

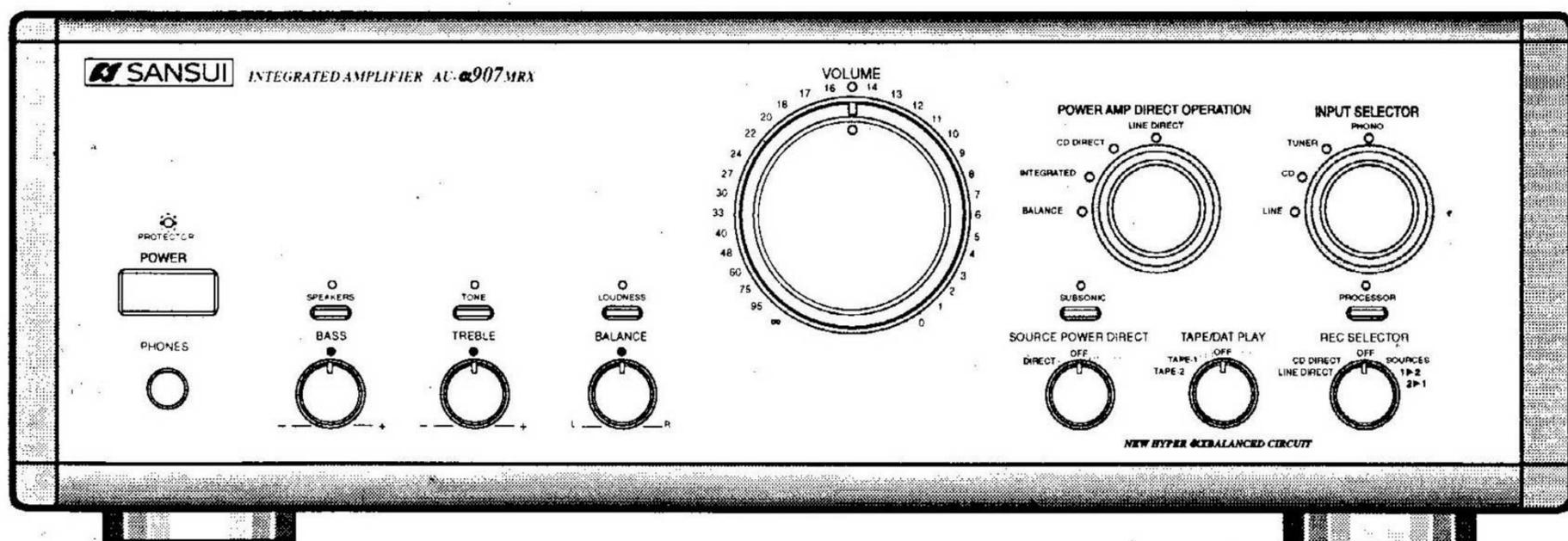
INTEGRATED AMPLIFIER

集成放大器

AU-α907MRX

OPERATING INSTRUCTIONS

使用說明書



 **SANSUI**

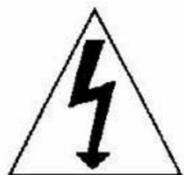


CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.

ENGLISH

3 ~ 15

Table of contents

Precautions	3
Connections	4-7
Panel information	8-9
Operating procedures	10-14
Specifications	14
Troubleshooting and service request	15

WARNING: To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

* The model No. and Serial No. of your unit are shown on its back panel.

* In order to simplify, the explanations may sometimes differ from the originals.

Thank you for purchasing this fine SANSUI product. Taking the time to read these operating instructions carefully before use will acquaint you fully with all its features and help ensure optimum performance.

Precautions

Be sure to read this section before operating the unit.

Precautions when plugging or unplugging the power cord

- * When unplugging the power cord, be sure to hold the plug section while pulling. Pulling the plug out by grasping the cord may cause the cord to break or cause a short to occur and is very dangerous.
- * Do not plug or unplug the power cord when your hand is wet or damp as this may cause an electrical shock.
- * Do not damage the power cord or place heavy objects on top of the cord as this may cause shock or fire.

Installation precautions

Do not install the unit in any of the following locations since this may result in a deterioration in performance or malfunction:

- * Locations exposed to direct sunlight or near objects radiating heat such as heating appliances.
- * Locations exposed to moisture or humidity.
- * Locations with poor ventilation exposed to dust and dirt.
- * Locations which are unstable and not perfectly flat or which are susceptible to vibration.

Do not remove the case, back plate or bottom plate

Do not make any internal inspections or adjustments yourself or touch any of the internal components, as this could damage the unit or cause electrical shock.

The warranty on this unit does not cover any damage or loss of performance caused by internal modifications.

Do not wipe with thinner

Wipe the panels and case from time to time with a soft cloth. Using any kind of thinner, alcohol or volatile liquid will mar the surface, cause blotching on the exterior and erase the markings and should therefore be avoided.

Do not use insecticide sprays in the vicinity.

Do not block the ventilation holes.

The ventilation holes located in the top and bottom of this unit are designed to efficiently utilize air convection to disseminate heat generated inside the unit during operation.

Since excessively high internal temperatures resulting from poor ventilation can cause malfunction or fire, pay particular attention to the following precautions.

- * Do not place the unit on a soft surface such as a blanket or thick (long shag) carpet.
- * If installed next to a wall, place the unit far enough away from the wall so as not to block the rear panel ventilation holes.
- * Do not install the unit in a sealed rack or other closed location.

If the unit is not to be used for a long period

If the unit is not to be used for a long period of time, unplug the power cord from the AC outlet. Leaving the power cord connected may cause an unexpected disaster.

This unit dissipates the heat most effectively when installed on a flat surface. Do not stand it up or install it at an angle.

Before connecting the power plug

Before connecting the power plug to an electrical outlet, check to be sure that the unit is set to the proper voltage for your area. If the voltage of the unit is improperly set, fire hazard or damage to the unit may result.

If the unit is to be used in an area where the power requirements are different, make sure you consult your nearest authorized SANSUI Service Station.

In cases such as those listed below, immediately unplug the power cord and contact your dealer or the nearest Sansui service station (see the provided service station list).

If a foreign object enters the unit

If a foreign object such as a hairpin or a coin enters the inside of the unit, continued operation may cause a malfunction, fire, or electrical shock.

Be especially careful of this when children are present.

If water enters the unit

Water entering the unit may cause a malfunction, fire, or electrical shock. If water enters the unit, immediately unplug the power cord taking care not to touch the body of the unit.

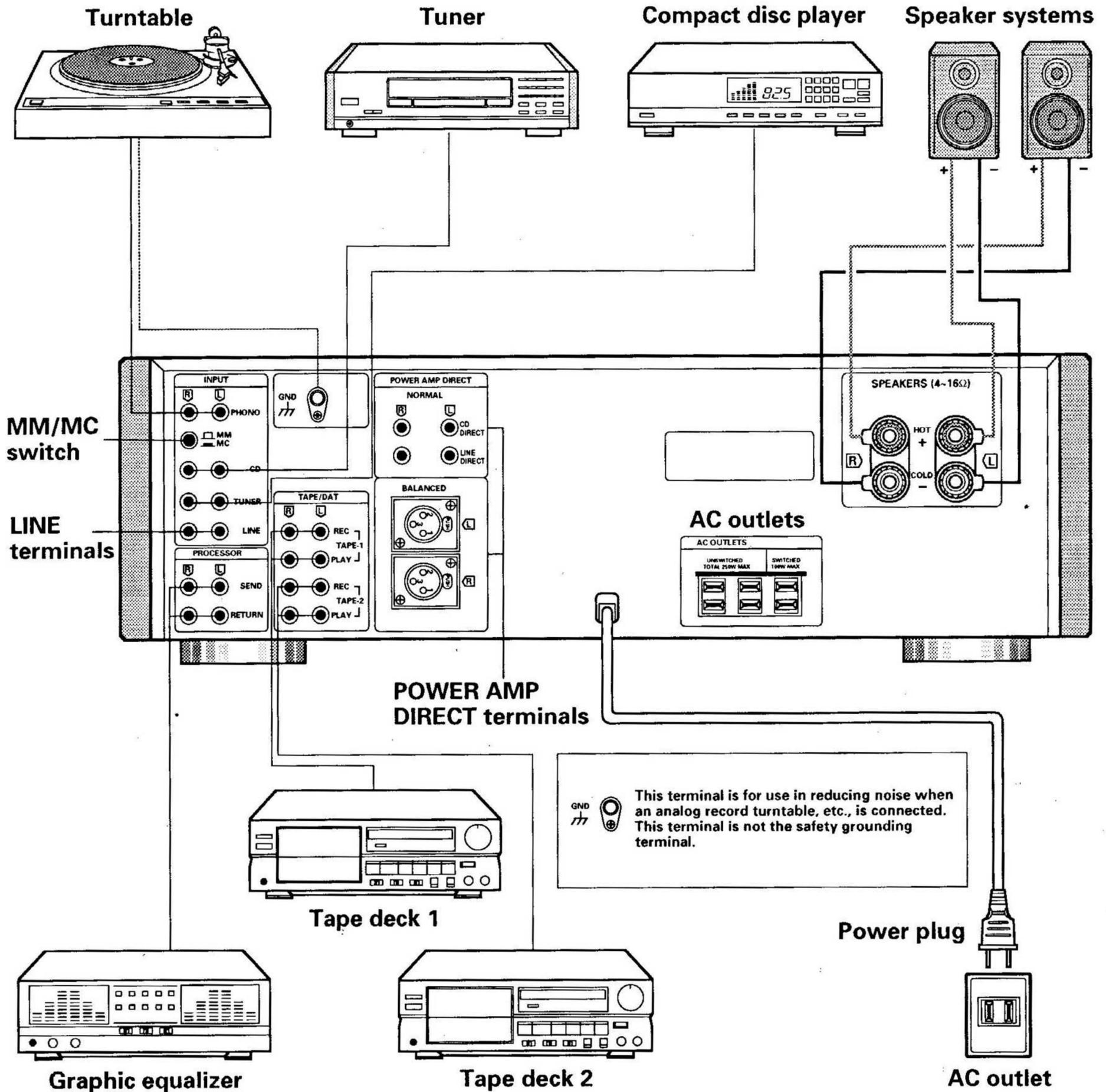
Do not place flower vases or cups containing liquids on top of the unit.

If the unit starts operating abnormally

If you detect smoke or an abnormal noise or smell coming from this unit, continued operation may cause the damage to spread or cause a fire or electrical shock.

Connection

* Mains plug may vary to some extent depending on sales area, local laws and regulations.



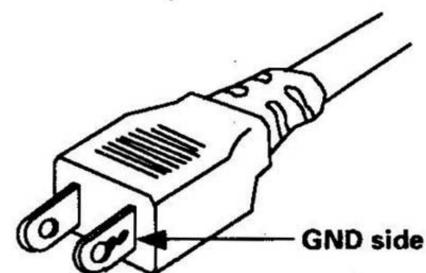
MM/MC switch

Set this switch to "MM (□)" or "MC (—)" according to the output voltage from the cartridge in use with the analog record turntable. Leave the switch to the "MM (□)" position when using a high-power cartridge such as the MM (Moving Magnet) type, and push it into the "MC (—)" position with a low-power cartridge such as the MC (Moving Coil) type.

Polarity indication on the power cord

The power cord of this unit is provided with a polarity indication, and the sound quality can sometimes be improved by matching the cord polarity with the polarity of the AC outlet to which it is connected. If you AC outlet also has a polarity indication (in general the polarity is indicated by making the GND side slot longer than the other slot), insert the plug so that the blade corresponding to the white-lined wire of the power cord comes into the GND blade of the outlet.

* The polarity of the AC power outlets on the rear panel is indicated according to the polarity of the power cord, so the power polarity can be unified throughout the connected components.



Connections

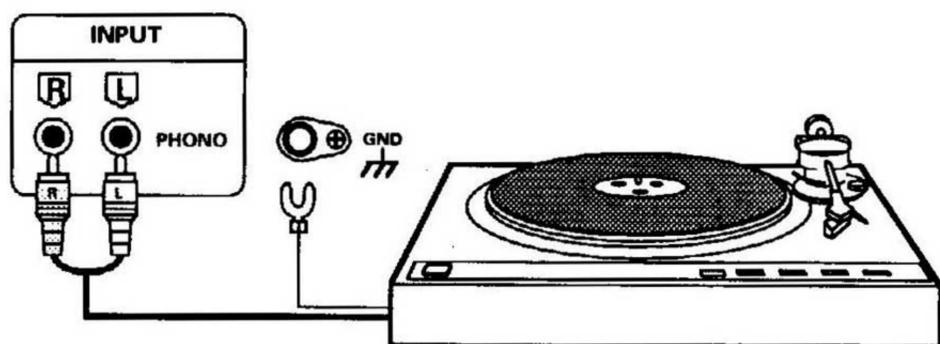
Caution in connections

- * Before connecting the audio components, be sure to unplug the power cord from the power outlet or switch the power off by pressing the POWER switch.
- * Before connections, also read carefully the instruction manuals of the audio components to be connected to this unit.
- * Check the left and right channels carefully and connect each channel properly (L to L, R to R).
- * Insert each plug completely into the jack. Incomplete connection may result in noise.
- * This unit has the a-X balanced configuration. Do not use a common terminal as the COLD (-) terminals of more than one speaker or connect the COLD (-) terminal with the GND terminal of another component.

Connection of analog record turntable

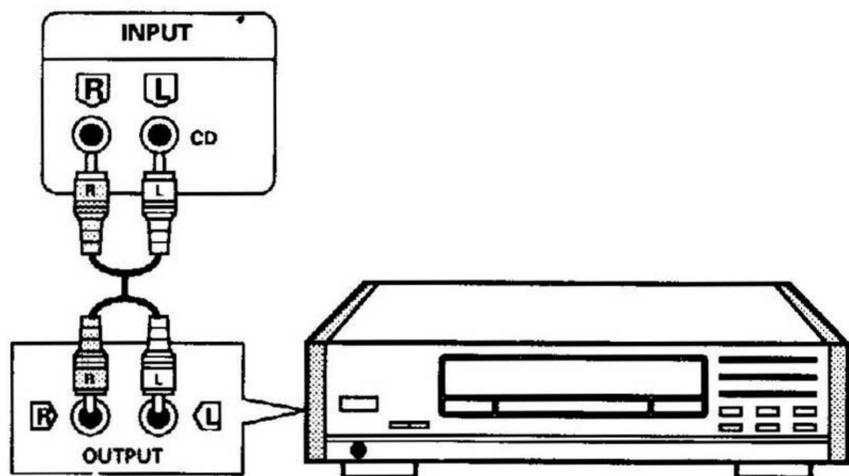
Connect the output cord of the turntable to the PHONO jacks. Insert the L plug of the output cord into the L jack and the R plug into the R jack, and connect the grounding wire to the (* GND) terminal.

- * The (* GND) terminal is provided to reduce noise when an analog record turntable, etc., is connected. It is not the safety grounding terminal.



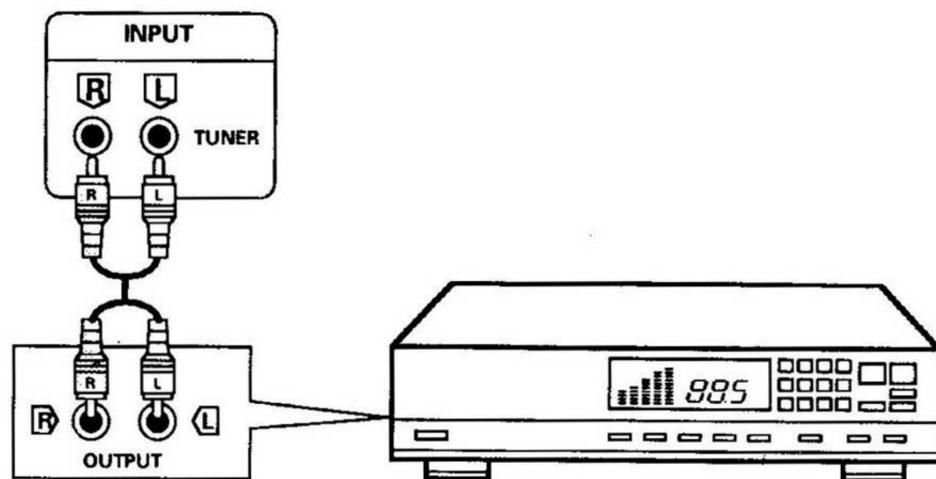
Connection of Compact Disc player

Connect the OUTPUT jacks of the CD player with the CD INPUT jacks of this unit using a pin-plug cord.



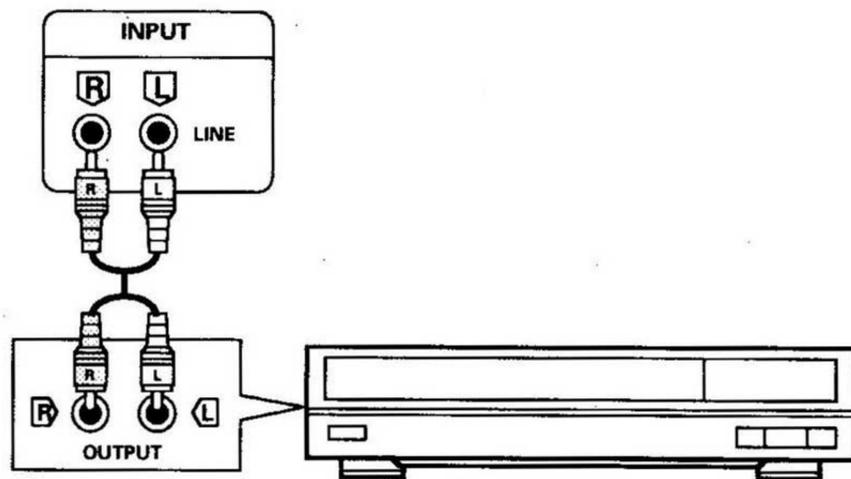
Connection of tuner

Connect the OUTPUT jacks of the tuner with the TUNER INPUT jacks of this unit using a pin-plug cord.



Connection to LINE INPUT jacks

As the LINE jacks are provided with the same electrical performance as the CD and TUNER jacks, they can be used to reproduce the audio of a videodisk player, TV tuner, etc. Connect the OUTPUT jacks of the audio component with the LINE INPUT jacks of this unit using a pin-plug cord.



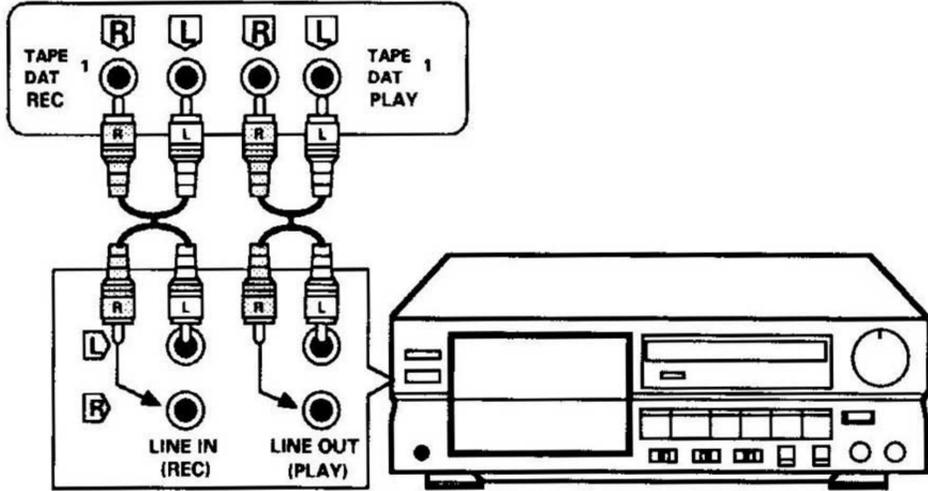
Connections

Connection of tape deck

Two sets of TAPE/DAT jacks are provided for connection of tape decks. Two tape decks can be connected for simultaneous recording or tape copy (1 ▶ 2, 2 ▶ 1) operation.

Recording connection: Connect the LINE IN/REC jacks of the tape deck with the TAPE/DAT REC jacks of this unit using a pin-plug cords.

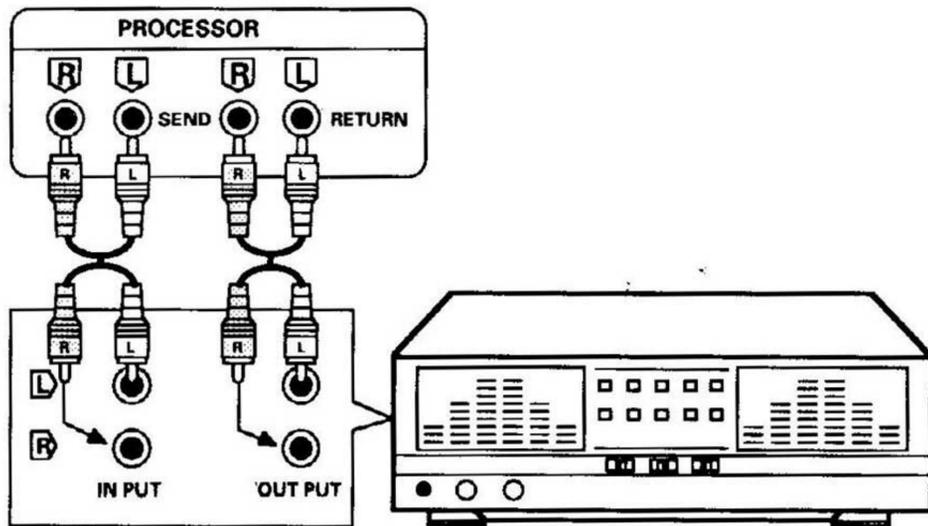
Playback connection: Connect the LINE OUT/PLAY jacks of the tape deck with the TAPE/DAT PLAY jacks of this unit using a pin-plug cords.



- * When connecting a DAT (Digital Audio Tape recorder) deck to this unit, connect it with the TAPE/DAT jacks.
- * When connecting the audio input/output of a hi-fi VCR, also connect with the same way as the above.

PROCESSOR jacks

These jacks are designed to connect a graphic equalizer but can also be used conveniently in case an AV selector is used in the system. Connect the INPUT jacks of the component with the SEND jacks of this unit and the OUTPUT jacks with the RETURN jacks of this unit using pin-plug cords.



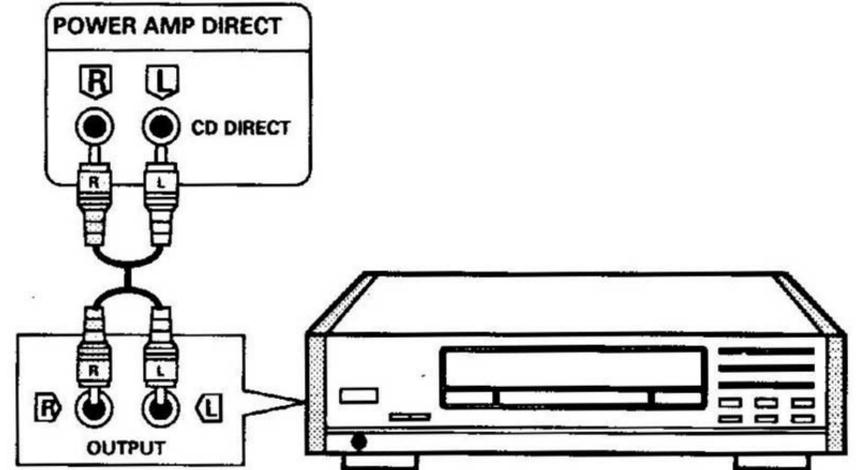
POWER AMP DIRECT jacks

When you system use a separate preamplifier and connects it directly to the power amplifier incorporated in this unit, connect the preamplifier to these jacks.

Two types of POWER AMP DIRECT jacks are provided, the normal type jacks (CD DIRECT, LINE DIRECT) and balanced jacks (BALANCED).

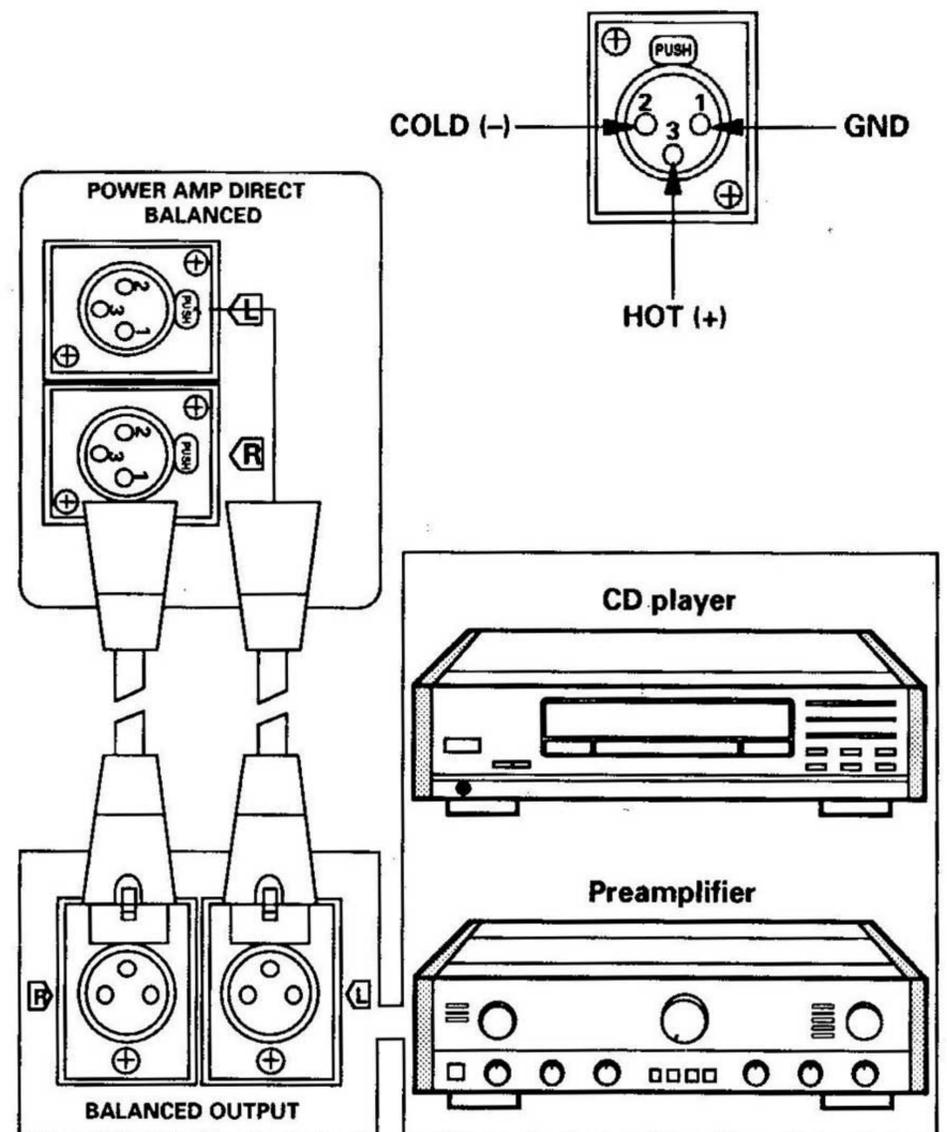
CD DIRECT or LINE DIRECT connection

A preamplifier or CD player can be connected. Connect the OUTPUT jacks of the component with the CD DIRECT or LINE DIRECT jacks of this unit using a pin-plug cord.



BALANCED connection

Connect the OUTPUT jacks of the component with the BALANCED jacks of this unit using a Cannon-connector cord. The Cannon connectors on this unit are provided with the polarity as shown in the illustration. Check and correct the polarity of the connection cord as required.



Connections

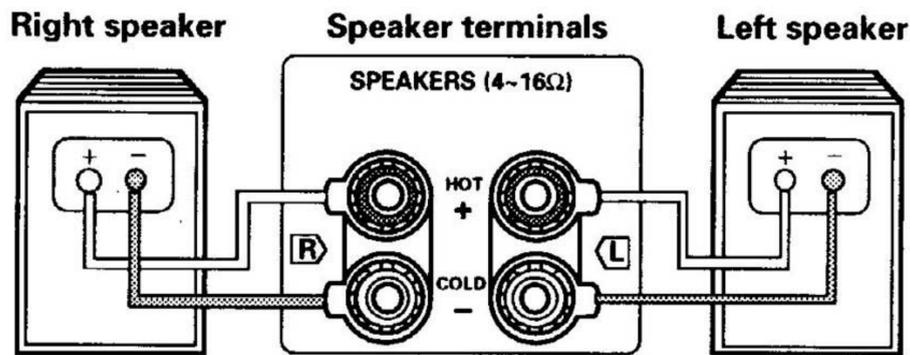
Connection of speaker systems

When connecting speaker systems, connect the speaker system located on the left seen from the front of the unit to the L terminals and the speaker system located on the right seen from the front to the R terminals.

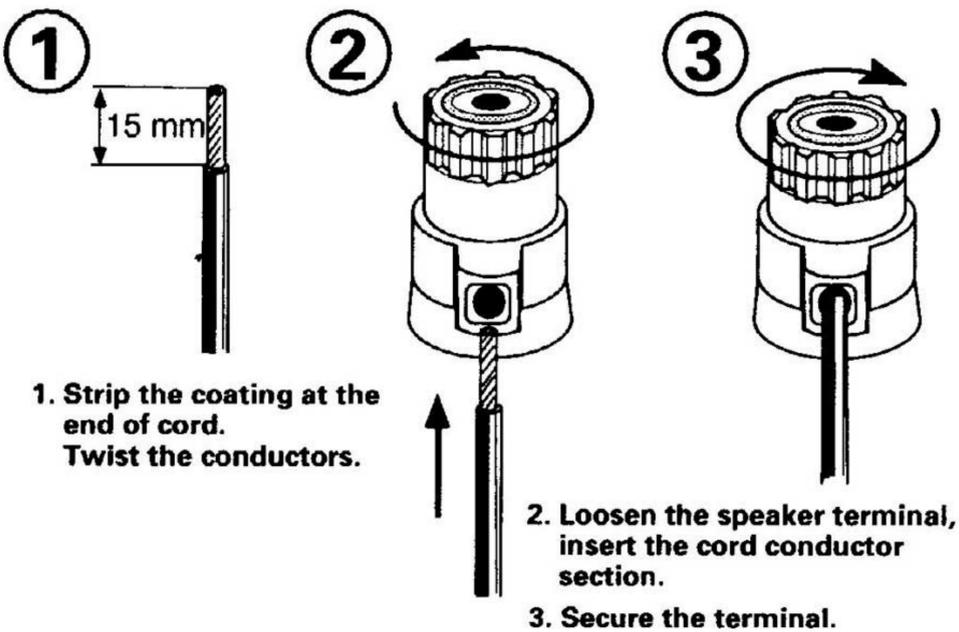
When connecting each speaker system to the speaker terminals, be always sure to connect the terminals with the same polarity (+ to +, - to -). If the left or right speaker system is connected with a wrong polarity, the stereo image of the reproduced audio will be spoiled, with lack of the center sound or unclear positioning of musical instruments.

Note

* Check the connection of each speaker cord to make sure that its conductor section contacts the metallic part inside each terminal. If the conductor section is inserted incompletely or it is inserted too much that the coating section is clamped by the metallic part, sound will not be produced from the speaker. Also be careful so that the conductor section of the speaker cord does not project out of the terminal and contact another terminal.



Speaker cord connection



The speaker terminals form a part of the a-X balanced circuit, and their improper handling will result in malfunction. Specially, never connect them in any of the following methods.

- Shared use as the COLD (-) terminal and GND terminal.
- Shared use of a terminal as the COLD (-) terminals of more than one speaker.

Also be careful so that the COLD (-) terminals do not contact the conductors of other speaker cords or other terminals.

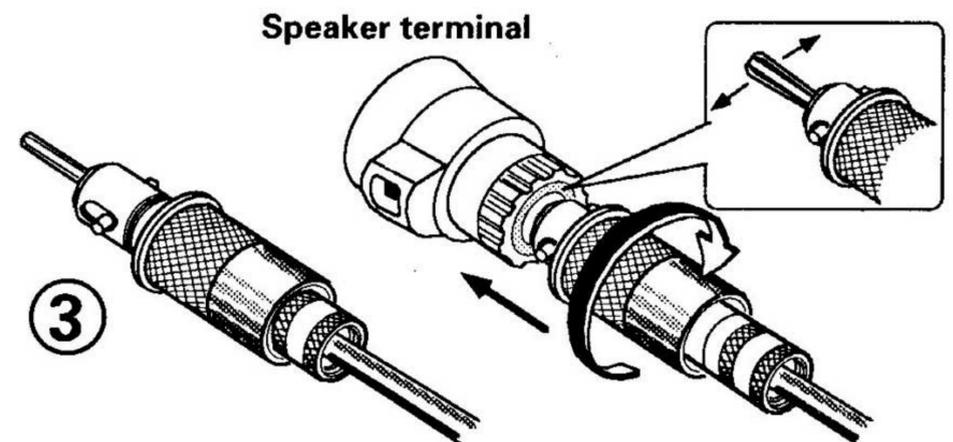
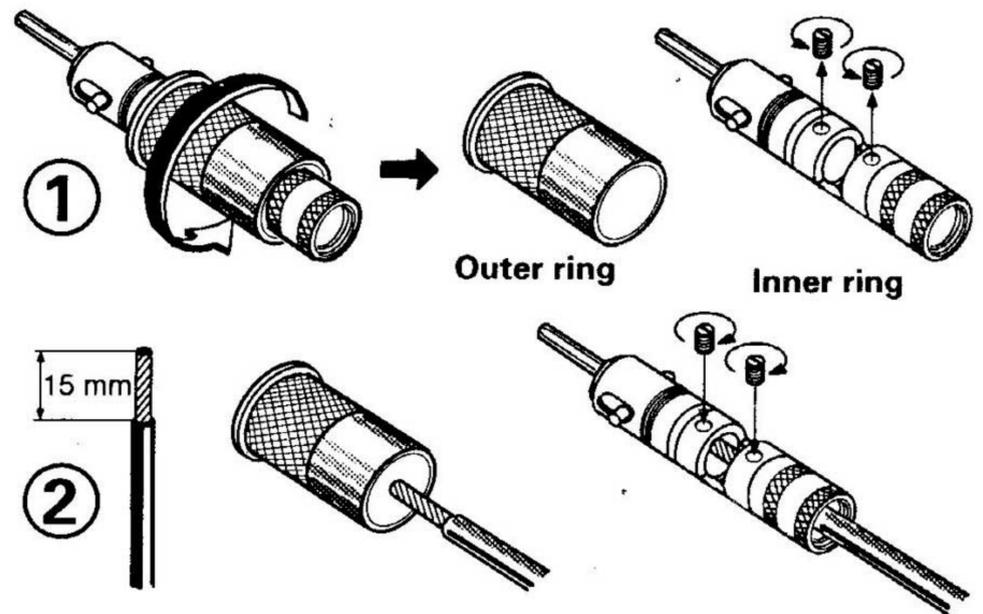
Note on speaker impedance

The impedance of the speakers which can be connected is between 6 and 16 ohms.

Connection of speaker systems (Example for reference)

In case speaker cord connection hardware (banana plugs) available in stores is used:

1. Remove the outer ring of the hardware and loosen the 2 screws on the inner ring.
2. Strip the coating from the end of speaker cord and twist the conductors. Thread the twisted conductor section through the outer ring, then insert the conductor section into the inner ring and tighten the 2 screws.
3. Attach the outer ring and tighten loosely. Then insert the conductor section into the speaker terminal and tighten the outer ring securely. Now the tip of the hardware opens and locks onto the speaker terminal.



Note on AC power outlets

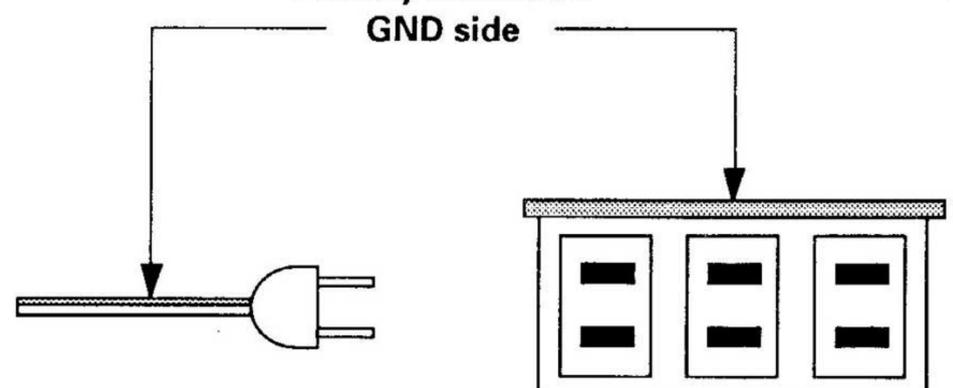
These are convenient for supplying power to the components connected to this unit, such as a tuner and analog record turntable.

SWITCHED (capacity 100 W): The power supply from this outlet is switched on-off according to the POWER switch setting.

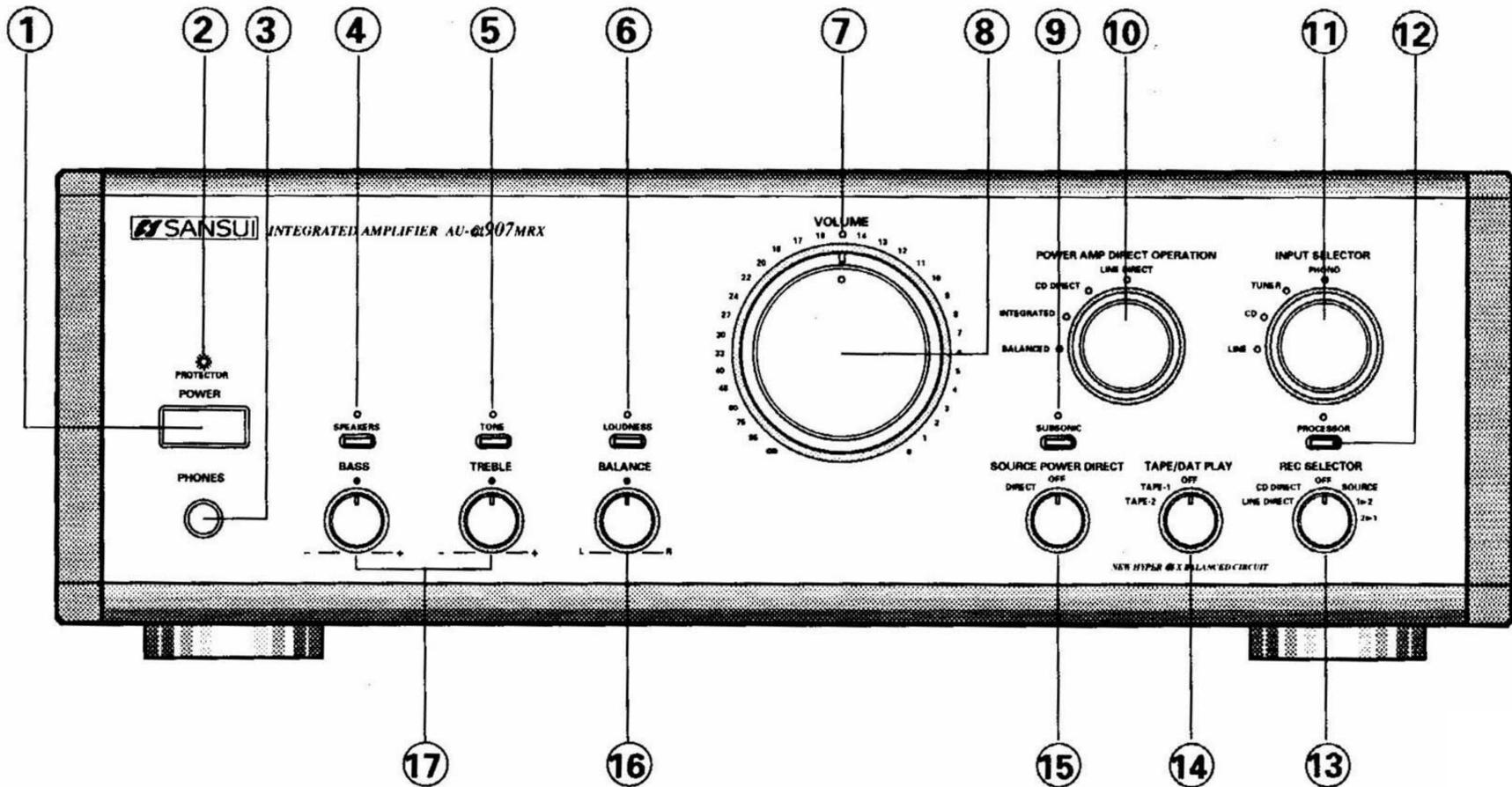
UNSWITCHED (total capacity 250 W): The power from these outlets is supplied permanently regardless of the POWER switch setting.

- * It is dangerous if the total power consumption of the connected components exceed the specified total capacity. Be sure to check the power consumption before connection.
- * When connecting the plug of a power cord with polarity indication (using white line or W marking), insert the plug so that the GND blade comes on the polarity indication of the AC power outlet (white line).

Polarity indication



Panel information



1. POWER Switch

Press this switch to turn power ON, and press again to turn it OFF.

2. PROTECTOR Indicator

When the power is switched ON, this indicator blinks first, stops blinking in a few seconds and starts to light continuously to indicate that the amplifier is in the operating status. Whenever the protector circuit is activated during operation, the indicator starts blinking to indicate that the amplifier operation is abnormal. In this case, immediately switch power OFF and remove the cause (for example short-circuiting of the speaker cord, etc.).

* Sound is not output from the speakers while this indicator is blinking.

3. Headphones Jack (PHONES)

The headphones signal is output from this jack. When listening to music using stereo headphones, insert the plug into this jack. In the headphones listening, adjust the volume to prevent the sound from harming your ears.

* Be sure to remove the plug from the jack when headphones are not used.

4. SPEAKERS Switch

To listen to sound through the speaker systems connected to the SPEAKERS terminals, press this switch to the on position (the indicator is lit).

* When using headphones, set this switch to the off position (the indicator is not lit).

5. TONE Switch

When it is required to adjust the tone using the BASS and TREBLE tone controls, enable the tone controls by pressing this switch so that the indicator lights up.

When the switch is pressed again so that the indicator goes out, the tone control circuitry is isolated and the reproduced frequency characteristics become flat.

Panel information

6. LOUDNESS Switch

Human audition tends to become less sensible to lowest and highest frequencies as the listening volume drops, and sound during low-volume listening tends to be heard as a poor sound lacking bass and treble. When listening to sound at a low volume level, press this switch so that the indicator lights up; this will compensate the audible balance of frequencies by boosting the bass and treble to optimum levels.

When the switch is pressed again so that the indicator goes out, the loudness control circuitry is isolated and the reproduced frequency characteristics become flat.

7. Power amp Direct Indicator

This indicator lights up when the POWER AMP DIRECT OPERATION switch is set to CD DIRECT, LINE DIRECT or BALANCED.

8. VOLUME Control

This control is used to adjust the volume from the speakers or headphones. Rotate the control knob clockwise to increase the volume and counterclockwise to decrease it. The volume is indicated with two scales (on the panel surface and around the control knob) and the reading method is variable depending on the POWER AMP DIRECT OPERATION switch setting as described in the following.

INTEGRATED: Read the volume value on the panel surface which corresponds to the mark on the control knob (⊙).

CD DIRECT, LINE DIRECT, BALANCED: Read the volume value on the control knob which corresponds to the power amp direct indicator (⊙).

9. SUBSONIC Switch

When this switch is pressed so that the indicator lights up, the subsonic filter which attenuates the lower frequency band below the audible band (16 Hz band) by 6 dB/oct. Ultralow-frequency noise which is produced when a warped analog record is played affects the sound quality by causing cross-modulation distortion, but such noise can be eliminated by switching on the subsonic filter.

When the switch is pressed again so that the indicator goes out, the subsonic filter is canceled.

10. POWER AMP DIRECT OPERATION Switch

Use this switch when only the power amplifier block of this unit is combined with another component by isolating the preamplifier block.

LINE DIRECT: Position for using the component connected to the POWER AMP DIRECT (LINE DIRECT) jacks.

CD DIRECT: Position for using the component connected to the POWER AMP DIRECT (CD DIRECT) jacks.

INTEGRATED: Position for using this unit as an integrated amplifier.

BALANCED: Position for using the component connected to the POWER AMP DIRECT (BALANCED) connectors.

* Be careful in setting this switch for sound is not produced if it is set to a wrong position.

* Usually, set this switch to INTEGRATED.

11. INPUT SELECTOR Switch

Use this switch to select the program source to be reproduced.

PHONO: Position for listening to an analog record by playing it on the turntable connected to the PHONO jacks.

TUNER: Position for listening to radio using the tuner connected to the TUNER jacks.

CD: Position for listening to a CD by playing it on the CD player connected to the CD jacks.

LINE: Position for using the component connected to the LINE jacks.

12. PROCESSOR Switch

Press this switch to use the processor component such as a graphic equalizer connected to the PROCESSOR jacks.

The indicator above the switch lights up to indicate that the processor component is available.

* When the processor component connected to the PROCESSOR jacks is not used or when no component is connected to them, set this switch so that the indicator is not lit; otherwise sound will not be produced.

13. Recording Source Selector Switch (REC SELECTOR)

Set this switch to select the program source to be recorded onto the components connected to the TAPE/DAT jacks.

LINE DIRECT: Position for recording the program source component connected to the POWER AMP DIRECT (LINE DIRECT) jacks.

CD DIRECT: Position for recording the program source component connected to the POWER AMP DIRECT (CD DIRECT) jacks.

OFF: When recording is not required, set to this position to isolate the recording circuitry so that the amplifier is freed from the electrical influence of the tape decks.

SOURCE: Position for recording the program source component selected with the INPUT SELECTOR switch.

1 ▶2: Position for recording from the component connected to the TAPE/DAT-1 jacks onto the tape deck, etc., connected to the TAPE/DAT-2 jacks.

2 ▶1: Position for recording from the component connected to the TAPE/DAT-2 jacks onto the tape deck, etc., connected to the TAPE/DAT-1 jacks.

14. TAPE/DAT PLAY Switch

Set this switch when playing the audio from one of the tape decks, DAT decks or video decks connected to the TAPE/DAT PLAY jacks.

OFF: Set to this position to play the component selected with the INPUT SELECTOR switch or when it is not required to play any tape.

TAPE-1: Position for playing the component connected to the TAPE-1 jacks.

TAPE-2: Position for playing the component connected to the TAPE-2 jacks.

15. SOURCE POWER DIRECT Switch

Use this switch to make the reproduced sound clearer by simplifying the path of signals inside the control amplifier. The signal transmission circuitry is simplified when this switch is set to DIRECT, and the normal circuit configuration is re-established when it is set to OFF.

* While this switch is in the DIRECT position, the BASS/TREBLE tone controls, BALANCE control, TONE switch, LOUDNESS switch and SUBSONIC switch are defeated.

16. BALANCE Control

Use this control to adjust the volume balance between the left and right channels. Rotate the control knob clockwise when the right channel volume is low and counterclockwise when the left channel volume is low. Usually, set the control to the center position.

17. Tone Controls (BASS/TREBLE)

While the TONE indicator is lit, these controls can be used to adjust the tone.

Rotating the TREBLE control knob in the clockwise direction from the center position boosts the high frequencies and in the counterclockwise direction attenuates them.

Rotating the BASS control knob in the clockwise direction from the center position boosts the low frequencies and in the counterclockwise direction attenuates them.

* When the TONE indicator is not lit, the frequency characteristics are flat and the tone controls are defeated.

Operating procedures (Playback)

Before operation

Check the positions of the controls before starting playback operations.

- * Set the VOLUME control to the fully counterclockwise position to minimize the volume.
- * Set the BALANCE control to the center position.
- * Set the tone (BASS, TREBLE) controls to the center positions.
- * Set the POWER AMP DIRECT OPERATION switch to INTEGRATED.

After checking, press the POWER switch to turn the power ON.

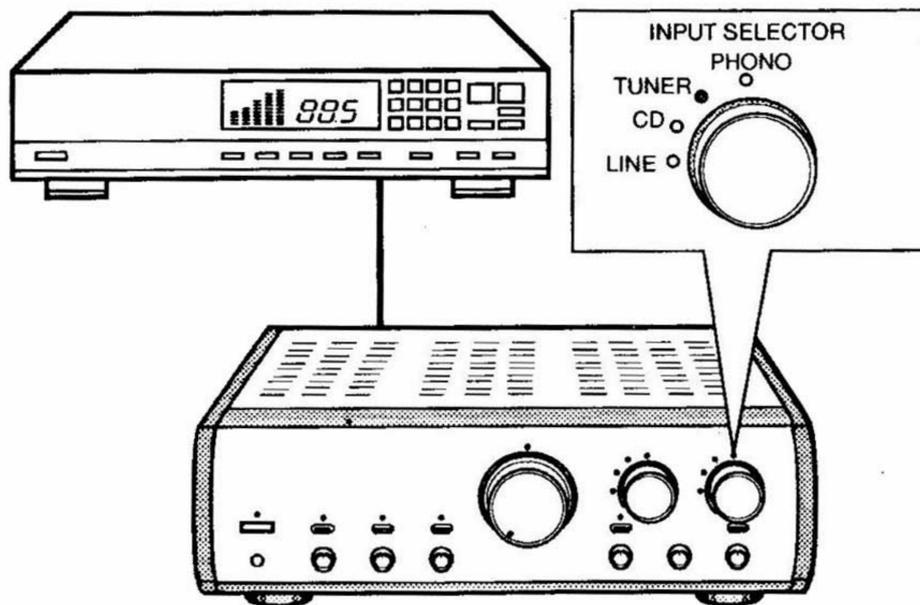
The PROTECTOR indicator starts to blink. In a few seconds, it starts to light continuously and the amplifier enters the operating status.

Check the positions of the switches before starting playback.

- * Press the SPEAKERS to the on position (so that the indicator is lit).
- * Set the PROCESSOR, LOUDNESS, SUBSONIC and TONE switches so that their indicators are not lit.

Receiving radio broadcast

1. Set the INPUT SELECTOR switch to TUNER.
2. Receive broadcasting by operating the tuner.
3. Adjust the volume and tone and enjoy broadcasting.



Playing an analog record

1. Set the INPUT SELECTOR switch to PHONO.
2. Set the MM/MC switch on the rear panel according to the cartridge used.

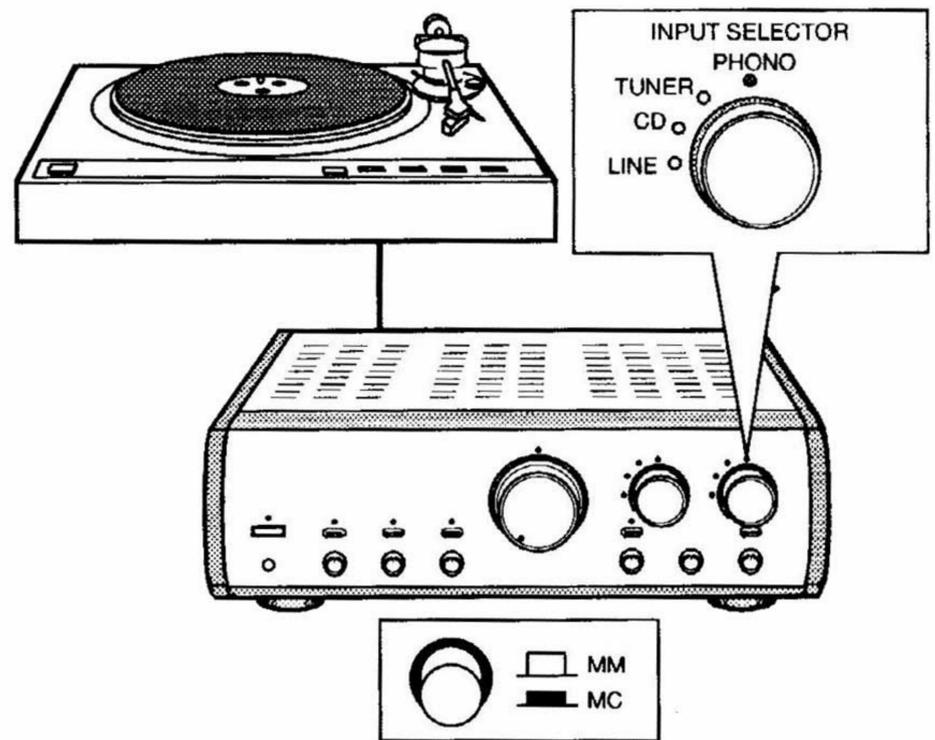
MM: Position for using a high-power cartridge including MM cartridge.

MC: Position for using a low-power cartridge including MC cartridge.

3. Play an analog record by operating the turntable.
4. Adjust the volume and tone and enjoy the play.

Notes for improved play of analog record

- * When a warped analog record is played, ultralow-frequency noise is produced and it affects the tone by causing unnecessary vibrations of the low-frequency speakers. In this case, press the SUBSONIC switch to eliminate the ultralow-frequency noise.
- * If humming noise is observed, the pin-plug cord may be inserted incompletely or the GND wire may be disconnected. Also note that, with some cartridges, less hum noise is produced when the GND wire is not connected.



Adjusting the tone controls

The tone controls are to be adjusted to compensate for the tone altered due to absorption and/or reflection of sound depending on the characteristics of the speaker systems and cartridge and on the listening room condition, as well as to obtain the desired tone according to your personal liking.

Press the TONE switch so that the indicator above it lights up, then rotate the BASS and TREBLE controls to adjust the tone. The low frequencies of the bass, etc., can be boosted by rotating the BASS control clockwise and attenuated by rotating it counterclockwise.

The high frequencies of the cymbal, etc., can be boosted by rotating the TREBLE control clockwise and attenuated by rotating it counterclockwise.

Adjusting the stereo balance

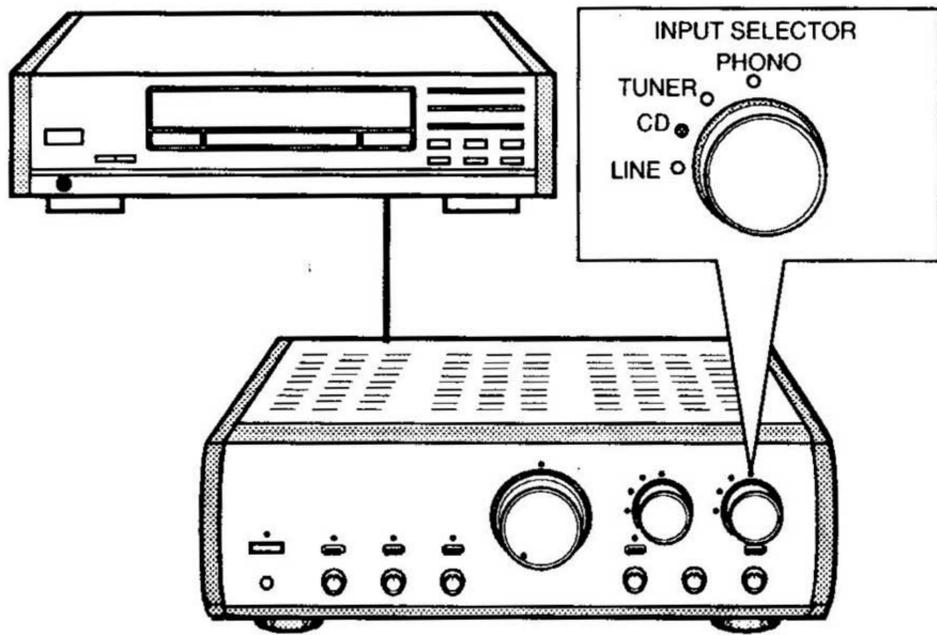
The stereo balance is affected by the way the left and right speakers are installed, the difference in their efficiencies or the layout of furniture in the listening room. If the volume levels from the left and right speakers are different and sound is inclined to one of them, adjust the stereo balance with the BALANCE control.

To adjust the balance, play a monaural program source at the ordinary listening volume and rotate the BALANCE control so that the sound is heard from the center of the left and right speakers.

Operating procedures (Playback)

Playing a Compact Disc

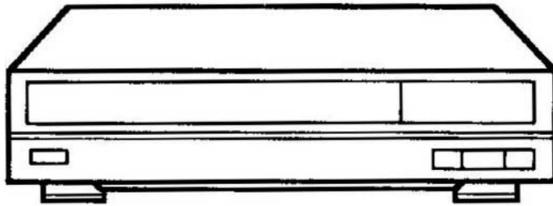
1. Set the INPUT SELECTOR switch to CD.
2. Play a CD disc by operating the CD player.
3. Adjust the volume and tone and enjoy the playback.



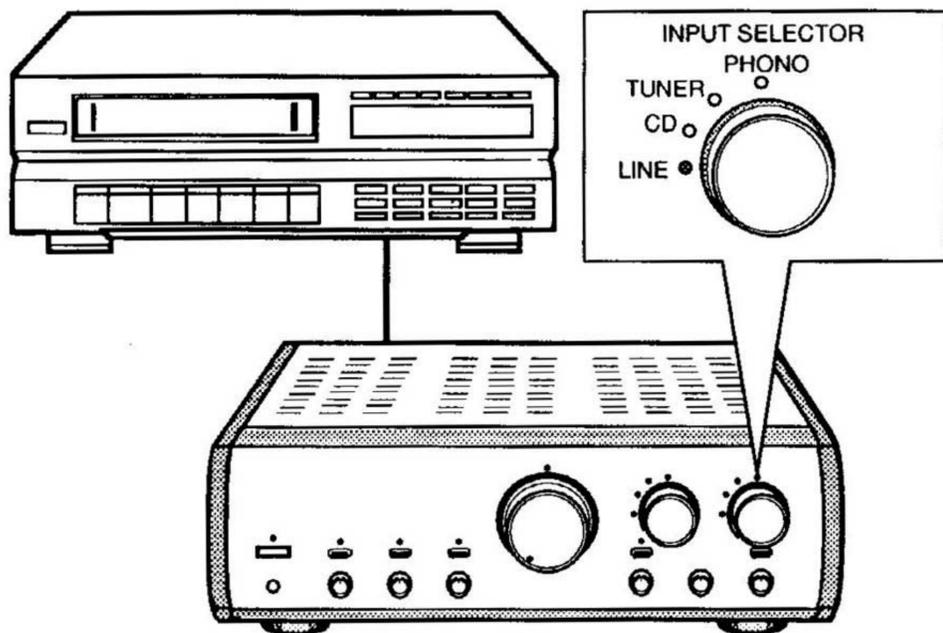
Playing a component connected to the LINE jacks

1. Set the INPUT SELECTOR switch to LINE.
2. Play the connected component by operating it.
3. Adjust the volume and tone and enjoy the playback.

LD player



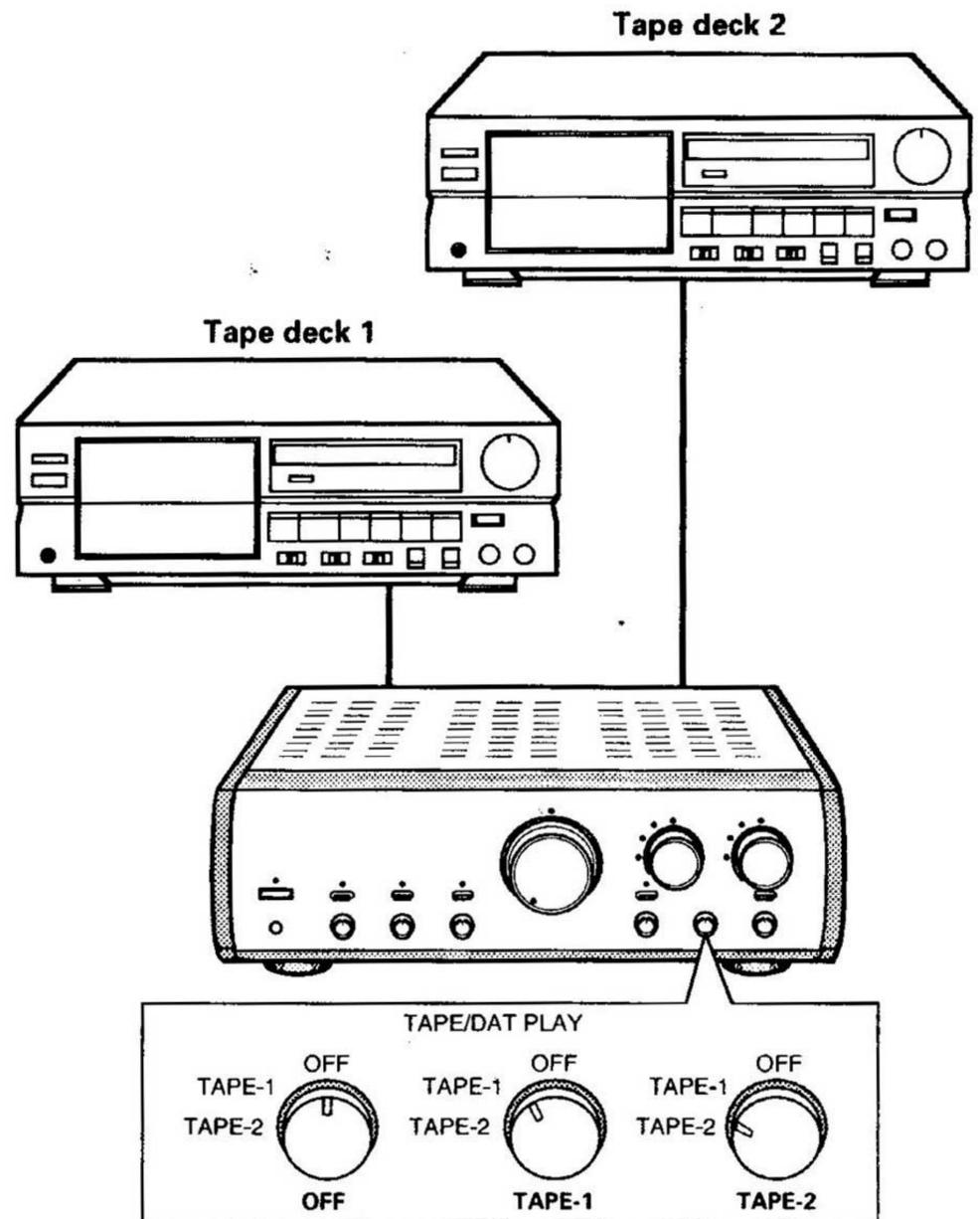
VCR



Playing a tape

Use the following procedure to play the audio of one of the tape deck (s), DAT deck(s) and/or video deck(s) connected to the TAPE/DAT PLAY jacks.

1. Set the POWER AMP DIRECT OPERATION switch to INTEGRATED.
2. Set the TAPE/DAT play switch to TAPE-1 or TAPE-2 according to the jacks to which the component to be played is connected.
3. Play the connected component by operating it.
4. Adjust the volume and tone and enjoy the playback.



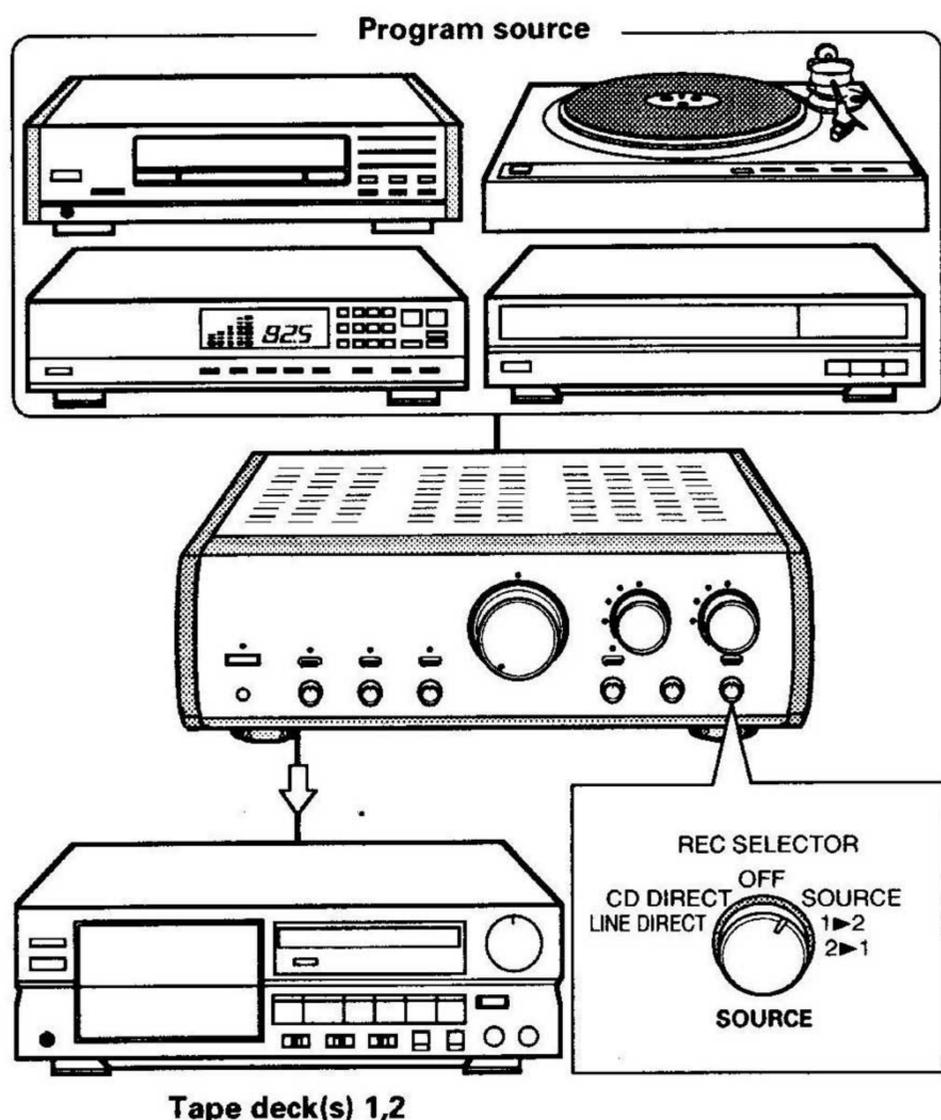
* After tape playback, set the TAPE/DAT PLAY switch back to OFF if the component selected with the INPUT SELECTOR switch is to be played next.

Tape recording

Program sources including analog record, CD, broadcasting as well as those played on the components connected to the POWER AMP DIRECT (CD DIRECT, LINE DIRECT) jacks can be recorded to the tape decks connected to the TAPE/DAT REC jacks.

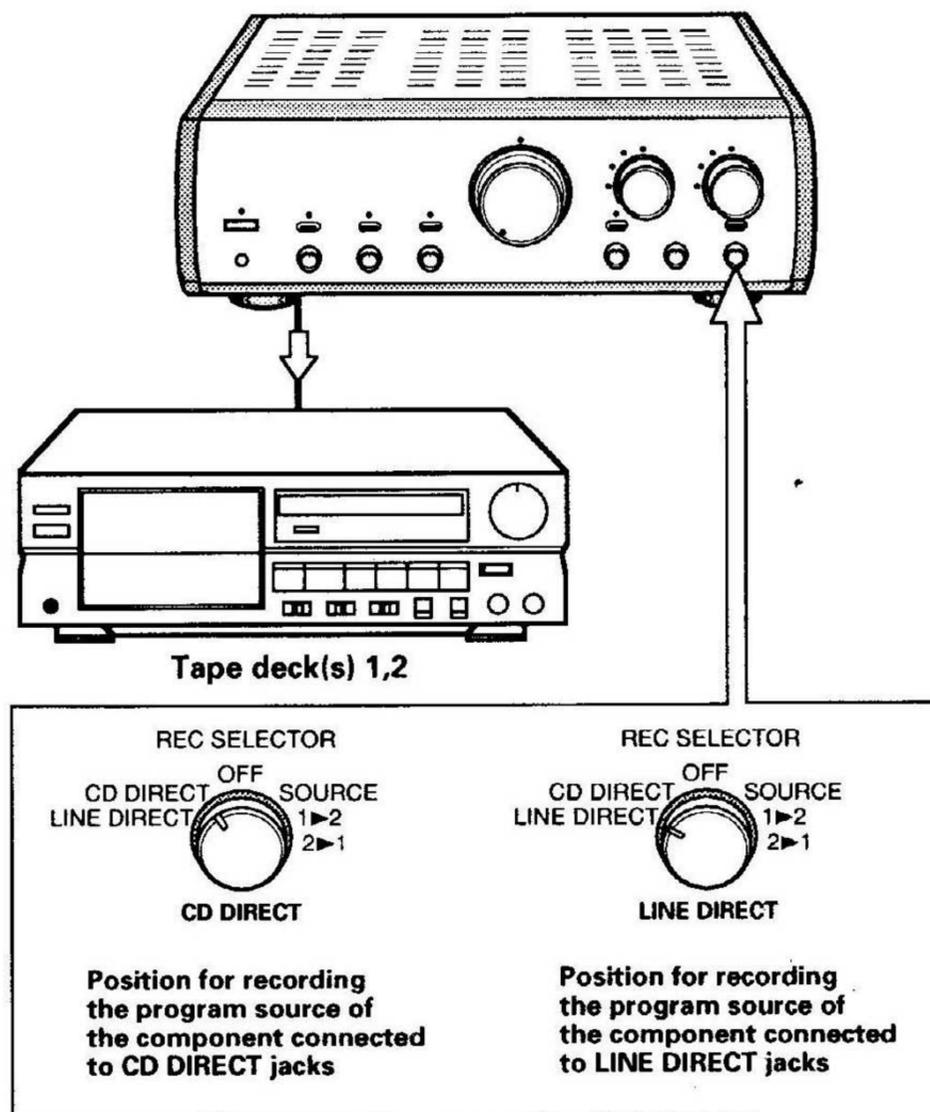
Recording of an analog record, CD or the program source played on the component connected to the LINE jacks

1. Set the REC SELECTOR switch to SOURCE.
2. Set the INPUT SELECTOR switch according to the program source to be recorded (PHONO, CD or LINE).
3. Start playing the program source.
4. Adjust the recording level on the tape deck(s) and start recording.



Recording the program source played on the component connected to the CD DIRECT or LINE DIRECT jacks

1. Set the REC SELECTOR switch to CD DIRECT or LINE DIRECT according to the program source to be recorded.
2. Start playing the program source.
3. Adjust the recording level on the tape deck(s) and start recording.



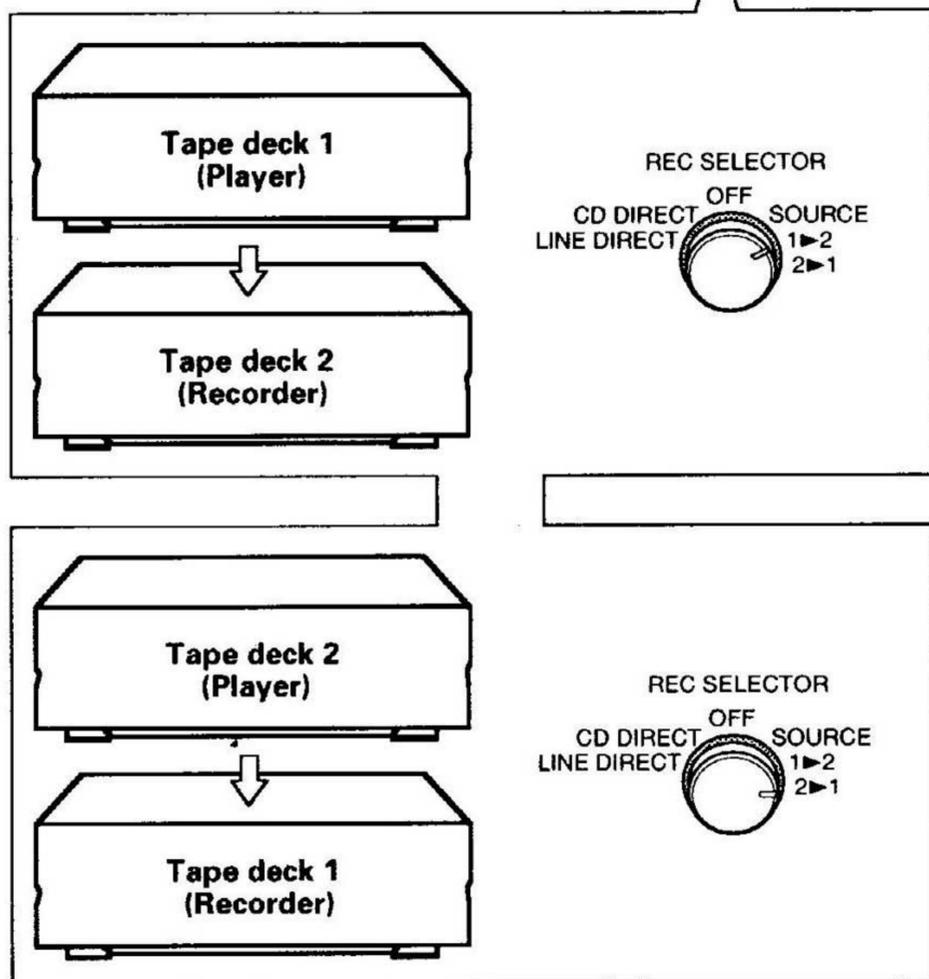
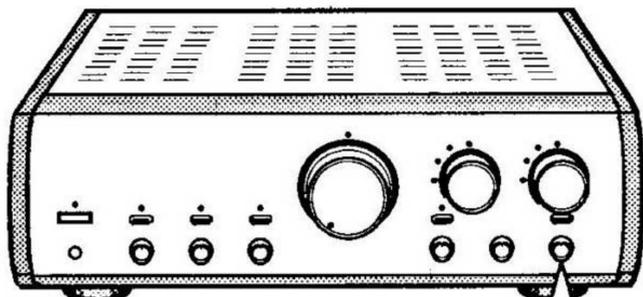
- * The program source of the component connected to the BALANCED connectors cannot be recorded because of the sound quality priority design.
- * The recording level and tone are not be affected even when the VOLUME, BALANCE, BASS and TREBLE controls are adjusted. It is not possible to record the signal input through the PROCESSOR RETURN jacks.
- * If the switch is set to other position than SOURCE, a different program source from the program source being recorded can be selected with the INPUT SELECTOR switch and played.

Operating procedures

Copying sound from a tape to tape

By using two tape decks, the tape copy operation can be used to dub the signal of a prerecorded tape onto another tape.

1. Set the REC SELECTOR switch to "1 ▶ 2" or "2 ▶ 1",
 - Set to "1 ▶ 2" for tape copy from deck 1 to deck 2.
 - Set to "2 ▶ 1" for tape copy from deck 2 to deck 1.
2. Start tape copy by operating the two tape decks, one for playback and the other for recording.

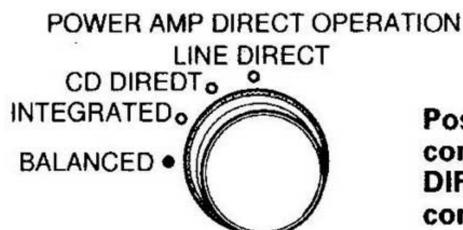
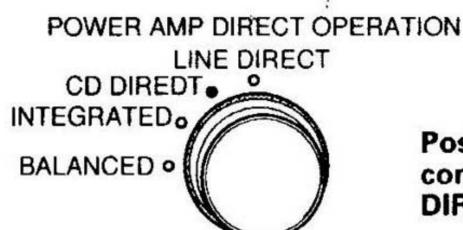
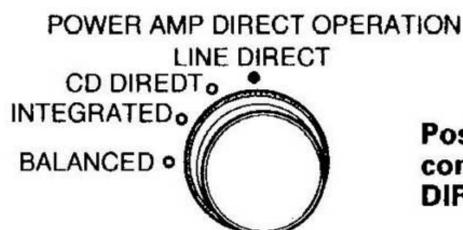


- * During tape copy, it is also possible to play another program source through speaker systems. If this is required, select the desired program source with the INPUT SELECTOR or POWER AMP DIRECT OPERATION switch.
- * The program source of tape copy can be played through speaker systems by setting the TAPE/DAT switch to TAPE-1 or TAPE-2 according to the player deck. If the recorder deck has the monitor function (that is, if it is a 3-head deck incorporating separate record and play heads), the recorded sound can be monitored by selecting the recorder deck with the TAPE/DAT switch.

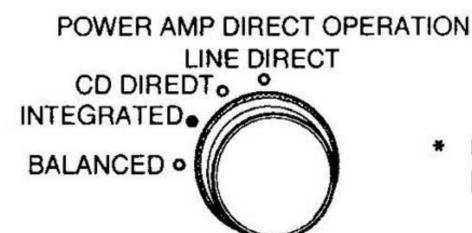
POWER AMP DIRECT OPERATION switch

Use the following procedure to play one of the components connected to the POWER AMP DIRECT jacks.

1. Set the POWER AMP DIRECT OPERATION switch to CD DIRECT, LINE DIRECT or BALANCED according to the component to be played.
2. Start playing the component by operating it.
3. Adjust the volume by aligning the power amp direct indicator with the desired figure on the scale marked around the VOLUME control knob.



- * Before changing the position of the POWER AMP DIRECT OPERATION switch, rotate the VOLUME control fully counterclockwise to the minimum position.
- * If the switch is set to other position than INTEGRATED, the BALANCE control, BASS/TREBLE controls, LOUDNESS switch and SUBSONIC switch are defeated.



When the switch position is changed from CD DIRECT, LINE DIRECT or BALANCED to INTEGRATED, the listening volume changes even if the VOLUME control is left in the same position; this is because of the difference in levels between the circuits.

Protector circuit

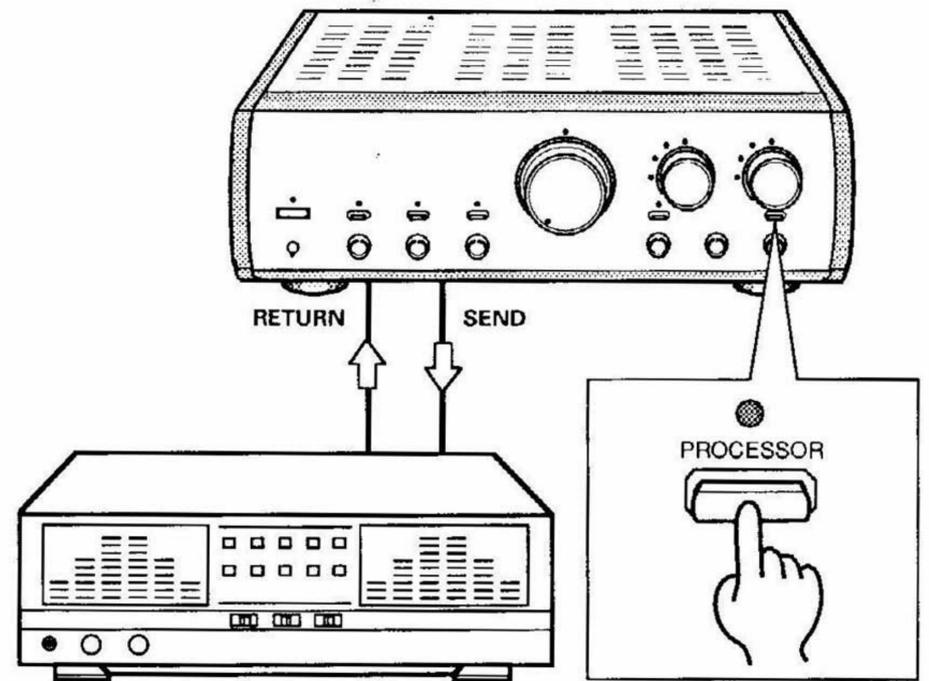
In case CD component leaks from any of the components connected to the input (INPUT/TAPE/DAT or POWER AMP DIRECT) jacks of this unit, the protector circuit is activated to protect the speakers (the PROTECTOR indicator blinks) and sound is not produced from them. In this case, the component causing this cannot be used.

Operating procedures

PROCESSOR switch

Use the following procedure to use the component connected to the PROCESSOR jacks (graphic equalizer, etc.).

1. Press the PROCESSOR switch so that the indicator lights up.
 2. Play a program source through this unit and operate the component connected to the PROCESSOR jacks.
- * When no component is connected to the PROCESSOR jacks or when the connected component is not to be used, be sure to set the switch so that the indicator is not lit.



Specifications

Power output

Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more than 0.003% total harmonic distortion.
160 watts per channel into 8 ohms.

Load impedance 4 to 16 ohms

Intermodulation distortion

(60 Hz: 7 kHz = 4:1 SMPTE method)

..... less than 0.008% at rated power output

Frequency response (at 1 watt)

Overall (from CD) 10 to 70,000 Hz, +0 dB, -3 dB
RIAA curve deviation (PHONO-MM, 20 Hz to 20 kHz)
..... +0.2 dB, -0.2 dB

Input sensitivity and impedance (at 1 kHz)

PHONO (MC) 300 μ V/100 ohms
PHONO (MM) 2.5 mV/47 kohms
(Max. input capability: 210 mV at 1 kHz, less than 0.01% total harmonic distortion)
CD, TUNER, LINE 150 mV/20 kohms
TAPE/DAT PLAY1,2 150 mV/20 kohms
PROCESSOR RETURN 150 mV/20 kohms

Output level (1 kHz)

TAPE/DAT REC1,2 150 mV into 47 kohms
PROCESSOR SEND 150 mV into 47 kohms

Signal to noise ratio (short-circuit, A-network)

PHONO (MC) 70 dB
PHONO (MM) 88 dB
CD, TUNER, LINE 110 dB
TAPE/DAT PLAY1,2 110 dB

Controls and Filter

BASS +6 dB, -6 dB (50 Hz)
TREBLE +6 dB, -6 dB (15 kHz)
SUBSONIC -3 dB at 16 Hz (6 dB/oct)

Loudness (at -30 dB volume level)

..... +6 dB (50 Hz)
..... +4 dB (10 kHz)

Power requirements AC 110 V / 230 V 50/60 Hz

Power consumption 800 watts

Dimensions 471 mm (18-9/16") W
163mm (6-7/16") H
452 mm (17-13/16") D

Weight 33.0 kg (72.9 lbs) net
35.0kg (77.3 lbs) packed

* Design and specifications subject to change without notice for improvements.

Troubleshooting, service request

Before requesting for service

Some of the troubles with the amplifier are attributable to the operating method or to other component than the amplifier. Before calling for service, read this instruction manual carefully and check the connections and operations again.

Sound is not produced at all.

- Is any power cord disconnected?
Also check the power cords of the turntable, CD player, tuner and tape decks.
- Are the speaker cords disconnected.
Check both the amplifier side and each speaker side.
- Are the pin-plug cords disconnected?
Also check the pin-plug cords of the turntable, CD player, tuner and tape decks.
- Is the PROTECTOR indicator blinking?
Check if the positive and negative speaker wires are contacting each other.
- Is the VOLUME control set to the minimum position?
- Is the INPUT SELECTOR set properly?
- Are the SPEAKERS switches set to the OFF positions?
- Is the POWER AMP DIRECT switch set properly?
- Is the PROCESSOR switch set properly?

Sound is not produced from a channel.

- Is any of the connection cord disconnected?
- Is the BALANCE control set to the LEFT or RIGHT position?

The reproduced sound is unnatural and the acoustic image is not well positioned.

- The speakers are connected with wrong polarity (+ and - matching error of cords and terminals).

The tone cannot be adjusted.

- Is the TONE indicator lit?

Noise is noticeable.

- Is any pin-plug cord or speaker cord half disconnected?

Recording is not possible.

- Is the REC SELECTOR set properly?

故障檢修，要求檢修

在要求檢修之前

放大器出現的某些故障是由於操作方法或者是由於放大器之外的其他部件而引起的。在要求檢修之前，請仔細閱讀本說明手冊，並且再次檢查連接方法和操作。

完全不能發出聲音。

- 電源接線是否斷開？
此外，應檢查唱盤、CD唱機、調諧器和錄音座的電源接線。
- 揚聲器接線是否斷開？
檢查放大器和每個揚聲器的側面。
- 針式插頭接線是否斷開？
此外，應檢查唱盤、CD唱機、調諧器和錄音座的針式插頭接線。
- PROTECTOR (保護器) 指示燈是否發生閃爍？檢查正負極揚聲器接線是否相互接觸？
- VOLUME (音量) 控制器是否設定為最小位置？
- INPUT SELECTOR (輸入選擇器) 是否正確設定？
- SPEAKERS (揚聲器) 開關是否設定為OFF (關閉) 位置？
- POWER AMP DIRECT (功率放大直接) 開關是否正確設定？
- PROCESSOR (處理器) 開關是否正確設定？

某個信道不能發出聲音。

- 連接接線是否斷開？
- BALANCE (平衡) 控制器是否設定至LEFT (左側) 或者RIGHT (右側) 位置？

重放聲音不自然，聲象未正確定位。

- 揚聲器連接極性錯誤 (接線和終端的+和-匹配錯誤)。

音調不能調整。

- TONE (音調) 指示燈是否點亮？

噪聲明顯。

- 針式插頭接線或者揚聲器接線是否半斷開？

不能進行錄製。

- REC SELECTOR (錄音選擇器) 是否正確設定？