

FM Stereo/FM-AM Receiver

Operating Instructions

STR-AV1010
STR-AV910
STR-AV710

OWNER'S RECORD

For the customers in Canada

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

Model No. _____ Serial No. _____

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

WARNING

To prevent fire or shock hazard, do not ex-
pose the unit to rain or moisture.

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



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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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Getting Started

Using Your Receiver

Getting into the Details

Troubleshooting

Quick Reference

Outline

The STR-AV1010/910/710 is a FM Stereo/FM-AM receiver and audio/video control center. You can enjoy various audio/video program sources with this unit.

TV/VIDEO Programs

- You can enjoy TV or CATV programs with FM simulcast.
- Sounds from various audio program sources can be added on video tapes during editing.

Tuner

- Precise tuning is ensured by a quartz lock digital synthesizer.
- Station Index system allows you to tune into a station quickly.

Electronic graphic equalizer and Music Index system

- You can enjoy audio program sources with an appropriate equalization curve.
- Memorization of equalization curve is possible as well as curve adjustment.
- Combined use of the graphic equalizer and the preset EQ Link system allows you to very quickly tune in a preset broadcast station and immediately enjoy the sound with the memorized equalization curve.

Remote control

- The supplied remote commander allows you to remotely control both the unit and the equipment connected to the unit.
- The commander supplied with the STR-AV1010 can learn various functions of other remote commanders of the infrared type.

Surround sound system

This unit incorporates all of five types of surround effect.

-  **DOLBY SURROUND** * —expands sound just like listening to it in a movie theater.
- Hall Surround—provides reverberation effect that is produced in a large concert hall.
- Live surround—provides the sound effect just like listening a real live performance.
- Stadium surround—provides the sound effect just like being in a stadium.
- Simulated Surround—gives the feeling of width and thickness to monaural sound of old movie program, etc.

* Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792, and 3,959,590; Canadian numbers 1,004,603 and 1,037,877. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

Display

- The frequency of each tuned-in broadcast station is displayed.
- The current selection/operation is displayed to clearly indicate what is taking place.

Precautions

On safety

- Operate the unit only on 120 V AC, 60 Hz.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the cord itself.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.

On operation

Before making program source connections, be sure to unplug the unit.

On cleaning the cabinet

Clean the cabinet, panel and controls with a soft cloth slightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzene.

For the customers in U.S.A.

For detailed safety precautions, see the "IMPORTANT SAFEGUARDS" leaflet.

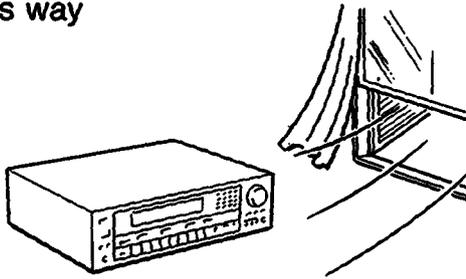
If you have any question or problem concerning your unit, please consult your nearest Sony dealer.

Installation

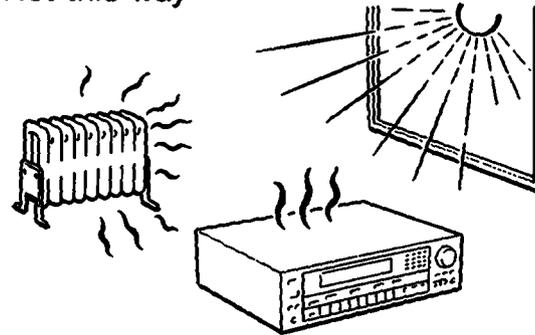
Notes on Installation

Place the unit in a location with adequate air circulation to prevent internal heat build-up in the unit.

This way



Not this way



Do not install this unit:

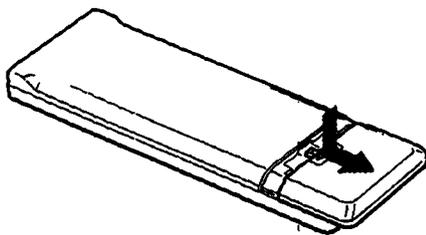
- near heat sources such as radiators or air ducts.
- in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

Do not place anything on top of the cabinet. The top ventilation holes must be unobstructed for the proper operation of the unit and to prolong the life of its components.

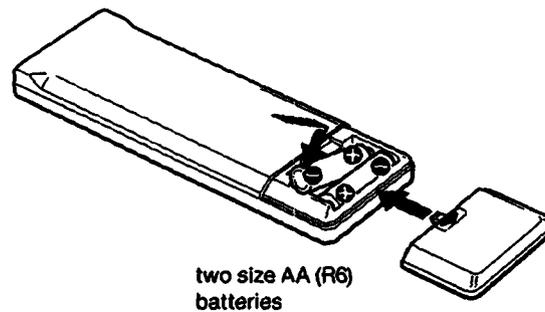
Loading the Batteries into the Remote Commander

RM-P201 and RM-U100 Remote Commander

1



2



Do not throw away the carton and packing material. It will be an ideal container when transporting the unit for repair work, etc.

To avoid damage caused by battery leakage and corrosion
When the commander will not be used for a long time, remove the batteries.

Battery life

Normal operation can be expected about a half year using Sony SUM-3 (NS), and a year using Sony AM-3 (NW) alkaline batteries. When the batteries are run down, the remote commander will not operate the unit. In this case, replace the batteries with new ones.

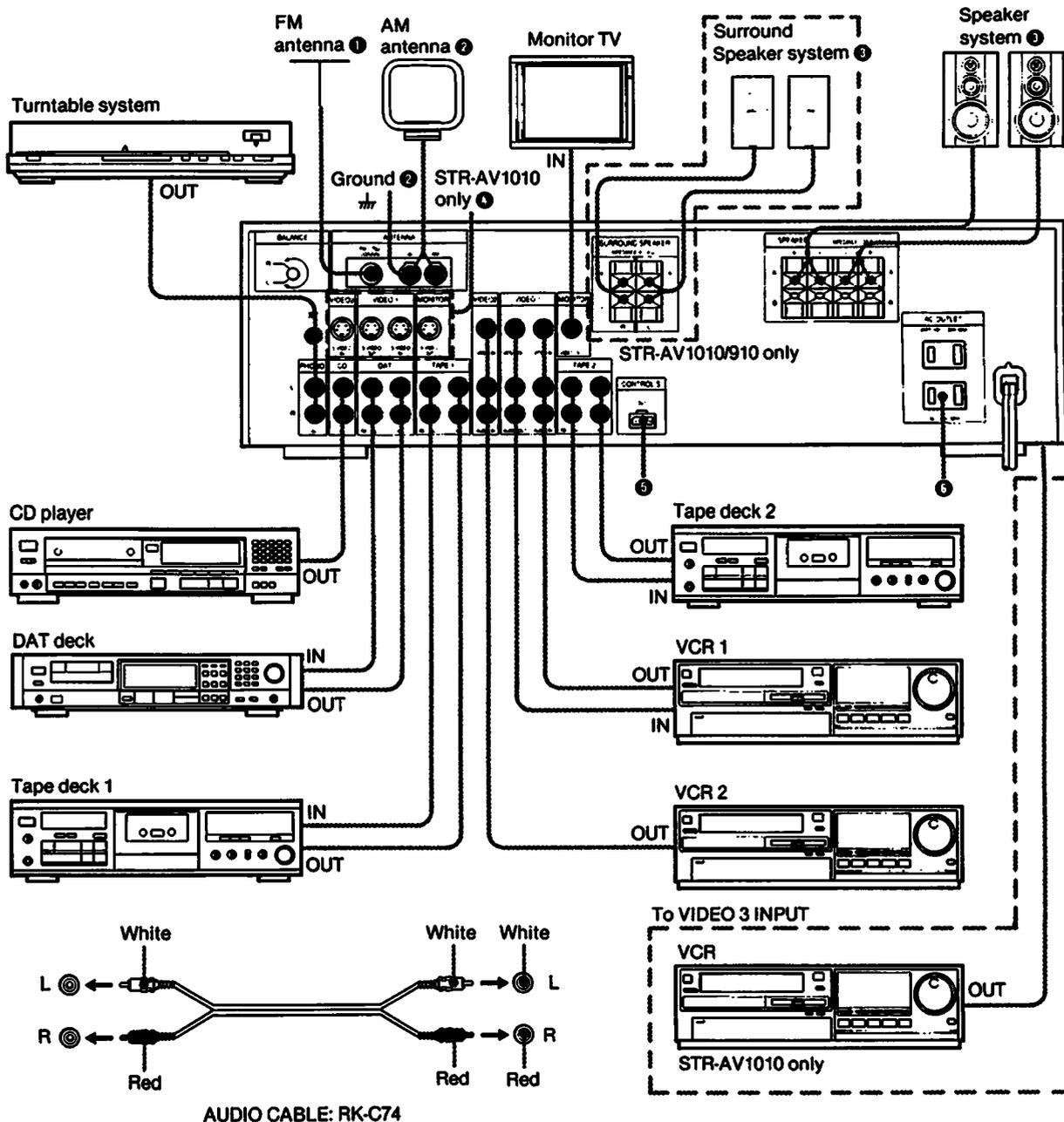
Connections

Notes on Connections

- Do not connect the power cord to an AC outlet nor press the SYSTEM POWER switch before accomplishing all other connections.
- The cable connectors should be fully inserted into the jacks. Loose connection may cause hum and noise.
- Cord plugs and jacks are color coded. Red plugs and jacks are for right channel (R) and white ones for left channel (L).

Overall Connection Diagram

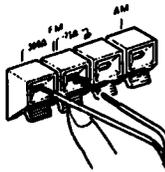
The numbers placed in a circle ● correspond to those of the individual connecting diagrams given on the following pages.



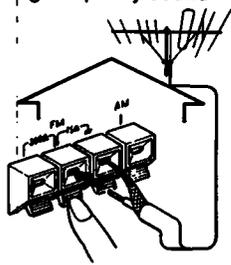
1 Connecting the FM Antenna

STR-AV910/710

For normal use

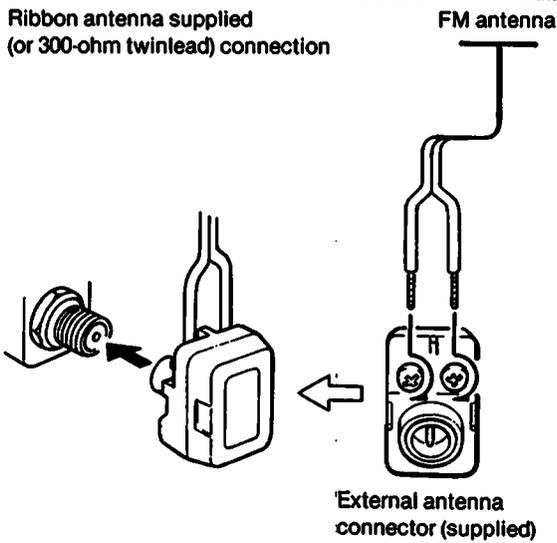


For higher quality sound



STR-AV1010

Ribbon antenna supplied
(or 300-ohm twinlead) connection



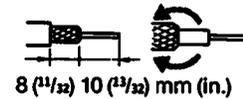
75-ohm coaxial cable connection

A 75-ohm coaxial cable is free from external interference, reduces noise pickup, and is the ideal transmission line for most FM installations. 3C-2V cable is recommended. Connect the 75-ohm coaxial cable to the supplied antenna connector and connect it to the FM antenna connector.

1 Open the lid.



2 Strip the cable.



3 Remove the ring.
(Keep it in the projection on the lid.)

4 Loosen the screws
and insert the cable

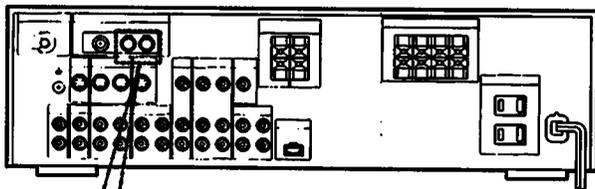


5 Coil the center conductor



6 Snap the cover into place.

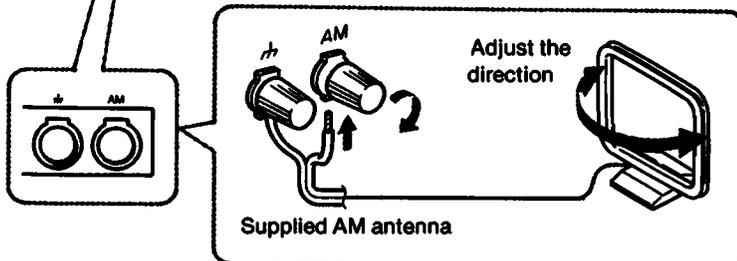
2 Connecting the AM Antenna



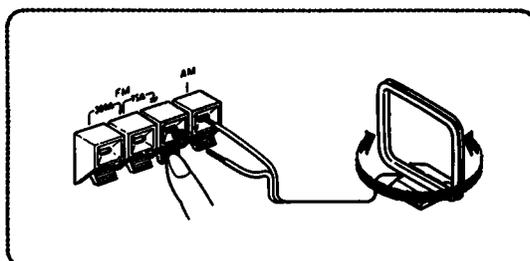
For areas with difficult AM reception

In areas with troubled reception, connect a 6- to 15-meter (20- to 50-foot) insulated wire to the AM antenna terminal. Extend this out of doors if possible, keeping the greater portion horizontal. (There is no need to disconnect the supplied antenna.)

STR-AV1010



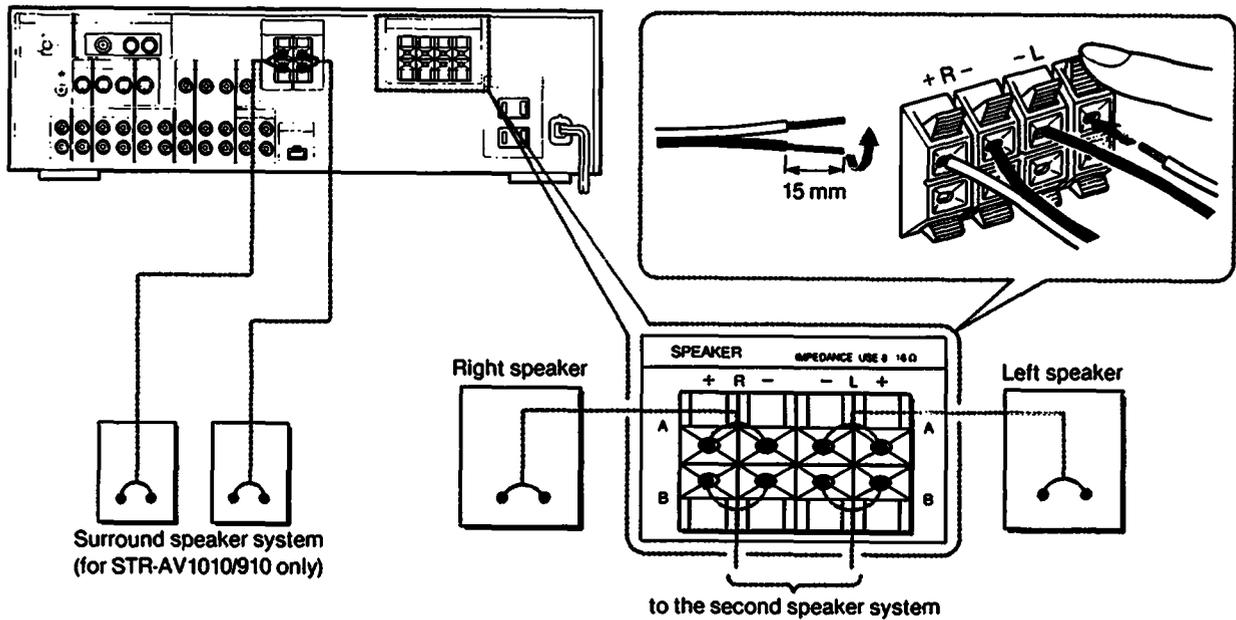
STR-AV910/710



To prevent hum, connect the ground wire to ANTENNA ground terminal (⊕).
When an outdoor antenna is installed, be sure to connect the ground wire for lightning protection.

Connections

3 Connecting a Speaker System

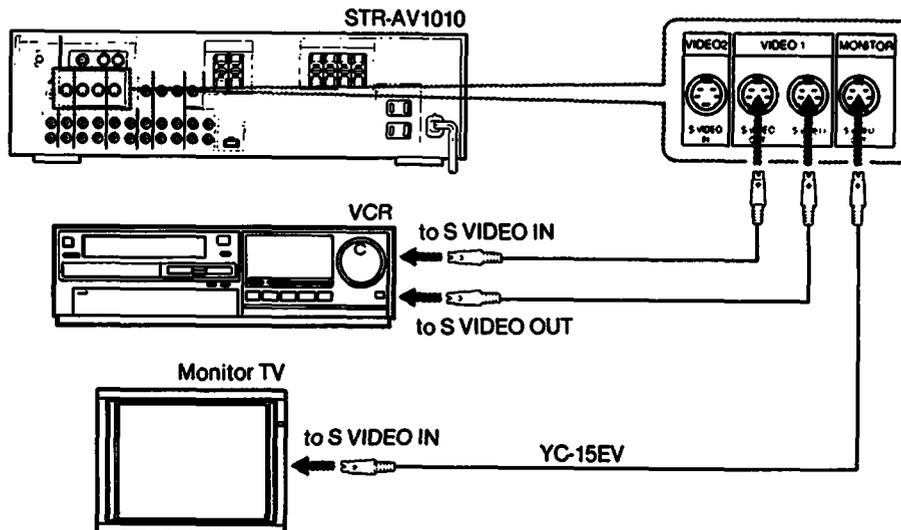


Speaker impedance and power capability

This receiver is designed to work best with speakers having nominal impedance from 8 to 16 ohms, at rated 120 watts (STR-AV1010), 100 watts (STR-AV910) or 55 watts (STR-AV710) minimum RMS per channel with an 8-ohm load from 20 - 20,000 Hz. For surround speakers, connect speakers having nominal impedance from 8 to 16 ohms and rated over 20 watts RMS. (STR-AV1010/910 only)

4 Connecting a VCR, Monitor TV, etc. Equipped with the Connectors for Component Video Signal of the Luminance and the Chrominance

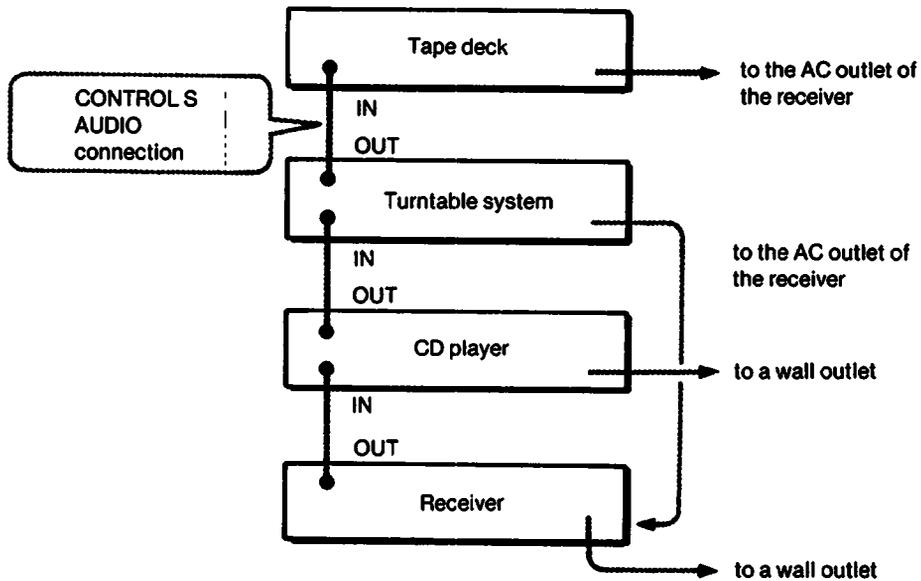
This connection is possible only with the STR-AV1010.



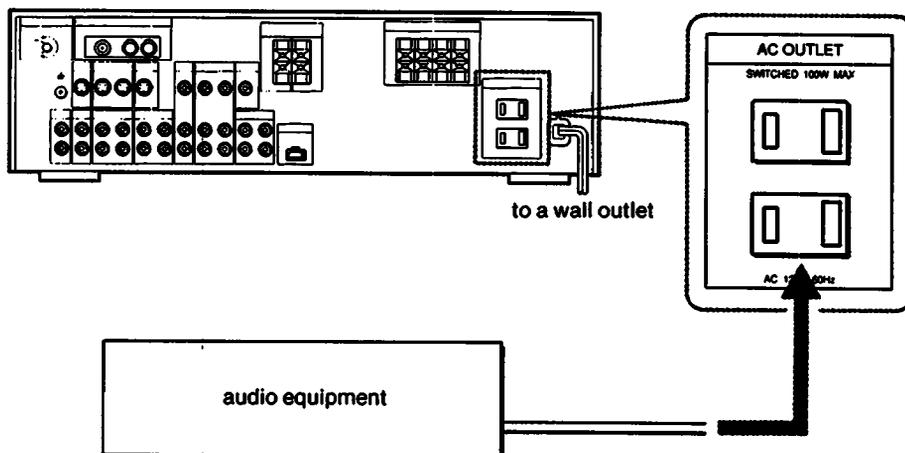
5 Connecting the Remote Control System

To control the equipment connected to the receiver with the remote commander, connect the CONTROL S OUT connector and the CONTROL S IN connector of each equipment as illustrated below.

Example of audio connection



6 Connecting the AC Power



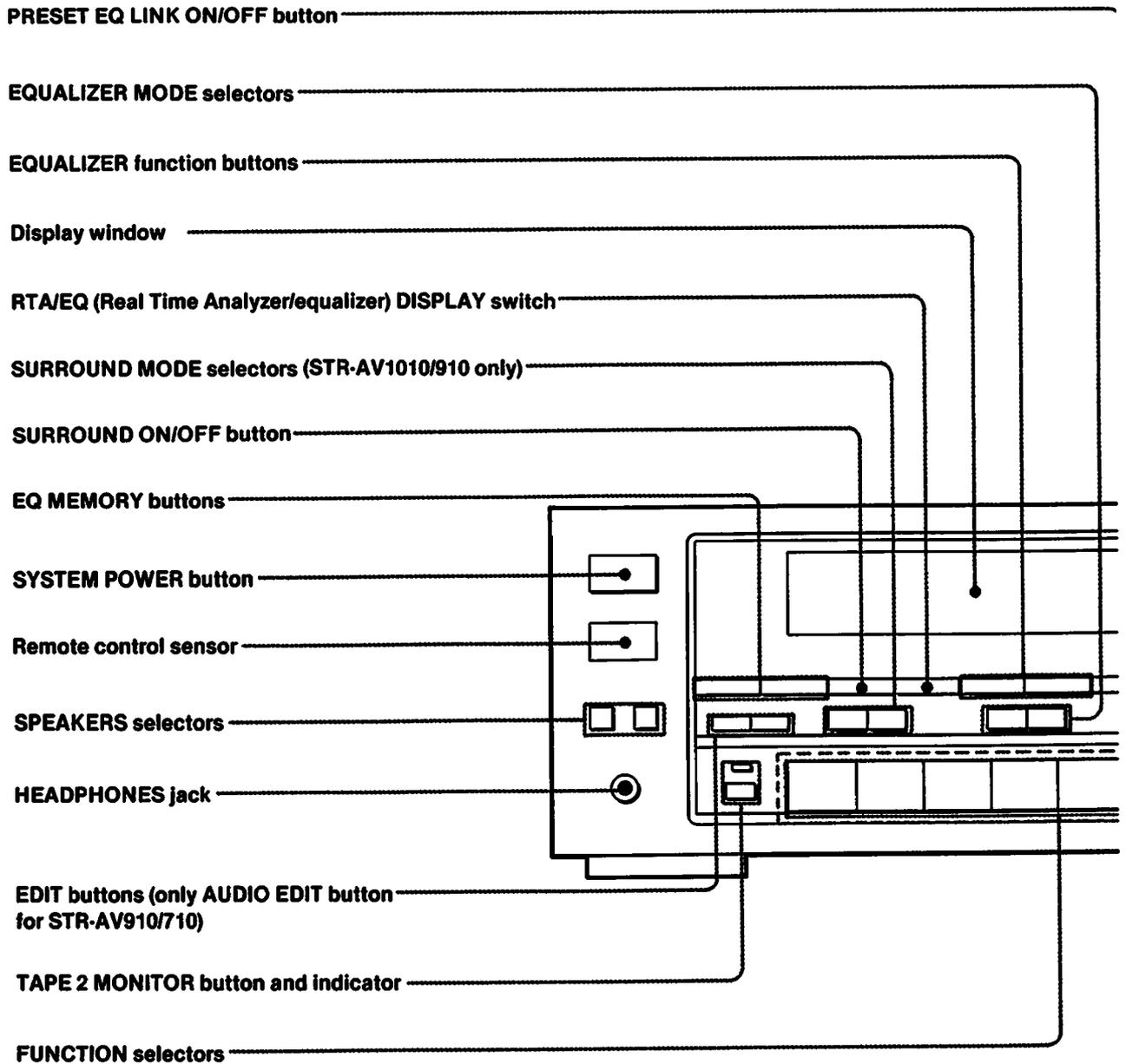
Caution

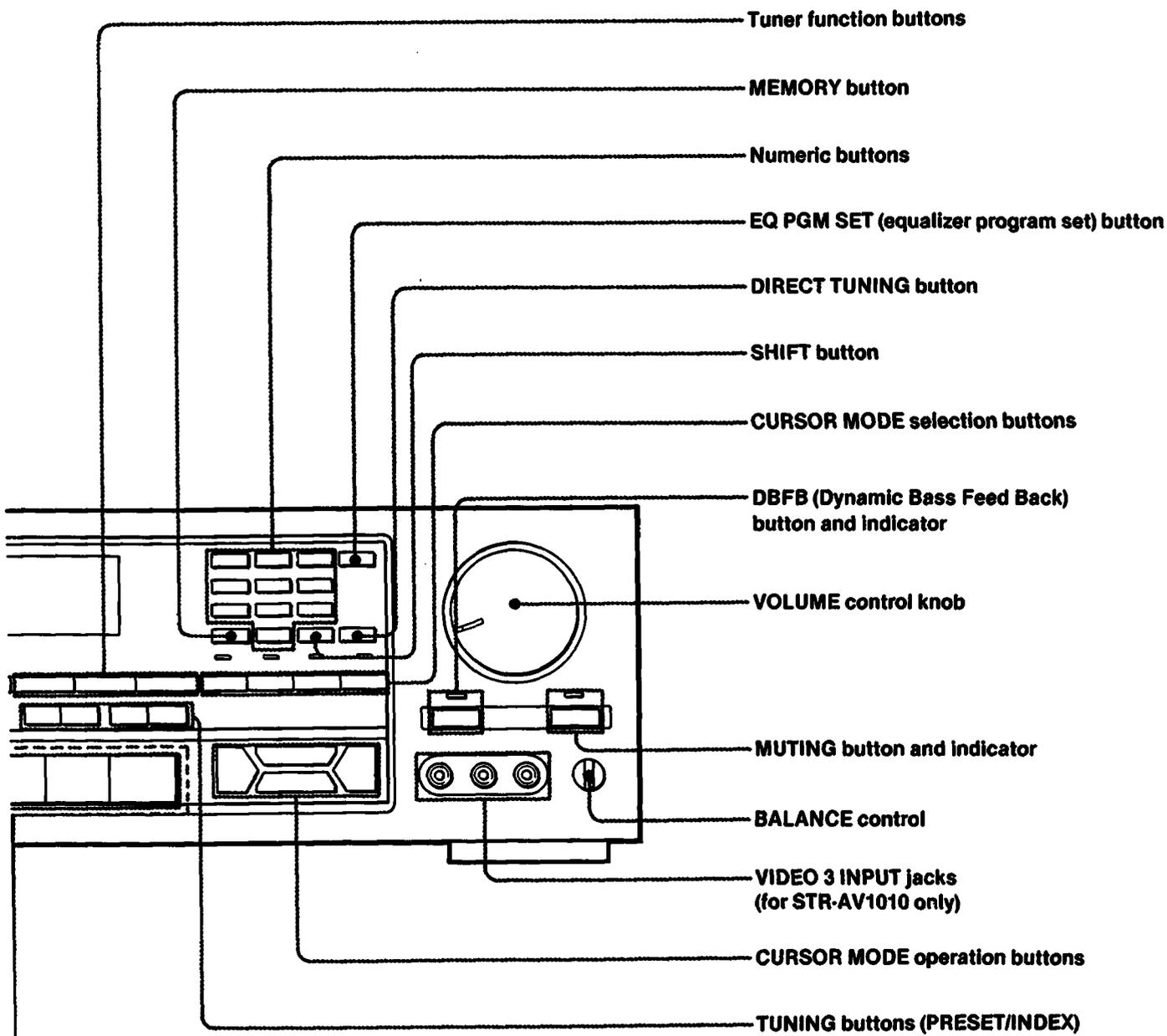
Be careful that the total power consumption of each equipment connected to the outlets on the receiver does not exceed 100 watts.

Do not connect electrical home appliance such as an electric iron, fan, TV, or other high-wattage equipment to these outlets.

Parts Identification

Front Panel





STR-AV910/710

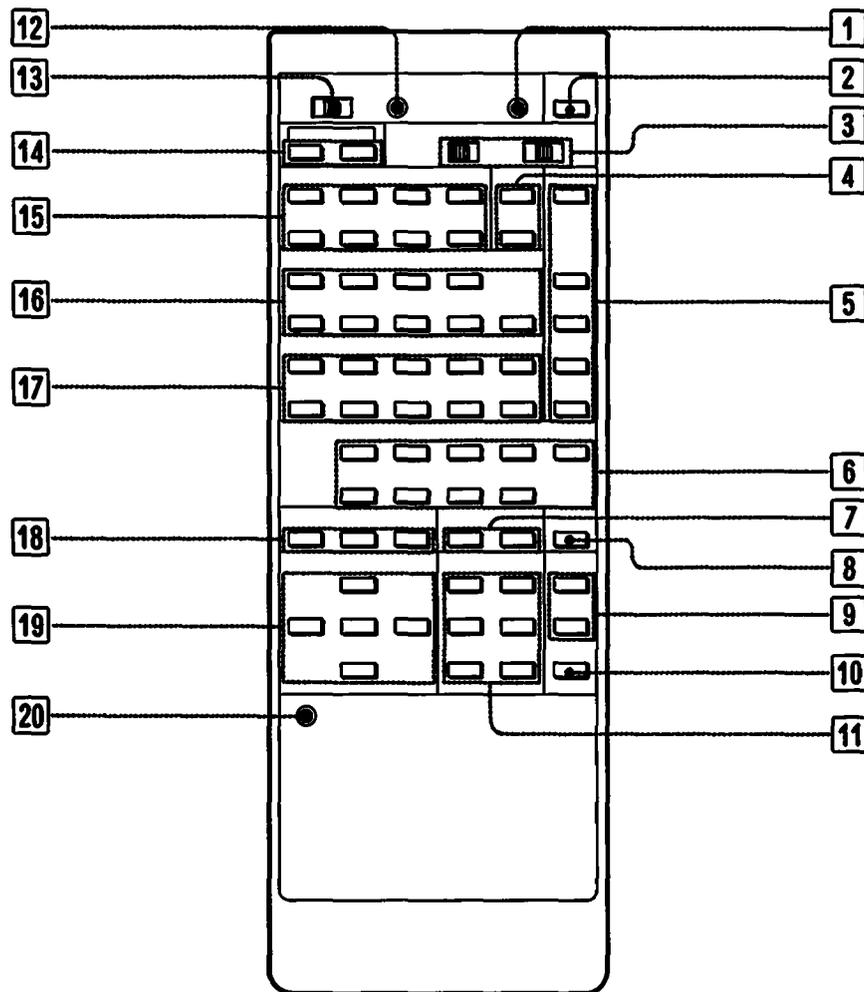


Parts Identification

Programmable System Commander RM-P201 (supplied with the STR-AV1010)

The Programmable System Commander RM-P201 supplied with the STR-AV1010 can learn various functions of other remote commanders emitting infrared rays.

When it is set to SONY STD (Sony Standard) by the mode selector, its buttons can be used to perform the functions below.



1 PROGRAM CLEAR button

2 POWER button

Turns on/off the receiver.

3 DECK and VTR selectors

DECK A, B: Selects deck A or B.
VTR 1, 2, 3: Selects VCR 1, 2 or 3.
1: Betamax VCRs
2: 8 mm VCRs
3: VHS VCRs

4 PHONO buttons

START: Starts record play.
STOP: Stops record play.

5 TV operation buttons

TV/VIDEO: Selects the input signal to the TV set, either a TV signal or VCR programs.
VOL (volume) +/- buttons
CH (channel) +/- buttons

6 FUNCTION selectors

Note

DIGITAL button does not function for STR-AV1010.

7 SURROUND buttons

ON/OFF: Turns on/off the surround mode.
MODE: Selects the surround mode.

8 DBFB/DDS ON/OFF switch

Turns on/off DBFB (Dynamic Bass Feed Back)

9 VOL (volume) control buttons

10 MUTING button

11 TUNER operation buttons

INDEX: Preset station index select buttons
+/-: Selects a next/previous preset station under the same index.
SELECT: Index select button
PRESET: Preset station select buttons
+/-: Selects a higher/lower preset channel number.
EQ LINK: Turns on/off the equalizer link.

12 LEARN indicator

13 Mode selector

SONY STD: To operate the commander on Sony standard.
USER STD: To use the learned functions.
LEARN: To perform learning function.

14 TV and VTR POWER buttons

TV: Turns on/off the TV.
VTR: Turns on/off the VCR.

15 CD player operation buttons

▶: Starts play.
■: Stops play.
◀◀/▶▶: AMS (Automatic Music Sensor)
PGM: Program play
SHUFFLE: Shuffle play
CONTINUE: Continuous play
DISC SKIP: Disc skip

16 TAPE deck operation buttons

◀◀: Reverse fast winding
◀: Reverse play
▶: Forward play
▶▶: Forward fast winding
■: Stop
||: Pause
●: Recording (While you press ●, press REV for reverse recording or FWD for forward recording.)

17 VTR operation buttons

◀◀: Rewind
▶: Play
▶▶: Fast forward
■: Stop
||: Pause
●: Recording buttons (Press both buttons for recording.)
ANT TV/VTR: Selects the output signal from the antenna terminal from the VCR, either TV or VCR.
CH +/-: Channel select buttons

18 EQUALIZER operation buttons

ON/OFF: Turns on/off the equalizer.
MODE: Selects the equalizer mode (A through F).
BAND: Selects the equalizer band.
(This button does not function for STR-AV1010).

19 CURSOR MODE operation buttons

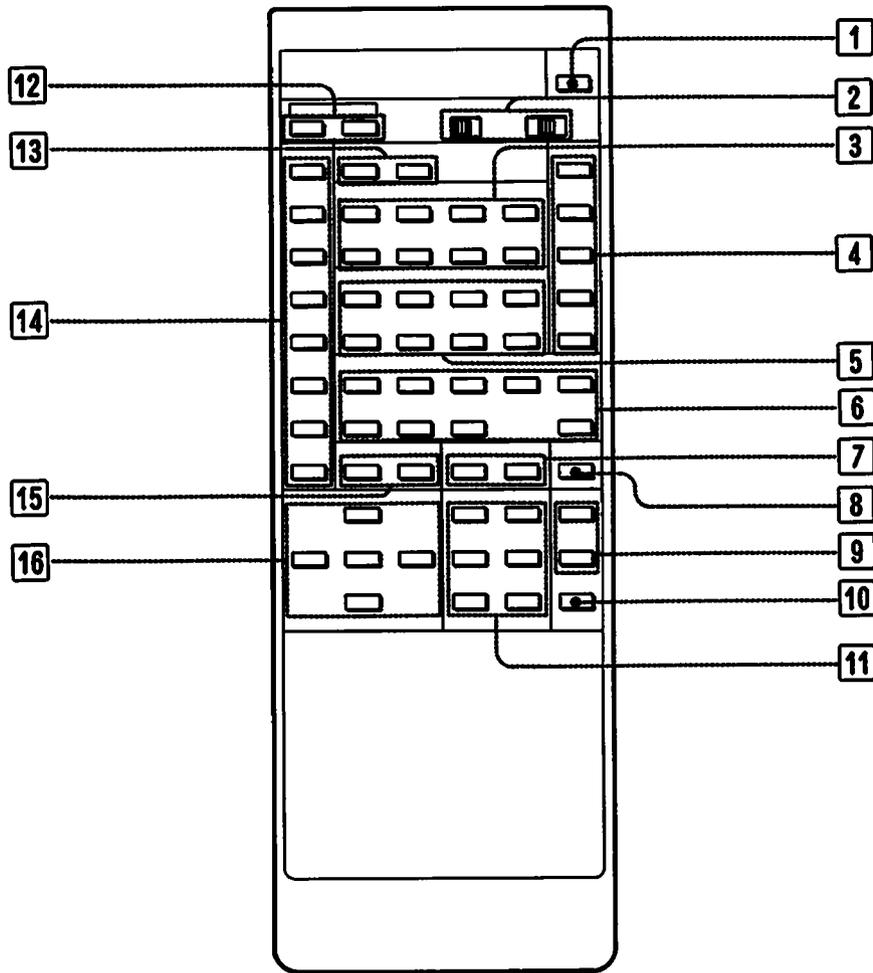
20 RESET button

Notes

• When the CONTROL S OUT connector is connected to the CONTROL S IN connector of each equipment, you can control the connected equipment using this remote commander.

Parts Identification

Remote Commander RM-U100 (supplied with STR-AV910/710)



1 POWER button

Turns on/off the receiver.

2 DECK and VTR selectors

DECK A, B: Selects deck A or B.
VTR 1, 2, 3: Selects VCR 1, 2 or 3.
1: Betamax VCRs
2: 8 mm VCRs
3: VHS VCRs

3 CD player operation buttons

▶: Play
■: Stop
◀◀/▶▶: AMS (Automatic Music Sensor)
PGM: Program play
SHUFFLE: Shuffle play
CONTINUE: Continuous play
DISC SKIP: Disc skip

4 TV operation buttons

TV/VIDEO: Selects the input signal to the TV set, either a TV signal or VCR programs.
VOL (volume) +/- buttons
CH (channel) +/- buttons

5 TAPE deck operation buttons

◀◀: Reverse fast winding
◀: Reverse play
▶: Forward play
▶▶: Forward fast winding
■: Stop
||: Pause
○: Record muting
●: Recording (While you press ●, press ◀ or ▶.)

6 VTR operation buttons

◀◀: Rewind
▶: Play
▶▶: Fast forward
■: Stop
||: Pause
●: Recording (While you press ●, press ▶)
ANT TV/VTR: Selects the output signal from the antenna terminal from the VCR, either TV or VCR.
CH +/-: Channel select buttons

7 SURROUND buttons

ON/OFF: Turns on/off the surround mode.
MODE: Selects the surround mode (except for STR-AV710).

8 DBFB button

Turns on/off the DBFB (Dynamic Bass Feed Back).

9 VOL (volume) control buttons

10 MUTING button

11 TUNER operation buttons

INDEX: Preset station index select buttons
+/-: Selects a next/previous preset station under the same index.
SELECT: Index select button
PRESET: Preset station select buttons
+/-: Selects a higher lower preset channel number.
EQ LINK: Turns on/off the equalizer link.

12 TV and VTR POWER buttons

TV: Turns on/off TV.
VTR: Turns on/off VCR.

13 PHONO buttons

START: Starts record play.
STOP: Stops record play.

14 FUNCTION selectors

15 EQUALIZER operation buttons

ON/OFF: Turns on/off the equalizer.
MODE: Selects the equalizer mode (A through F).

16 CURSOR MODE operation buttons

Notes

• When the CONTROL S OUT connector is connected to the CONTROL S IN connector of each equipment, you can control the connected equipment using this remote commander.

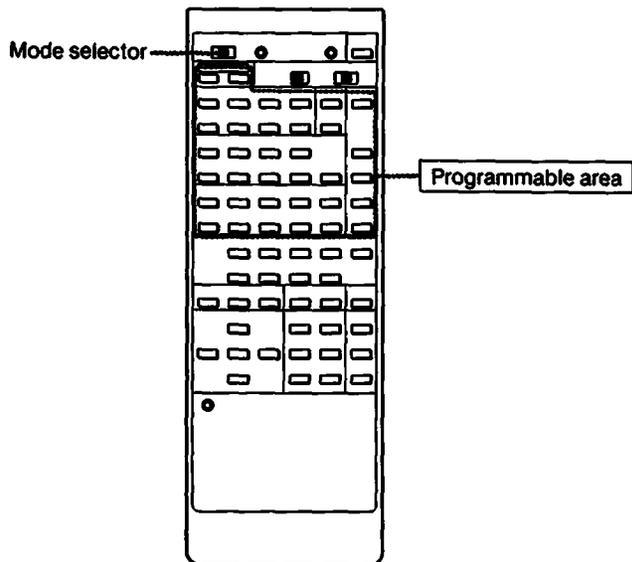
Note on the ● (recording) button under 6 VTR operation buttons
If your VCR is of such type as pressing ● puts it in REC PAUSE mode, first press ● on this commander and then ||.

Using the Remote Commander

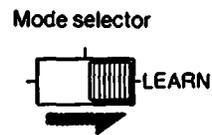
- When you manipulate a switch or button on the commander, be sure to point the head of the commander toward the remote control sensor on the front of the receiver.
- If there is an obstacle between the receiver and the head of the commander, the receiver may not be controlled remotely.

Programming Signals of Other Audio/Video Equipment with Programmable System Commander RM-P201

Insert batteries before operating.



1



2

1 Press and hold the button which shall "learn" the remote-control signal until the LEARN indicator light up.

2 Press and hold the button of other manufacturer's remote commander whose signal is to be learnt.

3 Remove your finger(s) from the button(s) after the LEARN indicator goes off.

The diagram shows two remote commanders. The 'Programmable commander' has a 'LEARN indicator' (a small light) that is shown as lit. An arrow points from a button on the 'Other manufacturer's remote commander' towards the 'LEARN indicator'. The distance between the two devices is labeled 'Approx. 5 cm (2 inches)'. A hand is shown pressing a button on the second remote.

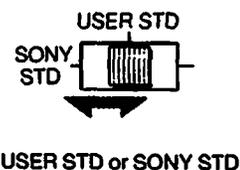
The two remote commanders must:

- face straight each other.
- be placed at a distance of approx. 5 cm (2 inches).
- not be moved during programming operation.

3

Repeat operation for each button to be programmed.

4



After programming

Be sure to test if the equipment really works with the programmed signals.

If the LEARN indicator flashes or does not go out in step 2-2, 3. The memory capacity has become full. This occurs when other signals stronger than the remote-control signals have been stored because the signals were programmed in a noisy environment or the remote commanders were placed too far apart from each other.

→ Clear all the signals following the procedure on the right and program again from the beginning under the proper conditions.

Notes on programming

- Remote-control signals of equipment of manufactures other than Sony can be programmed only when they are compatible with the infrared wireless remote control system. Since the programmable commander can "learn" only the signals output from another remote commander, it cannot control equipment that do not use a remote commander. Also, note that there are some special remote-control signals that cannot be programmed.
- Do not attempt to use the programmable commander with an air conditioner or other household appliances.

To program a new signal onto a previously programmed button

Follow the programming procedure. The previously programmed signal is cleared and replaced by the new signal.

To clear all programmed signals

- 1 Set the mode selector to LEARN.
- 2 Press and hold any button of the programmable area until the LEARN indicator lights up.
- 3 Press PROGRAM CLEAR until the LEARN indicator flashes and goes off.

Note

It is not possible to clear the programmed content of just one button.

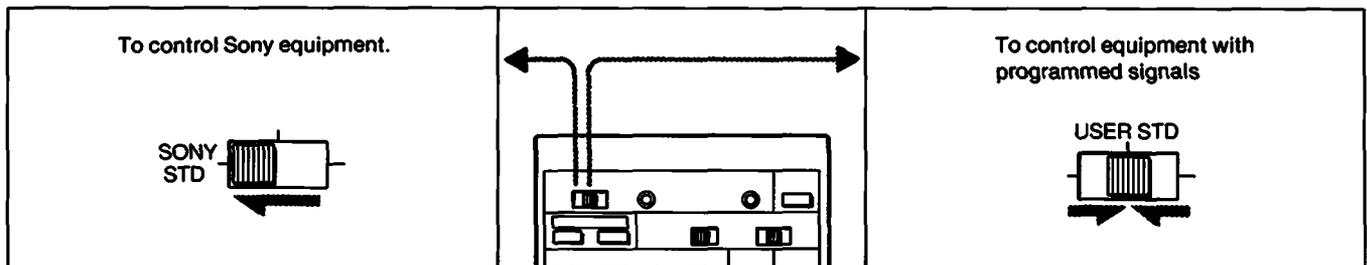
To program a signal onto the ● REC button in the TAPE or VTR section

It is not possible to operate any equipment with only the ● REC button. To program a signal under the ● REC button, press and hold the following buttons at the same time in step 2-1.

TAPE	REV	REC	REC	FWD
VTR		●REC		

Controlling Equipment

By switching the mode selector as shown below, a single button alternately controls Sony equipment and another manufacturer equipment.



When Sony equipment cannot be remote-controlled

Program the signal in the same way as for equipment from other manufacturers. In this case, even with Sony equipment, set the mode selector to USER STD.

Battery life

Normal operation can be expected about a half year using Sony SUM-3 (NS), and a year using Sony AM-3 (NW) alkaline batteries. If the LEARN indicator does not light when a button is pressed, the batteries are almost exhausted.

When the batteries are exhausted, the remote commander can no longer operate the unit or programming becomes impossible.

If this happens, replace both batteries with new ones. We strongly recommend the use of alkaline batteries.

If no signal has been programmed

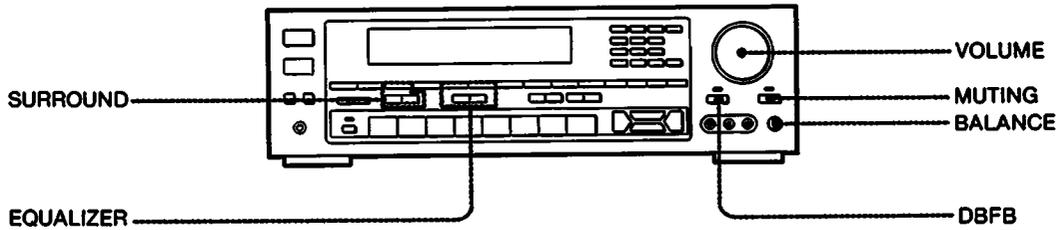
The programmable commander can control Sony equipment even when the mode selector is set to USER STD.

If the equipment works incorrectly

Press RESET and start again. The programmed contents of the buttons are not cleared by pressing RESET.

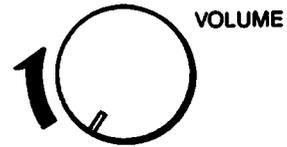
Audio Adjustment

You can enjoy superb sounds using the audio adjustment functions as shown below.



Volume Adjustment

Adjust the **VOLUME** control.



Temporarily reducing the sound to a low level (-20 dB attenuation)
Press **MUTING**.
Press again to restore the previous level.



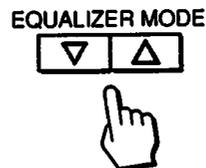
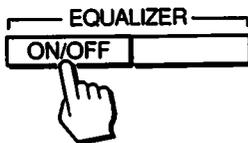
Balance Adjustment

Changing the relative output strength of the right and left speakers
Adjust **BALANCE** to correct stereo imaging, when the speaker position is not symmetrical.



Sound Quality Adjustment

Selecting a factory-preset equalization curve
Press **EQUALIZER ON/OFF**.
Select a desired equalization mode by pressing the **EQUALIZER MODE** ∇ or Δ .
Press **EQUALIZER ON/OFF** again to turn off the effect.



Creating and/or Memorizing a New Equalization Curve
See "Using the Graphic Equalizer," pages 24, 25.

To reinforce the bass sound
Press **DBFB** (Dynamic Bass Feed Back) to obtain powerful bass sound at small output levels.
Indicator lights up.
Press again to turn off the effect.

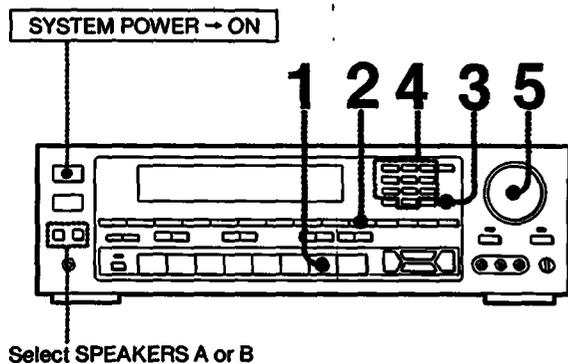


Enjoying the surround sound
Press **SURROUND**.
Press again to turn off the effect.



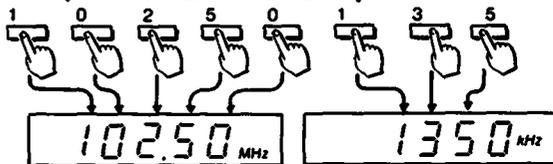
Receiving Radio Broadcast Programs

Direct Tuning



Select SPEAKERS A or B

- 1 Select the function **TUNER**.
- 2 Select **FM** or **AM**.
- 3 Press **TUNING DIRECT**.
- 4 Enter the frequency of the desired station by pressing the appropriate numeric buttons. The entered frequency is displayed.
Example 1: FM 102.50 MHz Example 2: AM 1350 kHz
- 5 Adjust the volume.



Tuning intervals for direct tuning

FM: 50 kHz interval

AM: 10 kHz interval (changeable to the 9 kHz interval)

Changing the AM tuning interval

The AM tuning interval is preset to 10 kHz. To use the receiver where the frequency allocation system is based on the 9 kHz interval, make the following adjustments:

- 1 Turn on the power and tune in any AM station.
- 2 Press **SYSTEM POWER** to turn off the receiver.
- 3 Press again **SYSTEM POWER** to turn on the receiver while pressing **PRESET TUNING +**.

Resetting the AM tuning interval

Follow the procedure for changing the AM tuning interval.

Caution

When the interval is changed, all preset stations which you have memorized will be erased. After changing the interval, be sure to newly preset stations. (See "Presetting Stations...", pages 20, 21.)

When the entered number is not in the receivable frequency range

The entered digits (up to 5 digits for FM or up to 3 digits for AM) blink in the frequency display area, and reception does not take place.

If this condition occurs, press **TUNING DIRECT** again, and enter the correct frequency (the frequency range of the receiver is 87.50 to 108.0 MHz for FM, and 530 to 1710 kHz for AM).

Correcting the entered frequency

Repeat Steps 3 to 4 of Direct Tuning.

For entering AM frequencies, you need not enter the last "0". However, if you have changed the AM tuning interval to 9 kHz, enter all the digits.

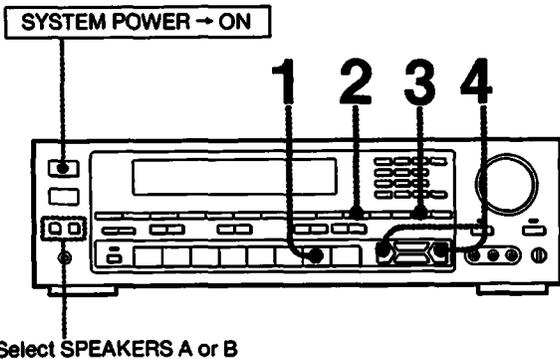
If you enter a frequency not covered by the tuning interval The entered value is automatically rounded up or down to the closest value covered by the tuning interval.

When an FM stereo program is noisy

When the unit receives an FM stereo program, the **STEREO** indicator goes on in the display window. If the stereo program is noisy, press **FM MODE** to change the mode over to **MONO**. This eliminates the stereo effect, but the noise will be greatly reduced. To return to the stereo mode, press **FM MODE** again.

Receiving Radio Broadcast Programs

Auto Tuning



- 1** Select the function **TUNER**.
- 2** Select **FM** or **AM**.
- 3** Select the **CURSOR MODE TUNING**
- 4** Press **CURSOR > (+)** or **< (-)** to start auto tuning.

Selecting the signal level of the station to be tuned

You can select "high" or "low" as the FM tuning level by **TUNING LEVEL** on **CURSOR MODE**.

Press **△** to select high; **HIGH** displayed in the display window.

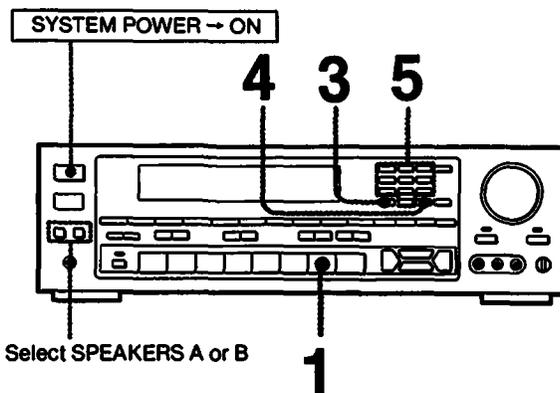
Press **▽** to select low; **HIGH** display disappears.

HIGH: The frequencies of strong signal stations only will be tuned.

LOW: The frequencies of all receivable stations will be tuned.

Presetting Stations Without Index Name—Station Preset

A total of 30 FM/AM stations can be memorized in any desired sequence.



- 1** Select the function **TUNER**.
- 2** Tune in the desired station. (See "Auto Tuning" or "Direct Tuning".)
- 3** Press **MEMORY**.
MEMORY indicator appears for a few seconds.
- 4** Press the **SHIFT** to select the memory page (**A**, **B** or **C**).
The memory pages (**A**, **B** and **C**) can be classified according to the music category, station band, etc.
- 5** Press the desired numeric button (**1** to **0**), while the **MEMORY** indicator is displayed.

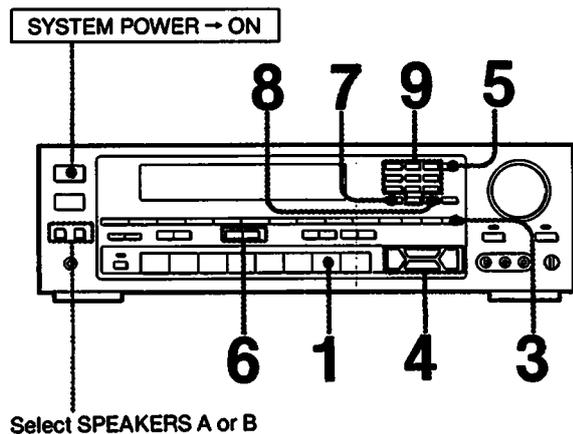
Repeat above steps for presetting other desired stations.

Replacing a preset station

Preset another station on the number of the station to be replaced. The previously preset station will be erased.

Presetting Stations with Index Name—Index Input

You can divide preset stations under Index Names you create (up to 4 digits). If you want to categorize the preset stations by kinds of music, for example, create indexes such as ROCK, JAZZ, etc. Also, a EQUALIZATION MODE can be assigned to preset stations at the same time.

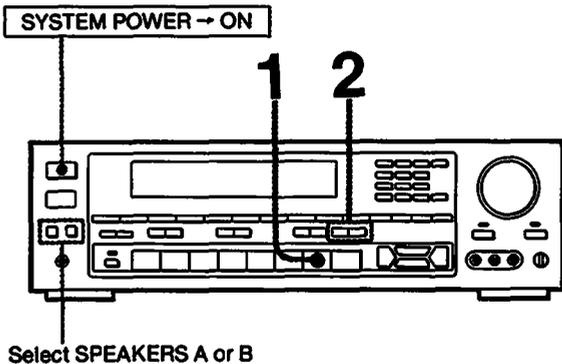


- 1** Select the function **TUNER**.
- 2** Tune in the desired station with **Direct. Auto** or **Preset Tuning**.
- 3** Select **INDEX** on the **CURSOR MODE**.
- 4** Create a index name.
To select a letter or a number (1 – 4), press Δ or ∇ .
To change the position, press \leftarrow or \rightarrow .
- 5** Press **EQ PGM SET** to assign a equalization curve.
- 6** Select a equalization mode which you want to assign to the selected station.
- 7** Press **MEMORY**.
The **MEMORY** indicator appears.
- 8** Preset **SHIFT** to select memory page. (**A**, **B** or **C**)
- 9** Press the numeric button.
- 10** Repeat Steps 4 to 9 for all other stations you want to assign a **Index Name** to.
If you want to assign a station under the same **Index Name**, press Δ or ∇ to skip the steps 3 to 6.
 - Pressing **CURSOR MODE INDEX** twice make all 4 digits of the **Index** flash. Then, all previously memorized **Index** can be called up by pressing Δ or ∇ . This allows you to change only one digit of a previously memorized **Index** to create a **Index Name**.
To return to the previous mode, press **CURSOR MODE INDEX** again.

Each station can be stored under only one Index Name
If you store an already categorized station under any other **Index Name**, only the last selected category will be valid.

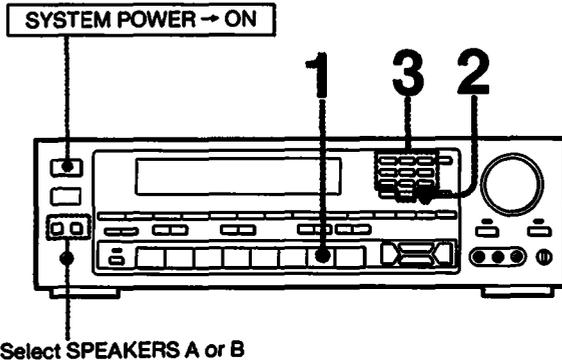
Receiving Radio Broadcast Programs

Tuning in Preset Stations—Preset Tuning



Method A

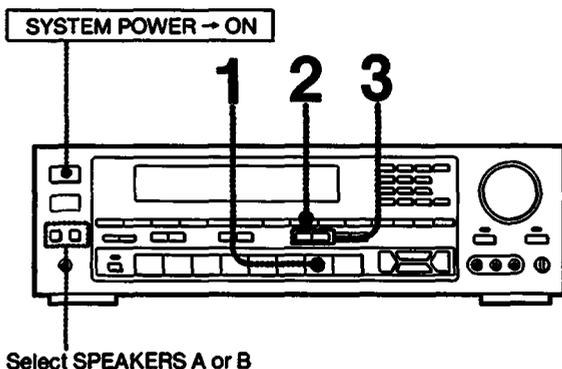
- 1 Select the function **TUNER**.
- 2 Select the desired preset station by the **PRESET TUNING + or -** button.
 - Each time you press **PRESET TUNING +** (or **-**), a preset station of next higher (or lower) channel number is tuned in.
 - If you keep pressing **+ (or -)**, preset stations are successively tuned in the increasing (or decreasing) order of channel number. Release the button when the desired station is tuned in.
 - Scanning of the preset stations takes place cyclically from **AM** to **FM** and vice versa.



Method B

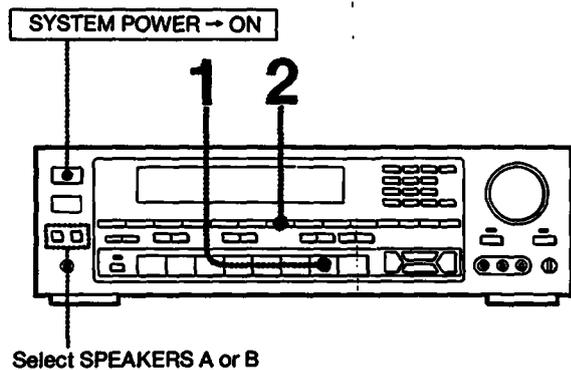
- 1 Select the function **TUNER**.
- 2 Press **SHIFT** to select memory page (**A**, **B** or **C**)
- 3 Press the preset numeric button.

Index Tuning



- 1 Select the function **TUNER**.
- 2 Select the Index Name by pressing **INDEX SELECT**.
- 3 Select the desired station by pressing **INDEX TUNING +/-**
When you want to tune into a station memorized under a different Index Name, press **INDEX SELECT** as many times until the desired Index Name appears.

Listening to Programs with Preset Equalizer Link



- 1** Select the function **TUNER**.
- 2** Press **PRESET EQ LINK ON/OFF** to put the unit in the Link On state.
- 3** Tune into a station by **Preset Tuning** or **Index Tuning**.
Equalizer Mode assigned to the Preset station is linked and the sound is processed accordingly.

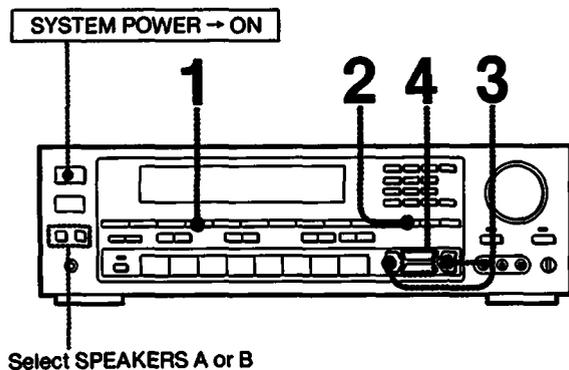
To listen to the station without any equalization
Press **EQUALIZER ON/OFF** to set it to off.

Note
Always turn off the EQ Link function by pressing **PRESET EQ LINK ON/OFF** button before selecting other program sources from **TUNER** function.

Using the Graphic Equalizer

You can enjoy a music with a different equalization curve than the ones preset at the factory.

Creating a New Equalization Curve



- 1** Press RTA/EQ.
This switches the display to the equalizer setting.
- 2** Select CURSOR MODE EQUALIZER.
- 3** Press the frequency select button (▲ and ▼) for the frequency of which the level you want to raise or lower.
- 4** Press the Level ▲ (or ▼) button to raise (or lower) the level of the selected frequency. (The arrow points MANUAL.)
- 5** Repeat Steps 3 and 4 for other frequencies until you obtain the desired equalization curve.

To restore the RTA (real time analyzer) display, press RTA/EQ.

Adjustable frequency bands and the effect of level adjustment (STR-AV1010/910)

63 Hz: Lowering the level will cut the ventilation noise of a music hall, hum of electronic instruments, boomy bass, etc.

Raising the level will reinforce the heavy bass part of a pipe organ or add depth to the bass sound.

150 Hz: Boosting or cutting the normal bass.

400 Hz: Increasing or decreasing the power, spaciousness and warmth of the sound.

1 kHz: Providing more presence for vocals, and moving the sound forward or into the background.

2.4 kHz: Lowering the level will reduce stridency, and raising will make the base sound brighter.

6 kHz: Increasing or decreasing the brightness of the sound; for example, raising the level will make the violin sound silky smooth.

14 kHz: Changing the general atmosphere rather than the sound itself.

Raising the level will highlight the delicate quality of instrumental sound, and lowering will reduce high-frequency noise such as the resonant peak of a cartridge, tape hiss, etc.

Adjustable frequency bands and the effect of level adjustment (STR-AV710)

63 Hz: Lowering the level will cut the ventilation noise of a music hall, hum of electronic instruments, boomy bass, etc.

Raising the level will reinforce the heavy bass part of a pipe organ or add depth to the bass sound.

250 Hz: Boosting or cutting the normal bass.

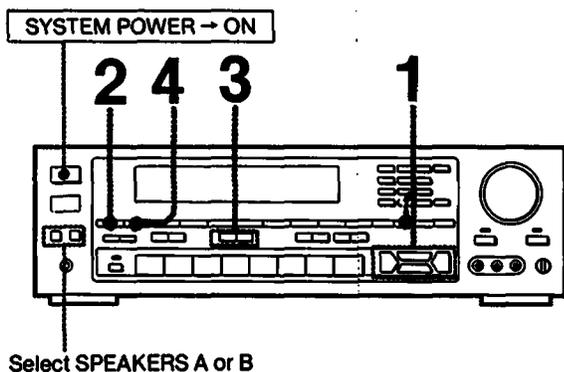
1 kHz: Providing more presence for vocals, and moving the sound forward or into the background.

3.3 kHz: Lowering the level will reduce stridency, and raising will make the base sound brighter.

10 kHz: Increasing or decreasing the brightness of the sound; for example, raising the level will make the violin sound silky smooth.

Memorizing a New Equalization Curve

You can store a created equalization curve into memory under any EQUALIZE MODE you select. However, note that this operation will alter the factory-preset equalization curve or the last memorized one under the selected EQUALIZER MODE.



- 1** Create an equalization curve you want to store.
- 2** Press EQ MEMORY SET. The MEMORY indicator will light up for a few seconds.
- 3** Select a equalizer mode under which you want to store the equalization curve.
- 4** Press EQ MEMORY WRITE.

To return to the factory preset equalization curve
Select CURSOR MODE SURROUND and turn the SYSTEM POWER off.

Turn on the SYSTEM POWER while pressing SURROUND MODE Δ .

Surround Mode returns to the factory preset also.

To listen to a music with a memorized equalization curve

Select the desired equalizer mode.

If you have not stored a curve under that MODE, the factory-preset curve will be called in.

Note

Graphic equalizer and surround do not have any effect on the program source connected to the TAPE 2 MONITOR.

To listen to a music without graphic equalizer effect
Press EQUALIZER ON/OFF button to set it to off.

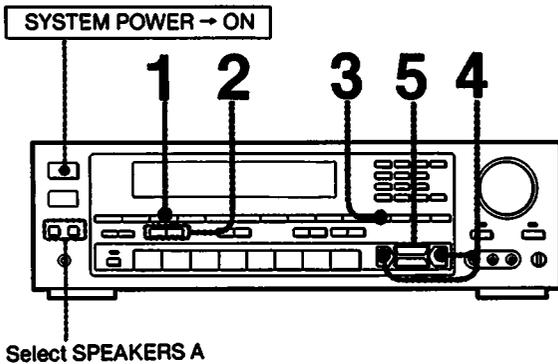
To accurately check the highest input
Press the PEAK HOLD button.

The real time analyzer display will hold the highest input of each frequency range for several seconds.

Enjoying the Surround Sound

Listening to the Surround Sound with the STR-AV1010/910

Select **SPEAKERS A** when listening to the surround sound with rear speakers. **SPEAKERS B** circuitry does not activate the rear speakers.



- 1** Press **SURROUND ON/OFF**.
- 2** Select **SURROUND MODE**.
- 3** Select **SURROUND** on the **CURSOR MODE**.
- 4** Adjust **DELAY TIME S, M or L** by pressing **<** or **>**. (for **DOLBY** and **SIMULATED** only)
- 5** Adjust the surround speaker level by pressing **LEVEL +** or **LEVEL -**.

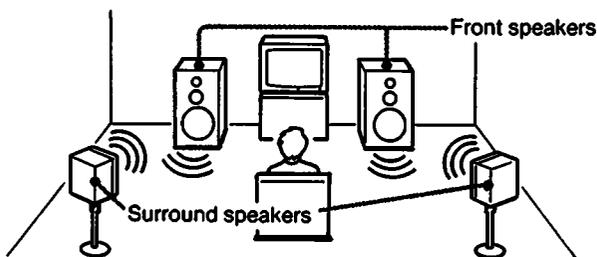
To turn off the surround effect.

Press **SURROUND ON/OFF** again.

The normal sound without surround effect will resume.

- Both Level and Delay Time of the surround is memorized in the Surround Mode each time after adjusting with Cursor.
- To return to the factory preset Surround adjustment, select **CURSOR MODE SURROUND** and turn the **SYSTEM POWER** off. Then, turn on the **SYSTEM POWER** while pressing **SURROUND MODE**. Equalizer Mode returns to the factory preset also.

How to place speakers:



Selecting surround modes

HALL: Provides reverberation effect that is produced in a concert hall.

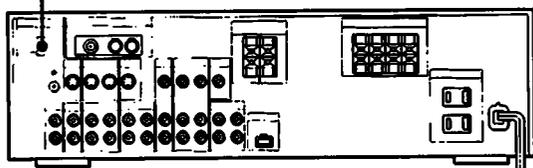
LIVE: Provides the sound effect just like listening a real live performance.

STADIUM: Provides the sound effect just like being in a stadium.

SIMULATED: Gives a simulated stereo effect to monaural sound.

DOLBY: Expands sound just like listening it in a movie theater.

BALANCE



About the input balance control (on the rear panel)

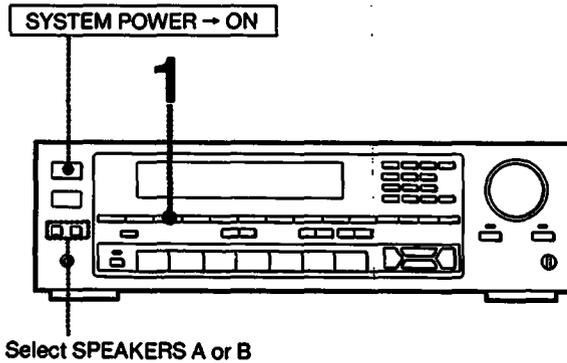
When selecting the Dolby surround mode, adjust the input balance as follows:

Using a portion of the surround encoded video source which contains dialogue, turn down the front speaker volume and increase the surround speaker volume by pressing **LEVEL +**. Adjust the input balance control until any dialogue heard from the surround speakers is minimized. Once this is achieved, restore the front and rear speaker volume settings to their original levels.

In other modes, set this control to the center position.

Listening to the Surround Sound with the STR-AV710

Although STR-AV710 is not equipped for the surround speaker connection, surround effect can be obtained from the main speakers. (Monaural sound would not become the surround sound.)



1 Press SURROUND ON/OFF.

To turn off the surround effect
Press SURROUND ON/OFF again.

Note

Surround and graphic equalizer do not have any effect on the program source connected to the TAPE 2 MONITOR.

Listening to Program Sources Other than Radio Broadcasts

SYSTEM POWER → ON

1

3

Select SPEAKERS A or B

2

	FUNCTION selector to be pressed
Phono record	PHONO
Compact disc	CD
DAT programs	DAT
Taped programs	TAPE 1, TAPE 2 MONITOR
Video programs	VIDEO 1, VIDEO 2/CDV, VIDEO 3 (STR-AV1010)

Turntable system
CD player
Tape deck
DAT
VCR
CDV player

- 1 Select the program source.
- 2 Start the selected program.
- 3 Adjust the volume.

Receiving FM Simulcast TV Programs

SYSTEM POWER → ON

3

TV tuner or VCR

Monitor TV

2

VIDEO 1 or VIDEO 2 IN

MONITOR VIDEO OUT

1

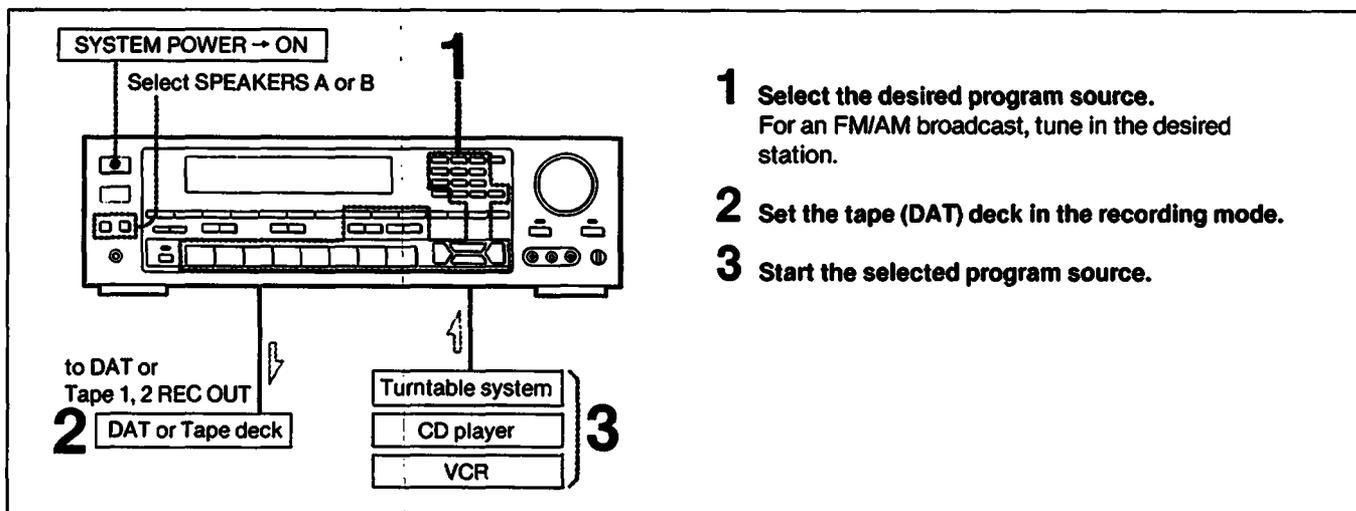
4

5

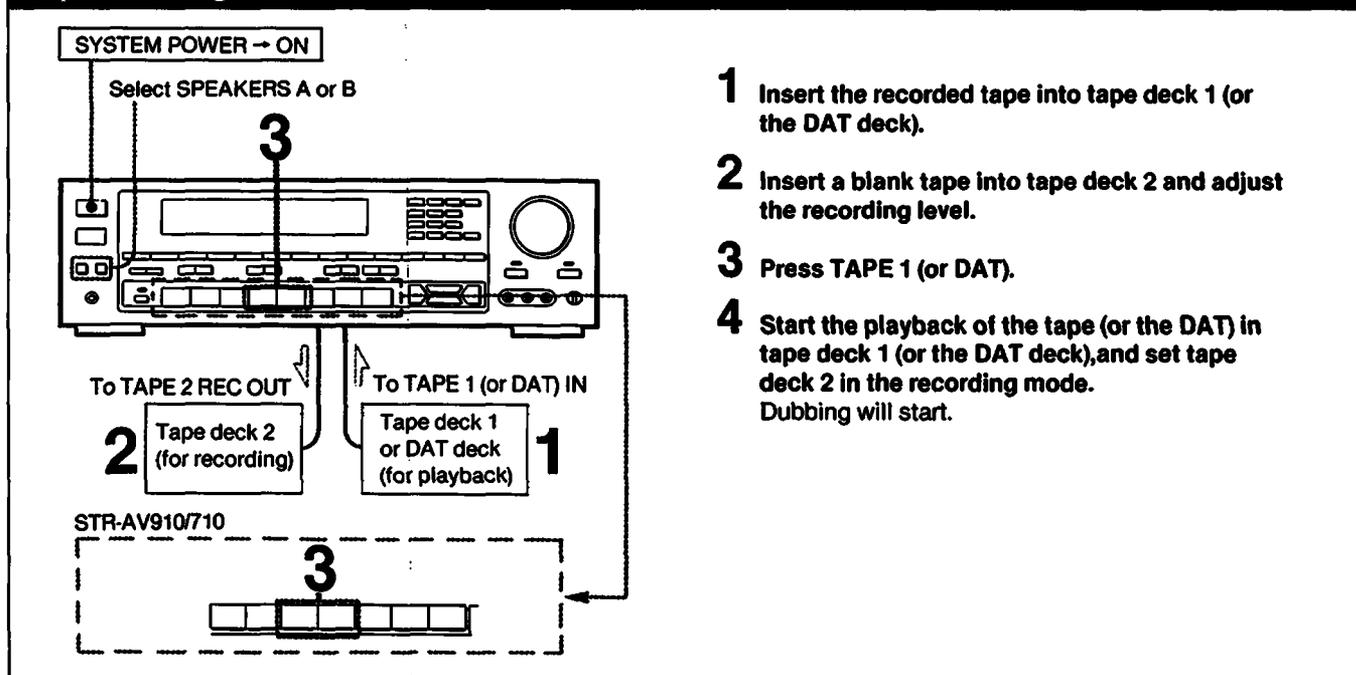
Select SPEAKERS A or B

- 1 Select VIDEO 1, VIDEO 2, or VIDEO 3 (STR-AV1010 only) according to video inputs connected to an equipment to which the VHF antenna is connected.
- 2 Turn on the TV.
- 3 Select the desired program on the TV tuner or the VCR.
- 4 Select TUNER and tune in the FM simulcast TV program on the Receiver.
- 5 Adjust the volume.

Recording on an Audio Tape or DAT



Tape Dubbing



Note on recording

Use TAPE 2 REC OUT for the recording with the equalizer and SURROUND effects.

For other REC OUT jacks, the settings of the VOLUME, SURROUND, BALANCE, and graphic equalizer do not have any effect on recording.

Monitoring the recorded sound

If you have connected a tape deck having separate record and playback heads to the TAPE 2 jacks, you can monitor the recording results. While recording or dubbing, press the TAPE 2 MONITOR button. To listen to the source sound again, press the button again.

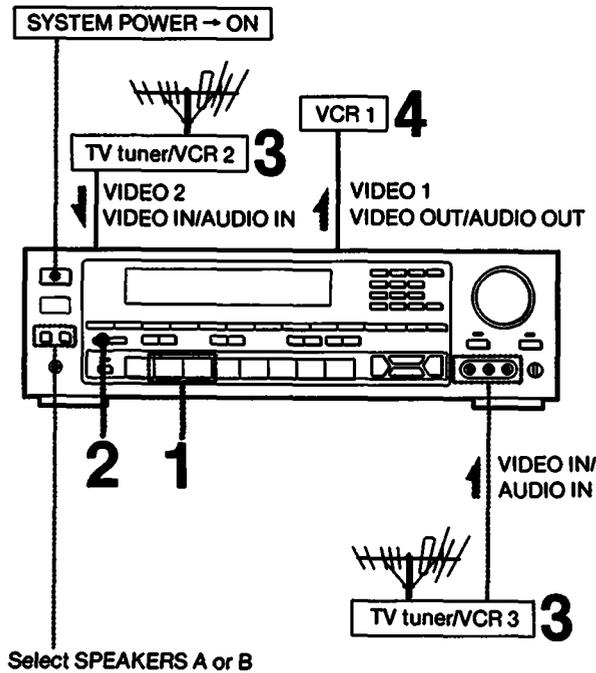
Note on tape dubbing

Tape dubbing is possible only in the following directions:

From (playback side)	To (recording side)	FUNCTION selector to be pressed
Tape deck connected to TAPE 1 IN	Tape deck connected to TAPE 2 REC OUT	TAPE 1
	DAT deck connected to DAT REC OUT	
DAT deck connected to DAT IN	Tape deck connected to TAPE 1 or 2 REC OUT	DAT

Video Operations

Recording a TV Program on a Video Tape with the STR-AV1010

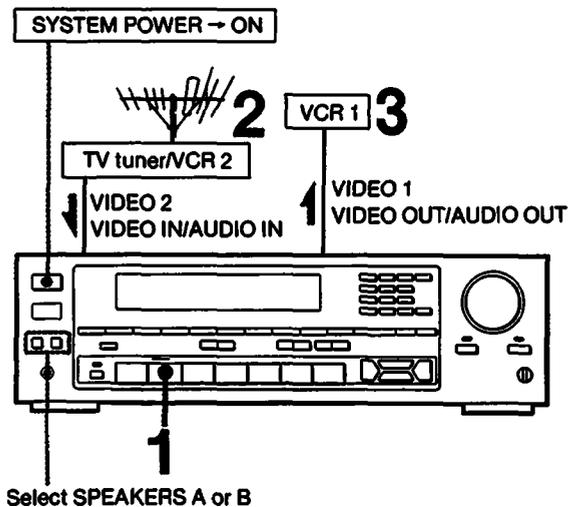


Preparation

- Turn on the unit and the equipment to be used.
- If the AUDIO indicator is lit in the VIDEO EDIT display, press the EDIT AUDIO button to make the indicator go out.

- 1 Press the function selector VIDEO 2/CDV or VIDEO 3 according to the video inputs connected to an equipment to which the TV antenna is connected.
- 2 Make 1 ← 2 or 1 ← 3 appear in the VIDEO EDIT display area using the EDIT VIDEO button.
1 ← 2: When you have selected VIDEO 2/CDV at step 1.
1 ← 3: When you have selected VIDEO 3 at step 1.
- 3 Select the desired TV program on the TV tuner (VCR 2 or 3).
- 4 Set VCR 1 to the recording mode.

Recording a TV Program on a Video Tape with the STR-AV910/710



Preparation

- Turn on the unit and the equipment to be used.
- If the AUDIO indicator is lit in the display window, press the EDIT AUDIO button to make the indicator go out.

- 1 Press the function selector VIDEO 2/CDV.
- 2 Select the desired TV program on the VCR 2.
- 3 Set VCR 1 to the recording mode.

Note

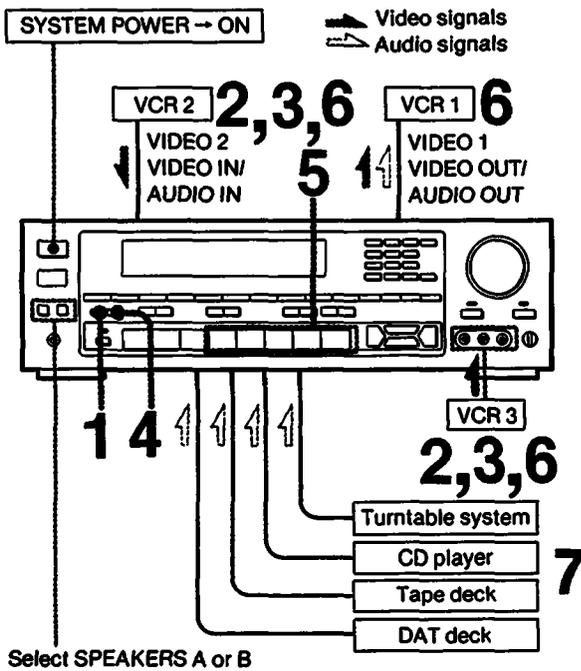
The VOLUME, BALANCE, SURROUND and graphic equalizer settings do not have any effect on the recording except for TAPE 2 REC OUT.

Video Operations

Adding the Desired Sound on a Video Tape during Editing

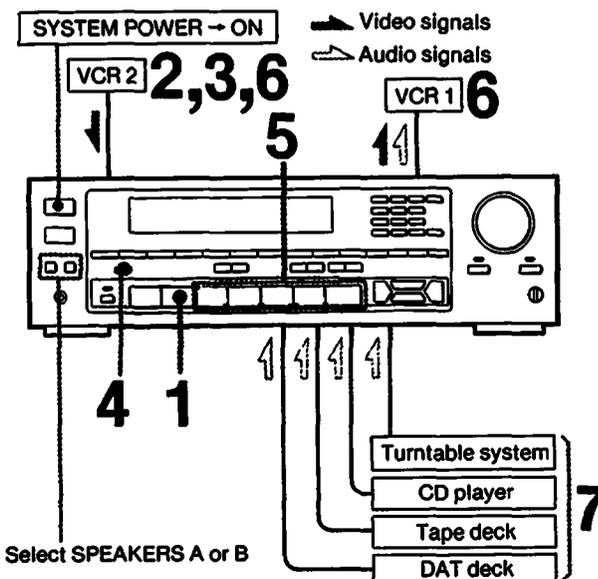
During video tape editing, you can add the desired sound on the recording-side video tape from various audio program sources.

Audio Dubbing during Video Tape Editing with the STR-AV1010



- 1** Select the playback side VCR with the EDIT VIDEO button.
1 \blacktriangle 2 or 1 \blacktriangle 3 will appear in the VIDEO EDIT display area.
1 \blacktriangle 2: for VCR 2
1 \blacktriangle 3: for VCR 3
- 2** Insert a recorded video tape into the playback-side VCR and set the VCR to the playback mode.
- 3** At the point where audio dubbing is to start, press the PAUSE button on the playback-side VCR.
- 4** Press EDIT AUDIO.
- 5** Select the audio program source with the appropriate function selector.
- 6** Release the PAUSE mode of the playback-side VCR and set VCR 1 to the recording mode.
- 7** Start the selected audio program source. Audio dubbing will start.

Audio Dubbing during Video Tape Editing with the STR-AV910/710



- 1** Press VIDEO 2/CDV.
- 2** Insert a recorded video tape into VCR 2 and set the VCR to the playback mode.
- 3** At the point where audio dubbing is to start, press the PAUSE button on VCR 2.
- 4** Press EDIT AUDIO.
- 5** Select the audio program source with the appropriate function selector.
- 6** Release the PAUSE mode of VCR 2 and set VCR 1 to the recording mode.
- 7** Start the selected audio program source. Audio dubbing will start.

Specifications

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8-ohm load, both channels driven, from 20 - 20,000 Hz, rated 120 watts (STR-AV1010), 100 watts (STR-AV910) or 55 watts (STR-AV710) per channel minimum RMS power, with no more than 0.008% (STR-AV1010), 0.03% (STR-AV910) or 0.08% (STR-AV710) total harmonic distortion from 250 milliwatts to rated output.

Other Specifications

Amplifier section

		STR-AV1010	STR-AV910	STR-AV710
Dynamic power output	8 ohms, at 1 kHz IHF	195 + 195 watts	140 + 140 watts	70 + 70 watts
	4 ohms, at 1 kHz IHF	250 + 250 watts	190 + 190 watts	90 + 90 watts
Power output of surround amplifier (8 ohms, at 1 kHz)		20 watts (10 + 10 watts)		
Harmonic distortion at rated output		Less than 0.008%	Less than 0.03%	Less than 0.08%
Intermodulation (IM) distortion at rated output		Less than 0.008%	Less than 0.03%	Less than 0.08%
Frequency response	PHONO RIAA equalization curve	±0.5 dB		
	CD, DAT, TAPE 1, 2 VIDEO 1, 2, 3*	10 Hz - 70 kHz ±0.5 dB		10 Hz - 50 kHz ±0.5 dB
Residual noise		Less than 70 µV		Less than 80 µV
Damping factor (8 ohms, at 1 kHz)		50		40
Input sensitivity/impedance	PHONO MM	2.5 mV, 50 kilohms		
	DAT, CD, VIDEO 1, 2, 3* TAPE 1, 2	150 mV 50 kilohms		
S/N	PHONO MM	87 dB 79 dB** (A, 2.5 mV)		74 dB 72 dB** (A, 2.5 mV)
	DAT, CD, VIDEO 1, 2, 3* TAPE 1, 2	105 dB 85 dB** (A, 150 mV)		100 dB 80 dB** (A, 150 mV)
Output sensitivity/impedance	DAT OUT TAPE OUT 1, 2 VIDEO 1	150 mV 10 kilohms		
	SPEAKERS	Accepts speakers of 8 - 16 ohms		
	HEAD-PHONES	Accepts headphones of high and low impedance		
MUTING		-20 dB		
DBFB		+ 10 dB (70 Hz)		
Graphic Equalizer		7-band, ±10 dB at 63 Hz, 150 Hz, 400 Hz, 1 kHz, 2.4 kHz, 6 kHz, and 14 kHz		5-band, ±10 dB at 63 Hz, 250 Hz, 1 kHz, 3.3 kHz, and 10 kHz

*STR-AV1010 only
**78 IHF

Video section

	STR-AV1010	STR-AV910	STR-AV710
Inputs	VIDEO 1, 2, 3: 1 Vp-p 75 ohms	VIDEO 1, 2: 1 Vp-p 75 ohms	
Outputs	VIDEO 1, MONITOR: 1 Vp-p 75 ohms		

FM tuner section

		STR-AV1010	STR-AV910	STR-AV710
Frequency range		87.5 - 108.0 MHz		
Antenna terminals		75 ohms coaxial	300 ohms, balanced 75 ohms, unbalanced	
Sensitivity at 50 dB		18.3 dBf, 45 µV (mono) 38.3 dBf, 45 µV (stereo)		
Usable sensitivity		11.2 dBf, 2 µV (IHF)		
S/N	Mono	84 dB	80 dB	
	Stereo	78 dB	74 dB	
Harmonic distortion at 1 kHz	Mono	0.2%	0.3%	
	Stereo	0.4%	0.5%	
IM distortion	Mono	0.2%	0.3%	
	Stereo	0.4%	0.5%	
Separation		45 dB at 1 kHz		
Frequency response		30 Hz - 15 kHz ±0.5 dB	30 Hz - 15 kHz ±0.5 dB	
Selectivity		65 dB at 300 kHz	60 dB at 400 kHz	
Capture ratio		1.2 dB		
AM suppression ratio		60 dB	54 dB	
Image response ratio		80 dB	70 dB	
IF response ratio		90 dB	70 dB	
Spurious response ratio		100 dB	80 dB	
RF intermodulation at 800 kHz		85 dB	60 dB	
Auto tuning threshold	Low	30 dBf		
	High	50 dBf		

AM tuning section

		STR-AV1010	STR-AV910	STR-AV710
Frequency range		530 - 1710 kHz (with 10 kHz interval) 531 - 1710 kHz (with 9 kHz interval)		
Antenna		Loop antenna		
Usable sensitivity		50 dBm (at 1,000 kHz or 999 kHz)		
S/N		54 dB (at 50 mV/m)		
Harmonic distortion		0.5% (50 mV/m, 400 Hz)		
Selectivity		35 dB (9 kHz), 40 dB (10 kHz)		
Auto tuning threshold		55 dBm		

General

		STR-AV1010	STR-AV910	STR-AV710
System	Tuner section	PLL quartz-locked digital synthesizer system		
	Preamplifier section	Low-noise NF type equalizer		
	Power amplifier section	Pure-complimentary SEPP		Quasi-complimentary SEPP
Power requirements		120 V AC, 60 Hz		
Power consumption		USA model: 250 watts Canada model: 520 VA	USA model: 210 watts Canada model: 450 VA	120 watts
AC outlets		Two switched, total 100 watts		
Dimensions		430 × 130 × 350 mm (17 × 5 1/8 × 14 1/8 inches)		430 × 130 × 295 mm (17 × 5 1/8 × 11 1/8 inches)
Weight		9.6 kg (21 lb 3 oz)	9.5 kg (21 lb)	6.7 kg (14 lb 13 oz)

Supplied accessories

FM ribbon antenna (1), AM loop antenna (1)
Remote Commander (1), (RM-P201 for STR-AV1010, RM-U100 for STR-AV910/710)
External antenna connector (1) (STR-AV1010 only),
Sony Batteries SUM-3(NS) (2)

Design and specifications subject to change without notice.

Troubleshooting Guide

Before proceeding through the check list below, examine the connections and the procedures outlined in the manual.

Should any problem persist after you have checked the following items, consult your nearest Sony dealer.

Radio Broadcast Reception		
Problem	Cause	Solution
No FM station can be located by Auto-Tuning operation.	The signal strength of the stations is too weak.	Press TUNING LEVEL ∇ to set low level.
The STEREO indicator flickers or does not appear when receiving stereo programs.	A very weak FM station or a noisy FM program is received.	Adjust the antenna or connect an external FM antenna.
		Press the FM MODE button to set to MONO mode.
No station can be tuned in by Auto-Tuning operation.	The AM tuning interval is set incorrectly.	Change the tuning interval according to the AM frequency allocation system of your country. (See page 19.)
	The signal strength of the stations is too weak for Auto-Tuning.	Adjust the antenna. Directly tune in the stations. (See page 19.)
No stations can be tuned in by PRESET operation.	No stations have been preset.	Preset the stations by Auto-Tuning operation. (See page 20.)

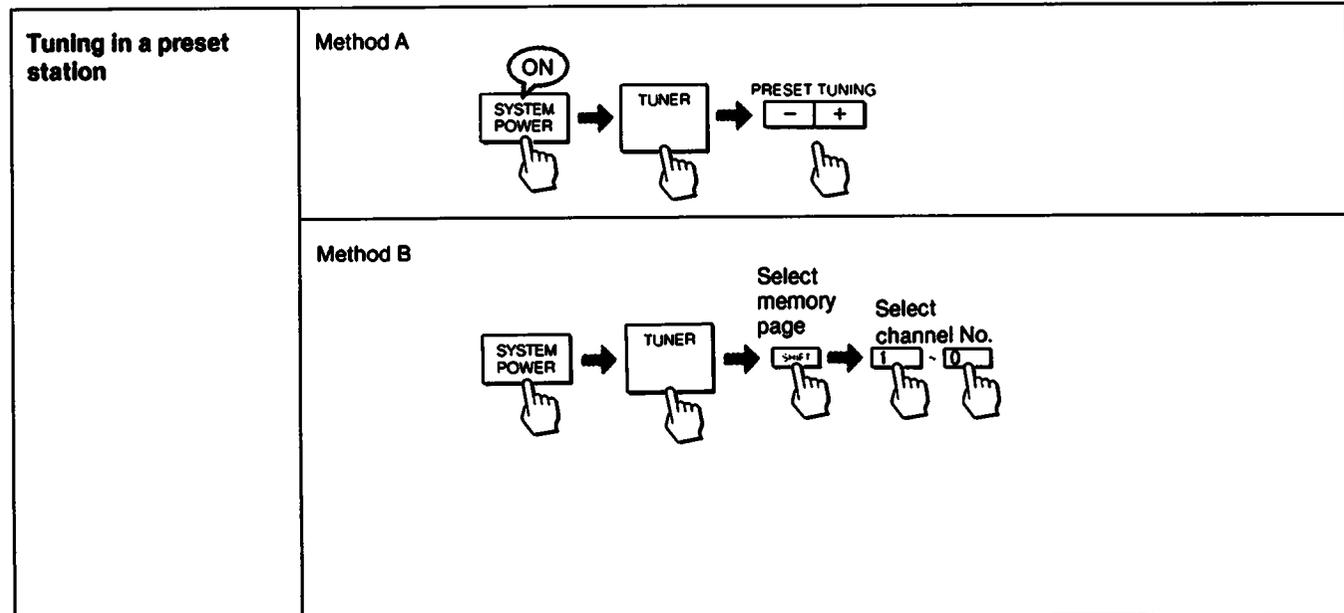
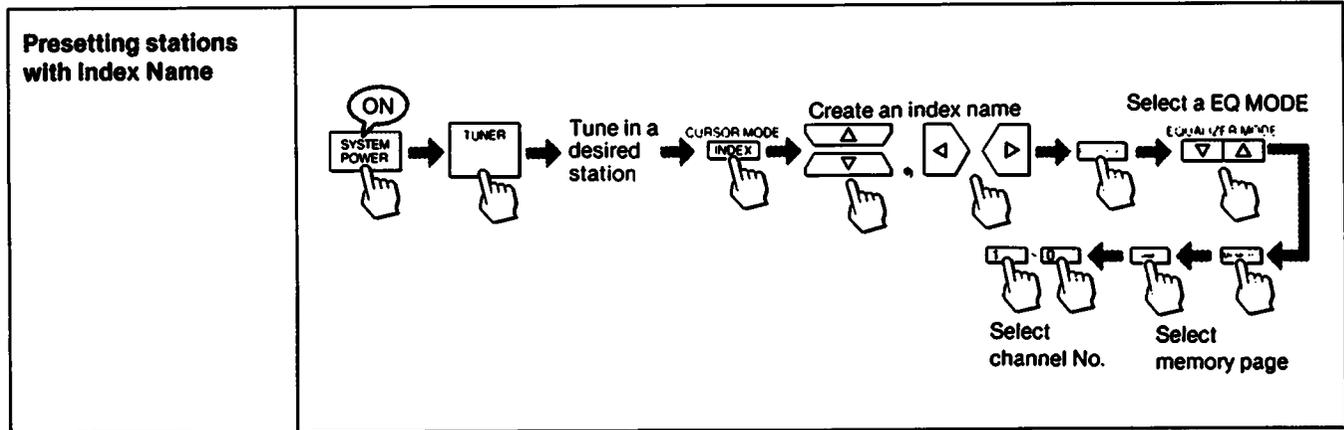
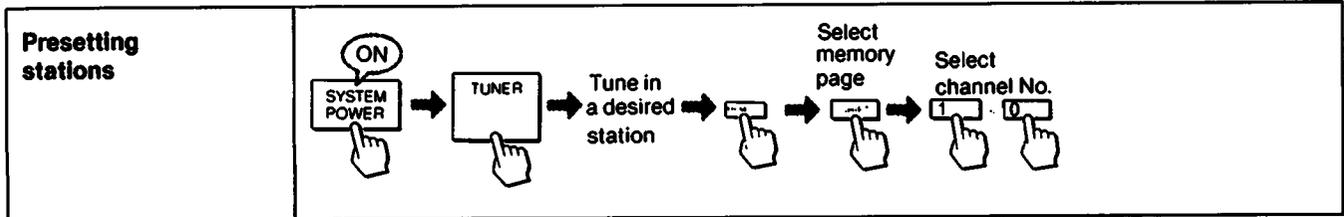
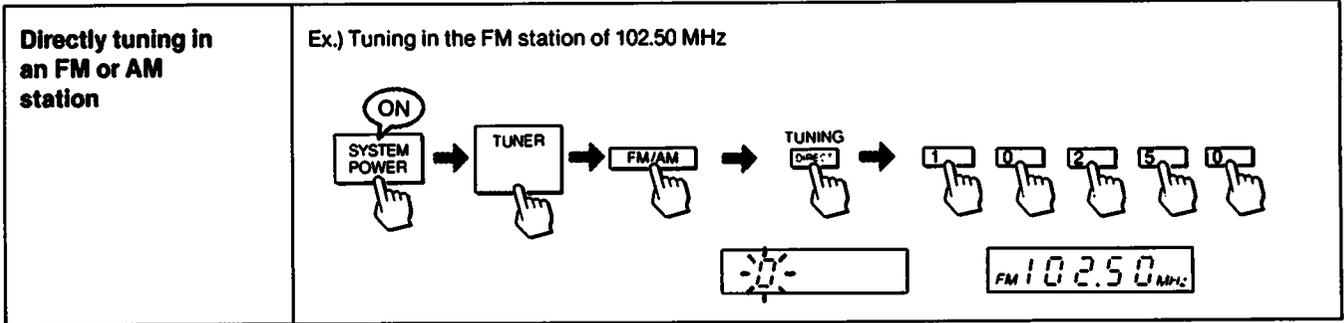
Graphic Equalizer and Music Index Functions		
Problem	Cause	Solution
Equalization curve adjustment is impossible.	CURSOR is in wrong MODE.	Press CURSOR MODE EQUALIZER

Remote Commander		
Problem	Cause	Solution
The remote commander will not operate.	The batteries are exhausted.	Replace the batteries with new ones.
	The commander head is not pointed toward the unit's front.	Point the commander head toward the receiver.
	There is an object between the commander and the receiver.	Remove the object.
The remote-control signal cannot be programmed.	Programming is interfered by noise.	Place both remote commanders apart from the source of noise.
	The batteries are exhausted.	Replace the batteries with new ones.
The LEARN indicator goes off after flashing	The internal memory capacity is full.	Clear all the signals and program again. (See page 17.)

Sound		
Problem	Cause	Solution
No sound is heard even if you adjust VOLUME.	The speaker or program source equipment is not connected correctly.	Connect the equipment correctly.
	The SPEAKERS selectors are not set correctly.	Set the selectors correctly.
	The TAPE 2 MONITOR button has been pressed for a program source other than tape deck 2. (The indicator is lit.)	Press the button to disengage.
	A wrong FUNCTION selector has been pressed.	Check the FREQUENCY/FUNCTION display area, and press the correct FUNCTION selector.
	The function switch on the VCR is not set correctly.	Check and set it correctly.
Sound is heard only at a very low volume.	The MUTING button has been pressed. (The MUTING indicator is lit.)	Press the button to disengage.
One channel does not transmit audio, or the volume from the left and right speakers is unbalanced.	The BALANCE control is not set appropriately.	Adjust the BALANCE control.
	The speaker or program source is not connected correctly.	Check and properly connect the equipment.
There is an abrupt loss of sound from one or both of the speakers, and the PROTECTOR indicator flickers in the display window.	A short-circuit problem activates the protective circuit.	Turn off the unit, eliminate the short-circuit problem and turn on the power again. If there is no short-circuit problem, consult your nearest Sony dealer.
Sound transmitted from the speakers is reversed.	The speakers are not connected correctly.	Connect the right speaker to the R SPEAKER terminals and the left speaker to the L SPEAKER terminals.
There is lack of bass sound or the instrument position is obscure.	The +/- connection of the speaker is reversed.	Connect the speaker with the correct phase.
Severe hum or noise is heard.	The connecting cords are not shielded type.	Use shielded type cords.
	A transformer, motor, TV or fluorescent light affects the connecting cords.	Place the connecting cords in a location away from a transformer or motor, and at least 3 meters (10 feet) from a TV set or a fluorescent light.
	The audio components are too close to a TV set.	If both are used at the same time, separate the TV from the audio components.
	The unit is not grounded.	Connect the ground wire to the antenna ground terminal.
	The connections are loose.	Make secure connections.
	The plugs and jacks are dirty.	Wipe the plugs and jacks with a cloth lightly dampened with alcohol.

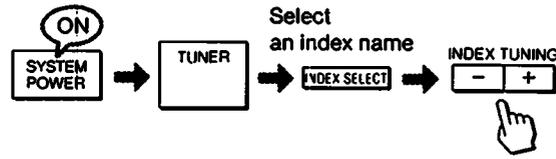
Quick Reference

When you operate the unit consulting this Quick Reference, make sure that the unit and the various audio/video equipments are properly connected. (Refer to the Overall Connection Diagram given on page 6.)



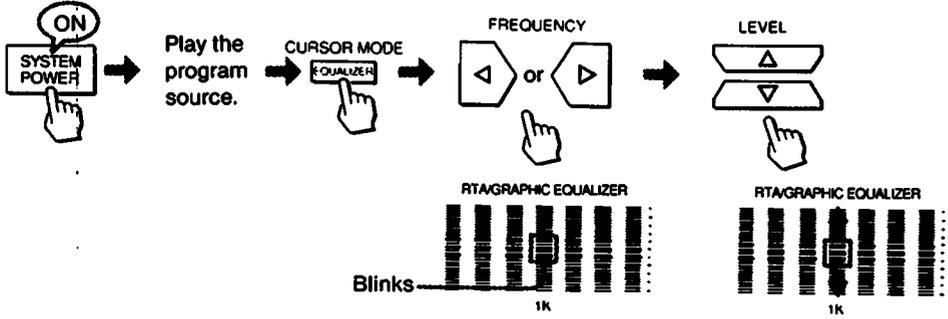
Tuning in a Categorized station-Index Tuning

Ex.) Tuning in a station memorized under an index name.

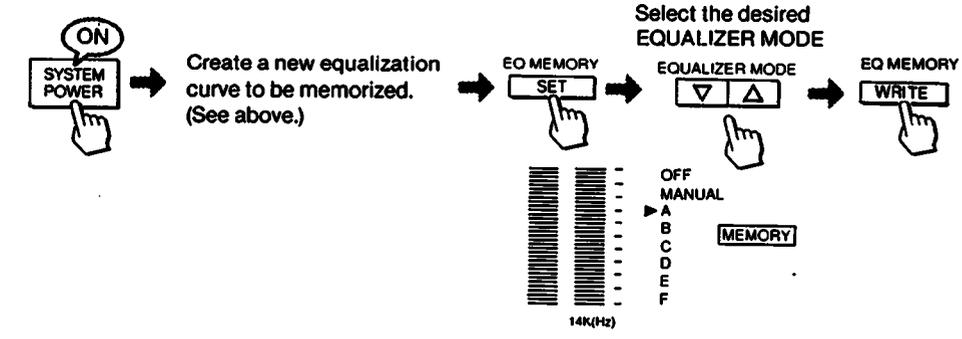


Adjusting sound quality (Creating a new equalization curve)

Ex.) Adjusting the level of 1 kHz.

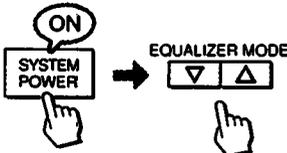


Memorizing a new equalization curve

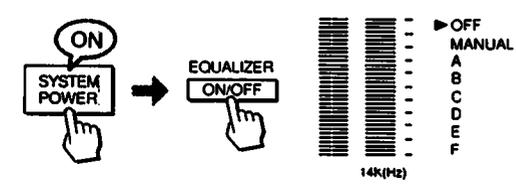


Listening with a memorized equalization curve

Ex.) Listening with the equalization curve memorized under an EQUALIZER MODE.



Listening without using the graphic equalizer

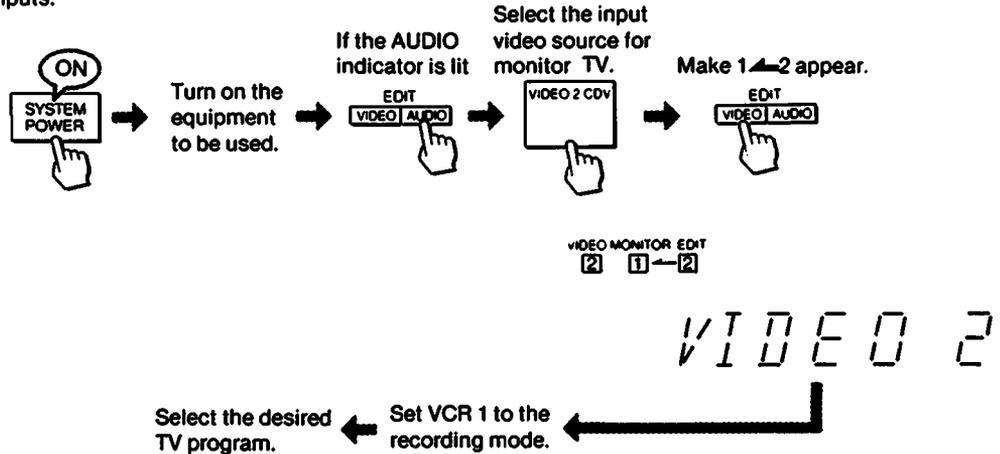


Quick Reference

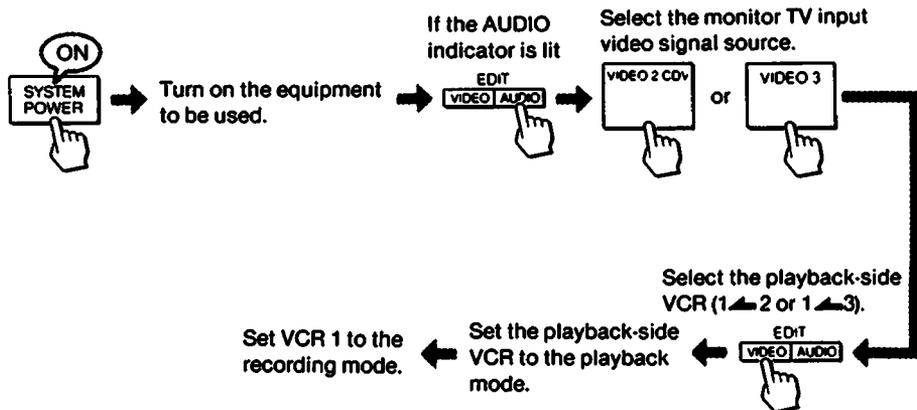
Video Operations with the STR-AV1010

Recording a TV program on a video tape

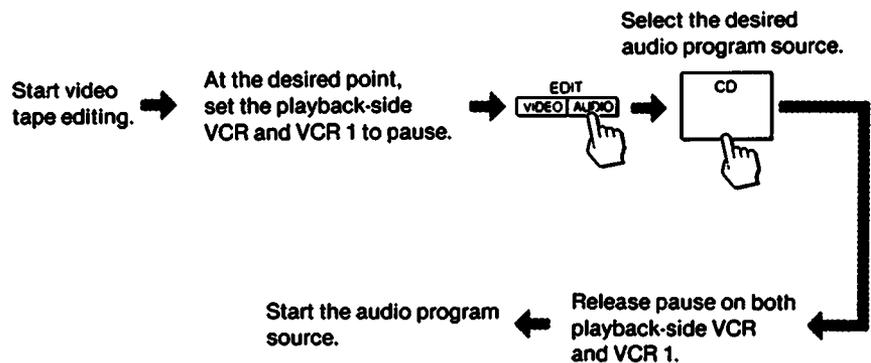
Ex.) When the VHF antenna or CATV cable is connected to the TV tuner or VCR connected to the VIDEO 2 inputs.



Video tape editing

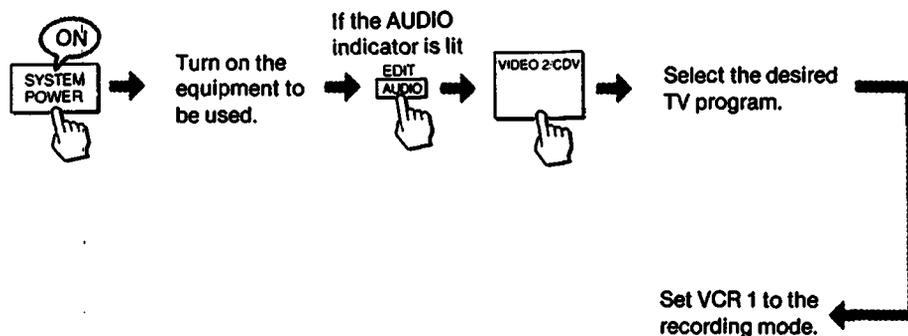


Audio dubbing during video tape editing



Video Operations with the STR-AV910/710

Recording a TV program on a video tape



Video tape editing



Audio dubbing during video tape editing

