

# XM-7547

## SERVICE MANUAL

US Model

Canadian Model

AEP Model

UK Model

E Model



### SPECIFICATIONS

#### POWER OUTPUT AND TOTAL HARMONIC DISTORTION

75 watts per channel minimum continuous average power into 4 ohms, both channels driven from 20 Hz to 20 kHz with no more than 0.04%\* total harmonic distortion per Car Audio Ad Hoc Committee standards.

#### Other Specifications

Circuit system	Pure Direct Drive SEPP	High-pass filter (x 1/x 10)	50 - 400 Hz/500 - 4 kHz, -12 dB/oct
Inputs	Pulse power supply (Three Transformers)	Low-pass filter (x 1/x 10)	50 - 400 Hz/500 - 4 kHz, -12 dB/oct
Outputs	RCA pin jacks	Low boost	0 - 10 dB (40 Hz)
Speaker impedance	Speaker terminals 0.5** - 8 Ω (stereo) 1** - 8 Ω (when used as a bridging amplifier)	Power requirements	12 V DC car battery (negative ground)
Maximum outputs	HI-VOLTAGE (A/B/C/D ch.) 180 W (at 4 Ω) 300 W (at 2 Ω) 600 W (at 4 Ω BTL)	Power supply voltage	10.5 - 16 V at rated output: 45 A (4Ω HI-VOLTAGE mode)
Rated outputs (supply voltage at 14.4 V*, 20 Hz - 20 kHz)	HI-CURRENT (C/D ch.) 90 W (at 4 Ω) 180 W (at 2 Ω) 360 W (at 4 Ω BTL)	Current drain	at rated output: 100 A (2 Ω HI-VOLTAGE mode)
	HI-VOLTAGE (A/B/C/D ch.) 75 W (at 4 Ω, 0.04 %) 150 W (at 2 Ω, 0.1 %)	Dimensions	Remote input: 1.5 mA Approx. 532 × 83.5 × 260 (303 with cover) mm (w/h/d) (21 × 3 3/8 × 10 1/4 in.) not incl. projecting parts and controls
	— — 300 W (at 4 Ω BTL, 0.1 %)	Mass	Approx. 8 kg (17 lb. 10 oz.) not incl. accessories
	150 W (at 1 Ω, 0.3 %) 180 W (at 0.5 Ω, 0.3 %) 150 W (at 4 Ω BTL, 0.1 %)	Supplied accessories	Mounting screws (4) Terminal cover (1) Hexagonal wrench 3mm (1/8 in.) (1)
Frequency response	5 Hz - 100 kHz (-3 dB)	*	NFB ON
Harmonic distortion	0.005 % or less (at 1 kHz, 4 Ω*)	**	HI-CURRENT (C/D channels) only
Input level adjustment range	0.2 - 4.0 V	Design and specifications are subject to change without notice.	

Design and specifications are subject to change without notice.

STEREO POWER AMPLIFIER

**SONY®**



MICROFILM

## TABLE OF CONTENTS

<b>1. SERVICE MODE</b>	3
<b>2. GENERAL</b>	4
<b>3. DISASSEMBLY</b>	
3-1. Side Plate and Filer Board	7
3-2. Amplifier/Power Board and LED Board	7
<b>4. ELECTRICAL ADJUSTMENT</b>	7
<b>5. DIAGRAMS</b>	
5-1. Block Diagram – Amplifier Section –	8
5-2. Block Diagram – Power Section –	9
5-3. IC Block Diagram	10
5-4. Printed Wiring Board – LED/Filter Section –	10
5-5. Schematic Diagram – Filter/Amplifier (1/3) Section –	11
5-6. Printed Wiring Board – Amplifier Section –	12
5-7. Schematic Diagram – Amplifier (2/3) Section –	13
5-8. Schematic Diagram – Power/Amplifier (3/3)/LED Section –	14
5-9. Printed Wiring Board – Power Section –	15
<b>6. EXPLODED VIEWS</b>	
6-1. Plate and Cover Section	17
6-2. Board and Heat Sink	18
<b>7. ELECTRICAL PARTS LIST</b>	19

### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

# SECTION 1

## SERVICE NOTE

### Clearing the Protector During Repairs

- **OVER CURRENT** : Detects overcurrent during output.
- **OFF SET** : Detects DC offset at the speaker terminal.

#### 1. Clearing the **OVER CURRENT** protector

- ① When the position of the **MODE** switch (S801/power board) is set to **[HI-VOLTAGE]** :  
Cut the jumper wire JW535 of the amplifier board.
- ② When the position of the **MODE** switch (S801/power board) is set to **[HI-CURRENT]** :  
Cut the jumper wire JW690 of the amplifier board.

#### 2. Clearing the **OFF SET** protector

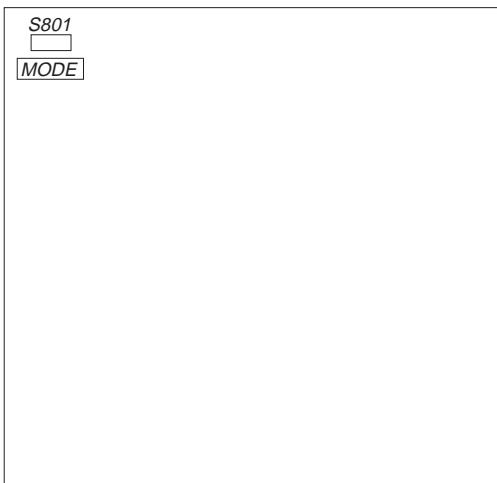
- Cut the jumper wire JW502 of the amplifier board.

#### 3. **TEST TONE** Function

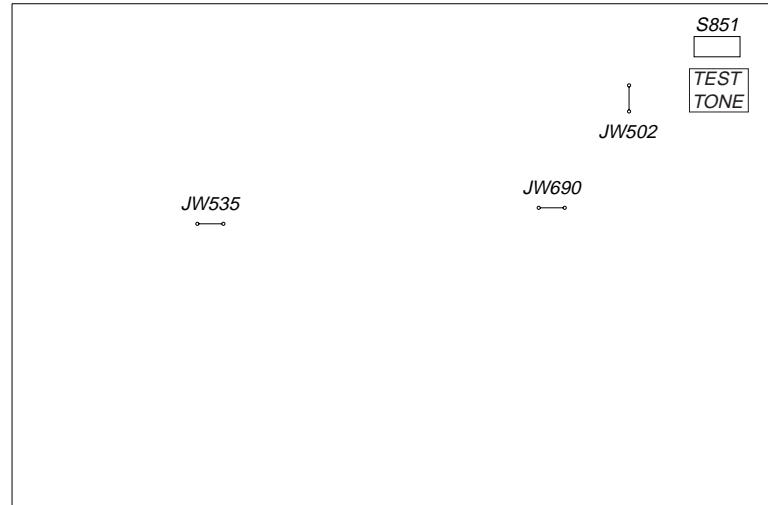
- ① Press the **TEST TONE** button (S851/amplifier board) with the power ON. The amplifier is normal if sound is produced from the speaker.
- ② If no sound
  - Problem causer by incorrect connection of the power supply system or speaker system.
  - The signals input by the RCA cable before the amplifier system are abnormal.

### Adjustment Location:

- POWER BOARD - (Component side)



- AMPLIFIER BOARD - (Component side)



## SECTION 2 GENERAL

This section is extracted from instruction manual.

# Connections

## Precautions

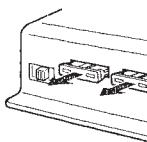
- This unit is designed for negative ground 12 V DC operation only.
- Use speakers with suitable impedance.
  - HI-CURRENT mode: 0.5 to 2 Ω.
  - HI-VOLTAGE mode: 2 to 8 Ω.
- Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers.
- Avoid installing the unit where:
  - it would be subject to high temperatures such as from direct sunlight or hot air from the heater
  - it would be exposed to rain or moisture
  - it would be subject to dust or dirt
- If your car is parked in direct sunlight and there is a considerable rise in temperature inside the car, allow the unit to cool down before use.
- Be sure to install the unit horizontally so that the air duct of the cooling fan or its fin will not be covered with carpet etc.
- The cooling fan operates when the temperature inside the unit rises to a certain level. It is not a malfunction if the cooling fan does not operate when you turn on the power.
- If this unit is placed too close to the car radio, interference may occur. In this case, relocate the amplifier away from the car radio.
- If no power is being supplied to the cassette player or tuner, check the connections.
- This power amplifier employs a protection circuit\* to protect the transistors and speakers if the amplifier malfunctions. Do not attempt to test the protection circuits by connecting the heat sink or connecting improper loads.
- Do not use the unit on a weak battery as its optimum performance depends on a good power supply.
- For safety reasons, keep your car audio volume moderate so that you can still hear sounds outside your car.

## Fuse Replacement

If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In such a case, consult your nearest Sony dealer.

## Warning

- When replacing the fuse, be sure to use one matching the amperage stated above the fuse holder. Never use a fuse with an amperage rating exceeding the one supplied with the unit as this could damage the unit.
- If all four fuses are not used, the performance is limited, and the power may not be activated.



\* Protection circuit  
This amplifier is provided with a protection circuit that cuts off the following cases:

- when the unit is overheated
  - when a DC current is generated
  - when the speaker terminals are short-circuited.
- The color of the POWER/PROTECTOR indicator will change from green to amber, and the unit will shut down.
- If this happens, turn off the connected equipment, take out the cassette tape or disc, and determine the cause of the malfunction. If the amplifier has overheated, wait until the unit cools down before use.

If you have any questions or problems concerning your unit that are not covered in this manual, please consult your nearest Sony dealer.

# Connexions

## Précautions

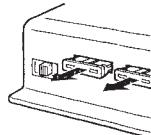
- Cet appareil est conçu pour fonctionner uniquement sur courant continu de 12 volts avec masse négative.
- Utilisez des haut-parleurs d'une impédance appropriée.
  - Mode HI-CURRENT : 0.5 à 2 Ω.
  - Mode HI-VOLTAGE : 2 à 8 Ω.
- Ne raccordez pas de haut-parleurs actifs (avec amplificateur intégré) aux bornes de haut-parleurs de cet appareil; ils pourraient être endommagés.
- N'exposez pas l'appareil:
  - à des températures élevées, comme en plein soleil ou près de la sortie d'air chaud du chauffage;
  - à l'humidité ou à la pluie;
  - à la poussière ou à la saleté.
- Si votre voiture était garée en plein soleil et que la température a considérablement augmenté à l'intérieur, laissez refroidir l'appareil avant de l'utiliser.
- Veuillez à installer l'appareil horizontalement de façon à ce que le conduit d'air du ventilateur de refroidissement ou ses ailettes ne soit pas recouvert par le tapis de sol, etc.
- Le ventilateur fonctionne lorsque la température interne de l'appareil atteint un certain niveau. Ce n'est pas normal que le ventilateur ne fonctionne pas à la mise sous tension.
- Si cet appareil est placé trop près de l'autoradio, des interférences risquent de se produire. Eloignez autant que possible l'amplificateur de l'autoradio.
- Si le lecteur de cassette ou le tuner ne sont pas alimentés, vérifiez tout d'abord les connexions.
- Cet amplificateur est équipé d'un circuit\* destiné à protéger les transistors et les haut-parleurs en cas de défaillance. N'essayez pas de tester l'efficacité de ce circuit en recouvrant les dissipateurs thermiques ou en effectuant des connexions inadéquates.
- N'utilisez pas l'appareil sur une batterie faible, sa performance maximale dépend d'une bonne alimentation en électricité.
- Pour des raisons de sécurité, écoutez l'autoradio à un volume modéré afin d'entendre les bruits extérieurs.

## Remplacement du fusible

Si le fusible saute, vérifiez les connexions du fil d'alimentation et remplacez le fusible. Si'il saute de nouveau, un mauvais circuit interne peut en être la cause. Dans ce cas, consultez votre concessionnaire Sony.

## Avertissement

- En cas de remplacement du fusible, veillez à utiliser un fusible dont l'intensité correspond à celle inscrite sur le porte-fusible. N'utilisez jamais de fusible dont l'intensité dépasse celle du fusible fourni avec l'appareil, car vous risqueriez d'endommager l'appareil.
- Ses quatre fusibles ne sont pas utilisés, les performances s'en trouvent limitées et il se peut que le système ne puisse être mis sous tension.



## Circuit de protection

Cet amplificateur est équipé d'un circuit de protection qui entre en service dans les cas suivants:
 

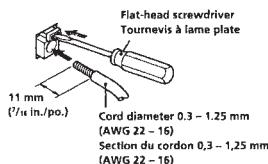
- lorsque l'appareil:
  - Production d'un courant continu
  - Court-circuit aux bornes des haut-parleurs.
- La couleur du témoin POWER/PROTECTOR passe du vert à l'ambre et l'appareil s'éteint.
- Si le cas se présente, coupez l'alimentation de l'appareil, raccordez la cassette le disque compact avant d'examiner la cause de la défaillance. Si l'amplificateur est trop chaud, attendez qu'il refroidisse.

Pour toute question ou problème qui ne sera pas traité dans ce manuel, consultez votre concessionnaire Sony.

## Caution

- Before making any connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Be sure to use speakers with an adequate power rating. If you use small capacity speakers, they may be damaged.
- Do not connect the  $\ominus$  terminal of the speaker system to the car chassis, and do not connect the  $\ominus$  terminal of the right speaker with that of the left speaker.
- Install the input and output cords away from the power supply lead as running them close together can generate some interference noise.
- This unit is a high powered amplifier. Therefore, it may not perform its full potential if used with the speaker cords supplied with the car.
- If your car is equipped with a computer system for navigation or some other purpose, do not remove the ground wire from the car battery. If you disconnect the wire, the computer memory may be erased. To avoid short circuits when making connections, disconnect the +12 V power supply lead until all the other leads have been connected.

## Make the terminal connections as illustrated below.



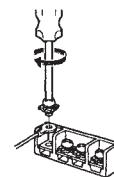
Note  
Tighten the screws firmly, but be careful not to apply too much force\* as doing so may damage the screws.

\* The torque value should be less than 1 N·m.

## Attention

- Avant d'effectuer les connexions, débranchez le fil de masse de la borne de la batterie pour éviter un court-circuit.
- Utilisez des haut-parleurs d'une capacité adéquate. Si vous utilisez des haut-parleurs de faible capacité, ils risquent d'être endommagés.
- Ne raccordez pas la borne  $\ominus$  des haut-parleurs à la carrosserie de la voiture ni la borne  $\ominus$  du haut-parleur droit à celle du haut-parleur gauche.
- Eloignez les cordons d'entrée et de sortie du fil d'alimentation électrique pour éviter que des interférences ne se produisent.
- Cet appareil est un amplificateur de haute puissance; il peut ne pas atteindre sa puissance maximale si les cordons de haut-parleurs originaux de la voiture lui sont raccordés.
- Si votre voiture est équipée d'un ordinateur de bord pour la navigation ou à toute autre fin, ne débranchez pas le fil de masse de la batterie de la voiture. Si vous débranchez ce fil, toute la mémoire de l'ordinateur sera effacée. Pour éviter un court-circuit lorsque vous effectuez les branchements, branchez le fil d'alimentation de +12 V uniquement après avoir branché tous les autres fils.

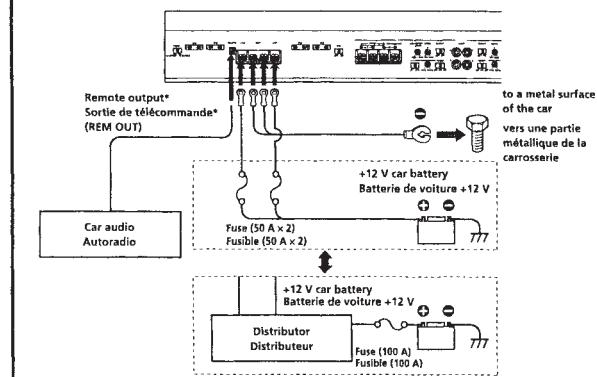
## Effectuez les connexions de la manière indiquée ci-dessous.



Remarque  
Ne serrez\* pas trop fort la vis car vous pourriez l'endommager.

\* Le couple de serrage devrait être inférieur à 1 N·m.

## Power Connection Leads Câbles d'alimentation



\* If you have the factory original or some other car audio without a remote out-put on the amplifier, connect the remote input terminal (REMOTE) to the accessory power supply.  
\* Si vous disposez du modèle d'origine ou d'un autre autoradio dont l'amplificateur ne comporte pas de sortie de télécommande, raccordez la borne d'entrée de télécommande (REMOTE) à la prise d'alimentation accessoires.

### Notes on the power supply

- Connect the +12 V power supply lead only after all the other leads have been connected.
- Be sure to connect the ground lead of the unit securely to a metal point of the car. A loose connection may cause a malfunction of the amplifier.
- Be sure to connect the remote control lead of the car audio to the remote terminal.
- When using a car audio without a remote output on the amplifier, connect the remote input terminal (REMOTE) to the accessory power supply.
- Use the power supply lead with a fuse attached (100 A).
- Place the fuse in the power supply lead as close as possible to the car battery.
- Make sure that the leads to be connected to the +12 V and GND terminals of this unit are larger than 6-Gauge (AWG-6) or have a sectional area of more than 13 mm<sup>2</sup>.
- When using the optional RC-46 power amplifier connecting cord, consult that manual for proper use.

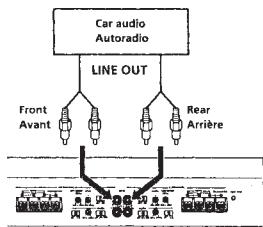
### Remarques sur l'alimentation électrique

- Raccordez le câble d'alimentation +12 V uniquement après avoir réalisé toutes les autres connexions.
- Raccordez correctement le fil de masse à une partie métallique de la voiture. Une connexion lâche peut provoquer un dysfonctionnement de l'amplificateur.
- Veuillez à raccorder le fil de télécommande de l'autoradio à la borne de télécommande.
- Si vous utilisez un autoradio dont l'amplificateur ne comporte pas de sortie de télécommande, raccordez la borne d'entrée de la télécommande (REMOTE) à la prise d'alimentation accessoires.
- Utilisez un câble d'alimentation muni d'un fusible (100 A).
- Fixez le câble d'alimentation le plus près possible de la batterie de voiture.
- Vous devez raccorder des câbles de calibre supérieurs à 6-Jauge (AWG-6) ou d'une section supérieure à 13 mm<sup>2</sup> aux bornes +12V et GND.
- Lorsque vous utilisez le cordon de raccordement pour amplificateur RC-46 en option, consultez le manuel pour une utilisation correcte.

## Input Connections

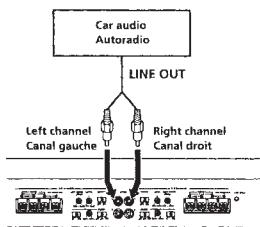
### Line Input Connection (with Speaker Connection 1, 2 or 4)

Connexion d'entrée de ligne  
(avec connexion de haut-parleur 1, 2 ou 4)



A

### Line Input Connection (with Speaker Connection 3) Connexion d'entrée de ligne (avec connexion de haut-parleur 3)



B

**Note**  
Make sure that the line output from the car audio is connected to the jack marked "A (MONO)/C (MONO)" on the unit.

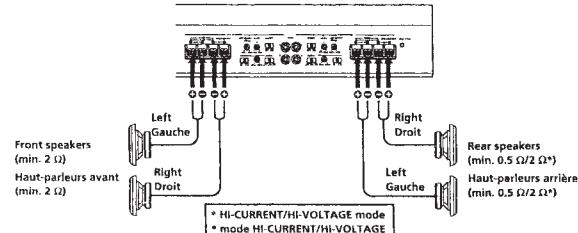
**Remarque**  
Vérifiez que la sortie de ligne de l'autoradio est raccordée à la prise portant l'indication "A (MONO)/C (MONO)" sur l'appareil.

## Speaker Connections

### 4-Speaker System (with Input Connection A) Système à 4 haut-parleurs (avec connexion d'entrée A)

For details on the settings of switches and controls, refer to "Location and Function of Controls."

Pour plus de détails sur les réglages des commutateurs et commandes, reportez-vous à "Emplacement et fonction des commandes".

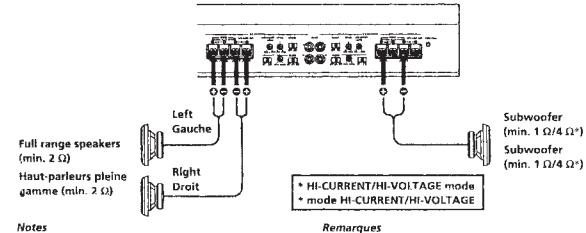


1

### 3-Speaker System (with Input Connection A) Système à 3 haut-parleurs (avec connexion d'entrée A)

For details on the settings of switches and controls, refer to "Location and Function of Controls."

Pour plus de détails sur les réglages des commutateurs et commandes, reportez-vous à "Emplacement et fonction des commandes".

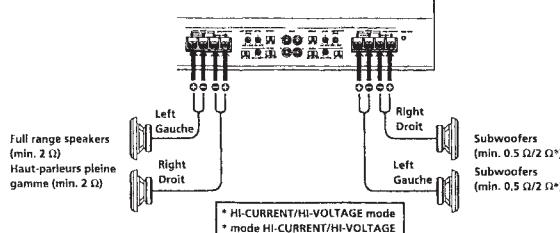


2

### 2-Way System (with Input Connection A) Système à 2 voies (avec connexion d'entrée A)

For details on the settings of switches and controls, refer to "Location and Function of Controls."

Pour plus de détails sur les réglages des commutateurs et commandes, reportez-vous à "Emplacement et fonction des commandes".

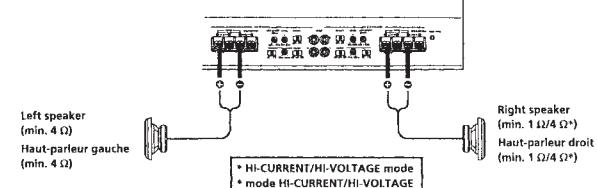


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### 2-Speaker System (with Input Connection B) Système à 2 haut-parleurs (avec connexion d'entrée B)

For details on the settings of switches and controls, refer to "Location and Function of Controls."

Pour plus de détails sur les réglages des commutateurs et commandes, reportez-vous à "Emplacement et fonction des commandes".



4

## Features

- Maximum power output of 180 watts per channel (at 4 Ω).
- This unit can be used as a bridging amplifier with a maximum output of 600 watts.
- Built-in variable filter corresponds to a wide range, from 50Hz to 400Hz/500Hz to 4kHz. (x1/x10 switch)
- Built-in variable LPF (Low-pass filter), HPF (High-pass filter) and low boost circuit.
- Possible to switch between HI-CURRENT mode (0.5 - 1 Ω) and HI-VOLTAGE mode (2 - 4 Ω) for C/D channels. A/B channels are fixed to HI-VOLTAGE mode.
- The DIRECT switch can be used to bypass the low-pass filter, high-pass filter for more enjoyable high quality sound.
- Negative Feed Back (ON/OFF) switchable.
- Independent voltage amplifier power supply.
- Protection circuit and indicator are provided.
- Pulse power supply\* for stable, regulated output power.
- **Pulse power supply**  
This unit has a built-in power regulator which converts the power supplied by the DC 12 V car battery into high speed pulses using a semiconductor switch. These pulses are stepped up by the built-in pulse transformer and separated into both positive and negative power supplies before being converted into direct current again. This is to regulate fluctuating voltage from the car battery. This light weight power supply system provides a highly efficient power supply with a low impedance output.

## Caractéristiques

- Puissance de sortie maximale de 180 watts par canal (à 4 Ω).
- Cet appareil peut être utilisé comme amplificateur de pontage avec une sortie maximale de 600 watts.
- Le filtre variable intégré correspond à une large plage allant de 50Hz à 400Hz/500Hz à 4kHz (commutateur x1/x10).
- Filtre passe-bas (LPF), filtre passe-haut (HPF) variables et circuit d'amplification des graves intégrés.
- Possibilité de commutation des modes HI-CURRENT (0.5 - 1 Ω) et HI-VOLTAGE (2 - 4 Ω) pour les canaux C/D. Les canaux A/B sont limités à la mode HI-VOLTAGE.
- Le commutateur DIRECT peut être utilisé pour contourner le filtre passe-bas, le filtre passe-haut, et pour le circuit d'égalisation, afin d'optimiser la qualité sonore.
- Rétro-action négative (ON/OFF) commutable.
- Alimentation indépendante de l'amplificateur de tension.
- Circuit de protection et indicateur fournis.
- Alimentation électrique par impulsions\* pour une puissance de sortie stable, régulée.
- **Alimentation électrique par impulsions**  
Cet appareil est équipé d'un régulateur de puissance intégré qui convertit la puissance fournie par une batterie de voiture de 12 V CC en impulsions ultra-rapides au moyen d'un commutateur à semi-conducteur. Ces impulsions sont amplifiées par le transformateur d'impulsions intégré et séparées en alimentation positive et négative avant d'être recouvertes en courant continu. Ce processus permet de compenser les fluctuations de tension provenant de la batterie de la voiture. Ce système d'alimentation de faible poids assure une alimentation électrique très efficace pour une sortie d'impédance faible.

## Location and Function of Controls

**① MODE (C/D CHANNEL) indicator**  
Indicates HI-CURRENT mode or HI-VOLTAGE mode.

**② POWER/PROTECTOR indicator**

- OVER CURRENT lights up in green during normal operation. The color will change from green to amber when receiving a powerful signal.
- OFFSET lights up in green during normal operation. The color will change from green to amber when the voltage going out to the Speaker terminal or the Pin Jack is too high.
- THERMAL lights up in green during normal operation. The color will change from green to amber when the temperature rises to an unsafe level. The color will return to green when the temperature returns to normal.

**③ MODE (C/D CHANNEL) (HI-CURRENT/HI-VOLTAGE) switch**

- In HI-CURRENT mode the speaker impedance is 0.5 to 1 Ω. This mode sends a signal via parallel circuits for a powerful sound.
- In HI-VOLTAGE mode the speaker impedance is 2 to 4 Ω. In this mode you can enjoy clear sound with the dynamic range.

**④ NFB switch**

- When the NFB (Negative Feed Back) switch is set to ON, the NFB circuits are effective at reducing the distortion produced by the amplifier.

*Tip*

The NFB circuits are effective at reducing the static characteristic distortion produced by the amplifier, but are susceptible to the effects of sound muddiness from the reverse electromotive force produced by the speakers.

**⑤ DIRECT switch**

- When the DIRECT switch is set to ON, the signal will not go through the low-pass filter, high-pass filter, or low boost circuit.

**⑥ LEVEL adjustment control**

- The input level can be adjusted with this control when using source equipment made by other manufacturers. Turn it to MAX when the output level of the car audio seems low.

**⑦ LOW BOOST level control (See Fig. 1)**

- Turn this control to boost the frequencies around 40 Hz to a maximum of 10 dB.

**⑧ FILTER select switch**

- When the switch is in the LPF position, the filter is set to low-pass. When in the HPF position, the filter is set to high-pass. When the DIRECT switch is set to ON, these filters do not work.

**⑨ Cut-off frequency adjustment control (See Fig. 2)**

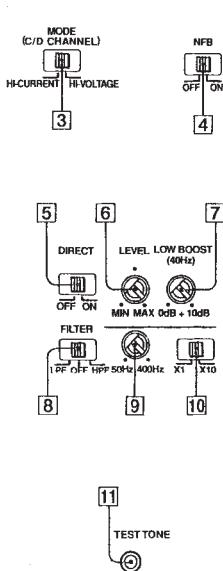
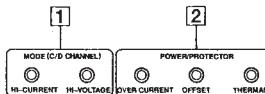
- Sets the cut-off frequency (50 - 400 Hz) for the low-pass or high-pass filters.

**⑩ x1/x10 switch (See Fig. 2)**

- When the x1/x10 switch is set to x10, the established cut-off frequency (⑨) will be 10 times as large as the x1 setting.

**⑪ TEST TONE button**

- To check the system's status, activate the built in transmitter then press the TEST TONE button. If the tone is heard, the unit is functioning normally.



## Emplacement et fonction des commandes

**① Indicateur MODE (C/D CHANNEL)**

L'indicateur signale le mode activé : HI-CURRENT ou HI-VOLTAGE.

**② Indicateur POWER/PROTECTOR**

- OVER CURRENT s'allume en vert en cours de fonctionnement normal. La couleur passe du vert à l'ambre lors de la réception d'un signal puissant.
- OFFSET s'allume en vert en cours de fonctionnement normal. La couleur passe du vert à l'ambre lorsque la tension transmise via la borne de haut-parleurs ou la prise à broche est trop élevée.

- THERMAL s'allume en vert en cours de fonctionnement normal. La couleur passe du vert à l'ambre lorsque la température dépasse le niveau de sécurité.
- La couleur repasse au vert dès que la température est revenue à un niveau normal.

**③ Commutateur de MODE (C/D CHANNEL) (HI-CURRENT/HI-VOLTAGE)**

- En mode HI-CURRENT, l'impédance de haut-parleur est de 0.5 à 1 Ω. Ce mode transmet un signal via des circuits parallèles pour créer un son de forte amplitude.
- En mode HI-VOLTAGE, l'impédance de haut-parleur est de 2 à 4 Ω. Ce mode vous permet d'obtenir un son clair dans la plage dynamique.

**④ Commutateur NFB**

- Lorsque le commutateur NFB (réaction négative) est réglé sur ON, les circuits NFB réduisent efficacement les distorsions produites par l'amplificateur.

*Conseil*

Ces circuits NFB réduisent efficacement les distorsions statiques produites par l'amplificateur, mais sont sensibles aux effets d'altération du son causés par la force électromotrice inverse produite par les haut-parleurs.

**⑤ Commutateur DIRECT**

- Lorsque le commutateur DIRECT est réglé sur ON, le signal ne passe pas par le filtre passe-bas, le filtre passe-haut et le circuit d'égalisation.

**⑥ Commande de réglage LEVEL**

- Le niveau d'entrée peut se régler avec cette commande lors de l'utilisation d'équipements source d'autres fabricants. Mettez-le sur MAX lorsque le niveau de sortie de l'installation audio paraît faible.

**⑦ Commande de niveau LOW BOOST (Voir Fig. 1)**

- Tournez cette commande pour amplifier les fréquences autour de 40 Hz à un maximum de 10 dB. Lorsque le commutateur DIRECT est activé, ce circuit n'est pas activé.

**⑧ Sélecteur FILTER**

- Lorsque le commutateur est en position LPF, le filtre est mis sur passe-bas. Lorsqu'il est en position H.P.F., le filtre est mis sur passe-haut.

- Lorsque le commutateur DIRECT est réglé sur ON, ces filtres sont inopérants.

**⑨ Commandes de réglage de la fréquence de coupure (Voir Fig. 2)**

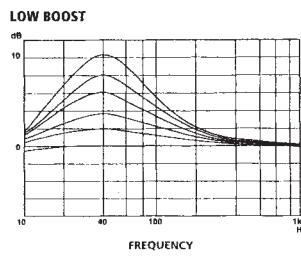
- Règle la fréquence de coupure (50 - 400 Hz) des filtres passe-bas ou passe-haut.

**⑩ Commutateur x 1/x 10 (Voir Fig. 2)**

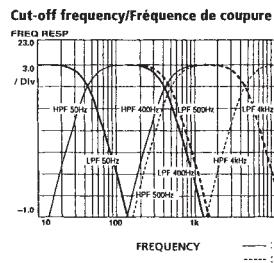
- Lorsque le commutateur x 1/x 10 est réglé sur x 10, la fréquence de coupure réglée (⑨) est dix fois supérieure au réglage x 1.

**⑪ Touche TEST TONE**

- Pour contrôler le statut du système, activez le transmetteur intégré et appuyez ensuite sur la touche TEST TONE. Si vous entendez une tonalité, c'est que l'appareil fonctionne normalement.

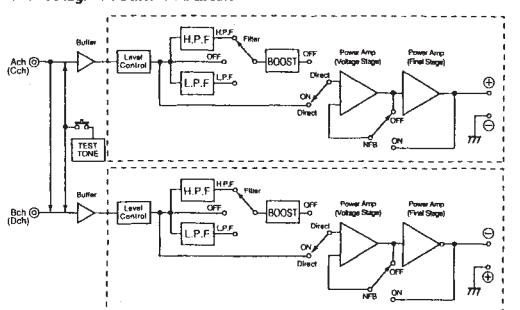


— Fig. 1 —



— Fig. 2 —

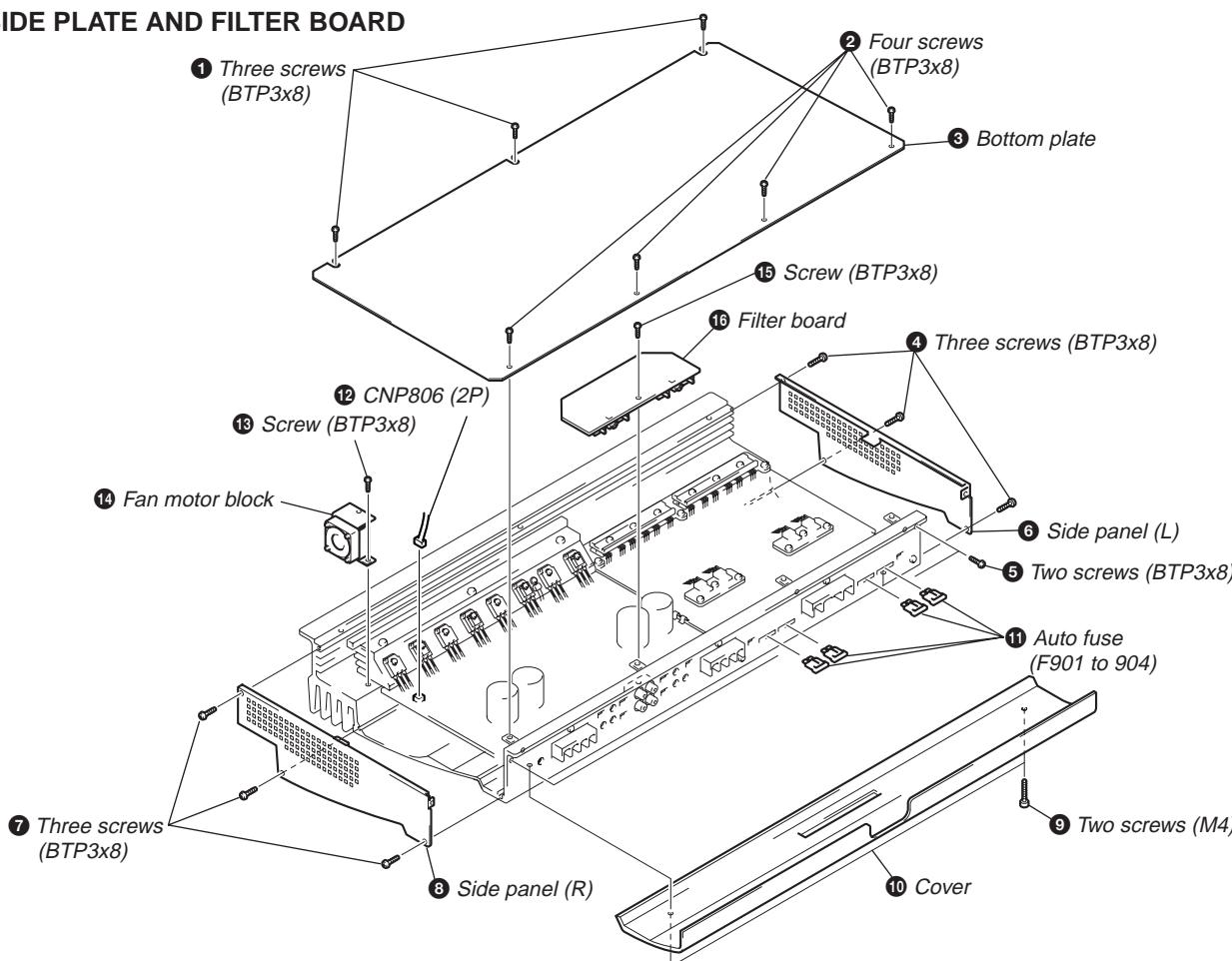
## Circuit Diagram / Schéma du circuit



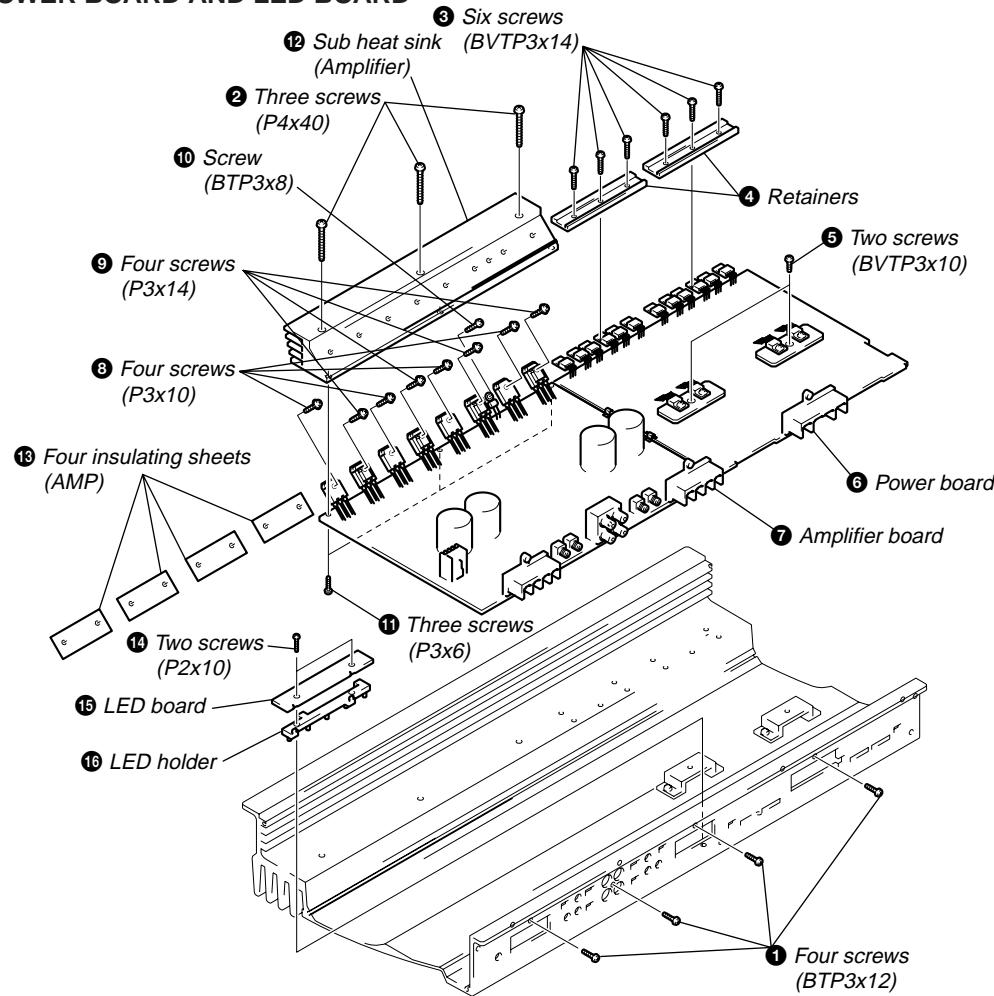
## SECTION 3 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

### 3-1. SIDE PLATE AND FILTER BOARD



### 3-2. AMPLIFIER/POWER BOARD AND LED BOARD



## SECTION 4 ELECTRICAL ADJUSTMENT

### IDLING CURRENT ADJUSTMENT

- Perform adjustments in the **[HI-VOLTAGE]** mode.

#### ① Adjustment point

Semi-fixed resistors VR101, VR201, VR301, VR401 of amplifier board.

#### ② Precautions on adjustments

1. Set the RCA input terminal to open.
2. Apply a voltage of 14.4V between the +12V terminal, REMOTE terminal, and GND terminal.
3. Rotate the above semi-fixed resistors completely in the counter-clockwise direction while observing the component side.
4. Check that the voltage at the adjustment point becomes 0 mV in step 2.
5. Fine adjustments may be required according to the characteristics of the MOS-FET used.

#### • When adjusting the idling current

Rotating the semi-fixed resistor in the clockwise direction:

Increases the idling current

Rotating the semi-fixed resistor in the counterclockwise direction:

Decreases the idling current

\*Take note that rotating excessively in the clockwise direction will increase the idling current suddenly.

#### ③ Approximate adjustment values

Adjust as follows so that the following voltages become [0.4 to 0.5 mV].

#### **A channel**:

Voltage between TP101 and TP102: Use VR101 of the amplifier board

#### **B channel**:

Voltage between TP201 and TP202: Use VR201 of the amplifier board

#### **C channel**:

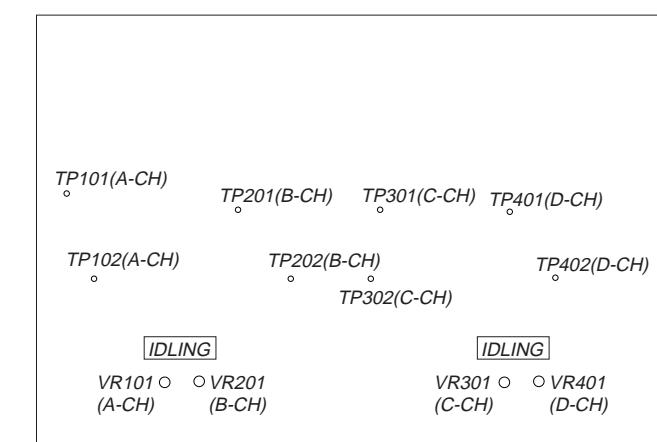
Voltage between TP301 and TP302: Use VR301 of the amplifier board

#### **D channel**:

Voltage between TP401 and TP402: Use VR401 of the amplifier board

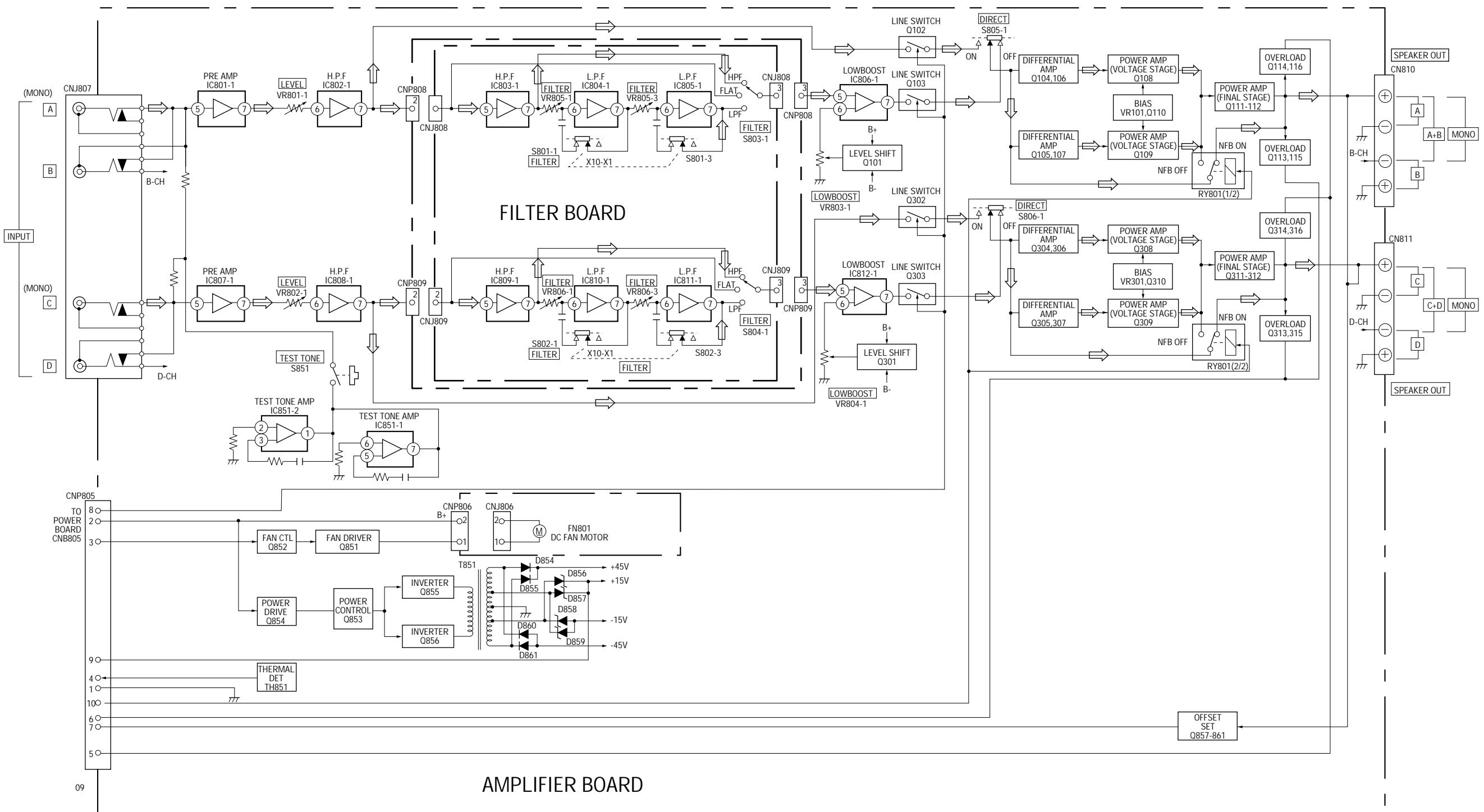
### Adjustment Location

#### - AMPLIFIER BOARD - (Component side)

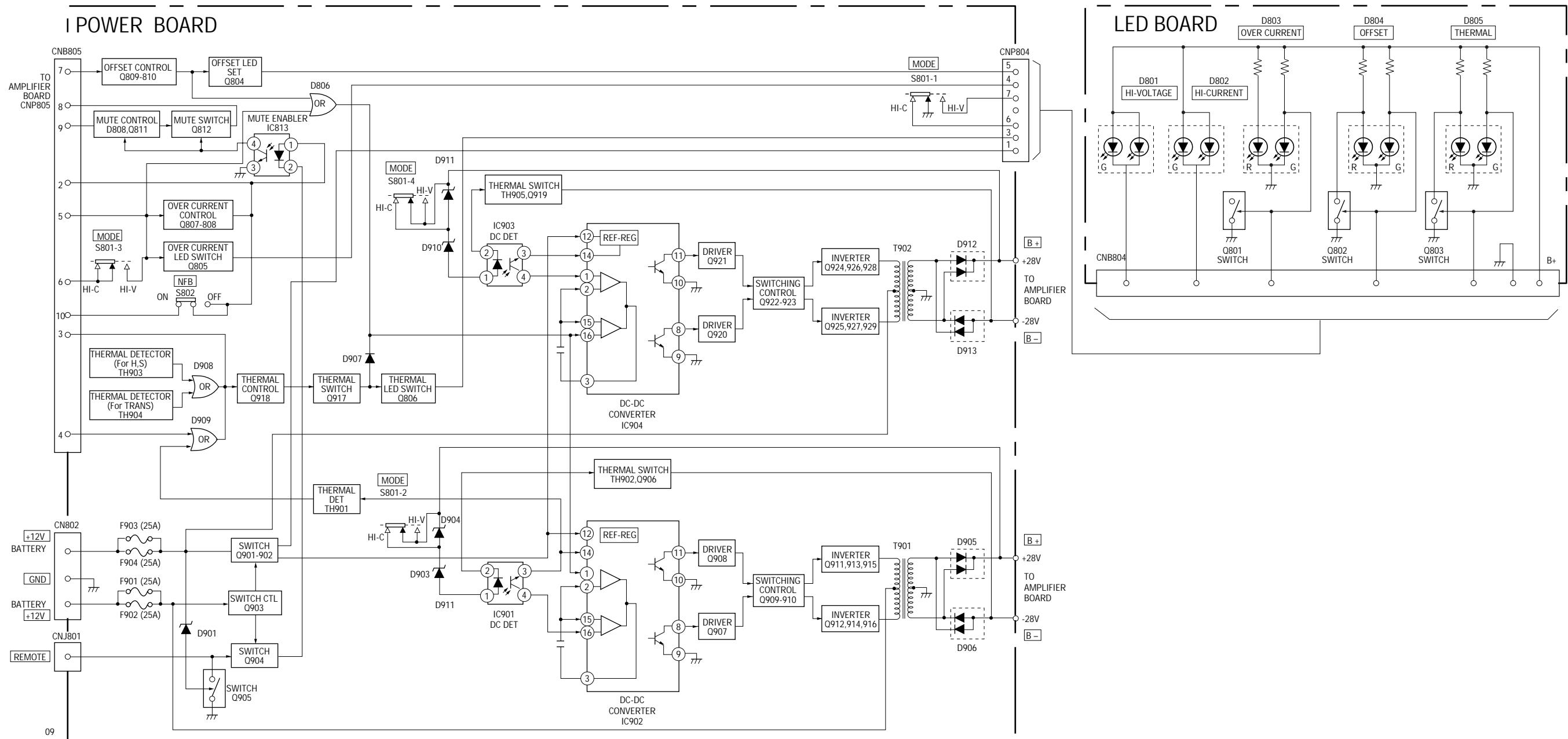


## SECTION 5 DIAGRAMS

### 5-1. BLOCK DIAGRAM – AMPLIFIER SECTION –



## 5-2. BLOCK DIAGRAM – POWER SECTION –



**THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.**  
(In addition to this, the necessary note is printed in each block.)

#### For schematic diagrams.

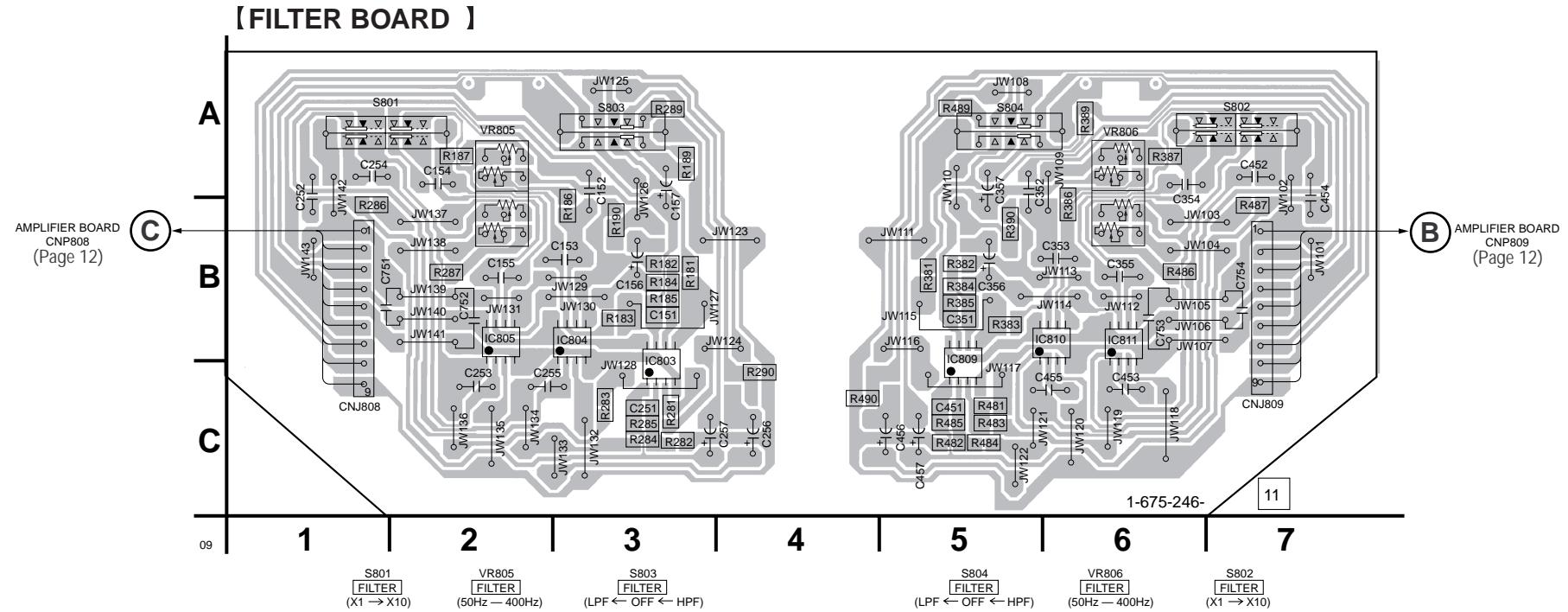
- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $1/4$  W or less unless otherwise specified.
  - : panel designation.
  - : B+ Line.
  - Power voltage is dc 14.4V and fed with regulated dc power supply from +12V and REMOTE terminals.
  - Voltages and waveforms are dc with respect to ground under no-signal conditions.  
no mark: POWER ON  
 $*$  : Impossible to measure
  - Voltages are taken with a VOM (Input impedance  $10 \text{ M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
  - Waveforms are taken with an oscilloscope.  
Voltage variations may be noted due to normal production tolerances.
  - Circled numbers refer to waveforms.
  - Signal path.  
 : AUDIO

#### For printed wiring boards.

**Note:**

- : parts extracted from the component side.

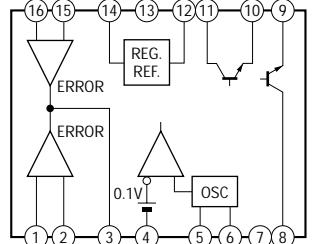
### 5-4. PRINTED WIRING BOARD – LED/FILTER SECTION –



### 5-3. IC BLOCK DIAGRAM

#### • POWER section

IC902, 904  $\mu\text{PC494G2}$



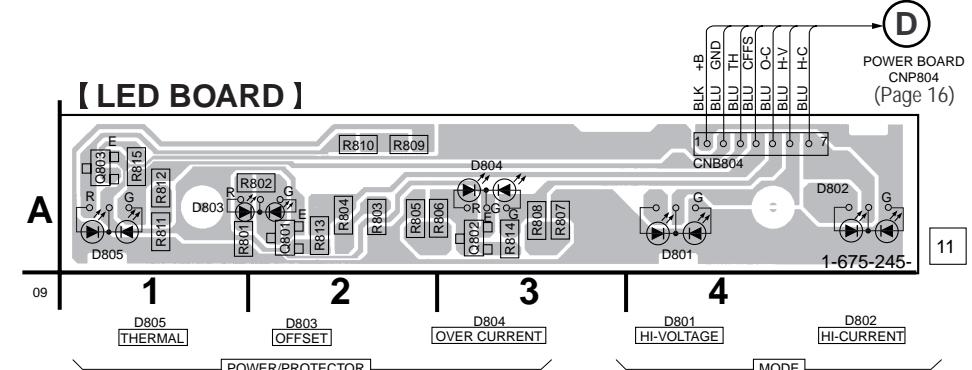
#### • Semiconductor Location

Ref. No.	Location
IC803	C-3
IC804	B-3
IC805	B-2
IC809	C-5
IC810	B-6
IC811	B-6

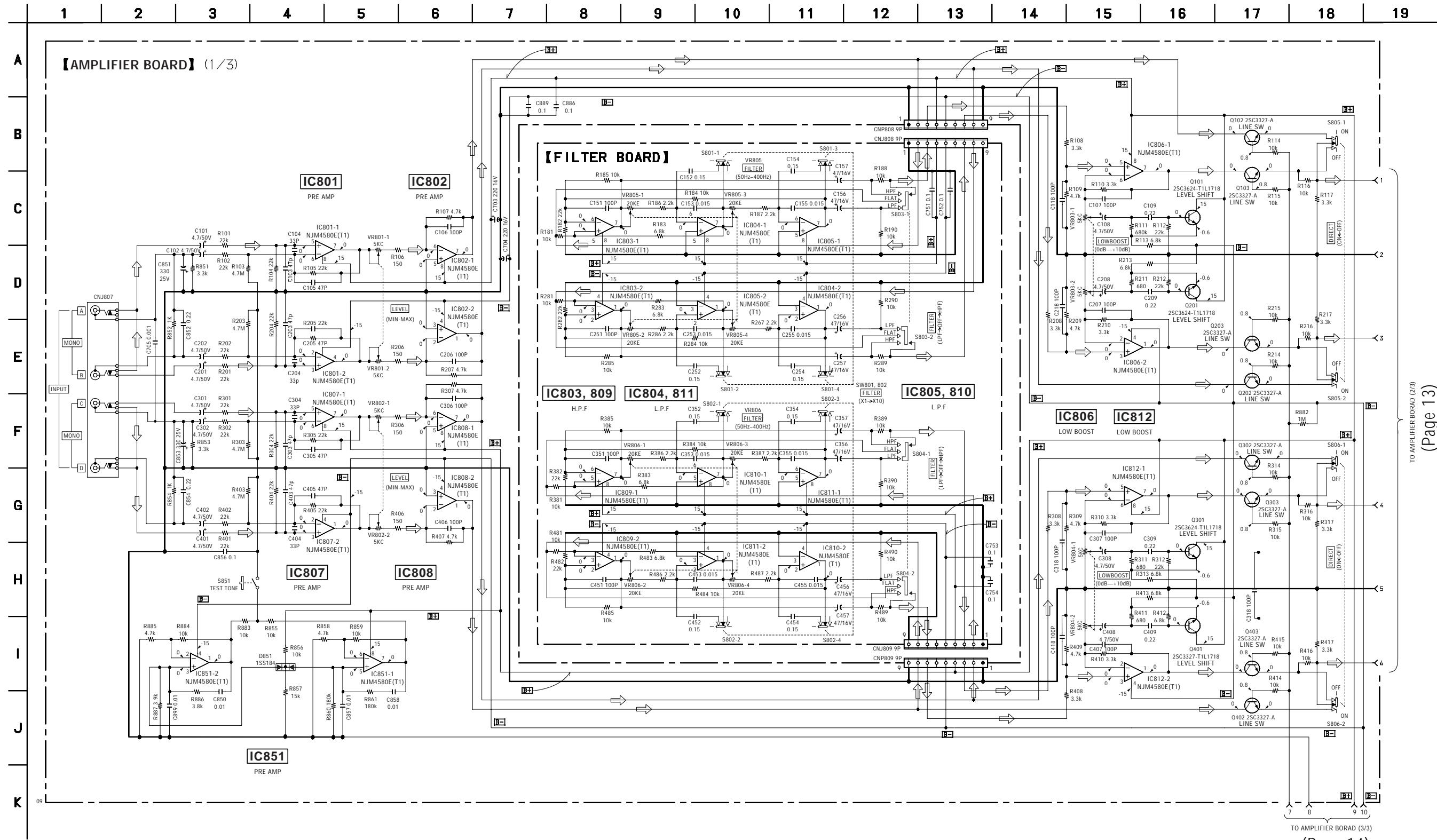
#### • Semiconductor Location

Ref. No.	Location
D801	A-4
D802	A-4
D803	A-2
D804	A-3
D805	A-1
Q801	A-2
Q802	A-3
Q803	A-1

### [ LED BOARD ]



**5-5. SCHEMATIC DIAGRAM – FILTER/AMPLIFIER (1/3) SECTION – • See page 10 for IC Block Diagram.**

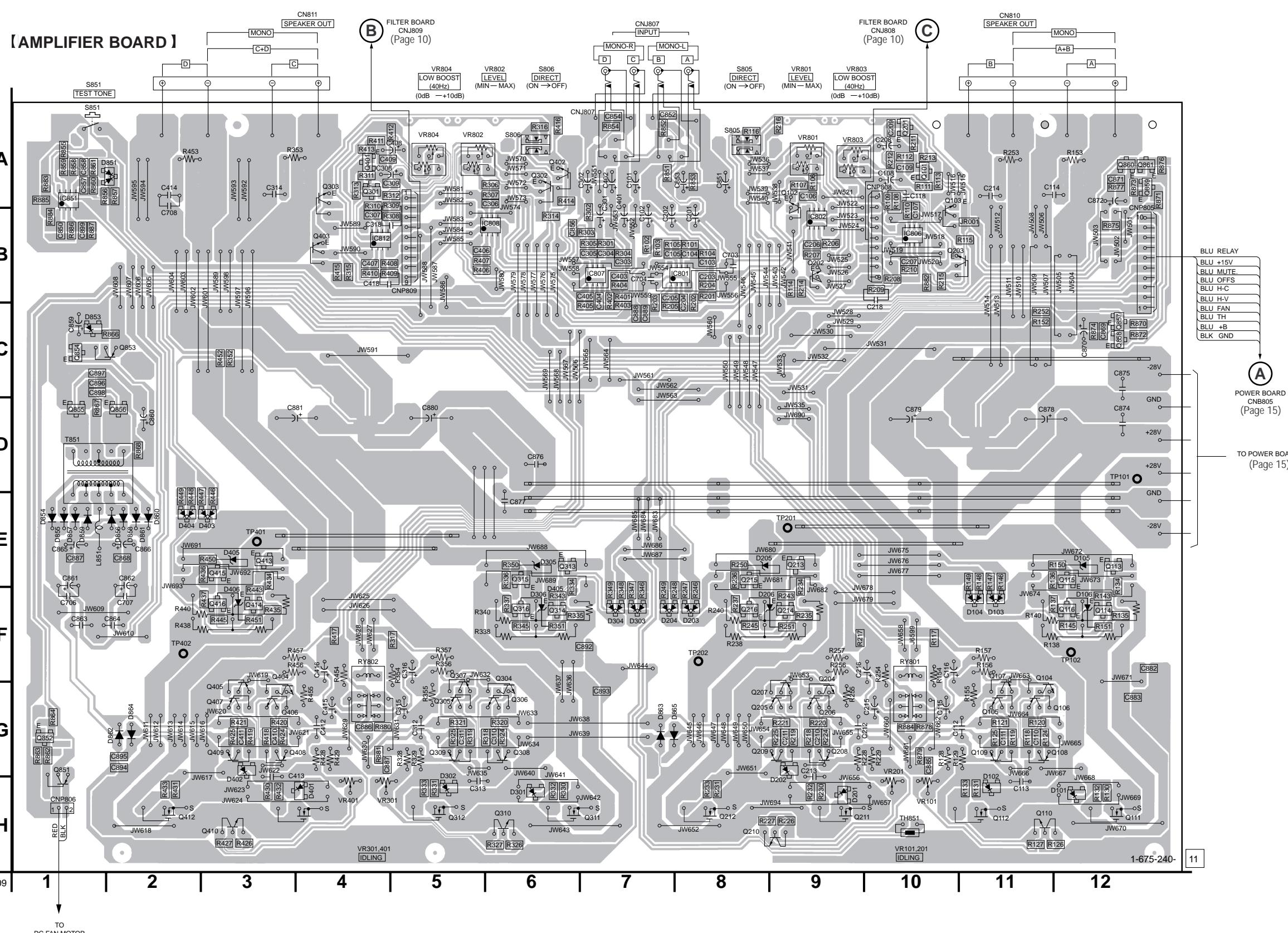


(Page 14)

## 5-6. PRINTED WIRING BOARD - AMPLIFIER SECTION -

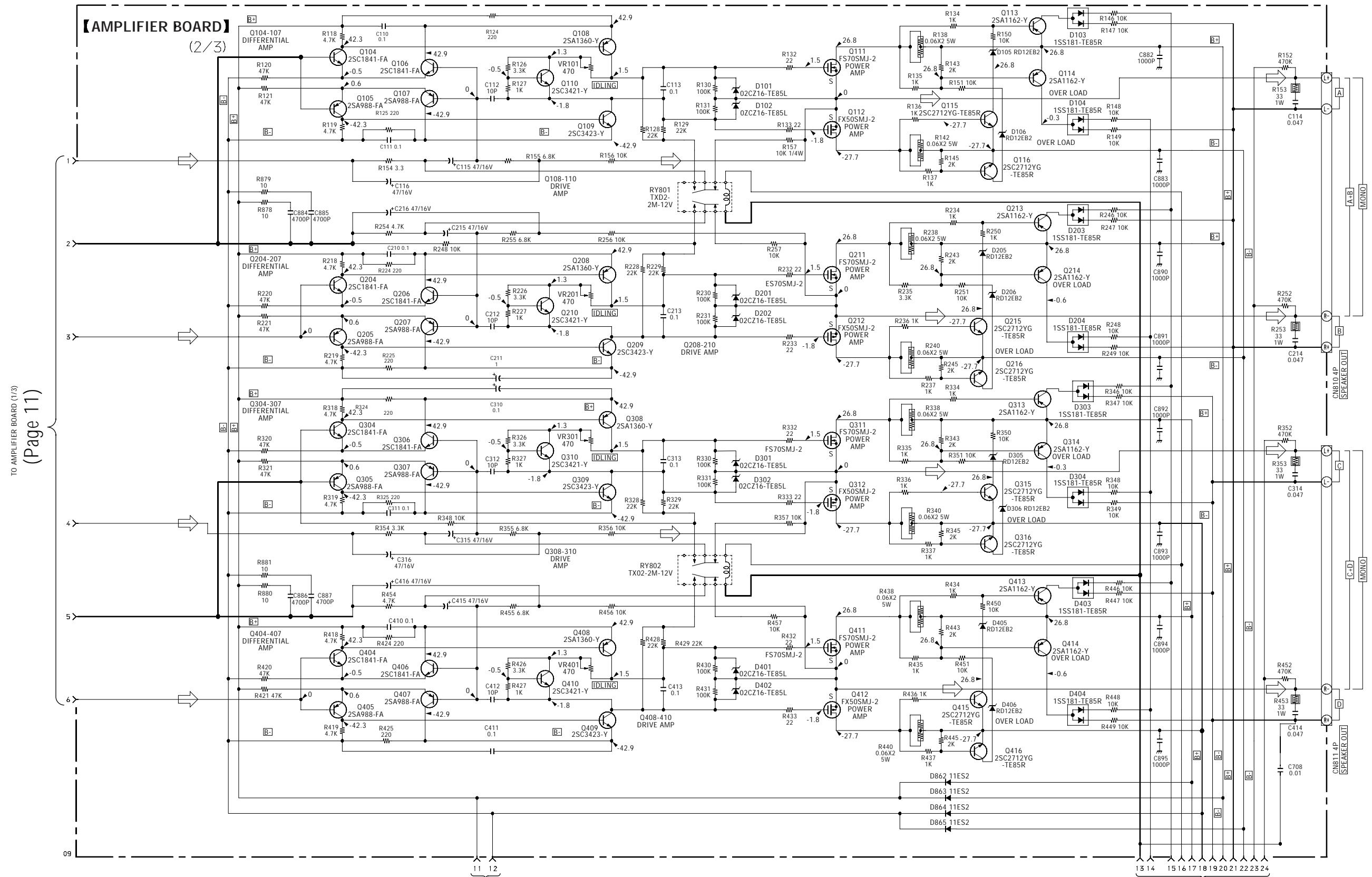
## • Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	H-12	Q202	B-9
D102	H-11	Q203	B-11
D103	F-11	Q204	G-9
D104	F-11	Q205	G-9
D105	E-9	Q206	G-9
D106	F-9	Q207	G-9
D201	H-9	Q208	G-9
D202	G-9	Q209	G-9
D203	F-8	Q210	H-8
D204	F-7	Q211	H-9
D205	E-8	Q212	H-8
D206	F-8	Q213	E-9
D301	H-6	Q214	F-9
D302	H-5	Q215	E-8
D303	F-7	Q216	F-8
D304	F-7	Q301	A-4
D305	E-6	Q302	A-6
D306	F-6	Q303	A-4
D401	H-4	Q304	G-6
D402	G-3	Q305	G-5
D403	E-3	Q306	G-6
D404	E-2	Q307	G-5
D405	E-3	Q308	G-6
D406	F-3	Q309	G-5
D851	A-2	Q310	H-6
D853	C-1	Q311	H-6
D854	E-1	Q312	H-5
D855	E-1	Q313	E-6
D856	E-2	Q314	F-6
D857	E-1	Q315	E-6
D858	E-2	Q401	A-4
D859	E-1	Q402	A-6
D860	E-2	Q403	B-4
D861	E-1	Q405	G-3
D862	G-2	Q406	G-3
D863	G-7	Q407	G-3
D864	G-2	Q408	G-3
D865	G-7	Q409	G-3
IC801	B-8	Q410	H-3
IC802	B-9	Q411	H-3
IC806	B-10	Q412	H-2
IC807	B-7	Q413	E-3
IC808	B-6	Q414	F-3
IC812	B-4	Q415	E-3
IC851	A-1	Q416	F-3
Q101	A-10	Q852	C-12
Q102	A-9	Q853	C-2
Q103	A-10	Q854	C-1
Q104	G-11	Q855	D-1
Q105	G-11	Q856	D-2
Q106	G-11	Q857	C-12
Q107	G-11	Q858	C-12
Q108	G-11	Q859	A-12
Q109	G-11	Q860	A-12
Q110	H-11	Q861	A-12
Q111	H-12		
Q112	H-11		
Q113	E-12		
Q114	F-12		
Q115	E-12		
Q116	F-12		
Q201	A-10		



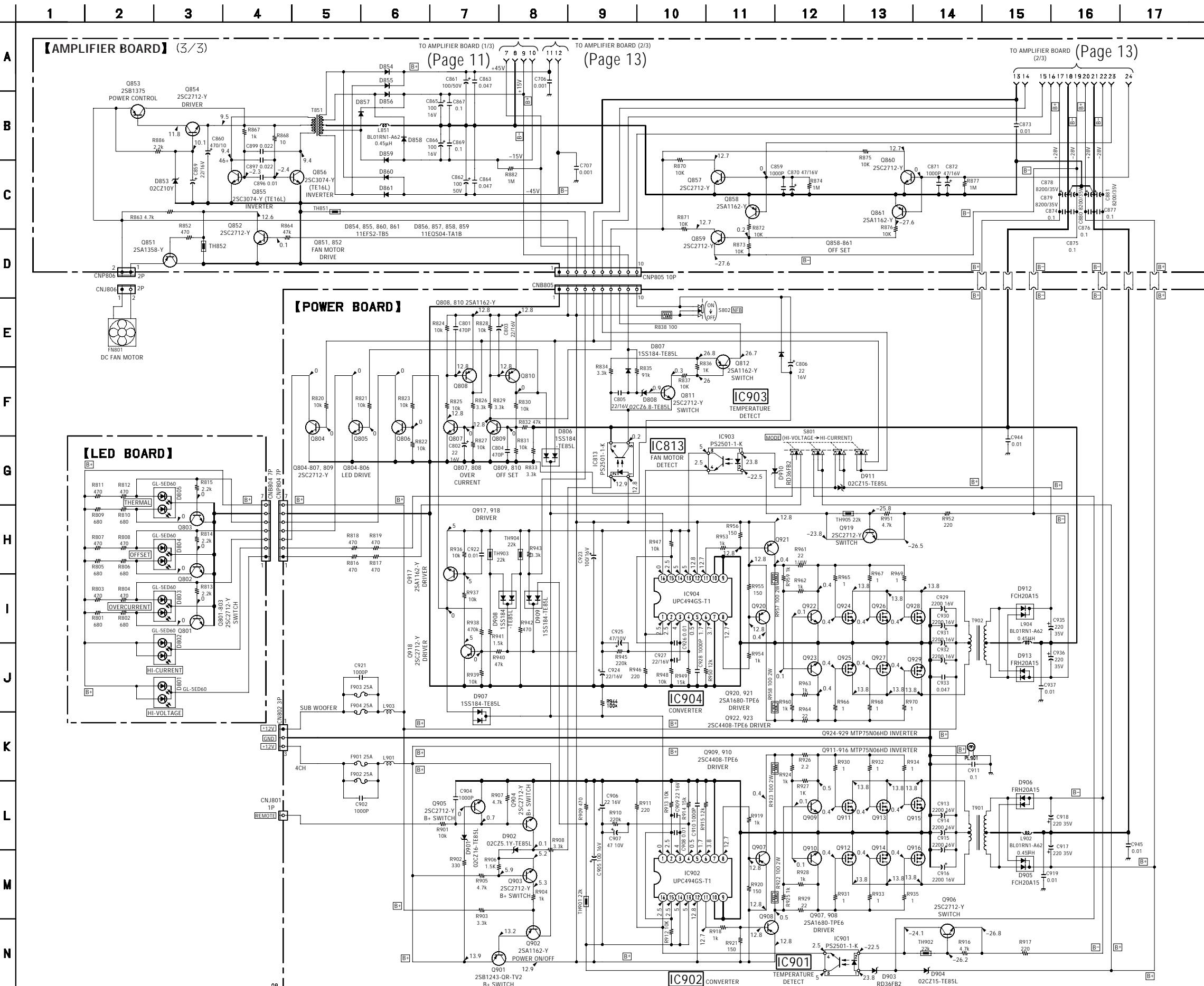
**5-7. SCHEMATIC DIAGRAM – AMPLIFIER (2/3) SECTION – • See page 10 for IC Block Diagram.**

20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35

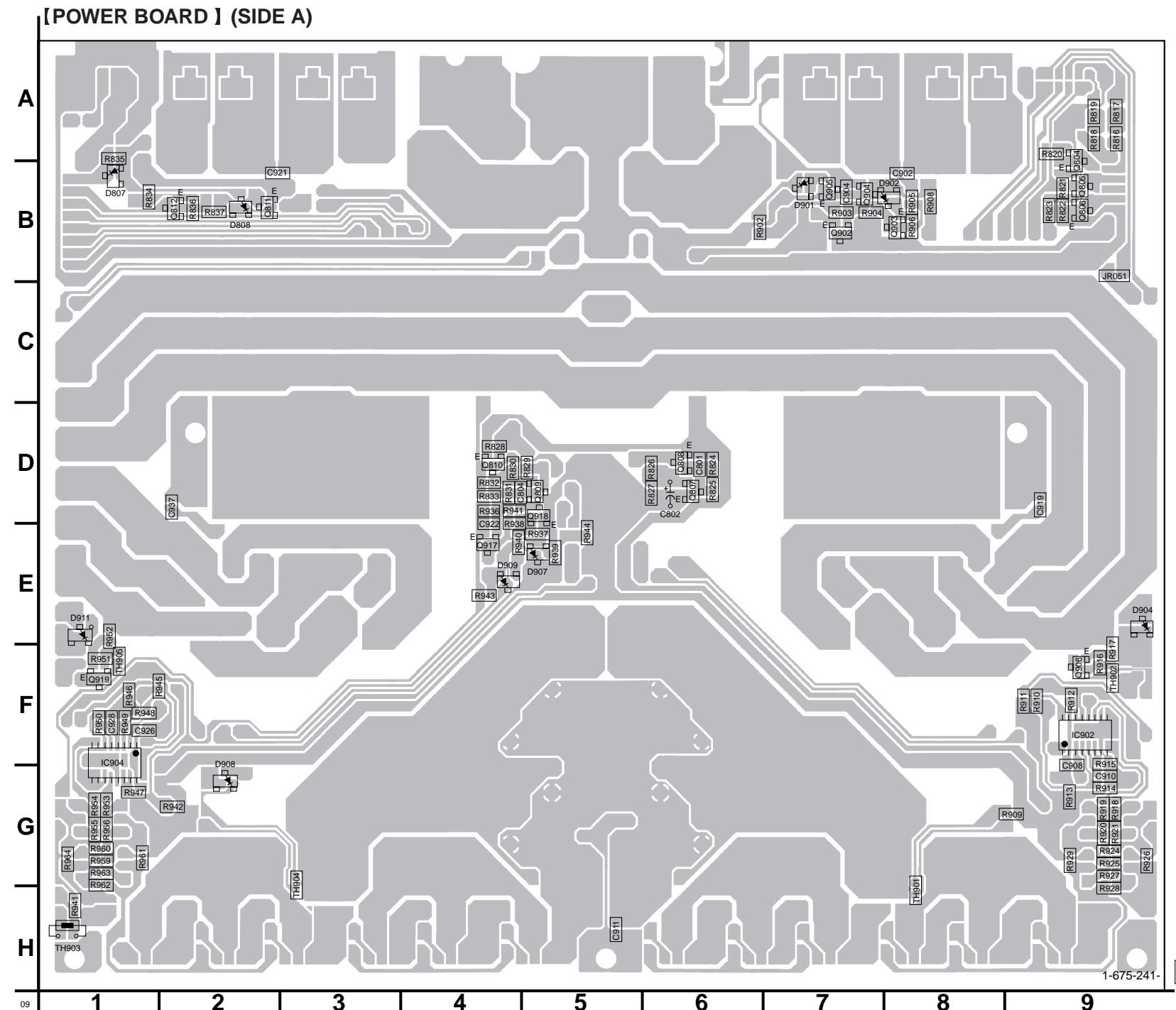


(Page 14)

## 5-8. SCHEMATIC DIAGRAM – POWER/AMPLIFIER (3/3)/LED SECTION – • See page 10 for IC Block Diagram.



## 5-9. PRINTED WIRING BOARD – POWER SECTION –

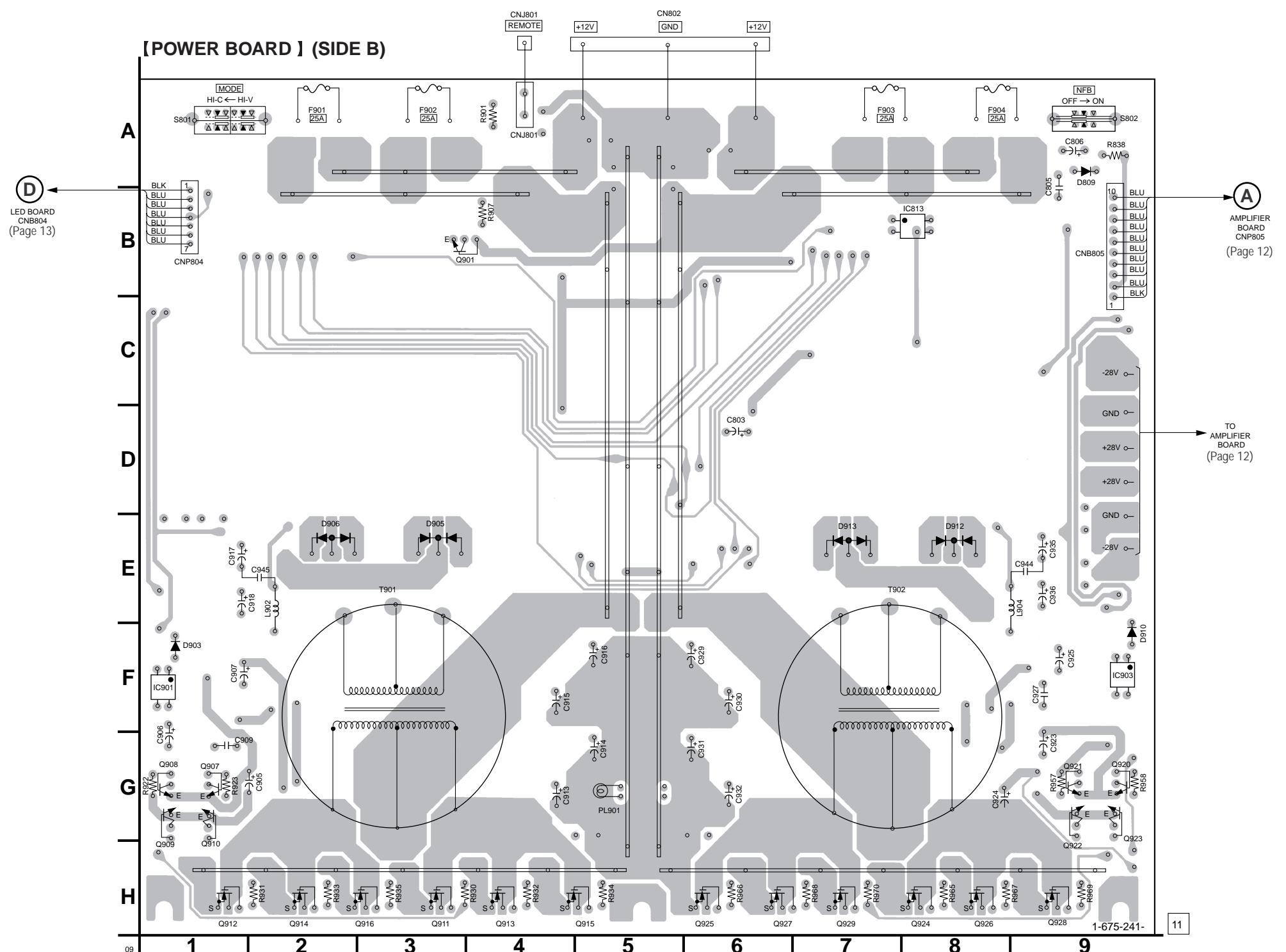


- Semiconductor Location

Ref. No.	Location
D806	E-5
D807	B-1
D808	B-2
D901	B-7
D902	B-7
D904	E-9
D907	E-5
D908	G-2
D909	E-4
D911	E-1
IC902	F-9
Q804	B-9
Q805	B-9
Q806	B-9
Q807	D-6
Q808	D-6
Q809	D-5
Q810	D-4
Q811	B-2
Q812	B-2
Q902	B-7
Q903	B-8
Q904	B-7
Q905	B-7
Q906	F-9
Q917	E-4
Q918	D-5
Q919	F-1

• Semiconductor Location

Ref. No.	Location
D809	A-1
D903	F-9
D905	E-7
D906	E-8
D910	F-1
D912	E-2
D913	E-3
IC813	B-3
IC901	F-9
IC903	F-1
Q901	B-7
Q907	G-9
Q908	G-9
Q909	G-9
Q910	G-9
Q911	H-7
Q912	H-9
Q913	H-6
Q914	H-8
Q915	H-6
Q916	H-8
Q920	G-1
Q921	G-1
Q922	G-1
Q923	G-1
Q924	H-3
Q925	H-4
Q926	H-2
Q927	H-4
Q928	H-1
Q929	H-3



## SECTION 6 EXPLODED VIEWS

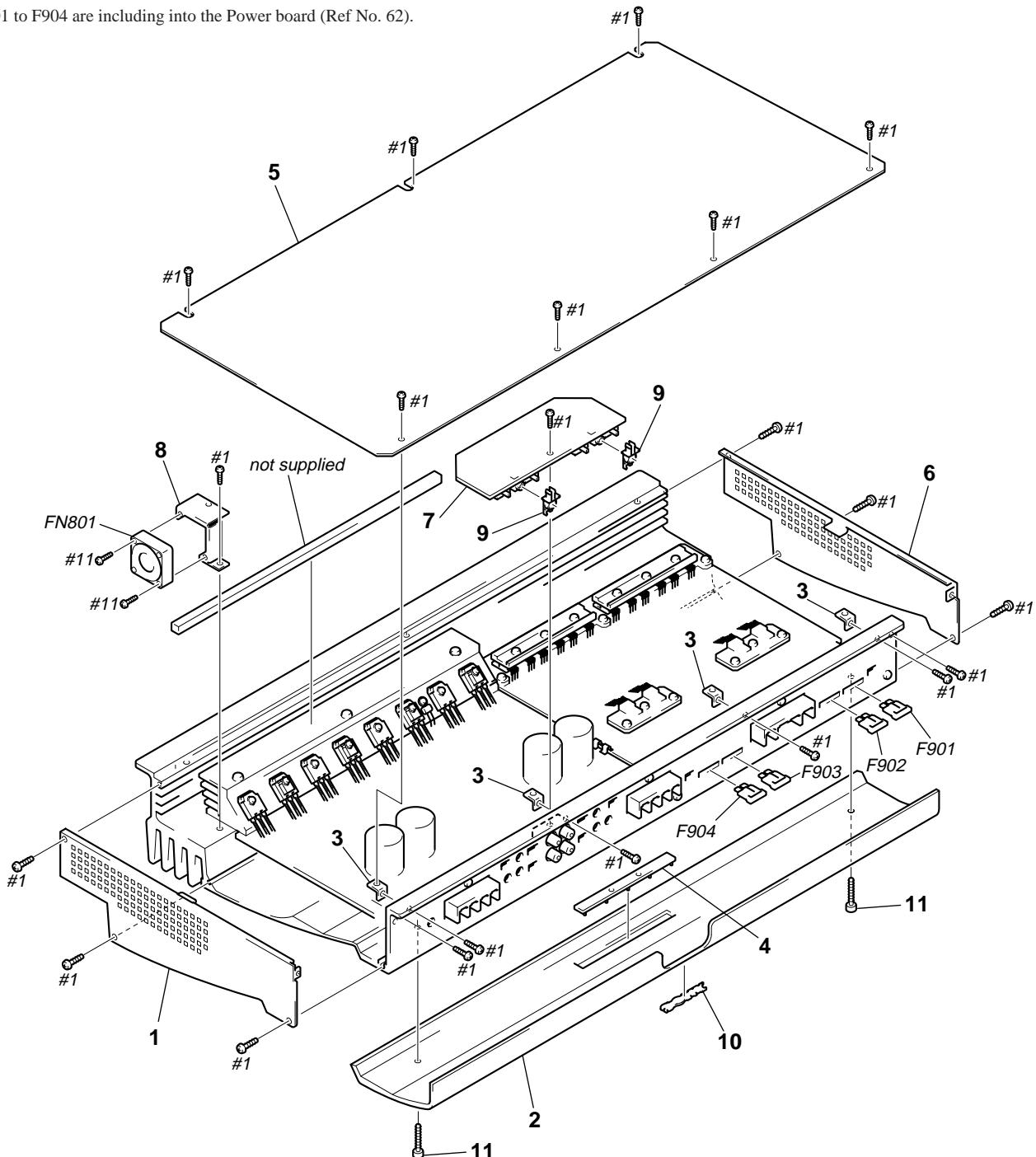
### NOTE:

- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation  
CND : Canadian model

### 6-1. PLATE AND COVER SECTION

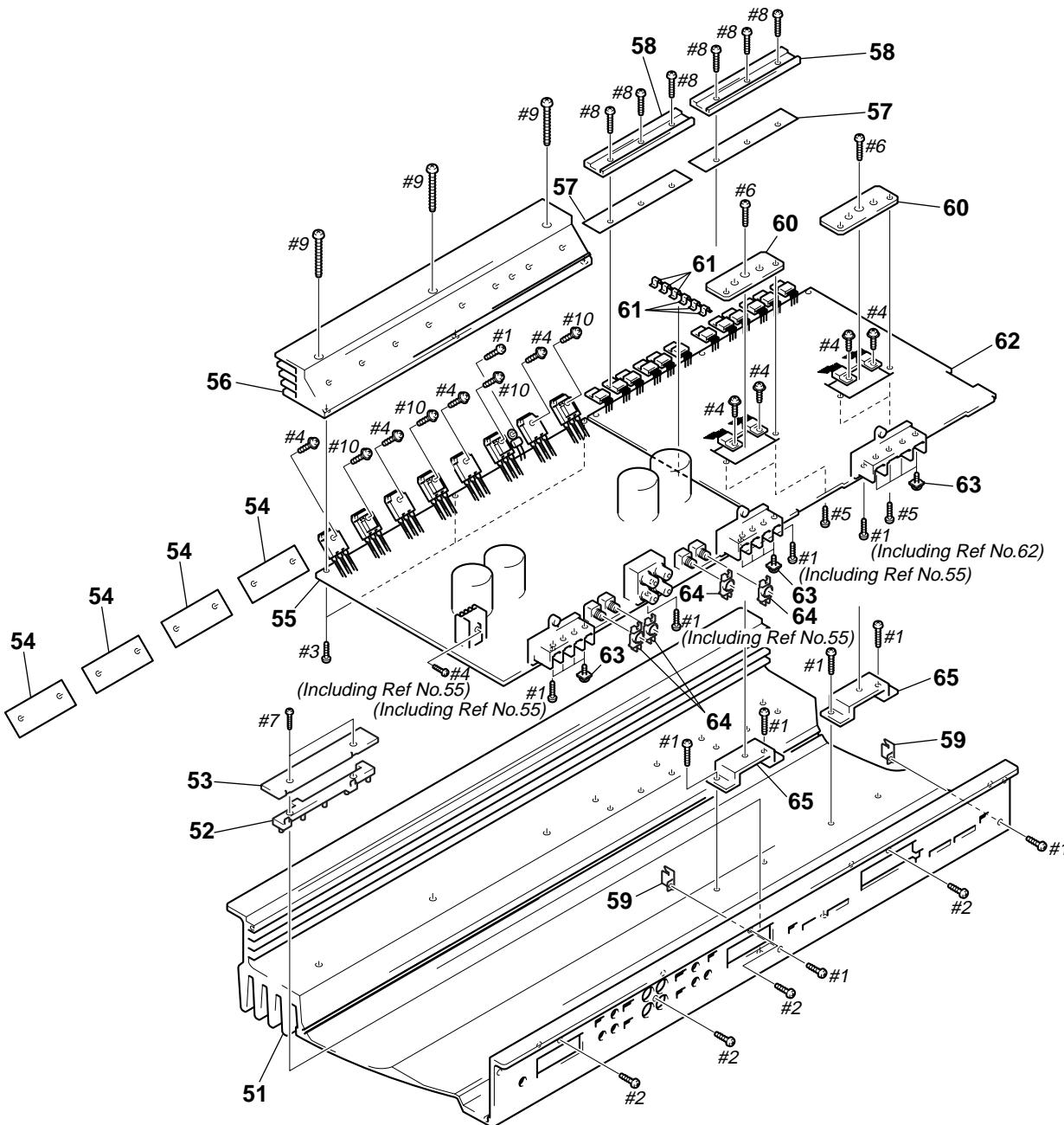
- F901 to F904 are including into the Power board (Ref No. 62).



Ref. No.	Part No.	Description
* 1	3-039-168-01	PANEL (R), SIDE
* 2	3-039-205-01	HEAT SINK (COVER)
* 3	3-039-173-01	PLATE (BKT), BOTTOM
* 4	3-039-170-01	LENS(COVER)
* 5	3-039-201-01	PLATE, BOTTOM
* 6	3-039-167-01	PANEL (L), SIDE
* 7	1-675-246-11	FILTER BOARD
* 8	3-039-202-01	BRACKET (FAN)
* 9	3-039-172-01	HOLDER, VOL

Ref. No.	Part No.	Description	Remark
10	3-704-177-11	EMBLEM (No. 7), SONY	
11	3-040-933-01	BOLT, M4 HEXAGON HOLE	
F901	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE) (25A)	
F902	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE) (25A)	
F903	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE) (25A)	
F904	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE) (25A)	
FN801	1-763-107-11	MOTOR, FAN	

## 6-2. BOARD AND HEAT SINK SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 51	3-039-210-01	HEAT SINK (US,CND)		* 59	3-039-200-01	BRACKET (PWB)	
* 51	3-039-210-11	HEAT SINK (AEP,UK,E)		* 60	3-039-179-01	HEAT SINK, SPACER	
52	3-039-171-01	HOLDER, LED		* 61	3-039-180-01	BAR(PC-PC), BUS	
* 53	1-675-245-11	LED BOARD		* 62	A-3317-933-A	POWER BOARD, COMPLETE	
* 54	3-039-184-01	SHEET (AMP), INSULATING		* 63	3-912-431-01	SCREW (P)	
* 55	A-3317-930-A	AMPLIFIER BOARD, COMPLETE		* 64	3-039-172-01	HOLDER, VOL	
* 56	3-039-204-01	HEAT SINK (AMPLIFIER), SUB		* 65	3-039-178-01	HEAT SINK (RECTIFIER), SUB	
* 57	3-039-183-01	SHEET (POWER), INSULATING					
* 58	3-033-321-01	RETAINER					

## SECTION 7

### ELECTRICAL PARTS LIST

**AMPLIFIER**

Note:

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked “\*\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS  
All resistors are in ohms  
METAL: Metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F : nonflammable

- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA...:  $\mu$  A..., uPA...:  $\mu$  PA..., uPB...:  $\mu$  PB...,  
uPC...:  $\mu$  PC..., uPD...:  $\mu$  PD...
- CAPACITORS  
uF :  $\mu$  F
- COILS  
uH :  $\mu$  H
- Abbreviation  
CND : Canadian model

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark							
*	A-3317-930-A	AMPLIFIER BOARD, COMPLETE	*****			C309	1-164-222-11	CERAMIC CHIP	0.22uF	25V						
< CAPACITOR >																
C101	1-126-047-81	ELECT	4.7uF	20%	50V	C310	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V					
C102	1-126-047-81	ELECT	4.7uF	20%	50V	C311	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V					
C103	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	C312	1-102-508-11	CERAMIC	10PF	0.5PF	50V					
C104	1-163-239-11	CERAMIC CHIP	33PF	5%	50V	C313	1-136-165-00	FILM	0.1uF	5%	50V					
C105	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	C314	1-136-161-00	FILM	0.047uF	5%	50V					
C106	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C315	1-126-008-51	ELECT	47uF	20%	16V					
C107	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C316	1-126-008-51	ELECT	47uF	20%	16V					
C108	1-126-047-81	ELECT	4.7uF	20%	50V	C318	1-163-251-11	CERAMIC CHIP	100PF	5%	50V					
C109	1-164-222-11	CERAMIC CHIP	0.22uF	25V		C401	1-126-047-81	ELECT	4.7uF	20%	50V					
C110	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C402	1-126-047-81	ELECT	4.7uF	20%	50V					
C111	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C403	1-163-243-11	CERAMIC CHIP	47PF	5%	50V					
C112	1-102-508-11	CERAMIC	10PF	0.5PF	50V	C404	1-163-239-11	CERAMIC CHIP	33PF	5%	50V					
C113	1-136-165-00	FILM	0.1uF	5%	50V	C405	1-163-243-11	CERAMIC CHIP	47PF	5%	50V					
C114	1-136-161-00	FILM	0.047uF	5%	50V	C406	1-163-251-11	CERAMIC CHIP	100PF	5%	50V					
C115	1-126-008-51	ELECT	47uF	20%	16V	C407	1-163-251-11	CERAMIC CHIP	100PF	5%	50V					
C116	1-126-008-51	ELECT	47uF	20%	16V	C408	1-126-047-81	ELECT	4.7uF	20%	50V					
C118	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C409	1-164-222-11	CERAMIC CHIP	0.22uF	25V						
C201	1-126-047-81	ELECT	4.7uF	20%	50V	C410	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V					
C202	1-126-047-81	ELECT	4.7uF	20%	50V	C411	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V					
C203	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	C412	1-102-508-11	CERAMIC	10PF	0.5PF	50V					
C204	1-163-239-11	CERAMIC CHIP	33PF	5%	50V	C413	1-136-165-00	FILM	0.1uF	5%	50V					
C205	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	C414	1-136-161-00	FILM	0.047uF	5%	50V					
C206	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C415	1-126-008-51	ELECT	47uF	20%	16V					
C207	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C416	1-126-008-51	ELECT	47uF	20%	16V					
C208	1-126-047-81	ELECT	4.7uF	20%	50V	C418	1-163-251-11	CERAMIC CHIP	100PF	5%	50V					
C209	1-164-222-11	CERAMIC CHIP	0.22uF	25V		C703	1-126-010-81	ELECT	220uF	16V						
C210	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C704	1-126-010-81	ELECT	220uF	16V						
C211	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C705	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V					
C212	1-102-508-11	CERAMIC	10PF	0.5PF	50V	C706	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V					
C213	1-136-165-00	FILM	0.1uF	5%	50V	C707	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V					
C214	1-136-161-00	FILM	0.047uF	5%	50V	C708	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V					
C215	1-126-008-51	ELECT	47uF	20%	16V	C850	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V					
C216	1-126-008-51	ELECT	47uF	20%	16V	C851	1-126-025-11	ELECT	330uF	25V						
C218	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C852	1-164-222-11	CERAMIC CHIP	0.22uF	25V						
C301	1-126-047-81	ELECT	4.7uF	20%	50V	C853	1-126-025-11	ELECT	330uF	20%	25V					
C302	1-126-047-81	ELECT	4.7uF	20%	50V	C854	1-164-222-11	CERAMIC CHIP	0.22uF	25V						
C303	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	C855	1-165-319-11	CERAMIC CHIP	0.1uF	50V						
C304	1-163-239-11	CERAMIC CHIP	33PF	5%	50V	C857	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V					
C305	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	C858	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V					
C306	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C859	1-126-006-11	ELECT	22uF	20%	16V					
C307	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C860	1-124-997-11	ELECT	470uF	20%	10V					
C308	1-126-047-81	ELECT	4.7uF	20%	50V	C861	1-126-052-11	ELECT	100uF	20%	50V					
						C862	1-126-052-11	ELECT	100uF	20%	50V					
						C863	1-136-161-00	FILM	0.047uF	5%	50V					
						C864	1-136-161-00	FILM	0.047uF	5%	50V					

# AMPLIFIER

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C865	1-126-009-81	ELECT	100uF 20%	16V	D106	8-719-100-65	DIODE RD12EB2
C866	1-126-009-81	ELECT	100uF 20%	16V	D201	8-719-025-50	DIODE 02CZ16-TE85L
C867	1-164-004-11	CERAMIC CHIP	0.1uF 10%	25V	D202	8-719-025-50	DIODE 02CZ16-TE85L
C868	1-164-004-11	CERAMIC CHIP	0.1uF 10%	25V	D203	8-719-820-05	DIODE 1SS181-TE85R
C869	1-163-009-11	CERAMIC CHIP	0.001uF 10%	50V	D204	8-719-820-05	DIODE 1SS181-TE85R
C870	1-126-008-51	ELECT	47uF 20%	16V	D205	8-719-100-65	DIODE RD12EB2
C871	1-163-009-11	CERAMIC CHIP	0.001uF 10%	50V	D206	8-719-100-65	DIODE RD12EB2
C872	1-126-008-51	ELECT	47uF 20%	16V	D301	8-719-025-50	DIODE 02CZ16-TE85L
C874	1-136-165-00	FILM	0.1uF 5%	50V	D302	8-719-025-50	DIODE 02CZ16-TE85L
C875	1-136-165-00	FILM	0.1uF 5%	50V	D303	8-719-820-05	DIODE 1SS181-TE85R
C876	1-136-165-00	FILM	0.1uF 5%	50V	D304	8-719-820-05	DIODE 1SS181-TE85R
C877	1-136-165-00	FILM	0.1uF 5%	50V	D305	8-719-100-65	DIODE RD12EB2
C878	1-131-730-11	ELECT	8200uF	35V	D306	8-719-100-65	DIODE RD12EB2
C879	1-131-730-11	ELECT	8200uF	35V	D401	8-719-025-50	DIODE 02CZ16-TE85L
C880	1-131-730-11	ELECT	8200uF	35V	D402	8-719-025-50	DIODE 02CZ16-TE85L
C881	1-131-730-11	ELECT	8200uF	35V	D403	8-719-820-05	DIODE 1SS181-TE85R
C882	1-163-009-11	CERAMIC CHIP	0.001uF 10%	50V	D404	8-719-820-05	DIODE 1SS181-TE85R
C883	1-163-009-11	CERAMIC CHIP	0.001uF 10%	50V	D405	8-719-100-65	DIODE RD12EB2
C884	1-163-029-11	CERAMIC CHIP	0.0047uF 50V		D406	8-719-100-65	DIODE RD12EB2
C885	1-163-029-11	CERAMIC CHIP	0.0047uF 50V		D851	8-719-801-78	DIODE 1SS184-TE85L
C886	1-163-029-11	CERAMIC CHIP	0.0047uF 50V		D853	8-719-018-77	DIODE 02CZ10Y
C887	1-163-029-11	CERAMIC CHIP	0.0047uF 50V		D854	8-719-987-67	DIODE 11EFS2-TB5
C888	1-165-319-11	CERAMIC CHIP	0.1uF	50V	D855	8-719-987-67	DIODE 11EFS2-TB5
C889	1-165-319-11	CERAMIC CHIP	0.1uF	50V	D856	8-719-210-21	DIODE 11EQS04-TA1B
C890	1-163-009-11	CERAMIC CHIP	0.001uF 10%	50V	D857	8-719-210-21	DIODE 11EQS04-TA1B
C891	1-163-009-11	CERAMIC CHIP	0.001uF 10%	50V	D858	8-719-210-21	DIODE 11EQS04-TA1B
C892	1-163-009-11	CERAMIC CHIP	0.001uF 10%	50V	D859	8-719-210-21	DIODE 11EQS04-TA1B
C893	1-163-009-11	CERAMIC CHIP	0.001uF 10%	50V	D860	8-719-987-67	DIODE 11EFS2-TB5
C894	1-163-009-11	CERAMIC CHIP	0.001uF 10%	50V	D861	8-719-987-67	DIODE 11EFS2-TB5
C895	1-163-009-11	CERAMIC CHIP	0.001uF 10%	50V	D862	8-719-200-82	DIODE 11ES2-TB5
C896	1-163-021-11	CERAMIC CHIP	0.01uF 10%	50V	D863	8-719-200-82	DIODE 11ES2-TB5
C897	1-163-037-11	CERAMIC CHIP	0.022uF 10%	25V	D864	8-719-200-82	DIODE 11ES2-TB5
C898	1-163-037-11	CERAMIC CHIP	0.022uF 10%	25V	D865	8-719-200-82	DIODE 11ES2-TB5
C899	1-163-021-11	CERAMIC CHIP	0.01uF 10%	50V			< IC >
							< CONNECTOR >
CN810	1-694-619-11	TERMINAL BOARD 4P (SPEAKER OUT/C/D CHANNEL)			IC801	8-759-711-82	IC NJM4580E(T1)
CN811	1-694-619-11	TERMINAL BOARD 4P (SPEAKER OUT/A/B CHANNEL)			IC802	8-759-711-82	IC NJM4580E(T1)
					IC806	8-759-711-82	IC NJM4580E(T1)
					IC807	8-759-711-82	IC NJM4580E(T1)
					IC808	8-759-711-82	IC NJM4580E(T1)
					IC812	8-759-711-82	IC NJM4580E(T1)
					IC851	8-759-711-82	IC NJM4580E(T1)
							< JACK >
CNJ807	1-770-068-71	JACK, PIN 4P (INPUT MONO A/B C/D)					< COIL >
					L852	1-410-396-71	INDUCTOR 0.45uH
					L951	1-410-396-71	INDUCTOR 0.45uH
							< TRANSISTOR >
* CNP805	1-564-513-11	PLUG, CONNECTOR 10P			Q101	8-729-107-43	TRANSISTOR 2SC3624-T1L1718
* CNP806	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P			Q102	8-729-203-48	TRANSISTOR 2SC3327-A
CNP808	1-784-917-11	CONNECTOR, BOARD TO BOARD 9P			Q103	8-729-203-48	TRANSISTOR 2SC3327-A
CNP809	1-784-917-11	CONNECTOR, BOARD TO BOARD 9P			Q104	8-729-184-53	TRANSISTOR 2SC1841-FA
					Q105	8-729-140-82	TRANSISTOR 2SA988-FA
					Q106	8-729-184-53	TRANSISTOR 2SC1841-FA
					Q107	8-729-140-82	TRANSISTOR 2SA988-FA
					Q108	8-729-209-18	TRANSISTOR 2SA1360-Y
					Q109	8-729-203-45	TRANSISTOR 2SC3423-Y
D101	8-719-025-50	DIODE 02CZ16-TE85L					
D102	8-719-025-50	DIODE 02CZ16-TE85L					
D103	8-719-820-05	DIODE 1SS181-TE85R					
D104	8-719-820-05	DIODE 1SS181-TE85R					
D105	8-719-100-65	DIODE RD12EB2					

**AMPLIFIER**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark	
Q110	8-729-207-82	TRANSISTOR	2SC3421-Y	Q852	8-729-230-49	TRANSISTOR	2SC2712-Y	
Q111	8-729-049-52	TRANSISTOR	FS70SMJ-2	Q853	8-729-141-83	TRANSISTOR	2SB1375	
Q112	8-729-049-53	TRANSISTOR	FX50SMJ-2	Q854	8-729-230-49	TRANSISTOR	2SC2712-Y	
Q113	8-729-216-21	TRANSISTOR	2SA1162-Y	Q855	8-729-205-88	TRANSISTOR	2SC3074-Y(TE16L)	
Q114	8-729-216-21	TRANSISTOR	2SA1162-Y	Q856	8-729-205-88	TRANSISTOR	2SC3074-Y(TE16L)	
Q115	8-729-230-51	TRANSISTOR	2SC2712YG-TE85R	Q857	8-729-230-49	TRANSISTOR	2SC2712-Y	
Q116	8-729-230-51	TRANSISTOR	2SC2712YG-TE85R	Q858	8-729-216-21	TRANSISTOR	2SA1162-Y	
Q201	8-729-107-43	TRANSISTOR	2SC3624-T1L1718	Q859	8-729-230-49	TRANSISTOR	2SC2712-Y	
Q202	8-729-203-48	TRANSISTOR	2SC3327-A	Q860	8-729-230-49	TRANSISTOR	2SC2712-Y	
Q203	8-729-203-48	TRANSISTOR	2SC3327-A	Q861	8-729-216-21	TRANSISTOR	2SA1162-Y	
Q204	8-729-184-53	TRANSISTOR	2SC1841-FA	< RESISTOR >				
Q205	8-729-140-82	TRANSISTOR	2SA988-FA	R101	1-208-518-61	RES,CHIP	22K    2%    1/10W	
Q206	8-729-184-53	TRANSISTOR	2SC1841-FA	R102	1-208-518-61	RES,CHIP	22K    2%    1/10W	
Q207	8-729-140-82	TRANSISTOR	2SA988-FA	R103	1-208-291-11	RES,CHIP	4.7M    5%    1/10W	
Q208	8-729-209-18	TRANSISTOR	2SA1360-Y	R104	1-208-518-61	RES,CHIP	22K    2%    1/10W	
Q209	8-729-203-45	TRANSISTOR	2SC3423-Y	R105	1-208-518-61	RES,CHIP	22K    2%    1/10W	
Q210	8-729-207-82	TRANSISTOR	2SC3421-Y	R106	1-216-631-11	METAL CHIP	150    0.5%    1/10W	
Q211	8-729-049-52	TRANSISTOR	FS70SMJ-2	R107	1-208-453-61	RES,CHIP	4.7K    2%    1/10W	
Q212	8-729-049-53	TRANSISTOR	FX50SMJ-2	R108	1-208-449-61	RES,CHIP	3.3K    2%    1/10W	
Q213	8-729-216-21	TRANSISTOR	2SA1162-Y	R109	1-208-453-61	RES,CHIP	4.7K    2%    1/10W	
Q214	8-729-216-21	TRANSISTOR	2SA1162-Y	R110	1-208-449-61	RES,CHIP	3.3K    2%    1/10W	
Q215	8-729-230-51	TRANSISTOR	2SC2712YG-TE85R	R111	1-216-647-11	METAL CHIP	680    0.5%    1/10W	
Q216	8-729-230-51	TRANSISTOR	2SC2712YG-TE85R	R112	1-208-518-61	RES,CHIP	22K    2%    1/10W	
Q301	8-729-107-43	TRANSISTOR	2SC3624-T1L1718	R113	1-216-671-11	METAL CHIP	6.8K    0.5%    1/10W	
Q302	8-729-203-48	TRANSISTOR	2SC3327-A	R114	1-208-510-61	RES,CHIP	10K    2%    1/8W	
Q303	8-729-203-48	TRANSISTOR	2SC3327-A	R115	1-208-510-61	RES,CHIP	10K    2%    1/8W	
Q304	8-729-184-53	TRANSISTOR	2SC1841-FA	R116	1-208-462-61	RES,CHIP	10K    2%    1/10W	
Q305	8-729-140-82	TRANSISTOR	2SA988-FA	R117	1-208-449-61	RES,CHIP	3.3K    2%    1/10W	
Q306	8-729-184-53	TRANSISTOR	2SC1841-FA	R118	1-208-453-61	RES,CHIP	4.7K    2%    1/10W	
Q307	8-729-140-82	TRANSISTOR	2SA988-FA	R119	1-208-453-61	RES,CHIP	4.7K    2%    1/10W	
Q308	8-729-209-18	TRANSISTOR	2SA1360-Y	R120	1-216-238-00	RES,CHIP	47K    2%    1/8W	
Q309	8-729-203-45	TRANSISTOR	2SC3423-Y	R121	1-216-238-00	RES,CHIP	47K    2%    1/8W	
Q310	8-729-207-82	TRANSISTOR	2SC3421-Y	R124	1-216-635-11	METAL CHIP	220    0.5%    1/10W	
Q311	8-729-049-52	TRANSISTOR	FS70SMJ-2	R125	1-216-635-11	METAL CHIP	220    0.5%    1/10W	
Q312	8-729-049-53	TRANSISTOR	FX50SMJ-2	R126	1-208-449-61	RES,CHIP	3.3K    2%    1/10W	
Q313	8-729-216-21	TRANSISTOR	2SA1162-Y	R127	1-208-437-61	RES,CHIP	1K    2%    1/10W	
Q314	8-729-216-21	TRANSISTOR	2SA1162-Y	R128	1-249-955-11	CARBON	22K    5%    1/4W	
Q315	8-729-230-51	TRANSISTOR	2SC2712YG-TE85R	R129	1-249-955-11	CARBON	22K    5%    1/4W	
Q316	8-729-230-51	TRANSISTOR	2SC2712YG-TE85R	R130	1-208-534-61	RES,CHIP	100K    2%    1/10W	
Q401	8-729-107-43	TRANSISTOR	2SC3624-T1L1718	R131	1-208-534-61	RES,CHIP	100K    2%    1/10W	
Q402	8-729-203-48	TRANSISTOR	2SC3327-A	R132	1-211-960-11	RES,CHIP	22    2%    1/10W	
Q403	8-729-203-48	TRANSISTOR	2SC3327-A	R133	1-211-960-11	RES,CHIP	22    2%    1/10W	
Q404	8-729-184-53	TRANSISTOR	2SC1841-FA	R134	1-208-437-61	RES,CHIP	1K    2%    1/10W	
Q405	8-729-140-82	TRANSISTOR	2SA988-FA	R135	1-208-437-61	RES,CHIP	1K    2%    1/10W	
Q406	8-729-184-53	TRANSISTOR	2SC1841-FA	R136	1-208-437-61	RES,CHIP	1K    2%    1/10W	
Q407	8-729-140-82	TRANSISTOR	2SA988-FA	R137	1-208-437-61	RES,CHIP	1K    2%    1/10W	
Q408	8-729-209-18	TRANSISTOR	2SA1360-Y	R138	1-242-799-11	METAL	0.06/0.06	5W    F
Q409	8-729-203-45	TRANSISTOR	2SC3423-Y	R139	1-242-799-11	METAL	0.06/0.06	5W    F
Q410	8-729-207-82	TRANSISTOR	2SC3421-Y	R140	1-242-799-11	METAL	0.06/0.06	5W    F
Q411	8-729-049-52	TRANSISTOR	FS70SMJ-2	R141	1-242-799-11	METAL	0.06/0.06	5W    F
Q412	8-729-049-53	TRANSISTOR	FX50SMJ-2	R143	1-208-789-11	RES,CHIP	2K    2%    1/10W	
Q413	8-729-216-21	TRANSISTOR	2SA1162-Y	R145	1-208-789-11	RES,CHIP	2K    2%    1/10W	
Q414	8-729-216-21	TRANSISTOR	2SA1162-Y	R146	1-208-462-61	RES,CHIP	10K    2%    1/10W	
Q415	8-729-230-51	TRANSISTOR	2SC2712YG-TE85R	R147	1-208-462-61	RES,CHIP	10K    2%    1/10W	
Q416	8-729-230-51	TRANSISTOR	2SC2712YG-TE85R	R148	1-208-462-61	RES,CHIP	10K    2%    1/10W	
Q851	8-729-207-89	TRANSISTOR	2SA1358-Y	R149	1-208-462-61	RES,CHIP	10K    2%    1/10W	

# AMPLIFIER

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R150	1-208-462-61	RES,CHIP	10K 2% 1/10W	R254	1-249-568-11	CARBON	4.7K 5% 1/4W
R151	1-208-462-61	RES,CHIP	10K 2% 1/10W	R255	1-249-943-11	CARBON	6.8K 5% 1/4W
R152	1-208-550-61	RES,CHIP	470K 2% 1/10W	R256	1-249-576-11	CARBON	10K 5% 1/4W
R153	1-217-784-11	FUSIBLE	10 5% 5W F	R257	1-249-576-11	CARBON	10K 5% 1/4W
R154	1-249-935-11	CARBON	3.3K 5% 1/4W	R301	1-208-518-61	RES,CHIP	22K 2% 1/10W
R155	1-249-943-11	CARBON	6.8K 5% 1/4W	R302	1-208-518-61	RES,CHIP	22K 2% 1/10W
R156	1-249-576-11	CARBON	10K 5% 1/4W	R303	1-208-291-11	RES,CHIP	4.7M 5% 1/10W
R157	1-249-576-11	CARBON	10K 5% 1/4W	R304	1-208-518-61	RES,CHIP	22K 2% 1/10W
R201	1-208-518-61	RES,CHIP	22K 2% 1/10W	R305	1-208-518-61	RES,CHIP	22K 2% 1/10W
R202	1-208-518-61	RES,CHIP	22K 2% 1/10W	R306	1-216-631-11	METAL CHIP	150 0.5% 1/10W
R203	1-208-291-11	RES,CHIP	4.7M 5% 1/10W	R307	1-208-453-61	RES,CHIP	4.7K 2% 1/10W
R204	1-208-518-61	RES,CHIP	22K 2% 1/10W	R308	1-208-449-61	RES,CHIP	3.3K 2% 1/10W
R205	1-208-518-61	RES,CHIP	22K 2% 1/10W	R309	1-208-453-61	RES,CHIP	4.7K 2% 1/10W
R206	1-216-631-11	METAL CHIP	150 0.5% 1/10W	R310	1-208-449-61	RES,CHIP	3.3K 2% 1/10W
R207	1-208-453-61	RES,CHIP	4.7K 2% 1/10W	R311	1-216-647-11	METAL CHIP	680 0.5% 1/10W
R208	1-208-449-61	RES,CHIP	3.3K 2% 1/10W	R312	1-208-518-61	RES,CHIP	22K 2% 1/10W
R209	1-208-453-61	RES,CHIP	4.7K 2% 1/10W	R313	1-216-671-11	METAL CHIP	6.8K 0.5% 1/10W
R210	1-208-449-61	RES,CHIP	3.3K 2% 1/10W	R314	1-208-510-61	RES,CHIP	10K 2% 1/8W
R211	1-216-647-11	METAL CHIP	680 0.5% 1/10W	R315	1-208-510-61	RES,CHIP	10K 2% 1/8W
R212	1-208-518-61	RES,CHIP	22K 2% 1/10W	R316	1-208-462-61	RES,CHIP	10K 2% 1/10W
R213	1-216-671-11	METAL CHIP	6.8K 0.5% 1/10W	R317	1-208-449-61	RES,CHIP	3.3K 2% 1/10W
R214	1-208-510-61	RES,CHIP	10K 2% 1/8W	R318	1-208-453-61	RES,CHIP	4.7K 2% 1/10W
R215	1-208-510-61	RES,CHIP	10K 2% 1/8W	R319	1-208-453-61	RES,CHIP	4.7K 2% 1/10W
R216	1-208-462-61	RES,CHIP	10K 2% 1/10W	R320	1-216-238-00	RES,CHIP	47K 2% 1/8W
R217	1-208-449-61	RES,CHIP	3.3K 2% 1/10W	R321	1-216-238-00	RES,CHIP	47K 2% 1/8W
R218	1-208-453-61	RES,CHIP	4.7K 2% 1/10W	R324	1-216-635-11	METAL CHIP	220 0.5% 1/10W
R219	1-208-453-61	RES,CHIP	4.7K 2% 1/10W	R325	1-216-635-11	METAL CHIP	220 0.5% 1/10W
R220	1-216-238-00	RES,CHIP	47K 2% 1/8W	R326	1-208-449-61	RES,CHIP	3.3K 2% 1/10W
R221	1-216-238-00	RES,CHIP	47K 2% 1/8W	R327	1-208-437-61	RES,CHIP	1K 2% 1/10W
R224	1-216-635-11	METAL CHIP	220 0.5% 1/10W	R328	1-249-955-11	CARBON	22K 5% 1/4W
R225	1-216-635-11	METAL CHIP	220 0.5% 1/10W	R329	1-249-955-11	CARBON	22K 5% 1/4W
R226	1-208-449-61	RES,CHIP	3.3K 2% 1/10W	R330	1-208-534-61	RES,CHIP	100K 2% 1/10W
R227	1-208-437-61	RES,CHIP	1K 2% 1/10W	R331	1-208-534-61	RES,CHIP	100K 2% 1/10W
R228	1-249-955-11	CARBON	22K 5% 1/4W	R332	1-211-960-11	RES,CHIP	22 2% 1/10W
R229	1-249-955-11	CARBON	22K 5% 1/4W	R333	1-211-960-11	RES,CHIP	22 2% 1/10W
R230	1-208-534-61	RES,CHIP	100K 2% 1/10W	R334	1-208-437-61	RES,CHIP	1K 2% 1/10W
R231	1-208-534-61	RES,CHIP	100K 2% 1/10W	R335	1-208-437-61	RES,CHIP	1K 2% 1/10W
R232	1-211-960-11	RES,CHIP	22 2% 1/10W	R336	1-208-437-61	RES,CHIP	1K 2% 1/10W
R233	1-211-960-11	RES,CHIP	22 2% 1/10W	R337	1-208-437-61	RES,CHIP	1K 2% 1/10W
R234	1-208-437-61	RES,CHIP	1K 2% 1/10W	R338	1-242-799-11	METAL	0.06/0.06 5W F
R235	1-208-437-61	RES,CHIP	1K 2% 1/10W	R339	1-242-799-11	METAL	0.06/0.06 5W F
R236	1-208-437-61	RES,CHIP	1K 2% 1/10W	R340	1-242-799-11	METAL	0.06/0.06 5W F
R237	1-208-437-61	RES,CHIP	1K 2% 1/10W	R341	1-242-799-11	METAL	0.06/0.06 5W F
R238	1-242-799-11	METAL	0.06/0.06 5W F	R343	1-208-789-11	RES,CHIP	2K 2% 1/10W
R239	1-242-799-11	METAL	0.06/0.06 5W F	R345	1-208-789-11	RES,CHIP	2K 2% 1/10W
R240	1-242-799-11	METAL	0.06/0.06 5W F	R346	1-208-462-61	RES,CHIP	10K 2% 1/10W
R241	1-242-799-11	METAL	0.06/0.06 5W F	R347	1-208-462-61	RES,CHIP	10K 2% 1/10W
R243	1-208-789-11	RES,CHIP	2K 2% 1/10W	R348	1-208-462-61	RES,CHIP	10K 2% 1/10W
R245	1-208-789-11	RES,CHIP	2K 2% 1/10W	R349	1-208-462-61	RES,CHIP	10K 2% 1/10W
R246	1-208-462-61	RES,CHIP	10K 2% 1/10W	R350	1-208-462-61	RES,CHIP	10K 2% 1/10W
R247	1-208-462-61	RES,CHIP	10K 2% 1/10W	R351	1-208-462-61	RES,CHIP	10K 2% 1/10W
R248	1-208-462-61	RES,CHIP	10K 2% 1/10W	R352	1-208-550-61	RES,CHIP	470K 2% 1/10W
R249	1-208-462-61	RES,CHIP	10K 2% 1/10W	R353	1-217-784-11	FUSIBLE	10 5% 5W F
R250	1-208-462-61	RES,CHIP	10K 2% 1/10W	R354	1-249-935-11	CARBON	3.3K 5% 1/4W
R251	1-208-462-61	RES,CHIP	10K 2% 1/10W	R355	1-249-943-11	CARBON	6.8K 5% 1/4W
R252	1-208-550-61	RES,CHIP	470K 2% 1/10W	R356	1-249-576-11	CARBON	10K 5% 1/4W
R253	1-217-784-11	FUSIBLE	10 5% 5W F	R357	1-249-576-11	CARBON	10K 5% 1/4W

**AMPLIFIER**

Ref. No.	Part No.	Description		Remark	Ref. No.	Part No.	Description		Remark		
R401	1-208-518-61	RES,CHIP	22K	2%	1/10W	R858	1-208-453-61	RES,CHIP	4.7K	2%	1/10W
R402	1-208-518-61	RES,CHIP	22K	2%	1/10W	R859	1-208-462-61	RES,CHIP	10K	2%	1/10W
R403	1-208-291-11	RES,CHIP	4.7M	5%	1/10W	R860	1-208-539-11	RES,CHIP	160K	2%	1/10W
R404	1-208-518-61	RES,CHIP	22K	2%	1/10W	R861	1-208-539-11	RES,CHIP	160K	2%	1/10W
R405	1-208-518-61	RES,CHIP	22K	2%	1/10W	R862	1-208-774-11	RES,CHIP	470	2%	1/10W
R406	1-216-631-11	METAL CHIP	150	0.5%	1/10W	R863	1-208-518-61	RES,CHIP	22K	2%	1/10W
R407	1-208-453-61	RES,CHIP	4.7K	2%	1/10W	R864	1-208-526-61	RES,CHIP	47K	2%	1/10W
R408	1-208-449-61	RES,CHIP	3.3K	2%	1/10W	R866	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R409	1-208-453-61	RES,CHIP	4.7K	2%	1/10W	R867	1-208-437-61	RES,CHIP	1K	2%	1/10W
R410	1-208-449-61	RES,CHIP	3.3K	2%	1/10W	R868	1-208-437-61	RES,CHIP	1K	2%	1/10W
R411	1-216-647-11	METAL CHIP	680	0.5%	1/10W	R870	1-208-462-61	RES,CHIP	10K	2%	1/10W
R412	1-208-518-61	RES,CHIP	22K	2%	1/10W	R871	1-208-462-61	RES,CHIP	10K	2%	1/10W
R413	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W	R872	1-208-462-61	RES,CHIP	10K	2%	1/10W
R414	1-208-510-61	RES,CHIP	10K	2%	1/8W	R873	1-208-462-61	RES,CHIP	10K	2%	1/10W
R415	1-208-510-61	RES,CHIP	10K	2%	1/8W	R874	1-216-121-91	RES,CHIP	1M	5%	1/10W
R416	1-208-462-61	RES,CHIP	10K	2%	1/10W	R875	1-208-462-61	RES,CHIP	10K	2%	1/10W
R417	1-208-449-61	RES,CHIP	3.3K	2%	1/10W	R876	1-208-462-61	RES,CHIP	10K	2%	1/10W
R418	1-208-453-61	RES,CHIP	4.7K	2%	1/10W	R877	1-216-121-00	RES,CHIP	1M	5%	1/10W
R419	1-208-453-61	RES,CHIP	4.7K	2%	1/10W	R878	1-216-603-11	METAL CHIP	10	0.5%	1/10W
R420	1-216-238-00	RES,CHIP	47K	2%	1/8W	R879	1-216-603-11	METAL CHIP	10	0.5%	1/10W
R421	1-216-238-00	RES,CHIP	47K	2%	1/8W	R880	1-216-603-11	METAL CHIP	10	0.5%	1/10W
R424	1-216-635-11	METAL CHIP	220	0.5%	1/10W	R881	1-216-603-11	METAL CHIP	10	0.5%	1/10W
R425	1-216-635-11	METAL CHIP	220	0.5%	1/10W	R882	1-216-121-00	RES,CHIP	1M	5%	1/10W
R426	1-208-449-61	RES,CHIP	3.3K	2%	1/10W	R883	1-208-462-61	RES,CHIP	10K	2%	1/10W
R427	1-208-437-61	RES,CHIP	1K	2%	1/10W	R884	1-208-462-61	RES,CHIP	10K	2%	1/10W
R428	1-249-955-11	CARBON	22K	5%	1/4W	R885	1-208-453-61	RES,CHIP	4.7K	2%	1/10W
R429	1-249-955-11	CARBON	22K	5%	1/4W	R886	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
R430	1-208-534-61	RES,CHIP	100K	2%	1/10W	R887	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
R431	1-208-534-61	RES,CHIP	100K	2%	1/10W						< RELAY >
R432	1-211-960-11	RES,CHIP	22	2%	1/10W	RY801	1-755-353-11	RELAY			
R433	1-211-960-11	RES,CHIP	22	2%	1/10W	RY802	1-755-353-11	RELAY			
R434	1-208-437-61	RES,CHIP	1K	2%	1/10W						< SWITCH >
R435	1-208-437-61	RES,CHIP	1K	2%	1/10W						
R436	1-208-437-61	RES,CHIP	1K	2%	1/10W						
R437	1-208-437-61	RES,CHIP	1K	2%	1/10W	S805	1-692-721-11	SWITCH, SLIDE (DIRECT/ON↔OFF)			
R443	1-208-789-11	RES,CHIP	2K	2%	1/10W	S806	1-692-721-11	SWITCH, SLIDE (DIRECT/ON↔OFF)			
R445	1-208-789-11	RES,CHIP	2K	2%	1/10W	S851	1-771-802-11	SWITCH (TEST TONE)			
R446	1-208-462-61	RES,CHIP	10K	2%	1/10W						< TRANSFORMER >
R447	1-208-462-61	RES,CHIP	10K	2%	1/10W	T851	1-435-149-11	TRANSFORMER, DC-DC CONVERTER			
R448	1-208-462-61	RES,CHIP	10K	2%	1/10W						
R449	1-208-462-61	RES,CHIP	10K	2%	1/10W						
R450	1-208-462-61	RES,CHIP	10K	2%	1/10W						< THERMISTOR >
R451	1-208-462-61	RES,CHIP	10K	2%	1/10W	TH851	1-809-664-51	THERMISTOR, POSITIVE			
R452	1-208-550-61	RES,CHIP	470K	2%	1/10W						
R453	1-217-784-11	FUSIBLE	10	5%	5W F						< VARIABLE RESISTOR >
R454	1-249-568-11	CARBON	4.7K	5%	1/4W	VR101	1-241-760-11	RES, ADJ, CERMET 470 (IDLING)			
R455	1-249-943-11	CARBON	6.8K	5%	1/4W	VR201	1-241-760-11	RES, ADJ, CERMET 470 (IDLING)			
R456	1-249-576-11	CARBON	10K	5%	1/4W	VR301	1-241-760-11	RES, ADJ, CERMET 470 (IDLING)			
R457	1-249-576-11	CARBON	10K	5%	1/4W	VR401	1-241-760-11	RES, ADJ, CERMET 470 (IDLING)			
R851	1-216-210-00	RES,CHIP	3.3K	2%	1/8W	VR801	1-225-648-11	RES, VAR 5K/5K (LEVEL/MIN-MAX)			
R852	1-208-486-61	RES,CHIP	1K	2%	1/8W	VR802	1-225-648-11	RES, VAR 5K/5K (LEVEL/MIN-MAX)			
R853	1-216-210-00	RES,CHIP	3.3K	2%	1/8W	VR803	1-225-648-11	RES, VAR 5K/5K (LOW BOOST/0dB+10dB)			
R854	1-208-486-61	RES,CHIP	1K	2%	1/8W	VR804	1-225-648-11	RES, VAR 5K/5K (LOW BOOST/0dB+10dB)			
R855	1-208-462-61	RES,CHIP	10K	2%	1/10W						
R856	1-208-462-61	RES,CHIP	10K	2%	1/10W						
R857	1-208-441-61	RES,CHIP	1.5K	2%	1/10W						

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## FILTER

## LED

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark									
	1-675-246-11	FILTER (4CH) BOARD *****				R187	1-216-057-61	RES,CHIP	2.2K	5%	1/10W							
< CAPACITOR >																		
*****																		
C151	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	R282	1-208-518-61	RES,CHIP	22K	2%	1/10W							
C152	1-136-167-00	FILM	0.15uF	5%	50V	R283	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W							
C153	1-136-155-00	FILM	0.015uF	5%	50V	R284	1-208-462-61	RES,CHIP	10K	2%	1/10W							
C154	1-136-167-00	FILM	0.15uF	5%	50V	R285	1-208-462-61	RES,CHIP	10K	2%	1/10W							
C155	1-136-155-00	FILM	0.015uF	5%	50V	R286	1-216-057-61	RES,CHIP	2.2K	5%	1/10W							
C156	1-126-008-51	ELECT	47uF	20%	16V	R287	1-216-057-61	RES,CHIP	2.2K	5%	1/10W							
C157	1-126-008-51	ELECT	47uF	20%	16V	R289	1-208-462-61	RES,CHIP	10K	2%	1/10W							
C251	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	R290	1-208-462-61	RES,CHIP	10K	2%	1/10W							
C252	1-136-167-00	FILM	0.15uF	5%	50V	R381	1-208-462-61	RES,CHIP	10K	2%	1/10W							
C253	1-136-155-00	FILM	0.015uF	5%	50V	R382	1-208-518-61	RES,CHIP	22K	2%	1/10W							
C254	1-136-167-00	FILM	0.15uF	5%	50V	R383	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W							
C255	1-136-155-00	FILM	0.015uF	5%	50V	R384	1-208-462-61	RES,CHIP	10K	2%	1/10W							
C256	1-126-008-51	ELECT	47uF	20%	16V	R385	1-208-462-61	RES,CHIP	10K	2%	1/10W							
C257	1-126-008-51	ELECT	47uF	20%	16V	R386	1-216-057-61	RES,CHIP	2.2K	5%	1/10W							
C351	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	R387	1-216-057-61	RES,CHIP	2.2K	5%	1/10W							
C352	1-136-167-00	FILM	0.15uF	5%	50V	R389	1-208-462-61	RES,CHIP	10K	2%	1/10W							
C353	1-136-155-00	FILM	0.015uF	5%	50V	R390	1-208-462-61	RES,CHIP	10K	2%	1/10W							
C354	1-136-167-00	FILM	0.15uF	5%	50V	R481	1-208-462-61	RES,CHIP	10K	2%	1/10W							
C355	1-136-155-00	FILM	0.015uF	5%	50V	R482	1-208-518-61	RES,CHIP	22K	2%	1/10W							
C356	1-126-008-51	ELECT	47uF	20%	16V	R483	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W							
C357	1-126-008-51	ELECT	47uF	20%	16V	R484	1-208-462-61	RES,CHIP	10K	2%	1/10W							
C451	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	R485	1-208-462-61	RES,CHIP	10K	2%	1/10W							
C452	1-136-167-00	FILM	0.15uF	5%	50V	R486	1-216-057-61	RES,CHIP	2.2K	5%	1/10W							
C453	1-136-155-00	FILM	0.015uF	5%	50V	R487	1-216-057-61	RES,CHIP	2.2K	5%	1/10W							
C454	1-136-167-00	FILM	0.15uF	5%	50V	R489	1-208-462-61	RES,CHIP	10K	2%	1/10W							
C455	1-136-155-00	FILM	0.015uF	5%	50V	R490	1-208-462-61	RES,CHIP	10K	2%	1/10W							
C456	1-126-008-51	ELECT	47uF	20%	16V	< SWITCH >												
C457	1-126-008-51	ELECT	47uF	20%	16V	S801	1-571-658-11	SWITCH, SLIDE (FILTER, X1/X10)										
C751	1-164-001-11	CERAMIC CHIP	0.1uF	10%	25V	S802	1-571-658-11	SWITCH, SLIDE (FILTER, X1/X10)										
C752	1-164-001-11	CERAMIC CHIP	0.1uF	10%	25V	S803	1-762-191-11	SWITCH, SLIDE (FILTER, LPF/OFF/HPF)										
C753	1-164-001-11	CERAMIC CHIP	0.1uF	10%	25V	S804	1-762-191-11	SWITCH, SLIDE (FILTER, LPF/OFF/HPF)										
< JACK >																		
CNJ808	1-784-916-11	CONNECTOR, BOARD TO BOARD 9P				< VARIABLE RESISTOR >												
CNJ809	1-784-916-11	CONNECTOR, BOARD TO BOARD 9P				VR805	1-225-921-11	RES, VAR 20K/20K/20K/20K										
< IC >												(FILTER/50Hz-400Hz)						
IC803	8-759-711-82	IC NJM4580E(T1)				VR806	1-225-921-11	RES, VAR 20K/20K/20K/20K					(FILTER/50Hz-400Hz)					
IC804	8-759-711-82	IC NJM4580E(T1)				*****												
IC805	8-759-711-82	IC NJM4580E(T1)				* 1-675-245-11	LED (4CH) BOARD											
IC809	8-759-711-82	IC NJM4580E(T1)				*****												
IC810	8-759-711-82	IC NJM4580E(T1)																
IC811	8-759-711-82	IC NJM4580E(T1)				< DIODE >												
< RESISTOR >												D801	8-719-076-62	DIODE GL-5ED60 (HI-VOLTAGE)				
R181	1-208-462-61	RES,CHIP	10K	2%	1/10W	D802	8-719-076-62	DIODE GL-5ED60 (HI-CURRENT)										
R182	1-208-518-61	RES,CHIP	22K	2%	1/10W	D803	8-719-076-62	DIODE GL-5ED60 (OFFSET)										
R183	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W	D804	8-719-076-62	DIODE GL-5ED60 (OVER CURRENT)										
R184	1-208-462-61	RES,CHIP	10K	2%	1/10W	D805	8-719-076-62	DIODE GL-5ED60 (THERMAL)										
R185	1-208-462-61	RES,CHIP	10K	2%	1/10W	< TRANSISTOR >												
R186	1-216-057-61	RES,CHIP	2.2K	5%	1/10W	Q801	8-729-230-49	TRANSISTOR 2SC2712-Y										
						Q802	8-729-230-49	TRANSISTOR 2SC2712-Y										

**LED**      **POWER**

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>			<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>		
Q803	8-729-230-49	TRANSISTOR	2SC2712-Y			C935	1-104-829-11	ELECT	220uF	20%	35V
		< RESISTOR >				C936	1-104-829-11	ELECT	220uF	20%	35V
R801	1-216-194-00	METAL CHIP	680	5%	1/8W	C937	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
R802	1-216-194-00	METAL CHIP	680	5%	1/8W	C944	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
R803	1-216-190-00	RES,CHIP	470	2%	1/8W	C945	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
R804	1-216-190-00	RES,CHIP	470	2%	1/8W			< CONNECTOR >			
R805	1-216-194-00	METAL CHIP	680	5%	1/8W	CN802	1-694-620-11	TERMINAL BOARD 3P (+12V, GND, +12V)			
R806	1-216-194-00	METAL CHIP	680	5%	1/8W			< JACK >			
R807	1-216-190-00	RES,CHIP	470	2%	1/8W	CNJ801	1-793-279-11	CONNECTOR 1P (REMOTE)			
R808	1-216-190-00	RES,CHIP	470	2%	1/8W			< CONNECTOR >			
R809	1-216-194-00	METAL CHIP	680	5%	1/8W	* CNP804	1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P			
R810	1-216-194-00	METAL CHIP	680	5%	1/8W			< DIODE >			
R811	1-216-190-00	RES,CHIP	470	2%	1/8W	D806	8-719-801-78	DIODE 1SS184-TE85L			
R812	1-216-190-00	RES,CHIP	470	2%	1/8W	D807	8-719-801-78	DIODE 1SS184-TE85L			
R813	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	D808	8-719-025-34	DIODE 02CZ6.8-TE85L			
R814	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	D809	8-719-160-56	DIODE RD12FB2			
R815	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	D901	8-719-025-50	DIODE 02CZ16-TE85L			
*****											
*	A-3317-933-A	POWER BOARD, COMPLETE				D902	8-719-043-82	DIODE 02CZ5.1Y-TE85L			
		*****				D903	8-719-160-90	DIODE RD36FB2			
			< CAPACITOR >			D904	8-719-025-49	DIODE 02CZ15-TE85L			
C801	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	D905	8-719-076-60	DIODE FCH20A15			
C802	1-126-006-11	ELECT	22uF	20%	16V	D906	8-719-076-61	DIODE FRH20A15			
C803	1-126-006-11	ELECT	22uF	20%	16V	D907	8-719-801-78	DIODE 1SS184-TE85L			
C804	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	D908	8-719-801-78	DIODE 1SS184-TE85L			
C805	1-107-715-11	ELECT	22uF	20%	16V	D909	8-719-801-78	DIODE 1SS184-TE85L			
C806	1-126-006-11	ELECT	22uF	20%	16V	D910	8-719-160-90	DIODE RD36FB2			
C902	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	D911	8-719-025-49	DIODE 02CZ15-TE85L			
C904	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	D912	8-719-076-60	DIODE FCH20A15			
C905	1-126-009-81	ELECT	100uF	20%	16V	D913	8-719-076-61	DIODE FRH20A15			
C906	1-126-006-11	ELECT	22uF	20%	16V			< FUSE >			
C907	1-124-993-11	ELECT	47uF	20%	10V	F901	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE)(25A)			
C908	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	F902	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE)(25A)			
C909	1-107-715-11	ELECT	22uF	20%	16V	F903	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE)(25A)			
C910	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	F904	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE)(25A)			
C911	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V			< IC >			
C913	1-131-731-11	ELECT	2200uF		16V	IC813	8-719-156-72	PHOTO COUPLER PS2501-1-K			
C914	1-131-731-11	ELECT	2200uF		16V	IC901	8-719-156-72	PHOTO COUPLER PS2501-1-K			
C915	1-131-731-11	ELECT	2200uF		16V	IC902	8-759-144-88	IC uPC494GS-T1			
C916	1-131-731-11	ELECT	2200uF		16V	IC903	8-719-156-72	PHOTO COUPLER PS2501-1-K			
C917	1-104-829-11	ELECT	220uF	20%	35V	IC904	8-759-144-88	IC uPC494GS-T1			
C918	1-104-829-11	ELECT	220uF	20%	35V			< COIL >			
C919	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	L902	1-410-396-71	INDUCTOR	0.45uH		
C921	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	L904	1-410-396-71	INDUCTOR	0.45uH		
C922	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V			< PILOT LAMP >			
C923	1-126-009-81	ELECT	100uF	20%	16V	PL901	1-518-540-00	LAMP, PILOT			
C924	1-126-006-11	ELECT	22uF	20%	16V			< TRANSISTOR >			
C925	1-124-993-11	ELECT	47uF	20%	10V	C929	1-131-731-11	ELECT	2200uF	16V	
C926	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C930	1-131-731-11	ELECT	2200uF	16V	
C927	1-107-715-11	ELECT	22uF	20%	16V	C931	1-131-731-11	ELECT	2200uF	16V	
C928	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	C932	1-131-731-11	ELECT	2200uF	16V	
C929	1-131-731-11	ELECT	2200uF			Q804	8-729-230-49	TRANSISTOR	2SC2712-Y		
C930	1-131-731-11	ELECT	2200uF								
C931	1-131-731-11	ELECT	2200uF								
C932	1-131-731-11	ELECT	2200uF								

# POWER

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q805	8-729-230-49	TRANSISTOR	2SC2712-Y	R835	1-216-698-11	METAL CHIP	91K 0.5% 1/10W
Q806	8-729-230-49	TRANSISTOR	2SC2712-Y	R836	1-208-437-61	RES,CHIP	1K 2% 1/10W
Q807	8-729-230-49	TRANSISTOR	2SC2712-Y	R837	1-208-510-61	RES,CHIP	10K 2% 1/8W
Q808	8-729-216-21	TRANSISTOR	2SA1162-Y	R838	1-249-405-11	CARBON	100 5% 1/4W
Q809	8-729-230-49	TRANSISTOR	2SC2712-Y	R901	1-249-576-11	CARBON	10K 5% 1/4W
Q810	8-729-216-21	TRANSISTOR	2SA1162-Y	R902	1-208-474-61	RES,CHIP	330 2% 1/8W
Q811	8-729-230-49	TRANSISTOR	2SC2712-Y	R903	1-216-210-00	RES,CHIP	3.3K 2% 1/8W
Q812	8-729-216-21	TRANSISTOR	2SA1162-Y	R904	1-208-486-61	RES,CHIP	1K 2% 1/8W
Q901	8-729-046-13	TRANSISTOR	2SB1243-QR-TV2	R905	1-216-214-00	RES,CHIP	4.7K 2% 1/8W
Q902	8-729-216-21	TRANSISTOR	2SA1162-Y	R906	1-208-441-61	RES,CHIP	1.5K 2% 1/10W
Q903	8-729-230-49	TRANSISTOR	2SC2712-Y	R907	1-249-568-11	CARBON	4.7K 5% 1/4W
Q904	8-729-230-49	TRANSISTOR	2SC2712-Y	R909	1-216-429-11	RES,CHIP	470 2% 1/10W
Q905	8-729-230-49	TRANSISTOR	2SC2712-Y	R910	1-218-760-11	RES,CHIP	220K 2% 1/10W
Q906	8-729-230-49	TRANSISTOR	2SC2712-Y	R911	1-216-635-11	METAL CHIP	220 0.5% 1/10W
Q907	8-729-030-89	TRANSISTOR	2SA1680-TPE6	R912	1-208-462-61	RES,CHIP	10K 2% 1/10W
Q908	8-729-030-89	TRANSISTOR	2SA1680-TPE6	R913	1-208-462-61	RES,CHIP	10K 2% 1/10W
Q909	8-729-030-90	TRANSISTOR	2SC4408-TPE6	R914	1-208-466-61	RES,CHIP	15K 2% 1/10W
Q910	8-729-030-90	TRANSISTOR	2SC4408-TPE6	R915	1-216-677-11	METAL CHIP	12K 0.5% 1/10W
Q911	8-729-035-83	TRANSISTOR	MTP75N06HD	R916	1-208-453-61	RES,CHIP	4.7K 2% 1/10W
Q912	8-729-035-83	TRANSISTOR	MTP75N06HD	R917	1-216-635-11	METAL CHIP	220 0.5% 1/10W
Q913	8-729-035-83	TRANSISTOR	MTP75N06HD	R918	1-208-437-61	RES,CHIP	1K 2% 1/10W
Q914	8-729-035-83	TRANSISTOR	MTP75N06HD	R919	1-208-437-61	RES,CHIP	1K 2% 1/10W
Q915	8-729-035-83	TRANSISTOR	MTP75N06HD	R920	1-216-631-11	METAL CHIP	150 0.5% 1/10W
Q916	8-729-035-83	TRANSISTOR	MTP75N06HD	R921	1-216-631-11	METAL CHIP	150 0.5% 1/10W
Q917	8-729-216-21	TRANSISTOR	2SA1162-Y	R922	1-215-886-11	METAL OXIDE	100 5% 2W F
Q918	8-729-230-49	TRANSISTOR	2SC2712-Y	R923	1-215-886-11	METAL OXIDE	100 5% 2W F
Q919	8-729-230-49	TRANSISTOR	2SC2712-Y	R924	1-208-437-61	RES,CHIP	1K 2% 1/10W
Q920	8-729-030-89	TRANSISTOR	2SA1680-TPE6	R925	1-208-437-61	RES,CHIP	1K 2% 1/10W
Q921	8-729-030-89	TRANSISTOR	2SA1680-TPE6	R926	1-208-397-61	RES,CHIP	22 2% 1/8W
Q922	8-729-030-90	TRANSISTOR	2SC4408-TPE6	R927	1-208-437-61	RES,CHIP	1K 2% 1/10W
Q923	8-729-030-90	TRANSISTOR	2SC4408-TPE6	R928	1-208-437-61	RES,CHIP	1K 2% 1/10W
Q924	8-729-035-83	TRANSISTOR	MTP75N06HD	R929	1-208-397-61	RES,CHIP	22 2% 1/8W
Q925	8-729-035-83	TRANSISTOR	MTP75N06HD	R930	1-259-033-51	CARBON	1 5% 1/4W
Q926	8-729-035-83	TRANSISTOR	MTP75N06HD	R931	1-259-033-51	CARBON	1 5% 1/4W
Q927	8-729-035-83	TRANSISTOR	MTP75N06HD	R932	1-259-033-51	CARBON	1 5% 1/4W
Q928	8-729-035-83	TRANSISTOR	MTP75N06HD	R933	1-259-033-51	CARBON	1 5% 1/4W
< RESISTOR >				R934	1-259-033-51	CARBON	1 5% 1/4W
R816	1-216-190-00	RES,CHIP	470 2% 1/8W	R935	1-259-033-51	CARBON	1 5% 1/4W
R817	1-216-190-00	RES,CHIP	470 2% 1/8W	R936	1-208-462-61	RES,CHIP	10K 2% 1/10W
R818	1-216-190-00	RES,CHIP	470 2% 1/8W	R937	1-208-462-61	RES,CHIP	10K 2% 1/10W
R819	1-216-190-00	RES,CHIP	470 2% 1/8W	R938	1-208-550-61	RES,CHIP	470K 2% 1/10W
R820	1-208-462-61	RES,CHIP	10K 2% 1/10W	R939	1-208-462-61	RES,CHIP	10K 2% 1/10W
R821	1-208-462-61	RES,CHIP	10K 2% 1/10W	R940	1-208-526-61	RES,CHIP	47K 2% 1/10W
R822	1-208-462-61	RES,CHIP	10K 2% 1/10W	R941	1-208-441-61	RES,CHIP	1.5K 2% 1/10W
R823	1-208-462-61	RES,CHIP	10K 2% 1/10W	R942	1-216-429-61	RES,CHIP	470 2% 1/10W
R824	1-208-462-61	RES,CHIP	10K 2% 1/10W	R943	1-216-210-61	RES,CHIP	3.3K 2% 1/10W
R825	1-208-462-61	RES,CHIP	10K 2% 1/10W	R944	1-208-534-61	RES,CHIP	100K 2% 1/10W
R826	1-216-210-00	RES,CHIP	3.3K 2% 1/8W	R945	1-218-760-11	RES,CHIP	220K 2% 1/10W
R827	1-208-462-61	RES,CHIP	10K 2% 1/10W	R946	1-216-635-11	METAL CHIP	220 0.5% 1/10W
R828	1-208-462-61	RES,CHIP	10K 2% 1/10W	R947	1-208-462-61	RES,CHIP	10K 2% 1/10W
R829	1-216-210-00	RES,CHIP	3.3K 2% 1/8W	R948	1-208-462-61	RES,CHIP	10K 2% 1/10W
R830	1-208-462-61	RES,CHIP	10K 2% 1/10W	R949	1-208-466-61	RES,CHIP	15K 2% 1/10W
R831	1-208-462-61	RES,CHIP	10K 2% 1/10W	R950	1-216-677-11	METAL CHIP	12K 0.5% 1/10W
R832	1-208-526-61	RES,CHIP	47K 2% 1/10W	R951	1-208-453-61	RES,CHIP	4.7K 2% 1/10W
R833	1-216-210-00	RES,CHIP	3.3K 2% 1/8W	R952	1-216-635-11	METAL CHIP	220 0.5% 1/10W
R834	1-216-234-00	RES,CHIP	33K 2% 1/8W	R953	1-208-437-61	RES,CHIP	1K 2% 1/10W
				R954	1-208-437-61	RES,CHIP	1K 2% 1/10W

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>			<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>			
R955	1-216-631-11	METAL CHIP	150	0.5%	1/10W				ACCESSORIES			
R956	1-216-631-11	METAL CHIP	150	0.5%	1/10W				*****			
R957	1-215-886-11	METAL OXIDE	100	5%	2W F				3-867-641-11 MANUAL, INSTRUCTION (ENGLISH,FRENCH)			
R958	1-215-886-11	METAL OXIDE	100	5%	2W F				3-867-641-21 MANUAL, INSTRUCTION (GERMAN,ITALIAN)(AEP,UK,E)			
R959	1-208-437-61	RES,CHIP	1K	2%	1/10W				3-867-641-31 MANUAL, INSTRUCTION (SPANISH,PORTUGUESE)(AEP,UK,E)			
R960	1-208-437-61	RES,CHIP	1K	2%	1/10W				3-867-641-41 MANUAL, INSTRUCTION (DUTCH,SWEDISH)(AEP,UK,E)			
R961	1-208-397-61	RES,CHIP	22	2%	1/8W				3-867-641-51 MANUAL, INSTRUCTION (RUSSIAN)(AEP,UK,E)			
R962	1-208-437-61	RES,CHIP	1K	2%	1/10W				*****			
R963	1-208-437-61	RES,CHIP	1K	2%	1/10W				*****			
R964	1-208-397-61	RES,CHIP	22	2%	1/8W				*****			
R965	1-259-033-51	CARBON	1	5%	1/4W				HARDWARE LIST			
R966	1-259-033-51	CARBON	1	5%	1/4W				*****			
R967	1-259-033-51	CARBON	1	5%	1/4W				*****			
R968	1-259-033-51	CARBON	1	5%	1/4W				*****			
R969	1-259-033-51	CARBON	1	5%	1/4W	#1	7-685-546-19	SCREW (+BTP3X8) TYPE2 N-S				
R970	1-259-033-51	CARBON	1	5%	1/4W	#2	7-685-548-19	SCREW (+BTP3X12) TYPE2 N-S				
< SWITCH >												
S801	1-571-658-11	SWITCH, SLIDE (MODE, HI-C/HI-V)				#3	7-685-145-19	SCREW (+P3X6) TYPE2 NON-SLIT				
S802	1-692-721-11	SWITCH, SLIDE (NFB, ON/OFF)				#4	7-685-147-11	SCREW (+P3X10) TYPE2 NON-SLIT				
< TRANSFORMER >												
T901	1-435-148-11	TRANSFORMER, DC-DC CONVERTER				#5	7-685-146-19	SCREW (+P3X8) TYPE2 NON-SLIT				
T902	1-435-148-11	TRANSFORMER, DC-DC CONVERTER				#6	7-685-647-79	SCREW (+BVTP3X10) TYPE2 IT-3				
< THERMISTOR >												
TH901	1-810-506-11	THERMISTOR NTH5G39B223K01				#7	7-685-106-11	SCREW (+P2X10) TYPE2 NON-SLIT				
TH902	1-810-506-11	THERMISTOR NTH5G39B223K01				#8	7-685-649-79	SCREW (+BVTP3X14) TYPE2 IT-3				
TH903	1-810-506-11	THERMISTOR NTH5G39B223K01				#9	7-685-168-11	SCREW (+P4X40) TYPE2 NON-SLIT				
TH904	1-810-506-11	THERMISTOR NTH5G39B223K01				#10	7-685-149-11	SCREW (+P3X14) TYPE2 NON-SLIT				
TH905	1-810-506-11	THERMISTOR NTH5G39B223K01				#11	7-685-797-01	SCREW +PTT2.6X16 (S)				
*****												
MISCELLANEOUS												
*****												
F901	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE) (25A)										
F902	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE) (25A)										
F903	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE) (25A)										
F904	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE) (25A)										
FN801	1-763-107-11	MOTOR, FAN										
*****												

