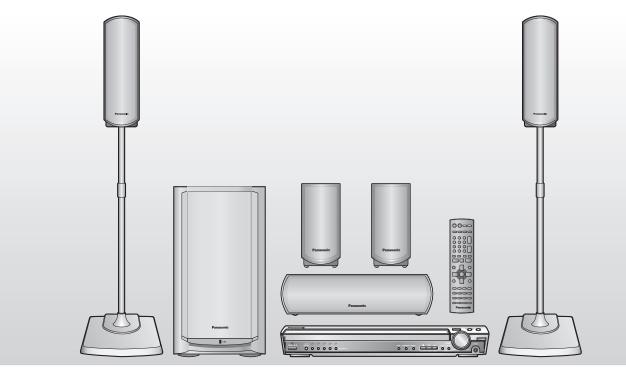


The illustration shows SC-HT730.



# Operating Instructions *DVD Home Theater Sound System* Model No. **SC-HT730/SC-HT733/ SC-HT930/SC-HT933**

Advanced progressive scan page 11 Provides a smoother and sharper image.

Compatible with a variety of media formats page 15 DVD-RAM, DVD-Audio, DVD-Video and more.

#### **Region number**

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











# U.S.A. and Canada



As an ENERGY STAR<sup>®</sup> Partner,<sup>\*\*</sup> Panasonic has determined that this product meets the ENERGY STAR<sup>®</sup> guidelines for energy efficiency.

\* For Canada only: The word "Participant" is used in place of the word "Partner".



# High performance sound effects page 30

Sound field control (SFC), Bass sound enhancement and more.

If you have any questions contact 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.



# Dear customer

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

HT730: indicates features applicable to SC-HT730 only. HT733: SC-HT733 only. HT930: SC-HT930 only. HT933: SC-HT933 only.

- •These operating instructions are applicable to models SC-HT730, SC-HT733, SC-HT930 and SC-HT933 for a variety of regions.
- •Unless otherwise indicated, illustrations in these operating instructions are of SC-HT730 for U.S.A. and Canada.
- •Operations in these instructions are described mainly with the remote control, but you can perform the operations on the main unit if the controls are the same.

System	SC-HT730	SC-HT733	SC-HT930	SC-HT933
Main unit	SA-HT730	SA-HT733	SA-HT930	SA-HT933
Front speakers	SB-FS730	SB-FS730	SB-FS930	SB-PF920
Center speaker	SB-PC730	SB-PC730	SB-PC930	SB-PC920
Surround speakers	SB-FS731	SB-FS731	SB-FS931	SB-PS920
Active subwoofer	SB-WA730	SB-WA733	SB-WA930	SB-WA933

# 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.
- •DO NOT OBSTRUCT THE UNIT'S VENTILATION OPENINGS WITH NEWSPAPERS, TABLECLOTHS, CURTAINS, AND SIMILAR ITEMS.
- •DO NOT PLACE SOURCES OF NAKED FLAMES, SUCH AS LIGHTED CANDLES, ON THE UNIT.
- •DISPOSE OF BATTERIES IN AN ENVIRONMENTALLY FRIENDLY MANNER.

This product may receive radio interference caused by mobile telephones during use. If such interference is apparent, please increase separation between the product and the mobile telephone.

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

For units with PX printed on the outer packaging THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.

# For units with PX printed on the outer packaging **CAUTION:**

The AC voltage is different according to the area. Be sure to set the proper voltage in your area before use. (For details, please refer to page 12.)

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

# FCC Note:

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.

Responsible Party: Panasonic Corporation of North America One Panasonic Way Secaucus, NJ 07094 Telephone No.: 1-800-211-7262

#### THE FOLLOWING APPLIES ONLY IN THE U.S.A. AND CANADA



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.

# E OF CONTEN

# Getting started

# 

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# **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.
- Do not use this apparatus near water. 5)
- 6) Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with 7) 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.

#### U.S.A. and Canada 9)

Do not defeat the safety purpose of the polarized or groundingtype 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.

CAUTION	<ul> <li>LASER RADIATION WHEN OPEN.</li> <li>DO NOT STARE INTO BEAM.</li> </ul>	FDA 21 CFR / Class II
CAUTION	<ul> <li>VISIBLE AND INVISIBLE LASER RADIATION AVOID EXPOSURE TO BEAM.</li> </ul>	ON WHEN OPEN. IEC60825-1 / Class 3b
VARNING	<ul> <li>SYNLIG OCH OSYNLIG LASERSTRÄLNIN ÖPPNAD. BETRAKTA EJ STRÄLEN.</li> </ul>	IG NÅR DENNA DEL ÄR
ADVARSEL	<ul> <li>SYNLIG OG USYNLIG LASERSTRÅLING UNDGÅ UDSÆTTELSE FOR STRÅLING.</li> </ul>	VED ÅBNING.
ADVARSEL	<ul> <li>SYNLIG OG USYNLIG LASERSTRÅLING I UNNGÅ EKSPONERING FOR STRÅLEN.</li> </ul>	NÅR DEKSEL ÅPNES.
VARO!	AVATTAESSA OLET ALTTIINA NÄKYVÄÄ . LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEE	
VORSICHT	<ul> <li>SICHTBARE UND UNSICHTBARE LASER ABDECKUNG GEÖFFNET. NICHT DEM</li> </ul>	
ATTENTION	<ul> <li>RAYONNEMENT LASER VISIBLE ET INVIS D'OUVERTURE. EXPOSITION DANGER</li> </ul>	
注意	<ul> <li>打开时有可见及不可见激光辐射。避免;</li> </ul>	激光束照射.
注意	<ul> <li>ここを開くと可視及び不可視レー*</li> <li>ビームを見たり、触れたりしない**</li> </ul>	

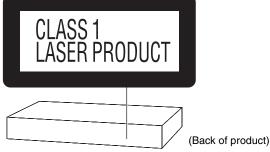
10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Accessories..... Back cover

- 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.
- Refer all servicing to gualified service personnel. Servicing is 14) 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.



The laser product label has not been attached to products for the U.S.A. and Canada

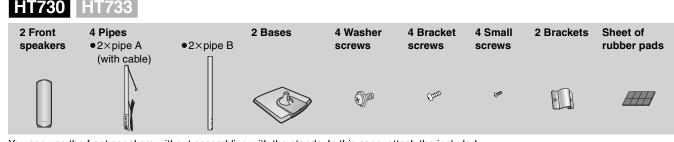
# Simple setup



The supplied stands are specially designed for attachment to Panasonic SB-FS730, SB-FS930 or SB-PF920 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.

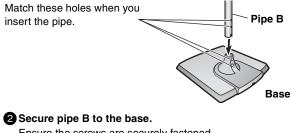


You can use the front speakers without assembling with the stands. In this case, attach the included rubber pads to the base of the speakers. This prevents vibration from causing the speakers to move or fall over. Use 3 or 4 pads per speaker.

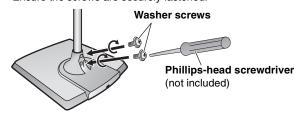


# **1** Attach the pipes to the bases.

# Insert pipe B.



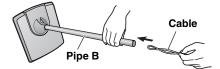
Ensure the screws are securely fastened.



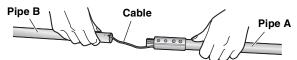
# $2\,$ Assemble the pipes.

# 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.

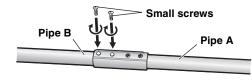


# **2** Join pipe A to pipe B.



**3** Secure the pipes.

Ensure the screws are securely fastened.

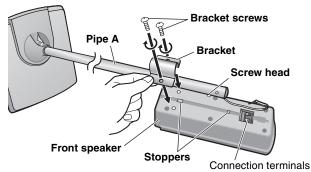


# ${f 3}$ Attach the pipes to the speakers.

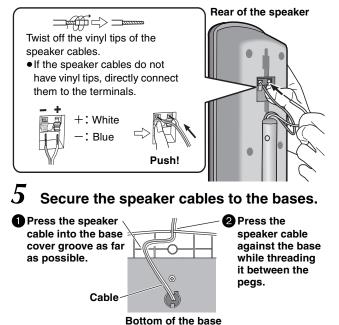
Slot the screw head in between the 2 stoppers of the speaker groove.

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

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



# **4** Connect the speaker cables.



 HT930
 Note To prevent the speaker cables from being pulled out of the pipes, leave the plastic wrap on the pipes while assembling the speaker stands.

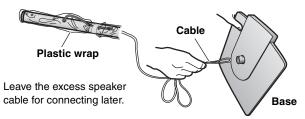
 2 Front speakers
 2 Pipes
 2 Bases
 4 Long screws
 4 Short screws

 Image: I

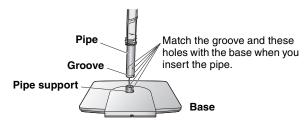
# Assemble the speaker stands.

# 1 Thread the speaker cable through the base.

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



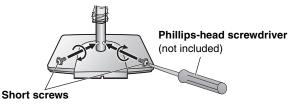
2 Insert the pipe.



Insert the pipe while gently pulling on the speaker cable.

# **3** Secure the pipe to the base.

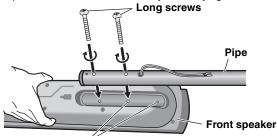
Ensure the screws are securely fastened.



Before proceeding to the next step, please remove the plastic wrap from the pipe.

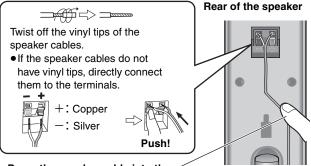
# 2 Attach the stands to the speakers.

Ensure the stand is fastened on straight by gradually tightening the top and bottom screws alternately until fully tightened.



You can also attach to the lower rear of the speaker. The height of the speaker can be changed when attaching the stand to the upper rear or lower rear of the speaker.

# 3 Connect the speaker cables.



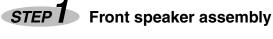
Press the speaker cable into the groove.

If there is any excess speaker cable, thread the speaker cable into the opening near the top of the pipe while pulling the speaker cable from the bottom of the base.

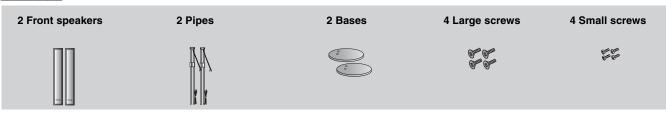
# **4** Secure the speaker cables to the bases.



# Simple setup

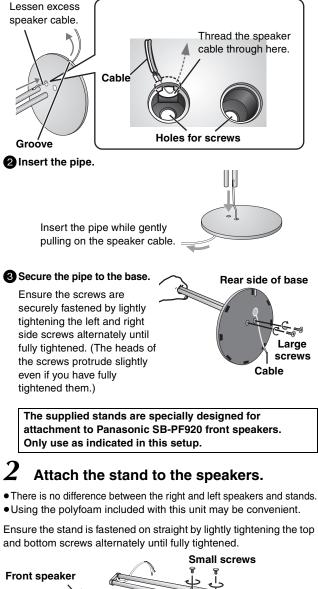


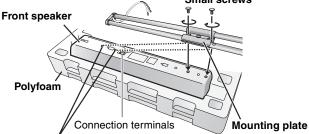
# HT933



# Attach the pipe to the base.

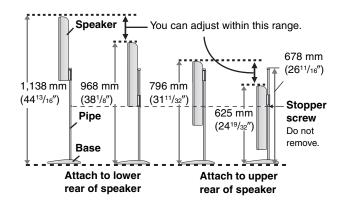
1 Thread the speaker cable through the base.





You can also attach to the upper rear of the speaker. The height of the speaker is indicated in the diagram on the right when attaching the stand to the upper rear or lower rear of the speaker.

Front speaker height (Assembled diagram)



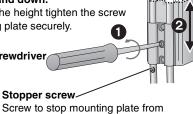
#### 3 Adjust the speaker height.

- Check the screws you tightened in procedures 1 and 2 if the pipe and speaker are loose.
- e.g. Attaching the stand to the lower rear
- Loosen the attached speaker mounting plate screw until the attached speaker is slightly loose and adjustable.

Be careful not to loosen the screw too much or the speaker may detach and fall.

- 2 With one hand on the base and the other holding the speaker adjust the height of the speaker up and down.
  - After adjusting the height tighten the screw on the mounting plate securely.

Phillips-head screwdriver



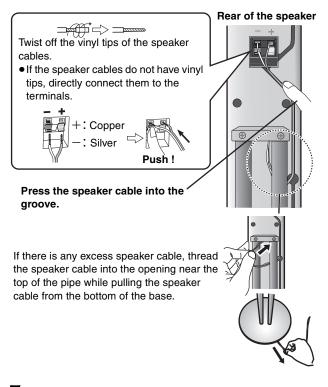
Screw to stop mounting plate from moving or sliding below this point.

# For your reference

You can enjoy good acoustics by adjusting the height of the speaker to the height of the television so the center positions of both are approximately the same.

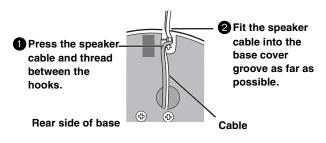


# **4** Connect the speaker cables.



# $\, {f 5}\,$ Fasten the speaker cable to the base.

•Using the same polyfoam as in procedure 2 will assist you in safely and securely fastening the speaker cables.



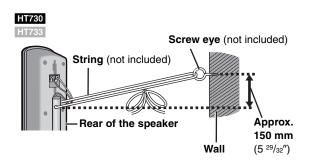
# Preventing the speakers from falling over

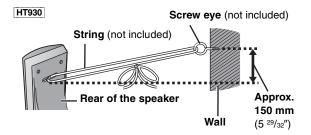
### Preparation

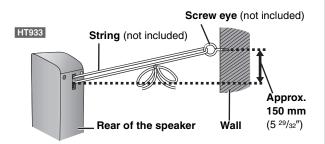
Attach screw eyes (not included) to secure the speakers to the wall (+ diagram below).

- 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.

# To prevent the speaker from falling over, thread the string (not included) from the wall to the speaker as shown and tie tightly.







RQT7972

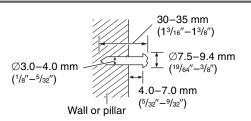
# Other speaker setup options

### Attaching to a wall

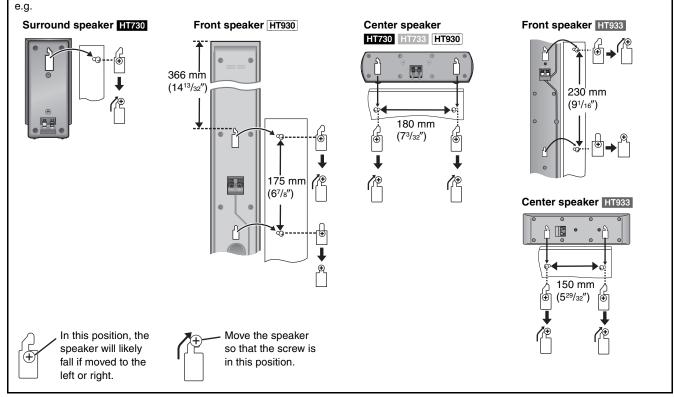
You can attach all of the speakers to a wall.

Drive a screw (not included) into the wall.

**2** Fit the speaker securely onto the screw(s) with the hole(s).



- 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 a 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).
- HT930 HT933 When mounting the front speakers to a wall, we recommend using a string (not included) to prevent it from falling (-> page 7).



# Fitting speaker stands (not included)

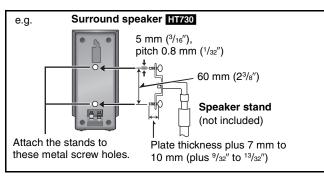
### (Except Front speakers)

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).

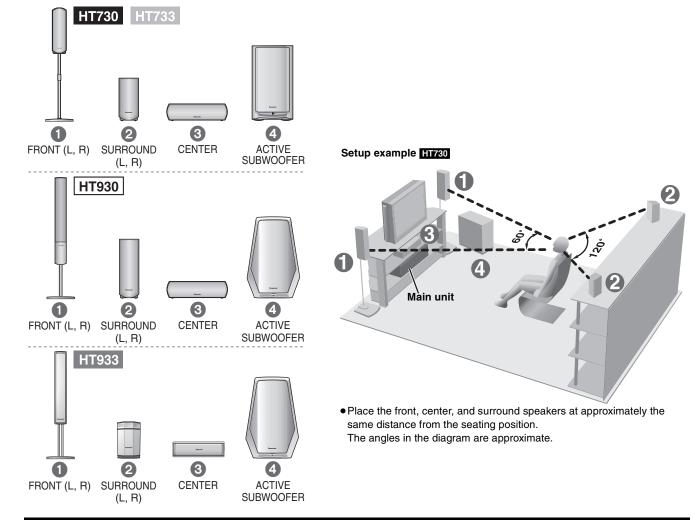
• The stands must be stable even if the speakers are in a high position.





How you set up your speakers can affect the bass and the sound field. Note the following points: 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.
- The left and right speakers are the same with respect to the front and surround speaker pairs.



#### 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 10 mm (13/32") away from the system for proper ventilation.

#### Center speaker

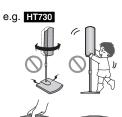
- Vibration caused by the center speaker can disrupt the picture if it is placed directly on the television. Put the center speaker on a rack or shelf.
- To prevent the speakers from falling, do not place directly on top of the television.

#### Active 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 about 30 cm (1113/16") from the television, and 10 cm (4") at the rear for ventilation.

#### Caution

• Do not stand on the base and shake the speaker. Be cautious when children are near.



• HT933 Do not touch the netted area of the surround speakers.

#### The active subwoofer and supplied speakers are to be used only 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.

- 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 reverberating due to 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.

### 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 farther away from the television.

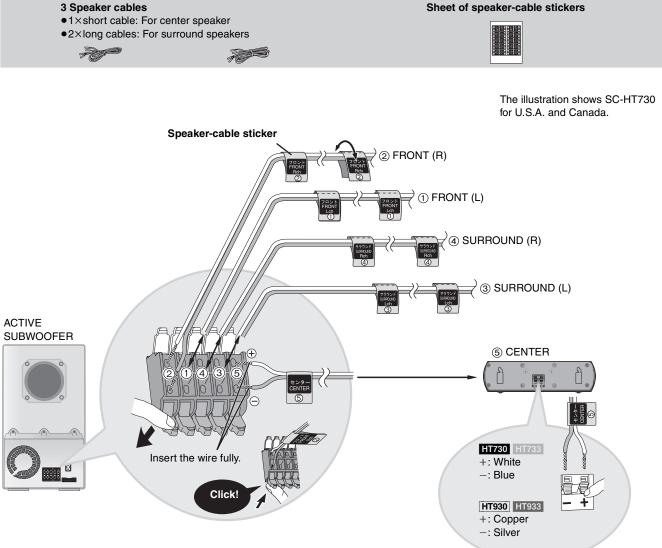
#### Caution

**RQT7972** 9



• Attach the speaker-cable stickers to make connection easier.

• The terminals of the subwoofer have high output power. Carefully connect the speaker wires.



# Note

- HT930 HT933 Even though the subwoofer shown is different, you can connect the speakers to the subwoofer in the same way.
- Never short-circuit positive (+) and negative (-) speaker wires.
- •Be sure to connect only positive (HT730 HT733 : white, HT930 HT933 : copper) wires to positive (+) terminals and negative (HT730 HT733 : blue, HT930 HT933 : silver) wires to negative (-) terminals. Incorrect connection can damage the speakers.



Video cable

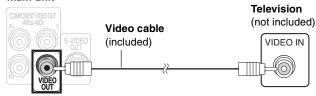


#### •Do not connect through the video cassette recorder.

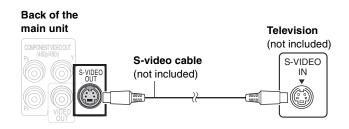
- Due to copy guard protection, the picture may not be displayed properly.
- Turn the television off before connecting, and refer to the television's operating instructions.

# Television with a VIDEO IN terminal

Back of the main unit



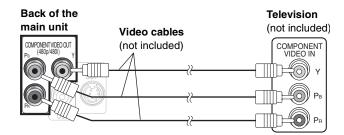
# Television with an S-VIDEO IN terminal



# S-VIDEO OUT terminal

The S-VIDEO OUT 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.)

# Television with COMPONENT VIDEO IN terminals



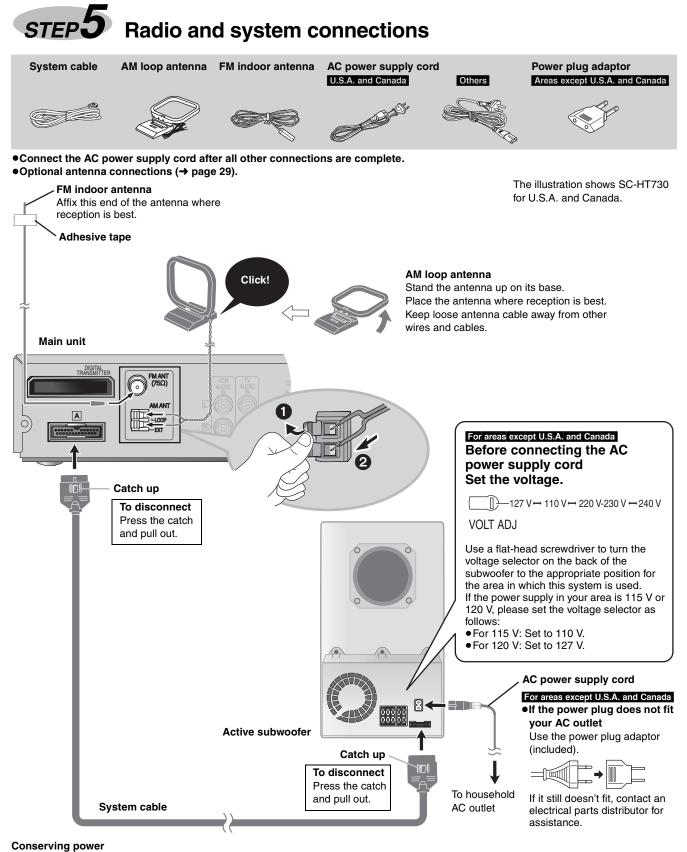
#### **COMPONENT VIDEO OUT terminals**

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 ( $P_B/P_R$ ) 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<sub>B</sub>/P<sub>R</sub>, Y/B-Y/R-Y, Y/C<sub>B</sub>/C<sub>R</sub>). Connect to terminals of the same color.
- After making this connection, select "Darker" from the "Black Level Control" in the "Video" tab (→ page 27).

# 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 Panasonic televisions that have 480p input connectors are compatible. Consult the manufacturer if you have another brand of television.



The main unit consumes a small amount of power, even when it is turned off (For U.S.A. and Canada: approx. 0.5 W or for other areas: approx. 0.9 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 in the unit.

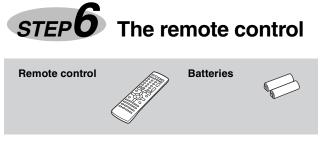
# Note

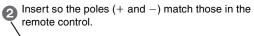
The included AC power supply cord is for use with this unit only. Do not use it with other equipment.

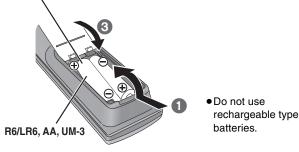
# Set your surround sound free! Panasonic SH-FX50 Digital Transmitter and Receiver (optional) For U.S.A. and Canada (Except SC-HT933)

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 surround speaker sound wirelessly.

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







### 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.

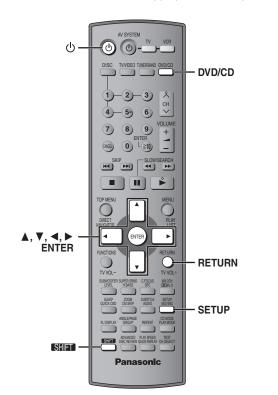
# Use

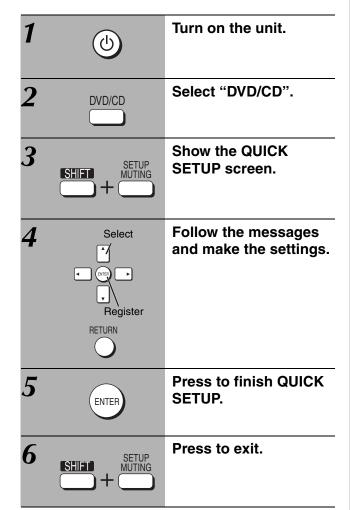
Aim at the remote control signal sensor ( $\rightarrow$  page 14), avoiding obstacles, at a maximum range of 7 m (23 feet) directly in front of the unit.



# The QUICK SETUP screen assists you to make necessary settings.

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



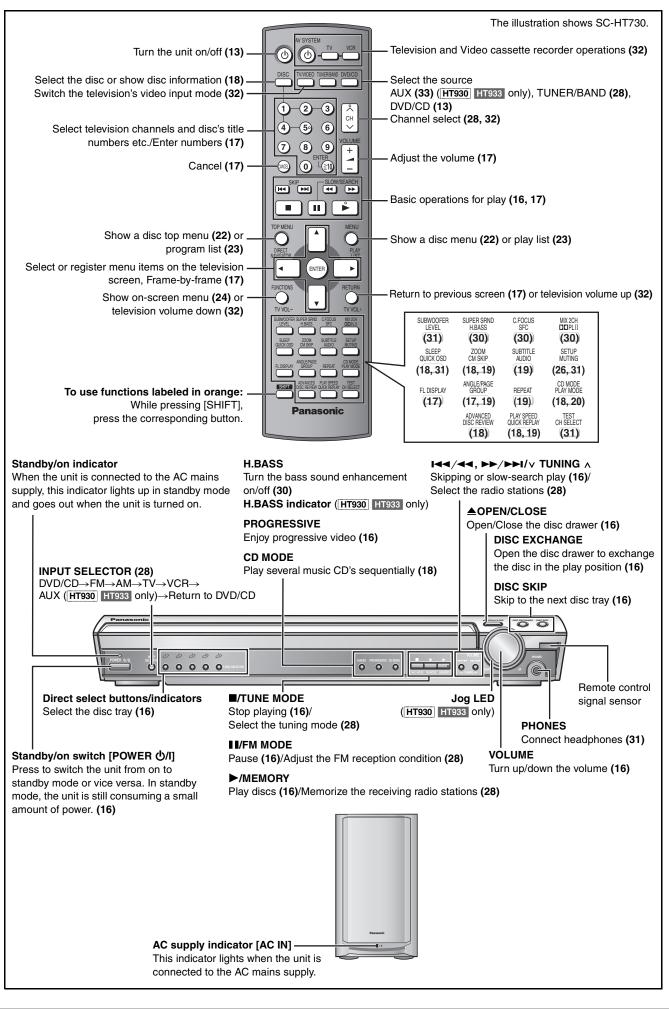


To change these settings later

Select "QUICK SETUP" in the "Others" tab ( $\rightarrow$  page 27).

# **Control reference guide**

See reference pages in brackets.



# Discs that can be played

Disc	Logo	Indication in these operating instructions	Remarks
DVD-RAM	DVD	RAM	Recorded with devices using Version 1.1 of the Video Recording Format (a unified video recording standard), such as DVD video recorders, DVD video cameras, personal computers, etc.
DVD-NAM	R A M R A M 4.7	JPEG	Recorded using the DCF (Design rule for Camera File system) standard Version 1.0. ● To play JPEG files, select "Play as Data Disc" in Other Menu (→ page 25).
DVD-Audio	AUDIO	DVD-A DVD-V	<ul> <li>—</li> <li>Some DVD-Audio discs contain DVD-Video content.</li> <li>To play DVD-Video content, select "Play as DVD-Video" in Other Menu</li> <li>(→ page 25).</li> </ul>
DVD-Video			—
DVD-R (DVD-Video)/ DVD-RW (DVD-Video)	R4.7	DVD-V	Discs recorded and finalized* on DVD video recorders or DVD video cameras.
+R (Video)/ +RW (Video)	_		Discs recorded and finalized* on DVD video recorders or DVD video cameras.
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 CD's sound better because they are encoded with 20 bits, as compared with 16 bits for all other CD's.
CD-R CD-RW	_	WMA MP3 JPEG CD VCD	<ul> <li>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.</li> <li>HighMAT discs WMA, MP3 or JPEG files only. To play without using the HighMAT function, select "Play as Data Disc" in Other Menu (→ page 25). </li> <li>WMA This unit does not support Multiple Bit Rate (MBR: a file that contains the same content encoded at several different bit rates).</li> </ul>

\* 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.

#### Discs that cannot be played

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.

#### 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.

#### Audio format of DVD's

This unit automatically recognizes and decodes discs with these symbols.



Main unit and disc caution

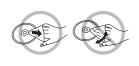
# ■ To prevent damage

Do not:

- -load more than one disc per tray.
- -touch the drawer or the carousel while they are in motion.
- -rotate the carousel by hand.
- -close the drawer by hand.

#### To clean discs

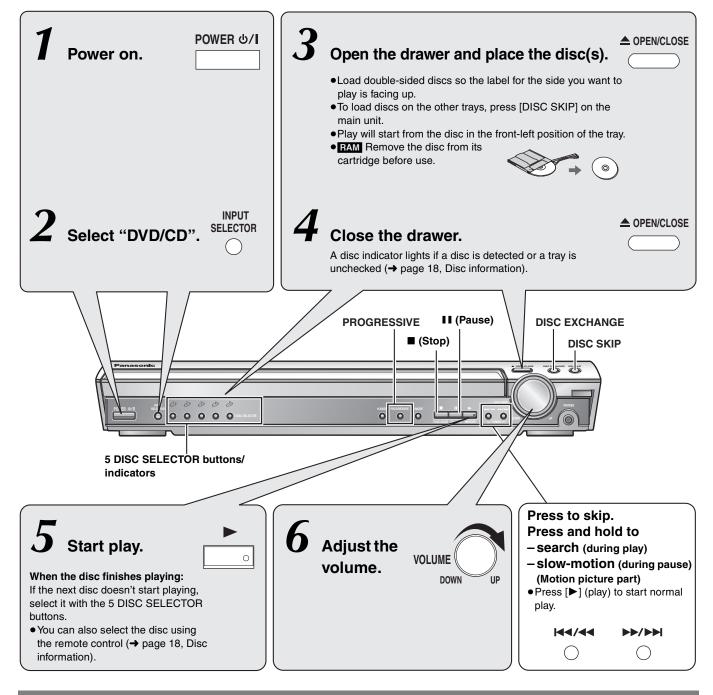
Wipe with a damp cloth and then wipe dry.



# Disc handling precautions

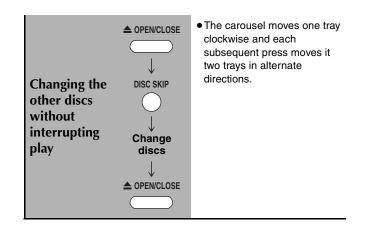
- Do not attach labels or stickers to discs (This may cause disc warping, rendering it unusable).
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do 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.

# **Basic play**



# Using the main unit

Progressive video	PROGRESSIVE	PRG
Skipping to the next disc tray	DISC SKIP	•While the drawer is closed Each time you press the button, the carousel moves counter-clockwise by one tray.
Exchanging the disc in the play position	DISC EXCHANGE	<ul> <li>The drawer opens and the disc in the play position comes to the front-left position.</li> <li>Press the button again to play the disc after changing the disc in the front-left position.</li> </ul>



### Note

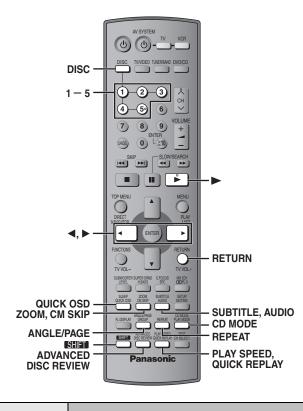
- Discs continue to rotate while menus are displayed. Press [I] when you finish to preserve the unit's motor and your television screen.
- Total title number may not be displayed properly on +R/+RW.

# Using the remote control

1 Numbered buttons 0 0 0 0 0 0 0 0 0 0 0 0 0	Enter number	1 2 3 4 6 6 7 8 9 0 110	<b>RAM DVD-A DVD-V VCD CD</b> e.g. To select 12: $[\ge 10] \rightarrow [1] \rightarrow [2]$ <b>VCD</b> with playback control Press <b>[II]</b> to cancel the PBC function, and then press the numbered buttons. <b>WMA MP3 JPEG</b> e.g. To select 123: $[1] \rightarrow [2] \rightarrow [3] \rightarrow [ENTER]$ • Press [CANCEL] to cancel the number(s).
R DSFLW R D	- Disc menu	TOP MENU DIRECT NAVIGATOR MENU PLAY LIST RETURN	DVD-A DVD-V Shows a disc top menu RAM Shows the programs (→ page 23) DVD-V Shows a disc menu RAM Shows a play list (→ page 23) VCD with playback control Shows a disc menu
Stop       ● Press [▶] (play) to resume.         ● Press [▶] again to clear the position.         Pause       ● Press [▶] (play) to restart play.	Return to previous screen	RETURN	
			RAM DVD-A DVD-V VCD CD
Skip ★ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	Main unit display	FL DISPLAY	RAM DVD-A DVD-V VCD CD WMA MP3 Time display ↔Information display JPEG When Slideshow (→ page 24) is on: SLIDE↔Information display When Slideshow is off: PLAY↔Information display
Skip Skip		FL DISPLAY	WMA MP3         Time display         ↔Information display         JPEG         When Slideshow (→ page 24) is on:         SLIDE<

RQT7972

# **Convenient functions**

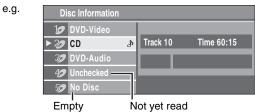


**Disc information** 

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

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

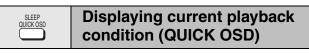
# 1 Press [DISC] to show the Disc information screen.



2 Press the numbered buttons ([1] - [5]) to select the disc.

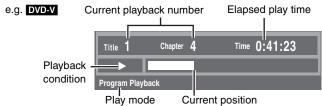
To clear the screen Press [DISC].

DISC



The current playback condition is displayed.

# Press [QUICK OSD].



 To exit the screen Press [QUICK OSD]



# **Reviewing titles 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 (→ page 26).

#### 1 Press [ADVANCED DISC REVIEW].

The QUICK OSD screen is displayed.

e.g. RAM		
	Program 4	Time 0:01:06
	04	

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

This may not work depending on the disc and the play position.



# **CD** sequential play (CD MODE)

# VCD CD WMA MP3

This feature is very convenient if you want to play several music CD's sequentially. Make sure that applicable disc is in the play position before playing (> Disc information, left).

DVD and JPEG are skipped without being played.

# While stopped

#### 7 Press [SHIFT]+[CD MODE].



# Press [▶] (play).

- If all loaded discs are DVD or unchecked, CD Mode does not work and "CD MODE" flashes.
- HighMAT menus and Video CD playback control are disabled.
- You cannot change the mode during program or random play.
- If you want to play a DVD, press [SHIFT]+[CD MODE] again to cancel CD Mode. (CD Mode is also canceled when you switch the unit to standby or select another source.)



# **Quick replay**

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

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

(Only when the elapsed play time can be displayed.) **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 through the current program if the start of the next program is within about one minute of the point you are skipping from.

**Convenient functions** 

• CD MP3 WMA The QUICK OSD screen will appear automatically.

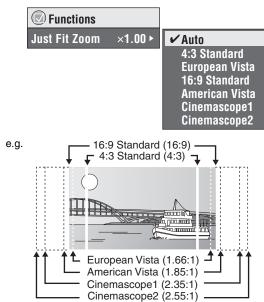


# Changing the zoom ratio

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

This feature expands the letterbox picture to fit the screen. **During play** 

# Press [SHIFT]+[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.

#### PLAY SPEED QUICK REPLAY SHIFT Changing play speed +

# DVD-A (Motion picture part) RAM DVD-V **During play**

# Press [SHIFT]+[PLAY SPEED] several times to select "Normal", "Fast" or "Slow".

**Functions** Play Speed ∢×1.0 ✓ Normal Fast Slow

Changing play speed between the range of "×0.6" to "×1.4" (in 0.1 units)

Press  $[\blacktriangleleft, \blacktriangleright]$  while the above message is displayed.

- Press [▶] (play) to return to normal play.
- After you change the speed

SHIFT

- -Dolby Pro Logic II and Sound Enhancement do not work.
- -Audio output switches to 2ch.
- Sampling frequency of 96 kHz is converted to 48 kHz.
- HT930 HT933 Multi Re-master does not work.
- This function may not work depending on the disc's recording.

#### Angle selection and Still ANGLE/PAGE GROUP picture rotation/advance

# Press [SHIFT]+[ANGLE/PAGE] several times to select the angle or rotate/advance the still picture.

DVD-V (with multiple angles)-Angle selection JPEG -Still picture rotation DVD-A -Still picture advance (Press [RETURN] to go back to page 1.)



# Changing soundtracks

# DVD-A DVD-V (with multiple soundtracks) RAM VCD Press [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 [4, ] to select "On" or "Off" for vocals. Read the disc's instructions for details.

### Signal type/data

LPCM/PPCM/DDigital/DTS/MPEG: Signal type kHz (Sampling frequency)/bit/ch (Number of channels) Example: 3/2 .1ch

.1: Low frequency effect (not displayed if there is no signal) 0: No surround 1: Mono surround 2: Stereo surround (left/right) 1: Center 2: Front left+Front right 3: Front left+Front right+Center

AUDIO SHIFT

REPEAT

# **Changing subtitles**

### DVD-V (with multiple subtitles) VCD (SVCD only) Press [SHIFT]+[SUBTITLE] several times to select the subtitle language.

• On + R/+ RW, a subtitle number may be shown for subtitles that are not displayed.

To display/clear the subtitles Press [◀, ▶] to select "On" or "Off".

RAM (On/Off only with discs that contain subtitle on/off information)

# Press [SHIFT]+[SUBTITLE] to select "On" or "Off".

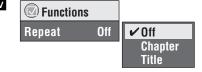
• Subtitle on/off information cannot be recorded using Panasonic **DVD** Recorders.

Repeat play

(Only when the elapsed play time can be displayed. JPEG: Works with all JPEG content.)

### **During play** Press [REPEAT] several times to select an item to be repeated.

e.g. DVD-V



RAM: Program→Disc→Off

● During play list play: Scene → Playlist → Off

DVD-A: Track→Group<sup>\*</sup>→Off

DVD-V: Chapter→Title\*→Off

- VCD CD: Track→Disc\*→Off
- When CD Mode is on: Track $\rightarrow$ Disc $\rightarrow$ All CD's $\rightarrow$ Off
- When CD Mode is on, during program and random play: Track→All CD's→Off

**WMA MP3**: Content→Group<sup>\*</sup>→Off

- When CD Mode is on: Content $\rightarrow$ Group $\rightarrow$ All CD's $\rightarrow$ Off
- When CD Mode is on, during program and random play:
- Content→All CD's→Off JPEG : Group\*→Off



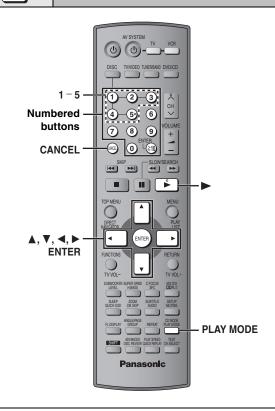
e.g. DVD-V

Functions

< Off ►

Subtitle

# Program/Random play



# Press [PLAY MODE] while stopped.

 ^\_\_\_\_\_ off (Normal play) 
 \* "RANDOM 1" and "RANDOM 2" (→ page 21) are displayed on the main unit's display when CD Mode is on (→ page 18).

#### To exit the program and random mode

Press [PLAY MODE] several times while stopped.

● Disable HighMAT disc play to use program and random play. Select "Play as Data Disc" in Other Menu (→ page 25).

#### DVD-A

Some discs contain bonus groups. If a password screen appears after selecting a group, enter the password with the numbered buttons to play the bonus group. Refer also to the disc's jacket.

### Program play (up to 32 items)

#### When CD Mode is off

DVD-A DVD-V VCD CD WMA MP3 JPEG

You can program all the items on a disc in the play position.

# **1** DVD-A DVD-V Press the numbered buttons to

select a group (WMA MP3 JPEG then press [ENTER]) or title.

e.g. DVD-V

O Program Playback
Choose a title and chapter.
▲▼ <> to select and press ENTER PLAY to start

•To select a 2-digit number e.g. To select 25: [≥10] → [2] → [5] WMA MP3 JPEG [2] → [5] → [ENTER]

# $2\,$ Press the numbered buttons to select a

chapter or track (<u>WMA MP3</u> JPEG then press [ENTER]).

Repeat steps 1 and 2 to program other items.
VCD CD Step 1 is unnecessary.

- 3 Press [▶] (play).
- When CD Mode is on (→ page 18) VCD CD WMA MP3

You can program all the items on all the discs.

Press the numbered buttons ([1] – [5]) to select a disc.

# $2\,$ Press the numbered buttons to select the

items (WMA MP3 then press [ENTER]). •To select a 2-digit number e.g. To select 25: [≥10] → [2] → [5] WMA MP3 [2] → [5] → [ENTER]

- Repeat steps 1 and 2 to program other items.
- 3 Press [▶] (play).

#### To select an item using the cursor buttons

Press [ENTER] and [ $\blacktriangle$ ,  $\blacktriangledown$ ] to select an item, then press [ENTER] again to register.

### To change the selected program

- 1 Press  $[\blacktriangle, \nabla]$  to select an item.
- 2 Repeat above steps 1 and 2.

#### To clear the selected program

- 1 Press  $[\blacktriangle, \nabla]$  to select an item.
- 2 Press [CANCEL] (or press [▲, ▼, ◄, ►] to select "Clear" and press [ENTER]).

#### To clear the whole program

Select "Clear all" with  $[\blacktriangle, \lor, \lhd, \triangleright]$  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

VCD CD

You can play all the items on a disc in the play position in random order.

DVD-A DVD-V WMA MP3 JPEG

You can play selected item(s) on a disc in the play position in random order.

#### 1 DVD-A DVD-V WMA MP3 JPEG

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

e.g. DVD-V



RND



### DVD-A

- To enter all groups, press [◄, ►] to select "All" and press [ENTER].
- To deselect a group, press numbered buttons corresponding to the group you want to clear.

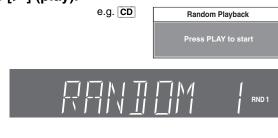
# Press [▶] (play).

# Random 1 play

■ When CD Mode is on (→ page 18) VCD CD WMA MP3

You can play all the items on all the discs in random order.

Press [▶] (play).

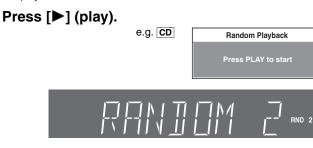


# Random 2 play

■ When CD Mode is on (→ page 18)

# VCD CD WMA MP3

You can play all the discs in sequence, but all the items on each disc are played in random order.



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

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

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.





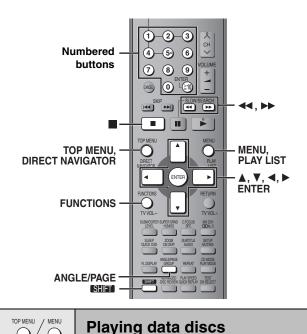
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# Using navigation menus



# 

WMA MP3 JPEG

You can play JPEG files on DVD-RAM or play HighMAT discs without using the HighMAT function ( $\rightarrow$  page 25, "Play as Data Disc" in Other Menu).

● Playing HighMAT<sup>TM</sup> discs (→ page 23)

Playing	items	in	order	(Playback Menu	)
				· ·	

# **Press** [TOP MENU].

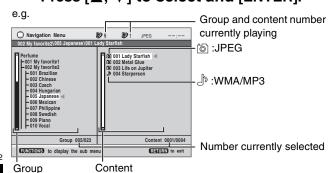
	e.g. (© Playback Menu
WMA/MP3/JPEG	All Total 434
WMA/MP3 JPEG	Audio Total 7
	▲▼ to select and press Ξ\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\

 To exit the screen Press [TOP MENU].

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

Playing from the selected item (Navigation Menu)

- **1** Press [MENU].
- 2 Press [▲, ▼, ◄, ►] to select the group and press [ENTER].
- To play content in the group in order Press [ENTER]. To start play from the selected content Press [▲, ▼] to select and [ENTER].



- Press [SHIFT]+[ANGLE/PAGE] to skip page by page in the group or content field.
- •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].

# Using the submenu

- **1** While the menu is displayed Press [FUNCTIONS].
- 2 Press [▲, ▼] to select an item and press [ENTER]. Items shown differ depending on the type of disc.

√Multi——	Groups and contents are displayed.
List	Contents only
Tree	Groups only
Thumbnail—	– Thumbnail images JPEG
Next group	To go to next group WMA MP3
Previous group	<ul> <li>To go to previous group WMA MP3</li> </ul>
	WMA/MP3 and JPEG
Audio ——	WMA/MP3 only
Picture —	_ JPEG only
	To switch between guide messages and the
Help display	elapsed play time indicator
Find	$\frac{1}{1}$ To search by content or group title ( $\Rightarrow$ below)

# Searching by a content or group title

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

While the submenu is displayed (→ above)
 Press [▲, ▼] to select "Find" and press [ENTER].

A	Find

- Press [▲, ▼] to select a character and press [ENTER].
   Repeat to enter another character.
  - •Lower case is also searched.
  - •Press  $[\blacktriangleleft, \blacktriangleright)$  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 [▶] to select "Find" and press [ENTER]. The search result screen appears.
- 4 Press [▲, ▼] to select the content or group and press [ENTER].

Playing from the selected TOP MENU MENU O/track in the CD ()

CD

1

Titles appear with CD Text disc playback.

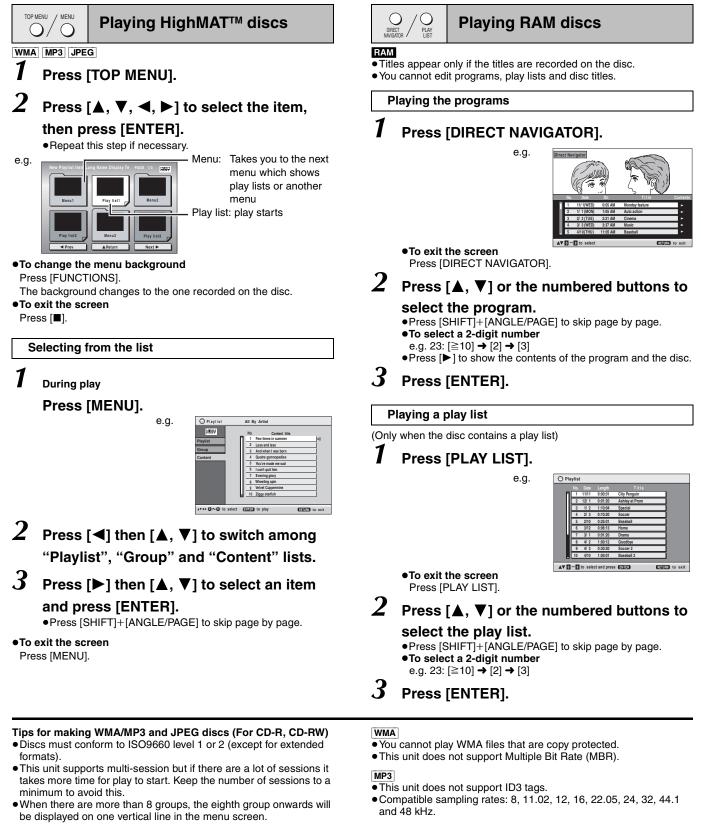
# Press [TOP MENU] or [MENU].



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

- Press [SHIFT]+[ANGLE/PAGE] to skip page by page.
- Press [FUNCTIONS] to show the playback condition and current position.

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



JPEG

name.

• To view JPEG files on this unit:

render a picture unviewable.

pictures with attached audio.

- 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

- Do not alter the files in any way or save them under a different

• This unit cannot display moving pictures, MOTION JPEG and other

such formats, still pictures other than JPEG (e.g. TIFF) or play

- 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 (Files are treated as content and folders are treated as groups on this unit.) 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"

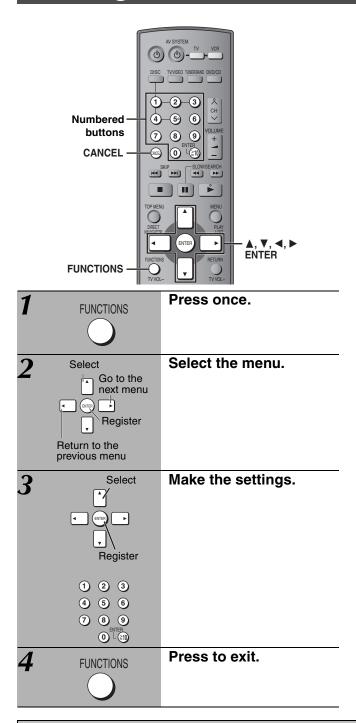
- ".JPG", ".jpg", ".JPEG" or ".jpeg"
- 001 track.mp3 002 track.mp3 002 group 003 group 003 group 003 group 003 track.mp3 003 group 004 track.mp3 004 track.mp3

RQT7972

Using navigation menus

23

# Using on-screen menus



# Items shown differ depending on the type of disc.

Main menu				
Program Group Title Chapter Track Playlist Content	To start from a specific item			
Time * Except +R/ +RW	<ul> <li>To skip incrementally or decrementally<sup>*</sup> (Time Slip for play only)</li> <li>1 Press [ENTER] twice to show the Time Slip indicator.</li> <li>2 Press [▲, ▼] to select the time and press [ENTER].</li> <li>●Press and hold [▲, ▼] to alter faster.</li> <li>To start from a specific time<sup>*</sup> (Time Search)</li> <li>To change remaining/elapsed time display</li> </ul>			
Audio	(→ page 19, Changing soundtracks) WMA MP3 To display the current disc type			
Still Picture	To switch still pictures			
Thumbnail	To show thumbnail images			
Subtitle	(→ page 19, Changing subtitles)			
Marker (VR)	RAM To recall a marker recorded on DVD-Video recorders To recall a marker: Press [▲, ▼] → Press [ENTER]			
Angle	(with multiple angles) To select the angle			
Rotate Picture	To rotate picture			
Slideshow	To turn on/off slideshow To change the slideshow timing (0–30 sec)			
Other Settings	(→ below)			

# **Other Settings**

Play Speed	ay Speed DVD-A (Motion picture part) RAM DVD-V To change play speed - from "×0.6" to "×1.4" (in 0.1 unit steps)		Except RAM To mark up to 5 positions to play again Press [ENTER] (The unit is now ready to accept	
	<i>U</i> elapsed play time can be displayed. ith all JPEG content.)	Marker	markers.) To mark a position: Press [ENTER] (at the desired point) To mark another position: Press [◀, ▶] to select "★" → Press [ENTER] To recell a marker, Press	
Repeat (→ page 19, Repeat play)			To recall a marker: Press [◄, ►] → Press [ENTER] To erase a marker: Press [◄, ►] → Press [CANCEL] • This feature does not work during program and random play.	
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.				
		Advanced Disc Review	[→ page 18, Reviewing titles to play (ADVANCED DISC REVIEW)]	

# **Other Settings**

# Picture Menu

	Normal				
	<b>Cinema1</b> : Mellows images and enhances detail in dark scenes.				
	<b>Cinema2</b> : Sharpens images and enhances detail in dark scenes.				
	Animation				
	Dynamic				
Picture	User (Press [ENTER] to select "Picture				
Mode	Adjustment") (→ below)				
Mode	Picture Adjustment				
	Contrast Brightness				
	Sharpness Color				
	Gamma: Adjusts the brightness of dark parts.				
	Depth Enhancer				
	Reduces the rough noise in the background to				
	give a greater feeling of depth.				
Video	480i (Interlace) ↔ 480p (Progressive)				
Output	When you select "480p", a confirmation screen				
Mode	appears. Select "Yes" only if connecting to a				
mode	progressive output compatible television.				
	If you have chosen "480p" (→ above), select the				
	method of conversion for progressive output to				
	suit the type of material.				
	Auto1 (normal): Detects 24 frame-per-second				
Transfer	film content and appropriately				
Mode	converts it.				
	Auto2: Compatible with 30 frame-per-second film content in addition to 24 frame-per-				
	second film content.				
	Video: Select when using Auto1 or Auto2, and				
	the video content is distorted.				

# Audio Menu

Dolby Pro Logic II	(→ page 30, Dolby Pro Logic II)				
Dialogue Enhancer	To make the dialogue in movies easier to hear DVD-V (Dolby Digital, DTS, MPEG, 3-channel or higher, with the dialogue recorded in the center channel) On ←→ Off				
Multi Re-master (HT930 HT933 only)	<ul> <li>RAM DVDY (Discs recorded with 48 kHz only)</li> <li>DVDA (Discs recorded with 44.1 kHz or 48 kHz only)</li> <li>DVDA (Discs recorded with 44.1 kHz or 48 kHz only)</li> <li>CD CD</li> <li>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 → page 38)</li> <li>During multi-channel output of these discs, this feature reproduces the frequencies lost during recording to give you a sound closer to the original.</li> <li>WMA MP3 (Disc recording is other than 8 kHz, 16 kHz, 32 kHz)</li> <li>This feature reproduces the higher frequencies lost during recording to give you a sound closer to the original.</li> <li>1 ← 2 ← 3 ← Off</li> <li>1 ← 2 ← (D) (LPCM/PPCM)</li> <li>1 High tempo (e.g., pop and rock)</li> <li>2 Various tempos (e.g., jazz)</li> <li>3 Low tempo (e.g., classical)</li> <li>Other discs</li> <li>1 Light effect</li> <li>2 Medium effect</li> <li>3 Strong effect</li> <li>You can confirm the sampling frequency on the screen.</li> </ul>				

	Enhances audio output to produce a warm hall-like
Enhancement	sound.
Ennancement	sound. On $\longleftrightarrow$ Off

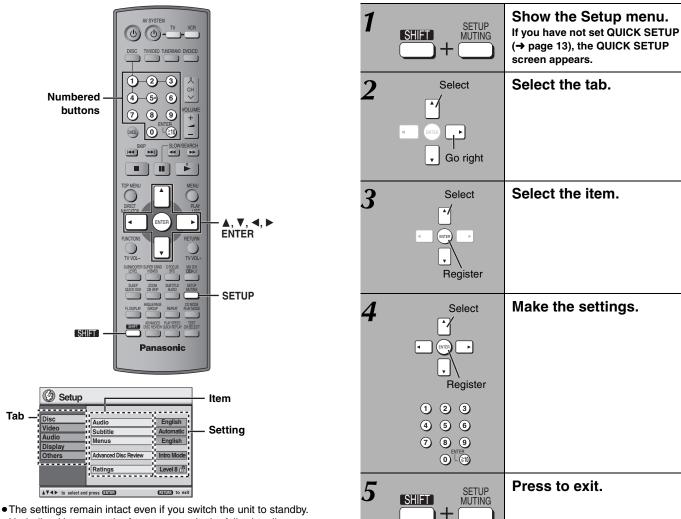
# Display Menu

1 /				
Information	JPEG Off, Date, Details			
Subtitle Position	0 to −60 (in 2 unit steps)			
Subtitle Brightness	Auto, 0 to -7			
	To select how to show images made for 4:3 aspect screens on a 16:9 aspect television			
	Normal: Horizontally stretches images. Auto: Expands 4:3 letterbox images to fill more of the screen.			
4:3 Aspect	Other images appear in full in the center of the screen.Shrink:Images appear in the center of the screen.			
	Zoom: Expands all images to fill the screen.			
	If your television has a similar feature, use it instead for a better effect.			
Just Fit Zoom	To select the appropriate screen size to fit your TV screen			
Manual Zoom	To zoom in and out manually			
Bit Rate Display	RAM DVD-V VCD DVD-A (Motion picture part) On ←→ Off			
GUI See-through	Off, On, Auto			
GUI Brightness	-3 to +3			

# ■ Other Menu

Setup	(→ page 26)
Play as DVD-Video or Play as DVD-Audio	Select "Play as DVD-Video" to play DVD-Video contents of DVD-Audio.
Play as DVD-VR, Play as HighMAT or Play as Data Disc	Select "Play as Data Disc" to play JPEG files on DVD-RAM or to play a HighMAT disc without using the HighMAT function.

# Changing the player settings



• Underlined items are the factory preset in the following diagram.

### QUICK SETUP enables successive settings of the items in the shaded area.

# ■ "Disc" tab

Audio Choose the audio language.	● <u>English</u>	<ul> <li>French</li> </ul>	<ul> <li>Spanish</li> </ul>	●Original <sup>*1</sup>	● Other**** <sup>*2</sup>
Subtitle Choose the subtitle language.	● <u>Automatic</u> <sup>*3</sup>	● English	<ul> <li>French</li> </ul>	<ul> <li>Spanish</li> </ul>	● Other*****
<b>Menus</b> Choose the language for disc menus. Changing the menu language in QUICK SETUP also changes this setting.	● <u>English</u>	• French	● Spanish	●Other***	**2
Advanced Disc Review (→ page 18)	<ul> <li><u>Intro Mode</u>:</li> <li>Interval Mode</li> </ul>		ach title/progra t only each title		o each 10 minute interval within a title/prograr
Ratings Set a ratings level to limit DVD-Video	Setting ratings • <u>8 No Limit</u>	(When level •1 to 7	,	: To prevent pla	y of discs without ratings levels.
play.	When you select your ratings level, a password screen is shown. Follow the on-screen instructions. <b>Do not forget your password.</b> A message screen will be shown if a DVD-Video exceeding the ratings level is inserted in the unit. Enter your password and then follow the on-screen instructions.				
<sup>1</sup> The original language designated on	the disc is select	ed.	∗³ lf the	language sele	cted for "Audio" is not available, subtitles

The original language designated on the disc is selected. \*2 Input a code number referring to the table on page 38.

appear in that language (if available on the disc).

■ "Video" tab

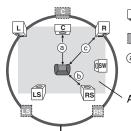
<b>TV Aspect</b> Choose the setting to suit your television and preference.	• <u>4:3 Pan&amp;Scan</u> : Regular aspect television (4:3) The sides of the widescreen picture are cut off so it fills the screen (unless prohibited by the disc).	
	• 4:3 Letterbox: Regular aspect television (4:3) Widescreen picture is shown in the letterbox style.	
	• 16:9: Widescreen television (16:9)	

TV/ Turne	• Ctondord	(Direct View TV)	CRT Proje	atar	● LCD TV/P	
<b>TV Type</b> Select to suit the type of television.	<ul> <li>Projection</li> </ul>	· · · · · · · · · · · · · · · · · · ·	● Plasma TV		•LCD IV/F	Tojeciol
<b>Time Delay</b> When connected with a Plasma display, adjust if you notice the audio is out of sync with the video.	• <u>0ms</u>	• 20ms	• 40ms	●60ms	•80ms	•100ms
Still Mode Specify the type of picture shown when paused.		2 The picture is not b Overall quality is hig				
Black Level Control Change the black level of the picture if you connected a television through the COMPONENT VIDEO OUT terminals.		When connected the When connected the the source of the				
■ "Audio" tab						
Dynamic Range Compression		I and the highest s				ange of the lowest sound Only works with Dolby
Speaker Settings (→ below) Set the delay time for your center and surround speakers.	<ul><li>Center:</li><li>Surround</li></ul>		.0/3.0/4.0/5.0 n 0.0/15.0 ms	ns		
■ "Display" tab						
Menu Language	● <u>English</u>	<ul> <li>Français</li> </ul>	<ul> <li>Español</li> </ul>			
On-Screen Messages	● <u>On</u>	• Off				
■ "Others" tab						
FL Dimmer Changes the brightness of the unit's display (and Jog LED HT930 HT933).		• Dim (HT930 e display is dimmed F930 HT933 Jog LE		s when you perf		
QUICK SETUP	● <u>Yes</u>	• No				
<b>Re-initialize Setting</b> This returns all values in the Setup menus to the default settings.		password screen sword. After "INIT"			,	

# Changing the delay time (Speaker Settings)

# (Effective when playing multi-channel audio)

(Center and surround speakers only) 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.



 $\hfill \square$  : Actual speakers position

- : Ideal speakers position
- (a) (b) (c) : Primary listening distance

Approximate room dimensions

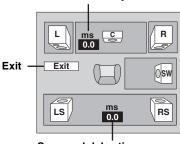
Circle of constant primary listening distance

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

		(b) Surround speaker	
Difference (Approx.)	Setting	Difference (Approx.)	Setting
30 cm (1 foot)	1.0 ms	150 cm (5 feet)	5.0 ms
60 cm (2 feet)	2.0 ms	300 cm (10 feet)	10.0 ms
90 cm (3 feet)	3.0 ms	450 cm (15 feet)	15.0 ms
120 cm (4 feet)	4.0 ms		
150 cm (5 feet)	5.0 ms		

- 1 Press [▲, ▼] to select the delay time box and press [ENTER].
- 2 Press  $[\blacktriangle, \nabla]$  to adjust the delay time and press [ENTER].

Center delay time



Surround delay time

# To finish the speaker setting

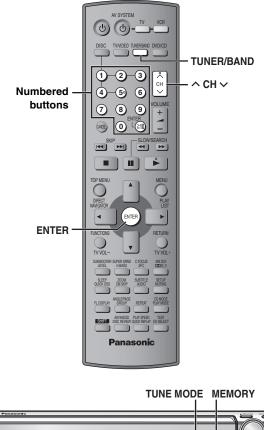
Press [◀] to select "Exit" and press [ENTER].

When you change the surround speaker setting for Dolby Digital, the setting also changes for Dolby Pro Logic II.

e.g., the settings for MUSIC are the same as those for Dolby Digital.

Dolby Digital	Dolby Pro Logic II		
Doiby Digital	MUSIC	MOVIE	
0 ms	0 ms	10 ms	
5 ms	5 ms	15 ms	
10 ms	10 ms	20 ms	
15 ms	15 ms	25 ms	

# The radio



# 

# Automatic presetting

# Main unit only

Up to 15 stations can be set in each band, FM and AM.

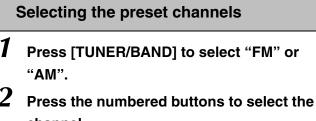
- **1** Press [INPUT SELECTOR] to select "FM" or "AM".
- 2 Press [TUNE MODE] to select "MANUAL". Each time you press the button: MANUAL ↔ PRESET
- **3** Press [∨ TUNING ∧] to tune to the lowest frequency (FM: 87.9 or 87.5, AM: 520).

# **4** Press and hold [MEMORY].

Release the button when "FM AUTO" or "AM 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, and the radio tunes to the last preset station.
- "ERROR" is displayed when automatic presetting is unsuccessful. Preset the channels manually (→ right).



**channel.** Alternatively, press [ $\land$  CH  $\lor$ ]. **To select a 2-digit number** e.g. 12: [ $\ge$ 10]  $\rightarrow$  [1]  $\rightarrow$  [2]



When a stereo FM broadcast is being received.



# ■ If noise is excessive in FM



# Press [FM MODE] to display "MONO".



Press [FM MODE] again to cancel the mode. The mode is also canceled when you change the frequency.

# Manual tuning

# Main unit only

- **1** Press [INPUT SELECTOR] to select "FM" or "AM".
- $\mathbf{2}$  Press [TUNE MODE] to select "MANUAL".
- 3 Press [imes TUNING imes] to select the

# frequency.

Press and hold [ $\lor$  TUNING  $\land$ ] until the frequency starts scrolling to start automatic tuning. Tuning stops when a station is found.

# Presetting the channel

Up to 15 stations can be set in each band, FM and AM.

- While listening to the radio broadcast Press [ENTER].
- 2 While the frequency and "PGM" are flashing on the display Press the numbered buttons to select a channel.
  - Alternatively, press [ $\land$  CH  $\lor$ ], then press [ENTER]. •To select a 2-digit number

e.g. 12: [≧10] → [1] → [2].



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

# ■ FM frequency step

### Main unit only

You can change the FM step. 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] 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.

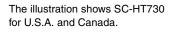
#### Note

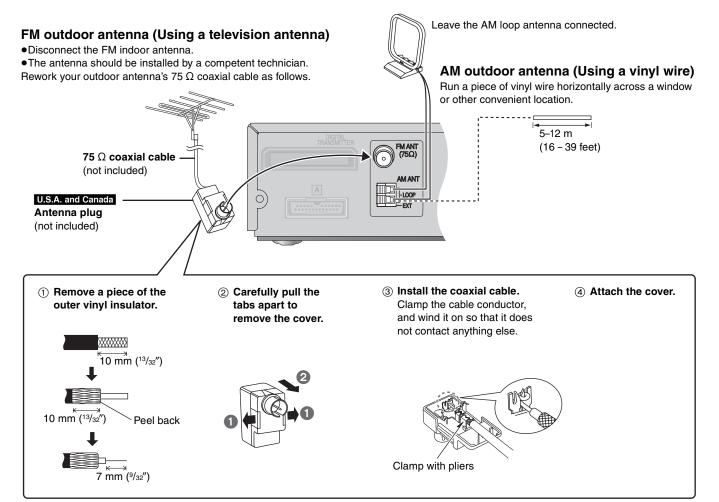
After changing the setting, previously preset frequency will be cleared. Preset it again.

# **Optional antenna connections**

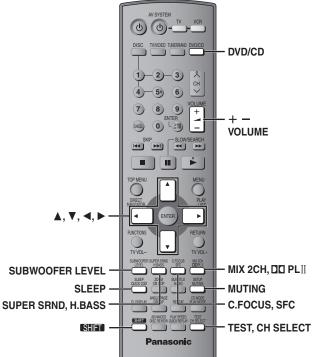
Use outdoor antennas if radio reception is poor.

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





# Sound field and sound quality



# Note

Sound field and sound quality

- When connected with headphones, the following sound field systems have no effect. (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.
- If you turn on Super Surround, Dolby Pro Logic II is canceled and vice versa.



# 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].

a multi-channel source.

Super Surround SHIFT H.BASS +

Adds surround effects to stereo sound.

# Press [SHIFT]+[SUPER SRND].

Each tim	e you press the button:	
MUSIC:	Adds surround effects to stereo	S.SRND
	sources.	
MOVIE:	Use this mode when playing movie	
	software.	
PARTY:	Sound is in stereo regardless of the dire	ection you are
	facing.	
OFF:	Cancel	

• You can adjust the volume of the surround speakers to get the best surround effect (→ page 31, Speaker level adjustments). Super Surround does not work when playing a DVD recorded with

(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]. Each time you press the button: C FOCUS ON ← → C FOCUS OFF

C.FOCUS

SFC

SHIFT

- This does not work when Super Surround is turned on.

**Center Focus** 

• This also works when Dolby Pro Logic II is turned on.

MIX 2CH

**Dolby Pro Logic II** 

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 [DDPLII].

- Each time you press the button:
- MOVIE: Movie software, recorded in Dolby Surround.
- MUSIC: Stereo sources Cancel
- OFF:
- This works only in DVD/CD mode.
- "DDPLII" lights when there is effect.



You can output the down-mixed 2 channel signals when necessary.

# Press [SHIFT]+[MIX 2CH].



Each time you press the button: MIX 2CH ON ← → MIX 2CH OFF

• When "D.MIX" flashes on the display, the disc contains multiplechannel signals that cannot be down-mixed. DVD-A



# 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 [H.BASS].

HT930 HT933 H.BASS indicator lights on the main unit.

- •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

H.BASS

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



# 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



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



This is one of the ways to get appropriate surround effects. Preparation

Press [DVD/CD].

1

# While stopped and no on-screen display is shown Press [SHIFT]+[TEST] to output a test

signal. L: Front left C: Center R: Front right RS: Right surround LS: Left surround

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

# Press [VOLUME, +] or [-] to set the

volume level normally used for listening.

# Press $[\blacktriangle]$ (increase) or $[\nabla]$ (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 [◀, ▶]. Adjust the speaker level to the same level as the front speakers.

To stop the test signal Press [SHIFT]+[TEST] again.

# To adjust speaker level during play

(Effective when playing multi-channel audio or when Dolby Pro Logic II or Super Surround is on.)

#### 1 Press [CH SELECT] to select the speaker.

 $\rightarrow$ C $\rightarrow$ R $\rightarrow$ RS $\rightarrow$ LS $\rightarrow$ SW

SW: Subwoofer

- You can adjust SW only if the disc includes a subwoofer channel.
- "SW" does not appear on the display and is not adjustable when Dolby Pro Logic II is turned on.
- •"S" appears on the display when "MUSIC" or "MOVIE" is selected with Super Surround (→ page 30). In this case, you can adjust both surround speaker levels at the same time using [▲, ▼]. S: -6 dB to +6 dB

**2** Press  $[\blacktriangle]$  (increase) or  $[\nabla]$  (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 While "L" or "R" is selected, press  $[\blacktriangleleft, \blacktriangleright]$ .

# Other useful functions

#### QUICK OSE Sleep timer SHIFT

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

SLEEP 30-→SLEEP 60----->SLEEP 90 OFF←--SLEEP 120←



# 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.



# Press [MUTING].

"MUTING" flashes on the unit's display.



#### To cancel

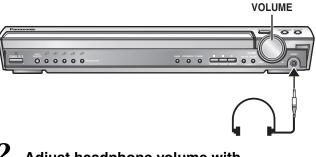
- Press [MUTING] again or reduce the volume to minimum (- dB), then raise it to the required level.
- Muting is canceled when you switch the unit to standby.

# Using headphones

# Main unit only

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

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



Adjust headphone volume with [VOLUME].

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

# Note

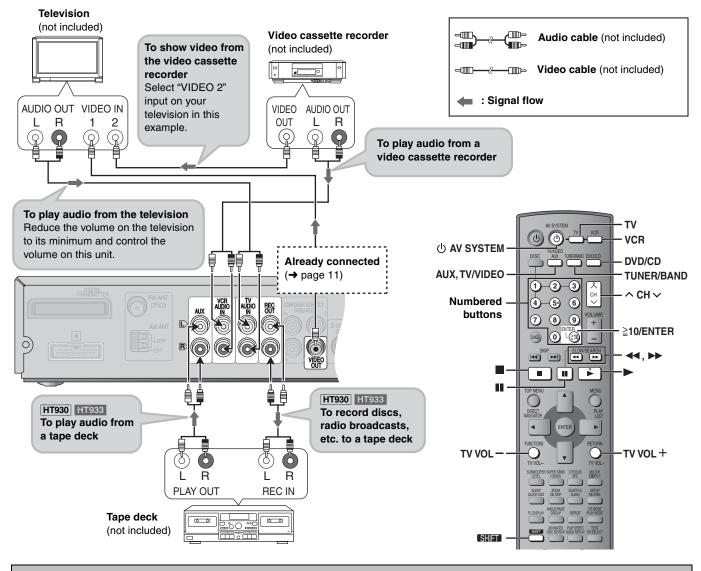
Avoid listening for prolonged periods of time to prevent hearing damage.



# **Operating other equipment**

# Connection example

The illustration shows SC-HT930 for U.S.A. and Canada.



# Operating the television and the video cassette recorder

You can use the remote control to operate a Panasonic television or a video cassette recorder. Connect your equipment referring to "Connection example" (→ above).

# Note

The remote control may not work properly with some models.

# Television

#### Preparation

Aim the remote control at the unit and press [TV] to light up the button, and then aim it at the television for the following operations:

# Turning the television on/off

Press [() AV SYSTEM].

# Switching the television's video input mode

HT730 HT733 Press [TV/VIDEO]. HT930 HT933 Press [SHIFT]+[TV/VIDEO].

# Changing channels

#### Press [ $\land$ CH $\lor$ ].

• [≧10/ENTER] is used to confirm channel selection on some televisions manufactured by other companies.

# Adjusting the volume

Press [TV VOL-] or [TV VOL+].

# Video cassette recorder

### Preparation

- Change the video input mode on the television ("VIDEO 2" in the example).
- Aim the remote control at the unit and press [VCR] to light up the button, and then aim it at the video cassette recorder for the following operations:

Turning the video cassette recorder on/off Press [ $\bigcirc$  AV SYSTEM].

# Play, pause and stop

Press [▶] (play), [11] or [1].

# Fast forward and rewind

Press [◀◀] or [▶▶].

# Connecting a laser disc or record player

Connect instead of a video cassette recorder ( $\rightarrow$  above) and select "VCR" as the source.

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.

# Changing the remote control code

This remote control can also operate some other brands of televisions and video cassette recorders. Change the code to operate such equipment (→ below).

Aim the remote control at the equipment.

# While pressing [TV] or [VCR] Press a numbered button to enter the first digit, and then the second digit.

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

Reenter the codes after you change the batteries.

# Operating the tape deck (HT930 HT933 only)

Recording to the tape deck

Press [DVD/CD] to select "DVD/CD".

or

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

Start recording and play.

Listening to the tape deck

Press [AUX] to select "AUX" as the source.

Televisio	on code list		
Panasonic:	01, 02, 26	Philco:	06, 07
Sony:	04	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,
Hitachi:	05, 07		24, 25
JVC:	12	Sanyo:	14
LXI:	03, 06, 07, 10, 14,	Sharp:	08, 21
	15	Sylvania:	06, 07, 15
Magnavox:	06, 07, 11, 15, 22	Symphonic:	17
Mitsubishi:	07, 15, 16, 21	Toshiba:	10, 21
NEC:	07, 15	Zenith:	18, 20
Video cassette recorder code list			
Panasonic:	01, 02, 09, 33	NEC:	19, 25, 31, 38
Sony:	05, 06, 07, 35, 36,	Philco:	02, 09, 12, 30
	37	Philips:	02, 09, 12
Fisher:	13, 14, 15, 18, 34	Pioneer:	09
Funai:	08, 30	Quasar:	01, 02, 09, 33
G-E:	02, 03, 11	RCA:	02, 03, 04, 09, 10,
Gold Star:	27		11, 12, 23, 24, 26
Hitachi:	09, 10, 11	Sanyo:	14, 18, 34
JVC:	19, 25, 31, 38, 39,	Sharp:	16, 17
	40	Shintom:	32
LXI:	10, 13, 14, 15, 18,	Sylvania:	02, 09, 12, 30
	27, 30	Symphonic:	30
Magnavox:	02, 09, 12	Toshiba:	23, 24
Mitsubishi:	21, 22, 28, 29	Zenith:	20

# Specifications

# **AMPLIFIER SECTION**

#### H RI

Center Ch

HT730
RMS Output Power: Dolby Digital Mode
Front Ch 70 W per channel (4 Ω), 1 kHz, 10 % THD
Front Ch70 W per channel (4 $\Omega$ ), 1 kHz, 10 % THDSurround Ch70 W per channel (4 $\Omega$ ), 1 kHz, 10 % THD
Center Ch 260 W per channel (4 Ω), 1 kHz, 10 % THD
Subwoofer Ch 260 W per channel (4 Ω), 100 Hz, 10 % THD
Total RMS Dolby Digital mode power 800 W
FTC Output Power: Dolby Digital Mode
Front Ch 45 W per channel (4 $\Omega$ ), 120 Hz–20 kHz, 1 % THD
Surround Ch 45 W per channel (4 Ω), 120 Hz–20 kHz, 1 % THD
Center Ch 140 W per channel (4 Ω), 120 Hz–20 kHz, 1 % THD
Subwoofer Ch 150 W per channel (4 Ω), 45 Hz–120 Hz, 1 % THD
Total FTC Dolby Digital mode power 470 W
HT733 BMC Output Douge Dollar Disting Mode
RMS Output Power: Dolby Digital Mode
Front Ch 65 W per channel (4 $\Omega$ ), 1 kHz, 10 % THD
Surround Ch 60 W per channel (4 $\Omega$ ), 1 kHz, 10 % THD
Center Ch 250 W per channel $(4 \Omega)$ , 1 kHz, 10 % THD
Subwoofer Ch 250 W per channel (4 $\Omega$ ), 100 Hz, 10 % THD
Total RMS Dolby Digital mode power 750 W
FTC Output Power: Dolby Digital Mode
Front Ch 40 W per channel (4 $\Omega$ ), 120 Hz–20 kHz, 1 % THD
Surround Ch 40 W per channel (4 $\Omega$ ), 120 Hz–20 kHz, 1 % THD
Center Ch 130 W per channel (4 Ω), 120 Hz–20 kHz, 1 % THD
Subwoofer Ch 140 W per channel (4 $\Omega$ ), 45 Hz–120 Hz, 1 % THD
Total FTC Dolby Digital mode power430 W
HT930 HT933
RMS Output Power: Dolby Digital Mode
Front Ch 170 W per channel (6 $\Omega$ ), 1 kHz, 10 % THD
Surround Ch 70 W per channel $(4 \Omega)$ , 1 kHz, 10 % THD
· · · · · · · · · · · · · · · · · · ·

#### Subwoofer Ch 260 W per channel (4 $\Omega),$ 100 Hz, 10 % THD Total RMS Dolby Digital mode power

FTC Output Power: Dolby Digital Mode 100 W per channel (6 Ω), 120 Hz-20 kHz, 1 % THD Front Ch Surround Ch 45 W per channel (4 Ω), 120 Hz–20 kHz, 1 % THD 140 W per channel (4 Ω), 120 Hz–20 kHz, 1 % THD Center Ch Subwoofer Ch 150 W per channel (4 Ω), 45 Hz–120 Hz, 1 % THD Total FTC Dolby Digital mode power 580 W

260 W per channel (4  $\Omega),$  1 kHz, 10 % THD

#### FM/AM TUNER, TERMINALS SECTION **Preset station**

FM 15 stations AM/MW 15 stations

### **Frequency Modulation (FM)** Frequency range

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)
Amplitude Modulation (AM/MW)	
Frequency range	520–1710 kHz (10-kHz step)
AM Sensitivity S/N 20 dB at 1000	) kHz 560 µV/m
Phone jack	
Terminal	Stereo, 3.5 mm (1/8") jack

Specifications

1000 W

# **Specifications**

### **DISC SECTION**

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

- (1) DVD-RAM (DVD-VR compatible, 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/RW (CD-DA, Video-CD, SVCD, MP3, WMA, JPEG formatted disc)
- (9) MP3/WMA\*1
  - •Compatible compression rate:
  - MP3: between 32 kbps and 320 kbps WMA: between 48 kbps and 320 kbps
- (10) JPEG\*1
  - Exif Ver 2.1 JPEG Baseline files
  - •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)
- \*1 The total combined maximum number of recognizable audio and picture contents and groups: 4000 audio and picture contents and 400 groups.
- Pick up

Wavelength	CD 785 nm DVD 662 nm
Laser power	U.S.A. CLASS IIa/CLASS I Others CLASS 2/CLASS 3A
Audio output (Disc)	
Number of channels	5.1ch (FL, FR, C, SL, SR, SW)
HT930 HT933 Audio performan	ce
(1) Frequency response	
<ul> <li>DVD (linear audio)</li> </ul>	4 Hz–22 kHz (48 kHz sampling)
	4 Hz–44 kHz (96 kHz sampling)
<ul> <li>DVD-Audio</li> </ul>	4 Hz–88 kHz (192 kHz sampling)
●CD-Audio	4 Hz–20 kHz
(2) S/N ratio	
●CD-Audio	95 dB
(3) Dynamic range	
<ul> <li>DVD (linear audio)</li> </ul>	95 dB
●CD-Audio	93 dB
(4) Total harmonic distortion	
●CD-Audio	0.005 %
VIDEO SECTION	
Video system	
Signal system	NTSC
Composite video output	
Output level	1 Vp-p (75 Ω)
Terminal	Pin jack (1 system)
S-video output	
V output loval	$1 \ln n (75 \text{ O})$

Y output level		1 Vp-p (75 Ω)
C output level		NTSC; 0.286 Vp-p (75 Ω)
Terminal		S terminal (1 system)
Component video	output (480p/480i)	
Y output level		1 Vp-p (75 Ω)
P <sub>B</sub> output level		0.7 Vp-p (75 Ω)
PR output level		0.7 Vp-p (75 Ω)
Terminal	Pin jack (Y: green, F	PB: blue, PR: red) (1 system)

# SUBWOOFER SECTION

HT730 Active subwoofer SB-WA	<b>\730</b>
Туре	1 way, 2 speaker system (Bass reflex)
Speaker unit(s)	
1. Woofer	13 cm (5 <sup>1</sup> / <sub>8</sub> ") Cone type
2. Woofer	13 cm (51/8") Cone type
Output sound pressure	80 dB/W (1.0 m)
Frequency range	40 Hz–220 Hz (–16 dB)
	45 Hz–180 Hz (–10 dB)
Dimensions (W×H×D)	201.5 mm×368.2 mm×491.5 mm
	(7 <sup>15</sup> / <sub>16</sub> "×14 <sup>1</sup> / <sub>2</sub> "×19 <sup>3</sup> / <sub>8</sub> ")
Mass	11.3 kg (24.9 lbs)
Frequency range Dimensions (W×H×D)	40 Hz-220 Hz (-16 dB) 45 Hz-180 Hz (-10 dB) 201.5 mm×368.2 mm×491.5 mm (7 <sup>15</sup> / <sub>16</sub> "×14 <sup>1</sup> / <sub>2</sub> "×19 <sup>3</sup> / <sub>6</sub> ")

HT733 Active subwoofer SB-W/	
Type	1 way, 2 speaker system (Bass reflex)
Speaker unit(s)	
1. Woofer	13 cm (5 <sup>1</sup> / <sub>8</sub> ") Cone type
2. Woofer	13 cm (5 <sup>1</sup> / <sub>8</sub> ") Cone type
Output sound pressure	80 dB/W (1.0 m)
Frequency range	40 Hz–220 Hz (–16 dB)
	45 Hz–180 Hz (–10 dB)
Dimensions (W×H×D)	201.5 mm×368.2 mm×491.5 mm
<b>N</b> 4	$(7^{15}/_{16}'' \times 14^{1}/_{2}'' \times 19^{3}/_{8}'')$
Mass	11.3 kg (24.9 lbs)
HT930 Active subwoofer SB-W/	<b>A930</b>
HT933 Active subwoofer SB-W	A933
Туре	1 way, 2 speaker system (Bass reflex)
Speaker unit(s)	-3,
1. Woofer	15 cm (5 <sup>7</sup> /8") Cone type
2. Woofer	15 cm (5 <sup>7</sup> / <sub>8</sub> ") Cone type
Output sound pressure	84 dB/W (1.0 m)
Frequency range	34 Hz–220 Hz (–16 dB)
	38 Hz–190 Hz (–10 dB)
Dimensions (W×H×D)	285 mm×402 mm×520 mm
	(11 <sup>7</sup> / <sub>32</sub> "×15 <sup>13</sup> / <sub>16</sub> "×20 <sup>15</sup> / <sub>32</sub> ")
Mass	15 kg (33.1 lbs)
SPEAKER SECTION	
HT730 HT733 Front speakers	SB-FS730
Туре	2 way, 2 speaker system (Bass reflex)
Speaker unit(s)	Impedance 4 Ω
1. Woofer	6.5 cm (2 <sup>1</sup> / <sub>2</sub> ") Cone type
2. Tweeter	6 cm (2 <sup>3</sup> /8") Cone type
Input power (IEC)	70 W (Max)
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 (W×H×D)	
218 mm×1	080 mm (max)/984 mm (min)×243 mm
	$[8^{19}/_{32}" \times 42^{1}/_{2}" (max)/38^{3}/_{4}" (min) \times 9^{9}/_{16}"]$
Mass	2.7 kg (6 lbs)
HT730 HT733 Surround speak	ers SB-FS731
Туре	1 way, 1 speaker system (Bass reflex)
Speaker unit(s)	Impedance 4 $\Omega$
Full range	6.5 cm (2 <sup>1</sup> /2") Cone type
Input power (IEC)	70 W (Max)
Output sound pressure	80 dB/W (1.0 m)
Eroqueney renge	

#### Mass

Frequency range

Dimensions (W×H×D)

HT730 HT733 Center speaker	SB-PC730
Туре	2 way, 3 speaker system (Bass reflex)
Speaker unit(s)	Impedance 4 Ω
1. Full range	6.5 cm (21/2") Cone type
2. Full range	6.5 cm (21/2") Cone type
<ol><li>Super tweeter</li></ol>	Piezo type
Input power (IEC)	260 W <sup>∞2</sup> (Max)
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 (W×H×D)	$320 \text{ mm} \times 88 \text{ mm} \times 96 \text{ mm}$
	(12 <sup>19</sup> / <sub>32</sub> "×3 <sup>15</sup> / <sub>32</sub> "×3 <sup>25</sup> / <sub>32</sub> ")
Mass	1.3 kg (2.9 lbs)

88 Hz–25 kHz (–16 dB) 100 Hz–22 kHz (–10 dB)

90 mm×193 mm×102 mm  $(3^{17}/_{32}'' \times 7^{19}/_{32}'' \times 4^{1}/_{32}'')$ 0.7 kg (1.54 lbs)

HT930 Front speakers SB-FS930 2 way, 3 speaker system (Bass reflex) Type Speaker unit(s) Impedance 6 Ω 1. Woofer 8 cm (31/8") Cone type 2. Woofer 8 cm (31/8") Cone type 6 cm (23/8") Ring shaped dome type 3. Tweeter Input power (IEC) 170 W\*2 (Max) Output sound pressure 84 dB/W (1.0 m) Cross over frequency 7 kHz 75 Hz-50 kHz (-16 dB) Frequency range 90 Hz-45 kHz (-10 dB) Dimensions (W×H×D) 260 mm×1234 mm×270 mm (10<sup>1</sup>/<sub>4</sub>"×48<sup>19</sup>/<sub>32</sub>"×10<sup>21</sup>/<sub>32</sub>") Mass 4.35 kg (9.6 lbs) HT930 Surround speakers SB-FS931 2 way, 2 speaker system (Bass reflex) Type Speaker unit(s) Impedance 4 O 8 cm (31/8") Cone type 1. Woofer 2. Tweeter 6 cm (23/8") Ring shaped dome type Input power (IEC) 70 W (Max) Output sound pressure 80 dB/W (1.0 m) Cross over frequency 5 kHz **Frequency range** 70 Hz-50 kHz (-16 dB) 85 Hz-45 kHz (-10 dB) Dimensions (W×H×D) 100 mm×324 mm×112 mm (3<sup>15</sup>/<sub>16</sub>"×12<sup>25</sup>/<sub>32</sub>"×4<sup>13</sup>/<sub>32</sub>") Mass 1.06 kg (2.34 lbs) HT930 Center speaker SB-PC930 2 way, 3 speaker system (Bass reflex) Type Speaker unit(s) Impedance 4 Ω 1. Woofer 6.5 cm (21/2") Cone type 6.5 cm (21/2") Cone type 2. Woofer 6 cm (23/8") Ring shaped dome type Tweeter Input power (IEC) 260 W\*2 (Max) Output sound pressure 82 dB/W (1.0 m) Cross over frequency 5 kHz 110 Hz-50 kHz (-16 dB) **Frequency range** 140 Hz-45 kHz (-10 dB) Dimensions (W×H×D) 320 mm×88 mm×96 mm (12<sup>19</sup>/<sub>32</sub>"×3<sup>15</sup>/<sub>32</sub>"×3<sup>25</sup>/<sub>32</sub>") 1.36 kg (3 lbs) Mass HT933 Front speakers SB-PF920 2 way, 3 speaker system (Bass reflex) Type Speaker unit(s) Impedance 6 Ω 1. Woofer 6.5 cm (21/2") Cone type 2. Woofer 6.5 cm (21/2") Cone type 3. Tweeter 6 cm (23/8") Ring shaped dome type Input power (IEC) 170 W\*2 (Max) Output sound pressure 83 dB/W (1.0 m) Cross over frequency 7 kHz **Frequency range** 92 Hz-50 kHz (-16 dB) 110 Hz-45 kHz (-10 dB) Dimensions (W×H×D) 240 mm×1138 mm (Max)/678 mm (Min)×240 mm [97/16"×4413/16" (Max)/2611/16" (Min)×97/16"] Speaker height adjustment range: 1138-968 mm (4413/16"-381/8") 796-625 mm (3111/32"-2419/32") [However, the height of the stand is fixed at 678 mm (2611/16").] Mass 4.1 kg (9 lbs) HT933 Surround speakers SB-PS920 Type 2 way, 2 speaker system (Bass reflex) Speaker unit(s) Impedance 4 Ω 1. Woofer 6.5 cm (21/2") Cone type 2. Tweeter 6 cm (23/8") Ring shaped dome type Input power (IEC) 70 W (Max) Output sound pressure 80 dB/W (1.0 m) Cross over frequency 5 kHz 95 Hz-50 kHz (-16 dB) **Frequency range** 110 Hz-45 kHz (-10 dB) Dimensions (W×H×D) 160 mm×224 mm×107 mm (65/16"×813/16"×47/32") Mass 1.5 kg (3.3 lbs) HT933 Center speaker SB-PC920 2 way, 3 speaker system (Bass reflex) Type Speaker unit(s) Impedance 4 Ω 1. Woofer 6.5 cm (21/2") Cone type 2. Woofer 6.5 cm (21/2") Cone type 3. Tweeter 6 cm (23/8") Ring shaped dome type Input power (IEC) 270 W\*2 (Max) Output sound pressure 82 dB/W (1.0 m) Cross over frequency 5 kHz 110 Hz-50 kHz (-16 dB) **Frequency range** 140 Hz-45 kHz (-10 dB) Dimensions (W×H×D) 320 mm $\times$ 97 mm $\times$ 93 mm (12<sup>19</sup>/<sub>32</sub>"×3<sup>13</sup>/<sub>16</sub>"×3<sup>21</sup>/<sub>32</sub>") Mass 1.5 kg (3.3 lbs)

GENERAL

Power supply					
U.S.A. and Canada				AC 120	V, 60 Hz
Others	AC 110	V/127 \	V/220–2	30 V/240 V,	50/60 Hz
Power consumption				Main unit	25 W
		HT730	HT733	Subwoofer	340 W
		HT930	HT933	Subwoofer	390 W
Dimensions (W×H×D	))		430 m	nm×68 mm≻	<423 mm
			(16	<sup>15</sup> / <sub>16</sub> "×2 <sup>11</sup> / <sub>16</sub> "	×16¹º/ュ6″)
Mass			Main	unit 4 kg	(8.9 lbs)
Operating temperatur	re range	+5 °C	to +35 °	C (+41 °F to	o +95 °F)
Operating humidity ra	ange	5 % t	o 90 % F	RH (no cond	ensation)

Power consumption in standby mode	
U.S.A. and Canada	approx. 0.5 W
Others	approx. 0.9 W

\*2 Rating with low cut filter equipped amplifier

#### Note

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

#### 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

# Troubleshooting guide

Before requesting service, make the following checks. If you are in doubt about some of the check points, or if the solutions indicated in the chart do not solve the problem, refer to the "Customer Services Directory" on page 39 if you reside in the U.S.A., or refer to the "Product information" on page 38 if you reside in Canada. In other areas, consult your dealer.

#### Power

Power		Page			
No power.	• Insert the AC power supply cord and system cable securely.	12			
The unit is automatically switched to the standby mode.	• The Sleep timer was working and had reached the set time limit.				
Unresponsive or inoperable f	unction				
No response when any buttons are pressed.	<ul> <li>This unit cannot play discs other than the ones listed in these operating instructions.</li> <li>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 the AC power supply cord, and then reconnect it.</li> <li>Condensation has formed: Wait 1 to 2 hours for it to evaporate.</li> </ul>	15 —			
No response when remote control buttons are pressed.	<ul> <li>Check that the batteries are installed correctly.</li> <li>The batteries are depleted. Replace them with new ones.</li> <li>Aim the remote control at the remote control signal sensor and operate.</li> </ul>	13 13 14			
Cannot play DVD's.	• CD Mode is on. Press [SHIFT]+[CD MODE] to turn CD Mode off.	18			
No picture or sound.	<ul> <li>Check the video or audio connection.</li> <li>Check the power or input setting of the connected equipment.</li> <li>Check that the DVD-RAM has something recorded on it.</li> </ul>	4, 5, 7, 10, 11, 3 —			
You have forgotten your ratings password. Reset all the settings to Factory Preset.	• 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. All settings will return to the default values.	-			
Specific operation undesirabl	e or unexpected				
It takes time before play starts.	• 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. This is normal.	-			
Folders deeper than the eighth	• Folders deeper than the eighth layer are displayed as the eighth layer				

MP3	the correct play time will not be displayed. 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.	_				
A menu screen appears during skip or search. VCD	• This is normal for Video CD's.	-				
Playback control menu doesn't appear. VCD with playback control	● Press [■] twice and then press [▶] (play).	—				
The program and random play functions do not work. DVD-V	<ul> <li>These functions do not work with some DVD-Videos.</li> </ul>					
Programmed items are not played. DVD-V	<ul> <li>Some items cannot be played even if you have programmed them.</li> </ul>					
The on-screen menu shows "2" as a soundtrack option when [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.	_				
Scenes are skipped intermittently. RAM DVD-V	• If you change the volume or sound field/quality setting during ADVANCED DISC REVIEW, the function continues without the on-screen display. Press [ADVANCED DISC REVIEW] again to cancel the function.	18				
Subtitle						
Subtitle position is wrong.	<ul> <li>Adjust the position. ("Subtitle Position" in Display Menu)</li> </ul>	25				
No subtitles.	● Display the subtitles.	19				
The subtitles overlap closed	•Clear the subtitles.	19				
captions recorded on discs.						
captions recorded on discs. Marker						
•	<ul> <li>You cannot add markers with DVD-RAM.</li> <li>If the disc's elapsed play time doesn't appear on the unit's display, you cannot add markers.</li> </ul>					
Marker Cannot add markers.	You cannot add markers with DVD-RAM.	=				
Marker Cannot add markers.	You cannot add markers with DVD-RAM.	- -				
Marker Cannot add markers. A-B repeat	<ul> <li>You cannot add markers with DVD-RAM.</li> <li>If the disc's elapsed play time doesn't appear on the unit's display, you cannot add markers.</li> </ul>					
Marker Cannot add markers. A-B repeat Point B is automatically set. A-B repeat is automatically	<ul> <li>You cannot add markers with DVD-RAM.</li> <li>If the disc's elapsed play time doesn't appear on the unit's display, you cannot add markers.</li> <li>The end of an item becomes point B when it is reached.</li> </ul>	— — — —				
Marker Cannot add markers. A-B repeat Point B is automatically set. A-B repeat is automatically canceled.	<ul> <li>You cannot add markers with DVD-RAM.</li> <li>If the disc's elapsed play time doesn't appear on the unit's display, you cannot add markers.</li> <li>The end of an item becomes point B when it is reached.</li> </ul>	- - -				
Marker Cannot add markers. A-B repeat Point B is automatically set. A-B repeat is automatically canceled. Sound abnormal or improper	<ul> <li>You cannot add markers with DVD-RAM.</li> <li>If the disc's elapsed play time doesn't appear on the unit's display, you cannot add markers.</li> <li>The end of an item becomes point B when it is reached.</li> <li>A-B repeat is canceled when you press [QUICK REPLAY].</li> </ul>	- - -				
Marker Cannot add markers. A-B repeat Point B is automatically set. A-B repeat is automatically canceled. Sound abnormal or improper Sound distorted.	<ul> <li>You cannot add markers with DVD-RAM.</li> <li>If the disc's elapsed play time doesn't appear on the unit's display, you cannot add markers.</li> <li>The end of an item becomes point B when it is reached.</li> <li>A-B repeat is canceled when you press [QUICK REPLAY].</li> <li>Noise may occur when playing WMA.</li> <li>Some audio effects do not work or have less effect with some discs.</li> <li>Multi Re-master (HT930] HT933 only) and Dolby Pro Logic II do not work if you have changed</li> </ul>					
Marker Cannot add markers. A-B repeat Point B is automatically set. A-B repeat is automatically canceled. Sound abnormal or improper Sound distorted. Effects do not work.	<ul> <li>You cannot add markers with DVD-RAM.</li> <li>If the disc's elapsed play time doesn't appear on the unit's display, you cannot add markers.</li> <li>The end of an item becomes point B when it is reached.</li> <li>A-B repeat is canceled when you press [QUICK REPLAY].</li> <li>Noise may occur when playing WMA.</li> <li>Some audio effects do not work or have less effect with some discs.</li> <li>Multi Re-master (HT930) HT933 only) and Dolby Pro Logic II do not work if you have changed the play speed.</li> <li>An AC power supply cord or fluorescent light is near the subwoofer. Keep other appliances and</li> </ul>					

Menus		Page
The Setup menu cannot be accessed.	<ul> <li>Select "DVD/CD" as the source.</li> <li>Cancel program and random play.</li> </ul>	 20
Picture abnormal or unviewab	le	
Picture distorted.	• Ensure that the unit is connected directly to the television, and is not connected through a video cassette recorder.	11
Picture size doesn't fit the screen.	<ul> <li>Change "TV Aspect" in the "Video" tab.</li> <li>Use the television to change the aspect. If your television does not have that function, change "4:3 Aspect" in Display Menu.</li> <li>Change the Zoom setting.</li> </ul>	26 25 19
Menu is not displayed correctly.	<ul> <li>Restore the zoom ratio to "×1.00".</li> <li>Set "Subtitle Position" in Display Menu to "0".</li> <li>Set "4:3 Aspect" in Display Menu to "Normal".</li> </ul>	19 25 25
Auto zoom function does not work well.	<ul> <li>Turn off TV's zoom function.</li> <li>Use the other preset aspect ratios or manual adjustment.</li> <li>Zoom function may not work well, especially in dark scenes and may not work depending on the type of disc.</li> </ul>	 19 
The picture on the television disappears or stripes appear on the screen.	<ul> <li>Mobile telephone chargers can cause some disturbance.</li> <li>If you are using a TV indoor antenna, change to an outdoor antenna.</li> <li>The television antenna wire is too close to the unit. Separate the antenna wire of the television from the unit.</li> </ul>	
Progressive video		
There is ghosting when progressive output is on. Pictures not in progressive output.	<ul> <li>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".</li> <li>Press [PROGRESSIVE] on the main unit so "PRG" is displayed. Or select "480p" in "Video Output Mode" in Picture Menu.</li> <li>If the unit is connected to the television through VIDEO OUT or S-VIDEO OUT terminal, output will be interlace even if "PRG" is displayed.</li> </ul>	25 16, 25 11
Closed captions not displayed.	•When progressive output is on, closed captions will not be displayed.	_
Listening to the radio		
Noise is heard. "ST" flickers or doesn't light. Sound is distorted.	<ul> <li>Adjust the position of the FM or AM antenna.</li> <li>Use an outdoor antenna.</li> </ul>	 29
A beat sound is heard.	•Turn the television off or move it away from the unit.	—
A low hum is heard during AM broadcasts.	• Separate the antenna from other cables.	-
Television operation		
Cannot operate the TV.	<ul> <li>Press [TV] first to operate the television.</li> <li>Check the remote control code for the TV manufacturer.</li> </ul>	
Unit displays		
The display is dark.	•Select "Bright" in "FL Dimmer" in the "Others" tab.	27
"NOPLAY"	<ul> <li>You inserted a disc the unit cannot play; insert one it can.</li> <li>You inserted a blank disc.</li> </ul>	15 —
"NODISC"	<ul> <li>You haven't inserted a disc; insert one.</li> <li>You haven't inserted the disc correctly; insert it correctly.</li> </ul>	 16
"F61"	• Check and correct the speaker cord connections. If this does not fix the problem, there is a power supply problem. Consult the dealer.	4, 5, 7, 10
"DVD U11"	• Disc is dirty. Wipe it clean.	15
"ERROR"	•Incorrect operation performed. Read the instructions and try again.	-
"DVD H□□" □□ stands for a number.	<ul> <li>Trouble may have occurred. The number following "H" depends on the status of the unit. Turn the unit off and then back to ON. Alternatively, turn the unit off, disconnect the AC power supply cord, and then reconnect it.</li> <li>If the service numbers fail to clear, note the service number and contact a qualified service person.</li> </ul>	
" <b>W</b> " <b>is flashing.</b> (When using optional SH-FX50)	<ul> <li>There is no link between the main unit and the receiver. Check that the receiver is turned on.</li> <li>Ensure that the digital transmitter is fully inserted into the slot of the main unit.</li> </ul>	=
"W01" is flashing or lit. (When using optional SH-FX50)	• 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 displays		
"⊘"	•The operation is prohibited by the unit or disc.	—
"Cannot display group xx, content xx"	• You are trying to display incompatible contents.	-
"This disc may not be played in your region"	• You can only play DVD-Video if their region number is the same or includes the same region number as the unit or if the DVD-Video is marked "ALL". Confirm the region number for the unit on the rear panel.	Cover page
No on-screen display.	<ul> <li>Select "On" in "On-Screen Messages" in the "Display" tab.</li> </ul>	27

# **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.
- 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 39. 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

(www.panasonic.ca), or an authorized Servicentre closest to you.

In other areas, consult your dealer.

# 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, carefully read the instructions that came with the cloth.

**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.

# Glossary

### Decoder

A decoder restores the coded audio signals on DVD's to normal. This is called decoding.

# **Dolby Digital**

This is a method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2-channel) audio, these signals can also be multi-channel audio. A large amount of audio information can be recorded on one disc using this method.

### **DTS (Digital Theater Systems)**

This surround system is used in many movie theaters around the world. There is good separation between the channels, so realistic sound effects are possible.

# Dynamic range

Dynamic range is the difference between the lowest level of sound that can be heard above the noise of the equipment and the highest level of sound before distortion occurs.

### Frame still and field still

Frames are the still pictures that go together to make a moving picture. There are about 30 frames shown each second. One frame is made up of two fields. A regular television shows these fields one after the other to create frames.

A still is shown when you pause a moving picture. A frame still is made up of two alternating fields, so the picture may appear blurred, but overall quality is high.

A field still is not blurred, but it has only half the information of a frame still so picture quality is lower.

# I/P/B

MPEG 2, the video compression standard adopted for use with DVD-Video, codes frames using these 3 picture types.

- I: Intra coded picture This picture has the best quality and is the best to use when adjusting the picture.
- **P:** Predictive coded picture
- This picture is calculated based on past I or P-pictures. B: Bidirectionally-predictive coded picture
- This picture is calculated by comparing past and future I and P-pictures so it has the lowest volume of information.

# Linear PCM (pulse code modulation)

These are uncompressed digital signals, similar to those found on CDs.

# Playback control (PBC)

If a Video CD has playback control, you can select scenes and information with menus.

# 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.

# Language code list

Language											
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:	6589	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		
<b>۱</b>											

# 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

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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:

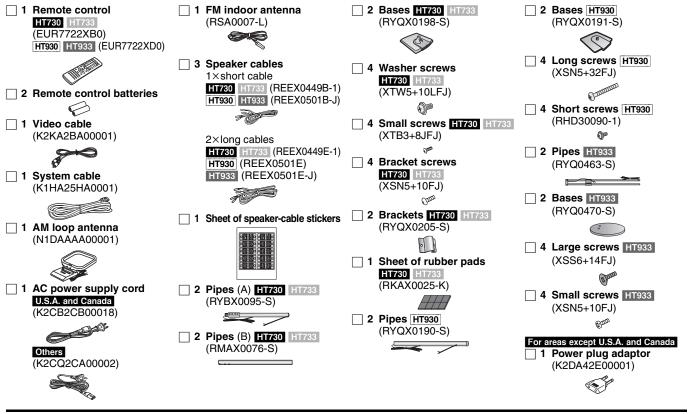
• Set the dial and leave it there.

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 39. For other areas: To order accessories, call the dealer from whom you made your purchase.



# For U.S.A.

Panasonic Consumer Electronics Company, Division of Panasonic Corporation of North America One Panasonic Way Secaucus, New Jersey 07094 http://www.panasonic.com For others

Matsushita Electric Industrial Co., Ltd. Corporate Management Division for the Americas Sales Office for North America Tokyo Panasonic Sales Section 32nd Floor, World Trade Center 4-1, Hamamatsu-cho, 2-Chome, Minato-Ku, Panasonic Puerto Rico, Inc. Ave. 65 de Infantería, Km. 9.5 San Gabriel Industrial Park, Carolina, Puerto Rico 00985

Panasonic Marketing Europe G.M.B.H. Wiesbaden N. (a Division of Panasonic Marketing G.M.B.H.) Military Sales Department 6200 Wiesbaden-Biebrich, Hagenauerstr. 43 Germany For Canada Panasonic Canada Inc. 5770 Ambler Drive Mississauga, Ontario L4W 2T3 www.panasonic.ca



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Tokyo 105-6132, Japan