



# SERVICE MANUAL

HF/VHF/UHF TRANSCEIVER

## IC-9100

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S-14721XZ-C1  
Jun. 2011

Icom Inc.

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## 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<sup>\*1\*2</sup>
    - 136.000–174.000<sup>\*1\*2</sup>
    - 420.000–480.000<sup>\*1\*2</sup>
    - 1240.000–1320.000<sup>†</sup>
  - Transmit
    - 1.800–1.999<sup>\*2</sup>, 3.500–3.999<sup>\*2</sup>,
    - 5.330500<sup>\*3</sup>, 5.346500<sup>\*3</sup>, 5.366500<sup>\*3</sup>,
    - 5.371500<sup>\*3</sup>, 5.403500<sup>\*3</sup>,
    - 7.000–7.300<sup>\*2</sup>, 10.100–10.150<sup>\*2</sup>,
    - 14.000–14.350<sup>\*2</sup>, 18.068–18.168<sup>\*2</sup>,
    - 21.000–21.450<sup>\*2</sup>, 24.890–24.990<sup>\*2</sup>,
    - 28.000–29.700<sup>\*2</sup>, 50.000–54.000<sup>\*2</sup>
    - 144.000–148.000<sup>\*2</sup>, 430.000–450.000<sup>\*2</sup>
    - 1240.000–1300.000<sup>†</sup>
- <sup>\*1</sup>Some frequency bands are not guaranteed.
- <sup>\*2</sup>Depending on version. <sup>\*3</sup>USA 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<sup>†</sup>; 99CH × 4 bands)
- No. of scan edge memory channels : 18CH (6 × 3 band)  
(24CH with UX-9100<sup>†</sup>; 6CH × 4 bands)
- No. of call channels : 3CH (1 × 3 band)  
(4CH with UX-9100<sup>†</sup>; 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)<sup>†</sup>
  - Receive
    - Standby : 3.0 A (HF/50/144/430 MHz band)  
4.0 A (1200 MHz band)<sup>†</sup>
    - Max. audio : 4.5 A (HF/50/144/430 MHz band)  
5.5 A (1200 MHz band)<sup>†</sup>
- 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 <sup>†</sup>	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<sup>†</sup> : 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<sup>†</sup> : Less than –50 dB
- Carrier suppression : More than 40 dB
- Unwanted sideband suppression : More than 55 dB  
(1200 MHz: More than 40 dB)<sup>†</sup>
- 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)

<sup>†</sup> The optional UX-9100 is required for 1200 MHz frequency band operation.

<sup>‡</sup> Only when the 1200 MHz frequency band is selected.

## ■ Receiver

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

Frequency band	Squelch sensitivity
HF	SSB : Less than 5.6 $\mu$ V <sup>*1</sup>
	FM : Less than 0.3 $\mu$ V <sup>*1</sup>
50 MHz	SSB : Less than 5.6 $\mu$ V <sup>*2</sup>
	FM : Less than 0.3 $\mu$ V <sup>*2</sup>
144/430 MHz	SSB : Less than 1.0 $\mu$ V
	FM : Less than 0.18 $\mu$ V
1200 MHz <sup>†</sup>	SSB : Less than 1.0 $\mu$ V
	FM : Less than 0.18 $\mu$ 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<sup>†</sup> : More than 50 dB
- AF output power : More than 2.0 W at 10%  
(at 13.8 V DC) distortion with an 8  $\Omega$  load
- AF output impedance : 8  $\Omega$
- RIT variable range :  $\pm$ 9.999 kHz

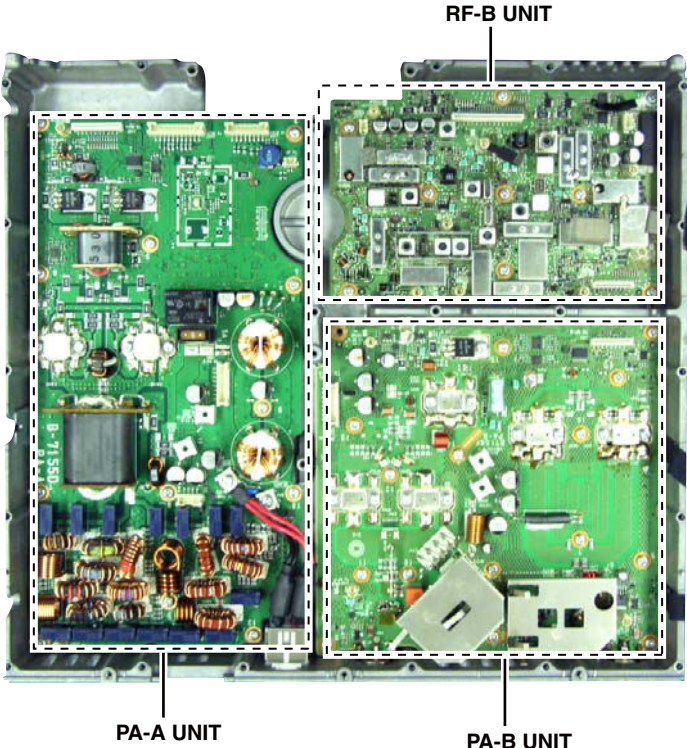
- PHONES connector : 3-conductor 6.35 (d) mm ( $\frac{1}{4}$ " )
- External SP connector : 2-conductor 3.5 (d) mm  
( $\frac{1}{8}$ " )/8  $\Omega$
- DSP ANF attenuation : More than 30 dB  
(with 1 kHz single tone)
- DSP MNF attenuation : More than 70 dB
- DSP NR attenuation : More than 6 dB  
(noise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

## ■ Antenna tuner

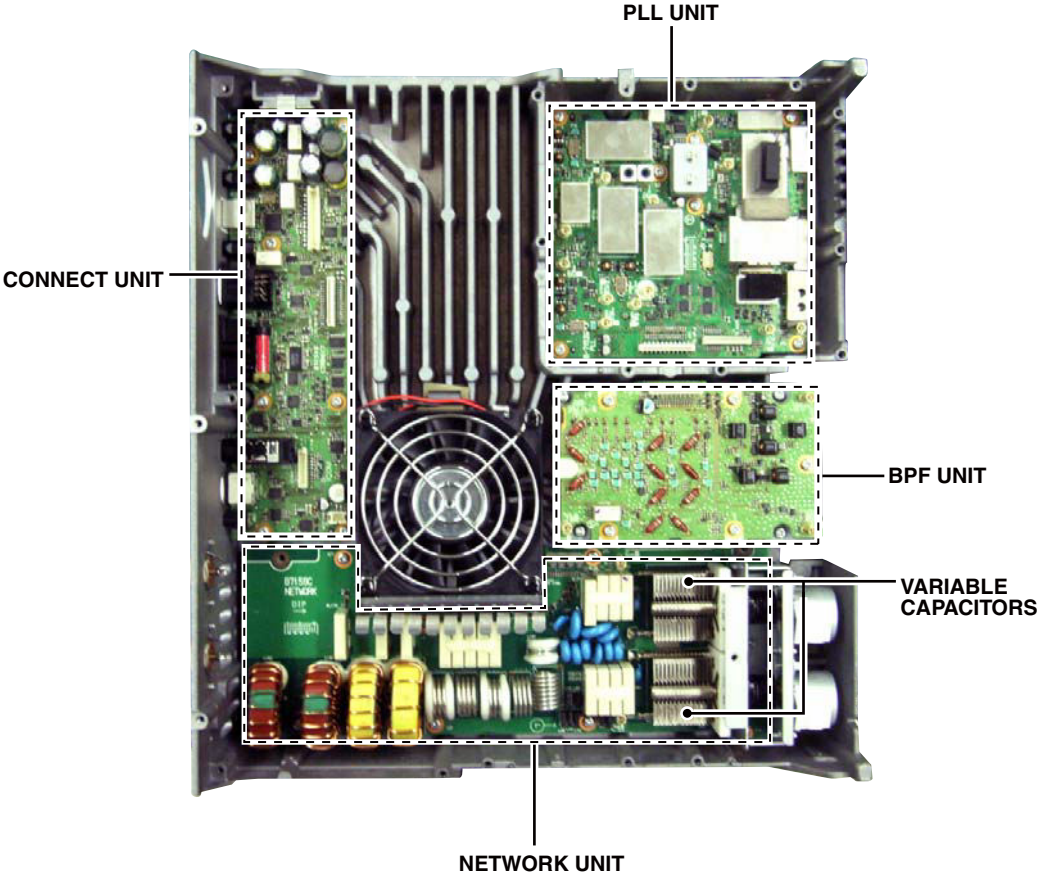
- Matching impedance range
  - HF bands : 16.7 to 150  $\Omega$  unbalanced  
(Less than VSWR 1:3)
  - 50 MHz band : 20 to 125  $\Omega$  unbalanced  
(Less than VSWR 1:2.5)
- Minimum operating input power : 8 W (HF bands)  
15 W (50MHz band )
- Tuning accuracy : VSWR 1:1.5 or less
- Insertion loss : 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.

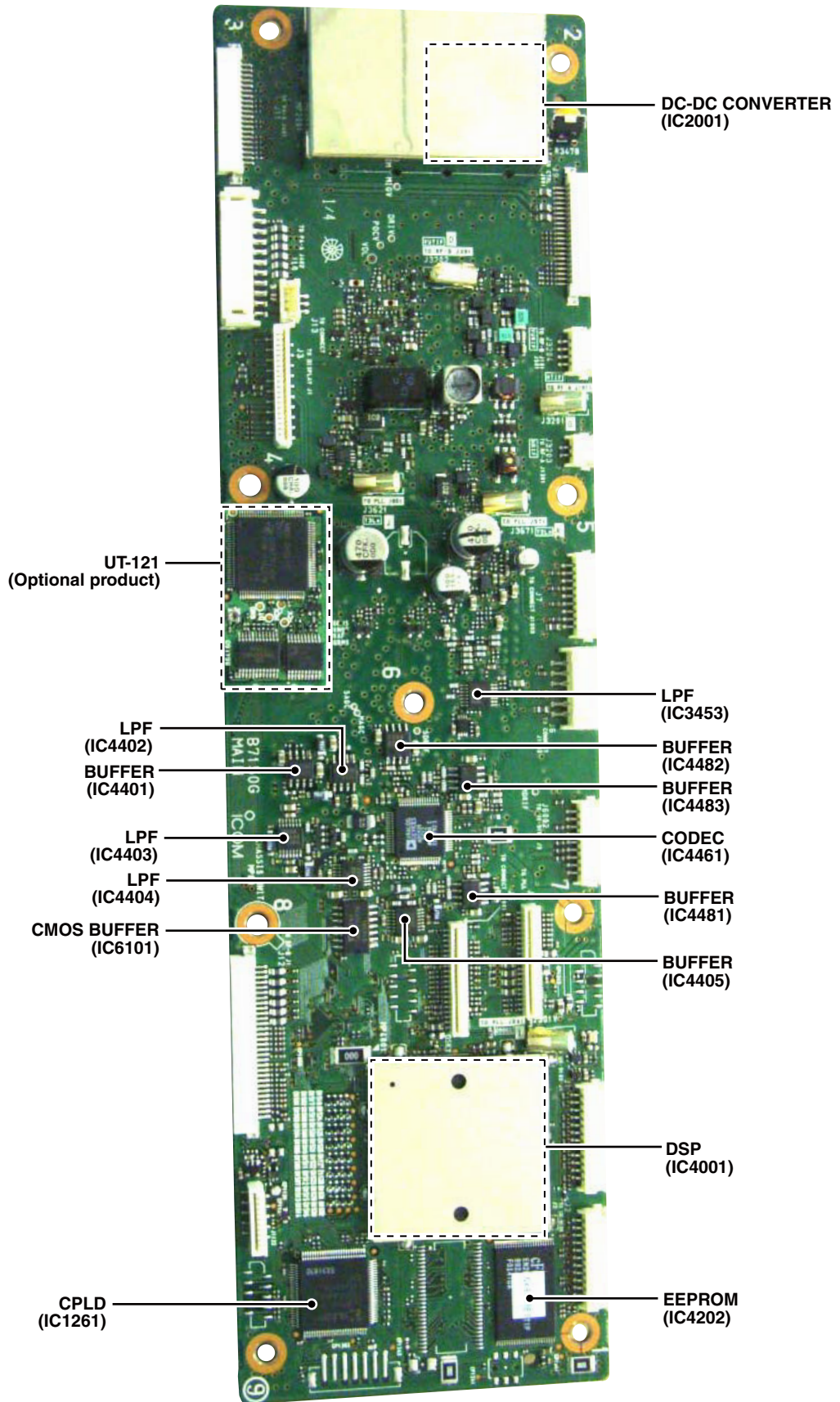
**• THE VIEW FROM THE TOP OF CHASSIS**



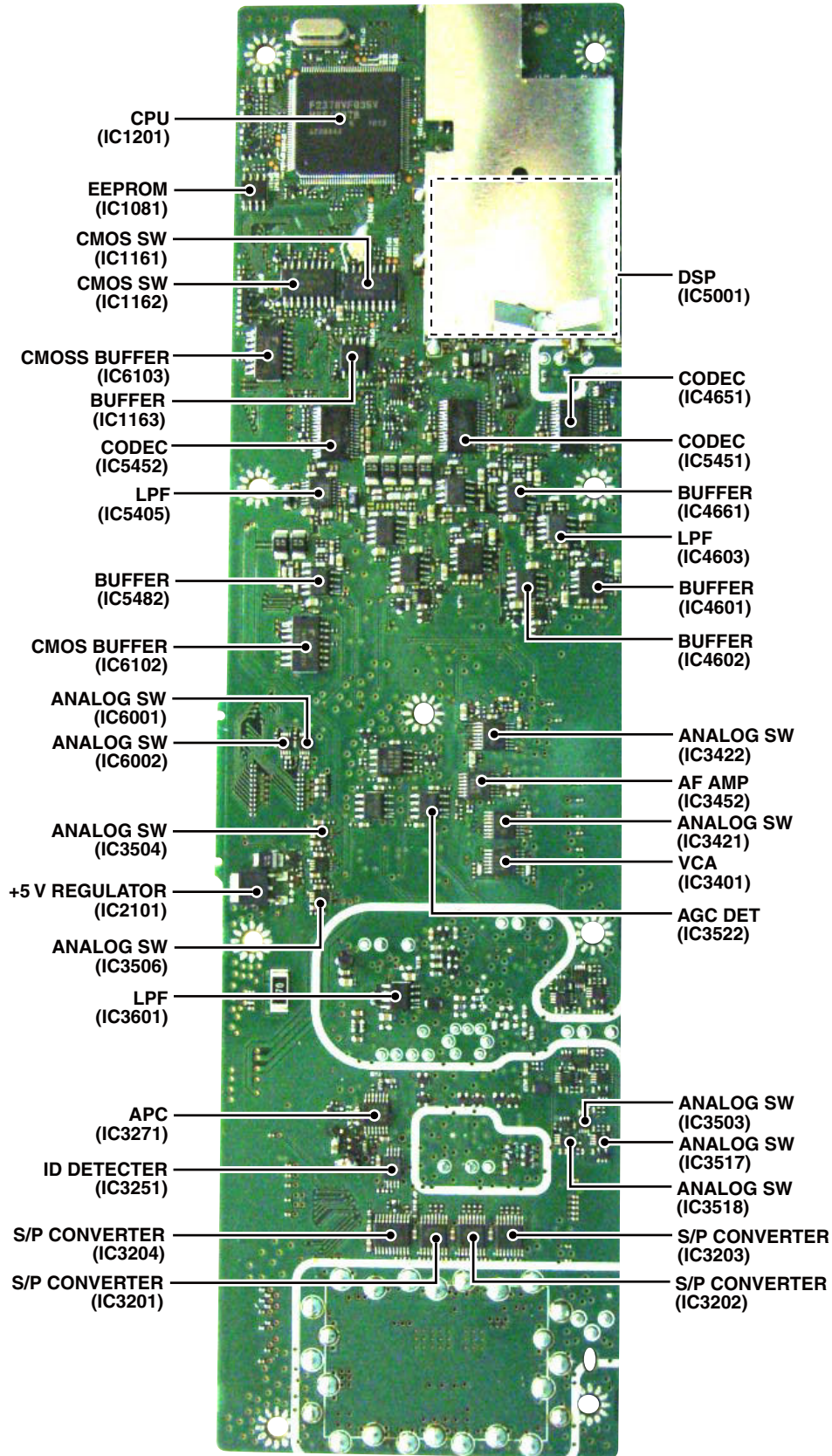
**• THE VIEW FROM THE BOTTOM OF CHASSIS**



• MAIN UNIT  
(TOP VIEW)

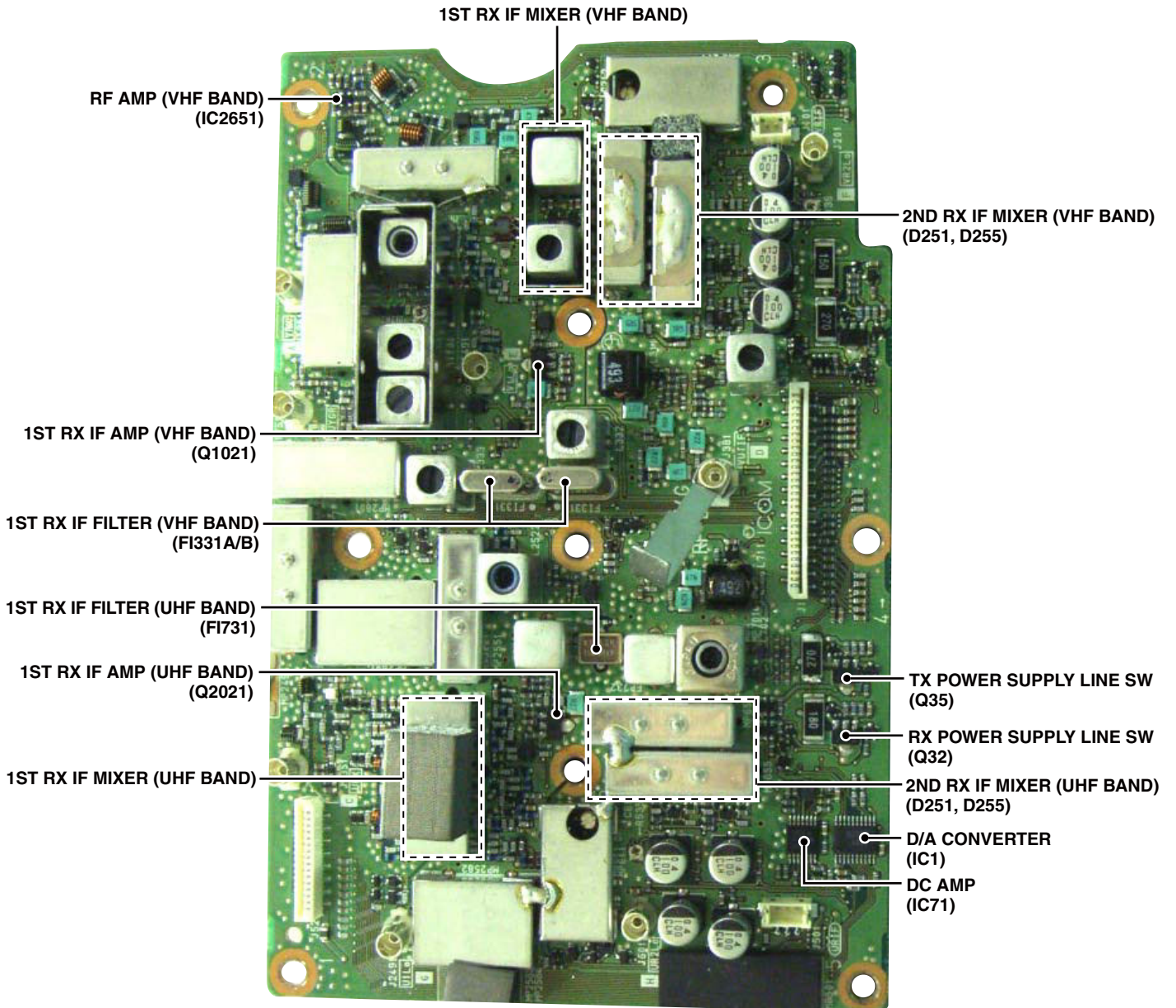


• MAIN UNIT  
(BOTTOM VIEW)

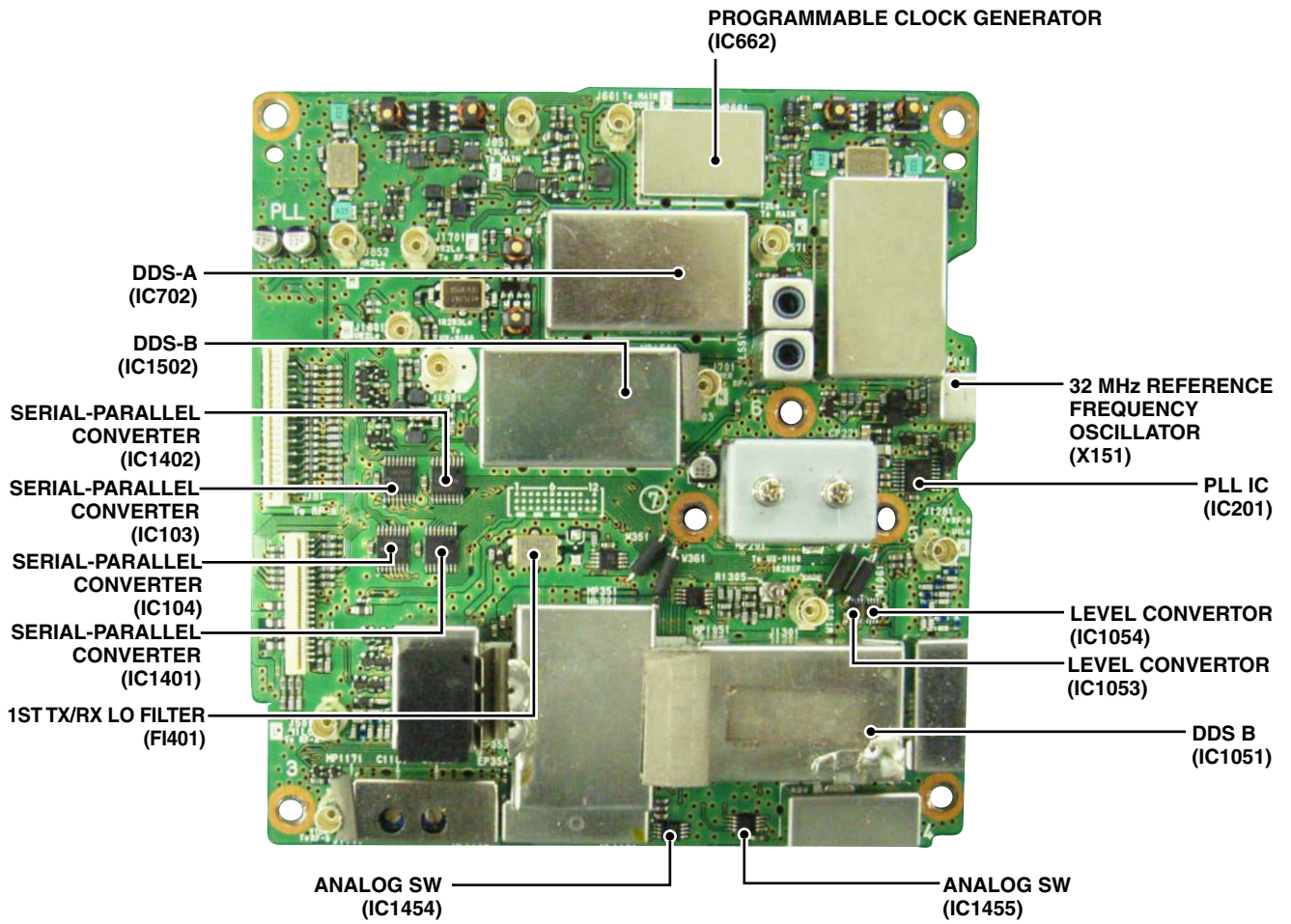




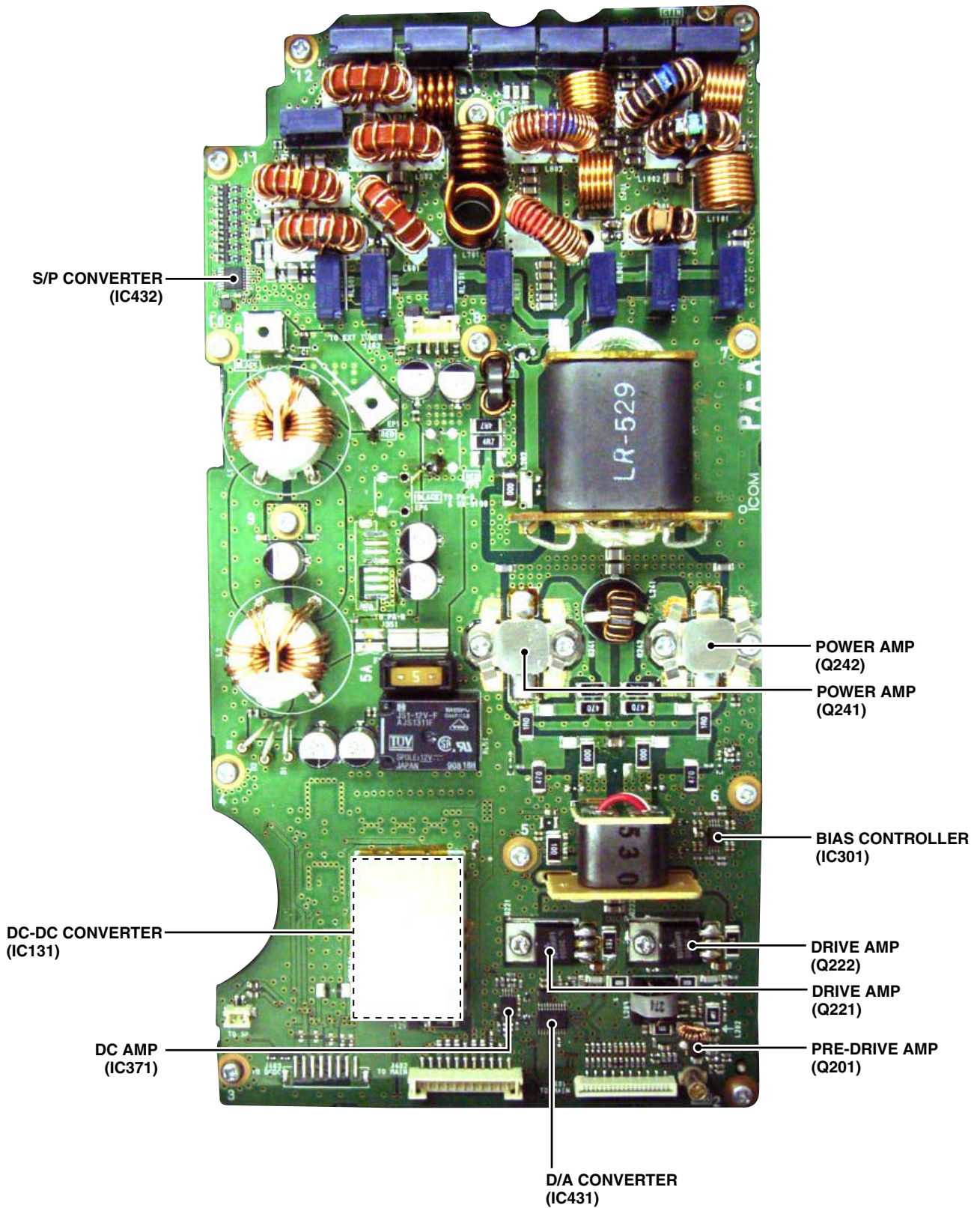
• RF-B UNIT



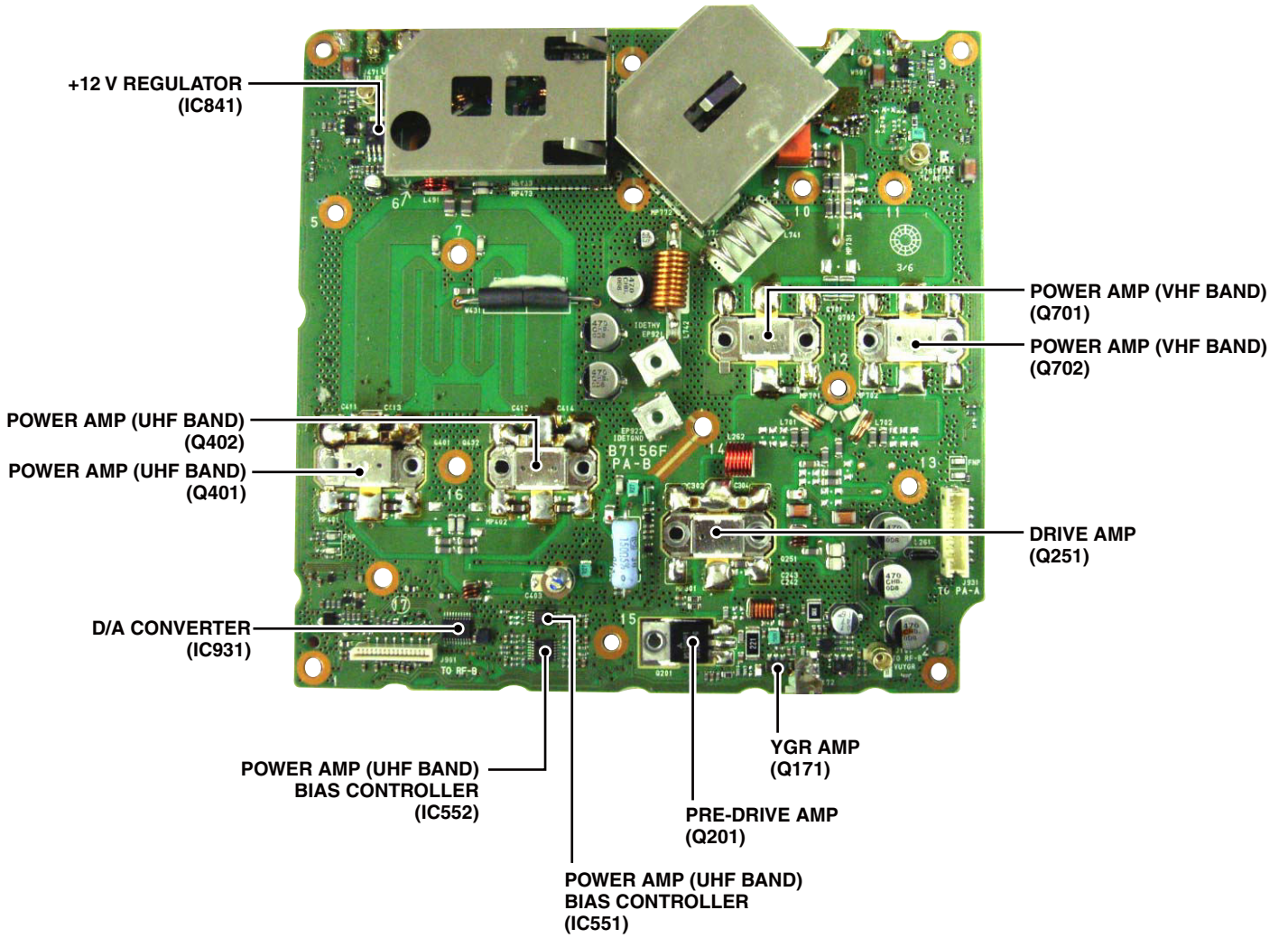
• PLL UNIT



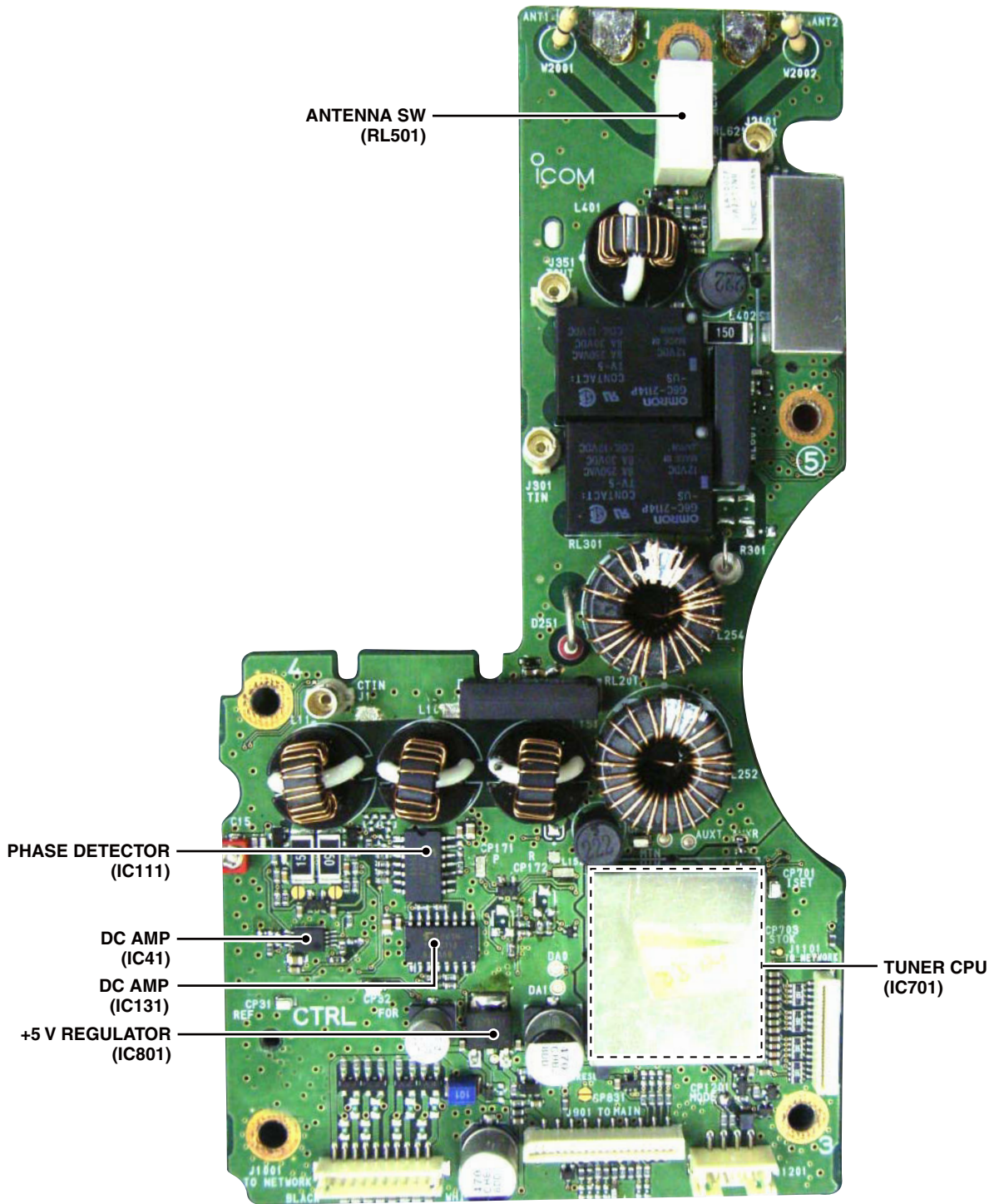
• PA-A UNIT



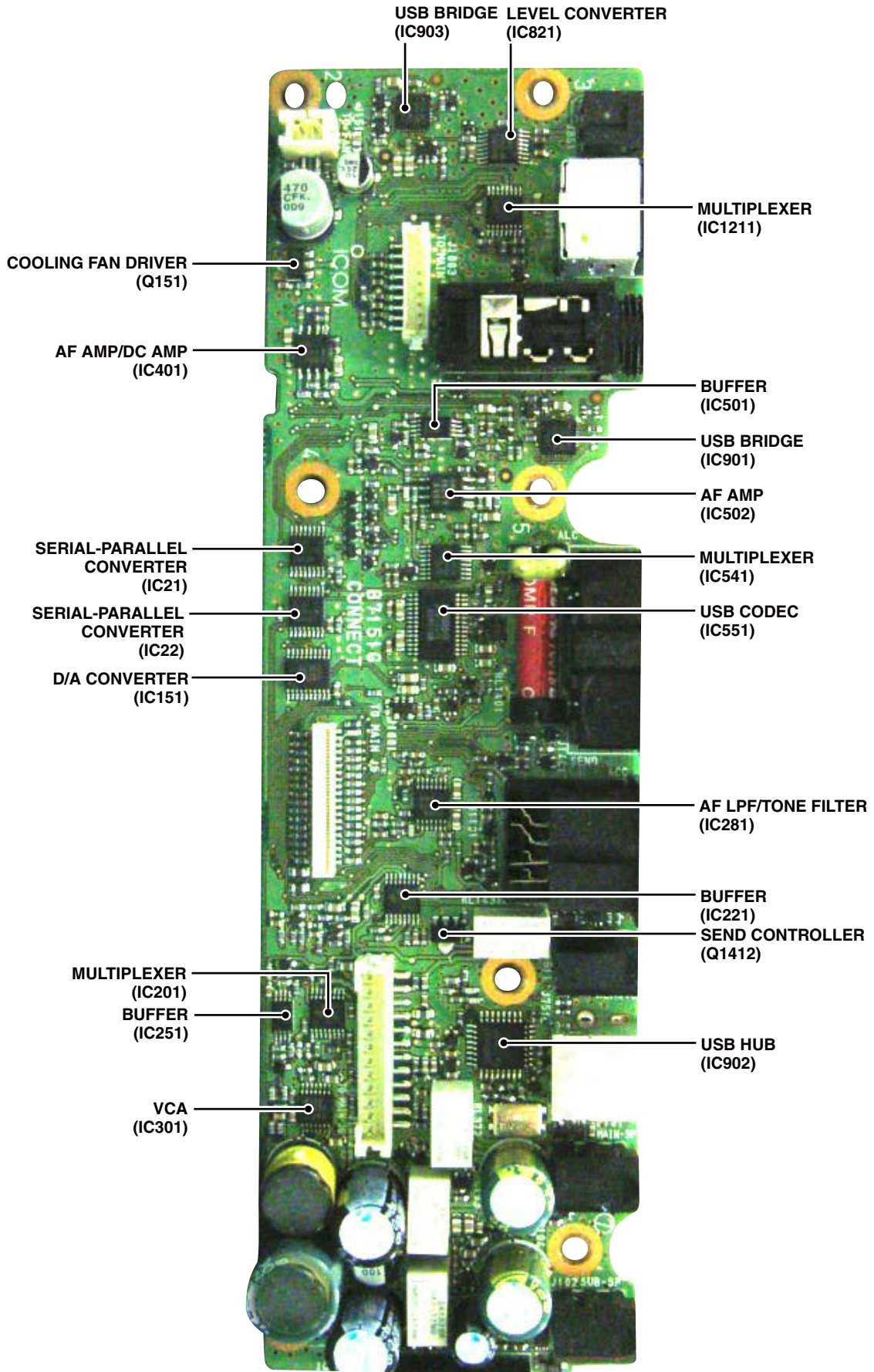
• PA-B UNIT



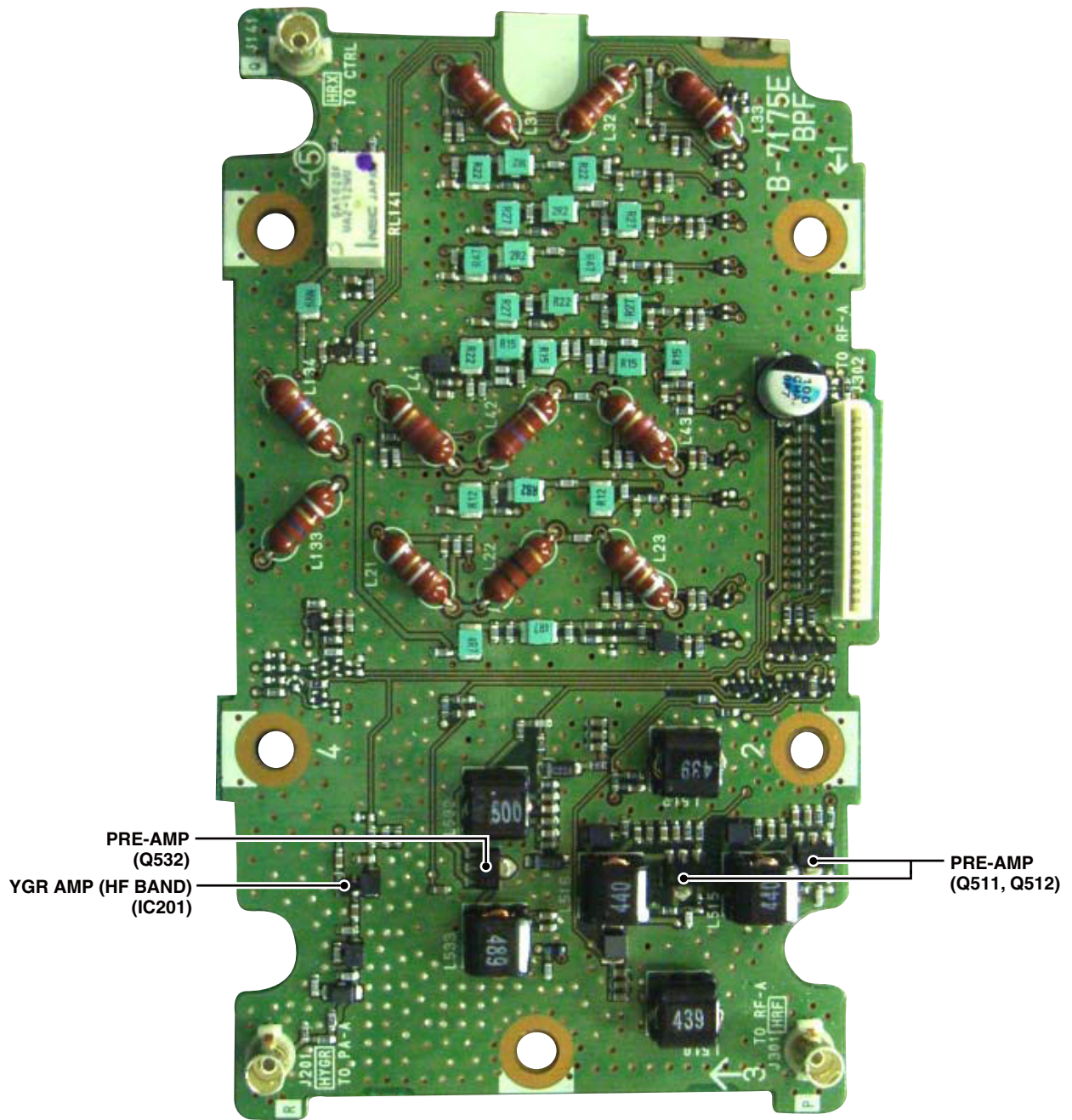
• CTRL UNIT



• 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.

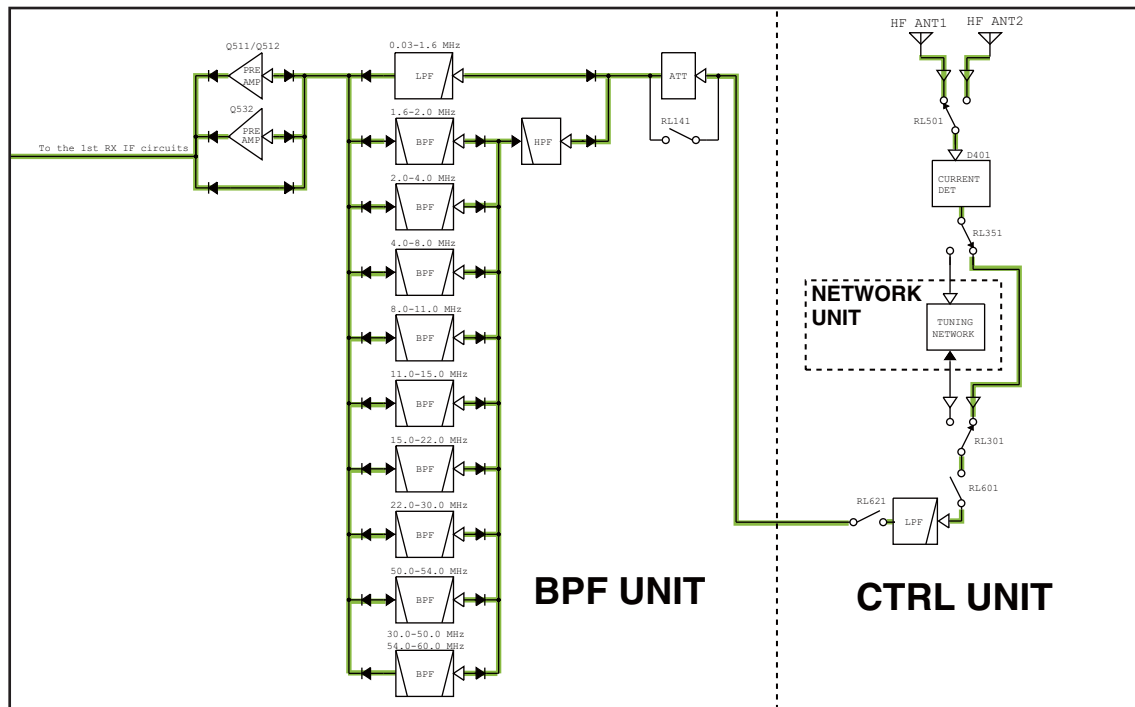
#### PREAMPLIFIER CIRCUITS (BPF UNIT)

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)**

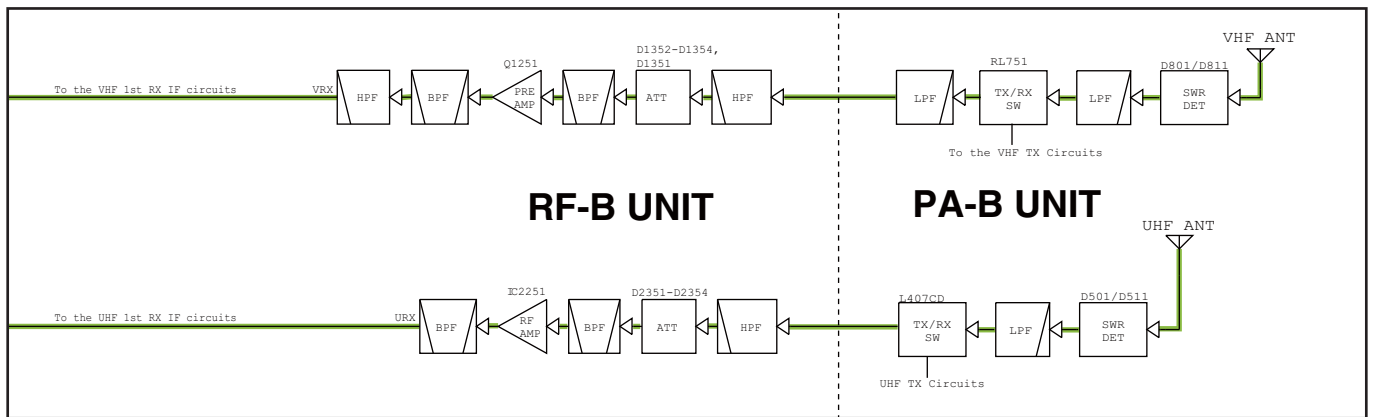
UHF band RX signal from the antenna connector [430MHz ANT] (CHASSIS; J2) is passed through the SWR detector (PA-B; D501, D511), LPF (L451, L452, C451-C455), TX/RX SW (PA-B; D471-D473) and LPF (L471, C471, C472, C475), and then applied to the RF-B UNIT.

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)**

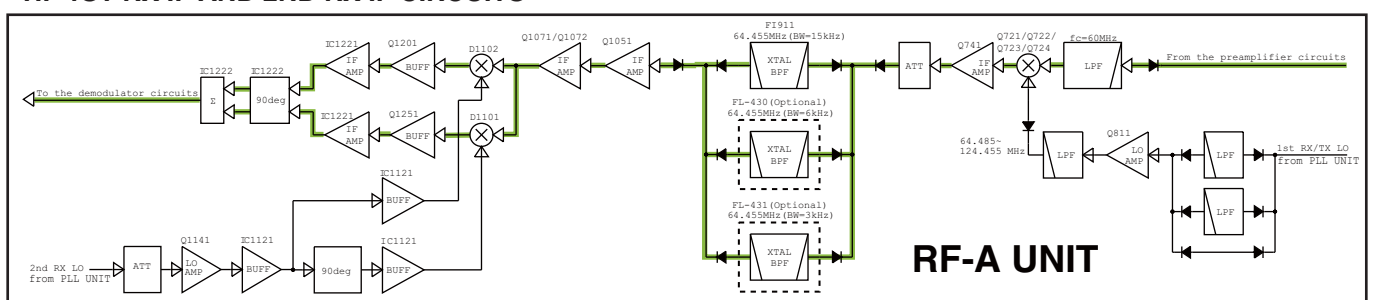
The 1st RX IF signal from the 1st RX IF circuits is divided into two paths, and then each signal is applied to the 2nd RX IF mixers (the image reduction mixers; D1102/D1101) to be mixed with the 2nd RX LO signal (64.491 MHz) from the PLL UNIT, resulting in the 36 kHz 2nd RX IF signal.

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)**

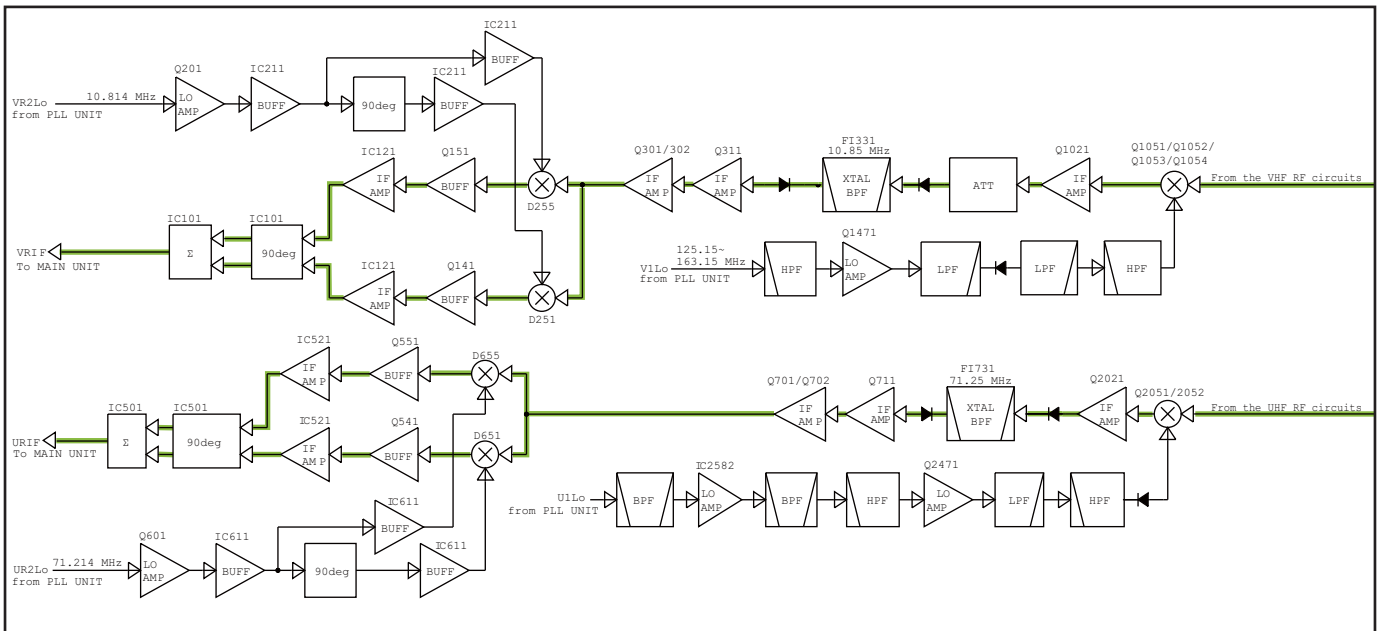
The 1st RX IF signal from the 1st RX IF circuits is divided into two paths, and then each signal is applied to the 2nd RX IF mixers (the image reduction mixers; D651/D655) to be mixed with the 2nd RX LO signal (71.214 MHz) from the PLL UNIT, resulting in the 36 kHz 2nd RX IF signal.

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**

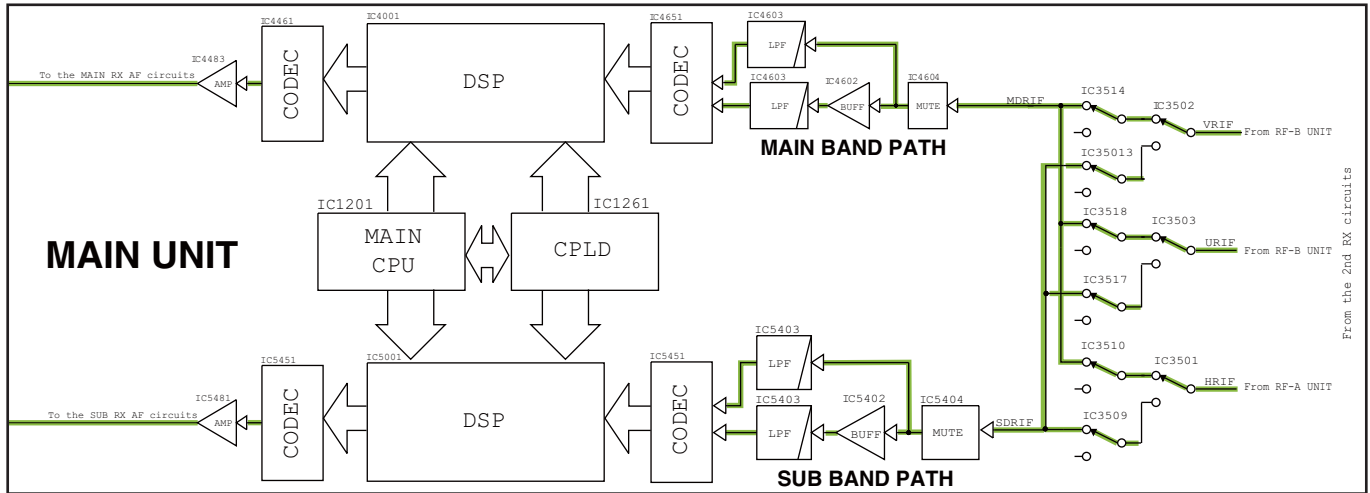
The 2nd RX IF signal is passed through the AF SW (HF band; IC3509, VHF band; IC3513, UHF band; IC3517), RX mute SW (IC5404) and the balance-unbalance converter (Balun; IC5402/IC5403), and then applied to the CODEC (IC5451) to be converted into digital audio signal.

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).

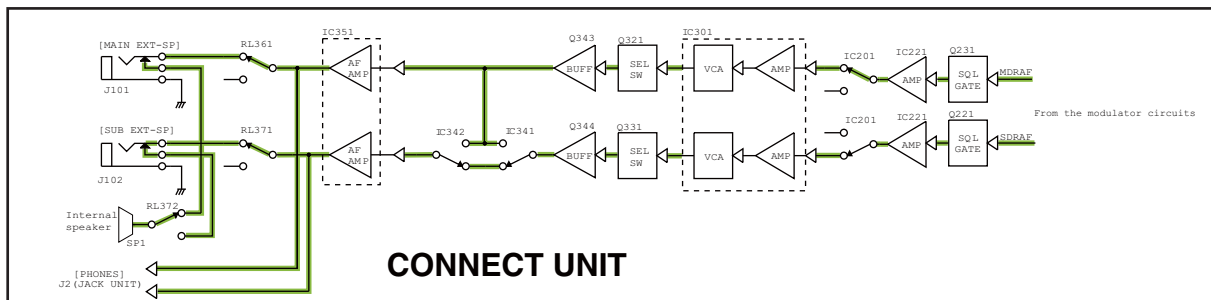
**• SUB BAND**

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).

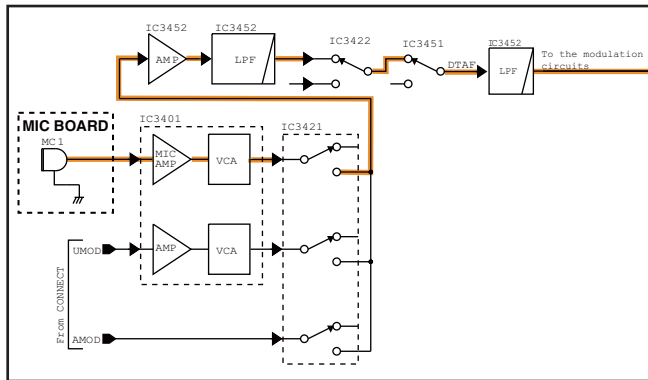
The applied MIC signal is amplified by the MIC AMP, and adjusted in level (=MIC gain) by the VCA circuit.

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



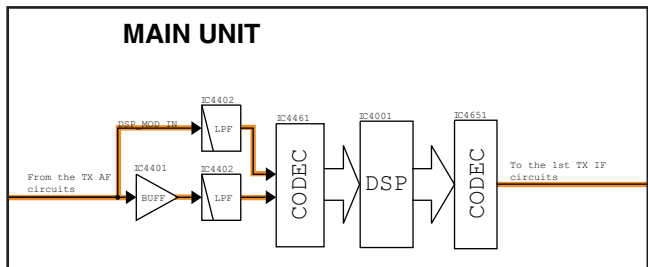
### MODULATION CIRCUITS (MAIN UNIT)

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.

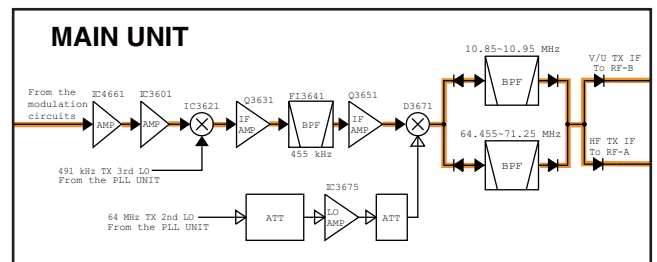
The 1st TX IF signal is applied to the 1st TX IF circuits on the RF-A UNIT, through the BPF (L3692, L3693, C3692–C3697) and band SW (D3701).

#### • 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.

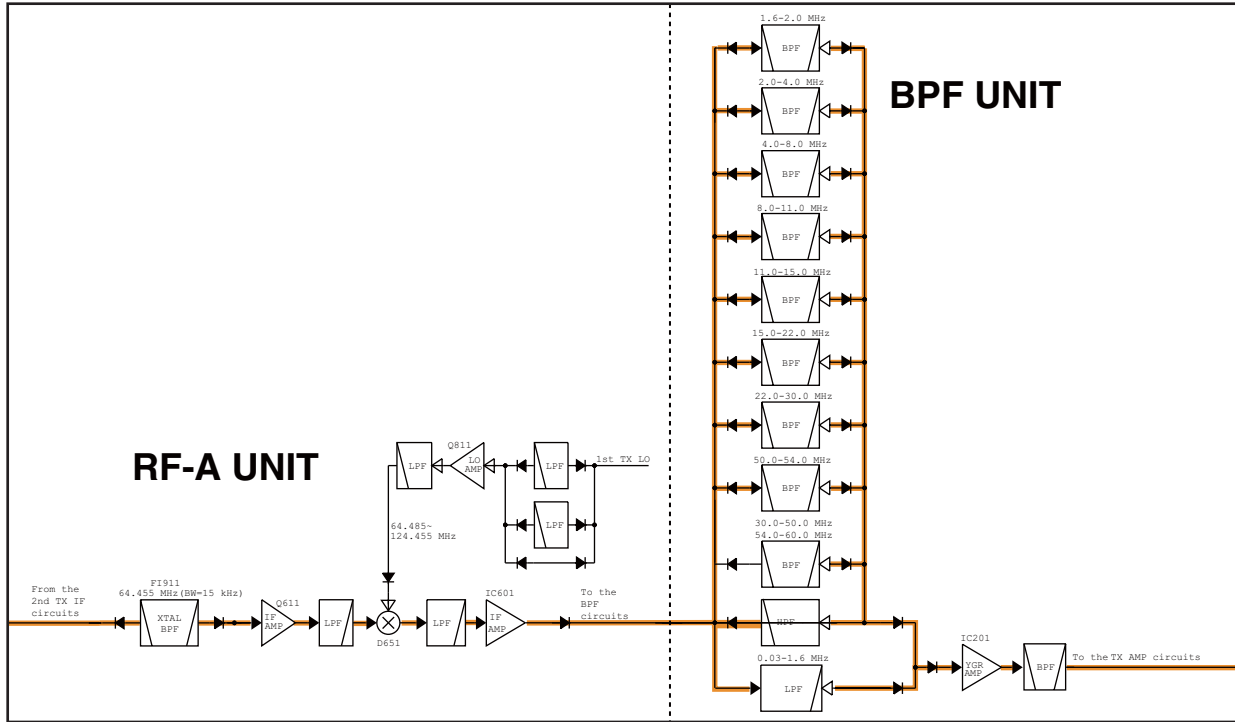
The 1st TX IF signal is mixed with the 1st TX LO signal from the PLL UNIT, resulting in the TX signal (TX frequency itself).

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)**

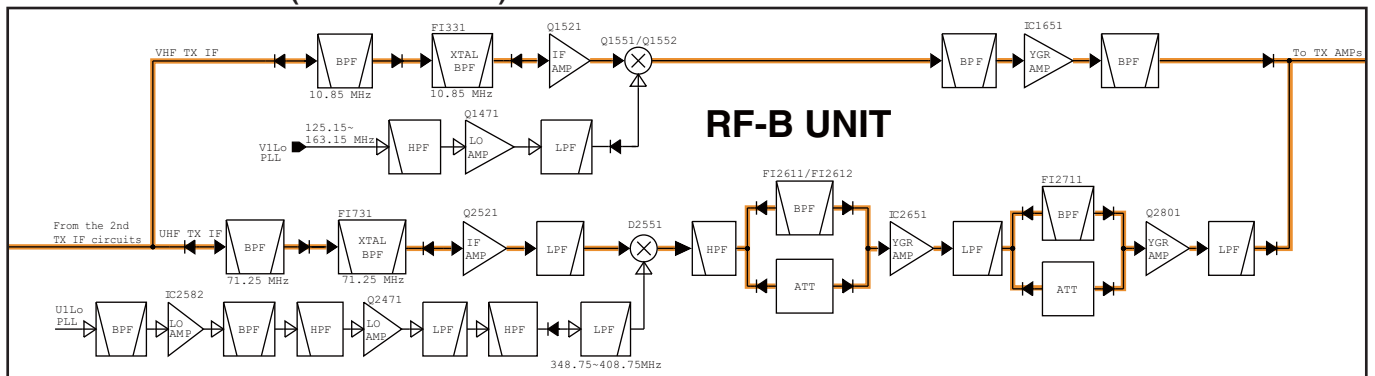
The 1st TX IF signal from the 2nd TX IF circuits is passed through the BPFs (L761–L763, C762–C764 and FI731) to remove unwanted signals, and then and amplified by the 1st TX IF AMP (Q2521). The amplified signal is applied to the 1st TX mixer (D2551), through the LPF (L2551, C2551–C2553).

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).

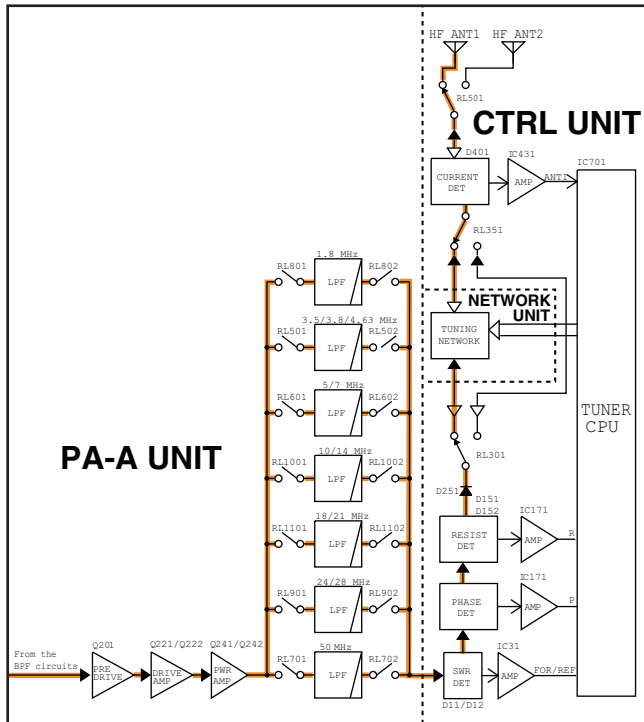
The amplified TX signal is applied to the TX filter circuits.

## 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

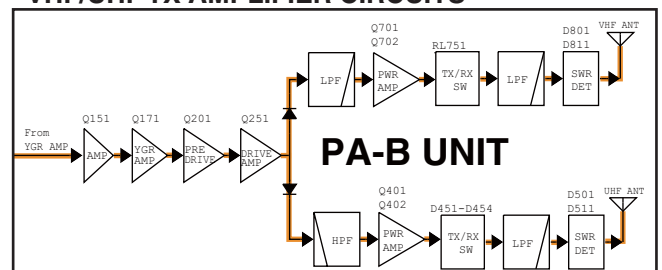
The TX signal from the RF-B UNIT is sequentially amplified by the AMP (Q151), YGR AMP (Q171), pre-drive AMP (Q201), drive AMP (Q251), and then applied to the power AMP (Q701, Q702).

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).

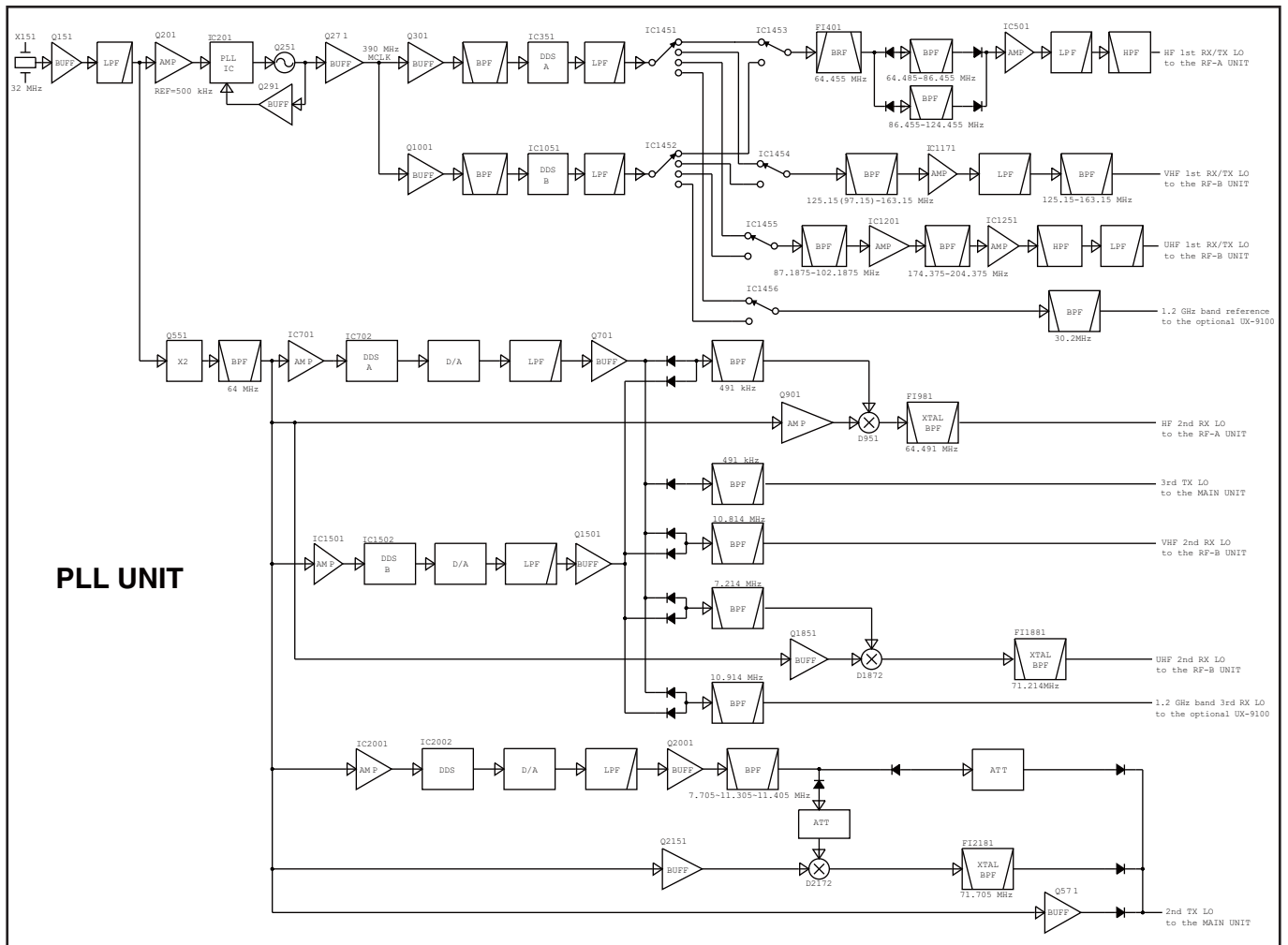
The 1st RX/TX LO signal is passed through the BPF (RF-B UNIT; D2582, D2583, L2582, L2583, C2583, C2584, C2587, C2607, C2608), and amplified by the LO AMP (RF-B UNIT; IC2582). The amplified signal is passed through the BPF (RF-B UNIT; D2584, D2585, L2585, L2586, C2594, C2595, C2598, C2609, C2610) and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

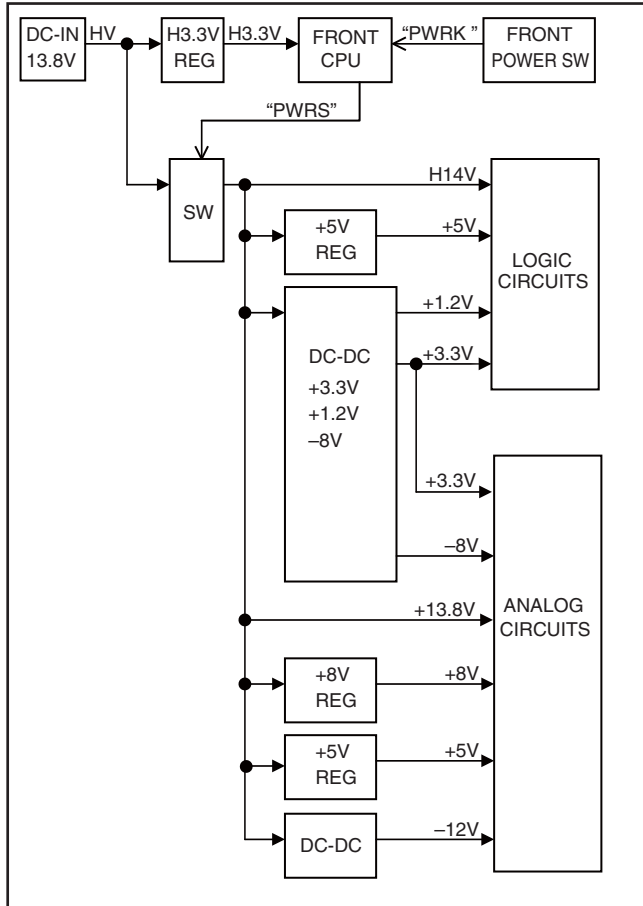
The 1st RX/TX LO signal is passed through the LO SW (IC1455) and BPF (D1203, L1201–L1203, C1203–C1210, C1216, C1219), and then applied to the LO AMP (IC1201). The amplified signal is passed through the BPF (L1233–L1236, C1233–C1240), and then applied to another LO AMP (IC1251). The amplified signal is 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)

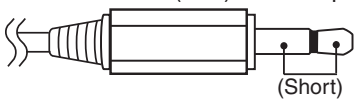
Pin No.	Line Name	Description	I/O
3	VBUS	VBUS connection detect for USB HUB. H=USB connection detected.	I
8	DAVOX	MIC signal detect. H=Input detect.	I
9	CTFL	CW TX status.	I
11	RTKI	RTTY keying input. H="Space" input.	I
12	UNLK	PLL (ADF4630) unlock detect. L=Unlock detected.	I
13	DVOPT	Optional UT-121 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

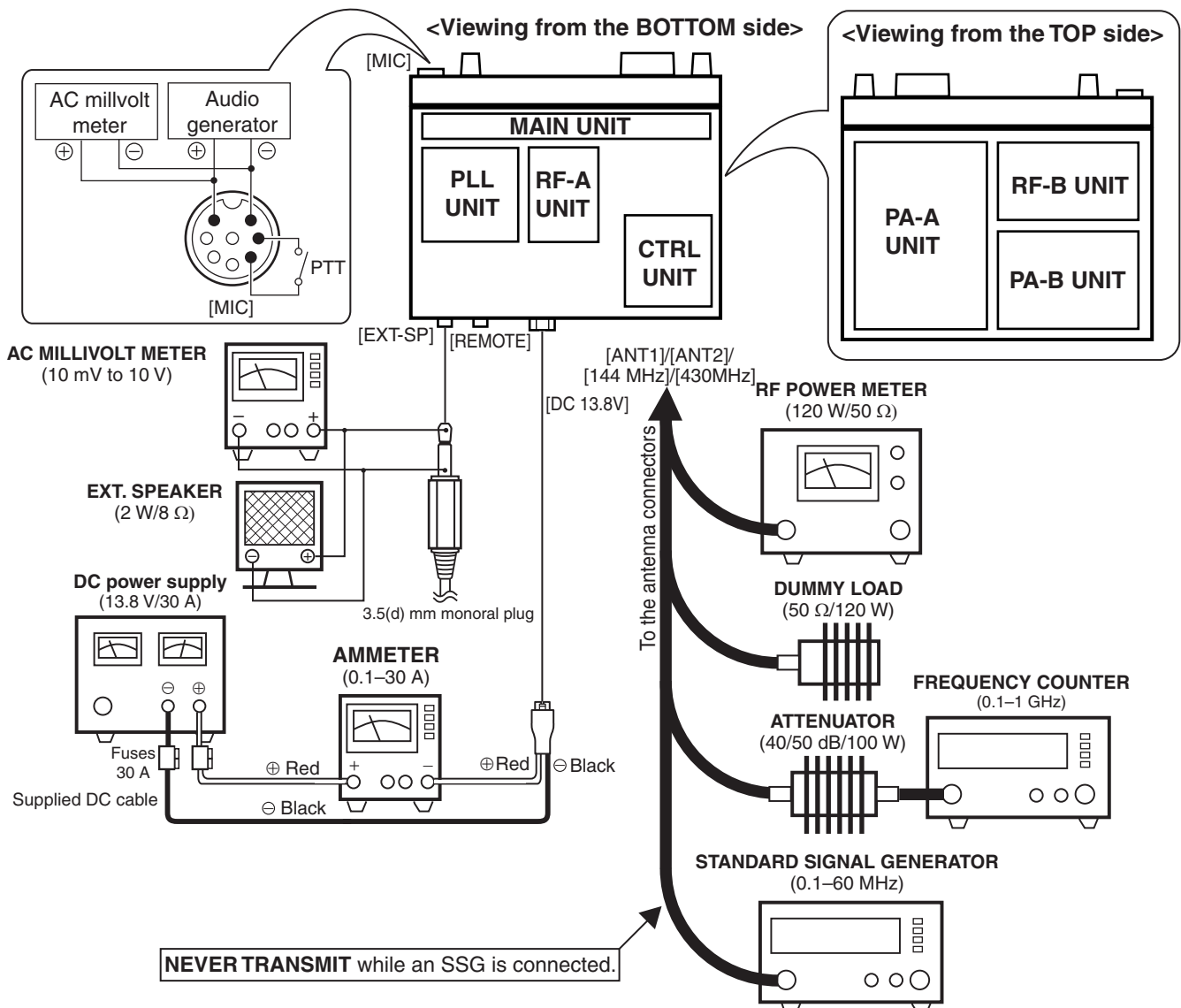
## 4-1 PREPARATION

### 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	TRANSCIVER'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]

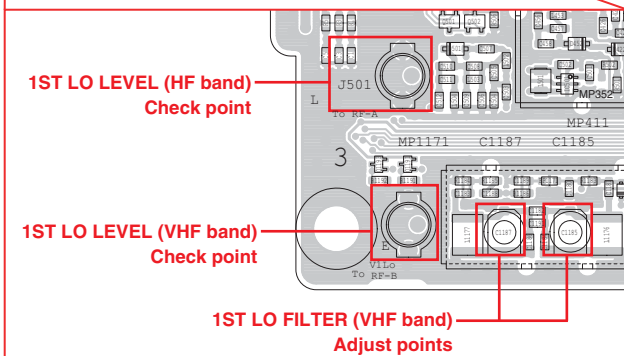
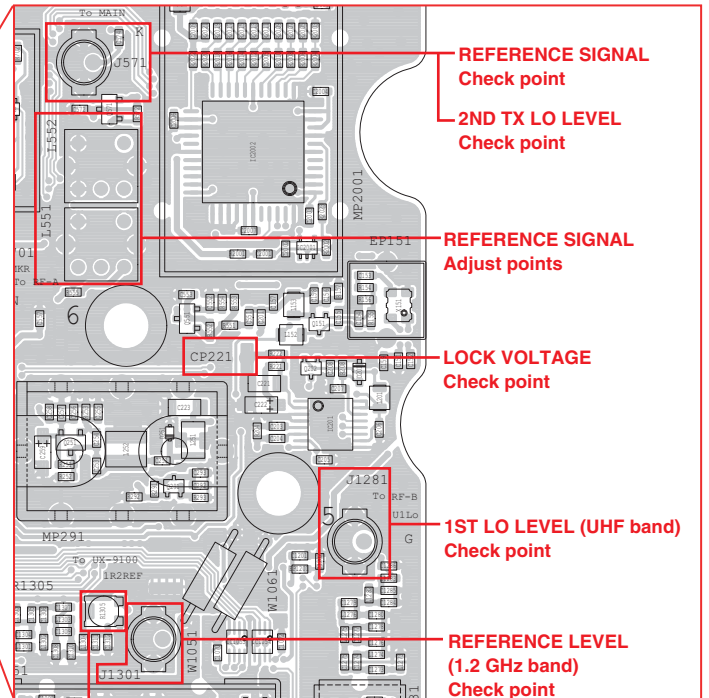
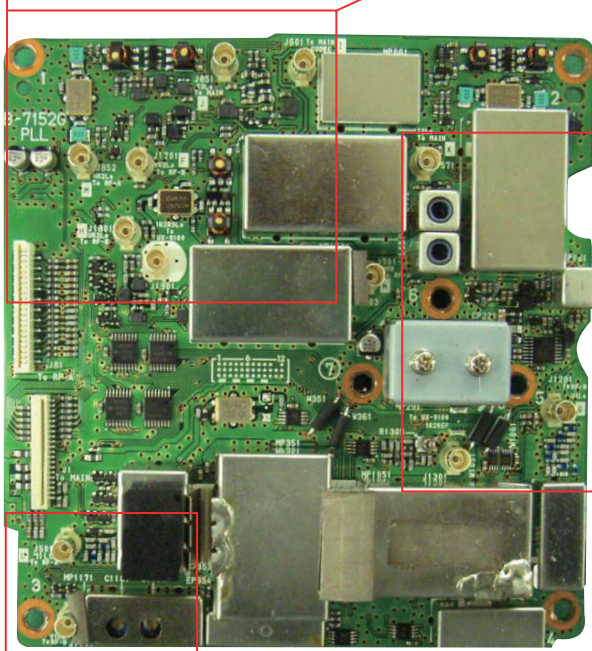
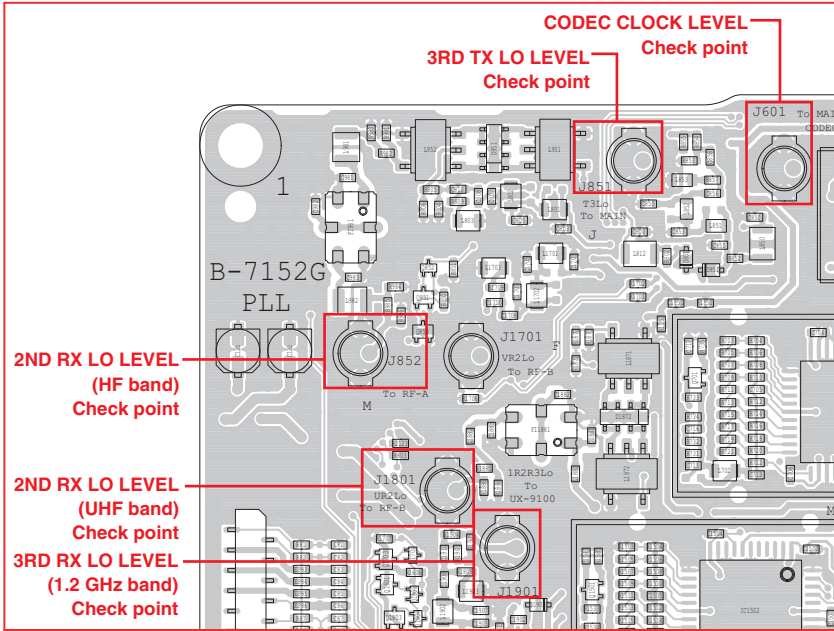
#### 4-2 ADJUSTMENTS ON THE PLL UNIT (continued)

ADJUSTMENT ITEM	TRANSCEIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
<b>1ST LO LEVEL (UHF band)</b>	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)
<b>2ND RX LO LEVEL (UHF band)</b>	• Frequency: 435.000 MHz (432.000 MHz*) • Mode: USB • Receiving	• Connect an RF voltmeter to the J1801.	J1801	(Verify)	-12.0 dBm (±3 dB)
<b>REFERENCE LEVEL† (1.2 GHz band)</b>	• Frequency: 1200.000 MHz • Mode: USB • Receiving	• Connect an RF voltmeter to the J1301.	J1301	R1305	-10.0 dBm (±0.5 dB)
<b>3RD RX LO LEVEL† (1.2 GHz band)</b>	• Frequency: 1200.000 MHz • Mode: USB • Receiving	• Connect an RF voltmeter to the J1901.	J1901	(Verify)	-8.0 dBm (±3 dB)
<b>2ND TX LO LEVEL</b>	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				
<b>3RD TX LO LEVEL</b>	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				
<b>CODEC CLOCK LEVEL</b>	• 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.

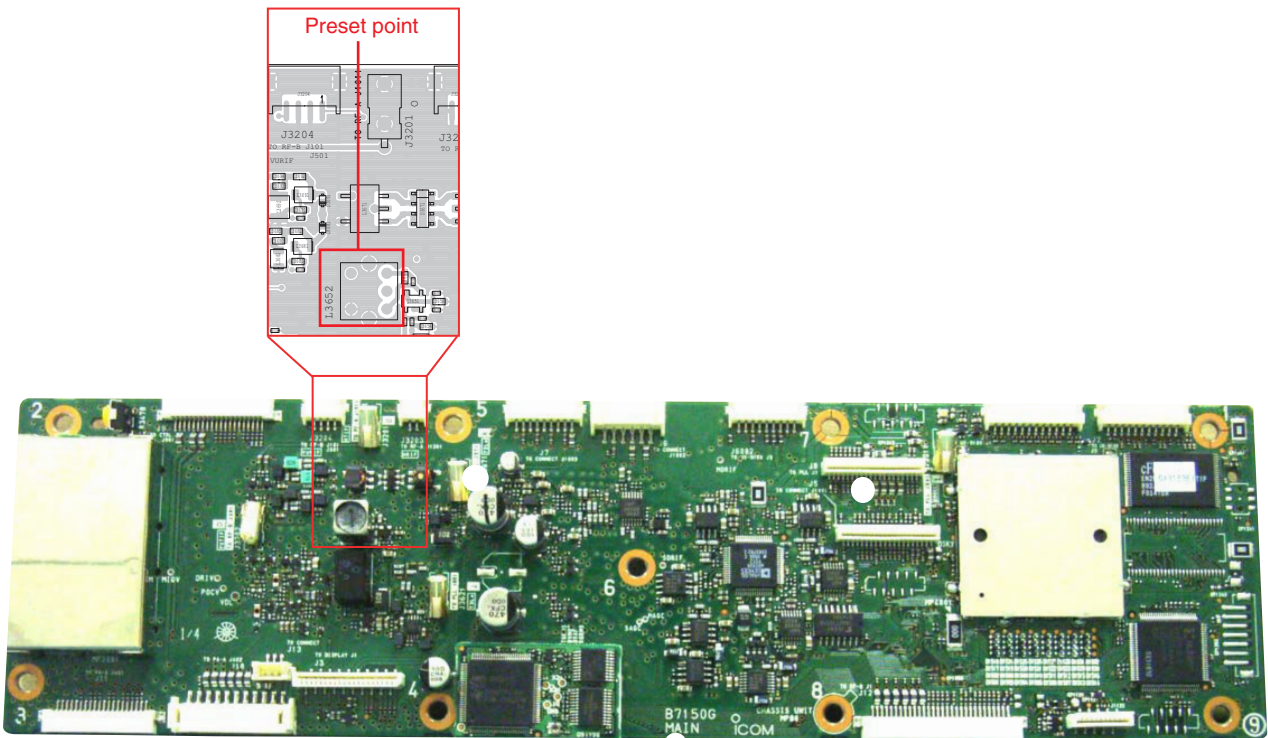
**• THE LOCATION OF ADJUST/CHECK POINTS ON THE PLL UNIT**



### 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

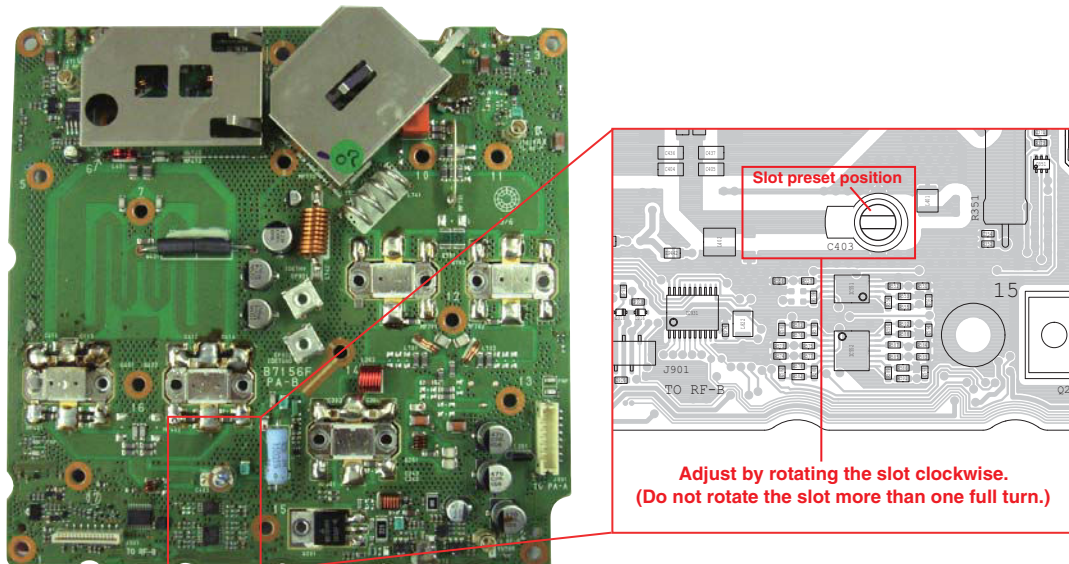


### 4-4 ADJUSTMENT ON THE PA-B UNIT

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 <b>NOTE:</b> 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

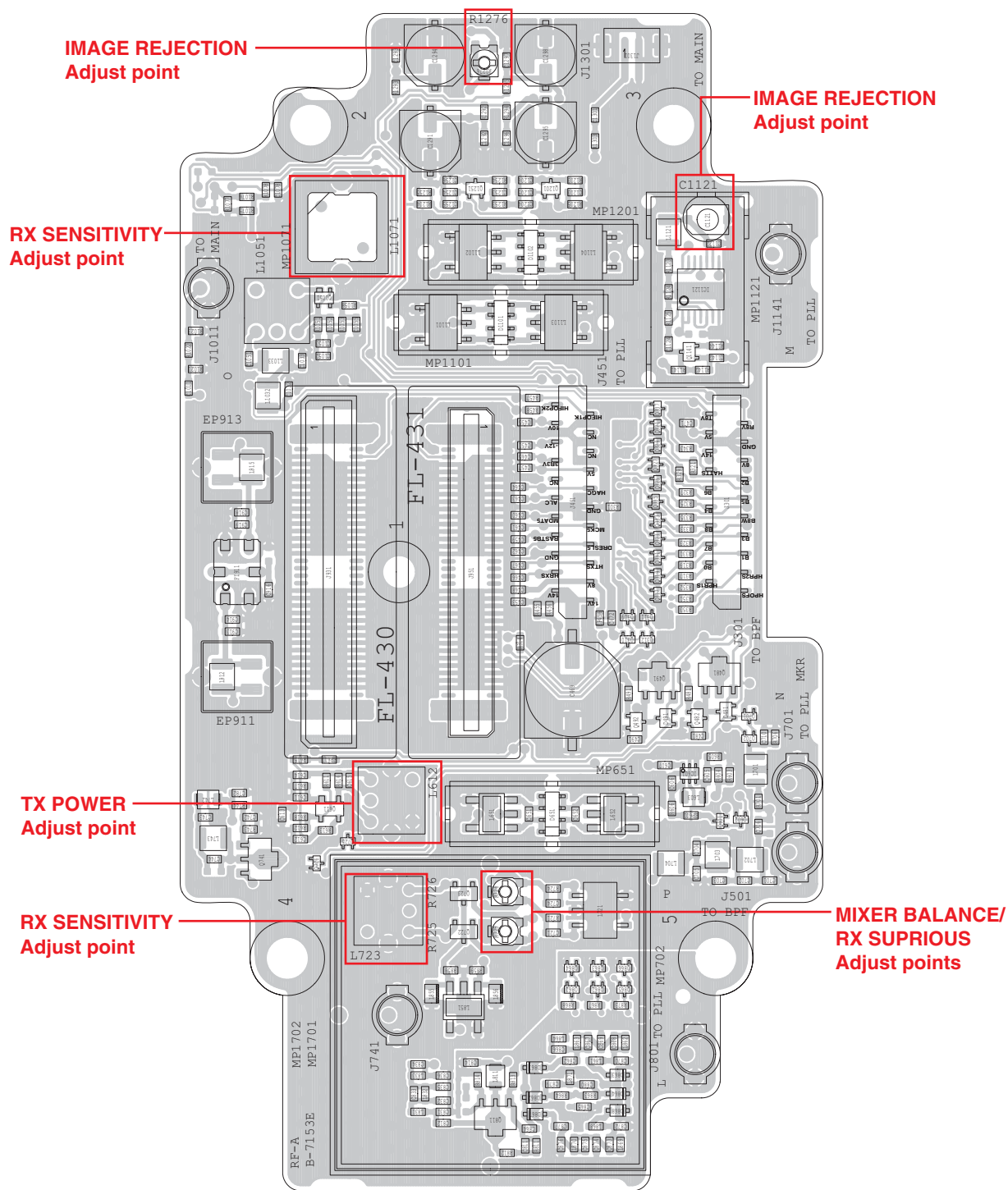
ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
<b>TX ADJUSTMENT (TX power)</b>	<ul style="list-style-type: none"> <li>• Frequency: 14.100 MHz</li> <li>• Mode: USB</li> <li>• Transmitting</li> </ul>	<ol style="list-style-type: none"> <li>1) Connect an RF power meter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

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

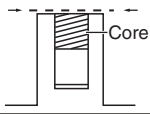
†; The output level of the standard signal generator (SSG) is indicated as the SSG's terminated circuit.



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



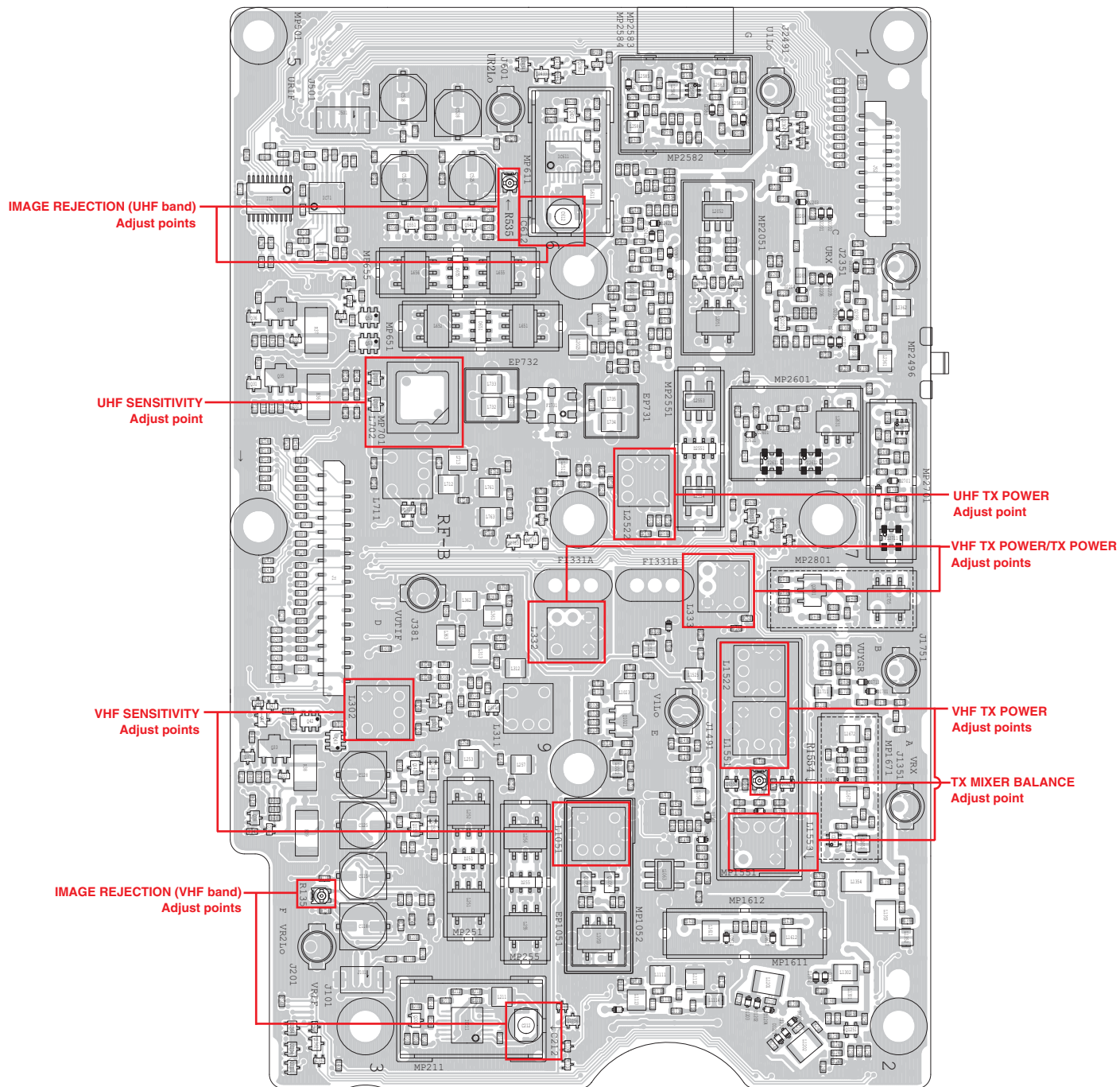
## 4-6 ADJUSTMENTS ON THE RF-B UNIT

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
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.

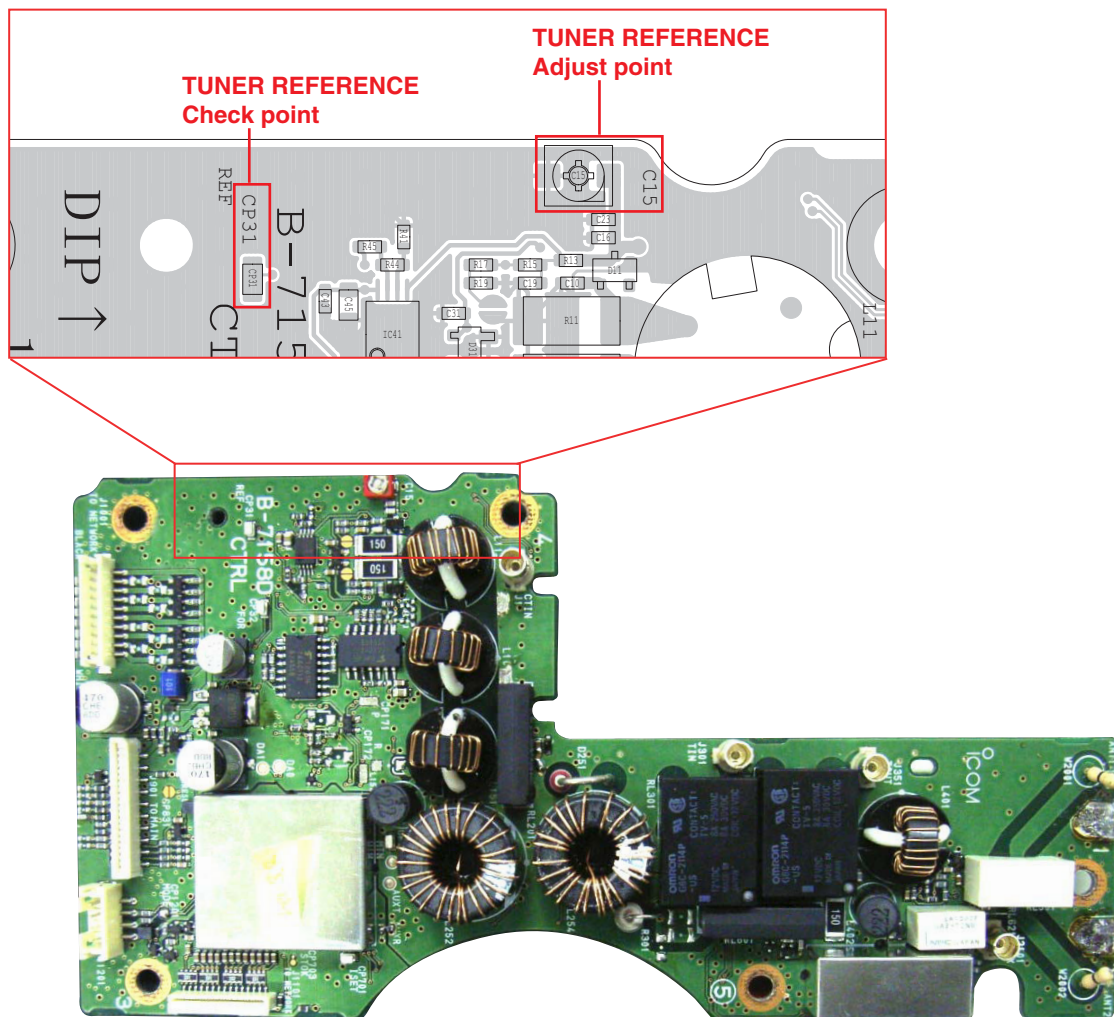
# • THE LOCATION OF ADJUST/CHECK POINTS ON THE RF-B UNIT



## 4-7 ADJUSTMENT ON THE CTRL UNIT

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

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

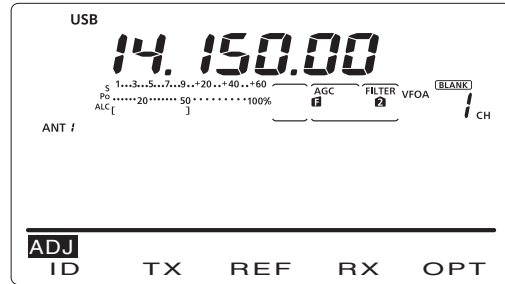


## 4-8 ADJUSTMENTS ON THE FUNCTION DISPLAY

- 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.

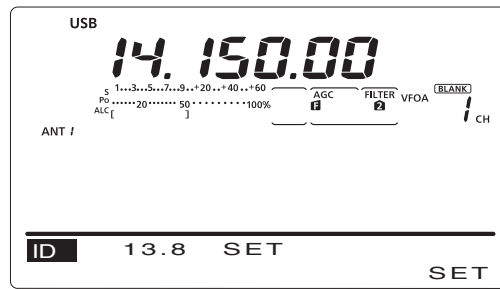
**NOTE:** If the optional UX-9100 is installed, remove it before the adjustment.

### ■ 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
- F-5

### ■ ID ADJUSTMENTS



- F-1
- F-2
- F-3
- F-4
- F-5 — Stores the value and move to the next item.
- Returns to the previous screen. — MENU

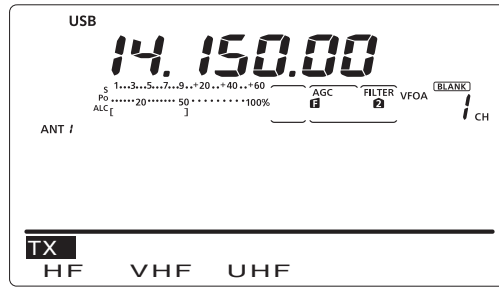
ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
<b>LOADING REFERENCE VOLTAGE</b>	<ul style="list-style-type: none"> <li>• Display: "13.8 SET"</li> <li>• Receiving</li> </ul>	<ul style="list-style-type: none"> <li>• Set the power supply voltage to 13.8 V.</li> </ul>	—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

■ 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				
	16 • Display: "UID1V" • Transmitting				Push [F-5]. (A beep sounds, and then another beeps sound 3 sec. later)
	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.
- Starts the transmit adjustments (HF band). (See below)
- Starts the transmit adjustments (VHF). (Page 4-14)
- Starts the transmit adjustments (UHF). (Page 4-16)
- Stores the value and move to the next item.

### • TRANSMIT ADJUSTMENTS (HF band)

ADJUSTMENT ITEM	TRANSCIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
<b>PREPARATION</b>	-	<ul style="list-style-type: none"> <li>• Connect an AG and millivoltmeter to [MIC], and then set it as; Frequency : 1.5 kHz Level : 1 mV</li> <li>• Connect a power meter to [ANT1].</li> <li>• Connect a 25 Ω dummy load to [ANT2].</li> </ul>	-	-	-
<b>TX TOTAL GAIN</b>	1 • Display: "Total Gain HF" • Receiving	• Push [F-5]. (Automatically starts to transmit.)	-	[MAIN DIAL]	50 W Push [F-5].
<b>TX POWER &amp; POWER METER SETTING</b>	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].
	<b>POWER DOWN SETTING</b>	16 • Display: "POWER Down HF/50M" • Transmitting	• Push [F-5]. (Automatically starts to transmit.)	-	[MAIN DIAL]
<b>AM CARRIER POWER RATIO</b>	17 • Display: "POWER AM Ratio HF" • Transmitting	• Push [F-5]. (Automatically starts to transmit.)	-	[MAIN DIAL]	27 W Push [F-5].
<b>ID APC</b>	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].
<b>ALC METER</b>	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)
<b>DRIVE GAIN</b>	20 • Display: "DRIVE HF/50M" • Transmitting	-	-	-	Push [F-5].
<b>SWR METER</b>	21 • Display: "SWR HF/50M" • Transmitting	-	-	-	Push [F-5].
Automatically returns to the transmit adjustment menu.					

• TRANSMIT ADJUSTMENTS (VHF band)

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

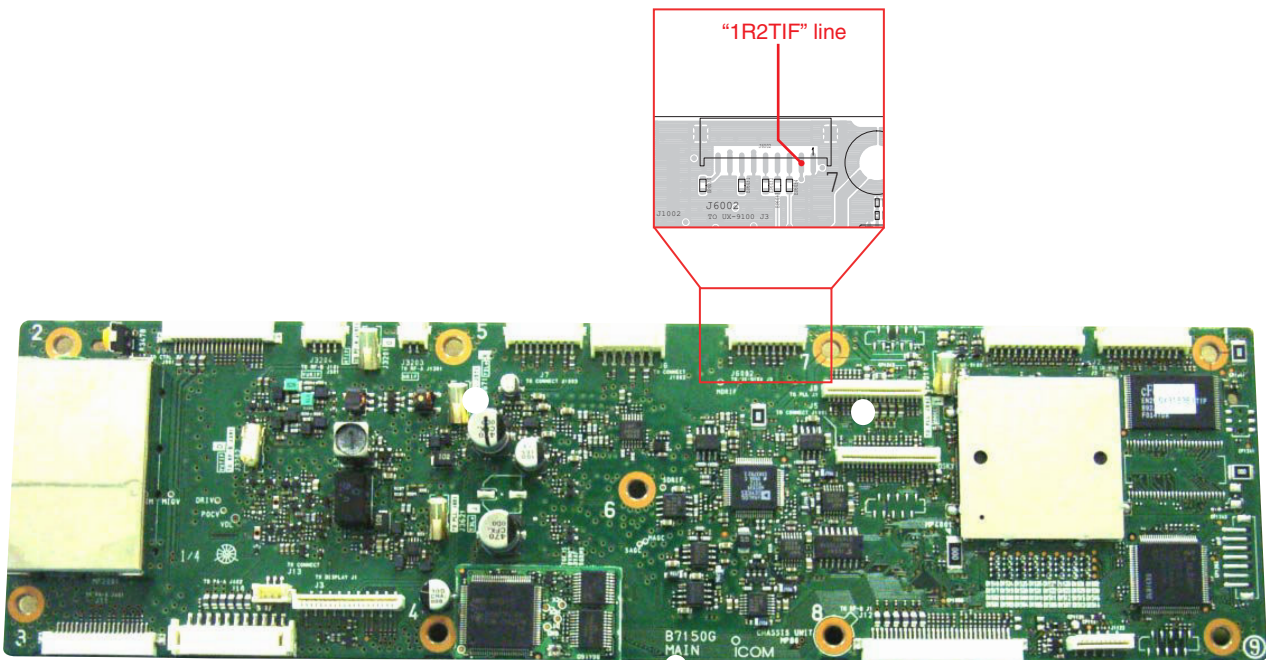
\*: For RF-B UNIT adjustment (Page 4-8), set the value to "8A," using [MAIN DIAL].



• 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

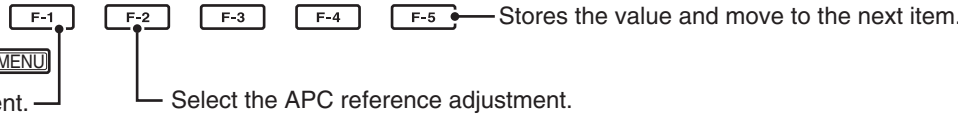
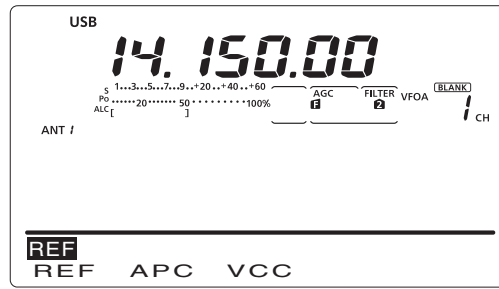


• TRANSMIT ADJUSTMENTS (UHF band)

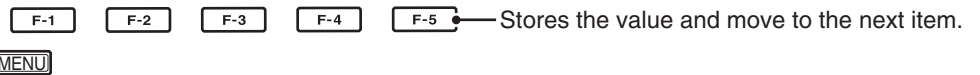
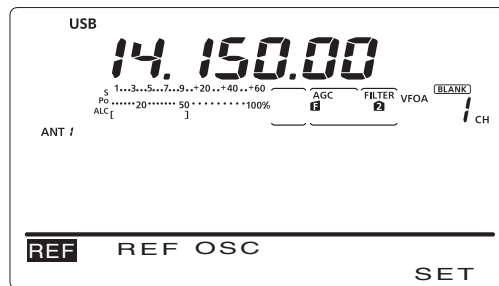
ADJUSTMENT ITEM	TRANSCEIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
PREPARATION	-	<ul style="list-style-type: none"> <li>Connect an AG and millivoltmeter to [MIC], and then set it as; Frequency : 1.5 kHz Level : 1 mV</li> <li>Connect a power meter to [430MHz ANT].</li> </ul>	-	-	-
TX TOTAL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

## ■ REFERENCE ADJUSTMENTS

### • Reference adjustment menu.

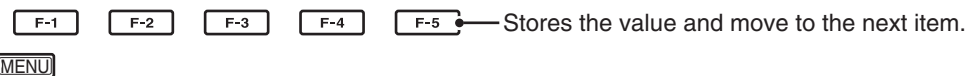
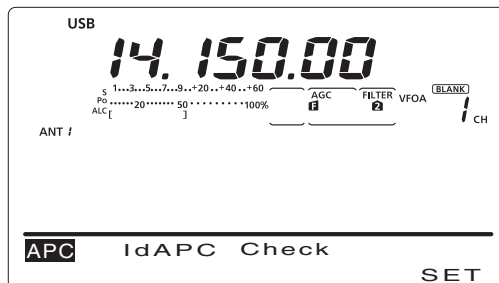


### • REFERENCE FREQUENCY ADJUSTMENT



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

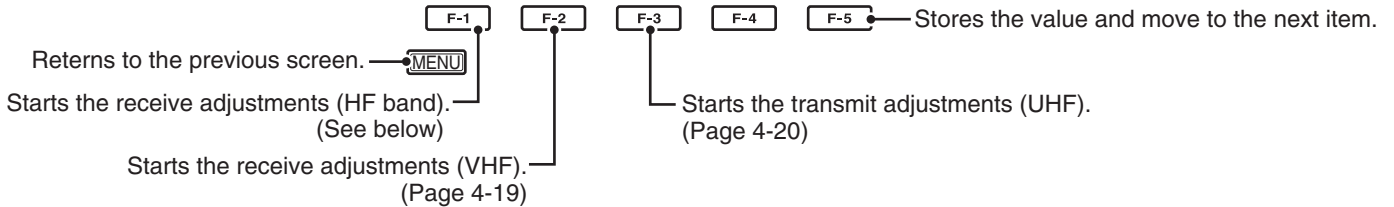
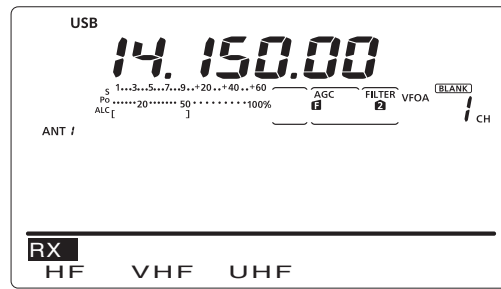
### • APC REFERENCE ADJUSTMENT



ADJUSTMENT ITEM	TRANSCEIVER'S CONDITION	OPERATION	MEASURE POINT	ADJUST POINT	VALUE
ID APC VERIFICATION	<ul style="list-style-type: none"> <li>• Display: "IdAPC Check"</li> <li>• Transmitting</li> </ul>	<ul style="list-style-type: none"> <li>• Push [F-5]. (Automatically starts to transmit.)</li> </ul>	–	–	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	
<b>PREPARATION</b>	—	<ul style="list-style-type: none"> <li>Connect an SSG to [ANT1], and then set it as; Frequency : 14.1515 MHz Modulation : None Level† : +20 dBu (−87 dBm)</li> </ul>	—	—	—	
<b>TOTAL GAIN</b>	1	<ul style="list-style-type: none"> <li>Display: "Total Gain HF POFF"</li> <li>Receiving</li> </ul>	—	—	Push [F-5]. (Beeps sound 20–30 sec. later)	
	2	<ul style="list-style-type: none"> <li>Display: "Total Gain HF PON"</li> <li>Receiving</li> </ul>	—	—		
<b>EXTERNAL AGC</b>	3	<ul style="list-style-type: none"> <li>Display: "AGC (HF)"</li> <li>Receiving</li> </ul>	—	—	Push [F-5]. (Beeps sound 40 sec. later)	
<b>S-METER</b>	<b>NOTE: DO NOT</b> change the output level of the SSG until the beeps sound.					
	4	<ul style="list-style-type: none"> <li>Display: "S0 Level HF"</li> <li>Receiving</li> </ul>	<ul style="list-style-type: none"> <li>Set the SSG as; Level : OFF</li> </ul>	—	—	Push [F-5]. (Beep sounds, and then another beeps sound 0.5 sec. later)
	5	<ul style="list-style-type: none"> <li>Display: "S9 Level HF"</li> <li>Receiving</li> </ul>	<ul style="list-style-type: none"> <li>Set the SSG as; Level† : +34 dBu (−73 dBm)</li> </ul>	—	—	Push [F-5]. (Beep sounds, and then another beeps sound 1 sec. later)
6	<ul style="list-style-type: none"> <li>Display: "S9+60 Level HF"</li> <li>Receiving</li> </ul>	<ul style="list-style-type: none"> <li>Set the SSG as; Level† : +90 dBu (−17 dBm)</li> </ul>	—	—		
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		
<b>TUNED BPF</b>	<b>NOTE: DO NOT</b> 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 <sup>†</sup> : +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						
<b>TOTAL GAIN</b>	11	• Display: "Total Gain VHF" • Receiving	• Set the SSG as; Frequency : 145.8015 MHz Modulation : None Level <sup>†</sup> : 0 dBu (−107 dBm)	–	–	Push [F-5]. (Beeps sound 20–30 sec. later)	
<b>EXTERNAL AGC</b>	12	• Display: "AGC (VHF)" • Receiving	• Set the SSG as; Level <sup>†</sup> : +60 dBu (−47 dBm)	–	–	Push [F-5]. (Beeps sound 40 sec. later)	
<b>S-METER</b>	<b>NOTE: DO NOT</b> 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 <sup>†</sup> : +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 <sup>†</sup> : +70 dBu (−37 dBm)					
Automatically returns to the receive adjustment menu.							

<sup>†</sup>; 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	
<b>TUNED BPF</b>	<b>NOTE: DO NOT</b> 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 <sup>†</sup> : +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					
<b>TOTAL GAIN</b>	7	• Display: "Total Gain UHF" • Receiving	• Set the SSG as; Frequency : 435.2015 MHz Modulation : None Level <sup>†</sup> : 0 dBu (-107 dBm)	-	-	Push [F-5]. (Beeps sound 20-30 sec. later)
<b>EXTERNAL AGC</b>	8	• Display: "AGC (UHF)" • Receiving	• Set the SSG as; Level <sup>†</sup> : +60 dBu (-47 dBm)	-	-	Push [F-5]. (Beeps sound 40 sec. later)
<b>S-METER</b>	<b>NOTE: DO NOT</b> 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 <sup>†</sup> : +10 dBu (-97 dBm)			
	11	• Display: "S9+60 Level UHF" • Receiving	• Set the SSG as; Level <sup>†</sup> : +70 dBu (-37 dBm)			
Automatically returns to the receive adjustment menu.						Push [F-5]. (Beep sounds, and then another beeps sound 1 sec. later)

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











[MAIN UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains 100 rows of part specifications.

[MAIN UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains 100 rows of part specifications.

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





[MAIN UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains parts list for the left side of the unit.

[MAIN UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains parts list for the right side of the unit.

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

[MAIN UNIT]

Table with 5 columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains 300 rows of part details.

[MAIN UNIT]

Table with 5 columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains 300 rows of part details.

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

















[PLL UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Rows include parts like ERJ3GEYJ 332 V (3.3K) and ERA3YED 202V (2K).

[PLL UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Rows include parts like C1608 CH 1H 220J-T and C1608 JB 1H 102K-T.

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



















[RF-B UNIT]

Table with 5 columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains 256 rows of component data for the [RF-B UNIT].

[RF-B UNIT]

Table with 5 columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Contains 256 rows of component data for the [RF-B UNIT], including various surface mount components and capacitors.

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



[RF-B UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C118	4510009920	S.ELE 16 CE 100 LH	T	129.2/18.7
C121	4030007170	S.CER C1608 CH 1H 221J-T	B	115.0/16.2
C125	4510009920	S.ELE 16 CE 100 LH	T	115.0/18.7
C126	4030006880	S.CER C1608 JB 1E 472K-T	B	121.1/20.7
C127	4030006880	S.CER C1608 JB 1H 472K-T	B	117.4/20.6
C128	4510009920	S.ELE 16 CE 100 LH	T	107.9/18.7
C131	4030007170	S.CER C1608 CH 1H 221J-T	B	126.2/15.5
C141	4030018640	S.CER C2012 CH 1H 103J-T	B	107.4/28.2
C142	4550003220	S.TAN TEESVA 1E 105M8R	T	107.0/28.5
C143	4030007010	S.CER C1608 CH 1H 100D-T	T	105.0/26.0
C144	4030010760	S.CER C1608 CH 1H 331J-T	T	109.5/24.4
C145	4030018800	S.CER C3216 CH 1H 223J-T	B	109.8/18.7
C146	4030019120	S.CER GRM188B31E105KA75D	T	109.5/26.8
C148	4030019560	S.CER GRM21BB31C106KE15L	B	109.7/24.2
C149	4030011600	S.CER C1608 JB 1E 104K-T	B	111.6/24.3
C151	4030018640	S.CER C2012 CH 1H 103J-T	B	117.6/24.9
C152	4550003220	S.TAN TEESVA 1E 105M8R	T	115.3/28.5
C153	4030007010	S.CER C1608 CH 1H 100D-T	T	113.6/26.0
C154	4030010760	S.CER C1608 CH 1H 331J-T	T	118.1/24.4
C155	4030018800	S.CER C3216 CH 1H 223J-T	B	117.2/22.7
C156	4030019120	S.CER GRM188B31E105KA75D	T	118.1/25.6
C201	4030011600	S.CER C1608 JB 1E 104K-T	B	140.4/24.7
C202	4030011600	S.CER C1608 JB 1E 104K-T	T	145.0/26.1
C203	4030006860	S.CER C1608 JB 1H 102K-T	T	142.6/28.2
C212	4610001970	S.TRI TZC3P200A110R00 (TZC03P200A1102)	T	143.1/41.6
C213	4030007050	S.CER C1608 CH 1H 220J-T	T	144.9/37.9
C215	4030006900	S.CER C1608 JB 1H 103K-T	B	136.3/31.0
C217	4030006900	S.CER C1608 JB 1H 103K-T	B	138.0/39.8
C221	4030011600	S.CER C1608 JB 1E 104K-T	T	139.6/34.6
C222	4550006780	S.TAN TEESVBZ QJ 476M8R	B	141.5/31.6
C223	4030011600	S.CER C1608 JB 1E 104K-T	B	146.0/32.3
C224	4030006860	S.CER C1608 JB 1H 102K-T	B	144.0/24.1
C251	4030007170	S.CER C1608 CH 1H 221J-T	T	105.5/30.6
C252	4030007030	S.CER C1608 CH 1H 150J-T	T	103.4/32.9
C255	4030007170	S.CER C1608 CH 1H 221J-T	T	109.2/39.6
C256	4030007030	S.CER C1608 CH 1H 150J-T	T	105.7/38.0
C301	4030011600	S.CER C1608 JB 1E 104K-T	B	90.2/21.2
C302	4030011600	S.CER C1608 JB 1E 104K-T	B	93.3/24.5
C303	4030006900	S.CER C1608 JB 1H 103K-T	B	94.9/24.5
C304	4030007130	S.CER C1608 CH 1H 101J-T	B	99.1/21.5
C305	4030011600	S.CER C1608 JB 1E 104K-T	B	96.5/26.5
C306	4030011600	S.CER C1608 JB 1E 104K-T	T	94.2/27.5
C307	4030011600	S.CER C1608 JB 1E 104K-T	T	98.5/30.8
C308	4030006980	S.CER C1608 CH 1H 070D-T	B	101.8/33.5
C311	4030011600	S.CER C1608 JB 1E 104K-T	T	95.8/36.2
C313	4030011600	S.CER C1608 JB 1E 104K-T	B	94.2/43.4
C315	4030011600	S.CER C1608 JB 1E 104K-T	T	95.0/33.8
C316	4030017870	S.CER C1608 CH 1H 681J-T	T	92.2/37.5
C317	4030007140	S.CER C1608 CH 1H 121J-T	T	89.9/38.0
C318	4030007050	S.CER C1608 CH 1H 220J-T	B	93.3/37.5
C319	4030007150	S.CER C1608 CH 1H 151J-T	T	88.7/38.0
C321	4030011600	S.CER C1608 JB 1E 104K-T	B	91.9/42.7
C331	4030011600	S.CER C1608 JB 1E 104K-T	B	88.7/42.1
C332	4030009530	S.CER C1608 CH 1H 030B-T	B	79.9/53.8
C333	4030007090	S.CER C1608 CH 1H 470J-T	B	88.0/48.2
C334	4030007090	S.CER C1608 CH 1H 470J-T	B	81.4/69.4
C335	4030007030	S.CER C1608 CH 1H 150J-T	B	83.8/45.1
C336	4030007030	S.CER C1608 CH 1H 150J-T	B	79.2/64.5
C351	4030011600	S.CER C1608 JB 1E 104K-T	B	80.4/43.4
C361	4030011600	S.CER C1608 JB 1E 104K-T	B	84.2/37.9
C362	4030017810	S.CER C1608 CH 1H 102J-T	T	86.1/39.2
C363	4030007090	S.CER C1608 CH 1H 470J-T	T	84.9/30.4
C364	4030017810	S.CER C1608 CH 1H 102J-T	T	56.5/27.8
C365	4030011600	S.CER C1608 JB 1E 104K-T	T	50.0/32.2
C371	4030011600	S.CER C1608 JB 1E 104K-T	B	88.0/25.0
C381	4030011600	S.CER C1608 JB 1E 104K-T	B	84.8/28.9
C501	4030019120	S.CER GRM188B31E105KA75D	B	18.5/15.5
C502	4030007130	S.CER C1608 CH 1H 101J-T	T	11.5/19.1
C505	4030009350	S.CER C1608 CH 1H 3R5B-T	B	15.0/30.2
C506	4030007160	S.CER C1608 CH 1H 181J-T	B	16.6/30.2
C511	4030017870	S.CER C1608 CH 1H 681J-T	B	18.2/30.2
C512	4030011330	S.CER C1608 CH 1H 391J-T	B	19.8/30.2
C515	4510009920	S.ELE 16 CE 100 LH	T	24.0/24.5
C516	4030011600	S.CER C1608 JB 1E 104K-T	T	24.1/20.3
C517	4030011600	S.CER C1608 JB 1E 104K-T	T	17.4/26.0
C518	4510009920	S.ELE 16 CE 100 LH	T	12.7/24.3
C521	4030007170	S.CER C1608 CH 1H 221J-T	B	14.4/34.0
C525	4510009920	S.ELE 16 CE 100 LH	T	24.0/34.0
C526	4030011600	S.CER C1608 JB 1E 104K-T	T	24.1/29.8
C527	4030011600	S.CER C1608 JB 1E 104K-T	T	18.5/39.5
C528	4510009920	S.ELE 16 CE 100 LH	T	14.9/32.0
C531	4030007170	S.CER C1608 CH 1H 221J-T	B	25.0/33.9
C541	4030018640	S.CER C2012 CH 1H 103J-T	B	39.4/27.5
C542	4550003220	S.TAN TEESVA 1E 105M8R	B	31.5/32.1
C543	4030007010	S.CER C1608 CH 1H 100D-T	T	31.0/36.3
C544	4030010760	S.CER C1608 CH 1H 331J-T	B	29.3/31.0
C545	4030018800	S.CER C3216 CH 1H 223J-T	B	29.7/37.4
C546	4030019120	S.CER GRM188B31E105KA75D	T	31.0/31.0
C548	4030019560	S.CER GRM21BB31C106KE15L	B	26.6/25.6
C549	4030011600	S.CER C1608 JB 1E 104K-T	B	26.1/27.6
C551	4030018640	S.CER C2012 CH 1H 103J-T	B	34.8/23.1
C552	4550003220	S.TAN TEESVA 1E 105M8R	B	31.5/26.4
C553	4030007010	S.CER C1608 CH 1H 100D-T	T	31.0/28.2
C554	4030010760	S.CER C1608 CH 1H 331J-T	T	29.3/22.9
C555	4030018800	S.CER C3216 CH 1H 223J-T	B	28.9/29.3
C556	4030019120	S.CER GRM188B31E105KA75D	T	31.0/22.9
C601	4030006880	S.CER C1608 JB 1H 472K-T	B	44.4/60.4
C602	4030006880	S.CER C1608 JB 1H 472K-T	B	44.9/53.3
C603	4030006880	S.CER C1608 JB 1H 472K-T	B	40.4/12.0
C604	4030006860	S.CER C1608 JB 1H 102K-T	B	45.8/10.9
C605	4030006860	S.CER C1608 JB 1H 102K-T	T	44.7/12.4
C606	4030006860	S.CER C1608 JB 1H 102K-T	T	43.8/16.2
C612	4610001970	S.TRI TZC3P200A110R00 (TZC03P200A1102)	B	231.2/89

[RF-B UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C615	4030006880	S.CER C1608 JB 1H 472K-T	B	45.2/42.1
C617	4030006880	S.CER C1608 JB 1H 472K-T	B	35.8/40.8
C621	4030011600	S.CER C1608 JB 1E 104K-T	T	22.4/50.3
C622	4030011600	S.CER C1608 JB 1E 104K-T	B	18.5/44.3
C651	4030009920	S.CER C1608 CH 1H 050B-T	B	47.5/28.2
C655	4030009920	S.CER C1608 CH 1H 050B-T	B	41.5/22.1
C701	4030011600	S.CER C1608 JB 1E 104K-T	B	58.9/19.8
C702	4030011600	S.CER C1608 JB 1E 104K-T	B	52.6/30.4
C703	4030006880	S.CER C1608 JB 1H 472K-T	B	54.2/31.2
C704	4030007030	S.CER C1608 CH 1H 150J-T	B	52.6/27.3
C705	4030006880	S.CER C1608 JB 1H 472K-T	B	55.8/27.3
C706	4030006880	S.CER C1608 JB 1H 472K-T	T	51.8/16.2
C707	4030006880	S.CER C1608 JB 1H 472K-T	T	57.0/17.8
C708	4030006880	S.CER C1608 CH 1H 070D-T	T	66.9/20.2
C711	4030006880	S.CER C1608 JB 1H 472K-T	T	72.6/24.9
C712	4030007010	S.CER C1608 CH 1H 100D-T	T	69.7/26.5
C713	4030007160	S.CER C1608 CH 1H 181J-T	B	64.1/29.4
C715	4030006880	S.CER C1608 JB 1H 472K-T	B	75.2/25.7
C716	4030007150	S.CER C1608 CH 1H 151J-T	T	69.3/32.8
C717	4030007120	S.CER C1608 CH 1H 820J-T	T	64.3/34.3
C721	4030006880	S.CER C1608 JB 1H 472K-T	B	69.4/35.9
C731	4030006880	S.CER C1608 JB 1H 472K-T	B	58.6/34.1
C732	4030007030	S.CER C1608 CH 1H 150J-T	T	55.5/39.5
C734	4030011770	S.CER C1608 CH 1H 060B-T	T	60.1/46.6
C737	4030007030	S.CER C1608 CH 1H 150J-T	T	55.9/50.9
C740	4030006860	S.CER C1608 JB 1H 102K-T	T	139.7/7.3
C751	4030006880	S.CER C1608 JB 1H 472K-T	B	67.9/43.3
C761	4030006880	S.CER C1608 JB 1H 472K-T	T	64.5/39.1
C762	4030007150	S.CER C1608 CH 1H 151J-T	T	65.3/37.2
C763	4030006990	S.CER C1608 CH 1H 080D-T	T	71.2/39.3
C764	4030007150	S.CER C1608 CH 1H 151J-T	T	73.9/36.4
C765	4030006880	S.CER C1608 JB 1H 472K-T	B	78.0/36.2
C771	4030006880	S.CER C1608 JB 1H 472K-T	B	73.2/38.5
C1001	4030011600	S.CER C1608 JB 1E 104K-T	B	85.4/64.2
C1011	4030011600	S.CER C1608 JB 1E 104K-T	B	91.7/56.6
C1021	4030011600	S.CER C1608 JB 1E 104K-T	T	106.7/56.3
C1022	4030007140	S.CER C1608 CH 1H 121J-T	T	94.0/58.8
C1023	4030009920	S.CER C1608 CH 1H 050B-T	T	103.5/53.0
C1024	4030006860	S.CER C1608 JB 1H 102K-T	T	99.3/51.1
C1025	4030011600	S.CER C1608 JB 1E 104K-T	T	100.5/51.1
C1026	4030011600	S.CER C1608 JB 1E 104K-T	T	95.1/51.7
C1027	4030006860	S.CER C1608 JB 1H 102K-T	T	96.3/57.1
C1028	4030007080	S.CER C1608 CH 1H 390J-T	T	94.0/56.2
C1051	4030011600	S.CER C1608 JB 1E 104K-T	B	114.4/51.8
C1052	4030007140	S.CER C1608 CH 1H 121J-T	T	120.5/51.8
C1053	4030006900	S.CER C1608 JB 1H 103K-T	T	125.8/49.4
C1054	4030006900	S.CER C1608 JB 1H 103K-T	B	126.4/52.8
C1055	4030006900	S.CER C1608 JB 1H 103K-T	B	126.5/49.0
C1056	4030006900	S.CER C1608 JB 1H 103K-T	T	125.8/53.8
C1081	4030007060	S.CER C1608 CH 1H 270J-T	T	120.6/66.4
C1082	4030011340	S.CER C1608 CH 1H 471J-T	T	125.1/65.9
C1083	4030011600	S.CER C1608 JB 1E 104K-T	B	123.2/63.3
C1084	4030007060	S.CER C1608 CH 1H 270J-T	T	122.5/67.1
C1085	4030007060	S.CER C1608 CH 1H 270J-T	T	118.2/66.4
C1101	4030017810	S.CER C1608 CH 1H 102J-T	B	136.2/52.2
C1102	4030017810	S.CER C1608 CH 1H 102J-T	B	140.7/72.9
C1103	4030006860	S.CER C1608 JB 1H 102K-T	B	142.3/55.6
C1111	4030009990	S.CER C1608 CH 1H 200J-T	T	140.2/59.4
C1112	4030009650	S.CER C1608 CH 1H 240J-T	T	138.3/60.2
C1113	4030007040	S.CER C1608 CH 1H 180J-T	T	139.5/61.3
C1114	4030007090	S.CER C1608 CH 1H 470J-T	T	138.8/63.1
C1116	4030007040	S.CER C1608 CH 1H 180J-T	T	141.1/62.8
C1117	4030006860	S.CER C1608 JB 1H 102K-T	T	137.5/54.9
C1118	4030006860	S.CER C1608 JB 1H 102K-T	T	137.0/69.1
C1119	4030011600	S.CER C1608 JB 1E 104K-T	T	136.9/57.1
C1201	4030007110	S.CER C1608 CH 1H 680J-T	T	139.7/76.0
C1202	4030007050	S.CER C1608 CH 1H 220J-T	T	140.1/79.2
C1203	4030007110	S.CER C1608 CH 1H 680J-T	T	143.5/79.9
C1204	4030006860	S.CER C1608 JB 1H 102K-T	B	144.1/78.1
C1205	4030007030	S.CER C1608 CH 1H 150J-T	T	139.5/71.5
C1206	4030007020	S.CER C1608 CH 1H 120J-T	T	145.9/76.3
C1251	4030007030			

[RF-B UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C1475	4030006860	S.CER C1608 JB 1H 102K-T	B	114.6/62.7
C1491	4030007070	S.CER C1608 CH 1H 330J-T	T	105.5/63.9
C1492	4030007140	S.CER C1608 CH 1H 121J-T	T	104.3/63.9
C1493	4030009650	S.CER C1608 CH 1H 240J-T	T	103.8/65.7
C1511	4030011600	S.CER C1608 JB 1E 104K-T	T	90.5/57.0
C1521	4030011600	S.CER C1608 JB 1E 104K-T	T	89.8/61.7
C1522	4030007090	S.CER C1608 CH 1H 470J-T	B	87.5/63.9
C1523	4030006860	S.CER C1608 JB 1H 102K-T	B	87.7/72.7
C1524	4030011600	S.CER C1608 JB 1E 104K-T	B	94.0/65.2
C1525	4030011600	S.CER C1608 JB 1E 104K-T	B	95.6/69.6
C1526	4030007030	S.CER C1608 CH 1H 150J-T	B	93.3/75.6
C1527	4030007090	S.CER C1608 CH 1H 470J-T	B	93.3/74.0
C1552	4030007140	S.CER C1608 CH 1H 121J-T	B	106.0/74.4
C1555	4030006860	S.CER C1608 JB 1H 102K-T	B	106.7/70.2
C1556	40300117810	S.CER C1608 CH 1H 102J-T	T	109.3/76.4
C1557	40300117810	S.CER C1608 CH 1H 102J-T	T	109.3/72.4
C1559	4030007070	S.CER C1608 CH 1H 330J-T	T	113.0/77.2
C1560	4030007070	S.CER C1608 CH 1H 330J-T	T	113.0/71.6
C1561	4030006860	S.CER C1608 JB 1H 102K-T	T	111.8/71.6
C1562	4030006860	S.CER C1608 JB 1H 102K-T	B	112.7/74.4
C1563	4030011600	S.CER C1608 JB 1E 104K-T	B	112.7/76.0
C1564	4030006860	S.CER C1608 JB 1H 102K-T	B	105.2/67.0
C1571	40300117810	S.CER C1608 CH 1H 102J-T	B	93.2/91.0
C1581	4030006860	S.CER C1608 JB 1H 102K-T	T	108.6/65.5
C1611	4030009550	S.CER C1608 CH 1H 2R5B-T	T	128.6/64.6
C1612	4030007170	S.CER C1608 CH 1H 221J-T	T	129.3/71.1
C1613	4030009500	S.CER C1608 CH 1H 0R5B-T	T	129.3/72.4
C1614	4030009570	S.CER C1608 CH 1H 0R3B-T	T	129.3/73.7
C1615	4030007170	S.CER C1608 CH 1H 221J-T	T	129.3/75.0
C1616	4030009550	S.CER C1608 CH 1H 2R5B-T	T	128.5/78.4
C1617	40300117810	S.CER C1608 CH 1H 102J-T	B	131.8/77.8
C1631	40300117810	S.CER C1608 CH 1H 102J-T	B	120.7/82.8
C1651	4030006860	S.CER C1608 JB 1H 102K-T	B	117.4/86.3
C1652	4030011340	S.CER C1608 CH 1H 471J-T	T	117.9/87.0
C1670	40300117810	S.CER C1608 CH 1H 102J-T	T	115.1/86.0
C1671	4030009550	S.CER C1608 CH 1H 2R5B-T	T	110.5/89.5
C1672	4030007170	S.CER C1608 CH 1H 221J-T	T	108.6/88.7
C1673	4030009500	S.CER C1608 CH 1H 0R5B-T	T	107.2/88.7
C1674	4030009570	S.CER C1608 CH 1H 0R3B-T	T	105.8/88.7
C1675	4030007170	S.CER C1608 CH 1H 221J-T	T	104.4/88.7
C1676	4030009550	S.CER C1608 CH 1H 2R5B-T	T	102.2/89.7
C1677	40300117810	S.CER C1608 CH 1H 102J-T	T	105.1/84.1
C1678	4030006860	S.CER C1608 JB 1H 102K-T	T	97.7/91.5
C1701	4030006860	S.CER C1608 JB 1H 102K-T	B	95.6/83.2
C1711	4030006860	S.CER C1608 JB 1H 102K-T	T	98.1/83.1
C2001	4030006880	S.CER C1608 JB 1H 472K-T	B	57.9/56.9
C2011	4030006860	S.CER C1608 JB 1H 102K-T	B	48.0/56.6
C2021	4030006860	S.CER C1608 JB 1H 102K-T	T	50.6/57.1
C2022	4030006860	S.CER C1608 JB 1H 102K-T	B	44.4/53.0
C2023	4030009920	S.CER C1608 CH 1H 050B-T	T	39.5/53.9
C2024	4030011600	S.CER C1608 JB 1E 104K-T	T	45.8/56.4
C2025	4030006860	S.CER C1608 JB 1H 102K-T	T	44.5/56.4
C2027	4030011600	S.CER C1608 JB 1E 104K-T	T	48.6/56.6
C2028	4030009550	S.CER C1608 CH 1H 2R5B-T	T	47.8/51.2
C2029	4030006860	S.CER C1608 JB 1H 102K-T	B	44.7/57.1
C2033	4030007030	S.CER C1608 CH 1H 150J-T	T	47.8/53.6
C2052	4030006860	S.CER C1608 JB 1H 102K-T	B	31.8/64.3
C2053	4030011600	S.CER C1608 JB 1E 104K-T	B	41.0/70.2
C2054	4030006860	S.CER C1608 JB 1H 102K-T	B	41.0/68.6
C2061	4030006860	S.CER C1608 JB 1H 102K-T	T	32.8/70.0
C2062	4030011600	S.CER C1608 JB 1E 104K-T	T	34.1/70.4
C2063	4030007170	S.CER C1608 CH 1H 221J-T	T	36.7/66.7
C2064	4030007170	S.CER C1608 CH 1H 221J-T	T	36.7/70.4
C2065	4030009530	S.CER C1608 CH 1H 030B-T	B	33.5/69.6
C2081	4030011340	S.CER C1608 CH 1H 471J-T	B	34.5/55.3
C2082	4030006860	S.CER C1608 JB 1H 102K-T	B	34.5/56.9
C2202	4030007010	S.CER C1608 CH 1H 100D-T	T	29.0/81.9
C2203	4030007030	S.CER C1608 CH 1H 150J-T	T	33.6/79.6
C2204	4030009990	S.CER C1608 CH 1H 200J-T	T	26.2/80.4
C2205	4030009990	S.CER C1608 CH 1H 200J-T	T	41.0/80.4
C2206	4030007010	S.CER C1608 CH 1H 100D-T	T	38.1/81.9
C2207	4030007170	S.CER C1608 CH 1H 221J-T	B	33.1/76.5
C2208	4030007030	S.CER C1608 CH 1H 150J-T	T	25.3/76.6
C2209	4030007030	S.CER C1608 CH 1H 150J-T	T	27.0/77.8
C2210	4030006940	S.CER C1608 CH 1H 030C-T	T	24.1/78.1
C2251	4030009920	S.CER C1608 CH 1H 050B-T	T	40.2/77.8
C2252	4030006900	S.CER C1608 JB 1H 103K-T	T	43.0/79.6
C2253	4030006860	S.CER C1608 JB 1H 102K-T	T	43.0/80.8
C2254	4030006860	S.CER C1608 JB 1H 102K-T	T	47.0/78.0
C2255	4030006900	S.CER C1608 JB 1H 103K-T	T	47.0/76.8
C2261	4030006860	S.CER C1608 JB 1H 102K-T	B	44.0/76.8
C2262	40300119560	S.CER GRM21BB31C106KE15L	B	44.2/75.0
C2264	4030006900	S.CER C1608 JB 1H 103K-T	T	35.7/77.2
C2265	4030006860	S.CER C1608 JB 1H 102K-T	T	35.7/76.0
C2301	4030007040	S.CER C1608 CH 1H 180J-T	T	47.0/81.1
C2302	4030007170	S.CER C1608 CH 1H 221J-T	T	48.9/83.7
C2303	4030011340	S.CER C1608 CH 1H 471J-T	T	45.2/80.3
C2304	4030009920	S.CER C1608 CH 1H 050B-T	T	45.1/86.4
C2305	4030007170	S.CER C1608 CH 1H 221J-T	B	44.7/84.9
C2351	4030006860	S.CER C1608 JB 1H 102K-T	T	50.8/86.4
C2352	4030011600	S.CER C1608 JB 1E 104K-T	B	38.9/90.7
C2353	4030011340	S.CER C1608 CH 1H 471J-T	T	43.2/89.4
C2354	4030006860	S.CER C1608 JB 1H 102K-T	T	37.1/89.8
C2355	4030011600	S.CER C1608 JB 1E 104K-T	T	35.8/89.8
C2356	4030006860	S.CER C1608 JB 1H 102K-T	B	39.1/86.3
C2357	4030011600	S.CER C1608 JB 1E 104K-T	B	40.7/86.3
C2358	4030006860	S.CER C1608 JB 1H 102K-T	B	41.3/91.5
C2359	4030011340	S.CER C1608 CH 1H 471J-T	T	40.6/92.1
C2361	4030011530	S.CER C1608 CH 1H 110J-T	T	45.1/90.1
C2362	4030007070	S.CER C1608 CH 1H 330J-T	T	46.4/92.1
C2363	4030011770	S.CER C1608 CH 1H 060B-T	T	43.8/92.1
C2364	4030011340	S.CER C1608 CH 1H 471J-T	T	15.1/80.3
C2365	4030011340	S.CER C1608 CH 1H 471J-T	T	16.6/75.9
C2411	4030007020	S.CER C1608 CH 1H 120J-T	T	36.7/60.0
C2412	4030009650	S.CER C1608 CH 1H 240J-T	T	35.5/58.5

[RF-B UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C2413	4030006990	S.CER C1608 CH 1H 080D-T	T	34.7/60.5
C2414	4030011530	S.CER C1608 CH 1H 110J-T	T	34.2/58.5
C2415	4030007000	S.CER C1608 CH 1H 090D-T	T	32.1/60.5
C2422	4030006860	S.CER C1608 JB 1H 102K-T	T	33.0/55.0
C2423	4030009350	S.CER C1608 CH 1H 3R5B-T	T	28.5/57.0
C2424	4030006860	S.CER C1608 JB 1H 102K-T	T	31.2/55.9
C2451	4030009920	S.CER C1608 CH 1H 050B-T	T	28.6/58.9
C2452	4030009540	S.CER C1608 CH 1H 1R5B-T	T	28.6/62.5
C2453	4030009920	S.CER C1608 CH 1H 050B-T	T	28.6/60.1
C2454	4030006980	S.CER C1608 CH 1H 070D-T	T	26.7/61.8
C2455	4030009350	S.CER C1608 CH 1H 3R5B-T	T	24.3/61.8
C2456	4030006980	S.CER C1608 CH 1H 070D-T	T	25.5/61.8
C2457	4030009910	S.CER C1608 CH 1H 040B-T	T	25.1/58.6
C2458	4030009910	S.CER C1608 CH 1H 040B-T	T	25.1/59.8
C2471	4030006980	S.CER C1608 CH 1H 070D-T	T	23.1/59.2
C2472	4030011600	S.CER C1608 JB 1E 104K-T	B	20.9/54.5
C2473	4030006860	S.CER C1608 JB 1H 102K-T	B	21.6/55.8
C2474	4030006900	S.CER C1608 JB 1H 103K-T	B	16.9/68.1
C2475	4030011770	S.CER C1608 CH 1H 060B-T	T	25.4/57.4
C2491	4030007030	S.CER C1608 CH 1H 150J-T	T	18.3/64.5
C2492	4030011770	S.CER C1608 CH 1H 060B-T	T	15.7/65.7
C2493	4030007110	S.CER C1608 CH 1H 680J-T	T	15.7/63.3
C2494	4030007020	S.CER C1608 CH 1H 120J-T	T	15.7/62.1
C2511	4030006860	S.CER C1608 JB 1H 102K-T	T	67.0/46.1
C2521	4030006860	S.CER C1608 JB 1H 102K-T	T	65.1/49.1
C2522	4030006880	S.CER C1608 JB 1H 472K-T	B	64.0/47.0
C2523	4030006990	S.CER C1608 CH 1H 080D-T	B	64.0/48.5
C2524	4030006880	S.CER C1608 JB 1H 472K-T	B	71.4/53.9
C2525	4030006880	S.CER C1608 JB 1H 472K-T	B	73.0/59.8
C2526	4030007030	S.CER C1608 CH 1H 150J-T	B	66.6/58.1
C2551	4030007080	S.CER C1608 CH 1H 390J-T	T	72.2/59.1
C2552	4030007020	S.CER C1608 CH 1H 120J-T	T	72.2/61.6
C2553	4030007080	S.CER C1608 CH 1H 390J-T	T	74.0/58.4
C2562	4030011340	S.CER C1608 CH 1H 471J-T	T	48.6/61.6
C2570	4030009540	S.CER C1608 CH 1H 1R5B-T	T	38.9/58.8
C2571	4030009540	S.CER C1608 CH 1H 1R5B-T	T	40.1/58.8
C2572	4030007010	S.CER C1608 CH 1H 100D-T	T	40.9/60.7
C2573	4030006990	S.CER C1608 CH 1H 080D-T	T	42.4/59.2
C2574	4030009920	S.CER C1608 CH 1H 050B-T	T	44.1/61.1
C2575	4030007010	S.CER C1608 CH 1H 100D-T	T	45.9/59.2
C2576	4030009910	S.CER C1608 CH 1H 040B-T	T	45.9/61.6
C2577	4030007010	S.CER C1608 CH 1H 100D-T	T	47.8/59.7
C2580	4030011340	S.CER C1608 CH 1H 471J-T	B	6.2/52.9
C2581	4030011340	S.CER C1608 CH 1H 471J-T	B	40.5/57.3
C2582	4030009530	S.CER C1608 CH 1H 030B-T	T	9.9/72.1
C2583	40300117810	S.CER C1608 CH 1H 102J-T	T	15.9/70.9
C2584	4030009570	S.CER C1608 CH 1H 0R3B-T	T	9.9/70.9
C2585	4030011340	S.CER C1608 CH 1H 471J-T	B	17.8/71.4
C2587	40300117810	S.CER C1608 CH 1H 102J-T	T	14.5/69.0
C2588	4030009550	S.CER C1608 CH 1H 2R5B-T	T	9.1/69.0
C2589	40300117810	S.CER C1608 CH 1H 102J-T	B	12.4/66.0
C2590	4030011340	S.CER C1608 CH 1H 471J-T	T	9.6/64.2
C2591	40300117810	S.CER C1608 CH 1H 102J-T	B	12.0/62.7
C2592	4030006860	S.CER C1608 JB 1H 102K-T	T	8.3/64.2
C2593	4030009510	S.CER C1608 CH 1H 010B-T	T	10.7/60.4
C2594	40300117810	S.CER C1608 CH 1H 102J-T	T	12.6/59.6
C2595	4030009500	S.CER C1608 CH 1H 0R5B-T	T	14.5/59.7
C2596	4030011340	S.CER C1608 CH 1H 471J-T	B	6.9/55.5
C2598	40300117810	S.CER C1608 CH 1H 102J-T	T	14.5/58.5
C2599	4030009520	S.CER C1608 CH 1H 020B-T	T	15.7/60.9
C2601	4030011340	S.CER C1608 CH 1H 471J-T	B	61.8/72.4
C2602	4030011340	S.CER C1608 CH 1H 471J-T	B	50.9/77.5
C2603	4030011340	S.CER C1608 CH 1H 471J-T	T	57.8/76.3
C2604	4030011340	S.CER C1608 CH 1H 471J-T	T	56.4/80.4
C2605	4030011340	S.CER C1608 CH 1H 471J-T	B	50.8/81.2
C2606	4030011340	S.CER C1608 CH 1H 471J-T	B	58.6/83.1
C2607	4030009510	S.CER C1608 CH 1H 010B-T	T	11.7/71.7
C2608	4030009510	S.CER C1608 CH		

**RF-B UNIT]**

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C2802	4030006880	S.CER C1608 JB 1H 472K-T	T	83.5/77.9
C2803	4030011340	S.CER C1608 CH 1H 471J-T	T	84.7/77.9
C2804	4030009920	S.CER C1608 CH 1H 050B-T	T	85.7/82.2
C2805	4030006860	S.CER C1608 JB 1H 102K-T	T	87.0/90.3
C2807	4030011340	S.CER C1608 CH 1H 471J-T	B	84.2/88.7
C2808	4030006860	S.CER C1608 JB 1H 102K-T	T	83.2/87.4
C2831	4030006990	S.CER C1608 CH 1H 080D-T	T	91.1/83.8
C2832	4030009510	S.CER C1608 CH 1H 010B-T	T	93.6/83.8
C2833	4030006990	S.CER C1608 CH 1H 080D-T	T	90.4/85.6
C2834	4030011340	S.CER C1608 CH 1H 471J-T	T	94.9/86.4
J1	6510020001	S.CON 52808-3071(3090)	T	80.3/14.6
J52	6510019981	S.CON 52808-1671(1690)	T	22.7/90.7
J101	6510014961	S.CON B2B-ZR-SM4-TF(LF)(SN)	T	136.7/18.5
J201	6510028210	CON SJ050010 (TMP-J01X-V6)		
J381	6510028210	CON SJ050010 (TMP-J01X-V6)		
J501	6510019371	S.CON B3B-ZR-SM4-TF(LF)(SN)	T	15.9/15.9
J601	6510028210	CON SJ050010 (TMP-J01X-V6)		
J1351	6510028210	CON SJ050010 (TMP-J01X-V6)		
J1491	6510028210	CON SJ050010 (TMP-J01X-V6)		
J1751	6510028210	CON SJ050010 (TMP-J01X-V6)		
J2351	6510028210	CON SJ050010 (TMP-J01X-V6)		
J2491	6510028210	CON SJ050010 (TMP-J01X-V6)		
EP1	6910014730	S.BEA MPZ2012S331A-T	T	93.1/10.0
EP2	6910015970	S.BEA MMZ1608B 301CT-AS	T	91.5/10.0
EP3	6910015970	S.BEA MMZ1608B 301CT-AS	T	90.2/10.0
EP4	6910015970	S.BEA MMZ1608B 301CT-AS	T	88.9/10.0
EP5	6910015970	S.BEA MMZ1608B 301CT-AS	T	86.3/10.0
EP6	6910015970	S.BEA MMZ1608B 301CT-AS	T	87.6/10.0
EP51	6910014730	S.BEA MPZ2012S331A-T	T	10.6/88.9
EP62	6910019900	S.BEA MPZ1608S601AT	B	21.2/88.4
EP81	6910012350	S.BEA MMZ1608Y 102BT	T	6.3/51.5
EP201	6910012350	S.BEA MMZ1608Y 102BT	B	149.1/27.5
EP601	6910012350	S.BEA MMZ1608Y 102BT	B	9.0/48.1
EP731	6910002161	CAS CASE-BM7H-LF		
EP732	6910002161	CAS CASE-BM7H-LF		
EP1051	6910002161	CAS CASE-BM7H-LF		
EP1052	6910012350	S.BEA MMZ1608Y 102BT	B	116.5/51.8
EP1261	6910015970	S.BEA MMZ1608B 301CT-AS	T	148.5/84.2
EP1521	6910015970	S.BEA MMZ1608B 301CT-AS	B	85.9/72.7
EP2261	6910015970	S.BEA MMZ1608B 301CT-AS	B	39.2/78.1
EP2421	6910012350	S.BEA MMZ1608Y 102BT	B	30.5/56.3
EP2422	6910012350	S.BEA MMZ1608Y 102BT	B	29.8/57.9
EP2521	6910015970	S.BEA MMZ1608B 301CT-AS	T	67.9/52.3
EP2591	6910012350	S.BEA MMZ1608Y 102BT	B	6.8/62.7

**[PA-A UNIT]**

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
IC121	1180001072	S.IC TA7805F(TE16L1NQ)	B	51.4/99.4
IC301	1110003800	S.IC NJM2904V-TE1-#FMZB	T	64.0/11.0
IC371	1110003800	S.IC NJM2904V-TE1-#FMZB	T	24.9/57.9
IC431	1110006680	S.IC BH2221FV-E2	T	21.6/47.7
IC432	1130011760	S.IC CD4094BPWR	T	190.5/118.5
Q51	1590003680	S.TRA KRC402 RTK/P	B	85.9/76.9
Q201	1560001241	S.FET RD01MUS1-T113	T	15.3/15.5
Q221	1560001530	FET RD15HVF1-101		
Q222	1560001530	FET RD15HVF1-101		
Q241	1560001640	FET RD100HHF1C-103		
Q242	1560001640	FET RD100HHF1C-103		
Q1251	1590003680	S.TRA KRC402 RTK/P	T	205.5/120.0
Q1252	1590003770	S.TRA KRA302E-RTK/P	T	205.5/117.2
Q1253	1590003680	S.TRA KRC402 RTK/P	T	200.3/120.0
Q1254	1590003770	S.TRA KRA302E-RTK/P	T	200.3/117.2
Q1255	1590003680	S.TRA KRC402 RTK/P	T	195.1/120.0
Q1256	1590003770	S.TRA KRA302E-RTK/P	T	195.1/117.2
Q1257	1590003680	S.TRA KRC402 RTK/P	T	197.7/120.0
Q1258	1590003770	S.TRA KRA302E-RTK/P	T	197.7/117.2
Q1259	1590003680	S.TRA KRC402 RTK/P	T	208.1/120.0
Q1260	1590003770	S.TRA KRA302E-RTK/P	T	208.1/117.2
Q1261	1590003680	S.TRA KRC402 RTK/P	T	210.7/120.0
Q1262	1590003770	S.TRA KRA302E-RTK/P	T	210.7/117.2
Q1263	1590003680	S.TRA KRC402 RTK/P	T	202.9/120.0
Q1264	1590003770	S.TRA KRA302E-RTK/P	T	202.9/117.2
D1	1790000700	DIO DSA3A1		
D2	1790000700	DIO DSA3A1		
D3	1790000700	DIO DSA3A1		
D51	1750001320	S.DIO KDS4148U RTK/P	B	89.4/79.1
D244	1750002020	S.DIO DA2S10100L	T	79.1/57.1
D245	1750002020	S.DIO DA2S10100L	T	79.1/9.8
D351	1750002020	S.DIO DA2S10100L	T	28.3/10.1
D352	1750002020	S.DIO DA2S10100L	T	29.8/43.4
D353	1750002020	S.DIO DA2S10100L	T	60.8/18.0
D354	1750002020	S.DIO DA2S10100L	T	67.2/18.0
D371	1790001241	S.DIO MA2S7280GL	T	26.7/53.5
D372	1790001241	S.DIO MA2S7280GL	T	21.5/53.5
D551	1750001320	S.DIO KDS4148U RTK/P	T	226.5/104.6
D651	1750001320	S.DIO KDS4148U RTK/P	T	239.0/97.0
D751	1750001320	S.DIO KDS4148U RTK/P	B	243.8/76.7
D851	1750001320	S.DIO KDS4148U RTK/P	B	243.0/60.6
D951	1750001320	S.DIO KDS4148U RTK/P	B	243.9/44.6
D1051	1750001320	S.DIO KDS4148U RTK/P	B	243.9/33.1
D1151	1750001320	S.DIO KDS4148U RTK/P	B	244.7/18.5
L1	6140003440	COI LR-386 (FK-100E-5003H) [USA]		
	6140003440	COI LR-386 (FK-100E-5003H) [TPE]		
	6140003440	COI LR-386 (FK-100E-5003H) [KOR]		
	6140003440	COI LR-386 (FK-100E-5003H) [CHN]		
	6140003440	COI LR-386 (FK-100E-5003H) [EXP]		
L2	6140003440	COI LR-386 (FK-100E-5003H) [USA]		
	6140003440	COI LR-386 (FK-100E-5003H) [TPE]		
	6140003440	COI LR-386 (FK-100E-5003H) [KOR]		
	6140003440	COI LR-386 (FK-100E-5003H) [CHN]		
	6140003440	COI LR-386 (FK-100E-5003H) [EXP]		
L202	6140002220	COI LR-270 (TR6X3X2 3A9)		
L203	6140002350	COI LR-274 (RIB4X7X5 3A6)		
L221	6140004690	COI LR-530 <KN>		
L241	6140003590	COI LR-400 (TR10X5X5 6H3)		
L242	6140004700	COI LR-529		
L281	6140004570	COI LR-507		
L431	6200005011	S.COI NLV25T-100J	B	71.55/135.7
L432	6200005011	S.COI NLV25T-100J	T	184.6/119.9
L461	6200003241	S.COI NLV32T-221J	T	177.1/83.8
L462	6200003241	S.COI NLV32T-221J	T	182.3/78.2
L501	6140001240	COI LR-149 (T68-2)		
L502	6140001130	COI LR-138 (T68-2)		
L601	6140001160	COI LR-141 (T68-2)		
L602	6140001160	COI LR-141 (T68-2)		
L603	6140001160	COI LR-141 (T68-2)		
L701	6110003570	COI LA-550		
L702	6110003540	COI LA-548 (LA-215A)		
L703	6110003550	COI LA-547 (LA-214A)		
L801	6140001990	COI LR-226 (T68-2)		
L802	6140002000	COI LR-227 (T68-2)		
L901	6140005080	COI LR-563		
L902	6140003460	COI LR-388 (T50-10)		
L903	6140005070	COI LR-562		
L1001	6140001810	COI LR-217 (T50-10)		
L1002	6140005090	COI LR-564		
L1003	6140005100	COI LR-565		
L1051	6200005051	S.COI NLV25T-330J	B	182.5/19.5
L1101	6110002920	COI LA-481		
L1102	6110002910	COI LA-480		
R1	7030011240	S.RES LRF3W-LF-01-R020F	T	108.8/81.2
R2	7030011240	S.RES LRF3W-LF-01-R020F	T	108.8/74.2
R121	7030010260	S.RES ERJ1TYJ 3R3 U	T	28.2/97.9
R201	7030003370	S.RES ERJ3GEYJ 271 V (270)	T	9.4/11.0
R202	7030003230	S.RES ERJ3GEYJ 180 V (18)	T	10.2/8.9
R203	7030003370	S.RES ERJ3GEYJ 271 V (270)	T	12.8/7.4
R204	7030000010	S.RES MCR10EZHZ JPW (000)	T	13.6/10.7
R205	7030003510	S.RES ERJ3GEYJ 392 V (3.9K)	T	12.3/19.3
R206	7030003410	S.RES ERJ3GEYJ 561 V (560)	T	15.8/24.1
R207	7030006210	S.RES ERJ12YJ4R7U (4.7)	T	22.6/10.8
R208	7030008180	S.RES ERJ12YJ331U (330)	T	19.5/22.4
R221	7030008240	S.RES ERJ12Y0R00U	T	30.2/32.4
R222	7030008240	S.RES ERJ12Y0R00U	T	30.2/16.8
R223	7030010480	S.RES ERJ1TYJ 181U (180)	T	39.5/34.7

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
R224	7030010480	S.RES ERJ1TYJ 181U (180)	T	39.5/6.6
R225	7030003480	S.RES ERJ3GEYJ 222 V (2.2K)	T	31.3/43.1
R226	7030003480	S.RES ERJ3GEYJ 222 V (2.2K)	T	31.3/6.2
R242	7030010250	S.RES ERJ1TYJ 0R00U	T	82.5/39.8
R243	7030010250	S.RES ERJ1TYJ 0R00U	T	82.5/27.2
R244	7030003510	S.RES ERJ3GEYJ 392 V (3.9K)	T	80.0/54.8
R245	7030003510	S.RES ERJ3GEYJ 392 V (3.9K)	T	80.0/12.2
R246	7030011130	S.RES ERJ1TYJ 1R0U (1)	T	89.9/53.6
R247	7030011130	S.RES ERJ1TYJ 1R0U (1)	T	89.9/13.5
R248	7030010610	S.RES ERJ1TYJ 470U (47)	T	93.4/38.5
R249	7030010610	S.RES ERJ1TYJ 470U (47)	T	97.4/38.5
R250	7030010610	S.RES ERJ1TYJ 470U (47)	T	97.4/28.5
R251	7030010610	S.RES ERJ1TYJ 470U (47)	T	93.4/28.5
R281	7030010250	S.RES ERJ1TYJ 0R00U	T	142.4/56.9
R283	7030010570	S.RES ERJ1TYJ 4R7U (4.7)	T	153.0/61.7
R284	7030010570	S.RES ERJ1TYJ 4R7U (4.7)	T	156.7/61.7
R301	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	61.5/8.1
R302	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	66.4/8.1
R303	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	58.9/9.2
R304	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	57.6/9.2
R305	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	69.1/9.2
R306	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	70.4/9.2
R307	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	58.9/12.0
R308	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	69.1/12.0
R309	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	58.9/14.8
R310	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	69.1/14.8
R311	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	65.5/12.0
R341	7030005981	S.RES ERA3YED 333V (33K)	B	116.1/82.8
R342	7030005971	S.RES ERA3YKD 683V (68K)	B	120.8/81.3
R343	7030011240	S.RES LRF3W-LF-01-R020F	B	112.3/88.4
R344	7030005981	S.RES ERA3YED 333V (33K)	B	112.2/84.0
R345	7030005971	S.RES ERA3YKD 683V (68K)	B	114.3/81.7
R346	7030009661	S.RES ERA3YED 121V (120)	B	118.4/82.1
R351	7030003310	S.RES ERJ3GEYJ 820 V (82)	T	12.3/20.6
R352	7030003450	S.RES ERJ3GEYJ 122 V (1.2K)	T	12.3/21.9
R353	7030003440	S.RES ERJ3GEYJ 102 V (1K)	T	21.8/8.0
R354	7030000220	S.RES MCR10EZHH 47 (470)	T	30.3/8.2
R355	7030000220	S.RES MCR10EZHH 47 (470)	T	30.3/41.0
R356	7030010950	S.RES ERJ1TYJ 100U (10)	T	61.4/47.4
R357	7030010610	S.RES ERJ1TYJ 470U (47)	T	77.7/16.3
R358	7030010610	S.RES ERJ1TYJ 470U (47)	T	77.7/50.7
R359	7030003860	S.RES ERJ3GE JPW V	T	82.0/5.6
R360	7030003460	S.RES ERJ3GEYJ 152 V (1.5K)	T	83.8/7.7
R361	7510001551	S.THE NTCG16 4LH 333JT	T	95.1/6.2
R362	7030005971	S.RES ERA3YKD 683V (68K)	B	108.8/79.5
R363	7030005981	S.RES ERA3YED 333V (33K)	B	112.7/77.1
R364	7030007661	S.RES ERA3YED 331V (330)	B	109.6/77.1
R365	7030005971	S.RES ERA3YKD 683V (68K)	B	105.6/81.1
R366	7030005981	S.RES ERA3YED 333V (33K)	B	106.8/78.0
R367	7030003370	S.RES ERJ3GEYJ 271 V (270)	T	85.1/9.2
R368	7030003510	S.RES ERJ3GEYJ 392 V (3.9K)	T	84.3/4.1
R371	7030005981	S.RES ERA3YED 333V (33K)	T	30.3/59.0
R372	7030003820	S.RES ERJ3GEYJ 155 V (1.5M)	T	30.3/60.3
R373	7030005981	S.RES ERA3YED 333V (33K)	T	32.1/56.9
R374	7030003820	S.RES ERJ3GEYJ 155 V (1.5M)	T	29.5/56.9
R375	7030003500	S.RES ERJ3GEYJ 332 V (3.3K)	T	29.9/54.8
R377	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	23.2/55.2
R381	7030008141	S.RES ERA3YKD 224V (220K)	T	19.6/59.8
R382	7030005521	S.RES ERA3YKD 334V (330K)	T	23.9/60.6
R383	7030008141	S.RES ERA3YKD 224V (220K)	T	17.7/57.7
R384	7030003750	S.RES ERJ3GEYJ 394 V (390K)	T	20.3/57.7
R385	7030003500	S.RES ERJ3GEYJ 332 V (3.3K)	T	19.9/55.6
R386	7030003560	S.RES ERJ3GEYJ 103 V (10K)	B	13.7/25.2
R401	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	11.1/26.5
R404	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	52.2/46.3
R405	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	51.8/48.5
R406	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	50.2/46.3
R407	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	35.0/35.5
R409	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	45.1/71.6
R410	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	11.1/38.2
R411	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	11.1/39.5
R412	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	11.1/36.9
R413	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	11.1/34.3
R414	7030003860	S.RES ERJ3GE JPW V	T	17.4/61.5
R551	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	220.5/107.6
R552	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	220.5/108.9
R651	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	235.0/97.9
R652	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	233.4/97.9
R751	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	244.4/81.0
R752	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	244.4/82.6
R851	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	244.3/65.1
R852	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	244.3/66.7
R951	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	244.8/46.5
R952	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	244.8/48.1
R1051	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	244.1/36.8
R1052	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	244.1/38.4
R1151	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	244.3/22.0
R1152	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	244.3/23.6
C1	4560000170	CER D67X5T 1E 684M51 (MARUWA) [USA]		
	4560000170	CER D67X5T 1E 684M51 (MARUWA) [TPE]		
	4560000170	CER D67X5T 1E 684M51 (MARUWA) [KOR]		
	4560000170	CER D67X5T 1E 684M51 (MARUWA) [CHN]		
	4560000170	CER D67X5T 1E 684M51 (MARUWA) [EXP]		
C2	4030018980	S.CER C1608 JB 1H 104K-T [USA]	T	177.6/102.1
	4030018980	S.CER C1608 JB 1H 104K-T [TPE]		
	4030018980	S.CER C1608 JB 1H 104K-T [KOR]		
	4030018980	S.CER C1608 JB 1H 104K-T [CHN]		
	4030018980	S.CER C1608 JB 1H 104K-T [EXP]		

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REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C3	4510009250	S.ELE EEEFK1C471P [USA]	T	127.0/107.0
	4510009250	S.ELE EEEFK1C471P [KOR]		
	4510009250	S.ELE EEEFK1C471P [CHN]		
	4510009250	S.ELE EEEFK1C471P [EXP]		
C4	4030004740	S.CER C2012 JB 1H 472K-T [USA]	T	132.2/101.4
	4030004740	S.CER C2012 JB 1H 472K-T [TPE]		
	4030004740	S.CER C2012 JB 1H 472K-T [KOR]		
	4030004740	S.CER C2012 JB 1H 472K-T [CHN]		
	4030004740	S.CER C2012 JB 1H 472K-T [EXP]		
C5	4030004740	S.CER C2012 JB 1H 472K-T [USA]	T	132.2/112.6
	4030004740	S.CER C2012 JB 1H 472K-T [TPE]		
	4030004740	S.CER C2012 JB 1H 472K-T [KOR]		
	4030004740	S.CER C2012 JB 1H 472K-T [CHN]		
	4030004740	S.CER C2012 JB 1H 472K-T [EXP]		
C8	4030018980	S.CER C1608 JB 1H 104K-T	T	92.6/116.0
C9	4030007170	S.CER C1608 CH 1H 221J-T	T	92.6/114.4
C10	4030006880	S.CER C1608 JB 1H 472K-T	T	92.5/89.0
C11	4510009250	S.ELE EEEFK1C471P	T	85.2/99.7
C12	4510009250	S.ELE EEEFK1C471P	T	85.2/90.9
C13	4030005110	S.CER C2012 JB 1E 473K-T	B	96.2/107.0
C51	4030006900	S.CER C1608 JB 1H 103K-T	B	82.3/78.9
C52	4030011600	S.CER C1608 JB 1E 104K-T	B	85.9/79.1
C53	4030006900	S.CER C1608 JB 1H 103K-T	B	89.3/81.0
C121	4030019560	S.CER GRM21BB31C106KE15L	B	44.2/97.6
C122	4030011600	S.CER C1608 JB 1E 104K-T	B	44.2/97.6
C123	4030011600	S.CER C1608 JB 1E 104K-T	B	44.2/101.3
C124	4030019560	S.CER GRM21BB31C106KE15L	B	44.4/101.2
C201	4030007130	S.CER C1608 CH 1H 101J-T	T	8.9/9.8
C204	4030017320	S.CER GRM21BB11H104KA01 (GRM40-034)	T	11.8/14.2
C205	4030008960	S.CER C2012 JB 1C 104K-T	T	14.9/21.7
C206	4030005110	S.CER C2012 JB 1E 473K-T	T	19.4/26.4
C207	4030004720	S.CER C2012 JB 1H 102K-T	T	16.8/10.7
C209	4030005110	S.CER C2012 JB 1E 473K-T	T	23.1/15.3
C210	4030006860	S.CER C1608 JB 1H 102K-T	B	24.9/18.7
C221	4030018530	S.CER C3216 CH 1H 103J-T	T	31.0/11.4
C222	4030018530	S.CER C3216 CH 1H 103J-T	T	31.0/37.8
C224	4030012490	S.CER GRM31M1X2A472JZ01L (GRM42-6 SL)	T	34.0/37.1
C225	4030012490	S.CER GRM31M1X2A472JZ01L (GRM42-6 SL)	T	34.0/9.0
C226	4030011550	S.CER GRM31M2C2H680JV01L (GRM42-6 CH)	T	49.5/33.5
C227	4030014460	S.CER GRM31M2C2H820JV01L (GRM42-6 CH)	T	47.4/33.5
C240	4030011210	S.CER GRM31M2C2H330JV01L (GRM42-6 CH)	T	84.0/33.5
C243	4030011730	S.CER GRM31M2C2H01JV01L (GRM42-6 CH)	T	86.1/33.5
C244	4030018750	S.CER C3225 CH 2J 682K-T	T	85.7/43.8
C245	4030018750	S.CER C3225 CH 2J 682K-T	T	85.7/23.2
C246	4030018750	S.CER C3225 CH 2J 682K-T	T	93.0/49.1
C247	4030018750	S.CER C3225 CH 2J 682K-T	T	93.0/18.0
C248	4030011550	S.CER GRM31M2C2H680JV01L (GRM42-6 CH)	T	124.8/58.0
C249	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	T	134.2/33.5
C250	4030011550	S.CER GRM31M2C2H680JV01L (GRM42-6 CH)	T	124.8/9.1
C251	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	T	131.0/33.5
C252	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	T	127.8/33.5
C253	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	T	124.6/33.5
C281	4510009250	S.ELE EEEFK1C471P	T	158.9/84.1
C282	4510009250	S.ELE EEEFK1C471P	T	128.8/77.1
C283	4030006880	S.CER C1608 JB 1H 472K-T	T	113.2/92.1
C285	4030011600	S.CER C1608 JB 1E 104K-T	T	150.3/78.2
C286	4030007170	S.CER C1608 CH 1H 221J-T	T	151.9/78.2
C287	4510009250	S.ELE EEEFK1C471P	T	166.6/77.3
C288	4510009250	S.ELE EEEFK1C471P	T	165.9/68.4
C301	4030006900	S.CER C1608 JB 1H 103K-T	B	62.4/12.0
C302	4030011600	S.CER C1608 JB 1E 104K-T	T	61.5/6.8
C303	4030011600	S.CER C1608 JB 1E 104K-T	T	66.4/6.7
C304	4030019560	S.CER GRM21BB31C106KE15L	B	62.6/13.8
C305	4030019120	S.CER GRM188B31E105KA75D	T	4.5/46.7
C341	4030006900	S.CER C1608 JB 1H 103K-T	B	122.4/81.3
C342	4030006900	S.CER C1608 JB 1H 103K-T	B	112.7/81.7
C351	4030008920	S.CER C1608 JB 1H 473K-T	T	11.6/23.8
C353	4030011600	S.CER C1608 JB 1E 104K-T	T	25.6/13.7
C355	4030008920	S.CER C1608 JB 1H 473K-T	T	27.5/7.9
C356	4030008920	S.CER C1608 JB 1H 473K-T	T	30.5/48.8
C357	4030008920	S.CER C1608 JB 1H 473K-T	T	64.9/50.7
C358	4030006860	S.CER C1608 JB 1H 102K-T	T	63.6/50.7
C361	4030011600	S.CER C1608 JB 1E 104K-T	T	61.5/14.1
C362	4030006900	S.CER C1608 JB 1H 103K-T	T	61.5/15.5
C363	4030006900	S.CER C1608 JB 1H 103K-T	T	66.5/14.1
C364	4030011600	S.CER C1608 JB 1E 104K-T	T	87.7/32.6
C366	4030011600	S.CER C1608 JB 1E 104K-T	T	46.9/32.2
C367	4030011600	S.CER C1608 JB 1E 104K-T	T	44.2/23.8
C368	4030006880	S.CER C1608 JB 1H 472K-T	B	62.6/27.9
C369	4030006880	S.CER C1608 JB 1H 472K-T	T	59.9/28.0
C372	4030006900	S.CER C1608 JB 1H 103K-T	T	57.9/32.2
C401	4030006900	S.CER C1608 JB 1H 103K-T	T	5

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REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C413	4030006900	S.CER C1608 JB 1H 103K-T	B	13.4/67.1
C414	4030018960	S.CER C3216 JB 1C 106MT-N	B	13.8/69.1
C415	4030006900	S.CER C1608 JB 1H 103K-T	B	13.4/75.1
C417	4030006900	S.CER C1608 JB 1H 103K-T	B	14.2/65.5
C419	4030006900	S.CER C1608 JB 1H 103K-T	T	14.7/31.7
C420	4030006900	S.CER C1608 JB 1H 103K-T	T	14.7/33.0
C431	4030006900	S.CER C1608 JB 1H 103K-T	T	30.9/49.4
C432	4030011600	S.CER C1608 JB 1E 104K-T	T	29.5/49.4
C433	4030006880	S.CER C1608 JB 1H 472K-T	T	186.5/120.3
C463	4030006860	S.CER C1608 JB 1H 102K-T	B	173.7/77.8
C464	4030006860	S.CER C1608 JB 1H 102K-T	T	174.3/80.8
C465	4030006860	S.CER C1608 JB 1H 102K-T	T	173.0/80.8
C503	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	B	194.8/103.9
C504	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	B	192.4/103.9
C505	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	T	196.4/112.7
C506	4030011180	S.CER GRM31M2C2H220JV01L (GRM42-6 CH)	T	196.4/110.6
C507	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	T	204.0/104.2
C508	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	B	209.1/104.5
C509	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	B	206.7/104.5
C510	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	B	210.7/100.4
C511	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	B	218.2/102.6
C512	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	T	216.1/96.5
C513	4030011240	S.CER GRM31M2C2H470JV01L (GRM42-6 CH)	T	216.1/98.6
C515	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	T	191.7/110.1
C517	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	T	191.6/105.0
C519	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	198.1/100.4
C520	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	198.1/97.1
C521	4030011200	S.CER GRM31M2C2H300JV01L (GRM42-6 CH)	B	198.1/94.7
C522	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	T	200.5/112.5
C524	4030011200	S.CER GRM31M2C2H300JV01L (GRM42-6 CH)	T	204.0/106.3
C525	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	T	204.2/110.9
C527	4030011200	S.CER GRM31M2C2H300JV01L (GRM42-6 CH)	T	204.0/108.4
C528	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	B	201.5/104.3
C530	4030011200	S.CER GRM31M2C2H300JV01L (GRM42-6 CH)	B	204.3/104.5
C531	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	T	216.3/103.2
C533	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	215.8/102.6
C534	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	212.9/104.1
C535	4030011200	S.CER GRM31M2C2H300JV01L (GRM42-6 CH)	T	216.1/100.7
C551	4030006900	S.CER C1608 JB 1H 103K-T	B	179.3/92.5
C552	4030006900	S.CER C1608 JB 1H 103K-T	T	228.1/104.3
C601	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	15.5/43.3
C603	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	B	201.05/81.1
C604	4030011240	S.CER GRM31M2C2H470JV01L (GRM42-6 CH)	B	203.9/83.9
C605	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	210.6/86.7
C606	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	213.0/87.8
C607	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	T	45.8/17.0
C608	4030011180	S.CER GRM31M2C2H220JV01L (GRM42-6 CH)	B	218.0/83.1
C610	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	221.7/89.4
C611	4030011510	S.CER GRM31M2C2H560JV01L (GRM42-6 CH)	T	42.3/56.1
C612	4030011230	S.CER GRM31M2C2H390JV01L (GRM42-6 CH)	T	37.8/56.1
C614	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	233.7/92.5
C615	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	236.1/91.1
C616	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	200.8/87.7
C617	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	T	195.1/85.9
C619	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	208.2/86.7
C620	4030011230	S.CER GRM31M2C2H390JV01L (GRM42-6 CH)	B	205.8/86.7
C621	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	B	215.9/89.2
C623	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	T	223.1/86.4
C624	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	219.3/89.4

[PA-A UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C625	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	226.5/89.4
C626	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	T	225.7/87.4
C629	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	228.9/93.7
C651	4030006900	S.CER C1608 JB 1H 103K-T	B	179.8/85.9
C652	4030006900	S.CER C1608 JB 1H 103K-T	T	238.7/98.5
C702	4030011120	S.CER GRM31M2C2H100JV01L (GRM42-6 CH)	B	194.5/65.7
C703	4030011170	S.CER GRM31M2C2H180JV01L (GRM42-6 CH)	B	202.0/63.3
C705	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	B	208.4/59.4
C706	4030011140	S.CER GRM31M2C2H120JV01L (GRM42-6 CH)	B	203.6/59.4
C707	4030011090	S.CER GRM31M2C2H7R0DV01L (GRM42-6 CH)	B	212.9/65.4
C708	4030011240	S.CER GRM31M2C2H470JV01L (GRM42-6 CH)	B	225.3/69.9
C709	4030011240	S.CER GRM31M2C2H470JV01L (GRM42-6 CH)	B	227.7/69.9
C710	4030011140	S.CER GRM31M2C2H120JV01L (GRM42-6 CH)	B	231.6/73.8
C711	4030011060	S.CER GRM31M2C2H4R0CY21L (GRM42-6 CH)	B	231.6/71.4
C713	4030011210	S.CER GRM31M2C2H330JV01L (GRM42-6 CH)	B	233.8/64.5
C714	4030006900	S.CER C1608 JB 1H 103K-T	B	243.6/79.1
C751	4030006900	S.CER C1608 JB 1H 103K-T	B	180.9/71.5
C801	4030018940	S.CER GRM31A7U2J331JW31D	B	192.2/53.7
C802	4030018940	S.CER GRM31A7U2J331JW31D	B	194.6/53.7
C803	4030018940	S.CER GRM31A7U2J331JW31D	B	197.0/53.7
C804	4030018940	S.CER GRM31A7U2J331JW31D	B	199.4/53.7
C805	4030018940	S.CER GRM31A7U2J331JW31D	B	199.4/48.1
C806	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	B	206.6/48.1
C807	4030011550	S.CER GRM31M2C2H680JV01L (GRM42-6 CH)	B	204.2/48.1
C808	4030018930	S.CER GRM31A7U2J221JW31D	B	212.1/51.2
C809	4030018940	S.CER GRM31A7U2J331JW31D	B	214.5/51.2
C810	4030018940	S.CER GRM31A7U2J331JW31D	B	216.9/51.7
C811	4030018940	S.CER GRM31A7U2J331JW31D	B	219.3/51.7
C812	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	218.5/46.6
C813	4030019410	S.CER GRM31A7U2J471JW31D	T	224.2/57.0
C814	4030019410	S.CER GRM31A7U2J471JW31D	T	226.3/57.0
C815	4030018940	S.CER GRM31A7U2J331JW31D	T	194.4/53.9
C816	4030018940	S.CER GRM31A7U2J331JW31D	T	196.8/53.9
C817	4030018940	S.CER GRM31A7U2J331JW31D	T	199.2/53.9
C818	4030018940	S.CER GRM31A7U2J331JW31D	T	201.6/53.9
C819	4030011550	S.CER GRM31M2C2H680JV01L (GRM42-6 CH)	T	192.3/53.9
C820	4030011510	S.CER GRM31M2C2H560JV01L (GRM42-6 CH)	B	201.8/48.1
C821	4030018940	S.CER GRM31A7U2J331JW31D	B	209.8/51.9
C822	4030018940	S.CER GRM31A7U2J331JW31D	T	207.1/53.2
C823	4030018940	S.CER GRM31A7U2J331JW31D	T	209.2/53.9
C824	4030018940	S.CER GRM31A7U2J331JW31D	T	211.3/53.9
C825	4030011510	S.CER GRM31M2C2H560JV01L (GRM42-6 CH)	T	213.4/53.9
C826	4030018940	S.CER GRM31A7U2J331JW31D	T	229.6/58.1
C827	4030018930	S.CER GRM31A7U2J221JW31D	T	231.7/58.1
C828	4030011120	S.CER GRM31M2C2H100JV01L (GRM42-6 CH)	T	233.8/58.1
C851	4030006900	S.CER C1608 JB 1H 103K-T	B	180.1/58.8
C852	4030006900	S.CER C1608 JB 1H 103K-T	B	244.3/63.3
C902	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	B	204.8/29.7
C903	4030011190	S.CER GRM31M2C2H270JV01L (GRM42-6 CH)	B	209.2/31.3
C904	4030011050	S.CER GRM31M3C2H3R0CY21L (GRM42-6 CJ)	B	209.2/33.7
C905	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	T	216.8/33.7
C906	4030011230	S.CER GRM31M2C2H390JV01L (GRM42-6 CH)	T	219.2/33.7
C908	4030011090	S.CER GRM31M2C2H7R0DV01L (GRM42-6 CH)	B	229.2/48.0
C910	4030011210	S.CER GRM31M2C2H330JV01L (GRM42-6 CH)	B	230.3/40.8
C911	4030011140	S.CER GRM31M2C2H120JV01L (GRM42-6 CH)	B	232.7/40.8
C912	4030011190	S.CER GRM31M2C2H270JV01L (GRM42-6 CH)	B	198.1/33.3
C951	4030006900	S.CER C1608 JB 1H 103K-T	B	180.7/34.4
C952	4030006900	S.CER C1608 JB 1H 103K-T	B	242.2/49.5
C1001	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	T	209.8/20.7
C1002	4030011730	S.CER GRM31M2C2H101JV01L (GRM42-6 CH)	B	217.7/18.7
C1003	4030011080	S.CER GRM31M2C2H6R0DV01L (GRM42-6 CH)	B	217.7/21.1
C1004	4030014460	S.CER GRM31M2C2H820JV01L (GRM42-6 CH)	B	219.2/31.0
C1005	4030012480	S.CER GRM31M2C2H121JV01L (GRM42-6 CH)	B	221.6/31.0
C1007	4030011230	S.CER GRM31M2C2H390JV01L (GRM42-6 CH)	B	227.9/29.4
C1008	4030014460	S.CER GRM31M2C2H820JV01L (GRM42-6 CH)	T	232.3/30.5
C1011	4030011200	S.CER GRM31M2C2H300JV01L (GRM42-6 CH)	B	224.0/31.0
C1051	4030006900	S.CER C1608 JB 1H 103K-T	B	179.5/23.0
C1052	4030006900	S.CER C1608 JB 1H 103K-T	B	244.1/35.0

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]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
IC551	1110003800	S.IC NJM2904V-TE1-#FMZB	T	58.7/17.8
IC552	1110003780	S.IC NJM2902V-TE1-#ZZZB	T	58.7/10.0
IC841	1180001111	S.IC PQ20VZ51J00H S	T	19.4/128.7
IC931	1110006680	S.IC BH2221FV-E2	T	38.7/14.8
IC932	1180001252	S.IC TA7808F(TE16L1NQ)	B	14.4/10.0
Q151	1560001091	S.FET 2SK2854(T2LICOMF)	T	127.2/7.0
Q171	1560001101	S.FET 2SK3074(TE12LF)	T	111.8/7.0
Q201	1560001530	FET RD15HVF1-101		
Q251	1560001591	FET RD70HVF1C-121		
Q341	1590003680	S.TRA KRC402 RTK/P	B	128.2/35.7
Q351	1590001660	S.TRA XP4312(TX)	T	82.6/33.5
Q371	1590003680	S.TRA KRC402 RTK/P	T	82.4/40.7
Q401	1560001611	FET RD60HUF1C-101		
Q402	1560001611	FET RD60HUF1C-101		
Q483	1590003680	S.TRA KRC402 RTK/P	T	26.3/132.8
Q491	1590001660	S.TRA XP4312(TX)	T	13.5/122.8
Q541	1590003680	S.TRA KRC402 RTK/P	B	6.4/129.2
Q542	1520000460	S.TRA 2SB1132 T100 R	T	12.3/131.3
Q551	1530003900	S.TRA KTC4075 BL-RTK/P	B	62.0/17.3
Q553	1530003900	S.TRA KTC4075 BL-RTK/P	B	62.1/6.3
Q554	1530003900	S.TRA KTC4075 BL-RTK/P	B	62.1/11.7
Q701	1560001591	FET RD70HVF1C-121		
Q702	1560001591	FET RD70HVF1C-121		
Q751	1590003680	S.TRA KRC402 RTK/P	T	130.8/133.3
Q831	1590003680	S.TRA KRC402 RTK/P	T	150.4/141.4
Q832	1520000460	S.TRA 2SB1132 T100 R	T	141.2/145.0
Q941	1540000441	S.TRA 2SD1619T-TD-E	T	8.9/15.7
Q942	1530003900	S.TRA KTC4075 BL-RTK/P	T	15.0/14.2
Q943	1540000441	S.TRA 2SD1619T-TD-E	B	8.2/25.2
Q944	1530003900	S.TRA KTC4075 BL-RTK/P	T	15.8/20.0
D341	1750001360	S.DIO L709CER (9401)	T	116.3/46.2
D351	1750001360	S.DIO L709CER (9401)	T	73.7/41.4
D352	1750001360	S.DIO L709CER (9401)	B	75.1/34.6
D371	1750001360	S.DIO L709CER (9401)	B	81.3/42.1
D441	1750001320	S.DIO KDS4148U RTK/P	B	30.4/21.5
D442	1750001320	S.DIO KDS4148U RTK/P	B	39.8/19.8
D451	1710001061	DIO LA-407CDB		
D452	1710001061	DIO LA-407CDB		
D453	1710001061	DIO LA-407CDB		
D454	1710001061	DIO LA-407CDB		
D471	1710001061	DIO LA-407CDB		
D472	1710001061	DIO LA-407CDB		
D473	1710001061	DIO LA-407CDB		
D483	1790001621	S.DIO 1SV308(TPL3F)	T	27.1/139.7
D501	1720000361	S.DIO HSU88TRF-E	B	42.9/140.4
D511	1720000361	S.DIO HSU88TRF-E	B	21.7/149.3
D757	1750001320	S.DIO KDS4148U RTK/P	T	125.0/132.5
D762	1790001621	S.DIO 1SV308(TPL3F)	T	140.6/129.0
D801	1750000951	S.DIO MA2J7320GL	B	116.7/143.9
D811	1750000951	S.DIO MA2J7320GL	B	137.5/149.1
D851	1750001320	S.DIO KDS4148U RTK/P	B	147.2/57.4
D852	1750001320	S.DIO KDS4148U RTK/P	B	131.8/60.8
D861	1750001320	S.DIO KDS4148U RTK/P	B	147.2/52.9
D862	1750001320	S.DIO KDS4148U RTK/P	B	116.0/62.2
D911	1750001320	S.DIO KDS4148U RTK/P	B	4.5/28.1
D912	1750001320	S.DIO KDS4148U RTK/P	T	9.1/26.0
D916	1790001241	S.DIO MA2S7280GL	T	32.1/14.9
D917	1790001241	S.DIO MA2S7280GL	T	27.7/14.9
D918	1790001241	S.DIO MA2S7280GL	T	29.6/14.9
D919	1790001241	S.DIO MA2S7280GL	T	26.4/16.6
D941	1750001180	S.DIO KDS122 RTK/P	T	17.5/15.4
D942	1750001180	S.DIO KDS122 RTK/P	T	13.0/20.9
L151	6200004961	S.COI NLV25T-R33J	B	110.8/61.9
L152	6200008570	S.COI LQW2BHN6N8D03L	T	101.3/68.6
L171	6200010720	S.COI C2520C-56NG-A	T	111.2/13.7
L172	6200007670	S.COI LQW2BHN10NJ03L	T	107.7/20.2
L201	6200010060	S.COI AS080647-56N	T	108.5/20.2
L261	2040000490	COI EXC-ELDR25C		
L262	6110001780	COI LA-267		
L321	6200010160	S.COI AS080440-22N	T	116.6/36.8
L341	6200008911	S.COI 1812CS-122XJLC	T	127.2/40.9
L342	6200008911	S.COI 1812CS-122XJLC	T	116.8/42.5
L351	6200010740	S.COI C2520C-R27G-A	T	79.1/47.5
L371	6200013000	S.COI 0.25-1.9-13TL 135N <COMO>	T	82.4/45.7
L401	6200010740	S.COI C2520C-R27G-A	T	68.3/28.9
L402	6200010150	S.COI AS080340-15N	T	42.1/23.7
L451	6110000410	COI LA-69		
L452	6110000410	COI LA-69		
L471	6110001660	COI LA-252		
L472	6110001660	COI LA-252		
L473	6200010590	S.COI C2520C-22NG-A	T	33.1/132.3
L482	6200001981	S.COI NLV25T-1R0J	T	25.9/136.1
L491	6110001780	COI LA-267		
L523	6200008911	S.COI 1812CS-122XJLC	T	12.2/144.7
L701	6110001730	COI LA-262		
L702	6110001730	COI LA-262		
L741	6110001360	COI LA-179		
L742	6170000340	COI LW-33		
L752	6200008911	S.COI 1812CS-122XJLC	T	156.1/120.9
L753	6200010780	S.COI C2520C-1R0G-A	T	124.5/130.1
L754	6200010780	S.COI C2520C-1R0G-A	T	115.2/138.5
L762	6200001981	S.COI NLV25T-1R0J	T	143.7/135.7
L763	6200010720	S.COI C2520C-56NG-A	T	144.3/129.2
L771	6110001340	COI LA-177		
L772	6110001340	COI LA-177		
L773	6110001330	COI LA-176		
L821	6200008911	S.COI 1812CS-122XJLC	T	135.2/142.8
L822	6200001831	S.COI NLV32T-100J	T	45.0/13.4

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REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R104	7030003370	S.RES ERJ3GEYJ 271 V (270)	T	132.3/5.3
R105	7030003230	S.RES ERJ3GEYJ 180 V (18)	T	131.5/7.4
R106	7030003370	S.RES ERJ3GEYJ 271 V (270)	T	130.8/5.3
R151	7030003300	S.RES ERJ3GEYJ 680 V (68)	T	128.7/12.3
R152	7030003420	S.RES ERJ3GEYJ 681 V (680)	T	125.9/10.9
R153	7030003480	S.RES ERJ3GEYJ 222 V (2.2K)	T	125.9/13.6
R154	7030003520	S.RES ERJ3GEYJ 472 V (4.7K)	T	125.9/12.3
R155	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	121.4/12.3
R156	7030008190	S.RES ERJ12YJ330U (33)	T	120.4/19.5
R171	7030003290	S.RES ERJ3GEYJ 560 V (56)	T	115.9/10.2
R172	7030003410	S.RES ERJ3GEYJ 561 V (560)	T	112.7/11.0
R173	7030003300	S.RES ERJ3GEYJ 332 V (3.3K)	T	116.7/13.1
R174	7030003530	S.RES ERJ3GEYJ 562 V (5.6K)	T	117.9/13.1
R201	7030000230	S.RES MCR10EZJHJ 56 (560)	T	100.9/4.8
R202	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	98.5/4.4
R203	7030010820	S.RES ERJ1TYJ 221U (220)	T	106.5/12.0
R206	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	95.9/4.4
R251	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	89.9/20.9
R252	7030000220	S.RES MCR10EZJHJ 47 (470)	T	93.1/20.4
R254	7030000220	S.RES MCR10EZJHJ 47 (470)	T	93.1/22.2
R341	7030006070	S.RES ERJ12YJ101U (100)	B	125.6/41.5
R342	7030003560	S.RES ERJ3GEYJ 103 V (10K)	B	126.0/35.9
R351	7070001250	RES ERG3SJ 151P (150)		
R352	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	75.9/23.5
R371	7030006070	S.RES ERJ12YJ101U (100)	B	80.8/31.7
R372	7030000340	S.RES MCR10EZJHJ 470 (471)	B	82.0/38.4
R373	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	82.5/36.2
R441	7030003400	S.RES ERJ3GEYJ 471 V (470)	B	37.0/16.3
R442	7030003400	S.RES ERJ3GEYJ 471 V (470)	B	39.8/16.3
R443	7030010820	S.RES ERJ1TYJ 221U (220)	B	22.9/38.2
R444	7030010820	S.RES ERJ1TYJ 221U (220)	B	53.0/38.0
R445	7030003560	S.RES ERJ3GEYJ 103 V (10K)	B	34.0/23.8
R446	7030003560	S.RES ERJ3GEYJ 103 V (10K)	B	27.6/23.6
R447	7030010820	S.RES ERJ1TYJ 221U (220)	B	23.1/34.2
R448	7030010820	S.RES ERJ1TYJ 221U (220)	B	53.1/30.4
R482	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	28.6/137.2
R484	7030000340	S.RES MCR10EZJHJ 470 (471)	T	25.5/139.7
R485	7030003860	S.RES ERJ3GE JPW V	T	32.5/141.2
R486	7030003440	S.RES ERJ3GEYJ 102 V (1K)	B	28.0/132.5
R491	7030003560	S.RES ERJ3GEYJ 103 V (10K)	B	13.4/120.5
R492	7030010480	S.RES ERJ1TYJ 181U (180)	B	22.1/115.3
R502	7030003440	S.RES ERJ3GEYJ 102 V (1K)	B	37.9/136.9
R503	7030003330	S.RES ERJ3GEYJ 121 V (120)	B	22.9/139.9
R504	7030003330	S.RES ERJ3GEYJ 121 V (120)	B	24.5/139.9
R511	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	43.7/149.4
R512	7030003440	S.RES ERJ3GEYJ 102 V (1K)	B	22.6/152.6
R513	7030003440	S.RES ERJ3GEYJ 102 V (1K)	B	11.6/149.3
R514	7030003330	S.RES ERJ3GEYJ 121 V (120)	B	43.7/147.8
R531	7030003480	S.RES ERJ3GEYJ 222 V (2.2K)	B	6.8/136.1
R532	7030003540	S.RES ERJ3GEYJ 682 V (6.8K)	B	11.8/135.3
R541	7030003660	S.RES ERJ3GEYJ 683 V (68K)	T	8.6/131.3
R542	7030009950	S.RES ERJ8GEYJ 681V (680)	T	8.7/130.1
R551	7030003680	S.RES ERJ3GEYJ 104 V (100K)	B	67.7/18.2
R552	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	64.1/18.2
R553	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	65.4/16.9
R554	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	63.3/16.1
R555	7030003390	S.RES ERJ3GEYJ 391 V (390)	T	65.4/15.6
R556	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	49.6/18.8
R557	7030003680	S.RES ERJ3GE JPW V	T	53.2/18.8
R559	7030003860	S.RES ERJ3GE JPW V	T	53.9/16.8
R561	7030003510	S.RES ERJ3GEYJ 392 V (3.9K)	B	68.4/17.1
R562	7030003390	S.RES ERJ3GEYJ 391 V (390)	B	65.2/16.4
R563	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	60.8/14.4
R571	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	57.7/16.6
R572	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	57.7/8.6
R573	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	49.7/10.7
R574	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	49.7/9.4
R575	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	53.3/10.7
R576	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	52.0/12.0
R577	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	53.3/9.4
R578	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	52.0/8.1
R579	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	54.0/12.7
R580	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	54.0/7.3
R581	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	52.0/13.3
R582	7030003400	S.RES ERJ3GEYJ 471 V (470)	T	52.0/6.8
R583	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	67.7/9.3
R584	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	67.7/10.8
R585	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	64.1/9.3
R586	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	65.2/7.9
R587	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	64.1/10.8
R588	7030003680	S.RES ERJ3GEYJ 104 V (100K)	T	65.4/12.1
R589	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	63.3/7.2
R590	7030003650	S.RES ERJ3GEYJ 563 V (56K)	T	63.3/12.8
R591	7030003390	S.RES ERJ3GEYJ 391 V (390)	T	65.2/6.5
R592	7030003390	S.RES ERJ3GEYJ 391 V (390)	T	65.4/13.4
R593	7030003510	S.RES ERJ3GEYJ 392 V (3.9K)	B	65.2/5.9
R594	7030003510	S.RES ERJ3GEYJ 392 V (3.9K)	B	65.2/13.9
R595	7030003390	S.RES ERJ3GEYJ 391 V (390)	B	65.2/7.0
R596	7030003390	S.RES ERJ3GEYJ 391 V (390)	B	65.2/12.3
R597	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	58.9/5.9
R598	7030003360	S.RES ERJ3GEYJ 221 V (220)	B</	

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REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
R822	7030003480	S.RES ERJ3GEYJ 222 V (2.2K)	T	143.8/141.1
R831	7030003660	S.RES ERJ3GEYJ 683 V (68K)	T	144.7/145.6
R832	7030009950	S.RES ERJ8GEYJ 681V (680)	T	147.8/143.0
R841	7030003700	S.RES ERJ3GEYJ 154 V (150K)	T	15.3/121.1
R842	7030003470	S.RES ERJ3GEYJ 182 V (1.8K) [USA]	T	22.6/121.1
	7030003440	S.RES ERJ3GEYJ 102 V (1K) [EUR]		
	7030003440	S.RES ERJ3GEYJ 102 V (1K) [EUR-01]		
	7030003440	S.RES ERJ3GEYJ 102 V (1K) [ITR]		
	7030003440	S.RES ERJ3GEYJ 102 V (1K) [ESP]		
	7030003440	S.RES ERJ3GEYJ 102 V (1K) [TPE]		
	7030003440	S.RES ERJ3GEYJ 102 V (1K) [KOR]		
	7030003440	S.RES ERJ3GEYJ 102 V (1K) [CHN]		
	7030003440	S.RES ERJ3GEYJ 102 V (1K) [FRA]		
	7030003440	S.RES ERJ3GEYJ 102 V (1K) [EXP]		
R843	7030003540	S.RES ERJ3GEYJ 682 V (6.8K) [USA]	T	19.6/120.4
	7030003550	S.RES ERJ3GEYJ 822 V (8.2K) [EUR]		
	7030003550	S.RES ERJ3GEYJ 822 V (8.2K) [EUR-01]		
	7030003550	S.RES ERJ3GEYJ 822 V (8.2K) [ITR]		
	7030003550	S.RES ERJ3GEYJ 822 V (8.2K) [ESP]		
	7030003550	S.RES ERJ3GEYJ 822 V (8.2K) [TPE]		
	7030003550	S.RES ERJ3GEYJ 822 V (8.2K) [KOR]		
	7030003550	S.RES ERJ3GEYJ 822 V (8.2K) [CHN]		
	7030003550	S.RES ERJ3GEYJ 822 V (8.2K) [FRA]		
	7030003550	S.RES ERJ3GEYJ 822 V (8.2K) [EXP]		
R844	7030003420	S.RES ERJ3GEYJ 681 V (680)	T	19.6/121.7
R856	7030003480	S.RES ERJ3GEYJ 222 V (2.2K)	B	132.6/58.1
R857	7030010910	S.RES ERJ1TYJ 150U (15)	B	136.2/63.2
R866	7030003480	S.RES ERJ3GEYJ 222 V (2.2K)	B	114.9/59.0
R867	7030010910	S.RES ERJ1TYJ 150U (15)	B	113.2/64.1
R901	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	35.8/7.0
R902	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	34.2/7.8
R903	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	39.0/7.0
R904	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	37.4/7.8
R905	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	44.6/14.0
R906	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	43.0/16.3
R907	7030003320	S.RES ERJ3GEYJ 101 V (100)	B	40.6/7.8
R931	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	22.9/15.5
R932	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	21.6/15.9
R933	7030003320	S.RES ERJ3GEYJ 101 V (100)	T	20.3/16.2
R941	7030003230	S.RES ERJ3GEYJ 180 V (18)	T	12.1/17.1
R942	7030003500	S.RES ERJ3GEYJ 332 V (3.3K)	T	13.3/17.1
R943	7030006060	S.RES ERJ12YJ100U (10)	B	9.0/20.2
R944	7030003500	S.RES ERJ3GEYJ 332 V (3.3K)	T	11.1/19.9
R945	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	17.7/13.3
R946	7030003560	S.RES ERJ3GEYJ 103 V (10K)	T	19.0/17.9
R947	7030003500	S.RES ERJ3GEYJ 332 V (3.3K)	T	14.5/17.1
R948	7030003500	S.RES ERJ3GEYJ 332 V (3.3K)	T	15.7/17.1
R949	7030003500	S.RES ERJ3GEYJ 332 V (3.3K)	T	9.8/19.9
R950	7030003500	S.RES ERJ3GEYJ 332 V (3.3K)	T	8.5/19.9
R951	7510001551	S.THE NTCG16 4LH 333JT	B	152.5/68.6
R952	7030003500	S.RES ERJ3GEYJ 332 V (3.3K)	T	156.5/66.2
R953	7030003860	S.RES ERJ3GE JPW V	T	156.5/64.7
R954	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	25.0/8.0
R955	7030003510	S.RES ERJ3GEYJ 392 V (3.9K)	T	155.8/49.7
R961	7510001551	S.THE NTCG16 4LH 333JT	B	6.6/38.9
R962	7030003460	S.RES ERJ3GEYJ 152 V (1.5K)	T	6.7/36.3
R963	7030003860	S.RES ERJ3GE JPW V	T	7.4/34.3
R964	7030003360	S.RES ERJ3GEYJ 221 V (220)	B	27.0/8.5
R965	7030003430	S.RES ERJ3GEYJ 821 V (820)	T	5.2/35.0
R966	7030003510	S.RES ERJ3GEYJ 392 V (3.9K)	T	8.9/30.9
R972	7030003460	S.RES ERJ3GEYJ 152 V (1.5K)	T	155.3/130.3
R973	7030003480	S.RES ERJ3GEYJ 222 V (2.2K)	T	157.0/135.3
R974	7030003860	S.RES ERJ3GE JPW V	T	156.0/128.4
R975	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	157.0/137.9
R980	7030003520	S.RES ERJ3GEYJ 472 V (4.7K)	T	4.6/127.1
R984	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	3.4/127.1
R988	7030003360	S.RES ERJ3GEYJ 221 V (220)	T	3.3/119.4
R989	7030003480	S.RES ERJ3GEYJ 222 V (2.2K)	T	3.3/122.0
R992	7030008240	S.RES ERJ12Y0R00U	B	127.5/132.4
R993	7030008240	S.RES ERJ12Y0R00U	B	133.5/128.9
R994	7030008240	S.RES ERJ12Y0R00U	B	148.8/145.5
R995	7030003860	S.RES ERJ3GE JPW V	B	146.9/149.3
R996	7030003860	S.RES ERJ3GE JPW V	B	8.5/141.9
C151	4030006860	S.CER C1608 JB 1H 102K-T	T	130.8/9.5
C152	4030011600	S.CER C1608 JB 1E 104K-T	T	128.7/13.6
C153	4030007130	S.CER C1608 CH 1H 101J-T	T	128.7/10.9
C154	4030011600	S.CER C1608 JB 1E 104K-T	T	123.0/15.0
C155	4030006850	S.CER C1608 JB 1H 471K-T	T	121.7/15.0
C156	4030006860	S.CER C1608 JB 1H 102K-T	T	120.4/15.0
C158	4510009770	S.ELE 16 CE 47 FS	T	127.1/18.0
C159	4030007130	S.CER C1608 CH 1H 101J-T	T	123.3/9.3
C160	4030007010	S.CER C1608 CH 1H 100D-T	T	121.2/7.2
C161	4030011600	S.CER C1608 JB 1E 104K-T	T	117.9/19.7
C171	4030007030	S.CER C1608 CH 1H 150J-T	T	117.9/10.2
C172	4030006860	S.CER C1608 JB 1H 102K-T	T	115.5/13.1
C173	4030011600	S.CER C1608 JB 1E 104K-T	T	114.3/13.1
C174	4030011600	S.CER C1608 JB 1E 104K-T	T	114.7/10.2
C175	4030006860	S.CER C1608 JB 1H 102K-T	T	109.0/14.3
C176	4030018960	S.CER C3216 JB 1C 106MT-N	T	114.6/16.8
C178	4030007130	S.CER C1608 CH 1H 101J-T	T	103.1/5.6
C179	4030007020	S.CER C1608 CH 1H 120J-T	T	104.7/5.6
C201	4030011600	S.CER C1608 JB 1E 104K-T	T	97.2/4.4
C202	4030004720	S.CER C2012 JB 1H 102K-T	T	103.7/8.6
C204	4030004870	S.CER C2012 CH 1H 100D-T	T	103.7/13.5
C207	4030004930	S.CER C2012 CH 1H 330J-T	T	100.3/18.9
C210	4030006860	S.CER C1608 JB 1H 102K-T	T	114.5/19.9
C211	4030011600	S.CER C1608 JB 1E 104K-T	T	114.0/15.1
C243	4030011210	S.CER GRM31M2C2H330JV01L (GRM42-6 CH)	T	103.8/30.4
C251	4030006860	S.CER C1608 JB 1H 102K-T	T	89.9/22.4
C261	4510009880	S.ELE EEEHBC471UAP	T	140.8/16.5
C262	4510009880	S.ELE EEEHBC471UAP	T	136.8/27.4
C263	4030006860	S.CER C1608 JB 1H 102K-T	T	148.8/26.3

[PA-B UNIT]

REF NO.	PARTS NO.	DESCRIPTION	M.	H/V LOCATION
C264	4030006880	S.CER C1608 JB 1H 472K-T	B	111.1/57.8
C265	4510009880	S.ELE EEEHBC471UAP	T	136.8/38.2
C266	4030006850	S.CER C1608 JB 1H 471K-T	B	109.5/57.8
C302	4030017960	S.CER ERF22X 6C2H 330J D01L	T	93.1/44.3
C304	4030017960	S.CER ERF22X 6C2H 330J D01L	T	103.8/44.3
C306	4030011090	S.CER GRM31M2C2H7R0DV01L (GRM42-6 CH)	B	98.5/47.6
C321	4030011180	S.CER GRM31M2C2H220JV01L (GRM42-6 CH)	T	119.9/33.1
C323	4030017960	S.CER ERF22X 6C2H 330J D01L	T	125.2/30.4
C324	4030017960	S.CER ERF22X 6C2H 330J D01L	T	125.2/33.7
C341	4030006860	S.CER C1608 JB 1H 102K-T	T	130.4/36.0
C342	4030006860	S.CER C1608 JB 1H 102K-T	B	124.4/35.9
C343	4030011600	S.CER C1608 JB 1E 104K-T	T	120.5/40.2
C351	4030018450	S.CER ERF22X 6C2H 8R0D D01L	B	94.7/49.3
C352	4030018040	S.CER ERF22X 6C2H 180J D01L	B	88.8/47.7
C353	4030019420	S.CER GRM31A7U2J102JW31D	B	80.2/47.1
C354	4030006860	S.CER C1608 JB 1H 102K-T	T	75.9/24.8
C355	4030018420	S.CER ERF22X 6C2H 5R0C D01L	B	94.7/52.6
C356	4030011040	S.CER GRM31M4C2H2R0CY21L (GRM42-6 CK)	T	75.9/48.2
C371	4030011600	S.CER C1608 JB 1E 104K-T	T	82.5/37.5
C372	4030006860	S.CER C1608 JB 1H 102K-T	T	26.0/55.2
C373	4030006860	S.CER C1608 JB 1H 102K-T	T	59.4/29.7
C374	4030019420	S.CER GRM31A7U2J102JW31D	T	143.3/27.9
C401	4030011170	S.CER GRM31M2C2H180JV01L (GRM42-6 CH)	T	44.0/10.9
C403	4610002260	TRI CVC20-41KR-PB	T	
C404	4030011160	S.CER GRM31M2C2H150JV01L (GRM42-6 CH)	T	59.3/60.25
C405	4030011160	S.CER GRM31M2C2H150JV01L (GRM42-6 CH)	T	59.0/80.9
C406	4030011060	S.CER GRM31M2C2H4R0CY21L (GRM42-6 CH)	T	37.4/38.8
C411	4030018290	S.CER ERF22X 6C2H 390J D01L	T	14.1/58.4
C412	4030018290	S.CER ERF22X 6C2H 390J D01L	T	54.1/58.4
C413	4030018290	S.CER ERF22X 6C2H 390J D01L	T	21.9/58.4
C414	4030018290	S.CER ERF22X 6C2H 390J D01L	T	61.9/58.4
C419	4030011020	S.CER GRM31M4C2H1R0CY21L (GRM42-6 CK)	T	43.4/103.2
C420	4030011020	S.CER GRM31M4C2H1R0CY21L (GRM42-6 CK)	T	32.9/103.2
C421	4030019420	S.CER GRM31A7U2J102JW31D	T	39.7/92.5
C422	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	T	36.2/112.1
C423	4030011740	S.CER GRM32N2C2H201JV01L (GRM42-2 CH)	T	40.1/112.1
C424	4030011050	S.CER GRM31M3C2H3R0CY21L (GRM42-6 CJ)	T	59.2/120.1
C425	4030011180	S.CER GRM31M2C2H220JV01L (GRM42-6 CH)	T	23.3/42.7
C426	4030011180	S.CER GRM31M2C2H220JV01L (GRM42-6 CH)	T	52.8/42.7
C429	4030011180	S.CER GRM31M2C2H220JV01L (GRM42-6 CH)	T	12.8/42.7
C430	4030011180	S.CER GRM31M2C2H220JV01L (GRM42-6 CH)	T	63.3/42.7
C431	4510009880	S.ELE EEEHBC471UAP	B	72.1/82.7
C432	4030007170	S.CER C1608 CH 1H 221J-T	B	68.8/91.9
C433	4030006880	S.CER C1608 JB 1H 472K-T	B	68.8/87.9
C434	4030011600	S.CER C1608 JB 1E 104K-T	B	68.8/86.3
C435	4030011040	S.CER GRM31M4C2H2R0CY21L (GRM42-6 CK)	T	43.6/115.8
C436	4030011160	S.CER GRM31M2C2H150JV01L (GRM42-6 CH)	T	35.9/35.0
C437	4030011160	S.CER GRM31M2C2H150JV01L (GRM42-6 CH)	T	41.0/35.0
C438	4030011060	S.CER GRM31M2C2H4R0CY21L (GRM42-6 CH)	T	39.5/38.8
C441	4030006860	S.CER C1608 JB 1H 102K-T	B	25.4/30.7
C442	4030006860	S.CER C1608 JB 1H 102K-T	B	50.9/30.5
C443	4030007090	S.CER C1608 CH 1H 470J-T	B	27.0/30.5
C444	4030007090	S.CER C1608 CH 1H 470J-T	B	49.3/30.5
C451	4030011050	S.CER GRM31M3C2H3R0CY21L (GRM42-6 CJ)	T	62.9/146.2
C452	4030018540	S.CER ERF22X 6C2H 7R0D D01L	T	52.7/147.4
C453	4030011050	S.CER GRM31M3C2H3R0CY21L (GRM42-6 CJ)	T	43.6/147.2
C454	4030011020	S.CER GRM31M4C2H1R0CY21L (GRM42-6 CK)	T	55.7/144.1
C455	4030011040	S.CER GRM31M4C2H2R0CY21L (GRM42-6 CK)	T	47.5/145.6
C456	4030019420	S.CER GRM31A7U2J102JW31D	T	64.5/140.5
C457	4030019420	S.CER GRM31A7U2J102JW31D	T	64.5/142.6
C471	4030011070	S.CER GRM31M2C2H5R0CY21L (GRM42-6 CH)	T	61.5/133.4
C472	4030011100	S.CER GRM31M2C2H8R0DV01L (GRM42-6 CH)	T	51.2/134.4
C473	4030006970	S.CER C1608 CH 1H 060D-T	T	35.4/137.2
C474	4030006980	S.CER C1608 CH 1H 070D-T	T	33.9/138.7
C475	4030011040	S.CER GRM31M4C2H2R0CY21L (GRM42-6 CK)	T	61.5/131.3
C477	4030009520	S.CER C1608 CH 1H 020B-T	T	35.0/129.4
C478	4030008560	S.CER C1608 CH 1H 300J-T	T	33.9/135.9
C482	4030006860	S.CER C1608 JB 1H 102K-T	T	27.8/135.4
C483	4030006860	S.CER C1608 JB 1H 102K-T	T	22.1/140.2
C484	4030006860	S.CER C1608 JB 1H 102K-T	T	28.3/132.8
C491	4030006860	S.CER C1608 JB 1H 102K-T	T	13.1/119.2
C492	4030006860	S.CER C1608 JB 1H 102K-T	B	27.4/119.4
C501	4030007170	S.CER C1608 CH 1H 221J-T	B	36.0/139.3
C502				





[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)	B	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]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Rows include parts like ERJ3GEYJ 224 V (220K) to ERJ3GE JPW V.

[CTRL UNIT]

Table with columns: REF NO., PARTS NO., DESCRIPTION, M., H/V LOCATION. Rows include parts like ERJ3GE JPW V, GRM31M4C2H2R0CY21L (GRM42-6 CK), and various surface mount components.

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	19.3/7.7
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	14.9/7.7
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		
J2	6510019971	S.CON 52808-1071	T	3.4/10.4
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





**[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





[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	[FRA] 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	[FRA] 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	[FRA] 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

[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
	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
	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]**

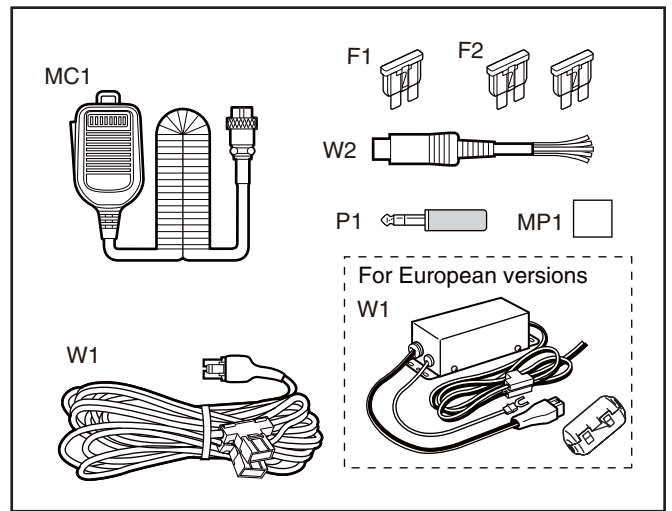
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J141	6510028210	SJ050010 (TMP-J01X-V6)	1
J201	6510028210	SJ050010 (TMP-J01X-V6)	1
J301	6510028210	SJ050010 (TMP-J01X-V6)	1
J302*	6510020081	52808-2071 (2090)	1
MP31	8930062740	2590 M-SPRING	1

**[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

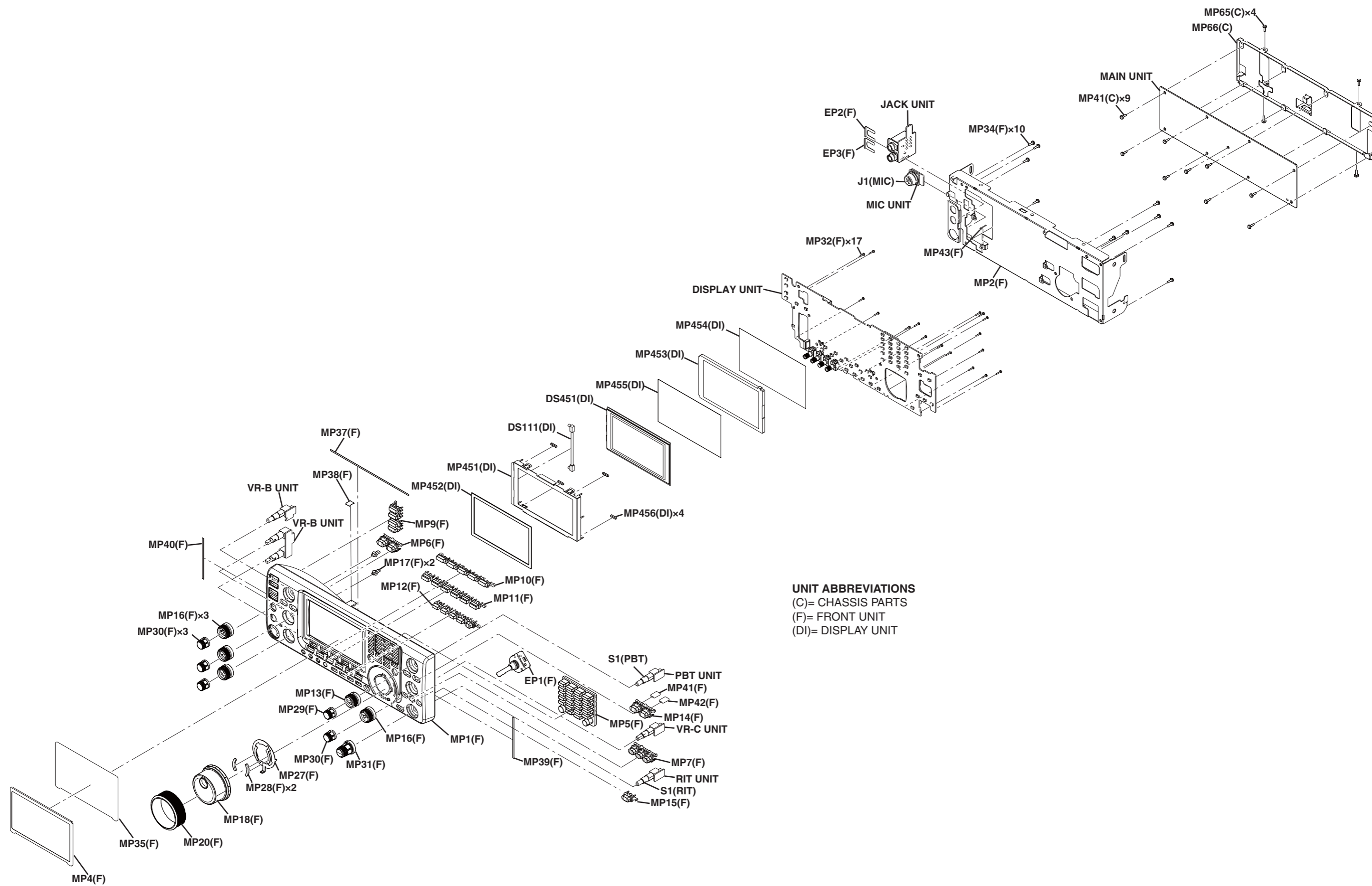


\*: Refer to "BOARD LAYOUTS" for the location.

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

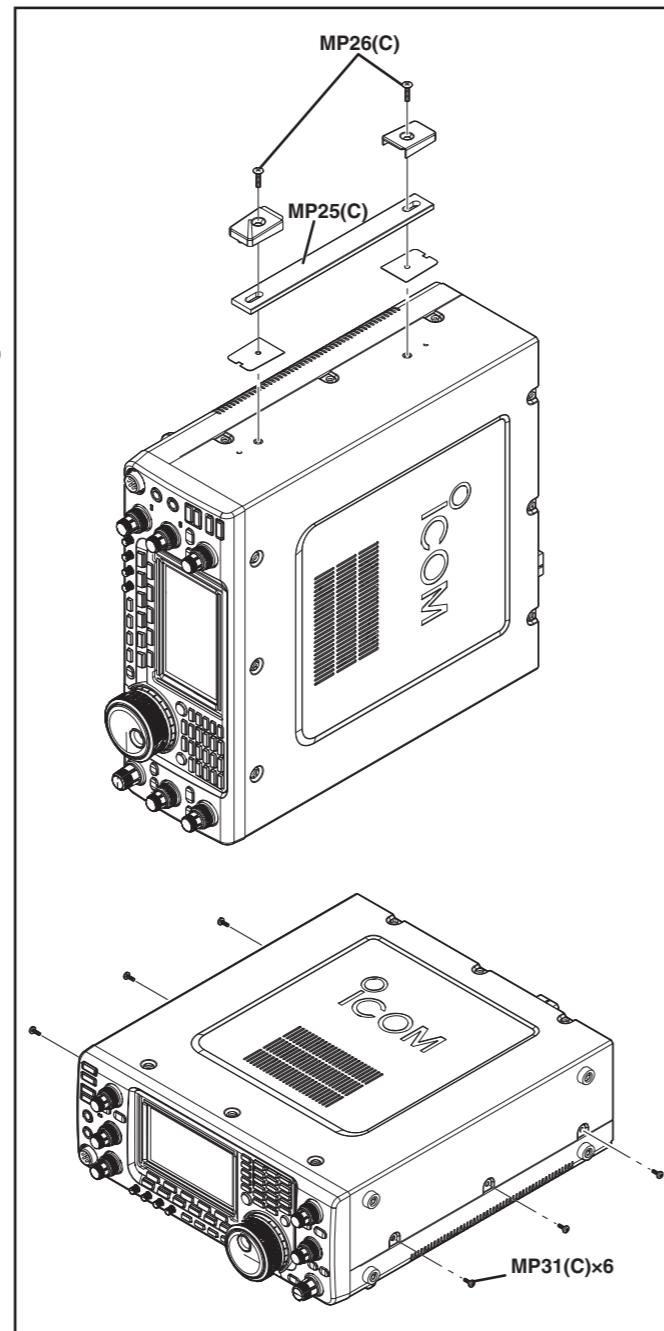
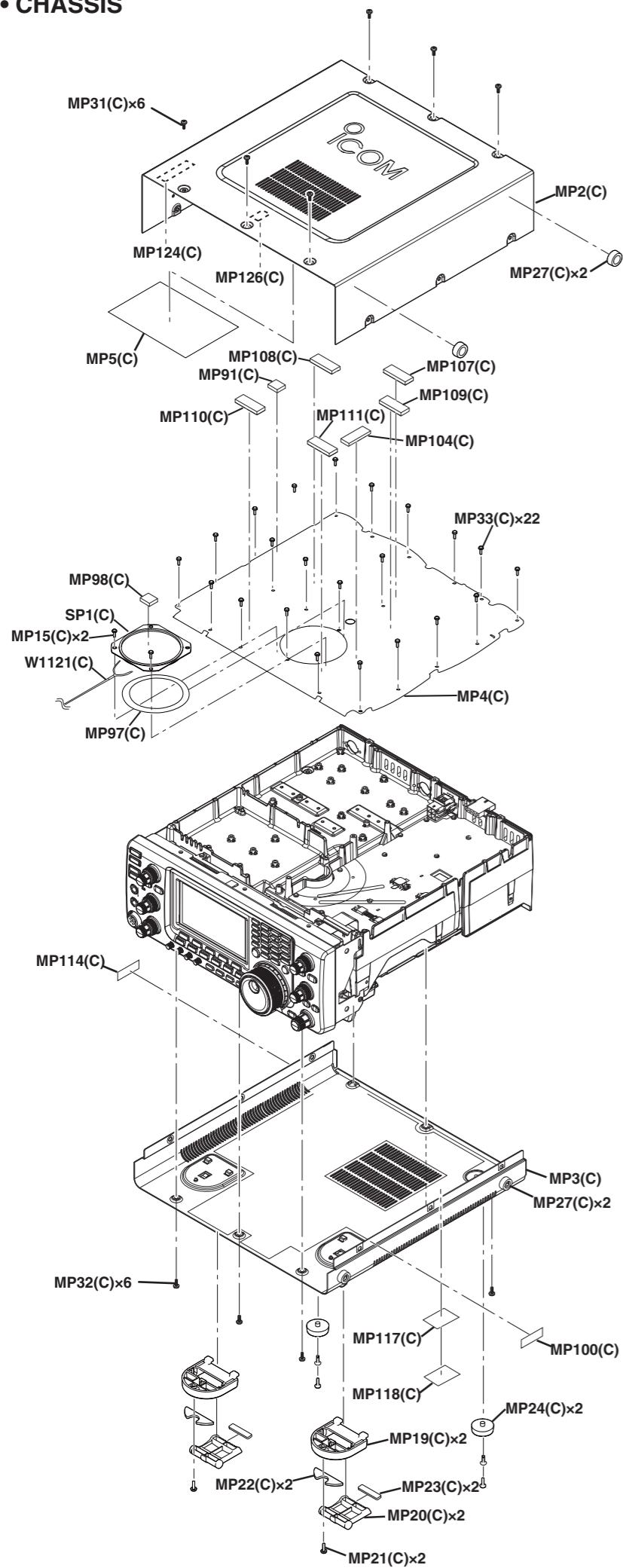
**Screw abbreviations** A, B0, BT: Self-tapping PH: Pan head ZK: Black NI-ZU: Nickel-Zinc SUS: Stainless

• FRONT UNIT

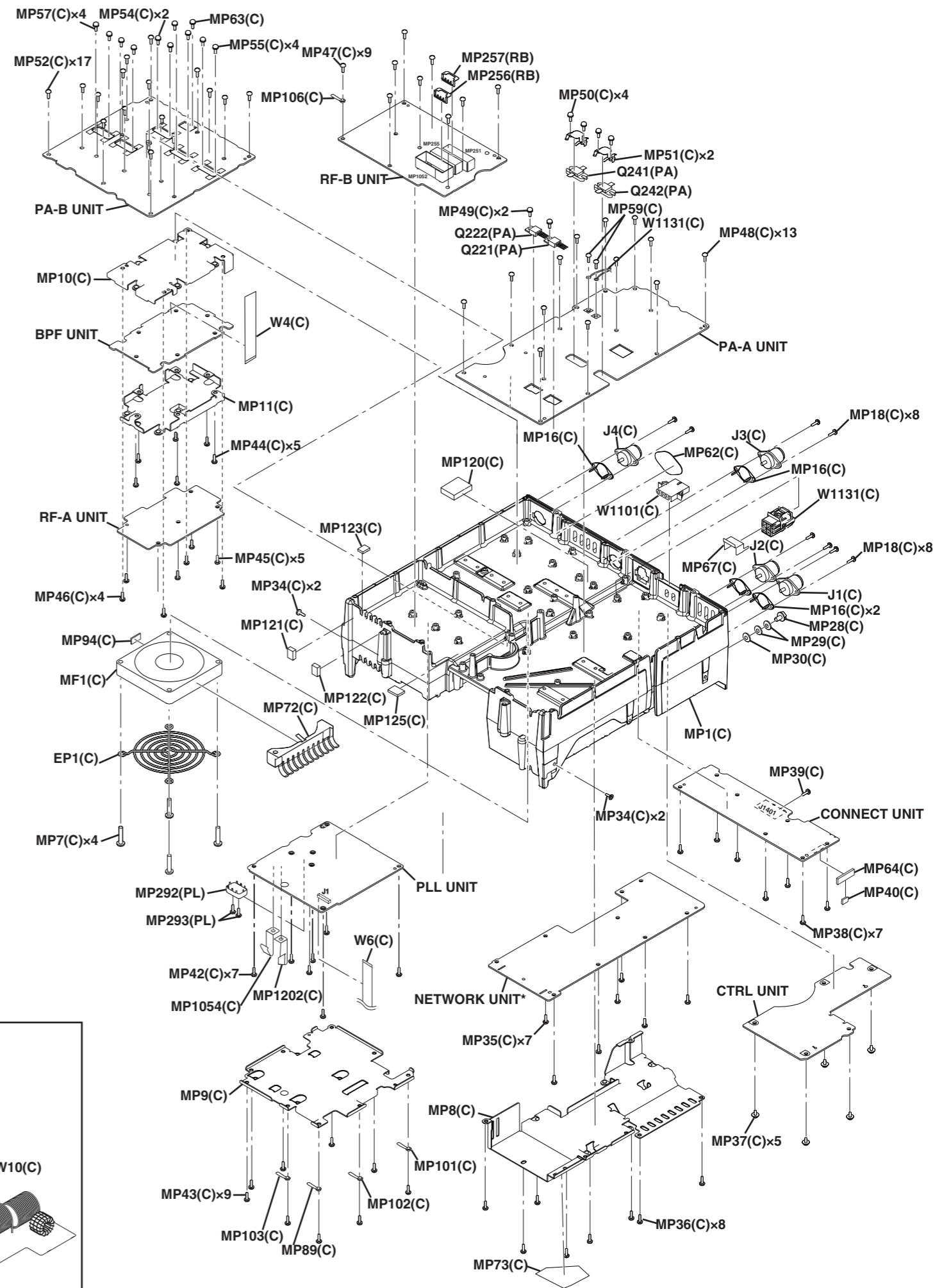
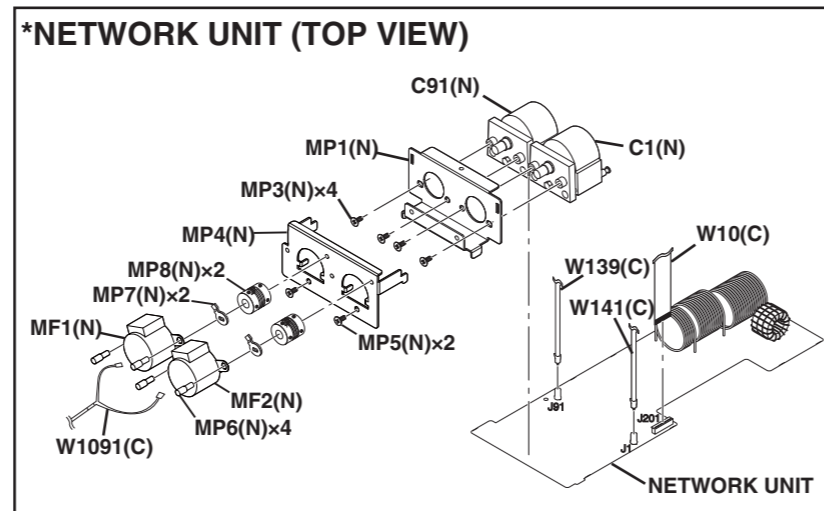


**UNIT ABBREVIATIONS**  
 (C)= CHASSIS PARTS  
 (F)= FRONT UNIT  
 (DI)= DISPLAY UNIT

• CHASSIS

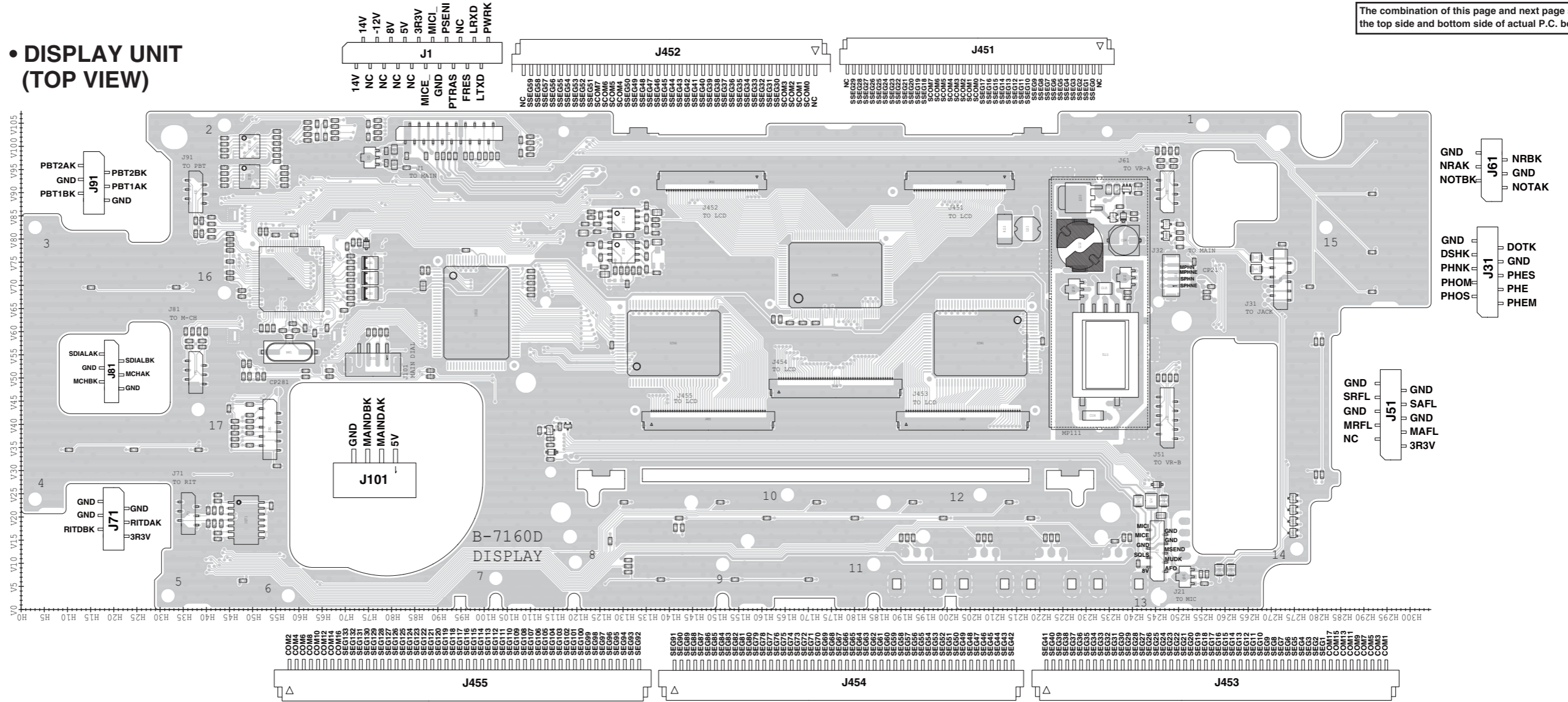


**UNIT ABBREVIATIONS**  
 (C)= CHASSIS PARTS  
 (PL)= PLL UNIT  
 (PA)= PA-A UNIT  
 (PB)= PA-B UNIT  
 (RA)= RF-A UNIT  
 (RB)= RF-B UNIT  
 (N)= NETWORK UNIT

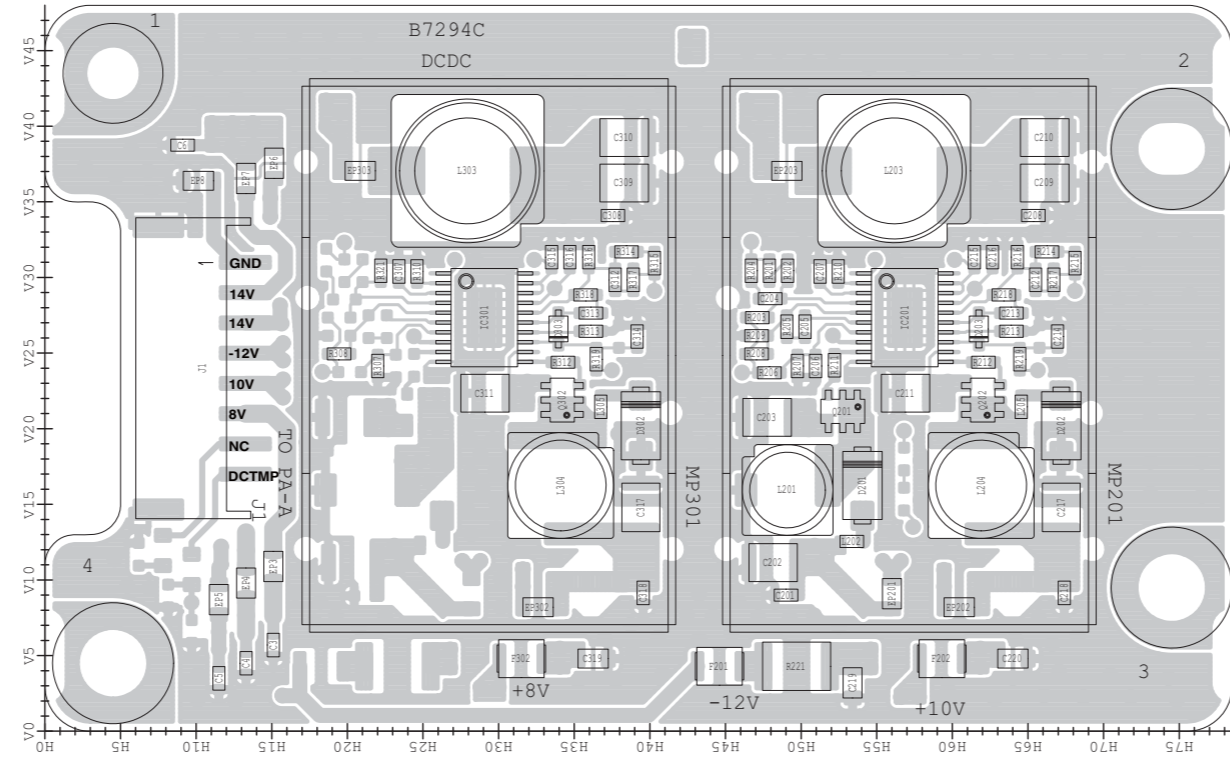


The combination of this page and next page shows the top side and bottom side of actual P.C. board.

• DISPLAY UNIT (TOP VIEW)

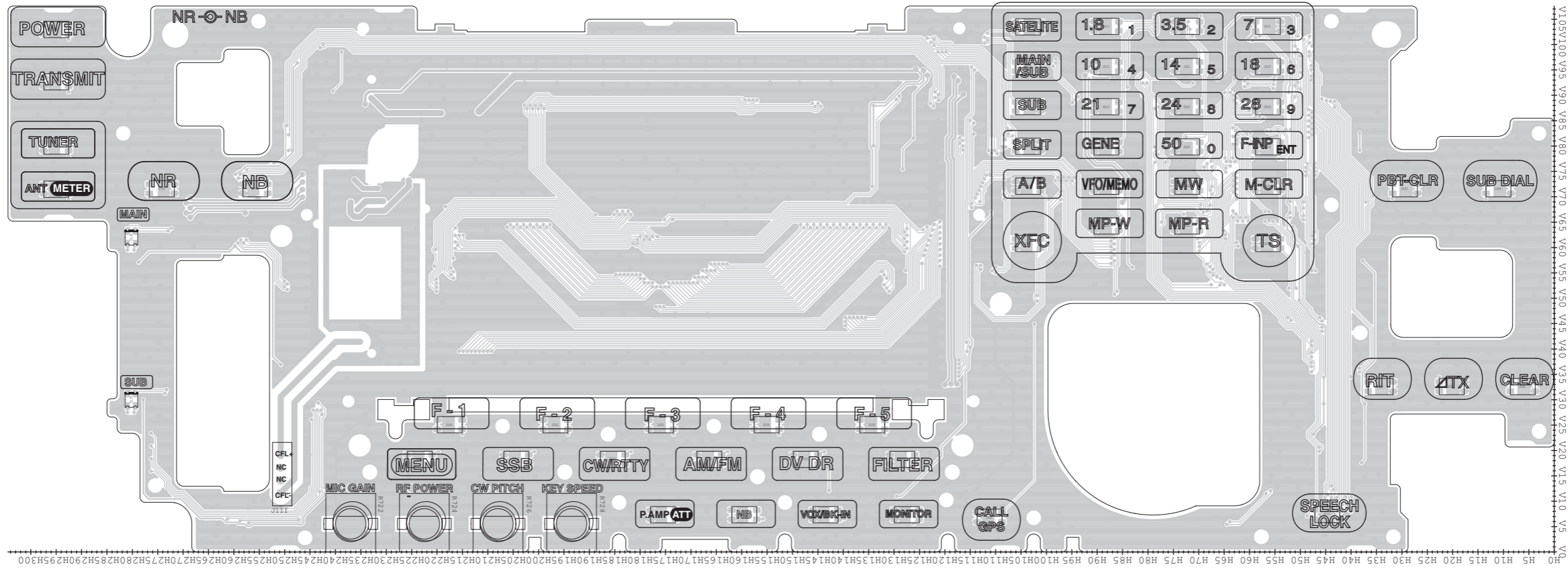


• DC-DC UNIT (TOP VIEW)

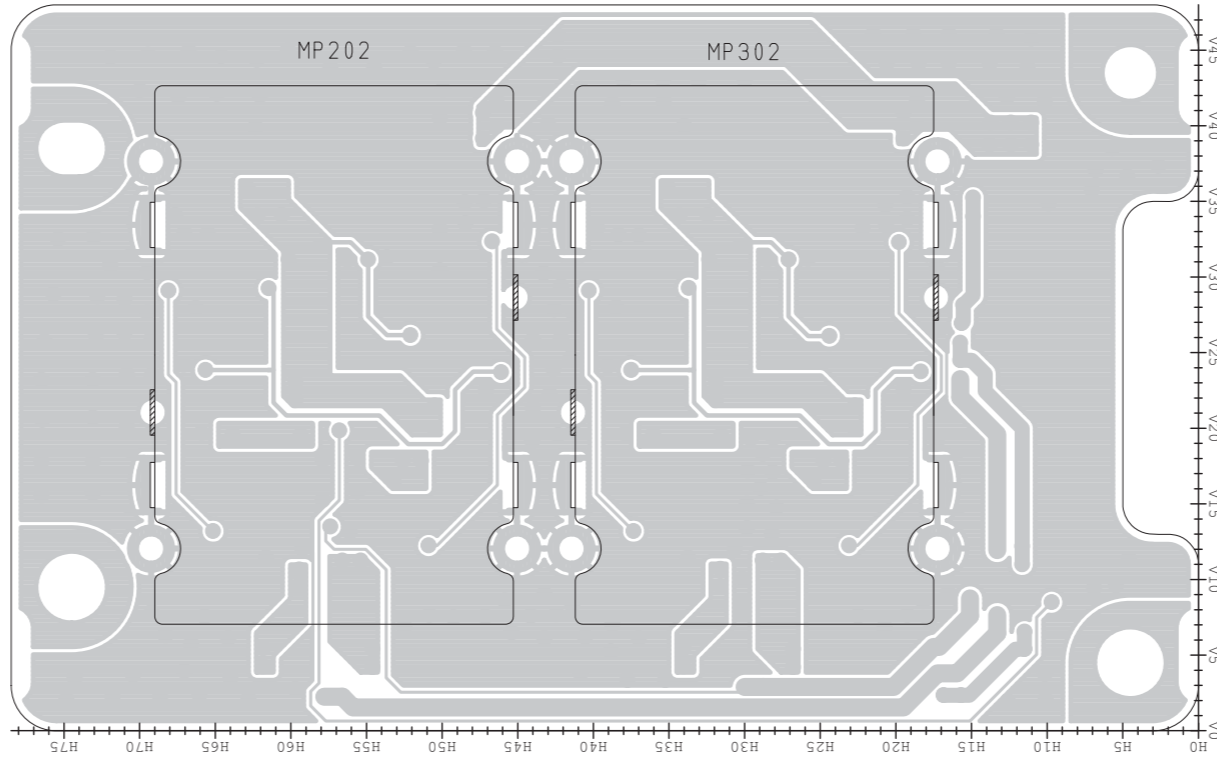


The combination of this page and next page shows the top side and bottom side of actual P.C. board.

• DISPLAY UNIT  
(BOTTOM VIEW)

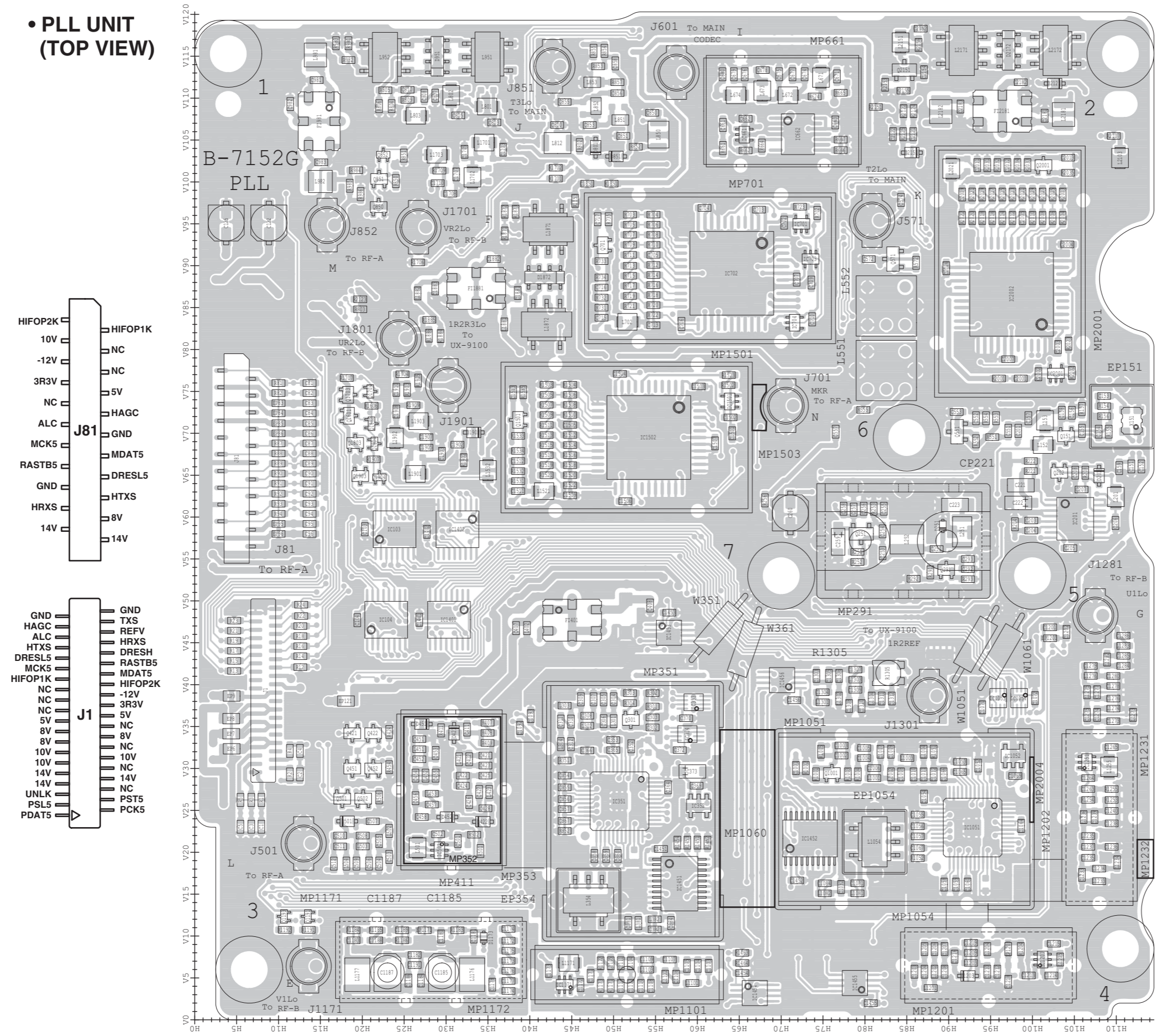


• DC-DC UNIT  
(BOTTOM VIEW)

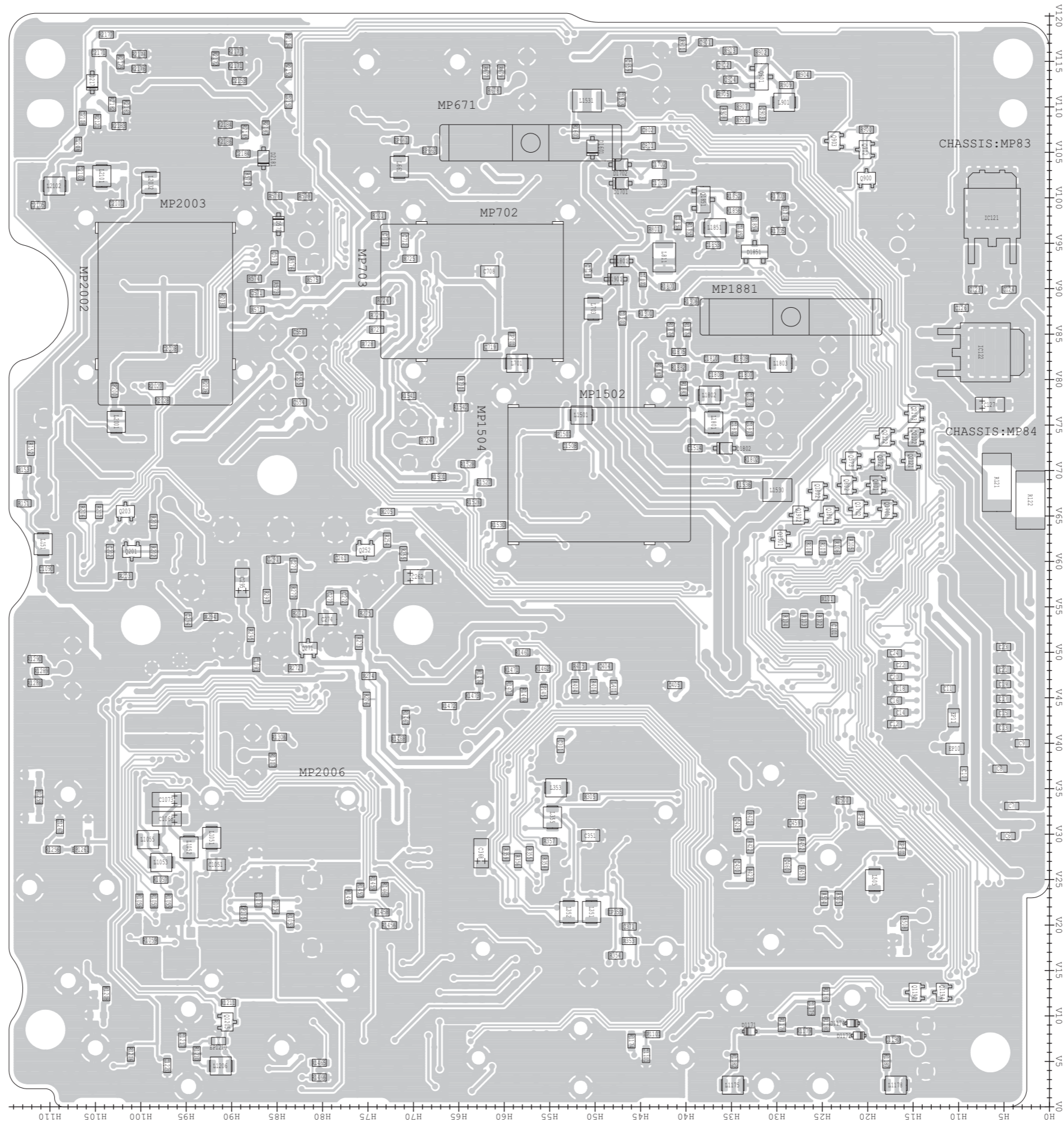




• PLL UNIT  
(TOP VIEW)



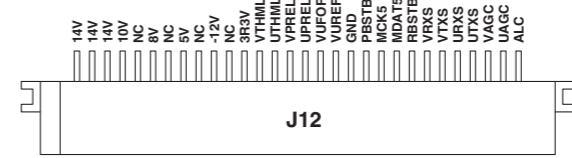
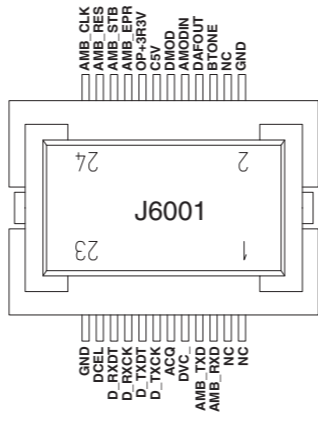
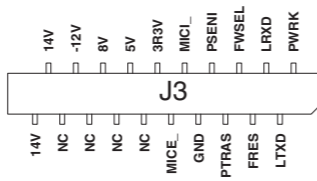
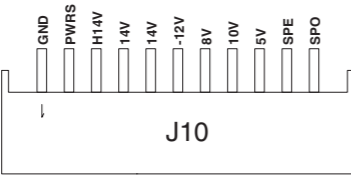
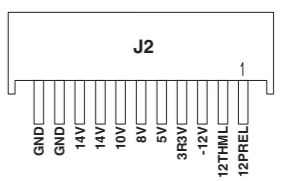
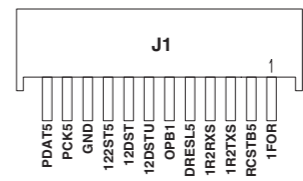
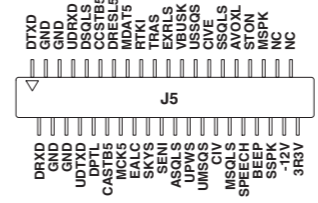
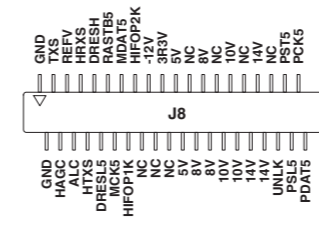
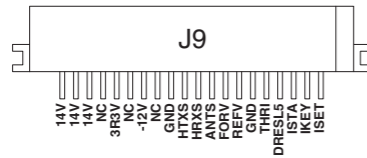
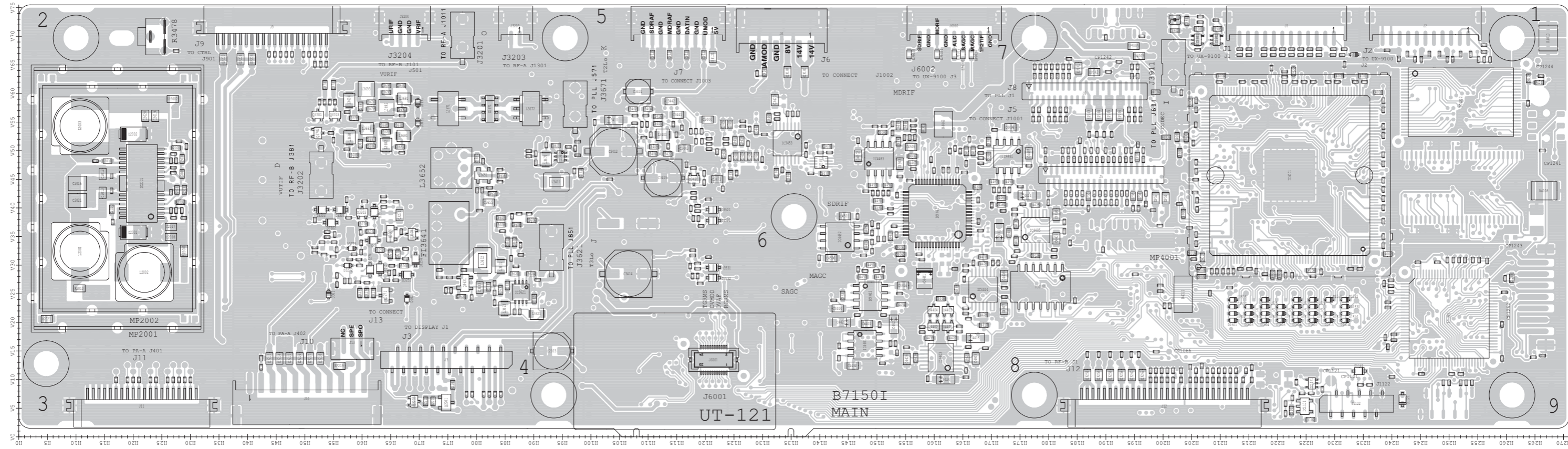
• PLL UNIT  
(BOTTOM VIEW)



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

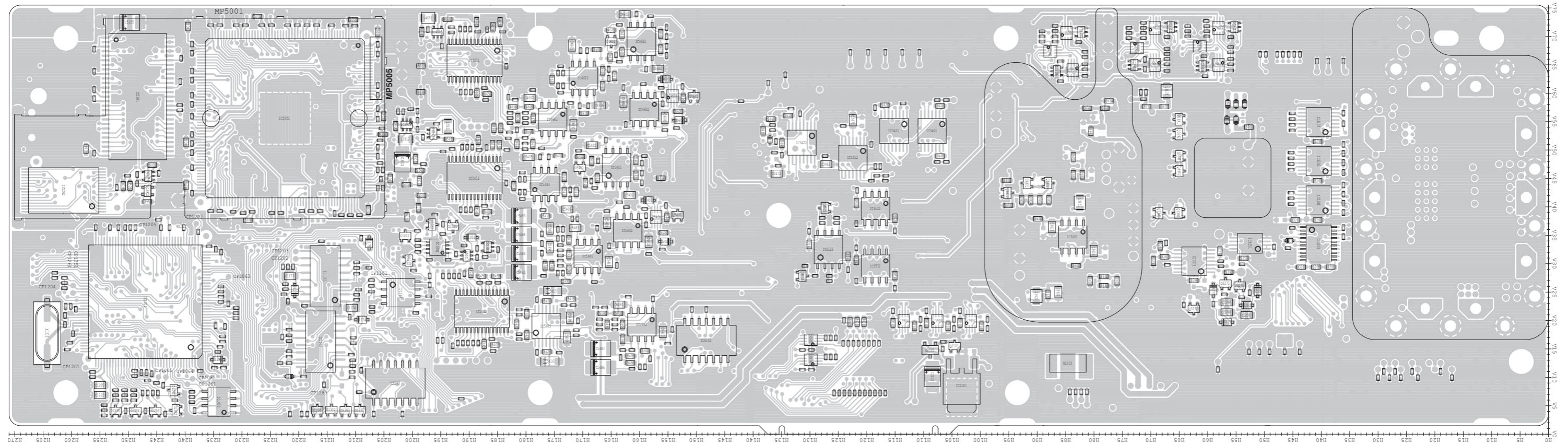
The combination of this page and next page shows the top side and bottom side of actual P.C. board.

• MAIN UNIT (TOP VIEW)

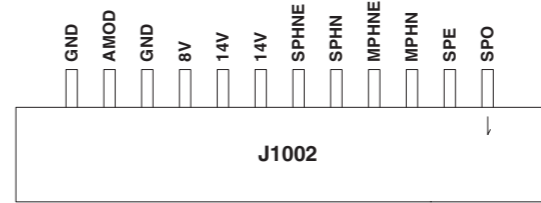
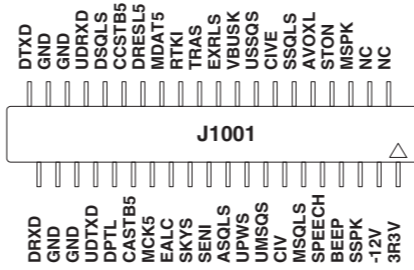
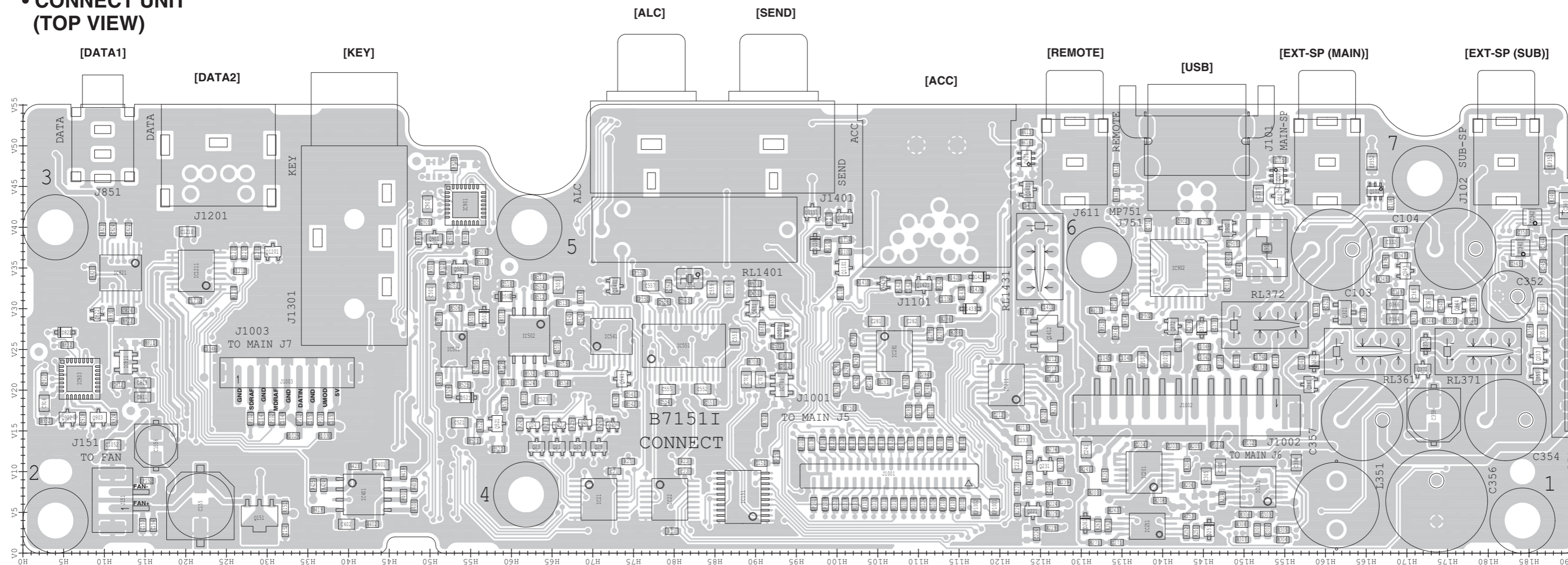


The combination of this page and next page shows the top side and bottom side of actual P.C. board.

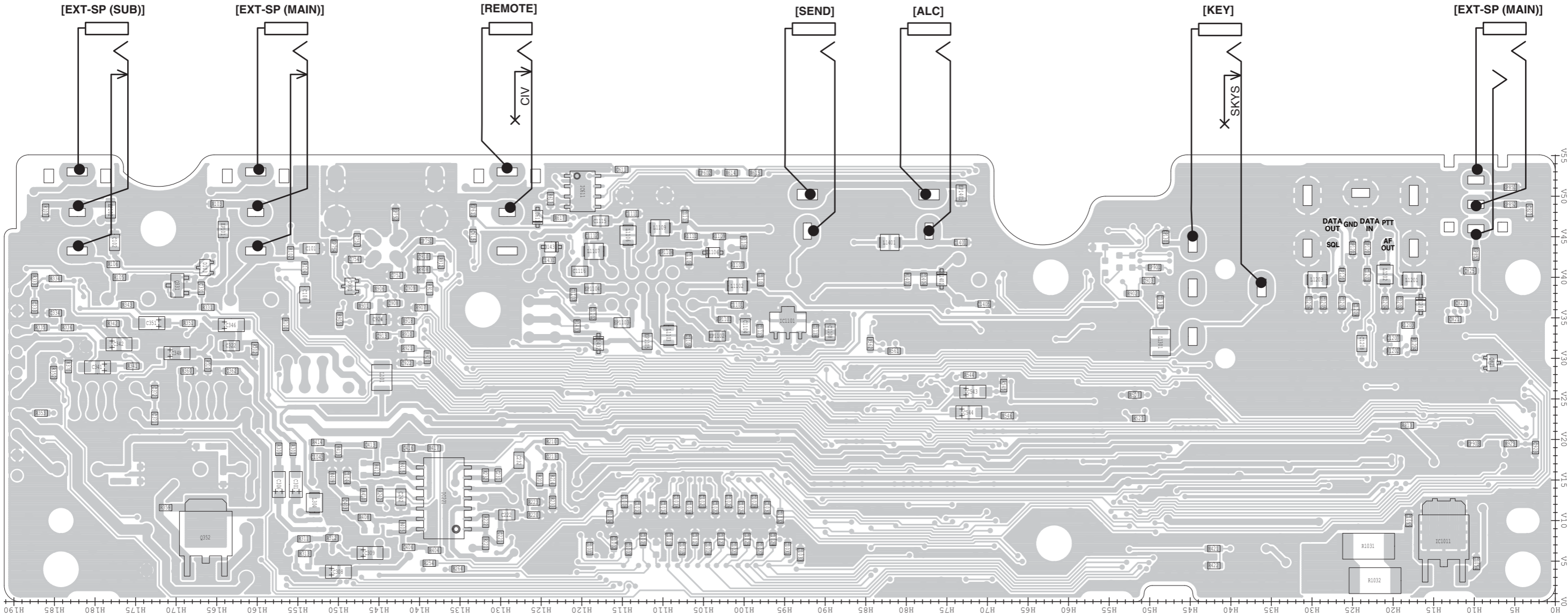
• MAIN UNIT  
(BOTTOM VIEW)



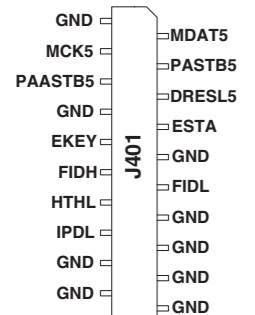
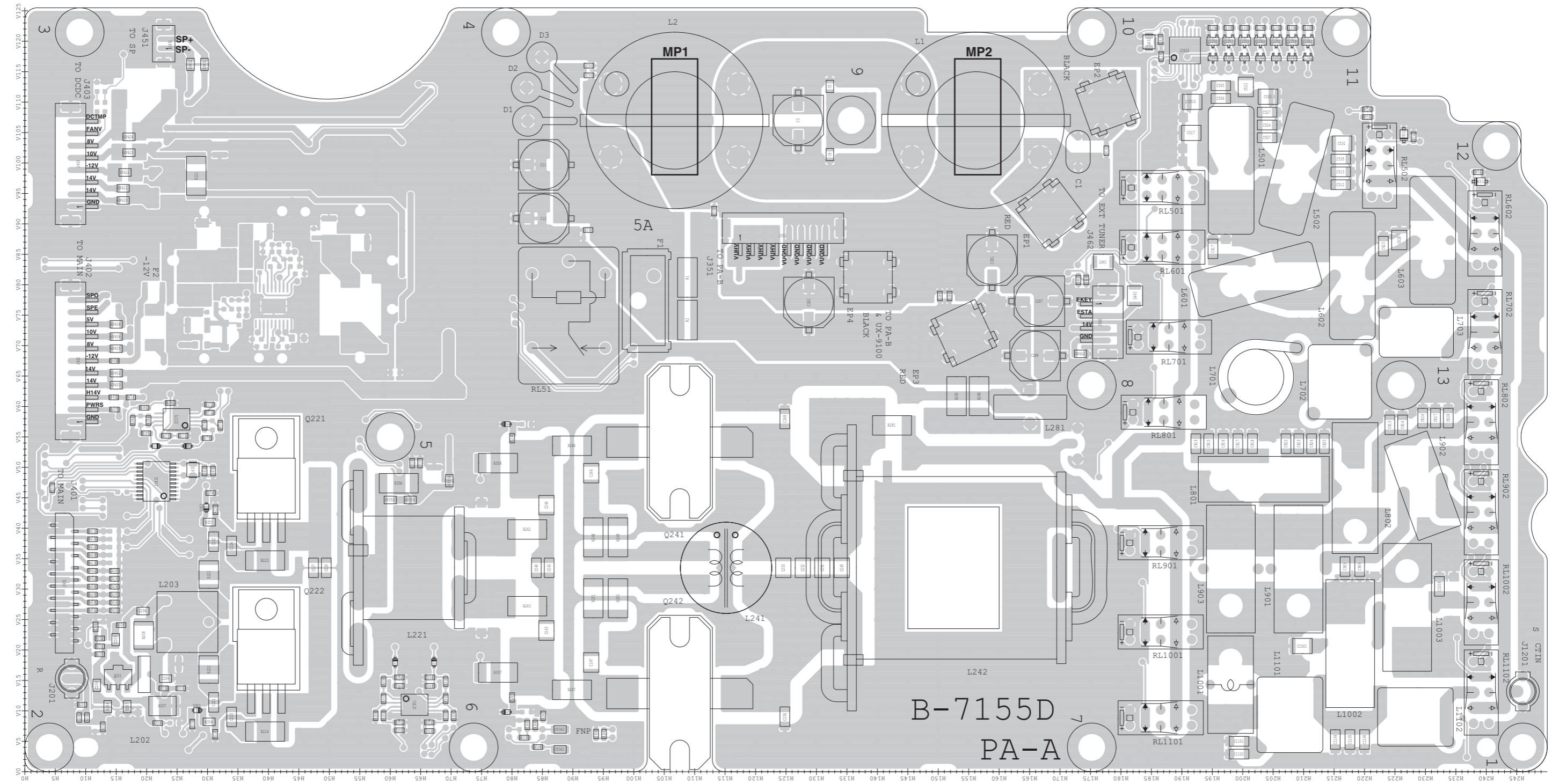
• **CONNECT UNIT  
(TOP VIEW)**



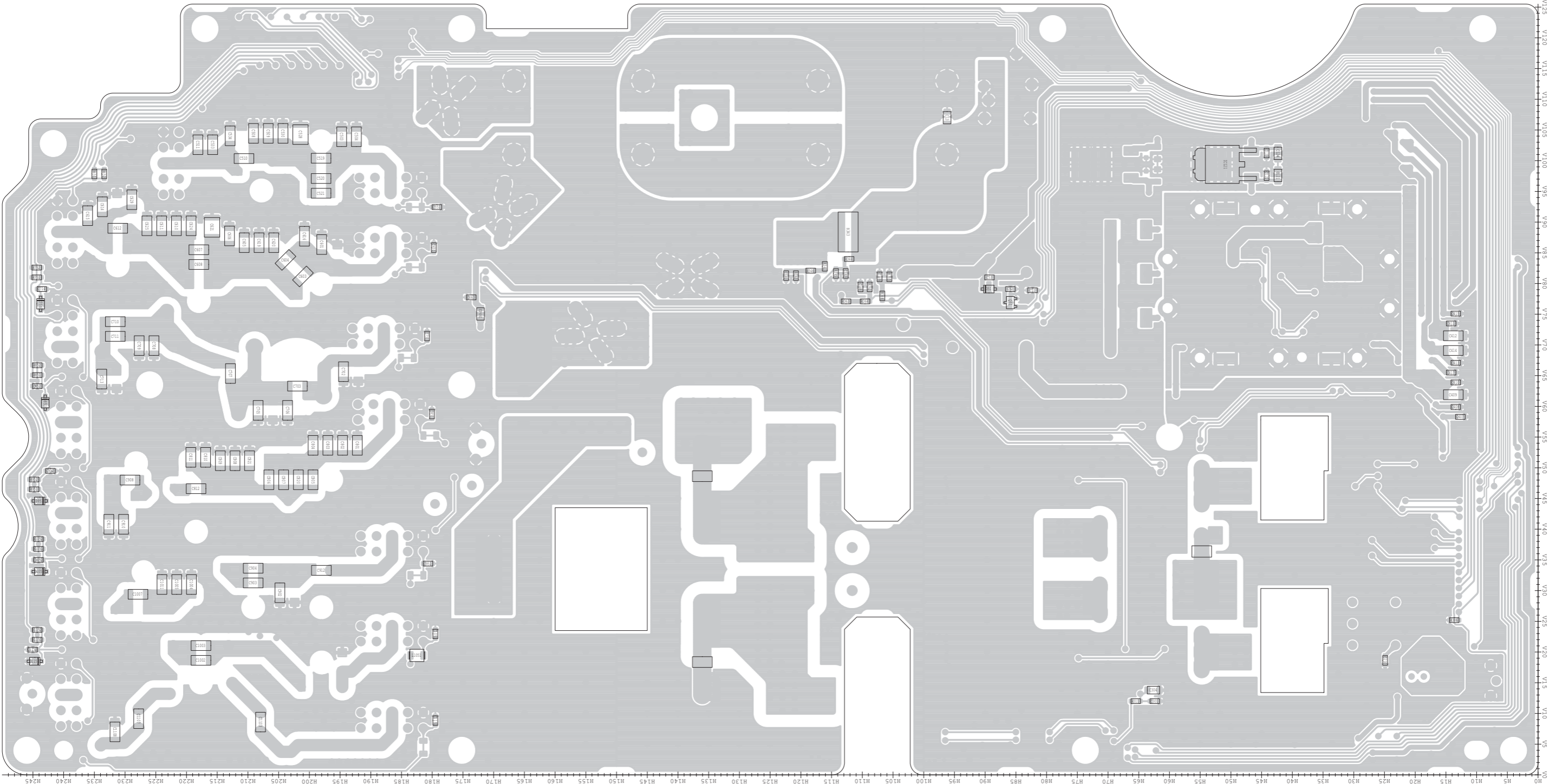
• CONNECT UNIT  
(BOTTOM VIEW)



• PA-A UNIT  
(TOP VIEW)



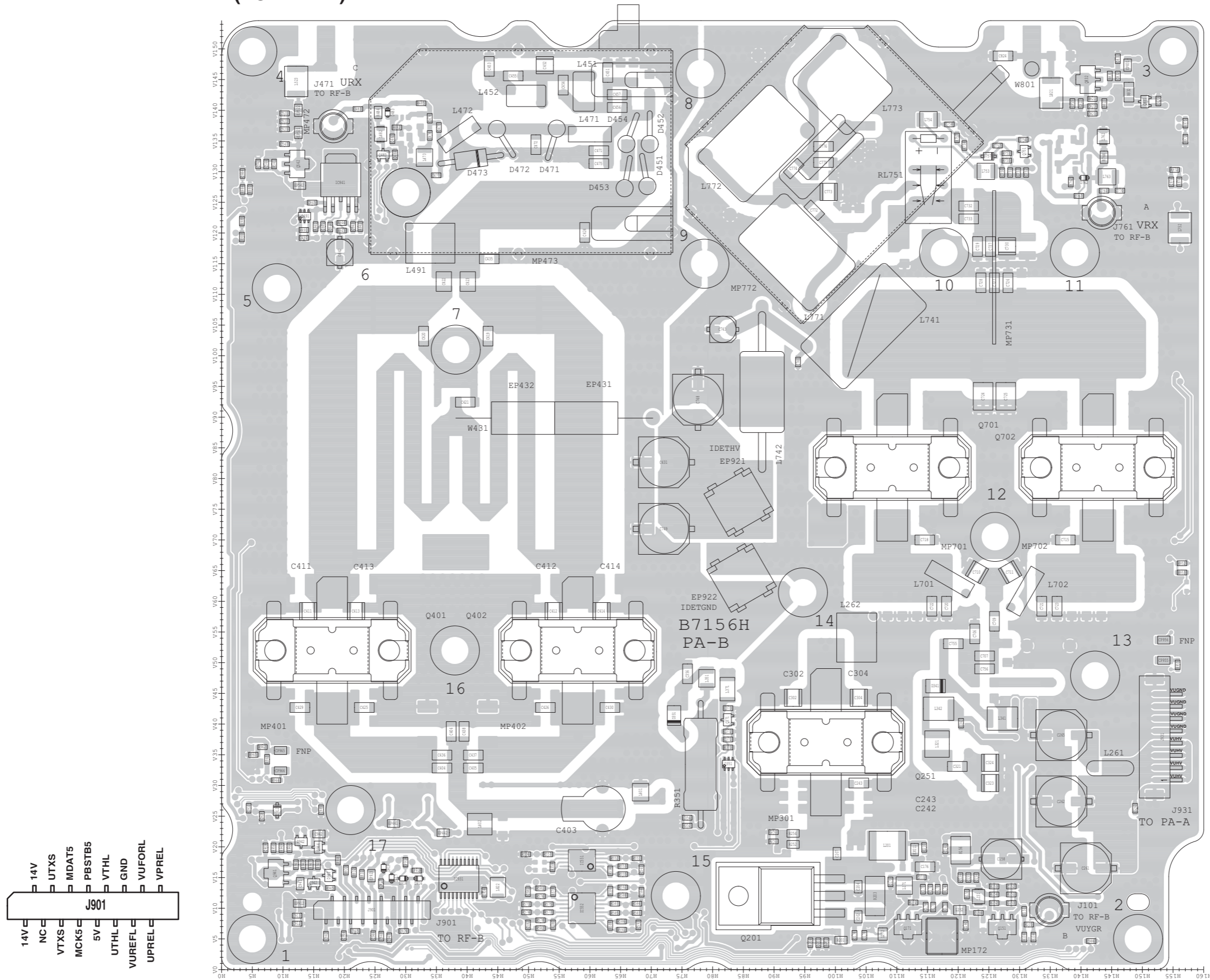
• PA-A UNIT  
(BOTTOM VIEW)





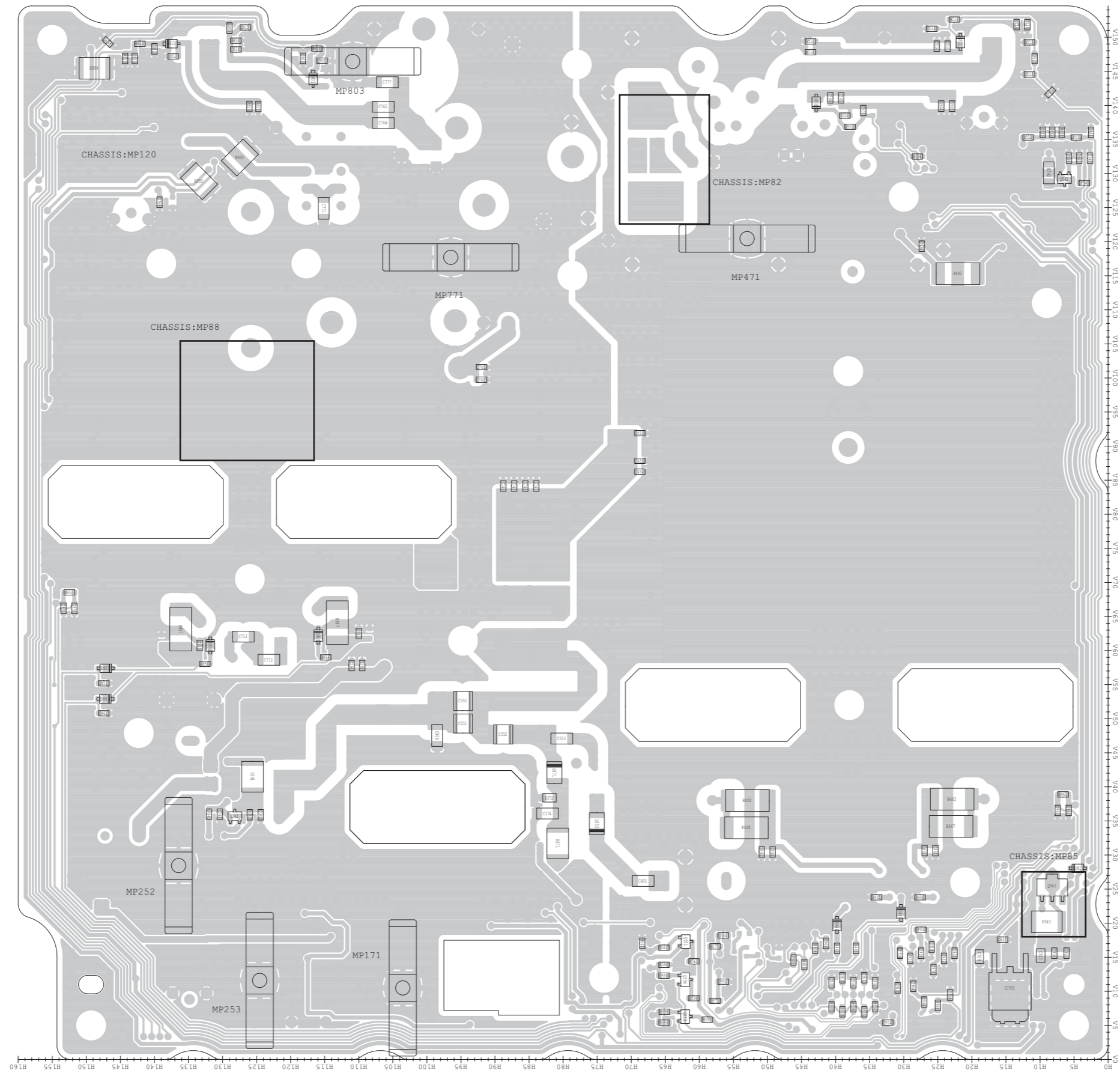
• PA-B UNIT  
(TOP VIEW)

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

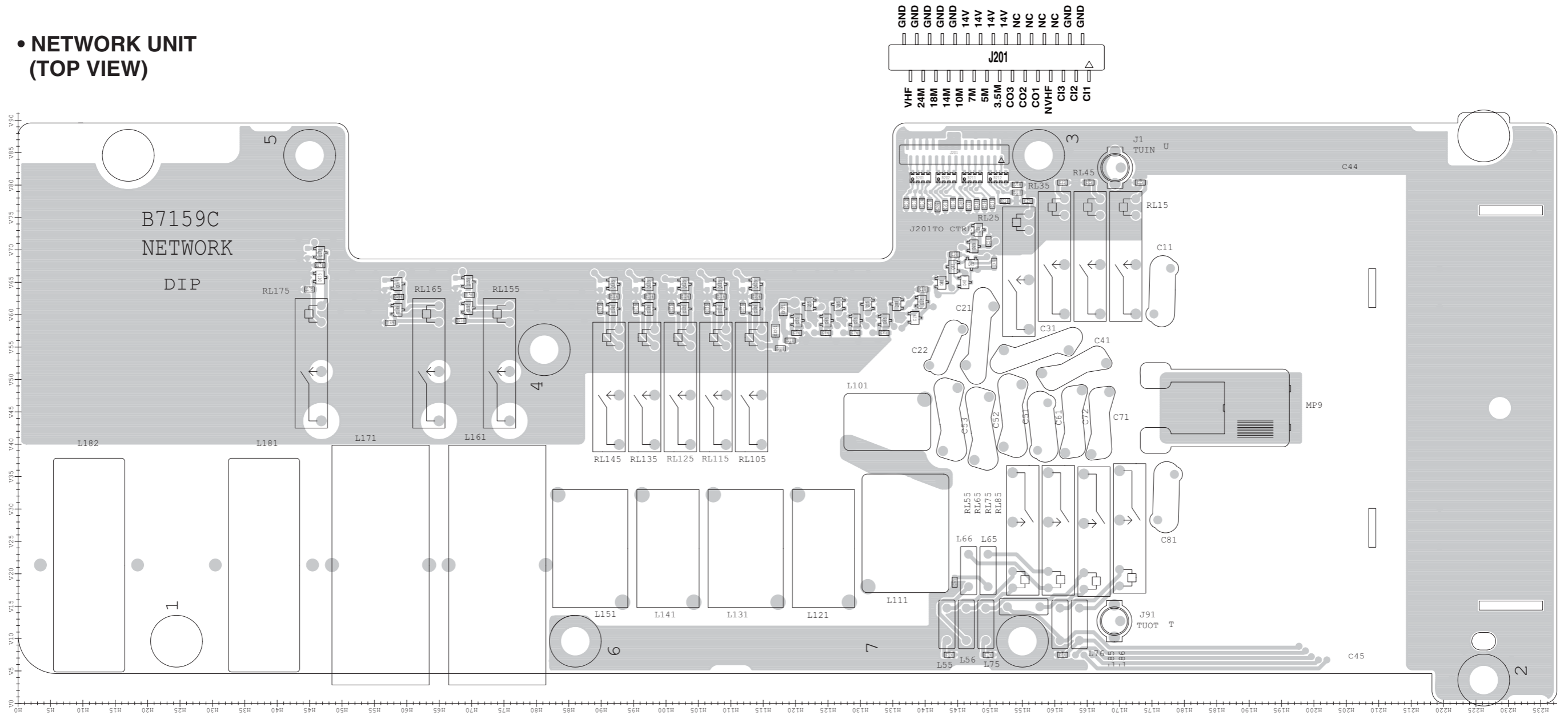


• PA-B UNIT  
(BOTTOM VIEW)

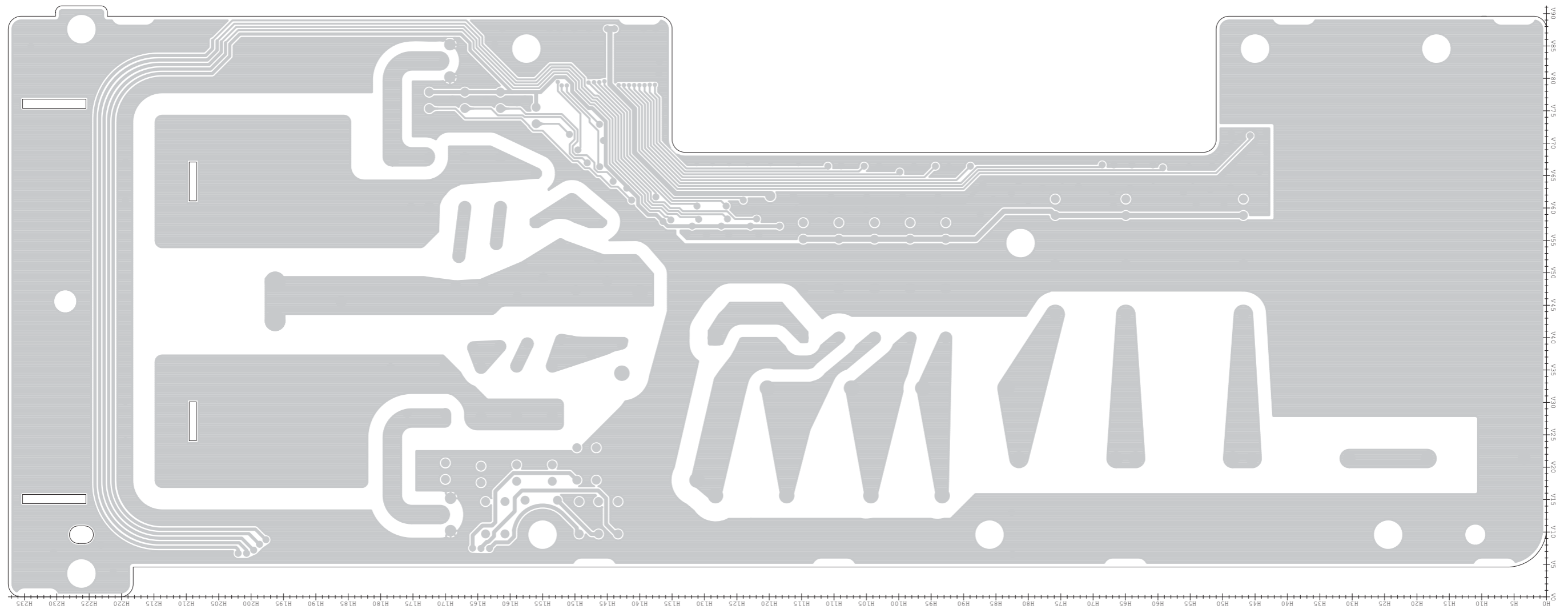
The combination of this page and next page shows  
the top side and bottom side of actual P.C. board.



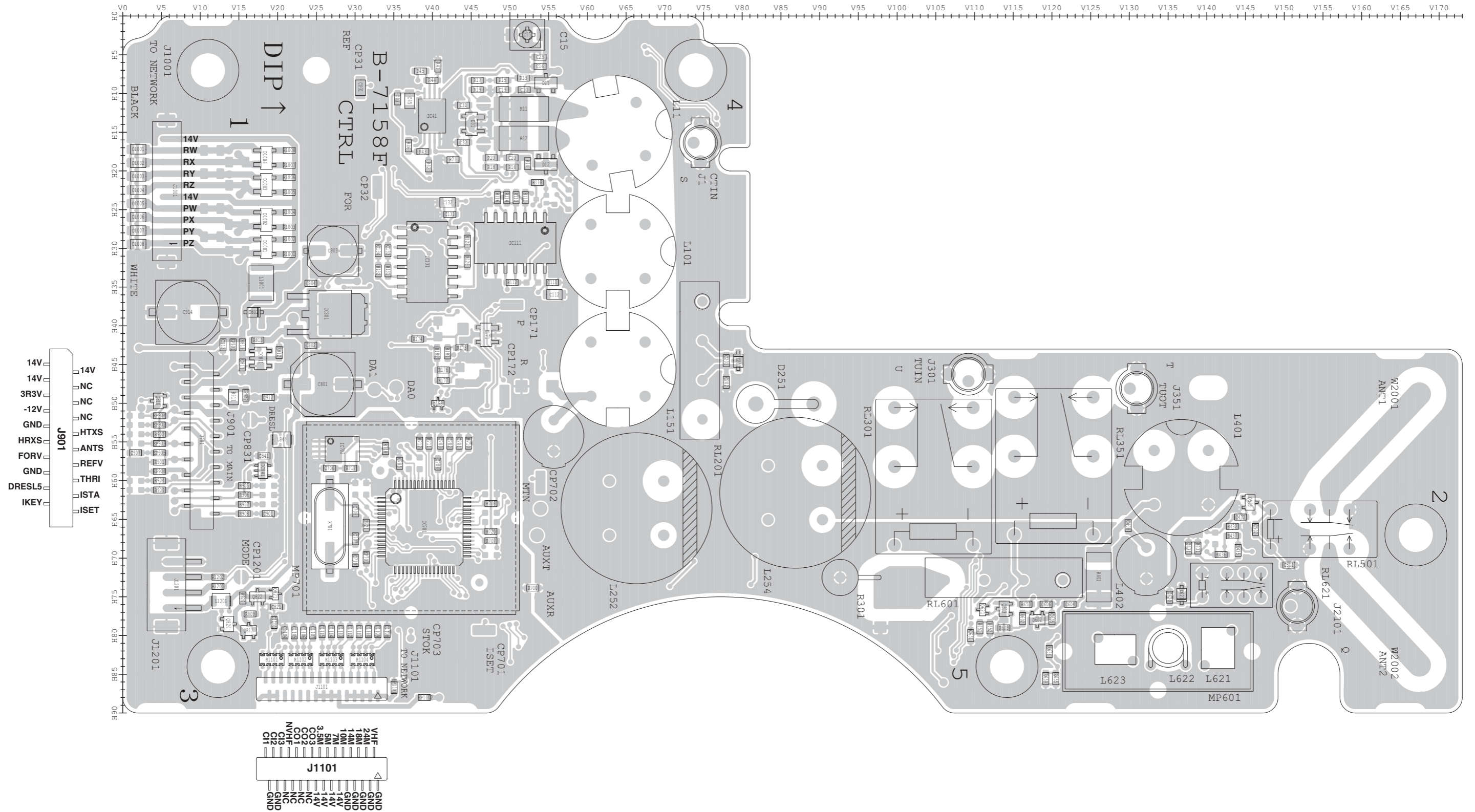
• NETWORK UNIT  
(TOP VIEW)



• NETWORK UNIT  
(BOTTOM VIEW)

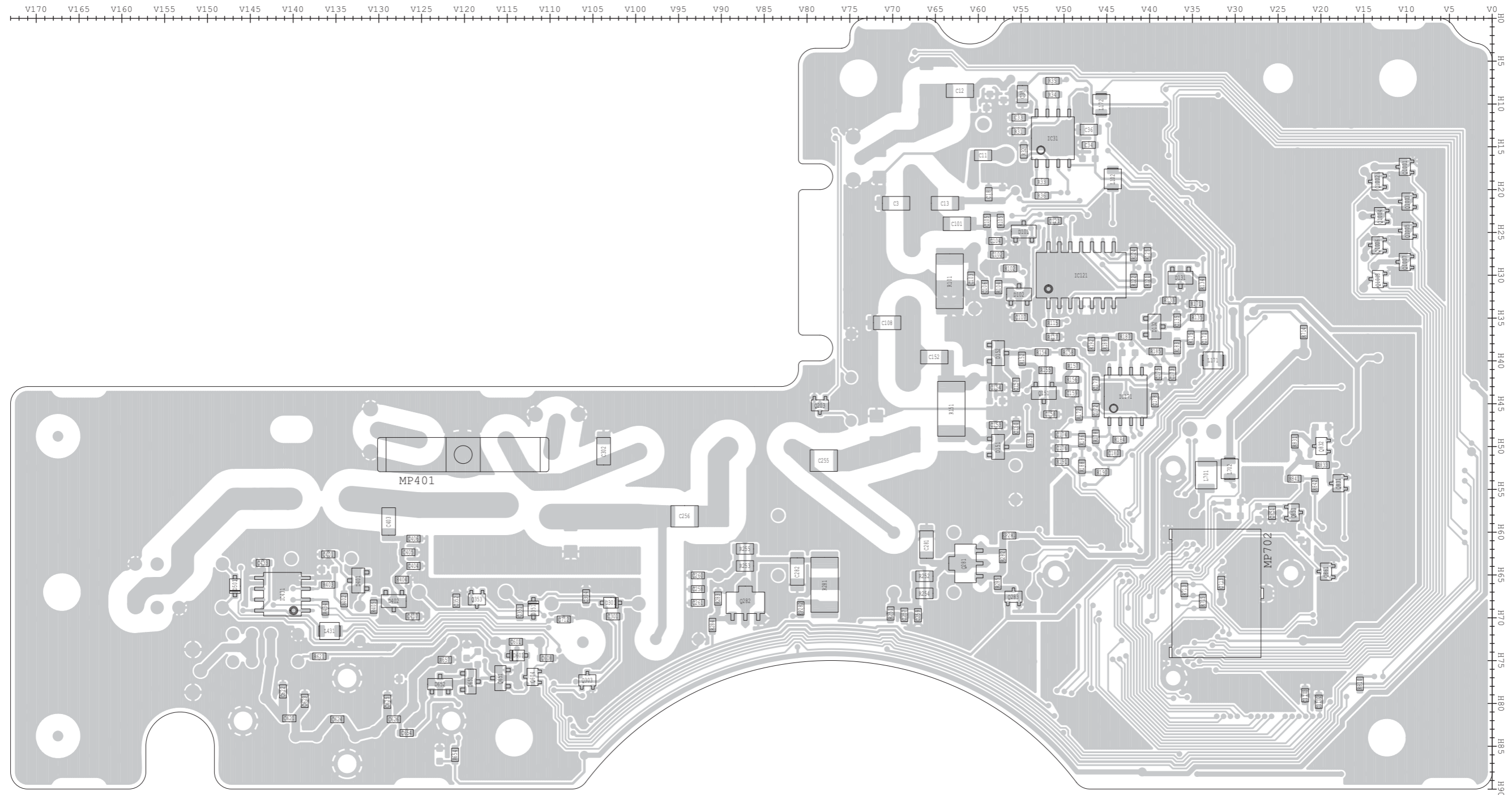


• CTRL UNIT  
(TOP VIEW)



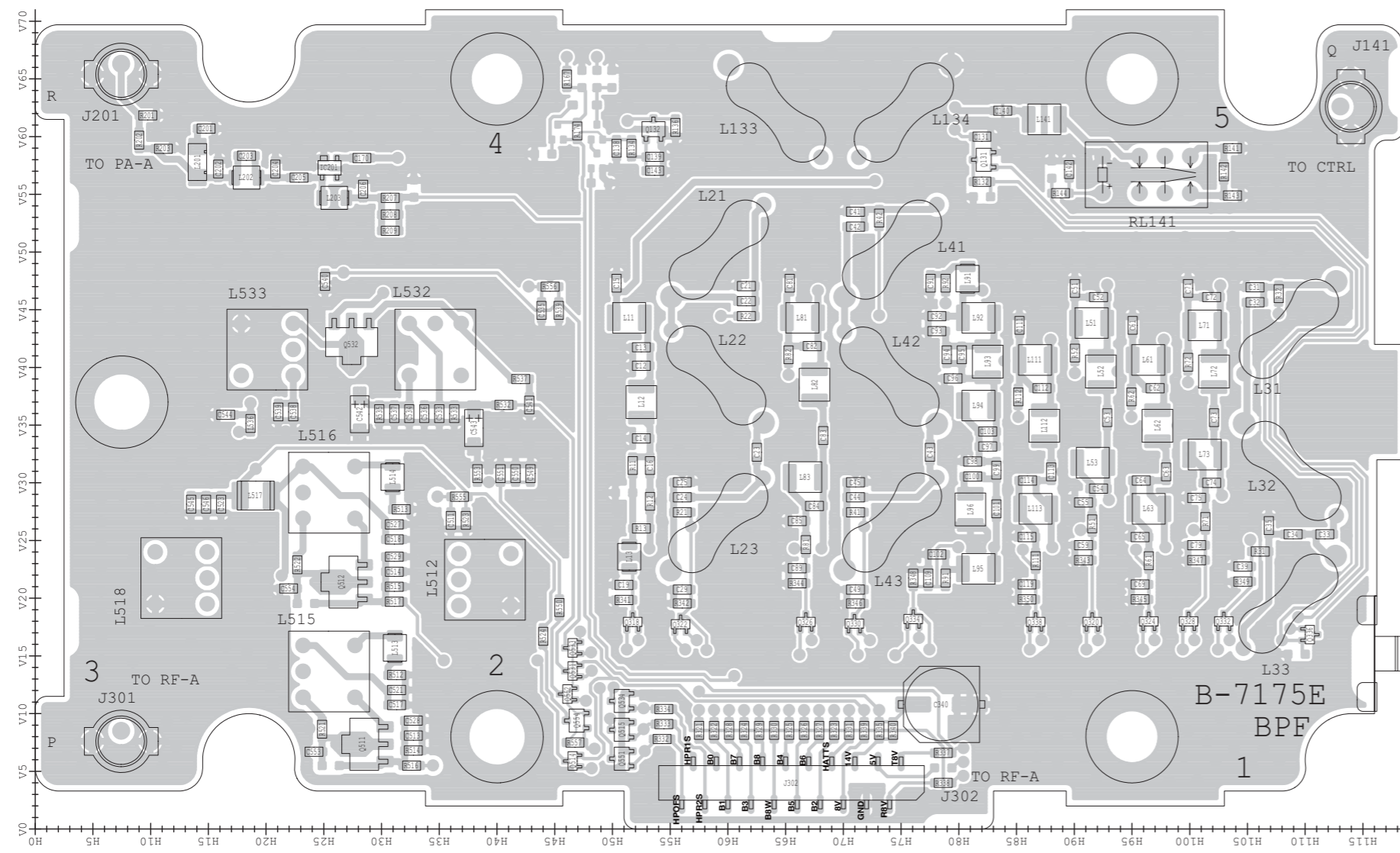
The combination of this page and next page shows the top side and bottom side of actual P.C. board.

• CTRL UNIT  
(BOTTOM VIEW)

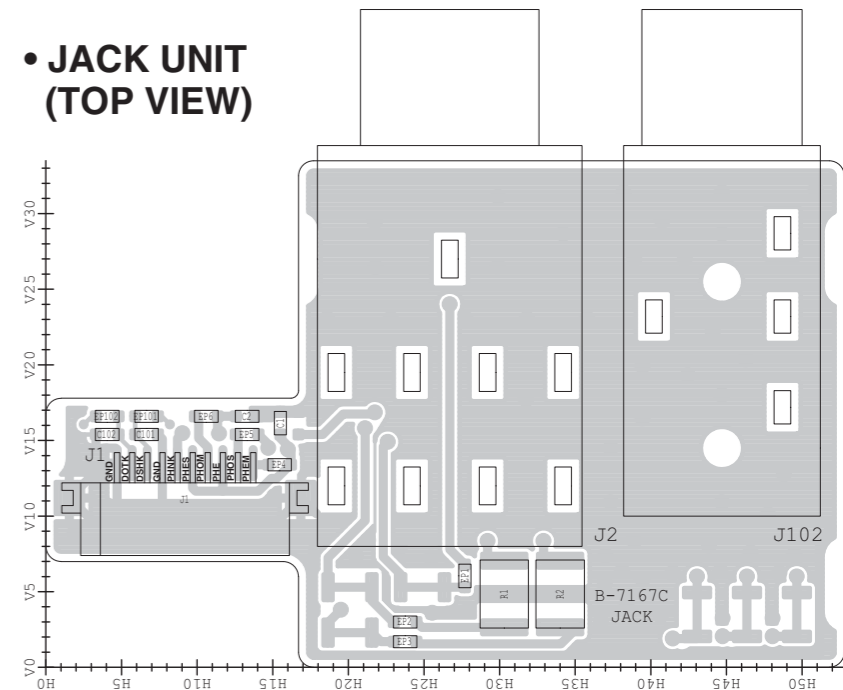


The combination of this page and next page shows the top side and bottom side of actual P.C. board.

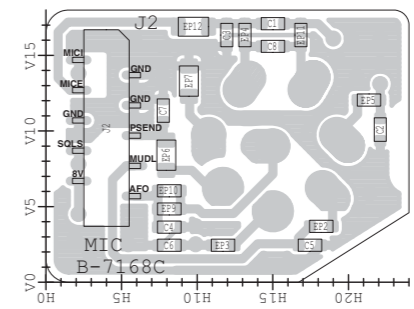
• BPF UNIT (TOP VIEW)



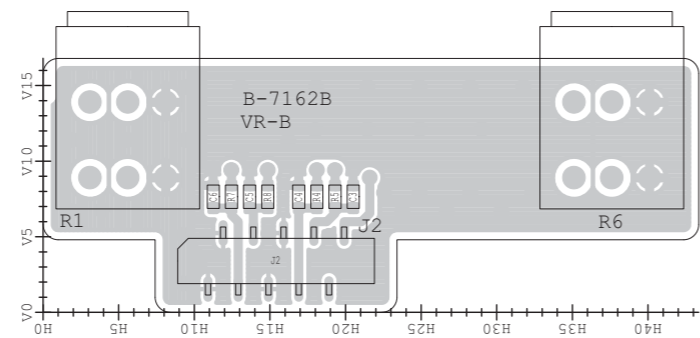
• JACK UNIT (TOP VIEW)



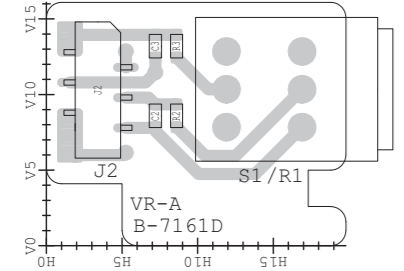
• MIC UNIT (TOP VIEW)



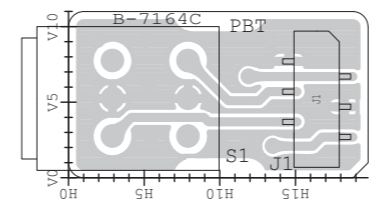
• VR-B UNIT (TOP VIEW)



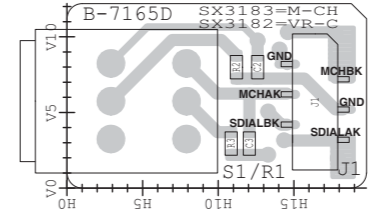
• VR-A UNIT (TOP VIEW)



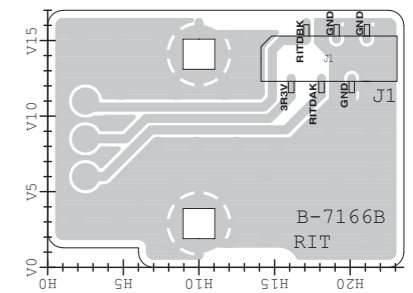
• PBT UNIT (TOP VIEW)



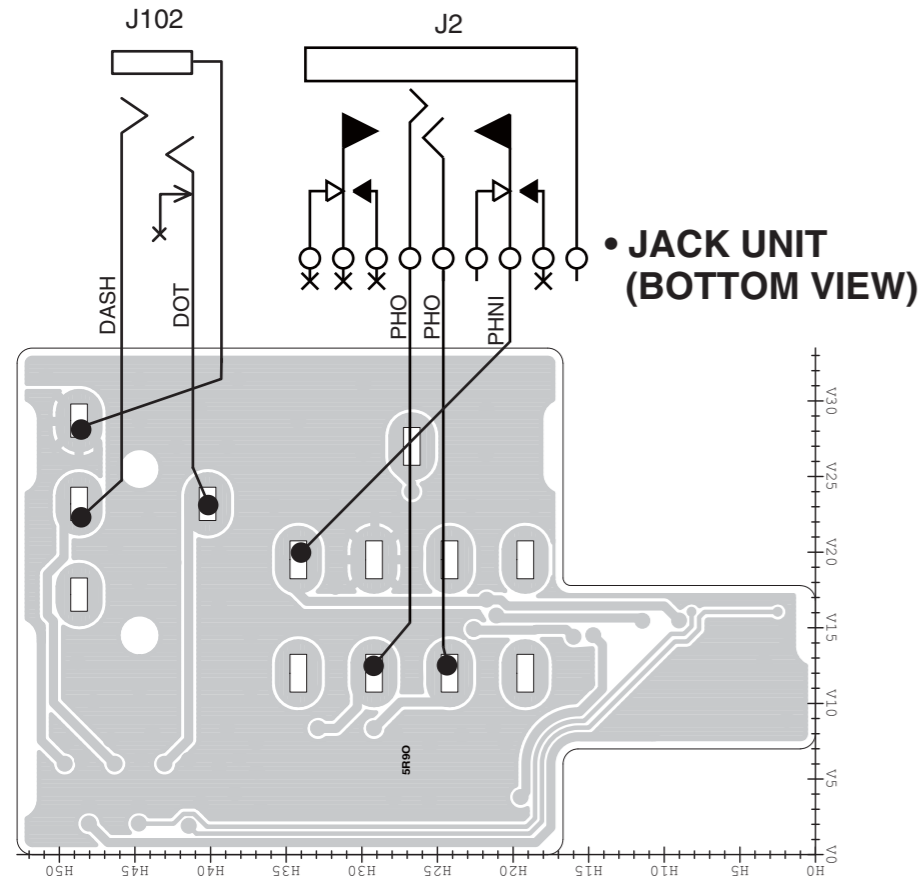
• M-CH UNIT (TOP VIEW)



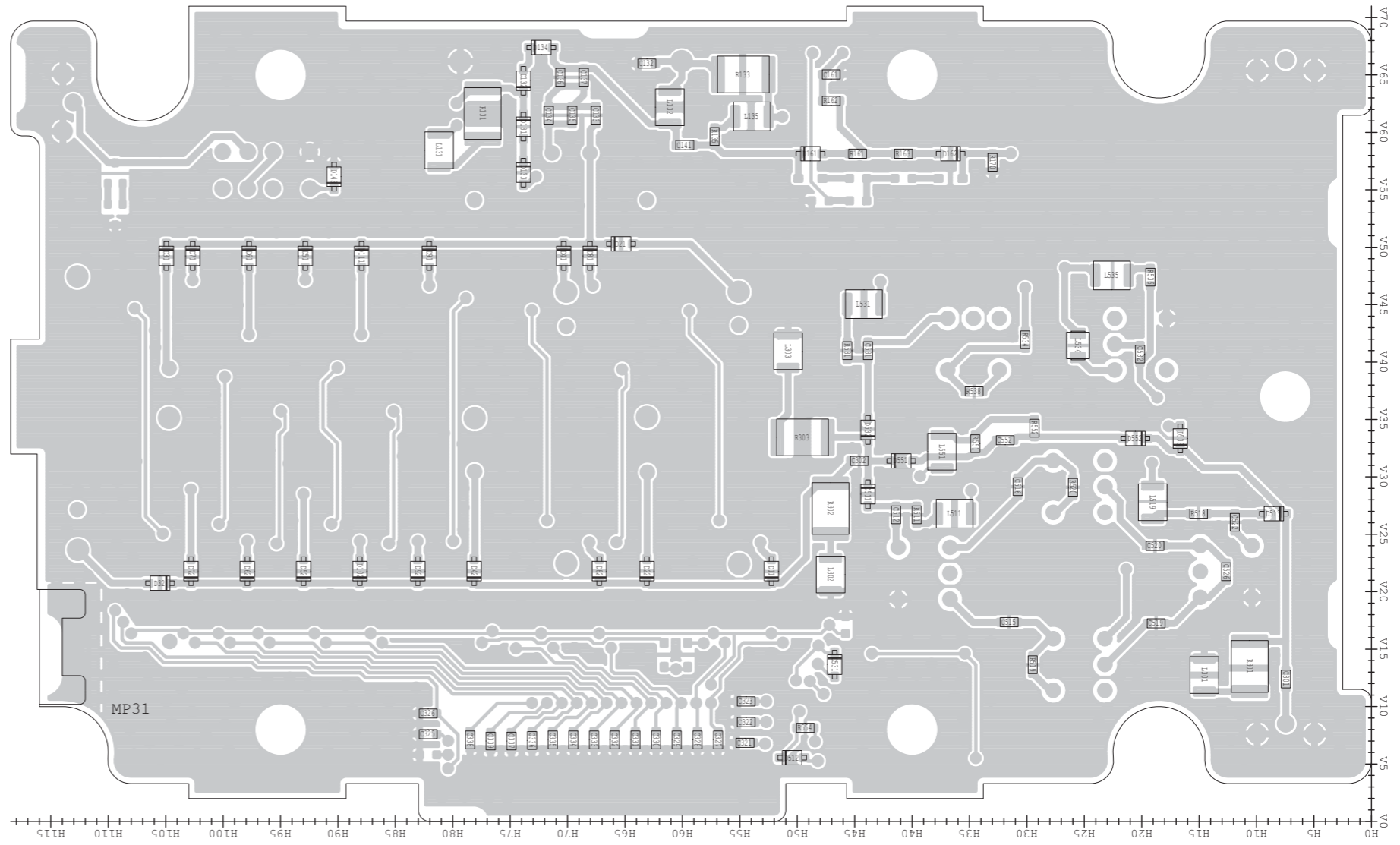
• RIT UNIT (TOP VIEW)



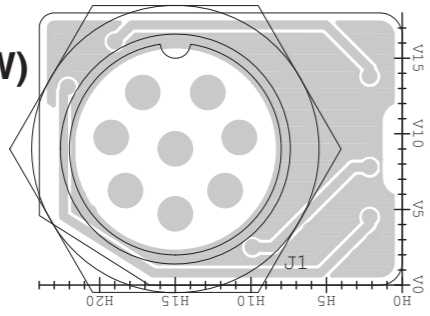
The combination of this page and next page shows the top side and bottom side of actual P.C. board.



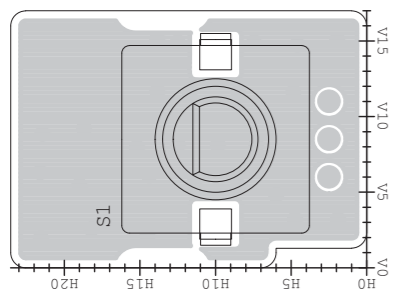
• BPF UNIT (BOTTOM VIEW)



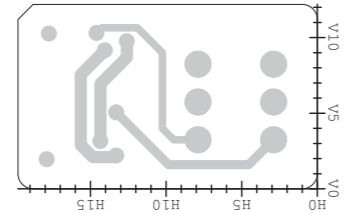
• MIC UNIT (BOTTOM VIEW)



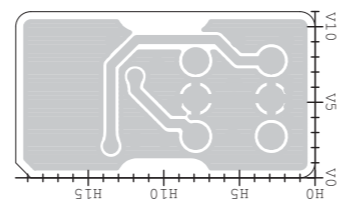
• RIT UNIT (BOTTOM VIEW)



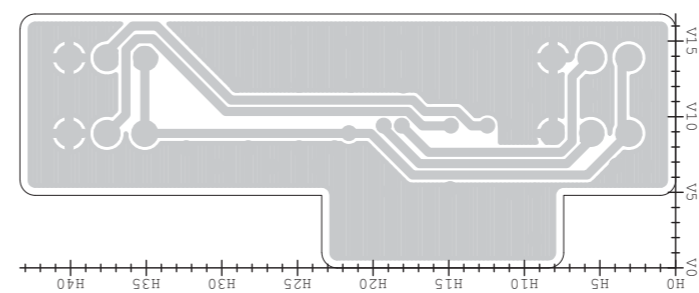
• M-CH UNIT (BOTTOM VIEW)



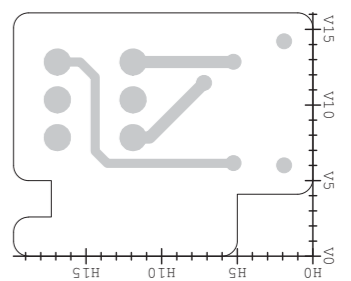
• PBT UNIT (BOTTOM VIEW)



• VR-B UNIT (BOTTOM VIEW)

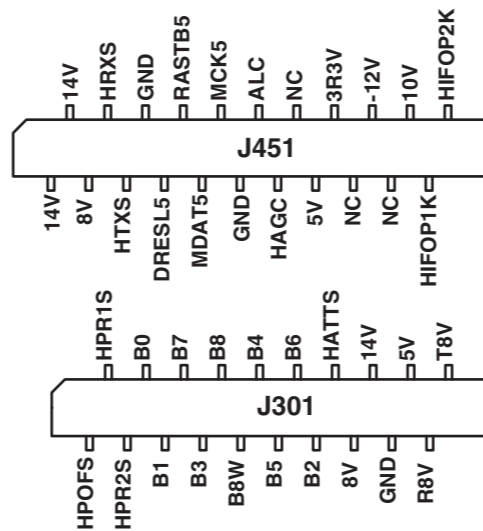
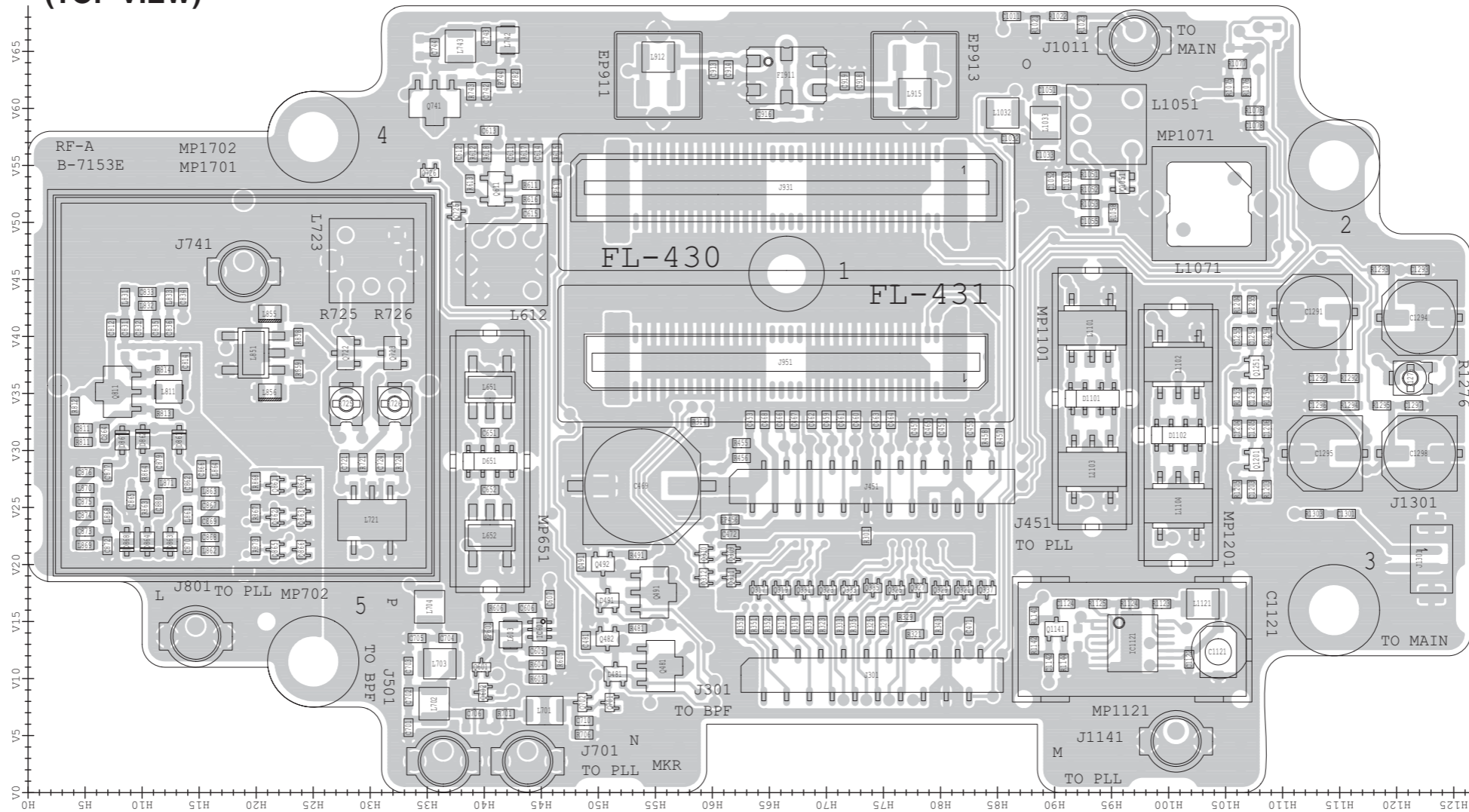


• VR-A UNIT (BOTTOM VIEW)



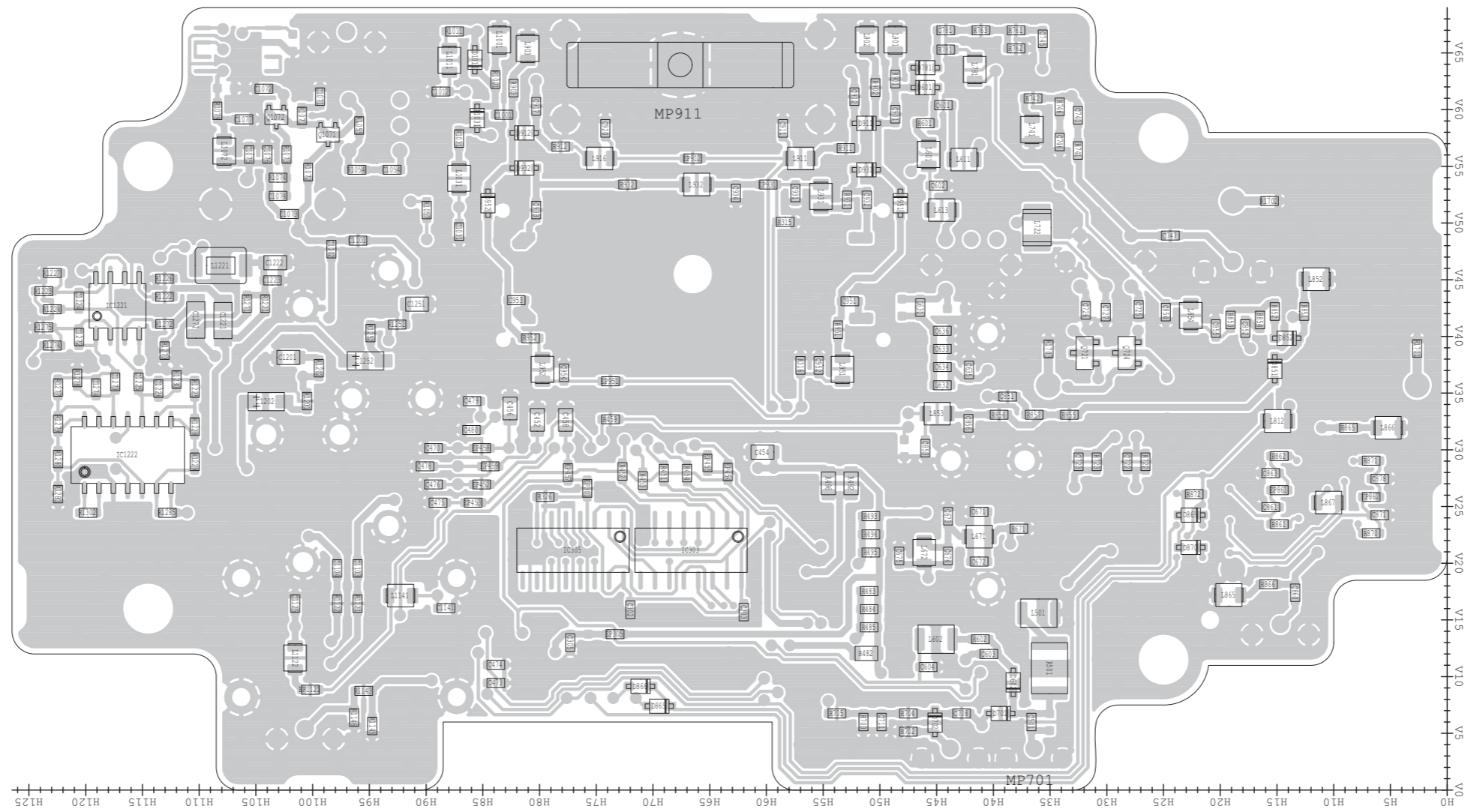


• RF-A UNIT  
(TOP VIEW)

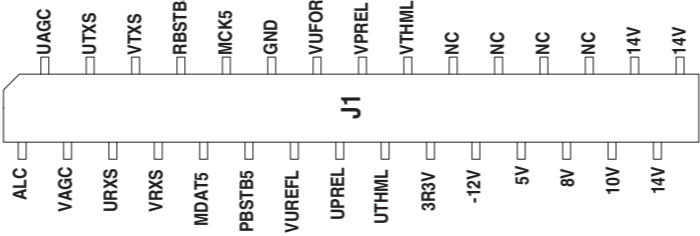
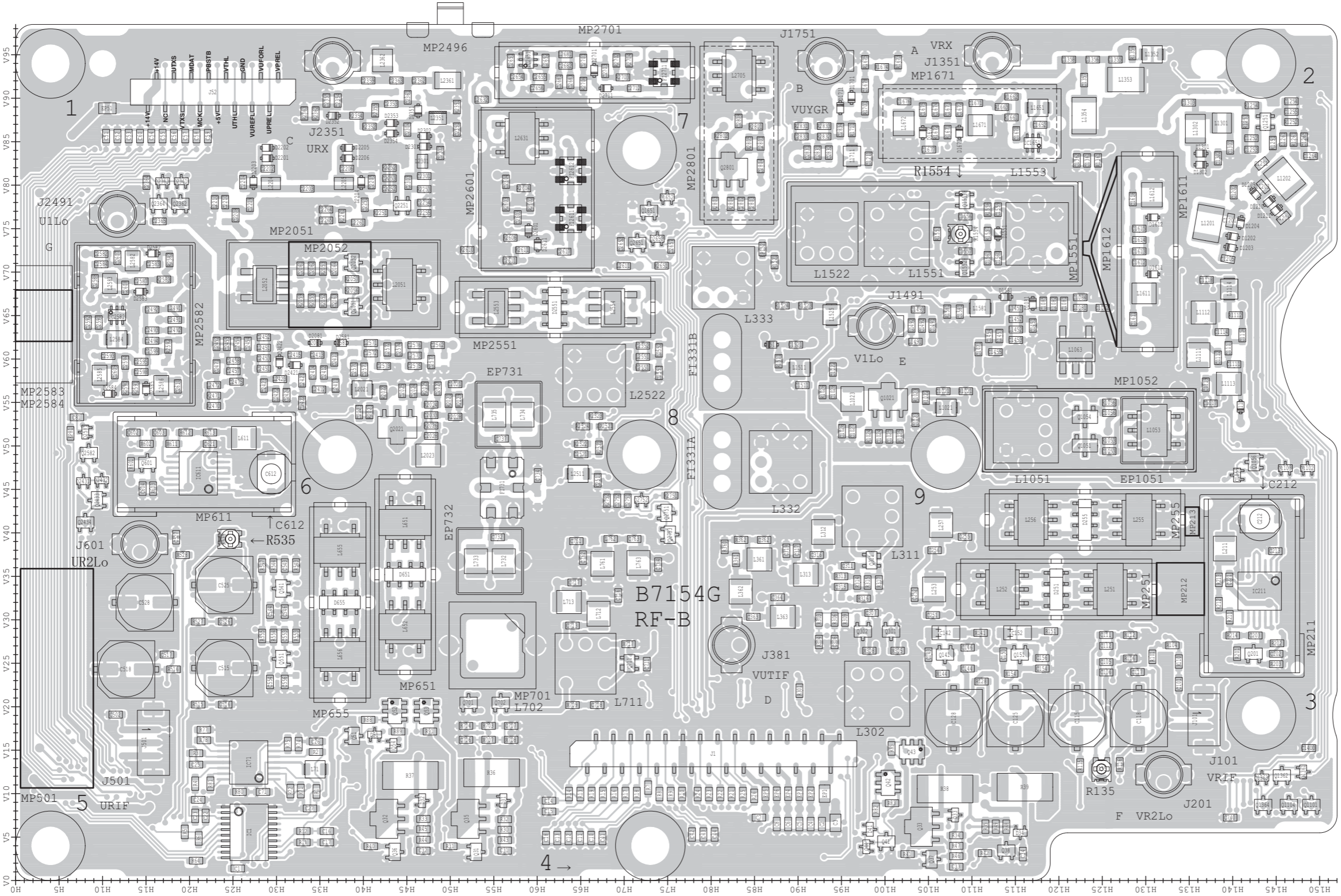


The combination of this page and next page shows the top side and bottom side of actual P.C. board.

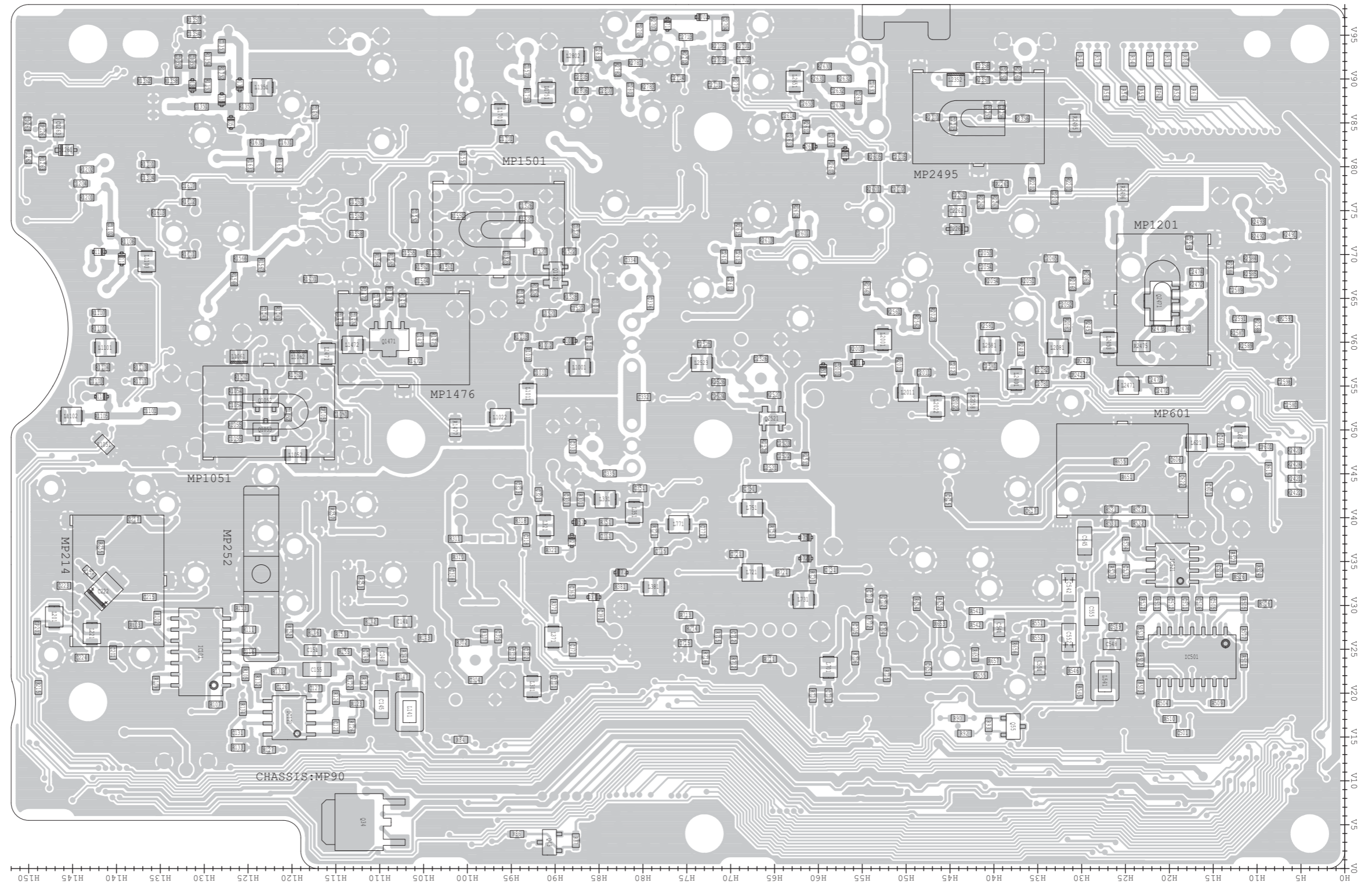
• RF-A UNIT  
(BOTTOM VIEW)

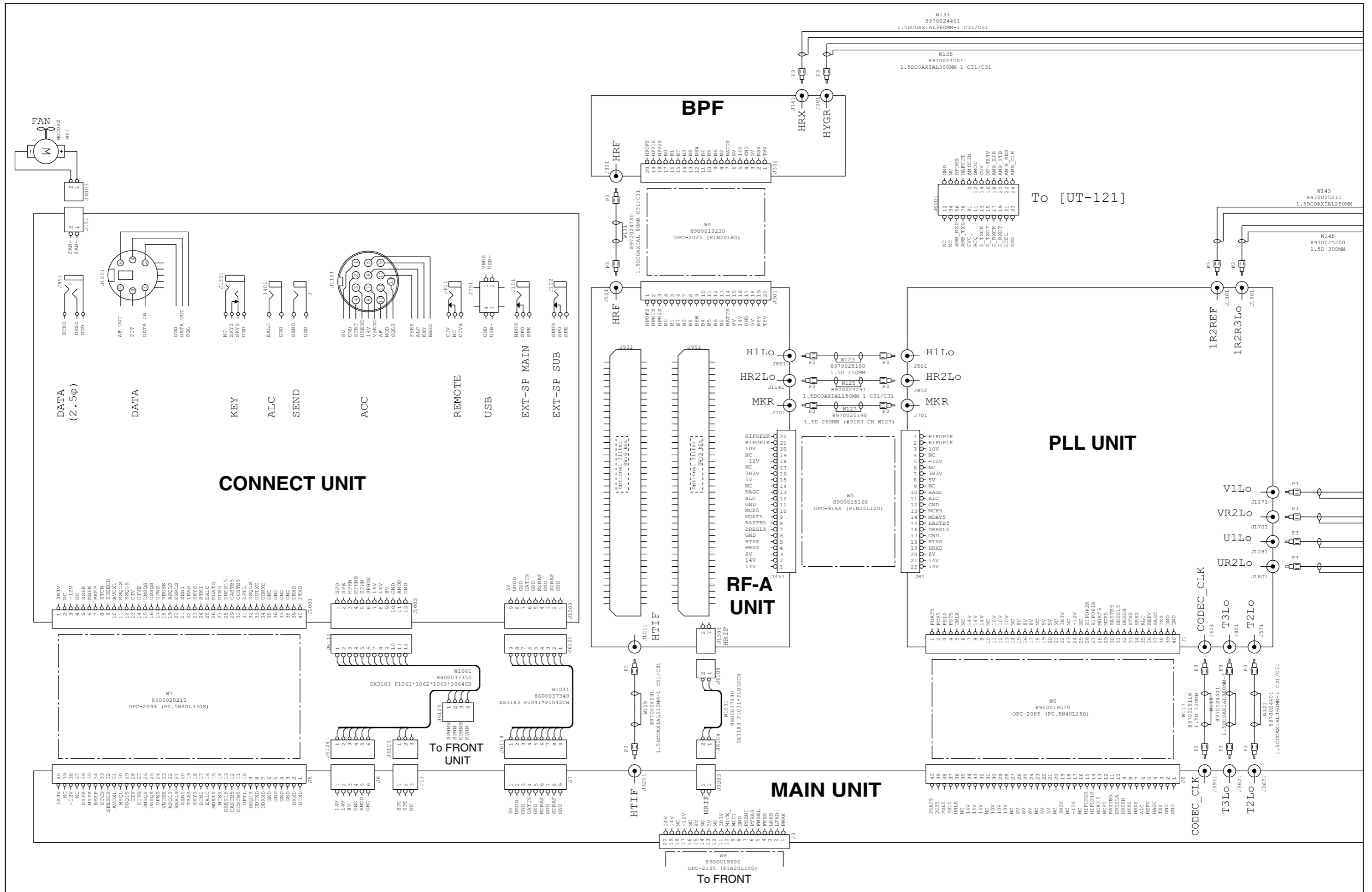


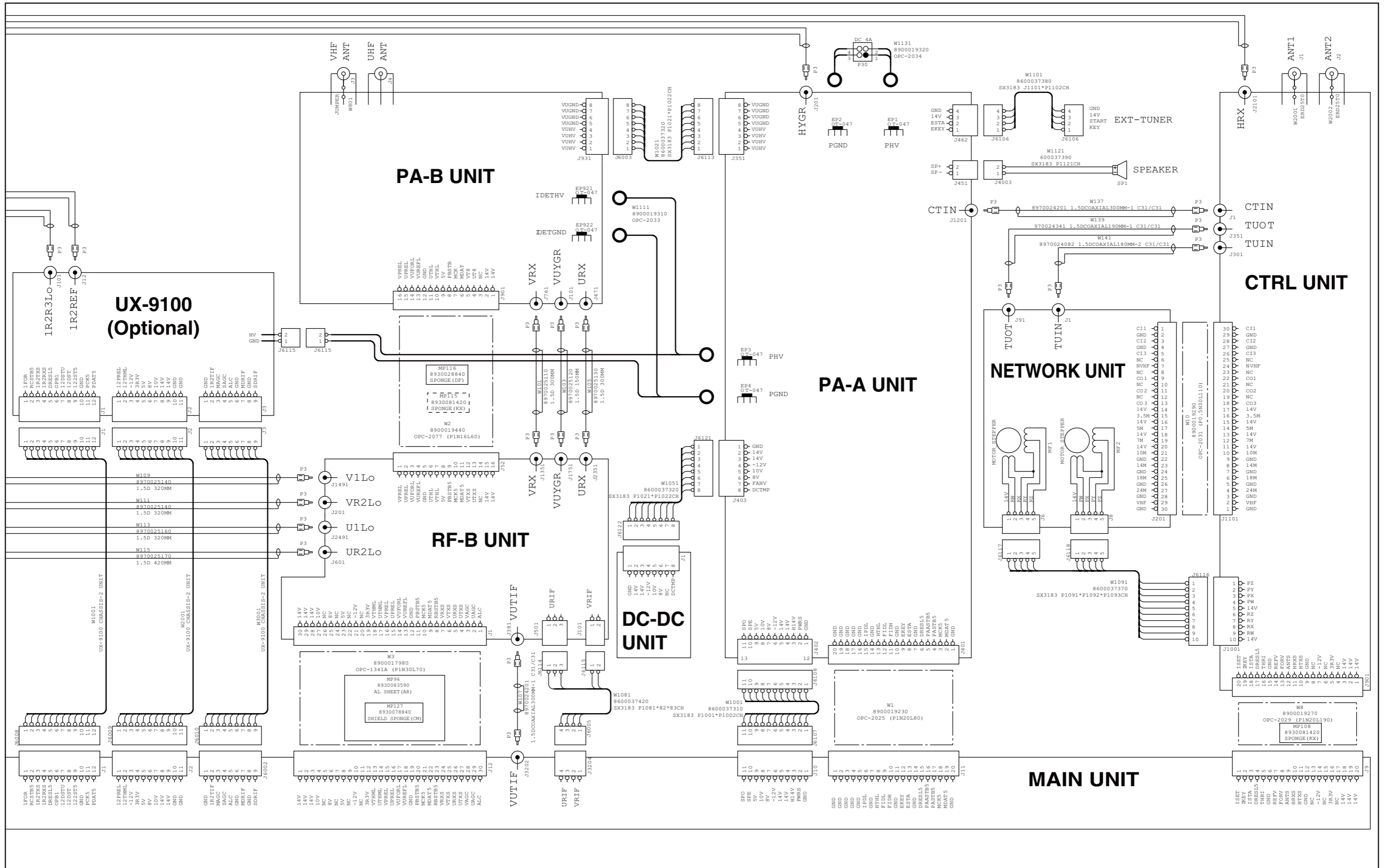
• RF-B UNIT  
(TOP VIEW)



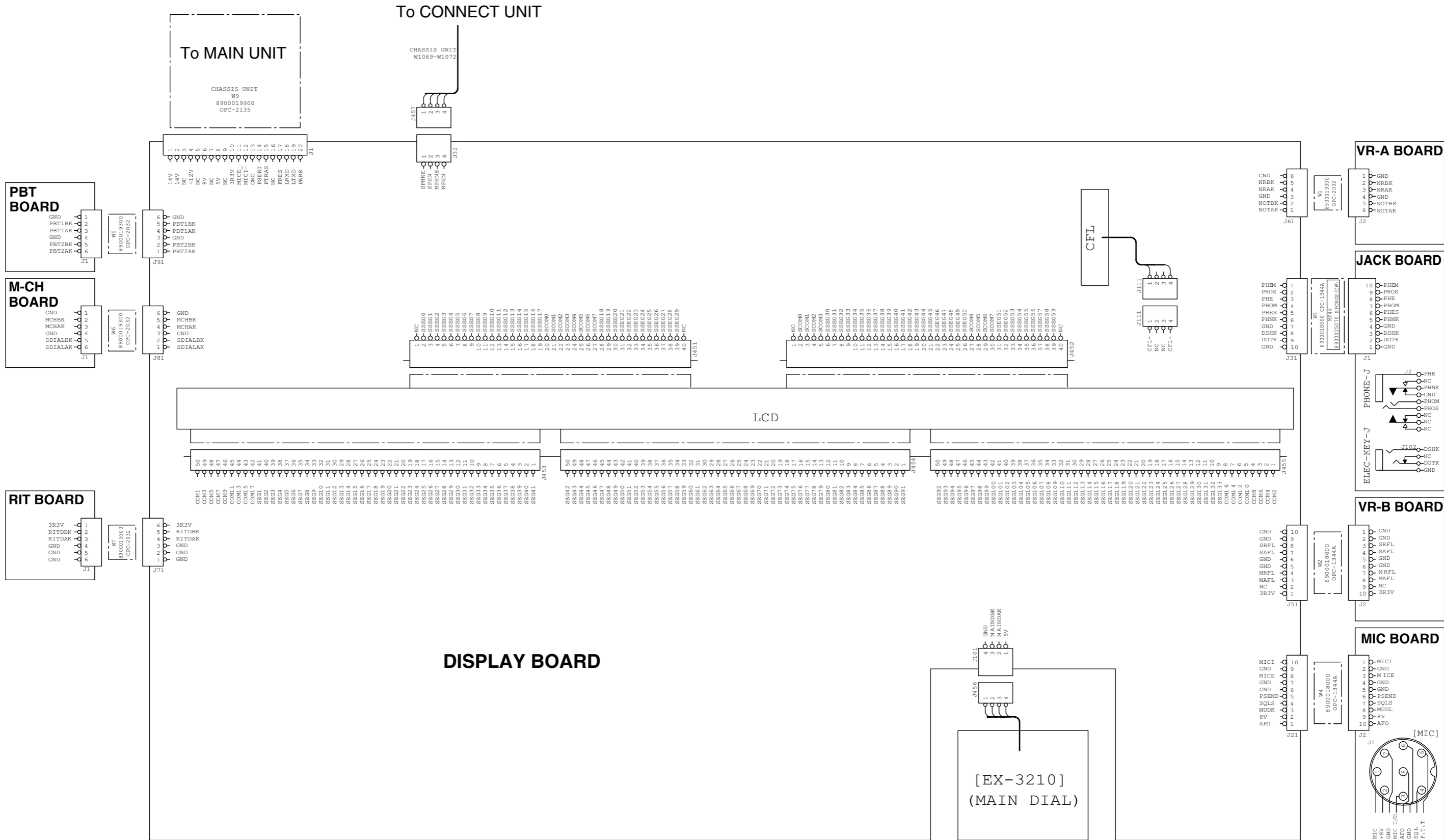
• RF-B UNIT  
(BOTTOM VIEW)





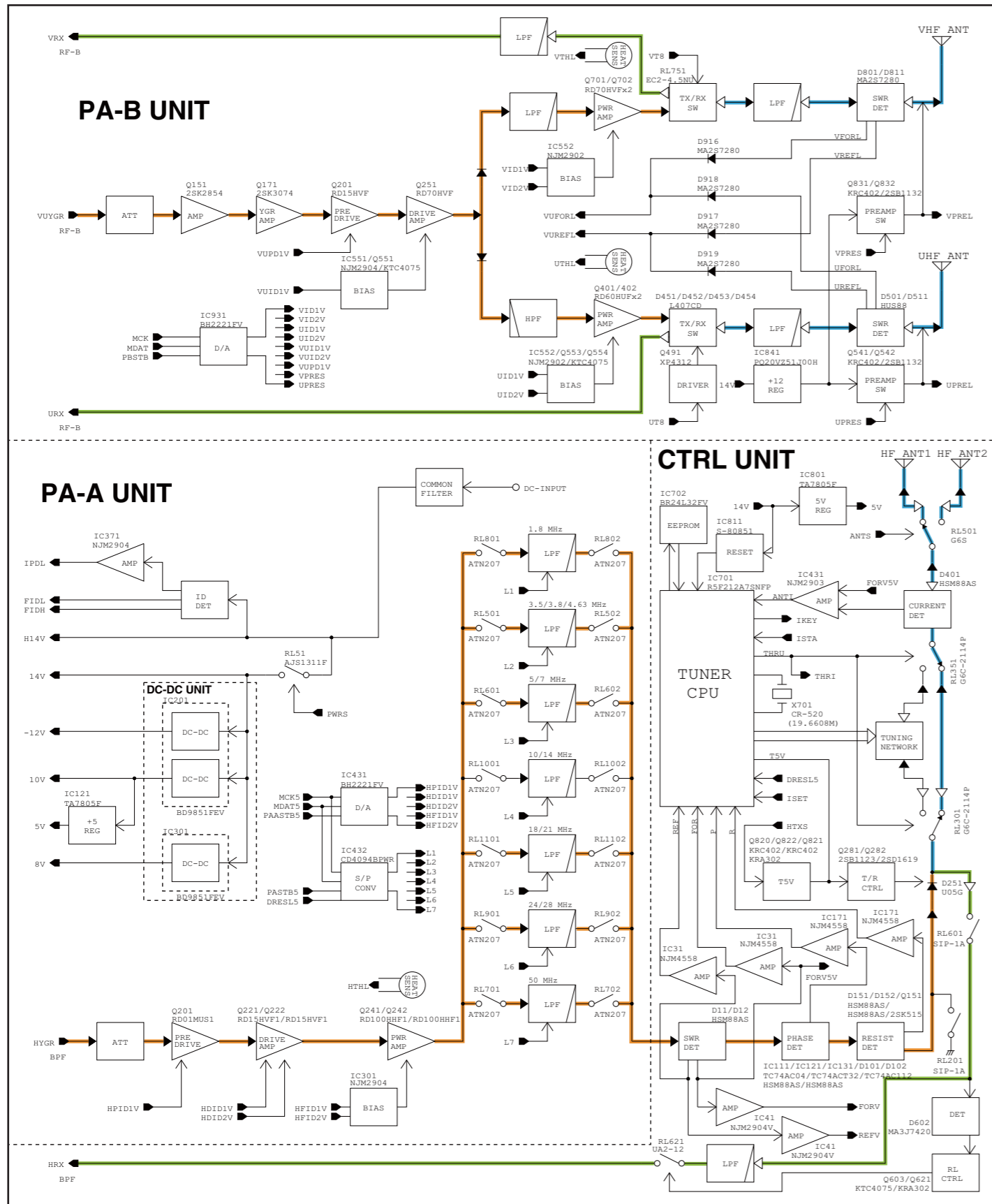


# FRONT UNIT

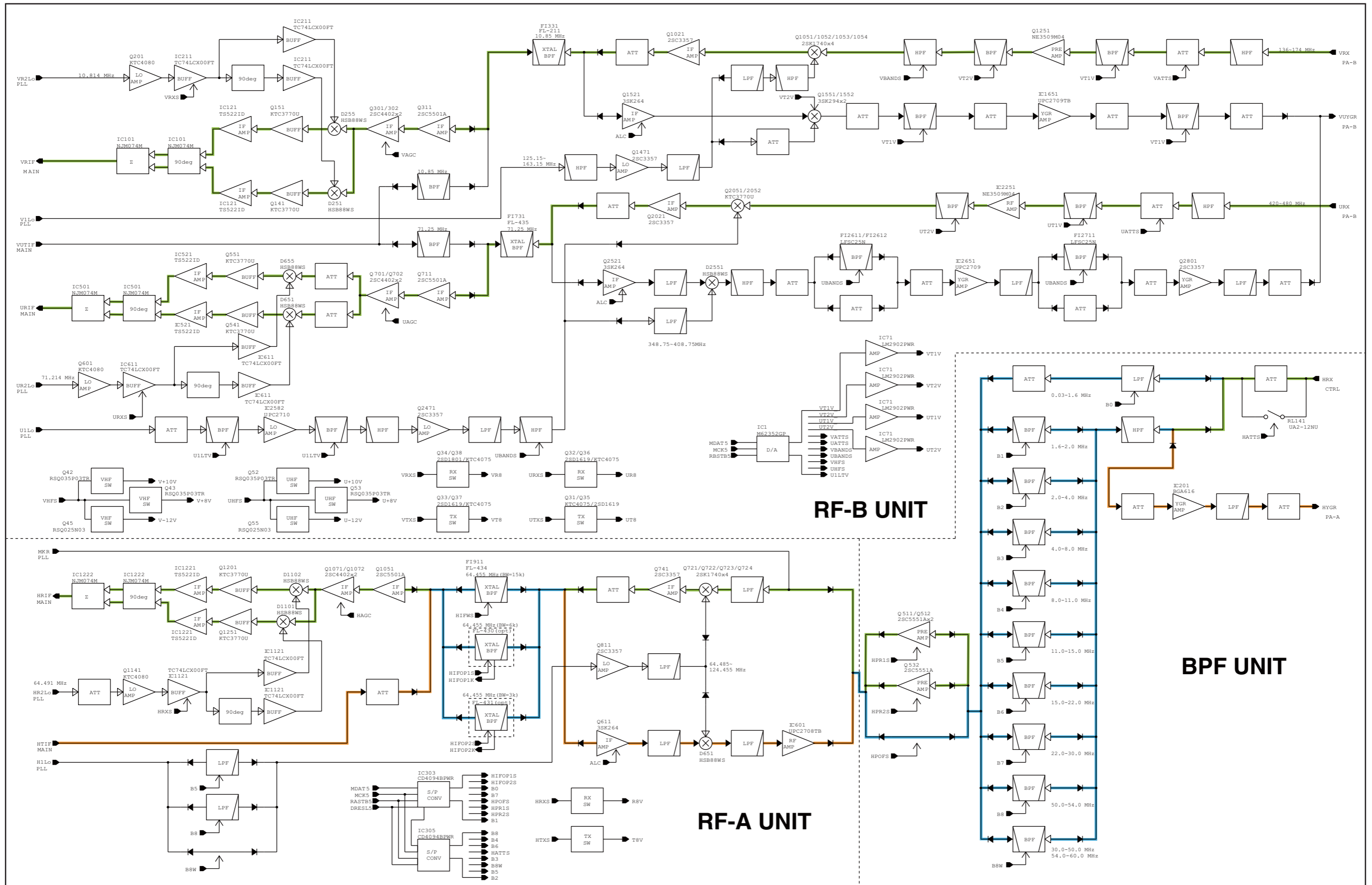


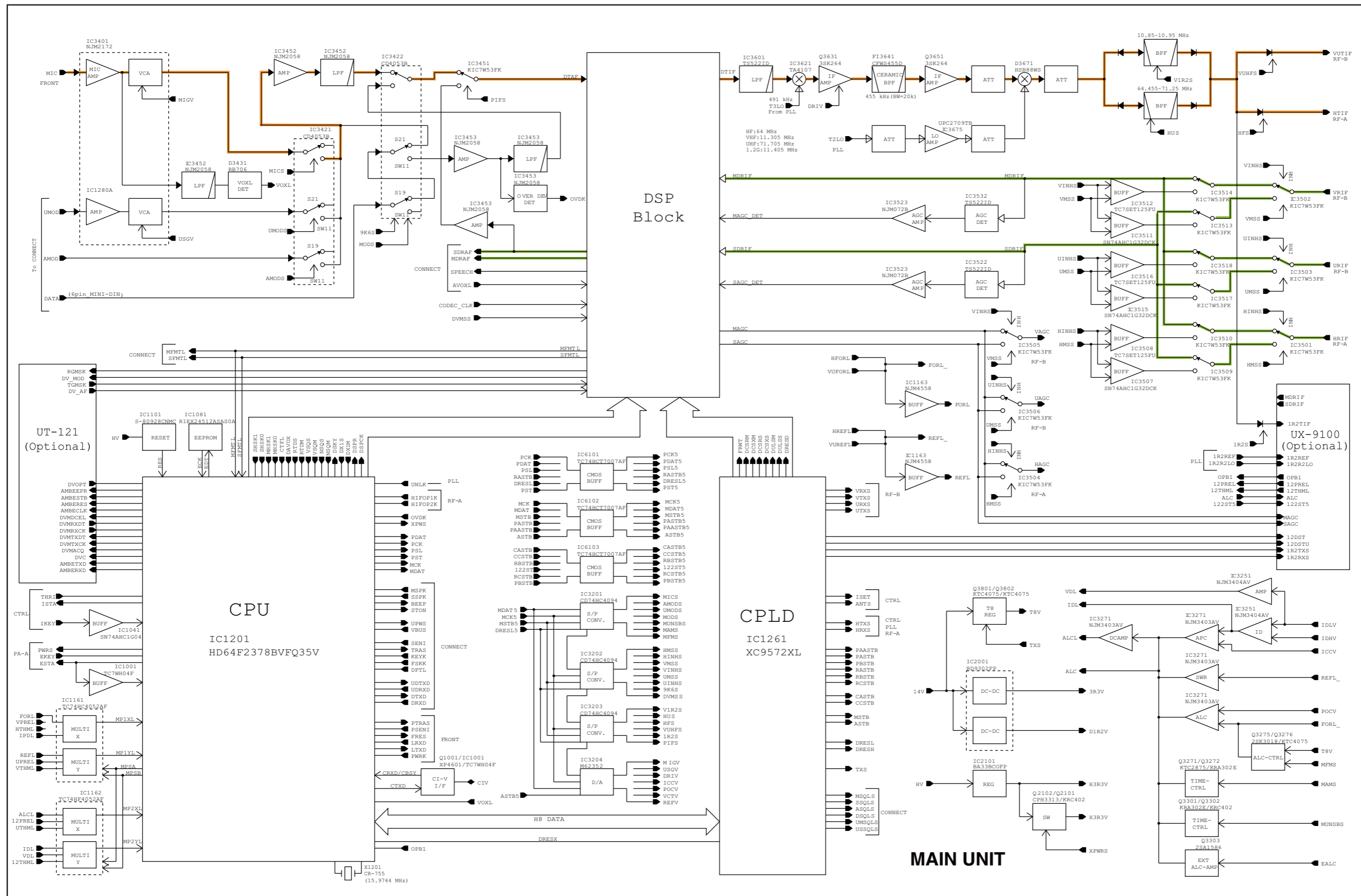
# SECTION 9

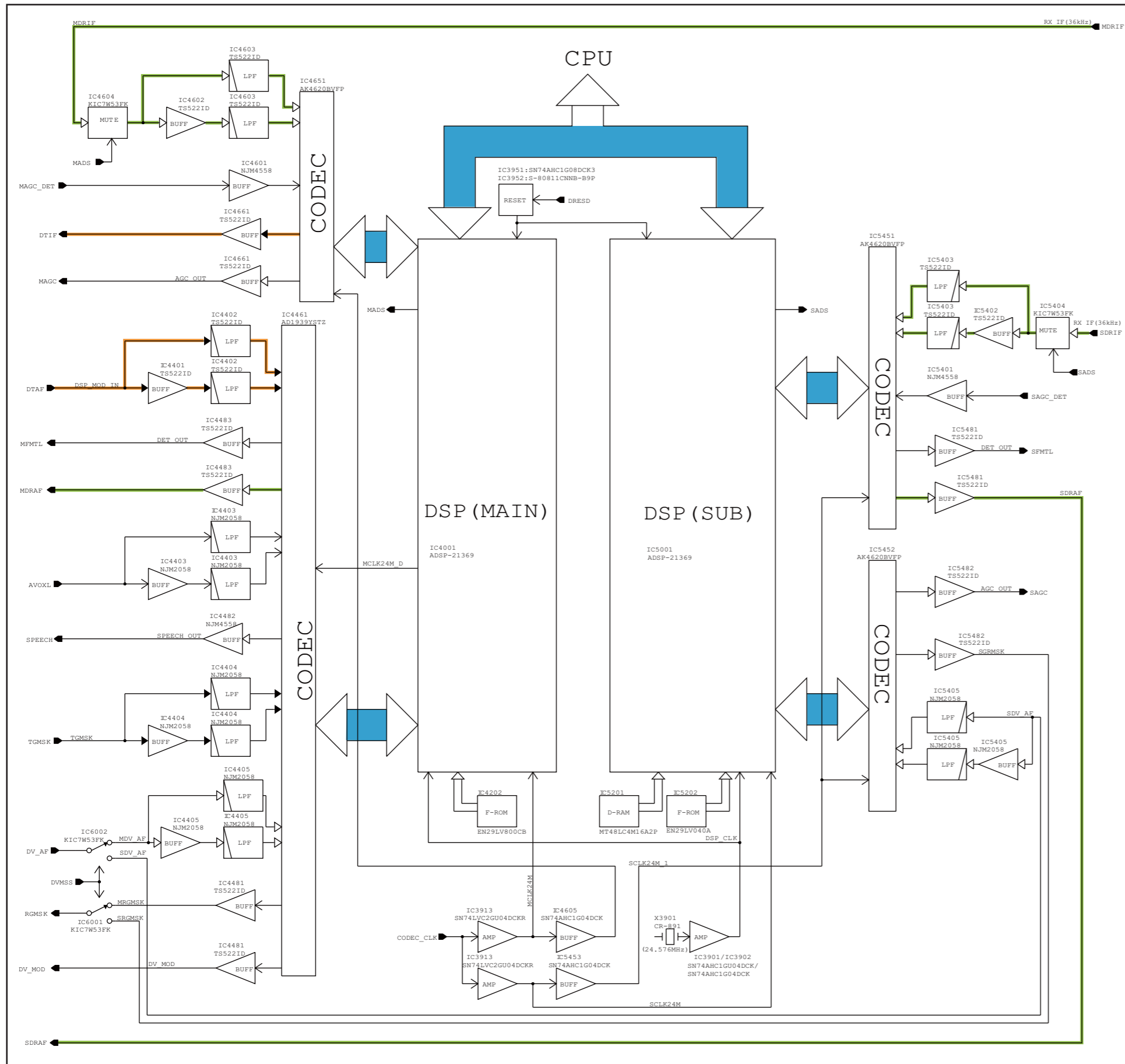
# BLOCK DIAGRAM

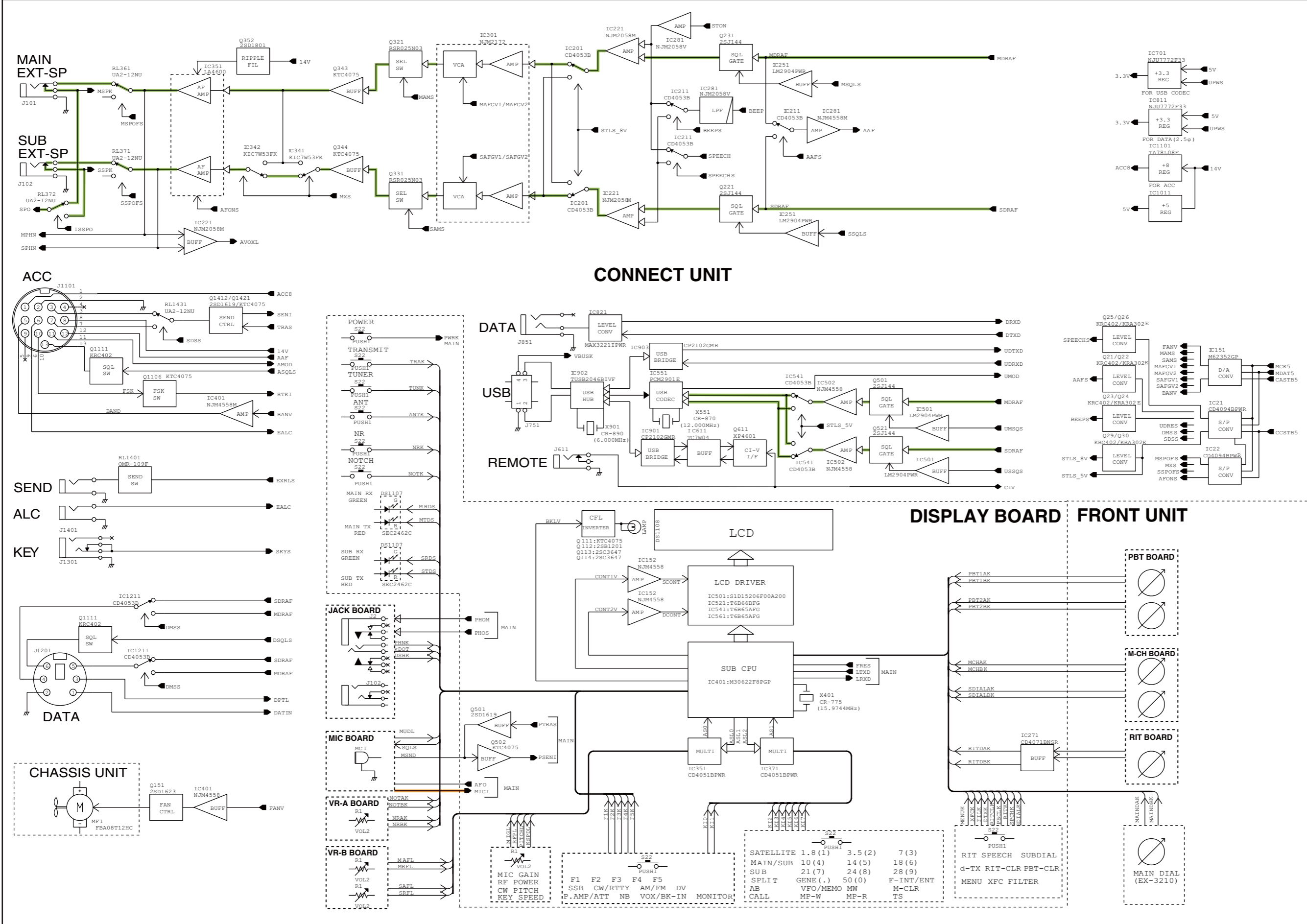


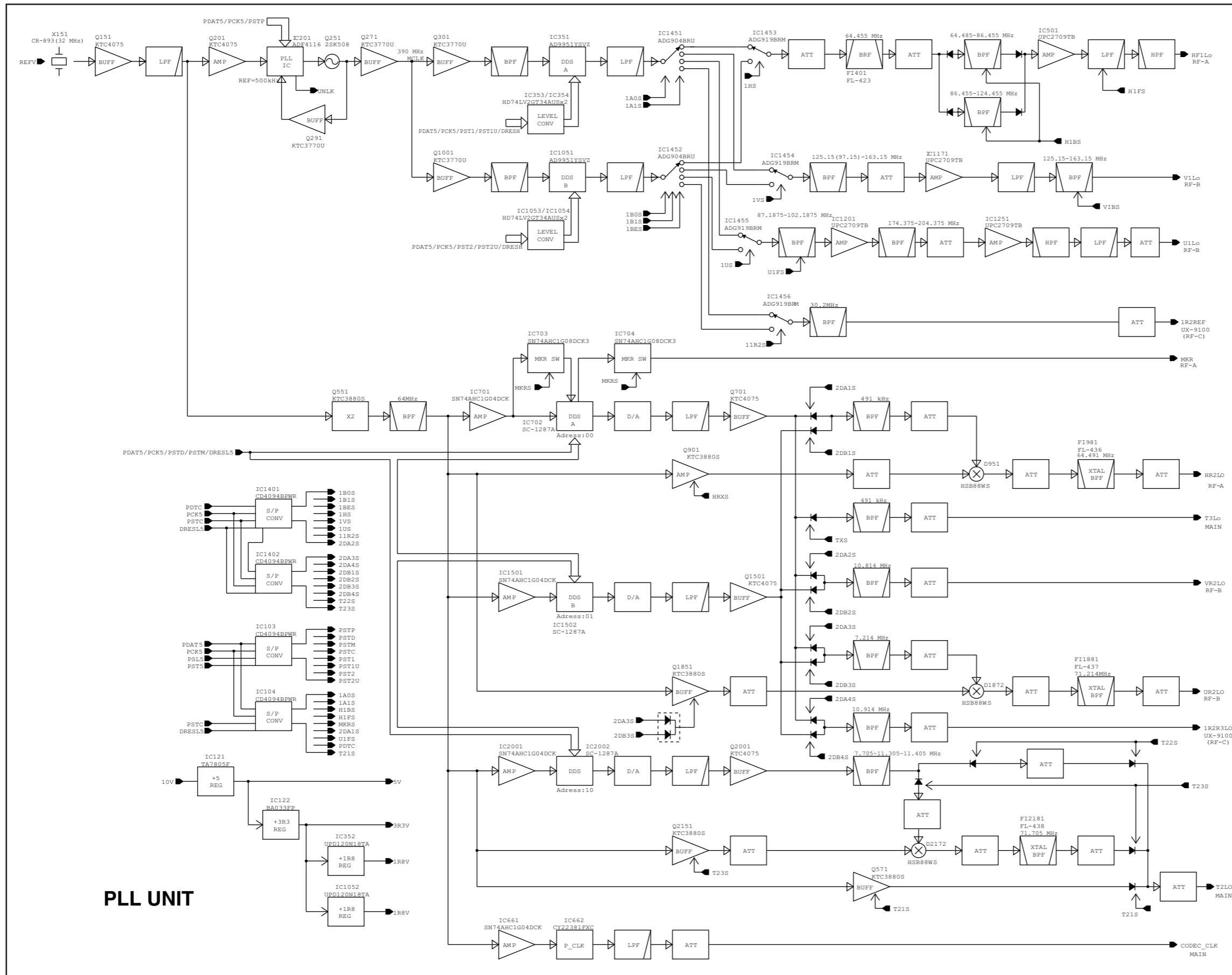




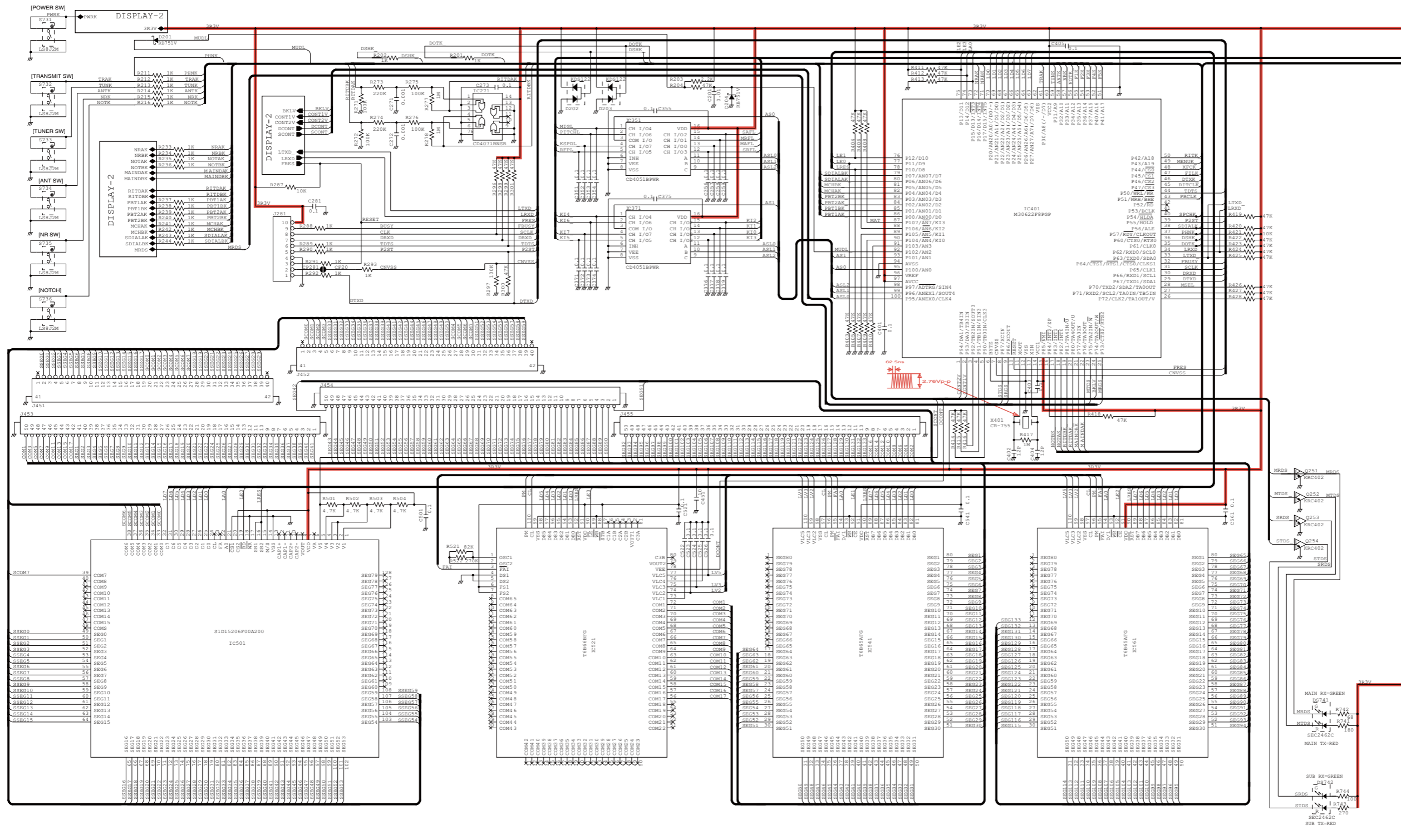




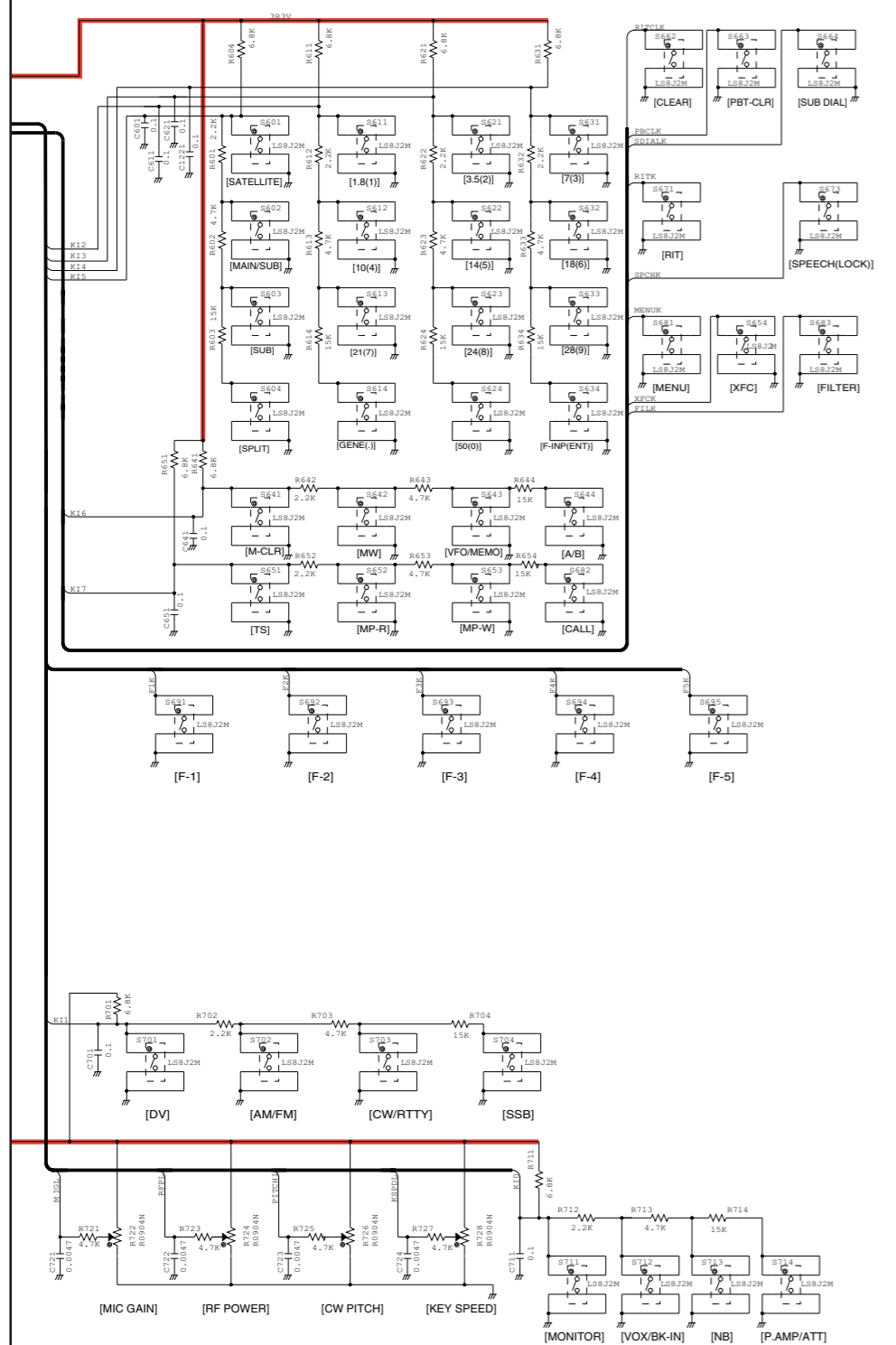




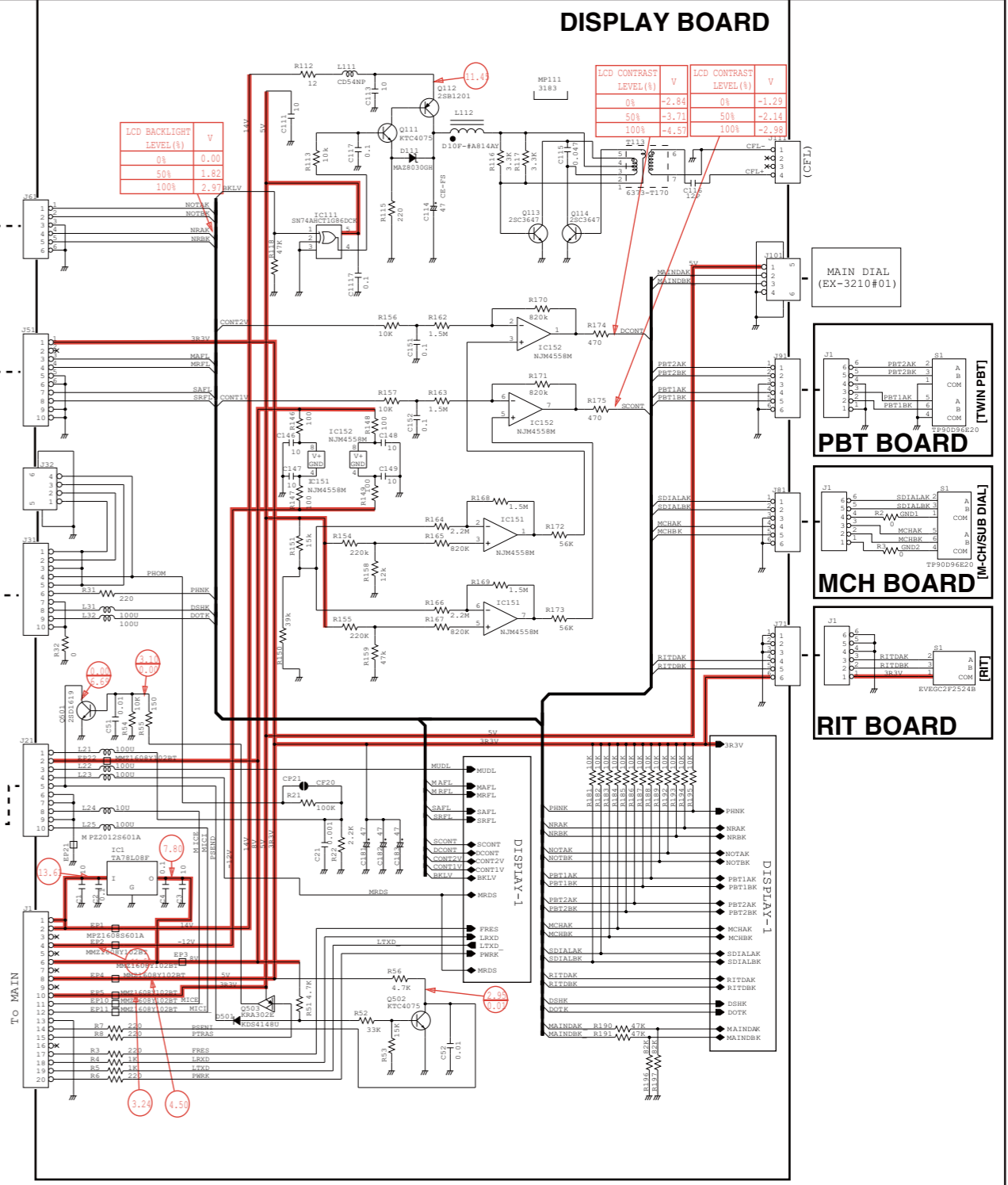
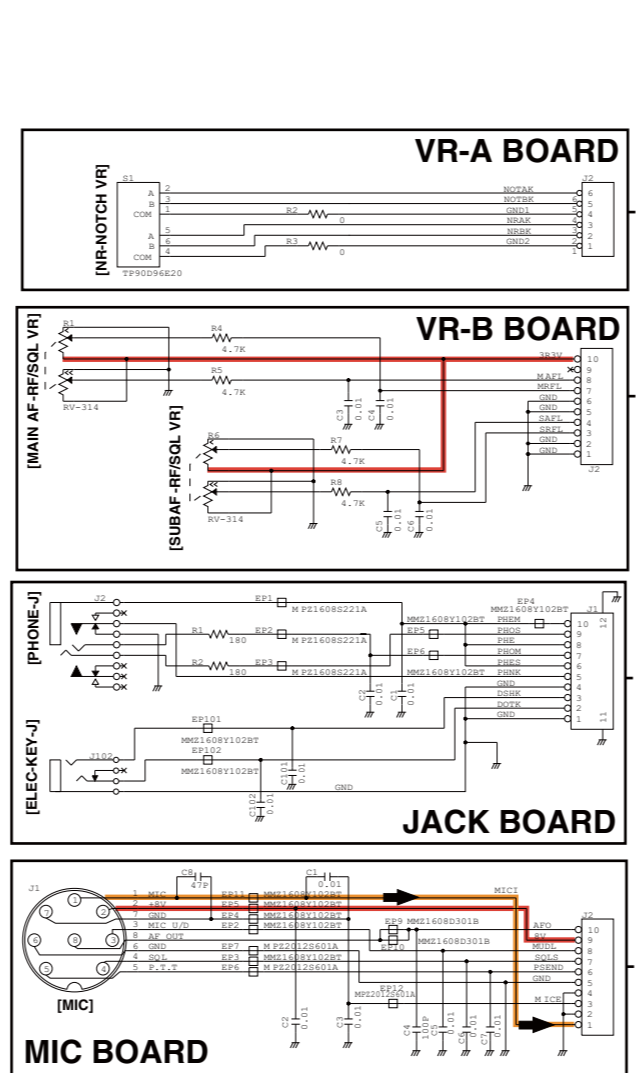
• DISPLAY BOARD (DISPLAY BOARD-1)



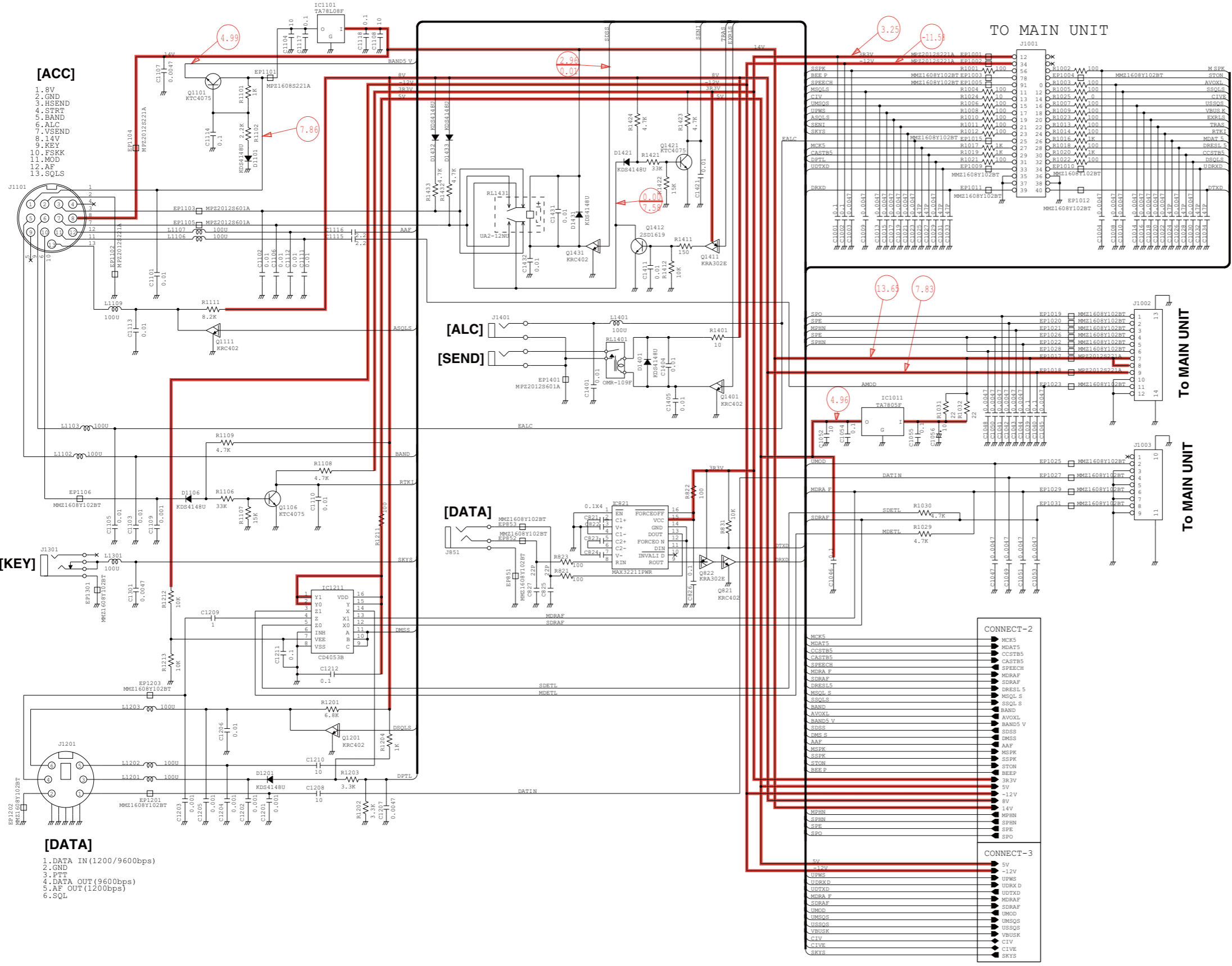
• DISPLAY BOARD (DISPLAY BOARD-1)



• DISPLAY BOARD (DISPLAY BOARD-2)

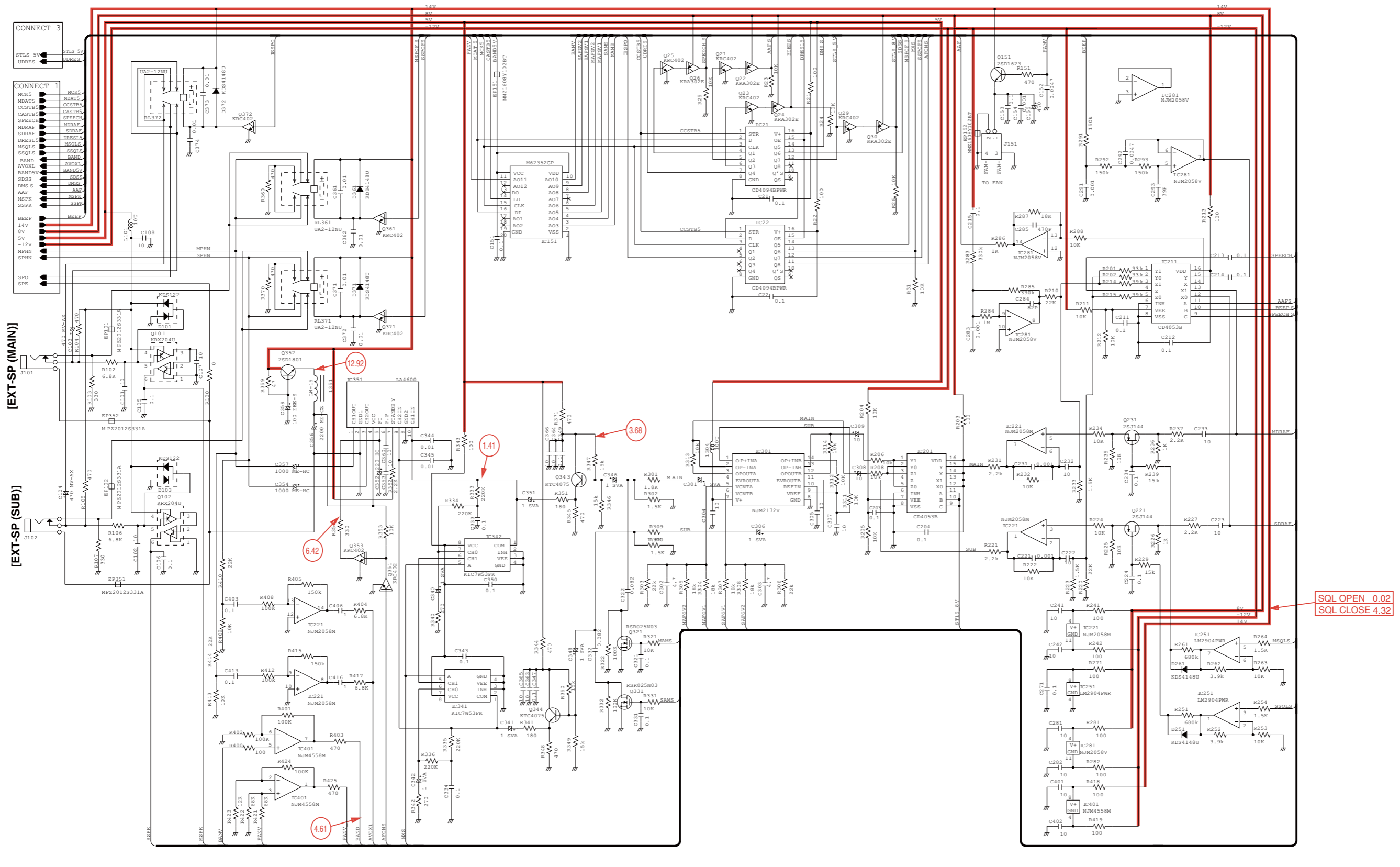


• CONNECT UNIT (CONNECT-1)

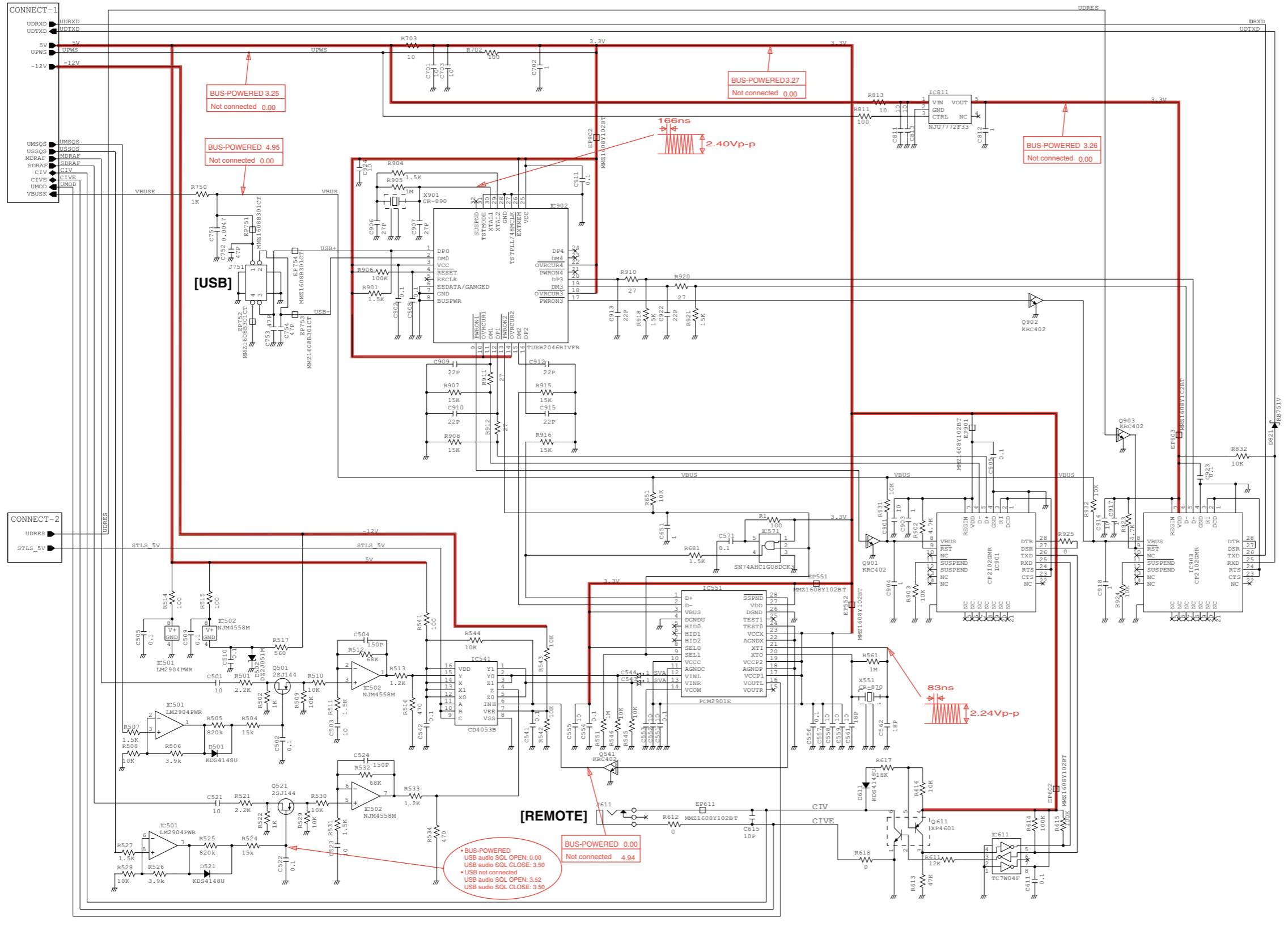




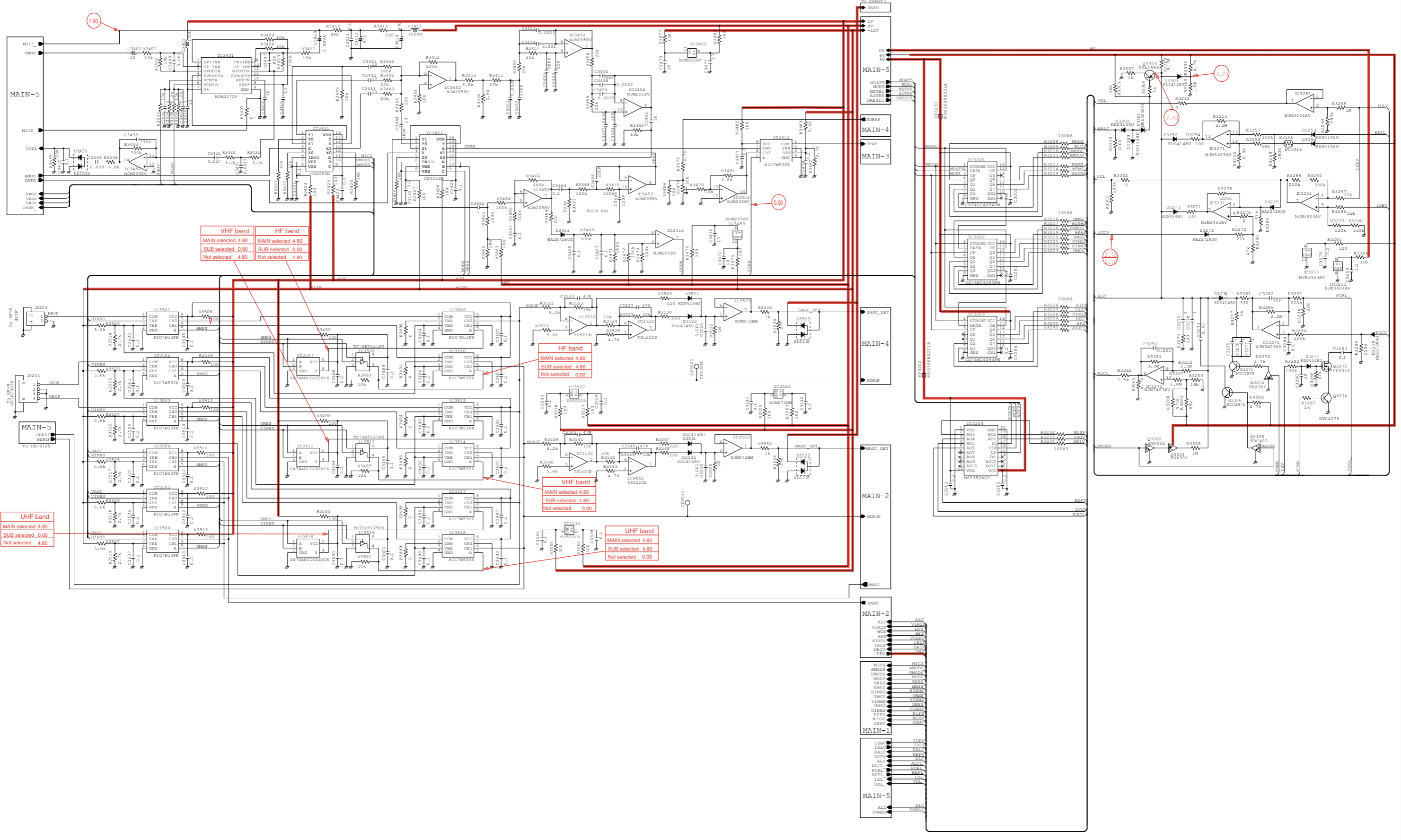
• CONNECT UNIT (CONNECT-2)



• CONNECT UNIT (CONNECT-3)

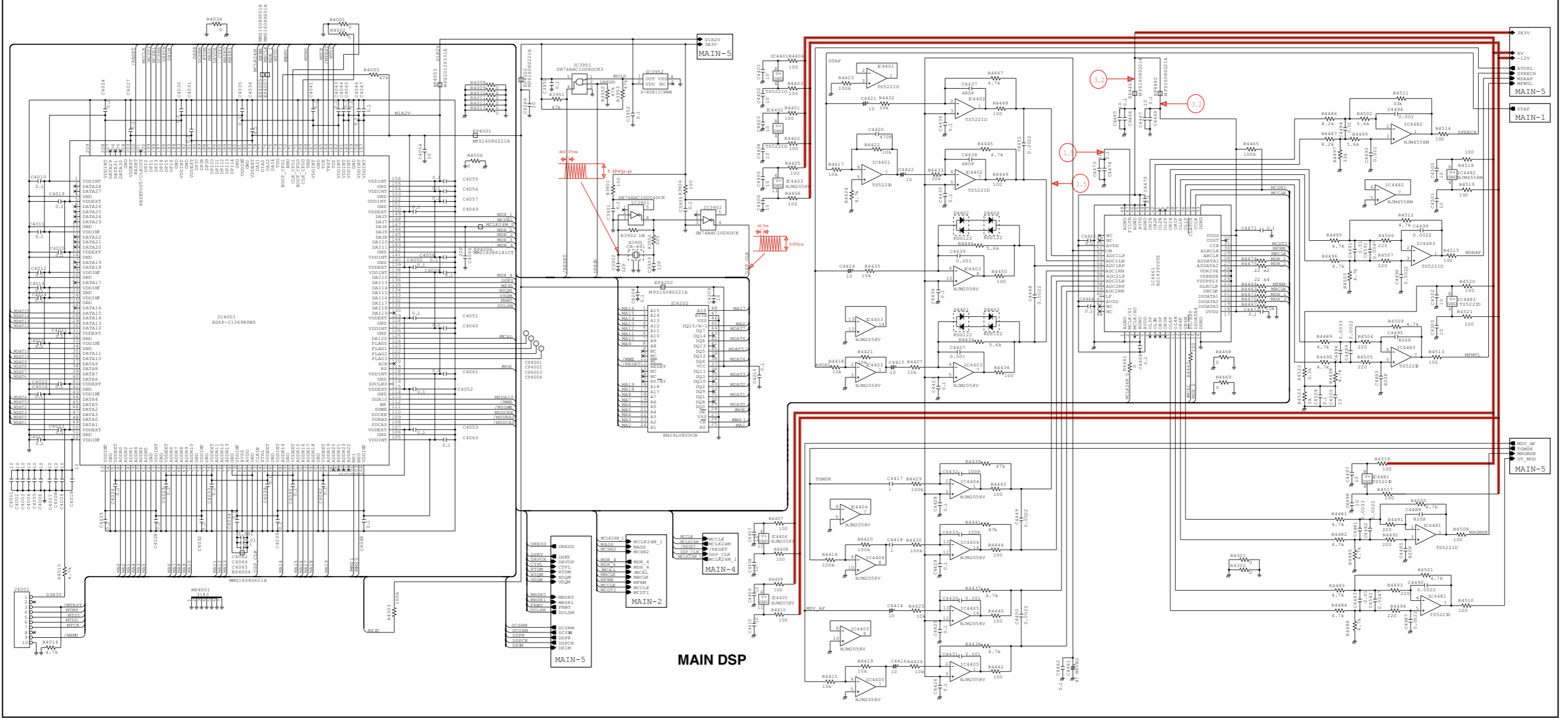


• MAIN UNIT (MAIN-1)

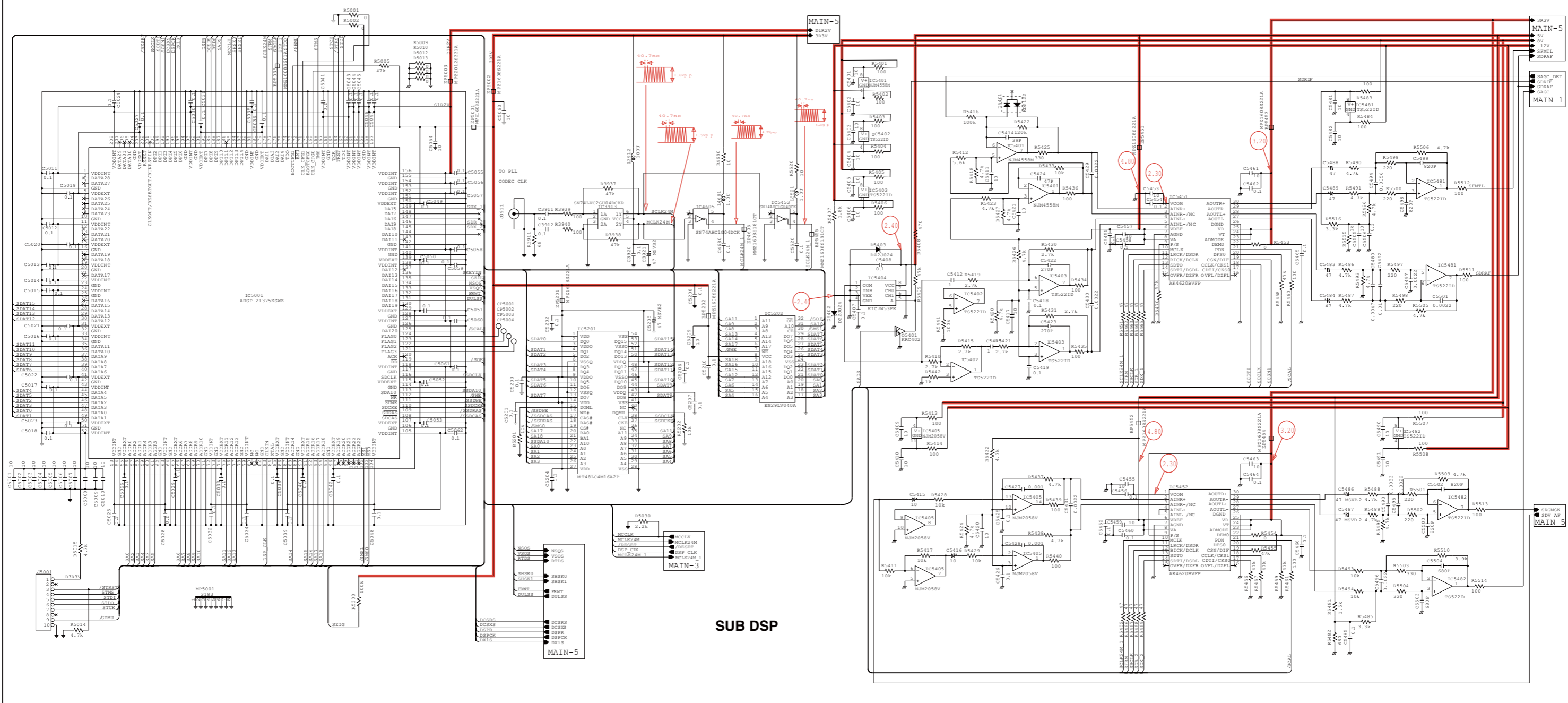




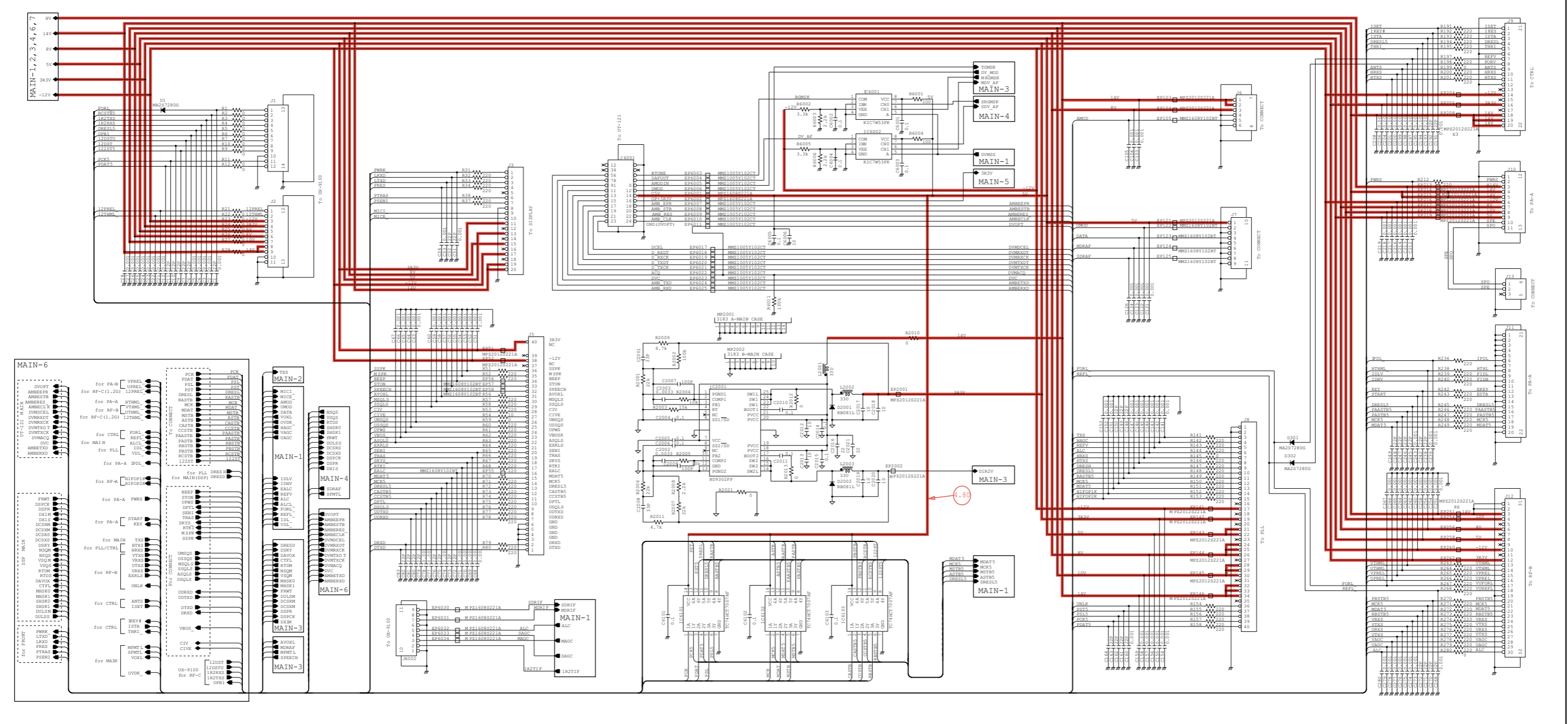
• MAIN UNIT (MAIN-3)



• MAIN UNIT (MAIN-4)



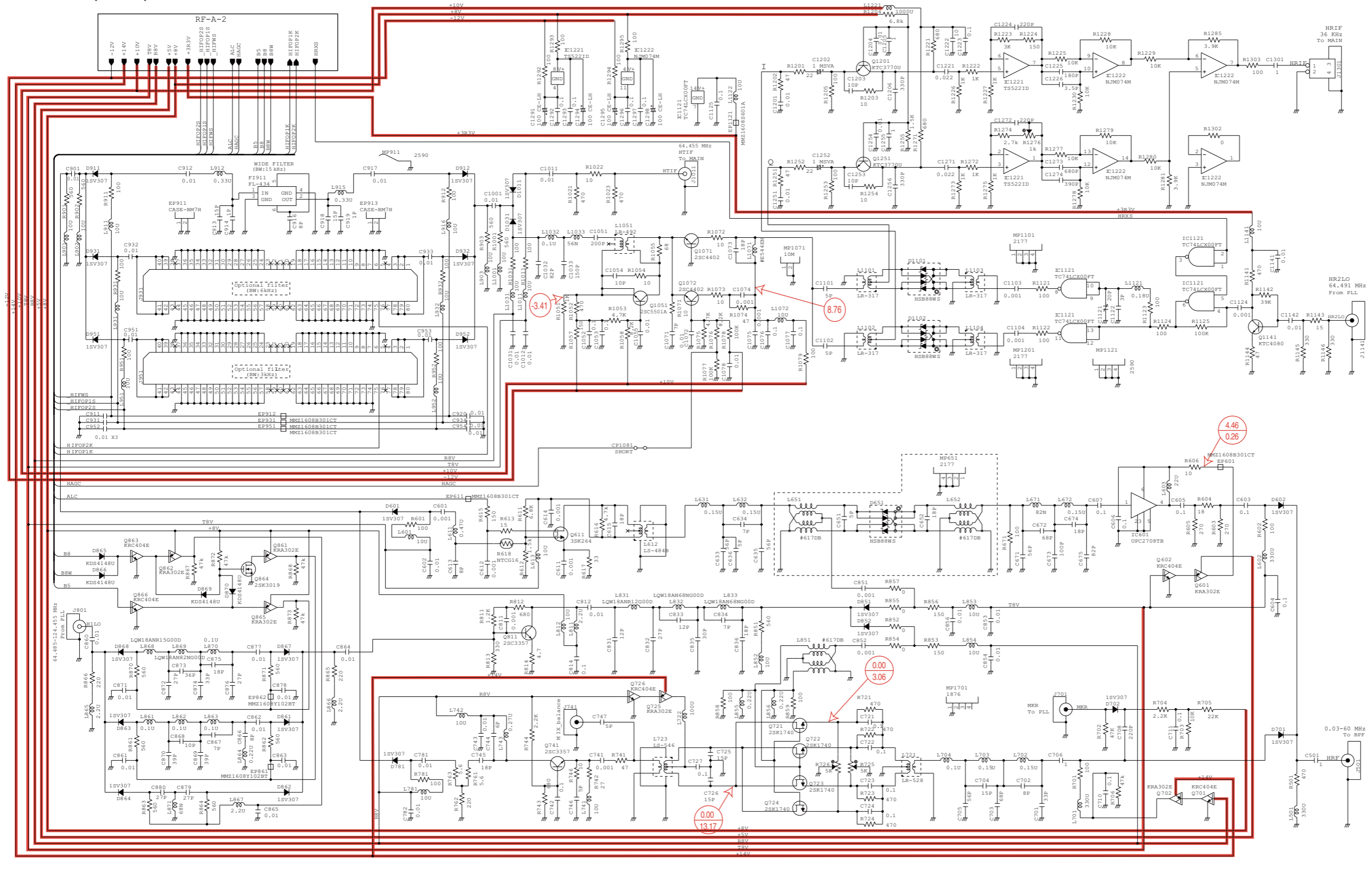
• MAIN UNIT (MAIN-5)





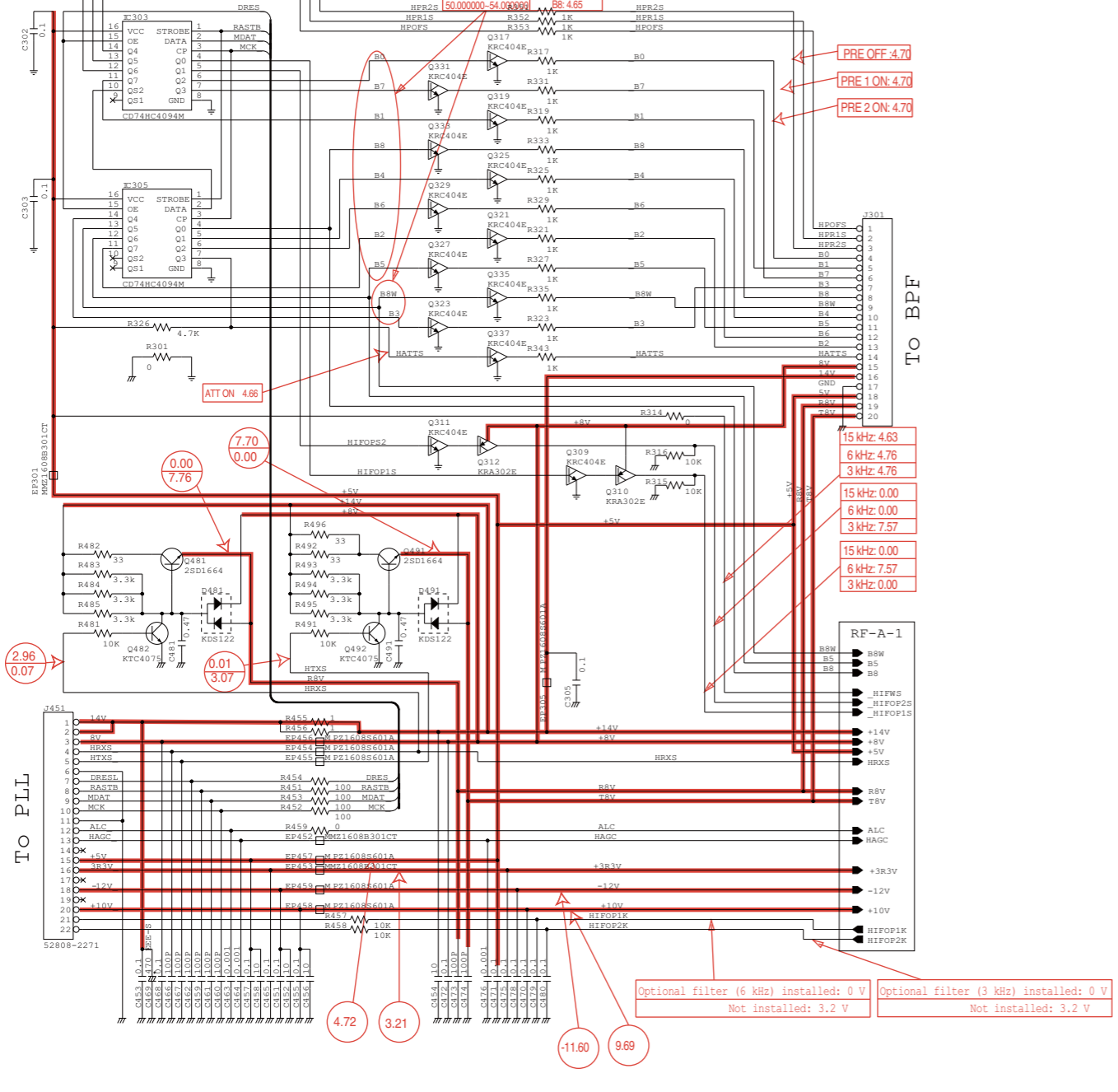


• RF-A UNIT (RF-A-1)



• 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

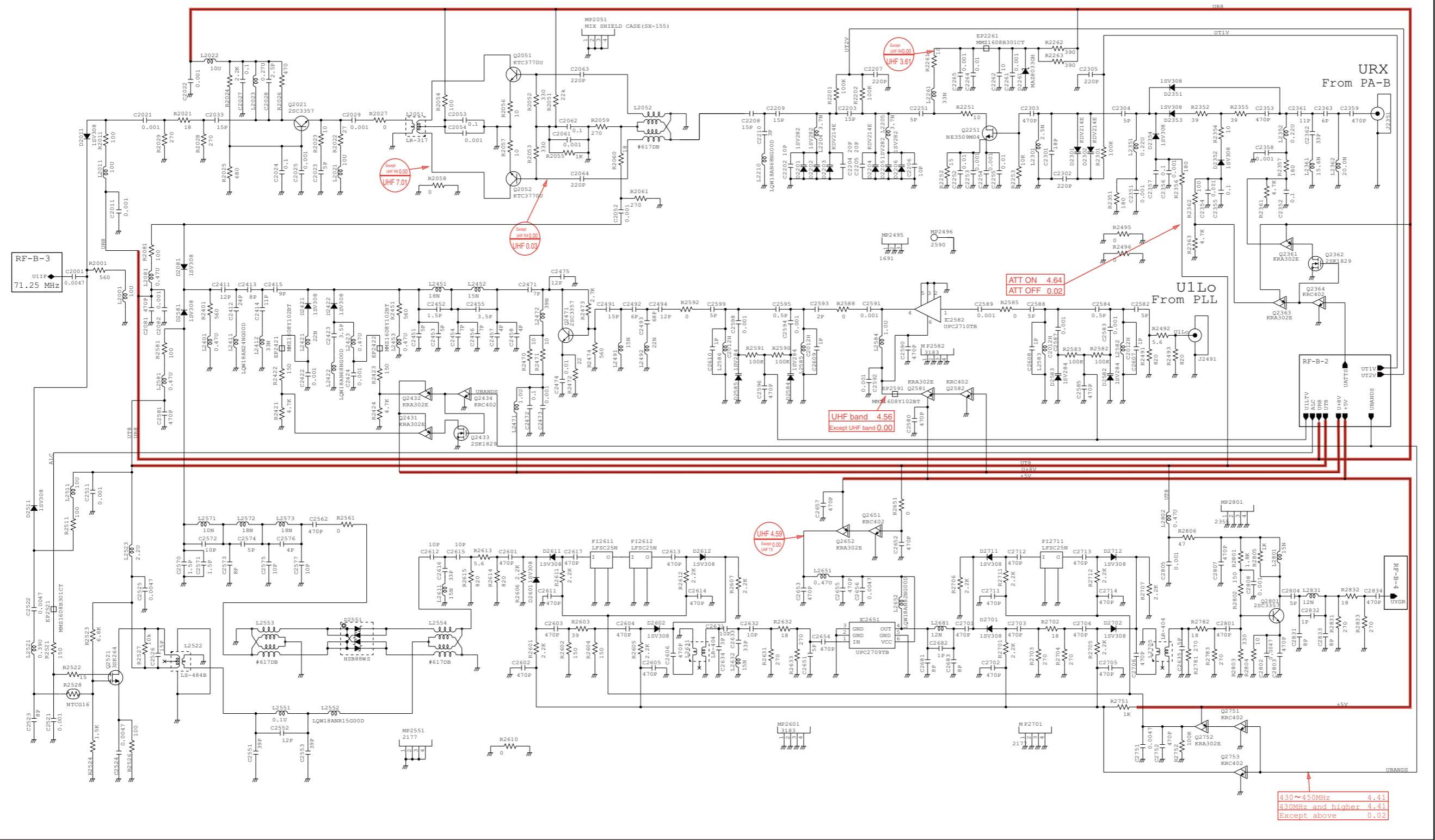


PRE OFF: 4.70  
 PRE 1 ON: 4.70  
 PRE 2 ON: 4.70

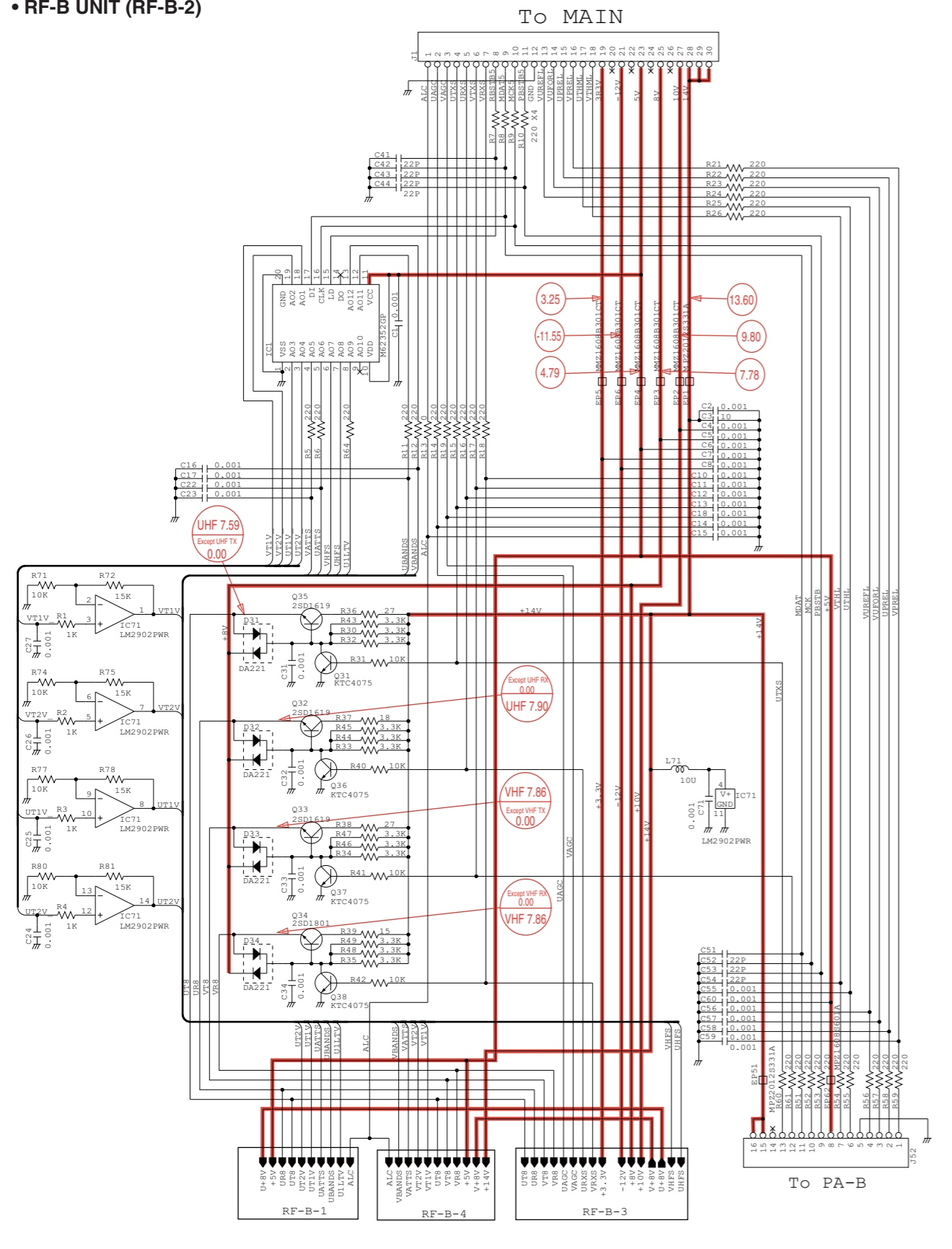
15 kHz: 4.63  
 6 kHz: 4.76  
 3 kHz: 4.76  
 15 kHz: 0.00  
 6 kHz: 0.00  
 3 kHz: 7.57  
 15 kHz: 0.00  
 6 kHz: 7.57  
 3 kHz: 0.00

Optional filter (6 kHz) installed: 0 V  
 Not installed: 3.2 V  
 Optional filter (3 kHz) installed: 0 V  
 Not installed: 3.2 V

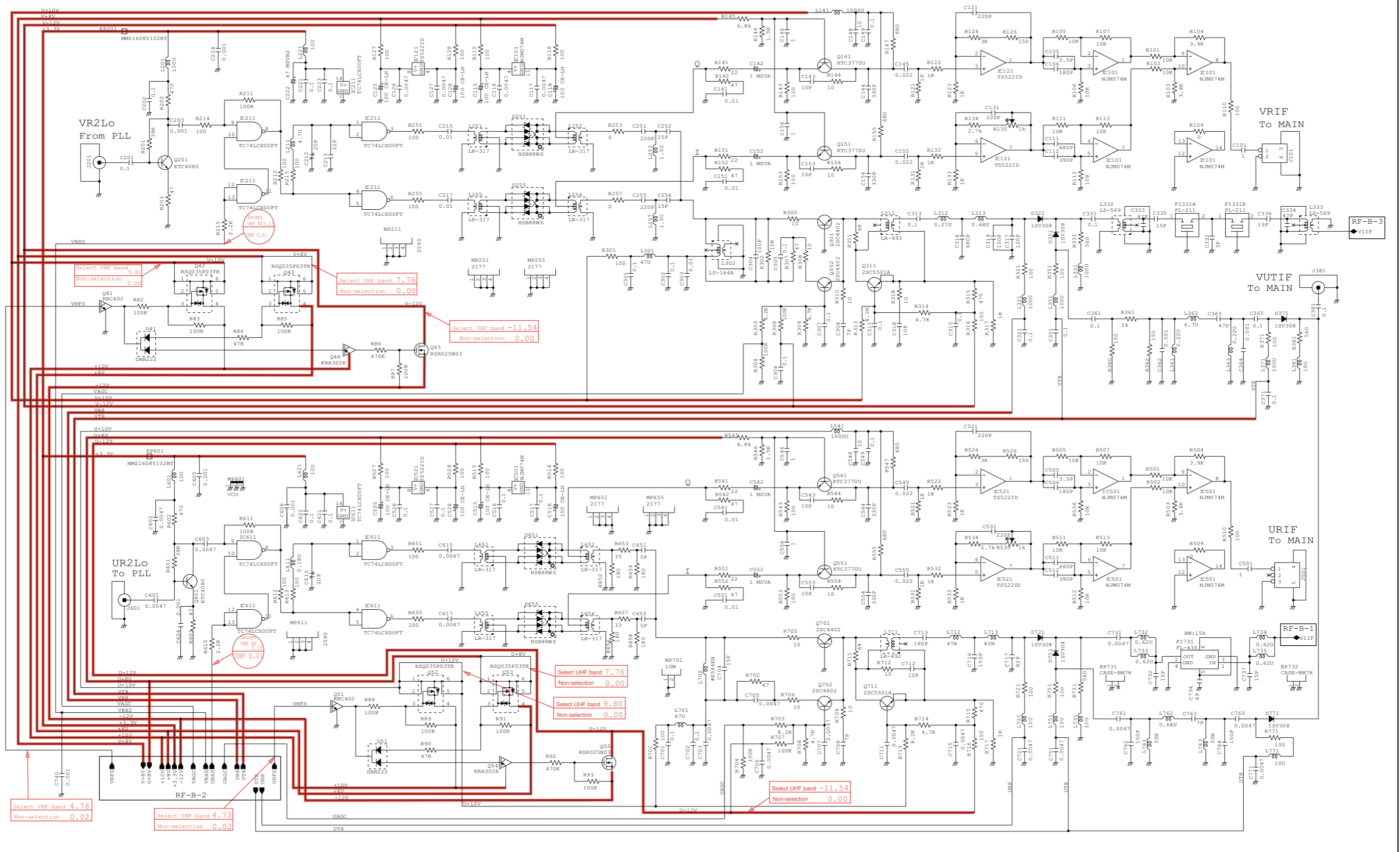
• RF-B UNIT (RF-B-1)



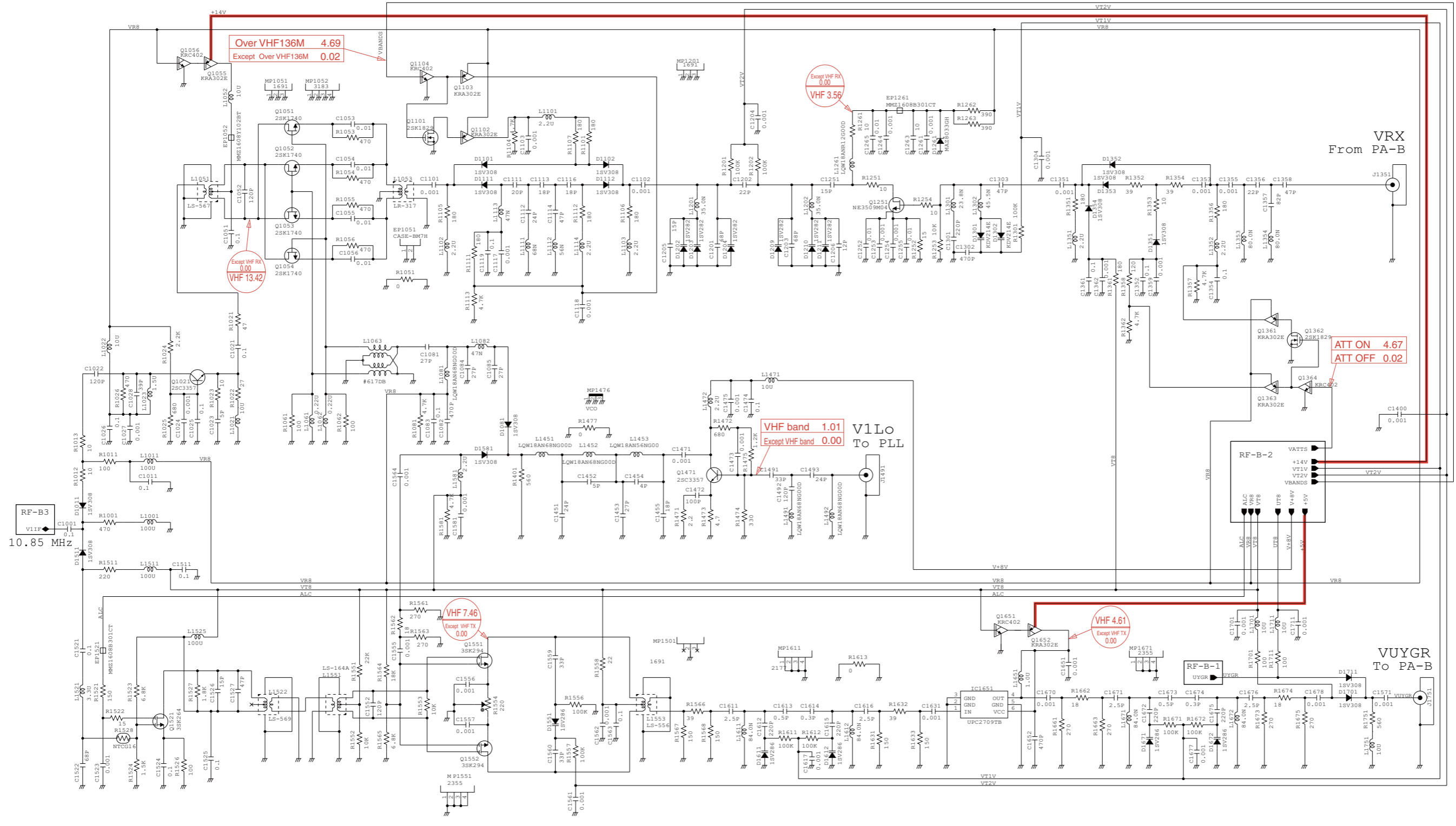
• RF-B UNIT (RF-B-2)



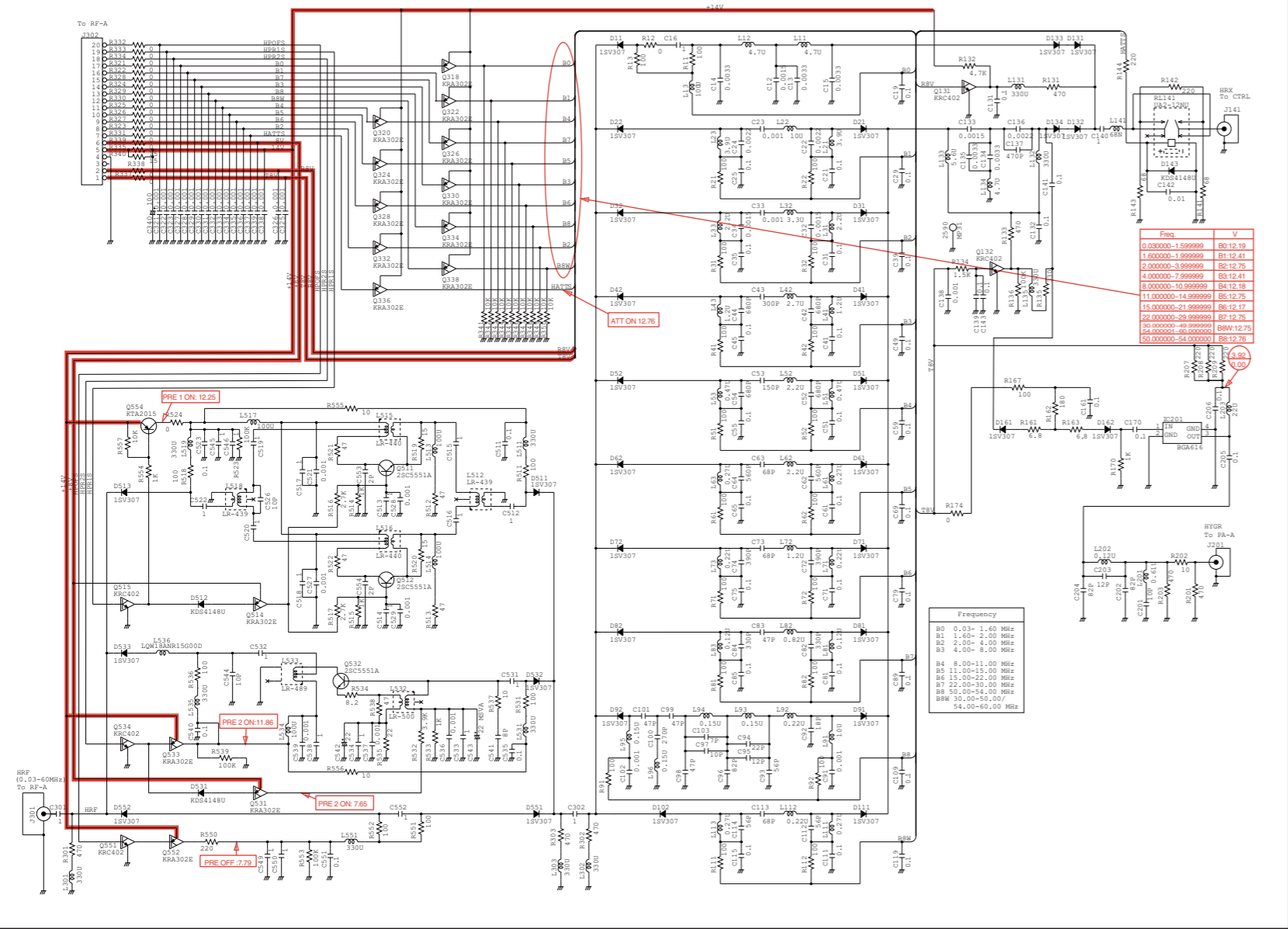
• RF-B UNIT (RF-B-3)



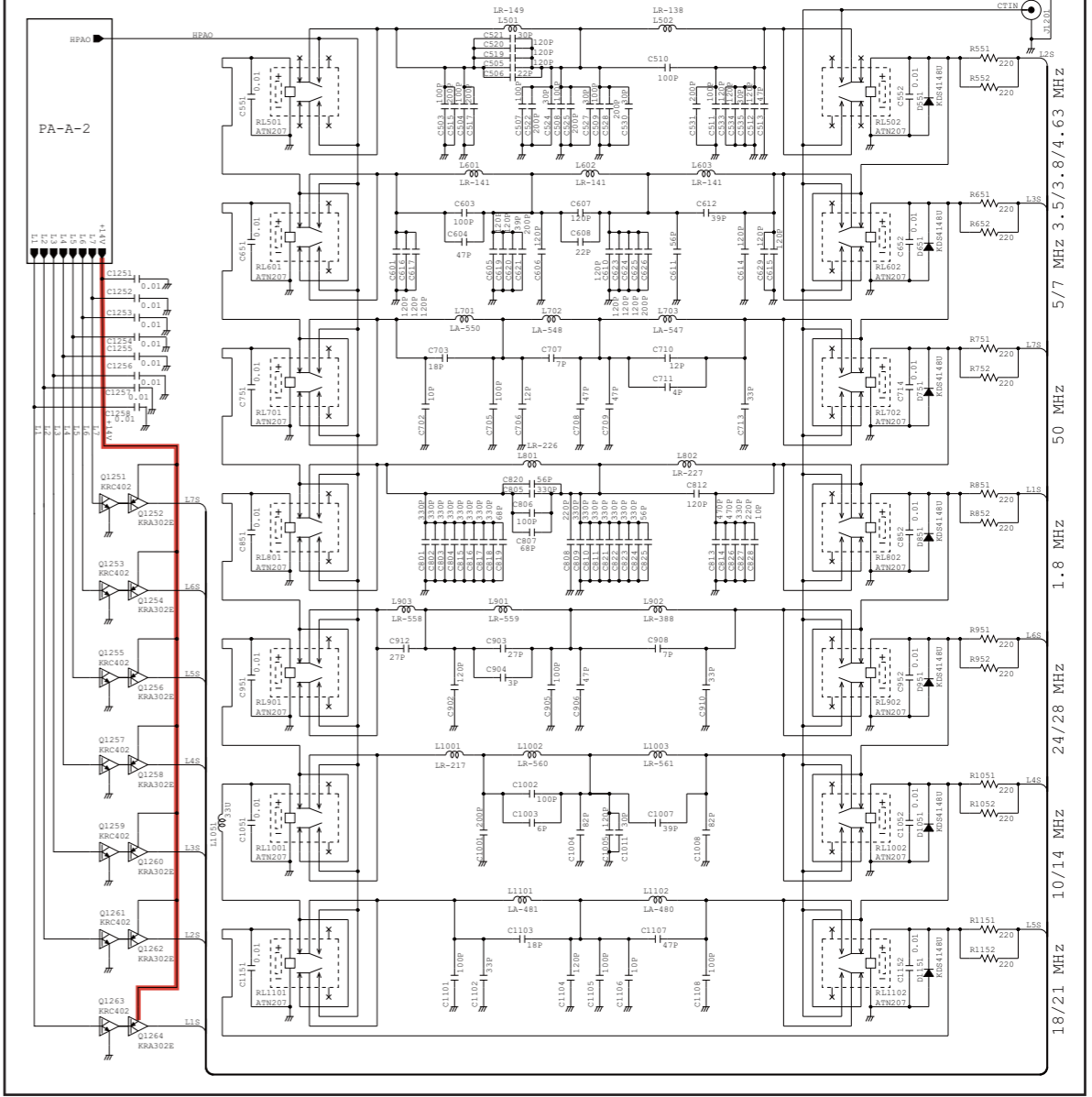
• RF-B UNIT (RF-B-4)



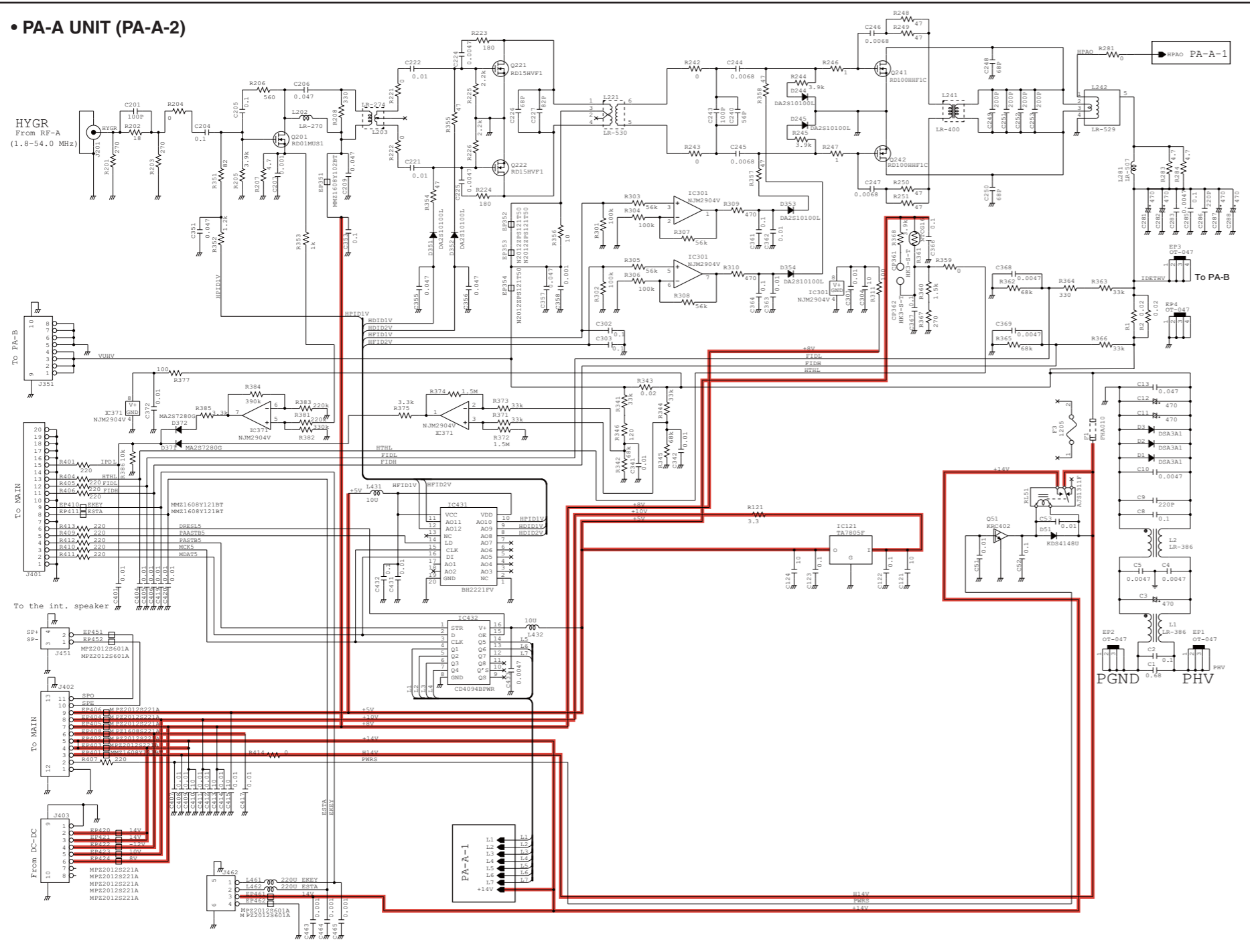
• BPF UNIT



• PA-A UNIT (PA-A-1)

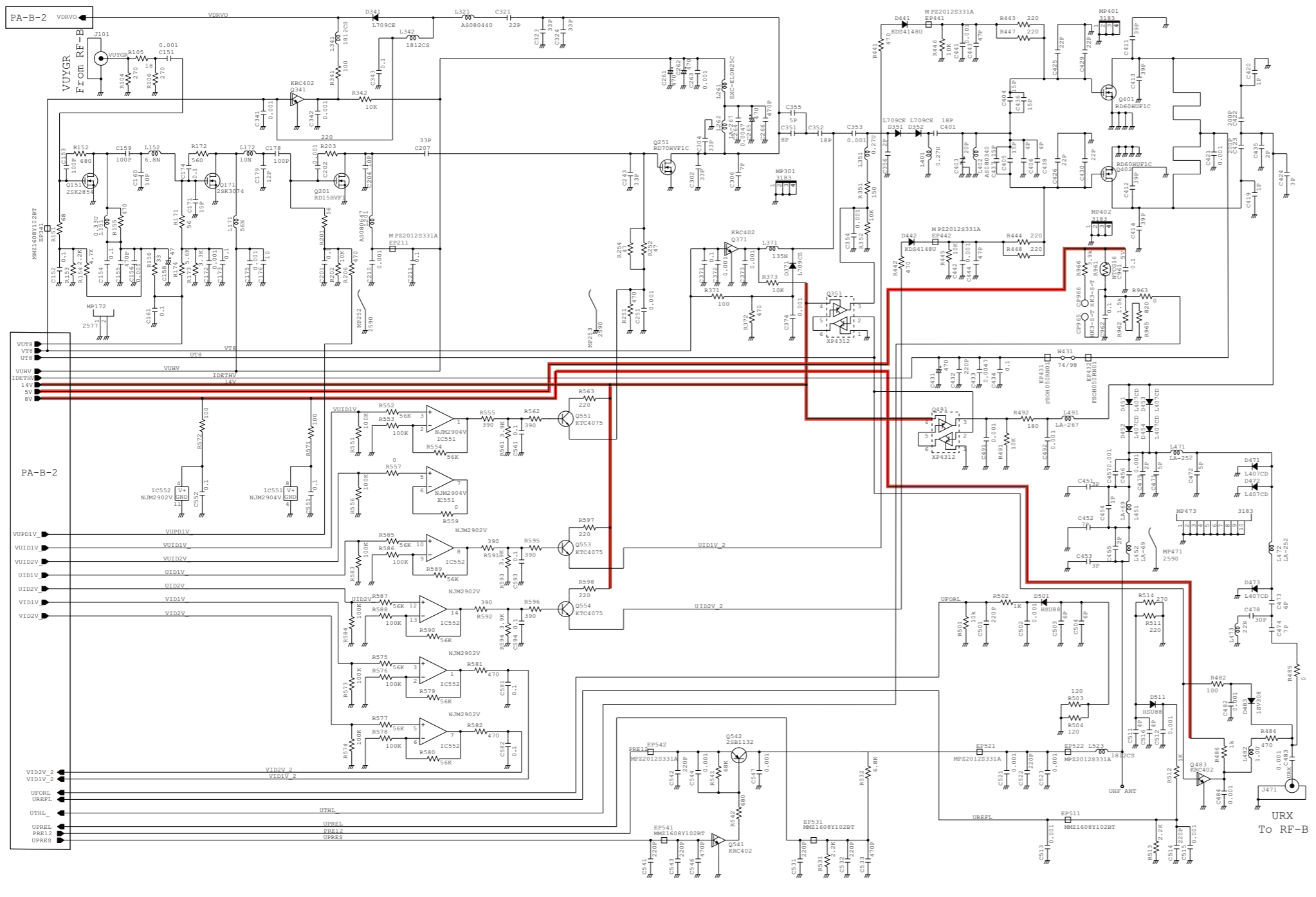


• PA-A UNIT (PA-A-2)

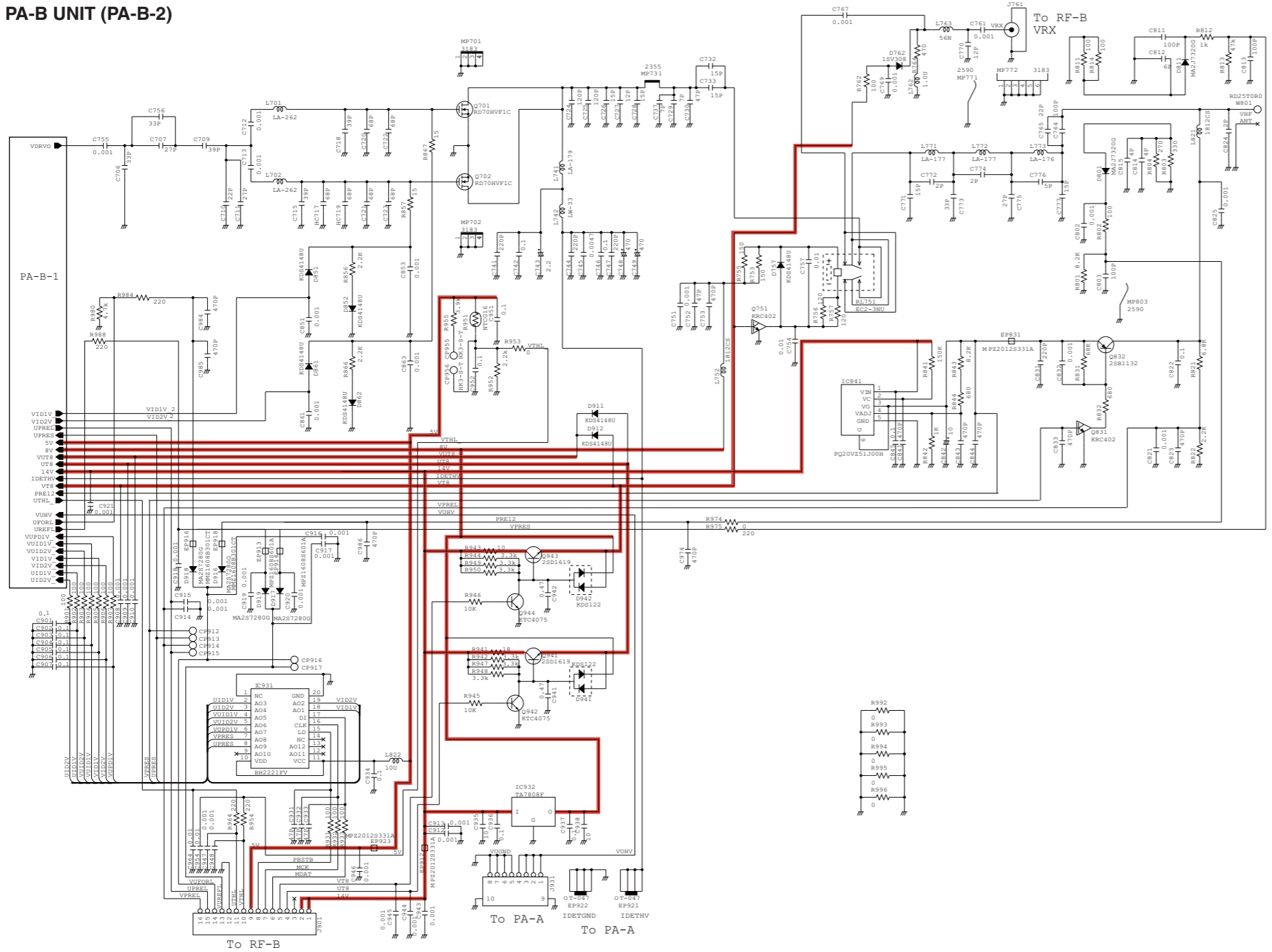




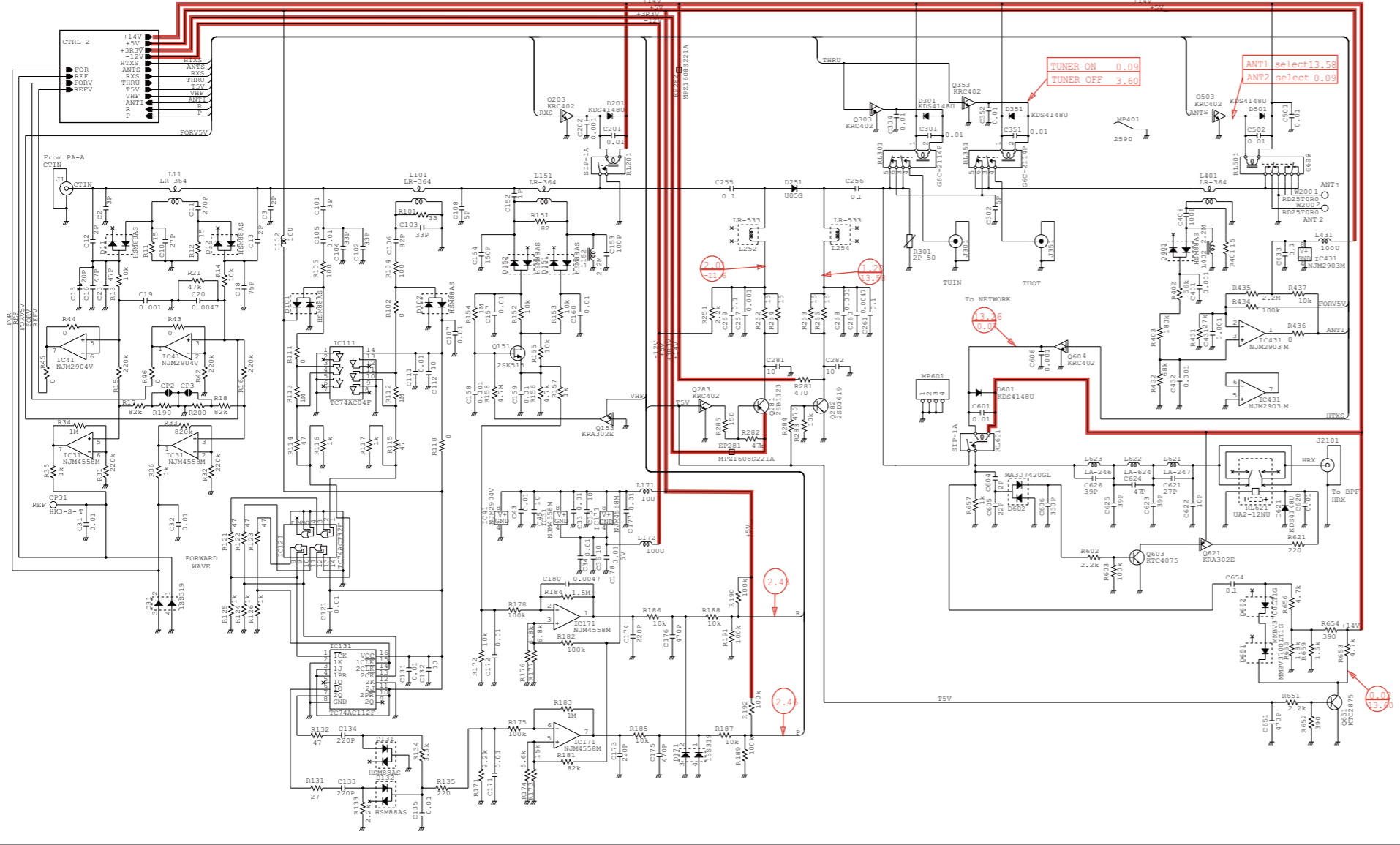
• PA-B UNIT (PA-B-1)



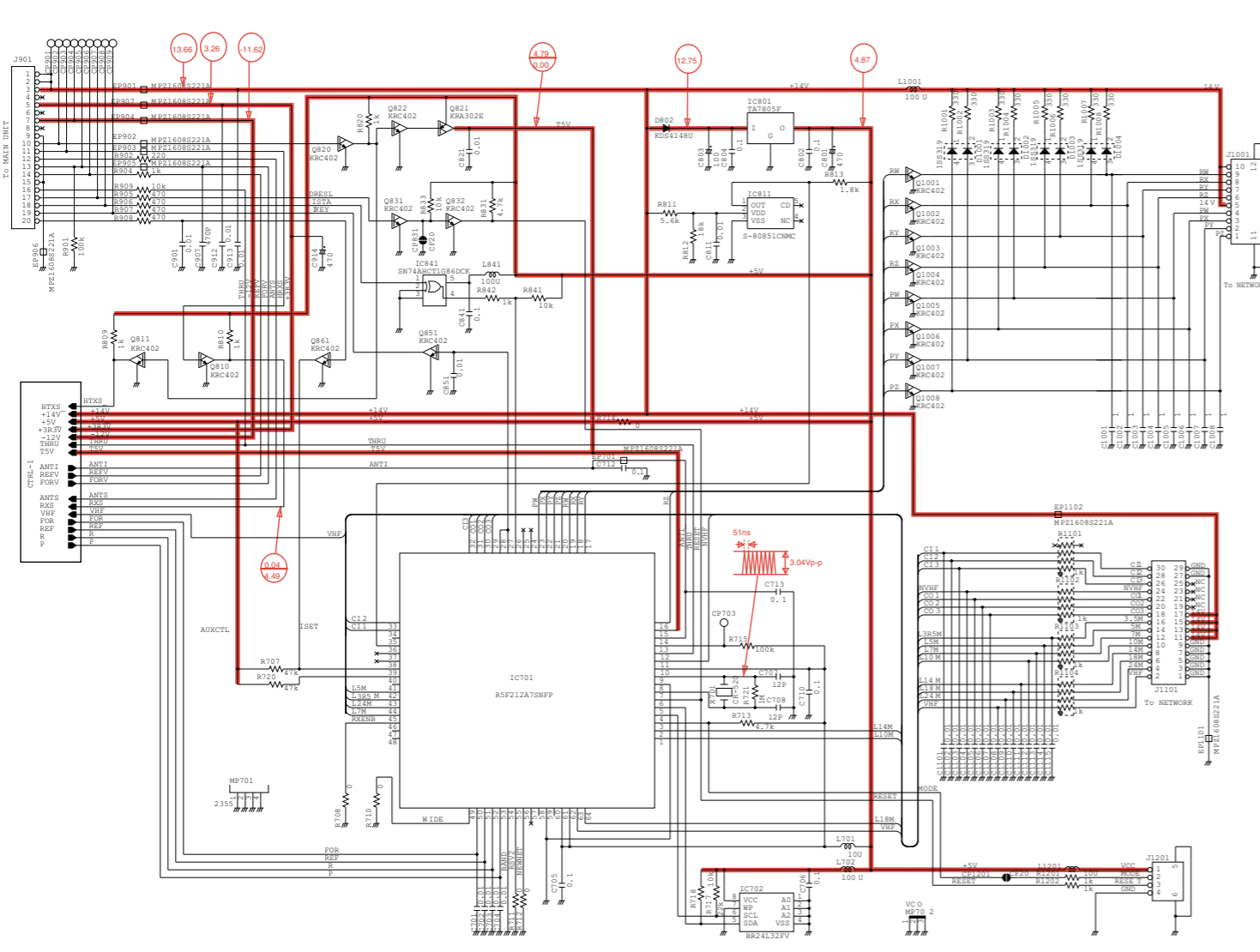
• PA-B UNIT (PA-B-2)



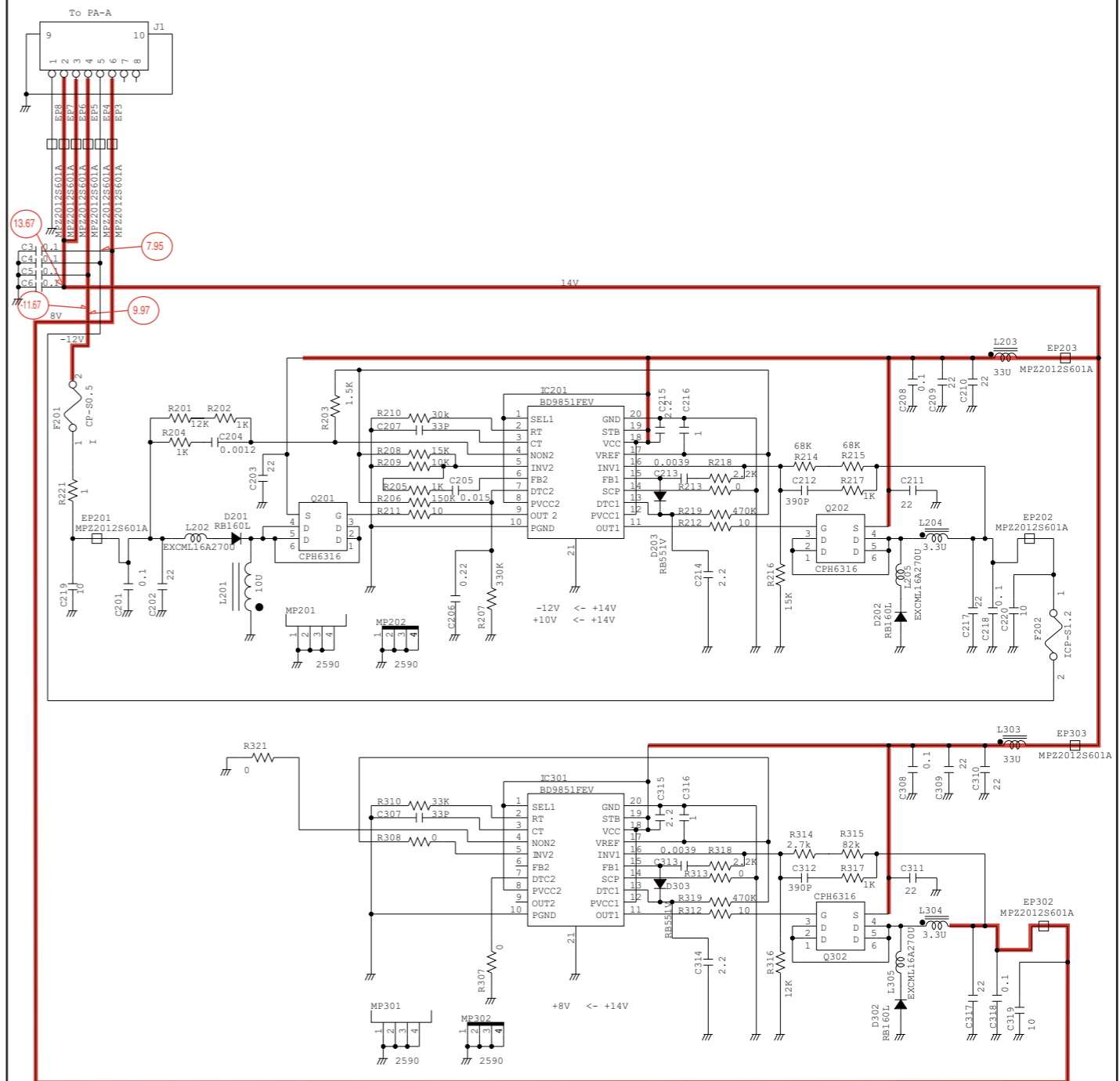
• CTRL UNIT (CTRL-1)



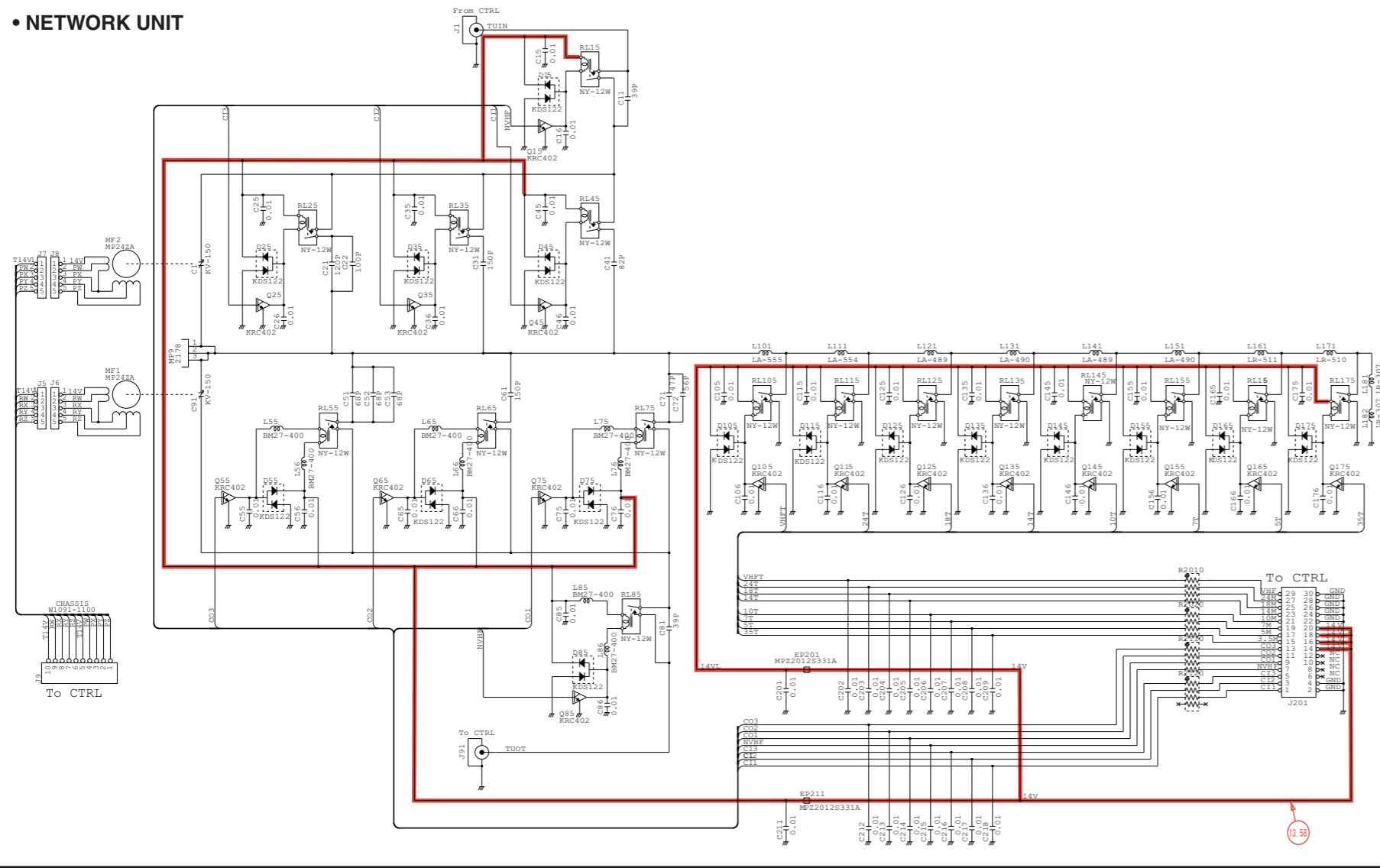
• CTRL UNIT (CTRL-2)



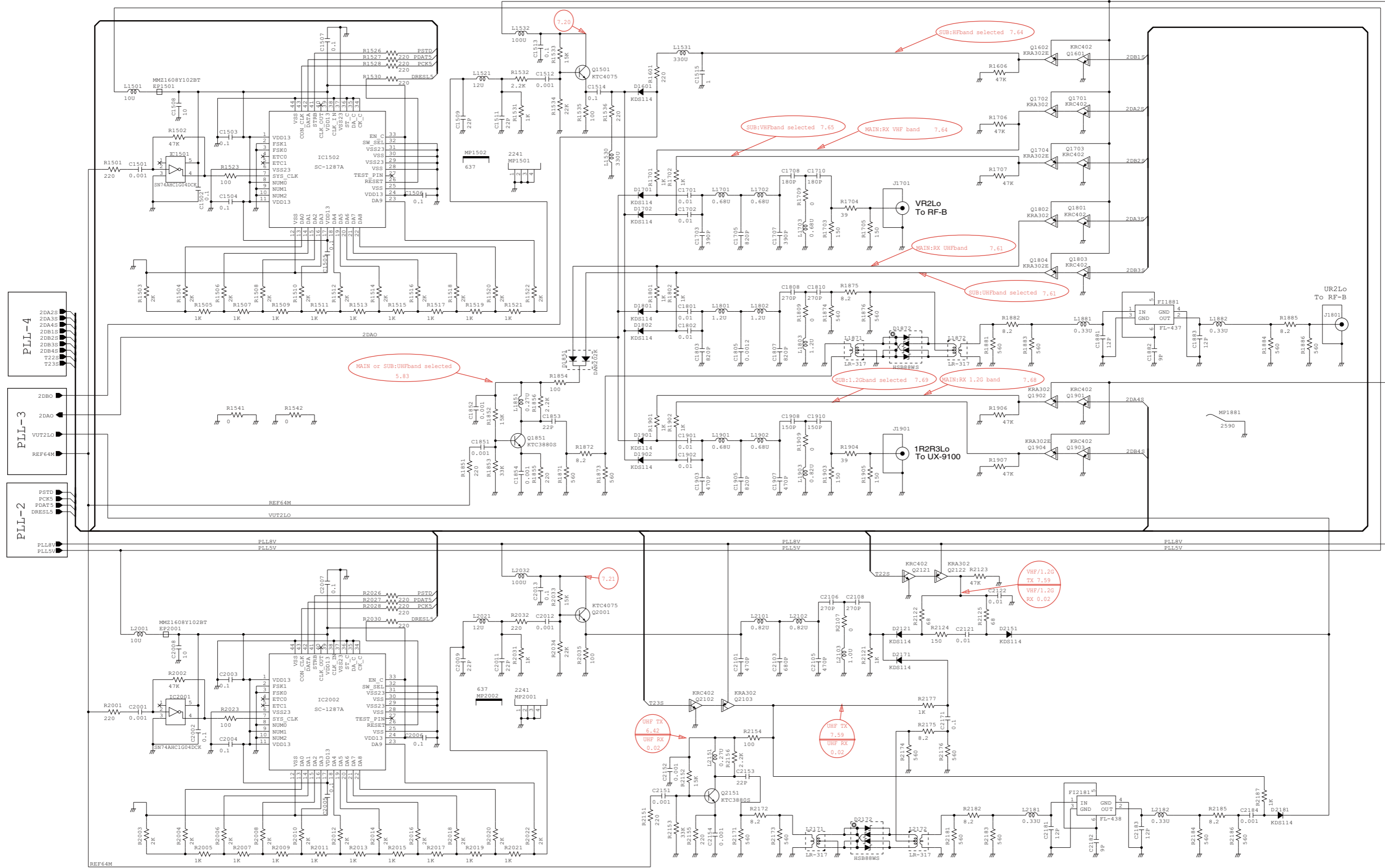
• DC-DC UNIT



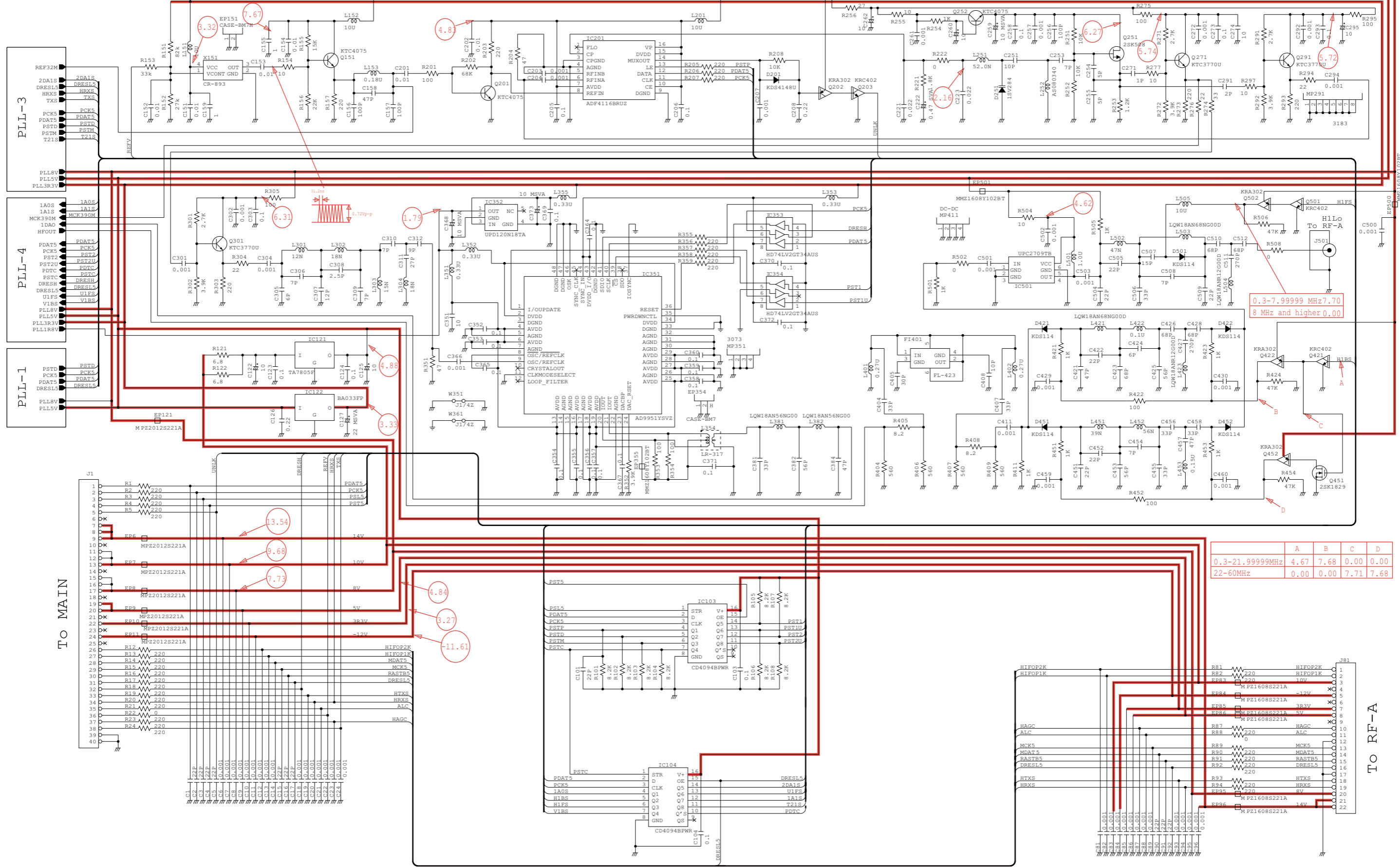
• NETWORK UNIT



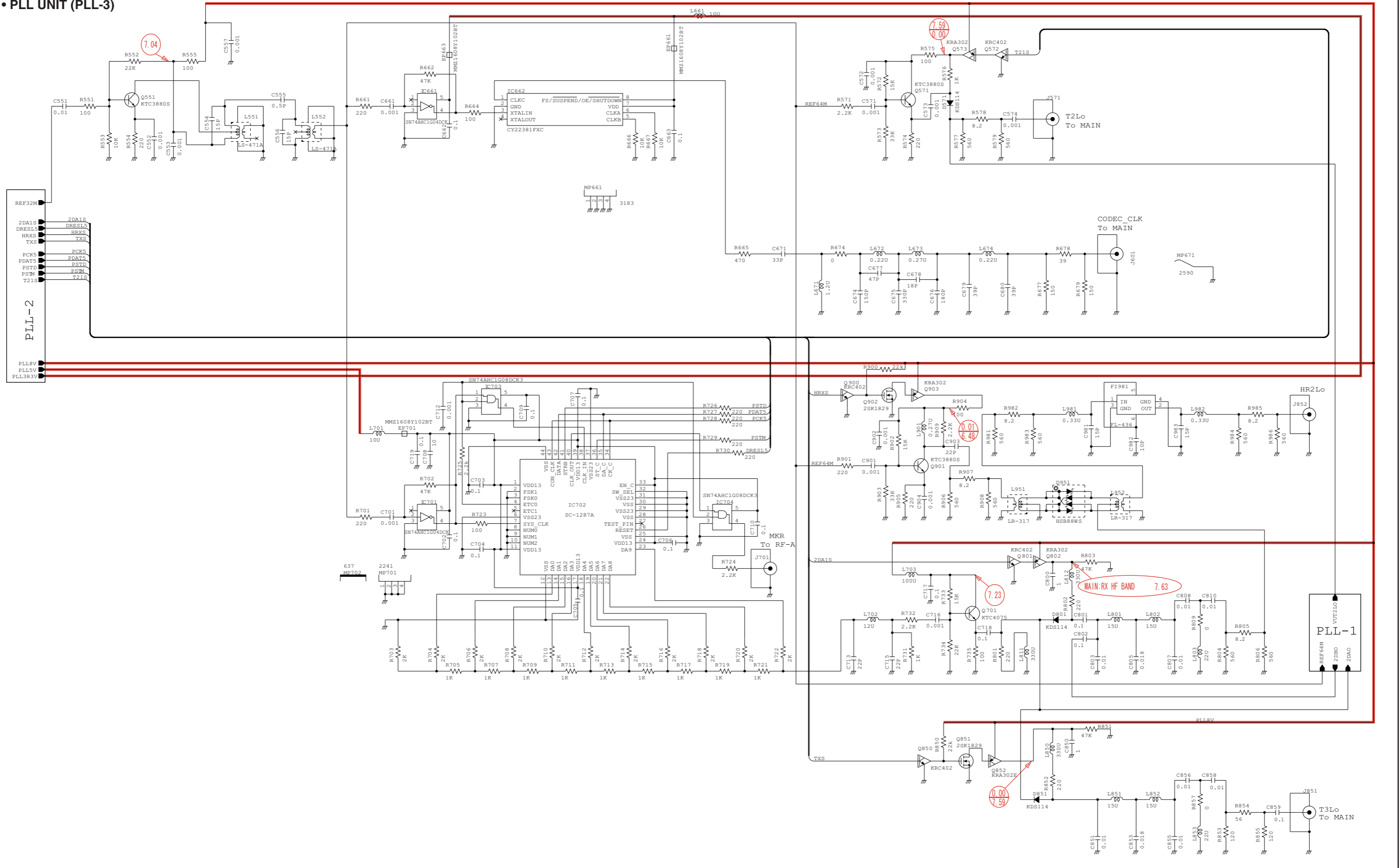
• PLL UNIT (PLL-1)



• PLL UNIT (PLL-2)

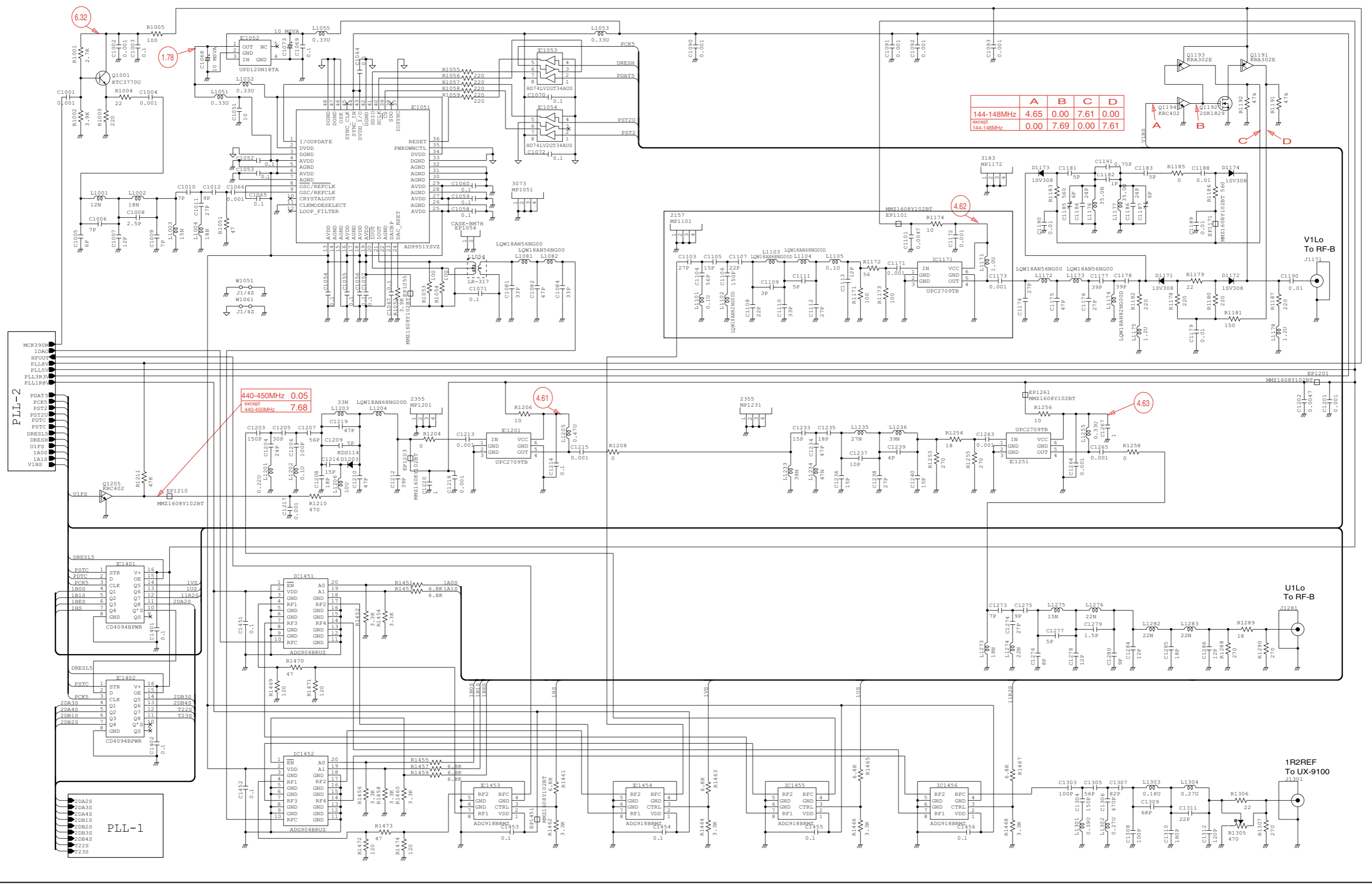


• PLL UNIT (PLL-3)





• PLL UNIT (PLL-4)



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