

TAD

Service Manual



TAD-M4300

ORDER NO.
CRT4592

POWER AMPLIFIER

TAD-M4300 TAD-M2500

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
TAD-M4300	U	AC 120 V	
TAD-M4300	YS8	AC 220 V to 230 V	
TAD-M4300	L	AC 220 V to 230 V	
TAD-M2500	U	AC 120 V	
TAD-M2500	YS8	AC 220 V to 230 V	
TAD-M2500	L	AC 220 V to 230 V	



For details, refer to "Important Check Points for good servicing".

SAFETY INFORMATION



This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product may contain a chemical known to the State of California to cause cancer, or birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

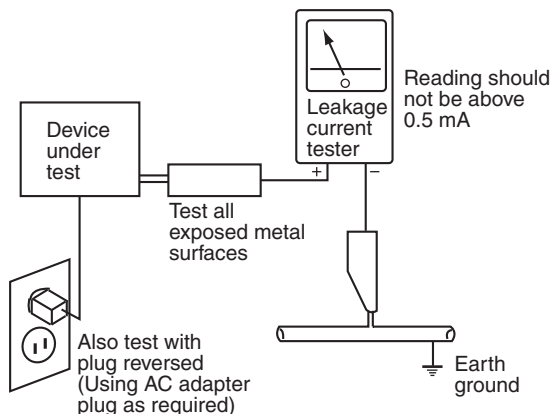
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol. Please be sure to confirm and follow these procedures.

1. Product safety



Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

- ① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

- ② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification (addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

- ③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris. Soldering should be finished with the proper quantity. (Refer to the example)

- ④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

- ⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

- ⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs. In addition, be sure that there are no pinched wires, etc.

- ⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

- ⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages. If you find a damaged power cord, please exchange it with a suitable one.

- ⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

- ⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries. Please pay attention to your surroundings and repair safely.

2. Adjustments



To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification. Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts



Use grease and adhesives that are equal to the specified substance. Make sure the proper amount is applied.

4. Cleaning



For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws



To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

CONTENTS

	SAFETY INFORMATION	2
A	1. SERVICE PRECAUTIONS	5
	1.1 NOTES ON SOLDERING	5
	2. SPECIFICATIONS	6
	2.1 SPECIFICATIONS	6
	2.2 PANEL FACILITIES	7
	3. BASIC ITEMS FOR SERVICE	6
	3.1 CHECK POINTS AFTER SERVICING	6
	4. BLOCK DIAGRAM	12
	4.1 OVERALL WIRING DIAGRAM (TAD-M4300)	12
	4.2 OVERALL WIRING DIAGRAM (TAD-M2500)	14
	5. DIAGNOSIS	18
	5.1 TROUBLESHOOTING	18
	5.2 CIRCUITE DESCRIPTION	20
B	6. SERVICE MODE	No data
	7. DISASSEMBLY	22
	8. EACH SETTING AND ADJUSTMENT	No data
	9. EXPLODED VIEWS AND PARTS LIST	32
	9.1 PACKING SECTION	32
	9.2 EXTERIOR SECTION (TAD-M4300)	34
	9.3 BOTTOM SECTION (TAD-M4300)	36
	9.4 EXTERIOR SECTION (TAD-M2500)	38
	9.5 BOTTOM SECTION (TAD-M2500)	40
	10. SCHEMATIC DIAGRAM	42
	10.1 AUDIO UNIT (INPUT1-2)	42
	10.2 AUDIO UNIT (INPUT3-4)	44
C	10.3 AUDIO UNIT (SP-OUT1-3)	46
	10.4 AUDIO UNIT (SP-OUT2-4)	47
	10.5 POWER SUPPLY UNIT (RECTIFICATION, S-SW and P-SW)	48
	10.6 POWER SUPPLY UNIT (PRIMARY)	50
	11. PCB CONNECTION DIAGRAM	52
	11.1 AUDIO UNIT (INPUT1-2)	52
	11.2 AUDIO UNIT (INPUT3-4)	53
	11.3 AUDIO UNIT (SP-OUT1-3)	54
	11.4 AUDIO UNIT (SP-OUT2-7)	55
	11.5 POWER SUPPLY UNIT (RECTIFICATION)	56
	11.6 POWER SUPPLY UNIT (S-SW and P-SW)	57
	11.7 POWER SUPPLY UNIT (PRIMARY)	58
D	12. PCB PARTS LIST	60

1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.
- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40 °C.
Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373 °C in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

Do NOT use a soldering iron whose tip temperature cannot be controlled.

Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

The following lead-free solders are available as service parts:

- Parts numbers of lead-free solder:
GYP1006 1.0 in dia.
GYP1007 0.6 in dia.
GYP1008 0.3 in dia.

2. SPECIFICATIONS

2.1 SPECIFICATIONS

A

■ Amplifier Section

Power output		
TAD-M4300.....	300 W (4 channels simultaneously driven, 20 Hz to 20 kHz, T.H.D., 1.0 %, 4 Ω)	
TAD-M2500.....	500 W (2 channels simultaneously driven, 20 Hz to 20 kHz, T.H.D., 1.0 %, 4 Ω)	
Rated distortion		
TAD-M4300.....	Less than 0.05 % (20 Hz to 20 kHz, 150 W, 4 Ω)	
TAD-M2500.....	Less than 0.05 % (20 Hz to 20 kHz, 250 W, 4 Ω)	
Signal-to-Noise Ratio (IHF, short circuited, A network)		112 dB or higher
Frequency response		5 Hz to 50 kHz, -3 dB
Gain (Balance)		29.5 dB

B

Input terminal (Sensitivity/ Impedance)	
TAD-M4300	1.16 V/220 kΩ (Balance) 0.58 V/47 kΩ (Unbalance)
TAD-M2500	1.5 V/220 kΩ (Balance) 0.75 V/47 kΩ (Unbalance)

■ Power section/miscellaneous

Power requirements	
U.S. model	AC 120 V, 60 Hz
Europe, Russia model	AC 220 V to 230 V, 50 Hz /60 Hz
Asia model	AC 220 V to 230 V, 50 Hz

C

Power consumption	
TAD-M4300.....	300 W
TAD-M2500.....	250 W
Power consumption in standby	0.5 W or less
Dimensions	440 mm (W) × 170 mm (H) × 467 mm (D) (17-5/16 in. (W) × 6-5/8 in. (H) × 18-3/8 in. (D))
Weight	43 kg (94.8 lb)

■

■ Accessories

Power cord	1
Operating Instructions (this document)	1

D

- **Note**
- Specifications and the design are subject to possible modifications without notice, due to improvements.

To ensure long product life, avoid installing this unit in the following locations:

- ⊘

- Locations exposed to direct sunlight.
 - Humid or poorly ventilated areas.
 - Areas of extreme temperatures.
 - Areas with vibration.
 - Dusty or smoky areas.
 - Areas exposed to grease fumes, steam or heat (such as a kitchen).

E

Maintenance

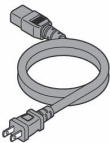
Use a dry polishing cloth to wipe off dust and dirt. If the surface is extremely dirty, wipe with a soft cloth dipped in neutral cleanser diluted five to six times with water and wrung out well. Do not use volatile chemicals such as paint thinner or benzenes, as these may corrode the surface of the panels. Do not use sprays such as insecticides around the unit. If you plan on using a chemical cleaning cloth, read the precautionary statements of the chemical cleaning cloth before using.

Checking what's in the box

Please check that you have received the following supplied accessories in the accessory box.

■

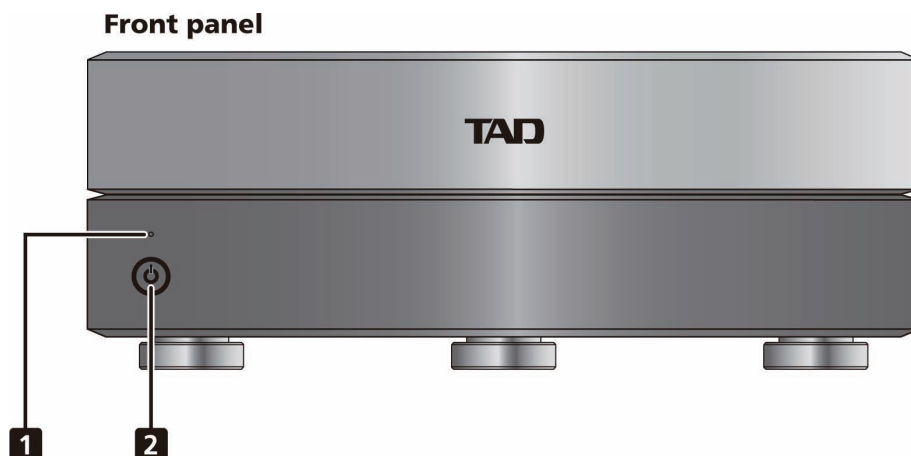
- Power cord x 1 (U.S. model)
- Power cord x 1 (Europe, Russia model)
- Power cord x 1 (Asia model)



F

- Operating Instructions (this document)

2.2 PANEL FACILITIES



1. Power indicator

Indicates the unit's power status.

Lighted yellow: unit ready for operation

Lighted red: standby

Flashing yellow: power on processing

Flashing red: malfunction

If the power indicator changes from lighted yellow to flashing red, it indicates the power protection circuit has operated.

In this event, disconnect the power cord; for details, consult the section "*Protection circuit*". If the trouble is still

not resolved, consult your dealer.

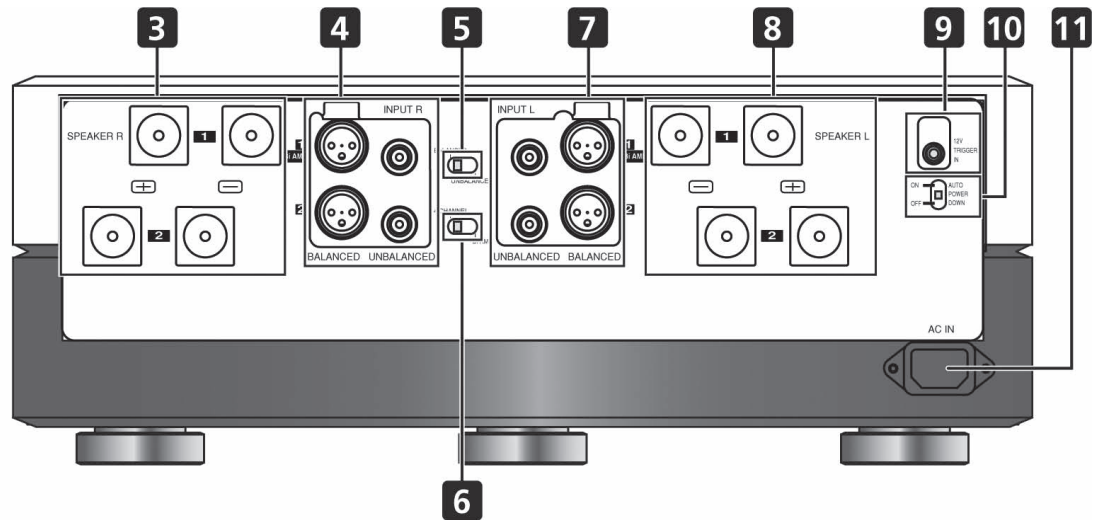
2. Power switch

Press to turn the power on/standby.

A

TAD-M4300

Rear panel

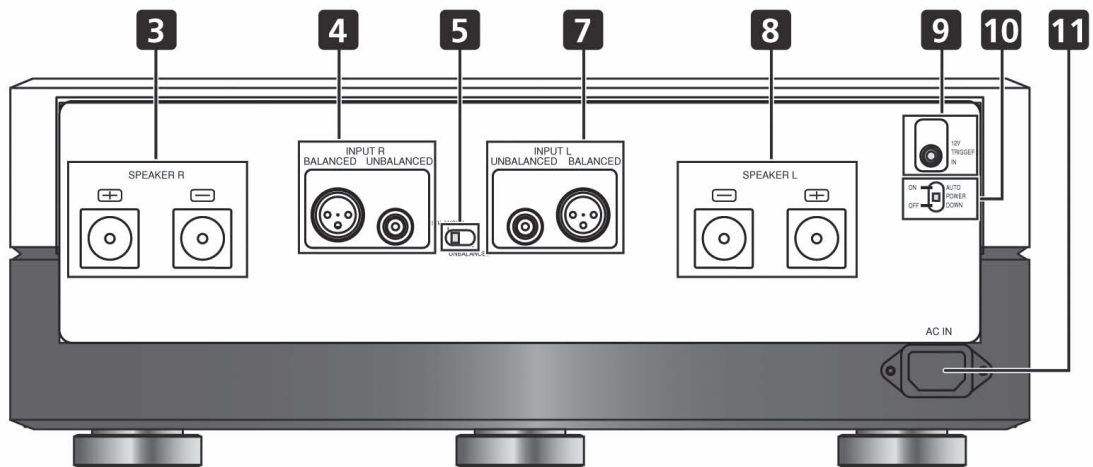


B

C

TAD-M2500

Rear panel



D

3. SPEAKER R terminals

Connect speakers with rated impedance of 4 Ω to 16 Ω .

4. INPUT R terminals (BALANCED/UNBALANCED)

Connect to Pre-Amplifier.

5. BALANCED/UNBALANCED input connector selector switch

In accordance with the type of output connectors for the Pre-Amplifier to be connected, set this selector switch to either BALANCED (XLR-3-31) or UNBALANCED (RCA pin jack).

6. Bi-AMP selector switch (4 CHANNEL/Bi AMP) (TAD-M4300 only)

Use this switch when four power amplifiers are connected in two sets for Bi-AMP connection.

7. INPUT L terminals (BALANCED/UNBALANCED)

Connect to Pre-Amplifier.

8. SPEAKER L terminals

Connect speakers with impedance of 4 Ω to 16 Ω .

F

9. 12V TRIGGER IN connector

This terminal can be used to switch unit power on/standby from an external component.

Input connector: $\varnothing$ 3.5 mm monaural mini-jack

Operating specifications:

When in the standby mode, if the input signal voltage changes from L to H.....power on mode

When in power on mode, if the input signal voltage changes from H to L.....standby mode

When H level signal is being input to the 12V TRIGGER INPUT connector, the main unit's power switch cannot be used to turn the power off.

10. AUTO POWER DOWN switch (ON/OFF)

When this switch is set to ON, the unit will automatically enter the standby mode after about three hours. When set to OFF, the function is disabled.

11. AC IN connector

Connect the accessory power cord here.

Items to be checked after servicing

To keep the product quality after servicing, confirm recommended check points shown below.

No.	Procedures	Check points
1	Confirm whether the customer complain has been solved.	The customer complain must not be reappeared. Audio and operations must be normal.
2	Check the analog audio playback. (Make the analog connections with a CD player via a preamplifier/ attenuator.	Each channel audio and operations must be normal.
3	Check the appearance of the product.	No scratches or dirt on its appearance after receiving it for service.

See the table below for the items to be checked regarding audio.

Item to be checked regarding audio
Distortion
Noise
Volume too low
Volume too high
Volume fluctuating
Sound interrupted

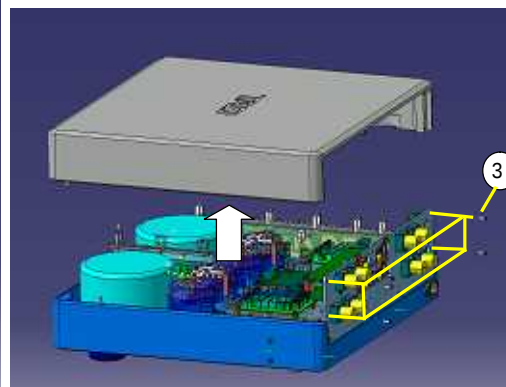
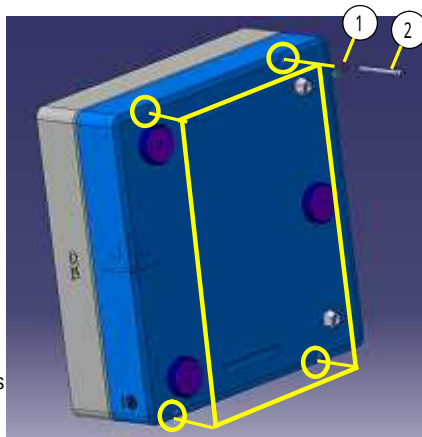
フクゴウ基板診断
Diagnosis Complex Unit (CWX3924)

【外装部を外す】
CASE(CLA4944)を外す
Disassemble Case(CI [Outer Case]

製品を立てて、
BOLT(CLA4948)を 4 本外す。
WG50FCC を 4 個取る。
リア部ビス (PMH30P100FNI) を4本外す

Put up a product
Remove Bolts(CLA4948) 4 pieces
Remove washer(WG50FCC) 4 pieces
Remove Screws(PMH30P100FNI) 4 pieces

CASE(CLA4944)を上を持ち上げ外す。
Lift up Case to above and take it off .



【シールド部を外す】
Disassemble sheild(CND5643)

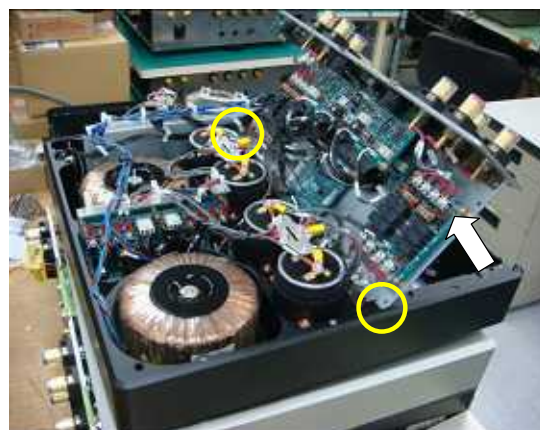
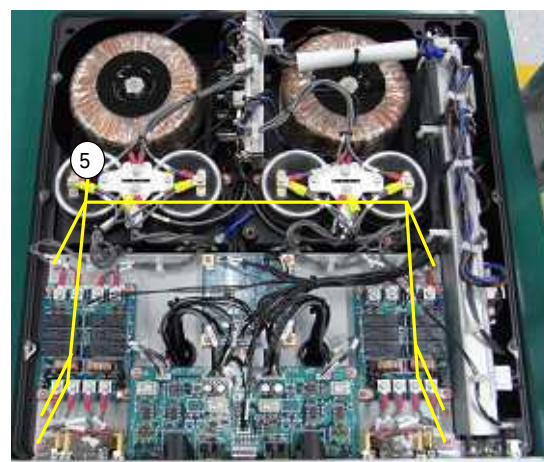
REARのビスを外す。4本 (PMH30P100FNI)
Remove screws(PMH30P100FNI) from Panel . 4 pieces

Ppanel No	U model	YS8 model	J model	L model
M2500	CNB3695	CNB3696	CNB3697	CNB3698
M4300	CNB3699	CNB3700	CNB3701	CNB3702



SHIELD PLATE ビスを外す6本 (PMB30P080FCC)
Remove screws(PMB30P080FCC) sheild . 6 pieces

CHASSISのスリットにSHIELD PLATEを差し込んで、フクゴウユニット診断する。
Plug in the sheild assy to the slits of Chassis to diagnose the Complex unit.



■

5

■

6

■

7

■

8

■

A

■

B

■

C

■

D

■

E

■

F

■

5

■

6

■

7

■

8

■

TAD-D600

4. BLOCK DIAGRAM

4.1 OVERALL WIRING DIAGRAM (TAD-M4300)

A

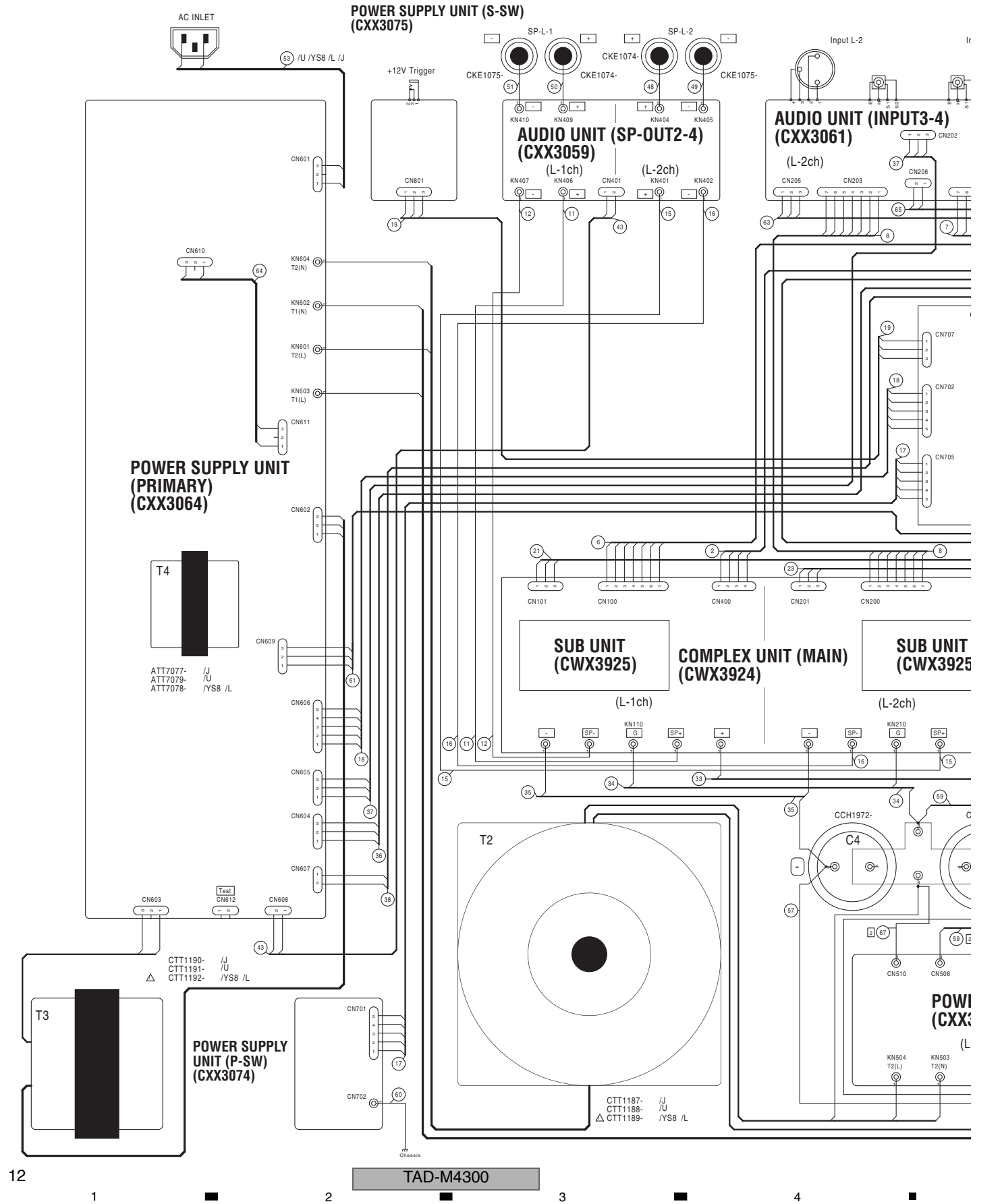
B

C

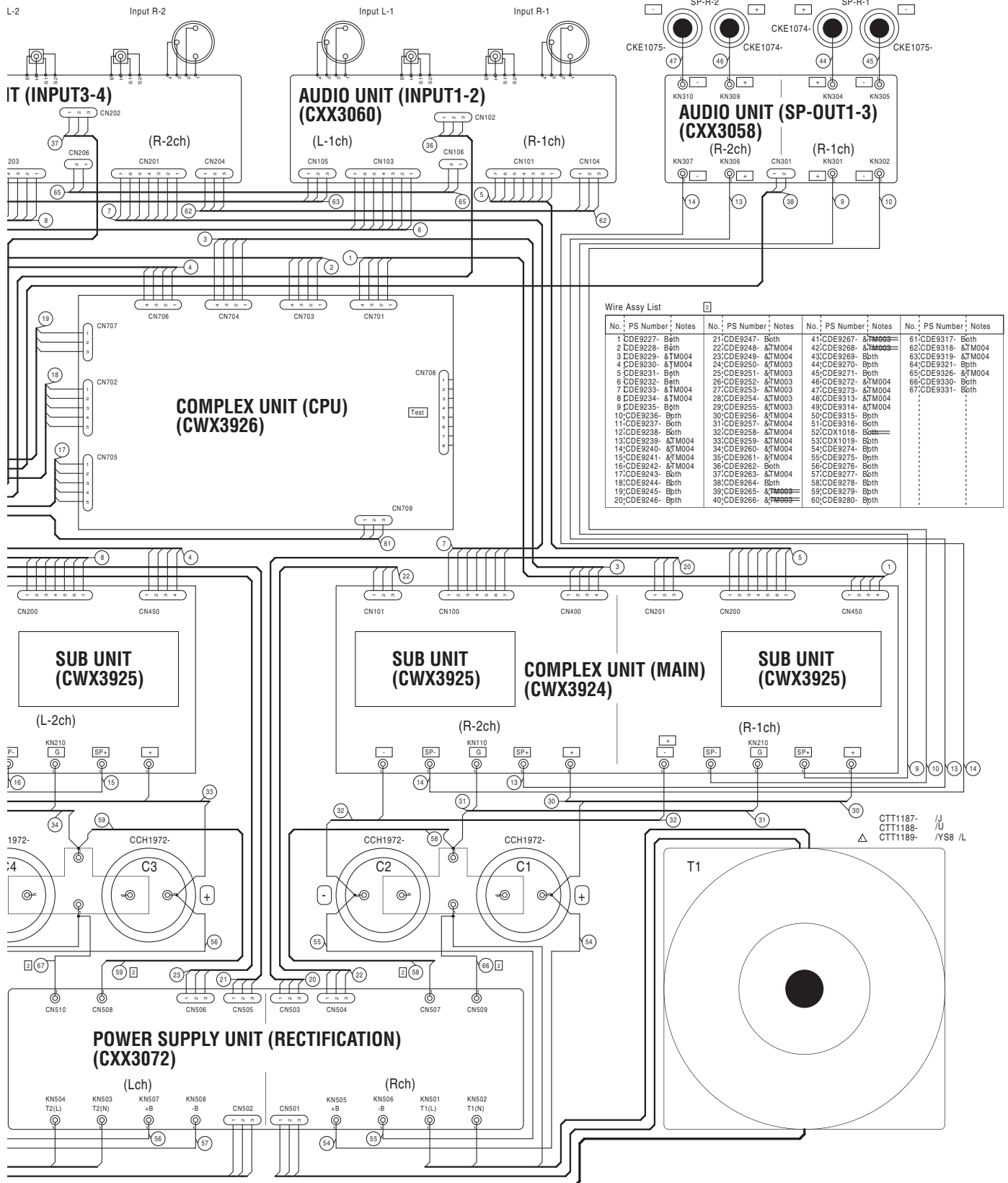
D

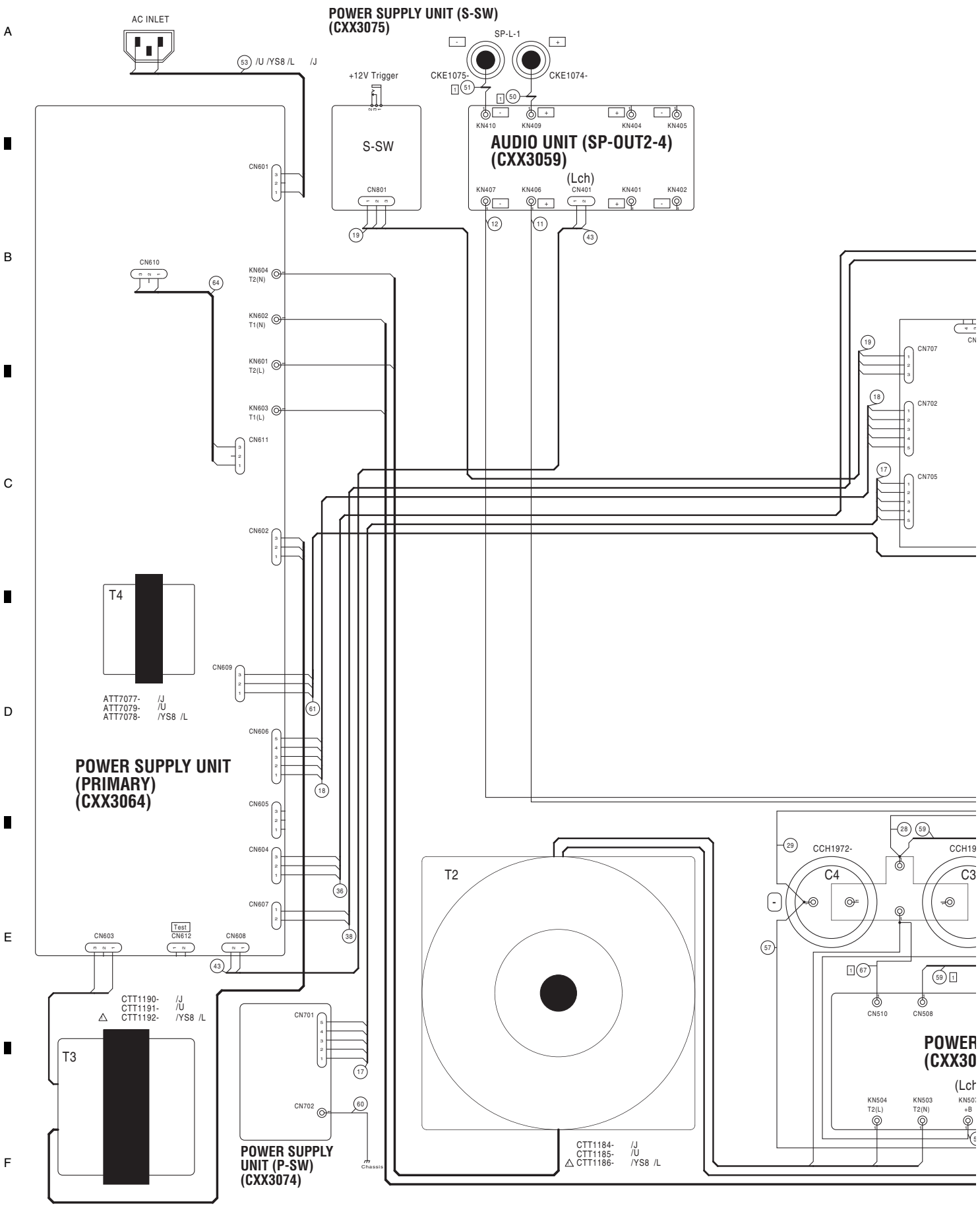
E

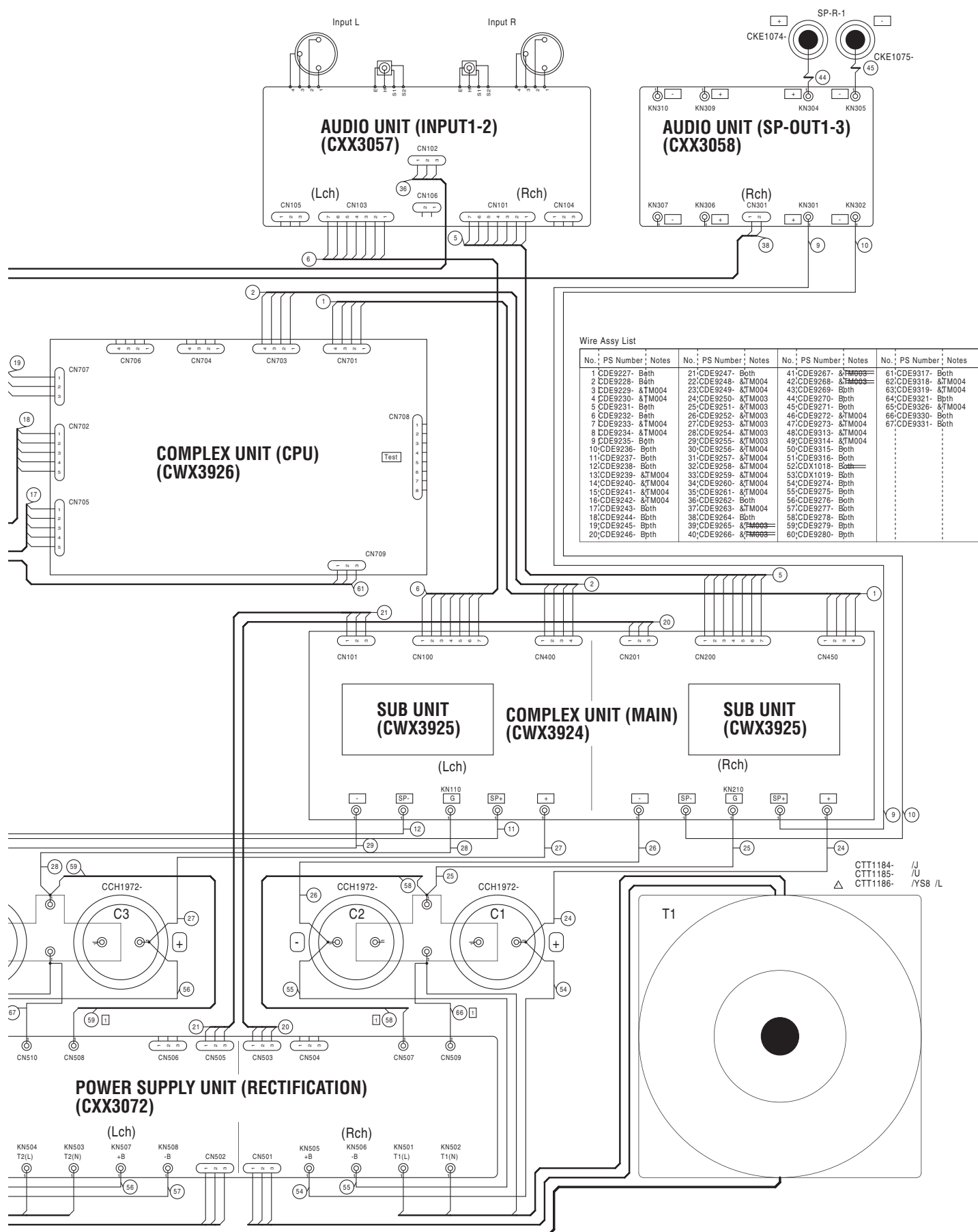
F

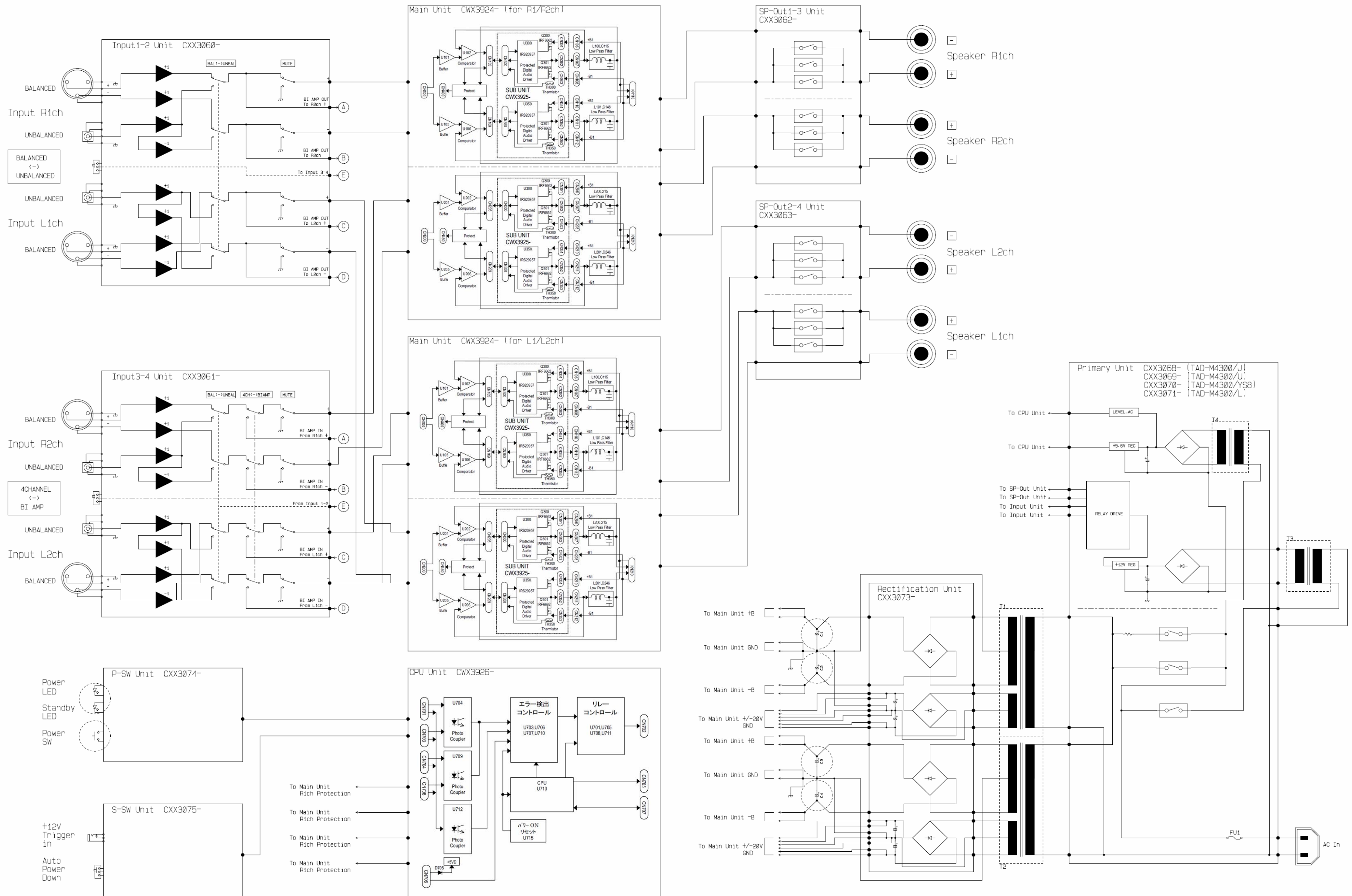


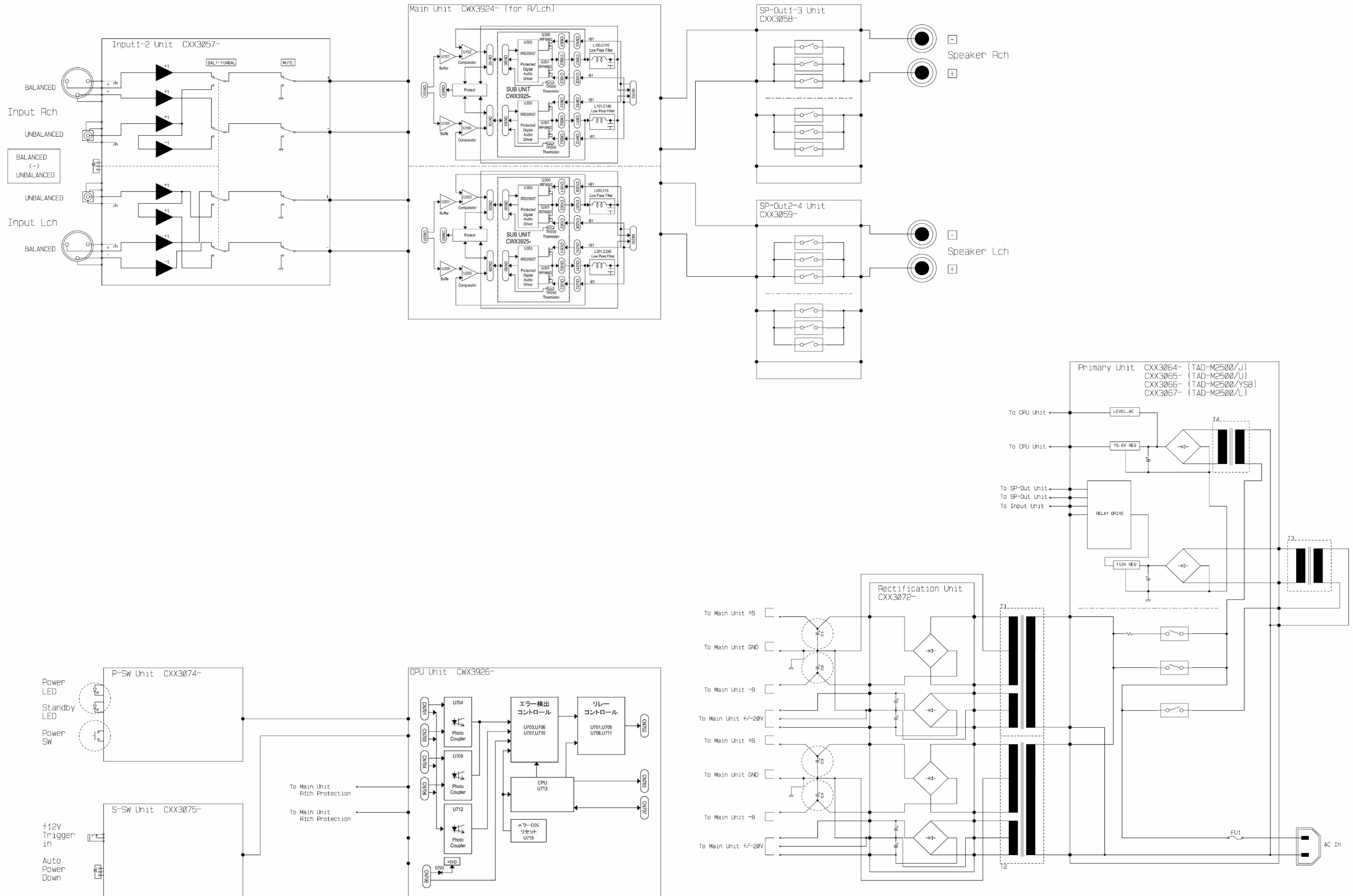
- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The  mark found on some component parts indicates the importance of the safety factor of the part.
- Therefore, when replacing, be sure to use parts of identical designation.
-  : The power supply is shown with the marked box.





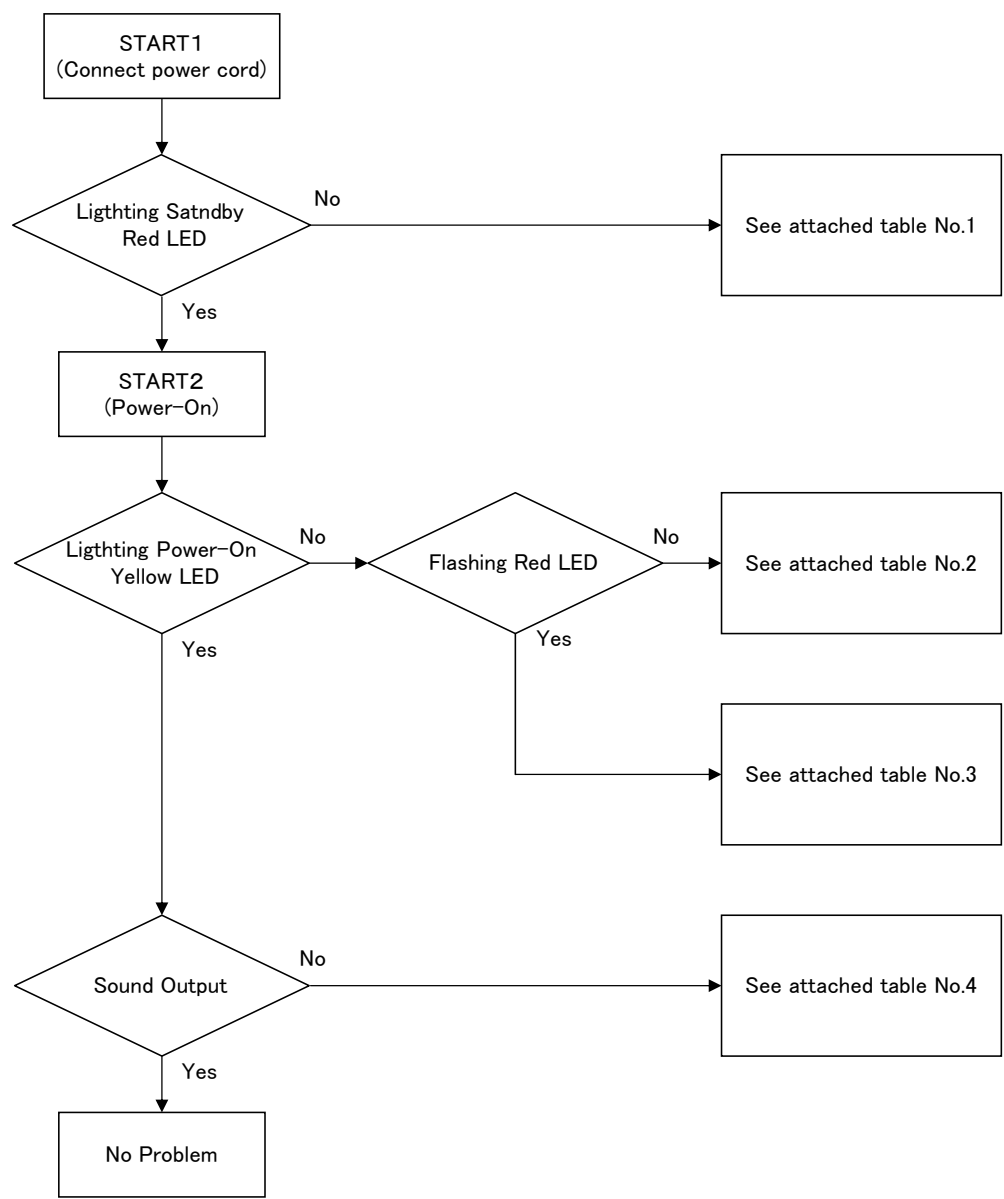






5. DIAGNOSIS

5.1 TROUBLESHOOTING



TAD-M4300/M2500

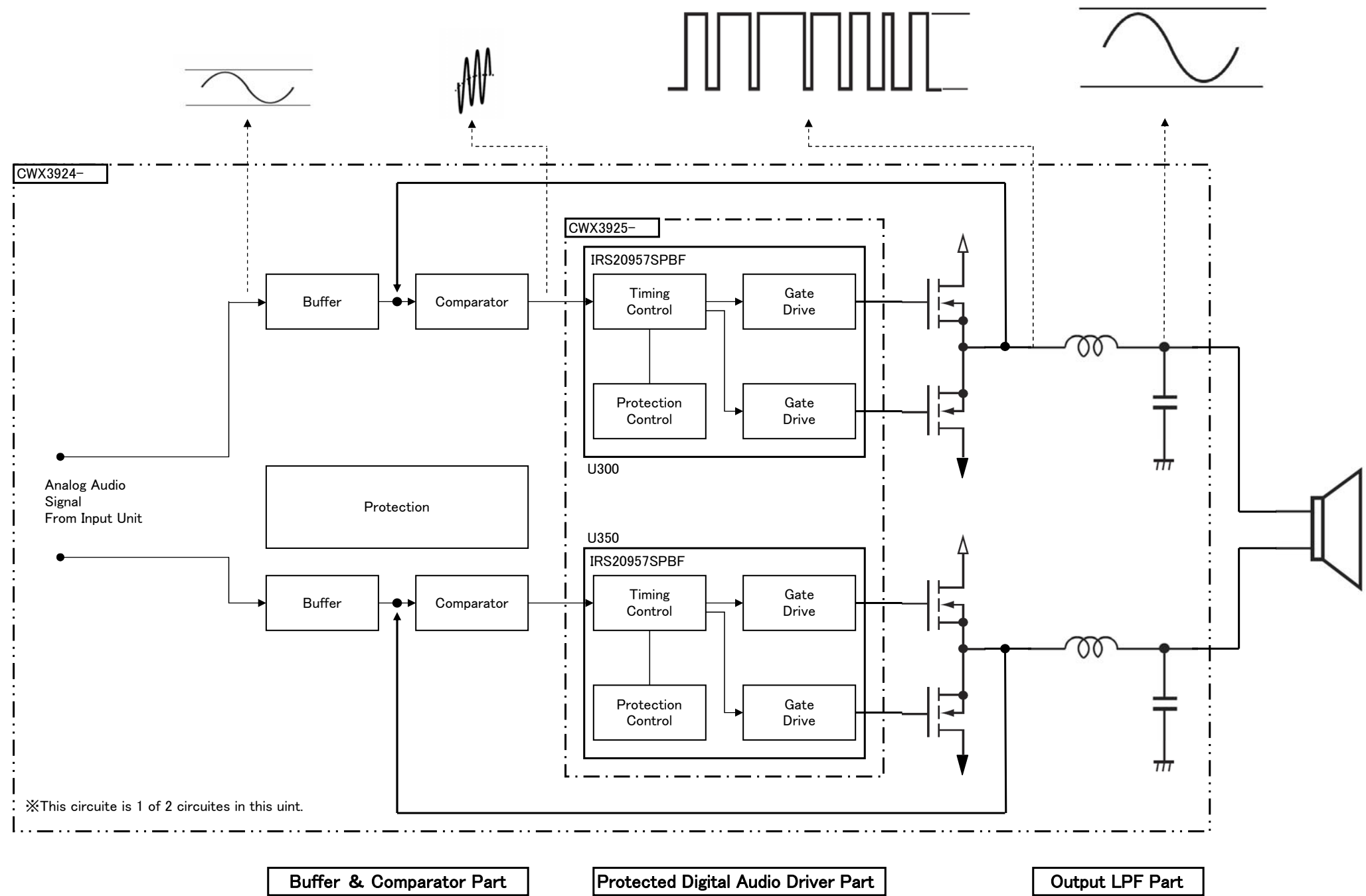
5. DIAGNOSIS

5.1 TROUBLESHOOTING

No.	Symptoms	Diagnosis Contents	Possible Defective Points
1	Power does not turn on. Standby Red LED does not light.	Confirmation. Whether does the fuse do OPEN or not?	Primary Unit FU1
		Confirmation. Are wires disconnected or damaged?	Primary Unit CN601, CN609 CPU Unit CN705, CN709
		Check that the following voltage is output: CN709 1pin: +5.6V	CPU Unit CN709
2	Power does not turn on. Standby Yellow LED does not light.	Confirmation. Are wires disconnected or damaged?	P-SW Unit CN701 CPU Unit CN705
3	Power does not turn on. Protection circuit operate. Red LED flashes.	Confirmation. Are wires disconnected or damaged?	Main Unit CN400, 450 CPU Unit CN701, 703, 704, 706
		Check that the following voltage is output: KN110, KN210 1ピン: +40V (M2500), +35V (M4300) KN110, KN210 5ピン: -40V (M2500), -35V (M4300) CN101, CN201 1ピン: +20V CN101, CN201 2ピン: -20V U107 3ピン: +15V U108 3ピン: -15V U109 3ピン: +5V U110 3ピン: -5V	Main Unit KN110, KN210, CN101, CN201 U107, U108, U109, U110
		Confirmation. Does not the protection circuit operate? U713 7ピン (CH_ERR): L	CPU Unit U713
		Confirmation. Does not the DC detection circuit operate? KN110, KN210 2, 4ピン: under than -3V, more than +3V	Main Unit KN110, KN210
		Confirmation. Does not the temperature detection circuit operate? CN105, CN109, CN205, CN209 6ピン: 0V	Main Unit CN105, CN109, CN205, CN209
4	The power turn on. The sound is nothing.	Confirmation. Check the input select sw. Are wires disconnected or damaged?	CPU Unit CN701, 703, 704, 706 SP terminal
			Input Unit S101, CN101, CN103 CN201, CN203 (M4300)

TAD-M4300/M2500

5.2 CIRCUITE DESCRIPTION



Buffer & Comparator Part

Analog audio signal output from Input unit is input to Comparator via Buffer.
Standard wave, Input audio signal, and the negative feed back(NFB) signal are composed by Comparator part.
The oscillatory frequency of a standard wave is set in this part.

Protected Digital Audio Driver Part

The signal composed with pre-circuit is input to U300,350 of driver IC.
U300,350 execute pulse width modulation(PWM), and controls the level shift and timing and drive MOSFET.
MOSFET output the PWM signal for the speaker drive.
This part has the overcurrent protection by the short-circuit of the output and the temperature detection protection function .

Output LPF Part

This part removes the career element of an unnecessary radio-frequency signal to the speaker.
After low pass filter(LPF) is passed, it becomes Analog signal as shown in the above figure.

Detailed Descriptions on the Protection Functions

The protection circuit function of the amplifier is done in the following specifications.
Refer to this protection functions and the detailed circuit description for the diagnosis of a digital amplifier.

Overcurrent output detection function

Driver IC IRS20957SPBF(U300,U350) has this protection function.
Driver IC function will stop when the overcurrent is detected by either a high side or a low side of output MOSFET.
At the same time, detection signal (CSD) is transmitted to CPU(U713) by driver IC and the power is turned off. (Red LED flashes.)

DC output detection function

The power amplifier breaks down. MOSFET is destroyed.
Some the DC outputs are generated in the SP output by $\pm 3V$ or more.
Detection signal (ERR) is transmitted from the DC output detection circuit to CPU so as not to destroy the connected speaker and the power is turned off. (Red LED flashes.)

Temperature detection function

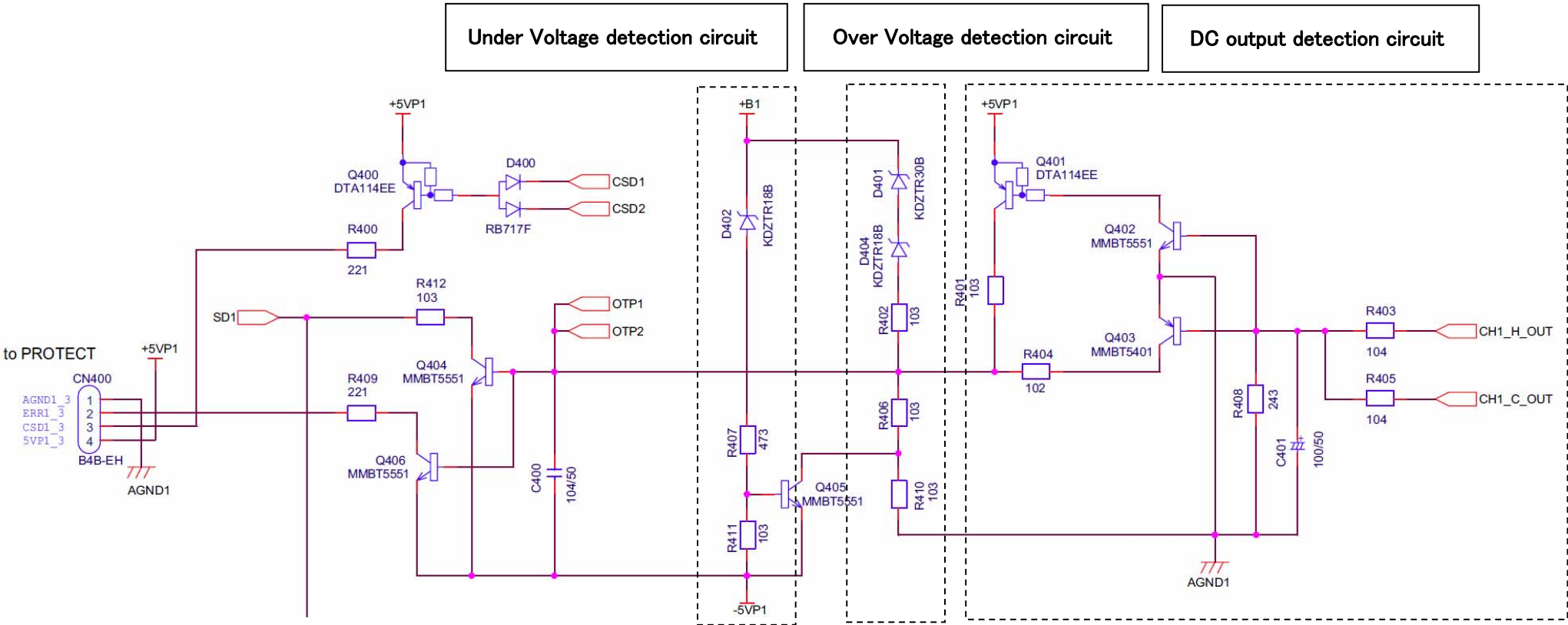
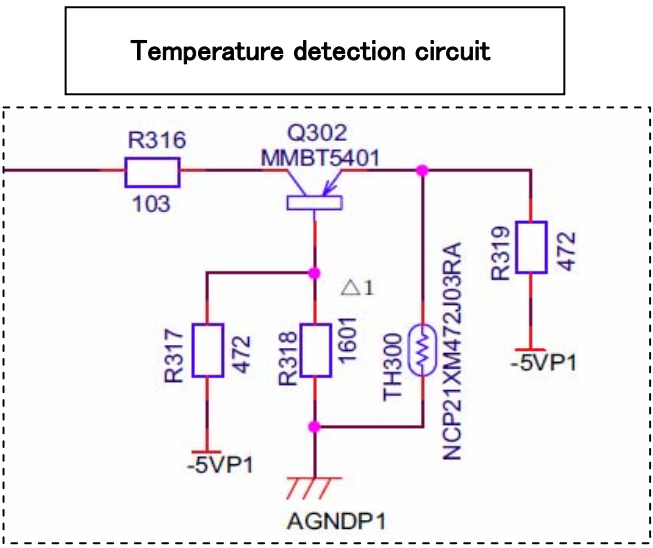
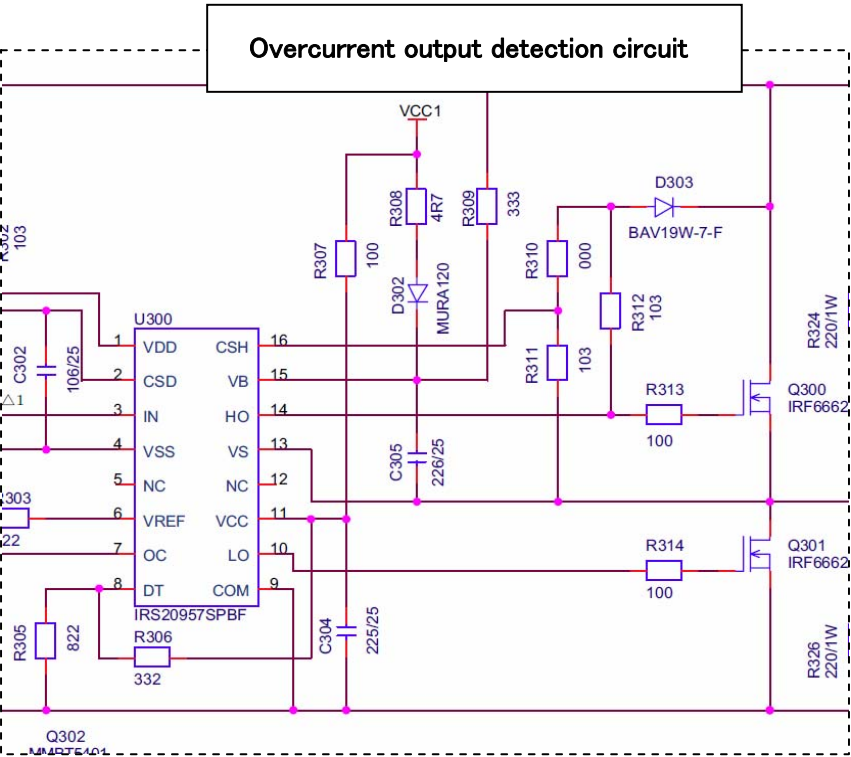
PTC (positive temperature coefficient, TH300, and TH350) resistance is mounted on the neighborhood to MOSFET.
Driver IC function stops when the temperature of the PTC resistance over about 75°C.
Detection signal (CSD) is transmitted to CPU and the power is turned off at the same time. (Red LED flashes.)

Over Voltage detection function

Driver IC function stops when the voltage between GND and +B power supply over about 50V.
Detection signal (CSD) is transmitted to CPU and the power is turned off at the same time. (Red LED flashes.)

Under Voltage detection function

Driver IC function stops when the voltage between GND and +B power supply under about 20V.
Detection signal (CSD) is transmitted to CPU and the power is turned off at the same time. (Red LED flashes.)



サービス基本項目

主要部品配置図

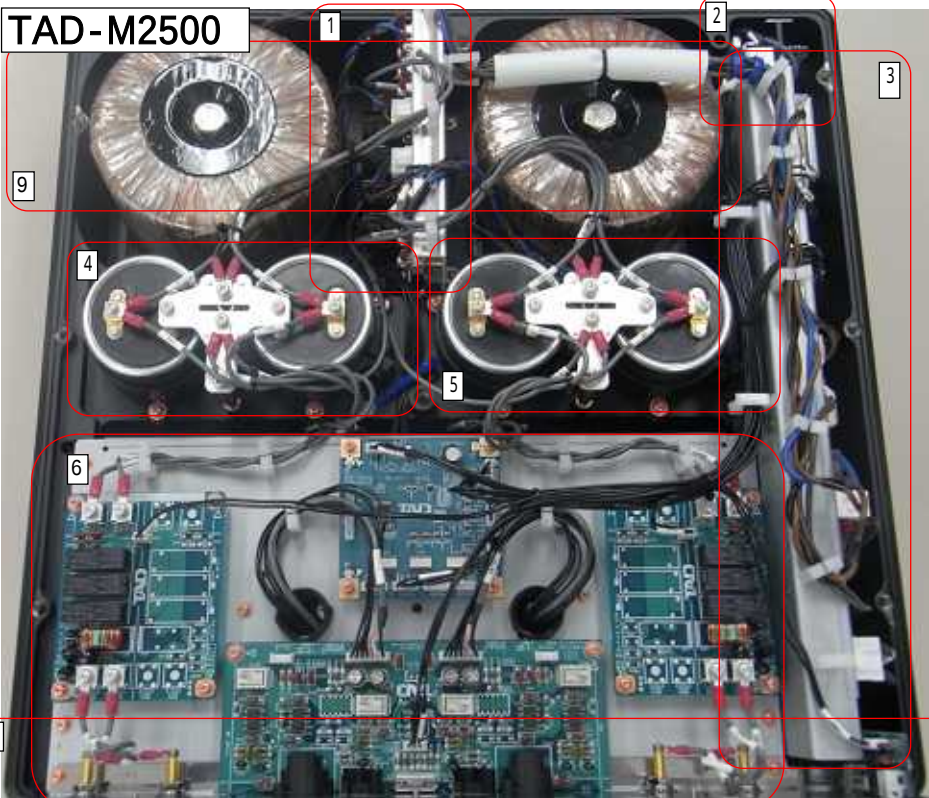
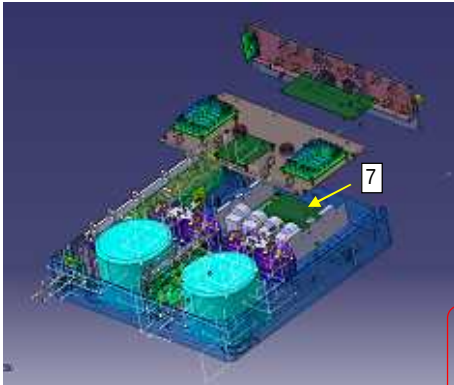
Layout

線材レイアウトと注意点
The layout of wires

線材がバラけない程度、写真のように軽くよる。
Twist those wire like this picture .

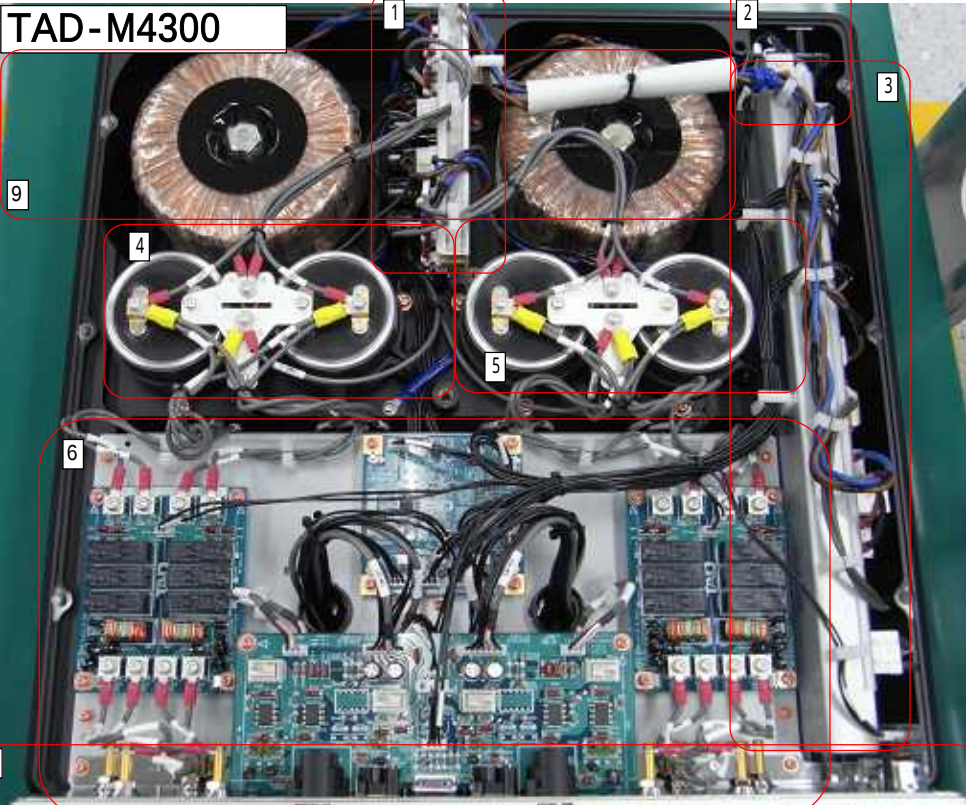
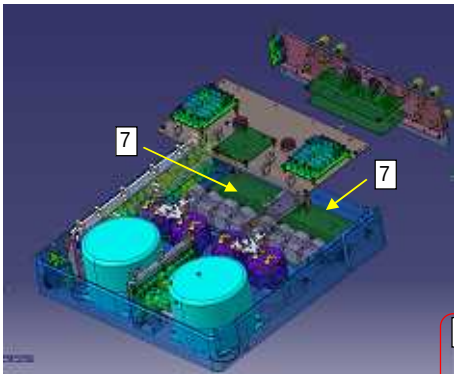
TAD-M2500

- 1.RECTIFICATION UNIT
- 2.P-SW UNIT
- 3.PRIMARY UNIT
- 4.CAPACITORS
- 5.CAPACITORS
- 6.AUDIO AREA
- 7.COMPLEX UNIT
- 8.SPEAKERS
- 9.MAIN TRANSFORMER AND OTHERS



TAD-M4300

- 1.RECTIFICATION UNIT
- 2.P-SW UNIT
- 3.PRIMARY UNIT
- 4.CAPACITORS
- 5.CAPACITORS
- 6.AUDIO AREA
- 7.COMPLEX UNIT
- 8.SPEAKERS
- 9.MAIN TRANSFORMER AND OTHERS



1,SEIRYU PCB ASSY

Disassemble RECTIFICATION UNIT

Remove Screws PMB30P080FCC X 4

Remove Screws PMB30P080FCC X 7

Remove Screws PMH30P080B X 2

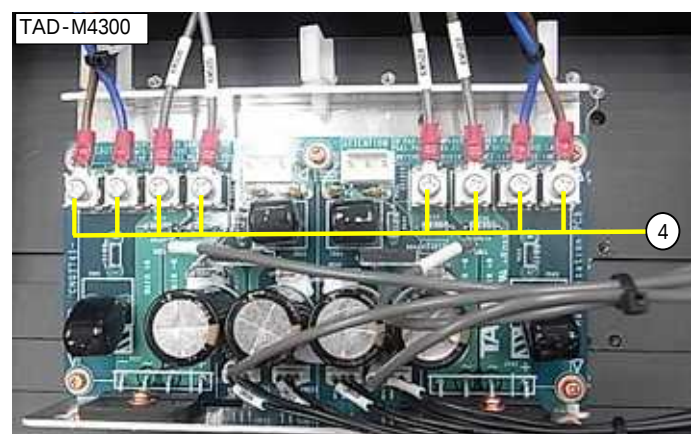
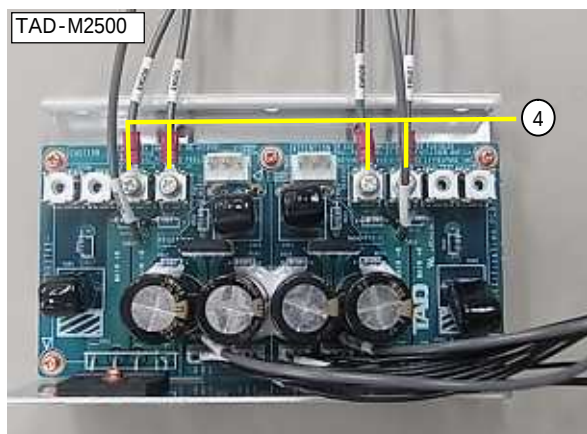
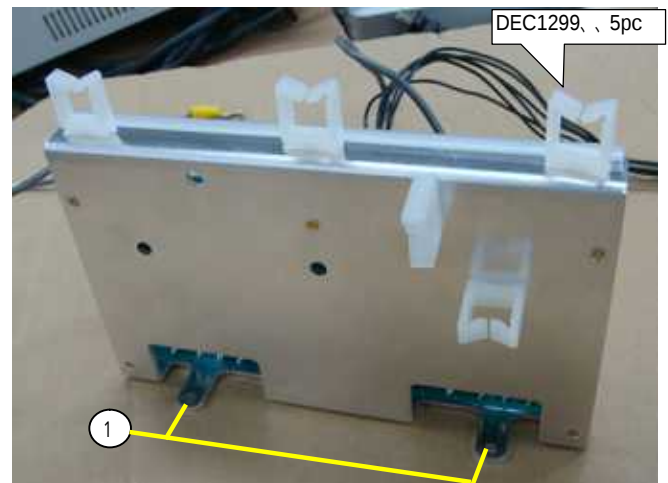
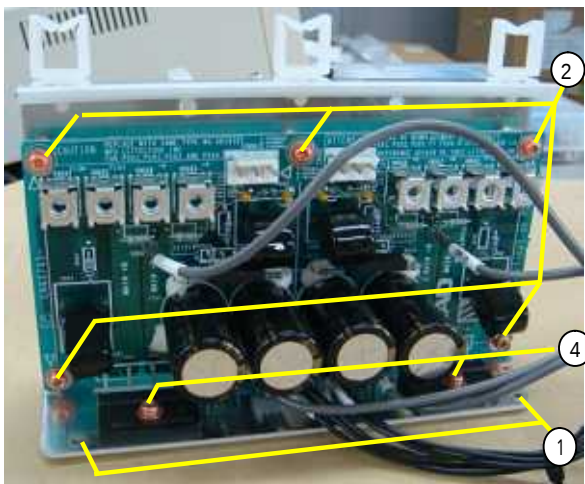
Remove Screws CBA2257

TAD-M2500 x 4

TAD-M4300 x 8

Taking out ANGLE(CND5646) from Chassis

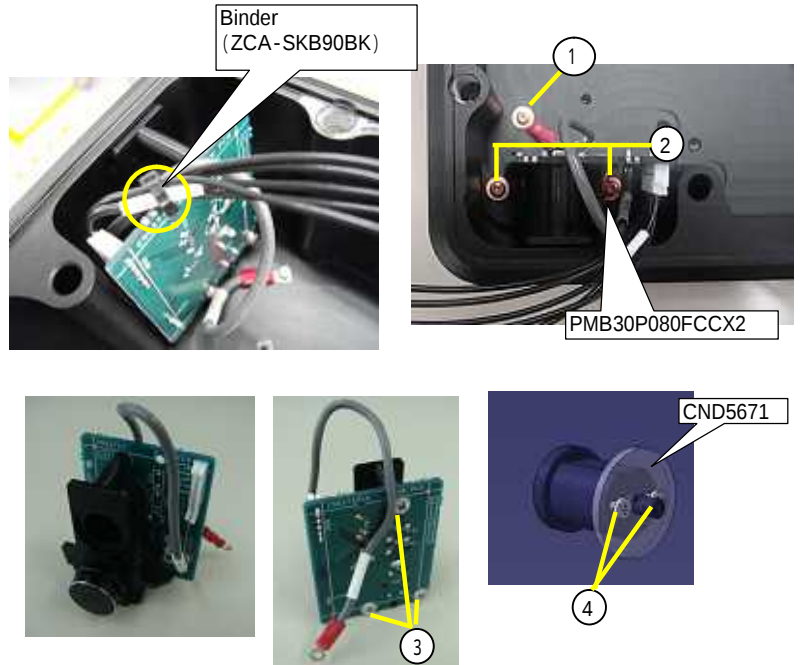
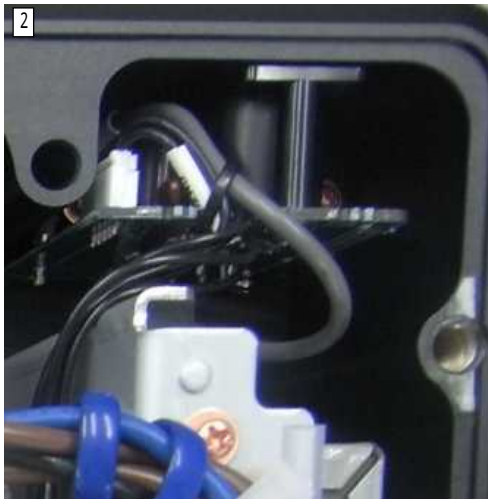
Taking out PCB from ANGLE(CND5646)



2.POWER BUTTON ASSY

Disassemble RECTIFICATION UNIT

- Remove Screws PMH30P060FTC X 1
- Remove Screws PMB30P080FCC X 2
- Remove Screws PPZ30P080FNI X 3
- Remove Screws PMH26P060FTCX 2

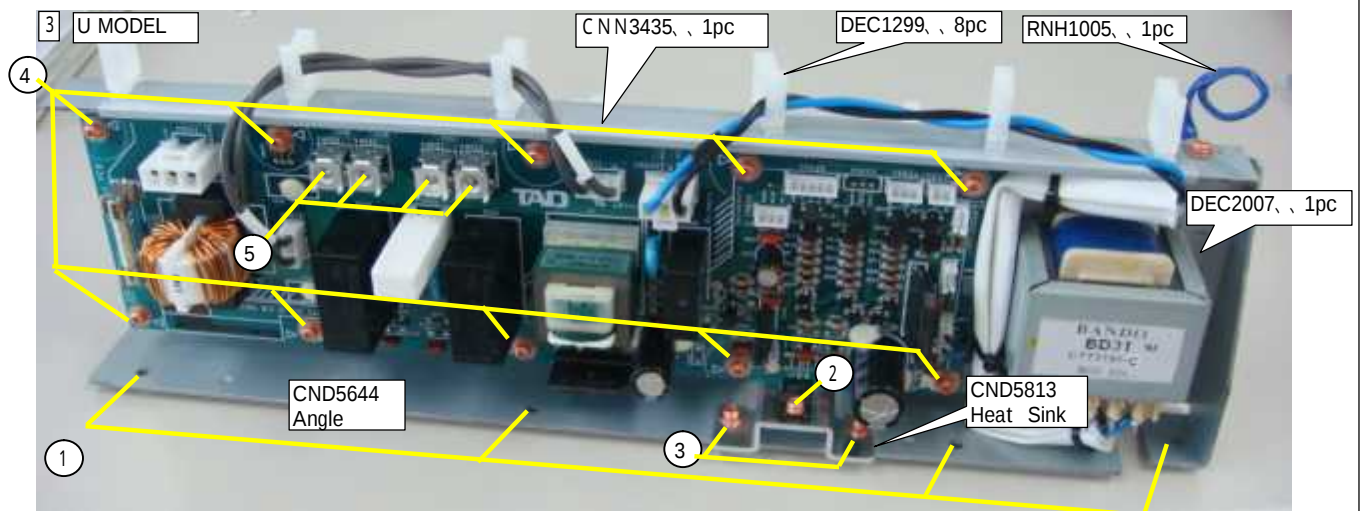


3.PRIMARY PCB ASSY

Disassemble RECTIFICATION UNIT

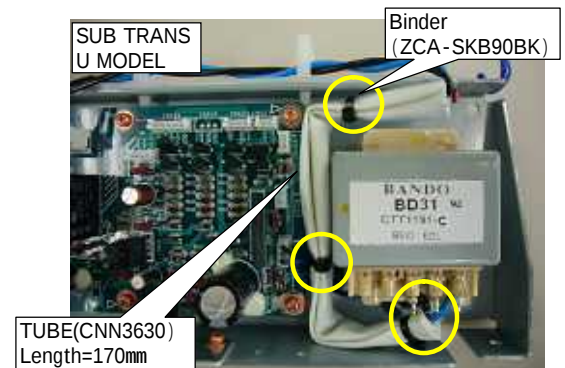
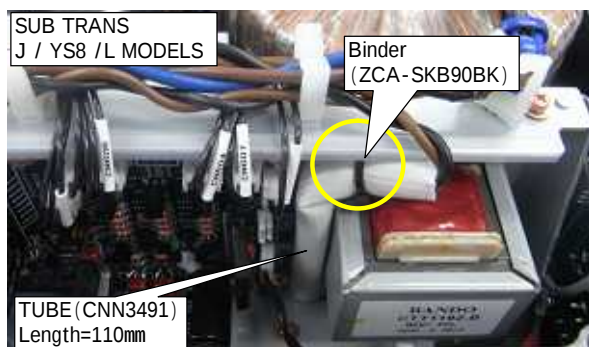
- Remove Screws PMB30P080FCC X 1
- Remove Screws PMH30P080FCC X 1
- Remove Screw PMB30P080FCC X 2
- Remove Screws PMB30P080FCCX 10
- Remove Screws CNB2257X 4

- Taking out ANGLE(CND5644) from Chassis
- Taking out IC601 from HEAT SINK
- Taking out HEAT SINK(CND5813) from ANGEL
- Taking out PRIMARY PCB from ANGEL
- Taking out WIRES from PCB



*Uモデルのみ、サブトランス回りの配線スタイリングが異なる。

*The stabling for Transformer of U model is different from other models .



6,AUDIO AREA

TAD-M2500

Disassemble PCB UNITS

Remove Screws PMB30P080FCC X 8
Remove Screws PMH30P080FCC X 8
Remove Screw PMB30P080FCC X 4
Remove Screws PMB30P080FCCX 2

Remove Screws CNB2257X 8

Taking out SHEILD(CND5643) from Chassis

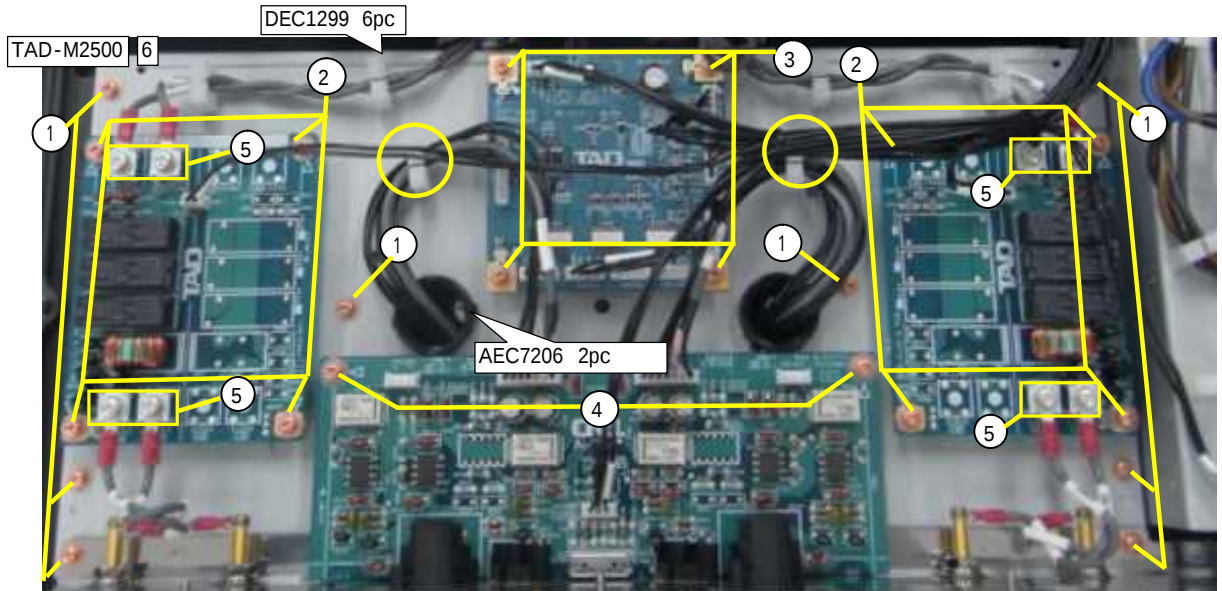
Taking out Speaker PCB from SHEILD .

Taking out μ PCB from SHEILD .

Taking out INPUT PCB from SHEILD .

*Screw for conpornent on the Rear panel should be taken .

Taking out WIRES from PCB



TAD-M4300

Disassemble PCB UNITS

Remove Screws PMB30P080FCC X 8
Remove Screws PMH30P080FCC X 8
Remove Screw PMB30P080FCC X 4
Remove Screws PMB30P080FCCX 2

Remove Screws CNB2257X 16

Taking out SHEILD(CND5643) from Chassis

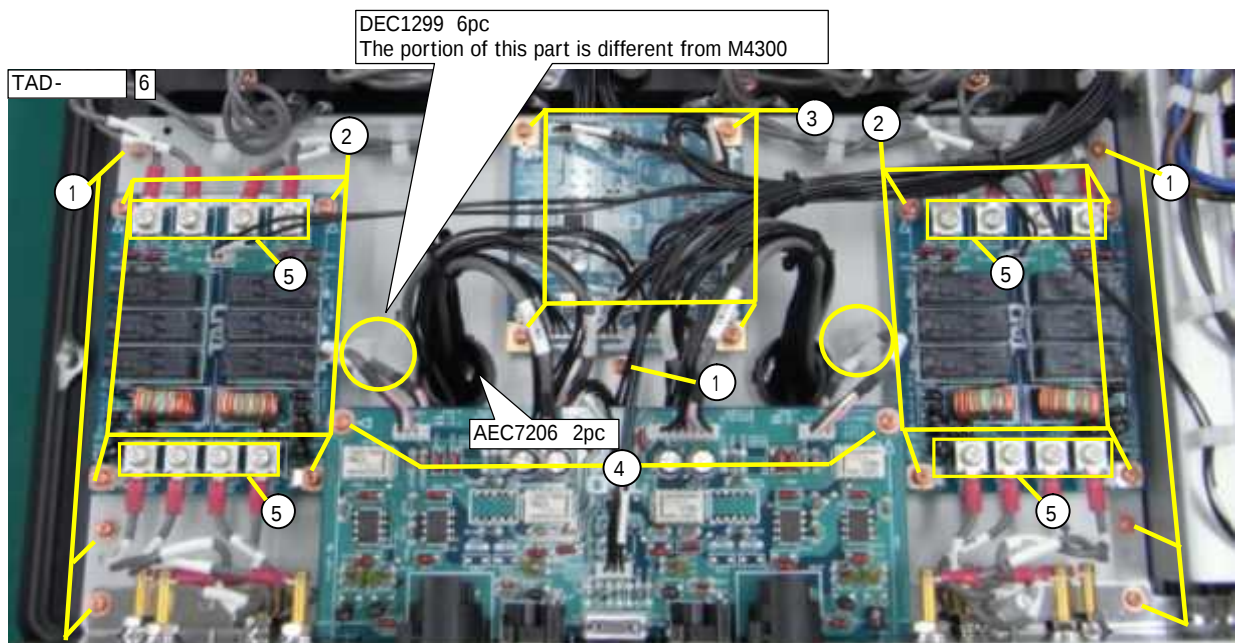
Taking out Speaker PCB from SHEILD .

Taking out μ PCB from SHEILD .

Taking out INPUT PCB from SHEILD .

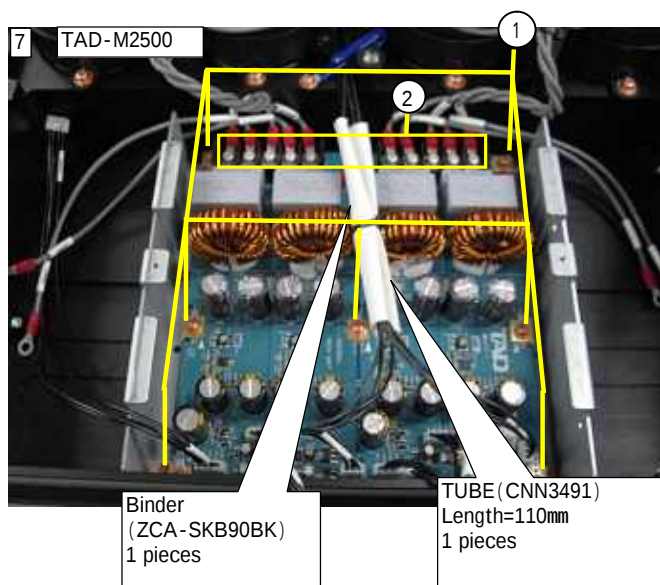
*Screw for conpornent on the Rear panel should be taken .

Taking out WIRES from PCB

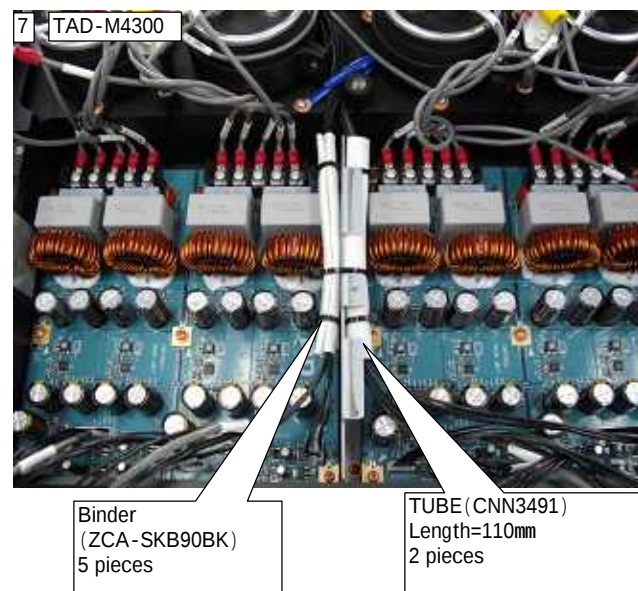


7.COMPLEX ASSY

TAD-M2500
フコウユニット部線材スタイリング
Wire styling for Complex Unit (CWX3924)

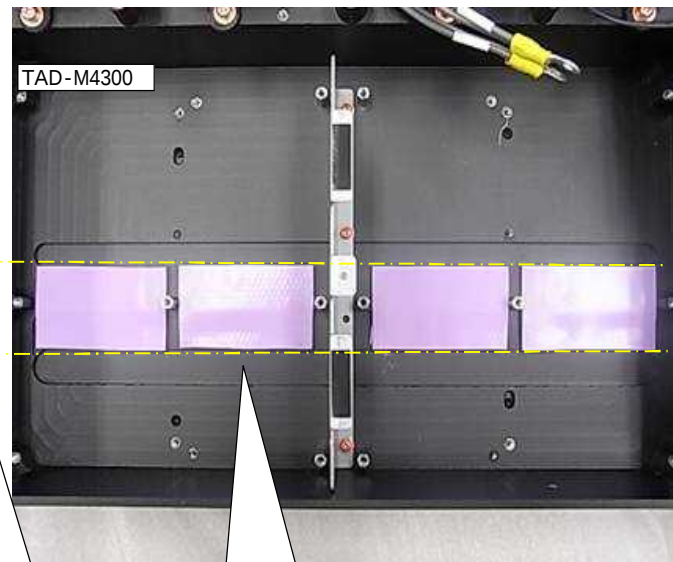
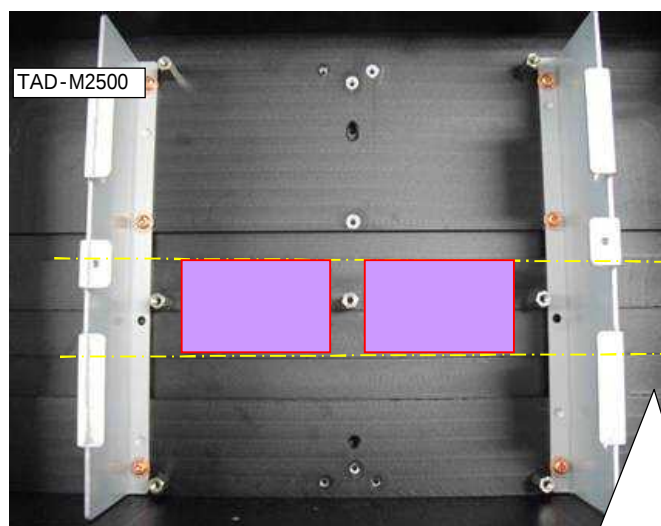


TAD-M4300
フコウユニット部線材スタイリング
Wire styling for Complex Unit (CWX3924)



放熱シート貼り付け位置 (CNN3476)
Portion for Sheets (CNN3476)

Sheetを貼り付け直す場合は、貼り位置間違えなき事。
Do not put the sheets on wrong position when those are put again .

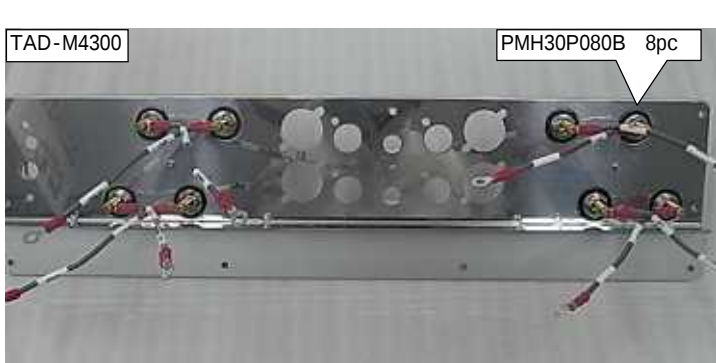


凹みのライン(黄)の間に貼り付ける。
Stick sheets between the line (yellow) of the groove.

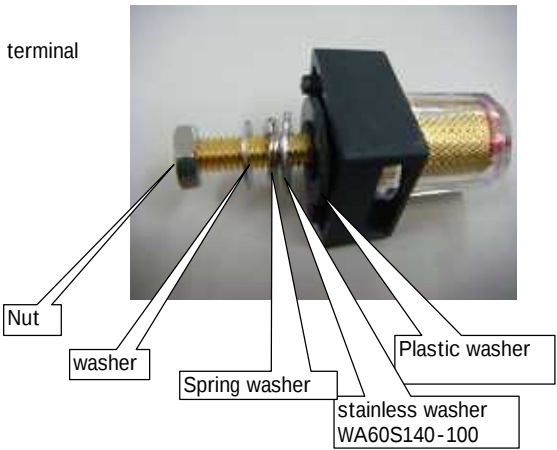
Sheet (CNN3476)
purple color



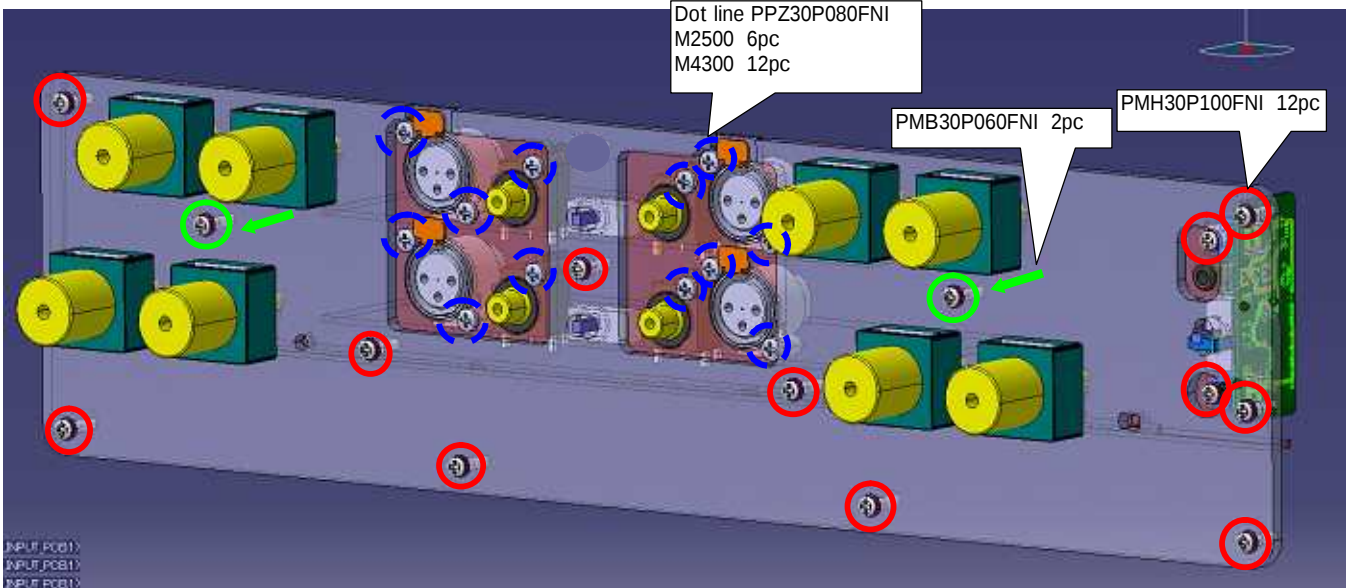
8,SPEAKERS



S Pターミナル取り付け順序
Installation order of Speaker terminal



リアパネルビス
Screw for Rear Panel

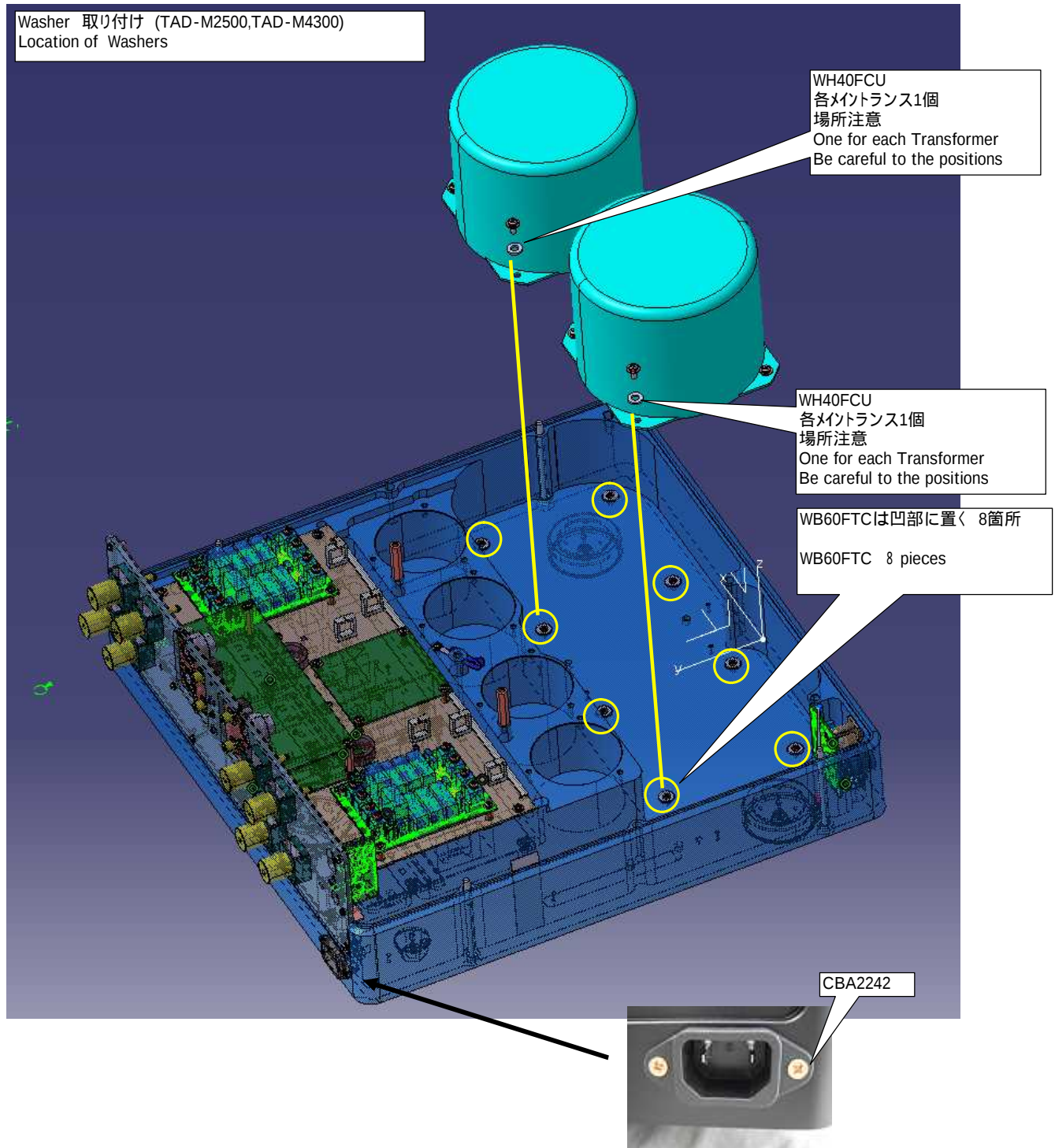


9,MAIN TRANSFORMER

Remove Screws PMB40P100FCC X 8 Taking out TRANSFPRMAR from Chassis
Taking out Washaers form Chassis

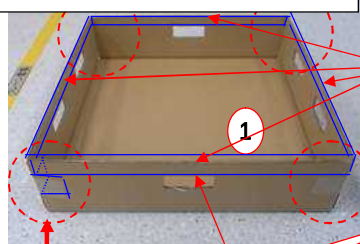
Remove Screws CBA2242 X 2 Taking out AC INLET form Chassis

Washer 取り付け (TAD-M2500,TAD-M4300)
Location of Washers



梱包 PACKING

梱包手順 Packing



4 隅を止める

取っ手開口部に
合わせて
位置決め

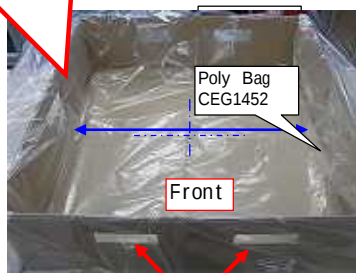
シート Sheet
CHV1005



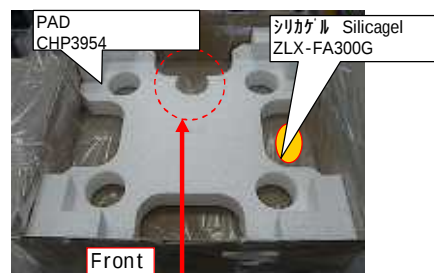
4 辺に
裏表貼る

2

ビニール袋の縫い目が矢印の横方向になるように置く
Put joint of poly bag as arrow direction



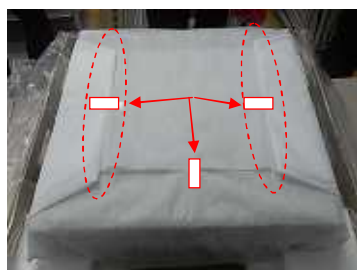
2 つ穴が製品の前後方向。
この場合、製品のフロントは手前とする
Those two holes are on the front or rear side



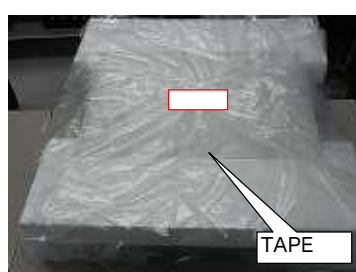
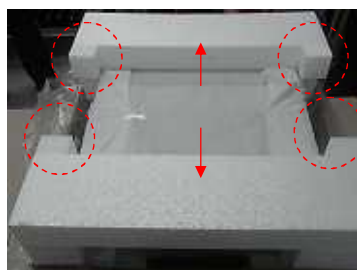
このマークが後ろ
This mark is on the rear side



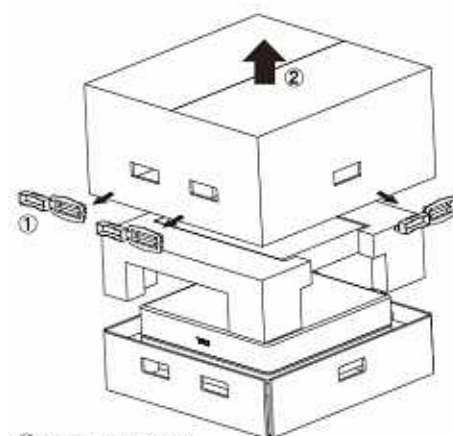
前後で折りたたみテープ止め
folding tape stopper in front and back



両サイドを折りたたみテープ止め点線部は2つ折り
fold both sides, and two tape stopper
dotted line parts are folded



ビニールを前後に折りコーションを貼る
fold vinyl into front and back and put caution CAN6233(US model)

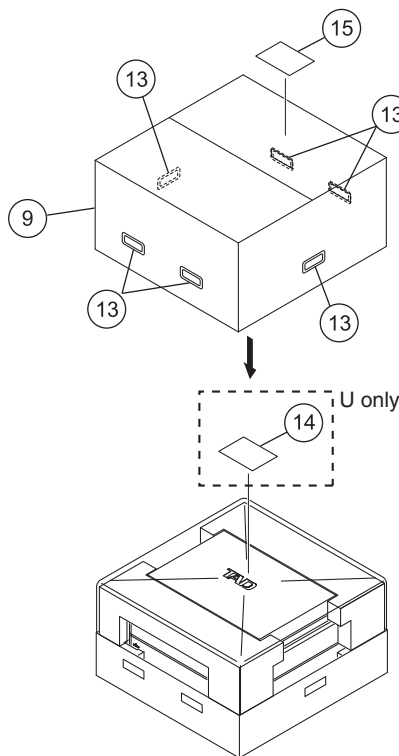
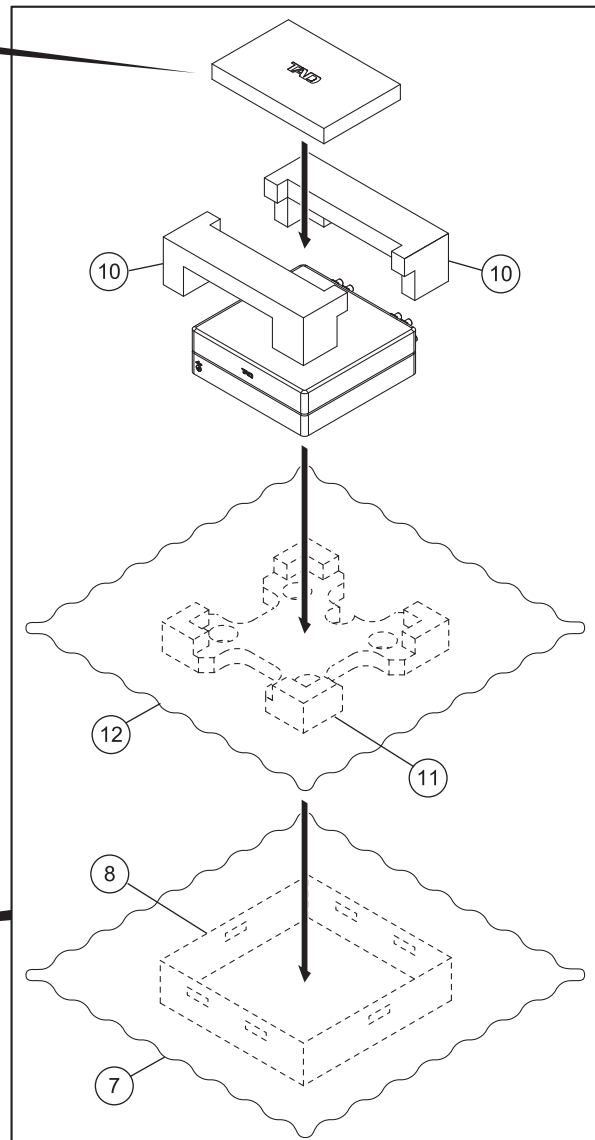
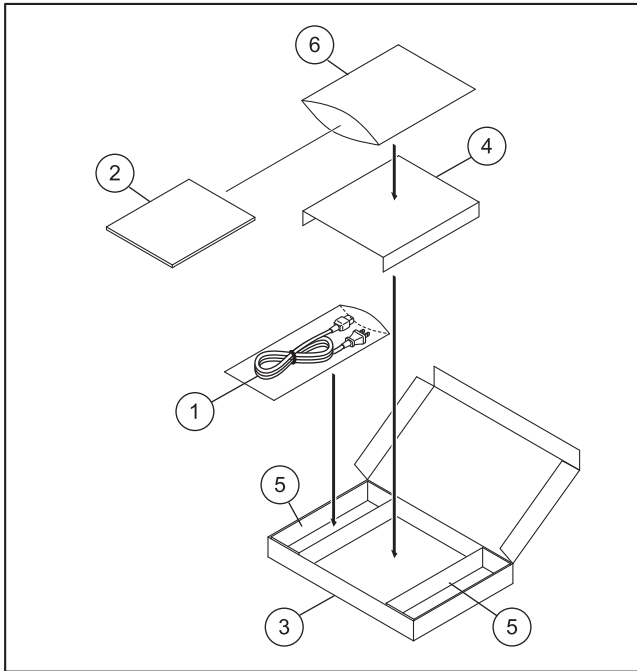


- ① Remove the joints (6px)
Enlevez les joints (6px)
- ② Lift up and Remove the Case
Soulever et enlever la partie supérieure du carton

9. EXPLODED VIEWS AND PARTS LIST

- NOTES :
- Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.
 - The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 - Screw adjacent to  mark on the product are used for disassembly.
 - For the applying amount of lubricants or glue, follow the instructions in this manual.
(In the case of no amount instructions, apply as you think it appropriate.)

9.1 PACKING SECTION



(1) PACKING SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
⚠	1 Power Cord	See Contrast table (2)
	2 Operating Instructions (En, Fr, De, It, Es, Ru, Zhtw)	CRD4490
	3 Accessory Box	CHW2145
*	4 Partition	CHW2135
	5 Spacer	CHW2146
	6 Polyethylene Bag	CEG1190
	7 Poly Bag	CEG1452
	8 Unit Box	CHG7122
	9 Unit Box	See Contrast table (2)
	10 Protector	CHP3953
	11 Protector	CHP3954
	12 Sheet	CHV1005
	13 Holder	CNW2003
*	14 Label	See Contrast table (2)
*	15 Label	CAN6506

(2) CONTRAST TABLE

TAD-M4300/U, YS8, L, TAD-M2500/U, YS8 and L are constructed the same except for the following:

Mark	No.	Symbol and Description	TAD-M4300 /U	TAD-M4300 /YS8	TAD-M4300 /L	TAD-M2500 /U	TAD-M2500 /YS8	TAD-M2500 /L
⚠	1	Power Cord	ADG7061	ADG7062	ADG7104	ADG7061	ADG7062	ADG7104
	9	Unit Box	CHG7129	CHG7129	CHG7129	CHG7125	CHG7125	CHG7125
*	14	Label	CAN6233	Not used	Not used	CAN6233	Not used	Not used

(1) EXTERIOR SECTION (TAD-M4300) PARTS LIST

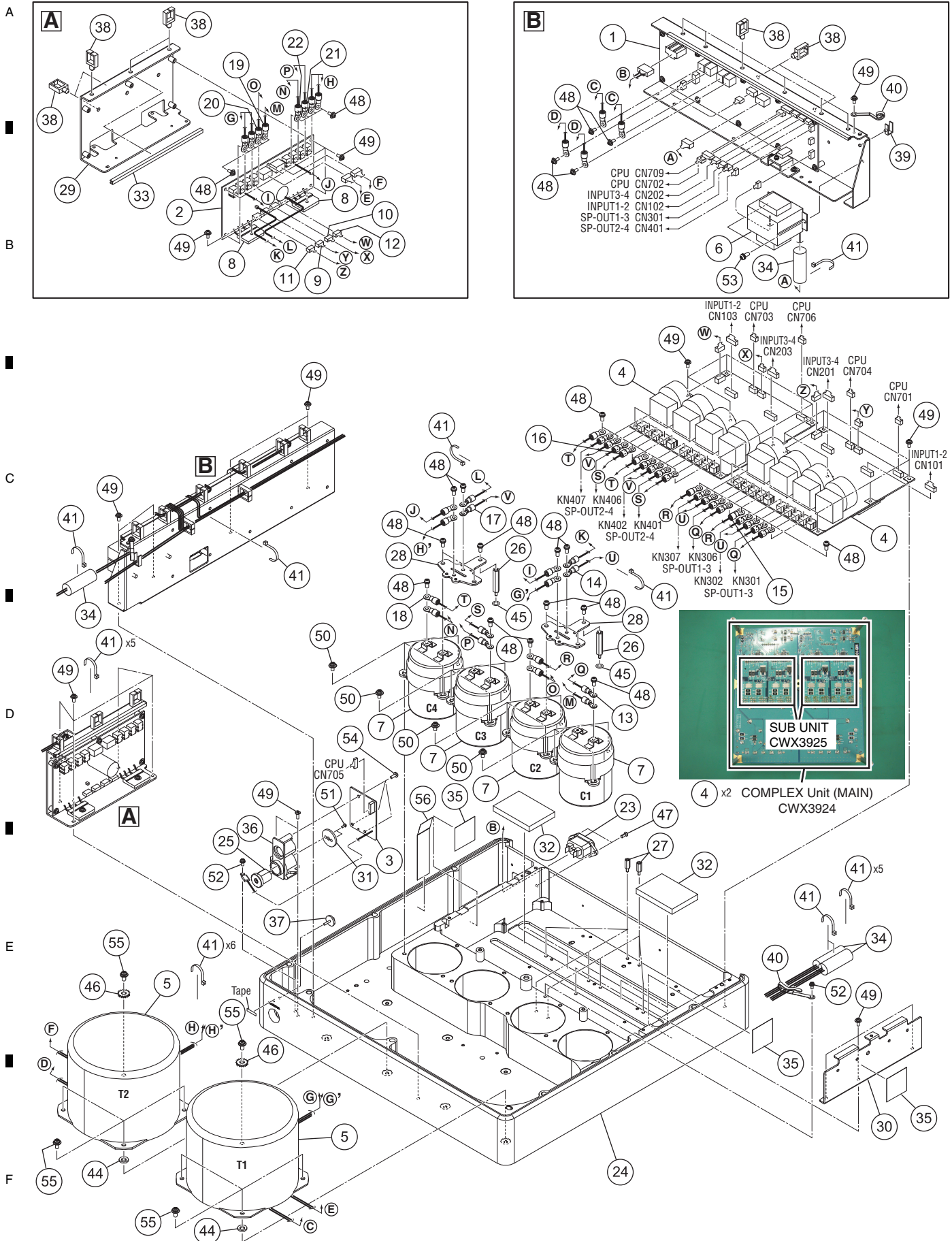
Mark No.	Description	Part No.	Mark No.	Description	Part No.	
1	AUDIO Unit (INPUT1-2)	CXX3060	36	Cord	CDE9313	
2	AUDIO Unit (INPUT3-4)	CXX3061	37	Cord	CDE9314	A
3	AUDIO Unit (SP-OUT1-3)	CXX3062	38	Cord	CDE9315	
4	AUDIO Unit (SP-OUT2-4)	CXX3063	39	Cord	CDE9316	
5	POWER SUPPLY Unit (S-SW)	CXX3075	40	Cord	CDE9317	
6	COMPLEX Unit (CPU)	CWX3926	41	Cord	CDE9318	
7	Terminal	CKE1074	42	Cord	CDE9319	
8	Terminal	CKE1075	43	Cord	CDE9326	
9	Cord	CDE9227	* 44	Bush	AEC7206	
10	Cord	CDE9228	45	Cushion	AEC7224	
11	Cord	CDE9229	46	Insulator 56 (MET)	ANL7028	B
12	Cord	CDE9230	47	Case	CLA4944	
13	Cord	CDE9231	48	Spacer	CLA4962	
14	Cord	CDE9232	49	Panel	CNB3665	
15	Cord	CDE9233	50	Panel	See Contrast table (2)	
16	Cord	CDE9234	51	Shield	CND5643	
17	Cord	CDE9235	52	Foot	CNN3414	
18	Cord	CDE9236	53	Edging	CNN3435	
19	Cord	CDE9237	54	Sheet	CNN3436	
20	Cord	CDE9238	55	Wire Saddle	DEC1299	C
21	Cord	CDE9239	56	Binder	ZCA-SKB90BK	
22	Cord	CDE9240	57	•••••		
23	Cord	CDE9241	58	•••••		
24	Cord	CDE9242	59	Washer	WA60S140-100	
25	Cord	CDE9243	60	Washer	WG50FCC	
26	Cord	CDE9244	61	Bolt	CLA4948	
27	Cord	CDE9245	62	Screw	CBA2257	
28	Cord	CDE9262	63	Screw	PMB30P080FCC	
29	Cord	CDE9263	64	Screw	PMB40P140FCC	D
30	Cord	CDE9264	65	Screw	PMH30P080B-	
31	Cord	CDE9269	66	Screw	PMH30P100FNI	
32	Cord	CDE9270	67	Screw	PMH40P180FCC	
33	Cord	CDE9271	68	Screw	PPZ30P080FNI	
34	Cord	CDE9272	69	Screw	PMB30P060FNI	
35	Cord	CDE9273				

(2) CONTRAST TABLE

TAD-M4300/U, YS8 and L are constructed the same except for the following:

Mark	No.	Symbol and Description	TAD-M4300/U	TAD-M4300/YS8	TAD-M4300/L
	50	Panel	CNB3699	CNB3700	CNB3702

9.3 BOTTOM SECTION (TAD-M4300)



(1) BOTTOM SECTION (TAD-M4300) PARTS LIST

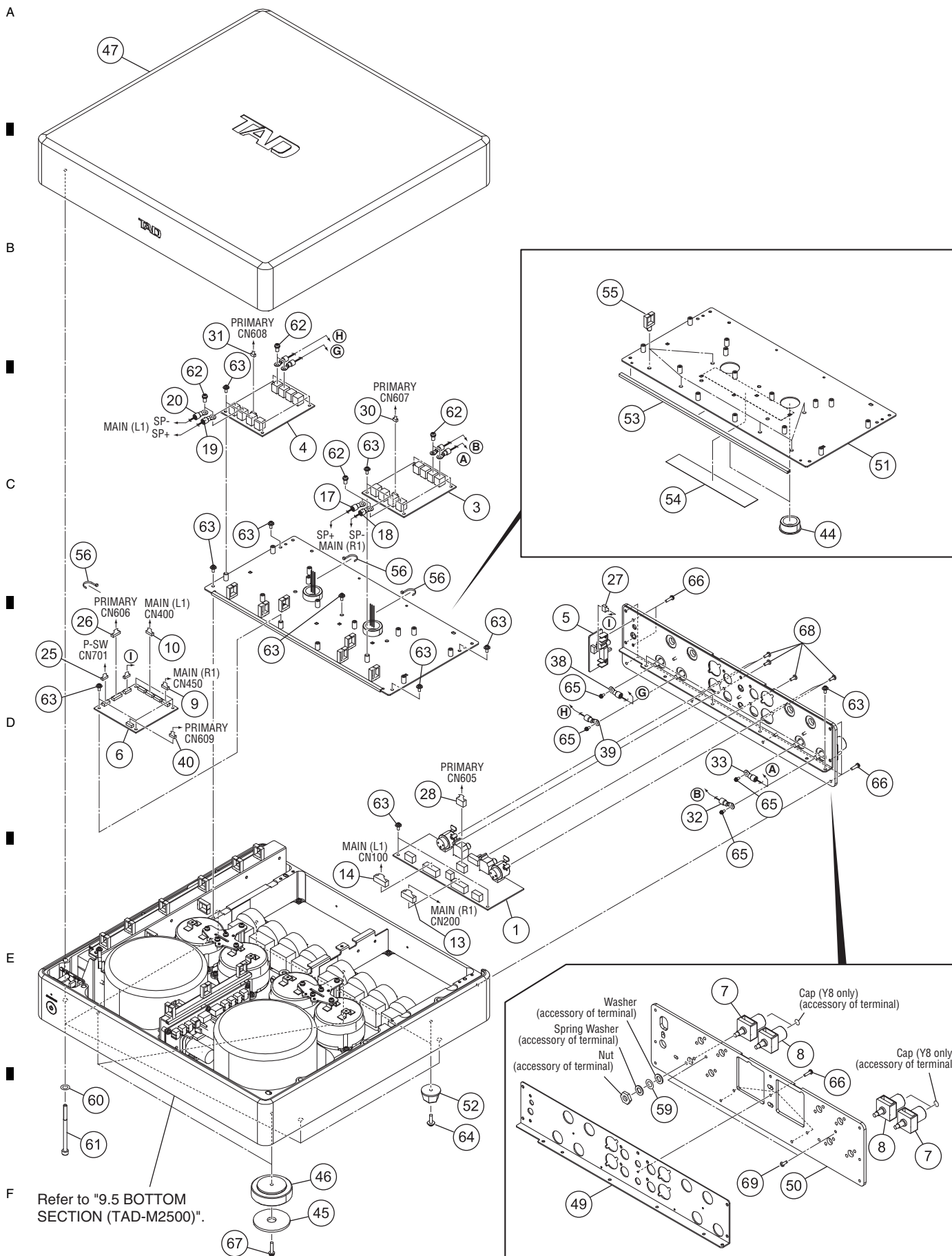
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.	
	1	POWER SUPPLY Unit (PRIMARY)	See Contrast table (2)		25	Button	CLA4946	
	2	POWER SUPPLY Unit (RECTIFICATION)	CXX3073		26	Specer	CLA4960	A
	3	POWER SUPPLY Unit (P-SW)	CXX3074		27	Spacer	CLA4961	
	4	COMPLEX Unit (MAIN)	CWX3924		28	Earth Plate	CND5642	
					29	Angle	CND5646	
⚠	5	Transformer (T1, T2)	See Contrast table (2)		30	Angle	CND5656	
⚠	6	Transformer (T3)	See Contrast table (2)		31	Cap	CND5671	
	7	Capacitor (C1 - C4)	CCH1972		32	Sheet	CNN3476	
	8	Diode (D501, D502)	D30XBN20		33	Edging	CNN3490	
	9	Cord	CDE9246		34	Tube	CNN3491	
	10	Cord	CDE9247	*	35	Sheet	CNN3508	B
	11	Cord	CDE9248		36	Cover	CNW1867	
	12	Cord	CDE9249		37	Lens	CNW2000	
	13	Cord	CDE9256		38	Wire Saddle	DEC1299	
	14	Cord	CDE9257		39	Side Clamp	DEC2007	
	15	Cord	CDE9258		40	Cord Clamper (Steel)	RNH1005	
	16	Cord	CDE9259		41	Binder	ZCA-SKB90BK	
	17	Cord	CDE9260		42	•••••		
	18	Cord	CDE9261		43	•••••		
	19	Cord	CDE9274		44	Washer	WB60FTC	C
	20	Cord	CDE9275		45	Washer	WG40FCC	
	21	Cord	CDE9276		46	Nut	WH40FCU	
	22	Cord	CDE9277		47	Screw	CBA2242	
	23	Other Cord	CDX1019		48	Screw	CBA2257	
	24	Chassis	CLA4945		49	Screw	PMB30P080FCC	
					50	Screw	PMB40P080FCC	
					51	Screw	PMH26P060FTC	
					52	Screw	PMH30P060FTC	
					53	Screw	PMH40P100FCC	D
					54	Screw	PPZ30P080FNI	
					55	Screw	PMB40P100FCC	
					56	Spacer	CNN3624	

(2) CONTRAST TABLE

TAD-M4300/U, YS8 and L are constructed the same except for the following:

Mark	No.	Symbol and Description	TAD-M4300/U	TAD-M4300/YS8	TAD-M4300/L
	1	POWER SUPPLY Unit (PRIMARY)	CXX3069	CXX3070	CXX3071
⚠	5	Transformer (T1, T2)	CTT1188	CTT1189	CTT1189
⚠	6	Transformer (T3)	CTT1191	CTT1192	CTT1192

9.4 EXTERIOR SECTION (TAD-M2500)



(1) EXTERIOR SECTION (TAD-M2500) PARTS LIST

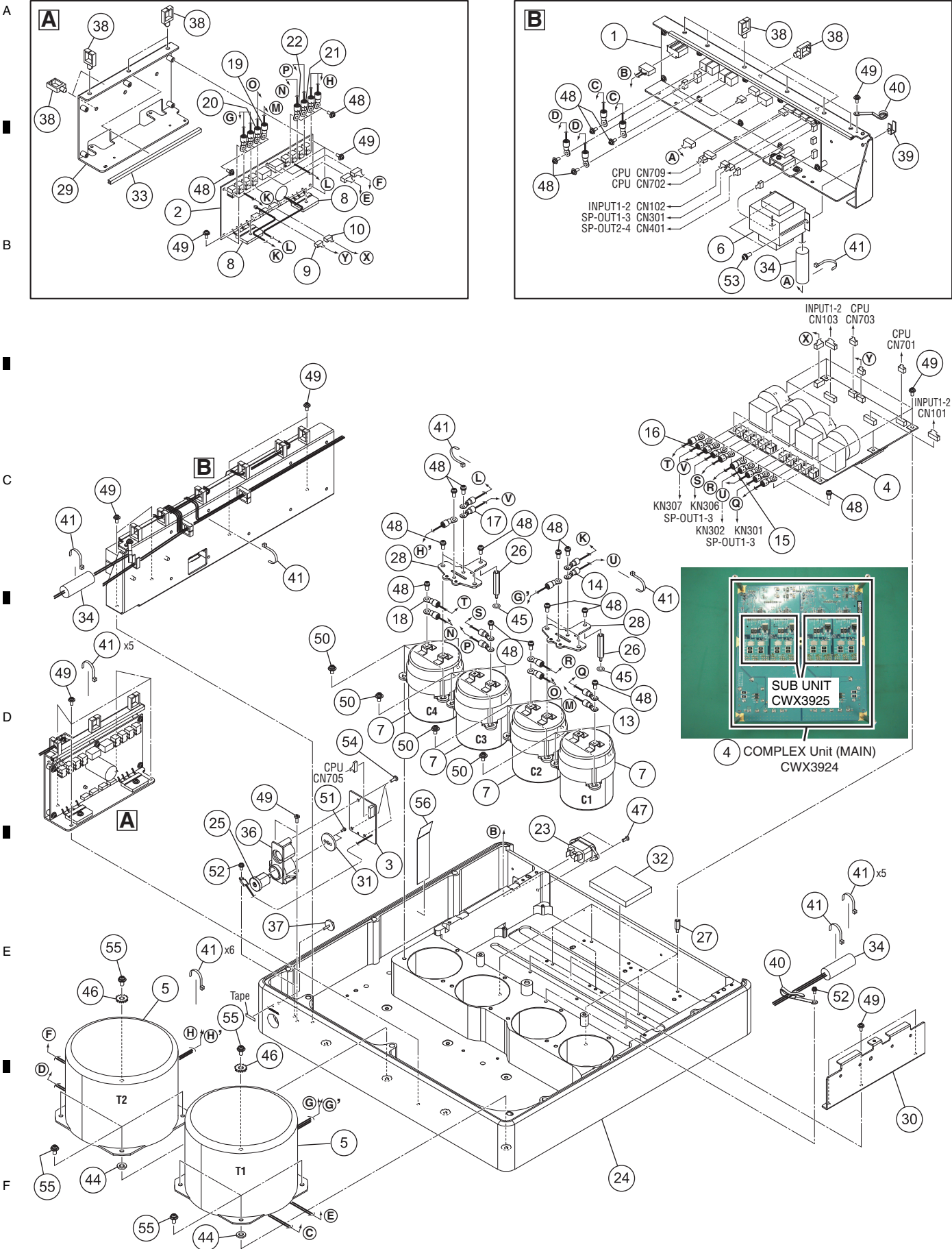
Mark No.	Description	Part No.	Mark No.	Description	Part No.	
1	AUDIO Unit (INPUT1-2)	CXX3057	36	•••••		
2	•••••		37	•••••		A
3	AUDIO Unit (SP-OUT1-3)	CXX3058	38	Cord	CDE9315	
4	AUDIO Unit (SP-OUT2-4)	CXX3059	39	Cord	CDE9316	
5	POWER SUPPLY Unit (S-SW)	CXX3074	40	Cord	CDE9317	
6	COMPLEX Unit (CPU)	CWX3926	41	•••••		
7	Terminal	CKE1074	42	•••••		
8	Terminal	CKE1075	43	•••••		
9	Cord	CDE9227	* 44	Bush	AEC7206	
10	Cord	CDE9228	45	Cushion	AEC7224	
11	•••••		46	Insulator 56 (MET)	ANL7028	B
12	•••••		47	Case	CLA4944	
13	Cord	CDE9231	48	•••••		
14	Cord	CDE9232	49	Panel	CNB3660	
15	•••••		50	Panel	See Contrast table (2)	
16	•••••		51	Shield	CND5643	
17	Cord	CDE9235	52	Foot	CNN3414	
18	Cord	CDE9236	53	Edging	CNN3435	
19	Cord	CDE9237	54	Sheet	CNN3436	
20	Cord	CDE9238	55	Wire Saddle	DEC1299	C
21	•••••		56	Binder	ZCA-SKB90BK	
22	•••••		57	•••••		
23	•••••		58	•••••		
24	•••••		59	Washer	WA60S140-100	
25	Cord	CDE9243	60	Washer	WG50FCC	
26	Cord	CDE9244	61	Bolt	CLA4948	
27	Cord	CDE9245	62	Screw	CBA2257	
28	Cord	CDE9262	63	Screw	PMB30P080FCC	
29	•••••		64	Screw	PMB40P140FCC	D
30	Cord	CDE9264	65	Screw	PMH30P080B-	
31	Cord	CDE9269	66	Screw	PMH30P100FNI	
32	Cord	CDE9270	67	Screw	PMH40P180FCC	
33	Cord	CDE9271	68	Screw	PPZ30P080FNI	
34	•••••		69	Screw	PMB30P060FNI	
35	•••••					

(2) CONTRAST TABLE

TAD-M2500/U, YS8 and L are constructed the same except for the following:

Mark	No.	Symbol and Description	TAD-M2500/U	TAD-M2500/YS8	TAD-M2500/L
	50	Panel	CNB3695	CNB3696	CNB3698

9.5 BOTTOM SECTION (TAD-M2500)



(1) BOTTOM SECTION (TAD-M2500) PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.	
	1	POWER SUPPLY Unit (PRIMARY)	See Contrast table (2)	25	Button		CLA4946	
	2	POWER SUPPLY Unit (RECTIFICATION)	CXX3072	26	Specer		CLA4960	A
	3	POWER SUPPLY Unit (P-SW)	CXX3074	27	Spacer		CLA4961	
	4	COMPLEX Unit (MAIN)	CWX3924	28	Earth Plate		CND5642	
				29	Angle		CND5646	
⚠	5	Transformer (T1, T2)	See Contrast table (2)	30	Angle		CND5656	
⚠	6	Transformer (T3)	See Contrast table (2)	31	Cap		CND5671	
	7	Capacitor (C1 - C4)	CCH1972	32	Sheet		CNN3476	
	8	Diode (D501, D502)	D30XBN20	33	Edging		CNN3490	
	9	Cord	CDE9246	34	Tube		CNN3491	
	10	Cord	CDE9247	35	•••••			B
	11	•••••		36	Cover		CNW1867	
	12	•••••		37	Lens		CNW2000	
	13	Cord	CDE9250	38	Wire Saddle		DEC1299	
	14	Cord	CDE9251	39	Side Clamp		DEC2007	
	15	Cord	CDE9252	40	Cord Clamper (Steel)		RNH1005	
	16	Cord	CDE9253	41	Binder		ZCA-SKB90BK	
	17	Cord	CDE9254	42	•••••			
	18	Cord	CDE9255	43	•••••			
	19	Cord	CDE9274	44	Washer		WB60FTC	C
	20	Cord	CDE9275	45	Washer		WG40FCC	
	21	Cord	CDE9276	46	Nut		WH40FCU	
	22	Cord	CDE9277	47	Screw		CBA2242	
	23	Other Cord	CDX1019	48	Screw		CBA2257	
	24	Chassis	CLA4945	49	Screw		PMB30P080FCC	
				50	Screw		PMB40P080FCC	
				51	Screw		PMH26P060FTC	
				52	Screw		PMH30P060FTC	
				53	Screw		PMH40P100FCC	D
				54	Screw		PPZ30P080FNI	
				55	Screw		PMB40P100FCC	
				56	Spacerw		CNN3624	

(2) CONTRAST TABLE

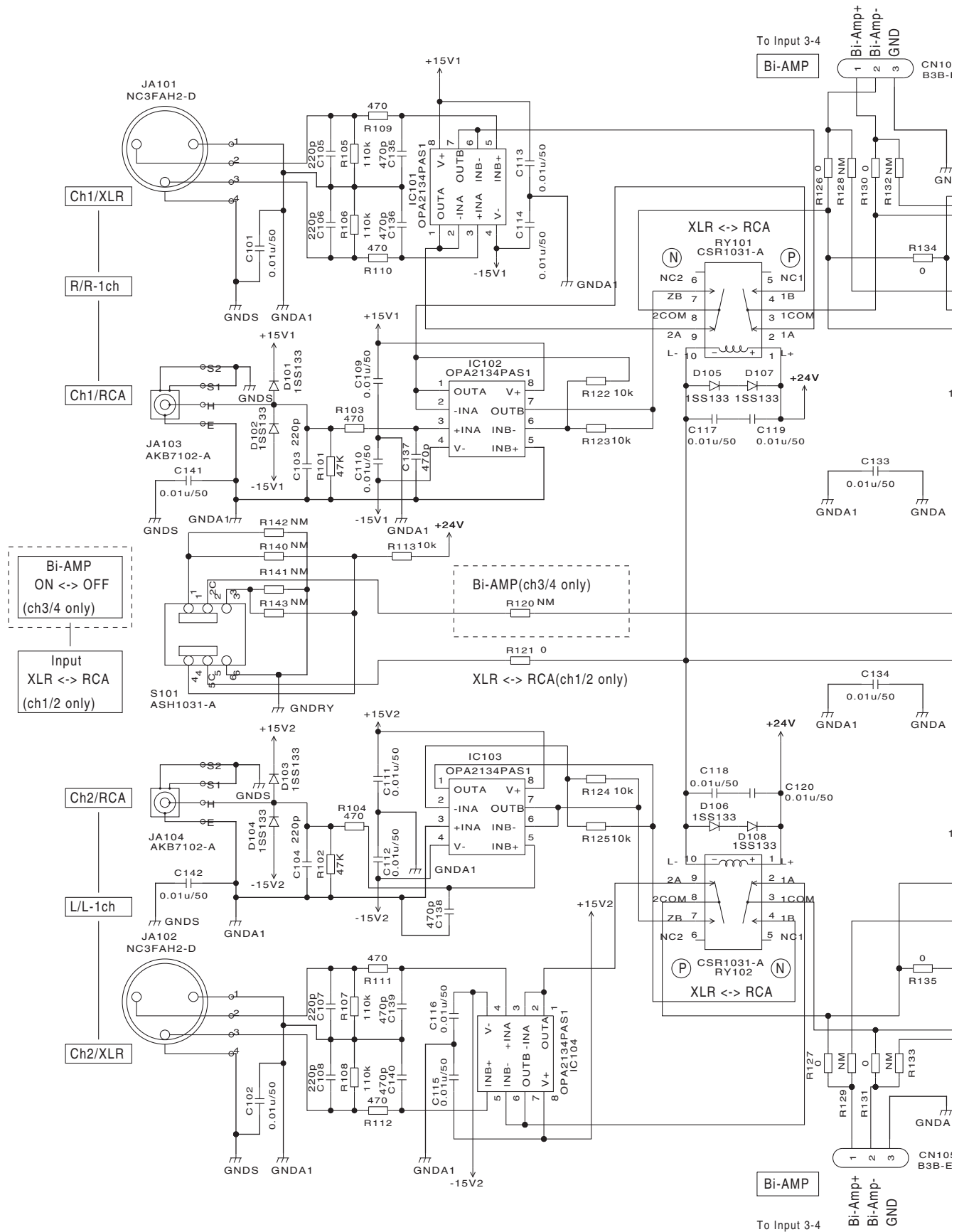
TAD-M2500/U, YS8 and L are constructed the same except for the following:

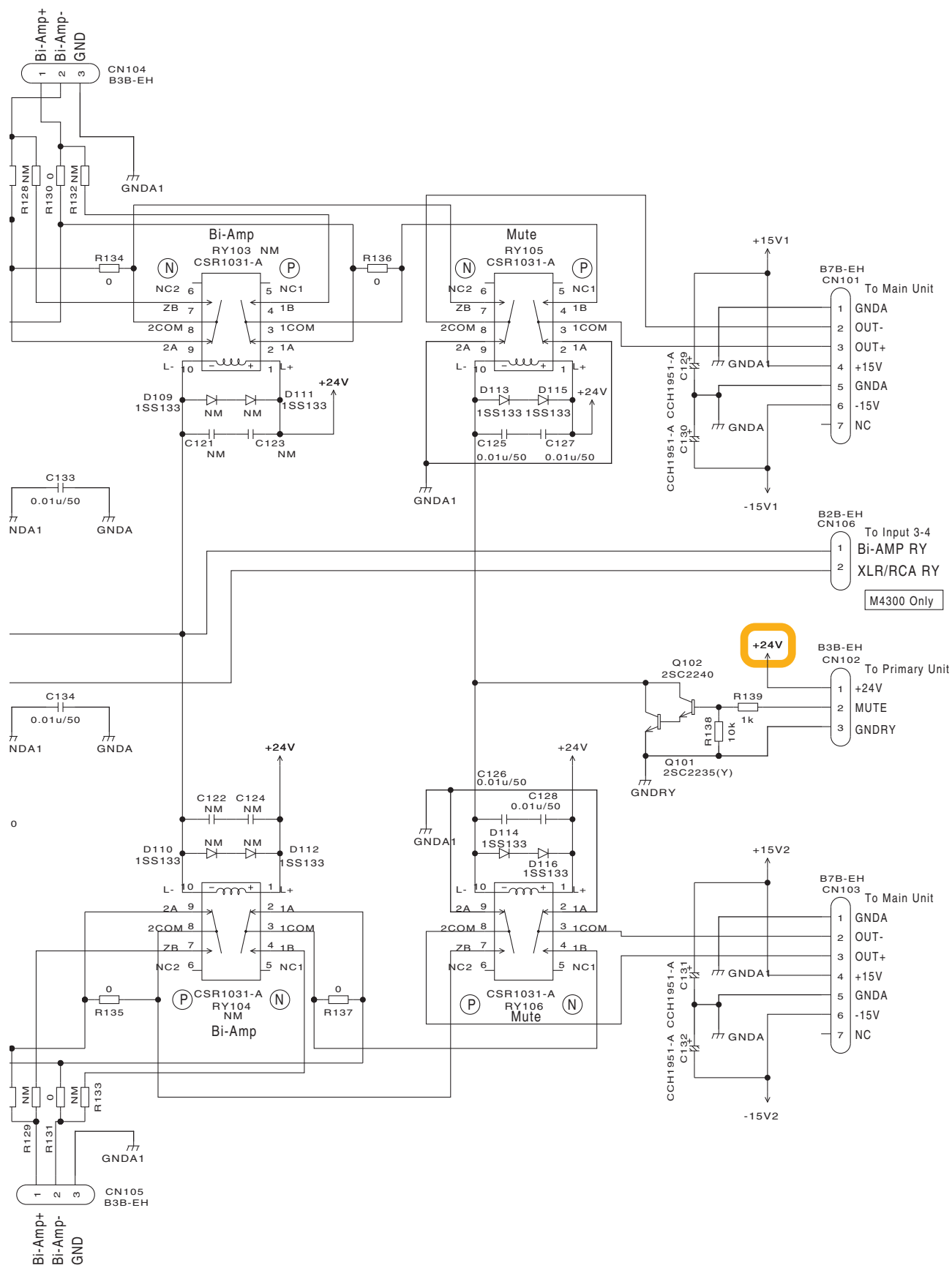
Mark	No.	Symbol and Description	TAD-M2500/U	TAD-M2500/YS8	TAD-M2500/L
	1	POWER SUPPLY Unit (PRIMARY)	CXX3065	CXX3068	CXX3067
⚠	5	Transformer (T1, T2)	CTT1185	CTT1186	CTT1186
⚠	6	Transformer (T3)	CTT1191	CTT1192	CTT1192

10. SCHEMATIC DIAGRAM

10.1 AUDIO UNIT (INPUT1-2)

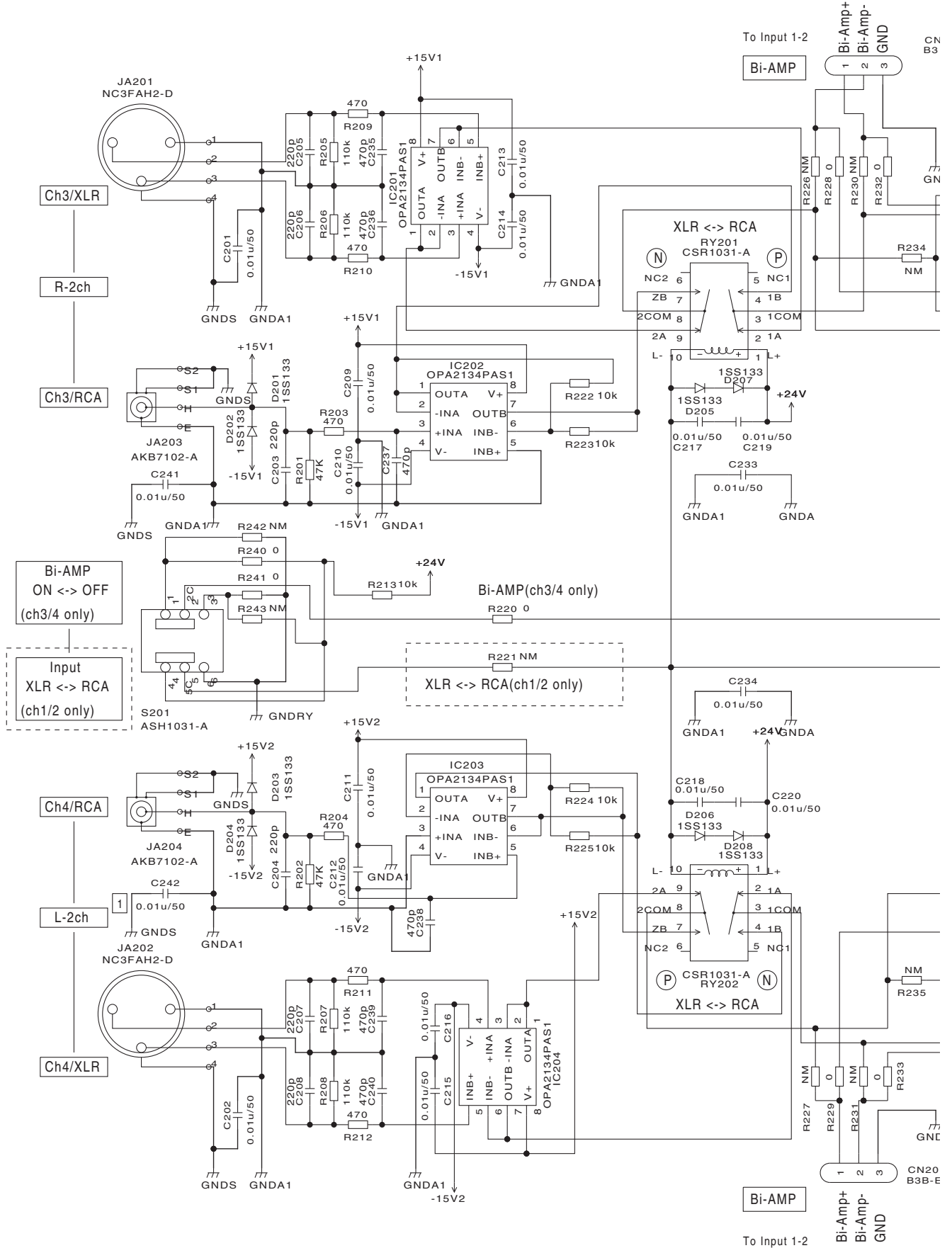
AUDIO UNIT (INPUT1-2)

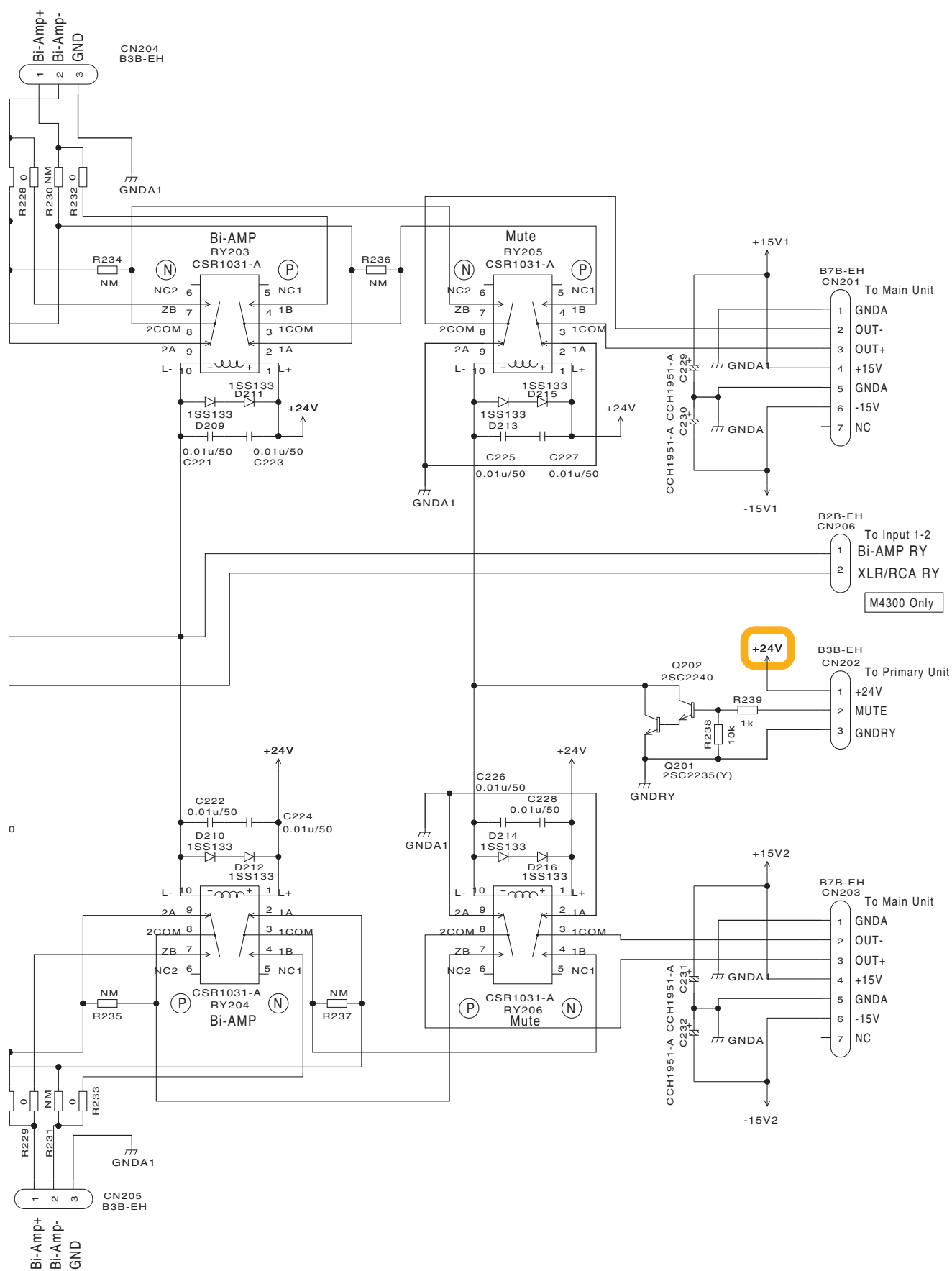




10.2 AUDIO UNIT (INPUT3-4)

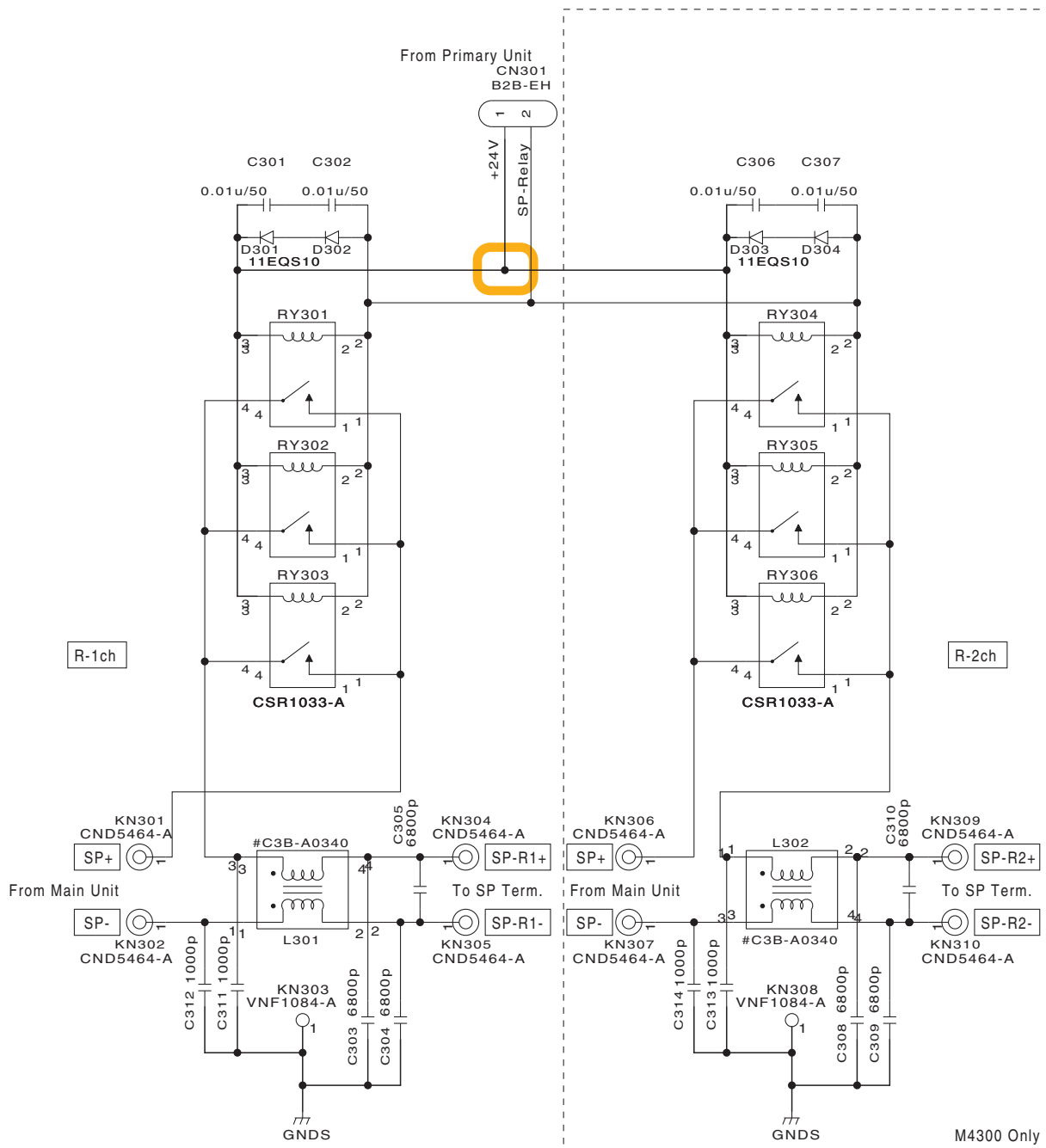
AUDIO UNIT (INPUT3-4)





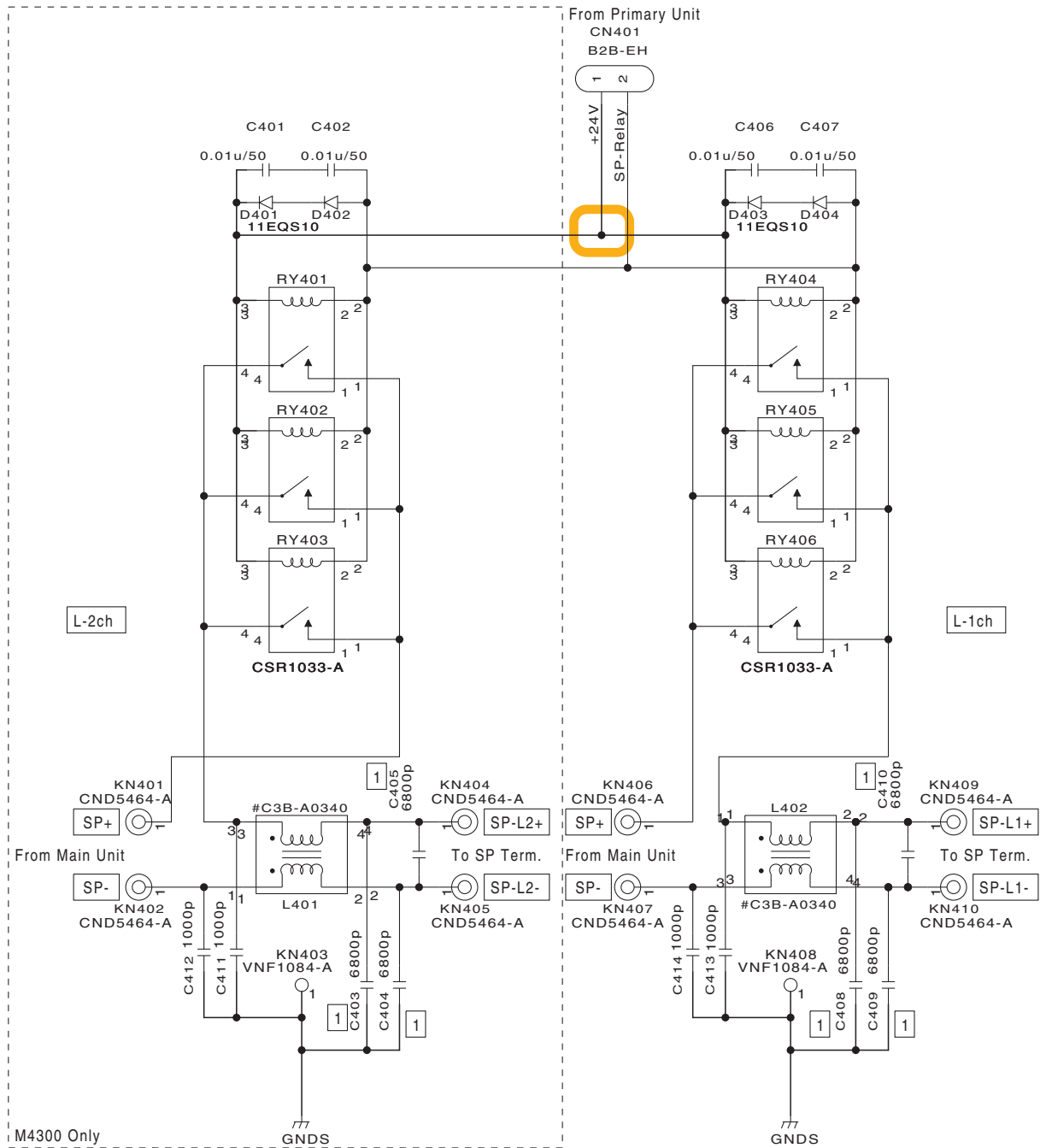
10.3 AUDIO UNIT (SP-OUT1-3)

AUDIO UNIT (SP-OUT1-3)



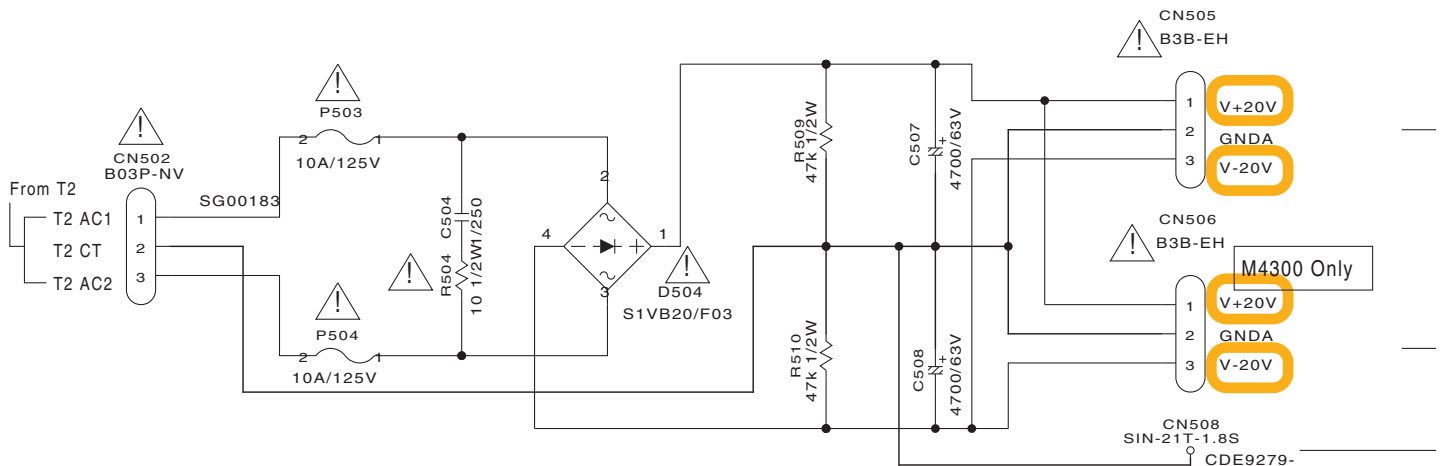
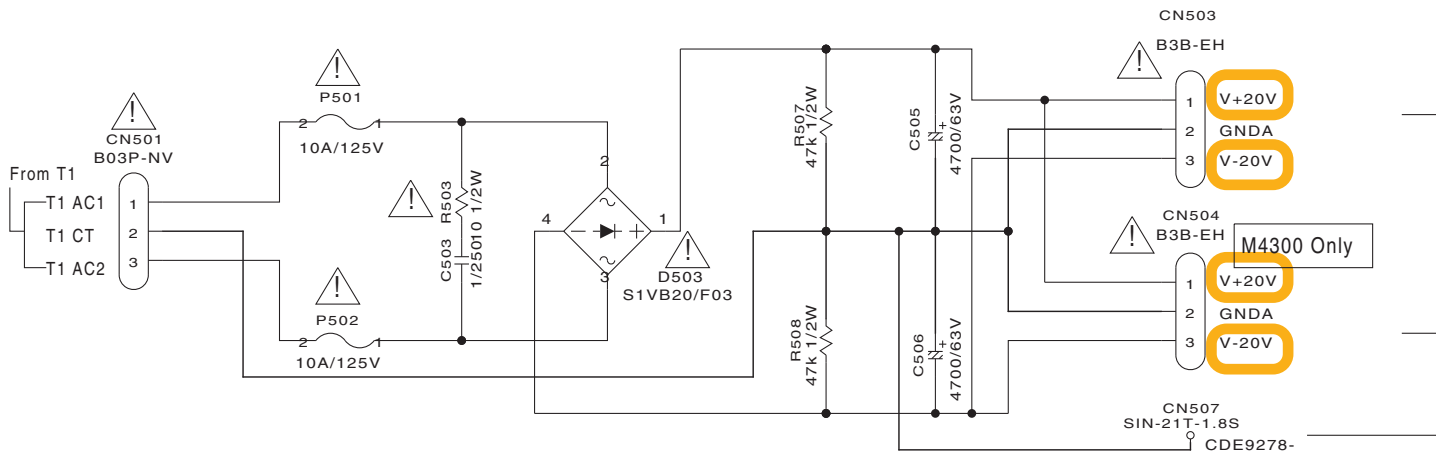
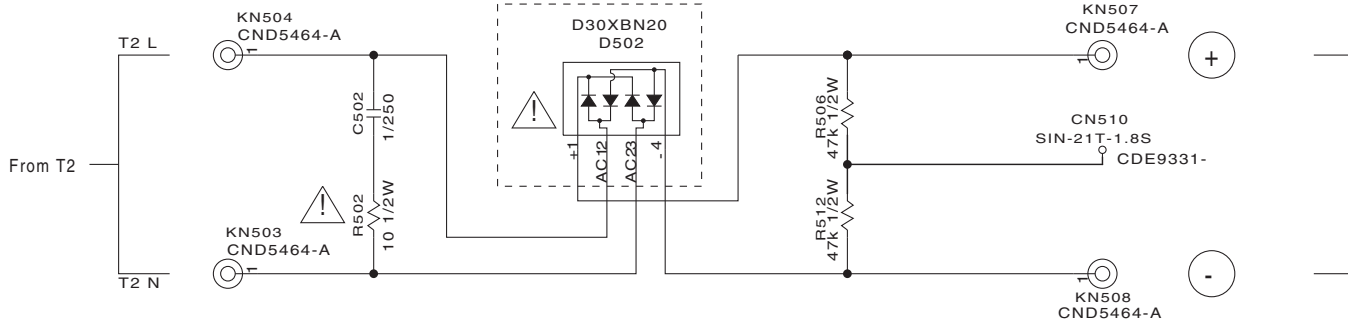
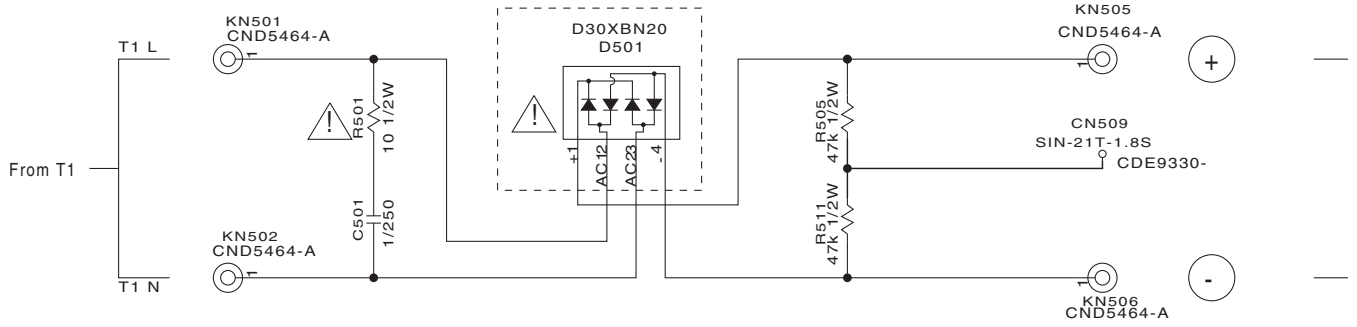
10.4 AUDIO UNIT (SP-OUT2-4)

AUDIO UNIT (SP-OUT2-4)



10.5 POWER SUPPLY UNIT (RECTIFICATION, S-SW and P-SW)

A POWER SUPPLY UNIT (RECTIFICATION)



CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE ONLY WITH SAME TYPE NO. 491010 MFD. BY
LITTELFUSE INC. FOR P501, P502, P503 and P504.

The  mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

Unit No.	Model
CWH1632-	M2500 /J
CWH1651-	M2500 /U
CWH1652-	M2500 /YS
CWH1653-	M2500 /L
CWH1633-	M4300 /J
CWH1654-	M4300 /U
CWH1655-	M4300 /YS
CWH1656-	M4300 /L

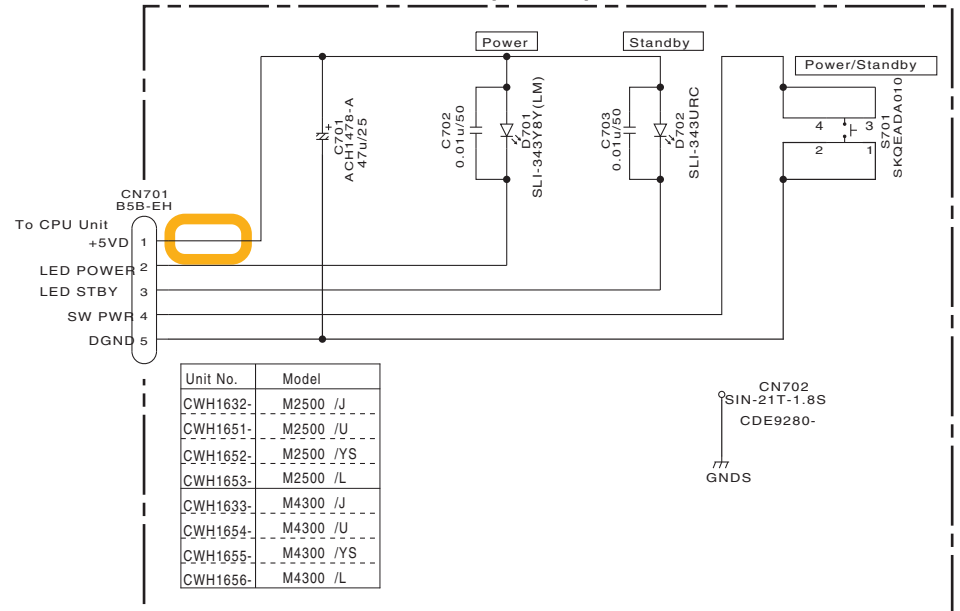
330-  To Main Capacitor

331-  To Main Capacitor

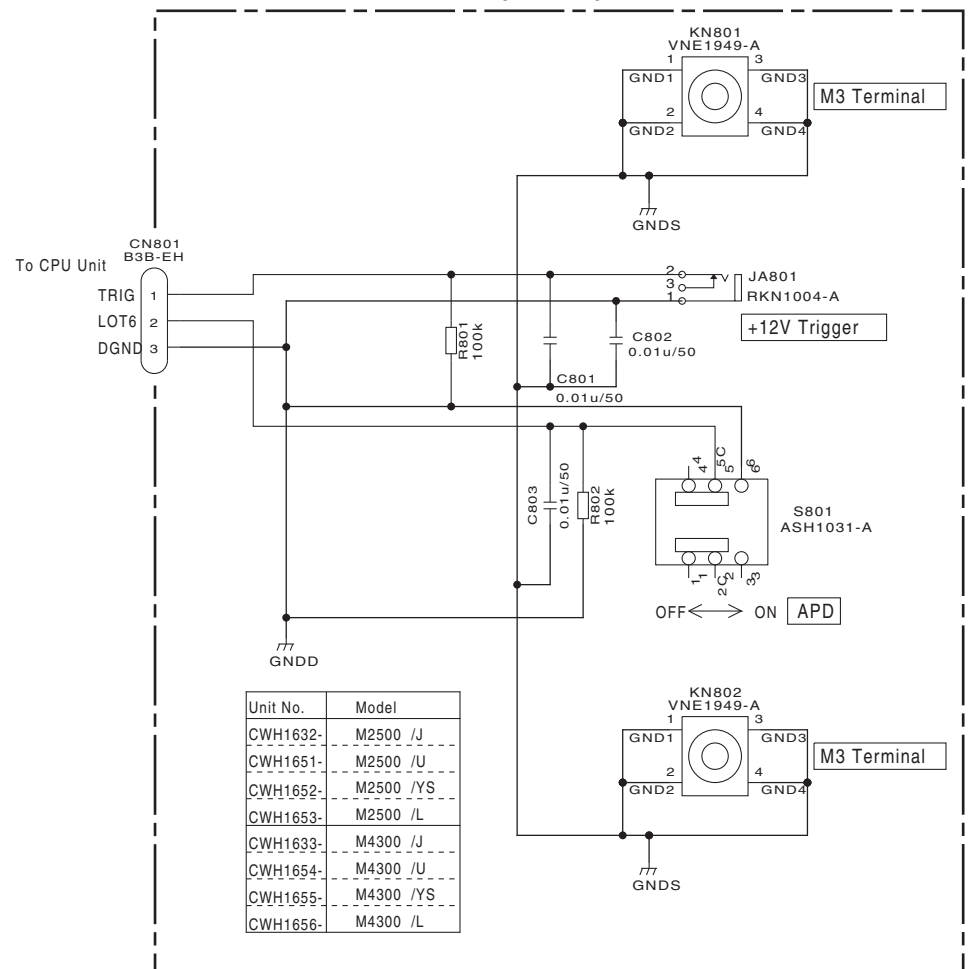
331-  To Main Capacitor

331-  To Main Capacitor

POWER SUPPLY UNIT (P-SW)



POWER SUPPLY UNIT (S-SW)



△

A

B

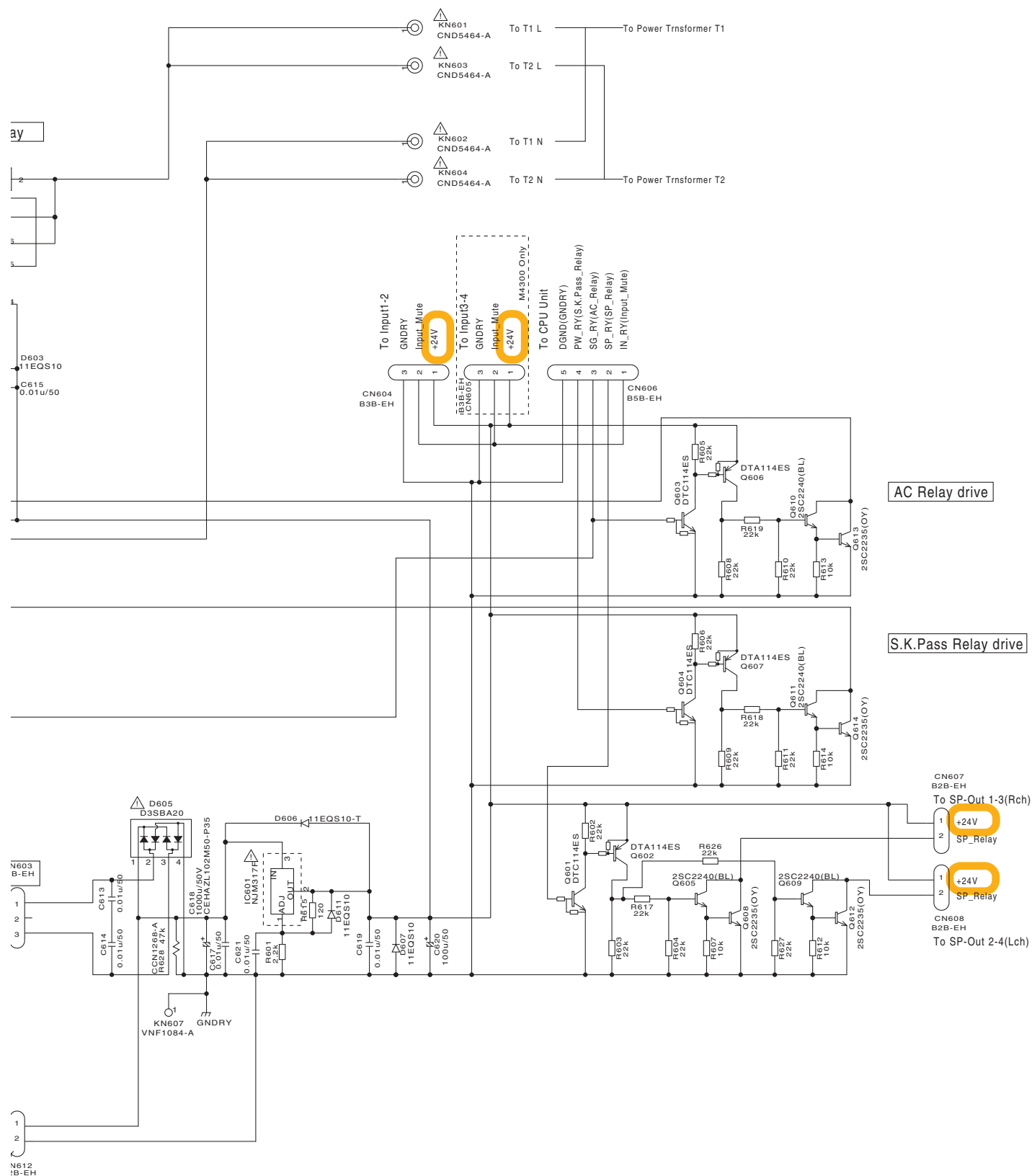
○

□



7

F



11. PCB CONNECTION DIAGRAM

11.1 AUDIO UNIT (INPUT1-2)

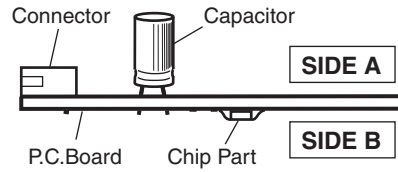
SIDE A

SIDE B

NOTE FOR PCB DIAGRAMS :

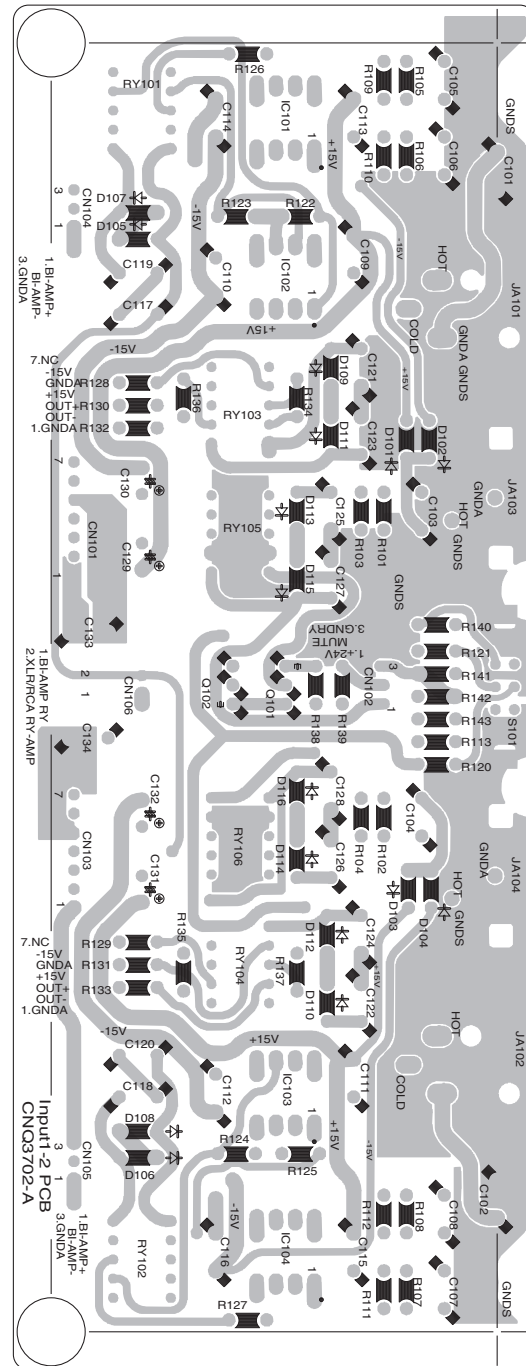
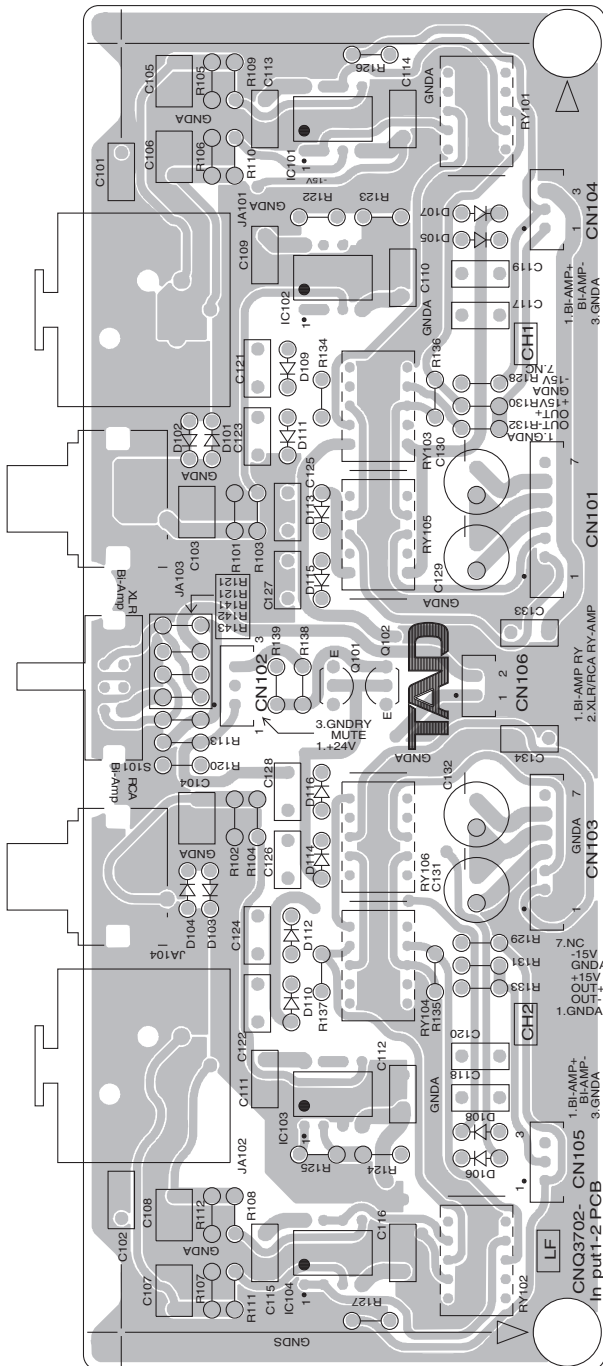
1. The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

2. View point of PCB diagrams.



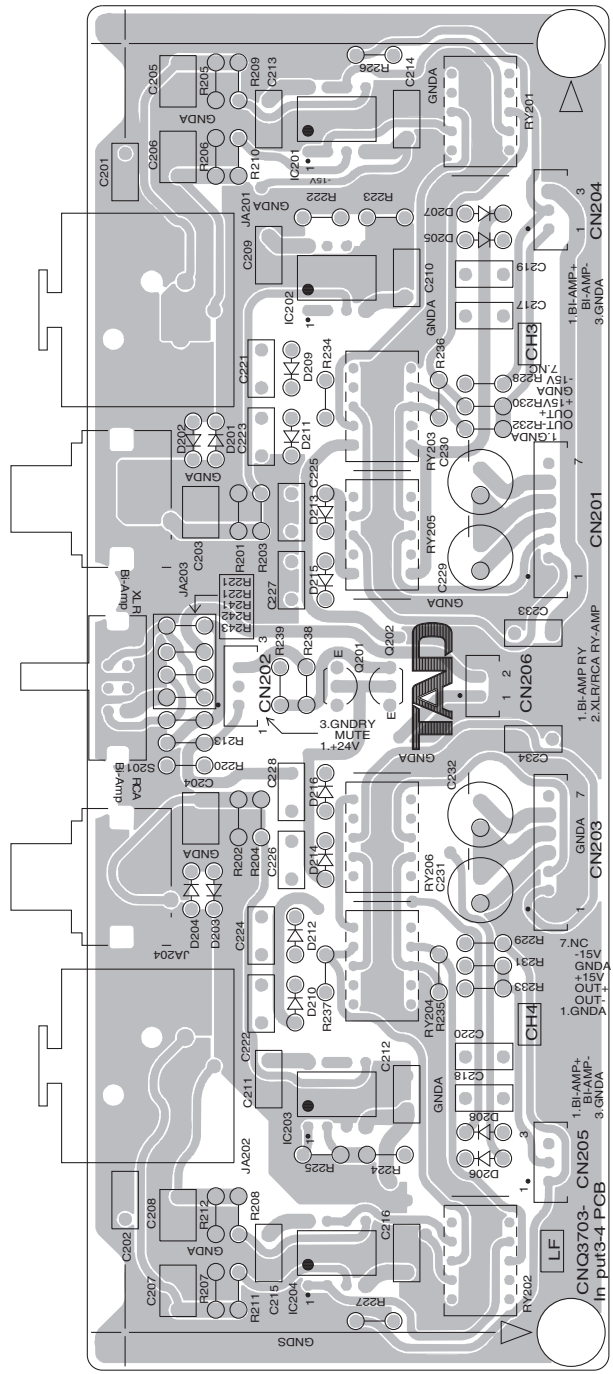
AUDIO UNIT (INPUT1-2)

AUDIO UNIT (INPUT1-2)



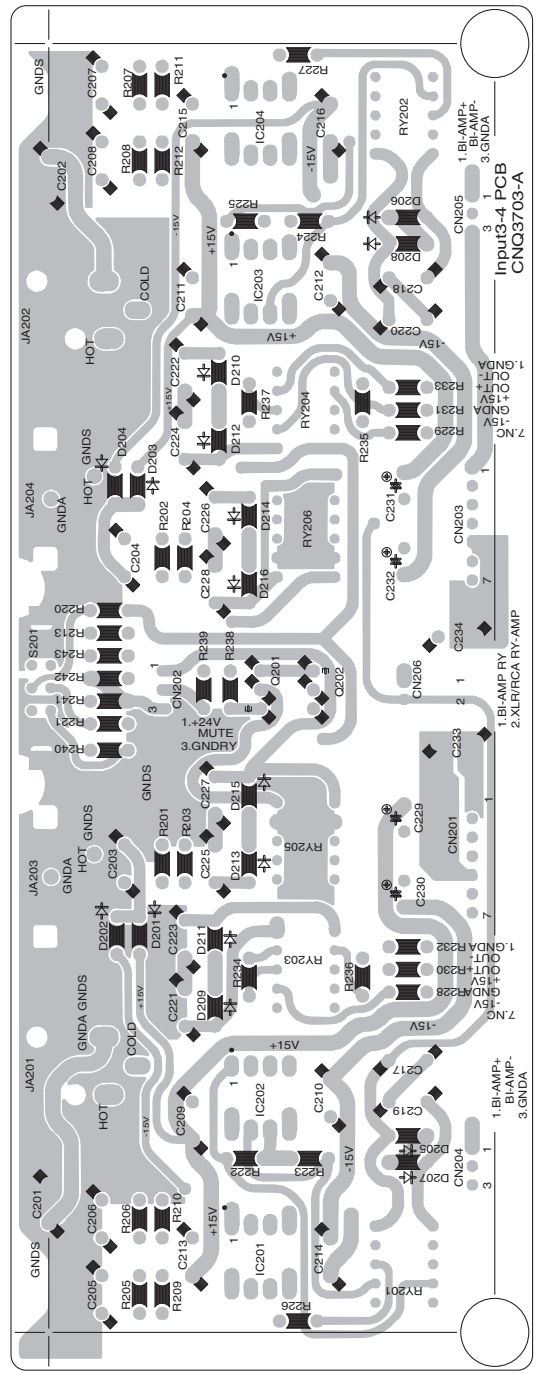
SIDE A

AUDIO UNIT (INPUT3-4)



SIDE B

AUDIO UNIT (INPUT3-4)



SIDE A

SIDE A

A

B

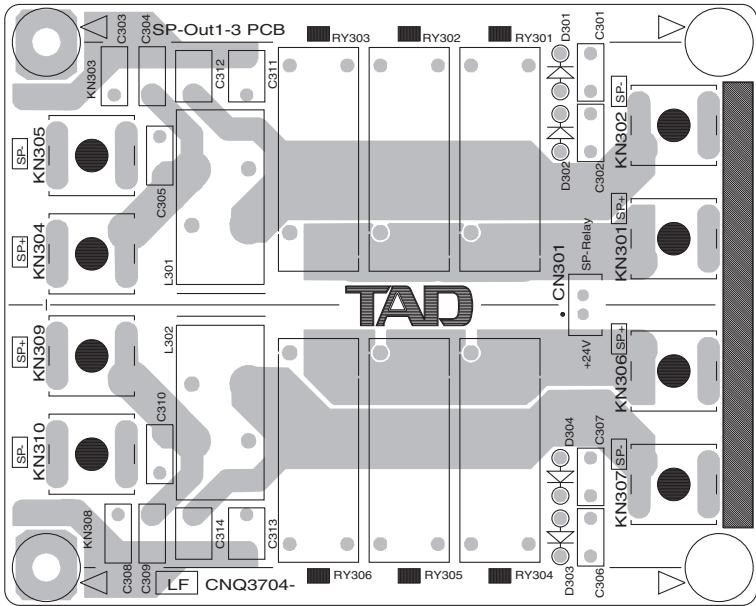
C

D

E

F

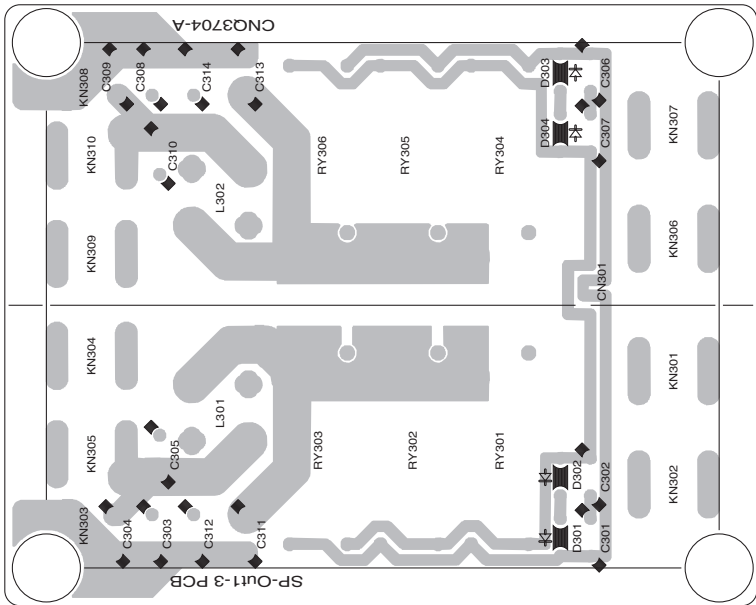
AUDIO UNIT (SP-OUT1-3)



SIDE B

SIDE B

AUDIO UNIT (SP-OUT1-3)

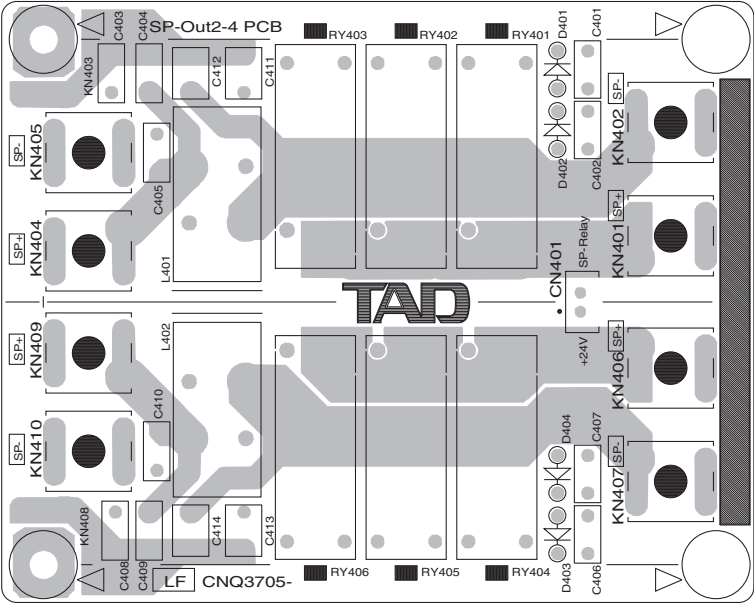


SIDE A

SIDE A

A

AUDIO UNIT (SP-OUT2-4)



B

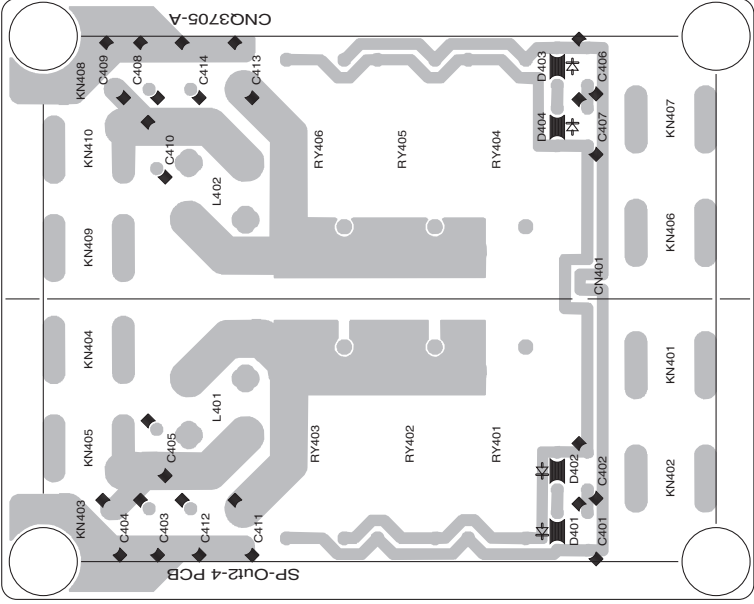
C

SIDE B

SIDE B

D

AUDIO UNIT (SP-OUT2-4)



E

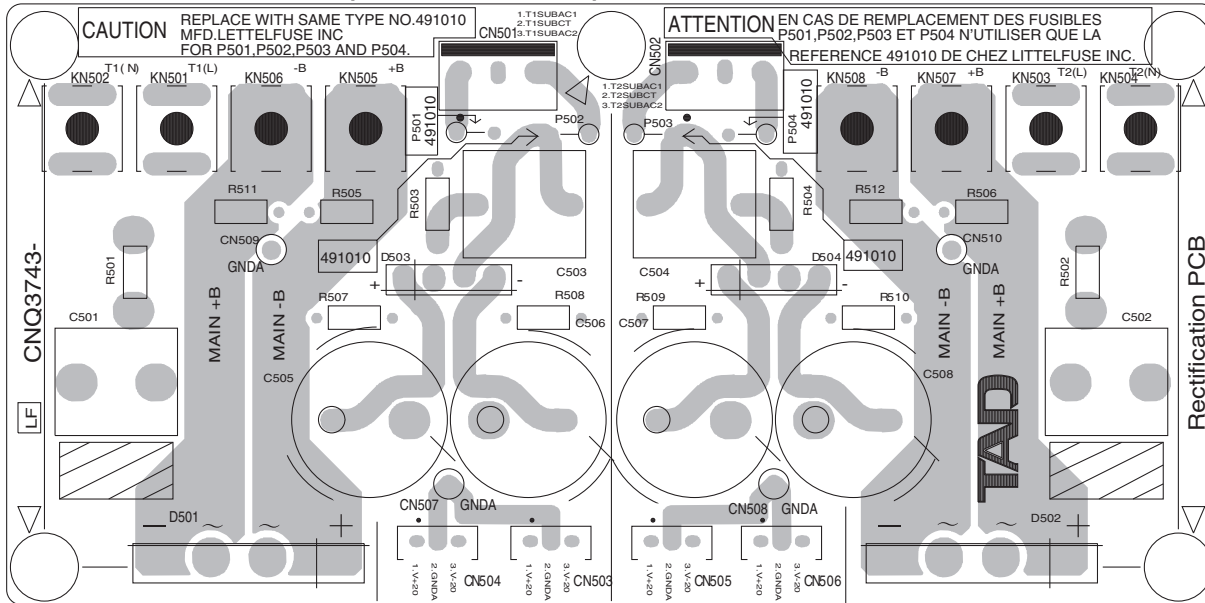
F

11.5 POWER SUPPLY UNIT (RECTIFICATION)

SIDE A

SIDE A

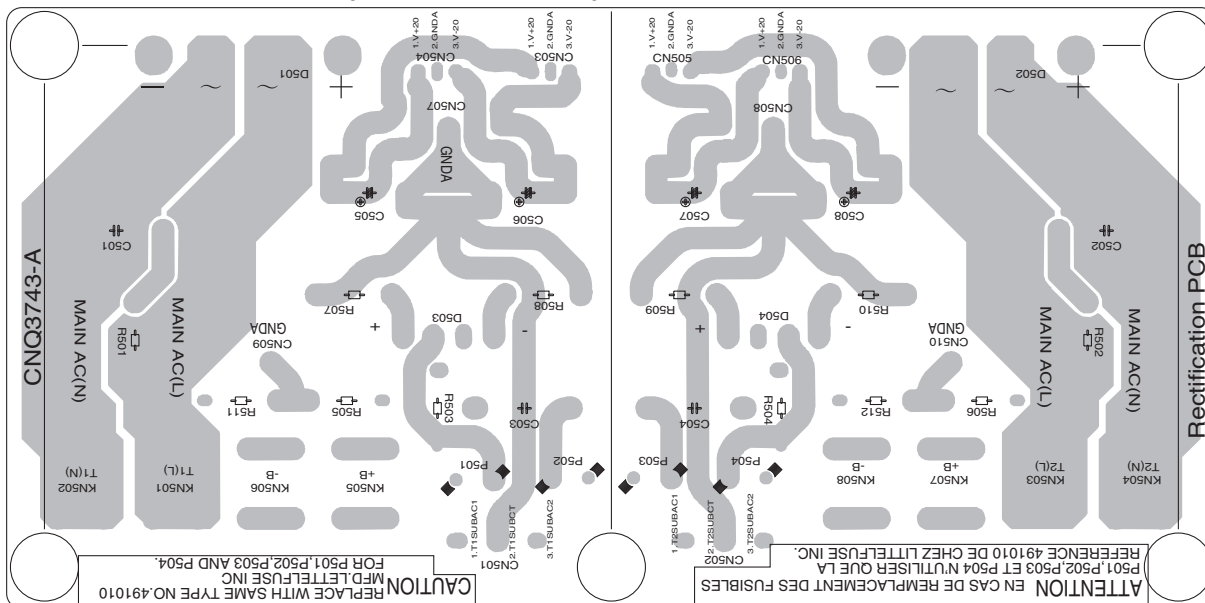
POWER SUPPLY UNIT (RECTIFICATION)



SIDE B

SIDE B

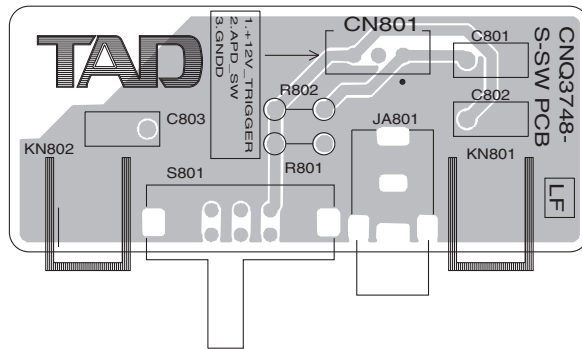
POWER SUPPLY UNIT (RECTIFICATION)



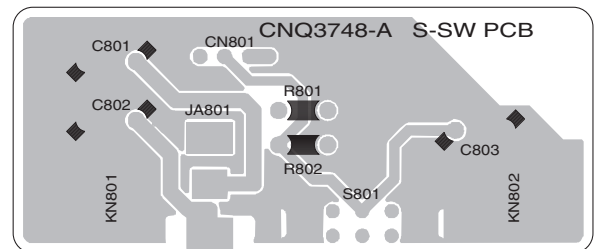
SIDE A

SIDE B

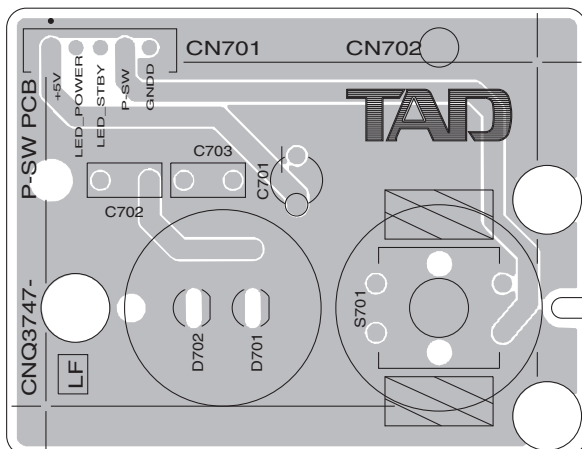
POWER SUPPLY UNIT (S-SW)



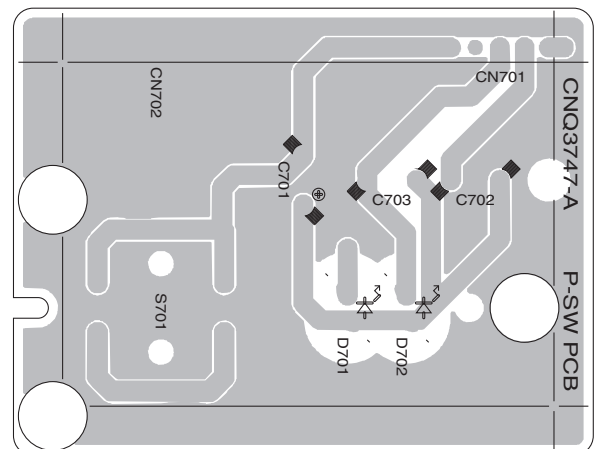
POWER SUPPLY UNIT (S-SW)



POWER SUPPLY UNIT (P-SW)



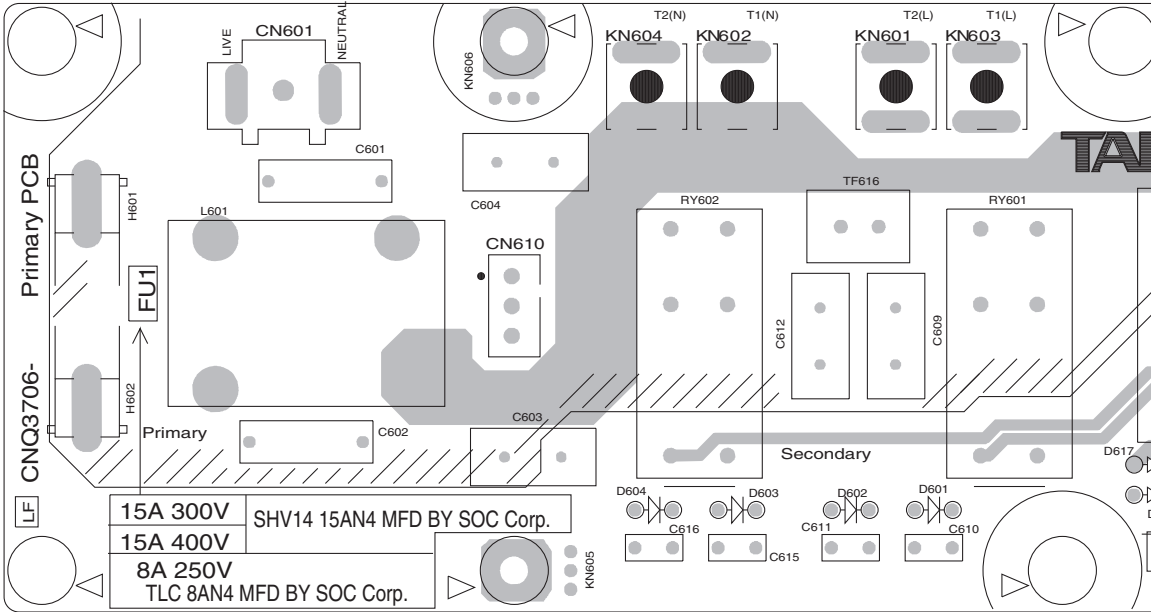
POWER SUPPLY UNIT (P-SW)



11.7 POWER SUPPLY UNIT (PRIMARY)

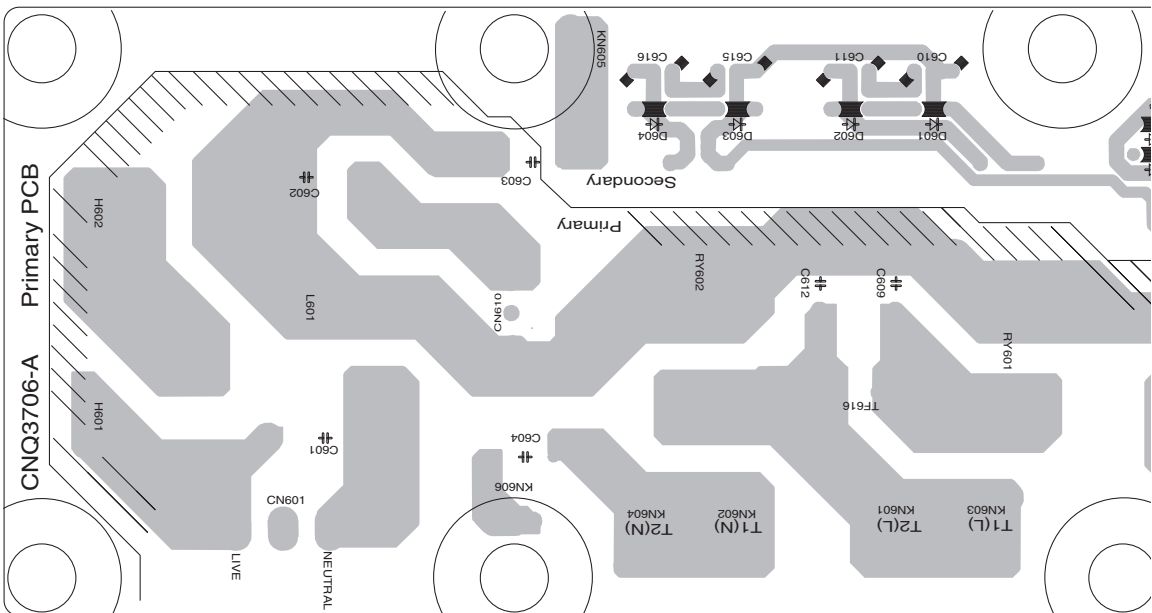
SIDE A

POWER SUPPLY UNIT (PRIMARY)



SIDE B

POWER SUPPLY UNIT (PRIMARY)

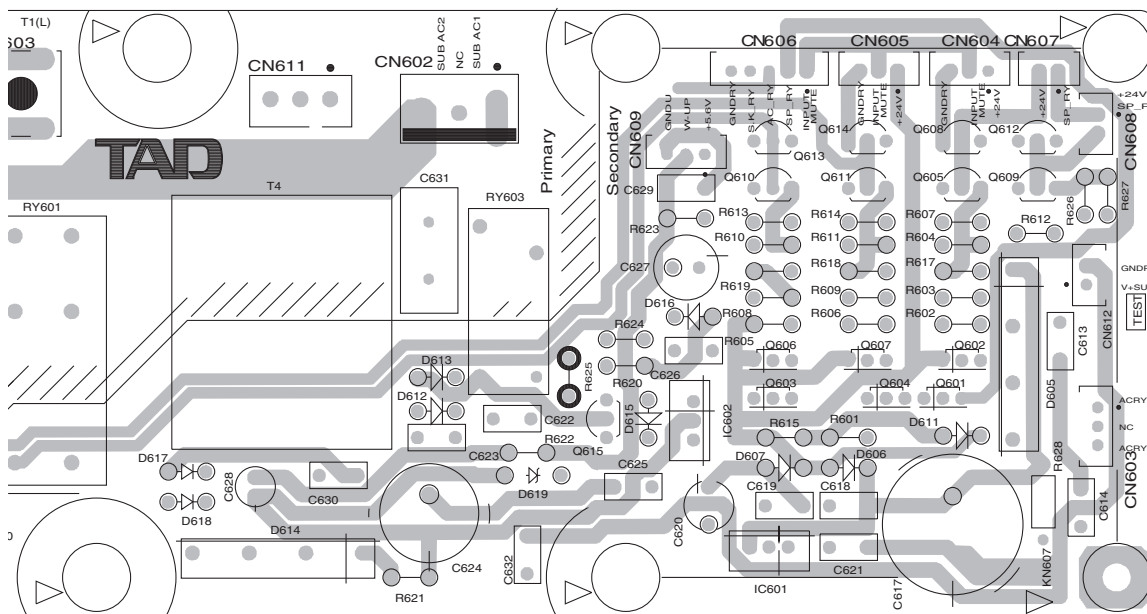


SIDE A

A

B

C

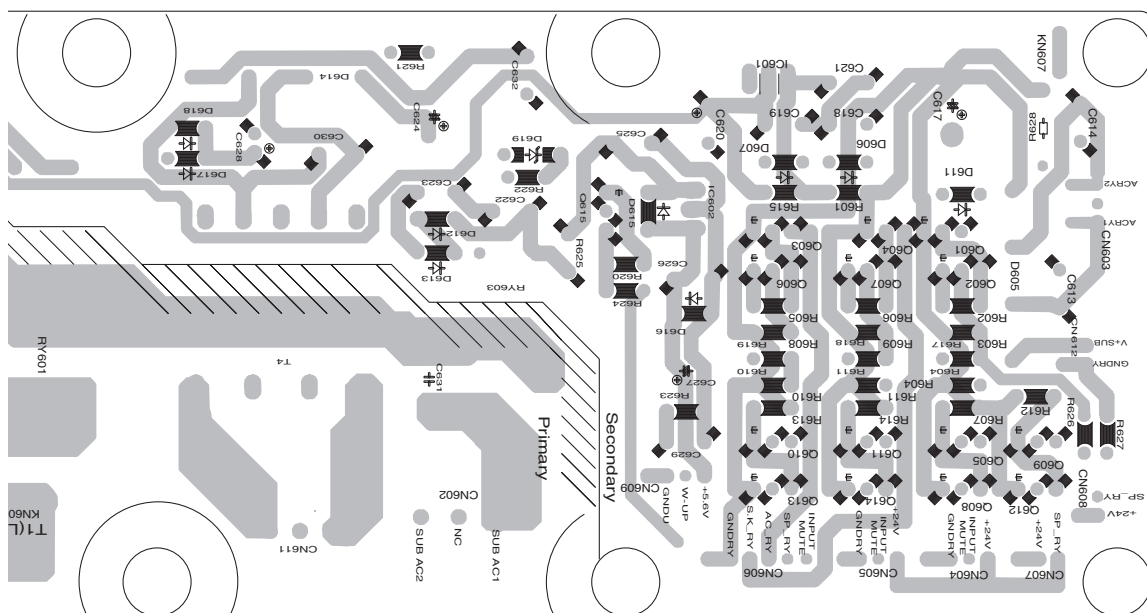


SIDE B

D

E

F



12. PCB PARTS LIST

NOTES: ● Parts marked by “ * ” are generally unavailable because they are not in our Master Spare Parts List.

● The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

● When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47 k ohm (tolerance is shown by J = 5%, and K = 10%).

560 Ω $\rightarrow$ 56×10^1 $\rightarrow$ 561.....RD1/4PU $\begin{bmatrix} 5 \\ 6 \end{bmatrix} \begin{bmatrix} 1 \\ 1 \end{bmatrix} J$

47 k Ω $\rightarrow$ 47×10^3 $\rightarrow$ 473.....RD1/4PU $\begin{bmatrix} 4 \\ 7 \end{bmatrix} \begin{bmatrix} 3 \\ 3 \end{bmatrix} J$

0.5 Ω $\rightarrow$ R50.....RN2H $\begin{bmatrix} R \\ 5 \end{bmatrix} \begin{bmatrix} 0 \\ 0 \end{bmatrix} K$

1 Ω $\rightarrow$ 1R0.....RS1P $\begin{bmatrix} 1 \\ 1 \end{bmatrix} \begin{bmatrix} R \\ 0 \end{bmatrix} K$

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62 k Ω $\rightarrow$ 562×10^1 $\rightarrow$ 5621.....RN1/4PC $\begin{bmatrix} 5 \\ 6 \end{bmatrix} \begin{bmatrix} 2 \\ 1 \end{bmatrix} F$

● Meaning of the figures and others in the parentheses in the parts list.

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.

IC 301 (A, 91, 111) IC NJM2068V

Mark	No.	Description	Part No.
------	-----	-------------	----------

LIST OF ASSEMBLIES

1..AUDIO UNIT (TAD-M4300)	CWH1635
1..AUDIO UNIT (TAD-M2500)	CWH1634

1..POWER SUPPLY UNIT (TAD-M4300/U)	CWH1654
1..POWER SUPPLY UNIT (TAD-M4300/YS8)	CWH1655
1..POWER SUPPLY UNIT (TAD-M4300/L)	CWH1656

1..POWER SUPPLY UNIT (TAD-M2500/U)	CWH1651
1..POWER SUPPLY UNIT (TAD-M2500/YS8)	CWH1652
1..POWER SUPPLY UNIT (TAD-M2500/L)	CWH1653

Mark	No.	Description	Part No.
------	-----	-------------	----------

AUDIO UNIT (CWH1635)

SEMICONDUCTORS

IC 101-104,201-204	OPA2134PAS1
Q 101,201	2SC2235
Q 102,202	2SC2240
D 101-108,113-116	1SS133
D 201-216	1SS133

D 301-304,401-404	11EQS10
-------------------	---------

MISCELLANEOUS

L 301,302,401,402 COIL	CTX1112
JA 101,102,201,202 PLUG	CKM1597
JA 103,104,203 PIN JACK (1P)	AKB7102
JA 204 PIN JACK (1P)	AKB7102
KN301,302,304-307 HOLDER	CND5464

KN303,308 WRAPPING TERMINAL	VNF1084
KN309,310,401,402 HOLDER	CND5464
KN403,408 WRAPPING TERMINAL	VNF1084
KN404-407,409,410 HOLDER	CND5464
RY 101,102,105,106 RELAY	CSR1031

RY 201-206 RELAY	CSR1031
RY 301-306,401-406 RELAY	CSR1033
S 101,201 SLIDE SWITCH	ASH1031
CN101,103,201,203 CONNECTOR	B7B-EH
CN102,104,105,202 3P TOP POST	B3B-EH

CN106,206,301,401 2P TOP POST	B2B-EH
CN204,205 3P TOP POST	B3B-EH

Mark	No.	Description	Part No.
------	-----	-------------	----------

RESISTORS

All Resistors	RD1/4PU###J
---------------	-------------

CAPACITORS

C 101,102,109-120	CFTLA103J50
C 103-108,203-208	CQHA221J2A
C 125-128,133,134	CFTLA103J50
C 129-132,229-232	CCH1951
C 135-140,235-240	CQMA471J50

C 141,142,201,202	CFTLA103J50
C 209-228,233,234	CFTLA103J50
C 241,242,301,302	CFTLA103J50
C 303-305,308-310	CCE1059
C 306,307,401,402	CFTLA103J50

C 311-314,411-414	CQHA102J2A
C 403-405,408-410	CCE1059
C 406,407	CFTLA103J50

AUDIO UNIT (CWH1634)

SEMICONDUCTORS

IC 101-104	OPA2134PAS1
Q 101	2SC2235
Q 102	2SC2240
D 101-108,113-116	1SS133
D 301,302,403,404	11EQS10

MISCELLANEOUS

L 301,402 COIL	CTX1112
JA 101,102 PLUG	CKM1597
JA 103,104 PIN JACK (1P)	AKB7102
KN301,302,304,305 HOLDER	CND5464
KN303,408 WRAPPING TERMINAL	VNF1084

KN406,407,409,410 HOLDER	CND5464
RY 101,102,105,106 RELAY	CSR1031
RY 301-303,404-406 RELAY	CSR1033
S 101 SLIDE SWITCH	ASH1031
CN101,103 CONNECTOR	B7B-EH

CN102,104,105 3P TOP POST	B3B-EH
CN301,401 2P TOP POST	B2B-EH

RESISTORS

All Resistors	RD1/4PU###J
---------------	-------------

5	6	7	8		
Mark	No. Description	Part No.	Mark	No. Description	Part No.
<u>CAPACITORS</u>					
C	101,102,109-120	CFTLA103J50	FU 1	FUSE (15 A)	AEK7077
C	103-108	CQHA221J2A	P	501-504 PROTECTOR (10 A)	AEK7022
C	125-128,133,134	CFTLA103J50	TF 616	FIXED RESISTOR	CCN1269
C	129-132	CCH1951	<u>RESISTORS</u>		
C	135-140	CQMA471J50	R	501-504	CCN1193
			R	505-512,628	CCN1268
C	141,142,301,302	CFTLA103J50	R	625	RD1/4MUF220J
C	303-305,408-410	CCE1059	Other Resistors		RD1/4PU####J
C	311,312,413,414	CQHA102J2A	<u>CAPACITORS</u>		
C	406,407	CFTLA103J50	C	501-504	CCE1040
POWER SUPPLY UNIT (CWH1654)			C	505-508	CCH1973
<u>SEMICONDUCTORS</u>			C	601,602	ACE7072
IC	601	NJM317F	C	609,612,631	ACG7039
IC	602	NJM78M56FA	C	610,611,613-616	CFTLA103J50
Q	601,603,604	DTC114ES	C	617	CEHAZL102M50
Q	602,606,607	DTA114ES	C	618,619,621-623	CFTLA103J50
Q	605,609-611,615	2SC2240	C	620	CEHAZL101M50
			C	624	CEHAZL102M35
Q	608,612-614	2SC2235	C	625,626,629,630	CFTLA103J50
D	503,504	S1VB20/F03	C	627	CCH1951
D	601-604,606,607	11EQS10	C	628	CEHAT100M50
D	605,614	D3SBA20	C	701	ACH1478
D	611-613,615,616	11EQS10	C	702,703,801-803	CFTLA103J50
			POWER SUPPLY UNIT (CWH1655)		
D	617,618	1SS133	<u>SEMICONDUCTORS</u>		
D	619	HZ5LL(C)	IC	601	NJM317F
D	701	SLI-343Y8Y(LM)	IC	602	NJM78M56FA
D	702	SLI-343URC	Q	601,603,604	DTC114ES
<u>MISCELLANEOUS</u>			Q	602,606,607	DTA114ES
L	601 COIL	CTX1113	Q	605,609-611,615	2SC2240
H	601,602 FUSE HOLDER	AKR7004	Q	608,612-614	2SC2235
JA	801 JACK	RKN1004	D	503,504	S1VB20/F03
KN	501-508,601-604 HOLDER	CND5464	D	601-604,606,607	11EQS10
KN	607 WRAPPING TERMINAL	VNF1084	D	605,614	D3SBA20
KN	801,802 SCREW TERMINAL	VNE1949	D	611-613,615,616	11EQS10
RY	601,602 RELAY	CSR1032	D	617,618	1SS133
RY	603 JOE LOWPOWER RELAY	ASR7013	D	619	HZ5LL(C)
S	701 PUSH SW	CSG1194	D	701	SLI-343Y8Y(LM)
S	801 SLIDE SWITCH	ASH1031	D	702	SLI-343URC
T	4 POWER TRANSFORMER	ATT7079	<u>MISCELLANEOUS</u>		
CN	501,502,602 CONNECTOR	CKS6112	L	601 COIL	CTX1113
CN	503-506,603-605 3P TOP POST	B3B-EH	H	601,602 FUSE HOLDER	AKR7004
CN	507 CORD	CDE9278	JA	801 JACK	RKN1004
CN	508 CORD	CDE9279	KN	501-508,601-604 HOLDER	CND5464
CN	509 CORD	CDE9330	KN	607 WRAPPING TERMINAL	VNF1084
CN	510 CORD	CDE9331	KN	801,802 SCREW TERMINAL	VNE1949
CN	601 CONNECTOR	CKS6211	RY	601,602 RELAY	CSR1032
CN	606,701 5P TOP POST	B5B-EH	RY	603 JOE LOWPOWER RELAY	ASR7013
CN	607,608,612 2P TOP POST	B2B-EH	S	701 PUSH SW	CSG1194
CN	609,801 3P TOP POST	B3B-EH	S	801 SLIDE SWITCH	ASH1031
CN	610 CORD	CDE9321	T	4 POWER TRANSFORMER	ATT7078
CN	702 CORD	CDE9280	CN	501,502,602 CONNECTOR	CKS6112
56	COIL SPRING	CBH3060	CN	503-506,603-605 3P TOP POST	B3B-EH
57	SHEET	CNN3415	CN	507 CORD	CDE9278
61	ANGLE	CND5644	CN	508 CORD	CDE9279
130	HEAT SINK	CND5813	CN	509 CORD	CDE9330
131	EDGING	CNN3435	CN	510 CORD	CDE9331
180	SCREW	PMH30P080FCC	CN	601 CONNECTOR	CKS6211
181	SCREW	PMB30P080FCC			
803	SPACER	CNW1813			

Mark	No.	Description	Part No.
A		CN 606,701 5P TOP POST	B5B-EH
		CN 607,608,612 2P TOP POST	B2B-EH
		CN 609,801 3P TOP POST	B3B-EH
	CN 610	CORD	CDE9321
	CN 702	CORD	CDE9280
	56	COIL SPRING	CBH3060
	57	SHEET	CNN3415
	61	ANGLE	CND5644
	130	HEAT SINK	CND5813
	131	EDGING	CNN3435
	180	SCREW	PMH30P080FCC
	181	SCREW	PMB30P080FCC
	803	SPACER	CNW1813
	FU 1	FUSE	CEK1378
	P	501-504 PROTECTOR (10 A)	AEK7022
B	TF 616	FIXED RESISTOR	CCN1269

RESISTORS

R	501-504	CCN1193
R	505-512,628	CCN1268
R	625	RD1/4MUF220J
	Other Resistors	RD1/4PU####J

CAPACITORS

C	501-504	CCE1040
C	505-508	CCH1973
C	601,602	ACE7072
C	609,612,631	ACG7039
C	610,611,613-616	CFTLA103J50
	617	CEHAZL102M50
	618,619,621-623	CFTLA103J50
	620	CEHAZL101M50
	624	CEHAZL102M35
	625,626,629,630	CFTLA103J50
	627	CCH1951
	628	CEHAT100M50
	701	ACH1478
	702,703,801-803	CFTLA103J50

POWER SUPPLY UNIT (CWH1656)

SEMICONDUCTORS

	IC 601	NJM317F
	IC 602	NJM78M56FA
	Q 601,603,604	DTC114ES
	Q 602,606,607	DTA114ES
	Q 605,609-611,615	2SC2240
E	Q 608,612-614	2SC2235
	D 503,504	S1VB20/F03
	D 601-604,606,607	11EQS10
	D 605,614	D3SBA20
	D 611-613,615,616	11EQS10
	D 617,618	1SS133
	D 619	HZ5LL(C)
	D 701	SLI-343Y8Y(LM)
	D 702	SLI-343URC

MISCELLANEOUS

L	601	COIL	CTX1113
H	601,602	FUSE HOLDER	AKR7004
JA	801	JACK	RKN1004
KN	501-508,601-604	HOLDER	CND5464
KN	607	WRAPPING TERMINAL	VNF1084

Mark	No.	Description	Part No.
		KN 801,802 SCREW TERMINAL	VNE1949
		RY 601,602 RELAY	CSR1032
	RY 603	JOE LOWPOWER RELAY	ASR7013
	S 701	PUSH SW	CSG1194
	S 801	SLIDE SWITCH	ASH1031
	T 4	POWER TRANSFORMER	ATT7078
	CN 501,502,602	CONNECTOR	CKS6112
	CN 503-506,603-605	3P TOP POST	B3B-EH
	CN 507	CORD	CDE9278
	CN 508	CORD	CDE9279
	CN 509	CORD	CDE9330
	CN 510	CORD	CDE9331
	CN 601	CONNECTOR	CKS6211
	CN 606,701 5P TOP POST		B5B-EH
	CN 607,608,612 2P TOP POST		B2B-EH

CN 609,801 3P TOP POST	B3B-EH
CN 610 CORD	CDE9321
CN 702 CORD	CDE9280
56 COIL SPRING	CBH3060
57 SHEET	CNN3415
61 ANGLE	CND5644
130 HEAT SINK	CND5813
131 EDGING	CNN3435
180 SCREW	PMH30P080FCC
181 SCREW	PMB30P080FCC
803 SPACER	CNW1813
FU 1 FUSE	CEK1378
P 501-504 PROTECTOR (10 A)	AEK7022
TF 616 FIXED RESISTOR	CCN1269

RESISTORS

R	501-504	CCN1193
R	505-512,628	CCN1268
R	625	RD1/4MUF220J
	Other Resistors	RD1/4PU####J

CAPACITORS

C	501-504	CCE1040
C	505-508	CCH1973
C	601,602	ACE7072
C	609,612,631	ACG7039
C	610,611,613-616	CFTLA103J50
	617	CEHAZL102M50
	618,619,621-623	CFTLA103J50
	620	CEHAZL101M50
	624	CEHAZL102M35
	625,626,629,630	CFTLA103J50
	627	CCH1951
	628	CEHAT100M50
	701	ACH1478
	702,703,801-803	CFTLA103J50

POWER SUPPLY UNIT (CWH1651)

SEMICONDUCTORS

IC	601	NJM317F
IC	602	NJM78M56FA
Q	601,603,604	DTC114ES
Q	602,606,607	DTA114ES
Q	605,609-611,615	2SC2240
Q	608,612-614	2SC2235

Mark	No. Description	Part No.
	D 503,504	S1VB20/F03
	D 601-604,606,607	11EQS10
	D 605,614	D3SBA20
	D 611-613,615,616	11EQS10
	D 617,618	1SS133
	D 619	HZ5LL(C)
	D 701	SLI-343Y8Y(LM)
	D 702	SLI-343URC

MISCELLANEOUS

L 601	COIL	CTX1113
H 601,602	FUSE HOLDER	AKR7004
JA 801	JACK	RKN1004
KN 501-508,601-604	HOLDER	CND5464
KN 607	WRAPPING TERMINAL	VNF1084
KN 801,802	SCREW TERMINAL	VNE1949
RY 601,602	RELAY	CSR1032
RY 603	JOE LOWPOWER RELAY	ASR7013
S 701	PUSH SW	CSG1194
S 801	SLIDE SWITCH	ASH1031
T 4	POWER TRANSFORMER	ATT7079
CN 501,502,602	CONNECTOR	CKS6112
CN 503,505,603,604	3P TOP POST	B3B-EH
CN 507	CORD	CDE9278
CN 508	CORD	CDE9279
CN 509	CORD	CDE9330
CN 510	CORD	CDE9331
CN 601	CONNECTOR	CKS6211
CN 606,701	5P TOP POST	B5B-EH
CN 607,608,612	2P TOP POST	B2B-EH
CN 609,801	3P TOP POST	B3B-EH
CN 610	CORD	CDE9321
CN 702	CORD	CDE9280
56	COIL SPRING	CBH3060
57	SHEET	CNN3415
61	ANGLE	CND5644
130	HEAT SINK	CND5813
131	EDGING	CNN3435
180	SCREW	PMH30PC
181	SCREW	PMB30PC
803	SPACER	CNW1813
FU 1	FUSE (15 A)	AEK7077
P 501-504	PROTECTOR (10 A)	AEK7022
TF 616	FIXED RESISTOR	CNN1269

RESISTORS

R 501-504	CCN1193
R 505-512,628	CCN1268
R 625	RD1/4MUF220J
Other Resistors	RD1/4PU###J

CAPACITORS

C 501-504	CCE1040
C 505-508	CCH1973
C 601,602	ACE7072
C 609,612,631	ACG7039
C 610,611,613-616	CFTLA103J50
C 617	CEHAZL102M50
C 618,619,621-623	CFTLA103J50
C 620	CEHAZL101M50
C 624	CEHAZL102M35
C 625,626,629,630	CFTLA103J50

Mark	No.	Description	Part No.
	C 627		CCH1951
	C 628		CEHAT100M50
	C 701		ACH1478
	C 702,703,801-803		CFTLA103J50

POWER SUPPLY UNIT (CWH1652)

SEMICONDUCTORS

IC 601	NJM317F
IC 602	NJM78M56FA
Q 601,603,604	DTC114ES
Q 602,606,607	DTA114ES
Q 605,609-611,615	2SC2240
Q 608,612-614	2SC2235
D 503,504	S1VB20/F03
D 601-604,606,607	11EQS10
D 605,614	D3SBA20
D 611-613,615,616	11EQS10
D 617,618	1SS133
D 619	HZ5LL(C)
D 701	SLI-343Y8Y(LM)
D 702	SLI-343URC

MISCELLANEOUS

L 601	COIL	CTX1113
H 601,602	FUSE HOLDER	AKR7004
JA 801	JACK	RKN1004
KN501-508,601-604	HOLDER	CND5464
KN 607	WRAPPING TERMINAL	VNF1084
KN801,802	SCREW TERMINAL	VNE1949
RY 601,602	RELAY	CSR1032
RY 603	JOE LOWPOWER RELAY	ASR7013
S 701	PUSH SW	CSG1194
S 801	SLIDE SWITCH	ASH1031
T 4	POWER TRANSFORMER	ATT7078
CN 501,502,602	CONNECTOR	CKS6112
CN 503,505,603,604	3P TOP POST	B3B-EH
CN 507	CORD	CDE9278
CN 508	CORD	CDE9279
CN 509	CORD	CDE9330
CN 510	CORD	CDE9331
CN 601	CONNECTOR	CKS6211
CN 606,701	5P TOP POST	B5B-EH
CN 607,608,612	2P TOP POST	B2B-EH

CN 609,801 3P TOP POST	B3B-EH
CN 610 CORD	CDE9321
CN 702 CORD	CDE9280
56 COIL SPRING	CBH3060
57 SHEET	CNN3415

61	ANGLE	CND5644
130	HEAT SINK	CND5813
131	EDGING	CNN3435
180	SCREW	PMH30P080FCC
181	SCREW	PMB30P080FCC

803	SPACER	CNW1813
FU 1	FUSE	CEK1378
P 501-504	PROTECTOR (10 A)	AEK7022
TF 616	FIXED RESISTOR	CCN1269

RESISTORS

R 501-504	CCN1193
R 505-512,628	CCN1268

Mark	No.	Description	Part No.
	R 625		RD1/4MUF220J
		Other Resistors	RD1/4PU###J

Mark	No.	Description	Part No.
	57	SHEET	CNN3415
	61	ANGLE	CND5644
	130	HEAT SINK	CND5813
	131	EDGING	CNN3435
	180	SCREW	PMH30P080FCC
	181	SCREW	PMB30P080FCC

CAPACITORS

C 501-504	CCE1040
C 505-508	CCH1973
C 601,602	ACE7072
C 609,612,631	ACG7039
C 610,611,613-616	CFTLA103J50

803	SPACER	CNW1813
FU 1	FUSE	CEK1378
P 501-504	PROTECTOR (10 A)	AEK7022
TF 616	FIXED RESISTOR	CCN1269

C 617	CEHAZL102M50
C 618,619,621-623	CFTLA103J50
C 620	CEHAZL101M50
C 624	CEHAZL102M35
C 625,626,629,630	CFTLA103J50

RESISTORS

R 501-504	CCN1193
R 505-512,628	CCN1268
R 625	RD1/4MUF220J
Other Resistors	RD1/4PU###J

C 627	CCH1951
C 628	CEHAT100M50
C 701	ACH1478
C 702,703,801-803	CFTLA103J50

CAPACITORS

C 501-504	CCE1040
C 505-508	CCH1973
C 601,602	ACE7072
C 609,612,631	ACG7039
C 610,611,613-616	CFTLA103J50

POWER SUPPLY UNIT (CWH1653)

SEMICONDUCTORS

IC 601	NJM317F
IC 602	NJM78M56FA
Q 601,603,604	DTC114ES
Q 602,606,607	DTA114ES
Q 605,609-611,615	2SC2240
Q 608,612-614	2SC2235
D 503,504	S1VB20/F03
D 601-604,606,607	11EQS10
D 605,614	D3SBA20
D 611-613,615,616	11EQS10
D 617,618	1SS133
D 619	HZ5LL(C)
D 701	SLI-343Y8Y(LM)
D 702	SLI-343URC

C 617	CEHAZL102M50
C 618,619,621-623	CFTLA103J50
C 620	CEHAZL101M50
C 624	CEHAZL102M35
C 625,626,629,630	CFTLA103J50
C 627	CCH1951
C 628	CEHAT100M50
C 701	ACH1478
C 702,703,801-803	CFTLA103J50

MISCELLANEOUS

L 601	COIL	CTX1113
H 601,602	FUSE HOLDER	AKR7004
JA 801	JACK	RKN1004
KN501-508,601-604	HOLDER	CND5464
KN607	WRAPPING TERMINAL	VNF1084
KN801,802	SCREW TERMINAL	VNE1949
RY 601,602	RELAY	CSR1032
RY 603	JOE LOWPOWER RELAY	ASR7013
S 701	PUSH SW	CSG1194
S 801	SLIDE SWITCH	ASH1031

T 4	POWER TRANSFORMER	ATT7078
CN501,502,602	CONNECTOR	CKS6112
CN503,505,603,604	3P TOP POST	B3B-EH
CN507	CORD	CDE9278
CN508	CORD	CDE9279

CN509	CORD	CDE9330
CN510	CORD	CDE9331
CN601	CONNECTOR	CKS6211
CN606,701	5P TOP POST	B5B-EH
CN607,608,612	2P TOP POST	B2B-EH

CN609,801	3P TOP POST	B3B-EH
CN610	CORD	CDE9321
CN702	CORD	CDE9280
56	COIL SPRING	CBH3060