

## SERVICE MANUAL

MODEL	JP	E3	E2	EK	E2A	E1C	E1K	EUT
<b>DN-A300M</b>		✓	✓					

### INTEGRATED STEREO AMPLIFIER

#### 注意

サービスをおこなう前に、このサービスマニュアルを必ずお読みください。本機は、火災、感電、けがなどに対する安全性を確保するために、さまざまな配慮をおこなっており、また法的には「電気用品安全法」にもとづき、所定の許可を得て製造されております。従ってサービスをおこなう際は、これらの安全性が維持されるよう、このサービスマニュアルに記載されている注意事項を必ずお守りください。

• For purposes of improvement, specifications and design are subject to change without notice.

• 本機の仕様は性能改良のため、予告なく変更することがあります。  
• 補修用性能部品の保有期間は、製造打切後 8 年です。

• Please use this service manual with referring to the operating instructions without fail.

• 修理の際は、必ず取扱説明書を参照の上、作業を行ってください。

• Some illustrations using in this service manual are slightly different from the actual set.

• 本文中に使用しているイラストは、説明の都合上現物と多少異なる場合があります。

D&M Holdings Inc.

PROFESSIONAL BUSINESS COMPANY

## SAFETY PRECAUTIONS

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

### LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

**CAUTION** Please heed the points listed below during servicing and inspection.

#### ⊙ Heed the cautions!

Spots requiring particular attention when servicing, such as the cabinet, parts, chassis, etc., have cautions indicated on labels or seals. Be sure to heed these cautions and the cautions indicated in the handling instructions.

#### ⊙ Caution concerning electric shock!

- (1) An AC voltage is impressed on this set, so touching internal metal parts when the set is energized could cause electric shock. Take care to avoid electric shock, by for example using an isolating transformer and gloves when servicing while the set is energized, unplugging the power cord when replacing parts, etc.
- (2) There are high voltage parts inside. Handle with extra care when the set is energized.

#### ⊙ Caution concerning disassembly and assembly!

Though great care is taken when manufacturing parts from sheet metal, there may in some rare cases be burrs on the edges of parts which could cause injury if fingers are moved across them. Use gloves to protect your hands.

#### ⊙ Only use designated parts!

The set's parts have specific safety properties (fire resistance, voltage resistance, etc.). For replacement parts, be sure to use parts which have the same properties. In particular, for the important safety parts that are marked  $\triangle$  on wiring diagrams and parts lists, be sure to use the designated parts.

#### ⊙ Be sure to mount parts and arrange the wires as they were originally!

For safety reasons, some parts use tape, tubes or other insulating materials, and some parts are mounted away from the surface of printed circuit boards. Care is also taken with the positions of the wires inside and clamps are used to keep wires away from heating and high voltage parts, so be sure to set everything back as it was originally.

#### ⊙ Inspect for safety after servicing!

Check that all screws, parts and wires removed or disconnected for servicing have been put back in their original positions, inspect that no parts around the area that has been serviced have been negatively affected, conduct an insulation check on the external metal connectors and between the blades of the power plug, and otherwise check that safety is ensured.

(Insulation check procedure)

Unplug the power cord from the power outlet, disconnect the antenna, plugs, etc., and turn the power switch on. Using a 500V insulation resistance tester, check that the insulation resistance between the terminals of the power plug and the externally exposed metal parts (antenna terminal, headphones terminal, microphone terminal, input terminal, etc.) is  $1M\Omega$  or greater. If it is less, the set must be inspected and repaired.

### **CAUTION** Concerning important safety parts

Many of the electric and structural parts used in the set have special safety properties. In most cases these properties are difficult to distinguish by sight, and using replacement parts with higher ratings (rated power and withstand voltage) does not necessarily guarantee that safety performance will be preserved. Parts with safety properties are indicated as shown below on the wiring diagrams and parts lists in this service manual. Be sure to replace them with parts with the designated part number.

- (1) Schematic diagrams ... Indicated by the  $\triangle$  mark.
- (2) Parts lists ... Indicated by the  $\triangle$  mark.

Using parts other than the designated parts could result in electric shock, fires or other dangerous situations.

**注意** サービス、点検時にはつぎのことにご注意願います。

### ◎注意事項をお守りください！

サービスのとき特に注意を必要とする個所についてはキャビネット、部品、シャーシなどにラベルや捺印で注意事項を表示しています。これらの注意書きおよび取扱説明書などの注意事項を必ずお守りください。

### ◎感電に注意！

- (1) このセットは、交流電圧が印加されていますので通電時に内部金属部に触れると感電することがあります。従って通電サービス時には、絶縁トランスの使用や手袋の着用、部品交換には、電源プラグを抜くなどして感電にご注意ください。
- (2) 内部には高電圧の部分がありますので、通電時の取扱には十分ご注意ください。

### ◎分解、組み立て作業時のご注意！

板金部品の端面の『バリ』は、部品製造時に充分管理しておりますが、板金端面は鋭利となっている箇所がありますので、部品端面に触れたまま指を動かすとまれに怪我をする場合がありますので十分注意して作業して下さい。手の保護のために手袋を着用してください。

### ◎指定部品の使用！

セットの部品は難燃性や耐電圧など安全上の特性を持ったものとなっています。従って交換部品は、使用されていたものと同じ特性の部品を使用してください。特に配線図、部品表に△印で指定されている安全上重要な部品は必ず指定のものをご使用ください。

### ◎部品の取付けや配線の引きまわしは、元どおりに！

安全上、テープやチューブなどの絶縁材料を使用したり、プリント基板から浮かして取付けた部品があります。また内部配線は引きまわしやクランパーによって発熱部品や高圧部品に接近しないように配慮されていますので、これらは必ず元どおりにしてください。

### ◎サービス後は安全点検を！

サービスのために取り外したねじ、部品、配線などが元どおりになっているか、またサービスした個所の周辺を劣化させてしまったところがないかなどを点検し、外部金属端子部と、電源プラグの刃の間の絶縁チェックをおこなうなど、安全性が確保されていることを確認してください。

(絶縁チェックの方法)

電源コンセントから電源プラグを抜き、アンテナやプラグなどを外し、電源スイッチを入れます。500V絶縁抵抗計を用いて、電源プラグのそれぞれの端子と外部露出金属部〔アンテナ端子、ヘッドホン端子、マイク端子、入力端子など〕との間で、絶縁抵抗値が1 MΩ以上であることを確認してください。この値以下のときはセットの点検修理が必要です。

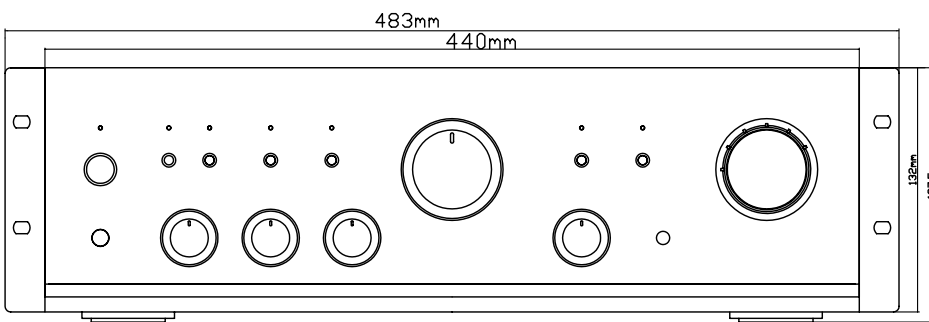
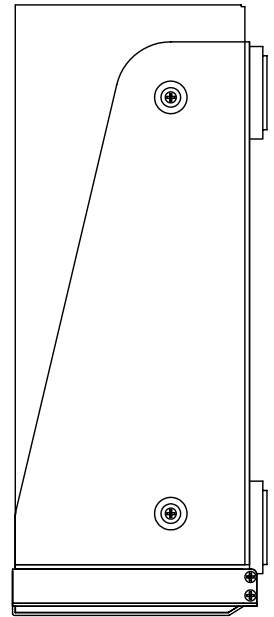
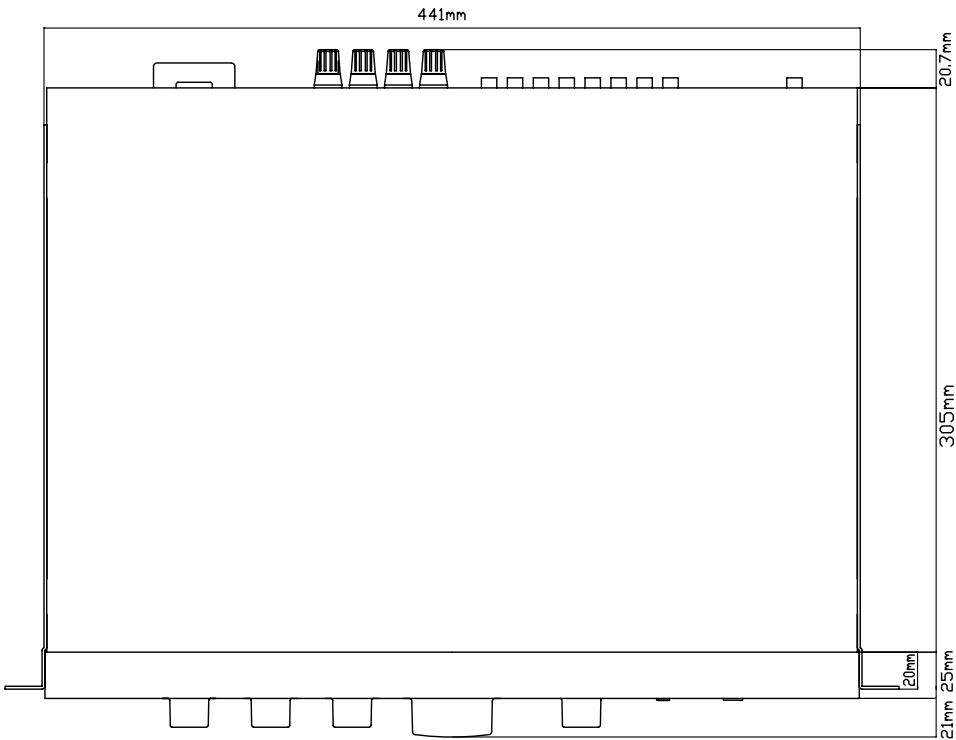
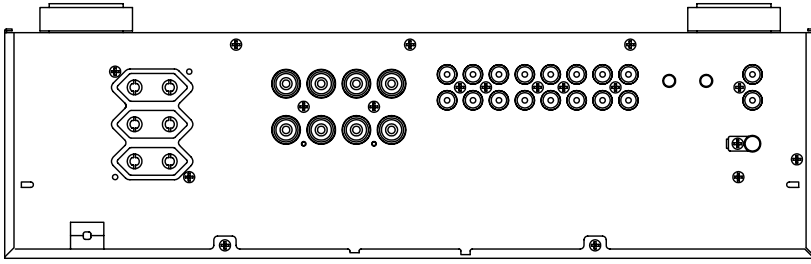
### **注意** 安全上重要な部品について

本機に使用している多くの電気部品、および機構部品は安全上、特別な特性を持っています。この特性はほとんどの場合、外観では判別つきにくく、またもとの部品より高い定格（定格電力、耐圧）を持ったものを使用しても安全性が維持されるとは、限りません。安全上の特性を持った部品は、このサービスマニュアルの配線図、部品表に つぎのように表示していますので必ず指定されている部品番号のものを使用願います。

- (1) 配線図… △ マークで表示しています。
- (2) 部品表… △ マークで表示しています。

指定された部品と異なるものを使用した場合には、感電、火災などの危険を生じる恐れがあります。

# DIMENSION



## WIRE ARRANGEMENT

If wire bundles are untied or moved to perform adjustment or parts replacement etc., be sure to rearrange them neatly as they were originally bundled or placed afterward. Otherwise, incorrect arrangement can be a cause of noise generation.

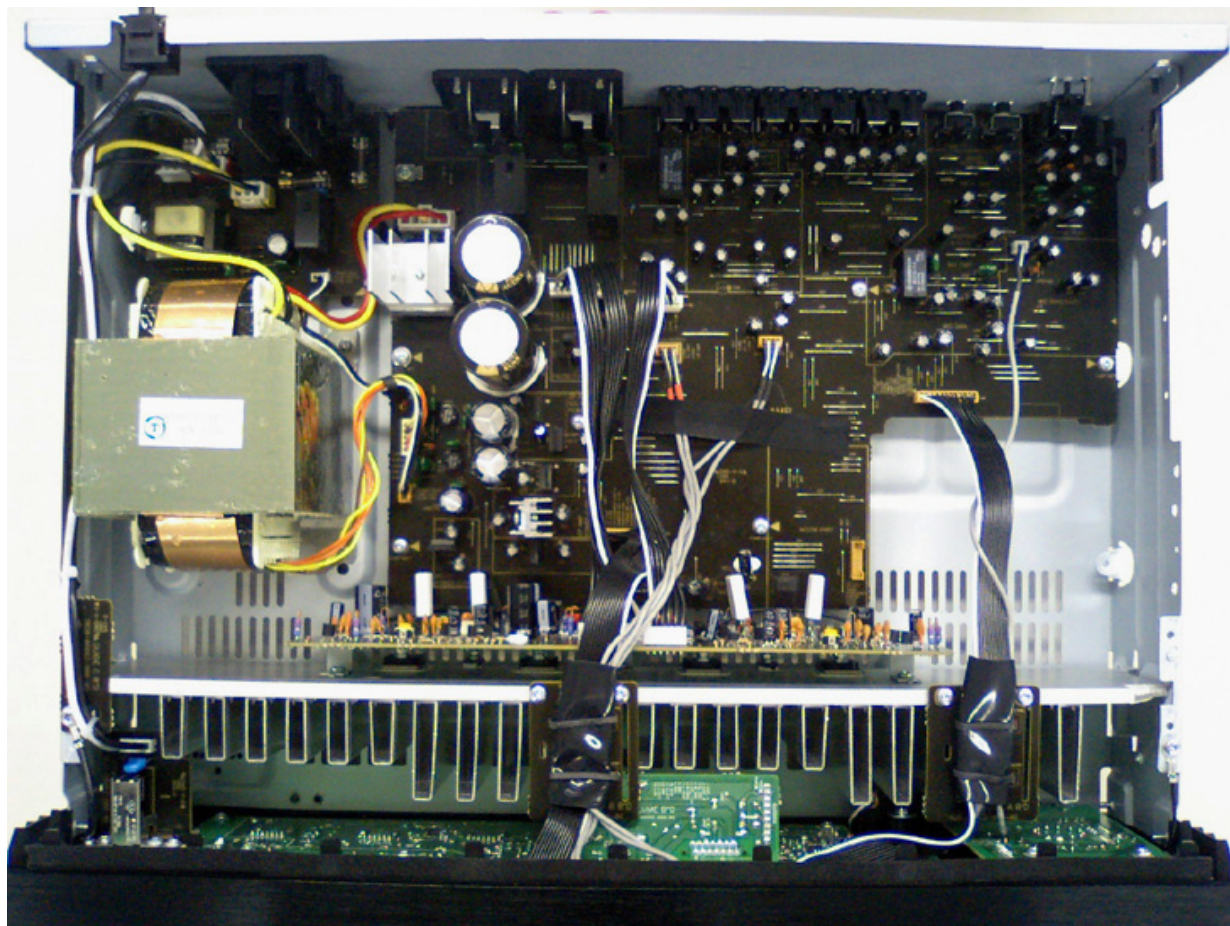
### Wire arrangement viewed from the top

## ワイヤー整形図

調整や部品の交換等により、ワイヤー類の結束をはずしたり移動させた場合には、それらの作業が完了した時点でワイヤーの整形をおこなってください。正しく整形されていないとノイズ発生の原因となることがあります。

### 上面からみたワイヤー整形

Back Panel side



Front Panel side



## CAUTION OF WIRE ARRANGEMENT

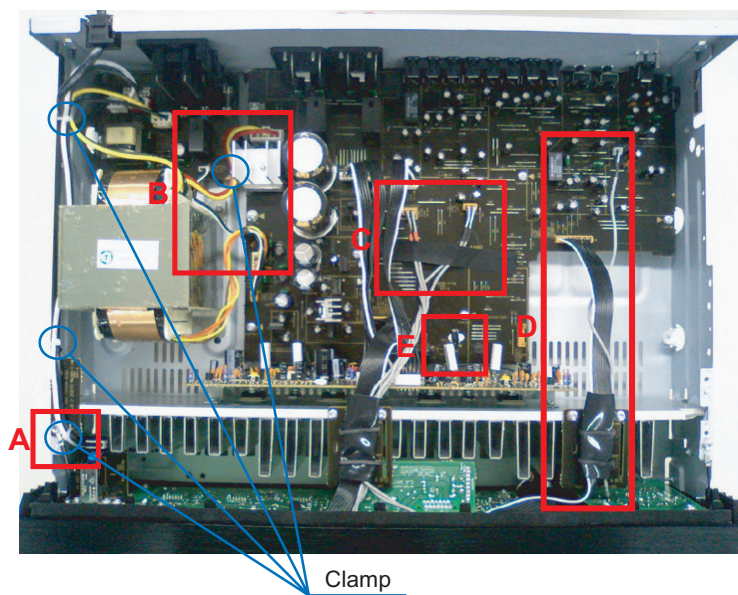
Observe that the wires do not contact heat producing parts (heatsink, resistors, fuse, etc.).

Fix the wiring of the wire like this photo

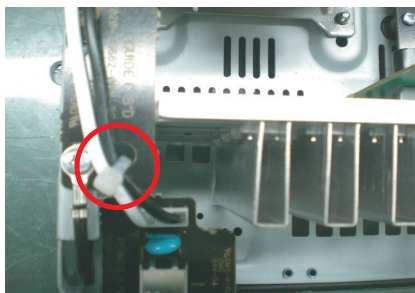
## ワイヤー整形時の注意事項

ワイヤーが発熱体（ヒートシンク・抵抗・ヒューズなど）に接触しないようにして下さい。

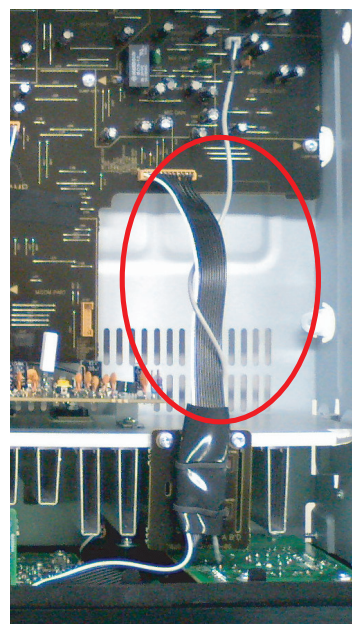
写真のようにワイヤーの配線を整えてください。



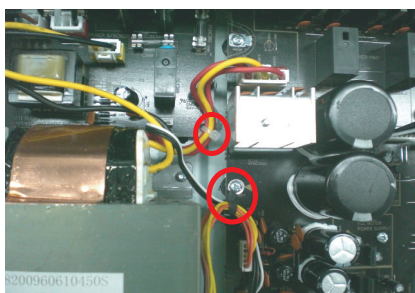
Detail A



Detail D

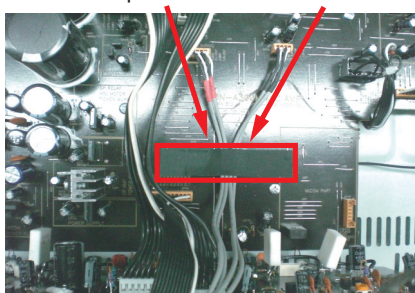


Detail B



Detail C

The wire is pulled in the direction of arrow.



Detail E





# ADJUSTMENT

## DC Offset Current / Idling Current


Required measurement equipment: DC Voltmeter

### 1. Setup


- (1) Place the unit at an ordinary position avoiding direct air flow from an air-conditioner or fan. Do the adjustment at a temperature between 15 °C (59 °F) and 30 °C (86 °F).
- (2) Set control as follows.
  - POWER switch → OFF (  ).
  - VOLUME control → fully counterclockwise (  min. )
  - SPEAKER terminals → open: do not connect the speakers, dummy load etc.

### 2. Adjustment

#### ● DC Offset Current

- (1) Connect SPEAKER terminals to the DC Voltmeter.
- (2) Connect power cord to AC wall outlet, and turn POWER switch "ON" (  ).
- (3) Right after power on, adjust test points VR400 and VR401 of Power Amp P.W.B. so that the DC voltmeter reads  $10 \pm 1\text{mV}$ .
- (4) Then after 2 minutes warm up adjust VR400 and VR401 so that the DC voltmeter reads  $10 \pm 1\text{mV}$ .
- (5) And after 10 minutes warm up adjust VR400 and VR401 so that the DC voltmeter reads  $10 \pm 0.5\text{mV}$ .

#### ● DC Offset Current



- (1) Remove top cover. And then connect DC Voltmeter to the test points TP300 and TP301 of Power Amp P.W.B.
- (2) Connect power cord to AC wall outlet, and turn POWER switch "ON" (  ).
- (3) Right after power on, adjust test points VR403 and VR404 of Power Amp P.W.B. so that the DC voltmeter reads  $10 \pm 1\text{mV}$ .
- (4) Then after 2 minutes warm up adjust VR403 and VR404 so that the DC voltmeter reads  $10 \pm 1\text{mV}$ .
- (5) And after 10 minutes warm up adjust VR403 and VR404 so that the DC voltmeter reads  $10 \pm 0.5\text{mV}$ .

# 調整

## DC オフセット電流 / アイドリング電流


調整に必要な測定器： DC Voltmeter

### 1. 準備


- (1) セットをクーラ、扇風機のそばなど風通しの良い場所を避け、通常の使用状態に置きます。セットの周囲温度は、15～30℃で調整をおこないます。
- (2) セットのスイッチ類は、次のようにセットします。
  - パワースイッチ → OFF (  )。
  - ボリューム調整つまみ → 最小の反時計方向 (  ) にセットします。
  - スピーカ端子 → 無負荷 (スピーカを接続しません。)

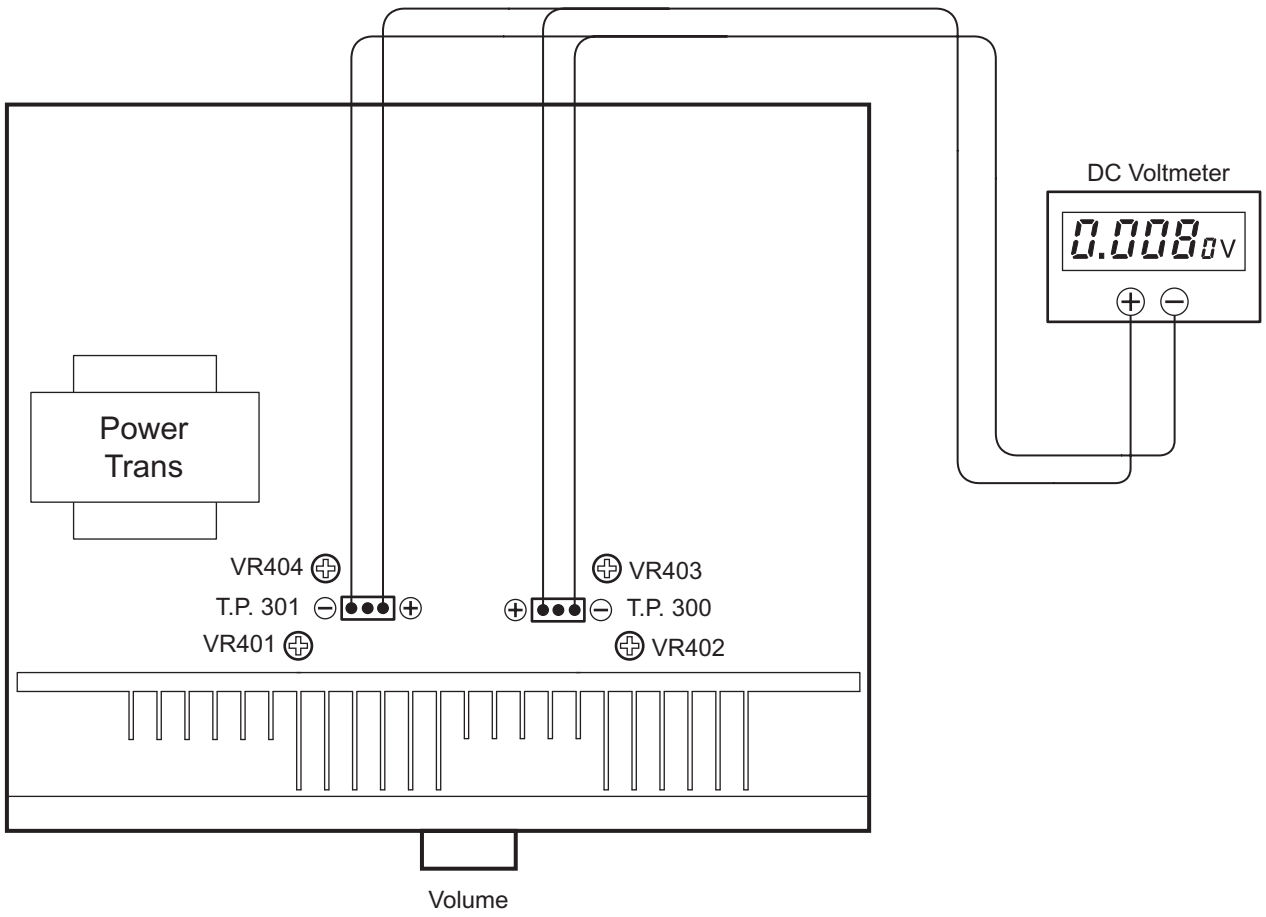
### 2. 調整

#### ● DC オフセット電流

- (1) DC Voltmeter にスピーカ端子を接続します。
- (2) 電源コードを AC100V (95～105V の範囲でも可) に接続し、電源スイッチを "ON" (  ) にします。
- (3) 通電後にパワーアンプ基板のテストポイントの電圧が (  $10 \pm 1\text{mV}$  ) になるよう、VR400・VR401 を調整します。
- (4) 2分後にテストポイントの電圧が (  $10 \pm 1\text{mV}$  ) になるよう、VR400・VR401 を調整します。
- (5) 10分後にテストポイントの電圧が (  $10 \pm 0.5\text{mV}$  ) になるよう、VR400・VR401 を調整します。

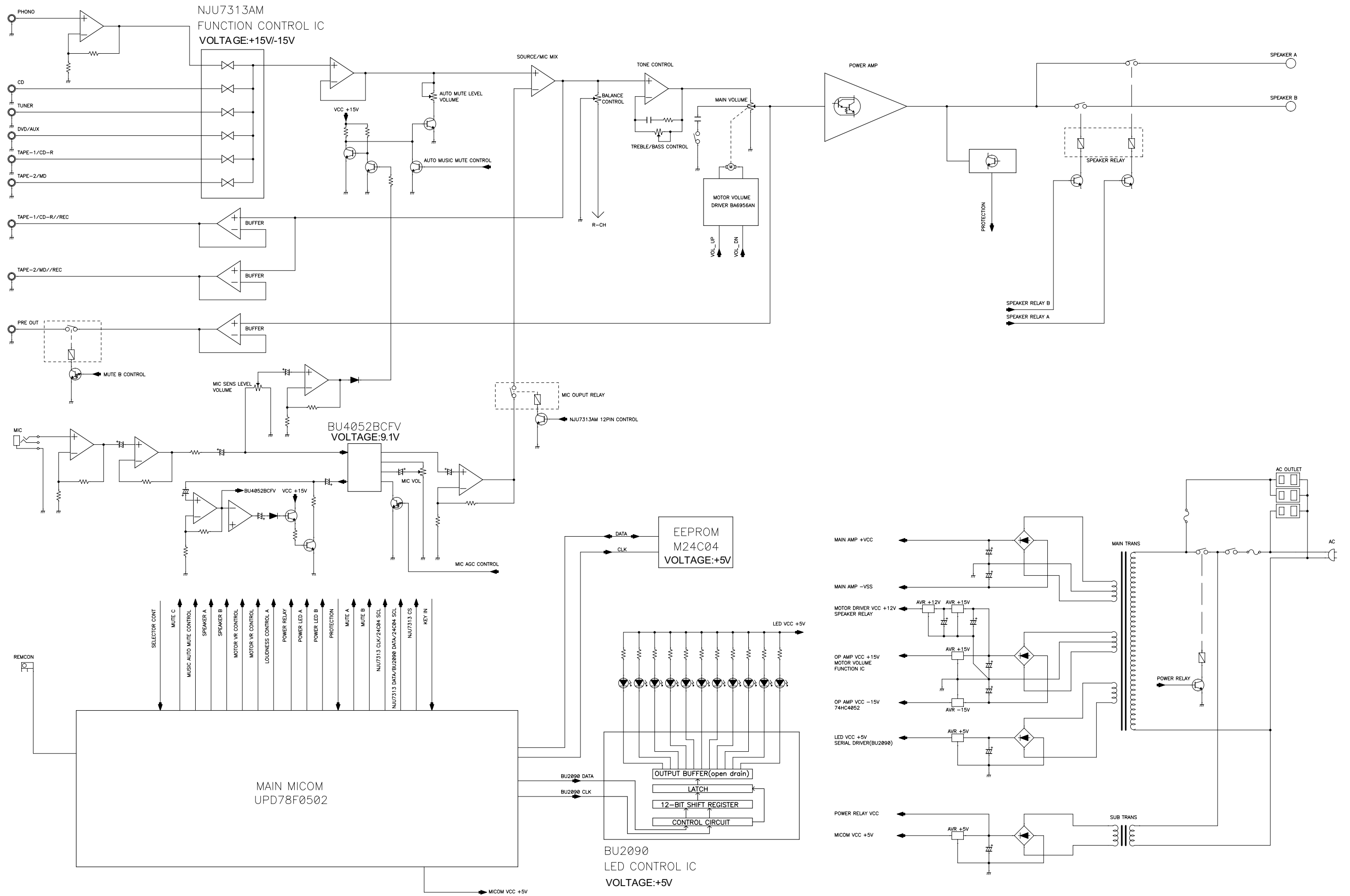
#### ● アイドリング電流

- (1) トップカバーをはずし、パワーアンプ基板のテストポイント (T.P.300, T.P.301) に DC Voltmeter を接続します。
- (2) 電源コードを AC100V (95～105V の範囲でも可) に接続し、電源スイッチを "ON" (  ) にします。
- (3) 通電後にパワーアンプ基板のテストポイントの電圧が (  $10 \pm 1\text{mV}$  ) になるよう、VR403・VR404 を調整します。
- (4) 2分後にテストポイントの電圧が (  $10 \pm 1\text{mV}$  ) になるよう、VR403・VR404 を調整します。
- (5) 10分後にテストポイントの電圧が (  $10 \pm 0.5\text{mV}$  ) になるよう、VR403・VR404 を調整します。





# BLOCK DIAGRAM



---MEMO---

# SEMICONDUCTORS

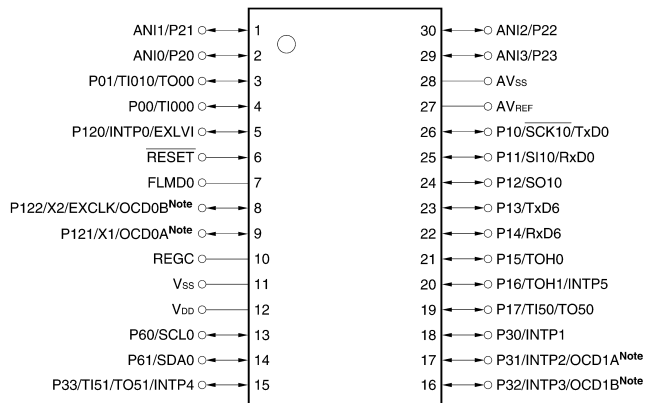
Only major semiconductors are shown, general semiconductors etc. are omitted to list.

The semiconductor which described a detailed drawing in a schematic diagram are omitted to list.

主な半導体を記載しています。汎用の半導体は記載を省略しています。

回路図の中に詳細図がある半導体は記載を省略しています。

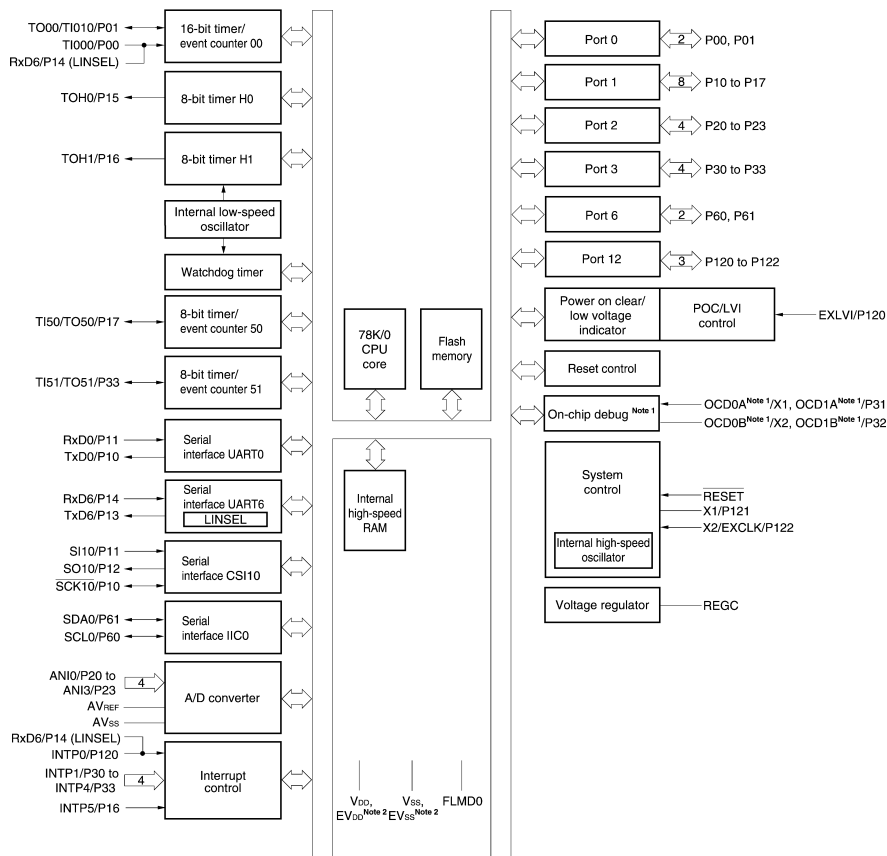
## UPD78F0502MC(T) (IC109)



**Note**  $\mu$ PD78F0503D (product with on-chip debug function) only

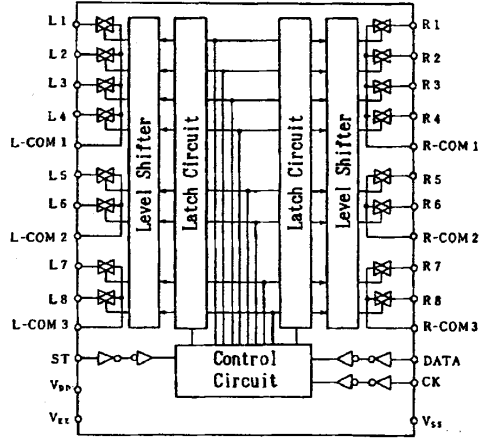
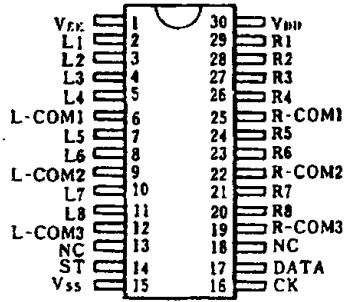
- Cautions**
1. Make AV<sub>ss</sub> the same potential as V<sub>ss</sub>.
  2. Connect the REGC pin to V<sub>ss</sub> via a capacitor (0.47 to 1  $\mu$ F: recommended).
  3. ANI0/P20 to ANI3/P23 are set in the analog input mode after release of reset.

## Functional Block Diagram



- Notes**
1. Available only in the  $\mu$ PD78F0503D (product with on-chip debug function).
  2. Available only in the 36-pin plastic FLGA (FC-AA3 type).

# NJU7313AM (IC108)

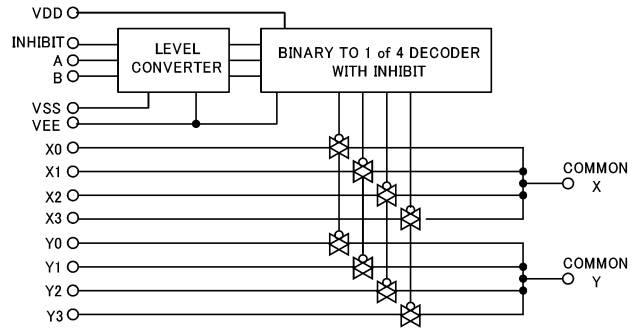
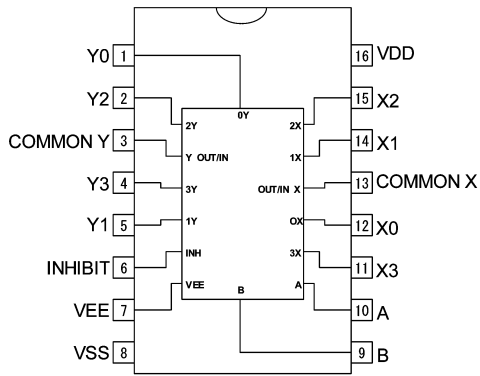


## Pin Function

### TERMINALS DESCRIPTION

No.		SYMBOL	FUNCTIONS	No.		SYMBOL	FUNCTIONS
DIP	DMP			DIP	DMP		
1	1	V <sub>EE</sub>	Negative Voltage Supply	15	16	CK	Clcock input
2	2	L1	Analog switch input/output	16	17	DATA	Data input
3	3	L2		17	19	R-COM3	R7, L8 Common
4	4	L3		18	20	R8	Analog switch input/output
5	5	L4		19	21	R7	
6	6	L-COM1		L1, L2, L3, L4 Common	20	22	R-COM2
7	7	L5	Analog switch input/output	21	23	R6	Analog switch input/output
8	8	L6		22	24	R5	
9	9	L-COM2	L5, L6 Common	23	25	R-COM1	R1, R2, R3, R4 Common
10	10	L7	Analog switch input/output	24	26	R4	Analog switch input/output
11	11	L8		25	27	R3	
12	12	L-COM3		L7, L8 Common	26	28	
13	14	ST	Chip enable	27	29	R1	
14	15	V <sub>SS</sub>	GND	28	30	V <sub>DD</sub>	Positive voltage supply

# BU4052BCFV (IC101)



## Pin Function

PIN No.	PIN NAME	I/O	PIN FUNCTION
1	Y0	I/O	Analog Switch Input / Output
2	Y2	I/O	Analog Switch Input / Output
3	COMMON Y	I/O	Analog Switch Input / Output
4	Y3	I/O	Analog Switch Input / Output
5	Y1	I/O	Analog Switch Input / Output
6	INHIBIT	I	Control Input
7	VEE	—	Power Supply(-)
8	VSS	—	Power Supply(-)
9	B	I	Control Input
10	A	I	Control Input
11	X3	I/O	Analog Switch Input / Output
12	X0	I/O	Analog Switch Input / Output
13	COMMON X	I/O	Analog Switch Input / Output
14	X1	I/O	Analog Switch Input / Output
15	X2	I/O	Analog Switch Input / Output
16	VDD	—	Power Supply(+)

## TRUTH TABLE

INHIBIT	A	B	ON SWITCH
L	L	L	X0, Y0
L	H	L	X1, Y1
L	L	H	X2, Y2
L	H	H	X3, Y3
H	X	X	NONE

## BU2090FS-E2 (IC102)

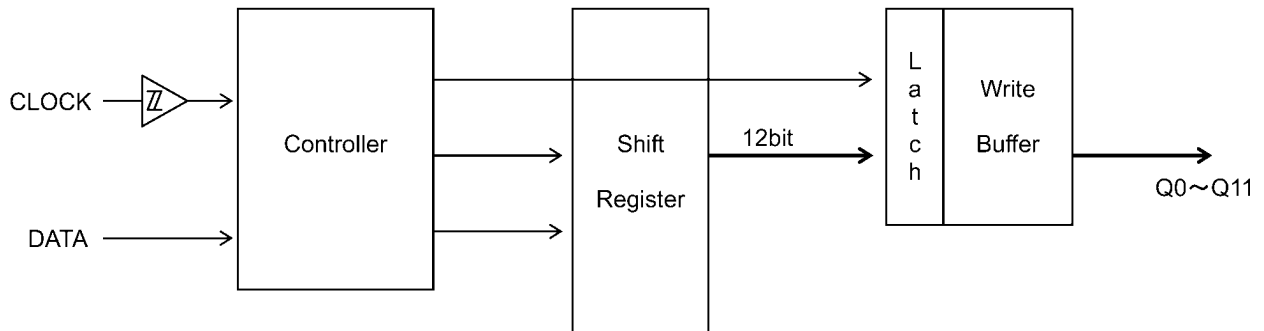
### Pin Function

PIN No.	Pin Name	I/O	Function
1	V <sub>SS</sub>	-	GND
2	DATA	I	Serial data input
3	CLOCK	I	Data shift clock input (rising edge trigger) The shift data is transferred to the output when the input data logic level is high during the falling transition of the clock pulse.
4	Q0	O	Parallel data output (Nch Open Drain FET)
5	Q1		
6	Q2		
7	Q3		
8	Q4		
9	Q5		
10	Q6		
11	Q7		
12	Q8		
13	Q9		
14	Q10		
15	Q11		
16	V <sub>DD</sub>	-	Power supply

Latch data	L	H
Output FET	ON	OFF

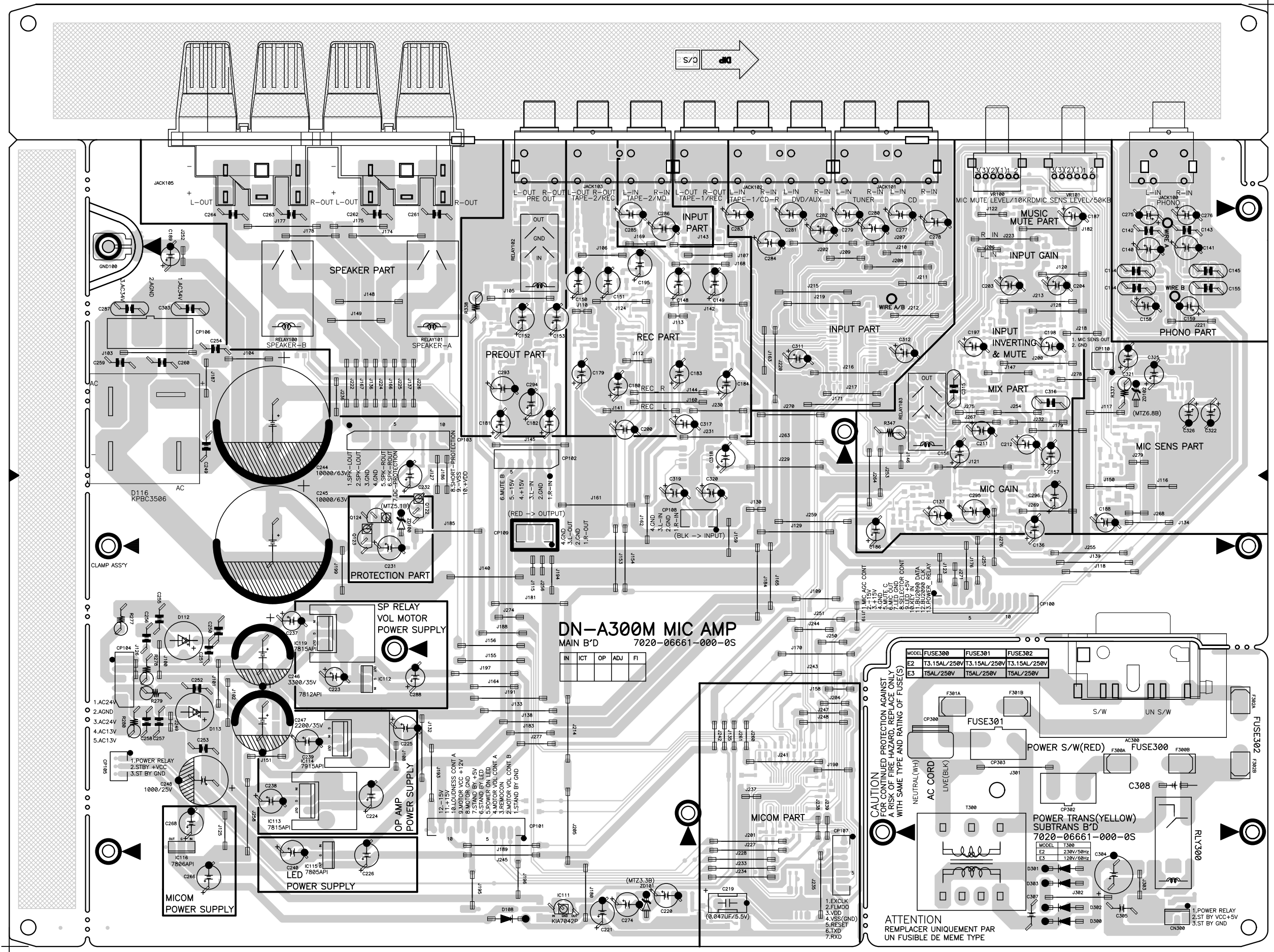
### Functional Block Diagram



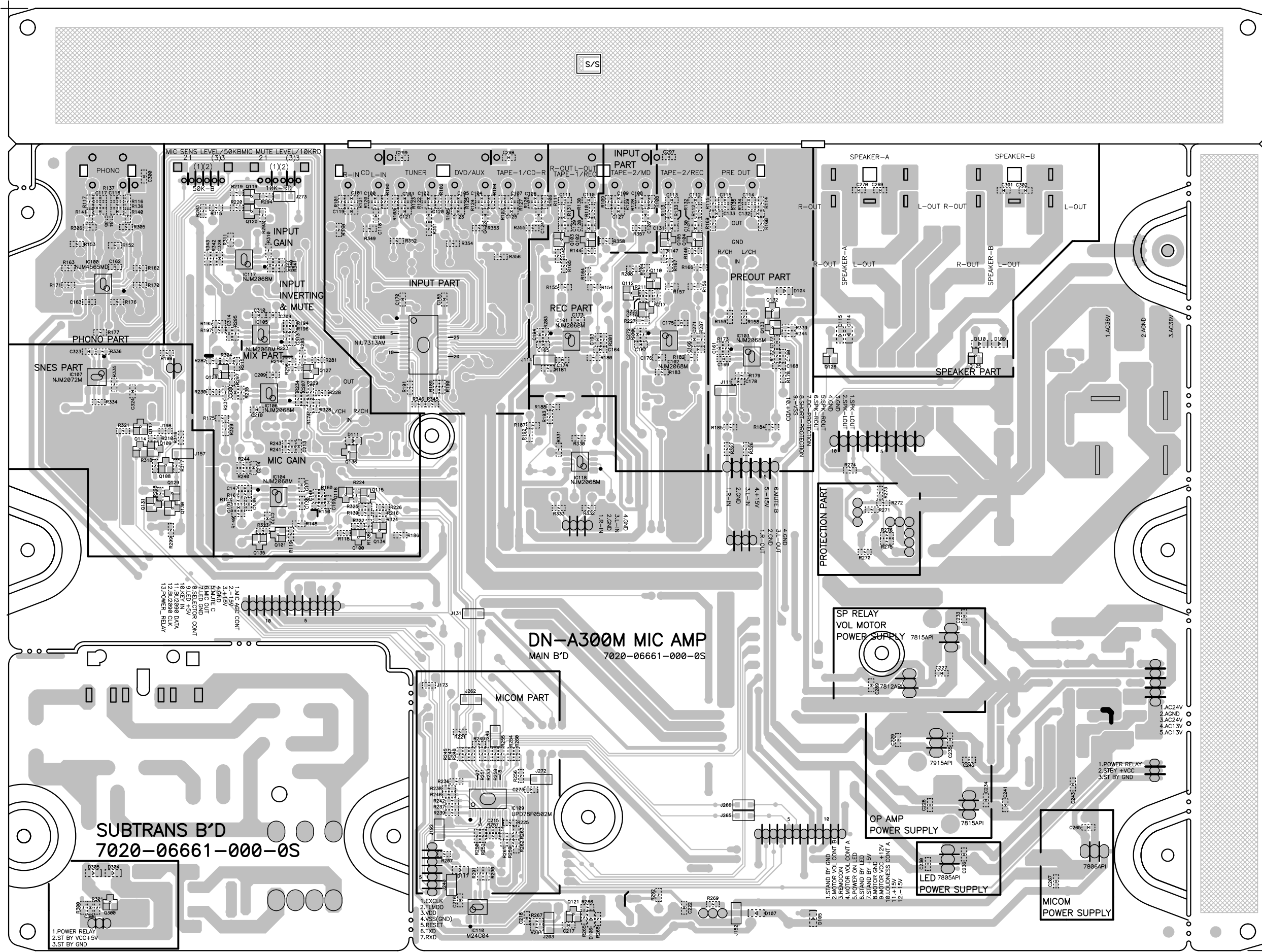


PRINTED WIRING BOARDS

MAIN P.W.B. UNIT (1/2)



MAIN P.W.B. UNIT(2/2)



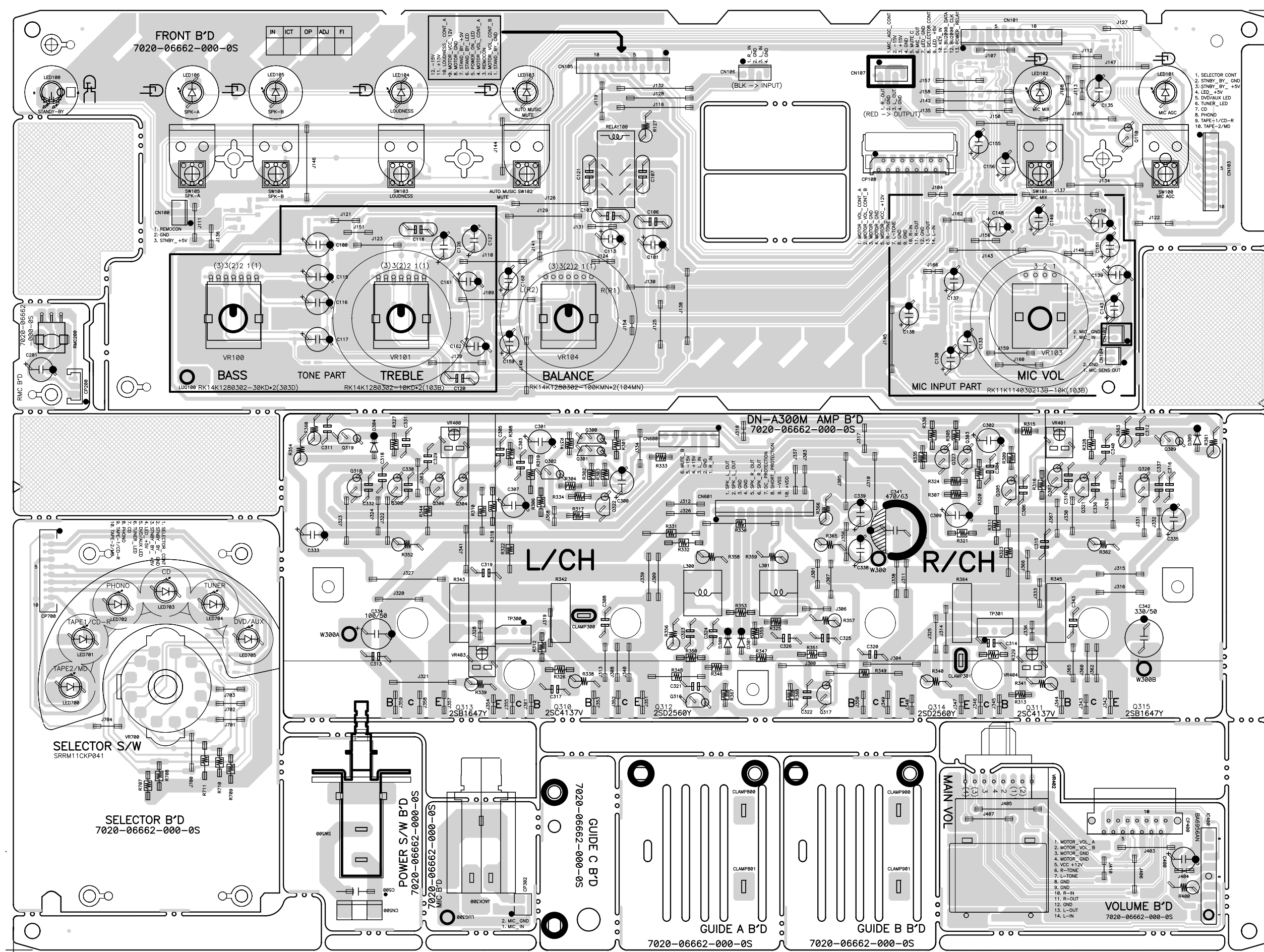
S/S

DN-A300M MIC AMP  
MAIN B'D 7020-06661-000-0S

SUBTRANS B'D  
7020-06661-000-0S

FOIL SIDE

FRONT P.W.B. UNIT (1/2)



COMPONENT SIDE





# NOTE FOR PARTS LIST

- Parts for which "nsp" is indicated on this table cannot be supplied.
- When ordering part, clearly indicate "1" and "l" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including General-purpose Carbon Film Resistor in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)
- Not including General-purpose Carbon Chip Resistor in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

### WARNING:

Parts marked with this symbol  $\Delta$  have critical characteristics.  
Use ONLY replacement parts recommended by the manufacturer.

## ● Resistors

Ex.:  $\overbrace{RN}^{\text{Type}}$   $\overbrace{14K}^{\text{Shape and performance}}$   $\overbrace{2E}^{\text{Power}}$   $\overbrace{182}^{\text{Resistance}}$   $\overbrace{G}^{\text{Allowable error}}$   $\overbrace{FR}^{\text{Others}}$

RD : Carbon	2B : 1/8W	F : $\pm 1\%$	P : Pulse-resistant type
RC : Composition	2E : 1/4W	G : $\pm 2\%$	NL : Low noise type
RS : Metal oxide film	2H : 1/2W	J : $\pm 5\%$	NB : Non-burning type
RW : Winding	3A : 1W	K : $\pm 10\%$	FR : Fuse-resistor
RN : Metal film	3D : 2W	M : $\pm 20\%$	F : Lead wire forming
RK : Metal mixture	3F : 3W		
	3H : 5W		

### \* Resistance

$\overbrace{1}^{\text{1}} \overbrace{8}^{\text{8}} \overbrace{2}^{\text{2}} \Rightarrow 1800 \text{ ohm} = 1.8 \text{ kohm}$   
Indicates number of zeros after effective number.  
2-digit effective number.

• Units: ohm

$\overbrace{1}^{\text{1}} \overbrace{R}^{\text{R}} \overbrace{2}^{\text{2}} \Rightarrow 1.2 \text{ ohm}$   
1-digit effective number.  
2-digit effective number, decimal point indicated by R.

• Units: ohm

## ● Capacitors

Ex.:  $\overbrace{CE}^{\text{Type}}$   $\overbrace{04W}^{\text{Shape and performance}}$   $\overbrace{1H}^{\text{Dielectric strength}}$   $\overbrace{2R2}^{\text{Capacity}}$   $\overbrace{M}^{\text{Allowable error}}$   $\overbrace{BP}^{\text{Others}}$

CE : Aluminum foil electrolytic	0J : 6.3V	F : $\pm 1\%$	HS : High stability type
CA : Aluminum solid electrolytic	1A : 10V	G : $\pm 2\%$	BP : Non-polar type
CS : Tantalum electrolytic	1C : 16V	J : $\pm 5\%$	HR : Ripple-resistant type
CQ : Film	1E : 25V	K : $\pm 10\%$	DL : For change and discharge
CK : Ceramic	1V : 35V	M : $\pm 20\%$	HF : For assuring high frequency
CC : Ceramic	1H : 50V	Z : $+80\%$	U : UL part
CP : Oil	2A : 100V	-20%	C : CSA part
CM : Mica	2B : 125V	P : $+100\%$	W : UL-CSA type
CF : Metallized	2C : 160V	-0%	F : Lead wire forming
CH : Metallized	2D : 200V	C : $\pm 0.25\text{pF}$	
	2E : 250V	D : $\pm 0.5\text{pF}$	
	2H : 500V	= : Others	
	2J : 630V		

### \* Capacity (electrolyte only)

$\overbrace{2}^{\text{2}} \overbrace{2}^{\text{2}} \overbrace{2}^{\text{2}} \Rightarrow 2200\mu\text{F}$   
Indicates number of zeros after effective number.  
2-digit effective number.

• Units:  $\mu\text{F}$ .

$\overbrace{2}^{\text{2}} \overbrace{R}^{\text{R}} \overbrace{2}^{\text{2}} \Rightarrow 2.2\mu\text{F}$   
1-digit effective number.  
2-digit effective number, decimal point indicated by R.

• Units:  $\mu\text{F}$ .

### \* Capacity (except electrolyte)

$\overbrace{2}^{\text{2}} \overbrace{2}^{\text{2}} \overbrace{2}^{\text{2}} \Rightarrow 2200\text{pF} = 0.0022\mu\text{F}$   
(More than 2) Indicates number of zeros after effective number.  
2-digit effective number.

• Units: pF.

$\overbrace{2}^{\text{2}} \overbrace{2}^{\text{2}} \overbrace{1}^{\text{1}} \Rightarrow 220\text{pF}$   
(0 or 1) Indicates number of zeros after effective number.  
2-digit effective number.

• Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dielectric strength value.

# 部品表について

- 部品表に "nsp" と記載されている部品は供給できません。
- 部品を発注する際は特に数字の "1" と英字の "l" との区別をはっきり記入してください。
- 部品番号を表示していない部品は供給できません。
- $\Delta$  印の部品は安全上重要な部品です。交換するときは、安全および性能維持のため必ず指定の部品をご使用ください。
- ★印のついている部品は分解図中には記載していません。
- 汎用カーボン抵抗器は記載していません。定数は回路図を参照願います。
- 汎用カーボンチップ抵抗器は記載していません。定数は回路図を参照願います。
- 部品表の抵抗器、コンデンサの品名記号の読み方は表を参照してください。

## ● 抵抗器

例)  $\overbrace{RN}^{\text{種類}}$   $\overbrace{14K}^{\text{形状特性}}$   $\overbrace{2E}^{\text{電力}}$   $\overbrace{182}^{\text{抵抗値}}$   $\overbrace{G}^{\text{許容差}}$   $\overbrace{FR}^{\text{その他}}$

RD : カーボン	2B : 1/8 W	F : $\pm 1\%$	P : 耐パルス形
RC : 固定体	2E : 1/4 W	G : $\pm 2\%$	NL : 低雑音形
RS : 金属系皮膜	2H : 1/2 W	J : $\pm 5\%$	NB : 不燃形
RW : 巻線	3A : 1 W	K : $\pm 10\%$	FR : ヒューズ抵抗
RN : 金属皮膜	3D : 2 W	M : $\pm 20\%$	F : リード線成形
RK : 金属混合体	3F : 3 W		
	3H : 5 W		

### \* 抵抗値

$\overbrace{18}^{\text{18}} \overbrace{2}^{\text{2}} \Rightarrow 1800\Omega = 1.8\text{k}\Omega$   
有効数字につづく0の数を表わす。  
2桁の有効数字を表わす。

$\overbrace{1R}^{\text{1R}} \overbrace{2}^{\text{2}} \Rightarrow 1.2\Omega$   
1桁の有効数字を表わす。  
2桁の有効数字で小数点はRで表わす。  
: 単位は $\Omega$

## ● コンデンサ

例)  $\overbrace{CE}^{\text{種類}}$   $\overbrace{04W}^{\text{形状特性}}$   $\overbrace{1H}^{\text{耐圧}}$   $\overbrace{2R2}^{\text{容量}}$   $\overbrace{M}^{\text{許容差}}$   $\overbrace{BP}^{\text{その他}}$

CE : アルミ箔電解	0J : 6.3 V	F : $\pm 1\%$	HS : 高安定形
CA : アルミ固体電解	1A : 10 V	G : $\pm 2\%$	BP : 無極性形
CS : タンタル電解	1C : 16 V	J : $\pm 5\%$	DR : 耐リップル形
CQ : フィルム	1E : 25 V	K : $\pm 10\%$	DL : 充放電対策用
CK : セラミック	1V : 35 V	M : $\pm 20\%$	HF : 高周波保証用
CC : セラミック	1H : 50 V	Z : $+80\%$	U : UL 部品
CP : オイル	2A : 100 V	-20%	C : CSA 部品
CM : マイカ	2B : 125 V	P : $+100\%$	W : UL-CSA 部品
CF : メタライズド	2C : 160 V	-0%	F : リード線成形
CH : メタライズド	2D : 200 V	C : $\pm 0.25\text{pF}$	
	2E : 250 V	D : $\pm 0.5\text{pF}$	
	2H : 500 V	= : その他	
	2J : 630 V		

### \* 容量値

#### ● 電解コンデンサの場合

$\overbrace{22}^{\text{22}} \overbrace{2}^{\text{2}} \Rightarrow 2200\mu\text{F}$   
有効数字につづく0の数を表わす。  
2桁の有効数字を表わす。  
: 単位は $\mu\text{F}$

$\overbrace{2R}^{\text{2R}} \overbrace{2}^{\text{2}} \Rightarrow 2.2\mu\text{F}$   
1桁の有効数字を表わす。  
2桁の有効数字で小数点はRで表わす。  
: 単位は $\mu\text{F}$

#### ● 電解コンデンサ以外の場合

$\overbrace{22}^{\text{22}} \overbrace{2}^{\text{2}} \Rightarrow 2200\text{pF} = 0.0022\mu\text{F}$   
有効数字につづく0の数を表わす。  
(0の数が2以上の場合)  
2桁の有効数字を表わす。  
: 単位はpF

$\overbrace{22}^{\text{22}} \overbrace{1}^{\text{1}} \Rightarrow 220\text{pF}$   
有効数字につづく0の数を表わす。  
(0の数0または1の場合)  
2桁の有効数字を表わす。  
: 単位はpF

● 耐圧を交流で表示する場合は、耐圧表示の次に「AC」を表示します。

# PARTS LIST OF P.W.B. UNIT

\* 本表に "nsp" と記載されている部品は供給できません。

\* Parts for which "nsp" is indicated on this table cannot be supplied.

\* 本表に記載されている部品は、補修用部品のため製品に使用している部品とは一部、形状、寸法などが異なる場合があります。

\* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

**Note:** The symbols in the column "Remarks" indicate the following destinations.

E3 : U.S.A. & Canada model

E2 : Europe model

## MAIN P.W.B. UNIT ASSY

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
<b>SEMICONDUCTORS GROUP</b>					
IC100	963239002480S	IC NJM4565MD		J121456500040S	*
IC101-106	00D9630024004	IC NJM2068M		J121206800020S	
IC107	963239002470S	IC NJM2072M		J121207200010S	*
IC108	00D9630132802	IC NJU7313AM		J040731300030S	
IC109	963243002750S	IC UPD78F0502MC(T)		J020780502540S	*
IC110	963243002760S	IC M24C02		J000240200140S	*
IC111	90M-HC109570R	IC KIA7042P		J125704200010S	
IC112	00D9600100301	IC KIA7812API		J126781200040S	
IC113	00D9600174900	IC KIA7815API		J126781500000S	
IC114	00D9630021502	IC KIA7915PI		J126791500030S	
IC115	00D9600159501	IC KIA7805API		J126780500110S	
IC116	00D9600239104	IC KIA7806API		J126780600130S	
IC117,118	00D9630024004	IC NJM2068M		J121206800020S	
IC119	00D9600174900	IC KIA7815API		J126781500000S	
Q102-105	00D9630044301	TR KTC2875B(MB)		J5222875B0010S	
Q108	00D9630267308	TR KRA101S		J520010100010S	
Q109	00D9630121606	TR KRC107S		J522107S00210S	
Q110	00D9630267308	TR KRA101S		J520010100010S	
Q112	00D9630121606	TR KRC107S		J522107S00210S	
Q114	00D9630121606	TR KRC107S		J522107S00210S	
Q115	00D9630267308	TR KRA101S		J520010100010S	
Q116	00D9630066606	TR KTC3875Y(ALY)		J5223875Y0210S	
Q117	00D9630044301	TR KTC2875B(MB)		J5222875B0010S	
Q118	00D9630121606	TR KRC107S		J522107S00210S	
Q119,120	00D9630044301	TR KTC2875B(MB)		J5222875B0010S	
Q121	00D9630066606	TR KTC3875Y(ALY)		J5223875Y0210S	
Q122	00D9600196205	TR KSA992F		J5000992F0050S	
Q123,124	00D9600196506	TR KSC1845F		J5021845F0000S	
Q125,126	00D9630121606	TR KRC107S		J522107S00210S	
Q127,128	00D9630044301	TR KTC2875B(MB)		J5222875B0010S	
Q129	00D9630267308	TR KRA101S		J520010100010S	
Q130-133	00D9630121606	TR KRC107S		J522107S00210S	
Q136	00D9630121606	TR KRC107S		J522107S00210S	
Q300	00D9630066606	TR KTC3875Y(ALY)		J5223875Y0210S	
D104-107	963201002490S	D,SWITCHING 1N4148WS		K005041483230S	*
D108	00D9630328409	D,SWITCHING 1N4007		K000400700010S	
D109-111	963201002490S	D,SWITCHING 1N4148WS		K005041483230S	*
D112,113	963203002450S	D,RECTIFIER 400V/50A		K047040500000S	*
D114,115	963201002490S	D,SWITCHING 1N4148WS		K005041483230S	*
D116	963203002460S	D,RECTIFIER KPBC3506MB356 600V 35A		K047350600010S	*
D117	963201002490S	D,SWITCHING 1N4148WS		K005041483230S	*
D300-303	00D9630328409	D,SWITCHING 1N4007		K000400700010S	
D304,305	963201002490S	D,SWITCHING 1N4148WS		K005041483230S	*
ZD100-102	00D9600095500	D,ZENER MTZJ5.1B		K06005R144520S	



Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
<b>RESISTORS GROUP</b>					
R277-280	nsp	R,METAL 0.22-J,1W-R		C060R22065050S	
R337	nsp	R,METAL FILM 470-J,1W		C060047165050S	
R338	nsp	R,METAL FILM 10-J,1/4W		C060010063050S	
R347	nsp	R,METAL FILM 10-J,1/4W		C060010063050S	
VR100,101	963679002420S	VR, RK12U1210011		C453121302210S	*
<b>CAPACITORS GROUP</b>					
C100-117	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C118-135	nsp	C,CERAMIC 220PF-J/50V		D010221167160S	
C136,137	00D963023420S	C,ELECT 10UF-M/50V		D040100087070S	
C138,139	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C140,141	00D9630276409	C,ELECT 100UF-M/16V		D040101083090S	
C142,143	nsp	C,CERAMIC B100PF-K/50V-5RE		D004101277050S	
C144,145	00D9609008653	C,FILM 0.012UF-J/100V		D02012306C060S	
C146,147	00D9609009827	C,CERAMIC HIK X7R1500PF-K/50V		D011152777160S	
C148-153	00D9639005862	C,ELECT 47UF-M/16V		D040470083080S	
C154,155	00D9609008611	C,FILM ST-0.0033UF-J/100V		D02033206C060S	
C156-159	00D9639005862	C,ELECT 47UF-M/16V		D040470083080S	
C160,161	nsp	C,CERAMIC 220PF-J/50V		D010221167160S	
C162,163	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S	
C168,169	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C170-178	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S	
C179-184	00D963023420S	C,ELECT 10UF-M/50V		D040100087070S	
C185	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S	
C186	00D9630294106	C,ELECT 2.2UF-M/50V (Pb Free)		D0402R2087160S	
C187	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)		D040010087150S	
C188	00D9630244606	C,ELECT 0.1UF-M/50V (Pb Free)		D040R10087080S	
C195	00D9630244606	C,ELECT 0.1UF-M/50V (Pb Free)		D040R10087080S	
C197,198	00D9639005862	C,ELECT 47UF-M/16V		D040470083080S	
C203,204	00D9639005862	C,ELECT 47UF-M/16V		D040470083080S	
C207,208	nsp	C,CERAMIC 100PF-J/50V		D010101167160S	
C209,210	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S	
C211,212	00D9639005862	C,ELECT 47UF-M/16V		D040470083080S	
C213,214	nsp	C,CERAMIC HIK X7R3300PF-K/50V		D011332777160S	
C216-218	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S	
C219	00D9600186503	C,DOUBLE H0.047F-70UA/5.5V		D090473904010S	
C220	90M-OA000580R	C,ELECT 0.68UF-M/50V		D040R68087050S	
C221	00D9630312305	C,ELECT 220UF-M/16V		D040221083110S	
C222	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S	
C223-226	00D963023420S	C,ELECT 10UF-M/50V		D040100087070S	
C227-230	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S	
C231	00D9630276409	C,ELECT 100UF-M/16V		D040101083090S	
C232	00D9609010625	C,ELECT 1UF-M/100V		D040010086060S	
C233-236	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S	
C237-240	00D963023420S	C,ELECT 10UF-M/50V		D040100087070S	
C241-243	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S	
C244,245	00D9600177305	C,ELECT 10000UF-M/63V		D040103088380S	
C246	00D9630312703	C,ELECT 3300UF-M/35V		D040332085050S	
C247	00D9630224707	C,ELECT 2200UF-M/35V		D040222085020S	
C248	00D9630324102	C,ELECT 1000UF-M/25V(SHL)		D040102084060S	
C249-260	nsp	C,CERAMIC F0.01UF-Z/500V		D00410359D050S	
C261-264	nsp	C,CERAMIC F0.01UF-Z/50V		D004103097060S	
C265	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S	
C266	00D963023420S	C,ELECT 10UF-M/50V		D040100087070S	
C267	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S	
C268	00D963023420S	C,ELECT 10UF-M/50V		D040100087070S	
C269,270	nsp	C,CERAMIC 0.047UF-Z/50V		D011473597160S	
C273	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S	

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
C275-286	00D9639005862	C,ELECT 47UF-M/16V		D040470083080S		
C287	00D9639003097	C,FILM 0.1UF-K/250V		D02010407H080S		
C288	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S		
C289	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S		
C293-296	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C301,302	nsp	C,CERAMIC 0.047UF-Z/50V		D011473597160S		
C303	00D9639003097	C,FILM 0.1UF-K/250V		D02010407H080S		
C304	963134002510S	C,ELECT 470UF-M/16V		D040471083060S		
C305	nsp	C,CERAMIC F0.01UF-Z/500V		D00410359D050S		
C306	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S		
C307	nsp	C,CERAMIC F0.01UF-Z/500V		D00410359D050S		
C308	nsp	C,CERAMIC AC(SAFETY) 0.0047UF 250VAC		D00847208H010S		
C309,310	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S		
C311,312	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S		
C313,314	nsp	C,CERAMIC 330PF-J/50V		D010331167160S		
C315,316	nsp	C,FILM 0.047UF-J/100V		D02047306C060S		
C317-320	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S		
C321	00D9630244606	C,ELECT 0.1UF-M/50V (Pb Free)		D040R10087080S		
C322	00D9609010010	C,ELECT 4.7UF-M/50V		D0404R7087250S		
C323	nsp	C,CERAMIC 1000PF-K/50V		D011102777160S		
C324	nsp	C,CERAMIC 0.1UF-K/50V		D011104577160S		
C325,326	00D9630234205	C,ELECT 10UF-M/50V		D040100087070S		
C327,328	nsp	C,CERAMIC 100PF-J/50V		D010101167160S		
<b>OTHERS PARTS GROUP</b>						
CN300	nsp	CN,WIRE 3P		L000161030040S		
CP100,101	nsp	CN.WAFER 12P		L101220120000S		
CP102	nsp	CN.WAFER 6P		L102526700600S		
CP103	nsp	CN.WAFER 10P		L102526701000S		
CP104	nsp	CN.WAFER 5P		L102526700500S		
CP105	nsp	CN.WAFER 3P		L101220030000S		
CP106	nsp	CN.WAFER 3CKT		L108353280360S		
CP107	nsp	CN.WAFER 7P		L101220070000S		
CP108,109	nsp	CN.WAFER 4P		L101220040000S		
CP110	nsp	CN.WAFER 2P		L101200100210S		
CP300	nsp	CN.WAFER PLUG 2P		L108202000220S		
CP302	nsp	CN.WAFER2CKT(YEL)		L108353280290S		
CP303	nsp	CN.WAFER2CKT(RED)		L108353280280S		
△ FUSE300-302	00D9630104801	FUSE T3.15A /250V	E2	N751223151110S		
△ FUSE300-302	00D9630337607	FUSE T5A /250V	E3	N751225001110S		
F300A	nsp	HOLDER,FUSE CLIP		G645000050010S		
F300B	nsp	HOLDER,FUSE CLIP		G645000050010S		
F301A	nsp	HOLDER,FUSE CLIP		G645000050010S		
F301B	nsp	HOLDER,FUSE CLIP		G645000050010S		
F302A	nsp	HOLDER,FUSE CLIP		G645000050010S		
F302B	nsp	HOLDER,FUSE CLIP		G645000050010S		
GND100	nsp	TERMINAL EARTH		3790040886000S		
JACK100	90M-YT004640R	MODULE JSR1165-C		G601207AE020YS		
JACK101	00D9630132103	TER,RCA 4PIN		G602405B0400YS		
JACK102,103	00D9630132307	TER,RCA 6PIN		G603603B05000S		
JACK105	00D9630146607	TER,BOARD SCREW 8P		G614801A0200YS		
RLY300	00D9630339508	RELAY DC9V 250V/5A		G680090102010S		
RELAY100	963682002440S	RELAY 12V 5A SPK		G680120502050S		*

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
	RELAY101	963682002440S	RELAY 12V 5A SPK		G680120502050S		*
	RELAY102	00D9630218409	RELAY 24V 2A (SMALL SIGNAL)		G680240202030S		
	RELAY103	00D9630218409	RELAY 24V 2A (SMALL SIGNAL)		G680240202030S		
	AC300	963641002500S	SOCKET A306D0081P AC OUTLET 3P(220V)	E2	G435306D00810S		*
	AC300	963641002660S	SOCKET A206D0051P 3P	E3	G435206D00051S		*
	⚠ T300	963101000310S	POWER TRANS 230V/50HZ	E2	8200280150520S		*
	⚠ T300	963101000320S	POWER TRANS 120V/60HZ	E3	8200280150510S		*
		nsp	HEAT SINK		2120044338010S		
		nsp	HEAT SINK		2120210718000S		
		nsp	SCREW (3*8 B-TYPE ZNW/BH)		B020030081B10S		
		nsp	SCREW (4*18 B-TYPE ZNW/BH)		B020040181B10S		

# FRONT P.W.B. UNIT ASSY

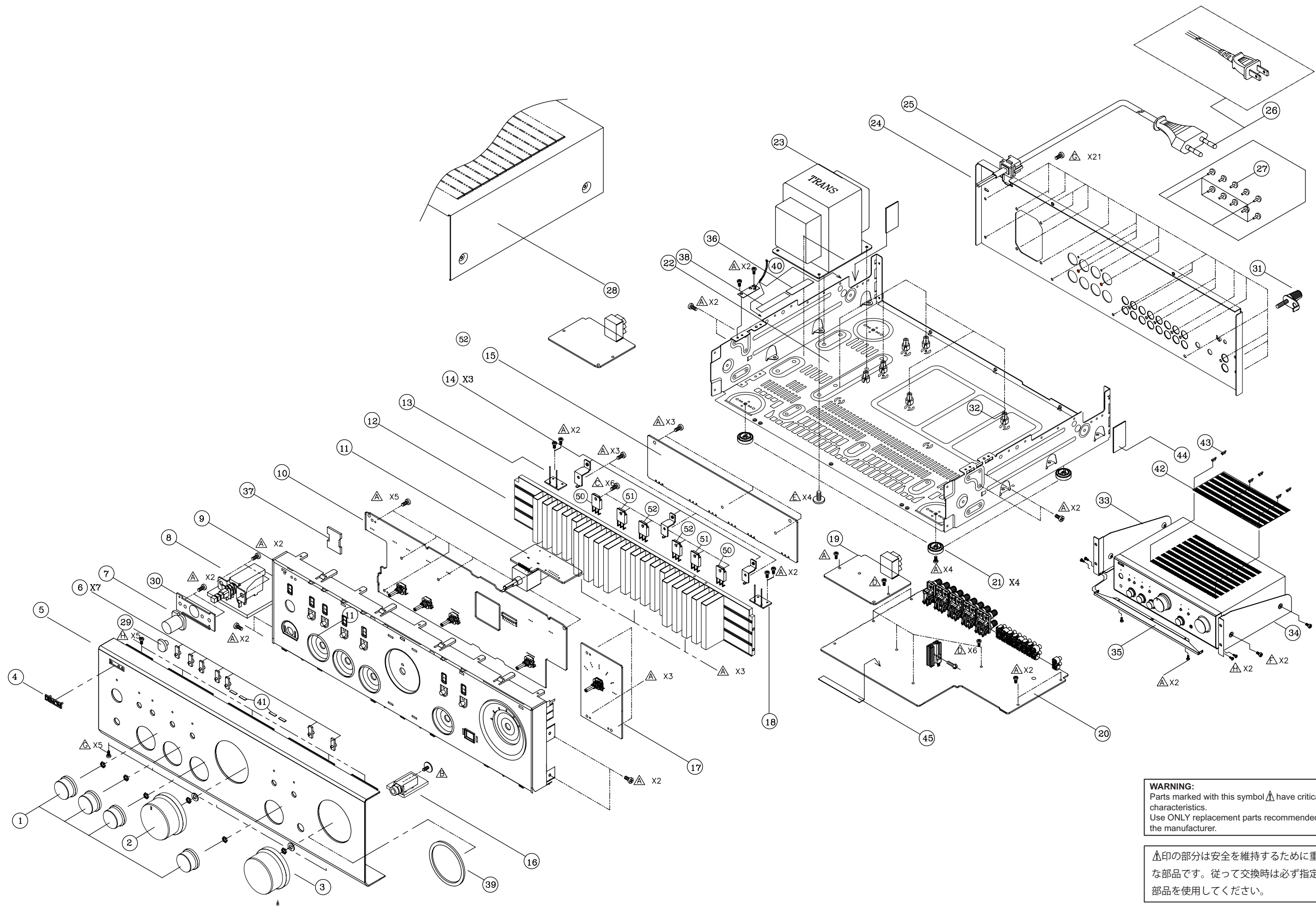
Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
<b>SEMICONDUCTORS GROUP</b>					
IC101	00D9630326304	IC BU4052BCFV		J040405200070S	
IC102	963239002550S	IC BU2090FS		J044209000020S	*
IC103-105	00D9630024004	IC NJM2068M		J121206800020S	
IC400	00D9600251108	IC BA6956AN		J127695600010S	
Q100,101	00D9630121606	TR KRC107S		J522107S00210S	
Q102,103	00D9630066606	TR 2SC KTC3875Y(ALY)		J5223875Y0210S	
Q104-108	00D9630121606	TR KRC107S		J522107S00210S	
Q300	00D9630121208	TR KRC107M		J6020107M0010S	
Q301	00D9630253008	TR KRA107M		J601107M00050S	
Q302,303	00D2730459903	TR KTC2874B		J502287400010S	
Q304-307	00D9600196205	TR KSA992F		J5000992F0050S	
Q308	00D9600196506	TR KSC1845F		J5021845F0000S	
Q309	00D9600196205	TR KSA992F		J5000992F0050S	
Q316-318	00D9600196506	TR KSC1845F		J5021845F0000S	
Q319	00D9600196205	TR KSA992F		J5000992F0050S	
Q320,321	00D9600196506	TR KSC1845F		J5021845F0000S	
Q322,323	00D2730459903	TR KTC2874B		J502287400010S	
D100-102	963201002490S	D,SWITCHING 1N4148WS		K005041483230S	*
D104-106	963201002490S	D,SWITCHING 1N4148WS		K005041483230S	*
D300,301	00D9630020309	D,SWITCHING 1SS133T		K000013300520S	
D304,305	00D9630020309	D,SWITCHING 1SS133T		K000013300520S	
D700,701	963201002490S	D,SWITCHING 1N4148WS		K005041483230S	*
ZD103,104	963202002560S	D,ZENER 0.2W 9.1V UDZ		K06609R14P400S	*
LED100	00D9630003708	LED PI5-RD		K500052003090S	
LED101-106	963263002630S	LED KD-500CF4T		K500053002020S	*
LED700-705	963263002630S	LED KD-500CF4T		K500053002020S	*
<b>RESISTORS GROUP</b>					
R127	nsp	R,METAL FILM 10-J,1/4W		C060010063050S	
R338-341	nsp	R,METAL 47-J,1/4W-R		C060047063050S	
R342,343	963129002590S	R,CEMENT RGC5-0.22-J/5W		C144R22069000S	*
R345	963129002590S	R,CEMENT RGC5-0.22-J/5W		C144R22069000S	*
R352	nsp	R,METAL 220-J,1/4W-R		C060022163050S	
R354	nsp	R,METAL 220-J,1/4W-R		C060022163050S	
R356-359	nsp	R,METAL 10-J,1W-R		C060010065050S	
R360-363	nsp	R,METAL 220-J,1/4W-R		C060022163050S	
R364	963129002590S	R,CEMENT RGC5-0.22-J/5W		C144R22069000S	*
R365,366	nsp	R,METAL 47-J,1/4W-R		C060047063050S	
R400	nsp	R,METAL 2.2-J,1/4W-R		C0602R2063050S	
VR100	963679002540S	VR, RK14K1280302		C454123300010S	*
VR101	963679002520S	VR, RK14K1280302		C454121300070S	*
VR103	963671000390S	VR, RK11K114030213B		C452111300010S	*
VR104	963679002530S	VR, RK14K1280302		C454121402920S	*
VR400,401	963679002610S	VR, EVN-DJAA03BE2/REEL		C541221315000S	*
VR402	963679002580S	VR, RK16812MG005		C495121400350S	*
VR403,404	00D9630366407	VR, EVN-DCAA03B13/REEL		C541102315000S	
VR700	963667002620S	SW, SRRM11CKP04		G121110410010S	*
<b>CAPACITORS GROUP</b>					
C100	00D9630244606	C,ELECT 0.1UF-M/50V (Pb Free)		D040R10087080S	
C101	00D9609010023	C,ELECT 0.47UF-M/50V		D040R47087050S	
C102	nsp	C,CERAMIC X7R4700PF-K/50V		D011472777160S	

Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
C103	nsp	C,FILM 0.047UF-J/100V			
C105	nsp	C,CERAMIC 1000PF-K/50V			
C106	nsp	C,FILM 0.047UF-J/100V			
C107	nsp	C,FILM ST-0.033UF-J/100V			
C109	nsp	C,CERAMIC 0.1UF-K/50V			
C110	nsp	C,CERAMIC 100PF-J/50V			
C113	00D9609010023	C,ELECT 0.47UF-M/50V			
C115,116	00D9609010023	C,ELECT 0.47UF-M/50V			
C117	00D9630244606	C,ELECT 0.1UF-M/50V (Pb Free)			
C118	nsp	C,FILM ST-0.033UF-J/100V			
C120,121	nsp	C,FILM ST-0.033UF-J/100V			
C126,127	963134002730S	C,ELECT 0.22UF-M/50V			
C130	00D9630294106	C,ELECT 2.2UF-M/50V (Pb Free)			
C131	nsp	C,CERAMIC 0.01UF-K/50V			
C132	nsp	C,CERAMIC 330PF-J/50V			
C133	00D9630276409	C,ELECT 100UF-M/16V			
C134	nsp	C,CERAMIC 100PF-J/50V			
C135	00D9630234205	C,ELECT 10UF-M/50V			
C136	nsp	C,CERAMIC 0.01UF-K/50V			
C137	00D9630224503	C,ELECT 22UF-M/50V			
C138	00D9630294106	C,ELECT 2.2UF-M/50V (Pb Free)			
C139	963134002740S	C,ELECT 10UF-M/16V			
C140	nsp	C,CERAMIC 100PF-J/50V			
C141	nsp	C,CERAMIC T.C COG10PF-D/50V			
C142	nsp	C,CERAMIC X7R4700PF-K/50V			
C143	00D9630234205	C,ELECT 10UF-M/50V			
C144,145	nsp	C,CERAMIC 0.01UF-K/50V			
C146,147	nsp	C,CERAMIC COG47PF-J/50V			
C148	00D9630294106	C,ELECT 2.2UF-M/50V (Pb Free)			
C149-151	00D9630234205	C,ELECT 10UF-M/50V			
C152,153	nsp	C,CERAMIC 0.01UF-K/50V			
C154	nsp	C,CERAMIC X7R4700PF-K/50V			
C155,156	00D9639005862	C,ELECT 47UF-M/16V			
C157,158	nsp	C,CERAMIC 0.1UF-K/50V			
C159	963134002720S	C,ELECT 10UF-M/50V (Pb Free)			
C160	00D9630333300	C,ELECT 47UF-M/16V			
C161	963134002720S	C,ELECT 10UF-M/50V (Pb Free)			
C162	00D9630333300	C,ELECT 47UF-M/16V			
C163,164	nsp	C,CERAMIC 0.1UF-K/50V			
C165	nsp	C,CERAMIC 0.047UF-Z/50V			
C200	nsp	C,CERAMIC 0.01UF-K/50V			
C201	nsp	C,ELECT 10UF-M/16V (Pb Free)			
C300	00D9630293602	C,ELECT 1UF-M/50V (Pb Free)			
C301,302	00D9630234205	C,ELECT 10UF-M/50V			
C303-306	nsp	C,CERAMIC B100PF-K/500V			
C307	963134002070S	C,ELECT 100UF-M/35V (Pb Free)			
C308	nsp	C,CERAMIC B100PF-K/500V			
C309	963134002070S	C,ELECT 100UF-M/35V (Pb Free)			
C310	nsp	C,CERAMIC B100PF-K/500V			
C311,312	00D9630367101	C,CERAMIC 220PF-J/500V			
C313,314	nsp	C,CERAMIC B100PF-K/500V			
C315	nsp	C,CERAMIC CH22PF-J/50V			
C316	nsp	C,CERAMIC CH8PF-D/50V			
C317	nsp	C,CERAMIC B100PF-K/500V			
C318	nsp	C,CERAMIC CH8PF-D/50V			
C319	nsp	C,CERAMIC CH22PF-J/50V			
C320	nsp	C,CERAMIC B100PF-K/500V			
C321,322	nsp	C,CERAMIC F0.022UF-Z/50V			
C323-326	nsp	C,FILM RED-0.1UF-K/63V			
C328	nsp	C,CERAMIC 0.1UF-K/50V			
C329	nsp	C,CERAMIC B100PF-K/500V			

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
C330	nsp	C,CERAMIC SL150PF-J/500V		D00015106D050S		
C331	00D9630338208	C,CERAMIC 470PF-K/500V		D00447127D050S		
C332	nsp	C,CERAMIC SL150PF-J/500V		D00015106D050S		
C333	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S		
C334	00D9609009937	C,ELECT 100UF-M/50V		D040101087060S		
C335	00D9630224503	C,ELECT 22UF-M/50V		D040220087060S		
C336,337	nsp	C,CERAMIC SL150PF-J/500V		D00015106D050S		
C338,339	00D9630234506	C,ELECT 47UF-M/50V (Pb Free)		D040470087070S		
C340	nsp	C,CERAMIC 470PF-K/500V		D00447127D050S		
C341	00D9630157900	C,ELECT 470UF-M/63V		D040471088000S		
C342	963134002600S	C,ELECT 330UF-M/50V		D040331087010S		
C343	nsp	C,CERAMIC B100PF-K/500V		D00410106D050S		
C400	00D9609009924	C,ELECT 100UF-M/16V		D040101083070S		
C401	nsp	C,CERAMIC 0.1UF-K/50V		D011104577162S		
C500	nsp	C,CERAMIC AC(SAFETY) 0.0047UF 250VAC		D00847208H010S		
C700	nsp	C,CERAMIC 0.01UF-K/50V		D011103777160S		
<b>OTHERS PARTS GROUP</b>						
CLAMP300,301	nsp	CLAMP WIRE(SOLDER)		4330000120000S		
CLAMP800,801	nsp	CLAMP WIRE(SOLDER)		4330000120000S		
CLAMP900,901	nsp	CLAMP WIRE(SOLDER)		4330000120000S		
CN100	nsp	CN,WIRE 3P		L000600030100S		
CN101	nsp	CN,WIRE 12P		L000301120020S		
CN102	nsp	CN,WIRE 2P		L000500020010S		
CN103	nsp	CN,WIRE 10P		L000500100010S		
CN104	nsp	CN,WIRE 2P		L002401020010S		
CN105	nsp	CN,WIRE 12P		L000221120030S		
CN106	nsp	CN,WIRE 4P		L000301040130S		
CN107	nsp	CN,WIRE 4P		L000301040140S		
CN500	nsp	CN,WIRE 2P		L000371020020S		
CN600	nsp	CN,WIRE 6P		L000201060110S		
CN601	nsp	CN,WIRE 10P		L000201100070S		
CP108	nsp	CN.WAFER 14P		L102140000080S		
CP200	nsp	CN.WAFER 3P		L101220030000S		
CP302	nsp	CN.WAFER 2P		L101220020000S		
CP400	nsp	CN.WAFER 14P		L102140000090S		
CP700	nsp	CN.WAFER 10		L101220100000S		
JACK300	963642002570S	JACK,D6.5 PHONE PJ-619AG02		G402PJ619AG2YS		*
L300,301	00D9630049005	COIL INDUCTOR 0.5UH		D330R50000000S		
RMC200	00D9630217808	MODULE,REMOCON NJL34H380A		E940343800010S		
SW100-105	00D9630095305	SW,TACT SKHV10910D01		G180040500010S		
SW500	00D9630145802	SW,PUSH SDDL-005-S(C-UL)		G000122006060S		
TP300,301	nsp	CN.WAFER 3P		L102526700300S		
RELAY100	00D9630218409	RELAY BC3-12 24V 2A		G680240202030S		
LUG100	nsp	RING,TER WIRE 1P		8410161010050S		
LUG300	nsp	RING,TER WIRE 1P		8410161010040S		
W300	nsp	CN,WIRE 1P		L000181010070S		



# EXPLODED VIEW



**WARNING:**  
 Parts marked with this symbol have critical characteristics.  
 Use **ONLY** replacement parts recommended by the manufacturer.

印の部分は安全を維持するために重要な部品です。従って交換時は必ず指定の部品を使用してください。

---MEMO---

# PARTS LIST OF EXPLODED VIEW

\* 本表に "nsp" と記載されている部品は供給できません。

\* Parts for which "nsp" is indicated on this table cannot be supplied.

\* 本表に "nsp" と記載されている基板 ASS'Y は供給できません。基板 ASS'Y の修理の際には基板部品表を確認のうえ、交換部品を発注してください。

\* P.W.B. ASS'Y for which "nsp" is indicated on this table cannot be supplied. When repairing the P.W.B. ASS'Y, check the board parts table and order replacement parts.

\* 本表に記載されている部品は、補修用部品のため製品に使用している部品とは一部、形状、寸法などが異なる場合があります。

\* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

**Note:** The symbols in the column "Remarks" indicate the following destinations.

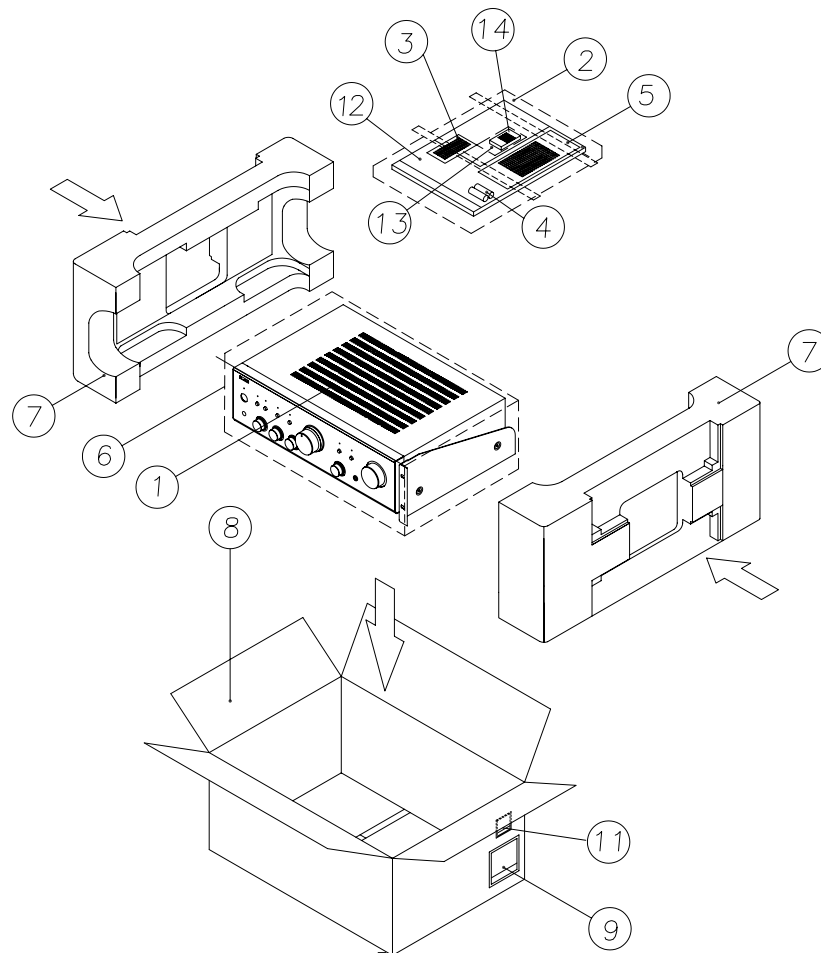
E3 : U.S.A. & Canada model

E2 : Europe model

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New	
	20A	nsp	MAIN UNIT ASSY	E3	7025HA0701010	1	
	20A	nsp	MAIN UNIT ASSY	E2	7025HA0701020	1	
	20	-	MAIN UNIT			1	
	19	-	SUBTRANS UNIT			1	
	10A	nsp	FRONT UNIT ASSY	E3	7025HA0701011	1	
	10A	nsp	FRONT UNIT ASSY	E2	7025HA0701021	1	
	10	-	FRONT UNIT			1	
	8	-	POWER S/W UNIT			1	
	11	-	VOLUME UNIT			1	
	13	-	GUIDE B UNIT			1	
	15	-	AMP UNIT			1	
	16	-	MIC UNIT			1	
	17	-	SELECTOR UNIT			1	
	18	-	GUIDE A UNIT			1	
	37	-	REMOCON UNIT			1	
	1	963412000360S	KNOB BASS		5087211721000S	4	*
	2	963412000340S	KNOB FUNCTION		5087211731000S	1	*
	3	963412000350S	KNOB VR		5087211741000S	1	*
	4	963443000370D	PANEL FRAME		3067213951000S	1	*
	5	963402000330D	PANEL FRONT		3067213968000S	1	*
	6	00D9630051307	LENS LED		3710210023002S	7	
	7	963411002690D	BUTTON POWER		5097211271020S	1	*
	9	963421002640D	BADGE		5637210508000S	1	*
	12	nsp	HEAT SINK MAIN		2120210538200S	1	
	14	nsp	BRACKET H SINK		4010056906010S	3	
	21	963407002370P	FOOT		4007040201060S	4	*
	22	nsp	CHASSIS MAIN		3200200026020S	1	
	23	963101002670D	POWER TRANS	E3	8200960610440S	1	*
	23	963101002390P	POWER TRANS	E2	8200960610450S	1	*
	24	963406002700D	CHASSIS BACK	E3	3207212116700S	1	*
	24	963406002710D	CHASSIS BACK	E2	3207212116600S	1	*
	25	nsp	STOPPER AC CORD		4380040162010S	1	
	26	00D9630292205	CORD ASSY	E3	L068125100020S	1	
	26	00D9630292409	CORD ASSY	E2	L068250250040S	1	
	27	nsp	BUSHING	E2	2410040353010S	8	
	28	963401002360D	CABINET TOP		30070412360D0S	1	*
	29	963416002410P	REMOCON WINDOW		5070210073000S	1	*
	30	nsp	BRACKET POWER		4010210876000S	1	
	31	00D9600183807	TERMINAL		3790000090000S	1	
	32	nsp	SPACER		4300040561010S	7	
	33	nsp	BRACKET RACK L		4017213526000S	1	
	34	nsp	BRACKET RACK R		4017213526100S	1	
	35	nsp	BRACKET BOTTOM		4017213536000S	1	
	36	nsp	ACETATE CLOTH TAPE		1220210199020S	1	
	38	nsp	ACETATE CLOTH TAPE		1220210199020S	1	
	39	nsp	PLATE PANEL		4470211432100S	1	

	Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
	40	nsp	CLAMP CABLE TIE		4330040343010S	4	
	41	nsp	FELT TOP		2690040057020S	4	
	42	963409001780D	COVER SAFETY		4310212122020S	1	*
	43	nsp	COVER HOLDER		4310214361000S	6	
	44	nsp	CUSHION RUBBER		4050212175000S	2	
	45	nsp	ACETATE CLOTH TAPE		1220210059000S	1	
	50	00D9630235204	SEMI,TR/GE PNP 2SB	Q313 Q315	J5011647Y0170S	2	
	51	00D9600114300	SEMI,TR/GE NPN 2SC	Q310 Q311	J5024137V0130S	2	
	52	00D9630235301	SEMI,TR/GE NPN 2SD	Q312 Q314	J5032560Y0170S	2	
	★ 53	963423002400P	LENS LED		3710210773000S	1	*
<b>SCREWS</b>							
	A	nsp	SCREW (+2S 3*8 ZNW/BH)		B020030081B10S	44	
	B	nsp	SCREW (+2S 3*8 WASHER P112)		1500001456010S	1	
	C	nsp	SCREW (+2S 3*16+S WASHER ZNW/HH )		1507041146010S	6	
	D	nsp	SCREW (3X18 ZNW/BH)		B020030181B10S	7	
	E	nsp	SCREW (+3S 4*10 ZNW/BH)		B028940101B10S	4	
	F	nsp	SCREW (+2S 4*12 BK/BH)		B020040123B10S	4	
	G	nsp	SCREW (+2S 3*10 DOT BK/BH)		B020030103B11S	20	
	H	nsp	SCREW (+2S 3*8 BK/FH)		B020030083F10S	4	

# PACKING VIEW



## PARTS LIST OF PACKING & ACCESSORIES

\* 本表に "nsp" と記載されている部品は供給できません。

\* Parts for which "nsp" is indicated on this table cannot be supplied.

\* 本表に記載されている部品は、補修用部品のため製品に使用している部品とは一部、形状、寸法などが異なる場合があります。

\* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

**Note:** The symbols in the column "Remarks" indicate the following destinations.

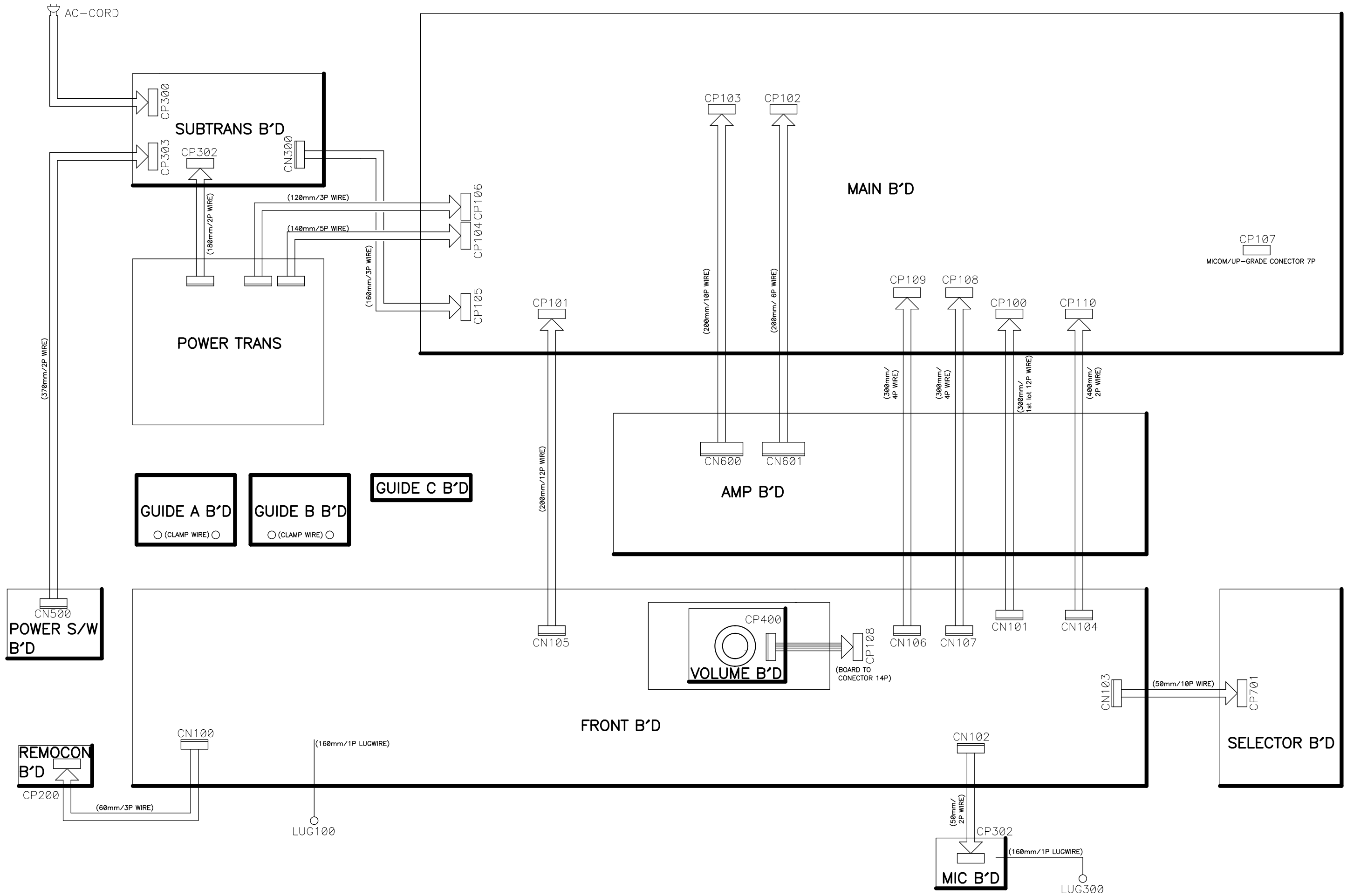
E3 : U.S.A. & Canada model

E2 : Europe mode

Ref. No.	Part No.	Part Name	Remarks		Q'ty	New
1	-	SET		-		
2	nsp	POLY BAG		6337000240010S	1	
3	nsp	WARRANTY CARD	E3	5727000000050S	1	
4	nsp	BATTERY, DRY		G670001R50210S	2	
5	963541002680D	INSTRUCTION MANUAL	E3	5707210110010S	1	*
5	963541002310D	INSTRUCTION MANUAL	E2	5707210110020S	1	*
6	nsp	PE, SHEET		6327040059000S	1	
7	963533002340D	CUSHION, SNOW		6230212064000S	2	*
8	963531002330D	BOX, INNER CARTON		6017040120010S	1	*
9	nsp	LABEL CONTROL		5500014920010S	2	
11	nsp	LABEL UPC	E3	5507002380010S	1	
11	nsp	LABEL UPC	E2	5507002380020S	1	
12	nsp	CARD S.S LIST		5777001620020S	1	
13	nsp	POLY BAG ASSY		6338210242000S	1	
14	963307002350D	REMOTE CONTROLLER		8300584200010S	1	*
★ 15	nsp	LABEL SERIAL NO.		5507002000070S	1	

---MEMO---

# WIRING DIAGRAM



## NOTE FOR SCHEMATIC DIAGRAM

### WARNING:

Parts marked with this symbol  $\triangle$  have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

### CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

### WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

### NOTICE:

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM  
M=1,000,000 OHM  
ALL CAPACITANCE VALUES IN MICRO FARAD.  
P=MICRO-MICRO FARAD  
EACH VOLTAGE AND CURRENT ARE MEASURED AT  
NO SIGNAL INPUT CONDITION.  
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE  
WITHOUT PRIOR NOTICE.

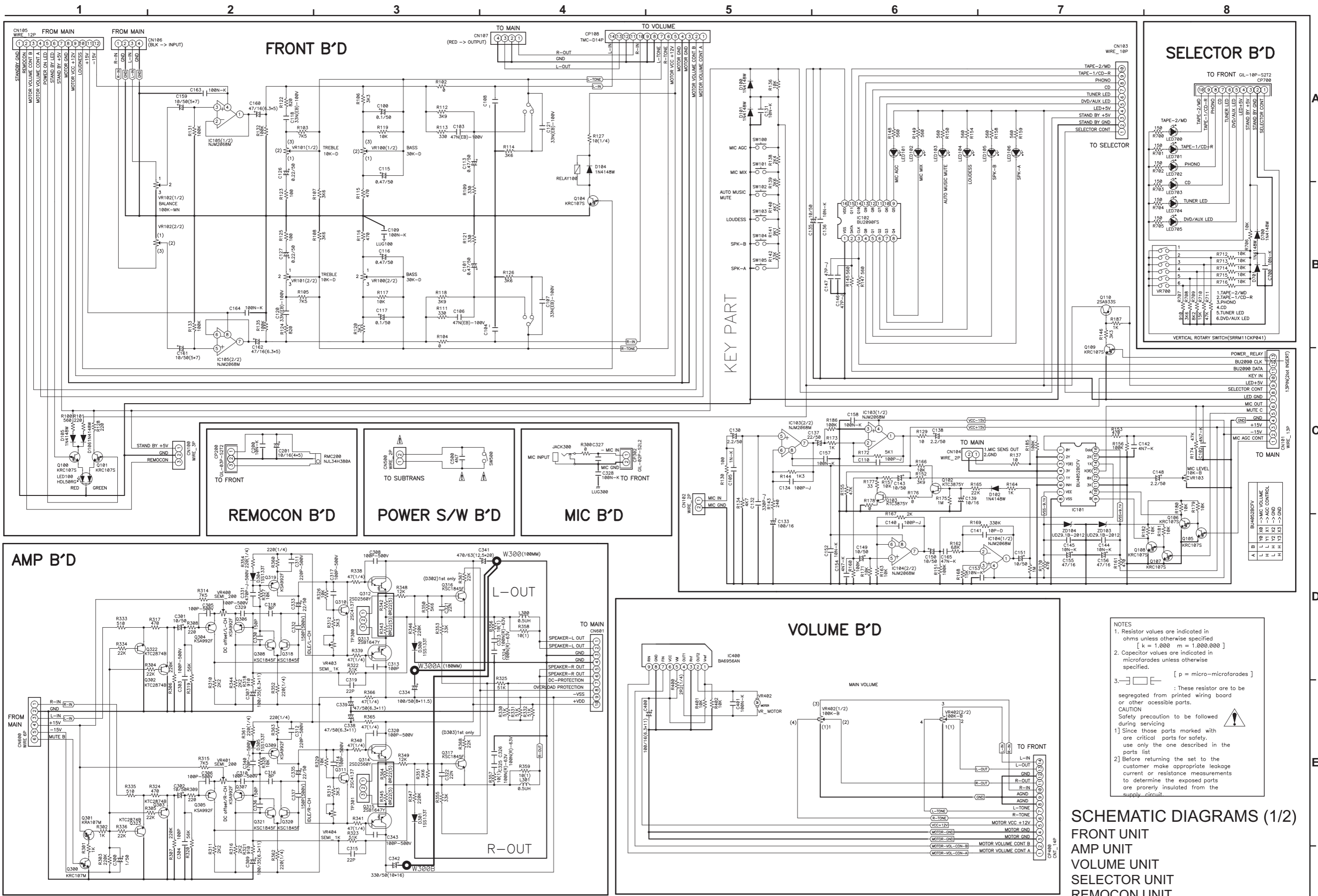
## 配線図について

$\triangle$  印の部品は安全を維持するために重要な部品です。  
従って交換時は必ず指定の部品を使用してください。

### 注)

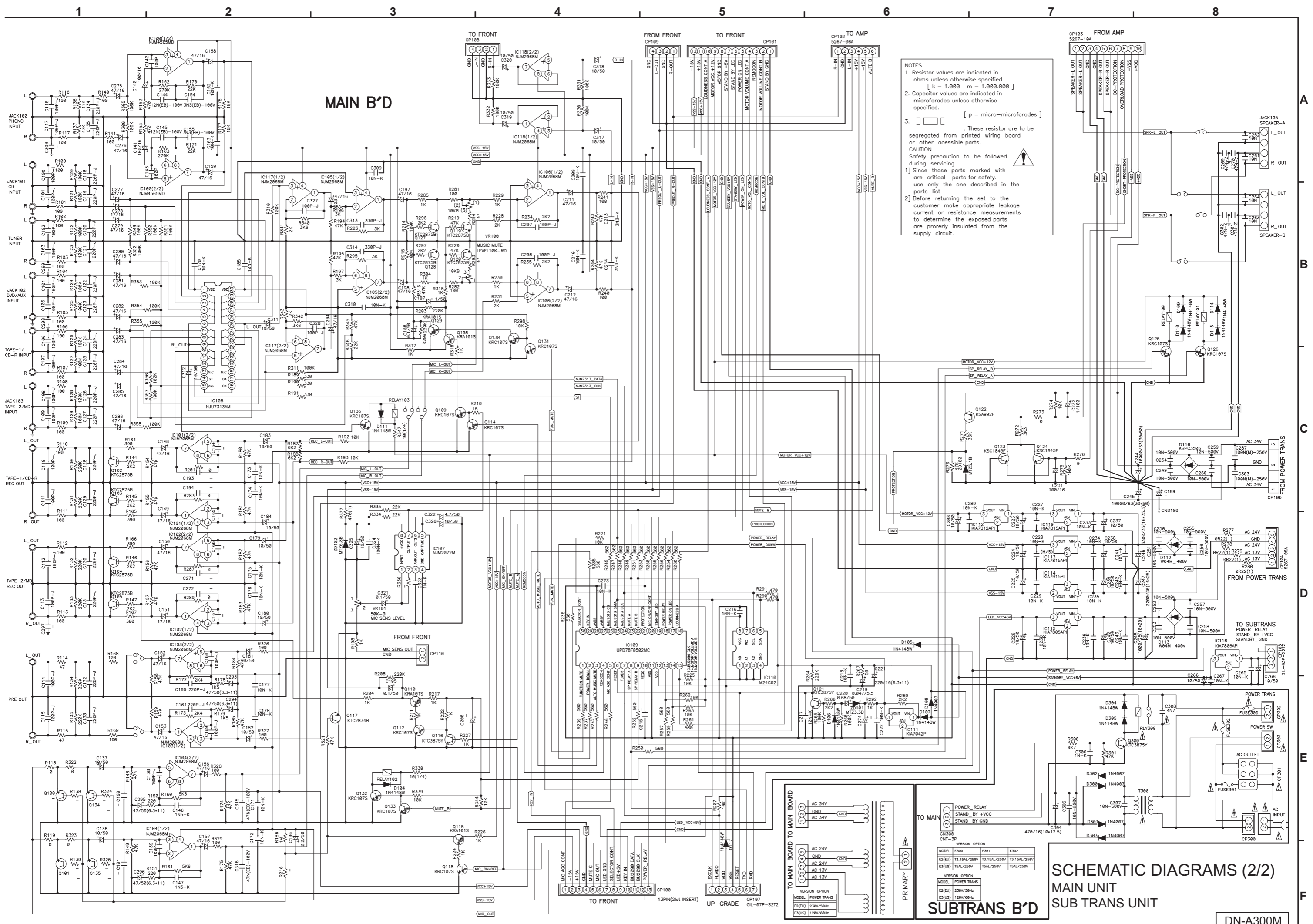
- (1) 指定なき抵抗値は  $\Omega$ 、k は  $k\Omega$ 、M は  $M\Omega$  を示す。
- (2) 指定なきコンデンサーの値は  $\mu F$ 、p は  $pF$  を示す。
- (3) 各部の電圧は無信号の値を示す。
- (4) この配線図は基本配線図です。改良等のため変更することがありますのでご了承ください。





- NOTES**
- Resistor values are indicated in ohms unless otherwise specified  
[ k = 1.000 m = 1.000.000 ]
  - Capacitor values are indicated in microfarads unless otherwise specified.  
[ p = micro-microfarads ]
3. : These resistor are to be segregated from printed wiring board or other accessible parts.
- CAUTION**
- Safety precaution to be followed during servicing
- Since those parts marked with are critical parts for safety, use only the one described in the parts list
  - Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

**SCHEMATIC DIAGRAMS (1/2)**  
 FRONT UNIT  
 AMP UNIT  
 VOLUME UNIT  
 SELECTOR UNIT  
 REMOCON UNIT  
 POWER S/W UNIT  
 MIC UNIT



**NOTES**

- Resistor values are indicated in ohms unless otherwise specified  
 [ k = 1,000 m = 1,000,000 ]
- Capacitor values are indicated in microfarads unless otherwise specified.  
 [ p = micro-microfarads ]
- These resistor are to be segregated from printed wiring board or other accessible parts.  
**CAUTION**  
 Safety precaution to be followed during servicing.  
 1) Since those parts marked with are critical parts for safety, use only the one described in the parts list  
 2) Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

**SCHEMATIC DIAGRAMS (2/2)**  
**MAIN UNIT**  
**SUB TRANS UNIT**