001250	S.DIO MA2S111-(TX) [FRA], [ITR], [FRA-1], [ITR-1] only
D2027	1790001250	S.DIO MA2S111-(TX) [EUR], [ESP], [EUR-1], [ESP-1] only
D2029	1790001250	S.DIO MA2S111-(TX) [ESP], [ITR], [ESP-1], [ITR-1] only
D2030	1790001250	S.DIO MA2S111-(TX)
D2031	1790001250	S.DIO MA2S111-(TX)
D2081	1790001250	S.DIO MA2S111-(TX)

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
D2082	1790001250	S.DIO MA2S111-(TX)
D2083	1790001250	S.DIO MA2S111-(TX)
D2101	1790001250	S.DIO MA2S111-(TX)
D2102	1790001250	S.DIO MA2S111-(TX)
D2103	1790001250	S.DIO MA2S111-(TX)
D2104	1790001250	S.DIO MA2S111-(TX)
D2105	1790001250	S.DIO MA2S111-(TX)
D2106	1790001250	S.DIO MA2S111-(TX)
D2107	1790001250	S.DIO MA2S111-(TX)
D2108	1790001611	S.DIO 1SS385 (TE85L,F)
D2131	1750000370	S.DIO DA221 TL
D2132	1750000370	S.DIO DA221 TL
D2133	1750000520	S.DIO DAN222TL
D2141	1750000370	S.DIO DA221 TL
D2142	1750000370	S.DIO DA221 TL
D2143	1750000370	S.DIO DA221 TL
D2144	1790001250	S.DIO MA2S111-(TX)
D2145	1790001250	S.DIO MA2S111-(TX)
D2161	1790001250	S.DIO MA2S111-(TX)
D2171	1790001250	S.DIO MA2S111-(TX)
D2181	1730000911	S.ZEN RD12M-T2B-A B2
D2182	1790001621	S.DIO 1SV308 (TPL3,F)
D2183	1790001621	S.DIO 1SV308 (TPL3,F)
FI371	2040001420	S.LC LFB32440MSC1-955 (LFSC25N12B0)
FI372	2040001420	S.LC LFB32440MSC1-955 (LFSC25N12B0)
FI373	2040001420	S.LC LFB32440MSC1-955 (LFSC25N12B0)
FI511	2010002090	FIL FL-261 (69.0115 MHz)
FI561	2010000270	FIL 9M15A (FL-23)
FI601	2020001810	S.CER SFCEV10M7FA00-R0 (SFCEV10.7MA5S) [ESP], [OTH], [ITA], [ITR], [OTH-1], [ITR-1], [CHN], [CHN-01] only
FI611	2020001810	S.CER SFCEV10M7FA00-R0 (SFCEV10.7MA5S) [ESP], [OTH], [ITA], [ITR], [OTH-1], [ITR-1], [CHN], [CHN-01] only
FI671	2010002130	D.FIL FL-272 (9.0115 MHz)
FI681	2010000730	FIL 9M 8A (FL-94)
FI791	2020001051	S.CER SFPKA455KE4A-R1
X791	6070000151	S.DCR CDBKB455KAY24-R0
X2161	6050010501	S.XTL CR-636A (14.7456 MHz)
L111	6200003550	S.COL MLF1608A 4R7K-T
L112	6200008070	S.COL MLF1608E 6R8K 6.8U
L121	6200012340	S.COL LB2518T101K
L122	6200003550	S.COL MLF1608A 4R7K-T
L123	6200003941	S.COL NLV25T-5R6J
L132	6200002631	S.COL NLV25T-R10J
L133	6200002641	S.COL NLV25T-R15J
L141	6200012340	S.COL LB2518T101K
L142	6200003550	S.COL MLF1608A 4R7K-T
L151	6200012340	S.COL LB2518T101K
L153	6200012340	S.COL LB2518T101K
L154	6200012340	S.COL LB2518T101K
L155	6200012340	S.COL LB2518T101K
L156	6200012340	S.COL LB2518T101K
L158	6200003640	S.COL MLF1608E 100K-T
L159	6200003640	S.COL MLF1608E 100K-T
L182	6200002520	S.COL ELJNC R18K-F
L183	6200002520	S.COL ELJNC R18K-F
L184	6200002520	S.COL ELJNC R18K-F
L195	6200006671	S.COL ELJRE 68NGFA
L196	6200006991	S.COL ELJRE 56NGFA
L231	6200001711	S.COL NLV32T-220J
L232	6200004480	S.COL MLF1608D R82K-T
L233	6200004961	S.COL NLV25T-R33J
L251	6200012680	S.COL 0.30-1.3-5TL 20N <COMO>
L252	6200012680	S.COL 0.30-1.3-5TL 20N <COMO>
L253	6200012960	S.COL 0.45-1.4-4TL 12.1N <COMO>
L254	6200012340	S.COL LB2518T101K
L255	6200012340	S.COL LB2518T101K
L256	6200012340	S.COL LB2518T101K
L257	6200012340	S.COL LB2518T101K
L261	6200007720	S.COL LQW2BHN33NJ03L
L262	6200007740	S.COL LQW2BHN47NJ03L
L271	6130002961	S.COL #617DB-1327=P3
L272	6130002961	S.COL #617DB-1327=P3
L273	6200004920	S.COL MLF1608A 2R2K-T
L280	6200007700	S.COL LQW2BHN22NJ03L except [EUR], [FRA], [ESP], [USA], [EUR-1], [ESP-1], [USA-1]
L281	6200004590	S.COL MLF1608D R18K-T
L344	6200002971	S.COL NLV32T-121J
L371	6200005691	S.COL ELJRE 18NGFA
L372	6200005691	S.COL ELJRE 18NGFA
L417	6200003550	S.COL MLF1608A 4R7K-T
L435	6200003550	S.COL MLF1608A 4R7K-T
L464	6200003550	S.COL MLF1608A 4R7K-T
L477	6200003550	S.COL MLF1608A 4R7K-T
L501	6200005190	S.COL MLF1608D R56K-T
L502	6200009540	S.COL MLG1608B 22NJ-T [OTH], [ITA], [ITR], [OTH-1], [ITR-1], [CHN], [CHN-01] only
L503	6200005190	S.COL MLF1608D R56K-T
L504	6200004940	S.COL MLF1608D R27K-T
L505	6200009550	S.COL MLG1608B 27NJ-T [OTH], [ITA], [ITR], [OTH-1], [ITR-1], [CHN], [CHN-01] only
L511	6150004971	S.COL LS-522-LF
L512	6150004971	S.COL LS-522-LF
L513	6200002991	S.COL NLV32T-2R2J
L521	6200002991	S.COL NLV32T-2R2J
L522	6200002991	S.COL NLV32T-2R2J
L523	6200002991	S.COL NLV32T-2R2J
L524	6200002991	S.COL NLV32T-2R2J
L525	6200002991	S.COL NLV32T-2R2J

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
L526	6200002991	S.COL NLV32T-2R2J
L527	6200001831	S.COL NLV32T-100J
L528	6200001831	S.COL NLV32T-100J
L529	6200002991	S.COL NLV32T-2R2J
L541	6200003540	S.COL MLF1608D R22K-T
L542	6200007700	S.COL LQW2BHN22NJ03L
L543	6200005180	S.COL MLF1608D R39K-T
L544	6200004600	S.COL MLF1608D R15K-T
L545	6200007700	S.COL LQW2BHN22NJ03L
L546	6200004720	S.COL MLF1608D R10K-T
L551	6140002810	S.COL LR-317
L552	6140002810	S.COL LR-317
L561	6200004600	S.COL MLF1608D R15K-T
L562	6150004871	S.COL LS-512-LF
L563	6150004871	S.COL LS-512-LF
L564	6200004600	S.COL MLF1608D R15K-T
L565	6200004600	S.COL MLF1608D R15K-T
L566	6150004901	S.COL LS-515-LF
L571	6200002900	S.COL ELJSC 680K-F
L572	6200002900	S.COL ELJSC 680K-F
L573	6200003261	S.COL NLV32T-101J
L574	6200002041	S.COL NLV25T-101J
L575	6200003261	S.COL NLV32T-101J
L576	6200003261	S.COL NLV32T-101J
L577	6200003261	S.COL NLV32T-101J
L578	6200003261	S.COL NLV32T-101J
L579	6200001851	S.COL NLV32T-5R6J
L601	6200003031	S.COL NLV32T-R47J
L602	6200003261	S.COL NLV32T-101J
L603	6200003261	S.COL NLV32T-101J
L621	6150004881	S.COL LS-513-LF
L622	6200002041	S.COL NLV25T-101J
L631	6200003191	S.COL NLV32T-470J
L632	6150004891	S.COL LS-514-LF
L633	6150004881	S.COL LS-513-LF
L634	6200003261	S.COL NLV32T-101J
L671	6200003121	S.COL NLV32T-8R2J
L681	6200001711	S.COL NLV32T-220J
L682	6200001831	S.COL NLV32T-100J
L701	6200007380	S.COL ELJFC 8R2K-F
L711	6200007380	S.COL ELJFC 8R2K-F except [USA], [USA-1], [EUR], [EUR-1] except [USA], [USA-1], [EUR], [EUR-1]
L731	6150004911	S.COL LS-516-LF
L741	6150004911	S.COL LS-516-LF
L791	6200003261	S.COL NLV32T-101J
L841	6200003261	S.COL NLV32T-101J
L1011	6200003261	S.COL NLV32T-101J
L1012	6200003261	S.COL NLV32T-101J
L1013	6200002991	S.COL NLV32T-2R2J
L1014	6200001831	S.COL NLV32T-100J
L1015	6200008600	S.COL ELJFC 560K-F
L1041	6200002041	S.COL NLV25T-101J
L1042	6200002041	S.COL NLV25T-101J
L1043	6200002041	S.COL NLV25T-101J
L1044	6200003261	S.COL NLV32T-101J
L2001	6200001831	S.COL NLV32T-100J
L2251	6200003950	S.COL HF50ACC 322513-T
L2252	6200003950	S.COL HF50ACC 322513-T
L2253	6200003640	S.COL MLF1608E 100K-T
L2254	6200005190	S.COL MLF1608D R56K-T
R111	7030003310	S.RES ERJ3GEYJ 820 V (82)
R112	7030003320	S.RES ERJ3GEYJ 101 V (100)
R113	7030003360	S.RES ERJ3GEYJ 221 V (220)
R114	7030003720	S.RES ERJ3GEYJ 224 V (220 k)
R115	7030000300	S.RES MCR10EZHZJ 220 (221)
R116	7030000300	S.RES MCR10EZHZJ 220 (221)
R117	7030003320	S.RES ERJ3GEYJ 101 V (100)
R120	7030003340	S.RES ERJ3GEYJ 151 V (150)
R121	7030003350	S.RES ERJ3GEYJ 181 V (180)
R122	7030003470	S.RES ERJ3GEYJ 182 V (1.8 k) [ESP], [OTH], [ITA], [ITR], [OTH-1], [ITR-1], [CHN], [CHN-01] only
R123	7030003720	S.RES ERJ3GEYJ 224 V (220 k)
R124	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R125	7030003470	S.RES ERJ3GEYJ 182 V (1.8 k) [ESP], [OTH], [ITA], [ITR], [OTH-1], [ITR-1], [CHN], [CHN-01] only
R126	7030003470	S.RES ERJ3GEYJ 182 V (1.8 k) [ESP], [OTH], [ITA], [ITR], [OTH-1], [ITR-1], [CHN], [CHN-01] only
R131	7030003720	S.RES ERJ3GEYJ 224 V (220 k)
R132	7030003720	S.RES ERJ3GEYJ 224 V (220 k)
R133	7030009220	S.RES ERJ12VJ561U
R134	7030003370	S.RES ERJ3GEYJ 271 V (270)
R135	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R141	7030003720	S.RES ERJ3GEYJ 224 V (220 k)
R142	7030003720	S.RES ERJ3GEYJ 224 V (220 k)
R143	7030003470	S.RES ERJ3GEYJ 182 V (1.8 k) [ESP], [OTH], [ITA], [ITR], [OTH-1], [ITR-1], [CHN], [CHN-01] only
R144	7030003470	S.RES ERJ3GEYJ 182 V (1.8 k) [ESP], [OTH], [ITA], [ITR], [OTH-1], [ITR-1], [CHN], [CHN-01] only
R145	7030003470	S.RES ERJ3GEYJ 182 V (1.8 k) [ESP], [OTH], [ITA], [ITR], [OTH-1], [ITR-1], [CHN], [CHN-01] only
R151	7030003360	S.RES ERJ3GEYJ 221 V (220)
R153	7030003340	S.RES ERJ3GEYJ 151 V (150)
R154	7030003400	S.RES ERJ3GEYJ 471 V (470)
R155	7030003430	S.RES ERJ3GEYJ 821 V (820)
R156	7030003350	S.RES ERJ3GEYJ 181 V (180)
R157	7030003400	S.RES ERJ3GEYJ 471 V (470)
R158	7030003720	S.RES ERJ3GEYJ 224 V (220 k)
R159	7030003200	S.RES ERJ3GEYJ 100 V (10)
R160	7030003370	S.RES ERJ3GEYJ 271 V (270)
R161	7030003230	S.RES ERJ3GEYJ 180 V (18)
R162	7030003370	S.RES ERJ3GEYJ 271 V (270)

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
R163	7030003360	S.RES ERJ3GEYJ 221 V (220)
R164	7030003280	S.RES ERJ3GEYJ 470 V (47)
R165	7030003360	S.RES ERJ3GEYJ 221 V (220)
R174	7030003360	S.RES ERJ3GEYJ 221 V (220)
R181	7030000340	S.RES MCR10EZHZJ 470 (471)
R200	7030003350	S.RES ERJ3GEYJ 181 V (180)
R201	7030003370	S.RES ERJ3GEYJ 271 V (270)
R202	7030003340	S.RES ERJ3GEYJ 151 V (150)
R203	7030003200	S.RES ERJ3GEYJ 100 V (10)
R204	7030003340	S.RES ERJ3GEYJ 151 V (150)
R223	7030003220	S.RES ERJ3GEYJ 150 V (15)
R224	7030003320	S.RES ERJ3GEYJ 101 V (100)
R224	7030003370	S.RES ERJ3GEYJ 271 V (270)
R225	7030003280	S.RES ERJ3GEYJ 470 V (47)
R232	7030003400	S.RES ERJ3GEYJ 471 V (470)
R234	7030003200	S.RES ERJ3GEYJ 100 V (10)
R236	7030003370	S.RES ERJ3GEYJ 271 V (270)
R237	7030003230	S.RES ERJ3GEYJ 180 V (18)
R238	7030003370	S.RES ERJ3GEYJ 271 V (270)
R251	7030000300	S.RES MCR10EZHZJ 220 (221)
R252	7030003360	S.RES ERJ3GEYJ 221 V (220)
R253	7030003360	S.RES ERJ3GEYJ 221 V (220)
R271	7030000300	S.RES MCR10EZHZJ 220 (221)
R272	7030003440	S.RES ERJ3GEYJ 102 V (1 k) except [USA], [USA-1], [EUR], [EUR-1]
R273	7030003440	S.RES ERJ3GEYJ 102 V (1 k) except [USA], [USA-1], [EUR], [EUR-1]
R274	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R275	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R276	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R277	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R278	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R279	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R280	7030003380	S.RES ERJ3GEYJ 331 V (330)
R281	7030003350	S.RES ERJ3GEYJ 181 V (180)
R282	7030003260	S.RES ERJ3GEYJ 330 V (33)
R283	7030003350	S.RES ERJ3GEYJ 181 V (180)
R284	7030003200	S.RES ERJ3GEYJ 100 V (10)
R285	7030003400	S.RES ERJ3GEYJ 471 V (470)
R286	7030003200	S.RES ERJ3GEYJ 100 V (10)
R288	7030003500	S.RES ERJ3GEYJ 332 V (3.3 k)
R340	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R341	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R342	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R343	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R351	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R352	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R353	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R354	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R355	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R356	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R357	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R358	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R359	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R501	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R502	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R503	7030003400	S.RES ERJ3GEYJ 471 V (470)
R504	7030003230	S.RES ERJ3GEYJ 180 V (18) [OTH], [ITA], [ITR], [OTH-1], [ITR-1], [CHN], [CHN-01] only
R511	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R512	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R513	7030003380	S.RES ERJ3GEYJ 331 V (330)
R514	7030003400	S.RES ERJ3GEYJ 471 V (470)
R521	7030003280	S.RES ERJ3GEYJ 470 V (47)
R522	7030003280	S.RES ERJ3GEYJ 470 V (47)
R523	7030003320	S.RES ERJ3GEYJ 101 V (100)
R524	7030003360	S.RES ERJ3GEYJ 221 V (220)
R525	7030003360	S.RES ERJ3GEYJ 221 V (220)
R526	7030003360	S.RES ERJ3GEYJ 221 V (220)
R527	7030003350	S.RES ERJ3GEYJ 181 V (180)
R527	7030003360	S.RES ERJ3GEYJ 221 V (220)
R528	7030003360	S.RES ERJ3GEYJ 221 V (220)
R551	7030003370	S.RES ERJ3GEYJ 271 V (270)
R552	7030003230	S.RES ERJ3GEYJ 180 V (18)
R553	7030003370	S.RES ERJ3GEYJ 271 V (270)
R554	7030003400	S.RES ERJ3GEYJ 471 V (470)
R561	7030003280	S.RES ERJ3GEYJ 470 V (47)
R562	7030003360	S.RES ERJ3GEYJ 221 V (220)
R563	7030003360	S.RES ERJ3GEYJ 221 V (220)
R564	7030003280	S.RES ERJ3GEYJ 470 V (47)
R571	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R572	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)
R573	7030003360	S.RES ERJ3GEYJ 221 V (220)
R574	7030003360	S.RES ERJ3GEYJ 221 V (220)
R576	7030003360	S.RES ERJ3GEYJ 221 V (220)
R577	7030003360	S.RES ERJ3GEYJ 221 V (220)
R578	7030003320	S.RES ERJ3GEYJ 101 V (100)
R579	7310005110	S.TRI RH03ADCS2X (470)
R580	7030003320	S.RES ERJ3GEYJ 101 V (100)
R581	7030003360	S.RES ERJ3GEYJ 221 V (220)
R582	7030003400	S.RES ERJ3GEYJ 471 V (470)
R583	7030003360	S.RES ERJ3GEYJ 221 V (220)
R584	7030003400	S.RES ERJ3GEYJ 471 V (470)
R585	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R585	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R586	7030003500	S.RES ERJ3GEYJ 332 V (3.3 k)
R587	7030003320	S.RES ERJ3GEYJ 472 V (4.7 k)
R588	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R601	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R602	7030003570	S.RES ERJ3GEYJ 123 V (12 k)
R603	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)
R604	7030003380	S.RES ERJ3GEYJ 331 V (330)
R605	7030003280	S.RES ERJ3GEYJ 470 V (47)
R612	7030003540	S.RES ERJ3GEYJ 682 V (6.8 k)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R613	7030003440	S.RES	ERJ3GEYJ 102 V (1 k)
R614	7030003410	S.RES	ERJ3GEYJ 561 V (560)
R615	7030003280	S.RES	ERJ3GEYJ 470 V (47)
R616	7030003440	S.RES	ERJ3GEYJ 102 V (1 k)
R617	7030003280	S.RES	ERJ3GEYJ 470 V (47)
R618	7030003430	S.RES	ERJ3GEYJ 821 V (820)
R619	7030003420	S.RES	ERJ3GEYJ 681 V (680)
R621	7030003680	S.RES	ERJ3GEYJ 104 V (100 k)
R622	7030003320	S.RES	ERJ3GEYJ 101 V (100)
R623	7310005020	S.TRI	RH03ADC14X (10 k)
R624	7030003620	S.RES	ERJ3GEYJ 333 V (33 k)
R625	7030003520	S.RES	ERJ3GEYJ 472 V (4.7 k)
R626	7030003320	S.RES	ERJ3GEYJ 101 V (100)
R627	7030003400	S.RES	ERJ3GEYJ 471 V (470)
R628	7030003400	S.RES	ERJ3GEYJ 471 V (470)
R631	7030003640	S.RES	ERJ3GEYJ 473 V (47 k)
R632	7030003480	S.RES	ERJ3GEYJ 222 V (2.2 k)
R633	7030003720	S.RES	ERJ3GEYJ 224 V (220 k)
R634	7030003360	S.RES	ERJ3GEYJ 221 V (220)
R635	7030003520	S.RES	ERJ3GEYJ 472 V (4.7 k)
R636	7030003320	S.RES	ERJ3GEYJ 101 V (100)
R637	7030003640	S.RES	ERJ3GEYJ 473 V (47 k)
R638	7030003520	S.RES	ERJ3GEYJ 472 V (4.7 k)
R639	7030003680	S.RES	ERJ3GEYJ 104 V (100 k)
R640	7030003540	S.RES	ERJ3GEYJ 682 V (6.8 k)
R641	7030003500	S.RES	ERJ3GEYJ 332 V (3.3 k)
R642	7030003380	S.RES	ERJ3GEYJ 331 V (330)
R643	7030003600	S.RES	ERJ3GEYJ 223 V (22 k)
R644	7030003440	S.RES	ERJ3GEYJ 102 V (1 k)
R661	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R662	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R663	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R664	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R665	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R671	7030003480	S.RES	ERJ3GEYJ 222 V (2.2 k)
R672	7030003480	S.RES	ERJ3GEYJ 222 V (2.2 k)
R673	7030003360	S.RES	ERJ3GEYJ 221 V (220)
R674	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R681	7030003480	S.RES	ERJ3GEYJ 222 V (2.2 k)
R682	7030003480	S.RES	ERJ3GEYJ 222 V (2.2 k)
R683	7030003360	S.RES	ERJ3GEYJ 221 V (220)
R684	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R691	7030003480	S.RES	ERJ3GEYJ 222 V (2.2 k)
R692	7030003480	S.RES	ERJ3GEYJ 222 V (2.2 k)
R693	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R701	7030003480	S.RES	ERJ3GEYJ 222 V (2.2 k)
R702	7030003480	S.RES	ERJ3GEYJ 222 V (2.2 k)
R703	7030003360	S.RES	ERJ3GEYJ 221 V (220)
R704	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R711	7030003480	S.RES	ERJ3GEYJ 222 V (2.2 k)
R712	7030003480	S.RES	ERJ3GEYJ 222 V (2.2 k)
R713	7030003360	S.RES	ERJ3GEYJ 221 V (220)
R714	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R721	7030003320	S.RES	ERJ3GEYJ 101 V (100)
R722	7030003530	S.RES	ERJ3GEYJ 562 V (5.6 k)
R723	7030003420	S.RES	ERJ3GEYJ 681 V (680)
R730	7030003570	S.RES	ERJ3GEYJ 123 V (12 k)
R731	7030003580	S.RES	ERJ3GEYJ 153 V (15 k)
R732	7030003590	S.RES	ERJ3GEYJ 183 V (18 k)
R733	7030003400	S.RES	ERJ3GEYJ 471 V (470)
R734	7030003280	S.RES	ERJ3GEYJ 470 V (47)
R735	7030003400	S.RES	ERJ3GEYJ 471 V (470)
R736	7030003280	S.RES	ERJ3GEYJ 470 V (47)
R741	7310005050	S.TRI	RH03ADCS3X (4.7 k)
R742	7030003280	S.RES	ERJ3GEYJ 470 V (47)
R751	7030003400	S.RES	ERJ3GEYJ 471 V (470)
R752	7030003640	S.RES	ERJ3GEYJ 473 V (47 k)
R753	7030003360	S.RES	ERJ3GEYJ 221 V (220)
R761	7030003440	S.RES	ERJ3GEYJ 102 V (1 k)
R762	7030003660	S.RES	ERJ3GEYJ 683 V (68 k)
R763	7030003680	S.RES	ERJ3GEYJ 104 V (100 k)
R764	7030003580	S.RES	ERJ3GEYJ 153 V (15 k)
R771	7030003520	S.RES	ERJ3GEYJ 472 V (4.7 k)
R772	7030003440	S.RES	ERJ3GEYJ 102 V (1 k)
R773	7030003540	S.RES	ERJ3GEYJ 682 V (6.8 k)
R774	7030003440	S.RES	ERJ3GEYJ 102 V (1 k)
R775	7030003800	S.RES	ERJ3GEYJ 105 V (1 M)
R776	7030003320	S.RES	ERJ3GEYJ 101 V (100)
R777	7030003320	S.RES	ERJ3GEYJ 101 V (100)
R778	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R779	7030003520	S.RES	ERJ3GEYJ 472 V (4.7 k)
R780	7030003640	S.RES	ERJ3GEYJ 473 V (47 k)
R781	7030003680	S.RES	ERJ3GEYJ 104 V (100 k)
R782	7030003420	S.RES	ERJ3GEYJ 681 V (680)
R783	7030003640	S.RES	ERJ3GEYJ 473 V (47 k)
R785	7030003640	S.RES	ERJ3GEYJ 473 V (47 k)
R786	7030003200	S.RES	ERJ3GEYJ 100 V (10)
R791	7030003480	S.RES	ERJ3GEYJ 222 V (2.2 k)
R792	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R793	7030003460	S.RES	ERJ3GEYJ 152 V (1.5 k)
R794	7030003740	S.RES	ERJ3GEYJ 334 V (330 k)
R795	7030003700	S.RES	ERJ3GEYJ 154 V (150 k)
R796	7030003500	S.RES	ERJ3GEYJ 332 V (3.3 k)
R797	7030003440	S.RES	ERJ3GEYJ 102 V (1 k)
R803	7030003520	S.RES	ERJ3GEYJ 472 V (4.7 k)
R811	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R812	7030003630	S.RES	ERJ3GEYJ 393 V (39 k)
R813	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R814	7030003700	S.RES	ERJ3GEYJ 154 V (150 k)
R815	7030003700	S.RES	ERJ3GEYJ 154 V (150 k)
R816	7030003320	S.RES	ERJ3GEYJ 101 V (100)
R821	7030003840	S.RES	ERJ3GEYJ 225 V (2.2 M)
R822	7030003800	S.RES	ERJ3GEYJ 105 V (1 M)
R823	7030003670	S.RES	ERJ3GEYJ 823 V (82 k)

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
R824	7030003670	S.RES	ERJ3GEYJ 823 V (82 k)
R825	7030003670	S.RES	ERJ3GEYJ 823 V (82 k)
R826	7030003680	S.RES	ERJ3GEYJ 104 V (100 k)
R827	7030003690	S.RES	ERJ3GEYJ 124 V (120 k)
R828	7030003760	S.RES	ERJ3GEYJ 474 V (470 k)
R829	7030003680	S.RES	ERJ3GEYJ 104 V (100 k)
R830	7030003840	S.RES	ERJ3GEYJ 225 V (2.2 M)
R831	7030003800	S.RES	ERJ3GEYJ 105 V (1 M)
R832	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R841	7030003400	S.RES	ERJ3GEYJ 471 V (470)
R842	7030003320	S.RES	ERJ3GEYJ 101 V (100)
R843	7030003440	S.RES	ERJ3GEYJ 102 V (1 k)
R845	7030003650	S.RES	ERJ3GEYJ 563 V (56 k)
R846	7030003680	S.RES	ERJ3GEYJ 104 V (100 k)
R861	7030003600	S.RES	ERJ3GEYJ 223 V (22 k)
R862	7030003660	S.RES	ERJ3GEYJ 683 V (68 k)
R864	7030003580	S.RES	ERJ3GEYJ 153 V (15 k)
R866	7030003760	S.RES	ERJ3GEYJ 474 V (470 k)
R868	7030003580	S.RES	ERJ3GEYJ 153 V (15 k)
R869	7030003570	S.RES	ERJ3GEYJ 123 V (12 k)
R870	7030003640	S.RES	ERJ3GEYJ 473 V (47 k)
R871	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R872	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R881	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R882	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R883	7030003640	S.RES	ERJ3GEYJ 473 V (47 k)
R884	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R890	7030003700	S.RES	ERJ3GEYJ 154 V (150 k)
R891	7030003690	S.RES	ERJ3GEYJ 124 V (120 k)
R892	7030003650	S.RES	ERJ3GEYJ 563 V (56 k)
R893	7030003640	S.RES	ERJ3GEYJ 473 V (47 k)
R894	7030003680	S.RES	ERJ3GEYJ 104 V (100 k)
R895	7030003520	S.RES	ERJ3GEYJ 472 V (4.7 k)
R896	7310004250	TRI	EVN-D2AA03 B25
R898	7030003680	S.RES	ERJ3GEYJ 104 V (100 k)
R899	7030003680	S.RES	ERJ3GEYJ 104 V (100 k)
R900	7310005020	S.TRI	RH03ADC14X (10 k)
R901	7030003640	S.RES	ERJ3GEYJ 473 V (47 k)
R902	7030003520	S.RES	ERJ3GEYJ 472 V (4.7 k)
R903	7030003520	S.RES	ERJ3GEYJ 472 V (4.7 k)
R911	7030005871	S.RES	ERA3YKD 104V (100 k)
R912	7030005871	S.RES	ERA3YKD 104V (100 k)
R913	7030003400	S.RES	ERJ3GEYJ 471 V (470)
R921	7310005140	S.TRI	RH03ADCJ3X (2.2 k)
R922	7030003550	S.RES	ERJ3GEYJ 822 V (8.2 k)
R923	7030003400	S.RES	ERJ3GEYJ 471 V (470)
R924	7030003520	S.RES	ERJ3GEYJ 472 V (4.7 k)
R931	7030003520	S.RES	ERJ3GEYJ 472 V (4.7 k)
R932	7030003670	S.RES	ERJ3GEYJ 823 V (82 k)
R933	7030003680	S.RES	ERJ3GEYJ 104 V (100 k)
R934	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R935	7030003540	S.RES	ERJ3GEYJ 682 V (6.8 k)
R936	7030003600	S.RES	ERJ3GEYJ 223 V (22 k)
R937	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R938	7030003680	S.RES	ERJ3GEYJ 104 V (100 k)
R939	7030003720	S.RES	ERJ3GEYJ 224 V (220 k)
R940	7030003540	S.RES	ERJ3GEYJ 682 V (6.8 k)
R941	7030003360	S.RES	ERJ3GEYJ 221 V (220)
R942	7030003440	S.RES	ERJ3GEYJ 102 V (1 k)
R943	7030003540	S.RES	ERJ3GEYJ 682 V (6.8 k)
R944	7030003600	S.RES	ERJ3GEYJ 223 V (22 k)
R945	7310004250	TRI	EVN-D2AA03 B25
R946	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R947	7030003290	S.RES	ERJ3GEYJ 560 V (56)
R948	7030003640	S.RES	ERJ3GEYJ 473 V (47 k)
R949	7030003640	S.RES	ERJ3GEYJ 473 V (47 k)
R950	7030003720	S.RES	ERJ3GEYJ 224 V (220 k)
R951	7030003720	S.RES	ERJ3GEYJ 224 V (220 k)
R952	7030003520	S.RES	ERJ3GEYJ 472 V (4.7 k)
R953	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R963	7030003320	S.RES	ERJ3GEYJ 101 V (100)
R964	7030003620	S.RES	ERJ3GEYJ 333 V (33 k)
R965	7030003360	S.RES	ERJ3GEYJ 221 V (220)
R966	7030003510	S.RES	ERJ3GEYJ 392 V (39 k)
R967	7030003440	S.RES	ERJ3GEYJ 102 V (1 k)
R971	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R981	7030003200	S.RES	ERJ3GEYJ 100 V (10)
R982	7030003640	S.RES	ERJ3GEYJ 473 V (47 k)
R983	7030003590	S.RES	ERJ3GEYJ 183 V (18 k)
R984	7030003580	S.RES	ERJ3GEYJ 153 V (15 k)
R985	7030003700	S.RES	ERJ3GEYJ 154 V (150 k)
R986	7030003710	S.RES	ERJ3GEYJ 184 V (180 k)
R987	7030003370	S.RES	ERJ3GEYJ 271 V (270)
R988	7030003700	S.RES	ERJ3GEYJ 154 V (150 k)
R989	7030003700	S.RES	ERJ3GEYJ 154 V (150 k)
R990	7030003730	S.RES	ERJ3GEYJ 274 V (270 k)
R991	7030003780	S.RES	ERJ3GEYJ 684 V (680 k)
R992	7030003750	S.RES	ERJ3GEYJ 394 V (390 k)
R993	7030003670	S.RES	ERJ3GEYJ 823 V (82 k)
R994	7030003670	S.RES	ERJ3GEYJ 823 V (82 k)
R995	7030003450	S.RES	ERJ3GEYJ 122 V (1.2 k)
R996	7030003440	S.RES	ERJ3GEYJ 102 V (1 k)
R998	7030003600	S.RES	ERJ3GEYJ 223 V (22 k)
R999	7310005020	S.TRI	RH03ADC14X (10 k)
R1000	7030003410	S.RES	ERJ3GEYJ 561 V (560)
R1001	7030003660	S.RES	ERJ3GEYJ 683 V (68 k)
R1002	7310005050	S.TRI	RH03ADCS3X (4.7 k)
R1003	7030003660	S.RES	ERJ3GEYJ 683 V (68 k)
R1004	7030003560	S.RES	ERJ3GEYJ 103 V (10 k)
R1010	7030003640	S.RES	ERJ3GEYJ 473 V (47 k) except [EUR], [FRA], [ESP], [USA], [EUR-1], [ESP-1], [USA-1]
R1011	7030003320	S.RES	ERJ3GEYJ 101 V (100)
R1012	7030003620	S.RES	ERJ3GEYJ 333 V (33 k)
R1013	7030003580	S.RES	ERJ3GEYJ 153 V (15 k)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
R1014	7030003830	S.RES ERJ3GEYJ 185 V (1.8 M)
R1015	7030003280	S.RES ERJ3GEYJ 470 V (47)
R1016	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R1017	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R1018	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R1019	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)
R1020	7030003760	S.RES ERJ3GEYJ 474 V (470 k)
R1021	7030003320	S.RES ERJ3GEYJ 101 V (100)
R1022	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R1023	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R1024	7030003340	S.RES ERJ3GEYJ 151 V (150)
R1025	7030003320	S.RES ERJ3GEYJ 101 V (100)
R1026	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R1027	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R1028	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R1029	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R1030	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R1041	7030003280	S.RES ERJ3GEYJ 470 V (47) except [USA], [USA-1], [EUR], [EUR-1]
R1042	7310005060	S.TRI RH03ADCE5X (150 k)
R1043	7030005680	S.RES RR0816R-473-D (47 k)
R1044	7030005680	S.RES RR0816R-473-D (47 k)
R1045	7310005050	S.TRI RH03ADCS3X (4.7 k)
R1046	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R1047	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R1048	7030003430	S.RES ERJ3GEYJ 821 V (820)
R1049	7030003450	S.RES ERJ3GEYJ 122 V (1.2 k)
R1050	7030003380	S.RES ERJ3GEYJ 331 V (330)
R1051	7030003550	S.RES ERJ3GEYJ 822 V (8.2 k)
R1052	7030003380	S.RES ERJ3GEYJ 331 V (330)
R1054	7030003420	S.RES ERJ3GEYJ 681 V (680)
R1055	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R1057	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R1061	7030003400	S.RES ERJ3GEYJ 471 V (470)
R1062	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R1070	7030003650	S.RES ERJ3GEYJ 563 V (56 k)
R1071	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R1072	7030003760	S.RES ERJ3GEYJ 474 V (470 k)
R1073	7030003800	S.RES ERJ3GEYJ 105 V (1 M)
R1074	7030003840	S.RES ERJ3GEYJ 225 V (2.2 M)
R1075	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R1076	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R1077	7030003720	S.RES ERJ3GEYJ 224 V (220 k)
R1079	7030003380	S.RES ERJ3GEYJ 331 V (330)
R1080	7310005150	S.TRI RH03AD CJ5X (220 k)
R1081	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R1081	7030003740	S.RES ERJ3GEYJ 334 V (330 k)
R1082	7310005150	S.TRI RH03AD CJ5X (220 k)
R1083	7030003700	S.RES ERJ3GEYJ 154 V (150 k)
R1083	7030003720	S.RES ERJ3GEYJ 224 V (220 k)
R1084	7310005150	S.TRI RH03AD CJ5X (220 k)
R1085	7030003690	S.RES ERJ3GEYJ 124 V (120 k)
R1086	7310005150	S.TRI RH03AD CJ5X (220 k)
R1087	7030003740	S.RES ERJ3GEYJ 334 V (330 k)
R1088	7310005150	S.TRI RH03AD CJ5X (220 k)
R1091	7030003380	S.RES ERJ3GEYJ 331 V (330)
R1092	7030003400	S.RES ERJ3GEYJ 471 V (470)
R1093	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R1094	7030003340	S.RES ERJ3GEYJ 151 V (150)
R1095	7030004710	S.RES ERJ3GEYJ 475 V (4.7 M)
R1096	7030003600	S.RES ERJ3GEYJ 223 V (22 k)
R1097	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R1098	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R1099	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R1100	7030003360	S.RES ERJ3GEYJ 221 V (220)
R1101	7030003360	S.RES ERJ3GEYJ 221 V (220)
R1102	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R1103	7030003200	S.RES ERJ3GEYJ 100 V (10)
R1104	7030003320	S.RES ERJ3GEYJ 101 V (100)
R1111	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R1112	7030003800	S.RES ERJ3GEYJ 105 V (1 M)
R1113	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R1114	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R1115	7030003470	S.RES ERJ3GEYJ 182 V (1.8 k)
R1116	7030003400	S.RES ERJ3GEYJ 471 V (470)
R1121	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R1122	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R1123	7030003620	S.RES ERJ3GEYJ 333 V (33 k)
R1124	7030003620	S.RES ERJ3GEYJ 333 V (33 k)
R1125	7310005020	S.TRI RH03AD C14X (10 k)
R1126	7030003800	S.RES ERJ3GEYJ 105 V (1 M)
R1127	7030003400	S.RES ERJ3GEYJ 471 V (470)
R1128	7030010760	S.RES ERA3YKD 623V (62 k)
R1131	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R1132	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R1133	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R1141	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R1142	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R1143	7030003760	S.RES ERJ3GEYJ 474 V (470 k)
R1144	7030003760	S.RES ERJ3GEYJ 474 V (470 k)
R1145	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R1146	7030003760	S.RES ERJ3GEYJ 474 V (470 k)
R1147	7030003760	S.RES ERJ3GEYJ 474 V (470 k)
R1148	7030003760	S.RES ERJ3GEYJ 474 V (470 k)
R1149	7030003560	S.RES ERJ3GEYJ 103 V (10 k) except [USA], [USA-1], [EUR], [EUR-1]
R1150	7030003440	S.RES ERJ3GEYJ 102 V (1 k) except [USA], [USA-1], [EUR], [EUR-1]
R1161	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R1162	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R1163	7030003580	S.RES ERJ3GEYJ 153 V (15 k)
R1164	7030003590	S.RES ERJ3GEYJ 183 V (18 k)
R1165	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R1166	7030003740	S.RES ERJ3GEYJ 334 V (330 k)

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
R1167	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R1168	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R1169	7030003700	S.RES ERJ3GEYJ 154 V (150 k)
R1170	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R2001	7030003360	S.RES ERJ3GEYJ 221 V (220)
R2002	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2003	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2004	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R2005	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R2011	7030003320	S.RES ERJ3GEYJ 101 V (100)
R2012	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2013	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2014	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2015	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2016	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2017	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2018	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2019	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2021	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R2041	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2042	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2044	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2045	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R2051	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2052	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2053	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2054	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2055	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2056	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2057	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2058	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2061	7030003320	S.RES ERJ3GEYJ 101 V (100)
R2062	7030003320	S.RES ERJ3GEYJ 101 V (100)
R2063	7030003320	S.RES ERJ3GEYJ 101 V (100)
R2064	7030003320	S.RES ERJ3GEYJ 101 V (100)
R2065	7030003320	S.RES ERJ3GEYJ 101 V (100)
R2072	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2074	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2076	7030003800	S.RES ERJ3GEYJ 105 V (1 M)
R2077	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R2081	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R2084	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R2085	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R2086	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2087	7030006560	S.RES RR0816P-223-D (22 k)
R2088	7030006560	S.RES RR0816P-223-D (22 k)
R2089	7030006560	S.RES RR0816P-223-D (22 k)
R2090	7030006560	S.RES RR0816P-223-D (22 k)
R2101	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R2102	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R2103	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R2104	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R2105	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R2106	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)
R2107	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R2108	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2109	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R2110	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R2111	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R2112	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R2113	7030003750	S.RES ERJ3GEYJ 394 V (390 k)
R2121	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R2122	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R2123	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R2124	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R2131	7030003800	S.RES ERJ3GEYJ 105 V (1 M)
R2132	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R2133	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2134	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2141	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R2142	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2143	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R2144	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2146	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R2147	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2148	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R2149	7030003440	S.RES ERJ3GEYJ 102 V (1 k)
R2150	7030003400	S.RES ERJ3GEYJ 471 V (470)
R2151	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R2152	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R2161	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R2162	7030003520	S.RES ERJ3GEYJ 472 V (4.7 k)
R2163	7030003630	S.RES ERJ3GEYJ 393 V (39 k)
R2164	7030003620	S.RES ERJ3GEYJ 333 V (33 k)
R2165	7030003320	S.RES ERJ3GEYJ 101 V (100)
R2166	7030003320	S.RES ERJ3GEYJ 101 V (100)
R2167	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R2171	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R2172	7030003540	S.RES ERJ3GEYJ 682 V (6.8 k)
R2173	7030003620	S.RES ERJ3GEYJ 333 V (33 k)
R2174	7030003640	S.RES ERJ3GEYJ 473 V (47 k)
R2175	7030003590	S.RES ERJ3GEYJ 183 V (18 k)
R2201	7030009851	S.RES ERA3YED 271V (270)
R2202	7030009861	S.RES ERA3YED 471V (470)
R2203	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R2204	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R2205	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R2206	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R2207	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R2208	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R2209	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R2210	7030003680	S.RES ERJ3GEYJ 104 V (100 k)
R2211	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R2212	7030003560	S.RES ERJ3GEYJ 103 V (10 k)

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
R2213	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R2214	7030003560	S.RES ERJ3GEYJ 103 V (10 k)
R2215	7030003480	S.RES ERJ3GEYJ 222 V (2.2 k)
R2221	7030003320	S.RES ERJ3GEYJ 101 V (100)
R2231	7030003320	S.RES ERJ3GEYJ 101 V (100)
R2241	7030003420	S.RES ERJ3GEYJ 681 V (680)
R2242	7030003420	S.RES ERJ3GEYJ 681 V (680)
R2243	7030003420	S.RES ERJ3GEYJ 681 V (680)
R2244	7030003410	S.RES ERJ3GEYJ 561 V (560)
R2245	7030003360	S.RES ERJ3GEYJ 221 V (220)
C111	4030011600	S.CER C1608 JB 1E 104K-T
C112	4030011600	S.CER C1608 JB 1E 104K-T
C113	4030011600	S.CER C1608 JB 1E 104K-T
C114	4030008650	S.CER C1608 JB 1H 332K-T
C115	4030011330	S.CER C1608 CH 1H 391J-T
C116	4030008650	S.CER C1608 JB 1H 332K-T
C121	4030011600	S.CER C1608 JB 1E 104K-T
C122	4030008470	S.CER C1608 JB 1H 272K-T
C123	4030009880	S.CER C1608 JB 1H 682K-T
C124	4030009980	S.CER C1608 JB 1H 152K-T
C125	4030011600	S.CER C1608 JB 1E 104K-T
C131	4030011600	S.CER C1608 JB 1E 104K-T
C132	4030011600	S.CER C1608 JB 1E 104K-T
C133	4030007060	S.CER C1608 CH 1H 270J-T
C134	4030007080	S.CER C1608 CH 1H 390J-T
C135	4030011540	S.CER C1608 CH 1H 750J-T
C136	4030007020	S.CER C1608 CH 1H 120J-T
C137	4030007090	S.CER C1608 CH 1H 470J-T
C138	4030011600	S.CER C1608 JB 1E 104K-T
C141	4030011600	S.CER C1608 JB 1E 104K-T
C142	4030006870	S.CER C1608 JB 1H 222K-T
C143	4030006870	S.CER C1608 JB 1H 222K-T
C144	4030008870	S.CER C1608 JB 1H 183K-T
C153	4030011600	S.CER C1608 JB 1E 104K-T
C155	4030011600	S.CER C1608 JB 1E 104K-T
C157	4030011600	S.CER C1608 JB 1E 104K-T
C158	4030011600	S.CER C1608 JB 1E 104K-T
C159	4030011600	S.CER C1608 JB 1E 104K-T
C161	4030011600	S.CER C1608 JB 1E 104K-T
C163	4030011600	S.CER C1608 JB 1E 104K-T
C165	4030011600	S.CER C1608 JB 1E 104K-T
C167	4030011600	S.CER C1608 JB 1E 104K-T
C168	4030007010	S.CER C1608 CH 1H 100D-T
C169	4030006860	S.CER C1608 JB 1H 102K-T
C171	4030011600	S.CER C1608 JB 1E 104K-T
C173	4030011600	S.CER C1608 JB 1E 104K-T
C181	4030009920	S.CER C1608 CH 1H 050B-T
C182	4030009500	S.CER C1608 CH 1H 0R5B-T
C183	4030009910	S.CER C1608 CH 1H 040B-T
C184	4030009500	S.CER C1608 CH 1H 0R5B-T
C185	4030009920	S.CER C1608 CH 1H 050B-T
C186	4030007060	S.CER C1608 CH 1H 270J-T
C187	4030006860	S.CER C1608 JB 1H 102K-T
C188	4030006860	S.CER C1608 JB 1H 102K-T
C191	4030006880	S.CER C1608 JB 1H 472K-T
C192	4030006880	S.CER C1608 JB 1H 472K-T
C195	4030006990	S.CER C1608 CH 1H 080D-T
C196	4030007050	S.CER C1608 CH 1H 220J-T
C197	4030008560	S.CER C1608 CH 1H 300J-T
C201	4030006860	S.CER C1608 JB 1H 102K-T
C212	4030006860	S.CER C1608 JB 1H 102K-T
C222	4030011600	S.CER C1608 JB 1E 104K-T
C223	4030006860	S.CER C1608 JB 1H 102K-T
C224	4030006860	S.CER C1608 JB 1H 102K-T
C226	4030011600	S.CER C1608 JB 1E 104K-T
C233	4030011600	S.CER C1608 JB 1E 104K-T
C235	4030011600	S.CER C1608 JB 1E 104K-T
C236	4030007030	S.CER C1608 CH 1H 150J-T
C237	4030011600	S.CER C1608 JB 1E 104K-T
C238	4030011600	S.CER C1608 JB 1E 104K-T
C239	4510009060	S.ELE EEE1HA3R3SR
C251	4030006880	S.CER C1608 JB 1H 472K-T
C253	4030011770	S.CER C1608 CH 1H 060B-T
C254	4030009540	S.CER C1608 CH 1H 1R5B-T
C255	4030007010	S.CER C1608 CH 1H 100D-T
C256	4030009540	S.CER C1608 CH 1H 1R5B-T
C257	4030007010	S.CER C1608 CH 1H 100D-T
C258	4030009910	S.CER C1608 CH 1H 040B-T
C259	4030009910	S.CER C1608 CH 1H 040B-T
C261	4030007050	S.CER C1608 CH 1H 220J-T
C262	4030007040	S.CER C1608 CH 1H 180J-T
C263	4030007070	S.CER C1608 CH 1H 330J-T
C264	4030006990	S.CER C1608 CH 1H 080D-T
C270	4030006860	S.CER C1608 JB 1H 102K-T
C271	4030006860	S.CER C1608 JB 1H 102K-T except [USA], [USA-1], [EUR], [EUR-1] except [USA], [USA-1], [EUR], [EUR-1]
C272	4030007010	S.CER C1608 CH 1H 100D-T
C273	4030006880	S.CER C1608 JB 1H 472K-T
C275	4030006860	S.CER C1608 JB 1H 102K-T
C276	4030006860	S.CER C1608 JB 1H 102K-T
C277	4030006860	S.CER C1608 JB 1H 102K-T
C278	4030006860	S.CER C1608 JB 1H 102K-T
C279	4030006860	S.CER C1608 JB 1H 102K-T
C280	4030007020	S.CER C1608 CH 1H 120J-T except [EUR], [FRA], [ESP], [USA], [EUR-1], [ESP-1], [USA-1]
C281	4030006880	S.CER C1608 JB 1H 472K-T
C282	4030006880	S.CER C1608 JB 1H 472K-T
C283	4030006880	S.CER C1608 JB 1H 472K-T
C284	4030006860	S.CER C1608 JB 1H 102K-T
C285	4030007090	S.CER C1608 CH 1H 470J-T

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
C286	4030006860	S.CER C1608 JB 1H 102K-T
C287	4030006860	S.CER C1608 JB 1H 102K-T
C289	4030006860	S.CER C1608 JB 1H 102K-T
C290	4030011600	S.CER C1608 JB 1E 104K-T
C300	4030006860	S.CER C1608 JB 1H 102K-T
C301	4030006860	S.CER C1608 JB 1H 102K-T
C302	4030006860	S.CER C1608 JB 1H 102K-T
C303	4030006860	S.CER C1608 JB 1H 102K-T
C351	4510008540	S.ELE EEE1CA100SR
C352	4030011600	S.CER C1608 JB 1E 104K-T
C353	4030006860	S.CER C1608 JB 1H 102K-T
C354	4030006860	S.CER C1608 JB 1H 102K-T
C361	4030011600	S.CER C1608 JB 1E 104K-T
C362	4030011600	S.CER C1608 JB 1E 104K-T
C363	4030011600	S.CER C1608 JB 1E 104K-T
C364	4030011600	S.CER C1608 JB 1E 104K-T
C365	4030011600	S.CER C1608 JB 1E 104K-T
C366	4030011600	S.CER C1608 JB 1E 104K-T
C367	4030011600	S.CER C1608 JB 1E 104K-T
C371	4030006850	S.CER C1608 JB 1H 471K-T
C372	4030006990	S.CER C1608 CH 1H 080D-T
C373	4030006990	S.CER C1608 CH 1H 080D-T
C374	4030006990	S.CER C1608 CH 1H 080D-T
C375	4030006990	S.CER C1608 CH 1H 080D-T
C376	4030006850	S.CER C1608 JB 1H 471K-T
C401	4030006880	S.CER C1608 JB 1H 472K-T
C402	4030006880	S.CER C1608 JB 1H 472K-T
C403	4030006880	S.CER C1608 JB 1H 472K-T
C404	4030006880	S.CER C1608 JB 1H 472K-T
C405	4030006880	S.CER C1608 JB 1H 472K-T
C406	4030006880	S.CER C1608 JB 1H 472K-T
C407	4030006880	S.CER C1608 JB 1H 472K-T
C408	4030006880	S.CER C1608 JB 1H 472K-T
C409	4030006880	S.CER C1608 JB 1H 472K-T
C410	4030006880	S.CER C1608 JB 1H 472K-T
C411	4030006880	S.CER C1608 JB 1H 472K-T
C412	4030006880	S.CER C1608 JB 1H 472K-T
C413	4030006880	S.CER C1608 JB 1H 472K-T
C414	4030006850	S.CER C1608 JB 1H 471K-T
C415	4030006850	S.CER C1608 JB 1H 471K-T
C417	4030006880	S.CER C1608 JB 1H 472K-T
C418	4030006860	S.CER C1608 JB 1H 102K-T
C426	4030011600	S.CER C1608 JB 1E 104K-T
C432	4030006880	S.CER C1608 JB 1H 472K-T
C434	4030006880	S.CER C1608 JB 1H 472K-T
C439	4030006850	S.CER C1608 JB 1H 471K-T
C440	4030006850	S.CER C1608 JB 1H 471K-T
C445	4030006880	S.CER C1608 JB 1H 472K-T
C461	4030006880	S.CER C1608 JB 1H 472K-T
C462	4030006880	S.CER C1608 JB 1H 472K-T
C463	4030006850	S.CER C1608 JB 1H 471K-T
C465	4030006880	S.CER C1608 JB 1H 472K-T
C466	4030006880	S.CER C1608 JB 1H 472K-T
C467	4030006880	S.CER C1608 JB 1H 472K-T
C468	4030006880	S.CER C1608 JB 1H 472K-T
C469	4030006880	S.CER C1608 JB 1H 472K-T
C470	4030006880	S.CER C1608 JB 1H 472K-T
C471	4030006880	S.CER C1608 JB 1H 472K-T
C472	4030006880	S.CER C1608 JB 1H 472K-T
C473	4030006880	S.CER C1608 JB 1H 472K-T
C474	4030006860	S.CER C1608 JB 1H 102K-T
C475	4030006880	S.CER C1608 JB 1H 472K-T
C476	4030006880	S.CER C1608 JB 1H 472K-T
C501	4030007000	S.CER C1608 CH 1H 090D-T
C502	4030007170	S.CER C1608 CH 1H 221J-T
C503	4030007000	S.CER C1608 CH 1H 090D-T
C504	4030007040	S.CER C1608 CH 1H 180J-T
C505	4030007170	S.CER C1608 CH 1H 221J-T
C506	4030006880	S.CER C1608 JB 1H 472K-T
C507	4030006880	S.CER C1608 JB 1H 472K-T
C511	4030006880	S.CER C1608 JB 1H 472K-T
C512	4030006990	S.CER C1608 CH 1H 080D-T
C513	4030006990	S.CER C1608 CH 1H 080D-T
C514	4030006880	S.CER C1608 JB 1H 472K-T
C515	4030006860	S.CER C1608 JB 1H 102K-T
C516	4030006860	S.CER C1608 JB 1H 102K-T
C521	4030006880	S.CER C1608 JB 1H 472K-T
C522	4030006880	S.CER C1608 JB 1H 472K-T
C523	4030011600	S.CER C1608 JB 1E 104K-T
C524	4030006860	S.CER C1608 JB 1H 102K-T
C525	4030006880	S.CER C1608 JB 1H 472K-T
C526	4030006880	S.CER C1608 JB 1H 472K-T
C527	4030006880	S.CER C1608 JB 1H 472K-T
C528	4030006880	S.CER C1608 JB 1H 472K-T
C529	4030006880	S.CER C1608 JB 1H 472K-T
C530	4030006860	S.CER C1608 JB 1H 102K-T
C531	4030011600	S.CER C1608 JB 1E 104K-T
C532	4030009650	S.CER C1608 CH 1H 240J-T
C533	4030009650	S.CER C1608 CH 1H 240J-T
C534	4030011600	S.CER C1608 JB 1E 104K-T
C536	4030011600	S.CER C1608 JB 1E 104K-T
C537	4030006860	S.CER C1608 JB 1H 102K-T
C541	4030007170	S.CER C1608 CH 1H 221J-T
C542	4030007020	S.CER C1608 CH 1H 120J-T
C543	4030007070	S.CER C1608 CH 1H 330J-T
C544	4030007170	S.CER C1608 CH 1H 221J-T
C545	4030007050	S.CER C1608 CH 1H 220J-T
C546	4550006770	S.TAN TEESVD2 1C 476M-12R
C552	4030007110	S.CER C1608 CH 1H 680J-T
C553	4030011600	S.CER C1608 JB 1E 104K-T
C561	4030011600	S.CER C1608 JB 1E 104K-T
C562	4030007020	S.CER C1608 CH 1H 120J-T
C563	4030007040	S.CER C1608 CH 1H 180J-T
C564	4030009520	S.CER C1608 CH 1H 020B-T

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
C1041	4030010210	S.CER C3216 JB 1C 105M-T
C1042	4030012610	S.CER C2012 JB 1C 474K-T except [USA], [USA-1], [EUR], [EUR-1]
C1043	4030011600	S.CER C1608 JB 1E 104K-T
C1044	4030006880	S.CER C1608 JB 1H 472K-T
C1045	4510008540	S.ELE EEE1CA100SR
C1046	4030011600	S.CER C1608 JB 1E 104K-T
C1047	4510008540	S.ELE EEE1CA100SR
C1048	4030011600	S.CER C1608 JB 1E 104K-T
C1049	4030006880	S.CER C1608 JB 1H 472K-T
C1050	4030006880	S.CER C1608 JB 1H 472K-T
C1051	4030011600	S.CER C1608 JB 1E 104K-T
C1052	4030011600	S.CER C1608 JB 1E 104K-T
C1053	4510008540	S.ELE EEE1CA100SR
C1061	4510008540	S.ELE EEE1CA100SR
C1091	4510008540	S.ELE EEE1CA100SR
C1094	4030010210	S.CER C3216 JB 1C 105M-T
C1095	4030006880	S.CER C1608 JB 1H 472K-T
C1096	4030009990	S.CER C1608 CH 1H 200J-T
C1141	4030012610	S.CER C2012 JB 1C 474K-T
C1142	4030006880	S.CER C1608 JB 1H 472K-T
C1143	4510008540	S.ELE EEE1CA100SR
C1144	4030011600	S.CER C1608 JB 1E 104K-T
C1145	4030012610	S.CER C2012 JB 1C 474K-T
C1161	4030012610	S.CER C2012 JB 1C 474K-T
C1162	4030011600	S.CER C1608 JB 1E 104K-T
C1163	4030011600	S.CER C1608 JB 1E 104K-T
C1164	4030011600	S.CER C1608 JB 1E 104K-T
C1165	4030011600	S.CER C1608 JB 1E 104K-T
C1381	4030006880	S.CER C1608 JB 1H 472K-T
C1382	4030006880	S.CER C1608 JB 1H 472K-T
C1390	4030006860	S.CER C1608 JB 1H 102K-T
C1391	4030006880	S.CER C1608 JB 1H 472K-T
C1394	4030006880	S.CER C1608 JB 1H 472K-T
C1397	4030006880	S.CER C1608 JB 1H 472K-T
C1410	4030006880	S.CER C1608 JB 1H 472K-T
C1421	4030006850	S.CER C1608 JB 1H 471K-T
C1426	4030006880	S.CER C1608 JB 1H 472K-T
C1427	4030006880	S.CER C1608 JB 1H 472K-T
C1428	4030006880	S.CER C1608 JB 1H 472K-T
C2001	4030006880	S.CER C1608 JB 1H 472K-T
C2002	4030006880	S.CER C1608 JB 1H 472K-T
C2003	4030006880	S.CER C1608 JB 1H 472K-T
C2004	4030011600	S.CER C1608 JB 1E 104K-T
C2011	4030007090	S.CER C1608 CH 1H 470J-T
C2012	4030007090	S.CER C1608 CH 1H 470J-T
C2013	4030006880	S.CER C1608 JB 1H 472K-T
C2014	4030006880	S.CER C1608 JB 1H 472K-T
C2016	4030006880	S.CER C1608 JB 1H 472K-T
C2017	4030006880	S.CER C1608 JB 1H 472K-T
C2018	4030006880	S.CER C1608 JB 1H 472K-T
C2019	4030006880	S.CER C1608 JB 1H 472K-T
C2022	4030006880	S.CER C1608 JB 1H 472K-T
C2041	4030006880	S.CER C1608 JB 1H 472K-T
C2042	4030006880	S.CER C1608 JB 1H 472K-T
C2044	4030006880	S.CER C1608 JB 1H 472K-T
C2059	4030011600	S.CER C1608 JB 1E 104K-T
C2061	4030007170	S.CER C1608 CH 1H 221J-T except [EUR], [FRA], [ESP], [USA], [EUR-1], [ESP-1], [USA-1]
C2062	4030007090	S.CER C1608 CH 1H 470J-T
C2063	4030007170	S.CER C1608 CH 1H 221J-T except [EUR], [FRA], [ESP], [USA], [EUR-1], [ESP-1], [USA-1]
C2064	4030007090	S.CER C1608 CH 1H 470J-T
C2065	4030007090	S.CER C1608 CH 1H 470J-T
C2066	4030011600	S.CER C1608 JB 1E 104K-T
C2071	4030006880	S.CER C1608 JB 1H 472K-T
C2072	4030006880	S.CER C1608 JB 1H 472K-T
C2073	4030006880	S.CER C1608 JB 1H 472K-T
C2074	4030006880	S.CER C1608 JB 1H 472K-T
C2075	4030006880	S.CER C1608 JB 1H 472K-T
C2076	4030009590	S.CER C2012 JF 1C 225Z-T
C2081	4030006880	S.CER C1608 JB 1H 472K-T
C2082	4030006880	S.CER C1608 JB 1H 472K-T
C2083	4030006880	S.CER C1608 JB 1H 472K-T
C2084	4030006880	S.CER C1608 JB 1H 472K-T
C2085	4030006880	S.CER C1608 JB 1H 472K-T
C2086	4030012610	S.CER C2012 JB 1C 474K-T
C2101	4030011600	S.CER C1608 JB 1E 104K-T
C2121	4030011600	S.CER C1608 JB 1E 104K-T
C2122	4030011600	S.CER C1608 JB 1E 104K-T
C2123	4030007090	S.CER C1608 CH 1H 470J-T
C2131	4030011600	S.CER C1608 JB 1E 104K-T
C2141	4030006880	S.CER C1608 JB 1H 472K-T
C2142	4030006880	S.CER C1608 JB 1H 472K-T
C2143	4030006880	S.CER C1608 JB 1H 472K-T
C2144	4030006880	S.CER C1608 JB 1H 472K-T
C2145	4030006880	S.CER C1608 JB 1H 472K-T
C2146	4030006880	S.CER C1608 JB 1H 472K-T
C2147	4030006850	S.CER C1608 JB 1H 471K-T
C2161	4030007020	S.CER C1608 CH 1H 120J-T
C2162	4030007020	S.CER C1608 CH 1H 120J-T
C2163	4030011600	S.CER C1608 JB 1E 104K-T
C2164	4030008890	S.CER C1608 JB 1H 273K-T
C2165	4030006880	S.CER C1608 JB 1H 472K-T
C2166	4030011600	S.CER C1608 JB 1E 104K-T
C2181	4030010210	S.CER C3216 JB 1C 105M-T
C2201	4030011600	S.CER C1608 JB 1E 104K-T
C2202	4030011600	S.CER C1608 JB 1E 104K-T
C2221	4030011600	S.CER C1608 JB 1E 104K-T
C2222	4030011600	S.CER C1608 JB 1E 104K-T
C2223	4030007090	S.CER C1608 CH 1H 470J-T
C2232	4030011600	S.CER C1608 JB 1E 104K-T
C2233	4030011600	S.CER C1608 JB 1E 104K-T
C2234	4030011600	S.CER C1608 JB 1E 104K-T

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
C2235	4030006850	S.CER C1608 JB 1H 471K-T
C2236	4030006850	S.CER C1608 JB 1H 471K-T
C2237	4030006850	S.CER C1608 JB 1H 471K-T
C2238	4030006850	S.CER C1608 JB 1H 471K-T
C2239	4030006860	S.CER C1608 JB 1H 102K-T
C2240	4030006860	S.CER C1608 JB 1H 102K-T
C2250	4030006860	S.CER C1608 JB 1H 102K-T
C2251	4030007090	S.CER C1608 CH 1H 470J-T
C2252	4030007090	S.CER C1608 CH 1H 470J-T
C2253	4030006860	S.CER C1608 JB 1H 102K-T
J1	6510021280	S.CNR AXK6S20645P
J101	6510007020	CNR TMP-J01X-V6
J141	6510007020	CNR TMP-J01X-V6
J231	6510007020	CNR TMP-J01X-V6
J281	6510007020	CNR TMP-J01X-V6
J401	6510020081	S.CNR 52808-2071 (2090)
J431	6510020081	S.CNR 52808-2071 (2090)
J461	6510020081	S.CNR 52808-2071 (2090)
J551	6510007020	CNR TMP-J01X-V6
J701	6450001560	CNR PD-72
J702	6450001560	CNR PD-72
J703	6450001560	CNR PD-72
J704	6450001560	CNR PD-72
J705	6510020381	CNR JS0330-SN
J706	6510020381	CNR JS0330-SN
J711	6450001560	CNR PD-72
J712	6450001560	CNR PD-72
J713	6450001560	CNR PD-72
J714	6450001560	CNR PD-72
J715	6510020381	CNR JS0330-SN
J716	6510020381	CNR JS0330-SN
J791	6510018961	S.CNR B2B-PH-SM4-TB (LF) (SN)
J1381	6510019071	S.CNR 52559-3072 (3092)
J1421	6510020091	S.CNR 52808-0871 (0890)
J1431	6510018971	S.CNR B4B-PH-SM4-TB (LF) (SN)
J2061	6510019191	S.CNR 52365-0871
W201	7030003860	S.RES ERJ3GE JPW V
W202	7030003860	S.RES ERJ3GE JPW V
W231	7030008240	S.RES ERJ12Y0R00U
W301	7030003860	S.RES ERJ3GE JPW V
W302	7030000010	S.RES MCR10EZHZ JPW (000)
W303	7030000010	S.RES MCR10EZHZ JPW (000)
W461	7030003860	S.RES ERJ3GE JPW V
W514	7030003860	S.RES ERJ3GE JPW V
W844	7030003860	S.RES ERJ3GE JPW V
W1014	7030003860	S.RES ERJ3GE JPW V except [EUR], [FRA], [ESP], [USA], [EUR-1], [ESP-1], [USA-1]
W1056	7030003860	S.RES ERJ3GE JPW V
W1078	7030003860	S.RES ERJ3GE JPW V
W1094	7030003860	S.RES ERJ3GE JPW V
W1433	7030003860	S.RES ERJ3GE JPW V
W2001	7030003860	S.RES ERJ3GE JPW V
W2061	7030000010	S.RES MCR10EZHZ JPW (000)
W2101	7030003860	S.RES ERJ3GE JPW V

S.=Surface mount

[PLL UNIT]

REF NO.	ORDER NO.	DESCRIPTION
C602	4030006880	S.CER C1608 JB 1H 472K-T
C603	4030006880	S.CER C1608 JB 1H 472K-T
C623	4030006880	S.CER C1608 JB 1H 472K-T
C624	4030008320	S.CER C1608 UJ 1H 470J-T
C625	4030006880	S.CER C1608 JB 1H 472K-T
C626	4030008320	S.CER C1608 UJ 1H 470J-T
C641	4030006980	S.CER C1608 CH 1H 070D-T
C642	4030009520	S.CER C1608 CH 1H 020B-T
C643	4030007030	S.CER C1608 CH 1H 150J-T
C644	4030009560	S.CER C1608 CH 1H R75B-T
C645	4030006990	S.CER C1608 CH 1H 080D-T
C662	4030006880	S.CER C1608 JB 1H 472K-T
C663	4030006880	S.CER C1608 JB 1H 472K-T
C664	4030007090	S.CER C1608 CH 1H 470J-T
C665	4030006880	S.CER C1608 JB 1H 472K-T
C681	4030006880	S.CER C1608 JB 1H 472K-T
C682	4030009650	S.CER C1608 CH 1H 240J-T
C683	4030006880	S.CER C1608 JB 1H 472K-T
C684	4030006920	S.CER C1608 CH 1H 010C-T
C685	4030009650	S.CER C1608 CH 1H 240J-T
C686	4030007090	S.CER C1608 CH 1H 470J-T
C701	4030006880	S.CER C1608 JB 1H 472K-T
C711	4030007070	S.CER C1608 CH 1H 330J-T
C712	4030007010	S.CER C1608 CH 1H 100D-T
C713	4030007090	S.CER C1608 CH 1H 470J-T
C714	4030006980	S.CER C1608 CH 1H 070D-T
C715	4030007060	S.CER C1608 CH 1H 270J-T
C731	4030006880	S.CER C1608 JB 1H 472K-T
C741	4030008560	S.CER C1608 CH 1H 300J-T
C742	4030007000	S.CER C1608 CH 1H 090D-T
C743	4030007070	S.CER C1608 CH 1H 330J-T
C744	4030006960	S.CER C1608 CH 1H 050C-T
C745	4030007040	S.CER C1608 CH 1H 180J-T
C761	4030006880	S.CER C1608 JB 1H 472K-T
C771	4030007020	S.CER C1608 CH 1H 120J-T
C772	4030007110	S.CER C1608 CH 1H 680J-T
C773	4030007030	S.CER C1608 CH 1H 150J-T
C781	4030007030	S.CER C1608 CH 1H 150J-T
C782	4030006940	S.CER C1608 CH 1H 030C-T
C783	4030007060	S.CER C1608 CH 1H 270J-T
C784	4030006990	S.CER C1608 CH 1H 080D-T
C785	4030007020	S.CER C1608 CH 1H 120J-T
C791	4030006880	S.CER C1608 JB 1H 472K-T
C801	4030007050	S.CER C1608 CH 1H 220J-T
C802	4030007060	S.CER C1608 CH 1H 270J-T
C803	4030007010	S.CER C1608 CH 1H 100D-T
C804	4030007120	S.CER C1608 CH 1H 820J-T
C805	4030007040	S.CER C1608 CH 1H 180J-T
C811	4030006990	S.CER C1608 CH 1H 080D-T
C812	4030006970	S.CER C1608 CH 1H 060D-T
C813	4030007040	S.CER C1608 CH 1H 180J-T
C814	4030006930	S.CER C1608 CH 1H 020C-T
C815	4030007010	S.CER C1608 CH 1H 100D-T
C821	4030007060	S.CER C1608 CH 1H 270J-T
C822	4030007020	S.CER C1608 CH 1H 120J-T
C823	4030007010	S.CER C1608 CH 1H 100D-T
C824	4030006990	S.CER C1608 CH 1H 080D-T
C825	4030007110	S.CER C1608 CH 1H 680J-T
C826	4030006860	S.CER C1608 JB 1H 102K-T
C827	4030007060	S.CER C1608 CH 1H 270J-T
C828	4030009910	S.CER C1608 CH 1H 040B-T
C829	4030007010	S.CER C1608 CH 1H 100D-T
C830	4030006980	S.CER C1608 CH 1H 070D-T
C831	4030007010	S.CER C1608 CH 1H 100D-T
C851	4030006880	S.CER C1608 JB 1H 472K-T
C852	4030006880	S.CER C1608 JB 1H 472K-T
C853	4030011340	S.CER C1608 CH 1H 471J-T except [EUR], [FRA], [USA]
C861	4030007030	S.CER C1608 CH 1H 150J-T
C862	4030007010	S.CER C1608 CH 1H 100D-T
C863	4030009920	S.CER C1608 CH 1H 050B-T
C864	4030006990	S.CER C1608 CH 1H 080D-T
C865	4030007090	S.CER C1608 CH 1H 470J-T
C871	4030007000	S.CER C1608 CH 1H 090D-T
C872	4030009500	S.CER C1608 CH 1H 0R5B-T
C873	4030009920	S.CER C1608 CH 1H 050B-T
C874	4030009540	S.CER C1608 CH 1H 1R5B-T
C875	4030009920	S.CER C1608 CH 1H 050B-T
C876	4030006880	S.CER C1608 JB 1H 472K-T
C881	4030007100	S.CER C1608 CH 1H 560J-T
C882	4030007110	S.CER C1608 CH 1H 680J-T
C883	4030007100	S.CER C1608 CH 1H 560J-T
C884	4030009910	S.CER C1608 CH 1H 040B-T
C885	4030009910	S.CER C1608 CH 1H 040B-T
C886	4030009910	S.CER C1608 CH 1H 040B-T
C902	4030011600	S.CER C1608 JB 1E 104K-T
C903	4030011600	S.CER C1608 JB 1E 104K-T
C904	4030011600	S.CER C1608 JB 1E 104K-T
C905	4030011600	S.CER C1608 JB 1E 104K-T
C906	4030011600	S.CER C1608 JB 1E 104K-T
C907	4030011600	S.CER C1608 JB 1E 104K-T
C931	4030011600	S.CER C1608 JB 1E 104K-T
C934	4030006880	S.CER C1608 JB 1H 472K-T
C935	4030006880	S.CER C1608 JB 1H 472K-T
C941	4030006880	S.CER C1608 JB 1H 472K-T
C942	4030011600	S.CER C1608 JB 1E 104K-T
C943	4030007050	S.CER C1608 CH 1H 220J-T
C945	4030007130	S.CER C1608 CH 1H 101J-T
C946	4030007140	S.CER C1608 CH 1H 121J-T

[PLL UNIT]

REF NO.	ORDER NO.	DESCRIPTION
C951	4030007010	S.CER C1608 CH 1H 100D-T
C981	4030007040	S.CER C1608 CH 1H 180J-T
C982	4030007090	S.CER C1608 CH 1H 470J-T
C983	4030007040	S.CER C1608 CH 1H 180J-T
C991	4030007040	S.CER C1608 CH 1H 180J-T
C992	4030006960	S.CER C1608 CH 1H 050C-T
C993	4030007070	S.CER C1608 CH 1H 330J-T
C994	4030006930	S.CER C1608 CH 1H 020C-T
C995	4030007040	S.CER C1608 CH 1H 180J-T
C1000	4030006860	S.CER C1608 JB 1H 102K-T
C1001	4030006860	S.CER C1608 JB 1H 102K-T
C1002	4030006860	S.CER C1608 JB 1H 102K-T
C1004	4030006860	S.CER C1608 JB 1H 102K-T
C1005	4030006860	S.CER C1608 JB 1H 102K-T
C1006	4030006860	S.CER C1608 JB 1H 102K-T
RL231	6330000621	RLY SY-12-K
CP281	6910009670	S.CHK HK3-S-T
CP282	6910009670	S.CHK HK3-S-T
J252	6510019981	S.CNR 52808-1671 (1690)
J253	6510019971	S.CNR 52808-1071
J254	6510019071	S.CNR 52559-3072 (3092)
W43	7030003860	S.RES ERJ3GE JPW V
W294	9034704001	WIR 72/98/005/X98/X98
W301	7030003860	S.RES ERJ3GE JPW V
W461	7030003860	S.RES ERJ3GE JPW V
W592	7030003860	S.RES ERJ3GE JPW V
W661	7030003860	S.RES ERJ3GE JPW V
W993	7030003860	S.RES ERJ3GE JPW V
EP2	6910012350	S.BEA MMZ1608Y 102BT

S.=Surface mount

[PA UNIT]

REF NO.	ORDER NO.	DESCRIPTION
C470	4030006860	S.CER C1608 JB 1H 102K-T
C471	4030009500	S.CER C1608 CH 1H 0R5B-T
C472	4030007030	S.CER C1608 CH 1H 150J-T
C476	4030006860	S.CER C1608 JB 1H 102K-T
C477	4030011600	S.CER C1608 JB 1E 104K-T
C478	4030011600	S.CER C1608 JB 1E 104K-T
C501	4030011600	S.CER C1608 JB 1E 104K-T
C502	4030006880	S.CER C1608 JB 1H 472K-T
C511	4030011600	S.CER C1608 JB 1E 104K-T
C521	4030006880	S.CER C1608 JB 1H 472K-T
C531	4030006880	S.CER C1608 JB 1H 472K-T
C552	4030006860	S.CER C1608 JB 1H 102K-T
C553	4030006860	S.CER C1608 JB 1H 102K-T
C571	4030006880	S.CER C1608 JB 1H 472K-T
C572	4030006880	S.CER C1608 JB 1H 472K-T
C573	4030011600	S.CER C1608 JB 1E 104K-T
C574	4030006880	S.CER C1608 JB 1H 472K-T
C575	4030011600	S.CER C1608 JB 1E 104K-T
C576	4510009270	S.ELE EEEHB1C220UR
C577	4030011600	S.CER C1608 JB 1E 104K-T
C578	4510004591	ELE 16 ME 470 HC
C579	4030011600	S.CER C1608 JB 1E 104K-T
C580	4030006860	S.CER C1608 JB 1H 102K-T
C581	4030006880	S.CER C1608 JB 1H 472K-T
C582	4030006860	S.CER C1608 JB 1H 102K-T
C583	4030006860	S.CER C1608 JB 1H 102K-T
C591	4030004760	S.CER C2012 JF 1H 104Z-T
C592	4030004740	S.CER C2012 JB 1H 472K-T
C593	4030011600	S.CER C1608 JB 1E 104K-T
C594	4030011600	S.CER C1608 JB 1E 104K-T
C601	4030006850	S.CER C1608 JB 1H 471K-T
C602	4030004740	S.CER C2012 JB 1H 472K-T
C603	4030004760	S.CER C2012 JF 1H 104Z-T
C604	4510004601	ELE 16 ME 1000 HC
C613	4030011600	S.CER C1608 JB 1E 104K-T
C621	4030011600	S.CER C1608 JB 1E 104K-T
C622	4030011600	S.CER C1608 JB 1E 104K-T
C623	4030011600	S.CER C1608 JB 1E 104K-T
C624	4030006880	S.CER C1608 JB 1H 472K-T
C626	4030006860	S.CER C1608 JB 1H 102K-T
C627	4030011600	S.CER C1608 JB 1E 104K-T
C632	4030011600	S.CER C1608 JB 1E 104K-T
C641	4030006880	S.CER C1608 JB 1H 472K-T
C651	4030006880	S.CER C1608 JB 1H 472K-T
C652	4030011600	S.CER C1608 JB 1E 104K-T
C661	4030011600	S.CER C1608 JB 1E 104K-T
C662	4030011600	S.CER C1608 JB 1E 104K-T
C663	4030011600	S.CER C1608 JB 1E 104K-T
C664	4030011600	S.CER C1608 JB 1E 104K-T
C665	4030011600	S.CER C1608 JB 1E 104K-T
C666	4030011600	S.CER C1608 JB 1E 104K-T
C669	4030011600	S.CER C1608 JB 1E 104K-T
C670	4030011600	S.CER C1608 JB 1E 104K-T
C672	4030006850	S.CER C1608 JB 1H 471K-T
C673	4030006850	S.CER C1608 JB 1H 471K-T
C674	4030006850	S.CER C1608 JB 1H 471K-T
C675	4030006850	S.CER C1608 JB 1H 471K-T
C676	4030011600	S.CER C1608 JB 1E 104K-T
C677	4030011600	S.CER C1608 JB 1E 104K-T
C678	4030011600	S.CER C1608 JB 1E 104K-T
C679	4030011600	S.CER C1608 JB 1E 104K-T
C680	4030011600	S.CER C1608 JB 1E 104K-T
C681	4030011600	S.CER C1608 JB 1E 104K-T
C682	4030011600	S.CER C1608 JB 1E 104K-T
C683	4030011600	S.CER C1608 JB 1E 104K-T
C684	4030011600	S.CER C1608 JB 1E 104K-T
C685	4030006860	S.CER C1608 JB 1H 102K-T
C686	4030006860	S.CER C1608 JB 1H 102K-T
C687	4030006860	S.CER C1608 JB 1H 102K-T
C688	4030006860	S.CER C1608 JB 1H 102K-T
C689	4030006860	S.CER C1608 JB 1H 102K-T
C690	4030007170	S.CER C1608 CH 1H 221J-T
C691	4030007170	S.CER C1608 CH 1H 221J-T
C692	4030006860	S.CER C1608 JB 1H 102K-T
C693	4030006860	S.CER C1608 JB 1H 102K-T
C694	4030006850	S.CER C1608 JB 1H 471K-T [ESP], [ITR], [ITR-1], [CHN], [CHN-01] only
C695	4030006850	S.CER C1608 JB 1H 471K-T [ESP], [ITR], [ITR-1], [CHN], [CHN-01] only
C696	4030010750	S.CER C1608 CH 1H 201J-T [ESP], [ITR], [ITR-1], [CHN], [CHN-01] only
C697	4030007090	S.CER C1608 CH 1H 470J-T [ESP], [ITR], [ITR-1], [CHN], [CHN-01] only
C702	4030007170	S.CER C1608 CH 1H 221J-T
C711	4030010750	S.CER C1608 CH 1H 201J-T [ESP], [ITR], [ITR-1], [CHN], [CHN-01] only
C712	4030006860	S.CER C1608 JB 1H 102K-T [ESP], [ITR], [ITR-1], [CHN], [CHN-01] only
C716	4030007090	S.CER C1608 CH 1H 470J-T [ESP], [ITR], [ITR-1], [CHN], [CHN-01] only
C717	4030007170	S.CER C1608 CH 1H 221J-T
C718	4030007090	S.CER C1608 CH 1H 470J-T [ESP], [ITR], [CHN], [CHN-01] only
RL591	6330001550	RLY JV-12-KT
CP573	6910009670	S.CHK HK3-S-T
CP574	6910009670	S.CHK HK3-S-T
J160	6510021531	CNR IMSA-9230B-1-04Z024-PT1

[PA UNIT]

REF NO.	ORDER NO.	DESCRIPTION
J161	6510021531	CNR IMSA-9230B-1-04Z024-PT1
J172	6510007020	CNR TMP-J01X-V6
J210	6510021531	CNR IMSA-9230B-1-04Z024-PT1
J211	6510021531	CNR IMSA-9230B-1-04Z024-PT1
J270	6510017150	CNR TMP-S01X-C1
J571	6510018961	S.CNR B2B-PH-SM4-TB (LF) (SN)
J621	6510019981	S.CNR 52808-1671 (1690)
J641	6450000140	CNR HSJ0807-01-010
J661	6510020081	S.CNR 52808-2071 (2090)
F591	5210000131	FUS FGB 4A PBF (FGB0 125V)
F592	5220000230	HOL S-N5054
F593	5220000230	HOL S-N5054
W185	7030009300	S.RES ERJ1WY0R00U except [USA], [USA-1], [EUR], [EUR-1]
W186	7030009300	S.RES ERJ1WY0R00U except [USA], [USA-1], [EUR], [EUR-1]
W235	7030000010	S.RES MCR10EZHZ JPW (000)
W300	7030008240	S.RES ERJ12Y0R00U
W301	7030008240	S.RES ERJ12Y0R00U
W316	7030003860	S.RES ERJ3GE JPW V
W320	7030003860	S.RES ERJ3GE JPW V
W361	9056200020	WIR 73/98/012/X98/X98 except [EUR], [FRA], [USA]
W462	7030003860	S.RES ERJ3GE JPW V
W572	7030003860	S.RES ERJ3GE JPW V
EP121	9040901901	TUB IRRAX 0.7 (d) L=12 mm
EP174	9018970370	TUB 20 L=25MM

[FILTER BOARD]

REF NO.	ORDER NO.	DESCRIPTION
IC1	1110002700	S.IC NJM2904M-TE1
Q1	1590000680	S.TR DTC114EUA T106
Q2	1530002060	S.TR 2SC4081 T106 R
Q3	1530002060	S.TR 2SC4081 T106 R
Q4	1530002060	S.TR 2SC4081 T106 R
Q5	1530002060	S.TR 2SC4081 T106 R
Q6	1530002060	S.TR 2SC4081 T106 R
Q7	1530002060	S.TR 2SC4081 T106 R
Q8	1530002060	S.TR 2SC4081 T106 R
Q9	1530003091	S.TR 2SC4213-B (TE85R,F)
Q10	1530002060	S.TR 2SC4081 T106 R
Q11	1540000451	S.TR 2SD1623T-DE
Q12	1590001870	S.TR DTA114EE TL
D1	1750000301	S.DIO 1SS302 (TE85R,F)
D2	1750000301	S.DIO 1SS302 (TE85R,F)
D3	1750000301	S.DIO 1SS302 (TE85R,F)
D4	1750000301	S.DIO 1SS302 (TE85R,F)
D5	1750000301	S.DIO 1SS302 (TE85R,F)
D6	1750000301	S.DIO 1SS302 (TE85R,F)
D7	1750000301	S.DIO 1SS302 (TE85R,F)
D8	1750000301	S.DIO 1SS302 (TE85R,F)
D9	1790000980	S.DIO MA742 (TX)
D10	1790000980	S.DIO MA742 (TX)
D23	1750000301	S.DIO 1SS302 (TE85R,F)
D24	1160000050	S.DIO DAP202U T106
D25	1750000641	S.DIO 1SV312 (TE85L,F)
D26	1790001250	S.DIO MA2S111-(TX)
L1	6110001560	COL LA-236
L2	6110001630	COL LA-246
L5	6110003570	COL LA-550
L6	6110003570	COL LA-550
L7	6110003550	COL LA-547 (LA-214A)
L10	6140001800	COL LR-216 (T50-2)
L11	6140001800	COL LR-216 (T50-2)
L14	6140003450	COL LR-387 (T50-10) except [USA], [USA-1]
L15	6140003540	COL LR-396 except [USA], [USA-1], [EUR], [EUR-1]
L16	6140003460	COL LR-388 (T50-10) except [USA], [USA-1], [EUR], [EUR-1]
L18	6140002560	COL LR-293 (T50-10)
L19	6140002560	COL LR-293 (T50-10)
L22	6110002920	COL LA-481
L23	6110003580	COL LA-551
L26	6140001800	COL LR-216 (T50-2)
L27	6140001780	COL LR-214 (T50-2)
L30	6140002570	COL LR-294 (T50-2)
L31	6140002580	COL LR-295 (T50-2)
L33	6140003490	COL LR-391 (TR10X5X5 3A6)
L34	6200002041	S.COL NLV25T-101J
L35	6200003950	S.COL HF50ACC 322513-T
L36	6200002041	S.COL NLV25T-101J
L37	6200002041	S.COL NLV25T-101J
L39	6200003950	S.COL HF50ACC 322513-T
L41	6200003950	S.COL HF50ACC 322513-T
L42	6200003950	S.COL HF50ACC 322513-T
L43	6200003950	S.COL HF50ACC 322513-T
L44	6200002041	S.COL NLV25T-101J

S.=Surface mount

[FILTER BOARD]

REF NO.	ORDER NO.	DESCRIPTION
C147	4030006880	S.CER C1608 JB 1H 472K-T
C148	4030006880	S.CER C1608 JB 1H 472K-T
C149	4030011600	S.CER C1608 JB 1E 104K-T
C151	4010005540	CER HM60SJ SL 030C 500V
C152	4030006860	S.CER C1608 JB 1H 102K-T
C153	4030006880	S.CER C1608 JB 1H 472K-T
C154	4030006880	S.CER C1608 JB 1H 472K-T
C155	4030006880	S.CER C1608 JB 1H 472K-T
C156	4030006880	S.CER C1608 JB 1H 472K-T
C157	4030006880	S.CER C1608 JB 1H 472K-T
C158	4030006880	S.CER C2012 JF 1C 105Z-T
C159	4030006880	S.CER C1608 JB 1H 472K-T
C162	4030011080	S.CER GRM31M2C2H6R0DV01L (GRM42-6 CH)
C164	4030011160	S.CER GRM31M2C2H150JV01L (GRM42-6 CH)
C165	4030011240	S.CER GRM31M2C2H470JV01L (GRM42-6 CH) except [ITA], [FRA-1], [ITA-1], [ITR-1]
C166	4030011240	S.CER GRM31M2C2H470JV01L (GRM42-6 CH)
C168	4030011210	S.CER GRM31M2C2H330JV01L (GRM42-6 CH) [ESP], [OTH], [ITR], [OTH-1], [CHN], [CHN-01] only
C169	4030011180	S.CER GRM31M2C2H220JV01L (GRM42-6 CH)
C170	4030011170	S.CER GRM31M2C2H180JV01L (GRM42-6 CH)
C171	4030011160	S.CER GRM31M2C2H150JV01L (GRM42-6 CH) [ESP], [USA] [OTH], [ITA], [ITR], [USA-1], [OTH-1], [CHN], [CHN-01] only
C172	4030011180	S.CER GRM31M2C2H220JV01L (GRM42-6 CH)
C174	4030011510	S.CER GRM31M2C2H560JV01L (GRM42-6 CH)
C175	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)
C176	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)
C177	4030011180	S.CER GRM31M2C2H220JV01L (GRM42-6 CH)
C178	4030011240	S.CER GRM31M2C2H470JV01L (GRM42-6 CH)
C180	4030011550	S.CER GRM31M2C2H680JV01L (GRM42-6 CH)
C181	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH) [EUR], [FRA], except [USA], [USA-1], [EUR], [EUR-1] only
C182	4030011180	S.CER GRM31M2C2H220JV01L (GRM42-6 CH)
C183	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)
C184	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)
C185	4030011210	S.CER GRM31M2C2H330JV01L (GRM42-6 CH)
C186	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)
C188	4030011120	S.CER GRM31M2C2H100JV01L (GRM42-6 CH)
C189	4030011600	S.CER C1608 JB 1E 104K-T
C190	4030011600	S.CER C1608 JB 1E 104K-T
C191	4030011600	S.CER C1608 JB 1E 104K-T
C192	4030011600	S.CER C1608 JB 1E 104K-T
C200	4030011180	S.CER GRM31M2C2H220JV01L (GRM42-6 CH)
C201	4030011190	S.CER GRM31M2C2H270JV01L (GRM42-6 CH)
C202	4030006880	S.CER C1608 JB 1H 472K-T
C203	4030006860	S.CER C1608 JB 1H 102K-T
C204	4030007090	S.CER C1608 CH 1H 470J-T
C205	4030006860	S.CER C1608 JB 1H 102K-T
C206	4030006860	S.CER C1608 JB 1H 102K-T
C207	4030006860	S.CER C1608 JB 1H 102K-T
C208	4030006860	S.CER C1608 JB 1H 102K-T
C209	4030006860	S.CER C1608 JB 1H 102K-T
C210	4030006860	S.CER C1608 JB 1H 102K-T
C211	4030006860	S.CER C1608 JB 1H 102K-T
C213	4030012610	S.CER C2012 JB 1C 474K-T
C214	4030006880	S.CER C1608 JB 1H 472K-T
C215	4030011600	S.CER C1608 JB 1E 104K-T
C216	4030011120	S.CER GRM31M2C2H100JV01L (GRM42-6 CH)
C217	4030011210	S.CER GRM31M2C2H330JV01L (GRM42-6 CH)
C218	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH) except [USA], [USA-1], [EUR], [EUR-1]
C219	4030007090	S.CER C1608 CH 1H 470J-T [ESP], [ITR], [ITR-1], [CHN], [CHN-01] only
RL1	6330001330	RLY AG 201344
RL2	6330001430	RLY NA-12W-K
RL3	6330001430	RLY NA-12W-K
RL4	6330001150	RLY MZ-12DK
RL5	6330001150	RLY MZ-12DK
RL6	6330001150	RLY MZ-12DK
RL7	6330001150	RLY MZ-12DK
RL8	6330001150	RLY MZ-12DK
RL9	6330001150	RLY MZ-12DK
RL10	6330001150	RLY MZ-12DK
RL11	6330001150	RLY MZ-12DK
RL12	6330001150	RLY MZ-12DK
RL13	6330001150	RLY MZ-12DK
RL14	6330001150	RLY MZ-12DK
RL15	6330001150	RLY MZ-12DK
RL16	6330001150	RLY MZ-12DK
J4	6450001491	CNR HLJ7001-016010
J5	6510024661	CNR TCS5072-1041577
J7	6450001650	CNR HSJ0836-01-500
J8	6450001660	CNR EX345GLB
J9	6510020081	S.CNR 52808-2071 (2090)
J11	6510016171	CNR 52018-8836
J12	6510020081	S.CNR 52808-2071 (2090)
J13	6510017150	CNR TMP-S01X-C1
J14	6450001841	CNR TCS7568-4320177
W15	7030003860	S.RES ERJ3GE JPW V
W16	7030003860	S.RES ERJ3GE JPW V
W17	7030003860	S.RES ERJ3GE JPW V
W18	7030003860	S.RES ERJ3GE JPW V
W19	7030009300	S.RES ERJ1WY0R00U
W20	7030009300	S.RES ERJ1WY0R00U
W23	7030003860	S.RES ERJ3GE JPW V
W24	7030000010	S.RES MCR10EZHZ JPW (000)
EP5	6910012350	S.BEA MMZ1608Y 102BT
EP7	6910012350	S.BEA MMZ1608Y 102BT

[DRIVER BOARD]

REF NO.	ORDER NO.	DESCRIPTION
Q100	1590003121	S.FET MRF1518NT1
Q200	1590003121	S.FET MRF1518NT1
R165	7030010480	S.RES ERJ1TYJ 181U (180)
R166	7030000020	S.RES MCR10EZHZJ 1 (010) [ESP], [OTH], [CHN], [CHN-01] only
C168	4030006480	S.CER GRM319B11H104KA01D (GRM42-6)
C169	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)
C216	4030011240	S.CER GRM31M2C2H470JV01L (GRM42-6 CH)
W213	7030000010	S.RES MCR10EZHZJ JPW (000)

[VR BOARD]

REF NO.	ORDER NO.	DESCRIPTION
R1	7210002780	VAR RV-300 (RK0972210) 10KB/10KB
R2	7210002940	VAR TP96D231E20-20F-10KB-1897
J1	6510018891	S.CNR 52559-1370 (1390)
S1	2220000540	SW SW-162 (SSSS22-2-11)

S.=Surface mount

SECTION 6

MECHANICAL PARTS AND DISASSEMBLY

[CHASSIS PARTS]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J3	6510000370	MR-DS	1
J4	6510000370	MR-DS	1
P3	6510009330	51006-0200	1
P4	6510003240	TMP-P01X-A1	1
SP1	2510000991	VS-C66Y0811A	1
MF1	2710000580	FBA06T12HF	1
W1	8900008850	OPC-874	1
W2	8900015940	OPC-875A	1
W3	8900015020	OPC-877A	1
W4	9016910510	51/99/160/A14A/W99A	1
W5	9011130780	Wire 00	1
W12	9016910450	62/99/075/C31/W17D	1
W13	9086700300	Wire 08	1
W14	8900008700	OPC-852	1
W15	8900008870	OPC-876	1
EP4	6910000630	FSOH070RN	1
EP5	9068000100	Wire D=5.0 L=10MM	1
EP7	9010001410	Wire D=8.0	1
EP8	6910009680	H-110-02 L=50MM	1
EP9†	-	UT-106 [EUR-1], [FRA-1], [ESP-1], [USA-1], [OTH-1], [ITA-1], [ITR-1] only	1
EP10	9019501210	Wire D=7.0	1
MP1	8010017543	2177 CHASSIS-3	1
MP2	8110006061	1897 U-COVER-1	1
MP3	8110006591	2177 L-COVER-1	1
MP4	8010001490	stand (D)	1
MP5	8930005790	Color reg (A)	1
MP6	8930005800	Color reg (B)	1
MP7	8930049123	2177 FAN HOLDER-3	1
MP8	8820000530	Flange bolt M4X8 NI	1
MP9	8930002820	rubber leg (D) SK136A	2
MP10	8930015850	Speaker net (SX-611)	1
MP11	8930018520	TR clip (A)	1
MP12	8950004181	1691 CONTACT BASE (A)-1	1
MP14	8930052330	sponge (GN)	1
MP17	8310045920	2177 ANT PLATE	1
MP19	8810008661	Screw BT B0 3X8 NI-ZC3 (BT)	5
MP20	8810007410	Screw PH M3X6 NI	2
MP21	8810009611	Screw M2.6X6 ZK3	5
MP22	8850000140	Flat washer M4 BS NI	1
MP24	8810008991	Screw BT B0 2X10NI-ZK3 (BT)	1
MP25	8850001561	TOOTHED WASHER (A) M4 ZC3	1
MP26	8810008661	Screw BT B0 3X8 NI-ZC3 (BT)	4
MP27	8810008661	Screw BT B0 3X8 NI-ZC3 (BT)	5
MP28	8810008661	Screw BT B0 3X8 NI-ZC3 (BT)	6
MP29	8810004431	Screw PH M3X6 ZK3	2
MP30	8810004431	Screw PH M3X6 ZK3	2
MP31	8810004431	Screw PH M3X6 ZK3	2
MP32	8810007410	Screw PH M3X6 NI	2
MP33	8810008490	Setscrew (H) 2.6X8 NI	2
MP34	8810008490	Setscrew (H) 2.6X8 NI	2
MP35	8810008490	Setscrew (H) 2.6X8 NI	2
MP36	8810009611	Screw M2.6X6 ZK3	5
MP37	8810008490	Setscrew (H) 2.6X8 NI	2
MP38	8930038650	Thermal sheet (BE)	1
MP40	8930038820	aluminium sheet (V)	1
MP49	8930028390	Thermal sheet (AH)	5
MP60	8930042441	1897 SP HOLDER-1	1
MP61	8810009611	Screw M2.6X6 ZK3	4
MP62	8810009391	Screw BT B0 3X18NI-ZC3 (BT)	4
MP63	8810007410	Screw PH M3X6 NI	2
MP65	8810008661	Screw BT B0 3X8 NI-ZC3 (BT)	2
MP74	8510011940	2177 PLATE	1
MP75	8810009511	Screw BT B0 2X4 NI-ZC3 (BT)	2
MP76	8510006440	ANT cover	1
MP77	8930048550	2177 CLIP	1
MP79	8930048960	SHIELD TAPE (B)	1
MP80	8930048970	SHIELD TAPE (C)	1
MP81	8930048960	SHIELD TAPE (B)	1
MP82	8930045920	2056 SPONGE	1
MP83	8930015640	Cable holder (SX-713)	1
MP84	8930048120	SHIELD TAPE (A)	1
MP87	8930049110	sponge (GC)	1
MP89	8930049710	2177 FAN SPRING	1
MP92	8850000571	TOOTHED WASHER (B) M3 ZC3	1
MP93	8850000571	TOOTHED WASHER (B) M3 ZC3	1
MP94	8930045920	2056 SPONGE	1
MP95	8930045920	2056 SPONGE	1
MP96	8930049110	sponge (GC)	1
MP97	8930049110	sponge (GC)	1
MP98	8930056020	sponge (GU)	1
MP100	8930049130	SHIELD TAPE (D)	1
MP101	8930048960	SHIELD TAPE (B)	1
MP102	8930049130	SHIELD TAPE (D)	1
MP103	8930049130	SHIELD TAPE (D)	1
MP104	8930048970	SHIELD TAPE (C)	1
MP105	8930049130	SHIELD TAPE (D)	1
MP106	8930045920	2056 SPONGE	1
MP107	8930056010	emboss tape (K)	1
MP108	8930056160	Doublesided tape (AG)	1
MP109	8930041830	sponge (ER)	1
MP110	8930041830	sponge (ER)	1

[FRONT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
W1	8900006040	OPC-593	1
W2	8900006252	OPC-610B	1
EP1	6910013810	RMS20-100-201-1C	1
MP1	8210015781	2177 FRONT PANEL-1	1
MP2	8210015890	1691 REAR PANEL (A)	1
MP3	8930047970	2177 MENU KEY	1
MP4	8930047960	2177 MODE KEY	1
MP5	8930048370	1691 UP/DOWN KEY (B)	1
MP6	8930036731	1691 4-KEY-1	1
MP7	8930036751	Push spring (Y)-1	1
MP8	8930060190	2591 N-SPRING	1
MP9	8830001010	HEX NUT (A)	2
MP10	8610010660	Knob N-237 (A)	1
MP11	8610010670	Knob N-238 (A)	2
MP12	8610010024	Knob N-239 BASE-4	1
MP13	8610010030	Knob N-239 COVER	1
MP14	8610010040	Knob N-239 FINGER REST	1
MP15	8930036691	1691 RELEASE BUTTON-1	1
MP16	8930048090	2177 LENS	3
MP17	8310036280	1691 WINDOW PLATE	1
MP18	8310036273	1691 BRAKE PLATE-3	1
MP19	8950004192	1691 CONTACT BASE (B)-2	1
MP20	8930036740	1691 BRAKE PAD	2
MP21	8930037111	1691 BRAKE SHEET-1	1
MP22	8310036583	1691 Warning sticker (S)-3	1
MP23	8810008991	Screw BT B0 2X10NI-ZK3 (BT)	2
MP24	8930038940	sponge (EF)	1
MP26	8610010360	Knob N-260	1
MP27	8610007510	knob spring NO.7800	1
MP28	8610007510	knob spring NO.7800	1

[DISPLAY UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510019121	S8B-PH-SM4-TB (LF) (SN)	1
J2	6450001630	HSJ1406-01-050	1
J3*	6510018891	52559-1370	1
DS4	5030001670	DLC-8309YBGF	1
DS5	5030001290	D2264	1
W1	7030003860	ERJ3GE-JPW	1
W2	7120000470	ERDS2T0	1
W3	7120000470	ERDS2T0	1
EP2	8930039790	SRCN-1691-ZSS-505	2
MP1	8930036710	1691 LCD HOLDER	1
MP3	8810009040	Setscrew (H) 2.6X10 NI	1
MP4	8830000180	Nut M2.6 BS NI	1
MP5	8930043471	1897 FRONT PLATE-1	1
MP6	8510014100	2177 FRONT SHIELD	1

[VR BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
R1	7210002780	RV-300	1
R2	7210002940	TP96D231E20-20F-10KB-1897	1
J1	6510018891	52559-1370	1
S1	2220000540	SW-162	1

*: Refer to SECTION 8 "BOARD LAYOUTS."

†: Optional product

Screw abbreviations

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

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510021280	AXK6S20645P	1
J101	6510007020	TMP-J01X-V6	1
J141	6510007020	TMP-J01X-V6	1
J231	6510007020	TMP-J01X-V6	1
J281	6510007020	TMP-J01X-V6	1
J401*	6510020081	52808-2071	1
J431*	6510020081	52808-2071	1
J461*	6510020081	52808-2071	1
J551	6510007020	TMP-J01X-V6	1
J701	6450001560	PD-72	1
J702	6450001560	PD-72	1
J703	6450001560	PD-72	1
J704	6450001560	PD-72	1
J705	6510020381	JS0330-SN	1
J706	6510020381	JS0330-SN	1
J711	6450001560	PD-72	1
J712	6450001560	PD-72	1
J713	6450001560	PD-72	1
J714	6450001560	PD-72	1
J715	6510020381	JS0330-SN	1
J716	6510020381	JS0330-SN	1
J791*	6510018961	B2B-PH-SM4-TB (LF) (SN)	1
J1381*	6510019071	52559-3072	1
J1421*	6510020091	52808-0871	1
J1431*	6510018971	B4B-PH-SM4-TB (LF) (SN)	1
J2061*	6510019191	52365-0871	1
MP1	8510011950	2177 HPF CASE	1
MP2	8510005990	724 Shield case cover	1
MP3	8510012400	2177 D/A CASE	1
MP4	8930014140	earth spring (D)	1
MP5	8930014140	earth spring (D)	1
MP6	8310045930	2177 SHIELD PLATE	1
MP7	8510010460	1691 MAIN SHIELD PLATE	1
MP8	8930054530	2355 EARTH SPRING	1
MP9	8930017200	752 earth spring	1
MP10	8930017200	752 earth spring	1
MP14	8510012410	2177 MAIN S-PLATE	1
MP18	8930054530	2355 EARTH SPRING	1
MP19	8930014140	earth spring (D)	1

[DRIVER BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8410002270	2177 HEATSINK	1

[PLL UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
RL231	6330000621	SY-12-K	1
CP281*	6910009670	HK3-S-T	1
CP282*	6910009670	HK3-S-T	1
J251	6510009890	PD054-04M	1
J252*	6510019981	52808-1671	1
J253*	6510019971	52808-1071	1
J254*	6510019071	52559-3072	1
J681	6510007900	TBP-P01X-A1	1
J891	6510007900	TBP-P01X-A1	1
J991	6510009870	PD054-02M	1
P251	6510018990	PHR-4	1
P681	6510003240	TMP-P01X-A1	1
P891	6510003240	TMP-P01X-A1	1
P991	6510018980	PHR-2	1
W251	9021770080	51/99/210/B11A/D33A	1
W252	9011130780	Wire 00 A	1
W253	9021770080	51/99/210/B11A/D33A	1
W254	9011130780	Wire 00 A	1
W294	9034704001	72/98/005/X98/X98	1
W681	9086700060	62/99/110/C31/C24	1
W682	9086700300	Wire 08	1
W891	9012962951	62/99/180/C24/C31	1
W892	9086700300	Wire 08	1
W991	9016910300	51/99/130/B11A/D33A	1
W992	9011130780	Wire 00 A	1
MP1	8510012260	2177 PLL S-CASE	1
MP2	8510010850	1897 D/A CASE	1
MP5	8510005150	602 Shield case	1
MP6	8510012140	2177 SHIELD COVER	1
MP7	8510005150	602 Shield case	1
MP8	8510012140	2177 SHIELD COVER	1
MP9	8510005150	602 Shield case	1
MP10	8510012140	2177 SHIELD COVER	1
MP11	8510012400	2177 D/A CASE	1
MP12	8510011981	2177 VCO CASE-1	1
MP13	8510011991	2177 VCO COVER-1	1

[PLL UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP14	8810009001	0 tap screw PH M2.6X5 ZK3	4
MP15	8510011970	2177 OSC CASE	1
MP16	8930001170	earth spring (A) (FX-294)	1
MP18	8510011250	1897 MAIN S-PLATE	1
MP19	8510011960	2177 OSC COVER	1
MP20	8930049151	2177 PLL SPRING-1	1
MP21	8930048610	2197 A-SPONGE	1
MP23	8930030220	rubber sheet (L)	1
MP24	8930049461	2177 VCO ANGLE-1	1
MP25	8930024170	earth spring (G)	1
MP26	8930049470	rubber sheet (AS)	1
MP27	8930049470	rubber sheet (AS)	1
MP28	8930036870	sponge (DZ)	1
MP29	8930049670	2177 PLL PLATE	1
MP30	8930017200	752 earth spring	1
MP33	8930017200	752 earth spring	1
MP34	8930045920	2056 SPONGE	1
MP35	8930036860	Insulation sheet (DT)	1

[PA UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP36	8930055981	Shield sponge (F)-1	1
MP37	8930053900	Insulation sheet (GK)	1
MP38	8930052330	sponge (GN)	1
MP39	6910008240	59TN4772	1
RL591	6330001550	JV-12-KT	1
CP573*	6910009670	HK3-S-T	1
CP574*	6910009670	HK3-S-T	1
J101	6510007900	TBP-P01X-A1	1
J160	6510021531	IMSA-9230B-1-04Z024-PT1	1
J161	6510021531	IMSA-9230B-1-04Z024-PT1	1
J172	6510007020	TMP-J01X-V6	1
J180	6510021500	SIN-41T-2.4S	2
J181	6510021500	SIN-41T-2.4S	2
J210	6510021531	IMSA-9230B-1-04Z024-PT1	1
J211	6510021531	IMSA-9230B-1-04Z024-PT1	1
J270	6510017150	TMP-S01X-C1	1
J481	6510007900	TBP-P01X-A1	1
J571*	6510018961	B2B-PH-SM4-TB (LF) (SN)	1
J601	6510021500	SIN-41T-2.4S	1
J602	6510021500	SIN-41T-2.4S	1
J603	6510021500	SIN-41T-2.4S	1
J604	6510021500	SIN-41T-2.4S	1
J611	6510009890	PD054-04M	1
J612	6510001920	1490R	1
J621	6510019981	52808-1671	1
J641	6450000140	HSJ0807-01-010	1
J651	6510009870	PD054-02M	1
J661*	6510020081	52808-2071	1
P101	6510003240	TMP-P01X-A1	1
P481	6510003240	TMP-P01X-A1	1
P601	5610000360	LLR-06V	1
P651	6510019170	51005-0200	1
F591	5210000131	FGB 4A PBF	1
F592	5220000230	S-N5054 #01	1
F593	5220000230	S-N5054 #01	1
W101	9009130046	62/99/160/C24/C31	1
W102	9086700300	Wire 08	1
W171	9024801017	23/06/060/C21/C21	1
W180	9021770030	11/02/100/X99/X99	1
W181	9021770030	11/02/100/X99/X99	1
W361	9056200020	73/98/012/X98/X98	1
W481	9014130390	62/99/290/C24/C31	1
W482	9086700300	Wire 08	1
W601	9021770010	11/00/100/B03/X99	1
W602	9021770010	11/00/100/B03/X99	1
W603	9021770020	11/02/100/B03/X99	1
W604	9021770020	11/02/100/B03/X99	1
W605	9009630450	13/05/050/B03/B03	1
W610	9021770040	14/01/150/A08/D33	1
W611	9021770050	14/02/150/A08/D33	1
W612	9021770060	14/03/150/A08/D33	1
W613	9021770070	14/04/150/A08/D33	1
W651	9021770120	51/99/230/A15A/D33A	1
W652	9011130780	Wire 00 A	1
EP101	9068000100	Tube D=5.0 L=10MM	1
EP121	9040901901	IRRAX D=0.7 L=12MM	1
EP174	9018970370	Tube D=20.0 L=25MM	1
EP601	6910000640	FSOH090RN	1
EP602	6910000640	FSOH090RN	1
EP603	9010000660	Tube D=16.0	1
EP604	6910000630	FSOH070RN	1
EP605	6910000640	FSOH090RN	1
EP606	9010000630	Tube D=10.0	1
EP607	9010001410	Tube D=8.0	1
EP608	6910000640	FSOH090RN	1

*: Refer to SECTION 8 "BOARD LAYOUTS."

†: Optional product

Screw abbreviations

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

[PA UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP609	6910000640	FSOH090RN	1
EP610	6910000640	FSOH090RN	1
EP611	6910000640	FSOH090RN	1
EP612	9010000630	Tube D=10.0	1
MP101	8930014140	earth spring (D)	1
MP231	8860001130	2177 RUG	1
MP232	8930049100	2177 PA SPRING	1
MP233	8930014140	earth spring (D)	1
MP234	8860001130	2177 RUG	1
MP235	8930053490	Insulation sheet (GH)	1
MP241	8930050261	2177 THERMALLY SHEET-1	1
MP451	8510012150	2177 PA S-PLATE	1
MP501	8930024170	earth spring (G)	1
MP502	8930024170	earth spring (G)	1
MP601	8950000180	Cable tie -80	1
MP602	8950000180	Cable tie -80	1
MP603	8510014090	2177 DRIVER SHIELD	1
MP604	8510014110	2177 PA SHIELD	1
MP605	8950000180	Cable tie -80	1
MP606	8950000180	Cable tie -80	1
MP607	8930014140	earth spring (D)	1
MP608	8930027810	emboss tape (B)	1
MP610	8930049110	sponge (GC)	1
MP611	8930030380	FERRITE SHEET (C)	1
MP612	8930024170	earth spring (G)	1
MP613	8950000180	Cable tie -80	1

[FILTER BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510007900	TBP-P01X-A1	1
J2	6510007900	TBP-P01X-A1	1
J4	6450001491	HLJ7001-016010	1
J5	6510024661	TCS5072-1041577	1
J7	6450001650	HSJ0836-01-500	1
J8	6450001660	EX345GLB	1
J9*	6510020081	52808-2071	1
J11	6510016171	52018-8836	1
J12*	6510020081	52808-2071	1
J13	6510017150	TMP-S01X-C1	1
J14	6450001841	TCS7568-4320177	1
P1	6510003240	TMP-P01X-A1	1
P2	6510003240	TMP-P01X-A1	1
W11	9012962951	62/99/180/C24/C31	1
W12	9086700300	Wire 08	1
W21	9086700060	62/99/110/C31/C24	1
W22	9086700300	Wire 08	1
MP1	8930017200	752 earth spring	1
MP3	8930001170	earth spring (A) (FX-294)	1
MP4	8930055970	2177 GND SPRING	1
MP5	8930055970	2177 GND SPRING	1
MP6	8930055970	2177 GND SPRING	1

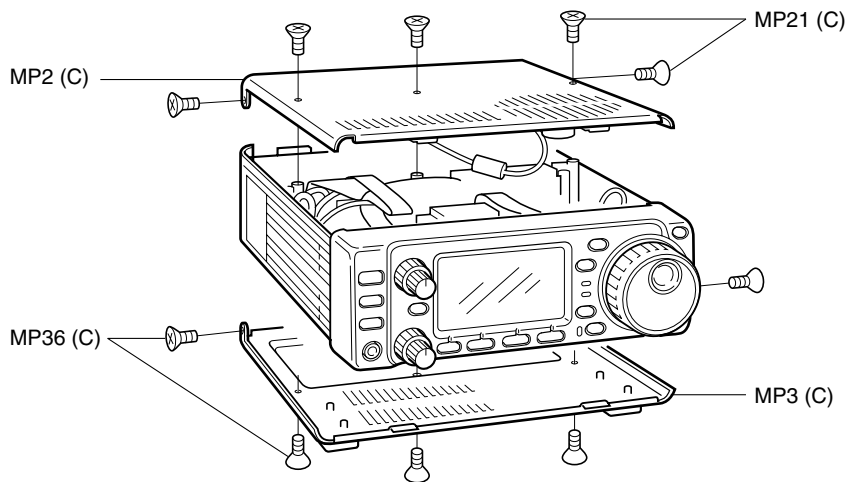
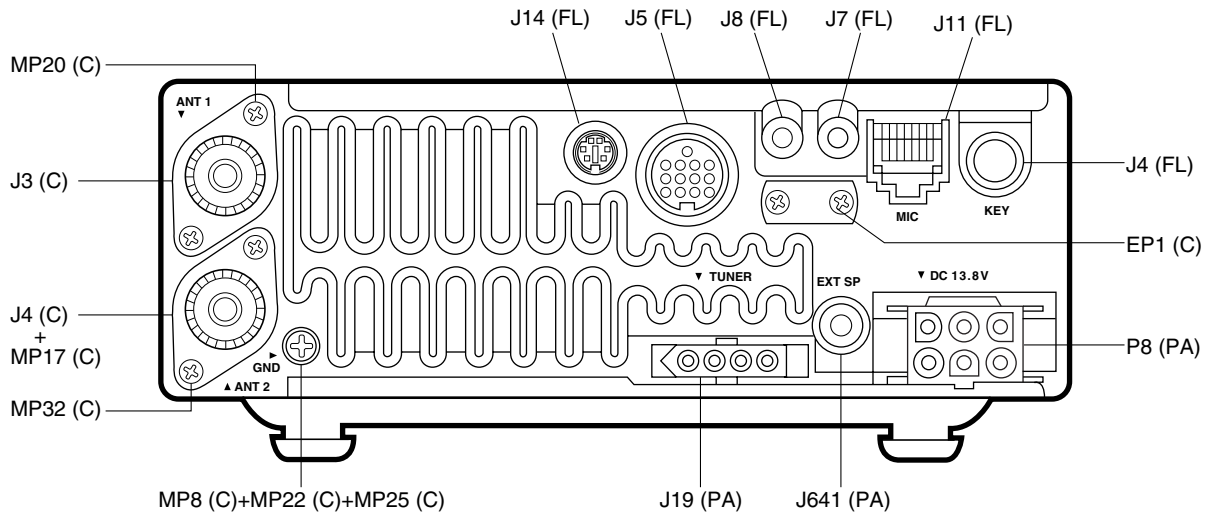
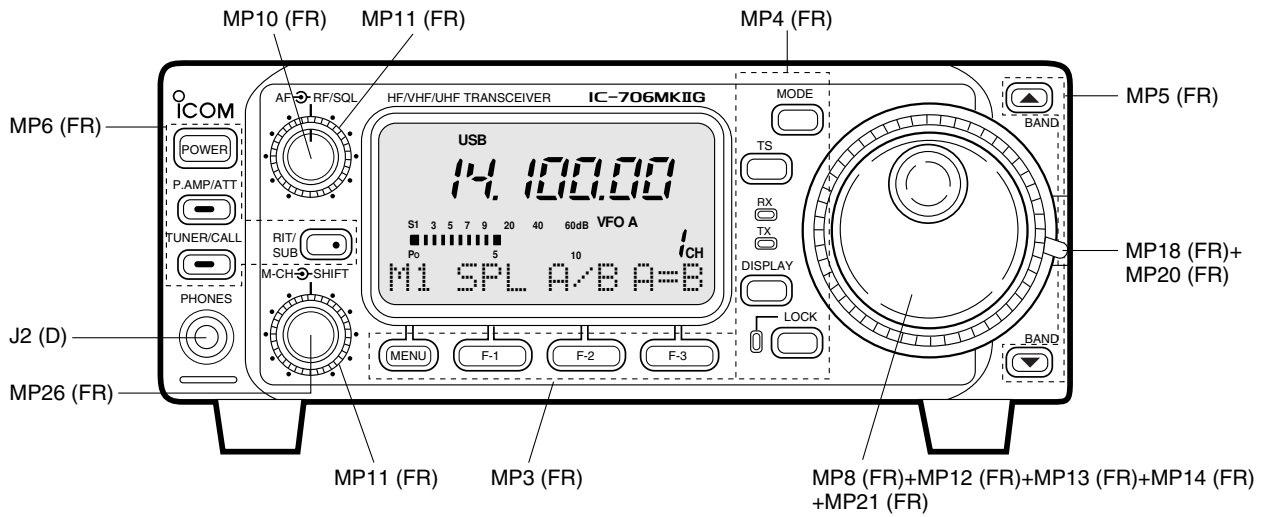
[ACCESSORIES]

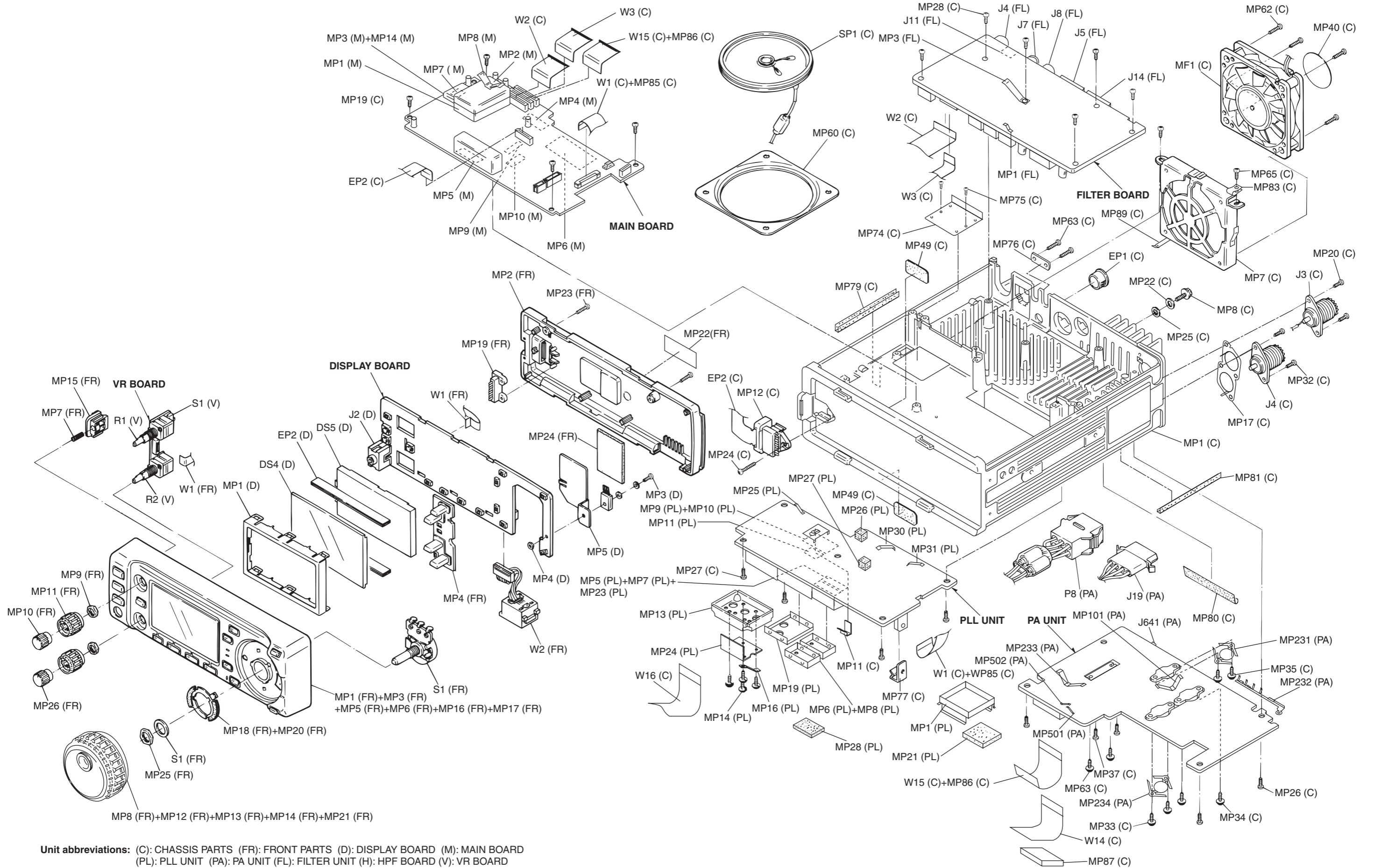
REF NO.	ORDER NO.	DESCRIPTION	QTY.
P1	5610000410	AP-319	1
P2	5610000420	AP-338	1
MC1†	-	HM-103-1	1
F1	5210000090	FGB 30A	2
F2	5210000131	FGB 4A PBF	1
W1	8900006490	OPC-025D	1
W2	8900006110	OPC-596	1
EP1	0880000230	OPC-639 (EX-1874 PACKING)	1
EP2	6910011960	ZCAT1518-0730	1
MP1	8930007300	MIC hunger	1

*: Refer to SECTION 8 "BOARD LAYOUTS."

†: Optional product

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





SECTION 7 SEMICONDUCTOR INFORMATION

• TRANSISTOR AND FET'S

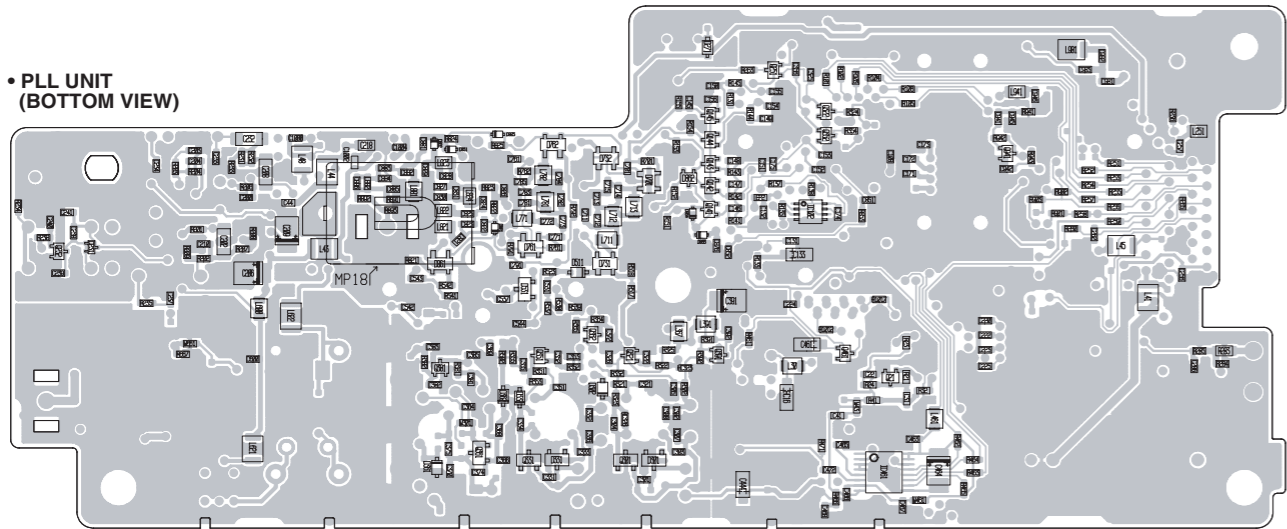
2SA1576 R (Symbol: FR) 	2SA1577 Q (Symbol: FR) 	2SB1123T (Symbol: BF) 	2SB1132R (Symbol: BA) 	2SB1143 S
2SC4081 R (Symbol: BR) 	2SC4116 GR (Symbol: LG) 	2SC4213 B (Symbol: AB) 	2SC4403-3 (Symbol: LY3) 	2SC4405-3 (Symbol: OY3)
2SD1619 (Symbol: DB) 	2SD1623 (Symbol: DF) 	2SK210 GR (Symbol: YG) 	2SK2171-4 (Symbol: KM) 	2SK2854 (Symbol: UP)
2SK508 K52 (Symbol: K52) 	2SK880 Y (Symbol: XY) 	2SK882 GR (Symbol: TG) 	3SK126 O (Symbol: UC) 	3SK291 (Symbol: UF)
CPH3404 (Symbol: KD) 	DTA114EE (Symbol: 14) 	DTA114EU (Symbol: 14) 	DTA144EU (Symbol: 16) 	DTC114EE (Symbol: 24)
DTC114EU (Symbol: 24) 	DTC144EE (Symbol: 24) 	MRF1508T1 (Symbol: 1508) 	MXR9745RT1 (Symbol: RG) 	RN1202
SRFJ7044 (Symbol: SRFJ7044) 	UMC1NTR (Symbol: C1) 	UMC3N TR (Symbol: C3) 	XP4111 (Symbol: 9U) 	

• DIODES

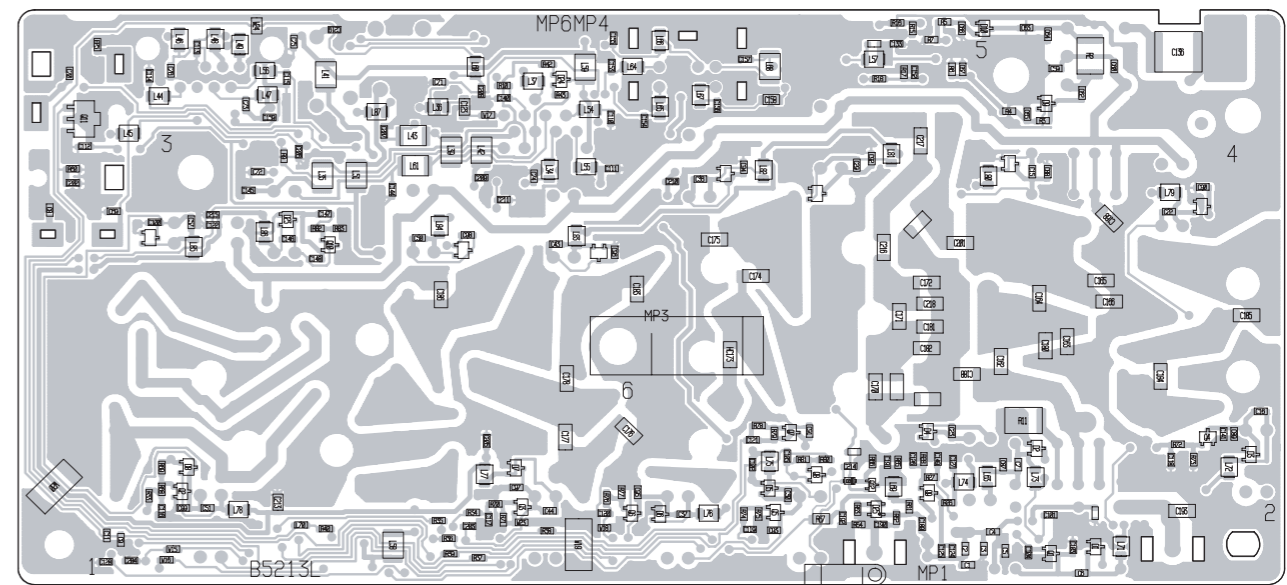
1SS302 (Symbol: C3) 	1SS355 (Symbol: A) 	1SS375 (Symbol: FH) 	1SS385 (Symbol: 09) 	1SV237 (Symbol: BB)
1SV265 (Symbol: LV) 	1SV305 (Symbol: TV) 	1SV308 (Symbol: TX) 	1SV312 (Symbol: BB) 	DA221 (Symbol: K)
DAN202U (Symbol: N) 	DAN222 (Symbol: N) 	DAP202U (Symbol: P) 	DAP222 (Symbol: P) 	HSB88WSTR (Symbol: Silver line)
KV1470TL (Symbol: F7) 	MA114 (Symbol: 1E) 	MA2S077 (Symbol: S) 	MA2S111 (Symbol: A) 	MA2S728 (Symbol: B)
MA2SV0500L (Symbol: A) 	MA304B (Symbol: 7R) 	MA357 (Symbol: NL) 	MA717WK (Symbol: M3D) 	MA742 (Symbol: M1U)
MA77 (Symbol: 4B) 	MA8027 (Symbol: 2^7) 	MA8033 (Symbol: 3_3) 	MA8036L (Symbol: 3_6) 	MA8056M (Symbol: 5-6)
MA8068M (Symbol: 6-8) 	MA862 (Symbol: M11) 	RD12M T2B2 (Symbol: 122) 	UM9401F 	

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

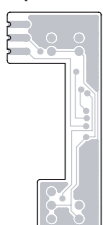
• PLL UNIT (BOTTOM VIEW)



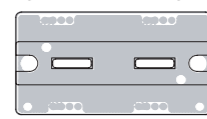
• FILTER UNIT (BOTTOM VIEW)



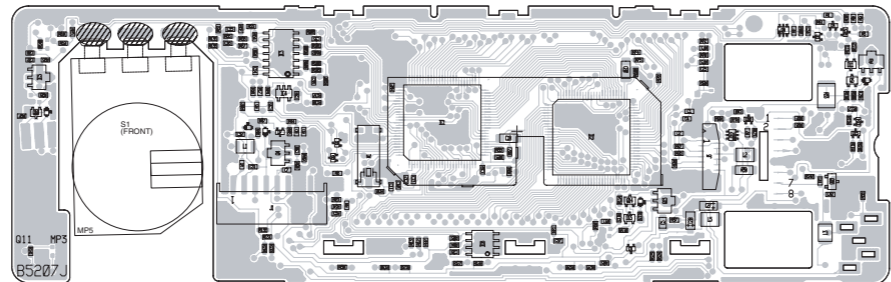
• VR UNIT (BOTTOM VIEW)



• DRIVE UNIT (BOTTOM VIEW)



• DISPLAY UNIT (BOTTOM VIEW)



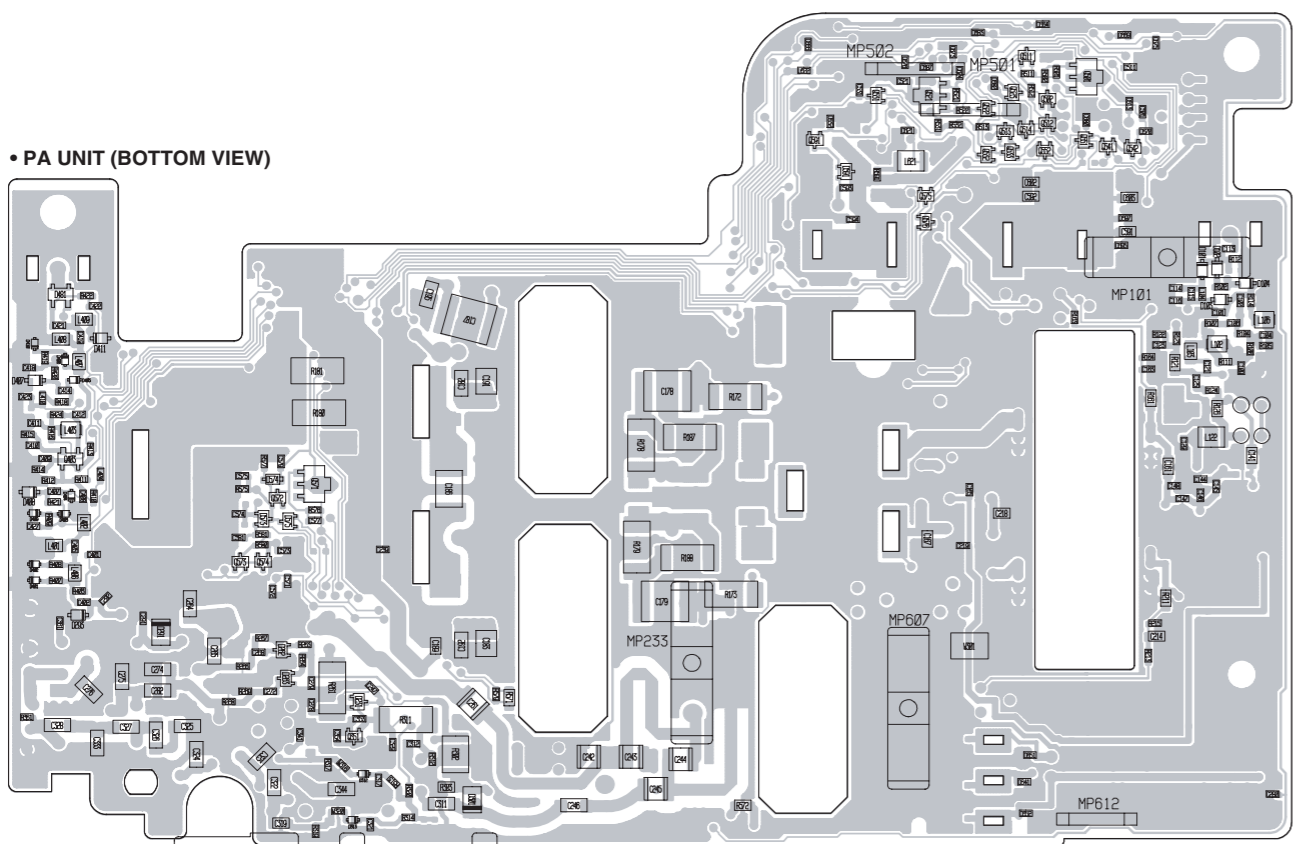
1	J3	DN	AFL	2
		AFL	AF	
		SOL	AF	
		AFV	AFS	
		UP	AFS	
		SFT	5V	
		GND		
13				12

TO VR BOARD J1

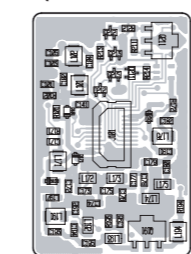
1	J1	BVLM	8
		UID	
		AF	
		PTT	
		MICEL	
		MICL	
		GND	
		SQLS	

TO FRONT UNIT W2

• PA UNIT (BOTTOM VIEW)



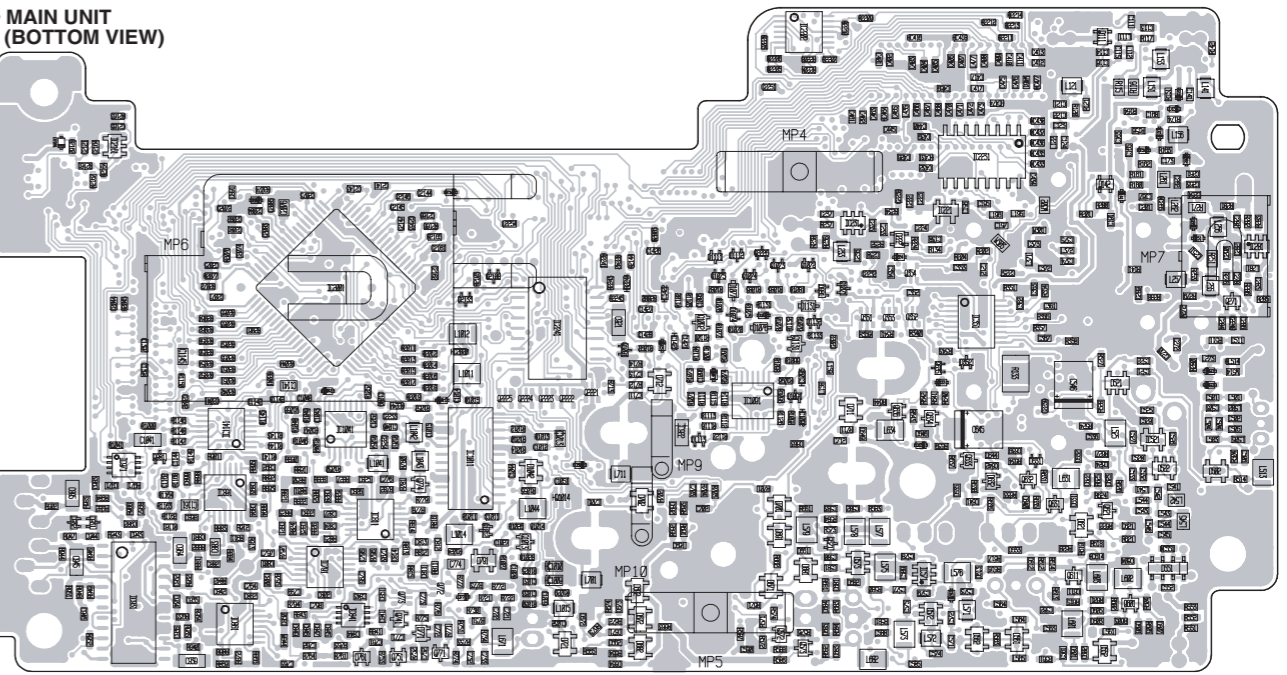
• HPF UNIT (BOTTOM VIEW)



11	J101	GND	SRF	10
		GND	SRF	
		T8V	GND	
		B7H	PA2S	
		L5H	L6H	
		L3H	L4H	
		L2H	THH	
		GND	GND	
		SIF	GND	
		SIF	GND	
20				1

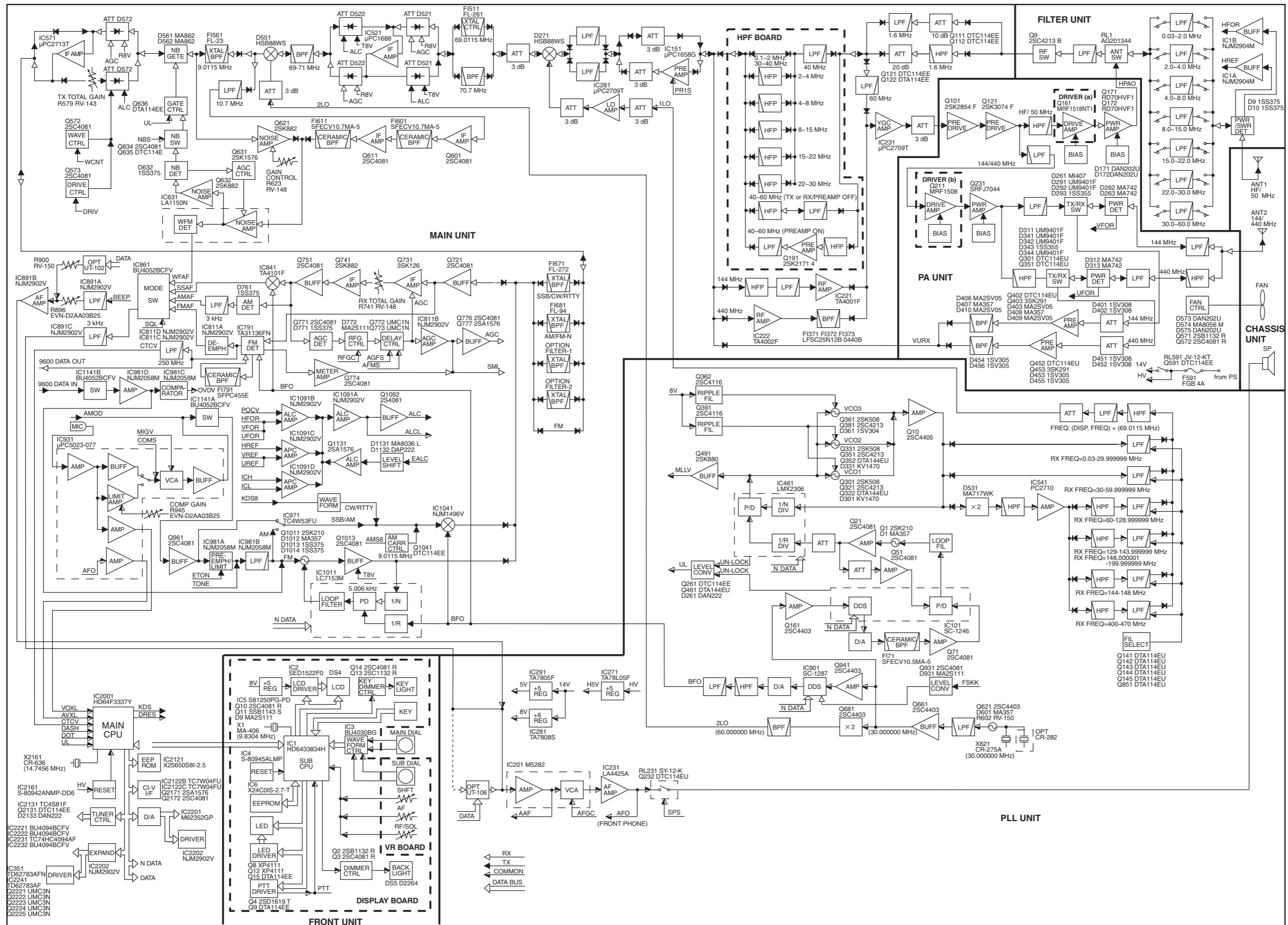
TO MAIN UNIT J1

• MAIN UNIT (BOTTOM VIEW)



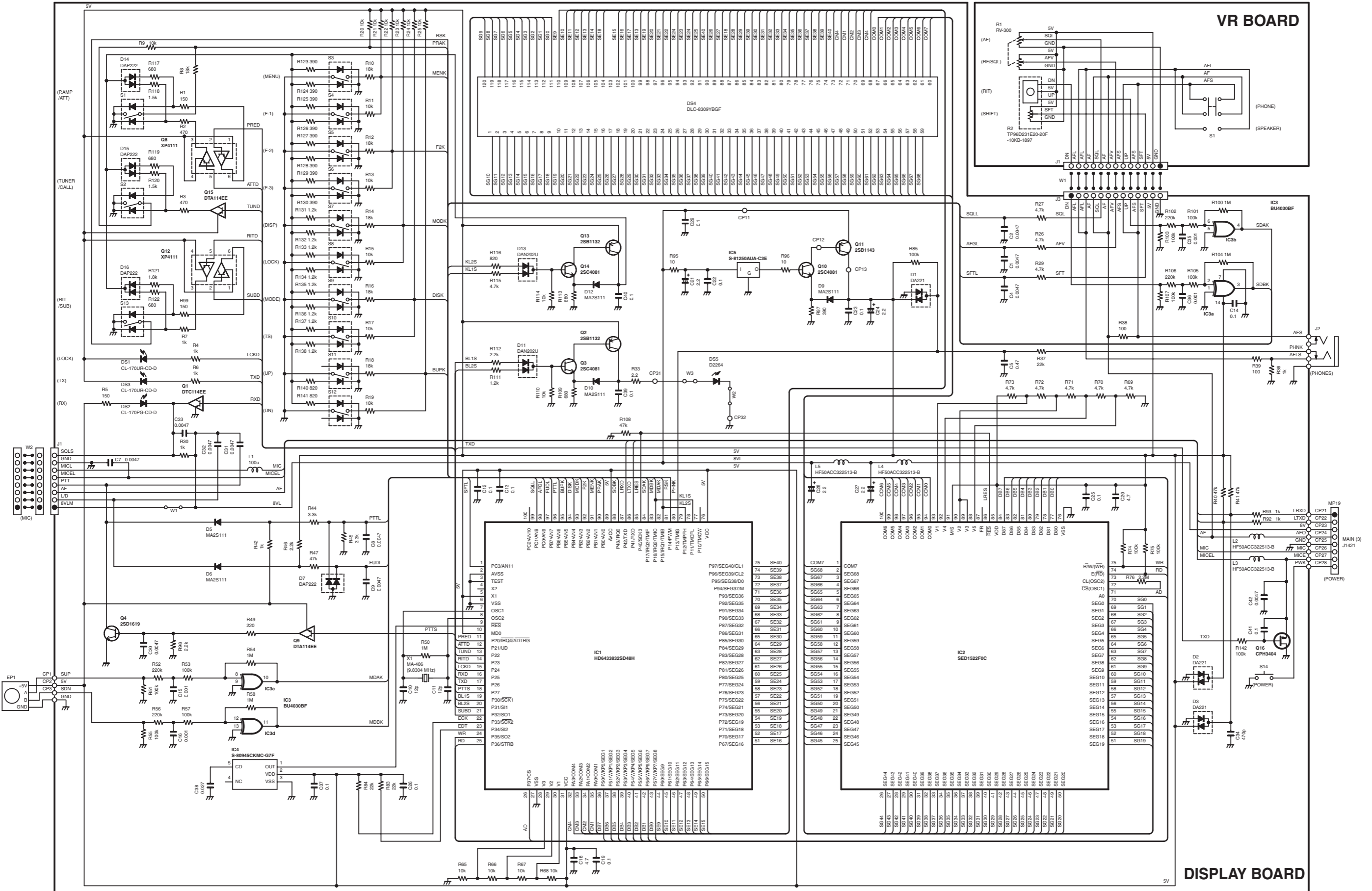
SECTION 9

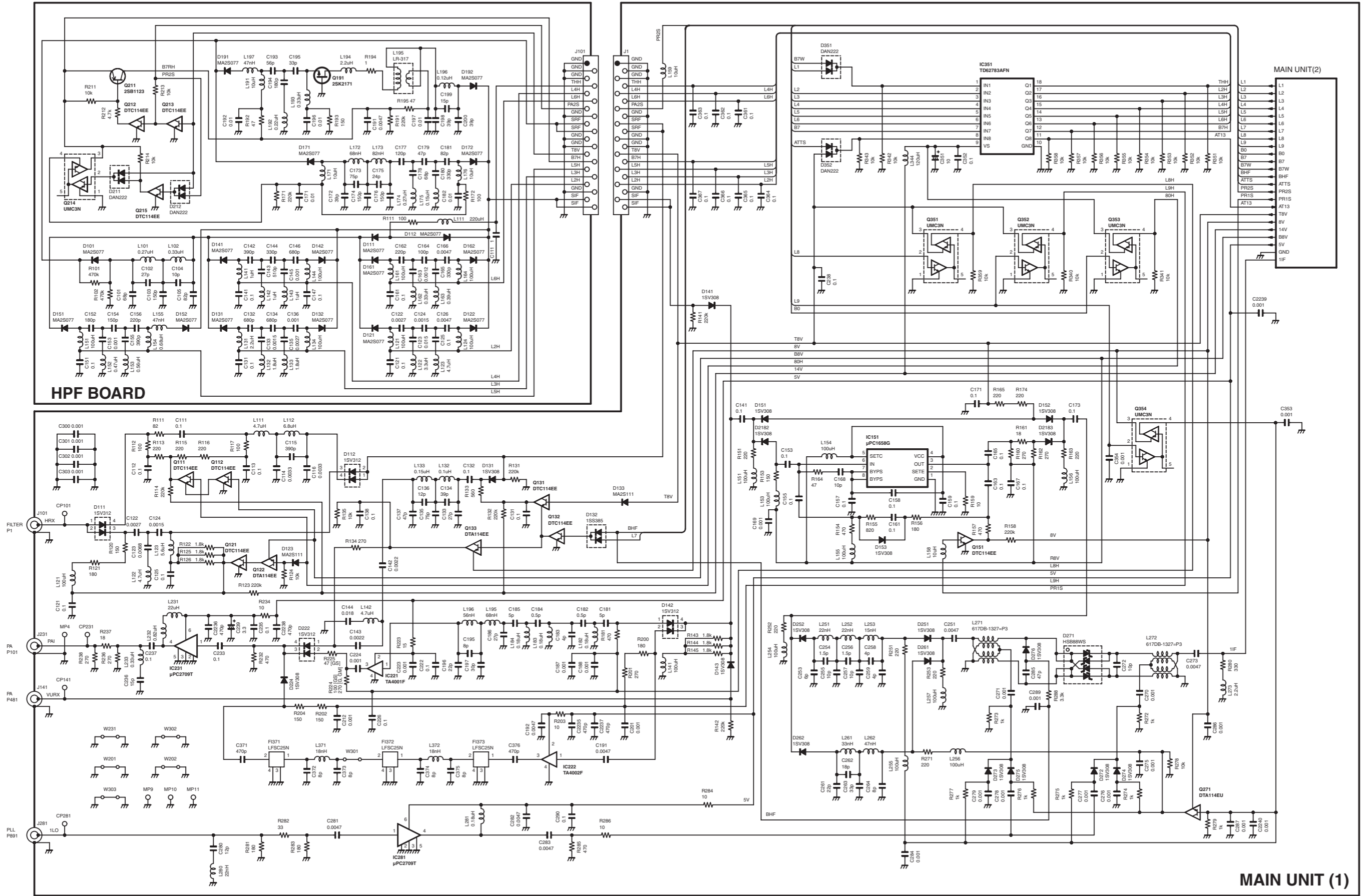
BLOCK DIAGRAM



SECTION 10

VOLTAGE DIAGRAM

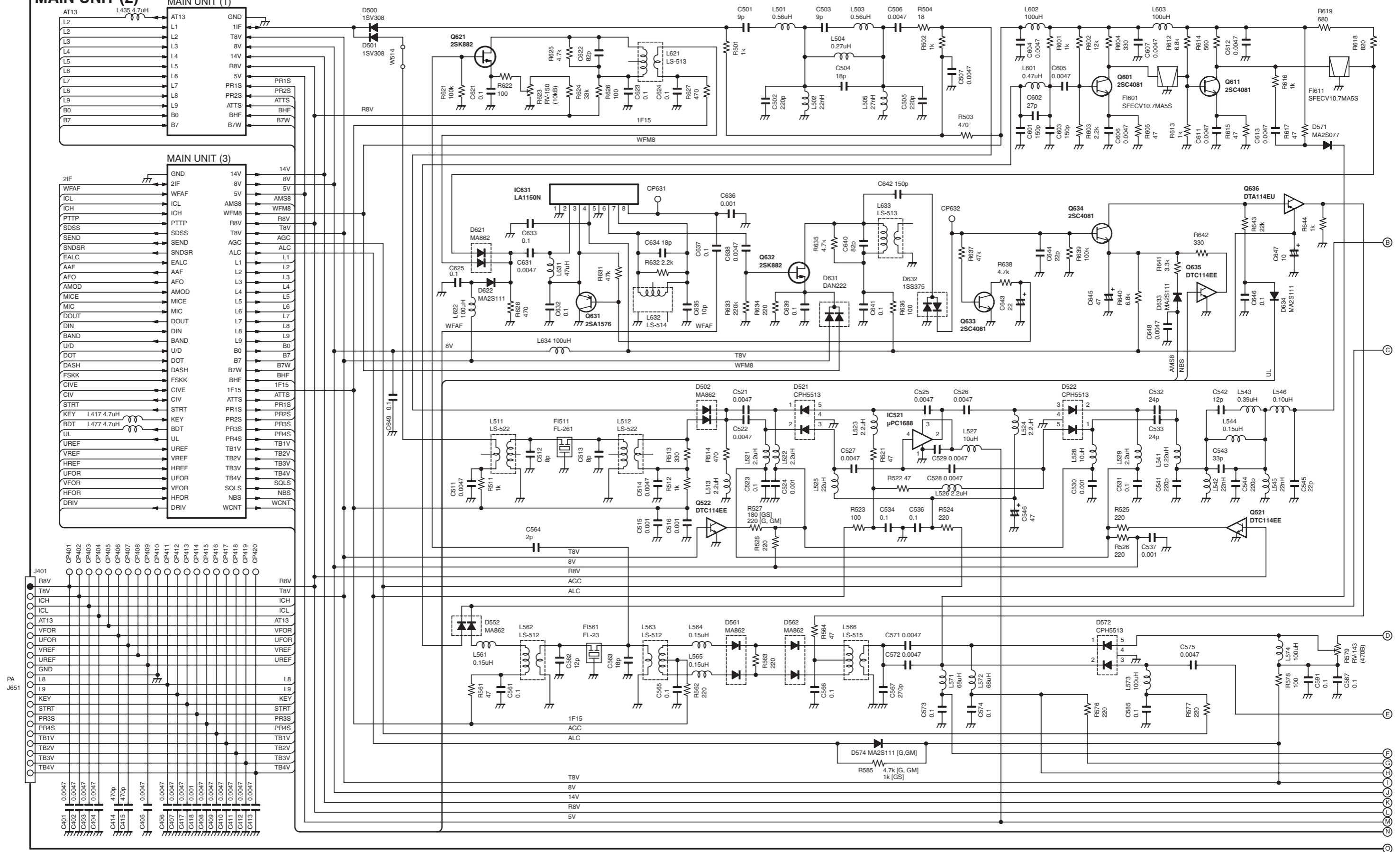




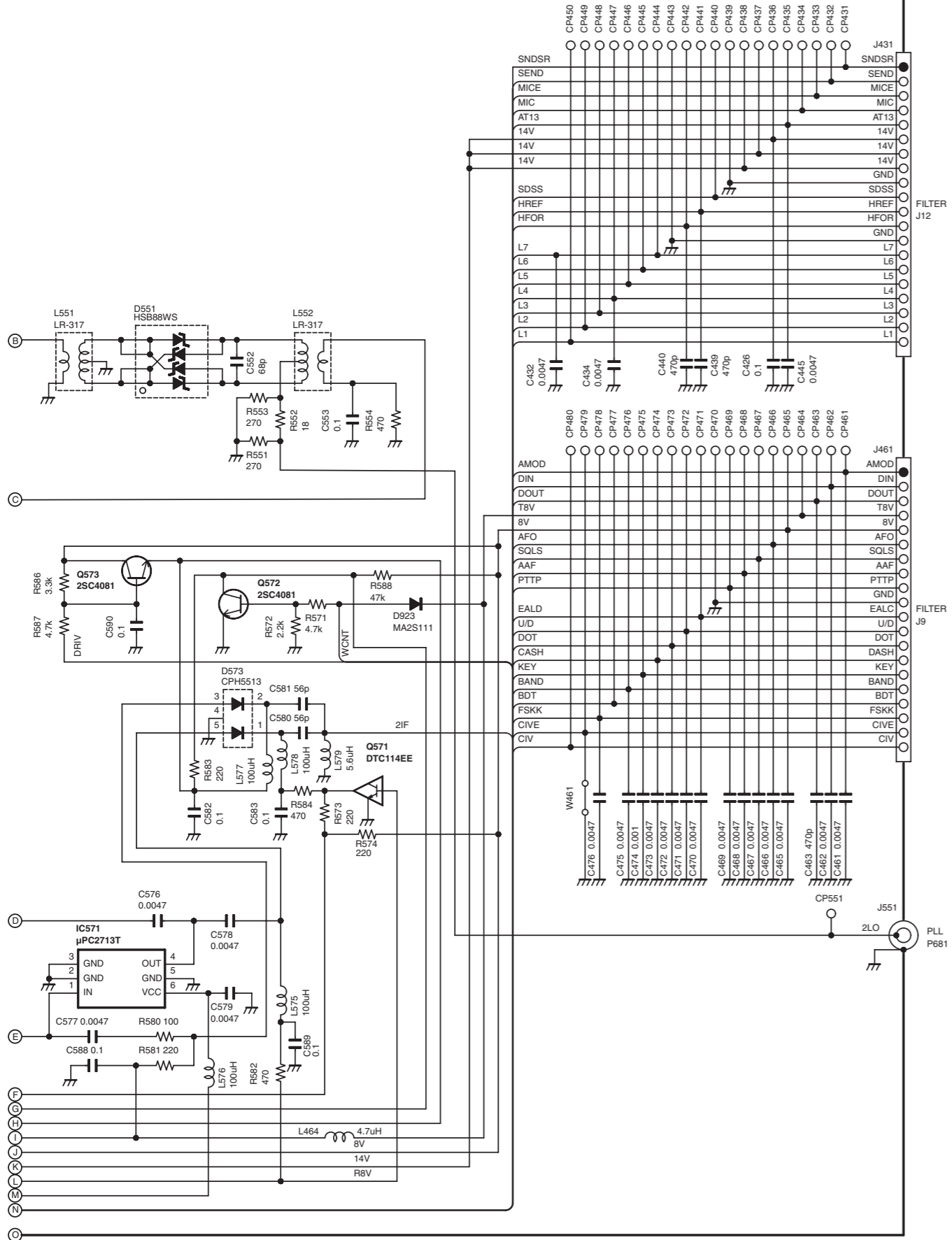
MAIN UNIT (2)

MAIN UNIT (1)

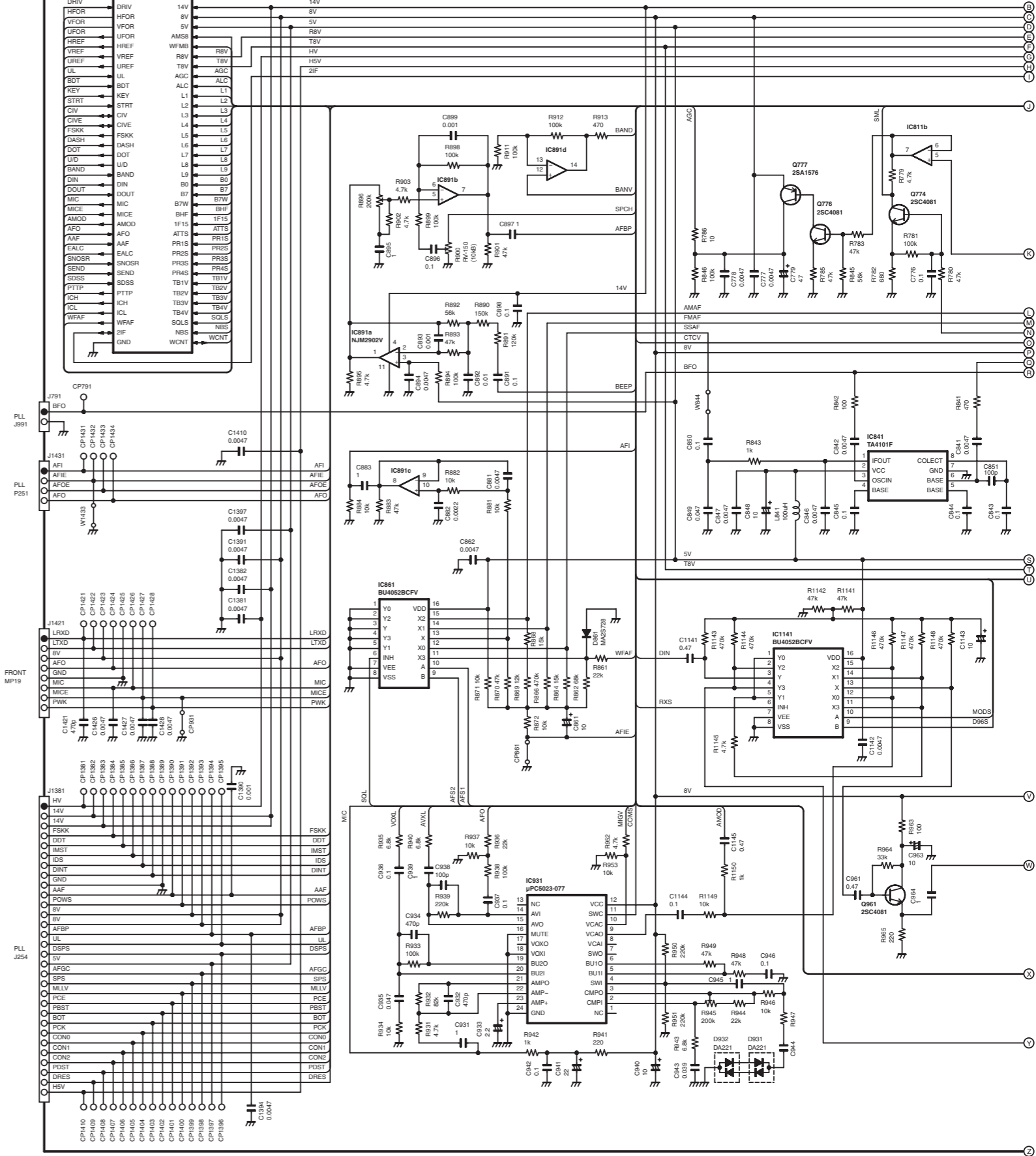
MAIN UNIT (3)



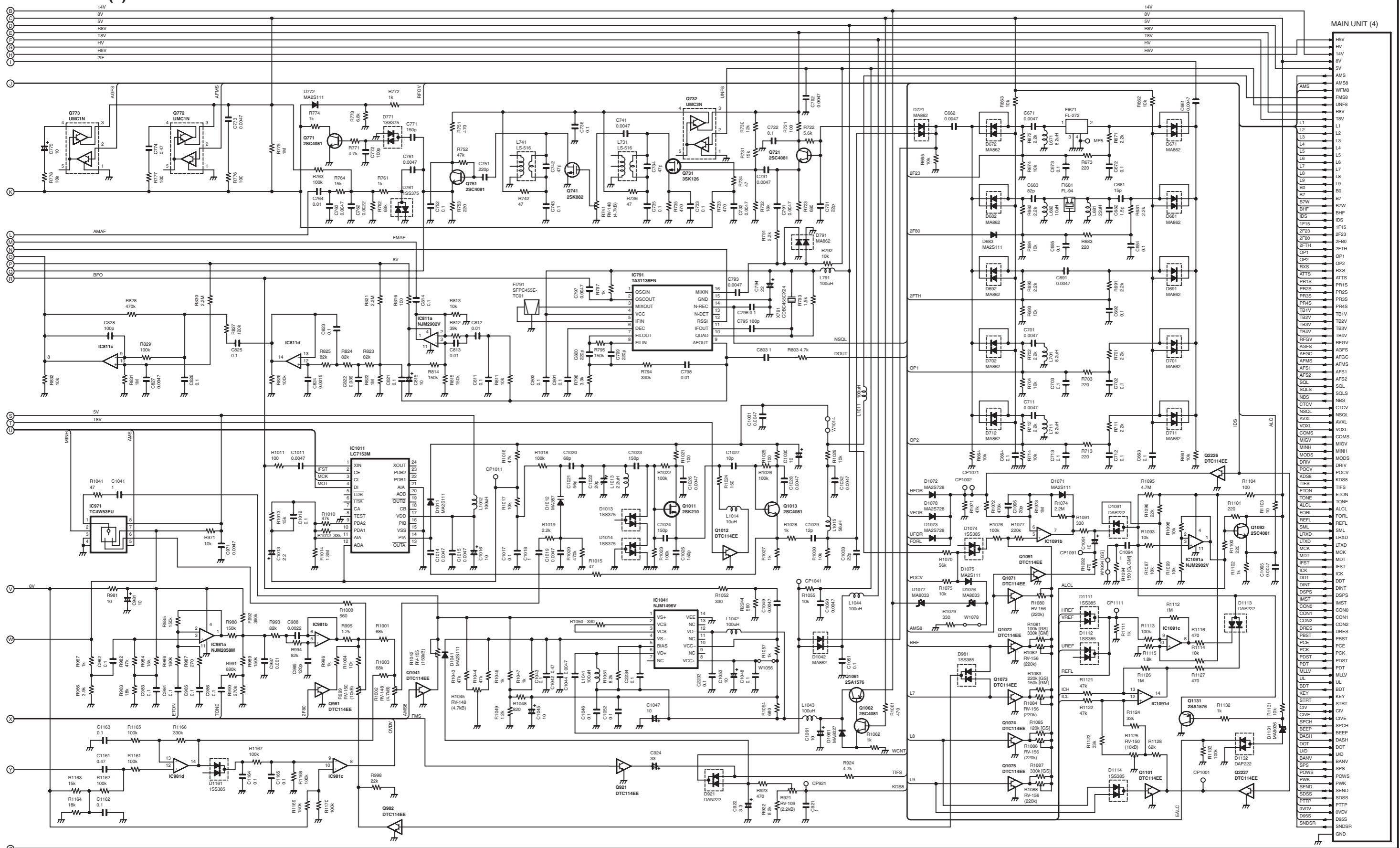
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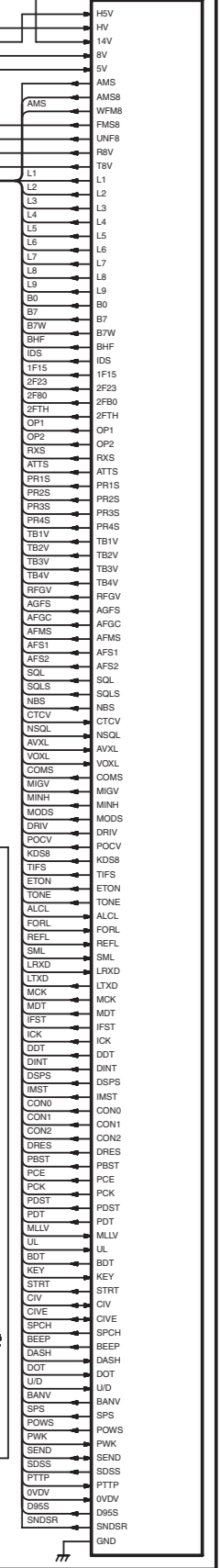
MAIN UNIT (3)

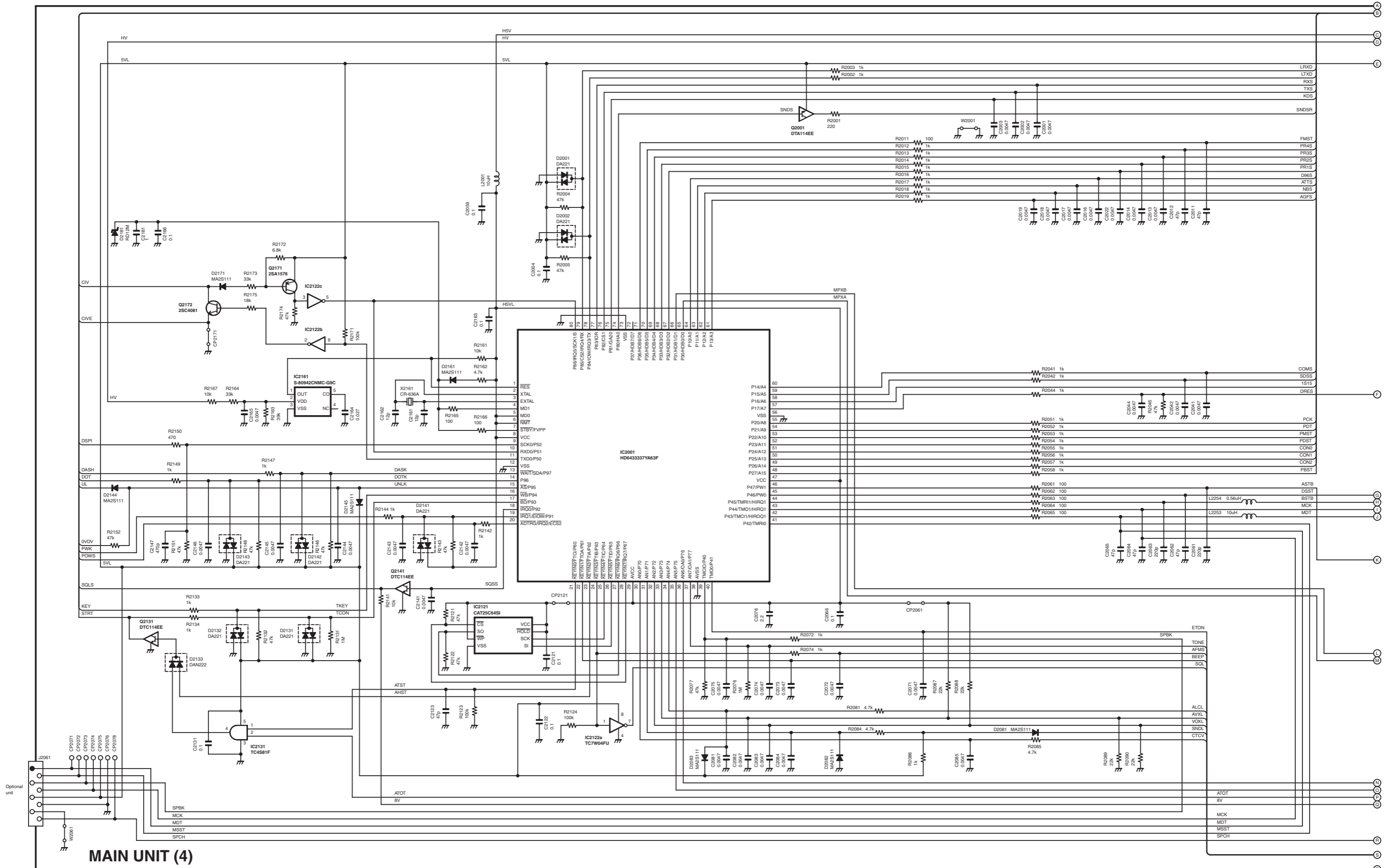


MAIN UNIT (3)

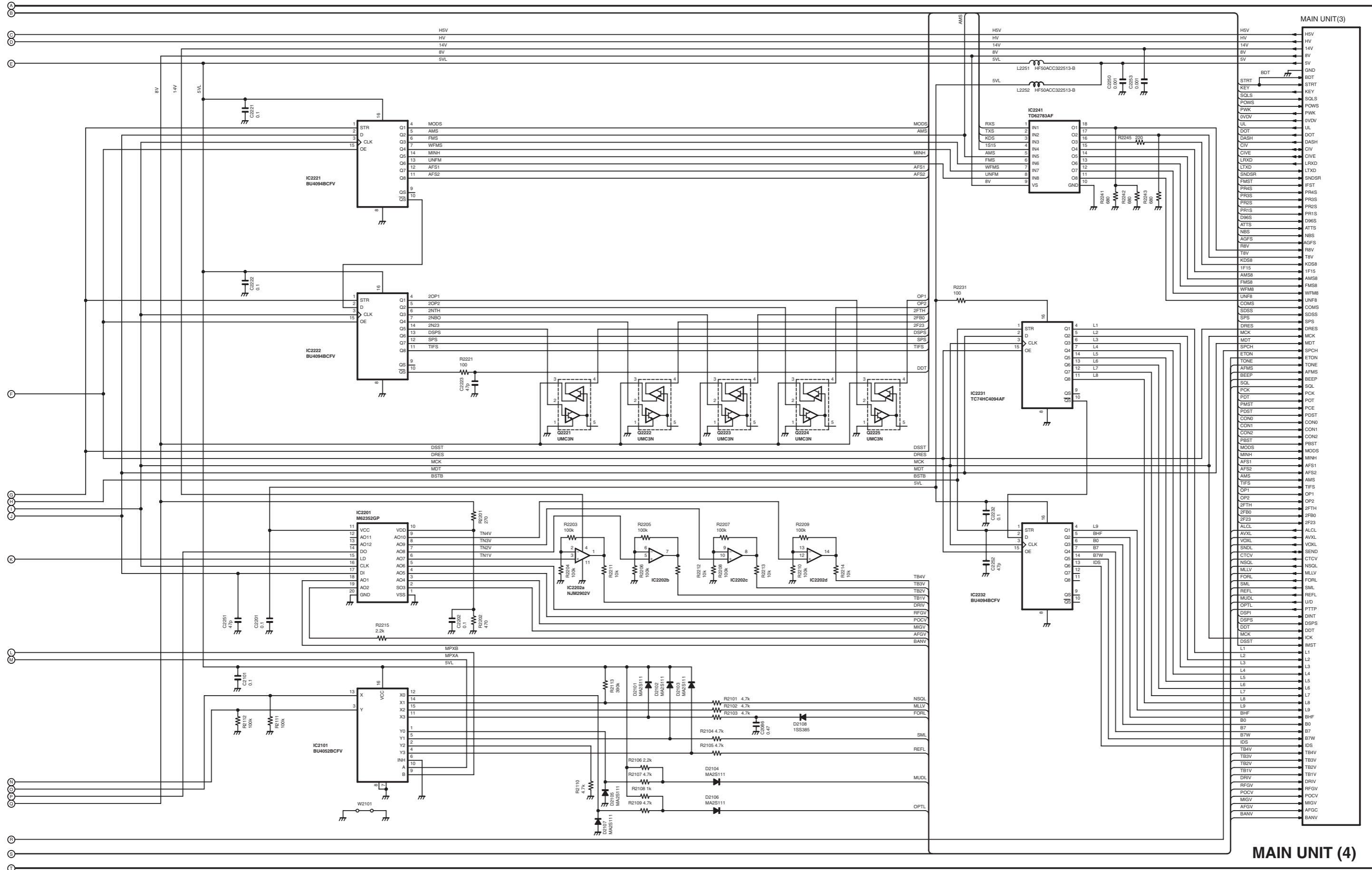


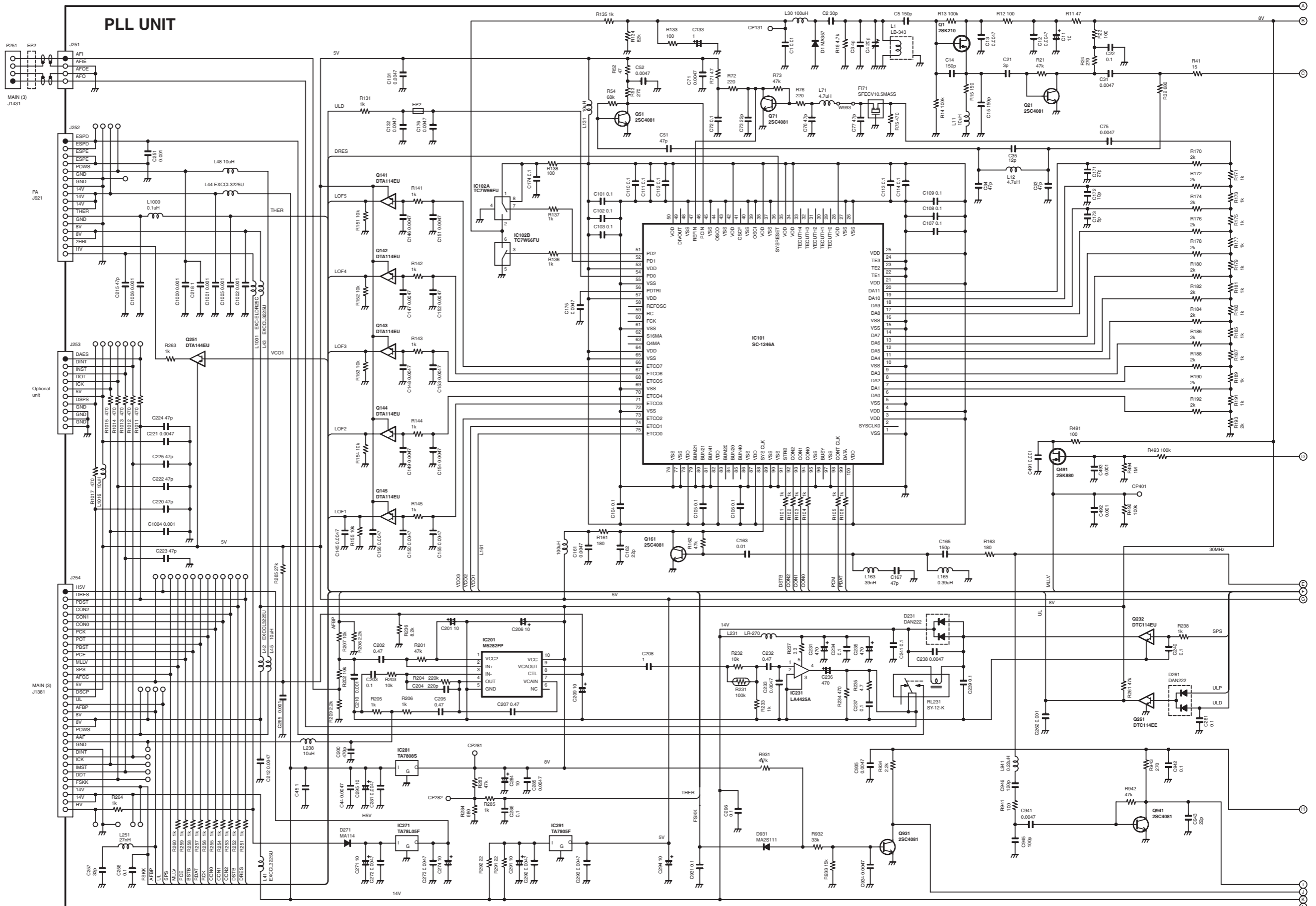
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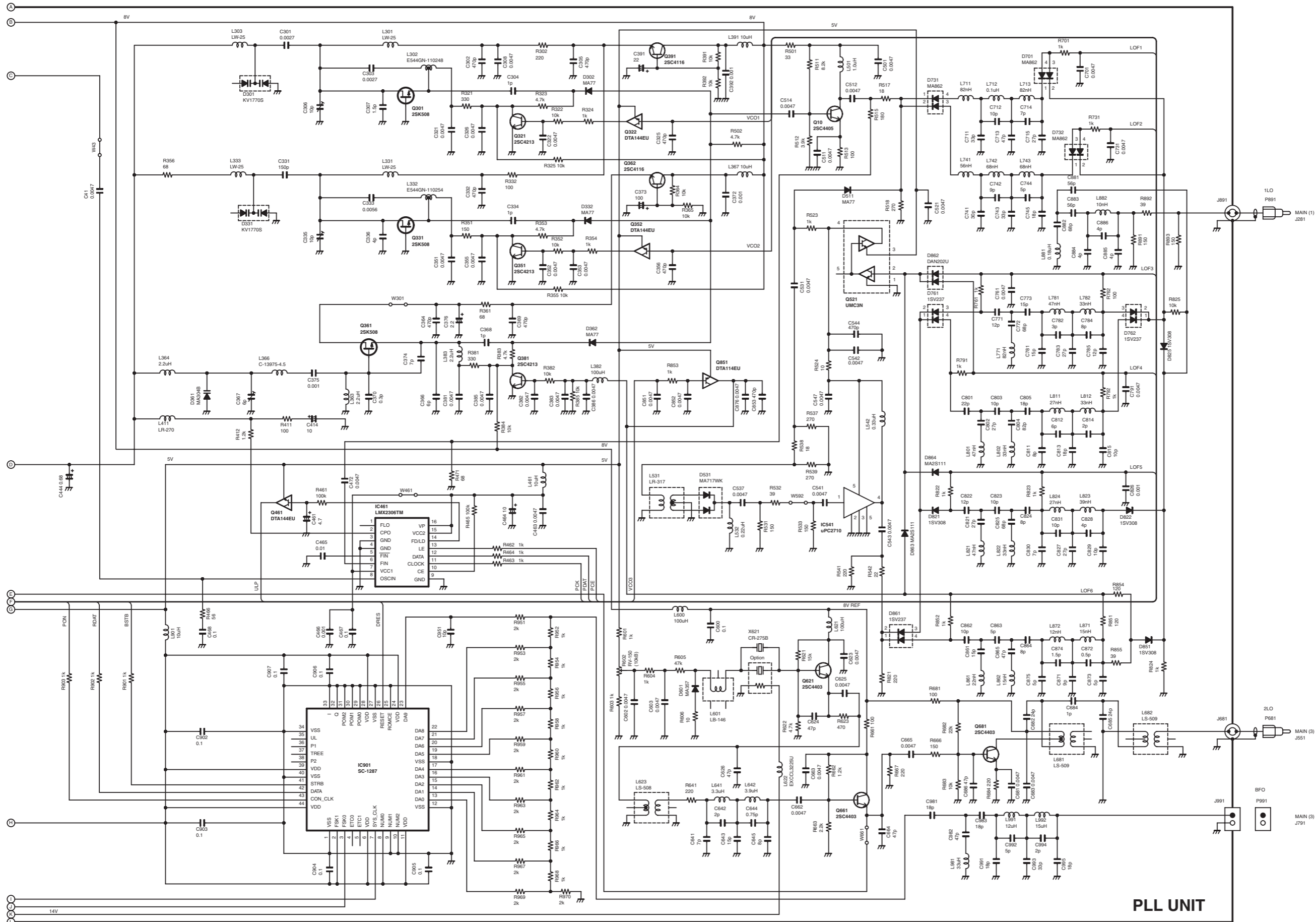




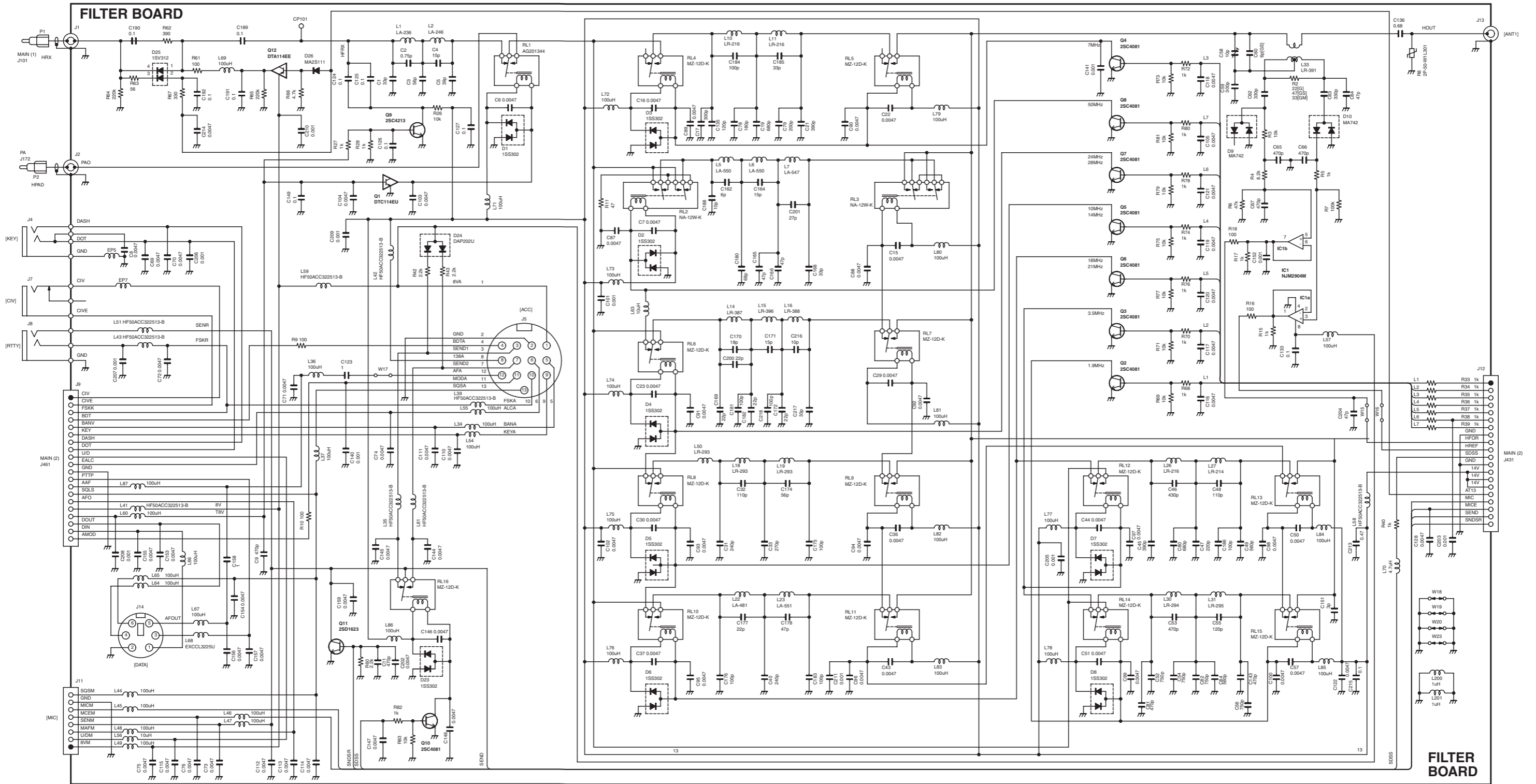
MAIN UNIT (4)

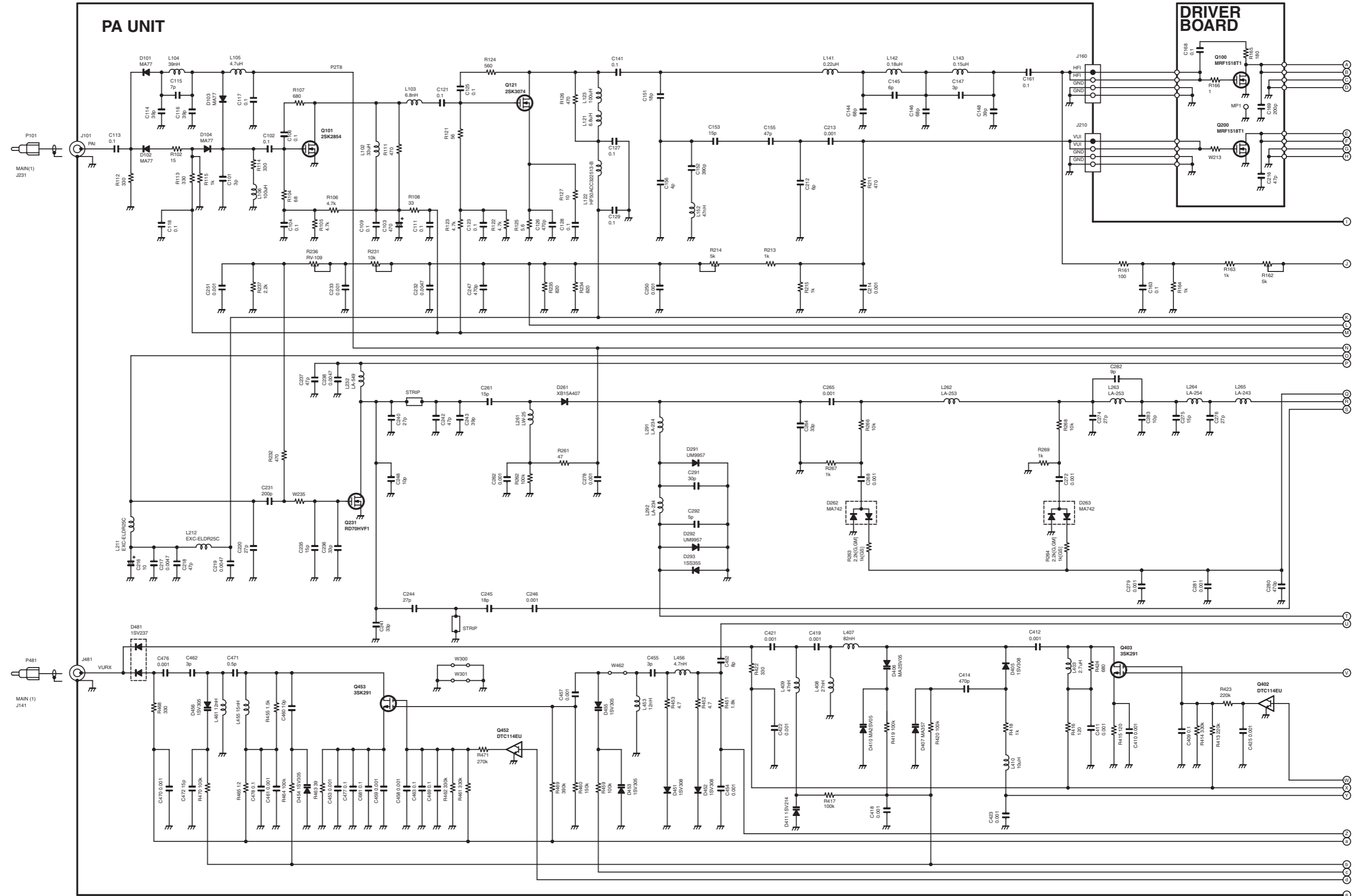


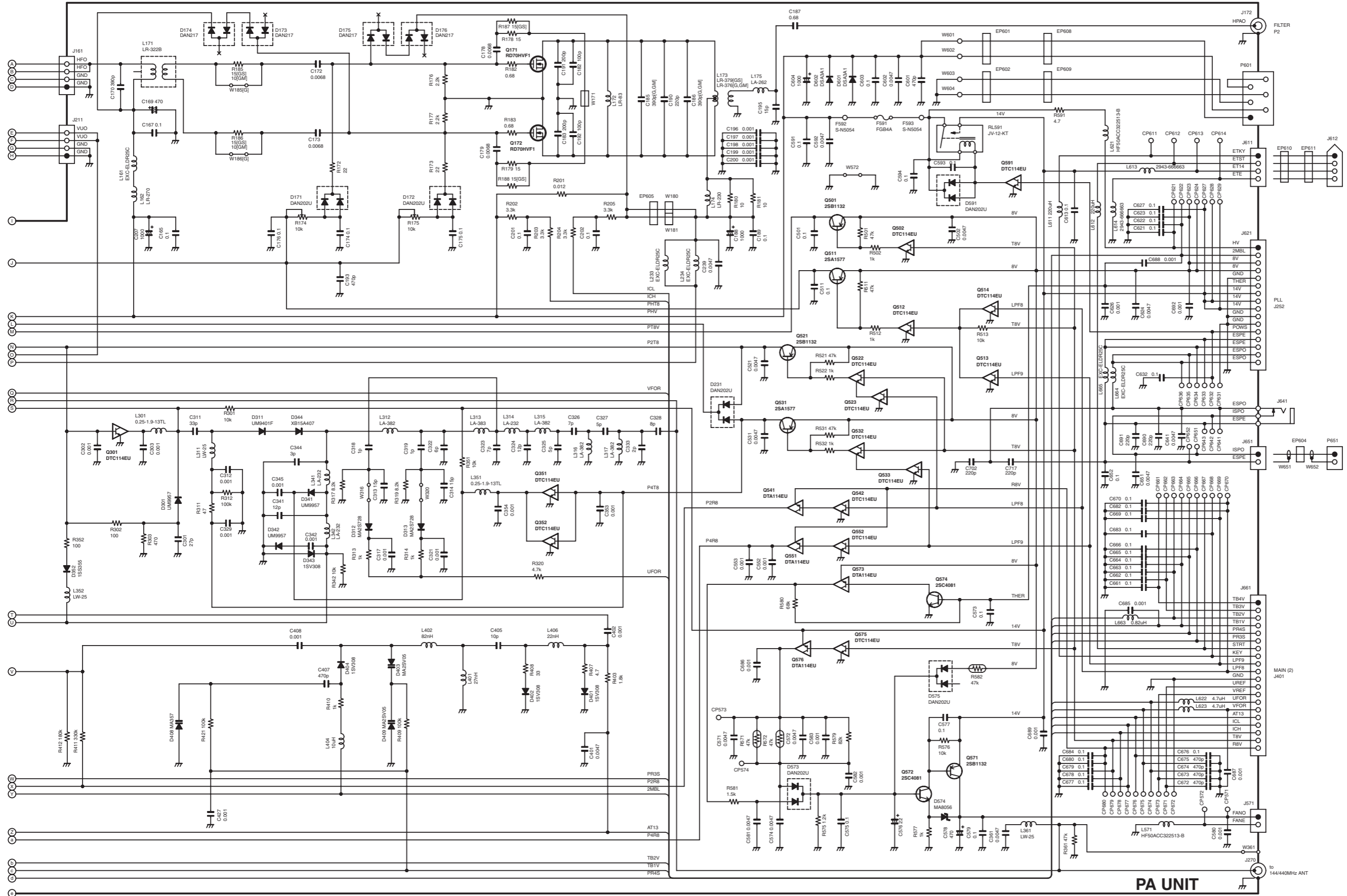




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