

Operating Instructions

DVD/VHS Home Theater Sound System

Model No. **SC-HT830V**
SC-HT833V

ADVANCED PROGRESSIVE SCAN (DVD) page **8**

EASY-TO-USE 5 DVD/CD CHANGER WITH QUICK START CD KEY page **18**

LONG 10h RECORDING/PLAYBACK & HIGH SPEED x600 TAPE REWIND (VHS) page **28**

SC-HT833V is only for the U.S.A.

Region number

The player plays DVD-Video marked with labels containing the region number "1" or "ALL".

Example:



SUPER DRIVE

If you have any questions, please call
In the U.S.A.: 1-800-211-PANA (7262)
In Canada: 1-800-561-5505

Before connecting, operating or adjusting this product, please read the instructions completely. Please keep this manual for future reference.

For U.S.A. only
The warranty can be found on page 49.
For Canada only
The warranty can be found on page 50.

Dear customer

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



INTRO

System	SC-HT830V/SC-HT833V	Center speaker	SB-PC730 (SC-HT830V/SC-HT833V)
Main unit	SA-HT830V (SC-HT830V)	Active subwoofer	SB-WA830 (SC-HT830V)
	SA-HT833V (SC-HT833V)		SB-WA833 (SC-HT833V)
Front speakers	SB-FS730 (SC-HT830V/SC-HT833V)	Surround speakers	SB-FS731 (SC-HT830V/SC-HT833V)

CAUTION!

THIS PRODUCT UTILIZES A LASER. USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE. DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE, DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

CAUTION!

DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.

THE FOLLOWING APPLIES ONLY IN THE U.S.A.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 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.

Before moving the unit, ensure the disc trays and video cassette slot are empty.

Failure to do so will risk severely damaging the discs, video cassette tape and the unit.

Avoid use or placing highly magnetic devices (Speakers etc.) or devices that emit strong electro-magnetic waves (mobile telephones etc.) near the main unit.

- The above may result in problems with audio and video, and recorded content may be lost.
- Be extra cautious when you are using a plasma television, keeping these devices as far away as possible.

Stacking

Place the unit in a horizontal position, and do not place anything heavy on it.

The socket outlet shall be installed near the equipment and easily accessible or the mains plug or an appliance coupler shall remain readily operable.

THE FOLLOWING APPLIES ONLY IN THE U.S.A.

CAUTION:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any unauthorized changes or modifications to this equipment would void the user's authority to operate this device.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE SCREWS. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



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




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

- Operating while there is condensation in the unit or on the cassette tape may cause the tape to catch upon the cylinder resulting in the tape being cut, or not being able to remove the cassette tape from the unit. The unit also may not work properly if the unit's cylinder or heads have been damaged.
- Wait 1–2 hours for condensation to evaporate (do not operate the unit during this time).

IMPORTANT SAFETY INSTRUCTIONS

Read these operating instructions carefully before using the unit. Follow the safety instructions on the unit and the applicable safety instructions listed below. Keep these operating instructions handy for future reference.

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over. 
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

INTRO

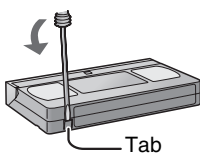
CAUTION	- LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.	FDA 21 CFR / Class II
CAUTION	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.	IEC60825-1 / Class 3b
WARNING	- SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN.	
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSETTELSE FOR STRÅLING.	
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING NÄR DEKSEL ÅPNET. UNDGÅ EKSPONERING FOR STRÅLEN.	
VARO!	- AVATTAESSA OLET ALLTIIN NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTELYLLÄ. ÄLÄ KATSO SÄTEESEEN.	
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET, NICHT DEM STRAHL AUSSETZEN.	
ATTENTION	- RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.	
注意	- 照射が可視及不可視レーザー光が出ます。	
注意	- ここを覗くと可視及び不可視レーザー光が出ます。ビームを見たり、触れたりしないで下さい。	BOLXS0054

(Inside of product)

Tape information

■ Tapes

- You can use tapes with the VHS and S-VHS marks, but this unit is unable to make full use of the characteristics of S-VHS tapes.
- Break out the tape's tab to prevent accidental erasure. Cover the hole with a double layer of adhesive tape when you want to use the tape for recording again.



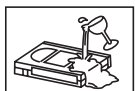
■ S-VHS Quasi Playback (SQPB)

You can play tapes recorded with the S-VHS system, however some noise may occur with some types and this unit cannot take advantage of S-VHS's high resolution. This unit cannot make S-VHS recordings.

■ Tape care

Poor quality or damaged tapes can cause the heads to become dirty and malfunction. Store your tapes carefully and discard when they become dirty or damaged.

Never use tapes on which juice has been spilt or those that are extremely damaged since this will not only cause the heads to become dirty, but will also make the unit malfunction.

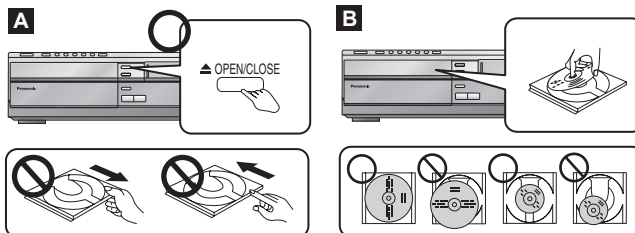


■ Caution

Tapes that are inserted slightly offset cannot be loaded into the unit. Insert the tapes straight into the unit to prevent malfunction.

Tray/disc handling procedure

- Not doing the following will cause damage to the unit.



- A** • Always press [▲ OPEN/CLOSE] to insert or remove a disc.
 - Do not push or pull out the tray by hand as this will cause an accident.
- B** • Place the disc label up in the center of tray.
 - Insert only one disc into each tray.

■ About descriptions in these Operating Instructions

- Pages to be referred to are indicated as →○○○.
- Operations in these instructions are described mainly with the remote control, but you can do the operations on the main unit if the controls are the same.

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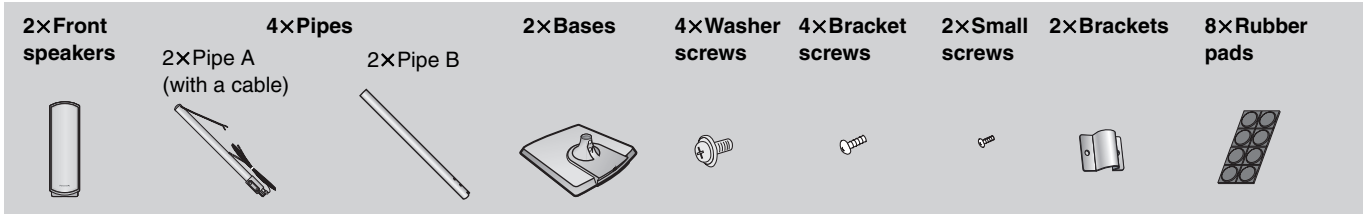
Simple setup

STEP 1 Front speaker assembly

The supplied stands are specially designed for attachment to Panasonic SB-FS730 front speakers. Use only as indicated in this setup.

Preparation

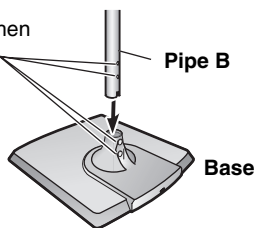
- To prevent damage or scratches, lay down a soft cloth and perform assembly on it.
- For assembly, use a Phillips-head screwdriver.
- Make sure you have all the indicated components before starting assembly, setup, and connection.
- There is no difference between the right and left speakers and pipes.



1 Attach pipes B to the bases.

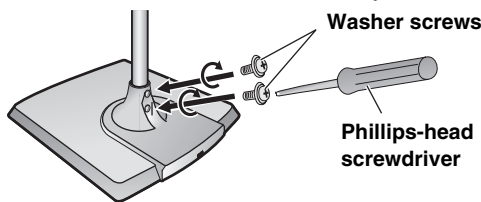
A Insert pipe B.

Match these holes when you insert the pipe.



B Secure pipe B to the base.

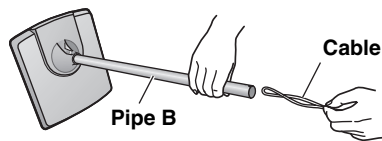
Ensure the screws are securely fastened.



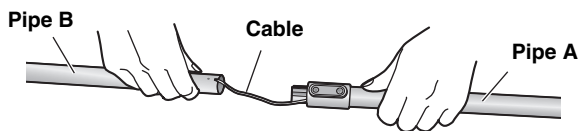
2 Assemble the pipes.

A Thread the speaker cable from Pipe A through Pipe B and the base.

For quicker threading, loosely fold the cable in half (do not crease), pass the folded portion through the pipe, and then pull the rest of the cable through the base.

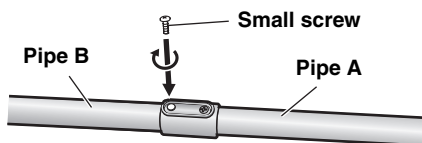


B Join Pipe A to Pipe B.



C Secure the pipes.

Ensure the screw is securely fastened.



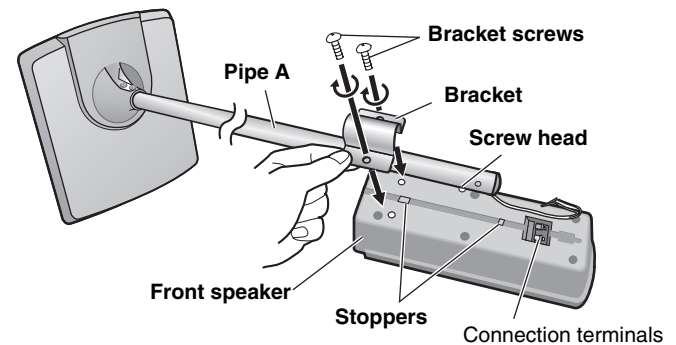
3 Attach pipes A to the speakers.

Slot the screw head in between the 2 stoppers of the speaker groove.

Align the screw head with the speaker groove.

Ensure the pipe is fastened on straight by gradually tightening the right and left screws alternately until fully tightened.

To prevent short-circuit, do not cover the connection terminals with the pipe.

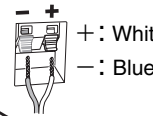


4 Connect the speaker cables.

Rear of the speaker

Twist the vinyl tip and pull off.

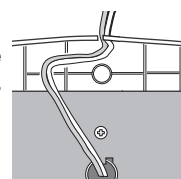
• If the cords do not have vinyl tips, directly connect them to the terminals.



Push!

5 Secure the speaker cable to the base.

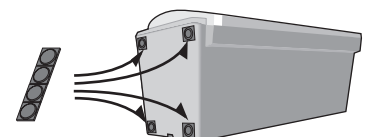
A Press the speaker cable into the base cover groove as far as possible.



B Press the speaker cable against the base while threading it between the pegs.

Note

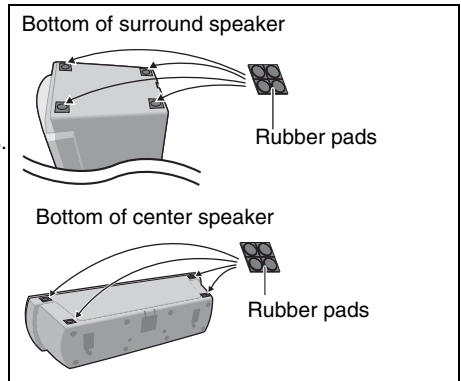
You can use the front speakers without assembling with the stands. In this case, attach the included rubber pads to the base of the speakers. This prevents vibration from causing the speakers to move or fall over. Use 4 pads per speaker.



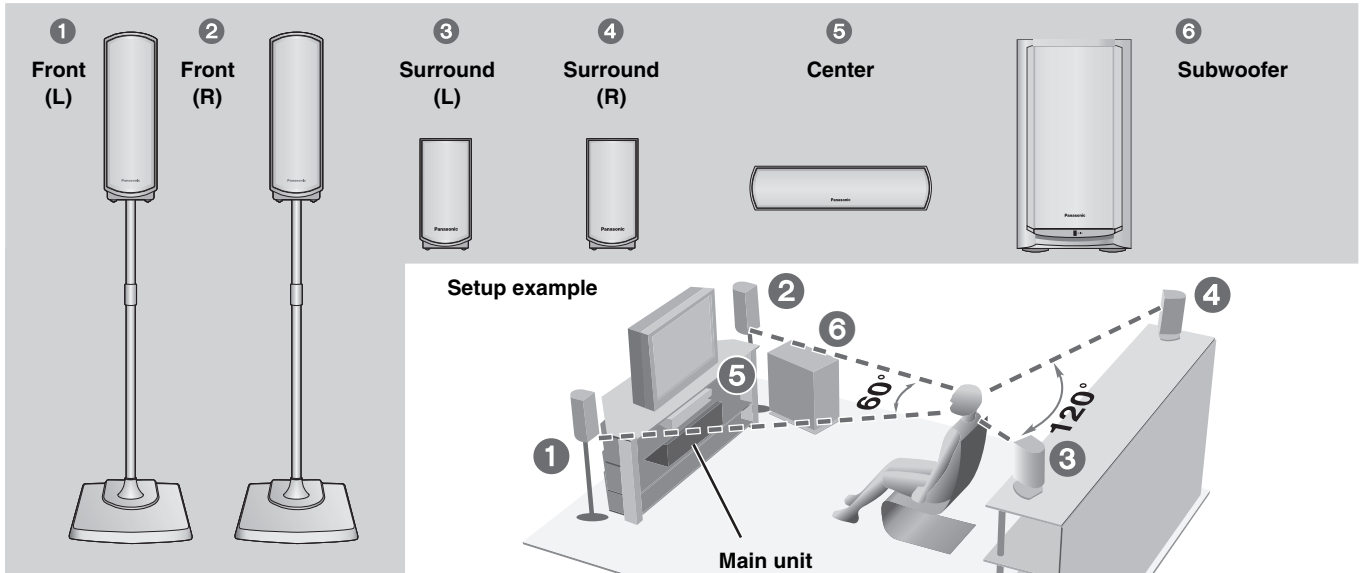
STEP 2 Positioning

How you set up your speakers can affect the bass and the sound field. Note the following points.

- Attach the included rubber pads to the base of the center and surround speakers. This prevents vibration from causing the speakers to move or fall over. Use 4 pads per speaker.
- Place speakers on flat secure bases.
- Placing speakers too close to floors, walls, and corners can result in excessive bass. Cover walls and windows with thick curtains.



↑
SETUP
&
BUTTON



Place the front, center and surround speakers at approximately the same distance from the seating position. The angles in the diagram are approximate.

→ See page 43 for other speaker setup options.

Use only supplied speakers

Using other speakers can damage the unit and sound quality will be negatively affected.

- Set the speakers up on an even surface to prevent them from falling. Take proper precautions to prevent the speakers from falling if you cannot set them up on an even surface.

Main unit

Note

Keep your speakers at least 10mm (13/32") away from the system for proper ventilation.

Center speaker

- Vibration caused by the center speaker can disrupt the picture if it is placed directly on the television. Put the center speaker on a rack or shelf.
- To prevent the speakers from falling do not place the speakers directly on top of the television.

Surround speaker

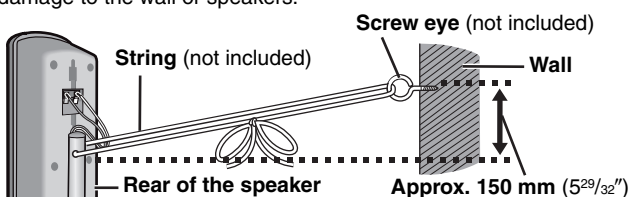
Preventing the speakers from falling over

Preparation

Attach screw eyes (not included) to secure the speakers to the wall

- You will need to obtain the appropriate screw eyes to match the walls or pillars to which they are going to be fastened.

- Consult a qualified housing contractor concerning the appropriate procedure when attaching to a concrete wall or a surface that may not have strong enough support. Improper attachment may result in damage to the wall or speakers.



- 1 Thread the string (not included) through the slot on the rear of the speaker to prevent it from falling over.
- 2 Loop the string through the screw eye and tie tightly.

Subwoofer

Place to the right or left of the television, on the floor or a sturdy shelf so that it won't cause vibration.

Leave 10 cm (4") at the rear for ventilation.

Notes on speaker use

- You can damage your speakers and shorten their useful life if you play sound at high levels over extended periods.
- Reduce the volume in the following cases to avoid damage.
 - When playing distorted sound.
 - When the speakers are receiving howling from a record player, noise from FM broadcasts, or continuous signals from an oscillator, test disc, or electronic instrument.
 - When adjusting the sound quality.
 - When turning the unit on or off.

	<p>Caution</p> <ul style="list-style-type: none"> ● The main unit and supplied speakers are only to be used as indicated in this setup. Failure to do so may lead to damage to the amplifier and/or the speakers, and may result in the risk of fire. Consult a qualified service person if damage has occurred or if you experience a sudden change in performance. ● Do not attempt to attach these speakers to walls using methods other than those described in this manual.
--	---

Caution

Do not stand on the base and shake the speaker.

Be cautious when children are near.



STEP 3 Connecting speakers with the subwoofer

- Attach the speaker-cable stickers to make connection easier.
- The terminals of the subwoofer have high output power. Carefully connect the speaker wires.

Speaker cables

- 1× short cable: For center speaker
- 2× long cables: For surround speakers

Sheet of speaker-cable stickers

Speaker-cable sticker

Subwoofer

Note

- Never short-circuit positive (+) and negative (-) speaker wires.
- Be sure to connect only positive (White) wires to positive (+) terminals and negative (Blue) wires to negative (-) terminals. Incorrect connection can damage the speakers.

STEP 4 Video connections

Basic connection

75 Ω coaxial cable

Video cable

Connect video cables directly to your television

The video signals on DVDs and videotapes have copyright protection. The video may not be shown correctly if you connect through an A/V selector or other equipment.

Antenna cable (not included)
(usually disconnected from the television)

From

- Cable TV
- Outdoor antenna
- Indoor antenna

Main unit

Television (not included)

If the connector doesn't match → 44

75 Ω coaxial cable (included, → 8)

VHF/UHF RF IN

Video cable (included)

VIDEO IN

75 Ω coaxial cable

This cable carries broadcast signals to the television whether the unit is on or off so you do not need to connect the antenna directly to the television.

But the picture and sound signal from this unit does not go through the 75 Ω coaxial cable to the TV. Make sure you connect one of the following terminals on this unit to the TV; the VIDEO OUT terminal, the S-VIDEO OUT terminal or the COMPONENT VIDEO OUT terminal. If the TV has none of these terminals, consult your local dealer.

To enjoy cable and satellite television

Connection → 44

Subscribe to a cable or satellite company.

If irregular coloring occurs on your television

The supplied speakers are designed to be used close to a television, but the picture may be affected with some televisions and setup combinations.

If this occurs, turn the television off for about 30 minutes.

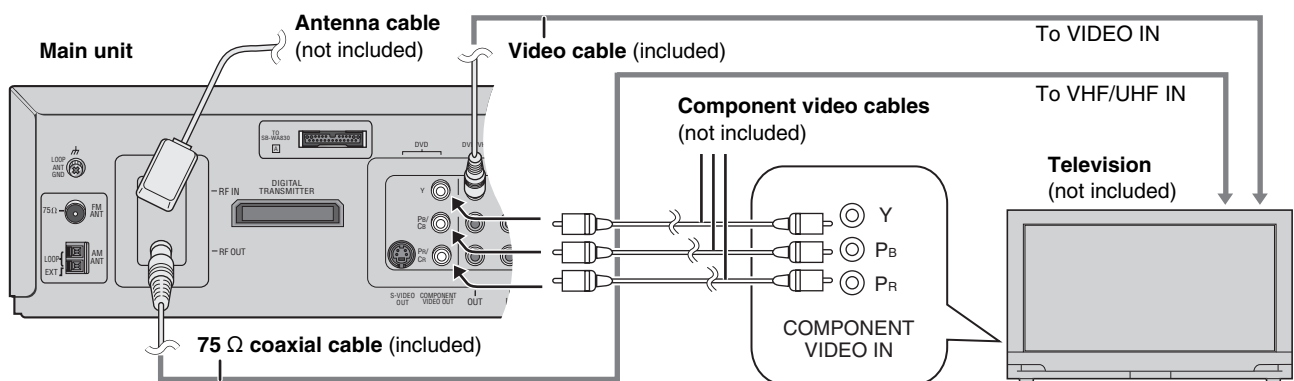
The television's demagnetizing function should correct the problem. If it persists, move the speakers further away from the television.

For better video from DVD

The following connections are for video from the DVD section only. Make sure you have connected the VIDEO OUT terminal with the television to view video from the VHS section.

You may need to change the video-input mode on the television to view video from the VHS and DVD sections. Read your television's operating instructions for details.

■ Connecting a television with COMPONENT VIDEO IN terminals



COMPONENT VIDEO OUT terminals

These terminals can be used for either interlace or progressive output and provide a purer picture than the S-VIDEO OUT terminal.

Connection using these terminals outputs the color difference signals (P_B/C_B, P_R/C_R) and luminance signal (Y) separately in order to achieve high fidelity in reproducing colors.

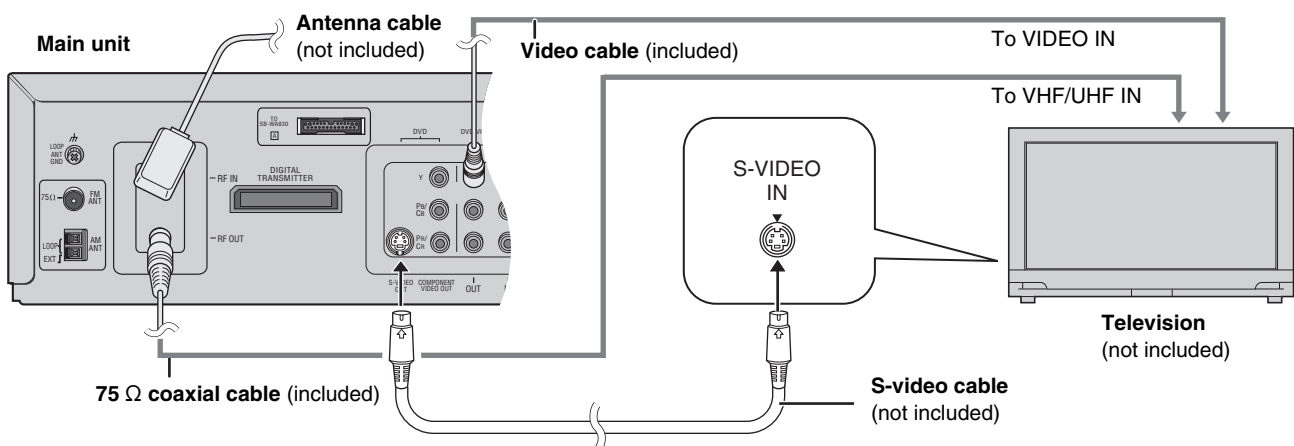
- The description of the component video input terminals depends on the television or monitor (e.g. Y/P_B/P_R, Y/B-Y/R-Y, Y/C_B/C_R). Connect to terminals of the same color.

- After making this connection, change the black level for a better picture (→ 27, "Video"—"Black Level Control").

To enjoy progressive video

- Connect to the component video input terminals on a 480p compatible television. (Video will not be displayed correctly if connected to an incompatible television.)
- All televisions manufactured by Panasonic and that have 480p input connectors are compatible. Consult the manufacturer if you have another brand of television.

■ Connecting a television with an S-VIDEO IN terminal



S-VIDEO OUT terminal

The S-video terminal achieves a more vivid picture than the VIDEO OUT terminal by separating the chrominance (C) and luminance (Y) signals. (Actual results depend on the television.)

Note

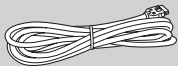
Connect to a different terminal group than that you used for the video cable (e.g., "VIDEO 2"). Picture from this unit's VHS will not appear when you use the same group input terminal connections because the S-video terminal input takes precedence.



SETUP
&
BUTTON

STEP 5 Radio and system connection

System cable



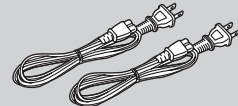
AM loop antenna



FM indoor antenna

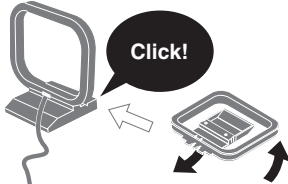


2 AC power supply cords



Connect the AC power supply cords after all other connections are complete.

AM loop antenna



Click!

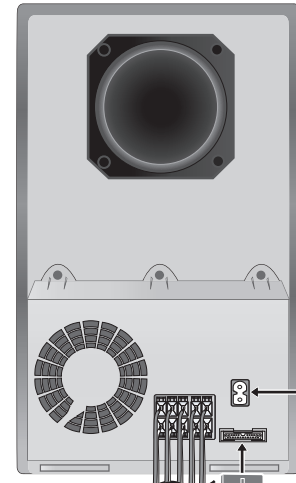
Stand the antenna up on its base. Place the antenna where the reception is best. Keep loose antenna cord away from other wires and cords.

AC power supply cord



To household AC outlet (AC 120 V, 60 Hz)

Subwoofer



AC power supply cord

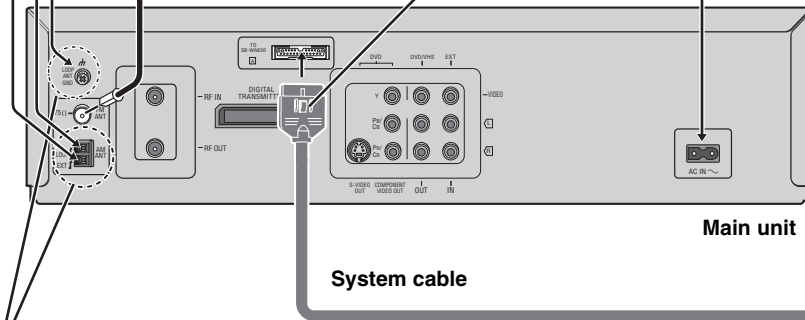
To household AC outlet (AC 120 V, 60 Hz)

FM indoor antenna

Adhesive tape
Fix the other end of the antenna where reception is best.

Catch up

To disconnect
Press the catch and pull out.



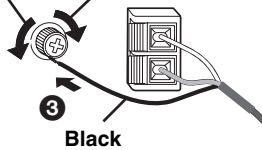
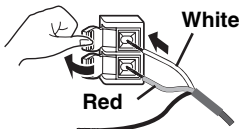
Main unit

System cable

Catch up

To disconnect
Press the catch and pull out.

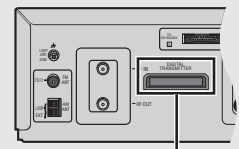
- 1 Push and insert the antenna cables in as far as possible.
- 2 Loosen the terminal with a Phillips-head screwdriver.
- 3
- 4 Tighten the terminal screw again.



Set your surround sound free! Panasonic SH-FX50 Digital Transmitter and Receiver (optional)

When you insert the digital transmitter into the DIGITAL TRANSMITTER slot of the main unit and connect the surround speakers to the receiver, you can enjoy wireless surround speaker sound except when VHS audio type is on mono sound mode.

For details, please refer to the operating instructions for Panasonic SH-FX50 Digital Transmitter and Receiver.



DIGITAL TRANSMITTER terminal

Note

The included AC power supply cords are for use with this unit only. Do not use them with other equipment.

AC power supply cords

Connect both AC power supply cords to enjoy all the features of this system.

Demo function

When the unit is first plugged in, a demonstration of its functions may be shown on the display.

If the demo setting is off, you can show a demonstration by selecting "DEMO ON" in the standby mode.

Press and hold [-DEMO] on the main unit (→ 14).

The display changes each time you press and hold the button. DEMO OFF ↔ DEMO ON

While in the standby mode, select "DEMO OFF" to reduce power consumption.

Conserving power

The system consumes a small amount of power, even when it is turned off. The amount of power used depends on the display setting (→ 38):

BRIGHT: 3.7 W DIM: 3.4 W OFF: 1.9 W

To save power when the unit is not to be used for a long time, unplug it from the household AC outlet.

You will need to reset some memory items after plugging the unit.

Before unplugging the AC power supply cords

- 1 Press [⏻] to turn off the unit.
- 2 After "BYE" on the display disappears, unplug the AC power supply cords.

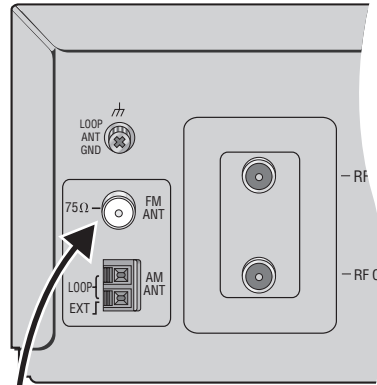


SETUP
&
BUTTON

■ Optional FM antenna connection

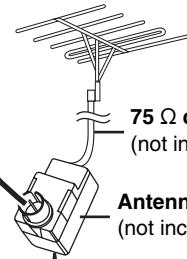
Use FM outdoor antenna if radio reception is poor.

- Disconnect the outdoor antenna when the unit is not in use.
- Do not use the outdoor antenna during an electrical storm.



FM outdoor antenna (Using a television antenna)

- Disconnect the FM indoor antenna.
 - The antenna should be installed by a competent technician.
- Rework your outdoor antenna's 75 Ω coaxial cable as follows.

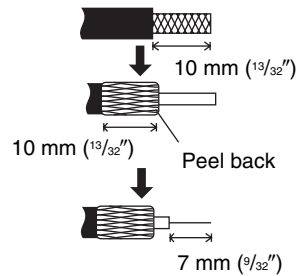


75 Ω coaxial cable
(not included)

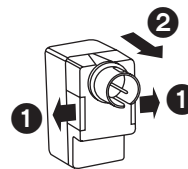
Antenna plug
(not included)

For example; Panasonic Antenna plug (K2RC021B0001, not included)

- ① Remove a piece of the outer vinyl insulator.

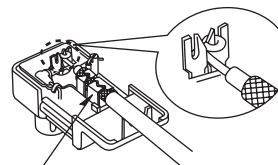


- ② Carefully pull the tabs apart to remove the cover.



- ③ Install the coaxial cable.

Clamp the cable conductor, and wind it on so that it does not contact anything else.



Clamp with pliers

- ④ Attach the cover.

STEP 7 Plug-in Auto Tuning

After plugging the unit into your household AC outlet and pressing [⏻] to turn the unit on for the first time, the unit automatically tunes in all the channels it can receive and sets the clock.

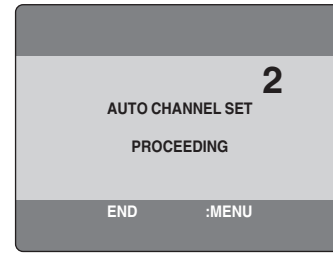
The unit determines the type of transmission, TV or CATV, as follows:
 TV: when there are less than 5 CATV channels.
 CATV: when there are 5 or more CATV channels.

Preparation

- Confirm that the antenna is connected correctly.
- Turn on the television and select the video input for the VHS.
- Press [VHS] to put the remote control in VHS mode.

Press [⏻] to turn on the unit.

Plug-in Auto Tuning starts and the unit puts the stations it can receive into channels (→ 37, Channel range).



The unit starts auto clock setting when finished, then displays the time.

Note

If auto tuning stops partway (by changing the source, turning the unit off, or due to a power failure).

- 1 Disconnect the AC power supply cord on the main unit and then reconnect it.
- 2 Turn on the main unit.

To cancel partway

Press [MENU].

■ To start Plug-in Auto Tuning again (after relocation, for example)

Preparation

- Press [⏻] to turn on the unit.
- Make sure there is no video cassette tape loaded in the unit.
- Press [DVD/VHS] to select "VHS" as the source.

- 1 Press and hold [^ CH] and [v CH] on the main unit simultaneously for 3 seconds until the channel changes to "2".



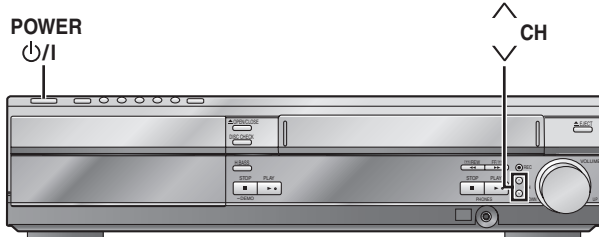
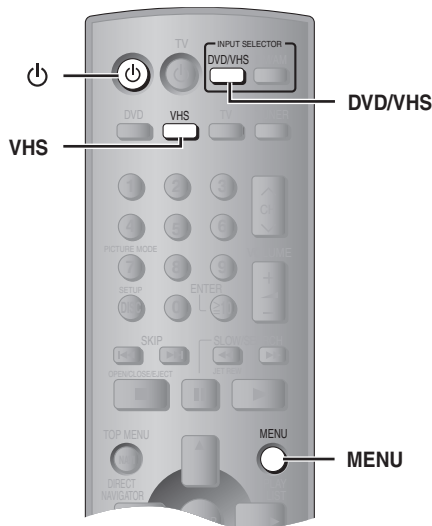
- 2 Disconnect the AC power supply cord on the main unit and then reconnect it.
- 3 Turn on the main unit. Plug-in Auto Tuning restarts.

Antenna system and channel captions all revert to the default values when you perform the procedure above. Reset the timer recording settings. (If necessary reset the clock first. → 36, CLOCK SET)

■ To set the channels manually (→ 37).

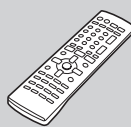
■ If the unit couldn't set the clock automatically

The MANUAL CLOCK SET screen appears. Set the time manually (→ 36).



STEP 6 The remote control

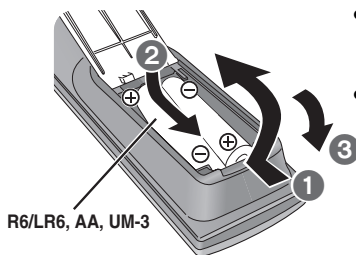
Remote control



Batteries



■ Batteries



R6/LR6, AA, UM-3

- Insert so the poles (+ and -) match those in the remote control.
- Do not use rechargeable type batteries.

Do not:

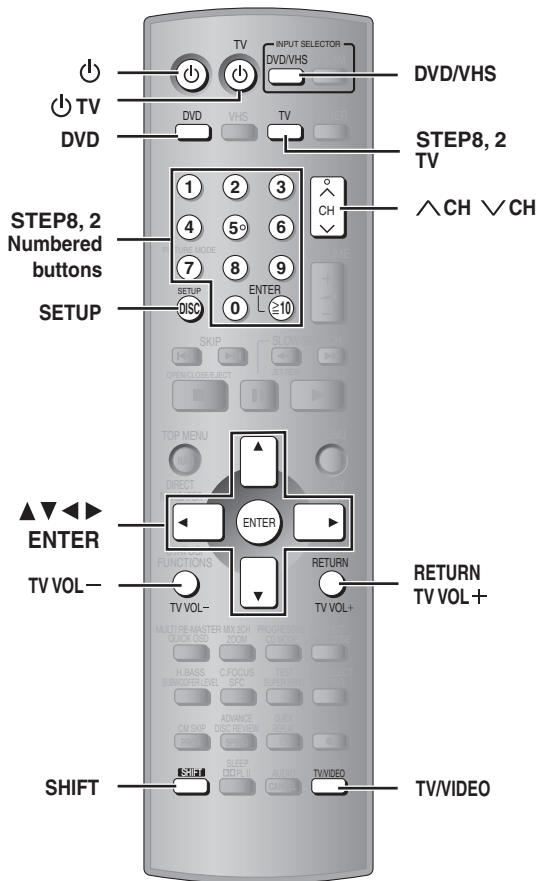
- mix old and new batteries.
- use different types at the same time.
- heat or expose to flame.
- take apart or short circuit.
- attempt to recharge alkaline or manganese batteries.
- use batteries if the covering has been peeled off.

Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.

Remove if the remote control is not going to be used for a long period of time. Store in a cool, dark place.

■ Use

Aim at the sensor (→ 14), avoiding obstacles at a maximum range of 7 m (23 feet) directly in front of the unit.



STEP 8 TV manufacturer setting

You can control the television by entering the remote control code.

1 Refer the following chart for the code for your television.

Manufacturer	Code No.	Manufacturer	Code No.
Panasonic	01, 02	PHILIPS	06
FISHER	14	PIONEER	02, 10, 19
G.E.	02, 03, 07, 09	QUASAR	02
GOLD STAR	07, 15	RCA	03, 07, 09, 13, 23, 24, 25
HITACHI	05, 07	SANYO	14
JVC	12	SHARP	08, 21
LXI	03, 06, 07, 10, 14, 15	SONY	04
MAGNAVOX	06, 07, 11, 15, 22	SYLVANIA	06, 07, 15
MITSUBISHI	07, 15, 16, 21	SYMPHONIC	17
NEC	07, 15	TOSHIBA	10, 21
PHILCO	06, 07	ZENITH	18, 20

2 Aiming the remote control at the television

While pressing and holding [TV], press the numbered buttons to enter the code number.

- Example: To select 01, press [0] → [1].
- The remote control outputs the on/off signal. If the code is correct, the equipment turns on or off. If it doesn't, try entering another code.

Note

- If your television brand is not listed or if the code listed for your television does not allow control of your television, this remote control is not compatible with your television.
- Re-enter the codes after you change the batteries.

TV operation

Switch the remote control mode to TV. Press [TV] before doing TV operations. When in TV mode, the [TV] button lights each time you press an operation button.

Operation	Buttons
Remote control TV mode	[TV]
Power on/standby	[TV/POWER]
TV/Video switch	[TV/VIDEO]
Selecting channels	[^ CH], [v CH] or numbered buttons [1-9, 0, ≥10/ENTER]. • [≥10/ENTER] is used to confirm channel selection on some televisions manufactured by other companies.
Adjusting volume	[TV VOL-] [TV VOL+]

STEP 9 DVD QUICK SETUP

Turn on the television and select the video input for the DVD.

The QUICK SETUP screen assists you to make necessary settings such as:

- Menu Language (→ 27)
- TV Type (→ 26)
- TV Aspect (→ 26)

- 1 Press [DVD] to put the remote control in DVD mode.
- 2 Press [TV] to turn on the unit.
- 3 Press [DVD/VHS] to select "DVD/CD" as the source.
- 4 Press [SHIFT]+[SETUP] to show QUICK SETUP screen.



- 5 Follow the messages and make the settings using [^ ▼ ◀ ▶] and [ENTER].
- 6 Press [ENTER] to finish QUICK SETUP.
- 7 Press [SHIFT]+[SETUP] to exit.

To change these settings later

Select "QUICK SETUP" in "Others" tab (→ 27).

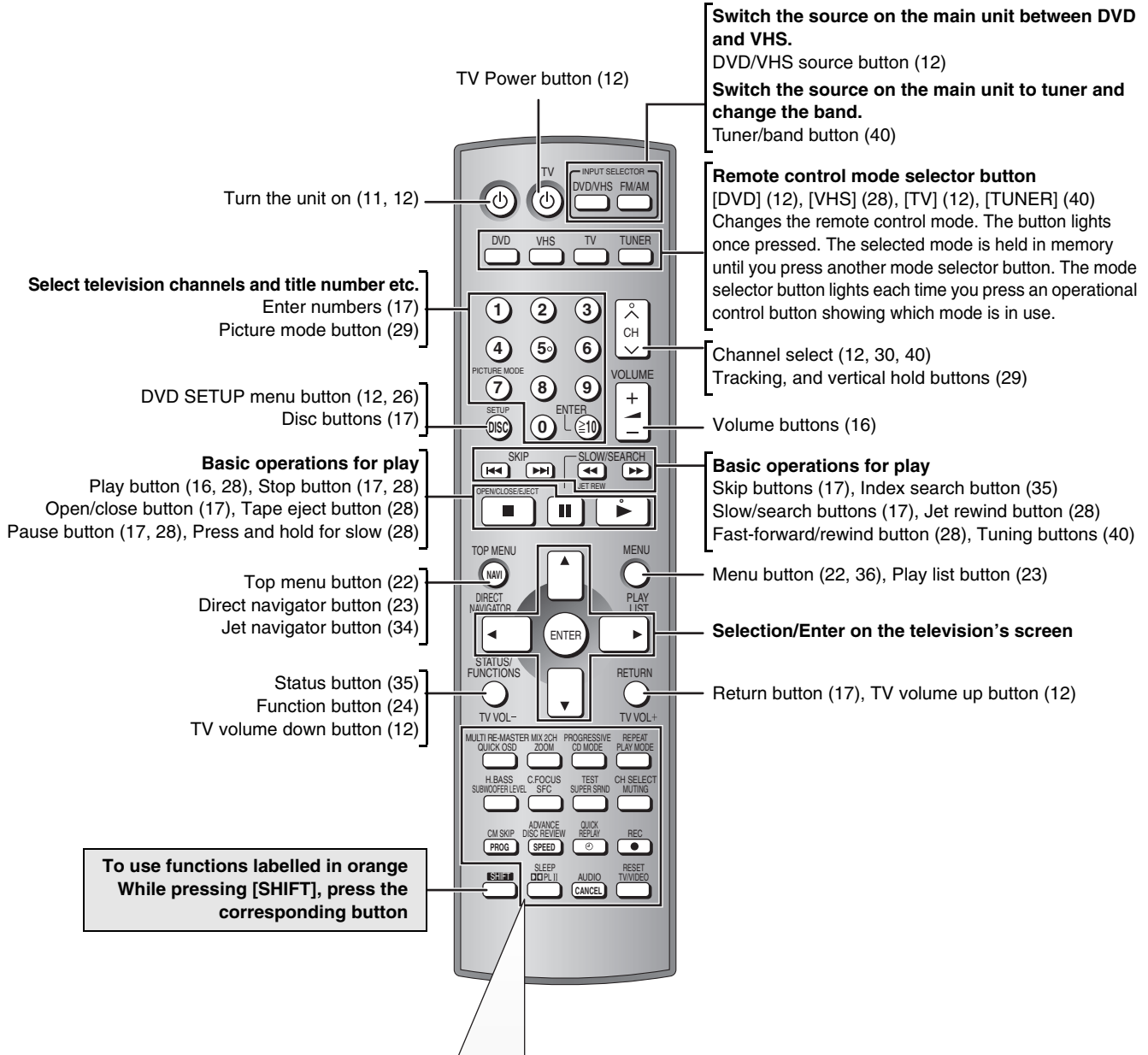
To return to the previous screen

Press [RETURN].

Control reference guide

• See reference pages in brackets.

Remote control

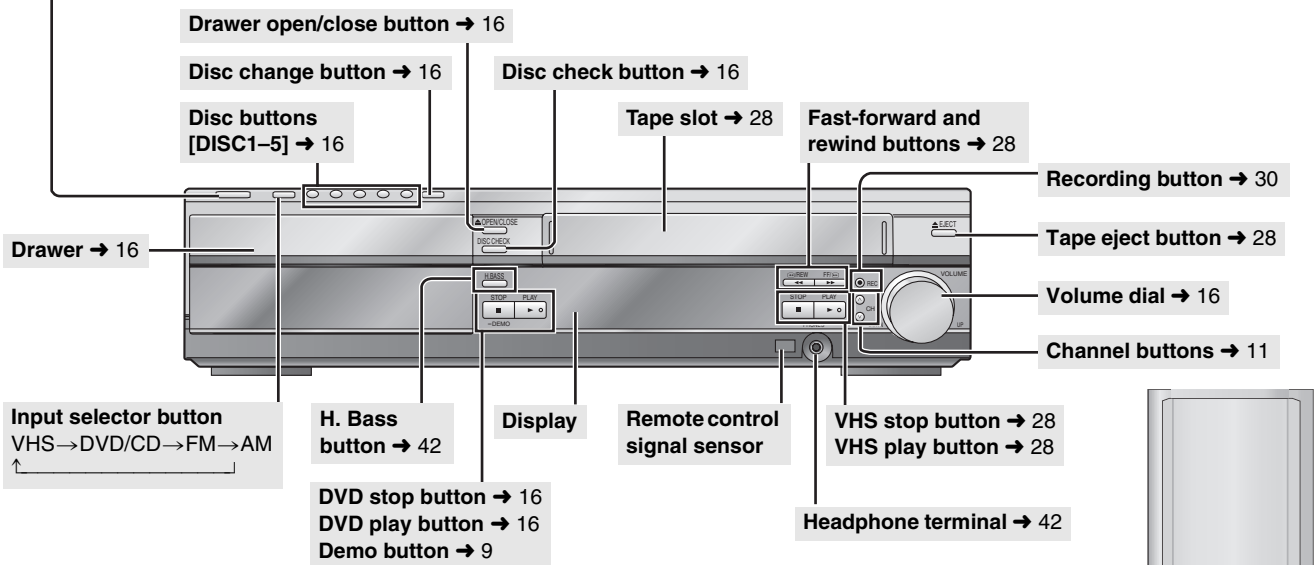


MULTI RE-MASTER.... (21)	MIX 2CH (42)	PROGRESSIVE..... (17)	REPEAT (19)
QUICK OSD (18)	ZOOM..... (19)	CD MODE (18)	PLAY MODE.. (20, 40)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H.BASS..... (42)	C.FOCUS (41)	TEST (41)	CH SELECT (41)
SUBWOOFER LEVEL (42)	SFC (41)	SUPER SRND (41)	MUTING..... (42)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM SKIP (18)	ADVANCE DISC REVIEW (18)	QUICK REPLAY (18)	REC (30)
PROG (32)	SPEED (32)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SLEEP..... (42)	RESET (35)	AUDIO (19, 39)	TV/VIDEO (12)
<input type="checkbox"/>	<input type="checkbox"/>	CANCEL (17)	<input type="checkbox"/>

• Intervals between buttons are changed.

Main unit and subwoofer

Power button [⏻/POWER] → 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.

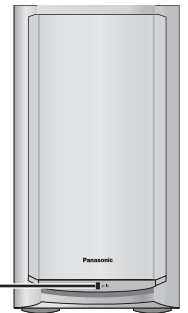


Note

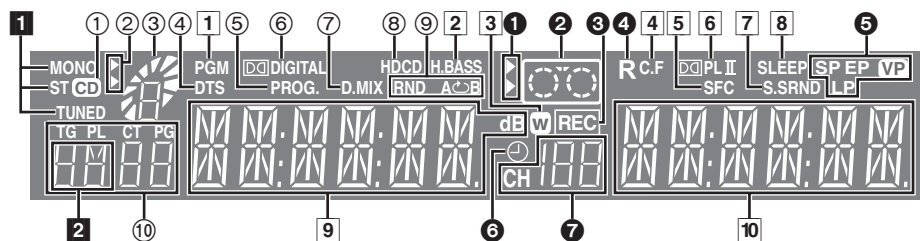
- "BYE" is displayed when the unit turns off. Remove the power plug after this display disappears.

AC supply indicator [AC IN]

- This indicator lights when the subwoofer is connected to the household AC outlet and through the system cable to the main unit.
- When main unit is turned on, this indicator will light on or vice versa.
- The indicator light turns off in approximately 10 seconds after the unit is disconnected from the AC outlet.



Main unit display



Common display

- 1 Program indicator 20, 40
- 2 H. Bass indicator 42
- 3 Wireless Theater indicator 9
 - Indicates when you use the Digital Transmitter and Receiver.
- 4 Center Focus indicator 41
- 5 Sound Field Control indicator 41
- 6 Dolby Pro Logic II indicator 41
- 7 Super Surround indicator 41
- 8 SLEEP timer indicator 42
- 9 Main display (Orange)
 - Disc play elapsed time, program recording start time, volume, TUNER frequency/channel display, various messages, etc.
- 10 Main display (White)
 - Time display, video play/record elapsed time, program recording end time, various messages, etc.

DVD operation

- 1 CD mode indicator 18
 - Lights when CD mode is on.
- 2 DVD selector indicator
 - Lights when DVD is selected.
- 3 Operation status of DVD section
 - Displays play status graphically.
 - Rotating: playing
 - Stopped: paused
 - Blinking: Standby to resume play (→ 17, Stop)
 - Numeric indicator lights corresponding to disc tray number.
- 4 DTS indicator
- 5 Progressive video indicator 17
- 6 Dolby Digital indicator



- 7 Down mix indicator 42
- 8 HDCD indicator 15
- 9 Play sequence indicator
 - CD mode indicator + RND: During all disc random play. 21
 - RND: During random play. 21
 - ↻: During repeat 19
 - A↔B: During A-B repeat 25
- 10 Title/Group/Playlist/Chapter/Track/Program display








VHS operation

- 1 VHS selector indicator
 - Lights when the selector is in VHS mode.
- 2 Operation status of VHS section
 - Lights when a video cassette is inserted.
 - Blinks when recording or timer recording is attempted with no video cassette inserted.
 - Displays play status graphically.
 - Rotating: playing
 - Stopped: paused
- 3 Recording indicator 30
- 4 Repeat playback indicator 29
- 5 Tape speed indicator 30
- 6 Timer program recording indicator 32
- 7 Channel display



Tuner operation

- 1 Radio broadcast display 40
 - MONO: Forced monaural
 - ST: Stereo
 - TUNED: Receiving radio signal
- 2 Band display

Logo	Disc	Indication in operating instructions	Remarks
	DVD-RAM	RAM	Recorded using Version 1.1 of the Video Recording Format (a unified video recording standard). <ul style="list-style-type: none"> Recorded with DVD video recorders, DVD video cameras, personal computers, etc. Remove discs from their cartridges before use.
		JPEG	Recorded using the DCF (Design rule for Camera File system) standard Ver 1.0. <ul style="list-style-type: none"> Recorded with Panasonic DVD-Video recorders. To play JPEG files, select "Play as Data Disc" in Other Menu (→ 25).
	DVD-Audio	DVD-A	—
		DVD-V	Some DVD-Audio discs contain DVD-Video content. To play DVD-Video content, select "Play as DVD-Video" in Other Menu (→ 25).
	DVD-Video		—
	DVD-R (DVD-Video)/ DVD-RW (DVD-Video)	DVD-V	Discs recorded and finalized* on DVD video recorders or DVD video cameras.
—	+R (Video)/ +RW (Video)		
	Video CD	VCD	—
	SVCD		Conforming to IEC62107
	CD	CD	This unit is compatible with HDCD, but does not support the Peak Extend function. (A function which expands the dynamic range of high level signals) HDCD-encoded CDs sound better because they are encoded with 20 bits, as compared with 16 bits for all other CDs. <ul style="list-style-type: none"> During HDCD play, "HDCD" lights on the unit's display.
—	CD-R CD-RW	WMA MP3 JPEG CD VCD	<ul style="list-style-type: none"> This unit can play CD-R/RW (audio recording disc) recorded with the formats on the left. Close the sessions or finalize* the disc after recording. HighMAT™ discs WMA, MP3 or JPEG files only. To play without using the HighMAT™ function, select "Play as Data Disc" in Other Menu (→ 25). WMA This unit is not compatible with Multiple Bit Rate (MBR: a file that contains the same content encoded at several different bit rates).

*A process that allows play on compatible equipment.


• It may not be possible to play the above discs in all cases due to the type of disc or condition of the recording.


Note about using a DualDisc

The digital audio content side of a DualDisc does not meet the technical specifications of the Compact Disc Digital Audio (CD-DA) format so play may not be possible.

Discs that cannot be played

PAL discs (except DVD-Audio), DVD-ROM, CD-ROM, CDV, CD-G, SACD, Divx Video Discs and Photo CD, DVD-RAM that cannot be removed from their cartridge, 2.6-GB and 5.2-GB DVD-RAM, and "Chaoji VCD" available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.

	HighMAT and the HighMAT logo are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.
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	HDCD®, HDCD®, High Definition Compatible Digital® and Pacific Microsonics™ are either registered trademarks or trademarks of Pacific Microsonics, Inc. in the United States and/or other countries.
<p>HDCD system manufactured under license from Pacific Microsonics, Inc. This product is covered by one or more of the following: In the USA : 5,479,168, 5,638,074, 5,640,161, 5,808,574, 5,838,274, 5,854,600, 5,864,311, 5,872,531, and in Australia: 669114, with other patents pending.</p>	

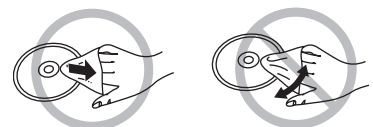
Disc handling

To prevent damage

- Do not;
- load more than one disc per tray.
 - close the drawer by hand.

To clean discs

Wipe with a damp cloth and then wipe dry.



Handling precautions

- Do not attach labels or stickers to discs (This may cause disc warping, rendering it unusable).
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzene, thinner, static electricity prevention liquids or any other solvent.
- Do not use scratch-proof protectors or covers.
- Do not use the following discs:
 - Discs with exposed adhesive from removed stickers or labels (rented discs etc).
 - Discs that are badly warped or cracked.
 - Irregularly shaped discs, such as heart shapes.



DVD

Turn on the television and select the appropriate video input for the DVD.

1 Put the remote control in DVD mode.



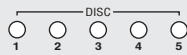
2 Turn on the unit.



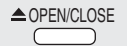
3 Select "DVD/CD".



4 Select the disc tray.

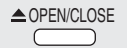


5 Open the disc tray and load the disc.



- Load double-sided discs so the label for the side you want to play is facing up.

6 Close the disc tray.



- To load discs on the other trays, repeat steps 4–6.

7 Start play.

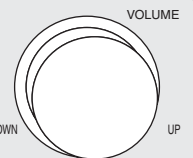


- Press [■] to stop play.

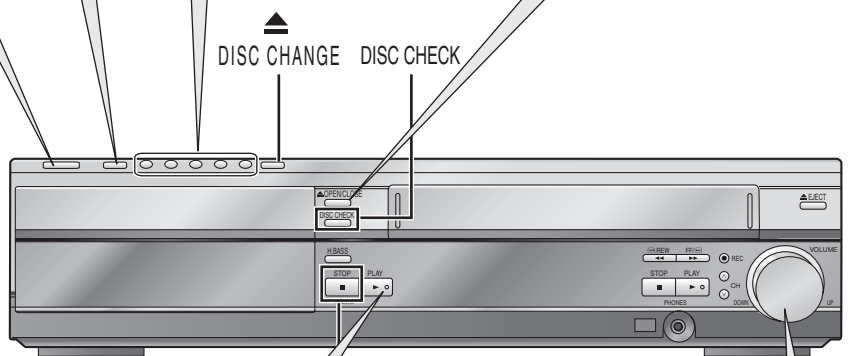
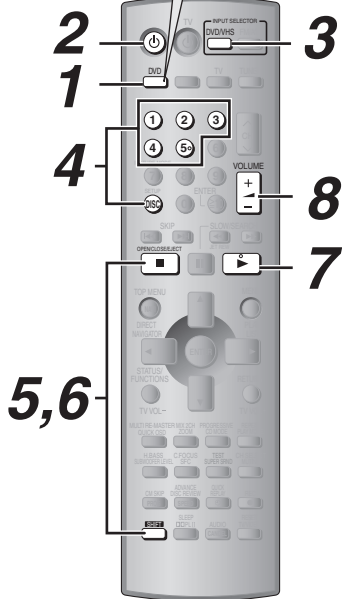
8 Adjust the volume.

—dB ▲ 0dB
(Minimum) (Maximum)

Volume may be lower when playing DVD-Video than when playing other discs or during television broadcasts. Reduce the volume before playing other sources or returning to the television so volume doesn't increase suddenly.



DVD



Using main unit

Checking the disc trays



All trays except the tray in play open without interrupting play. While stopped, all trays will open.

- Press [DISC CHECK] again to close the trays.
- Do not pull out the trays, remove or insert discs during the disc check.

Note

- When "Press PLAY to resume play" is displayed, this position is memorized even after turning off the unit, changing the source. (Power off resume)
- Total title number may not be displayed properly on +R/+RW.

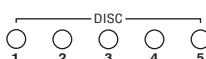
If you are experiencing problems, refer to troubleshooting (→ 45–47).

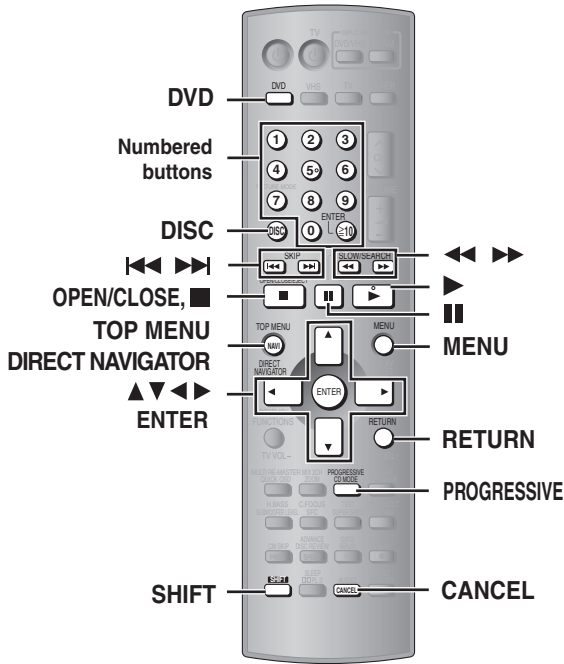
Changing the discs during play



You can change the other discs without interrupting play.

- After selecting the disc tray, press [▲ DISC CHANGE] to close the tray.





Using remote control

Progressive video

[SHIFT] + [PROG.]

PROGRESSIVE CD MODE

Stop

[OPEN/CLOSE/EJECT]

The position is memorized while "Press PLAY to resume play" is on the screen.

- Press [▶] (play) to resume.
- Press [■] to clear the position.
- This may not work while playing some parts of a disc or at all with some discs (only when the elapsed play time can be displayed).
- Power off resume (→ 16)

Open/Close

[SHIFT] + [OPEN/CLOSE/EJECT]

- You can open a disc tray even when the unit is in standby mode.

Pause

[PAUSE]

- Press [▶] (play) to restart play.

Search (during play)

[SLOW/SEARCH]

- Up to 5 steps
- Press [▶] (play) to start play.

Slow-motion (during pause)

[RAM] [DVD-V] [VCD]

- [VCD] Slow motion, forward direction only

Frame-by-frame (during pause)

[DVD-A] (Motion picture part)

[RAM] [DVD-V] [VCD]

- [VCD] forward direction only

Skip

[SKIP]

- [WMA] [MP3] [JPEG]
- [▲, ▼]: Group skip during play
- [◀, ▶]: Content skip during play

On-screen item select

[SELECT]

[REGISTER]

Enter number

[RAM] [DVD-A]

[DVD-V] [VCD] [CD]

e.g. To select 12:
[≥10] → [1] → [2]

[VCD] with playback control (PBC)
To cancel the playback control, press [■] and then press the numbered buttons.

[WMA] [MP3] [JPEG]

e.g. To select 123:
[1] → [2] → [3] → [ENTER]

- Press [CANCEL] to cancel the number(s).

Disc menu

[TOP MENU] [NAVI]

[DVD-A] [DVD-V]

Shows a disc top menu

[RAM]

Plays the programs (→ 23)

[MENU]

[DVD-V]

Shows a disc menu

[RAM]

Shows the play list (→ 23)

[RETURN]

[VCD]

Shows a disc menu

Return to previous screen

[RETURN]

Selecting the disc directly

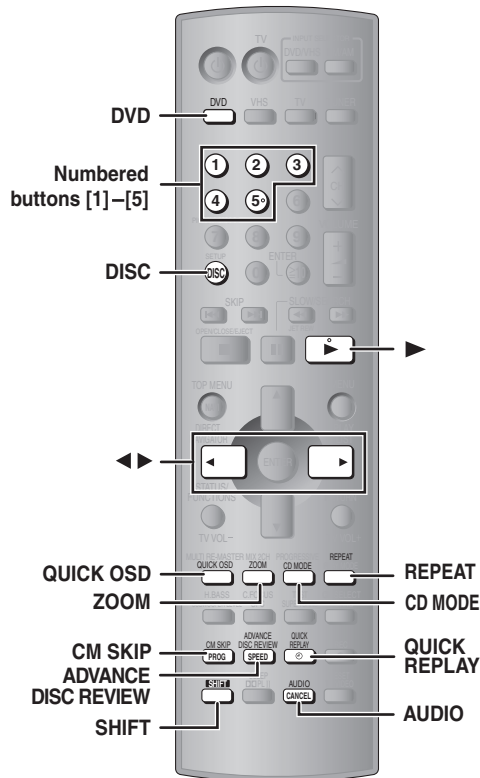
[DISC] + [1-5]

- Disc information (→ 18)
- You can select the disc with [DISC1-5] on the main unit.

Note

- Discs continue to rotate while menus are displayed. Press [■] when you finish to preserve the unit's motor and your television screen.





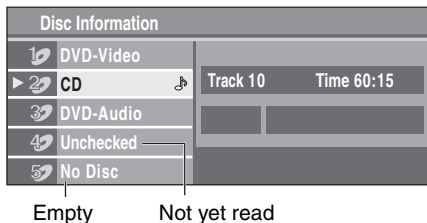
DVD

Disc information

You can select the disc after checking the discs loaded with the Disc information screen.

- You can also select the disc directly with 5 DISC SELECTOR buttons on the main unit.

1 Press [DISC] to show the Disc information screen.



2 Press the numbered buttons ([1] – [5]).

To clear the screen

Press [DISC].

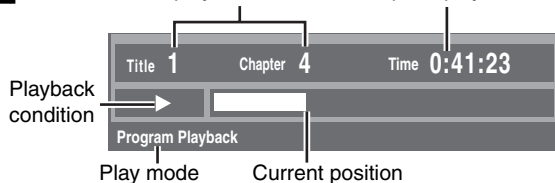
- You can not select a tray with no disc.

Displaying current playback condition (QUICK OSD)

Press [QUICK OSD].

The current playback condition screen is displayed.

e.g. **DVD-V** Current playback number Elapsed play time



To exit the screen

Press [QUICK OSD].

- **CD** **MP3** **WMA** Quick OSD screen will appear automatically.
- If there is a JPEG data in the disc, Quick OSD screen will not appear automatically.

CD Mode (CD sequential play)

VCD CD WMA MP3

This feature is very convenient if you want to play several music CDs sequentially. Make sure that applicable discs are on the tray before playing. (→ Disc information, left)

DVD and JPEG files are skipped without being played.

- 1 While stopped Press [CD MODE].**
- 2 Press [▶] (play).**



- If all loaded discs are DVD, JPEG, or unchecked, CD Mode does not work.
- HighMAT™ menus and Video CD playback control are disabled.
- You cannot change the mode during program play, random play or CD mode play. (→ 20)
- If you want to play a DVD, press [CD MODE] again to cancel CD Mode. (CD Mode is also canceled when you switch the unit to standby.)
- If no disc is loaded in the player, CD Mode will not function.

Quick replay

(Only when the elapsed play time can be displayed)
(Except +R/+RW)

Press [QUICK REPLAY] to skip back a few seconds.

Reviewing title to play (Advanced Disc Review)

RAM DVD-V (Except +R/+RW)

Allows you to browse the disc contents and start playing from the selected position. You can select either "Intro Mode" or "Interval Mode" in "Advanced Disc Review" in the "Disc" tab (→ 26).

1 Press [ADVANCE DISC REVIEW].

e.g. **RAM**



- Quick OSD screen is displayed

2 Press [▶] (play) when you find a title/program to play.

- This may not work depending on the disc and the play condition.

Skipping one minute forward (CM skip)

RAM DVD-V (Except +R/+RW)

Play restarts from approximately a minute later. Convenient when you want to skip commercials etc.

During play Press [CM SKIP].

RAM

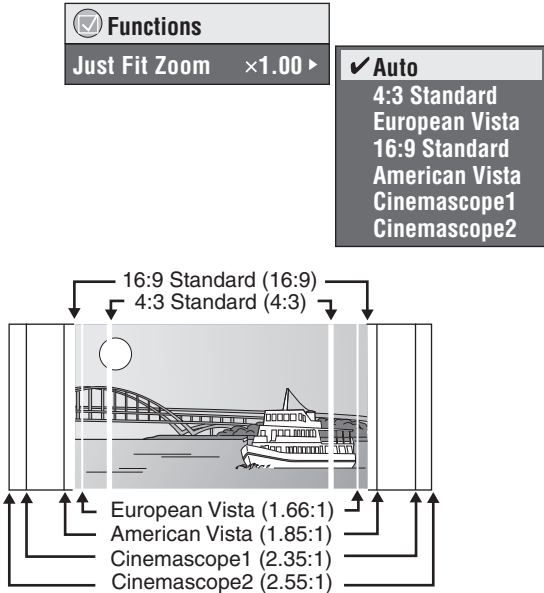
- It is not possible to skip the program if the start of the next program is within about one minute of the point you skipped from.

MIX 2CH ZOOM **Changing the zoom ratio (Zoom)**

DVD-A (Motion picture part) **RAM** **DVD-V** **VCD**

Expands the letterbox picture to fit the screen.

Press [**ZOOM**] several times to select the preset aspect ratio (Just Fit Zoom) or "Auto".



Fine adjustments (Manual Zoom)

After selecting the preset aspect ratio or "Auto", press [**◀ ▶**].

–from ×1.00 to ×1.60 (in 0.01 units)

–from ×1.60 to ×2.00 (in 0.02 units)

• Press and hold [**◀ ▶**] to alter faster.

SHIFT + AUDIO CANCEL **Changing soundtracks (Audio)**

DVD-A **DVD-V** (with multiple soundtracks) **RAM** **VCD**

Changes the soundtrack.

Press [**SHIFT**]+[**AUDIO**] several times to select the soundtrack.



RAM **VCD**

You can use this button to select "L", "R" or "LR".

DVD-V (Karaoke discs)

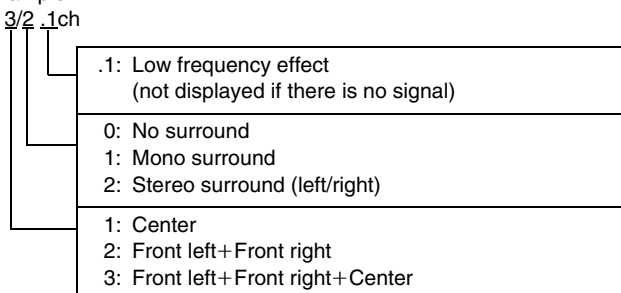
Press [**◀ ▶**] to select "On" or "Off" of vocals.

Read the discs instructions for details.

Signal type/data

LPCM/PPCM/□□Digital/DTS/MPEG: Signal type
kHz (Sampling frequency)/bit/ch (Number of channels)

Example:



SHIFT + REPEAT PLAY MODE **Repeat play**

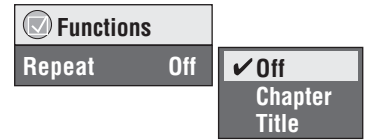
(Only when the elapsed play time can be displayed)

JPEG: Works with all JPEG content.)

During play

Press [**SHIFT**]+[**REPEAT**] several times to select an item to be repeated.

e.g. **DVD-V**



RAM PG (Program)→Disc→Off

• During play list play: Scene→PL (Playlist)→Off

DVD-A Track→Group*→Off

DVD-V Chapter→Title*→Off

VCD **CD** Track→Disc→Off

• When CD Mode is on: Track→Disc→All CD's→Off

• When CD Mode is on, during program and random play: Track→All CD's→Off

WMA **MP3** Content→Group*→Off

• When CD Mode is on: Content→Group→All CD's→Off

• When CD Mode is on, during program and random play: Content→All CD's→Off

JPEG Group*→Off

* "All" is displayed, program and random play.



DVD

To select an item using the cursor buttons

Press [ENTER] and [▲ ▼] to select an item, then press [ENTER] again to register.

To change the selected program

- 1 Press [▲ ▼] to select an item.
- 2 Repeat step 2 and 3.

To clear the selected item,

- 1 Press [▲ ▼] to select an item.
- 2 Press [CANCEL] (or press [▲ ▼ ◀ ▶] to select "Clear" and press [ENTER]).

To clear the whole program

Select "Clear all" with [▲ ▼ ◀ ▶] and press [ENTER]. The whole program is also cleared when the disc is moved out of the play position, the unit is turned off or another source is selected.

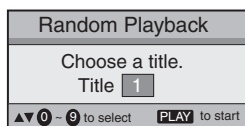
■ Random play

■ When CD Mode is off (→ 18)

DVD-A DVD-V VCD CD WMA MP3 JPEG

2 Press the numbered buttons to select a group or a title.

e.g. DVD-V



- VCD CD This step is unnecessary.
- DVD-A
- To enter all groups, press [◀ ▶] to select "All" and press [ENTER].
- To deselect a group, press the numbered buttons corresponding to the group you want to clear.

3 Press [▶] (play).

■ When CD Mode is on (→ 18)

VCD CD WMA MP3

2 Press [▶] (play).

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"DTS" and "DTS Digital Surround" are registered trademarks of Digital Theater Systems, Inc.

Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, and 4,819,098, licensed for limited viewing uses only.

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MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.

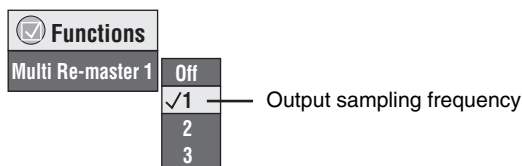


Multi Re-master

RAM DVD-V (Discs recorded with 48 kHz only)
 DVD-A (Discs recorded with 44.1 kHz and 48 kHz only)
 VCD CD

- During 2ch output of these discs, this feature gives you a more natural sound by adding the higher frequency signals not recorded on the disc, for example, playing DVD-Video recorded with 48 kHz at 96 kHz. (Sampling frequency → below)
 - During multi-channel output of these discs, this feature reproduces the frequencies lost during recording to give you a sound closer to the original.
- WMA MP3 (Disc recording is other than 8 kHz, 16 kHz, 32 kHz)
 This feature reproduces the higher frequencies lost during recording to give you a sound closer to the original.


1 Press [SHIFT]+[MULTI RE-MASTER] several times to select "1" "2" or "3".



Setting	DVD-A DVD-V CD (LPCM/PPCM) Type of music	Other discs Effect level
1	High tempo (e.g., pops and rock)	Light
2	Various tempos (e.g., jazz)	Medium
3	Low tempo (e.g., classical)	Strong
Off	Off	Off

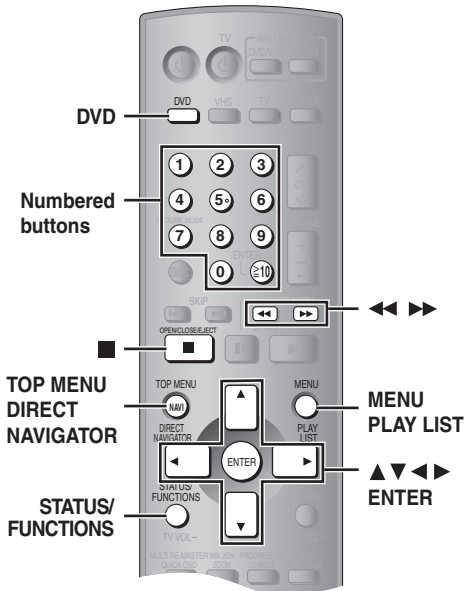
Sampling frequency
 Sampling is the process of converting the heights of sound wave (analog signal) samples taken at set periods into digits (digital encoding). Sampling frequency is the number of samples taken per second, so larger numbers mean more faithful reproduction of the original sound.

Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.



WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.





Using the submenu

- 1 While the navigation menu is displayed Press [STATUS/FUNCTIONS].
- 2 Press [▲ ▼] to select an item and press [ENTER].

Multi	Groups and contents
List	Contents only
Tree	Groups only
Thumbnail	Thumbnail images [JPEG]
Next group	To go to next group [WMA] [MP3]
Previous group	To go to previous group [WMA] [MP3]
All	WMA/MP3 and JPEG
Audio	WMA/MP3 only
Picture	JPEG only
Help display	To switch between guide messages and the elapsed play time indicator
Find	To search by content or group title (→ see below)

Searching by content or group title

Highlight a group title to search the group, or content title to search its content.

- 1 While the submenu is displayed Press [▲, ▼] select “Find” (→ above) and press [ENTER].



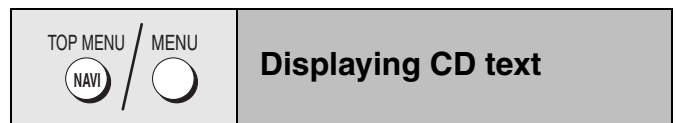
- 2 Press [▲ ▼] to select a character and press [ENTER].

- Repeat to enter another characters.
- Lower case is also searched.
- Press [◀▶] to skip between A, E, I, O and U.
- Press [◀] to erase a character.
- Leave the asterisk (*) when you search for the titles including the character you enter.
- Erase the asterisk (*) to search for the titles starting with the character you enter. To add the asterisk (*) again, display the submenu again and select “Find”.

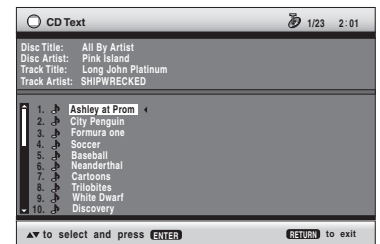
- 3 Press [▶] (cursor) to select “Find” and press [ENTER].

The search result screen appears.

- 4 Press [▲ ▼] to select the content or group and press [ENTER].



- 1 Press [TOP MENU] or [MENU].

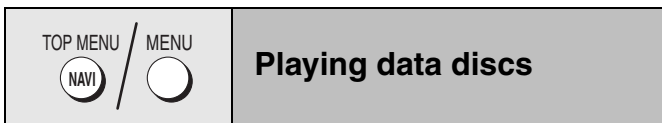


e.g. CD text

- 2 Press [▲ ▼] to select the track and press [ENTER].

- Press [STATUS/FUNCTIONS] to show the playback condition and current position.

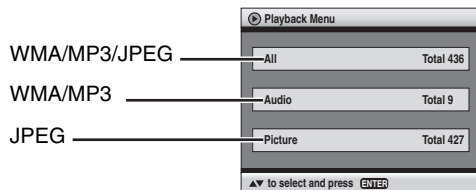
- To exit the screen Press [TOP MENU] or [MENU].



You can play JPEG files on DVD-RAM or play HighMAT™ discs without using the HighMAT™ function (Playing HighMAT™ discs → 23 “Play as Data Disc” in Other Menu → 25).

Playing items in order (Playback Menu)

- 1 Press [TOP MENU].

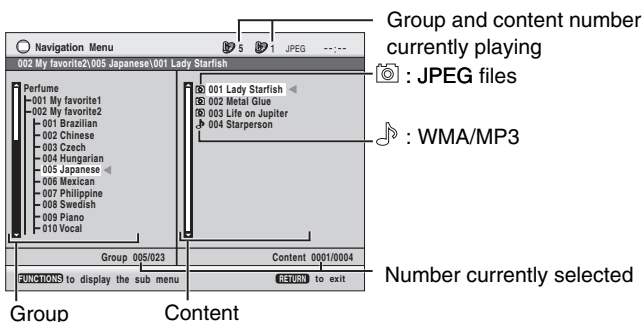


- 2 Press [▲ ▼] to select “All”, “Audio” or “Picture” and press [ENTER].

- To exit the screen Press [TOP MENU].

Playing from the selected item (Navigation menu)

- 1 Press [MENU].



- 2 Press [▲ ▼ ◀ ▶] to select the group or audio/picture content and press [ENTER].

- To enjoy listening to WMA/MP3 contents while showing a JPEG image on the screen Select a JPEG file first, and then select audio contents. (The opposite order is not effective.)

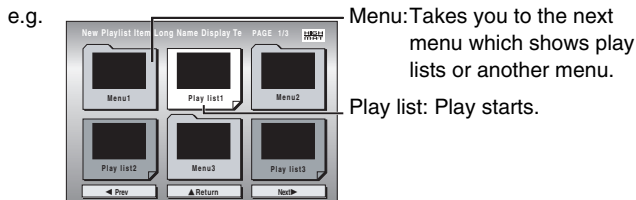
- To exit the screen Press [MENU].

TOP MENU / MENU
NAVI /

Playing HighMAT™ discs

WMA MP3 JPEG

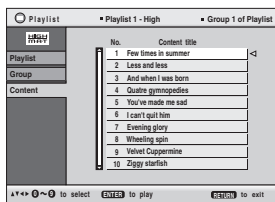
- 1 Press [TOP MENU].
- 2 Press [\blacktriangle \blacktriangledown \blacktriangleleft \blacktriangleright] to select the item, then press [ENTER].



- To change the menu background Press [STATUS/FUNCTIONS]. The background changes to the one recorded on the disc.
- To exit the screen Press [TOP MENU].

Selecting from the list

- 1 During play Press [MENU].
- 2 Press [\blacktriangleleft] then [\blacktriangle \blacktriangledown] to switch among "Playlist", "Group" and "Content" lists.
- 3 Press [\blacktriangleright] (cursor) then [\blacktriangle \blacktriangledown] to select an item and press [ENTER].



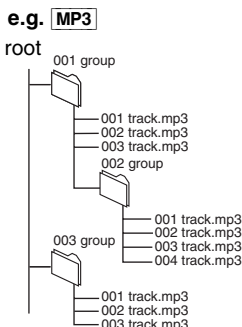
- To exit the screen Press [MENU].

Tips for making WMA/MP3 and JPEG discs (For CD-R/CD-RW)

- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).
- This unit is compatible with multi-session but if there are a lot of sessions it takes more time for play to start. Keep the number of sessions to a minimum to avoid this.
- When there are more than 8 groups, the eighth group onwards will be displayed on one vertical line in the menu screen.
- There may be differences in the display order on the menu screen and computer screen.
- This unit cannot play files recorded using packet write.

Naming folders and files

At the time of recording, prefix folder and file names with 3-digit numbers in the order you want to play them (this may not work at times).
Files must have the extension:
".WMA" or ".wma"
".MP3" or ".mp3"
".JPG", ".jpg", ".JPEG" or ".jpeg"



NAVI /
DIRECT NAVIGATOR / PLAY LIST

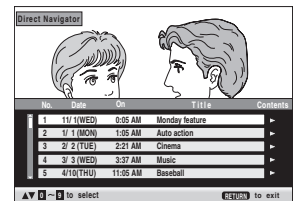
Playing RAM discs

RAM

- Titles appear only if the titles are recorded on the disc.
- You cannot edit programs, play lists and disc titles.

Playing the programs

- 1 Press [DIRECT NAVIGATOR].
- 2 Press [\blacktriangle \blacktriangledown] or the numbered buttons to select the program.



- To select a 2-digit number e.g. 23: [≥ 10] \rightarrow [2] \rightarrow [3]
- Press [\blacktriangleright] (cursor) to show the contents of the program.
- To exit the screen Press [DIRECT NAVIGATOR].

Playing a play list

(Only when the disc contains a play list)

- 1 Press [PLAY LIST].
- 2 Press [\blacktriangle \blacktriangledown] or the numbered buttons to select the play list.
- 3 Press [ENTER].



- To select a 2-digit number e.g. 23: [≥ 10] \rightarrow [2] \rightarrow [3]
- To exit the screen Press [MENU].

WMA

- You cannot play WMA files that are copy protected.
- This unit is not compatible with Multiple Bit Rate (MBR).

MP3

- This unit is not compatible with ID3 tags.
- Compatible sampling rate: 8, 11.02, 12, 16, 22.05, 24, 32, 44.1 and 48 kHz.

JPEG

- To view JPEG files on this unit:
 - Take them on a digital camera that meets the DCF Standard (Design rule for Camera File system) Version 1.0. Some digital cameras have functions that are not supported by the DCF Standard Version 1.0 like automatic picture rotation which may render a picture un-viewable.
 - Do not alter the files in any way or save them under a different name.
- This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g. TIFF) or play pictures with attached audio.



DVD

Other settings

Play Speed	RAM DVD-V To change play speed –from $\times 0.6$ to $\times 1.4$ (in 0.1 units)
	<ul style="list-style-type: none"> • After you change the speed <ul style="list-style-type: none"> – Output is in stereo. – Sampling frequency of 96 kHz is converted to 48 kHz.

■ Play Menu

(Only when the elapsed play time can be displayed)

JPEG: Works with all JPEG content.)

Repeat	(→ 19)
A-B Repeat	Except JPEG RAM (still picture part) To repeat a specified section Press [ENTER] at the starting and ending points. Press [ENTER] again to cancel.
Marker	To mark up to 5 positions to play again Press [ENTER] (The unit is now ready to accept markers.) To mark a position: [ENTER] (at the desired point) To mark another position: [◀▶] → [ENTER] To recall a marker: [◀▶] → [ENTER] To erase a marker: [◀▶] → [CANCEL] • This feature doesn't work during program and random play.
Advanced Disc Review	(Reviewing title to play (Advanced Disc Review) → 18)

■ Picture Menu

Picture Mode	Normal Cinema1 : Mellows images and enhances detail in dark scenes. Cinema2 : Sharpens images and enhances detail in dark scenes. Animation Dynamic User (Press [ENTER] to select "Picture Adjustment") (→ below)
	Picture Adjustment Contrast Brightness Sharpness Color Gamma (Adjusts the brightness of dark parts.) Depth Enhancer Reduce the rough noise in the background to give a greater feeling of depth.
Video Output Mode	480i (Interlace) ↔ 480p (Progressive)
Transfer Mode	If you have chosen "480p" (→ above), select the method of conversion for progressive output to suit the type of material. Auto1 (normal): For viewing film material Auto2 : For viewing film material (the same as Auto1, but able to convert 30-frame-per-second progressive video) Video : For video material

■ Audio Menu

Dolby Pro Logic II	(→ 41)
Dialogue Enhancer	To make the dialogue in movies easier to hear DVD-V (Dolby Digital, DTS, MPEG, 3-channel or over, with the dialogue recorded in the center channel) On ↔ Off
Multi Re-master	(→ 21)
Sound Enhancement	Enhances audio output to produce a warm hall-like sound. You can enjoy higher quality audio by adding higher frequency signals not recorded on the disc. On ↔ Off

■ Display Menu

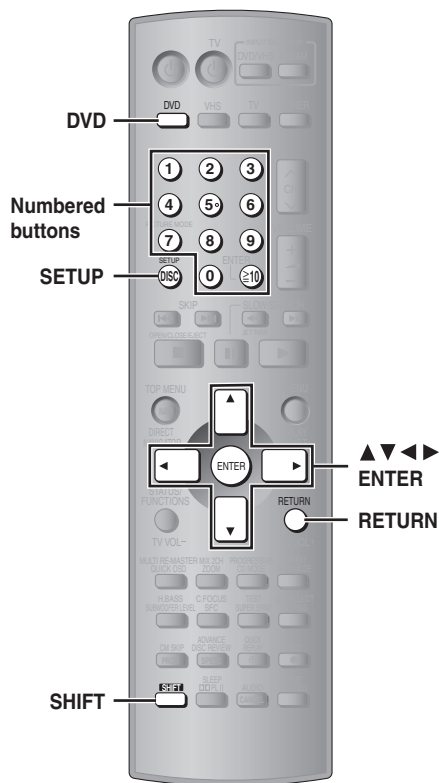
Information	JPEG : Off, Date, Details
Subtitle Position	0 to –60 (in 2 units)
Subtitle Brightness	Auto , 0 to –7 Auto : Subtitle gets bright when picture is bright or vice versa.
Just Fit Zoom	(→ 19)
Manual Zoom	(→ 19)
Bit Rate Display	RAM DVD-V VCD On ↔ Off
GUI See-through	Off ↔ On ↔ Auto ↑ Auto : GUI See-through setting becomes active except when you display screen saver or thumbnail images.
GUI Brightness	–3 to +3

■ Other Menu




















Play as DVD-Video or Play as DVD-Audio	While stopped • Select "Play as DVD-Video" to play DVD-Video contents on DVD-Audio.
Play as DVD-VR Play as HighMAT™ or Play as Data Disc	While stopped • Select "Play as Data Disc" to play JPEG files on DVD-RAM or to play HighMAT™ disc without using the HighMAT™ function.
Setup	(→ 26)




DVD



DVD

1	 + 	Shows Setup menu.
2	 Select     Go to right	Select the tab.
3	 Select     Register	Select the item.
4	 Select     Register 	Make the settings.
5		Press to exit.

- The settings remain intact even if you switch the unit to standby.
- When you show Setup menu during playback, playback will stop and resume function does not work.
- Underlined items are the factory preset.

• The **QUICK SETUP** enables successive settings of the items with .

■ “Disc” tab

Audio

Choose the audio language.

[English] [French] [Spanish] [Original]^{*1} [Other*****]^{*2}

Subtitle

Choose the subtitle language.

[Automatic]^{*3} [English] [French] [Spanish] [Other*****]^{*2}

Menus

Choose the language for disc menus.

[English] [French] [Spanish] [Other*****]^{*2}

Changing the menu language from QUICK SETUP also changes this setting.

Advanced Disc Review (→ 18)

[Intro Mode] [Interval Mode]]

Intro Mode	Reviews each title/program.
Interval Mode	Reviews not only each title/program but also each 10 minute interval within a title/program.

Ratings

Set a ratings level to limit DVD-Video play.

Follow the on-screen instructions.

• Setting ratings (When level 8 is selected)

[8 No Limit]: All DVD-Video can be played.

[1 to 7]

[0 Lock All]: To prevent play of discs without ratings levels.

• Changing ratings (When level 0–7 is selected)

[Unlock Player] [Change Password]

[Change Level] [Temporary Unlock]

*1 The original language designed on the disc is selected.

*2 Input a code number referring to the table on page 27.



*3 If the language selected for “Audio” is not available, subtitle appears in that language (if available on the disc).

■ “Video” tab

TV Aspect

Choose the setting to suit your television and preference.

[4:3 Pan&Scan] [4:3 Letterbox] [16:9]

4:3 Pan&Scan	Regular aspect television (4:3) The sides of the widescreen picture are cut off so it fills the screen (unless prohibited by the disc).	
4:3 Letterbox	Regular aspect television (4:3) Widescreen picture is shown in the letterbox style.	
16:9	Widescreen television (16:9)	

TV Type

Select to suit the type of television.

[Standard (Direct View TV)]

[CRT Projector] [LCD TV/Projector]

[Projection TV] [Plasma TV]

Time Delay

When connected to a Plasma display, adjust if you notice the audio is out of the sync with the video.

[0ms] [20ms] [40ms] [60ms] [80ms] [100ms]

Still Mode

Specify the type of picture shown when paused.

[Automatic] [Field] [Frame]

Automatic	Still picture is displayed without being blurred or at high quality.
Field	The picture is not blurred, but picture quality is lower.
Frame	Overall quality is high, but the picture may appear blurred.

Black Level Control

Change the black level of the picture if you connected a television through the COMPONENT VIDEO OUT terminals.

[Lighter] [Darker]

Lighter	When connected through VIDEO OUT or S-VIDEO OUT.
Darker	When connected through COMPONENT VIDEO OUT.

“Audio” tab

Dynamic Range Compression

[Off] [On]

On	Adjusts for clarity even when the volume is low through compressing the range of the lowest sound level and the highest sound level. Convenient for late night viewing. (Only works with Dolby Digital)
----	---

Speaker Setting (→below)

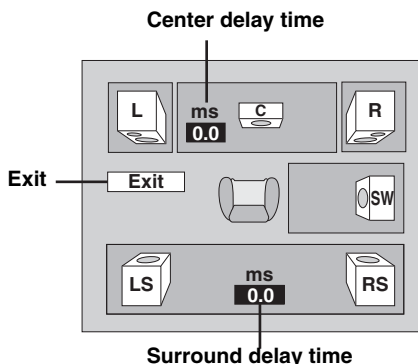
Set the delay time for your center and surround speakers.

- Center
0.0/1.0/2.0/3.0/4.0/5.0 ms
- Surround (L/R)
0.0/5.0/10.0/15.0 ms

Changing the delay time (Speaker Setting)

(Effective when playing multi-channel audio)

For optimum listening with 5.1-channel sound, all the speakers, except for the subwoofer, should be the same distance from the seating position. If you have to place the center or surround speakers closer to the seating position, adjust the delay time to make up for the difference.



- 1 Press [▲ ▼] to select the delay time box and press [ENTER].
- 2 Press [▲ ▼] to adjust the delay time and press [ENTER].

To finish the speaker setting

Press [◀] to select “Exit” and press [ENTER].

“Display” tab

Menu Language [QUICK SETUP]

[English] [Français] [Español]

On-Screen Messages

[On] [Off]

“Others” tab

QUICK SETUP [QUICK SETUP]

[Yes] [No]

Re-initialize Setting

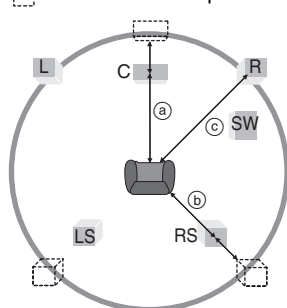
This returns all values in the Setup menus to the default settings.

[Yes] [No]

Yes	The password screen is shown if “Ratings” (→ 26) are set. Please enter the same password. After “INIT” on the display disappears, turn the unit off and on again.
-----	---

If either distance (a) or (b) is less than (c), find the difference in the relevant table and change to the recommended setting.

☐ : Recommended placement



(a) Center speaker

Difference	Setting
Approx. 30 cm (1 foot)	1.0 ms
Approx. 60 cm (2 feet)	2.0 ms
Approx. 90 cm (3 feet)	3.0 ms
Approx. 120 cm (4 feet)	4.0 ms
Approx. 150 cm (5 feet)	5.0 ms

(b) Surround speakers

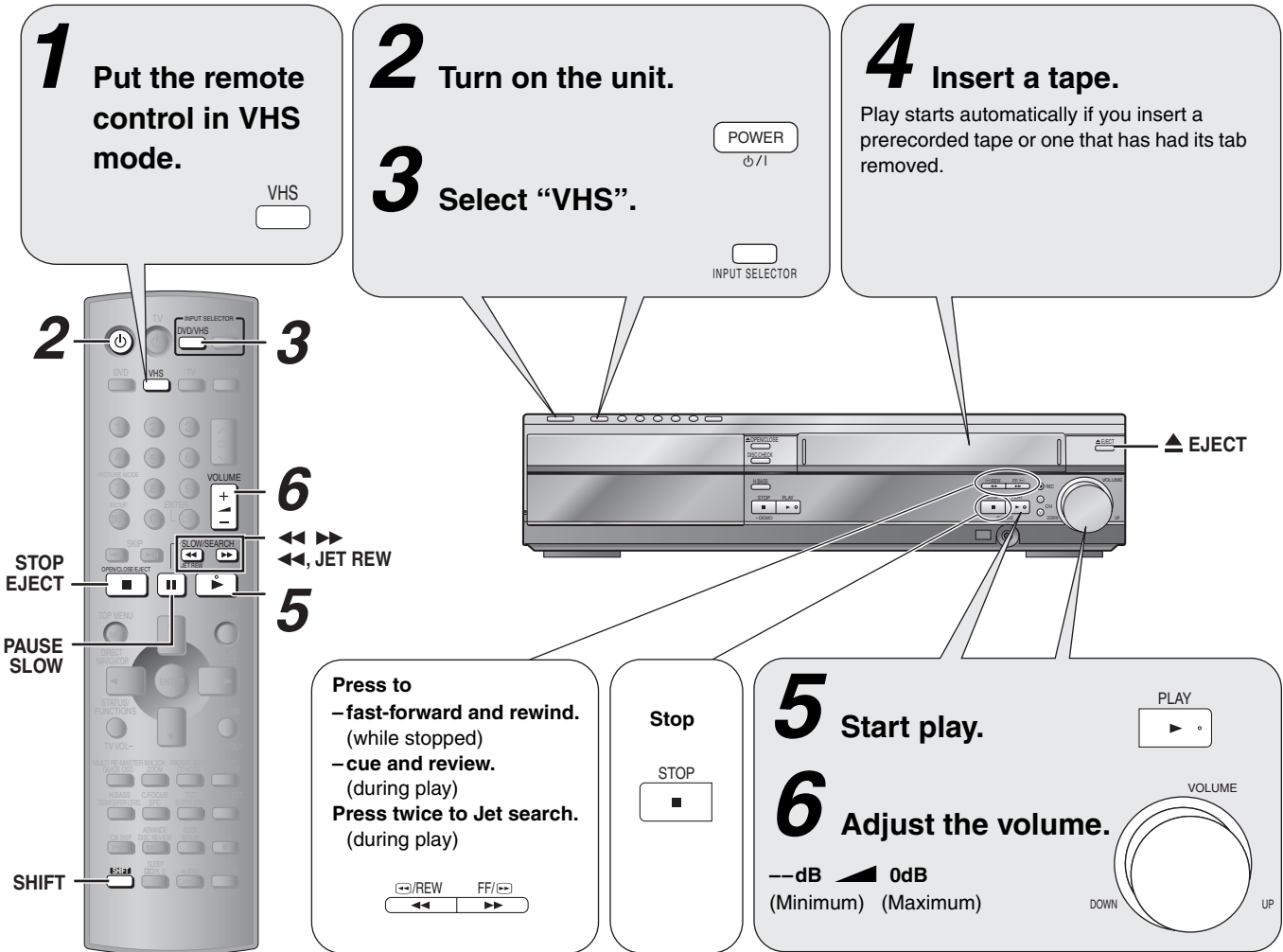
Difference	Setting
Approx. 150 cm (5 feet)	5.0 ms
Approx. 300 cm (10 feet)	10.0 ms
Approx. 450 cm (15 feet)	15.0 ms



Language code list

Abkhazian: 6566	Chinese: 9072	Hausa: 7265	Lithuanian: 7684	Romanian: 8279	Telugu: 8469
Afar: 6565	Corsican: 6779	Hebrew: 7387	Macedonian: 7775	Russian: 8285	Thai: 8472
Afrikaans: 6570	Croatian: 7282	Hindi: 7273	Malagasy: 7771	Samoan: 8377	Tibetan: 6679
Albanian: 8381	Czech: 6783	Hungarian: 7285	Malay: 7783	Sanskrit: 8365	Tigrinya: 8473
Ameharic: 6577	Danish: 6865	Icelandic: 7383	Malayalam: 7776	Scots Gaelic: 7168	Tonga: 8479
Arabic: 6582	Dutch: 7876	Indonesian: 7378	Maltese: 7784	Serbian: 8382	Turkish: 8482
Armenian: 7289	English: 6978	Interlingua: 7365	Maori: 7773	Serbo-Croatian: 8372	Turkmen: 8475
Assamese: 6583	Esperanto: 6979	Irish: 7165	Marathi: 7782	Shona: 8378	Twi: 8487
Aymara: 6588	Estonian: 6984	Italian: 7384	Moldavian: 7779	Sindhi: 8368	Ukrainian: 8575
Azerbaijani: 6590	Faroese: 7079	Japanese: 7465	Mongolian: 7778	Singhalese: 8373	Urdu: 8582
Bashkir: 6665	Fiji: 7074	Javanese: 7487	Nauru: 7865	Slovak: 8375	Uzbek: 8590
Basque: 6985	Finnish: 7073	Kannada: 7578	Nepali: 7869	Slovenian: 8376	Vietnamese: 8673
Bengali, Bangla: 6678	French: 7082	Kashmiri: 7583	Norwegian: 7879	Somali: 8379	Volapük: 8679
Bhutani: 6890	Frisian: 7089	Kazakh: 7575	Oriya: 7982	Spanish: 6983	Welsh: 6789
Bihari: 6672	Galician: 7176	Kirghiz: 7589	Pashto, Pushto: 8083	Sundanese: 8385	Wolof: 8779
Breton: 6682	Georgian: 7565	Korean: 7579	Persian: 7065	Swahili: 8387	Xhosa: 8872
Bulgarian: 6671	German: 6869	Kurdish: 7585	Polish: 8076	Swedish: 8386	Yiddish: 7473
Burmese: 7789	Greek: 6976	Laotian: 7679	Portuguese: 8084	Tagalog: 8476	Yoruba: 8979
Byelorussian: 6669	Greenlandic: 7576	Latin: 7665	Punjabi: 8065	Tajik: 8471	Zulu: 9085
Cambodian: 7577	Guarani: 7178	Latvian, Lettish: 7686	Quechua: 8185	Tamil: 8465	
Catalan: 6765	Gujarati: 7185	Lingala: 7678	Rhaeto-Romance: 8277	Tatar: 8484	

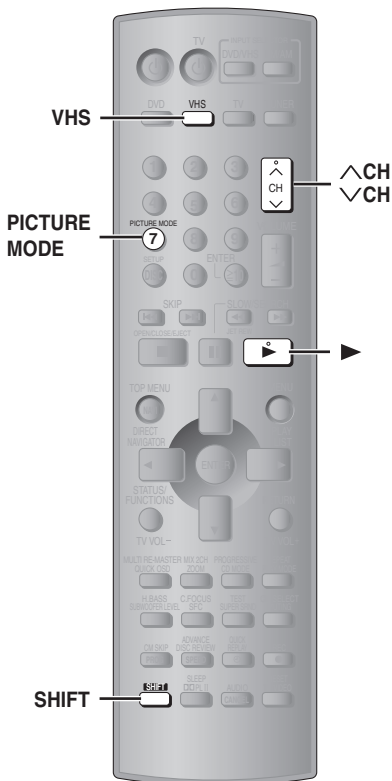
Turn on the television and select the appropriate video input for the VHS.



Stop		
Pause		• Press [▶] (play) to start play.
Slow	Press and hold 	• There is no sound.
Fast-forward and rewind (while stopped)		• You can use fast-forward and rewind after pressing [VHS] while using another source.
Cue and review (during play)	SLOW/SEARCH 	• There is no sound. • Press and hold during play. • Play restarts when you release the button.
Jet search (during play)	Press twice SLOW/SEARCH 	• Press [▶] (play) to start play. • There is no sound.
Jet rewind (while stopped)	SHIFT + 	• The tape counter does not appear. • You can use jet rewind after pressing [VHS] while using another source.
Eject	SHIFT + 	• You can eject tapes when the unit is in standby mode. It switches back to standby mode once it ejects the tape. • You cannot eject tapes when the unit is recording or in timer recording standby mode.

Note • Jet rewind function is not applicable for 160 minutes tape and above.

- Pause stops after 5 minutes. Cue, review and jet search restart to play after 10 minutes.
- The tape moves at high speed during fast-forward, rewind, and jet rewind so the unit will make a noise. Also, it takes some time for the tape to stop after you press [■].
- The picture during cue, review, and jet search may be disrupted or otherwise affected on some televisions. During jet search at 35 times normal speed through EP or VP recordings, the picture may scroll vertically on some televisions. Change to 27 times normal speed if this occurs (→ 38).



SHIFT + **PICTURE MODE** (7) **Picture mode**

Changes the picture quality to suit the material you are playing.
Press [SHIFT]+[PICTURE MODE].

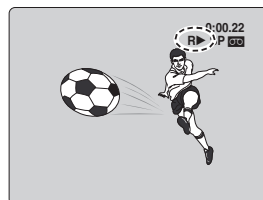


Each time you do this:
STANDARD: for recordings of television program (Factory preset)
DYNAMIC: clear, vivid pictures for scenery and sports
SOFT: for prerecorded tapes

Repeat play

Plays a program repeatedly.
Press and hold [▶] (play) for about five seconds.

“R▶” / “R” appears on the television and the main unit.



At the end of the program, the tape rewinds to the beginning of the program and plays it again. (It only works if there is a five-second blank at the end of the program.) This repeats until you cancel it.

To cancel
 Press [▶] (play).
 • It also cancels if you stop, pause, cue, or review.



VHS

Manual tracking

This unit has an automatic digital tracking control feature that usually makes tracking adjustments for you, but you may need to do it manually, such as if noise appears on a tape recorded on other equipment.

During play
Press [^ CH] or [v CH].
 Repeat until the noise disappears.

To return to automatic digital tracking control
 Press [^ CH] and [v CH] at the same time.

To remove the noise from a paused picture
 Start slow play, then adjust the tracking.

Note
 This may not be effective on some tapes.

Vertical locking adjustment

Adjusts the vertical hold to keep the picture from jiggling.

While paused
Press [^ CH] or [v CH].
 Repeat until the jiggling stops.

To return to the previous condition
 Press [^ CH] and [v CH] at the same time.

Note
 This may not work with some televisions. Try adjusting the vertical on the television itself.

Using another source while recording

You can watch and listen to other content when the unit is in timer recording standby or during VHS recording.

■ Television (→ 12)

- 1 During recording
Press [TV] to put the remote control in TV mode.
- 2 Press [TV/VIDEO] then select the channel with the numbered buttons, [^ CH] or [v CH].

■ DVD (→ 16)

- 1 During recording
Press [DVD] to put the remote control in DVD mode.
- 2 Press [DVD/VHS] to select "DVD/CD".
- 3 Insert a disc and start play.

■ Radio (→ 40)

- 1 During recording
Press [TUNER] to put the remote control in TUNER mode.
- 2 Press [FM/AM] to select the radio band.
- 3 Select the radio channel with the numbered buttons, [^ CH] or [v CH].

Note

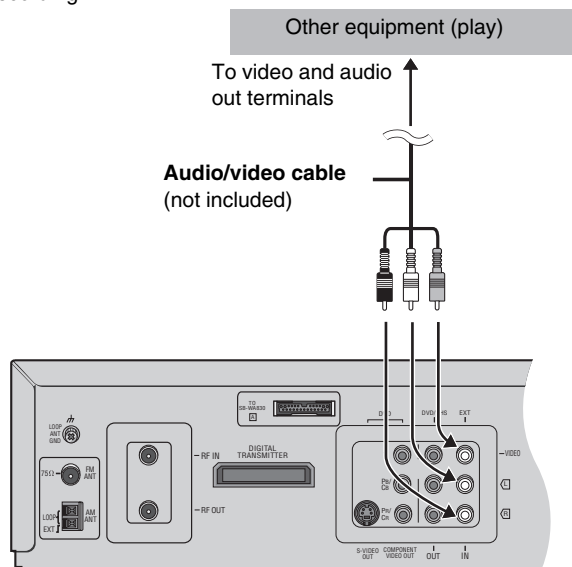
When you want to operate the VHS section again, be sure to press [VHS] to put the remote control in VHS mode.

Recording from other equipment

You can record from other video equipment. (video cassette recorder, camera, etc.)

Preparation

- Connect the equipment to this unit's input terminals.
– Turn the unit off before making connections.
– If audio output on the other equipment is monaural, use a stereo-monaural conversion cable (not included).
- Insert the tape, ensuring its tab is in place and find the place to start recording.



- 1 Press [^ CH] or [v CH] to select "AV" channel.

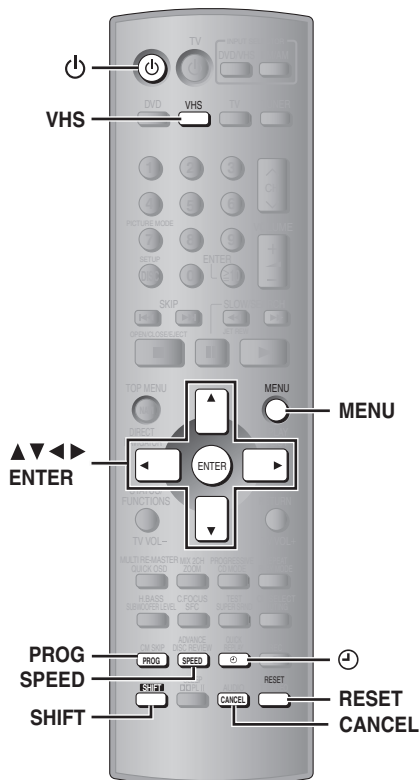


- 2 Press [▶] (play) to find the place to start recording.
- 3 Press [|||], then press [SHIFT]+[● REC] to put the unit in recording standby mode.
- 4 Press [SPEED] to select the tape speed.
SP → EP → VP
↑
- 5 Start play on the other equipment.
- 6 Press [|||] when you want to start recording.

To stop
Press [■].

- To make a timer program to record from other equipment (→ 32)





6 Select “OFF” with [◀ ▶] and change the end time with [▲ ▼].

7 Press [SPEED] to change the tape speed.

SP → EP → VP → A*

↑

*Auto SP/EP change function (→ 33)

8 If the Jet Navigator is on (→ 34),
Select a category.

Press [▶] (cursor) to select a category column. Press [▲ ▼] to enter the category selection menu. Then select a category with [▲ ▼ ▶], and confirm with [MENU].

You can also set and change the category in the navigator list (→ 35).

Repeat steps 2 to 8 to make further timer programs.

9 Press [⏻] to put the unit on timer recording standby.

“⏻” lights on the unit’s display.



10 Press [⏻] to switch the unit to standby.

The timer recording works whether the unit is on or not, so you can play DVDs or listen to the radio (→ 31). Switch the unit to standby if you are finished.

To cancel the selected line

Press [SHIFT]+[RESET].

To release the unit from timer recording standby

Press [⏻].

To stop recording

Press [⏻].

PROG

Timer recording

You can create up to 16 timer recording programs. You can set the timer to record an individual program up to a month in advance, record at the same time on the same day every week, or at the same time daily.

Preparation

- Make sure the unit’s clock is correct (→ 36 to adjust it if necessary).
- Insert a tape, ensuring its tab is in place (→ 3).

1 While stopped, press [PROG].

The timer-programming screen appears.

	DATE	CH	ON	OFF	1/2
1	27WE	2	8:02PM	9:30PMS	P
2	SU-SA	125	10:30AM	11:00AM	A
3	SU	14	3:00PM	4:00PM	EP
4	19TU	5	10:15PM	11:30PM	V
5	28TH	AV	8:02PM	9:30PMS	P
6	30SA	4	7:10PM	7:55PM	V
7	---	---	---	---	---
8	---	---	---	---	---

PROG:ENTER END:MENU

2 Press [PROG] to select an available line and press [ENTER].

3 Select “DATE” with [◀ ▶] and change it with [▲ ▼].

The date changes as follows:

- Current date
- ↓ ↑
- Next day up to one month later minus one day
- ↓ ↑
- Weekly timer: SU-SA → MO-SA → MO-FR
- ↓ ↑
- Daily timer: SU → MO → TU → WE → TH → FR → SA

4 Select “CH” with [◀ ▶] and change it with [▲ ▼].

Select “AV” when recording from other equipment (→ 31).

5 Select “ON” with [◀ ▶] and change the start time with [▲ ▼].

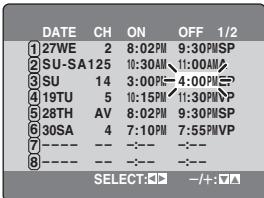
To check, correct, and cancel timer programs

■ To check a program

Press [PROG].
The timer-programming screen appears.

■ To correct a program

While the timer programming screen is on the television,
1 Press [PROG] to highlight the program you want to correct and press [ENTER].
2 Select the item with [◀ ▶] and correct it with [▲ ▼].



■ To cancel a program

While the timer programming screen is on the television,
1 Press [PROG] to highlight the program you want to cancel.
2 Press [CANCEL].

To clear the timer programming screen

Press [MENU].

Auto SP/EP change

The unit switches tape speed to EP if it determines there is not enough tape to record the entire program in SP mode. The change may start at the beginning of the recording or part way through, depending on the remaining tape.

Before using this function, set the length of the tape you are using (→ 38). It may not work correctly if you use tapes with irregular lengths.

Example program combination

1st program (30 min.)	2nd program (60 min.)
------------------------------	------------------------------

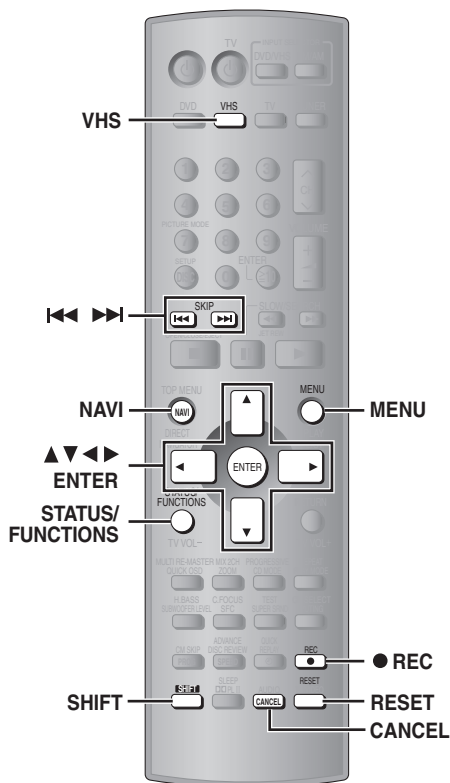
Example program combination

30 min. at SP	15 min. at SP	45 min. at EP	(when using a 60-min. tape)
----------------------	----------------------	----------------------	-----------------------------

Note

This function does not guarantee recording of the entire program.





NAVI ■ Using the Jet Navigator to find programs

- 1 Press [NAVI] to show the “JET NAVIGATOR” screen.
- 2 Press [NAVI] to highlight the program you want to watch.

The most recent program is highlighted first.

Once you have highlighted the program, wait about three seconds. The unit then starts searching for the program and starts play.

JET NAVIGATOR			
DATE	CH	ON	CATEGORY
10/18	1	10:30PM	MUSIC ♪
10/19	124	3:00PM	SPORT ⚽
10/21	5	10:15AM	--
10/23	AV	8:02PM	--
10/26	4	7:10AM	EDUCA 📖
10/27	2	8:02AM	--
10/27	12	8:30PM	--

SELECT:NAVI, END:MENU

The channel, date, and time of a recording appear on the television when play starts.

Jet Navigator

This unit can display a list of the recorded programs on the inserted tape on the TV screen. You can then select the desired program, and this unit will quickly reach its beginning and start playback.

■ Saving Jet Navigator data

The unit can save the data for up to 14 recordings on a tape, for 20 different tapes, and for a total of 50 recordings.

- 1 Press [MENU] to display the “VHS MENU” screen.
- 2 Press [▲ ▼] to select “OPTION” menu and press [ENTER].
- 3 Press [▲ ▼] to select “JET NAVIGATOR” and press [◀ ▶] to change the setting to “ON”.

OPTION	1/2
OSD	•ON OFF
TAPE SELECT	
•T120 T160 T180	
BLUE BACK	•ON OFF
JET NAVIGATOR	•ON OFF
DELETE NAVIDATA	•NO YES
JET SEARCH	×27 ×35
SELECT	:◻ - / + : ◻
END	:MENU

- 4 Press [▲ ▼] to select “TAPE SELECT” and press [◀ ▶] to set the length of the tape you are using.

T120: T30, T60, T90, T120 tapes

T160: T140, T160 tapes

T180: T180 tapes

- 5 Record programs (→ pages 30–32). The unit makes the list as you record.

To clear the Jet Navigator list

Press [MENU].

■ To delete the Jet Navigator on a video cassette tape

Keep [CANCEL] pressed for more than 5 seconds while the Jet Navigator list appears. “- -” appears on the list.

■ To delete all the Jet Navigator data stored in the unit’s memory (→ 38).

Setting categories

Set categories to make it easier to see what kind of programs are in the list.

- 1 Press [▶] (cursor) while the program you want to categorize is highlighted.
- 2 Press [▲ ▼ ◀ ▶] to select a category and press [MENU] to confirm and return to the previous screen.

Category	Indication	Icon	Category	Indication	Icon
MOVIE	MOVIE		SPORTS	SPORT	
MUSIC	MUSIC		CHILDREN	CHILD	
DRAMA	DRAMA		NEWS	NEWS	
EDUCATION	EDUCA		OTHERS	OTHER	
DOCUMENTARY	DOCUM				

To return to the Jet Navigator list

Press [MENU].

Note

- If you have already stored 14 programs on a tape and you then store another one, the new item is added and the oldest is deleted.
- "REMAINING PROGRAM 0 DELETE JET NAVIGATOR DATA" appears when you try to store more than fifty programs. The new item is added and the oldest item is deleted.
- "REMAINING CASSETTE 0 FOR JET NAVIGATOR DATA" appears when you try to store items for more than 20 tapes. Delete all the Jet Navigator data in the unit if you want to save the data for the tape (→ 38).
- The list does not appear when playing tapes recorded on other equipment.
- Parts of the list data are recorded on the tape. Take care when recording over older recordings that you do not overlap it. It is recorded within a few minutes either side of the beginning of the recording (longer if you used EP or VP).

To demonstrate the Jet navigator function

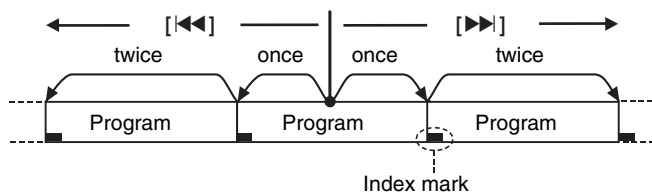
Keep [NAVI] pressed for more than 5 seconds without inserting a cassette tape.

Finding programs—VHS Index Search System (VISS)

Use the index marks on a tape to find sections to play. The unit adds index marks when recording starts. To add them manually during recording, press [SHIFT]+[● REC].

While stopped or during play

Press [◀◀] (backward) or [▶▶] (forward) to skip to the part you want to play.



- Up to 20 index signals can be searched for in both directions.
- You can reduce the number of skips by pressing the opposite button.
- This feature may not work correctly if the marks are too close together. Make recordings of at least 15 minutes (25 minutes in VP mode).

STATUS/
FUNCTIONS

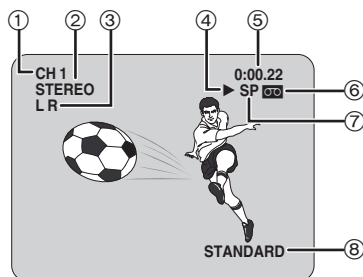


On-screen display

To see these displays, set the OSD item in the OPTION menu to ON.

Press [STATUS/FUNCTIONS].

The time and operation details appear on the screen for about 5 seconds.



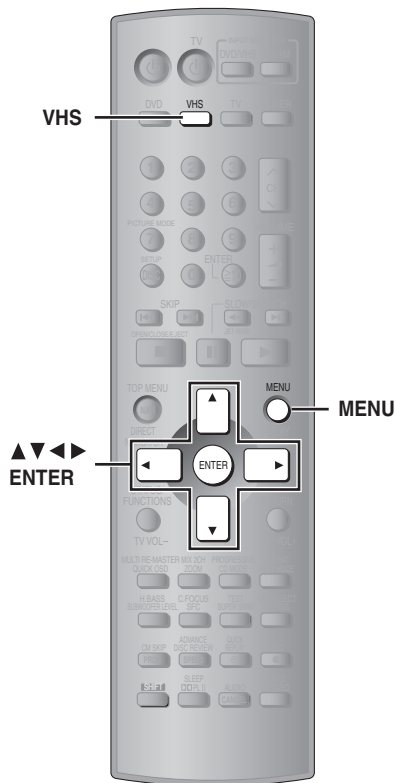
①	Channel display Displays the cable television channel or television channel currently being received.
②	STEREO/SAP indication Indicates when a program is broadcast in stereo or SAP. (→ 39)
③	L and R indicators The Left (L) and Right (R) indicators show which sound mode is selected as follows: Stereo: Both the L and R indicators appear. L: The L indicator appears. R: The R indicator appears. Mono: Neither the L and R indicator appears.
④	Tape running display Shows operations taking place.
⑤	Shows the time and tape counter Press [STATUS/FUNCTIONS]. The display changes as follows: Present time → Tape counter → Remaining tape time Using index search: "S 01" to "S 20" is displayed. Using jet rewind: "J.REW" is displayed (except when the remaining tape time indication appears). • Press [SHIFT]+[RESET] to reset the tape counter (elapsed time) to "0:00.00". • The remaining time is approximate. It will be incorrect if you set the wrong tape time in the TAPE SELECT item in the OPTION menu and if the tape is of poor quality.
⑥	Cassette in indicator Shows whether you have loaded a cassette.
⑦	Tape speed indicator (→ 30)
⑧	Picture mode indicator (→ 29)

Note

- These displays do not appear when paused or during slow play.
- The on-screen display may be disturbed depending on the playback tape or the input signal.



VHS

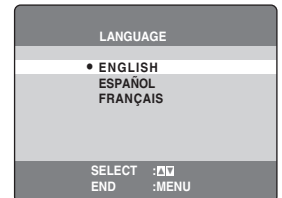


LANGUAGE

Select the language for these menus and other on screen displays.

- 1 Press [**▲ ▼**] to select “LANGUAGE” and press [ENTER].
- 2 Press [**▲ ▼**] to choose the preferred language.

- ENGLISH (Factory preset)
- ESPAÑOL
- FRANÇAIS



Press [MENU] to confirm and return to the previous screen.

CLOCK SET

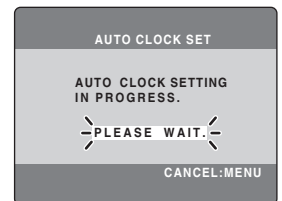
The clock is set automatically after Plug-in Auto Tuning (→ 11). Do the following if you want to set it again or if the time is not set correctly.

- 1 Press [**▲ ▼**] to select “CLOCK SET” and press [ENTER].

AUTO CLOCK SET

- 2 Press [**▲ ▼**] to select “AUTO CLOCK SET” and press [ENTER].

Auto setting starts. This can take some time.

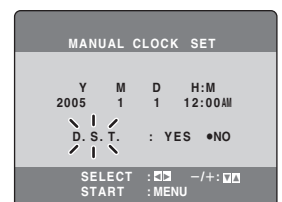


To stop partway through
Press [MENU].

- **If the unit cannot set the clock automatically**
The MANUAL CLOCK SET screen appears. Set the time manually (→ below).

MANUAL CLOCK SET

- 2 Press [**▲ ▼**] to select “MANUAL CLOCK SET” and press [ENTER].



- 3 Press [**◀ ▶**] to select the item you want to change and press [**▲ ▼**] to change the setting.
- 4 Press [MENU] to start the clock and exit the setting screen.

■ Time reset function

If the clock is less than 2 minutes slow or fast, it can easily be reset to the proper time when it is 12:00:00.

- 1 Display the MANUAL CLOCK SET screen on the TV screen.
- 2 When the current clock displays on the unit is between 11:58 and 12:01, press [MENU] as soon as you see 12:00:00. This resets the time to 12:00:00.

<p>1</p>	<p>Shows VHS MENU.</p>
<p>2</p>	<p>Select the item.</p>
<p>3</p>	<p>Make the settings.</p>
<p>4</p>	<p>Press to exit.</p>

• The settings remain intact even if you switch the unit to standby.



CHANNEL SET

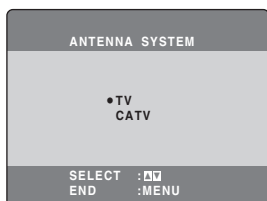
The unit tunes automatically after you plug it in and turn it on for the first time (→ 11, Plug-in Auto Tuning), but you can start the process again if necessary.

- Make sure you have tuned to a television channel. This does not work if you have selected "AV" channel.

- 1 While VHS MENU is displayed (→ 36)
Press [▲ ▼] to select "CHANNEL SET" and press [ENTER].

ANTENNA SYSTEM

- 2 Press [▲ ▼] to select "ANTENNA SYSTEM" and press [ENTER].
- 3 Press [▲ ▼] to select "TV" or "CATV" to suit the type of antenna you are using.



Channels are set corresponding to the antenna system you select. This is set automatically when you do Plug-in Auto Tuning.

To exit the settings screen

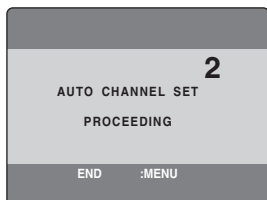
Press [MENU] until the screen disappears.

AUTO

Auto tuning searches for TV stations and memorizes every tuned program position. Other program positions are skipped. (Channel range → right)

- 2 Press [▲ ▼] to select "AUTO" and press [ENTER].

Auto tuning starts. It takes three or more minutes to complete.



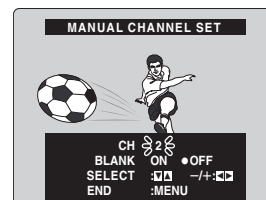
To stop partway through

Press [MENU].

MANUAL

You can manually preset channels that are skipped when using the auto channel setting, and manually skip channels that are preset.

- 2 Press [▲ ▼] to select "MANUAL" and press [ENTER].
- 3 Press [▲ ▼] to select "CH" and [◀ ▶] to select the channel.
- 4 Press [▲ ▼] to select "BLANK" and [◀ ▶] to select "ON" or "OFF".



To exit the settings screen

Press [MENU] until the screen disappears.

Channel range

•TV mode

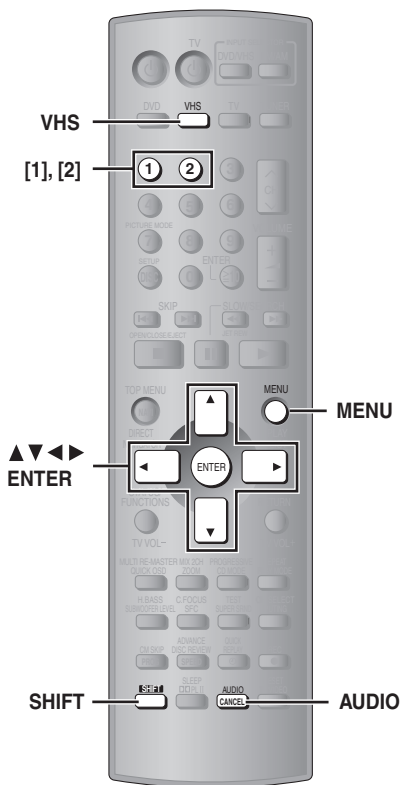
Band	Airwaves
VHF	2-13
UHF	14-69

•CATV mode

Band	Cable
VHF	2-13
CATV LOW BAND	95-99
CATV MID/SUPER BAND	14-36
CATV HYPER BAND	37-65
ULTRA BAND	66-94
	100-125
SPECIAL CATV CHANNEL	1



VHS



OPTION

- 1 While VHS MENU is displayed (→ 36)
Press [**▲ ▼**] to select the “**OPTION**” and press [ENTER].
- 2 Press [**▲ ▼**] to select the item and press [**◀ ▶**] to change the setting (→ below).



VHS

OPTION		1/2
OSD	• ON	OFF
TAPE SELECT	• T120	T160 T180
BLUE BACK	• ON	OFF
JET NAVIGATOR	• ON	OFF
DELETE NAVIDATA	• NO	YES
JET SEARCH	×27	•×35
SELECT : [OK] -/+ : [EXIT]		
END : MENU		

OPTION		2/2
MTS	• MAIN	SAP MONO
REMOTE CONTROL	• 1	2
DISPLAY	BRIGHT	• DIM OFF
SELECT : [OK] -/+ : [EXIT]		
END : MENU		

To exit the settings screen
Press [MENU] until the screen disappears.

• Underlined items are the factory preset.

■ **Items**

OSD (→ 35, On-screen display)

- [ON]: Messages appear on the television for about five seconds after you perform operations.
- [OFF]: Messages do not appear.

TAPE SELECT

Set the length of tape you are using so the unit can show the correct remaining time.

- [T120]: T30, T60, T90, T120 tapes
- [T160]: T140, T160 tapes
- [T180]: T180 tapes

BLUE BACK

- [ON]: The screen shows a blue background when you play unrecorded portions.
- [OFF]:

JET NAVIGATOR (→ 34)

- [ON]: Jet Navigator data automatically registered.
- [OFF]: Data not registered.

DELETE NAVIDATA

Delete all the Navigation data registered in the unit. See page 34 to delete data on a single tape.

- [NO]:
- [YES]: Then press [ENTER] when you want to delete all the Jet navigator data.

JET SEARCH (→ 28)

Set the speed for JET SEARCH when playing EP and VP tapes.

- [×27] [×35]
- Select ×27 if the picture is poor at ×35.

MTS (→ 39, Changing audio)

Set the MTS (Multi-channel Television Sound Stereo) reception type.

- [MAIN]: To receive stereo broadcasts.
- [SAP]: To receive SAP when being broadcast.
- [MONO]: To receive monaural broadcasts (e.g., when reception is poor).

REMOTE CONTROL (→ 39)

- [1] [2]

DISPLAY

Set the brightness of the unit's display when the unit is in standby mode.

- [BRIGHT]: The display is bright all the time.
- [DIM]: The display dims when the unit is in standby mode.
- [OFF]: The display turns off when the unit is in standby mode.

• When Demo function is on, the display does not turn off even if “OFF” is selected. Select “DEMO OFF” to reduce power consumption (→ 9).

REMOTE CONTROL

Panasonic video cassette recorders use the same remote control system so they may respond unintentionally to a command from this remote control. Change the code on this unit and its remote control (the two must match) if you place another Panasonic video cassette recorder close together.

- Use "1", the factory preset, under normal circumstances.

- 1** While **OPTION** menu is displayed
Press [**▲ ▼**] to select the **"REMOTE CONTROL"**.
- 2** Press [**◀ ▶**] to select the code (1 or 2) and press [**MENU**].
The remote control code on the unit has been set.
- 3** While pressing [**ENTER**] on the remote control, press and hold the numbered button ([1] or [2]) corresponding to the code you selected in step 2.

When the remote control code on the remote is set, "REMOTE" indication (→ below) disappears.

The following is displayed for a few seconds on the main unit when you use a remote control with the different code.



The unit's remote control code

Change its code to match the unit's (→ step 3).

Changing audio

When a stereo and/or SAP broadcast is received, "STEREO" and/or "SAP" appear showing the type of broadcast.

To change the audio
Press [SHIFT]+[AUDIO].

The audio changes as follows:

- When playing a tape:
LR→L→R→Monaural audio track
- While watching the television:
LR→L→R

The table below shows the TV broadcast type, "MTS" settings, and audio recording patterns.

TV broadcast	MTS setting	Audio track		
		Normal (Mono)	Hi-Fi	
			Left	Right
Mono	MAIN or SAP	Mono	Mono	Mono
Stereo	MAIN or SAP	L+R (Mixed)	Left	Right
Mono and SAP	MAIN	Mono	Mono	Mono
	SAP	Mono	Mono	SAP
Stereo and SAP	MAIN	L+R (Mixed)	Left	Right
	SAP	L+R (Mixed)	L+R (Mixed)	SAP

Be sure that "MTS" is set to "MAIN" or "SAP" to record on the Hi-Fi audio tracks.

Note

- Switch to "MONO" for viewing or recording if a stereo or SAP broadcast is impaired by poor reception.
- To resume stereophonic recording, set "MTS" to "MAIN" or "SAP".

Auto bilingual choice function

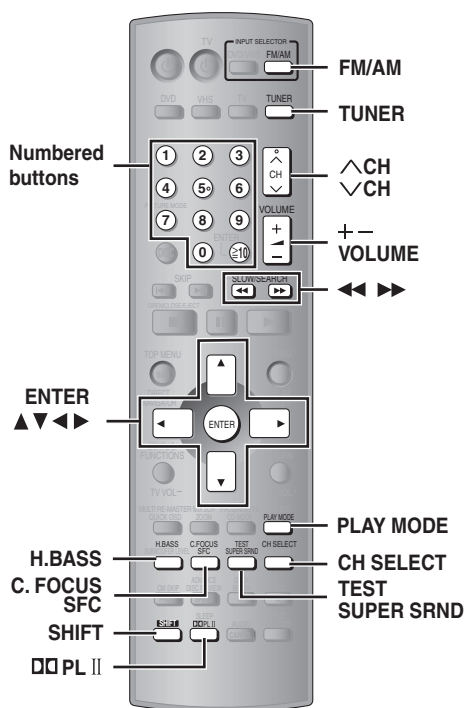
When you play back recordings of stereo or SAP broadcasts, these audio types are automatically selected. The unit may select a different type if you start play midway through the program. Press [SHIFT]+[AUDIO] to change the type if this occurs.

This function does not work if:

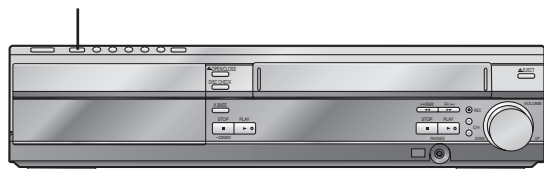
- The tape was recorded on a deck without this system.
- The tape is a recording from external equipment.



Press [TUNER] to put the remote control in TUNER mode.



INPUT SELECTOR



Automatic presetting

Up to 15 stations can each be set in the FM and AM bands.

- 1** Press [FM/AM] to select “FM”.
- 2** Press [<<<] or [>>>] to tune to the lowest frequency (“FM 87.9” MHz or “FM 87.5” MHz).
- 3** Press and hold [ENTER].
Release the button when “AUTO” is displayed.
The tuner presets all the stations it can receive into the channels in ascending order.
 - “SET OK” is displayed when the stations are set. The last station to be set is then played.
 - “ERROR” is displayed when automatic presetting is unsuccessful. Preset the channels manually (→ right).
- 4** Repeat steps 1 to 3 to set the AM bands (the lowest frequency is “AM 520” kHz).

Manual tuning

- 1** Press [FM/AM] to select “FM” or “AM”.
- 2** Press [<<<] or [>>>] to select the frequency.
Press and hold [<<<] or [>>>] until the frequency starts scrolling to start automatic tuning. Tuning stops when a station is found.

■ Presetting the channel one by one

- 1** Tune to the station (→ above).
- 2** Press [ENTER].
- 3** While “PGM” is blinking on the display
Press the numbered buttons to select a channel.
Alternatively, press [^ CH] or [v CH] then press [ENTER].



The station occupying a channel is erased if another station is preset to that channel.

Selecting the preset channels

- 1** Press [FM/AM] to select “FM” or “AM”.
- 2** Press the numbered buttons to select the channel.
Alternatively, press [^ CH] or [v CH].
To select a 2-digit number
e.g. 12: [≧10] → [1] → [2].



When a stereo FM broadcast is being received.



■ If noise is excessive in FM

Press [PLAY MODE] to display “MONO”.

Press [PLAY MODE] again to cancel the mode.

The mode is also canceled when you change the frequency.



■ FM frequency step

Main unit only

The step is factory-set to 0.2 MHz, but you can change it to receive broadcasts allocated in 0.1 MHz steps.

- 1** Press [INPUT SELECTOR] on the main unit to select “FM”.
- 2** Press and hold [INPUT SELECTOR].
After a few seconds the display changes to show the current minimum frequency. Continue to hold the button down. The minimum frequency changes and the step is changed. To return to the original step, repeat the above steps.

Note

Any FM/AM frequencies preset in channels will be changed by this procedure. Preset them again.

Sound field and sound quality

- When connected with headphones, the following sound field systems cannot be used. (Excluding Sound Field Control)
- You may experience a reduction in sound quality when these sound field systems are used with some sources. If this occurs, turn the sound field system off.

C.FOCUS SFC 	Sound Field Control
---	----------------------------

Changes the sound quality.


Press [SFC].

Each time you press the button:

- FLAT:** Cancel (no effect is added) (factory preset).
- HEAVY:** Adds punch to rock.
- CLEAR:** Clarifies higher sounds.
- SOFT:** For background music.
- DISCO:** Reverberates sound to make you feel like you are in a disco.
- LIVE:** Makes vocals more alive.
- HALL:** Expands sound to make you feel like you are in a hall.

To check the current setting

Press [SFC].

TEST SUPER SRND 	Super Surround
---	-----------------------


Adds surround effects to stereo sound.

Press [SUPER SRND].

Each time you press the button:

- MUSIC:** Adds surround effects to stereo sources.
- MOVIE:** Use this mode when playing movie software.
- PARTY:** Sound is in stereo regardless of the direction you are facing.
- OFF:** No sound effect.

- This does not work when you are playing multi channel audio.
- You can adjust the volume of the surround speakers to get the best surround effect (→ Right, Speaker level adjustments).
- When Super Surround is on, Dolby Pro Logic II turns off.

SLEEP DOLBY II 	Dolby Pro Logic II
--	---------------------------

Change stereo sound to surround sound.

Dolby Pro Logic II is an advanced decoder that derives 5 channel surround (Left and Right Front, Center, Left and Right Surround) from any stereo program material, whether or not it has been specifically Dolby Surround encoded.

Press [DOLBY II].

Each time you press the button:

- Movie:** Movie software, recorded in Dolby Surround.
- Music:** Stereo sources.
- Off:** Cancel.

- This works only in DVD/CD mode.
- "DOLBY II" lights when there is effect.
- Dolby Pro Logic II for disc media only.

To cancel

Press [DOLBY II] several times.

- This does not work when playing multi-channel audio.

Software encoded with Dolby Surround can be identified with this mark (DVD, CD, Video CD, Laser Disc, Video tape).



SHIFT + C.FOCUS SFC 	Center Focus
---	---------------------

(Discs where the dialogue is recorded in the center channel)

You can make the sound of the center speaker seem like it is coming from within the television.

Press [SHIFT]+[C.FOCUS].



CENTER FOCUS ON ↔ CENTER FOCUS OFF

- This does not work when Super Surround is turned on.
- This will have less effect when Dolby Pro Logic II is turned on.

SHIFT + TEST SUPER SRND 	Speaker level adjustments
---	----------------------------------

This is one of the ways to get the appropriate surround effect. Adjust the speaker level to the same level as the front speakers.

- Dolby Digital and DTS: Turn off the other sound field systems.
- Dolby Pro Logic II : Press [DOLBY II].

1 While stopped

Press [SHIFT]+[TEST] to output a test signal.

Lch: Front left
Cch: Center
Rch: Front right
RSch: Right surround
LSch: Left surround

- There is no output from SW (subwoofer) channel.

2 Press [VOLUME, +] or [-] to set the volume level normally used for listening.

3 Press [▲] (increase) or [▼] (decrease) to adjust the speaker level for each speaker.

C, RS, LS: -6 dB to +6 dB
(L, R: Only the balance is adjustable.)

- To adjust the balance of the front speakers
While outputting the test signal, press [◀ ▶].

To stop the test signal

Press [SHIFT]+[TEST] again.

■ To adjust speaker level during play (Effective when playing multi-channel audio or Dolby Pro Logic II is on.)

1 Press [SHIFT]+[CH SELECT] to select the speaker.

L→C→R→RS→LS→SW

SW: Subwoofer

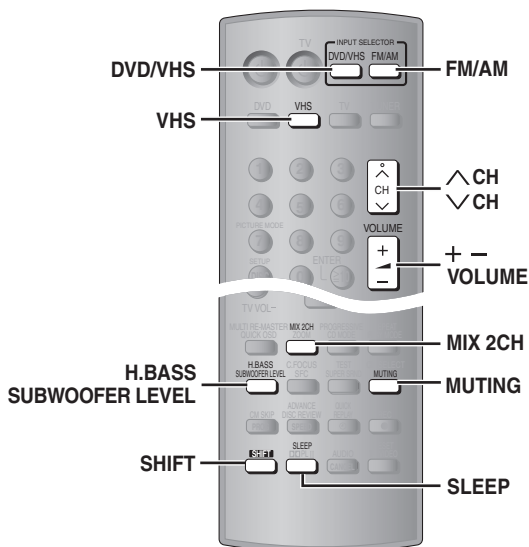
- You can only adjust SW if the disc includes a subwoofer channel.
- S appears instead of RS and LS on the display when "MUSIC" or "MOVIE" is selected with Super Surround (→ Left, Super Surround). In this case, you can adjust both surround speaker levels at the same time.
S: -6 dB to +6 dB

2 Press [▲] (increase) or [▼] (decrease) to adjust the speaker level for each speaker.

C, RS, LS, SW: -6 dB to +6 dB
(L, R: Only the balance is adjustable.)

- To adjust the balance of the front speakers
During play, press [◀ ▶].



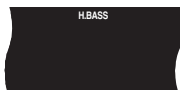


SHIFT + **H.BASS SUBWOOFER LEVEL** **Enhancing the bass sound**

You can enhance low-frequency sound so that heavy bass sound can be heard clearly, even if the acoustics of your room are not optimal. The unit automatically selects the most suitable setting according to the type of playing source.

Press [SHIFT]+[H.BASS].

- When DVD-Video or DVD-RAM is selected
H.BASS ON (factory preset) ←→ H.BASS OFF
- When another source is selected
H.BASS OFF (factory preset) ←→ H.BASS ON



The setting you make is retained, and recalled every time you play the same type of source.

SHIFT + **MIX 2CH ZOOM** **Down-mixing**

You can output the down-mixed 2 channel signal when necessary (e.g. when you intend to record 5.1ch sound on other recording equipment).

Press [SHIFT]+[MIX 2CH].



To cancel
Press [SHIFT]+[MIX 2CH] again.

- Note**
- This works only when you are playing multiple channel signals.
 - When "D.MIX" flashes on the display, the disc contains multiple-channel signals that cannot be down-mixed. **DVD-A**

H.BASS SUBWOOFER LEVEL **Subwoofer level**

You can adjust the amount of bass. The unit automatically selects the most suitable setting according to the type of playing source.

Press [SUBWOOFER LEVEL].

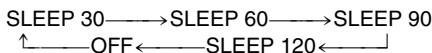


- When DVD-Video or DVD-RAM is selected
SUB W 4 (factory preset) → SUB W 1 → SUB W 2 → SUB W 3
- When another source is selected
SUB W 2 (factory preset) → SUB W 3 → SUB W 4 → SUB W 1

SHIFT + **SLEEP DOPL II** **Sleep timer**

Turns the unit off after a set time.

Press [SHIFT]+[SLEEP] to select the time (in minutes).



- To cancel the timer**
Press [SHIFT]+[SLEEP] to select "OFF".
- To confirm the remaining time**
Press [SHIFT]+[SLEEP] again.
- To change the setting**
Repeat the procedure from the beginning.

- The VHS's timer program recording functions even when the unit is turned off by the sleep timer.

CH SELECT MUTING **Muting**

Mutes the sound.

Press [MUTING].



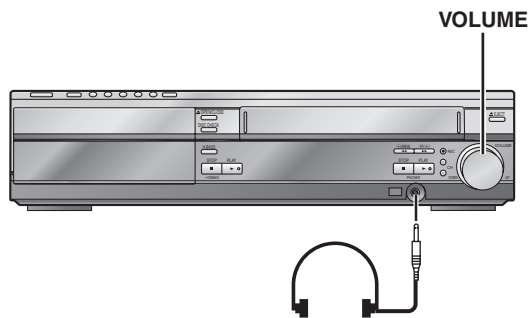
- "MUTING" flashes on the unit's display.

- To cancel**
- Press [MUTING] again or reduce the volume to minimum (--- dB), then raise it to the required level.
- Muting is canceled when you switch the unit to standby or turn up the volume from minimum (--- dB).

Using headphones

1 Reduce the volume and connect the headphones (not included).

Headphone plug type: 3.5 mm (1/8") stereo



2 Adjust headphone volume with [VOLUME].

- Audio is automatically switched to stereo (2-channel).

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

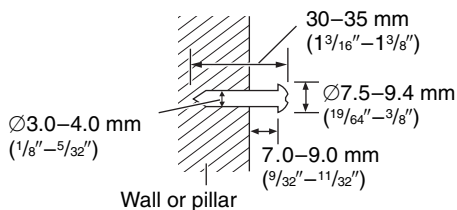


The setting you make is retained, and recalled every time you play the same type of source.

Other speaker setup options

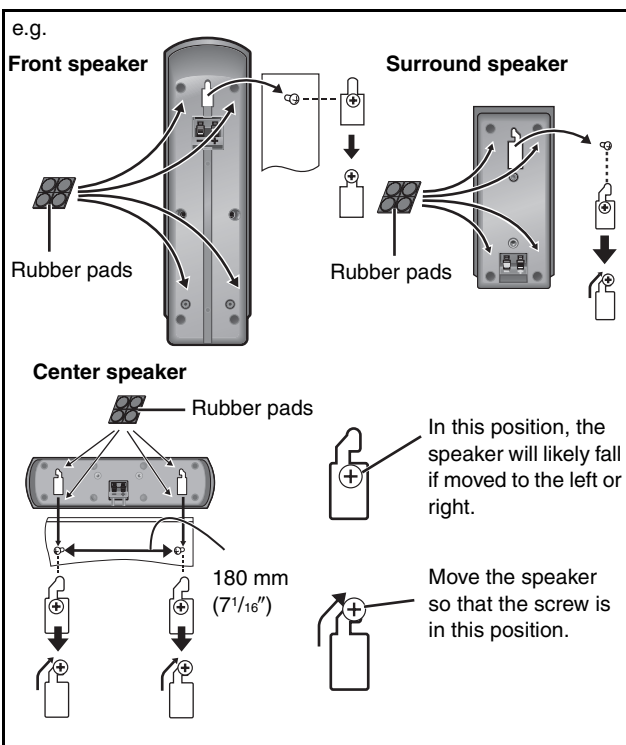
■ Attaching to a wall

- 1 Drive a screw (not included) into a wall.
- 2 Attaching 4 rubber pads to the rear of the speaker.
- 3 Fit the speaker securely onto the screw(s) with the hole(s).



Note

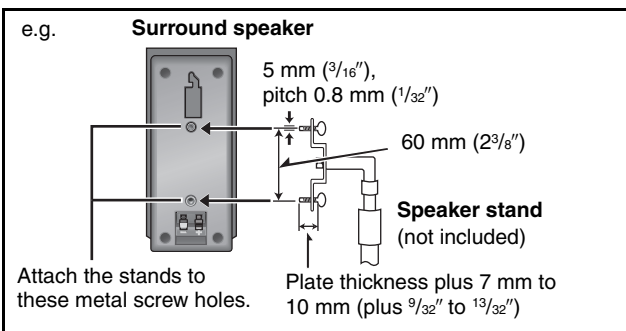
- The wall or pillar on which the speakers are to be attached should be capable of supporting 10 kg (22 lbs) per screw. Consult a qualified building contractor when attaching the speakers to wall. Improper attachment may result in damage to the wall and speakers.
- Use of optional speaker cables is recommended for wall-mounted front speakers. (You can also remove the speaker cables from the pipes supplied with this system).



■ Fitting speaker stands (not included)

Ensure the stands meet these conditions before purchasing them. Note the diameter and length of the screws and the distance between screws as shown in the diagram.

- The stands must be able to support over 10 kg (22 lbs).
- The stands must be stable even if the speakers are in a high position.

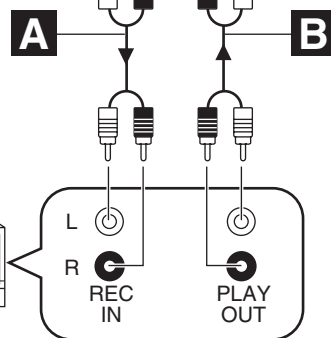
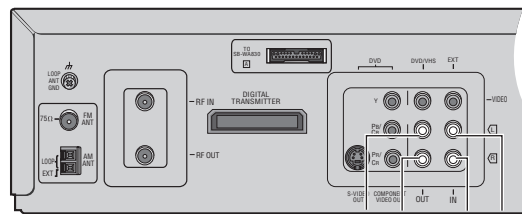


Optional connections

Listening to an external source/ Recording to other equipment

Audio cable (not included)

White (L)
Red (R)



A You can record sound from discs, video cassette tapes, or radio, etc., to a tape deck.

- 1 Discs
Press [DVD/VHS] to select "DVD/CD" as the source.

Video cassette tapes

Press [DVD/VHS] to select "VHS" as the source.

Radio

Press [FM/AM] to select "FM" or "AM".

- 2 Start recording and play.

Refer to the manual of the other unit for details.

B You can play back the sound from a tape deck/laser disc player, etc., through this unit's speakers.

- 1 Press [VHS] to put the remote control in VHS mode.
- 2 Press [DVD/VHS] to select "VHS" as the source.
- 3 Press [\wedge CH] or [\vee CH] to select "AV" channel.
- 4 Start playback from the external source. (For details, refer to external unit's operating instructions manual.)

When connecting a record player

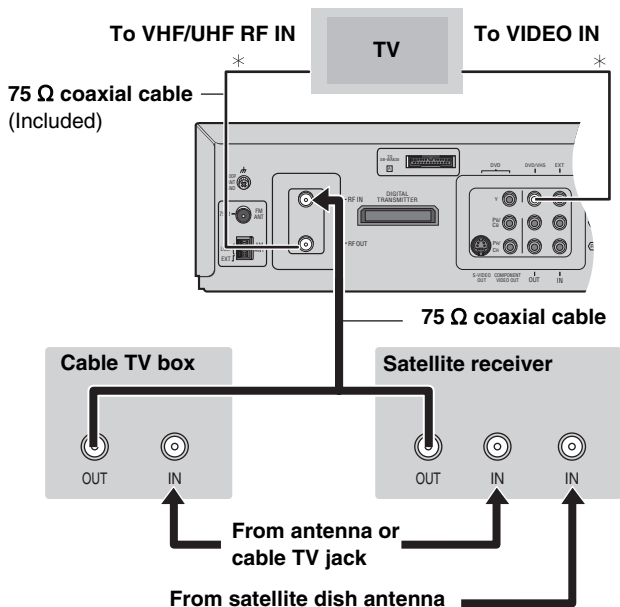
We recommend using a record player with a built-in phono equalizer. If your player doesn't have a built-in equalizer, connect it first to a separate equalizer and then to the unit.



- The equipment connections described are examples.
- Peripheral equipment and optional cables sold separately unless otherwise indicated.
- Before connection, turn off all equipment and read the appropriate operating instructions.

Connecting a cable TV box/satellite receiver

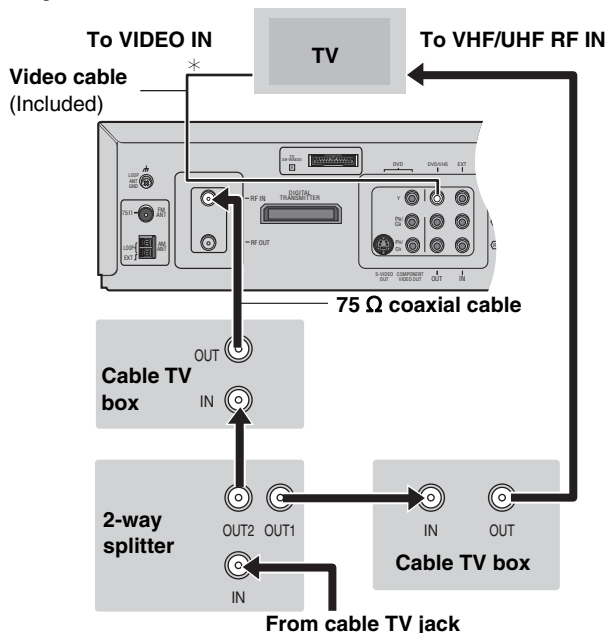
- You need to subscribe to a cable TV or satellite TV service, to enjoy viewing their programming.
- Consult your service provider regarding appropriate cable TV box or satellite receiver.
- Select the applicable input on your television to view the output from your cable TV box/satellite receiver through this unit.
- The signal from the cable TV box or satellite receiver passes through this unit to the television even when this unit is turned off.
- You cannot do a timer recording unless the channel is first selected on the cable TV box or satellite receiver.



Note

When a home satellite system (Dishnetwork/DSS) is connected, auto tuning and auto clock setting may not operate properly. Set the clock manually (→ 36).

- You can record and view simultaneously scrambled and unscrambled channels if connections are made as shown in the diagram below.



* For more information on connections (→ 7)

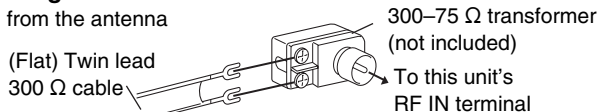
If the antenna connector doesn't match

■ Other antenna connections to the unit

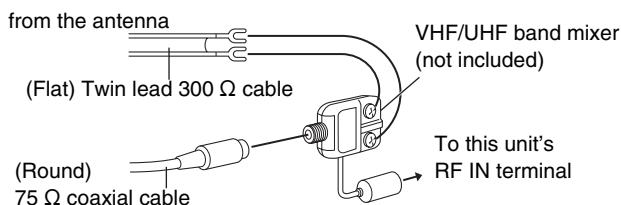
Use one of the following connections to suit the antenna lead.

- If your TV has both lead and coaxial VHF terminals, use the lead connection to minimize signal loss.

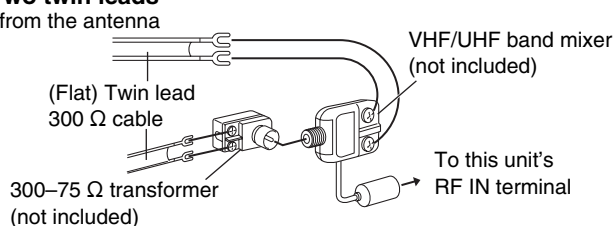
■ A single twin lead



■ A twin lead and a coaxial cable



■ Two twin leads



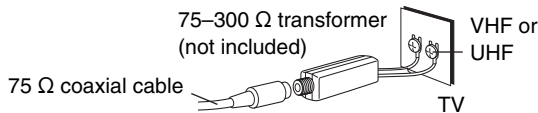
■ Other antenna connections from the unit to the TV

Use one of the following connections to suit the antenna terminals on your TV. Refer to the TV's operating instructions.

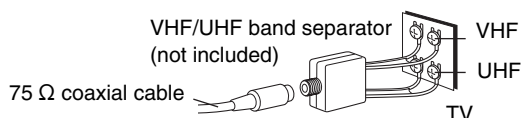
■ A twin lead and coaxial plug terminal



■ A twin lead terminal

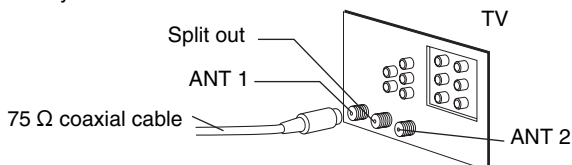


■ Two twin lead terminals



■ Multiple antenna terminals

- Connect to one of ANT terminals, then change the TV's setting as necessary.



Troubleshooting guide

Before requesting service, make the following checks. 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 "Customer Services Directory" on page 49 if you reside in the U.S.A., or refer to the "Product information" on page 50 if you reside in Canada.

Power

Page

No power.	• Insert the AC power supply cords and system cable securely.	9
The unit is automatically switched to the standby mode.	• The Sleep timer was working and had reached the set time limit.	42

Unresponsive or inoperable operation

No response when any buttons are pressed.	<ul style="list-style-type: none"> • This unit cannot play discs other than the ones listed in these operating instructions. • The unit may not be operating properly due to lightning, static electricity or some other external factor. Turn the unit off and then back to ON. Alternatively, turn the unit off, disconnect both AC power supply cords, and then reconnect them. • Condensation has formed: Wait 1 to 2 hours for it to evaporate. 	15 —
No response when remote control buttons are pressed.	<ul style="list-style-type: none"> • Check that the batteries are installed correctly. • The batteries are depleted: Replace them with new ones. • Point the remote control at the remote control sensor and operate. 	11 11 14
Cannot play DVDs.	• CD Mode is on. Press [CD MODE] to turn CD Mode off.	18
No picture or sound.	<ul style="list-style-type: none"> • Check the video and audio connection. • Check the power or input setting of the connected equipment. • Check that the DVD-RAM has something recorded on it. 	7–10 — —
You have forgotten your ratings password. Reset all the settings to Factory Preset.	• While stopped and "DVD/CD" is the source, press [DVD] and then press and hold [■] (DVD) on the main unit and [≥10] on the remote control until "Initialized" disappears from the television. Turn the unit off and on again. All settings will return to the default values.	—
Cannot operate the DVD.	• Press [DVD] to switch the remote control mode to DVD.	—
Cannot operate the VHS.	<ul style="list-style-type: none"> • Press [VHS] to switch the remote control mode to VHS. • The unit is in timer recording standby ("⊖" is on on the unit's display). • The remote control and main unit are using different codes. Change the code on the remote control. 	— 32 39
Cannot operate the TV.	<ul style="list-style-type: none"> • Press [TV] to switch the remote control mode to TV. • Check the TV manufacturer setting. 	— 12
Television reception worsens after connecting the unit.	• This can occur because the signals are being divided between the unit and the television. You can solve this with a signal booster, available from audio-visual suppliers. Consult your dealer if reception does not improve.	—
Cannot eject cassette.	• The unit is recording or in timer recording standby mode. If you need to eject the tape, press [⊖] first so "⊖" goes out.	32

Specific operation impossible or incorrect

It takes time before play starts. MP3	• Play may take time to begin when an MP3 track has still picture data. Even after the track starts, the correct play time will not be displayed, however this is normal.	—
Folders deeper than the eighth layer on a data CD are not displayed correctly. WMA MP3 JPEG	• Folders deeper than the eighth layer are displayed as the eighth layer.	—
Programmed items are not played. DVD-V	• Some items will not be played even if you have programmed them.	—
A menu screen appears during skip or search. VCD	• This is normal for Video CDs.	—
The on-screen menu shows "2" as a soundtrack option when [SHIFT]+[AUDIO] is pressed, but the audio does not change. DVD-A	• Even if a second soundtrack isn't recorded, two numbers will normally be shown.	—
Play restarts from the beginning of the track when soundtrack is changed. DVD-A	• This is normal on DVD-Audio.	—

Subtitle

Subtitle position is wrong.	• Adjust the position. ("Subtitle Position" in Display Menu)	25
No subtitles.	• Display the subtitles.	24
The subtitles overlap closed captions recorded on discs.	• Clear the subtitles.	24

Marker

Cannot add markers.	<ul style="list-style-type: none"> • You cannot add markers with DVD-RAM if the disc's play time doesn't appear on the unit's display. • If the disc's elapsed play time doesn't appear on the unit's display, you cannot add markers. 	— —
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A-B repeat

Point B is automatically determined.	• The end of an item becomes point B when it is reached.	—
A-B repeat is automatically canceled.	• A-B repeat is canceled when you press [QUICK REPLAY].	—

Menu

The Setup menu cannot be accessed.	<ul style="list-style-type: none"> • Select "DVD/CD" as the source. • Cancel playmode and CD Mode play. 	— 20, 21
------------------------------------	---	-------------



Picture incorrect

Picture distorted.	<ul style="list-style-type: none"> ● Ensure that the unit is connected directly to the television, and is not connected through an A/V selector or other equipment. 	7
The television may display incorrectly or colors appear faded.	<ul style="list-style-type: none"> ● The unit and television are using different video systems. Use a multi-system or NTSC television. ● The system used on the disc doesn't match your television. PAL discs cannot be played. This unit converts DVD-Audio recorded in PAL to NTSC for play, however, play may not function properly. 	—
The picture on the television disappears or stripes appear on the screen.	<ul style="list-style-type: none"> ● Mobile telephone chargers can cause some disturbance. ● If you are using a TV indoor antenna, change to an outdoor antenna. ● The television antenna wire is too close to the unit. Separate the antenna wire of the television from the unit. 	—

Disc picture incorrect

Picture size doesn't fit the screen.	<ul style="list-style-type: none"> ● Change "TV Aspect" in "Video" tab. ● Change the Zoom setting. 	26 19
Menus not displayed correctly.	<ul style="list-style-type: none"> ● Restore the zoom ratio to × 1.00. ● Set "Subtitle Position" in Display Menu to "0". 	19 25
Auto zoom function does not work well.	<ul style="list-style-type: none"> ● Turn off TV's zoom function. ● Use the other preset aspect ratios or manual adjustment. ● Zoom function may not work well, especially in dark scenes and may not work depending on the type of disc. 	— 19 —

VHS picture incorrect

The picture is noisy or is in black and white. Horizontal bars or lines run down the screen.	<ul style="list-style-type: none"> ● Adjust the tracking. ● Make sure the television's input setting is correct. ● The video heads are dirty: clean them with a head-cleaning cassette. ● The video heads are worn: consult your dealer. ● The tape is old or damaged. ● You cannot correctly play tapes recorded with other systems (e.g., PAL). 	29 — 47 — — —
Picture is distorted when stilled or during slow-motion.	<ul style="list-style-type: none"> ● Some distortion is normal with tapes recorded using VP mode. 	—
The blue back appears during play.	<ul style="list-style-type: none"> ● You are playing a blank or poor quality part of the tape. ● You can damage the unit if you play dirty or damaged tapes and this can cause the blue back to appear. Consult your dealer. 	— —
The picture jiggles.	<ul style="list-style-type: none"> ● Adjust the vertical hold. 	29

Progressive video

There is ghosting when progressive output is on.	<ul style="list-style-type: none"> ● This problem is caused by the editing method or material used on DVD-Video, but should be corrected if you use interlace output. Change "Video Output Mode" in Picture Menu to "480i". 	25
Pictures not in progressive output.	<ul style="list-style-type: none"> ● If the unit is connected to the television through VIDEO OUT or S-VIDEO OUT output will be interlace. ● Press [SHIFT]+[PROGRESSIVE]. Or select "480p" in "Video Output Mode" in Picture Menu. 	— 17, 25
Closed captions not displayed.	<ul style="list-style-type: none"> ● When progressive output is on, closed captions will not be displayed. 	—


Sound incorrect

Sound distorted.	<ul style="list-style-type: none"> ● Noise may occur when playing WMA files. 	—
Effects do not work.	<ul style="list-style-type: none"> ● Some audio effects do not work or have less effect with some discs. ● Multi Re-master and Dolby Pro Logic II do not work if you have changed the play speed. ● When connected with headphones, only Sound Field Control is effective. 	— — —
Humming heard during play.	<ul style="list-style-type: none"> ● An AC power supply cord or fluorescent light is near the subwoofer. Keep other appliances and cords away from the subwoofer. 	—
There is noise when playing a video tape.	<ul style="list-style-type: none"> ● Adjust the tracking. ● The tape is old or damaged. 	29 —

Listening to the radio

Noise is heard. "ST" flickers or doesn't light. Sound is distorted.	<ul style="list-style-type: none"> ● Adjust the position of the FM or AM antenna. ● Use an outdoor antenna. 	— 10
A beat sound is heard.	<ul style="list-style-type: none"> ● Turn the television off or separate it from the unit. 	—
A low hum is heard during AM broadcasts.	<ul style="list-style-type: none"> ● Separate the antenna from other cables. 	—


Recording

" " flashes when I try to start recording. Cannot record.	<ul style="list-style-type: none"> ● If the erasure prevention tab has been removed, cover the hole with adhesive tape. 	3
Timer recording doesn't record a program correctly.	<ul style="list-style-type: none"> ● Check the clock and calendar. ● Set the channel and start and end times correctly. ● Be sure to press [⊖] after programming to put the unit in timer recording standby. ● Program times may be overlapped. 	— — 32 —
Cannot record from other equipment.	<ul style="list-style-type: none"> ● Press [∧ CH] or [∨ CH] to select "AV". ● Check the connections to the other equipment. 	31 31
Black bands appear in the recording.	<ul style="list-style-type: none"> ● Move the other equipment away from the television as it may be picking up interference. 	—
The copy of a videotape or DVD is very poor.	<ul style="list-style-type: none"> ● This unit complies with industry standards regarding the recording and duplication of copy-protected material. This includes commercial videotapes and DVDs. Consequently, copying not only infringes copyright laws but also presents serious technical difficulties. Even in cases where a copy can be made, the quality will be very poor. 	—



INFO

Unit display

The unit's display lights and changes when the unit is turned off.	<ul style="list-style-type: none"> • Demo function is on. Press and hold [-DEMO] on the main unit to select "DEMO OFF". 	9
The unit's display disappears or fades once the unit is turned off.	<ul style="list-style-type: none"> • The DISPLAY setting is set to "DIM" or "OFF" under OPTION from the VHS MENU. Select "BRIGHT" if you want the display bright all the time. 	38
The tape counter isn't changing.	<ul style="list-style-type: none"> • The tape counter does not change while playing unrecorded parts.  <ul style="list-style-type: none"> • The display also appears like this if the tape is dirty or damaged. Consult your dealer if this is the case. 	—
"NoPLAY"	<ul style="list-style-type: none"> • You inserted a disc the unit cannot play; insert one it can. • You inserted a blank disc. 	15 —
"NoDISC"	<ul style="list-style-type: none"> • You haven't inserted a disc; insert one. • You haven't inserted the disc correctly; insert it correctly. 	— 16
"F61"	<ul style="list-style-type: none"> • Check and correct the speaker cord connections. If this does not fix the problem, there is a power supply problem. Consult the dealer. 	5, 7
"U11"	<ul style="list-style-type: none"> • Disc is dirty. Wipe it clean. 	15
"U15"	<ul style="list-style-type: none"> • You inserted a DVD-R that has not been finalized. 	15
"ERROR"	<ul style="list-style-type: none"> • Incorrect operation performed. Read the instructions and try again. 	—
"REMOTE"	<ul style="list-style-type: none"> • The remote control and main unit are using different codes. Change the code on the remote control. 	38
"H□□", "F□□" □□ stands for a number.	<ul style="list-style-type: none"> • Trouble may have occurred. The number following "H" or "F" depends on the status of the unit. Turn the unit off and then back to ON. Alternatively, turn the unit off, disconnect both AC power supply cords, and then reconnect them. • If the service numbers fail to clear, note the service number and contact a qualified service person. 	— —
"W" is flashing. (When using optional SH-FX50)	<ul style="list-style-type: none"> • There is no link between the main unit and the receiver. Check that the receiver is turned on. • Ensure that the digital transmitter is fully inserted into the slot of the main unit. • This is normal when you set VHS audio type to mono sound mode. 	— — 9, 35
"W01" is flashing. (When using optional SH-FX50)	<ul style="list-style-type: none"> • Re-initialize the main unit: While stopped and "DVD/CD" is the source, press and hold [■] on the main unit and [≥10] on the remote control until "Initialized" disappears from the television. Turn the unit off and on again. If the problem persists, contact a qualified service person. 	—

Television display

"⊙"	<ul style="list-style-type: none"> • The operation is prohibited by the unit or disc. 	—
"Cannot display group xx, content xx"	<ul style="list-style-type: none"> • You are trying to display incompatible contents. 	23
"This disc may not be played in your region"	<ul style="list-style-type: none"> • You can only play DVD-Video if their region number is "1" or if the DVD-Video is marked "ALL". 	Cover
No on-screen display.	<ul style="list-style-type: none"> • Select "On" in "On-Screen Messages" in "Display" tab. • Select "ON" in "OSD" of "OPTION" setting in the VHS MENU. 	27 38
The menu is displayed in a different language.	<ul style="list-style-type: none"> • Select the preferred language in "Menus" in "Disc" tab. • Select the preferred language in "LANGUAGE" in the VHS MENU. 	26 36

Maintenance

Clean this unit with a soft, dry cloth.

- Never use alcohol, paint thinner or benzine to clean this unit.
- Before using chemically treated cloth, read the instructions that came with the cloth carefully.
- Do not use commercially available lens cleaners as they may cause malfunction. (Cleaning of the lens is generally not necessary although this depends on the operating environment.)

Before moving the unit, ensure the disc trays are empty. Failure to do so will risk severely damaging the discs and the unit.

Cleaning the video heads

Dirt on the video heads can cause poor recording and play.



To clean the heads, insert and eject a tape 5 to 10 times in succession.

If the picture does not improve, use an optional head-cleaning cassette (part number NV-TCL30PT). If the problem persists, seek advice from a qualified service person.



Specifications

■ AMPLIFIER SECTION

System SC-HT830V

RMS output power, 10 % total harmonic distortion	
1 kHz FL/FR	70 W per channel 4 Ω
1 kHz Center	260 W per channel 4 Ω
1 kHz SL/SR	70 W per channel 4 Ω
100 Hz Subwoofer	260 W per channel 4 Ω
Total RMS Dolby Digital mode power	800 W
FTC output power, 1 % total harmonic distortion	
120 Hz–20 kHz FL/FR	45 W per channel 4 Ω
120 Hz–20 kHz Center	140 W per channel 4 Ω
120 Hz–20 kHz SL/SR	45 W per channel 4 Ω
45 Hz–120 Hz Subwoofer	150 W per channel 4 Ω
Total FTC power in Dolby Digital mode (Band 1 % THD)	470 W
Input sensitivity	
AUX	250 mV
Input impedance	20 kΩ

System SC-HT833V

RMS output power, 10 % total harmonic distortion	
1 kHz FL/FR	65 W per channel 4 Ω
1 kHz Center	240 W per channel 4 Ω
1 kHz SL/SR	65 W per channel 4 Ω
100 Hz Subwoofer	250 W per channel 4 Ω
Total RMS Dolby Digital mode power	750 W
FTC output power, 1 % total harmonic distortion	
120 Hz–20 kHz FL/FR	42 W per channel 4 Ω
120 Hz–20 kHz Center	128 W per channel 4 Ω
120 Hz–20 kHz SL/SR	42 W per channel 4 Ω
45 Hz–120 Hz Subwoofer	144 W per channel 4 Ω
Total FTC power in Dolby Digital mode (Band 1 % THD)	440 W
Input sensitivity	
AUX	250 mV
Input impedance	20 kΩ

■ SPEAKER SECTION

Front speakers SB-FS730

Type	2 way, 2 speaker system, Bass reflex
Speaker unit(s)	
1. FULL RANGE	6.5 cm (2 ¹ / ₂ "), cone type, 4 Ω
2. TWEETER	6 cm (2 ³ / ₈ "), cone type, 4 Ω
Input power (IEC)	70 W (Music)
Output sound pressure	81 dB/W (1.0 m)
Cross over frequency	6 kHz
Frequency range	80 Hz–41 kHz (–16 dB) 95 Hz–40 kHz (–10 dB)
Dimensions	218 mm (W) × 984–1080 mm (H) × 241 mm (D) (8 ⁹ / ₁₆ " × 38 ³ / ₄ " – 42 ¹ / ₂ " × 9 ¹ / ₂ ")
Mass	2.66 kg (5.86 lbs)

Center speaker SB-PC730

Type	2 way, 3 speaker system, Bass reflex
Speaker unit(s)	
1. FULL RANGE	6.5 cm (2 ¹ / ₂ "), cone type, 4 Ω
2. SUPER TWEETER	Piezo type, 4 Ω
Input power (IEC)	260 W (Music)
Output sound pressure	83 dB/W (1.0 m)
Cross over frequency	10 kHz
Frequency range	103 Hz–25 kHz (–16 dB) 116 Hz–22 kHz (–10 dB)
Dimensions	320 mm (W) × 84 mm (H) × 95.5 mm (D) (12 ⁵ / ₈ " × 3 ³ / ₁₆ " × 3 ³ / ₄ ")
Mass	1.29 kg (2.84 lbs)

Surround speakers SB-FS731

Type	1 way, 1 speaker system, Bass reflex
Speaker unit(s)	
1. FULL RANGE	6.5 cm (2 ¹ / ₂ "), cone type, 4 Ω
Input power (IEC)	70 W (Music)
Output sound pressure	80 dB/W (1.0 m)
Frequency range	88 Hz–25 kHz (–16 dB) 100 Hz–22 kHz (–10 dB)
Dimensions	90 mm (W) × 191 mm (H) × 117 mm (D) (3 ⁹ / ₁₆ " × 7 ¹ / ₂ " × 4 ⁵ / ₈ ")
Mass	0.72 kg (1.59 lbs)

Active subwoofer SB-WA830, SB-WA833

Type	1 way, 2 speaker system, Bass reflex
Speaker unit(s)	
Woofers	13 cm (5 ¹ / ₈ "), cone type, 4 Ω
Output sound pressure	80 dB/W (1.0 m)
Frequency range	40 Hz–220 Hz (–16 dB) 45 Hz–180 Hz (–10 dB)
Dimensions	200 mm (W) × 367.5 mm (H) × 492 mm (D) (7 ⁷ / ₈ " × 14 ⁷ / ₁₆ " × 19 ³ / ₈ ")
Mass	11.3 kg (24.95 lbs)

■ DISC SECTION

Discs played [8 cm (3") or 12 cm (5")]

- (1) DVD-RAM (DVD-VR formatted discs, JPEG formatted discs)
- (2) DVD-Audio
- (3) DVD-Video
- (4) DVD-R, DVD-RW (DVD-Video compatible)
+R, +RW (Video compatible)
- (5) CD-Audio (CD-DA)
- (6) Video CD
- (7) SVCD (Conforming to IEC62107)
- (8) CD-R/CD-RW (CD-DA, Video-CD, SVCD, MP3, WMA, JPEG formatted discs)
- (9) MP3/WMA

- Maximum number of tracks and groups recognizable: 4000 tracks and 400 groups
- Compatible compression rate:
MP3: between 32 kbps and 320 kbps
WMA: between 48 kbps and 320 kbps
- (10) JPEG
 - Exif Ver 2.1 JPEG Baseline files
 - Maximum number of pictures and groups recognizable: 4000 pictures and 400 groups
 - Picture resolution: between 320×240 and 6144×4096 pixels (sub sampling is 4:2:2 or 4:2:0)
- (11) HighMAT™ Level 2 (Audio and Image)

Video

Signal system	NTSC
Output level	Composite video: 1 Vp-p (75 Ω) S-video: 1 Vp-p (Y), 0.286 Vp-p (C) (75 Ω) Component video: 1 Vp-p (Y) (75 Ω) 0.7 Vp-p (P _B /C _B , P _R /C _R) (75 Ω)

Audio

Sampling frequency	
CD	44.1 kHz
MP3	32 kHz, 44.1 kHz, 48 kHz
DVD VIDEO	48 kHz, 96 kHz
DVD-Audio	192 kHz
Decoding	16/20/24 bit linear
Pick up	
Beam Source	Semiconductor Laser
Wavelength	
CD/VCD	785 nm
DVD	662 nm
Number of channels	5.1 ch (FL, FR, SL, SR, C, SW)
Frequency response	20 Hz–20 kHz (+1, –2 dB)

■ VHS SECTION

Video recording system	2 rotary heads, helical scanning system
Video heads	4 heads
Audio heads	2 heads
Tape speed	SP: 33.35 mm/s, EP: 11.12 mm/s
Tape format	VHS tape
Recording/playback time	SP: 120 min. with NV-T120 EP: 360 min. with NV-T120
FF/REW time	Approx. 54 s. with NV-T120 (FF/REW) Approx. 36 s. with NV-T120 (JET REW)

VIDEO

Television system	EIA: Standard (525 lines, 60 fields), NTSC color signal
Modulation system	Luminance: FM azimuth recording Color signal: converted subcarrier phase shift recording
Input level	VIDEO IN: 1 Vp-p, 75 Ω
Output level	VIDEO OUT: 1 Vp-p, 75 Ω
Antenna receive input	VHF 2–13 CH, 75 Ω UHF 14–69 CH, 75 Ω CATV 5A and A-5-EEE CH, 75 Ω

AUDIO

Input level	AUDIO IN (PHONO): –10 dBV, 47 kΩ
Output level	AUDIO OUT (PHONO): –8 dBV, 1 kΩ
Audio track	1 track (normal-mono only), 2 channels (Hi-Fi sound stereo)
Video horizontal resolution	Color: more than 200 lines
Signal-to-Noise ratio	Video: more than 40 dB/SP Audio: more than 60 dB/Hi-Fi
Audio frequency response	20 Hz–20 kHz/Hi-Fi
Wow and flutter	0.005 %

■ FM TUNER SECTION

Frequency range	87.9–107.9 MHz (200 kHz step) 87.5–108.0 MHz (100 kHz step)
Sensitivity	2.5 μV (IHF)
S/N 26 dB	2.2 μV
Antenna terminals	75 Ω (unbalanced)
Preset station	15

■ AM TUNER SECTION

Frequency range	520–1710 kHz (10 kHz step)
AM Sensitivity S/N 20 dB at 1000 kHz	560 μV/m
Preset station	15

■ GENERAL

RF converter	Not provided
Power supply	AC 120 V, 60 Hz
Power consumption	
Main unit	38 W
Subwoofer [SB-WA830, SB-WA833]	340 W
Dimensions	430 mm (W) × 105 mm (H) × 354 mm (D) (16 ¹⁵ / ₁₆ " × 4 ¹ / ₈ " × 13 ¹⁵ / ₁₆ ")
Mass	4.5 kg (9.92 lbs)

Power consumption in standby mode (when Demo function is off)	
BRIGHT mode	Approx. 3.7 W (main unit) + 0 W (subwoofer)
DIM mode	Approx. 3.4 W (main unit) + 0 W (subwoofer)
OFF mode	Approx. 1.9 W (main unit) + 0 W (subwoofer)

Note

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



INFO

Limited Warranty (ONLY FOR U.S.A.)

Panasonic Consumer Electronics Company,
Division of Panasonic Corporation of North America
One Panasonic Way, Secaucus, New Jersey 07094

Panasonic Puerto Rico, Inc.
Ave. 65 de Infantería, Km. 9.5
San Gabriel Industrial Park, Carolina, Puerto Rico 00985

Panasonic Audio Products Limited Warranty

Limited Warranty Coverage

If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Electronics Company or Panasonic Puerto Rico, Inc. (collectively referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

Product or Part Name	Parts	Labor
Audio Products (except items listed below)	One (1) year	One (1) year
USB Reader-Writer, Personal Computer Card Adapters (in exchange for defective item)	One (1) year	Not Applicable
Accessories: Headphones, Cartridges, Microphones, Adapters	Ninety (90) days	Ninety (90) days
Rechargeable Batteries, DVD-R/-RAM Discs (in exchange for defective item)	Ten (10) days	Not Applicable
SD Memory Cards, Rechargeable Battery Packs (in exchange for defective item)	Ninety (90) days	Not Applicable

During the "Labor" warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must carry-in or mail-in your product during the warranty period. If non-rechargeable batteries are included, they are not warranted. This warranty only applies to products purchased and serviced in the United States or Puerto Rico. This warranty is extended only to the original purchaser of a new product which was not sold "as is". A purchase receipt or other proof of the original purchase date is required for warranty service.

Carry-In or Mail-In Service

For Carry-In or Mail-In Service in the United States call 1-800-211-PANA (1-800-211-7262) or visit Panasonic web site: <http://www.panasonic.com>
For assistance in Puerto Rico call Panasonic Puerto Rico, Inc. (787)-750-4300 or fax (787)-768-2910.

Limited Warranty Limits And Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or commercial use (such as in a hotel, office, restaurant, or other business), rental use of the product, service by anyone other than a Factory Servicenter or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, travel to and from the servicer, loss of media or images, data or other memory content. The items listed are not exclusive, but are for illustration only.) **ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the warrantor's Consumer Affairs Department at the addresses listed for the warrantor.

PARTS AND SERVICE WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY ARE YOUR RESPONSIBILITY.

Customer Services Directory

Obtain Product Information and Operating Assistance; locate your nearest Dealer or Servicenter; purchase Parts and Accessories; or make Customer Service and Literature requests by visiting our Web Site at:

<http://www.panasonic.com/consumersupport>

or, contact us via the web at:

<http://www.panasonic.com/contactinfo>

You may also contact us directly at:

1-800-211-PANA (7262),

Monday-Friday 9 am-9 pm; Saturday-Sunday 10 am-7 pm, EST.

For hearing or speech impaired TTY users, TTY : 1-877-833-8855

Accessory Purchases

Purchase Parts, Accessories and Instruction Books online for all Panasonic Products by visiting our Web Site at:

<http://www.pasc.panasonic.com>

or, send your request by E-mail to:

npcparts@us.panasonic.com

You may also contact us directly at:

1-800-332-5368 (Phone) 1-800-237-9080 (Fax Only) (Monday – Friday 9 am to 8 pm, EST.)

Panasonic Services Company

20421 84th Avenue South, Kent, WA 98032

(We Accept Visa, MasterCard, Discover Card, American Express, and Personal Checks)

For hearing or speech impaired TTY users, TTY : 1-866-605-1277

Service in Puerto Rico

Panasonic Puerto Rico, Inc.

Ave. 65 de Infantería, Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985

Phone (787)750-4300, Fax (787)768-2910

F1104



Limited Warranty (ONLY FOR CANADA)

Panasonic Canada Inc.

5770 Ambler Drive, Mississauga, Ontario L4W 2T3

PANASONIC/TECHNICS PRODUCT—LIMITED WARRANTY

Panasonic Canada Inc. warrants this product to be free from defects in material and workmanship and agrees to remedy any such defect, or at its option, replace the product for a period as stated below from the date of original purchase.

Technics Audio Product

One (1) year, parts and labour

Panasonic Audio & DVD Product

One (1) year, parts and labour

Accessories including rechargeable batteries

Ninety (90) days

LIMITATIONS AND EXCLUSIONS

This warranty does not apply to products purchased outside Canada or to any product which has been improperly installed, subjected to usage for which the product was not designed, misused or abused, damaged during shipping, or which has been altered or repaired in any way that affects the reliability or detracts from the performance, nor does it cover any product which is used commercially. Dry cell batteries are also excluded from coverage under this warranty.

This warranty is extended to the original end user purchaser only. A purchase receipt or other proof of date of original purchase is required before warranty service is performed.

THIS EXPRESS, LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT WILL PANASONIC CANADA INC. BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES.

In certain instances, some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, or the exclusion of implied warranties, so the above limitations and exclusions may not be applicable.

WARRANTY SERVICE

For product operation and information assistance, please contact your Dealer or our Customer Care Centre at: Telephone #: (905) 624-5505
Fax #: (905) 238-2360 Web: www.panasonic.ca

For product repairs, please contact one of the following:

- Your Dealer who will inform you of an authorized Servicentre nearest you.
- Our Customer Care Centre at (905) 624-5505 or www.panasonic.ca
- A Panasonic Factory Servicentre listed below:

Richmond, British Columbia

Panasonic Canada Inc.
12111 Riverside Way
Richmond, BC
V6W 1K8
Tel: (604) 278-4211
Fax: (604) 278-5627

Calgary, Alberta

Panasonic Canada Inc.
6835-8th St. N. E.
Calgary, AB
T2E 7H7
Tel: (403) 295-3955
Fax: (403) 274-5493

Mississauga, Ontario

Panasonic Canada Inc.
5770 Ambler Dr.
Mississauga, ON
L4W 2T3
Tel: (905) 624-8447
Fax: (905) 238-2418

Lachine, Québec

Panasonic Canada Inc.
3075, rue Louis A. Amos
Lachine, QC
H8T 1C4
Tel: (514) 633-8684
Fax: (514) 633-8020

IF YOU SHIP THE PRODUCT TO A SERVICENTRE

Carefully pack and send prepaid, adequately insured and preferably in the original carton.
Include details of the defect claimed, and proof of date of original purchase.

Product Service

- 1. Damage requiring service**—The unit should be serviced by qualified service personnel if:
 - (a) The AC power supply cord or AC adaptor has been damaged; or
 - (b) Objects or liquids have gotten into the unit; or
 - (c) The unit has been exposed to rain; or
 - (d) The unit does not operate normally or exhibits a marked change in performance; or
 - (e) The unit has been dropped or the cabinet damaged.
- 2. Servicing**—Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.
- 3. Replacement parts**—When parts need replacing ensure the servicer uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other hazards.
- 4. Safety check**—After repairs or service, ask the servicer to perform safety checks to confirm that the unit is in proper working condition.

The servicer will require all components to service your system.
Therefore, should service ever be necessary, be sure to bring the entire system.

Product information

For product information or assistance with product operation:

In the U.S.A., refer to "Customer Services Directory" on page 49.

In Canada, contact the Panasonic Canada Inc. Customer Care Centre at 1-800-561-5505, or visit the website (www.panasonic.ca), or an authorized Servicentre closest to you.



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Listening caution



Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion—and, most importantly, without affecting your sensitive hearing.

We recommend that you avoid prolonged exposure to excessive noise.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing.

Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

To establish a safe level:

- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:

- Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

Accessories



Please check and identify the supplied accessories. Use numbers indicated in parentheses when asking for replacement parts. (Product numbers correct as of December 2004. These may be subject to change.)

(Only for U.S.A.)

To order accessories, refer to "Accessory Purchases" on page 49.

(Only for Canada)

To order accessories, call the dealer from whom you have made your purchase.

1 Remote control
(EUR7722XJ0)

2 Batteries
for remote control

2 AC power supply cords
(K2CB2CB00006)

1 AM loop antenna
(N1DAAAA00002)

1 FM indoor antenna
(RSA0007-L)

1 Video cable
(RJL1P016B15A)

1 75 Ω coaxial cable
(VJA1125)

1 System cable
(K1HA25HA0001)

3 Speaker cables
1×4 m (13 foot) cables
(REEX0449B-1K)
2×10 m (33 foot) cables
(REEX0449G-1K)

1 Sheet of speaker-cable stickers

2 Pipes A
(RYQV0057-1)

2 Pipes B
(RMAV0033-S)

2 Bases
(RYQV0058-S)

2 Brackets
(RMAV0032-S)

4 Washer screws
(XTW5+10LFJ)

4 Bracket screws
(XSN5+10FN)

2 Small screws
(XTB3+8FFJ)

20 Rubber pads
(RKA0072-KJ)

User memo:

DATE OF PURCHASE _____
DEALER NAME _____
DEALER ADDRESS _____
TELEPHONE NUMBER _____

The model number and serial number of this product can be found on either the back or the bottom of the unit. Please note them in the space provided below and keep for future reference.

MODEL NUMBER _____
SERIAL NUMBER _____

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