

SONY

Stereo Power Amplifier

Features

- Maximum power output of 150 watts \times 4 = 600 watts (at 4 ohms).
- Features a 2 channel-input / 5 channel-output function that makes it possible to carry a 2-way multi system even with a single line output from the car stereo.
- Built-in variable filter corresponds to a wide range, from 50 Hz to 400 Hz / 500 Hz to 4 kHz. ($\times 1/\times 10$ switch)
- Built-in variable LPF (Low-pass filter), HPF (High-pass filter) and low boost circuit.
- The DIRECT switch can be used to bypass the low-pass filter, high-pass filter for more enjoyable high quality sound.
- Possible to switch between HI-CURRENT mode (1 - 2 Ω) and HI-VOLTAGE mode (2 - 4 Ω) for subwoofer.
- 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.
- Circuit de protection et indicateur fournis.
 - Alimentation électrique par impulsions* pour une puissance de sortie stable, régulée.
- Circuit de protection et indicateur fournis.
 - 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 reconvertis 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 (Subwoofer) 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 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 (HI-CURRENT/HI-VOLTAGE) switch
• In HI-CURRENT mode the speaker impedance is 1 to 2 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 modulus from the reverse electromotive force produced by the speakers.

- 5 DIRECT switch
With 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/BOOST LEVEL CONTROL 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. To reduce noise, turn the LEVEL control (gain) of the amplifier to MIN and the volume of the car audio up.

- 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 (FRONT/REAR) (See Fig. 2)
Sets the cut-off frequency for the low-pass or high-pass filters (50 - 400 Hz).

- 10 $\times 1/\times 10$ switch
When the $\times 1/\times 10$ switch is set to $\times 10$, the established cut-off frequency (9) will be 10 times as large as the $\times 1$ setting.

- 11 BOOST/LOW CUT FREQ (Subsonic Filter) adjustment control (See Fig. 3)
Sets the boost frequency (7 - 40 Hz) for BOOST LEVEL (low boost level) control.

- 12 BOOST LEVEL (Low boost level) control
Amplifies the frequencies set by BOOST/LOW CUT FREQ adjustment control (11) up to a maximum of 10dB.

- 13 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.

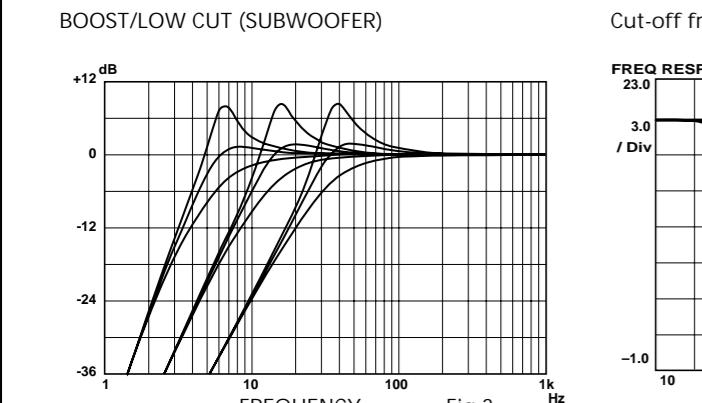
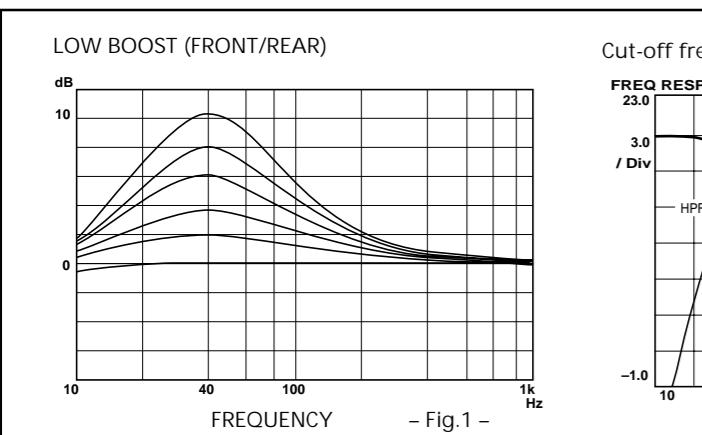
- 14 Cut-off frequency adjustment control (SUBWOOFER) (See Fig. 4)
Sets the cut-off frequency for the subwoofer (50 - 200 Hz).

- 15 INPUT MODE select switch
When the switch is set to SUBWOOFER INPUT, the switch can be used to change the SUBWOOFER OUTPUT as follows:
FRONT: Outputs the signal that has been input to the FRONT input jack.

- 16 Subwoofer LEVEL/BOOST LEVEL CONTROL select switch (US model only)
Selects LEVEL or BOOST to adjust the level or the boost level of the subwoofer from the connected subwoofer level controller. For details on the optional Subwoofer level controller, consult your nearest Sony dealer.

- 17 Subwoofer LEVEL/BOOST LEVEL CONTROL connecting terminal (US model only)
Connects the optional subwoofer controller to this terminal.

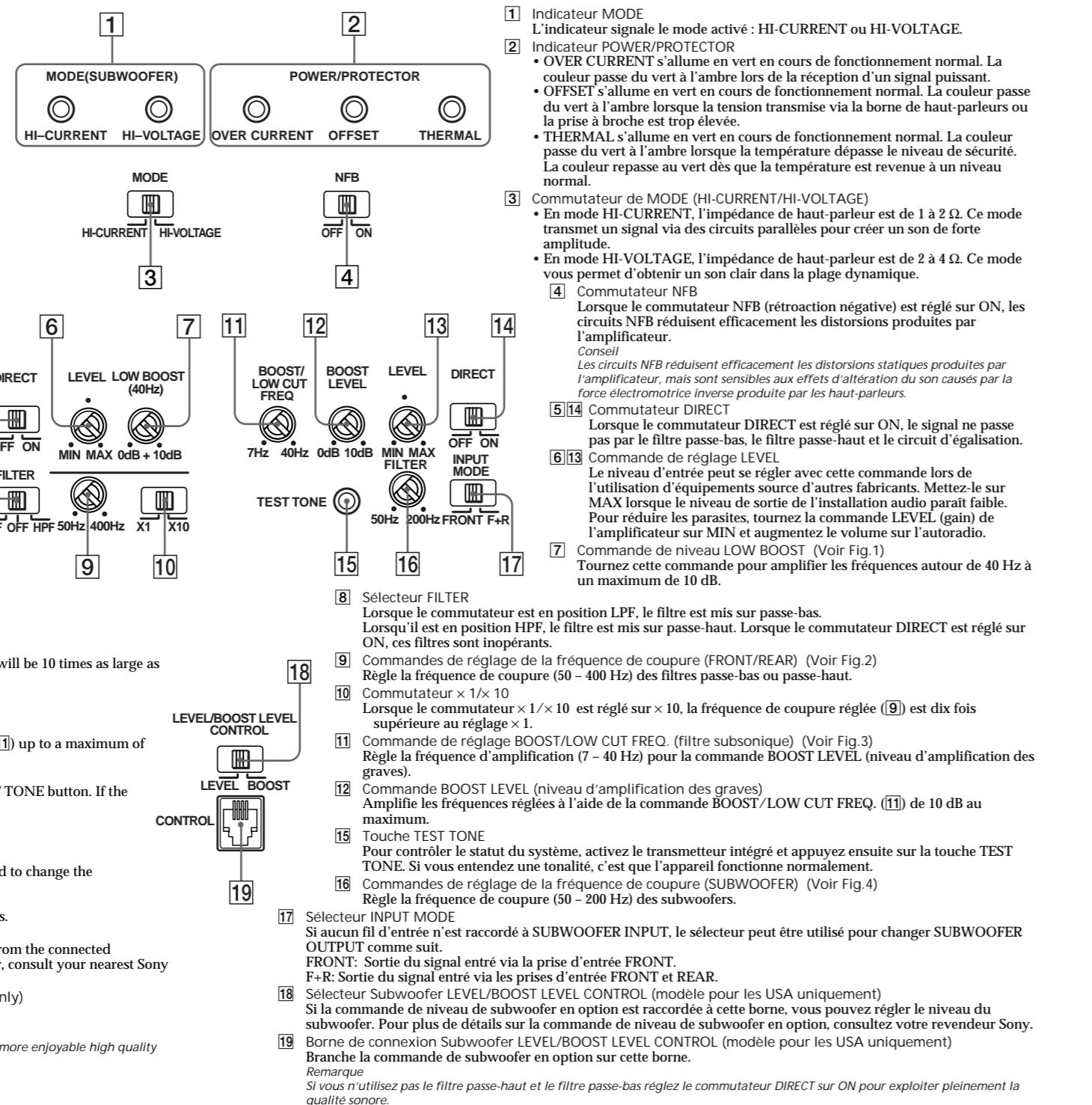
- Note*
If you do not use the high-pass filter and low-pass filter, set the DIRECT switch to ON for more enjoyable high quality sound.



Caractéristiques

- Puissance de sortie maximale de 150 watts \times 4 = 600 watts (à 4 ohms).
- Intègre une fonction d'entrée à 2 canaux/sortie à 5 canaux compatible avec un multistème à 2 voies même avec une sortie de ligne signal via la stéréo.
- Le filtre variable intégré correspond à une grande plage allant de 50 Hz à 500 Hz à 4 kHz (commutateur $\times 1/\times 10$).
- Filtre passe-bas (LPF), filtre passe-haut (HPF) variables et circuit d'amplification des graves intégrés.
- 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.
- Il est possible de commuter le mode HI-CURRENT (1 - 2 Ω) et HI-VOLTAGE (2 - 4 Ω) pour le subwoofer.
- Rétro-action négative (ON/OFF) commutable.
- Alimentation indépendante de l'amplificateur de tension.
- Protection circuit et indicateur fournis.
- Alimentation électrique par impulsions* pour une puissance de sortie stable, régulée.
- Circuit de protection et indicateur fournis.
- 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 reconvertis 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.

Emplacement et fonction des commandes



Specifications

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
75watts/220watts per channel minimum continuous average power into 4ohms, 5channels driven from 20Hz to 20kHz with no more than 0.04%* total harmonic distortion per Car Audio Ad Hoc Committee Standards.

Other Specifications

| | | | |
|--|--|----------------------|--|
| Circuit system | Pure Direct Drive SEPP | Low boost | 0 - 10 dB (40 Hz) (Front/Rear) |
| Power supply | Pulse power supply | Power boost and cut | 0 - 10 dB (7 - 40 Hz) (Subwoofer) |
| Inputs | RCA pin jacks | Power requirements | 12 V DC car battery (negative ground) |
| Outputs | Speaker terminals | Power supply voltage | 10.5 - 16 V |
| Speaker impedance | 2 - 8 Ω (F/R ch.), 1** - 8 Ω (Subwoofer) | Current drain | 1A (40 Hz THD mode) |
| | 4 - 8 Ω (F/R ch.) used as a bridging amp (4 ohm F/R ch.) | Front/Rear: | Remote input: 1.5 mA |
| Maximum outputs (Front/Rear + Subwoofer) | 150 watts \times 4 = 500 watts \times 1 (at 4 Ω) | Dimensions | Approx. 637 \times 83.5 \times 260 (303 with cover) mm |
| | 360 watts \times 2 = 500 watts \times 1 (at 4 Ω) | Mass | (W/h/d) (25 1/8 \times 3 3/8 \times 10 1/4 in.) not including packing parts and controls |
| Rated outputs (supply voltage at 14.4 V, 20 Hz - 20 kHz) | 90 watts \times 2 (0.1% THD, at 2 Ω) | Subwoofer: | Approx. 9.5 kg (20 lb. 15 oz.) not including accessories |
| | 180 watts \times 2 (0.1% THD, at 4 Ω) | Frequency response | Mounting screws (4) |
| Front/Rear: | Hi-voltage 220 watts (0.04 % THD, at 2 Ω) | Terminal cover (1) | Hexagonal wrench 3 mm (1/8 in.) (1) |
| | Hi-current 280 watts (0.1 % THD, at 1 Ω) | Optional accessories | Connecting cord for power amplifier RC-46 |
| | 5 Hz - 100 kHz (-3 dB) | | |
| Frequency response | 0.005 % or less (at 1 kHz, 4 Ω) | | |
| Input level adjustment range | 0.2 - 4.0 V | | |
| | High-pass filter ($\times 1/\times 10$) 50 - 400 Hz / 500 Hz - 4 kHz, -12 dB/oct | | |
| | Low-pass filter ($\times 1/\times 10$) 50 - 200 Hz, -12 dB/oct (Subwoofer) | | |

Design and specifications are subject to change without notice.

Operating Instructions

Mode d'emploi

Owner's Record

The model and serial numbers are located on the bottom of the unit. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. XM-7557 Serial No. _____

XM-7557

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Troubleshooting Guide

The following checklist will assist in the correction of most problems which you may encounter with your unit. Before going through the checklist below, refer to the connection and operating procedures.

| Problem | Cause/Solution |
|---|---|
| The POWER/PROTECTOR indicator does not light up. | The fuse is blown. → Replace the fuse with a new one. The ground lead is not securely connected. → Fasten the ground lead securely to a metal surface of the car. |
| The OVER CURRENT indicator lights up in amber. | The voltage going into the remote terminal is too low. → The connected master unit is not turned on. → Turn on the master unit. The system employs too many amplifiers. → Use a relay. |
| The OFFSET indicator lights up in amber. | The power connecting leads and/or ground lead was not connected completely. → Connect the two power connecting leads to +12 V and/or the ground lead to GND. |
| The THERMAL indicator lights up in amber. | The unit heats up abnormally. → Make sure to place the unit in a well ventilated location. Use speakers with suitable impedance. → Make sure to place the unit in a well ventilated location. |
| Alternator noise is heard. | The power connecting leads are installed too close to the RCA pin cords. → Keep the leads away from the cords. |
| HF, LPF, and LOW BOOST are not effective. | The ground lead is not securely connected. → Fasten the ground lead securely to a metal surface of the car. Negative speaker leads are touching the car chassis. → Keep the leads away from the car chassis. |
| The DIRECT switch is set to ON. | The LEVEL adjustment control is set to the "MIN" position. The FILTER select switch is set to the "LPF" position. |
| The LEVEL adjustment control is set to "MIN". | One or more of the switches is settled between settings (i.e., not correctly set); set the switch properly. |
| No test tone is heard when the test tone button is pressed. | The wiring is not properly connected. Check the connections and re-wire accordingly. |

Guide de dépannage

La liste suivante vous aidera à résoudre la plupart des problèmes que vous pouvez rencontrer avec cet appareil. Avant de passer la liste en revue, vérifiez les connexions et les procédures de fonctionnement.

| Problème | Cause/Solution |
|--|---|
| L'indicateur POWER/PROTECTOR ne s'allume pas. | Le fusible est grillé. → Remplacez le fusible par un neuf. Le fil de masse n'est pas connecté correctement. → Fixez correctement le fil de masse à un point métallique de la voiture. |
| L'indicateur OVER CURRENT s'allume en ambré. | La tension entrant à la borne de télécommande est trop faible. → L'appareil maitre connecté n'est pas allumé. → Mettez l'appareil maitre sous tension. Le système utilise trop d'amplificateurs. → Utilisez un relais. |
| L'indicateur OFFSET s'allume en ambré. | Vérifiez la tension de la batterie (10.5 - 16 V). Le cordon d'alimentation et/ou le fil de masse n'était pas correctement raccordé. → Raccordez les deux câbles d'alimentation à +12 V et/ou le fil de masse à GND. |
| L'indicateur THERMAL s'allume en ambré. | Coupez l'interrupteur d'alimentation. Les sorties de haut-parleur sont court-circuitées. → Remédiez à la cause du court-circuit. Coupez l'interrupteur d'alimentation. Assurez-vous que le cordon de haut-parleur et le fil de masse sont correctement branchés. → La connexion du fil de masse du stéréo est mauvais contact. |
| L'alternateur émet un bruit. | L'appareil chauffe anormalement. → Utilisez des haut-parleurs d'endroit bien aéré. Les câbles d'alimentation sont installés trop près des câbles à broches RCA. → Eloignez les câbles l'un de l'autre. |
| Le son est trop faible. | Le fil de masse n'est pas connecté correctement. → Fixez correctement le fil de masse à un point métallique de la voiture. |
| Le son est étouffé. | Les fils négatifs des haut-parleurs touchent la carrosserie de la voiture. → Eloignez les fils de la carrosserie de la voiture. |
| Aucun son n'est audible. | Les fils de terre ne sont pas correctement connectés. Vérifiez les connexions et refaites le câblage en conséquence. |
| Aucune tonalité de test n'est audible lorsque la touche de tonalité de test est enfournée. | La commande de réglage de niveau est mise en position "MIN". Le commutateur FILTER est mis sur ON. |

Attaching the terminal cover

After all of the adjustment controls and switches are set and all of the cords are connected completely, attach the terminal cover to this unit with the supplied hexagonal wrench 3 mm (1/8 in.).

Note
Install this unit on the mounting board first, and then attach the terminal cover to this unit.

Remarque
Inst

Connections

Connexions

Precautions

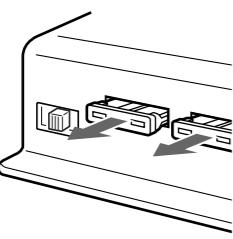
- This unit is designed for negative ground 12 V DC operation only.
- Use front/rear speakers with an impedance of 2 to 8 ohms (4 to 8 ohms when used as a bridging amplifier).
- Use a subwoofer with suitable impedance.
 - HI-CURRENT mode: 1 to 2 Ω
 - HI-VOLTAGE mode: 2 to 8 Ω
- Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers.
- Avoid installing the unit in areas subject to:
 - high temperatures such as from direct sunlight or hot air from the heater
 - rain or moisture
 - 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 or antenna, interference may occur. In this case, relocate the amplifier away from the car radio or antenna.
- If no power is being supplied to the master unit, 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 circuit by covering 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 activates in 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.

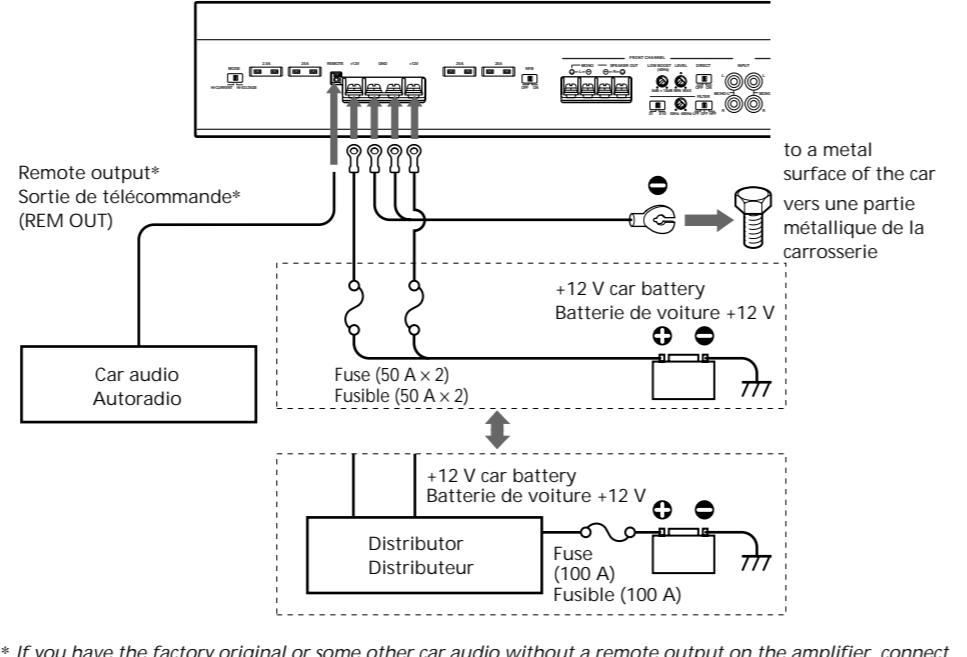
Caution

- 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-power amplifier. Therefore, it may not perform to 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.

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.
- Éloignez 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 et il peut ne pas atteindre sa puissance maximale si les cordons de haut-parleurs originaires 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.

Power Connection Leads Câbles d'alimentation



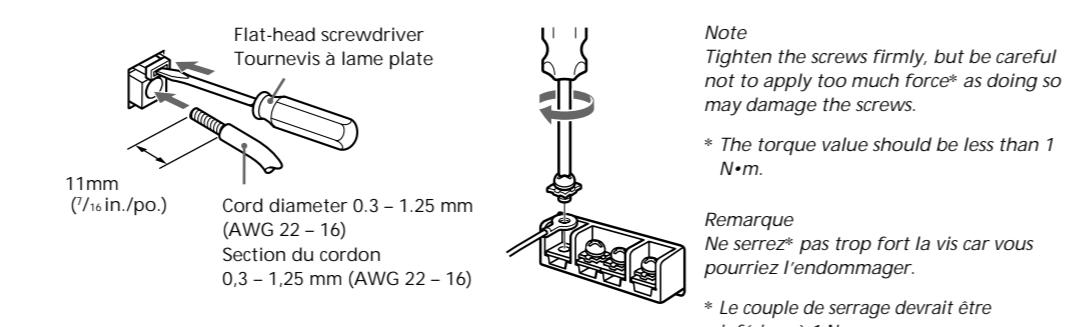
Notes on the power supply

- 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 surface of the car. A loose connection may cause the amplifier to malfunction.
- 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 mm².
- When using the optional RC-46 power amplifier connecting cord, consult that manual for proper use.

Remarques sur l'alimentation électrique

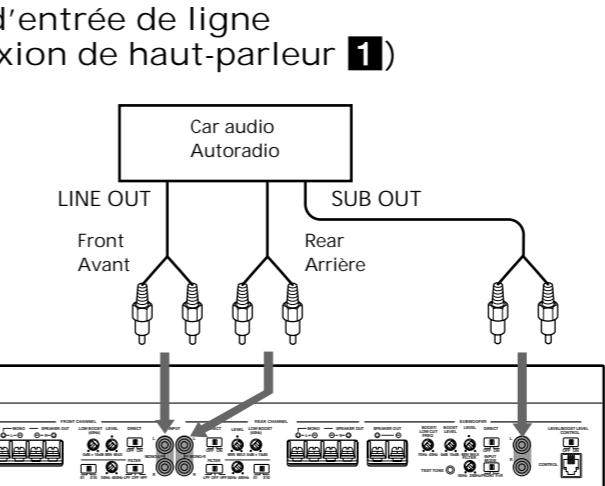
- Raccordez le câble d'alimentation +12 V uniquement après avoir réalisé toutes les autres connexions.
- Raccordez correctement le fil de masse de l'appareil à une surface métallique de la voiture. Une connexion lâche peut provoquer un dysfonctionnement de l'amplificateur.
- Veuillez à raccorder le fil 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 mm² aux bornes +12 V et GND.
- Lorsque vous utilisez le cordon de raccordement pour amplificateur RC-46 en option, consultez le manuel pour une utilisation correcte.

Make the terminal connections as illustrated below.

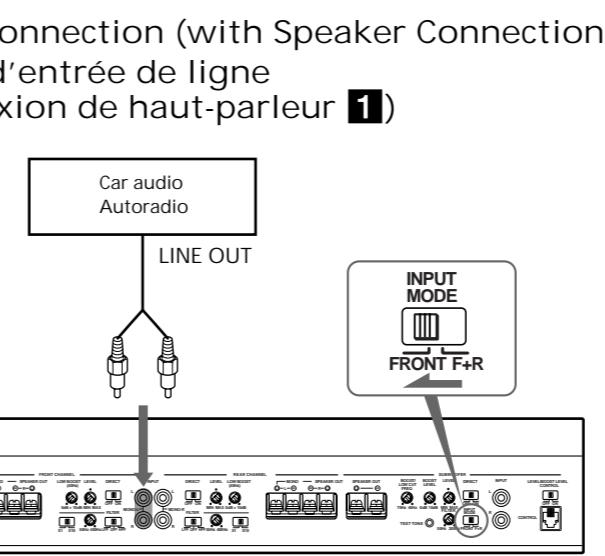


Input Connections/Connexions d'entrée

Line Input Connection (with Speaker Connection 1) Connexion d'entrée de ligne (avec connexion de haut-parleur 1)

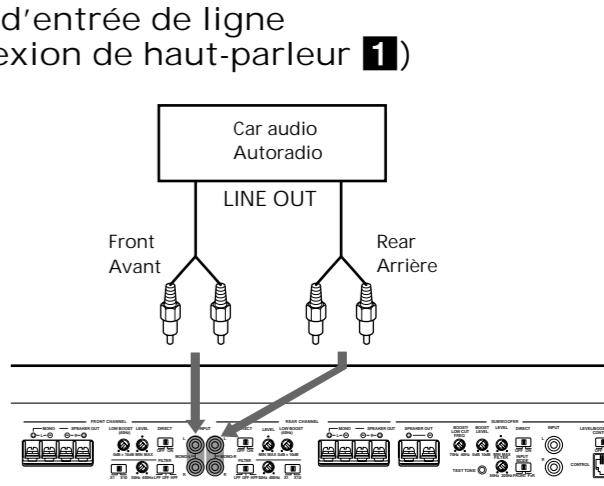


Line Input Connection (with Speaker Connection 1) Connexion d'entrée de ligne (avec connexion de haut-parleur 1)

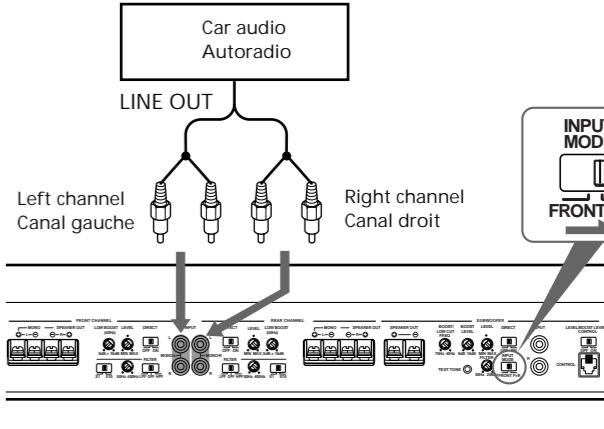


Line Input Connection (with Speaker Connection 1) Connexion d'entrée de ligne (avec connexion de haut-parleur 1)

Line Input Connection (with Speaker Connection 1) Connexion d'entrée de ligne (avec connexion de haut-parleur 1)



Line Input Connection (with Speaker Connection 2) Connexion d'entrée de ligne (avec connexion de haut-parleur 2)

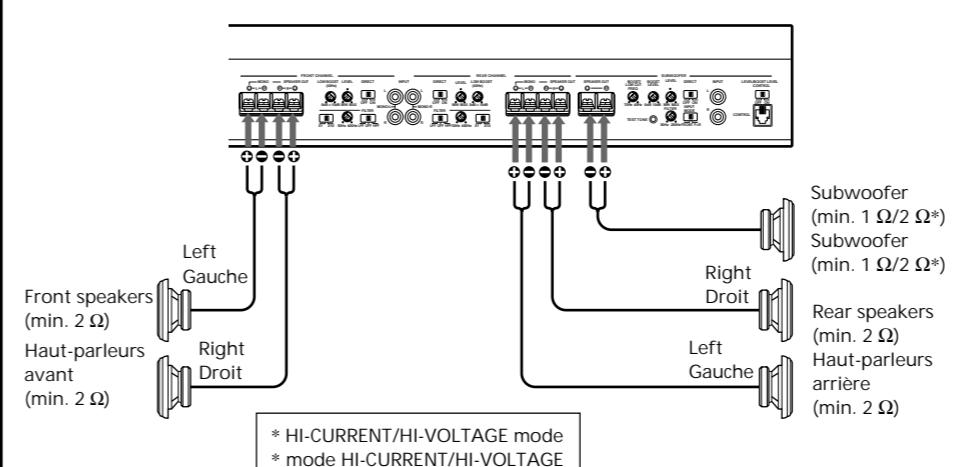


Speaker Connections/Raccordement de haut-parleurs

5-Speaker System (with Input Connection A, B or C)

Système à 5 haut-parleurs
(avec connexion d'entrée A, B ou C)

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



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

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

