



# SERVICE MANUAL

HF/50 MHz ALL BAND  
LINEAR AMPLIFIER

## **IC-PW1**

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## INTRODUCTION

This service manual describes the latest service information for the IC-PW1 HF/50 MHz ALL BAND LINEAR AMPLIFIER and the PX-1981 POWER SUPPLY UNIT at the time of publication.

MODEL	VERSION	SYMBOL
IC-PW1	U.S.A.	USA
	Europe	EUR
	Europe-1	EUR-1

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

## DANGER

**THE IC-PW1** include an AC power supply. Therefore, **NEVER** touch the PX-1981 unit while the linear amplifier is connected to an AC outlet, otherwise an electric shock may be received. An insulated tool must be used at all times.

Use **ONLY** the specified AC voltage labelled on the AC power socket of the IC-PW1. Other voltages could cause a fire hazard.

**THE IC-PW1** IC accepts 13.8 V DC ONLY. **NEVER** connect to an AC outlet. Such a connection could cause a fire hazard and/or electric shock.

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

**NEVER** carry the linear amplifier by yourself. At least two persons must carry the linear amplifier since it weights approx. 25 kg (55.12 lb).



## ORDERING PARTS

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

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

### <SAMPLE ORDER>

1140003830 S.IC TC4W66F IC-PW1 MAIN UNIT 1 piece  
8810003160 SET Screw 3×6 ZK IC-PW1 CHASSIS 6 pieces

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

## REPAIR NOTES

1. Make sure a problem is internal before disassembling the linear amplifier, power supply or remote controller.
2. **DO NOT** open the linear amplifier, power supply or remote controller until the power supply 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 linear amplifier is defective.
6. **READ** the instructions of test equipment thoroughly before connecting equipment to the linear amplifier.

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# SECTION 1 SPECIFICATIONS

## • IC-PW1

### ■ GENERAL

- Frequency range : 1.800–1.999 MHz  
3.500–3.999 MHz  
4.630 MHz  
7.000–7.300 MHz  
10.100–10.150 MHz  
14.000–14.350 MHz  
18.068–18.168 MHz  
21.000–21.450 MHz  
24.890–24.990 MHz\*<sup>1</sup>  
28.000–29.700 MHz\*<sup>1</sup>  
50.000–54.000 MHz  
\*<sup>1</sup>The USA version can only be used the antenna tuner on the 24–28 MHz bands.
- Duty cycle : Full duty
- Input connector : SO-239 × 2 (50 Ω)
- Output connector : SO-239 × 4 (50 Ω)
- Power supply voltage : 90 V–132 V AC or 180 V–264 V AC  
(single-phase; 50/60 Hz)
- Usable temperature range : –10 °C to +40 °C; +14 °F to +104 °F
- Dimensions : Linear amplifier 350(W)×265(H)×375(D) mm;  
(Projections not included) 13.78(W)×10.43(H)×14.76(D) in  
Remote controller 205(W)×71(H)×68.3(D) mm;  
8.07(W)×2.80(H)×2.69(D) in
- Weight : 25 kg; 55.12 lb (Included in the remote controller and PX-1981)

### ■ LINEAR AMPLIFIER

- Output power :

MODE	INPUT AC VOLTAGE	
	90–132 V AC	180–264 V AC
<b>CW, RTTY</b>	450–600 W* <sup>1</sup>	950–1150 W
<b>SSB</b>	450–600 W PEP* <sup>2</sup>	950–1150 W PEP

\*<sup>1</sup> EUR-1 version is 450–550 W;

\*<sup>2</sup> EUR-1 version is 450–550 W PEP

- Driving power : Max. 100 W
- Spurious emissions : Less than –60 dB (for HF bands)  
Less than –70 dB (for 50 MHz band)

### ■ ANTENNA TUNER

- Output matching range : 16.7–150.0 Ω\*<sup>1</sup> (for HF bands)  
20.0–125.0 Ω (for 50 MHz band)  
\*<sup>1</sup> Specifications of 1.9 MHz band guaranteed 1.85–1.95 MHz
- Auto tuning accuracy : VSWR 1.5:1 or less
- Min. required input power : 60 W
- Insertion loss : Less than 1 dB (after tuning)

• **PX-1981**

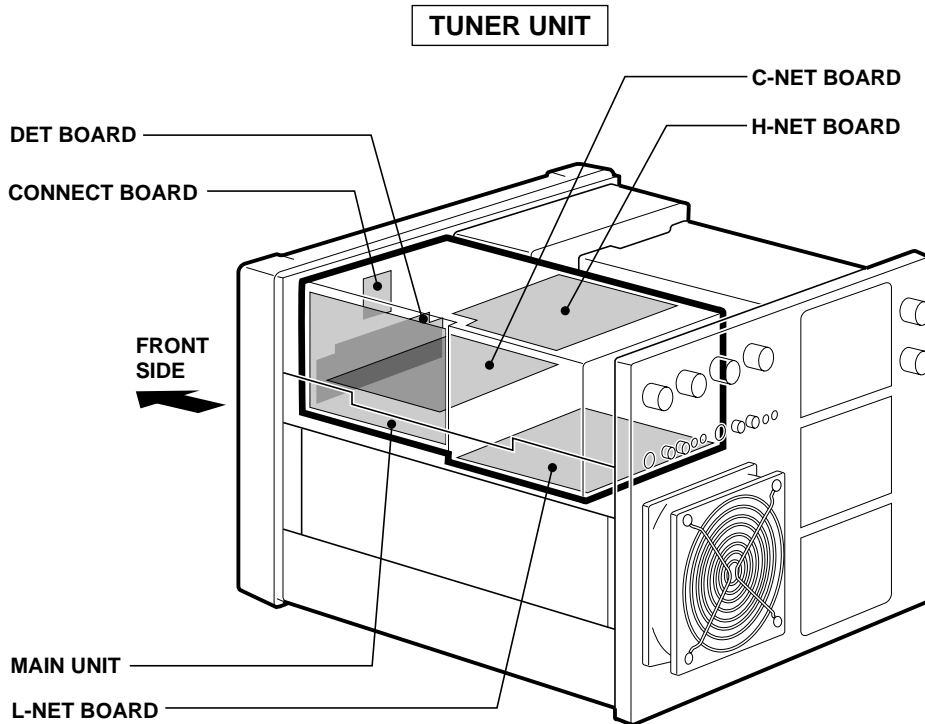
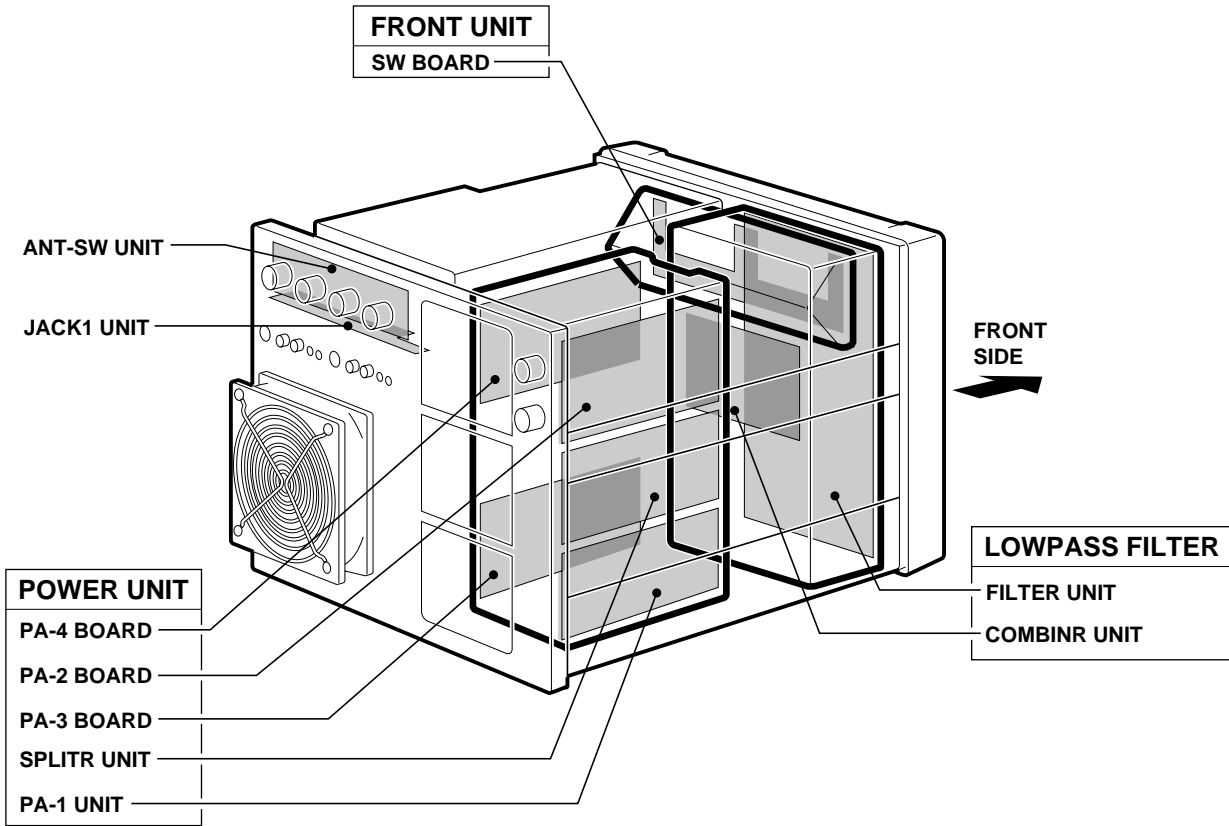
■ **GENERAL**

- Input voltage : 90 V–132 V AC or 180 V–264 V AC
- Input current : less than 15 A (200 V AC)  
less than 20 A (100 V AC)
  
- Usable frequency : 47 Hz–63 Hz
- Inrush current : less than 30 A peak
- Efficiency : more than 75 %  
(input voltage; 200 V AC, output voltage; 45 V, output current; 45A)
  
- Output voltage : DC 45 V  $\pm$ 1.5 V (Input voltage: 200 V AC)  
DC 40 V  $\pm$ 1.5 V (Input voltage: 100 V AC)  
DC 13.6 V  $\pm$ 1.0 V
  
- Output current : 0–45 A (Output voltage: 45 V DC)  
0–30 A (Output voltage: 40 V DC)  
0–3.5 A (Output voltage: 13.6 V DC)
  
- Current limitation : 52 A  $\pm$ 1.0 A (Output voltage: 45 V DC)  
35 A  $\pm$ 1.0 A (Output voltage: 40 V DC)
  
- Total fluctuation rate :  $\pm$ 5 % (Output voltage: 40 V or 45 V)  
 $\pm$ 10 % (Output voltage: 13.6 V)
  
- Ripple voltage : less than 2000 mV (P-P)
- Usable temperature range : –10 °C to +40 °C; +14 °F to +104 °F
- Usable humidity range : 30 % to 85 %
- Dimensions : 182(W) $\times$ 147.8(H) $\times$ 346(D) mm;  
7.17(W) $\times$ 5.82(H) $\times$ 13.6(D) in;
  
- Weight : 6.0 kg; 13.23 lb

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

# SECTION 2 INSIDE VIEWS

## 2-1 PW1 INSIDE VIEW

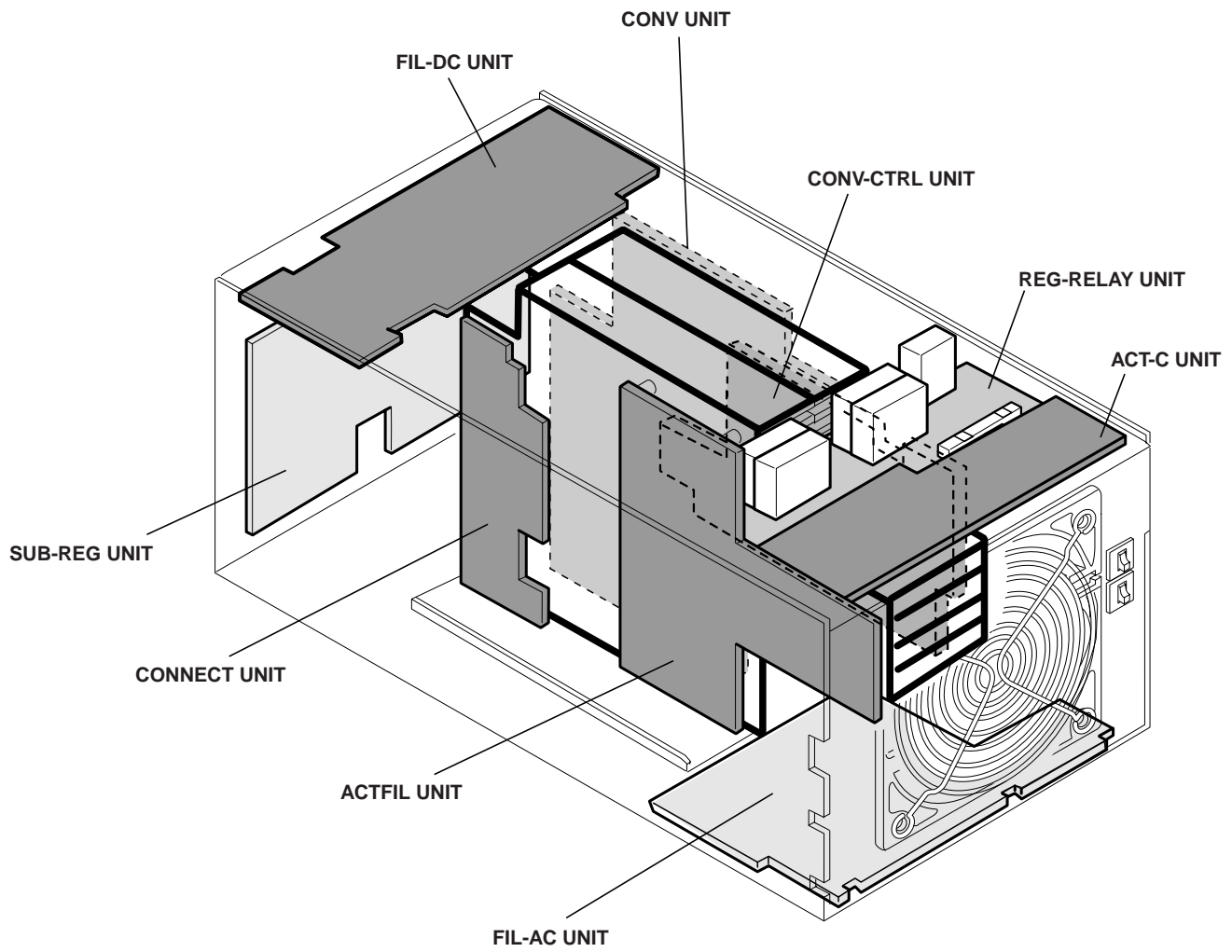


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## PX-1981 INSIDE VIEWS

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### 2-2 PX-1981 REG UNIT INSIDE VIEW



# SECTION 3 CIRCUIT DESCRIPTION

## 3-1 LINEAR AMPLIFIER CIRCUITS

### 3-1-1 EXCITER INPUT SWITCHING CIRCUIT (SPLITR UNIT)

The applied signal from the exciter (transceiver) is passed through the exciter select circuit (RL1) then applied to the THROUGH/AMP switching relay (RL2). The switched signal is passed through the attenuator circuit (R3–R6) when the amplifier is activated. The attenuated signal is applied to the power split circuit (L2–L4, L6, R9–R12).

When "THROUGH" is selected, the signal from the exciter select circuit is applied to the FILTER unit via J8.

The attenuator circuit attenuates the switched signal approx. 1 dB to protect the amplifier circuits from excessive input power and stabilizes the amplifying operation.

### 3-1-2 POWER SPLITTER CIRCUIT (SPLITR UNIT)

The power splitter circuit converts the antenna impedance to  $\frac{1}{4}$  ( $12.5 \Omega$ ) at L2, then the applied RF power level is divided at the hybrid circuit (L3, R9, R10). The divided RF signals are separately passed through another hybrid circuit (L4, R11 and L6, R12) to convert the impedance to  $50 \Omega$  and divide the power level.

The power level divided signal is applied to the one of four PA units (PA1–PA4) via J4 to J7.

The RF power level at J4, J5, J6 and J7 is approx.  $\frac{1}{5}$  of applied power (from the exciter).

### 3-1-3 POWER AMPLIFIER CIRCUITS (PA1–4 BOARDS)

The power level divided signal from the SPLITR unit is amplified at the power amplifier circuit (Q1a/b). The amplified signal is applied to the COMBINR unit.

Two power MOS-FETs (MRF150) and a negative feedback circuit are employed for each PA unit to obtain a stable 300 W or higher of RF power and to maintain response gain for all bands within 3 dB.

### 3-1-4 POWER COMBINER CIRCUIT (CONBINR UNIT)

The amplified signals from the PA1 and PA2 boards are combined at the hybrid circuit (L1, R1) to obtain a 500 W RF level and the impedance is converted to  $25 \Omega$ .

The amplified signals from the PA3 and PA4 boards are combined at another hybrid circuit (L2, R2).

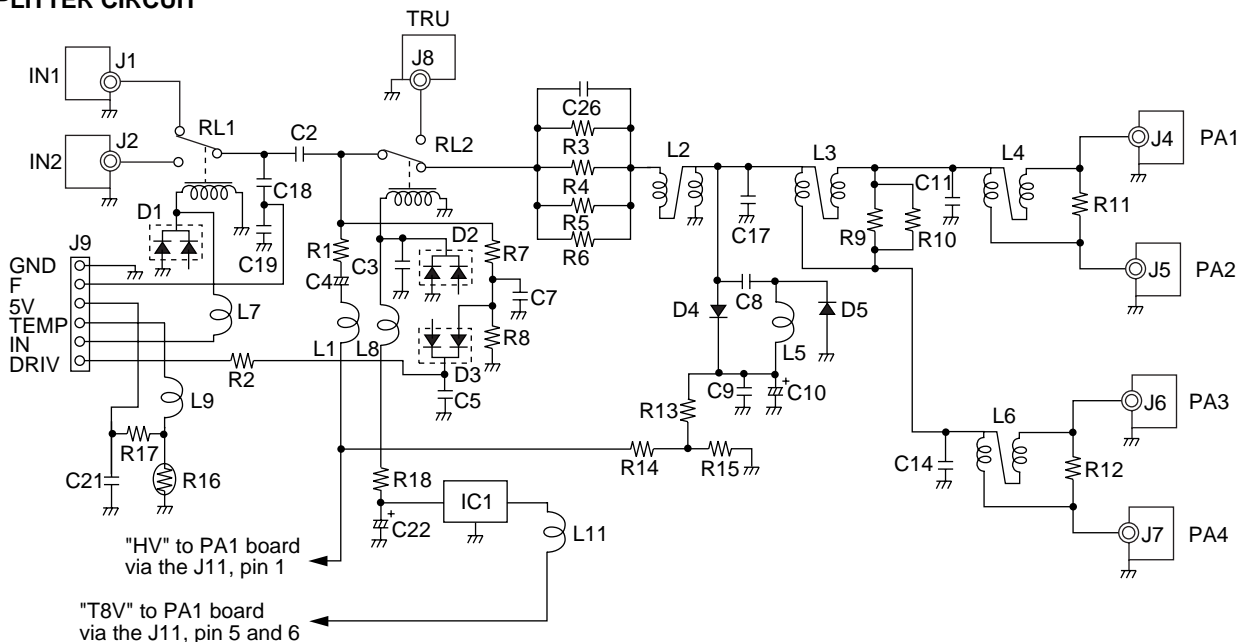
Both signals are again combined at another hybrid circuit (L3, R3) to obtain a 1 kW RF level and the impedance is converted to  $12.5 \Omega$ . The combined signal is applied to the FILTER unit via the impedance convertor (L5) for conversion to  $50 \Omega$  impedance.

### 3-1-5 FILTER CIRCUIT (FILTER UNIT)

The signal from the CONBINR unit is passed through one of 8 low-pass filters.

The filtered signal is applied to the matching circuit.

### • SPLITTER CIRCUIT





2-step (3-step for the 50 MHz band) Chebyshev low-pass filters are adopted, to obtain -60 dB or less higher harmonic emissions for all HF bands or -70 dB or less for the 50 MHz band.

The filtered signal is passed through or bypasses the antenna tuner and is then applied to one of four antenna connectors via the antenna select relay (RL1-RL4) on the ANT-SW unit.

## 3-2 ANTENNA TUNER CIRCUITS

### 3-2-1 MATCHING CIRCUIT (TUNER UNIT)

The matching circuit is a T-network. Using 2 tuning motors, the matching circuit obtains rapid overall tuning speed.

Using relays (TUNER unit; RL1-RL10, L-NET board; RL1, RL2, H-NET board; RL1-RL10), the relay control signals from the antenna tuner CPU (MAIN unit; IC12) via the relay driver (MAIN unit; IC14) ground one of the taps of L3-L5 (L-NET board) or L11-L15 (H-NET board) and add network capacitors (C-NET board). After selecting the coils and capacitors, 2 motors (TUNER unit; MF1, MF2) adjust C1 and C2 using the antenna tuner CPU and the motor driver (MAIN unit; IC15) to obtain a low SWR (Standing Wave Ratio).

### 3-2-2 DETECTOR CIRCUIT (MAIN AND FILTER UNITS)

#### (1) SWR DETECTOR

Forward and reflected power are picked up by a current transformer (FILTER unit; L22), detected by D15 and D16, and then applied to the MAIN unit.

The applied signals are amplified at the SWR amplifier (MAIN unit; IC31a/b). The amplified voltages are applied to the antenna tuner CPU (MAIN unit; IC12, pins 2, 3). The CPU detects the SWR.

#### (2) REACTANCE COMPONENTS DETECTOR

Reactance components are picked up by comparing the phase of the RF current and RF voltage. The RF current is detected by L3 and R4 (DET board), and then amplified at IC1a and IC2d. The amplified RF current is applied to the phase comparator (DET board; IC4, pin 13). The RF voltages are detected at C1-C3 on the DET board, and amplified at IC1c and IC2a, then applied to the phase comparator (IC4, pin 1). The output signal from the phase comparator (IC4, pin 6 for RF voltage, pin 9 for RF current) is rectified at D13 and D14 for conversion into DC voltage. The rectified voltage signals are combined, then applied to the antenna CPU (MAIN unit; IC12, pin 64) after being amplified at IC9a on the MAIN unit.

ECL-IC is used for IC1 and IC2 on the DET board to ensure quick and stable signal detection even at low RF signal level input.

#### (3) RESISTANCE COMPONENTS DETECTOR

Resistance components are picked up by L5, R14 and R21, and detected by Q1, D11 and D12 on the DET board. The detected resistance components are amplified at IC9a on the MAIN unit, and then applied to the antenna CPU (IC12, pin 1).

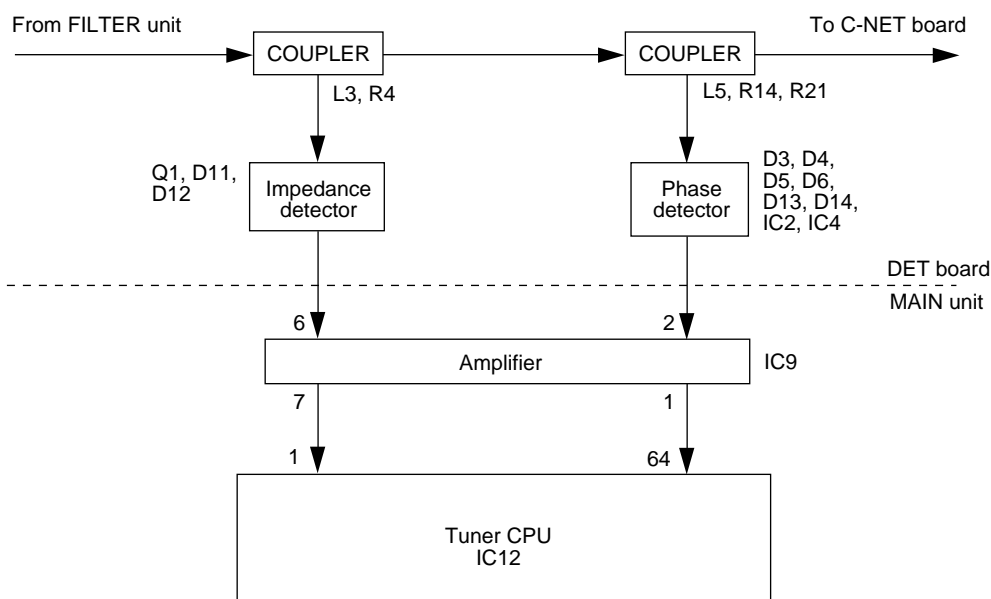
### 3-2-3 MOTOR CONTROL CIRCUIT (MAIN UNIT AND C-NET, L-NET, H-NET BOARDS)

The control circuit of the internal antenna tuner consists of the CPU, EEPROM, tuning motors and tuning relays.

#### (1) CPU AND EEPROM (MAIN UNIT)

The antenna tuner CPU (IC12) controls the tuning motors via the motor driver (IC15) and tuning relays via the relay driver (IC14, Q9-Q14). The CPU memorizes the best preset position and the contents are stored in the EEPROM (IC7) without the need for a backup battery.

## • DETECTOR CIRCUIT



**(2) TUNING CONTROLS (MAIN UNIT)**

A motor driver (IC15) rotates the tuning motors (MF1, MF2) to obtain a low SWR.

**(3) TUNING RELAYS (C-NET, L-NET AND H-NET BOARDS)**

According to the operating frequency band and antenna condition, tuning relays select the capacitors and coils.

**3-3 PROTECTION CIRCUITS**

**3-3-1 GENERAL**

The IC-PW1 has two protection systems. One system bypasses the power amplifier, and the other system shuts down the internal power supply activation.

Protection activates when:

- a mismatched frequency band signal is transmitted.
- the ALC control level exceeds the control range.
- the power level balance between the 4 PA units becomes unbalanced.
- the output voltage of the internal power supply (V<sub>D</sub>) exceeds 55 V DC.
- the current of the power amplifiers (I<sub>D</sub>) exceeds 50 A.
- the heatsink temperature of the power amplifier exceeds +100°C (212°F).
- the applied AC voltage exceeds the specified value.

The main CPU controls the THROUGH/AMP switch and internal power supply operation.

**3-3-2 ALC CIRCUIT (MAIN UNIT)**

The ALC (Automatic Level Control) circuit automatically limits RF output power by controlling the input level of the exciter.

**(1) FOR-ALC**

The detected “FOR” voltage signal from the SWR detector circuit (FILTER unit; D15, D16, L22) is op-amplified at IC1a then applied to the ACC2 socket (JACK1 unit; J5, pin 5) via the ALC adjustment pot (JACK1 unit; R1) and ALC2 jack (JACK2 unit; J7).

**(2) I<sub>D</sub>-ALC**

In the IC-PW1, internal power supply voltage (I<sub>D</sub>) is used for I<sub>D</sub>-ALC. The power supply voltage (I<sub>D</sub>) is amplified at the op-amplifier (IC1c), then applied to the ACC2 socket.

**(3) SWR-ALC**

SWR-ALC protects the power amplifiers (PA1–PA4 boards; Q1a/b) when SWR worsens and when dielectric breakdown/discharge from excessive voltage rises.

The detected “REF” voltage signal from the SWR detector circuit (FILTER unit; D15, D16, L22) is op-amplified at the SWR/DRIVE amplifier (IC1b) then applied to the ACC2 socket (JACK1 unit; J5, pin 5).

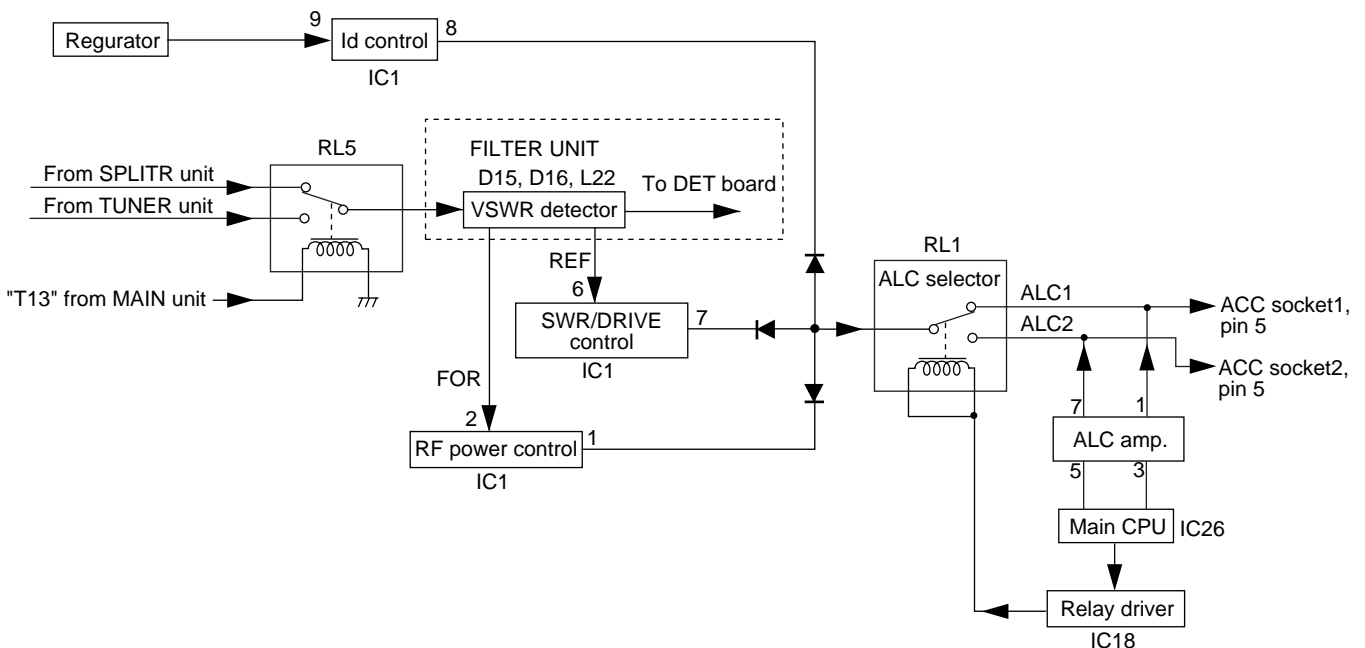
**(4) DRV-ALC**

DRV-ALC activates when the exciter input exceeds 120 W to protect the power amplifiers. The op-amplified “REF” signal at the SWR/DRIVE amplifier (IC1b) is used for operation. However, the limiter circuit on the SPLITR unit (D4, D5) is activated for momentary excessive input such as leading edge power, etc.

**3-3-3 DRIVING POWER DETECTOR CIRCUIT (SPLITR AND MAIN UNITS)**

A portion of the attenuated input power from the exciter input switching circuit (SPLITR unit; RL1) is divided by R7 and R8, and then rectified at D3, R2 and C5 for conversion to DC voltages. The rectified DC voltages are applied to the drive amplifier (MAIN unit; IC21a/b). The amplified DC voltages are applied to the main CPU (MAIN unit; IC26)

**• ALC CIRCUITS**



### 3-3-4 TEMPERATURE DETECTOR CIRCUIT (SPLITR AND MAIN UNITS)

The temperature detector circuit detects the temperature of the heatsink for final FETs and controls amplifying operation.

A thermistor (SPLITR unit; R16) detects temperature of the heatsink for final FETs, and the detected temperature signal (DC voltage) is applied to the main CPU (MAIN unit; IC26, pin 12), to control the cooling fans and amplifying operation.

Common 5 V is applied to the thermistor for reference.

### 3-3-5 DRIVING FREQUENCY DETECTOR CIRCUIT (SPLITR AND MAIN UNITS)

A portion of the RF signal from RL1 (SPLITR unit) is divided at C18 and C19, then applied to the driving frequency detector circuit in the MAIN unit as the "F" signal.

The "F" signal from the SPLITR unit is amplified at the limiter amplifier (MAIN unit; IC30) after being amplified at Q34 and Q35. The amplified signal is divided at the divider (MAIN unit; IC20) for conversion to pulse-type signals. The signals are applied to the main CPU (MAIN unit; IC26, pin 76). The CPU counts the number of pulses as the driving frequency, then controls the protector for frequency band selection.

The driving frequency detector circuit detects the input power level at the same time to prevent malfunction at low power level inputs.

## 3-4 POWER SUPPLY CIRCUITS

### • VOLTAGE LINE

LINE	DESCRIPTION
H12	+12 V line from the regulator circuit. The output voltage is applied to the meter lamp (FRONT unit; DS1, DS2).
12 V	12 V controlled from a H12 line by the relay control circuit (IC8, IC9).
5 V	5 V DC converted from a 12 V line at IC5 on the MAIN unit. The voltage is used for the phase detector on the DET unit.
+5 V	5 V DC converted from a S12 line (+12 V) at IC6 on the FRONT unit. The voltage is used for the output expander IC on the FRONT unit.
-5 V	-5 V DC converted from a -13 V line at IC5 on the DET board.
-13 V	-13 V DC converted from a H12 (+12 V) line at IC8 on the MAIN unit.
T13	Transmit 13 V DC converted from a H12 (+12 V) line at Q3 on the MAIN unit.
T8V	Transmit 8 V DC converted from a T13 line at IC1 on the SPLITR unit. The output voltage is used for PA1, PA2, PA3 and PA4 on the PA unit.
HV	45 V line from the regulator circuit. The voltage is used for PA1, PA2, PA3 and PA4 on the PA unit.

## 3-5 PORT ALLOCATIONS

### 3-5-1 EXPANDER IC (SWITCH BOARD; IC1)

Pin number	Port name	Description
4	I1L	Outputs INPUT "1" LED control signal. High: While INPUT "1" LED is ON.
5	I2L	Outputs INPUT "2" LED control signal. High: While INPUT "2" LED is ON.
11	A4L	Outputs ANT "4" LED control signal. High: While ANT "4" LED is ON.
12	A3L	Outputs ANT "3" LED control signal. High: While ANT "3" LED is ON.
13	A2L	Outputs ANT "2" LED control signal. High: While ANT "2" LED is ON.
14	A1L	Outputs ANT "1" LED control signal. High: While ANT "1" LED is ON.

### 3-5-2 EXPANDER IC (SWITCH BOARD; IC2)

Pin number	Port name	Description
4	VML	Outputs "V <sub>D</sub> " LED control signal. High: While "V <sub>D</sub> " LED is ON.
5	SML	Outputs "SWR" LED control signal. High: While "SWR" LED is ON.
6	AML	Outputs "ALC" LED control signal. High: While "ALC" LED is ON.
12	TML	Outputs "TEMP" LED control signal. High: While "TEMP" LED is ON.
13	IML	Outputs "I <sub>D</sub> " LED control signal. High: While "I <sub>D</sub> " LED is ON.
14	PML	Outputs "P <sub>o</sub> " LED control signal. High: While "P <sub>o</sub> " LED is ON.

### 3-5-3 EXPANDER IC (SWITCH BOARD; IC3)

Pin number	Port name	Description
4	50ML	Outputs "50" LED control signal. High: While "50" LED is ON.
6	24ML	Outputs "24" LED control signal. High: While "24" LED is ON.
11	7ML	Outputs "7" LED control signal. High: While "7" LED is ON.
12	10ML	Outputs "10" LED control signal. High: While "10" LED is ON.
13	14ML	Outputs "14" LED control signal. High: While "14" LED is ON.
14	18ML	Outputs "18" LED control signal.

### 3-5-4 EXPANDER IC (SWITCH BOARD; IC4)

Pin number	Port name	Description
4	3_5M	Outputs "3.5" LED control signal. High: While "3.5" LED is ON.
5	1_9M	Outputs "1.8" LED control signal. High: While "1.8" LED is ON.
7	AUTOL	Outputs "AUTO" LED control signal. High: While "AUTO" LED is ON.
11	PROL	Outputs "AMP/PROTECT" LED control signal. High: While "AMP/PROTECT" LED is ON.
12	PAL	Outputs "AMP/PROTECT" LED control signal. High: While "AMP/PROTECT" LED is ON.
13	TUNL	Outputs "TUNER" LED control signal. High: While "TUNER" LED is ON.
14	TRANS	Outputs "TRANSMIT" LED control signal. High: While "TRANSMIT" LED is ON.

### 3-5-5 SHIFT REGISTER IC (SWITCH BOARD; IC7)

Pin number	Port name	Description
1	ANT	Input port for the antenna switching signal. Low: When "ANT" switch is pushed.
4	TUNER	Input port for the tuner power ON/OFF switching signal. Low: When "TUNER" switch is pushed.
5	PA	Input port for the PA power ON/OFF switching signal. Low: When "AMP/PROTECT" switch is pushed.
6	MET2	Input port for the meter mode select signal for meter-2. Low: When "METER-2" switch is pushed.
7	MET1	Input port for the meter mode select signal for meter-1. Low: When "METER-1" switch is pushed.
13	BUP	Input port for the band up signal. Low: When "UP" switch is pushed.
14	BDOWN	Input port for the band down signal. Low: When "DOWN" switch is pushed.
15	I1/2	Input port for the port select signal. Low: When "INPUT" switch is selected.

### 3-5-6 CPU (MAIN UNIT; IC26)

Pin number	Port name	Description
7	FOR	Input port for the forward power voltage from IC2 (pin 1).
8	REF	Input port for the reflected voltage from IC2 (pin 7).
9	Vc	Input port for the voltage from power supply "VO" signal. The voltage is controlled by R197.
10	Ic	Input port for the current from power supply "IO" signal. The current is controlled by R22.
11	ALCM	Input port for the ALC signal which is used for the METER-2.
12	TEMP	Input port for the signal about temperature of the heatsink.
16	USA	Input port for the version set signal. Low: USA version is set.
32	SEND	Input port for the transmit switching signal. Low: While transmitting
33	I1/2	Outputs a input port select signal. Low: When INPUT1 is selected. High: When INPUT2 is selected.
35	1.9MF	Outputs a bandpass filter select signal. High: When 1.8–1.999 MHz band is selected.
36	3.5MF	Outputs a bandpass filter select signal. High: When 3.5–3.999 MHz band is selected.
37	7MF	Outputs a bandpass filter select signal. High: When 7.0–7.300 MHz band is selected.
38	10MF	Outputs a bandpass filter select signal. High: When 10.10–10.150 MHz band is selected.
39	14MF	Outputs a bandpass filter select signal. High: When 14.10–14.350 MHz band is selected.
40	18MF	Outputs a bandpass filter select signal. High: When 18.068–18.168 MHz band is selected.
41	24MF	Outputs a bandpass filter select signal. High: When 24.980–24.990 MHz band is selected.
42	50MF	Outputs a bandpass filter select signal. High: When 50.000–54.000 MHz band is selected.

Pin number	Port name	Description
43	ANT1	Outputs ANT1 select signal to RL4 on the ANT-SW unit. Low : When ANT1 is selected.
44	ANT2	Outputs ANT2 select signal to RL3 on the ANT-SW unit. Low : When ANT2 is selected.
45	ANT3	Outputs ANT3 select signal to RL2 on the ANT-SW unit. Low : When ANT3 is selected.
46	ANT4	Outputs ANT4 select signal to RL1 on the ANT-SW unit. Low : When ANT4 is selected.
47	PAF	Outputs cooling fan control signal for the PA unit. High: The PA fan is working.
48	TUF	Outputs cooling fan control signal for the CHASSIS unit. High: The tuner fan is working.
49	REGF	Outputs cooling fan control signal for the power supply unit. High: The power supply fan is working.
56	STA	Data output port to the tuner CPU in the MAIN unit.
62	ACC81	Input port for the informed signal about the power switch of the exciter on JACK1 unit. High: When power of the exciter is ON.
73	REGT	Input port for the protect signal about temperature of the power supply. High: While protecting.
74	BALA	Input port for the signal to obtain stable power from the PA unit.
79	KEY	Data input port from the tuner CPU in the MAIN unit.
80	MAXI	Input port for the protect signal about the the power supply current. High: While protecting.

### 3-6 PX-1981 POWER SUPPLY CIRCUITS

#### 3-6-1 MATCHING CIRCUIT (TUNER UNIT)

The power supply circuit mainly consists of a 380 V DC rectifier, 45 V DC switching regulator, 12, 18 V DC regulators.

When turning ON the power, the 45 V switching regulator operates with the start-up circuit output voltage. After several milliseconds, the switching regulator operates on its own output voltage.

#### 3-6-2 RECTIFIER CIRCUIT (REG, FIL-AC AND REGRELAY UNITS)

An AC voltage from the AC power socket passes through the [POWER] switch and is applied to the FIL-AC unit. The AC voltage passes through the common mode filter (FIL-AC unit; L1, L2, C2, C4–C8), and then applied to the REGRELAY unit. The signal passes through R2 and R4 on the REGRELAY unit to prevent an entry of current until 13.6 V DC are supplied from the REG unit. After 13.6 V DC are regulated, the AC voltage bypasses R2 and R4 through RL3 and RL4 on the REGRELAY unit.

AC voltage passes through the AC filter circuit (SUBREG unit; L4, C30, C31). The filtered signal is rectified and smoothed by D8 and C26 on the SUBREG unit, then applied to the AC 100/200 V select circuit (SUBREG unit; Q4, Q5, D4) to select either 100 or 200 V AC input. The selected signal is applied to the active filter control circuit (ACTFIL unit; IC1, pin 11) via Q7 as "SELV" signal to control output voltage.

AC voltage from REGRELAY unit is rectified at D1 (ACTFIL unit), and then passes through the low-pass filter (ACTFIL unit; L3, C35, C36). The filtered signal is applied to the active filter circuit (REG unit; Q1–Q3, D2, L1, L2) to obtain 380 V DC output (When 100 V AC inputs, output voltage is 300 V DC), and then applied to the CONV unit via the smoothing circuit (ACT-C unit; C1, C3, C4).

#### 3-6-3 CONVERT CONTROL CIRCUIT (CONV-CTRL UNIT)

Passing through a smoothing circuit, 380 V (or 300 V) DC are applied to the inverter circuit (Q1–Q4) and are converted to a pulse signal, which is then applied to the transformer (REG unit; T1). The signal passes through the current detector (R17, R18) to protect short-circuit.

Part of the output voltage passes through the common mode filter (FIL-DC unit; L1, L2, C2, C4–C8), and is then output as DC output voltage via the "HV" signal.

Part of the output voltage is rectified by D1, D2, and smoothed by L3 (REG unit), C5, C6. The signal is amplified at the amplifier (IC2A, pin 3), and is then applied to the limiter amplifier (IC2B, pin 5). The amplified signal is compared to "SEL" signal from the IC4, pin 4 on the SUBREG unit. When above the thresh of IC2B, the signal from the limiter amplifier (IC2B, pin 7) is applied to the Q14. The amplified signal is applied to the inverter control circuit (IC1, pin 4) to control the pulse width.

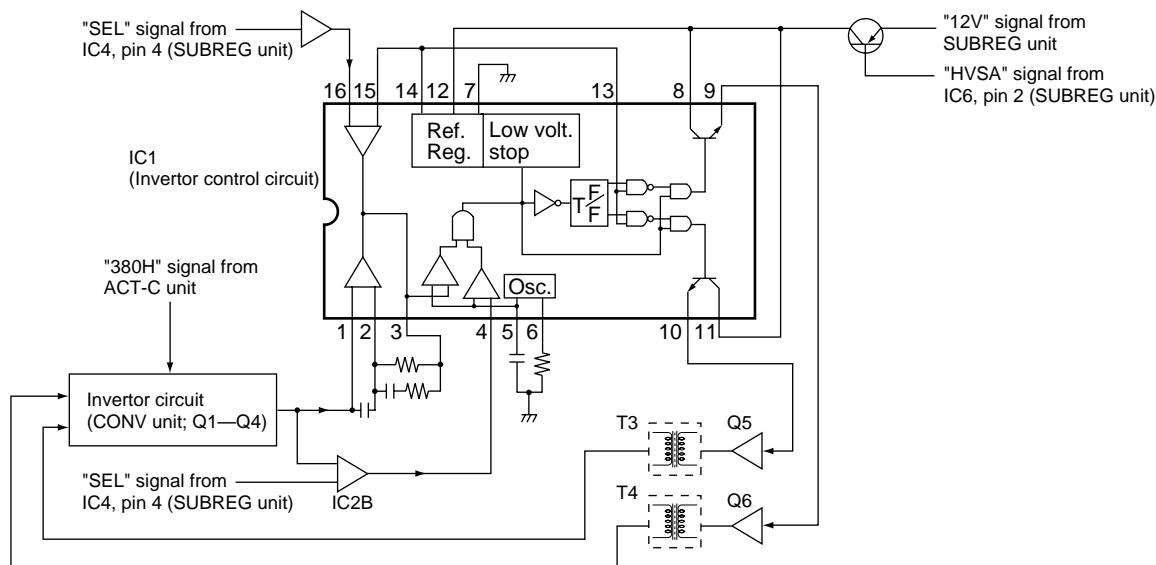
IC1 contains a reference regulator, oscillator, dead-time comparator, PWM comparator, etc. The switching control signal is applied to the buffer amplifier (CONV unit; Q5 or Q6).

When the switching control signal is applied to the gate terminal of Q5 as "E1" signal, the amplified signal applied to the inverter circuit (CONV unit; Q1, Q4) via the T3 on CONV unit.

When the switching control signal is applied to the gate terminal of Q6 as "E2" signal, the amplified signal applied to the inverter circuit (CONV unit; Q2, Q3) via the T4 on CONV unit.

380 V DC from the ACTFIL unit is switched by the inverter circuit (CONV unit; Q1–Q4), and then applied to the T1 on the REG unit.

#### • INVERTOR CONTROL CIRCUIT



### 3-6-4 REGULATOR CIRCUIT (SUBREG UNIT)

Either 13.6 V or 18 V DC are supplied from their corresponding regulator circuits. These are regulated from the 380 V DC (When input voltage is 100 V AC, outputs 300 V DC).

#### (1) 13.6 V AND 18 V REGULATORS

The AC voltage from the REGRELAY unit passes through the AC filter circuit (L4, C30, C31), and is rectified by D1. The signal passes through R1 to prevent an entry of current until 300 V AC (When input is 100 V AC, preventing an entry of current until 140 V AC) The signal is smoothed and converted to the DC voltage by C1.

The DC voltage passes through R4 and R16, and is then applied to the base terminal of Q1. The signal passes through T1 (pins 3, 1), then generates the DC voltage at T1 (pins 6, 8). Because the RCC circuit (D3, D4, D10) are reverse connection, the current does not pass through T1 (pins 9, 10 and 13, 15).

When the base current of Q1 can not hold saturation voltage, collector-emitter voltage of Q1 is increase. Therefore, the voltage of T1 (pins 1, 3 and 6, 8) and the base current of Q1 are decrease, and then Q1 switches OFF. The same current of T1 (pins 1, 3 and 6, 8) passes through the pins 9, 10 and 13, 15 of T1, and then D3, D4, D10 are forward direction. Thus, the voltages output from T1.

When finishes outputting voltage from T1, the RCC circuit (D3, D4, D10) switches OFF. According to the residual voltage of T1, generated voltage at T1 (pins 6, 8). Q1 is switched ON by the voltage, and then run the switching circuit repeat the same thing.

The signal from T1 (pins 13, 15) passes through the rectification circuit (D4), and is then applied to the IC-PW1, etc as "12 V" line.

Part of signals from D4 is applied to the RCC control circuit (IC3). When voltage of D4 is high, the transistor which is included in IC2 is switched ON by the RCC control circuit (IC3). The signal from IC2 is applied to Q2, and is then applied to Q1 to control the base current. Thus, the RCC circuit can obtain stabilized voltage.

The signal from T1 (pins 9, 10) passes through the rectification circuit (D3 and D10), and is then applied to the 18 V regulator circuit (IC5). The output voltage is applied to the ACT-FIL unit as "A18+" line after being passed through the 18 V short start switch (Q6).

#### (2) 100/200 V AC VOLTAGE DETECTION CIRCUIT

The AC voltage from the REGRELAY unit passes through the AF filter circuit (L4, C30, C31), and is then rectified and smoothed by D8 and C26 to convert the AC voltage to the DC voltage. The DC voltage passes through the voltage divider (R18–R21), and is applied to the AC 100/200 V select circuit (Q4, Q5, D9).

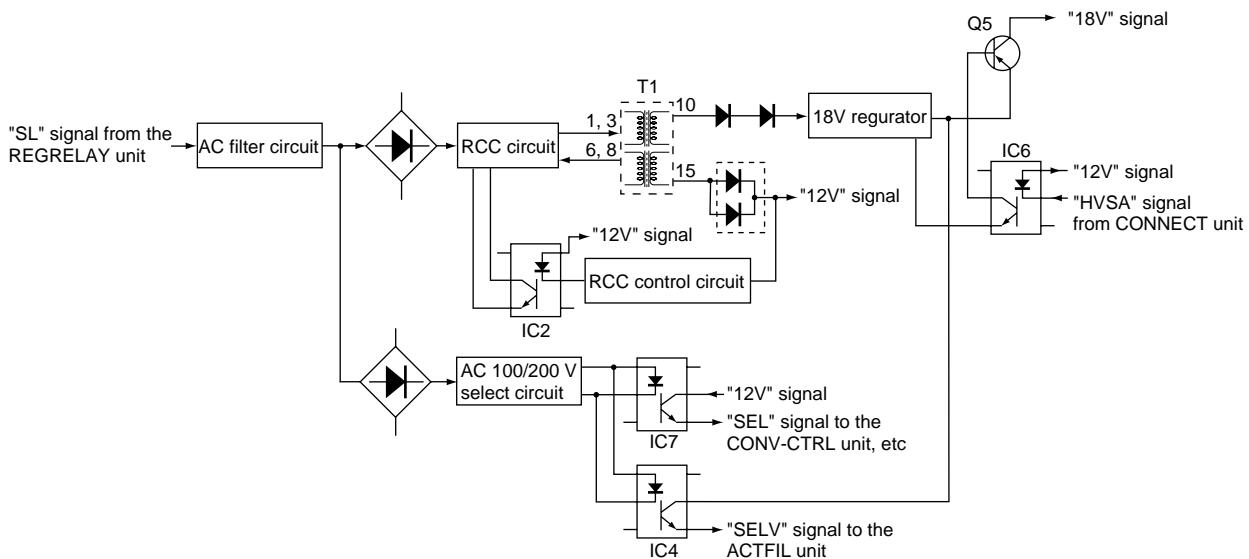
When the divided voltage is above the zener voltage of D9, the voltage passes through D9, and Q5 is switched ON to control the 200 V AC detection circuit.

When the divided voltage is below the zener voltage of D9, Q5 is switched OFF to control the 100 V AC detection circuit. The signal is applied to IC4 and IC7.

The signal from IC4 is applied to Q7 on the ACTFIL unit via the "SELV" signal to control the active filter control circuit (ACTFIL unit; IC1).

The signal from IC7 is applied to the IC-PW1 via the "SEL" signal. Part of the "SEL" signals is applied to the Q15 and Q16 on the CONV-CTRL unit to control the inverter control unit (CONV-CTRL unit; IC1).

### • REGURATOR CIRCUIT



# SECTION 4 ADJUSTMENT PROCEDURES

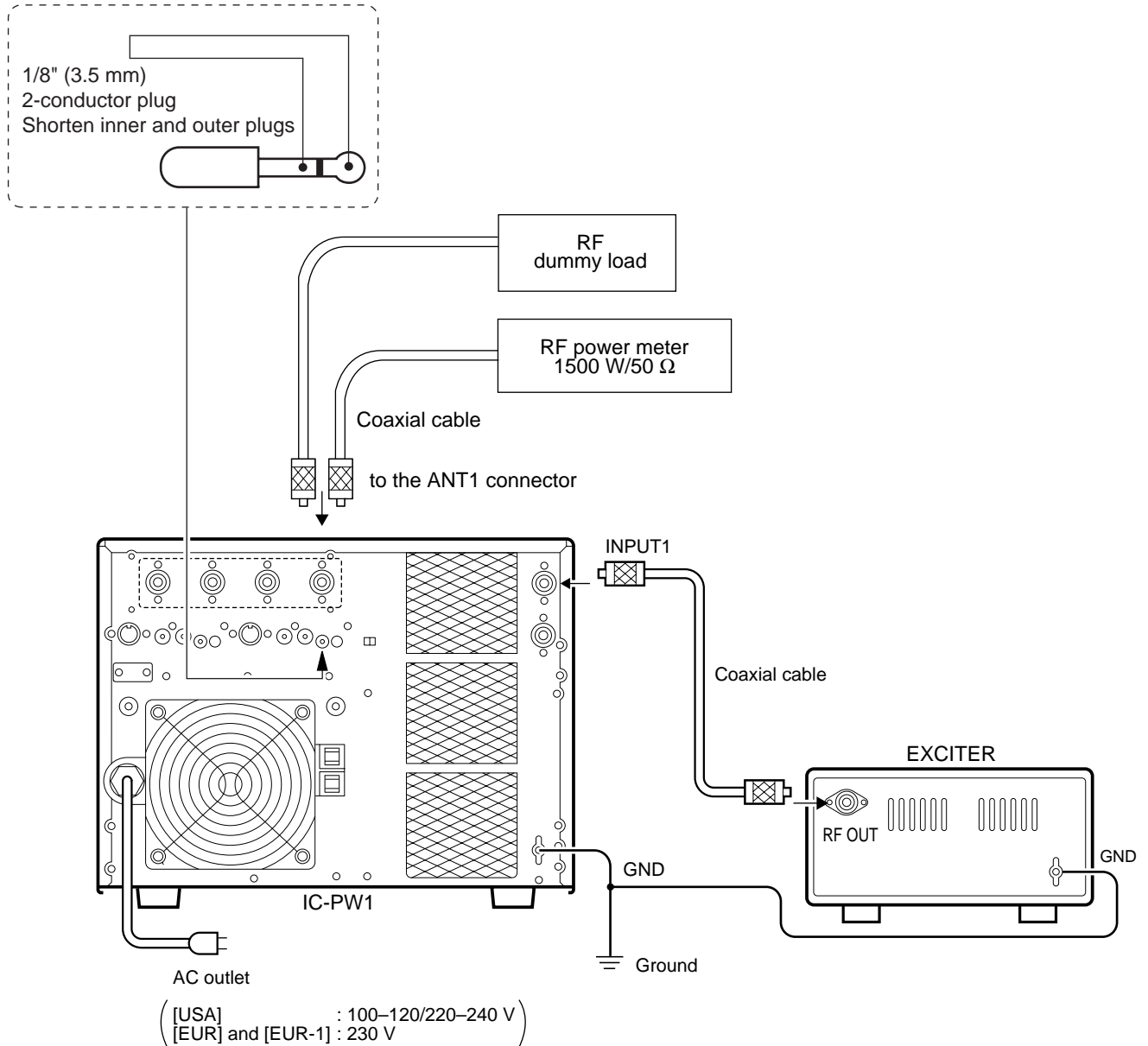
## 4-1 PREPARATION

### ■ REQUIRED TEST EQUIPMENT

EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
Exciter (Transceiver)	Frequency range : 1.8–60 MHz	Ammeter	Capability : 0.1–100 A
	Output power : 50–100 W	RF dummy load	Impedance : 50, 100 and 150 Ω
	Mode : RTTY or FM		Capability : 1500 W or more
	IC-736 (for tuner basis voltage adjustment)	Digital DC voltmeter	Input impedance : 10 MΩ/V DC or better
RF power meter (terminated type)	Measuring range : 10–1500 W	DC voltmeter	Input impedance : 50 kΩ/V DC or better
	Frequency range : 1.8–60 MHz	Load-resistor	Capability : 9.7–10.3 A
	Impedance : 50 Ω		
	SWR : Less than 1.2 : 1		

### ■ CONNECTION

Connect 2-conductor plug to REMOTE connector when adjusting meter maximum point.

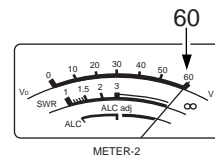
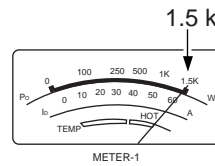




## 4-2 PA AND FRONT UNITS ADJUSTMENT

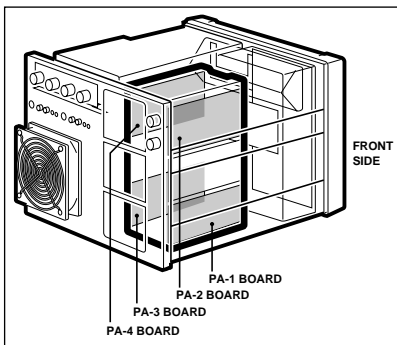
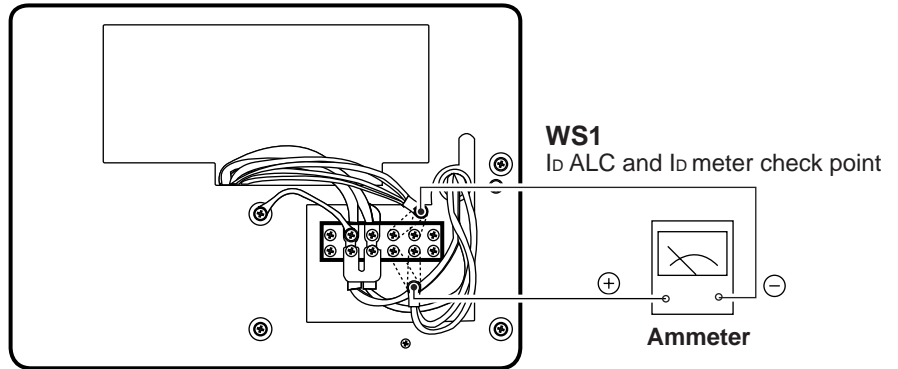
Idling current must be taken out the PA unit from the main body.

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT		
		UNIT	LOCATION		UNIT	ADJUST	
IDLING CURRENT	1	<ul style="list-style-type: none"> <li>• [POWER] switch : OFF</li> <li>• Pre-set R9 and R10 on the PA1 board to maximum counterclockwise position.</li> </ul>	Front panel	Connect the DC ammeter to the HV line between PA1 board and the power supply unit.	100 mA	PA1	R9
		<ul style="list-style-type: none"> <li>• [POWER] switch : ON</li> <li>• [AMP] switch : ON</li> <li>• Exciter frequency : 14.1 MHz</li> <li>• Mode : USB</li> <li>• Apply no audio signal to the [MICROPHONE] connector.</li> <li>• Connect the lead of L6 to ground.</li> <li>• Transmitting.</li> </ul>					
	2	<ul style="list-style-type: none"> <li>• Disconnect the lead of L6 from ground.</li> <li>• Connect the lead of L5 to ground.</li> <li>• Transmitting.</li> </ul>	Front panel	Connect the DC ammeter to the HV line between PA1 board and the power supply unit.	200 mA	PA1	R10
	3	<ul style="list-style-type: none"> <li>• Disconnect the lead of L5 from ground.</li> <li>• Connect the lead of L6 to ground.</li> </ul>					100 mA
4	• Same adjustments as steps 1–4 for PA2–PA4 boards.						
METER MAXIMUM POINT	1	<ul style="list-style-type: none"> <li>• [POWER] switch : OFF</li> <li>• Connect the terminator to [REMOTE] jack, then while pushing the [ANT] switch, turn power ON.</li> <li>• METER-1 : [Po] scale</li> <li>• METER-2 : [Vd] scale</li> </ul>	Controller	[METER-1]	Set as below :	SW	R56
	2			[METER-2]	Set as below :		R57



• Idling current adjustment

Front side (after removed front panel)

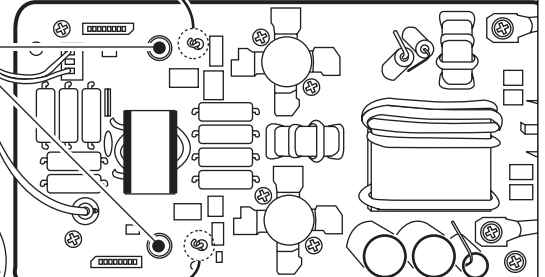


**L6**  
Connect the lead of L6 to ground

**R10**  
**R9**  
• Idling current pre-setting  
• Idling current adjustment

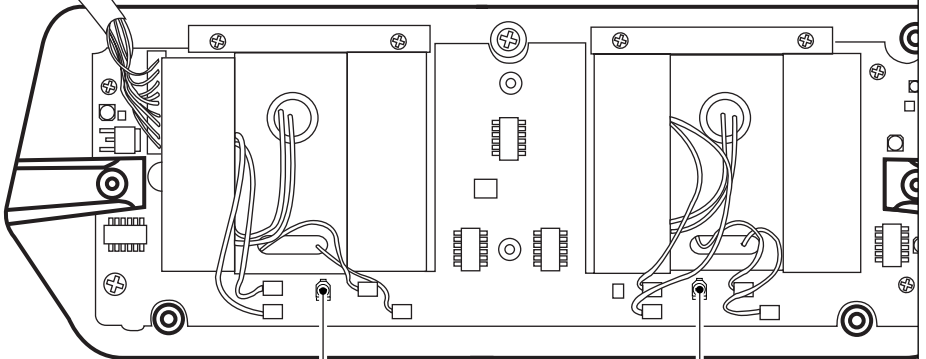
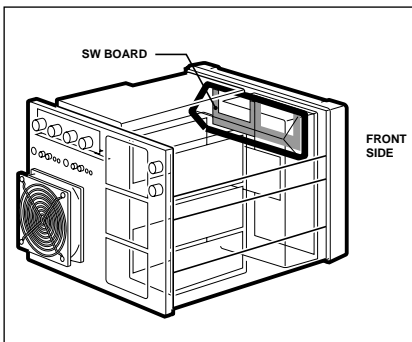
**L5**  
Connect the lead of L5 to ground

**PA1-PA4 boards**



• Meter maximum point adjustment

**Switch board**



**R57**  
**R56**  
Meter maximum point adjustment

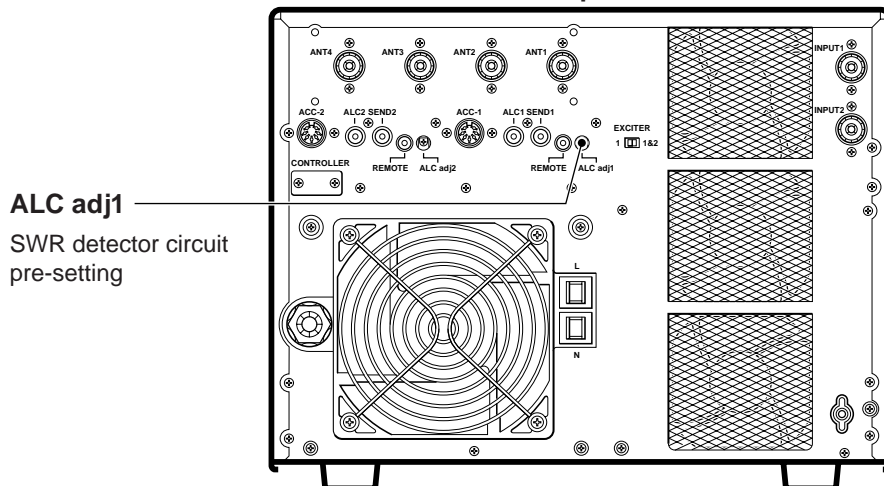
### 4-3 MAIN UNIT ADJUSTMENT

The TUNER BASIS VOLTAGE ADJUSTMENT needs the IC-736 as an exciter.

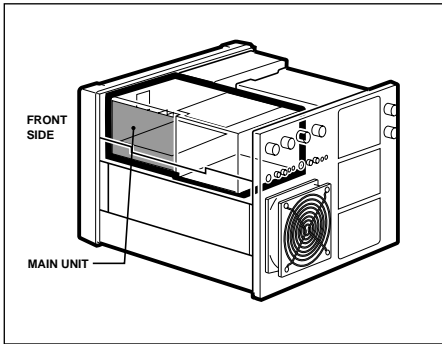
ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
SWR DETECTOR CIRCUIT	1 <ul style="list-style-type: none"> <li>• Input AC voltage : 200 V</li> <li>• Pre-set R4, R6, R15 to 90° counterclockwise</li> <li>• Pre-set R5, R22 to center.</li> <li>• Pre-set S3 to 5, and S4 to 4.</li> <li>• [METER-1] : [Po] scale</li> <li>• Pre-set ALC adj1 to max. counterclockwise, and then turn slowly ALC adj1 to max. clockwise.</li> <li>• Exciter frequency : 54.0 MHz</li> <li>• Mode : RTTY</li> <li>• RF power : minimum</li> <li>• Transmitting</li> </ul>	Controller	[METER-1]	400 W	Exciter	RF power volume
	2 <ul style="list-style-type: none"> <li>• [METER-2] : [SWR] scale</li> <li>• Transmitting</li> </ul>		[METER-2]	Minimum value		
<ul style="list-style-type: none"> <li>• After adjustment, reset ALC adj1 to max. counterclockwise.</li> </ul>						
TUNER BASIS VOLTAGE	1 <ul style="list-style-type: none"> <li>• Disconnect J5 on the tuner unit of IC-736, and then connect to J18 on the MAIN unit of IC-PW1.</li> <li>• Connect [ANT1] connector of IC-736 to [INPUT1] connector of IC-PW1.</li> <li>• Connect a 150 Ω dummy load to [ANT1] connector of IC-PW1.</li> <li>• Turn S5 to "SET".</li> <li>• Connect CP1 to ground.</li> <li>• Push and hold [ANT], [ENT] and [TUNER] switches of IC-736, then turn IC-736 ON.</li> </ul>	IC-736	DISPLAY	Display of IC-736 shows "SET".		Verify
	2 <ul style="list-style-type: none"> <li>• Push [TUNER] key of IC-736.</li> </ul>			Display of IC-736 shows "END".		
After adjustment, remove the jumper wire from CP1 and reset S5 to counter side.						

#### • SWR detector circuit adjustment

Rear panel

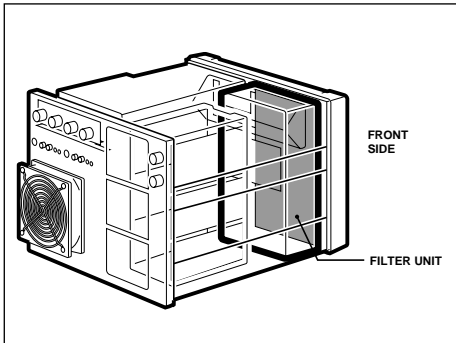
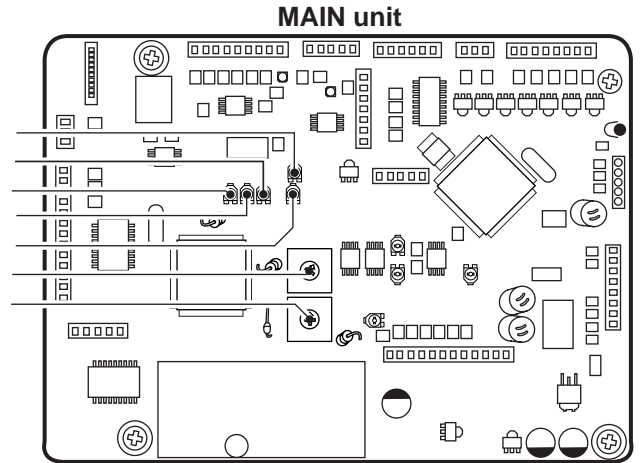


• SWR detector circuit adjustment

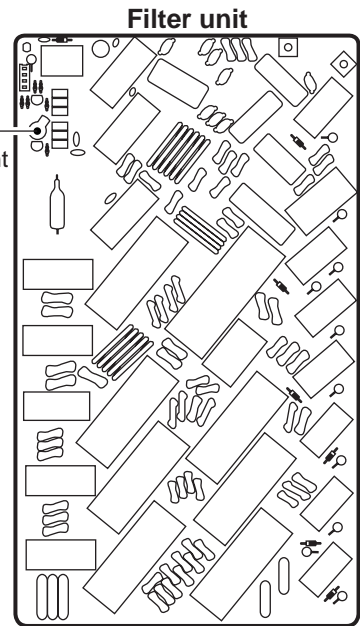


SWR detector pre-setting

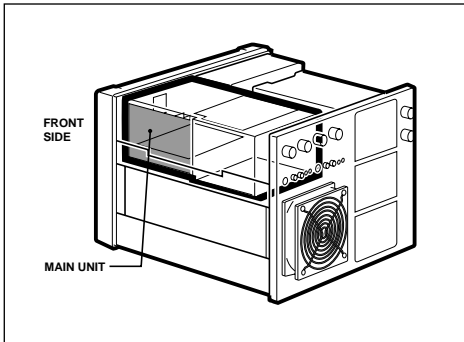
R15  
R6  
R4  
R5  
R22  
S3  
S4



C73  
SWR detector circuit adjustment

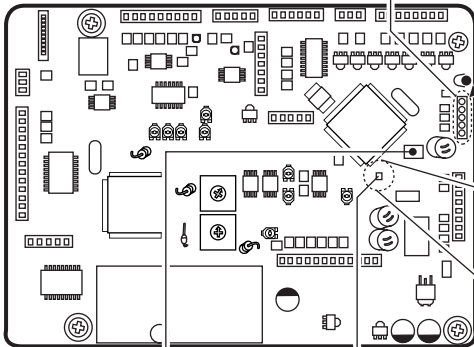


• Tuner basis voltage adjustment



J18  
Connect J5 on the tuner unit of IC-736 to here

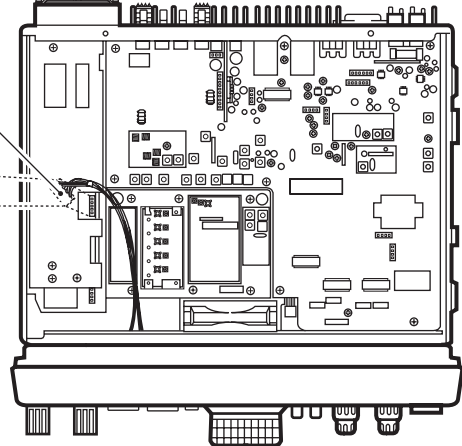
MAIN unit of IC-PW1



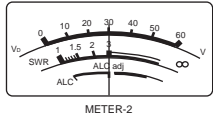
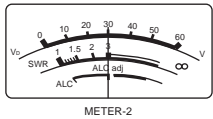
Tuner basis voltage pre-setting

J5  
Disconnect J5 from here

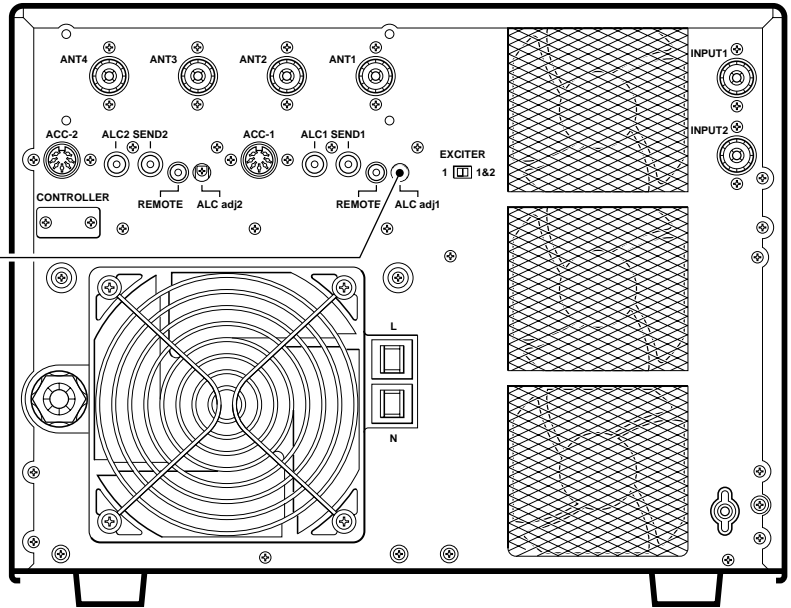
Bottom view of IC-736



## MAIN UNIT ADJUSTMENT (Continued)

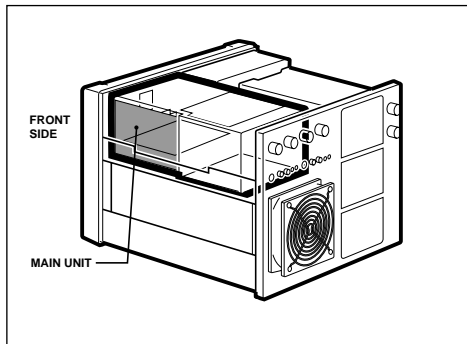
ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT		
		UNIT	LOCATION		UNIT	ADJUST	
POWER SET (HF BAND, AC 200 V <sub>r</sub> )	1	<ul style="list-style-type: none"> <li>Input AC voltage : 200 V</li> <li>METER-1 : [Po] scale</li> <li>METER-2 : [ALC] scale</li> <li>Exciter frequency : 21.1 MHz</li> <li>Mode : RTTY</li> <li>Transmitting</li> </ul>	Controller	[METER-2]	Set [ALC] meter to center as below: 	REAR panel	ALC adj1
	2		REAR panel	Connect the RF power meter to the [ANT1] connector.	1050 W	MAIN	R4
	3	• Repeat steps1, 2 several times for precision.					
(AC 100 V) [USA], [EUR] only	1	<ul style="list-style-type: none"> <li>Input AC voltage : 100 V</li> <li>Set ALC adj1 to max. counter-clockwise.</li> <li>Exciter frequency : 14.1 MHz</li> <li>Mode : RTTY</li> <li>Transmitting</li> </ul>	Controller	[METER-2]	Set [ALC] meter to center as below: 	REAR panel	ALC adj1
	2		REAR panel	Connect the RF power meter to the [ANT1] connector.	520 W	MAIN	R6
	3	• Repeat steps1, 2 several times for precision.					
(50 MHz, AC 200 V)	1	<ul style="list-style-type: none"> <li>Input AC voltage : 200 V</li> <li>Exciter frequency : 50.2 MHz</li> <li>Mode : RTTY</li> <li>Transmitting</li> </ul>	REAR panel	Connect the RF power meter to the [ANT1] connector.	1020 W	MAIN	R5
Po METER SET (HF bands)	1	<ul style="list-style-type: none"> <li>Turn ALC adj1 to max. counter-clockwise.</li> <li>METER-1 : [Po] scale</li> <li>Exciter frequency : 21.1 MHz</li> <li>Mode : RTTY</li> <li>Transmitting</li> </ul>	REAR panel	Connect the RF power meter to the [ANT1] connector.	1050 W	REAR panel	ALC adj1
	2		Controller	[METER-1]	1050 W	MAIN	R26
(50 MHz band)	1	<ul style="list-style-type: none"> <li>Connect the RF power meter to the [ANT1] connector.</li> <li>Exciter frequency : 50.2 MHz</li> <li>Transmitting</li> </ul>	Controller	[METER-1]	Same power as the RF power meter.	MAIN	R240
SWR METER SET	1	<ul style="list-style-type: none"> <li>Connect a 100 Ω dummy load to [ANT1] connector.</li> <li>METER-2 : [SWR] scale</li> <li>Exciter frequency : 14.1 MHz</li> <li>Mode : RTTY</li> <li>Power : 1 kW</li> <li>Transmitting</li> </ul>	Controller	[METER-2]	SWR 2	MAIN	R31
V <sub>D</sub> METER SET	1	<ul style="list-style-type: none"> <li>METER-2 : [V<sub>D</sub>] scale</li> <li>Connect the DC voltmeter between the "HV" line and the "GND" line of the power supply unit.</li> </ul>	Controller	[METER-2]	Same voltage as the DC voltmeter.	MAIN	R197

**Rear panel**



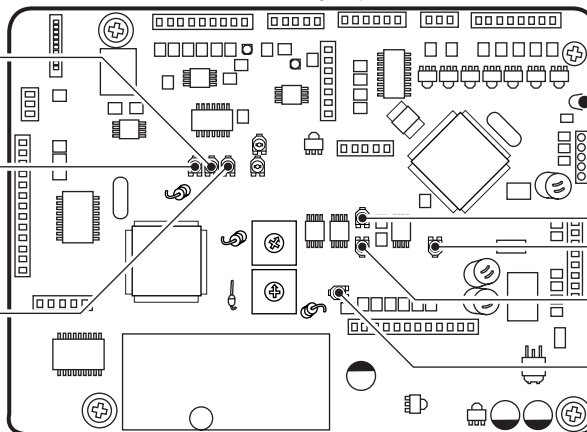
**ALC adj1**

- Power set adjustment for HF band
- $P_o$  meter set adjustment



**MAIN unit**

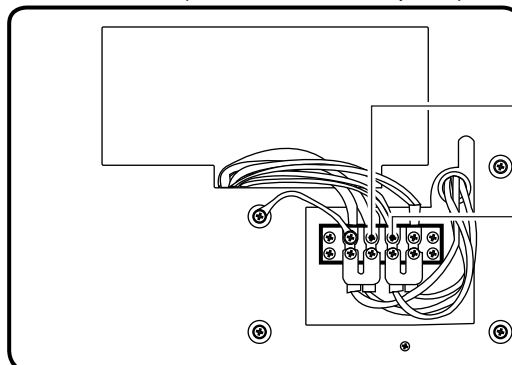
- R5**  
Power set adjustment for 50 MHz band
- R4**  
Power set adjustment for HF band (AC 200 V)
- R6**  
Power set adjustment for HF band (AC 100 V)



- R26**  
**R240** }  $P_o$  meter set adjustment
- R31**  
SWR meter set adjustment
- R197**  
 $V_D$  meter set adjustment

**•  $V_D$  meter set adjustment**

Front side (after removed front panel)



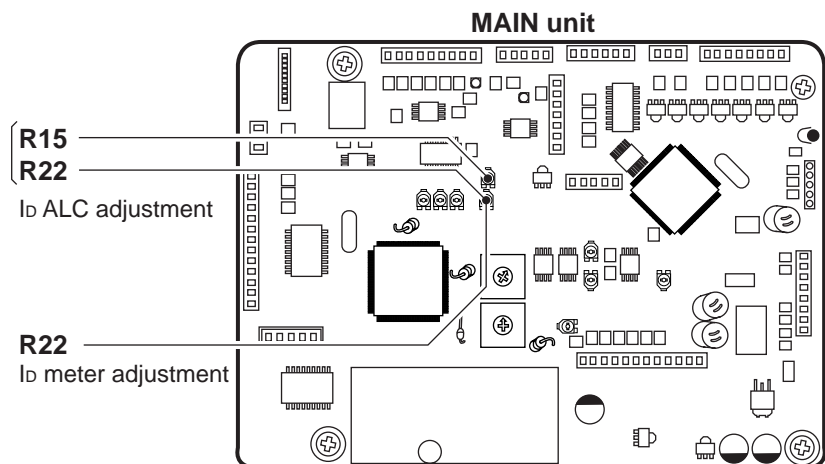
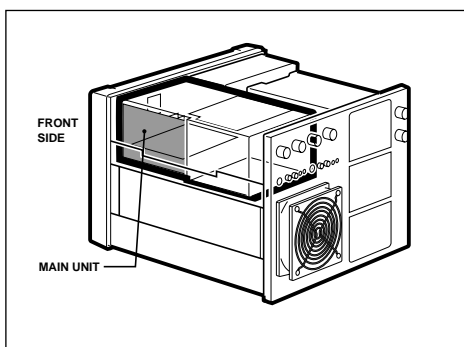
**WS1**  
 $V_D$  meter set check point

**DC voltmeter**

## MAIN UNIT ADJUSTMENT (Continued)

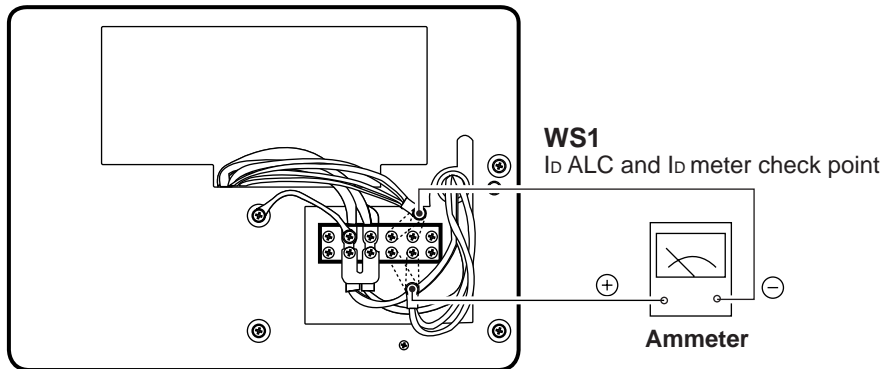
ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT		
		UNIT	LOCATION		UNIT	ADJUST	
I <sub>b</sub> ALC	1	<ul style="list-style-type: none"> <li>Connect a DC ammeter to the "HV" line between power supply unit and PA unit.</li> </ul>	Controller	[METER-1]	Set [I <sub>b</sub> ] meter to a half value of connecting ammeter.	MAIN	R22
	2	<ul style="list-style-type: none"> <li>METER-1 : [I<sub>b</sub>] scale.</li> <li>Exciter frequency : 14.1 MHz</li> <li>Mode : RTTY</li> <li>Transmitting</li> </ul>	Front panel	Ammeter	38 A	Exciter	RF power
	3	<ul style="list-style-type: none"> <li>Connect a load-resistor between "HV" line and "GND" line on power supply unit.</li> <li>Transmitting</li> <li>Disconnect a DC ammeter, and then connect a DC ammeter to the "HV" line between power supply unit and a load-resistor.</li> </ul>			9.7 – 10.3 A		The load-resistor
	4	<ul style="list-style-type: none"> <li>Disconnect a DC ammeter, and then connect a DC ammeter to the "HV" line between power supply unit and PA unit.</li> </ul>			34.7 – 35.3 A	MAIN	R15
I <sub>b</sub> METER	1	<ul style="list-style-type: none"> <li>Connect a DC ammeter to the "HV" line between power supply unit and PA unit.</li> <li>METER-1 : [I<sub>b</sub>] scale.</li> <li>Exciter frequency : 14.1 MHz</li> <li>Mode : RTTY</li> <li>Transmitting</li> </ul>	Controller	[METER-1]	The same value of the ammeter.	MAIN	R22

### • I<sub>b</sub> ALC and I<sub>b</sub> meter adjustment



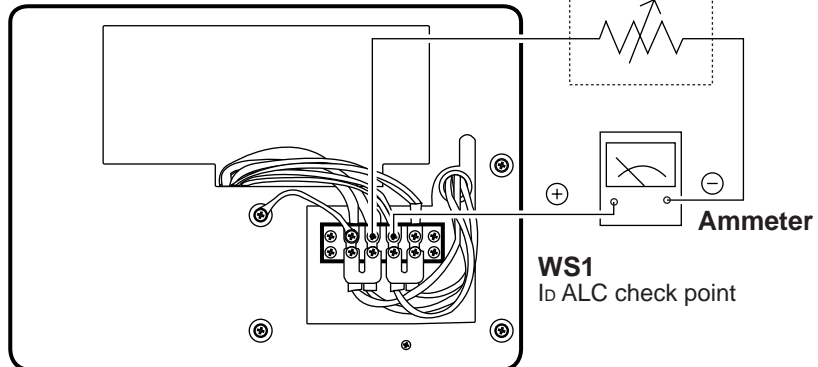
• **I<sub>D</sub> ALC and I<sub>D</sub> meter adjustment**

Front side (after removed front panel)

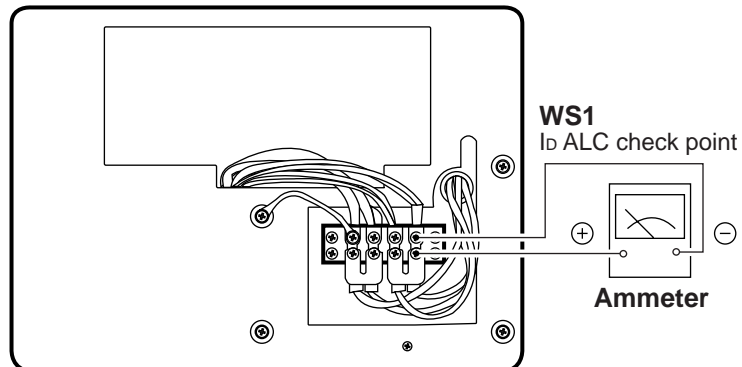


• **I<sub>D</sub> ALC adjustment**

Front side (after removed front panel)



Front side (after removed front panel)





## 4-4 PX-1981 PREPARATION

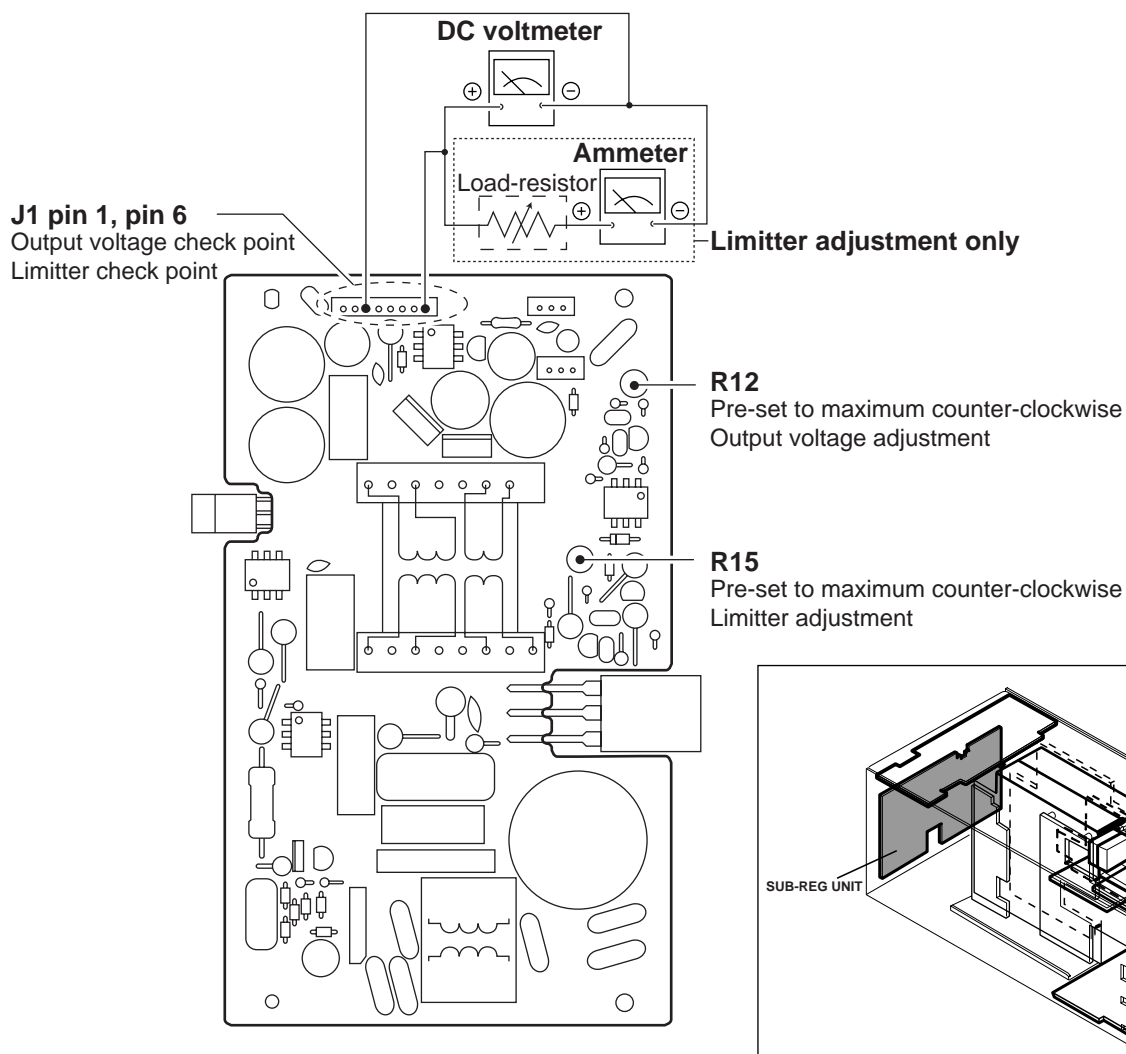
### ■ REQUIRED TEST EQUIPMENT

EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
DC voltmeter	Input impedance : 50 k $\Omega$ /DC or better	Ammeter	Measurement capability : 0.1–100 A
Variable load-resistor	Power capacity : 2800 W or more		

**NOTE:** All adjustments must be input 200 V AC except a part of CONV-CTRL ADJUSTMENT.

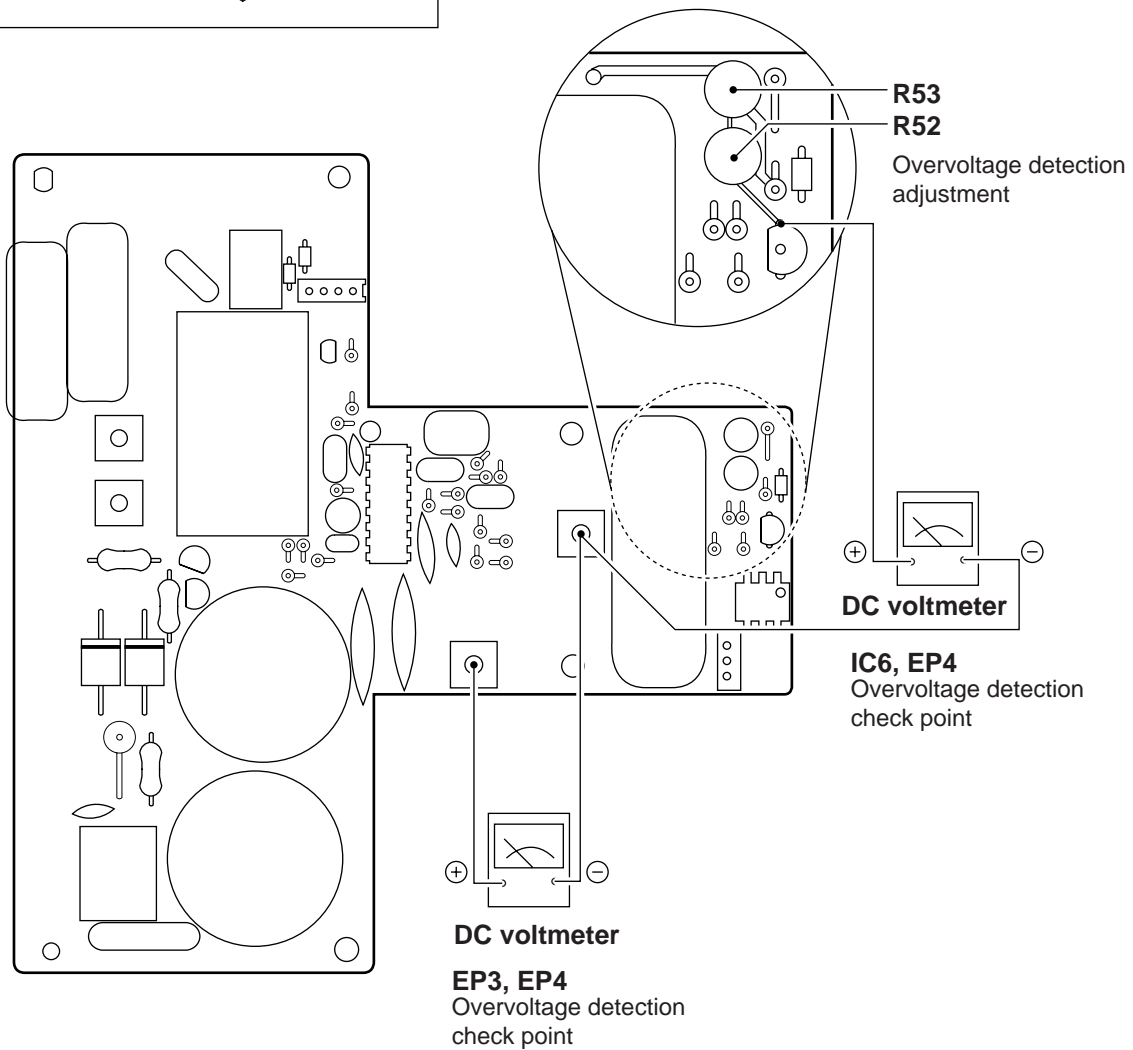
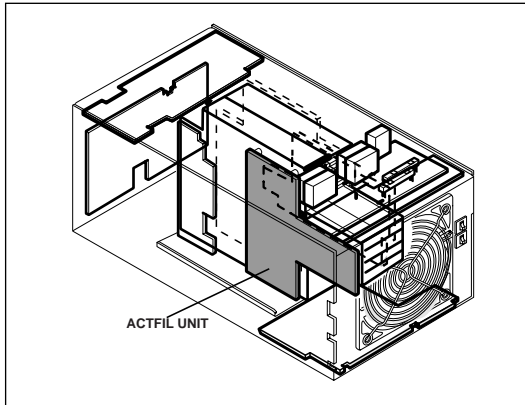
## 4-5 SUBREG BOARD ADJUSTMENT

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
OUTPUT VOLTAGE	1 • Pre-set R12 and R15 to maximum counterclockwise position.	SUBREG	Connect a DC voltmeter between J1, pin 1 and pin 6.	13.6 V	SUBREG	R12
LIMITTER	1 • Connect a variable load-resistor between J1, pin 1 and pin 6.	SUBREG	Connect an ammeter between J1, pin 1 and variable load-resistor.	6.2 A	Variable load-resistor	
			Connect a DC voltmeter between J1, pin 1 and pin 6.	Below 13.3 V		
	2					



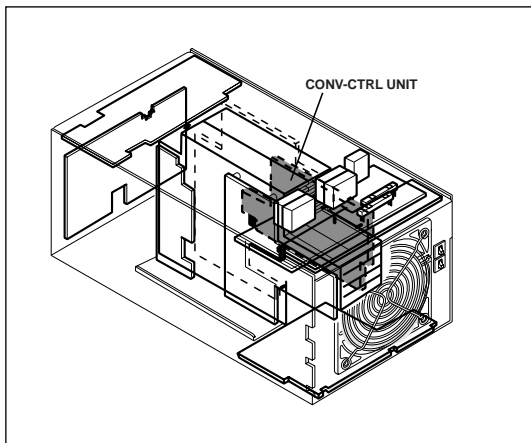
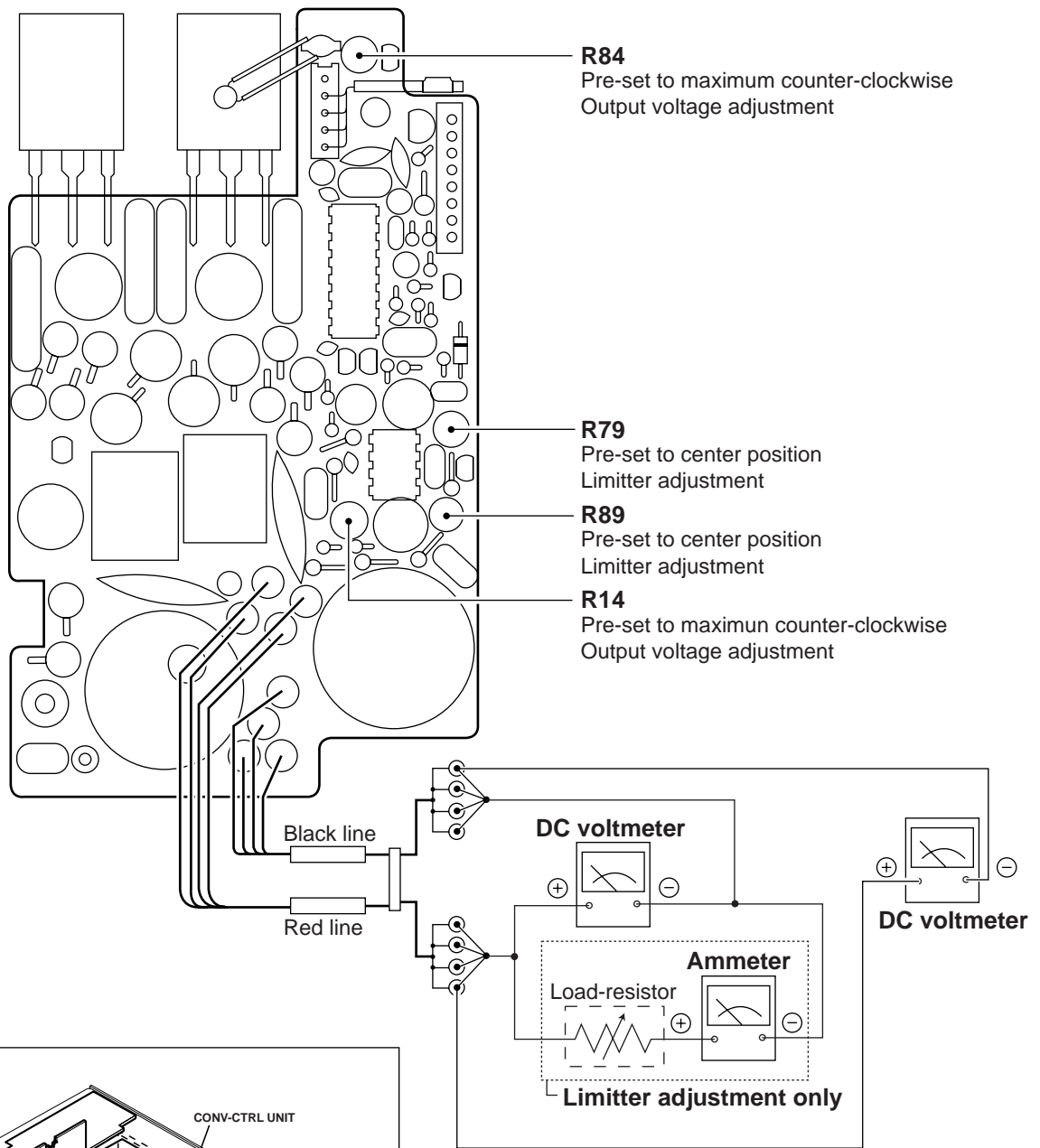
## 4-6 ACTFIL BOARD ADJUSTMENT

ADJUSTMENT	ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
		UNIT	LOCATION		UNIT	ADJUST
OVERVOLTAGE DETECTION	1 • Pre-set R52 and R53 to maximum counterclockwise position.	ACTFIL	Connect a DC voltmeter between EP3 and EP4.	380 V	ACTFIL	R52
			Connect a DC voltmeter between IC6 and EP4.			210.0 V



## 4-7 CONV-CTRL BOARD ADJUSTMENT

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
OUTPUT VOLTAGE	1	<ul style="list-style-type: none"> <li>• Pre-set R14 and R84 to maximum counterclockwise position.</li> <li>• Pre-set R79 and R89 to center position.</li> </ul>	CONV-CTRL	Connect a DC voltmeter between W3, and W6.	45 V	CONV-CTRL	R14
LIMITTER	1	<ul style="list-style-type: none"> <li>• Connect a variable load-resistor between W3, W4, W14, W15 and W5, W6, W16, W17.</li> <li>• Set R79 to maximum counterclockwise position.</li> </ul>	CONV-CTRL	Connect an ammeter between W3, W4, W14, W15 and variable load-resistor.	52 A	Variable load-resistor	
	2					Connect a DC voltmeter between W3, W4, W14, W15 and W5, W6, W16, W17.	Point just before the output voltage drops.
OUTPUT VOLTAGE	1	• Input AC voltage : 100 V AC	CONV-CTRL	Connect a DC voltmeter between W3 and W6.	40 V	CONV-CTRL	R84
LIMITTER	1	<ul style="list-style-type: none"> <li>• Input AC voltage : 100 V AC</li> <li>• Connect a load-resistor between W3, W4, W14, W15 and W5, W6, W16, W17.</li> <li>• Set R89 to maximum counterclockwise position.</li> </ul>	CONV-CTRL	Connect an ammeter between W3, W4, W14, W15 and variable load-resistor.	35 A	Variable load-resistor	
	2					Connect a DC voltmeter between W3, W4, W14, W15 and W5, W6, W16, W17.	Point just before the output voltage drops.
<p><b>NOTE:</b> Input above 20 A current when adjusting this item, stop the power supply and must wait until Q1–Q3 on the ACTFIL unit are cool down.</p>							



**W3, W4, W14, W15,**      **W3, W6**  
**W5, W6, W19, W17**      Output voltage check point  
 Limiter check point

# SECTION 5 PARTS LIST

## • IC-PW1 PARTS LIST

### [MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
IC1	1110001340	S.IC NJM3403AM-T1
IC2	1110000960	S.IC NJM4558M-T1
IC3	1110000960	S.IC NJM4558M-T1
IC4	1110000960	S.IC NJM4558M-T1
IC5	1180001070	S.IC TA7805F (TE16L)
IC7	1140003610	S.IC X24C04S8-2.7T6
IC8	1180001260	S.IC BA9700AF-T1
IC9	1110000960	S.IC NJM4558M-T1
IC10	1130003920	S.IC TC4S69F (TE85R)
IC11	1130003920	S.IC TC4S69F (TE85R)
IC12	1140004120	S.IC M38022M2-138FP
IC13	1110004860	S.IC S-80842ALUP-EA6-T2
IC14	1160000130	S.IC TD62783AF (TP1)
IC15	1110004510	S.IC TD62597AFN (EL)
IC16	1130001880	S.IC μPD4069UBG-T1
IC17	1180001960	S.IC S-24C01BFJ-TB
IC18	1160000130	S.IC TD62783AF (TP1)
IC19	1160000130	S.IC TD62783AF (TP1)
IC20	1130008410	S.IC TC74AC393F (EL)
IC21	1110000960	S.IC NJM4558M-T1
IC25	1110001550	S.IC S-8054ALB-LM-T1
IC26	1140007690	S.IC TMP90PM38F
IC27	1130007030	S.IC TC7W08FU (TE12L)
IC28	1140003830	S.IC TC4W66F (TE12L)
IC30	1130007430	S.IC TC7S14FU (TE85R)
IC31	1110000960	S.IC NJM4558M-T1
IC33	1130005820	S.IC TC4S584F (TE85R)
IC35	1180001070	S.IC TA7805F (TE16L)
Q1	1510000780	S.TRANSISTOR 2SA1586-Y (TE85R)
Q2	1530002690	S.TRANSISTOR 2SC4116-GR (TE85R)
Q3	1520000530	S.TRANSISTOR 2SB1119S-TD
Q4	1590002310	S.TRANSISTOR DTC114EE TL
Q5	1520000530	S.TRANSISTOR 2SB1119S-TD
Q6	1590002310	S.TRANSISTOR DTC114EE TL
Q7	1520000530	S.TRANSISTOR 2SB1119S-TD
Q8	1590002310	S.TRANSISTOR DTC114EE TL
Q9	1520000530	S.TRANSISTOR 2SB1119S-TD
Q10	1520000530	S.TRANSISTOR 2SB1119S-TD
Q11	1520000530	S.TRANSISTOR 2SB1119S-TD
Q12	1520000530	S.TRANSISTOR 2SB1119S-TD
Q13	1520000530	S.TRANSISTOR 2SB1119S-TD
Q14	1520000530	S.TRANSISTOR 2SB1119S-TD
Q15	1520000530	S.TRANSISTOR 2SB1119S-TD
Q16	1590002310	S.TRANSISTOR DTC114EE TL
Q17	1590002310	S.TRANSISTOR DTC114EE TL
Q18	1590002310	S.TRANSISTOR DTC114EE TL
Q19	1590002310	S.TRANSISTOR DTC114EE TL
Q20	1590002310	S.TRANSISTOR DTC114EE TL
Q21	1590002310	S.TRANSISTOR DTC114EE TL
Q22	1590002310	S.TRANSISTOR DTC114EE TL
Q23	1510000780	S.TRANSISTOR 2SA1586-Y (TE85R)
Q24	1530002690	S.TRANSISTOR 2SC4116-GR (TE85R)
Q25	1530002690	S.TRANSISTOR 2SC4116-GR (TE85R)
Q26	1510000670	S.TRANSISTOR 2SA1588-GR (TE85R)
Q27	1520000530	S.TRANSISTOR 2SB1119S-TD
Q28	1590002310	S.TRANSISTOR DTC114EE TL
Q29	1530002690	S.TRANSISTOR 2SC4116-GR (TE85R)
Q30	1530002690	S.TRANSISTOR 2SC4116-GR (TE85R)
Q32	1590002310	S.TRANSISTOR DTC114EE TL
Q33	1530002690	S.TRANSISTOR 2SC4116-GR (TE85R)
Q34	1530002370	S.TRANSISTOR 2SC2714-O (TE85R)
Q35	1560000270	S.FET 2SK302-Y (TE85R)
Q36	1590002310	S.TRANSISTOR DTC114EE TL
Q100	1590002310	S.TRANSISTOR DTC114EE TL
Q101	1520000580	S.TRANSISTOR 2SB1124S-TD
Q102	1590002310	S.TRANSISTOR DTC114EE TL
Q103	1530002690	S.TRANSISTOR 2SC4116-GR (TE85R)
Q104	1590002310	S.TRANSISTOR DTC114EE TL
Q105	1590002310	S.TRANSISTOR DTC114EE TL
Q106	1530002690	S.TRANSISTOR 2SC4116-GR (TE85R)
Q107	1590002310	S.TRANSISTOR DTC114EE TL
Q108	1590002310	S.TRANSISTOR DTC114EE TL
Q109	1590002310	S.TRANSISTOR DTC114EE TL
Q110	1590002310	S.TRANSISTOR DTC114EE TL

### [MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION
Q111	1590002310	S.TRANSISTOR DTC114EE TL
Q112	1590002310	S.TRANSISTOR DTC114EE TL
Q113	1590002310	S.TRANSISTOR DTC114EE TL
Q114	1510000780	S.TRANSISTOR 2SA1586-Y (TE85R)
D1	1790001640	S.DIODE 1SS373 (TPH3)
D2	1790000620	S.DIODE MA77 (TX)
D3	1790000620	S.DIODE MA77 (TX)
D4	1730000680	S.ZENER RD4.7M-T2B2
D6	1730000680	S.ZENER RD4.7M-T2B2
D7	1790001640	S.DIODE 1SS373 (TPH3)
D8	1790001640	S.DIODE 1SS373 (TPH3)
D11	1750000270	S.DIODE 1SS301 (TE85R)
D12	1750000270	S.DIODE 1SS301 (TE85R)
D13	1750000290	S.DIODE 1SS300 (TE85R)
D14	1750000290	S.DIODE 1SS300 (TE85R)
D15	1790001130	S.DIODE D2FS4-4063
D16	1790000620	S.DIODE MA77 (TX)
D17	1790000620	S.DIODE MA77 (TX)
D18	1790000620	S.DIODE MA77 (TX)
D20	1790000620	S.DIODE MA77 (TX)
D21	1790000620	S.DIODE MA77 (TX)
D23	1730000410	S.ZENER RD5.1M-T2B2
D24	1730000410	S.ZENER RD5.1M-T2B2
D26	1750000270	S.DIODE 1SS301 (TE85R)
D27	1790000620	S.DIODE MA77 (TX)
D50	1790000620	S.DIODE MA77 (TX)
D51	1790000620	S.DIODE MA77 (TX)
D52	1750000270	S.DIODE 1SS301 (TE85R)
D54	1790000620	S.DIODE MA77 (TX)
D55	1790000620	S.DIODE MA77 (TX)
D56	1790001640	S.DIODE 1SS373 (TPH3)
D59	1790001640	S.DIODE 1SS373 (TPH3)
D60	1790001640	S.DIODE 1SS373 (TPH3)
D61	1750000270	S.DIODE 1SS301 (TE85R)
D62	1750000290	S.DIODE 1SS300 (TE85R)
D63	1750000270	S.DIODE 1SS301 (TE85R)
D66	1790001130	S.DIODE D2FS4-4063
D67	1790001640	S.DIODE 1SS373 (TPH3)
D68	1790001640	S.DIODE 1SS373 (TPH3)
D69	1790000620	S.DIODE MA77 (TX)
D70	1790001640	S.DIODE 1SS373 (TPH3)
D71	1790000620	S.DIODE MA77 (TX)
D72	1750000270	S.DIODE 1SS301 (TE85R)
D73	1750000270	S.DIODE 1SS301 (TE85R)
D75	1750000270	S.DIODE 1SS301 (TE85R)
D76	1790001640	S.DIODE 1SS373 (TPH3)
D77	790001130	S.DIODE D2FS4-4063
D78	790001130	S.DIODE D2FS4-4063
D79	1790001130	S.DIODE D2FS4-4063
D80	790001130	S.DIODE D2FS4-4063
D81	790001130	S.DIODE D2FS4-4063
D82	790001130	S.DIODE D2FS4-4063
D83	790001130	S.DIODE D2FS4-4063
D84	790001130	S.DIODE D2FS4-4063
D85	1750000270	S.DIODE 1SS301 (TE85R)
D86	790001130	S.DIODE D2FS4-4063
D87	790001130	S.DIODE D2FS4-4063
D88	790001130	S.DIODE D2FS4-4063
X1	6050009890	S.XTAL CR-569 (6.144 MHz)
X2	6050009870	S.XTAL CR-567 (9.8304 MHz)
L1	6200003260	S.COIL NL 322522T-101J
L2	6200003260	S.COIL NL 322522T-101J
L3	6200003260	S.COIL NL 322522T-101J
L4	6200003260	S.COIL NL 322522T-101J
L5	6200003260	S.COIL NL 322522T-101J
L6	6200003260	S.COIL NL 322522T-101J
L7	6200003260	S.COIL NL 322522T-101J
L8	6200003260	S.COIL NL 322522T-101J
L9	6200001830	S.COIL NL 322522T-100J
L10	6200001830	S.COIL NL 322522T-100J

[USA] only

S.=Surface mount

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION
L11	6200003260	S.COIL NL 322522T-101J
L12	6200003260	S.COIL NL 322522T-101J
L13	6200003950	S.COIL HF50ACC 322513-T
L14	6200003950	S.COIL HF50ACC 322513-T
L15	6200003260	S.COIL NL 322522T-101J
L16	6200003260	S.COIL NL 322522T-101J
L17	6200001830	S.COIL NL 322522T-100J
L19	6200003260	S.COIL NL 322522T-101J
L22	6200003260	S.COIL NL 322522T-101J
L24	6200003260	S.COIL NL 322522T-101J
L25	6200003260	S.COIL NL 322522T-101J
L27	6200001830	S.COIL NL 322522T-100J
L28	6140002220	COIL LR-270
L29	6190000220	COIL S0971136-101K
L30	6200003260	S.COIL NL 322522T-101J
L31	6200003260	S.COIL NL 322522T-101J
L32	6200003260	S.COIL NL 322522T-101J
L35	6140002220	COIL LR-270
L36	6200003260	S.COIL NL 322522T-101J
L37	6180000990	COIL LAL 04NA 101K
L38	6200003950	S.COIL HF50ACC 322513-T
L39	6200003950	S.COIL HF50ACC 322513-T
L40	6200003950	S.COIL HF50ACC 322513-T
L41	6200003950	S.COIL HF50ACC 322513-T
L42	6200003950	S.COIL HF50ACC 322513-T
L43	6200003950	S.COIL HF50ACC 322513-T
L44	6200003950	S.COIL HF50ACC 322513-T
L45	6200003950	S.COIL HF50ACC 322513-T
L46	6200003950	S.COIL HF50ACC 322513-T
L47	6200003950	S.COIL HF50ACC 322513-T
L48	6200003950	S.COIL HF50ACC 322513-T
L49	6200003260	S.COIL NL 322522T-101J
L50	6200003950	S.COIL HF50ACC 322513-T
L51	6200003260	S.COIL NL 322522T-101J
L52	6200003260	S.COIL NL 322522T-101J
L54	6200003950	S.COIL HF50ACC 322513-T
L55	6200003950	S.COIL HF50ACC 322513-T
L56	6200003950	S.COIL HF50ACC 322513-T
L57	6200003950	S.COIL HF50ACC 322513-T
L58	6200003950	S.COIL HF50ACC 322513-T
L59	6200003950	S.COIL HF50ACC 322513-T
L60	6200003950	S.COIL HF50ACC 322513-T
L61	6200003950	S.COIL HF50ACC 322513-T
L62	6200003950	S.COIL HF50ACC 322513-T
L63	6200003950	S.COIL HF50ACC 322513-T
L64	6200003950	S.COIL HF50ACC 322513-T
L65	6200003950	S.COIL HF50ACC 322513-T
L66	6200003950	S.COIL HF50ACC 322513-T
L67	6200003950	S.COIL HF50ACC 322513-T
L68	6200003950	S.COIL HF50ACC 322513-T
L69	6200003950	S.COIL HF50ACC 322513-T
L70	6200003950	S.COIL HF50ACC 322513-T
L71	6200003950	S.COIL HF50ACC 322513-T
L72	6200003950	S.COIL HF50ACC 322513-T
L73	6200003950	S.COIL HF50ACC 322513-T
L74	6200003950	S.COIL HF50ACC 322513-T
L75	6200003260	S.COIL NL 322522T-101J
L76	6200003260	S.COIL NL 322522T-101J
L77	6200001830	S.COIL NL 322522T-100J
L78	6200001830	S.COIL NL 322522T-100J
L79	6200001830	S.COIL NL 322522T-100J
L80	6910003570	COIL 2943-666663
L81	6200003260	S.COIL NL 322522T-101J
L82	6200003260	S.COIL NL 322522T-101J
L100	6200003260	S.COIL NL 322522T-101J
L101	6200003260	S.COIL NL 322522T-101J
L104	6200003950	S.COIL HF50ACC 322513-T
L105	6200003950	S.COIL HF50ACC 322513-T
L106	6200003950	S.COIL HF50ACC 322513-T
L107	6910003570	COIL 2943-666663
L108	6910003570	COIL 2943-666663
L109	6200003260	S.COIL NL 322522T-101J
L110	6200003260	S.COIL NL 322522T-101J
L111	6200003950	S.COIL HF50ACC 322513-T
L113	6200003260	S.COIL NL 322522T-101J
L114	6180000900	COIL LAL 03NA 101K
L115	6180000880	COIL LAL 03NA 100K
L116	6180000880	COIL LAL 03NA 100K
L117	6200003260	S.COIL NL 322522T-101J
L118	6200003260	S.COIL NL 322522T-101J
L119	6200003260	S.COIL NL 322522T-101J
L120	6200003260	S.COIL NL 322522T-101J

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION
L121	6200003950	S.COIL HF50ACC 322513-T
L122	6200003950	S.COIL HF50ACC 322513-T
L123	6200003260	S.COIL NL 322522T-101J
L124	6200003260	S.COIL NL 322522T-101J
L125	6200003950	S.COIL HF50ACC 322513-T
R1	7030003840	S.RESISTOR ERJ3GEYJ 225 V (2.2 MΩ)
R2	7030003740	S.RESISTOR ERJ3GEYJ 334 V (330 kΩ)
R3	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R4	7310002580	S.TRIMMER RV-108 (RH03A3A15X05A) 104
R5	7310002840	S.TRIMMER RV-160 (RH03A3A16) 105
R6	7310002580	S.TRIMMER RV-108 (RH03A3A15X05A) 104
R7	7030003570	S.RESISTOR ERJ3GEYJ 123 V (12 kΩ)
R9	7030003840	S.RESISTOR ERJ3GEYJ 225 V (2.2 MΩ)
R10	7030003750	S.RESISTOR ERJ3GEYJ 394 V (390 kΩ)
R11	7030003810	S.RESISTOR ERJ3GEYJ 125 V (1.2 MΩ)
R12	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R13	7030003810	S.RESISTOR ERJ3GEYJ 125 V (1.2 MΩ)
R14	7030003690	S.RESISTOR ERJ3GEYJ 124 V (120 kΩ)
R15	7310002740	S.TRIMMER RV-150 (RH03A3A14X0FC) 103
R22	7310002580	S.TRIMMER RV-108 (RH03A3A15X05A) 104
R23	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R24	7030003750	S.RESISTOR ERJ3GEYJ 394 V (390 kΩ)
R25	7030003750	S.RESISTOR ERJ3GEYJ 394 V (390 kΩ)
R26	7310002800	S.TRIMMER RV-156 (RH03A3AJ5) 224
R27	7030003650	S.RESISTOR ERJ3GEYJ 563 V (56 kΩ)
R28	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R29	7030003750	S.RESISTOR ERJ3GEYJ 394 V (390 kΩ)
R30	7030003750	S.RESISTOR ERJ3GEYJ 394 V (390 kΩ)
R31	7310002820	S.TRIMMER RV-158 (RH03A3AS5) 474
R32	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R33	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R34	7030003730	S.RESISTOR ERJ3GEYJ 274 V (270 kΩ)
R35	7030003660	S.RESISTOR ERJ3GEYJ 683 V (68 kΩ)
R37	7030003670	S.RESISTOR ERJ3GEYJ 823 V (82 kΩ)
R38	7030003450	S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ)
R39	7030003450	S.RESISTOR ERJ3GEYJ 122 V (1.2 kΩ)
R44	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R45	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R46	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R47	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R48	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R49	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R50	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R51	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R52	7030006060	S.RESISTOR ERJ12YJ100U (10 Ω)
R53	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R54	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R55	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R56	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R57	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R58	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R59	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R60	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R61	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R62	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R63	7030003670	S.RESISTOR ERJ3GEYJ 823 V (82 kΩ)
R64	7030003540	S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ)
R65	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R66	7030003540	S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ)
R67	7030003570	S.RESISTOR ERJ3GEYJ 123 V (12 kΩ)
R68	7030003630	S.RESISTOR ERJ3GEYJ 393 V (39 kΩ)
R69	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R70	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)
R71	7030006220	S.RESISTOR ERJ12YJ470U (47 Ω)
R73	7030008170	S.RESISTOR ERJ12YJ1R0U (1 Ω)
R75	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R76	7030003510	S.RESISTOR ERJ3GEYJ 392 V (3.9 kΩ)
R77	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R78	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R79	7030003810	S.RESISTOR ERJ3GEYJ 125 V (1.2 MΩ)
R80	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R82	7030003520	S.RESISTOR ERJ3GEYJ 472 V (4.7 kΩ)
R83	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R84	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R85	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R86	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)
R87	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R88	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R89	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R90	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)

S.=Surface mount

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION
R91	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R92	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R93	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R94	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R95	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R96	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R97	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R98	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R99	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R100	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R101	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R102	7030003370	S.RESISTOR ERJ3GEYJ 271 V (270 Ω)
R103	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R104	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R105	7030003650	S.RESISTOR ERJ3GEYJ 563 V (56 kΩ)
R106	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R107	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R108	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R109	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R110	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R111	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R112	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R113	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R114	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R115	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R116	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R117	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R118	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R119	7030003540	S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ)
R120	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R121	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R122	7030003590	S.RESISTOR ERJ3GEYJ 183 V (18 kΩ)
R123	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R124	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R125	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R126	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R127	7030003840	S.RESISTOR ERJ3GEYJ 225 V (2.2 MΩ)
R128	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R130	7030003700	S.RESISTOR ERJ3GEYJ 154 V (150 kΩ)
R132	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R133	7030003610	S.RESISTOR ERJ3GEYJ 273 V (27 kΩ)
R135	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R136	7030003540	S.RESISTOR ERJ3GEYJ 682 V (6.8 kΩ)
R137	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R139	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R140	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R141	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R142	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R143	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R144	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R145	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R146	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R147	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R148	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R149	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R150	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R151	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R152	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R153	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R155	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R157	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R158	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R159	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R160	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R161	7030003380	S.RESISTOR ERJ3GEYJ 331 V (330 Ω)
R162	7030003630	S.RESISTOR ERJ3GEYJ 393 V (39 kΩ)
R163	7030003420	S.RESISTOR ERJ3GEYJ 681 V (680 Ω)
R164	7030003260	S.RESISTOR ERJ3GEYJ 330 V (33 Ω)
R165	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R166	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R167	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R170	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R171	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R172	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R173	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R174	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R175	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R176	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R177	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R178	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R179	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R180	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)

**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION
R181	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R182	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R183	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R184	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R185	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R186	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R187	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R188	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R189	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R190	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R191	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R192	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R193	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R194	7030003580	S.RESISTOR ERJ3GEYJ 153 V (15 kΩ)
R196	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R197	7310002760	S.TRIMMER RV-152 (RH03A3AJ4X0HA) 223
R198	7030003640	S.RESISTOR ERJ3GEYJ 473 V (47 kΩ)
R199	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R200	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R201	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R202	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R203	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R204	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R205	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R206	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R207	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R208	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R209	7030003620	S.RESISTOR ERJ3GEYJ 333 V (33 kΩ)
R210	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R211	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R212	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R213	7030003480	S.RESISTOR ERJ3GEYJ 222 V (2.2 kΩ)
R222	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R223	7030003400	S.RESISTOR ERJ3GEYJ 471 V (470 Ω)
R224	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R225	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R226	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R227	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R228	7030003560	S.RESISTOR ERJ3GEYJ 103 V (10 kΩ)
R229	7030003710	S.RESISTOR ERJ3GEYJ 184 V (180 kΩ)
R229	7030003820	S.RESISTOR ERJ3GEYJ 155 V (1.5 MΩ)
R230	7030003440	S.RESISTOR ERJ3GEYJ 102 V (1 kΩ)
R231	7030003760	S.RESISTOR ERJ3GEYJ 474 V (470 kΩ)
R232	7010000990	RESISTOR R25XJ 47 Ω
R233	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R234	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R235	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R237	7030003610	S.RESISTOR ERJ3GEYJ 273 V (27 kΩ)
R238	7030003800	S.RESISTOR ERJ3GEYJ 105 V (1 MΩ)
R240	7310002840	S.TRIMMER RV-160 (RH03A3A16) 105
R241	7030003610	S.RESISTOR ERJ3GEYJ 273 V (27 kΩ)
R242	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R243	7030000420	S.RESISTOR MCR10EZHZJ 2.2 kΩ
R244	7030003720	S.RESISTOR ERJ3GEYJ 224 V (220 kΩ)
R245	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R246	7030003600	S.RESISTOR ERJ3GEYJ 223 V (22 kΩ)
R247	70300008190	S.RESISTOR ERJ12YJ330U (33 Ω)
R249	7030003680	S.RESISTOR ERJ3GEYJ 104 V (100 kΩ)
R250	7030003660	S.RESISTOR ERJ3GEYJ 683 V (68 kΩ)
C1	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C2	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C3	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C5	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C6	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C8	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C13	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C14	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C17	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C18	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A
C19	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C20	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C21	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C22	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C23	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C25	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C26	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C28	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C29	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C31	4030011600	S.CERAMIC C1608 JB 1C 104KT-N
C33	4030006880	S.CERAMIC C1608 JB 1H 472K-T-A

S.=Surface mount

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C34	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C35	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C36	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C37	4510004640	S.ELECTROLYTIC	ECEV1CA470SP
C38	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C39	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C40	4510004640	S.ELECTROLYTIC	ECEV1CA470SP
C41	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C43	4030009580	S.CERAMIC	C1608 JB 1H 681K-T-A
C44	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C45	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C46	4510006240	S.ELECTROLYTIC	ECEV1CA221P
C47	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C48	4510006670	S.ELECTROLYTIC	ECEV1CA471P
C49	4510006670	S.ELECTROLYTIC	ECEV1CA471P
C50	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C51	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C52	4510004640	S.ELECTROLYTIC	ECEV1CA470SP
C53	4510004640	S.ELECTROLYTIC	ECEV1CA470SP
C54	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C55	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C56	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C57	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C59	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C60	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C61	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C64	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C65	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C66	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C67	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C68	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C69	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C70	4030007030	S.CERAMIC	C1608 CH 1H 150J-T-A
C71	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C72	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C73	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C74	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C75	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C76	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C77	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C78	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C79	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C80	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C81	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C82	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C83	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C84	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C85	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C86	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C87	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C88	4030009660	S.CERAMIC	C1608 JF 1C 224Z-T-A
C89	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C90	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C92	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C93	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C94	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C95	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C96	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C97	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C98	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C99	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C100	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C101	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C102	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C103	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C104	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C105	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C106	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C107	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C108	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C109	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C110	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C111	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C112	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C113	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C114	4030011340	S.CERAMIC	C1608 CH 1H 471J-T-A
C115	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C121	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C122	4030010110	S.CERAMIC	C1608 SL 1H 471J-T-A
C123	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C124	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C125	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A

[MAIN UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
C126	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C201	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C202	4030007020	S.CERAMIC	C1608 CH 1H 120J-T-A
C203	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C204	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C205	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C206	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C207	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C208	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C209	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C210	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C211	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C212	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C213	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C214	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C215	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C216	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C219	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C220	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C221	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C222	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C223	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C224	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C225	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C226	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C227	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C228	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C229	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C230	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C231	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C232	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C233	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C234	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C235	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C236	4510003840	ELECTROLYTIC	50 MV 1 SWB
C239	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C240	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C241	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C242	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C245	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C246	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C247	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C248	4510004870	S.ELECTROLYTIC	ECEV1CA330P
C249	4510003790	ELECTROLYTIC	16 MV 10 SWB
RL2	6330001320	RELAY	AHY103
RL3	6330001320	RELAY	AHY103
CP1	6910009670	S.CHECK P	HK3-S-T [EUR-1] only
J2	6510022090	S.CONNECTOR	52610-1290
J3	6510003460	CONNECTOR	B10B-EH-S
J4	6510003480	CONNECTOR	B12B-EH-S
J6	6510003410	CONNECTOR	B05B-EH-S
J8	6510003490	CONNECTOR	B13B-EH-S
J9	6510003410	CONNECTOR	B05B-EH-S
J10	6510003450	CONNECTOR	B09B-EH-S
J14	6510017650	CONNECTOR	52045-1045
J17	6510003390	CONNECTOR	B03B-EH-S
J18	6510003410	CONNECTOR	B05B-EH-S
J19	6510003420	CONNECTOR	B06B-EH-S
J20	6510003430	CONNECTOR	B07B-EH-S
J21	6510003440	CONNECTOR	B08B-EH-S
J22	6510003390	CONNECTOR	B03B-EH-S
J23	6910005800	CONNECTOR	IMS A-9210B-1-03T
P1	6910007600	CONNECTOR	IMS A-9215H-T
S3	2260002220	SWITCH	S-1010A
S4	2260002220	SWITCH	S-1010A
S5	2220000530	S.SWITCH	SW-161 (SSSS822-A-0)
W3	7030003860	S.JUMPER	ERJ3GE JPW V
W10	7030003860	S.JUMPER	ERJ3GE JPW V

S.=Surface mount



**[MAIN UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
EP1	0910051093	PCB	B 4891M

**[FILTER UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
C15	4010004780	CERAMIC	DE1010 SL 560J 6KV
C16	4010004770	CERAMIC	DE0910 SL 390J 6KV
C18	4010004800	CERAMIC	DE1210 SL 820J 6KV
C19	4010004780	CERAMIC	DE1010 SL 560J 6KV
C20	4010004790	CERAMIC	DE1210 SL 680J 6KV
C23	4010004800	CERAMIC	DE1210 SL 820J 6KV
C24	4010004800	CERAMIC	DE1210 SL 820J 6KV
C25	4010004820	CERAMIC	DE1410 SL 121J 6KV
C26	4010004830	CERAMIC	DE1510 SL 151J 6KV
C27	4010004830	CERAMIC	DE1510 SL 151J 6KV
C28	4010004830	CERAMIC	DE1510 SL 151J 6KV
C29	4010004820	CERAMIC	DE1410 SL 121J 6KV
C30	4010004820	CERAMIC	DE1410 SL 121J 6KV
C31	4010004810	CERAMIC	DE1310 SL 101J 6KV
C32	4010004810	CERAMIC	DE1310 SL 101J 6KV
C33	4010005130	CERAMIC	DE0910 SL 470J 6KV
C34	4010004820	CERAMIC	DE1410 SL 121J 6KV
C35	4010004290	CERAMIC	DE1310 SL 181J 3KV
C36	4010004830	CERAMIC	DE1510 SL 151J 6KV
C37	4010004830	CERAMIC	DE1510 SL 151J 6KV
C38	4010004830	CERAMIC	DE1510 SL 151J 6KV
C39	4010004290	CERAMIC	DE1310 SL 181J 3KV
C40	4010004290	CERAMIC	DE1310 SL 181J 3KV
C41	4010004750	CERAMIC	DE1510 SL 331J 2KV
C42	4010004810	CERAMIC	DE1310 SL 101J 6KV
C43	4010004740	CERAMIC	DE1207 SL 271J 2KV
C44	4010004300	CERAMIC	DE1410 SL 221J 3KV
C45	4010004740	CERAMIC	DE1207 SL 271J 2KV
C46	4010004740	CERAMIC	DE1207 SL 271J 2KV
C47	4010004830	CERAMIC	DE1510 SL 151J 6KV
C48	4010004830	CERAMIC	DE1510 SL 151J 6KV
C49	4320001150	DIP MICA	KD20C 681J5
C50	4320001150	DIP MICA	KD20C 681J5
C51	4010004300	CERAMIC	DE1410 SL 221J 3KV
C52	4010004300	CERAMIC	DE1410 SL 221J 3KV
C53	4010004300	CERAMIC	DE1410 SL 221J 3KV
C54	4010004300	CERAMIC	DE1410 SL 221J 3KV
C55	4320001150	DIP MICA	KD20C 681J5
C56	4320001150	DIP MICA	KD20C 681J5
C58	4040000150	BARRIERLAYR	UAT 05X 472K
C60	4040000150	BARRIERLAYR	UAT 05X 472K
C62	4040000150	BARRIERLAYR	UAT 05X 472K
C64	4040000150	BARRIERLAYR	UAT 05X 472K
C66	4040000150	BARRIERLAYR	UAT 05X 472K
C68	4040000150	BARRIERLAYR	UAT 05X 472K
C70	4040000150	BARRIERLAYR	UAT 05X 472K
C71	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C72	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C73	4610001220	TRIMMER	CVE101-56 (100P)
C74	4030005040	S.CERAMIC	C2012 CH 1H 271J-T-A
C75	4040000150	BARRIERLAYR	UAT 05X 472K
C76	4010005080	CERAMIC	DE0707 SL 470J 3KV
C77	4010005070	CERAMIC	DE0707 SL 390J 3KV
C78	4010005110	CERAMIC	DE0910 SL 220J 6KV
C79	4010004760	CERAMIC	DE0910 SL 330J 6KV
C80	4010004310	CERAMIC	DE0705 SL 100D 1KV
C81	4010004310	CERAMIC	DE0705 SL 100D 1KV
C83	4010005030	CERAMIC	DE0707 SL 120J 3KV
C86	4010005030	CERAMIC	DE0707 SL 120J 3KV
C87	4010005030	CERAMIC	DE0707 SL 120J 3KV
C88	4010005110	CERAMIC	DE0910 SL 220J 6KV
C89	4010005030	CERAMIC	DE0707 SL 120J 3KV
C90	4010005030	CERAMIC	DE0707 SL 120J 3KV
C91	4010005030	CERAMIC	DE0707 SL 120J 3KV
C95	4010004710	CERAMIC	DE0707 SL 150J 3KV
C96	4010005030	CERAMIC	DE0707 SL 120J 3KV
C98	4010004700	CERAMIC	DE0707 SL 220J 3KV
C100	4010000500	CERAMIC	DD104 B 102K 50V
C101	4040000150	BARRIERLAYR	UAT 05X 472K
C102	4040000150	BARRIERLAYR	UAT 05X 472K
C103	4040000150	BARRIERLAYR	UAT 05X 472K
C104	4040000150	BARRIERLAYR	UAT 05X 472K
C107	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C108	4030004740	S.CERAMIC	C2012 JB 1H 472K-T-A
C110	4010004820	CERAMIC	DE1410 SL 121J 6KV
C112	4010004800	CERAMIC	DE1210 SL 820J 6KV
C115	4010006900	CERAMIC	HE805J YB 472K 50V
C116	4010004770	CERAMIC	DE0910 SL 390J 6KV
C117	4010004750	CERAMIC	DE1510 SL 331J 2KV
C118	4010005120	CERAMIC	DE0910 SL 270J 6KV
C119	4010005120	CERAMIC	DE0910 SL 270J 6KV
C120	4010005030	CERAMIC	DE0707 SL 120J 3KV

**[FILTER UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
D2	1710000470	DIODE	1S955
D4	1710000470	DIODE	1S955
D6	1710000470	DIODE	1S955
D8	1710000470	DIODE	1S955
D10	1710000470	DIODE	1S955
D12	1710000470	DIODE	1S955
D14	1710000470	DIODE	1S955
D15	1710000980	DIODE	MBD701
D16	1710000980	DIODE	MBD701
D17	1710000470	DIODE	1S955
D18	1710000470	DIODE	1S955
L1	6110003450	COIL	LA-539
L2	6110002280	COIL	LA-405
L3	6110003430	COIL	LA-540
L4	6110002250	COIL	LA-402
L6	6110003420	COIL	LA-541
L7	6140001900	COIL	LR-200
L8	6140001910	COIL	LR-201
L9	6140001890	COIL	LR-198
L10	6140001940	COIL	LR-199
L11	6140003330	COIL	LR-369
L12	6140003340	COIL	LR-370
L13	6140001860	COIL	LR-195
L14	6140001850	COIL	LR-194
L15	6180001220	COIL	LAL 04NA 100K
L16	6180001220	COIL	LAL 04NA 100K
L17	6180001220	COIL	LAL 04NA 100K
L18	6180000990	COIL	LAL 04NA 101K
L19	6180000990	COIL	LAL 04NA 101K
L20	6180000990	COIL	LAL 04NA 101K
L21	6180000990	COIL	LAL 04NA 101K
L22	6140001001	COIL	LR-123A
L23	6180000990	COIL	LAL 04NA 101K
L27	6110003440	COIL	LA-538
L28	6110003460	COIL	LA-537
L29	6110003460	COIL	LA-537
L30	6180001220	COIL	LAL 04NA 100K
L31	6110002260	COIL	LA-403
L32	6180000990	COIL	LAL 04NA 101K
L33	6910000670	COIL	BL01RN1-A62-001
R2	7010004320	RESISTOR	R20J 10 kΩ
R3	7010004320	RESISTOR	R20J 10 kΩ
R4	7010004320	RESISTOR	R20J 10 kΩ
R5	7010004320	RESISTOR	R20J 10 kΩ
R7	7030007360	S.RESISTOR	ERJ1WYJ470U (47 Ω)
R8	7030007360	S.RESISTOR	ERJ1WYJ470U (47 Ω)
R9	7030007360	S.RESISTOR	ERJ1WYJ470U (47 Ω)
R10	7030007360	S.RESISTOR	ERJ1WYJ470U (47 Ω)
R11	7010004320	RESISTOR	R20J 10 kΩ
R12	7010004320	RESISTOR	R20J 10 kΩ
R13	7030007360	S.RESISTOR	ERJ1WYJ470U (47 Ω)
R14	7030007360	S.RESISTOR	ERJ1WYJ470U (47 Ω)
R15	7540000050	ABSORBER	DSA-701MA
C1	4010004770	CERAMIC	DE0910 SL 390J 6KV
C4	4010005130	CERAMIC	DE0910 SL 470J 6KV
C5	4010005130	CERAMIC	DE0910 SL 470J 6KV
C6	4010004770	CERAMIC	DE0910 SL 390J 6KV
C7	4010004760	CERAMIC	DE0910 SL 330J 6KV
C8	4010004770	CERAMIC	DE0910 SL 390J 6KV
C9	4010004800	CERAMIC	DE1210 SL 820J 6KV
C10	4010004790	CERAMIC	DE1210 SL 680J 6KV
C11	4010004780	CERAMIC	DE1010 SL 560J 6KV
C12	4010004810	CERAMIC	DE1310 SL 101J 6KV
C13	4010004780	CERAMIC	DE1010 SL 560J 6KV
C14	4010004780	CERAMIC	DE1010 SL 560J 6KV

[EUR-1] only  
[EUR-1] only

S.=Surface mount

**[FILTER UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
C123	4010005030	CERAMIC	DE0707 SL 120J 3KV
C124	4010004800	CERAMIC	DE1210 SL 820J 6KV
C125	4010004800	CERAMIC	DE1210 SL 820J 6KV
C126	4010004790	CERAMIC	DE1210 SL 680J 6KV
C128	4010005030	CERAMIC	DE0707 SL 120J 3KV
C129	4010005030	CERAMIC	DE0707 SL 120J 3KV
C130	4010005030	CERAMIC	DE0707 SL 120J 3KV
C131	4010004290	CERAMIC	DE1310 SL 181J 3KV
C133	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C134	4030008960	S.CERAMIC	C2012 JB 1C 104K-T-A
C135	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C136	4030006850	S.CERAMIC	C1608 JB 1H 471K-T-A
C137	4010004770	CERAMIC	DE0910 SL 390J 6KV
C138	4010004300	CERAMIC	DE1410 SL 221J 3KV
C139	4010004300	CERAMIC	DE1410 SL 221J 3KV
C140	4010004300	CERAMIC	DE1410 SL 221J 3KV
C141	4010004300	CERAMIC	DE1410 SL 221J 3KV
C142	4010004300	CERAMIC	DE1410 SL 221J 3KV
C143	4010004300	CERAMIC	DE1410 SL 221J 3KV
C144	4010006900	CERAMIC	HE80SJ YB 472k 50V
RL1	6330000201	RELAY	VS-12TBU-E-UC
RL2	6330000201	RELAY	VS-12TBU-E-UC
RL3	6330000201	RELAY	VS-12TBU-E-UC
RL4	6330000201	RELAY	VS-12TBU-E-UC
RL5	6330000201	RELAY	VS-12TBU-E-UC
RL6	6330000201	RELAY	VS-12TBU-E-UC
RL7	6330000201	RELAY	VS-12TBU-E-UC
RL8	6330000201	RELAY	VS-12TBU-E-UC
RL9	6330000201	RELAY	VS-12TBU-E-UC
RL10	6330000201	RELAY	VS-12TBU-E-UC
RL11	6330000201	RELAY	VS-12TBU-E-UC
RL12	6330000201	RELAY	VS-12TBU-E-UC
RL13	6330000201	RELAY	VS-12TBU-E-UC
RL14	6330000201	RELAY	VS-12TBU-E-UC
RL15	6330001500	RELAY	AW3033
RL16	6330001210	RELAY	VB-12TBU-UC
RL17	6330001210	RELAY	VB-12TBU-UC
WS1	8600035754	OTHER	EX1900 P01*J01FI-4
WS2	8970022640	OTHER	EX1900 1.5D COAXIAL TUBE (1)/FI
WS3	8970022650	OTHER	EX1900 TEFLON COAXIAL TUBE (1)/FI
WS5	8970023250	OTHER	EX1900 J LEAD SET (1)/FI
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP3	6910011330	TERMINAL	OT-009 M3
EP4	6910011330	TERMINAL	OT-009 M3
EP5	0910048749	PCB	B 4888I

**[COMBINR UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
D1	1710000040	DIODE	1S953
D2	1710000040	DIODE	1S953
D3	1710000040	DIODE	1S953
L1	6140000970	COIL	LR-119
L2	6140000970	COIL	LR-119
L3	6140001950	COIL	LR-211
L5	6140003290	COIL	LR-365
R1	7070000830	RESISTOR	ERG3SJ 101 (100 Ω)
R2	7070000830	RESISTOR	ERG3SJ 101 (100 Ω)
R3	7010004070	RESISTOR	R20J 100 Ω
R4	7010003950	RESISTOR	R20J 10 Ω
R5	7010003950	RESISTOR	R20J 10 Ω
R6	7100000580	RESISTOR	SRW7P-M 50 Ω (500)
R7	7010003910	RESISTOR	R20J 4.7 Ω
R8	7010003970	RESISTOR	R20J 15 Ω
R9	7010003950	RESISTOR	R20J 10 Ω

**[COMBINR UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
R10	7010003950	RESISTOR	R20J 10 Ω
R11	7010004070	RESISTOR	R20J 100 Ω
C1	4040000690	BARRIERLAYR	UAT 08X 473K
C2	4040000690	BARRIERLAYR	UAT 08X 473K
C3	4010004790	CERAMIC	DE1210 SL 680J 6KV
C4	4010004790	CERAMIC	DE1210 SL 680J 6KV
C5	4010005110	CERAMIC	DE0910 SL 220J 6KV
C6	4010005110	CERAMIC	DE0910 SL 220J 6KV
C7	4030005050	S.CERAMIC	C2012 CH 1H 331J-T-A
C8	4030005050	S.CERAMIC	C2012 CH 1H 331J-T-A
J1	6510017920	CONNECTOR	1811P342
J2	6510017920	CONNECTOR	1811P342
J3	6510017920	CONNECTOR	1811P342
J4	6510017920	CONNECTOR	1811P342
WS1	8970022610		EX1900 0.8D COAXIAL TUBE (3)/CO
WS2	8600035730		EX1900 P01*J08CO
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP3	0910048758	PCB	B 4889H
EP5	0910049250	PCB	B 5039

**[SPLITR UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1180001250	S.IC	TA7808F (TE16L)
D1	1750000270	S.DIODE	1SS301 (TE85R)
D2	1750000270	S.DIODE	1SS301 (TE85R)
D3	1790000490	S.DIODE	HSM88AS-TR
D4	1710000950	DIODE	RG3D
D5	1710000950	DIODE	RG3D
L1	6200003260	S.COIL	NL 322522T-101J
L2	6140000970	COIL	LR-119
L3	6140000970	COIL	LR-119
L4	6140001001	COIL	LR-123A
L5	6180000900	COIL	LAL 03NA 101K
L6	6140001001	COIL	LR-123A
L7	6200003260	S.COIL	NL 322522T-101J
L8	6200003260	S.COIL	NL 322522T-101J
L9	6200003260	S.COIL	NL 322522T-101J
L10	6200003260	S.COIL	NL 322522T-101J
L11	6200003260	S.COIL	NL 322522T-101J
R1	7070000591	RESISTOR	ERG1SJ 333 (33 kΩ)
R2	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R3	7100000580	RESISTOR	SRW7P-M 50 Ω (500)
R4	7100000580	RESISTOR	SRW7P-M 50 Ω (500)
R5	7100000580	RESISTOR	SRW7P-M 50 Ω (500)
R6	7100000580	RESISTOR	SRW7P-M 50 Ω (500)
R7	7030008020	S.RESISTOR	ERJ12YJ472U (4.7 kΩ)
R8	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R9	7030006180	S.RESISTOR	ERJ1WYJ101U (100 Ω)
R10	7030006180	S.RESISTOR	ERJ1WYJ101U (100 Ω)
R11	7030006070	S.RESISTOR	ERJ12YJ101U (100 Ω)
R12	7030006070	S.RESISTOR	ERJ12YJ101U (100 Ω)
R13	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R14	7030003590	S.RESISTOR	ERJ3GEYJ 183 V (18 kΩ)
R15	7030003690	S.RESISTOR	ERJ3GEYJ 124 V (120 kΩ)
R16	7510000140	THERMISTOR	ERT-D2FHL 802S
R17	7030003460	S.RESISTOR	ERJ3GEYJ 152 V (1.5 kΩ)
R18	7030006210	S.RESISTOR	ERJ12YJ4R7U (4.7 Ω)

S.=Surface mount

**[SPLITR UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
C1	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C2	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C3	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C4	4510005840	S.ELECTROLYTIC	ECEV1HANR47R
C5	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C7	4030006960	S.CERAMIC	C1608 CH 1H 050C-T-A
C8	4010006900	CERAMIC	HE80SJ YB 472K 50V
C9	4510006880	ELECTROLYTIC	100 MV 33 CZ
C10	4010006900	CERAMIC	HE80SJ YB 472K 50V
C11	4010005740	CERAMIC	HM60SJ SL 560J 500V
C14	4010005740	CERAMIC	HM60SJ SL 560J 500V
C17	4010005740	CERAMIC	HM60SJ SL 560J 500V
C18	4010005610	CERAMIC	HM60SJ SL 100D 500V
C19	4010005690	CERAMIC	HM60SJ SL 300J 500V
C20	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C21	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C22	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C23	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C24	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C25	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C26	4010005370	CERAMIC	HM11SJ SL 331J 500V
RL1	6330001330	RELAY	AG 201344
RL2	6330000470	RELAY	NR-HD (12V) AE5343
J1	6510007020	CONNECTOR	TMP-J01X-V6
J2	6510007020	CONNECTOR	TMP-J01X-V6
J4	6510007020	CONNECTOR	TMP-J01X-V6
J5	6510007020	CONNECTOR	TMP-J01X-V6
J6	6510007020	CONNECTOR	TMP-J01X-V6
J7	6510007020	CONNECTOR	TMP-J01X-V6
J8	6510007020	CONNECTOR	TMP-J01X-V6
J11	6510019970	S.CONNECTOR	52808-1091
WS1	8600035721	OTHER	EX1900 P01*J03*09SP-1
EP1	0910048784	PCB	B 4890D
EP2	9034901004	TUBE	TUBE 1 (d) L=10 mm
EP3	9050409902	TUBE	TUBE 1 (d) L=15 mm
EP5	9001602001	TUBE	IRRAX 0.7 (d) L=10 mm

**[PA BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
Q1	1560001000	FET	MRF150MP (SRFJ150MP)
Q2	1560001000	FET	MRF150MP (SRFJ150MP)
Q3	1560001000	FET	MRF150MP (SRFJ150MP)
Q4	1560001000	FET	MRF150MP (SRFJ150MP)
MF1	2710000620	FAN	PUDC12Z4-992
MF2	2710000620	FAN	PUDC12Z4-992
MF3	2710000620	FAN	PUDC12Z4-992
W1	8900006990	CABLE	OPC-683 (N:10 L:110)
W2	8900007360	CABLE	OPC-711 (N:10 L:250)
W3	8900006990	CABLE	OPC-683 (N:10 L:110)
W4	8900007360	CABLE	OPC-711 (N:10 L:250)
WS1	8970022930	OTHER	EX1900 J BOARD SET (4)/PA

**[PA-1 BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
D1	1750000270	S.DIODE	1SS301 (TE85R)
D2	1750000270	S.DIODE	1SS301 (TE85R)
D3	1750000270	S.DIODE	1SS301 (TE85R)
D4	1750000270	S.DIODE	1SS301 (TE85R)
L1	6110001730	COIL	LA-262
L2	6140003040	COIL	LR-322B
L3	6140002590	COIL	LR-296
L4	6140000720	COIL	LR-95
L5	6180000900	COIL	LAL 03NA 101K
L6	6180000900	COIL	LAL 03NA 101K
L7	6140002030	COIL	LR-230
L9	6200003260	S.COIL	NL 322522T-101J
L11	6200003950	S.COIL	HF50ACC 322513-T
R2	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R4	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R5	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R6	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R7	7030006140	S.RESISTOR	ERJ1WYJ560U (56 Ω)
R8	7030006140	S.RESISTOR	ERJ1WYJ560U (56 Ω)
R9	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R10	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R11	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R12	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R15	7070000960	RESISTOR	ERG3SJ 561 (560 Ω)
R16	7080001300	RESISTOR	ERG3SJ 270 (27 Ω)
R17	7070000940	RESISTOR	ERG3SJ 331 (330 Ω)
R18	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R19	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R20	7070000930	RESISTOR	ERG3SJ 330 (33 Ω)
R21	7070001000	RESISTOR	ERG3SJ 821 (820 Ω)
R23	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R24	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
C1	4010005740	CERAMIC	HM60SJ SL 560J 500V
C3	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C4	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C11	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C13	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C16	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C17	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C18	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C19	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C23	4510006830	ELECTROLYTIC	63 MV 470CZ
C24	4510006830	ELECTROLYTIC	63 MV 470CZ
C25	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C26	4030003410	S.CERAMIC	GRM42-6 B 473K 50PT
C27	4030001170	S.CERAMIC	GRM42-6 B 102K 50PT
C29	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C35	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C37	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C40	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C41	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C42	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C43	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C44	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C45	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C46	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C51	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C52	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C55	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C56	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C57	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
J2	6510017920	CONNECTOR	1811P342
J3	6510019970	S.CONNECTOR	52808-1091
J4	6510019970	S.CONNECTOR	52808-1091
J5	6510003390	CONNECTOR	B03B-EH-S
W6	7030003860	S.JUMPER	ERJ3GE JPW V
WS1	8970022531	OTHER	EX1900 J BOARD SET-1 (1)/PA-1
WS2	8970022540	OTHER	EX1900 1.5D COAXIAL TUBE (1)/PA-1

S.=Surface mount

**[PA-1 BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP3	6910000640	BEAD	FSOH090RN
EP4	0910048706	PCB	B 4884F

**[PA-2 BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
J2	6510017920	CONNECTOR	1811P342
J3	6510019970	S.CONNECTOR	52808-1091
J4	6510019970	S.CONNECTOR	52808-1091
J5	6510003390	CONNECTOR	B03B-EH-S
W6	7030003860	S.JUMPER	ERJ3GE JPW V
WS1	8970022551	OTHER	EX1900 J BOARD SET-1 (1)/PA-2
WS2	8970022560	OTHER	EX1900 1.5D COAXIAL TUBE (1)/PA-2
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP3	6910000640	BEAD	FSOH090RN
EP4	0910048706	PCB	B 4884F

**[PA-2 BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
D1	1750000270	S.DIODE	1SS301 (TE85R)
D2	1750000270	S.DIODE	1SS301 (TE85R)
D3	1750000270	S.DIODE	1SS301 (TE85R)
D4	1750000270	S.DIODE	1SS301 (TE85R)
L1	6110001730	COIL	LA-262
L2	6140003040	COIL	LR-322B
L3	6140002590	COIL	LR-296
L4	6140000720	COIL	LR-95
L5	6180000900	COIL	LAL 03NA 101K
L6	6180000900	COIL	LAL 03NA 101K
L7	6140002030	COIL	LR-230
L9	6200003260	S.COIL	NL 322522T-101J
L11	6200003950	S.COIL	HF50ACC 322513-T
R2	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R4	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R5	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R6	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R7	7030006140	S.RESISTOR	ERJ1WYJ560U (56 Ω)
R8	7030006140	S.RESISTOR	ERJ1WYJ560U (56 Ω)
R9	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R10	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R11	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R12	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R15	7070000960	RESISTOR	ERG3SJ 561 (560 Ω)
R16	7080001300	RESISTOR	ERG3SJ 270 (27 Ω)
R17	7070000940	RESISTOR	ERG3SJ 331 (330 Ω)
R18	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R19	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R20	7070000930	RESISTOR	ERG3SJ 330 (33 Ω)
R21	7070001000	RESISTOR	ERG3SJ 821 (820 Ω)
R23	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R24	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
C1	4010005740	CERAMIC	HM60SJ SL 560J 500V
C3	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C4	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C11	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C13	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C16	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C17	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C18	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C19	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C23	4510006830	ELECTROLYTIC	63 MV 470CZ
C24	4510006830	ELECTROLYTIC	63 MV 470CZ
C25	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C26	4030003410	S.CERAMIC	GRM42-6 B 473K 50PT
C27	4030001170	S.CERAMIC	GRM42-6 B 102K 50PT
C29	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C35	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C37	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C40	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C41	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C42	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C43	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C44	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C45	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C46	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C51	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C52	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C55	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C56	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C57	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A

**[PA-3 BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
D1	1750000270	S.DIODE	1SS301 (TE85R)
D2	1750000270	S.DIODE	1SS301 (TE85R)
D3	1750000270	S.DIODE	1SS301 (TE85R)
D4	1750000270	S.DIODE	1SS301 (TE85R)
L1	6110001730	COIL	LA-262
L2	6140003040	COIL	LR-322B
L3	6140002590	COIL	LR-296
L4	6140000720	COIL	LR-95
L5	6180000900	COIL	LAL 03NA 101K
L6	6180000900	COIL	LAL 03NA 101K
L7	6140002030	COIL	LR-230
L9	6200003260	S.COIL	NL 322522T-101J
L11	6200003950	S.COIL	HF50ACC 322513-T
R2	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R4	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R5	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R6	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R7	7030006140	S.RESISTOR	ERJ1WYJ560U (56 Ω)
R8	7030006140	S.RESISTOR	ERJ1WYJ560U (56 Ω)
R9	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R10	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R11	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R12	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R15	7070000960	RESISTOR	ERG3SJ 561 (560 Ω)
R16	7080001300	RESISTOR	ERG3SJ 270 (27 Ω)
R17	7070000940	RESISTOR	ERG3SJ 331 (330 Ω)
R18	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R19	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R20	7070000930	RESISTOR	ERG3SJ 330 (33 Ω)
R21	7070001000	RESISTOR	ERG3SJ 821 (820 Ω)
R23	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R24	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
C1	4010005740	CERAMIC	HM60SJ SL 560J 500V
C3	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C4	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C11	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C13	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C16	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C17	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C18	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C19	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C23	4510006830	ELECTROLYTIC	63 MV 470CZ
C24	4510006830	ELECTROLYTIC	63 MV 470CZ
C25	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C26	4030003410	S.CERAMIC	GRM42-6 B 473K 50PT
C27	4030001170	S.CERAMIC	GRM42-6 B 102K 50PT
C29	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C35	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C37	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N

S.=Surface mount

**[PA-3 BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
C40	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C41	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C42	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C43	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C44	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C45	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C46	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C51	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C52	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C55	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C56	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C57	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
J2	6510017920	CONNECTOR	1811P342
J3	6510019970	S.CONNECTOR	52808-1091
J4	6510019970	S.CONNECTOR	52808-1091
J5	6510003390	CONNECTOR	B03B-EH-S
W6	7030003860	S.JUMPER	ERJ3GE JPW V
WS1	8970022571	OTHER	EX1900 J BOARD SET-1 (1)/PA-3
WS2	8970022580	OTHER	EX1900 1.5D COAXIAL TUBE (1)/PA-3
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP3	6910000640	BEAD	FSOH090RN
EP4	0910048706	PCB	B 4884F

**[PA-4 BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
D1	1750000270	S.DIODE	1SS301 (TE85R)
D2	1750000270	S.DIODE	1SS301 (TE85R)
D3	1750000270	S.DIODE	1SS301 (TE85R)
D4	1750000270	S.DIODE	1SS301 (TE85R)
L1	6110001730	COIL	LA-262
L2	6140003040	COIL	LR-322B
L3	6140002590	COIL	LR-296
L4	6140000720	COIL	LR-95
L5	6180000900	COIL	LAL 03NA 101K
L6	6180000900	COIL	LAL 03NA 101K
L7	6140002030	COIL	LR-230
L9	6200003260	S.COIL	NL 322522T-101J
L11	6200003950	S.COIL	HF50ACC 322513-T
R2	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R4	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R5	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R6	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R7	7030006140	S.RESISTOR	ERJ1WYJ560U (56 Ω)
R8	7030006140	S.RESISTOR	ERJ1WYJ560U (56 Ω)
R9	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R10	7310003180	TRIMMER	EVN-2ACA00 B24 (203)
R11	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R12	7070000900	RESISTOR	ERX3SJ 1R8 (1.8 Ω)
R15	7070000960	RESISTOR	ERG3SJ 561 (560 Ω)
R16	7080001300	RESISTOR	ERG3SJ 270 (27 Ω)
R17	7070000940	RESISTOR	ERG3SJ 331 (330 Ω)
R18	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R19	7070000890	RESISTOR	ERG3SJ 150 (15 Ω)
R20	7070000930	RESISTOR	ERG3SJ 330 (33 Ω)
R21	7070001000	RESISTOR	ERG3SJ 821 (820 Ω)
R23	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R24	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
C1	4010005740	CERAMIC	HM60SJ SL 560J 500V
C3	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C4	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT

**[PA-4 BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
C11	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C13	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C16	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C17	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C18	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C19	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C23	4510006830	ELECTROLYTIC	63 MV 470CZ
C24	4510006830	ELECTROLYTIC	63 MV 470CZ
C25	4030006480	S.CERAMIC	GRM42-6 B 104K 50PT
C26	4030003410	S.CERAMIC	GRM42-6 B 473K 50PT
C27	4030001170	S.CERAMIC	GRM42-6 B 102K 50PT
C29	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C35	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C37	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C40	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C41	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C42	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C43	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C44	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C45	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C46	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C51	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C52	4030011790	S.CERAMIC	GRM44-1 Y5V 684Z 100PT
C55	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C56	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C57	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
J2	6510017920	CONNECTOR	1811P342
J3	6510019970	S.CONNECTOR	52808-1091
J4	6510019970	S.CONNECTOR	52808-1091
J5	6510003390	CONNECTOR	B03B-EH-S
W6	7030003860	S.JUMPER	ERJ3GE JPW V
WS1	8970022591	OTHER	EX1900 J BOARD SET-1 (1)/PA-4
WS2	8970022600	OTHER	EX1900 1.5D COAXIAL TUBE (1)/PA-4
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP3	6910000640	BEAD	FSOH090RN
EP4	0910048706	PCB	B 4884F

**[TUNER UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
C1	4620000130	VARIABLE	UV55 150PF
C2	4620000130	VARIABLE	UV55 150PF
MF1	2710000460	MOTOR	MP28GA STEPPING MOTOR
MF2	2710000460	MOTOR	MP28GA STEPPING MOTOR
MF3	2710000630	FAN	FBA08T12HC
WS1	8970022910	OTHER	EX1900 COAXIAL TUBE (1)/TU
EP7	9019001020	TUBE	TUBE 10 (d) L=65 mm

S.=Surface mount

[DET BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1110001850	IC	MC10116 L
IC2	1110001860	IC	MC10125 L
IC3	1120002250	S.IC	TC74ACT32F
IC4	1120002240	S.IC	TC74AC112F
IC5	1180000320	IC	NJM79L05A
Q1	1560000870	S.FET	2SK515-T1B (X33)
D3	1790000620	S.DIODE	MA77 (TX)
D4	1790000620	S.DIODE	MA77 (TX)
D5	1790000620	S.DIODE	MA77 (TX)
D6	1790000620	S.DIODE	MA77 (TX)
D7	1750000270	S.DIODE	1SS301 (TE85R)
D8	1750000270	S.DIODE	1SS301 (TE85R)
D11	1710000980	DIODE	MBD701
D12	1710000980	DIODE	MBD701
D13	1790001530	DIODE	1SS286
D14	1790001530	DIODE	1SS286
L1	6180000960	COIL	LAL 03NA 102K
L3	6140002660	COIL	LR-299
L4	6180000960	COIL	LAL 03NA 102K
L5	6140002660	COIL	LR-299
L8	6180000990	COIL	LAL 04NA 101K
L9	6200003260	S.COIL	NL 322522T-101J
L10	6200003260	S.COIL	NL 322522T-101J
L11	6140002220	COIL	LR-270 (TR6X3X2 3A9)
L12	6180000990	COIL	LAL 04NA 101K
R1	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R2	7030000080	S.RESISTOR	MCR10EZHZ 3.3 Ω (3R3)
R3	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R4	7030008320	S.RESISTOR	ERJ1WYJ6R8U (6.8 Ω)
R5	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R6	7030000080	S.RESISTOR	MCR10EZHZ 3.3 Ω (3R3)
R7	7030003400	S.RESISTOR	ERJ3GEYJ 471 V (470 Ω)
R8	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R9	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R11	7030003280	S.RESISTOR	ERJ3GEYJ 470 V (47 Ω)
R12	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
R13	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R14	7030009330	RESISTOR	ERJ1WYJ300U
R15	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R16	7030003800	S.RESISTOR	ERJ3GEYJ 105 V (1 MΩ)
R17	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R18	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R19	7030003450	S.RESISTOR	ERJ3GEYJ 122 V (1.2 kΩ)
R20	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R21	7030009330	RESISTOR	ERJ1WYJ300U
C1	4010005570	CERAMIC	HM60SJ SL 060D 500V
C2	4010005370	CERAMIC	HM11SJ SL 331J 500V
C3	4010005370	CERAMIC	HM11SJ SL 331J 500V
C4	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C5	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C6	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C7	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C8	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C9	4010005740	CERAMIC	HM60SJ SL 560J 500V
C10	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C11	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C12	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C13	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C14	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C15	4010005540	CERAMIC	HM60SJ SL 030C 500V
C16	4010005880	CERAMIC	HM95SJ SL 271J 500V
C17	4010005850	CERAMIC	HM95SJ SL 181J 500V
C18	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C19	4010005780	CERAMIC	HM60SJ SL 101J 500V
C20	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C21	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C22	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C23	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C24	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C25	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C26	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C27	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A

[DET BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
C29	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C30	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C33	4010005110	CERAMIC	DE0910 SL 220J 6KV
C34	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C35	4010005850	CERAMIC	HM95SJ SL 181J 500V
C36	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C37	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C38	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C39	4030006900	S.CERAMIC	C1608 JB 1E 103K-T-A
C40	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C41	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C42	4010005110	CERAMIC	DE0910 SL 220J 6KV
C43	4010005050	CERAMIC	DE0707 SL 270J 3KV
C44	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C45	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
WS1	8970022630	OTHER	EX1900 TEFLON COAXIAL TUBE (2)/DE
WS2	8600035821	OTHER	EX1900 P01*J01DE-1
EP5	6910011330	TERMINAL	OT-009 M3
EP6	6910011330	TERMINAL	OT-009 M3
EP7	6910011330	TERMINAL	OT-009 M3
EP8	6910011330	TERMINAL	OT-009 M3
EP9	0910048738	PCB	B 4887H

[CONNECT BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
C1	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C2	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C3	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C4	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C5	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C6	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C7	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
C8	4030010210	S.CERAMIC	C3216 JB 1C 105M-T-A
J1	6510017650	CONNECTOR	52045-1045
J2	6510003410	CONNECTOR	B05B-EH-S
J3	6510003410	CONNECTOR	B05B-EH-S
EP1	0910048814	PCB	B 4941D

[L-NET BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
D1	1710000050	DIODE	1SS53
D2	1710000050	DIODE	1SS53
L1	6180000990	COIL	LAL 04NA 101K
L2	6180000990	COIL	LAL 04NA 101K
L3	6110003360	COIL	LA-530
L4	6110003500	COIL	LA-543
L5	6110003490	COIL	LA-542
C1	4040000150	BARRIERLAYR	UAT 05X 472K
C2	4040000150	BARRIERLAYR	UAT 05X 472K
C3	4040000260	BARRIERLAYR	UZE 08X 104M
C4	4040000260	BARRIERLAYR	UZE 08X 104M
RL1	6330000570	RELAY	AR-39251
RL2	6330000570	RELAY	AR-39251

S.=Surface mount

**[L-NET BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
WS1	8600035830	OTHER	EX1900 P01*J01L
EP1	6910011340	TERMINAL	OT-010 M3
EP2	0910048727	PCB	B 4886G
EP3	9008501018	TUBE	PLASTIC TUBE 5.0 (d) L=150 mm

**[H-NET BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
EP2	6910011340	TERMINAL	OT-010 M3
EP3	0910049304	PCB	B 5017D

**[H-NET BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
D1	1710000050	DIODE	1SS53
D2	1710000050	DIODE	1SS53
D3	1710000050	DIODE	1SS53
D4	1710000050	DIODE	1SS53
D5	1710000050	DIODE	1SS53
D6	1710000050	DIODE	1SS53
D7	1710000050	DIODE	1SS53
D8	1710000050	DIODE	1SS53
D9	1710000050	DIODE	1SS53
D10	1710000050	DIODE	1SS53
L1	6180000990	COIL	LAL 04NA 101K
L2	6180000990	COIL	LAL 04NA 101K
L3	6180000990	COIL	LAL 04NA 101K
L4	6180000990	COIL	LAL 04NA 101K
L5	6180000990	COIL	LAL 04NA 101K
L6	6180000990	COIL	LAL 04NA 101K
L7	6180000990	COIL	LAL 04NA 101K
L8	6180000990	COIL	LAL 04NA 101K
L9	6180000990	COIL	LAL 04NA 101K
L10	6180000990	COIL	LAL 04NA 101K
L11	6110003410	COIL	LA-535
L12	6110003400	COIL	LA-534
L13	6110003510	COIL	LA-544
L14	6110003380	COIL	LA-532
L15	6110003370	COIL	LA-531
C1	4040000260	BARRIERLAYR	UZE 08X 104M
C2	4040000260	BARRIERLAYR	UZE 08X 104M
C3	4040000260	BARRIERLAYR	UZE 08X 104M
C4	4040000260	BARRIERLAYR	UZE 08X 104M
C5	4040000260	BARRIERLAYR	UZE 08X 104M
C6	4040000260	BARRIERLAYR	UZE 08X 104M
C7	4040000260	BARRIERLAYR	UZE 08X 104M
C8	4040000260	BARRIERLAYR	UZE 08X 104M
C9	4040000260	BARRIERLAYR	UZE 08X 104M
C10	4040000260	BARRIERLAYR	UZE 08X 104M
C11	4040000150	BARRIERLAYR	UAT 05X 472K
C12	4040000150	BARRIERLAYR	UAT 05X 472K
C13	4040000150	BARRIERLAYR	UAT 05X 472K
C14	4040000150	BARRIERLAYR	UAT 05X 472K
C15	4040000150	BARRIERLAYR	UAT 05X 472K
C16	4040000150	BARRIERLAYR	UAT 05X 472K
C17	4040000150	BARRIERLAYR	UAT 05X 472K
C18	4040000150	BARRIERLAYR	UAT 05X 472K
C19	4040000150	BARRIERLAYR	UAT 05X 472K
C20	4040000150	BARRIERLAYR	UAT 05X 472K
RL1	6330000570	RELAY	AR-39251
RL2	6330000570	RELAY	AR-39251
RL3	6330000570	RELAY	AR-39251
RL4	6330000570	RELAY	AR-39251
RL5	6330000570	RELAY	AR-39251
RL6	6330000570	RELAY	AR-39251
RL7	6330000570	RELAY	AR-39251
RL8	6330000570	RELAY	AR-39251
RL9	6330000570	RELAY	AR-39251
RL10	6330000570	RELAY	AR-39251
WS1	8600035841	OTHER	EX1900 P01*J01H-1

**[C-NET BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
D1	1710000050	DIODE	1SS53
D2	1710000050	DIODE	1SS53
D14	1710000050	DIODE	1SS53
D15	1710000050	DIODE	1SS53
D16	1710000050	DIODE	1SS53
D17	1710000050	DIODE	1SS53
D18	1710000050	DIODE	1SS53
D19	1710000050	DIODE	1SS53
D20	1710000050	DIODE	1SS53
D21	1710000050	DIODE	1SS53
L1	6180000990	COIL	LAL 04NA 101K
L2	6180000990	COIL	LAL 04NA 101K
L14	6180000990	COIL	LAL 04NA 101K
L15	6180000990	COIL	LAL 04NA 101K
L16	6180000990	COIL	LAL 04NA 101K
L17	6180000990	COIL	LAL 04NA 101K
L18	6180000990	COIL	LAL 04NA 101K
L19	6180000990	COIL	LAL 04NA 101K
L20	6180000990	COIL	LAL 04NA 101K
L21	6180000990	COIL	LAL 04NA 101K
C1	4040000150	BARRIERLAYR	UAT 05X 472K
C2	4040000150	BARRIERLAYR	UAT 05X 472K
C34	4040000150	BARRIERLAYR	UAT 05X 472K
C39	4040000150	BARRIERLAYR	UAT 05X 472K
C40	4010004790	CERAMIC	DE1210 SL 680J 6KV
C41	4010004790	CERAMIC	DE1210 SL 680J 6KV
C42	4010004790	CERAMIC	DE1210 SL 680J 6KV
C43	4010004790	CERAMIC	DE1210 SL 680J 6KV
C44	4040000150	BARRIERLAYR	UAT 05X 472K
C45	4010004300	CERAMIC	DE1410 SL 221J 3KV
C46	4010004300	CERAMIC	DE1410 SL 221J 3KV
C47	4010004300	CERAMIC	DE1410 SL 221J 3KV
C48	4010004300	CERAMIC	DE1410 SL 221J 3KV
C49	4040000150	BARRIERLAYR	UAT 05X 472K
C50	4010004810	CERAMIC	DE1310 SL 101J 6KV
C51	4010004810	CERAMIC	DE1310 SL 101J 6KV
C52	4010004810	CERAMIC	DE1310 SL 101J 6KV
C53	4010004810	CERAMIC	DE1310 SL 101J 6KV
C54	4040000150	BARRIERLAYR	UAT 05X 472K
C55	4010004710	CERAMIC	DE0707 SL 150J 3KV
C56	4010004710	CERAMIC	DE0707 SL 150J 3KV
C57	4010004710	CERAMIC	DE0707 SL 150J 3KV
C58	4010004710	CERAMIC	DE0707 SL 150J 3KV
C59	4040000150	BARRIERLAYR	UAT 05X 472K
C60	4010004800	CERAMIC	DE1210 SL 820J 6KV
C61	4010004800	CERAMIC	DE1210 SL 820J 6KV
C62	4010004800	CERAMIC	DE1210 SL 820J 6KV
C63	4010004800	CERAMIC	DE1210 SL 820J 6KV
C64	4040000150	BARRIERLAYR	UAT 05X 472K
C65	4010004810	CERAMIC	DE1310 SL 101J 6KV
C66	4010004810	CERAMIC	DE1310 SL 101J 6KV
C67	4010004810	CERAMIC	DE1310 SL 101J 6KV
C68	4010004810	CERAMIC	DE1310 SL 101J 6KV
C69	4040000150	BARRIERLAYR	UAT 05X 472K
C70	4010004830	CERAMIC	DE1510 SL 151J 6KV
C71	4010004830	CERAMIC	DE1510 SL 151J 6KV
C72	4010004830	CERAMIC	DE1510 SL 151J 6KV
C73	4010004830	CERAMIC	DE1510 SL 151J 6KV
C74	4010004710	CERAMIC	DE0707 SL 150J 3KV
C75	4010004710	CERAMIC	DE0707 SL 150J 3KV
C76	4010004710	CERAMIC	DE0707 SL 150J 3KV
C77	4010004710	CERAMIC	DE0707 SL 150J 3KV
C82	4010004810	CERAMIC	DE1310 SL 101J 6KV
C84	4010004810	CERAMIC	DE1310 SL 101J 6KV
C86	4010004810	CERAMIC	DE1310 SL 101J 6KV
C87	4010004810	CERAMIC	DE1310 SL 101J 6KV

S.=Surface mount

**[C-NET UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
C88	4010004810	CERAMIC	DE1310 SL 101J 6KV
C89	4010004810	CERAMIC	DE1310 SL 101J 6KV
C90	4010004710	CERAMIC	DE0707 SL 150J 3KV
C91	4010004710	CERAMIC	DE0707 SL 150J 3KV
C92	4010004710	CERAMIC	DE0707 SL 150J 3KV
C93	4010004710	CERAMIC	DE0707 SL 150J 3KV
C94	4010004710	CERAMIC	DE0707 SL 150J 3KV
C95	4010004710	CERAMIC	DE0707 SL 150J 3KV
C96	4010004710	CERAMIC	DE0707 SL 150J 3KV
C97	4010004710	CERAMIC	DE0707 SL 150J 3KV
RL1	6330001440	RELAY	VS-12TBU-VD3
RL2	6330001440	RELAY	VS-12TBU-VD3
RL3	6330000570	RELAY	AR-39251
RL4	6330001490	RELAY	VB-12MBU-UC
RL5	6330001490	RELAY	VB-12MBU-UC
RL6	6330001490	RELAY	VB-12MBU-UC
RL7	6330000570	RELAY	AR-39251
RL8	6330001490	RELAY	VB-12MBU-UC
RL9	6330001490	RELAY	VB-12MBU-UC
RL10	6330001490	RELAY	VB-12MBU-UC
WS1	8600035851	OTHER	EX1900 P01*J01C-1
WS2	8600035861	OTHER	EX1900 P02*J02C-1
EP3	0910049245	PCB	B 5019E

**[JACK1 UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
L1	6200003260	S.COIL	NL 322522T-101J
L2	6200003260	S.COIL	NL 322522T-101J
L3	6200003260	S.COIL	NL 322522T-101J
L4	6200003260	S.COIL	NL 322522T-101J
L5	6200003950	S.COIL	NL HF50ACC 322513-T
L6	6200003950	S.COIL	NL HF50ACC 322513-T
R1	7310003820	TRIMMER	EVN-D2AA03 B14
R2	7310003820	TRIMMER	EVN-D2AA03 B14
C1	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C2	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C3	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C4	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C5	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C6	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
J1	6450001590	CONNECTOR	TCS5073-17-4151
J3	6450001130	CONNECTOR	JPJ2042-01-110
J4	6450000140	CONNECTOR	HSJ0807-01-010
J5	6450001590	CONNECTOR	TCS5073-17-4151
J7	6450001130	CONNECTOR	JPJ2042-01-110
J8	6450000140	CONNECTOR	HSJ0807-01-010
J9	6510022090	S.CONNECTOR	52610-1290
J10	6510003460	CONNECTOR	B10B-EH-S
J11	6510003460	CONNECTOR	B10B-EH-S
J12	6510018960	S.CONNECTOR	B2B-PH-SM3-TB
S1	2220000570	SWICHI	HSW1196-01-020
EP1	0910048777	PCB	B 4898G

**[ANT-SW UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
D1	1710000050	DIODE	1SS53
D2	1710000050	DIODE	1SS53
D3	1710000050	DIODE	1SS53
D4	1710000050	DIODE	1SS53
L1	6180000900	COIL	LAL 03NA 101K
L2	6180000900	COIL	LAL 03NA 101K
L3	6180000900	COIL	LAL 03NA 101K
L4	6180000900	COIL	LAL 03NA 101K
R1	7540000190	ABSOBER	SRYG-2000L
C1	4010006900	CERAMIC	HE80SJ YB 472K 50V
C2	4010006900	CERAMIC	HE80SJ YB 472K 50V
C3	4010006900	CERAMIC	HE80SJ YB 472K 50V
C4	4010006900	CERAMIC	HE80SJ YB 472K 50V
C6	4010006900	CERAMIC	HE80SJ YB 472K 50V
C7	4010006900	CERAMIC	HE80SJ YB 472K 50V
C8	4010006900	CERAMIC	HE80SJ YB 472K 50V
C9	4010006900	CERAMIC	HE80SJ YB 472K 50V
C11	4010004310	CERAMIC	DE0705 SL 100D 1KV
C12	4010004310	CERAMIC	DE0705 SL 100D 1KV
C13	4010004310	CERAMIC	DE0705 SL 100D 1KV
C14	4010004310	CERAMIC	DE0705 SL 100D 1KV
C15	4010004310	CERAMIC	DE0705 SL 100D 1KV
C16	4010004310	CERAMIC	DE0705 SL 100D 1KV
RL1	6330001460	RELAY	FTR-F1CA012V
RL2	6330001460	RELAY	FTR-F1CA012V
RL3	6330001460	RELAY	FTR-F1CA012V
RL4	6330001460	RELAY	FTR-F1CA012V
WS1	8600035743	OTHER	EX1900 P01*J01AN-SW-3
EP1	6910011340	TERMINAL	OT-010 M3
EP2	6910011340	TERMINAL	OT-010 M3
EP3	0910048716	PCB	B 4885F

**[FRONT UNIT]**

REF NO.	ORDER NO.	DESCRIPTION	
DS1	5080000380	LAMP	HRS-4160A-H9 L150
DS2	5080000380	LAMP	HRS-4160A-H9 L150
ME1	5510000470	METER	ME-39
ME2	5510000460	METER	ME-38
WS1	8970022810	OTHER	EX1900 J LEAD SET (4) /FR
WS2	8600035961	OTHER	EX1900 P03*04FR-1
EP1	6910011040	TUBE	A-4210-G20
EP2	6910011040	TUBE	A-4210-G20

S.=Surface mount



[SW BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1130000830	S.IC	µPD4094BG-T1
IC2	1130000830	S.IC	µPD4094BG-T1
IC3	1130000830	S.IC	µPD4094BG-T1
IC4	1130000830	S.IC	µPD4094BG-T1
IC5	1110003690	S.IC	M62354GP 75EC
IC6	1180001070	S.IC	TA7805F (TE16L)
IC7	1130004670	S.IC	BU4021BF-T1
IC8	1130007260	S.IC	TC7W74FU (TE12L)
IC9	1130005820	S.IC	TC4S584F (TE85R)
IC11	1130007300	S.IC	TC4W66FU (TE12L)
Q1	1590002310	S.TRANSISTOR	DTC114EE TL
Q2	1590002310	S.TRANSISTOR	DTC114EE TL
Q3	1590002310	S.TRANSISTOR	DTC114EE TL
Q4	1590002310	S.TRANSISTOR	DTC114EE TL
Q5	1590002310	S.TRANSISTOR	DTC114EE TL
Q6	1590002310	S.TRANSISTOR	DTC114EE TL
Q7	1590002310	S.TRANSISTOR	DTC114EE TL
Q8	1590002310	S.TRANSISTOR	DTC114EE TL
Q9	1590002310	S.TRANSISTOR	DTC114EE TL
Q10	1590002310	S.TRANSISTOR	DTC114EE TL
Q11	1590002310	S.TRANSISTOR	DTC114EE TL
Q12	1590002310	S.TRANSISTOR	DTC114EE TL
Q13	1590002310	S.TRANSISTOR	DTC114EE TL
Q14	1590002310	S.TRANSISTOR	DTC114EE TL
Q15	1590002310	S.TRANSISTOR	DTC114EE TL
Q16	1590002310	S.TRANSISTOR	DTC114EE TL
Q17	1590002310	S.TRANSISTOR	DTC114EE TL
Q18	1530002690	S.TRANSISTOR	2SC4116-GR (TE85E)
Q19	1590002310	S.TRANSISTOR	DTC114EE TL
Q20	1590002310	S.TRANSISTOR	DTC114EE TL
Q21	1590002310	S.TRANSISTOR	DTC114EE TL
Q22	1590002310	S.TRANSISTOR	DTC114EE TL
Q23	1590002310	S.TRANSISTOR	DTC114EE TL
Q24	1590002310	S.TRANSISTOR	DTC114EE TL
Q25	1590002310	S.TRANSISTOR	DTC114EE TL
Q26	1590002310	S.TRANSISTOR	DTC114EE TL
Q27	1590002310	S.TRANSISTOR	DTC114EE TL
Q31	1590001940	S.TRANSISTOR	DTC144EE TL
Q32	1520000460	S.TRANSISTOR	2SB1132 T100 R
D1	1750000270	S.DIODE	1SS301 (TE85R)
D2	1750000270	S.DIODE	1SS301 (TE85R)
D3	1750000290	S.DIODE	1SS300 (TE85R)
D4	1750000290	S.DIODE	1SS300 (TE85R)
D5	1730002320	S.ZENER	MA8051-M (TX)
D6	1750000270	S.DIODE	1SS301 (TE85R)
D7	1750000290	S.DIODE	1SS300 (TE85R)
D10	1750000230	S.DIODE	1SS315 TPH-3
D11	1750000230	S.DIODE	1SS315 TPH-3
D13	1750000290	S.DIODE	1SS300 (TE85R)
D16	1750000270	S.DIODE	1SS301 (TE85R)
L1	6200003260	S.COIL	NL 322522T-101J
L2	6200003260	S.COIL	NL 322522T-101J
L3	6200003260	S.COIL	NL 322522T-101J
L4	6200003260	S.COIL	NL 322522T-101J
L5	6200003950	S.COIL	HF50ACC 322513-T
L6	6200003950	S.COIL	HF50ACC 322513-T
L7	6200003260	S.COIL	NL 322522T-101J
L8	6200003260	S.COIL	NL 322522T-101J
L9	6200003950	S.COIL	HF50ACC 322513-T
R1	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R2	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R3	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R4	7030009220	S.RESISTOR	ERJ12YJ561U
R5	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R6	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R7	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R8	7030009220	S.RESISTOR	ERJ12YJ561U
R9	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R10	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R11	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R12	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R13	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R14	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R15	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)

[SW BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
R16	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R17	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R18	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R19	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R20	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R21	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R22	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R23	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R24	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R25	7030009220	S.RESISTOR	ERJ12YJ561U
R26	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R27	7030003340	S.RESISTOR	ERJ3GEYJ 151 V (150 Ω)
R29	7030003720	S.RESISTOR	ERJ3GEYJ 224 V (220 kΩ)
R30	7030008190	S.RESISTOR	ERJ12YJ330U (33 Ω)
R31	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R32	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R33	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R34	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R35	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R36	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R37	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R38	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R39	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R40	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R41	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R42	7030006060	S.RESISTOR	ERJ12YJ100U (10 Ω)
R43	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R44	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R45	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R46	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R47	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R48	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R51	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R52	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R53	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R54	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R55	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R56	7310002740	S.TRIMMER	RV-150 (RH03A3A14X0FC) 103
R57	7310002740	S.TRIMMER	RV-150 (RH03A3A14X0FC) 103
R58	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R59	7030003440	S.RESISTOR	ERJ3GEYJ 102 V (1 kΩ)
R60	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R61	7030003640	S.RESISTOR	ERJ3GEYJ 473 V (47 kΩ)
R62	7030009170	S.RESISTOR	ERJ1WYJ1R5U (1.5 Ω)
R63	7030003520	S.RESISTOR	ERJ3GEYJ 472 V (4.7 kΩ)
R65	7030003560	S.RESISTOR	ERJ3GEYJ 103 V (10 kΩ)
R66	7030003550	S.RESISTOR	ERJ3GEYJ 822 V (8.2 kΩ)
R67	7030003480	S.RESISTOR	ERJ3GEYJ 222 V (2.2 kΩ)
C1	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C2	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C3	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C4	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C5	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C6	4510005860	S.ELECTROLYTIC	ECEV1HA2R2SR
C7	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C8	4510004870	S.ELECTROLYTIC	ECEV1CA330P
C9	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C10	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C11	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C16	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C17	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C18	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C19	4510005600	S.ELECTROLYTIC	ECEV1CS100SR
C20	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C21	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C24	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N
C25	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C26	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C27	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C28	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C29	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C30	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C31	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C32	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C33	4510004630	S.ELECTROLYTIC	ECEV1CA100SR
C34	4030006860	S.CERAMIC	C1608 JB 1H 102K-T-A
C35	4030006880	S.CERAMIC	C1608 JB 1H 472K-T-A
C36	4030008920	S.CERAMIC	C1608 JB 1C 473K-T-A
C38	4030011600	S.CERAMIC	C1608 JB 1C 104KT-N

S.=Surface mount

**[SW BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
J1	6510003450	CONNECTOR	B09B-EH-S
J2	6910005800	CONNECTOR	IMSA-9210B-1-03T
DS1	5040002080	S.LED	CL-200YG-C-TU
DS2	5040002080	S.LED	CL-200YG-C-TU
DS3	5040002080	S.LED	CL-200YG-C-TU
DS4	5040002080	S.LED	CL-200YG-C-TU
DS5	5040002080	S.LED	CL-200YG-C-TU
DS6	5040002080	S.LED	CL-200YG-C-TU
DS7	5040002080	S.LED	CL-200YG-C-TU
DS8	5040001870	S.LED	SEC 2462C
DS9	5040002010	S.LED	CL-170PG-CD-T
DS10	5040002010	S.LED	CL-170PG-CD-T
DS11	5040002010	S.LED	CL-170PG-CD-T
DS12	5040002010	S.LED	CL-170PG-CD-T
DS13	5040002010	S.LED	CL-170PG-CD-T
DS14	5040002010	S.LED	CL-170PG-CD-T
DS15	5040002010	S.LED	CL-170PG-CD-T
DS16	5040002010	S.LED	CL-170PG-CD-T
DS17	5040002010	S.LED	CL-170PG-CD-T
DS18	5040002080	S.LED	CL-200YG-C-TU
DS19	5040002080	S.LED	CL-200YG-C-TU
DS20	5040002010	S.LED	CL-170PG-CD-T
DS21	5040002010	S.LED	CL-170PG-CD-T
DS22	5040002080	S.LED	CL-200YG-C-TU
DS23	5040002080	S.LED	CL-200YG-C-TU
DS24	5040002080	S.LED	CL-200YG-C-TU
DS26	5040002080	S.LED	CL-200YG-C-TU
DS27	5040002080	S.LED	CL-200YG-C-TU
S1	2260001890	S.SWITCH	SKQDPA
S2	2260001890	S.SWITCH	SKQDPA
S3	2260001890	S.SWITCH	SKQDPA
S4	2260001890	S.SWITCH	SKQDPA
S5	2260001890	S.SWITCH	SKQDPA
S6	2260001890	S.SWITCH	SKQDPA
S7	2260001890	S.SWITCH	SKQDPA
S8	2260001890	S.SWITCH	SKQDPA
S9	2260001890	S.SWITCH	SKQDPA
W1	7030003860	S.JUMPER	ERJ3GE JPW V
W3	7030003860	S.JUMPER	ERJ3GE JPW V
W4	7030003860	S.JUMPER	ERJ3GE JPW V
W5	7030003860	S.JUMPER	ERJ3GE JPW V
W6	7030003860	S.JUMPER	ERJ3GE JPW V
EP1	0910048767	PCB	B 4893G

S.=Surface mount

• PX-1981 PARTS LIST

[REG UNIT]

REF NO.	ORDER NO.	DESCRIPTION	
L1	6140003310	COIL	LR-366
L2	6140003310	COIL	LR-366
L3	6140003300	COIL	LR-367
R1	7100000760	RESISTOR	RH-25 10 kΩ
R2	7100000750	RESISTOR	RH-50 390 Ω
R3	7520000120	POSISTOR	PTH9M04 BC 222TS-2F333
F1	5210000630	FUSE	W28XQ1A 20A [USA]
	5210000640	FUSE	W28XQ1A 15A [EUR], [EUR-1]
F2	5210000630	FUSE	W28XQ1A 20A [USA]
	5210000640	FUSE	W28XQ1A 15A [EUR], [EUR-1]
S1	6910006900	THERMAL	OHD-3 110M [EUR-1]
	6910011800	THERMAL	OHD3-130M [USA], [EUR]
T1	5910000860	TRANSFORMER	TP-69 [USA], [EUR]
	5910000861	TRANSFORMER	TP-69A [EUR-1]
MF1	2710000640	FAN	MMF-12C12DH-R06
W1	8900007300	CABLE	OPC-709 [EUR]
	8900007310	CABLE	OPC-707 [USA]
	8900008830	CABLE	OPC-855 [EUR-1]
WS1	8970022822	OTHER	PX1981 J BOARD SET-2 (6)/RE
WS2	8600036251	OTHER	PX1981 P05RE-1
WS3	8600036510	OTHER	PX1981 P06RE
EP1	6510008350	TERMINAL	ML-1750A 4P
EP2	8930042970	COVER	PG-47-02
EP15	6950000410	E.OTHER	SUPER GROUND (FGA21M-11B)
EP16	6910010950	PIPE	NB-15
EP17	9019810780	TUBE	HEAT CONTRACTION TUBE F 6 (d) L=25 mm
EP18	9019810780	TUBE	HEAT CONTRACTION TUBE F 6 (d) L=25 mm
EP23	6910011160	TUBE	T-105 NO.1/2 L=250 mm
EP24	9019810770	TUBE	HEAT CONTRACTION TUBE F 15 (d) L=45 mm
EP27	9019810770	TUBE	HEAT CONTRACTION TUBE F 15 (d) L=45 mm
EP29	6910010480	BEAD	DL-7C 0R-31-15-19H
EP34	6910010480	BEAD	DL-7C 0R-31-15-19H
EP35	6910010480	BEAD	DL-7C 0R-31-15-19H
EP36	6910011140	TUBE	T-105 NO.6 L=220 mm
EP37	6910010480	BEAD	DL-7C 0R-31-15-19H
EP38	6910010480	BEAD	DL-7C 0R-31-15-19H
EP39	9030694001	TUBE	HEAT CONTRACTION TUBE 2 (d) L=20 mm
EP41	9019810810	TUBE	HEAT CONTRACTION TUBE F 40 (d) L=25 mm
EP42	6910010480	BEAD	DL-7C 0R-31-15-19H
EP43	9019810810	TUBE	HEAT CONTRACTION TUBE F 40 (d) L=25 mm

[SUBREG BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
IC2	1170000320	IC	PC111YS
IC3	1180001620	IC	HA17431PA
IC4	1170000320	IC	PC111YS
IC5	1180001710	IC	TA78M18S
IC6	1170000320	IC	PC111YS
IC7	1170000320	IC	PC111YS
Q1	1530003520	TRANSISTOR	2SC4237
Q2	1530002080	TRANSISTOR	2SC2655-Y (C)
Q3	1530002080	TRANSISTOR	2SC2655-Y (C)
Q4	1530003530	TRANSISTOR	2SC3075
Q5	1530000040	TRANSISTOR	2SC1815-Y
Q6	1530003540	TRANSISTOR	2SA1020-Y (C)

[SUBREG BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
D1	1710000930	BRIDGE	D3SBA60
D2	1790000780	DIODE	RG-4C
D3	1790001510	DIODE	SF5S6
D4	1790001360	DIODE	SF10SC6
D5	1790001490	DIODE	D1NL20U-4070
D6	1730002480	ZENER	RD6.2F B2
D7	1730000070	ZENER	RD3.9E B2
D8	1790001230	BRIDGE	S1VB60
D9	1730002470	ZENER	RD100E B
D10	1790001510	DIODE	SF5S6
L2	6190001220	COIL	TSL1112 100M 10U
L3	6140002030	COIL	LR-230 (SK-10M-15Y 120)
L4	5920000450	COIL	FK-080E-1020
R1	7100000770	RESISTOR	RGU5L 6.8 Ω
R2	7080001340	RESISTOR	ERG3SJ 473 (47 kΩ)
R3	7070000271	RESISTOR	ERG1SJ 101 (100 Ω)
R4	7010007040	RESISTOR	PSD1/4 270 kΩ
R5	7070001020	RESISTOR	ERX3SJ 5R6 (5.6 Ω)
R6	7070001020	RESISTOR	ERX3SJ 5R6 (5.6 Ω)
R7	7070000940	RESISTOR	ERG3SJ 331 (330 Ω)
R8	7070000301	RESISTOR	ERG1SJ 331 (330 Ω)
R9	7010007100	RESISTOR	PSD1/4V 1 kΩ
R10	7010007100	RESISTOR	PSD1/4V 1 kΩ
R11	7010007150	RESISTOR	PSD1/4V 10 kΩ
R12	7310001240	TRIMMER	RH0621CS2J1KA (471)
R13	7010007110	RESISTOR	PSD1/4V 2.2 kΩ
R14	7010006930	RESISTOR	PSD1/4 470 Ω
R15	7310001090	TRIMMER	RH0621C13J1TA (102)
R16	7010007270	RESISTOR	PSD1/4V 270 kΩ
R17	7010007100	RESISTOR	PSD1/4V 1 kΩ
R18	7010007030	RESISTOR	PSD1/4 120 kΩ
R19	7010007030	RESISTOR	PSD1/4 120 kΩ
R20	7010007020	RESISTOR	PSD1/4 100 kΩ
R21	7010007020	RESISTOR	PSD1/4 100 kΩ
R22	7010006980	RESISTOR	PSD1/4 10 kΩ
R23	7010006980	RESISTOR	PSD1/4 10 kΩ
R24	7010007080	RESISTOR	PSN1/4 560 kΩ
R25	7070000910	RESISTOR	ERG2SJ 104 (100 kΩ)
R26	7070000920	RESISTOR	ERG3SJ 103 (10 kΩ)
R27	7010007100	RESISTOR	PSD1/4V 1 kΩ
R28	7010007170	RESISTOR	PSD1/4V 18 kΩ
R29	7070000920	RESISTOR	ERG3SJ 103 (10 kΩ)
R30	7070000920	RESISTOR	ERG3SJ 103 (10 kΩ)
R31	7070000920	RESISTOR	ERG3SJ 103 (10 kΩ)
R32	7070000990	RESISTOR	ERG3SJ 221 (220 Ω)
R33	7010007070	RESISTOR	PSN1/4 2.2 kΩ
R34	7010006950	RESISTOR	PSD1/4 1.5 kΩ
R35	7010006960	RESISTOR	PSD1/4 2.2 kΩ
R36	7100000770	RESISTOR	RGU5L 6.8 Ω [EUR-1] only
R37	7100000770	RESISTOR	RGU5L 6.8 Ω [EUR-1] only
R38	7070001020	RESISTOR	ERX3SJ 5R6 (5.6 Ω)
R39	7070001020	RESISTOR	ERX3SJ 5R6 (5.6 Ω)
C1	4510006820	ELECTROLYTIC	EC0S2GB 181DB
C2	4310001010	MYLAR	630MMW224K
C3	4010004730	CERAMIC	DE0905 SL 221J 1KV
C4	4510006840	ELECTORL	35 MV 2200GX
C6	4510006800	ELECTROLYTIC	25 MV 470 GX
C7	4040000190	BARRIERLAYR	UAT 05X 103K
C8	4510006790	ELECTROLYTIC	16 MV 2700 GX
C9	4510006790	ELECTROLYTIC	16 MV 2700 GX
C10	4510006780	ELECTROLYTIC	16 MV 470 GX
C11	4040000190	BARRIERLAYR	UAT 05X 103K
C12	4310000360	MYLAR	50 F2D 103J
C13	4310000360	MYLAR	50 F2D 103J
C21	4310000440	MYLAR	50 F2D 473J
C22	4310000400	MYLAR	50 F2D 223J
C23	4310000350	MYLAR	50 F2D 822J
C24	4040000150	BARRIERLAYR	UAT 05X 472K
C26	4510006900	ELECTROLYTIC	ECA 2GHG 2R2
C27	4310000920	MYLAR	250 MMW 473K
C28	4510004490	ELECTROLYTIC	25 MV 22 HW
C30	4010008110	CERAMIC	DE1307E472M-KH
C31	4010008110	CERAMIC	DE1307E472M-KH

S.=Surface mount

**[SUBREG BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
RL1	6330001060	RELAY	APQ 3311
J1	6510003440	CONNECTOR	B08B-EH-S
J2	6510003390	CONNECTOR	B03B-EH-S
T1	5910000840	TRANSFORMER TP-67	
W3	6910001030	JUMPER	IPS-1041-4 [USA], [EUR]
W4	6910001030	JUMPER	IPS-1041-4 [USA], [EUR]
WS1	8970022830	OTHER	PX1981 J BOARD SET (2)/SU-RE
WS2	8970023140	OTHER	PX1981 J LEAD SET (2)/SU-RE [USA], [EUR]
EP13	0910049585	PCB	B 4934E

**[CONV BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
T3	5910000851	TRANSFORMER TP-68A	
T4	5910000851	TRANSFORMER TP-68A	
WS1	8970022851	OTHER	PX1981 J BOARD SET-1 (3)/CONV
EP5	6910011330	TERMINAL	OT-009 M3
EP6	6910011330	TERMINAL	OT-009 M3
EP13	9025009901	TUBE	IRRAX 2 (d) L=30 mm
EP23	6910000310	OTHER	B312D ISOLATING BUSH
EP24	8950004760	SHEET	TC-45CG
EP31	6910010480	BEAD	DL-7C 0R-31-15-19H
EP32	0910049596	PCB	B 4935F
EP35	9019810810	TUBE	HEAT CONTRACTION TUBE F 40 (d) L=25 mm
EP36	9025009901	TUBE	IRRAX 2 (d) L=30 mm

**[CONV BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
Q1	1560001040	FET	MTW20N50E
Q2	1560001040	FET	MTW20N50E
Q3	1560001040	FET	MTW20N50E
Q4	1560001040	FET	MTW20N50E
Q5	1560000970	FET	2SK702
Q6	1560000970	FET	2SK702
D3	1790001490	DIODE	D1NL20U-4070
D4	1790001490	DIODE	D1NL20U-4070
D7	1730000050	ZENER	RD3.0E B2
D8	1730000050	ZENER	RD3.0E B2
D9	1730000050	ZENER	RD3.0E B2
D10	1730000050	ZENER	RD3.0E B2
L1	6170000150	COIL	LW-16
R1	7070000880	RESISTOR	ERG2SJ 680 (68 Ω)
R2	7010007370	RESISTOR	PSD1/2 3.3 Ω
R3	7070000880	RESISTOR	ERG2SJ 680 (68 Ω)
R4	7010007370	RESISTOR	PSD1/2 3.3 Ω
R5	7070000880	RESISTOR	ERG2SJ 680 (68 Ω)
R6	7010007370	RESISTOR	PSD1/2 3.3 Ω
R7	7070000880	RESISTOR	ERG2SJ 680 (68 Ω)
R8	7010007370	RESISTOR	PSD1/2 3.3 Ω
R9	7070001030	RESISTOR	ERG5SJ 470
R10	7070001030	RESISTOR	ERG5SJ 470
R11	7070001030	RESISTOR	ERG5SJ 470
R12	7070001030	RESISTOR	ERG5SJ 470
R31	7070000880	RESISTOR	ERG2SJ 680 (68 Ω)
R32	7070000880	RESISTOR	ERG2SJ 680 (68 Ω)
C2	4510006720	ELECTROLYTIC	EC0S2WB221DB
C3	4510006720	ELECTROLYTIC	EC0S2WB221DB
C4	4310000980	MYLAR	ECWF4225KZ
C5	4010004730	CERAMIC	DE0905 SL 221J 1KV
C6	4010004730	CERAMIC	DE0905 SL 221J 1KV
C7	4010004730	CERAMIC	DE0905 SL 221J 1KV
C8	4010004730	CERAMIC	DE0905 SL 221J 1KV
C34	4310001000	MYLAR	MTB 2G 335K
C35	4560000040	CERAMIC	D67X5T 1H 684M51
C36	4560000040	CERAMIC	D67X5T 1H 684M51
C37	4510005040	ELECTROLYTIC	25 MV 1000 HC
C38	4310001000	MYLAR	MTB 2G 335K
J1	6510003410	CONNECTOR	B05B-EH-S

**[CONNECT BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1180001620	IC	HA17431PA
Q1	1530000100	TRANSISTOR	2SC2458-Y
Q2	1540000070	TRANSISTOR	2SD468C
Q5	1530000100	TRANSISTOR	2SC2458-Y
Q6	1540000070	TRANSISTOR	2SD468C
Q7	1530000100	TRANSISTOR	2SC2458-Y
Q8	1530000100	TRANSISTOR	2SC2458-Y
Q11	1530000100	TRANSISTOR	2SC2458-Y
D1	1710000050	DIODE	1SS53
D2	1710000050	DIODE	1SS53
D3	1710000050	DIODE	1SS53
D5	1710000050	DIODE	1SS53
D6	1730000100	ZENER	RD5.1E B2
D7	1710000050	DIODE	1SS53
L1	6180000900	COIL	LAL 03NA 101K
L2	6180000900	COIL	LAL 03NA 101K
L3	6180000900	COIL	LAL 03NA 101K
L4	6180000900	COIL	LAL 03NA 101K
L5	6180000900	COIL	LAL 03NA 101K
L6	6180000900	COIL	LAL 03NA 101K
L7	6180000900	COIL	LAL 03NA 101K
L8	2040000490	COIL	EXC-ELDR25C
L9	6180000900	COIL	LAL 03NA 101K
R1	7010007180	RESISTOR	PSD1/4V 22 kΩ
R2	7010007180	RESISTOR	PSD1/4V 22 kΩ
R3	7010006960	RESISTOR	PSD1/4 2.2 kΩ
R4	7010007180	RESISTOR	PSD1/4V 22 kΩ
R5	7010007180	RESISTOR	PSD1/4V 22 kΩ
R6	7010007110	RESISTOR	PSD1/4V 2.2 kΩ
R7	7070000850	RESISTOR	ERG3SJ 100 (10 Ω)
R8	7010007150	RESISTOR	PSD1/4V 10 kΩ
R9	7010007150	RESISTOR	PSD1/4V 10 kΩ
R12	7010007090	RESISTOR	PSD1/4V 820 Ω
R14	7010007180	RESISTOR	PSD1/4V 22 kΩ [EUR-1]
	7010007200	RESISTOR	PSD1/4V 33 kΩ [USA], [EUR]
R15	7520000070	POSISTOR	PTH9M04 BF 222TS-2F333
R16	7010007150	RESISTOR	PSD1/4V 10 kΩ
R17	7010007110	RESISTOR	PSD1/4V 2.2 kΩ
C1	4040000190	BARRIERLAYR	UAT 05X 103K
C3	4040000190	BARRIERLAYR	UAT 05X 103K
C5	4510004500	ELECTROLYTIC	25 MV 100 HW
C6	4510004600	ELECTROLYTIC	16 MV 1000 HC
C8	4040000150	BARRIERLAYR	UAT 05X 472K
C9	4040000150	BARRIERLAYR	UAT 05X 472K
C10	4040000150	BARRIERLAYR	UAT 05X 472K
C11	4040000150	BARRIERLAYR	UAT 05X 472K

S.=Surface mount

**[CONNECT BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
C12	4040000150	BARRIERLAYR	UAT 05X 472K
C13	4040000150	BARRIERLAYR	UAT 05X 472K
C14	4040000150	BARRIERLAYR	UAT 05X 472K
RL1	6330001320	RELAY	AHY103
J11	6510003400	CONNECTOR	B04B-EH-S
J12	6510003380	CONNECTOR	B02B-EH-S
WS1	8600035871	OTHER	PX1981 P04*J04CO-1
WS2	8600035881	OTHER	PX1981 P05*J05CO-1
WS3	8600035892	OTHER	PX1981 P08*J08CO-2
WS4	8600035900	OTHER	PX1981 P09*J09CO
WS5	8600035911	OTHER	PX1981 P01*J01CO-1
EP10	0910049606	PCB	B 4936F

**[ACTFIL BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
R56	7010007280	RESISTOR	PSD1/4V 390 kΩ
R57	7010007280	RESISTOR	PSD1/4V 390 kΩ
R58	7010007280	RESISTOR	PSD1/4V 390 kΩ
R59	7010006920	RESISTOR	PSD1/2 1 kΩ
R62	7010006940	RESISTOR	PSD1/4 1 kΩ
R63	7010007150	RESISTOR	PSD1/4V 10 kΩ
R64	7010007220	RESISTOR	PSD1/4V 47 kΩ
C1	4010007600	CERAMIC	HM17SJ YB 103K 500V
C2	4010007600	CERAMIC	HM17SJ YB 103K 500V
C4	4510006720	ELECTROLYTIC	EC0S2WB221DB
C5	4510006720	ELECTROLYTIC	EC0S2WB221DB
C6	4310000480	MYLAR	50 F2D 104J
C7	4010000480	CERAMIC	DD104 B 681K 50V
C8	4010000900	CERAMIC	DD106-601 CH 680J 50V
C9	4310000520	MYLAR	50 F2D 224J
C10	4010006340	CERAMIC	HE70SJ SL 271J 50V
C11	4550000350	TANTALUM	DN 1V 010M
C13	4560000100	CERAMIC	D67X5T 1H 334M51
C14	4310000480	MYLAR	50 F2D 104J
C15	4310000360	MYLAR	50 F2D 103J
C16	4310000330	MYLAR	50 F2D 102J
C24	4010008110	CERAMIC	DE1307E472M-KH
C25	4010005780	CERAMIC	HM60SJ SL 101J 500V
C26	4320001140	DIP MICA	KD20C 102J5
C34	4310000980	MYLAR	ECWF4225KZ
C35	4310001020	MYLAR	ECWF4474KZ
C36	4310001020	MYLAR	ECWF4474KZ
C46	4010008110	CERAMIC	DE1307E472M-KH
C47	4010008110	CERAMIC	DE1307E472M-KH
C48	4010008110	CERAMIC	DE1307E472M-KH
C49	4010008110	CERAMIC	DE1307E472M-KH
C50	4010008110	CERAMIC	DE1307E472M-KH
C51	4010008110	CERAMIC	DE1307E472M-KH
C52	4510007060	ELECTROLYTIC	50 MV 22 HWN
C53	4010006340	CERAMIC	HE70SJ SL 271J 50V
J2	6510003390	CONNECTOR	B03B-EH-S
WS1	8970022863	OTHER	PX1981 J BOARD SET-3 (4)/AC
WS2	8600035923	OTHER	PX1981 P01*J01AC-3
EP3	6910011330	TERMINAL	OT-009 M3
EP4	6910011330	TERMINAL	OT-009 M3
EP5	6910010920	TERMINAL	OT-009-M4
EP6	6910010920	TERMINAL	OT-009-M4
EP18	9019810340	TUBE	HEAT CONTRACTION TUBE F 4 (d) L=25 mm
EP19	9019810340	TUBE	HEAT CONTRACTION TUBE F 4 (d) L=25 mm
EP28	6910010480	BEAD	DL-7C 0R-31-15-19H
EP30	0910049615	PCB	B 4937E
EP31	9030602001	TUBE	IRRAX 1 (d) L=10 mm
EP32	9019810810	TUBE	HEAT CONTRACTION TUBE F 40 (d) L=25 mm

**[ACTFIL BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1180001600	IC	TK83854D
IC3	1170000320	IC	PC111YS
IC6	1180001620	IC	HA17431PA
Q1	1560001040	FET	MTW20N50E
Q2	1560001040	FET	MTW20N50E
Q3	1560001040	FET	MTW20N50E
Q5	1530002080	TRANSISTOR	2SC2655-Y (C)
Q6	1530003540	TRANSISTOR	2SA1020-Y (C)
Q7	1510000080	TRANSISTOR	2SA1048-GR
D1	1710000910	BRIDGE	D25XB60
D2	1710000940	DIODE	MUR3060WT
D3	1790001460	DIODE	1SS165
D4	1790001460	DIODE	1SS165
D11	1790000780	DIODE	RG-4C
D16	1790000780	DIODE	RG-4C
L3	6140003361	COIL	LR-377A
R1	7070000820	RESISTOR	ERG1SJ 220 (22 Ω)
R2	7070000820	RESISTOR	ERG1SJ 220 (22 Ω)
R3	7070000820	RESISTOR	ERG1SJ 220 (22 Ω)
R6	7010007270	RESISTOR	PSD1/4V 270 kΩ
R7	7010007270	RESISTOR	PSD1/4V 270 kΩ
R8	7010007150	RESISTOR	PSD1/4V 10 kΩ
R9	7010007210	RESISTOR	PSD1/4V 39 kΩ
R10	7010007230	RESISTOR	PSD1/4V 82 kΩ
R11	7010007250	RESISTOR	PSD1/4V 120 kΩ
R12	7010007260	RESISTOR	PSD1/4V 220 kΩ
R13	7010007190	RESISTOR	PSD1/4V 27 kΩ
R14	7010007220	RESISTOR	PSD1/4V 47 kΩ
R15	7010007170	RESISTOR	PSD1/4V 18 kΩ
R16	7010007260	RESISTOR	PSD1/4V 220 kΩ
R17	7010007160	RESISTOR	PSD1/4V 15 kΩ
R18	7010006960	RESISTOR	PSD1/4 2.2 kΩ
R19	7010006970	RESISTOR	PSD1/4 3.3 kΩ
R20	7010006960	RESISTOR	PSD1/4 2.2 kΩ
R25	7010007190	RESISTOR	PSD1/4V 27 kΩ
R28	7010007150	RESISTOR	PSD1/4V 10 kΩ
R35	7080001310	RESISTOR	ERG3SJ 470 (47 Ω)
R36	7100000720	RESISTOR	RGGN10 22 Ω
R38	7010007270	RESISTOR	PSD1/4V 270 kΩ
R39	7010007270	RESISTOR	PSD1/4V 270 kΩ
R51	7100000740	RESISTOR	TS 7L 0.01 Ω
R52	7310000660	TRIMMER	RH0621C14J19A (103)
R53	7310000660	TRIMMER	RH0621C14J19A (103)
R55	7010007280	RESISTOR	PSD1/4V 390 kΩ

**[FIL-AC BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
L2	6190001260	COIL	FK-180M-1020HZ
L3	6190001260	COIL	FK-180M-1020HZ
R1	7540000170	ABSORBER	MP302M
C2	4310000990	MYLAR	PA474L
C3	4310000990	MYLAR	PA474L
C4	4010008110	CERAMIC	DE1307E472M-KH
C5	4010008110	CERAMIC	DE1307E472M-KH
C6	4310000990	MYLAR	PA474L
C7	4310000990	MYLAR	PA474L
C8	4010008110	CERAMIC	DE1307E472M-KH
C9	4010008110	CERAMIC	DE1307E472M-KH

S.=Surface mount

**[FIL-AC BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP3	6910011330	TERMINAL	OT-009 M3
EP4	6910011330	TERMINAL	OT-009 M3
EP5	0910049623	PCB	B 4938C

**[FIL-DC BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
L1	6190001260	COIL	FK-180M-1020HZ
L2	6190001260	COIL	FK-180M-1020HZ
C2	4010007600	CERAMIC	HM17SJ YB 103K 500V
C4	4010007600	CERAMIC	HM17SJ YB 103K 500V
C5	4560000150	CERAMIC	RPE210E105Z100
C6	4560000150	CERAMIC	RPE210E105Z100
C7	4560000150	CERAMIC	RPE210E105Z100
C8	4560000150	CERAMIC	RPE210E105Z100
WS1	8970022880	OTHER	PX1981 J BOARD SET (4)/FI-DC
EP2	6910011330	TERMINAL	OT-009 M3
EP3	6910011330	TERMINAL	OT-009 M3
EP4	6910011330	TERMINAL	OT-009 M3
EP5	6910011330	TERMINAL	OT-009 M3
EP19	6910011330	TERMINAL	OT-009 M3
EP20	6910011330	TERMINAL	OT-009 M3
EP21	6910011330	TERMINAL	OT-009 M3
EP22	6910011330	TERMINAL	OT-009 M3
EP23	0910049635	PCB	B 4939E

**[REGRELAY BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
Q1	1520000060	TRANSISTOR	2SB562C
D1	1710000050	DIODE	1SS53
D4	1710000050	DIODE	1SS53
D5	1710000050	DIODE	1SS53
D6	1730000050	ZENER	RD3.0E B2
L1	6180000990	COIL	LAL 04NA 101K
L2	6180000990	COIL	LAL 04NA 101K
L3	6180000990	COIL	LAL 04NA 101K
R2	7100000670	RESISTOR	BGR20X 30 Ω
R3	7010007060	RESISTOR	PSN1/4V 3.3 kΩ
R4	7100000670	RESISTOR	BGR20X 30 Ω
C1	4040000150	BARRIERLAYR	UAT 05X 472K
C3	4010006900	CERAMIC	HE80SJ YB 472K 50V
C4	4010006900	CERAMIC	HE80SJ YB 472K 50V
C5	4010006900	CERAMIC	HE80SJ YB 472K 50V
C6	4510004590	ELECTROLYTIC	16 MV 470 HC
RL1	6330001380	RELAY	VSB-12MB
RL3	6330001400	RELAY	FTR-H1AA012V
RL4	6330001400	RELAY	FTR-H1AA012V
RL5	6330001400	RELAY	FTR-H1AA012V
RL6	6330001400	RELAY	FTR-H1AA012V

**[REGRELAY BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
J1	6510003410	CONNECTOR	B05B-EH-S
J2	6510003390	CONNECTOR	B03B-EH-S
F1	5210000440	FUSE	S506T-250V-4A
F2	5210000440	FUSE	S506T-250V-4A
F3	5220000230	HOLDER	S-N5054 #01
F4	5220000230	HOLDER	S-N5054 #01
F5	5220000230	HOLDER	S-N5054 #01
F6	5220000230	HOLDER	S-N5054 #01
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP4	6910011330	TERMINAL	OT-009 M3
EP5	6910011330	TERMINAL	OT-009 M3
EP6	6910011330	TERMINAL	OT-009 M3
EP7	6910011330	TERMINAL	OT-009 M3
EP8	0910049644	PCB	B 4940D

**[CONV-CTRL BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	
IC1	1110001950	IC	μPC494C
IC2	1110000540	IC	NJM4558D
Q14	1510000070	TRANSISTOR	2SA1048-Y
Q15	1590000340	TRANSISTOR	RN1202
Q16	1590000340	TRANSISTOR	RN1202
Q17	1520000060	TRANSISTOR	2SB562C
Q18	1510000070	TRANSISTOR	2SA1048-Y
Q19	1590000340	TRANSISTOR	RN1202
D1	1710000940	DIODE	MUR3060WT
D2	1710000940	DIODE	MUR3060WT
D16	1710000050	DIODE	1SS53
D17	1710000050	DIODE	1SS53
D20	1730000110	ZENER	RD5.6E B2
L4	6910000670	COIL	BL01RN1-A62-001
R9	7070001020	RESISTOR	ERX3SJ 5R6 (5.6 Ω)
R10	7100000580	RESISTOR	SRW7P-M 50 Ω (500)
R12	7070001020	RESISTOR	ERX3SJ 5R6 (5.6 Ω)
R13	7010007240	RESISTOR	PSD1/4V 100 kΩ
R14	7310003710	TRIMMER	EVN-2ACA00 B33 (302)
R15	7010007140	RESISTOR	PSD1/4V 4.7 kΩ
R16	7070000850	RESISTOR	ERG3SJ 100 (10 Ω)
R17	7100000790	RESISTOR	TS 10L 0.01 Ω
R18	7100000790	RESISTOR	TS 10L 0.01 Ω
R20	7080001390	RESISTOR	RN14K2E 10 kΩ
R21	7080001390	RESISTOR	RN14K2E 10 kΩ
R25	7080001430	RESISTOR	RN14K2E 200 kΩ
R33	7010007140	RESISTOR	PSD1/4V 4.7 kΩ
R34	7010007140	RESISTOR	PSD1/4V 4.7 kΩ
R35	7010007200	RESISTOR	PSD1/4V 33 kΩ
R36	7010007270	RESISTOR	PSD1/4V 270 kΩ
R37	7010007460	RESISTOR	RN14E2E 3 kΩ
R49	7080001360	RESISTOR	RN14K2E 18 kΩ
R50	7080001370	RESISTOR	RN14K2E 1.2 kΩ
R51	7080001380	RESISTOR	RN14K2E 470 Ω
R56	7010007290	RESISTOR	PSD1/4V 1 MΩ
R57	7010007220	RESISTOR	PSD1/4V 47 kΩ
R78	7010007000	RESISTOR	PSD1/4 33 kΩ
R79	7310004710	S.RESISTOR	ERJ3GEYJ 475 V (4.7 MΩ)
R80	7080001420	RESISTOR	RN14K2E 3.9 kΩ
R82	7010007120	RESISTOR	PSD1/4V 2.7 kΩ
R83	7010007110	RESISTOR	PSD1/4V 2.2 kΩ
R84	7310003210	TRIMMER	EVN-2ACA00 B54 (503)
R85	7010007110	RESISTOR	PSD1/4V 2.2 kΩ
R89	7310003710	TRIMMER	EVN-2ACA00 B33 (302)
R91	7010007090	RESISTOR	PSD1/4V 820 Ω

S.=Surface mount

[CONV-CTRL BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
R92	7510000080	THERMISTOR	ERT-D2FHL 153S
R93	7070000850	RESISTOR	ERG3SJ 100 (10 Ω)
R94	7070001020	RESISTOR	ERX3SJ 5R6 (5.6 Ω)
R95	7070001020	RESISTOR	ERX3SJ 5R6 (5.6 Ω)
R97	7100000580	RESISTOR	SRW7P-M 50 Ω (500)
R99	7100000580	RESISTOR	SRW7P-M 50 Ω (500)
R100	7100000580	RESISTOR	SRW7P-M 50 Ω (500)
R102	7070001020	RESISTOR	ERX3SJ 5R6 (5.6 Ω)
R103	7070001020	RESISTOR	ERX3SJ 5R6 (5.6 Ω)
R104	7070001020	RESISTOR	ERX3SJ 5R6 (5.6 Ω)
R105	7070001020	RESISTOR	ERX3SJ 5R6 (5.6 Ω)
R106	7010003281	RESISTOR	PSD1/4V 100 Ω
R107	7010003631	RESISTOR	PSD1/4V 56 kΩ
R108	7010007220	RESISTOR	PSD1/4V 47 kΩ
R109	7010007120	RESISTOR	PSD1/4V 2.7 kΩ
C3	4560000150	CERAMIC	RPE210E105Z100
C4	4560000150	CERAMIC	RPE210E105Z100
C5	4510006730	ELECTROLYTIC	EC0S2AA102CB
C6	4510006730	ELECTROLYTIC	EC0S2AA102CB
C7	4010007600	CERAMIC	HM17SJ YB 103K 500V
C8	4010007600	CERAMIC	HM17SJ YB 103K 500V
C9	4310000330	MYLAR	50 F2D 102J
C11	4310000480	MYLAR	50 F2D 104J
C13	4510003790	ELECTROLYTIC	16 MV 10 SWB
C19	4040000260	BARRIERLAYR	UZE 08X 104M
C22	4510003790	ELECTROLYTIC	16 MV 10 SWB
C23	4320001140	DIP MICA	KD20C 102J5
C24	4320001140	DIP MICA	KD20C 102J5
C25	4320001140	DIP MICA	KD20C 102J5
C26	4320001140	DIP MICA	KD20C 102J5
C35	4040000260	BARRIERLAYR	UZE 08X 104M
C37	4040000260	BARRIERLAYR	UZE 08X 104M
C40	4560000040	CERAMIC	D67X5T 1H 684M51
C41	4010006210	CERAMIC	HE40SJ SL 470J 50V
C44	4310000480	MYLAR	50 F2D 104J
C46	4310000360	MYLAR	50 F2D 103J
C47	4310000400	MYLAR	50 F2D 223J
C48	4010006210	CERAMIC	HE40SJ SL 470J 50V
C50	4040000260	BARRIERLAYR	UZE 08X 104M
C51	4510001350	ELECTROLYTIC	16 MS5 10UF
C52	4510001420	ELECTROLYTIC	35 MS5 22UF
C53	4010006850	CERAMIC	HE40SJ YB 471K 50V
C54	4010006850	CERAMIC	HE40SJ YB 471K 50V
C55	4510004590	ELECTROLYTIC	16 MV 470 HC
C56	4510004590	ELECTROLYTIC	16 MV 470 HC
J1	6510003440	CONNECTOR	B08B-EH-S
WS1	8970022891	OTHER	PX1981 J BOARD SET-1 (2)/CO-CT
WS2	8970022901	OTHER	PX1981 J BOARD SET-1 (2)/CO-CT
WS3	8600035931	OTHER	PX1981 P02*J02CO-CT-1
WS4	8970023151	OTHER	PX1981 J LEAD SET (1)/CO-CT
EP7	6910010910	TERMINAL	PB-3-S
EP8	6910010910	TERMINAL	PB-3-S
EP9	6910010910	TERMINAL	PB-3-S
EP36	0910049655	PCB	B 4952E
EP37	9020001015	TUBE	IRRAX 0.8 (d) L=15 mm
EP38	9019810340	TUBE	HEAT CONTRACTION TUBE F 4 (d) L=25 mm
EP39	9019810340	TUBE	HEAT CONTRACTION TUBE F 4 (d) L=25 mm
EP43	9049594901	TUBE	IRRAX 0.8 (d) L=12 mm
EP44	9049594901	TUBE	IRRAX 0.8 (d) L=12 mm
EP45	9049594901	TUBE	IRRAX 0.8 (d) L=12 mm

[ACT-C BOARD]

REF NO.	ORDER NO.	DESCRIPTION	
C1	4510006720	ELECTROLYTIC	EC0S2WB221DB
C3	4510006720	ELECTROLYTIC	EC0S2WB221DB
C4	4510006720	ELECTROLYTIC	EC0S2WB221DB
EP1	6910011330	TERMINAL	OT-009 M3
EP2	6910011330	TERMINAL	OT-009 M3
EP3	0910050172	PCB	B 5142B

S.=Surface mount

# SECTION 6 MECHANICAL PARTS AND DISASSEMBLY

## 6-1 FRAME DISASSEMBLY

### [CHASSIS PARTS]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510000410	Connector MR-DS-E 02	1
J2	6510000410	Connector MR-DS-E 02	1
J3	6510009290	Connector MR-DSE-02(AG)	1
J4	6510009290	Connector MR-DSE-02(AG)	1
J5	6510009290	Connector MR-DSE-02(AG)	1
J6	6510009290	Connector MR-DSE-02(AG)	1
W15	8900005410	Cable OPC-521	1
W16	8900005410	Cable OPC-521	1
W17	8900005410	Cable OPC-521	1
W18	8900005410	Cable OPC-521	1
W20	8900005380	Cable OPC-525 (N:10 L:400)	1
W21	8900009670	Cable OPC-959	1
W31	8900008030	Cable OPC-769	2
W32	8900008210	Cable OPC-805	1
EP8	0880000320	PX-1981 USA Attachment unit [USA]	1
	0880000330	PX-1981 EUR Attachment unit [EUR]	1
	0880000570	PX-1981 EUR-1 Attachment unit[EUR-1]	1
EP9	6910000310	B312D Isolating bush	2
EP11	6910000310	B312D Isolating bush	2
EP13	6910010480	Bead DL-7C OR-31-15-19H	5
EP16	6910012300	1992 (white) [EUR-1] only	1
EP17	9019810770	Tube [EUR-1] only	1
EP18	6910010480	Bead DL-7C OR-31-15-19H [EUR-1] only	10
MP1	8210014270	1900 Front panel	1
MP2	8110006231	1900 A-cover-1	1
MP3	8010017072	1900 A-sub chassis-2	1
MP4	8210014952	1900 A-rear panel-2	1
MP5	8010017080	1900 A-cent chassis	1
MP6	8110006243	1900 A-bottom cover-3	1
MP7	8010017091	1900 A-side chassis-1	1
MP8	8930042540	1900 Jack plate	2
MP10	8510011342	1900 A-filter case-2	1
MP11	8510011360	1900 A-filter cover	1
MP12	8310039540	1900 hole plate	1
MP16	8810009620	Bind screw BT M3 × 6 ZK	1
MP17	8810009620	Bind screw BT M3 × 6 ZK	3
MP21	8810003160	Set screw A M3 × 6	4
MP23	8810003160	Set screw A M3 × 6	4
MP26	8810003160	Set screw A M3 × 6	11
MP30	8810004430	Screw PH M3 × 6 ZK	8
MP31	8810004430	Screw PH M3 × 6 ZK	4
MP32	8810009620	Bind screw BT M3 × 6 ZK	1
MP33	8810009620	Bind screw BT M3 × 6 ZK	1
MP34	8810009620	Bind screw BT M3 × 6 ZK	1
MP35	8810009620	Bind screw BT M3 × 6 ZK	1
MP36	8810009620	Bind screw BT M3 × 6 ZK	4
MP37	8810009620	Bind screw BT M3 × 6 ZK	2
MP38	8810009620	Bind screw BT M3 × 6 ZK	1
MP39	8810009620	Bind screw BT M3 × 6 ZK	1
MP40	8810009620	Bind screw BT M3 × 6 ZK	1
MP41	8810009620	Bind screw BT M3 × 6 ZK	2
MP42	8810009620	Bind screw BT M3 × 6 ZK	7
MP45	8810009620	Bind screw BT M3 × 6 ZK	5

### [CHASSIS PARTS]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP46	8810008660	Bind screw BT M3 × 8 ZK	4
MP48	8810004430	Screw PH M3 × 6 ZK	2
MP49	8810008690	Screw PH BT M4 × 16 NI-ZU	5
MP52	8810009620	Bind screw BT M3 × 6 ZK	4
MP53	8810009620	Bind screw BT M3 × 6 ZK	6
MP54	8810009620	Bind screw BT M3 × 6 ZK	2
MP55	8810009620	Bind screw BT M3 × 6 ZK	2
MP56	8810009350	Screw PH B0 M3 × 8 SUS ZK	2
MP57	8810009620	Bind screw BT M3 × 6 ZK	3
MP59	8810009620	Bind screw BT M3 × 6 ZK	2
MP61	8810004300	Screw PH M3 × 10 ZK	2
MP63	8810009620	Bind screw BT M3 × 6 ZK	4
MP64	8810004430	Screw PH M3 × 6 ZK	4
MP65	8810008450	Bind screw M4 × 8 ZK	4
MP66	8810008450	Bind screw M4 × 8 ZK	2
MP67	8810008450	Bind screw M4 × 8 ZK	2
MP68	8830000360	Wing nut M5 NI	1
MP69	8850000150	Flat washer M5 NI BS	3
MP70	8830000210	Nut M5 NI BS	1
MP71	8850000440	Spring washer M 5 NI	1
MP72	8930011680	Rubber standoff (G)	5
MP73	8930037420	Rubber sheet (P)	2
MP74	8810009620	Bind screw BT M3 × 6 ZK	1
MP75	8810009620	Bind screw BT M3 × 6 ZK	2
MP76	8810003360	Set screw C M3 × 6	1
MP77	8810003360	Set screw C M3 × 6	1
MP78	8810003360	Set screw C M3 × 6	1
MP79	8810003360	Set screw C M3 × 6	1
MP80	8810003360	Set screw C M3 × 6	1
MP81	8810003360	Set screw C M3 × 6	1
MP82	8810003360	Set screw C M3 × 6	1
MP83	8810003360	Set screw C M3 × 6	1
MP84	8810003360	Set screw C M3 × 6	1
MP85	8810003360	Set screw C M3 × 6	1
MP86	8310044320	IC-PW1 FCC serial number seal [USA]	1
	8310039900	IC-PW1 FCC serial number seal [EUR]	1
	8310046130	IC-PW1 FCC serial number seal [EUR-1]	1
MP87	8810009620	Bind screw BT M3 × 6 ZK	3
MP88	8810009620	Bind screw BT M3 × 6 ZK	1
MP90	8930046310	1900 A-sheet	1
MP95	8930037280	Poli-cap type M	4
MP96	8930038820	Alumi-sheet V	1
MP97	8930047150	1900 A-side sheet	1
MP98	8930047160	1900 B-side sheet	1
MP99	8930047170	Isolating plate FH	2
MP100	8930047140	Isolating plate FI	1
MP104	8810008660	Screw PH BT M3 × 8 NI-ZU	1
MP105	8810008660	Screw PH BT M3 × 8 NI-ZU	1
MP106	6910008240	59TN4772	1
MP109	8930001170	Grounding spring (A)	1
MP110	8510011840	1900 A-shield plate	1
MP111	8930047270	Sponge (FH)	3
MP112	8930047280	Sponge	1
MP113	8930047260	Himeron sheet (BV)	1
MP114	8930047440	Isolating plate	2
MP116	6910008240	59TN4771	1

Screw abbreviations: PH: Pan head BT: Self-tapping ZK: Black



# FRAME DISASSEMBLY

## CHASSIS PARTS

### [CHASSIS PARTS]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP117	8930046320	1900 B-Sheet	1
MP119	8810009310	Screw FH BT M3 × 6 NI-ZU	1
MP120	8810009620	Bind screw BT M3 × 6 ZK	1
MP121	8810009620	Bind screw BT M3 × 6 ZK	2
MP122	8930047260	Himeron sheet (BV) [EUR-1] only	1
MP123	8930049750	Sponge 1900 filter	1
MP124	8930036270	1562 side seal	2
MP125	885001780	Isolating flat washer (W)	2
WS1	8970022801	EX1900 special coaxial cable-1 (2)/CH	1
WS3	8970022520	EX1900 1.5D coaxial cable (2)/CH L=335mm	1
	8970022520	EX1900 1.5D coaxial cable (2)/CH L=250mm	1

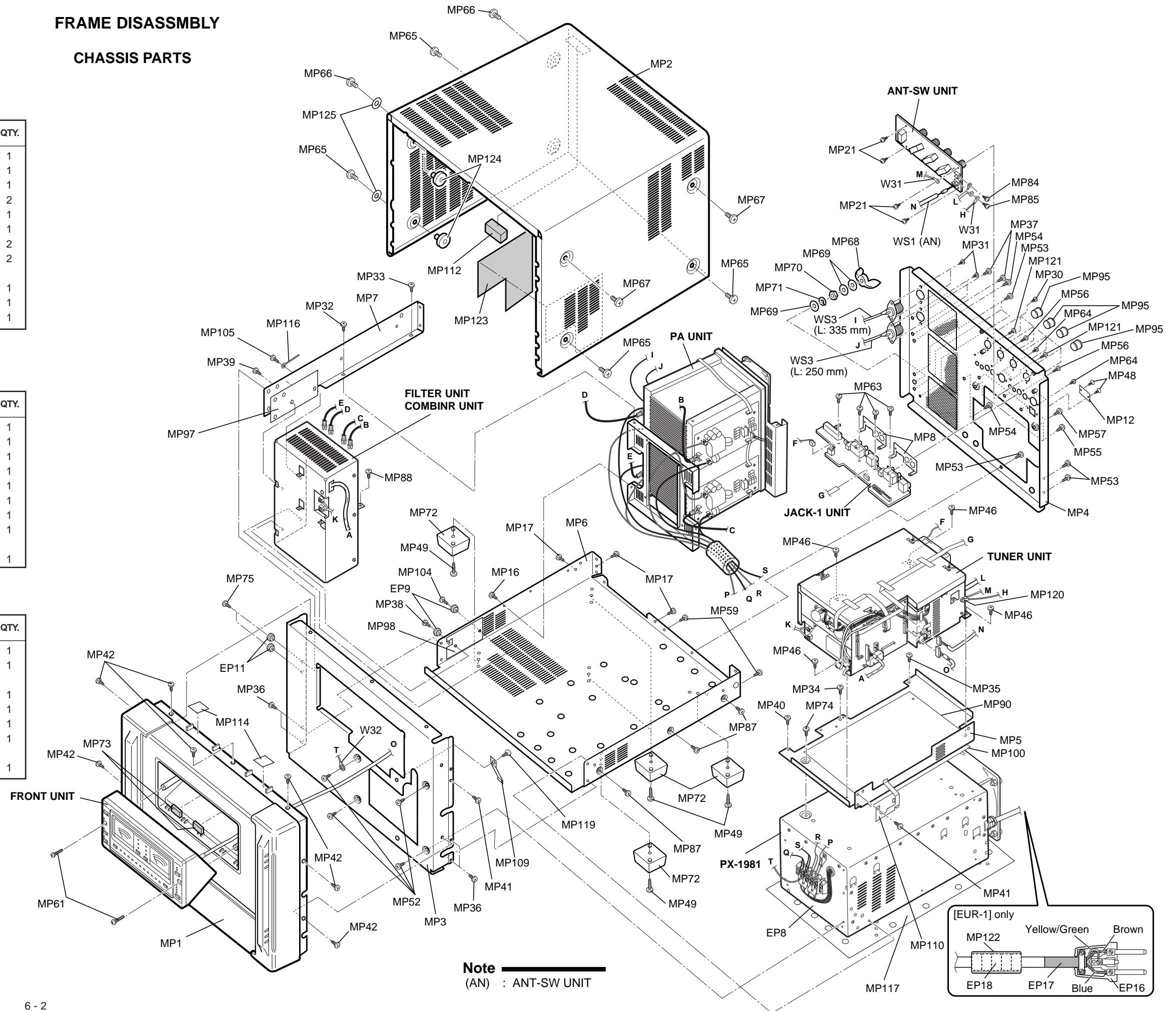
Screw abbreviations: BT: Self-tapping ZK: Black

### [JACK-1 UNIT]

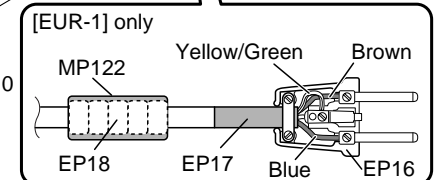
REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6450001590	Connector TCS5073-17-4151	1
J3	6450001130	Connector JPJ2042-01-110	1
J4	6450000140	Connector HSJ0807-01-010	1
J5	6450001590	Connector TCS5073-17-4151	1
J7	6450001130	Connector JPJ2042-01-110	1
J8	6450000140	Connector HSJ0807-01-010	1
J10	6510003450	Connector B09B-EH-S	1
J11	6510003450	Connector B09B-EH-S	1
S1	2220000570	Switch HSW1196-01-020	1

### [ANT-SW UNIT]

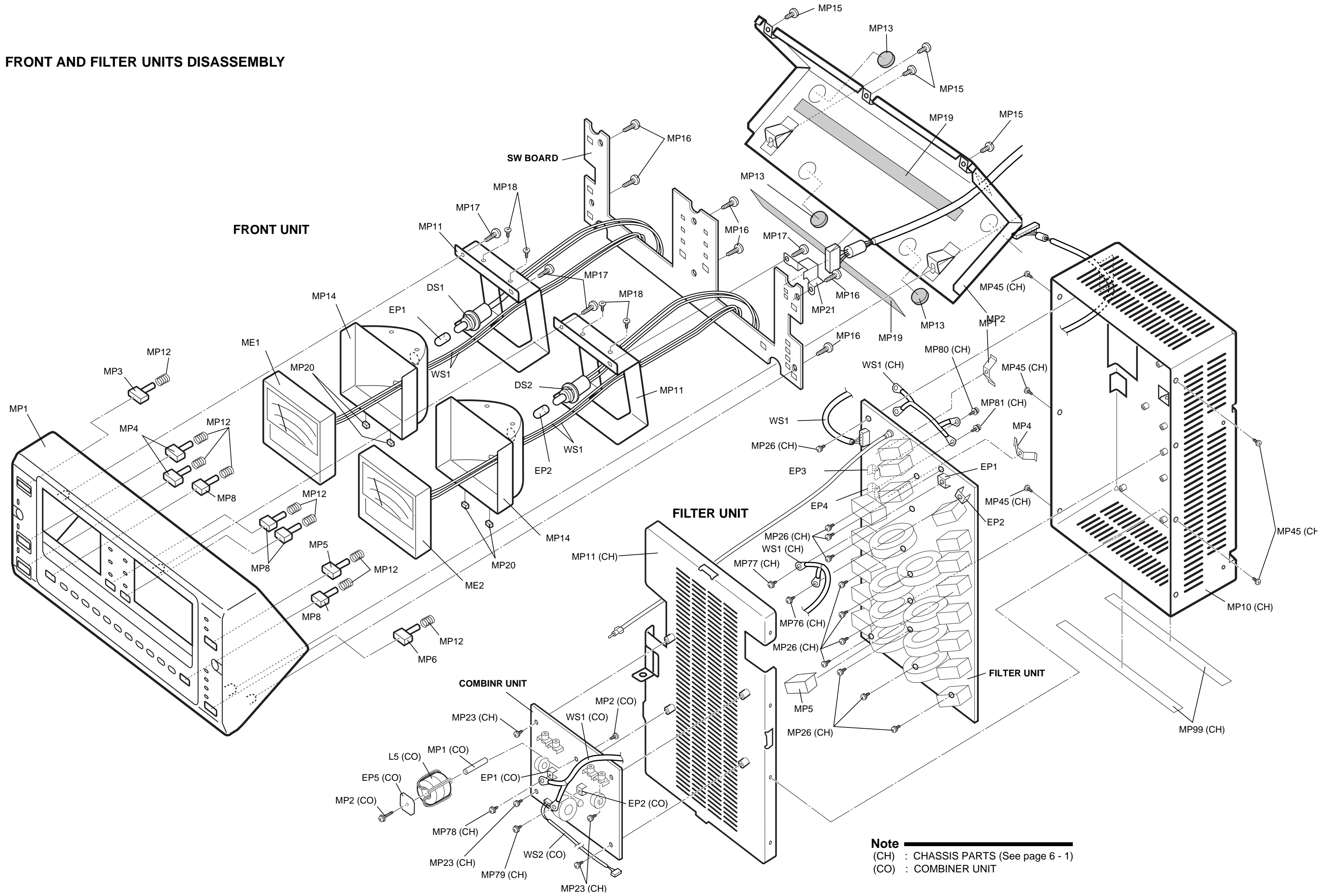
REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	6910011340	Terminal OT-010 M3	1
EP2	6910011340	Terminal OT-010 M3	1
RL1	6330001460	Relay FTR-F1CA012V	1
RL2	6330001460	Relay FTR-F1CA012V	1
RL3	6330001460	Relay FTR-F1CA012V	1
RL4	6330001460	Relay FTR-F1CA012V	1
WS1	8600035743	EX1900 P01*J01AN-SW-3	1



**Note**  
(AN) : ANT-SW UNIT



**FRONT AND FILTER UNITS DISASSEMBLY**



## 6-2 FRONT UNIT DISASSEMBLY

### [FRONT UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
DS1	5080000380	Lamp HRS-4160A-H9 L150	1
DS2	5080000380	Lamp HRS-4160A-H9 L150	1
EP1	6910011040	Tube A-4210-G20	1
EP2	6910011040	Tube A-4210-G20	1
ME1	5510000470	Meter ME-39 EX1900	1
ME2	5510000460	Meter ME-38	1
MP1	8210014260	1900 Control panel	1
MP2	8110006101	1900 Control cover-1	1
MP3	8610008431	Knob K202-1	1
MP4	8610010371	Knob K155(A)-1 EX1900	2
MP5	8610010381	Knob K155(B)-1 EX1900	1
MP6	8610010391	Knob K155(C)-1 EX1900	1
MP8	8610010411	Knob K200(B)-1 EX1900	4
MP11	8930042550	1900 Meter angle	2
MP12	8930017960	Push spring	9
MP13	8930041660	Standoff cushion (B)	4
MP14	8010002990	Meter holder	2
MP15	8810004430	Screw PH M3 × 6 ZK	5
MP16	8810008660	SCREW PH BT M3 × 8 NI-ZU	6
MP17	8810008660	SCREW PH BT M3 × 8 NI-ZU	4
MP18	8810002250	SCREW FH B0 M2.6 × 6	4
MP19	8930006630	Himeron sheet G	2
MP20	8930043290	Rubber sheet (AF)	4
MP21	8930053950	1900 PCB angle	1
WS1	8970022810	EX1900 J lead set (4)/FR	4
WS2	8600035961	EX1900 P03*04FR-1	1

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

## 6-3 FILTER UNIT DISASSEMBLY

### [FILTER UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	6910011330	Terminal OT-009 M3	1
EP2	6910011330	Terminal OT-009 M3	1
EP3	6910011330	Terminal OT-009 M3	1
EP4	6910011330	Terminal OT-009 M3	1
MP1	8930014140	Grounding spring(D)	1
MP4	8930014140	Grounding spring(D)	1
MP5	8510011480	1900 AL cover	1
MP6	8930048680	Isolating pipe	1
RL1	6330000201	Relay VS-12TBU-E-UC	1
RL2	6330000201	Relay VS-12TBU-E-UC	1
RL3	6330000201	Relay VS-12TBU-E-UC	1
RL4	6330000201	Relay VS-12TBU-E-UC	1
RL5	6330000201	Relay VS-12TBU-E-UC	1
RL6	6330000201	Relay VS-12TBU-E-UC	1
RL7	6330000201	Relay VS-12TBU-E-UC	1
RL8	6330000201	Relay VS-12TBU-E-UC	1
RL9	6330000201	Relay VS-12TBU-E-UC	1
RL10	6330000201	Relay VS-12TBU-E-UC	1
RL11	6330000201	Relay VS-12TBU-E-UC	1
RL12	6330000201	Relay VS-12TBU-E-UC	1
RL13	6330000201	Relay VS-12TBU-E-UC	1
RL14	6330000201	Relay VS-12TBU-E-UC	1
RL15	6330001500	Relay AW3033	1
RL16	6330001210	Relay VB-12TBU-UC (UL3)	1
RL17	6330001210	Relay VB-12TBU-UC (UL3)	1
W12	9040401001	74/98/050/X98/X98	1
WS1	8600035754	EX1900 P01*J01FI-4	1
WS2	8970022640	EX1900 1.5D coaxial cable (1)/FI	1
WS3	8970022650	EX1900 Tefron coaxial cable (1)/FI	1

### [COMBINR UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510017920	Connector 1811P342	1
J2	6510017920	Connector 1811P342	1
J3	6510017920	Connector 1811P342	1
J4	6510017920	Connector 1811P342	1
L5	6140003290	LR-365	1
EP1	6910011330	Terminal OT-009 M3	1
EP2	6910011330	Terminal OT-009 M3	1
EP5	0910049250	B5039 (#1900-3D)	1
MP1	8930000700	Tread spacer (T)	1
MP2	8810003380	Set screw C M3 ×10	2
WS1	8970022610	EX1900 0.8D coaxial cable (3)/CO	1
WS2	8600035730	EX1900 P01*J08CO	1

## 6-4 POWER UNIT DISASSEMBLY

### [PA UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
W1	8900006990	Cable OPC-683 (N:10 L:110)	1
W2	8900007360	Cable OPC-711 (N:10 L:250)	1
W3	8900006990	Cable OPC-683 (N:10 L:110)	1
W4	8900007360	Cable OPC-711 (N:10 L:250)	1
MF1	2710000620	Fan PUDC12Z4-992	1
MF2	2710000620	Fan PUDC12Z4-992	1
MF3	2710000620	Fan PUDC12Z4-992	1
MP1	8930042520	1900 FHS angle	1
MP2	8930042510	1900 RHS angle	1
MP3	8410002123	1900 PA heat sink-3	1
MP4	8810003160	Set screw A M3 × 6	16
MP5	8810008490	Set screw H M2.6 × 8 NI	16
MP6	8810009620	Bind screw BT M3 × 6 ZK	4
MP7	8810009620	Bind screw BT M3 × 6 ZK	6
MP8	8810009620	Bind screw BT M3 × 6 ZK	8
MP9	8930043050	1900 Spacer angle	1
MP10	8810003160	Set screw A M3 × 6	4
MP11	8820000550	Cap-bolt M4 × 8 ZK	12
MP12	8810003360	Set screw C M3 × 6	1
MP13	8810003360	Set screw C M3 × 6	1
MP14	8810003360	Set screw C M3 × 6	1
MP15	8810003360	Set screw C M3 × 6	1
MP16	8810003360	Set screw C M3 × 6	1
MP17	8810003360	Set screw C M3 × 6	1
MP18	8810003360	Set screw C M3 × 6	1
MP19	8810003360	Set screw C M3 × 6	1
MP21	8930047400	1900 C-sheest	1
MP22	8930047410	1900 D-sheet	1
WS1	8970022930	EX1900 J boad (special) (4)/PA	1

**Screw abbreviations:** PH: Pan head  
BT: Self-tapping  
ZK: Black  
NI: Nickel

### [PA-1 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J2	6510017920	Connector 1811P342	1
J5	6510003390	Connector B03B-EH-S	1
EP1	6910011330	Terminal OT-009 M3	1
EP2	6910011330	Terminal OT-009 M3	1
EP3	6910000640	Bead FSOH090RN	1
WS1	8970022531	EX1900 J boad set-1 (1)/PA-1	1
WS2	8970022540	EX1900 1.5D coaxial cable (1)/PA-1	1

### [PA-2 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J2	6510017920	Connector 1811P342	1
J5	6510003390	Connector B03B-EH-S	1
EP1	6910011330	Terminal OT-009 M3	1
EP2	6910011330	Terminal OT-009 M3	1
EP3	6910000640	Bead FSOH090RN	1
WS1	8970022551	EX1900 J boad set-1 (1)/PA-2	1
WS2	8970022560	EX1900 1.5D coaxial cable (1)/PA-2	1

### [PA-3 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J2	6510017920	Connector 1811P342	1
J5	6510003390	Connector B03B-EH-S	1
EP1	6910011330	Terminal OT-009 M3	1
EP2	6910011330	Terminal OT-009 M3	1
EP3	6910000640	Bead FSOH090RN	1
WS1	8970022571	EX1900 J boad set-1 (1)/PA-3	1
WS2	8970022580	EX1900 1.5D coaxial cable (1)/PA-3	1

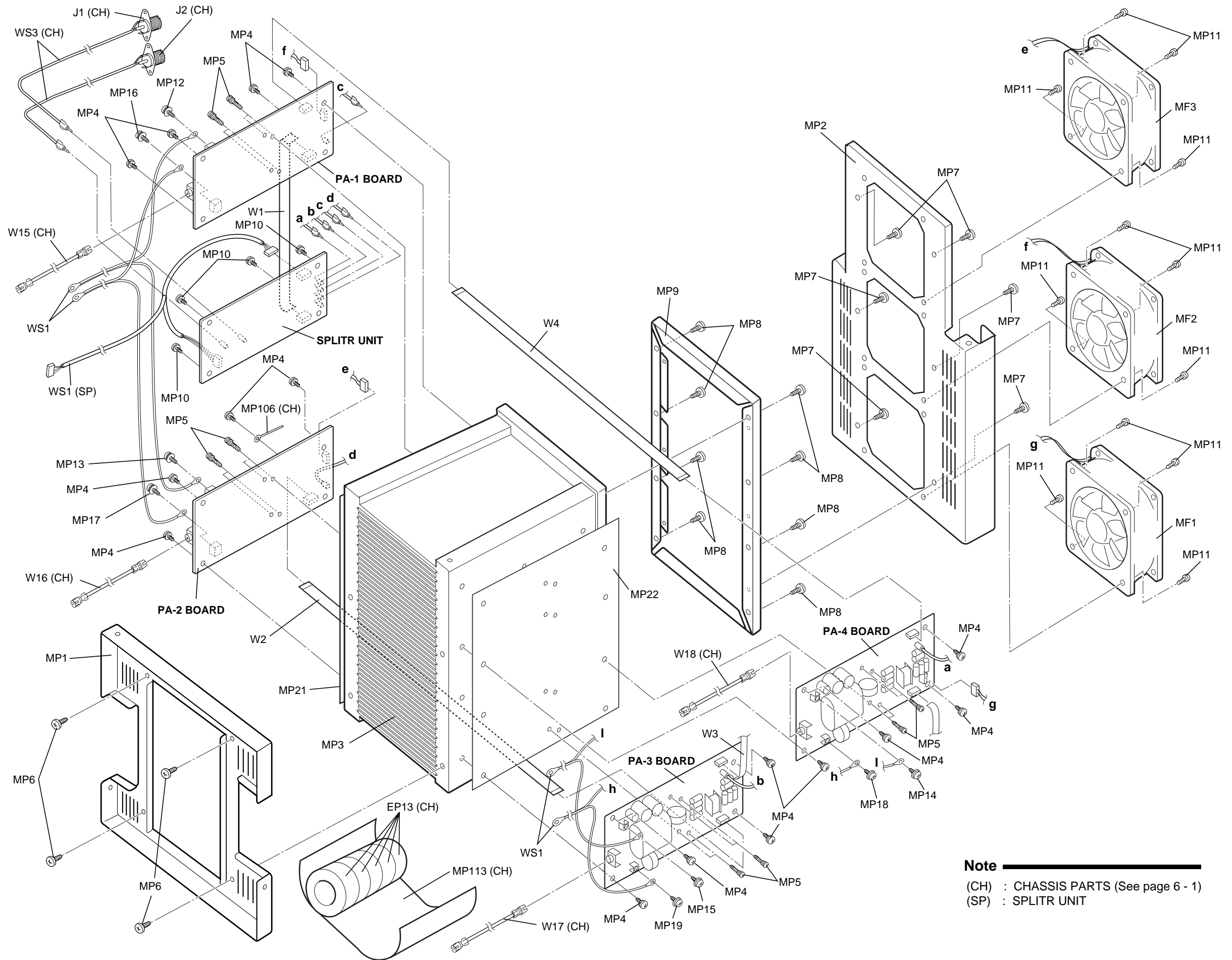
### [SPLITR UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510007020	Connector TMP-J01X-V6	1
J2	6510007020	TMP-J01X-V6	1
J4	6510007020	TMP-J01X-V6	1
J5	6510007020	TMP-J01X-V6	1
J6	6510007020	TMP-J01X-V6	1
J7	6510007020	TMP-J01X-V6	1
J8	6510007020	TMP-J01X-V6	1
RL1	6330001330	AG 201344	1
RL2	6330000470	NR-HD (12V) AE5343	1
WS1	8600035721	EX1900 P01*J03*09SP-1	1

### [PA-4 BOARD]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
J2	6510017920	Connector 1811P342	1
J5	6510003390	Connector B03B-EH-S	1
EP1	6910011330	Terminal OT-009 M3	1
EP2	6910011330	Terminal OT-009 M3	1
EP3	6910000640	Bead FSOH090RN	1
WS1	8970022591	EX1900 Jboad set-1(1)/PA-4	1
WS2	8970022600	EX1900 1.5D coaxial cable (1)/PA-4	1

**PA UNIT**

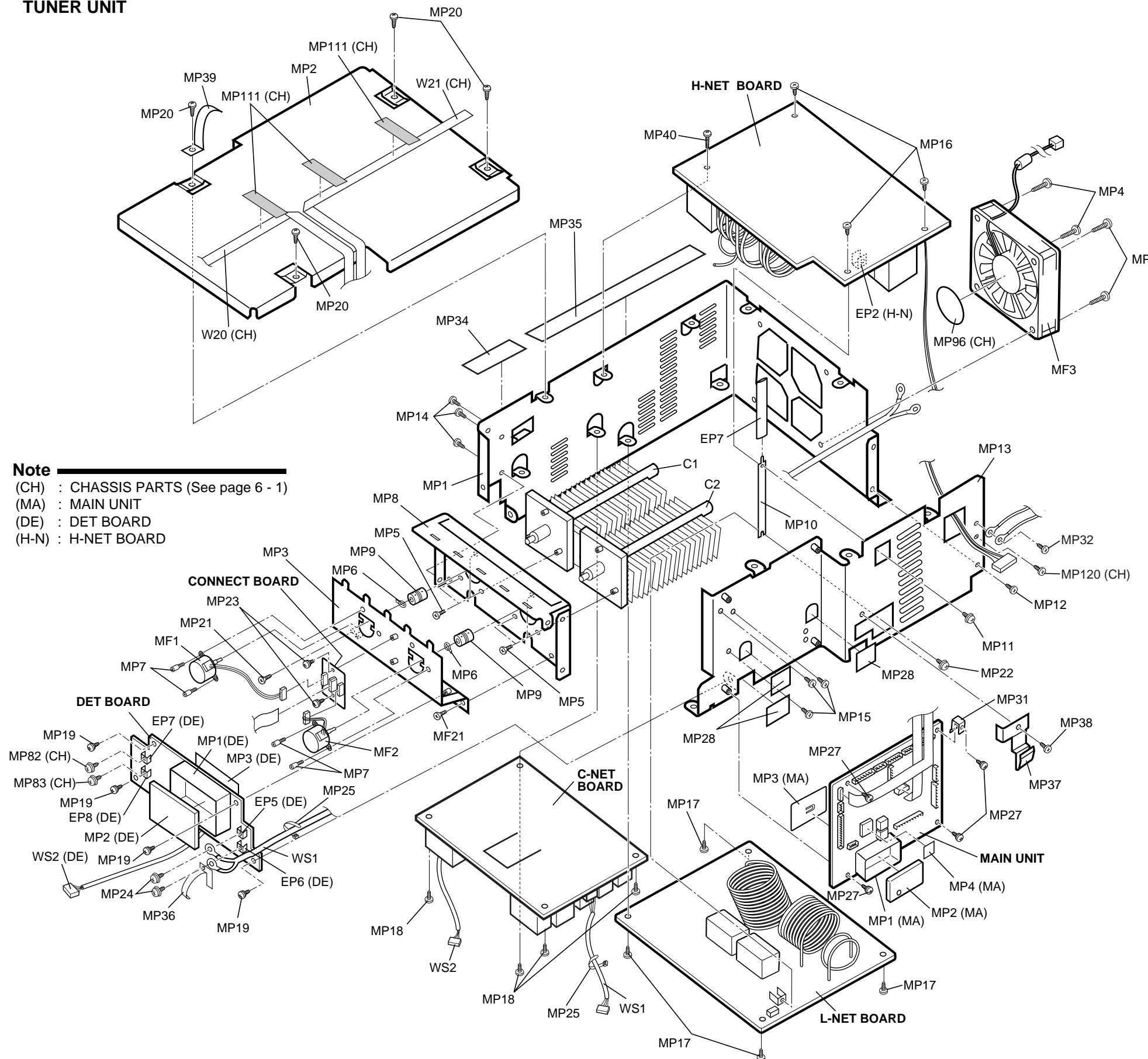


**Note**  
 (CH) : CHASSIS PARTS (See page 6 - 1)  
 (SP) : SPLITR UNIT

# TUNER UNIT

# 6-5 TUNER UNIT DISASSEMBLY

## [TUNER UNIT]



**Note**  
 (CH) : CHASSIS PARTS (See page 6 - 1)  
 (MA) : MAIN UNIT  
 (DE) : DET BOARD  
 (H-N) : H-NET BOARD

REF NO.	ORDER NO.	DESCRIPTION	QTY.
C1	4620000130	UV55 150pF	1
C2	4620000130	UV55 150pF	1
EP7	9019001020	Empire tube 10.0 (d) L=6.5 (mm)	1
MF1	2710000460	Stepping motor MP28GA	1
MF2	2710000460	Stepping motor MP28GA	1
MF3	2710000630	Fan FBA08T12HC (w/beadscore)	1
MP1	8510011322	1900 A-TUN case-2	1
MP2	8510011351	1900 A-TUN cover-1	1
MP3	8930044041	1900 A-motor angle-1	1
MP4	8810006500	Bind screw M4 × 20 ZK	4
MP5	8810002160	Screw FH M3 × 5	6
MP6	8930030111	1414 Plate-1	2
MP7	8820000880	1528 Screw	4
MP8	8930044030	1900 TUN angle	1
MP9	8950003200	UJ6-5 (univ. cuppling)	2
MP10	8930044050	1900 CU plate	1
MP11	8810002160	Screw FH M3 × 5	1
MP12	8810009620	Bind screw BT M3 × 6 ZK	1
MP13	8510011332	1900 B-TUN case-2	1
MP14	8810009620	Tapping screw bind B0 M3 × 6 ZK(BT)	3
MP15	8810009620	Tapping screw bind B0 M3 × 6 ZK(BT)	3
MP16	8810009620	Tapping screw bind B0 M3 × 6 ZK(BT)	3
MP17	8810008660	Tapping screw bind PH B0 M3 × 8 NI-ZU (BT)	4
MP18	8810009620	Tapping screw bind B0 M3 × 6 ZK(BT)	4
MP19	8810003160	Set screw A M3 × 6	4
MP20	8810008660	Tapping screw bind PH B0 M3 × 8 NI-ZU (BT)	4
MP21	8810009310	Tapping screw bind PH B0 M3 × 6 NI-ZU (BT)	2
MP22	8810003380	Set screw C M3 × 10	1
MP23	8810003160	Set screw A M3 × 6	2
MP24	8810003360	Set screw C M3 × 6	2
MP25	8950000180	Cable tie-80	2
MP26	6910008240	Clip 59TN4772	2
MP27	8810003160	Set screw A M3 × 6	4
MP28	8930007100	Alumi-sheet C	3
MP31	8930047180	1900 A-grounding plate	1
MP32	8810008660	Tapping screw bind PH B0 M3 × 8 NI-ZU (BT)	1
MP34	8950001770	Filamen tape 9510 12 × 40	1
MP35	8950004950	Filamen tape 9510 12 × 195	1
MP36	8930047810	1900 Tun spring	1
MP37	8930047190	1900 B-grounding plate	1
MP38	8810008630	Tapping screw bind PH B0 M3 × 6 NI-ZU (BT)	1
MP39	8930004070	Grounding spring (C)	1
MP40	8930008660	Tapping screw bind PH B0 M3 × 8 NI-ZU (BT)	1
WS1	8970022910	EX1900 Special coaxial cable (1)/TU	1

**Screw abbreviations:** PH: Pan head FH: Flat head  
 BT: Self-tapping ZK: Black NI:Nickel

**[DET BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP5	6910011330	Terminal OT-009 M3	1
EP6	6910011330	Terminal OT-009 M3	1
EP7	6910011330	Terminal OT-009 M3	1
EP8	6910011330	Terminal OT-009 M3	1
MP1	8510001080	Shield case (A) SX117	1
MP2	8510001101	Shield case (A) cover (A)-1	1
MP3	8510004370	506 Shield plate	1
MP4	8930048681	Isolating pipe (K)-1	1
MP5	8930048681	Isolating pipe (K)-1	1
WS1	8970022630	EX1900 Tefron coaxial cable (2)/DE	1
WS2	8600035821	EX1900 P01*J01DE-1	1

**[L-NET BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP1	6910011340	Terminal OT-010 M3	1
RL1	6330000570	Relay AR-39251	1
RL2	6330000570	Relay AR-39251	1

**[C-NET BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	QTY.
RL1	6330001440	Relay VS-12TBU-VD3	1
RL2	6330001440	Relay VS-12TBU-VD3	1
RL3	6330000570	Relay AR-39251	1
RL4	6330001490	Relay VB-12MBU-UC (UL3)	1
RL5	6330001490	Relay VB-12MBU-UC (UL3)	1
RL6	6330001490	Relay VB-12MBU-UC (UL3)	1
RL7	6330000570	Relay AR-39251	1
RL8	6330001490	Relay VB-12MBU-UC (UL3)	1
RL9	6330001490	Relay VB-12MBU-UC (UL3)	1
RL10	6330001490	Relay VB-12MBU-UC (UL3)	1

**[MAIN UNIT]**

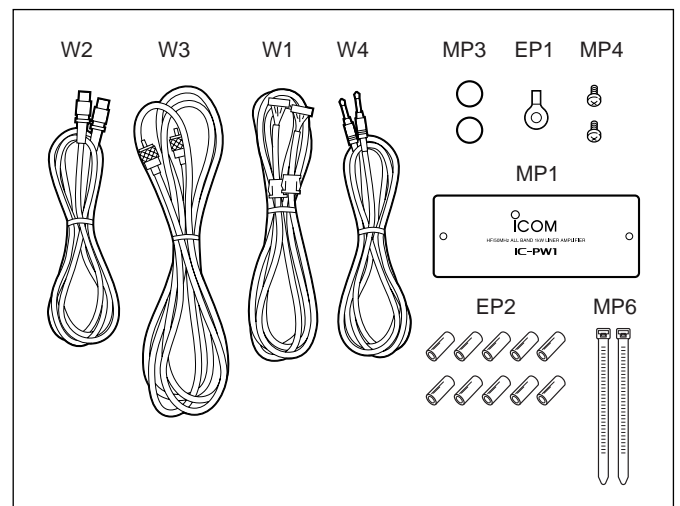
REF NO.	ORDER NO.	DESCRIPTION	QTY.
J1	6510003080	Connector RT01T-1.0B	1
J3	6510003450	Connector B09B-EH-S	1
J4	6510003480	Connector B12B-EH-S	1
J6	6510003410	Connector B05B-EH-S	1
J8	6510003490	Connector B13B-EH-S	1
J9	6510003410	Connector B05B-EH-S	1
J10	6510003450	Connector B09B-EH-S	1
J14	6510017650	Connector 52045-1045	1
J17	6510003390	Connector B03B-EH-S	1
J18	6510003410	Connector B05B-EH-S	1
J19	6510003420	Connector B06B-EH-S	1
J20	6510003430	Connector B07B-EH-S	1
J21	6510003440	Connector B08B-EH-S	1
J22	6510003390	Connector B03B-EH-S	1
S3	2260002220	Switch S-1010A	1
S4	2260002220	Switch S-1010A	1
MP1	8510000230	220 Shield case	1
MP2	8510000241	220 Shield case cover-1	1
MP3	8510005581	644 Shield plate-1	1
MP4	8510011820	1900 shield plate	1
RL2	6330001320	Relay AHY103	1
RL3	6330001320	Relay AHY103	1

**[ACCESSORIES]**

REF NO.	ORDER NO.	DESCRIPTION	QTY.
W1	8900009680	Cable OPC-960	1
W2	8900002260	Cable OPC-104 B	1
W3	8900002270	Cable OPC-125 B	1
W4	8900007290	Cable OPC-718	1
EP1	6510020330	Terminal 5.5-5 pin	1
EP2	6910010480	DL-7C OR-31-15-19H [USA], [EUR]	10
MP1	8310039530	1900 front plate	1
MP3	8930043080	Rubber (hole bush)	2
MP4	8810004430	Screw PH M3 × 6 ZK	2
MP6	8950001980	JIG cable tie-140	2
MP7	8310045230	1900 Cable caution rabel(BJ)	1

**[H-NET BOARD]**

REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP2	6910011340	Terminal OT-010 M3	1
RL1	6330000570	Relay AR-39251	1
RL2	6330000570	Relay AR-39251	1
RL3	6330000570	Relay AR-39251	1
RL4	6330000570	Relay AR-39251	1
RL5	6330000570	Relay AR-39251	1
RL6	6330000570	Relay AR-39251	1
RL7	6330000570	Relay AR-39251	1
RL8	6330000570	Relay AR-39251	1
RL9	6330000570	Relay AR-39251	1
RL10	6330000570	Relay AR-39251	1



## 6-6 PX-1981 REG UNIT DISASSEMBLY

### [REG UNIT-1]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP16	8810003160	Set screw A M3 × 6	6
MP17	8810003160	Set screw A M3 × 6	2
MP18	8810008630	Screw PH BT M3 × 6 NI-ZU	2
MP19	8810008630	Screw PH BT M3 × 6 NI-ZU	4
MP20	8810008630	Screw PH BT M3 × 6 NI-ZU	2
MP21	8810003160	Set screw A M3 × 6	4
MP22	8810008660	Screw PH BT M3 × 8 NI-ZU	4
MP27	8810003160	Set screw A M3 × 6	4
MP28	8810003160	Set screw A M3 × 6	6
MP29	8810003160	Set screw A M3 × 6	4
MP30	8810003160	Set screw A M3 × 6	3
MP39	8410002102	1981 A-heat sink-2	1
MP40	8410002113	1981 B-heat sink-3	1
MP41	8930042261	1981 B-plate-1	1
MP42	8930042480	1981 C-plate	2
MP45	8930044001	1981 C-angle-1	3
MP46	8930044012	1981 D-angle-2	1
MP53	8810003260	Set screw A M4 × 6	2
MP54	8810003160	Set screw A M3 × 6	2
MP55	8810003190	Set screw A M3 × 12 [USA, EUR]	5
	8810009900	Screw PH M3 × 10 reny screw [EUR-1]	5
MP56	8810000370	Screw PH M4 × 8	1
MP57	8850000430	S-washer M4 NI	1
MP58	8830000110	Nut M4	1
MP63	8810003160	Set screw A M3 × 6	2
MP64	8810008020	Set screw C M2.6 × 12 ZK	3
MP66	8810003160	Set screw A M3 × 6	2
MP69	8810003260	Set screw A M4 × 6	3
MP70	8810003190	Set screw A M3 × 12	2
MP72	8810000380	Screw PH M4 × 10	1
MP73	8850000430	S-washer M4 NI	1
MP74	8830000110	Nut M4	1
MP78	8810003160	Set screw A M3 × 6	2
MP97	8930004070	Grounding spring (C) SX166	1
MP102	8810008460	Set screw H M2.6 × 16 NI	1
MP103	8930050140	Thermally sheet (J) (TC-45BG)	1
MP104	8510012610	1981 K-plate	1
MP105	8930050190	Sponge (GK)	1
MP106	8930050160	Thermally sheet (L) (TC-150TKC)	1
MP107	8930047090	sponge (FP)	1
MP108	8930050170	1981 A-sponge	1
MP109	8930050180	1981 B-sponge	1
MP110	8850001790	Isolating washer (N)	4
MP111	8930050150	Thermally sheet (K) (TC-200TKC)	1

Screw abbreviations: PH: Pan head FH: Flat head

### [CONV UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP23	6910000310	Isolating bush B312D	2
EP24	8950004760	Sheet TC-45CG	2
MP1	8810003170	Set screw A M3 × 8	2
MP2	8930053400	1981 A-sheet (D)	4
MP7	8410002140	1981 heat plate	1

### [ACTFIL UNIT]

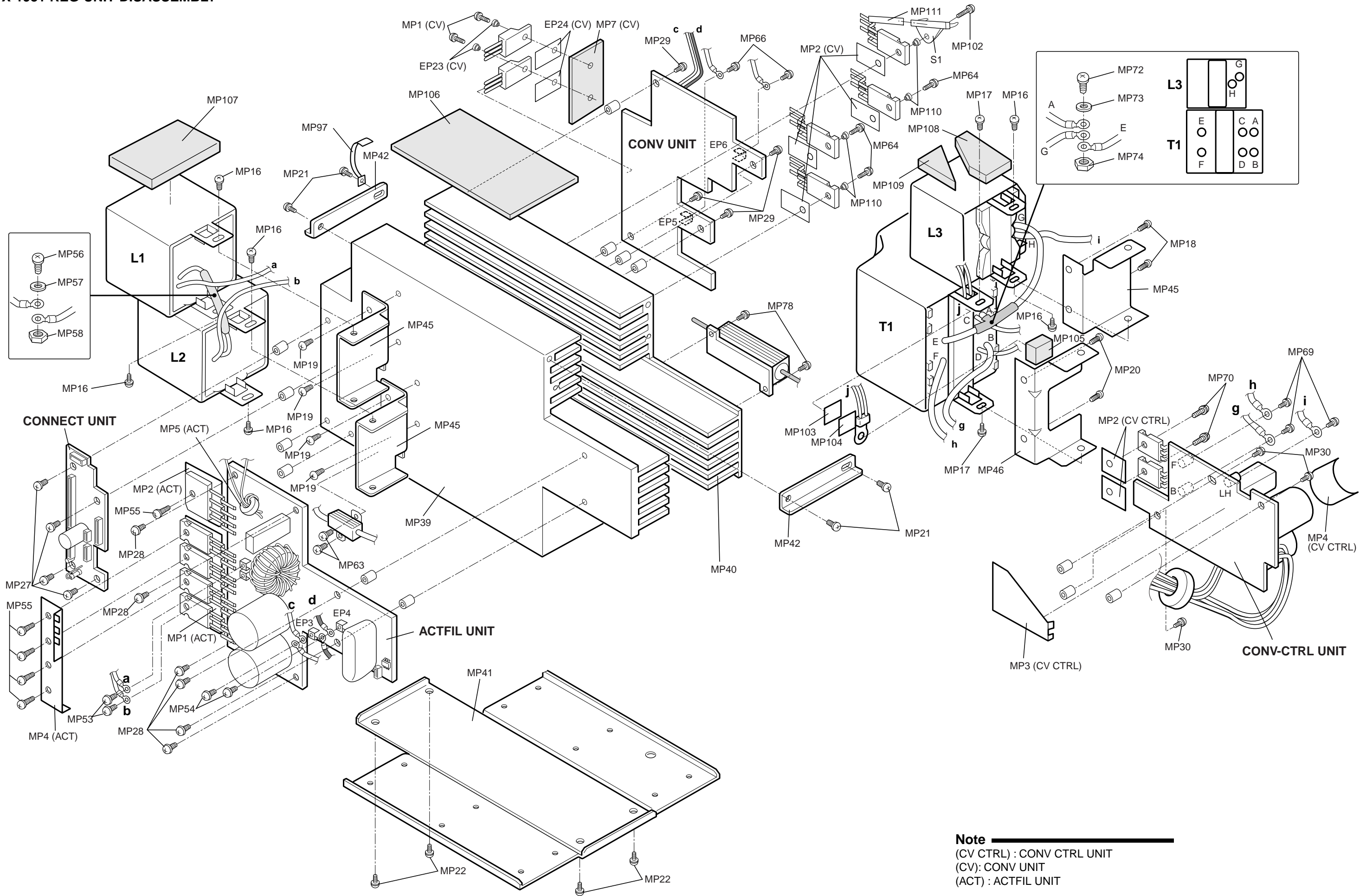
REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP1	8930053380	1981 C-sheet (B)	1
MP2	8930053390	1981 B-sheet (C)	1
MP4	8510011400	1981 TR plate	1

### [CONV-CTRL UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP2	8930053400	1981 A-SHEET(D)	2
MP3	8510011410	1981 CTRL PLATE	1



PX-1981 REG UNIT DISASSEMBLY



**Note**  
 (CV CTRL) : CONV CTRL UNIT  
 (CV) : CONV UNIT  
 (ACT) : ACTFIL UNIT

# PX-1981 REG UNIT DISASSEMBLY

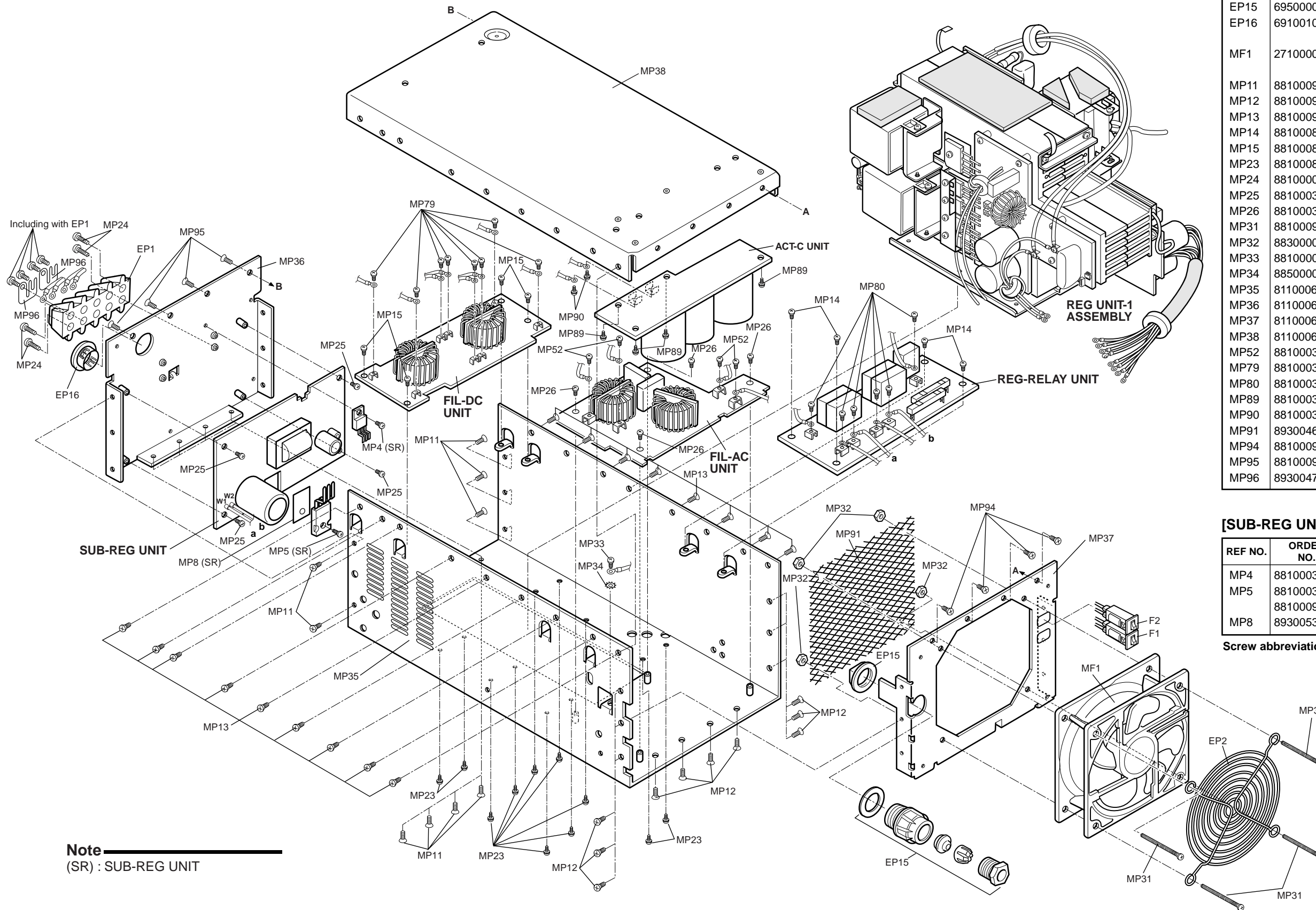
## [REG UNIT-2]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
EP2	8930042970	Fan gurd PG-47-02	1
EP15	6950000410	Super ground (FGA21M-11B)	1
EP16	6910010950	One touch bush NB-15	1
MF1	2710000640	MMF-12C12DH-R06	1
MP11	8810009650	Screw FH BT M3 × 8 NI-ZU	9
MP12	8810009650	Screw FH BT M3 × 8 NI-ZU	10
MP13	8810009650	Screw FH BT M3 × 8 NI-ZU	17
MP14	8810008630	Screw PH BT M3 × 6 NI-ZU	4
MP15	8810008630	Screw PH BT M3 × 6 NI-ZU	4
MP23	8810008630	Screw PH BT M3 × 6 NI-ZU	11
MP24	8810000490	Screw PH M5 × 15	4
MP25	8810003160	Set screw A M3 × 6	4
MP26	8810003160	Set screw A M3 × 6	4
MP31	8810009870	Set screw C M4 × 50	4
MP32	8830000110	Nut M4	4
MP33	8810000450	Set screw PH M5 × 8	1
MP34	8850000590	Tooth lock washer M5	1
MP35	8110006222	1981 A-bottom cover-2	1
MP36	8110006212	1981 A-front cover-2	1
MP37	8110006201	1981 A-rear cover-1	1
MP38	8110006490	1981 B-top cover	1
MP52	8810003160	Set screw A M3 × 6	4
MP79	8810003160	Set screw A M3 × 6	8
MP80	8810003160	Set screw A M3 × 6	6
MP89	8810003160	Set screw A M3 × 6	4
MP90	8810003160	Set screw A M3 × 6	2
MP91	8930046660	1981 fan plate	1
MP94	8810009650	Screw FH BT M3 × 8 NI-ZU	4
MP95	8810009650	Screw FH BT M3 × 8 NI-ZU	4
MP96	8930047130	1981 terminal plate	2

## [SUB-REG UNIT]

REF NO.	ORDER NO.	DESCRIPTION	QTY.
MP4	8810003170	Set screw A M3 × 8	1
MP5	8810003180	Set screw A M3 × 10 [USA, EUR]	1
	8810009900	Screw PH M3 × 10 reny screw [EUR-1]	1
MP8	8930053400	1981 A-sheet (D)	1

Screw abbreviations: PH: Pan head FH: Flat head



**Note**  
(SR) : SUB-REG UNIT

# SECTION 7 SEMI-CONDUCTOR INFORMATION

## 7-1 TRANSISTOR AND FET'S

NAME	SYMBOL	INSIDE VIEW
2SA1020-Y	-	
2SA1048-Y	-	
2SA1588-GR 2SA1586-Y	SG SY	
2SB1119S 2SB1123S 2SB1124S 2SB1132R	BB BF B9 BAR	
2SB562C	-	
2SC1815-Y	-	
2SC2458-Y	-	
2SC2655-Y 2SD468C	- -	
2SC2714-O 2SC4116-GR	QO GR	

NAME	SYMBOL	INSIDE VIEW
2SC3075	-	
2SC4237	c4237	
2SK302-Y	TY	
2SK515-X33	X33	
2SK702	K702	
DTC114EE DTC144EE	24 26	
MTW20N50E	-	
RN1202	-	

*Continue to next page.*

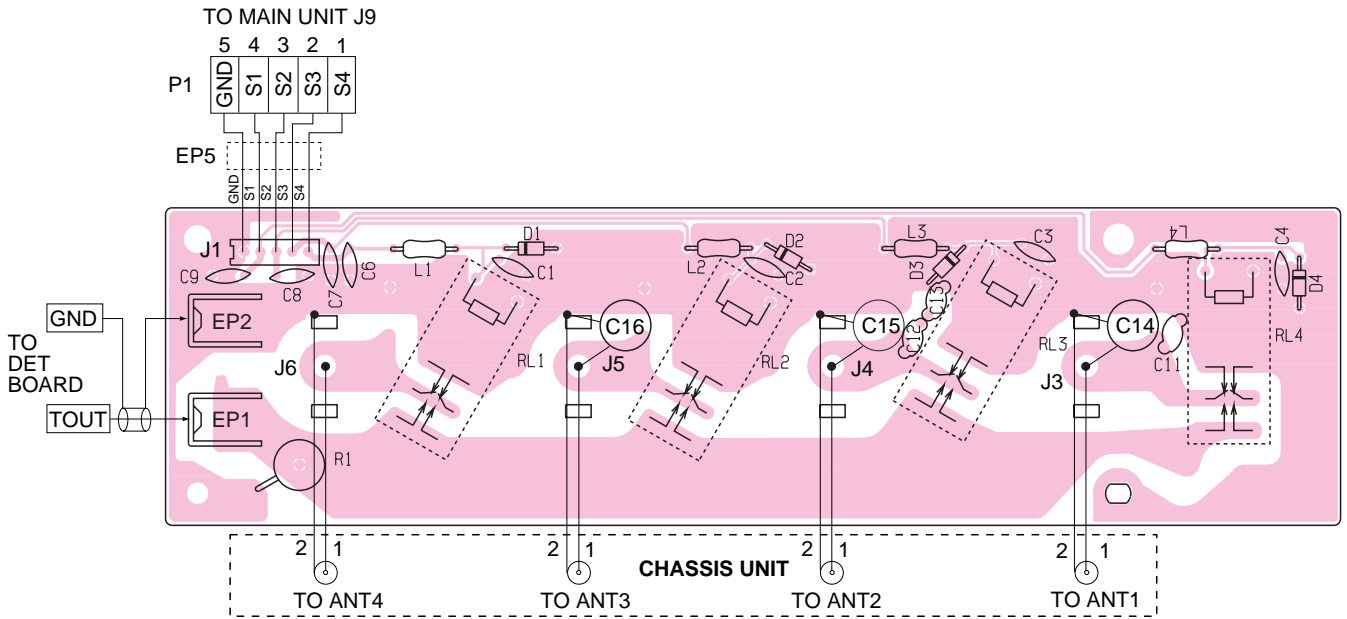
## 7-2 DIODES

NAME	SYMBOL	INSIDE VIEW
1SS165	Green line	
1SS300	A3	
1SS301	B3	
1SS315 1SS373 D2FS4-4063	S2 S4 2FS	
1SS53	White line	
1S953	Green line	
1S955	Green double line	
D1NL20U-4070	Silver line	
D25XB60	D25XB60	
D3SBA60	D3SBA60	

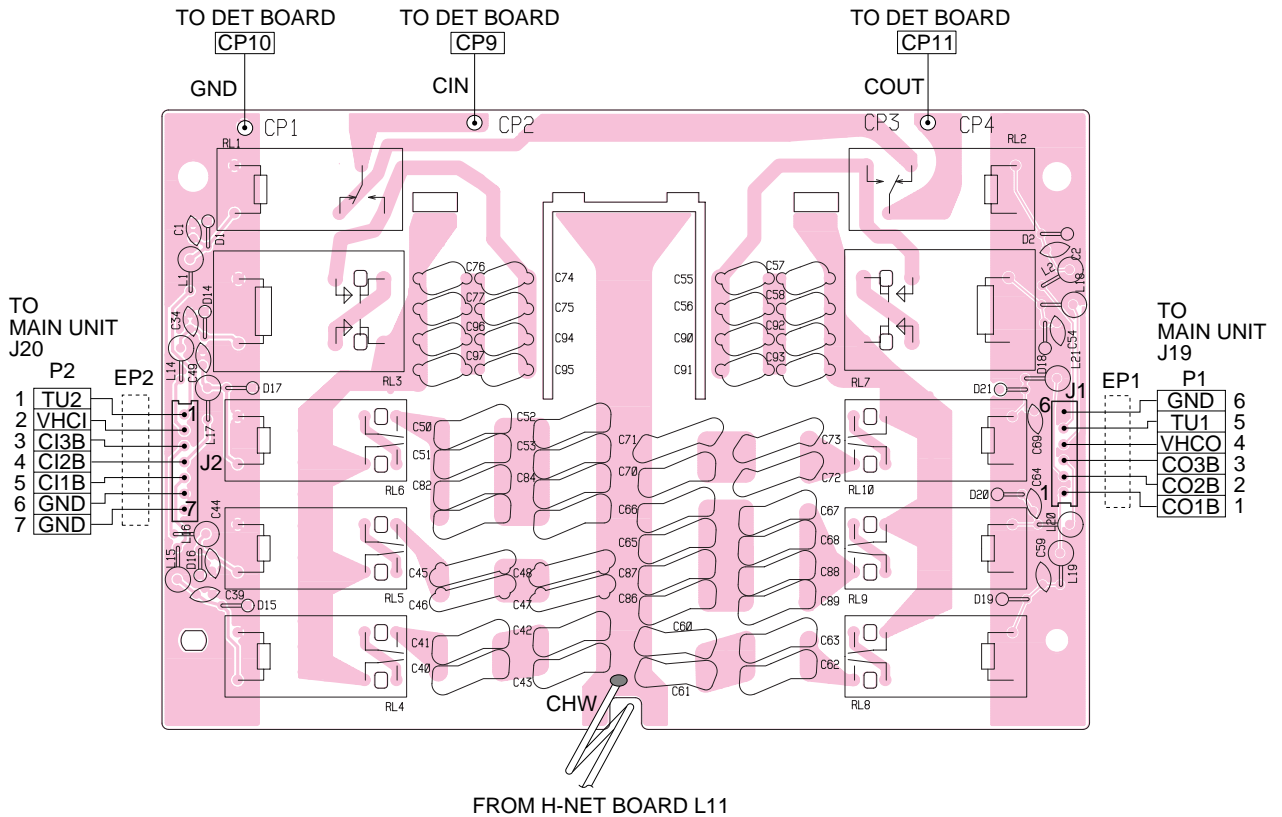
NAME	SYMBOL	INSIDE VIEW
HSM88AS-TR	C1	
MA77	4B	
MA8051-M	5_1	
MUR3060WT	-	
RD100E B RD3.0E B2 RD3.9E B2 RD5.1E B2 RD5.6E B2 RD6.2F B2	- - - - - -	
RD4.7M-T2B2 RD5.1M-T2B2	472 512	
RG3D	-	
S1VB60	S1VB	
SF5S6	F5S6	
SF10SC6	-	

# SECTION 8 BOARD LAYOUTS

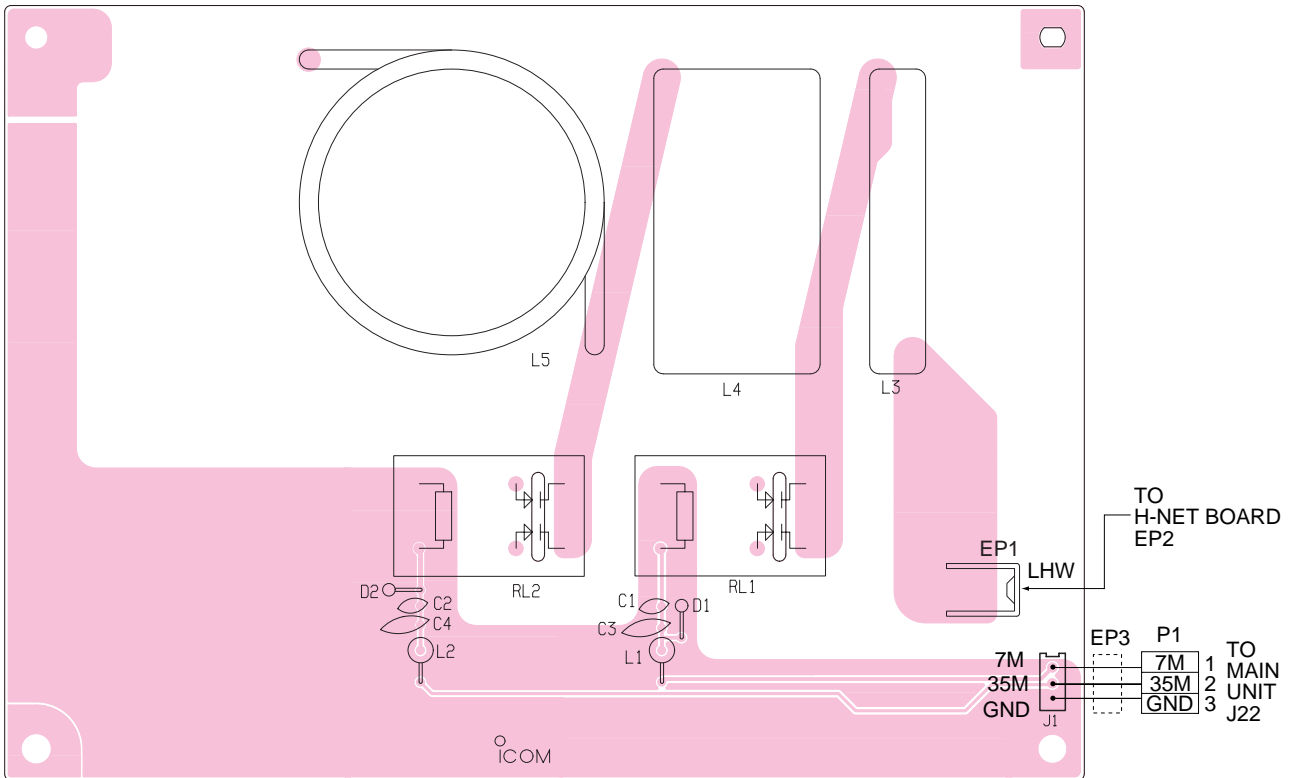
## 8-1 ANT- SW UNIT



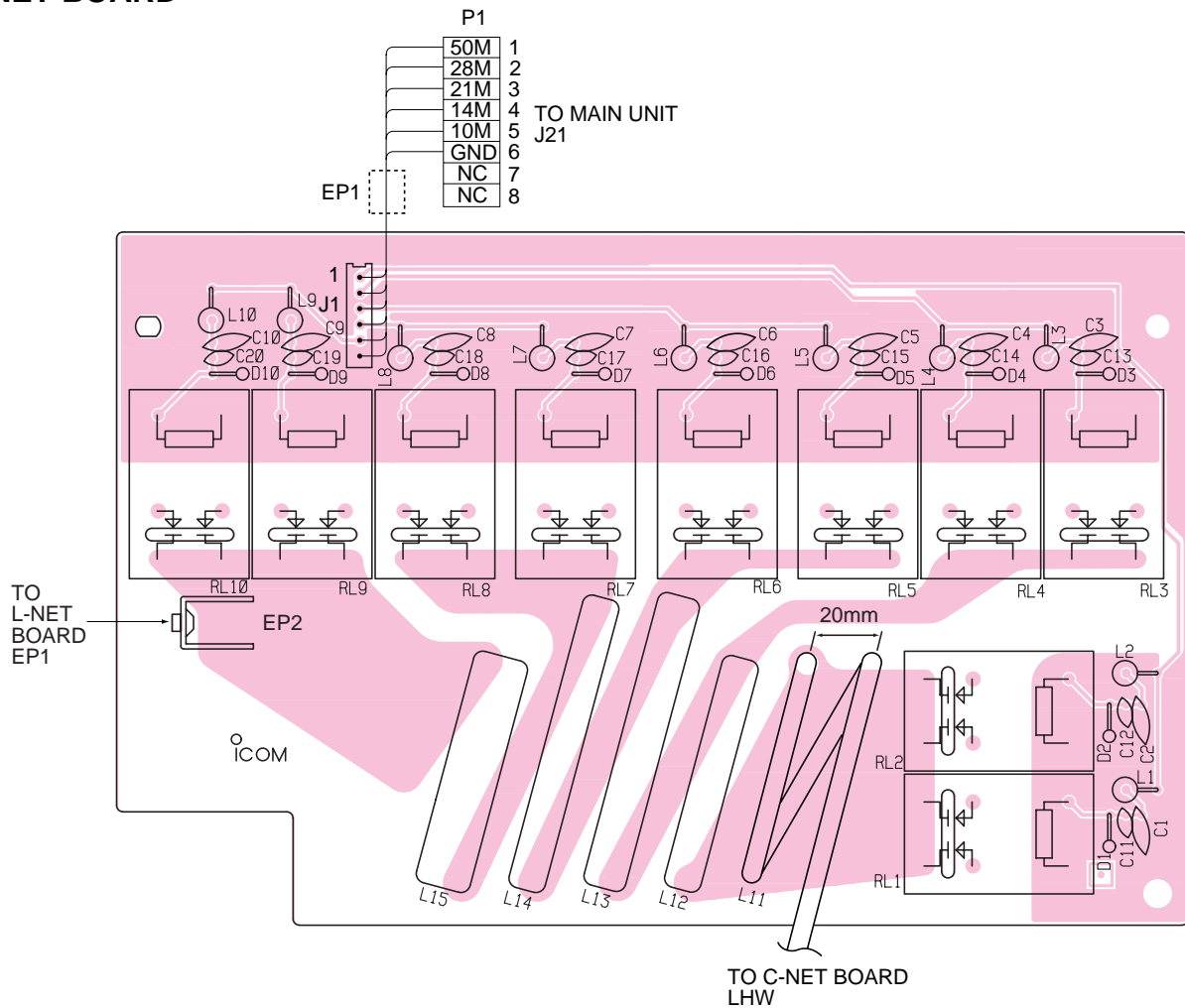
## 8-2 C-NET BOARD



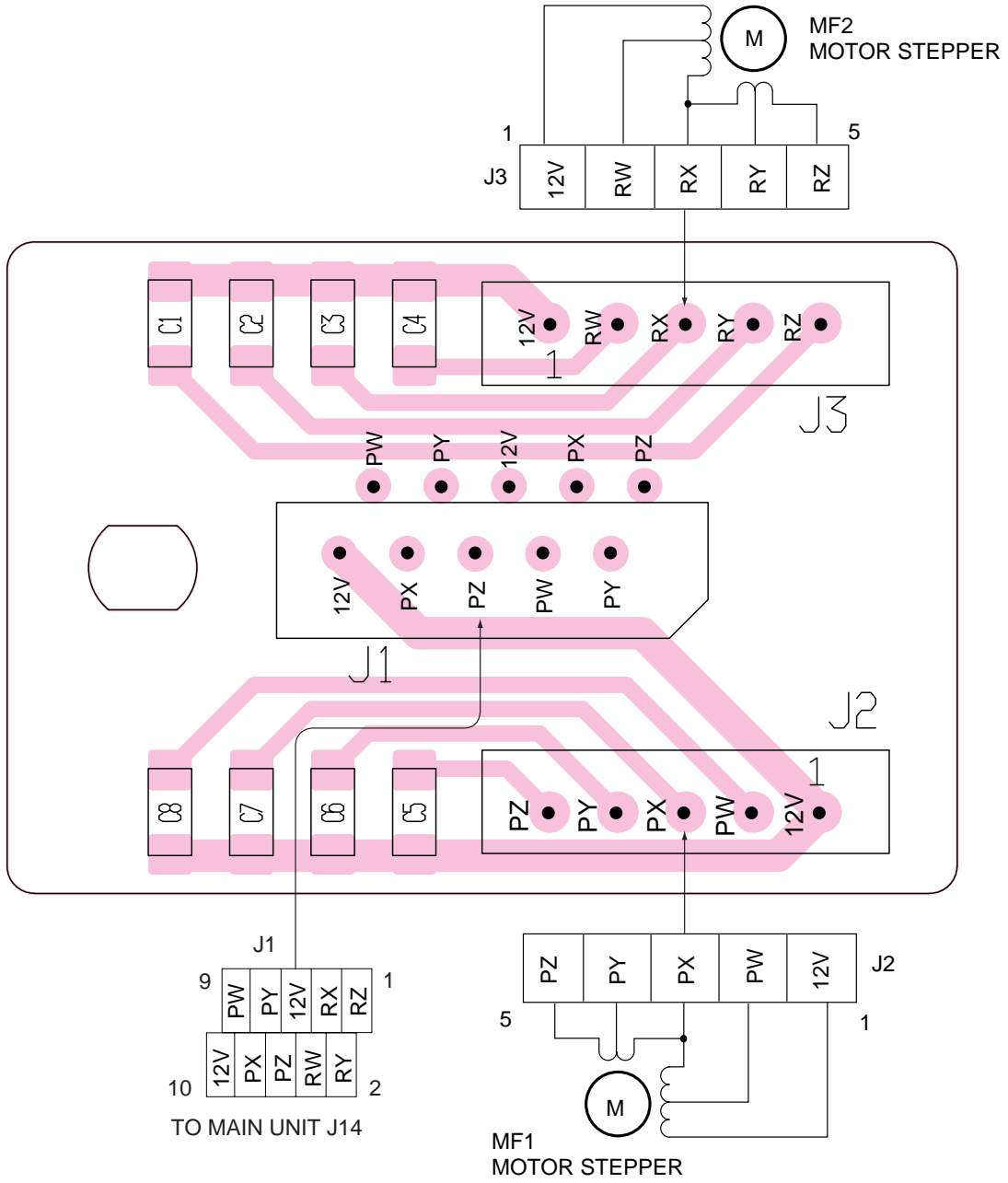
### 8-3 L-NET BOARD



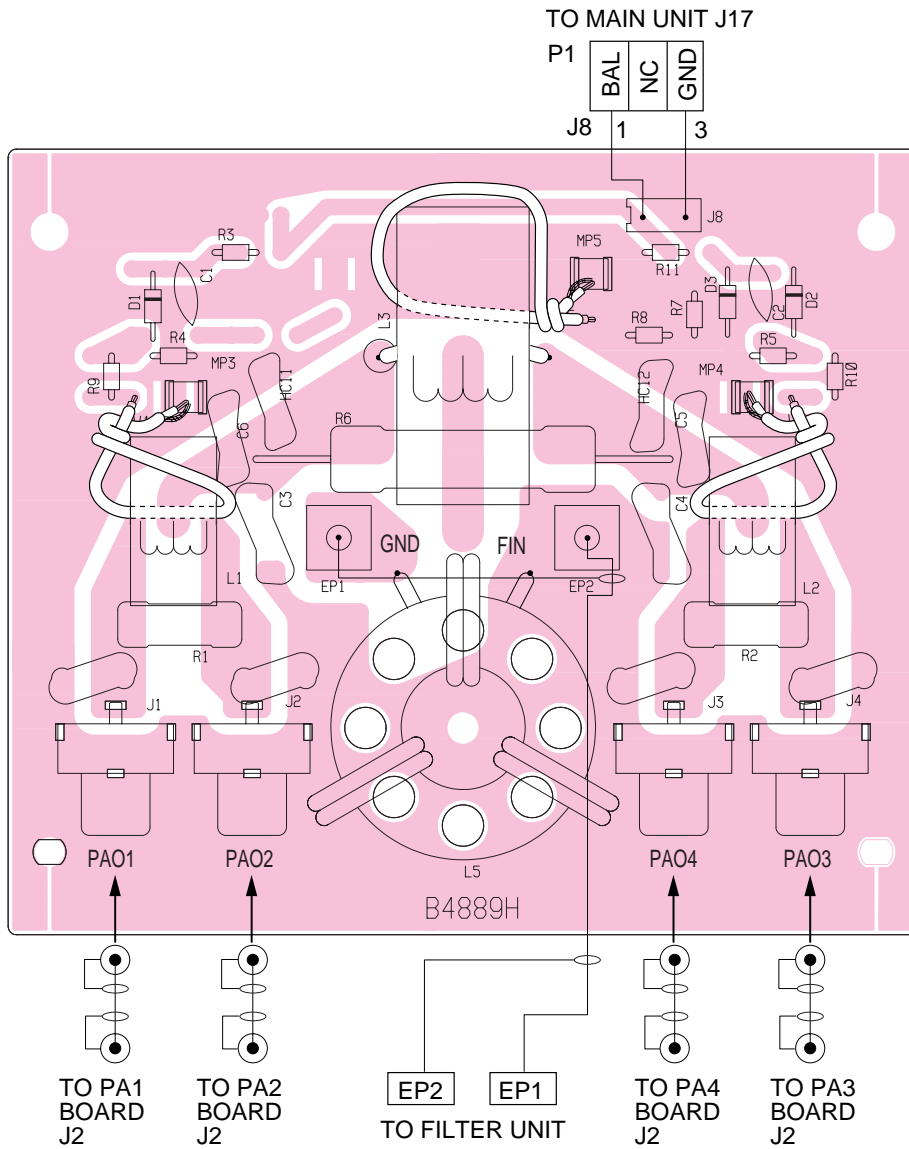
### 8-4 H-NET BOARD



# 8-5 CONNECT BOARD

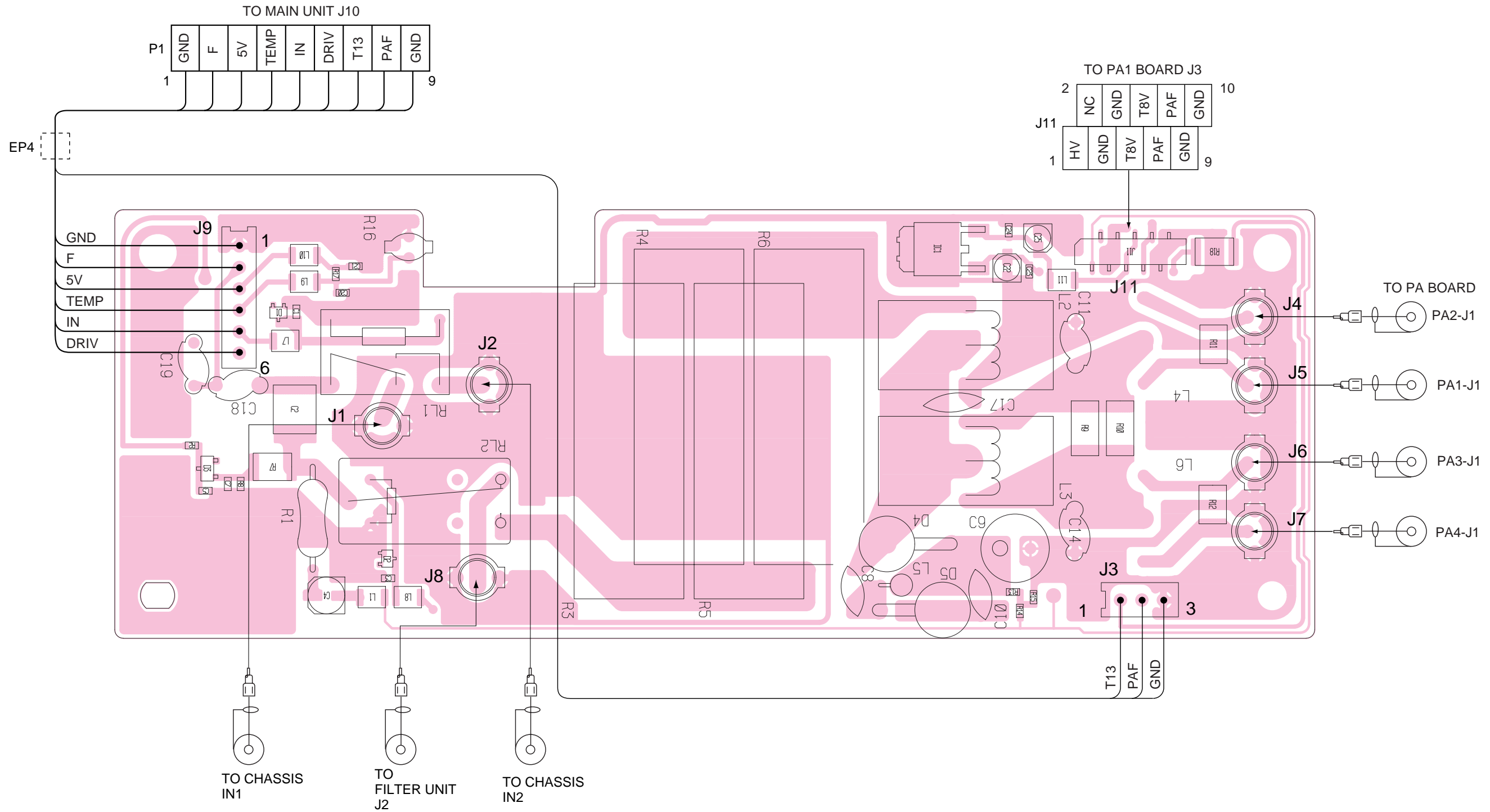


# 8-6 COMBINR UNIT



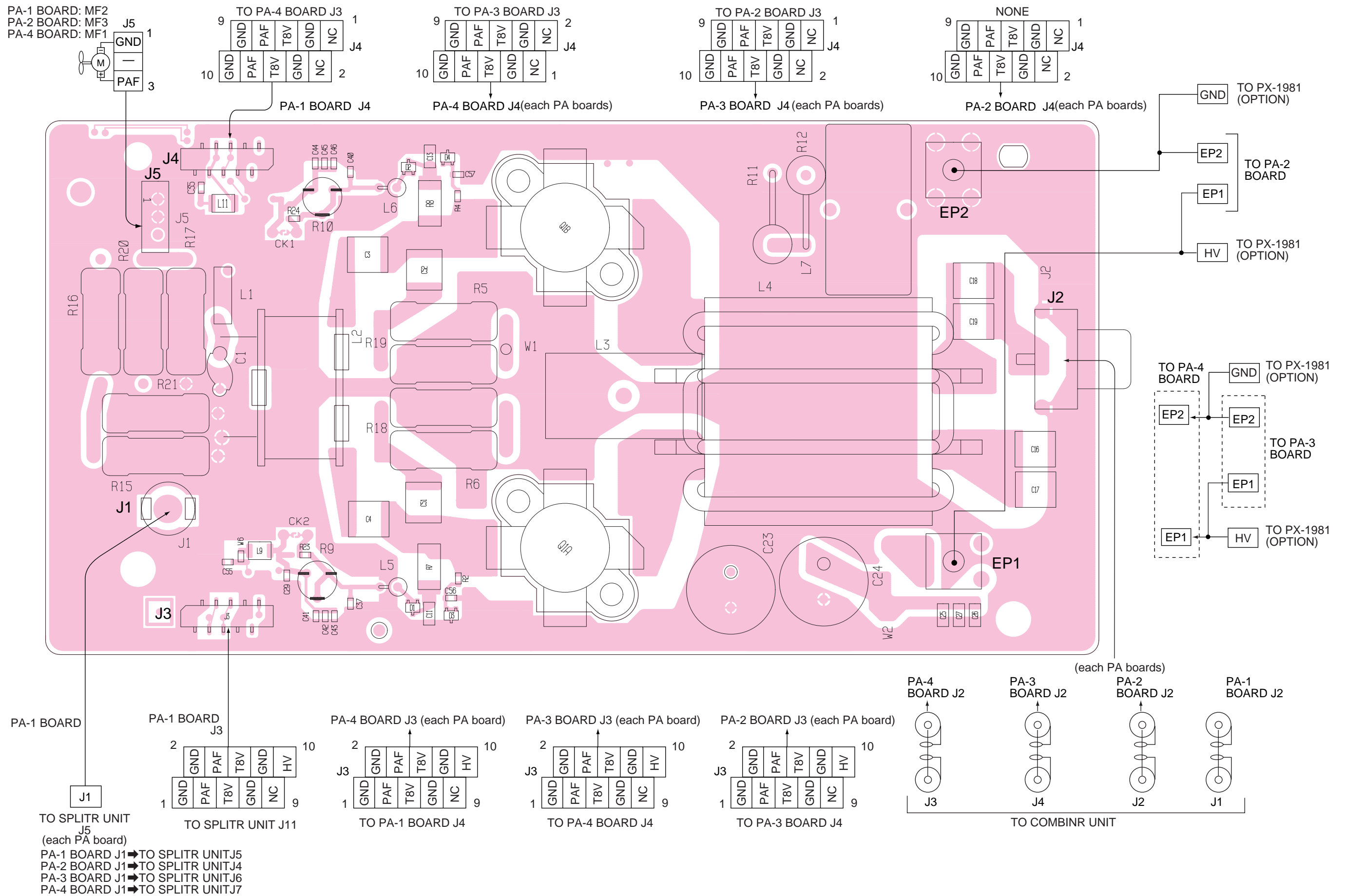


8-7 SPLITR UNIT

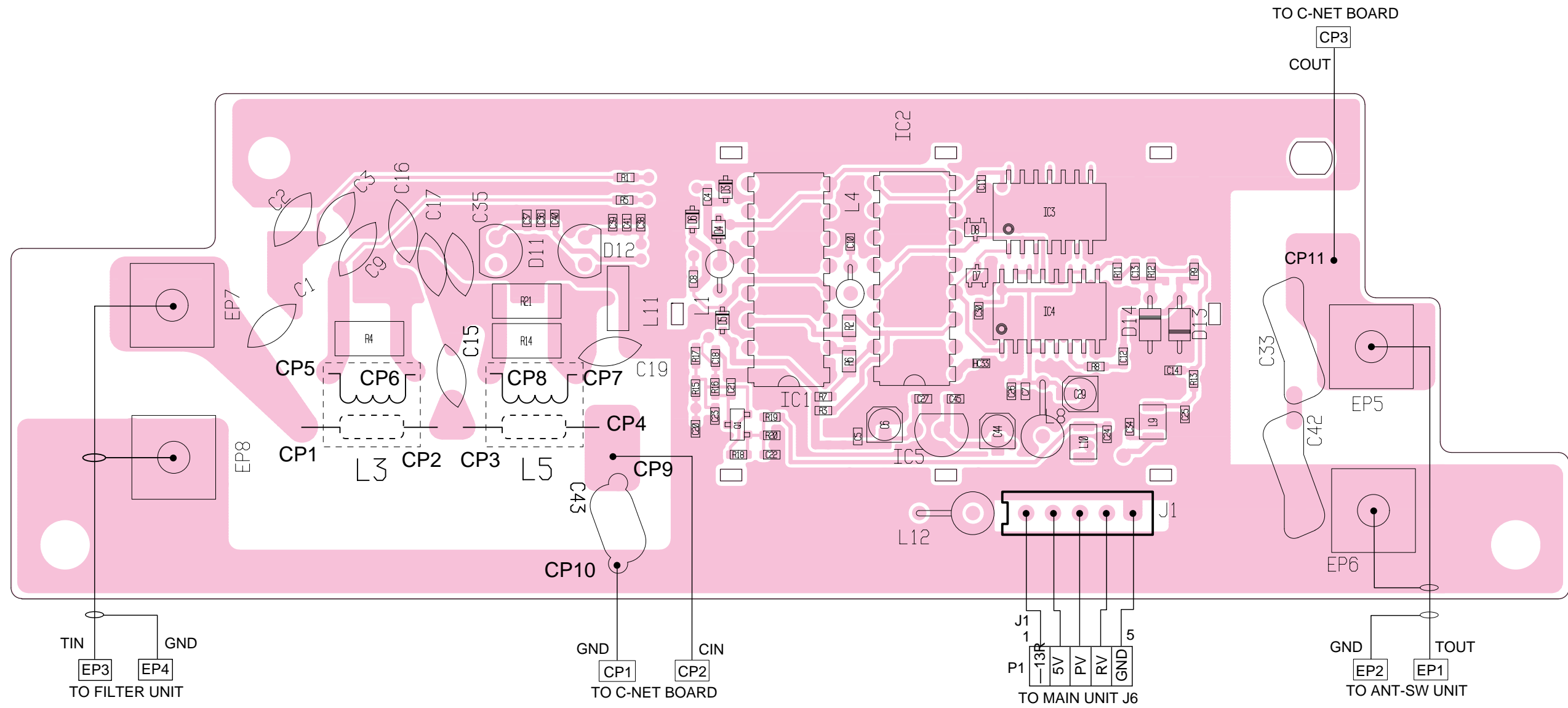


8-8 PA-1 – PA-4 BOARD

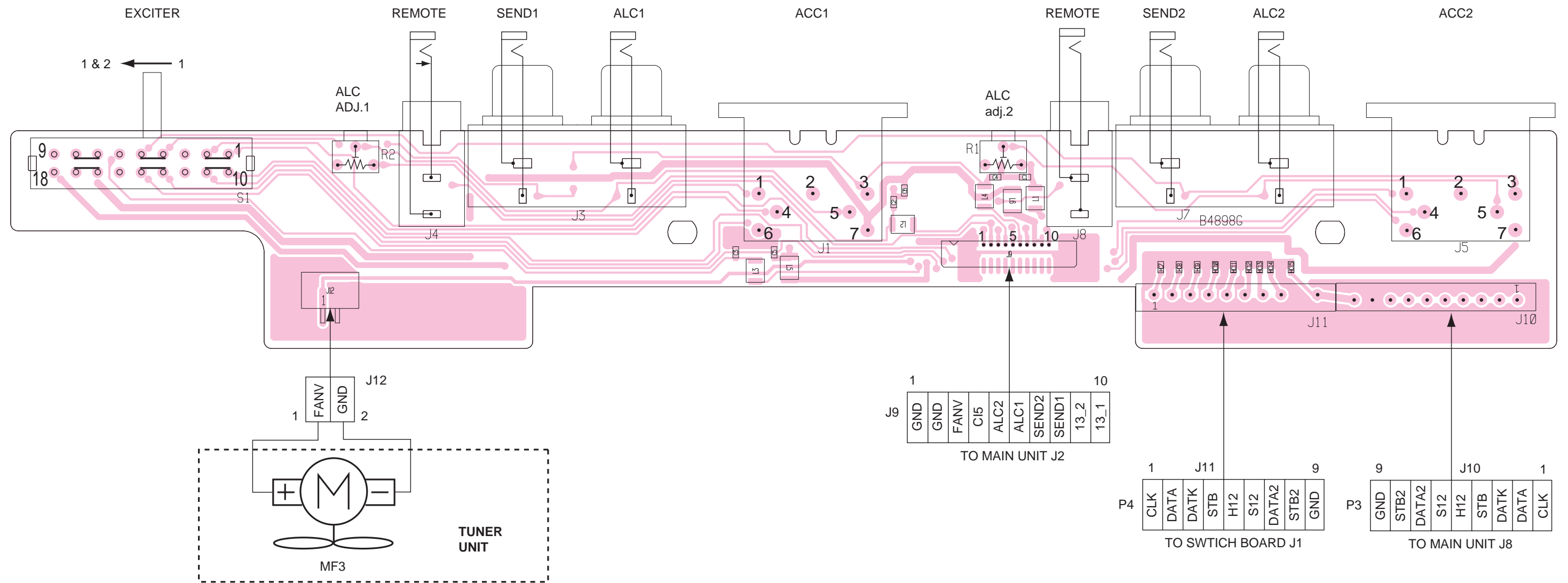
PA-1 BOARD: MF2  
 PA-2 BOARD: MF3  
 PA-4 BOARD: MF1



8-9 DET BOARD



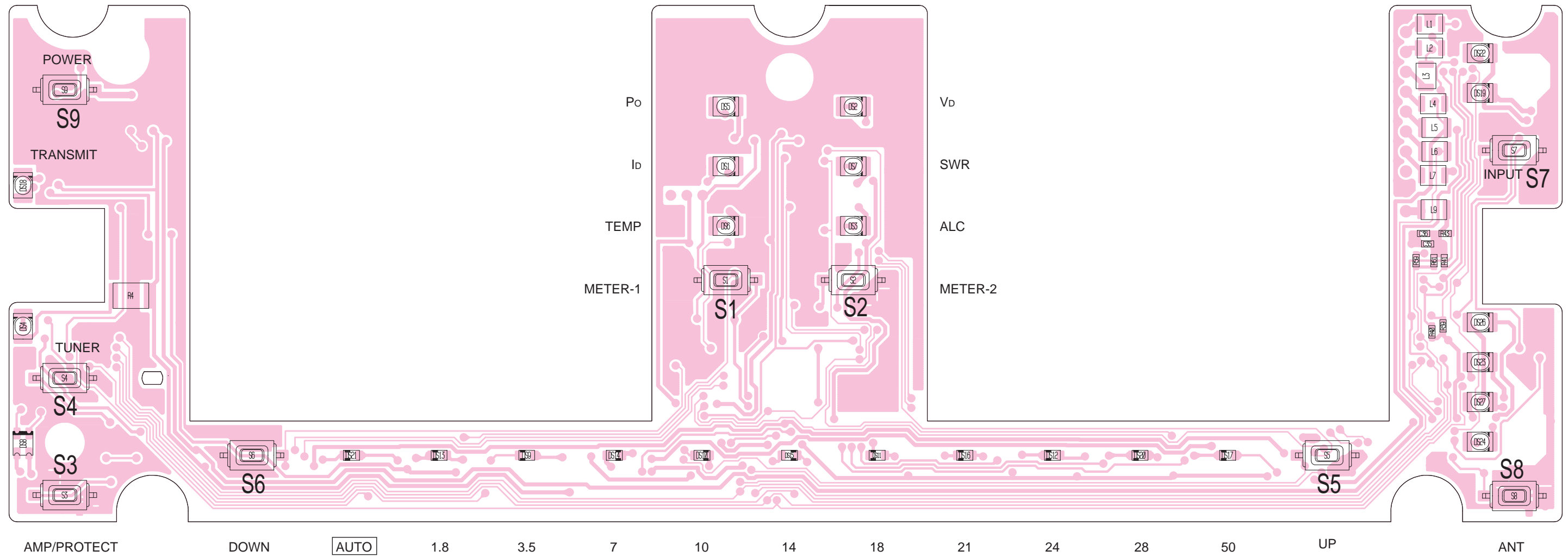
8-10 JACK-1 UNIT



# 8-11 SW BOARD

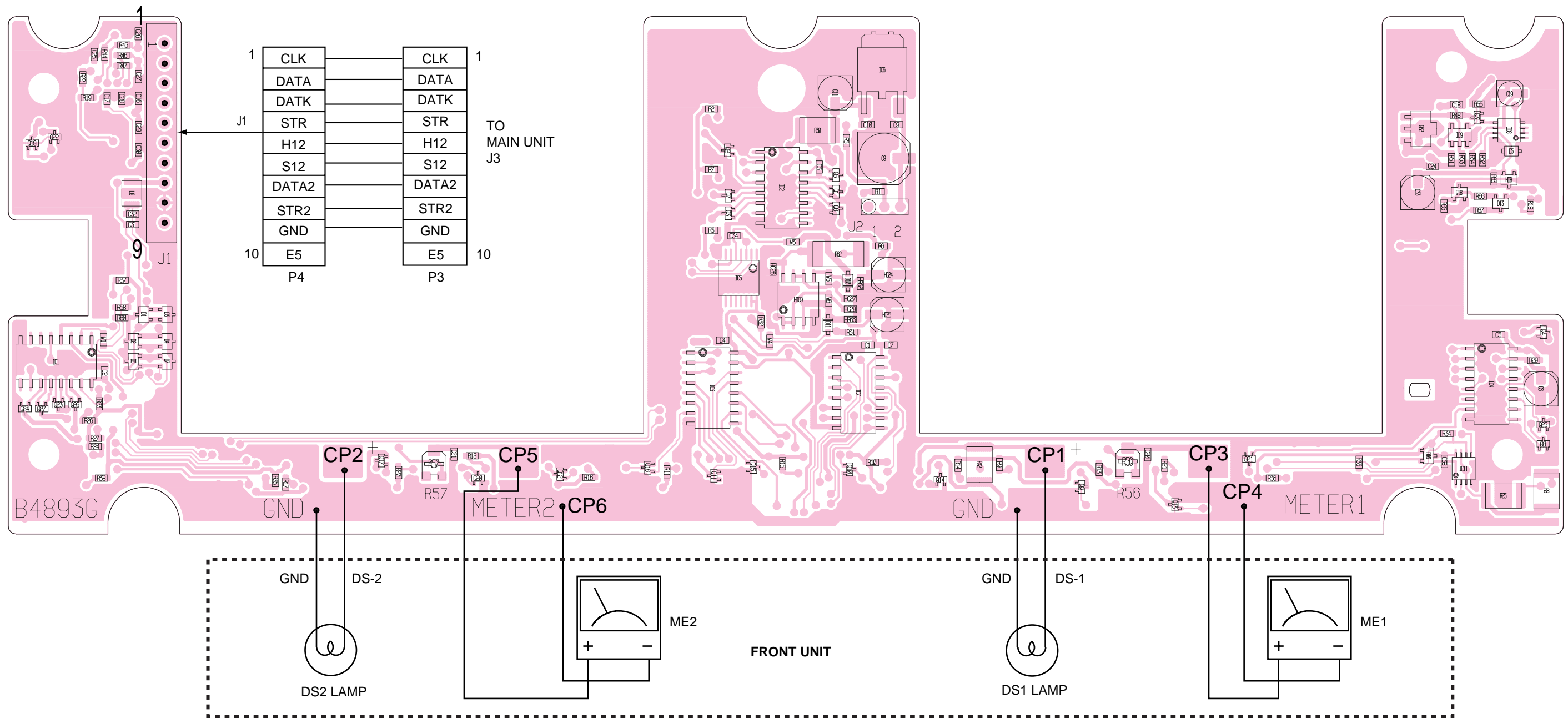
## •TOP VIEW

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



• **BOTTOM VIEW**

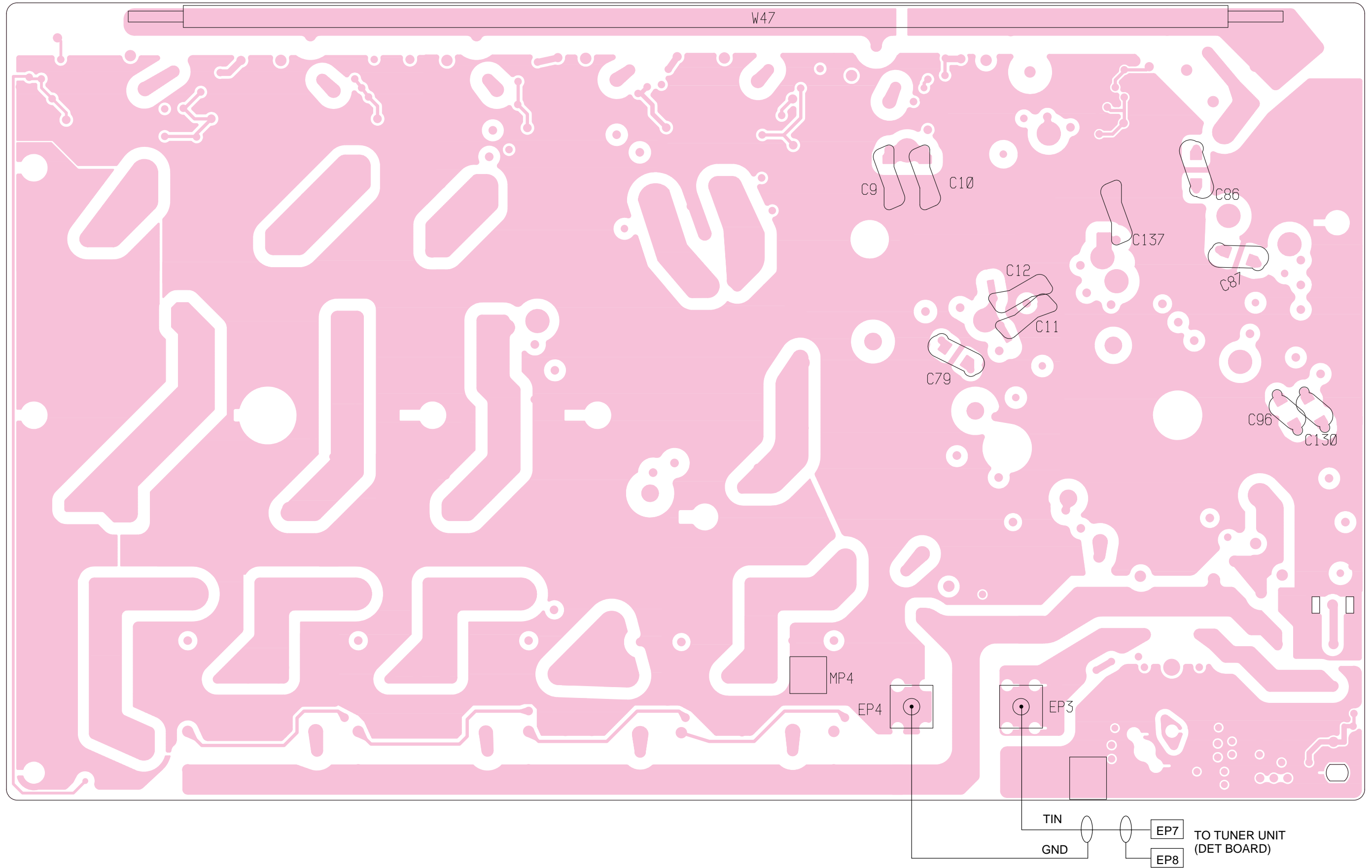
The combination of this page and the previous page shows the unit layout in the same configuration as the actual P.C. Board.





● BOTTOM VIEW

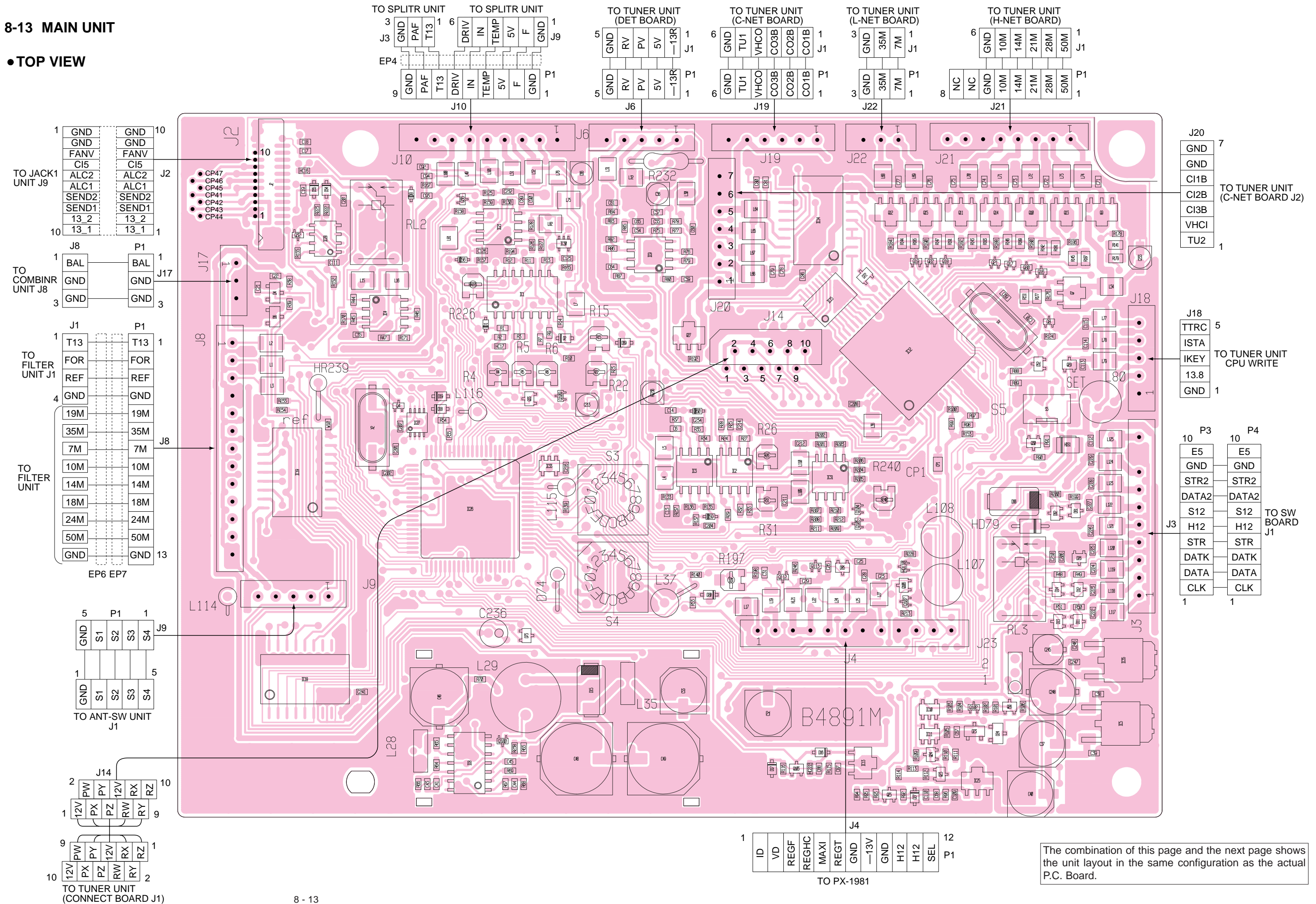
The combination of this page and the previous page shows the unit layout in the same configuration as the actual P.C. Board.





# 8-13 MAIN UNIT

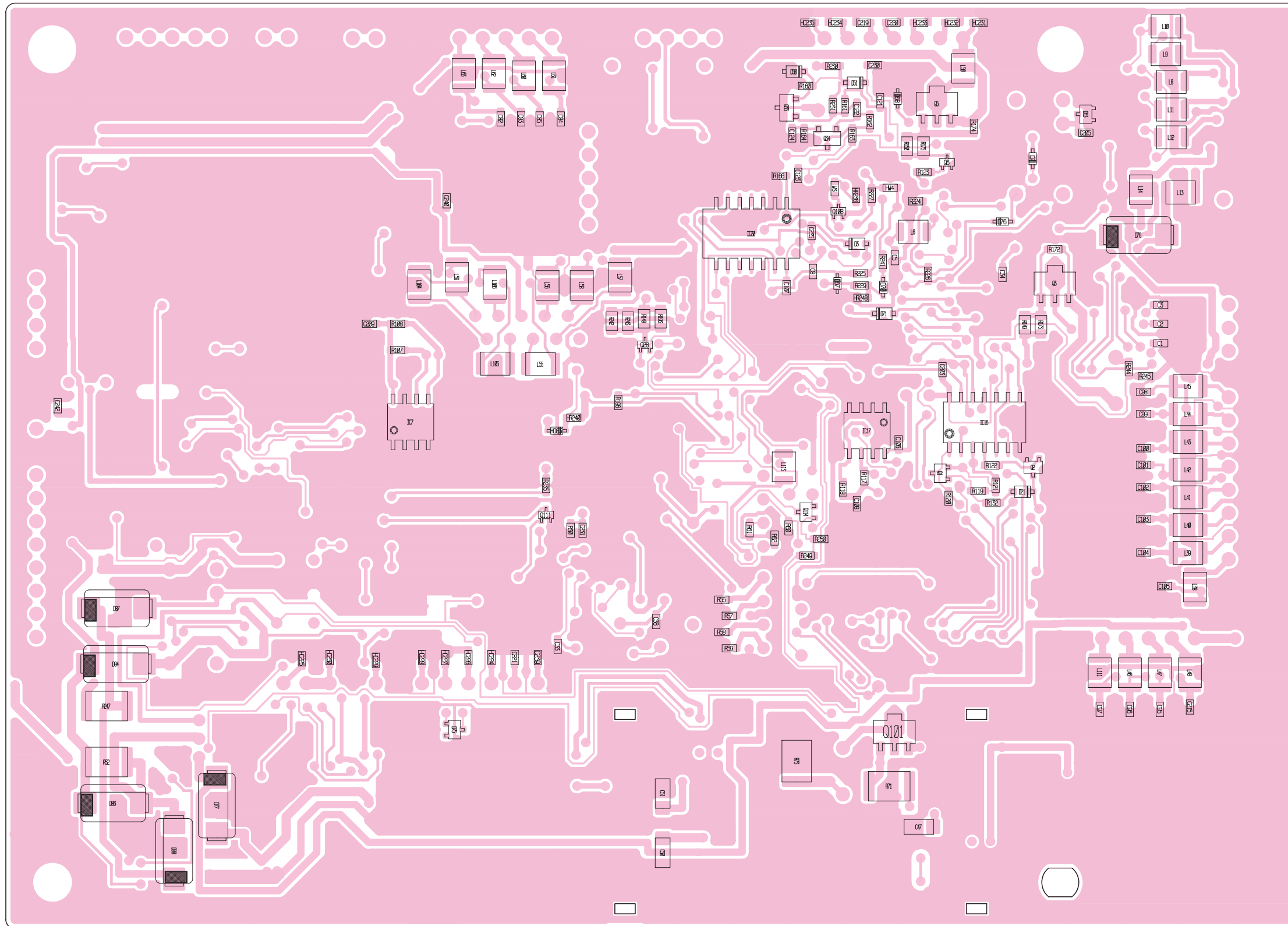
## •TOP VIEW



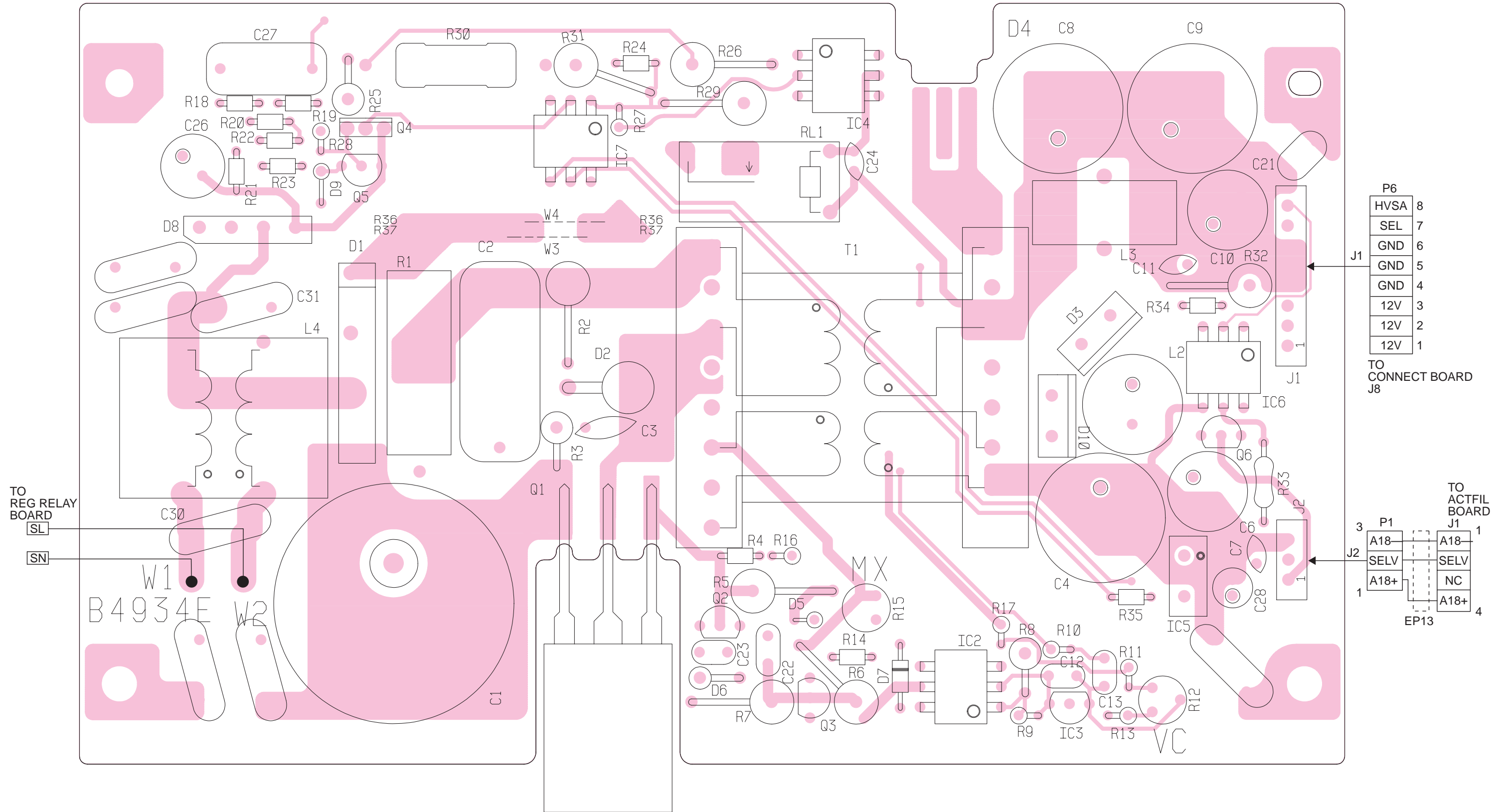
The combination of this page and the next page shows the unit layout in the same configuration as the actual P.C. Board.

● BOTTOM VIEW

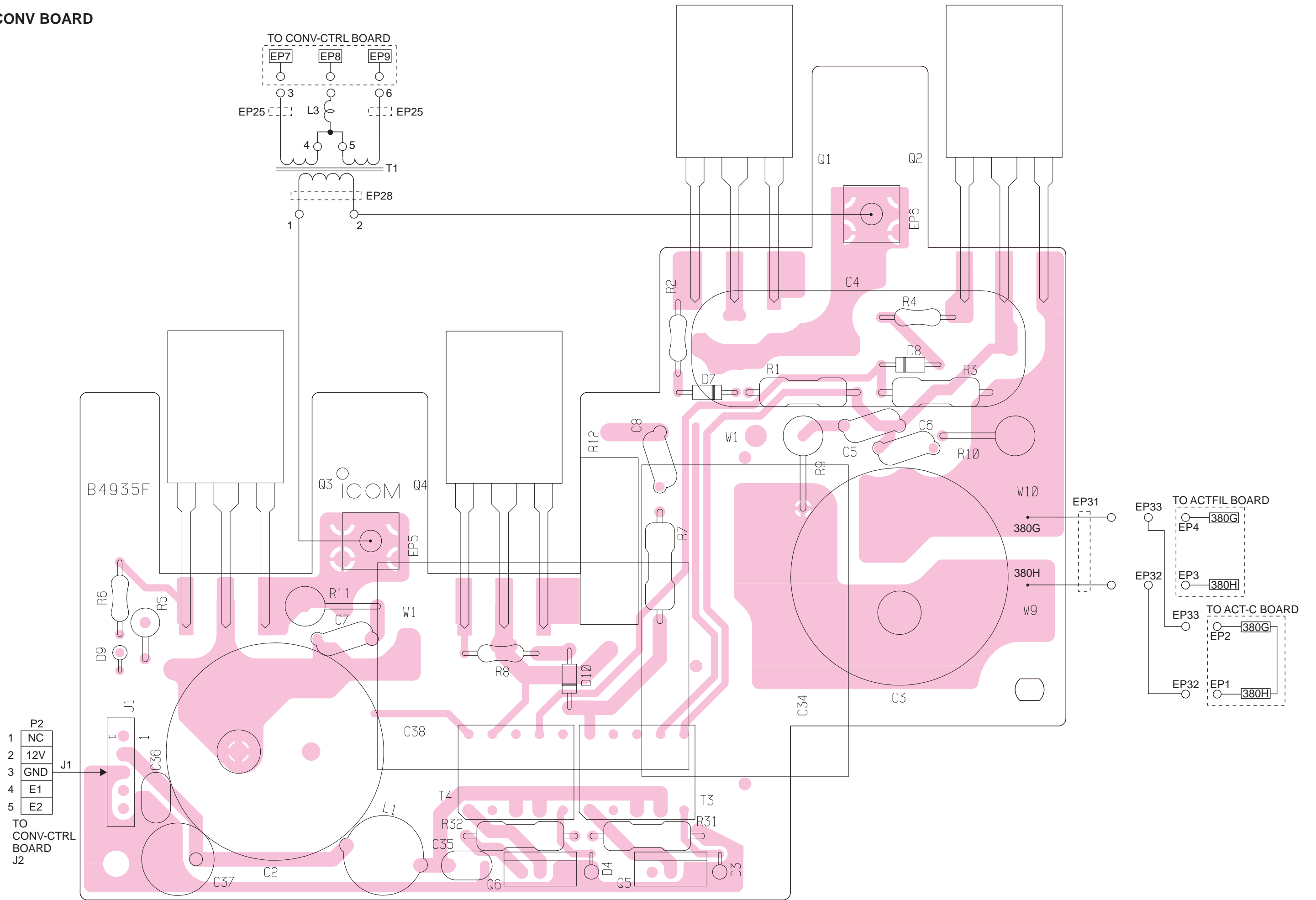
The combination of this page and the previous page shows the unit layout in the same configuration as the actual P.C. Board.



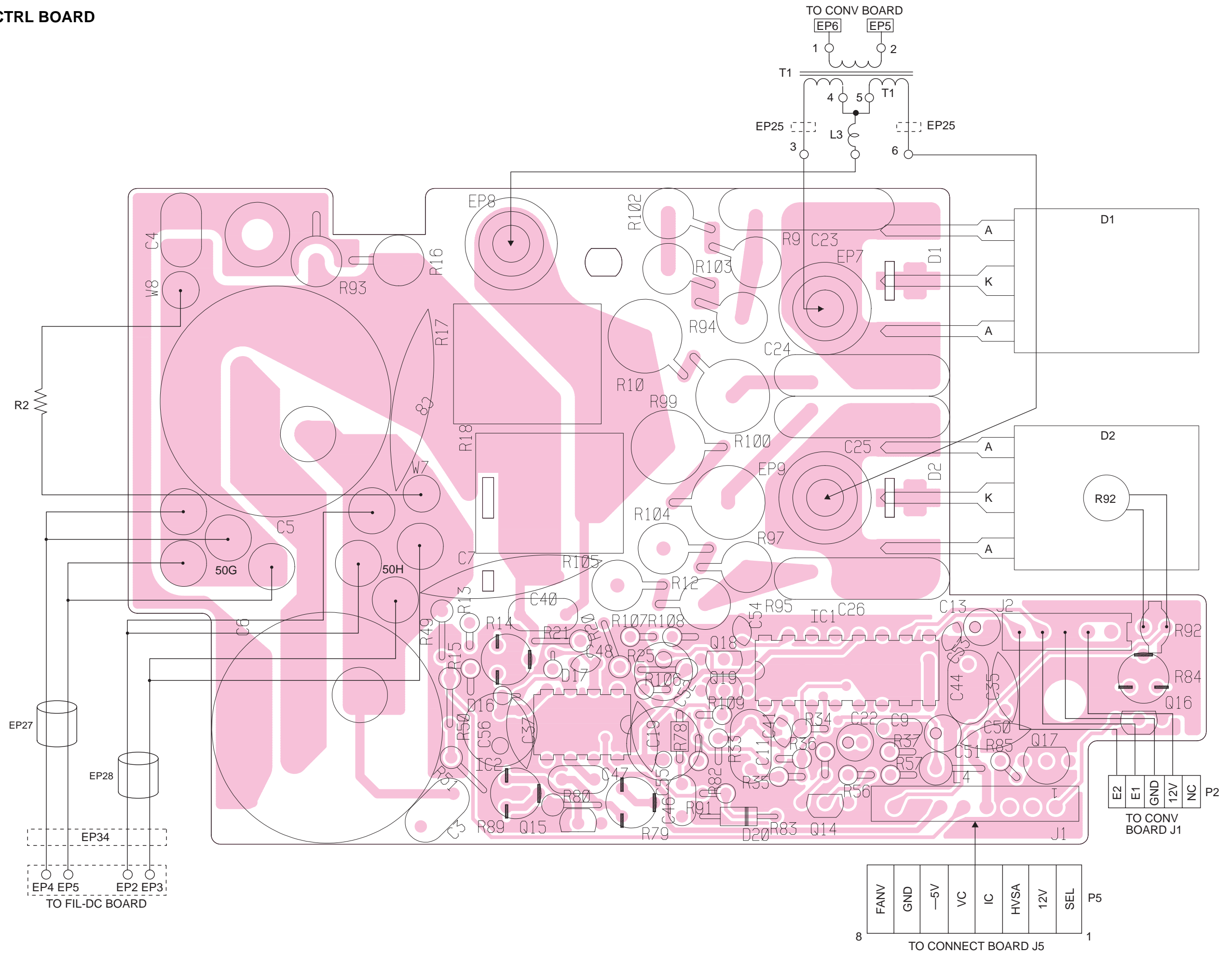
8-14 SUBREG BOARD



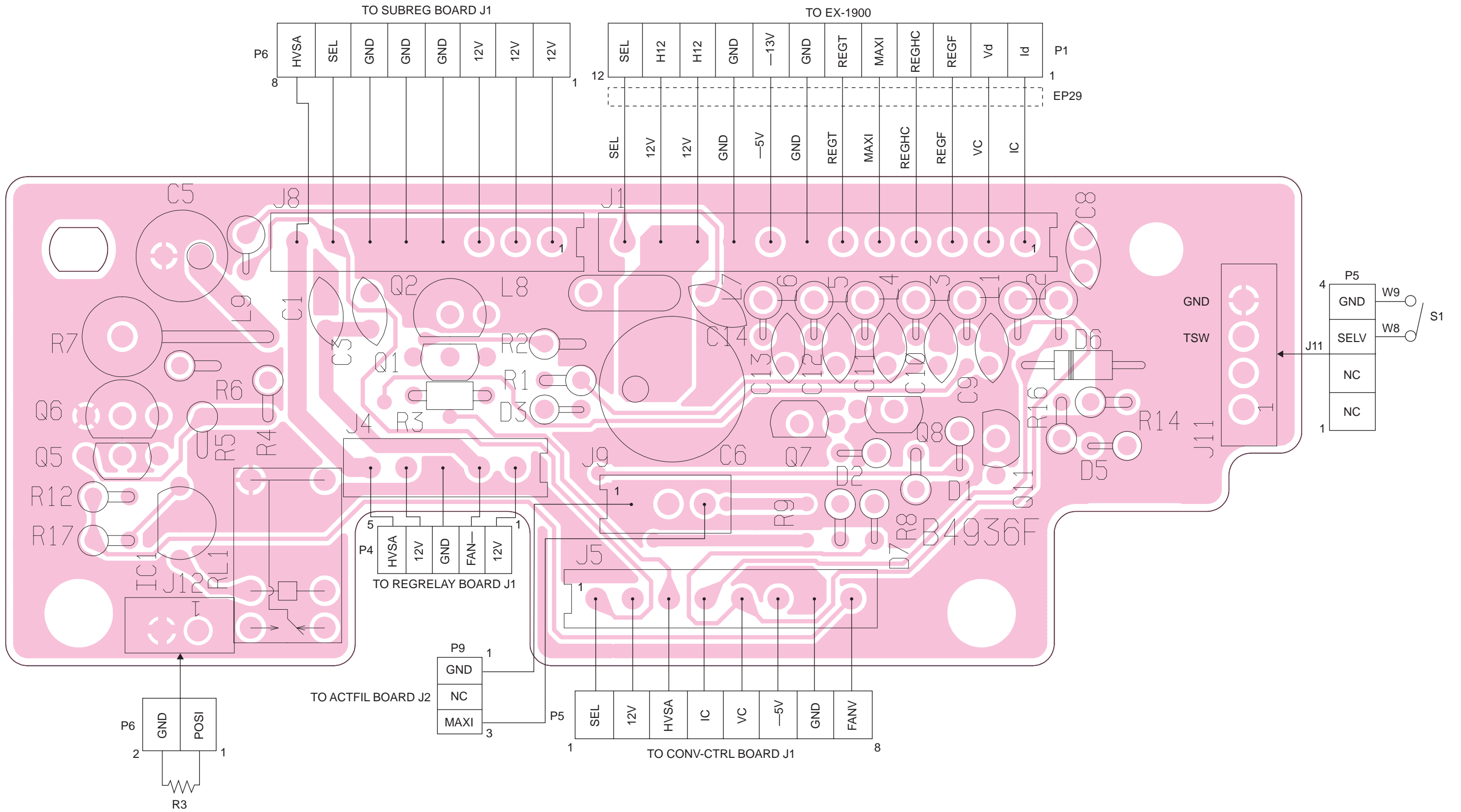
8-15 CONV BOARD



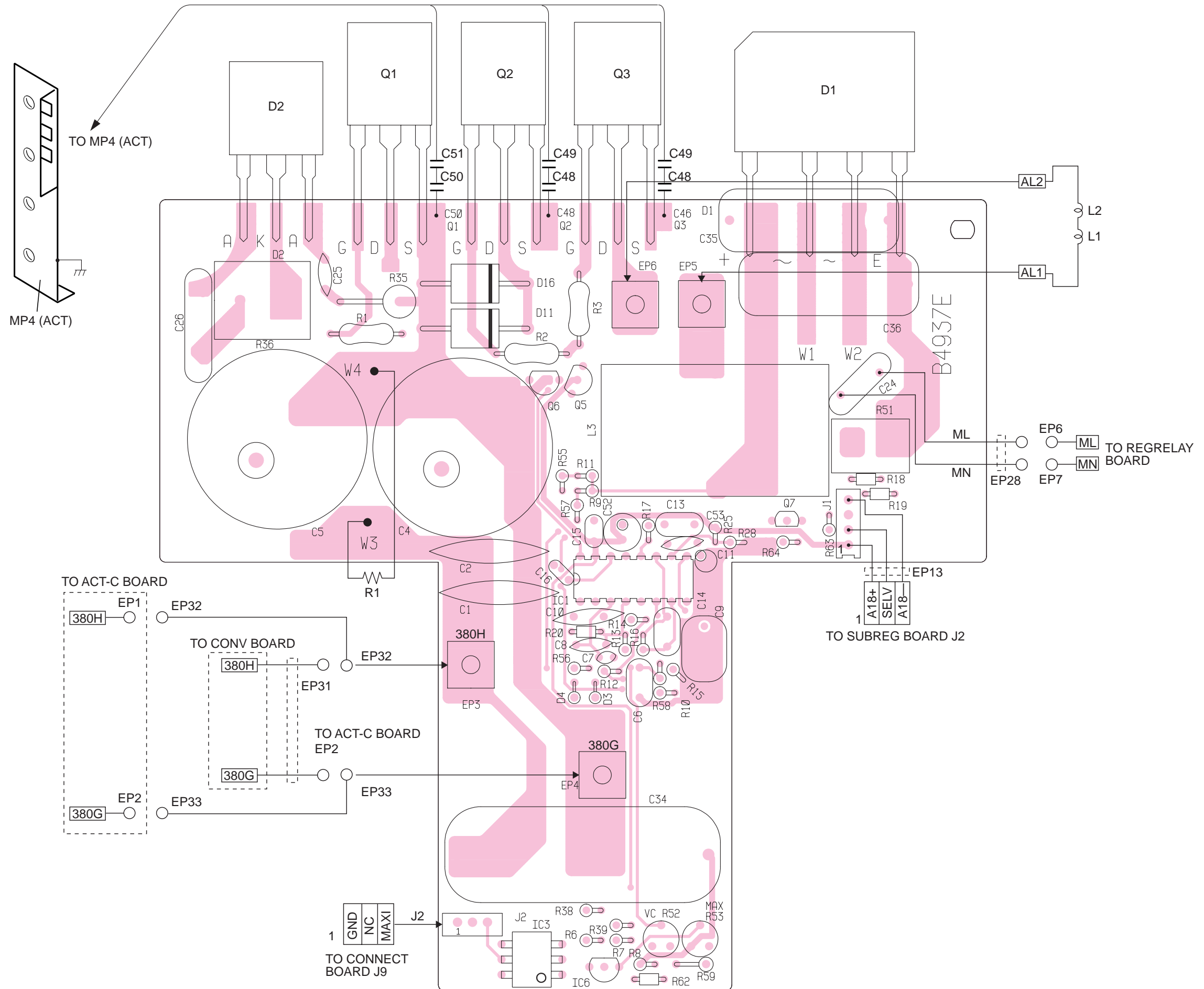
8-16 CONV-CTRL BOARD



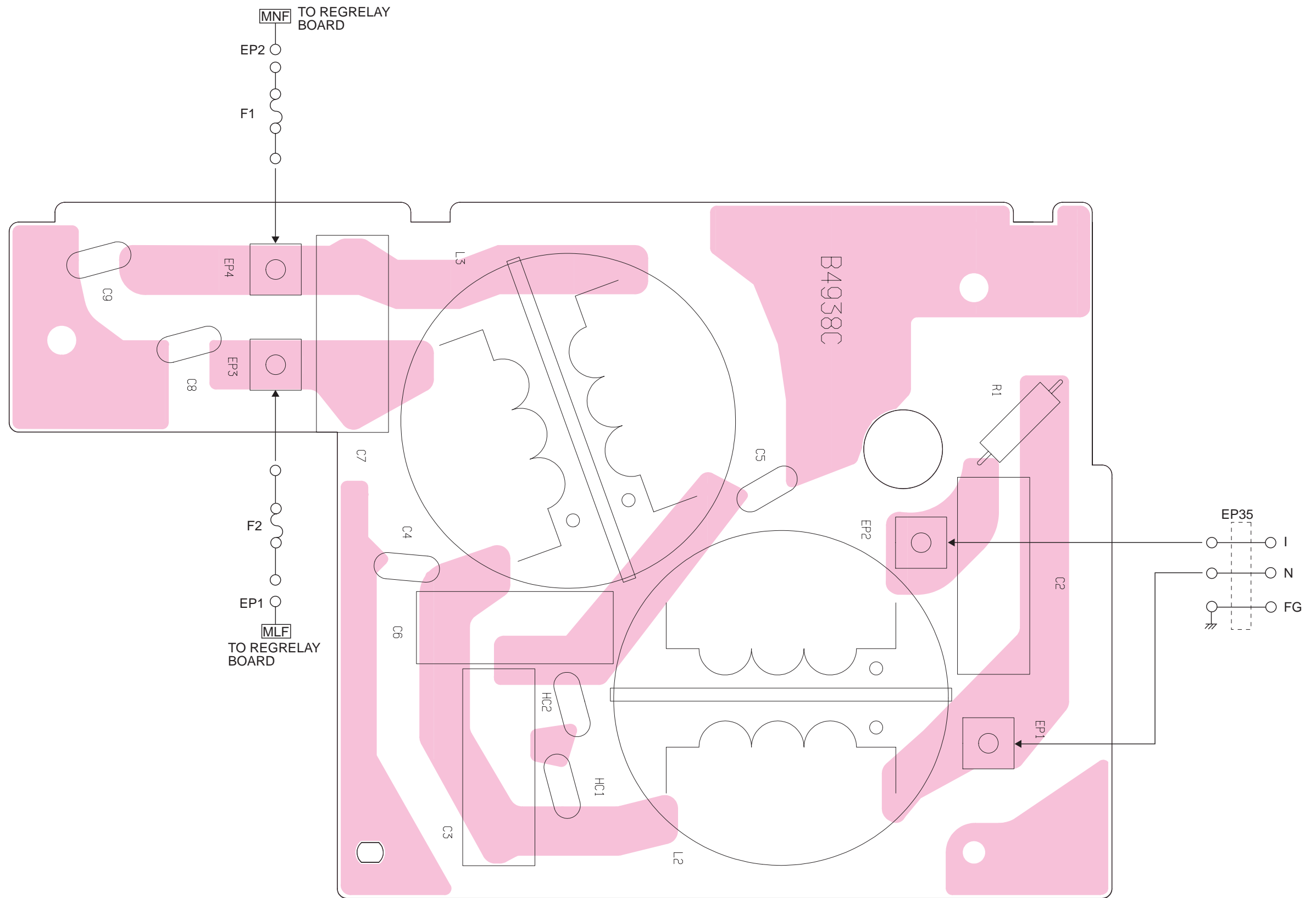
8-17 CONNECT BOARD



8-18 ACTFIL BOARD

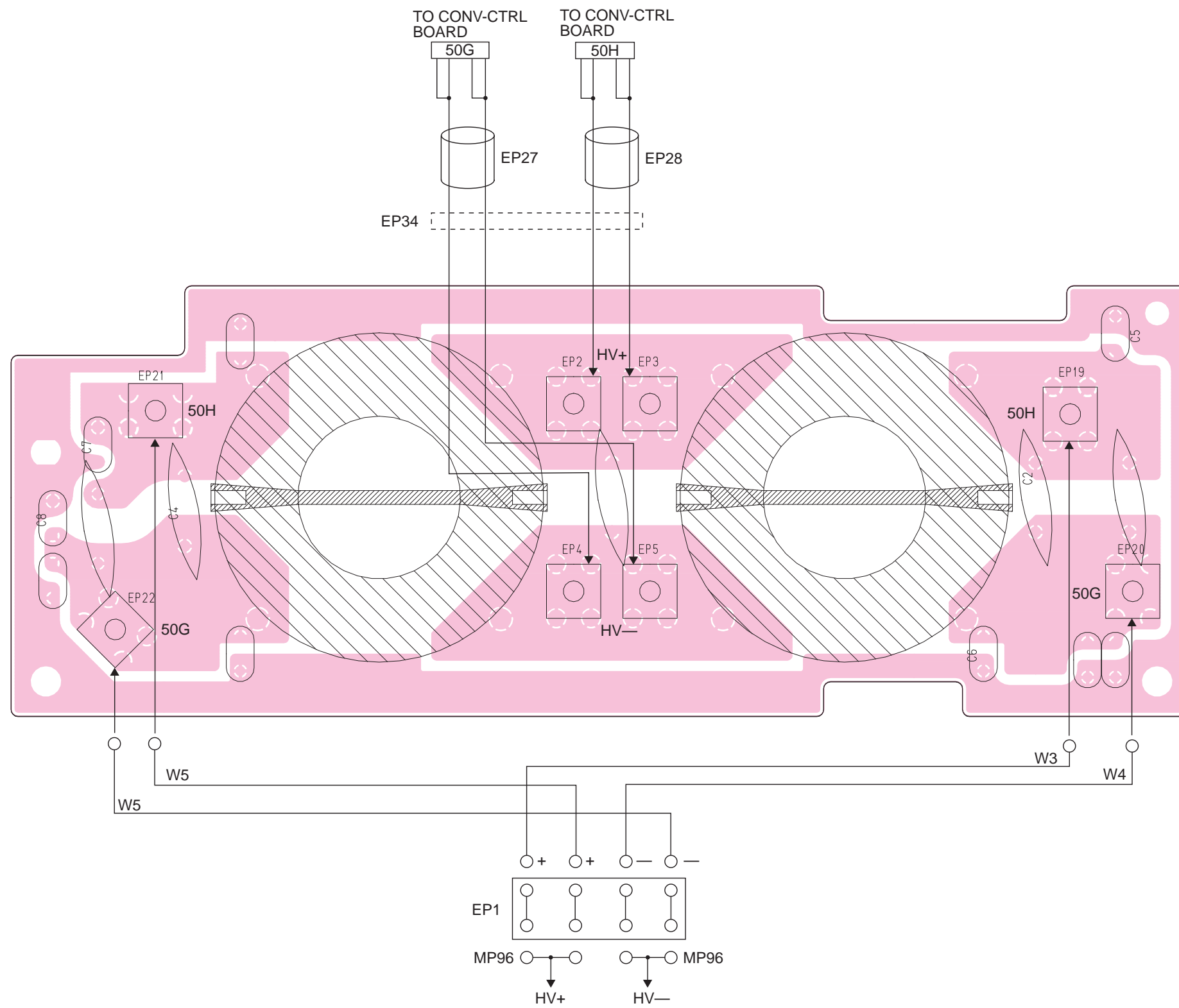


8-19 FIL-AC BOARD

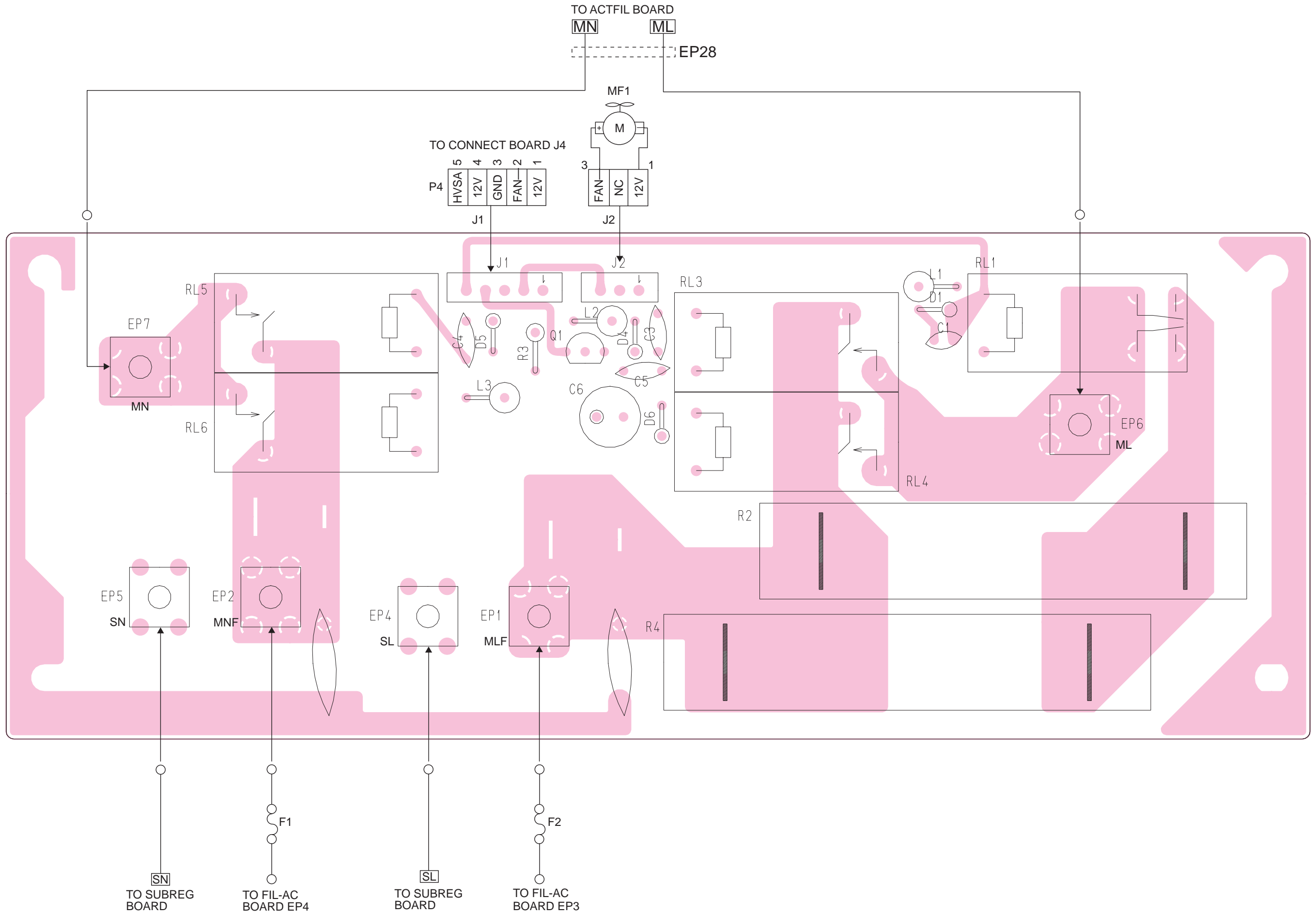




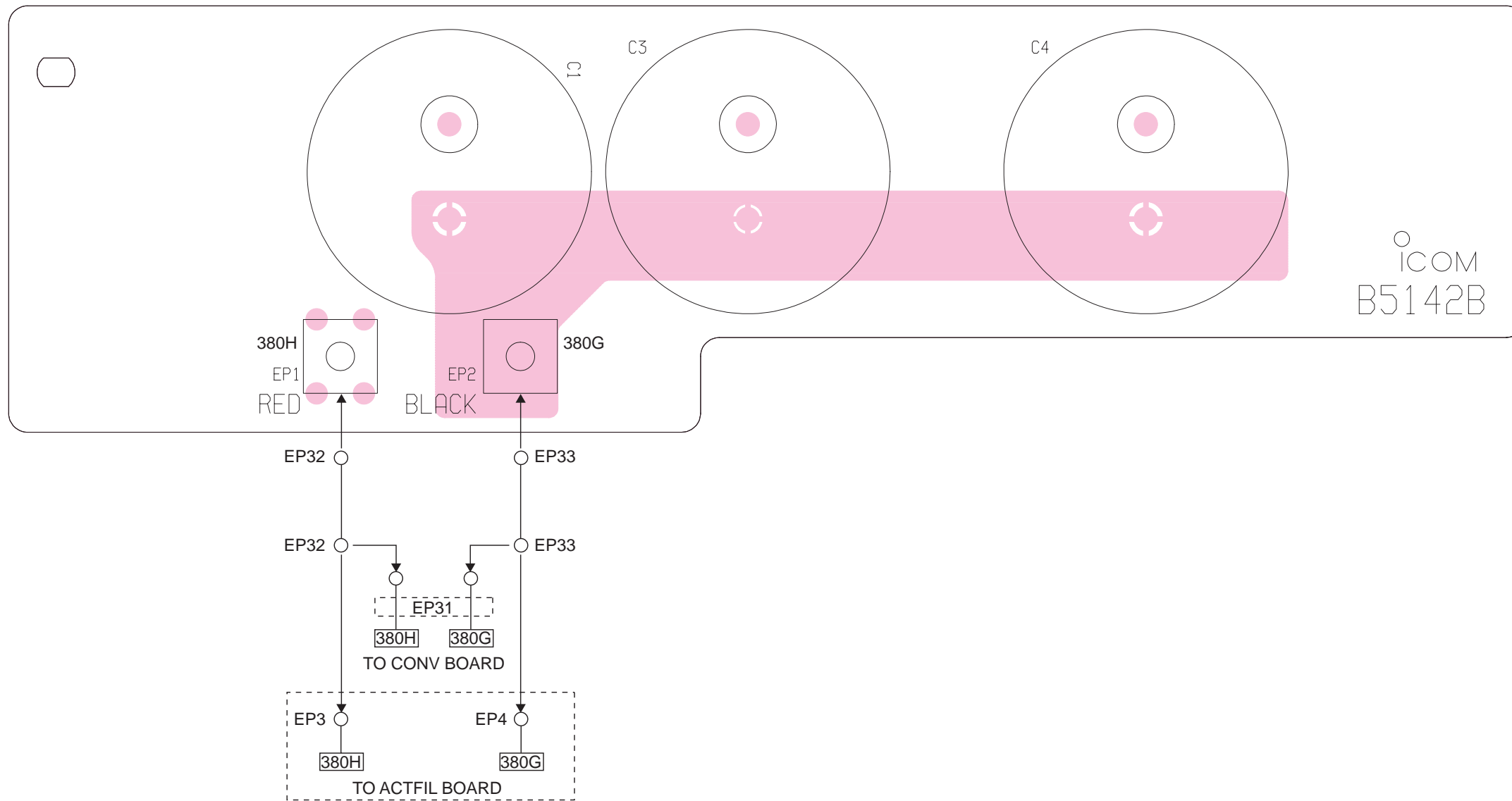
8-20 FIL-DC BOARD



8-21 REGRELAY BOARD

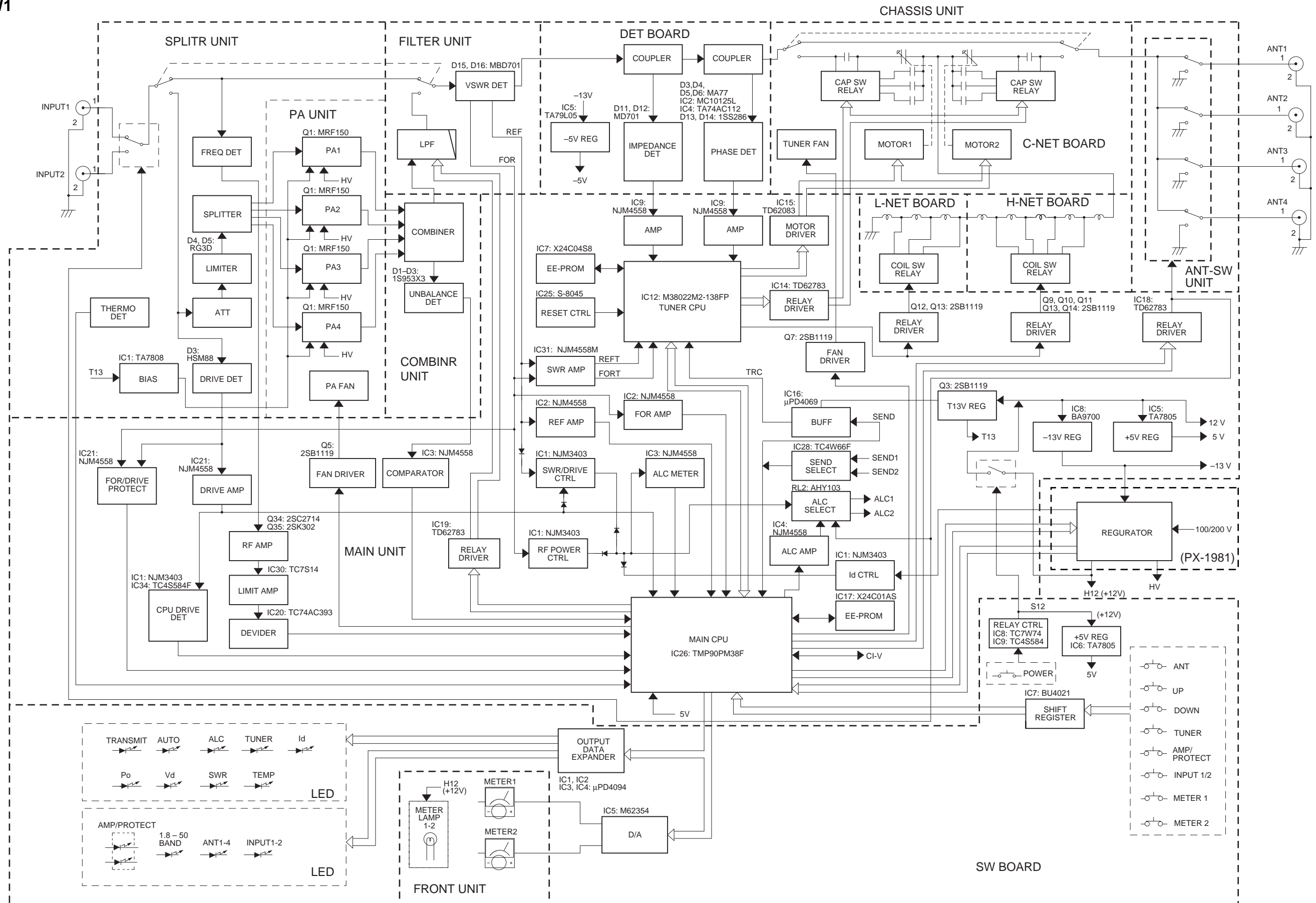


8-22 ACT-C BOARD

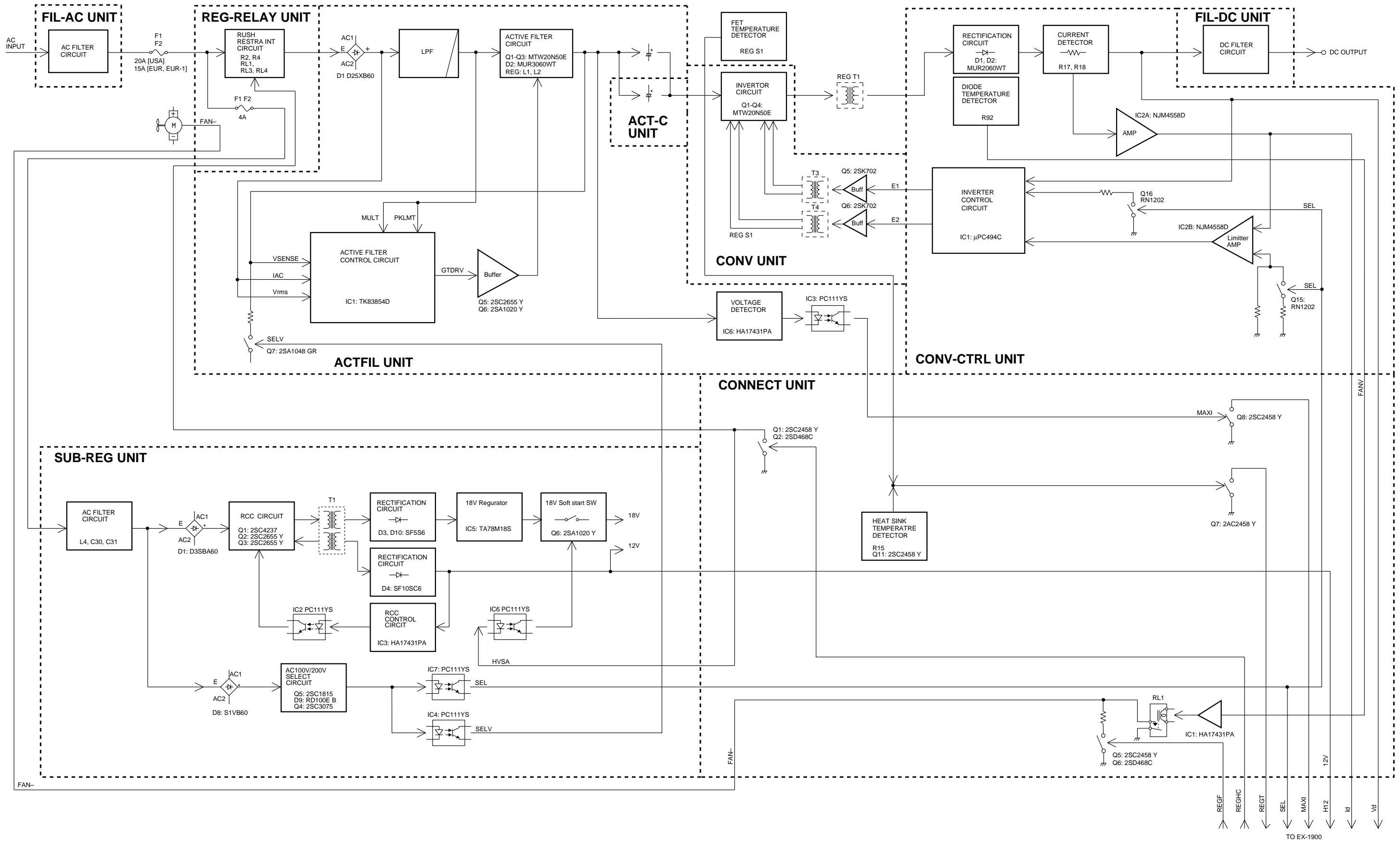


# SECTION 9 BLOCK DIAGRAM

## 9-1 IC-PW1

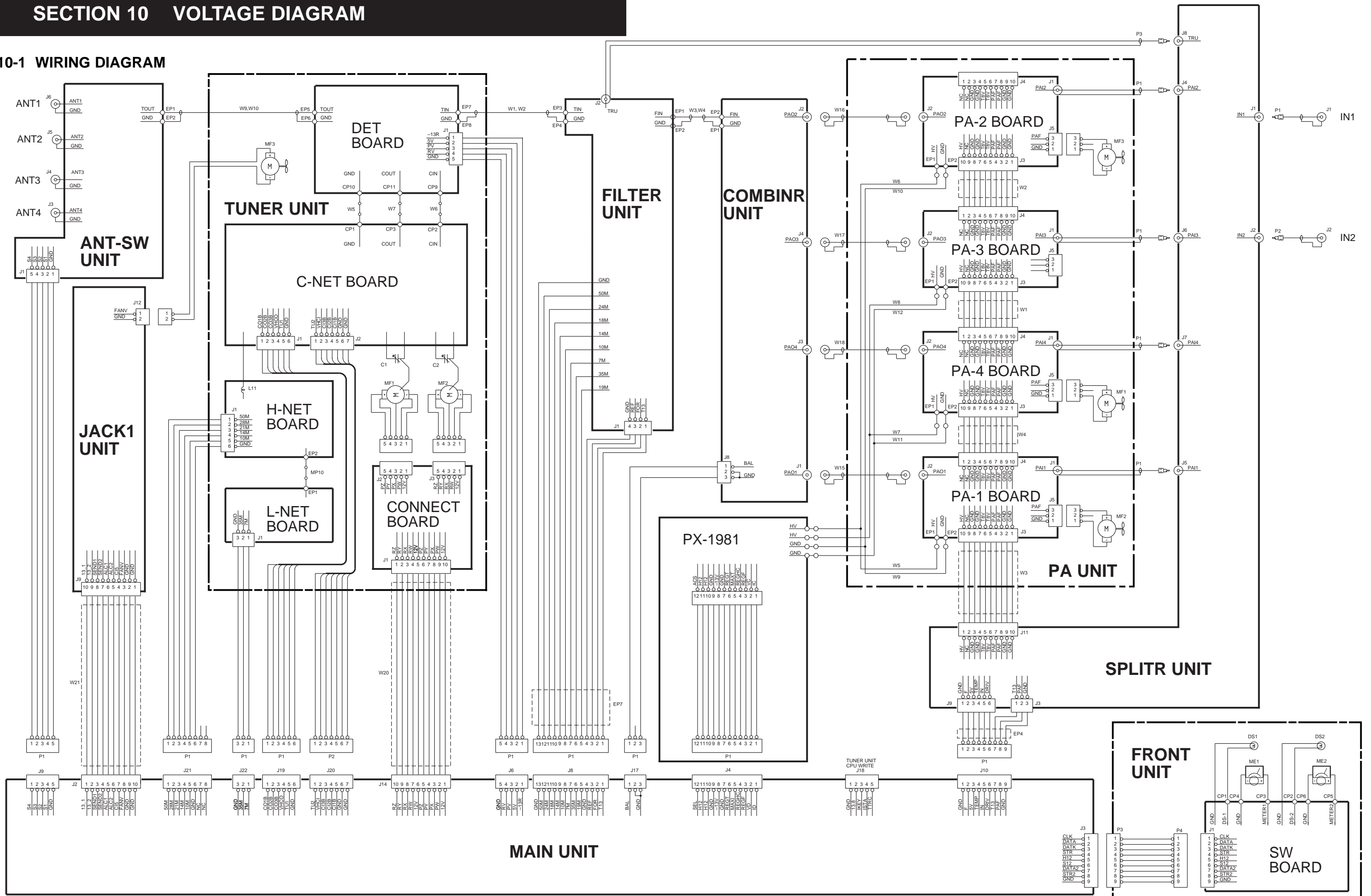


# 9-2 PX-1981 REG UNIT

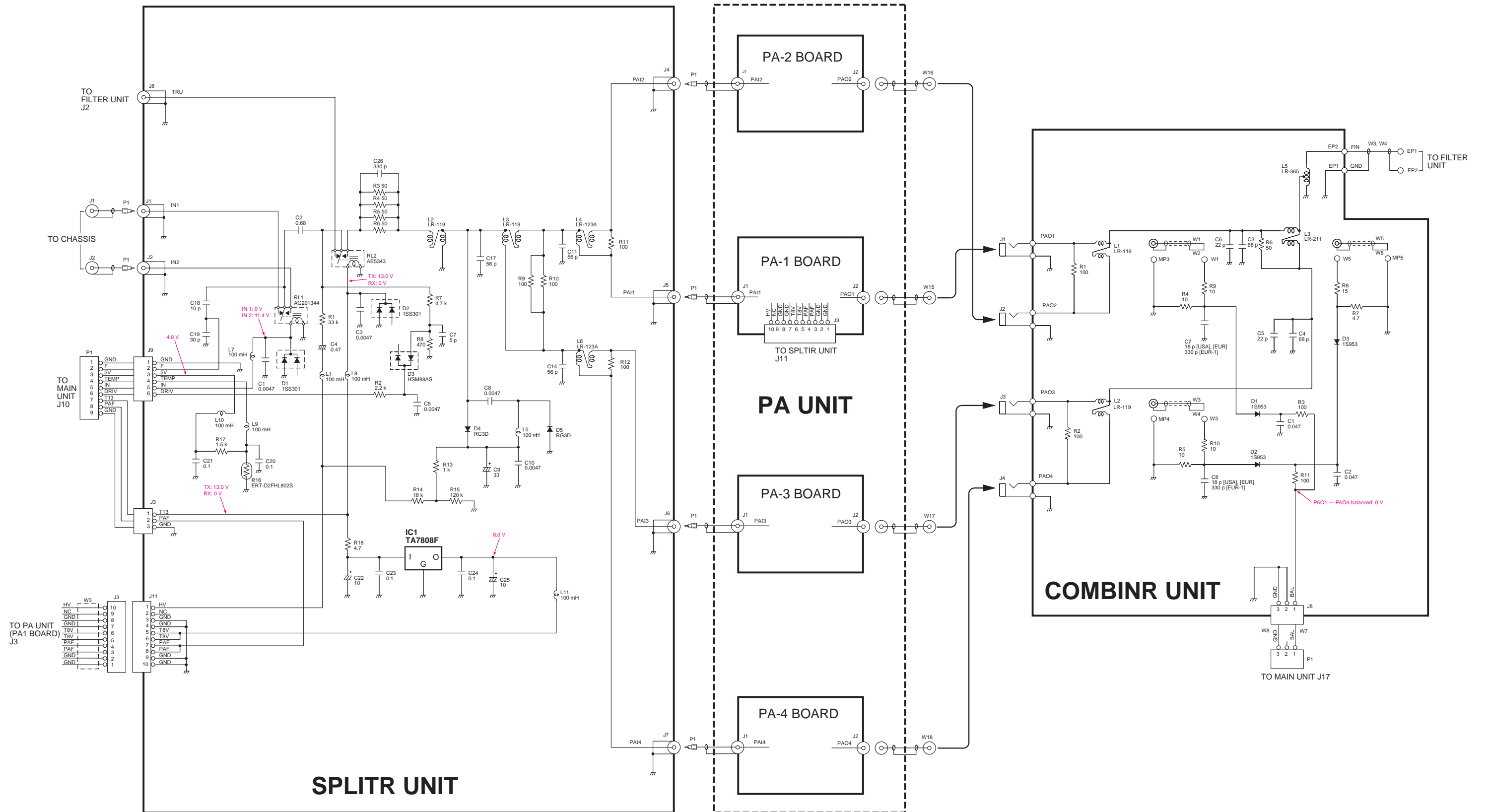


# SECTION 10 VOLTAGE DIAGRAM

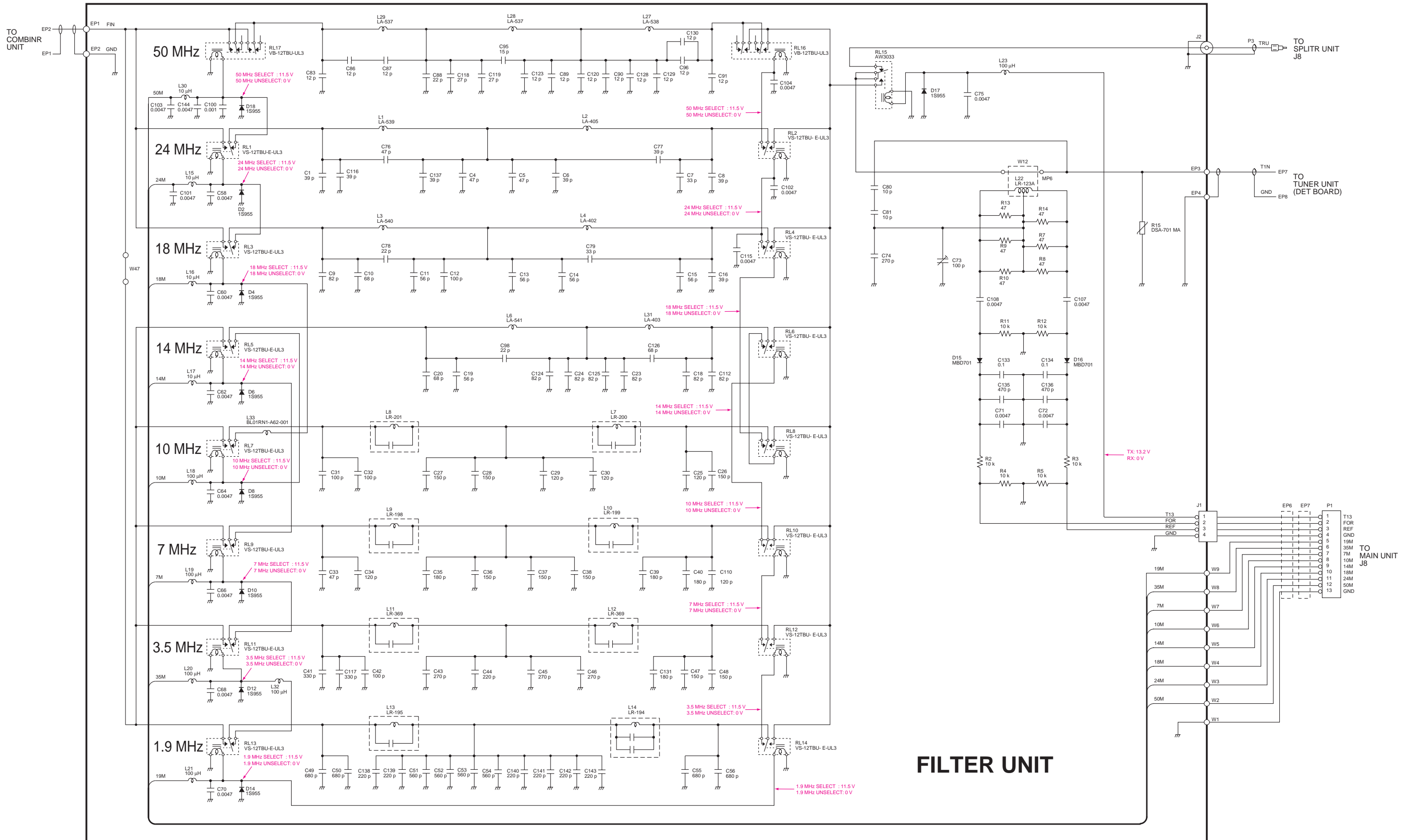
## 10-1 WIRING DIAGRAM



# 10-2 SPLITER, PA AND COMBINR UNITS



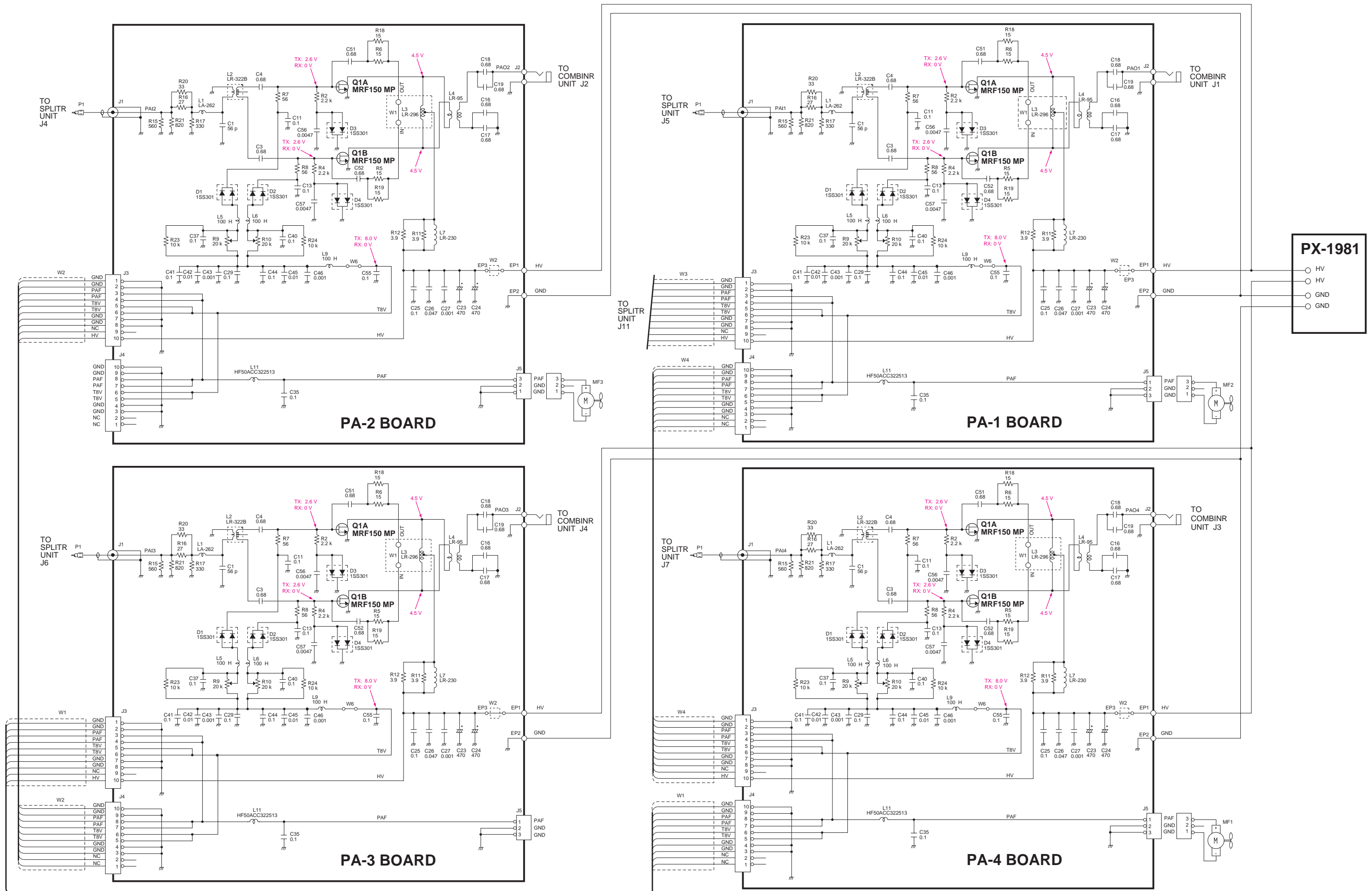
# 10-3 FILTER UNIT



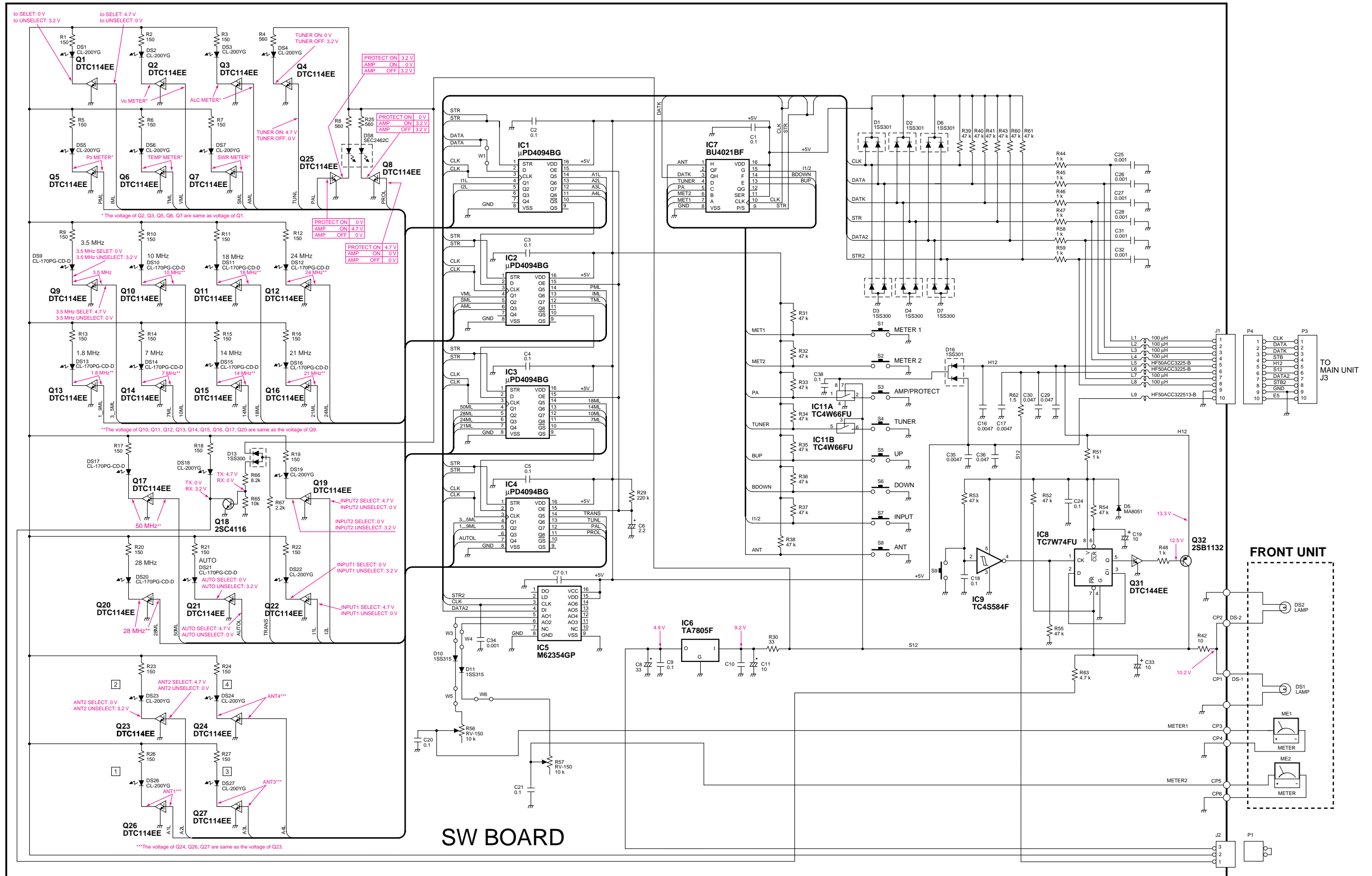
## FILTER UNIT



10-4 PA UNIT



# 10-5 FRONT UNIT

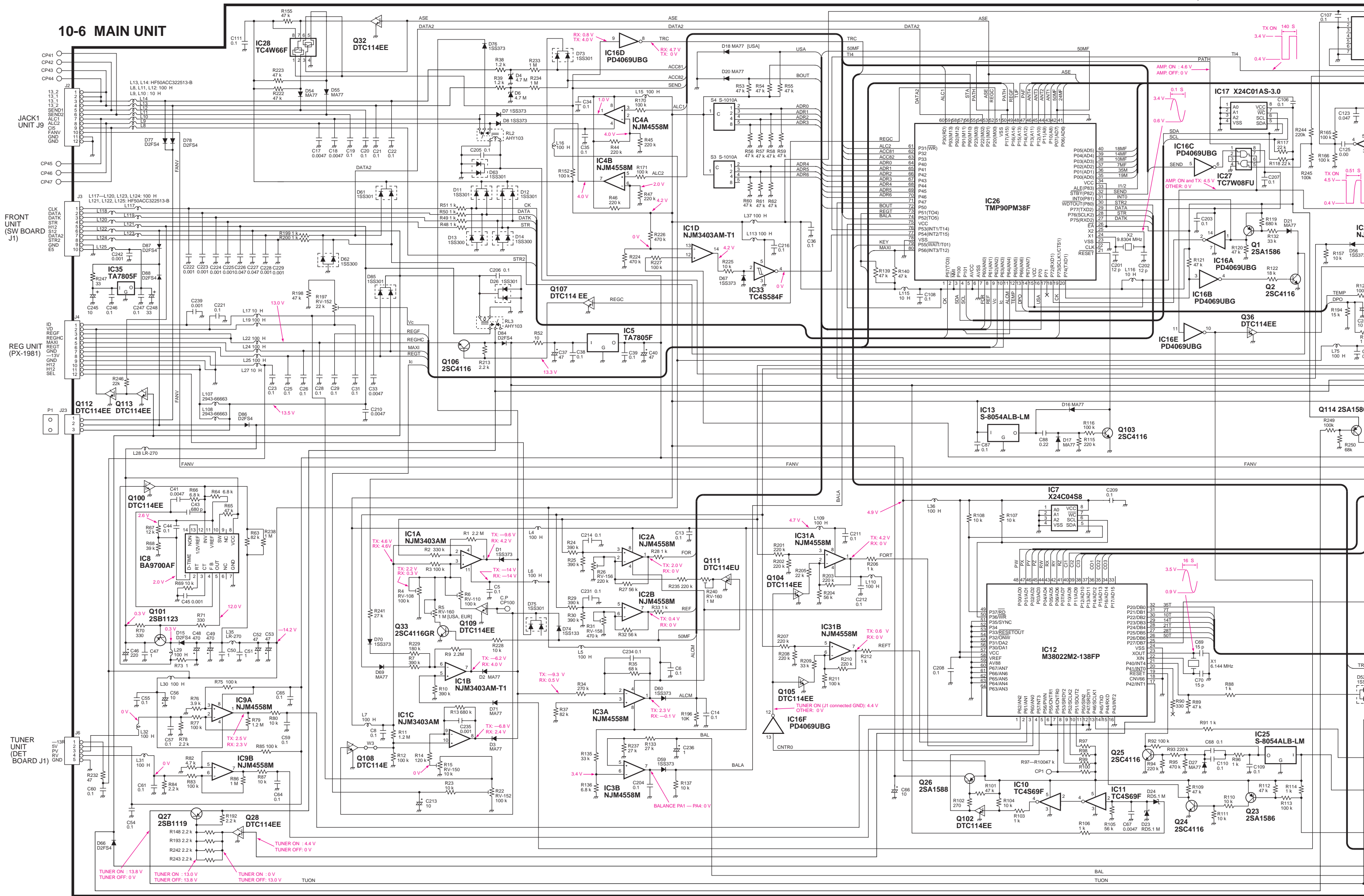


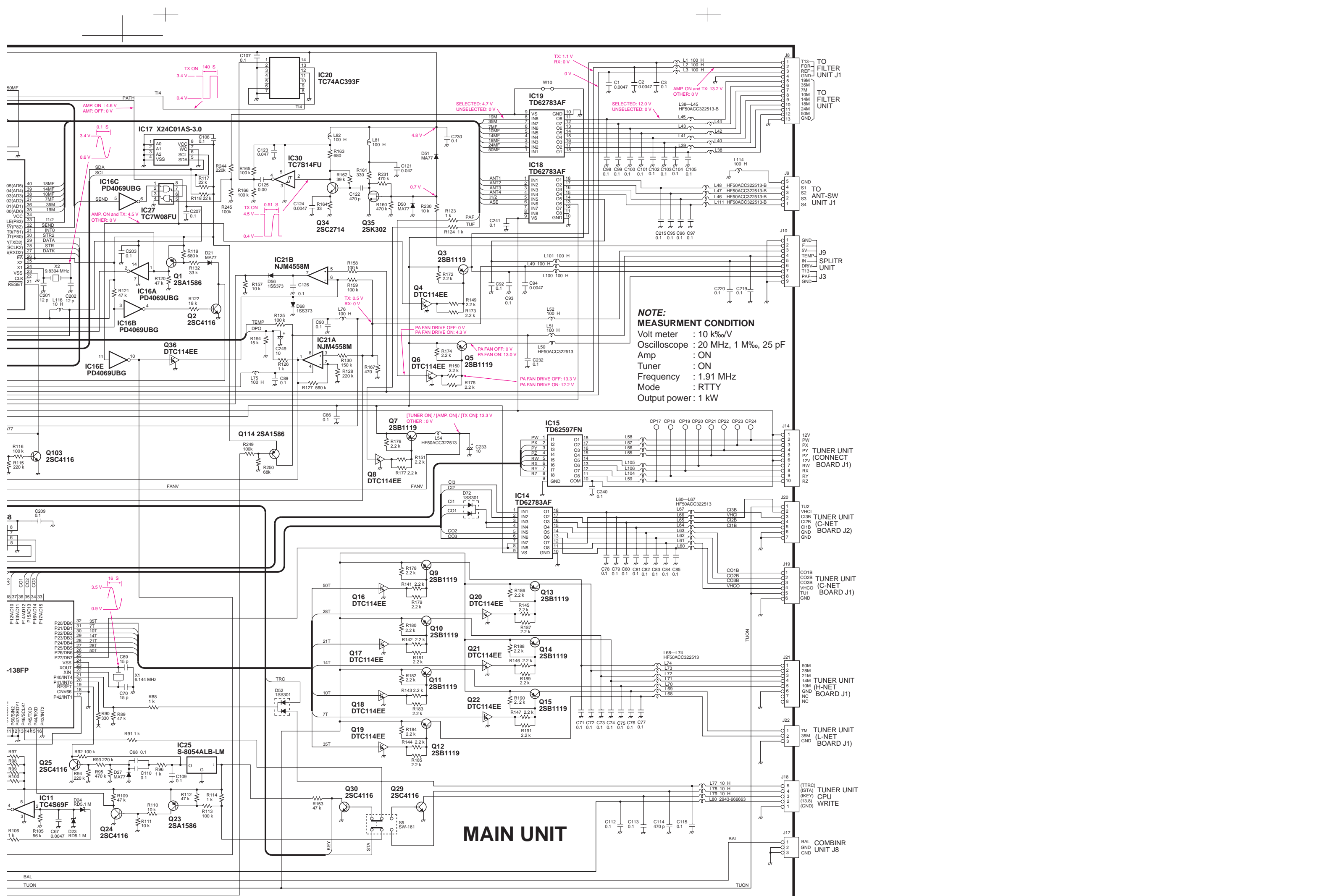
\*The voltage of Q2, Q3, Q5, Q6, Q7 are same as voltage of Q1.

\*\*The voltage of Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q20 are same as the voltage of Q9.

\*\*\*The voltage of Q24, Q26, Q27 are same as the voltage of Q23.

# 10-6 MAIN UNIT

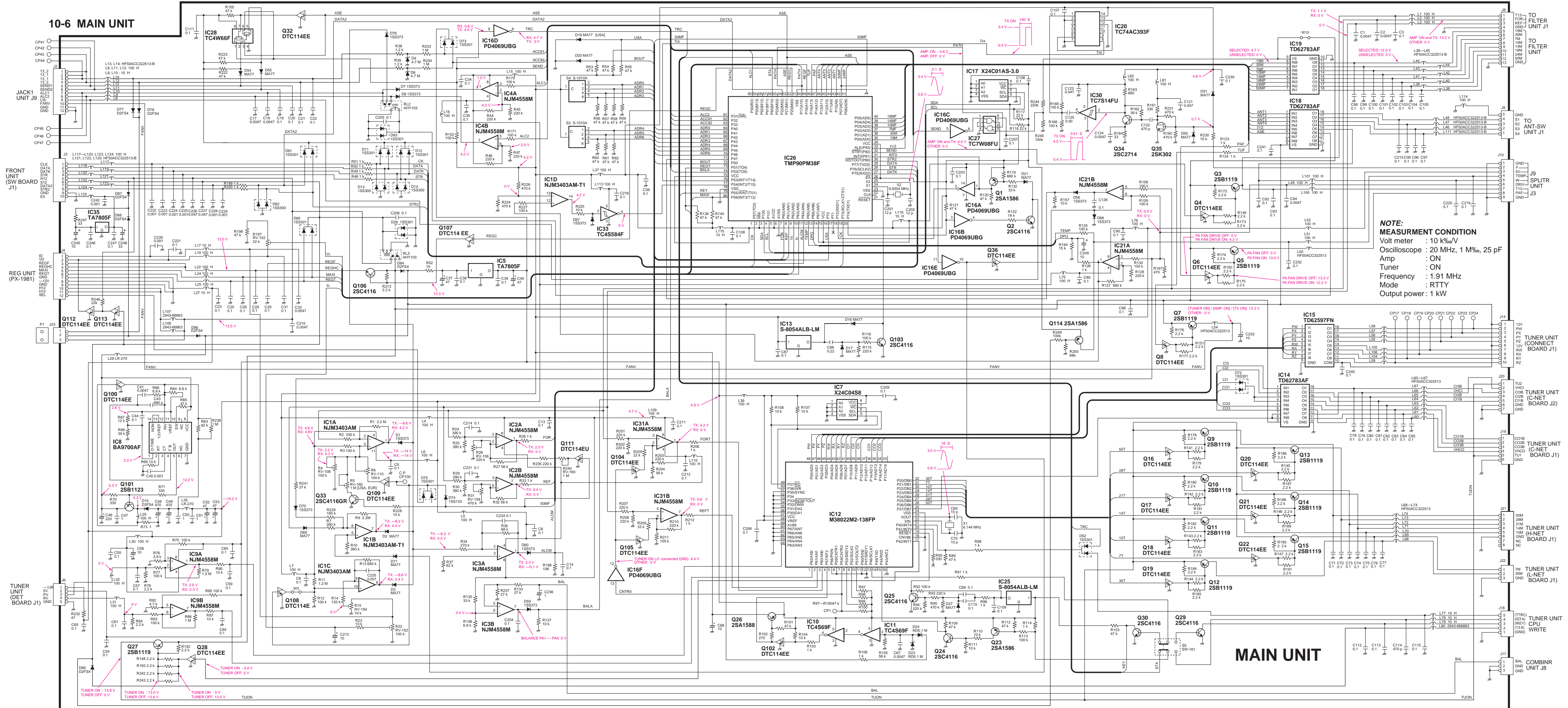




**NOTE:**  
**MEASUREMENT CONDITION**  
 Volt meter : 10 k $\Omega$ /V  
 Oscilloscope : 20 MHz, 1 M%, 25 pF  
 Amp : ON  
 Tuner : ON  
 Frequency : 1.91 MHz  
 Mode : RTTY  
 Output power : 1 kW

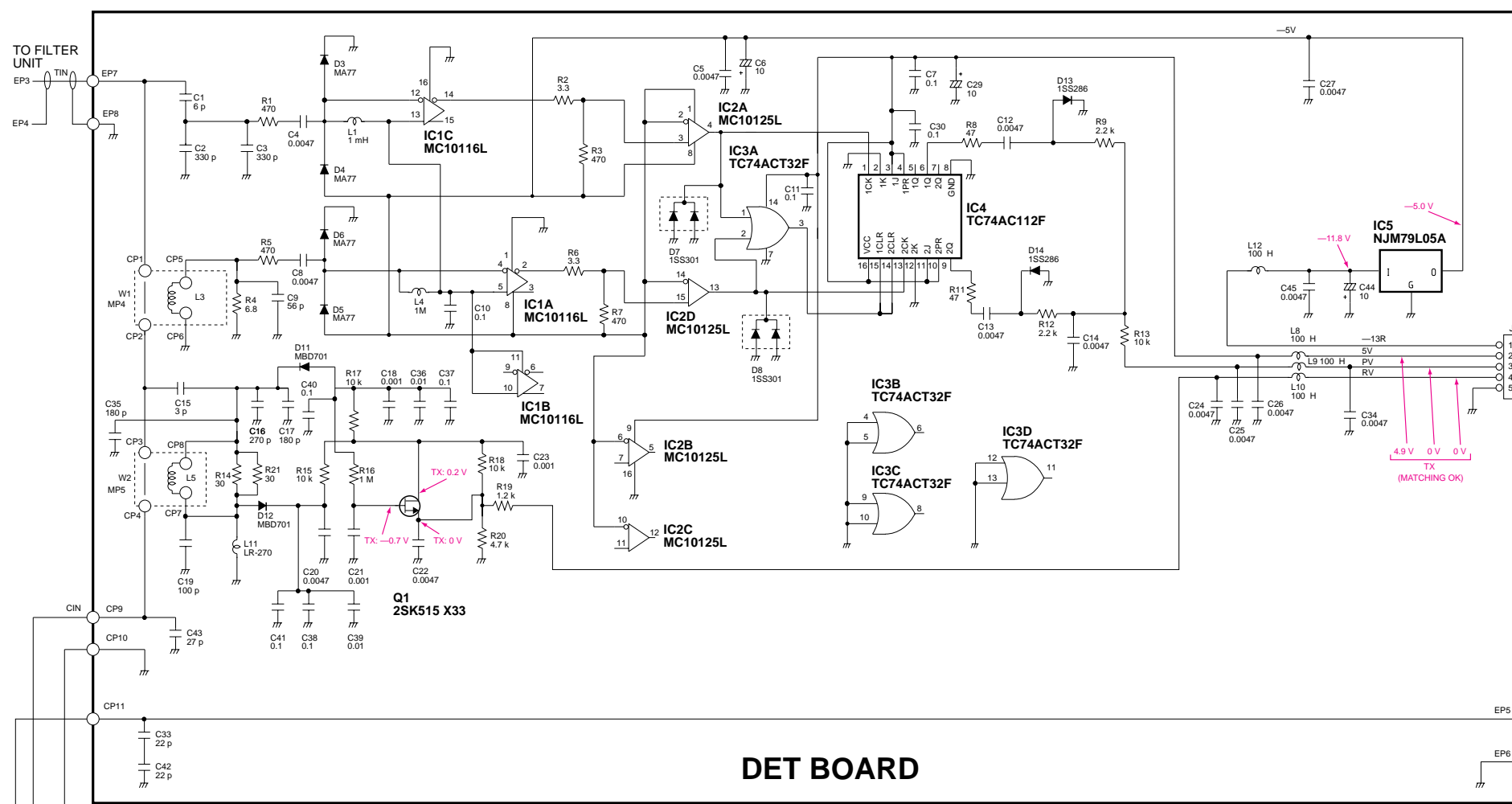
**MAIN UNIT**

# 10-6 MAIN UNIT

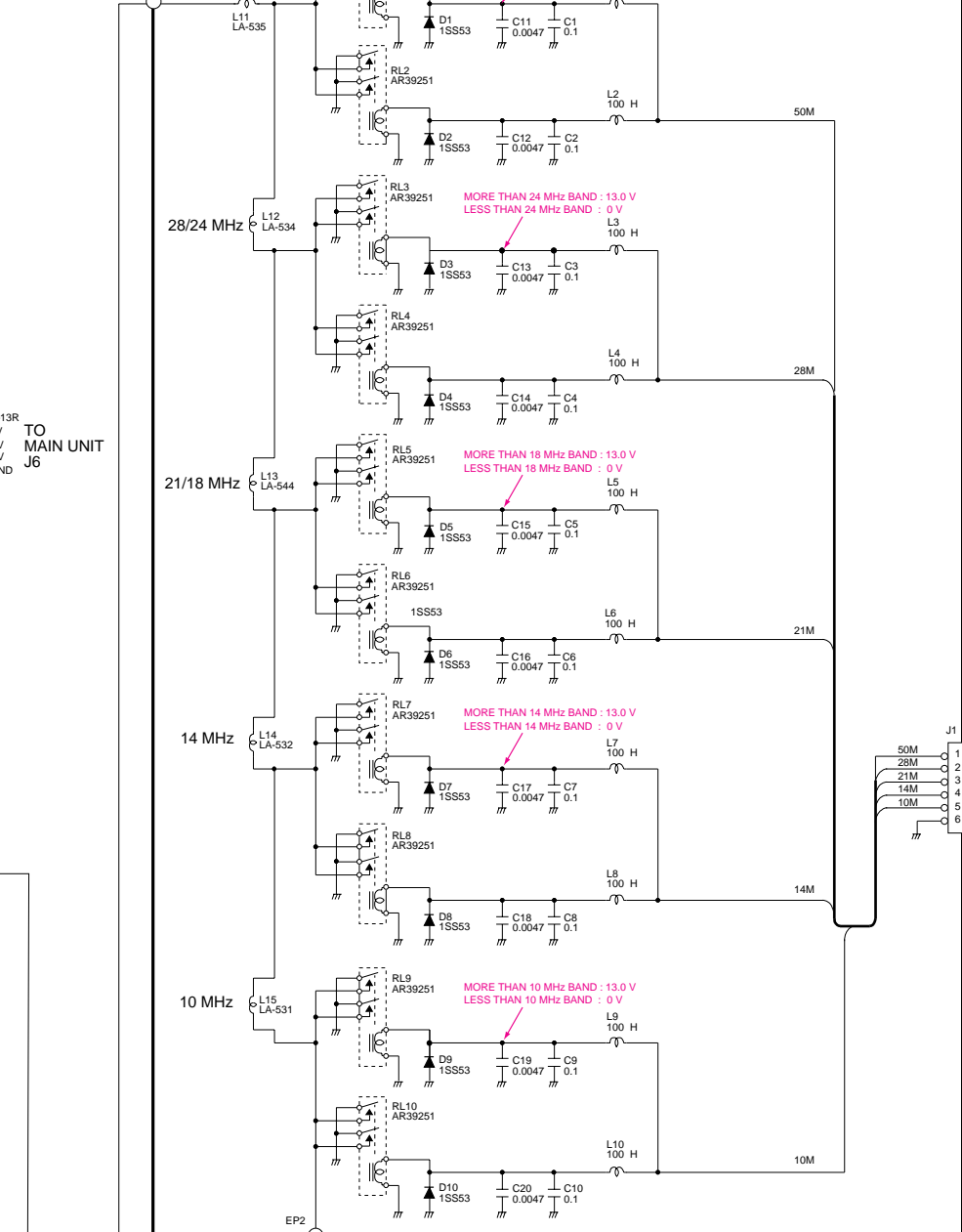


**NOTE:**  
MEASUREMENT CONDITION  
Volt meter : 10 k $\Omega$ /V  
Oscilloscope : 20 MHz, 1 M $\Omega$ , 25 pF  
Amp : ON  
Tuner : ON  
Frequency : 1.91 MHz  
Mode : RTTY  
Output power : 1 kW

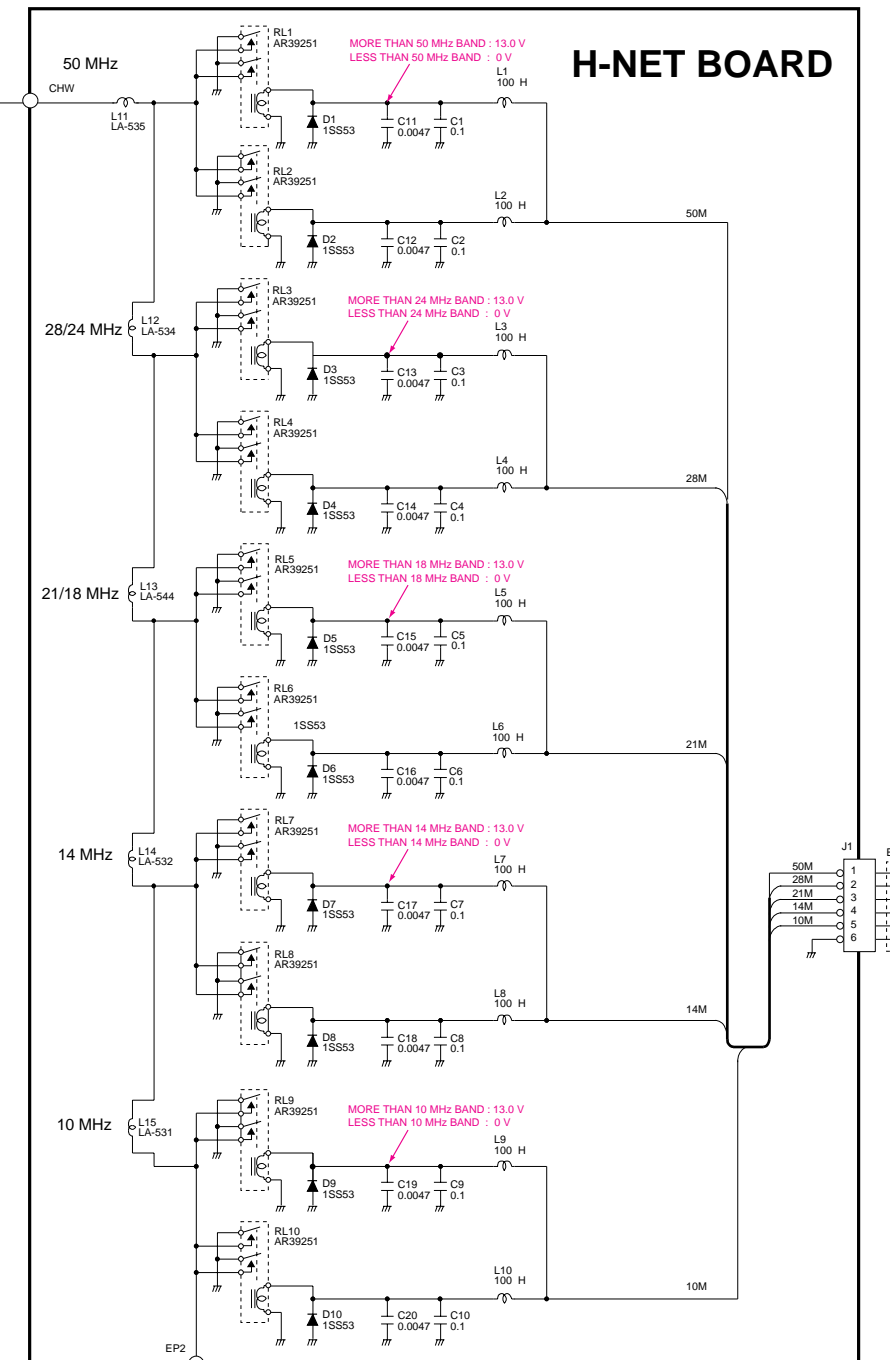
# 10-7 TUNER UNIT



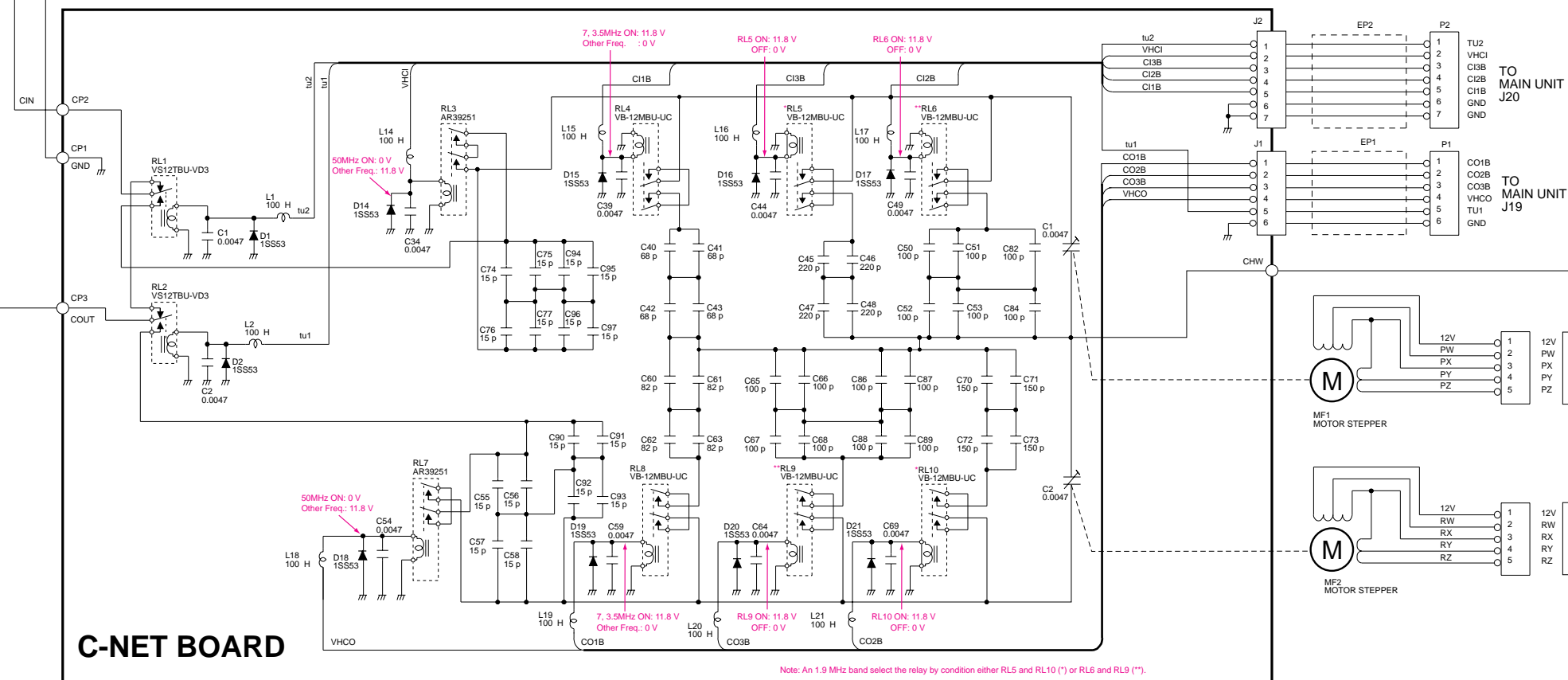
# TUNER UNIT



# H-NET BOARD



# DET BOARD

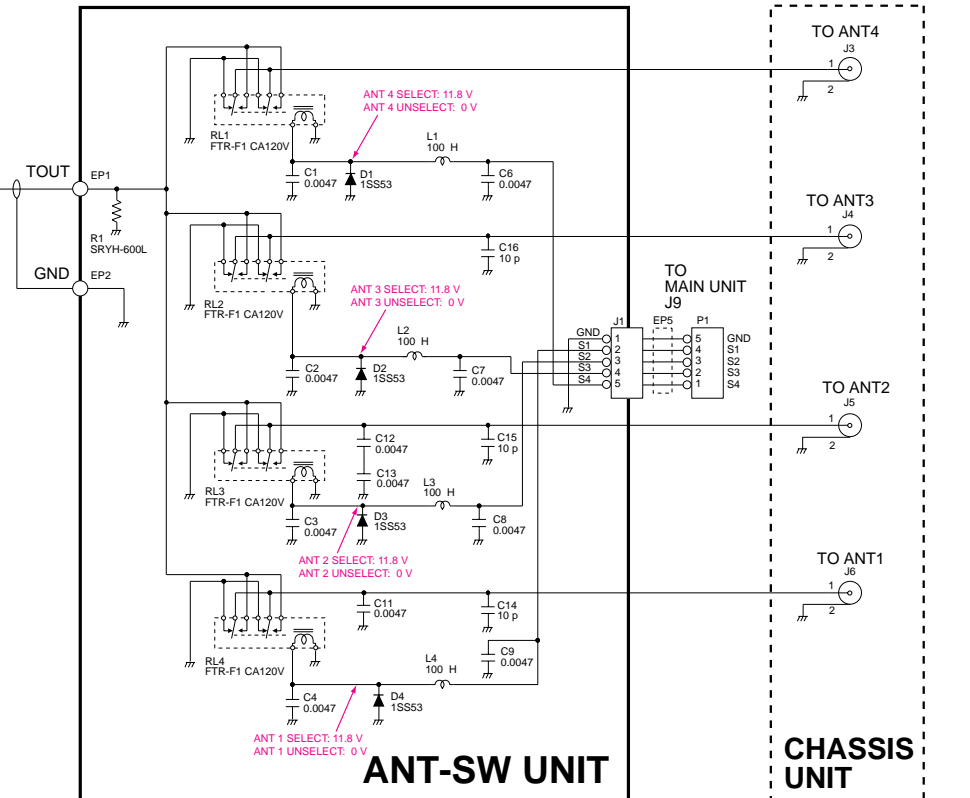
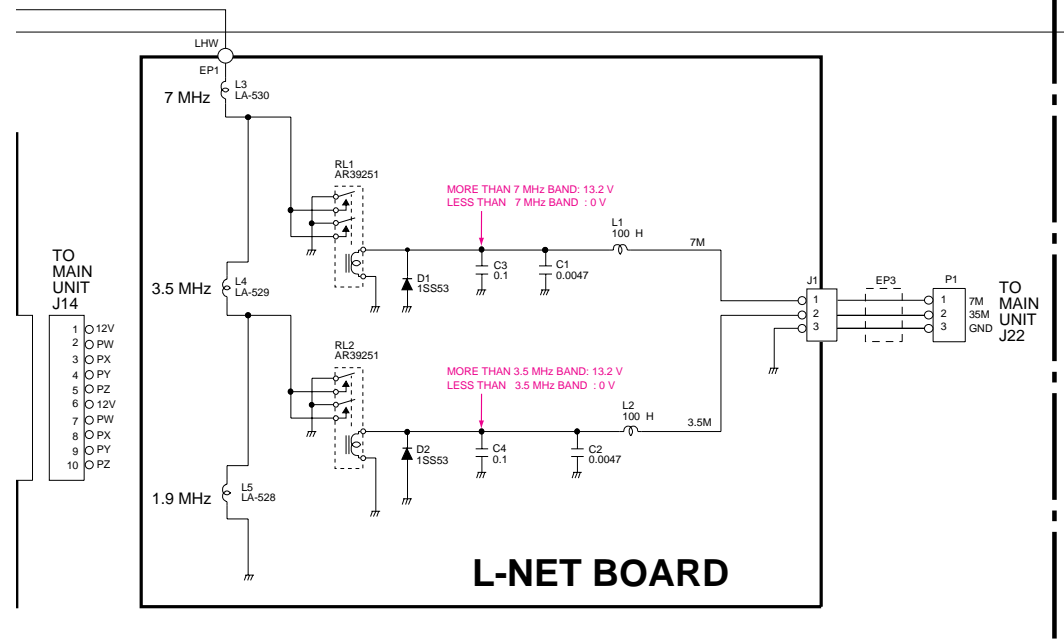
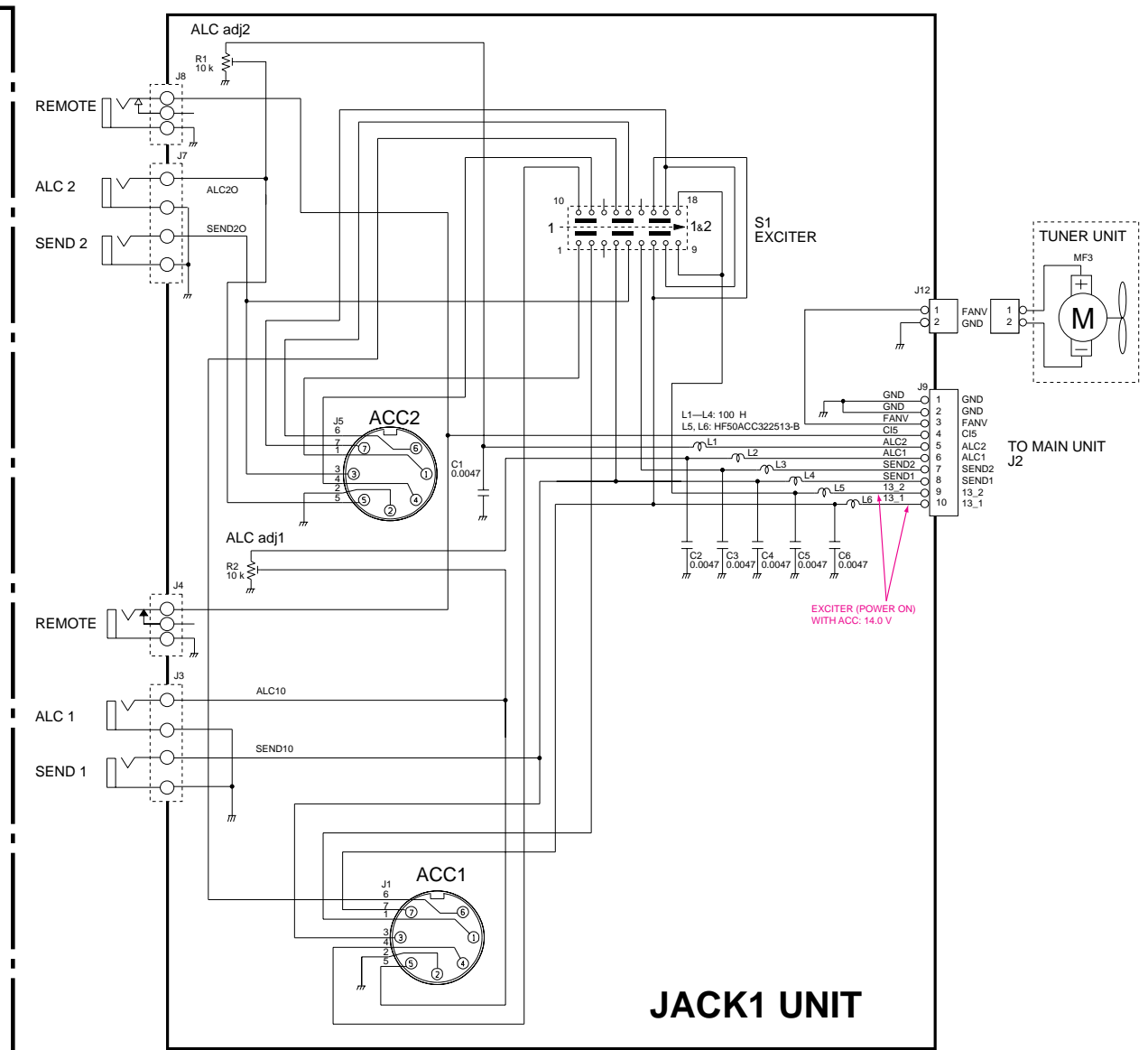
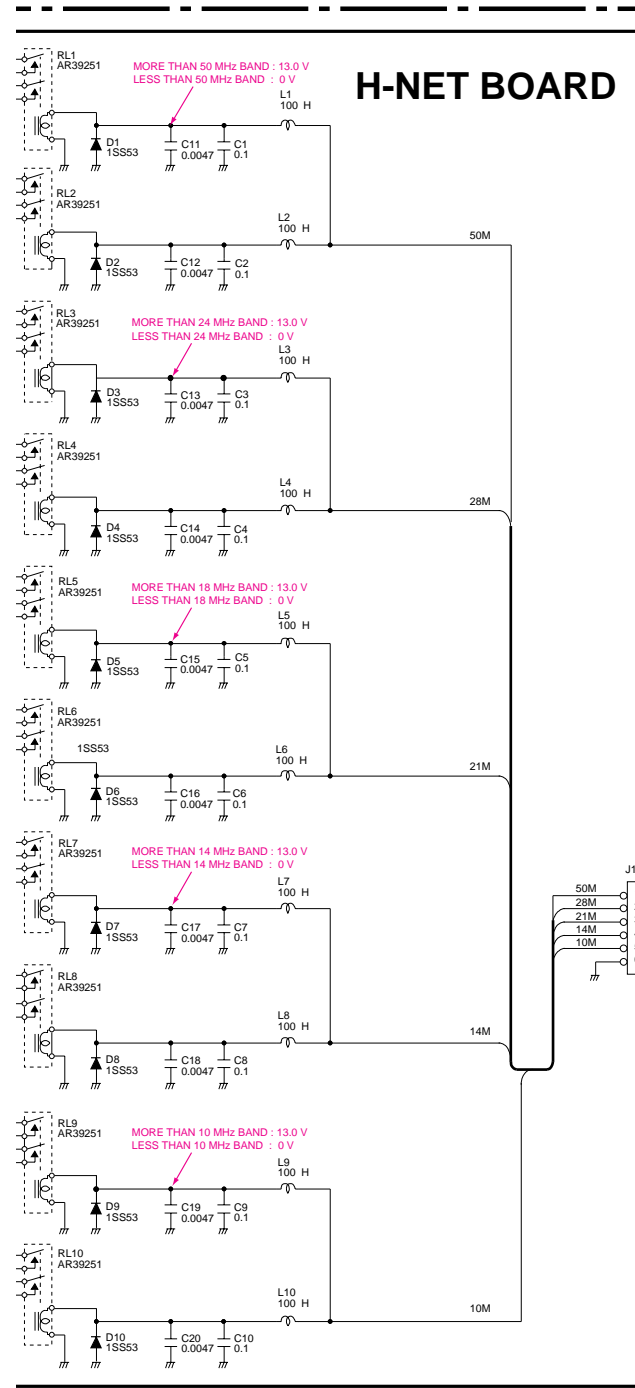


# C-NET BOARD

# CONNECT BOARD

# L-NET BOA

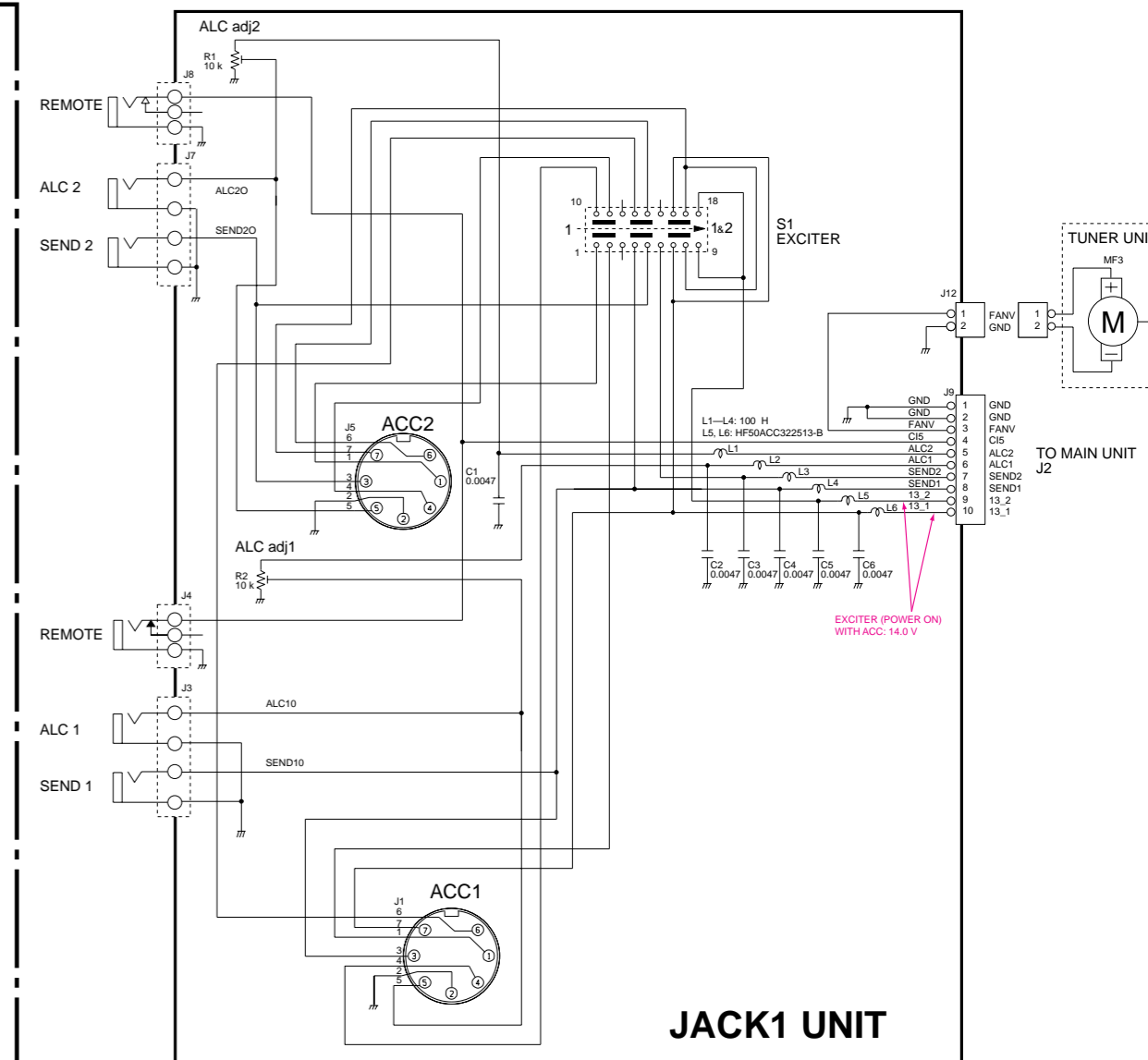
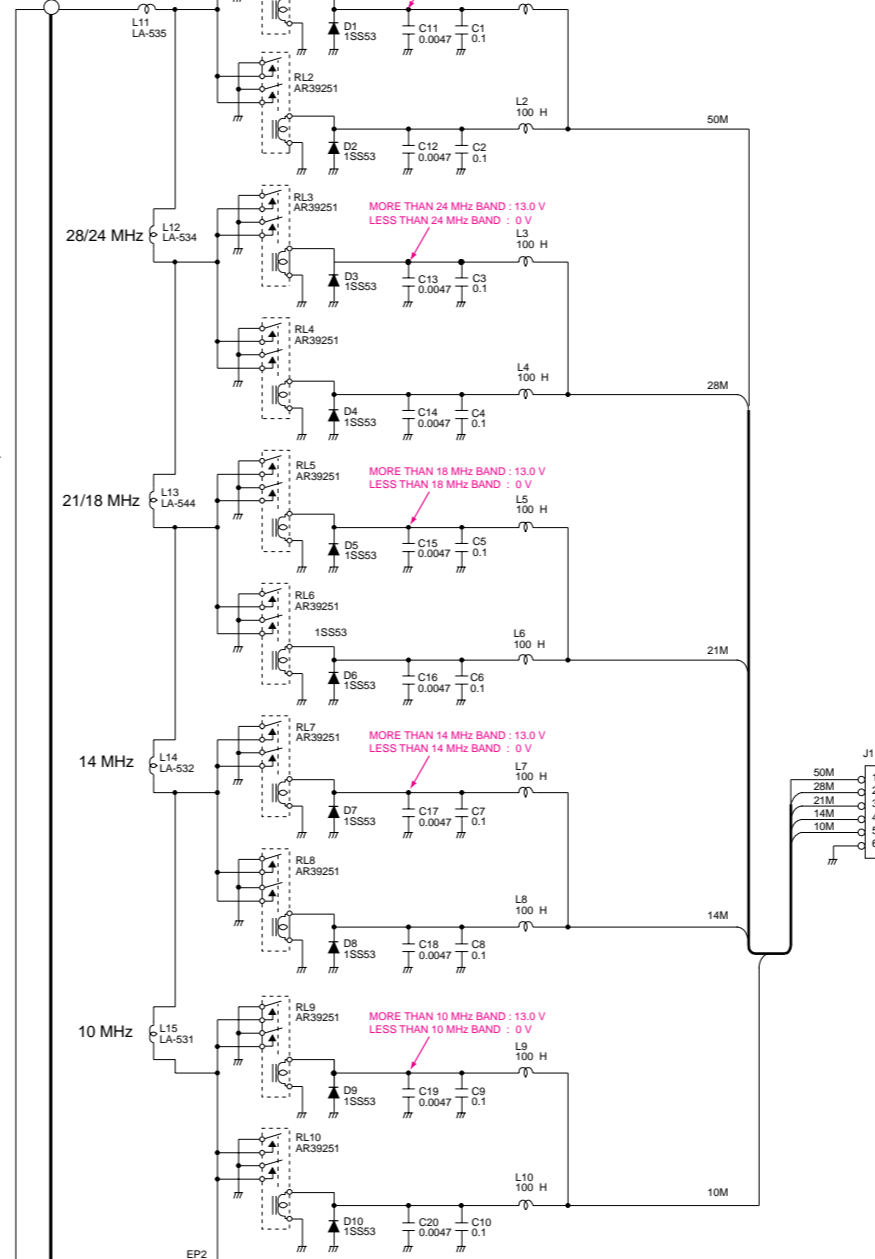
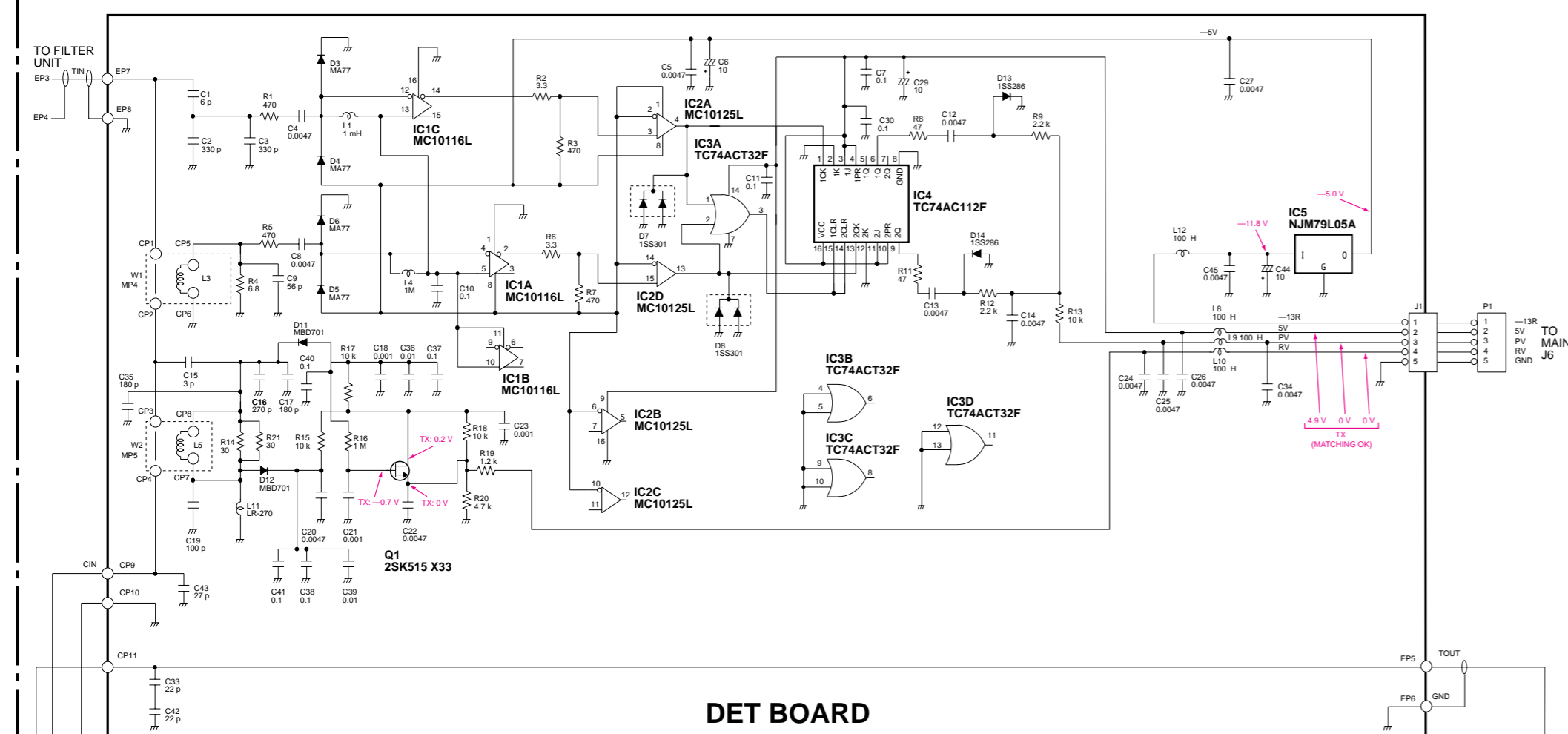
Note: An 1.9 MHz band select the relay by condition either RL5 and RL10 (\*) or RL6 and RL9 (\*).



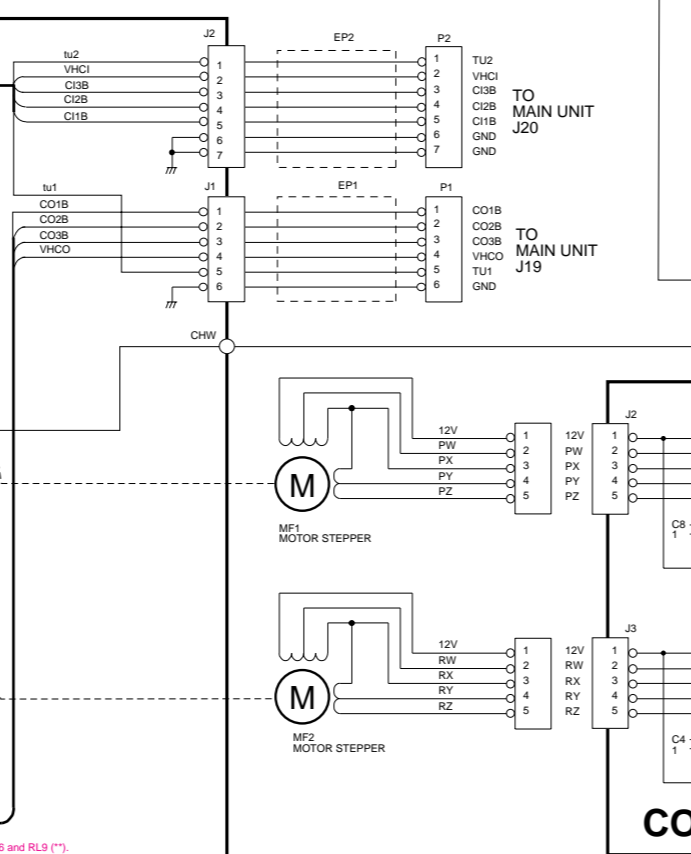
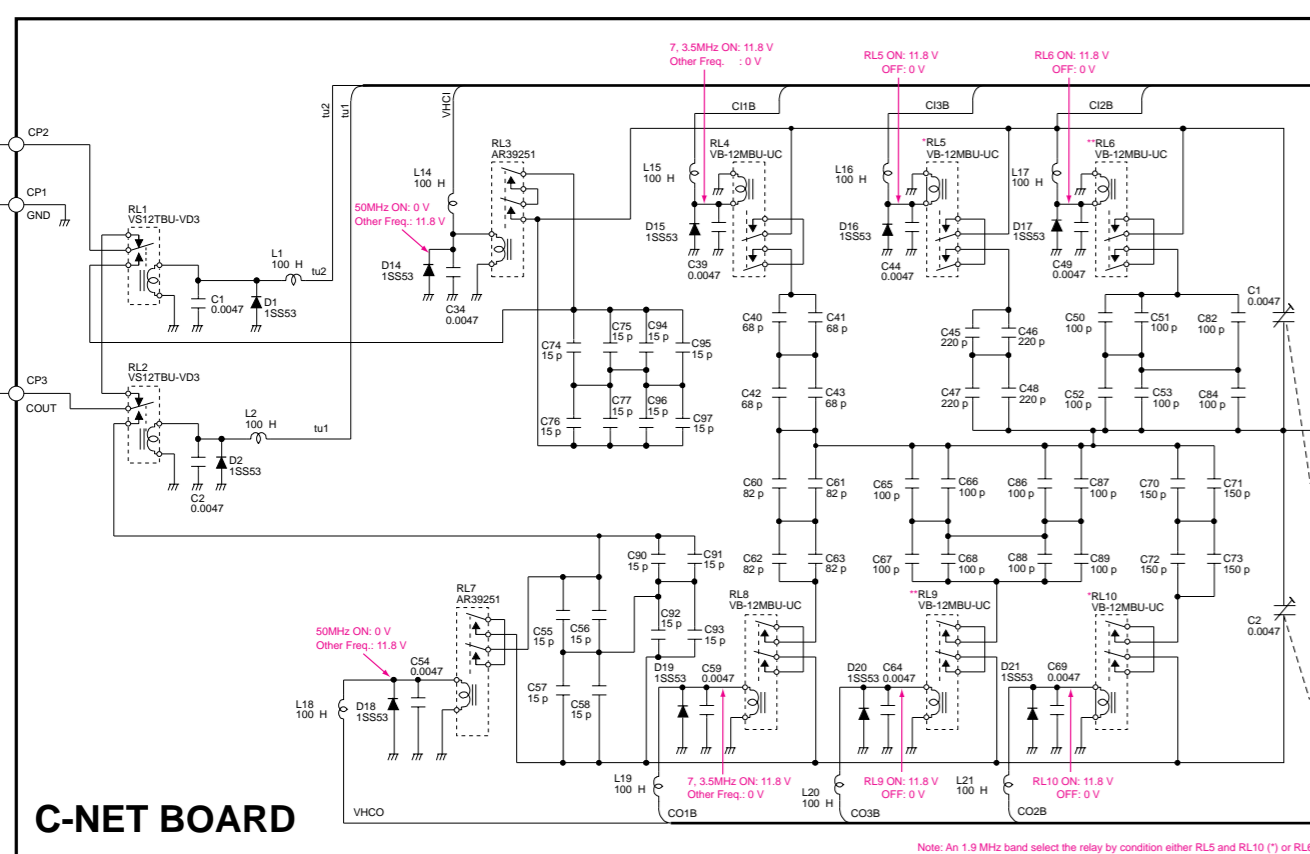
10-7 TUNER UNIT

TUNER UNIT

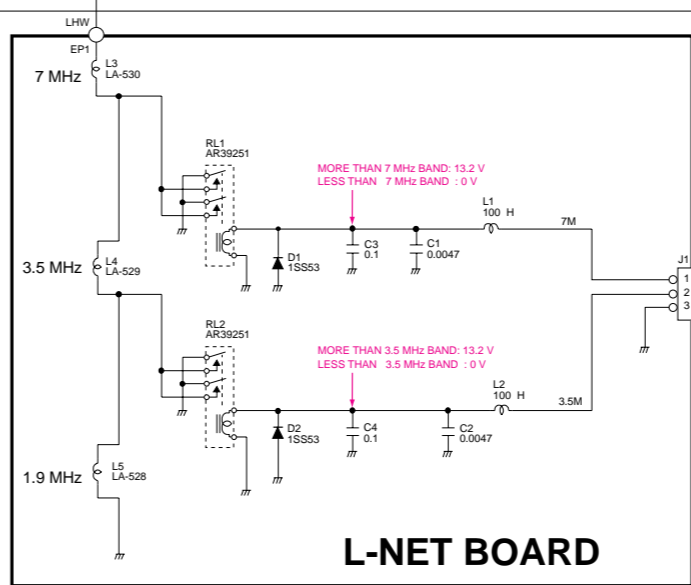
H-NET BOARD



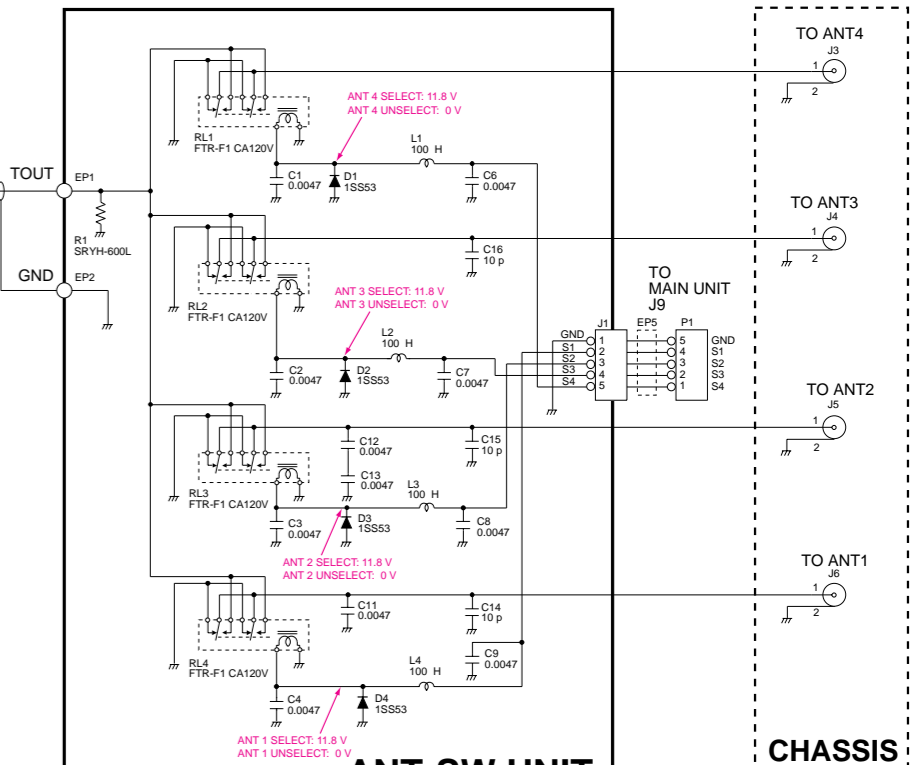
DET BOARD



CONNECT BOARD



L-NET BOARD



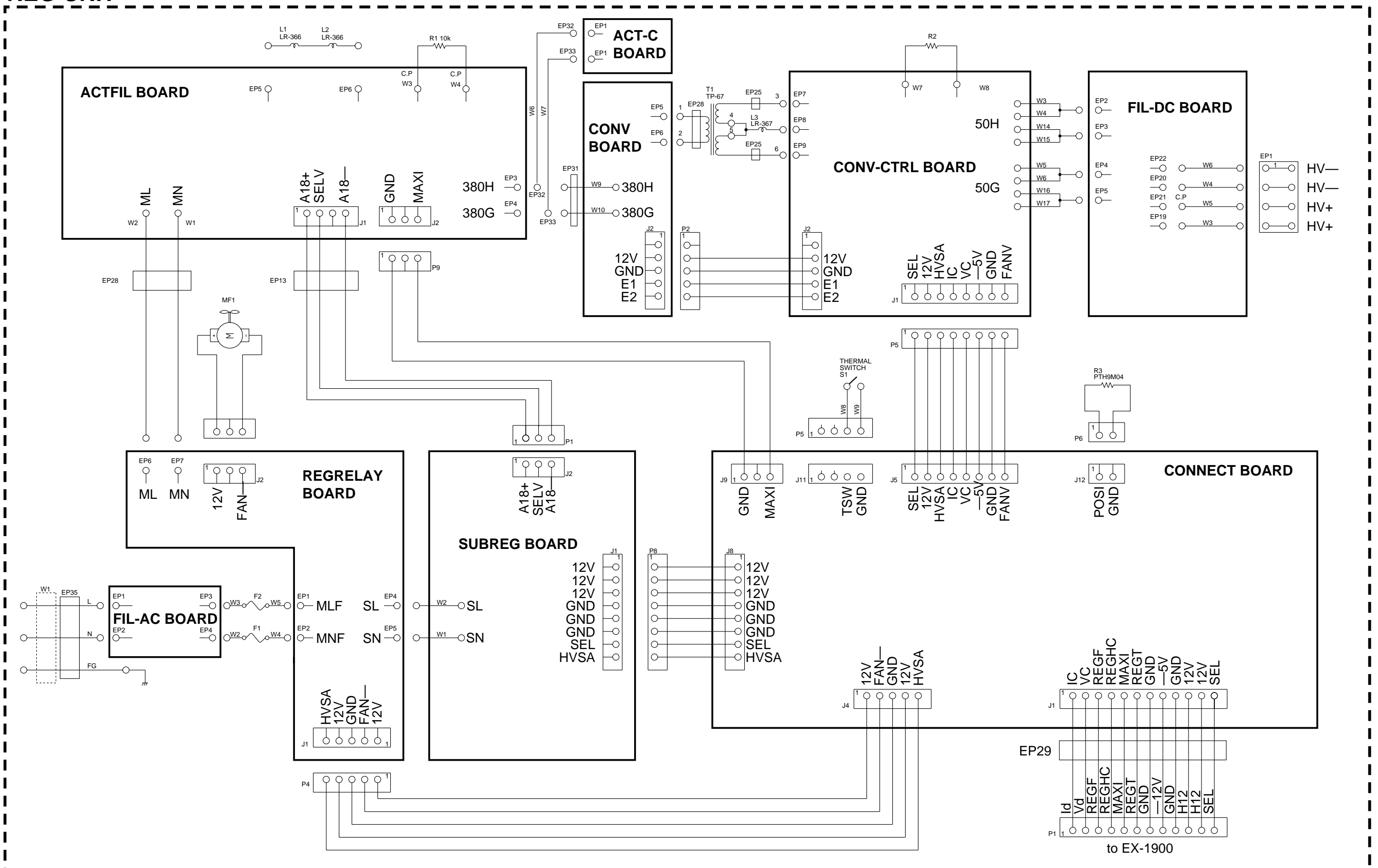
ANT-SW UNIT

CHASSIS UNIT

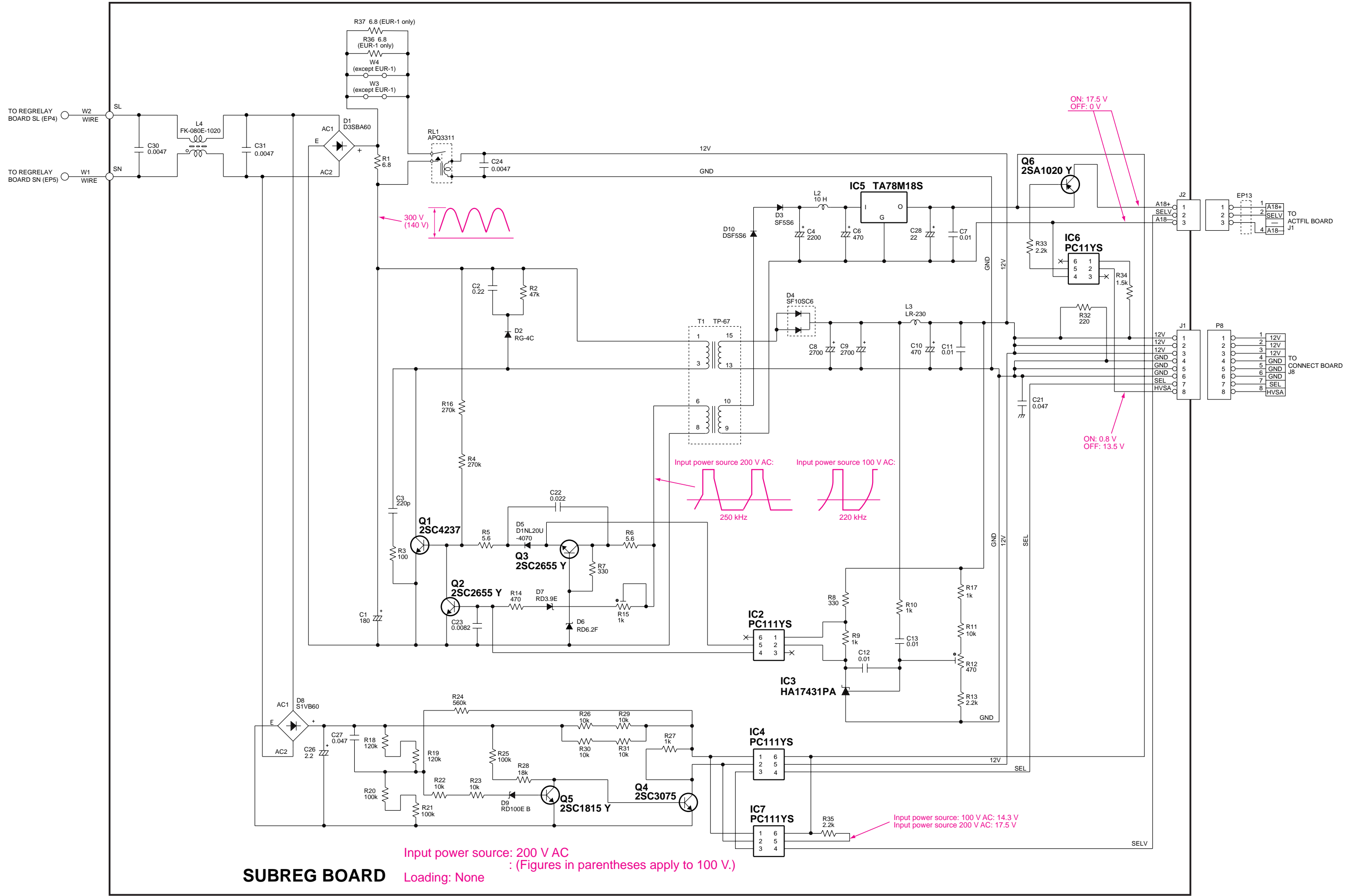
Note: An 1.9 MHz band select the relay by condition either RL5 and RL10 (\*) or RL6 and RL9 (\*\*).



**REG UNIT**

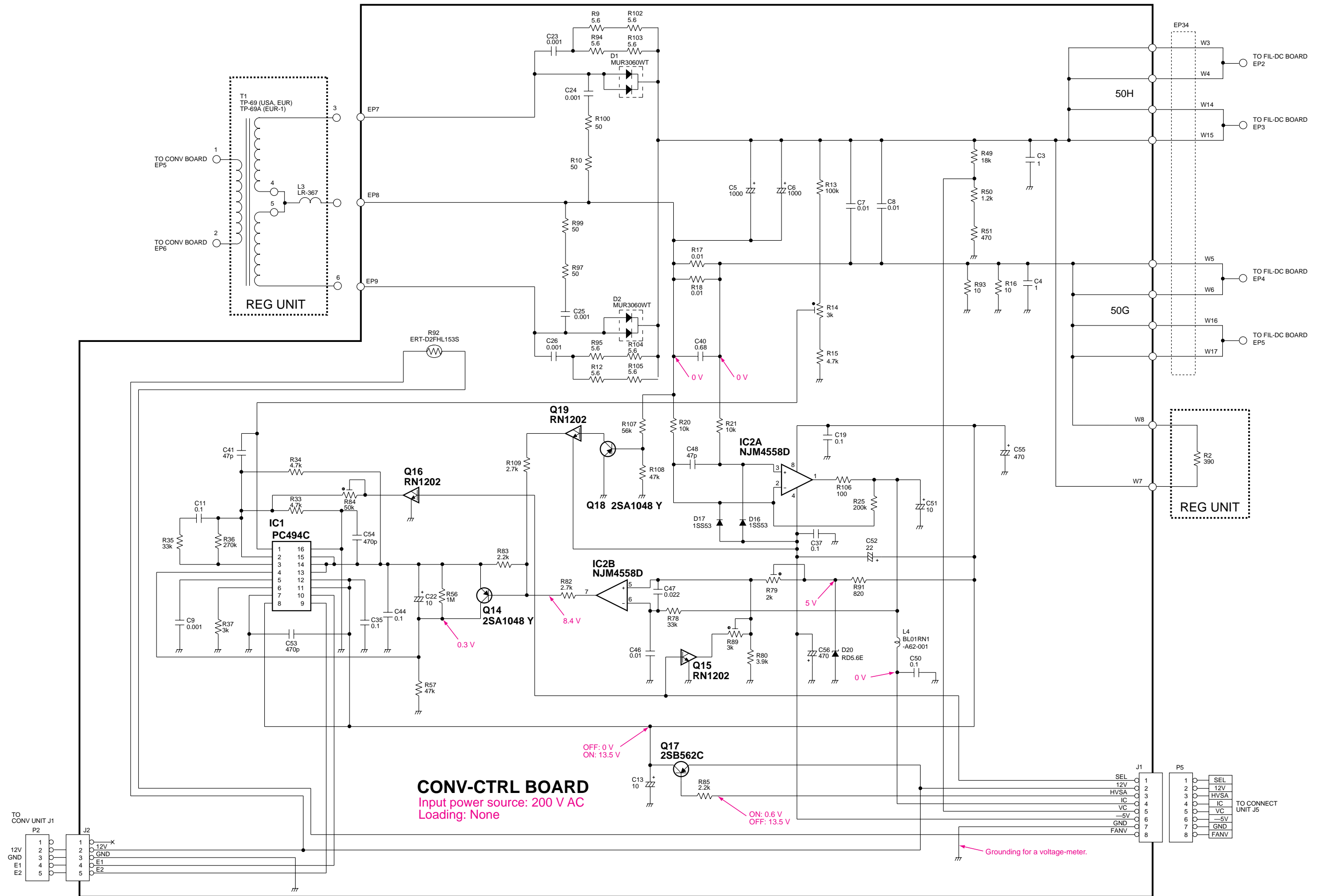


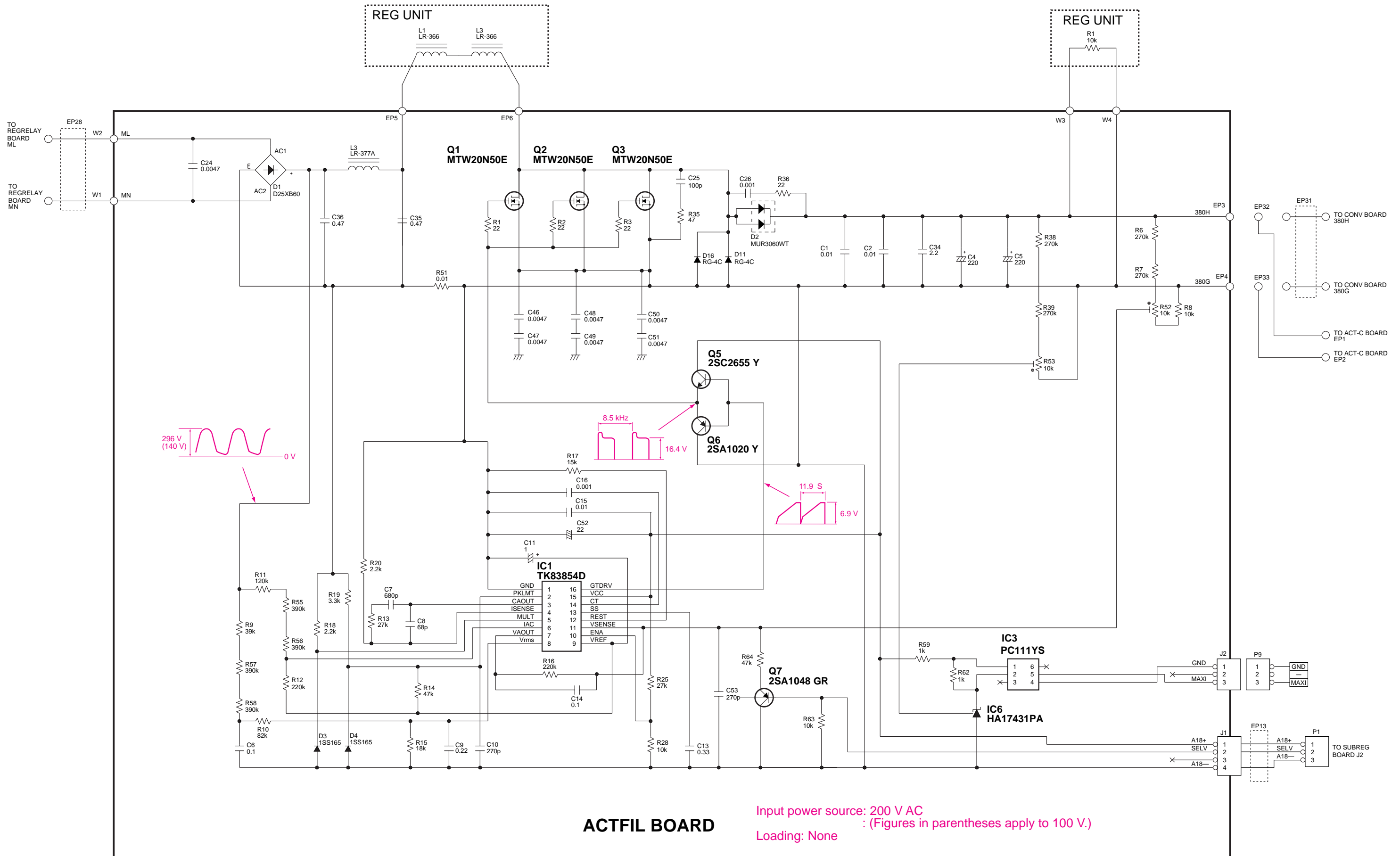
10-9 SUBREG BOARD



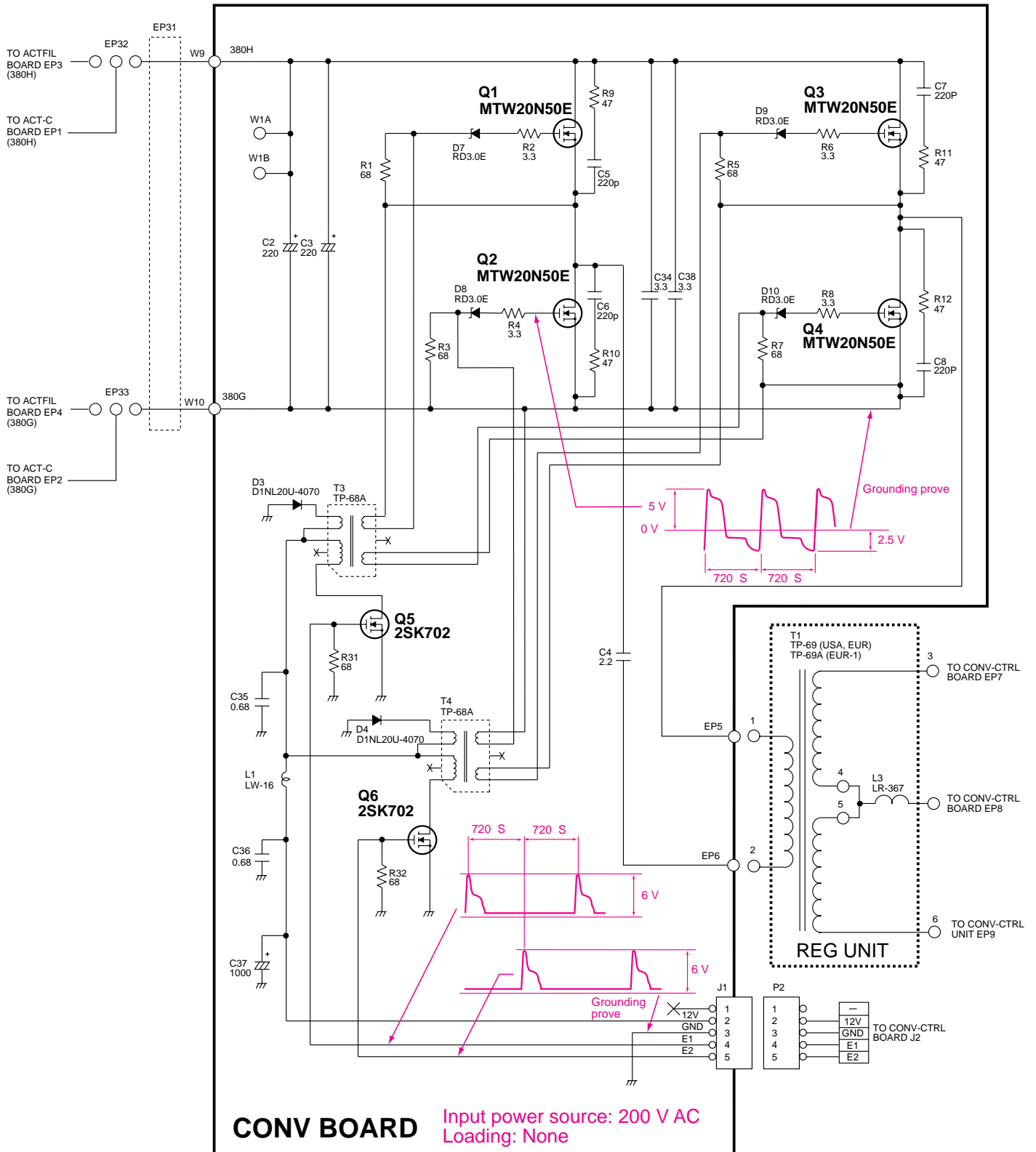
SUBREG BOARD

# 10-10 CONV-CTRL BOARD

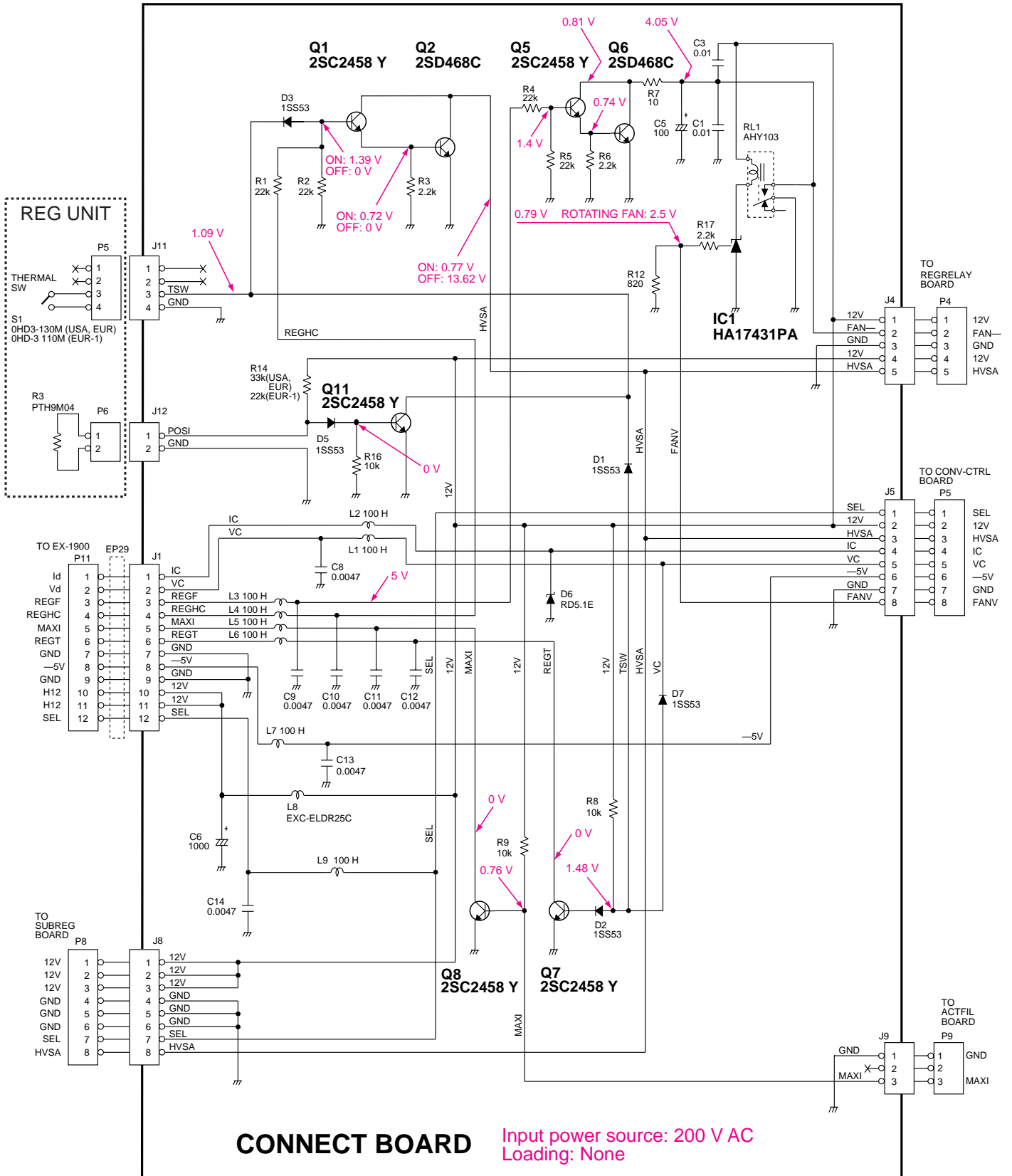




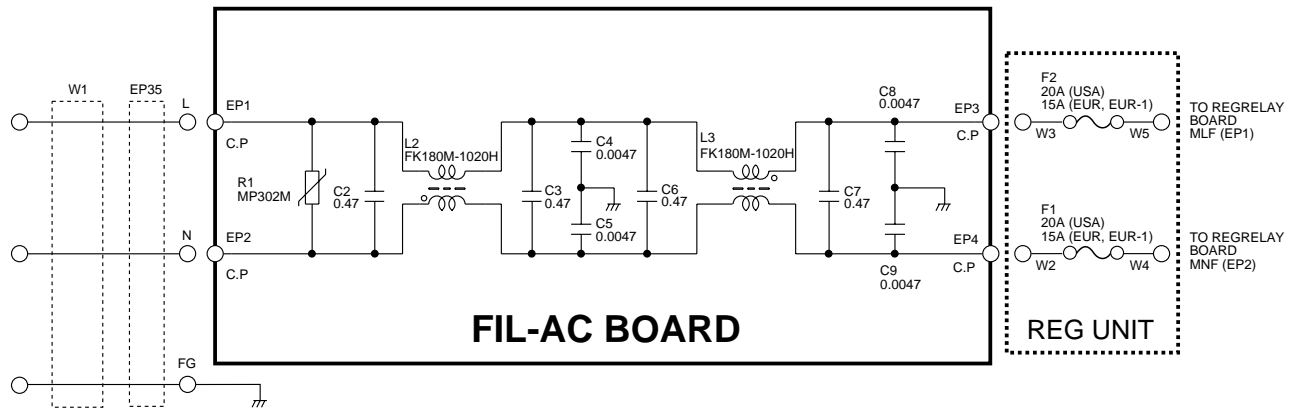
# 10-12 CONV BOARD



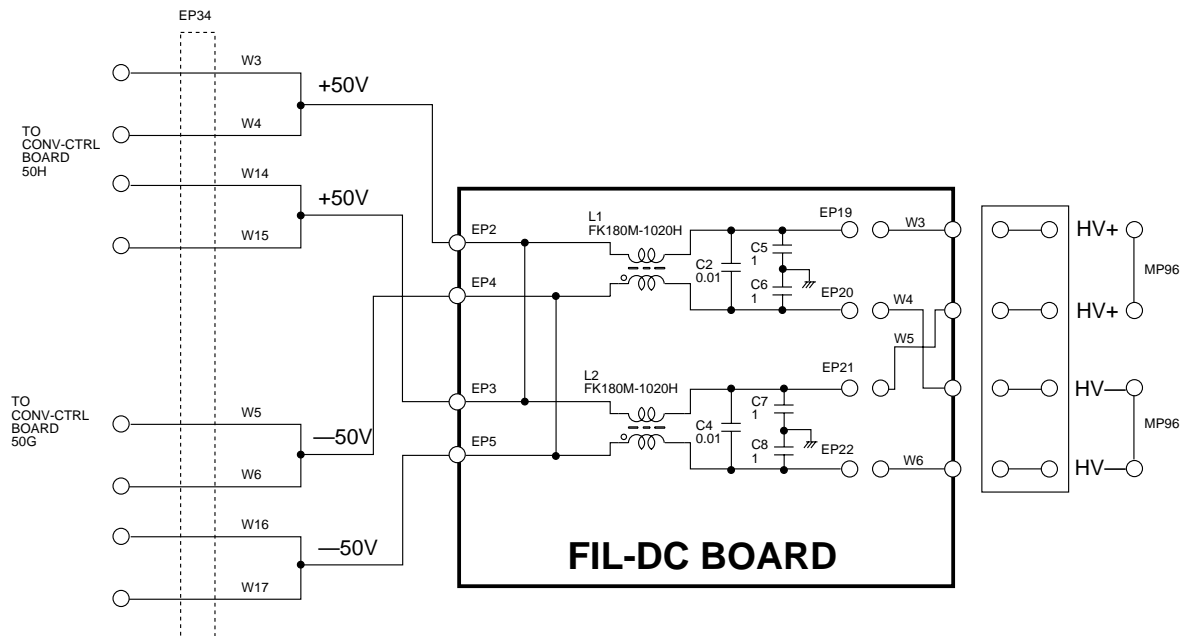
# 10-13 CONNECT BOARD



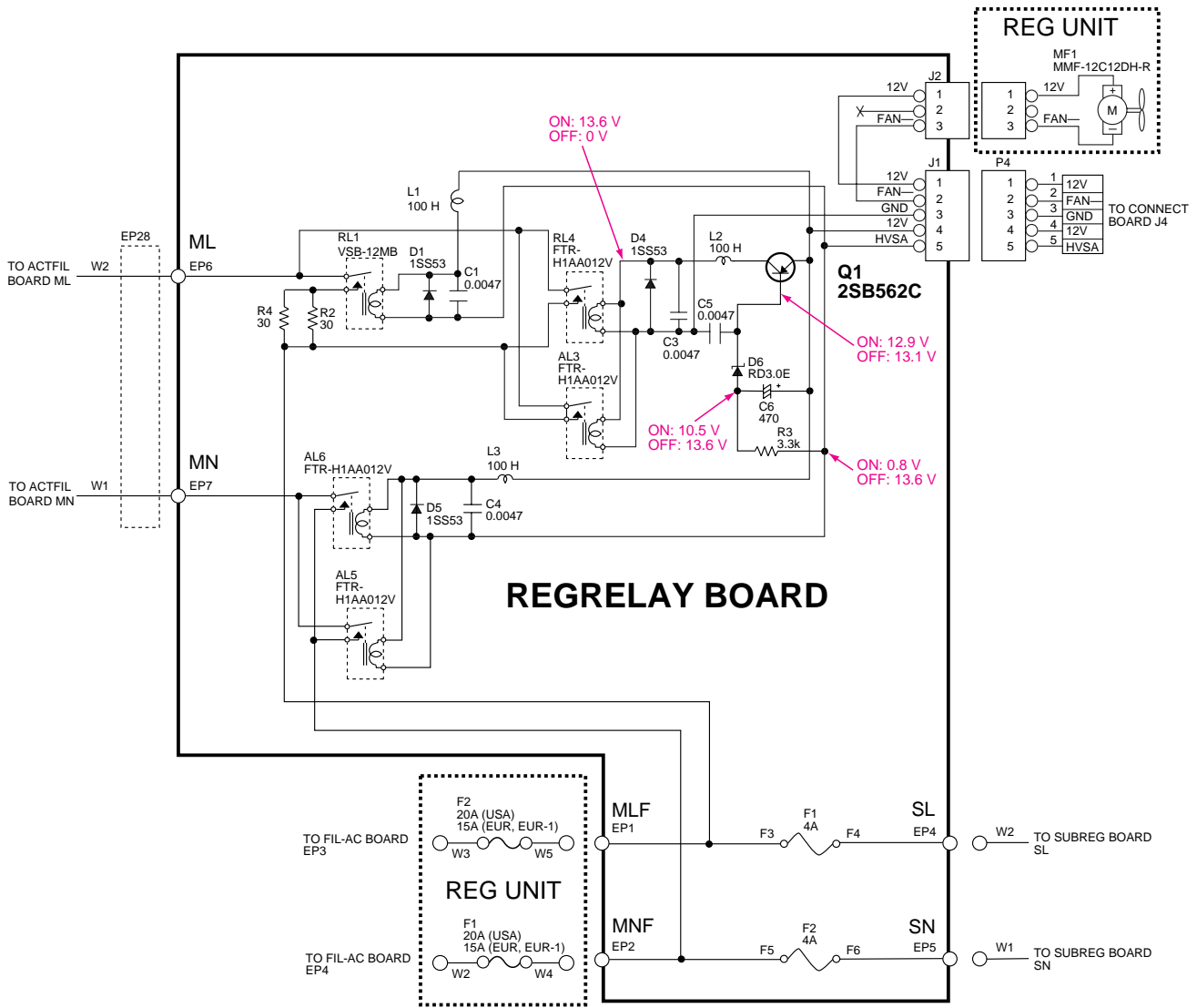
## 10-14 FIL-AC BOARD



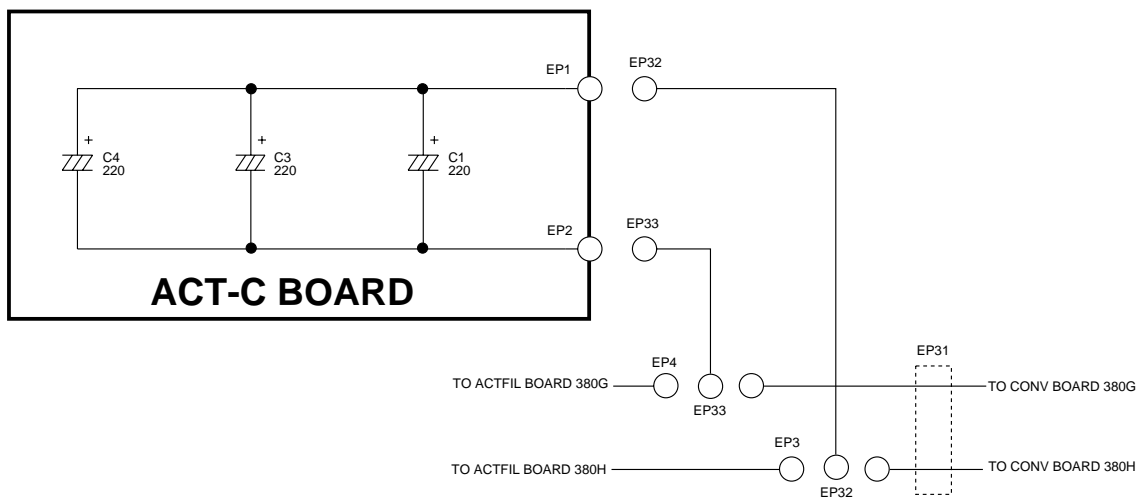
## 10-15 FIL-DC BOARD



# 10-16 REGRELAY BOARD



# 10-17 ACT-C BOARD





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