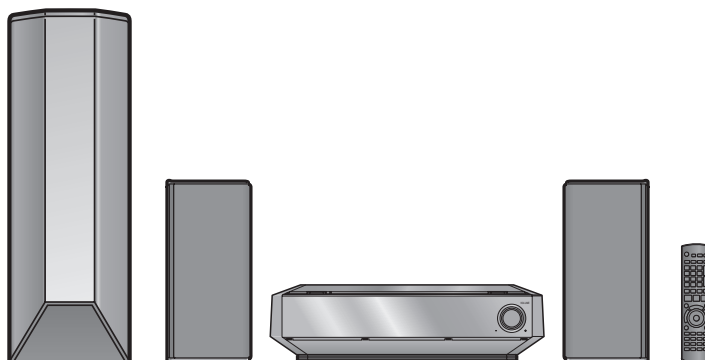


Operating Instructions

DVD Home Theater Sound System

Model No. **SC-PTX7**



Dear customer

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

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

System	SC-PTX7
Main unit	SA-PTX7
Front/center speakers	SB-FCX9
Subwoofer	SB-HWX7



Region number supported by this unit

Region numbers are allocated to DVD players and DVD-Video according to where they are sold.

- The region number of this unit is “2”.
- The unit will play DVD-Video marked with labels containing “2” or “ALL”.

Example:



Web Site: <http://www.panasonic-europe.com>

Note

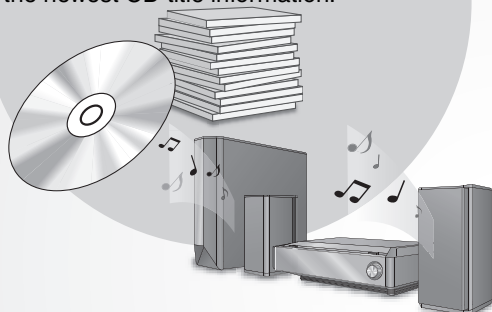
“EB” on the packaging indicates the United Kingdom.

High Speed Recording from CD to HDD

(up to 4X recording speed) (→ page 28)

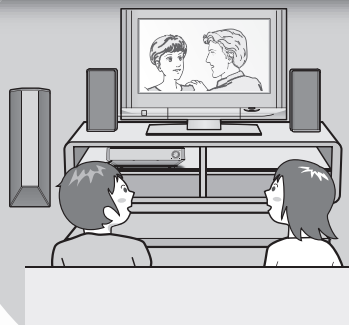
Recorded songs are automatically provided with the title, artist, and other information by the built-in Gracenote database*.

※ A connection to the Internet is necessary to obtain the newest CD title information.



DVD Playback

(→ page 37)



You can enjoy DVD movie software with the included 3.1 ch speakers.

Easy Location of HDD recording contents

(→ page 32)

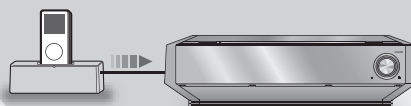


- You can search for tracks recorded to the HDD by using several methods such as song title, artist, album, most recently recorded, or most often played.
- By simply pressing one of the MUSIC SHUFFLE buttons, you can play tracks that have a certain impression or mood (Energetic, Mellow, Relaxing, or Emotional).

iPod recording/playings

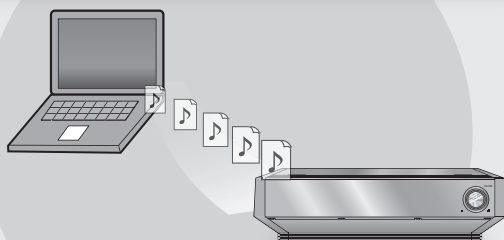
(→ page 72)

You can record tracks in iPod to the HDD, and also play tracks in iPod using this unit's speakers.



Import WMA/MP3 from a PC

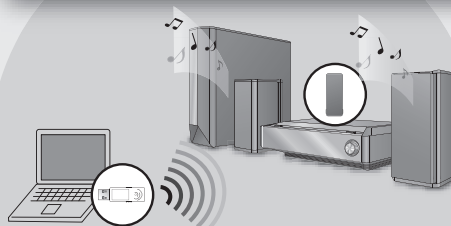
(→ page 44)



You can import WMA/MP3 from a PC via a network connection.

Playing tracks from your PC wirelessly through this unit's speakers

(→ page 74)



By using the optional Panasonic wireless audio kit SH-FX570K (not included), you can enjoy audio tracks from your PC on this unit wirelessly.

Caution for AC Mains Lead

For your safety, please read the following text carefully. This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as stated below.

If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral, Brown: Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL  OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

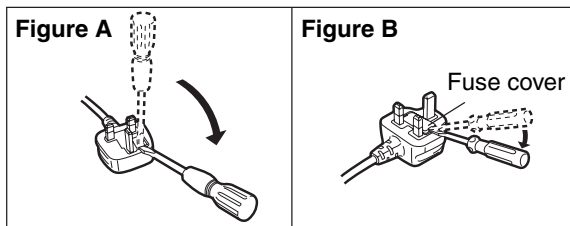
Remove the connector cover.

How to replace the fuse

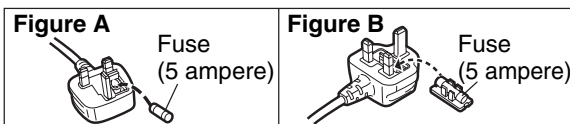
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.



2. Replace the fuse and close or attach the fuse cover.



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.
- USE ONLY THE RECOMMENDED ACCESSORIES.
- DO NOT REMOVE THE COVER (OR BACK); THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.

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. The mains plug of the power supply cord shall remain readily operable. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from AC receptacle.

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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.

Safety precautions

Placement

Set the unit up on an even surface away from direct sunlight, high temperatures, high humidity, and excessive vibration. These conditions can damage the cabinet and other components, thereby shortening the unit's service life. Do not place heavy items on the unit.

Voltage

Do not use high voltage power sources. This can overload the unit and cause a fire. Do not use a DC power source. Check the source carefully when setting the unit up on a ship or other place where DC is used.

AC mains lead protection

Ensure the AC mains lead is connected correctly and not damaged. Poor connection and lead damage can cause fire or electric shock. Do not pull, bend, or place heavy items on the lead.

Grasp the plug firmly when unplugging the lead. Pulling the AC mains lead can cause electric shock. Do not handle the plug with wet hands. This can cause electric shock.

Foreign matter

Do not let metal objects fall inside the unit. This can cause electric shock or malfunction.

Do not let liquids get into the unit. This can cause electric shock or malfunction. If this occurs, immediately disconnect the unit from the power supply and contact your dealer.

Do not spray insecticides onto or into the unit. They contain flammable gases which can ignite if sprayed into the unit.

Service

Do not attempt to repair this unit by yourself. If sound is interrupted, indicators fail to light, smoke appears, or any other problem that is not covered in these instructions occurs, disconnect the AC mains lead and contact your dealer or an authorized service center. Electric shock or damage to the unit can occur if the unit is repaired, disassembled or reconstructed by unqualified persons.

Extend operating life by disconnecting the unit from the power source if it is not to be used for a long time.

Cautions about personal and recorded data

■ *Indemnity concerning recorded content*

Panasonic does not accept any responsibility for damages directly or indirectly due to any type of problems that result in loss of recording or edited content (data), and does not guarantee any content if recording or editing does not work properly. Likewise, the above also applies in a case where any type of repair is made to the unit (including any other non-HDD related component).

■ *A warning about data management:*

This unit records the history of your operations (user information), and this history includes data such as track data recorded, user playlist information, and the various settings you made on this unit.

Depending on where you place this unit, your personal information could be compromised and used by a third party.

Use caution and discretion when considering where to use this unit.

Also note that if this unit is sent for repair, user information may be checked as well.

To prevent compromising your personal information, please delete or change all personal user information before sending in for repair.

■ *Cautions about disposal or transferring ownership of this unit*

Before disposing or transferring ownership of this unit, delete all recorded data and user playlist information (→ page 89, Delete All Tracks in the Music Collection). Furthermore, change any settings as necessary.

In the event that user information is changed, lost, misused, compromised, or any damage or loss occurs as a result, Panasonic will not accept any responsibility. Please be aware of this before using this unit.

HDD (Hard disk drive) handling care

The HDD is a high precision recording instrument and because of its long recording capability and high speed operation it is a very special device that is easily susceptible to damage.

■ *The HDD is a device that is not built to withstand vibration/shock or dust*

Depending on the setup environment and handling of the HDD some content may become damaged and play and recording may no longer be possible. Especially during operation, do not subject the unit to any vibration, shock, or remove the AC mains lead from the household mains socket. In the event of a power failure during recording or play, the content may be damaged.

■ *Back up the HDD periodically*

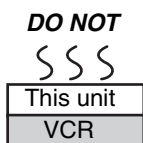
As a precaution for HDD failure, we recommend making a backup of the HDD periodically. However, in some cases where the HDD is heavily damaged, backups may not be restored.

■ *Immediately request service as soon as you feel there may be a problem with the HDD*

If there is an irregularity within the HDD, repetitive strange sounds or distortion ("broken up" audio) may result. Using the HDD in this condition may worsen the problem and in the worst case the HDD may no longer become usable. As soon as you notice this type of problem, request service. Recorded content (data) on an HDD that has become unusable is unrecoverable.

■ *Setup precautions*

- Do not place in an enclosed area where the rear cooling fan is covered up.
- Place the unit on a surface that is flat and not subject to vibration or impact.
- Do not place on anything that generates heat like a video cassette recorder, etc.
- Do not place in an area often subject to temperature changes.
- Place in an area where condensation does not occur. Condensation is a phenomenon where moisture forms on a cold surface when there is an extreme change in temperature. Condensation may cause internal damage to the unit.



● *Conditions where condensation may occur*

- When there is an extreme change in temperature (moving from a very hot location to a very cold location, or vice versa, or when subjected to an air conditioner or when cooled air directly impacts the unit.) When the HDD (warms during operation) is subjected to cold air, condensation may form on the inside of the HDD and may cause damage to the HDD heads, etc.
- When there is high humidity or a lot of steam in the room.
- During the rainy season.

In the above situation, **without turning the unit on**, let the unit adjust to the room temperature and wait 2–3 hours until condensation is gone.

■ *Cigarette smoke, etc. causes malfunction or breakdown*

The unit may breakdown if cigarette smoke or bug spray/vapor, etc. gets inside the unit.

■ *While operating*

- Do not move the unit or subject to vibration or impact. (The HDD may become damaged.)
- Do not remove the AC mains lead from the household mains socket, or flip the power breaker switch.

While the unit is on, the HDD is rotating at high speed. Sound or movement due to rotation is normal.

■ *When moving the unit*

- ① Remove the CD.
- ② Turn the unit off.
- ③ After "GOOD-BYE" is finished displaying, remove the plug from the wall within 2 minutes, or wait until conversion and analysis is complete to remove the AC mains lead from the household mains socket.
- ④ Once the HDD is no longer rotating and has come to a complete stop (after waiting about 2 minutes), move the unit carefully so as to avoid any vibration or shock. (After the power has been turned off, the HDD will briefly continue to rotate due to inertia.)

After the power to the unit has been turned off, (unit enters "Standby Mode"), if there are recorded tracks that have not yet been converted or analysed, the HDD will begin conversion and analysis of these recorded tracks after about 2 minutes.

During conversion/analysis:

- Do not remove the AC mains lead.
- If you are using an extension cord and/or power strip with the standby/on switch, do not switch the power to off.



Please check and identify the supplied accessories.
(Product numbers correct as of February 2007. These may be subject to change.)

- ☐ **1 Remote control**
(N2QAYB000150)



- ☐ **2 Remote control batteries**



- ☐ **1 FM indoor aerial**
(RSA0007-L)



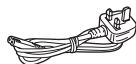
- ☐ **2 Speaker cables for front/center speaker**
[REEX0720A (White)]
[REEX0720B (Red)]



- ☐ **1 Speaker cable for subwoofer**
(REE1402)



- ☐ **1 AC mains lead**
(K2CT3CA00004)



- ☐ **1 Aerial plug adaptor**
(K1YZ02000013)



■ Sales and Support Information

Customer Care Centre

- For customers within the UK: 0844 844 3852
- For customers within the Republic of Ireland: 01 289 8333
- Visit our website for product information
E-mail: customer.care@panasonic.co.uk

Direct Sales at Panasonic UK

- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Care Centre Monday-Thursday 9:00am–5:30pm, Friday 9:30am–5:30pm (Excluding public holidays).
- Or go on line through our Internet Accessory ordering application at www.panasonic.co.uk
- Most major credit and debit cards accepted.
- All enquiries transactions and distribution facilities are provided directly by Panasonic UK Ltd.
- It couldn't be simpler!
- Also available through our Internet is direct shopping for a wide range of finished products, take a browse on our website for further details.

Interested in purchasing an extended guarantee?
Please call 0870 240 6284 or visit our website
www.panasonic.co.uk/guarantee.

Preparing the remote control

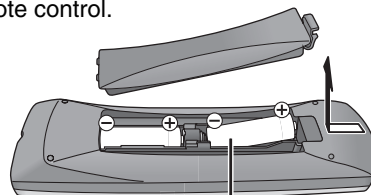
Remote control



Batteries



Insert so the poles (+ and –) match those in the remote control.



R6/LR6, AA

- Do not use rechargeable type batteries.

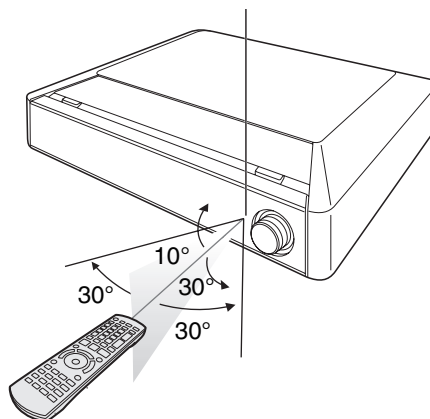
Do not:

- mix old and new batteries.
 - use different types at the same time.
 - heat or expose to flame.
 - take apart or short circuit.
 - attempt to recharge alkaline or manganese batteries.
 - use batteries if the covering has been peeled off.
- Mishandling of batteries can cause electrolyte leakage which can severely damage the remote control.

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

■ Use

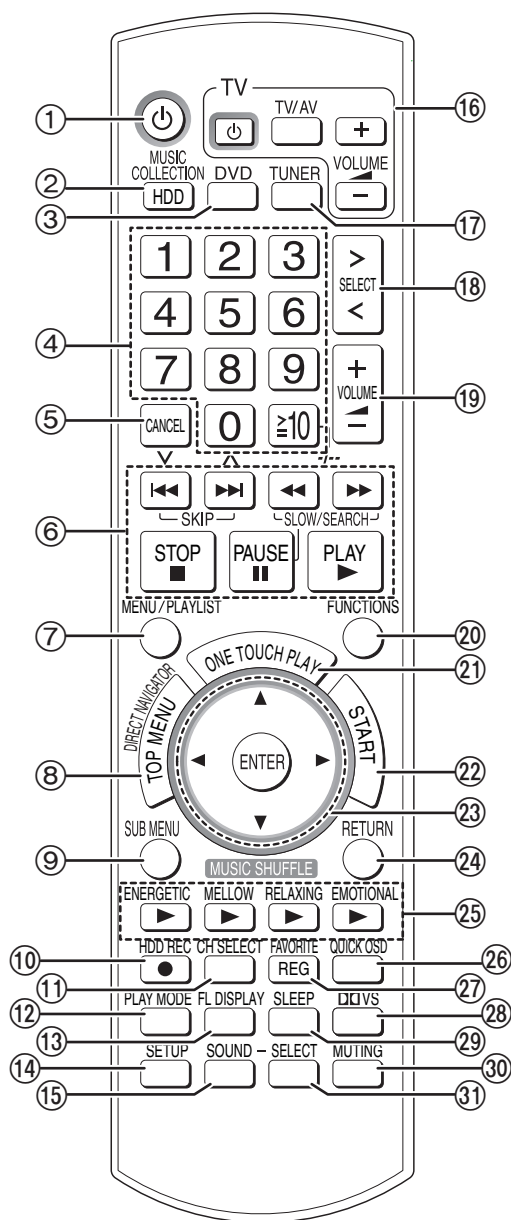
Aim at the remote control signal sensor, avoiding obstacles, at a maximum range of 7 m directly in front of the unit.



Your attention is drawn to the fact that the recording pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

Remote control

Instructions for operations are generally described using the remote control.



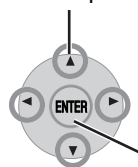
- ① Turn the unit on (→ page 16)
- ② Select the HDD drive (→ page 31)
- ③ Select the DVD/CD drive
- ④ Select channels and title numbers, etc./Enter numbers
- ⑤ Cancel items
- ⑥ Basic operations for playback (→ page 31, 36, 37)
- ⑦ Show a disc menu or playlist (→ page 38, 40, 48)
- ⑧ Show a disc top menu or program list (→ page 37, 38)
- ⑨ Show sub menu
- ⑩ Start recording to HDD (→ page 29)
- ⑪ Select speaker channels (→ page 76)
- ⑫ Select play mode (→ page 50, 53)
- ⑬ Switch information on the main unit's display
 - When the selector is set to “DVD/CD” or “USB”, elapsed time, track number information etc. can be switched depending on what is being played.
 - When listening the RDS broadcasting (→ page 59)
- ⑭ Show Setup menu (→ page 16, 85)
- ⑮ Select the sound effect to set (→ page 76)
- ⑯ Television operations
- ⑰ Select the FM tuner
- ⑱ Select the source
 - Music Collection → DVD/CD → FM → TV Audio
 - OPTION ← USB ← MUSIC PORT ← AUX
- ⑲ Adjust the volume
- ⑳ Show FUNCTIONS window
- ㉑ Start up and play a disc automatically/control both the home theater system and the television (→ page 70)
- ㉒ Show Start menu (→ page 24)
- ㉓ Selection/enter, frame-by-frame (→ page 37)
- ㉔ Return to previous screen
- ㉕ Music shuffle (→ page 35)
- ㉖ Show Quick OSD (→ page 55)
- ㉗ Register the current track to Favorites (→ page 63)
- ㉘ Turn Dolby Virtual Speaker on/off (→ page 77)
- ㉙ Set SLEEP timer (→ page 80)
- ㉚ Mute the sound (→ page 80)
- ㉛ Set the sound effect (→ page 76)

■ Using the cursor

● Select items on menu screens and set items.

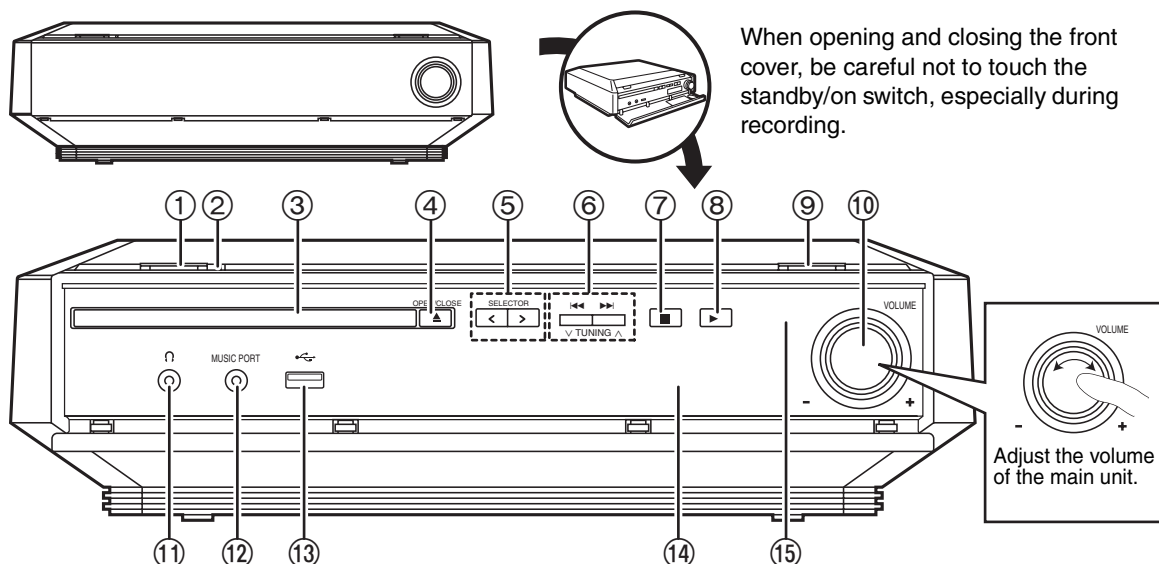
Press up, down, left, or right to select an item.
You can also move frame-by-frame (backward/forward).

While paused, press [◀] or [▶] (left/right).



Press [ENTER] to confirm.

Main unit



① Standby/on switch (⏻/⏻) (→ page 16)

Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

② Standby/on indicator

When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.

③ Disc tray

④ Open/close disc tray (→ page 11)

⑤ Select the source

Music Collection → DVD/CD → FM → TV Audio

OPTION ← USB ← MUSIC PORT ← AUX

⑥ Skip, Select preset radio stations/channels

⑦ Stop playback (→ page 31, 36, 37)

⑧ Start playback (→ page 31, 36, 37)

⑨ Start recording to HDD (→ page 29)

⑩ Adjust the volume

⑪ Connector for headphones (→ page 80)

⑫ Connector for external device (→ page 80)

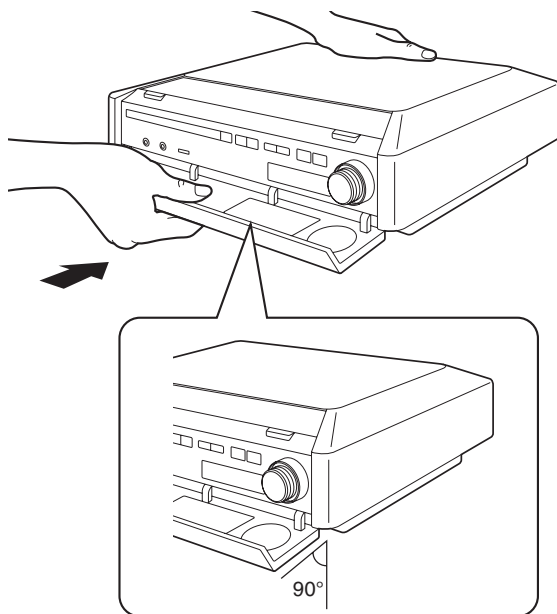
⑬ USB terminal (→ page 23)

⑭ Display (→ page 11)

⑮ Remote control signal sensor

Rear panel terminals (→ page 14–15, 91–94)

■ If the front cover comes off

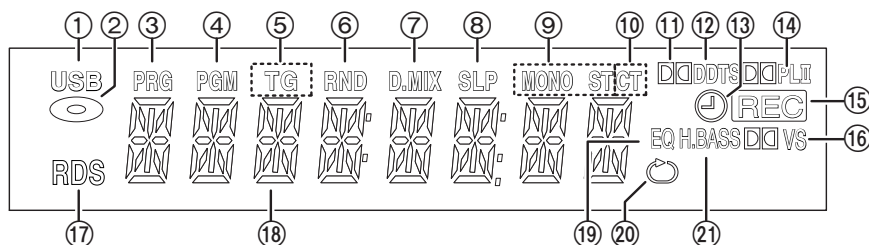


1 Hold rear side of main unit by one hand and match up left or right side protruding hook on the cover first with the corresponding slot on the unit.

2 Push the hook firmly towards the unit until it clicks into place. Then push the succeeding hooks one by one until all have clicked into place.

3 Check that the cover now moves correctly.
• If it does not, remove it and repeat the above procedure.

The unit's display



- ① Lights when connected USB device is ready to use.
- ② Lights when disc is ready to use.
- ③ Lights when the unit outputs progressive video signal.
- ④ Program playback indicator (→ page 53)
- ⑤ T: Title number / Track number
G: Group number
- ⑥ Random playback indicator (→ page 50, 53)
- ⑦ D.MIX indicator
When off: Down-mixing is possible.
When lit: The disc prevents down-mixing so only the two front channels can be played.
- ⑧ SLEEP indicator (→ page 80)
- ⑨ Radio broadcast display (→ page 39)
ST: Stereo
MONO: Monaural
- ⑩ C: Content number
T: Track number
- ⑪ Dolby Digital indicator
Lights when Dolby Digital decoder is being used.
- ⑫ DTS indicator
Lights when DTS decoder is being used.
- ⑬ Timer setting indicator (→ page 79)
Lights when the scheduled timer recording is set.
- ⑭ Dolby Pro Logic II indicator (→ page 77)
- ⑮ Recording indicator (→ page 29)
- ⑯ Dolby Virtual Speaker indicator (→ page 77)
- ⑰ Lights when receiving RDS (radio data system). (→ page 59)
- ⑱ Main display section/Progress indicator (→ below)
- ⑲ Equalizer indicator (→ page 76)
- ⑳ Repeat play indicator (→ page 50, 54)
- ㉑ H.BASS indicator (→ page 76)

• Indicators on the front display for functions that this unit does not support will not light.

■ Progress indicator

The progress of the following operations:

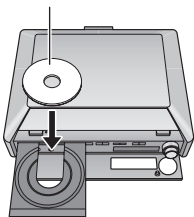
- importing MP3/WMA to the HDD
- conversion and analysis of data on the HDD
- compression of data on the HDD
- division/combination of LPCM tracks
- back-up of data from the HDD
- restoring of data to the HDD

is indicated on the unit's display as shown on the right:

□ □ □ □ □ □ □ □ □ □	12.5% completed
□ □ □ □ □ □ □ □ □ □	25% completed
□ □ □ □ □ □ □ □ □ □	37.5% completed
□ □ □ □ □ □ □ □ □ □	50% completed
□ □ □ □ □ □ □ □ □ □	100% completed

How to insert the disc

Insert label-up.



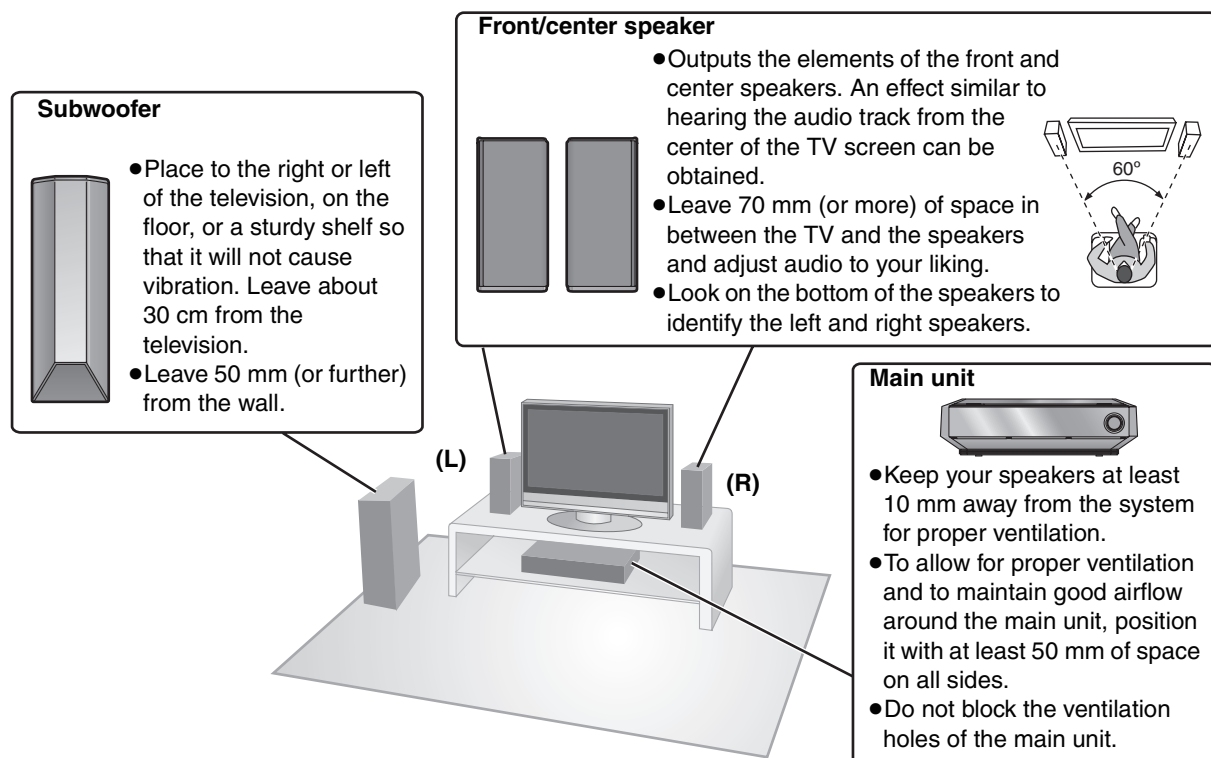
Press [▲OPEN/CLOSE] on the main unit to open the tray and insert a disc. (Press the button again to close the tray.)

- It is not possible to play continuously from one side of a double sided disc to the other. You will need to eject the disc and turn it over.
- **RAM** Remove the disc from its cartridge before use.



QUICK START GUIDE **STEP 1** Speaker location

This unit comes equipped with a Dolby Virtual Speaker circuit installed. Using just the front/center speakers, the subwoofer, and by reproducing acoustic effects very similar to 5.1ch surround, you can enjoy a true “home theater” experience even within a limited space.



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.

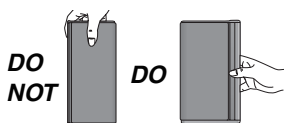
Use only supplied speakers

Using other speakers can damage the unit, and sound quality will be adversely 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.

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.
- Do not touch the netted area of the speakers.



If irregular colouring occurs on your television

The front/center 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 demagnetizing function of the television should correct the problem. If it persists, move the speakers further away from the television.

Caution

- **The main unit 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.**

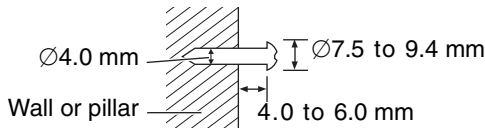
Speaker installation options

■ **Attaching to a wall**

You can attach the front/center speakers to a wall.

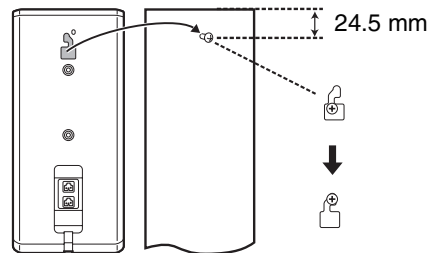
- The wall or pillar on which the speakers are to be attached should be capable of supporting 10 kg per screw. Consult a qualified building contractor when attaching the speakers to a wall. Improper attachment may result in damage to the wall and speakers.

1 Drive a screw (not included) into the wall.



2 Fit the speaker securely onto the screw(s) by matching them with the hole(s).

Front/center speaker



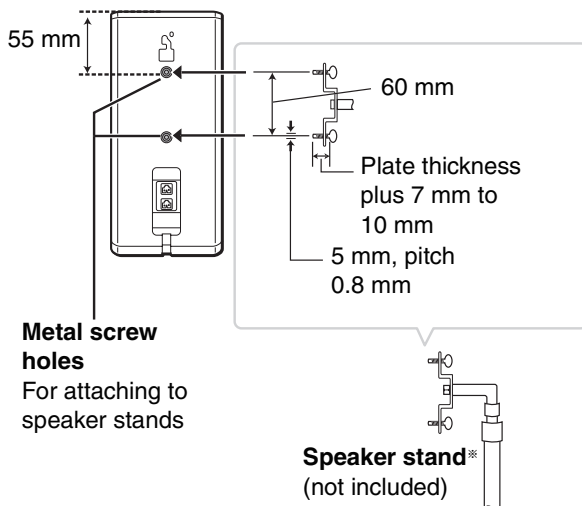
■ **Fitting speaker stands** (not included)

Ensure the stands meet these conditions before purchasing them.

Note the diameter and length of the screws and the distance between screws as shown in the diagram.

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

Front/center speaker

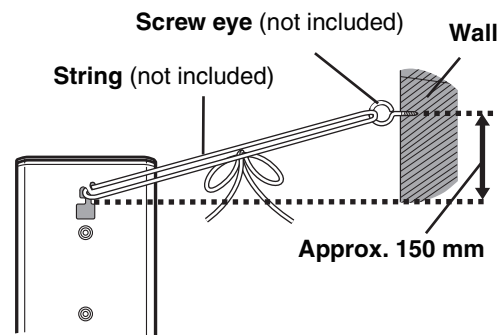


※ This is one example of configuring speaker stands.

Preventing the speakers from falling over

Preparation

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



1 Thread the string (not included) through the slot on the rear of the front/center speakers to prevent them from falling over.

2 Loop the string through the screw eye and tie tightly.

- You will need to obtain the appropriate screw eyes to match the walls and pillars to which the screw eyes are going to be fastened.
- Consult with 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.

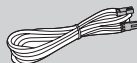
QUICK START GUIDE **STEP 2** Basic connections

Included parts to be used

Speaker cable for front/
center speakers



Speaker cable for
subwoofer

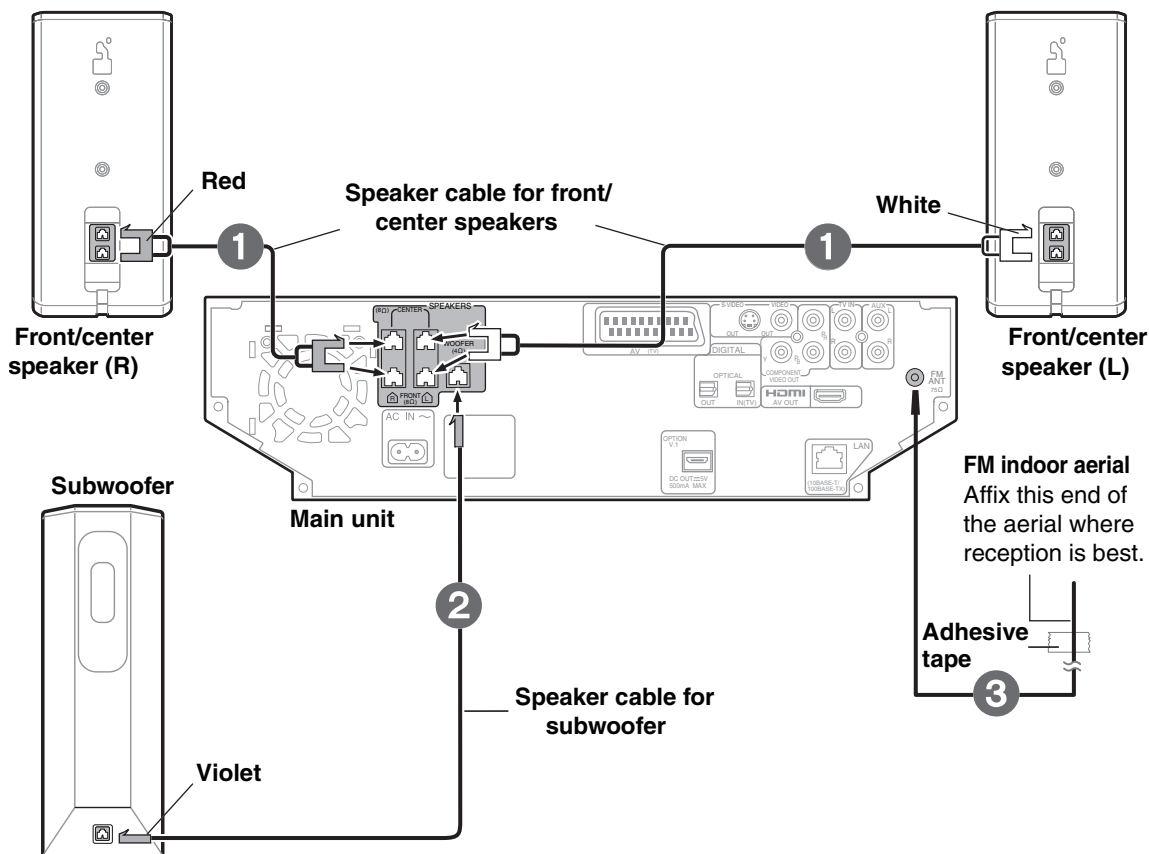


FM indoor aerial



Using FM outdoor aerial (optional) (→ page 59).

- Look on the bottom of the speakers to identify the left and right speakers.

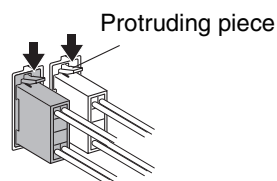
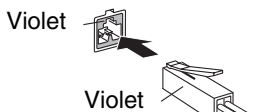
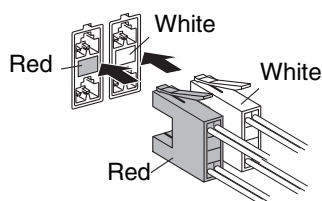


Connecting the speakers and subwoofer to the terminals (1, 2)

Connect the speaker to the terminal that matches the colour of the speaker connector. (Insert until you hear it click into place.)

Front/center speaker

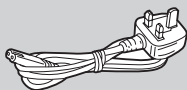
Subwoofer



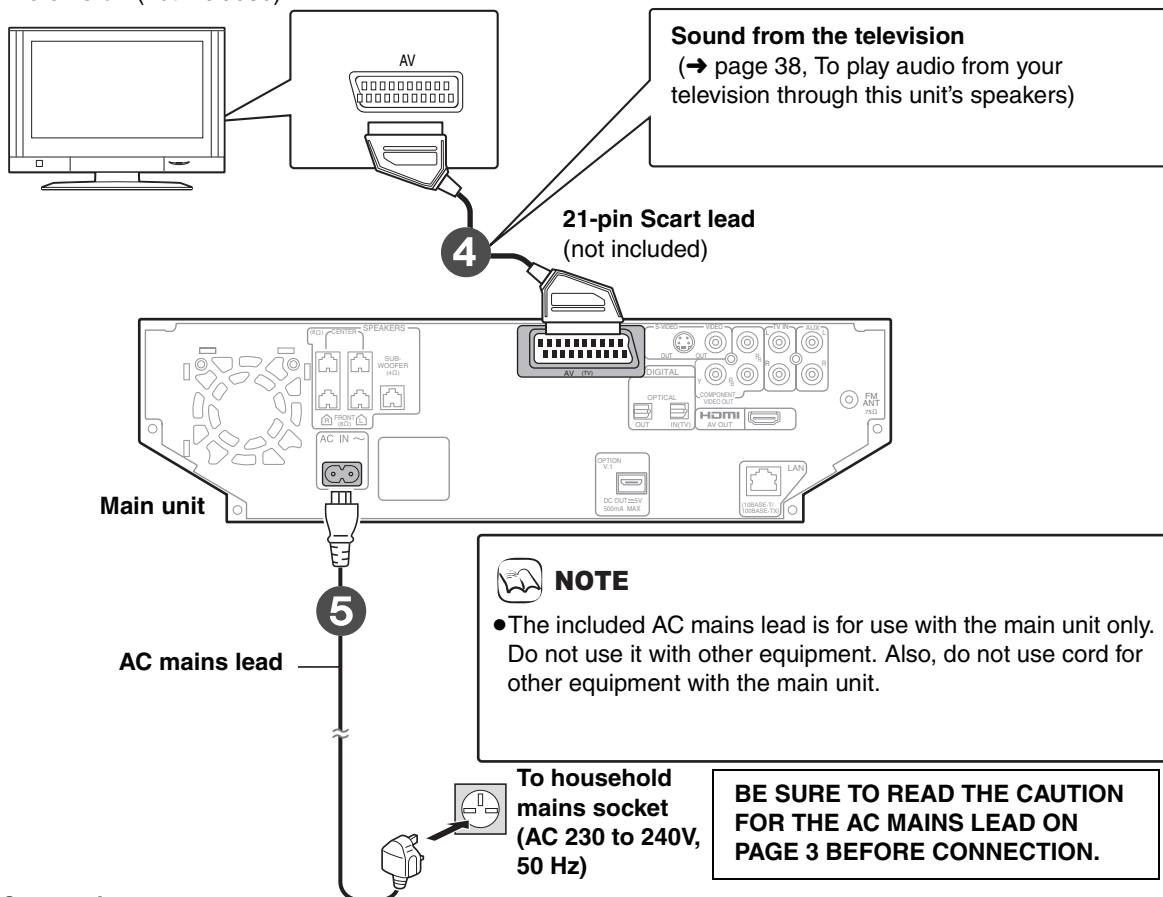
When disconnecting:

Press down on the protruding piece and pull out.

AC mains lead



Television (not included)



Conserving power

The main unit consumes a small amount of power when it is in standby mode (approx. 0.6 W). To save power when it is not to be used for a long time, unplug it from the household mains socket. You will need to reset some memory items after plugging in the main unit.

■ To listen to sound from this unit through your television's speakers

Press and hold [MUTING] until "AV MUTE OFF" appears on the unit's display.

The audio is output from both the speakers and the television.

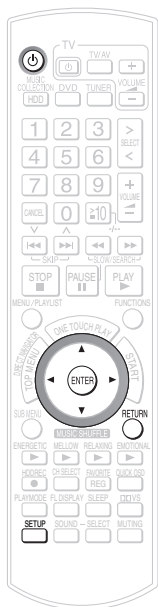
To mute sound from this unit's speakers (→ page 80)

- To cancel, press and hold [MUTING] and select "AV MUTE ON".
- If the selector is set to "TV Audio", this function does not work.

Optional Connections

- For those who want to enjoy higher picture quality and have a TV equipped with an HDMI terminal (→ page 91)
- For those who have a satellite receiver or VCR (→ page 92)
- For those who want to enjoy 5.1 ch surround sound by connecting with an amplifier or receiver (→ page 92)
- For those who want to connect this unit with an external device (such as an MP3 player) (→ page 93)
- For those who want to connect to a television with VIDEO terminal or S VIDEO terminal (→ page 93)
- For those who want to connect to a network and import new album/artist information (→ page 94)

QUICK START GUIDE **STEP 3** Performing QUICK SETUP



The QUICK SETUP screen assists you to make necessary settings.

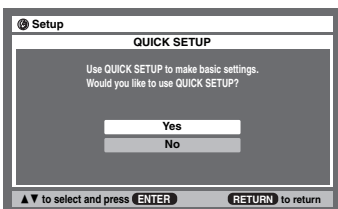
Preparation

To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.

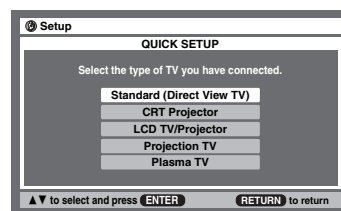
- 1 Press [POWER].
- 2 Press [SETUP].
- 3 Press [▲ ▼] to select “Setup for Video” and press [ENTER].



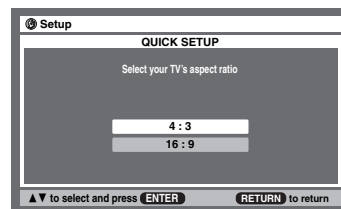
- 4 Press [▲ ▼] to select the menu language and press [ENTER].



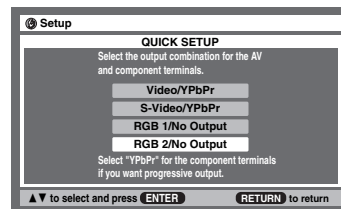
- 5 Press [▲ ▼] to select “Yes” and press [ENTER].



- 6 Press [▲ ▼] to select the TV Type and press [ENTER].



- 7 Press [▲ ▼] to select TV Aspect ratio and press [ENTER].
4:3: Regular aspect television (4:3)
16:9: Widescreen television (16:9)



- 8 Press [▲ ▼] to select the output combination for the AV and component terminals, and press [ENTER].
- 9 Press [ENTER].

To return to the previous screen
Press [RETURN].

To exit the screen

Press [RETURN] several times.

To change these settings later

Select “QUICK SETUP” in the “Others” menu (→ page 87).

■ To have the unit start up immediately

By setting “Power Off Mode” to “Quick-Start Mode”, this unit can be started up immediately from standby mode.

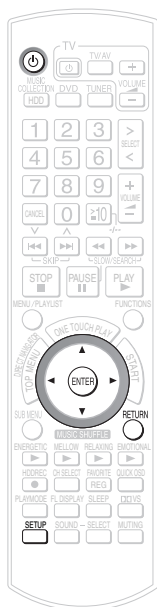
- 1 Press [SETUP].
- 2 Press [▲ ▼] to select “Other Setup”.
- 3 Press [▲ ▼] to select “Power On/Off” and press [▶].
- 4 Press [▲ ▼] to select “Power Off Mode” and press [ENTER].
- 5 Press [▲ ▼] to select “Quick-Start Mode” and press [ENTER].



NOTE

- Power consumption during standby will increase when this unit is set to “Quick-Start Mode”.

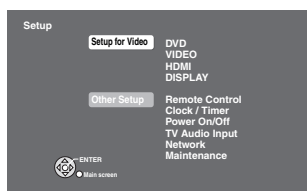
QUICK START GUIDE **STEP 4** Setting the clock



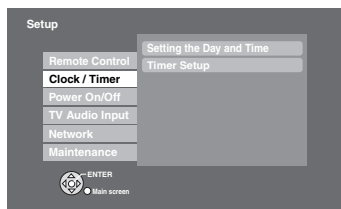
Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [POWER].

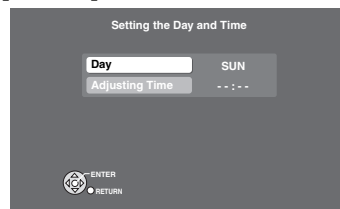
- 1 While stopped
Press [SETUP].



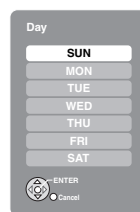
- 2 Press [▲ ▼] to select “Other Setup” and press [ENTER].
- 3 Press [▲ ▼] to select “Clock/Timer” and press [▶].



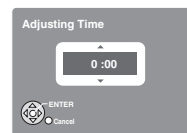
- 4 Press [▲ ▼] to select “Setting the Day and Time” and press [ENTER].



- 5 Press [▲ ▼] to select the “Day” and press [ENTER].



- 6 Press [▲ ▼] to select the day and press [ENTER].
- 7 Press [▲ ▼] to select “Adjusting Time” and press [ENTER].



- 8 Press [▲ ▼] to set the time and press [ENTER].
• This can be set quickly by pressing and holding [▲ ▼].

The clock starts.

To return to the previous screen
Press [RETURN].

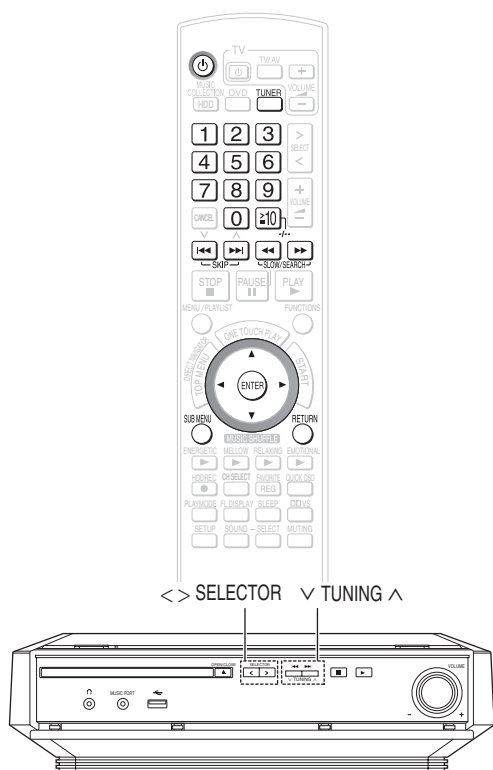
To exit the screen
Press [RETURN] several times.



NOTE

- This is a 24-hour clock.
- Reset the clock regularly to maintain accuracy.
- If there is a power failure or the plug is disconnected from the household mains socket, set this again.

QUICK START GUIDE **STEP 5** Setting the FM radio stations presets



Radio operations are described mainly with the remote control.

You can alternatively use the corresponding button on the main unit.

*1 [**<> SELECTOR**] *2 [**TUNING ^**]

Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [**⏻**].
- 3 Press [**TUNER**]*1 to switch the selector to "FM".

Setting preset channels

Up to 30 stations can be set.

Preparation

To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.

- 1 Press [**◀▶▶**] to select the frequency.
- 2 Press [**SUB MENU**].

FM Sub Menu	
Audio Mode	Auto(Stereo)
Set Preset Channel	
Erase Preset Channel	
Recording Mode	LPCM
Auto Track Divide	Auto 5 Minutes

- 3 Press [**▲▼**] to select "Set Preset Channel" and press [**ENTER**].

FM Set Preset Channel	
CH1	88.10 MHz
CH2	88.50 MHz
CH3	88.70 MHz
CH4	- - . - MHz
CH5	- - . - MHz

- 4 Press [**▲▼**] to select the channel and press [**ENTER**].

Set Preset CH.	
Preset:	CH4
Frequency:	89.90 MHz

Repeat steps 2–4 to set other channels.

To return to the previous screen

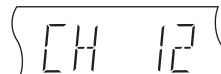
Press [**RETURN**].

Selecting the preset channels

Check that the radio station(s) are correctly set.

Press the numbered buttons to select the channel.

- To select a 2-digit number
e.g. "12": [**≥10**] → [**1**] → [**2**].



Alternatively, press [**◀▶▶**]*2 to select the channel.

Disc handling care

■ How to hold a disc

Do not touch the recorded surface.

DO



DO NOT



■ Concerning non-cartridge discs

Be careful about scratches and dirt.

■ If there is dirt or condensation on the disc

Wipe with a damp cloth and then wipe dry.

DO



DO NOT



■ Handling precautions

- Do not attach labels or stickers to discs. (This may cause disc warping and un-balanced rotation, rendering it unusable.)
- Write on the label side of the disc only with a soft, oil-based felt pen. Do not use ballpoint pens or other hard writing implements.
- Do not use record cleaning sprays, benzene, thinner, static electricity prevention liquids or any other solvent.
- Do not use scratch-proof protectors or covers.
- Do not drop, stack, or impact discs. Do not place objects on them.
- Do not use the following discs:
 - Discs with exposed adhesive from removed stickers or labels (rental discs, etc.).
 - Discs that are badly warped or cracked.
 - Irregularly shaped discs, such as heart shapes.

DO NOT



- Do not place in the following areas:
 - In direct sunlight.
 - In very dusty or humid areas.
 - Near a heater.
 - Locations susceptible to significant difference in temperature (condensation can occur).
- To protect discs from scratches and dirt, return them to their cases or cartridges when you are not using them.

Unit care

The precision parts in this unit are readily affected by the environment, especially temperature, humidity, and dust. Cigarette smoke can also cause the unit to break or malfunction.

Clean this unit with a soft, dry cloth.

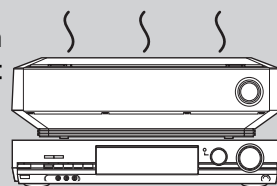
- Never use alcohol, paint thinner or benzene to clean this unit.
- Before using chemically treated cloth, carefully read the instructions that came with the cloth.

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.

Do not place the unit on amplifiers or equipment that may become hot.

The heat can damage the unit.

DO NOT



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



NOTE

Do not obstruct the rear panel's internal cooling fan.

Discs used with this unit

Discs that can be recorded to this unit's HDD (HDD)

Disc	Logo	Data type	Remarks
CD		CD	Music discs - This unit is not compatible with HDCD. - Operation and sound quality of CDs that do not conform to CD-DA specifications (copy control CDs, etc.) cannot be guaranteed.
CD-R/RW	—	CD / WMA ^{*1} / MP3 ^{*1} ^{*1} See also “Tips for making data discs” (→ page 22).	By recording in CD-DA, WMA, or MP3 format, and closing the session or finalizing ^{*2} the CD-R/CD-RW disc when recording is complete, you can record tracks from the disc to this unit's HDD. ^{*2} A process that allows play on other equipment.
DVD-RAM		MP3	This unit can record only MP3 files on these recordable DVDs. DVD-R/RW discs need to be finalized.
DVD-R/RW			

• DVD content cannot be recorded to this unit's HDD (except for MP3 files in recordable DVD).

Discs that can be played

Commercial discs

Disc	Logo	Indicated in these instructions by	Remarks
DVD-Video		DVD-V	High quality movie and music discs
DVD-Audio		DVD-A	High fidelity music discs* [*] Some DVD-Audio discs contain DVD-Video content. To play DVD-Video content, select “Play as DVD-Video” (→ page 58, Other Menu).
VCD		VCD	Music discs with video Including SVCD (Conforming to IEC62107)
CD		CD	Music discs - This unit is not compatible with HDCD. - Operation and sound quality of CDs that do not conform to CD-DA specifications (copy control CDs, etc.) cannot be guaranteed.

Regarding DVD-Audio

Some multi-channel DVD-Audio will prevent down-mixing (→ page 108, Glossary) of all or part of their contents if this is the manufacturer's intention. When playing such discs, or such parts of the disc, unless the number of connected speakers is the same as the disc's channel specification, audio will not be output properly (e.g., part of the audio is missing, multi-channel audio cannot be selected and audio is played in two channels). Refer to the disc's jacket for more information.

■ **Recorded discs** (○: Can be used, —: Cannot be used)

Disc	Logo	Recorded on a DVD recorder, etc.		Recorded on PC, etc.					Necessity of finalize ^{※6}
		DVD-VR ^{※2}	DVD-V ^{※4}	WMA	MP3	JPEG	MPEG4	DivX	
DVD-RAM		○	—	—	○	○	○	○	Not necessary
DVD-R/RW		○	○	—	○	○	○	○	Necessary
DVD-R DL		○ ^{※3}	○	—	—	—	—	—	Necessary
+R/+RW	—	—	(○) ^{※5}	—	—	—	—	—	Necessary
+R DL	—	—	(○) ^{※5}	—	—	—	—	—	Necessary
CD-R/RW ^{※1}	—	—	—	○	○	○	○	○	Necessary ^{※7}

● It may not be possible to play the discs in all cases due to the type of discs, the condition of the recording, the recording method and how the files were created (→ page 22, Tips for making data discs).

※1 This unit can play CD-R/RW recorded with CD-DA or Video CD format.

WMA MP3 JPEG This unit also plays HighMAT discs.

※2 Discs recorded on DVD recorders or DVD video cameras, etc. using Version 1.1 of the Video Recording Format (a unified video recording standard).

※3 Discs recorded on DVD recorders or DVD video cameras using Version 1.2 of the Video Recording Format (a unified video recording standard).

※4 Discs recorded on DVD recorders or DVD video cameras using DVD-Video Format.

※5 Recorded using a format different from DVD-Video Format, therefore some functions cannot be used.

※6 A process that allows play on compatible equipment. To play a disc that is displayed as “Necessary”, the disc must first be finalized on the device it was recorded on.

※7 Closing the session will also work.

■ **Discs that cannot be played**

Blu-ray, HD DVD, AVCHD discs, Version 1.0 of DVD-RW, DVD-ROM, CD-ROM, CDV, CD-G, SACD, Photo CD, DVD-RAM that cannot be removed from their cartridges, 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.

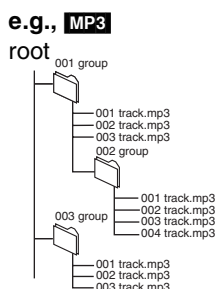
■ Tips for making data discs

Format	Disc	Extension	Reference
WMA	CD-R/RW	“.WMA” “.wma”	- Compatible compression rate: between 48 kbps and 320 kbps - You cannot play WMA files that are copy protected. - This unit is not compatible with Multiple Bit Rate (MBR: a file that contains the same content encoded at several different bit rates).
MP3	DVD-RAM DVD-R/RW CD-R/RW	“.MP3” “.mp3”	Sampling frequency and compatible compression rate DVD-RAM, DVD-R/RW : 11.02, 12, 22.05, 24 kHz (8–160 kbps) 44.1, 48 kHz (32–320 kbps) CD-R/RW : 8, 11.02, 12, 16, 22.05, 24 kHz (8–160 kbps) 32, 44.1, 48 kHz (32–320 kbps)
JPEG	DVD-RAM DVD-R/RW CD-R/RW	“.JPG” “.jpg” “.JPEG” “.jpeg”	- JPEG files taken on a digital camera that conforms to DCF Standard Version 1.0 are displayed. –Files that have been altered, edited or saved with picture editing software may not be displayed. - This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g., TIFF) or play pictures with attached audio.
MPEG4	DVD-RAM DVD-R/RW CD-R/RW	“.ASF” “.asf”	- You can play MPEG4 data [conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system] recorded with the Panasonic SD multi cameras or DVD recorders with this unit. - The recording date may differ from that of the actual date.
DivX	DVD-RAM DVD-R/RW CD-R/RW	“.DIVX” “.divx” “.AVI” “.avi”	- Plays all versions of DivX video (including DivX® 6) [DivX video system/MP3, Dolby Digital or MPEG audio system] with standard playback of DivX® media files. Functions added with DivX Ultra are not supported. - DivX files greater than 2GB or have no index may not play properly on this unit. - This unit supports all resolutions up to maximum of 720 × 480 (NTSC)/720 × 576 (PAL). - You can select up to 8 types of audio and subtitles on this unit.

- If groups were created away from the root like “002 group” in the illustration below, the eighth one onwards is displayed on the same vertical line in the menu screen.
- There may be differences in the display order on the menu screen and PC screen.
- This unit cannot play files recorded using packet write.
- This unit is not compatible with ID3 tags.

Naming folders and files (Files are treated as contents and folders are treated as groups on this unit.)

At the time of recording, prefix folder and file names. This should be with numbers that have an equal number of digits, and should be done in the order you want to play them (this may not work at times).



DVD-R/RW

- Discs must conform to UDF bridge (UDF 1.02/ISO9660).
- This unit is not compatible with multi-session. The default session only is played.

CD-R/RW

- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).
- This unit is compatible with multi-session but if there are a lot of sessions it takes more time for play to start. Keep the number of sessions to a minimum to avoid this.

DVD-RAM

- Discs must conform to UDF 2.0.

About compatible USB devices

The USB connectivity enables you to connect and play or record tracks or files from USB mass storage class devices. Typically, USB memory devices (Bulk only transfer).

■ Compatible devices

Devices which are defined as **USB mass storage class**:

- USB devices that support bulk only transfer.
- USB devices that support USB 2.0 full speed.

■ Playable/recordable formats

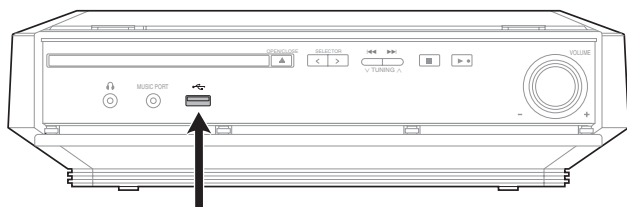
Format	Extension	Playable / Not playable	Recordable / Not recordable	Reference
WMA	“.WMA” “.wma”	Playable	Recordable	See “Reference” for each format in “Tips for making data discs” on page 22.
MP3	“.MP3” “.mp3”			
JPEG	“.JPG” “.jpg” “.JPEG” “.jpeg”		Not recordable	
MPEG4	“.ASF” “.asf”			

- CBI (Control/Bulk/Interrupt) is not supported.
- Digital Cameras that use PTP protocol or which require additional program installation when connected to a PC are not supported.
- A device using NTFS file system is not supported.
[Only FAT 12/16/32 (File Allocation Table 12/16/32) file system is supported].
- Depending on the sector size, some files may not work.
- It will not operate with Janus enabled MTP (Media Transfer Protocol) devices.
- Maximum folder: 400 folders
- Maximum file: 4000 files
- Maximum file name: 44 characters
- Maximum folder name: 44 characters
- Only one memory card will be selected when connecting a multi-port USB card reader. Typically the first memory card inserted.

■ Connecting compatible USB devices

Preparation

Before connecting any USB mass storage device to the unit, ensure that the data stored therein has been backed up. It is not recommended to use a USB extension cable. The USB device is not recognized by this unit.



Main unit

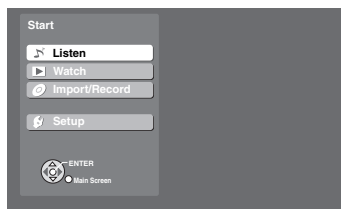
Compatible USB device (not included)

It is not recommended to use a USB extension cable. The device connected via the cable will not be recognized by this unit.

Utilizing the Start menu

By using the Start menu you can access the main functions quickly and easily.

1 Press [START].

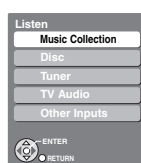


2 Press [▲ ▼] to select an item and press [ENTER].

Each sub-level menu is displayed. Follow the on-screen instructions for operation.

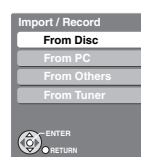
Listen:

Play music or receive radio broadcasts



Import/Record:

Import/Record music



Watch:

Operate DVD playback



Setup:

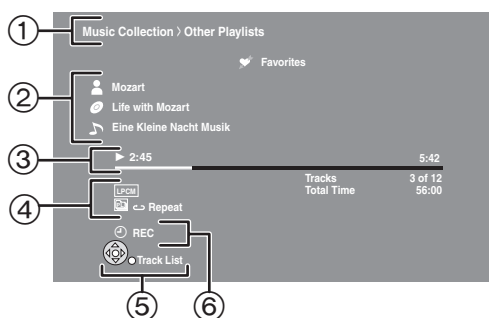
Change the unit's settings, set timer and use other functions



Displaying track information

When [MUSIC COLLECTION] is pressed, or while a track from the HDD is playing, the following screen is displayed on the television. You can check information about the track.

Main Screen



- ① How the track was selected is displayed
- ② Track information
- ③ Playback status, elapsed playtime, track time
- ④ Playback range/mode
 - One track
 - Playlist
 - All playlists
 - Repeat play mode
 - Random play mode
- ⑤ The availability and functions for [▲ ▼ ◀ ▶], [ENTER], [RETURN] is displayed.
- ⑥ Timer setting indicator (→ page 79)

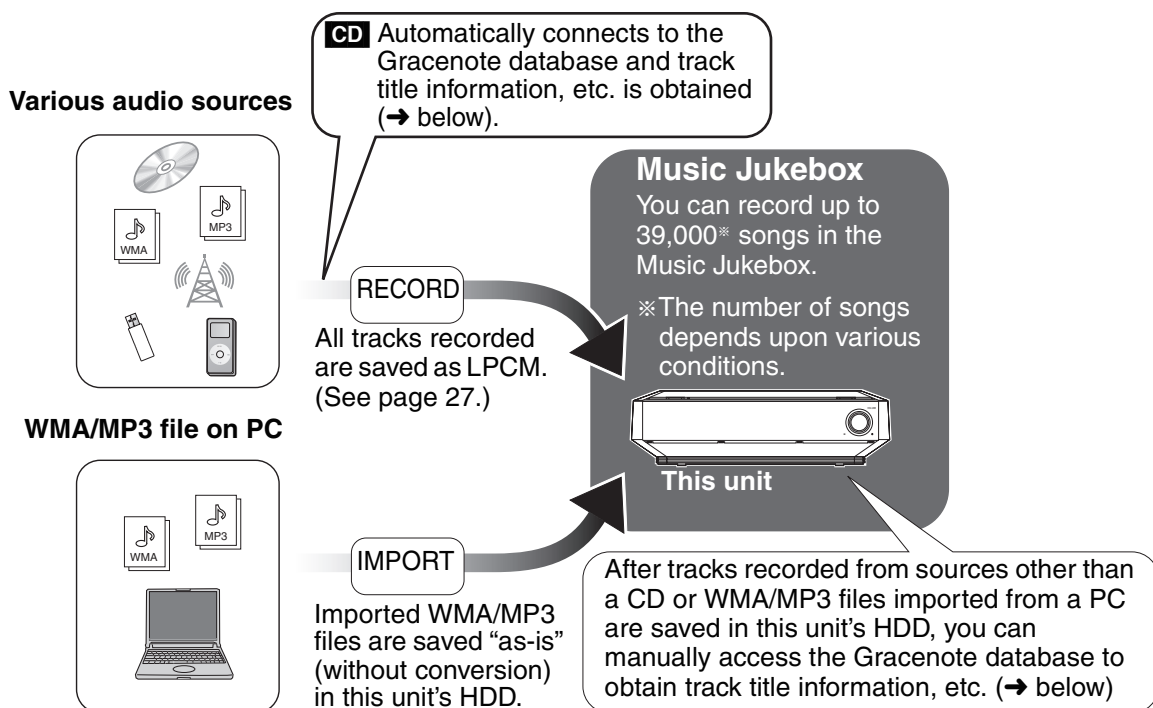
A brief introduction about recording and importing from a PC

Recording

This unit can record audio to the internal HDD from a variety of sources including commercial CDs, radio, music files (WMA/MP3), and audio from externally connected devices (portable digital audio players, etc.). This unit can also access the Gracenote database to obtain title information for music CDs, radio broadcasts, or other analogue recordings made with externally connected devices. (For recording details, see page 26.)

Importing from a PC

You can import WMA/MP3 files from your PC to this unit. This differs from recording because the files are saved in the HDD in the same format as they are saved on your PC. (LPCM and AAC conversion is not performed.)



About the Gracenote® database

The Gracenote® database is a database used to search and retrieve CD title information. By connecting to the Internet, the unit can access the Gracenote server and obtain the most recent CD title information. When a CD is inserted or recording from a CD begins, the unit will automatically search for and obtain information about the inserted CD (→ page 28).

If this unit is not connected to the Internet:

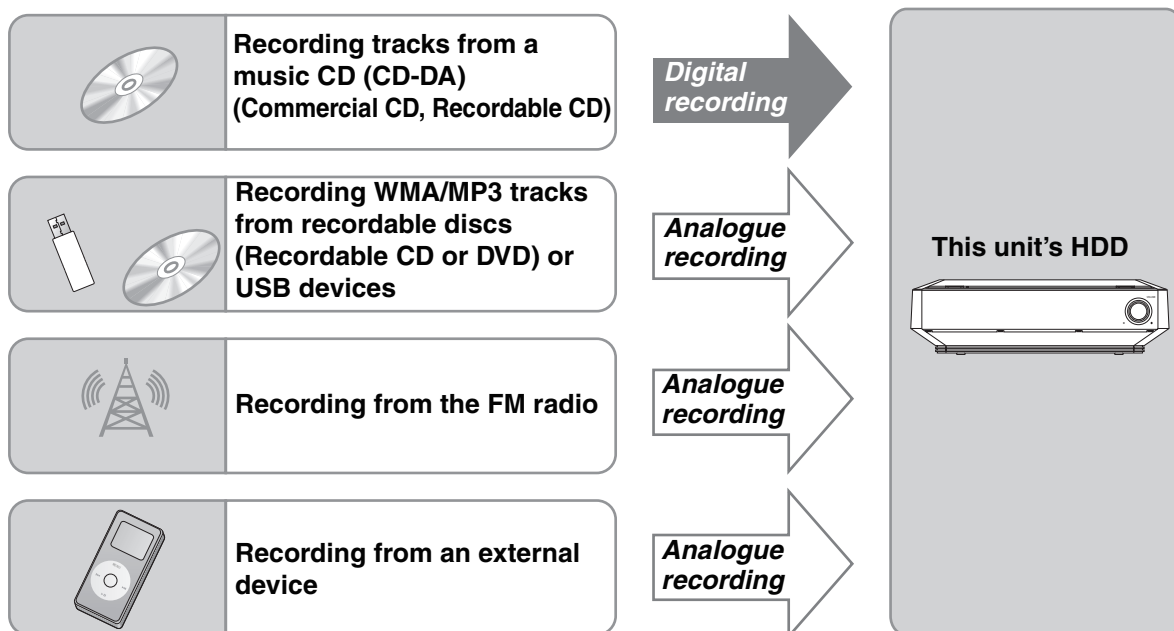
A portion of the Gracenote database comes pre-installed on this unit, so titles and artist information can be obtained. Please note however that the newest CD titles, etc. may not be registered yet to the internal database. This unit has an internal database containing information for approximately 350,000 album titles.

Searching for titles other than on CD:

Using the Gracenote database, information can also be obtained for other types of tracks recorded to the HDD (→ page 67, Searching for track names, artist names and album names within the Gracenote database and entering them automatically).

- If it takes a long time to access the Gracenote database, check if the unit's network connection (→ page 94) and the network settings (→ page 96) are correct.
- Some CDs may have title information that is similar to other CDs. In this case, try obtaining the CD title information again (→ page 67), or after recording to the HDD has completed enter the CD title information manually (→ page 66).
- For some CDs, multiple title suggestions will be found, therefore select the appropriate title (→ page 67). When you want to change the title, manually make changes after recording to the HDD is complete (→ page 66).

You can make these kinds of recordings

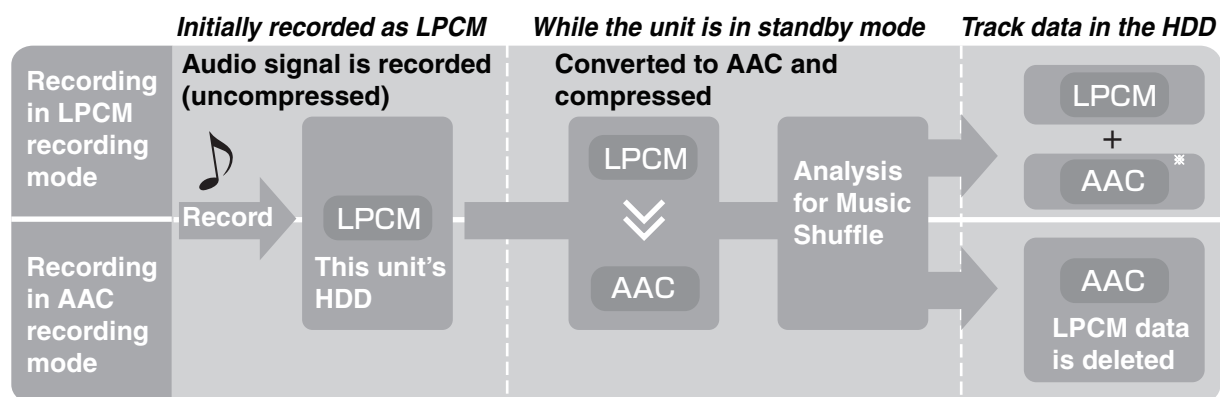


IMPORTANT

DVD content cannot be recorded to this unit's HDD (except for MP3 files in recordable DVD).

How recordings work

Tracks are initially recorded to the HDD and saved as LPCM. When the recording mode is set to AAC, AAC conversion takes place while the unit is in standby mode. In addition to AAC conversion, track analysis for the "Music Shuffle" function (→ page 35) also takes place during standby mode.



※With LPCM recording mode, AAC data created (XP mode only) is not displayed in the Track List.

■ About AAC conversion of recorded tracks and Music Shuffle analysis

- Conversion/analysis is performed when the unit is in standby mode. 2 minutes after the unit is set to standby mode, conversion/analysis starts and the unit's display starts to show "____". Leave the AC mains lead plugged in. You can also perform conversion/analysis immediately (→ page 46).
- This unit usually takes about one-third of the recording time to complete analysis and conversion. For example, a 60-minute recording will take about 20 minutes to complete conversion and analysis. (For tracks imported from a PC, time will be shorter as the tracks only need to be analysed.)
- Tracks can be played even if conversion and analysis is incomplete. However, the same track may sound slightly different before and after AAC conversion.
- You can also compress LPCM tracks to AAC to increase the amount of the available space on the HDD (→ page 47).

Recording modes

With these settings you can adjust the audio quality when recording tracks to the HDD. Recordings made with higher bitrates use more space, reducing the total available space on the HDD.

Recording mode

	Recording mode/ bitrate	Possible recording time	Explanation
Higher audio quality  Longer recording time	LPCM	Approx. 104 hours	The audio signal is digitally recorded without any compression.
	AAC(XP) 128 kbps	Approx. 1,230 hours	The audio is initially recorded as LPCM and converted to AAC when this unit is in standby mode. AAC is a compression format which compresses the audio data into a smaller size. Audio quality and the amount of tracks that can be recorded will differ depending on the bitrate.
	AAC(SP) 96 kbps	Approx. 1,640 hours	
	AAC(LP) 64 kbps	Approx. 2,460 hours	

Recording mode settings at the time of purchase:

The recording mode for each selector is set to “LPCM” at the time of purchase. The recording mode for each selector can be set individually (→ page 28).

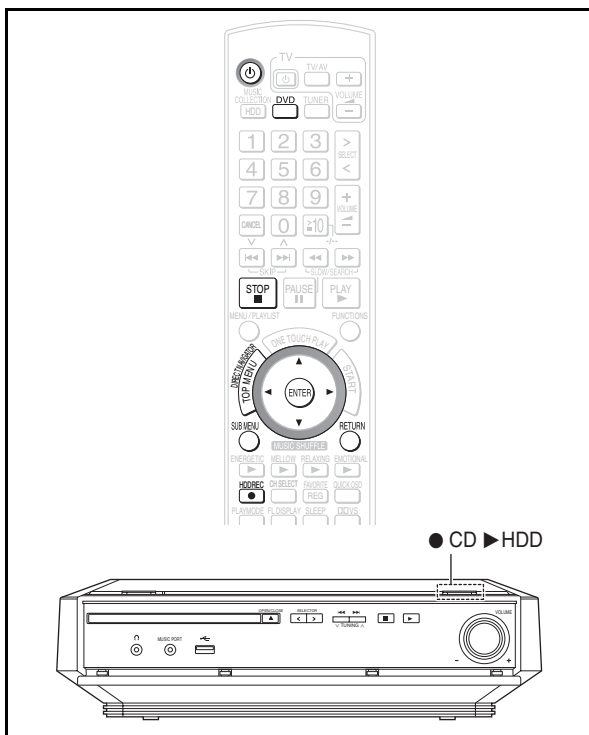
If you want to change the recording mode to AAC, please note the following:

Recordings made to this unit are initially recorded in LPCM, and then are converted to AAC. Therefore if you are making continuous, long recordings, the maximum amount of recordings you can make must fit within the LPCM limits for maximum possible recording time as described in the chart above. In the event that you are making many recordings, continue recording after the music data has been converted to AAC format (→ page 26, How recordings work).



NOTE

LPCM audio quality does not exceed the audio quality of the original recording.



CD

This unit digitally records tracks in CD-DA format from a commercial CD or recordable CD to this unit's HDD.

Using the Gracenote database, the unit automatically searches for the CD title.

Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].
- 3 Press [DVD] to switch the selector to "DVD/CD".
- 4 Insert a disc (→ page 11).

The unit starts accessing the Gracenote database and searches for the title information.



- A network connection (→ page 94) is necessary to obtain CD title information for the newest releases.

If search results indicate that multiple titles were found

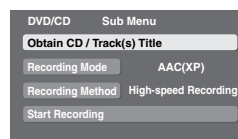
Press [▲ ▼] to select the appropriate title and press [ENTER].

Setting the recording mode/recording method

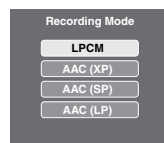
Use the following methods to change the settings for audio quality of recordings and how recording is executed.

- You will also perform this procedure when recording audio formats other than CD. Items displayed will change depending on the audio format used for recording.

1 Press [SUB MENU].



2 Press [▲ ▼] to select "Recording Mode" and press [ENTER].

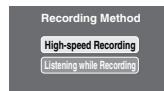


3 Press [▲ ▼] to select the recording mode and press [ENTER].

Recording modes (→ page 27)

CD only

4 Press [▲ ▼] to select "Recording Method" and press [ENTER].



5 Press [▲ ▼] to select the recording method and press [ENTER].

High-speed Recording:

Records in high speed (max. 4×).

Listening while Recording:

Audio is recorded at normal speed when listening while recording to the HDD.

Basic recordings

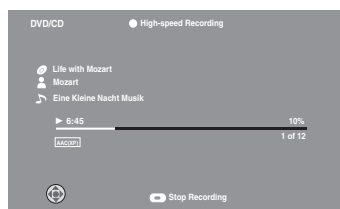
On the remote control: press [● HDD REC].
On the main unit: press [● CD ►HDD].

To start recording immediately after the recording mode/recording method settings (→ page 28)

After step 5 of “Setting the recording mode/recording method” (→ page 28)

- 1 Press [▲ ▼] to select “Start Recording” and press [ENTER].
- 2 Press [◀ ▶] to select “Yes” and press [ENTER].

Recording of the all tracks on the CD starts.



- Titles obtained from the Gracenote database will be applied to the tracks recorded.
- If the play mode is set to Repeat playback or Random playback (→ page 53, 54):
 - With [● HDD REC] (remote control): Recording cannot be performed. Turn repeat and random settings off.
 - With [● CD ►HDD] (main unit): Recording of the all tracks of the CD starts. Repeat and random play settings are automatically turned off.

To stop recording

Press [■].

Tracks that are stopped partially through recording (incomplete recordings) will not be recorded to the HDD.

- Additionally, nothing will be recorded if the current recording is stopped in the index portion (e.g. when “–0:03” etc. is displayed) between two tracks.

To select the track to start recording with

[Possible only when the recording method is set to “Listening while Recording” (→ page 28, step 5)].

- 1 Press [TOP MENU], and the track list will be displayed.
- 2 Press [▲ ▼] to select the track to start recording with and press [ENTER].
- 3 Press [● HDD REC].
Recording starts from the selected track and continues to the end of the CD.

To record a track while playing

[Possible only when the recording method is set to “Listening while Recording” (→ page 28, step 5)]. While the disc is playing, press [● HDD REC].

- Playback stops, and then restarts from the beginning of the track being played and records until the end of the disc.

To return to the previous screen

Press [RETURN].



NOTE

- Recordings cannot be paused.
- No audio can be heard during high-speed recording.
- The response to adjustments made to the volume while recording may be a bit slow, however this is not an indication of any problem.
- During high-speed recording, the elapsed time and status bar shown on-screen may appear to have stopped, but this is not an indication of a problem.
- When listening while recording audio from CDs that have no intermissions between tracks (e.g. DJ mix CDs), there may be some distortion when switching tracks. (However, this has no effect on the quality of the recording itself.)
- Recording or play of CDs, etc. with copyright restrictions that are not in compliance with CD standards is not guaranteed.
- Some music CDs have SCMS (Serial Copy Management System) restrictions. Due to copyright protection restrictions, these types of CDs cannot be recorded to the HDD.



TIPS

- If “The CD has already been recorded.” is displayed, the unit is trying to record a CD again that has previously been recorded. Follow the on-screen menu and select the appropriate operation.

Add to this Album playlist:

The CD will be recorded and added in the Album playlist of the CD (which has already been recorded). If the album title has been changed since it was recorded first, this item cannot be displayed.

Record as a New Album:

The CD will be recorded as a different album. The recorded album will be named “XXXXX (Name of the Album)~XX (Number)”.

Cancel:

Recording will be cancelled.

A brief introduction about search and playback of tracks recorded to the HDD

You can easily search for tracks that have been recorded to this unit's HDD by using a variety of categories based on your preferences. From the lists created by your search, you can select the tracks that you want to listen to. These lists that are created are referred to as "Playlists". Tracks are played when a selection is made in a playlist. Playlists are classified into the following categories.

■ *Playlists with tracks sorted by basic details (artist, album, track)*

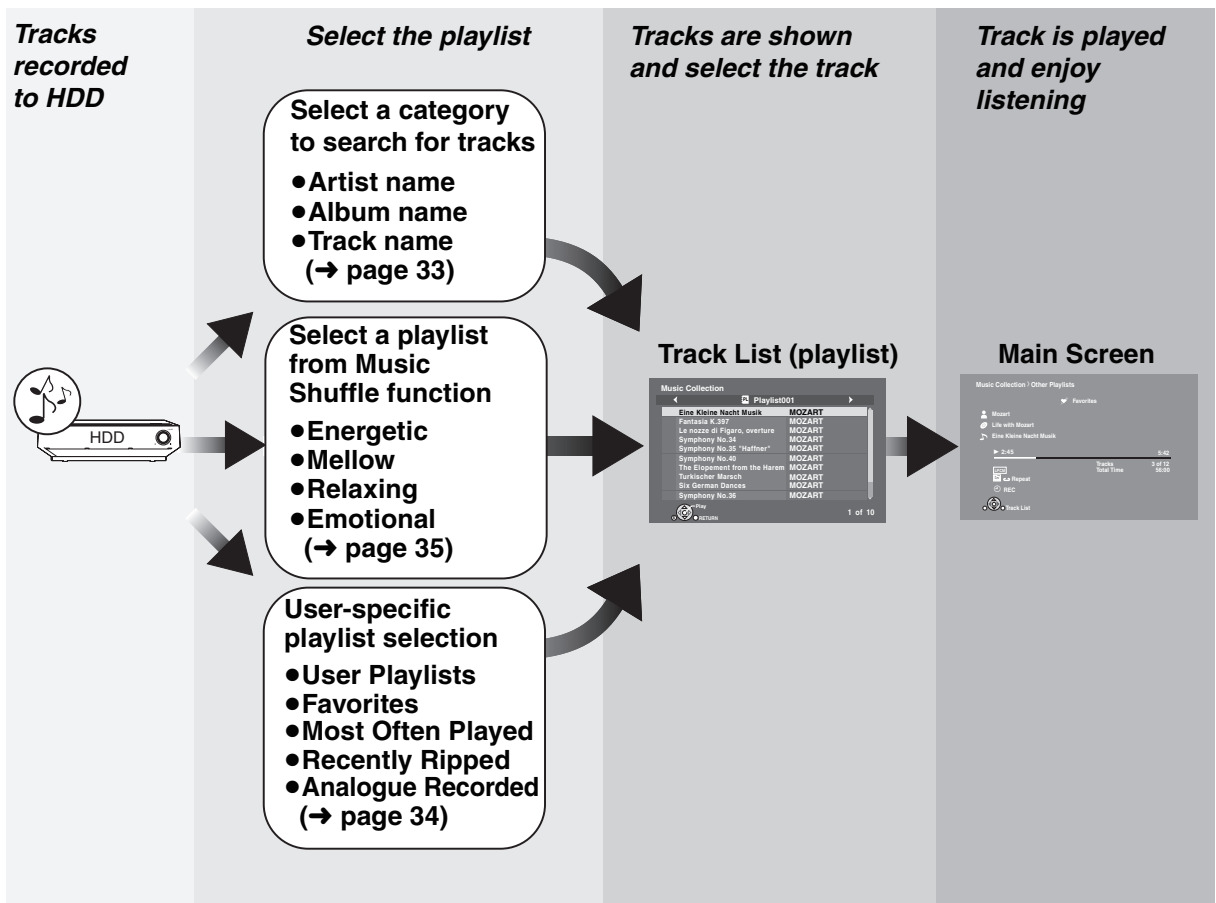
These playlists are created using basic details such as artist names or album names. Also you can search tracks by track names (→ page 33).

■ *Playlists generated by Music Shuffle function*

"Music Shuffle" is a function that automatically decides the feeling or impression of tracks, and then classifies the track into one of four different groups. If you select a specific group from "Music Shuffle", the tracks within the group will appear in a random playlist each time. Depending on the track, some tracks cannot be classified into any groups of Music Shuffle playlists (→ page 35).

■ *User-specific playlists ("Other Playlists" in the top menu of Music Collection)*

Aside from the playlists created by using basic details (as mentioned above), this unit has some other special types of playlists such as "User Playlists", which allow you to arrange any tracks in any order, or "Most Often Played" playlist, the tracks of which are automatically selected and arranged based on the frequency of playback. There are other user-specific or automatically arranged playlists like "Favorites", "Recently Ripped" and "Analogue Recorded". For more information about these useful playlists, see page 34.





HDD

Preparation

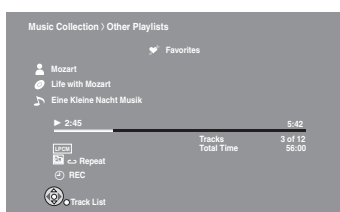
- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].
- 3 Press [MUSIC COLLECTION] to switch the selector to “Music Collection”.

Basic playback

Press [▶] (PLAY).

The track played last time will begin to play.

Main Screen



- When you switched the selector to “Music Collection” just after recording:
The first track of the last recorded source (CD, WMA/MP3 files, radio, or external devices) will begin to play.
- The Album playlist including the selected track will play through the last track (default setting).
You can change the play range (→ page 51).

Operations during playback



Stop



Pause

- Press [▶] (PLAY) to restart play.



Skip

- Operate in the Main Screen.



Search
(during play)

- Up to 5 steps.
- Press [▶] (PLAY) to restart play.
- Audio cannot be heard during search.
- It may take a little time for audio to be heard after search finishes.
- Operate in the Main Screen.



NOTE

- Audio may be broken up in between tracks.



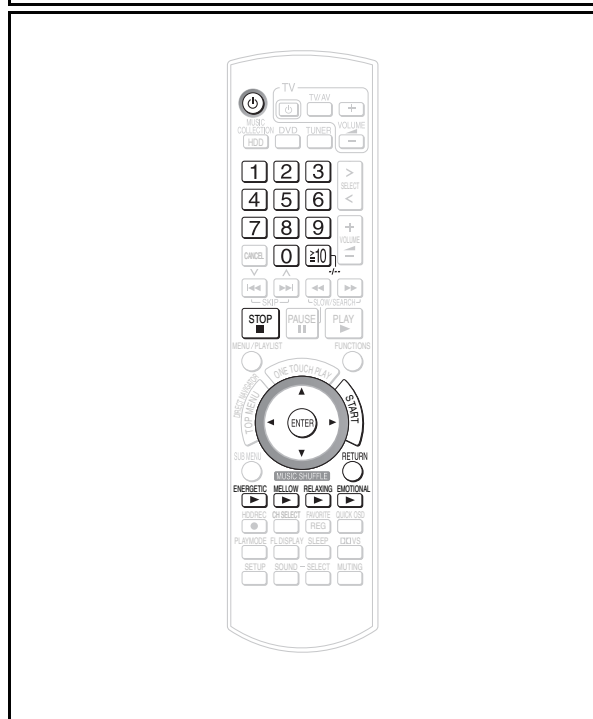
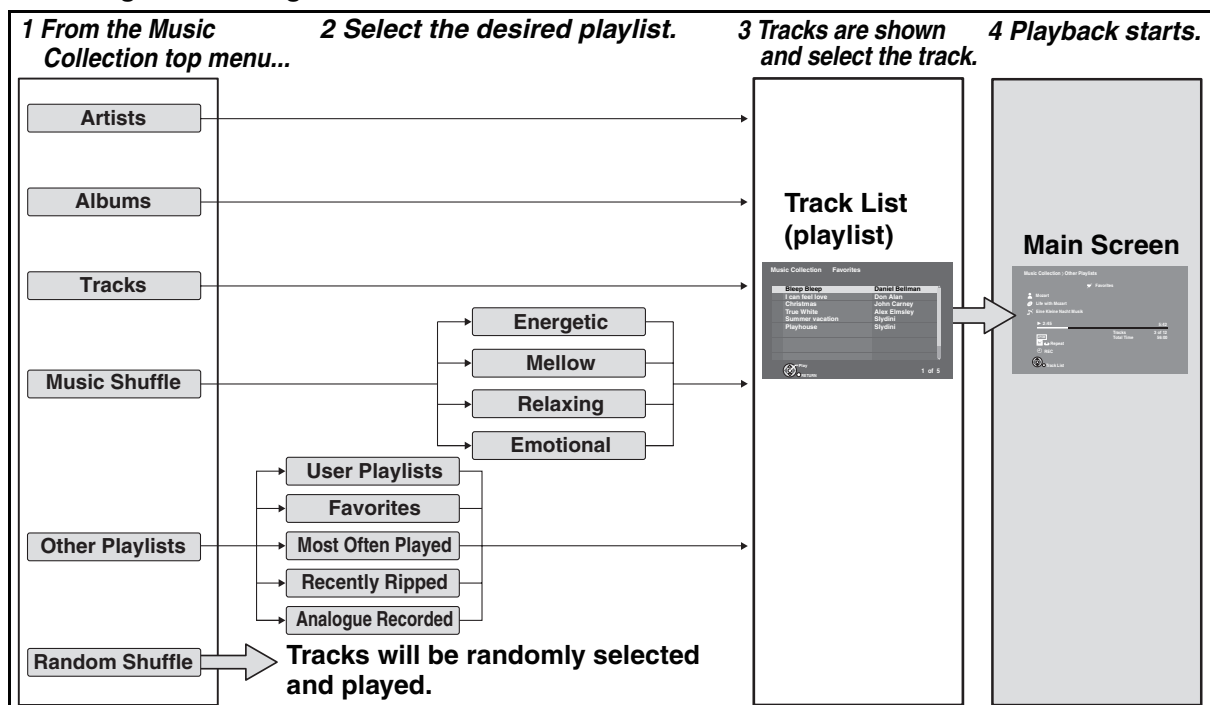
TIPS

To play tracks in the order you like
Create a user playlist (→ page 60).

Searching for tracks in the HDD

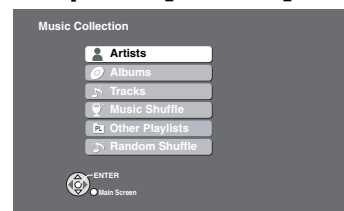
You can use several methods to easily find tracks in the HDD that you want to listen to.

Searching for/selecting tracks in the HDD



Searching from various playlists

- 1 Press [START].
- 2 Press [▲ ▼] to select “Listen” and press [ENTER].
- 3 Press [▲ ▼] to select “Music Collection” and press [ENTER].



Different ways to search for tracks

	Artists Search by artist name (→ page 33)
	Albums Search by album name (→ page 33)
	Tracks Search by track name (→ page 33)
	Music Shuffle Tracks are automatically selected from the Music Shuffle collection playlist (→ page 35).
	Other Playlists Search from various user-specific playlists (→ page 34)
	Random Shuffle Tracks will be randomly selected and played (→ page 35).

HDD

Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].

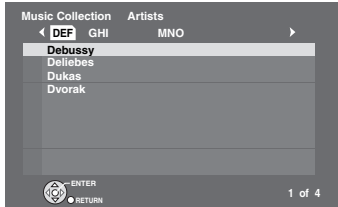


Searching by artist name

From the top menu of the Music Collection

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

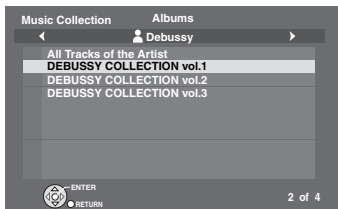
All the artist lists are displayed.



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

- With **[◀ ▶]** you can select the other alphabet tabs.

All the albums of the selected artist are displayed.



TIPS

To find artists whose name starts with “The”

Artists whose name starts with “The” cannot be searched for by “The”. Instead search by “W” if the artist’s name is “The World”.

- 3 Press **[▲ ▼]** to select the album and press **[ENTER]**.

- With **[◀ ▶]** you can select the other artists.

All the tracks of the selected album are displayed.

All Tracks of the Artist: Displays all tracks of the selected artist.

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

- With **[◀ ▶]** you can select the other albums.

The selected track starts playing.

- The Album playlist including the selected track will play through the last track (default setting). You can change the play range (→ page 51).

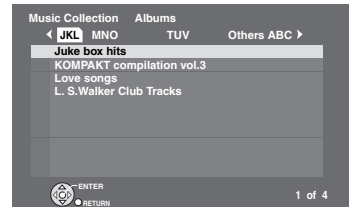


Searching by album name

From the top menu of the Music Collection

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

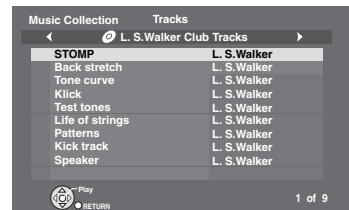
All the album lists are displayed.



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

- With **[◀ ▶]** you can select the other alphabet tabs.

All the tracks of the selected album are displayed.



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

- With **[◀ ▶]** you can select the other albums.

The selected track starts playing.

- The Album playlist including the selected track will play through the last track (default setting). You can change the play range (→ page 51).

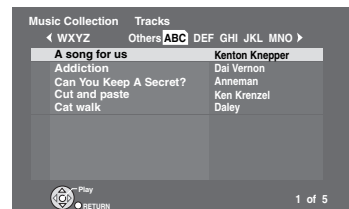


Searching by track name

From the top menu of the Music Collection

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

All recorded tracks are displayed in alphabetical order.



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

- With **[◀ ▶]** you can select the other alphabet tabs.

The selected track starts playing.

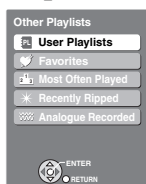
- The Album playlist including the selected track will play through the last track (default setting). You can change the play range (→ page 51).



Searching from various user-specific playlists

From the top menu of the Music Collection

- 1 Press [▲ ▼] to select “Other Playlists” and press [ENTER].

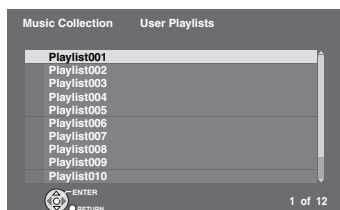


- 2 Press [▲ ▼] to select the item and press [ENTER].

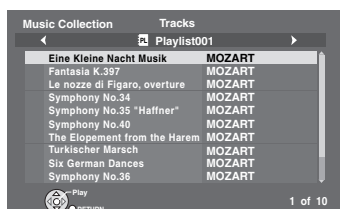
User-specific playlists (Other Playlists)

	User Playlists Playlists that allow you to freely arrange the tracks and the order in which they appear. (→ page 60)
	Favorites A playlist containing favorite tracks you registered (max.99 tracks) (→ page 63)
	Most Often Played A playlist created from 99 tracks that are arranged based on the frequency of playback among the most recently played 999 tracks.
	Recently Ripped A playlist created from the most recently added 99 tracks. Recordings from the radio or other external devices are not included in this playlist.
	Analogue Recorded A playlist containing only analogue recordings of the radio or from other external devices.

■ When “User Playlists” was selected



- 3 Press [▲ ▼] to select the playlist and press [ENTER].



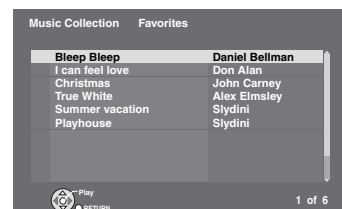
- 4 Press [▲ ▼] to select the track and press [ENTER].

- With [◀ ▶] you can select the other playlists.

The selected track starts playing.

- The playlist including the selected track will play through the last track (default setting). You can change the play range (→ page 51).

■ When “Favorites”, “Most Often Played” or “Recently Ripped” was selected e.g., Favorites



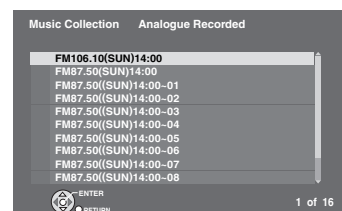
- 3 Press [▲ ▼] to select the track and press [ENTER].

The selected track starts playing.

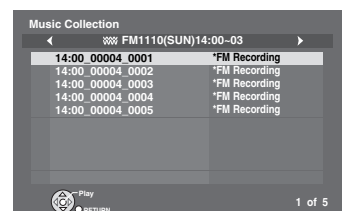
- The playlist including the selected track will play through the last track (default setting). You can change the play range (→ page 51).

■ When “Analogue Recorded” was selected

This list shows the day of the week and time for all analogue recordings made from the radio or other external devices.



- 3 Press [▲ ▼] to select the playlist and press [ENTER].



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

- With [◀ ▶] you can select the other playlists.

The selected track starts playing.

- The playlist including the selected track will play through the last track (default setting). You can change the play range (→ page 51).



Music Shuffle

Tracks are automatically selected from the Music Shuffle collection playlist.

This function generates playlists that contain only tracks that have been analysed and identified as having a certain feeling. This unit uses the beat and tempo, etc. as a basis for deciding which feeling the track fits best with, and then places the track into one of four different Music Shuffle groups.

- Every time you select a group of the Music Shuffle playlist, the tracks and the order they appear in will change.
- Depending on the track, some tracks cannot be classified into any groups of Music Shuffle playlists.

From the top menu of the Music Collection

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



The different groups of Music Shuffle

	Energetic		Mellow
	Relaxing		Emotional

- Each group can contain up to 99 tracks.

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

- All selected groups of tracks will be displayed in random order each time.
- If the group contains more than 99 tracks, 99 tracks are randomly selected and appear in random order.

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

- With [**◀ ▶**] you can select the other Music Shuffle groups.

The selected track starts playing.

- The playlist including the selected track will play through the last track (default setting). You can change the play range (→ page 51).



NOTE

About the Music Shuffle function

Music Shuffle analysis is performed while the unit is in standby mode (→ page 26), therefore tracks are not added to Music Shuffle immediately after recording. MP3/WMA tracks imported from a PC will be also analysed for Music Shuffle during the standby mode. To analyse tracks immediately, use “Convert/Analyse” (→ page 46).



TIPS

Using Music Shuffle directly with the remote control



By pressing the “MUSIC SHUFFLE” buttons on the remote control, applicable tracks will immediately play.



Random Shuffle

Tracks will be randomly selected and played.

From the top menu of the Music Collection

Press [▲ ▼**] to select “Random Shuffle” and press [ENTER].**

All tracks recorded to the HDD will be played at random.

- When play is stopped, the unit will switch to the Album playlist for that track.
- If “Repeat Playback” (→ page 50) is set to “On”, random playback will continue until you press [■]. If set to “Off”, playback will stop after all tracks on the HDD are played once.
- “Random Playback” (→ page 50) and “Play Range” settings (→ page 51) cannot be selected when Random Shuffle is performed.



NOTE

- Tracks that have not been converted or analysed will appear in the playlist screen with a “⬇” mark next to them.

About alphabet tabs

Alphabet tabs are displayed in the order shown below. Alphabet → Numbers → Other

To return to the previous menu

Press [RETURN].



TIPS

You can also select the track or playlist by numbered buttons instead of [**▲ ▼**].

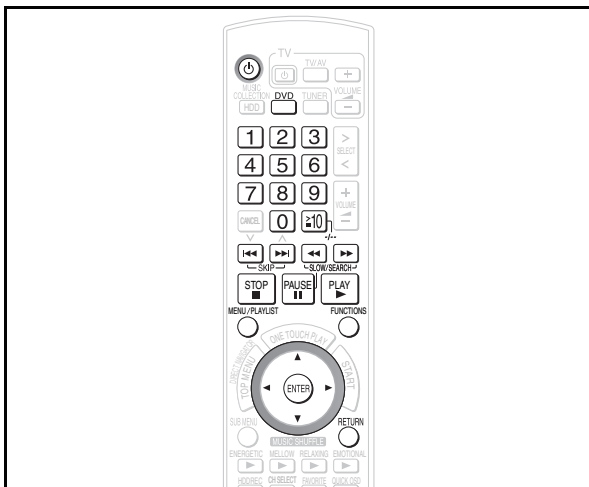
To enter numerical values more than 2 digits:

For 2 digits (e.g., 12)

[≥10] → [1] → [2]

For 3 digits (e.g., 225)

[≥10] → [≥10] → [2] → [2] → [5]



CD VCD

Preparation

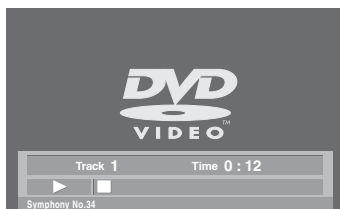
- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].
- 3 Press [DVD] to switch the selector to "DVD/CD".
- 4 Insert a disc (→ page 11).

Basic playback

CD: Press [▶] (PLAY).

VCD: Play begins automatically after insertion of the disc.

- When the disc is inserted, switching the selector to "DVD/CD" will also start play.
e.g., **CD**



Selecting and playing tracks from a commercial music CD

Track names obtained from the Gracenote database are listed.

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

- To return to the previous screen, press [RETURN].



Press [FUNCTIONS] to switch between guide messages and the playback condition indicator.

Operations during playback



Stop

The position is memorized when "RESUME" appears on the unit's display.

- Press [▶] (PLAY) to resume. (**Resume play**)
- Press [■] to clear the position.
- Even after the unit is turned off or the selector is changed, the position is memorized (Normal playback only).



Pause

- Press [▶] (PLAY) to restart play.



Skip



Search (during play)
VCD Slow-motion (during pause)

- Up to 5 steps.
- Press [▶] (PLAY) to restart play.
- VCD** Slow-motion: forward direction only



VCD
Frame-by-frame
(during pause)

- Forward direction only



Select the track with the numbered buttons

e.g., To select 12: [≥10] → [1] → [2]



VCD with playback control
Showing disc menu

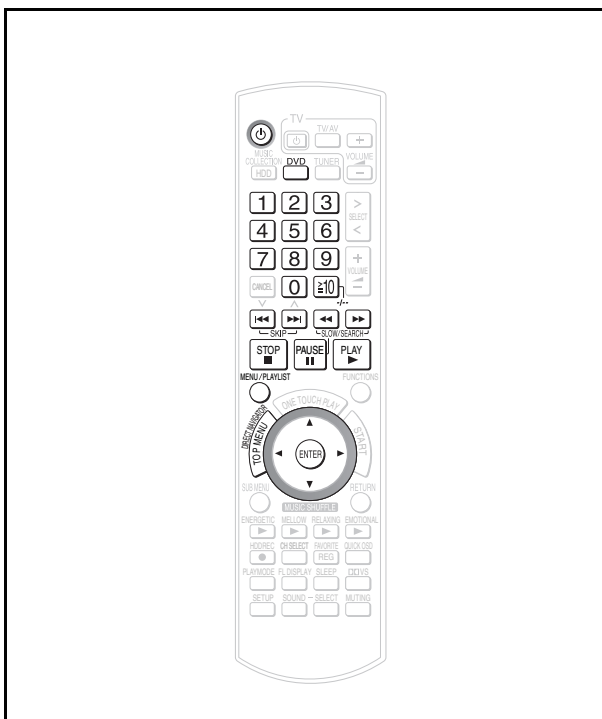
This menu may be different depending on discs, and selectable items may differ as well. For more information on how to operate the menu on your discs, please read the operating instructions that came with the disc.

- 1 Press [RETURN] while playing.
- 2 Press the numbered buttons to select the item.

e.g., To select 12: [≥10] → [1] → [2]

Playing WMA, MP3, JPEG, MPEG4 and DivX files on a recordable CD

See page 48, "Playing music or video files on recordable discs or USB devices".



DVD-V DVD-VR DVD-A

Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].
- 3 Press [DVD] to switch the selector to “DVD/CD”.



- 4 Insert a disc (→ page 11).
 - Load double-sided discs so the label for the side you want to play is facing up.
 - DVD-RAM: Remove discs from their cartridges before use.

Basic playback

Play begins automatically after insertion of the disc.

- When a menu screen appears (→ right, “Showing disc menu”, step 2)
- When the disc is inserted, switching the selector to “DVD/CD” will also start play.

Operations during playback



Stop

The position is memorized while “RESUME” is on the unit's display.

- Press [▶] (PLAY) to resume. (**Resume play**)
- Press [■] to clear the position.
- Even after the unit is turned off or the selector is changed, the position is memorized (Normal playback only).



NOTE

- DISCS CONTINUE TO ROTATE WHILE MENUS ARE DISPLAYED. Press [■] when you finish to preserve the unit's motor and your television screen.



Pause

- Press [▶] (PLAY) to restart play.



Skip

DVD-VR Can also skip to the markers recorded on DVD recorders.



Search (during play) Slow-motion (during pause)

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



DVD-V DVD-VR Frame-by-frame (during pause)



Select the item with the numbered buttons

e.g., To select 12: [≥10] → [1] → [2]



DVD-V DVD-A Showing disc menu

This menu may be different depending on discs, and selectable items may differ as well. For more information on how to operate the menu on your discs, please read the operating instructions that came with the disc.

- 1 Press [TOP MENU].
- 2 Press [▲ ▼ ◀ ▶] to select the item and press [ENTER].

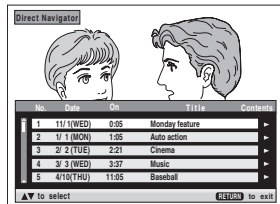
Different methods of play for recordable DVDs

DVD-VR

- Titles appear only if they have been entered.
- You cannot edit playlists and titles.

Playing the programs

1 Press [DIRECT NAVIGATOR].



2 Press [▲ ▼] or the numbered buttons to select the program.

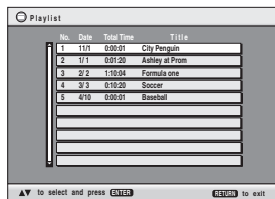
- To select a 2-digit number
e.g., 23: [≥10] → [2] → [3]
- Press [▶] to show the contents of the program.

3 Press [ENTER].

Playing a playlist of DVD-VR

(Only when the disc contains a playlist)

1 Press [PLAYLIST].



2 Press [▲ ▼] or the numbered buttons to select the play list.

- To select a 2-digit number
e.g., 23: [≥10] → [2] → [3]

3 Press [ENTER].

Playing MP3, JPEG, MPEG4 and DivX files on a recordable DVD

See page 48, "Playing music or video files on recordable discs or USB devices".



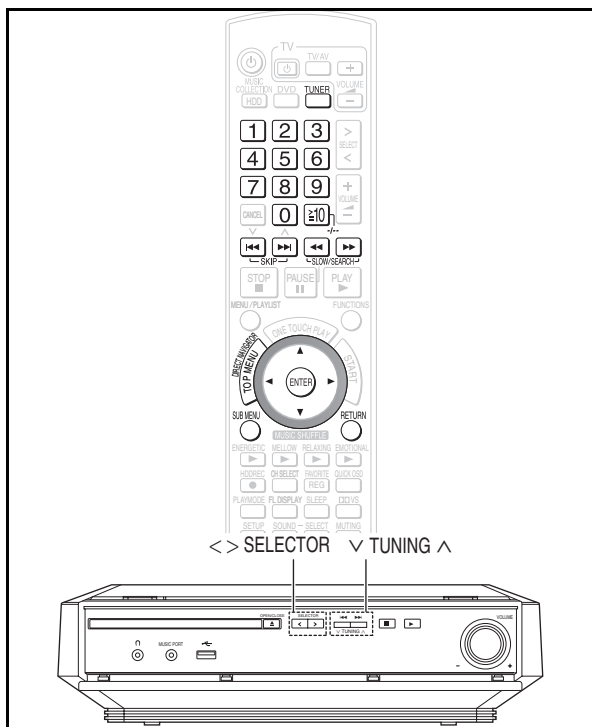
You can enjoy TV broadcasts with this unit's speakers if you connect the TV to this unit's AV (TV) or TV IN terminal.

Preparation

- 1 Set "TV Audio Input" (→ page 88, "TV Audio Input" menu) to "TV".
- 2 Reduce the volume on the television to the minimum.

1 Press [> SELECT <] to switch the selector to "TV Audio".

2 Adjust the volume on this unit.



Radio operations are described mainly with the remote control.

You can alternatively use the corresponding button on the main unit.

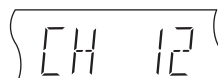
*1 [**<> SELECTOR**] *2 [**√ TUNING ^**]

Selecting the preset channels

To preset channels (→ page 18, Setting preset channels)

- 1 Press [**TUNER**]*1 to switch the selector to “FM”.
- 2 Press the numbered buttons to select the channel.

- To select a 2-digit number
e.g., “12”: [**≥10**] → [**1**] → [**2**].



Alternatively, press [**◀◀ ▶▶**]*2 to select the channel.

■ Making selections with the on-screen display

Preparation

To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.

- 1 Press [**TUNER**]*1 to switch the selector to “FM”.
- 2 Press [**TOP MENU**].
- 3 Press [**▲ ▼**] to select the preset channel and press [**ENTER**].

Manual tuning

- 1 Press [**TUNER**]*1 to switch the selector to “FM”.
- 2 Press [**◀◀ ▶▶**] to select the frequency.



When a stereo broadcast is being received, “ST” lights in the display.

- To start automatic tuning, press and hold [**◀◀ ▶▶**] until the frequency starts scrolling. Tuning stops when a station is found.

■ If noise is excessive

Preparation

To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.

- 1 Press [**SUB MENU**].
- 2 Press [**▲ ▼**] to select “Audio Mode” and press [**ENTER**].
- 3 Press [**▲ ▼**] to select “Mono” and press [**ENTER**].

- “MONO” (monaural) lights up in the display.
- This should normally be set to “Auto(Stereo)”.

To return to the previous screen

Press [**RETURN**].

Recording WMA/MP3 on recordable discs or USB devices

WMA MP3

WMA/MP3 tracks from recordable discs or USB devices will be recorded to the HDD as an analogue recording.

- WMA/MP3 recording is performed in “Listening while Recording” mode (→ page 28, step 5).
- Discs or USB devices that contain data other than WMA/MP3 may not be recorded.
- You cannot perform this recording with [● CD ►HDD] (main unit).

Recordable CD, USB device: WMA/MP3 tracks can be recorded.

Recordable DVD: Only MP3 tracks can be recorded.

Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].

[When recording from a recordable disc]

- 3 Press [DVD] to switch the selector to “DVD/CD”.
- 4 Insert the WMA/MP3 disc (→ page 11).

[When recording from a USB device]

- 3 Press [> SELECT <] to switch the selector to “USB”.
- 4 Connect the USB device containing WMA/MP3 files.

Basic WMA/MP3 recording

Press [● HDD REC].

Recording starts, and all WMA/MP3 tracks on the disc or the USB device are recorded.

- If “Random (Repeat) play mode” is displayed, turn random and repeat settings off (→ page 53, 54).

To change the recording mode before recording

Follow steps 1 to 3 of “Setting the recording mode/recording method” on page 28. (The recording method is automatically set to “Listening while Recording”.)

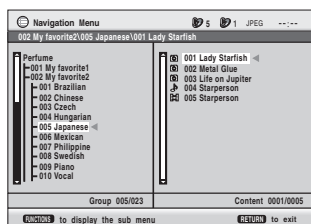
To stop recording

Press [■].

Tracks that are stopped partially through recording (incomplete recordings) will not be saved to the HDD.

To select the track to start recording with

- 1 Press [MENU], and the track list will be displayed.



- 2 Press [▲ ▼] to select the folder to start recording with and press [ENTER].
- 3 When you want to select a track Press [▲ ▼] to select the track to start recording with and press [ENTER].
- 4 Press [● HDD REC].
Recording starts from the selected folder or track and continues to the end of all contents.

To return to the previous screen

Press [RETURN].



NOTE

- Recordings cannot be paused.



TIPS

How titles are added

The names of the artist, album and track are added as shown below.

Artist name: “_Unknown Artist”

Album name: The folder’s name of the recorded track

Track name: The file name of the track

- After recording is complete, you can manually change the title or you can search and obtain title information from the Gracenote database (→ page 66).

Selecting specific WMA/MP3 tracks to record from recordable discs or USB devices

If you use the program play mode, you can specify multiple WMA/MP3 tracks from recordable discs or USB devices, and record them all at once (→ page 53).

- 1 **Create a list of tracks to play with the program play mode (→ page 53).**

- 2 **Press [● HDD REC].**

All tracks in the program play list are recorded.

To start recording from partway through the program play mode

- 1 Press [▶] (PLAY) before step 2 (above) to play the program play list.
- 2 While the track that you want to record is playing or paused, press [● HDD REC].
Recording will start from the currently playing or paused track and will record until the end of the last track in the program play list.

Recording FM radio broadcasts

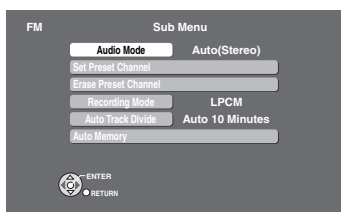
You can record FM radio broadcasts to the HDD. After recording starts, track data will be recorded and divided using the time settings selected before the recording starts. Therefore the recording (from start to finish) will be made and divided into multiple tracks.

Preparation

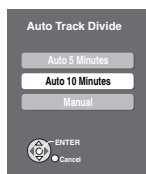
- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].
- 3 Press [TUNER] to switch the selector to "FM".

1 Tune in to the radio station that you want to record (→ page 39).

2 Press [SUB MENU].



3 Press [▲ ▼] to select "Auto Track Divide" and press [ENTER].



4 Press [▲ ▼] to select the method of division and press [ENTER].

Auto 5 Minutes: Tracks are divided into 5-minute recordings.

Auto 10 Minutes: Tracks are divided into 10-minute recordings.

Manual: Divide tracks at the point you like. (For division methods, see right.)

5 Press [RETURN].

6 Press [● HDD REC].

Recording starts.

Titles are automatically added (→ right).

To change the recording mode before recording

Follow steps 1 to 3 of "Setting the recording mode/recording method" on page 28. (The recording method cannot be selected.)

To stop recording

Press [■].

To pause recording

Press [● HDD REC].

- To continue recording, press [● HDD REC] once more (The track is divided).

To manually divide tracks

While recording, press [ENTER] at the point where you want to divide the track.

- When dividing tracks, create at least a 2-second space between two tracks. (Tracks divided with less than 2-second of space cannot be divided.)
- Tracks recorded in "Manual" mode that exceed 60 minutes will automatically be divided.

To return to the previous screen

Press [RETURN].



NOTE

- Radio broadcasts cannot be recorded by pressing [● CD ► HDD] on the main unit. Use [● HDD REC] on the remote control.
- The audio may sound broken up in the space between tracks recorded to the HDD.

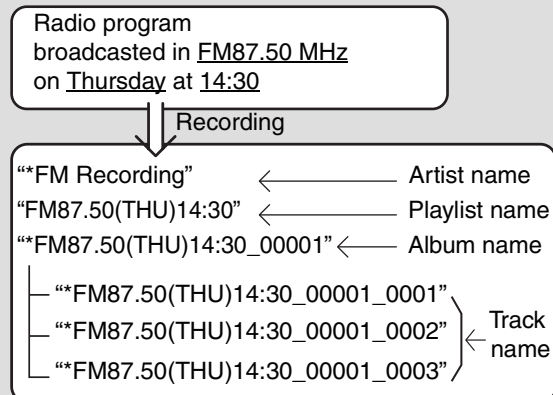


TIPS

About titles for recordings from the radio

All tracks created from the start to the end of the recording are treated as a single playlist (recorded data). Each track recorded from the radio is given title as shown below.

How titles are added (example)



- When audio is recorded with the scheduled timer function (→ page 78), recording will start slightly earlier than the set time to prevent cutting off the beginning of the recording. Therefore, the playlist will be given a name that is one minute earlier than the set recording time.
- After recording is complete, you can manually change the title or you can search and obtain title information from the Gracenote database (→ page 66).

Recording audio from external devices

You can record audio tracks to the HDD from externally connected devices. After recording starts, track data will be recorded and divided using the time settings selected before the recording starts. Therefore the recording (from start to finish) will be made and divided into multiple tracks.

Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].
- 3 Connect the device from which you want to record/play (→ page 93).
- 4 Press [➤ SELECT <] to switch the selector.

AUX: If connected to the AUX terminal

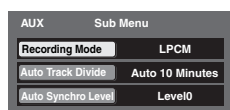
TV Audio: If connected to the TV IN terminal

- You cannot record when “TV Audio Input” is set to “DIGITAL IN” (→ page 77).

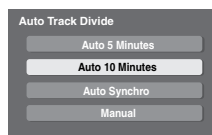
MUSIC PORT: If connected to the Music Port terminal

- When the audio output level of the external device is too high, audio may be distorted. Adjust the volume on the external device.

1 Press [SUB MENU].



2 Press [▲ ▼] to select “Auto Track Divide” and press [ENTER].



3 Press [▲ ▼] to select the method of division and press [ENTER].

Auto 5 Minutes: Tracks are divided into 5-minute recordings.

Auto 10 Minutes: Tracks are divided into 10-minute recordings.

Auto Synchro: When external equipment starts playing, recording starts automatically. The unit searches for silence in between tracks, and when a break of 3 seconds or longer is found, recording pauses (the track is divided) and will restart again when audio is found.

Manual: Divide tracks at the point you like. (For division methods, see right.)

4 Press [RETURN].

5 Press [● HDD REC].

Auto 5 Minutes, Auto 10 Minutes, Manual:

Recording starts.

Auto Synchro:

Unit enters recording standby mode.

6 Starting play on an external device.

- **Auto Synchro:** Recording starts once audio is output.

Titles are automatically added (→ page 43).

To change the recording mode before recording

Follow steps 1 to 3 of “Setting the recording mode/recording method” on page 28. (The recording method cannot be selected.)

To stop recording

Press [■].

To pause recording

Press [● HDD REC].

- To continue recording, press [● HDD REC] once more (The track is divided).

To manually divide tracks

While recording, press [ENTER] at the point where you want to divide the track.

- When dividing tracks, create at least a 2-second space between two tracks. (Tracks divided with less than 2-second of space cannot be divided.)
- Tracks recorded in “Manual” mode that exceed 60 minutes will automatically be divided.

To adjust the synchro level

For synchro recordings, if the recording does not start, or the tracks are not divided correctly between tracks, make adjustments and record again.

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select “Auto Synchro Level” and press [ENTER].
- 3 Press [▲ ▼] to select the level and press [ENTER]. You can make adjustments within a range of 25 levels.
–12 (Low) ↔ 0 (Standard) ↔ +12 (High)

- If the track is quiet, recording may not start. In this case, lower the value.

- If recording from a cassette tape, etc. with a lot of noise, tracks may not be divided correctly or recording may not start. In this case, raise the value.



NOTE

- Audio from external devices cannot be recorded by pressing [● CD ► HDD] on the main unit. Use [● HDD REC] on the remote control.
- The audio may sound broken up in the space between tracks recorded to the HDD.
- Depending on the audio quality or volume of external devices connected, obtaining the title information with the Gracenote database, the analysis for Music Shuffle function or “Auto Synchro” division method when recording may not work properly.



TIPS

How titles are added (example)

The audio from AUX terminal recorded on Thursday at 14:30

Recording

“*AUX Recording”	←	Artist name					
“AUX(THU)14:30”	←	Playlist name					
“*AUX(THU)14:30_00001”	←	Album name					
<table border="0"> <tr> <td>“*AUX(THU)14:30_00001_0001”</td> <td rowspan="3">} ←</td> <td rowspan="3">Track name</td> </tr> <tr> <td>“*AUX(THU)14:30_00001_0002”</td> </tr> <tr> <td>“*AUX(THU)14:30_00001_0003”</td> </tr> </table>	“*AUX(THU)14:30_00001_0001”	} ←	Track name	“*AUX(THU)14:30_00001_0002”	“*AUX(THU)14:30_00001_0003”		
“*AUX(THU)14:30_00001_0001”	} ←			Track name			
“*AUX(THU)14:30_00001_0002”							
“*AUX(THU)14:30_00001_0003”							

- After recording is complete, you can change the title or you can search and obtain title information from the Gracenote database (→ page 66).
- About synchro recordings:
Depending on the recording source, the first few seconds of a recording may not be recorded. Also, depending on synchro level settings, the number of tracks on the recording source may differ from the number of tracks on the recording destination. In this case, adjust the synchro level (→ page 42) and record again. Tracks recorded as LPCM can be combined and divided after recording has completed (→ page 68).

Importing WMA/MP3 from a PC

WMA MP3

With a network connection (LAN home network), you can save WMA/MP3 data from your PC in the HDD of this unit.

You can import recordings without any audio distortion or degradation.

- Supported OS: Windows XP SP2
- File formats that can be imported
 - extensions: WMA,MP3
 - MP3 files in compliance with MP3 standards
 - MPEG-1 Audio Layer III
 - MPEG-2 Audio Layer III (LSF)
 - compatible bitrate: 32 kbps to 192 kbps
 - files without copyright restrictions
- Tracks can also be Imported from NAS (Network Attached Storage).

Preparation

- 1 Connect this unit and the PC to the network (→ page 94), or connect this unit and the PC directly (→ page 84).
- 2 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 3 Press [⏻].
- 4 Press [MUSIC COLLECTION] to switch the selector to “Music Collection”.

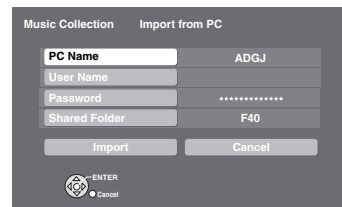
Preparations and items to check on the PC

- 1 Set the “Shared Folder” (→ page 45, Setting the “Shared Folder”), and move the folder containing WMA/MP3 files to the “Shared Folder”, or move the folder containing WMA/MP3 files to the “Shared Documents” folder.
 - It is necessary to name the PC and the PC Shared Folder using only characters that can be used on this unit. If necessary, make changes to the “Shared Name” and “Full Computer Name” on the PC.
- 2 Checking the PC name (Computer name).
e.g., For “Windows XP Home Edition”
From the “Start” menu, select “System” in “Control Panel”, and click on the “Computer Name” tab, and make note of the name given in the “Full Computer Name” field.

Main unit operations

From the Main Screen (→ page 24)

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select “Import from PC” and press [ENTER].



- 3 Press [▲ ▼] to select “PC Name” and press [ENTER].
- 4 Enter the PC name (→ page 62) and press [■] (Set).

- Enter the name that you checked in step 2 of “Preparations and items to check on the PC” (→ left) (Up to 15 characters).

If the PC name, etc. is displayed

If you have previously imported data or performed a backup (→ page 81), then PC name, etc. may be displayed. In this case, check the PC name and make any changes that may be necessary.

- 5 Repeat steps 3 and 4 and enter other items.

User Name: The user account name used when Windows XP was registered.

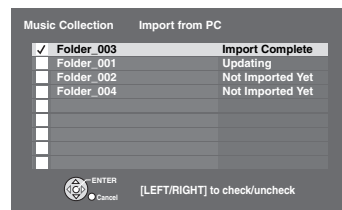
Password: Password set for the user name

- Passwords will be displayed as “*****”.

Shared Folder: Name of the shared folder on the PC.

- 6 Press [▲ ▼ ◀ ▶] to select “Import” and press [ENTER].

The list inside the shared folder on the PC will be displayed.



Folder	Import Complete
✓ Folder_003	Import Complete
Folder_001	Updating
Folder_002	Not Imported Yet
Folder_004	Not Imported Yet

- 7 Select the folder to be imported with [▲ ▼] and add a check mark with [◀ ▶].

To select all the folders

Press [SUB MENU] and select “Mark All”.

- To remove the check marks from all the folders, select “Unmark All”.

8 Press [ENTER].



9 Press [◀ ▶] to select “Yes” and press [ENTER].

Import starts and the current status and remaining time is displayed. After importing is finished, the status message appears.

- If import does not start, refer to “Messages” (→ page 99) to address to any problems.

To stop importing

Press [■].

Tracks that finished importing up to the point stopped can be recorded.

To return to the previous screen

Press [RETURN].



NOTE

- When the unit is set to standby mode, this unit performs analysis of WMA/MP3 tracks imported to the HDD for Music Shuffle (→ page 35). AAC conversion is not performed for the WMA/MP3 tracks imported from a PC.
- Tracks that have not been analysed will appear in the playlist screen with a “🔍” mark next to them.
- The audio may sound broken up in the space between tracks imported from a PC.
- If a track contains large data such as JPEG, etc., the track may be muted or not play at all.
- When using NAS (Network Attached Storage), input the user name and password registered with NAS (→ page 44, step 5).



TIPS

How titles are added

If the music data on the PC uses music information tags, the artist name, album name, and track titles will be added.

If there is no tag information, the names of the artist, album and track are added as shown below.

Artist name: “_Unknown Artist”

Album name: The folder’s name of the recorded track

Track name: The file name of the track

About WMA/MP3 data imported to this unit:

Operations for tracks imported from a PC will play and edit (excluding Combine/Divide functions), etc. in the same manner as tracks recorded to the HDD in this unit.

Setting the “Shared Folder”

For further information, refer to the Windows operating instructions or Windows “Help”.

e.g., For “Windows XP Home Edition”

- 1 Right click on the folder that you want to share, and select “Sharing and Security...”.
- 2 Add check marks to “Share this folder on the network” and “Allow network users to make changes to files”.
- 3 Make note of the “Shared Name” field. (Necessary for later operations.)
- 4 Click “OK”.

Depending on the PC, stability issues may cause problems such as tracks to fail to import, or imported tracks may be unusable, etc. Panasonic and/or its retailer’s responsibility are limited to gross negligence or malicious intent by Panasonic and/or its retailers. Neither Panasonic nor its retailers will accept any responsibility for direct or indirect loss or damage to your music data.

HDD

You can increase the available disc space on the HDD or you can obtain detailed information about the HDD/ tracks.

Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].
- 3 Press [MUSIC COLLECTION] to switch the selector to “Music Collection”.

LPCM tracks are deleted once they are converted to AAC. You cannot revert the track after conversion.

Performing conversion and analysis immediately

AAC conversion and analysis for Music Shuffle is usually executed two minutes after the unit is set to standby mode.

With the procedure below you can start the process immediately.

This track management can be performed by either selecting all tracks on the HDD that have not been converted or analysed yet, or a specified playlist.

From the Main Screen (→ page 24)

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select “Track Manager” and press [ENTER].
- 3 Press [▲ ▼] to select “Convert/Analyse” and press [ENTER].
 - While the track is playing, you will be asked if you want to stop play.
If you want to perform conversion/analysis: Press [◀ ▶] to select “Yes” and press [ENTER].
- 4 Press [▲ ▼] to select the item to be converted/analysed and press [ENTER].
 - All of HDD:** All tracks in the HDD will be converted and analysed.
 - All of this Playlist:** All tracks within the selected playlist will be converted and analysed.
- 5 Press [◀ ▶] to select “Yes” and press [ENTER].
Conversion and analysis starts. (Once complete, the unit will return to the previous screen.)

To stop partway through

Press [■].

To return to the previous screen

Press [RETURN].



NOTE

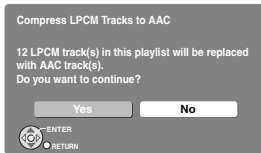
- Play and record cannot be performed during conversion and analysis.
- If you are trying to compress a playlist without any LPCM tracks, the message “There are no tracks that can be converted or analysed.” will be displayed. Select a different playlist.

Compressing LPCM tracks to AAC

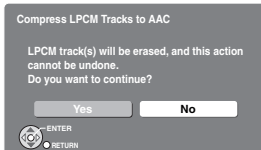
By converting tracks recorded in LPCM to AAC, you can increase the amount of available space on the HDD. Compression is performed on the playlist that includes the track currently displayed on the Main Screen.

From the Main Screen (→ page 24)

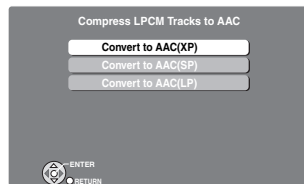
- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select “Track Manager” and press [ENTER].
- 3 Press [▲ ▼] to select “Compress LPCM Tracks to AAC” and press [ENTER].



- 4 Press [◀ ▶] to select “Yes” and press [ENTER].



- 5 Press [◀ ▶] to select “Yes” and press [ENTER].



- 6 Press [▲ ▼] to select the compression mode and press [ENTER].

Compression starts.

After compression is complete, the remaining space in the HDD is displayed.

- 7 Press [ENTER].

To stop partway through

Press [■].

To return to the previous screen

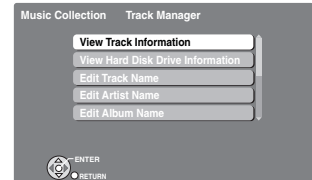
Press [RETURN].

Viewing track or HDD information

Displays the detailed information of the track or HDD.

From the Main Screen (→ page 24)

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select “Track Manager” and press [ENTER].



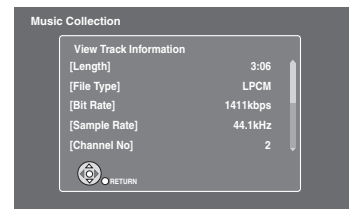
- 3 When viewing the track information:
Press [▲ ▼] to select “View Track Information” and press [ENTER].

When viewing the HDD information:

Press [▲ ▼] to select “View Hard Disk Drive Information” and press [ENTER].

Detailed information about the track/HDD is displayed.

e.g., Track information



To return to the previous screen

Press [RETURN].



TIPS

For “View Track Information” only

You can also perform the operations above from the Track List.

When the track you want to view track information for is selected,

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select “View Track Information” and press [ENTER].



NOTE

- Play and record cannot be performed during conversion and analysis.
- If you are trying to compress a playlist without any LPCM tracks, the message “No LPCM tracks in this playlist.” will be displayed. Select a different playlist.

Playing music or video files on recordable discs or USB devices

WMA MP3 JPEG MPEG4
DivX (Discs only)

For information about which data formats can be played on this unit, refer to pages 20–23, “Discs that can be played”, “About compatible USB devices”.

Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].

[When playing data on a disc]

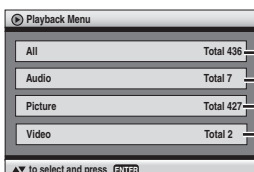
- 3 Press [DVD] to switch the selector to “DVD/CD”.
- 4 Insert a recordable disc (→ page 11).

[When playing data on a USB device]

- 3 Press [➤ SELECT <] to switch the selector to “USB”.
- 4 Connect the USB device containing music or video files.

- Select “Play as Data Disc” (→ page 58, Other Menu) in the following cases:
 - To play HighMAT discs without using the HighMAT function
 - To play **MP3**, **JPEG**, **MPEG4** or **DivX** on DVD-RAM that contain both **DVD-VR** and another format (e.g. **JPEG**)

Playing items in order (Playback Menu)



- All contents
- WMA/MP3
- JPEG
- MPEG4 and DivX

While the menu is displayed

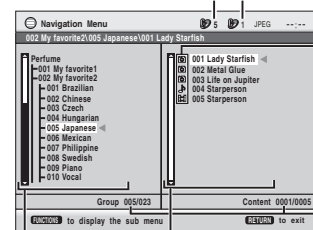
Press [▲ ▼] to select “All”, “Audio”, “Picture” or “Video” and press [ENTER].

- To display/exit the screen, press [TOP MENU].

Playing from the selected item (Navigation Menu)

- 1 Press [MENU].
- 2 Press [▲ ▼ ◀ ▶] to select the group and press [ENTER].
- 3
 - To play content in the group in order Press [ENTER].
 - To start play from the selected content Press [▲ ▼] to select and press [ENTER].

Group and content number currently playing



Group Content

- JPEG
- WMA/MP3
- MPEG4 and DivX

Number currently selected

- To listen to WMA/MP3 while showing a JPEG image on the screen
Select a JPEG first, and then select WMA/MP3. (The opposite order is not effective.)
- To exit the screen, press [MENU].

Using the submenu

- 1 Press [MENU].
- 2 Press [FUNCTIONS].
- 3 Press [▲ ▼] to select an item and press [ENTER].

Multi	Groups and content
List	Content only
Tree	Groups only
Thumbnail	Thumbnail images JPEG
Next group	To the next group
Previous group	To the previous group
All	WMA/MP3 and JPEG
Audio	WMA/MP3 only
Picture	JPEG only
Video	MPEG4 and DivX
Help display	To switch between guide messages and the playback condition indicator
Find	To search by content or group title (→ page 49)

■ Searching by a content or group title

- 1 Press [MENU].
 - Press [◀ ▶] to highlight a group title to search a group, or a content title to search its content.
- 2 Press [FUNCTIONS].
- 3 Press [▲ ▼] to select  and press [ENTER].
- 4 Press [▲ ▼] to select a character and press [ENTER].
 - Repeat to enter another character.
 - Lower case is also searched.
 - Press [◀▶▶▶] to skip between A, E, I, O and U.
 - Press [◀] to erase a character.
 - Erase the asterisk (*) to search for the titles starting with that character.
- 5 Press [▶] to select "Find" and press [ENTER].
The search result screen appears.
- 6 Press [▲ ▼] to select the content or group and press [ENTER].

Playing HighMAT™ discs

While the menu is displayed
Press [▲ ▼ ◀ ▶] to select items then press [ENTER].

- 

Menu:
Takes you to the next menu which shows playlists or another menu.



Playlist:
Play starts.

- To return to the menu screen, press [TOP MENU] then press [RETURN] several times.
- To change the menu background, press [FUNCTIONS].
- The background changes to the one recorded on the disc.
- To display/exit the screen, press [TOP MENU].

■ Selecting from the list

- 1 Press [MENU].
- 2 Press [◀] then [▲ ▼] to switch among "Playlist", "Group" and "Content" lists.
- 3 Press [▶] then [▲ ▼] to select an item and press [ENTER].
 - To exit the screen, press [MENU].



About DivX VOD content

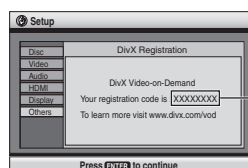
DivX (Discs only)

DivX Video-on-Demand (VOD) content is encrypted for copyright protection. In order to play DivX VOD content on this unit, you first need to register the unit.

Follow the on line instructions for purchasing DivX VOD content to enter the unit's registration code and register the unit. For more information about DivX VOD, visit www.divx.com/vod.

Display the unit's registration code

(→ page 87, "DivX Registration" in "Others" menu)



8 alphanumeric characters

- We recommend that you make a note of this code for future reference.
- After playing DivX VOD content for the first time, another registration code is then displayed in "DivX Registration". Do not use this registration code to purchase DivX VOD content. If you use this code to purchase DivX VOD content, and then play the content on this unit, you will no longer be able to play any content that you purchased using the previous code.
- If you purchase DivX VOD content using a registration code different from this unit's code, you will not be able to play this content. ("Authorization Error" is displayed.)

Regarding DivX content that can only be played a set number of times

Some DivX VOD content can only be played a set number of times. When you play this content, the remaining number of plays is displayed. You cannot play this content when the number of remaining plays is zero. ("Rented Movie Expired" is displayed.)

When playing this content

- The number of remaining plays is reduced by one if
 - you press [◀] or [SETUP].
 - you press [■] (STOP). [Press [⏸] (PAUSE) to stop play.]
 - you press [◀▶▶▶] (SKIP) or [◀▶▶▶] (SEARCH) etc. to arrive at other contents.
- Resume function (→ page 37, Stop) does not work.

Play mode settings of tracks recorded on the HDD

HDD

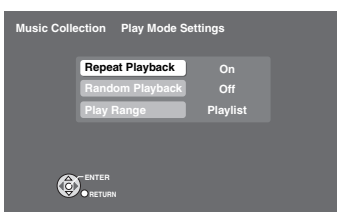
You can configure various playback methods of tracks recorded on the HDD, such as repeat playback, random playback or play range (setting that defines the end point of playback).

Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
 - 2 Press [⏻].
 - 3 Press [MUSIC COLLECTION] to switch the selector to "Music Collection".
- Play mode settings will be retained and be recalled each time "Music Collection" is selected.

Repeat playback

- 1 Press [PLAY MODE].



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



- 3 Press [▲ ▼] to select "On" or "Off" and press [ENTER].
- **On:** Repeat play within the play range (→ page 51).
 - **Off:** Turns repeat playback off.

To return to the previous screen

Press [RETURN].



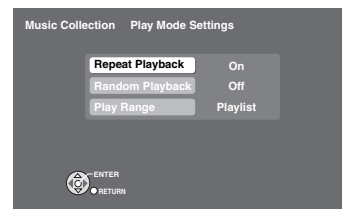
TIPS

To repeat one track

Set repeat play to "On", and set the play range (→ page 51) to "One Track".

Random playback

- 1 Press [PLAY MODE].



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



- 3 Press [▲ ▼] to select "On" or "Off" and press [ENTER].

- **On:** Random play within the play range (→ page 51).
- **Off:** Turns random playback off.

To return to the previous screen

Press [RETURN].

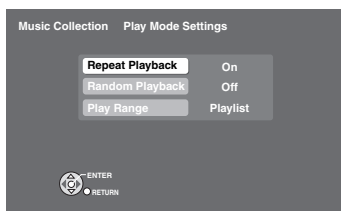


NOTE

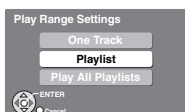
- When the track is played in random order, you cannot go back to tracks that have already been played.
- When Random Shuffle (→ page 35) is performed, this item cannot be displayed.

Changing the play range settings

1 Press [PLAY MODE].



2 Press [▲ ▼] to select “Play Range” and press [ENTER].



3 Press [▲ ▼] to select the play range and press [ENTER].

•One Track:

Play just one track

•Playlist:

Play the current playlist (factory default)

•Play All Playlists:

Continuously play all playlists of the same kind (Album playlists, User Playlists, Analogue Recorded or All Tracks of the Artist).

This setting is invalid for Favorites, Music Shuffle, Recently Ripped or Most Often Played playlists.

To return to the previous screen

Press [RETURN].



NOTE

When Random Shuffle (→ page 35) is performed, this item cannot be displayed.



TIPS

To check the play range settings

During play or while stopped, you can check the play range settings on screen.



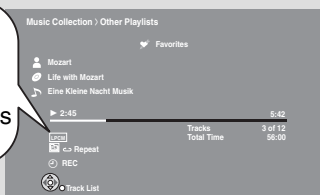
: One Track



: Playlist



: Play All Playlists



Various playback methods of discs or data on a USB device

DVD-V DVD-VR DVD-A CD VCD

WMA ※1 **MP3** ※1 **JPEG** **MPEG4** **DivX** ※2

※1 Except for WMA/MP3 files recorded on this unit's HDD

※2 Discs only

Preparation

1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.

2 Press [⏻].

[When playing a disc]

3 Press [DVD] to switch the selector to "DVD/CD".

4 Insert a recordable disc (→ page 11).

[When playing data on a USB device]

WMA MP3 JPEG MPEG4

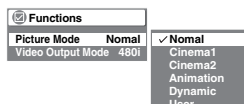
3 Press [➤ SELECT <] to switch the selector to "USB".

4 Connect the USB device containing music or video files.

Features for adjusting the video

Adjusting the picture quality (Video and picture contents)

- 1 Press [FUNCTIONS].
- 2 Press [▲ ▼] to select "Other Settings" and press [▶].
- 3 Press [▲ ▼] to select "Picture Menu" and press [▶].
- 4 Press [▲ ▼] to select "Picture Mode" and press [▶].
- 5 Press [▲ ▼] to select the item and press [ENTER].



The items listed are:

Normal: Normal images

Cinema1: Mellows images and enhances detail in dark scenes.

Cinema2: Sharpens images and enhances detail in dark scenes.

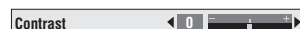
Animation: Suitable for animation

Dynamic: Enhances the contrast for powerful images.

User (Press [ENTER] to select "Picture Adjustment".) (→ right)

If "Picture Adjustment" is selected, on-screen picture adjustments appear.

e.g., Contrast adjustment



Select the adjuster you want to make change with [▲ ▼] and make adjustments by pressing [◀ ▶].

Picture Adjustment items are:

Contrast: Increases the contrast between light and dark parts of the picture (−7 to +7).

Brightness: Brightens the picture (0 to +15).

Sharpness: Adjusts the sharpness of the edges of the horizontal lines (−7 to +7).

Colour: Adjusts the shade of the picture's colour (−7 to +7).

Gamma: Adjusts the brightness of dark parts (0 to +5).

Depth Enhancer: Reduces the rough noise in the background to give a greater feeling of depth (0 to +4).

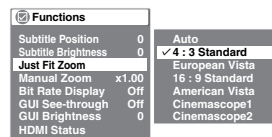
Zoom (Video contents)

This feature expands a letterbox picture to fit the screen.

- 1 Press [FUNCTIONS].
- 2 Press [▲ ▼] to select "Other Settings" and press [▶].
- 3 Press [▲ ▼] to select "Display Menu" and press [▶].

Just Fit Zoom After step 3

- 1 Press [▲ ▼] to select "Just Fit Zoom" and press [▶].



- 2 Press [▲ ▼] to select an item and press [ENTER].

DVD-V DVD-VR VCD

Auto, 4:3 Standard, European Vista, 16:9 Standard, American Vista, Cinemascope1, Cinemascope2

MPEG4 DivX

Standard, Original, Full

- Depending on the disc, the preset aspect ratio may not be displayed.

Manual Zoom After step 3

- 1 Press [▲ ▼] to select "Manual Zoom" and press [▶].
- 2 Press [▲ ▼] to adjust the zoom size.
–from ×1.00 to ×1.60 (in 0.01 units),
from ×1.60 to ×2.00 (in 0.02 units)

MPEG4 DivX

–from ×2.00 to ×4.00 (in 0.05 units)

- It may not be possible to zoom up to ×4.00 depending upon the connected television and its settings.

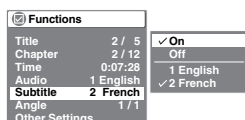
Switching subtitles and soundtracks

Changing subtitles

DVD-V DVD-VR DivX
(Discs with subtitles)

While playing

- 1 Press **[FUNCTIONS]**.
- 2 Press **[▲ ▼]** to select “Subtitle” and press **[▶]**.



- 3 Press **[▲ ▼]** to select the item and press **[ENTER]**.

DVD-V DivX: You can change subtitle on/off and subtitle language.

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

DVD-VR: You can change subtitle on/off when the disc has the subtitle information.

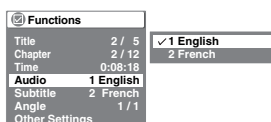
- Subtitle on/off information cannot be recorded using Panasonic DVD Recorders.

Changing soundtracks

DVD-V DVD-VR DVD-A VCD
DivX (with multiple soundtracks)

While playing

- 1 Press **[FUNCTIONS]**.
- 2 Press **[▲ ▼]** to select “Audio” and press **[▶]**.



- 3 Press **[▲ ▼]** to select the soundtrack and press **[ENTER]**.

DVD-VR DivX: You can select “L”, “R” or “LR”.

VCD: You can select “L”, “R”, “LR” or “L+R”.

DVD-V (Karaoke discs): You can select “On” or “Off” of vocals. Read the disc’s instructions for details.

Signal type/data

LPCM/PPCM/□□ Digital/DTS/MP3/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

- **DivX** It may take some time for play to start if you change the audio on a DivX video disc.

Changing the order and speed of play

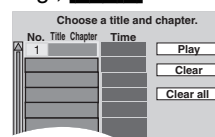
Program play (up to 32 items)

Except **DVD-VR**

While stopped

- 1 Press **[PLAY MODE]** several times.
- 2 Press the numbered buttons to select the item.

e.g., **DVD-V**



Repeat this step to program other items.

e.g.,

To select 12: $\geq 10 \rightarrow [1] \rightarrow [2]$

- 3 Press **[▶]** (PLAY).

Selecting all the items (on the disc or in the title or group)

Press **[ENTER]** and **[▲ ▼]** to select “ALL”, then press **[ENTER]** again to register.

Changing or clearing the program

Press **[▲ ▼]** to select an item.

–To change an item, repeat step 2.

–To clear an item, press **[CANCEL]** (or select “Clear” and press **[ENTER]**).

Clearing the whole program

Select “Clear all” and press **[ENTER]**. The whole program is also cleared when the unit is turned off, the selector is changed or the disc tray is opened.

Random play

Except **DVD-VR**

While stopped

- 1 Press **[PLAY MODE]** several times.

e.g., **DVD-V**



- 2 **DVD-A DVD-V WMA MP3 JPEG**

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

e.g., To select 12: $\geq 10 \rightarrow [1] \rightarrow [2]$

- 3 Press **[▶]** (PLAY).

To exit the program or random mode

Press **[PLAY MODE]** several times while stopped.



NOTE

- Disable HighMAT disc play to use program and random play. Select “Play as Data Disc” in Other Menu (→ page 58).

(Continued on the next page)

Changing the order and speed of play

All group play

DVD-A

While stopped

- 1 Press [PLAY MODE] several times.

All Group Playback

Press PLAY to start

- 2 Press [▶] (PLAY).

To exit the all group mode

Press [PLAY MODE] several times while stopped.

Repeat play

(Only when the elapsed play time can be displayed

JPEG: you can use even if there is no elapsed time display.)

- 1 Press [FUNCTIONS].
- 2 Press [▲ ▼] to select "Other Settings" and press [▶].
- 3 Press [▲ ▼] to select "Play Menu" and press [▶].
- 4 Press [▲ ▼] to select "Repeat" and press [▶].

Functions		
Repeat	Off	✓ Off
A-B Repeat	**	Chapter
Advanced Disc Review		Title

- 5 Press [▲ ▼] to select the item to be repeated and press [ENTER].

- Depending on the disc, the items that can be selected will differ.

Changing play speed

DVD-VR DVD-V

While playing

- 1 Press [FUNCTIONS].
- 2 Press [▲ ▼] to select "Other Settings" and press [▶].
- 3 Press [▲ ▼] to select "Play Speed" and press [▶].

Functions		
Title	2 / 5	
Chapter	2 / 12	
Time	0:08:18	
Audio	1 English	
Subtitle	2 French	
Angle	1 / 1	
Other Settings		

Play Speed	
Play Menu	X1.4
Picture Menu	X1.3
Audio Menu	X1.2
Display Menu	X1.1
Other Menu	Normal

- 4 Press [▲ ▼] to select the play speed and press [ENTER].
 - From "×0.6" to "×1.4"

- Press [▶] (PLAY) to return to the normal play.
- After you change the speed
 - Digital audio output switches to PCM-2 ch.
 - 96 kHz sampling frequency is converted to 48 kHz.
- This may not work depending on the disc's recording.

Starting play from a selected group

DVD-A WMA MP3 JPEG MPEG4 DivX

A folder on WMA/MP3, JPEG, MPEG4 and DivX discs is treated as a "Group".

- 1 Press [FUNCTIONS].
- 2 Press [▲ ▼] to select "Group" and press [▶].
- 3 Press [▲ ▼] or the numbered buttons to select a group and press [ENTER].
 - **DVD-A** To play all groups (→ left, All group play)

Other convenient features

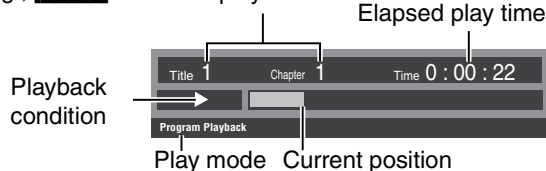
Displaying current playback condition (Quick OSD)

Press [QUICK OSD].

Basics → Details
↑ Off ←

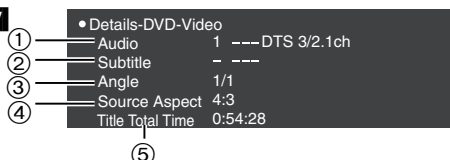
■ Basics

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



■ Details

e.g., **DVD-V**



- ① See page 53 for changing soundtracks
- ② See page 53 for changing subtitles
- ③ See page 56 for changing angles
- ④ Aspect of current playback title
- ⑤ Total play time of current playback title

- **MPEG4 DivX** “Video” and “Audio” information is not displayed during search.

Reviewing titles/programs to play (Advanced Disc Review)

DVD-VR **DVD-V** (Except +R/+RW)
(Normal playback only)

While playing

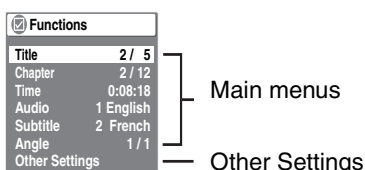
- 1 Press [FUNCTIONS].
- 2 Press [▲ ▼] to select “Other Settings” and press [▶].
- 3 Press [▲ ▼] to select “Play Menu” and press [▶].
- 4 Press [▲ ▼] to select “Advanced Disc Review” and press [ENTER].
Reviews each title/program.



- 5 Press [▶] (PLAY) when you find a title/program to play.
 - You can also review each 10 minutes. Select “Interval Mode” (→ page 85, “Advanced Disc Review” in “Disc” menu).
 - This may not work depending on the play position.
 - **DVD-VR** This function does not work:
 - with still picture part.
 - when playing a playlist.

Using on-screen menu

The on-screen menu, which appears when [FUNCTIONS] is pressed while the disc is playing or stopped, allows you to turn subtitles on or off, switch audio tracks, and change a variety of other settings.



- 1 Press [FUNCTIONS] to show on-screen menu.
- 2 Press [▲ ▼] to select the menu and press [▶].
- 3 Press [▲ ▼] to select the item and press [▶].
- 4 Press [▲ ▼] to select the setting and press [ENTER].

• Depending on the condition of the unit (playing, stopped, etc.) and disc contents, there may be some items that you cannot select or change.

To return to the previous screen

Press [RETURN].

Main menus	
Program, Group, Title, Chapter, Track Playlist, Content	To start from a specific item • Press [▲ ▼] to select and press [ENTER]. • Press and hold [▲ ▼] to alter faster.
Time	To skip incrementally or decrementally* (Time Slip for play only) 1. Press [ENTER] twice to show Time Slip indicator. 2. Press [▲ ▼] to select the time and press [ENTER]. • Press and hold [▲ ▼] to alter faster. To change remaining/elapsed time display * Except +R/+RW
Video	To display pixel number DivX fps (frame per second) is also displayed.
Audio	(→ page 53, Changing soundtracks) To display the current bitrate or sampling frequency
Still Picture	To switch still picture
Number Select	VCD with playback control • Use this function if you want to select a number with the television's remote control when VIERA Link "HDAVI Control" is active. The numbered buttons on the television's remote control do not work when selecting numbers on a VCD. To select a number While the disc menu is displayed Press [▶] → Press [▲ ▼] → Press [ENTER]

Thumbnail	To show thumbnail images
Subtitle	(→ page 53, Changing subtitles)
Marker (VR)	To recall a marker recorded on DVD recorders
Angle	DVD-V with multiple angles To switch angles
Rotate Picture	To rotate a picture right or left Press [▲ ▼] to select "Right" or "Left" and [ENTER].
Slideshow	To turn on/off slideshow To change the slideshow timing (1 Fast ↔ 5 Slow) • When using Slideshow, Skip/Rotate picture may not work correctly depending on the play position.
Other Settings	(→ page 57)

Other Settings	
Play Speed	(→ page 54, Changing play speed)
■ Play Menu (Only when the elapsed play time can be displayed, JPEG The Repeat function can be used.)	
Repeat	(→ page 54, Repeat play)
A-B Repeat Except MPEG4 DivX	To repeat a specified section Press [ENTER] at the starting and ending points. Press [ENTER] again to cancel. ● DVD-VR (still picture part): Does not work.
Advanced Disc Review	(→ page 55, Reviewing titles/ programs to play)
■ Picture Menu	
Picture Mode	(→ page 52, Adjusting the picture quality)
Video Output Mode	With HDMI connection (When “Video Mode” is set to “On”) (→ page 87, “HDMI” menu) Video recordings will be converted to, and output as, high definition video. The picture quality will vary depending on the connected equipment. Choose the picture quality to your preference. 480i/576i (interlace)* 480p/576p (progressive)* 720p (progressive) 1080i (interlace) 1080p (progressive) ● “*” will be displayed next to those video outputs possible with the connected equipment. Selecting an item without “*” can result in the picture being distorted. Should the picture be distorted, press and hold [CANCEL] until the picture is displayed correctly. The setting will return to “480p/576p”. ● Output from the COMPONENT VIDEO OUT terminal will be “480i/576i”. With Other connections (When “Video Mode” is set to “Off”) (→ page 87, “HDMI” menu) 480i/576i (interlace)* 480p/576p (progressive)* When you select “480p/576p” and a confirmation screen appears, select “Yes” only if connecting to a progressive input compatible television.

Transfer Mode	If you have chosen “480p/576p”, “720p”, “1080i” or “1080p” (→ left), select the method of conversion to suit the type of material. ● When the tray is opened, the setting will return to Auto or Auto1. When playing PAL discs, MPEG4 or DivX video contents Auto: Automatically detects the film and video content, and appropriately converts it. Video: Select when using Auto, and the content is distorted. Film: Select this if the edges of the film content appear jagged or rough when Auto is selected. However, if the video content is distorted as shown in the illustration to the right, then select Auto.
	When playing NTSC discs Auto1 (normal): Automatically detects the film and video content, and appropriately converts it. Auto2: In addition to Auto1, automatically detects film contents with different frame rates and appropriately converts it. Video: Select when using Auto1 and Auto2, and the content is distorted.
	When you select “Auto” the constructing method of the DivX contents is automatically distinguished and output. If the picture is distorted, select “I (Interlace)” or “P (Progressive)” depending on which constructing method was used when the contents were recorded to disc. Auto I (Interlace) P (Progressive)
Source Select DivX	
HD Picture Enhancer	With HDMI connection (When “Video Mode” is set to “On”) (→ page 87, “HDMI” menu) Makes the quality of HDMI video output (720p, 1080i, 1080p) sharp. Off, 1 (weakest) to 3 (strongest)



* 480i, 480p : When playing NTSC discs
 576i, 576p : When playing PAL discs

(Continued on the next page)

Picture Menu

HDMI Colour Space	With HDMI connection (When “Video Mode” is set to “On”) (→ page 87, “HDMI” menu) The picture quality will vary depending on the connected equipment. Choose the picture quality to your preference. Should one of the items below not be possible with the connected equipment it will not be displayed. RGB YCbCr (4:4:4) YCbCr (4:2:2) ● “RGB Range” (→ page 87, “HDMI” menu) is available when “RGB” is selected.

Audio Menu

Dialogue Enhancer	To make the dialogue in movies easier to hear DVD-V (Dolby Digital, DTS, MPEG, 3-channel or over, with the dialogue recorded in the center channel) On ↔ Off
	DivX (Dolby Digital, 3-channel or over, with the dialogue recorded in the center channel) On ↔ Off

Display Menu

Information	On ↔ Off
Subtitle Position	0 to -60 (in 2 units)
Subtitle Brightness	Auto, 0 to -7
4:3 Aspect	To select how to show images made for 4:3 aspect screens on a 16:9 aspect television Normal : Laterally stretches images. Auto : The standard setting is “Shrink”. However, this automatically changes to “Zoom” with a letterbox picture. Shrink : Images appear in the center of the screen. Zoom : Expands to 4:3 aspect ratio.

Just Fit Zoom	(→ page 52, Zoom)
Manual Zoom	(→ page 52, Zoom)
Bit Rate Display	<i>Video contents</i> On ↔ Off
GUI See-through	Off, On, Auto (Switches on automatically when the images appear on the display.)
GUI Brightness	-3 to +3
HDMI Status	Indicates various information when connected with HDMI AV OUT terminal (→ below, Confirming HDMI information).
Quick OSD	[→ page 55, Displaying current playback condition (Quick OSD)]

Other Menu

Setup	(→ page 85, Changing the settings)
Play as DVD-Video or Play as DVD-Audio	Select “Play as DVD-Video” to play DVD-V on DVD-Audio.
Play as DVD-VR Play as HighMAT or Play as Data Disc	Select “Play as Data Disc” to play MP3 , JPEG , MPEG4 or DivX on DVD-RAM that contain both DVD-VR and another format (e.g. JPEG) or to play HighMAT discs without using the HighMAT function.

Confirming HDMI information

•HDMI Status—HDMI is connected.	
HDMI Information	
Audio Stream	<u>PCM</u>
Max Channel	2ch
Colour Space	<u>YCbCr(4:4:4)/YCbCr(4:2:2)/RGB</u>
Video Format	<u>480i/576i/480p/576p</u> 720p/1080i/1080p

- Connection status
(→ page 53, Changing soundtracks)
- Shows the maximum channel number of the connected equipment.
(→ above, HDMI Colour Space)
- (→ page 57, Video Output Mode)

- All possible outputs are displayed.
- The current output for “Audio Stream”, “Colour Space” and “Video Format” will be underlined.
- When “Off” is selected in “Audio Output” (→ page 87, “HDMI” menu) “— — —” will be displayed in “Audio Stream” and “Max Channel”.

Advanced radio operations

Radio operations are described mainly with the remote control.

You can alternatively use the corresponding button on the main unit.

*1 [**<** **>** SELECTOR] *2 [**√** TUNING **^**]

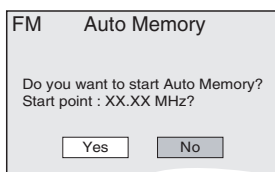
Setting preset stations automatically

Up to 30 stations can be set.

Preparation

To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.

- 1 Press [**TUNER**]*1 to switch the selector to “FM”.
- 2 Press [**<<** **>>**] to select the lowest frequency (87.50 MHz).
- 3 Press [**SUB MENU**].
- 4 Press [**▲ ▼**] to select “Auto Memory” and press [**ENTER**].



- 5 Press [**<** **>**] to select “Yes” and press [**ENTER**].

The tuner presets all the stations it can receive into the channels in ascending order.

- “Auto Memory Completed.” is displayed when the stations are set, and the radio tunes to the last preset station.
- “Memory setting failed.” is displayed when automatic preset is unsuccessful. Preset the channels manually (→ page 18).

To return to the previous screen

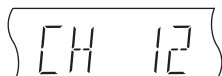
Press [**RETURN**].

Selecting the preset channels

Check that the radio stations are correctly set.

Press the numbered buttons to select the channel.

- To select a 2-digit number
e.g. “12”: [**≥**10] → [1] → [2].

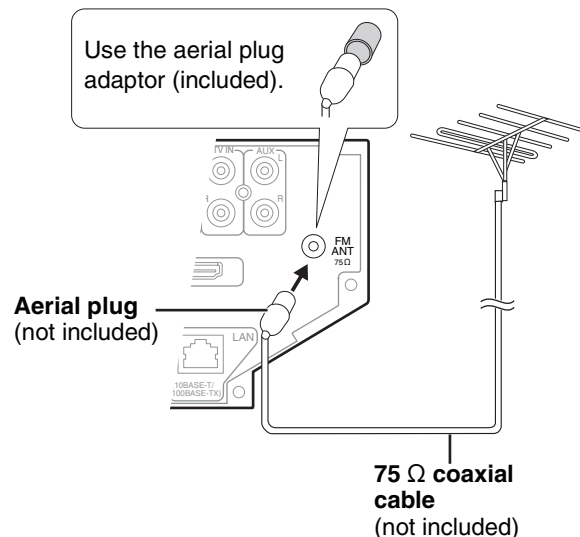


Alternatively, press [**<<** **>>**]*2 to select the channel.

Using FM outdoor aerial (optional)

Use a television aerials (not included) if FM radio reception is poor.

- Disconnect the FM indoor aerial.
- The aerial should be installed by a competent technician.
- Disconnect the aerial when the unit is not in use.
- Do not use the outdoor aerial during an electrical storm.



RDS broadcasting

The unit can display the text data transmitted by the radio data system (RDS) available in some areas. If the station you are listening to is transmitting RDS signals, “RDS” will light up on the display.

Press [**FL DISPLAY**].

Each time you press the button:

PS → PTY → OFF
↑

PTY displays

NEWS	VARIED	FINANCE	COUNTRY
AFFAIRS	POP M	CHILDREN	NATIONAL
INFO	ROCK M	SOCIAL A	OLDIES
SPORT	M.O.R. M*	RELIGION	FOLK M
EDUCATE	LIGHT M	PHONE IN	DOCUMENT
DRAMA	CLASSICS	TRAVEL	TEST
CULTURE	OTHER M	LEISURE	ALARM
SCIENCE	WEATHER	JAZZ	

*“M.O.R. M”=Middle of the road music



NOTE

- RDS displays may not be available if reception is poor.

HDD

You can create a user playlist with the tracks you like in the order you want them to play. You can also edit the order of tracks in playlists other than just the user playlists.

Preparation

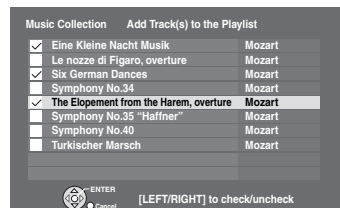
- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].
- 3 Press [MUSIC COLLECTION] to switch the selector to "Music Collection".

Creating a user playlist/adding tracks

One playlist can contain up to 99 tracks.

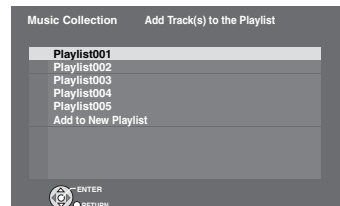
While the playlist you want to add tracks from is stopped,

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select "Edit Playlist" and press [ENTER].
- 3 Press [▲ ▼] to select "Add Track(s) to the Playlist" and press [ENTER].
- 4 Press [▲ ▼] to select the track and press [◀ ▶] to add a check mark.



Repeat step 4 to select all tracks you want to add to the playlist.

- 5 Press [ENTER].
- 6 Press [▲ ▼] to select the playlist to add the track(s) to and press [ENTER].



- If an existing playlist was selected, a message will be displayed and the unit will return to the previous menu.
- When "Add to New Playlist" was selected in step 6, proceed to step 7.

(If only "Add to New Playlist" was selected.)

- 7 Enter the characters (→ page 62).
- 8 Press [■] (Set).

To return to the previous screen

Press [RETURN].



TIPS

- You can also perform the operations above from the Track List. Press [▲ ▼] to select "Add Track to the Playlist" and press [ENTER]. Then operate from step 6.
- **To add or remove check marks to a group of tracks**
 - 1 Press [SUB MENU].
 - 2 Press [▲ ▼] to select "Mark All" or "Unmark All".

Removing tracks from a playlist

Tracks can be removed from the playlists while keeping the tracks on the HDD. This function can be used with playlists "User Playlists" and "Most Often Played".

While stopped,

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select "Edit Playlist" and press [ENTER].
- 3 Press [▲ ▼] to select "Remove Track(s) from the Playlist" and press [ENTER].
- 4 Select the playlist containing tracks that you want to remove from the playlist with [▲ ▼].
- 5 Press [▲ ▼] to select the track and press [◀ ▶] to add a check mark.



Repeat step 5 to select all the tracks you want to remove from the playlist.

- 6 Press [ENTER].

To return to the previous screen

Press [RETURN].

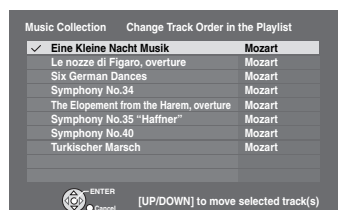
Changing the order of a playlist

You can change the order of playlists. This function can be used with playlists "User Playlists", "Favorites", "Artists" and "Albums".

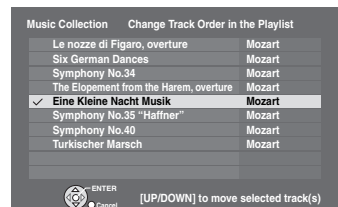
While the playlist that you want to change the order of is stopped,

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select "Edit Playlist" and press [ENTER].
- 3 Press [▲ ▼] to select "Change Track Order in the Playlist" and press [ENTER].
- 4 Press [▲ ▼] to select the track and press [◀ ▶] to add a check mark.

Track with the check mark can now be moved.



- 5 Press [▲ ▼] to select where you want to move the track to and press [ENTER].



Repeat steps 4 and 5 to move other tracks.

- 6 Once the track has finished moving, press [ENTER].

To return to the previous screen

Press [RETURN].



TIPS

To add or remove check marks to a group of tracks

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select "Mark All" or "Unmark All".



TIPS

- You can also perform the operations above from the Track List. Press [▲ ▼] to select "Change Track Order in the Playlist" and press [ENTER]. Then operate from step 4.

Changing the name of a playlist

You can change the names of playlists. This function can be used with playlists “User Playlists”, “Analogue Recorded”, “Artists”, and “Albums”.

While the playlist that you want to change the name of is stopped,

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select “Edit Playlist” and press [ENTER].
- 3 Press [▲ ▼] to select “Edit Playlist Name” and press [ENTER].

Changing the name of artist and/or album playlists:

If you select an artist or album playlist and change the name of the playlist, the artist and/or album name will change (→ page 66).

Confirmation messages such as “Do you want to change the artist name?” will appear on screen. Select “Yes” to continue with the operations.

- 4 Enter the characters (→ right).
- 5 Press [■] (Set).

To return to the previous screen

Press [RETURN].



NOTE

- When a playlist with the same name exists, the message “There is another playlist with the same name. Do you want to merge them?” will be displayed. You can combine the two playlists into one, or change the name and create a new playlist.

■ Entering text

You can give names to recorded tracks, etc.

The maximum number of characters:

	Characters
Track title	59
User playlist title	59
Artist title	39
Album title	59

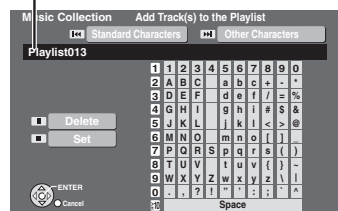


NOTE

If a name is long, parts of it may not be shown in some screens.

- 1 The text entry screen is displayed.

Name field: shows the text you have entered



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

Repeat this step to enter other characters.

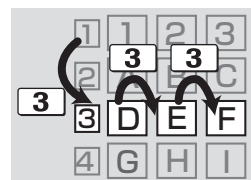
To erase a character

Press [▲ ▼ ◀ ▶] to select the character in the name field and press [■]. (The selected characters are erased.)

Using the numbered buttons to enter characters

e.g., entering the letter “F”

- 1 Press [3] to move to the 3rd row.
- 2 Press [3] twice to highlight “F”.
- 3 Press [ENTER].



To enter a space

Press [≥10] and press [ENTER].

- 3 Press [■] (Set).

To end partway

Press [RETURN].

Text is not saved.

Deleting a user playlist

This function will delete the user playlists, but the tracks will remain on the HDD.

- 1 While the user playlist that you want to delete is stopped, press [SUB MENU].
- 2 Press [▲ ▼] to select “Edit Playlist” and press [ENTER].
- 3 Press [▲ ▼] to select “Delete the Playlist” and press [ENTER].
- 4 Press [◀ ▶] to select “Yes” and press [ENTER].

To return to the previous screen

Press [RETURN].

Adding tracks to “Favorites”

You can easily add the tracks you like to “Favorites” (max. 99 tracks).

While the track you want to add is stopped, paused or playing

Press [FAVORITE/REG].

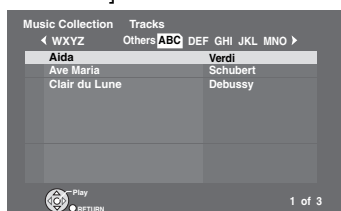
Track registered to Favorites playlist.

A message is displayed, and the unit returns to the previous screen.

- The track will be added as the last track in “Favorites”.

To perform operations from the Track List (playlist)

While the Track List (playlist) containing the track you want to add is displayed, press [▲ ▼] to select the track and then press [FAVORITE/REG].



Removing a track from “Favorites”

- 1 While stopped, press [SUB MENU].
- 2 Press [▲ ▼] to select “Edit Playlist” and press [ENTER].
- 3 Press [▲ ▼] to select “Remove Track(s) from Favorites playlist” and press [ENTER].
- 4 Press [▲ ▼] to select the track and press [◀ ▶] to add a check mark.



Repeat step 4 to select all the tracks you want to remove.

- 5 Press [ENTER].

To return to the previous screen

Press [RETURN].



TIPS

To add or remove check marks to a group of tracks

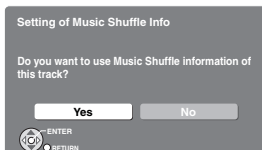
- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select “Mark All” or “Unmark All”.

Setting of Music Shuffle information

You can set if this unit will use Music Shuffle information indicated in the track when generating Music Shuffle lists.

From the Main Screen (→ page 24)

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select “Track Manager” and press [ENTER].
- 3 Press [▲ ▼] to select “Setting of Music Shuffle Info” and press [ENTER].



- 4 Press [◀ ▶] to select an item and press [ENTER].
Yes: This track can appear in Music Shuffle lists.
No: This track will not appear in Music Shuffle lists.
- 5 Press [ENTER].

To return to the previous screen

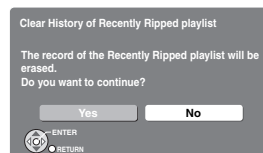
Press [RETURN].

Clearing the history for “Most Often Played” and/or “Recently Ripped” playlists

You can clear the history and create new “Most Often Played” or “Recently Ripped” playlists.

From the Main Screen (→ page 24)

- 1 While stopped, press [SUB MENU].
- 2 Press [▲ ▼] to select “Edit Playlist” and press [ENTER].
- 3 Press [▲ ▼] to select “Clear History of Most Often Played playlist” or “Clear History of Recently Ripped playlist” and press [ENTER].
e.g., When “Clear History of Recently Ripped playlist” is selected.



- 4 Press [◀ ▶] to select “Yes” and press [ENTER].

To return to the previous screen

Press [RETURN].



NOTE

Note regarding editing playlists

If you try to edit playlists that cannot be edited, the message “You cannot change the name of this playlist.” etc. will be displayed. Switch to a playlist that can be edited and then make changes.

Deleting tracks

HDD

Unnecessary tracks can be deleted from the HDD. You can select and delete a single track, or several tracks at once from a playlist.

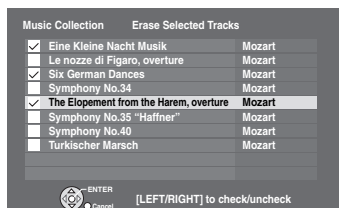
Tracks that are deleted cannot be recovered, therefore carefully check the tracks before deleting them.

Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].
- 3 Press [MUSIC COLLECTION] to switch the selector to "Music Collection".

While the playlist containing the track that you want to delete is stopped,

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select "Track Manager" and press [ENTER].
- 3 Press [▲ ▼] to select "Erase Selected Tracks" and press [ENTER].
- 4 Press [▲ ▼] to select the track and press [◀ ▶] to add a check mark.



Repeat step 4 to select all the tracks you want to delete.

- 5 Press [ENTER].
- 6 Press [◀ ▶] to select "Yes" and press [ENTER].

To return to the previous screen

Press [RETURN].



NOTE

- When a track is deleted, it will also be deleted from any playlists containing the track.



TIPS

- You can also perform the operations above from the Track List. Press [▲ ▼] to select "Erase Selected Tracks" and press [ENTER]. Then operate from step 4.
- **To add or remove check marks to a group of tracks**
 - 1 Press [SUB MENU].
 - 2 Press [▲ ▼] to select "Mark All" or "Unmark All".

Changing titles

HDD CD

Artist and album names can be manually input, or the Gracenote database can be used to automatically obtain track information.

About obtaining track title information

- Each track contains unique characteristics which act as a “sound fingerprint”. Gracenote database uses these unique characteristics to search and obtain information about music.
- To obtain track information for the newest titles, a network connection is necessary (→ page 94).

Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].
- 3 Press [MUSIC COLLECTION] to select “Music Collection” or press [DVD] to select “DVD/CD”.

Changing a track name manually

HDD

While the track you want to change the name of is stopped,

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select “Track Manager” and press [ENTER].
- 3 Press [▲ ▼] to select “Edit Track Name” and press [ENTER].
- 4 Enter the characters (→ page 62).
- 5 Press [■] (Set).

To return to the previous screen

Press [RETURN].



TIPS

- You can also perform the operations above from the Track List. Press [▲ ▼] to select “Edit Track Name” and press [ENTER]. Then operate from step 4.

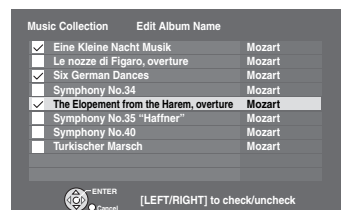
Changing an artist name or album name manually

HDD

You can change the names of albums and artists for multiple tracks.

While the track you want to change the name of is stopped,

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select “Track Manager” and press [ENTER].
- 3 Press [▲ ▼] to select “Edit Artist Name” or “Edit Album Name” and press [ENTER].
- 4 Press [▲ ▼] to select the track and press [◀ ▶] to add a check mark.
e.g., If changing the album name



Repeat step 4 to select all the tracks whose album or artist names you want to change.

When you add check marks to a group of tracks, the artist name and album name will be changed at the same time.

- 5 Press [ENTER].
- 6 Enter the characters (→ page 62).
- 7 Press [■] (Set).

To return to the previous screen

Press [RETURN].



TIPS

- You can also perform the operations above from the Track List. Press [▲ ▼] to select “Edit Artist Name” or “Edit Album Name” and press [ENTER]. Then operate from step 4.
- To add or remove check marks to a group of tracks
 - 1 Press [SUB MENU].
 - 2 Press [▲ ▼] to select “Mark All” or “Unmark All”.

Searching for track names, artist names and album names within the Gracenote database and entering them automatically

HDD

You can use the Gracenote database to search for and obtain title information for recordings made from sources other than CD-DA.

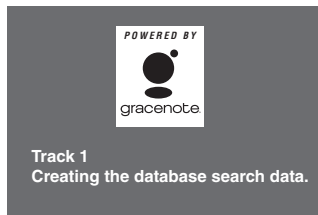
While the playlist containing the tracks that you want to add a title to is stopped,

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select “Track Manager” and press [ENTER].
- 3 Press [▲ ▼] to select “Obtain Track Title” and press [ENTER].
- 4 Press [▲ ▼] to select the track and press [◀ ▶] to add a check mark.



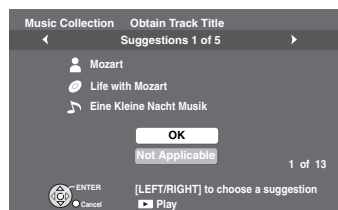
Repeat step 4 to select all the tracks whose album or artist names you want to change.

- 5 Press [ENTER].



Search begins for the first track.

- 6 If suggestions are displayed, press [◀ ▶] to select the title and press [▲ ▼] to select “OK”, then press [ENTER].



- If no applicable suggestions are found, then select “Not Applicable”.
- Once the title has been entered, search for information for the next track begins.

- 7 Repeat step 6 to search for other track titles.

The unit returns to the previous screen once finished searching for all track titles.

To return to the previous screen

Press [RETURN].



TIPS

- You can also perform the operations left from the Track List. Press [▲ ▼] to select “Obtain Track Title” and press [ENTER]. Then operate from step 4.
- To add or remove check marks to a group of tracks
 - 1 Press [SUB MENU].
 - 2 Press [▲ ▼] to select “Mark All” or “Unmark All”.

Correcting title information obtained from the Gracenote database

CD

You can correct any mistakes that may appear in title information obtained from the Gracenote database.

While the CD-DA format from a commercial CD or recordable CD is stopped,

- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select “Obtain CD/Track(s) Title” and press [ENTER].



After the title search finishes, suggestions are displayed.

- 3 Press [▲ ▼] to select the title and press [ENTER].

To return to the previous screen

Press [RETURN].

Dividing and combining tracks on the HDD

HDD

Tracks recorded as LPCM can be divided and combined.

1 track can be divided into 2 tracks. Alternately, 2 tracks can be combined into 1 track.

Tracks that can be divided and/or combined are limited to tracks recorded to the HDD as LPCM. Tracks recorded to the HDD in AAC, or WMA and MP3 tracks imported from a PC, cannot be divided or combined.

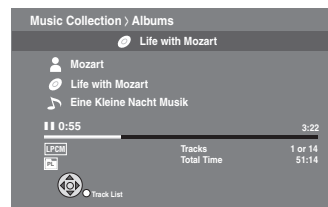
Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].
- 3 Press [MUSIC COLLECTION] to switch the selector to "Music Collection".

Dividing tracks

Only tracks recorded as LPCM can be divided. This function can be used with playlists "Albums" and "Analogue Recorded".

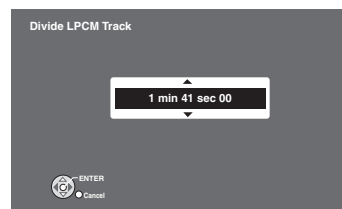
- 1 Select the playlist containing the track that you want to divide from.
- 2 Pause the track where you want to divide it. After pausing, press [SUB MENU].



- 3 Press [▲ ▼] to select "Track Manager" and press [ENTER].
- 4 Press [▲ ▼] to select "Divide and Combine LPCM Track" and press [ENTER].
- 5 Press [▲ ▼] to select "Divide this Track" and press [ENTER].



- 6 Press [▲ ▼] to select "Division Point" and press [ENTER].



- 7 Press [▲ ▼] to make all fine adjustments to the point of division and press [ENTER].
To check that the tracks were divided correctly, the track repeats playback of the first few seconds after the division point.
- 8 Press [▲ ▼] to select "Divide" and press [ENTER].
 - Tracks that have been divided before the division point are named with "_1", and tracks that are divided after the division point are named with "_2".

To stop partway through

Press [■].

To return to the previous screen

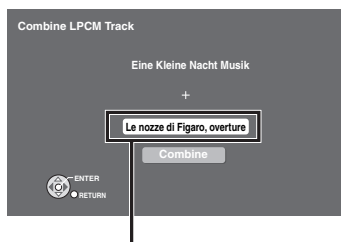
Press [RETURN].

Combining tracks

Only tracks recorded in LPCM format can be combined with other LPCM tracks. This function can be used with playlists “Albums” and “Analogue Recorded”.

When the track you want to designate as the first track is stopped,

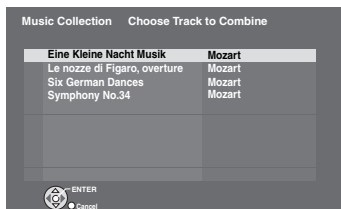
- 1 Press [SUB MENU].
- 2 Press [▲ ▼] to select “Track Manager” and press [ENTER].
- 3 Press [▲ ▼] to select “Divide and Combine LPCM Track” and press [ENTER].
- 4 Press [▲ ▼] to select “Combine with Another Track” and press [ENTER].



The track you want to combine at the end of the first track is displayed.

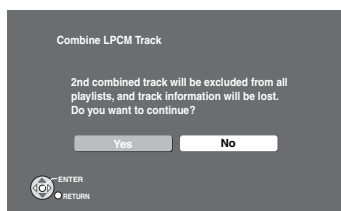
To change the track you want to add to the end of the first track

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



The playlist is displayed.

- 2 Press [▲ ▼] to select the track you want to combine as the second track, and press [ENTER].
- 5 Press [▲ ▼] to select “Combine” and press [ENTER].



- 6 Press [◀ ▶] to select “Yes” and press [ENTER].

To stop partway through
Press [■].

To return to the previous screen
Press [RETURN].



NOTE

- Combining or dividing long tracks will take more time.
- Two tracks cannot be combined if they exceed 202 minutes and 53 seconds.

VIERA Link “HDAVI Control”

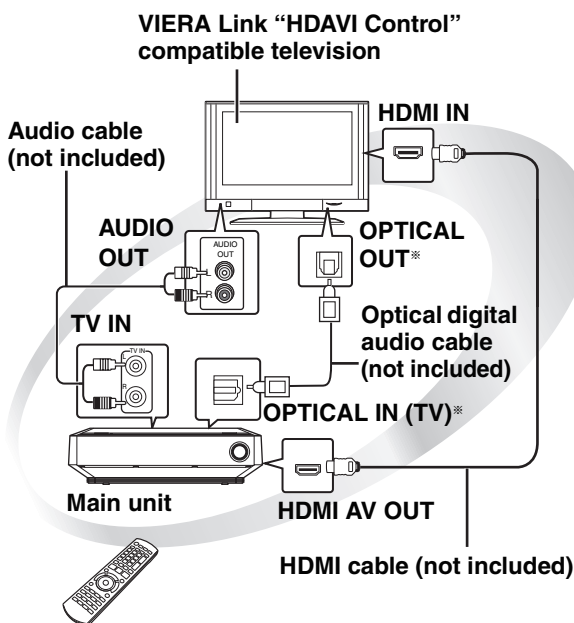
VIERA Link “HDAVI Control” is a convenient function that offers linked operation of this unit, and a Panasonic television (VIERA) under “HDAVI Control”.

You can use this function by connecting the equipment with the HDMI cable. See the operating instructions for connected equipment for operational details.

- VIERA Link “HDAVI Control”, based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers’ equipment that supports HDMI CEC cannot be guaranteed.

- This unit supports “HDAVI Control 2” function. The TV with “HDAVI Control 2” function enables the following operation:
VIERA Link Control only with TV’s remote control (for “HDAVI Control 2”) (→ page 71).

“HDAVI Control 2” is the newest standard (current as of February, 2007) for Panasonic’s HDAVI Control compatible equipment. This standard is compatible with Panasonic’s conventional HDAVI equipment.



※ Connect this when you want to output TV audio from this unit's speakers as digital audio.

Preparation

- 1 Confirm that the HDMI connection (→ page 91) has been made.
- 2 Set “VIERA Link” to “On” (→ page 87, “HDMI” menu).
- 3 To complete and activate the connection correctly, turn on all VIERA Link “HDAVI Control” compatible equipment and set the television to the corresponding HDMI input mode for this unit.

Whenever the connection or settings are changed, reconfirm the points above.

- It is recommended that you use Panasonic’s HDMI cable.

Recommended part number:

RP-CDHG15 (1.5 m), RP-CDHG30 (3.0 m),

RP-CDHG50 (5.0 m), etc.

- Non-HDMI-compliant cables cannot be utilized.

Functions made possible with VIERA Link “HDAVI Control” are...

■ One-touch theater playback

You can turn on this unit and television, and start playing the disc with a single press of a button.

- This operation is for “DVD/CD” only.

Press [ONE TOUCH PLAY].

- This function also works if you press [▶] (PLAY) on this unit’s remote control when this unit is in standby mode.



NOTE

- Playback may not be immediately displayed on the television. If you miss the beginning portion of playback, press [◀◀] or [◀◀] to go back to where playback started.

■ Power on link

The television automatically turns on and the corresponding display appears when the following operations are performed with the television in standby mode. Audio output is also automatically switched to this unit’s speakers.

- When you start playback on this unit.
- When using the GUI (display screen) to perform an action. [e.g., Start menu screen (→ page 24)]

■ Power off link

When the television is turned off, this unit goes into standby mode automatically.

- This function works only when “Music Collection”, “DVD/CD” or “TV Audio” is selected as the source on this unit.
- When the television is turned on, this unit does not turn on automatically.



NOTE

- Only this unit turns off when you press [⏻] for shutting it down. Other connected equipment compatible with VIERA Link “HDAVI Control” stays on.

■ Auto input switching

- When you switch the television input to TV tuner mode, this unit will automatically switch to “TV Audio[®]”.
- ※ If you want to output digital audio, connect the optical cable (→ page 70) and select “DIGITAL IN” in “TV Audio Input” menu (→ page 88).
- When you start playback on this unit, the television will automatically switch to the HDMI input mode for this unit.
- Also from the Start menu, the input mode will be switched.

■ Speaker control

You can select whether audio is output from this unit or the television speakers by using the television menu settings. For details, refer to the operating instructions of your television.

Home Cinema

Theater speakers are active.

- When this unit is in standby mode, changing the television speakers to theater speakers in the television menu will automatically turn this unit on and select “TV Audio[®]” as the source.
- ※ If you want to output digital audio, connect the optical cable (→ page 70) and select “DIGITAL IN” in “TV Audio Input” menu (→ page 88).
- The television speakers are automatically muted.
- You can control the volume setting using the volume or mute button on the TV’s remote control. (The volume level is displayed on this unit’s FL display.)
- To cancel muting, you can also use this unit’s remote control (→ page 90).
- If you turn off this unit, television speakers will be automatically activated.

TV

Television speakers are active.

- The volume of this unit is set to “0”.
- This function works only when “DVD/CD” or “TV Audio” is selected as the source on this unit.
- Audio output is 2-channel audio.
- Audio from the CD is not output from the television speakers while recording to the HDD. However, if “Listening while Recording” is selected, audio will be output from this unit’s speakers. In this case, operate the volume settings with this unit’s remote control.



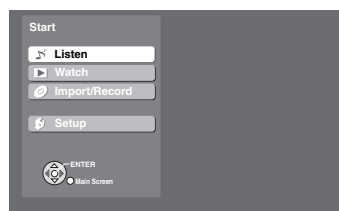
NOTE

- Depending on the type of TV, the TV settings, or operations performed on the TV, Speaker Control may be automatically set to “Home Cinema”.

■ VIERA Link Control only with TV’s remote control (for “HDAVI Control 2”)

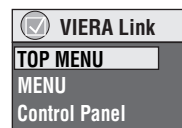
You can control the disc menus of this unit with the TV’s remote control when using the “Music Collection”, “DVD/CD”, “FM” and “USB” source. When operating the TV’s remote control, refer to the illustration below for operation buttons.

- 1 Select the operation menu by using the television menu settings. (For details, refer to the operating instructions of your television.)
- 2 Select the desired item on the Start menu (→ page 24).



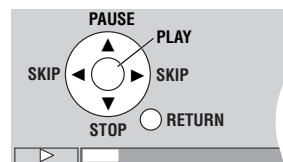
If you select “Disc” in “Listen” or “Watch” on the Start menu

“VIERA Link” menu is displayed. Select the desired item.



- “TOP MENU”: Shows a disc top menu (→ page 37) or program list (→ page 38).
- “MENU”: Shows a disc menu (→ page 36) or playlist (→ page 38).
- “Control Panel”: The basic operations for playback discs are available.

e.g., “DVD/CD”



NOTE

- Depending on the menu, some button operations cannot be performed from the TV’s remote control.
- “Control Panel” can be selected directly by using a button on the TV’s remote control (e.g. [SUB MENU]).
- Depending on the situation, not only the VIERA Link menu, but this unit’s Start menu may be displayed as well. At this point, select “Disc” by pressing [▲ ▼] (TV’s remote control) and selecting “Listen” or “Watch”. After that, you can operate the VIERA Link menu by operating the TV remote control.
- You cannot input numbers with the numbered buttons on the remote control ([0] to [10]). Use this unit’s remote control to input the IP Address, etc.

Operating iPod with this unit

By inserting Universal Dock for iPod (SH-PD10, not included) into the OPTION port on the back of this unit, you can charge and play or record tracks from a connected iPod. Also make sure to read the operating instructions for SH-PD10.

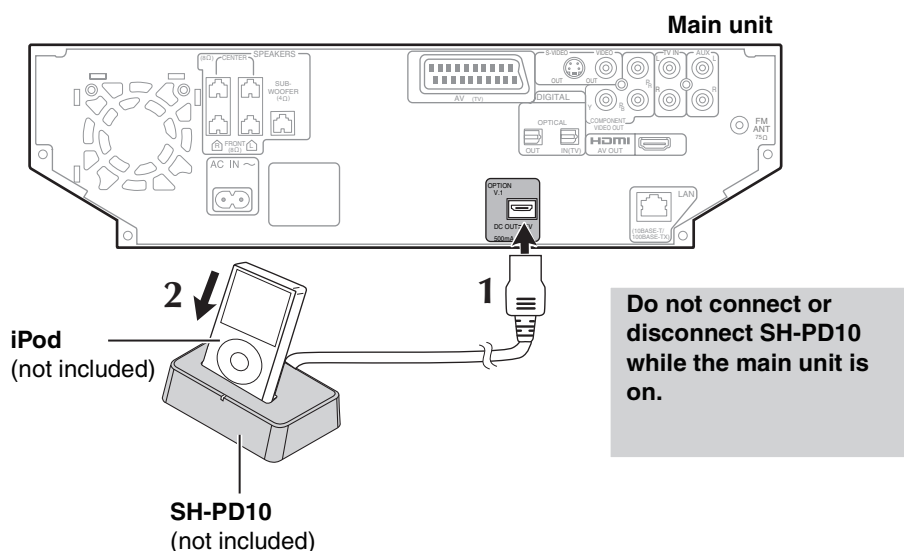
- You can enjoy higher audio quality when audio tracks from iPod are output through this unit's speakers.
- You can perform basic functions on iPod with this unit's remote control.
- You can record tracks from iPod to this unit's HDD.
- You can recharge iPod.

■ Connecting the SH-PD10 (not included)

Before connecting, turn off the power to iPod.

- 1 Insert SH-PD10 into the OPTION port on the back of this unit.
- 2 Connect iPod to the SH-PD10.

Once connected, recharging begins (→ below). Refer to page 73 for information about recording and play.



■ About recharging the battery

By inserting SH-PD10 (not included) to the OPTION port on the back of this unit and connecting iPod, you can recharge iPod.

Once connected, the battery will begin to recharge automatically.

iPod will start recharging regardless of whether this unit is on or off.
Check iPod to see if the battery is fully recharged.



NOTE

- Tracks from this unit cannot be checked-out to iPod using SH-PD10.
- If you are not using iPod for an extended period of time after recharging has completed, disconnect it from SH-PD10, as the battery will be depleted naturally. (Once fully recharged, additional recharging will not occur.)
- For more information, refer to the operating instructions for iPod or SH-PD10.

By inserting SH-PD10 (not included) into the OPTION port and connecting iPod, you can play tracks (audio) through this unit's speakers. Additionally, you can use the remote control for this unit to perform operations such as play, stop, and record* operations on iPod.

* Only audio tracks can be recorded from iPod.

Preparation

- 1 Connect the SH-PD10 and iPod as shown on page 72.
- 2 Press [**>** SELECT **<**] to switch the selector to "OPTION".

Playing tracks of iPod with the remote control for this unit

By performing the following operations on the remote control, you can play tracks from iPod.

	PLAY
	PAUSE
	SKIP
	SEARCH
[+ – VOLUME]	Volume adjust

- Play will continue from the last track you were listening to before connecting SH-PD10 and iPod.

Recording tracks from iPod to the HDD

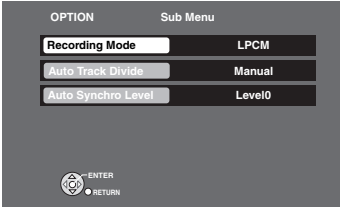
You can record tracks from iPod to the HDD.

Press [**● HDD REC**].

Recording starts in the set recording mode (→ below) and playing of iPod also starts automatically.

To change the recording mode

- 1 Press [SUB MENU] while stopped.



- 2 Press [**▲ ▼**] to select "Recording Mode" (→ page 27) and make changes.
In addition to the recording mode, you can also change "Auto Track Divide" (→ page 42), or "Auto Synchro Level" (→ page 42).

To stop midway through

Press [**■**].

To return to the previous screen

Press [RETURN].



NOTE

- If "No compatible equipment is connected" is displayed, then no OPTION-compatible equipment is connected to the OPTION port.



TIPS

To select a track you want to record
In "Playing tracks of iPod with the remote control for this unit" (→ left), operate the iPod, and press [**● HDD REC**] after pausing at the beginning of the track you want to record.

Playing audio tracks wirelessly from your PC with this unit

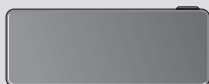


Expand your listening options with the Panasonic wireless audio kit SH-FX570K.

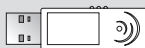
By using the optional Panasonic wireless audio kit SH-FX570K (not included), you can enjoy audio tracks from your PC on this unit wirelessly!



Panasonic wireless audio kit SH-FX570K (not included)



SH-FX570R
(Wireless audio receiver)



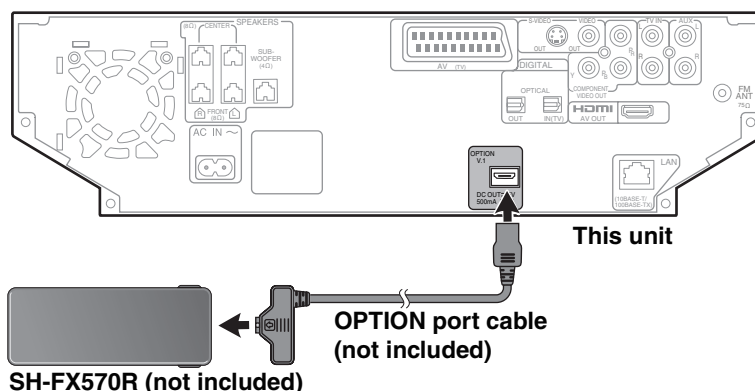
SH-FX550T
(USB transmitter)



OPTION port cable

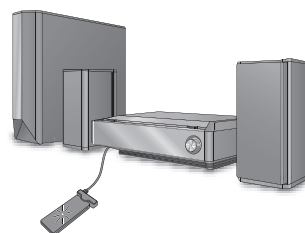
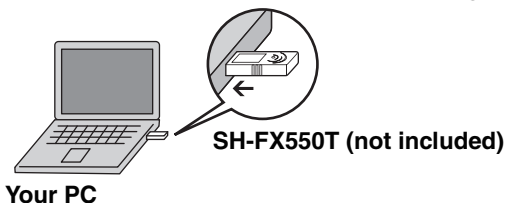
■ Connecting the wireless audio kit SH-FX570K (not included)

- 1 Connect the SH-FX570R (Wireless audio receiver) and the OPTION port cable into the OPTION port on the back of this unit.



- 2 Install the Bluetooth software (included on CD-ROM with SH-FX570K), insert the SH-FX550T (USB transmitter) into the USB terminal on your PC, perform pairing and create a connection between SH-FX570R and SH-FX550T.

For detailed information, read the operating instructions for SH-FX570K.



NOTE

- Place in front of this unit so that you can see the transmit lamp on the SH-FX570R.



NOTE

- Please read the operating instructions of SH-FX570K for the usage restrictions, range of use, the operating environment or other detailed information.

By performing the following operations on the remote control, you can play or record tracks from your PC.

Preparation

- 1 Connect the SH-FX570K as shown on page 74.
- 2 Press [> SELECT <] to switch the selector to "OPTION".

Preparations on your PC

Turn on the computer and boot Windows.

Basic play

Open Windows Media Player on your PC and play a track.

The sound will be wirelessly transmitted to this unit and output with this unit's speakers.

Playing tracks from your PC with the remote control for this unit

With this unit's remote control, you can perform basic operations of Windows Media Player.

Press [▶] (PLAY).

Windows Media Player automatically opens on your PC and starts playing.

- If playback does not start, operate your PC to start playback.

Operations with the remote control for this unit

▶	PLAY (While stopped or paused) PAUSE (While playing)
■	STOP
◀◀▶▶	SKIP
[VOLUME]	Volume adjust

Recording wirelessly transmitted tracks to the HDD

You can record tracks from your PC to the HDD in this unit.

1 Press [● HDD REC].

Recording starts in the set track division method (→ below).

Auto Synchro (factory preset):

Unit enters recording standby mode.

Auto 5 Minutes, Auto 10 Minutes, Manual:

Recording starts.

- For details of these settings (→ page 42)

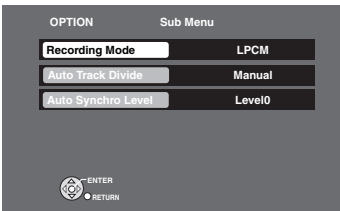
2 Operate your PC to play a track on Windows Media Player.

- Auto Synchro: Recording starts once audio is output.

Titles are automatically added (→ page 43).

To change the track division method

- 1 Press [SUB MENU] while stopped.



- 2 Press [▲ ▼] to select "Auto Track Divide" (→ page 42) and make changes.

In addition to the track division method, you can also change "Recording Mode" (→ page 27), or "Auto Synchro Level" (→ page 42).

To stop partway through

Press [■].

To return to the previous screen

Press [RETURN].



NOTE

- If "No compatible equipment is connected" is displayed, then no OPTION-compatible equipment is connected to the OPTION port.

OPTION port

Advanced Operations

Changing audio quality/sound field

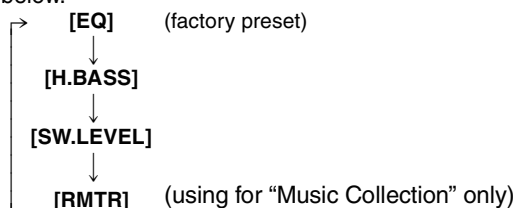
- The following sound effects may not be available or have no effect with some sources, or when headphones are used (→ page 80).
- You may experience a reduction in sound quality when these sound effects are used with some sources. If this occurs, turn the sound effects off.

Setting the sound effects

By changing the settings, you can enjoy various audio quality.

1 Press [SOUND].

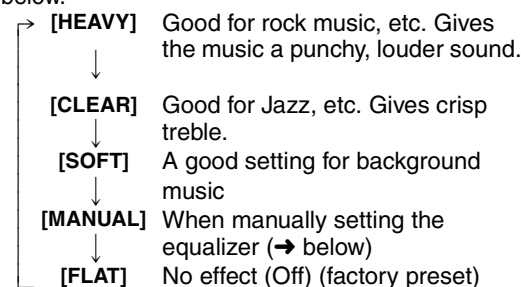
Each time the button is pressed, it switches as shown below.



■ To change the sound quality

2 When "EQ" is selected, press [SELECT].

Each time the button is pressed, it switches as shown below.

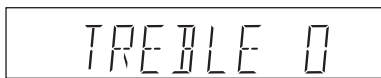


To manually set the equalizer

- 1 When "MANUAL" is selected, press [◀] or [▶]. Press [◀] and "BASS" is displayed.



Press [▶] and "TREBLE" is displayed.



- 2 When "BASS" or "TREBLE" is displayed, press [▲ ▼] to adjust the level.

■ To switch H.BASS between ON/OFF

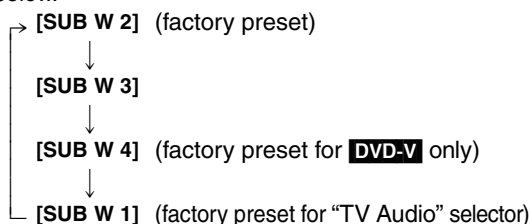
2 When "H.BASS" is selected, press [SELECT].

ON ←→ OFF
(factory preset) (factory preset)
for **DVD-V** only

■ To switch the subwoofer level

2 When "SW.LEVEL" is selected, press [SELECT].

Each time the button is pressed, it switches as shown below.



■ To switch "RMTR" between ON/OFF

2 When "RMTR" is selected, press [SELECT].

ON ←→ OFF
(factory preset)

- "RMTR" will only work with compressed tracks on the HDD (recorded AAC tracks or WMA/MP3 tracks imported from a PC).

※ RMTR (Digital Re-master)

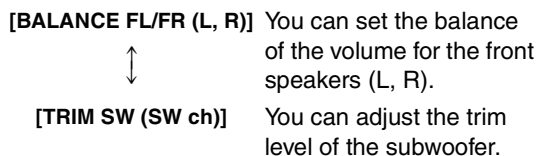
You can regenerate signal frequency lost during compression, restoring the sound to near pre-compression form.

Setting the volume balance

By changing these settings, you can make adjustments to the speaker volume.

1 Press [CH SELECT].

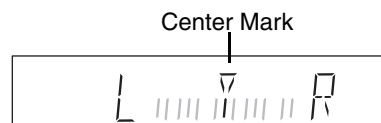
Each time the button is pressed, it switches as shown below.



- At the time of purchase this is set to "0 dB".
- When the playback source is 2 ch, only the balance settings can be operated.

■ To change the front speaker volume balance

2 When [BALANCE FL/FR (L, R)] is selected, press [◀ ▶].

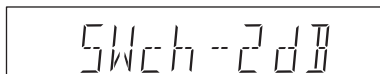


The settings for the volume balance of the front speakers (L, R) changes (0 to -12 dB).

- When headphones are connected (→ page 80) the balance will return to 0 dB (center).

■ To change the subwoofer trim levels

- When [TRIM SW (SW ch)] is selected, press [▲ ▼].



The settings for the trim level of the subwoofer changes (−6 to +6 dB).

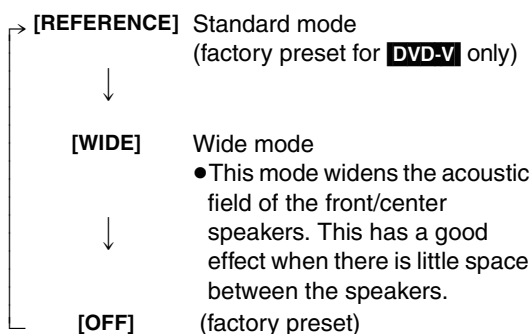
Setting the Dolby Virtual Speaker

With only the included front/center speakers and the subwoofer, you can add a surround sound effect similar to 5.1 ch (Dolby Digital or DTS) to any audio source. You can also add a surround sound effect to stereo sources such as video tapes or CDs.

Press [DOLBY VS].

Each time the button is pressed, it switches as shown below.

- Set the Dolby Virtual Speaker to “REFERENCE” or “WIDE”, and if the play source is 2 ch, “DOLBY PL II” will light up.



NOTE

When “ERROR” is displayed:

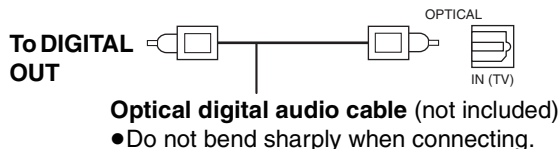
In the following cases, “ERROR” is displayed, and you cannot set the Dolby Virtual Speaker.

- During play, when the selector is set to “DVD/CD” and the audio source currently playing is in 3.1 ch, 3 ch, 1.1 ch, or 1 ch.
- When you are playing content that prohibits D.MIX (down-mixing)
- When headphones are connected.

Setting the sound effects for digital broadcasts or satellite receiver

This unit can decode the surround signals received through digital broadcasting or satellite broadcasts. Refer to your equipment’s operating instructions for details. Only Dolby Digital and PCM can be played with this connection.

Back of the main unit

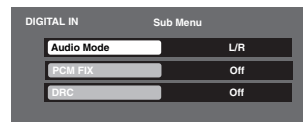


- Press [SETUP].
- Press [▲ ▼] to select “Other Setup” and press [ENTER].
- Press [▲ ▼] to select “TV Audio Input” and press [▶].
- Press [ENTER].
- Press [▲ ▼] to select “DIGITAL IN” and press [ENTER].
- Press [RETURN] to exit the screen.
- Then press [➤ SELECT <] to switch the selector to “TV Audio” as the source.

■ Selecting to the sound effects

When you select “DIGITAL IN” as the source, you can select the following sound effects. (These functions only work with Dolby Digital or PCM, excluding Audio Mode, which only works with Dolby Digital Dual Mono.)

- Press [SUB MENU].



- Press [▲ ▼] to select the effect that you want to switch and press [ENTER].

• Audio Mode

L/R, L, R

• PCM FIX

On: Select when receiving only PCM signals.

Off: Select when receiving Dolby Digital and PCM signals.

• DRC (Dynamic Range Compression)

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

Off

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

To return to the previous screen

Press [RETURN].



NOTE

- Audio that is input through the OPTICAL IN (TV) terminal cannot be output through the HDMI terminal.

Using the scheduled timer recording function

When the previously set time and day of the week is reached, the power will turn on and the unit will record from an external audio source or radio to the HDD, and when the recording time is finished, the unit will turn off automatically. You can also set the unit to make multiple recordings.

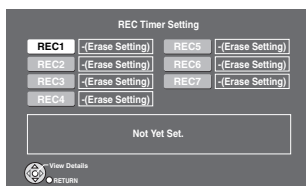
Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].
- 3 Set the clock (→ page 17).
- 4 When making a recording from the radio, add the radio station as a preset channel (→ page 18).

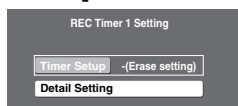
Setting the details of the scheduled timer recording

You can set up to 7 different details for the scheduled timer recording.

- 1 Press [SETUP].
- 2 Press [▲ ▼] to select “Other Setup” and press [ENTER].
- 3 Press [▲ ▼] to select “Clock/Timer” and press [ENTER].
- 4 Press [▲ ▼] to select “Timer Setup” and press [ENTER].



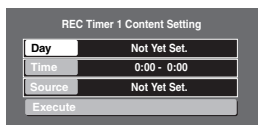
- 5 Press [▲ ▼ ◀ ▶] to select the number you want to record and press [ENTER].



- You can select any number between “REC1” and “REC7”.

- 6 Set the operation details.

- 1 Press [▲ ▼] to select “Detail Setting” and press [ENTER].

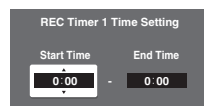


- 2 Press [▲ ▼] to select “Day” and press [ENTER].

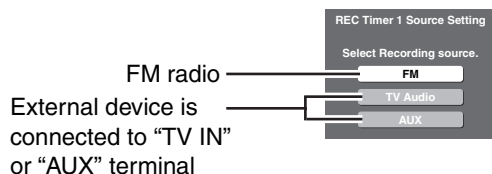


- 3 Press [▲ ▼] to select the day you want to set, press [◀ ▶] to add a check mark, and then press [ENTER].

- 4 Press [▲ ▼] to select “Time” and press [ENTER].



- 5 Press [◀ ▶] to select the start/finish time and press [▲ ▼] to set the time. Then press [ENTER].
- 6 Press [▲ ▼] to select “Source” and press [ENTER].



- 7 Press [▲ ▼] to select the audio source and press [ENTER].

When recording from the radio

- 1 In step 7, select “FM”.
- 2 Press [▲ ▼] to select the preset channel that you want to record.

When recording from an external device

- 1 In step 7, select “TV Audio” or “AUX”.
- 2 After switching the detailed settings to “On” (in the operations on page 79) set the day of the week and time for recording to match the settings also on the external device.

- You cannot record when “TV Audio Input” is set to “DIGITAL IN”.

- 8 Press [▲ ▼] to select “Execute” and press [ENTER].

The details for the scheduled timer recording are set.

To return to the previous screen

Press [RETURN].

When you want timer to operate immediately with the details that you set, go directly to step 6 on the next page.

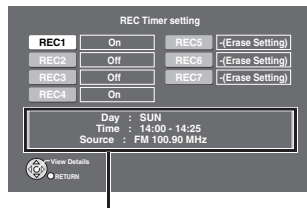
- When you only want to set the details for a recording, press [RETURN] several times and the unit will return to the previous screen.

Selecting the settings for the scheduled timer recording you want to use

You can use only the scheduled timer recording that you want to use by switching only the desired scheduled timer recording to "On" from the list of scheduled timer recording settings.

After completing step 4 on the left column on page 78,

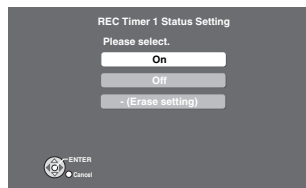
- 5 Press [▲ ▼ ◀ ▶] to select the scheduled timer recording that you want to use and press [ENTER].**



Selected scheduled timer recording day of the week and starting time.

- 6 Select the operation you want to set.**

- 1 Press [▲ ▼] to select "Timer Setup" and press [ENTER].**



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

When you do not want to use the scheduled settings, select "Off".

On : Use this scheduled timer recording
Off : Do not use this scheduled timer recording (setting only)

Invalid (Overlap): This scheduled timer recording conflicts or overlaps with another scheduled timer recording and cannot be used.

— (Erase setting): Scheduled timer recording not yet set.

- 7 Press [RETURN].**

The unit returns to the screen shown in step 5. Repeat steps 5 to 7 and switch each scheduled timer recording to "On" (or "Off").

- 8 Press [RETURN] several times.**

The unit returns to the previous screen.

- 9 Press [⏻] to turn off the power.**

If the power is not turned off, the timer will not operate.

To return to the previous screen

Press [RETURN].

To change settings of a scheduled timer recording

Select the number of the scheduled timer recording in step 5 and set again.



NOTE

- Only radio and externally connected devices can be recorded with the scheduled timer recording function. You cannot record from a CD or "OPTION" either with this function.
- To avoid cutting off the beginning of the track that is recording, the recording will begin a few seconds before the set day of the week and time. (While recording, "⏻ REC" and the number of the scheduled timer recording will flash on the television.)
- All scheduled timer recordings will operate on the specified day of the week and time, except for scheduled timer recordings indicated as "Off".
- If the starting time for the scheduled timer recording occurs at the same time as another scheduled timer recording finishes, the second recording may start late.



TIPS

When a scheduled timer recording overlaps with another scheduled timer recording

You cannot record when a scheduled timer recording overlaps with another scheduled timer recording. When a timer is activated by selecting "On", other timers that overlap with this scheduled recording will then be set to "Invalid (Overlap)" and cannot be used. If you want to activate a scheduled timer recording that is currently set to "Invalid (Overlap)", follow the steps in the left column to switch the scheduled timer recording to "On".

To delete unnecessary scheduled timer recording settings

After step 4 on the previous page

- 1 Press [▲ ▼ ◀ ▶] to select unnecessary scheduled timer recording settings and press [ENTER].
- 2 Press [▲ ▼] to select "Timer Setup" and press [ENTER].
- 3 Press [▲ ▼] to select "— (Erase setting)" and press [ENTER].

To play after setting a timer

Even after setting a scheduled timer recording you can play the unit as usual. However, after you finish playing, be sure to set the unit to standby mode. Scheduled timer recording will not record if the unit is turned on.

- Changing the volume and audio source will have no effect on the details of the settings.

If a power failure, etc. caused timers to lose their setting

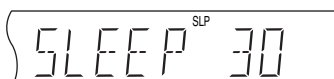
The clock is reset, and you cannot enter the timer recording screen.

Set the clock again (→ page 17).

Using other convenient functions

Setting the sleep timer

- 1 Press [SLEEP].



- 2 While the time is shown
Press [SLEEP] to select the time (in minutes).
SLEEP 30 → SLEEP 60 → SLEEP 90
↑ OFF ← SLEEP 120

To cancel the timer

While the time is shown, press [SLEEP] to select "OFF".

To confirm the remaining time

Press [SLEEP] again.

To change the setting

Repeat the procedure from the beginning.

Muting the sound

Press [MUTING].

"MUTING" flashes on the unit's display.



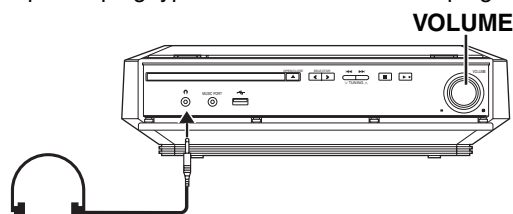
To cancel

- Press [MUTING] again or reduce the volume to minimum "VOL 0", and then raise it to the required level.
- Muting is cancelled when you switch the unit to standby.

Using headphones

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

Headphone plug type: Ø3.5 mm stereo mini plug



- 2 Adjust headphone volume with [+ – VOLUME].

- Audio is automatically switched to 2-channel stereo.



NOTE

- To prevent hearing damage, avoid listening for prolonged periods of time.

Using the Music Port

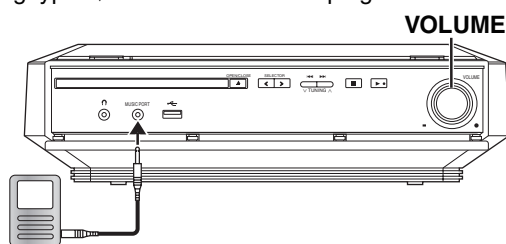
The Music Port allows you to connect and enjoy music from an external device (e.g. MP3 player) through this unit.

Preparation

To avoid distorted sound, make sure that any equalizer function of your external device is turned off.

- 1 Reduce the volume and connect the external device (not included).

Plug type: Ø3.5 mm stereo mini plug



External device

Reduce the volume before connecting.

- 2 Press [> SELECT <] to switch the selector to "MUSIC PORT".



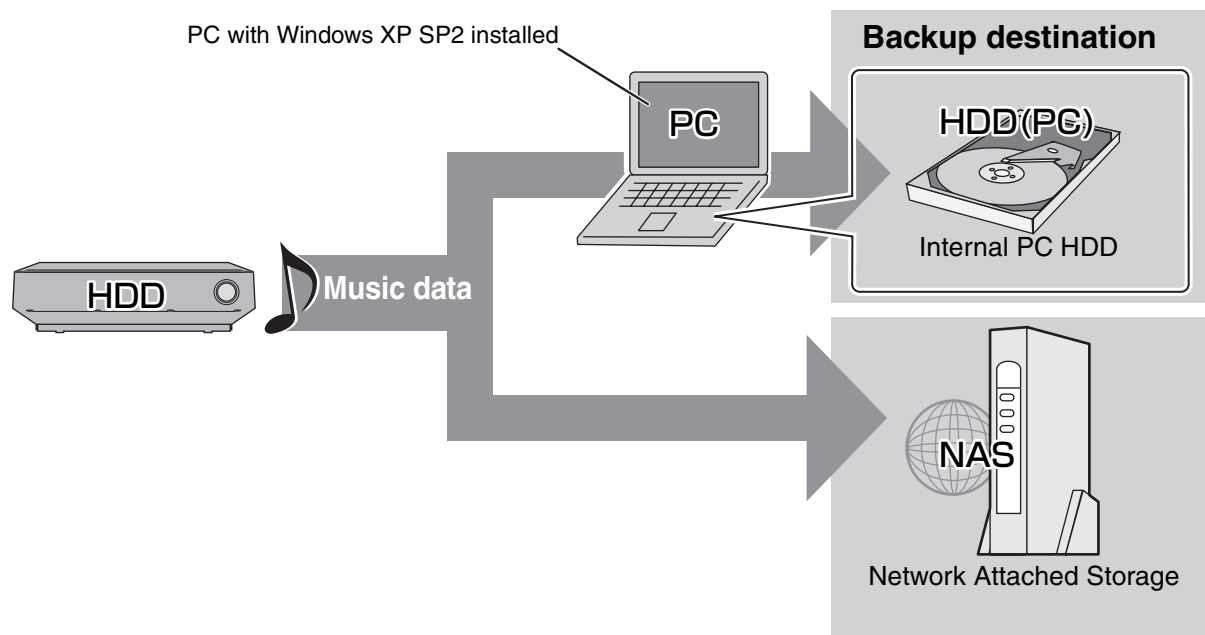
- 3 Adjust the external device volume to a normal listening level, and then adjust the volume of the main unit with [+ – VOLUME].

Backing up HDD data to a PC

We recommend backing up the tracks on the HDD regularly using a PC or NAS (Network Attached Storage). In the event that this unit requires service and the music data is damaged or lost, you can restore music from the last time you backed up.

The necessary equipment and recommended operating system for creating a backup:

- A PC operating with Windows XP SP2 installed
- A hard disk drive (HDD) with adequate available space, or a NAS device. Other media (DVD-R, etc.) cannot be used for creating a backup of your music library.
- When creating a backup, we recommend using a fast network connection such as 100BASE-T LAN.
- For further information about backups visit the following homepage.
<http://panasonic.jp/support/global/cs/audio>



Convenient functions

Preparation

- 1 Connect the unit to a PC network (→ page 94), or directly connect it to a PC (→ page 84).
- 2 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 3 Press [⏻].
- 4 Press [MUSIC COLLECTION] to switch the selector to "Music Collection".

Settings to check on the PC

- 1 Create a folder using the name below, and set the folder to "Shared". (This folder then becomes the save destination for the backup data.)

Folder name: ptxbckup

- 2 Check the PC name.



NOTE

About backup data

The backup data is created with encryption. Therefore, backup data cannot be played or copied to another device. Furthermore backups can only be restored on the unit from which it was created.



TIPS

If you do not have the equipment required for creating a backup

- Make certain to keep the recording source (CD, files, etc.).
- For information about the shared folder settings, see "Importing WMA/MP3 from a PC" (→ page 44).

Advanced Operations

Backing up data recorded to the HDD

Cautions about backup data:

Be careful not to perform any of the following:

- Do not open backup data with applications or software, and do not change the contents.
- Do not compress the backup data.
- Do not change the backup data file name or change the saved location.

Perform “Preparation” and “Settings to check on the PC” as described on page 81.

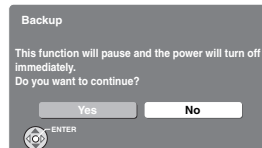
- 1 Press [SETUP].
- 2 Press [▲ ▼] to select “Other Setup” and press [ENTER].
- 3 Press [▲ ▼] to select “Maintenance” and press [▶].
- 4 Press [▲ ▼] to select “Backup/Restore” and press [ENTER].
- 5 Press [▲ ▼] to select “Backup” and press [ENTER].



- 6 Press [▲ ▼] to select “PC Name” and press [ENTER].
When the PC name is displayed
 The PC name and other information that was used when previous backups and imports (→ page 44) were performed may be displayed. In this case, check the PC name again, and if necessary, follow the steps below to make changes.
- 7 Enter the characters (→ page 62).
 Input the “User Name” and “Password” in steps 6 and 7 in the same manner.
- 8 Press [▲ ▼ ◀ ▶] to select “Backup” and press [ENTER].
 Backup begins.
 A message will be displayed, indicating that backup is complete. The unit will briefly stay this way, and then it will turn off automatically shortly after.

To cancel backup

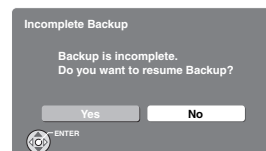
- 1 Press and hold [⏻] during backup.



- 2 Press [◀ ▶] to select “Yes” and press [ENTER].
 • This unit turns off and backup cancelled.

To continue a previously cancelled backup

- 1 After backup is cancelled, press [⏻] to turn the unit on again.
 The following message is displayed.



- 2 Press [◀ ▶] and select “Yes”, then press [ENTER].
 Follow the steps given on screen, and start backup again.



NOTE

- When the backup is cancelled partway through, the data becomes unusable. Finish the backup as soon as possible.
- The settings for the Power Off Mode for this unit will enter “Power-Save Mode” (→ page 88) until the backup is complete.
- When performing a backup, all timer settings will be set to “Off”. If you use a timer, you will need to set to “On” again (→ page 79).

If the backup aborted due to critical errors or abnormal termination

After the message is displayed on the unit, this unit will automatically turn off.
 In this situation, turn the power on again and continue the backup.

A note about the second (and subsequent) backups

Only newly added tracks and changes made since the previous backup was created will be backed up, therefore the backup will take less time to finish than the first time.

To return to the previous screen

Press [RETURN].

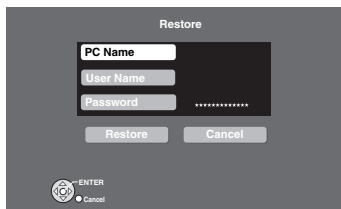
Restoring backed up data

This function will restore the backup data that was saved on your PC to this unit.
If the HDD requires service, please wait until the HDD has been repaired before restoring the backup to the HDD.

Restoring the backup data to the HDD will reset the HDD (no tracks on the HDD). If restoring fails, the content of the HDD will be lost. When restoring the backup data, therefore, please exercise the utmost caution.

Perform “Preparation” and “Settings to check on the PC” as described on page 81.

- 1 Press [SETUP].
- 2 Press [▲ ▼] to select “Other Setup” and press [ENTER].
- 3 Press [▲ ▼] to select “Maintenance” and press [▶].
- 4 Press [▲ ▼] to select “Backup/Restore” and press [ENTER].
- 5 Press [▲ ▼] to select “Restore” and press [ENTER].



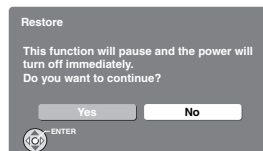
- 6 Press [▲ ▼] to select “PC Name” and press [ENTER].
When the PC name is displayed
The PC name and other information that was used when previous backups and imports (→ page 44) were performed may be displayed. In this case, check the PC name again, and if necessary, follow the steps below to make changes.
- 7 Enter the characters (→ page 62).
Input the “User Name” and “Password” in steps 6 and 7 in the same manner.
- 8 Press [▲ ▼ ◀ ▶] to select “Restore” and press [ENTER].
Restore begins.
A message will be displayed, indicating that restore is complete. The unit will briefly stay this way, and then it will turn off automatically shortly after.

To return to the previous screen

Press [RETURN].

To cancel restore

- 1 Press and hold [⏻] during restoring.



- 2 Press [◀ ▶] to select “Yes” and press [ENTER].
 - This unit is turned off and the restore is cancelled.
 - If restore is cancelled before completion, all progress up to the point of cancellation will not be recorded and the HDD will be completely empty. Restore this unit again later.



NOTE

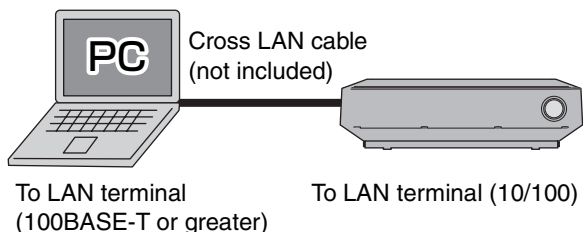
- Restore may be cancelled if your PC is turned off in an irregular manner or is forced to shut down due to errors. In this situation, restore again from the beginning. However, backups may not restore when the backup data contains abnormalities.

For reference: connecting this unit directly to a PC

When importing WMA/MP3 data (→ page 44), creating a backup (→ page 82), or restoring backed up data (→ page 83), you can connect this unit directly to your PC with a cross LAN cable. When using this connection method, changes to the settings on this unit and your PC are necessary.

Preparation

- 1 Connect this unit to the PC with a cross LAN cable (not included).
- 2 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 3 Press [⏻].



Settings on this unit

- 1 Press [SETUP].
- 2 Press [▲ ▼] to select "Other Setup" and press [ENTER].
- 3 Press [▲ ▼] to select "Network" and press [▶].
- 4 Press [▲ ▼] to select "Network Settings" and press [ENTER].
- 5 Press [▲ ▼] to select "TCP/IP 1" and press [ENTER].
- 6 Press [▲ ▼] to select "IP Manual Setting" and press [ENTER].
Set "IP Address", "Subnet Mask", and "Gateway".

Settings on the PC

For further information, refer to the operating instructions for your PC. These instructions are the examples of operating a PC with Windows XP operating system.

- 1 "Control Panel" → "Network Connections" → "Local Area Connections", then click on "Properties".
- 2 Click on "Properties" in "Internet Protocol (TCP/IP)".
- 3 Select "Use the following IP address" and set the IP address and subnet mask.



NOTE

- Connecting this unit to a PC in the manner described above may result in temporary loss of Internet connection. When using the Internet, change all the settings listed above back to the previous settings. You can also use the connection method described in "Network connection" (→ page 94).



TIPS

- To make sure that you can reconnect to a network, we recommend taking note of the network setting values used (IP addresses, Gateway, etc.) before changing any network settings and/or values.

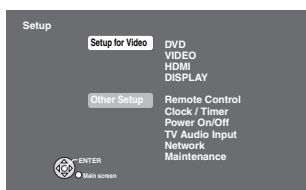
Changing the settings

Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏻].

Changing video settings

- 1 Press [SETUP].



To return to the previous screen

Press [RETURN].

To exit the screen

Press [RETURN] several times.

- 2 Press [▲ ▼] to select “Setup for Video” and press [ENTER].
● If you have not performed QUICK SETUP (→ page 16), the QUICK SETUP screen appears.
- 3 Press [▲ ▼] to select the menu and press [▶].
- 4 Press [▲ ▼] to select the item and press [ENTER].
- 5 Press [▲ ▼ ◀ ▶] or numbered buttons to make the settings and press [ENTER].



NOTE

- There may be differences in operation methods. If this happens, follow the on-screen instructions for the operation.

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

- The settings remain intact even if you switch the unit to standby.
- Underlined items are the factory settings in the following table.

Setup for Video

■ “Disc” menu

([SETUP] → “Setup for Video” → “Disc”)

Audio Choose the audio language.	● <u>English</u> ● Dutch	● French ● Swedish	● Spanish ● Polish	● German ● Original* ¹	● Italian ● Other* * * * *
Subtitle Choose the subtitle language.	● <u>Automatic</u> * ³ ● Italian	● English ● Dutch	● French ● Swedish	● Spanish ● Polish	● German ● Other* * * * *
Menus Choose the language for disc menus. Changing the menu language in QUICK SETUP also changes this setting.	● <u>English</u> ● Dutch	● French ● Swedish	● Spanish ● Polish	● German ● Other* * * * *	● Italian ● Other* * * * *
Advanced Disc Review (→ page 55)	● <u>Intro Mode</u> : Reviews each title/program. ● Interval Mode: Reviews not only each title/program but also each 10-minute interval within a title/program.				
Ratings Set a rating level to limit DVD-Video play.	Setting ratings (When level 8 is selected) ● <u>8 No Limit</u> ● 1 to 7 ● 0 Lock All: To prevent play of discs without rating levels. When you select your ratings level, a password screen is shown. Follow the on-screen instructions. Do not forget your password. A message screen will be shown if a DVD-Video disc exceeding the rating level is inserted in the unit. Enter your password and then follow the on-screen instructions.				

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

*² Input the appropriate code from the language code list (→ page 89).

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

■ “Video” menu

([SETUP] → “Setup for Video” → “Video”)

TV Aspect Choose the setting to suit your television and preference.	●4:3 Pan&Scan: Regular aspect television (4:3) The sides of the widescreen picture are cut off so it fills the screen (unless prohibited by the disc). 					
	●4:3 Letterbox: Regular aspect television (4:3) Widescreen picture is shown in the letterbox style. 					
	●16:9: Widescreen television (16:9)					
TV Type Select to suit the type of television.	●Standard (Direct View TV) ●CRT Projector ●LCD TV/Projector ●Projection TV ●Plasma TV					
Time Delay When connected with a Plasma display, adjust if you notice the audio is out of sync with the video.	●0ms	●20ms	●40ms	●60ms	●80ms	●100ms
Video Out (AV/Component) Choose the video signal format to be output from the SCART and COMPONENT VIDEO OUT terminals (→ page 15, 91).	●Video/YPbPr ●S-Video/YPbPr ●RGB 1/No Output: Select when a TV is connected that can receive an RGB signal. If you always would like to view the picture from the unit in RGB signal, select this mode. The TV screen will automatically switch to display the picture from the unit when the unit is turned on. ●RGB 2/No Output: Select when a TV is connected that can receive an RGB signal. If the selector is set to “DVD/CD”, the TV screen will automatically switch to display the picture from the unit only during DVD playback or when viewing on-screen menu of DVD/CD. The TV picture will be displayed when the selector is set to “TV Audio”. With other selectors, the picture from this unit will be displayed.					
Still Mode Specify the type of picture shown when paused.	●Automatic ●Field: The picture is not blurred, but picture quality is lower. ●Frame: Overall quality is high, but the picture may appear blurred. –Refer to “Frame still and field still” (→ page 108, Glossary).					
NTSC Disc Output Choose PAL 60 or NTSC output when playing NTSC discs.	●PAL60: NTSC discs can be viewed on PAL television. ●NTSC: Output signal from NTSC discs remains as NTSC.					
Picture/Video Output Choose the video signal format to be output for JPEG, MPEG4 and DivX video.	●Automatic ●PAL ●NTSC/PAL60: Output will depend on “NTSC Disc Output” setting (→ above). If picture output is not smooth during playback, change the setting.					

■ “Audio” menu

([SETUP] → “Setup for Video” → “Audio”)

PCM Digital Output Check the digital input limitations of the equipment you connect using DIGITAL OPTICAL OUT terminal and select the maximum sampling frequency of PCM digital output.	●Up to 48 kHz: When connected to equipment compatible with 44.1 or 48 kHz ●Up to 96 kHz: When connected to equipment compatible with 88.2 or 96 kHz –Signals from copy-protected discs are converted to 48 or 44.1 kHz. –Some equipment cannot handle sampling frequencies of 88.2 kHz, even if they can handle 96 kHz. Read your equipment’s operating instructions for details.	
Dolby Digital ^{*4}	●Bitstream ●PCM	Select to suit the type of equipment you connected to the HDMI AV OUT or DIGITAL OPTICAL OUT terminal.
DTS Digital Surround ^{*4}	●Bitstream ●PCM	Select “Bitstream” when the equipment can decode the bitstream (digital form of 5.1-channel data). Otherwise, select “PCM” (audio output is 2-channel).
MPEG ^{*4}	●PCM ●Bitstream	(If the bitstream is output to the equipment without a decoder, high levels of noise can be output and may damage your speakers and hearing.)

●When recording a CD, audio will not be output from HDMI AV OUT terminal or DIGITAL OPTICAL OUT terminal.

^{*4} When audio is output from HDMI AV OUT terminal, and the connected equipment does not support the item selected, the actual output will depend on the performance of this connected equipment.

■ “Audio” menu

Dynamic Range Compression	● <u>Off</u> ● On: Adjusts for clarity even when the volume is low by compressing the range of the lowest sound level and the highest sound level. Convenient for late night viewing. (Only works with Dolby Digital.) – This function works only when the selector is set to “DVD/CD”. When “TV Audio Input” is set to “DIGITAL IN” (→ page 88, “TV Audio Input” menu) and the selector is set to “TV Audio”, refer to “Setting the sound effects for digital broadcasts or satellite receiver” on page 77.
----------------------------------	---

■ “HDMI” menu

([SETUP] → “Setup for Video” → “HDMI”)

RGB Range When “HDMI Colour Space” is set to “RGB” (→ page 58, Picture Menu)	● <u>Standard</u> ● Enhanced: When the black and white images are not distinct.
Video Mode (This setting is irrelevant when connected through the VIDEO terminal.)	● <u>On</u>: Select this when connected through the HDMI terminal. Video is output from the HDMI terminal according to the setting of the “Video Output Mode” (→ page 57, Picture Menu). Video is also output from the COMPONENT VIDEO OUT terminal, but only in 480i/576i (interlace). ● Off: Select this when connected through the COMPONENT VIDEO OUT terminal. Video is output from the COMPONENT VIDEO OUT terminal according to the setting of the “Video Output Mode” (→ page 57, Picture Menu). Video is also output from the HDMI terminal, but only in 480p/576p (progressive).
Audio Output	● On: When audio output is from HDMI AV OUT terminal. (Depending on the capabilities of the connected equipment, audio output may differ from the audio settings.) ● <u>Off</u>: When audio output is not from HDMI AV OUT terminal. (The audio is output using the settings of this unit.)
VIERA Link	● <u>On</u>: The VIERA Link “HDAVI Control” function is available (→ page 70). ● Off

■ “Display” menu

([SETUP] → “Setup for Video” → “Display”)

Menu Language	● <u>English</u> ● Français ● Español ● Deutsch ● Italiano ● Nederlands ● Svenska ● Polski – When a language other than “English”, “Français” or “Deutsch” is selected, part of the on-screen displays relating to DVD and CD play will be displayed in the language selected. All other displays will be displayed in English.
On-Screen Messages	● <u>On</u> ● Off
Background during Play Select background during JPEG, MPEG4 and DivX video playback.	● <u>Black</u> ● Grey

■ “Others” menu

([SETUP] → “Setup for Video” → “Others”)

DivX Registration Displays the unit’s registration code.	● You need this registration code to purchase and play DivX Video-on-Demand (VOD) content. (→ page 49, About DivX VOD content)
QUICK SETUP	● <u>Yes</u> ● No
Re-initialise Setting Return all values in “Setup for Video” to the default settings.	● Yes: The password screen is shown if “Ratings” (→ page 85) is set. Please enter the same password. After “Initialised” is displayed on the television display, press [ENTER]. ● <u>No</u>

Changing other settings

1 Press [SETUP].



2 Press [▲ ▼] to select “Other Setup” and press [ENTER].

3 Press [▲ ▼] to select the menu and press [▶].

4 Press [▲ ▼] to select the item and press [ENTER].

5 Press [▲ ▼ ◀ ▶] or numbered buttons to make the settings and press [ENTER].

To return to the previous screen

Press [RETURN].

To exit the screen

Press [RETURN] several times.



NOTE

• There may be differences in operation methods. If this happens, follow the on-screen instructions for the operation.

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

• Underlined items are the factory settings in the following table.

Other Setup

■ “Remote Control” menu

([SETUP] → “Other Setup” → “Remote Control”)

Remote Control (→ page 90)	• <u>Mode 1</u> • Mode 2
--------------------------------------	---

■ “Clock/Timer” menu

([SETUP] → “Other Setup” → “Clock/Timer”)

Setting the Day and Time (→ page 17)	Day • <u>SUN</u> • MON • TUE • WED • THU • FRI • SAT Adjusting Time
Timer Setup (→ page 78)	Automatically turns the unit on and records specified audio at a specified time and date.

■ “Power On/Off” menu

([SETUP] → “Other Setup” → “Power On/Off”)

Auto Power Off Mode	• <u>Off</u> • On: When the selector is set to “DVD/CD”, “Music Collection” or “USB”, the unit switches to standby mode after about 10 minutes in the stop mode.
Power Off Mode	• Quick-Start Mode • <u>Power-Save Mode</u>: When the unit is turned off, the amount of power consumed is reduced. – When this unit is in “Power-Save Mode”, it may take more time to start operating the unit once the unit is turned on. If you want to operate the unit more quickly after turning the unit on, select “Quick-Start Mode”. – When you turn the unit off before the unit has finished conversion and analysis (→ page 26) of tracks, the unit will first enter standby in “Quick-Start Mode” for two minutes, and then conversion and analysis will begin. Once conversion and analysis is complete, the unit then enters “Power-Save Mode”.
FL Dimmer Change the brightness of the unit’s display.	• <u>Bright</u> • Dimmer • Auto: The display is dimmed, but brightens when you perform some operations.

■ “TV Audio Input” menu

([SETUP] → “Other Setup” → “TV Audio Input”)

TV Audio Input TV audio can be switched between analogue or digital input.	• <u>TV</u>: Switches to analogue input (TV IN) • DIGITAL IN: Switches to digital input [OPTICAL IN (TV)] – You cannot record from an external device when “TV Audio Input” is set to “DIGITAL IN”.
--	---

■ “Network” menu

[SETUP] → “Other Setup” → “Network”

Network Settings (→ page 96)	TCP/IP 1	● IP Auto Setting: In most cases, this should be selected. ● IP Manual Setting: If you are connecting this unit to a network and assigning a fixed IP address, perform the following settings: IP Address, Subnet Mask, Gateway.
	TCP/IP 2	● DNS Auto Setting: In most cases, this should be selected. ● DNS Manual Setting: When you have an assigned DNS server from your ISP, perform the following settings: Primary DNS Address, Secondary DNS Address. – If “TCP/IP 1” is set to “IP Manual Setting”, the “DNS Auto Setting” will not be displayed.
	IP Address	Displays the IP address assigned to this unit, etc.
CD database Setting		● Yes ● No: Only this unit’s internal CD database can be used. When using this function without connecting to a network, messages related to network connections will not be displayed. – After setting to “No”, make sure to set to “Yes” before connecting to a network.

■ “Maintenance” menu

[SETUP] → “Other Setup” → “Maintenance”

Backup/Restore	● Backup: Back up the HDD data to a PC (→ page 82). ● Restore: Restore backed up data from a PC to this unit (→ page 83).
Delete All Tracks in the Music Collection Deletes all music data on the unit, and the HDD returns to factory presets.	● Yes: When the caution message informing you that tracks deleted cannot be recovered has displayed, press [◀ ▶] to select “Yes” and press [ENTER]. Once all tracks have been deleted, a message will be displayed, indicating deletion is complete. ● No
System Software Information	Displays the software version, etc.
Software Program Update Updates and improves the system software.	● OK ● Cancel – Information about obtaining system update discs will be made available on the support page. For more information, check the following website. http://panasonic.jp/support/global/cs/audio

Language code list

Abkhazian: 6566	Chinese: 9072	Hindi: 7273	Malay: 7783	Sanskrit: 8365	Tonga: 8479
Afar: 6565	Corsican: 6779	Hungarian: 7285	Malayalam: 7776	Scots Gaelic: 7168	Turkish: 8482
Afrikaans: 6570	Croatian: 7282	Icelandic: 7383	Maltese: 7784	Serbian: 8382	Turkmen: 8475
Albanian: 8381	Czech: 6783	Indonesian: 7378	Maori: 7773	Serbo-Croatian: 8372	Twi: 8487
Ameharic: 6577	Danish: 6865	Interlingua: 7365	Marathi: 7782	Shona: 8378	Ukrainian: 8575
Arabic: 6582	Dutch: 7876	Irish: 7165	Moldavian: 7779	Sindhi: 8368	Urdu: 8582
Armenian: 7289	English: 6978	Italian: 7384	Mongolian: 7778	Singhalese: 8373	Uzbek: 8590
Assamese: 6583	Esperanto: 6979	Japanese: 7465	Nauru: 7865	Slovak: 8375	Vietnamese: 8673
Aymara: 6589	Estonian: 6984	Javanese: 7487	Nepali: 7869	Slovenian: 8376	Volapük: 8679
Azerbaijani: 6590	Faroese: 7079	Kannada: 7578	Norwegian: 7879	Somali: 8379	Welsh: 6789
Bashkir: 6665	Fiji: 7074	Kashmiri: 7583	Oriya: 7982	Spanish: 6983	Wolof: 8779
Basque: 6985	Finnish: 7073	Kazakh: 7575	Pashto, Pushto: 8083	Sundanese: 8385	Xhosa: 8872
Bengali, Bangla: 6678	French: 7082	Kirghiz: 7589	Persian: 7065	Swahili: 8387	Yiddish: 7473
Bhutani: 6890	Frisian: 7089	Korean: 7579	Polish: 8076	Swedish: 8386	Yoruba: 8979
Bihari: 6672	Galician: 7176	Kurdish: 7585	Portuguese: 8084	Tagalog: 8476	Zulu: 9085
Breton: 6682	Georgian: 7565	Laotian: 7679	Punjabi: 8065	Tajik: 8471	
Bulgarian: 6671	German: 6869	Latin: 7665	Quechua: 8185	Tamil: 8465	
Burmese: 7789	Greek: 6976	Latvian, Lettish: 7686	Rhaeto-Romance: 8277	Tatar: 8484	
Byelorussian: 6669	Greenlandic: 7576	Lingala: 7678	Romanian: 8279	Telugu: 8469	
Cambodian: 7577	Guarani: 7178	Lithuanian: 7684	Russian: 8285	Thai: 8472	
Catalan: 6765	Gujarati: 7185	Macedonian: 7775	Samoan: 8377	Tibetan: 6679	
	Hausa: 7265	Malagasy: 7771		Tigrinya: 8473	
	Hebrew: 7387				

Optional remote control settings

Television operation

You can operate the television through the unit's remote control.

Point the remote control at the television

While pressing [$\odot$ TV], enter the code with the numbered buttons.

e.g., 01: [0] → [1]

Manufacturer and Code No.

Brand	Code	Brand	Code
Panasonic	01/02/03/04/45	NOKIA	25/26/27
AIWA	35	NORDMENDE	10
AKAI	27/30	ORION	37
BLAUPUNKT	09	PHILIPS	05/06
BRANDT	10/15	PHONOLA	31/33
BUSH	05/06	PIONEER	38
CURTIS	31	PYE	05/06
DESMET	05/31/33	RADIOLA	05/06
DUAL	05/06	SABA	10
ELEMIS	31	SALORA	26
FERGUSON	10	SAMSUNG	31/32/43
GOLDSTAR/LG	31	SANSUI	05/31/33
GOODMANS	05/06/31	SANYO	21
GRUNDIG	09	SBR	06
HITACHI	22/23/31/40/41/42	SCHNEIDER	05/06/29/30/31
INNO HIT	34	SELECO	06/25
IRRADIO	30	SHARP	18
ITT	25	SIEMENS	09
JVC	17/39	SINUDYNE	05/06/33
LOEWE	07/46	SONY	08
METZ	28/31	TELEFUNKEN	10/11/12/13/14
MITSUBISHI	06/19/20	THOMSON	10/15/44
MIVAR	24	TOSHIBA	16
NEC	36	WHITE WESTINGHOUSE	05/06

Test by turning on the television ([$\odot$ TV]).

Repeat the procedure until you find the code that allows correct operation.

Operating the television

[$\odot$ TV] (Turn the television on/off)

[TV/AV] (Change the television's video input mode)

[+ – VOLUME] (Adjust the television volume)

- If your television brand is not listed or if the code listed for your television does not allow control of your television, this remote control is not compatible with your television.

When other Panasonic equipment is located nearby

Change the remote control code on the main unit and the remote control (the two must match) if you place other Panasonic products close together.

Use “Mode 1”, the factory set code, under normal circumstances.

Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [$\odot$].

- 1 **While stopped**
Press [SETUP].

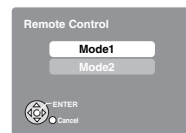


- 2 Press [$\blacktriangle$ $\blacktriangledown$] to select “Other Setup” and press [ENTER].

- 3 Press [$\blacktriangle$ $\blacktriangledown$] to select “Remote Control” and press [$\blacktriangleright$].

- 4 Press [ENTER].

- 5 Press [$\blacktriangle$ $\blacktriangledown$] to select the mode (“Mode 1” or “Mode 2”) and press [ENTER].



- 6 To change the code on the remote control
While pressing [ENTER], press and hold the numbered button ([1] or [2]) for more than 5 seconds.

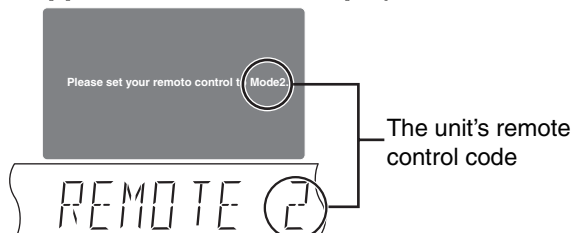
To return to the previous screen

Press [RETURN].

To exit the screen

Press [RETURN] several times.

- **When the following indicator and display appears on the unit's display and the TV.**



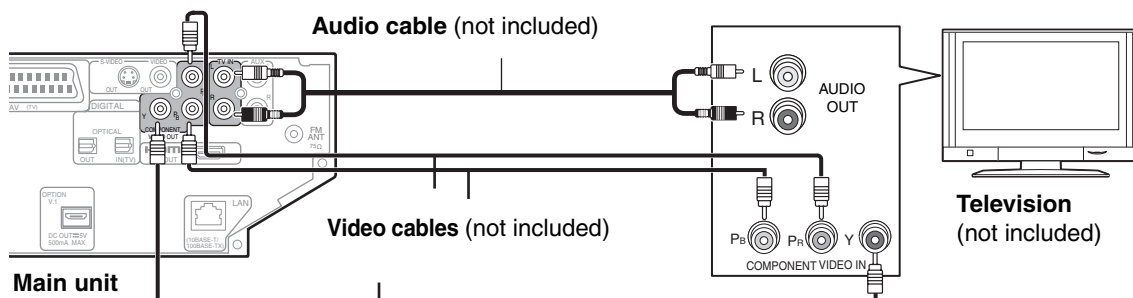
Change the code on the remote control to match the main unit's (→ step 6).

To enjoy higher picture quality

Using the following connections, you can enjoy higher picture quality.

■ Connecting to a television with **COMPONENT VIDEO IN** terminals

The COMPONENT VIDEO OUT terminals provide a purer picture than the VIDEO OUT terminal. These terminals can be used for either interlaced or progressive output. Connection using these terminals outputs the colour difference signals (P_B/P_R) and luminance signal (Y) separately in order to achieve high fidelity in reproducing colours.



NOTE

- Do not connect a Scart lead when using audio cables. Otherwise, the TV audio from AV (TV) terminal and TV IN terminal will be mixed when the selector is set to "TV Audio".
- The description of the component video input terminals depends on the television or monitor (e.g. Y/P_B/P_R, Y/B-Y/R-Y, Y/C_B/C_R). Connect to terminals of the same colour.



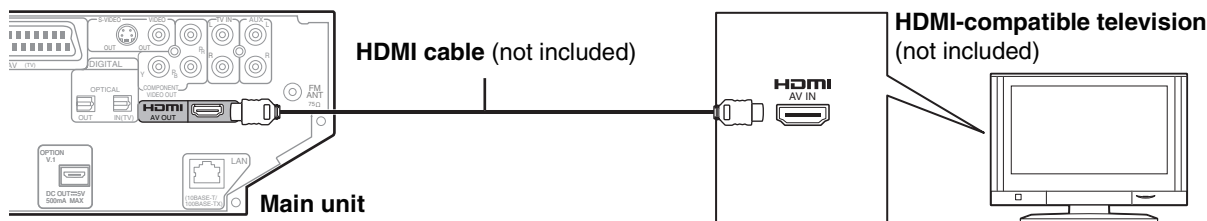
TIPS

To enjoy progressive video

- Connect to a progressive input compatible television.
- Set "Video Output Mode" to "480p/576p", and then follow the instructions on the menu screen (→ page 57, Picture Menu).
- All Panasonic televisions that have 480p/576p input connectors are compatible. Consult the manufacturer if you have another brand of television.

■ Connecting to a television with the **HDMI** terminal

HDMI is the next-generation interface for digital devices. When connected to an HDMI compatible unit, an uncompressed digital video and audio* signal is transmitted. You can enjoy high quality, digital video and audio* with just one cord. When connecting to an HDMI-compatible HDTV (High Definition Television), the output can be switched to 1080p, 1080i or 720p HD video.



Necessary Settings:

- Set "Video Mode" to "On" and "Audio Output" to "Off"* (→ page 87, "HDMI" menu).
- Set "Video Output Mode" (→ page 57, Picture Menu).

* When "Audio Output" is set to "On" (→ page 87, "HDMI" menu), CD and DVD audio will also be output from the TV. However, while recording a CD to the HDD (→ page 28), audio will not be output from the television speakers.



NOTE

- It is recommended that you use Panasonic's HDMI cable. [Recommended part number: RP-CDHG15 (1.5 m), RP-CDHG30 (3.0 m), RP-CDHG50 (5.0 m), etc.]
- Non-HDMI-compliant cables cannot be utilized.
- When connecting with a Panasonic TV (VIERA) equipped with the "HDAVI Control" function, linked operations would be possible. See page 70 for the details.

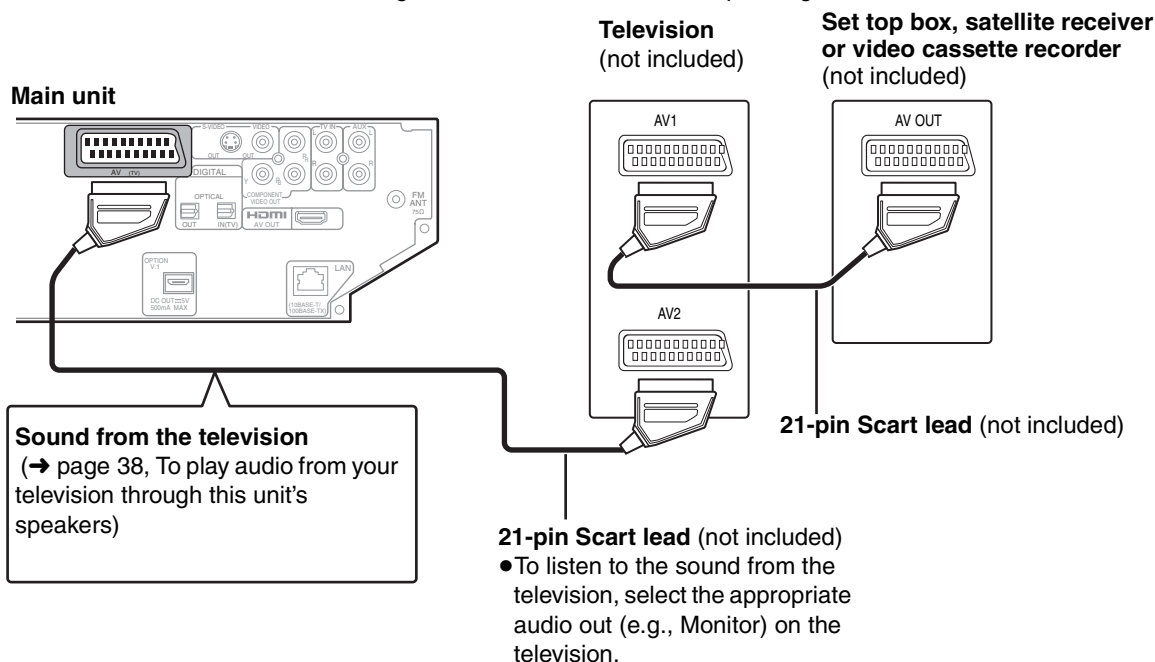
Connecting to the set top box, satellite receiver or video cassette recorder

Use the following connections when you want to output audio of your set top box, satellite receiver or VCR through this unit's speakers.

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

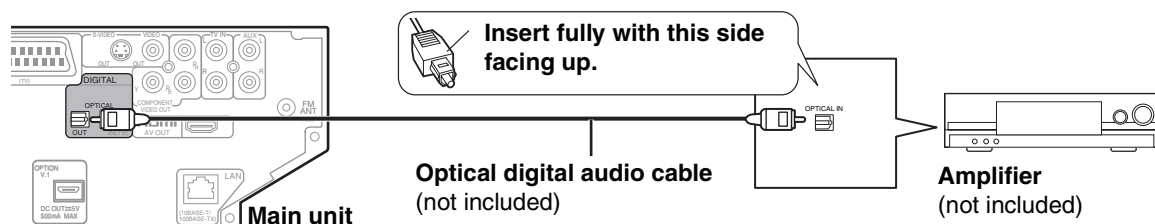
Due to copy guard protection, the picture may not be displayed properly.

Turn the television off before connecting, and refer to the television's operating instructions.



Connecting to the 5.1 channel amplifier

To enjoy multi-channel surround sound DVD-Video, connect an amplifier with a built-in Dolby Digital or DTS decoder using an optical digital audio cable.



Necessary Settings:

Set "PCM Digital Output", "Dolby Digital", "DTS Digital Surround" and "MPEG" (→ page 86, "Audio" menu)



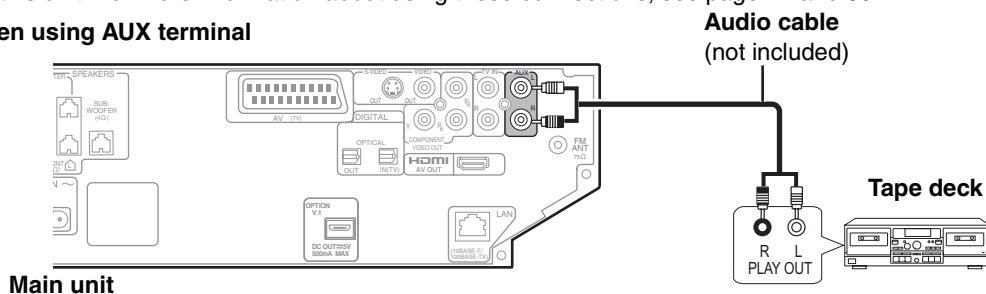
NOTE

- Using the connections shown above, you can output CD or DVD audio only. You cannot output audio from the HDD, Tuner or externally connected devices.
- Before purchasing an optical digital audio cable, check the terminal shape of the equipment to be connected.
- You cannot use DTS Digital Surround decoders not suited to DVD.
- Even if using this connection method, output will be in only 2 channels when playing DVD-Audio.

Connecting to the other audio equipment

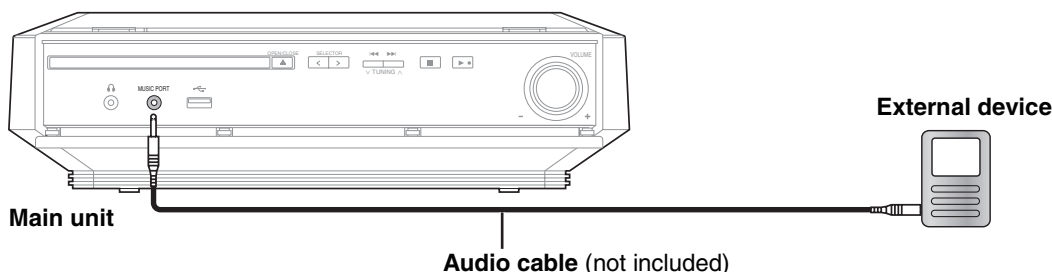
AUX and Music Port allow you to enjoy music from a tape deck or other external devices (e.g. MP3 player etc.) through this unit. For more information about using these connections, see page 42 and 80.

When using AUX terminal



When using Music Port terminal

Music Port plug type: $\varnothing 3.5$ mm stereo mini plug



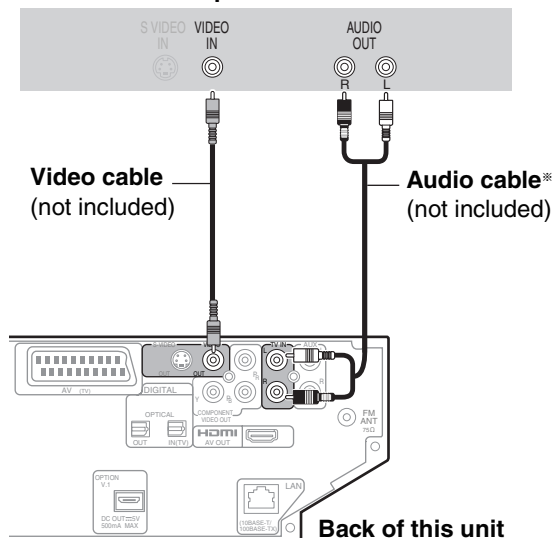
Other video connections

■ Connecting to a television with VIDEO terminal

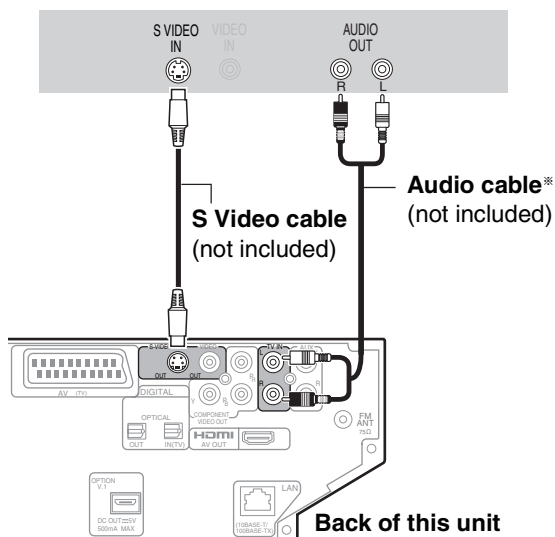
■ Connecting to a television with S VIDEO terminal

The S VIDEO OUT terminal achieves a more vivid picture than the VIDEO OUT terminal. (Actual results depend on the television.)

Television's rear panel



Television's rear panel



※ This audio connection will enable you to play audio from your television through your home theater system.



NOTE

- Do not connect a Scart lead when using audio cables. Otherwise, the TV audio from AV (TV) terminal and TV IN terminal will be mixed when the selector is set to "TV Audio".

Network connection

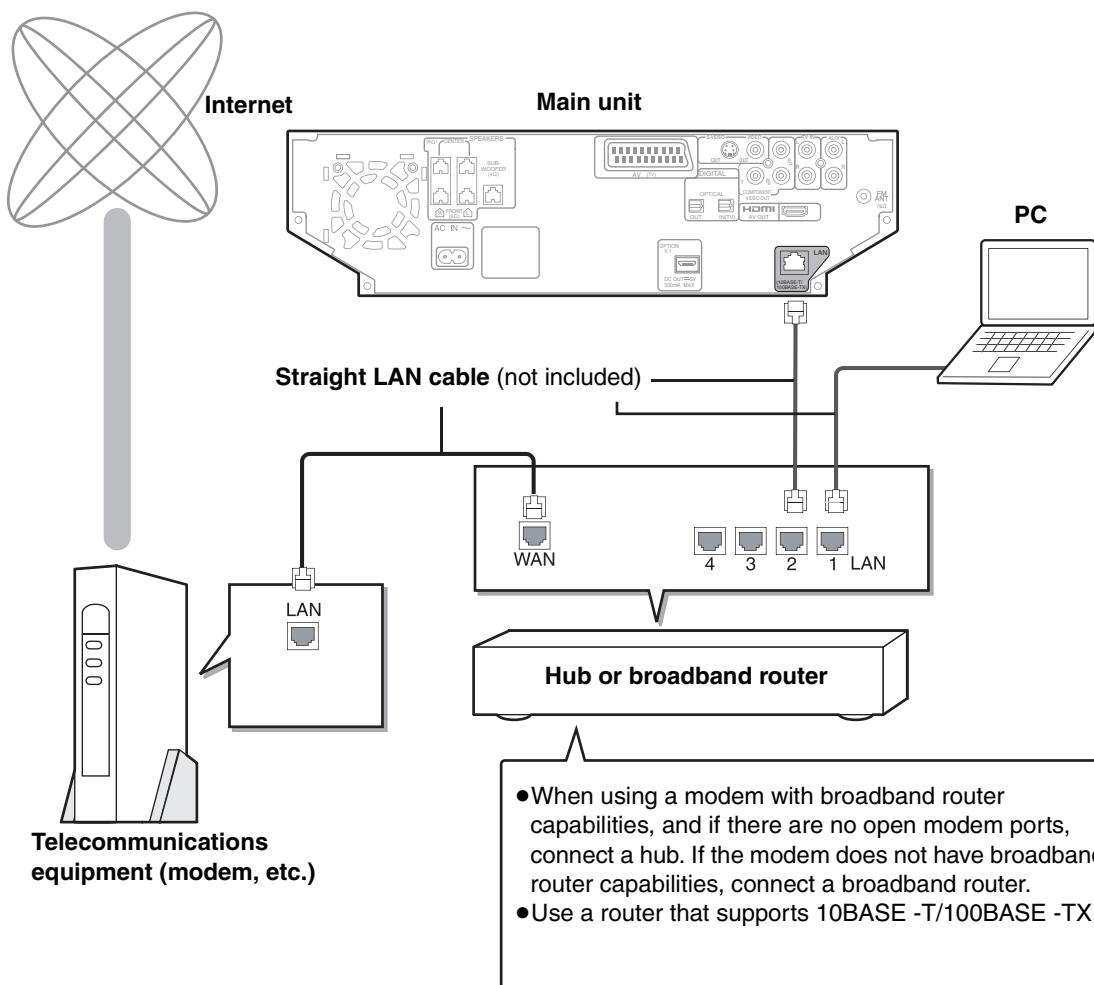
By connecting to the Internet, you can use the following functions:

- You can obtain the most recent CD title information from the online Gracenote® database.
[This unit has an abbreviated Gracenote® database in the HDD. CD title information can be obtained even if you are not connected to the Internet (→ page 25, About the Gracenote® database)].
- Importing WMA/MP3 data (→ page 44), data backup (→ page 82), etc., are all functions that use the network.
(Functions other than those listed above are not supported by network services.)

When you have a dedicated Internet connection (such as cable, broadband, etc.), after checking with your Internet Service Provider (ISP) and the service agreement, make connections and settings using indicated equipment.

For further information about network connection visit the following homepage.

<http://panasonic.jp/support/global/cs/audio>



NOTE

- The name for the terminal may differ depending on the device.
- Refer to the operating instructions for the connected device.
- Inserting any cable other than a LAN cable in the LAN terminal can damage the unit.

■ Router settings

- We recommend setting the DHCP for the router to “ON” (the setting to automatically assign IP addresses). This is usually set to “ON”, therefore changes may be unnecessary.
- Depending on the security settings of the router, this unit may not be able to connect to the Internet.

■ Settings for this unit

- When the DHCP server function is set to “ON”, you can use the default settings for this unit; no changes to the settings are necessary.
- Depending on the router settings, you may need to make changes to the network settings on this unit (→ page 96, Changing the network settings).



NOTE

- CD title information cannot be obtained from the online Gracenote® database if you connect to the Internet using a Proxy connection.

■ Responsibility disclaimer

- Panasonic will not accept responsibility for unintended consequences, malfunctions, hang-ups, or other damage resulting from connections of unapproved devices or software.
- Implementing router security requires a high level of knowledge of networking. If you are setting security levels, do so at your own risk. Panasonic accepts no responsibility for problems caused by security settings. Furthermore, Panasonic cannot address questions relating to the settings and usage of each device.

Changing the network settings

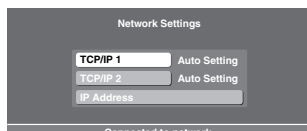
These settings are used if you will connect this unit to a network.

Preparation

- 1 To display the picture turn on the television and select the appropriate video input to suit the connections to this unit.
- 2 Press [⏏].

Common procedures

- 1 Press [SETUP].
- 2 Press [▲ ▼] to select “Other Setup” and press [ENTER].
- 3 Press [▲ ▼] to select “Network” and press [▶].
- 4 Press [▲ ▼] to select “Network Settings” and press [ENTER].



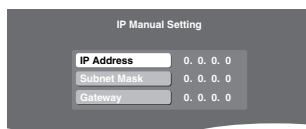
The network connection status is displayed.

Manually setting the IP address

In most cases, default settings can normally be used without making any changes. When connecting this unit to a network and assigning a fixed IP address, perform the following settings.

After performing steps 1–4 (→ above)

- 5 Press [▲ ▼] to select “TCP/IP 1” and press [ENTER].
- 6 Press [▲ ▼] to select “IP Manual Setting” and press [ENTER].
- 7 Press [▲ ▼] to select the item to be set and press [ENTER].



- 8 Enter numbers with the numbered buttons and press [ENTER].
 - After checking the specifications for your broadband router, enter each number.
 - The numeric input range is between 0 and 255.

Repeat steps 7–8, and enter numbers for other items.

To return to the previous screen

Press [RETURN].

To exit the screen

Press [RETURN] several times.

If you made an input mistake

Move the cursor with [◀ ▶] and make corrections with the numbered buttons.

To delete settings and use default settings

Select “IP Auto Setting” in step 6 and press [ENTER].

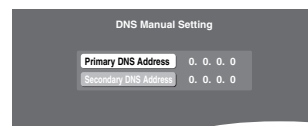
Manually setting the DNS server

In most cases, default settings can normally be used without making any changes.

When setting an assigned DNS server from your ISP, perform the following settings.

After performing steps 1–4 (→ left)

- 5 Press [▲ ▼] to select “TCP/IP 2” and press [ENTER].
- 6 Press [▲ ▼] to select “DNS Manual Setting” and press [ENTER].
 - If “TCP/IP 1” is set to “IP Manual Setting”, the “DNS Auto Setting” will not be displayed.
- 7 Press [▲ ▼] to select the item to be set and press [ENTER].



- 8 Enter numbers with the numbered buttons and press [ENTER].

- Follow the instructions given by your ISP and enter the numbers.
- The numeric input range is between 0 and 255.

Repeat steps 7–8, and enter numbers for other items.

To return to the previous screen

Press [RETURN].

To exit the screen

Press [RETURN] several times.

If you made an input mistake

Move the cursor with [◀ ▶] and make corrections with the numbered buttons.

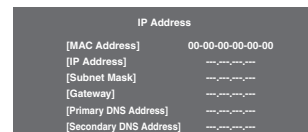
To delete settings and use default settings

Select “DNS Auto Setting” in step 6 and press [ENTER].

To check the IP Address, etc.

After performing steps 1–4 (→ left)

- 5 Press [▲ ▼] to select “IP Address” and press [ENTER].



To return to the previous screen

Press [RETURN].

To exit the screen

Press [RETURN] several times.

Frequently asked questions

Connecting to other devices

Page

I want to connect this unit to other speakers.	● <u>The speaker terminals on this unit cannot be used with speakers other than the included speakers.</u> By using the included speakers with this unit, you can obtain the appropriate audio. Using this unit with other speakers can result in damage, bass may not be correctly output, or this unit may not output appropriate audio.	—
I do not have an Internet connection, but can I still use the Gracenote database search function to search for titles?	● Yes, you can. This unit contains an abbreviated version of the Gracenote database internally stored in the HDD, therefore it is possible to obtain CD title information without an Internet connection. However, brand new releases or future releases may not have been added to the internal Gracenote database. Connect to the Internet when you want to search for title information for a newly released CD.	—

HDD

I want to make my recordings in the highest possible quality.	● Set the recording mode to LPCM.	27, 28
I want to make as many recordings as possible.	● Set the recording mode to AAC(LP).	27, 28
If I adjust the volume or audio quality during recording, what will happen?	● Changing the volume or audio quality will have no effect on the audio being recorded.	—
I want to find out how much space is remaining on the HDD.	● You can check total HDD usage and remaining space for recordings with “View Hard Disk Drive Information”.	47
After making the recording, I want to compress the tracks to increase the amount of available space on the HDD.	● If recorded in LPCM mode, you can convert to AAC (XP/SP/LP).	47
I want to listen to tracks I like in the order I like.	● When creating a user playlist, you can add the tracks in the order you like.	60
What will happen if I try to record the same CD multiple times?	● A message will appear before recording. Follow the on-screen menu and select the appropriate operation.	29
What kind of characters can I use when entering a title?	● Alphabetical and numerical characters can be used. However, characters with accents (é, etc.) cannot be used.	—

Others

If I will not use this unit for an extended period of time, what should I do?	● To save power, turn the unit off and remove the plug from the outlet. However, the next time you use the unit you will need to set the time again.	—
I'm concerned with standby power consumption.	● By setting the unit to “Power-Save Mode” in “Power Off Mode”, power consumption will be minimized when the unit is turned off.	88
I want to change the audio quality during play.	● Adjusting the equalizer settings is a simple way to change the audio quality.	76

Television displays (in general)

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Another playlist with the same name already exists, but you cannot combine them because the maximum number of tracks (99) has been reached.	●Another playlist with the same name already exists and you are trying to create a combined playlist that will be in excess of 99 tracks. The maximum number of tracks that can be added to a single playlist is 99. Give the playlist a different name or cancel editing.	—
Authorization Error	●You are trying to play the DivX VOD content that was purchased with a different registration code. You cannot play the content on this unit.	49
Backup is incomplete. Do you want to resume Backup?	●Following the on-screen message, select to continue backup or to operate the unit without continuing backup.	82
Cancelled. Cannot record this track.	●You tried to record tracks from recordable discs or USB devices that use data formats other than CD-DA, WMA or MP3, or you tried to record SCMS-protected tracks. Some or all tracks cannot be recorded.	29
Cannot add this track to the playlist. The maximum number of tracks (99) has been reached.	●You are trying to add more than 99 tracks to a single playlist. The maximum number of tracks that can be added to a single playlist is 99. Delete unnecessary tracks from the playlist.	61
Cannot display group xx, content xx	●You are trying to play incompatible group or content.	22
Cannot play audio	●Audio has not been recorded, or recorded in a format this unit cannot playback. Video playback only is possible.	22
Cannot play group xx, content xx	●You are trying to play incompatible group or content.	22
Cannot play this track because of copyright restrictions.	●This track is a copyright-protected WMA track. Skip this track to continue play.	—
Cannot record. Random/Repeat play mode is selected.	●You are trying to record by pressing [● HDD REC] on the remote control while CD playback is set to random or repeat. Recordings cannot be made during random or repeat playback.	53, 54
Check the disc	●This disc may be dirty.	19
Due to copyright protection, audio cannot be output from HDMI	●Should you connect equipment that does not support CPPM, the audio from the CPPM copy protected DVD-Audio cannot be output from HDMI AV OUT terminal. Use the included speakers.	108
Group xx, content xx is protected	●You are trying to play protected group or content. You cannot play it.	—
No audio	●Audio has not been recorded, or recorded in a format this unit cannot playback. Video playback only is possible.	22
No compatible equipment is connected.	●There is no OPTION compatible equipment connected. Connect an OPTION compatible equipment to the OPTION port.	72
No Disc	●There is no disc inserted, or the disc inserted cannot be played on this unit. Insert a disc, or insert a different disc.	11, 20
No suggested titles were found.	●The unit searched the Gracenote database, but the title could not be found. When the unit is connected to a network, insert the same CD again at a later date to search again.	—
Please insert an Audio CD.	●This operation is only available when an audio CD is inserted. Insert an audio CD.	11
Please select Playlist.	●You tried to display the sub menu when no tracks or playlists were selected. This operation is only possible when a track or playlist is selected.	—
Please set your remote control to Mode 1 (or 2).	●The remote control mode is not synchronized with the main unit. Change the mode on the remote control.	90
Please wait.	●Management and preparation for some functions can take a bit longer than others. Please wait until the unit finishes the operation.	—
Recording Cancelled. There is not enough space on the Hard Disk Drive.	●The recording stopped because there is insufficient space for the recording. You cannot make any further recordings.	—
Rented Movie Expired	●The DivX VOD content has zero remaining plays. You cannot play it.	49

Television displays (in general)

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Several suggestions for titles have been found. Please choose one.	●Select the appropriate title from the list of title suggestions found.	28
There are no tracks in the Music Collection.	●There are no tracks recorded to the HDD.	—
There are no tracks that can be converted or analysed.	●All tracks (or playlists) in the HDD have completed conversion and analysis.	—
There is not enough space on the Hard Disk Drive. Available space: xx GB Please erase unnecessary tracks, and try again.	●Due to insufficient space on the HDD, a portion or all of the tracks cannot be recorded and/or edited. –Delete unnecessary tracks. –Available space may be increased by performing conversion/analysis.	65 46, 47
This disc may not be played in your region	●You can only play DVD-Video if their region number is “2”, “ALL” or multiple region numbers including “2”.	Cover
You cannot perform this operation during play.	●Perform the operation again after stopping the unit.	—
You cannot perform this operation during play. Stop to continue?	●This operation cannot be performed during play. Select “Yes” to stop play and then proceed with the desired operation.	—
You cannot use this name. Please use another one.	●You are trying to add a name or character(s) that are used by this unit for file management purposes to the beginning of the name of this playlist. Give another name.	—
⊘	●The operation is prohibited by the unit or disc.	—

Television displays (when connected to a network)

Cancelled by timeout.	●Make sure that the router, modem, etc. are all turned on. Also check the connection between the router and this unit, and check the network settings.	94, 96
Cannot connect to network.	●Check the LAN cable connection. Also make sure that both the router and modem are turned on.	94
Cannot obtain IP address.	●Check that this unit is connected to the router, and check the settings.	94, 95
The PC name that was input not found. Cancelled.	●The cable may not be connected. Check the cable connection between the PC and this unit. ●Check that the PC connected to this unit is turned on. ●The PC name may have been input incorrectly. Input the PC name correctly.	— — 44
Unknown error has occurred.	●Turn this unit and the connected device(s) off and on again, and then repeat the operation again.	—

Unit displays (in general)

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H□□ or F7□□ (□□ stands for a number.)	●Trouble may have occurred. The number following “H” and “F7” depends on the status of the unit. Turn the unit off and then back to ON. Alternatively, turn the unit off, disconnect the AC mains lead, and then reconnect it. ●If the service numbers fail to clear, note the service number and contact a qualified service person.	— —
NO DISC	●You haven’t inserted a disc: Insert one. ●You haven’t inserted the disc correctly: Insert it correctly.	— 11
NO PLAY	●You inserted a disc the unit cannot play: Insert one it can. ●You inserted a blank disc. ●You inserted a disc that has not been finalized.	20 — 20
OVER CURRENT ERROR	●The USB device is drawing too much power. Switch the selector to “DVD/CD”, remove the USB and turn the unit off.	—
U11	●The disc may be dirty.	19
U59	●The temperature inside the unit has risen, and operation has stopped for safety purposes. Wait about 30 minutes until the message has disappeared before using the unit again. Place the unit in an area with good airflow and make sure that the ventilation openings are not blocked.	—
U70-□ (□ stands for a number.)	●The HDMI connection acts unusually. The actual number following “U70-” will depend on the state of this unit. –The connected equipment is not HDMI compatible. –The HDMI cable is too long. –The HDMI cable is damaged.	—
H19, F61 or F76	●Trouble may have occurred. Turn the unit off and on. When the message still appears, disconnect the AC mains lead and consult your dealer.	—

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, consult your dealer for instructions.

General Issues	Power	Page
No power.	●Insert the AC mains lead securely into the household mains socket.	15
The unit is automatically switched to the standby mode.	●When “Auto Power Off Mode” is set to “On”, the unit automatically switches to standby after approximately 10 minutes in the stop mode.	88
When the AC mains lead is plugged in, “----” flashes on the unit display.	●Last time you used the unit, was the AC mains lead removed from the power outlet immediately after the unit was turned off, or while “----” was flashing on the unit display? Conversion and analysis was aborted while the unit was in standby mode. The unit is converting and analysing the tracks again. While “----” is flashing on the unit display, the unit can be turned on without any problems.	11, 26
The unit display does not turn off even when the unit is in “Power-Save Mode”.	●If there are recorded tracks that have not been converted or analysed yet, the unit will enter standby in “Quick-Start Mode” when the unit is turned off. Once conversion and analysis is complete, the unit will switch to “Power-Save Mode”.	26, 88
The unit starts up slower than it used to when set to “Power-Save Mode”.	●When the number of tracks recorded to the HDD increases, it will take more time for the unit to start up.	—
I set the unit to “Quick-Start Mode”, but it starts up slow.	●In some cases, the unit manages the system for stable operation for several tens of seconds while the unit is turned off. During this period, if the unit is turned on, it can take time to start up (“Starting now. Please wait” is displayed). Furthermore, during system management, the standby indicator (red) will turn off briefly and a “click” sound may be heard.	—

General Issues	Operation	
The main unit is hot.	●When this unit is used for an extended period of time, the main unit can become hot. However, this does not cause any harm to the unit.	—
The display is dim.	●Change “FL Dimmer” in “Power On/Off” menu.	88
No response when any buttons pressed.	●This unit cannot play discs other than the ones listed in these operating instructions.	20
	●The unit may not be operating properly due to lightning, static electricity, or other external factors. Turn the unit off and on again. Alternatively, turn the unit off, disconnect the AC mains lead, and then reconnect it.	—
	●Condensation has formed: Wait 1 to 2 hours for it to evaporate.	—
	●Have you created a backup or restored the HDD? Backup and restore can take some time to complete.	—
	●Press and hold [⏻/⏮] on the main unit for approximately 10 seconds to force the unit to restart.	—
No response when remote control buttons pressed.	●Check that the batteries are installed correctly.	8
	●The batteries are depleted: Replace them with new ones.	8
	●Point the remote control at the remote control signal sensor and operate.	8
When using the remote control, the message “Please set your remote control to Mode 1 (or 2).” is displayed.	●The remote control settings are not correctly set with this unit’s settings. Change the mode on the remote control.	90
Using remote controls for other devices causes accidental operation on this unit.	●Are you using other Panasonic products at the same time? The remote control signals may be similar, so change the remote control mode.	90
No on-screen display.	●Select “On” in “On-Screen Messages” in “Display” menu.	87
No picture or sound.	●Check the video or audio connection.	14, 15, 91–93
	●Check the power or input setting of the connected equipment.	—
	●Check that the disc has something recorded on it.	—

General Issues	Operation	Page
Audio does not sound correct. The left and right channels are reversed.	• Are the left and right cords connecting the speakers or the external device reversed? Check the cord for the speakers and the external device and connect them correctly. • Are the left and right speakers properly installed? Look on the bottom of the speakers to identify the left and right speakers.	14, 91, 93 12
During play, a “humming” sound can be heard.	• Are there any AC mains leads or fluorescent lights near any connected cords? Keep this unit as far away as possible from other electrical devices.	—
I can’t connect to the network.	• Has the LAN cable come unplugged? Check that the LAN cable is properly connected. • Have you plugged in a modular cable for use with a telephone into the LAN terminal on this unit? Connect with a straight LAN cable. • Is the power for the modem or broadband router turned on? Turn the power on for each device. • Have you set the unit to use only the internal CD database? Set “CD database Setting” to “Yes” in “Network” menu. • Is there a mistake in the network settings? Follow any instructions you may have received from your ISP (Internet Service Provider) and make changes to the settings accordingly. • Are the broadband router settings correct? Read the operating instructions for the broadband router. • Is the broadband router and/or modem correctly connected? Check the operating instructions for each device and connect accordingly.	94 94 — 89 — — —
While using my PC, I cannot connect to the network.	• Does your Internet Service Provider (ISP) or service contract prevent multiple terminals connecting at the same time? Check the content and regulations of your contract.	—
You have forgotten your ratings password. Reset all the settings in “Setup for Video” to Factory Preset.	• Switch the selector to “DVD/CD”, and when the unit is stopped, simultaneously press [■] on the main unit and [≥10] on the remote control until “Initialised” is displayed. All settings in “Setup for Video” will return to the default values.	—
The SUB MENU button doesn’t work.	• Is the unit performing the recording? Perform operations after recording finishes.	—

General Issues	VIERA Link	
VIERA Link “HDAVI Control” does not work.	• Check the connection of the HDMI cable. • Is “VIERA Link” set to “On” in the “HDMI” menu? • Check the VIERA Link settings on the connected device. • If the HDMI device connection was changed, there has been a power failure, or the plug was removed and then reinserted to the power outlet, VIERA Link may stop working. In any of these cases, perform the steps listed below. 1 Turn on the power to all devices connected with an HDMI cable, and then turn the TV (VIERA) off and on again. 2 Turn the VIERA Link settings on the TV(VIERA) to “Off” and then “On” again. (For more information, refer to the VIERA operating instructions.) 3 Switch the VIERA input to the HDMI connection with this unit, and after this unit’s screen is displayed, check the VIERA Link operations.	91 87 — —

Playback Issues	Operation	
Recorded tracks are not displayed, and cannot be found.	• If it is difficult to find the playlist that a track was added to, search by the name of the track. All tracks in the Music Collection will be displayed by track name.	33
Tracks have not been added to “Music Shuffle”.	• Are you playing the track immediately after recording it? Adding the track to Music Shuffle takes place when the unit is in standby mode. • Does this abnormality only occur with specific tracks? Depending on the track, it may not be added to any genre.	— 35
The display does not change even after inserting a disc. Play does not begin even after pressing [▶] (PLAY).	• Does the inserted disc conform to disc standards and specifications? Replace it with a disc that conforms to disc standards. • Condensation has formed: Wait 1 to 2 hours for it to evaporate.	20 —

Playback Issues	Operation	Page
Play doesn't start.	• This unit may not play WMA that contains still picture data. • If a disc contains CD-DA and other formats, proper playback may not be possible. • If playing DivX VOD content, refer to the homepage where you purchased it. (Example: www.divx.com/vod)	— — —
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; however, this is normal. • This is normal on DivX video.	— —
Specific locations will not play correctly.	• Is the disc dirty or scratched? Wipe off the disc with a soft cloth, etc. and try again.	19
WMA/MP3 discs are not read correctly.	• If you have created a multi-session disc, did you close the session? Use WMA/MP3 discs that have closed sessions. • Is there one session with very little data on it? Create sessions with approximately 5 MB (approximately two three-minute tracks) or larger.	— —
Menu doesn't appear. VCD with playback control	• Press [■] twice and then press [▶] (PLAY).	—
The program and random play functions do not work.	• These functions do not work with some DVD-Videos.	—
Play restarts from the beginning of the track when soundtrack is changed.	• This is normal on DVD-Audio.	—
Subtitle position is wrong.	• Adjust the position. ("Subtitle Position" in Display Menu)	58
No subtitles.	• Display the subtitles.	53
In A-B Repeat, point B is automatically set.	• The end of an item becomes point B when it is reached.	57
Repeat play is automatically cancelled.	• Repeat play may be cancelled when you perform "Advanced Disc Review".	—

Playback Issues	Sound	
No sound.	• There may be a pause in sound when you change the play speed. • Audio may not be heard when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices. • DivX Audio may not be output due to how files were created.	— — 22
Sound distorted.	• Noise may occur when playing WMA files. • The DVD-Audio disc may have restrictions on the method of audio output. With some multi-channel DVD-Audio discs, unless the number of connected speakers is the same as the disc's channel specification, audio will not be output properly. Refer to the DVD-Audio disc's jacket for more information. • With HDMI AV OUT connections, audio may not be output from other terminals in the way that was set.	— — —
The track sounds different now than it did before.	• Did you make the recording to the HDD while the recording mode was set to AAC? Tracks are recorded to the HDD in LPCM and then converted to AAC. Playing a track directly after recording it will cause the audio to sound different from the converted AAC track.	26
The audio sounds broken up between tracks.	• Was the track recorded in AAC (LP)? In rare cases, the audio may sound broken up between tracks recorded in AAC (LP).	—
Effects do not work.	• Are you trying to use various audio qualities and effects for sound fields at the same time? Depending on how the audio quality and sound fields are grouped together, you may not be able to obtain enough of an effect. • None of the audio effects work when the unit is outputting bitstream signals from the DIGITAL OPTICAL OUT terminal. • Some audio effects do not work or have less effect with some discs.	— 92 —
The on-screen menu shows "2" as a soundtrack option, but the audio does not change.	• This is normal on DVD-Audio. Even if a second soundtrack isn't recorded, two numbers will be shown.	—

Playback Issues	Picture	Page
Picture distorted.	● Ensure that the unit is not connected through a video cassette recorder. ● Have you selected an item in “Video Output Mode” that is incompatible with the connected equipment? Depending on the current connection status, perform corresponding steps. – When connecting to a television that is incompatible with progressive input using the COMPONENT VIDEO OUT terminal: Press and hold [CANCEL] until the picture displays correctly. The settings will return to “480i/576i”. – When connecting to a television with an HDMI cable: Press and hold [CANCEL] until the picture displays correctly. The settings will return to “480p/576p”. ● DivX Change “Source Select” in Picture Menu.	92 57 57
Picture size doesn't fit the screen.	● Change “TV Aspect” in “Video” menu. ● Use the television to change the aspect. If your television does not have that function, change “4:3 Aspect” in Display Menu. ● Change the Zoom setting.	86 58 52
Picture stops.	● Picture may stop if the DivX files are greater than 2GB.	—
When playing PAL disc, picture distorted.	● Set “Transfer Mode” in Picture Menu to “Auto”.	57
The television may display incorrectly or colours appear faded.	● The unit and television are using different video systems. Use a multi-system or PAL television. ● The system used on the disc doesn't match your television. – PAL discs cannot be correctly viewed on an NTSC television. – This unit can convert NTSC signals to PAL 60 for viewing on a PAL television (“NTSC Disc Output” in “Video” menu). ● Connect to a progressive input compatible television to enjoy progressive video. ● Picture may not be seen when more than 4 devices are connected with HDMI cables. Reduce the number of connected devices.	— 86 — —
Menu not displayed correctly.	● Restore the zoom ratio to $\times 1.00$. ● Set “Subtitle Position” in Display Menu to “0”. ● Set “4:3 Aspect” in Display Menu to “Normal”.	52 58 58
Auto zoom function does not work well.	● Turn off TV's zoom function. ● Use the other preset aspect ratios or manual adjustment. ● Zoom function may not work well, especially in dark scenes and may not work depending on the type of disc.	— 52 —

Playback Issues	HDMI and progressive	
Video is not output from HDMI AV OUT.	● Please use HDMI cables that have the HDMI logo (as shown on the cover). ● Change the HDMI video output settings by using the procedure below. – Connect the television using VIDEO OUT, S VIDEO OUT or SCART terminal, then set “Video Mode” to “On” in the “HDMI” menu.	— 87
While “HDMI Status” displayed, any items are not underlined.	● If you select an item without an “*” in the “Video Output Mode” in Picture Menu, it will not be underlined.	57
Picture distorted.	● Please use HDMI cables that have the HDMI logo (as shown on the cover). ● Have you selected an item in “Video Output Mode” that is incompatible with the connected equipment? Depending on the current connection status, perform corresponding steps. – When connecting to a television that is incompatible with progressive input using the COMPONENT VIDEO OUT terminal: Press and hold [CANCEL] until the picture displays correctly. The settings will return to “480i/576i”. – When connecting to a television with an HDMI cable: Press and hold [CANCEL] until the picture displays correctly. The settings will return to “480p/576p”.	— 57

There is ghosting when HDMI or progressive output is on.	● This problem is caused by the editing method or material used on DVD-Video, but should be corrected if you use interlaced output. – When using the COMPONENT VIDEO OUT terminal, set “Video Output Mode” in Picture Menu to “480i/576i”. (Alternatively, press and hold [CANCEL] to switch to “480i/576i”.) – When using the HDMI AV OUT terminal, set “Video Output Mode” in Picture Menu to “480i/576i” output marked with an “*”. Else, disable the HDMI AV OUT connection and use other video connections. Make the settings in the following order: 1 Set “Video Mode” in the “HDMI” menu to “Off”. 2 Set “Video Output Mode” in Picture Menu to “480i/576i”. (Alternatively, press and hold [CANCEL] to switch to “480i/576i”.)	57
Pictures not in progressive output.	● If the unit is connected to the television through VIDEO OUT, S VIDEO OUT or SCART terminal, output will be interlace.	87 57

Recording Issues

Cannot record.	● Is the selector set to “TV Audio” (when “TV Audio Input” is set to “DIGITAL IN”) ? You cannot record tracks from these sources to the HDD. ● Is the CD set to random or repeat play mode? Turn random/repeat play off.	— 53, 54
Cannot perform high-speed recording.	● Did you try to record WMA/MP3 tracks from recordable discs or USB devices? WMA/MP3 tracks cannot be recorded in high-speed recording mode.	—
Tried to record tracks to the HDD, but they were not recorded.	● If the track you are trying to record is an SCMS recording, it will be skipped.	29
During recording, the audio is jumpy or there is noise in the recording.	● Does the readable surface of the disc have any scratches or fingerprints? Replace the disc if there are scratches, and wipe the disc off with a soft cloth if there are fingerprints. ● Depending on how the disc was recorded, you cannot record tracks correctly from some recordable discs.	19 —

Radio

Noise is heard. Sound is distorted. “ST” is flashing or doesn’t light during FM broadcasts.	● This is being caused by weak signal reception. Try the following operations. – Adjust the position of the FM aerial. – Use an FM outdoor aerial. – Change “Audio Mode” to “Mono”.	— 59 39 —
A beat sound is heard.	● Turn the television off or separate it from the unit.	—

Gracernote database

The title information obtained from the Gracenote database or WMA/MP3 titles display incorrectly. The title does not display all characters.	●The title may contain characters that are not supported by this unit. Letters of the alphabet can be displayed. Letters with accent mark (such as “é”, etc.) will be displayed blank or not displayed correctly. ●Does the track have a long name? This unit can display titles up to 59 characters in length (artist names only, up to 39 characters).	— 62
Newly released CD title information cannot be obtained.	●Is the unit connected to a network? Newly released CD title information may not have been added to the internal Gracenote database. Connect to a network to search for the newest titles.	94

USB

The USB drive or it's contents cannot be read.	●The USB drive format or it's contents is/are not compatible with this unit. ●The USB host function of this unit may not work with some USB devices. ●USB devices with storage capacity of more than 32 GB may not work in some instances.	23 — —
Slow operation of the USB flash drive.	●Large file size or high memory USB flash drive takes longer time to read.	—

AMPLIFIER SECTION

Dolby Virtual Speaker Mode (RMS)

Total Power Output	300 W
1 kHz	10 % total harmonic distortion
Front:	Front Section 50 W per ch (8 Ω) Center Section 50 W per ch (8 Ω)
100 Hz	10 % total harmonic distortion
Subwoofer:	100 W(4 Ω)

Dolby Virtual Speaker Mode (DIN)

Total Power Output	210 W
1 kHz	1.0 % total harmonic distortion
Front:	Front Section (both ch driven) 35 W per ch (8 Ω) Center Section (both ch driven) 35 W per ch (8 Ω)
100 Hz	1.0 % total harmonic distortion
Subwoofer:	70 W(4 Ω)

Dolby Virtual Speaker Mode (2.1ch DIN)

Total Power Output	140 W
1 kHz	1.0 % total harmonic distortion
Front:	Front Section (both ch driven) 35 W per ch (8 Ω)
100 Hz	1.0 % total harmonic distortion
Subwoofer:	70 W(4 Ω)

FM TUNER SECTION

Frequency range	87.50 to 108.00 MHz (50 kHz step)
Aerial terminals	75 Ω (unbalanced)

HDD SECTION

Internal HDD capacity	80 GB
Recording format	AAC/Linear PCM MP3/WMA (LAN-PC)
Bit rate (AAC)	128 kbps (XP) /96 kbps (SP) /64 kbps (LP)
Channel	2 channels (stereo)
Recording time	
AAC	Approx. 2460 hours (LP mode)
Linear PCM	Approx. 104 hours

DISC SECTION

Playable discs (8 cm or 12 cm)

- (1) DVD (DVD-Video, DVD-Audio, DivX[®]*6, 7)
 - (2) DVD-RAM (DVD-VR, MP3[®]*2, 7, JPEG[®]*4, 7, MPEG4[®]*5, 7, DivX[®]*6, 7)
 - (3) DVD-R (DVD-VR, DVD-Video, MP3[®]*2, 7, JPEG[®]*4, 7, MPEG4[®]*5, 7, DivX[®]*6, 7)
 - (4) DVD-R DL (DVD-VR[®], DVD-Video)
 - (5) DVD-RW (DVD-VR, DVD-Video, MP3[®]*2, 7, JPEG[®]*4, 7, MPEG4[®]*5, 7, DivX[®]*6, 7)
 - (6) +R/+RW (Video)
 - (7) +R DL (Video)
 - (8) CD, CD-R/RW [CD-DA, Video CD, SVCD[®]*1, MP3[®]*2, 7, WMA[®]*3, 7, JPEG[®]*4, 7, MPEG4[®]*5, 7, DivX[®]*6, 7, HighMAT Level 2 (Audio and Image)]
- *1 Conforming to IEC62107
- *2 MPEG-1 Layer 3, MPEG-2 Layer 3
- *3 Windows Media Audio Ver.9.0 L3
Not compatible with Multiple Bit Rate (MBR)
- *4 Exif Ver 2.1 JPEG Baseline files
Picture resolution: between 160×120 and 6144×4096 pixels (Sub sampling is 4:0:0, 4:2:0, 4:2:2 or 4:4:4). Extremely long and narrow pictures may not be displayed.
- *5 MPEG4 data recorded with Panasonic SD multi cameras or DVD recorders
Conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/ G.726 audio system
- *6 Plays all versions of DivX[®] video (including DivX[®]*6) with standard playback of DivX[®] media files. Certified to the DivX Home Theater Profile.
- *7 The total combined maximum number of recognizable audio, picture and video contents and groups: 4000 audio, picture and video contents and 400 groups.
- *8 Discs recorded on DVD recorders or DVD video cameras using Version 1.2 of the Video Recording Format (a unified video recording standard)

Pick up

Wave length (DVD/CD)	662 nm/785 nm
Laser power (DVD/CD)	CLASS 1/CLASS 1M

VIDEO SECTION

Video system PAL625/50, PAL525/60, NTSC

Video output

Output level	1 Vp-p (75 Ω)
Output terminal	Pin jack (1 system)/Scart jack (1 system)

S-video output

Y output level:	1 Vp-p (75 Ω)
C output level:	NTSC; 0.286 Vp-p (75 Ω) PAL; 0.300 Vp-p (75 Ω)

Output terminal:
S terminal (1 system)/Scart jack (1 system)

Component video output

[NTSC: 525 (480)p/525 (480)i, PAL: 625 (576)p/625 (576)i]

Y output level	1 Vp-p (75 Ω)
P _B output level	0.7 Vp-p (75 Ω)
P _R output level	0.7 Vp-p (75 Ω)

Output terminal:
Pin jack (Y: green, P_B: blue, P_R: red) (1 system)

RGB video output

R output level:	0.7 Vp-p (75 Ω)
G output level:	0.7 Vp-p (75 Ω)
B output level:	0.7 Vp-p (75 Ω)

Output terminal:
Scart jack (1 system)

HDMI AV output

HDMI 19 pin type A connector
This unit supports "HDAVI Control 2" function.

SPEAKER SECTION

Front & center channel SB-FCX9

■ Front speaker section

Type

Mechanical 2 way, 1 speaker system (Bass reflex)

Full range 6.5 cm Cone type

Impedance/Input power (IEC) 8 Ω/50 W*⁹ (Max)

Output sound pressure 82 dB/W (1.0 m)

Frequency range 85 Hz to 25 kHz (−16 dB)

100 Hz to 22 kHz (−10 dB)

■ Center speaker section

Type 1 way, 1 speaker system (Closed)

Full range 6.5 cm Cone type

Impedance/Input power (IEC) 8 Ω/50 W*⁹ (Max)

Output sound pressure 83 dB/W (1.0 m)

Frequency range 105 Hz to 25 kHz (−16 dB)

160 Hz to 22 kHz (−10 dB)

Dimensions (W×H×D) 106 mm×228 mm×131 mm

Mass Approx. 1.4 kg

Subwoofer SB-HWX7

Type 1 way, 1 speaker system (Bass reflex)

Woofers 17 cm Cone type

Impedance/Input power (IEC) 4 Ω/100 W*⁹ (Max)

Output sound pressure 80 dB/W (1.0 m)

Frequency range 32 Hz to 190 Hz (−16 dB)

39 Hz to 160 Hz (−10 dB)

Dimensions (W×H×D) 137 mm×403 mm×437 mm

Mass Approx. 5.3 kg

GENERAL

Power supply AC 230 to 240 V, 50 Hz

Power consumption 90 W

Dimensions (W×H×D) 360 mm×105.5 mm×334 mm

Mass Approx. 4.7 kg

(Dimensions and Mass do not include the speakers.)

Operating temperature range

+5 °C to +40 °C

Operating humidity range

10 % to 80 % RH (no condensation)

Power consumption in standby mode

Power-Save Mode (Shipping condition) **Approx. 0.6 W**

*⁹ Rating with the low-cut filter equipped amplifier



NOTE

1. Specifications are subject to change without notice.
2. Total harmonic distortion is measured by a digital spectrum analyser.

DIGITAL AUDIO OUTPUT

Optical digital output Optical terminal (up to 96 kHz)

DIGITAL AUDIO INPUT

Optical digital input Optical terminal (up to 48 kHz)

USB Port

USB standard USB 2.0 full speed

Media file format support MP3 (*.mp3)

WMA (*.wma)

JPEG (*.jpg) (*.jpeg)

MPEG4 (*.asf)

USB device file system FAT12, FAT16, FAT32

USB Port power Max. 500 mA

AAC (Advanced Audio Coding)

An audio compression method that compresses audio to approximately 1/12 of its size with CD-level quality.

CPPM (Content Protection for Pre-recorded Media)

A copy protection system used for DVD-Audio files. This unit supports CPPM.

Decoder

A decoder restores the coded audio signals on DVDs to normal. This is called decoding.

DHCP (Dynamic Host Configuration Protocol)

Provides a mechanism for automatically assigning network information such as the IP address or Subnet mask sent by the router and so on to this unit.

DivX

DivX is a popular media technology created by DivX, Inc. DivX media files contain highly compressed video with high visual quality that maintains a relatively small file size.

DNS Server

A server which acts like a telephone directory and translates Internet domain names into IP addresses.

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.

Down-mixing

This is a process of remixing the multi-channel audio (surround sound) on some discs into two channels. When you want to listen to the audio on a DVD with a 5.1 channel digital surround track through your television speakers, the down-mixed audio will be output. Some DVD-Audio prevent down-mixing of all or part of their contents. When playing such discs, or such parts of the disc, unless the number of connected speakers is the same as the disc's channel specification, audio will not be output properly.

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.

Film and video

DVD-Videos are recorded using either film or video. This unit can determine which type has been used, then uses the most suitable method of progressive output.

- Film:** Recorded at 25 frames per second (PAL discs) or 24 frames per second (NTSC discs). (NTSC discs recorded at 30 frames per second as well.) Generally appropriate for motion picture films.
- Video:** Recorded at 25 frames/50 fields per second (PAL discs) or 30 frames/60 fields per second (NTSC discs). Generally appropriate for TV drama programmes or animation.

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.

Gateway

IP address of the electronic device providing Internet access. Usually called a router IP address. (e.g., 192.168.0.1)

HDD (Hard disk drive)

This is a mass data storage device used in PC, etc. A disk with a surface that has been treated with magnetic fluid is spun and a magnetic head is brought in close proximity to facilitate the reading and writing of large amounts of data at high speed.

HDMI (High-Definition Multimedia Interface)

HDMI is a next-generation digital interface for consumer electronic products. Unlike conventional connections, it transmits uncompressed digital video and audio signals on a single cable. This unit supports high-definition video output (720p, 1080i, 1080p) from the HDMI AV OUT terminal. To enjoy high-definition video, a high-definition compatible television is required.

Hub

Used for connecting more than one device to the network.

IP address

A set of numbers which distinguish each PC on the network when, for example, connected to the Internet. When using a PC in a LAN (→ page 109) to access a PC or device that is not included in the LAN, the IP address is called the local IP address. (e.g., 192.168.0.10)

JPEG (Joint Photographic Experts Group)

This is a system used for compressing/decoding colour still pictures. If you select JPEG as the storage system on digital cameras, etc., the data will be compressed to 1/10–1/100 of its original size. The benefit of JPEG is less deterioration in picture quality considering the degree of compression.

LAN (Local Area Network)

A group of linked devices in a company, school or home. Indicates the boundaries of a particular network.

LPCM (Linear PCM)

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

MAC (Media Access Control) address

Address assigned to each device connected to the network to allow it to be recognized.

MP3 (MPEG Audio Layer 3)

An audio compression method that compresses audio to approximately 1/10 of its size without any considerable loss of audio quality.

MPEG4

A compression system for use on mobile devices or a network, that allows highly efficient recording at a low bit rate.

Playback control (PBC)

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

Progressive/Interlace

The PAL video signal standard has 576 (or 625) interlaced (i) scan lines, whereas progressive scanning, called 576p (or 625p), uses twice the number of scan lines. For the NTSC standard, these are called 480i (or 525i) and 480p (or 525p) respectively.

Using progressive output, you can enjoy the high-resolution video recorded on media such as DVD-Video. Your television must be compatible to enjoy progressive video.

Panasonic televisions with 576 (625)/50i · 50p, 480 (525)/60i · 60p input terminals are progressive compatible.

Router

Distinguishes the IP address assigned to each device, such as the PC, and relays the flow of data within the network.

Sampling frequency

Sampling is the process of converting the heights of sound wave (analogue 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.

Subnet mask

Enables efficient network use. A set of numbers which identify which part of the IP address allocated to every device connected to the router is the network portion.

TCP/IP (Transmission Control Protocol/Internet Protocol)

These are the standard protocols for sending and receiving data.

WMA (Windows Media™ Audio)

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.

1080i (1125i)

In one high definition image, 1080 (1125) alternating scan lines pass every 1/60th of a second to create an interlace image. Because 1080i (1125i) more than doubles current television broadcasts of 480i, the detail is much clearer and creates a more realistic and rich image.

1080p (1125p)

In one high definition image, 1080 (1125) scan lines pass at the same time every 1/60th of a second to create a progressive image. Since progressive video does not alternate scan lines like interlace, there is a minimal amount of screen flicker.

720p (750p)

In one high definition image, 720 (750) scan lines pass at the same time every 1/60th of a second to create a progressive image. Since progressive video does not alternate scan lines like interlace, there is a minimal amount of screen flicker.

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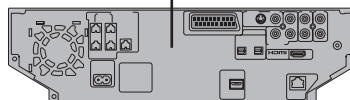
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(Back of product)

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VARO!	- AVATTAESSA OLET ALOTTUNA LUOKAN 1M NÄKYVÄÄ JA NÄKYMÄTÖNTÄ. LASERSÄTELYÄ, ÄLÄ KATSO OPTISELLA LAITTEILLA SUORAAN SATEESEEN.	
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(Inside of product)

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For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product.

Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point.

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Information on Disposal in other Countries outside the European Union

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