



SERVICE MANUAL

HF/VHF/UHF TRANSCEIVER

IC-9100

S-14721XZ-C1
Jun. 2011

Icom Inc.

INTRODUCTION

This service manual describes the latest technical information for the **IC-9100** HF/VHF/UHF TRANSCEIVER, at the time of publication.

MODEL	VERSION
IC-9100	[USA]
	[EUR]
	[EUR-01]
	[ITR]
	[ESP]
	[TPE]
	[KOR]
	[CHN]
	[FRA]
[EXP]	

CAUTION

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

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

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

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

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



ORDERING PARTS

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

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

<ORDER EXAMPLE>

1110003491	S.IC	TA31136FNG	IC-9100	MAIN UNIT	5 pieces
8820001210	Screw	2438 screw	IC-9100	Top cover	10 pieces

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

REPAIR NOTES

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

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General

- Frequency coverage : (unit: MHz)
 - Receive
 - 0.030–60.000^{*1*2}
 - 136.000–174.000^{*1*2}
 - 420.000–480.000^{*1*2}
 - 1240.000–1320.000[†]
 - Transmit
 - 1.800–1.999^{*2}, 3.500–3.999^{*2},
 - 5.330500^{*3}, 5.346500^{*3}, 5.366500^{*3},
 - 5.371500^{*3}, 5.403500^{*3},
 - 7.000–7.300^{*2}, 10.100–10.150^{*2},
 - 14.000–14.350^{*2}, 18.068–18.168^{*2},
 - 21.000–21.450^{*2}, 24.890–24.990^{*2},
 - 28.000–29.700^{*2}, 50.000–54.000^{*2}
 - 144.000–148.000^{*2}, 430.000–450.000^{*2}
 - 1240.000–1300.000[†]
- *¹Some frequency bands are not guaranteed.
- *²Depending on version. *³USA version only. USB mode only.
- Mode : USB, LSB, CW, RTTY, AM, FM, DV*
 - *The optional UT-121 is required.
- No. of memory channels : 297CH (99CH × 3 band)
(396CH with UX-9100[†]; 99CH × 4 bands)
- No. of scan edge memory channels : 18CH (6 × 3 band)
(24CH with UX-9100[†]; 6CH × 4 bands)
- No. of call channels : 3CH (1 × 3 band)
(4CH with UX-9100[†]; 1CH × 4 bands)
- No. of Satellite memory channels : 20CH
- Antenna connector : SO-239 × 3
Type-N × 2*
 - *When the optional UX-9100 is installed.
- Antenna impedance : 50 Ω (at Antenna Tuner OFF)
- Usable temperature range : 0°C to +50°C (+32°F to +122°F)
- Frequency stability : Less than ±0.5 ppm 5 min. after power ON. (0°C to +50°C; +32°F to +122°F)
- Frequency resolution : 1 Hz
- Power supply : 13.8 V DC ±15% (negative ground)
- Power consumption
 - Transmit
 - Max. power : 24.0 A (HF/50/144/430 MHz band)
11.0 A (1200 MHz band)[†]
 - Receive
 - Standby : 3.0 A (HF/50/144/430 MHz band)
4.0 A (1200 MHz band)[†]
 - Max. audio : 4.5 A (HF/50/144/430 MHz band)
5.5 A (1200 MHz band)[†]
- Dimensions : 315(W) × 116(H) × 343(D) mm
(projections not included) 12.4(W) × 4.57(H) × 13.5(D) in
- Weight (approximately) : 11.0 kg; 24.2 lb
11.95 kg; 26.3 lb (with UX-9100)
- ACC connector : 13-pin
- CI-V connector : 2-conductor 3.5 (d) mm (1/8")

Transmitter

- Output power (continuously adjustable)

Frequency band	Output power
HF/50 MHz	2 to 100 W (AM: 2 to 30 W)*
144 MHz	2 to 100 W
430 MHz	2 to 75 W
1200 MHz [†]	1 to 10 W

(at 13.8 V DC/+25°C)

* In the AM mode, transmission can be performed only on the HF/50 MHz frequency band.

- Modulation system
 - SSB : Digital PSN modulation
 - AM : Digital Low power modulation
 - FM : Digital Phase modulation
 - DV* : GMSK Digital Phase modulation
- *The optional UT-121 is required.
- Spurious emission (Spurious domain)
 - HF bands : Less than –50 dB
 - 50/144 MHz band : Less than –63 dB
 - 430 MHz band : Less than –61.8 dB
 - 1200 MHz band[†] : Less than –53 dB
- (Out-of-band domain)
 - HF bands : Less than –40 dB
 - 50/144/430 MHz band : Less than –60 dB
 - 1200 MHz band[†] : Less than –50 dB
- Carrier suppression : More than 40 dB
- Unwanted sideband suppression : More than 55 dB
(1200 MHz: More than 40 dB)[†]
- ΔTX variable range : ±9.999 kHz
- Microphone connector : 8-pin connector
- Microphone impedance : 600 Ω
- ELEC-KEY connector : 3-conductor 6.35(d) mm (1/4")
- KEY connector : 3-conductor 6.35(d) mm (1/4")
- SEND connector : Phono jack (RCA)
- ALC connector : Phono jack (RCA)

[†] The optional UX-9100 is required for 1200 MHz frequency band operation.

[‡] Only when the 1200 MHz frequency band is selected.

■ Receiver

- Receive system
 - HF/50/144/430 MHz band: Double superheterodyne system
 - 1200 MHz band† : Triple superheterodyne system
- Intermediate frequencies
 - 1st : 64.455 MHz (HF/50 MHz band)
10.850 MHz (144 MHz band)
71.250 MHz (430 MHz band)
243.950 MHz (1200 MHz band)†
 - 2nd : 36 kHz (HF/50/144/430 MHz)
10.950 MHz (1200 MHz)†
 - 3rd : 36 kHz (1200 MHz)†
- Sensitivity
 - SSB, CW : 0.16 μ V (1.80–29.99 MHz)*¹
(10 dB S/N) BW=2.4 kHz 0.13 μ V (50.0–54.0 MHz)*²
0.11 μ V (144/430/1200[†] MHz)
 - AM (10 dB S/N) : 12.6 μ V (0.5–1.799 MHz)*¹
BW=6 kHz 2.0 μ V (1.80–29.99 MHz)*¹
1.6 μ V (50.0–54.0 MHz)*²
1.4 μ V (144/430 MHz)
 - FM (12 dB SINAD) : 0.5 μ V (28.0–29.7 MHz)*¹
BW=15 kHz 0.32 μ V (50.0–54.0 MHz)*²
0.18 μ V (144/430/1200[†] MHz)
 - DV (1% BER) : 1.0 μ V (28.0–29.7 MHz)*¹
CH Space=12.5 kHz 0.63 μ V (50.0–54.0 MHz)*²
0.35 μ V (144/430/1200[†] MHz)
- Squelch sensitivity

Frequency band	Squelch sensitivity
HF	SSB : Less than 5.6 μ V* ¹
	FM : Less than 0.3 μ V* ¹
50 MHz	SSB : Less than 5.6 μ V* ²
	FM : Less than 0.3 μ V* ²
144/430 MHz	SSB : Less than 1.0 μ V
	FM : Less than 0.18 μ V
1200 MHz [†]	SSB : Less than 1.0 μ V
	FM : Less than 0.18 μ V

*¹ Preamp 1 is ON.

*² Preamp 2 is ON.

- Selectivity (IF filter shape is set to SHARP)
 - SSB (BW: 2.4 kHz) : More than 2.4 kHz/–6 dB
Less than 3.4 kHz/–40 dB
 - CW (BW: 500 Hz) : More than 500 Hz/–6 dB
Less than 700 Hz/–40 dB
 - RTTY (BW: 500 Hz) : More than 500 Hz/–6 dB
Less than 800 Hz/–40 dB
 - AM (BW: 6 kHz) : More than 6.0 kHz/–6 dB
Less than 10.0 kHz/–40 dB
 - FM (BW: 15 kHz) : More than 12.0 kHz/–6 dB
Less than 22.0 kHz/–40 dB
 - DV (CH space: 12.5 kHz): More than –50 dB
- Spurious and image rejection ratio
 - HF/50 MHz band* : More than 70 dB
*except IF through on 50 MHz band
 - 144/430 MHz band : More than 60 dB
 - 1200 MHz band[†] : More than 50 dB
- AF output power : More than 2.0 W at 10%
(at 13.8 V DC) distortion with an 8 Ω load
- AF output impedance : 8 Ω
- RIT variable range : \pm 9.999 kHz

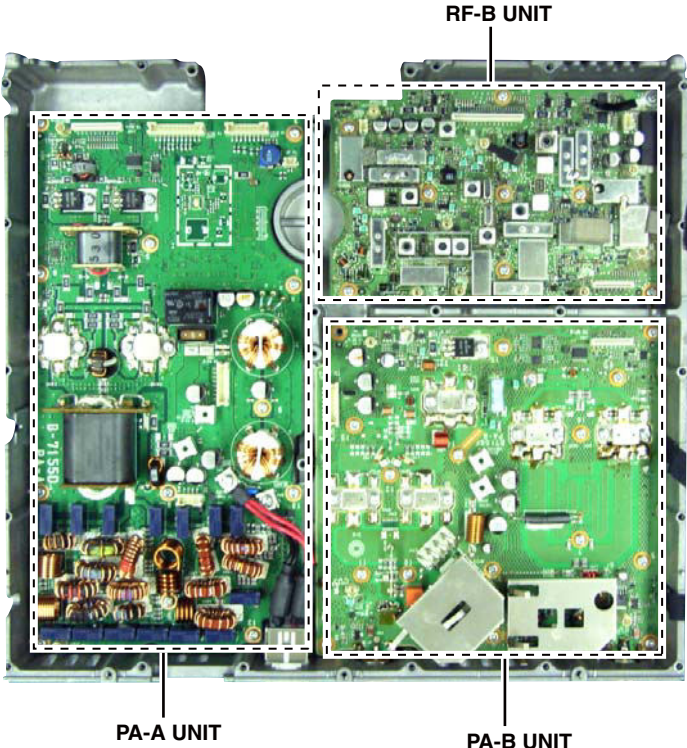
- PHONES connector : 3-conductor 6.35 (d) mm ($\frac{1}{4}$ ")
- External SP connector : 2-conductor 3.5 (d) mm
($\frac{1}{8}$ ")/8 Ω
- DSP ANF attenuation : More than 30 dB
(with 1 kHz single tone)
- DSP MNF attenuation : More than 70 dB
- DSP NR attenuation : More than 6 dB
(noise rejection in SSB)

■ Antenna tuner

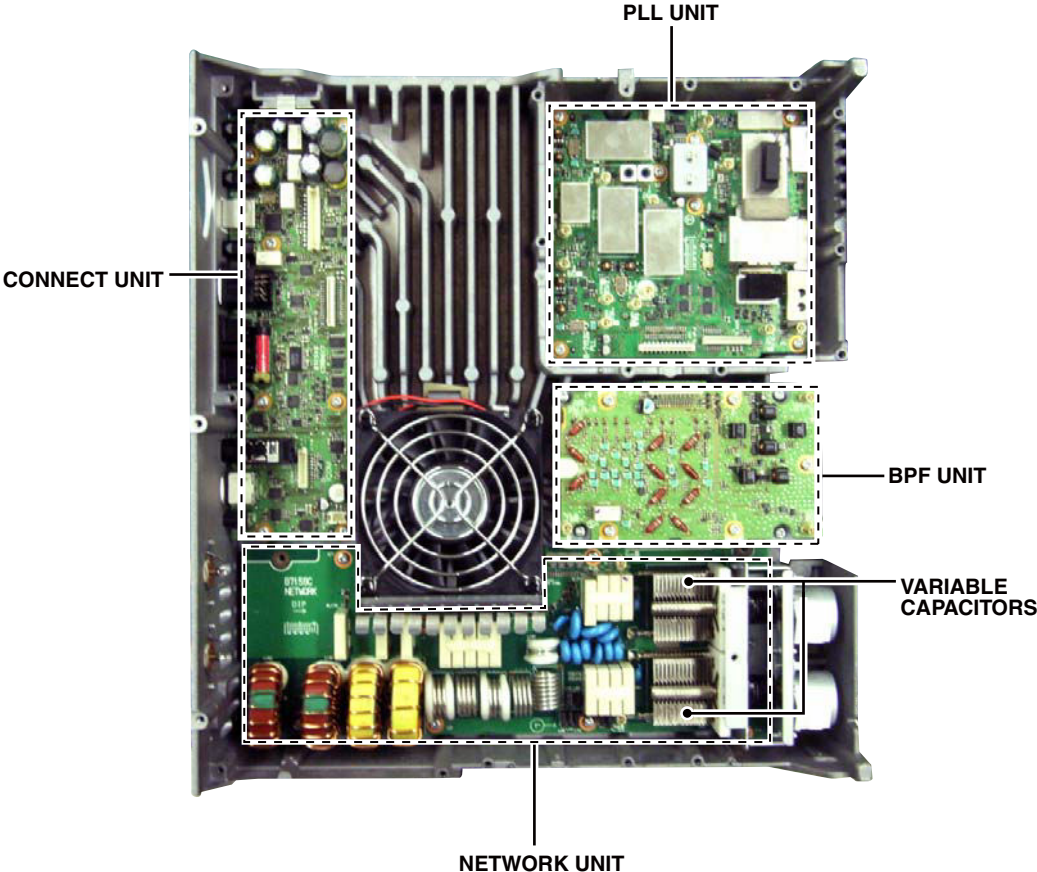
- Matching impedance range
 - HF bands : 16.7 to 150 Ω unbalanced
(Less than VSWR 1:3)
 - 50 MHz band : 20 to 125 Ω unbalanced
(Less than VSWR 1:2.5)
- Minimum operating input power : 8 W (HF bands)
15 W (50MHz band)
- Tuning accuracy : VSWR 1:1.5 or less
- Insertion loss : Less than 1.0 dB
(after tuning at RF power 100 W)

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

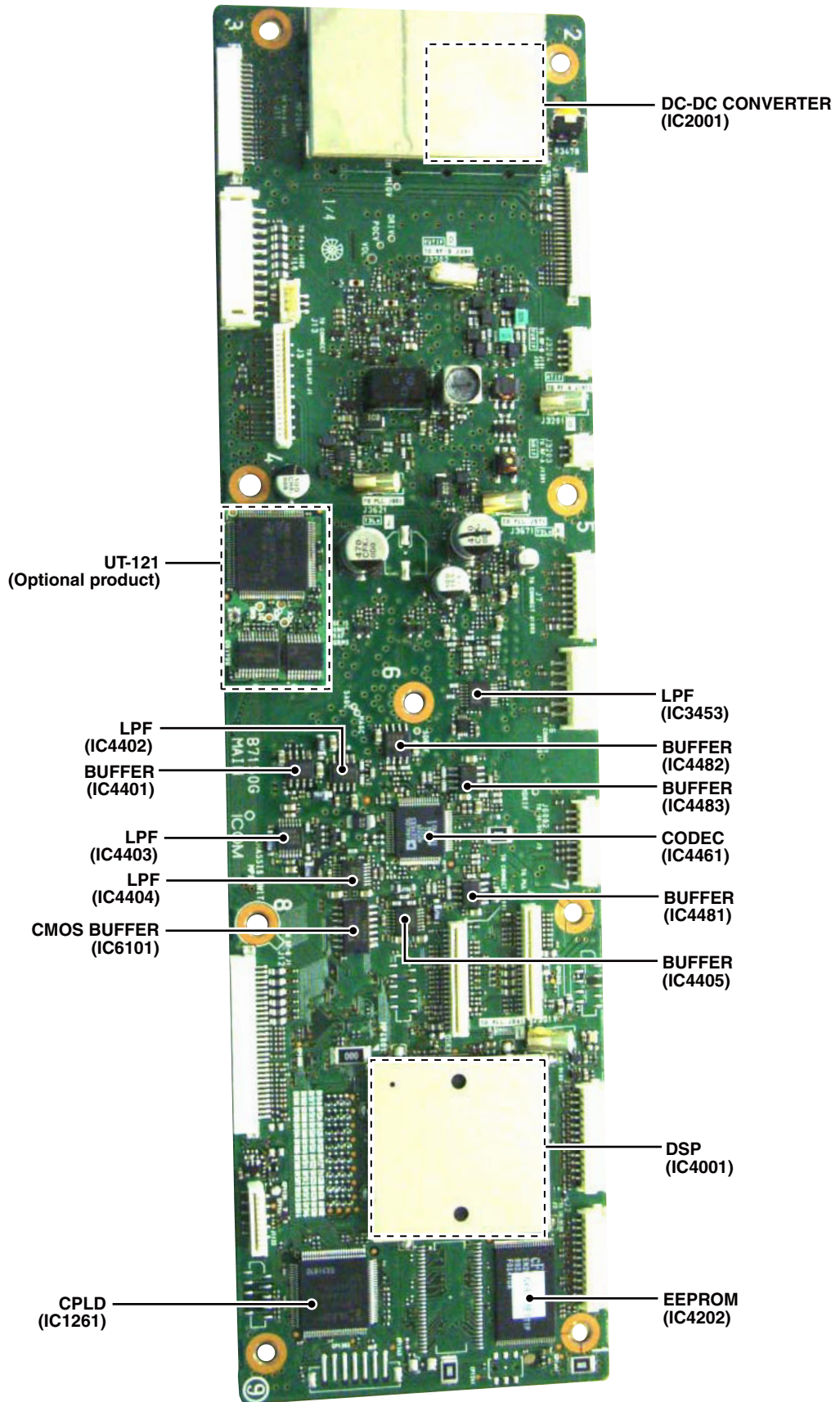
• THE VIEW FROM THE TOP OF CHASSIS



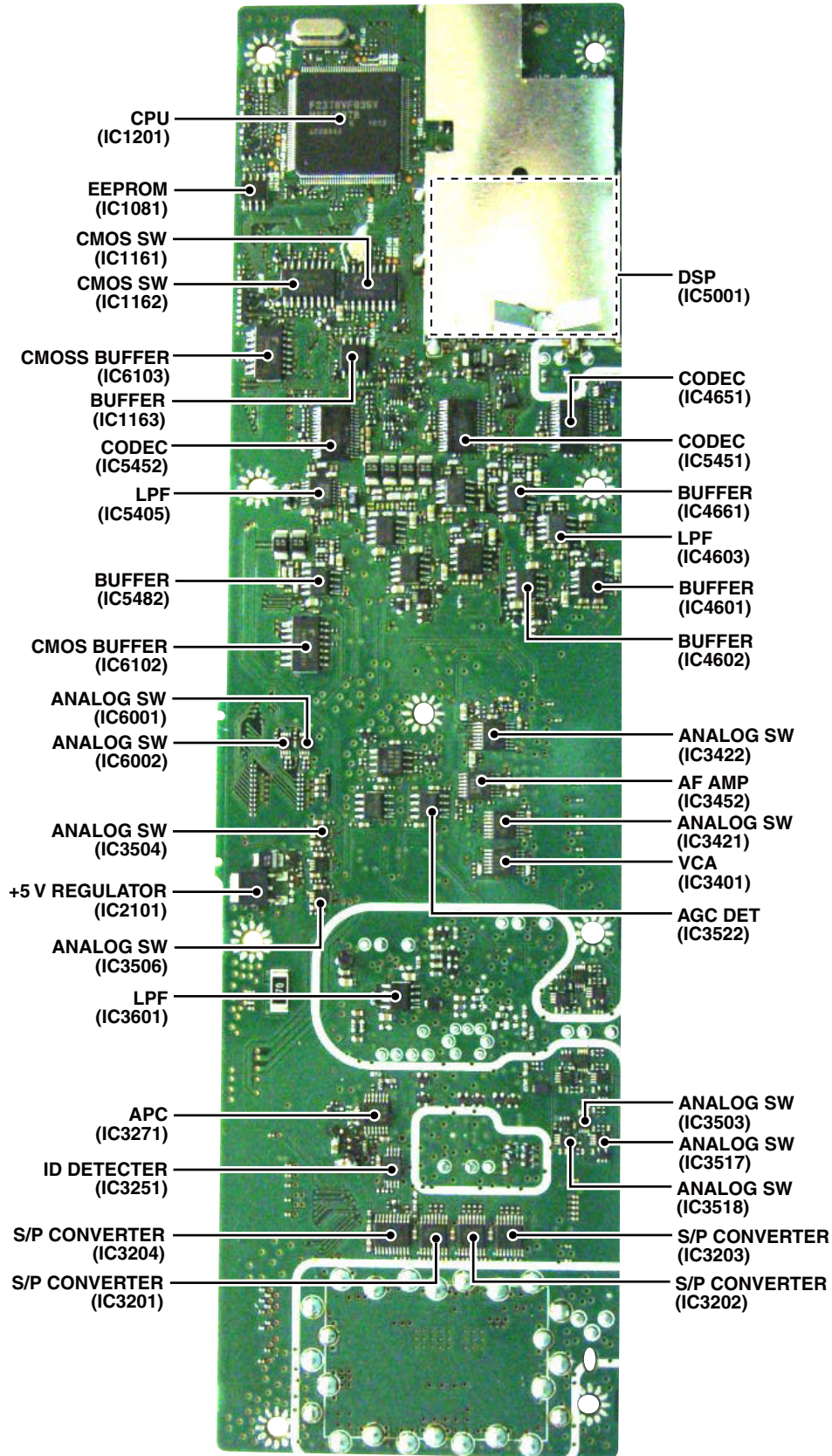
• THE VIEW FROM THE BOTTOM OF CHASSIS



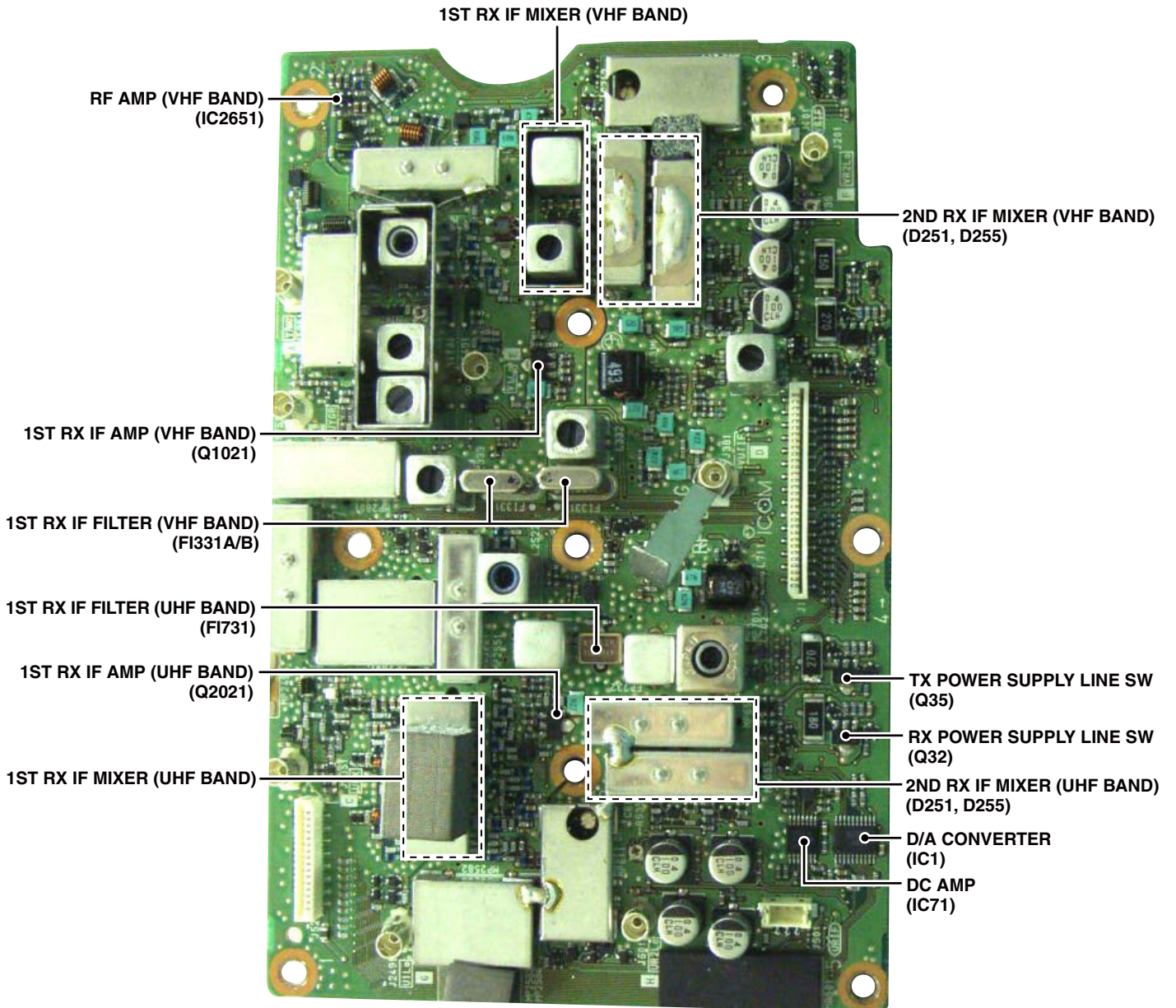
• MAIN UNIT
(TOP VIEW)



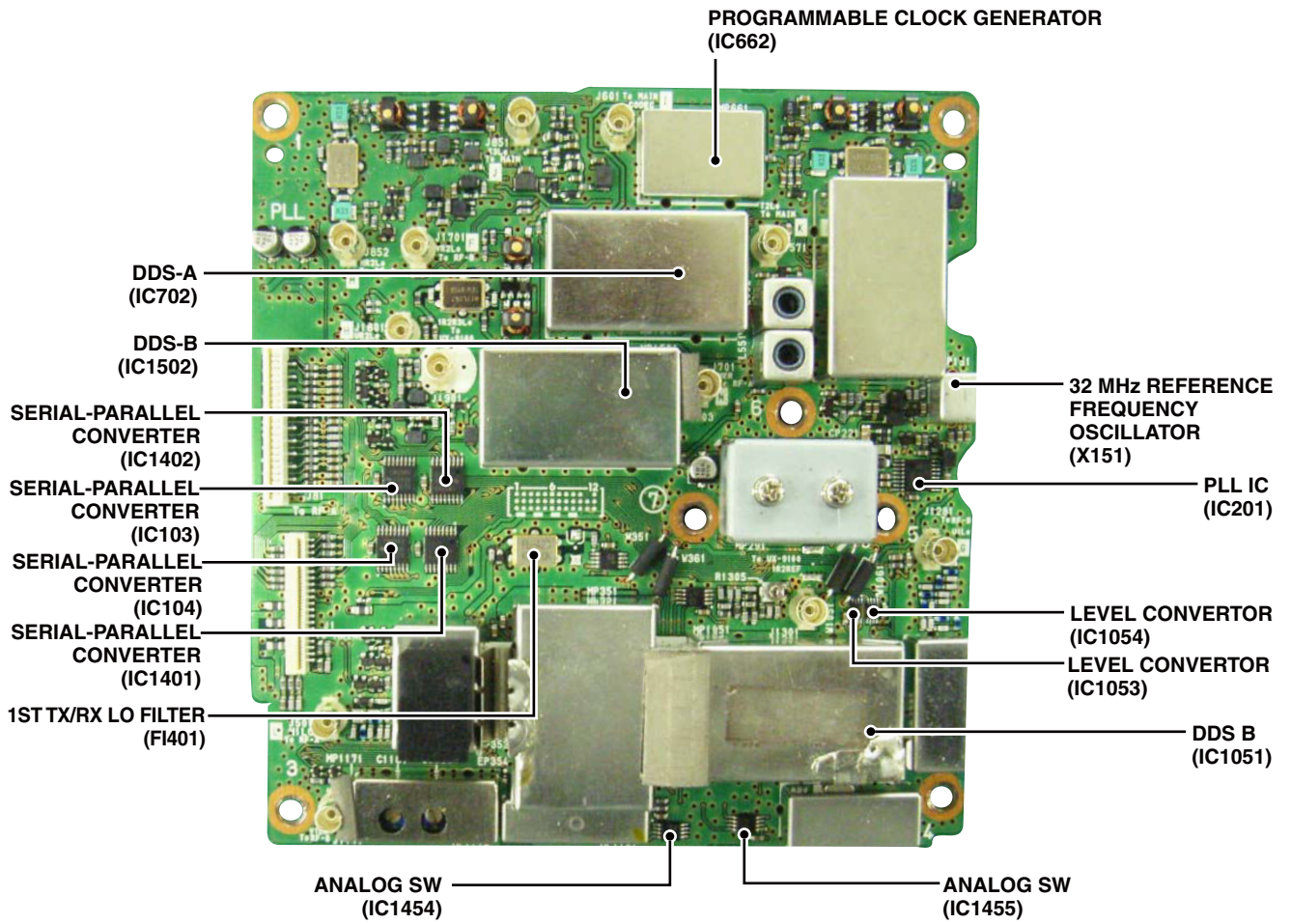
• MAIN UNIT
(BOTTOM VIEW)



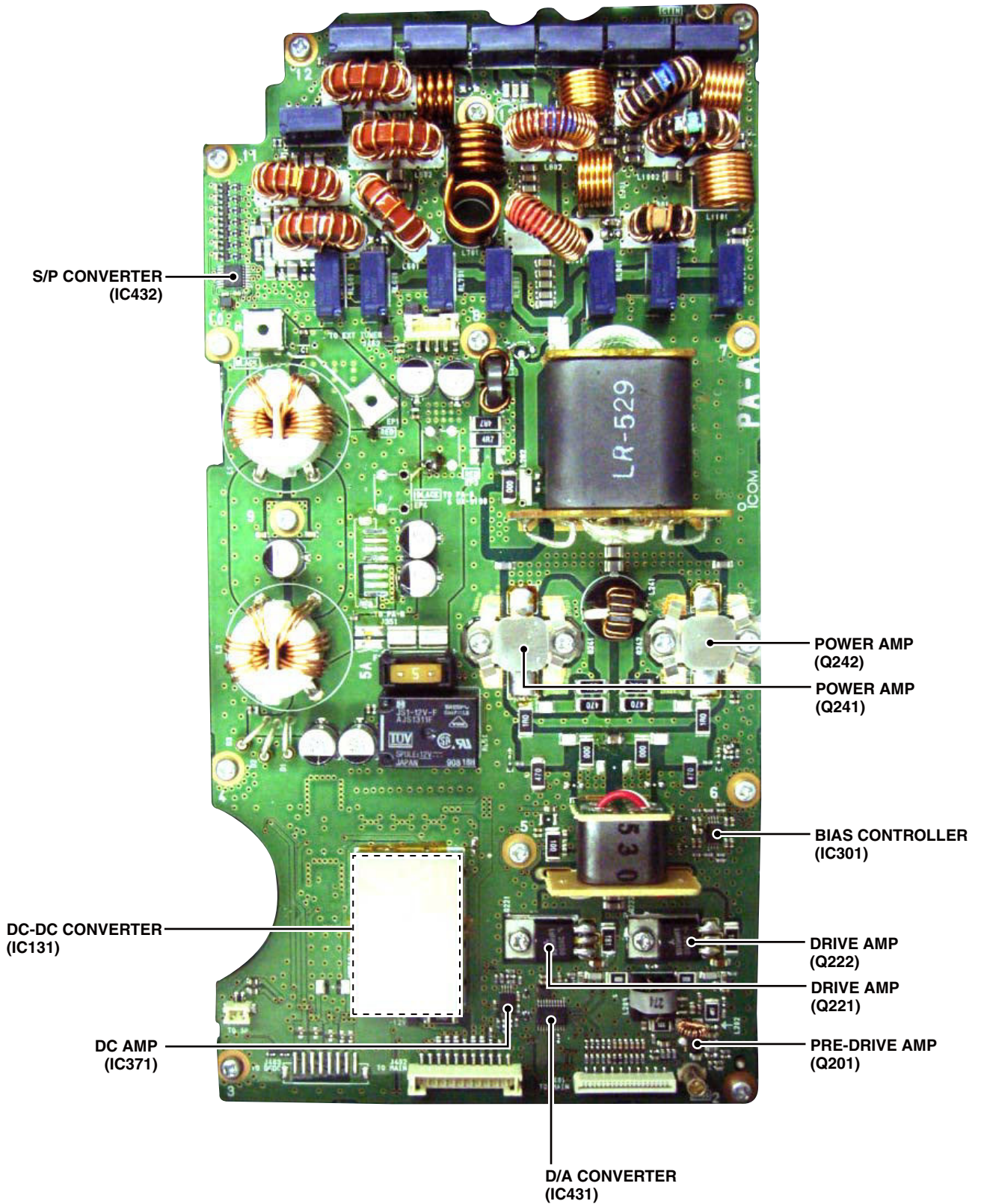
• RF-B UNIT



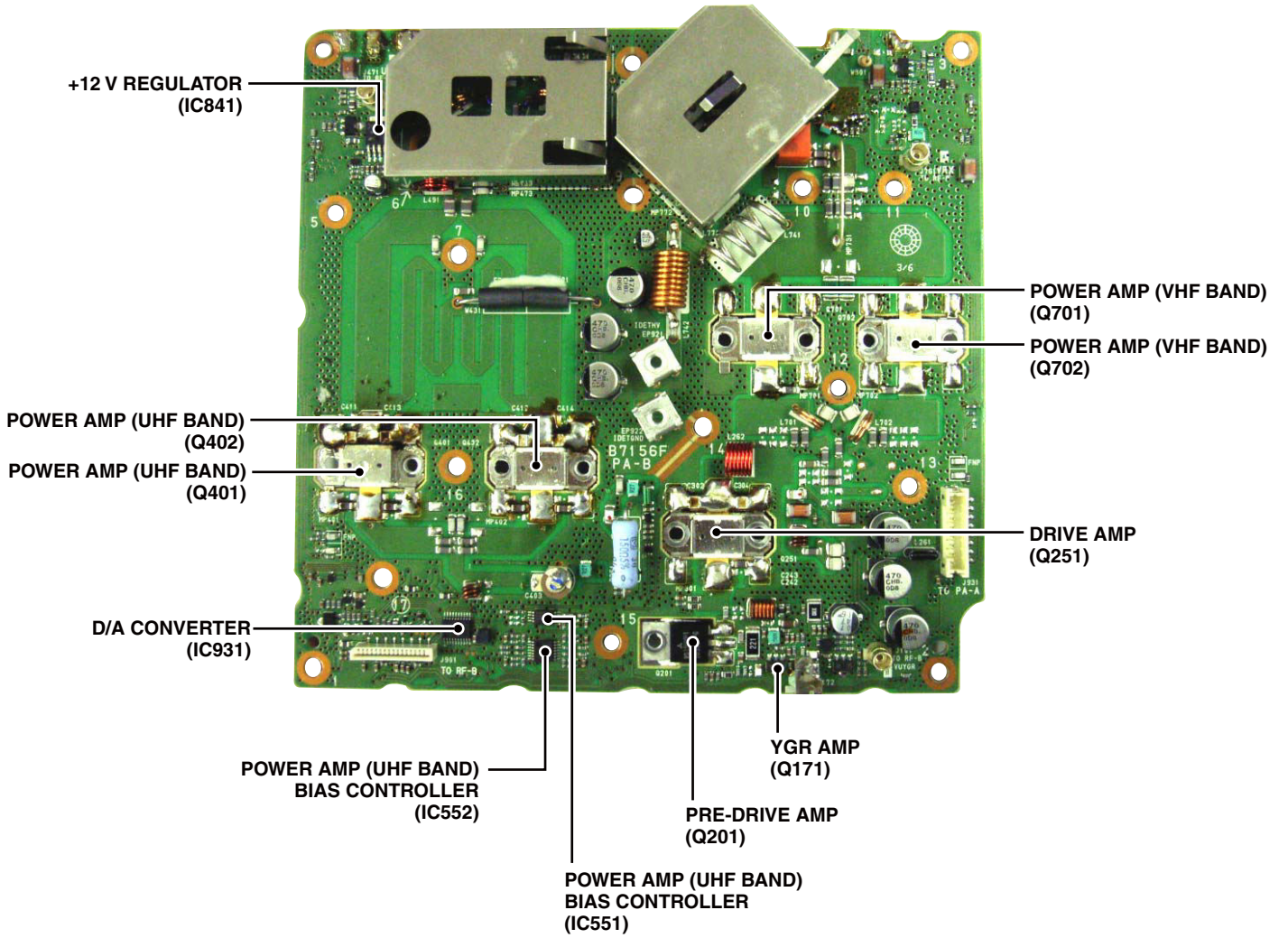
• PLL UNIT



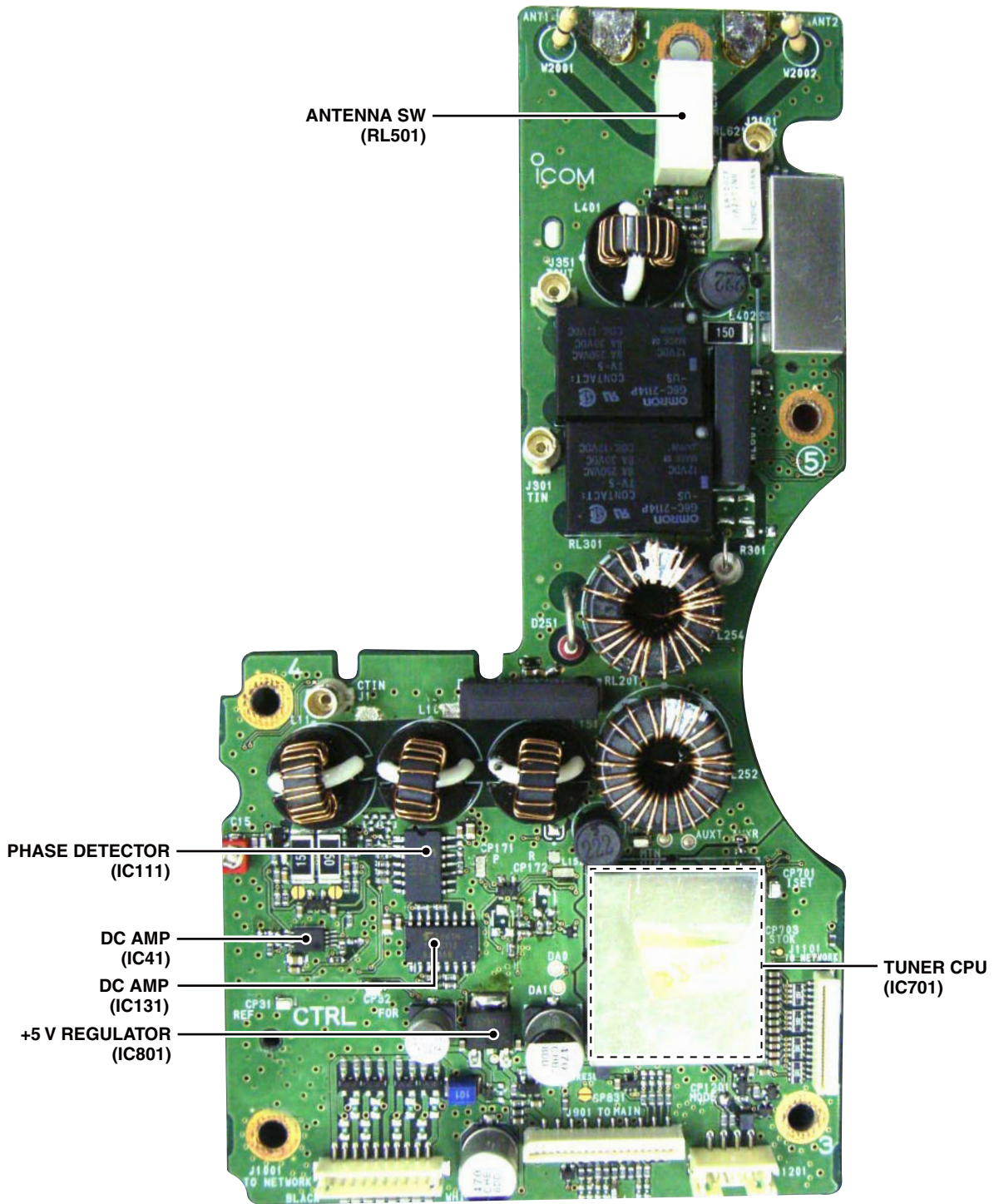
• PA-A UNIT



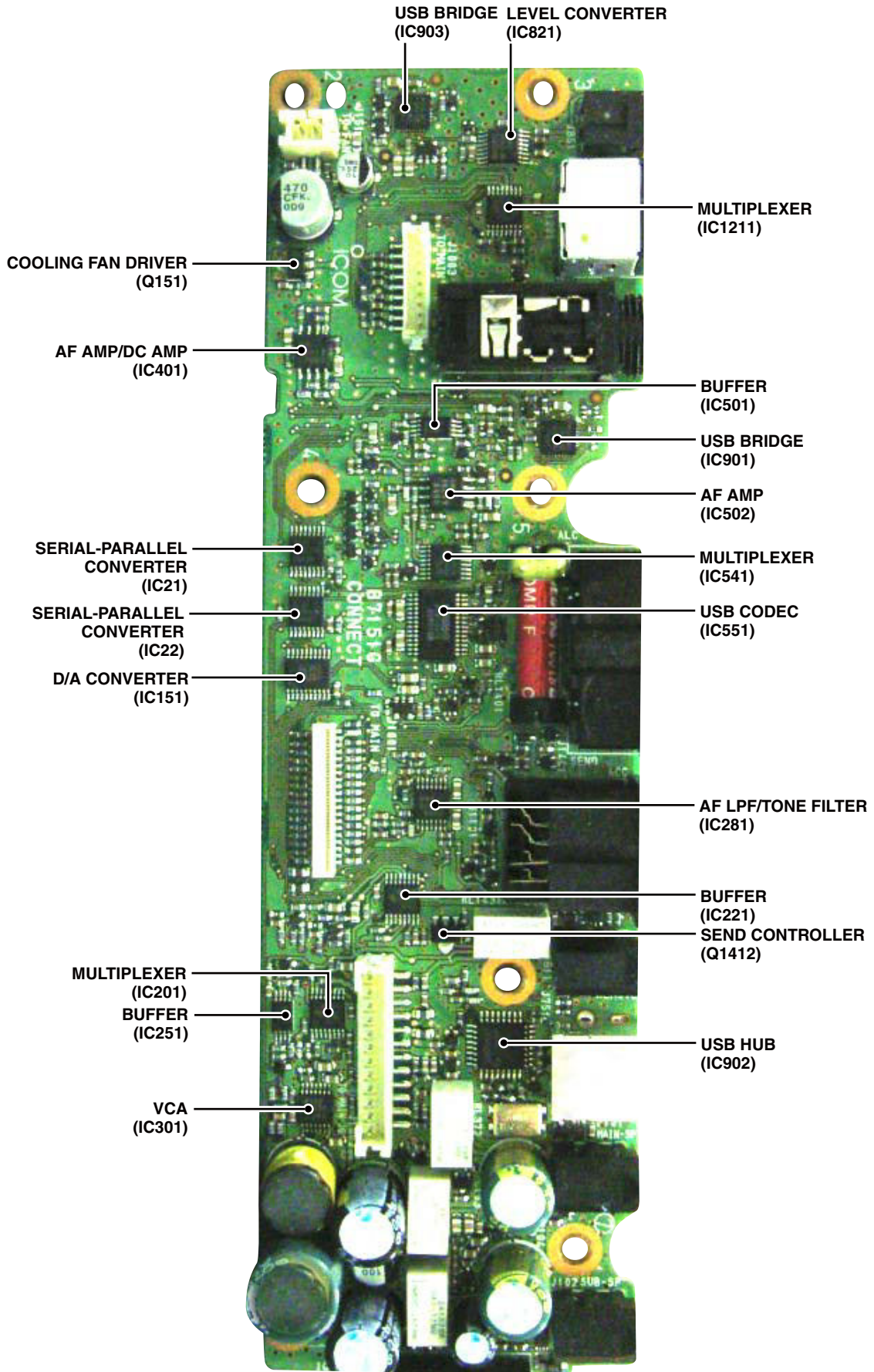
• PA-B UNIT



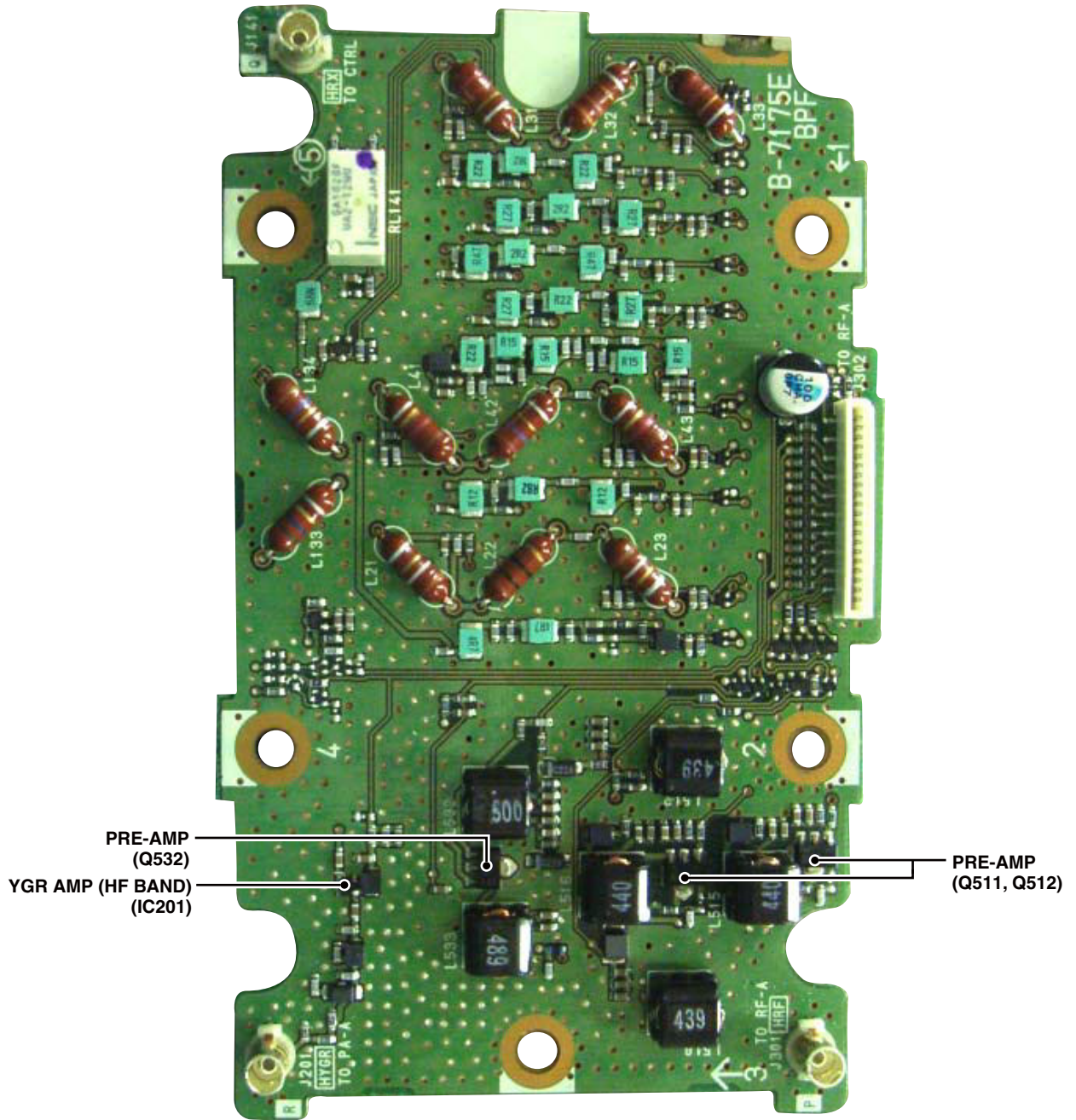
• CTRL UNIT



• CONNECT UNIT



• BPF UNIT



3-1 RECEIVER CIRCUITS

HF RF CIRCUITS

ANTENNA SWITCHING CIRCUITS (CTRL UNIT)

RX signal from the antenna connector [ANT1] (J1) or [ANT2] (J2) is passed through the antenna switch (RL501), current detector (D401, L401), tuner switches (RL301 and RL351), RX line switches (RL601 and RL621) and LPF, and then applied to the BPF UNIT.

ATTENUATOR CIRCUITS (BPF UNIT)

The RX signal from the CTRL UNIT is passed through or bypassed the attenuator circuit (RL141, R141–R143), depending on the setting.

The RX signal, which is passed through or bypassed the attenuator circuit (RL141, R141–R143), is applied to the BPF circuits.

BPF CIRCUITS (BPF UNIT)

The RX signal from the attenuator circuits is passed through an LPF or one of BPFs, depending on the operating frequency, to remove unwanted out-of-band signals.

The filtered RX signal is applied to or bypassed the preamplifier circuits.

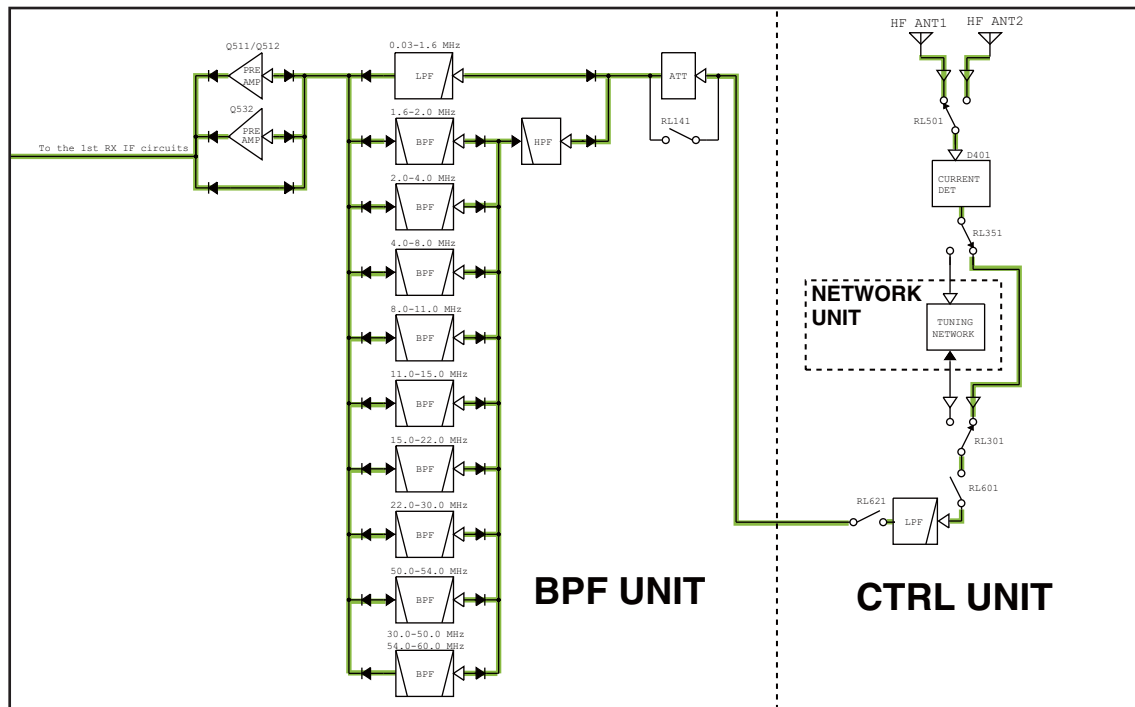
PREAMPLIFIER CIRCUITS (BPF UNIT)

The RX signal from the BPF circuits is applied to or bypassed the preamplifier.

When the Preamplifier function is activated, the RX signal is amplified by one of preamplifiers (Q511, Q512 (for 1.8–2.1 MHz) or Q532 (for 24–50 MHz)).

The amplified or bypassed RX signal is applied to the RF-A UNIT.

• HF RF CIRCUITS



VHF RF CIRCUITS (RF-B UNIT)

VHF band RX signal from the antenna connector [144MHz ANT] (CHASSIS; J1) is passed through the SWR detector (PA-B; D801, D811), LPF (PA-B; L771-L773, C771-C777), TX/RX SW (PA-B; RL751) and LPF (PA-B; L763, C770), and then applied to the RF-B UNIT.

The RX signal from the PA-B UNIT is passed through the HPF (L1353, L1354, C1355-C1357), and then passed through or bypassed the attenuator circuit (D1351-D1354, R1352-R1354), depending on the setting.

The RX signal, which is passed through or bypassed the attenuator circuit (D1351-D1354, R1352-R1354), is passed through the BPF (D1301, D1302, L1301, L1302, C1301, C1302), and then applied to the RF AMP (Q1251).

The amplified RX signal is passed through the two-staged BPF (D1209-D1211, L1202, C1203, C1206, and D1202-D1204, L1201, C1201, C1205) and HPF (L1111-L1114, C1111-C1114, C1116-C1117, C1119), and then applied to the 1st RX IF circuits.

UHF RF CIRCUITS (RF-B UNIT)

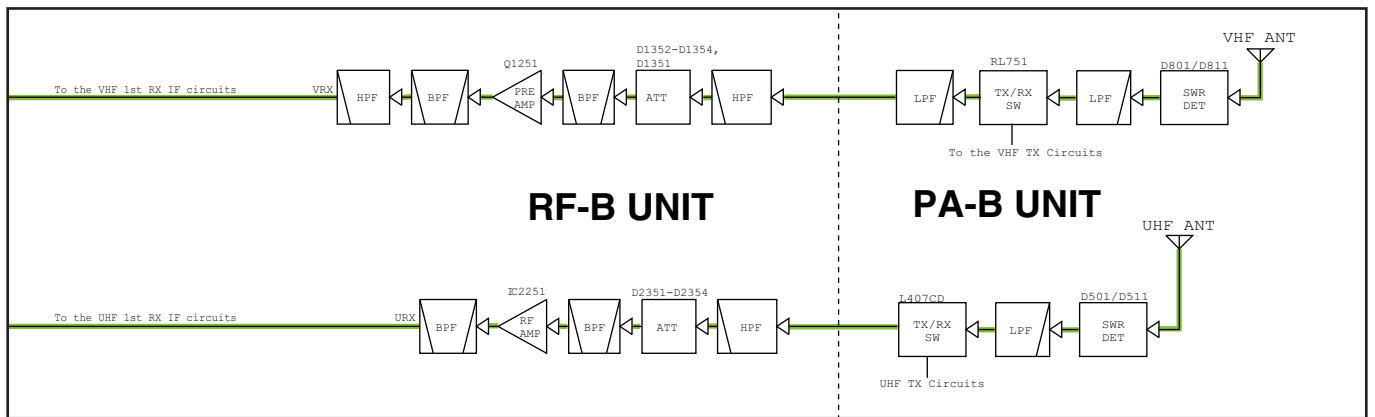
UHF band RX signal from the antenna connector [430MHz ANT] (CHASSIS; J2) is passed through the SWR detector (PA-B; D501, D511), LPF (L451, L452, C451-C455), TX/RX SW (PA-B; D471-D473) and LPF (L471, C471, C472, C475), and then applied to the RF-B UNIT.

The RX signal from the PA-B UNIT is passed through the HPF (L2361, L2362, C2361-C2363, C2359), and then passed through or bypassed the attenuator circuit (D2351-D2354, R2352, R2354, R2355), depending on the setting.

The RX signal, which is passed through or bypassed the attenuator circuit (D2351-D2354, R2352, R2354, R2355), is passed through the BPF (D2301, D2302, L2301, C2301, C2302), and then applied to the RF AMP (Q2251).

The amplified RX signal is passed through the two-staged BPF (D2201-D2203, L2204, C2202, C2204, and D2204-D2206, L2205, C2205, C2206) and HPF (L2210, C2210), and then applied to the 1st RX IF circuits.

• VHF/UHF RF CIRCUITS



HF 1ST RX IF CIRCUITS (RF-A UNIT)

The RX signal from the BPF UNIT is passed through the LPF, which removes unwanted signals (60 MHz and higher), and then applied to the 1st RX IF mixer (Q721-Q724) to be mixed with the 1st RX LO signal (64.485-124.455 MHz) from the PLL UNIT, resulting in the 64.455 MHz 1st RX IF signal.

The 1st RX IF signal is amplified by the 1st RX IF AMP (Q741) and passed through one of the 1st IF filters (FI911; FL-434, or optional FL-430 or FL-431), which has different passband widths, according to the IF filter setting.

The filtered 1st RX IF signal is amplified by the RX IF AMPs (Q1051 and Q1071, Q1072), and then applied to the 2nd RX IF circuits.

HF 2ND RX IF CIRCUITS (RF-A UNIT)

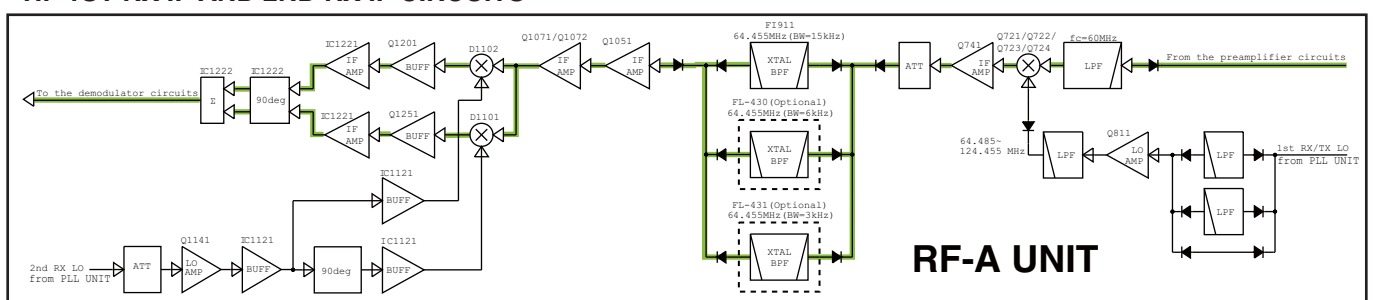
The 1st RX IF signal from the 1st RX IF circuits is divided into two paths, and then each signal is applied to the 2nd RX IF mixers (the image reduction mixers; D1102/D1101) to be mixed with the 2nd RX LO signal (64.491 MHz) from the PLL UNIT, resulting in the 36 kHz 2nd RX IF signal.

The image reduction mixer removes image frequency components by using two LO signals which are 90 degrees phase-shifted from each other.

The 2nd RX IF signals are independently amplified by the buffers (Q1201/Q1251) and IF AMPs (IC1221).

These amplified 2nd RX IF signals are 90 degrees phase-shifted and combined by the combiner (IC1222), and then applied to the MAIN UNIT.

• HF 1ST RX IF AND 2ND RX IF CIRCUITS



VHF 1ST RX IF CIRCUITS (RF-B UNIT)

The RX signal from the RF circuits is applied to the 1st RX IF mixer (Q1051–Q1054) to be mixed with the 1st RX LO signal (125.15–163.15 MHz) from the PLL UNIT, resulting in the 10.85 MHz 1st RX IF signal.

The 1st RX IF signal is passed through the 1st IF filter (FI331), amplified by two 1st RX OF AMPs (Q301, Q302 and Q311), and then applied to the 2nd RX IF circuits.

UHF 1ST RX IF CIRCUITS (RF-B UNIT)

The RX signal from the RF circuits is applied to the 1st RX IF mixer (Q2051, Q2052) to be mixed with the 1st RX LO signal (348.75–408.75 MHz) from the PLL UNIT, resulting in the 71.25 MHz 1st RX IF signal.

The 1st RX IF signal is amplified by the 1st RX IF AMP (Q2021), passed through the 1st IF filter (FI731), and then amplified by two 1st RX IF AMPs (Q701, Q702 and Q711).

The amplified 1st RX IF signal is applied to the 2nd RX IF circuits.

VHF 2ND RX IF CIRCUITS (RF-B UNIT)

The 1st RX IF signal from the 1st RX IF circuits is divided into two paths, and then each signal is applied to the 2nd RX IF mixers (the image reduction mixers; D251/D255) to be mixed with the 2nd RX LO signal (10.814 MHz) from the PLL UNIT, resulting in the 36 kHz 2nd RX IF signal.

The image reduction mixer removes image frequency components by using two LO signals which are 90 degrees phase-shifted from each other.

The 2nd RX IF signals are independently amplified by the buffers (Q151/Q141) and IF AMPs (IC121).

These amplified 2nd RX IF signals are 90 degrees phase-shifted and combined by the combiner (IC101), and then applied to the MAIN UNIT.

UHF 2ND RX IF CIRCUITS (RF-B UNIT)

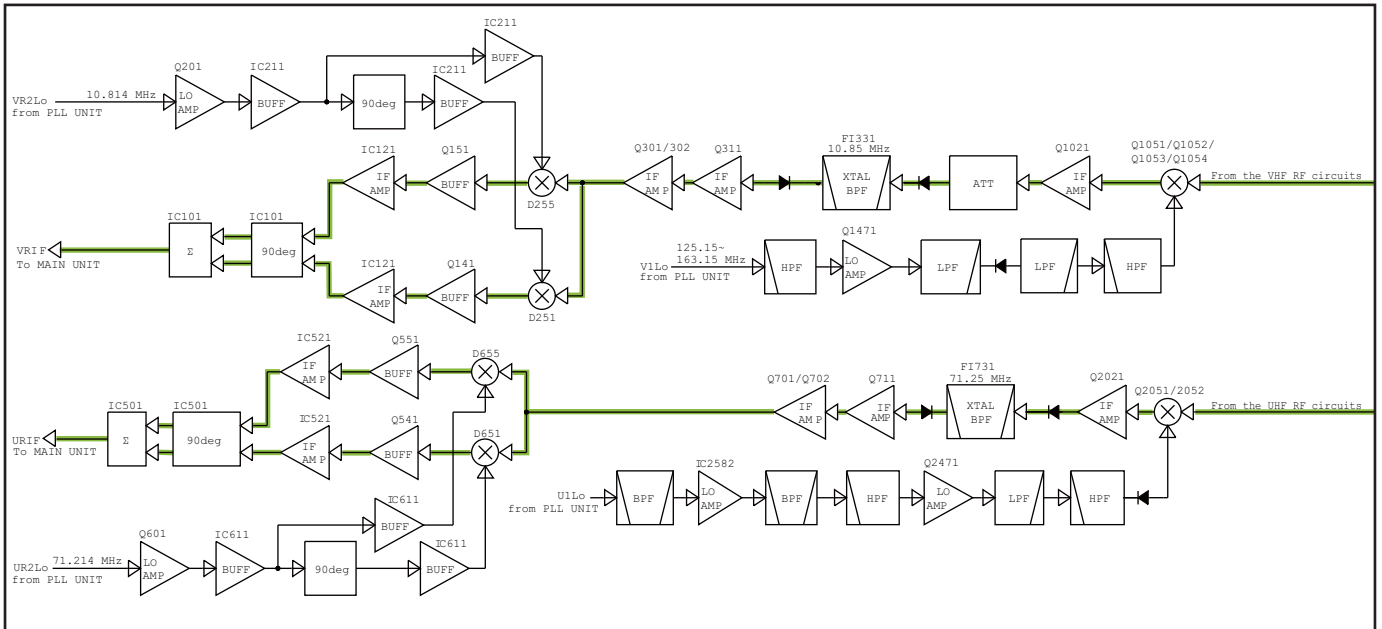
The 1st RX IF signal from the 1st RX IF circuits is divided into two paths, and then each signal is applied to the 2nd RX IF mixers (the image reduction mixers; D651/D655) to be mixed with the 2nd RX LO signal (71.214 MHz) from the PLL UNIT, resulting in the 36 kHz 2nd RX IF signal.

The image reduction mixer removes image frequency components by using two LO signals which are 90 degrees phase-shifted from each other.

The 2nd RX IF signals are independently amplified by the buffers (Q551/Q541) and IF AMPs (IC521).

These amplified 2nd RX IF signals are 90 degrees phase-shifted and combined by the combiner (IC501), and then applied to the MAIN UNIT.

• VHF/UHF 1ST RX IF AND 2ND IF CIRCUITS



DEMODULATOR CIRCUITS (MAIN UNIT)

The 2nd RX IF signal from the 2nd RX IF circuits is passed through the MAIN/SUB BAND SW (HF band; IC3501, VHF band; IC3502, UHF band; IC3503), and then applied to the demodulator circuits.

• MAIN BAND

The 2nd RX IF signal is passed through the AF SW (HF band; IC3510, VHF band; IC3514, UHF band; IC3518), RX mute SW (IC4604) and the balance-unbalance converter (Balun; IC4602/IC4603), and then applied to the CODEC (IC4651) to be converted into digital audio signal.

The converted digital audio signal is applied to the MAIN DSP (IC4001), and demodulated and processed.

The demodulated signal is applied to another CODEC (IC4461) to be converted into analog AF signal, and then applied to the buffer amplifier (IC4483).

The buffer amplified AF signal is applied to the CONNECT UNIT.

• SUB BAND

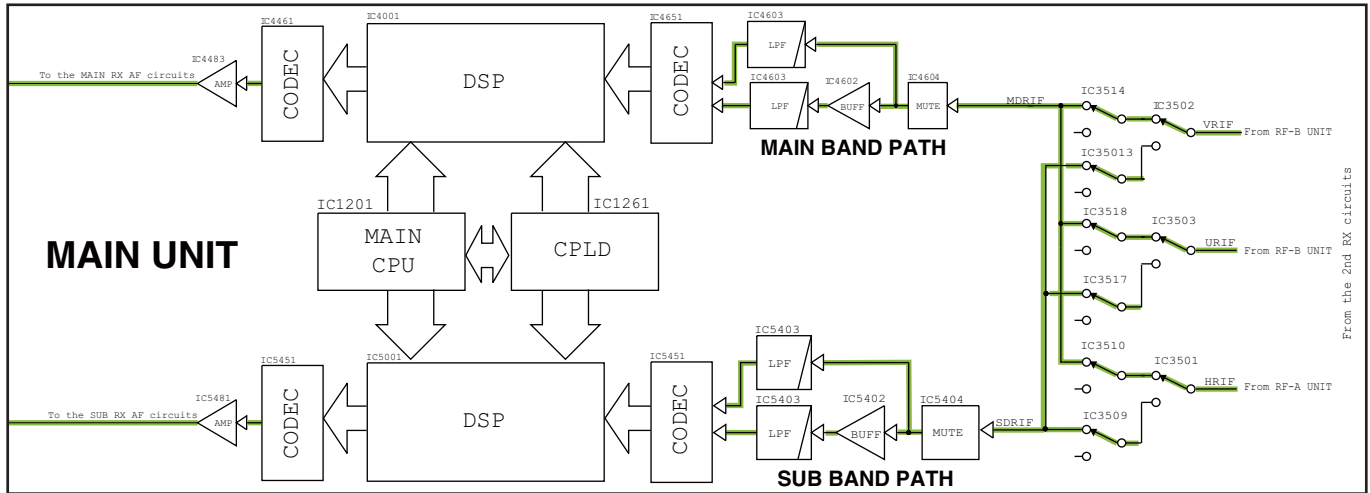
The 2nd RX IF signal is passed through the AF SW (HF band; IC3509, VHF band; IC3513, UHF band; IC3517), RX mute SW (IC5404) and the balance-unbalance converter (Balun; IC5402/IC5403), and then applied to the CODEC (IC5451) to be converted into digital audio signal.

The converted digital audio signal is applied to the SUB DSP (IC5001), and demodulated and processed.

The demodulated signal is applied to the CODEC (IC5481) again, to be converted into analog AF signal, and then applied to the buffer amplifier (IC5481).

The buffer amplified AF signal is applied to the CONNECT UNIT.

• DEMODULATOR CIRCUITS



RX AF CIRCUITS (CONNECT UNIT)

• MAIN BAND

The AF signal from the demodulator circuits is applied to the AF AMP (IC221), through the squelch gate (Q231). The amplified AF signal is applied to the Voltage Controlled Amplifier (VCA; IC301) to be adjusted in level (=audio output level), through the AF SW (IC201) which toggles the AF output lines for MAIN and SUB bands.

The level-adjusted AF signal is applied to the AF power AMP (IC351), through the mute SW (Q321) and the buffer (Q343).

The amplified AF signal is passed through the AF mute switch (RL361), and then applied to the internal speaker through RL372, or external speaker jack ([MAIN EXT-SP]; J101), or the amplified AF signal is applied to the headphones jack (JACK BORD: J2).

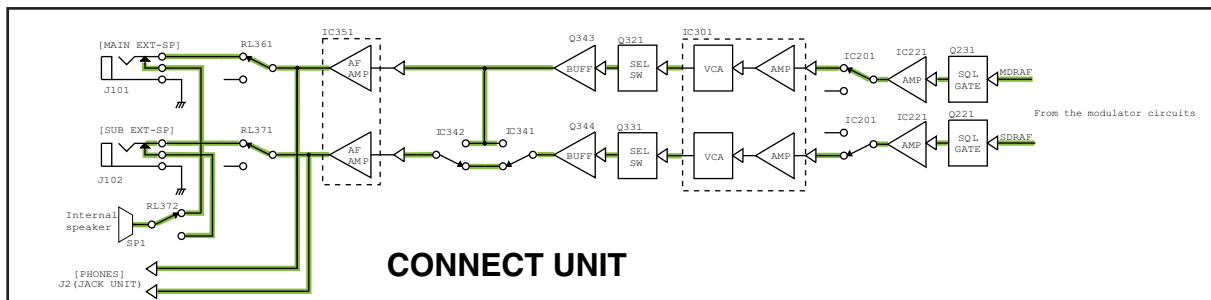
• SUB BAND

The AF signal from the demodulator circuits is applied to the AF AMP (IC221), through the squelch gate (Q221). The amplified AF signal is applied to the Voltage Controlled Amplifier (VCA; IC301) to be adjusted in level (=audio output level), through the AF SW (IC201) which toggles the AF output lines for MAIN and SUB bands.

The level-adjusted AF signal is applied to the AF power AMP (IC351), through the mute SW (Q331), the buffer (Q344) and AF line SWs (IC341 and IC342), which selects the AF output destinations from [MAIN EXT-SP] and [SUB EXT-SP].

The amplified AF signal is passed through the AF mute switch (RL371), and then applied to the internal speaker through RL372, or external speaker jack ([SUB EXT-SP]; J101), or the amplified AF signal is applied to the headphones jack (JACK BORD: J2).

• RX AF CIRCUITS



3-2 TRANSMITTER CIRCUITS TX AF CIRCUITS (MAIN UNIT)

The audio signal from the microphone (MIC signal) is applied to the MAIN UNIT, through the MICROPHONE CONNECTOR (MIC BOARD; J1), and then applied to the Voltage Controlled Amplifier (VCA; IC3401).

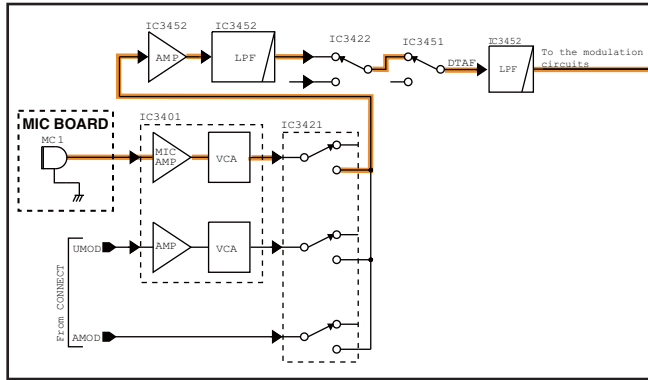
The applied MIC signal is amplified by the MIC AMP, and adjusted in level (=MIC gain) by the VCA circuit.

The level-adjusted MIC signal is passed through the MIC line SW (IC3421), amplified by the AF AMP (IC3452), and then applied to the modulation circuits, through the LPF (IC3452) and MIC line SWs (IC3422 and IC3451).

The MIC signal from the accessory socket [ACC1] on the rear panel, is directly applied to the AF AMP (IC3452), through the MIC line SW (IC3421).

The amplified MIC signal is applied to the modulation circuits.

• TX AF CIRCUITS



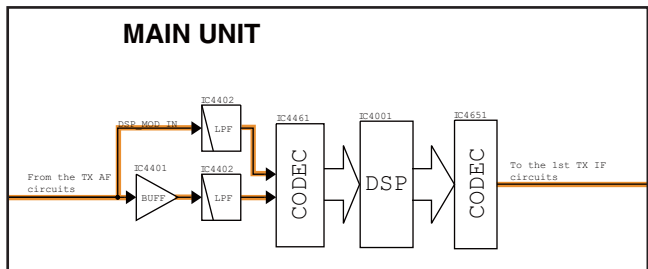
MODULATION CIRCUITS (MAIN UNIT)

The MIC signal from the TX AF circuits is passed through the Balance-Unbalance converter (Balun; IC4401, IC4402), and then applied to the CODEC (IC4461), to be converted into digital audio signal.

The converted digital audio signal is applied to the MAIN DSP (IC4001), and processed and modulated.

The modulation signal is converted into analog audio signal by the CODEC (IC4651), and then applied to the 3rd TX IF circuits, through the buffer (IC4661), as the 3rd TX IF signal.

• MODULATION CIRCUITS



3RD TX IF AND 2ND TX IF CIRCUITS (MAIN UNIT)

The 3rd TX IF signal from the modulation circuits is passed through the LPF (IC3601), and then applied to the 3rd TX mixer (IC3621) to be mixed with the 3rd TX LO signal from the PLL UNIT, resulting in the 455 kHz 2nd TX IF signal.

The converted 2nd TX IF signal is amplified by the IF AMP (Q3631), and then passed through the 2nd TX filter (FI3641). The filtered 2nd TX IF signal is amplified by the 2nd TX IF AMP (Q3651), and then applied to the 2nd TX mixer (D3671).

• HF BAND

The 2nd TX IF signal is mixed with the 64 MHz 2nd TX LO signal from the PLL UNIT, resulting in the 64.455 MHz 1st TX IF signal.

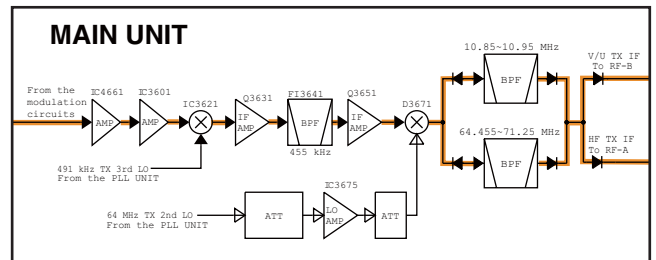
The 1st TX IF signal is applied to the 1st TX IF circuits on the RF-A UNIT, through the BPF (L3692, L3693, C3692–C3697) and band SW (D3701).

• VHF AND UHF BANDS

The 2nd TX IF signal is mixed with the 11.305 MHz (VHF band) or 71.705 MHz (UHF band) 2nd TX LO signal from the PLL UNIT, resulting in the 10.85 MHz (VHF band) or 71.25 MHz (UHF band) 1st TX IF signal.

The 1st TX IF signal is applied to the 1st TX IF circuits on the RF-B UNIT, through the BPF (VHF band; L3681–L3683, C3682, C3683, C3685–C3688 or UHF band; L3692, L3693, C3692–C3697) and band SW (D3702).

• 3RD TX IF AND 2ND TX IF CIRCUITS



1ST TX IF CIRCUITS

• HF BAND (RF-A UNIT)

The 1st TX IF signal from the 2nd TX IF circuits is passed through the 1st TX IF filter (F1911) to remove unwanted signals. The filtered signal is amplified by the IF AMP (Q611), and then applied to the 1st TX mixer (D651), through the LPF.

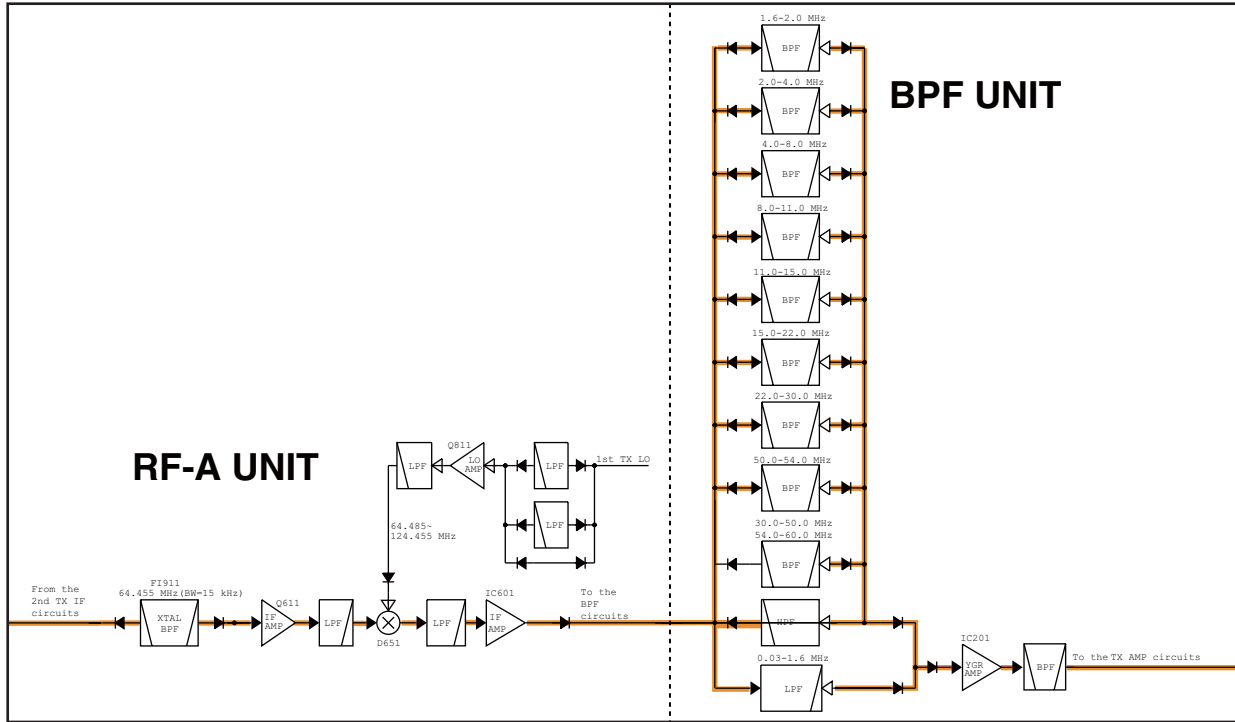
The 1st TX IF signal is mixed with the 1st TX LO signal from the PLL UNIT, resulting in the TX signal (TX frequency itself).

The converted TX signal is passed through the LPF, and amplified by the AMP (IC601), and then applied to the BPF UNIT.

The TX signal from the 1st TX IF circuits is passed through an LPF or one of BPFs, depending on the transmitting frequency, to remove unwanted signals contained in the TX signal.

The filtered TX signal is amplified by the YGR AMP (BPF UNIT; IC201), and then applied to the PA-A UNIT.

• 1ST TX IF CIRCUITS (HF BAND)



• VHF BAND (RF-B UNIT)

The 1st TX IF signal from the 2nd TX IF circuits is passed through the tree-staged BPF (L361–L363, C362–C364) and BPFs (L332, C333 and FI331) to remove unwanted signals, and then and amplified by the 1st TX IF AMP (Q1521). The amplified signal is applied to the 1st TX mixer (Q1551, Q1552). The 1st TX IF signal is mixed with the 1st TX LO signal from the PLL UNIT, resulting in the TX signal (TX frequency itself).

The converted TX signal is passed through the BPF (D1611, D1612, L1611, L1612, C1612–C1615), and then applied to the YGR AMP (IC1651). The amplified TX signal is applied to the PA-B UNIT, through the BPF (D1671, D1672, L1671, L1672, C1672–C1675).

• UHF BAND (RF-B UNIT)

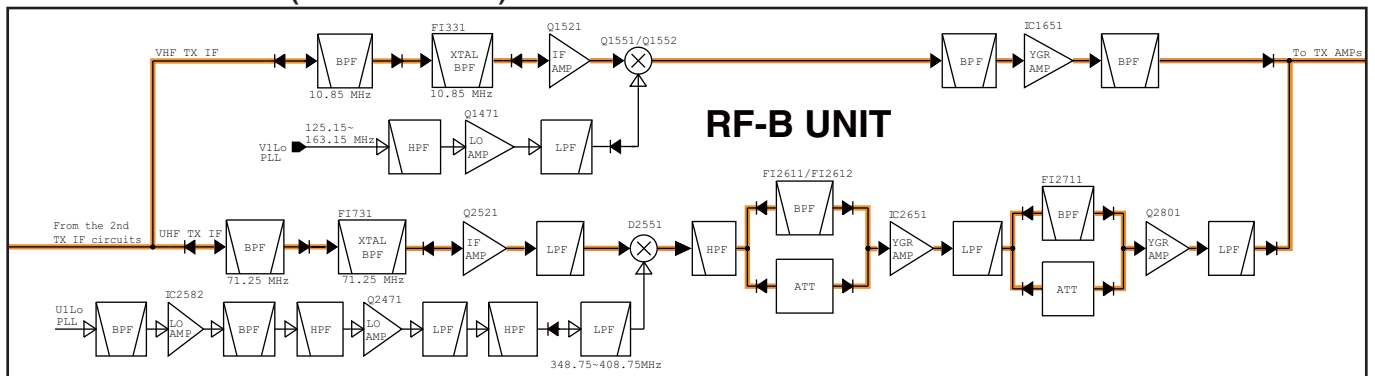
The 1st TX IF signal from the 2nd TX IF circuits is passed through the BPFs (L761–L763, C762–C764 and FI731) to remove unwanted signals, and then and amplified by the 1st TX IF AMP (Q2521). The amplified signal is applied to the 1st TX mixer (D2551), through the LPF (L2551, C2551–C2553).

The 1st TX IF signal is mixed with the 1st TX LO signal from the PLL UNIT, resulting in the TX signal (TX frequency itself).

The converted TX signal is passed through the HPF (L2611, C2612, C2615, C2616) and passed through or by-pass the BPF (FI2611, F2612), depending on the operating frequency, and then applied to the YGR AMP (IC2651). The amplified TX signal is passed through or by-pass the BPF (FI2711), depending on the operating frequency, and then applied to another YGR AMP (Q2801).

The amplified TX signal is applied to the PA-B UNIT, through the LPF (L2831, C2831–C2833).

• 1ST TX IF CIRCUITS (VHF/UHF BAND)



HF TX AMPLIFIER CIRCUITS (PA-A UNIT)

The TX signal from the BPF UNIT is sequentially amplified by the pre-drive AMP (Q201), drive AMP (Q221, Q222), and power AMP (Q241, Q242).

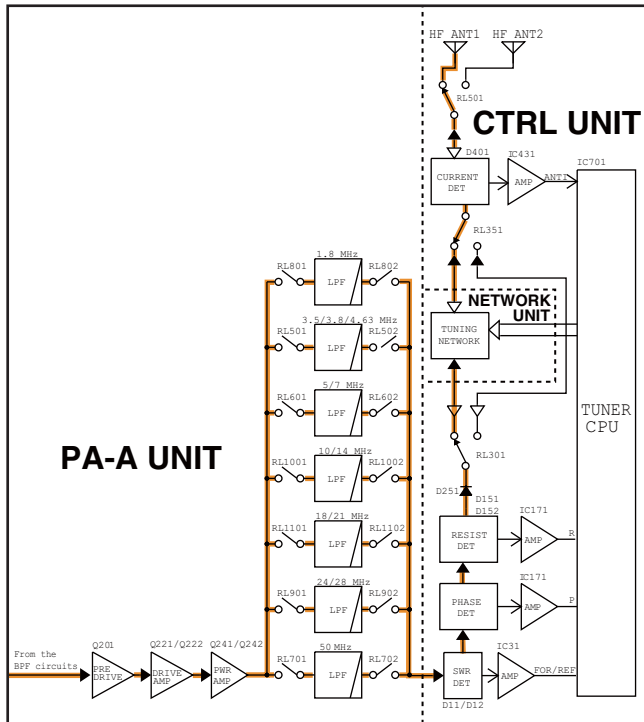
The amplified TX signal is applied to the TX filter circuits.

TX FILTER CIRCUITS (PA-A UNIT) (For only HF band)

The amplified TX signal from the power AMP (Q241, Q242) is passed through one of LPFs, depending on the transmitting frequency, to remove harmonic components contained in the TX signal.

The filtered TX signal is applied to the CTRL UNIT.

• HF TX AMPLIFIER AND FILTER CIRCUITS



ANTENNA TUNING AND SWITCHING CIRCUITS (CTRL UNIT) (For only HF band)

The TX signal from the PA-A UNIT is passed through 4 detection circuits on the CTRL UNIT, before being applied to the antenna connector [ANT1] or [ANT2].

Referring to the detected parameters, the tuner CPU (IC701) controls the tuning networks on the NETWORK UNIT, to match the transceiver and connected antenna.

SWR DETECTION CIRCUIT

The forward wave is rectified by D12 at the current detect transformer (L11). The rectified voltage is amplified by the DC AMP (IC41), and then applied to the A/D port of the tuner CPU (IC701).

The reflected wave is rectified by D11 at the current detect transformer (L11). The rectified voltage is amplified by the DC AMP (IC41), and then applied to the A/D port of the tuner CPU (IC701).

REACTANCE DETECTION CIRCUIT

The TX signal which is picked up at the current detect transformer (L101), and the TX signal which is picked up by C101, C105 and R105, are rectified by D102 and D101, and amplified by C-MOS IC (IC111).

The amplified signal is applied to IC131, through the buffer (IC121) for phase comparison. The resulting signal of phase comparison is rectified by D131 and D132, and composed and amplified by IC51, then applied to the A/D port of the tuner CPU (IC171).

RESISTANCE DETECTION CIRCUIT

A portion of the TX signal is picked up by L151 and C152, and rectified by D152 to be converted into DC voltage.

Another portion of the TX signal is rectified by D151 to be converted into DC voltage too.

And these voltages are the same when the connected load (=antenna) is matched to 50 Ω. Thus the difference of these voltages represents the resistance components.

By comparing the difference of these voltages, the transceiver detects the resistance components.

The detected resistance components are buffered by Q151 and amplified by IC171, and then applied to the A/D port of the tuner CPU (IC701).

CURRENT DETECTION CIRCUIT

A portion of the TX signal is picked up by L401, rectified by D401, and applied to IC431 to be level-compared with the voltage from the SWR detection circuit.

When the resistance of connected load (=antenna) is less than 10 Ω, the TX signal is bypassed the NETWORK UNIT, through the tuner compulsorily switches (RL301 and RL351), to protect the circuit on the NETWORK UNIT from reflected waves.

VHF/UHF TX AMPLIFIER CIRCUITS (PA-B UNIT)

• VHF BAND

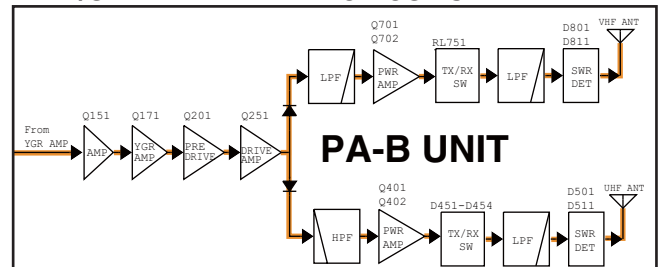
The TX signal from the RF-B UNIT is sequentially amplified by the AMP (Q151), YGR AMP (Q171), pre-drive AMP (Q201), drive AMP (Q251), and then applied to the power AMP (Q701, Q702).

The amplified TX signal is passed through the TX/RX SW (RL751), LPF(L771–L773, C771–C777) and SWR detector (D801, D811), before being applied to the antenna connector [144MHz ANT].

• UHF BAND (PA-B UNIT) The TX signal from the RF-B UNIT is sequentially amplified by the AMP (Q151), YGR AMP (Q171), pre-drive AMP (Q201), drive AMP (Q251), and then applied to the power AMP (Q401, Q402).

The amplified TX signal is passed through the TX/RX SW (D471–D473), LPF(L451, L452, C451–C455) and SWR detector (D501, D511), before being applied to the antenna connector [430MHz ANT].

• VHF/UHF TX AMPLIFIER CIRCUITS



3-3 FREQUENCY SYNTHESIZER (PLL UNIT)

REFERENCE FREQUENCY OSCILLATOR CIRCUIT

The crystal oscillator (X151) generates the 32 MHz reference frequency signal. This reference signal is applied to the Local Oscillator (LO) circuits, through the buffer (Q151) and LPF (L153, C156–158).

3RD TX LO CIRCUIT

The 32 MHz reference signal from the crystal oscillator (X151) is doubled by the doubler (Q551, L551, L552), resulting in the 64 MHz reference clock signal. Using the 64 MHz reference clock signal, the 491 kHz 3rd TX LO signal is directly generated by 10-bit DDS-A (IC702) and D/A converter (R703–R722). The generated 491 kHz 3rd TX LO signal is passed through the LPF (L702, C713, C715), buffer (Q701), LO SW (D851), BPF (L851–L853, C851, C853, C855, C856, C858), and then applied to the MAIN UNIT.

2ND TX LO CIRCUIT

The 32 MHz reference signal from the reference frequency oscillator circuit is doubled by the doubler (Q551, L551, L552) to extract the 64 MHz of 2nd harmonic component. The 64 MHz signal is applied to the MAIN UNIT as the 2nd TX LO signal, through the buffer (Q571).

The 2nd TX LO signal is amplified by the LO AMP (MAIN UNIT: IC3675), and then applied to the 2nd TX mixer (MAIN UNIT: D3671).

2ND RX LO CIRCUITS

• HF BAND

The 32 MHz reference signal from the reference frequency oscillator circuit is doubled by the doubler (Q551, L551, L552), to extract the 64 MHz of 2nd harmonic component. The 64 MHz signal is amplified by the LO AMP (Q901), and then mixed with the 491 kHz signal from the 3rd TX LO circuit, by the 2nd RX LO mixer (D951), resulting in the 64.491 MHz 2nd RX LO signal. The 2nd RX LO signal is filtered by the crystal filter (FI981), and then applied to the RF-A UNIT as the 2nd RX LO signal.

The 2nd RX LO signals which are 90 degrees phase-shifted from each other, are applied to the 2nd IF mixers (RF-A UNIT; D1101 and D1102), through the buffers (RF-A UNIT; IC1121).

• VHF BAND

The 32 MHz reference signal from the crystal oscillator (X151) is doubled by the doubler (Q551, L551, L552), resulting in the 64 MHz reference clock signal. Using the 64 MHz reference clock signal, the 10.814 MHz 2nd RX LO signal is directly generated by 10-bit DDS-A (for MAIN BAND; IC702, for SUB BAND; IC1502) and D/A converter (for MAIN BAND; R703–R722, for SUB BAND; R1503–R1522).

The generated 10.814 MHz 2nd RX LO signal is passed through the LPF (for MAIN BAND; L702, C713, C715, for SUB BAND; L1521, C1509, C1511), buffer (for MAIN BAND; Q701, for SUB BAND; Q1501), LO SW (for MAIN BAND; D1701, for SUB BAND; D1702), BPF (L851–L853, C851, C853, C855, C856, C858), and then applied to the RF-B UNIT.

The 2nd RX LO signals which are 90 degrees phase-shifted from each other, is applied to the 2nd IF mixers (RF-B UNIT; D251 and D255), through the LO AMP (RF-B UNIT; Q201), buffers (RF-B UNIT; IC211).

• UHF BAND

The 32 MHz reference signal from the crystal oscillator (X151) is doubled by the doubler (Q551, L551, L552), resulting in the 64 MHz reference clock signal. Using the 64 MHz reference clock signal, the 10.814 MHz 2nd RX LO signal is directly generated by 10-bit DDS-A (for MAIN BAND; IC702, for SUB BAND; IC1502) and D/A converter (for MAIN BAND; R703–R722, for SUB BAND; R1503–R1522).

The generated 10.814 MHz 2nd RX LO signal is passed through the LPF (for MAIN BAND; L702, C713, C715, for SUB BAND; L1521, C1509, C1511), buffer (for MAIN BAND; Q701, for SUB BAND; Q1501), LO SW (for MAIN BAND; D1801, for SUB BAND; D1802), BPF (L1801–L1803, C1803, C1805, C1807, C1808, C1810), and then applied to the 2nd RX LO mixer (D1872) to be mixed with the 64 MHz reference signal from the buffer (Q1851), resulting in the 71.214 MHz 2nd RX LO signal. The 2nd RX LO signal is applied to the RF-B UNIT, through the BPF (FI1881).

The 2nd RX LO signals which are 90 degrees phase-shifted from each other, is applied to the 2nd IF mixers (RF-B UNIT; D651 and D655), through the LO AMP (RF-B UNIT; Q601), buffers (RF-B UNIT; IC611).

1ST RX/TX LO CIRCUITS

The 32 MHz reference signal from the reference frequency oscillator circuit is amplified by Q201, and applied to the PLL IC (IC201) as the reference frequency signal.

The VCO (Q251), which is controlled by the PLL IC (IC201), generates the 388.5 MHz master clock signal, by using the applied 32 MHz signal as the reference.

The generated 388.5 MHz master clock signal is passed through the buffers (Q271, for MAIN BAND; Q301, for SUB BAND; Q1001) which provide the isolation between the DDS-A (IC351) and DDS-B (IC1051), and BPF (for MAIN BAND; L301–L304, C305–C312, for SUB BAND; L1001–L1004, C1005–C1011), and then applied to the DDS-A (for MAIN BAND; IC351, for SUB BAND; IC1051).

Using the applied DDS master clock signal as the reference, the DDS-A/DDS-B (MAIN BAND; IC351, for SUB BAND; IC1051) generates the 1st RX/TX LO signal. The generated 1st RX/TX LO signal is passed through the LPF (for MAIN BAND; L381, C381, C382, for SUB BAND; L1081, L1082, C1081, C1082, C1084), and then applied to each 1st RX/TX LO circuits, through the LO SW (for MAIN BAND; IC1451, for SUB BAND; IC1452).

• HF BAND

The 1st RX/TX LO signal is passed through the LO SW (IC1453), MCF notch filter (FI401), BPF (L421–L423, C421–C428 or L451–L453, C451–C458, C462; depending on the operating frequency), and amplified by the LO AMP (IC501). The amplified signal is applied to the RF-A UNIT, through the LPF (L502, L503, C504–C509), HPF (L504, C510–512).

The 1st RX/TX LO signal is passed through the harmonic filter (RF-A UNIT; L868–L870, C872–C876 or L861–L864, C866–C870 or L871, C879, C880), and amplified by the LO AMP (RF-A UNIT; Q811), and then applied to the 1st RX mixer (RF-A UNIT; Q721–Q724) or 1st TX mixer (RF-A UNIT; D651), through the LPF (RF-A UNIT; L831–L833, C831–C836) and LO SW (RF-A UNIT; D851, D852).

• VHF BAND

The 1st RX/TX LO signal is passed through the LO SW (IC1454) and BPF (L1101–L1105, C1103–C1113), and then applied to the LO AMP (IC1171). The amplified signal is passed through the LPF (L1172, L1173, C1174–C1176) and HPF (L1174, C1177, C1178), and then applied to the RF-B UNIT.

The 1st RX/TX LO signal is passed through the HPF (RF-B UNIT; L1491, L1492, C1491–C1493), and amplified by the LO AMP (RF-B UNIT; Q1471), and then applied to the 1st TX mixer (RF-B UNIT; Q1551, Q1552) or 1st RX mixer (RF-B UNIT; Q1051–Q1054), through the LPF (RF-B UNIT; L1451–L1453, C1451–C1455).

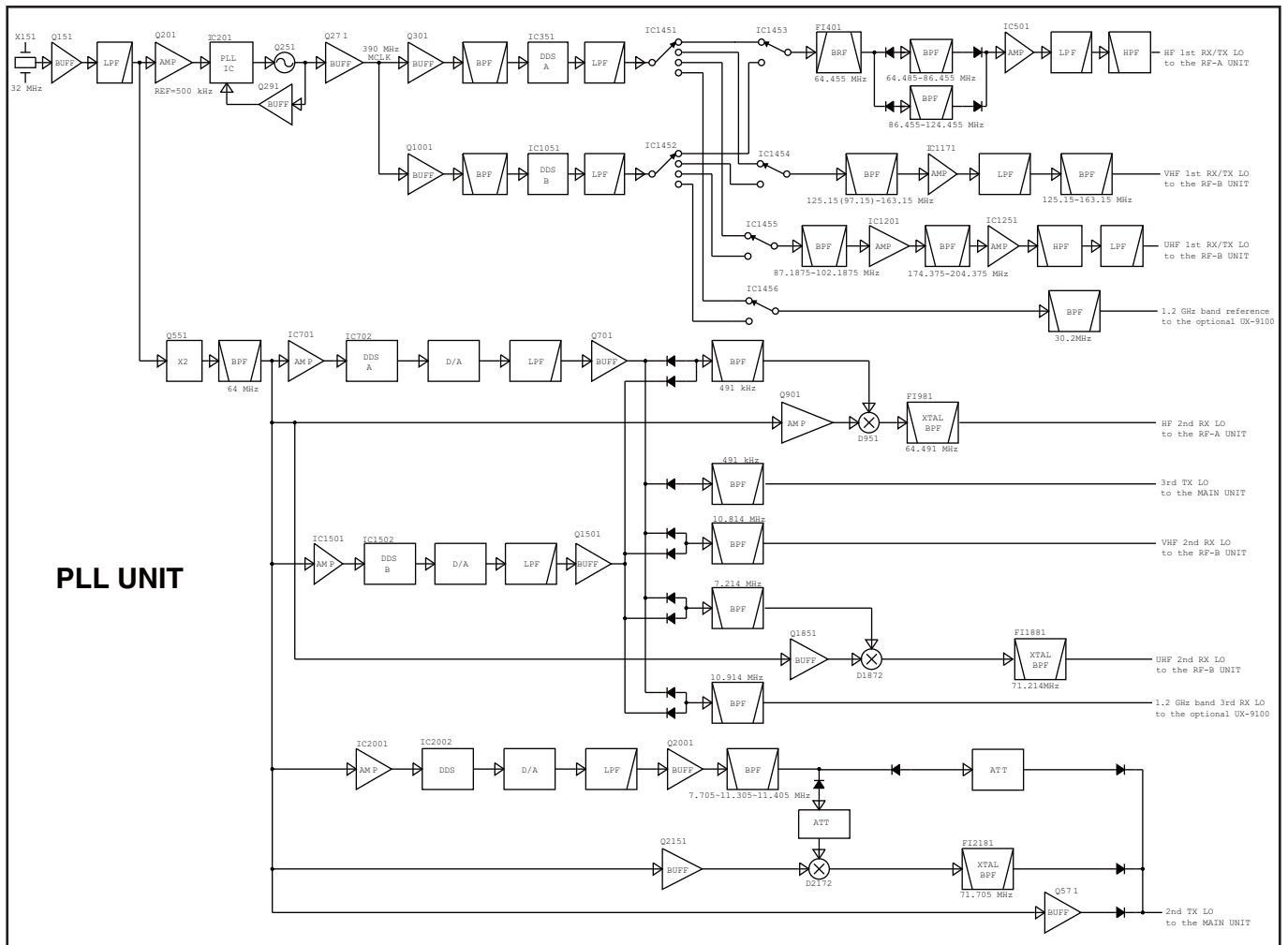
The 1st RX/TX LO signal is passed through the BPF (RF-B UNIT; D2582, D2583, L2582, L2583, C2583, C2584, C2587, C2607, C2608), and amplified by the LO AMP (RF-B UNIT; IC2582). The amplified signal is passed through the BPF (RF-B UNIT; D2584, D2585, L2585, L2586, C2594, C2595, C2598, C2609, C2610) and HPF (RF-B UNIT; L2491, L2492, C2491–C2494), and applied to another LO AMP (RF-B UNIT; Q2471).

The amplified signal is applied to the 1st TX mixer (RF-B UNIT; D2551) or 1st RX mixer (RF-B UNIT; Q2051, Q2052), through the LPF (RF-B UNIT; L2451, L2452, C2451–C2458) and HPF (RF-B UNIT; D2421, D2422, L2411, L2412, L2421, L2422, C2411–C2415, C2422, C2423).

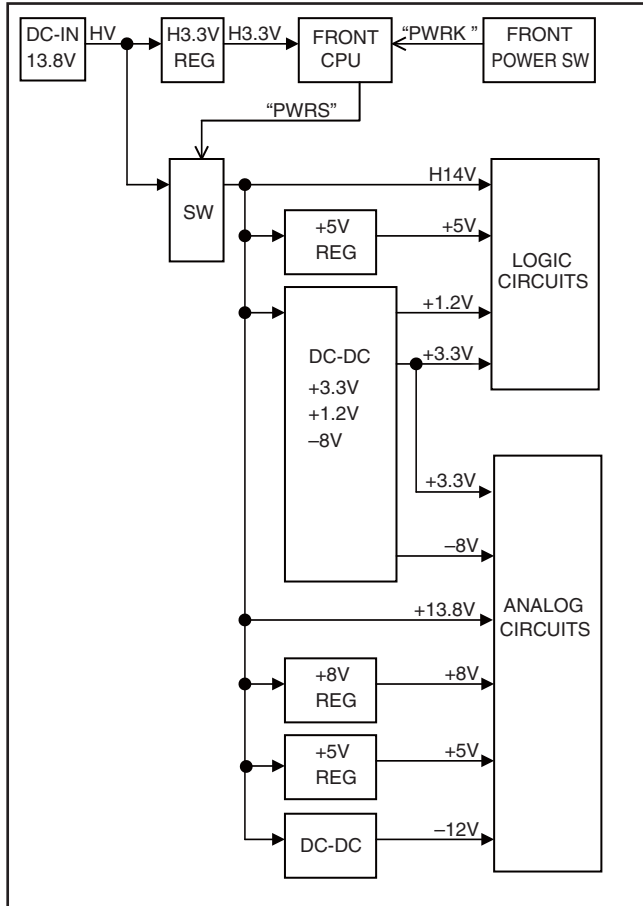
• UHF BAND

The 1st RX/TX LO signal is passed through the LO SW (IC1455) and BPF (D1203, L1201–L1203, C1203–C1210, C1216, C1219), and then applied to the LO AMP (IC1201). The amplified signal is passed through the BPF (L1233–L1236, C1233–C1240), and then applied to another LO AMP (IC1251). The amplified signal is applied to the RF-B UNIT, through the HPF (L1273, L1274, C1273–C1275) and LPF (L1275, L1276, L1282, L1283, C1276–C1280, C1284–C1286).

• FREQUENCY SYNTHESIZER



3-4 VOLTAGE BLOCK DIAGRAM



Pin No.	Line Name	Description	I/O
35	DOTK	Ele-key input. (Dot)	I
36	DSHK	Ele-key input. (Dash)	I
37	PHNK	Headphones connection detect. H=Connected.	I
40	SPCHK	[SPEECH/LOCK] input. (Pull-up)	I
43	PBCLK	[PBT-CLK] input. (Pull-up)	I
45	RITCLK	[CLEAR] input. (Pull-up)	I
46	DTXK	[/TX] input. (Pull-up)	I
47	FILK	[FILTER] input. (Pull-up)	I
48	XFK	[XFC] input. (Pull-up)	I
49	MENUK	[MENU] input. (Pull-up)	I
50	RITK	[RIT] input. (Pull-up)	I
51	F5K	[F-5] input. (Pull-up)	I
52	F4K	[F-4] input. (Pull-up)	I
53	F3K	[F-3] input. (Pull-up)	I
54	F2K	[F-2] input. (Pull-up)	I
55	F1K	[F-1] input. (Pull-up)	I
56	NOTK	[NOTCH] input. (Pull-up)	I
57	NRK	[NR] input. (Pull-up)	I
58	ANTK	[ANT] input. (Pull-up)	I
59	TUNK	[TUNER] input. (Pull-up)	I
61	TRAK	[TRANSMIT] input. (Pull-up)	I
63-70	LD7-LD0	LCD segment ports.	O
79	SDIALBK	[SUB] dial phase-B.	I
80	SDIALAL	[SUB] dial phase-A.	I
81	MCHBK	[M-CH] dial phase-B.	I
82	MCHAK	[M-CH] dial phase-A.	I
83	PBT2BK	[PBT] outer dial phase-B.	I
84	PBT2AK	[PBT] outer dial phase-A.	I
85	PBT1BK	[PBT] inner dial phase-B.	I
86	PBT1AK	[PBT] inner dial phase-A.	I
88	PITCHL	[CW PITCH] dial input.	I
90	NRL	[NR] dial input.	I
91	NOTL	[NOTCH] dial input.	I
92	MUDL	[MIC] Up/Down input.	I
98-100	ASL2-ASL0	Analog SW (CD4501) control.	O

3-5 CPU PORT ALLOCATIONS

• FRONT CPU (DISPLAY BOARD; IC401)

Pin No.	Line Name	Description	I/O
1	CNT2V	LCD contrast control. (segment area) (1-2.3 V)	O
2	CNT1V	LCD contrast control. (dot area) (1-2.3 V)	O
8	STDS	TX LED control. (SUB BAND) H=Lights. (While transmitting)	O
9	SRDS	RX LED control. (SUB BAND) H=Lights. (While receiving)	O
10	FRES	Front CPU reset. L=Reset.	I
19	RITDBK	[RIT/ΔTX] dial phase-B.	I
20	RITDAK	[RIT/ΔTX] dial phase-A.	I
21	MAINDAK	[MAIN] dial phase-A.	I
22	MAINDBK	[MAIN] dial phase-B.	I
23	MTDS	TX LED control. (MAIN BAND) H=Lights. (While transmitting)	O
24	BKLV	LCD backlight control. (PWM)	O
25	MRDS	RX LED control. (MAIN BAND) H=Lights. (While receiving)	O
29	DTXD	UART port (TX)	O
30	DRXD	UART port (RX)	I
33	LTXD	Data output (UART) for the communication with the main CPU.	O
34	LRXD	Data input (UART) for the communication with the main CPU.	I

• EXPANDER (MAIN UNIT: IC1161)

Pin No.	Line Name	Description	I/O
12	FORL	Forward wave detect voltage. (A/D)	I
1	REFL	Reflected wave detect voltage. (A/D)	I
14	ALCL	ALC meter voltage input. (A/D)	I
5	IDL	Drive AMP current (ID) detect voltage. (A/D)	I
4	VDL	Drive AMP voltage (VD). (A/D)	I
15	THML	Temperature sensing voltage from the thermal sensor on the PA-A UNIT. (A/D)	I

• MAIN CPU (MAIN UNIT: IC1201)

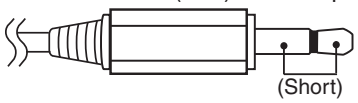
Pin No.	Line Name	Description	I/O
3	VBUS	VBUS connection detect for USB HUB. H=USB connection detected.	I
8	DAVOX	MIC signal detect. H=Input detect.	I
9	CTFL	CW TX status.	I
11	RTKI	RTTY keying input. H="Space" input.	I
12	UNLK	PLL (ADF4630) unlock detect. L=Unlock detected.	I
13	DVOPT	Optional UT-121 installation detect. H=Installed.	I
14	VSQM	Squelch level input. (MAIN BAND) H=Squelch open.	I
15	VSQS	Squelch level input. (SUB BAND) H=Squelch open.	I
16	RTDM	RTTY decode data from the DSP. (MAIN BAND)	I
17	RTDS	RTTY decode data from the DSP. (SUB BAND)	O
19, 20	MHSK0, MHSK1	Handshake signal from the DSP. (MAIN BAND)	I
21, 22	SHSK0, SHSK1	Handshake signal from the DSP. (SUB BAND)	I
23	FRES	Front CPU reset signal.	O
26	HIFOP1K	Optional IF filter (bandwidth=6 kHz) installation detect. L=Installed.	O
27	HIFOP2K	Optional IF filter (bandwidth=3 kHz) installation detect. L=Installed.	O
28	DVMTXCK	TX clock to CMX589 modem.	O
29	DVMTXDT	TX data to the CMX589 modem.	O
30	DVMRXCK	RX clock to the CMX589 modem.	O
31	DVMRXDT	RX clock from the CMX589 modem.	I
33	UDTXD	Data output port for [USB] connector.	O
35	PWRS	Transceiver power ON/OFF control. H=Power ON.	O
36	UPWS	USB HUB power control. H=USB power ON.	O
37	H8_CS6#	Dual-port SRAM chip select signal. L=Selected.	O
38	H8_CS7#	Expander chip select signal. L=Selected.	O
42	PCK	PLL serial clock.	O
43	PDAT	PLL serial data.	O
44	PSL	PLL strobe.	O
45	PST	PLL strobe output.	O
46	SKYS	Straight key/electronic keyer input. (A/D) L=Key down.	I
47	EXRL	External SEND relay output. H=Relay ON	O
48	ESTA	External tuner "START" signal output. L=Tuning start.	O
49	EKEY	External tuner "KEY" signal input. L=While tuning/tune NG.	I
51	MCK	Common serial clock.	O
52	MDAT	Common serial data.	O
53	TCON	External tuner connection detect.	I
54	CTXD	CI-V (UART) output.	O
55	CRXD/ CBSY	CI-V (UART) input/CI-V bus busy input. L=Data "1" /Busy.	I
56	PCK/ CON0	DDS clock.	O

Pin No.	Line Name	Description	I/O
56	DSPCK	DSP clock.	O
57	DSPR	DSP data.	O
59	UDRXD	USB data input.	I
60	MSPK	[EXT-SP] (MAIN BAND) connection detect. H=Connected.	I
61	SSPK	[EXT-SP] (SUB BAND) connection detect. H=Connected.	I
63	AMBESTB	AMBE strobe to the optional UT-121.	O
65	AMBERES	Reset signal to the optional UT-121.	O
66	AMBECLK	AMBE clock to the optional UT-121.	O
67	AMBETXD	AMBE serial data to the optional UT-121.	O
68	AMBERXD	AMBE serial data from the optional UT-121.	I
73-80	H8_D8- H8_D15	DSP address bus.	O
82	TND	QPSK (L) decode data.	I
83	NSQ	Noise pulse input. (MAIN BAND)	I
84	PSENI	Microphone PTT input. H=While transmitting.	I
85	TRAS	SEND signal.	O
88	H8_LWR#	(Bus control) "L" write signal. L=While writing.	O
89	H8_HWR#	(Bus control) "H" write signal. L=While writing.	O
89	H8_RD#	(Bus control) Read signal. L=While reading.	O
90	PTRAS	PTT circuit control. H=While transmitting.	O
92	RES	CPU reset. H=Reset.	O
94	SENI	PTT/ACC SEND signal. H=While transmitting.	I
105	DSKY	DSP CW/RTTY keying signal. L=Key down/space.	O
104	NSQS	Noise pulse input. (SUB BAND)	I
105	DSKY	CW/RTTY keying.	O
107	DVC	DV CODEC power supply control.	O
113	MFMTL	Tone signals. (MAIN BAND)	I
114	SFMTL	Tone signals. (SUB BAND)	I
115	VOXL	VOX level input.	I
116	DPTL	"SEND" signal input from the data socket.	I
121	DX1M	TX/RX DSP data. (MAIN BAND)	I
122	DX1S	TX/RX DSP data. (SUB BAND)	I
123	OVDK	Over deviation detect. L= Over deviation detected.	I
124	THRI	Internal tuner through signal. H=Tuner through.	I
125	BEEP	Beep audio.	O
126	STON	Side tone.	O
133	LTXD	Data output (UART) for the communication with the front CPU.	O
134	LRXD	Data input (UART) for the communication with the front CPU.	I
135	PWRK	[POWER] input. (Pull-up)	I
137	EDT	EEPROM data.	I/O
138	ECK	EEPROM clock.	O
140	IKEY	Internal tuner "KEY" input (UART). L=Tuner ON.	I
142	ISTA	Internal tuner "START" signal (UART).	O

SECTION 4 ADJUSTMENT PROCEDURE

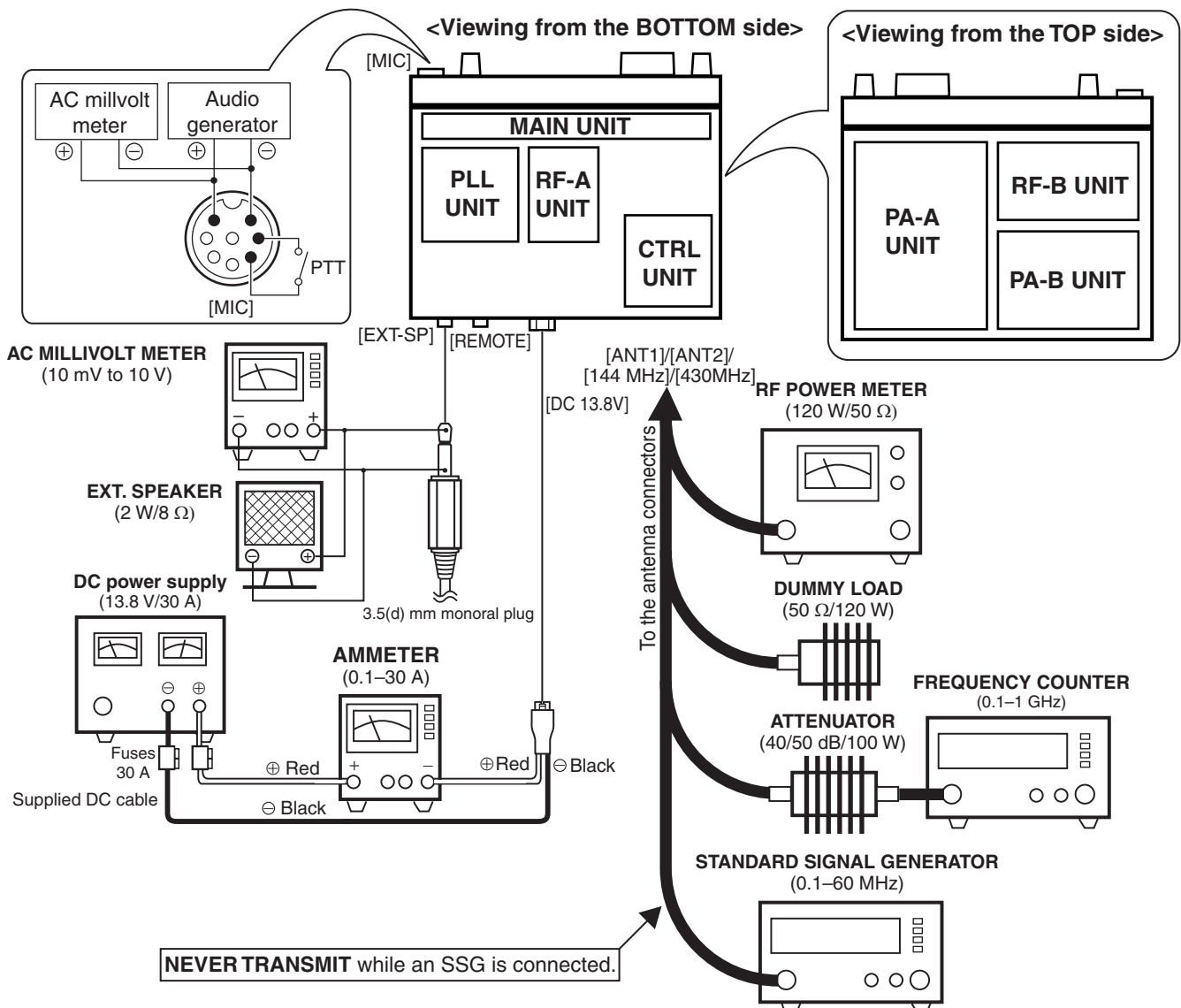
4-1 PREPARATION

REQUIRED EQUIPMENTS

EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
Short plug	Modified 3.5 mm (1/8") monoral plug  (Short)	Audio generator (AG)	Frequency range : 300–3000 Hz Output level : 1–500 mV
RF voltmeter (50 Ω terminated)	Measuring range : 20–200 mV Frequency range : 0.1–600 MHz	AC Millivoltmeter	Measuring range : 10 mV to 10 V
RF power meter (50 Ω terminated)	Measuring range : 5–120 W Frequency range : 0.1–600 MHz SWR : Less than 1.2 : 1	Digital multimeter	Measuring range : 0–10 V (Voltage) 1–30 A (Current) Input impedance : More than 50 kΩ
Frequency counter	Frequency range : 0.1–600 MHz Frequency accuracy : ±1 ppm or better Input level : Less than 1 mW	External speaker	Input impedance : 8 Ω Capacity : More than 2 W
Standard signal generator (SSG)	Frequency range : 0.1–600 MHz Output level : 0.1 mV to 32 mV (–127 to –17 dBm)	Spectrum Analyzer	Frequency range : At least 90 MHz Bandwidth : 100 kHz
		Dummy Loads	Impedance : 50 Ω and 100 Ω/120 W

CAUTION!: SAVE the originally programmed contents (Memory channel contents, set mode settings, etc.), before starting adjustment. When all adjustments are completed, these contents in the transceiver may be cleared.

GENERAL CONNECTION AND UNIT LOCATION



4-2 ADJUSTMENTS ON THE PLL UNIT

ADJUSTMENT ITEM	TRANSCEIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
REFERENCE FREQUENCY SIGNAL	1 • Frequency: 14.10000 MHz • Mode: USB • Transmitting	• Connect a frequency counter to J571.	J571	(Verify)	64.000000 MHz (±300 Hz)
	2 • Frequency: 14.10000 MHz • Mode: USB	• Connect an RF voltmeter to J571.	J571	L551, L552 (Repeatedly)	Max. voltage
	3 • Receiving			–	–10 dBm (±3 dB) (Verify)
LOCK VOLTAGE	• Frequency: 14.10000 MHz • Receiving	• Connect a voltmeter to CP221.	CP221	(Verify)	1.1–2.7 V
1ST LO LEVEL (HF band)	1 • Frequency: 0.03 MHz (1.8 MHz*) • Receiving	• Connect an RF voltmeter to J501.	J501	(Verify)	+4.0 dBm (±3 dB)
	2 • Frequency: 4.00 MHz (3.5625 MHz*) • Receiving				
	3 • Frequency: 7.90 MHz (7.10 MHz*) • Receiving				
	4 • Frequency: 8.00 MHz (7.10 MHz*) • Receiving				
	5 • Frequency: 15.00 MHz (14.35 MHz*) • Receiving				
	6 • Frequency: 21.90 MHz (21.45 MHz*) • Receiving				
	7 • Frequency: 22.00 MHz (21.45 MHz*) • Receiving				
	8 • Frequency: 50.00 MHz • Receiving				
	9† • Frequency: 60.00 MHz (50.1225 MHz*) • Receiving				–1.0 dBm (±3 dB)
2ND RX LO LEVEL (HF band)	• Frequency: 21.90 MHz (21.45 MHz*) • Receiving	• Connect an RF voltmeter to the J852.	J852	(Verify)	–8.0 dBm (±3 dB)
1ST LO FILTER (VHF band)	• Frequency: 146.000 MHz • Mode: USB • Receiving	• Connect an RF voltmeter to the J1171.	J1171	C1185, C1187 (Repeatedly)	Max. voltage
1ST LO LEVEL (VHF band)	1 • Frequency: 108.000 MHz (144.000 MHz*) • Mode: USB • Receiving	• Connect an RF voltmeter to the J1171.	J1171	(Verify)	–1.0 dBm (±3 dB)
	2 • Frequency: 144.000 MHz • Mode: USB • Receiving				
	3 • Frequency: 148.000 MHz (146.000 MHz*) • Mode: USB • Receiving				
	4** • Frequency: 174.000 MHz • Mode: USB • Receiving				–8.0 dBm (±3 dB)
2ND RX LO LEVEL (VHF band)	• Frequency: 145.000 MHz • Mode: USB • Receiving	• Connect an RF voltmeter to the J1701.	J1701	(Verify)	–8.0 dBm (±3 dB)

*: For [TPE] and [KOR]. **: For only [USA], [CHN] and [EXP]

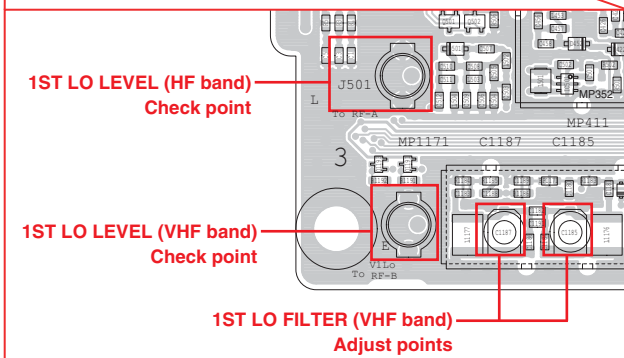
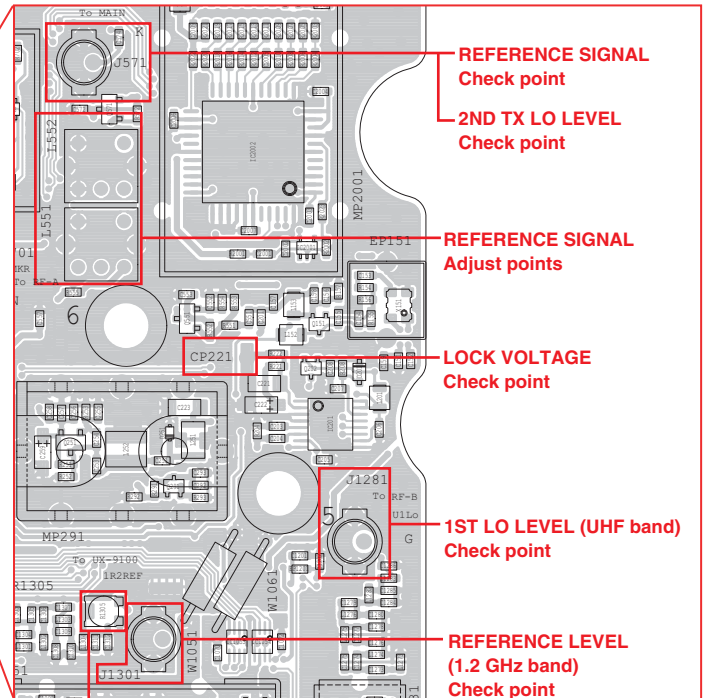
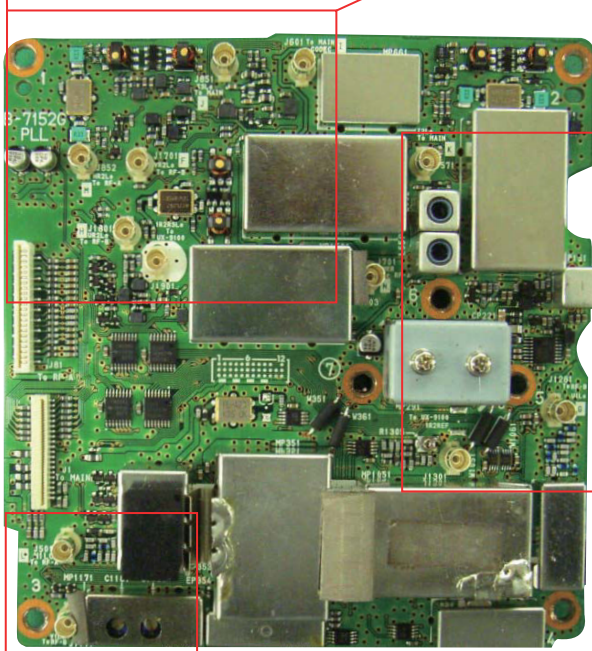
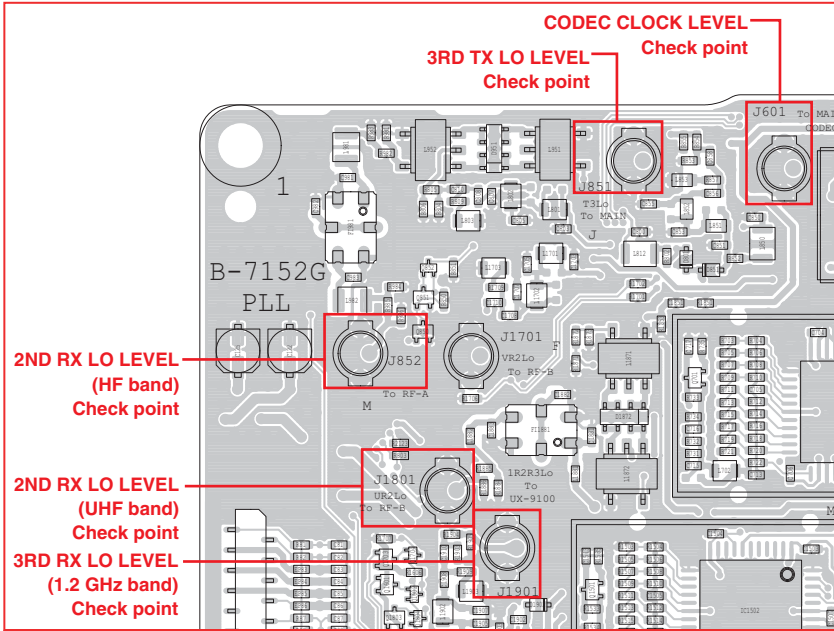
4-2 ADJUSTMENTS ON THE PLL UNIT (continued)

ADJUSTMENT ITEM	TRANSCEIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
1ST LO LEVEL (UHF band)	1 • Frequency: 420.000 MHz (430.000 MHz*) • Mode: USB • Receiving	• Connect an RF voltmeter to the J1281.	J1281	(Verify)	-3.0 dBm (±3 dB)
	2 • Frequency: 440.000 MHz (430.000 MHz*) • Mode: USB • Receiving				-4.0 dBm (±3 dB)
	3** • Frequency: 480.000 MHz • Mode: USB • Receiving				-3.0 dBm (±3 dB)
2ND RX LO LEVEL (UHF band)	• Frequency: 435.000 MHz (432.000 MHz*) • Mode: USB • Receiving	• Connect an RF voltmeter to the J1801.	J1801	(Verify)	-12.0 dBm (±3 dB)
REFERENCE LEVEL† (1.2 GHz band)	• Frequency: 1200.000 MHz • Mode: USB • Receiving	• Connect an RF voltmeter to the J1301.	J1301	R1305	-10.0 dBm (±0.5 dB)
3RD RX LO LEVEL† (1.2 GHz band)	• Frequency: 1200.000 MHz • Mode: USB • Receiving	• Connect an RF voltmeter to the J1901.	J1901	(Verify)	-8.0 dBm (±3 dB)
2ND TX LO LEVEL	1 • Frequency: 145.000 MHz • Mode: USB • Transmitting	• Connect a dummy load to [144MHz ANT]. • Connect an RF voltmeter to the J571.	J571	(Verify)	-12.0 dBm (±3 dB)
	2 • Frequency: 435.000 MHz (432.000 MHz*) • Mode: USB • Transmitting				
	3† • Frequency: 1200.000 MHz • Mode: USB • Transmitting				
3RD TX LO LEVEL	1 • Frequency: 145.000 MHz • Mode: USB • Transmitting	• Connect a dummy load to [144MHz ANT]. • Connect an RF voltmeter to the J571.	J851	(Verify)	-8.0 dBm (±3 dB)
	2 • Frequency: 435.000 MHz (432.000 MHz*) • Mode: USB • Transmitting				
	3† • Frequency: 1200.000 MHz • Mode: USB • Transmitting				
CODEC CLOCK LEVEL	• Receiving	• Connect an RF voltmeter to the J601.	J601	(Verify)	-12 dBm (±3 dB)

*: For [TPE] and [KOR]. **: For only [USA], [CHN] and [EXP]

†: Appears only when the optional UX-9100 is installed.

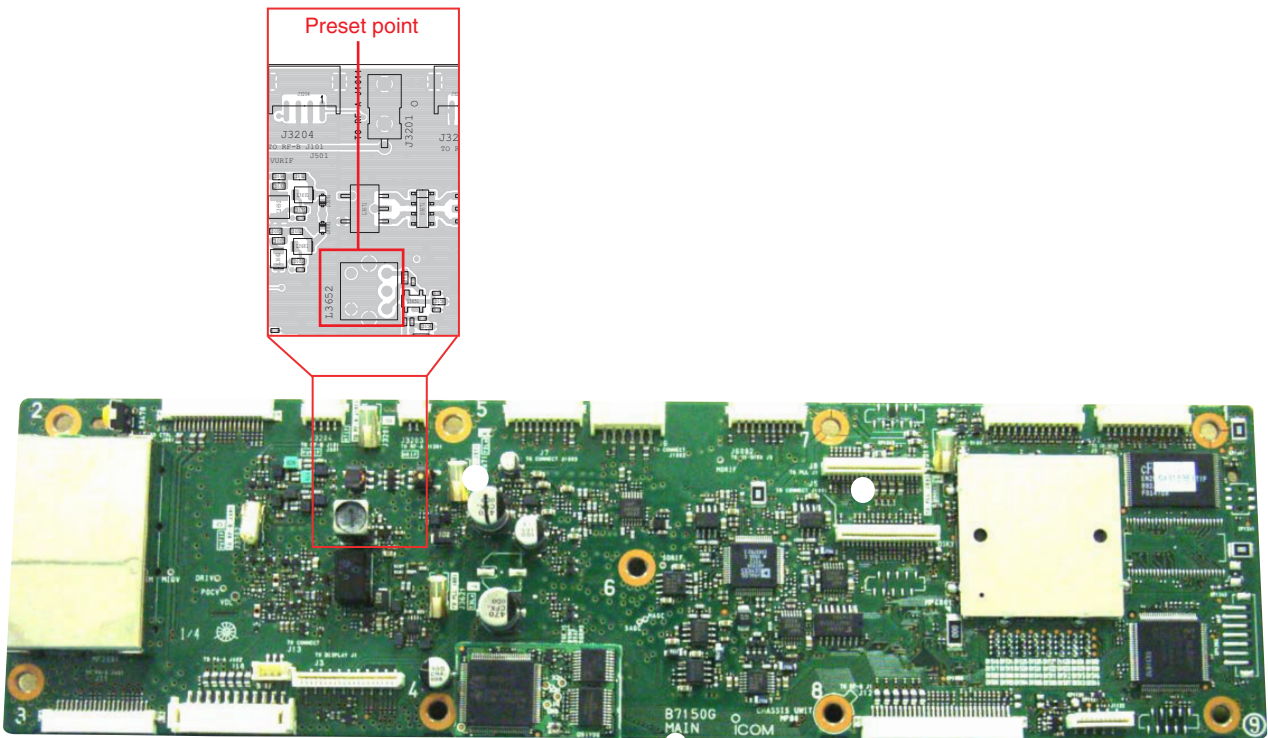
• THE LOCATION OF ADJUST/CHECK POINTS ON THE PLL UNIT



4-3 ADJUSTMENT ON THE MAIN UNIT

ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
PRESET	• Receiving	—	—	L3652	Screw the core all the way inside the coil.

• THE LOCATION OF PRESET POINT ON THE MAIN UNIT

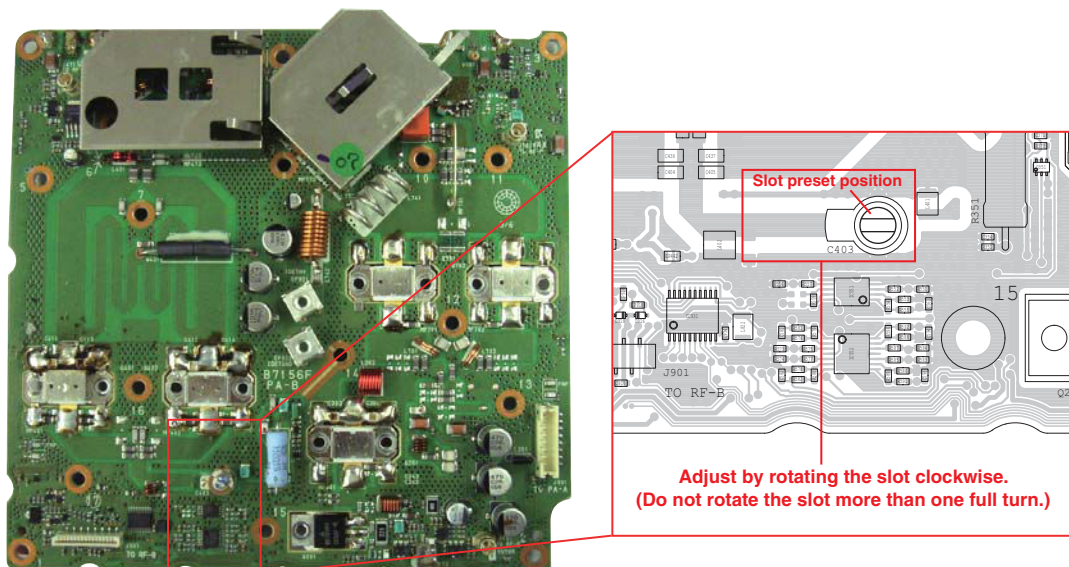


4-4 ADJUSTMENT ON THE PA-B UNIT

ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
TX ADJUSTMENT (TX power)	1 • Frequency: 430.000 MHz (MAIN BAND)	• Set the slot of C403 to the preset position as illustrated below. 1) Connect an SSG to J101, and then set it as Frequency : 440.000 MHz Level† : +112 dBμ (+5.0 dBm) Modulation : None 2) Connect a power meter to [430MHz ANT].	—	C403	(as illustrated below)
	2 • Mode: CW • Transmitting NOTE: This adjustment must be performed within a minute.		[430MHz ANT]	C403 (Rotate clockwise less than one full turn.)	More than 90 W

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

• THE LOCATION OF ADJUST POINT ON THE PA-B UNIT



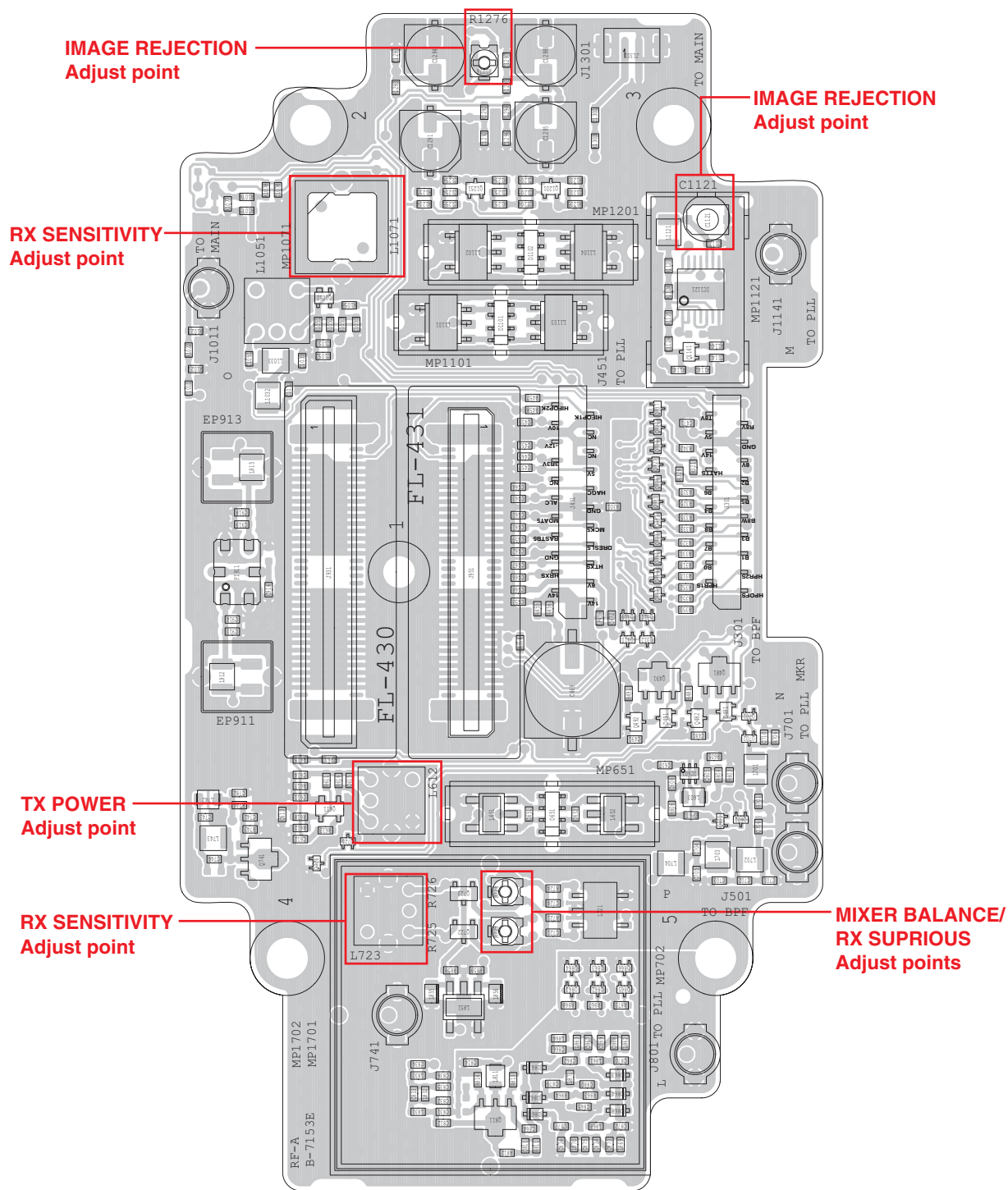
4-5 ADJUSTMENTS ON THE RF-A UNIT

ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
TX ADJUSTMENT (TX power)	<ul style="list-style-type: none"> • Frequency: 14.100 MHz • Mode: USB • Transmitting 	1) Connect an RF power meter to [ANT1]. 2) Connect an audio generator and millivoltmeter to [MIC], and then set it as; Frequency : 1.5 kHz Level [†] : 1 mV	[ANT1]	L612	Max. TX power
RX ADJUSTMENT (Sensitivity)	<ul style="list-style-type: none"> • Frequency: 14.150 MHz • Mode: USB • Receiving 	1) Connect an SSG to [ANT1], and then set it as; Frequency : 14.1515 MHz Level [†] : -15 dB μ (-122 dBm) Modulation: None 2) Connect a millivoltmeter and a speaker to [EXT-SP].	[EXT-SP]	L723, L1071	Max. AF output level
MIXER BALANCE	<ul style="list-style-type: none"> • Frequency: 14.150 MHz • Mode: USB • Receiving 	1) Connect a terminator to [ANT1]. 2) Connect a spectrum analyzer to the J741.	J741	R725, R726	Min. LO level (Freq.= 78.605 MHz)
RX SUPRIIOUS*	<ul style="list-style-type: none"> • Frequency: 3.621565 MHz • Mode: USB • [PREAMP]: OFF • Receiving 	<ul style="list-style-type: none"> • Connect a millivoltmeter to [EXT-SP]. 	[EXT-SP]		Min. AF output level
IMAGE REJECTION	<ul style="list-style-type: none"> • Frequency: 14.150 MHz • Mode: USB • [PREAMP]: OFF • Receiving 	1) Connect an SSG to [ANT1], and then set it as; Frequency : 14.0765 MHz Level [†] : +50 dB μ (-57 dBm) Modulation: None 2) Connect a millivoltmeter and a speaker to [EXT-SP].	[EXT-SP]	R1276, C1121 (Repeatedly)	Min. AF output level

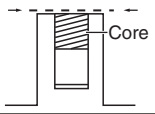
*: For all models except [TPE] and [KOR].

[†]; The output level of the standard signal generator (SSG) is indicated as the SSG's terminated circuit.

• THE LOCATION OF ADJUST/CHECK POINTS ON THE RF-A UNIT



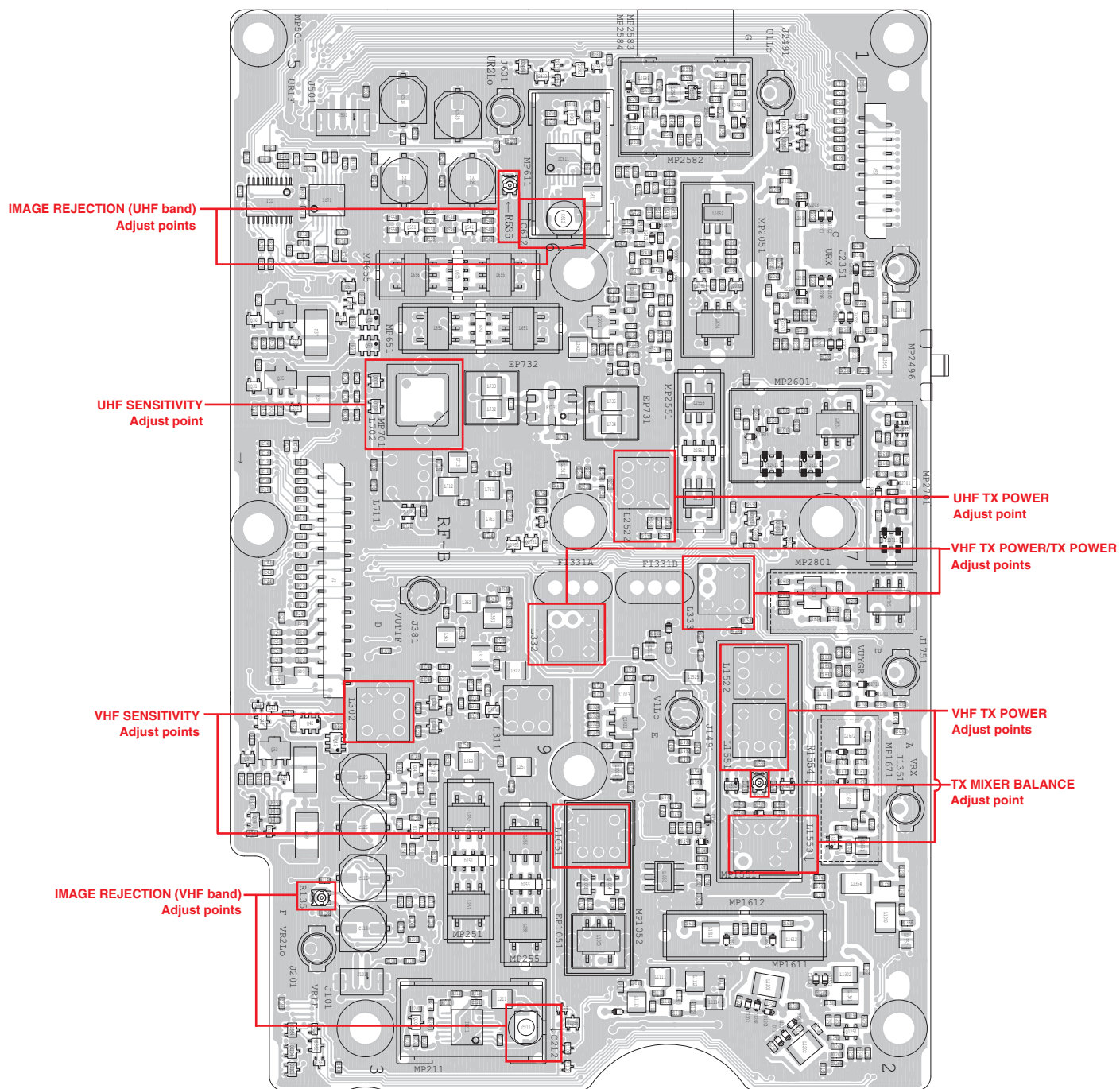
4-6 ADJUSTMENTS ON THE RF-B UNIT

ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE	
TX ADJUSTMENT (VHF TX power)	1	–	• Set the adjustment value in the "ADJUSTMENT ON THE FUNCTION DISPLAY." See the page 4-14 for details.	[Tuned BPF 1-2] in the VHF TX adjustment	[MAIN DIAL]	"8A"
	2	–	• Set the core of L1522 as illustrated.	–	L1522	Set the core as below. 
	3	• Frequency: 144.000 MHz • Mode: USB • Transmitting	1) Connect an RF power meter to [144MHz ANT]. 2) Connect an audio generator and millivoltmeter to [MIC], and then set it as; Frequency : 1.5 kHz Level : 1 mV	[144MHz ANT]	L332, L333, L1551, L1553	Max. TX power
RESIDUAL AM (AM mode)	• Frequency: 144.000 MHz • Mode: FM • [MIC GAIN]: Center • Transmitting	1) Connect an RF power meter to [144MHz ANT]. 2) Connect an audio generator and millivoltmeter to [MIC], and then set it as; Frequency : 1.5 kHz Level : 10 mV	[144MHz ANT]	L332, L333	Max. TX power	
TX MIXER BALANCE	• Frequency: 146.000 MHz* 148.000 MHz** • Mode: CW • Key: Up • Receiving	• Connect a spectrum analyzer to the [144MHz ANT].	[144MHz ANT]	R1554	Min. LO level (LO freq.= 135.150 MHz* 137.150 MHz**)	
TX ADJUSTMENT (UHF TX power)	• Frequency: 435.000 MHz • Mode: USB • Transmitting	1) Connect an RF power meter to [430MHz ANT]. 2) Connect an audio generator and millivoltmeter to [MIC], and then set it as; Frequency : 1.5 kHz Level : 1 mV	[430MHz ANT]	L2522	Max. TX power	
RX ADJUSTMENT (VHF Sensitivity)	• Frequency: 145.980 MHz • Mode: USB • Receiving	1) Connect an SSG to [144MHz ANT], and then set it as; Frequency : 145.9815 MHz Level [†] : –10 dBμ (–117 dBm) Modulation: None 2) Connect a millivoltmeter and a speaker to [EXT-SP].	[EXT-SP]	L302, L1051	Max. AF output level	
IMAGE REJECTION (VHF band)	• Frequency: 145.980 MHz • Mode: USB • Receiving	1) Connect an SSG to [144MHz ANT], and then set it as; Frequency : 145.9065 MHz Level [†] : +80 dBμ (–27 dBm) Modulation: None 2) Connect a millivoltmeter and a speaker to [EXT-SP].	[EXT-SP]	R135, C212 (Repeatedly)	Min. AF output level	
RX ADJUSTMENT (UHF Sensitivity)	• Frequency: 435.020 MHz • Mode: USB • Receiving	1) Connect an SSG to [430MHz ANT], and then set it as; Frequency : 435.0215 MHz Level [†] : –15 dBμ (–122 dBm) Modulation: None 2) Connect a millivoltmeter and a speaker to [EXT-SP].	[EXT-SP]	L702	Max. AF output level	
IMAGE REJECTION (UHF band)	• Frequency: 435.020 MHz • Mode: USB • Receiving	1) Connect an SSG to [430MHz ANT], and then set it as; Frequency : 434.9465 MHz Level [†] : +80 dBμ (–27 dBm) Modulation: None 2) Connect a millivoltmeter and a speaker to [EXT-SP].	[EXT-SP]	R535, C612 (Repeatedly)	Min. AF output level	

*: For except [USA], [CHN], [EXP]. **: For [USA], [CHN], [EXP].

†: The output level of the standard signal generator (SSG) is indicated as the SSG's terminated circuit.

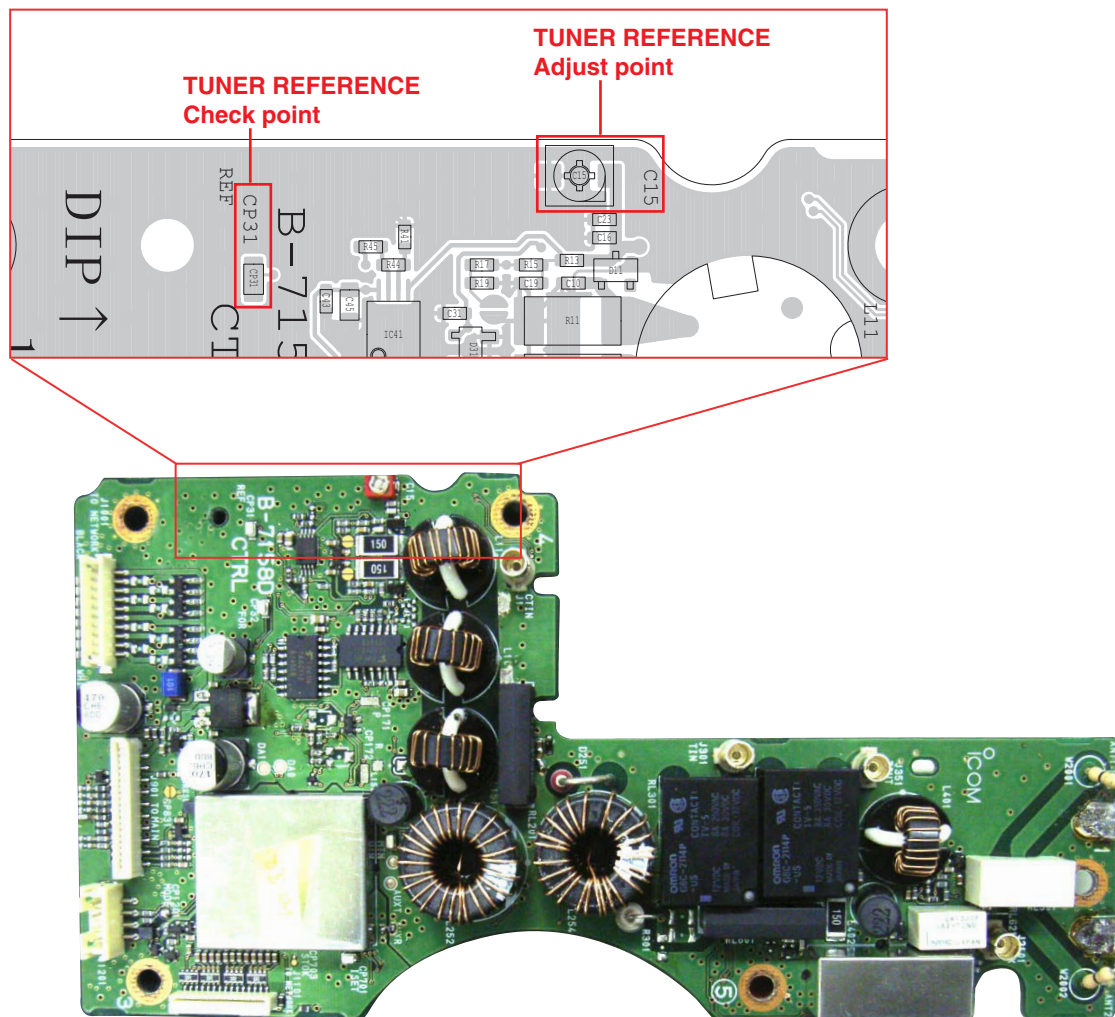
• THE LOCATION OF ADJUST/CHECK POINTS ON THE RF-B UNIT



4-7 ADJUSTMENT ON THE CTRL UNIT

ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE	
TUNER REFERENCE	1	<ul style="list-style-type: none"> Frequency: 3.55 MHz [TUNER]: Through TX power: Max. 	<ol style="list-style-type: none"> 1) Connect a 50 Ω dummy load to [ANT1]. 2) Connect a voltmeter to CP31. 	CP31	C15	Min. voltage
	2	<ul style="list-style-type: none"> Transmitting 	<ol style="list-style-type: none"> 1) Turn OFF the power. 2) Connect the short plug (See the page 4-1) to [REMOTE]. 3) Hold down [MENU] and [FILTER], and then turn ON the power. 4) Push [F-5] (STR). 	-	-	Verify the message " *** OK *** " is displayed.
	3	Turn OFF the power.				

• THE LOCATION OF ADJUST/CHECK POINTS ON THE CTRL UNIT

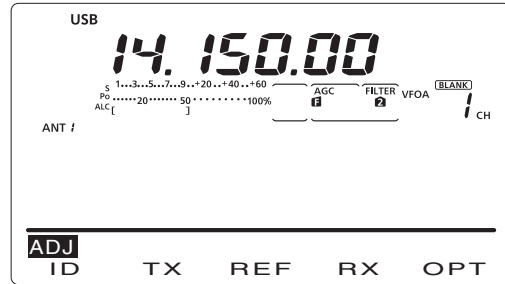


4-8 ADJUSTMENTS ON THE FUNCTION DISPLAY

- 1) Connect the short plug (Page 4-1) to [REMOTE], and while holding down [MENU] and [SSB], turn ON the power.
- 2) The main adjustment menu appears.

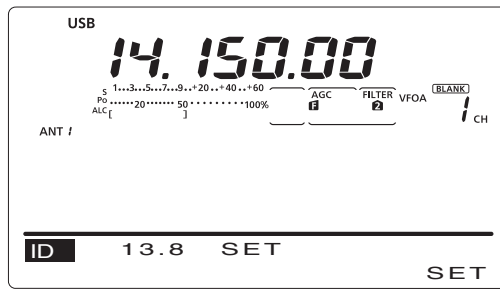
NOTE: If the optional UX-9100 is installed, remove it before the adjustment.

MAIN ADJUSTMENT MENU



- Select the ID adjustment (See below) — F-1
- Select the transmit adjustment (Page 4-13) — F-2
- Select the reference frequency/APC reference adjustment (Page 4-17) — F-3
- Select the receive adjustment (Page 4-18) — F-4

ID ADJUSTMENTS



- Stores the value and move to the next item. — F-5
- Returns to the previous screen. — MENU

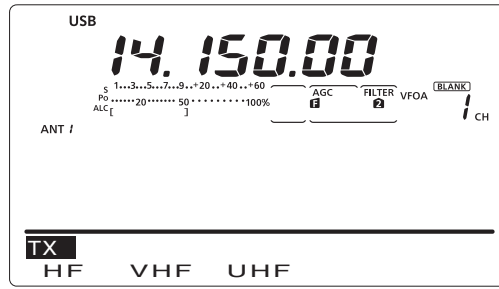
ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
LOADING REFERENCE VOLTAGE	<ul style="list-style-type: none"> • Display: "13.8 SET" • Receiving 	<ul style="list-style-type: none"> • Set the power supply voltage to 13.8 V. 	—	—	Push [F-5]. (A beep sounds, and then another beeps sound 0.5 sec. later)
SETTING ID REFERENCE LEVEL	1 <ul style="list-style-type: none"> • Display: "ID HF+1.0A" • Transmitting 	<ul style="list-style-type: none"> • Connect a 50 Ω dummy loads to [ANT1], [144MHz ANT] and [430MHz ANT]. 	—	—	Push [F-5].
	2 <ul style="list-style-type: none"> • Display: "ID VHF+1.0A" • Transmitting 				
	3 <ul style="list-style-type: none"> • Display: "ID UHF+1.0A" • Transmitting 				
	4 <ul style="list-style-type: none"> • Display: "IPD HF+1.0A" • Transmitting 				
	5 <ul style="list-style-type: none"> • Display: "IPD V/UHF+1.0A" • Transmitting 				

■ ID ADJUSTMENTS (continued)

ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
ID ADJUSTMENT (HF band)	6 • Display: "ID SET HF" • Transmitting	1) Connect a 50 Ω dummy load to [ANT1]. 2) Connect an ammeter to the power supply line.	Power supply line	–	Push [F-5]. (Measure the current and note it as the reference.)
	7 • Display: "HFID1V" • Transmitting			[MAIN DIAL]	1.0 A more than the reference. Push [F-5].
	8 • Display: "HFID2V" • Transmitting			–	Push [F-5]. (A beep sounds, and then another beeps sound 3 sec. later)
	9 • Display: "HDID1V" • Transmitting			[MAIN DIAL]	1.0 A more than "Step3." Push [F-5].
	10 • Display: "HDID2V" • Transmitting			–	Push [F-5]. (A beep sounds, and then another beeps sound 3 sec. later)
	11 • Display: "HPID1V" • Transmitting				
ID ADJUSTMENT (VHF/UHF band)	12 • Display: "ID SET VHF" • Transmitting	• Connect a 50 Ω dummy loads to [ANT1], [144MHz ANT] and [430MHz ANT].	–	–	Push [F-5].
	13 • Display: "VID1V" • Transmitting				Push [F-5]. (A beep sounds, and then another beeps sound 3 sec. later)
	14 • Display: "VID2V" • Transmitting				Push [F-5].
	15 • Display: "ID SET UHF" • Transmitting				Push [F-5]. (A beep sounds, and then another beeps sound 3 sec. later)
	16 • Display: "UID1V" • Transmitting				
	17 • Display: "UID2V" • Transmitting				
	18 • Display: "VUID1V" • Transmitting				
	19 • Display: "VUPD1V" • Transmitting				
Automatically returns to the main adjustment menu.					

■ TRANSMIT ADJUSTMENTS

• Transmit adjustment menu.



- RETURNS TO THE PREVIOUS SCREEN. — **MENU** (F-1)
- STARTS THE TRANSMIT ADJUSTMENTS (HF BAND). (See below)
- STARTS THE TRANSMIT ADJUSTMENTS (VHF). (Page 4-14) — **F-2**
- STARTS THE TRANSMIT ADJUSTMENTS (UHF). (Page 4-16) — **F-3**
- **F-4**
- **F-5** — Stores the value and move to the next item.

• TRANSMIT ADJUSTMENTS (HF band)

ADJUSTMENT ITEM	TRANSCEIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
PREPARATION	—	<ul style="list-style-type: none"> • Connect an AG and millivoltmeter to [MIC], and then set it as; Frequency : 1.5 kHz Level : 1 mV • Connect a power meter to [ANT1]. • Connect a 25 Ω dummy load to [ANT2]. 	—	—	—
TX TOTAL GAIN	1 • Display: "Total Gain HF" • Receiving	• Push [F-5]. (Automatically starts to transmit.)	—	[MAIN DIAL]	50 W Push [F-5].
TX POWER & POWER METER SETTING	2 • Display: "POWER HF" • Receiving	• Push [F-5]. (Automatically starts to transmit.)	—	—	Push [F-5].
	3 • Display: "POWER HF Min" • Transmitting	—	[ANT1]	[MAIN DIAL]	1.5 W Push [F-5].
	4 • Display: "POWER HF 10%" • Transmitting	—	—	—	10 W Push [F-5].
	5 • Display: "POWER HF Tuner" • Transmitting	—	—	—	10 W Push [F-5].
	6 • Display: "POWER HF 50%" • Transmitting	—	—	—	50 W Push [F-5].
	7 • Display: "POWER HF 75%" • Transmitting	—	—	—	80 W Push [F-5].
	8 • Display: "POWER HF 100%" • Transmitting	—	—	—	105 W Push [F-5].
	9 • Display: "POWER 50M" • Receiving	• Push [F-5]. (Automatically starts to transmit.)	—	—	Push [F-5].
	10 • Display: "POWER 50M Min" • Transmitting	—	[ANT1]	[MAIN DIAL]	1.5 W Push [F-5].
	11 • Display: "POWER 50M 10%" • Transmitting	—	—	—	10 W Push [F-5].
	12 • Display: "POWER 50M Tuner" • Transmitting	—	—	—	10 W Push [F-5].
	13 • Display: "POWER 50M 50%" • Transmitting	—	—	—	50 W Push [F-5].
	14 • Display: "POWER 50M 75%" • Transmitting	—	—	—	80 W Push [F-5].
	15 • Display: "POWER 50M 100%" • Transmitting	—	—	—	100 W Push [F-5].
	POWER DOWN SETTING	16 • Display: "POWER Down HF/50M" • Transmitting	• Push [F-5]. (Automatically starts to transmit.)	—	[MAIN DIAL]
AM CARRIER POWER RATIO	17 • Display: "POWER AM Ratio HF" • Transmitting	• Push [F-5]. (Automatically starts to transmit.)	—	[MAIN DIAL]	27 W Push [F-5].
ID APC	18 • Display: "ID-APC" • Receiving	1) Connect an ammeter to the power supply line. 2) Push [F-5]. (Automatically starts to transmit.)	Power supply line	[MAIN DIAL]	24–24.3 A Push [F-5].
ALC METER	19 • Display: "ALC HF/50M" • Transmitting	• Set the AG as; Frequency : 1.5 kHz Level : 10 mV	—	—	Push [F-5] (A beep sounds, and then another beeps sound 3 sec. later)
DRIVE GAIN	20 • Display: "DRIVE HF/50M" • Transmitting	—	—	—	Push [F-5].
SWR METER	21 • Display: "SWR HF/50M" • Transmitting	—	—	—	Push [F-5].
Automatically returns to the transmit adjustment menu.					

• TRANSMIT ADJUSTMENTS (VHF band)

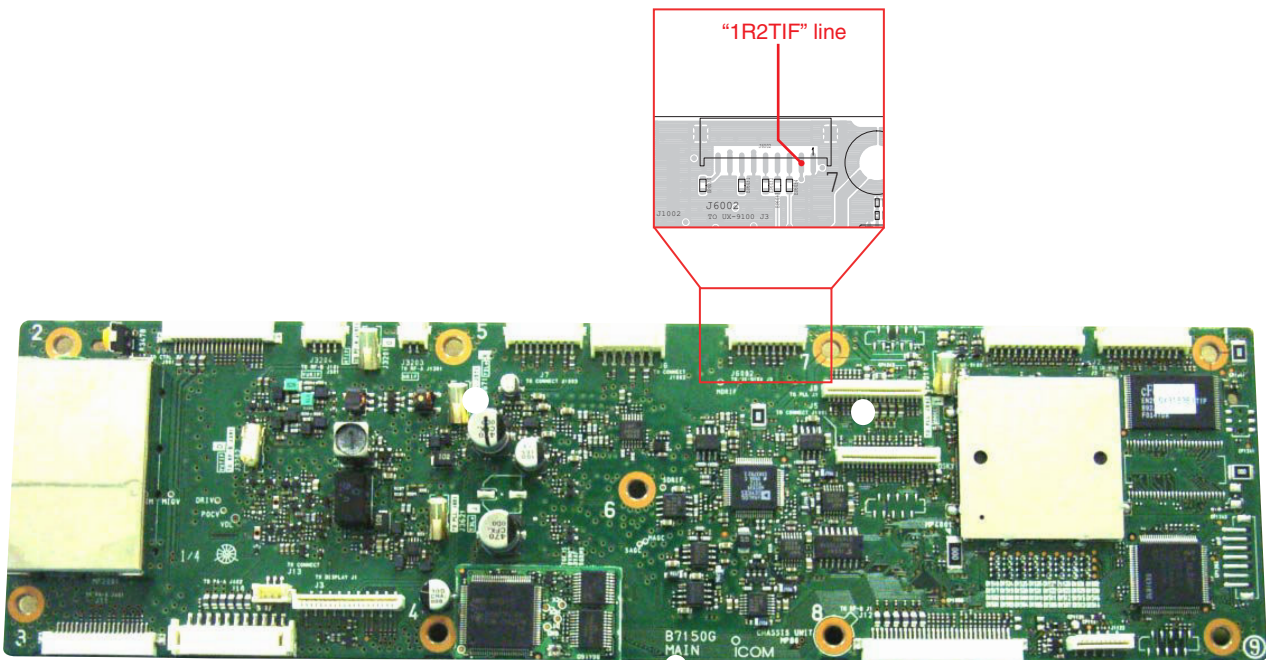
ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE	
PREPARATION	–	<ul style="list-style-type: none"> • Connect an AG and millivoltmeter to [MIC], and then set it as; Frequency : 1.5 kHz Level : 1 mV • Connect a power meter to [144MHz ANT]. 	–	–	–	
TUNED BPF	1	<ul style="list-style-type: none"> • Display: "Tuned BPF" • Receiving 	–	–	Push [F-5].	
	2	<ul style="list-style-type: none"> • Display: "Tuned BPF 1-1" • Transmitting 	–	–	Push [F-5]. (A beep sounds, and then another beeps sound 3 sec. later)	
	3*	<ul style="list-style-type: none"> • Display: "Tuned BPF 1-2" • Transmitting 				
	4	<ul style="list-style-type: none"> • Display: "Tuned BPF 2-1" • Transmitting 				
	5	<ul style="list-style-type: none"> • Display: "Tuned BPF 2-2" • Transmitting 				
	6	<ul style="list-style-type: none"> • Display: "Tuned BPF 3-1" • Transmitting 				
	7	<ul style="list-style-type: none"> • Display: "Tuned BPF 3-2" • Transmitting 				
	8	<ul style="list-style-type: none"> • Display: "Tuned BPF 4-1" • Transmitting 				
	9	<ul style="list-style-type: none"> • Display: "Tuned BPF 4-2" • Transmitting 				
	10	<ul style="list-style-type: none"> • Display: "Tuned BPF 5-1" • Transmitting 				
	11	<ul style="list-style-type: none"> • Display: "Tuned BPF 5-2" • Transmitting 				
TX TOTAL GAIN	12	<ul style="list-style-type: none"> • Display: "Total Gain VHF" • Receiving 	Push [F-5]. (Automatically starts to transmit.)	[144MHz ANT]	[MAIN DIAL]	50 W Push [F-5].
TX POWER & POWER METER SETTING	13	<ul style="list-style-type: none"> • Display: "POWER VHF" • Receiving 	Push [F-5]. (Automatically starts to transmit.)	–	–	Push [F-5].
	14	<ul style="list-style-type: none"> • Display: "POWER VHF Min" • Transmitting 	–	[144MHz ANT]	[MAIN DIAL]	1.5 W Push [F-5].
	15	<ul style="list-style-type: none"> • Display: "POWER VHF 10%" • Transmitting 				10 W Push [F-5].
	16	<ul style="list-style-type: none"> • Display: "POWER VHF 50%" • Transmitting 				50 W Push [F-5].
	17	<ul style="list-style-type: none"> • Display: "POWER VHF 75%" • Transmitting 				75 W Push [F-5].
	18	<ul style="list-style-type: none"> • Display: "POWER VHF 100%" • Transmitting 				100 W Push [F-5].
POWER DOWN SETTING	19	<ul style="list-style-type: none"> • Display: "POWER Down VHF" • Transmitting 	Push [F-5]. (Automatically starts to transmit.)	[144MHz ANT]	[MAIN DIAL]	50 W Push [F-5].

*: For RF-B UNIT adjustment (Page 4-8), set the value to "8A," using [MAIN DIAL].

• TRANSMIT ADJUSTMENTS (VHF band) (continued)

ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
TX POWER (1.2 GHz BAND)	20 • Display: "POWER 1.2G" • Receiving	• Push [F-5]. (Automatically starts to transmit.)	"FORV" on the display.	[MAIN DIAL]	2.600 V Push [F-5].
	21 • Display: "TX Total Gain 1.2G" • Transmitting	1) Connect a spectrum analyzer to the pin 2 of J6002, and then set it as; Center : 10.95 MHz Span : 100 kHz RBW : 3 kHz VBW : 100 Hz 2) Set the AG and millivoltmeter as; Frequency : 1.5 kHz Level : 1 mV	Pin 2 of J6002 (MAIN UNIT)	[MAIN DIAL]	-32.0 dBm (±0.1 dB) Push [F-5].
ALC METER	22 • Display: "ALC VHF" • Transmitting	• Set the AG as; Frequency : 1.5 kHz Level : 10 mV	-	-	Push [F-5]. (A beep sounds, and then another beeps sound 3 sec. later)
DRIVE GAIN	23 • Display: "DRIVE VHF" • Transmitting		-	-	Push [F-5].
SWR METER	24 • Display: "SWR VHF-1" • Transmitting		-	-	Push [F-5].
	25 • Display: "SWR VHF-2" • Transmitting	• Connect a 25 Ω dummy load to [144MHz ANT].	-	-	Push [F-5].
Automatically returns to the transmit adjustment menu.					

• THE LOCATION OF CHECK POINT ON THE MAIN UNIT

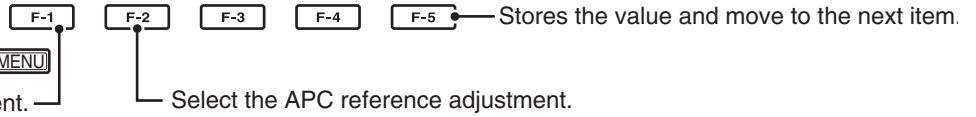
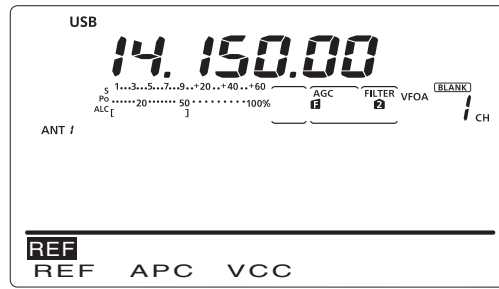


• TRANSMIT ADJUSTMENTS (UHF band)

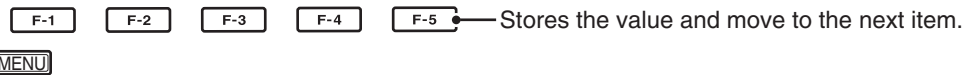
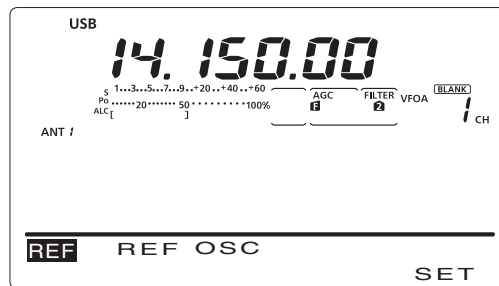
ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
PREPARATION	-	<ul style="list-style-type: none"> Connect an AG and millivoltmeter to [MIC], and then set it as; Frequency : 1.5 kHz Level : 1 mV Connect a power meter to [430MHz ANT]. 	-	-	-
TX TOTAL GAIN	1	<ul style="list-style-type: none"> Display: "Total Gain UHF" Receiving 	[430MHz ANT]	[MAIN DIAL]	37.5 W Push [F-5].
TX POWER & POWER METER SETTING	2	<ul style="list-style-type: none"> Display: "POWER UHF" Receiving 	-	-	Push [F-5].
	3	<ul style="list-style-type: none"> Display: "POWER UHF Min" Transmitting 	[144MHz ANT]	[MAIN DIAL]	1.5 W Push [F-5].
	4	<ul style="list-style-type: none"> Display: "POWER UHF 10%" Transmitting 			7.5 W Push [F-5].
	5	<ul style="list-style-type: none"> Display: "POWER UHF 50%" Transmitting 			37.5 W Push [F-5].
	6	<ul style="list-style-type: none"> Display: "POWER UHF 75%" Transmitting 			60 W Push [F-5].
	7	<ul style="list-style-type: none"> Display: "POWER UHF 100%" Transmitting 			75 W Push [F-5].
POWER DOWN SETTING	8	<ul style="list-style-type: none"> Display: "POWER Down UHF" Transmitting 			[430MHz ANT]
ALC METER	9	<ul style="list-style-type: none"> Display: "ALC UHF" Transmitting 	-	-	Push [F-5]. (A beep sounds, and then another beeps sound 3 sec. later)
DRIVE GAIN	10	<ul style="list-style-type: none"> Display: "DRIVE UHF" Transmitting 	-	-	Push [F-5].
SWR METER	11	<ul style="list-style-type: none"> Display: "SWR UHF-1" Transmitting 	-	-	Push [F-5].
	12	<ul style="list-style-type: none"> Display: "SWR UHF-2" Transmitting 	-	-	Push [F-5].
Automatically returns to the transmit adjustment menu.					

■ REFERENCE ADJUSTMENTS

• Reference adjustment menu.

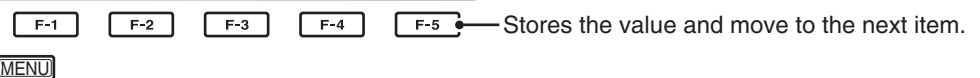
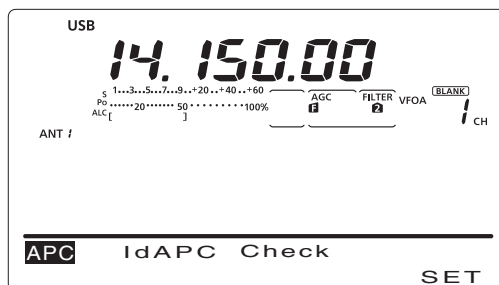


• REFERENCE FREQUENCY ADJUSTMENT



ADJUSTMENT ITEM	TRANSCEIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
REFERENCE FREQUENCY	1	—	—	—	—
	2	<ul style="list-style-type: none"> • Display: "REF OSC" • Transmitting 	<ul style="list-style-type: none"> • Connect a frequency counter to [430MHz ANT], through an attenuator. • Push [F-5]. (Automatically starts to transmit.) 	[430MHz ANT]	[MAIN DIAL]
Automatically returns to the reference adjustment menu. Push [MENU] to return to the main adjustment menu (Page 4-6).					

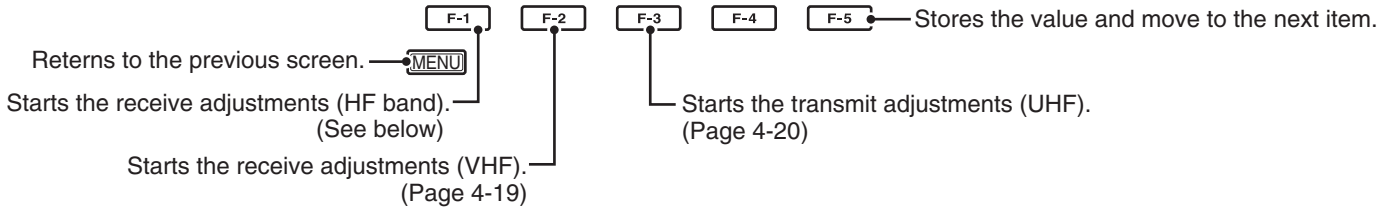
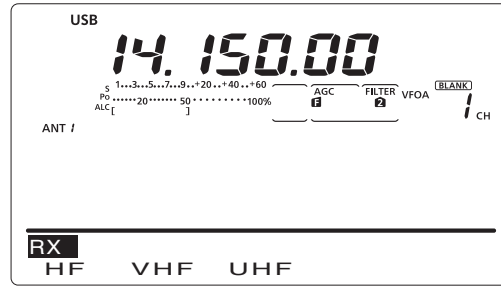
• APC REFERENCE ADJUSTMENT



ADJUSTMENT ITEM	TRANSCEIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
ID APC VERIFICATION	<ul style="list-style-type: none"> • Display: "IdAPC Check" • Transmitting 	<ul style="list-style-type: none"> • Push [F-5]. (Automatically starts to transmit.) 	—	—	Push [F-5]. (Beeps sound 1 sec. later)
Automatically returns to the reference adjustment menu. Push [MENU] to return to the main adjustment menu (Page 4-6).					

RECEIVE ADJUSTMENTS

Receive adjustment menu.



RECEIVE ADJUSTMENTS (HF band)

ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE	
PREPARATION	—	<ul style="list-style-type: none"> Connect an SSG to [ANT1], and then set it as; Frequency : 14.1515 MHz Modulation : None Level† : +20 dBu (−87 dBm) 	—	—	—	
TOTAL GAIN	1	<ul style="list-style-type: none"> Display: "Total Gain HF POFF" Receiving 	—	—	Push [F-5]. (Beeps sound 20–30 sec. later)	
	2	<ul style="list-style-type: none"> Display: "Total Gain HF PON" Receiving 	—	—		
EXTERNAL AGC	3	<ul style="list-style-type: none"> Display: "AGC (HF)" Receiving 	—	—	Push [F-5]. (Beeps sound 40 sec. later)	
S-METER	NOTE: DO NOT change the output level of the SSG until the beeps sound.					
	4	<ul style="list-style-type: none"> Display: "S0 Level HF" Receiving 	<ul style="list-style-type: none"> Set the SSG as; Level : OFF 	—	—	Push [F-5]. (Beep sounds, and then another beeps sound 0.5 sec. later)
	5	<ul style="list-style-type: none"> Display: "S9 Level HF" Receiving 	<ul style="list-style-type: none"> Set the SSG as; Level† : +34 dBu (−73 dBm) 	—	—	Push [F-5]. (Beep sounds, and then another beeps sound 1 sec. later)
	6	<ul style="list-style-type: none"> Display: "S9+60 Level HF" Receiving 	<ul style="list-style-type: none"> Set the SSG as; Level† : +90 dBu (−17 dBm) 	—	—	
Automatically returns to the receive adjustment menu.						

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

• RECEIVE ADJUSTMENTS (VHF band)

ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE		
TUNED BPF	NOTE: DO NOT change the output level of the SSG until the beeps sound.						
	1	• Display: "Tuned BPF 1-1 VHF" • Transmitting	• Connect an SSG to [144MHz ANT], and then set it as; Frequency : 108.1015 MHz Modulation : None Level† : +20 dBu (−87 dBm)	–	–	Push [F-5]. (A beep sounds, and then another beeps sound 2.5 sec. later)	
	2	• Display: "Tuned BPF 1-2 VHF" • Transmitting					
	3	• Display: "Tuned BPF 2-1 VHF" • Transmitting					• Set the SSG as; Frequency : 135.8015 MHz
	4	• Display: "Tuned BPF 2-2 VHF" • Transmitting					
	5	• Display: "Tuned BPF 3-1 VHF" • Transmitting					• Set the SSG as; Frequency : 136.2015 MHz
	6	• Display: "Tuned BPF 3-2 VHF" • Transmitting					
	7	• Display: "Tuned BPF 4-1 VHF" • Transmitting					• Set the SSG as; Frequency : 146.2015 MHz
	8	• Display: "Tuned BPF 4-2 VHF" • Transmitting					
	9	• Display: "Tuned BPF 5-1 VHF" • Transmitting					• Set the SSG as; Frequency : 173.8015 MHz
10	• Display: "Tuned BPF 5-2 VHF" • Transmitting						
TOTAL GAIN	11	• Display: "Total Gain VHF" • Receiving	• Set the SSG as; Frequency : 145.8015 MHz Modulation : None Level† : 0 dBu (−107 dBm)	–	–	Push [F-5]. (Beeps sound 20–30 sec. later)	
EXTERNAL AGC	12	• Display: "AGC (VHF)" • Receiving	• Set the SSG as; Level† : +60 dBu (−47 dBm)	–	–	Push [F-5]. (Beeps sound 40 sec. later)	
S-METER	NOTE: DO NOT change the output level of the SSG until the beeps sound.						
	13	• Display: "S0 Level VHF" • Receiving	• Set the SSG as; Frequency : 146.2015 MHz Level : OFF	–	–	Push [F-5]. (Beep sounds, and then another beeps sound 0.5 sec. later)	
	14	• Display: "S9 Level VHF" • Receiving	• Set the SSG as; Level† : +10 dBu (−97 dBm)	–	–	Push [F-5]. (Beep sounds, and then another beeps sound 1 sec. later)	
15	• Display: "S9+60 Level VHF" • Receiving	• Set the SSG as; Level† : +70 dBu (−37 dBm)					
Automatically returns to the receive adjustment menu.							

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

• RECEIVE ADJUSTMENTS (UHF band)

ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE	
TUNED BPF	NOTE: DO NOT change the output level of the SSG until the beeps sound.					
	1	• Display: "Tuned BPF 1-1 UHF" • Transmitting	• Connect an SSG to [430MHz ANT], and then set it as; Frequency : 420.2015 MHz Modulation : None Level [†] : +20 dBu (-87 dBm)	-	-	Push [F-5]. (A beep sounds, and then another beeps sound 2.5 sec. later)
	2	• Display: "Tuned BPF 1-2 UHF" • Transmitting				
	3	• Display: "Tuned BPF 2-1 UHF" • Transmitting	• Set the SSG as; Frequency : 440.2015 MHz			
	4	• Display: "Tuned BPF 2-2 UHF" • Transmitting				
	5	• Display: "Tuned BPF 3-1 UHF" • Transmitting	• Set the SSG as; Frequency : 479.8015 MHz			
6	• Display: "Tuned BPF 3-2 UHF" • Transmitting					
TOTAL GAIN	7	• Display: "Total Gain UHF" • Receiving	• Set the SSG as; Frequency : 435.2015 MHz Modulation : None Level [†] : 0 dBu (-107 dBm)	-	-	Push [F-5]. (Beeps sound 20-30 sec. later)
EXTERNAL AGC	8	• Display: "AGC (UHF)" • Receiving	• Set the SSG as; Level [†] : +60 dBu (-47 dBm)	-	-	Push [F-5]. (Beeps sound 40 sec. later)
S-METER	NOTE: DO NOT change the output level of the SSG until the beeps sound.					
	9	• Display: "S0 Level UHF" • Receiving	• Set the SSG as; Level : OFF	-	-	Push [F-5]. (Beep sounds, and then another beeps sound 0.5 sec. later)
	10	• Display: "S9 Level UHF" • Receiving	• Set the SSG as; Level [†] : +10 dBu (-97 dBm)			
	11	• Display: "S9+60 Level UHF" • Receiving	• Set the SSG as; Level [†] : +70 dBu (-37 dBm)			
Automatically returns to the receive adjustment menu.						Push [F-5]. (Beep sounds, and then another beeps sound 1 sec. later)

[†]; The output level of the standard signal generator (SSG) is indicated as the SSG's terminated circuit.

SECTION 5

PARTS LIST

[MAIN UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
IC1001	1130010111	S.IC TC7WH04FU(TE12LF)	B	195.6/32.9
IC1041	1130012600	S.IC SN74AHC1G04DCKR	B	186.8/33.0
IC1081	1130015080	S.IC R1EX24512ASAS0A	B	234.1/5.7
IC1101	1110005731	S.IC S-80928CNMC-G8Y-G	T	224.8/5.4
IC1141	1130013010	S.IC SN74AHC1G08DCK3	T	226.0/9.4
IC1161	1130010160	S.IC TC74HC4052AF(ELF)	B	215.4/27.8
IC1162	1130010160	S.IC TC74HC4052AF(ELF)	B	216.2/16.3
IC1163	1110000960	S.IC NJM4558M-TE1-#FMZB	B	202.1/24.9
IC1201	1140015724	S.IC HD64F2378BFVQ35V (SX-3183A-5)	B	247.0/23.3
IC1261	1140015700	S.IC XC9572XL-10TQG100C (SX-3183D)	T	250.0/20.8
IC2001	1180003100	S.REG BD9302FP-E2	T	21.5/44.3
IC2101	1180003560	S.REG BA33BC0FP-E2	B	103.3/9.3
IC3201	1130012720	S.IC CD74HC4094PWR	B	40.5/41.2
IC3202	1130012720	S.IC CD74HC4094PWR	B	40.5/48.1
IC3203	1130012720	S.IC CD74HC4094PWR	B	40.5/55.0
IC3204	1130012000	S.IC M62352AGP C60Q	B	40.5/33.6
IC3251	1110004050	S.IC NJM3404AV-TE1-#FMZB	B	52.6/33.6
IC3271	1110005140	S.IC NJM3403AV-TE1-#ZZZB	B	62.4/30.5
IC3401	1110006300	S.IC NJM2172V-TE1-#ZZZB	B	108.5/53.4
IC3421	1140013200	S.IC CD4053BPWR	B	115.2/53.4
IC3422	1140013200	S.IC CD4053BPWR	B	131.5/51.3
IC3451	1130013110	S.IC KIC7W53FK-RTK/P	T	140.3/48.0
IC3452	1110005610	S.IC NJM2058V-TE1-#ZZZB	B	122.5/48.7
IC3453	1110005610	S.IC NJM2058V-TE1-#ZZZB	T	134.4/51.3
IC3501	1130013110	S.IC KIC7W53FK-RTK/P	B	87.7/67.4
IC3502	1130013110	S.IC KIC7W53FK-RTK/P	B	72.5/68.0
IC3503	1130013110	S.IC KIC7W53FK-RTK/P	B	61.4/68.3
IC3504	1130013110	S.IC KIC7W53FK-RTK/P	B	113.5/19.9
IC3505	1130013110	S.IC KIC7W53FK-RTK/P	B	107.6/19.9
IC3506	1130013110	S.IC KIC7W53FK-RTK/P	B	101.7/19.9
IC3507	1130012260	S.IC SN74AHC1G32DCKR	B	82.3/70.8
IC3508	1140013770	S.IC TC7SET125FU(TE85LF)	B	86.6/63.9
IC3509	1130013110	S.IC KIC7W53FK-RTK/P	B	84.9/70.6
IC3510	1130013110	S.IC KIC7W53FK-RTK/P	B	83.8/64.1
IC3511	1130012260	S.IC SN74AHC1G32DCKR	B	66.5/71.7
IC3512	1140013770	S.IC TC7SET125FU(TE85LF)	B	72.9/65.0
IC3513	1130013110	S.IC KIC7W53FK-RTK/P	B	69.3/71.5
IC3514	1130013110	S.IC KIC7W53FK-RTK/P	B	69.3/65.0
IC3515	1130012260	S.IC SN74AHC1G32DCKR	B	55.3/71.7
IC3516	1140013770	S.IC TC7SET125FU(TE85LF)	B	60.9/64.8
IC3517	1130013110	S.IC KIC7W53FK-RTK/P	B	58.1/71.5
IC3518	1130013110	S.IC KIC7W53FK-RTK/P	B	58.1/65.0
IC3522	1110005450	S.IC TS522IDT	B	118.5/39.7
IC3523	1110005100	S.IC NJM072BM-TE1-#ZZZB	B	126.8/32.5
IC3532	1110005450	S.IC TS522IDT	B	118.5/29.6
IC3601	1110005450	S.IC TS522IDT	B	83.8/34.7
IC3621	1110005461	S.IC TA4107F(TE12LF)	T	87.8/25.3
IC3675	1110006870	S.IC UPC2709TB-E3	T	94.7/49.0
IC3901	1130012610	S.IC SN74AHC1GU04DCKR	T	206.1/69.4
IC3902	1130012600	S.IC SN74AHC1G04DCKR	T	209.4/69.4
IC3913	1130014260	S.IC SN74LVC2GU04DCKR	B	201.0/54.5
IC3951	1130013010	S.IC SN74AHC1G08DCK3	B	246.5/45.5
IC3952	1110007480	S.IC S-80811CNBB-B9PT2G	B	246.6/42.8
IC4001	1140015160	S.IC ADSP-21369KSWZ-2A <FE>	T	222.2/45.7
IC4202	1130015672	S.IC EN29LV800CB-70TIP (SX-3183E-2)	T	252.1/58.5
IC4401	1110005450	S.IC TS522IDT	T	147.9/16.1
IC4402	1110005450	S.IC TS522IDT	T	148.9/24.6
IC4403	1110005610	S.IC NJM2058V-TE1-#ZZZB	T	161.2/13.9
IC4404	1110005610	S.IC NJM2058V-TE1-#ZZZB	T	168.6/56.8
IC4405	1110005610	S.IC NJM2058V-TE1-#ZZZB	T	177.7/36.1
IC4461	1130015070	S.IC AD1939YSTZ <FE>	T	160.6/39.1
IC4481	1110005450	S.IC TS522IDT	T	172.9/49.0
IC4482	1110000960	S.IC NJM4558M-TE1-#FMZB	T	143.5/34.9
IC4483	1110005450	S.IC TS522IDT	T	150.4/48.6
IC4601	1110000960	S.IC NJM4558M-TE1-#FMZB	B	159.7/69.1
IC4602	1110005450	S.IC TS522IDT	B	159.2/57.2
IC4603	1110005450	S.IC TS522IDT	B	169.9/62.7
IC4604	1130013110	S.IC KIC7W53FK-RTK/P	B	154.2/59.6
IC4605	1130012600	S.IC SN74AHC1G04DCKR	B	195.6/70.8
IC4651	1190002650	S.IC AK4620BVPF-E2/P	B	189.1/65.8
IC4661	1110005450	S.IC TS522IDT	B	175.3/55.4
IC5001	1140014830	S.IC ADSP-21375KSWZ-2B <FE>	B	222.5/55.6
IC5201	1130015040	S.IC MT48LC4M16A2P-75:G	B	248.4/59.4
IC5202	1130015683	S.IC EN29LV040A-70SCP (SX-3183F-3)	B	261.4/42.9
IC5401	1110000960	S.IC NJM4558M-TE1-#FMZB	B	164.1/46.9
IC5402	1110005450	S.IC TS522IDT	B	162.1/35.8
IC5403	1110005450	S.IC TS522IDT	B	176.7/44.0
IC5404	1130013110	S.IC KIC7W53FK-RTK/P	B	157.1/38.2
IC5405	1110005610	S.IC NJM2058V-TE1-#ZZZB	B	176.5/19.1
IC5451	1190002650	S.IC AK4620BVPF-E2/P	B	189.1/45.1
IC5452	1190002650	S.IC AK4620BVPF-E2/P	B	187.8/21.6
IC5453	1130012600	S.IC SN74AHC1G04DCKR	B	196.3/52.9
IC5481	1110005450	S.IC TS522IDT	B	169.1/31.3
IC5482	1110005450	S.IC TS522IDT	B	159.6/19.3
IC6001	1130013110	S.IC KIC7W53FK-RTK/P	B	129.9/16.6
IC6002	1130013110	S.IC KIC7W53FK-RTK/P	B	129.9/13.1
IC6101	1130009691	S.IC TC74HCT7007AF(F) S	T	178.6/26.2
IC6102	1130009691	S.IC TC74HCT7007AF(F) S	B	148.3/16.5
IC6103	1130009691	S.IC TC74HCT7007AF(F) S	B	203.0/9.0
Q1001	1590001650	S.TRA XP4601(TX)	B	190.5/31.5
Q1021	1590003680	S.TRA KRC402 RTK/P	B	192.9/36.6
Q2101	1590003680	S.TRA KRC402 RTK/P	B	104.6/15.5

[MAIN UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
Q2102	1550000160	S.FET CPH3313-TL-E	B	108.9/14.8
Q2201	1550000160	S.FET CPH3313-TL-E	T	74.7/6.0
Q2202	1590003680	S.TRA KRC402 RTK/P	T	69.1/6.2
Q3271	1530003960	S.TRA KTC2875-B-RTK/P	T	64.1/24.7
Q3272	1590004010	S.TRA KRA302-RTK/P	T	62.5/22.1
Q3275	1560001260	S.FET 2SK3018 T106	B	56.9/26.5
Q3276	1560001260	S.FET 2SK3018 T106	B	54.4/26.2
Q3301	1590004010	S.TRA KRA302-RTK/P	B	65.2/38.9
Q3302	1590003680	S.TRA KRC402 RTK/P	B	68.6/38.9
Q3303	1510000771	S.TRA 2SA1586-GR(TE85LF)	T	60.0/39.2
Q3305	1590003680	S.TRA KRC402 RTK/P	T	68.7/35.4
Q3306	1530003960	S.TRA KTC2875-B-RTK/P	T	65.0/35.5
Q3631	1580000820	S.FET 3SK264-5-TG-E	T	78.0/26.9
Q3651	1580000820	S.FET 3SK264-5-TG-E	T	81.2/45.7
Q3681	1590004010	S.TRA KRA302-RTK/P	B	65.0/48.9
Q3682	1590003680	S.TRA KRC402 RTK/P	B	65.0/46.3
Q3691	1590004010	S.TRA KRA302-RTK/P	B	65.1/55.4
Q3692	1590003680	S.TRA KRC402 RTK/P	B	65.1/52.8
Q3701	1590003680	S.TRA KRC402 RTK/P	T	52.3/56.3
Q3702	1590003680	S.TRA KRC402 RTK/P	T	52.3/53.1
Q3703	1590003680	S.TRA KRC402 RTK/P	T	55.3/56.3
Q3801	1530003900	S.TRA KTC4075 BL-RTK/P	B	88.7/44.2
Q3802	1530003900	S.TRA KTC4075 BL-RTK/P	B	95.3/42.2
Q4601	1590003680	S.TRA KRC402 RTK/P	B	150.4/59.5
Q5401	1590003680	S.TRA KRC402 RTK/P	B	153.3/38.6
D1	1790001241	S.DIO MA2S7280GL	T	233.4/66.8
D301	1790001241	S.DIO MA2S7280GL	T	54.2/24.9
D302	1790001241	S.DIO MA2S7280GL	T	67.9/24.2
D1001	1750001320	S.DIO KDS4148U RTK/P	B	189.7/34.6
D1021	1750001180	S.DIO KDS122 RTK/P	B	201.3/34.9
D1022	1750001180	S.DIO KDS122 RTK/P	B	196.5/36.9
D1121	1750001320	S.DIO KDS4148U RTK/P	T	241.9/6.5
D1141	1750001710	S.DIO RB751V-40 TE-17	T	234.3/11.5
D1172	1750001320	S.DIO KDS4148U RTK/P	B	220.7/25.3
D1173	1790001241	S.DIO MA2S7280GL	B	221.7/10.2
D1174	1750001320	S.DIO KDS4148U RTK/P	B	208.9/20.2
D1175	1750001320	S.DIO KDS4148U RTK/P	B	207.6/33.7
D1201	1750001180	S.DIO KDS122 RTK/P	B	242.0/7.8
D1202	1750001180	S.DIO KDS122 RTK/P	B	241.7/4.2
D1203	1750001180	S.DIO KDS122 RTK/P	B	245.3/4.1
D1204	1750001180	S.DIO KDS122 RTK/P	B	248.8/4.1
D1281	1750001320	S.DIO KDS4148U RTK/P	B	234.3/13.1
D1282	1750001180	S.DIO KDS122 RTK/P	B	200.6/30.6
D1283	1750001180	S.DIO KDS122 RTK/P	B	211.8/4.2
D1331	1750001180	S.DIO KDS122 RTK/P	B	209.3/4.2
D1332	1750001180	S.DIO KDS122 RTK/P	B	214.3/4.3
D1333	1750001180	S.DIO KDS122 RTK/P	B	252.3/4.1
D1334	1750001180	S.DIO KDS122 RTK/P	B	216.8/4.2
D1501	1750002020	S.DIO DA2S10100L	T	212.3/20.4
D1502	1750002020	S.DIO DA2S10100L	T	212.3/21.6
D1503	1750002020	S.DIO DA2S10100L [USA] DA2S10100L [EUR] DA2S10100L [JPN] DA2S10100L [ITR] DA2S10100L [ESP] DA2S10100L [TPE] DA2S10100L [KOR] DA2S10100L [CHN] DA2S10100L [EXP]	T	215.1/20.4
D1504	1750002020	S.DIO DA2S10100L	T	217.9/20.4
D1505	1750002020	S.DIO DA2S10100L	T	220.7/20.4
D1506	1750002020	S.DIO DA2S10100L [CHN] DA2S10100L [FRA] DA2S10100L [EXP] DA2S10100L [ITR]	T	223.5/20.4
D1507	1750002020	S.DIO DA2S10100L [ITR] DA2S10100L [ESP] DA2S10100L [TPE] DA2S10100L [KOR]	T	226.3/20.4
D1508	1750002020	S.DIO DA2S10100L	T	215.1/21.6
D1509	1750002020	S.DIO DA2S10100L	T	217.9/21.6
D1510	1750002020	S.DIO DA2S10100L	T	220.7/21.6
D1511	1750002020	S.DIO DA2S10100L	T	223.5/21.6
D1512	1750002020	S.DIO DA2S10100L	T	226.3/21.6
D1513	1750002020	S.DIO DA2S10100L [EUR] DA2S10100L [EUR-01] DA2S10100L [TPE] DA2S10100L [KOR] DA2S10100L [EXP] DA2S10100L [USA] DA2S10100L [EUR-01] DA2S10100L [ESP] DA2S10100L [KOR] DA2S10100L [FRA] DA2S10100L [EUR] DA2S10100L [EUR-01] DA2S10100L [ITR] DA2S10100L [ESP] DA2S10100L [TPE] DA2S10100L [KOR] DA2S10100L [CHN] DA2S10100L [FRA] DA2S10100L [EXP]	T	229.1/20.4
D1514	1750002020	S.DIO DA2S10100L	T	231.9/20.4
D1515	1750002020	S.DIO DA2S10100L	T	229.1/21.6

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

[MAIN UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
D1516	1750002020	S.DIO DA2S10100L [EUR]	T	231.9/21.6
	1750002020	S.DIO DA2S10100L [TPE]		
	1750002020	S.DIO DA2S10100L [CHN]		
	1750002020	S.DIO DA2S10100L [FRA]		
D1517	1750002020	S.DIO DA2S10100L [EUR]	T	212.3/22.8
	1750002020	S.DIO DA2S10100L [EUR-01]		
	1750002020	S.DIO DA2S10100L [ITR]		
	1750002020	S.DIO DA2S10100L [ESP]		
	1750002020	S.DIO DA2S10100L [TPE]		
	1750002020	S.DIO DA2S10100L [KOR]		
	1750002020	S.DIO DA2S10100L [CHN]		
	1750002020	S.DIO DA2S10100L [FRA]		
D1518	1750002020	S.DIO DA2S10100L [KOR] only	T	212.3/24.0
D1519	1750002020	S.DIO DA2S10100L [EUR]	T	215.1/22.8
	1750002020	S.DIO DA2S10100L [EUR-01]		
	1750002020	S.DIO DA2S10100L [ITR]		
	1750002020	S.DIO DA2S10100L [FRA]		
D1520	1750002020	S.DIO DA2S10100L	T	217.9/22.8
D1523	1750002020	S.DIO DA2S10100L [EUR]	T	226.3/22.8
	1750002020	S.DIO DA2S10100L [EUR-01]		
	1750002020	S.DIO DA2S10100L [ITR]		
	1750002020	S.DIO DA2S10100L [ESP]		
	1750002020	S.DIO DA2S10100L [FRA]		
D1527	1750002020	S.DIO DA2S10100L	T	223.5/24.0
D1528	1750002020	S.DIO DA2S10100L	T	226.3/24.0
D1530	1750002020	S.DIO DA2S10100L [USA]	T	231.9/22.8
	1750002020	S.DIO DA2S10100L [KOR]		
D1531	1750002020	S.DIO DA2S10100L	T	229.1/24.0
D1532	1750002020	S.DIO DA2S10100L	T	231.9/24.0
D2001	1750000960	S.DIO RB081L-20	T	20.0/35.8
D2002	1750000960	S.DIO RB081L-20	T	20.0/52.9
D3252	1750001320	S.DIO KDS4148U RTK/P	T	63.2/29.4
D3253	1750001320	S.DIO KDS4148U RTK/P	T	67.8/28.4
D3254	1750001320	S.DIO KDS4148U RTK/P	T	69.4/31.0
D3271	1750001320	S.DIO KDS4148U RTK/P	T	61.9/34.4
D3272	1790001241	S.DIO MA2S7280GL	T	57.5/30.0
D3274	1750001320	S.DIO KDS4148U RTK/P	T	61.4/29.2
D3275	1790001241	S.DIO MA2S7280GL	T	58.2/33.0
D3277	1750001320	S.DIO KDS4148U RTK/P	B	59.0/25.4
D3278	1790001241	S.DIO MA2S7280GL	B	45.6/34.1
D3279	1750001320	S.DIO KDS4148U RTK/P	B	56.7/19.7
D3280	1750001320	S.DIO KDS4148U RTK/P	B	51.2/25.3
D3281	1750001320	S.DIO KDS4148U RTK/P	B	53.2/22.7
D3301	1750001320	S.DIO KDS4148U RTK/P	T	62.2/39.4
D3302	1750001320	S.DIO KDS4148U RTK/P	T	54.5/37.5
D3303	1750001320	S.DIO KDS4148U RTK/P	T	52.9/39.7
D3304	1790001331	S.ZEN MAZ8036GLL	T	56.3/39.7
D3431	1790001670	S.DIO RB706F-40T106	T	118.0/45.0
D3451	1790001241	S.DIO MA2S7280GL	B	137.1/51.9
D3521	1750001320	S.DIO KDS4148U RTK/P	T	121.4/39.7
D3522	1750001320	S.DIO KDS4148U RTK/P	T	121.4/37.8
D3523	1750001180	S.DIO KDS122 RTK/P	B	127.4/39.8
D3531	1750001320	S.DIO KDS4148U RTK/P	T	121.4/29.6
D3532	1750001320	S.DIO KDS4148U RTK/P	T	121.4/27.8
D3533	1750001180	S.DIO KDS122 RTK/P	B	131.4/27.9
D3671	1750000431	S.DIO HSB88WSTR-E	T	82.4/57.4
D3681	1790001621	S.DIO 1SV308(TPL3F)	T	69.8/55.0
D3682	1790001621	S.DIO 1SV308(TPL3F)	B	56.6/55.3
D3691	1790001621	S.DIO 1SV308(TPL3F)	T	69.8/58.4
D3692	1790001621	S.DIO 1SV308(TPL3F)	B	56.5/58.1
D3701	1790001621	S.DIO 1SV308(TPL3F)	B	53.5/58.1
D3702	1790001621	S.DIO 1SV308(TPL3F)	B	55.0/55.3
D3703	1790001621	S.DIO 1SV308(TPL3F)	B	55.0/58.1
D3801	1750001180	S.DIO KDS122 RTK/P	B	91.8/44.2
D4401	1750001180	S.DIO KDS122 RTK/P	T	162.4/19.3
D4402	1750001180	S.DIO KDS122 RTK/P	T	159.9/19.3
D4403	1750001180	S.DIO KDS122 RTK/P	T	162.4/22.2
D4404	1750001180	S.DIO KDS122 RTK/P	T	159.9/22.2
D4601	1750001180	S.DIO KDS122 RTK/P	B	165.0/69.1
D4602	1730002840	S.ZEN DZJ02400L	B	153.0/55.3
D4603	1730002840	S.ZEN DZJ02400L	B	155.5/62.5
D5401	1750001180	S.DIO KDS122 RTK/P	B	170.6/46.9
D5402	1730002840	S.ZEN DZJ02400L	B	155.5/33.9
D5403	1730002840	S.ZEN DZJ02400L	B	158.5/41.2
FI3641	2020001070	CER CFWLA455KDKFA-B0 (CFWS455D)		
X1201	6050011810	S.XTA CR-755 SMD-49 15.9744 MHz <KDS>	B	264.3/17.8
X3901	6050012980	S.XTA CR-891 TAS-2016B 24.576 MHz	T	202.1/72.9
L2001	6200013280	S.COI SLF10145T-330M1R6-PF	T	10.7/32.5
L2002	6200013280	S.COI SLF10145T-330M1R6-PF	T	22.0/28.8
L2003	6200013280	S.COI SLF10145T-330M1R6-PF	T	10.7/54.4
L3401	6200002041	S.COI NLV25T-101J	T	112.6/52.8
L3411	6200003520	S.COI ELJFB 102K-F	T	94.0/44.6
L3621	6200002041	S.COI NLV25T-101J	T	90.6/21.5
L3622	6200002041	S.COI NLV25T-101J	B	90.2/24.3
L3623	6200002041	S.COI NLV25T-101J	T	84.9/22.5
L3631	6200002041	S.COI NLV25T-101J	T	84.3/29.8
L3632	6200003520	S.COI ELJFB 102K-F	T	81.1/30.8
L3651	6200002041	S.COI NLV25T-101J	B	82.5/40.8
L3652	6150005420	COI LS-554 7QM		
L3671	6140004680	S.COI LR-528 4KBL	T	75.1/57.4
L3672	6140002810	S.COI LR-317	T	89.5/57.4
L3673	6200002041	S.COI NLV25T-101J	B	67.2/60.4
L3675	6200001981	S.COI NLV25T-1R0J	T	92.1/48.5
L3681	6200002041	S.COI NLV25T-101J	T	67.3/52.6
L3682	6200002851	S.COI NLV25T-F82J	T	64.2/51.1
L3683	6200003661	S.COI NLV25T-F86J	T	60.9/53.9
L3684	6200002041	S.COI NLV25T-101J	T	57.8/52.4

[MAIN UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
L3691	6200001981	S.COI NLV25T-1R0J	T	67.4/59.1
L3692	6200010670	S.COI C2520C-R18G-A (0.18U)	T	64.3/57.6
L3693	6200011410	S.COI C2520C-82NG-A	T	60.8/60.8
L3694	6200001981	S.COI NLV25T-1R0J	T	57.5/58.9
L3912	6200002041	S.COI NLV25T-101J	T	201.2/51.9
L4681	6200001981	S.COI NLV25T-1R0J	B	197.2/73.3
L5521	6200001981	S.COI NLV25T-1R0J	B	193.8/54.2
R1	7030010040	S.RES ERJ2GEJ-JPW	T	231.7/67.8
R2	7030010040	S.RES ERJ2GEJ-JPW	T	229.8/67.8
R3	7030010040	S.RES ERJ2GEJ-JPW	T	227.3/67.8
R4	7030010040	S.RES ERJ2GEJ-JPW	T	225.7/67.8
R5	7030010040	S.RES ERJ2GEJ-JPW	T	224.1/67.8
R6	7030010040	S.RES ERJ2GEJ-JPW	T	222.5/67.8
R7	7030010040	S.RES ERJ2GEJ-JPW	T	220.9/67.8
R9	7030010040	S.RES ERJ2GEJ-JPW	T	217.7/67.8
R10	7030010040	S.RES ERJ2GEJ-JPW	T	219.3/67.8
R11	7030010040	S.RES ERJ2GEJ-JPW	T	215.0/67.8
R12	7030010040	S.RES ERJ2GEJ-JPW	T	213.4/67.8
R21	7030010040	S.RES ERJ2GEJ-JPW	T	256.1/67.3
R22	7030010040	S.RES ERJ2GEJ-JPW	T	256.1/68.5
R23	7030010040	S.RES ERJ2GEJ-JPW	T	253.8/66.9
R24	7030010040	S.RES ERJ2GEJ-JPW	T	252.0/66.9
R25	7030010040	S.RES ERJ2GEJ-JPW	T	248.3/66.9
R26	7030010040	S.RES ERJ2GEJ-JPW	T	246.6/66.9
R27	7030010040	S.RES ERJ2GEJ-JPW	T	242.7/66.9
R28	7030010040	S.RES ERJ2GEJ-JPW	T	239.2/67.6
R31	7030004990	S.RES ERJ2GEJ 221 X (220)	T	84.3/7.5
R32	7030004990	S.RES ERJ2GEJ 221 X (220)	T	83.3/7.5
R33	7030004990	S.RES ERJ2GEJ 221 X (220)	T	82.3/7.5
R34	7030004990	S.RES ERJ2GEJ 221 X (220)	T	81.3/7.5
R37	7030004990	S.RES ERJ2GEJ 221 X (220)	T	78.3/7.5
R38	7030004990	S.RES ERJ2GEJ 221 X (220)	T	79.3/7.5
R51	7030004990	S.RES ERJ2GEJ 221 X (220)	T	197.0/42.6
R52	7030004990	S.RES ERJ2GEJ 221 X (220)	T	196.6/48.5
R53	7030005530	S.RES ERJ2GEJ 100 X (10)	T	192.8/42.6
R54	7030010040	S.RES ERJ2GEJ-JPW	T	192.5/48.5
R56	7030004990	S.RES ERJ2GEJ 221 X (220)	T	194.5/48.5
R57	7030004990	S.RES ERJ2GEJ 221 X (220)	T	193.7/42.6
R58	7030004990	S.RES ERJ2GEJ 221 X (220)	T	193.5/48.5
R59	7030004990	S.RES ERJ2GEJ 221 X (220)	T	191.9/42.6
R60	7030004990	S.RES ERJ2GEJ 221 X (220)	T	191.4/48.5
R61	7030004990	S.RES ERJ2GEJ 221 X (220)	T	191.0/42.6
R62	7030004990	S.RES ERJ2GEJ 221 X (220)	T	190.5/48.5
R63	7030004990	S.RES ERJ2GEJ 221 X (220)	T	190.0/42.6
R64	7030004990	S.RES ERJ2GEJ 221 X (220)	T	189.5/48.5
R65	7030004990	S.RES ERJ2GEJ 221 X (220)	T	189.0/42.6
R66	7030004990	S.RES ERJ2GEJ 221 X (220)	T	188.5/48.5
R67	7030004990	S.RES ERJ2GEJ 221 X (220)	T	188.0/42.6
R68	7030004990	S.RES ERJ2GEJ 221 X (220)	T	187.5/48.5
R70	7030004990	S.RES ERJ2GEJ 221 X (220)	T	186.5/48.5
R71	7030004990	S.RES ERJ2GEJ 221 X (220)	T	185.9/42.6
R72	7030004990	S.RES ERJ2GEJ 221 X (220)	T	185.5/48.5
R73	7030004990	S.RES ERJ2GEJ 221 X (220)	T	185.0/42.6
R74	7030004990	S.RES ERJ2GEJ 221 X (220)	T	184.5/48.5
R75	7030004990	S.RES ERJ2GEJ 221 X (220)	T	184.0/42.6
R76	7030004990	S.RES ERJ2GEJ 221 X (220)	T	183.5/48.5
R77	7030004990	S.RES ERJ2GEJ 221 X (220)	T	183.0/42.6
R78	7030004990	S.RES ERJ2GEJ 221 X (220)	T	182.5/48.5
R79	7030004990	S.RES ERJ2GEJ 221 X (220)	T	180.0/42.6
R80	7030004990	S.RES ERJ2GEJ 221 X (220)	T	179.5/48.5
R141	7030004990	S.RES ERJ2GEJ 221 X (220)	T	177.6/63.1
R142	7030004990	S.RES ERJ2GEJ 221 X (220)	T	177.3/57.2
R143	7030004990	S.RES ERJ2GEJ 221 X (220)	T	178.6/63.1
R144	7030010040	S.RES ERJ2GEJ-JPW	T	178.3/57.2
R145	7030004990	S.RES ERJ2GEJ 221 X (220)	T	179.6/63.1
R146	7030004990	S.RES ERJ2GEJ 221 X (220)	T	180.1/57.2
R147	7030004990	S.RES ERJ2GEJ 221 X (220)	T	180.6/63.1
R148	7030004990	S.RES ERJ2GEJ 221 X (220)	T	181.1/57.2
R149	7030004990	S.RES ERJ2GEJ 221 X (220)	T	181.6/63.1
R150	7030004990	S.RES ERJ2GEJ 221 X (220)	T	182.1/57.2
R151	7030004990	S.RES ERJ2GEJ 221 X (220)	T	182.6/63.1
R152	7030004990	S.RES ERJ2GEJ 221 X (220)	T	183.1/57.2
R153	7030004990	S.RES ERJ2GEJ 221 X (220)	T	183.6/63.1
R154	7030004990	S.RES ERJ2GEJ 221 X (220)	T	194.1/57.2
R155	7030004990	S.RES ERJ2GEJ 221 X		

[MAIN UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C5487	4550006780	S.TAN TEESVB2 0J 476M8R	B	166.9/15.1
C5488	4550006780	S.TAN TEESVB2 0J 476M8R	B	180.8/35.1
C5489	4550006780	S.TAN TEESVB2 0J 476M8R	B	180.8/38.4
C5490	4030019560	S.CER GRM21BB31C106KE15L	B	155.9/18.0
C5491	4030019560	S.CER GRM21BB31C106KE15L	B	163.6/22.8
C5492	4030020160	S.CER C1608 CH 1H 103J-T	B	175.5/29.7
C5493	4030019570	S.CER C1608 CH 1H 332J-T	B	161.7/12.6
C5494	4030019130	S.CER C2012 CH 1H 562JT-NS	B	175.8/32.9
C5495	4030018620	S.CER C1608 CH 1H 222J-T	B	161.7/13.8
C5496	4030018620	S.CER C1608 CH 1H 222J-T	B	165.7/19.3
C5497	4030018620	S.CER C1608 CH 1H 222J-T	B	173.0/26.9
C5498	4030018580	S.CER C1608 CH 1H 821J-T	B	172.5/34.2
C5499	4030018580	S.CER C1608 CH 1H 821J-T	B	172.5/31.6
C5500	4030018580	S.CER C1608 CH 1H 821J-T	B	163.0/16.7
C5501	4030018620	S.CER C1608 CH 1H 222J-T	B	172.5/29.0
C5502	4030018580	S.CER C1608 CH 1H 821J-T	B	159.1/14.7
C5503	4030017870	S.CER C1608 CH 1H 681J-T	B	163.8/21.3
C5504	4030017870	S.CER C1608 CH 1H 681J-T	B	163.0/19.3
C5505	4030019560	S.CER GRM21BB31C106KE15L	B	175.8/36.2
C5506	4030019990	S.CER C1005 JB 1C 104K-T	B	174.4/36.1
C5520	4030016930	S.CER C1005 JB 1A 104K-T	B	195.8/54.7
C6001	4030016930	S.CER C1005 JB 1A 104K-T	B	129.8/14.9
C6002	4030016930	S.CER C1005 JB 1A 104K-T	B	127.3/17.0
C6003	4030016930	S.CER C1005 JB 1A 104K-T	B	129.8/11.4
C6004	4030016930	S.CER C1005 JB 1A 104K-T	B	127.3/13.6
C6005	4030016930	S.CER C1005 JB 1A 104K-T	B	124.0/20.1
C6006	4030019460	S.CER C1608 JB 0J 106M-T	B	123.0/19.8
C6101	4030016930	S.CER C1005 JB 1A 104K-T	T	184.6/23.8
C6102	4030016930	S.CER C1005 JB 1A 104K-T	B	154.3/18.5
C6103	4030016930	S.CER C1005 JB 1A 104K-T	B	209.0/11.3
J1	6510027480	S.CON S12B-ZR-SM4A-TF(LF)(SN)	T	221.6/72.8
J2	6510027490	S.CON S11B-ZR-SM4A-TF(LF)(SN)	T	245.9/72.8
J3	6510020081	S.CON 52808-2071 (2090)	T	74.8/13.5
J5	6510022472	S.CON 40FLT-SM2-TB(LF)(SN)(M)	T	189.2/45.5
J6	6510025270	S.CON S6B-PH-SM4-TB(LF)(SN)	T	133.4/71.8
J7	6510023861	S.CON S9B-ZR-SM4A-TF(LF)(SN)	T	115.3/72.8
J8	6510022472	S.CON 40FLT-SM2-TB(LF)(SN)(M)	T	186.3/60.1
J9	6510024111	S.CON 52793-2070 (2090)	T	44.3/72.9
J10	6510027500	S.CON S11B-PH-SM4-TB(LF)(SN)	T	50.4/5.2
J11	6510024111	S.CON 52793-2070 (2090)	T	21.5/4.1
J12	6510027460	S.CON 52793-3070	T	200.3/4.1
J13	6510019371	S.CON B3B-ZR-SM4-TF(LF)(SN)	T	58.3/15.4
J1122	6510019971	S.CON 52808-1071	T	233.8/5.8
J3201	6510018450	CON TMP-S01X-B1		
J3202	6510018450	CON TMP-S01X-B1		
J3203	6510018301	S.CON S2B-ZR-SM4A-TF(LF)(SN)	T	86.8/72.8
J3204	6510023801	S.CON S4B-ZR-SM4A-TF(LF)(SN)	T	67.5/72.8
J3621	6510018450	CON TMP-S01X-B1		
J3671	6510018450	CON TMP-S01X-B1		
J3911	6510018450	CON TMP-S01X-B1		
J6001	6510025540	S.CON AXK724127G	T	121.5/13.5
J6002	6510023861	S.CON S9B-ZR-SM4A-TF(LF)(SN)	T	163.5/72.8
EP51	6910014640	S.BEA MPZ2012S221A-T	T	200.5/41.7
EP52	6910014640	S.BEA MPZ2012S221A-T	T	198.7/41.7
EP55	6910012350	S.BEA MMZ1608Y 102BT	T	187.0/42.1
EP56	6910012350	S.BEA MMZ1608Y 102BT	T	196.0/42.1
EP57	6910012350	S.BEA MMZ1608Y 102BT	T	195.5/49.0
EP58	6910012350	S.BEA MMZ1608Y 102BT	T	194.8/42.1
EP103	6910014640	S.BEA MPZ2012S221A-T	T	137.4/63.8
EP104	6910014640	S.BEA MPZ2012S221A-T	T	134.4/63.8
EP105	6910012350	S.BEA MMZ1608Y 102BT	T	130.4/63.8
EP121	6910014640	S.BEA MPZ2012S221A-T	T	121.3/66.4
EP122	6910012350	S.BEA MMZ1608Y 102BT	T	119.8/66.8
EP123	6910012350	S.BEA MMZ1608Y 102BT	T	116.8/66.8
EP124	6910012350	S.BEA MMZ1608Y 102BT	T	113.8/66.8
EP125	6910012350	S.BEA MMZ1608Y 102BT	T	110.8/66.8
EP141	6910014640	S.BEA MPZ2012S221A-T	T	185.2/64.4
EP142	6910014640	S.BEA MPZ2012S221A-T	T	188.0/63.8
EP143	6910014640	S.BEA MPZ2012S221A-T	T	187.1/56.3
EP144	6910014640	S.BEA MPZ2012S221A-T	T	188.8/56.3
EP145	6910014640	S.BEA MPZ2012S221A-T	T	190.6/56.3
EP146	6910014640	S.BEA MPZ2012S221A-T	T	192.5/56.3
EP204	6910014640	S.BEA MPZ2012S221A-T	T	40.8/66.0
EP206	6910014640	S.BEA MPZ2012S221A-T	T	38.8/66.0
EP208	6910014640	S.BEA MPZ2012S221A-T	T	35.8/66.0
EP213	6910014640	S.BEA MPZ2012S221A-T	T	43.8/13.7
EP214	6910014640	S.BEA MPZ2012S221A-T	T	45.6/13.7
EP215	6910014640	S.BEA MPZ2012S221A-T	T	47.3/13.7
EP216	6910014640	S.BEA MPZ2012S221A-T	T	49.1/13.7
EP217	6910014640	S.BEA MPZ2012S221A-T	T	50.9/13.7
EP218	6910014640	S.BEA MPZ2012S221A-T	T	52.7/13.7
EP219	6910014640	S.BEA MPZ2012S221A-T	T	56.1/12.4
EP251	6910014640	S.BEA MPZ2012S221A-T	T	186.8/10.8
EP254	6910014640	S.BEA MPZ2012S221A-T	T	188.8/10.8
EP256	6910014640	S.BEA MPZ2012S221A-T	T	190.8/10.8
EP258	6910014640	S.BEA MPZ2012S221A-T	T	192.8/10.8
EP260	6910014640	S.BEA MPZ2012S221A-T	T	194.6/10.8
EP262	6910014640	S.BEA MPZ2012S221A-T	T	196.4/10.8
EP2001	6910014640	S.BEA MPZ2012S221A-T	T	28.9/32.5
EP2002	6910014640	S.BEA MPZ2012S221A-T	T	26.9/59.1
EP3202	6910014690	S.BEA MPZ1608S221A-T	B	43.6/29.4
EP3203	6910014690	S.BEA MPZ1608S221A-T	B	44.6/37.7
EP3675	6910018460	S.BEA MMZ1005Y102C-T	T	92.2/51.0
EP4001	6910014690	S.BEA MPZ1608S221A-T	T	204.1/52.4
EP4002	6910014690	S.BEA MPZ1608S221A-T	T	202.9/49.7
EP4003	6910014730	S.BEA MPZ2012S331A-T	T	195.8/66.6
EP4004	6910017350	S.BEA MMZ1608S601A-T	T	222.8/63.9
EP4005	6910017350	S.BEA MMZ1608S601A-T	T	220.4/28.4
EP4006	6910015980	S.BEA MMZ1608S 181CT-AS	T	203.6/39.0
EP4007	6910017350	S.BEA MMZ1608S601A-T	T	219.2/28.4
EP4202	6910014690	S.BEA MPZ1608S221A-T	T	265.8/61.9

[MAIN UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
EP4461	6910014690	S.BEA MPZ1608S221A-T	T	154.1/33.1
EP4462	6910014690	S.BEA MPZ1608S221A-T	T	156.2/49.1
EP4601	6910014690	S.BEA MPZ1608S221A-T	B	188.7/72.6
EP4605	6910015980	S.BEA MMZ1608S 181CT-AS	B	193.8/73.0
EP4651	6910014690	S.BEA MPZ1608S221A-T	B	188.7/60.0
EP5001	6910014690	S.BEA MPZ1608S221A-T	B	198.8/44.6
EP5002	6910014690	S.BEA MPZ1608S221A-T	B	199.5/48.5
EP5003	6910014730	S.BEA MPZ2012S331A-T	T	194.9/68.3
EP5035	6910017350	S.BEA MMZ1608S601A-T	B	205.2/52.8
EP5201	6910014690	S.BEA MPZ1608S221A-T	B	257.5/50.2
EP5202	6910014690	S.BEA MPZ1608S221A-T	B	249.7/43.7
EP5451	6910014690	S.BEA MPZ1608S221A-T	B	188.4/51.8
EP5452	6910014690	S.BEA MPZ1608S221A-T	B	189.7/28.4
EP5453	6910014690	S.BEA MPZ1608S221A-T	B	188.7/39.3
EP5454	6910014690	S.BEA MPZ1608S221A-T	B	187.4/15.9
EP5455	6910015980	S.BEA MMZ1608S 181CT-AS	B	193.6/51.9
EP6001	6910014690	S.BEA MPZ1608S221A-T	B	121.7/19.8
EP6002	6910014690	S.BEA MPZ1608S221A-T	B	120.5/19.8
EP6003	6910018460	S.BEA MMZ1005Y102C-T	B	124.2/16.0
EP6004	6910018460	S.BEA MMZ1005Y102C-T	B	123.3/16.0
EP6005	6910018460	S.BEA MMZ1005Y102C-T	B	122.4/16.0
EP6006	6910018460	S.BEA MMZ1005Y102C-T	B	121.5/16.0
EP6007	6910018460	S.BEA MMZ1005Y102C-T	B	120.6/16.0
EP6008	6910018460	S.BEA MMZ1005Y102C-T	B	119.7/16.0
EP6009	6910018460	S.BEA MMZ1005Y102C-T	B	118.8/16.0
EP6010	6910018460	S.BEA MMZ1005Y102C-T	B	117.9/16.0
EP6011	6910018460	S.BEA MMZ1005Y102C-T	B	125.8/7.3
EP6017	6910018460	S.BEA MMZ1005Y102C-T	B	117.7/7.3
EP6018	6910018460	S.BEA MMZ1005Y102C-T	B	118.6/7.3
EP6019	6910018460	S.BEA MMZ1005Y102C-T	B	119.5/7.3
EP6020	6910018460	S.BEA MMZ1005Y102C-T	B	120.4/7.3
EP6021	6910018460	S.BEA MMZ1005Y102C-T	B	121.3/7.3
EP6022	6910018460	S.BEA MMZ1005Y102C-T	B	122.2/7.3
EP6023	6910018460	S.BEA MMZ1005Y102C-T	B	123.1/7.3
EP6024	6910018460	S.BEA MMZ1005Y102C-T	B	124.0/7.3
EP6025	6910018460	S.BEA MMZ1005Y102C-T	B	124.9/7.3
EP6030	6910014690	S.BEA MPZ1608S221A-T	T	155.6/66.9
EP6031	6910014690	S.BEA MPZ1608S221A-T	T	160.5/66.9
EP6032	6910014690	S.BEA MPZ1608S221A-T	T	163.5/66.9
EP6033	6910014690	S.BEA MPZ1608S221A-T	T	165.0/66.9
EP6034	6910014690	S.BEA MPZ1608S221A-T	T	166.5/66.9

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

S.=Surface mount

[CONNECT UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Rows include components like CD4094BPWR, M62352GP 75EC, LA4600-E, KRC402 RTK/P, etc.

[CONNECT UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Rows include components like NLV25T-101J, ERJ3GEYJ 101 V (100), ERJ3GEYJ 103 V (10K), etc.

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

[RF-B UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Lists various components like M62352GP 75EC, LM2902PWR, NJM074M-TE1-#ZZZB, etc.

[RF-B UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Lists various components like S.DIO 1SV308(TPL3F), S.DIO 1SV308(TPL3F), S.DIO 1SV308(TPL3F), etc.

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

[PA-A UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains multiple rows of component data for PA-A units.

[PA-A UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains multiple rows of component data for PA-A units.

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

[PA-A UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C1101	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	T	199.4/5.0
C1102	4030011210	S.CER GRM31M2C2H330JV01L (GRM42-6 CH)	T	199.4/2.9
C1103	4030011170	S.CER GRM31M2C2H180JV01L (GRM42-6 CH)	B	208.0/8.6
C1104	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	T	215.2/5.3
C1105	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	T	217.6/5.3
C1106	4030011120	S.CER GRM31M2C2H100JV01L (GRM42-6 CH)	T	220.0/5.3
C1107	4030011240	S.CER GRM31M2C2H470JV01L (GRM42-6 CH)	B	227.8/9.2
C1108	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	B	231.7/7.0
C1151	4030006900	S.CER C1608 JB 1H 103K-T	B	179.5/8.9
C1152	4030006900	S.CER C1608 JB 1H 103K-T	B	245.1/20.4
C1251	4030006900	S.CER C1608 JB 1H 103K-T	T	186.6/117.5
C1252	4030006900	S.CER C1608 JB 1H 103K-T	T	205.5/122.2
C1253	4030006900	S.CER C1608 JB 1H 103K-T	T	200.3/122.2
C1254	4030006900	S.CER C1608 JB 1H 103K-T	T	195.1/122.2
C1255	4030006900	S.CER C1608 JB 1H 103K-T	T	197.7/122.2
C1256	4030006900	S.CER C1608 JB 1H 103K-T	T	208.1/122.2
C1257	4030006900	S.CER C1608 JB 1H 103K-T	T	210.7/122.2
C1258	4030006900	S.CER C1608 JB 1H 103K-T	T	202.9/122.2
RL51	6330001471	REL AJS1311F-K2		
RL501	6330001721	REL ATN207-K1		
RL502	6330001721	REL ATN207-K1		
RL601	6330001721	REL ATN207-K1		
RL602	6330001721	REL ATN207-K1		
RL701	6330001721	REL ATN207-K1		
RL702	6330001721	REL ATN207-K1		
RL801	6330001721	REL ATN207-K1		
RL802	6330001721	REL ATN207-K1		
RL901	6330001721	REL ATN207-K1		
RL902	6330001721	REL ATN207-K1		
RL1001	6330001721	REL ATN207-K1		
RL1002	6330001721	REL ATN207-K1		
RL1101	6330001721	REL ATN207-K1		
RL1102	6330001721	REL ATN207-K1		
CP361	6910009670	S.CHE HK3-S-T	T	87.9/3.7
CP362	6910009670	S.CHE HK3-S-T	T	87.9/7.0
J201	6510028210	CON SJ050010 (TMP-J01X-V6)		
J351	6510018921	S.CON B8B-PH-SM4-TB(LF)(SN)	T	124.5/89.3
J401	6510020081	S.CON 52808-2071(2090)	T	6.5/31.0
J402	6510020051	S.CON B11B-PH-SM4-TB(LF)(SN)	T	7.5/67.5
J403	6510018921	S.CON B8B-PH-SM4-TB(LF)(SN)	T	7.5/99.9
J451	6510014961	S.CON B2B-ZR-SM4-TF(LF)(SN)	T	22.8/119.6
J462	6510018971	S.CON B4B-PH-SM4-TB(LF)(SN)	T	177.9/73.9
J1201	6510028210	CON SJ050010 (TMP-J01X-V6)		
F1	5220000400	HOL FHA010-01F		
F3	5210000940	FUS 1205		
W1	9062700030	WIR 77/98/040/X98/X98 [EUR]		
	9062700030	WIR 77/98/040/X98/X98 [EUR-01]		
	9062700030	WIR 77/98/040/X98/X98 [ITR]		
	9062700030	WIR 77/98/040/X98/X98 [ESP]		
	9062700030	WIR 77/98/040/X98/X98 [FRA]		
W2	9062700030	WIR 77/98/040/X98/X98 [EUR]		
	9062700030	WIR 77/98/040/X98/X98 [EUR-01]		
	9062700030	WIR 77/98/040/X98/X98 [ITR]		
	9062700030	WIR 77/98/040/X98/X98 [ESP]		
	9062700030	WIR 77/98/040/X98/X98 [FRA]		
W3	9062700030	WIR 77/98/040/X98/X98 [EUR]		
	9062700030	WIR 77/98/040/X98/X98 [EUR-01]		
	9062700030	WIR 77/98/040/X98/X98 [ITR]		
	9062700030	WIR 77/98/040/X98/X98 [ESP]		
	9062700030	WIR 77/98/040/X98/X98 [FRA]		
W4	9062700030	WIR 77/98/040/X98/X98 [EUR]		
	9062700030	WIR 77/98/040/X98/X98 [EUR-01]		
	9062700030	WIR 77/98/040/X98/X98 [ITR]		
	9062700030	WIR 77/98/040/X98/X98 [ESP]		
	9062700030	WIR 77/98/040/X98/X98 [FRA]		
EP1	6910020710	E.O OT-047 M3		
EP2	6910020710	E.O OT-047 M3		
EP3	6910020710	E.O OT-047 M3		
EP4	6910020710	E.O OT-047 M3		
EP351	6910012350	S.BEA MMZ1608Y 102BT	T	22.8/13.7
EP352	6910019200	S.BEA N2012ZPS121T50	T	60.0/44.7
EP353	6910019200	S.BEA N2012ZPS121T50	T	63.3/44.7
EP354	6910019200	S.BEA N2012ZPS121T50	T	69.7/47.8
EP401	6910014680	S.BEA MMZ1608Y 121BT	T	14.6/61.5
EP402	6910014640	S.BEA MPZ2012S221A-T	T	15.0/65.5
EP403	6910014640	S.BEA MPZ2012S221A-T	T	15.0/63.5
EP404	6910014640	S.BEA MPZ2012S221A-T	T	15.0/71.5
EP405	6910014640	S.BEA MPZ2012S221A-T	T	15.0/69.5
EP406	6910014640	S.BEA MPZ2012S221A-T	T	15.0/73.5
EP408	6910014690	S.BEA MPZ1608S221A-T	T	14.7/67.5
EP410	6910014680	S.BEA MMZ1608Y 121BT	T	11.1/31.7
EP411	6910014680	S.BEA MMZ1608Y 121BT	T	11.1/33.0
EP420	6910014640	S.BEA MPZ2012S221A-T	T	16.2/93.9
EP421	6910014640	S.BEA MPZ2012S221A-T	T	16.2/95.9
EP422	6910014640	S.BEA MPZ2012S221A-T	T	16.5/98.5

[PA-A UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
EP423	6910014640	S.BEA MPZ2012S221A-T	T	17.1/101.7
EP451	6910018930	S.BEA MPZ2012S601A	T	29.5/116.2
EP452	6910018930	S.BEA MPZ2012S601A	T	27.2/116.2
EP461	6910018930	S.BEA MPZ2012S601A	T	172.2/75.1
EP462	6910018930	S.BEA MPZ2012S601A	B	173.4/68.7

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

[PA-B UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains multiple rows of component data for the PA-B unit.

[PA-B UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains multiple rows of component data for the PA-B unit, including various electronic components and their specifications.

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

[PA-B UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
EP831	6910014730	S.BEA MPZ2012S331A-T	T	147.6/147.4
EP912	6910014730	S.BEA MPZ2012S331A-T	T	12.7/10.8
EP913	6910019900	S.BEA MPZ1608S601AT	B	27.5/19.1
EP914	6910019900	S.BEA MPZ1608S601AT	B	30.6/15.6
EP916	6910015970	S.BEA MMZ1608B 301CT-AS	T	30.0/17.5
EP918	6910015970	S.BEA MMZ1608B 301CT-AS	T	31.8/16.2
EP921	6910020710	E.O OT-047 M3		
EP922	6910020710	E.O OT-047 M3		
EP923	6910014730	S.BEA MPZ2012S331A-T	T	24.4/15.3

[CTRL UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
IC31	1110000960	S.IC NJM4558M-TE1-#FMZB	B	14.0/51.3
IC41	1110003800	S.IC NJM2904V-TE1-#FMZB	T	12.9/40.0
IC111	1120002301	S.IC TC74AC04F(F) S	T	29.3/50.7
IC121	1120002252	S.IC TC74ACT32F(F)	T	30.0/48.0
IC131	1120002242	S.IC TC74AC112F(F)	T	31.8/39.4
IC171	1110000960	S.IC NJM4558M-TE1-#FMZB	B	44.2/42.8
IC431	1110002690	S.IC NJM2903M-TE1-#FMZB	B	67.3/141.3
IC701	1140015072	S.IC R5F212A7SNFP(SX-3073B-2)	T	66.0/39.0
IC702	1130011570	S.IC BR24L32FV-WE2	T	55.9/28.4
IC801	1180001072	S.IC TA7805F(TE16L1NQ)	T	38.5/26.8
IC811	1110005920	S.IC S-80851CNMC-B9CT2G	T	44.2/17.8
IC841	1130012620	S.IC SN74AHC1G86DCKR	T	58.7/18.1
Q151	1560000871	S.FET 2SK515-T1B-A (X33)	B	43.8/52.4
Q153	1590003770	S.TRA KRA302E-RTK/P	T	50.1/40.7
Q203	1590003680	S.TRA KRC402 RTK/P	B	45.2/78.5
Q281	1520000561	S.TRA 2SB1123 T-TD-E	B	63.7/61.5
Q282	1540000441	S.TRA 2SD1619T-TD-E	B	68.3/87.2
Q283	1590003680	S.TRA KRC402 RTK/P	B	67.6/55.9
Q303	1590003680	S.TRA KRC402 RTK/P	B	77.3/105.7
Q353	1590003680	S.TRA KRC402 RTK/P	B	67.9/118.6
Q503	1590003680	S.TRA KRC402 RTK/P	T	62.8/145.6
Q603	1530003900	S.TRA KTC4075 BL-RTK/P	T	76.6/113.9
Q604	1590003680	S.TRA KRC402 RTK/P	B	76.9/112.1
Q621	1590003770	S.TRA KRA302E-RTK/P	T	76.7/111.1
Q651	1530003960	S.TRA KTC2875-B-RTK/P	B	77.1/115.8
Q810	1590003680	S.TRA KRC402 RTK/P	T	49.7/4.6
Q811	1590003680	S.TRA KRC402 RTK/P	T	79.4/16.3
Q820	1590003680	S.TRA KRC402 RTK/P	T	78.5/13.7
Q821	1590003770	S.TRA KRA302E-RTK/P	T	74.6/19.7
Q822	1590003680	S.TRA KRC402 RTK/P	T	75.0/17.4
Q831	1590003680	S.TRA KRC402 RTK/P	B	54.3/18.0
Q832	1590003680	S.TRA KRC402 RTK/P	B	50.0/20.0
Q851	1590003680	S.TRA KRC402 RTK/P	B	57.7/23.2
Q861	1590003680	S.TRA KRC402 RTK/P	B	64.6/19.4
Q1001	1590003680	S.TRA KRC402 RTK/P	B	17.4/10.2
Q1002	1590003680	S.TRA KRC402 RTK/P	B	19.1/13.4
Q1003	1590003680	S.TRA KRC402 RTK/P	B	21.4/9.9
Q1004	1590003680	S.TRA KRC402 RTK/P	B	23.1/13.1
Q1005	1590003680	S.TRA KRC402 RTK/P	B	24.8/9.9
Q1006	1590003680	S.TRA KRC402 RTK/P	B	26.5/13.4
Q1007	1590003680	S.TRA KRC402 RTK/P	B	28.5/10.2
Q1008	1590003680	S.TRA KRC402 RTK/P	B	30.5/13.4
D11	1790000491	S.DIO HSM88ASTR-E	T	8.7/54.7
D12	1790000491	S.DIO HSM88ASTR-E	T	19.2/54.7
D31	1750000201	S.DIO 1SS319(TE85RF)	T	13.9/45.1
D101	1790000491	S.DIO HSM88ASTR-E	B	24.9/54.7
D102	1790000491	S.DIO HSM88ASTR-E	B	32.3/55.3
D131	1790000491	S.DIO HSM88ASTR-E	B	30.3/36.4
D132	1790000491	S.DIO HSM88ASTR-E	B	36.0/39.5
D151	1790000491	S.DIO HSM88ASTR-E	B	50.1/57.7
D152	1790000491	S.DIO HSM88ASTR-E	B	39.1/57.7
D171	1750000201	S.DIO 1SS319(TE85RF)	T	41.2/46.9
D201	1750001320	S.DIO KDS4148U RTK/P	T	44.5/79.5
D251	1710000140	DIO U05G		
D301	1750001320	S.DIO KDS4148U RTK/P	B	68.3/102.9
D351	1750001320	S.DIO KDS4148U RTK/P	B	68.9/112.0
D401	1790000491	S.DIO HSM88ASTR-E	B	65.7/132.4
D402	1790000491	S.DIO HSM88ASTR-E	B	68.1/128.3
D501	1750001320	S.DIO KDS4148U RTK/P	B	66.3/146.8
D601	1750001320	S.DIO KDS4148U RTK/P	B	74.4/113.9
D602	1790000981	S.DIO MA3J7420GL	T	78.0/118.1
D621	1750001320	S.DIO KDS4148U RTK/P	T	74.8/136.8
D651	1750000851	S.DIO MMBV3700LT1G	B	77.5/119.3
D652	1750000851	S.DIO MMBV3700LT1G	B	77.8/122.9
D802	1750001320	S.DIO KDS4148U RTK/P	T	38.3/16.9
D1001	1750000201	S.DIO 1SS319(TE85RF)	T	29.8/18.6
D1002	1750000201	S.DIO 1SS319(TE85RF)	T	26.3/18.6
D1003	1750000201	S.DIO 1SS319(TE85RF)	T	21.8/18.6
D1004	1750000201	S.DIO 1SS319(TE85RF)	T	18.3/18.6
X701	6050009520	S.XTA CR-520 SMD-49 19.6608 MHz <KDS>	T	65.9/26.8
L11	6140003270	COI LR-364 (TR10X5X5 3A6)		
L101	6140003270	COI LR-364 (TR10X5X5 3A6)		
L102	6200005011	S.COI NLV25T-100J	B	18.75/44.3
L151	6140003270	COI LR-364 (TR10X5X5 3A6)		
L152	6180003300	COI T6-222J (2.2M)		
L171	6200005011	S.COI NLV25T-100J	B	40.0/32.6
L172	6200002041	S.COI NLV25T-101J	B	10.1/45.7
L252	6140004740	COI LR-533		
L254	6140004740	COI LR-533		
L401	6140003270	COI LR-364 (TR10X5X5 3A6)		
L402	6180003300	COI T6-222J (2.2M)		
L431	6200002041	S.COI NLV25T-101J	T	27.6/49.6
L621	6110001640	COI LA-247		
L622	6110004020	COI LA-624		
L623	6110001630	COI LA-246		
L701	6200009300	S.COI ELJPA 100KF 10U	B	53.4/33.4
L702	6200002041	S.COI NLV25T-101J	B	52.6/30.7
L841	6200002041	S.COI NLV25T-101J	T	54.7/20.6
L1001	6200005131	S.COI NLC453232T-101K-PF	T	34.5/17.9
L1201	6200005011	S.COI NLV25T-100J	T	75.6/12.7
R11	7030010910	S.RES ERJ1TYJ 150U (15)	T	12.0/51.8
R12	7030010910	S.RES ERJ1TYJ 150U (15)	T	15.8/51.8
R13	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	8.0/51.8
R14	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	19.1/52.3

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

[CTRL UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C256	4030018790	S.CER C3225 JB 2E 104K-T	B	58.2/94.3
C257	4030006860	S.CER C1608 JB 1H 102K-T	B	69.7/68.7
C258	4030006860	S.CER C1608 JB 1H 102K-T	B	66.7/92.8
C259	4030011600	S.CER C1608 JB 1E 104K-T	B	69.7/67.1
C260	4030006880	S.CER C1608 JB 1H 472K-T	B	65.1/92.8
C261	4030011600	S.CER C1608 JB 1E 104K-T	B	68.3/92.8
C281	4030018960	S.CER C3216 JB 1C 106MT-N	B	61.5/66.1
C282	4030018960	S.CER C3216 JB 1C 106MT-N	B	64.6/81.2
C301	4030006900	S.CER C1608 JB 1H 103K-T	B	69.9/102.7
C302	4030011070	S.CER GRM31M2C2H5R0CY21L (GRM42-6 CH)	B	50.6/103.8
C304	4030006900	S.CER C1608 JB 1H 103K-T	B	67.5/105.8
C351	4030006900	S.CER C1608 JB 1H 103K-T	B	69.3/113.6
C352	4030006900	S.CER C1608 JB 1H 103K-T	B	68.0/121.0
C401	4030006860	S.CER C1608 JB 1H 102K-T	T	14.7/26.5
C403	4030011020	S.CER GRM31M4C2H1R0CY21L (GRM42-6 CK)	T	47.7/67.6
C404	4030007040	S.CER C1608 CH 1H 180J-T	T	14.7/27.8
C405	4030007030	S.CER C1608 CH 1H 150J-T	T	14.7/29.1
C406	4030007030	S.CER C1608 CH 1H 150J-T	T	14.7/30.4
C407	4030017810	S.CER C1608 CH 1H 102J-T	B	12.7/58.3
C408	4030007130	S.CER C1608 CH 1H 101J-T	B	13.4/59.9
C431	4030006860	S.CER C1608 JB 1H 102K-T	T	68.7/137.7
C432	4030006860	S.CER C1608 JB 1H 102K-T	T	64.7/144.4
C433	4030011600	S.CER C1608 JB 1E 104K-T	B	63.6/143.6
C501	4030006900	S.CER C1608 JB 1H 103K-T	T	70.9/150.6
C502	4030006900	S.CER C1608 JB 1H 103K-T	T	66.3/146.3
C601	4030006900	S.CER C1608 JB 1H 103K-T	B	198.0/86.4
C604	4030009520	S.CER C1608 CH 1H 020B-T	T	75.95/122.3
C605	4030007050	S.CER C1608 CH 1H 220J-T	T	77.8/120.0
C606	4030010760	S.CER C1608 CH 1H 331J-T	T	76.0/119.3
C608	4030006860	S.CER C1608 JB 1H 102K-T	B	74.7/110.4
C620	4030006900	S.CER C1608 JB 1H 103K-T	T	75.1/135.2
C621	4030007060	S.CER C1608 CH 1H 270J-T	B	81.8/140.5
C622	4030007010	S.CER C1608 CH 1H 100D-T	B	78.6/141.2
C623	4030007080	S.CER C1608 CH 1H 390J-T	B	79.7/138.7
C624	4030007090	S.CER C1608 CH 1H 470J-T	B	81.9/134.9
C625	4030007080	S.CER C1608 CH 1H 390J-T	B	79.8/129.0
C626	4030007080	S.CER C1608 CH 1H 390J-T	B	81.9/128.3
C651	4030011340	S.CER C1608 CH 1H 471J-T	T	80.0/109.5
C654	4030011600	S.CER C1608 JB 1E 104K-T	B	83.5/126.8
C701	4030006900	S.CER C1608 JB 1H 103K-T	T	55.2/43.5
C702	4030006900	S.CER C1608 JB 1H 103K-T	T	55.2/42.3
C703	4030006900	S.CER C1608 JB 1H 103K-T	T	55.2/41.1
C704	4030006900	S.CER C1608 JB 1H 103K-T	T	57.9/40.7
C705	4030011600	S.CER C1608 JB 1E 104K-T	T	57.8/35.8
C706	4030011600	S.CER C1608 JB 1E 104K-T	T	58.4/26.7
C707	4030007020	S.CER C1608 CH 1H 120J-T	T	67.5/30.1
C708	4030007020	S.CER C1608 CH 1H 120J-T	T	63.9/30.1
C710	4030011600	S.CER C1608 JB 1E 104K-T	T	70.3/30.1
C712	4030011600	S.CER C1608 JB 1E 104K-T	B	70.2/108.4
C713	4030011600	S.CER C1608 JB 1E 104K-T	B	66.0/31.7
C801	4510009880	S.ELE EEEHBC471UAP	T	47.6/25.9
C802	4030011600	S.CER C1608 JB 1E 104K-T	T	42.5/24.3
C803	4510009920	S.ELE 16 CE 100 LH	T	30.3/27.2
C804	4030011600	S.CER C1608 JB 1E 104K-T	T	34.5/24.3
C811	4030006900	S.CER C1608 JB 1H 103K-T	T	45.1/15.5
C821	4030006900	S.CER C1608 JB 1H 103K-T	T	76.3/19.9
C841	4030011600	S.CER C1608 JB 1E 104K-T	T	56.8/18.3
C851	4030006900	S.CER C1608 JB 1H 103K-T	B	57.8/25.7
C901	4030006900	S.CER C1608 JB 1H 103K-T	T	64.3/18.8
C907	4030011340	S.CER C1608 CH 1H 471J-T	T	56.4/1.7
C912	4030006900	S.CER C1608 JB 1H 103K-T	T	49.3/18.8
C913	4030006900	S.CER C1608 JB 1H 103K-T	T	42.5/13.0
C914	4510009880	S.ELE EEEHBC471UAP	T	38.3/8.4
C1001	4030019180	S.CER TMK212BJ105KG-T	T	17.2/2.0
C1002	4030019180	S.CER TMK212BJ105KG-T	T	19.0/2.0
C1003	4030019180	S.CER TMK212BJ105KG-T	T	20.7/2.0
C1004	4030019180	S.CER TMK212BJ105KG-T	T	22.5/2.0
C1005	4030019180	S.CER TMK212BJ105KG-T	T	24.2/2.0
C1006	4030019180	S.CER TMK212BJ105KG-T	T	26.0/2.0
C1007	4030019180	S.CER TMK212BJ105KG-T	T	27.7/2.0
C1008	4030019180	S.CER TMK212BJ105KG-T	T	29.5/2.0
C1101	4030006900	S.CER C1608 JB 1H 103K-T	T	78.3/19.6
C1102	4030006900	S.CER C1608 JB 1H 103K-T	B	79.8/20.3
C1103	4030006900	S.CER C1608 JB 1H 103K-T	B	79.1/21.9
C1104	4030006900	S.CER C1608 JB 1H 103K-T	T	79.7/21.0
C1105	4030006900	S.CER C1608 JB 1H 103K-T	T	79.7/22.2
C1106	4030006900	S.CER C1608 JB 1H 103K-T	T	79.7/23.4
C1107	4030006900	S.CER C1608 JB 1H 103K-T	T	79.7/24.6
C1108	4030006900	S.CER C1608 JB 1H 103K-T	T	79.5/34.2
C1109	4030006900	S.CER C1608 JB 1H 103K-T	T	79.5/33.0
C1110	4030006900	S.CER C1608 JB 1H 103K-T	T	79.5/31.8
C1111	4030006900	S.CER C1608 JB 1H 103K-T	T	79.5/30.6
C1112	4030006900	S.CER C1608 JB 1H 103K-T	T	79.5/29.4
C1113	4030006900	S.CER C1608 JB 1H 103K-T	T	79.5/28.2
C1114	4030006900	S.CER C1608 JB 1H 103K-T	T	79.5/27.0
C1115	4030006900	S.CER C1608 JB 1H 103K-T	T	79.5/25.8
RL201	6330001770	REL SIP-1A-12Y		
RL301	6330001900	REL G6C-2114P-US DC12V		
RL351	6330001900	REL G6C-2114P-US DC12V		
RL501	6330001910	REL G6S-2 DC12V		
RL601	6330001770	REL SIP-1A-12Y		
RL621	6330001860	REL UA2-12NU		
CP31	6910009670	S.CHE HK3-S-T	T	9.3/30.7
J1	6510028210	CON SJ050010 (TMP-J01X-V6)		
J301	6510028210	CON SJ050010 (TMP-J01X-V6)		
J351	6510028210	CON SJ050010 (TMP-J01X-V6)		
J901	6510020081	S.CON 52808-2071(2090)	T	54.8/10.2

[CTRL UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
J1001	6510022031	S.CON B10B-ZR-SM4-TF(LF)(SN)	T	22.6/5.7
J1101	6510021722	S.CON 30FLT-SM2-TB(LF)(SN)(M)	T	86.6/25.7
J1201	6510018971	S.CON B4B-PH-SM4-TB(LF)(SN)	T	73.5/5.7
J2101	6510028210	CON SJ050010 (TMP-J01X-V6)		
W2001	7030012280	JUM RD25T0R0		
W2002	7030012280	JUM RD25T0R0		
EP281	6910014690	S.BEA MPZ1608S221A-T	B	60.4/56.4
EP282	6910014690	S.BEA MPZ1608S221A-T	B	68.9/80.8
EP701	6910014690	S.BEA MPZ1608S221A-T	T	70.0/31.5
EP901	6910014690	S.BEA MPZ1608S221A-T	T	42.5/14.3
EP902	6910014690	S.BEA MPZ1608S221A-T	T	52.8/4.8
EP903	6910014690	S.BEA MPZ1608S221A-T	T	55.2/4.8
EP904	6910014690	S.BEA MPZ1608S221A-T	T	51.6/4.8
EP905	6910014690	S.BEA MPZ1608S221A-T	T	56.4/4.8
EP906	6910014690	S.BEA MPZ1608S221A-T	T	58.8/4.8
EP907	6910014690	S.BEA MPZ1608S221A-T	T	49.0/15.9
EP1101	6910014690	S.BEA MPZ1608S221A-T	T	86.7/35.1
EP1102	6910014690	S.BEA MPZ1608S221A-T	T	88.0/39.0

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

[NETWORK UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
Q15	1590003680	S.TRA KRC402 RTK/P	T	139.5/62.0
Q25	1590003680	S.TRA KRC402 RTK/P	T	148.2/73.1
Q35	1590003680	S.TRA KRC402 RTK/P	T	144.3/67.4
Q45	1590003680	S.TRA KRC402 RTK/P	T	147.2/67.9
Q55	1590003680	S.TRA KRC402 RTK/P	T	122.1/61.6
Q65	1590003680	S.TRA KRC402 RTK/P	T	126.6/61.6
Q75	1590003680	S.TRA KRC402 RTK/P	T	131.1/61.6
Q85	1590003680	S.TRA KRC402 RTK/P	T	135.6/61.7
Q105	1590003680	S.TRA KRC402 RTK/P	T	113.9/64.7
Q115	1590003680	S.TRA KRC402 RTK/P	T	108.4/64.7
Q125	1590003680	S.TRA KRC402 RTK/P	T	102.9/64.7
Q135	1590003680	S.TRA KRC402 RTK/P	T	97.4/64.7
Q145	1590003680	S.TRA KRC402 RTK/P	T	91.9/64.7
Q155	1590003680	S.TRA KRC402 RTK/P	T	69.5/65.1
Q165	1590003680	S.TRA KRC402 RTK/P	T	58.6/64.8
Q175	1590003680	S.TRA KRC402 RTK/P	T	46.7/69.6
D15	1750001180	S.DIO KDS122 RTK/P	T	138.4/59.5
D25	1750001180	S.DIO KDS122 RTK/P	T	147.5/70.6
D35	1750001180	S.DIO KDS122 RTK/P	T	142.6/65.0
D45	1750001180	S.DIO KDS122 RTK/P	T	146.1/65.0
D55	1750001180	S.DIO KDS122 RTK/P	T	120.3/59.1
D65	1750001180	S.DIO KDS122 RTK/P	T	124.8/59.1
D75	1750001180	S.DIO KDS122 RTK/P	T	129.3/59.1
D85	1750001180	S.DIO KDS122 RTK/P	T	133.8/59.1
D105	1750001180	S.DIO KDS122 RTK/P	T	113.9/60.9
D115	1750001180	S.DIO KDS122 RTK/P	T	108.4/60.9
D125	1750001180	S.DIO KDS122 RTK/P	T	102.9/60.9
D135	1750001180	S.DIO KDS122 RTK/P	T	97.4/60.9
D145	1750001180	S.DIO KDS122 RTK/P	T	91.9/60.9
D155	1750001180	S.DIO KDS122 RTK/P	T	69.5/61.1
D165	1750001180	S.DIO KDS122 RTK/P	T	58.6/60.8
D175	1750001180	S.DIO KDS122 RTK/P	T	46.6/65.8
L55	6180003291	COI BM27-400-6A-LF		
L56	6180003291	COI BM27-400-6A-LF		
L65	6180003291	COI BM27-400-6A-LF		
L66	6180003291	COI BM27-400-6A-LF		
L75	6180003291	COI BM27-400-6A-LF		
L76	6180003291	COI BM27-400-6A-LF		
L85	6180003291	COI BM27-400-6A-LF		
L86	6180003291	COI BM27-400-6A-LF		
L101	6110003600	COI LA-555		
L111	6110003590	COI LA-554		
L121	6110003020	COI LA-489		
L131	6110003030	COI LA-490		
L141	6110003020	COI LA-489		
L151	6110003030	COI LA-490		
L161	6140004520	COI LR-511		
L171	6140004510	COI LR-510		
L181	6140002700	COI LR-307 (T130-2)		
L182	6140002700	COI LR-307 (T130-2)		
R201	7410000810	S.RES EXB-V8V JPW	T	139.3/81.2
R202	7410000810	S.RES EXB-V8V JPW	T	143.3/81.2
R211	7410000810	S.RES EXB-V8V JPW	T	147.3/81.2
R212	7410000810	S.RES EXB-V8V JPW	T	151.3/81.2
C1	4620000160	VAR KV-150-05 150P		
C11	4010008551	CER DEA1X3F390JC3B-Z		
C15	4030006900	S.CER C1608 JB 1H 103K-T	T	173.2/80.4
C16	4030006900	S.CER C1608 JB 1H 103K-T	T	139.7/63.9
C21	4010004820	CER DEC1X3J121JC4B (DE1410SL121J)		
C22	4010008690	CER DEA1X3F101JA3B		
C25	4030006900	S.CER C1608 JB 1H 103K-T	T	155.8/77.6
C26	4030006900	S.CER C1608 JB 1H 103K-T	T	149.8/71.3
C31	4010004830	CER DEC1X3J151JC4B (DE1510SL151J)		
C35	4030006900	S.CER C1608 JB 1H 103K-T	T	161.2/80.4
C36	4030006900	S.CER C1608 JB 1H 103K-T	T	144.6/69.3
C41	4010004800	CER DEC1X3J820JC4B (DE1210SL820J)		
C45	4030006900	S.CER C1608 JB 1H 103K-T	T	165.3/80.4
C46	4030006900	S.CER C1608 JB 1H 103K-T	T	150.7/68.0
C51	4010004790	CER DEC1X3J680JC4B (DE1210SL680J)		
C52	4010004790	CER DEC1X3J680JC4B (DE1210SL680J)		
C53	4010004790	CER DEC1X3J680JC4B (DE1210SL680J)		
C55	4030006900	S.CER C1608 JB 1H 103K-T	T	143.7/7.5
C56	4030006900	S.CER C1608 JB 1H 103K-T	T	120.2/57.2
C61	4010008560	CER DEA1X3F151JA3B (DE1107SL151J)		
C65	4030006900	S.CER C1608 JB 1H 103K-T	T	144.6/18.7
C66	4030006900	S.CER C1608 JB 1H 103K-T	T	124.7/57.2
C71	4010005130	CER DEC1X3J470JC4B (DE0910SL470J)		
C72	4010004780	CER DEC1X3J560JC4B (DE1010SL560J)		
C75	4030006900	S.CER C1608 JB 1H 103K-T	T	149.7/7.5
C76	4030006900	S.CER C1608 JB 1H 103K-T	T	129.2/57.2
C81	4010008551	CER DEA1X3F390JC3B-Z		
C85	4030006900	S.CER C1608 JB 1H 103K-T	T	133.7/57.2
C86	4030006900	S.CER C1608 JB 1H 103K-T	T	161.2/7.5
C91	4620000160	VAR KV-150-05 150P		
C105	4030006900	S.CER C1608 JB 1H 103K-T	T	111.9/61.0
C106	4030006900	S.CER C1608 JB 1H 103K-T	T	114.0/62.8
C115	4030006900	S.CER C1608 JB 1H 103K-T	T	106.4/61.0
C116	4030006900	S.CER C1608 JB 1H 103K-T	T	108.5/62.8

[NETWORK UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C125	4030006900	S.CER C1608 JB 1H 103K-T	T	100.9/61.0
C126	4030006900	S.CER C1608 JB 1H 103K-T	T	103.0/62.8
C135	4030006900	S.CER C1608 JB 1H 103K-T	T	95.4/61.0
C136	4030006900	S.CER C1608 JB 1H 103K-T	T	97.5/62.8
C145	4030006900	S.CER C1608 JB 1H 103K-T	T	89.9/61.0
C146	4030006900	S.CER C1608 JB 1H 103K-T	T	92.0/62.8
C155	4030006900	S.CER C1608 JB 1H 103K-T	T	68.4/59.1
C156	4030006900	S.CER C1608 JB 1H 103K-T	T	69.7/63.1
C165	4030006900	S.CER C1608 JB 1H 103K-T	T	57.5/58.8
C166	4030006900	S.CER C1608 JB 1H 103K-T	T	58.8/62.8
C175	4030006900	S.CER C1608 JB 1H 103K-T	T	45.0/63.9
C176	4030006900	S.CER C1608 JB 1H 103K-T	T	46.6/67.7
C201	4030006900	S.CER C1608 JB 1H 103K-T	T	117.7/54.8
C202	4030006900	S.CER C1608 JB 1H 103K-T	T	137.1/77.2
C203	4030006900	S.CER C1608 JB 1H 103K-T	T	138.3/77.2
C204	4030006900	S.CER C1608 JB 1H 103K-T	T	139.5/77.2
C205	4030006900	S.CER C1608 JB 1H 103K-T	T	140.7/77.1
C206	4030006900	S.CER C1608 JB 1H 103K-T	T	141.9/76.7
C207	4030006900	S.CER C1608 JB 1H 103K-T	T	143.1/76.9
C208	4030006900	S.CER C1608 JB 1H 103K-T	T	144.3/77.2
C209	4030006900	S.CER C1608 JB 1H 103K-T	T	145.5/77.2
C211	4030006900	S.CER C1608 JB 1H 103K-T	T	119.2/56.0
C212	4030006900	S.CER C1608 JB 1H 103K-T	T	146.7/76.9
C213	4030006900	S.CER C1608 JB 1H 103K-T	T	148.0/77.0
C214	4030006900	S.CER C1608 JB 1H 103K-T	T	149.2/77.0
C215	4030006900	S.CER C1608 JB 1H 103K-T	T	150.4/77.2
C216	4030006900	S.CER C1608 JB 1H 103K-T	T	152.3/77.6
C217	4030006900	S.CER C1608 JB 1H 103K-T	T	154.2/78.9
C218	4030006900	S.CER C1608 JB 1H 103K-T	T	154.2/80.1
RL15	6330001610	REL NY-12W-K-IE		
RL25	6330001610	REL NY-12W-K-IE		
RL35	6330001610	REL NY-12W-K-IE		
RL45	6330001610	REL NY-12W-K-IE		
RL55	6330001610	REL NY-12W-K-IE		
RL65	6330001610	REL NY-12W-K-IE		
RL75	6330001610	REL NY-12W-K-IE		
RL85	6330001610	REL NY-12W-K-IE		
RL105	6330001610	REL NY-12W-K-IE		
RL115	6330001610	REL NY-12W-K-IE		
RL125	6330001610	REL NY-12W-K-IE		
RL135	6330001610	REL NY-12W-K-IE		
RL145	6330001610	REL NY-12W-K-IE		
RL155	6330001610	REL NY-12W-K-IE		
RL165	6330001610	REL NY-12W-K-IE		
RL175	6330001610	REL NY-12W-K-IE		
J1	6510028210	CON SJ050010 (TMP-J01X-V6)		
J91	6510028210	CON SJ050010 (TMP-J01X-V6)		
J201	6510021722	S.CON 30FLT-SM2-TB(LF)(SN)(M)	T	144.5/85.0
MF1	2710000800	MOT MP24ZA		
MF2	2710000800	MOT MP24ZA		
EP201	6910014730	S.BEA MPZ2012S331A-T	T	116.9/57.6
EP211	6910014730	S.BEA MPZ2012S331A-T	T	118.1/60.9

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

[FRONT UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
EP1	0880002780	UNI EX-3210 #01		
EP2	6910015650	E.O S-G2218-3#01 (MOUNT PLATE)		
EP3	6910015650	E.O S-G2218-3#01 (MOUNT PLATE)		

[DISPLAY UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
IC1	1180001541	S.IC TA78L08F(TE12LF)	T	75.4/97.6
IC111	1130012620	S.IC SN74AHCT1G86DCKR	T	238.8/90.8
IC151	1110000960	S.IC NJM4558M-TE1-#FMZB	T	130.1/77.4
IC152	1110000960	S.IC NJM4558M-TE1-#FMZB	T	130.1/84.2
IC271	1130013470	S.IC CD4071BNSR	T	48.6/19.4
IC351	1130011880	S.IC CD4051BPWR	T	49.4/93.5
IC371	1130011880	S.IC CD4051BPWR	T	49.4/100.0
IC401	1140015710	S.IC M30622F8PGP(SX-3183C-1)	T	58.4/71.4
IC501	1130009121	S.IC S1D15206F00A200	T	175.9/72.2
IC521	1130014400	S.IC T6B66BFG(C)	T	98.3/64.1
IC541	1130014390	S.IC T6B65AFG(C)	T	207.2/57.5
IC561	1130014390	S.IC T6B65AFG(C)	T	141.0/57.5
Q111	1530003900	S.TRA KTC4075 BL-RTK/P	T	235.8/84.7
Q112	1520000651	S.TRA 2SB1201S-TL-E	T	229.5/88.9
Q113	1530003301	S.TRA 2SC3647S-TD-E	T	238.6/71.7
Q114	1530003301	S.TRA 2SC3647S-TD-E	T	227.5/69.2
Q251	1590003680	S.TRA KRC402 RTK/P	T	274.7/16.6
Q252	1590003680	S.TRA KRC402 RTK/P	T	274.7/19.1
Q253	1590003680	S.TRA KRC402 RTK/P	T	274.7/21.6
Q254	1590003680	S.TRA KRC402 RTK/P	T	274.7/24.1
Q501	1540000441	S.TRA 2SD1619T-TD-E	T	251.4/7.1
Q502	1530003900	S.TRA KTC4075 BL-RTK/P	T	114.2/38.8
Q503	1590003770	S.TRA KRA302E-RTK/P	T	118.1/39.6
D111	1730002261	S.ZEN MAZ8030GHL	T	238.1/84.8
D201	1750001710	S.DIO RB751V-40 TE-17	T	245.4/27.0
D202	1750001180	S.DIO KDS122 RTK/P	T	247.4/80.7
D203	1750001180	S.DIO KDS122 RTK/P	T	247.4/83.2
D204	1750001710	S.DIO RB751V-40 TE-17	T	74.6/79.0
D501	1750001320	S.DIO KDS4148U RTK/P	T	114.6/34.0
X401	6050011810	S.XTA CR-755 SMD-49 15.9744 MHz <KDS>	T	57.9/55.6
L21	6200002041	S.COI NLV25T-101J	T	258.8/8.6
L22	6200002041	S.COI NLV25T-101J	T	246.8/23.5
L23	6200002041	S.COI NLV25T-101J	T	261.3/8.6
L24	6200009300	S.COI ELJPA 100KF 10U	T	244.1/23.5
L25	6200002041	S.COI NLV25T-101J	T	241.3/23.5
L31	6200002041	S.COI NLV25T-101J	T	266.8/73.5
L32	6200002041	S.COI NLV25T-101J	T	266.8/76.0
L111	6200008631	S.COI CD54NP-101KCI	T	217.4/82.2
L112	6190001191	S.COI D10F-#A814AY-101K	T	228.7/78.7
R3	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	99.0/97.9
R4	7030003440	S.RES ERJ3GEYJ 102 V (1K)	T	100.3/97.9
R5	7030003440	S.RES ERJ3GEYJ 102 V (1K)	T	101.6/97.9
R6	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	102.9/97.9
R7	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	96.0/97.9
R8	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	97.3/97.9
R21	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	257.1/69.8
R22	7030003480	S.RES ERJ3GEYJ 222 V (2.2K)	T	256.1/67.4
R31	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	267.2/71.6
R32	7030003860	S.RES ERJ3GE JPW V	T	272.4/78.9
R51	7030003520	S.RES ERJ3GEYJ 472 V (4.7K)	T	114.3/32.5
R52	7030003620	S.RES ERJ3GEYJ 333 V (33K)	T	114.3/35.6
R53	7030003580	S.RES ERJ3GEYJ 153 V (15K)	T	112.0/38.7
R54	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	256.1/7.7
R55	7030003340	S.RES ERJ3GEYJ 151 V (150)	T	255.6/5.6
R56	7030003520	S.RES ERJ3GEYJ 472 V (4.7K)	T	116.4/39.5
R112	7030010960	S.RES ERJ1TYJ 120U (12)	T	212.4/82.2
R113	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	237.3/87.0
R115	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	240.4/85.5
R116	7030003500	S.RES ERJ3GEYJ 332 V (3.3K)	T	239.0/67.3
R117	7030003500	S.RES ERJ3GEYJ 332 V (3.3K)	T	239.0/68.5
R118	7030003640	S.RES ERJ3GEYJ 473 V (47K)	T	241.3/91.7
R146	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	135.1/78.9
R147	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	128.3/73.2
R148	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	135.1/87.2
R149	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	124.4/81.6
R150	7030003630	S.RES ERJ3GEYJ 393 V (39K)	T	130.9/70.3
R151	7030003580	S.RES ERJ3GEYJ 153 V (15K)	T	132.2/73.2
R154	7030003720	S.RES ERJ3GEYJ 224 V (220K)	T	125.9/74.0
R155	7030003720	S.RES ERJ3GEYJ 224 V (220K)	T	133.5/73.2
R156	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	123.1/84.7
R157	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	137.0/83.0
R158	7030003570	S.RES ERJ3GEYJ 123 V (12K)	T	123.0/78.9
R159	7030003640	S.RES ERJ3GEYJ 473 V (47K)	T	137.3/72.7
R162	7030003820	S.RES ERJ3GEYJ 155 V (1.5M)	T	124.4/83.3
R163	7030003820	S.RES ERJ3GEYJ 155 V (1.5M)	T	135.1/82.0
R164	7030003840	S.RES ERJ3GEYJ 225 V (2.2M)	T	129.6/73.2
R165	7030003790	S.RES ERJ3GEYJ 824 V (820K)	T	125.2/76.0
R166	7030003840	S.RES ERJ3GEYJ 225 V (2.2M)	T	130.9/73.2
R167	7030003790	S.RES ERJ3GEYJ 824 V (820K)	T	135.1/73.5
R168	7030003820	S.RES ERJ3GEYJ 155 V (1.5M)	T	125.2/78.8
R169	7030003820	S.RES ERJ3GEYJ 155 V (1.5M)	T	135.1/76.3
R170	7030003790	S.RES ERJ3GEYJ 824 V (820K)	T	125.2/85.1
R171	7030003790	S.RES ERJ3GEYJ 824 V (820K)	T	135.1/84.6
R172	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	128.7/80.8
R173	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	131.5/80.8
R174	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	123.1/85.9
R175	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	137.0/84.2
R181	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	39.1/56.7
R182	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	36.3/56.7
R183	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	36.3/58.0
R184	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	39.1/58.0
R185	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	37.7/84.0
R186	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	39.0/81.2
R187	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	37.7/81.2

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

[DISPLAY UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C403	4030011600	S.CER C1608 JB 1E 104K-T	B	149.2/12.0
C404	4030007050	S.CER C1608 CH 1H 220J-T	T	35.9/32.9
C405	4030011600	S.CER C1608 JB 1E 104K-T	T	41.0/32.9
C451	4030019560	S.CER GRM21BB31C106KE15L	T	86.8/69.9
C501	4030011600	S.CER C1608 JB 1E 104K-T	T	171.6/61.9
C521	4030011600	S.CER C1608 JB 1E 104K-T	T	96.1/77.6
C522	4030011600	S.CER C1608 JB 1E 104K-T	T	110.1/67.9
C523	4030011600	S.CER C1608 JB 1E 104K-T	T	110.1/69.2
C524	4030011600	S.CER C1608 JB 1E 104K-T	T	110.1/70.5
C525	4030011600	S.CER C1608 JB 1E 104K-T	T	110.1/71.8
C526	4030011600	S.CER C1608 JB 1E 104K-T	T	110.1/73.1
C541	4030011600	S.CER C1608 JB 1E 104K-T	T	220.6/58.0
C561	4030011600	S.CER C1608 JB 1E 104K-T	T	127.6/57.1
C601	4030011600	S.CER C1608 JB 1E 104K-T	B	72.8/114.0
C611	4030011600	S.CER C1608 JB 1E 104K-T	B	224.1/89.4
C621	4030011600	S.CER C1608 JB 1E 104K-T	T	65.7/102.1
C641	4030011600	S.CER C1608 JB 1E 104K-T	T	49.3/50.4
C651	4030011600	S.CER C1608 JB 1E 104K-T	T	48.0/50.4
C701	4030011600	S.CER C1608 JB 1E 104K-T	T	141.3/17.7
C711	4030011600	S.CER C1608 JB 1E 104K-T	T	131.1/8.1
C721	4030006880	S.CER C1608 JB 1H 472K-T	T	239.5/15.6
C722	4030006880	S.CER C1608 JB 1H 472K-T	T	223.8/15.5
C723	4030006880	S.CER C1608 JB 1H 472K-T	T	209.3/15.5
C724	4030006880	S.CER C1608 JB 1H 472K-T	T	192.7/15.5
C1117	4030011600	S.CER C1608 JB 1E 104K-T	T	241.3/89.9
C1221	4030011600	S.CER C1608 JB 1E 104K-T	T	61.9/101.3
J1	6510020081	S.CON 52808-2071(2090)	T	92.5/102.8
J21	6510019971	S.CON 52808-1071	T	245.4/12.7
J31	6510019971	S.CON 52808-1071	T	272.0/71.3
J32	6510015541	S.CON B4B-ZR-SM4-TF(LF)(SN)	T	248.4/72.2
J51	6510019971	S.CON 52808-1071	T	247.5/41.4
J61	6510027290	S.CON 52808-0671	T	247.5/90.2
J71	6510027290	S.CON 52808-0671	T	36.1/20.8
J81	6510027290	S.CON 52808-0671	T	37.7/51.3
J91	6510027290	S.CON 52808-0671	T	37.7/90.3
J101	6510018971	S.CON B4B-PH-SM4-TB(LF)(SN)	T	76.0/52.9
J111	6510003401	CON B04B-EH-S(LF)(SN)		
J281	6510019971	S.CON 52808-1071	T	53.7/38.9
J451	6510027390	S.CON 40FHY-RSM1-GAN-TF(LF)(SN)	T	202.7/92.7
J452	6510027390	S.CON 40FHY-RSM1-GAN-TF(LF)(SN)	T	149.2/92.7
J453	6510027400	S.CON 50FHY-RSM1-GAN-TF(LF)(SN)	T	203.4/40.8
J454	6510027400	S.CON 50FHY-RSM1-GAN-TF(LF)(SN)	T	175.9/47.8
J455	6510027400	S.CON 50FHY-RSM1-GAN-TF(LF)(SN)	T	148.4/40.8
DS111	5080000421	CFL MBS 3 UA1W 70N ASSY		
DS451	5030003350	LCD TSC2G0369-E <SKD>		
DS741	5040001870	S.LED SEC 2462C	B	280.2/62.0
DS742	5040001870	S.LED SEC 2462C	B	280.2/30.0
S601	2260002740	S.SWI LS8J2M-T	B	103.6/103.5
S602	2260002740	S.SWI LS8J2M-T	B	103.6/95.7
S603	2260002740	S.SWI LS8J2M-T	B	103.6/87.8
S604	2260002740	S.SWI LS8J2M-T	B	103.6/80.0
S611	2260002740	S.SWI LS8J2M-T	B	88.2/103.6
S612	2260002740	S.SWI LS8J2M-T	B	88.2/95.7
S613	2260002740	S.SWI LS8J2M-T	B	88.2/87.8
S614	2260002740	S.SWI LS8J2M-T	B	88.2/79.9
S621	2260002740	S.SWI LS8J2M-T	B	72.3/103.6
S622	2260002740	S.SWI LS8J2M-T	B	72.3/95.7
S623	2260002740	S.SWI LS8J2M-T	B	72.3/87.8
S624	2260002740	S.SWI LS8J2M-T	B	72.3/79.9
S631	2260002740	S.SWI LS8J2M-T	B	56.4/103.6
S632	2260002740	S.SWI LS8J2M-T	B	56.4/95.7
S633	2260002740	S.SWI LS8J2M-T	B	56.4/87.8
S634	2260002740	S.SWI LS8J2M-T	B	56.4/79.9
S641	2260002740	S.SWI LS8J2M-T	B	56.4/72.1
S642	2260002740	S.SWI LS8J2M-T	B	72.3/72.1
S643	2260002740	S.SWI LS8J2M-T	B	88.2/72.1
S644	2260002740	S.SWI LS8J2M-T	B	103.6/72.1
S651	2260002740	S.SWI LS8J2M-T	B	56.4/60.8
S652	2260002740	S.SWI LS8J2M-T	B	72.3/64.3
S653	2260002740	S.SWI LS8J2M-T	B	88.2/64.3
S654	2260002740	S.SWI LS8J2M-T	B	103.6/60.8
S661	2260002740	S.SWI LS8J2M-T	B	20.2/32.6
S662	2260002740	S.SWI LS8J2M-T	B	6.2/32.6
S663	2260002740	S.SWI LS8J2M-T	B	29.4/71.6
S664	2260002740	S.SWI LS8J2M-T	B	11.0/71.6
S671	2260002740	S.SWI LS8J2M-T	B	34.2/32.6
S673	2260002740	S.SWI LS8J2M-T	B	44.7/7.4
S681	2260002740	S.SWI LS8J2M-T	B	223.4/18.3
S682	2260002740	S.SWI LS8J2M-T	B	111.2/6.9
S683	2260002740	S.SWI LS8J2M-T	B	128.4/18.3
S691	2260002740	S.SWI LS8J2M-T	B	217.5/25.1
S692	2260002740	S.SWI LS8J2M-T	B	196.7/25.1
S693	2260002740	S.SWI LS8J2M-T	B	175.9/25.1
S694	2260002740	S.SWI LS8J2M-T	B	155.1/25.1
S695	2260002740	S.SWI LS8J2M-T	B	134.3/25.1
S701	2260002740	S.SWI LS8J2M-T	B	147.4/18.3
S702	2260002740	S.SWI LS8J2M-T	B	166.4/18.3
S703	2260002740	S.SWI LS8J2M-T	B	185.4/18.3
S704	2260002740	S.SWI LS8J2M-T	B	204.4/18.3
S711	2260002740	S.SWI LS8J2M-T	B	127.5/7.4
S712	2260002740	S.SWI LS8J2M-T	B	143.5/7.4
S713	2260002740	S.SWI LS8J2M-T	B	159.5/7.4
S714	2260002740	S.SWI LS8J2M-T	B	175.5/7.4
S731	2260002740	S.SWI LS8J2M-T	B	295.0/103.0
S732	2260002740	S.SWI LS8J2M-T	B	295.0/92.7
S733	2260002740	S.SWI LS8J2M-T	B	295.0/80.0
S734	2260002740	S.SWI LS8J2M-T	B	295.0/71.5
S735	2260002740	S.SWI LS8J2M-T	B	274.2/71.6
S736	2260002740	S.SWI LS8J2M-T	B	255.8/71.6

[DISPLAY UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
T113	5910001150	S.TRA 6373-T170 (CEPH145B)	T	234.2/55.0
EP1	6910019900	S.BEA MPZ1608S601AT	T	83.3/98.0
EP2	6910012350	S.BEA MMZ1608Y 102BT	T	87.5/97.9
EP3	6910012350	S.BEA MMZ1608Y 102BT	T	83.3/95.4
EP4	6910012350	S.BEA MMZ1608Y 102BT	T	89.9/97.9
EP5	6910012350	S.BEA MMZ1608Y 102BT	T	91.2/97.9
EP10	6910012350	S.BEA MMZ1608Y 102BT	T	92.5/97.9
EP11	6910012350	S.BEA MMZ1608Y 102BT	T	93.8/97.9
EP21	6910018930	S.BEA MPZ2012S601A	T	246.2/20.4
EP22	6910012350	S.BEA MMZ1608Y 102BT	T	241.3/10.0

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

[VR-A UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R2	7030003860	S.RES ERJ3GE JPW V	T	8.6/8.6
R3	7030003860	S.RES ERJ3GE JPW V	T	8.6/13.2
J2	6510027290	S.CON 52808-0671	T	15.4/3.4
S1	2250000410	ENC TP90D96E20-30F-2178-1		

[VR-B UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R1	7210002970	VAR RV-314(RK0972210 10KB/10KB)	T	18.1/7.7
R4	7030003520	S.RES ERJ3GEYJ 472 V (4.7K)	T	19.3/7.7
R5	7030003520	S.RES ERJ3GEYJ 472 V (4.7K)	T	
R6	7210002970	VAR RV-314(RK0972210 10KB/10KB)	T	12.5/7.7
R7	7030003520	S.RES ERJ3GEYJ 472 V (4.7K)	T	14.9/7.7
R8	7030003520	S.RES ERJ3GEYJ 472 V (4.7K)	T	
C3	4030006900	S.CER C1608 JB 1H 103K-T	T	20.5/7.7
C4	4030006900	S.CER C1608 JB 1H 103K-T	T	16.9/7.7
C5	4030006900	S.CER C1608 JB 1H 103K-T	T	13.7/7.7
C6	4030006900	S.CER C1608 JB 1H 103K-T	T	11.3/7.7
J2	6510019971	S.CON 52808-1071	T	4.0/10.2

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

[PBT UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
J1	6510027290	S.CON 52808-0671	T	16.4/5.3
S1	2250000410	ENC TP90D96E20-30F-2178-1		

[M-CH UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R2	7030003860	S.RES ERJ3GE JPW V	T	11.2/8.0
R3	7030003860	S.RES ERJ3GE JPW V	T	10.9/3.0
J1	6510027290	S.CON 52808-0671	T	18.6/13.8
S1	2250000410	ENC TP90D96E20-30F-2178-1		

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

[RIT UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
J1	6510027290	S.CON 52808-0671	T	9.2/9.8
S1	2250000650	ENC EVEGC2F2524B		

[JACK UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R1	7030006240	S.RES ERJ12YJ181U (180)	T	30.3/4.9
R2	7030006240	S.RES ERJ12YJ181U (180)	T	34.0/4.9
C1	4030006900	S.CER C1608 JB 1H 103K-T	T	15.5/16.2
C2	4030006900	S.CER C1608 JB 1H 103K-T	T	7.2/8.6
C101	4030006900	S.CER C1608 JB 1H 103K-T	T	6.7/15.4
C102	4030006900	S.CER C1608 JB 1H 103K-T	T	4.1/15.4
J1	6510020711	S.CON 52793-1070(1090)	T	9.0/24.0
J2	6510027890	CON 01J0370-00		
J102	6510023900	CON LGR4619-7000		
EP1	6910014690	S.BEA MPZ1608S221A-T	T	27.7/6.1
EP2	6910014690	S.BEA MPZ1608S221A-T	T	23.8/3.0
EP3	6910014690	S.BEA MPZ1608S221A-T	T	23.8/1.7
EP4	6910012350	S.BEA MMZ1608Y 102BT	T	15.5/13.4
EP5	6910012350	S.BEA MMZ1608Y 102BT	T	13.3/15.4
EP6	6910012350	S.BEA MMZ1608Y 102BT	T	10.6/16.6
EP101	6910012350	S.BEA MMZ1608Y 102BT	T	6.7/16.6
EP102	6910012350	S.BEA MMZ1608Y 102BT	T	4.1/16.6

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

[MIC UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C1	4030006900	S.CER C1608 JB 1H 103K-T	T	15.0/17.1
C2	4030006900	S.CER C1608 JB 1H 103K-T	T	12.6/8.0
C3	4030006900	S.CER C1608 JB 1H 103K-T	T	7.2/13.2
C4	4030007130	S.CER C1608 CH 1H 101J-T	T	8.2/3.7
C5	4030006900	S.CER C1608 JB 1H 103K-T	T	17.5/2.5
C6	4030006900	S.CER C1608 JB 1H 103K-T	T	8.2/2.5
C7	4030006900	S.CER C1608 JB 1H 103K-T	T	7.8/11.4
C8	4030007090	S.CER C1608 CH 1H 470J-T	T	15.0/15.6
J1	6510000191	CON FM214-8SS(P)-1	T	3.4/10.4
J2	6510019971	S.CON 52808-1071	T	
EP2	6910012350	S.BEA MMZ1608Y 102BT	T	18.2/3.7
EP3	6910012350	S.BEA MMZ1608Y 102BT	T	11.7/2.5
EP4	6910012350	S.BEA MMZ1608Y 102BT	T	13.2/16.4
EP5	6910012350	S.BEA MMZ1608Y 102BT	T	21.4/12.1
EP6	6910018930	S.BEA MPZ2012S601A	T	8.0/8.4
EP7	6910018930	S.BEA MPZ2012S601A	T	9.5/13.3
EP9	6910015130	S.BEA MMZ1608D 301BT	T	8.2/4.9
EP10	6910015130	S.BEA MMZ1608D 301BT	T	8.2/6.1
EP11	6910012350	S.BEA MMZ1608Y 102BT	T	16.9/16.4
EP12	6910018930	S.BEA MPZ2012S601A	T	9.8/16.9

[BPF UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
IC201	1110007400	S.IC BGA616	T	25.5/57.3
Q131	1590003680	S.TRA KRC402 RTK/P	T	82.2/58.0
Q132	1590003680	S.TRA KRC402 RTK/P	T	53.6/60.7
Q318	1590003770	S.TRA KRA302E-RTK/P	T	51.8/18.0
Q320	1590003770	S.TRA KRA302E-RTK/P	T	91.6/18.0
Q322	1590003770	S.TRA KRA302E-RTK/P	T	55.9/17.8
Q324	1590003770	S.TRA KRA302E-RTK/P	T	96.5/18.0
Q326	1590003770	S.TRA KRA302E-RTK/P	T	66.8/18.0
Q328	1590003770	S.TRA KRA302E-RTK/P	T	99.9/18.0
Q330	1590003770	S.TRA KRA302E-RTK/P	T	71.0/17.8
Q332	1590003770	S.TRA KRA302E-RTK/P	T	103.0/18.0
Q334	1590003770	S.TRA KRA302E-RTK/P	T	76.1/18.2
Q336	1590003770	S.TRA KRA302E-RTK/P	T	110.4/16.9
Q338	1590003770	S.TRA KRA302E-RTK/P	T	86.7/18.0
Q511	1530003852	S.TRA 2SC5551A-F-TD-E	T	28.6/7.4
Q512	1530003852	S.TRA 2SC5551A-F-TD-E	T	26.8/21.4
Q514	1590003770	S.TRA KRA302E-RTK/P	T	46.6/5.9
Q515	1590003680	S.TRA KRC402 RTK/P	T	50.8/8.6
Q531	1590003770	S.TRA KRA302E-RTK/P	T	46.6/13.7
Q532	1530003852	S.TRA 2SC5551A-F-TD-E	T	27.4/42.3
Q533	1590003770	S.TRA KRA302E-RTK/P	T	46.6/15.7
Q534	1590003680	S.TRA KRC402 RTK/P	T	50.8/11.1
Q551	1590003680	S.TRA KRC402 RTK/P	T	50.8/6.1
Q552	1590003770	S.TRA KRA302E-RTK/P	T	46.1/11.7
Q554	1510001090	S.TRA KTA2015Y-RTK/P	T	46.9/9.4
D11	1750000581	S.DIO 1SV307(TPH3F)	B	52.3/21.8
D21	1750000581	S.DIO 1SV307(TPH3F)	B	65.4/50.3
D22	1750000581	S.DIO 1SV307(TPH3F)	B	63.1/21.8
D31	1750000581	S.DIO 1SV307(TPH3F)	B	105.0/49.3
D32	1750000581	S.DIO 1SV307(TPH3F)	B	105.5/20.8
D41	1750000581	S.DIO 1SV307(TPH3F)	B	70.4/49.3
D42	1750000581	S.DIO 1SV307(TPH3F)	B	78.2/21.8
D51	1750000581	S.DIO 1SV307(TPH3F)	B	92.9/49.3
D52	1750000581	S.DIO 1SV307(TPH3F)	B	93.0/21.8
D61	1750000581	S.DIO 1SV307(TPH3F)	B	97.8/49.3
D62	1750000581	S.DIO 1SV307(TPH3F)	B	97.9/21.8
D71	1750000581	S.DIO 1SV307(TPH3F)	B	102.7/49.3
D72	1750000581	S.DIO 1SV307(TPH3F)	B	102.8/21.8
D81	1750000581	S.DIO 1SV307(TPH3F)	B	68.1/49.3
D82	1750000581	S.DIO 1SV307(TPH3F)	B	67.3/21.8
D91	1750000581	S.DIO 1SV307(TPH3F)	B	82.1/49.3
D92	1750000581	S.DIO 1SV307(TPH3F)	B	83.1/21.8
D102	1750000581	S.DIO 1SV307(TPH3F)	B	88.1/21.8
D111	1750000581	S.DIO 1SV307(TPH3F)	B	88.0/49.3
D131	1750000581	S.DIO 1SV307(TPH3F)	B	73.9/60.5
D132	1750000581	S.DIO 1SV307(TPH3F)	B	73.9/64.5
D133	1750000581	S.DIO 1SV307(TPH3F)	B	73.9/56.5
D134	1750000581	S.DIO 1SV307(TPH3F)	B	72.3/67.4
D143	1750001320	S.DIO KDS4148U RTK/P	B	90.4/56.2
D161	1750000581	S.DIO 1SV307(TPH3F)	B	48.9/58.2
D162	1750000581	S.DIO 1SV307(TPH3F)	B	36.7/58.2
D511	1750000581	S.DIO 1SV307(TPH3F)	B	43.9/28.5
D512	1750001320	S.DIO KDS4148U RTK/P	B	50.5/5.6
D513	1750000581	S.DIO 1SV307(TPH3F)	B	8.5/26.8
D531	1750001320	S.DIO KDS4148U RTK/P	B	46.8/13.7
D532	1750000581	S.DIO 1SV307(TPH3F)	B	43.9/34.1
D533	1750000581	S.DIO 1SV307(TPH3F)	B	16.7/33.4
D551	1750000581	S.DIO 1SV307(TPH3F)	B	41.0/31.4
D552	1750000581	S.DIO 1SV307(TPH3F)	B	20.6/33.4
L11	6200010800	S.COI C2520C-4R7G-A	T	51.5/44.3
L12	6200010800	S.COI C2520C-4R7G-A	T	52.5/37.0
L13	6200002041	S.COI NLV25T-101J	T	51.5/23.6
L21	6180003540	COI SP0406-3R9K-6		
L22	6180003770	COI SP0406-100J-PF		
L23	6180003540	COI SP0406-3R9K-6		
L31	6180003410	COI SP0406-2R2K-6		
L32	6180003570	COI SP0406-3R3K-6		
L33	6180003410	COI SP0406-2R2K-6		
L41	6180003390	COI SP0406-1R2K-6		
L42	6180003490	COI SP0406-2R7K-6		
L43	6180003390	COI SP0406-1R2K-6		
L51	6200010960	S.COI C2520C-R47G-A (0.47U)	T	91.5/43.9
L52	6200010810	S.COI C2520C-2R2G-A	T	92.3/39.7
L53	6200010960	S.COI C2520C-R47G-A (0.47U)	T	91.6/31.8
L61	6200010740	S.COI C2520C-R27G-A	T	96.4/40.7
L62	6200010810	S.COI C2520C-2R2G-A	T	97.2/35.0
L63	6200010740	S.COI C2520C-R27G-A	T	96.5/27.8
L71	6200010680	S.COI C2520C-R22G-A (0.22U)	T	34.5/12.8
L72	6200010440	S.COI C2520C-1R2G-A (1.2U)	T	102.1/39.7
L73	6200010680	S.COI C2520C-R22G-A (0.22U)	T	101.3/32.5
L81	6200010650	S.COI C2520C-R12G-A (0.12U)	T	66.5/44.3
L82	6200010450	S.COI C2520C-R82G-A (0.82U)	T	67.5/38.5
L83	6200010650	S.COI C2520C-R12G-A (0.12U)	T	66.7/30.5
L91	6200005011	S.COI NLV25T-100J	T	80.8/47.7
L92	6200010680	S.COI C2520C-R22G-A (0.22U)	T	81.7/44.3
L93	6200010660	S.COI C2520C-R15G-A (0.15U)	T	82.5/40.5
L94	6200010660	S.COI C2520C-R15G-A (0.15U)	T	81.7/36.7
L95	6200010660	S.COI C2520C-R15G-A (0.15U)	T	81.7/22.6
L96	6200010660	S.COI C2520C-R15G-A (0.15U)	T	81.0/27.7
L111	6200010740	S.COI C2520C-R27G-A	T	86.6/40.7
L112	6200010680	S.COI C2520C-R22G-A (0.22U)	T	87.4/35.0
L113	6200010740	S.COI C2520C-R27G-A	T	86.7/27.8
L131	6200005491	S.COI NLV32T-331J	B	81.2/58.5
L132	6200005491	S.COI NLV32T-331J	B	61.1/62.2
L133	6180003560	COI SP0406-5R6K-6		
L134	6180003550	COI SP0406-4R7K-6		
L135	6200005491	S.COI NLV32T-331J	B	54.0/61.4
L141	6200010730	S.COI C2520C-68NG-A	B	106.6/17.9
L201	6200009810	S.COI LQH31HNR61J03L	B	147.1/28.7

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

[BPF UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
L202	6200002181	S.COI NLV25T-R12J	T	18.3/56.5
L203	6200005041	S.COI NLV25T-220J	T	25.9/54.7
L301	6200005491	S.COI NLV32T-331J	B	14.6/12.8
L302	6200005491	S.COI NLV32T-331J	B	47.1/21.5
L303	6200005491	S.COI NLV32T-331J	B	50.8/41.0
L511	6200005491	S.COI NLV32T-331J	B	36.3/26.8
L512	6140003800	COI LR-439		
L513	6200002041	S.COI NLV25T-101J	T	31.2/15.7
L514	6200002041	S.COI NLV25T-101J	T	31.0/30.5
L515	6140003810	COI LR-440		
L516	6140003810	COI LR-440		
L517	6200009060	S.COI LQH32CN101K23L	T	19.1/28.9
L518	6140003800	COI LR-439		
L519	6200005491	S.COI NLV32T-331J	B	19.1/27.8
L531	6200005491	S.COI NLV32T-331J	B	44.2/45.1
L532	6140004430	COI LR-500		
L533	6140003900	COI LR-489		
L534	6200002041	S.COI NLV25T-101J	B	25.6/41.5
L535	6200005491	S.COI NLV32T-331J	B	22.6/40.7
L536	6200011660	S.COI LQW18ANR15G00D	T	18.7/35.2
L551	6200005491	S.COI NLV32T-331J	B	37.4/32.2
R11	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	51.8/31.5
R12	7030003860	S.RES ERJ3GE JPW V	T	53.3/28.4
R13	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	52.5/26.1
R21	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	56.1/27.5
R22	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	61.6/44.5
R31	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	106.1/24.1
R32	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	107.7/46.4
R41	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	6.5/40.7
R42	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	19.4/39.5
R51	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	91.6/26.5
R52	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	90.1/41.3
R61	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	96.5/23.3
R62	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	95.0/37.5
R71	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	101.4/26.7
R72	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	99.9/40.5
R81	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	66.8/24.7
R82	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	65.3/41.1
R91	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	78.9/21.8
R92	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	78.9/47.3
R111	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	86.7/23.3
R112	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	85.2/37.5
R131	7030006260	S.RES ERJ12VJ471U (470)	B	77.4/61.7
R132	7030003520	S.RES ERJ3GEYJ 472 V (4.7K)	T	82.0/56.1
R133	7030006260	S.RES ERJ12VJ471U (470)	B	54.7/65.1
R134	7030003460	S.RES ERJ3GEYJ 152 V (1.5K)	B	51.7/59.0
R135	7030003380	S.RES ERJ3GEYJ 331 V (330)	B	57.2/59.7
R136	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	55.5/60.8
R141	7030003300	S.RES ERJ3GEYJ 680 V (68)	T	103.7/59.0
R142	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	103.0/57.0
R143	7030003300	S.RES ERJ3GEYJ 680 V (68)	T	103.7/54.9
R144	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	88.8/55.1
R161	7030005280	S.RES ERJ3GEYJ 6R8V (6.8)	B	44.8/58.2
R162	7030003350	S.RES ERJ3GEYJ 181 V (180)	B	47.1/62.8
R163	7030005280	S.RES ERJ3GEYJ 6R8V (6.8)	B	40.8/58.2
R167	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	46.1/65.0
R170	7030003440	S.RES ERJ3GEYJ 102 V (1K)	B	33.0/57.4
R174	7030003860	S.RES ERJ3GE JPW V	T	47.0/60.5
R201	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	9.8/61.9
R202	7030003200	S.RES ERJ3GEYJ 100 V (10)	T	9.0/59.7
R203	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	11.1/59.0
R207	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	30.8/54.7
R208	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	30.8/53.3
R209	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	30.8/51.9
R301	7030006260	S.RES ERJ12VJ471U (470)	B	10.6/13.5
R302	7030006260	S.RES ERJ12VJ471U (470)	B	47.1/27.3
R303	7030006260	S.RES ERJ12VJ471U (470)	B	49.6/33.5
R321	7030003860	S.RES ERJ3GE JPW V	T	57.5/8.6
R322	7030003860	S.RES ERJ3GE JPW V	T	58.8/8.6
R323	7030003860	S.RES ERJ3GE JPW V	T	69.2/8.6
R324	7030003860	S.RES ERJ3GE JPW V	T	61.4/8.6
R325	7030003860	S.RES ERJ3GE JPW V	T	65.3/8.6
R326	7030003860	S.RES ERJ3GE JPW V	T	66.6/8.6
R327	7030003860	S.RES ERJ3GE JPW V	T	67.9/8.6
R328	7030003860	S.RES ERJ3GE JPW V	T	60.1/8.6
R329	7030003860	S.RES ERJ3GE JPW V	T	62.7/8.6
R330	7030003860	S.RES ERJ3GE JPW V	T	64.0/8.6
R331	7030003860	S.RES ERJ3GE JPW V	T	70.5/8.6
R332	7030003860	S.RES ERJ3GE JPW V	T	54.3/7.8
R333	7030003860	S.RES ERJ3GE JPW V	T	54.5/9.1
R334	7030003860	S.RES ERJ3GE JPW V	T	54.5/10.4
R335	7030003220	S.RES ERJ3GEYJ 150 V (15)	T	73.1/8.6
R337	7030003860	S.RES ERJ3GE JPW V	T	78.7/6.6
R338	7030003860	S.RES ERJ3GE JPW V	T	78.7/4.0
R339	7030003860	S.RES ERJ3GE JPW V	T	71.8/8.6
R340	7030003220	S.RES ERJ3GEYJ 150 V (15)	T	74.3/8.6
R341	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	51.0/19.9
R342	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	56.1/19.6
R343	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	90.8/23.3
R344	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	66.0/21.3
R345	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	95.7/19.9
R346	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	71.1/19.6
R347	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	100.6/23.3
R348	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	76.1/21.8
R349	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	104.6/21.5
R350	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	85.9/19.9
R511	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	39.6/26.7
R512	7030003280	S.RES ERJ3GEYJ 470 V (47)	T	31.3/13.4
R513	7030003280	S.RES ERJ3GEYJ 470 V (47)	T	31.7/27.7
R514	7030003440	S.RES ERJ3GEYJ 102 V (1K)	T	32.8/6.8
R515	7030003440	S.RES ERJ3GEYJ 102 V (1K)	T	31.1/21.0
R516	7030003490	S.RES ERJ3GEYJ 272 V (2.7K)	T	32.6/5.5
R517	7030003490	S.RES ERJ3GEYJ 272 V (2.7K)	T	31.1/19.7

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REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R518	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	15.1/26.8
R519	7030003220	S.RES ERJ3GEYJ 150 V (15)	B	29.5/13.7
R520	7030003220	S.RES ERJ3GEYJ 150 V (15)	B	26.0/29.1
R521	7030003280	S.RES ERJ3GEYJ 470 V (47)	T	22.9/28.7
R522	7030003280	S.RES ERJ3GEYJ 470 V (47)	T	24.7/22.9
R523	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	37.3/26.8
R524	7030003860	S.RES ERJ3GE JPW V	T	44.0/16.7
R531	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	45.7/41.0
R532	7030003510	S.RES ERJ3GEYJ 392 V (3.9K)	T	40.6/36.8
R533	7030003440	S.RES ERJ3GEYJ 102 V (1K)	T	36.3/36.0
R534	7030007860	S.RES ERJ3GEYJ 8R2V (8.2)	B	30.2/42.0
R535	7030003240	S.RES ERJ3GEYJ 220 V (22)	T	29.8/36.0
R536	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	19.3/47.4
R537	7030003200	S.RES ERJ3GEYJ 100 V (10)	T	42.1/39.0
R538	7030003280	S.RES ERJ3GEYJ 470 V (47)	B	34.6/37.5
R539	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	45.4/45.0
R550	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	45.4/19.2
R551	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	34.5/32.9
R552	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	29.4/34.3
R553	7030003680	S.RES ERJ3GEYJ 104 V (100K)	B	38.3/30.8
R554	7030003440	S.RES ERJ3GEYJ 102 V (1K)	B	49.3/8.2
R555	7030003200	S.RES ERJ3GEYJ 100 V (10)	T	36.8/28.8
R556	7030003200	S.RES ERJ3GEYJ 100 V (10)	T	44.6/47.0
R557	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	46.8/7.5
C12	4030018600	S.CER C1608 CH 1H 152J-T	T	52.5/40.2
C13	4030019570	S.CER C1608 CH 1H 332J-T	T	52.5/41.8
C14	4030019570	S.CER C1608 CH 1H 332J-T	T	52.5/33.9
C15	4030019570	S.CER C1608 CH 1H 332J-T	T	50.4/47.3
C16	4030019120	S.CER GRM188B31E105KA75D	T	53.3/31.5
C19	4030011600	S.CER C1608 JB 1E 104K-T	T	51.0/21.2
C21	4030011600	S.CER C1608 JB 1E 104K-T	T	61.6/47.1
C22	4030018620	S.CER C1608 CH 1H 222J-T	T	61.6/45.8
C23	4030017810	S.CER C1608 CH 1H 102J-T	T	62.5/37.2
C24	4030018620	S.CER C1608 CH 1H 222J-T	T	56.1/28.8
C25	4030011600	S.CER C1608 JB 1E 104K-T	T	56.1/30.1
C29	4030011600	S.CER C1608 JB 1E 104K-T	T	56.1/20.8
C31	4030011600	S.CER C1608 JB 1E 104K-T	T	105.7/47.0
C32	4030018600	S.CER C1608 CH 1H 152J-T	T	105.7/45.7
C33	4030017810	S.CER C1608 CH 1H 102J-T	T	111.7/25.6
C34	4030018600	S.CER C1608 CH 1H 152J-T	T	109.0/25.6
C35	4030011600	S.CER C1608 JB 1E 104K-T	T	106.9/26.3
C39	4030011600	S.CER C1608 JB 1E 104K-T	T	104.6/22.8
C41	4030011600	S.CER C1608 JB 1E 104K-T	T	71.1/53.5
C42	4030017870	S.CER C1608 CH 1H 681J-T	T	71.1/52.2
C43	4030011830	S.CER C1608 CH 1H 301J-T	T	77.5/32.7
C44	4030017870	S.CER C1608 CH 1H 681J-T	T	71.1/28.8
C45	4030011600	S.CER C1608 JB 1E 104K-T	T	71.1/30.1
C49	4030011600	S.CER C1608 JB 1E 104K-T	T	71.1/20.8
C51	4030011600	S.CER C1608 JB 1E 104K-T	T	90.1/46.9
C52	4030017870	S.CER C1608 CH 1H 681J-T	T	92.1/46.1
C53	4030007150	S.CER C1608 CH 1H 151J-T	T	92.9/35.7
C54	4030017870	S.CER C1608 CH 1H 681J-T	T	92.1/29.5
C55	4030011600	S.CER C1608 JB 1E 104K-T	T	90.8/28.3
C59	4030011600	S.CER C1608 JB 1E 104K-T	T	90.8/24.6
C61	4030011600	S.CER C1608 JB 1E 104K-T	T	95.1/43.7
C62	4030017800	S.CER C1608 CH 1H 561J-T	T	97.0/38.2
C63	4030007110	S.CER C1608 CH 1H 680J-T	T	98.0/31.0
C64	4030017800	S.CER C1608 CH 1H 561J-T	T	95.8/30.2
C65	4030011600	S.CER C1608 JB 1E 104K-T	T	95.7/25.3
C69	4030011600	S.CER C1608 JB 1E 104K-T	T	95.7/21.2
C71	4030011600	S.CER C1608 JB 1E 104K-T	T	99.9/46.9
C72	4030011330	S.CER C1608 CH 1H 391J-T	T	101.9/46.1
C73	4030007110	S.CER C1608 CH 1H 680J-T	T	102.1/35.7
C74	4030011330	S.CER C1608 CH 1H 391J-T	T	101.9/30.0
C75	4030011600	S.CER C1608 JB 1E 104K-T	T	100.6/28.7
C79	4030011600	S.CER C1608 JB 1E 104K-T	T	100.6/24.6
C81	4030011600	S.CER C1608 JB 1E 104K-T	T	65.4/47.3
C82	4030010760	S.CER C1608 CH 1H 331J-T	T	67.3/41.9
C83	4030007090	S.CER C1608 CH 1H 470J-T	T	68.3/34.1
C84	4030010760	S.CER C1608 CH 1H 331J-T	T	67.5/28.0
C85	4030011600	S.CER C1608 JB 1E 104K-T	T	66.0/26.7
C89	4030011600	S.CER C1608 JB 1E 104K-T	T	66.0/22.6
C91	4030006860	S.CER C1608 JB 1H 102K-T	T	77.6/47.3
C92	4030007040	S.CER C1608 CH 1H 180J-T	T	78.1/44.5
C93	4030007100	S.CER C1608 CH 1H 560J-T	T	78.1/43.2
C94	4030007050	S.CER C1608 CH 1H 220J-T	T	79.0/41.1
C95	4030007020	S.CER C1608 CH 1H 120J-T	T	80.3/41.1
C96	4030007120	S.CER C1608 CH 1H 820J-T	T	79.5/39.1
C97	4030007010	S.CER C1608 CH 1H 100D-T	T	82.5/33.2
C98	4030007090	S.CER C1608 CH 1H 470J-T	T	81.2/31.9
C99	4030007090	S.CER C1608 CH 1H 470J-T	T	83

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REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C142	4030006900	S.CER C1608 JB 1H 103K-T	T	89.6/57.2
C143	4030011600	S.CER C1608 JB 1E 104K-T	T	53.7/57.1
C161	4030011600	S.CER C1608 JB 1E 104K-T	B	47.1/65.1
C170	4030011600	S.CER C1608 JB 1E 104K-T	T	28.3/58.2
C201	4030007010	S.CER C1608 CH 1H 100D-T	T	14.8/60.7
C202	4030007120	S.CER C1608 CH 1H 820J-T	T	15.9/57.2
C203	4030007020	S.CER C1608 CH 1H 120J-T	T	18.3/58.4
C204	4030007120	S.CER C1608 CH 1H 820J-T	T	20.8/57.2
C205	4030011600	S.CER C1608 JB 1E 104K-T	T	22.9/56.5
C206	4030011600	S.CER C1608 JB 1E 104K-T	T	28.4/55.5
C301	4030019120	S.CER GRM188B31E105KA75D	B	7.5/12.4
C302	4030019120	S.CER GRM188B31E105KA75D	B	44.6/31.4
C321	4030006860	S.CER C1608 JB 1H 102K-T	B	54.6/6.9
C322	4030006860	S.CER C1608 JB 1H 102K-T	B	54.5/8.7
C323	4030006860	S.CER C1608 JB 1H 102K-T	B	54.5/10.5
C325	4030006860	S.CER C1608 JB 1H 102K-T	B	82.2/7.6
C326	4030006860	S.CER C1608 JB 1H 102K-T	B	82.2/9.4
C327	4030006860	S.CER C1608 JB 1H 102K-T	B	56.9/7.1
C328	4030006860	S.CER C1608 JB 1H 102K-T	B	58.7/7.1
C329	4030006860	S.CER C1608 JB 1H 102K-T	B	60.5/7.1
C330	4030006860	S.CER C1608 JB 1H 102K-T	B	62.3/7.1
C331	4030006860	S.CER C1608 JB 1H 102K-T	B	64.1/7.1
C332	4030006860	S.CER C1608 JB 1H 102K-T	B	65.9/7.1
C333	4030006860	S.CER C1608 JB 1H 102K-T	B	67.7/7.1
C334	4030006860	S.CER C1608 JB 1H 102K-T	B	69.5/7.1
C335	4030006860	S.CER C1608 JB 1H 102K-T	B	71.3/7.1
C336	4030006860	S.CER C1608 JB 1H 102K-T	B	73.1/7.1
C337	4030006860	S.CER C1608 JB 1H 102K-T	B	74.9/7.0
C338	4030006860	S.CER C1608 JB 1H 102K-T	B	78.5/7.0
C339	4030006860	S.CER C1608 JB 1H 102K-T	B	76.7/7.0
C340	4510009340	S.ELE EEEHA1C101WP	T	78.5/10.8
C511	4030011600	S.CER C1608 JB 1E 104K-T	T	36.0/26.8
C512	4030019120	S.CER GRM188B31E105KA75D	B	41.4/26.7
C513	4030019120	S.CER GRM188B31E105KA75D	T	32.8/8.1
C514	4030019120	S.CER GRM188B31E105KA75D	T	31.1/22.3
C515	4030019120	S.CER GRM188B31E105KA75D	B	31.6/17.4
C516	4030019120	S.CER GRM188B31E105KA75D	B	30.8/29.2
C517	4030019120	S.CER GRM188B31E105KA75D	T	31.3/10.8
C518	4030019120	S.CER GRM188B31E105KA75D	T	31.1/25.1
C519	4030019120	S.CER GRM188B31E105KA75D	B	18.8/17.3
C520	4030019120	S.CER GRM188B31E105KA75D	B	18.9/24.0
C521	4030006860	S.CER C1608 JB 1H 102K-T	T	31.3/12.1
C522	4030019120	S.CER GRM188B31E105KA75D	B	11.9/26.1
C523	4030011600	S.CER C1608 JB 1E 104K-T	T	16.1/28.2
C526	4030007010	S.CER C1608 CH 1H 100D-T	B	12.7/21.8
C527	4030006860	S.CER C1608 JB 1H 102K-T	T	31.1/26.4
C528	4030006860	S.CER C1608 JB 1H 102K-T	T	32.8/9.4
C529	4030006860	S.CER C1608 JB 1H 102K-T	T	31.1/23.6
C531	4030019120	S.CER GRM188B31E105KA75D	B	43.9/41.0
C532	4030019120	S.CER GRM188B31E105KA75D	B	20.2/40.7
C533	4030019120	S.CER GRM188B31E105KA75D	T	35.0/36.0
C534	4030019120	S.CER GRM188B31E105KA75D	T	32.4/36.0
C535	4030011600	S.CER C1608 JB 1E 104K-T	T	43.9/45.0
C536	4030006860	S.CER C1608 JB 1H 102K-T	T	33.7/36.0
C537	4030006860	S.CER C1608 JB 1H 102K-T	T	31.1/36.0
C538	4030019120	S.CER GRM188B31E105KA75D	T	22.4/36.2
C539	4030006860	S.CER C1608 JB 1H 102K-T	T	21.1/36.2
C540	4030011600	S.CER C1608 JB 1E 104K-T	T	25.1/47.5
C541	4030006990	S.CER C1608 CH 1H 080D-T	T	42.8/36.8
C542	4550006120	S.TAN TEESVA OG 226M8R	T	28.1/36.0
C543	4550006120	S.TAN TEESVA OG 226M8R	T	38.0/34.8
C544	4030007010	S.CER C1608 CH 1H 100D-T	T	16.5/35.9
C545	4030019120	S.CER GRM188B31E105KA75D	T	13.5/28.2
C546	4030019120	S.CER GRM188B31E105KA75D	T	14.8/28.2
C549	4030019120	S.CER GRM188B31E105KA75D	T	42.9/30.8
C550	4030019120	S.CER GRM188B31E105KA75D	T	41.6/30.8
C551	4030011600	S.CER C1608 JB 1E 104K-T	T	40.3/30.8
C552	4030019120	S.CER GRM188B31E105KA75D	B	31.9/33.2
C553	4030009520	S.CER C1608 CH 1H 020B-T	T	24.2/6.7
C554	4030009520	S.CER C1608 CH 1H 020B-T	T	22.0/20.9
RL141	6330001860	REL UA2-12NU		
J141	6510028210	CON SJ050010 (TMP-J01X-V6)		
J201	6510028210	CON SJ050010 (TMP-J01X-V6)		
J301	6510028210	CON SJ050010 (TMP-J01X-V6)		
J302	6510020081	S.CON 52808-2071(2090)	T	65.5/4.0

[DC-DC UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
IC201	1190002450	S.IC BD9851EFV-E2	T	56.9/27.4
IC301	1190002450	S.IC BD9851EFV-E2	T	29.1/27.4
Q201	1550000140	S.FET CPH6316-TL-E	T	52.8/21.2
Q202	1550000140	S.FET CPH6316-TL-E	T	62.0/21.9
Q302	1550000140	S.FET CPH6316-TL-E	T	34.2/21.9
D201	1790001450	S.DIO RB160L-40 TE-25	T	54.1/16.3
D202	1790001450	S.DIO RB160L-40 TE-25	T	67.2/20.2
D203	1750000880	S.DIO RB551V-30TE-17	T	61.8/26.6
D302	1790001450	S.DIO RB160L-40 TE-25	T	39.4/20.2
D303	1750000880	S.DIO RB551V-30TE-17	T	34.0/26.6
L201	6180003501	S.COI SLF6028T-100M1R3-PF	T	49.1/16.0
L202	6200011300	S.COI EXCML16A270U	T	53.4/12.6
L203	6200013280	S.COI SLF10145T-330M1R6-PF	T	56.2/37.1
L204	6200012250	S.COI SLF7045T-3R3M2R5-PF 3.3U	T	61.9/16.3
L205	6200011300	S.COI EXCML16A270U	T	64.6/21.5
L303	6200013280	S.COI SLF10145T-330M1R6-PF	T	68.0/37.1
L304	6200012250	S.COI SLF7045T-3R3M2R5-PF 3.3U	T	34.1/16.3
L305	6200011300	S.COI EXCML16A270U	T	36.8/21.5
R201	7030005691	S.RES ERA3YED 123V (12K)	T	47.9/30.5
R202	7030007230	S.RES ERA3YED 102V (1K)	T	49.1/30.5
R203	7030006461	S.RES ERA3YED 152V (1.5K)	T	47.1/27.4
R204	7030003440	S.RES ERJ3GEYJ 102 V (1K)	T	46.7/30.5
R205	7030003440	S.RES ERJ3GEYJ 102 V (1K)	T	49.1/26.8
R206	7030003700	S.RES ERJ3GEYJ 154 V (150K)	T	47.9/23.7
R207	7030003740	S.RES ERJ3GEYJ 334 V (330K)	T	49.8/24.2
R208	7030005451	S.RES ERA3YED 153V (15K)	T	47.1/25.0
R209	7030005321	S.RES ERA3YED 103V (10K)	T	47.1/26.2
R210	7030005511	S.RES ERA3YED 303V (30K)	T	52.5/30.4
R211	7030003200	S.RES ERJ3GEYJ 100 V (10)	T	52.2/24.2
R212	7030003200	S.RES ERJ3GEYJ 100 V (10)	T	62.1/24.4
R213	7030003860	S.RES ERJ3GE JPW V	T	63.9/26.5
R214	7030005971	S.RES ERA3YKD 683V (68K)	T	66.3/31.7
R215	7030005971	S.RES ERA3YKD 683V (68K)	T	68.1/31.0
R216	7030005451	S.RES ERA3YED 153V (15K)	T	64.3/31.4
R217	7030003440	S.RES ERJ3GEYJ 102 V (1K)	T	66.7/29.9
R218	7030003480	S.RES ERJ3GEYJ 222 V (2.2K)	T	63.4/28.9
R219	7030003760	S.RES ERJ3GEYJ 474 V (470K)	T	64.5/26.4
R221	7030008170	S.RES ERJ12YJ1R0U (1)	T	49.7/4.3
R307	7030003860	S.RES ERJ3GE JPW V	T	22.0/24.2
R308	7030003860	S.RES ERJ3GE JPW V	T	19.5/25.0
R310	7030005981	S.RES ERA3YED 333V (33K)	T	24.6/30.4
R312	7030003200	S.RES ERJ3GEYJ 100 V (10)	T	34.3/24.4
R313	7030003860	S.RES ERJ3GE JPW V	T	36.1/26.5
R314	7030006601	S.RES ERA3YED 272V (2.7K)	T	38.5/31.7
R315	7030005731	S.RES ERA3YKD 823V (82K)	T	40.3/31.0
R316	7030005691	S.RES ERA3YED 123V (12K)	T	36.0/31.4
R317	7030003440	S.RES ERJ3GEYJ 102 V (1K)	T	38.9/29.9
R318	7030003480	S.RES ERJ3GEYJ 222 V (2.2K)	T	35.8/28.9
R319	7030003760	S.RES ERJ3GEYJ 474 V (470K)	T	36.5/24.6
R321	7030003860	S.RES ERJ3GE JPW V	T	22.2/30.5
C3	4030011600	S.CER C1608 JB 1E 104K-T	T	12.1/3.0
C4	4030011600	S.CER C1608 JB 1E 104K-T	T	13.3/4.5
C5	4030011600	S.CER C1608 JB 1E 104K-T	T	11.5/3.5
C6	4030011600	S.CER C1608 JB 1E 104K-T	T	9.1/38.8
C201	4030011600	S.CER C1608 JB 1E 104K-T	T	49.0/9.0
C202	4030018970	S.CER C3225 JB 1C 226MT-N	T	48.2/11.2
C203	4030018970	S.CER C3225 JB 1C 226MT-N	T	47.8/20.8
C204	4030010020	S.CER C1608 JB 1H 122K-T	T	48.0/28.6
C205	4030008860	S.CER C1608 JB 1H 153K-T	T	50.3/26.8
C206	4030011810	S.CER C1608 JB 1A 224K-T	T	51.0/24.2
C207	4030007070	S.CER C1608 CH 1H 330J-T	T	51.3/30.4
C208	4030011600	S.CER C1608 JB 1E 104K-T	T	65.4/34.1
C209	4030018970	S.CER C3225 JB 1C 226MT-N	T	66.1/36.3
C210	4030018970	S.CER C3225 JB 1C 226MT-N	T	66.1/39.3
C211	4030018970	S.CER C3225 JB 1C 226MT-N	T	56.9/22.4
C212	4030010240	S.CER C1608 JB 1H 391K-T	T	65.5/29.9
C213	4030010770	S.CER C1608 JB 1H 392K-T	T	63.9/27.7
C214	4030019620	S.CER GRM188B31C225KE14D	T	67.0/26.1
C215	4030019620	S.CER GRM188B31C225KE14D	T	61.5/31.4
C216	4030019120	S.CER GRM188B31E105KA75D	T	62.7/31.4
C217	4030018970	S.CER C3225 JB 1C 226MT-N	T	67.2/14.8
C218	4030011600	S.CER C1608 JB 1E 104K-T	T	67.4/9.2
C219	4030019560	S.CER GRM21BB31C106KE15L	T	53.4/3.2
C220	4030019560	S.CER GRM21BB31C106KE15L	T	64.0/4.8
C307	4030007070	S.CER C1608 CH 1H 330J-T	T	23.4/30.4
C308	4030011600	S.CER C1608 JB 1E 104K-T	T	37.6/34.1
C309	4030018970	S.CER C3225 JB 1C 226MT-N	T	38.3/36.3
C310	4030018970	S.CER C3225 JB 1C 226MT-N	T	38.3/39.3
C311	4030018970	S.CER C3225 JB 1C 226MT-N	T	29.1/22.4
C312	4030010240	S.CER C1608 JB 1H 391K-T	T	37.7/29.9
C313	4030010770	S.CER C1608 JB 1H 392K-T	T	36.1/27.7
C314	4030019620	S.CER GRM188B31C225KE14D	T	39.2/26.1
C315	4030019620	S.CER GRM188B31C225KE14D	T	33.5/31.4
C316	4030019120	S.CER GRM188B31E105KA75D	T	34.7/31.4
C317	4030018970	S.CER C3225 JB 1C 226MT-N	T	39.4/14.8
C318	4030011600	S.CER C1608 JB 1E 104K-T	T	39.6/9.2
C319	4030019560	S.CER GRM21BB31C106KE15L	T	36.3/4.8
J1	6510019121	S.CON S8B-PH-SM4-TB(LF)(SN)	T	16.4/5.8
F201	5210001050	S.FUS ICP-S0.5TN	T	44.6/4.3
F202	5210001040	S.FUS ICP-S1.2TN	T	59.3/4.8
F302	5210001040	S.FUS ICP-S1.2TN	T	31.5/4.8

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

[DC-DC UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
EP3	6910018930	S.BEA MPZ2012S601A	T	15.1/10.9
EP4	6910018930	S.BEA MPZ2012S601A	T	13.3/9.8
EP5	6910018930	S.BEA MPZ2012S601A	T	11.5/8.7
EP6	6910018930	S.BEA MPZ2012S601A	T	15.2/37.6
EP7	6910018930	S.BEA MPZ2012S601A	T	13.3/36.6
EP8	6910018930	S.BEA MPZ2012S601A	T	10.2/36.4
EP201	6910018930	S.BEA MPZ2012S601A	T	56.0/9.1
EP202	6910018930	S.BEA MPZ2012S601A	T	60.5/8.2
EP203	6910018930	S.BEA MPZ2012S601A	T	49.1/37.1
EP302	6910018930	S.BEA MPZ2012S601A	T	32.6/8.2
EP303	6910018930	S.BEA MPZ2012S601A	T	20.9/37.1

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

SECTION 6

MECHANICAL PARTS

[CHASSIS PARTS]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510000370	MR-DS-01 <SSC>	1
J2	6510000370	MR-DS-01 <SSC>	1
J3	6510000370	MR-DS-01 <SSC>	1
J4	6510000330	NR-DS-01 <SSC>	1
SP1	2510000761	SM-C77KY0208	1
MF1	2710000630	FBA08T12HC	1
W1**	8900019230	OPC-2025 (P1N20L80)	1
W2**	8900019440	OPC-2077 (P1N16L60)	1
W3**	8900017980	OPC-1341A (P1N30L70)	1
W4**	8900019230	OPC-2025 (P1N20L80)	1
W5**	8900015160	OPC-916A (P1N22L120)	1
W6**	8900019570	OPC-2085 (P0.5N40L150)	1
W7**	8900020210	OPC-2099 (P0.5N40L330S)	1
W8**	8900019270	OPC-2029 (P1N20L190)	1
W9**	8900019900	OPC-2135 (P1N20L100)	1
W10**	8900019290	OPC-2031 (P0.5N30L110)	1
W101**	8970025110	1.5D 300MM (#3183 CH W101)	1
W103**	8970025120	1.5D 150MM (#3183 CH W103)	1
W105**	8970025130	1.5D 300MM (#3183 CH W105)	1
W107**	8970024201	1.5DCOAXIAL300MM-1 C31/C31	1
W109**	8970025140	1.5D 320MM (#3183 CH W109)	1
W111**	8970025140	1.5D 320MM (#3183 CH W109)	1
W113**	8970025160	1.5D 320MM (#3183 CH W113)	1
W115**	8970025170	1.5D 420MM (#3183 CH W115)	1
W117**	8970025110	1.5D 300MM (#3183 CH W101)	1
W119**	8970024401	1.5DCOAXIAL360MM-1 C31/C31	1
W121**	8970024401	1.5DCOAXIAL360MM-1 C31/C31	1
W123**	8970025180	1.5D 150MM (#3183 CH W123)	1
W125**	8970024291	1.5DCOAXIAL150MM-1 C31/C31	1
W127**	8970025190	1.5D 250MM (#3183 CH W127)	1
W129**	8970024091	1.5DCOAXIAL210MM-1 C31/C31	1
W131**	8970024730	1.5DCOAXIAL 80MM C31/C31	1
W133**	8970024401	1.5DCOAXIAL360MM-1 C31/C31	1
W135**	8970024201	1.5DCOAXIAL300MM-1 C31/C31	1
W137**	8970024201	1.5DCOAXIAL300MM-1 C31/C31	1
W139**	8970024341	1.5DCOAXIAL190MM-1 C31/C31	1
W141**	8970024082	1.5DCOAXIAL180MM-2 C31/C31	1
W143**	8970025210	1.5DCOAXIAL250MM C31/C31	1
W145**	8970025200	1.5D 300MM (#3183 CH W145)	1
W1001**	8600037310	SX3183 P1001*P1002CH	1
W1021**	8600037320	SX3183 P1021*P1022CH	1
W1031**	8600037330	SX3183 P1031*P1032CH	1
W1041**	8600037340	SX3183 P1041*P1042CH	1
W1051**	8600037320	SX3183 P1021*P1022CH	1
W1061**	8600037350	SX3183 P1061*1062*1063*1064CH	1
W1081**	8600037420	SX3183 P1081*82*83CH 6G4	1
W1091**	8600037370	SX3183 P1091*P1092*P1093CH	1
W1101**	8600037380	SX3183 J1101*P1102CH	1
W1121**	8600037390	SX3183 P1121CH	1
W1111**	8900019310	OPC-2033	1
W1131**	8900019320	OPC-2034	1
EP1	6910021760	BH09062901 (FAN GUARD)	1
EP141	9064200040	VINYL TUBE 6 L=20MM	1
EP142	9064200040	VINYL TUBE 6 L=20MM	1
MP1	8010021550	3183 CHASSIS	1
MP2	8110009830	3183 U-COVERASSEMBLY	1
MP3	8110009781	3183 L-COVER-1	1
MP4	8510019470	3183 SHIELD COVER	1
MP7	8810006501	BIND M4 X20 ZK3	4
MP8	8510019490	3183 TUNER PLATE	1
MP9	8510019480	3183 PLL PLATE	1
MP10	8510019510	3183 BPF PLATE	1
MP11	8510019501	3183 BPF CASE-1	1
MP15	8810003361	SETSCREWC M3 X 6 ZC3	4
MP16	8930052450	2355 EARTH PLATE	4
MP18	8810008661	PHBT M3 X 8 NI-ZC3	8
MP19	8930077030	3073 MAIN STAND	2
MP20	8930077040	3073 SUB STAND	2
MP21	8810008661	PHBT M3 X 8 NI-ZC3	2
MP22	8930077020	3073 A-STAND SHEET	2
MP23	8930077490	3073 B-STAND SHEET	2
MP24	8930040590	RUBBER LEG (K)	2
MP25	8930077650	3073 SIDE HANDLE (5)	2
MP26	8810010870	FLAT M4 X12 ZK3	2
MP27	8930079690	RUBBER STAND (Q)	4
MP28	8820000530	FLANGE BOLT M4 X 8 NI	1
MP29	8850000140	FLAT WASHER M 4 NI BS	2
MP30	8850000430	S-WASHER M 4 NI	1
MP31	8810005771	BIND M3 X 8 ZK3BLACK	12
MP32	8810005771	BIND M3 X 8 ZK3BLACK	6
MP33	8810008661	PHBT M3 X 8 NI-ZC3	22
MP34	8810009651	FLATBT M3 X 8 NI-ZC3	4

[CHASSIS PARTS]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP35	8810008661	PHBT M3 X 8 NI-ZC3	7
MP36	8810008661	PHBT M3 X 8 NI-ZC3	8
MP37	8810003361	SETSCREWC M3 X 6 ZC3	5
MP38	8810008661	PHBT M3 X 8 NI-ZC3	7
MP39	8810008661	PHBT M3 X 8 NI-ZC3	1
MP40	8930027480	1126 TR-A CLIP Y124	1
MP41	8810008661	PHBT M3 X 8 NI-ZC3	9
MP42	8810008661	PHBT M3 X 8 NI-ZC3	7
MP43	8810008661	PHBT M3 X 8 NI-ZC3	9
MP44	8810008661	PHBT M3 X 8 NI-ZC3	5
MP45	8810005771	BIND M3 X 8 ZK3BLACK	5
MP46	8810008661	PHBT M3 X 8 NI-ZC3	4
MP47	8810008661	PHBT M3 X 8 NI-ZC3	9
MP48	8810008661	PHBT M3 X 8 NI-ZC3	13
MP49	8810007231	SETSCREWH M3 X 8 ZC3	2
MP50	8810007231	SETSCREWH M3 X 8 ZC3	4
MP51	8930075440	3015 RUG SPRING Y1115	2
MP52	8810008661	PHBT M3 X 8 NI-ZC3	17
MP54	8810007231	SETSCREWH M3 X 8 ZC3	2
MP55	8810007231	SETSCREWH M3 X 8 ZC3	4
MP57	8810007231	SETSCREWH M3 X 8 ZC3	4
MP59	8810007231	SETSCREWH M3 X 8 ZC3	2
MP60	8810007231	SETSCREWH M3 X 8 ZC3	4
MP62	8310050190	2355 ANT PLATE	1
MP63	8810007231	SETSCREWH M3 X 8 ZC3	1
MP64	8930080830	THERMAL SHEET (BV)TC300HSV1.4 (5X19.5)	1
MP65	8810008661	PHBT M3 X 8 NI-ZC3	4
MP66	8010021630	3183 MAIN CHASSIS	1
MP67	8930079060	3073 DC PLATE	1
MP68	8930067290	SHIELD SPONGE (AR)	1
MP71	8930015640	CODE HOLDER SX713	1
MP72	8930080990	3183 FAN SPRING Y1196	1
MP73	8930081060	3183 AL SHEET	1
MP74	8930067290	SHIELD SPONGE (AR)	1
MP75	8510019730	3183 DC-DC PLATE	1
MP76	8510019720	3183 DC-DC CASE	1
MP77	8810008661	PHBT M3 X 8 NI-ZC3	4
MP78	8810003361	SETSCREWC M3 X 6 ZC3	4
MP79	8810007231	SETSCREWH M3 X 8 ZC3	9
MP80	8950003640	COATING CLIP CS-2 (UL)	1
MP81	8930067290	SHIELD SPONGE (AR)	1
MP82	8930070510	THERMAL SHEET (BF)TC-600HS-1.4 (14.5X)	1
MP83	8930059122	THERMAL SHEET (AJ)-2 TC400TXS (7X7)	1
MP84	8930053461	THERMAL SHEET (Q)-1 TC500HS-1.4	1
MP85	8930053461	THERMAL SHEET (Q)-1 TC500HS-1.4	1
MP86	8930058840	SHIELD SPONGE (T)	1
MP87	8930067290	SHIELD SPONGE (AR)	1
MP88	8930063000	THERMAL SHEET (AQ) TC-700HS-1.4	1
MP89	8950003640	COATING CLIP CS-2 (UL)	1
MP90	8930053461	THERMAL SHEET (Q)-1 TC500HS-1.4	1
MP91	8930058840	SHIELD SPONGE (T)	1
MP92	8930015640	CODE HOLDER SX713	1
MP93	8510019940	3183 BPF SHIELD PLATE	1
MP94	8930043800	DOUBLE SIDE TAPE (S)	1
MP96**	8930083590	AL SHEET (AR)	1
MP97	8930081440	3183 SP S-DAMPER	1
MP98	8930082600	SHIELD SPONGE (CT)	1
MP99	8930081500	3183 SP B-SPONGE	2
MP100	8930082150	SPONGE (KZ)	1
MP101	8950003640	COATING CLIP CS-2 (UL)	1
MP102	8950003640	COATING CLIP CS-2 (UL)	1
MP103	8950003640	COATING CLIP CS-2 (UL)	1
MP104	8930078840	SHIELD SPONGE (CM)	1
MP105*	8930054470	FERRITE SHEET (I) 20X50X1	1
MP106	8950003640	COATING CLIP CS-2 (UL)	1
MP107	8930081420	SPONGE (KX)	1
MP108**	8930081420	SPONGE (KX)	1
MP109	8930081420	SPONGE (KX)	1
MP110	8930081420	SPONGE (KX)	1
MP111	8930081420	SPONGE (KX)	1
MP114	8930082150	SPONGE (KZ)	1
MP115**	8930081420	SPONGE (KX)	1
MP116**	8930028840	SPONGE (DF)	1
MP117	8930070510	THERMAL SHEET (BF)TC-600HS-1.4 (14.5X)	1
MP118	8930070510	THERMAL SHEET (BF)TC-600HS-1.4 (14.5X)	1
MP120	8930063000	THERMAL SHEET (AQ) TC-700HS-1.4	1
MP121	8930058170	SHIELD SPONGE (O)	1
MP122	8930058170	SHIELD SPONGE (O)	1
MP123	8930058170	SHIELD SPONGE (O)	1
MP124	8930076540	SHIELD SPONGE (CK)	1
MP125	8930058170	SHIELD SPONGE (O)	1
MP126	8930058840	SHIELD SPONGE (T)	1
MP127**	8930078840	SHIELD SPONGE (CM)	1

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

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

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

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510027480	S12B-ZR-SM4A-TF (LF) (SN)	1
J2*	6510027490	S11B-ZR-SM4A-TF (LF) (SN)	1
J3*	6510020081	52808-2071 (2090)	1
J5*	6510022472	40FLT-SM2-TB (LF) (SN) (M)	1
J6*	6510025270	S6B-PH-SM4-TB (LF) (SN)	1
J7*	6510023861	S9B-ZR-SM4A-TF (LF) (SN)	1
J8*	6510022472	40FLT-SM2-TB (LF) (SN) (M)	1
J9*	6510024111	52793-2070 (2090)	1
J10*	6510027500	S11B-PH-SM4-TB (LF) (SN)	1
J11*	6510024111	52793-2070 (2090)	1
J12*	6510027460	52793-3070	1
J13*	6510019371	B3B-ZR-SM4-TF (LF) (SN)	1
J1122*	6510019971	52808-1071	1
J3201*	6510018450	TMP-S01X-B1	1
J3202*	6510018450	TMP-S01X-B1	1
J3203*	6510018301	S2B-ZR-SM4A-TF (LF) (SN)	1
J3204*	6510023801	S4B-ZR-SM4A-TF (LF) (SN)	1
J3621*	6510018450	TMP-S01X-B1	1
J3671*	6510018450	TMP-S01X-B1	1
J3911*	6510018450	TMP-S01X-B1	1
J6001*	6510025540	AXK724127G	1
J6002*	6510023861	S9B-ZR-SM4A-TF (LF) (SN)	1
MP2001	8510019780	3183 A-MAIN CASE	1
MP2002	8510019790	3183 B-MAIN CASE	1
MP2003	8930081481	INSULATION SHEET (IA)-1	1
MP4001*	8510019900	3183 A-MAIN PLATE Y1200	1
MP5001*	8930083230	3183 C-MAIN PLATE Y1240	1
MP5005*	8930065741	2590 D-EARTH SPRING-1	1

[PLL UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP661*	8510019800	3183 FILTER CASE Y1191	1
MP671*	8930065741	2590 D-EARTH SPRING-1	1
MP701*	8510013140	2241 DC-A CASE	1
MP702*	8510005351	637 VCO SHIELD PLATE-1	1
MP703*	8930078840	SHIELD SPONGE (CM)	1
MP1051*	8510019110	3073 PLL CASE Y1140	1
MP1054*	8930050240	1632 PLL SPLING Y472	1
MP1060*	8930058170	SHIELD SPONGE (O)	1
MP1101*	8510012310	2157 DBM CASE	1
MP1171*	8930063970	SHIELD SPONGE (AM)	1
MP1172*	8510019880	3183 PLL CASE Y1197	1
MP1201*	8510018870	2355 C-SHIELD CASE Y1088	1
MP1202*	8930050240	1632 PLL SPLING Y472	1
MP1231*	8510018870	2355 C-SHIELD CASE Y1088	1
MP1232*	8930057931	SHIELD SPONGE (M)-1	1
MP1501*	8510013140	2241 DC-A CASE	1
MP1502*	8510005351	637 VCO SHIELD PLATE-1	1
MP1503*	8930063970	SHIELD SPONGE (AM)	1
MP1504*	8930078840	SHIELD SPONGE (CM)	1
MP1881*	8930065741	2590 D-EARTH SPRING-1	1
MP2001*	8510013140	2241 DC-A CASE	1
MP2002*	8510005351	637 VCO SHIELD PLATE-1	1
MP2003*	8930078840	SHIELD SPONGE (CM)	1
MP2004*	8930058510	INSULATION SHEET HC	1
MP2005*	8930058510	INSULATION SHEET HC	1
MP2006*	8930076750	RUBBER SHEET (CC)	1
MP2007*	8930043300	RUBBER SHEET (AG)	1
MP2008*	8930053940	RUBBER SHEET (AV)	1

[CONNECT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J101*	6510023720	LGY6501-0600C	1
J102*	6510023720	LGY6501-0600C	1
J151*	6510018961	B2B-PH-SM4-TB (LF) (SN)	1
J611*	6510023720	LGY6501-0600C	1
J751*	6510026540	UBB-4R-D14T-4D (LF) (SN)	1
J851*	6510027740	HSJ2462-010010	1
J1001*	6510022472	40FLT-SM2-TB (LF) (SN) (M)	1
J1002*	6510027040	B12B-PH-SM4-TB (LF) (SN)	1
J1003*	6510021261	B9B-ZR-SM4-TF (LF) (SN)	1
J1101*	6450001641	TCS5044-0141177	1
J1201*	6450001841	TCS7568-4320177	1
J1301*	6510023900	LGR4619-7000	1
J1401*	6450001130	JPJ2042-01-110	1
MP751*	8930083220	3182 JACK SPRING	[EUR] 1
	8930083220	3182 JACK SPRING	[EUR-01] 1
	8930083220	3182 JACK SPRING	[ITR] 1
	8930083220	3182 JACK SPRING	[ESP] 1
	8930083220	3182 JACK SPRING	[FRA] 1

[RF-A UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J301*	6510020081	52808-2071 (2090)	1
J451*	6510019991	52808-2271 (2291)	1
J501*	6510028210	SJ050010 (TMP-J01X-V6)	1
J701*	6510028210	SJ050010 (TMP-J01X-V6)	1
J741*	6510028210	SJ050010 (TMP-J01X-V6)	1
J801*	6510028210	SJ050010 (TMP-J01X-V6)	1
J931*	6510027650	AXN480C330P	1
J951*	6510027660	AXN380C038P	1
J1011*	6510028210	SJ050010 (TMP-J01X-V6)	1
J1141*	6510028210	SJ050010 (TMP-J01X-V6)	1
J1301*	6510014961	B2B-ZR-SM4-TF (LF) (SN)	1
EP911*	6910002161	CASE-BM7H-LF	1
EP913*	6910002161	CASE-BM7H-LF	1
MP651*	8510012400	2177 D/A CASE Y454	1
MP701*	8930024170	EARTH SPRING (G) Y072	1
MP702*	8930081180	3183 RF-A SPRING Y1199	1
MP911*	8930065741	2590 D-EARTH SPRING-1	1
MP1071*	6910001130	10MSHIELD CASE (P10L-A)	1
MP1101*	8510012400	2177 D/A CASE Y454	1
MP1121*	8510015900	2590 M-2LO CASE Y697	1
MP1201*	8510012400	2177 D/A CASE Y454	1
MP1701*	8510010760	1876 DDS CASE	1
MP1702*	8510010770	1876 DDS COVER	1

[PLL UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510022472	40FLT-SM2-TB (LF) (SN) (M)	1
J81*	6510019991	52808-2271 (2291)	1
J501*	6510028210	SJ050010 (TMP-J01X-V6)	1
J571*	6510028210	SJ050010 (TMP-J01X-V6)	1
J601*	6510028210	SJ050010 (TMP-J01X-V6)	1
J701*	6510028210	SJ050010 (TMP-J01X-V6)	1
J851*	6510028210	SJ050010 (TMP-J01X-V6)	1
J852*	6510028210	SJ050010 (TMP-J01X-V6)	1
J1171*	6510028210	SJ050010 (TMP-J01X-V6)	1
J1281*	6510028210	SJ050010 (TMP-J01X-V6)	1
J1301*	6510028210	SJ050010 (TMP-J01X-V6)	1
J1701*	6510028210	SJ050010 (TMP-J01X-V6)	1
J1801*	6510028210	SJ050010 (TMP-J01X-V6)	1
J1901*	6510028210	SJ050010 (TMP-J01X-V6)	1
W351	7030011280	J1/4ZC	1
W361	7030011280	J1/4ZC	1
W1051	7030011280	J1/4ZC	1
W1061	7030011280	J1/4ZC	1
EP151*	6910002161	CASE-BM7H-LF	1
EP354*	6910002161	CASE-BM7H-LF	1
EP1054*	6910002161	CASE-BM7H-LF	1
MP291*	8510019980	3183 B-VCO CASE Y1205	1
MP292	8510019990	3183 B-VCO COVER Y1206	1
MP293	8810008490	SETSCREWH M2.6X 8 NI	2
MP351*	8510019110	3073 PLL CASE Y1140	1
MP352*	8930025070	SPONGE (CW)	1
MP353*	8930001181	EARTH SPRING-1 (FX-22)	1
MP411*	8510006810	DC-DC CASE FX859	1

[RF-B UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510020001	52808-3071 (3090)	1
J52*	6510019981	52808-1671 (1690)	1
J101*	6510014961	B2B-ZR-SM4-TF (LF) (SN)	1
J201*	6510028210	SJ050010 (TMP-J01X-V6)	1
J381*	6510028210	SJ050010 (TMP-J01X-V6)	1
J501*	6510019371	B3B-ZR-SM4-TF (LF) (SN)	1
J601*	6510028210	SJ050010 (TMP-J01X-V6)	1
J1351*	6510028210	SJ050010 (TMP-J01X-V6)	1
J1491*	6510028210	SJ050010 (TMP-J01X-V6)	1
J1751*	6510028210	SJ050010 (TMP-J01X-V6)	1
J2351*	6510028210	SJ050010 (TMP-J01X-V6)	1
J2491*	6510028210	SJ050010 (TMP-J01X-V6)	1
EP731	6910002161	CASE-BM7H-LF	1
EP732	6910002161	CASE-BM7H-LF	1
EP1051	6910002161	CASE-BM7H-LF	1
MP211*	8510015900	2590 M-2LO CASE Y697	1
MP212*	8930057931	SHIELD SPONGE (M)-1	1
MP213*	8930070580	SHIELD SPONGE (BA)	1
MP214*	8510002280	VCO SHIELD (A) FX 15	[USA] 1
	8510002280	VCO SHIELD (A) FX 15	[TPE] 1
	8510002280	VCO SHIELD (A) FX 15	[KOR] 1
	8510002280	VCO SHIELD (A) FX 15	[CHN] 1
	8510002280	VCO SHIELD (A) FX 15	[EXP] 1
MP251	8510012400	2177 D/A CASE Y454	1

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

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

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

[RF-B UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP252*	8930065741	2590 D-EARTH SPRING-1	[USA] 1
	8930065741	2590 D-EARTH SPRING-1	[TPE] 1
	8930065741	2590 D-EARTH SPRING-1	[KOR] 1
	8930065741	2590 D-EARTH SPRING-1	[CHN] 1
	8930065741	2590 D-EARTH SPRING-1	[EXP] 1
MP255	8510012400	2177 D/A CASE Y454	1
MP256	8930083170	3183 C-EARTH SPRING	1
MP257	8930083170	3183 C-EARTH SPRING	1
MP381*	8930057870	2429 EARTH SPRING	1
MP501*	8930081340	FERRITE SHEET (AE)	1
MP601*	8510002280	VCO SHIELD (A) FX 15	1
MP611*	8510015900	2590 M-2LO CASE Y697	1
MP651*	8510012400	2177 D/A CASE Y454	1
MP655*	8510012400	2177 D/A CASE Y454	1
MP701*	6910001130	10MSHIELD CASE (P10L-A)	1
MP1051	8510010460	1691 MAIN SHIELD PLATE Y295	1
MP1052*	8510019870	3183 MIXER CASE Y1198	1
MP1201*	8510010460	1691 MAIN SHIELD PLATE Y295	1
MP1476*	8510002280	VCO SHIELD (A) FX 15	1
MP1501*	8510010460	1691 MAIN SHIELD PLATE Y295	1
MP1551*	8510013390	2355 MIX CASE	1
MP1611*	8510012400	2177 D/A CASE Y454	1
MP1612*	8930065741	2590 D-EARTH SPRING-1	1
MP1671*	8510018870	2355 C-SHIELD CASE Y1088	1
MP2051*	8510002020	MIXSHIELD CASE SX155	1
MP2052*	8930059380	SHIELD SPONGE (X)	1
MP2495*	8510010460	1691 MAIN SHIELD PLATE Y295	1
MP2496*	8930062740	2590 M-SPRING	1
MP2551*	8510012400	2177 D/A CASE Y454	1
MP2582*	8510020260	3183 FILTER A-CASE Y1241	1
MP2583*	8930031700	INSULATION DC	1
MP2584*	8930068000	SHIELD SPONGE (AT)	1
MP2601*	8510019800	3183 FILTER CASE Y1191	1
MP2701*	8510012400	2177 D/A CASE Y454	1
MP2801*	8510018870	2355 C-SHIELD CASE Y1088	1

[PA-A UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J201*	6510028210	SJ050010 (TMP-J01X-V6)	1
J351*	6510018921	B8B-PH-SM4-TB (LF) (SN)	1
J401*	6510020081	52808-2071 (2090)	1
J402*	6510020051	B11B-PH-SM4-TB (LF) (SN)	1
J403*	6510018921	B8B-PH-SM4-TB (LF) (SN)	1
J451*	6510014961	B2B-ZR-SM4-TF (LF) (SN)	1
J462*	6510018971	B4B-PH-SM4-TB (LF) (SN)	1
J1201*	6510028210	SJ050010 (TMP-J01X-V6)	1
F1*	5220000400	FHA010-01F	1
F3*	5210000940	1205	1
W1	9062700030	77/98/040/X98/X98	[EUR] 1
	9062700030	77/98/040/X98/X98	[EUR-01] 1
	9062700030	77/98/040/X98/X98	[ITR] 1
	9062700030	77/98/040/X98/X98	[ESP] 1
	9062700030	77/98/040/X98/X98	[FRA] 1
	9062700030	77/98/040/X98/X98	[EUR-01] 1
W2	9062700030	77/98/040/X98/X98	[EUR] 1
	9062700030	77/98/040/X98/X98	[EUR-01] 1
	9062700030	77/98/040/X98/X98	[ITR] 1
	9062700030	77/98/040/X98/X98	[ESP] 1
	9062700030	77/98/040/X98/X98	[FRA] 1
	9062700030	77/98/040/X98/X98	[EUR] 1
W3	9062700030	77/98/040/X98/X98	[EUR] 1
	9062700030	77/98/040/X98/X98	[EUR-01] 1
	9062700030	77/98/040/X98/X98	[ITR] 1
	9062700030	77/98/040/X98/X98	[ESP] 1
	9062700030	77/98/040/X98/X98	[FRA] 1
	9062700030	77/98/040/X98/X98	[EUR] 1
W4	9062700030	77/98/040/X98/X98	[EUR] 1
	9062700030	77/98/040/X98/X98	[EUR-01] 1
	9062700030	77/98/040/X98/X98	[ITR] 1
	9062700030	77/98/040/X98/X98	[ESP] 1
	9062700030	77/98/040/X98/X98	[FRA] 1
	9062700030	77/98/040/X98/X98	[FRA] 1
EP1*	6910020710	OT-047 M3	1
EP2*	6910020710	OT-047 M3	1
EP3*	6910020710	OT-047 M3	1
EP4*	6910020710	OT-047 M3	1
MP1*	8930075200	HIMELON SHEET (CY)	[EUR] 1
	8930075200	HIMELON SHEET (CY)	[EUR-01] 1
	8930075200	HIMELON SHEET (CY)	[ITR] 1
	8930075200	HIMELON SHEET (CY)	[ESP] 1
	8930075200	HIMELON SHEET (CY)	[FRA] 1
MP2*	8930075200	HIMELON SHEET (CY)	[EUR] 1
	8930075200	HIMELON SHEET (CY)	[EUR-01] 1
	8930075200	HIMELON SHEET (CY)	[ITR] 1
	8930075200	HIMELON SHEET (CY)	[ESP] 1
	8930075200	HIMELON SHEET (CY)	[FRA] 1
	8930075200	HIMELON SHEET (CY)	[FRA] 1

[PA-B UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J101*	6510028210	SJ050010 (TMP-J01X-V6)	1
J471*	6510028210	SJ050010 (TMP-J01X-V6)	1
J761*	6510028210	SJ050010 (TMP-J01X-V6)	1
J901*	6510019981	52808-1671 (1690)	1
J931*	6510018921	B8B-PH-SM4-TB (LF) (SN)	1
W431*	9045201001	74/98/040/X98/X98	1
W801*	7030012280	RD25T0R0	1
EP431*	6910000610	FSRH050100RN000B (FSOH050RN01)	1
EP432*	6910000610	FSRH050100RN000B (FSOH050RN01)	1
EP921*	6910020710	OT-047 M3	1
EP922*	6910020710	OT-047 M3	1
MP171*	8930065741	2590 D-EARTH SPRING-1	1
MP172*	8510015100	2577 SHIELD CASE Y659	1
MP173*	8930054900	2356 EARTH SPRING	1
MP252*	8930065741	2590 D-EARTH SPRING-1	1
MP253*	8930065741	2590 D-EARTH SPRING-1	1
MP301*	8860001490	3183 RUG Y1188	1
MP401*	8860001490	3183 RUG Y1188	1
MP402*	8860001490	3183 RUG Y1188	1
MP471*	8930065741	2590 D-EARTH SPRING-1	1
MP473*	8510019830	3183 PA-B CASE	1
MP701*	8860001490	3183 RUG Y1188	1
MP702*	8860001490	3183 RUG Y1188	1
MP731*	8930073550	2355 PLATE Y1053	1
MP771*	8930065741	2590 D-EARTH SPRING-1	1
MP772*	8930080960	3183 PA-B SPRING	1
MP803*	8930065741	2590 D-EARTH SPRING-1	1

[CTRL UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510028210	SJ050010 (TMP-J01X-V6)	1
J301*	6510028210	SJ050010 (TMP-J01X-V6)	1
J351*	6510028210	SJ050010 (TMP-J01X-V6)	1
J901*	6510020081	52808-2071 (2090)	1
J1001*	6510022031	B10B-ZR-SM4-TF (LF) (SN)	1
J1101*	6510021722	30FLT-SM2-TB (LF) (SN) (M)	1
J1201*	6510018971	B4B-PH-SM4-TB (LF) (SN)	1
J2101*	6510028210	SJ050010 (TMP-J01X-V6)	1
W2001*	7030012280	RD25T0R0	1
W2002*	7030012280	RD25T0R0	1
MP401*	8930065741	2590 D-EARTH SPRING-1	1
MP601*	8510002020	MIXSHIELD CASE SX155	1
MP701*	8510020170	2355 A-SHIELD CASE Y1226	1
MP702*	8510002280	VCO SHIELD (A) FX 15	1
MP2101*	8930057870	2429 EARTH SPRING	1

[NETWORK UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510028210	SJ050010 (TMP-J01X-V6)	1
J91*	6510028210	SJ050010 (TMP-J01X-V6)	1
J201*	6510021722	30FLT-SM2-TB (LF) (SN) (M)	1
MF1	2710000800	MP24ZA (STEPPING MOTOR)	1
MF2	2710000800	MP24ZA (STEPPING MOTOR)	1
MP1	8930041091	1876 A-ANGLE-1	1
MP2	8810008661	PHBT M3 X 8 NI-ZC3	1
MP3	8810009061	FLAT M3 X 6 ZK3	4
MP4	8930041111	1876 B-ANGLE-1	1
MP5	8810009061	FLAT M3 X 6 ZK3	2
MP6	8820000881	1528 SCREW-1	4
MP7	8930030112	1414 PLATE-2	2
MP8	8950003200	UJ6-5 (UNIVERSAL COUPLING)	2
MP9*	8930051580	2178 TUNER PLATE Y503	1

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

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

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

[FRONT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
W1**	8900019300	OPC-2032 (P1N6L50)	1
W2**	8900018000	OPC-1344A (P1N10L70)	1
W3**	8900018000	OPC-1344A (P1N10L70)	1
W4**	8900018000	OPC-1344A (P1N10L70)	1
W5**	8900019300	OPC-2032 (P1N6L50)	1
W6**	8900019300	OPC-2032 (P1N6L50)	1
W7**	8900019300	OPC-2032 (P1N6L50)	1
EP1	0880002780	EX-3210 #01 (MAIN DIAL)	1
EP2	6910015650	S-G2218-3#01 (MOUNT PLATE) 0	1
EP3	6910015650	S-G2218-3#01 (MOUNT PLATE) 0	1
MP1	8210025750	3183 FRONT PANELASSEMBLY	1
MP2	8010021650	3183 SUB CHASSISASSEMBLY	1
MP4	8310074220	3183 WINDOW PLATE	1
MP5	8930079310	3183 KEYBOARD (SHJ)	1
MP6	8610014060	KNOB K-295	1
MP7	8610014050	KNOB K-294	1
MP9	8610014090	KNOB K-293	1
MP10	8610014020	KNOB K-290	1
MP11	8610014030	KNOB K-291	1
MP12	8610014040	KNOB K-292	1
MP13	8610014110	KNOB N-379 (A)	3
MP14	8610014080	KNOB K-297	1
MP15	8610014070	KNOB K-296	1
MP16	8610014100	KNOB N-378 (A)	2
MP18	8610013922	KNOB N-268ASSEMBLY (A)-2	1
MP20	8930076900	3073 D-RUBBER (TOP)	1
MP27	8930076910	3073 BRAKE BUTTON	1
MP28	8930077360	3073 BRAKE PAD	2
MP29	8610011830	KNOB N301	3
MP30	8610013290	KNOB N-361	2
MP31	8610014140	KNOB N-380ASSEMBLY (A)	1
MP32	8810008761	PHBT M2 X 8 NI-ZC3	17
MP34	8810008661	PHBT M3 X 8 NI-ZC3	10
MP35	8930081070	3183 WINDOW SHEET	1
MP38	8930082280	SPONGE (LB)	1
MP39	8930071490	2242 F-SPONGE	1
MP40	8930071490	2242 F-SPONGE	1
MP41	8930082320	SPONGE (LC)	1
MP42	8930082320	SPONGE (LC)	1
MP43	8950003640	COATING CLIP CS-2 (UL)	1
MP44**	8930025070	SPONGE (CW)	1

[DISPLAY UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
R722*	7210003370	R0904N-B10KL-20KQ-R1080<SKD>	1
R724*	7210003370	R0904N-B10KL-20KQ-R1080<SKD>	1
R726*	7210003370	R0904N-B10KL-20KQ-R1080<SKD>	1
R728*	7210003370	R0904N-B10KL-20KQ-R1080<SKD>	1
J1*	6510020081	52808-2071 (2090)	1
J21*	6510019971	52808-1071	1
J31*	6510019971	52808-1071	1
J32*	6510015541	B4B-ZR-SM4-TF (LF) (SN)	1
J51*	6510019971	52808-1071	1
J61*	6510027290	52808-0671	1
J71*	6510027290	52808-0671	1
J81*	6510027290	52808-0671	1
J91*	6510027290	52808-0671	1
J101*	6510018971	B4B-PH-SM4-TB (LF) (SN)	1
J111	6510003401	B04B-EH-S (LF) (SN)	1
J281*	6510019971	52808-1071	1
J451*	6510027390	40FHY-RSM1-GAN-TF (LF) (SN)	1
J452*	6510027390	40FHY-RSM1-GAN-TF (LF) (SN)	1
J453*	6510027400	50FHY-RSM1-GAN-TF (LF) (SN)	1
J454*	6510027400	50FHY-RSM1-GAN-TF (LF) (SN)	1
J455*	6510027400	50FHY-RSM1-GAN-TF (LF) (SN)	1
DS111	5080000421	MBS 3 UA1W 70N ASSY	1
DS451	5030003350	TSC2G0369-E <SKD>	1
S601*	2260002740	LS8J2M-T	1
S602*	2260002740	LS8J2M-T	1
S603*	2260002740	LS8J2M-T	1
S604*	2260002740	LS8J2M-T	1
S611*	2260002740	LS8J2M-T	1
S612*	2260002740	LS8J2M-T	1
S613*	2260002740	LS8J2M-T	1
S614*	2260002740	LS8J2M-T	1
S621*	2260002740	LS8J2M-T	1
S622*	2260002740	LS8J2M-T	1
S623*	2260002740	LS8J2M-T	1
S624*	2260002740	LS8J2M-T	1
S631*	2260002740	LS8J2M-T	1
S632*	2260002740	LS8J2M-T	1
S633*	2260002740	LS8J2M-T	1
S634*	2260002740	LS8J2M-T	1
S641*	2260002740	LS8J2M-T	1

[DISPLAY UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
S642*	2260002740	LS8J2M-T	1
S643*	2260002740	LS8J2M-T	1
S644*	2260002740	LS8J2M-T	1
S651*	2260002740	LS8J2M-T	1
S652*	2260002740	LS8J2M-T	1
S653*	2260002740	LS8J2M-T	1
S654*	2260002740	LS8J2M-T	1
S661*	2260002740	LS8J2M-T	1
S662*	2260002740	LS8J2M-T	1
S663*	2260002740	LS8J2M-T	1
S664*	2260002740	LS8J2M-T	1
S671*	2260002740	LS8J2M-T	1
S673*	2260002740	LS8J2M-T	1
S681*	2260002740	LS8J2M-T	1
S682*	2260002740	LS8J2M-T	1
S683*	2260002740	LS8J2M-T	1
S691*	2260002740	LS8J2M-T	1
S692*	2260002740	LS8J2M-T	1
S693*	2260002740	LS8J2M-T	1
S694*	2260002740	LS8J2M-T	1
S695*	2260002740	LS8J2M-T	1
S701*	2260002740	LS8J2M-T	1
S702*	2260002740	LS8J2M-T	1
S703*	2260002740	LS8J2M-T	1
S704*	2260002740	LS8J2M-T	1
S711*	2260002740	LS8J2M-T	1
S712*	2260002740	LS8J2M-T	1
S713*	2260002740	LS8J2M-T	1
S714*	2260002740	LS8J2M-T	1
S731*	2260002740	LS8J2M-T	1
S732*	2260002740	LS8J2M-T	1
S733*	2260002740	LS8J2M-T	1
S734*	2260002740	LS8J2M-T	1
S735*	2260002740	LS8J2M-T	1
S736*	2260002740	LS8J2M-T	1
T113*	5910001150	6373-T170 (CEPH145B)	1
MP111*	8510019770	3183 CFL CASE	1
MP112*	8930081100	THERMAL SHEET (BX)TC1000HS1.4 (6.8X13	1
MP451	8930079340	3183 LCD HOLDER	1
MP452	8930083250	3183 LCD A-SPONGE	1
MP453	8210025710	3183 REFLECTOR	1
MP454	8930079370	3183 WHITE SHEET	1
MP455	8930079730	3183 LCD FILTER	1
MP456	8930074720	SPONGE (JX)	4

[VR-A UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J2*	6510027290	52808-0671	1
S1	2250000410	TP90D96E20-30F-2178-1	1

[VR-B UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J2*	6510019971	52808-1071	1

[PBT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510027290	52808-0671	1
S1	2250000410	TP90D96E20-30F-2178-1	1

[M-CH UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510027290	52808-0671	1
S1	2250000410	TP90D96E20-30F-2178-1	1

[RIT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510027290	52808-0671	1
S1	2250000650	EVEGC2F2524B	1

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

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

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

[JACK UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510020711	52793-1070 (1090)	1
J2	6510027890	01J0370-00	1
J102	6510023900	LGR4619-7000	1

[MIC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510000191	FM214-8SS (P)-1	1
J2*	6510019971	52808-1071	1

[BPF UNIT]

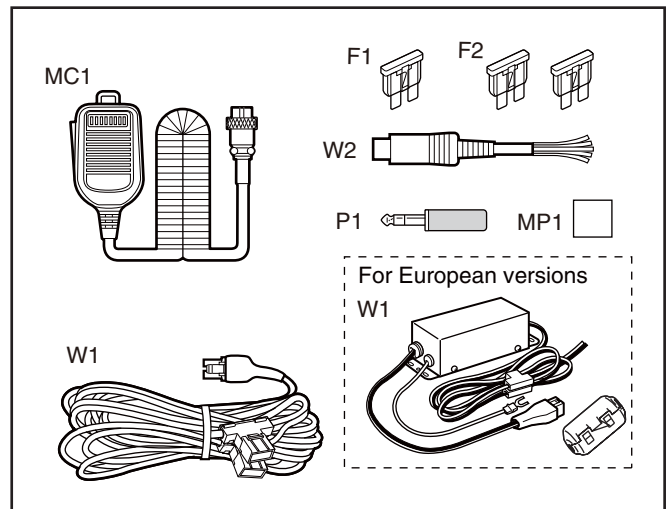
REF NO.	ORDER NO.	DESCRIPTION	QTY.
J141	6510028210	SJ050010 (TMP-J01X-V6)	1
J201	6510028210	SJ050010 (TMP-J01X-V6)	1
J301	6510028210	SJ050010 (TMP-J01X-V6)	1
J302*	6510020081	52808-2071 (2090)	1
MP31	8930062740	2590 M-SPRING	1

[DC-DC UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1*	6510019121	S8B-PH-SM4-TB (LF) (SN)	1
F201*	5210001050	ICP-S0.5TN	1
F202*	5210001040	ICP-S1.2TN	1
F302*	5210001040	ICP-S1.2TN	1
MP201	8510015740	2590 DC-DC B-CASE Y687	1
MP202	8510015750	2590 DC-DC B-PLATE Y689	1
MP301	8510015740	2590 DC-DC B-CASE Y687	1
MP302	8510015750	2590 DC-DC B-PLATE Y689	1
MP401	8930059021	THERMAL SHEET (AI)-1 TC-100HS-1.4	1
MP402	8930059021	THERMAL SHEET (AI)-1 TC-100HS-1.4	1
MP403	8930062220	THERMAL SHEET (AO)TC-200HS-1.4 (29X48)	1
MP404	8930062220	THERMAL SHEET (AO)TC-200HS-1.4 (29X48)	1

[ACCESSORIES]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
P1	5610000410	AP-319	1
F1	5210000840	ATC-30	2
F2	5210000940	1205	1
MC1	(Optional)	HM-36	1
W1	8900013980	OPC-1457	[USA] 1
	8900013980	OPC-1457	[TPE] 1
	8900013980	OPC-1457	[KOR] 1
	8900013980	OPC-1457	[CHN] 1
	8900013980	OPC-1457	[EXP] 1
	0880003060	OPC-2095	[EUR] 1
	0880003060	OPC-2095	[EUR-01] 1
	0880003060	OPC-2095	[ITR] 1
	0880003060	OPC-2095	[ESP] 1
	0880003060	OPC-2095	[FRA] 1
W2	8900006110	OPC-596	1
EP1	6910011941	ZCAT2436-1330A-BK	[EUR] 1
	6910011941	ZCAT2436-1330A-BK	[EUR-01] 1
	6910011941	ZCAT2436-1330A-BK	[ITR] 1
	6910011941	ZCAT2436-1330A-BK	[ESP] 1
	6910011941	ZCAT2436-1330A-BK	[FRA] 1
MP1	8930080210	DOUBLE SIDE TAPE (BG)	1

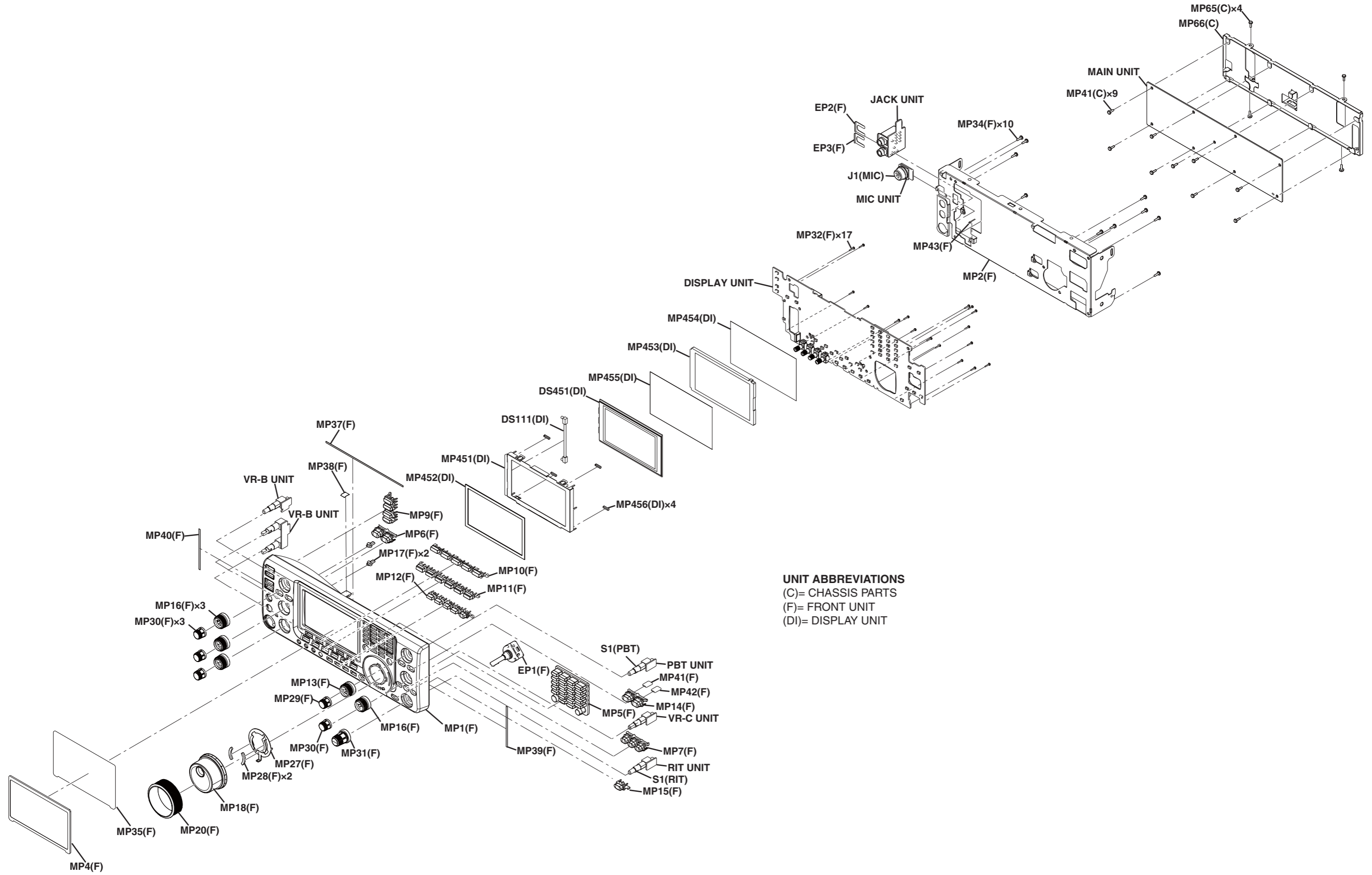


*: Refer to "BOARD LAYOUTS" for the location.

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

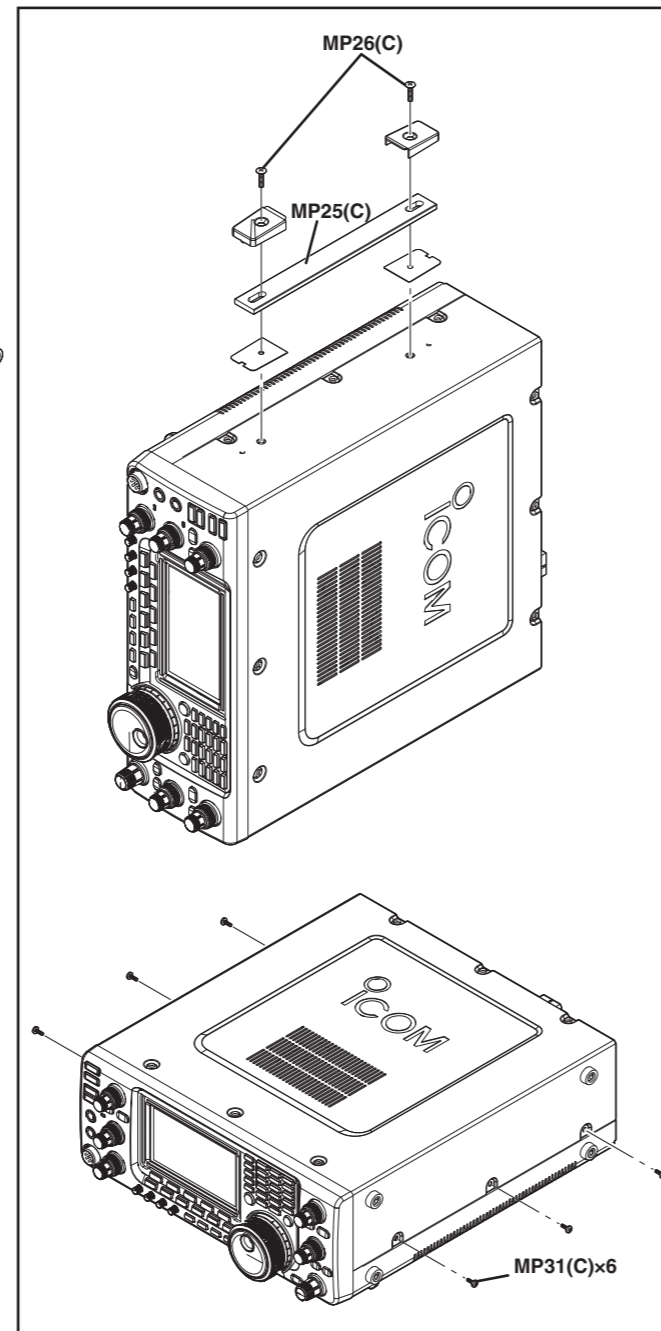
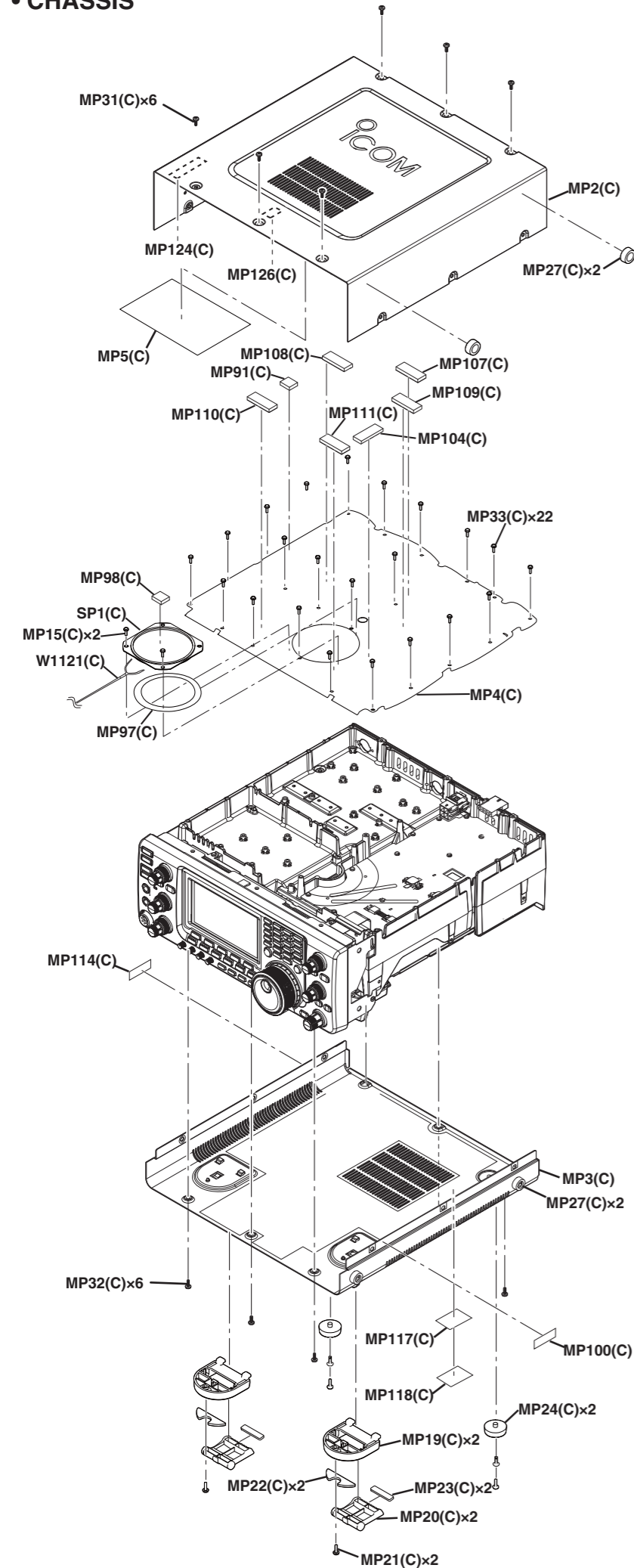
Screw abbreviations A, B0, BT: Self-tapping PH: Pan head ZK: Black NI-ZU: Nickel-Zinc SUS: Stainless

• FRONT UNIT

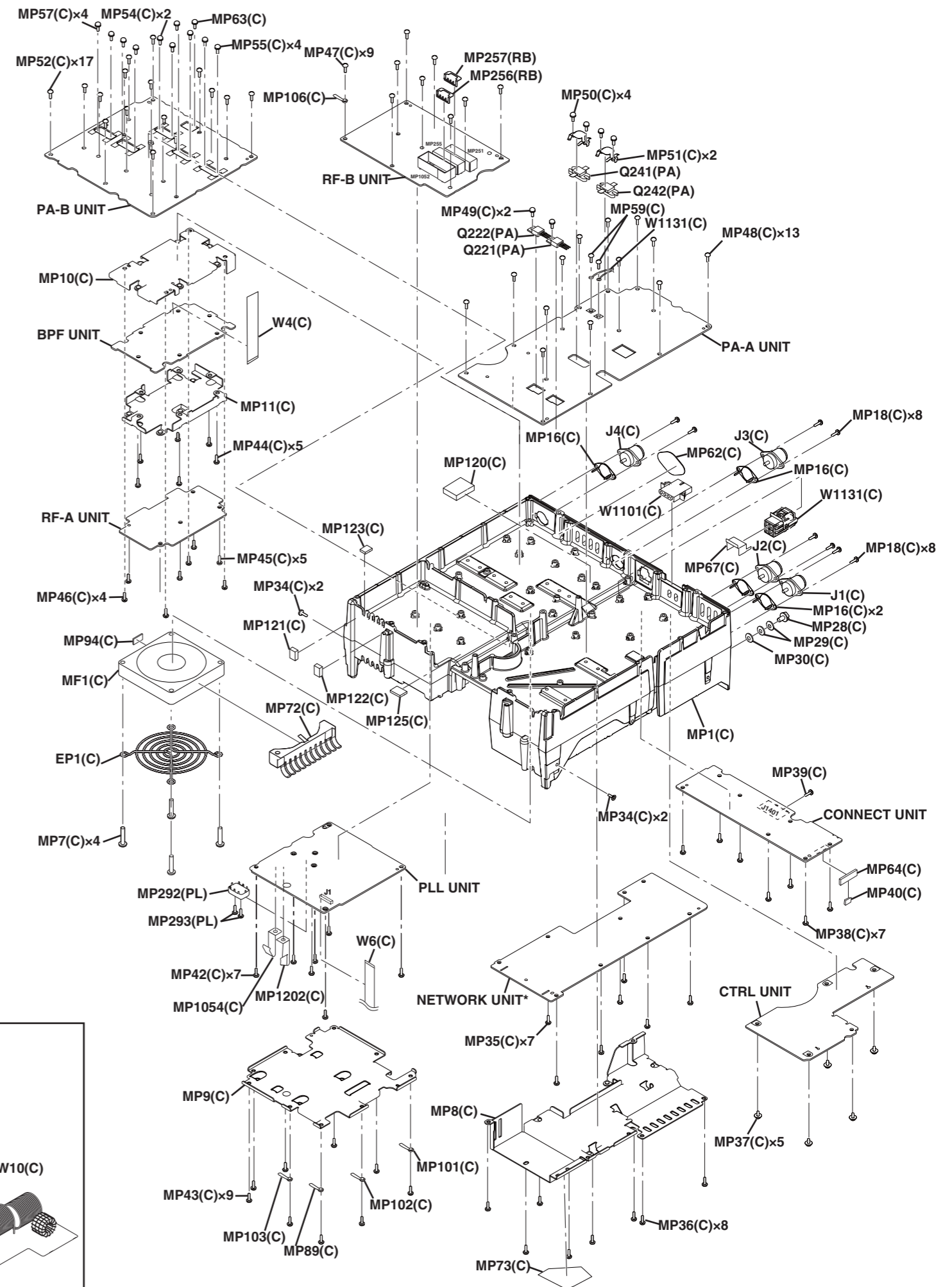
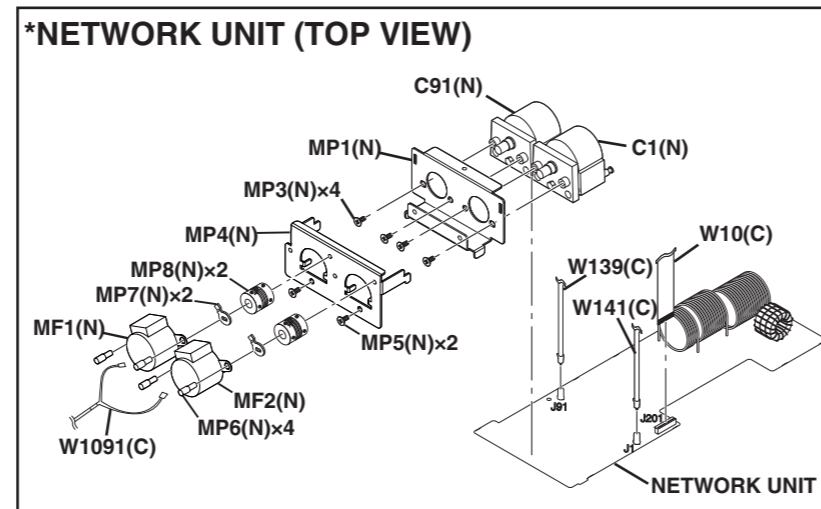


UNIT ABBREVIATIONS
 (C)= CHASSIS PARTS
 (F)= FRONT UNIT
 (DI)= DISPLAY UNIT

• CHASSIS

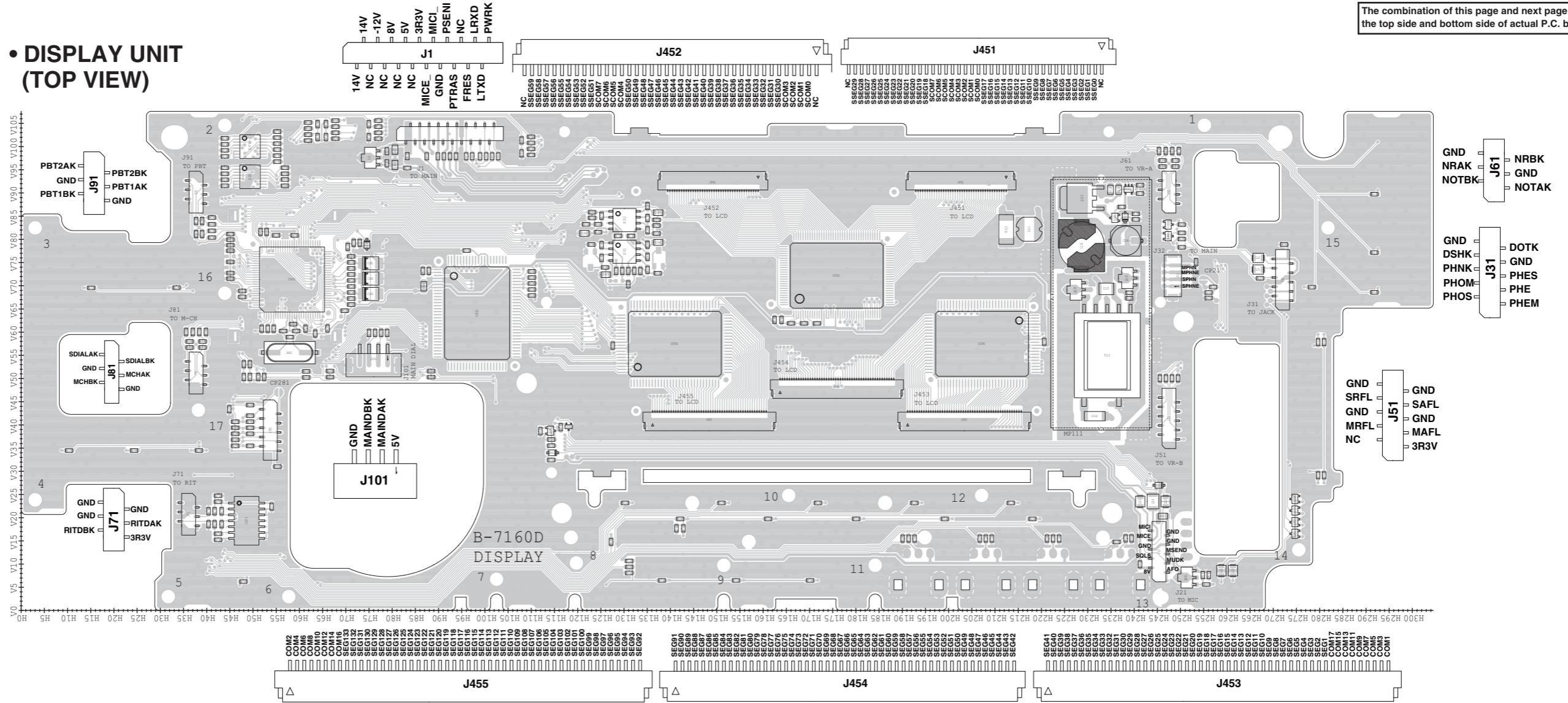


UNIT ABBREVIATIONS
 (C) = CHASSIS PARTS
 (PL) = PLL UNIT
 (PA) = PA-A UNIT
 (PB) = PA-B UNIT
 (RA) = RF-A UNIT
 (RB) = RF-B UNIT
 (N) = NETWORK UNIT

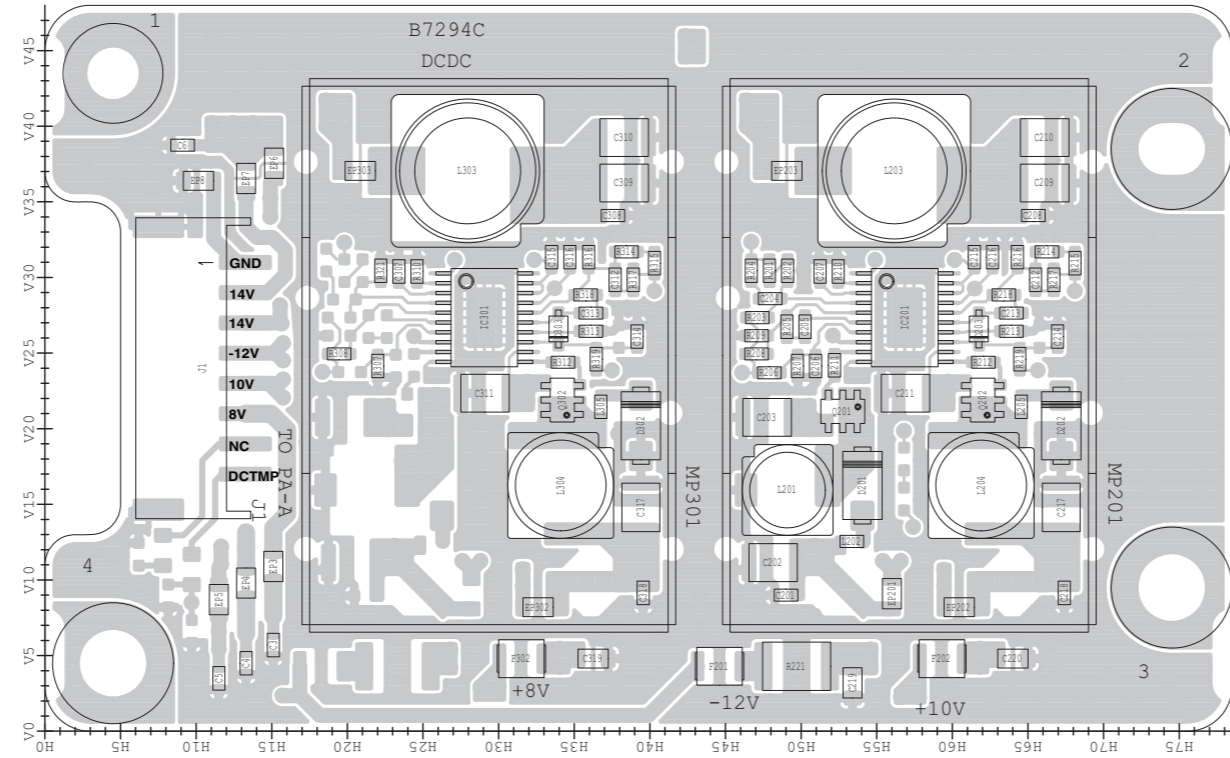


The combination of this page and next page shows the top side and bottom side of actual P.C. board.

• DISPLAY UNIT (TOP VIEW)

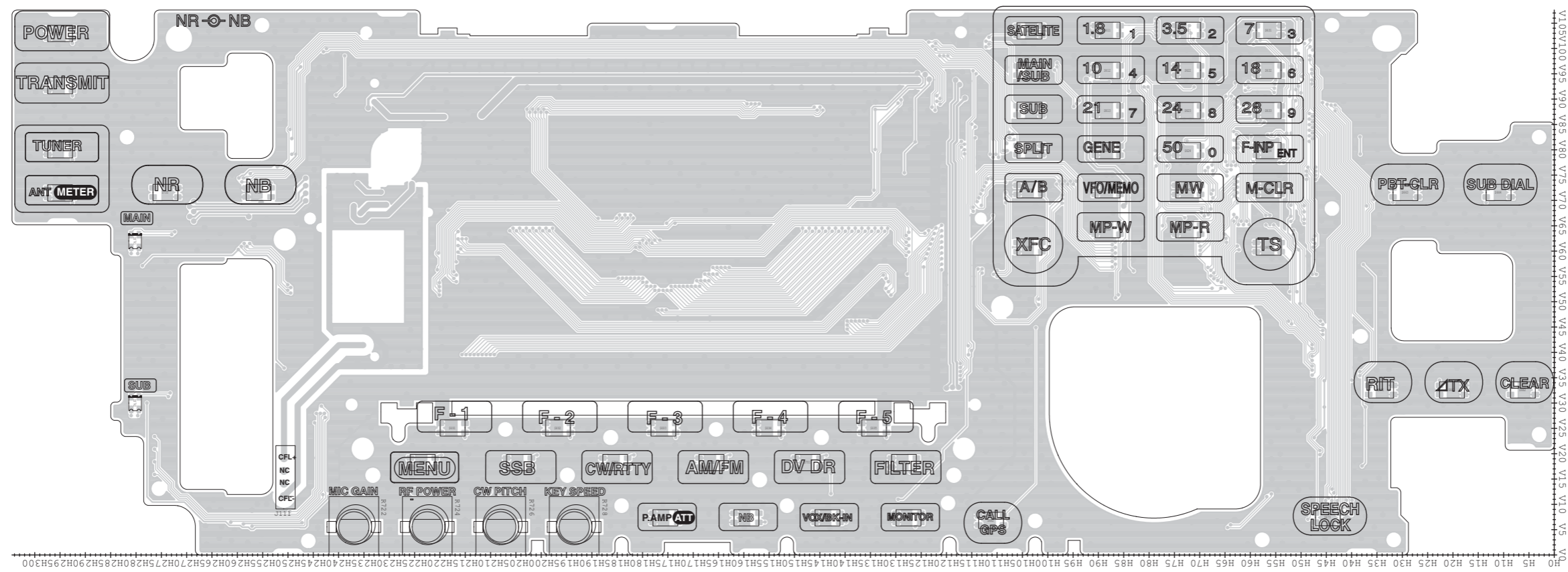


• DC-DC UNIT (TOP VIEW)

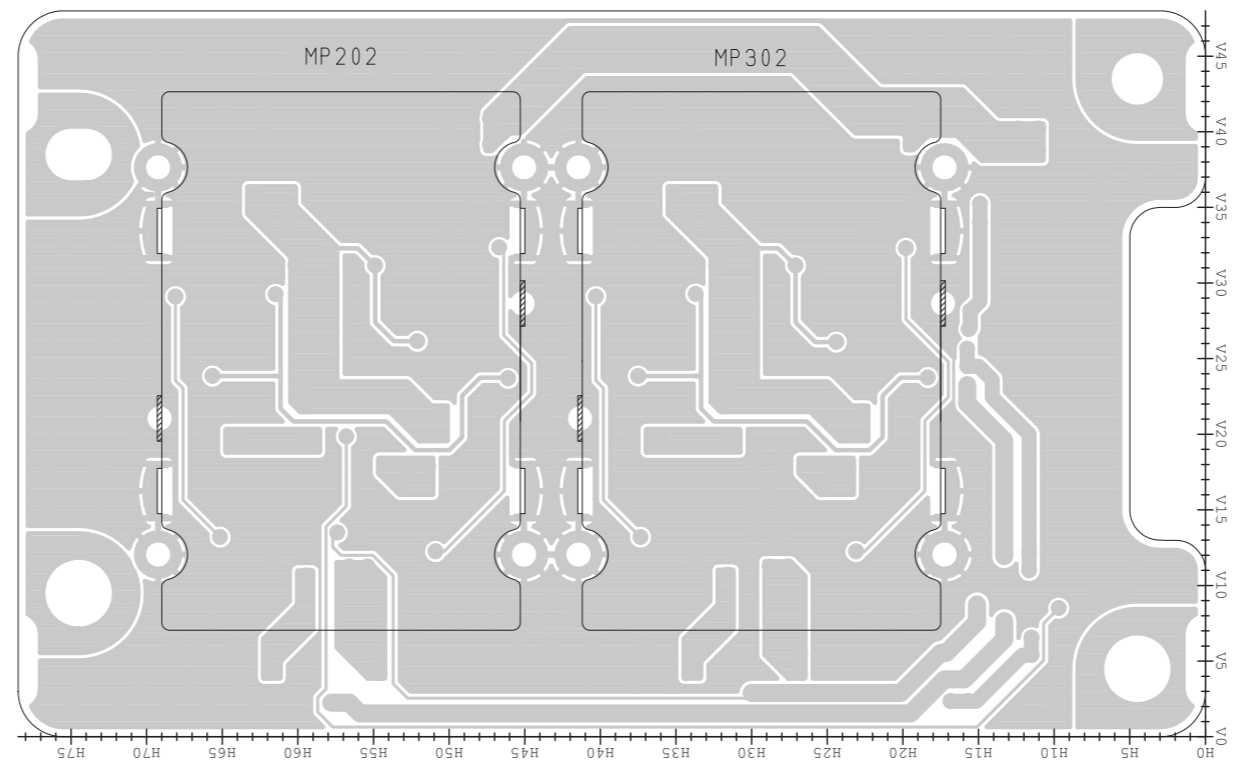


The combination of this page and next page shows the top side and bottom side of actual P.C. board.

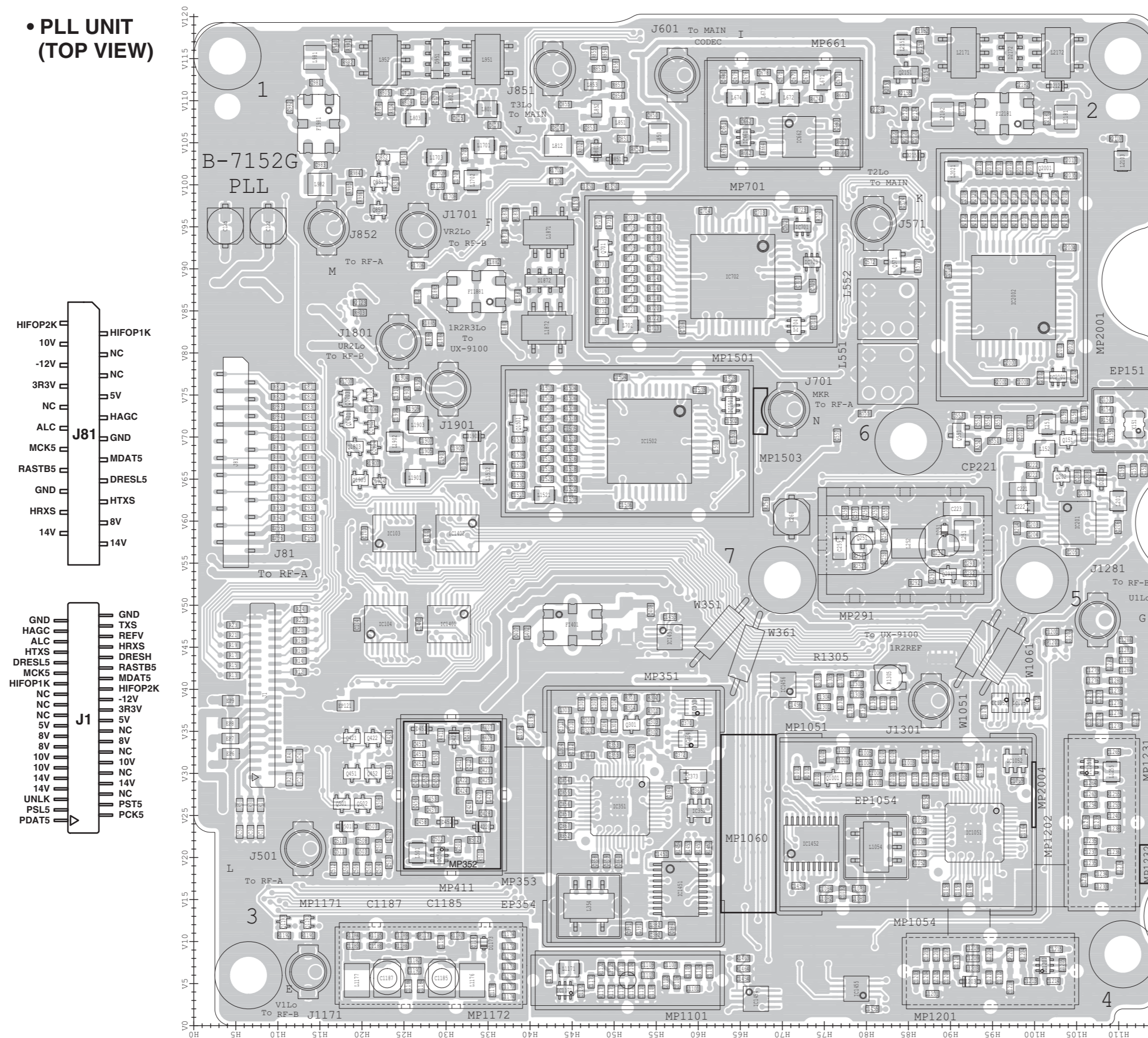
• **DISPLAY UNIT
(BOTTOM VIEW)**



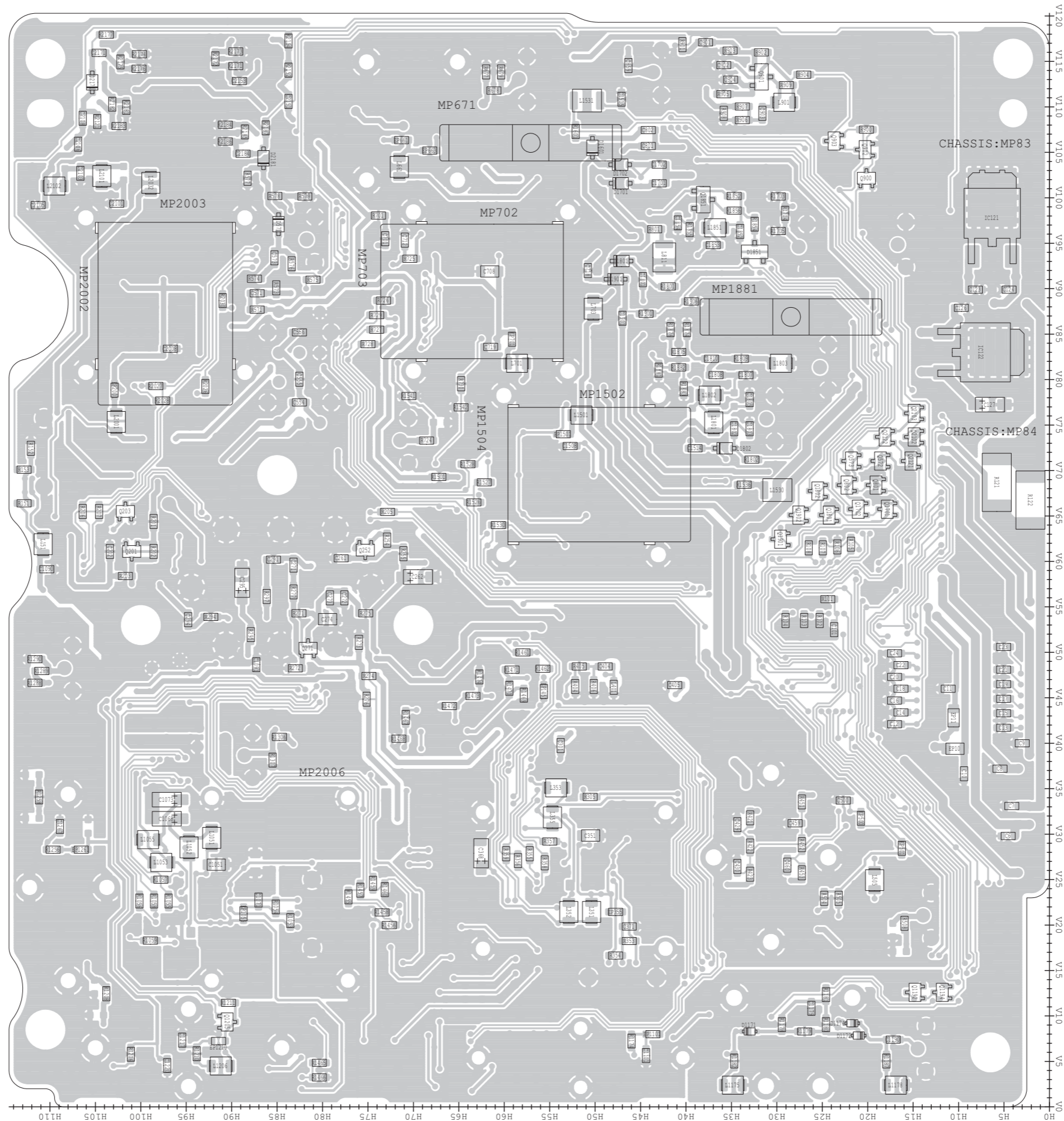
• **DC-DC UNIT
(BOTTOM VIEW)**



**• PLL UNIT
(TOP VIEW)**



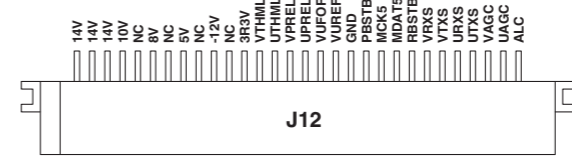
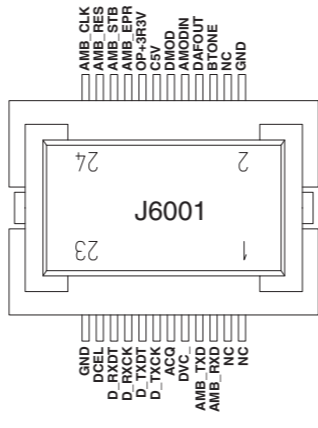
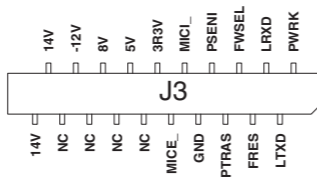
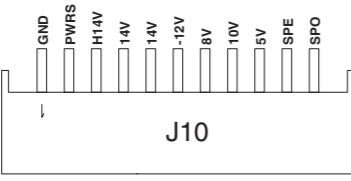
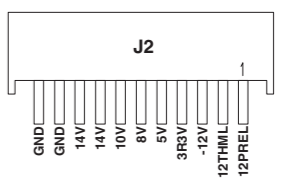
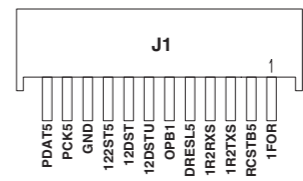
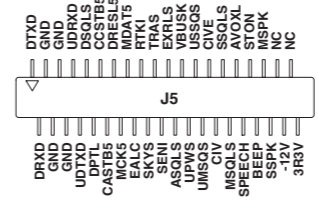
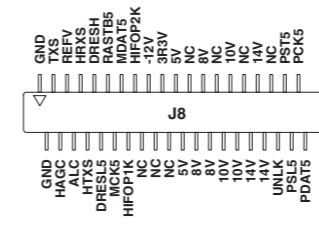
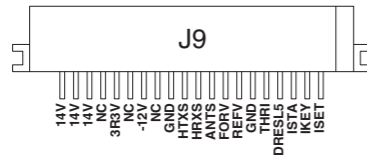
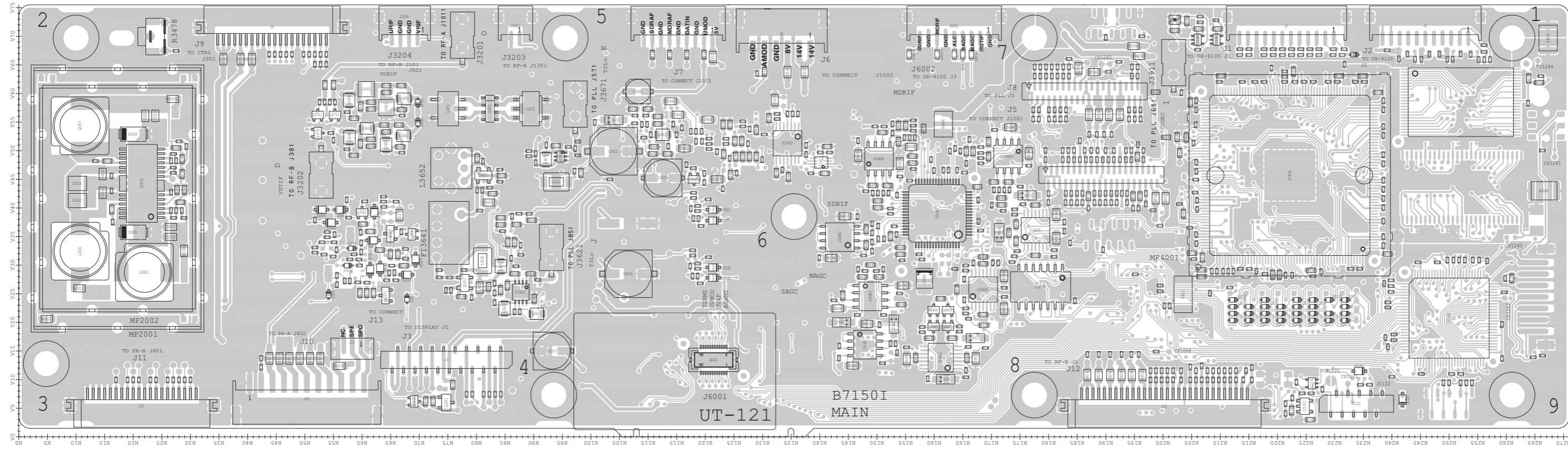
• PLL UNIT
(BOTTOM VIEW)



The combination of this page and next page shows
the top side and bottom side of actual P.C. board.

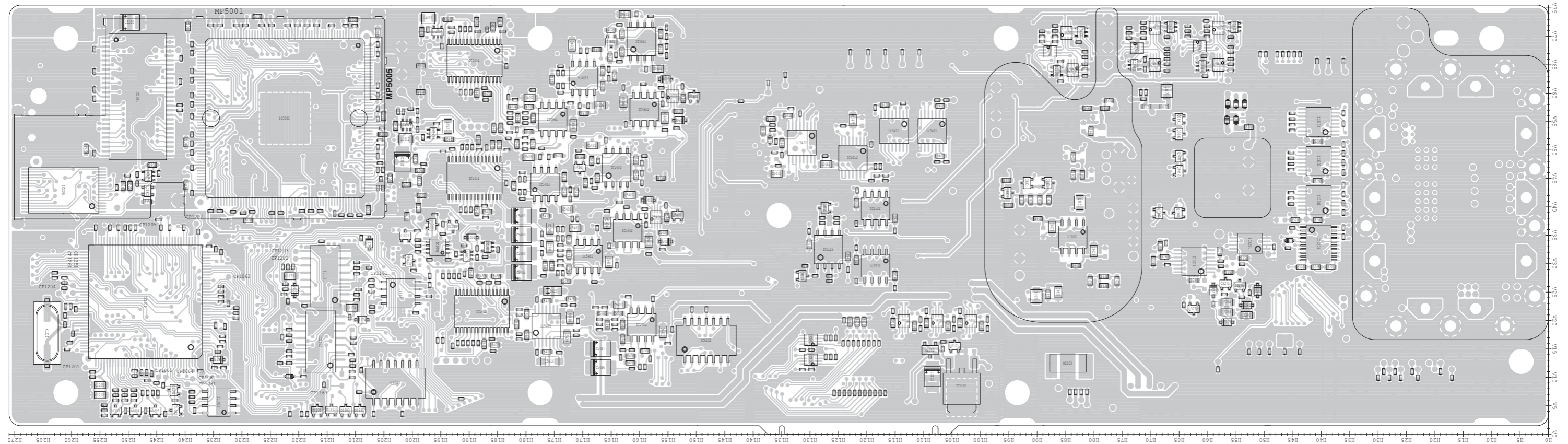
The combination of this page and next page shows the top side and bottom side of actual P.C. board.

• MAIN UNIT (TOP VIEW)

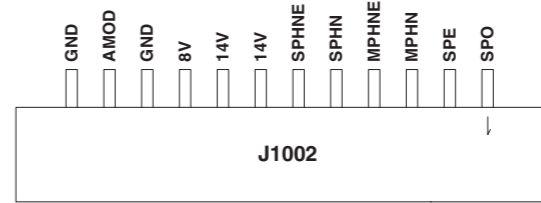
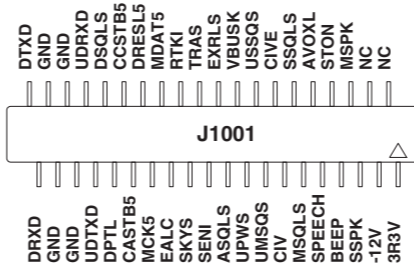
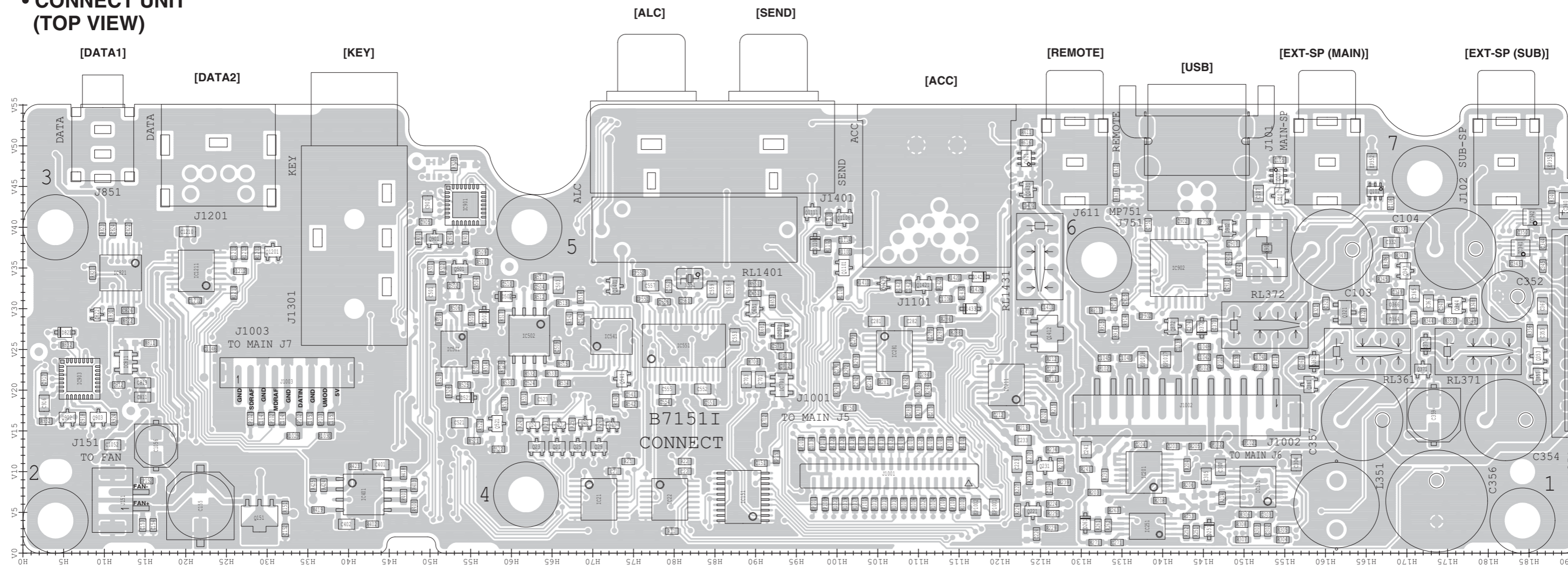


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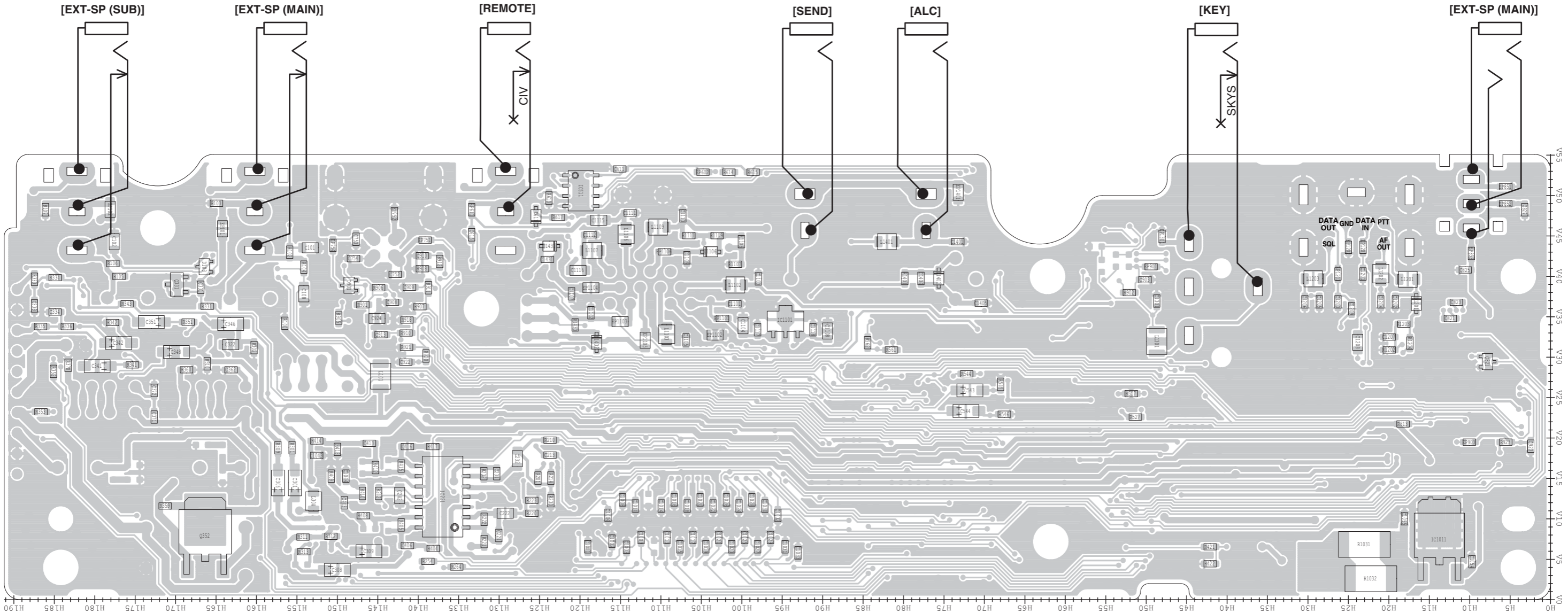
• MAIN UNIT
(BOTTOM VIEW)



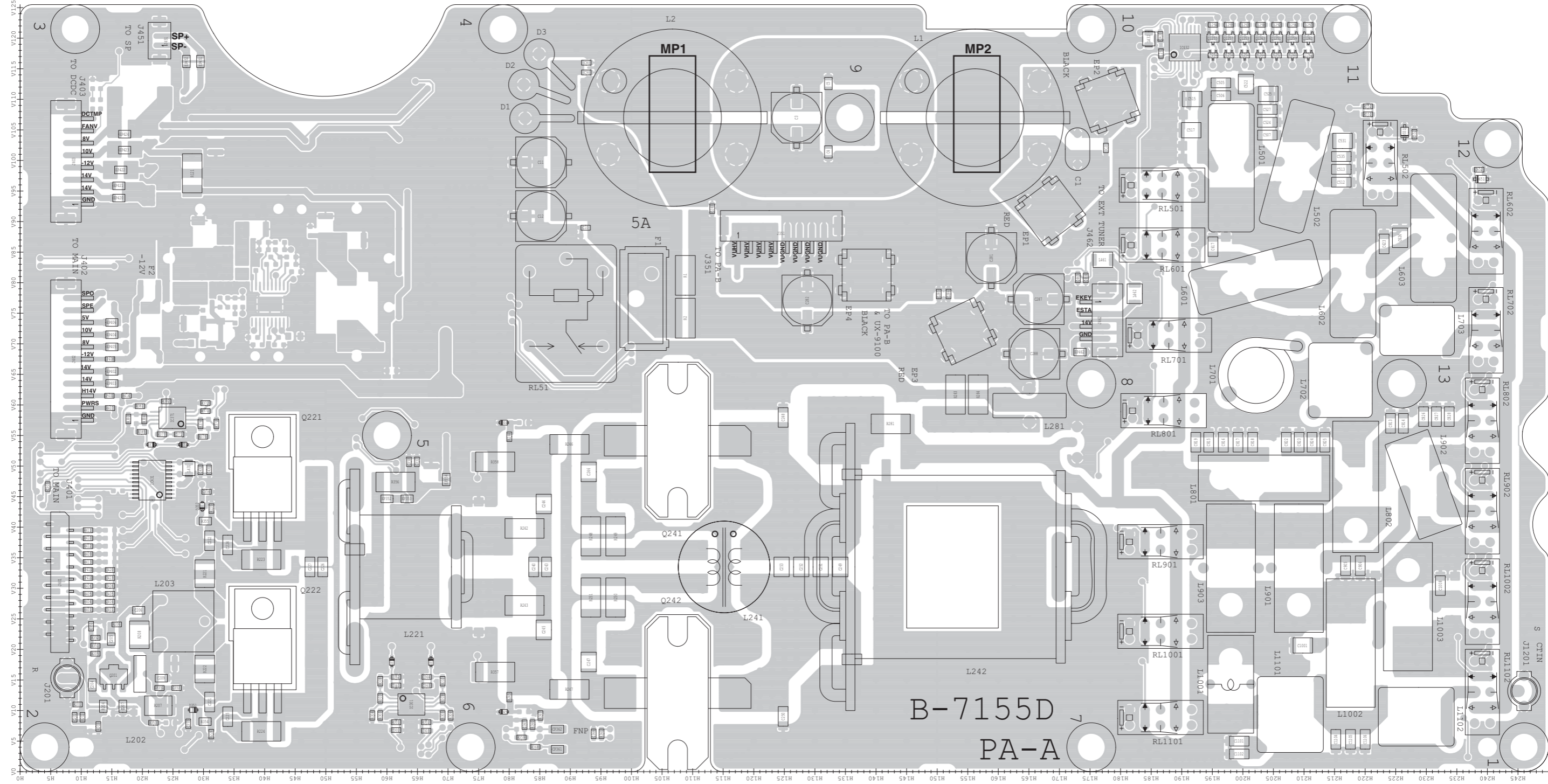
• CONNECT UNIT
(TOP VIEW)



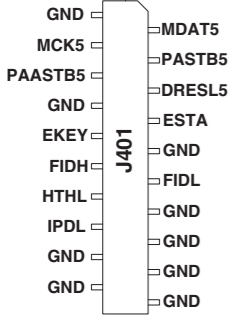
• CONNECT UNIT
(BOTTOM VIEW)



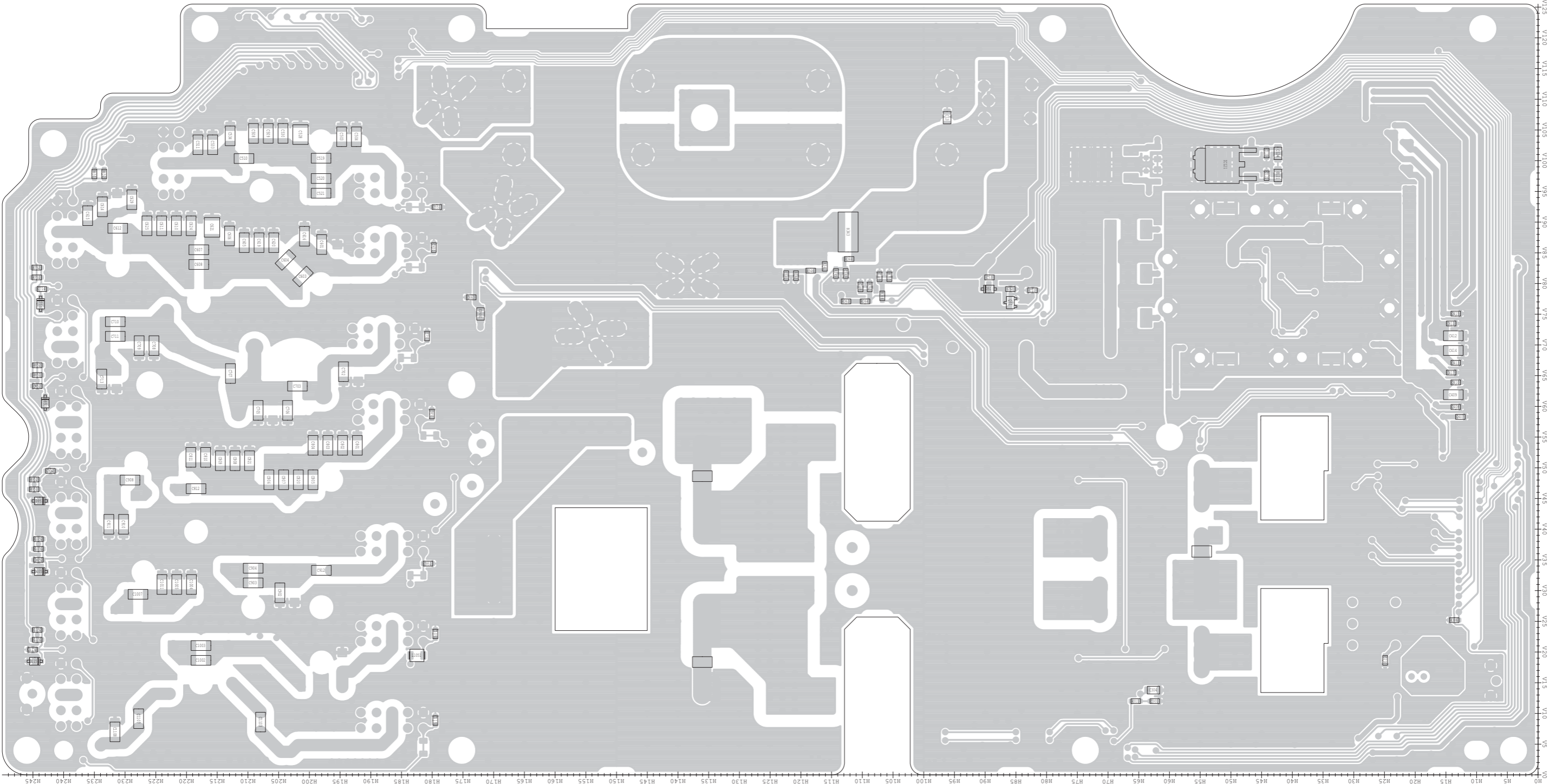
• PA-A UNIT
(TOP VIEW)



B-7155D
PA-A

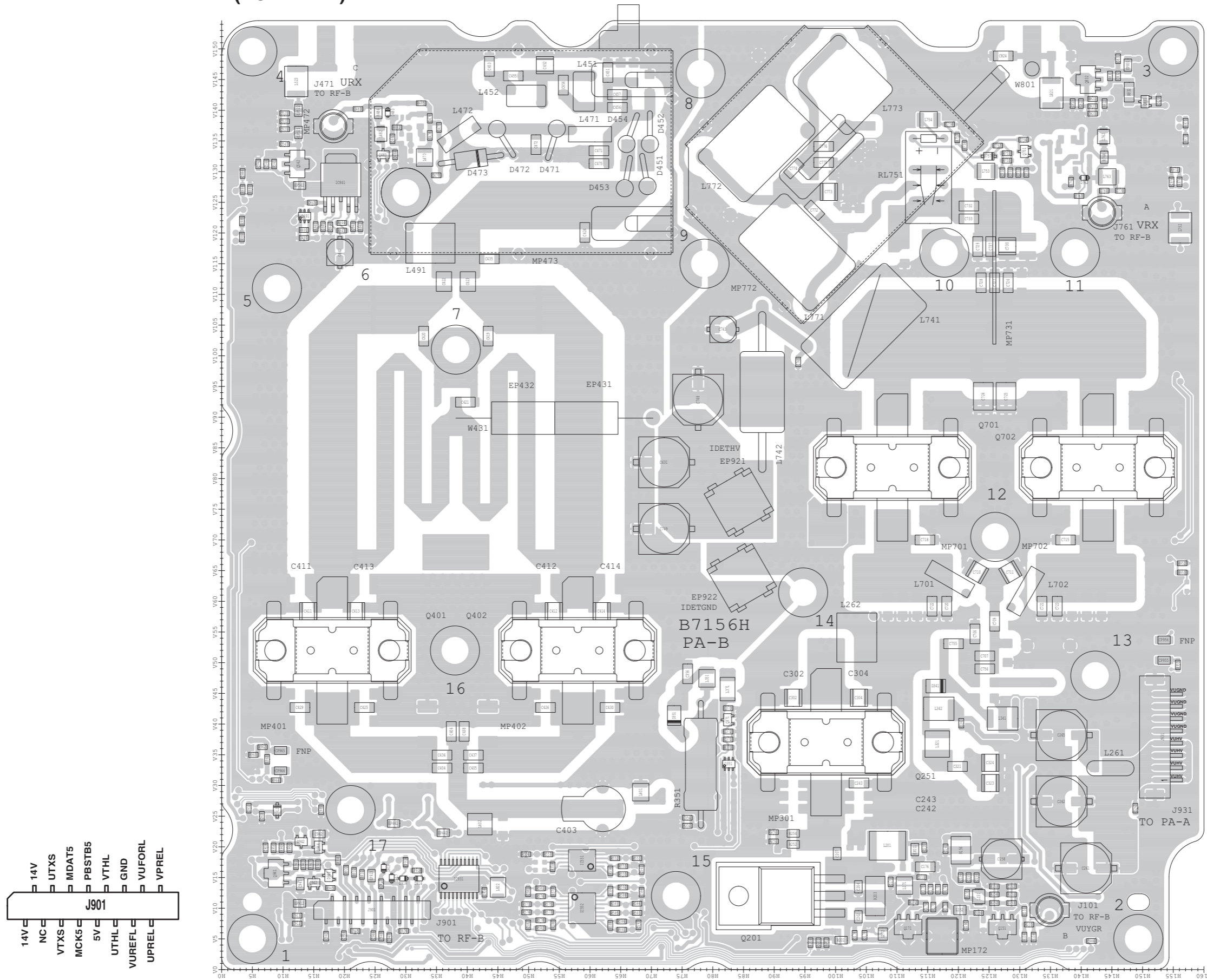


• PA-A UNIT
(BOTTOM VIEW)



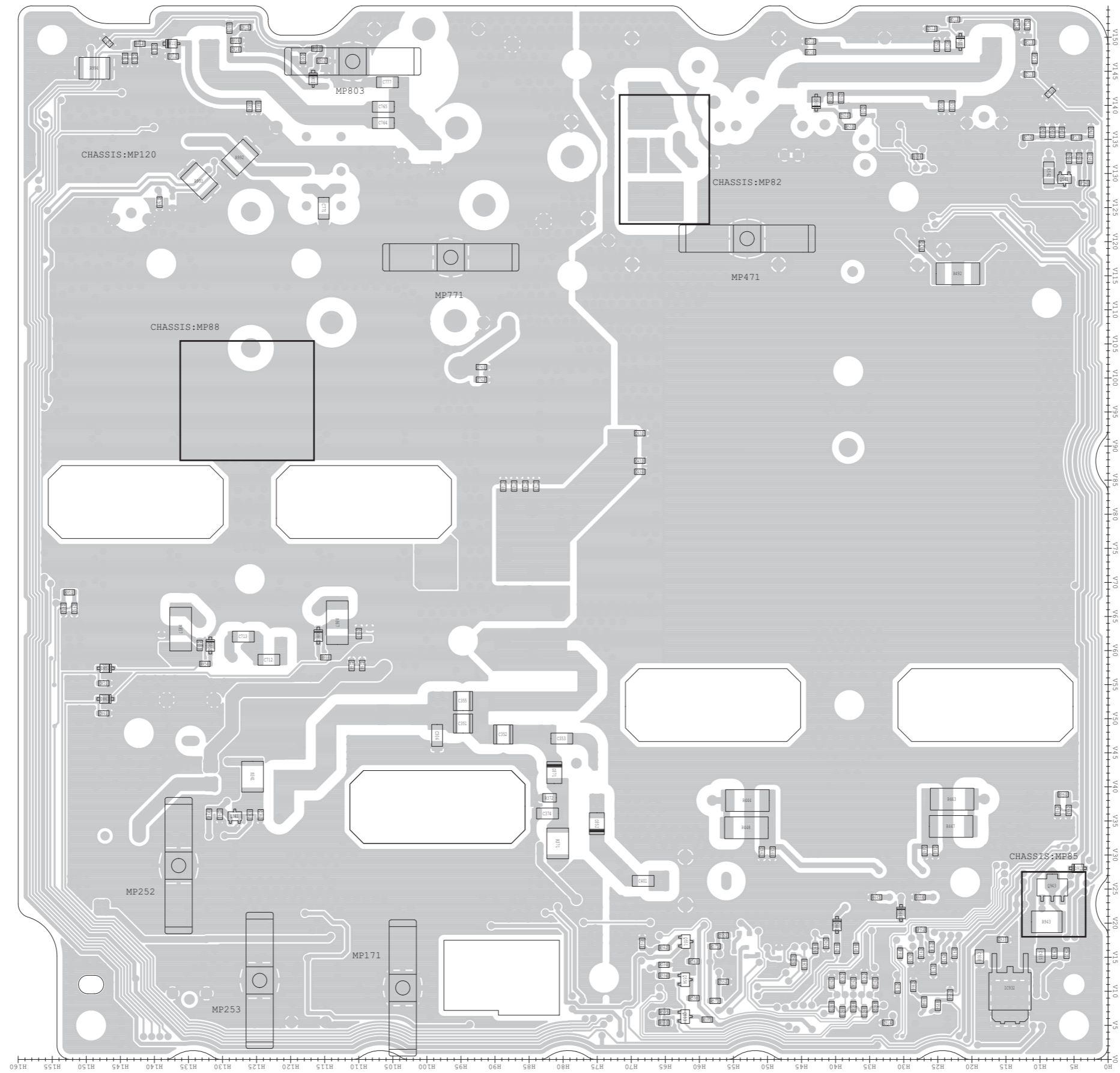
• PA-B UNIT
(TOP VIEW)

The combination of this page and next page shows
the top side and bottom side of actual P.C. board.

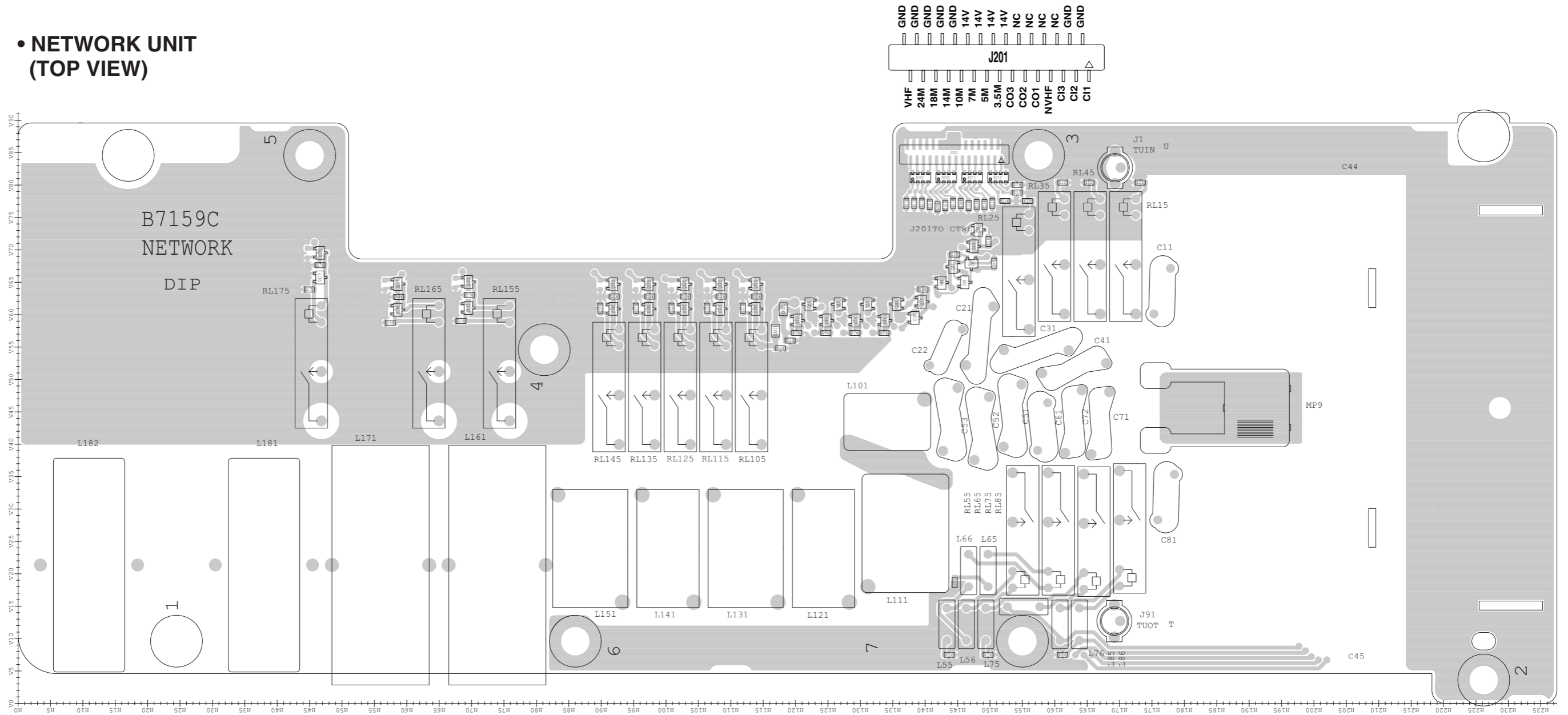


• PA-B UNIT
(BOTTOM VIEW)

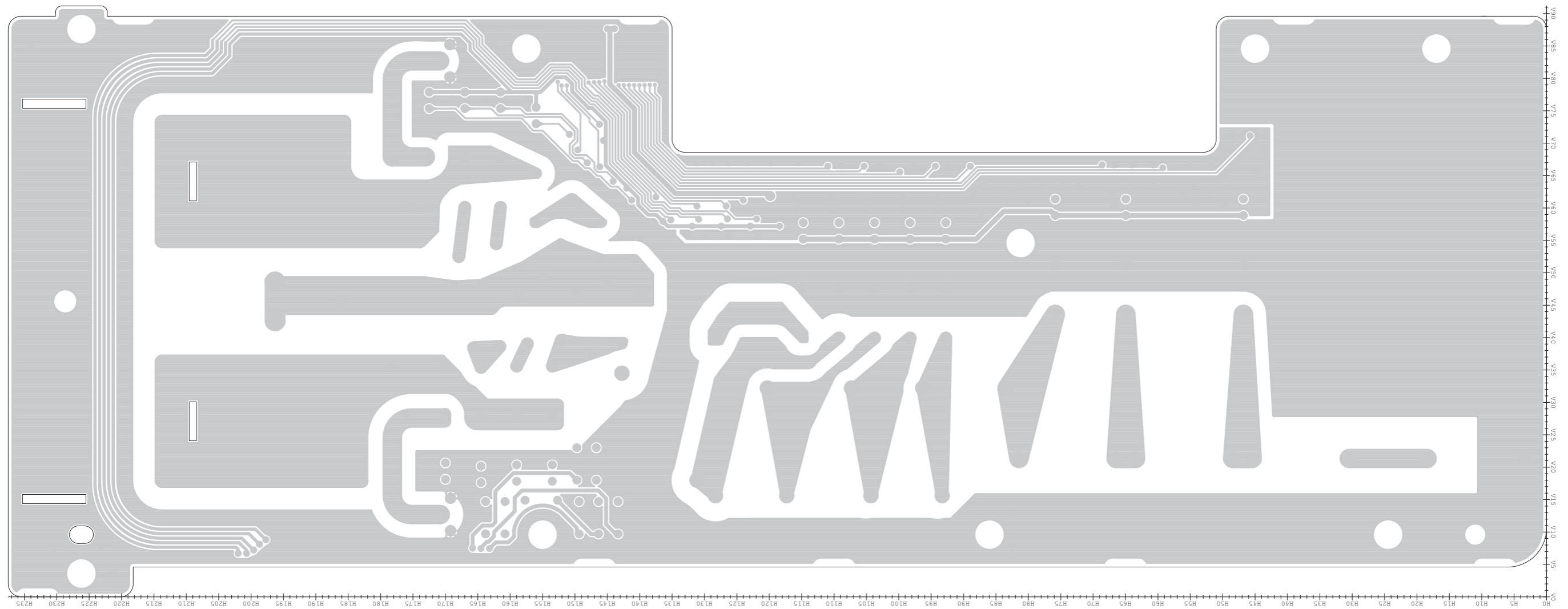
The combination of this page and next page shows
the top side and bottom side of actual P.C. board.



• NETWORK UNIT
(TOP VIEW)

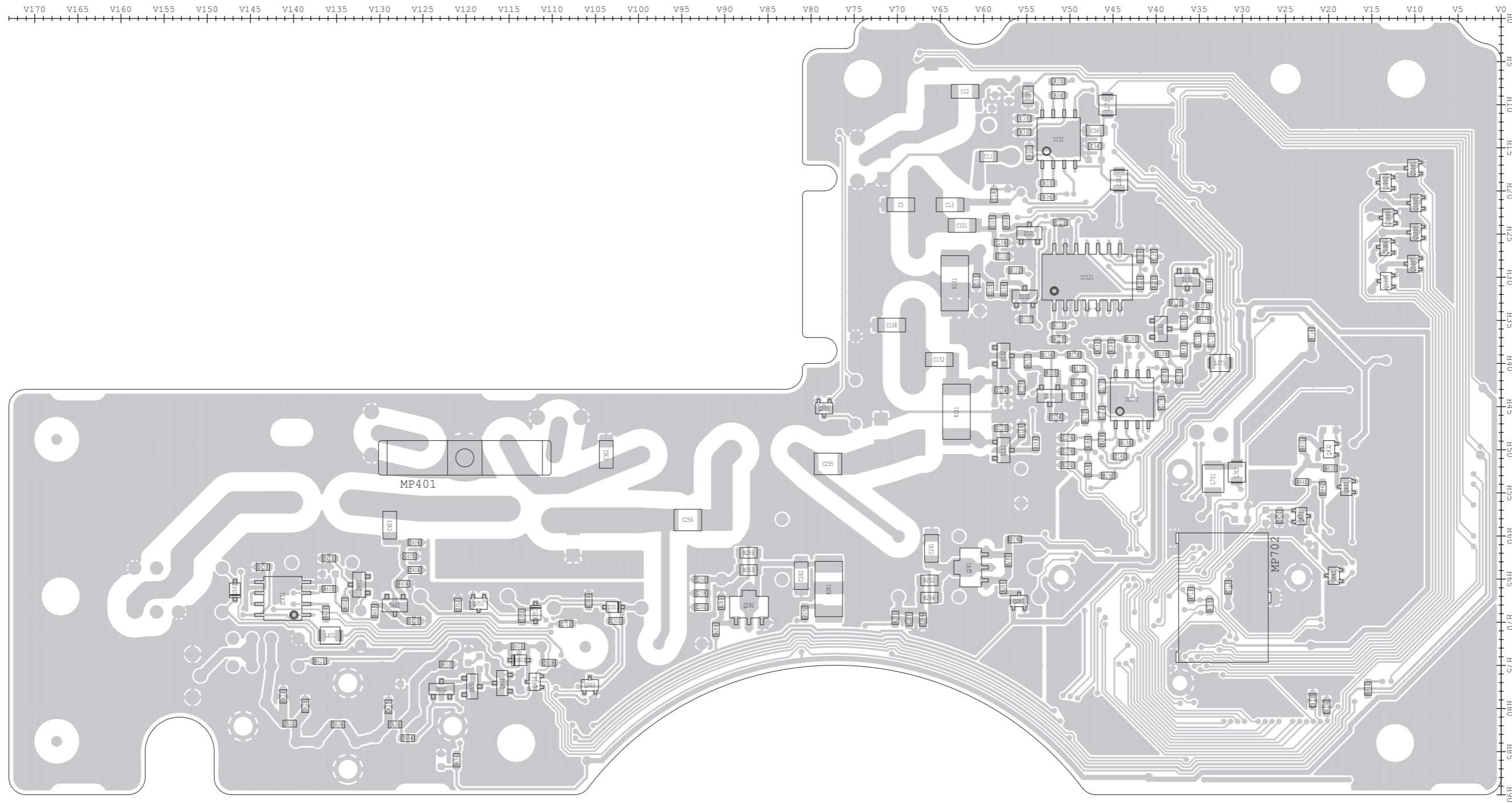


• NETWORK UNIT
(BOTTOM VIEW)



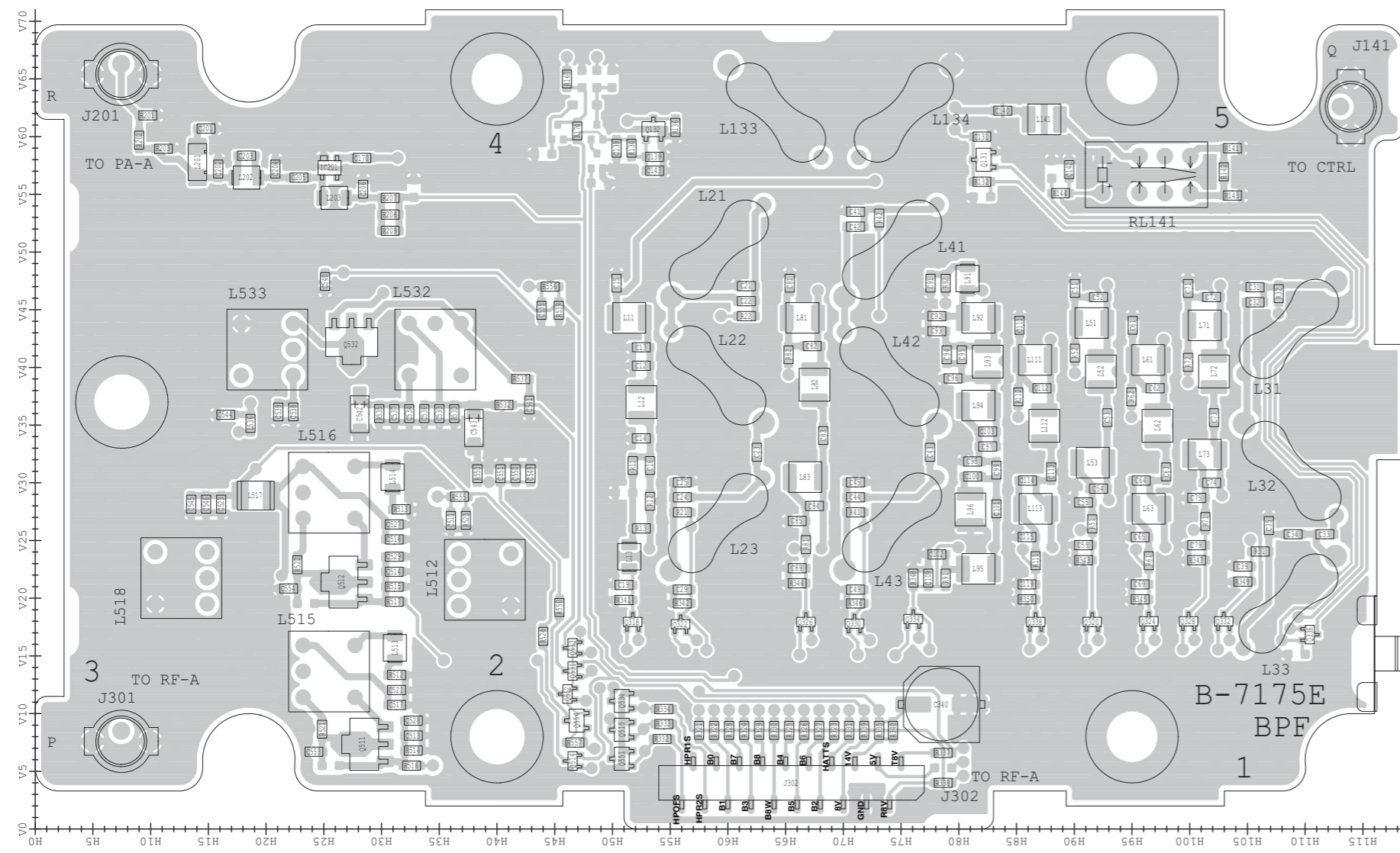
The combination of this page and next page shows the top side and bottom side of actual P.C. board.

• CTRL UNIT
(BOTTOM VIEW)

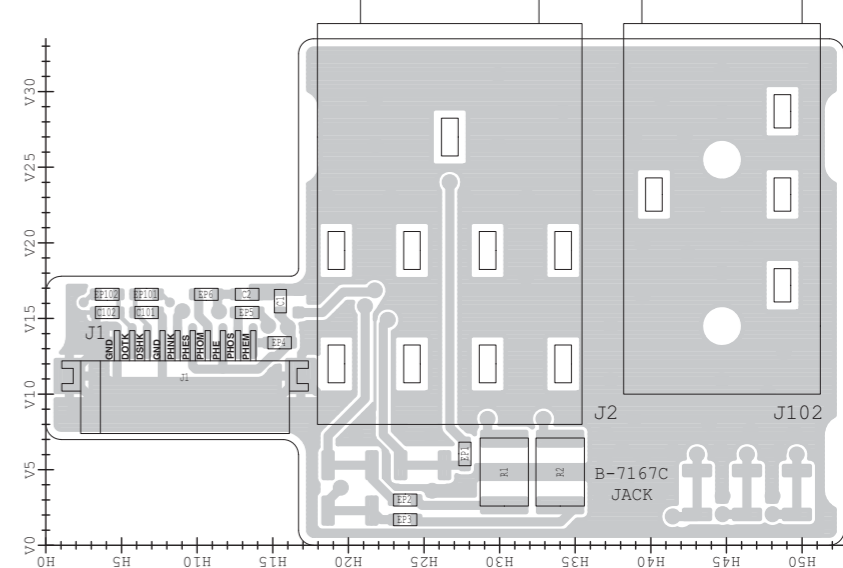


The combination of this page and next page shows the top side and bottom side of actual P.C. board.

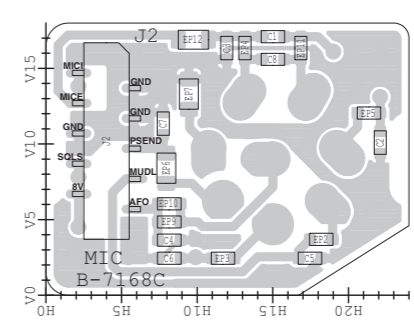
• BPF UNIT (TOP VIEW)



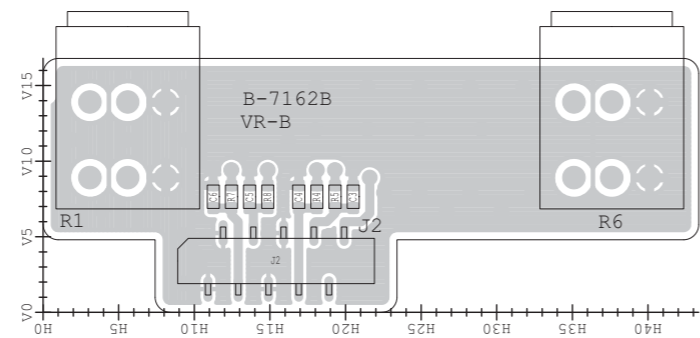
• JACK UNIT (TOP VIEW)



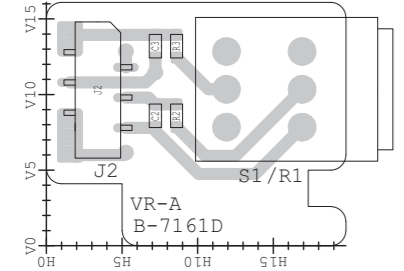
• MIC UNIT (TOP VIEW)



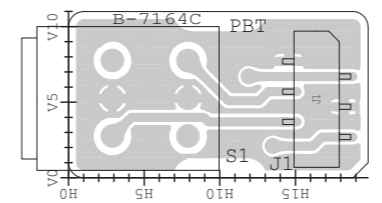
• VR-B UNIT (TOP VIEW)



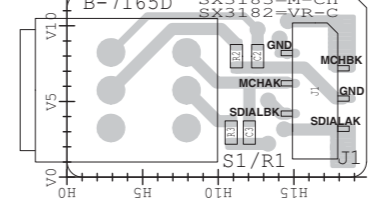
• VR-A UNIT (TOP VIEW)



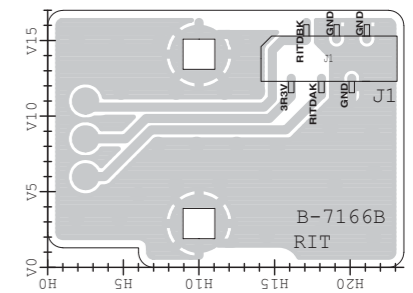
• PBT UNIT (TOP VIEW)



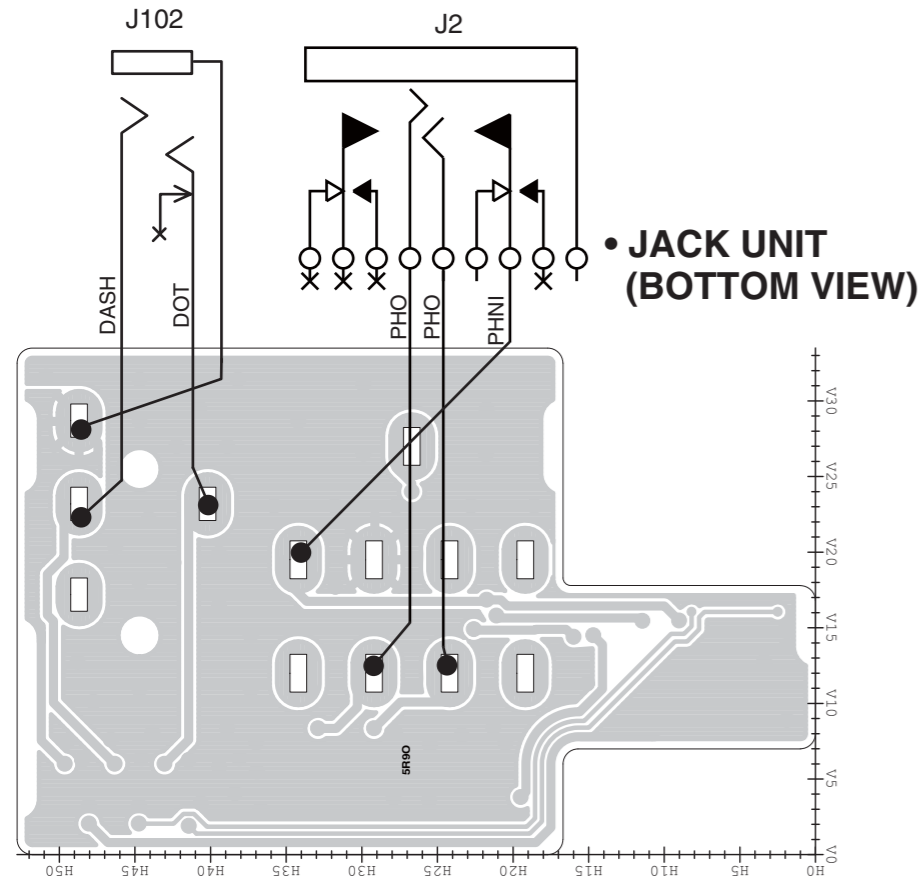
• M-CH UNIT (TOP VIEW)



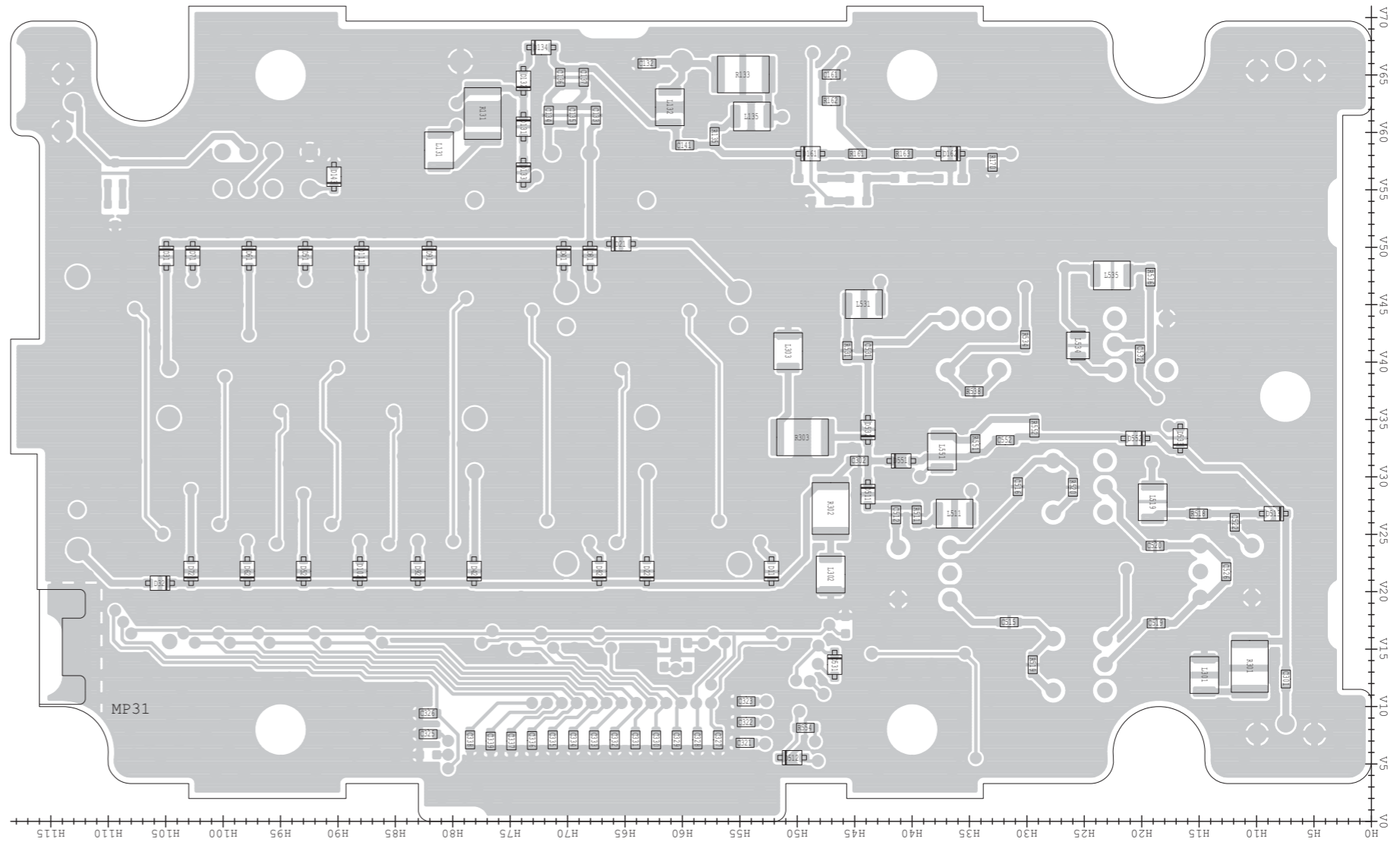
• RIT UNIT (TOP VIEW)



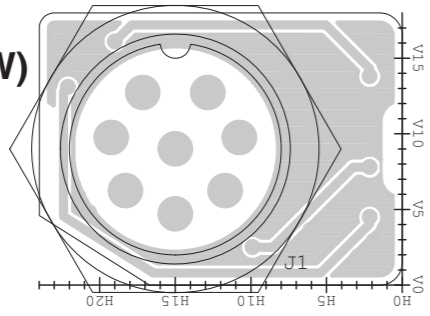
The combination of this page and next page shows the top side and bottom side of actual P.C. board.



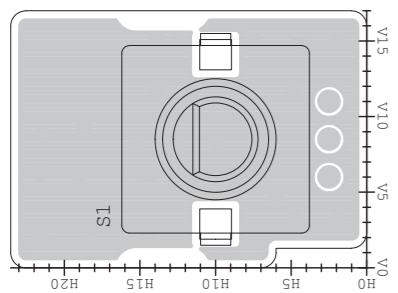
• BPF UNIT (BOTTOM VIEW)



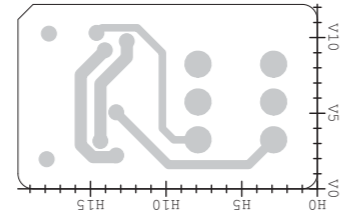
• MIC UNIT (BOTTOM VIEW)



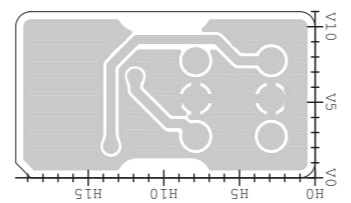
• RIT UNIT (BOTTOM VIEW)



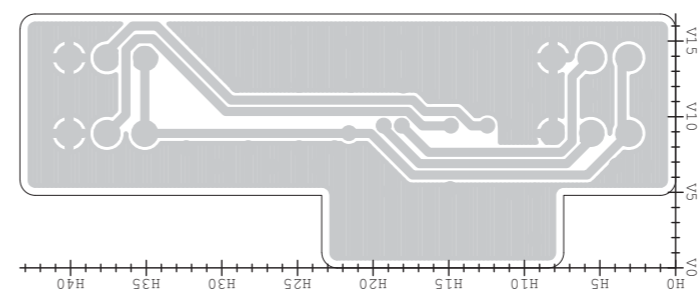
• M-CH UNIT (BOTTOM VIEW)



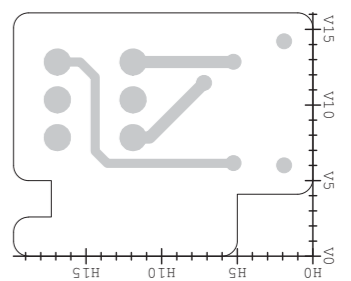
• PBT UNIT (BOTTOM VIEW)



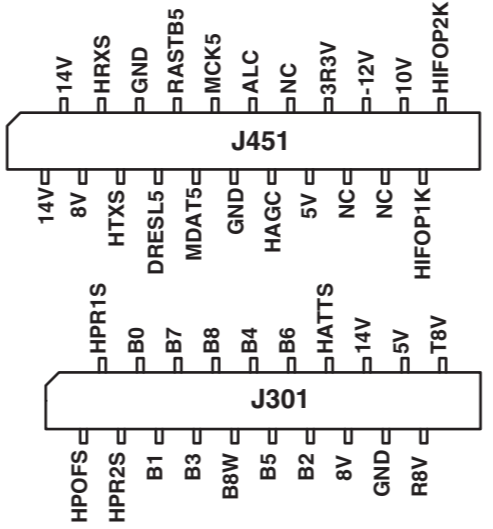
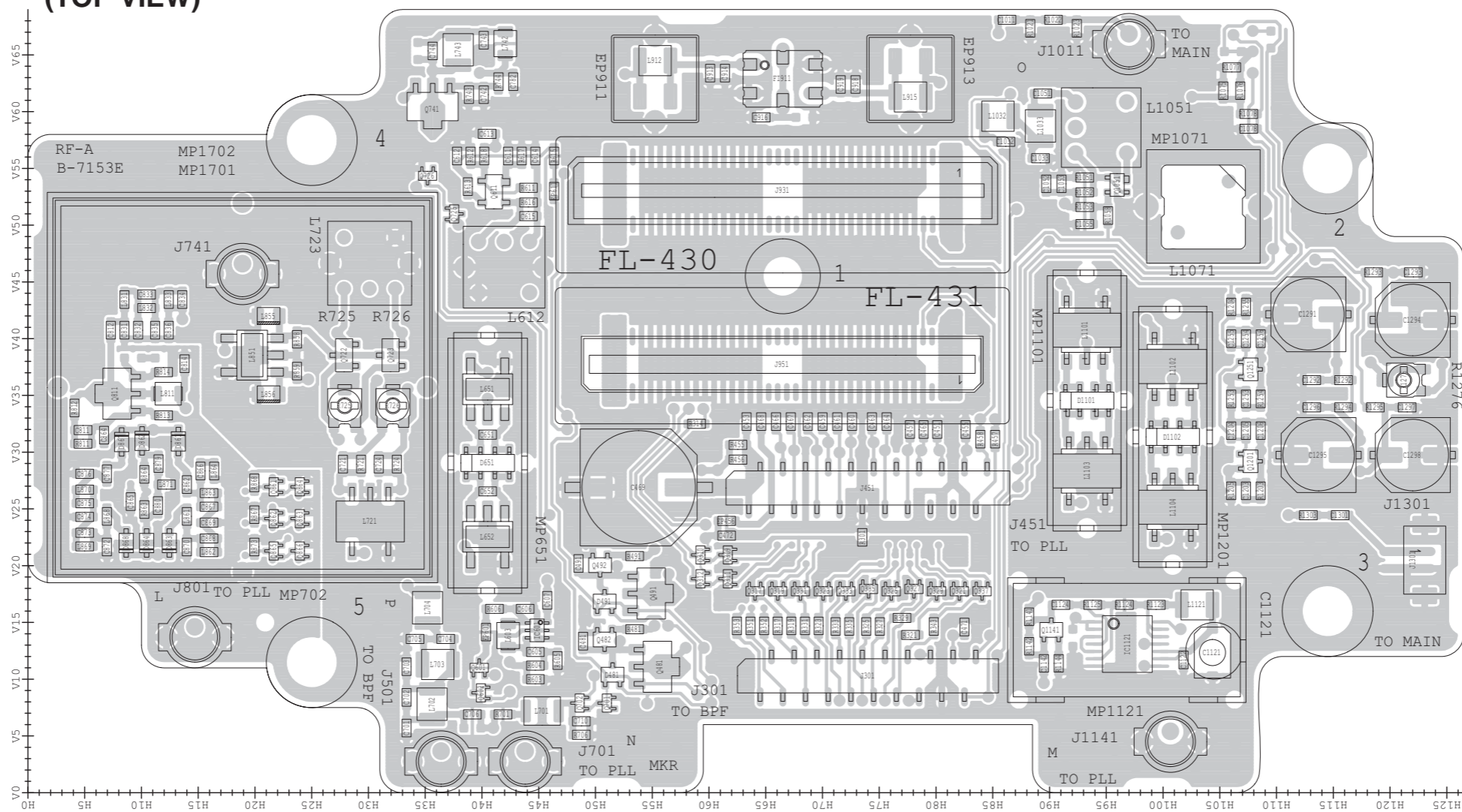
• VR-B UNIT (BOTTOM VIEW)



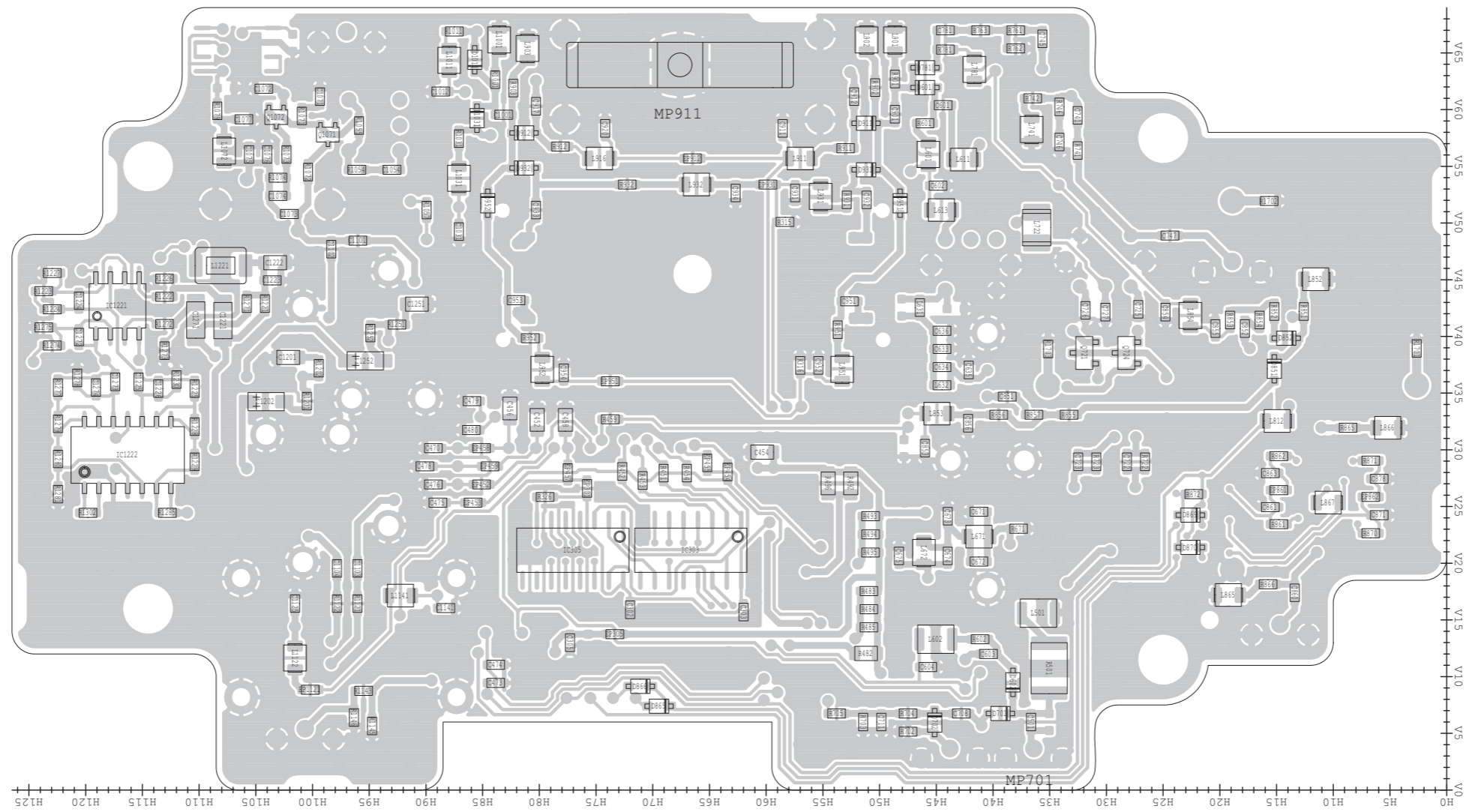
• VR-A UNIT (BOTTOM VIEW)



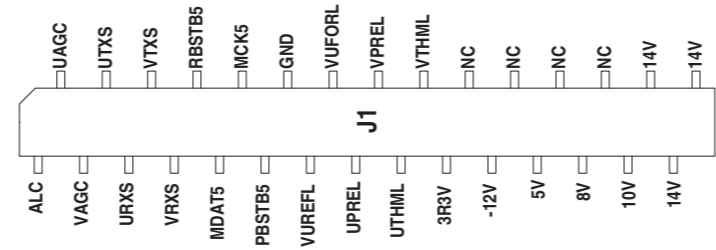
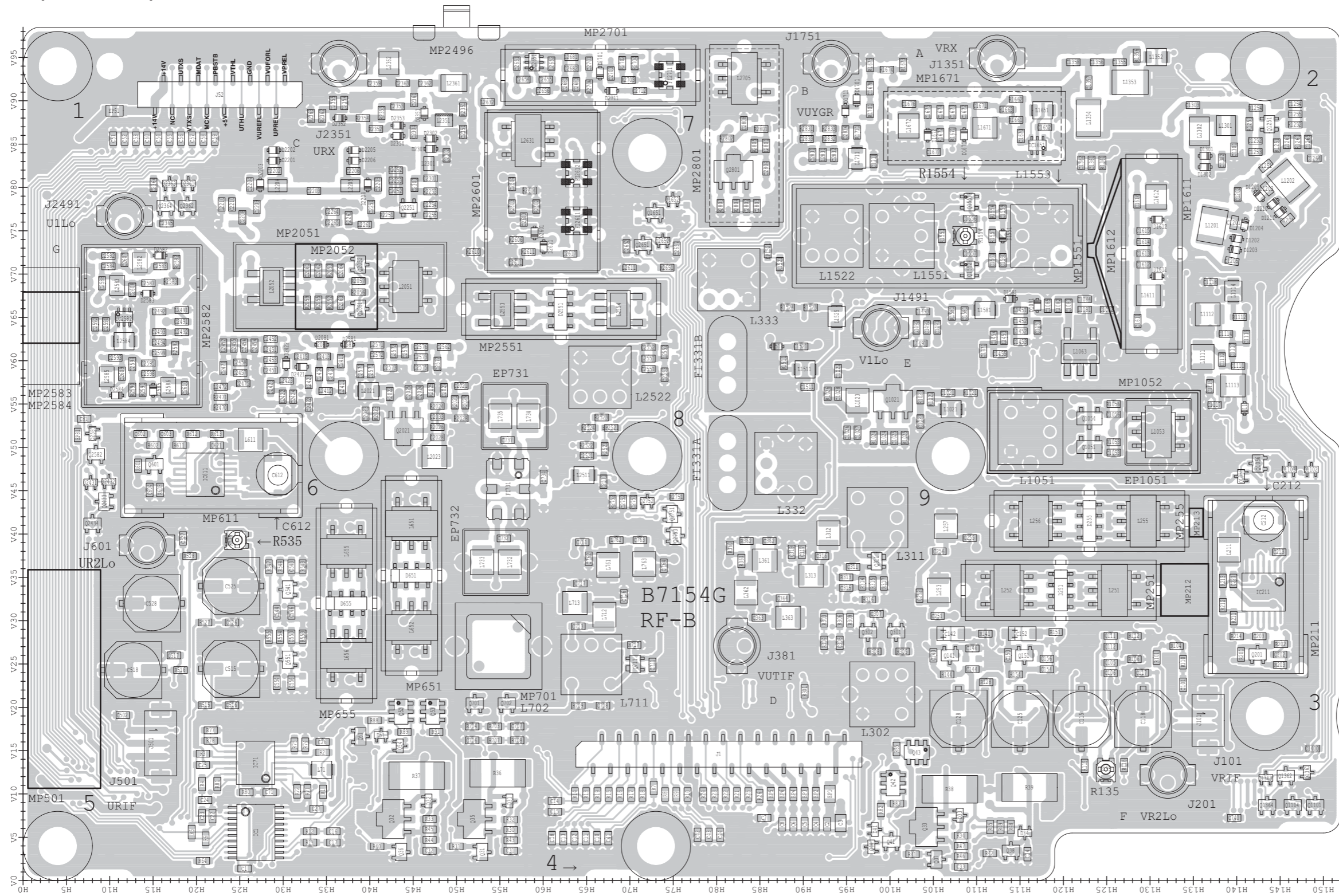
• RF-A UNIT
(TOP VIEW)



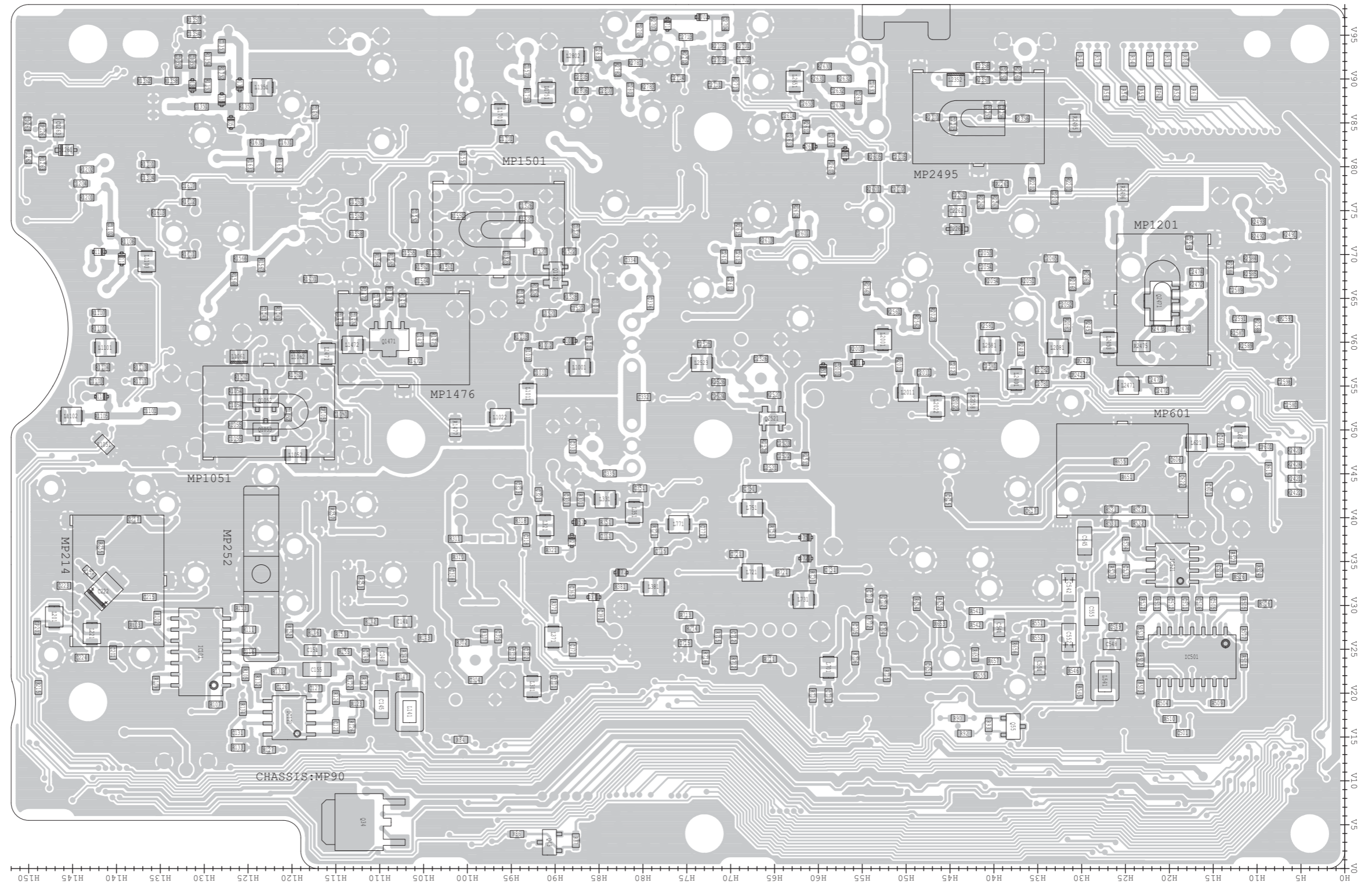
• RF-A UNIT
(BOTTOM VIEW)

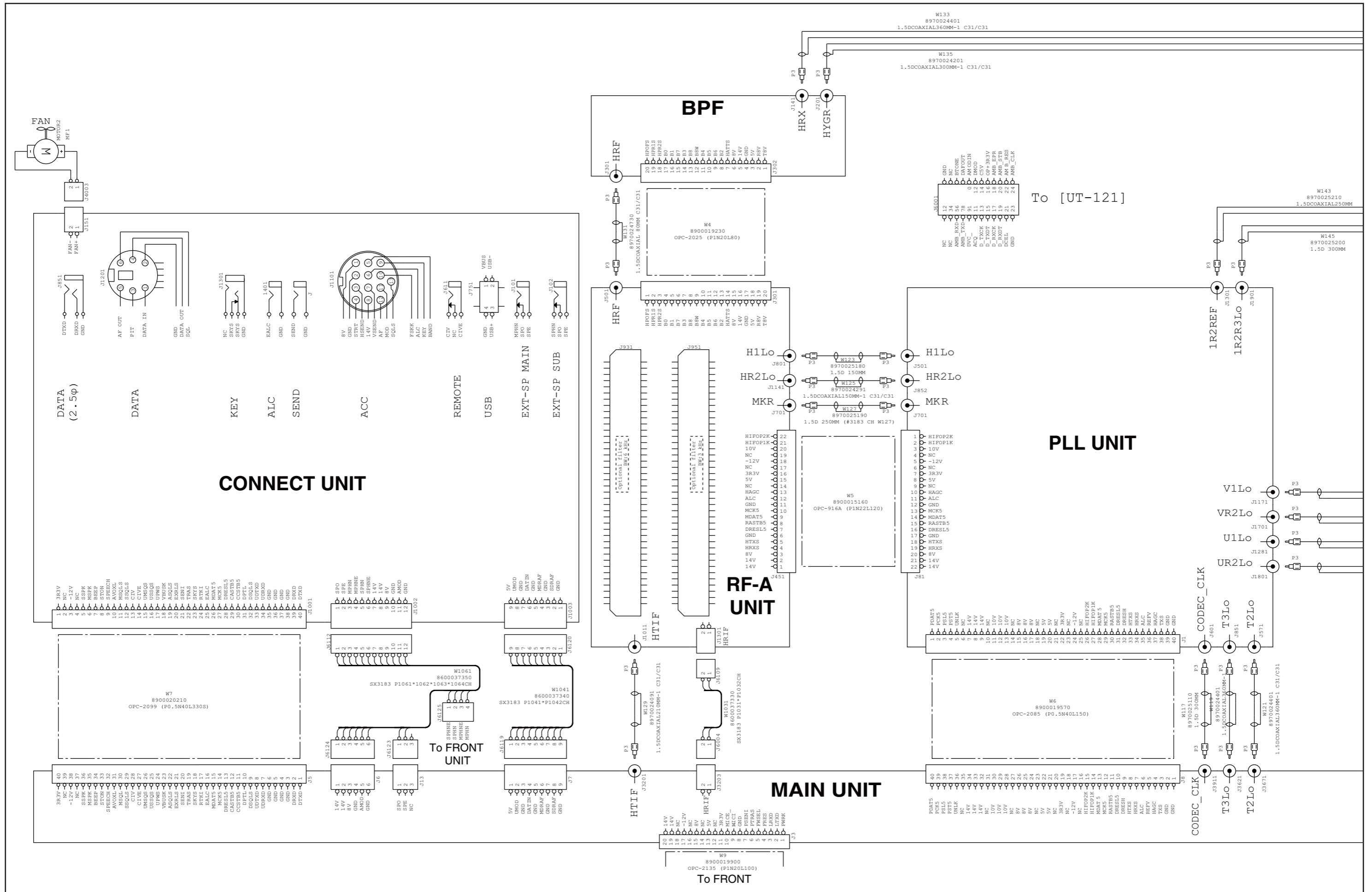


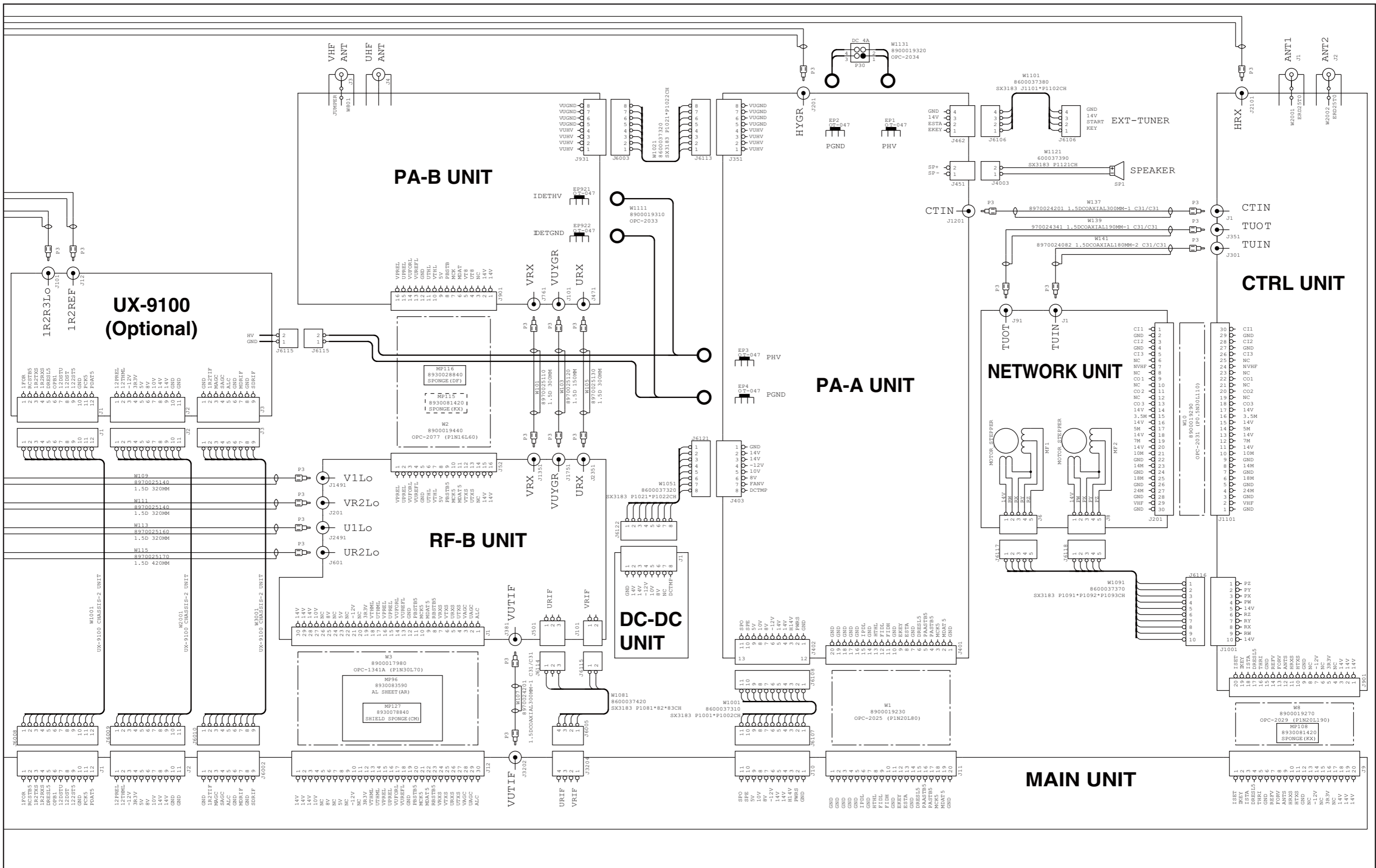
• RF-B UNIT
(TOP VIEW)



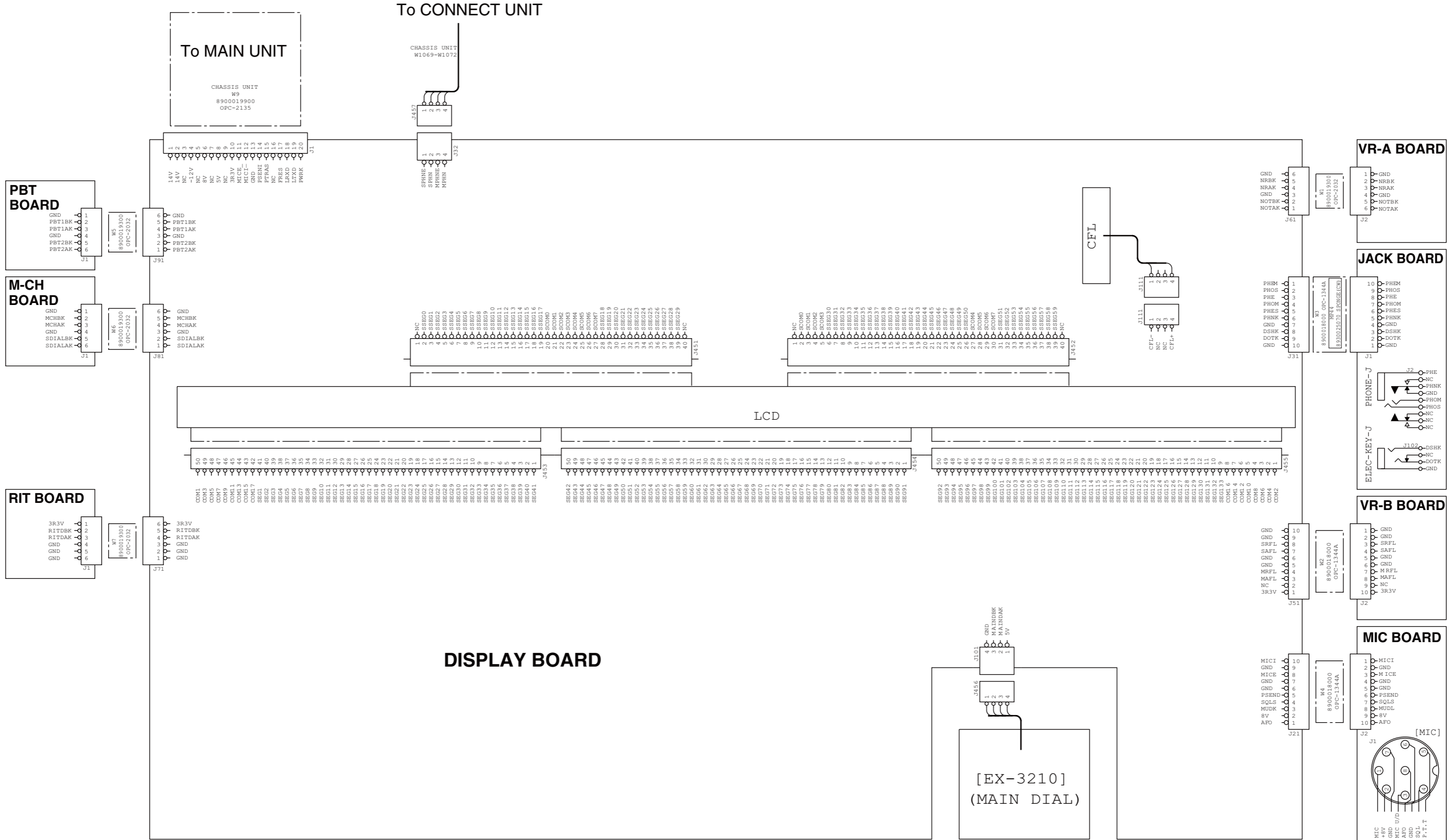
• RF-B UNIT
(BOTTOM VIEW)





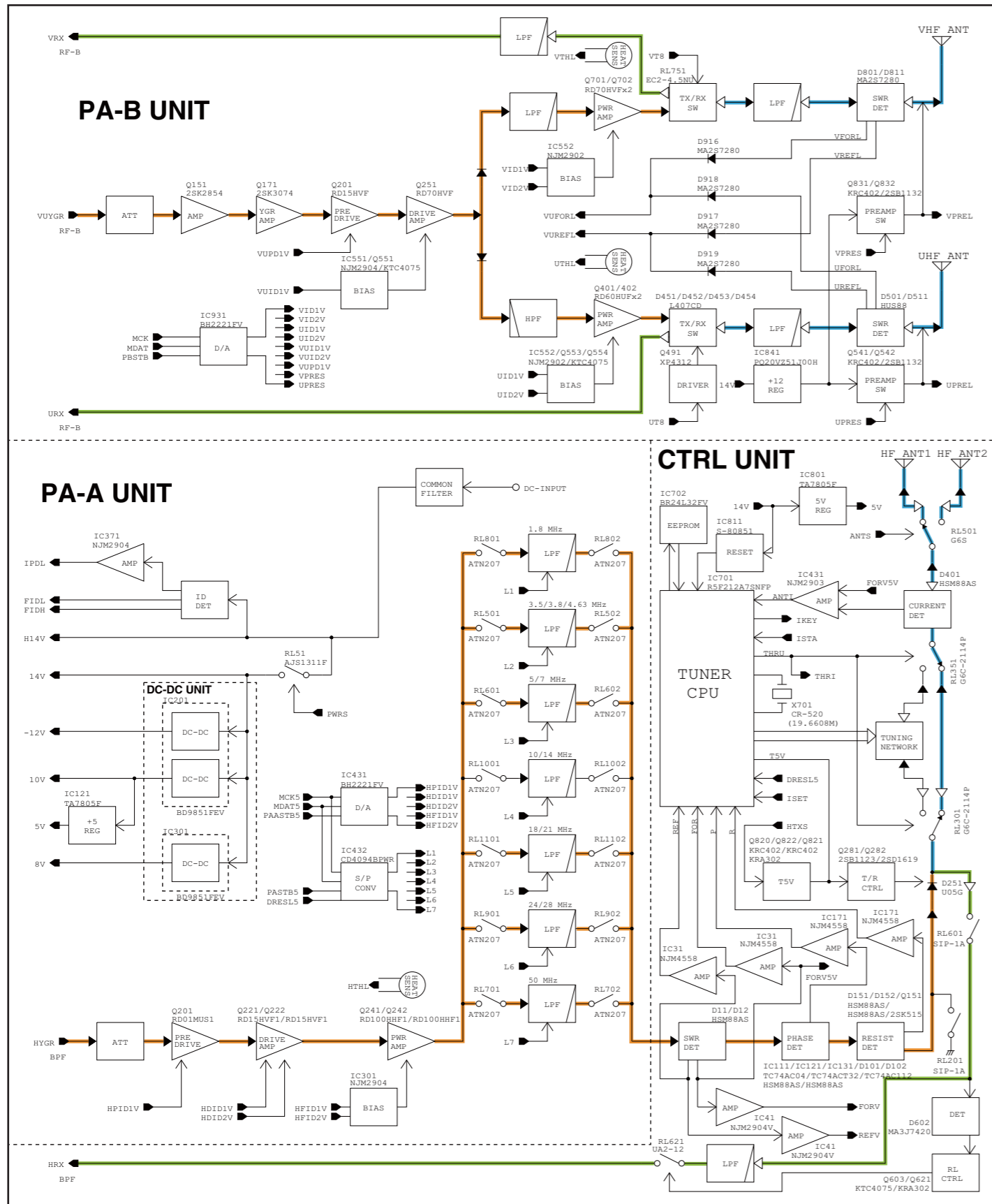


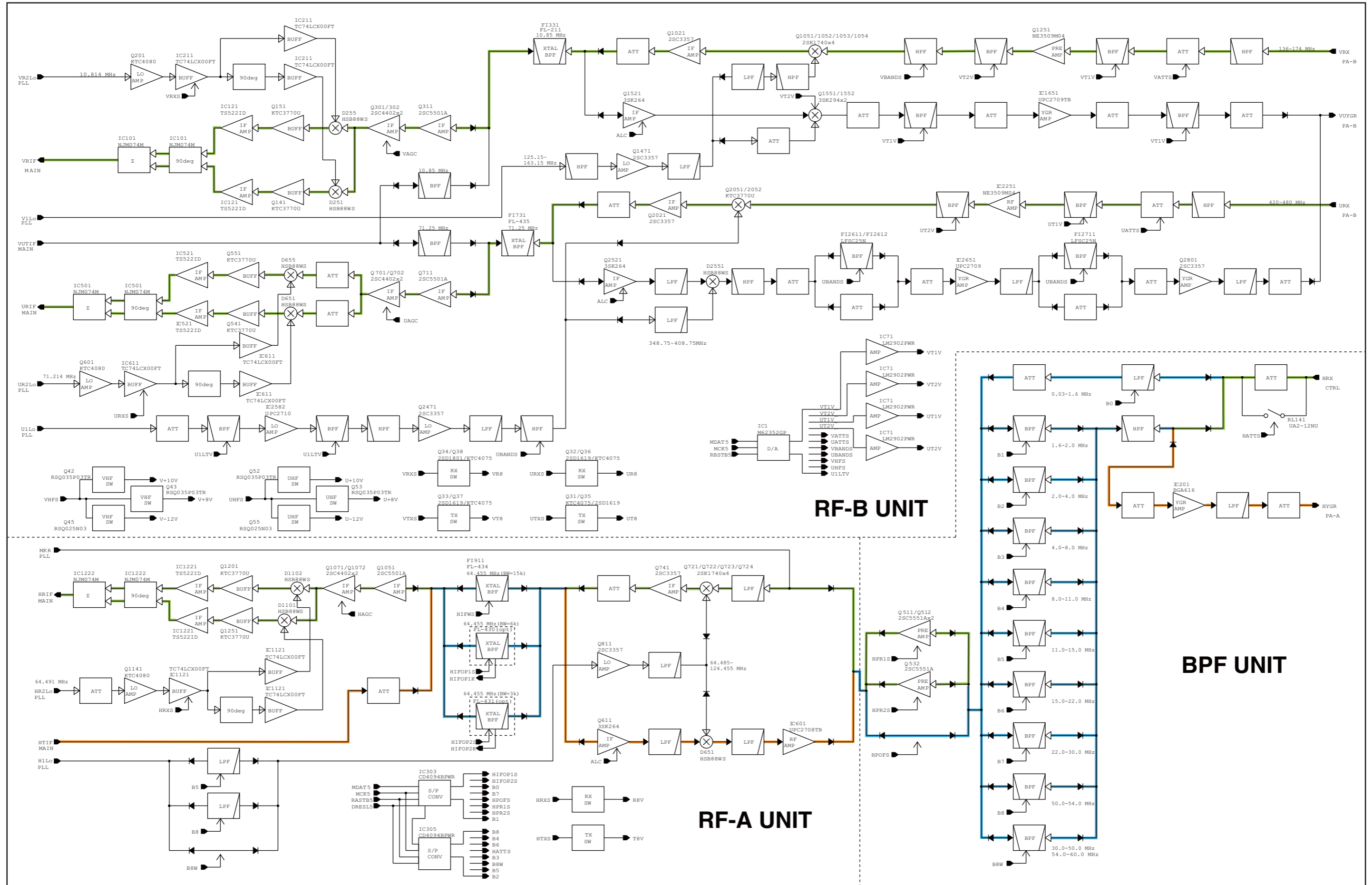
FRONT UNIT



SECTION 9

BLOCK DIAGRAM

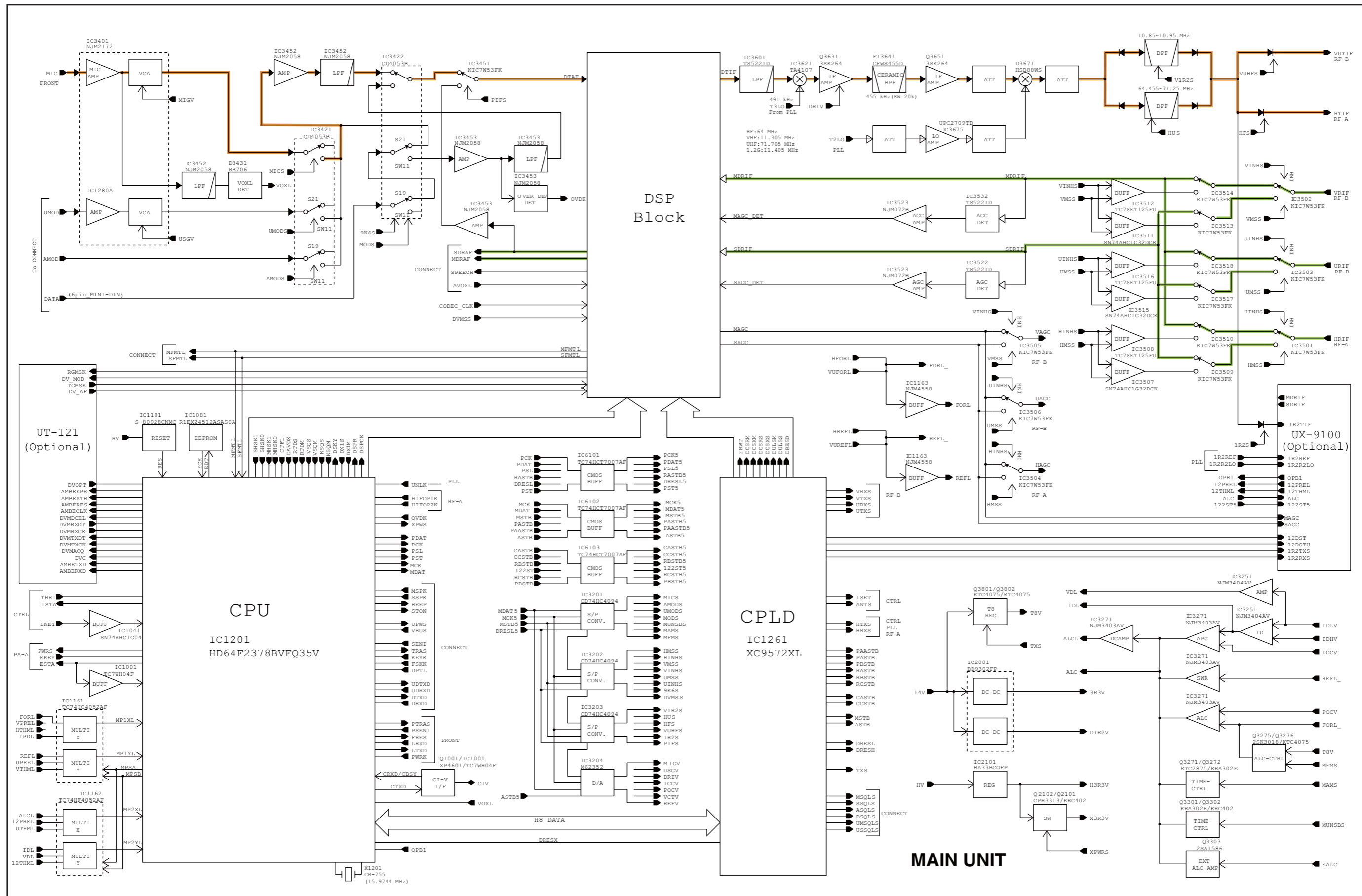


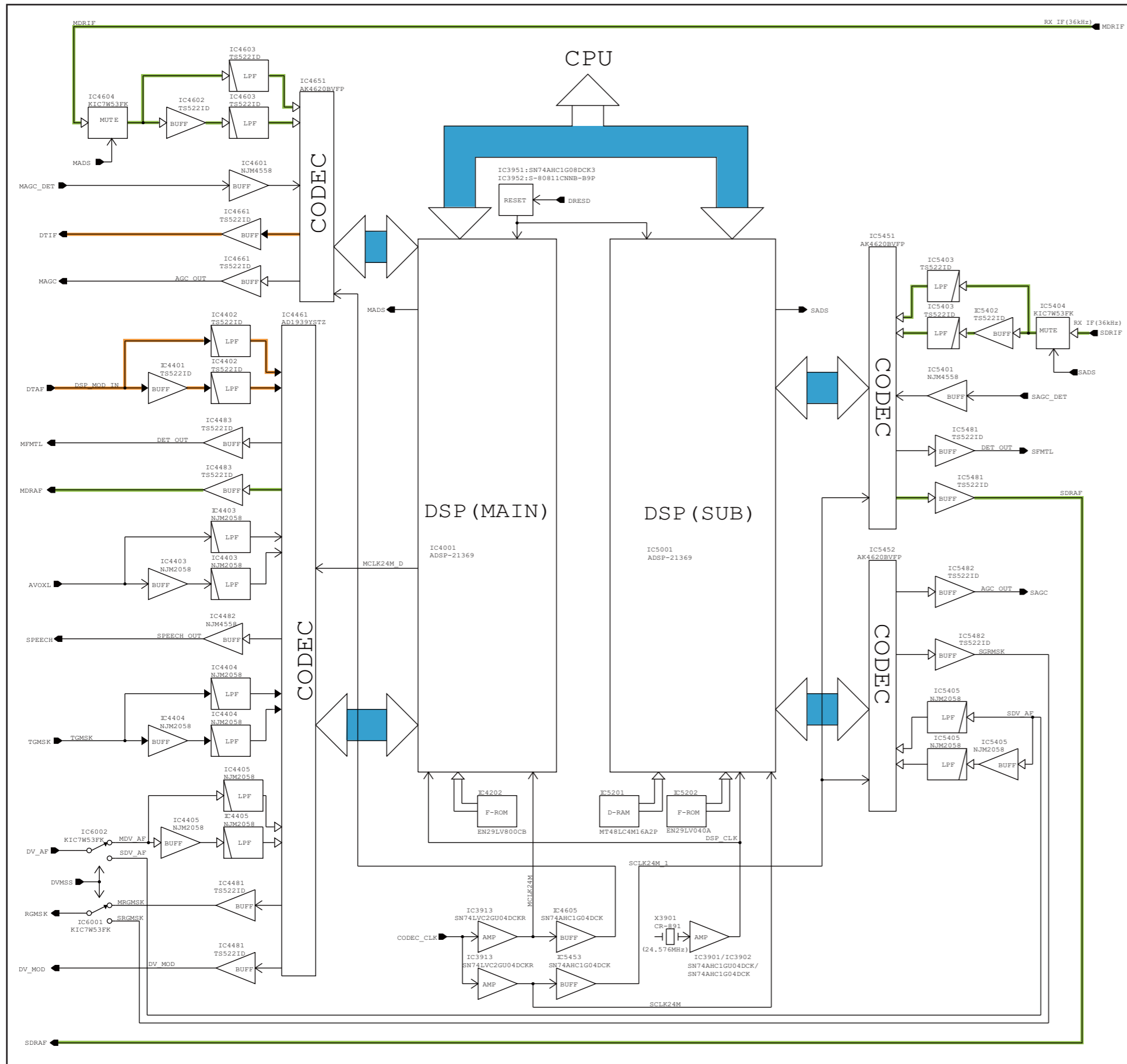


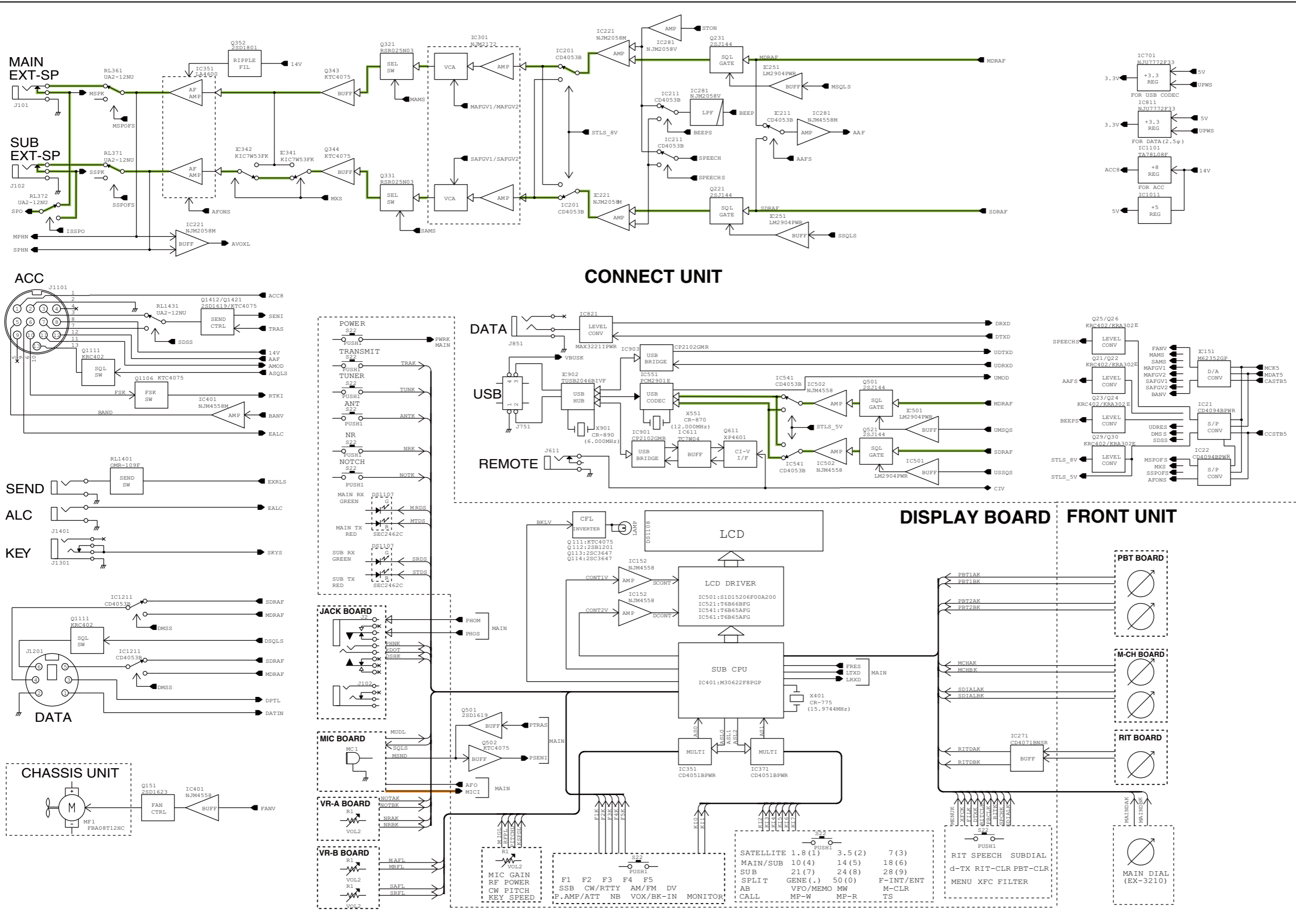
RF-B UNIT

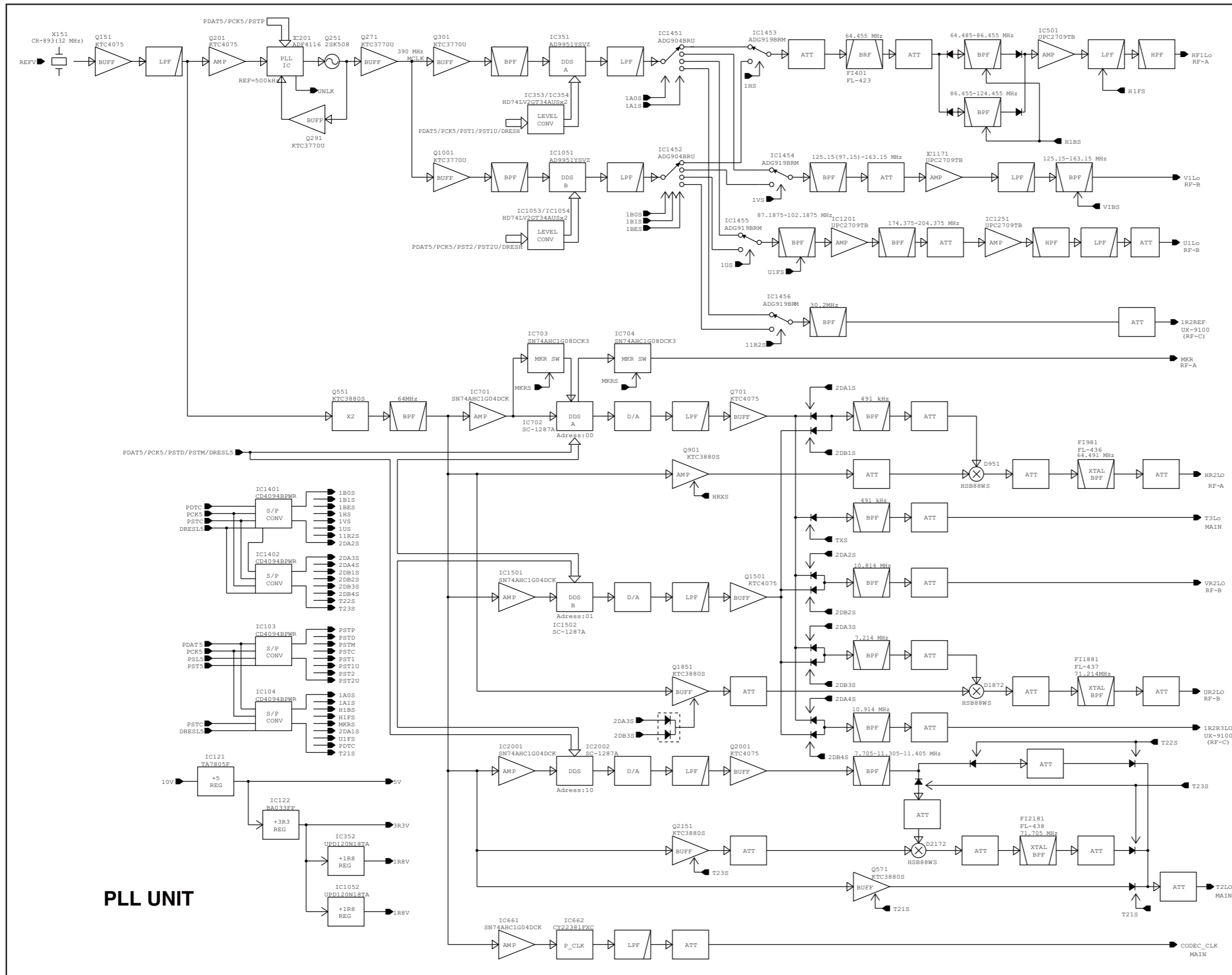
RF-A UNIT

BPF UNIT







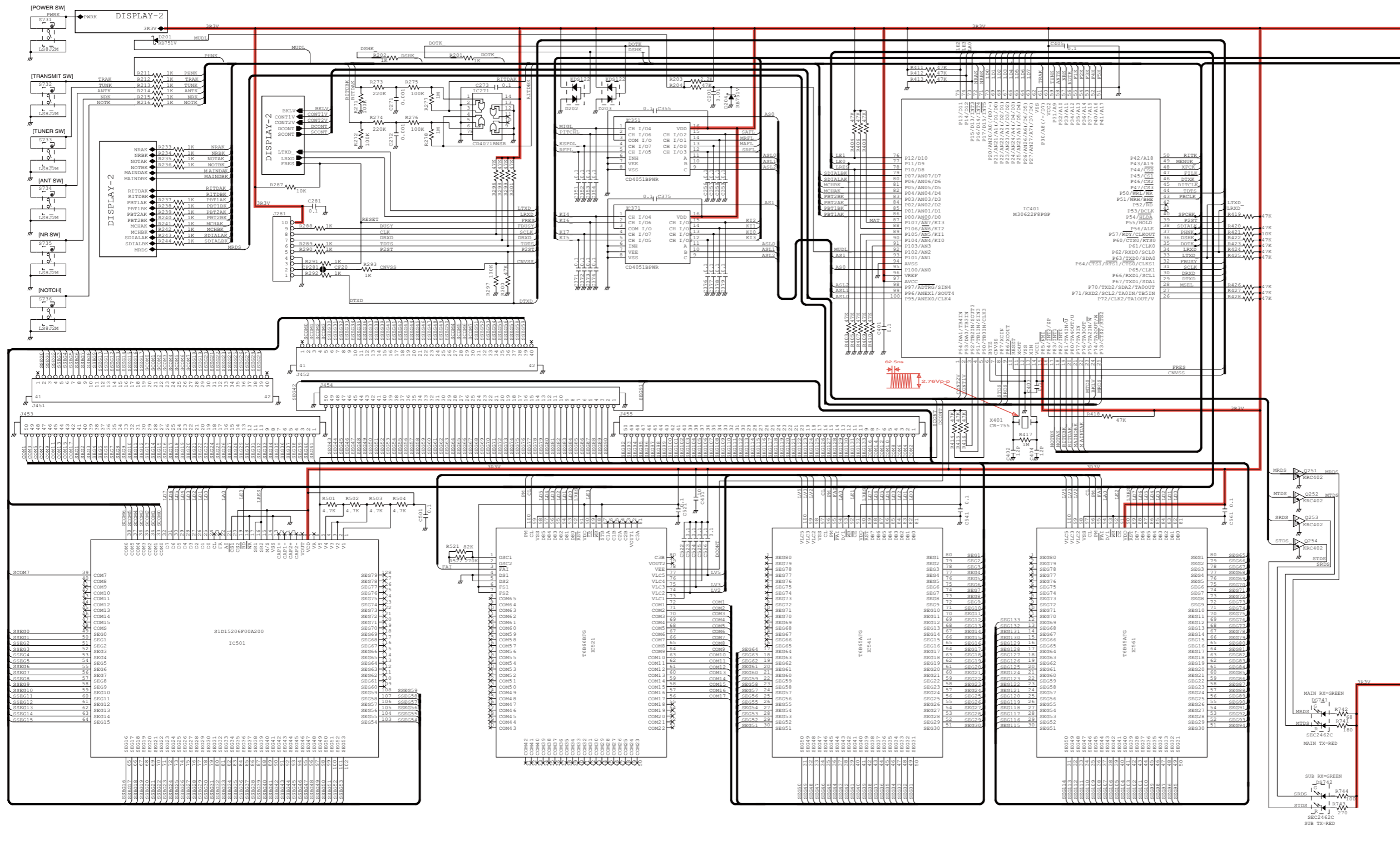


PLL UNIT

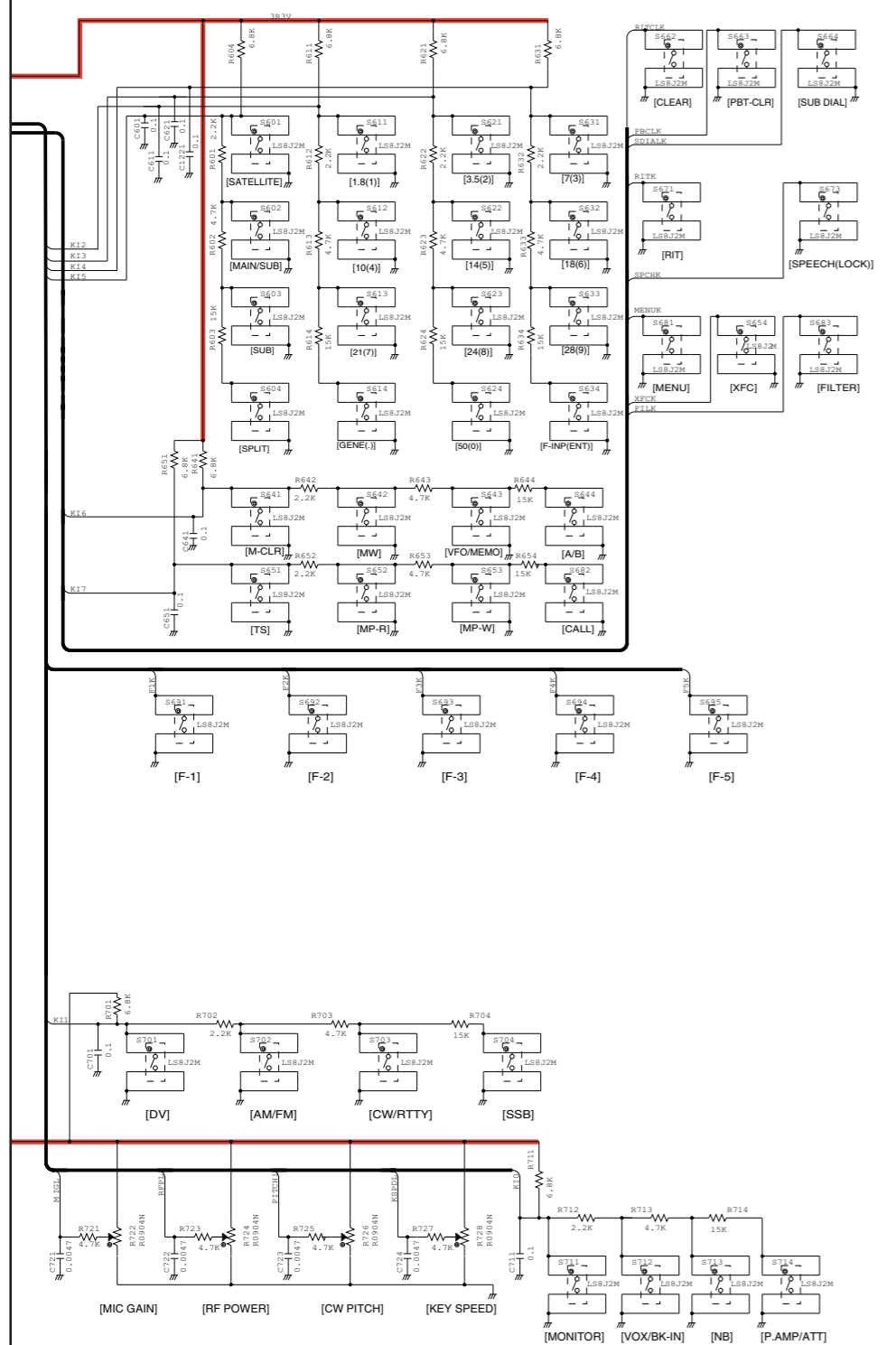
SECTION 10

VOLTAGE DIAGRAM

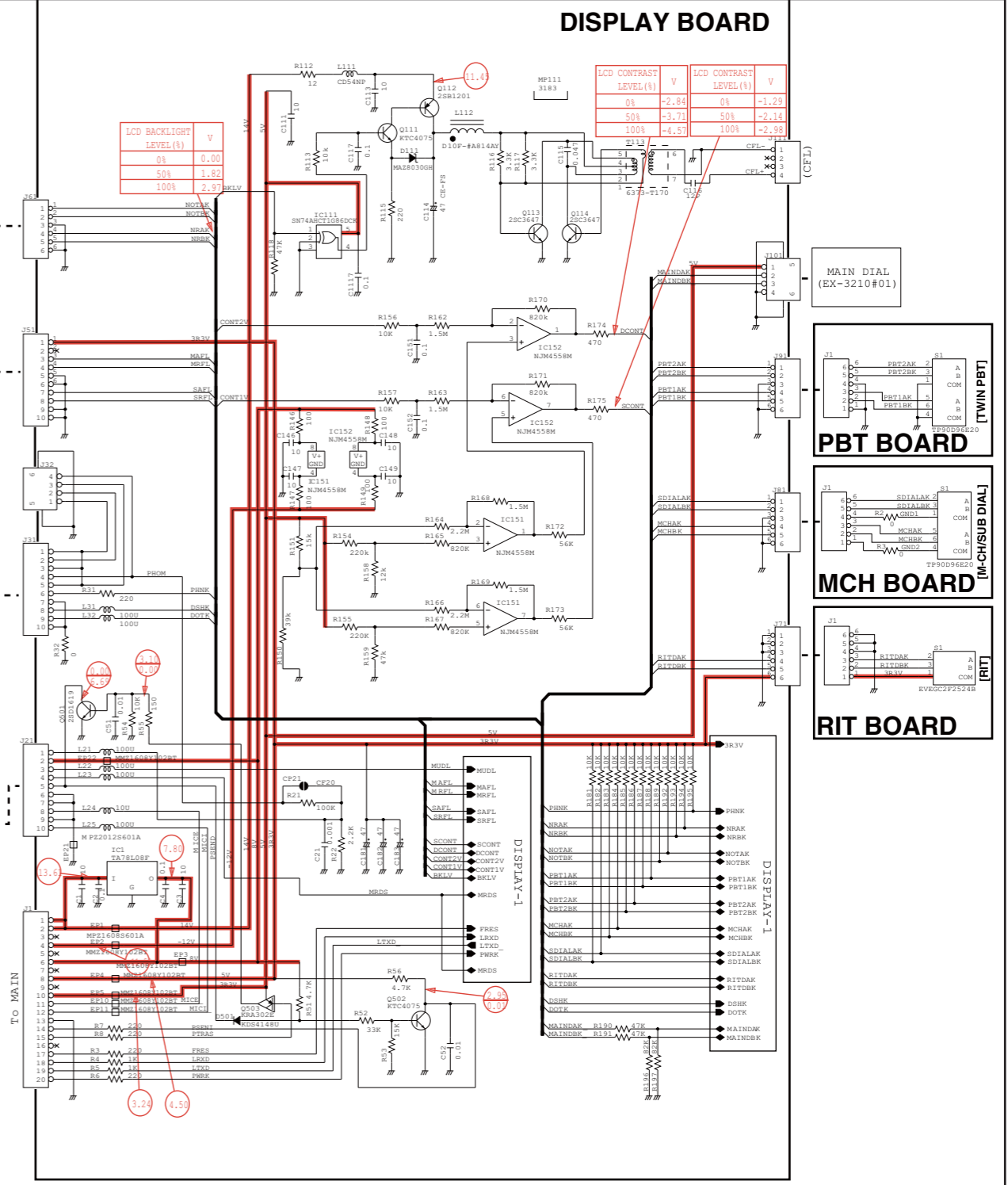
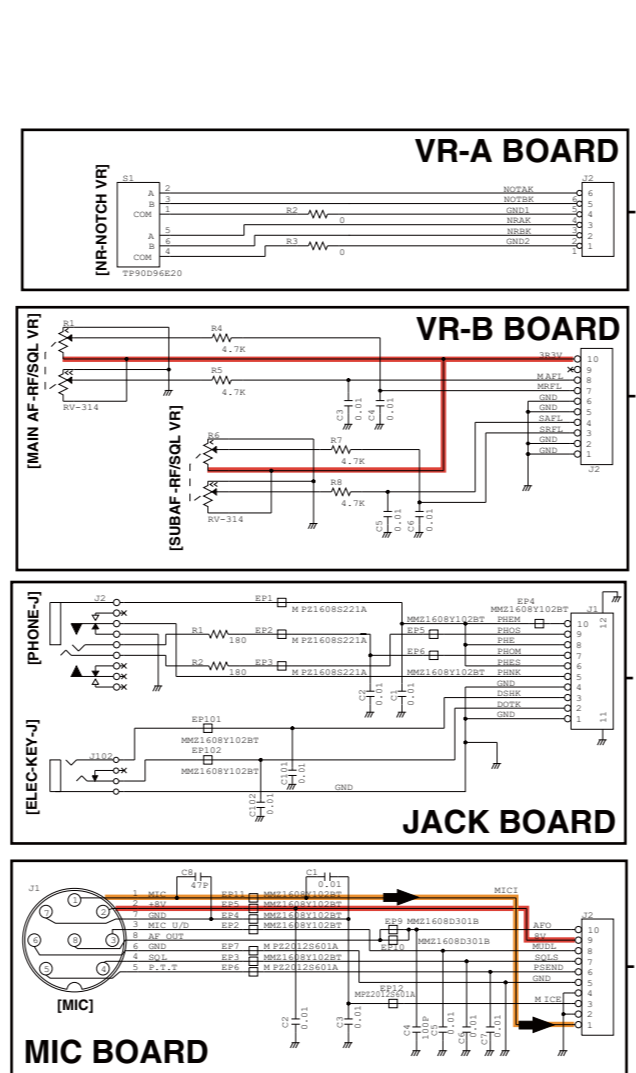
• DISPLAY BOARD (DISPLAY BOARD-1)



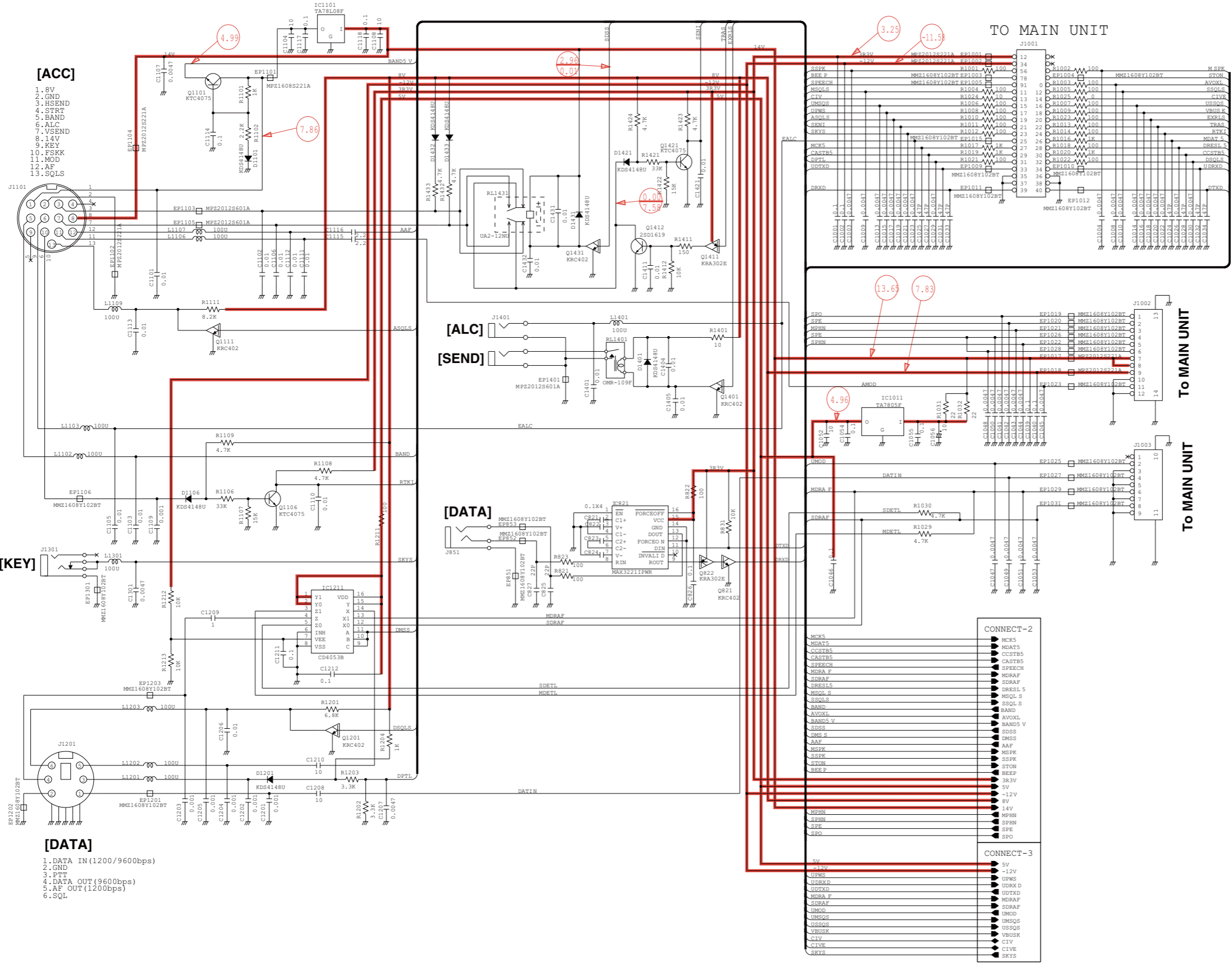
• DISPLAY BOARD (DISPLAY BOARD-1)



• DISPLAY BOARD (DISPLAY BOARD-2)



• CONNECT UNIT (CONNECT-1)



- [ACC]**
1. 8V
 2. GND
 3. HSEND
 4. STRT
 5. BAND
 6. ALC
 7. VSEND
 8. 14V
 9. KEY
 10. FSKK
 11. MOD
 12. AF
 13. SQLS

- [DATA]**
1. DATA IN (1200/9600bps)
 2. GND
 3. PTT
 4. DATA OUT (9600bps)
 5. AF OUT (1200bps)
 6. SQL

TO MAIN UNIT

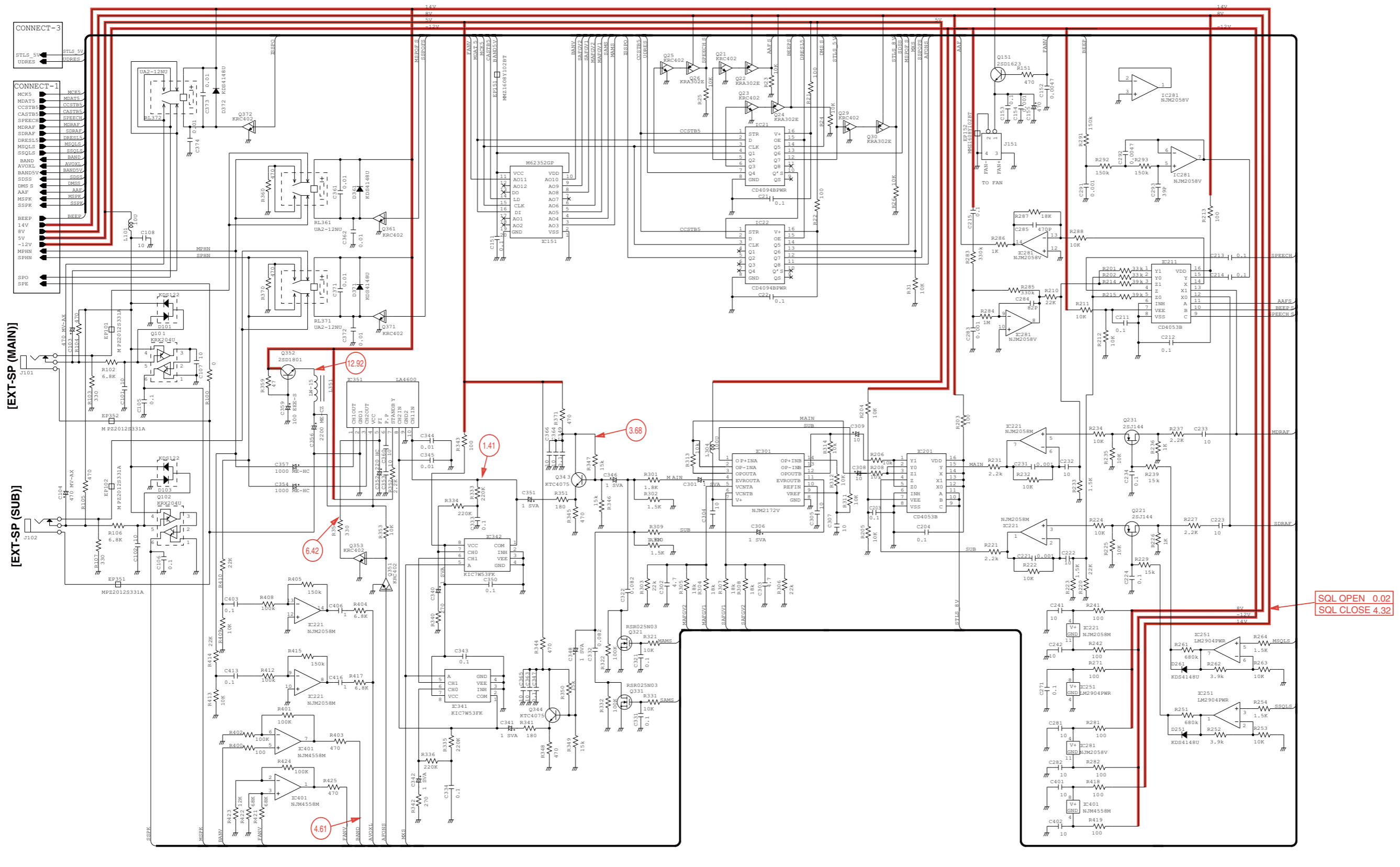
TO MAIN UNIT

TO MAIN UNIT

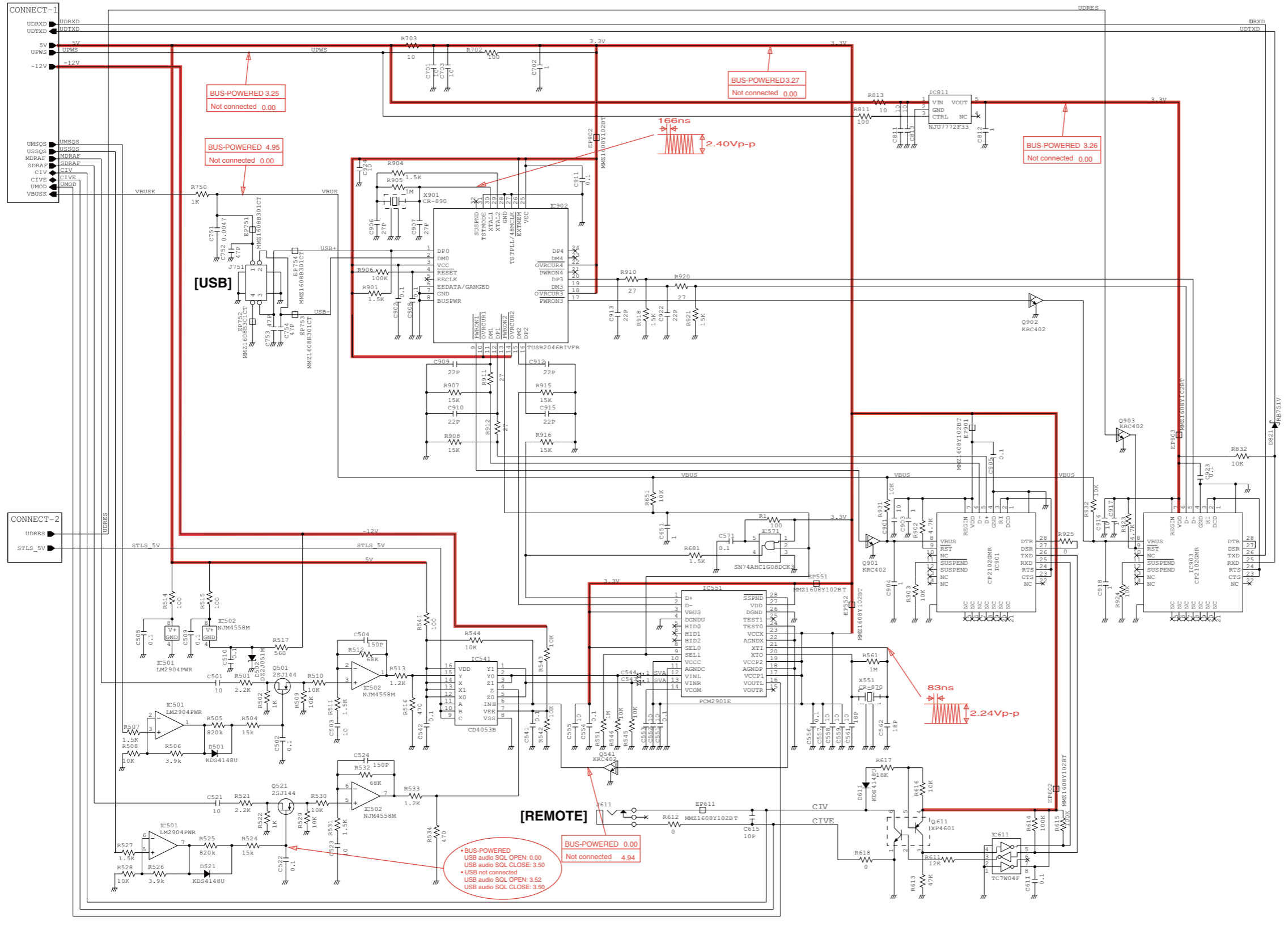
CONNECT-2

CONNECT-3

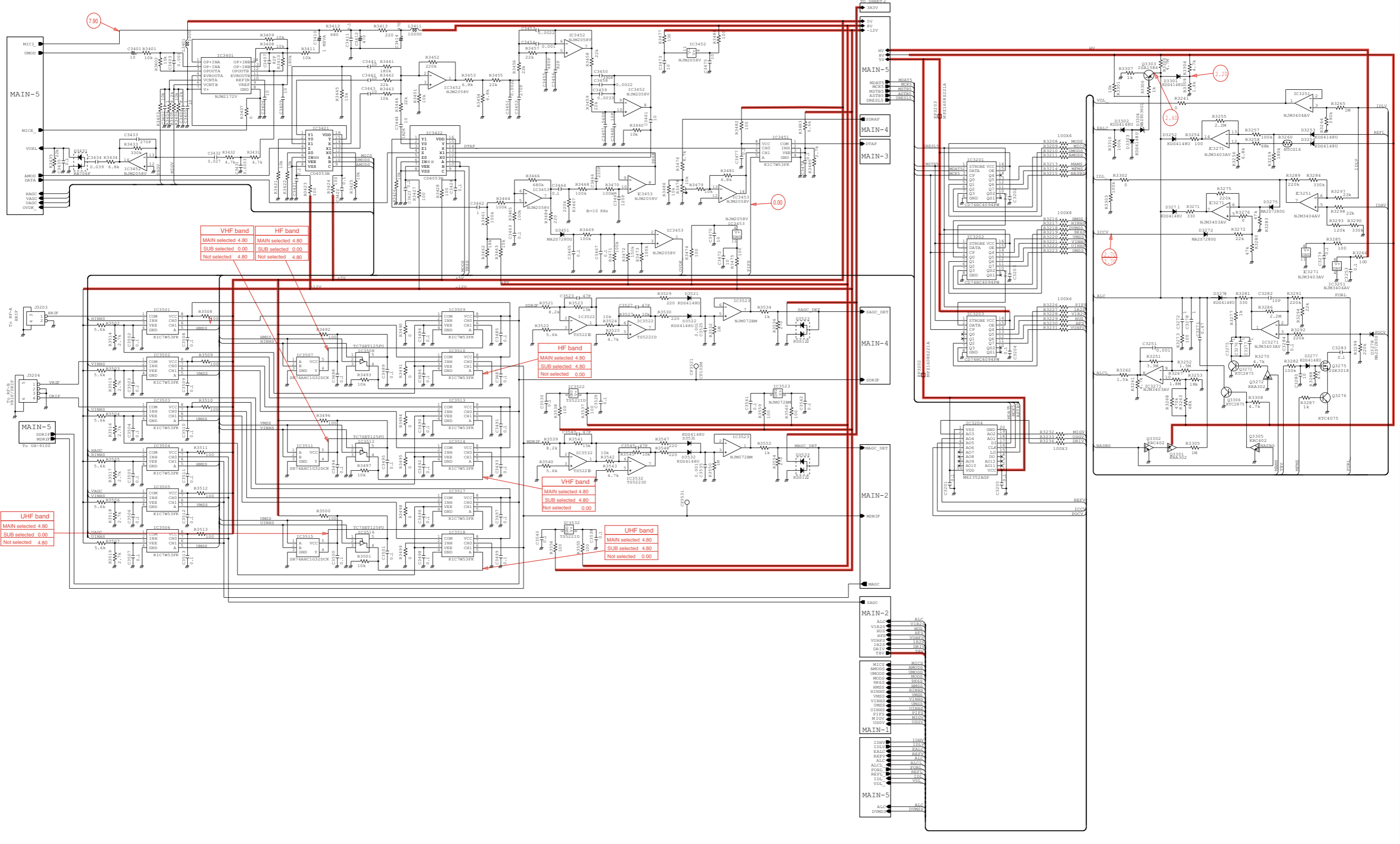
• CONNECT UNIT (CONNECT-2)



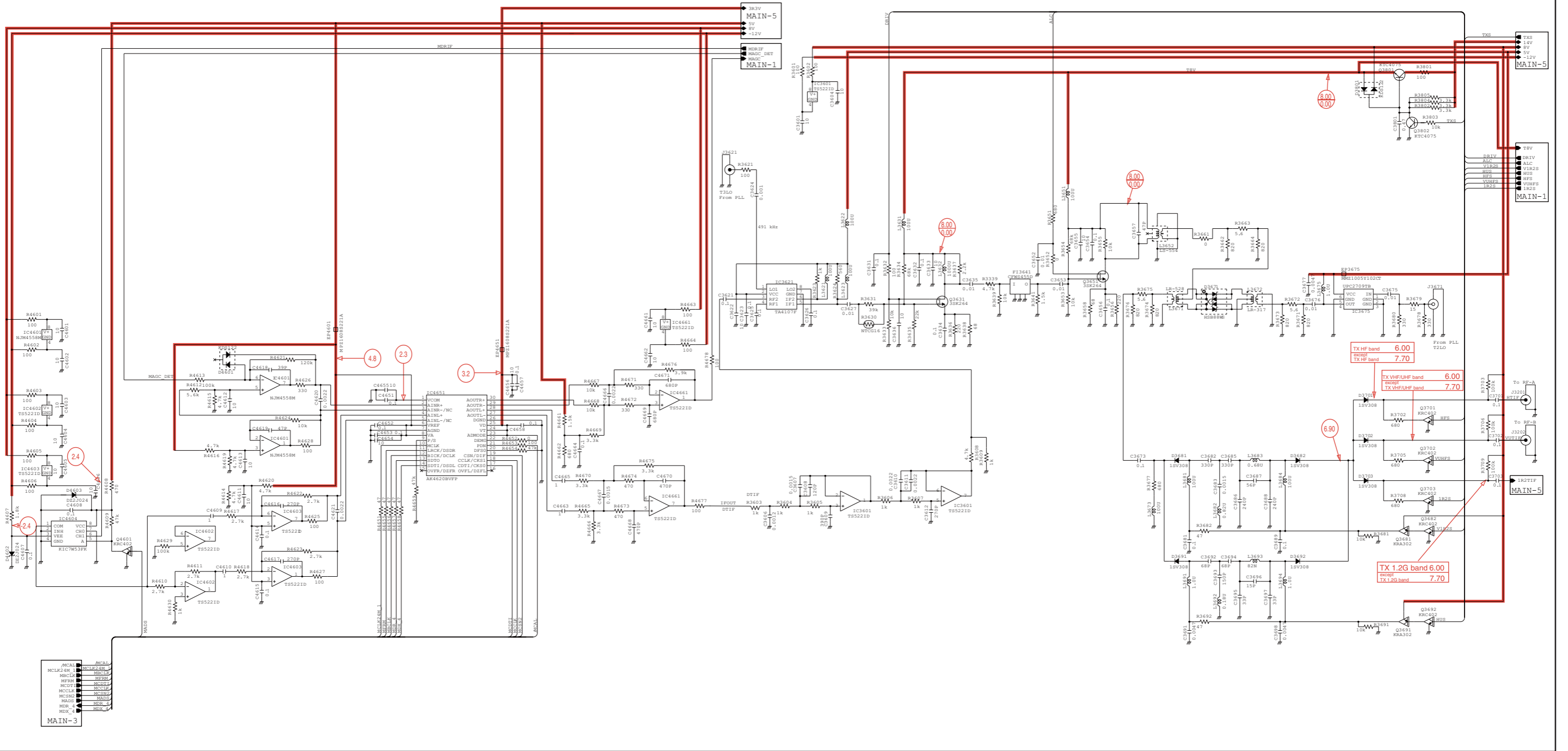
• CONNECT UNIT (CONNECT-3)



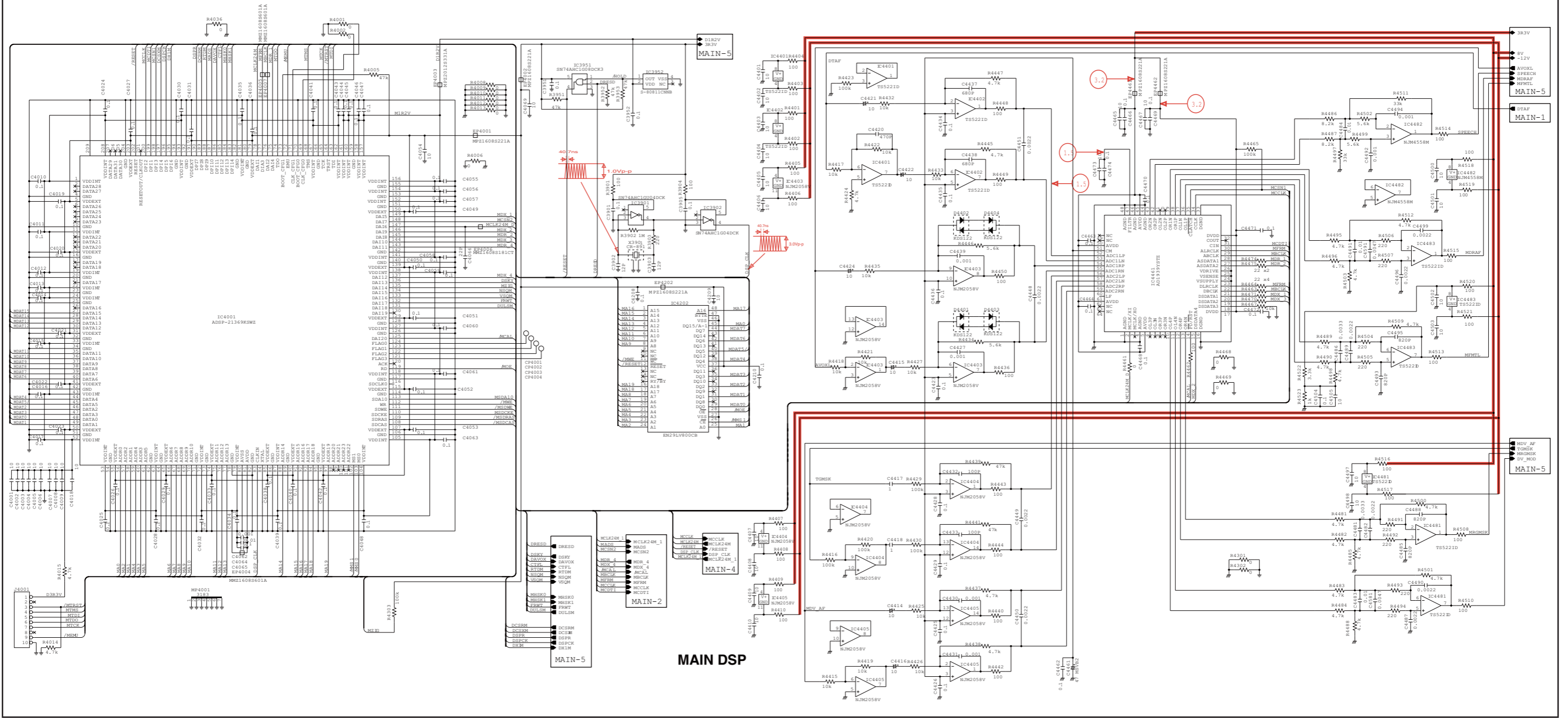
• MAIN UNIT (MAIN-1)



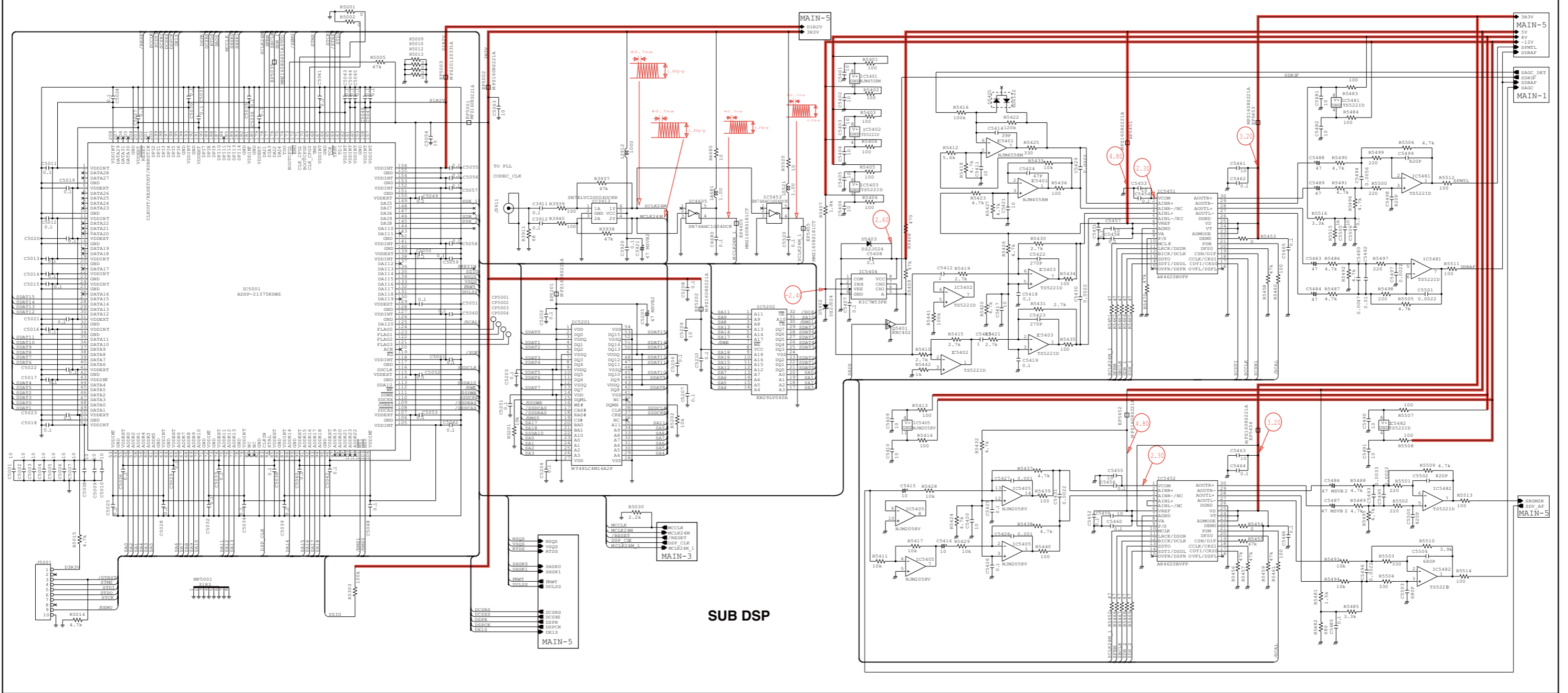
• MAIN UNIT (MAIN-2)



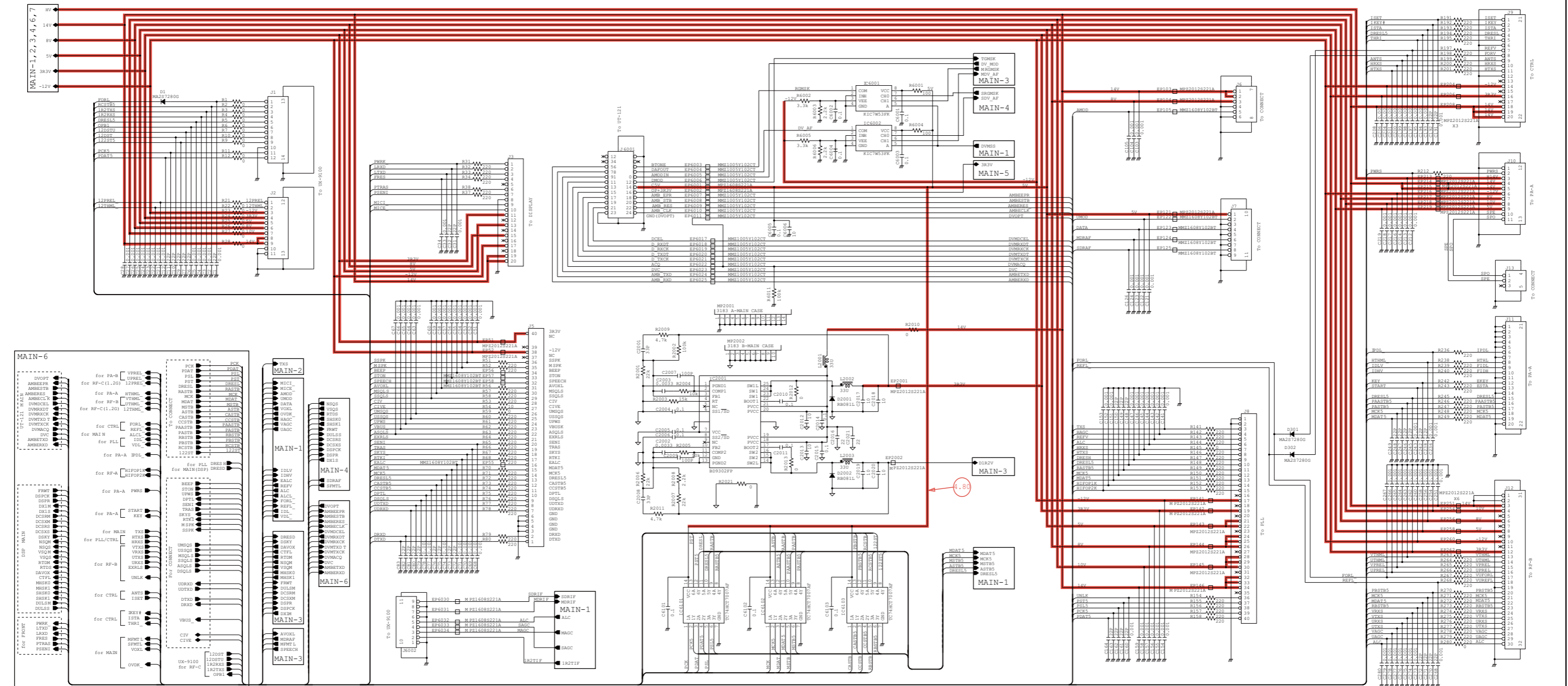
• MAIN UNIT (MAIN-3)



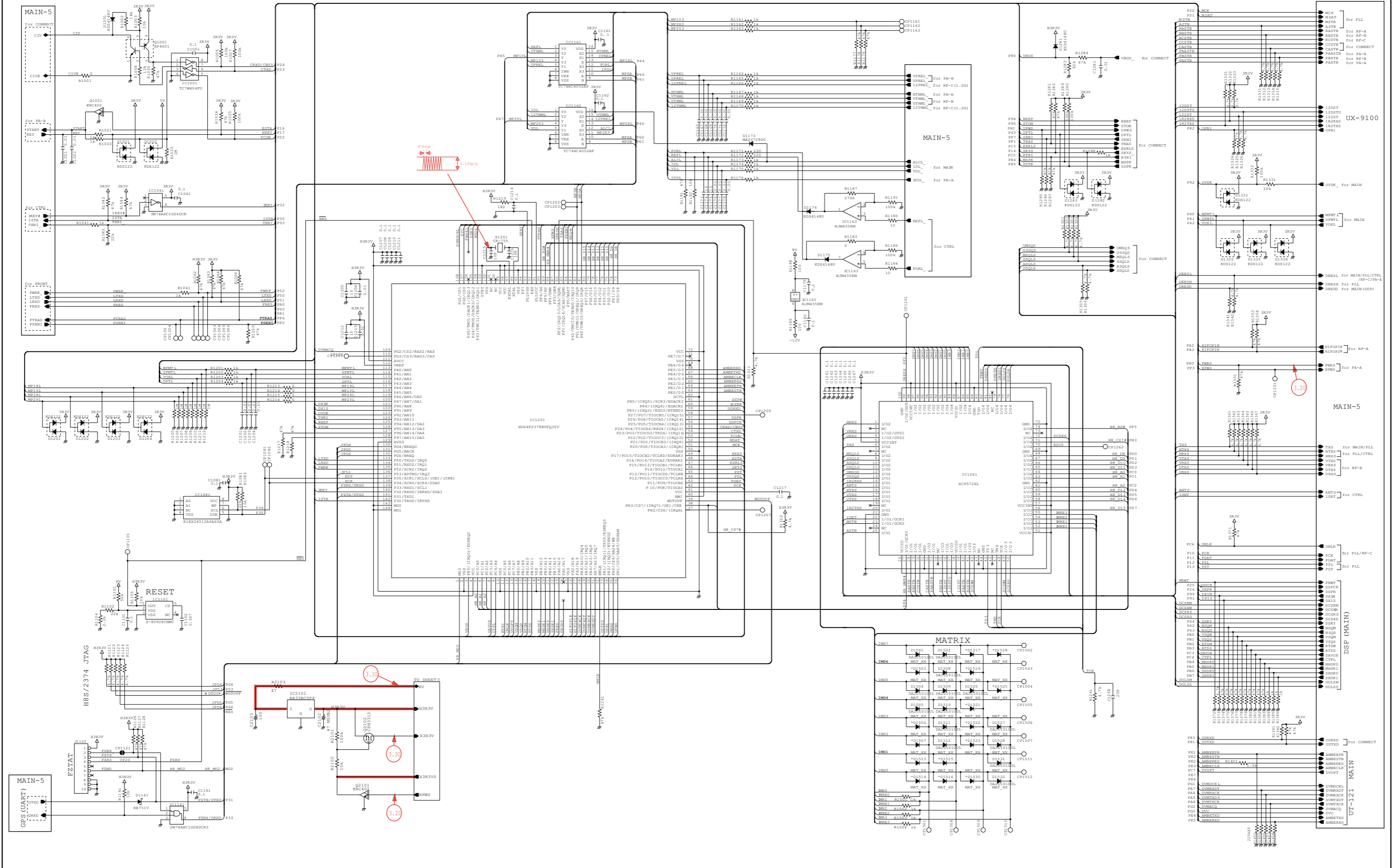
• MAIN UNIT (MAIN-4)



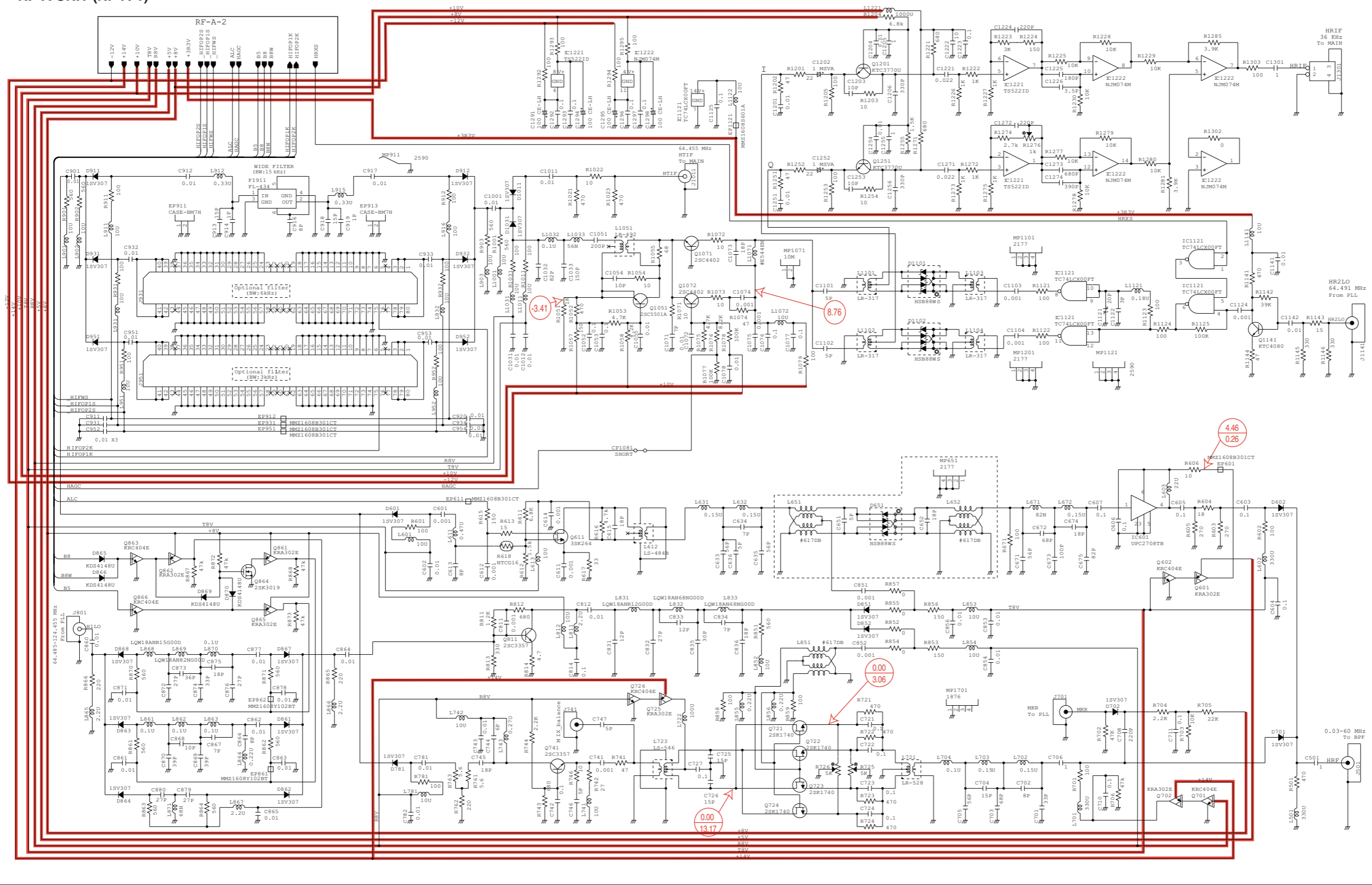
• MAIN UNIT (MAIN-5)



• MAIN UNIT (MAIN-6)

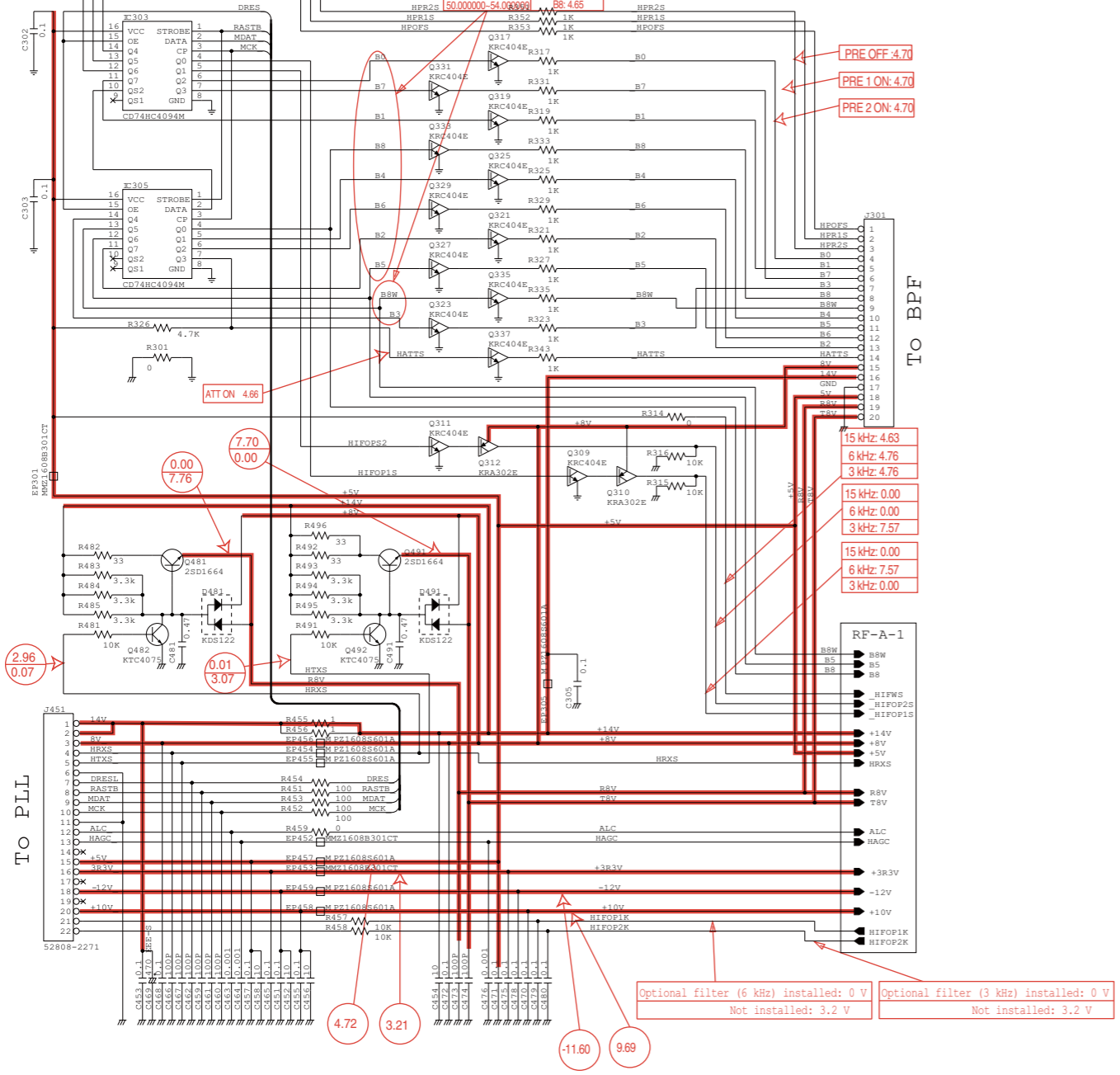


• RF-A UNIT (RF-A-1)

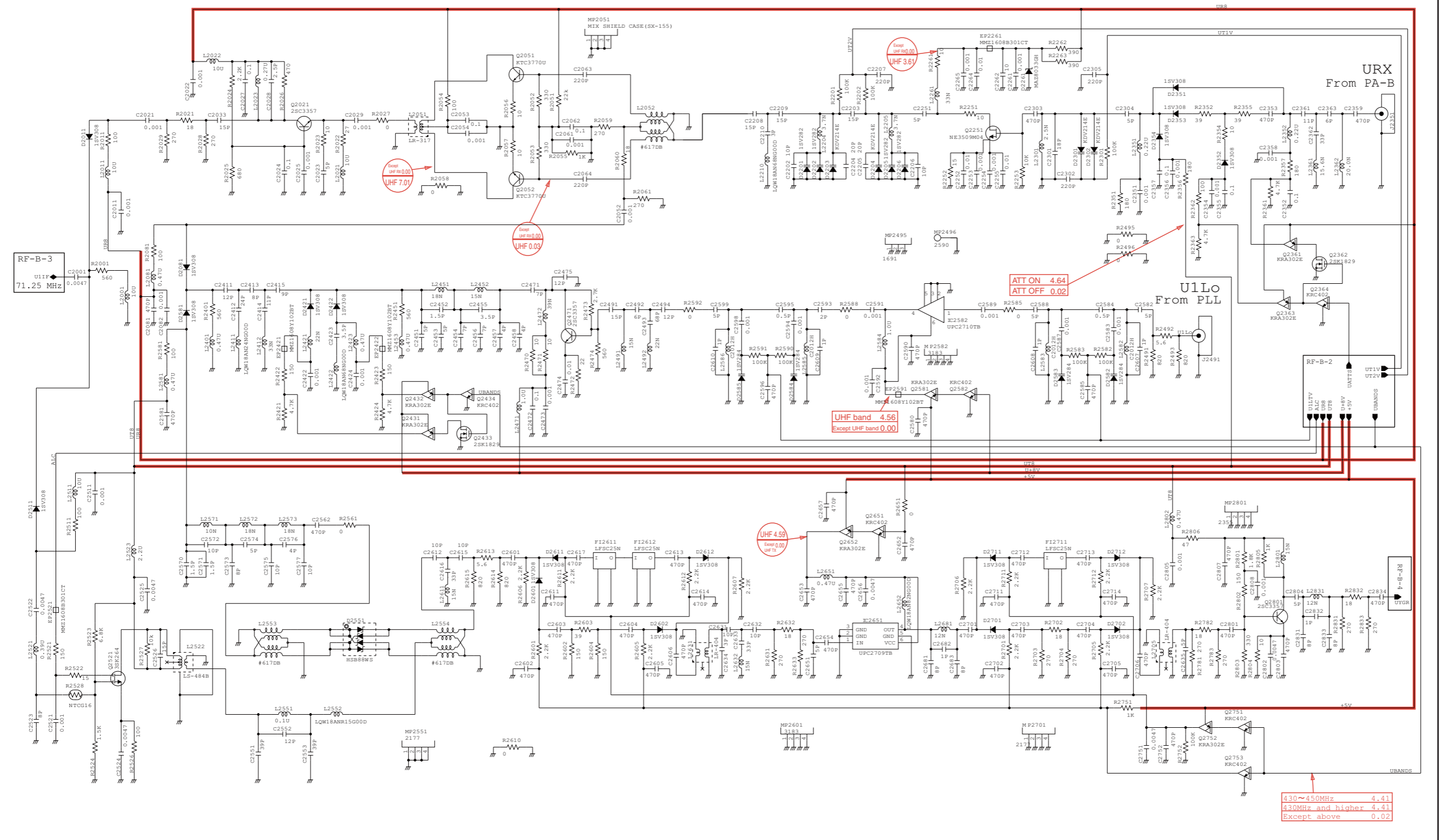


• RF-A UNIT (RF-A-2)

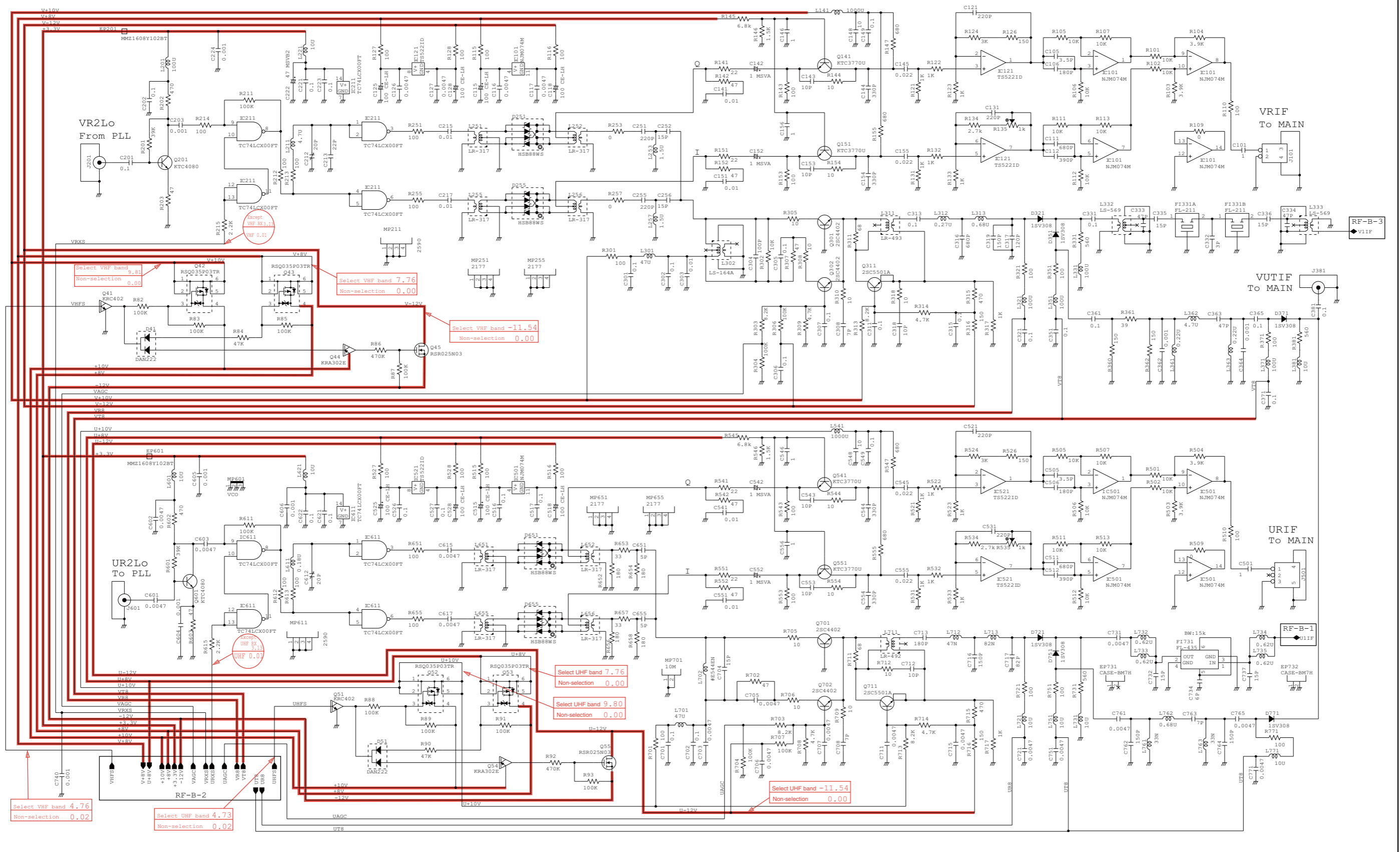
Freq. (MHz)	VOLTAGE
0.00000-1.59999	B0: 4.65
1.60000-3.19999	B1: 4.65
3.20000-4.79999	B2: 4.65
4.80000-6.39999	B3: 4.65
6.40000-8.09999	B4: 4.65
8.10000-9.79999	B5: 4.65
9.80000-11.59999	B6: 4.65
11.60000-13.39999	B7: 4.65
13.40000-15.19999	B8: 4.65
15.20000-17.09999	B9: 4.65
17.10000-18.99999	B10: 4.65
19.00000-20.99999	B11: 4.65
21.00000-22.99999	B12: 4.65
23.00000-24.99999	B13: 4.65
25.00000-26.99999	B14: 4.65
27.00000-28.99999	B15: 4.65
29.00000-30.99999	B16: 4.65
31.00000-32.99999	B17: 4.65
33.00000-34.99999	B18: 4.65
35.00000-36.99999	B19: 4.65
37.00000-38.99999	B20: 4.65
39.00000-40.99999	B21: 4.65
41.00000-42.99999	B22: 4.65
43.00000-44.99999	B23: 4.65
45.00000-46.99999	B24: 4.65
47.00000-48.99999	B25: 4.65
49.00000-50.99999	B26: 4.65
51.00000-52.99999	B27: 4.65
53.00000-54.99999	B28: 4.65



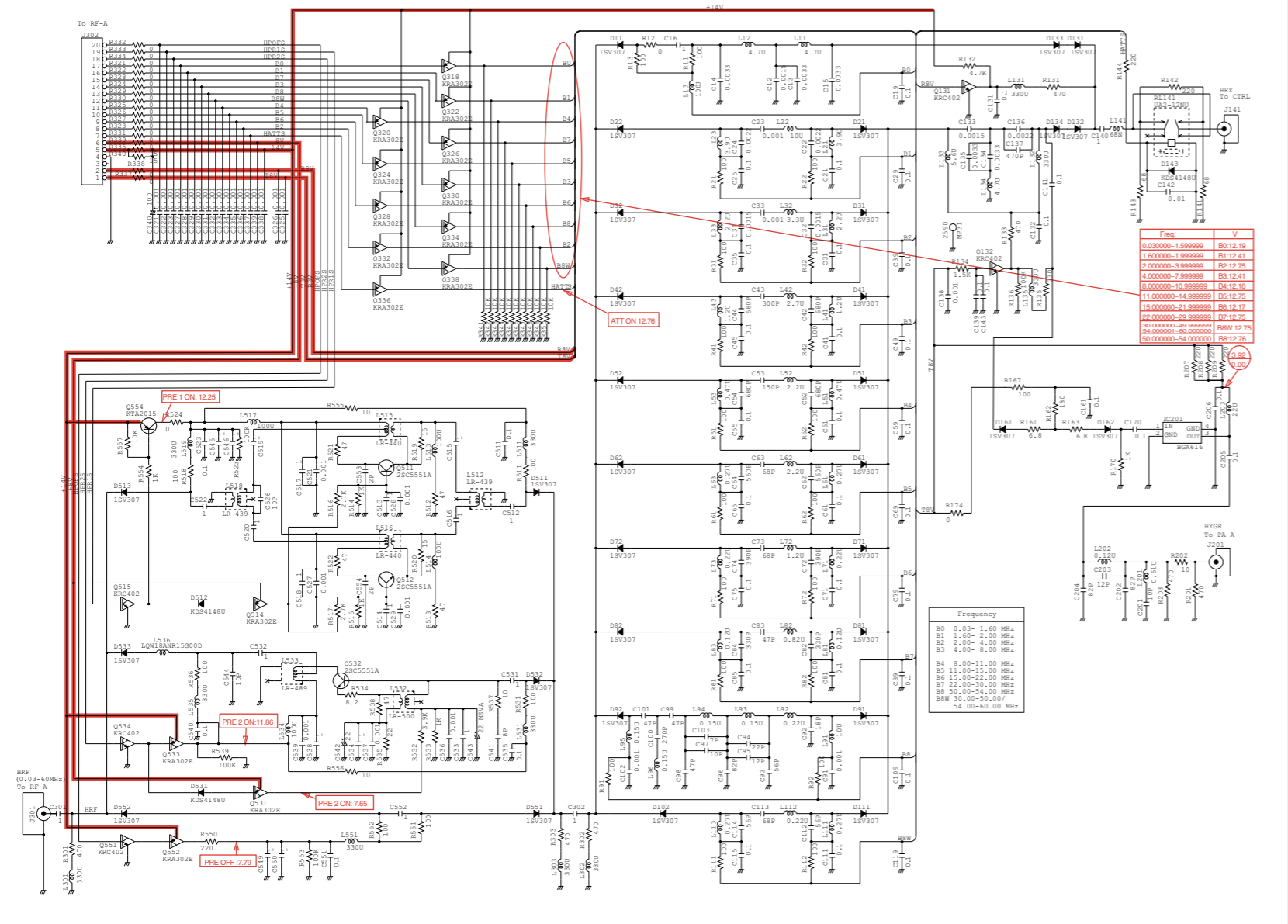
• RF-B UNIT (RF-B-1)



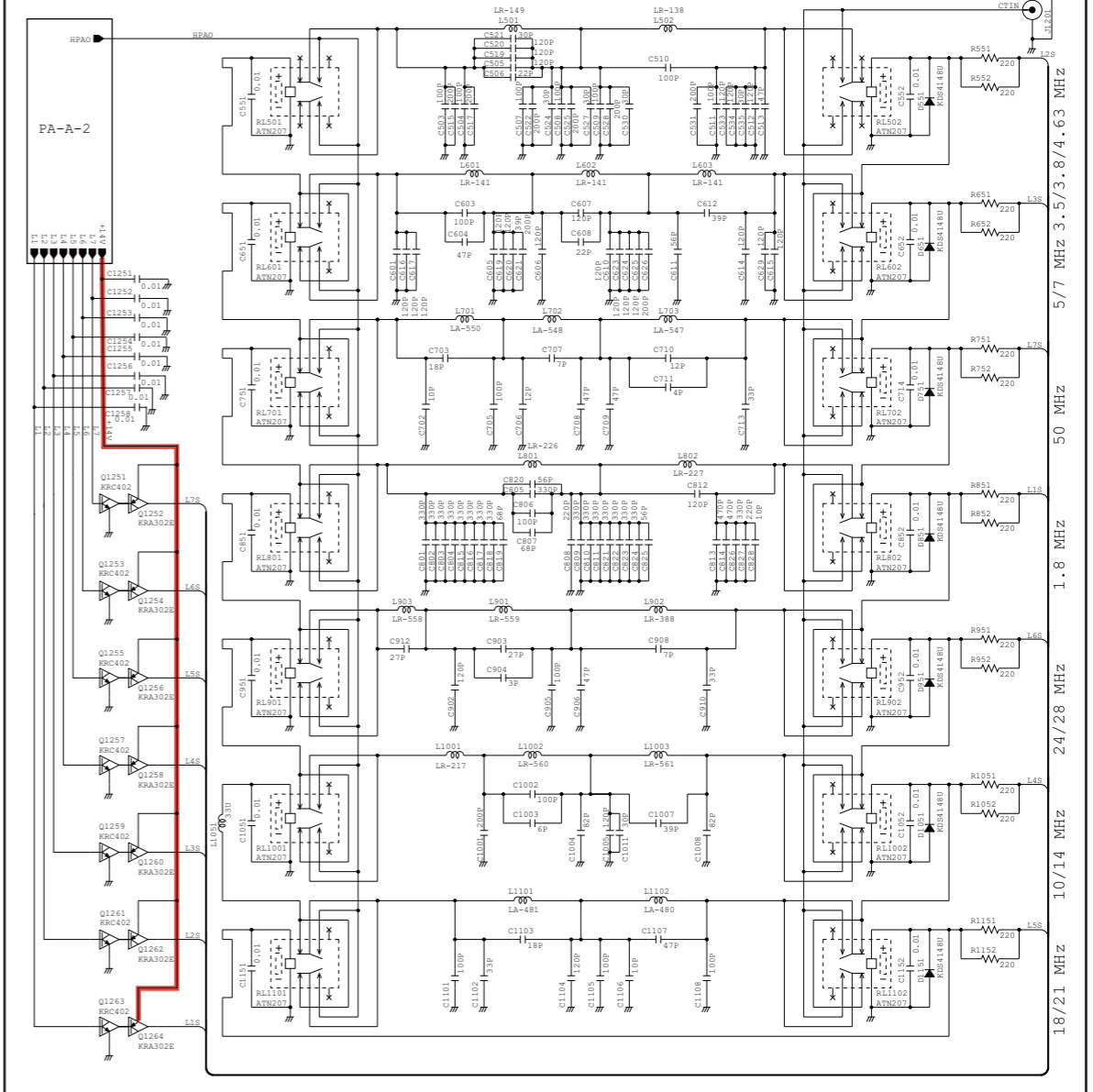
• RF-B UNIT (RF-B-3)



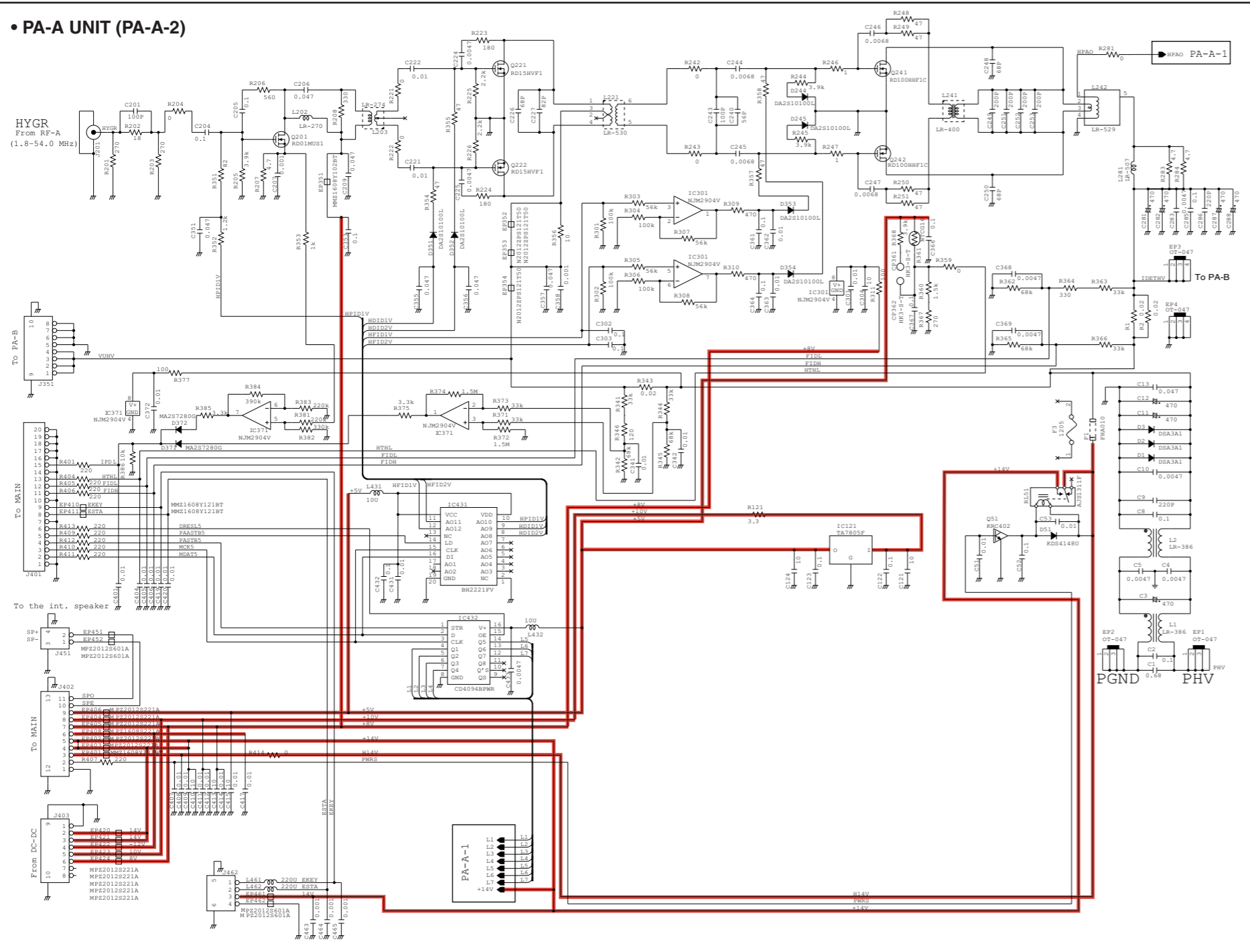
• BPF UNIT



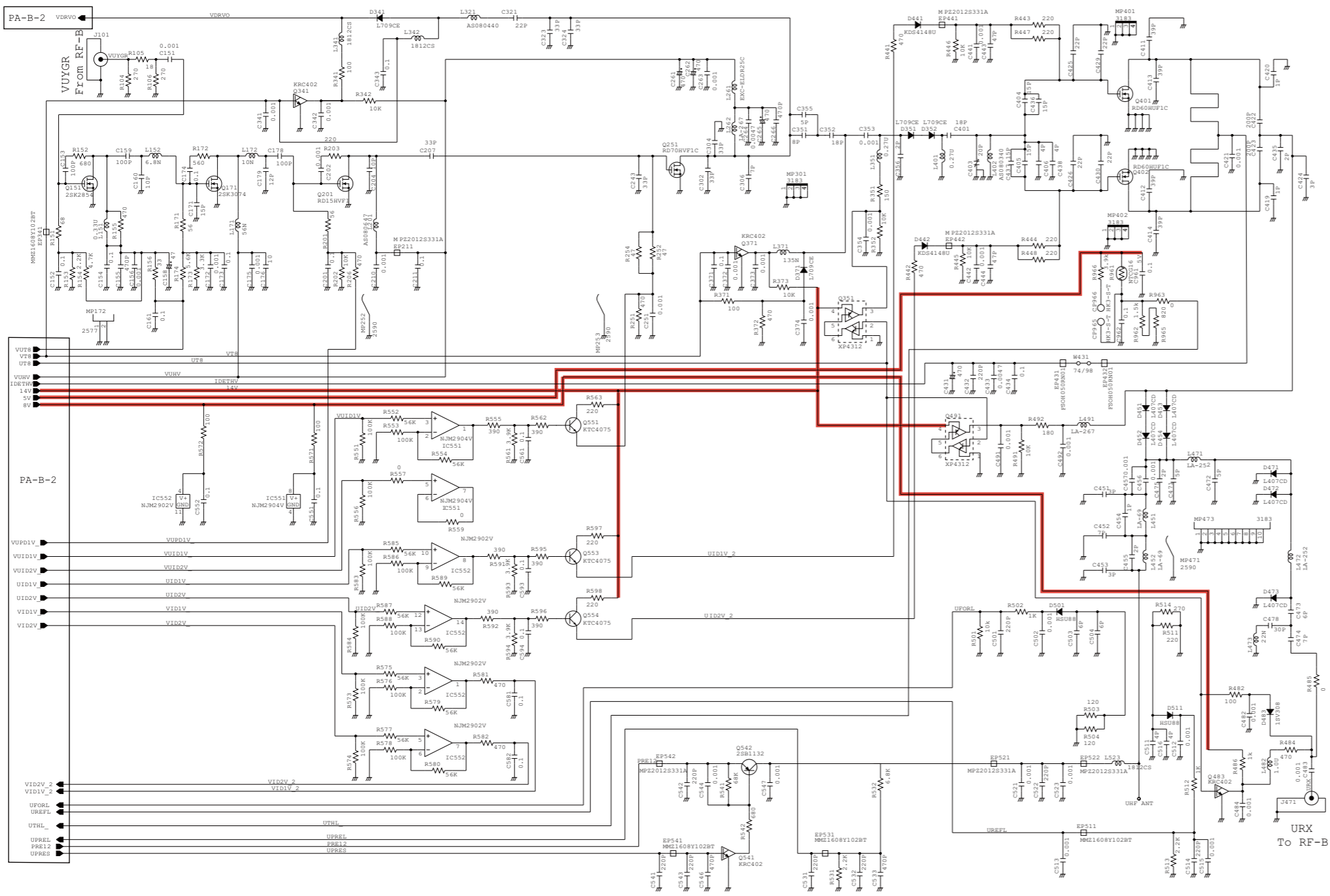
• PA-A UNIT (PA-A-1)



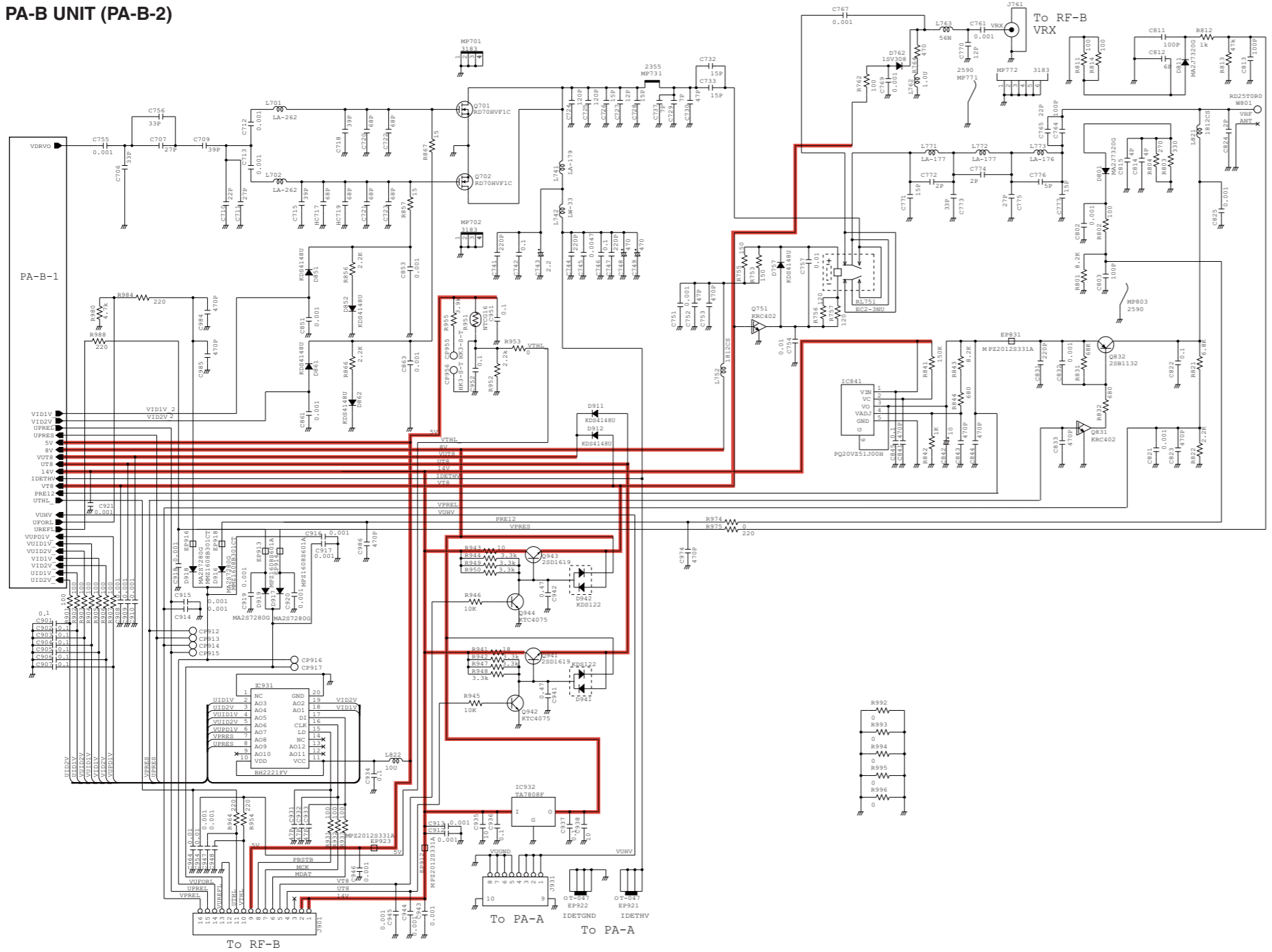
• PA-A UNIT (PA-A-2)



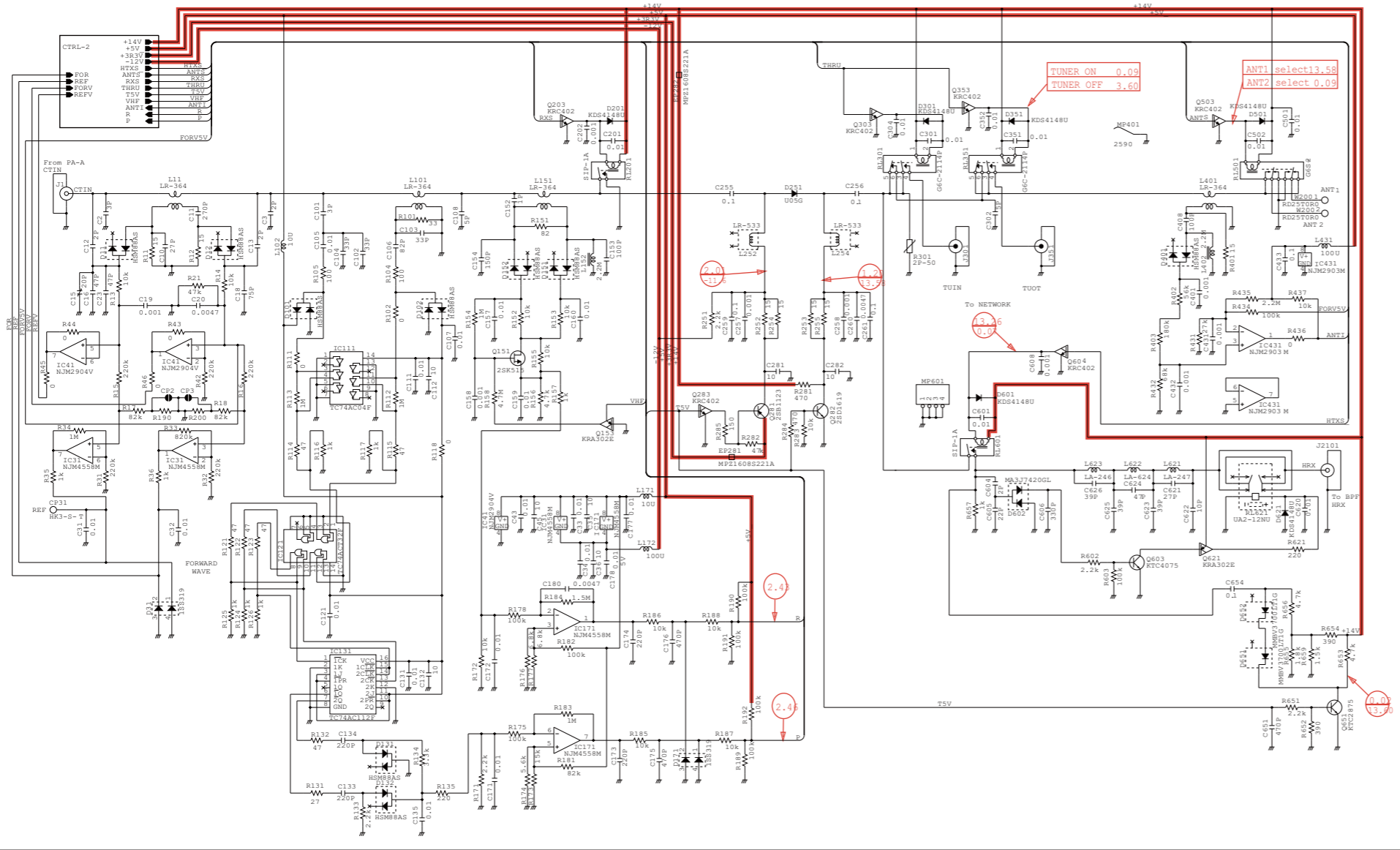
• PA-B UNIT (PA-B-1)



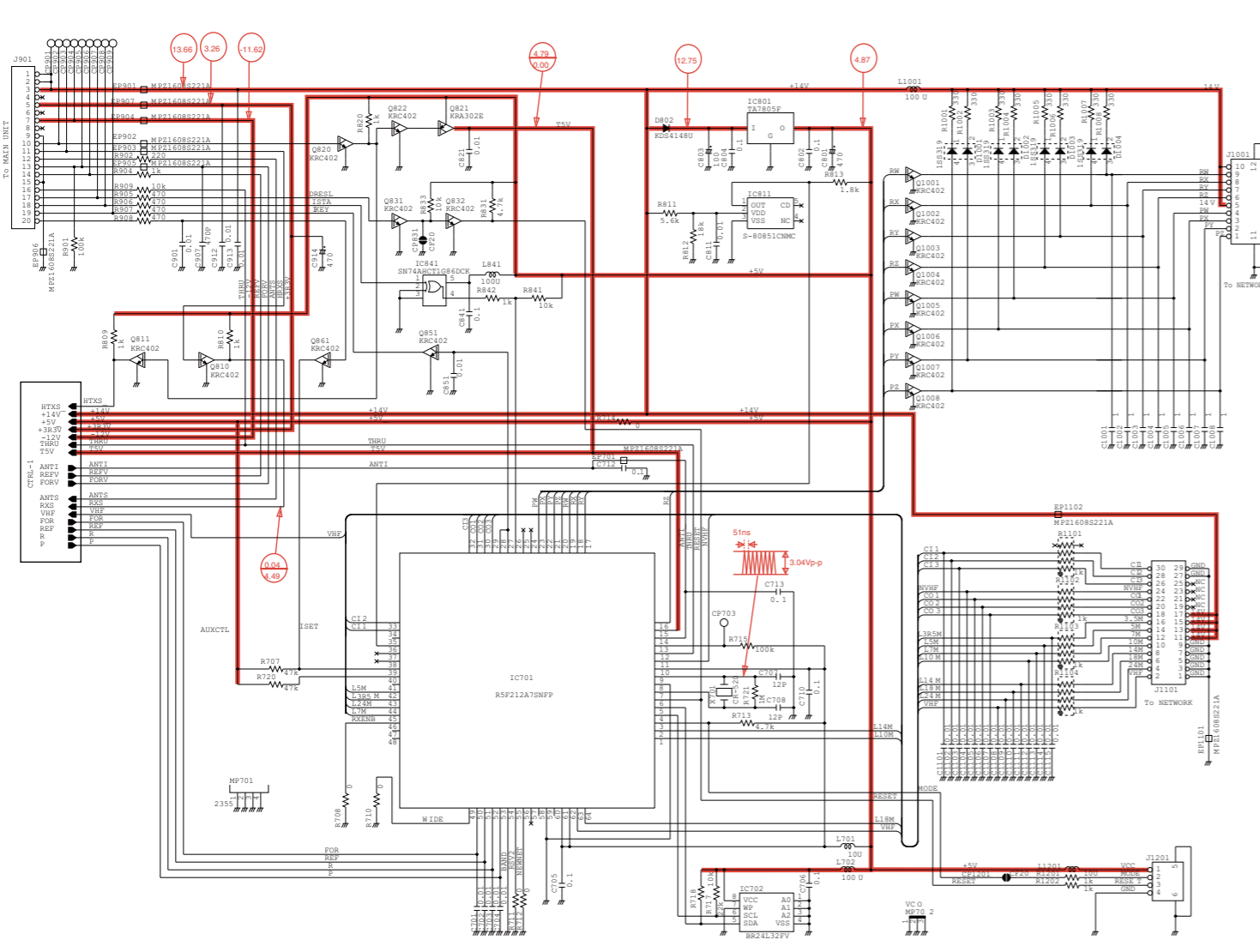
• PA-B UNIT (PA-B-2)



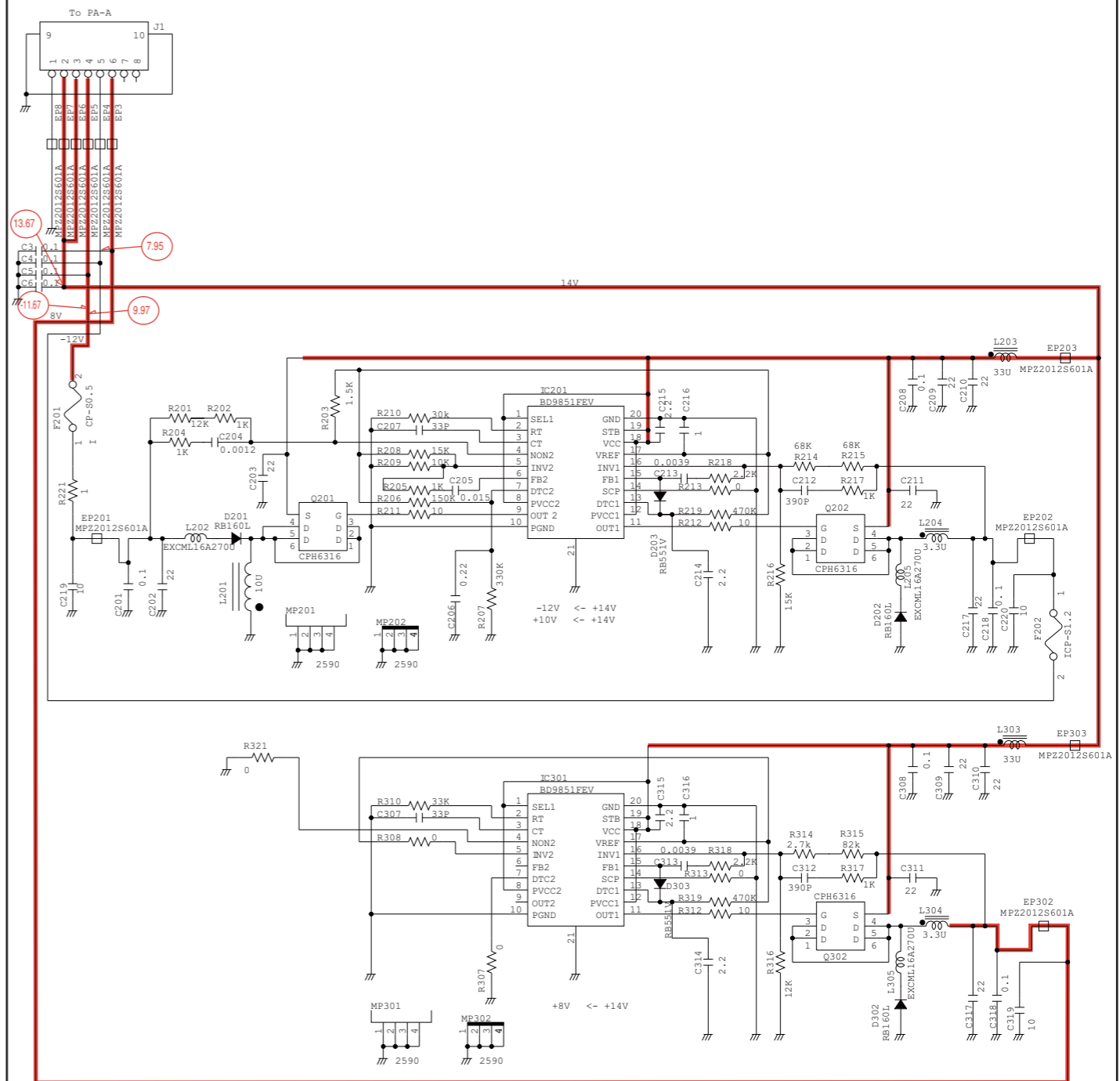
• CTRL UNIT (CTRL-1)



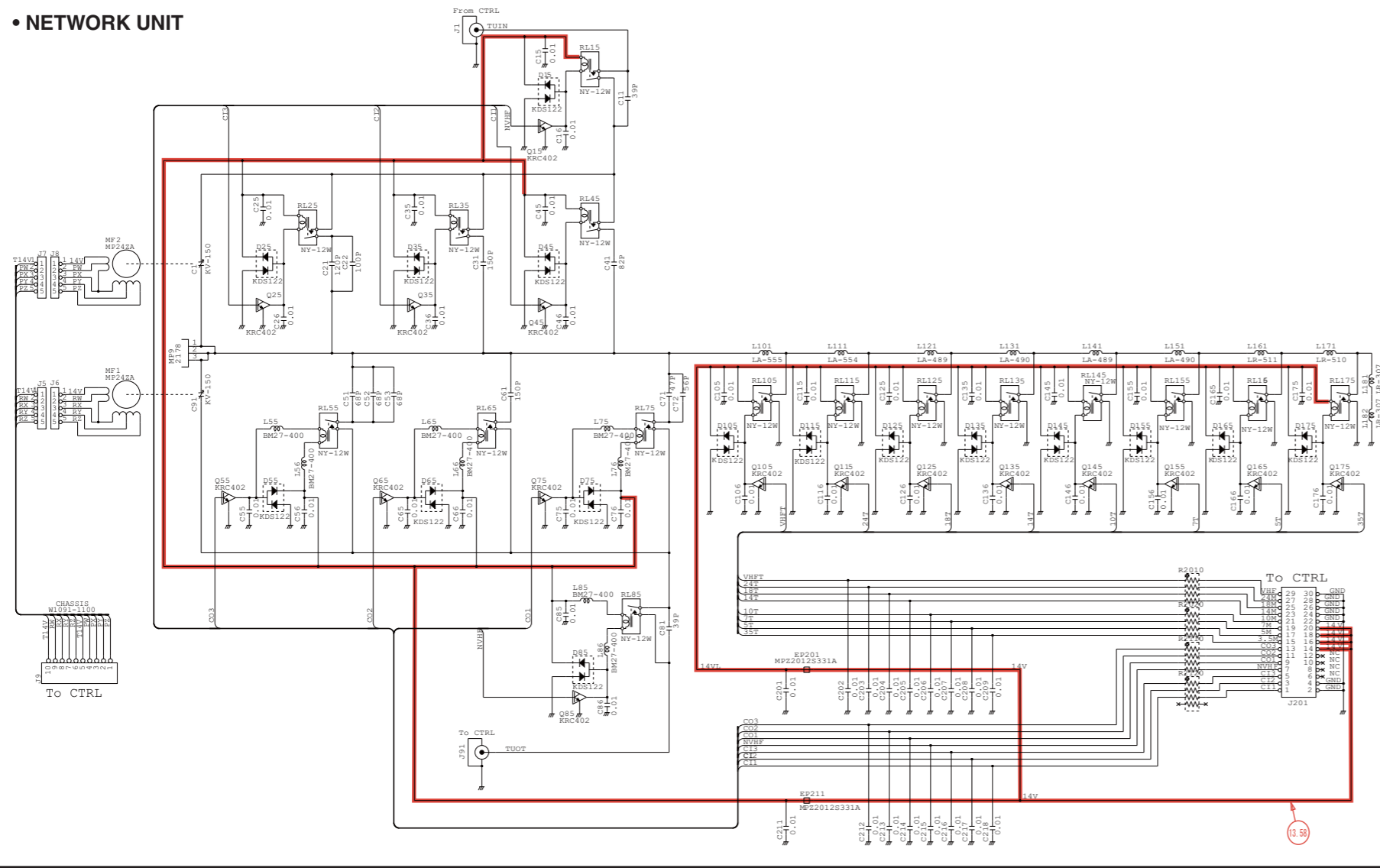
• CTRL UNIT (CTRL-2)



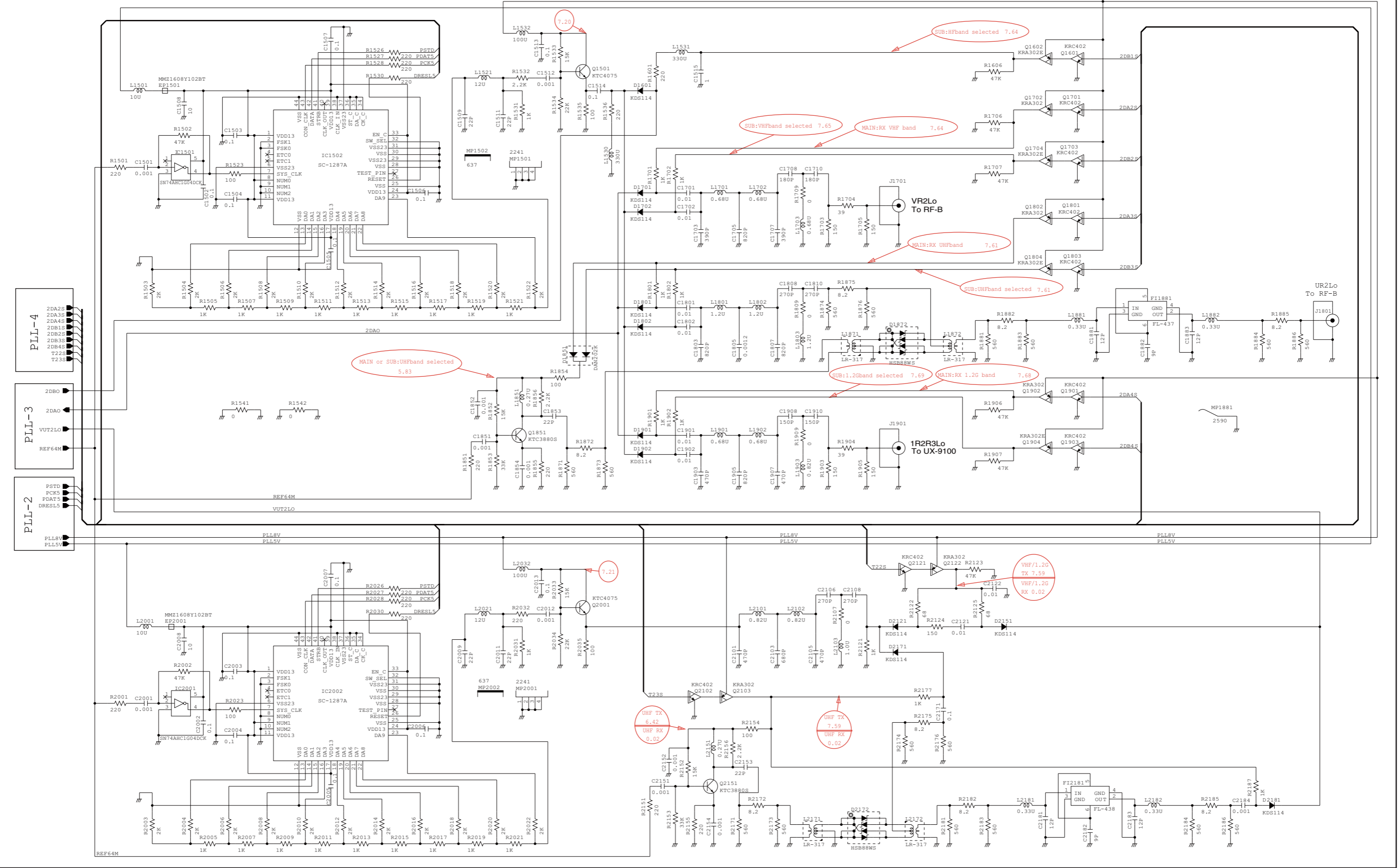
• DC-DC UNIT



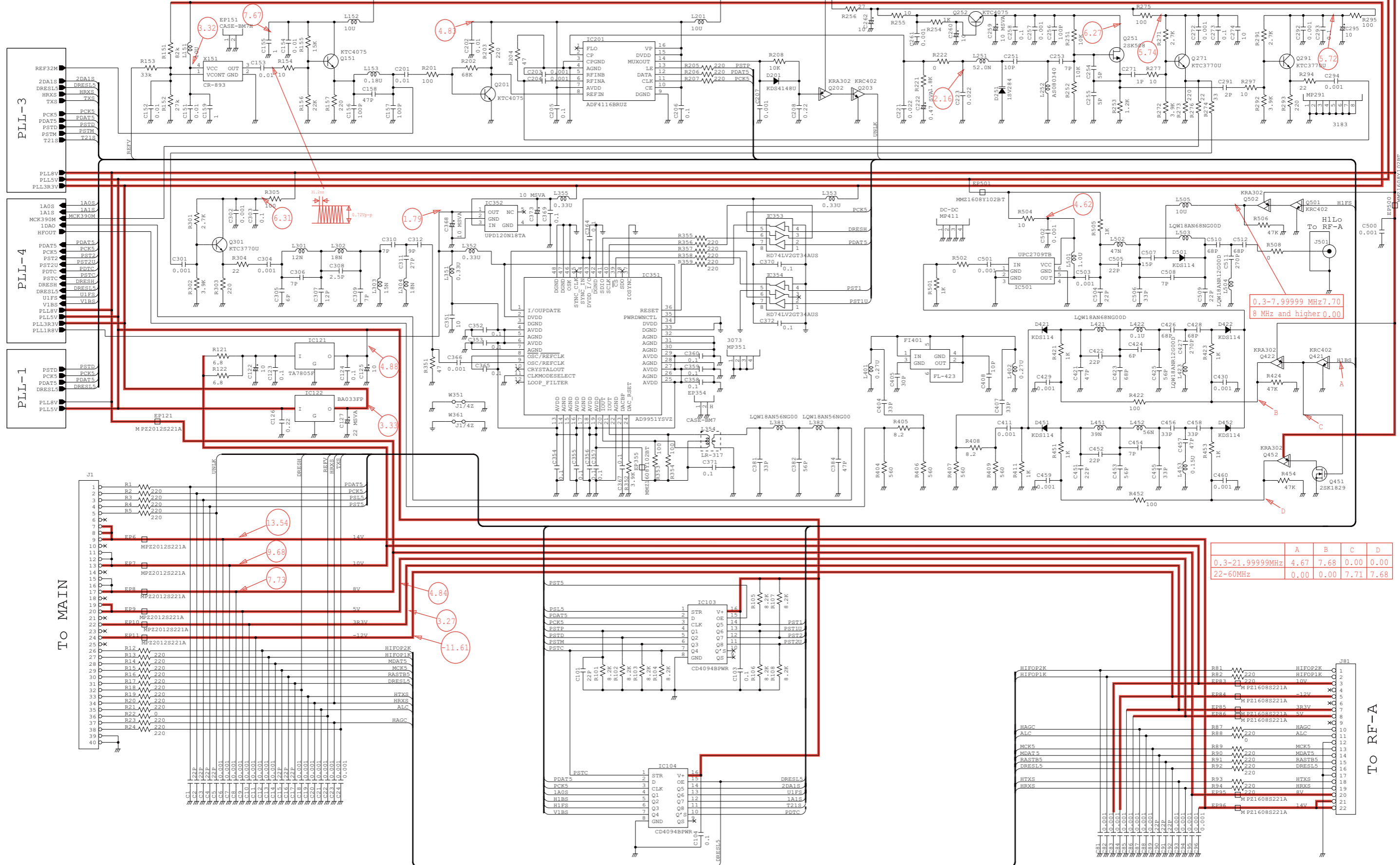
• NETWORK UNIT



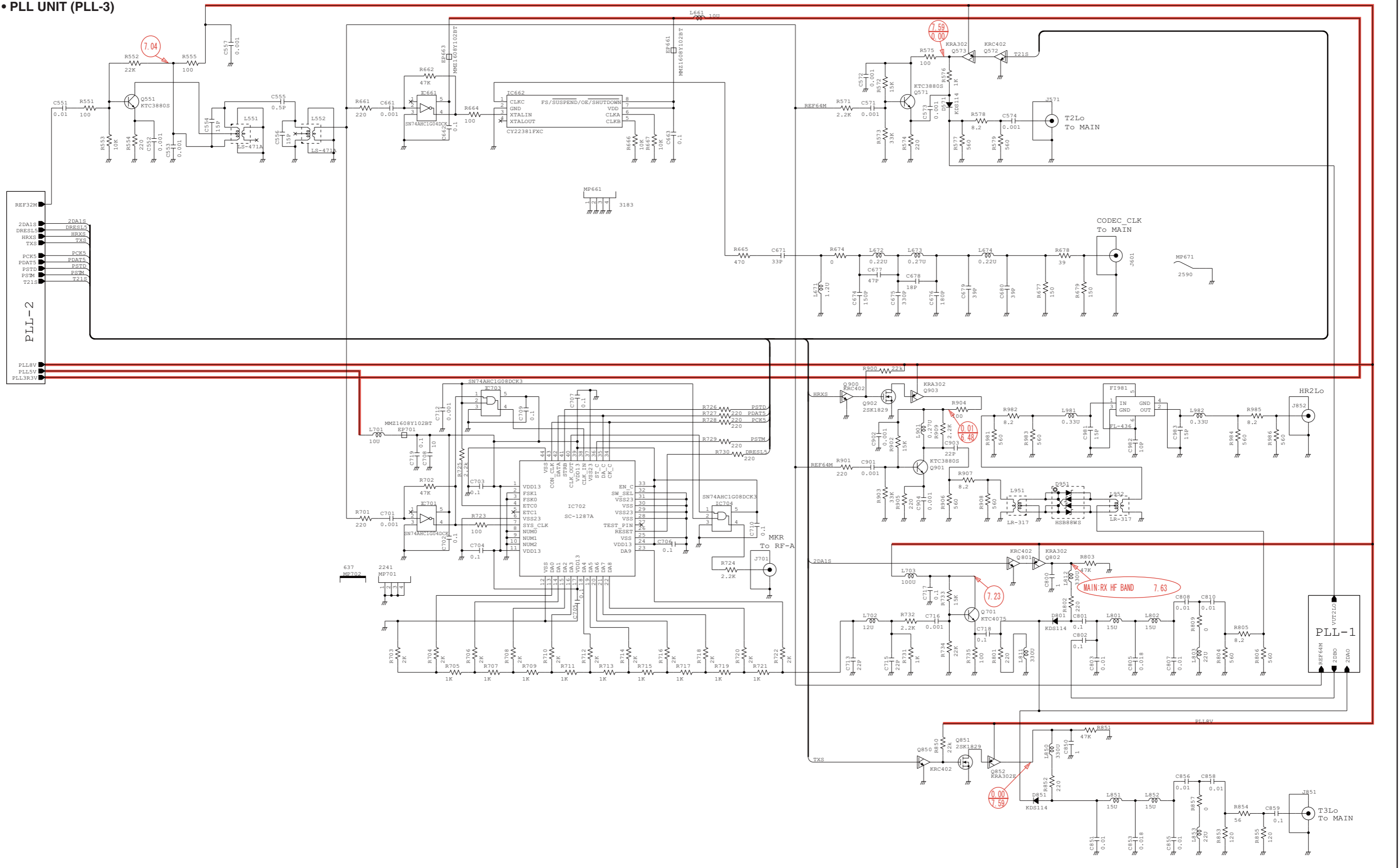
• PLL UNIT (PLL-1)



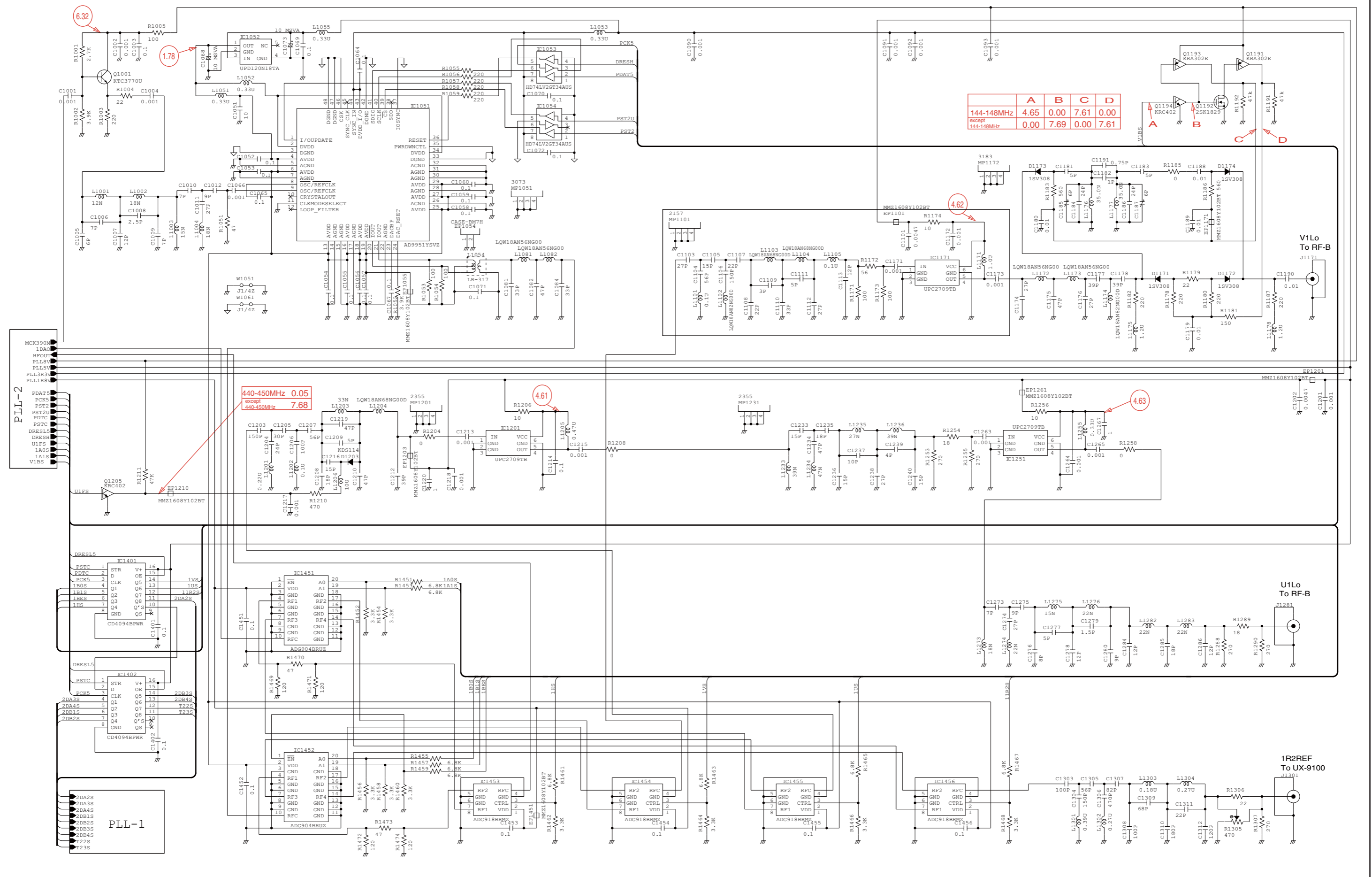
• PLL UNIT (PLL-2)



• PLL UNIT (PLL-3)



• PLL UNIT (PLL-4)



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