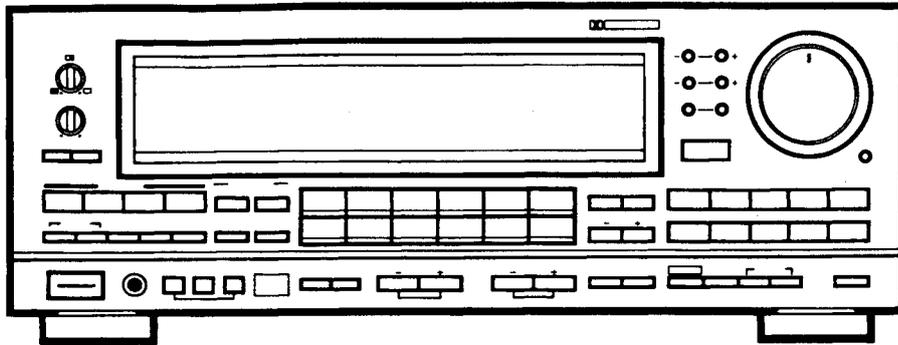


Operating Instructions

AUDIO/VIDEO STEREO RECEIVER

VSX-9700S

NTSC



Thank you for buying this Pioneer product.

When you read this manual for the first time, please proceed directly to:

1. the connection guide chart, page 8.
2. the general operation of the unit, page 11.

In this way you will become familiar with basic functions quickly and develop an understanding of the features in this unit. Consult the rear and front panel facilities section (page 21 & 29 respectively) for itemized details if need be. However please study the entire text for detailed knowledge of operation.

In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

For future reference, keep this manual in a safe place.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE

[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

About the Demonstration Mode

- The demonstration mode is activated by turning on the power switch while holding down the FM MODE switch (from power standby condition). The demonstration will appear on the display.
- Press any other switch to cancel the demonstration.

RETURN function

This key returns the unit to a set of initial settings and ready to broadcast tuner. This is helpful during troubleshooting or when no sound is output. For details, refer to "FRONT PANEL FACILITIES," page 24 and 28.

IMPORTANT



The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of 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.



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



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

SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS — The operating instructions should be retained for future reference.

HEED WARNING — All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

WATER AND MOISTURE — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION — The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING — The appliance should not be mounted to a wall or ceiling.

VENTILATION — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION — If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING — The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzene, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES — An outdoor antenna should be located away from power lines.

NONUSE PERIODS — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE — The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; or on the enclosure damaged.

SERVICING — The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

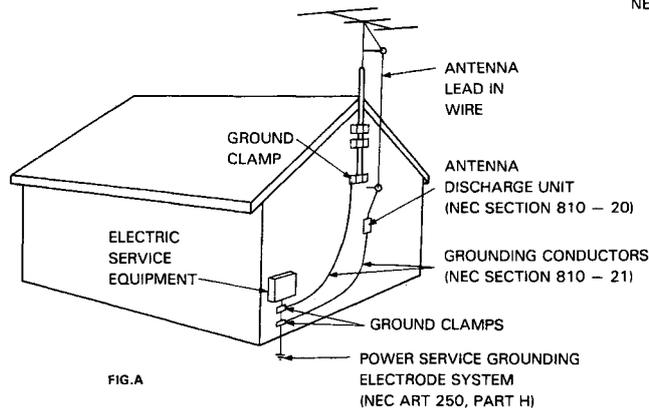
OUTDOOR ANTENNA GROUNDING — If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.

In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

CART — An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



NEC — NATIONAL ELECTRIC CODE



Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

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BEFORE OPERATING, ADJUST THE POSITION OF THESE SWITCHES

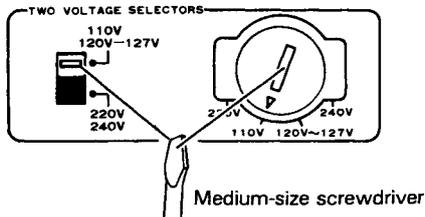
TWO VOLTAGE SELECTOR SWITCHES

Only multi-voltage models are provided with these switches. U.S., Canadian, European, U.K. and Australian models are not provided with these switches.

Mains voltages in Saudi Arabia are 127 V and 220 V only. Never use this model with 110 V setting in Saudi Arabia.

The line voltage selector switches are on the rear panel. Before your model is shipped from the factory, these switches are set to the power requirements of the destination. Check that they are set properly before plugging the power cord into the household wall socket. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switches as follows.

1. Use a medium-size screwdriver.
2. First, insert a screwdriver in the groove of the voltage selector at the right, and adjust so that the tip of the groove points to the voltage value of your area.
3. Next, insert a screwdriver in the groove of the voltage selector at the left and adjust until the voltage is the same as at the right.



NOTE:
Both switches must be in the same switch setting; otherwise, unit can be damaged.

CHANNEL STEP/FM DE EMPHASIS SWITCH

(Not available on U.S. and Canadian models)

The unit has been factory preset to the channel allocation and de-emphasis value for the area in which it is to be sold. If these values are set incorrectly, the frequency display may stop at the wrong frequency, or sound may be distorted, resulting in an inability to reproduce reception signals at their proper sound quality. For this reason, be sure to confirm that the values are set correctly before first using the unit.

[100kHz/10kHz/75μs] position:

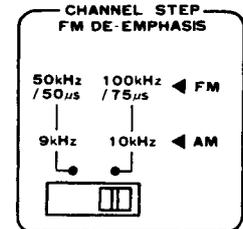
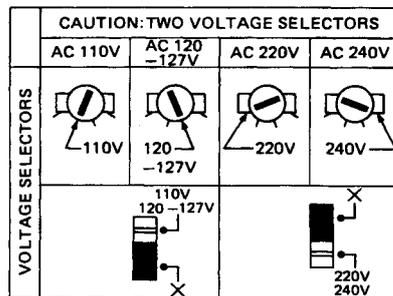
Set to this position for areas with an FM reception step of 100kHz, AM 10kHz, and de-emphasis 75μs.

[50kHz/9kHz/50μs] position:

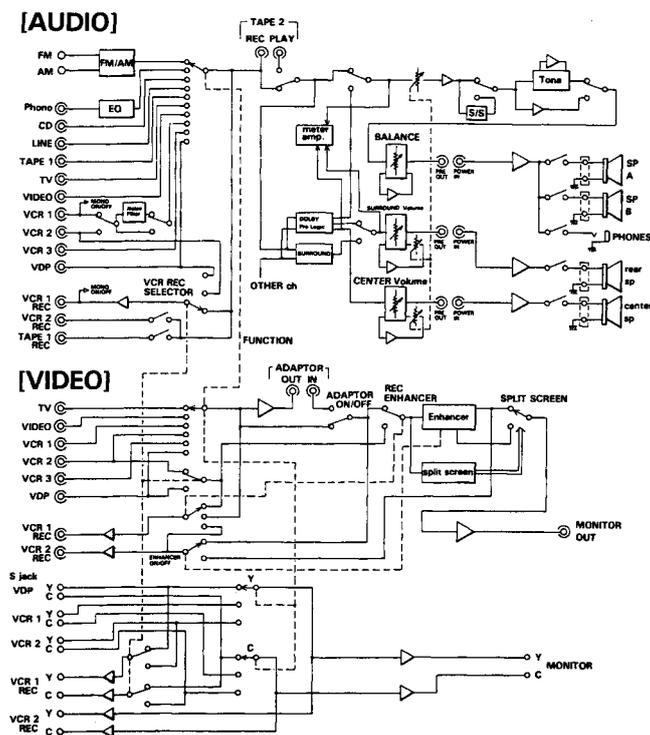
Set to this position, for areas with an FM reception step of 50kHz, AM 9kHz, and de-emphasis 50μs.

NOTE:

When unsure about the channel allocation and de-emphasis values for your area, consult your dealer for correct information.



BLOCK DIAGRAM



FEATURES

The VSX-9700S audio-video components combine the functions of receiver, wireless remote control, audio-video selector, surround processor and video enhancer. It will play a central role in your enjoyment of audio- video media.

- **BUILT-IN DIGITAL DELAY, DOLBY PRO LOGIC SURROUND CIRCUIT AND 5 POWER AMPLIFIER MODES**

Enjoy the presence and the expansive effect of surround playback. Three different surround effect and 3-step delay times are available.

- **MOTOR DRIVEN LARGE VOLUME KNOB WITH LED INDICATOR**

The large volume knob contributes to operational convenience and positive response. You can even operate it via remote control. When you change the volume setting using the remote, the knob turns by itself, making it easy to keep track of the current setting.

- **ENHANCER, SPLIT-SCREEN FUNCTION**

The built-in detail-type enhancer is beneficial when making copies of VCR tapes. Also, by using the split-screen function, you can simultaneously view the enhanced and original (non-enhanced) images. In this way you can select the optimum settings for enhancing the image. This can be applied to both the monitor signal and the VCR 1, VCR 2 REC OUT signals, or to the VCR 1 REC OUT signal alone.

- **VIDEO SIGNAL SELECTOR (Simulcast function)**

Allows free combination of various audio video sources during playback and over-dubbing, enabling you to produce your own original video program.

- **MULTI-ROOM REMOTE JACK**

An input jack is provided on the rear panel for the Multi-room Remote control.

- **TWO-WAY VCR COPYING AND MONITORING**

VCR 1 ↔ VCR 2: Copying of video cassette tapes can be performed in either direction.

VDP/CDV, TV, VCR 3, VIDEO → VCR 1, VCR 2: VCR 1 and VCR 2 can be used for recording from units connected to the VDP/CDV, TV, VCR 3 and VIDEO jacks.

- **VCR 1 RECORDING SELECTOR FUNCTION**

You can record on VCR 1 from VDP/CDV or VCR 2, regardless of other functions.

- **ACOUSTIC MEMORY FUNCTION**

Five types (A—E) of tone control settings can be preset. The settings for loudness and flat tone response functions can also be selected quickly.

- **STATION CALL-LETTER DISPLAY FUNCTION**

The call-letters of broadcast stations can be preset (up to four characters).

After presetting, the display can show the broadcasting frequency and the call letters depending on the preset letters (for example WBAC, JAZZ, NEWS, etc.).

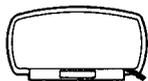
- **AUDIO/VIDEO PROGRAMMABLE REMOTE CONTROL UNIT**

With the attached remote control unit you can operate any Pioneer audio or video component bearing the  mark. Using additional learning functions a whole AV surround system including a TV and VCR from other manufacturers can be controlled. (Some manufacturers' remote control systems, however, are not suitable for programming.)

ACCESSORY ITEMS



FM T-type Antenna



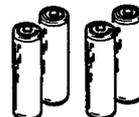
AM Loop Antenna



Audio/Video programmable remote control unit



Template x 2



Alkaline dry cell battery x 4 (size "AAA" (LR03/AM-4))

SURROUND EFFECT

This unit has a built in surround processor for adding presence and an expansive effect to the sound.

- **STADIUM:**

Effective for a stereo but not a monaural source. The "STADIUM" effect creates efficient, reverberated sounds to obtain an expansive sound field. For music sources like a rock concert, you can feel if you were at the live concert seated very close to the stage. For sports programs such as a baseball game, you can enjoy a powerful sound, thus obtaining a stadium-like effect.

- **SIMULATED SURROUND:**

The "SIMULATED SURROUND" creates of reverberated and reflected sound from the walls and ceiling similar to a concert hall. These sound-effects added to the actual sound from the source make you feel as if in a more expanded space. The different ranges of the expanded space can be set by the Delay Time key. Set the Delay Time to 15 ms or 20 ms for a live-house concert. For chamber music, set to 20 ms. For orchestral music, set to 30 ms. The "SIMULATED SURROUND" also gives the effects on monaural sources by outputting the reverberated sound from rear speakers while keeping the output sound from front speakers as it is. Turn on the "SIMULATED STEREO" for a monaural source to gain the effective surround playback.

- **DOLBY PRO LOGIC SURROUND**

Choose this setting for movies and music (especially Video Discs and video tapes bearing the  mark) playback. DOLBY PRO LOGIC SURROUND continuously detects the size and direction of the dominant signal and cancels undesirable crosstalk, thereby providing signal emphasis.

It makes you clearly perceive the directions where music comes from. Real flow of sound also can be re-created naturally using this feature. You can feel as if being in the outstanding and expansive sound field.

You can choose from the following settings:

Center Mode Choices:

(When using a center speaker:)

- **NORMAL** — Low range frequencies, which have little effect on directionality and positioning, are routed to the left and right front speakers. So you can use a relatively small size speaker as the center speaker.

- **WIDE** — If you use a large size center speaker, choose this setting. The full frequency range of the Dolby Surround center channel, from low to high, is routed to the center speaker.

(When not using a center speaker:)

- **PHANTOM** — The signal which would have been sent to the center speaker is divided equally between the left and right front speakers.

- **OFF** — There will be no sound from the center speaker. Ordinarily, select and use one of the three modes mentioned above.

When using DOLBY PRO LOGIC SURROUND, a delay time setting of 20 ms is commonly used. Use a different setting if you prefer.

Even if they do not bear the  mark, some video recordings may be Dolby Surround encoded.

DOLBY SURROUND mode can be used with stereo sources not encoded with DOLBY SURROUND. Adjust the volume of each speaker to obtain a suitable surround effect.

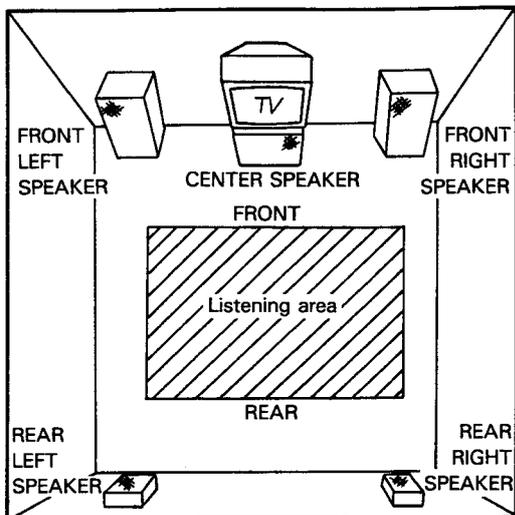
Choose the SIMULATED SURROUND mode if the source sound signal is mono. Little or no sound will be heard from the surround speakers if the STADIUM or DOLBY PRO LOGIC SURROUND mode is selected.

With DOLBY PRO LOGIC SURROUND, monaural source sound will be heard only from the center channel at settings other than the PHANTOM position.

SURROUND SPEAKER INSTALLATION EXAMPLE

To get the best effect out of the surround system, place the speakers as shown below.

An example for center speaker location



NOTE:

- To avoid interference with the picture on a nearby TV set, use magnetically shielded speaker systems. This is particularly important for the center speaker since it is usually located closest to the TV.
- Position the left and right channel speakers at equal distances from the TV set and approximately six feet from each other.
- Position the center speaker above, below, or behind the TV set. Sound may not appear to coincide with the picture if you position it next to the TV set.
- Rear speakers are best positioned slightly above ear level.

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Note:
 Dolby Surround will not operate correctly if the signal passes through a graphic equalizer.
 When using Dolby Surround, turn off the TAPE 2 switch or set the graphic equalizer for flat response or to its "through (defeat)" (or off) setting, if it has one.

TWO WAY SOUND EFFECTS

VCR NOISE FILTER

When playing back video tapes, if the audio channels contain noticeable high-frequency tape hiss, pressing this switch will improve the sound.

NOTE:
 The VCR NOISE FILTER has no effect on VCR 3 playback.

SIMULATED STEREO

This function transforms monaural signals into simulated stereo sound. Use it when you wish to experience a sense of stereo presence when listening to AM broadcasts, a monaural VCR or other monaural signal sources.

NOTE:
 The simulated stereo function can also be used with stereo sound sources, but it will result in an effect somewhat different from the normal stereo sound.

CONNECTION CHART (1)

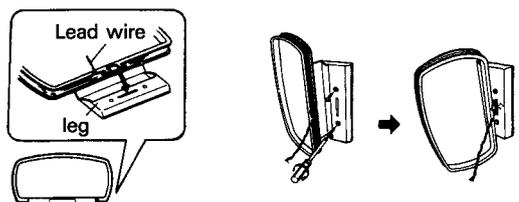
Basic Audio Component Connections

• Illustration shows U.S. model.

Accessory T-type FM antenna

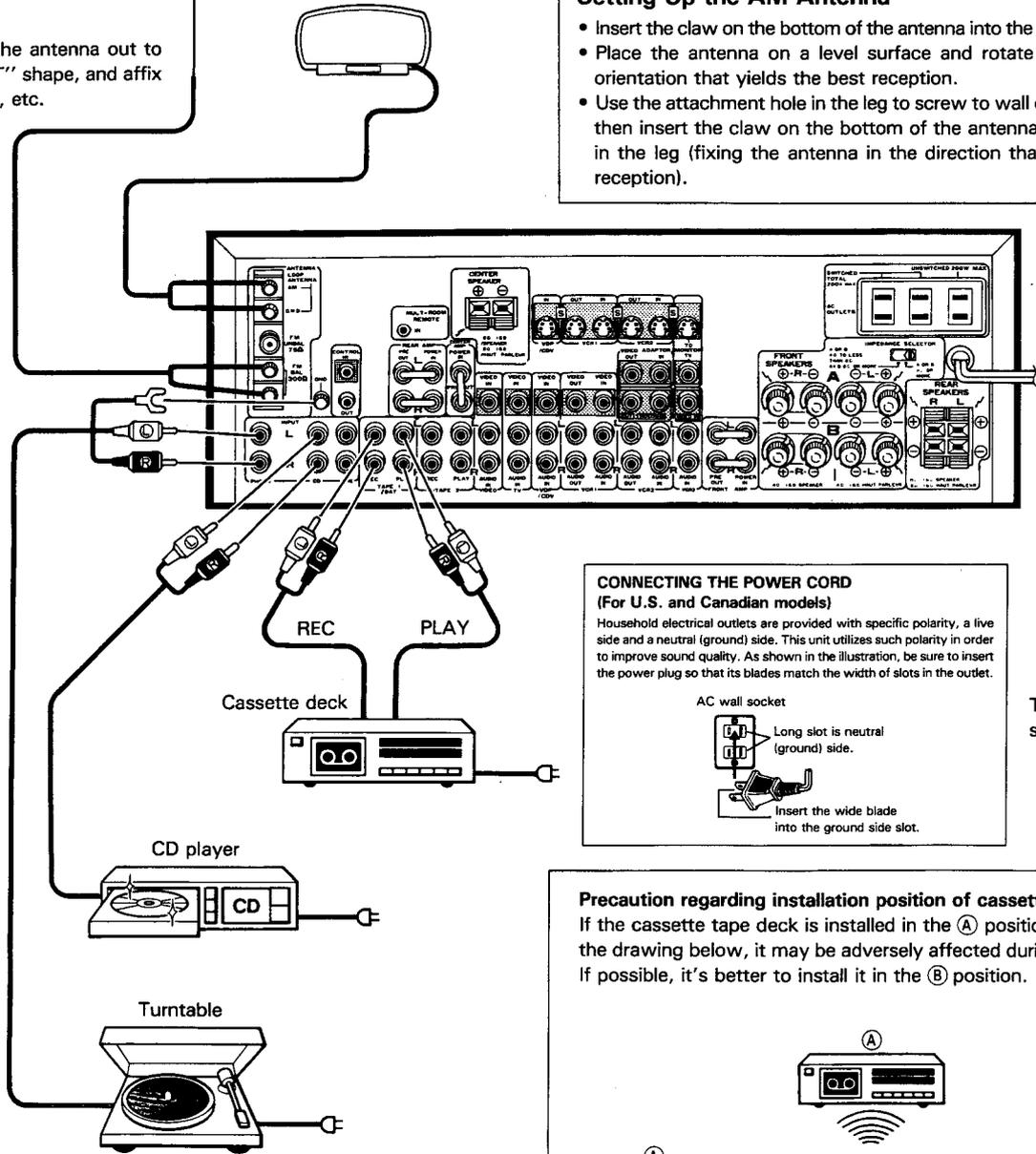
Accessory AM loop antenna

Stretch the antenna out to its full "T" shape, and affix to a wall, etc.



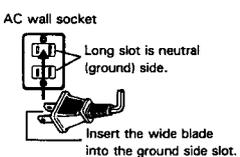
Setting Up the AM Antenna

- Insert the claw on the bottom of the antenna into the groove in the leg.
- Place the antenna on a level surface and rotate it to locate the orientation that yields the best reception.
- Use the attachment hole in the leg to screw to wall or other location, then insert the claw on the bottom of the antenna into the groove in the leg (fixing the antenna in the direction that gives the best reception).



CONNECTING THE POWER CORD
(For U.S. and Canadian models)

Household electrical outlets are provided with specific polarity, a live side and a neutral (ground) side. This unit utilizes such polarity in order to improve sound quality. As shown in the illustration, be sure to insert the power plug so that its blades match the width of slots in the outlet.



AC wall socket

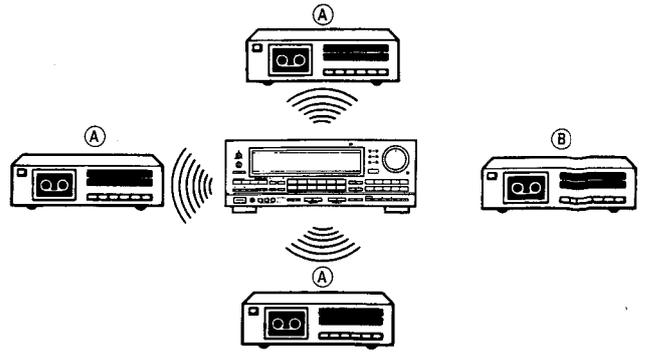
Long slot is neutral (ground) side.

Insert the wide blade into the ground side slot.

To AC wall socket

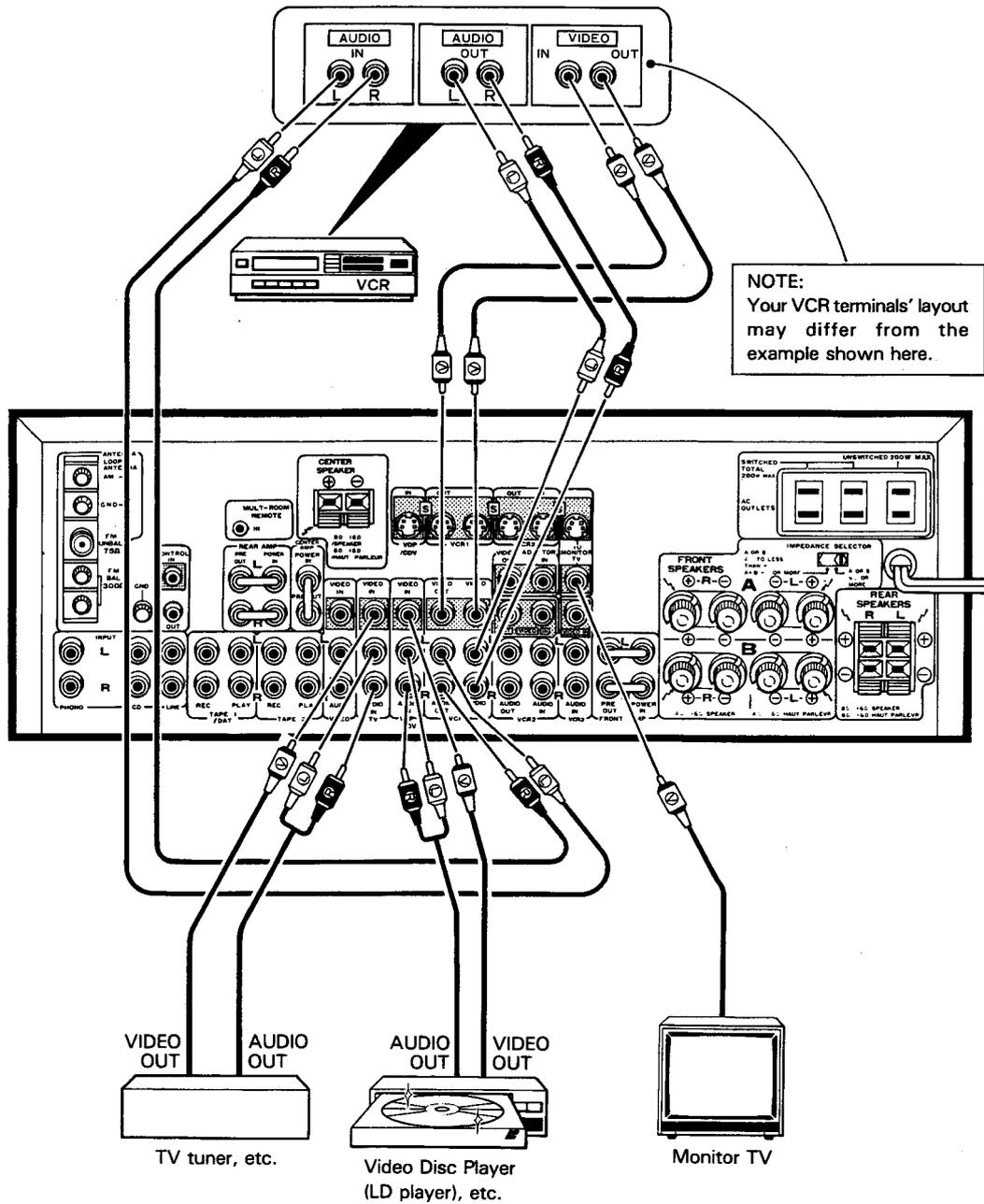
Precaution regarding installation position of cassette deck.

If the cassette tape deck is installed in the (A) positions shown in the drawing below, it may be adversely affected during playback. If possible, it's better to install it in the (B) position.



Basic Video Component Connections

- Illustration shows U.S. model.



CONNECTION CHART (1)

**Surround Speakers Connections
(Complete Diagram)**

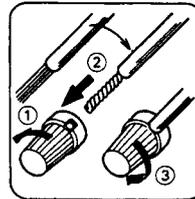
* Illustration shows U.S. model.

NOTE:

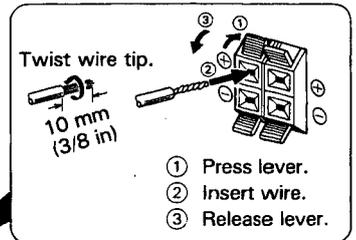
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.

Center speaker impedance

Connect center speaker system with a nominal impedance of between 8 and 16 ohms.

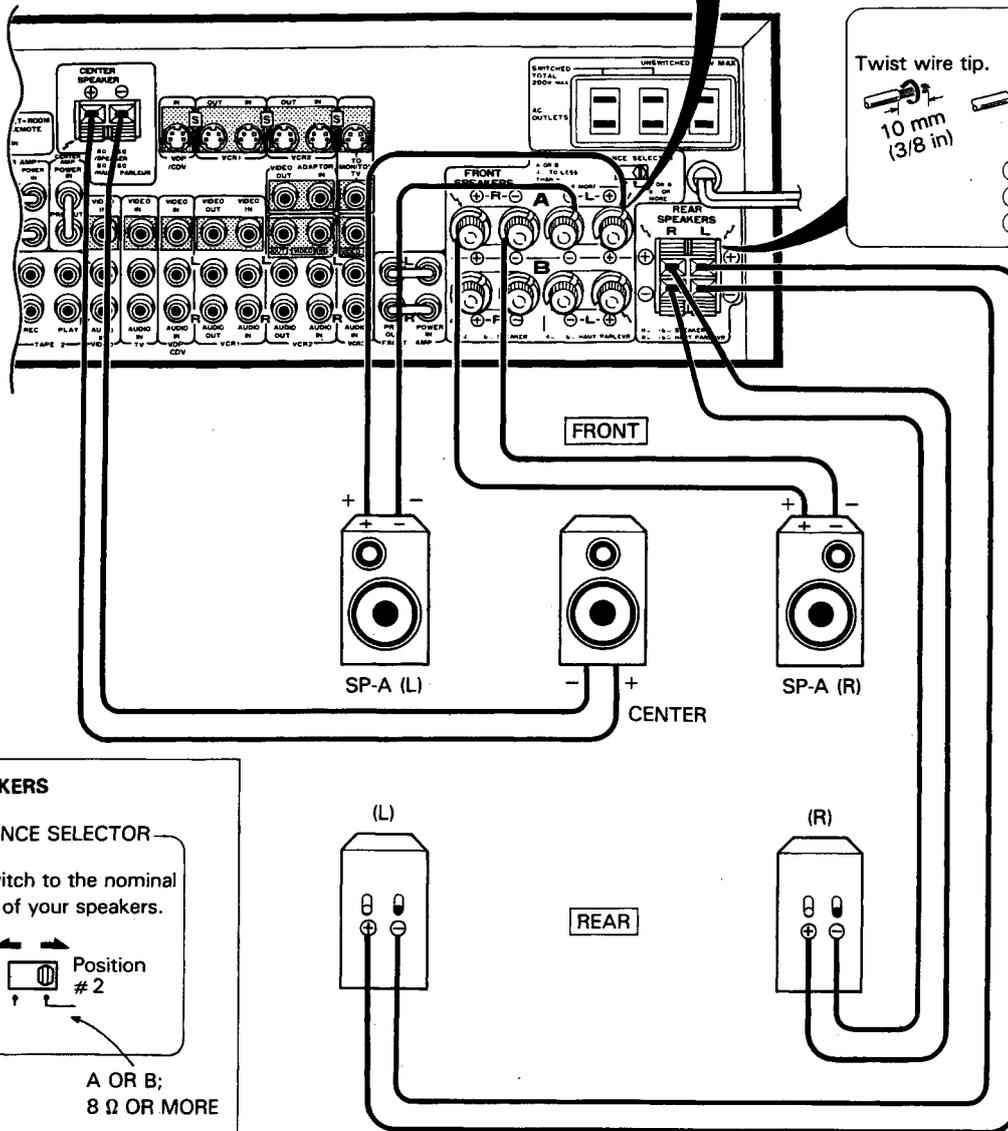


- ① Loosen cap.
- ② Insert wire.
- ③ Tighten cap.



Twist wire tip.
10 mm
(3/8 in)

- ① Press lever.
- ② Insert wire.
- ③ Release lever.



FRONT SPEAKERS

IMPEDANCE SELECTOR

Set this switch to the nominal impedance of your speakers.

Position #1 Position #2

A OR B;
4 Ω TO LESS
THAN 8 Ω

A + B; 8 Ω OR MORE

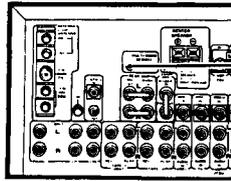
Rear speaker impedance

Connect rear speaker systems with a nominal impedance of between 8 and 16 ohms.

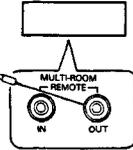
NOTES:

- Be sure to observe speaker polarity.
- If you have one pair of speakers only, connect it to front speaker terminals A or B.
- Position #1: when using one pair of speakers (4 Ω to 8 Ω) or two pairs of speakers (8 Ω or more for each speaker).
- Position #2: when using on pair of speaker of more than 8 Ω.

OPTIONAL MULTI-ROOM CONTROL ADAPTOR CONNECTION



Multi-Room Remote control unit MR-100 (option)

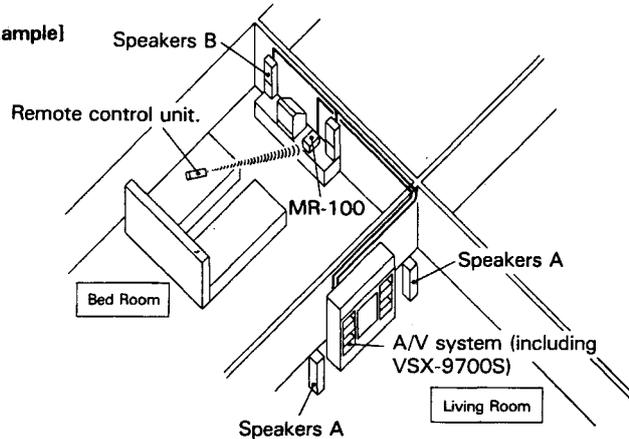


• For details, see operating instructions for multi-room remote control unit MR-100.

NOTE:

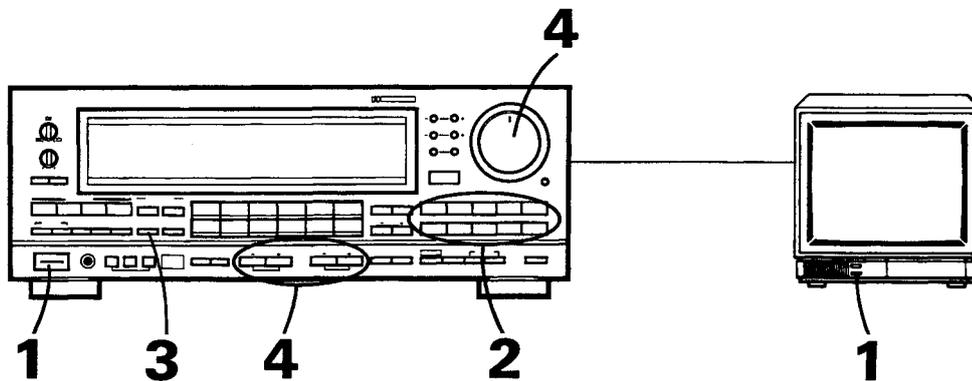
Be careful not to make the wrong connections for CONTROL IN/OUT (black) and MULTI-ROOM REMOTE IN (green).

[Set-up example]



You can operate the main system by remote control from a different room in which are installed a speaker system or monitor TV set if you also install a Multi-Room remote control unit in that room.

RECEIVING FM-TV SIMULCAST PROGRAMS

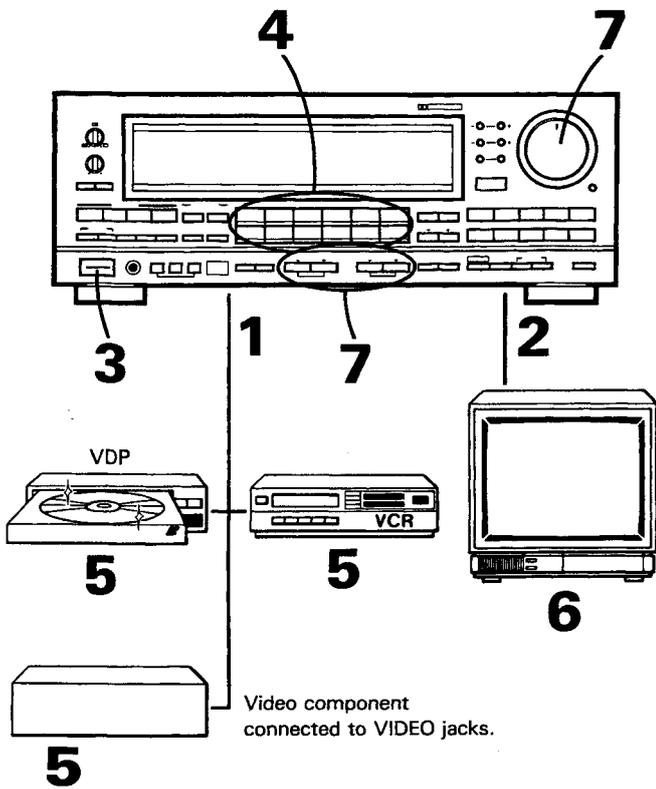


By combining a TV set and a VCR (or TV tuner), you can receive FM simulcast TV programs (stereo TV sound transmitted from an FM radio station) while viewing the video portion on your TV.

1. Press the POWER switch to the ON position, and turn on the power to the other components to be used.

- 2. Tune in the desired FM simulcast TV program on the receiver.
- 3. Select TV picture with the VIDEO SIGNAL SELECTOR switch.
- 4. Adjust the volume and tone controls as desired.

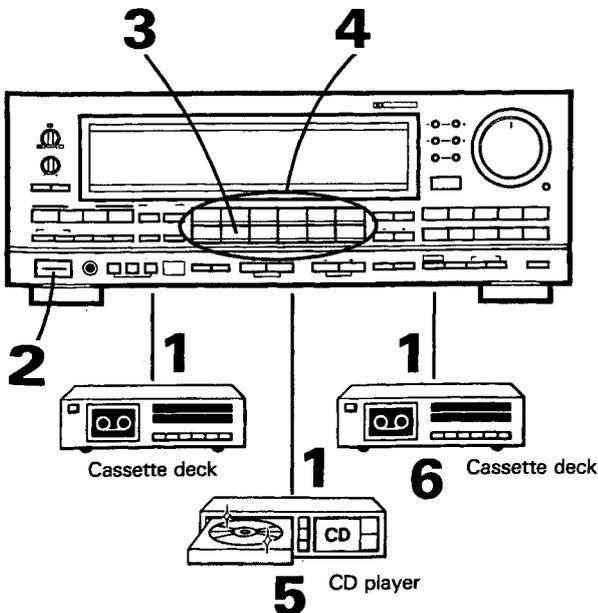
WATCHING VIDEO SOURCES



Refer to page 9 "Video Component Connection." and page 35.

1. Connect the video components to the VCR 1, VCR 2, VCR 3, VDP/CDV or VIDEO jacks.
2. Connect the TV set,
Connect the receiver's VIDEO OUT TO MONITOR TV jack to the TV (or monitor TV) video input terminal.
3. Press the POWER switch to the ON position, and turn on the power to the other components used.
4. Set the INPUT SELECTOR switch to the appropriate video component to be played back.
5. Play back the video component.
6. Operate the TV set to display the playback picture.
 - When using a TV set equipped with video input terminals, set it to video input playback mode.

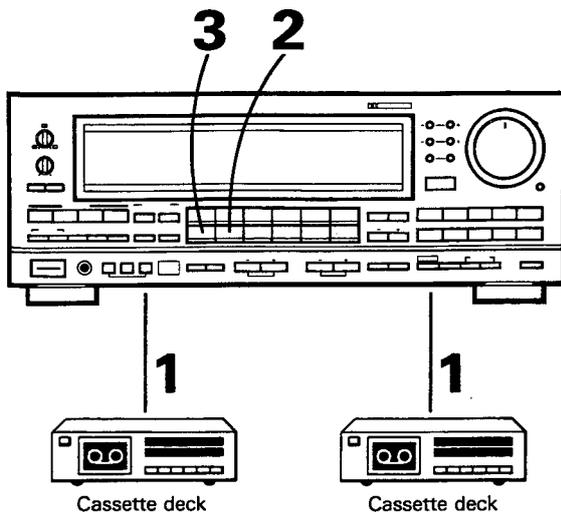
SOUND RECORDING WITH AN AUDIO TAPE DECK



RECORDING

1. Connect the audio source component while referring to page 8 "Audio Component Connection." and page 34.
2. Press the POWER switch to the ON position.
3. If recording on TAPE 2, turn off the TAPE 2 MONITOR switch. If recording on TAPE 1, the source selected by the INPUT SELECTOR switches will be recorded (except for TAPE 2 MONITOR switch).
4. Use the INPUT SELECTOR switch to select the desired program source.
 - To select a TUNER function, press the desired STATION CALL switch if the station has been preset. If the desired station has not been preset, tune in the station using Auto, Manual or Direct Access tuning.
5. Play the desired program source (record, compact disc, etc.).
6. Begin recording by following the operating procedures for the applicable cassette deck.
 - The volume, balance and tone controls have no effect on the recording.

SOUND RECORDING WITH AN AUDIO TAPE DECK



COPYING TAPES

The following operation is TAPE 1 → TAPE 2 copying.
TAPE 2 → TAPE 1 copying is not possible.

1. Connect the cassette deck to be used for playback to the TAPE 1/DAT jacks, and the cassette deck for recording to the TAPE 2 jacks.
2. If the TAPE 2 MONITOR switch is ON, press to turn it to OFF.
3. Press the TAPE 1/DAT switch.
 - Set the playback deck to the playback mode and simultaneously set the recording deck to the recording mode.
 - If the recording cassette deck is equipped with a monitoring function, the recording can be monitored by pressing the TAPE 2 MONITOR switch to the ON position.

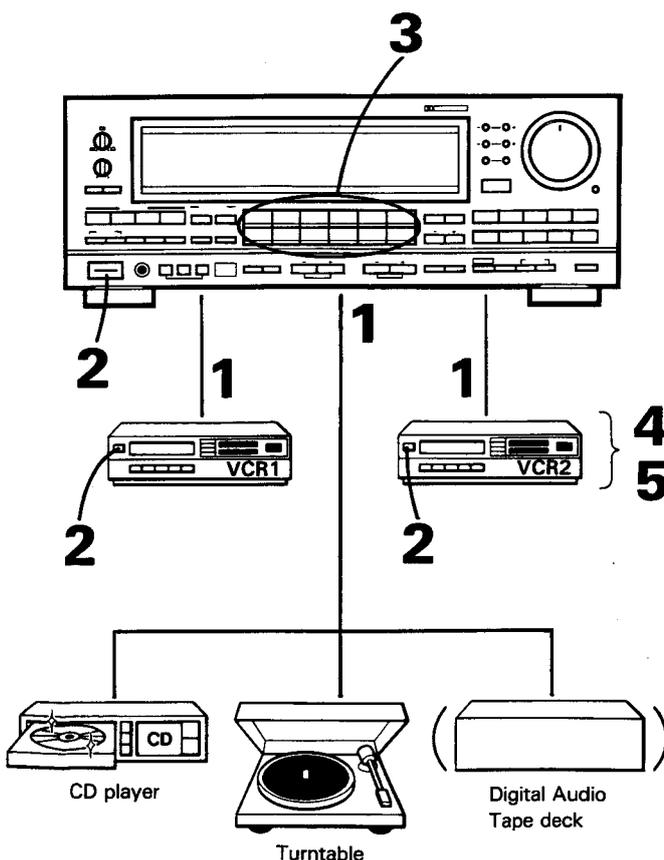
Tape monitoring

When recording is performed on a cassette deck equipped with monitoring function, the recorded sound can be monitored through the speaker system by pressing the TAPE 2 MONITOR switch. In this case, both recording and playback connections must be made.

NOTE:

If a two-head open-reel or cassette deck is used, monitoring of the recorded sound will not be possible, even if the TAPE 2 MONITOR switch is pressed. It will still be possible, however to listen to the original program source sound.

SOUND RECORDING WITH HI-FI VIDEO DECK



Refer to the connection procedures on pages 8, 9, 33 and 34, and the Hi-Fi VCR's Operating Instructions regarding proper operation procedures. Recording can be performed on both VCR 1 and VCR 2.

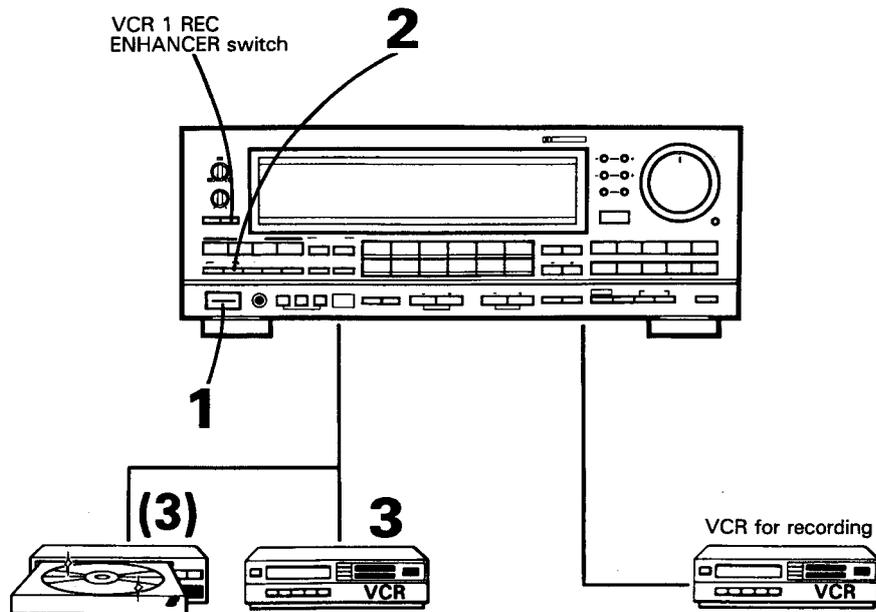
RECORDING SOUND ON A VIDEO TAPE

1. Connect the VCR to be used for recording.
2. Press the POWER switch to the ON position and turn on the power to the other components.
3. Use the INPUT SELECTOR switch to select the desired program source.
 - To select a TUNER function, press the desired STATION CALL switch if the station has been preset. If the desired station has not been preset, tune in the station using Auto, Manual or Direct Access tuning.
4. Insert a video cassette for recording into the Hi-Fi VCR and adjust the recording level.
 - Select the line input for VCR.
 - For details, consult the Operating Instructions for the Hi-Fi VCR used.
5. Start the program source and set the VCR to the recording mode.
 - The volume, balance, and tone controls have no effect on the recording.

About Video Recording and Video Copying

- You cannot record on VCR 2 if the VCR 1 REC SEL switch is set to VCR 2 → VCR 1.
- VCR 1 can record a stereo program source in stereo by setting the VCR 1 mode switch accordingly.
- If your VCR 1 component can record in stereo and the source signal is also in stereo, then set VCR 1 MODE switch accordingly.

Using VCR 1 REC SEL (SELECTOR) switch



It is possible to make video copies from VDP/CDV to VCR 1 or from VCR 2 to VCR 1 regardless of the INPUT SELECTOR switch setting. By using the VCR 1 REC ENHANCER switch, it is possible to record to VCR 1 the enhancer processed signal.

NOTE:

If VCR 1 REC ENHANCER is ON, the enhancer will process the image designated with the VCR 1 REC SEL switch. Therefore, the enhancer will not affect the signal from the component selected with the INPUT SELECTOR. The enhancer does not affect VCR 2 REC or VIDEO OUT.

1. Press the POWER switch to the ON position, and turn on the power to the connected components (VCR 1, VCR 2, VDP/CDV, etc.).
2. Select the recording mode with the VCR 1 REC SEL switch.
 - Either the **VCR 1** ← **VCR 2** or the **VCR 1** ← **VDP/CDV**
 VCR 1 RECORDING indicators will light.
3. Set the VCR 2 or video disc player to the playback mode.

When not using the VCR 1 REC ENHANCER function:

- ① Set the VCR 1 REC ENHANCER switch to OFF.
 - The ENHANCER REC indicator will go out.
- ② Set the VCR 1 to the recording mode.

When using the VCR 1 REC ENHANCER function:

Set the INPUT SELECTOR switch to the component selected with the VCR 1 REC SEL switch. Follow the instructions in "When using the enhancer function" under "VIDEO TAPE COPYING" to adjust the enhancer control. After adjustments are completed, the INPUT SELECTOR can be set to any component other than VCR 1.

- ① Set the VCR 1 REC ENHANCER switch to ON.
 - The ENHANCER REC indicator will light.
- ② Set the VCR 1 to the recording mode.

NOTE:

A video image enhanced by a video adaptor cannot be recorded.

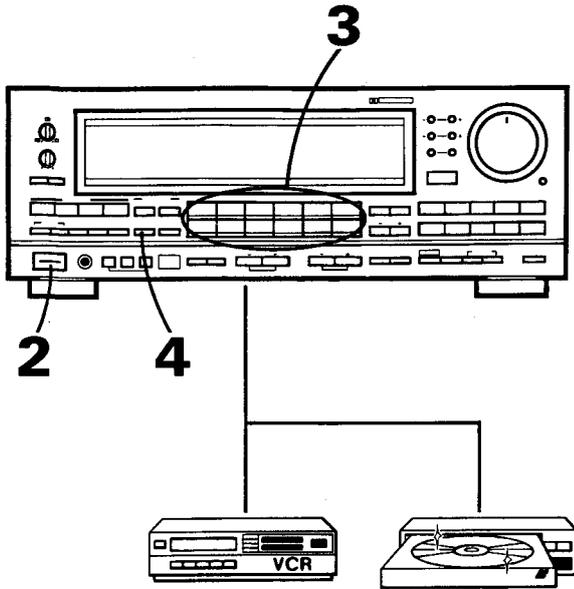
The ENHANCER switch will not operate if the VCR 1 REC ENHANCER is ON (ENHANCER REC indication is lit) while the VCR 1 REC SEL switch is on.

Turn off the VCR 1 REC SEL switch if you want to enhance the signal sent to the VIDEO OUT jacks.

About Video Recording and Video Copying

You cannot record on VCR 2 if the VCR 1 REC SEL switch is set to VCR 2 → VCR 1.

THE VIDEO SIGNAL SELECTOR



This function can be used to allow you to listen to the playback sound while changing the video image only, thus allowing you to play back and record video images different from the playback sound source. For example, VCR 1 can record VCR 2 picture mixed with CD sound.

1. Connect the audio and video component to be used.
2. Press the **POWER** switch to the **ON** position, and turn on the power to the other components used.
3. Set the **INPUT SELECTOR** switch to the audio source (CD, for example).
 - To select the tuner function, press the desired **STATION CALL** switch if the station has been preset. If the desired station has not been preset, tune in the station using Auto, Manual or Direct tuning.

4. Set the **VIDEO SIGNAL SELECTOR** switch to the video component (VCR 1, VCR 2, VCR 3, VDP/CDV, TV or VIDEO) used for playback. (For example, use VCR 2.)

NOTE:

- Set the **VCR 1 REC SEL** switch to **OFF**.

[Video recording]

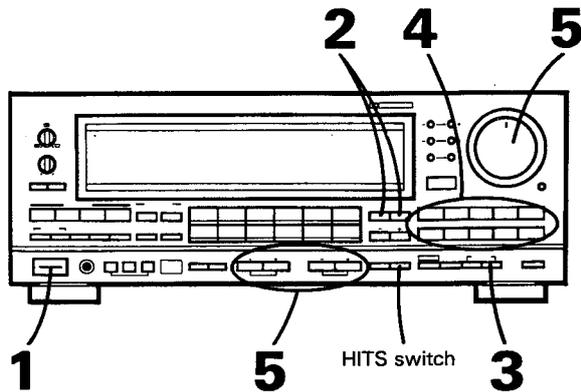
- Select a video signal source other than VCR 1.
5. Load a video cassette tape into the VCR (VCR 1, for example) to be used for recording.
 6. Set the recording VCR (VCR 1, for example) to the recording pause mode.
 - When using the **ENHANCER** function, see step 4 of the section "VIDEO TAPE COPYING: When using the enhancer function."
 7. Start playing the desired audio program source (CD, for example).
 8. Release the recording pause mode of the recording VCR (VCR 1, for example)

CAUTION:

- If you must operate the **VIDEO SIGNAL SELECTOR** switch during recording, do so after setting the recording VCR to the pause mode. If the switch is operated when the tape is traveling during recording, the recorded image and sound may be disrupted at the point at which the switch is operated.
- If you experience no video or wrong video, push the appropriate video selector switch for the function being used.

TUNER

DIRECT ACCESS TUNING



When you know the frequency of the desired station, the frequency can be input directly using the STATION CALL (number) switches in the following way:

1. Press the **POWER** switch to the **ON** position.

NOTE:

Be sure to turn the **TAPE 2 MONITOR** switch **OFF** when listening to **AM** or **FM** broadcasts.

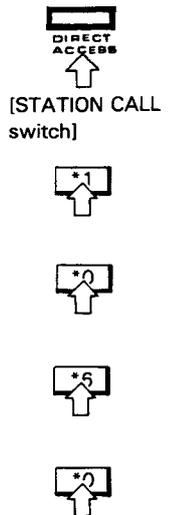
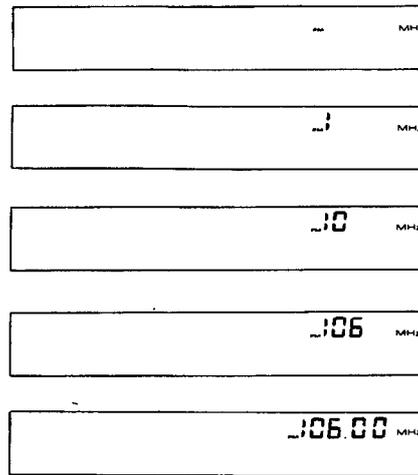
2. Select either **FM** or **AM** using the **BAND** selector.
3. Press the **DIRECT ACCESS TUNING** switch.
4. Input the desired station frequency using the **STATION CALL** switches.

When inputting the tuned stations into the station call switches, please refer to "PRESET TUNING" page 19.

HITS function

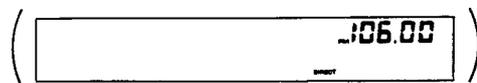
Press the **HITS** switch during frequency input and the remaining digits are assigned zeros. The receiver then searches over a frequency band edge from that center frequency for the nearest station and tunes in the first one it finds. If no receivable station is found within the band range, the receiver returns to the state it was in before the switch was pressed.

Example 1: To receive **FM 106.00 MHz**

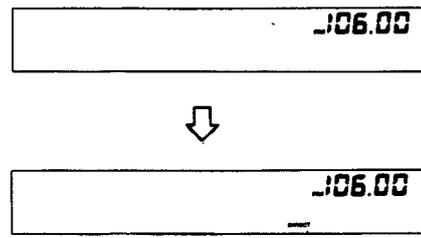


FOR MULTI VOLTAGE MODEL

- When the **CHANNEL STEP** switch is set to **FM 100 kHz**, the tuning operation is completed and reception begins.



When the **CHANNEL STEP** switch is set to **FM 50 kHz**:



Once the station frequency has been input, the receiver tunes into that frequency. If the input frequency falls below the lower or higher limit of the receiver's receivable frequency range (FM: 87.5 MHz — 108 MHz, AM: 10 kHz STEP 530 kHz — 1,700 kHz, 9 kHz STEP 531 kHz — 1,602 kHz) "LOWER" or "UPPER" is displayed, indicating that the frequency which has been input cannot be tuned in.

5. Adjust the **MASTER VOLUME** and tone as desired.

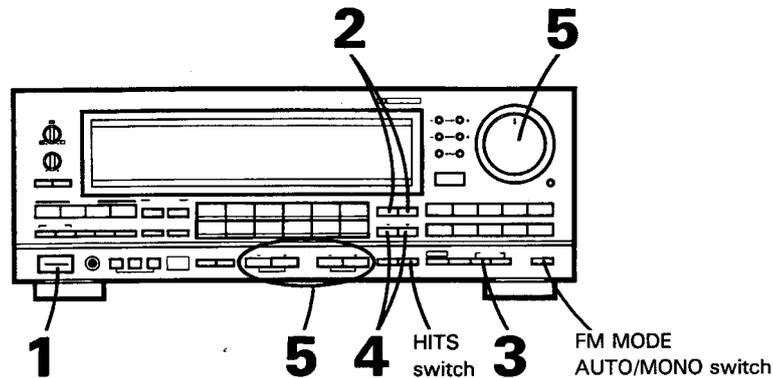
To cancel frequency input

If none of the **STATION CALL** switches (*1 — *0) are pressed for a period of approximately five seconds, the unit returns to the state it was in before the **DIRECT ACCESS** switch was pressed.

Notes regarding FM direct access tuning

- When the **CHANNEL STEP** switch is set to the **FM 100 kHz** position, there is no need to input the last digit "0" of the desired station frequency. Depending on the station frequency, inputting the first two or three digits is often sufficient.

AUTO OR MANUAL TUNING



1. Press the **POWER** switch to the ON position.

NOTE:

Be sure to turn the **TAPE 2 MONITOR** switch OFF when listening to AM or FM broadcasts.

2. Use the **BAND** selector to choose either FM or AM.

AUTO tuning:

Auto tuning is convenient when you do not remember the frequency of a desired station, or when you wish to find stations that you do not normally listen to.

For AUTO tuning:

3. Set the **AUTO/MANUAL** switch to the auto tuning mode.
 - In the Auto Tuning mode, the **AUTO** indicator will light.
4. Press the **“+”** or **“-”** switch of the **TUNING** switches.
 - Pressing **“+”** causes scanning to take place in the direction of increasing frequency. Pressing **“-”** causes scanning to take place in the direction of decreasing frequency.
 - When a station is received, scanning will stop (the **TUNED** indicator lights). If you wish to receive a different station, press the **TUNING** switch (**“+”** or **“-”**) again.

MANUAL tuning:

This is the “normal” tuning mode. Each time the **TUNING** switch **“+”** or **“-”** is pressed, the tuning frequency changes by one channel step, allowing you to find stations manually.

For MANUAL tuning:

3. Set the **AUTO/MANUAL** switch to the manual tuning mode.
 - When in the Manual Tuning mode, the **AUTO** indicator will go out.
4. Press the **“+”** or **“-”** switch of the **TUNING** switch as necessary to set to the frequency of the desired station.
 - Each time the switch is pressed, the tuning frequency will change by one step in the direction corresponding to the switch pressed. When pressed continuously, the reception frequency will also change continuously.
 - When a station is received, the **TUNED** indicator will light.
 - When the received station is broadcasting a program in FM stereo, the **STEREO** indicator will light. The **STEREO** indicator will not light if the **FM MODE** switch is set to **FM MONO**.
5. Adjust the **MASTER VOLUME** and tone as desired.

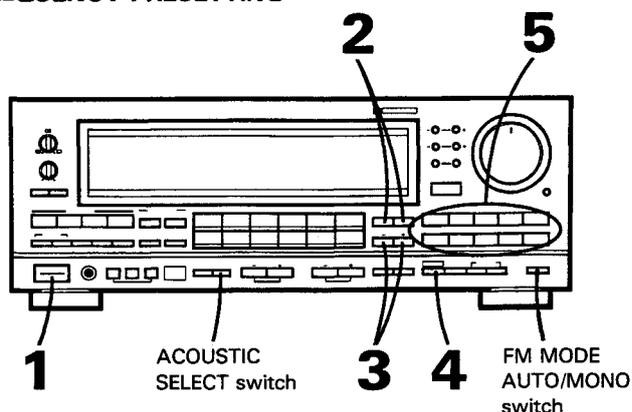
NOTE:

- When Auto Tuning is used, correct reception may not be possible for very distant stations or stations with very weak signals. In this event, Manual Tuning is recommended.
- The **TUNED** indicator may not light with broadcasts received over long distances, or when the broadcast signals are extremely weak.

HITS function

When the **HITS** switch is pressed, the receiver searches from the current frequency for the nearest station and tunes in the first one it finds. If no receivable station is found within the band range, the receiver returns to the state it was in before the switch was pressed.

RESET TUNING FREQUENCY PRESETTING



1. Press the **POWER** switch to the ON position.

NOTE:

Be sure to turn the **TAPE 2 MONITOR** switch OFF when listening to AM or FM broadcasts.

2. Set the **BAND** selector to either FM or AM.
3. Tune in the desired station.

- See the section "DIRECT ACCESS TUNING" for information on reception using the Direct Access Tuning mode.
- See the section "AUTO TUNING" for information on reception using the Auto Tuning mode.
- See the section "MANUAL TUNING" for information on reception using the Manual Tuning mode.

In addition to station frequencies, the following items can also be preset.

- FM MODE AUTO/MONO (FM)
- Acoustic setting (FM, AM)

4. Press the **MEMORY** switch.
5. Press the **STATION CALL** switch into which you wish to preset the station.

- Use the **STATION CALL** switches (*1 – *0) to select a STATION CH. One press selects the 1 – 10 range, two presses 11 – 20 and three presses 21 – 30.

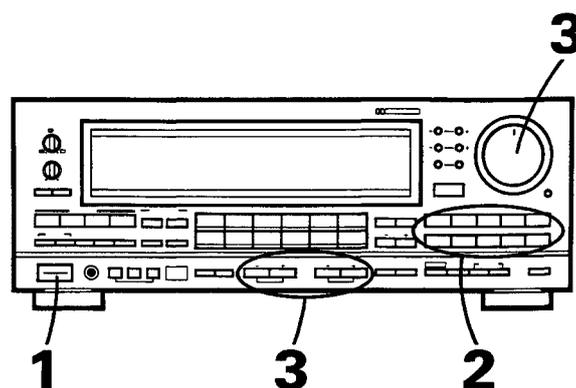
(Example) If you press key ***3**:

- One time – STATION 3
- Two times – STATION 13
- Three times – STATION 23

6. Repeat steps 2 to 5 to preset additional stations.

A total of 30 AM and FM stations may be preset. If you preset a STATION CALL switch into which a station has already been memorized, the former station information will be erased and the new station will be memorized in its place.

LISTENING TO BROADCASTS USING PRESET TUNING



1. Press the **POWER** switch to the ON position.
2. Press the **STATION CALL** switch into which the desired station has been preset.

- Use the **STATION CALL** switches (*1 – *0) to select a STATION CH. One press selects the 1 – 10 range, two presses 11 – 20 and three presses 21 – 30.

(Example) If you press key ***3**:

- One time – STATION 3
- Two times – STATION 13
- Three times – STATION 23

- When the **INPUT SELECTOR** is set to a function other than TUNER, it will switch to the TUNER function automatically if one of the **STATION CALL** switches is pressed.

Tuning can be performed simply and accurately following the above procedure.

3. Adjust the **MASTER VOLUME** and tone as desired.

NOTE:

The contents of the **STATION CALL** switch will be preserved for several days, even if the receiver power cord is unplugged. If a preset station has been erased, preset it again.

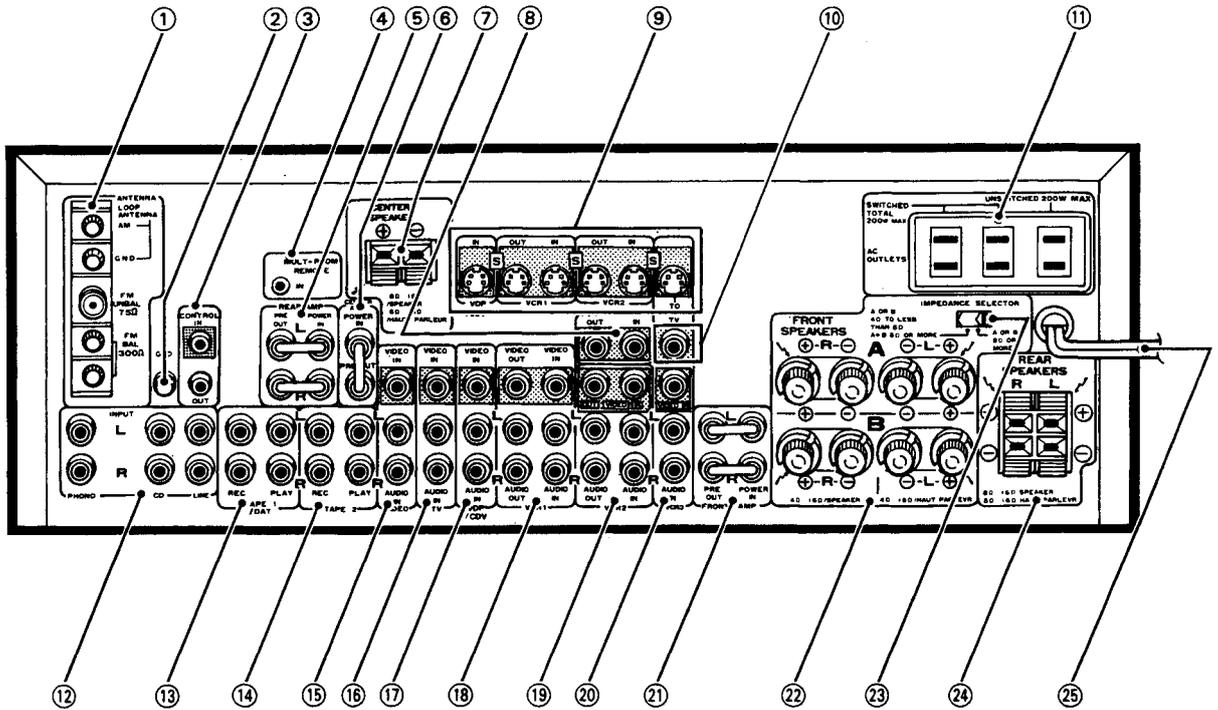
Last station memory

When the **POWER** switch is pressed to turn power on, the last station received before the power was turned off will be tuned in again.

When the power is ON, if one of the **BAND** selector switches is pressed, the last station received on that band will be tuned in again.

REAR PANEL FACILITIES

* Illustrations show U.S. models.



① FM/AM ANTENNA terminals

Use these antenna terminals for reception of normal FM and AM broadcasts.

Attach the accessory AM Loop and FM T-type antennas, here.

- For details regarding antenna connection, see the section "Hints for Better Reception" on page 44.

② GND terminal

Connect the turntable ground lead to this terminal.

③ CONTROL IN, OUT jacks

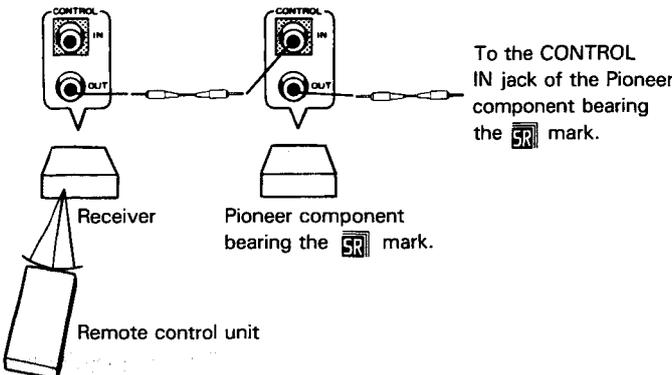
Used for system control with other Pioneer components bearing the **SR** mark.

IN For connection from the CONTROL OUT jack of another component.

OUT For connection to the CONTROL IN jack of another component.

NOTE:

The receiver's remote sensor does not function when a plug is inserted in the IN jack. To operate, point the remote control unit at the remote sensor on the component to which the receiver's IN jack is connected.



④ MULTI-ROOM REMOTE IN jack.

When using the optional MR-100 adaptor for multi-room remote control, connect to this jack.

⑤ REAR AMP jacks

[PRE OUT]

When a separate power amplifier is used to drive the rear speakers, connect the power amplifier to these jacks.

[POWER IN]

When a separate pre-amplifier is used for rear speakers and this unit is used as a power amplifier, connect the pre-amplifier to these jacks.

⑥ CENTER AMP jacks

[POWER IN]

When a separate pre-amplifier is used for center speaker and this unit is used as a power amplifier, connect the pre-amplifier to this jack.

[PRE-OUT]

When a separate power amplifier is used to drive the center speaker, connect the power amplifier to this jack.

⑦ CENTER SPEAKER terminal

Connect the center speaker here.

NOTE:

- Use a center speaker with an impedance from 8 ohms to 16 ohms.
- Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdown may occur when conductors come into contact with each other.

⑧ VIDEO ADAPTOR jacks

Use to connect a video adaptor component such as a video enhancer or color corrector.

⑨ S (connector) video jacks

When used in conjunction with a VCR, Video disc player (CDV player) or monitor TV equipped with S video jacks, connect to these jacks.

REAR PANEL FACILITIES

⑩ TO MONITOR TV jacks (OUTPUT)

Use to connect a monitor TV or a TV set with video input terminals for watching program materials from a VCR or Video disc player (CDV player) connected to this unit.

If monitor with S-VHS input connector is used, you also need line out to video monitor.

⑪ AC OUTLETS

[U.S. and Canadian models]

SWITCHED TOTAL 200 W MAX

Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 200 W.

UNSWITCHED 200 W MAX

Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 200 W.

[Multi-voltage model]

SWITCHED TOTAL 100 W MAX

Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W.

UNSWITCHED 100 W MAX

Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 100 W.

NOTE:

- This unit should be disconnected by removing the power plug from the wall socket when not in regular use, e.g. when on vacation.
- Do not connect appliances with high power consumption such as heaters, irons, or television sets to these AC OUTLETS in order to avoid overheating and fire risk.
This can cause the receiver to malfunction.

⑫ Audio INPUT jacks

PHONO Connect to turntable.

CD Connect to compact disc player.

LINE Connect to the audio output jacks of an additional audio component.

⑬ TAPE 1/DAT jacks

Connect a DAT (digital audio tape deck) or your primary analog cassette deck to these jacks.

Connection for Recording

The tape recording jack (TAPE REC) on the cassette deck or DAT should be connected to the REC side of the TAPE 1/DAT jack on the receiver with a pin plug connecting cord.

Connection for Playback

Connect the TAPE PLAY jack on the cassette deck or DAT to the PLAY side of the TAPE 1/DAT jack on the receiver with a pin plug connecting cord.

⑭ TAPE 2 jacks

Connect a second cassette deck to these jacks.

Connection for Recording

The tape recording jack (TAPE REC) on the cassette deck should be connected to the REC side of the TAPE 2 jack on the receiver with a pin plug connecting cord.

Connection for Playback

Connect the TAPE PLAY jack on the cassette deck to the PLAY side of the TAPE 2 jack on the receiver with a pin plug connecting cord.

⑮ VIDEO jacks (input)

Connect the output jacks of video components.

For example, connect a playback-only VCR or a video camera.

⑯ TV jacks (input)

Use these jacks if wish to connect a TV tuner having both video and audio outputs.

[VIDEO IN]

Connect the TV tuner's VIDEO OUTPUT to this jack.

[AUDIO IN (L, R)]

Connect the TV tuner's AUDIO OUTPUT to these jacks.

⑰ VDP/CDV jacks (INPUT)

[VIDEO IN]

When watching the video image from a LD player (VDP/CDV player) (or a VCR used for playback), connect its VIDEO OUTPUT jack here.

[AUDIO IN (L,R)]

When playing back the audio channel from a LD player (VDP/CDV player) or a VCR for playback, connect its AUDIO OUTPUT jacks here.

⑱ VCR 1 jacks

[VIDEO IN]

To receive the video image from VCR 1 used for playing, connect its VIDEO OUTPUT jack here.

[AUDIO IN (L, R)]

To receive the audio channels from VCR 1 used for playing, connect its AUDIO OUTPUT jacks here.

[VIDEO OUT]

When copying program material from the video component connected to the VCR 2, VCR 3, VIDEO, VDP/CDV or TV jacks, connect to the VIDEO INPUT jack of the VCR 1 used for recording.

[AUDIO OUT (L, R)]

When copying program material from the video component connected to the VCR 2, VCR 3, VIDEO, VDP/CDV or TV jacks, or when recording music from an audio component source, connect to the AUDIO INPUT jacks of the VCR 1 used for recording.

⑲ VCR 2 jacks

[VIDEO IN]

To receive the video image from VCR 2 used for playing, connect its VIDEO OUTPUT jack here.

[AUDIO IN (L, R)]

To receive the audio channels from VCR 2 used for playing, connect its AUDIO OUTPUT jacks here.

[VIDEO OUT]

When copying program materials from the video component connected to the VCR 1, VCR 3, VIDEO, VDP/CDV or TV jack, connect to the VIDEO INPUT jack of the VCR 2 used for recording.

[AUDIO OUT (L, R)]

When copying program materials from the video component connected to the VCR 1, VCR 3, VIDEO, VDP/CDV or TV jacks, or when recording music from an audio component source, connect to the AUDIO INPUT jacks of the VCR 2 used for recording.

⑳ VCR 3 input jacks

[VIDEO IN]

To receive the video image from a VCR used for playing only, connect its VIDEO OUTPUT jacks here.

[AUDIO IN (L, R)]

To receive the audio channels from a VCR used for playing, connect its AUDIO OUTPUT jacks here.

②① FRONT AMP jacks

[PRE-OUT]

When a separate power amplifier is used to drive the front speakers, connect the power amplifier to these jacks.

[POWER IN]

When a separate pre-amplifier is connected and this unit is used as power amplifier, connect the pre-amplifier to these jacks.

②② FRONT SPEAKERS terminals

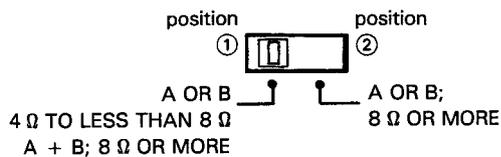
A: Connect to a first set of speakers.

B: Connect to a second set of speakers.

Please refer to item ②③ Front speakers impedance selector switch.

②③ Front speakers impedance selector switch

Set this switch to match the impedance of your speakers.



I When using one pair of speakers:

Impedance of a speaker	Selector position
4 Ω to less than 8 Ω	①
8 Ω or more	②

II When using two pairs of speakers:

Select ① as the selector switch position and use speakers having impedance of 8 Ω or more.

NOTE:

Turn off the receiver's power before changing the impedance selector switch setting.

②④ REAR SPEAKERS terminals

Connect the rear speakers to these terminals.

Speaker impedance

Connect speaker systems with a nominal impedance of between 8 and 16 Ω.

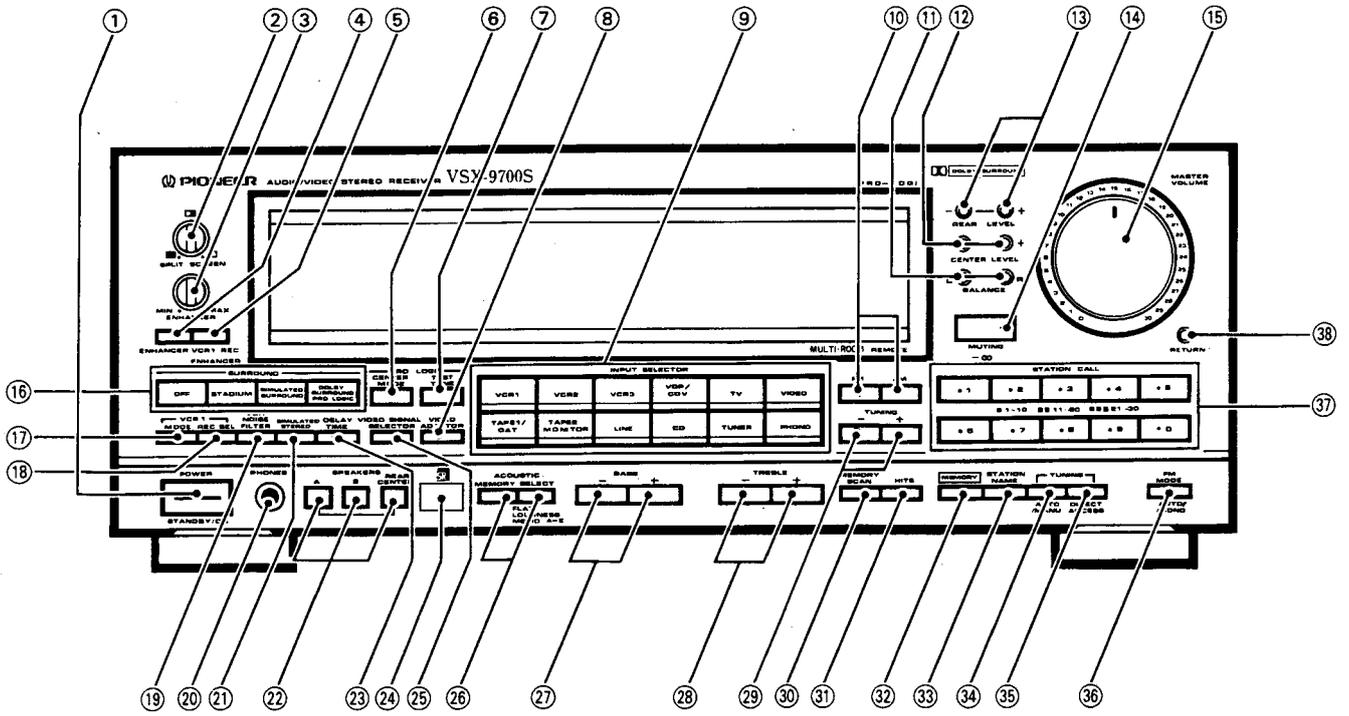
NOTE:

Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.

②⑤ AC Power cord

Connect to AC wall socket.

FRONT PANEL FACILITIES



① POWER STANDBY/ON switch

ON: The power to the unit is turned on.

STANDBY: This is equivalent to OFF but in fact a fraction of power still feeds the unit.

- The accessory remote control unit can also be used to turn the receiver on or standby (STANDBY function).

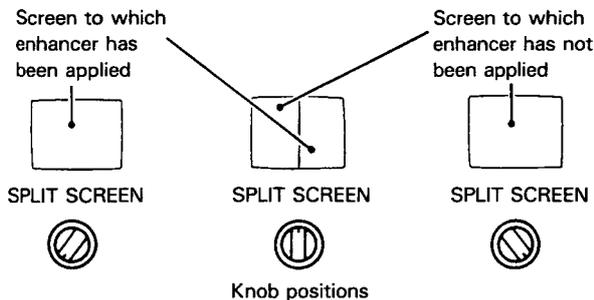
NOTE:

- When not using the unit for a long period, disconnect the power cord from the AC OUTLETS in the wall.
- When the power is initially turned ON, muting is applied to prevent sound from being output for about 5 seconds.
- On the multi-voltage model, the indicator above the MASTER VOLUME control knob lights during STANDBY.

② SPLIT SCREEN control

This split screen function can be used when the ENHANCER switch is on.

This control allows you to freely control the area of enhanced picture (on right side of screen) and original picture (non-enhanced, on left side of screen) by means of a vertical line dividing the screen into two sections. It has no effect on an S output jack signal.

**NOTE:**

This line is not output from the VCR (VCR 1 and VCR 2) VIDEO OUT jacks. As a result, the split screen image is not recorded; the recorded image will be entirely that produced by the enhancer function.

③ ENHANCER control

When performing tape copying with a VCR, some deterioration in image quality occurs normally. This control allows compensation for this deterioration in image quality by emphasizing image detail. This has no effect on an S output jack signal.

NOTE:

The ENHANCER control functions to suppress image deterioration, but will not improve image quality beyond its original state.

④ ENHANCER switch

Press when performing video copying with added video enhancer effects. When the switch is pressed, the monitored video image will be the split screen picture.

Using the SPLIT SCREEN function will enable you to compare the enhanced and original (non enhanced) images. It has no effect on an S output jack signal.

The ENHANCER switch will not operate if the VCR 1 REC ENHANCER is on (ENHANCER REC indication is lit) while the VCR 1 REC SEL switch is on.

Turn off the VCR 1 REC SEL switch if you want to enhance the signal sent to the MONITOR TV jack.

⑤ VCR 1 REC ENHANCER switch

Turn this switch ON to record on the VCR connected to the VCR 1 jacks the video image from VCR 2 or VDP with enhancement applied using the ENHANCER control knob. At this time, the enhancer is turned off for the monitor and VCR 2 REC OUT. This has no effect on an S output jack signal.

NOTE:

- The VCR 1 REC SEL switch must be on for the VCR 1 REC ENHANCER switch to operate.

⑥ PRO LOGIC CENTER MODE switch

This operates if DOLBY PRO LOGIC SURROUND is ON. Switches between the four DOLBY PRO LOGIC SURROUND center channel settings. The setting changes in the order listed below each time you press the switch.

NORMAL — Use this setting when a small enclosure center channel speaker incapable of reproducing frequencies below 100Hz is connected.

WIDE — Use this setting when a large enclosure center channel speaker capable of reproducing frequencies below 100Hz is connected.

PHANTOM — Use this setting when no center channel speaker is connected.

OFF — There will be no sound from the center speaker. Ordinarily, select and use one of the three modes mentioned above.

NOTES:

- If no center speaker is used, then mono signals and center channel signal components will not be reproduced at positions other than the PHANTOM position.
- To provide for correct surround operation, you must have a stereo source or no output will be heard.

⑦ PRO LOGIC TEST TONE switch

Only operates when the DOLBY PRO LOGIC SURROUND surround mode is selected. When the switch is turned ON, "TEST" appears on the central display and a test tone approximately two seconds in duration is generated in all channels in succession.

Adjust the speaker level controls so that all speakers sound equally loud from the listening position for the optimum surround effect.

⑧ VIDEO ADAPTOR switch

Press when using a video adaptor component connected to the rear panel VIDEO ADAPTOR jacks. An indicator on the display section lights up when this switch is set to ON. This has no effect on an S output jack signal.

⑨ Audio/Video INPUT SELECTOR switches

VCR 1: Press when performing playback on a VCR unit.

VCR 2: Press when performing playback on a second VCR unit.

VCR 3: Press when performing playback on a third VCR unit.

VDP/CDV: Press when performing playback on a video disc player (VDP) or CDV player.

TV: Press to watch TV broadcasts from the TV tuner connected to the rear panel TV jacks.

VIDEO: Press when performing playback on a VCR connected to VIDEO jack.

TAPE 1/DAT: Press when performing playback on a DAT or cassette deck.

TAPE 2 MONITOR: Press when performing playback on a second cassette deck and when monitoring recording or using a graphic equalizer.

LINE: Press when performing playback on an audio component connected to the LINE jacks.

CD: Press when playing compact discs on a CD player.

TUNER: Press when listening to radio broadcasts.

PHONO: Press when playing records on a turntable.

⑩ BAND selector switches

FM: Press for FM reception.

AM: Press for AM reception.

⑪ BALANCE switches

Use to adjust the sound volume balance between left and right speakers.

L: Press to decrease the sound on the right side.

R: Press to decrease the sound on the left side.

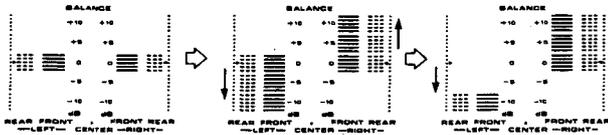
Press L and R together to bring the volume balance back to standard (Left = Right).

FRONT PANEL FACILITIES

NOTE:

The left-right sound volume balance cannot be adjusted independently on the front and rear speakers.

Example: If press and keep the "R" switch



12 CENTER LEVEL (+, -) switches

Use these switches to adjust the center speaker sound level to the level of the front speakers.

Operate only when DOLBY PRO LOGIC SURROUND mode is on.

After adjustment, use the MASTER VOLUME control to adjust the overall sound to a suitable level.

- : Lowers the center speaker sound level.
- + : Raises the center speaker sound level.

The level is displayed on the display section BALANCE/LEVEL meters. Pressing - and + at the same time returns you to the standard.

13 REAR LEVEL (-, +) switches

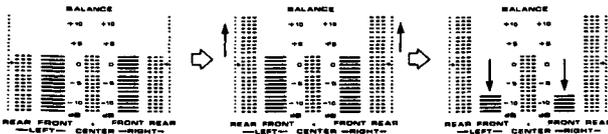
Operate only when the surround mode is on.

These switches are used to preset the sound level difference between the front and rear speakers. In this way, after presetting the difference, the overall volume of the front and rear speakers can be changed using the MASTER VOLUME control, while still maintaining the sound volume differential.

- : Surround rear speaker volume is reduced.
- + : Surround rear speaker volume is increased.

Pressing + and - together will restore front and rear to the standard balance setting.

Example: If press and keep the "+" switch



Operate only when SURROUND mode is on.

14 MUTING switch

Press to temporarily cut off the sound volume. The display section MUTING indicator will flash. When pressed again, the sound will return to its previous level.

15 MASTER VOLUME control

Use to simultaneously adjust the sound volume from the front and surround speakers.

When you adjust volume by remote control, the indicator above the knob flashes.

16 SURROUND Mode Selector Switches

OFF:

To cancel the surround function.

STADIUM:

Ideal for sports broadcasts, etc.

SIMULATED SURROUND:

Gives concert-hall presence to monaural sound (AM, TV, etc.).

DOLBY PRO LOGIC SURROUND

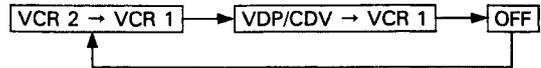
Select this setting when watching video tapes or video discs bearing the  mark.

17 VCR 1 MODE switch

Toggles the VCR 1 signal between mono and stereo. It operates both during playback and during recording.

18 VCR 1 REC SEL (SELECTOR) switch

Use this switch to select the VCR 1 copy mode independent of the INPUT SELECTOR switch setting. Each time you press it the unit switches between the following three settings. The current setting is shown on the central display section.



NOTE:

At the OFF position, the video source selected by the INPUT SELECTOR is output at the REC jack.

19 VCR NOISE FILTER switch

If tape hiss is noticeable in the sound while performing playback of video cassette tapes, press this switch to reduce the noise.

After pressing this switch, "VCR NOISE FILTER" will appear on the display section.

This switch can be used when either VCR 1 or VCR 2 INPUT SELECTOR switch is selected. The VCR NOISE FILTER has no effect on VCR 3 playback.

NOTE:

- The effectiveness in reducing high-frequency hiss noise varies depending on the type of tape used, the recording level, and other conditions.

20 PHONES jack

Connect the plug on your headphones to this jack. To only hear through the headphones, set all SPEAKERS A, B and REAR switches to the OFF position.

21 SIMULATED STEREO switch

Press to produce a simulated stereo effect when listening to monaural sources (for example AM or TV broadcasts).

"SIMULATED STEREO" appears on the display section.

NOTE:

There is no sound output from the rear speakers during this operation.

22 SPEAKER switches

Switches A, B, REAR/CENTER.

ON/OFF switches for the speaker systems. An indicator on the display section lights when any of these switches is set to ON.

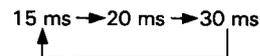
NOTE:

- Rear speaker on/off switching is possible only when the surround mode is on.
- Center speaker on/off switching is possible only when the DOLBY PRO LOGIC SURROUND (WIDE or NORMAL) mode is on.

23 DELAY TIME switch

Operates only when the surround mode is ON.

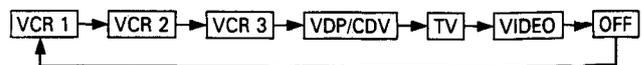
Switches the surround delay time in three steps. For DOLBY PRO LOGIC SURROUND, 20 ms is standard.



24 Remote signal sensor

25 VIDEO SIGNAL SELECTOR switch

When recording simulcast programs, the recorded image can be selected among VCR 1, VCR 2, VCR 3, VDP/CDV, TV and VIDEO.



The current setting is shown by an indicator on the display section.

Note that with an S video output jack, the switch is OFF for VCR 3, TV, and VIDEO.

**NOTE:**

- When using a VCR for sound recording only, follow the operating instructions of the VCR.
- During VCR 1 REC SEL use, recording is not possible on VCR 1 using the VIDEO SIGNAL SELECTOR.

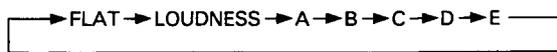
②6 ACOUSTIC Switch**MEMORY:**

Pressing this switch will result in the memorization of the sound quality (tone control condition). Press again to cancel this mode.

SELECT

This switch has three functions:

Each time you press the switch, the sound quality setting advances in the order shown below.



- I FLAT:** For flat (normal) frequency response.
- II LOUDNESS:** Emphasizes the low- and high- frequency ranges. Produces a fuller sense of sound.
- III A—E:** Memorized acoustic memory settings.

- To preset the acoustic memories (A—E).
- To recall previously set sound quality settings.

Presetting the acoustic memory

- Adjust the sound quality as desired using the BASS and TREBLE control switches. LOUDNESS or FLAT only, can also be chosen.
 - Settings are shown by the TONE indicator on the display section.
- Press the ACOUSTIC MEMORY switch.
 - The TONE indicator on the display section blinks on and off.
- Press the ACOUSTIC SELECT switch and select the sign to which you wish to assign the setting (A — E).
 - The sound quality setting is memorized approximately two seconds after you last press the ACOUSTIC SELECT switch.

In this way, the desired tone will be preset in one of the five acoustic memory positions. To preset four other desired tone settings, perform the same operations.

To recall the memorized tone settings, press the ACOUSTIC SELECT switch to select the desired memory position. In this way, five different tone settings can be preset and recalled in the five positions of the acoustic memory.

②7 BASS control switches

Use to adjust the low-frequency level. Press the + switch to increase low-frequency level, and the - switch to decrease it. The TONE indicator appears on the display section.

When both sides (+, -) of the BASS control are pressed simultaneously, the base response will be set to the flat (normal) condition.

②8 TREBLE control switches

Use to adjust the high-frequency level. Press the + switch to increase high-frequency level, and the - switch to decrease it. The TONE indicator appears on the display section.

When both sides (+, -) of the TREBLE control are pressed simultaneously, the treble response will be set to the flat (normal) condition.

②9 TUNING switches**[When tuning]**

- + : Performs tuning in ascending frequency order.
- : Performs tuning in descending frequency order.

[When inputting station names]

- + : Displays the letters in alphabetical order.
- : Displays the alphabet in reverse order. See page 20 for details.

③0 MEMORY SCAN switch

Operates when the INPUT SELECTOR is set to TUNER. Station frequencies assigned to the STATION CALL switches are tuned in, one after another, beginning with the current station no., for approximately 5 seconds each. The display section SCAN indicator will light. Press the switch again and the tuner remains tuned in to the station playing when the switch was pressed the second time. Station frequencies not assigned station numbers in the memory are skipped.

③1 HITS (Hyper Intelligent Tuning System) switch

- If the HITS switch is pressed at the currently displayed station frequency, the receiver searches up and down the frequency for the next station (The SEARCH indicator in the display section lights at this time.) and stops at the first one it finds.
- If the HITS switch is pressed during STATION NAME input (see page 20), the receiver performs a memory search in order of ascending station number for memorized stations whose names begin with the same letter as the station just input.
- If the HITS switch is pressed during input of numbers for DIRECT ACCESS tuning, the receiver sets the remaining digits which have not yet been input to "0", searches for the corresponding frequencies, and stops on the first station it finds.

NOTE:

- The system searches for stations within successive 1MHz ranges for FM and 100 kHz ranges for AM. During DIRECT ACCESS tuning, it searches up and down for a station until it reaches the edges of the band. If no receivable station is found within the band range, the receiver returns to the state it was in before the HITS switch was pressed.
- If the upper (or lower) frequency limit of the receiver is encountered during HITS operation, the receiver stops searching in that direction but continues to search in the other.

③2 MEMORY switch

When the unit is in the frequency display mode, pressing this switch will result in the memorization of the current broadcast band, reception frequency ACOUSTIC MEMORY position, and FM AUTO/MONO mode. This switch is also used to input station names (see page 20).

③3 STATION NAME switch

This switch is used when inputting station names (see page 20).

③4 AUTO/MANUAL TUNING selector switch

This switch is used to select the tuning mode. The AUTO tuning mode has been selected when the TUNING AUTO indicator lights.

AUTO tuning

When the - or + TUNING switch is pressed, the receiver automatically scans the broadcast station frequencies. When a broadcast is detected, the scanning stops at that frequency.

NOTE:

Pressing the TUNING switch (- or +) while scanning is taking place causes scanning to stop.

MANUAL tuning

This is the usual tuning method. Each time the - or + TUNING switch is pressed, the reception frequency is changed by one channel step. When pressed continuously, the receiver scans the broadcast frequencies continuously.

FRONT PANEL FACILITIES

⑳ DIRECT ACCESS TUNING switch

When this switch is pressed, the STATION CALL switches function as ten-key number switches for direct input of the desired reception frequency.

If the input station falls outside of the receiver's tuning range, the display section will display a message: "UPPER" if the frequency is too high and "LOWER" if it is too low.

㉑ FM MODE AUTO/MONO selector switch

Use to select the auto stereo mode or monaural mode when listening to FM broadcasts. The monaural mode has been selected when the FM MONO indicator in the display section is lit.

Auto stereo mode:

Normally, leave in this mode for reception. When a stereo FM broadcast is received, it will be automatically reproduced in stereo.

Monaural mode:

When receiving distant stations or stations with weak broadcast signals, the input signal may be weak, thus resulting in increased noise during FM stereo broadcasts. In this event, setting the receiver to the monaural mode will reduce the noise. In this case, however, FM stereo broadcasts will be reproduced in monaural sound.

NOTE:

This switch has no effect on reception of AM broadcasts.

㉒ STATION CALL RANDOM 30 CH switches

- These switches are used to preset and recall desired broadcasting stations, "AUTO STEREO"/"MONO" switch setting, and ACOUSTIC MEMORY mode.

Station call operation example:

If you press the [*2] key:

- One time — station 2 is selected.
- Two times — station 12 is selected.
- Three times — station 22 is selected.

NOTE:

Pressing the STATION CALL switches when a component other than TUNER is selected causes the INPUT SELECTOR setting to switch to TUNER.

- They are also used when performing direct access tuning.

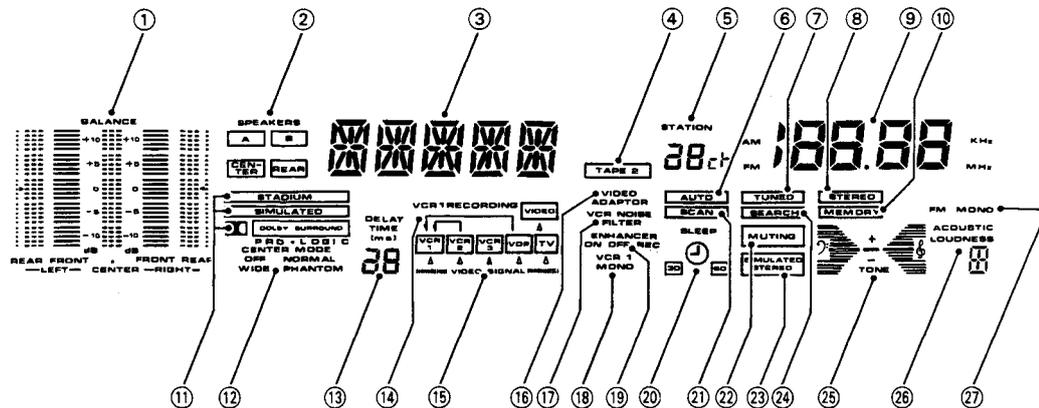
㉓ RETURN switch

Pressing this switch returns the receiver to the following settings, the sound level being controlled by MASTER VOLUME control knob.

- | | |
|------------------|--------|
| • TAPE 2 MONITOR | OFF |
| • SURROUND MODE | OFF |
| • SPEAKERS A | ON |
| • MUTING | OFF |
| • FRONT BALANCE | CENTER |
| • INPUT SELECTOR | TUNER |
| • STATION CALL | 1 CH * |
| • VIDEO ADAPTOR | OFF |

* When a station is not memorized in 1 CH, station search will automatically proceed from the frequency displayed.

[DISPLAY SECTION]



① BALANCE/LEVEL meters

② SPEAKERS indicators

Shows which speaker system (or systems) are switched ON.

③ Function & Station name display

④ TAPE 2 indicator

Lights when the INPUT SELECTOR is set to TAPE 2 MONITOR ON.

⑤ STATION display

Shows the channel selected with the STATION CALL switch.

⑥ AUTO indicator

Lights when the AUTO/MANUAL TUNING is set to AUTO.

⑦ TUNED indicator

Lights when a station is tuned.

⑧ STEREO indicator

Lights when a stereo FM broadcast is being received.

⑨ Frequency display

⑩ MEMORY indicator

⑪ Surround mode indicators

⑫ DOLBY PRO LOGIC SURROUND CENTER MODE indicators

Displays the mode selected with the CENTER MODE switch.

⑬ DELAY TIME display

Shows the delay time during surround operation.

⑭ VCR 1 RECORDING display

Displays a "V" symbol to indicate the copy mode selected with the VCR 1 REC SEL switch.

⑮ VIDEO SIGNAL SELECTOR indicators

Shows the video component selected with the VIDEO SIGNAL SELECTOR switch.

⑯ VIDEO ADAPTOR indicator

Lights when the VIDEO ADAPTOR switch is in the ON position.

⑰ VCR NOISE FILTER indicator

Lights when the VCR NOISE FILTER switch is in the ON position.

⑱ VCR 1 MONO indicator

⑲ ENHANCER ON, OFF, REC indicators

Shows the current VIDEO enhancer setting.

⑳ SLEEP timer indicators

Shows the SLEEP timer setting (the length of time from the set time to the point at which power will switch off). Only activated by remote control.

㉑ SCAN indicator

Lights during memory scan operation.

㉒ MUTING indicator

㉓ SIMULATED STEREO indicator

㉔ SEARCH indicator

Lights during HITS operation.

㉕ TONE level indicators

Shows the settings of the BASS and TREBLE level.

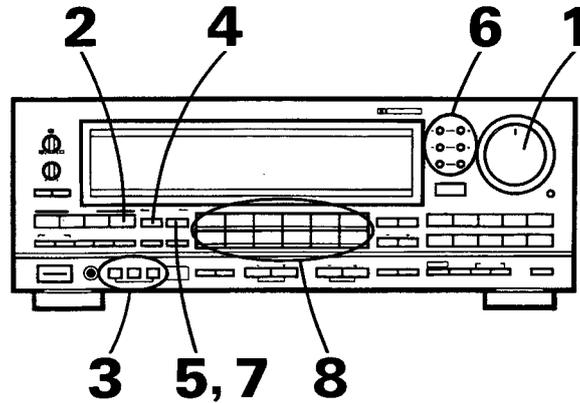
㉖ ACOUSTIC display

Shows the setting of the ACOUSTIC SELECT switch.

㉗ FM MONO indicator

Lights when the FM MONO mode is selected with the FM MODE switch.

DOLBY SURROUND ADJUSTMENT PROCEDURE



1. Adjust MASTER VOLUME control to a suitable listening level.
2. Use SURROUND mode selector switches to select DOLBY PRO LOGIC SURROUND.
3. Turn on front speakers, center speaker and rear speakers.
4. Select CENTER MODE setting. (See page 6.)
5. Turn on PRO LOGIC TEST TONE switch:
6. Use the BALANCE L, R switches, CENTER LEVEL +, - switches, and the REAR LEVEL +, - switches to adjust the volume levels of the front left, center, front right, and rear speakers until they are equal when heard from your listening position in the room.
7. Turn off PRO LOGIC TEST TONE switch when finished.
8. Use INPUT SELECTOR switches to select your desired source.

CONNECTION CHART (2)

When using with another amplifier for Front

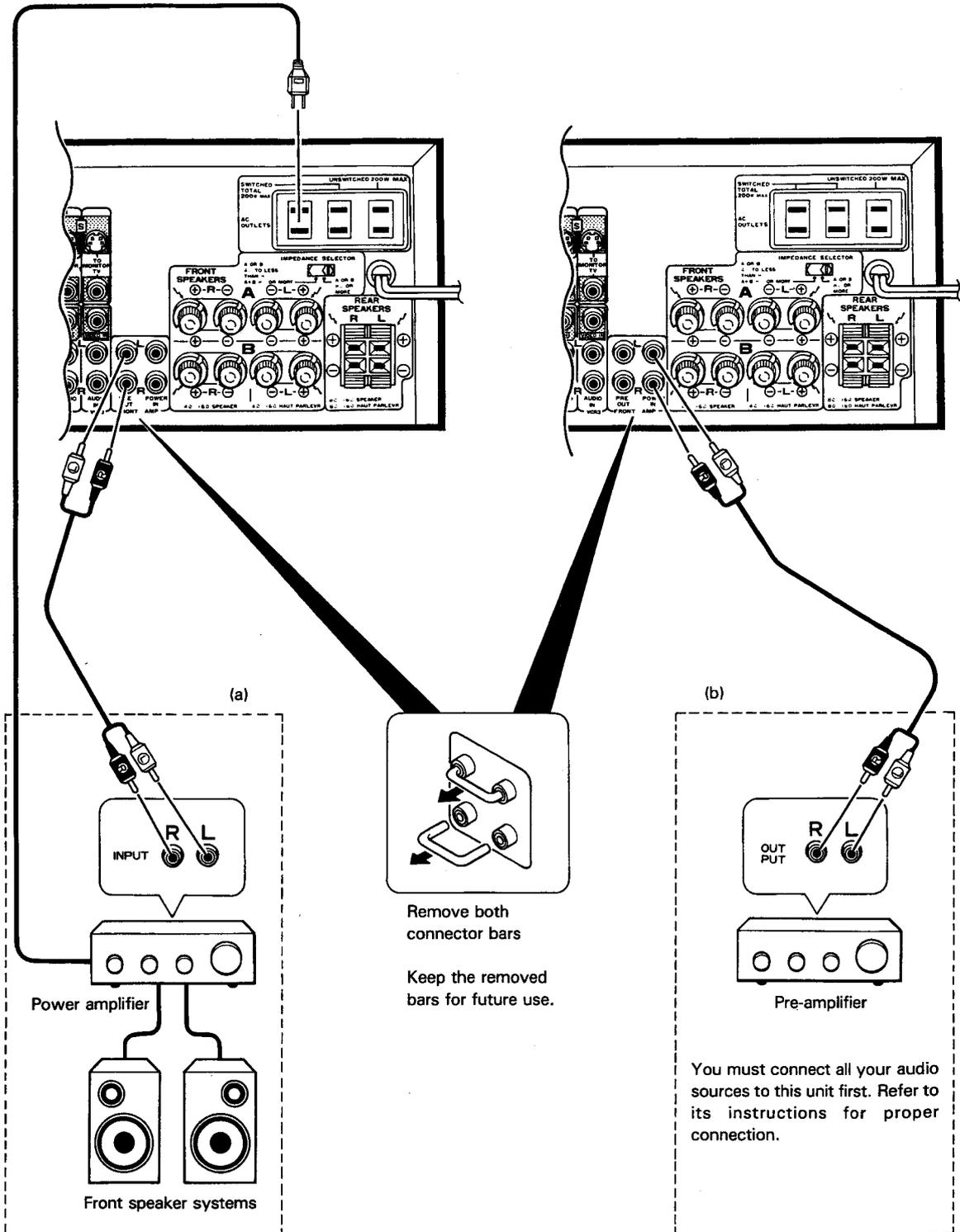
• Illustration shows U.S. model.

NOTE:

Be sure to power OFF all components before removing connector bars.

(a) Connection if using another power amplifier

(b) Connection if using a pre-amplifier



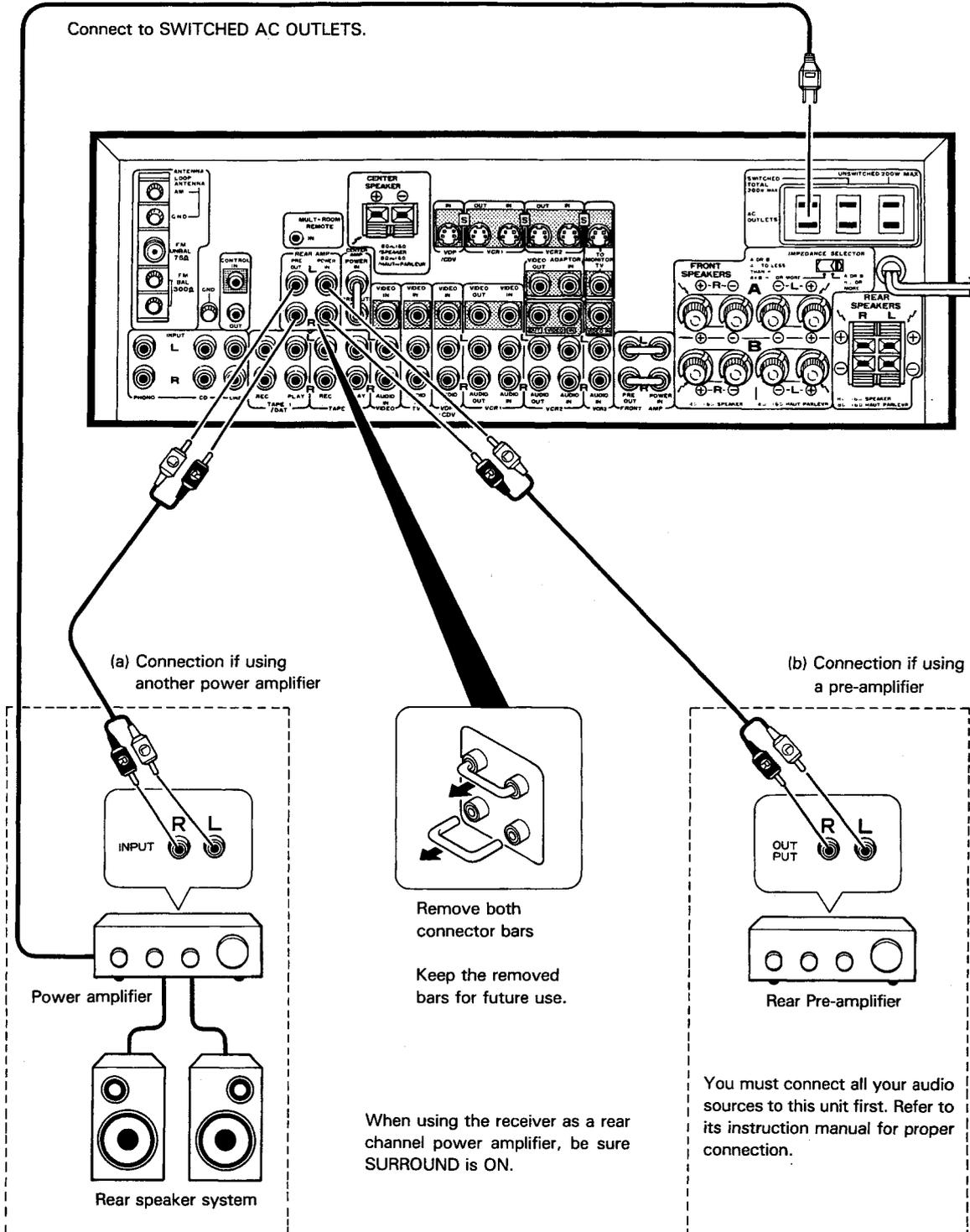
CONNECTION CHART (2)

When using another amplifier for Rear

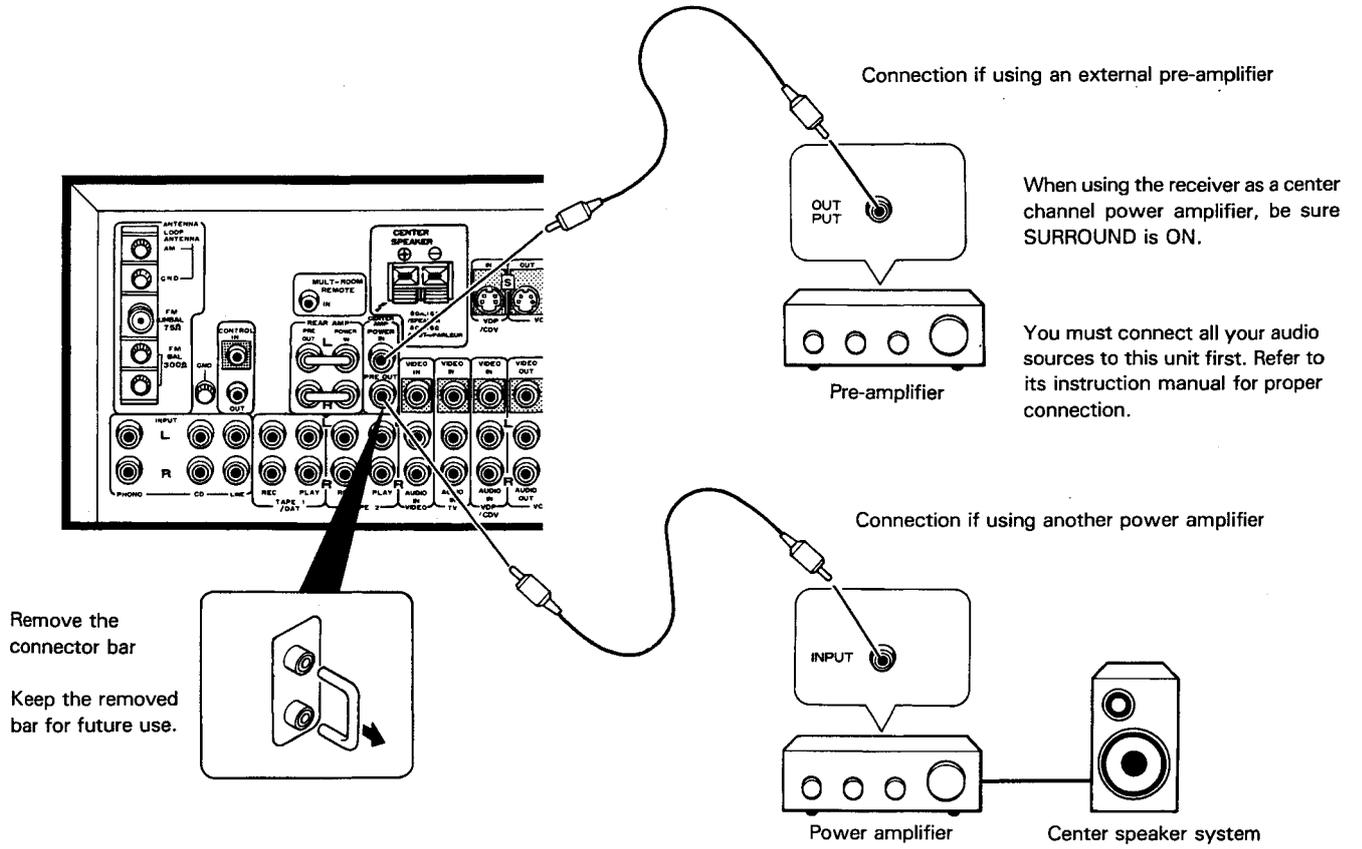
• Illustration shows U.S. model.

NOTE:

Be sure to power OFF all components before removing connector bars.



When using another amplifier for Center



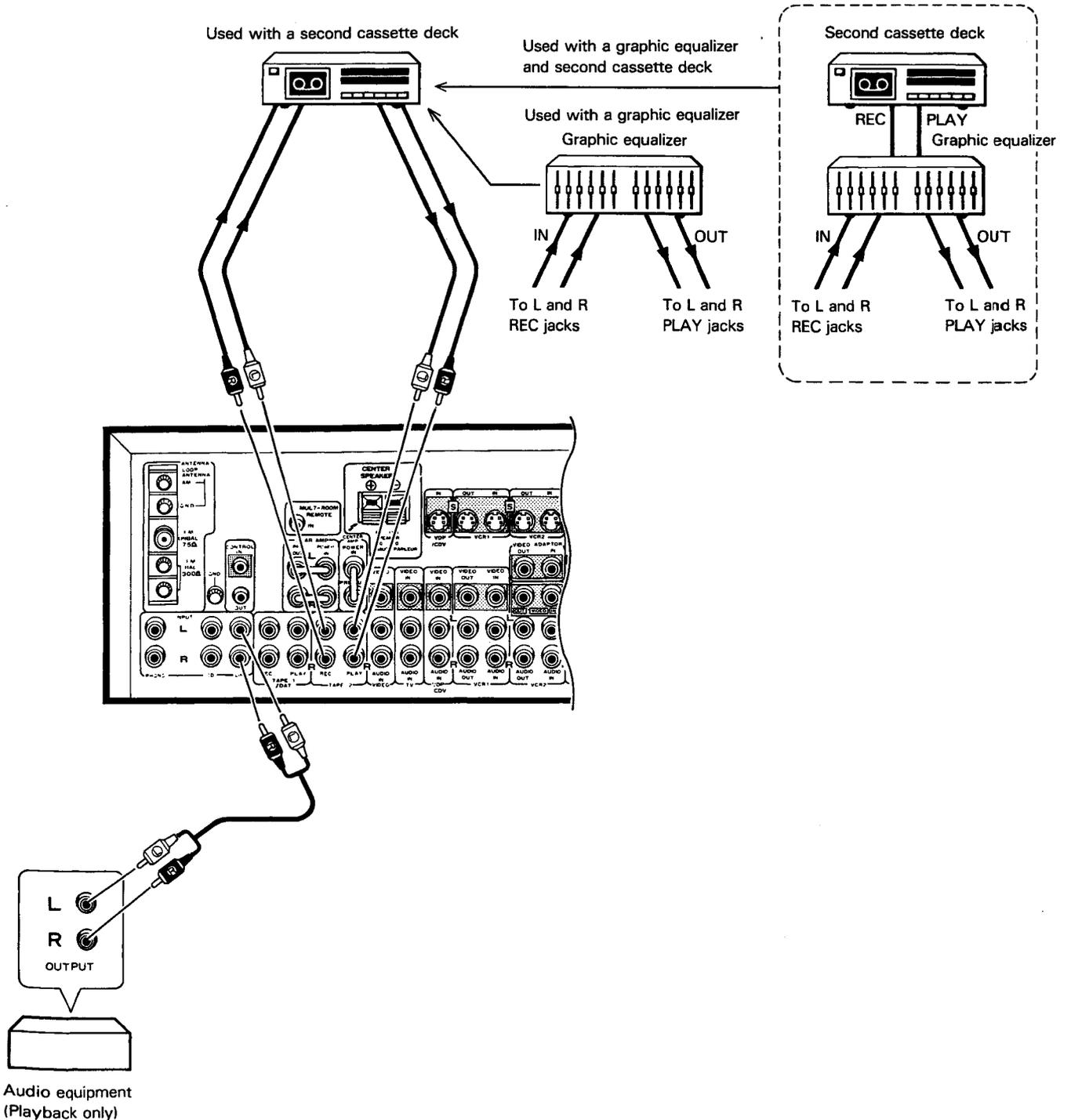
CONNECTION CHART (2)

Additional Audio Components.

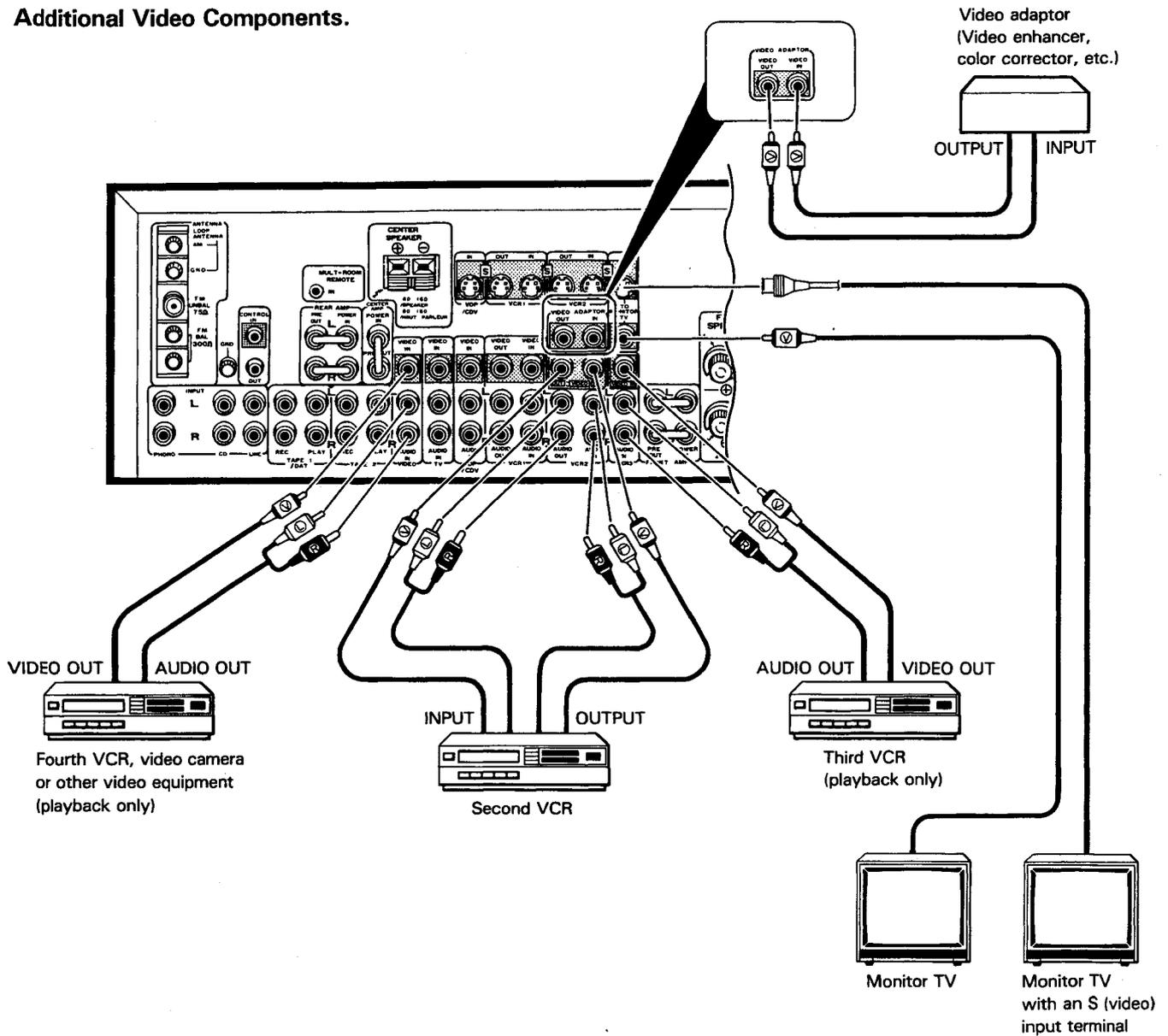
• Illustration shows U.S. model.

NOTE:

Dolby Surround will not operate correctly if the signal passes through a graphic equalizer. When using Dolby Surround, turn off the TAPE 2 MONITOR switch or set the graphic equalizer for flat response or to its through (defeat) setting.



Additional Video Components.



THE S-VIDEO CONNECTORS

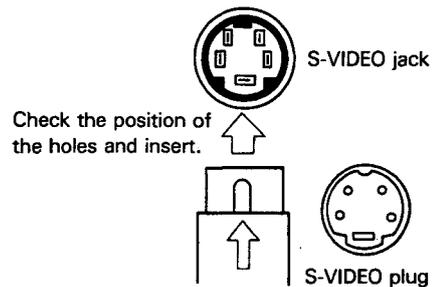
When using a VCR 1, VCR 2, VDP/CDV and monitor TV which has S-VIDEO connectors, they can be connected to the S-VIDEO connectors.

For the operation of components connected to S-VIDEO connectors, refer to the instruction manuals of the corresponding component.

NOTE:

- In this unit, the S-VIDEO connectors (Y-C separate) and the regular pin jacks are independent, so any signal input through a pin jack must be output from the pin jack, and any signal input through an S-VIDEO connector must be output through the S-VIDEO connector.
- The S-VIDEO connector is for video portion only, so be sure to make audio connections also.

How to use S-VIDEO connectors.

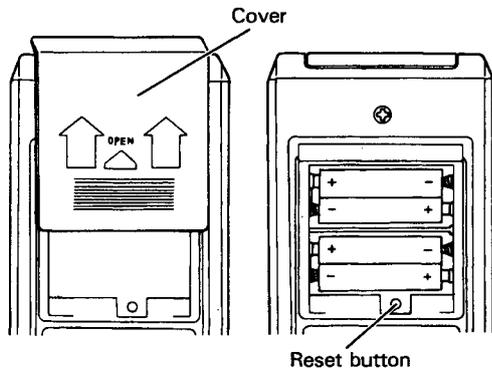


For the method of switching the monitor TV S-VIDEO connector/VIDEO jack, refer to the monitor TV's instruction manual.

REMOTE CONTROL

LOADING BATTERIES

1. Open the battery compartment cover on the rear of the remote control unit. The cover should open easily if you slide it in the direction of the arrow while pressing on it with your thumb.
2. Take out the four supplied batteries (LR03/AM-4), and insert them into the battery compartment in accordance with the indications in the compartment.
3. Close the cover of the battery compartment.



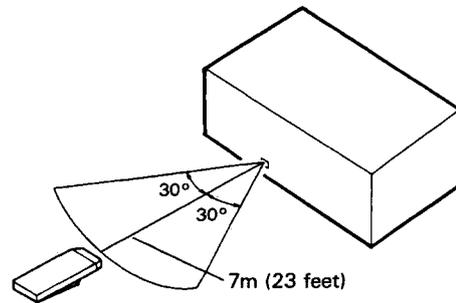
Incorrect use of batteries may lead to leakage or rupture. Always be sure to follow these guidelines:

- A.** Always insert batteries into the battery compartment correctly matching the positive + and negative - polarities, as indicated inside the compartment.
- B.** Never mix new and used batteries.
- C.** Batteries of the same size may have different voltages, depending on their type. Do not mix different type of batteries.

REMOTE CONTROL RANGE

When operating the remote control unit, point the front of the unit at the front panel of the receiver. The remote control unit may be used within a range of about 7 meters (23 feet) from the remote sensor, within angles of up to about 30 degrees.

Performance of the remote control unit is adversely affected in the presence of strong fluorescent light. Keep such lights away, specially from the sensor window.



Battery Replacement

When the batteries have run out, the transmit indicator will not illuminate even when a key is pressed. Be sure to replace the batteries as soon as possible. As the programmed functions will be retained in memory only as long as batteries are inserted, remove the old batteries only if they can be replaced by new ones immediately. Also, be sure to always use the specified batteries. [size "AAA" (LR03/AM-4) alkaline batteries]

NOTE:

When no batteries are inserted, the programmed memory contents will be erased after 30 to 60 minutes.

OPERATION

① TRANSMIT mode selector switch

AUDIO:

Select this position for remote control operation of audio equipment such as a CD player, tape deck, turntable or receiver.

VIDEO:

Select this position for remote control operation of video equipment such as a Video disc player (LD player), VCR or TV.

AUX:

The AUX mode is provided for programming extra commands in case you have filled up all the keys in the VIDEO and AUDIO modes. If you do not program any new commands, then only the receiver amplifier keys will operate in this mode. You may wish to use this mode to assign extra commands for a second VCR, tape deck etc.

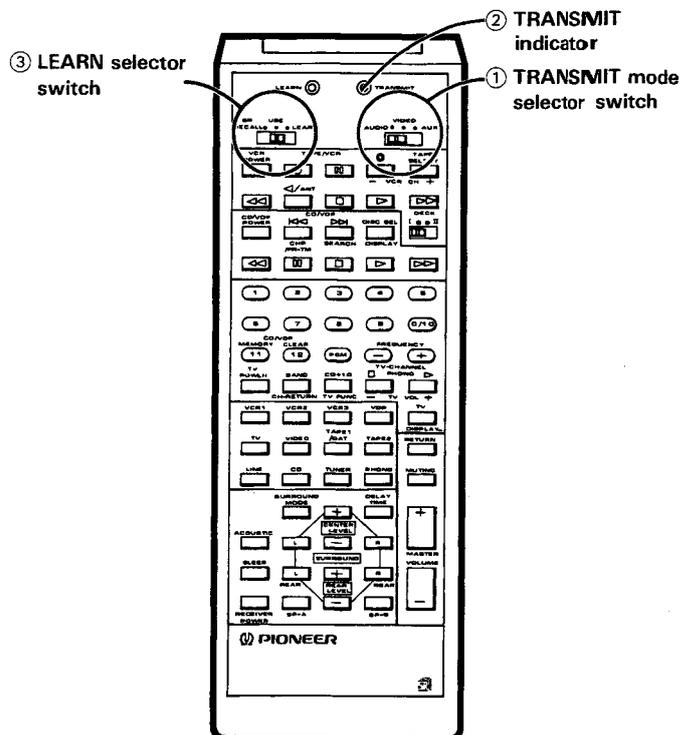
- Keys 1 to 12 are used as station keys for TUNER and TV. (In the CD and VDP modes 1 to 10 are number keys, 11 is the MEMORY, and 12 is the CLEAR key.)
- The function keys can be used in all modes.
- In the AUX mode, only the receiver keys transmit. Use after programming into memory the commands of your other remote control unit.

② TRANSMIT indicator

This light flashes when remote control signals are being sent.

③ LEARN selector switch

For Pioneer components set this switch to SR RECALL. Set to LEARN when programming the memory, and set to USE when using the memory. (More about LEARN switch on page 42.)



The initial functions can operate all products compatible with PIONEER's common system remote control units marked with the symbol .

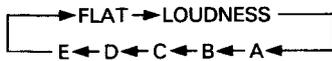
■ AMPLIFIER SECTION OPERATIONS



INPUT SELECTOR keys:
Press VCR 1, VCR 2, VCR 3, VDP, TV, VIDEO, TAPE 1/DAT, LINE, CD, TUNER or PHONO to select the receiver input.

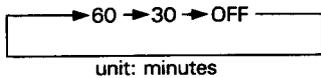
TAPE 2 key:
Press TAPE 2 to switch between source and monitor.

ACOUSTIC select key:
The acoustic setting changes in the following manner each time this key is pressed.

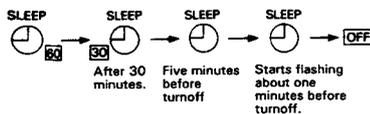


MUTING key:
Used to temporarily mute the sound. The volume is restored when pressed again.

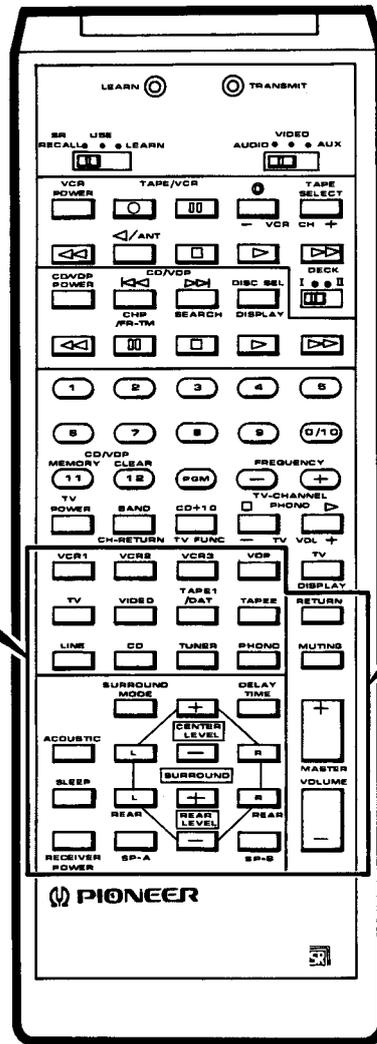
SLEEP timer key:
Activates the SLEEP timer. During SLEEP timer operation, the "dimmer" function decreases the brightness of the display section. The duration changes in the following manner each time the key is pressed:



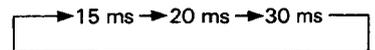
Display appearance if 60 minutes is selected.



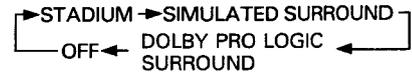
RECEIVER POWER key:
Switches the receiver power between ON and STANDBY.



DELAY TIME key:
Switches the delay time for surround each time it is pressed.

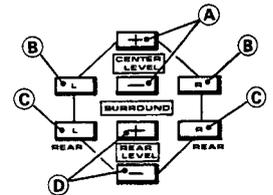


SURROUND MODE key:
The surround mode is switched in the following manner each time the key is pressed:



MASTER VOLUME (+, -) keys:
Adjusts the overall (front, center and rear) volume.

SURROUND keys:



Use these keys to adjust the surround sound.

- Ⓐ **CENTER LEVEL (+, -)**
Adjusts the center speaker sound level.
- Ⓑ **MASTER BALANCE (L, R)**
Adjusts the balance of the left and right front and rear speakers.
- Ⓒ **REAR BALANCE (L, R)**
Adjusts the balance of the left and right rear speakers.
- Ⓓ **REAR LEVEL (+, -)**
Adjusts the sound level of the rear speakers to the level of the front speakers.

SP-A key:
ON/OFF switch for SPEAKERS A

SP-B key:
ON/OFF switch for SPEAKERS B

RETURN key:
Press the RETURN key for sound when the input selector is TUNER.

REMOTE CONTROLLING OF ANY OTHER OF YOUR AUDIO-VISUAL COMPONENTS VIA THIS UNIT REQUIRES:

1. All components must be remote controllable (have sensor window on front panel) to receive direct command from this unit, upon successful learning of those commands by this programmable unit or,
2. All unit must have remote control jacks (IN/OUT) on the rear panel and be correctly connected to the receiver according to the diagram on page 21.

CD PLAYER OPERATIONS



Set the LEARN select switch to SR RECALL.



Set the TRANSMIT mode selector switch to AUDIO.

VDP OPERATIONS



Set the LEARN select switch to SR RECALL.



Set the TRANSMIT mode selector switch to VIDEO.

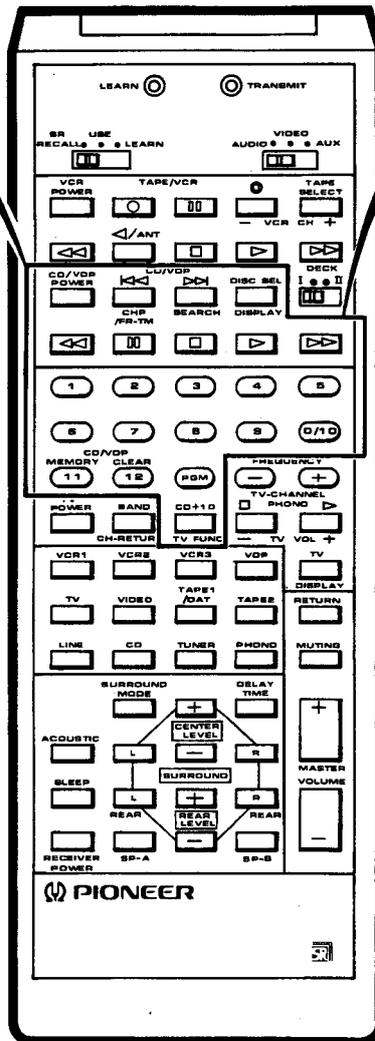
**CD Function Keys
(Operation of CD player)**

- CD POWER key:**
Switches CD player power ON/OFF.
- ◀◀ (TRACK SEARCH) key:**
Returns to the beginning of the track currently in playing.
- ▶▶ (TRACK SEARCH) key:**
Advances to the next track.
- DISC SEL key:**
Selects the DISC No. (1 to 6) for Multi-play CD players.
- PGM key:**
Press to program the CD player.
- ◀◀ (MANUAL SEARCH) key:**
Selects fast backward.
- || (PAUSE) key:**
Pauses playback.
- (STOP) key:**
Stops playback.
- ▶ (PLAY) key:**
Selects playback.
- ▶▶ (MANUAL SEARCH) key:**
Selects fast forward.
- 1* - 0/10* (NUMERIC) keys:**
For direct selection of a track or programming of tracks.
- MEMORY* key:**
Memorizes a program.
- CLEAR* key:**
Erases a memorized program.

* When using them as CD keys, first press the PGM key. If you don't press the PGM key, they will operate as keys for the STATION CALL tuning function.

CD + 10 key
Use this key when programming a TRACK NUMBER higher than 10. (Example) When programming TRACK NUMBER 21, press the CD + 10 key twice and then key 1.

NOTE: You may not be able to use the CD + 10 key with certain CD players.



**VDP function keys
(operation of LD player)**

- VDP POWER key:**
Switches VDP power ON/OFF.
- DISPLAY call key:**
Clears the chapter and frame/time displays on the screen.
- PGM (PROGRAM) key:**
Allows use of chapter program play, frame search and time search.
- ◀◀ (SCAN) key:**
Selects fast backward.
- || (PAUSE) key:**
Video and audio are stopped and playback is paused.
- (STOP/EJECT) key:**
Playback is stopped when pressed once. Pressing again causes the disc tray to come out.
- ▶ (PLAY) key:**
Selects playback.
- ▶▶ (SCAN) key:**
Selects fast forward.
- 1* - 0/10* (NUMERIC) keys:**
Used for chapter and frame/time number search and for chapter program play.
- MEMORY* key:**
Used for chapter program play.
- CLEAR* key:**
Used for releasing repeat playback, number correction and mode release during search operation, and for releasing chapter program play.

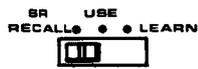
* When using them as VDP keys, first press the PGM key. If you don't press the PGM key, they will operate as keys for the TV CHANNEL CALL function.

- CHP/FR-TM (CHAPTER/FRAME-TIME) key:**
Used for chapter or frame (time) search operation.
- SEARCH key:**
Used for the search operation and for the memory repeat operation.

The initial functions can operate all products compatible with PIONEER's common system remote control units marked with the symbol .

REMOTE CONTROL

■ CASSETTE DECK OPERATIONS



Set the LEARN select switch to SR RECALL.



Set the TRANSMIT mode selector switch to AUDIO.

■ VCR OPERATIONS



Set the LEARN select switch to SR RECALL.



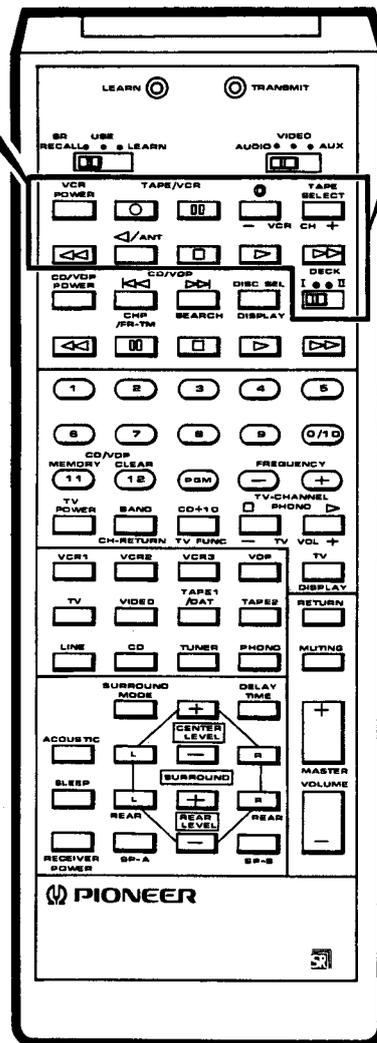
Set the TRANSMIT mode selector switch to VIDEO.

TAPE function keys (operation of cassette tape deck and multi-cassette changer)

- (REC MUTE) key:
For insertion of silent spaces between selections.
 - (REC) key:
Selects the recording mode.
 - ▯ (PAUSE) key:
Temporarily stops tape transport. Press again to resume tape transport.
 - ◀ (FF) key:
Rapidly advances the tape in the direction of the arrow.
 - ▶ (PLAY) key:
Selects reverse playback.
 - (STOP) key:
Stops the tape transport.
 - ▶ (PLAY) key:
Selects forward playback.
 - ▶▶ (FF) key:
Rapidly advances the tape in the direction of the arrow.
- DECK I/DECK II switch:**
This switch selects the deck to be used.
- TAPE SELECT key:**
Selects the cassette No.(1 to 6) for multi-cassette changer.

NOTE:

- Some cassette decks cannot be controlled using the switch.
- The ◀ key can only be used with cassette decks capable of reverse play.
- Some keys will not work with all types of cassette deck. Refer to the operating instructions for more information.



VCR function keys (operation of VCR)

- VCR POWER key:**
Switches VCR power ON/OFF.
- (REC) key:
Selects the recording mode.
 - ▯ (PAUSE/STILL) key:
Sets pause and still picture.
 - VCR CH - (DOWN) key:
Shifts channels in descending order.
 - VCR CH + (UP) key:
Shifts channels in ascending order.
 - ◀ (REW) key:
Rewinds the tape and allows picture search.
- ANT key*:**
This key can be used only for VCRs with a VCR/TV selector. Toggles the antenna output between VCR and TV.
- (STOP) key:
Stops tape transport.
 - ▶ (PLAY) key:
Selects playback.
 - ▶▶ (FF) key:
Rapidly advances the tape and allows picture search.

* For switching the antenna input for an optional VCR, the code of the VCR remote control must be memorized.

TUNER SECTION AND TURNTABLE OPERATIONS



Set the LEARN select switch to SR RECALL.



Set the TRANSMIT mode selector switch to AUDIO.

TUNER function keys (operation of FM/AM Tuner)

1 to 12 (STATION CALL) keys:

For recall of tuner presets. Keys 1 to 0/10 are used for the receiver. (Keys 11 and 12 cannot be used)

FREQUENCY + (UP):

Shifts the frequency up.

FREQUENCY - (DOWN):

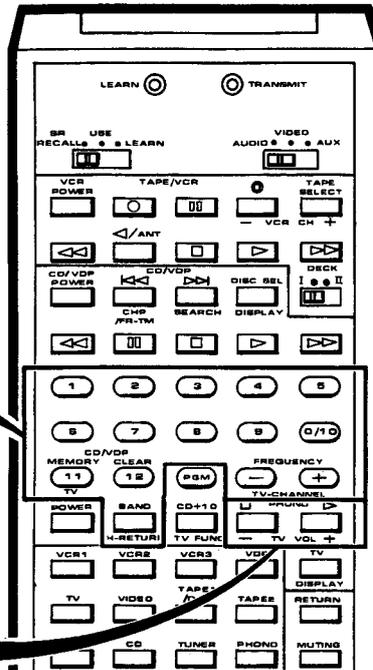
Shifts the frequency down.

BAND key:

Switches the FM and AM bands by turns.

PHONO function keys (operation of turntable)

- ▶ (PLAY) key: Selects play.
- (STOP) key: Stops play.



TV OPERATIONS



Set the LEARN select switch to SR RECALL.



Set the TRANSMIT mode selector switch to VIDEO.

TV function keys (operation of component display or projection monitor receiver)

1 to 12 (CHANNEL CALL DIGIT) keys: Used to call up channels.

CH-RETURN key:

Returns to the previously received channel.

CHANNEL + (UP) key:

Changes the channel in the direction of larger CHANNEL CALL DIGIT numbers.

CHANNEL - (DOWN) key:

Changes the channel in the direction of smaller CHANNEL CALL DIGIT numbers.

TV VOL +, - keys:

Raises and lowers the volume.

TV POWER key:

Switches the power of the TV ON/OFF.

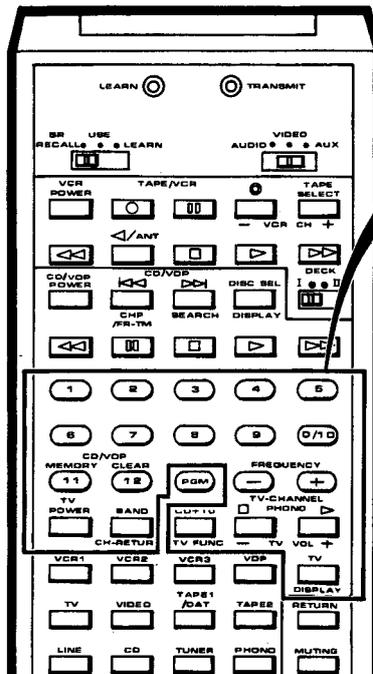
TV FUNC (TV FUNCTION) keys.

Used to change the TV FUNCTION.

- The TV FUNC key cannot be used with some Pioneer TVs.

TV DISPLAY key.

TV image display ON/OFF



PROGRAMMING

Introduction

This system remote control can "learn" the commands of other remote control units, regardless of manufacturer, as long as the other unit is of the infrared type.

On rare occasions, programming this unit may be impossible with some special types of infrared remote control units.

In some cases you may still need the original remote control unit for special situations. But as a rule, you will be able to use this Pioneer remote for most system control needs, including video as well as audio equipment.

LEARNING KEYS

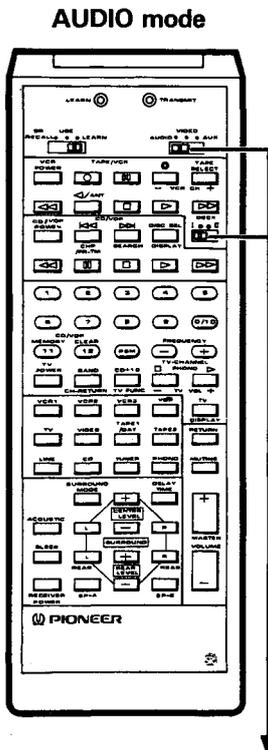
All the keys are programmable. When programming a button, the previous program on the button is erased.

In the AUDIO and VIDEO modes, the Pioneer unified remote control code is already programmed in the unit. If your audio and video equipment consists of Pioneer components, the remote control unit can be used as is. If you wish to program functions which do not already exist in the memory, use the LEARN function to program them. It is also possible to return to the original Pioneer commands after programming other commands. (Refer to "Returning to the Initial Settings" for this procedure.)

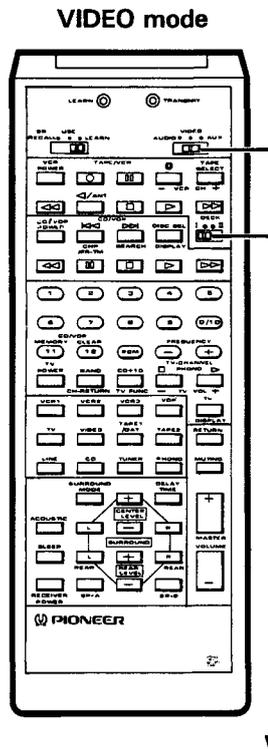
- In each mode, one function per key can be programmed.
- When presetting keys, make sure that the remote control units of both this and the other component are loaded with fresh batteries.

LEARNING CAPACITY

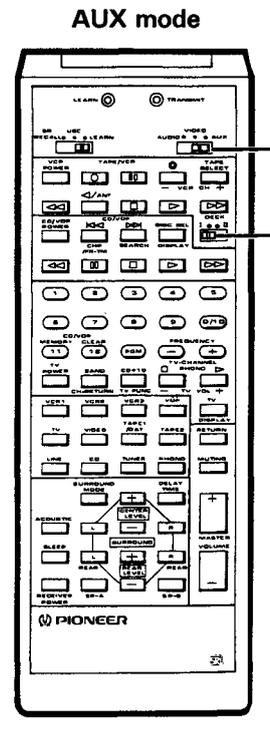
A maximum of 223 commands can be learned (About 150 commands are adequate for Pioneer's remote control signal). More commands than this can't be programmed even if there are keys which have not been preset.



In the AUDIO MODE, the TAPE function keys can be programmed to store commands for DECK I and DECK II depending on the position of the DECK I/DECK II switch. (A maximum of 81 keys can be programmed)



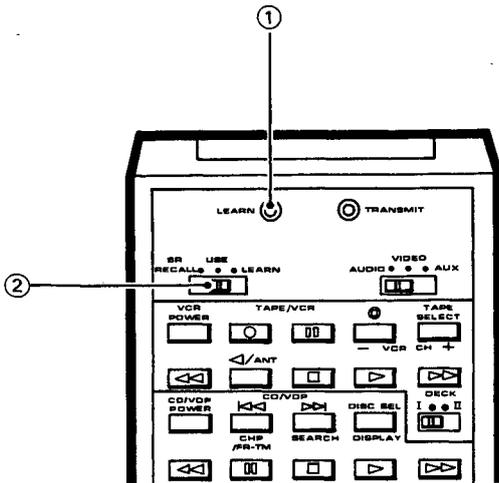
In the VIDEO mode the DECK I/ DECK II switch is inoperative. (A maximum of 71 keys can be programmed)



In the AUX mode the DECK I/ DECK II switch is inoperative. (A maximum of 71 keys can be programmed)

When teaching functions with names that differ from those of the keys, write in the names or codes of the functions on the supplied templates and place on the key.

See page 43 for related information.



① LEARN indicator

This indicator lights when the Learn function is activated.
ON: Learning is possible.
OFF: Regular remote control functions can be performed.

NOTE: If the LEARN indicator flashes, this indicates that the program capacity is exceeded and that the last command is not memorized.

② LEARN selector switch

This can be set as follows:

LEARN:

This position is used for storing the codes of your remote control unit.

USE:

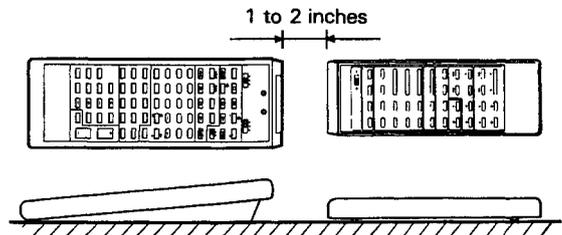
Set to this position after codes have been stored in the LEARN position. (Set to this position when using memorized commands.)

SR RECALL:

Set to this position when transmitting Pioneer unified remote control code signals (Marked on the remote control unit).

[Operation example]

1. Set the LEARN switch of the programmable remote control unit to the LEARN position and set the TRANSMIT mode selector switch to the VIDEO position.
 - Programming is possible with the TRANSMIT mode selector switch in any position, but VIDEO is used as an example.
2. Place the transmission sections of the programmable remote control unit and the remote control of the VCR facing each other.



- Place the two units on a table, separated by 2 to 5 cm (1 to 2 inches).

Memorization will not be possible if they are too close.

3. Hold down the VCR PLAY key of the Programmable remote control unit until the LEARN indicator light up, then release the key.
4. Hold down the PLAY key of the VCR remote control unit.
5. Release the key of the VCR remote control unit after making sure that the LEARN indicator has gone out on the Pioneer remote control unit.

NOTE:

If the LEARN indicator flashes, it indicates that you are trying to preset a key not available for the learning function, or otherwise the program capacity has been exceeded, the function programmed last will not be memorized correctly. All previously programmed functions, however, will be retained in memory and may be used as they are if the last function is not essential. For re-programming refer to page 43 "Returning to the Initial Settings."

6. Set the LEARN selector switch of the programmable remote control unit to the USE position.
 - The previous code (Pioneer uniform remote control code or code for other equipment) is erased and replaced by the new code.
7. Check that the program works.
 - Try actual operation and make sure the unit works properly.
 - If the VCR does not operate when pressing the key, change angle, position and distance between the remote control units and repeat the programming procedure.
 - When programming, make sure that the function indications (for example, ►, ►►, ■) on the other remote control unit and the programmable remote control unit are the same. This will facilitate operation.

NOTE:

Be careful when using the learn function because signals from the transmitting remote control unit may be reflected from walls or the ceiling, and may arrive at the sensor of a component other than the programmable remote control unit. It's a good idea to remove the tape from a cassette deck or VCR in case they are accidentally activated. It is also preferable to unplug the power cords of system components from power outlets, or cover the remote sensors of remote-controlled components to prevent accidental operation.

Questions and Answers about the Learning Function

- Q:** The remote control unit of my VCR has two REC (recording) keys. They both have to be pressed at the same time to start recording. What is the learning procedure in this case?
- A:** Hold one of the keys on the programmable remote control depressed (for example the VCR ● key) until the LEARN indicator lights up, and then press the two keys on the VCR remote control simultaneously.
- Q:** The remote control unit of my VCR has a REC (recording) key and a PLAY (playback) key and they both have to be pressed at the same time to start recording. What is the learning procedure in this case?
- A:** Hold one of the keys on the programmable remote control depressed (for example the VCR ● key) until the LEARN indicator lights up, and then press the REC and PLAY keys on the VCR remote control simultaneously.
- As described above, operations which require two keys to be pressed at the same time are programmed by pressing the two keys simultaneously.

Operating other equipment using the programmable remote control unit

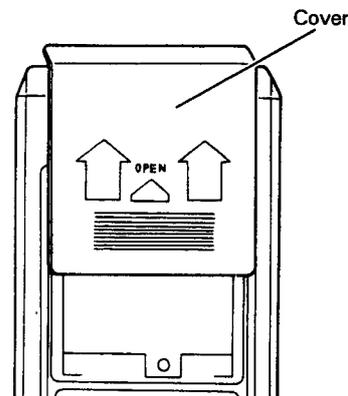
1. Set the LEARN switch of the programmable remote control unit to the USE position.
2. Set the TRANSMIT mode selector switch to the desired position (AUDIO/VIDEO/AUX).
 - Set to the VIDEO position for programming as described in the example.
3. Press the key of the desired function.
 - The TRANSMIT indicator lights up while the remote control unit is sending codes.

NOTE:

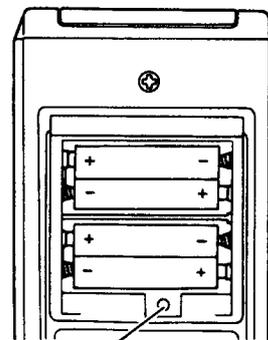
- When operating programmed keys, always set the LEARN switch to the USE position. Operation is not possible in the LEARN position.
- For functions which require two keys to be pressed at the same time (recording etc.) or functions for which several codes are sent simultaneously (auto functions, timer programming, etc.) the programming procedure is different and improper operation may occur.

Returning to the Initial Settings

1. Set the LEARN selector switch to the LEARN position.
2. Remove the battery cover.



3. Press any of the keys available for programming. The LEARN indicator will illuminate.
4. Use a ball-point pen or similar object to press the RESET button while the LEARN indicator is flashing.



Reset button .

- The programmed functions for the AUDIO, VIDEO and AUX positions are cleared, and the remote control unit is reset to the Pioneer uniform remote control codes.
- Press the button gently; do not use excessive force.

The following is the summary of the remote function modes. It is noteworthy that the unit can learn audio or video type of commands regardless of the setting of the transmit mode. This means you can program audio commands while the mode selector switch is on video and vice versa.

		TRANSMIT MODE SELECTOR SWITCH		
		AUDIO	VIDEO	AUX
LEARN SELECTOR SWITCH	SR RECALL	Operate all audio sections of this receiver and other Pioneer components.	Operate the video sections of this receiver and other Pioneer components.	Operations only the amplifier and surround sections.
	LEARN	Learn commands from different audio brands.	Learn commands from different video brands.	Learn additional audio or video commands.
	USE	Operate audio components of different brands, using the programmed (learnt) commands.	Operate video components of different brands, using the programmed (learnt) commands.	Operate the extra audio-video commands learnt.

HINTS FOR BETTER RECEPTION

OUTDOOR FM ANTENNA

The main advantage of FM over AM is the quality of the broadcast signal. In order to benefit fully from the high signal quality of FM broadcasts, it is recommended that a special-purpose FM antenna be installed. In weak signal areas, a multi-element (3-element, 5-element, 7-element) antenna should be used.

GROUNDING

Grounding is recommended if reception of FM programs is impaired by noise. To ground, connect a thick polyvinyl insulated wire to the GND terminal and attach the other end to a metal water pipe or grounding bar or wind it around a copper plate and bury it.

NOTE:

Never connect a wire to a gas pipe for grounding since sparks may ignite the gas.

EXTERNAL AM ANTENNA

If it is not possible to obtain adequate AM reception even by changing the orientation of the AM loop antenna, a separate indoor antenna, or an outdoor antenna should be installed.

INDOOR AM ANTENNA

Use a vinyl insulated wire (5 — 6 m) and connect one end to the AM antenna terminal and affix the other end to the wall or ceiling, as high as possible.

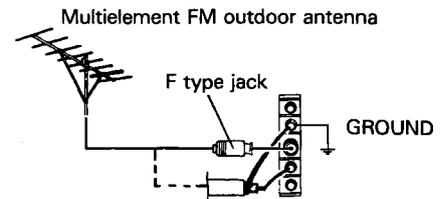
OUTDOOR AM ANTENNA

If reception quality is not improved sufficiently even when an indoor antenna is used, a vinyl insulated wire should be installed outside and fixed in place.

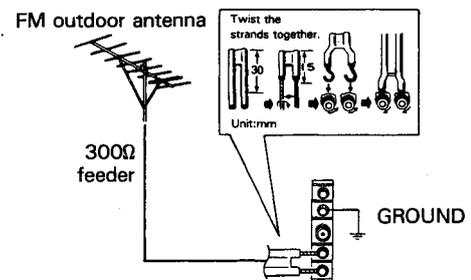
NOTE:

Do not detach the AM loop antenna when using an indoor or an outdoor AM antenna.

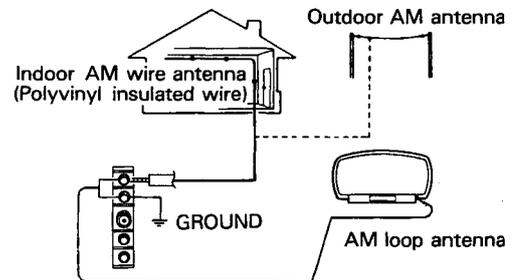
Connecting a coaxial 75Ω cable



Connecting a 300Ω feeder



AM antenna connection



TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunction. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Cause	Remedy
Power does not come on even when POWER switch is pressed.	<ul style="list-style-type: none"> Power cord is disconnected. Instances are rare, but the problem may be due to the operation of the protector circuit. 	<ul style="list-style-type: none"> Connect cord securely. Unplug the power cord of the unit from the AC wall outlet, then plug it in again.
Control was not possible regardless of what operation switch was pressed.	<ul style="list-style-type: none"> Static electricity affected the unit when the air was dry, such as in winter. 	<ul style="list-style-type: none"> Unplug the power cord of the unit from the AC wall outlet, then plug it in again. If static electricity is pronounced, it is recommended that you operate the unit using the remote controller.
No sound is produced, even when the INPUT SELECTOR switch is selected.	<ul style="list-style-type: none"> Connections are incorrect. The MUTING switch is pressed. TAPE 2 MONITOR switch is in the ON position. SPEAKERS switches are turned OFF. VOLUME is turned down. Speaker connecting wires are disconnected from speaker terminals. One or both of the input cords are disconnected. Connector bars are disconnected. 	<ul style="list-style-type: none"> Consult page 8 – 10, 31 – 35 and perform connections correctly. Press the MUTING switch to cancel the MUTING effect. Press the switch again to the OFF position. Press the SPEAKERS switch to turn ON. Raise volume. Connect wires to terminals securely. Connect input cords securely. Connect bars securely.
Rear sound is not produced.	<ul style="list-style-type: none"> SURROUND MODE switch is OFF position. REAR SPEAKERS switch is OFF position. REAR LEVEL control is minimum. 	<ul style="list-style-type: none"> Press the SURROUND MODE or REAR SPEAKERS switch to correct position. Adjust REAR LEVEL control.
REAR L or R sound is not produced.	<ul style="list-style-type: none"> REAR BALANCE is incorrect. The sound is monaural. 	<ul style="list-style-type: none"> Press the REAR BALANCE R or L on the remote control unit to correct the balance. Use the simulated surround mode.
No picture is produced, even when the INPUT SELECTOR switch is selected.	<ul style="list-style-type: none"> Connections are incorrect. The VIDEO SIGNAL SELECTOR is not set properly. The VCR and the selected INPUT SELECTOR switch are not correct. 	<ul style="list-style-type: none"> Consult page 8 – 10, 31 – 35 and perform connections correctly. Set correctly. Press the correct switch.
High noise level.	<ul style="list-style-type: none"> Station has not been tuned in to correct frequency. Antenna has not been connected or has become disconnected. <p>FM reception</p> <ul style="list-style-type: none"> Accessory T-type antenna remains bundled up or it is not pointing in right direction. Weak broadcasting station signals. <p>AM reception</p> <ul style="list-style-type: none"> AM loop antenna is not pointing in right direction. Weak broadcasting station signals. Noise being picked up from this unit and other equipment (especially electrical appliances using motor or fluorescent lights). 	<ul style="list-style-type: none"> Tune the station in correctly. Connect the antenna securely. Stretch both end of antenna taut and locate direction yielding optimum reception. Replace accessory T-type antenna with outdoor FM antenna. Change the AM loop antenna's direction and find a position where reception is improved. Erect outdoor AM antenna or connect ground wire. Stop using appliances generating noise or remove them from vicinity of stereo equipment. Separate the loop antenna from the unit by some distance.
No auto stop.	<ul style="list-style-type: none"> Input signals are not strong enough. 	<ul style="list-style-type: none"> (FM) If the T-type antenna is being used, change to an outdoor antenna.

TROUBLESHOOTING

<p>TV source can't be seen when the VCR's TV tuner is used.</p>	<ul style="list-style-type: none"> • TV antenna is not connected to VCR, or connections are faulty. • You are attempting to watch a TV source using a VCR with copy system connections. In general, when copy system connections are made, the VCR's TV tuner function ceases to operate. For details, consult the operating instructions for your VCR. 	<ul style="list-style-type: none"> • Consult the VCR's operating instructions, and connect antenna correctly. • Disconnect the copy system connection.
<p>Video tape copies can't be made with the VCR.</p>	<ul style="list-style-type: none"> • Video tape copy connections haven't been made. 	<ul style="list-style-type: none"> • Look again closely at the section VIDEO SYSTEM CONNECTIONS on page 9 and 35, and connect correctly.

<p>Remote control does not work.</p>	<ul style="list-style-type: none"> • Batteries are dead or no batteries in remote control unit. • Poor angle or too great a distance from the remote sensor window. • There is an obstacle between you and the remote sensor window. • LEARN selector switch and/or TRANSMIT mode selector switch position is incorrect. • A fluorescent light is shining on the remote sensor window. 	<ul style="list-style-type: none"> • Insert new batteries. • Use within seven meters and within a 30 degree angle of the remote sensor window. • Change your position or move the obstacle. • Set to correct position. • Move so fluorescent light does not shine directly on amplifier front panel remote sensor window.
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SPECIFICATIONS

Amplifier section

OUTPUT POWER (POWER AMP IN) (FRONT)

Continuous average power output of 125 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.005 %** total harmonic distortion.

Continuous power output

Rear 40 W + 40 W (1 kHz, 0.08%, 8Ω)
Center 40 W (1 kHz, 0.08%, 8Ω)
Dynamic power (2 Ω/4 Ω/8 Ω) 280 W/260 W/185 W

Audio section

Damping Factor
1 kHz, 8 Ω 100

Input (Sensitivity/Impedance)
PHONO MM 2.5 mV/47 kΩ
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV,
VDP/CDV, VCR 1, VCR 2, VCR 3 150 mV/47 kΩ
POWER AMP IN 1 V/47 kΩ

Phono Overload Level (T.H.D. 0.08 %, 1000 Hz)
PHONO MM 150 mV

Frequency Response
PHONO MM 20 Hz to 20,000 Hz ± 0.3 dB
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV,
VDP/CDV, VCR 1, VCR 2, VCR 3 5 Hz to 100,000 Hz ± 0.5 dB

Output (Level/Impedance)
TAPE 1/DAT REC, TAPE 2 REC, VCR 1 OUT,
VCR 2 OUT 150 mV/2.2 kΩ
PRE AMP OUT 1 V/220 Ω

Loudness Contour +6 dB (100 Hz)
+3 dB (10 kHz)

Signal-to-Noise Ratio (IHF, short circuited, A network)
PHONO MM 82 dB
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV,
VDP/CDV, VCR 1, VCR 2, VCR 3 98 dB

Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
PHONO MM 77 dB
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV,
VDP/CDV, VCR 1, VCR 2, VCR 3 80 dB

VIDEO Section

Input (Sensitivity/Impedance)
VCR 1, VCR 2, VCR 3, VDP/CDV, TV, VIDEO,
ADAPTOR 1 Vp-p/75 Ω

Output (Level/Impedance)
VCR 1, VCR 2, ADAPTOR, MONITOR 1 Vp-p/75 Ω

Frequency Response
VCR 1, VCR 2, VCR 3, VDP/CDV, TV, VIDEO,
ADAPTOR → MONITOR 5 Hz — 10 MHz ± 0.5 dB

Signal-to-Noise Ratio 55 dB
Cross Talk 55 dB (3.58 MHz)
Enhancer ± 3 dB (2 MHz)

[S terminals]

Input (Sensitivity/impedance)
VCR 1, VCR 2, VDP/CDV Luminance signal: 1 Vp-p/75 Ω
Color difference signal: 0.286 Vp-p/75 Ω

Output (Level/impedance)
VCR 1, VCR 2, TO MONITOR TV. Luminance signal: 1 Vp-p/75 Ω
Color difference signal: 0.286 Vp-p/75 Ω

Frequency response
Luminance signal 10 Hz to 10 MHz, ± 0.5 dB

Signal-to-Noise Ratio
Luminance signal 55 dB

Cross talk 55 dB (3.58 MHz)

Surround section

Input (Sensitivity/Impedance)
REAR POWER AMP IN 1 V/47 kΩ
CENTER POWER AMP IN 1 V/47 kΩ

Output (Level/Impedance)
REAR PRE AMP OUT 1 V/470 Ω
CENTER PRE AMP OUT 1 V/470 Ω

FM Tuner Section

Frequency Range 87.5 MHz to 108 MHz
Usable Sensitivity Mono; 10.8 dBf, IHF (0.95 μV/75 Ω)
50 dB Quieting Sensitivity Mono; 15.3 dBf, (1.6 μV/75 Ω)
Stereo; 37.0 dBf, (19.5 μV/75 Ω)

Signal-to-Noise Ratio Mono; 80 dB (at 65 dBf)
Stereo; 76 dB (at 85 dBf)

Distortion Mono; 0.08 % (100 Hz)
0.08 % (1 kHz)
0.2 % (6 kHz)
Stereo; 0.2 % (100 Hz)
0.15 % (1 kHz)
0.3 % (6 kHz)

Capture Ratio 1.0 dB
Alternate Channel Selectivity 65 dB (400 kHz)
Stereo Separation 50 dB (1 kHz)
Frequency Response 30 Hz to 15 kHz ± 0.5 dB

Image Interference Ratio 50 dB
IF Interference Ratio 80 dB
AM Suppression Ratio 55 dB
Spurious Interference Ratio 70 dB
Antenna Input 300 Ω balanced
75 Ω unbalanced

AM Tuner Section

Frequency range When 10 kHz step: 530 kHz — 1,700 kHz
When 9 kHz step: 531 kHz — 1,602 kHz

Sensitivity (IHF, Loop antenna) 300 μV/m
Selectivity 30 dB
Signal-to-Noise Ratio 50 dB
Image Interference Ratio 40 dB
IF Interference Ratio 65 dB
Antenna Loop antenna

SPECIFICATIONS

Miscellaneous

Power requirements	
U.S., Canadian models	AC 120V, 60 Hz
Other destination models	AC 110/120–127/220/240V (switchable), 50/60 Hz
Power consumption	
U.S., Canadian models	580 W, 750 VA
Other destination models	900 W
In stand by condition	3 W
AC Outlets	
U.S. and Canadian models	SWITCHED x 2: TOTAL 200 W MAX UNSWITCHED x 1: 200 W MAX
Other destination model	SWITCHED x 2: TOTAL 100 W MAX UNSWITCHED x 1: TOTAL 100 W MAX
Dimensions	420 (W) x 162 (H) x 421 (D) mm 16-9/16 (W) x 6-3/8 (H) x 15-9/16 (D) in
Weight (without package)	
U.S. and Canadian models	13.7 kg (30 lb 3 oz)
Other destination models	13.7 kg (30 lb 3 oz)

Furnished Parts

FM T-type antenna	1
AM Loop antenna	1
Dry cell battery (LR03/AM-4)	4
Remote control unit	1
Operating Instructions	1
Templates added	2

NOTE:

Specifications and the design subject to possible modifications without notice due to improvements.

- * Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.
- ** Measured by Audio Spectrum Analyzer.

POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

MAINTENANCE OF EXTERNAL SURFACES

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzene, insecticide sprays and other chemicals on or near this unit, since these will corrode the surfaces.

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