

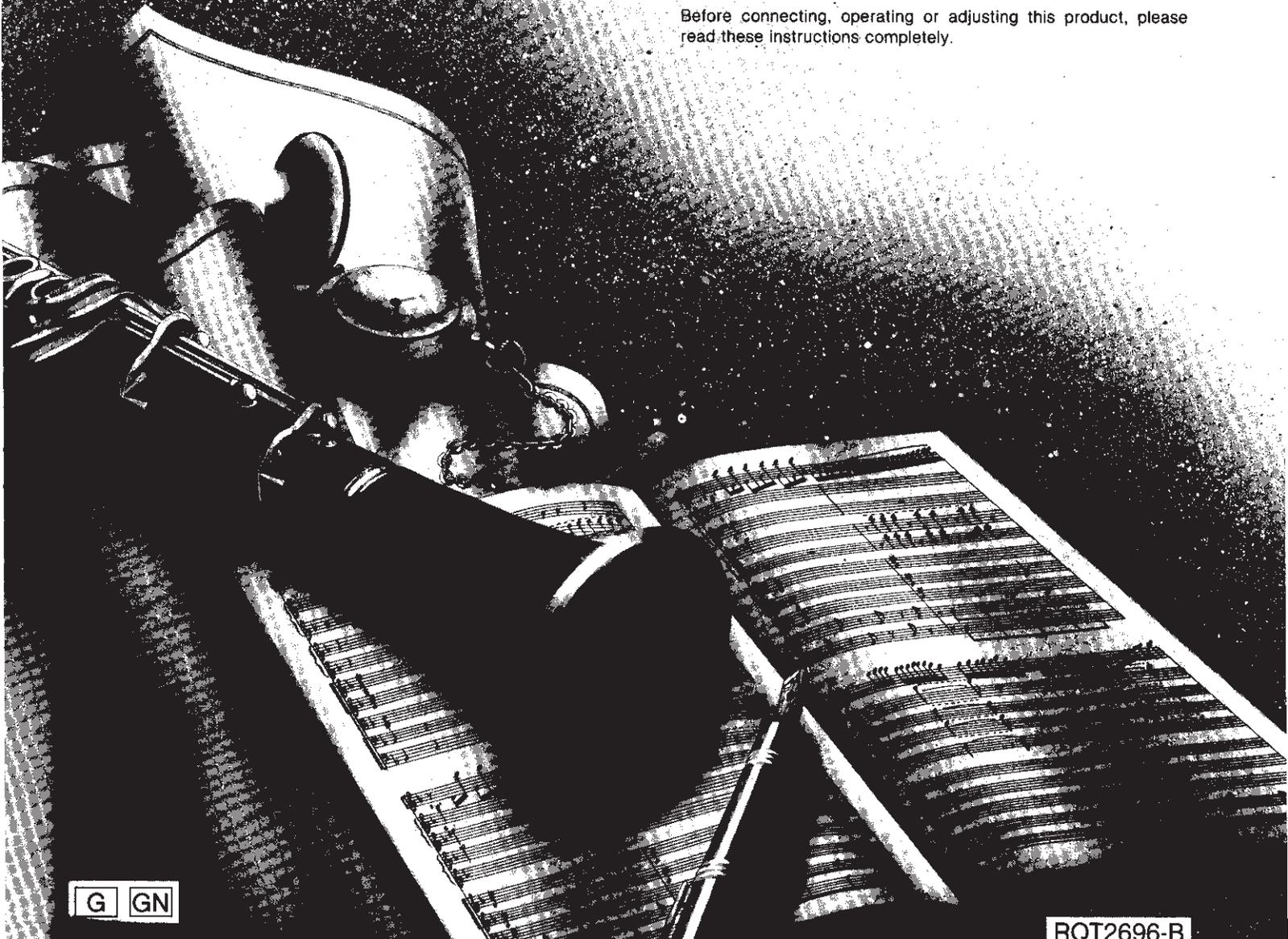
# Technics®

## AV control stereo receiver SA-GX190

### Operating Instructions



Before connecting, operating or adjusting this product, please read these instructions completely.



# Dear Customer

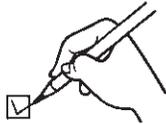
Thank you for purchasing this Technics product. For optimum performance and safety, please read these instructions carefully.

(For areas except Australia and N.Z.)

## CAUTION:

The AC voltage differs according to the area. Be sure to set the proper voltage in your area before use.

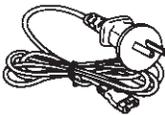
(For details, please refer to the page 6.)



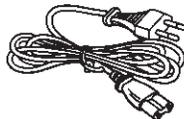
Please check and identify the supplied accessories.

AC power supply cord (1)

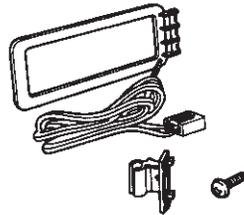
(For Australia and N.Z.)



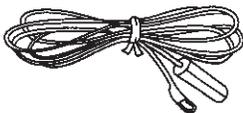
(For others)



AM loop antenna set  
• AM loop antenna (1)  
• AM antenna holder (1)  
• Screw (1)



FM indoor antenna (1)



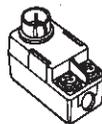
Power plug adaptor (1)  
(Not supplied for Australia and N.Z.)



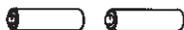
Remote control transmitter (1)  
(EUR643870)



Antenna plug (1)



Batteries (2)  
(UM-4, "AAA", R03)



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(For Australia and N.Z.)

THIS TUNER/RECEIVER IS CAPABLE OF RECEIVING THE NEW AM STEREO BROADCASTS FROM THE AM BAND RADIO STATIONS. HOWEVER LIKE MANY TUNERS AND RECEIVERS CURRENTLY AVAILABLE ON THE MARKET IT WILL REPRODUCE THIS AM STEREO SIGNAL ONLY IN AM MONO, WHICH, IN EFFECT, IS OF NO LESSER QUALITY THAN YOUR EXISTING AM MONO TUNER/RECEIVER.

# Suggestions for safety

## Placement

Avoid placing the unit in areas of:

- direct sunlight
- high temperature
- high humidity
- excessive vibration
- uneven surfaces. (Place the unit on a flat level surface).

Such conditions might damage the cabinet and/or other components and thereby shorten the unit's service life.

## Ventilation

- Place the unit in a well ventilated position at least 10 cm away from wall surfaces etc.
- Ensure that curtains and similar materials do not obstruct the ventilation holes.

## Stacking

Never place heavy items on top of the unit or the power cord.

## Voltage

- It is very dangerous to use an AC power source of high voltage such as for an air conditioner.  
A fire might be caused by such a connection.
- A DC power source can not be used.  
Be sure to check the power source carefully, especially on a ship or other place where DC is used.

## Power cord protection

- Avoid cuts, scratches or poor connection of the AC mains cord, as this may result in fire or electric shock hazard.  
Excessive bending, pulling or slicing of the cord should also be avoided.
- Do not pull on the cord when you are disconnecting the power, as this could cause an electric shock. Grasp the plug firmly when you disconnect the power supply.
- Never touch the plug with wet hands or a serious electric shock could result.

## Foreign materials

- Ensure that no foreign objects, such as needles, coins, screwdrivers etc, accidentally fall into the unit or through the ventilation holes.  
Otherwise, a serious electric shock or malfunction could occur.
- Be extremely careful about spilling water or liquid on/into the unit, as a fire or electric shock could occur.  
(Disconnect the power plug and contact your dealer immediately if this occurs.)
- Avoid spraying insecticides onto the unit as they contain flammable gases which can be ignited.
- Insecticides, alcohol, paint thinner and similar chemicals should never be used to clean the unit as they can cause flaking or cloudiness to the cabinet finish.

## Maintenance

Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild detergent solution.

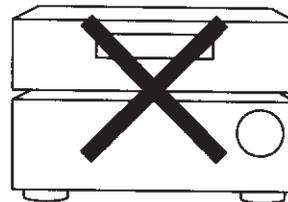
Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

## Service

- Never attempt to repair, disassemble or reconstruct the unit if there seems to be a problem.  
A serious electric shock could result if you ignore this precautionary measure.
- If a problem occurs during operation (the sound is interrupted, indicators fail to illuminate, smoke is detected, etc) contact your dealer or Authorized Service Center immediately.
- Disconnect the power supply if the unit will not be used for a long time. Otherwise the operation life could be shortened.

### CAUTION

Do not place a tape deck or CD player on top of this unit. Heat radiated from the top of this unit may cause damage to the tape or CD software.



**NO**

# Technical specifications (DIN 45 500)

## ■ AMPLIFIER SECTION

<b>Power output</b>	
DIN 1 kHz (T.H.D. 1%)	2 × 80 W (8 Ω)
40 Hz–20 kHz continuous power output both channels driven	2 × 60 W (8 Ω)
<b>Total harmonic distortion</b>	
rated power at 40 Hz–20 kHz	0.5% (8 Ω)
half power at 1 kHz	0.03% (8 Ω)
<b>Intermodulation distortion</b>	
rated power at 60 Hz: 7 kHz = 4:1, SMPTE	0.5% (8 Ω)
<b>Power bandwidth</b>	
both channels driven, –3 dB	10 Hz–40 kHz (8 Ω)
<b>Damping factor</b>	40 (8 Ω)
<b>Input sensitivity and impedance</b>	
PHONO	3 mV/47 kΩ
CD, VCR 1, VCR 2, TAPE/DCC	200 mV/22 kΩ
<b>S/N at rated power (8 Ω)</b>	
PHONO	70 dB (IHF, A: 80 dB)
CD, VCR 1, VCR 2, TAPE/DCC	80 dB (IHF, A: 90 dB)
<b>Frequency response</b>	
PHONO	RIAA standard curve (30 Hz–15 kHz) ±0.8 dB
CD, VCR 1, VCR 2, TAPE/DCC	10 Hz–40 kHz, ±3 dB
<b>Tone controls</b>	
BASS	50 Hz, +10 to –10 dB
TREBLE	20 kHz, +10 to –10 dB
<b>Output voltage</b>	
VCR 1 OUT, TAPE/DCC REC (OUT)	200 mV
<b>Channel balance (250 Hz–6.3 kHz)</b>	±1 dB
<b>Channel separation</b>	55 dB
<b>Headphones output level and impedance</b>	430 mV/330 Ω
<b>Load impedance</b>	
A or B	8–16 Ω
A and B	8–16 Ω

## ■ FM TUNER SECTION

<b>Frequency range</b>	87.50–108.00 MHz
<b>Sensitivity</b>	
S/N 30 dB	1.5 μV/75 Ω
S/N 26 dB	1.3 μV/75 Ω
S/N 20 dB	1.2 μV/75 Ω
<b>IHF usable sensitivity</b>	(IHF '58) 1.5 μV/75 Ω
<b>IHF 46 dB stereo quieting sensitivity</b>	22 μV/75 Ω
<b>Total harmonic distortion</b>	
MONO	0.2%
STEREO	0.3%
<b>S/N</b>	
MONO	60 dB (75 dB, IHF)
STEREO	58 dB (71 dB, IHF)
<b>Frequency response</b>	20 Hz–15 kHz, +1 dB, –2 dB
<b>Alternate channel selectivity</b>	
±400 kHz	65 dB

<b>Capture ratio</b>	1.0 dB
<b>Image rejection at 98 MHz</b>	40 dB
<b>IF rejection at 98 MHz</b>	70 dB
<b>Spurious response rejection at 98 MHz</b>	70 dB
<b>AM suppression</b>	50 dB
<b>Stereo separation</b>	
1 kHz	40 dB
<b>Carrier leak</b>	
19 kHz	–30 dB (–35 dB, IHF)
38 kHz	–50 dB (–55 dB, IHF)
<b>Channel balance (250 Hz–6.3 kHz)</b>	±1.5 dB
<b>Limiting point</b>	1.2 μV
<b>Bandwidth</b>	
IF amplifier	180 kHz
FM demodulator	1000 kHz
<b>Antenna terminal(s)</b>	75 Ω (unbalanced)

## ■ AM TUNER SECTION

<b>Frequency range</b>	
MW	522–1611 kHz (9 kHz steps)
LW	530–1620 kHz (10 kHz steps)
	144–288 kHz
<b>Sensitivity</b>	
MW	20 μV, 330 μV/m
LW	45 μV
<b>Selectivity</b>	
MW (at 999 kHz)	55 dB
LW (at 252 kHz)	55 dB
<b>Image rejection</b>	
MW (at 999 kHz)	40 dB
LW (at 252 kHz)	40 dB
<b>IF rejection</b>	
MW (at 999 kHz)	55 dB
LW (at 252 kHz)	55 dB

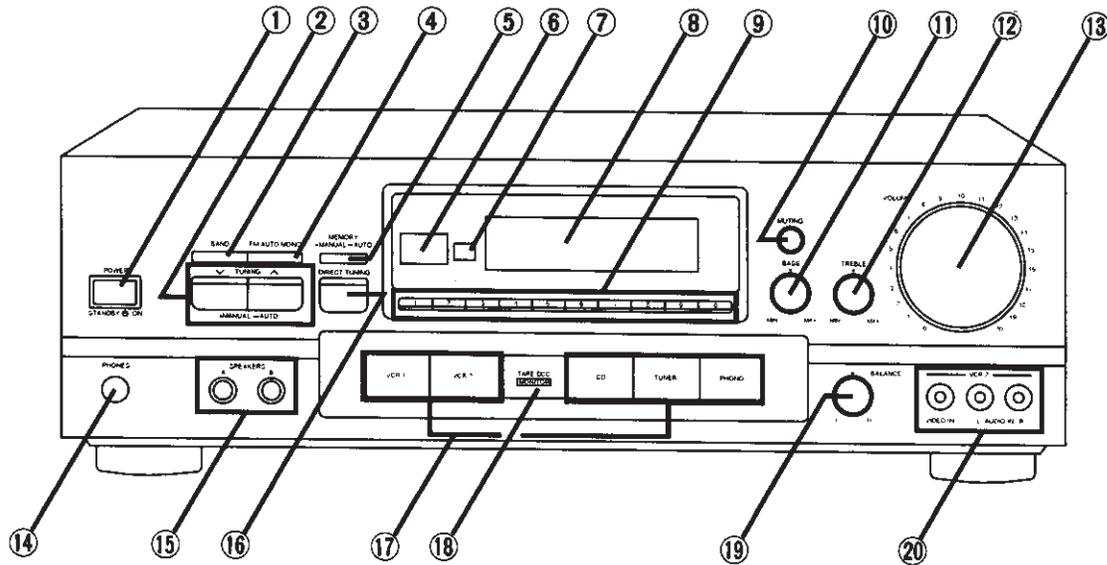
## ■ GENERAL

<b>Power consumption</b>	150 W
<b>Power supply</b>	
(For Australia and N.Z.)	AC 50/60 Hz, 230–240 V
(For others)	AC 50/60 Hz, 110–127 V/220–240 V
<b>Dimensions (W × H × D)</b>	430 × 136 × 305 mm
<b>Weight</b>	6.6 kg

### Notes:

- Specifications are subject to change without notice. Weight and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.

# Front panel controls

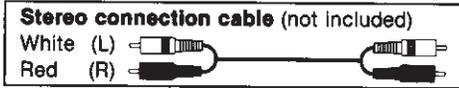


No.	Name	Ref. page
①	Power "STANDBY $\odot$ /ON" switch (POWER, STANDBY $\odot$ /ON)	11
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.		
②	Tuning buttons (TUNING)	14
③	Band select button (BAND)	13
④	FM mode select button (FM AUTO/MONO)	13
⑤	Memory button (MEMORY)	15
⑥	Remote control signal receptor	18
⑦	"STANDBY" indicator	—
When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.		
⑧	Display	—
⑨	Numeric buttons (1-0)	13,15,16
⑩	Muting button (MUTING)	12

No.	Name	Ref. page
⑪	Bass control (BASS)	12
⑫	Treble control (TREBLE)	12
⑬	Volume control (VOLUME)	11
⑭	Headphones Jack (PHONES)	12
⑮	Speaker select buttons (SPEAKERS)	11
⑯	Direct tuning button (DIRECT TUNING)	13
⑰	Input select buttons	11
⑱	Tape/DCC monitor button (TAPE/DCC <span style="border: 1px solid black; padding: 0 2px;">MONITOR</span> )	11,16
⑲	Balance control (BALANCE)	12
⑳	VCR 2 Input terminals (VCR 2)	17

# Equipment connections

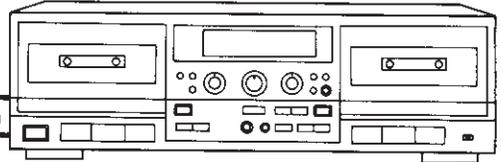
## Connecting audio equipment



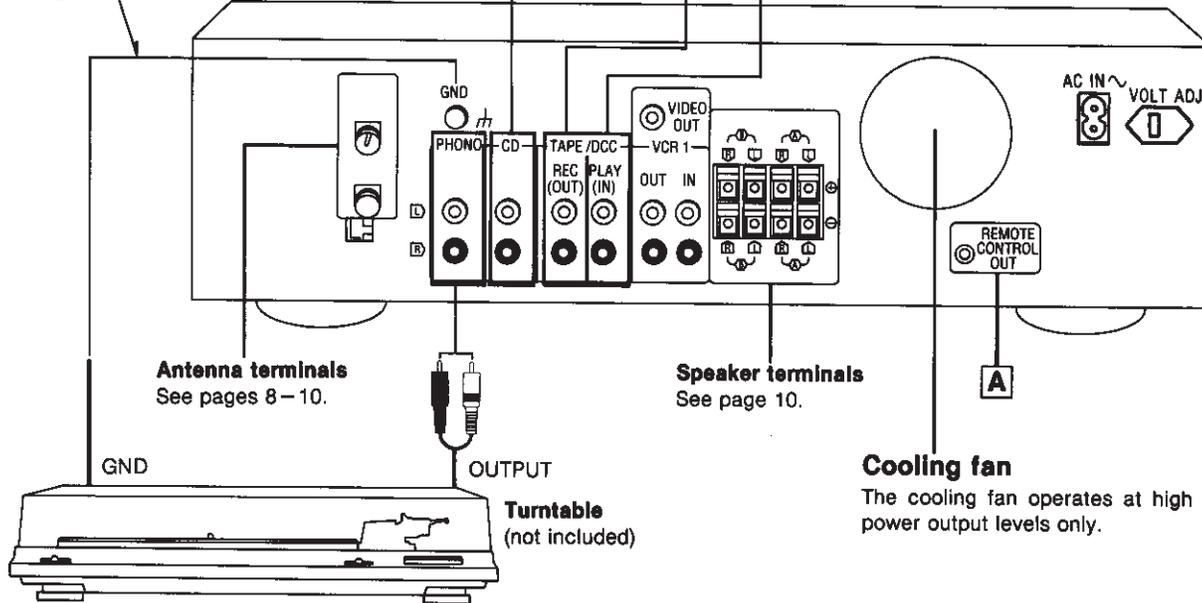
**CD player (or CD changer)**  
 (not included)



**Tape deck or digital compact cassette deck (DCC)** (not included)

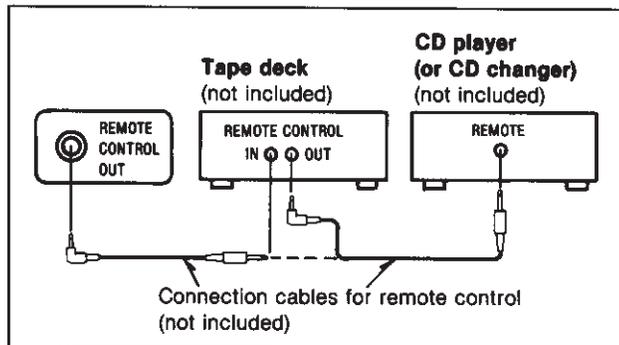


Only for turntable with ground terminal



### A "REMOTE CONTROL OUT" terminal

Connect the connection cable for the remote control to a Technics tape deck and/or CD player (or CD changer) which has the appropriate remote control terminal as shown below. If a tape deck is not being used, the CD player (or CD changer) can be connected directly (dotted line).



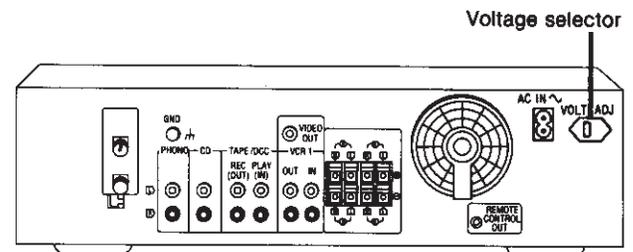
For a tape deck and/or CD player (or CD changer) with a remote control sensor the above connection is not necessary.

### To set the power voltage (For areas except Australia and N.Z.)

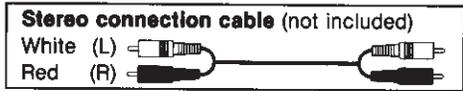
Set the voltage selector to the voltage setting for the area in which the unit will be used.

#### Note

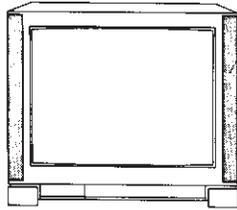
Note that this unit will be seriously damaged if this setting is not made correctly.



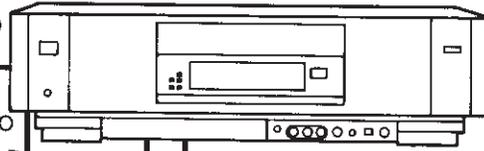
# Connecting video equipment



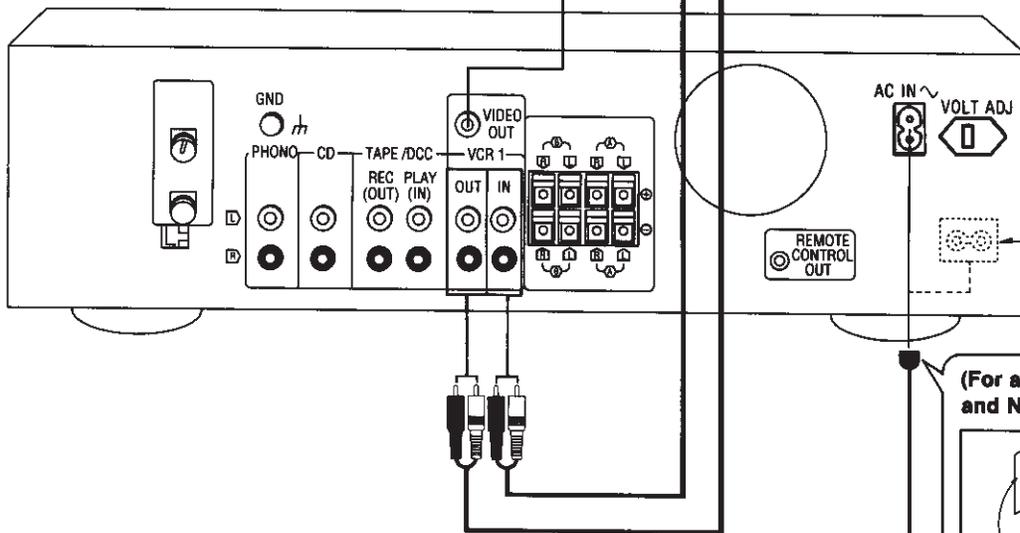
TV (not included)



VCR (not included)

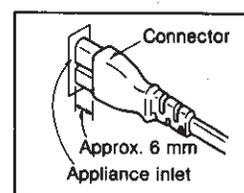


VIDEO IN  
 VIDEO OUT  
 VIDEO IN  
 Video connection cables (not included)



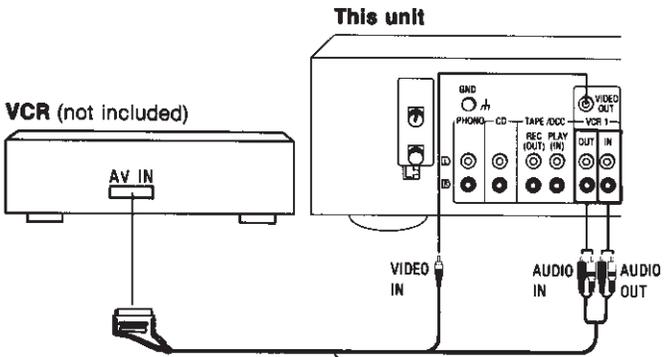
(For Australia and N.Z.)

(For areas except Australia and N.Z.)



Even when the connector is perfectly inserted, the front part of the connector jut out as shown in the drawing. However there is no problem using the unit.

**To connect a video deck with 21 pin scart terminal**



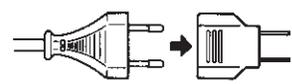
21 pin scart cable (not included)

AC power supply cord (included)

Connect this cord after all other cables and cords are connected.

Household AC outlet

(For areas except Australia and N.Z.)  
 If the power plug will not fit your socket, use the power plug adaptor (included).

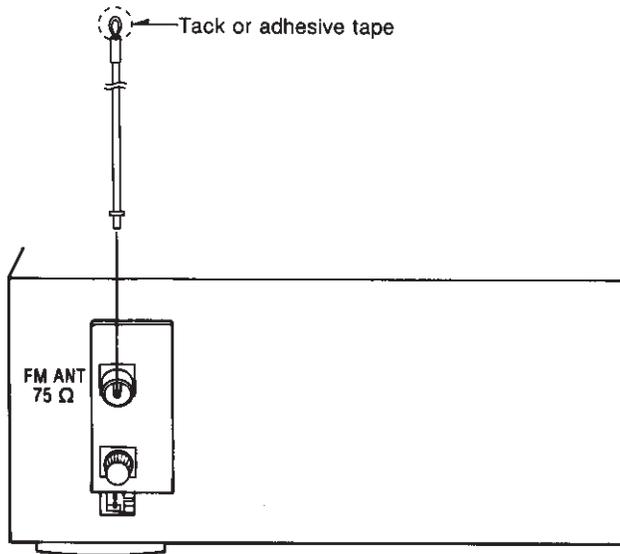


# Antenna connections

## FM indoor antenna (included)

This antenna is normally sufficient for reception of FM broadcasts.

### FM indoor antenna (included)



Attach to a wall (using a tack or adhesive tape) facing in the direction of best reception.

#### For best reception sound quality:

An FM outdoor antenna is recommended.

Disconnect the antenna if an FM outdoor antenna is installed.

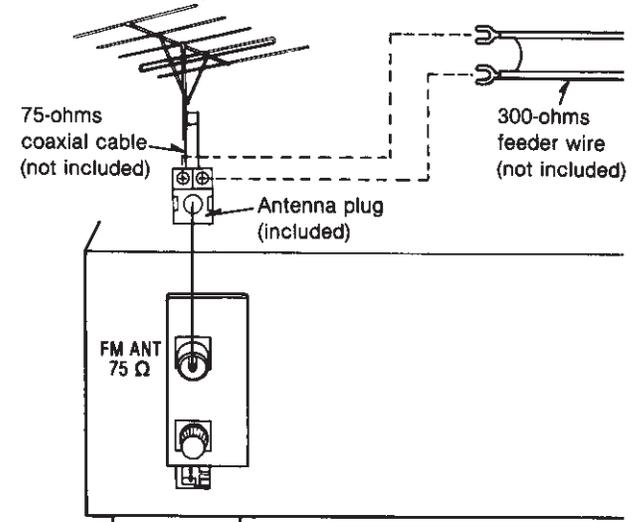
## FM outdoor antenna (not included)

The outdoor antenna should be used when using the main unit in mountainous areas or in spaces enclosed by reinforced concrete where the FM indoor antenna (included) does not provide satisfactory reception.

### Note

An outdoor antenna should be installed by a qualified technician only.

### FM outdoor antenna (not included)



See page 9 for using the antenna plug (included).

### How to use the antenna plug (Included)

Two types of wire are most commonly used for connection from the antenna: 300-ohms parallel feeder wire or 75-ohms coaxial cable. For best resistance to outside interference, the use of 75-ohms coaxial cable is suggested.

#### To connect a 75-ohms coaxial cable

- ① Remove a piece of the outer vinyl insulator.



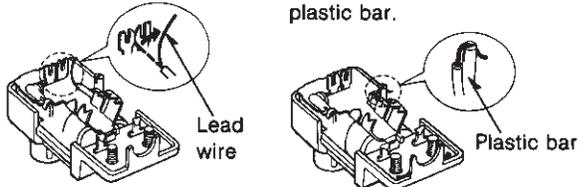
- ② Remove the cover while pulling the tabs.

**Note**

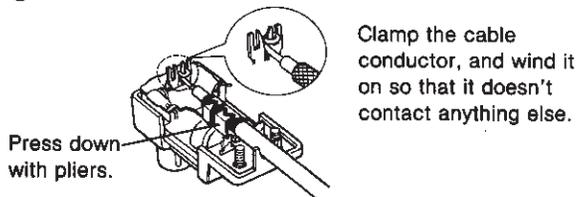
If the tabs are pulled too hard, the casing may be damaged.



- ③ Remove the lead wire. ④ Clamp the lead wire with the plastic bar.



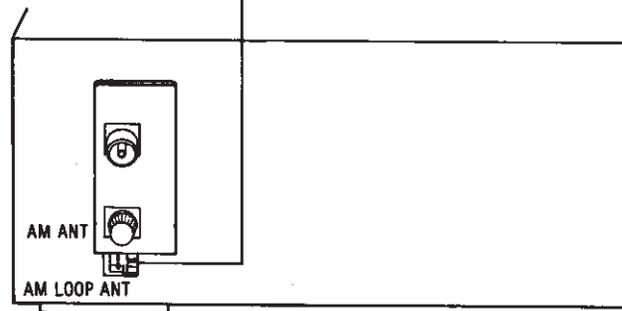
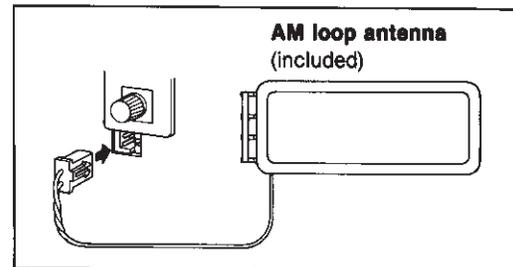
- ⑤ Install the coaxial cable.



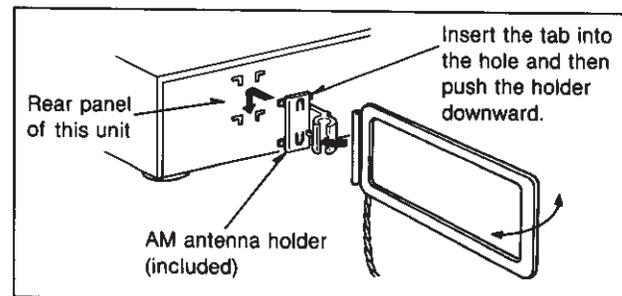
- ⑥ Attach the cover.

### AM loop antenna (included)

This antenna is normally sufficient for reception of MW/LW broadcasts.



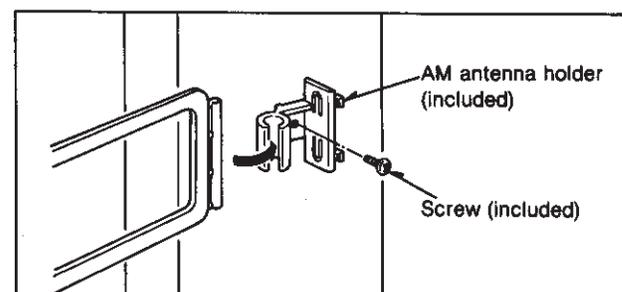
Install the AM antenna holder (included) at the rear panel of this unit and then attach the AM loop antenna to the AM antenna holder (facing in the direction of best reception).



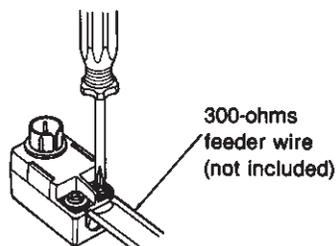
Pay attention to the following points when mounting the antenna.

- Do not mount it horizontally (Doing so will impair reception).
- Do not mount it close to power cords, speaker wires or metal surfaces (Doing so will result in noise).
- Do not mount it close to a tape deck. When the tape deck is being used, chirping or beeping sounds may result.

When mounting the antenna to a column, a wall or rack



#### To connect a 300-ohms feeder wire

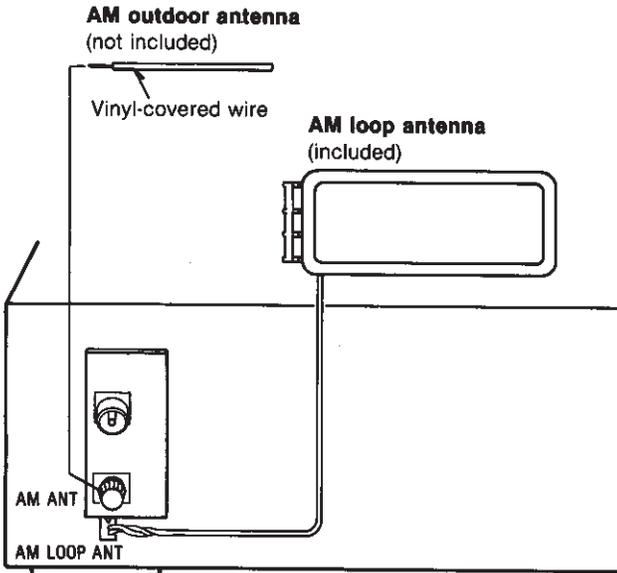


Loosen the screw to connect the feeder wire and tighten it to secure the connection.

## Antenna connections

### AM outdoor antenna (not included)

The outdoor antenna should be used when using the main unit in mountainous areas or in spaces enclosed by reinforced concrete where the AM loop antenna (included) does not provide satisfactory reception.



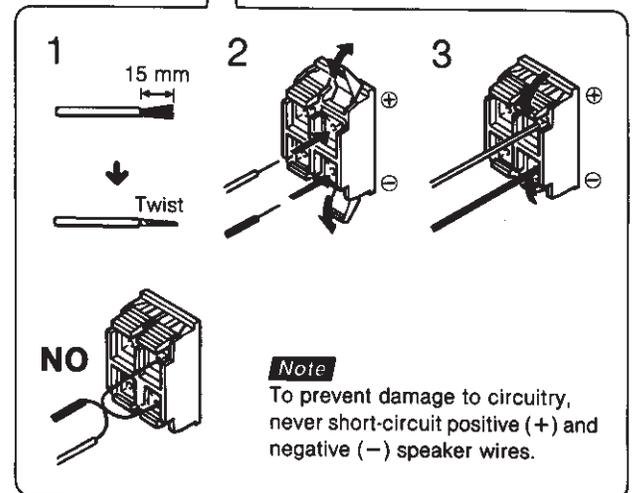
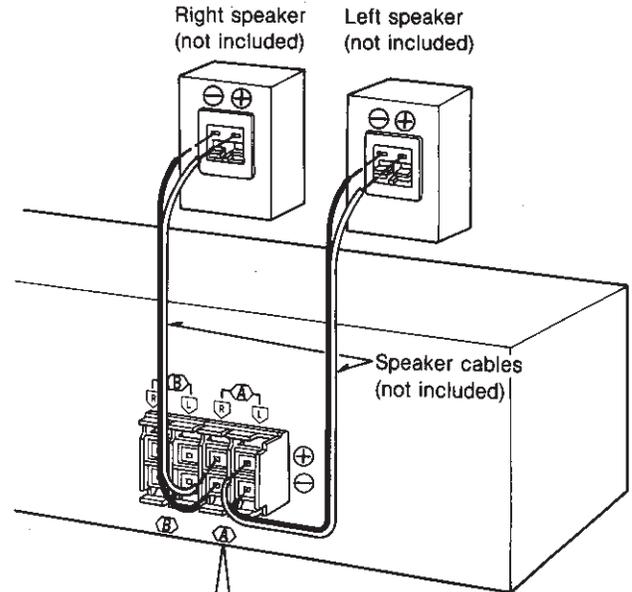
Use 5–12 m (16–40 ft.) of vinyl-covered wire horizontally at the window, or the convenient location.

When the unit is not in use, disconnect the outdoor antenna to prevent possible damage that may be caused by lightning. Never use an outdoor antenna during an electrical storm.

#### Note

Be sure to connect the AM loop antenna even when an outdoor antenna is used.

## Speaker connections



#### Note

To prevent damage to circuitry, never short-circuit positive (+) and negative (-) speaker wires.

### ■ "B" terminals

For connection to a second pair of speakers.

### ■ Speaker impedance

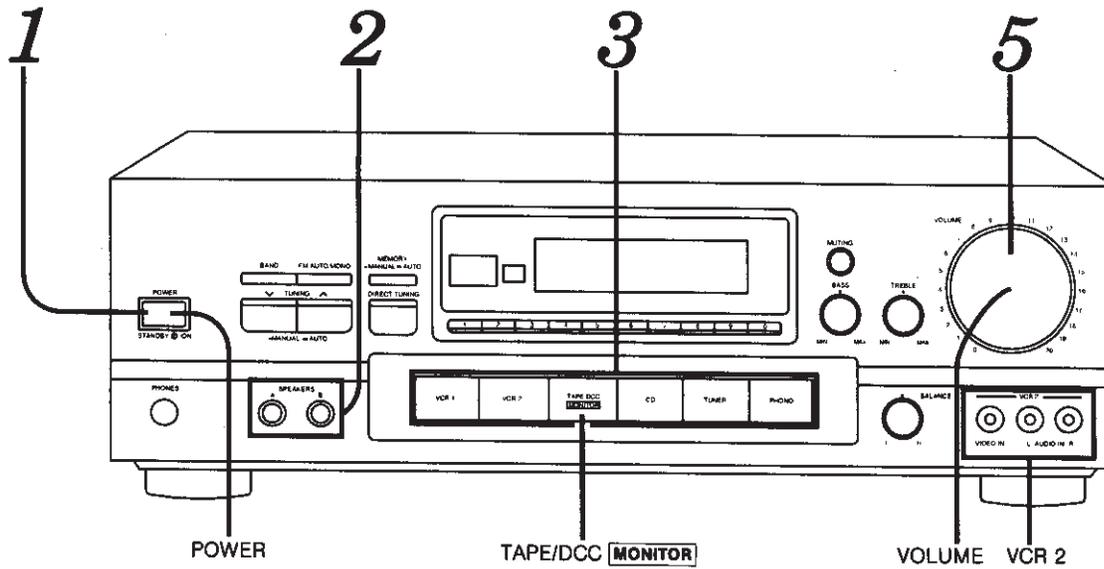
**When only the "A" or only the "B" speakers are connected:**

The impedance of the speaker used with this unit must be 8–16  $\Omega$ .

**When both the "A" and the "B" speakers are connected simultaneously:**

The impedance of the speaker used with this unit must be 8–16  $\Omega$ .

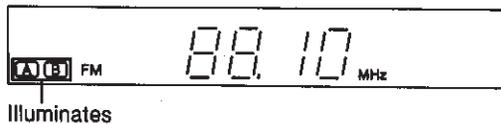
# Basic operations



Before operation, set VOLUME to the "0" position.

**1** **POWER** Press **POWER** to switch on the power.

**2** **SPEAKERS A B** Press **A** and/or **B** to select the speaker system(s) to be used.  
A and B refer to the speaker terminals at the rear of the unit.



Illuminates

If the button is pressed once more, the indicator will switch off and no sound will be heard from the speakers.

**3** **VCR 1 VCR 2 TAPE/DCC MONITOR CD TUNER PHONO** Press to select the desired source.  
**VCR 1:** To watch video tapes (VCR 1)  
**VCR 2:** To watch video tapes (VCR 2)  
**TAPE/DCC MONITOR:** To listen to tape or digital compact cassette (DCC). The tape monitor indicator will appear. (See below.)  
**CD:** To listen to compact discs  
**TUNER:** To listen to radio broadcasts  
**PHONO:** To listen to phono discs

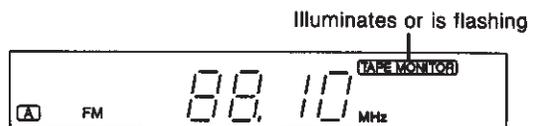
**4** **Start the desired source.**  
(Refer to the appropriate operating instructions for details.)

**5** **VOLUME** Turn **VOLUME** to adjust the volume level.

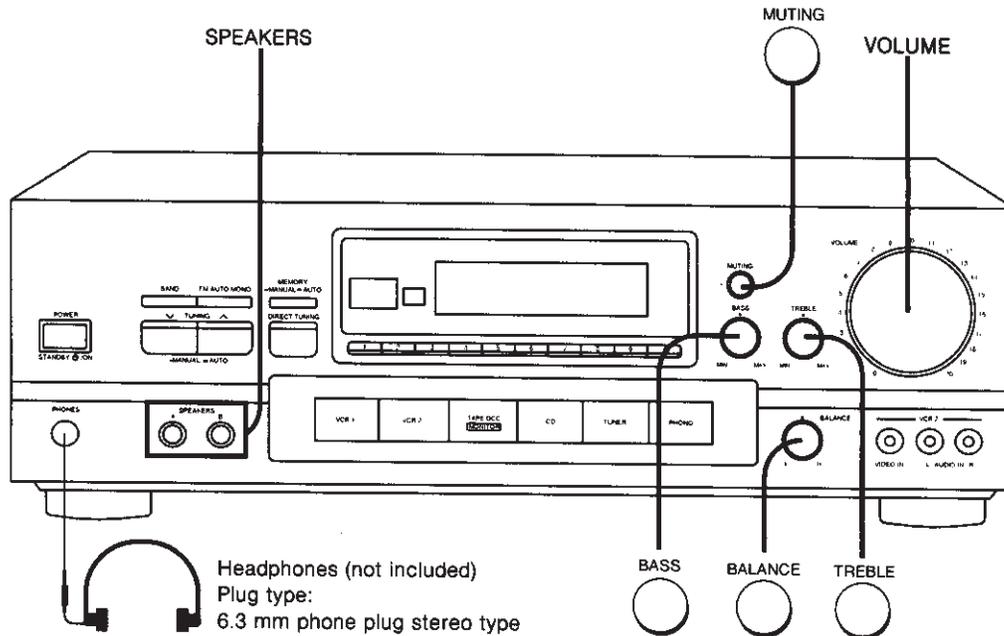
**After listening is finished**  
Be sure to reduce the volume level, and switch the power to the standby condition by pressing **POWER**.

## When tape monitor indicator illuminates or is flashing (approx. 3 seconds)

This indicates that the tape monitor function of this unit is ON. To listen to sources other than a tape or DCC, be sure to turn off the indicator by pressing **TAPE/DCC MONITOR**.



## Basic operations



### To adjust the tone quality

BASS



Turn **BASS** to adjust the low-frequency sound.

TREBLE



Turn **TREBLE** to adjust the high-frequency sound.

### To adjust the sound balance

BALANCE



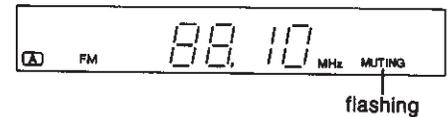
Turn **BALANCE** to adjust the left/right sound balance.

### To mute the sound level

MUTING



Press **MUTING**.



Press once again to return to the previous volume level. (The muting indicator will turn off.)

### When listening through headphones

Use **VOLUME** to reduce the volume level, and connect the headphones.

If sound from speakers is not wanted, press **SPEAKERS** (A) and/or (B) to turn off the speaker select indicators.

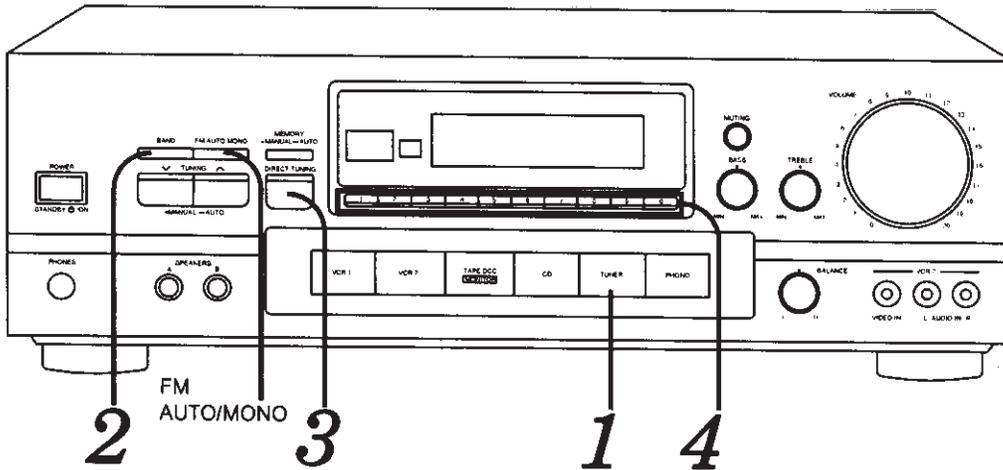
#### Note

Avoid listening for prolonged periods of time to prevent hearing damage.

# Listening to radio broadcasts

## Direct access tuning

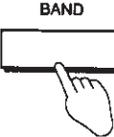
Specify the frequency using the numeric buttons to direct tune to the desired broadcast station.



- 1** Press **TUNER**.



- 2** Press **BAND** to select "FM", "MW" or "LW".  
The MW frequency step is set to 9 kHz before shipment. To change to 10 kHz step, see below.

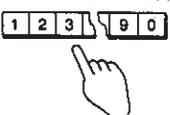



The indicator changes each time the button is pressed.
- 3** Press **DIRECT TUNING**.



While cursor display is flashing (approx. 10 seconds)


- 4** Press the appropriate numeric buttons to enter the frequency.



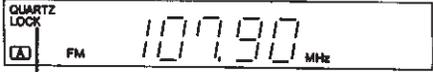
If the frequency has been input correctly, the frequency display will blink.

**Note**

  1. If no button is pressed while the cursor display is flashing, the display will return to the frequency which is currently being received. To re-specify the frequency, repeat the procedure from step 3.
  2. If the frequency has not been input correctly, an error message will be displayed. In this case, re-enter the frequency.

If the desired FM frequency is 107.90 MHz

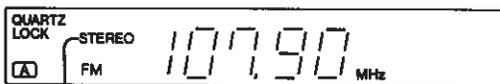
1 → 0 → 7 → 9 → 0



Illuminates when tuned

### When the FM stereo broadcast is received:

This unit will automatically switch to FM stereo reception and the FM stereo indicator will illuminate.



Illuminates

### If noise is excessive in the FM stereo mode

Press FM AUTO/MONO. (The FM stereo indicator will switch off.) The broadcast will be monaural, but noise will be reduced. If the button is pressed once more, stereo mode will be resumed.

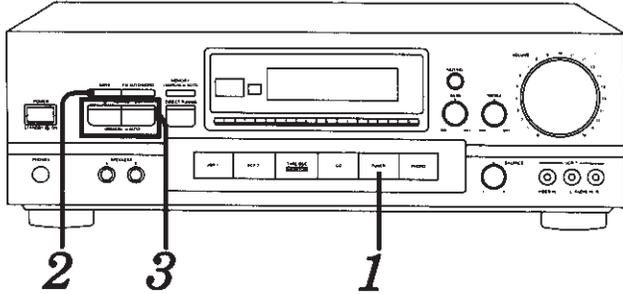
### To change the MW frequency step

Press and hold BAND for about 3 seconds. (The frequency step changes to 10 kHz per step.) To return to the previous step, press and hold BAND for about 3 seconds again.

# Listening to radio broadcasts

## Sequential tuning

If the frequency is not known, use the tuning buttons for searching.



**1** Press **TUNER**.

**2** Press **BAND** to select "FM", "MW" or "LW".

**3** Press **∨** or **∧** to tune to the desired broadcast.

If either button is pressed and held down until the frequency begins to change, the broadcast stations can be tuned automatically when a broadcast station is found.

**Note**

Tuning may stop automatically if any jamming is encountered.

## Preset tuning

By presetting the desired broadcast stations into the memory channels of this unit, broadcast stations can be selected simply by pressing numeric button(s). (Refer to page 16 for tuning.)

### Before presetting

#### How many broadcast stations can be preset?

A total of 30 FM, MW and LW stations can be preset.

#### How is presetting done?

The two following methods are available.

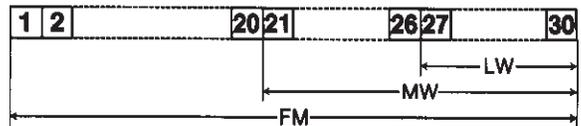
##### • Automatic memory presetting

Automatic memory presetting allows this unit to automatically search for broadcast stations and then preset them into memory.

With this function, searching proceeds from the frequency currently being displayed and continues to highest frequency, and broadcast stations are preset in the order in which they are located.

In this method, the channel ranges that can be preset into the memory for different bands (FM, MW or LW) are set as follows.

Channel



For example, after presetting the FM band, if the MW band is preset, the previous presettings in the sections in the above illustration which overlap will be erased and the subsequent settings will be preset. Therefore, the FM band stations will be kept for channels 1-20 and the MW band stations will be preset to channels 21-30.

##### • Manual memory presetting

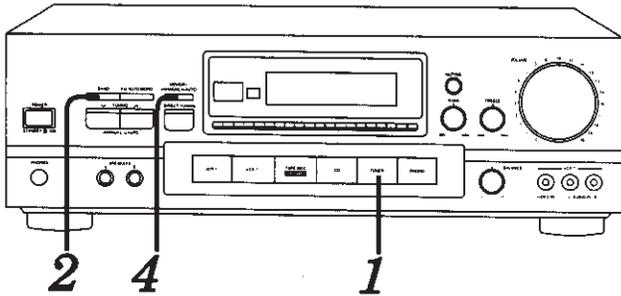
The desired broadcast stations can be preset into the desired channels by the user.

This can also be used as a method for changing selected broadcast stations that were preset in "Automatic memory presetting".

**Note**

If a new broadcast station is preset into a channel, the setting for the broadcast station which was previously entered in that channel will be automatically erased.

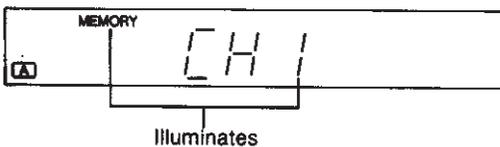
## Automatic memory presetting



- 1** **TUNER** Press TUNER.
- 2** **BAND** Press BAND to select "FM", "MW" or "LW".
- 3** Set to the frequency from which you want to start automatic memory presetting. (Follow steps 3 and 4 on page 13.)
- 4** **MEMORY** Press MEMORY until the frequency begins to change. (Automatic memory presetting will start.)  
To stop press MEMORY once again.

### When a broadcast station is preset

The memory indicator and the preset channel number will be displayed for approximately 1 second.



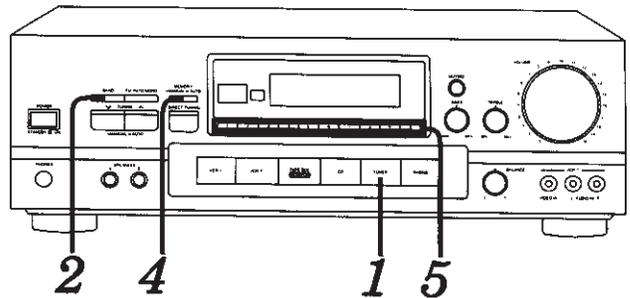
### When presetting is completed

The last broadcast station to be preset will be displayed.

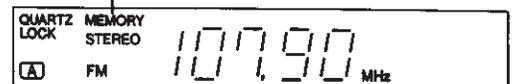
#### Note

Correct presetting may not be possible in cases where the broadcast waves are too strong or too weak. In such cases, carry out presetting manually.

## Manual memory presetting

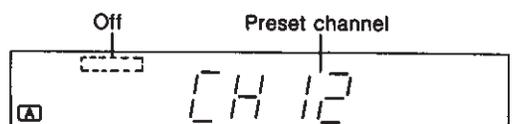
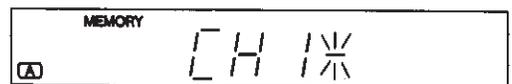


- 1** **TUNER** Press TUNER.
- 2** **BAND** Press BAND to select "FM", "MW" or "LW".
- 3** Set to the desired broadcast. (Follow steps 3 and 4 on page 13 or step 3 on page 14.)  
You can also set the stereo mode to the monaural position.
- 4** **MEMORY** Press MEMORY momentarily.  
Illuminates



To cancel the memory function, press MEMORY again.

- 5** **1 2 3 9 0** Specify the desired channel to be preset using the numeric button(s) (completes presetting). (Example: Channel 12)  
1 → 2 (Within 2 sec.)



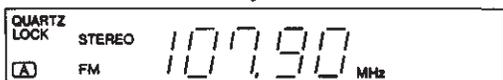
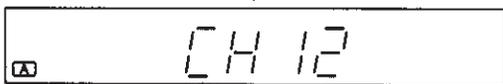
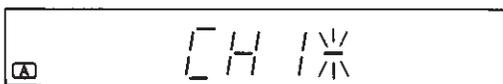
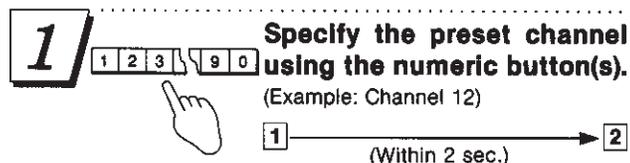
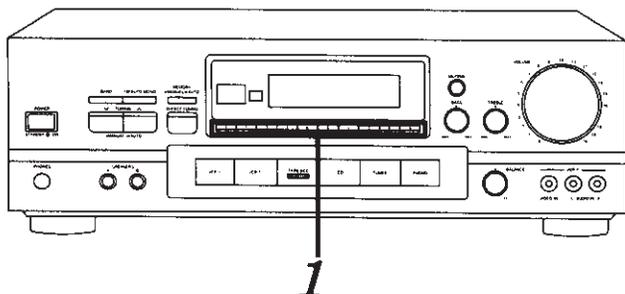
### To continue presetting

Repeat steps 2 through 5.

## Listening to radio broadcasts

### Preset tuning (continued)

#### To listen to preset broadcast stations



#### To confirm the channel number of the broadcast station being received

Press TUNER.

(The channel number will be displayed for about one second.)

#### Note

The channel number is not displayed if you change the reception frequency or FM mode setting.

#### For your reference:

Even if the power is switched to the standby condition or the power cord is disconnected from the household AC outlet, the contents of the memory will continue to be stored for approximately one month.

#### If frequency presettings are accidentally erased

Make the frequency presettings once again.

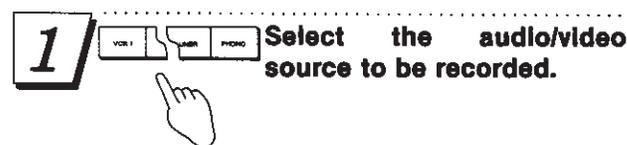
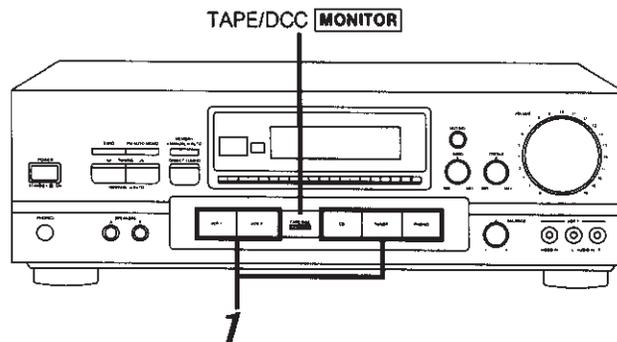
The power cord should remain connected for one hour or more for the memory back-up to be effective.

## Making a recording

### Tape recording on the tape deck or digital compact cassette (DCC)

Before recording, prepare the tape deck or DCC for recording (recording level adjustment, etc.).

See the tape deck's or DCC's operating instructions for details.



#### To check the sound recorded while recording is being made

With a tape deck with 3 heads, it is possible to check the sound recorded on the tape.

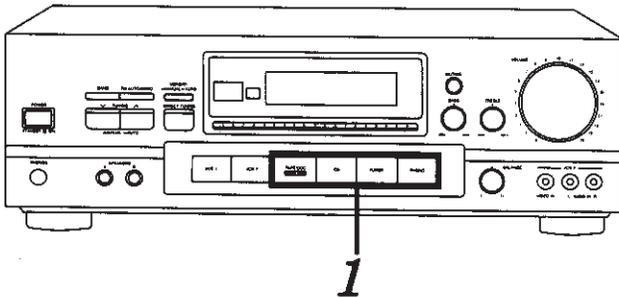
Press TAPE/DCC **MONITOR** on this unit and set the monitor button on the tape deck to "TAPE".



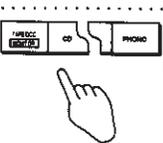
Press TAPE/DCC **MONITOR** once again to turn it off.

## VCR (VCR 1) recording from an audio source

Before recording, prepare the VCR (VCR1) for recording (recording level adjustment, input selector setting, etc.). See the VCR's operating instructions for details.



**1** Select the audio source to be recorded.



**2** Begin recording on the VCR 1.  
Follow your VCR's operating instructions.

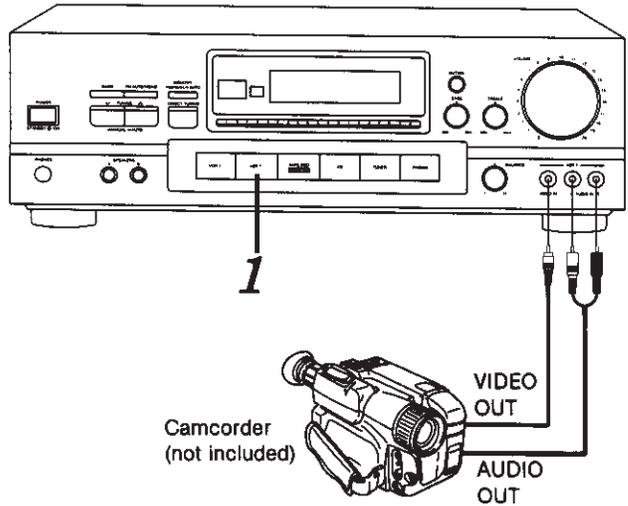
**3** Begin the audio source to be recorded.

## Recording from VCR 2 to VCR 1

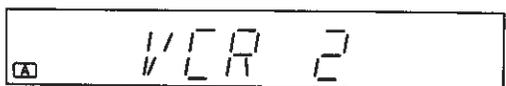
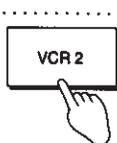
It is easier to carry out dubbing from a camcorder if it is connected to the front terminals.

Before recording, prepare the VCR (VCR 1) for recording (recording level adjustment, etc.).

See the VCR's operating instructions for details.



**1** Press VCR 2.



**2** Begin recording on the VCR 1 and playback the tape on the VCR 2.

Follow your VCR's operating instructions.

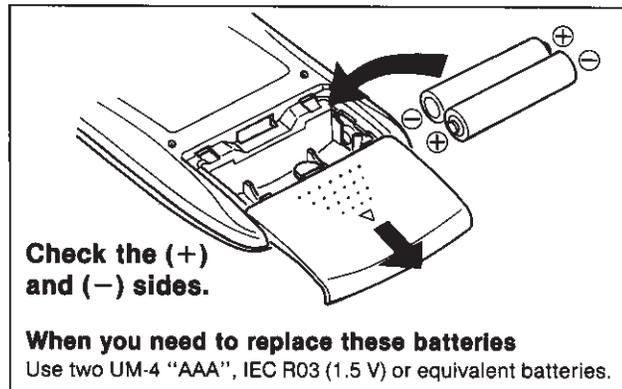
# Remote control operation

This remote control transmitter can be used to operate other units manufactured by this company in addition to this receiver, including TVs and VCRs manufactured since 1985, CD players (or CD changers), tape decks and DCC decks.

- For detailed information concerning operation steps, etc., please refer to the appropriate page for each unit and the respective operating instructions.
- Make sure that the power of each unit is set to the "ON" position, before beginning the operations.

## Battery installation

Insert the batteries included with this unit as shown below.



## Use of batteries

Do not mix old and new batteries, or batteries of different types (carbon and alkaline, etc.).

Always remove old, weak or worn-out batteries promptly and dispose them properly.

The battery life is about one year. Although the battery life varies depending on how often the device is used, the batteries should be replaced about once every year on the average.

The batteries should be replaced if commands from the remote control transmitter do not operate the unit even when transmitter is held close to the front panel.

Never subject batteries to excessive heat or flame; do not attempt to disassemble them; and be sure they are not short-circuited.

If the remote control is not to be used for a long period of time, remove the batteries and store them in a cool, dark place.

If a battery leaks, remove all batteries and dispose them properly. Thoroughly clean the battery compartment before inserting new batteries.

If the electrolyte comes into contact with skin or clothes, flush with water immediately.

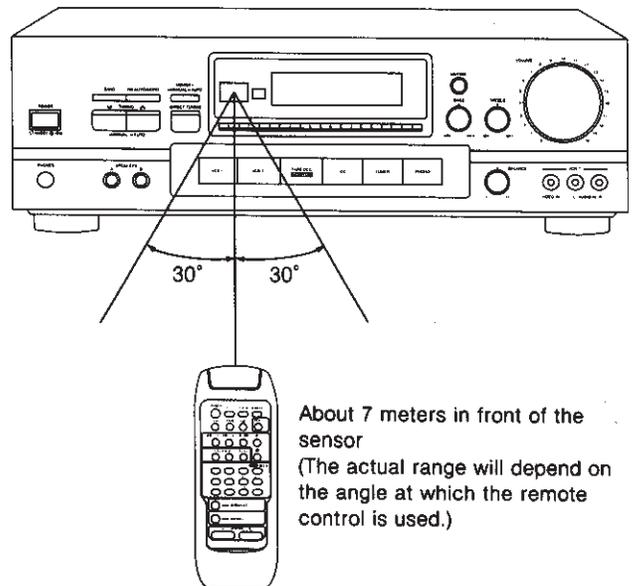
Keep batteries out of reach of children.

Do not use rechargeable (nickel-cadmium) type batteries.

Do not attempt to recharge alkaline or carbon batteries.

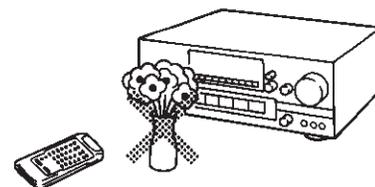
## Method for use

Use the remote control within 60 degrees and within 7 meters facing directly toward the receiver's remote control signal receptor.

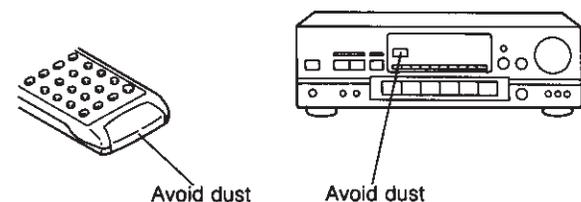


When operating a TV, VCR, digital compact cassette deck (DCC) or a CD player (or CD changer) with a remote control sensor, face this remote control toward the remote control sensor of the unit to be operated.

## Operation notes



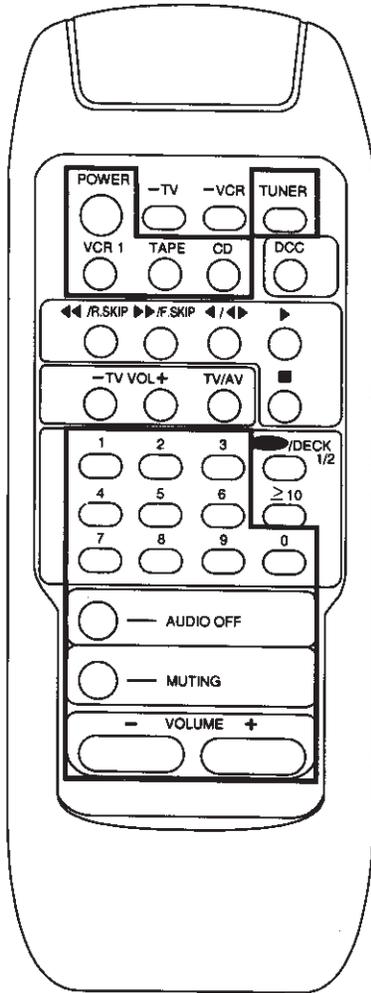
Aim the remote control's transmission window toward the unit's sensor. Avoid any obstacles.



Be sure the transmission window and the unit's sensor are free from dust. Excessive dust might affect performance.

The operation may not be correct if direct sunlight or another strong light source strikes the receiving sensor of this unit. If there is a problem, place the unit away from the light source.

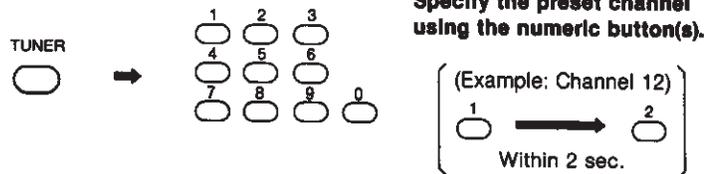
## To operate the receiver



### Basic operations

<b>To turn the unit ON/OFF</b>	POWER 
<b>To turn the tape monitor function ON</b>	TAPE To turn off the tape monitor function, press one of the input select buttons (TUNER, CD, VCR 1).
<b>To select an input source</b>	TUNER      CD      VCR 1 
<b>To mute the sound level</b>	— MUTING Press once more to return to the original volume.
<b>To adjust the volume level</b>	- VOLUME + 
<b>If your unit is equipped with the New Technics Remote Control System (see below)</b>	
<b>To turn the system OFF</b>	— AUDIO OFF

### To listen to radio broadcasts



### New Technics Remote Control System Compatibility Table (as of April, 1995)

<b>CD changer</b>	SL-PD667, SL-PD867, SL-PD687, SL-PD887, SL-PD1010
<b>Cassette deck</b>	RS-TR252, RS-TR373, RS-TR474, RS-TR575
<b>Digital compact cassette deck (DCC)</b>	RS-DC8

# Remote control operation

## To operate a CD player (or CD changer)

	<p><b>To switch the remote control transmitter to CD operation mode</b></p>	<p>CD  The input source for the receiver will switch to the CD player and operation of the buttons listed below will be possible.</p> <p><b>If a CD player or CD changer which is equipped with the New Technics Remote Control System is connected</b> The power supply of the CD player or CD changer can be turned on by pressing this button for approximately 2 seconds.</p>
	<p><b>To start play</b></p>	<p></p>
	<p><b>To start play from the desired track</b></p>	<p>(only for a CD changer)</p> <p></p> <p>↓</p> <p></p> <p>(Example: Track 12)  </p> <p><b>When a CD changer (or CD player) is connected to this unit by using the connection cable for the remote control:</b> Select a two-digit track number by pressing /F.SKIP.</p>
	<p><b>To skip a track</b></p>	<p> </p> <p>(Backward) (Forward)</p>
	<p><b>To stop play</b></p>	<p></p>

## To operate a cassette deck

	<p><b>To switch the remote control to cassette deck operation mode</b></p>	<p><b>TAPE</b></p> <p></p> <p>The input source for the receiver will switch to the cassette deck which is connected to the "TAPE/DCC" terminals, and operation of the buttons listed below will be possible.</p> <p><b>If a cassette deck which is equipped with the New Technics Remote Control System is connected</b></p> <p>The power supply of the cassette deck can be turned on by pressing TAPE for approximately 2 seconds.</p>
	<p>(Only when using a double cassette deck)</p> <p><b>Select the tape deck (DECK 1/DECK 2)</b></p>	<p></p> <p>The remote control indicator of the cassette deck will change each time the button is pressed.</p>
	<p><b>To start play</b></p>	<p></p> <p>(Reverse) (Forward)</p>
	<p><b>To fast-forward or rewind the tape</b></p>	<p></p> <p>When using a Technics cassette deck equipped with a TPS function, the start of a track can be found by performing this operation during playback.</p>
	<p><b>To stop play</b></p>	<p></p>

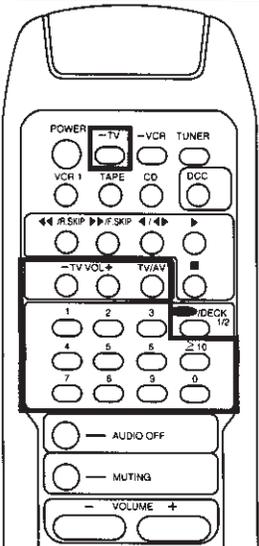
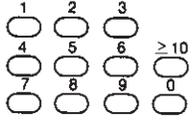
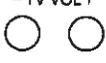
## To operate a digital compact cassette deck (DCC)

**Note** The Technics RS-DC10 can not be operated by this remote control.

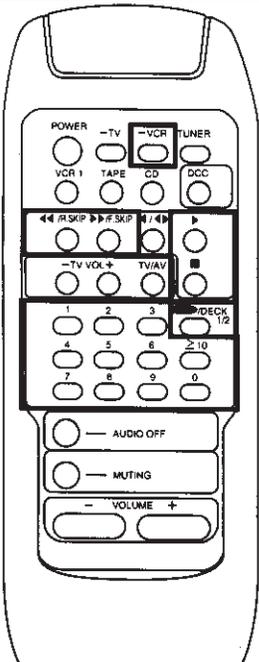
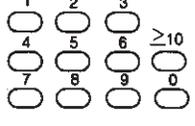
	<p><b>To switch the remote control transmitter to DCC operation mode</b></p>	<p><b>DCC</b></p> <p></p> <p>The remote control will switch to DCC operation mode, and operation of the buttons listed below will be possible.</p> <p><b>If a DCC deck which is equipped with the New Technics Remote Control System is connected</b></p> <p>The power supply of the DCC deck can be turned on by pressing this button for approximately 2 seconds.</p>
	<p><b>To start play</b></p>	<p></p>
	<p><b>To select by track number</b></p>	<p>This is only effective for commercially-available DCC tapes and for other DCC tapes for recording purposes which have had track numbers recorded.</p> <p> </p> <p>After the desired track has been searched for, the unit will return to the condition before the button was pressed (playing back, stopped or paused).</p>
	<p><b>To change the tape side</b></p>	<p></p>
	<p><b>To skip a track</b></p>	<p></p> <p>(Backward) (Forward)</p>
	<p><b>To stop play</b></p>	<p></p>

# Remote control operation

## To operate a TV

	<b>To turn the unit ON/OFF</b>		Press for approx. 2 seconds. When the unit is turned on, the remote control will switch to TV operation mode, and operation of the buttons listed below will be possible.
	<b>To select the TV/VIDEO mode</b>		The TV screen will change each time the button is pressed.
	<b>To select the desired channel</b>		(Example: Channel 9) 9 (Example: Channel 12) ≥10 → 1 → 2
	<b>To adjust the volume level</b>		

## To operate a VCR

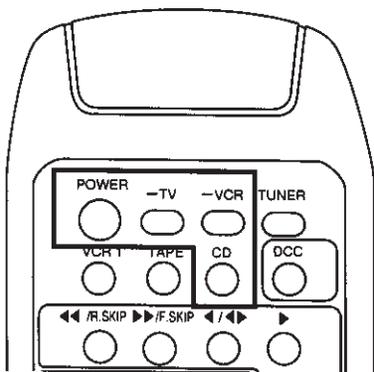
	<b>To turn the unit ON/OFF</b>		Press for approx. 2 seconds. When the unit is turned on, the remote control will switch to VCR operation mode, and operation of the buttons listed below will be possible.
	<b>To start play</b>		
	<b>To select the desired channel.</b>		(Example: Channel 9) 9 (Example: Channel 12) ≥10 → 1 → 2
	<b>To fast-forward or rewind the tape</b>	In the stop mode 	
	<b>To stop play</b>		

**Note**

If you operate a TV, VCR or CD player (or CD changer) using this remote control, the unit may fail to operate due to the differing nature of the remote control signal.

**If the remote control fails to operate:**

It is necessary to switch over the signal within the remote control by following this simple procedure.



**For CD player (or CD changer) operation**

POWER    CD    Press POWER and CD simultaneously, hold for 2 seconds.

**For TV operation**

POWER    -TV    Press POWER and TV simultaneously, hold for 2 seconds.

**For VCR operation**

POWER    -VCR    Press POWER and VCR simultaneously, hold for 2 seconds.

To restore the previous memory contents, carry out the same operations one more time.

Depending on the model, there may be cases where operation is still not possible even if the remote control signal is switched over due to differences in frequency range characteristics.

# Troubleshooting guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers (enclosed with this unit) to locate a convenient service center, or consult your Technics dealer for instructions.

Problem	Probable cause(s)	Suggested remedy
<b>While listening to FM broadcasts</b>		
An unusual hissing noise is heard when listening to the broadcast in stereo, but not heard when listening monaurally.	A slight noise may be heard because the method used for modulation of FM stereo broadcasts is different than that used for monaural broadcasts.	<ul style="list-style-type: none"> <li>• Try reducing the treble sound by using the treble control.</li> <li>• Try changing the location, height and/or direction of the antenna.</li> <li>• If an indoor antenna is being used, change to an outdoor antenna.</li> <li>• Try using an antenna with more elements.</li> </ul>
Noise is excessive in both stereo and monaural broadcasts.	Poor location and/or direction of the antenna. Transmitting station is too far away.	<ul style="list-style-type: none"> <li>• Try changing the location, height and/or direction of the antenna.</li> <li>• If an indoor antenna is being used, change to an outdoor antenna.</li> <li>• Try using an antenna with more elements.</li> </ul>
The FM stereo indicator or the quartz lock indicator flickers, without completely illuminating.	Poor location and/or direction of the antenna. Transmitting station is too far away.	<ul style="list-style-type: none"> <li>• Try changing the location, height and/or direction of the antenna.</li> <li>• If an indoor antenna is being used, change to an outdoor antenna.</li> <li>• Try using an antenna with more elements.</li> </ul>
Excessive distortion in the sound of stereo broadcasts.	Nearby building or mountain.	<ul style="list-style-type: none"> <li>• Try changing the location, height and/or direction of the antenna.</li> <li>• If an indoor antenna is being used, change to an outdoor antenna.</li> <li>• Try using an antenna with more elements.</li> </ul>

<b>While listening to AM broadcasts</b>		
An unusual "beat" sound is heard.	Unit is being used at the same time as the television set. Interference from an adjacent broadcast signal.	<ul style="list-style-type: none"> <li>• Turn off the television set, or use this unit farther away from it.</li> <li>• Try reducing the treble sound by using the treble control.</li> </ul>
A low-pitched "hum" sound is heard when the broadcast is tuned.	The AM loop antenna connection wires are too close to the power cord. The power supply frequency from the power cord is modulated and heard from the speakers.	<ul style="list-style-type: none"> <li>• Place the antenna connection wires and the power cord farther apart.</li> <li>• Install a special outdoor antenna.</li> </ul>
A strange hissing noise is produced continuously or intermittently.	Caused by the "discharge phenomenon" and the "oscillation phenomenon" of electric appliances (such as fluorescent lights, TV, small series-type motors, rectification equipment, etc.).	<ul style="list-style-type: none"> <li>• Try placing this unit farther away from such equipment.</li> <li>• Install noise-prevention equipment on this unit or on the electric appliance.</li> </ul>

<b>Problems noted at all times</b>		
Power will not switch ON.	The power cord plug is not completely inserted.	<ul style="list-style-type: none"> <li>• Confirm that the power cord plug is connected completely.</li> </ul>
No sound is heard.	Both A and B speakers are turned OFF. The tape monitor function is ON. The muting function is ON. Connections are incomplete or incorrect to the speaker systems, etc. The incorrect input selector has been pressed.	<ul style="list-style-type: none"> <li>• Select the input selector switch for the source to which you wish to listen and press the selector button. (The display will scroll through the channels.) Use this display when you select the input.</li> <li>• Check to be sure that all connection wires are correctly connected.</li> <li>• Check to be sure that the correct selector is pressed.</li> </ul>
Sound stops during a broadcast or when the power is turned ON.	The protection circuitry has functioned because the positive and negative speaker connections are reversed. (Speaker systems with an impedance less than the indicated value.) The speakers of this unit are used or under severe use, such as loud volume, excessive power and in an excessively hot environment.	<ul style="list-style-type: none"> <li>• Switch off the power and check the speaker connections. Reverse the positive and negative connections if necessary and turn the power ON again.</li> <li>• Do not use the speakers of this unit under severe use or in an excessively hot environment.</li> </ul>

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