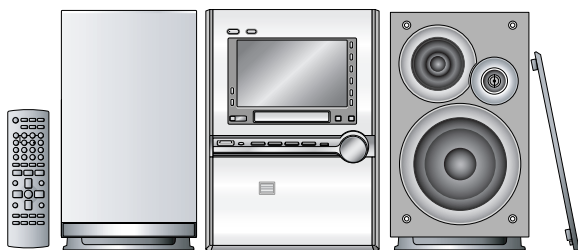


Panasonic®

Operating Instructions DVD Stereo System

Model No. **SC-PM91D**



Please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Unless otherwise indicated illustrations show the model for the United Kingdom and Continental Europe.

Table of contents

Accessories	2
Safety precautions	3
Caution for AC mains lead	3
Disc information	4
Tray/disc handling procedure	5

Simple setup

STEP 1 Positioning and connecting the speakers	6
STEP 2 Television	7
STEP 3 Connecting the antennas and AC mains lead ...	8
STEP 4 The remote control	8
STEP 5 QUICK SETUP	9
STEP 6 Setting the time	9
DEMO function	9

Control guide: main unit	10
Control guide: remote control	11
Discs — Basic play	12
Discs — Convenient functions	14
Discs — Using navigation menus	16
Discs — Using On-screen menus	18
Discs — Changing the player's settings	20
The radio	22
Cassette tapes — Play and Recording	23
Sound field and sound quality	25
Convenient functions	
Auto-off function/Dimming the display/Muting the volume/	
The sleep timer	26
The play/record timer	27
Enjoying karaoke	
(For the Middle East and Southeast Asia)	28
Using other equipment	
Home Theater — Enjoying more powerful sound/	
Using an external unit/Operating a television	30
Enjoying more powerful bass/Changing the remote control	
code/Other antenna connections	31
Troubleshooting guide	32
Glossary	34
Maintenance	34
When moving the unit	34
Specifications	35



Region number

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

Region	Number
United Kingdom, Continental Europe, and the Middle East	2
Southeast Asia	3
Australia and N.Z.	4

Example:

United Kingdom, Continental Europe, and the Middle East



Note

"EB" on the packaging indicates the United Kingdom.

Dear customer

Thank you for purchasing this product.

System	SC-PM91D
Main unit	SA-PM91D
Speakers	SB-PM91

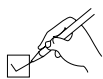
Operations in these instructions are described mainly for the remote control, but you can do the operations on the main unit if the controls are the same.

For the Middle East and Southeast Asia

CAUTION:

The AC voltage is different according to the area.
Be sure to set the proper voltage in your area before use.
(For details, please refer to page 8.)

Accessories



Please check and identify the supplied accessories.
Use numbers indicated in parentheses () when asking for replacement parts. (As of January 2005)

- ☐ **1 Remote control** [⇒ page 8]

For the Middle East and Southeast Asia (N2QAJB000134)

For Australia and N.Z. (N2QAJB000145)

For others (N2QAJB000135)

- ☐ **2 Batteries** — for remote control [⇒ page 8]

☐ **For the Middle East**

2 AC mains leads [⇒ page 8]

(RJA0019-2X) (RJA0053-3X)



For Saudi Arabia

For others

1 AC mains lead [⇒ page 8]

For the United Kingdom (VJA0733)

For Continental Europe (K2CQ2CA00002)

For Australia and N.Z. (K2CJ2DA00008)

For Southeast Asia (RJA0019-2X)

- ☐ **1 FM indoor antenna** [⇒ page 8]
(RSA0007-L)

- ☐ **1 AM loop antenna** [⇒ page 8]
(N1DAAA00001)

- ☐ **1 Video cable** [⇒ page 7]
(RJL1P016B15A)

For the United Kingdom

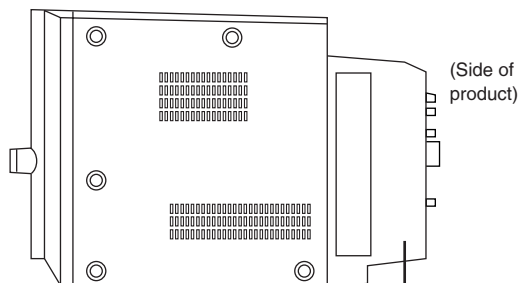
- ☐ **1 Antenna plug adaptor** [⇒ page 31]
(K1YZ02000013)

For Southeast Asia

- ☐ **1 Power plug adaptor** [⇒ page 8]
(RJP1SG04-H)

Note

- The included AC mains lead is for use with this unit only. Do not use it with other equipment.
- Do not use an AC mains lead from other equipment.



**CLASS 1
LASER PRODUCT**

**LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT**

CAUTION	- LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.	FDA 21 CFR / Class II
CAUTION	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.	IEC60825-1 / Class 3b
VARNING	- SYNLIIG OCH OSYNLIIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN.	
ADVARSEL	- SYNLIIG OG USYNLIIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSETELSE FOR STRÅLING.	
ADVARSEL	- SYNLIIG OG USYNLIIG LASERSTRÅLING NÄR DEKSEL ÄPNES. UNDGÅ EXPOSERING FOR STRÅLEN.	
VARO!	- AVATTAESSA OLET ALTTIIN NÄKYYVÄÄ JA NÄKYMÄTÖN LASERSÄTELYLLÄ. ÄLÄ KATSO SÄTEESEEN.	
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET, NICHT DEM STRAHL AUSSETZEN.	
ATTENTION	- RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.	
注意	- 打開時有可見及不可見激光輻射。避免激光照射。	
注意	- ここを開くと可視及び不可視レーザー光が出ます。ビームを見たり、触れたりしないで下さい。	ROLKS0054

(Inside of product)

Sales and Support Information

For the United Kingdom and the Republic of Ireland

Customer Care Centre

- For UK customers: 08705 357357
- For Republic of Ireland customers: 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-Friday 9:00am-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.

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.

Caution for AC Mains Lead

(For United Kingdom and Saudi Arabia only)

("EB" and "GC" area code models only)

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 $\perp$ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

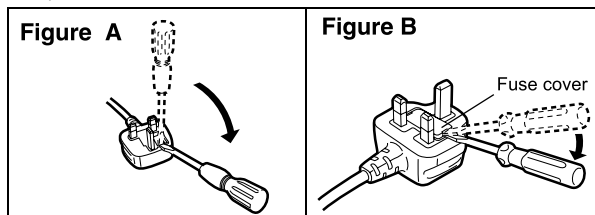
Remove the connector cover.

How to replace the fuse

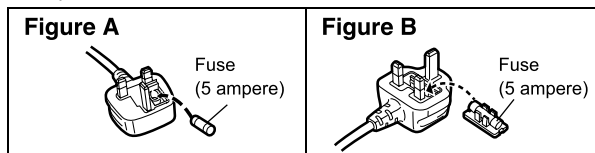
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

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.



Disc information

Discs that can be played

Disc	Logo	Indication in these operating instructions	Remarks
DVD-RAM		RAM	Recorded using Version 1.1 of the Video Recording Format (a unified video recording standard). • Recorded with DVD-Video recorders, DVD-Video cameras, personal computers, etc. • Remove discs from their cartridges before use.
		JPEG	Recorded using the DCF (Design rule for Camera File system) standard. • Recorded with Panasonic DVD-Video recorders. • To play JPEG files, select "Play as Data Disc" in Other Menu (⇒ page 19).
DVD-Audio		DVD-A	—
		DVD-V	Some DVD-Audio discs contain DVD-Video content. To play DVD-Video content, select "Play as DVD-Video" in Other Menu (⇒ page 19).
DVD-Video		DVD-V	—
DVD-R/ DVD-RW			Discs recorded and finalized ¹ on a DVD-Video recorder or DVD-Video camera are played as DVD-Video on this unit.
+R (Video)/ +RW (Video)	—	DVD-V	Discs recorded and finalized ¹ on a DVD-Video recorder or DVD-Video camera are played as DVD-Video on this unit. • Note that you cannot use some of the features described in these instructions with these discs, and some information may not be displayed correctly. This is due to the disc format and does not indicate a malfunction.
Video CD		VCD	—
SVCD			Conforming to IEC62107.
CD		CD	This unit is compatible with HDCD, but does not support Peak Extend function (A function which expands the dynamic range of high level signals). HDCD-encoded CDs sound better because they are encoded with 20 bits, compared with 16 bits for all other CDs. • During HDCD play, "HDCD" appears on the unit's display.
CD-R CD-RW	—	WMA MP3 JPEG CD VCD	• This unit can play CD-R/RW (audio recording disc) recorded with the formats on the left. Close the session or finalize ¹ the disc after recording. • HighMAT discs WMA, MP3 or JPEG files only. To play without using the HighMAT function, select "Play as Data Disc" in Other Menu (⇒ page 19).

¹A process that allows play on compatible equipment.

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

Discs that cannot be played

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

Playing DVDs and Video CDs

The producer of these discs can control how they are played so you may not always be able to control play as described in these operating instructions (for example if the play time is not displayed or if a Video CD has menus). Read the disc's instructions carefully.

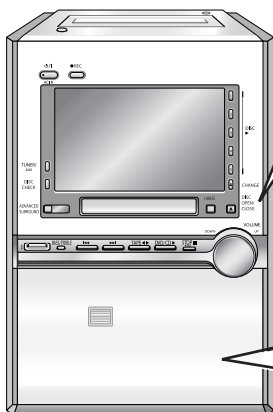
Video systems

- This unit can play PAL and NTSC, but your television must match the system used on the disc.
- 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 (⇒ page 21, "Video" tab—NTSC Disc Output).

Tray/disc handling procedure

Adhere to the following to avoid problems.

Opening/closing a disc tray



Open/close the tray only with [▲, DISC OPEN/CLOSE].



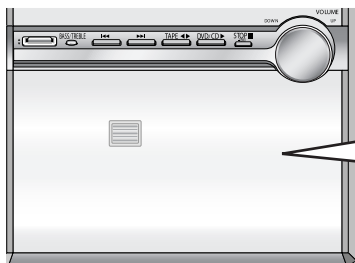
Do not pull.



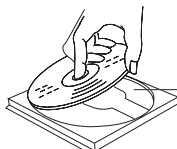
Do not push.



Inserting discs correctly



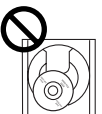
Insert disc inside the guide.



12 cm



8 cm

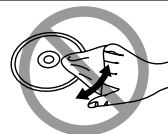
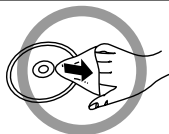


- Place the disc label up in the center of the tray.
- Insert only one disc into each tray.

Cleaning discs

DVD-A | DVD-V | VCD | CD

Wipe with a damp cloth and then wipe dry.



RAM and other recordable formats

- Clean with an optional DVD-RAM/PD disc cleaner (LF-K200DCA1, where available).
- Never use cloths or cleaners for CDs, etc.

Disc handling precautions

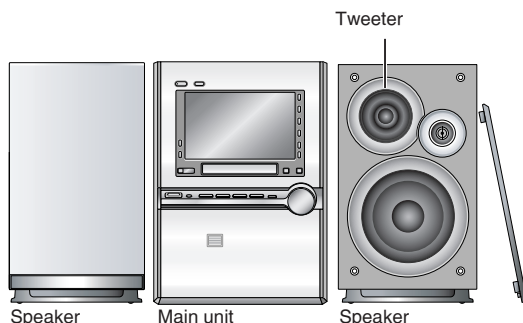
- Do not attach labels or stickers to discs (This may cause disc warping, rendering it unusable).
- Do not write on the label side with a ball-point pen or other hard writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.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

Simple setup

STEP 1

Positioning and connecting the speakers

a. Positioning



Place the speakers so that the tweeters are on the inside.

Caution

- Use the speakers only with the recommended system. Failure to do so may lead to damage to the main unit 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 attach these speakers to walls or ceilings.

Use only the supplied speakers

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

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

Positioning for best effect

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 curtain.
- Keep your speakers at least 10 mm away from the system for proper ventilation.
- To avoid damage to the speakers, do not touch the speaker cones if you have taken the nets off.

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 emit strange noise (howling) from a record player, noise from FM broadcasts, or continuous signals from an oscillator, test disc, or electronic instrument.
 - When adjusting the sound quality.
 - When turning the unit on or off.

If irregular coloring occurs on your television

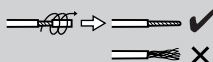
These speakers are designed to be used close to a television, but the picture may be affected with some televisions and set-up combinations.

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

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

b. Connecting

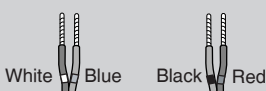
Twist the vinyl tip and pull off.



OR

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

Confirm the colors of the tags on the ends of the cords.



Note

- Never short-circuit positive (+) and negative (-) speaker wires. Incorrect connection can damage the speakers.

For White tags:

- Connect to grey terminals.

For Blue, Black and Red tags:

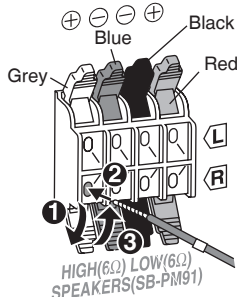
- Connect so tag colors match the terminal colors.

Cords with white and blue tags are for high frequency.

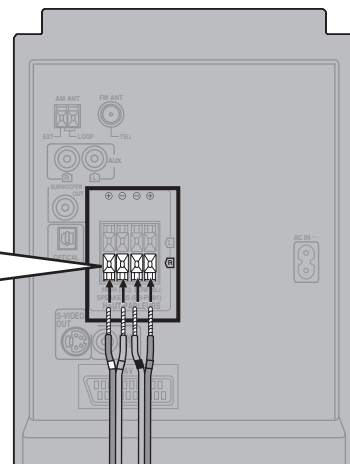
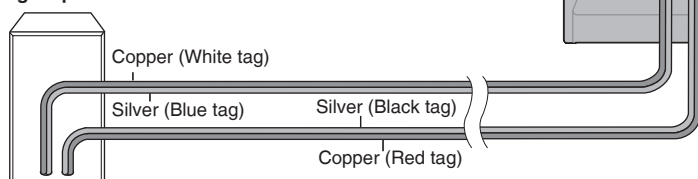
Cords with red and black tags are for low frequency.

The labels HIGH and LOW stand for high frequency and low frequency, respectively.

Connect the left (L) side in the same way.



Right speaker

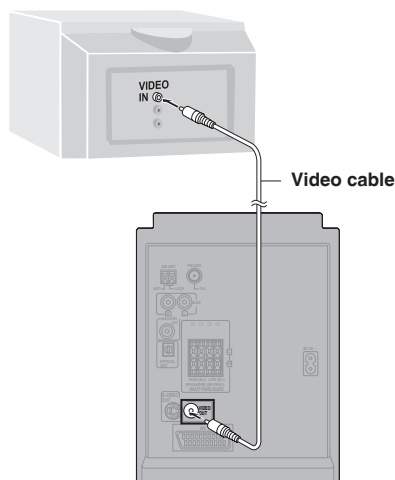


STEP 2 Television

Video cable



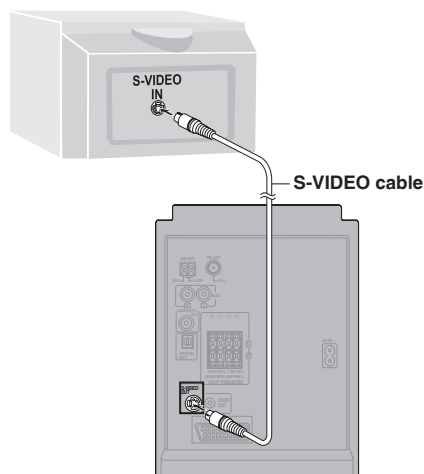
■ Connecting a television with a VIDEO IN terminal



VIDEO OUT terminal

Do not connect the unit through a video cassette recorder, because the picture may not be played correctly due to the copy guard.

■ Connecting a television with an S-VIDEO IN terminal

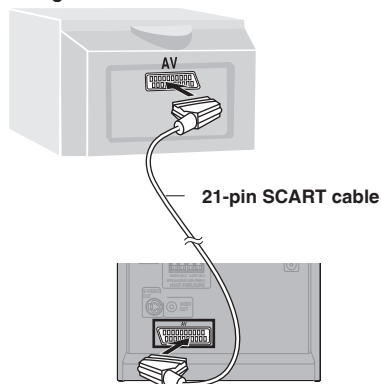


S-VIDEO OUT terminal

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

For the United Kingdom and Continental Europe

■ Connecting a television with SCART terminal

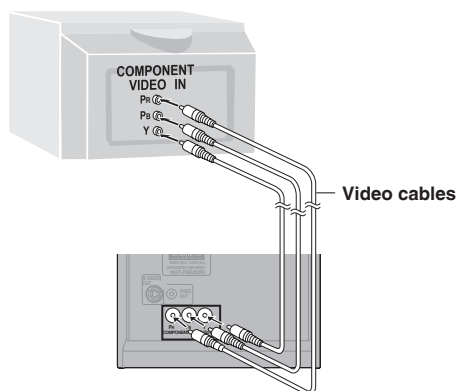


SCART terminal

To improve picture quality, you can change the video signal output from the AV terminal from "Video" to either "S-Video" or "RGB" to suit the type of television you are using (⇒ "Video" tab—AV Output, page 20).

For Australia, N.Z., the Middle East and Southeast Asia

■ Connecting a television with COMPONENT VIDEO IN terminals



COMPONENT VIDEO OUT terminals

These terminals can be used for either interlace or progressive output and provide a purer picture than the S-VIDEO OUT terminal. Connection using these terminals outputs the color difference signals (P_B/P_R) and luminance signal (Y) separately in order to achieve high fidelity in reproducing colors. The description of the component video input terminals depends on the television or monitor (e.g. Y/ P_B/P_R , Y/B-Y/R-Y, Y/ C_B/C_R). Connect to terminals of the same color.

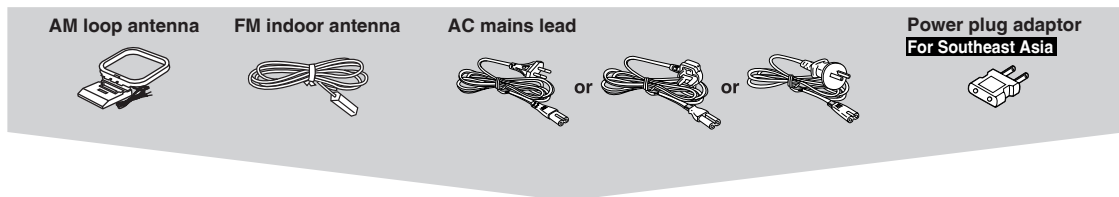
To enjoy progressive video

1. Connect to the component video input terminals on a 480P¹ compatible television. (Video will not be displayed correctly if connected to an incompatible television.)
 2. Select "480P"¹ for Video Output Mode (Picture Menu, ⇒ page 19).
- All televisions manufactured by Panasonic and that have 480P¹ input connectors are compatible. Consult the manufacturer if you have another brand of television.
 - If the unit is connected to the television through VIDEO OUT or S-VIDEO OUT, output will be interlace, irrespective of the settings.

¹ 525P/625P for the Middle East

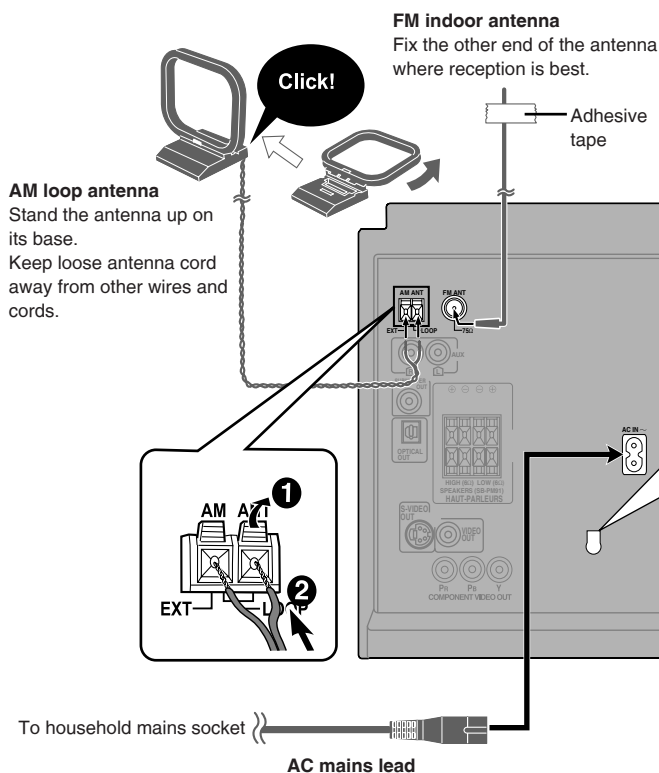
STEP 3 Connecting the antennas and AC mains lead

Connect the AC mains lead after all other connections are complete.



Conserving power

The unit consumes a small amount of power even when it is turned off with [⏻]. To save power when the unit 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 unit.



For the United Kingdom and Saudi Arabia

BE SURE TO READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 3 BEFORE CONNECTION.

For the Middle East and Southeast Asia

Before connecting the AC mains lead, set the voltage.

Voltage Selector

Use a flat-head screwdriver to turn the voltage selector on the rear panel to the appropriate position for the area in which this system is used.

If the power supply in your area is 115 V or 120 V, please set the voltage selector as follows:

- For 115 V: Set to 110 V.
- For 120 V: Set to 127 V.

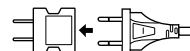


127 V ↔ 110 V ↔ 220-230 V ↔ 240 V

For Southeast Asia

If the power plug will not fit your socket

Use the power plug adaptor (included).

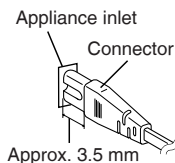


If it still doesn't fit, contact an electrical parts distributor for assistance.

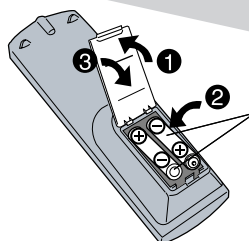
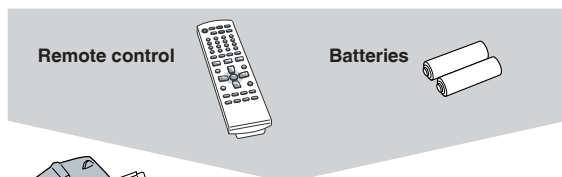
Insertion of Connector

Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing.

However there is no problem using the unit.



STEP 4 The remote control



R6/LR6, AA

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

Do not:

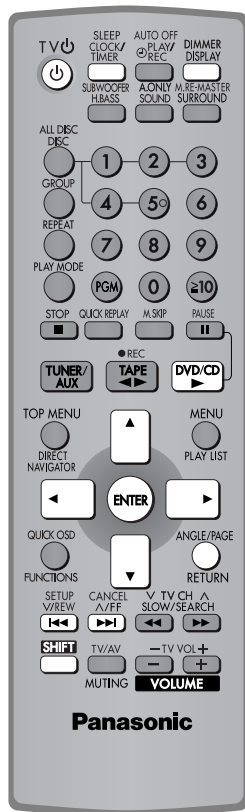
- mix old and new batteries.
- use different types at the same time.
- heat or expose to flame.
- take apart or short circuit.
- attempt to recharge alkaline or manganese batteries.
- use batteries if the covering has been peeled off.

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

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

Use

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



STEP 5 QUICK SETUP

Turn on the television and select the appropriate video input on the television to suit the connection for the unit.

1 Power ON.	2 Select "DVD/CD".	3 Show the QUICK SETUP screen.
4 Select the option from the screen.	5 Press to finish QUICK SETUP.	6 Press to exit.

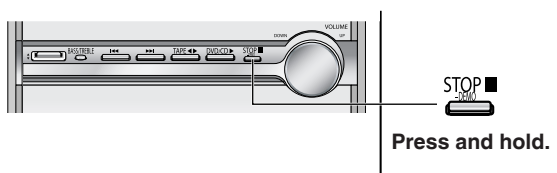
STEP 6 Setting the time

1 Select "CLOCK".	2 Set the time (press within 6 seconds or so).	3 Press [CLOCK/TIMER] to finish setting the time.
---------------------------------	--	---

This is a 24-hour clock.

- Press [DISPLAY] when the unit is on to display the time.
The time is also shown for about 5 seconds when you select "CLOCK" again.
- Reset the clock regularly to maintain accuracy.

DEMO function



When the unit is first plugged in, a demonstration of its functions may be shown on the display.
If the demo setting is off, you can see a demonstration by turning on the demo.

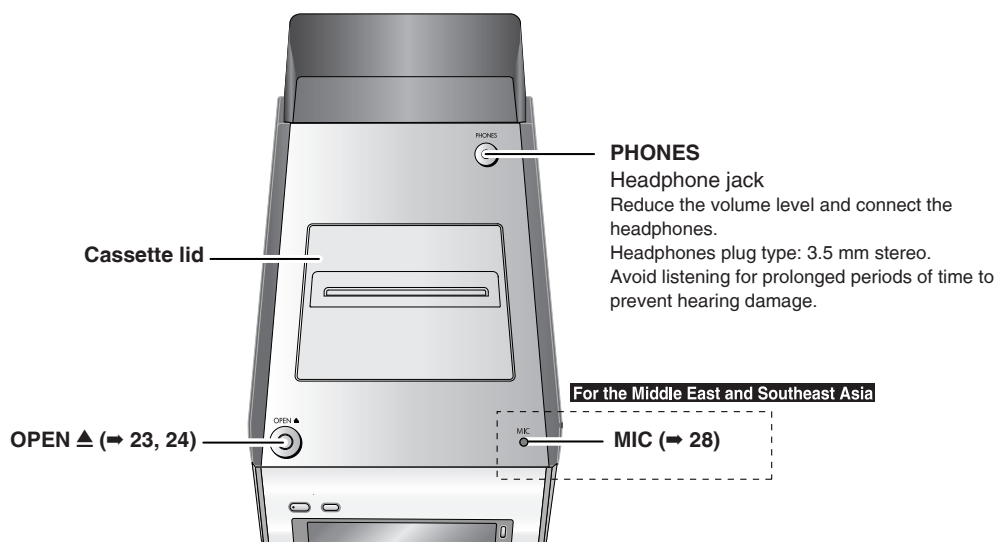
The display changes each time the button is held down.

Demonstration (demo on) ↔ **NO DEMO** (off)

You can reduce the power consumed in standby mode by turning the demonstration off.

Note

You cannot turn the demo function on and off when the unit is on.



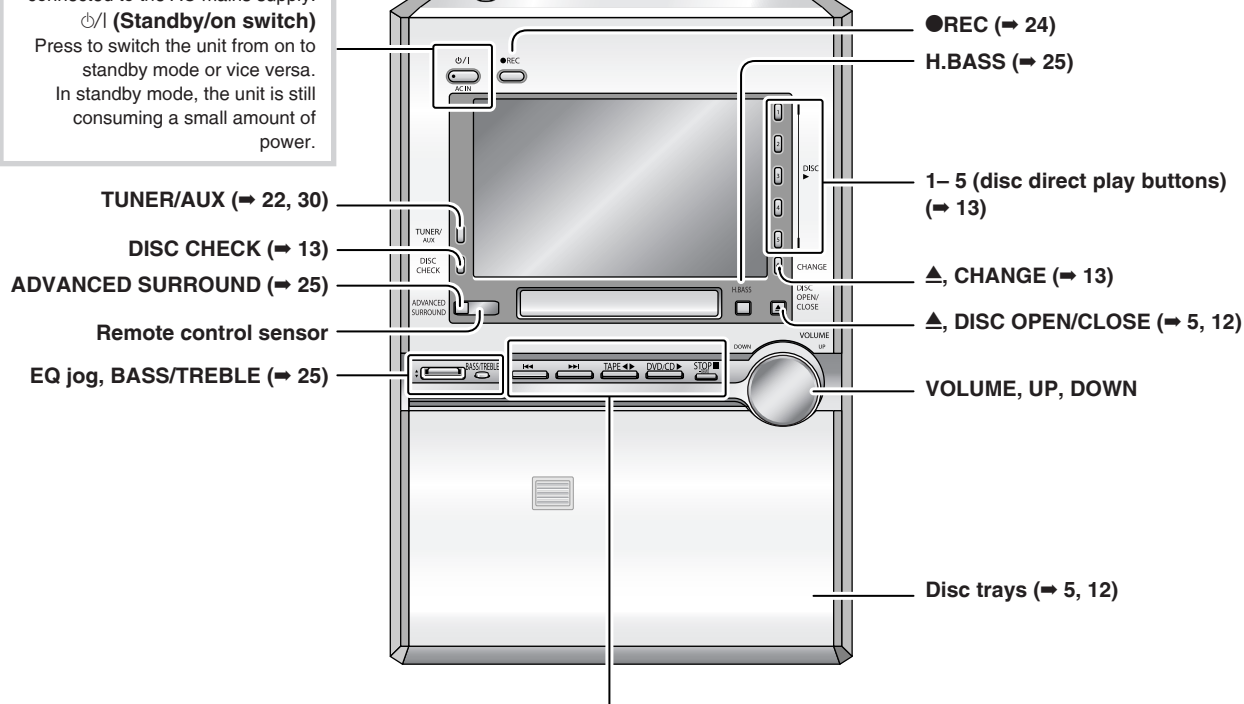
AC IN (AC supply indicator)

This indicator lights when the unit is connected to the AC mains supply.

⏻/I (Standby/on switch)

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.



⏮⏭⏪⏩ (time adjust, disc skip, radio channel select, tape fast-forward/rewind/TPS)
(➡ 9, 12, 22, 23)

For the United Kingdom and Continental Europe

TAPE ◀▶ (➡ 23)

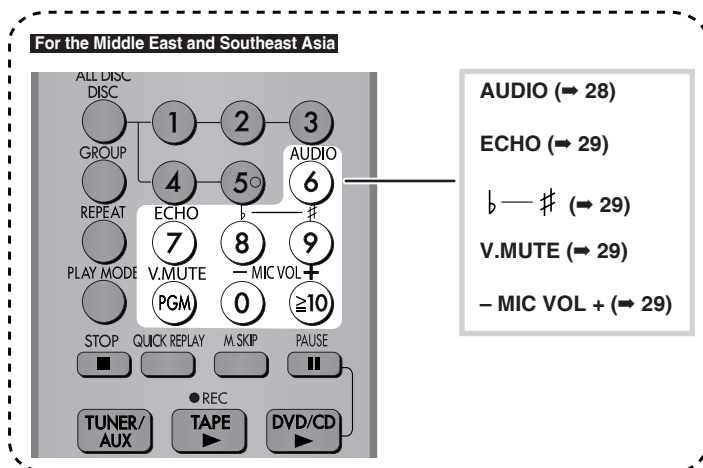
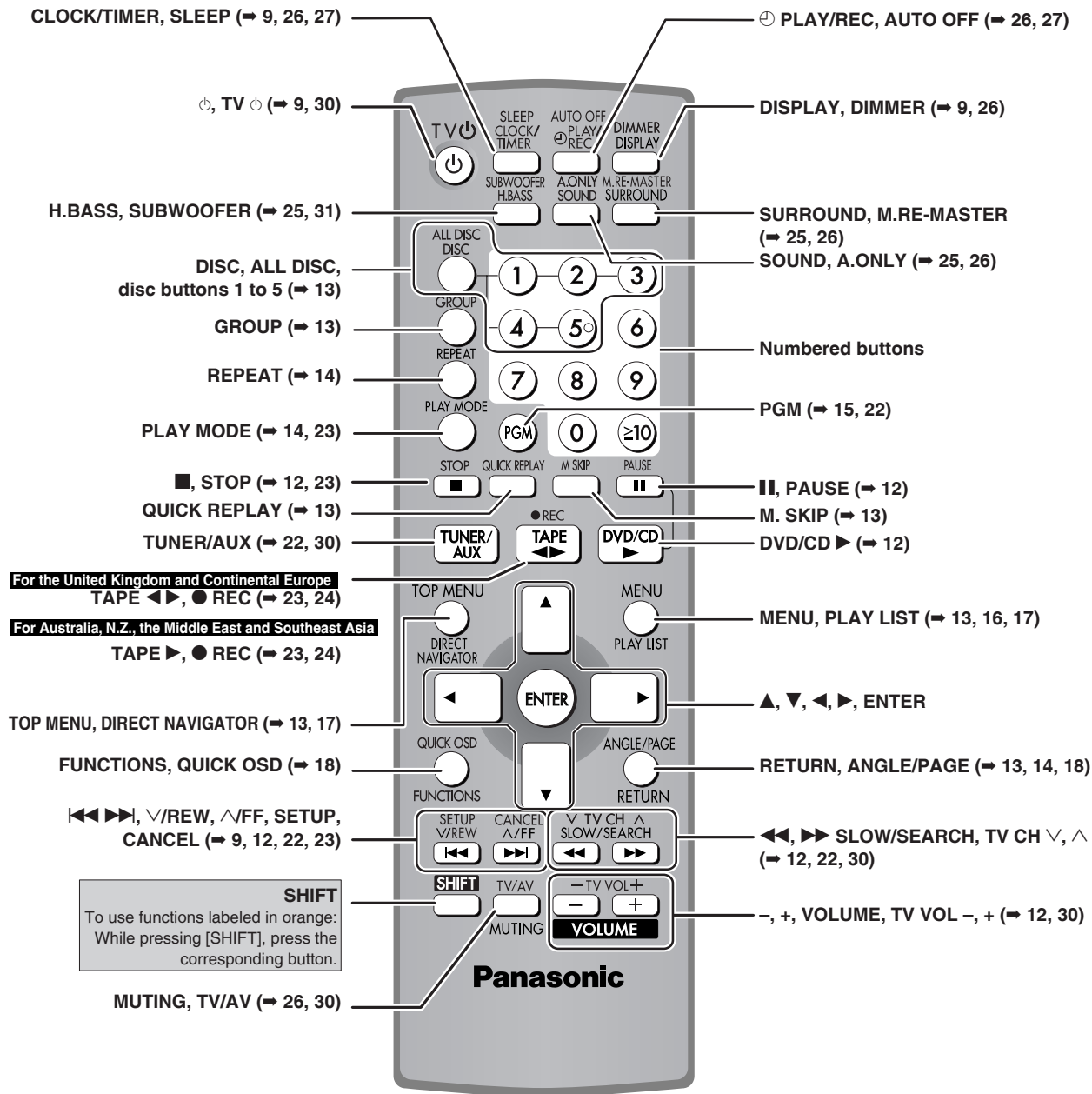
For Australia, N.Z., the Middle East and Southeast Asia

TAPE ► (→ 23)

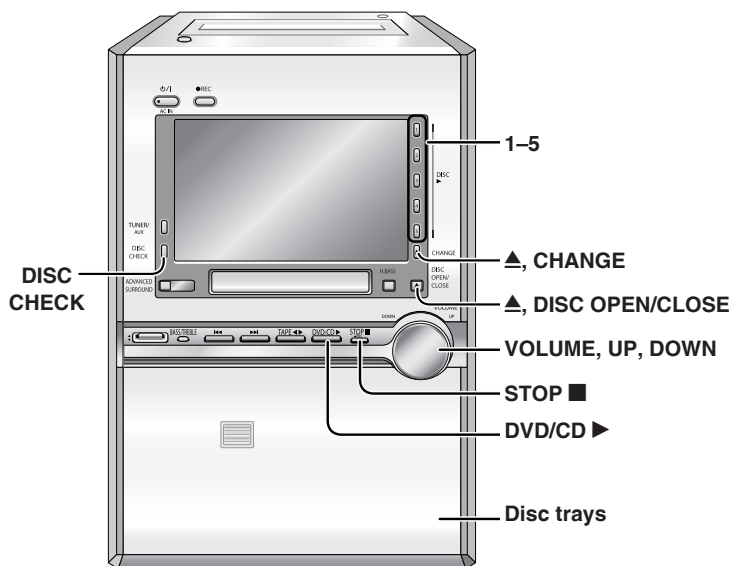
DVD/CD ► (→ 12)

STOP ■, -DEMO
(⇒ 9, 12, 23)

Control guide: remote control



Discs — Basic play



- If the disc contains both audio data (WMA and MP3) and JPEG, select "All" to play both, "Audio" to play WMA/MP3, or "Picture" to play JPEG while the menu is displayed (except **JPEG** on **RAM**). You can also access the menu by pressing [TOP MENU].

- Open the disc tray.**

• The unit turns on automatically and a tray opens.
- Place disc.**

Label must face upward.

Disc tray Tray number

• Load double-sided discs so the label for the side you want to play is facing up. (➡ Tray/disc handling procedure, page 5)
- Close the disc tray.**
- Start play.**

• It may take some time for play to start but this is normal.

Volume adjustment		
Stop		The stopped play position is memorized when "RESUME" is displayed. • Press [DVD/CD ►] to resume play. • Press [■, STOP] to clear the position.
Pause		• Press [DVD/CD ►] to restart play.
Skip		
Search (during play)		• Up to 5 steps. • Press [DVD/CD ►] to restart play.
Slow-motion		• Up to 5 steps. • Press [DVD/CD ►] to restart play. • DVD-A Motion picture parts only. • VCD Forward direction only.
Frame-by-frame (during pause)		• DVD-A Motion picture parts only. • VCD Forward direction only. • Pressing [■, PAUSE] also activates forward direction. • Press [DVD/CD ►] to restart play.

Enter number

1 2 3
4 5 6
7 8 9
0 ≤ 10

RAM DVD-A DVD-V VCD CD
Example: To select 12:
[10] → [1] → [2]
[VCD] with playback control

- Press [STOP] then press the numbered buttons.

WMA MP3 JPEG
Example: To select 123:
[1] → [2] → [3] → [ENTER]

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

SHIFT + CANCEL Δ OFF

Disc menu

TOP MENU
DIRECT NAVIGATOR
MENU
PLAYLIST
ANGLE/PAGE
RETURN

DVD-A DVD-V
Shows a disc top menu

DVD-V
Shows a disc menu

VCD
Shows a disc menu

On-screen item select

Select
Confirm

Return to previous screen

ANGLE/PAGE
RETURN

Skip back a few seconds
(during play)

QUICK REPLAY

- This may not work while playing some parts of a disc or at all with some discs (only when the elapsed play time can be displayed).

Skip 30 seconds forward
(during play)

M SKIP

- This may not work while playing some parts of a disc or at all with some discs (only when the elapsed play time can be displayed).

Selecting a disc

ALL DISC
DISC

Select
Confirm

1 2 3
4 5

Selecting a group

DVD-A WMA MP3 JPEG

GROUP

Select
Confirm

or

GROUP

1 2 3
4 5 6
7 8 9
0 ≤ 10

Select
Confirm

Group skip

WMA MP3 JPEG

Select

All disc play
(during stop)

SHIFT + ALL DISC DISC

- ALL DISC ON ↔ ALL DISC OFF
- DVD discs and JPEG tracks are skipped.
- HighMAT menus and video CD playback control are disabled.

Changing a disc in the desired tray

CHANGE

Press [▲, CHANGE] again to close the tray.

- You can also remove a disc while another is playing (except in all-disc random, program play or during recording).

Checking the disc location

DISC CHECK

Press again to close the tray.

This feature lets you check whether a 12 cm disc is in a tray.

- If a disc is being played, the corresponding tray will not open.
- Do not remove or insert discs during a disc check.
- Do not pull out the trays during a disc check.

- Multiple-channel signals are down-mixed to stereo (2-channel) (⇒ Home theater—Enjoying more powerful sound, page 30).
- When playing VCDs with playback control (PBC)**
Pressing buttons to perform skip, search or slow-motion may take you to a menu screen.
- Lights when a Dolby Digital or DTS disc is played.



Discs — Convenient functions

→ Page 11 for the position of the remote control buttons.



RAM **DVD-A** **DVD-V** **VCD**

(Discs with multiple soundtracks)

During play

Press **[FUNCTIONS]** then **[▲, ▼]** to select “Audio”.

Use the Functions menu to change the soundtrack to the one you want (⇒ Audio, page 18).

RAM **VCD**

You can also select “L”, “R” or “L R”.

(Karaoke discs: You can also switch the vocals on and off. Read the disc's instructions for details.)

DVD-A

Play restarts from the beginning of the soundtrack when changing soundtracks that are accompanied by still pictures.

Audio attributes

LPCM/PPCM **□□** Digital/DTS/MPEG: Signal type

kHz: Sampling frequency

bit: Number of bits

channel: 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



DVD-A (Motion picture parts only)

DVD-V (Discs with multiple subtitle languages) **VCD** (SVCD only)

During play

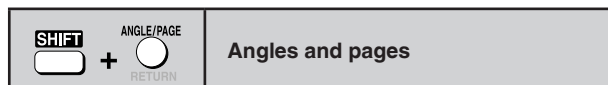
Press **[FUNCTIONS]** then **[▲, ▼]** to select “Subtitle”.

Use the Functions menu to switch the subtitles on and off and to change the language to the one you want (⇒ Subtitle, page 18).

RAM

You can only switch the subtitles on or off.

To change the subtitle position and brightness (⇒ Display Menu, page 19).



During play

DVD-V (with multiple angles)

Press to select the angle.

JPEG

Press to rotate the picture.

DVD-A

Press to change the pages.



(Only when the elapsed play time can be displayed

JPEG : Works with all JPEG contents.)

During play

Press **[REPEAT]** to select an item to be repeated.

For 1-disc play

RAM

PG REPEAT^{#1} → DISC REPEAT → REPEAT OFF

• During play list play

SCENE REPEAT → PL REPEAT^{#2} → REPEAT OFF

DVD-V

CHAPTER REPEAT → TITLE REPEAT^{#3} → REPEAT OFF

VCD **CD**

TRACK REPEAT → DISC REPEAT → REPEAT OFF

DVD-A

TRACK REPEAT → GROUP REPEAT^{#3} → REPEAT OFF

WMA **MP3**

CONTENT REPEAT → GROUP REPEAT^{#3} → REPEAT OFF

JPEG

GROUP REPEAT^{#3} → REPEAT OFF

• You can also repeat play of content and group on HighMAT discs.

For All-disc play (⇒ page 13)

VCD **CD** **WMA** **MP3**

TRACK (or CONTENT) REPEAT → DISC (or GROUP) REPEAT → ALL CD'S REPEAT → REPEAT OFF

To repeat only your favorite tracks, contents or chapters

Start program play (⇒ Program play, page 15) and press **[REPEAT]** to select the repeat mode.

^{#1} Program repeat (⇒ Playing the programs on DVD-RAM, page 17).

^{#2} Play list repeat (⇒ Using the play lists on DVD-RAM, page 17).

^{#3} During program and random play

“ALL REPEAT” is displayed.



DVD-A **DVD-V** **VCD** **CD** **WMA** **MP3** **JPEG**

During stop

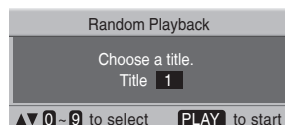
1 Press **[PLAY MODE]** to show the Random Playback screen.

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

Press the numbered buttons to select a group

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

Example: **DVD-V**



DVD-A

• You can select more than one group or all groups.

• To deselect a group, select the group again.

3 Press **[DVD/CD ►]**.

Note

• During random play in All Disc play, empty trays are skipped and the playback control function on Video CDs is canceled.

• During random play, this unit can access up to 4000 audio or picture contents and 400 groups.

• **DVD-A** If you select bonus groups, you will have to enter a password.

• For HighMAT discs, select “Play as Data Disc” (⇒ Other Menu, page 19) to use random play.

PGM

Program play (up to 32 items)

Programming from single disc

DVD-A DVD-V VCD CD WMA MP3 JPEG

During stop

Example: DVD-V

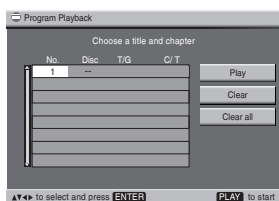
1 Press [PGM].

“PGM” appears.

2 Press the numbered buttons to select the items (WMA MP3 JPEG) then press [ENTER].

- Repeat this step to program other items.
- To select an item using the cursor buttons
Press [ENTER] and [▲, ▼] to select an item, then press [ENTER] again to confirm the number.

3 Press [DVD/CD ►] to play.



Programming from multiple discs

VCD WMA MP3 JPEG

During stop

1 Select ALL DISC ON (⇒ page 13)

2 Follow the steps above.

Select the discs in step 2.

• To exit the program mode

Press [PGM] so “PGM” goes out.

Press [PGM] again to go back to the program.

• To add or change the program

Press [▲, ▼] to select an available item, then repeat step 2.

• To clear the whole program

Select “Clear all” and press [ENTER].

• To clear an item

Press [SHIFT]+[CANCEL], or select “Clear” and press [ENTER].

• To skip a page

Press [SHIFT]+[ANGLE/PAGE].

Note

- Clear the existing program before creating a new program.
- Times are not displayed while programming.
- Items the unit cannot find can be programmed but are canceled during play. This is also the case if you program discs other than Video CD and CD.
- The program is cleared when you switch the unit to standby, select another source, or move the disc out of the play position.
- DVD-A If you select bonus groups, you will have to enter a password.
- For HighMAT discs, select “Play as Data Disc” (⇒ Other Menu, page 19) to use program play.

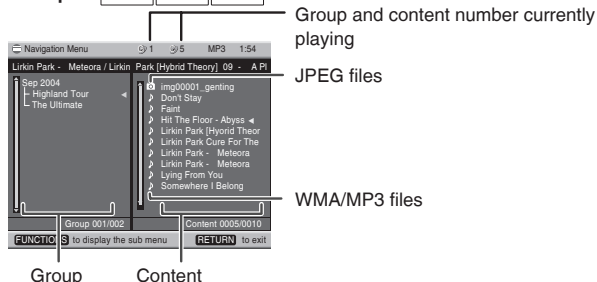


- You can play JPEG files on DVD-RAM or play HighMAT discs without using the HighMAT function (⇒ Other Menu, page 19).
- Only a content list appears when playing CDs, but information for CD-Text discs is correctly displayed.

■ Using navigation menus

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

Example: **WMA** **MP3** **JPEG**



- **To play WMA/MP3 while showing JPEG images**
First select the JPEG file you want to show, then select the WMA/MP3 file(s).
- **To skip a page**
Press [SHIFT]+[ANGLE/PAGE].
- **To exit the screen**
Press [MENU].



- 1 While the navigation menu is displayed, press [FUNCTIONS].

Actual items depend on the disc.

Example:

Multi	Show groups and content
List	Show content
✓ Tree	Show groups
Thumbnail	Show thumbnails JPEG
Next group	Go to next group WMA MP3
Previous group	Go to previous group WMA MP3
All	List both WMA/MP3 and JPEG files
✓ Audio	List WMA/MP3 files only
Picture	List JPEG files only
✓ Help display	Show help bar or the elapsed play time indicator
Find	Enter a title to find content and groups (⇒ below)

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

- **To return to the menu**
Press [RETURN].

■ Finding a track or group title

WMA **MP3** **JPEG**

To find a group: highlight one of the group names

To find content: highlight an item in the content column

- 1 Select "Find" in the submenu.



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

- Repeat to enter other characters.
- 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 only for the titles starting with that word.

- 3 Press [▶] to select "Find" and press [ENTER].

The search results screen appears.

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

Playing HighMAT discs

WMA **MP3** **JPEG**

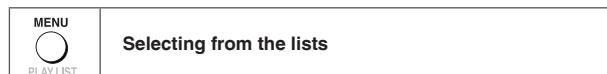
A menu appears when you select the disc.

Press [▲, ▼, ◀, ▶] to select then press [ENTER].

When you press [ENTER]:

	Menu:	Takes you to the next menu which shows play lists or another menu.
	Play list:	Play starts.

- **To display the screen**
Press [TOP MENU].
- **To return to the menu above the current one**
Press [RETURN].
- **To change the menu background**
Press [FUNCTIONS].
The background changes to the one recorded on the disc.
- **To exit the screen**
Press [■, STOP].



- 1 During play
Press [MENU].



- 2 Press [◀] then [▲, ▼] to switch between the play list, group and content lists.

- 3 Press [▶] then [▲, ▼] to select an item and press [ENTER].

- **To skip a page**
Press [SHIFT]+[ANGLE/PAGE].
- **To exit the list screen**
Press [MENU].

TOP MENU DIRECT NAVIGATOR Playing the programs on DVD-RAM

1 Press [DIRECT NAVIGATOR] to show the program list.

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

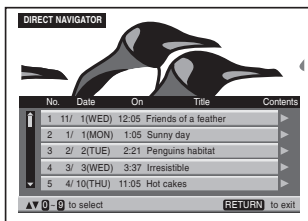
The selected program plays in the background.

3 Press [ENTER] to confirm.

- Titles appear only if you have entered them.
- You cannot change program and disc titles.
- Press [▶] to show the contents of the program.
- To skip a page
Press [SHIFT]+[ANGLE/PAGE].

Indication on the unit's display.

PG: Program number



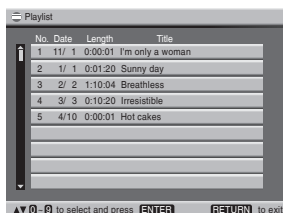
MENU PLAYLIST Using the play lists on DVD-RAM

You can play the groups of scenes (play lists) created on DVD video recording equipment.

1 Press [PLAY LIST] to show the play list menu.

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

3 Press [ENTER] to confirm.



- You can only select a play list if the disc contains play lists.
- To skip a page
Press [SHIFT]+[ANGLE/PAGE].

Indication on the unit's display.

PL: Play list number

Tips for making WMA/MP3, CD text and JPEG discs

- 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.
- The order in which the tracks appear in the menus may differ from the order shown on your computer.

Naming folders and files

At the time of recording, prefix folder and file names with 3-digit numbers in the order you want to play them (this may not work at times).

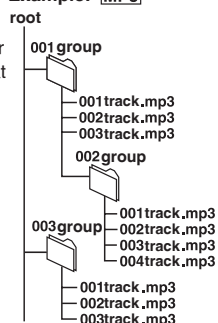
Files must have the extension:

“.WMA” or “.wma”

“.MP3” or “.mp3”

“.JPG”, “.jpg”, “.JPEG” or “.jpeg”

Example: MP3



WMA

- Noise may occur when playing WMA files.
- You cannot play WMA files that are copy protected.

MP3

- This unit is not compatible with ID3 tags.
- If you play an MP3 track that includes still picture data, it will take some time before the music itself starts playing and the elapsed time will not be displayed during this time. Even after the track starts, the correct play time will not be displayed.

JPEG

- To view JPEG files on this unit:
 - Take them on a digital camera that meets the DCF (Design rule for Camera File System) standard. Some digital cameras have functions that are not supported by the DCF standard like automatic picture rotation which may render a picture unviewable.
 - Do not alter the files in any way or save them under a different name.
- This unit cannot display moving pictures, Motion JPEG and other such formats, still pictures other than JPEG (i.e. TIFF) or play associated sound.

CD (CD text only)

When making your own CD text discs

The unit plays the tracks in the order you record them so you do not have to prefix the titles with numbers.

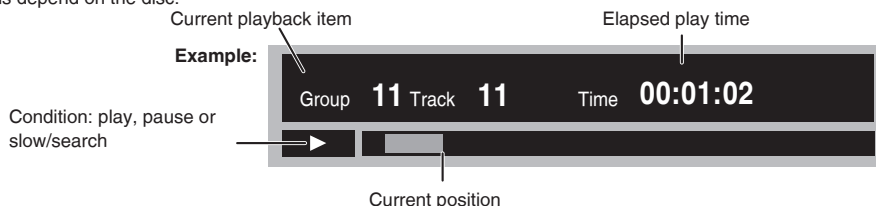


To show disc information and play position — **QUICK OSD**

RAM DVD-A DVD-V VCD CD WMA MP3

Press [SHIFT]+ [QUICK OSD] to show information about the disc playing.

Actual items depend on the disc.



• To exit the screen
Press [SHIFT]+
[QUICK OSD].



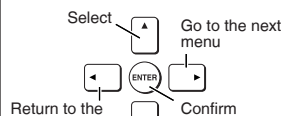
To get disc information or to play from a specified item

1



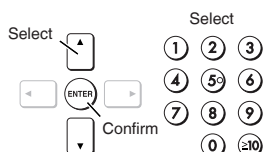
Show the
FUNCTIONS screen.

2



Select the menu.

3



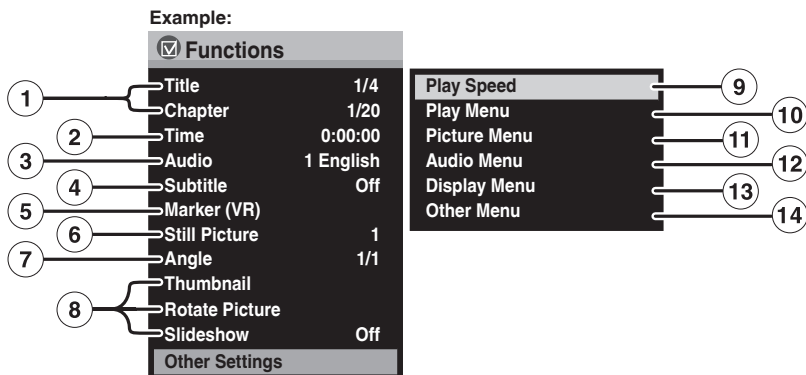
Make the settings.

4



Press to exit.

Actual items depend on the disc.



①	Program, Group, Title, Track, Chapter, Play list, Content To start from a specific item.
②	Time Time Slip (during play) RAM DVD-A DVD-V To skip the time forward or backward. 1. Press [ENTER] to select Time Slip. 2. Press [▲, ▼] to enter the time and press [ENTER]. • Press and hold [▲, ▼] to alter faster. Time Search RAM DVD-A DVD-V To start from a specific time. Elapsed/Remaining Time RAM DVD-A DVD-V VCD CD To change between elapsed or remaining time display.
③	Audio (⇒ Soundtracks, page 14) For the Middle East and Southeast Asia (⇒ Enjoying karaoke, page 28)
④	Subtitle (⇒ Subtitles, page 14)

⑤	Marker (VR) RAM To recall a marker recorded on DVD-Video recorders.
⑥	Still Picture DVD-A To view the still pictures. Next Picture Previous Picture
⑦	Angle DVD-V (Discs with multiple angles) To select the angle. (⇒ Angles and pages, page 14)
⑧	Thumbnail JPEG To show thumbnail images. Rotate Picture JPEG (⇒ Angles and pages, page 14) Slideshow JPEG To turn the slideshow on or off. To change the timing (0–30 seconds) of the slideshow.
⑨	Other Settings—Play Speed RAM DVD-A (Motion picture parts only) DVD-V To change play speed — from x0.6 to x1.4 (in 0.1 unit steps) • After you change the speed: Digital output switches to PCM-2ch. • Sound is stereo as long as “Normal” is selected.

10	Play Menu Repeat (⇒ Repeat play, page 14) A-B Repeat RAM DVD-A DVD-V VCD CD WMA MP3 Except still picture on RAM Repeat a section between points A and B within an item. [ENTER] (start point) ⇒ [ENTER] (finish point) To cancel: [ENTER] • A-B repeat cancels when you press [QUICK REPLAY]. Marker DVD-A DVD-V VCD CD WMA MP3 JPEG To mark a position to play again (Marker). • Press [►] to highlight the first asterisk and press [ENTER] again to mark a position. You can mark up to 5 positions. To mark another position: [◀, ►] ⇒ [ENTER] To recall a marker: [◀, ►] ⇒ [ENTER] To erase a marker: [◀, ►] ⇒ [SHIFT]+[CANCEL] • This feature does not work during program and random play. Advanced Disc Review RAM DVD-V To start Advanced Disc Review. For details, ⇒ Advanced Disc Review, page 20.
11	Picture Menu Picture Mode RAM DVD-A DVD-V VCD JPEG Normal Cinema1 : Mellows images and enhances detail in dark scenes. Cinema2 : Sharpens images and enhances detail in dark scenes. Animation Dynamic User : Enables settings you make in "Picture Adjustment". Picture Adjustment Contrast Brightness Sharpness Color Gamma (Adjusts the brightness of dark parts.) Depth Enhancer • Reduce the rough noise in the background to give a greater feeling of depth. Video Output Mode ^{#1} RAM DVD-A DVD-V VCD JPEG To switch between Progressive ^{#2} and Interlace ^{#3} video. Transfer Mode ^{#1} RAM DVD-A DVD-V VCD If you have chosen Progressive video (⇒ see above), select the method of conversion for progressive output to suit the type of material. Auto1 ^{#4} : For viewing film material Auto2 ^{#5} : For viewing film material (the same as Auto 1, but able to convert 30-frame-per-second progressive video) Video : For video material
12	Audio Menu Advanced Surround (⇒ Advanced Surround, page 25) Dialogue Enhancer DVD-V (Dolby Digital, DTS, 3-channel or over, where the dialogue is recorded in the center channel) This makes the dialogue in movies easier to hear. On ↔ Off (Factory preset) • This does not work or has less effect with some discs. Multi Re-master (⇒ Multi Remaster—Enjoying more natural sound, page 26) Sound Enhancement RAM DVD-A DVD-V VCD CD WMA MP3 Enhances audio output to produce a warm hall-like sound.

13	Display Menu Subtitle Position DVD-V 0 to -60 in 2 unit steps. Subtitle Brightness DVD-V "Auto" to automatically adjust the brightness against the background, or 0 to -7. Information JPEG Off, Date, Details 4:3 Aspect ^{#1} RAM DVD-A DVD-V VCD JPEG To select how to show images made for 4:3 aspect screens on a 16:9 aspect television. (Go to "Video" tab in the Setup menus, and select "16:9" for "TV Aspect" (⇒ page 20).) Normal : Laterally stretches images. Auto : Expands 4:3 letterbox images to fill more of the screen. Other images appear in full in the center of the screen. Shrink : Images appear in the center of the screen. Zoom : Expands all images to fill the screen. If your television has a similar feature, use it instead for a better effect. Just Fit Zoom RAM DVD-A (motion picture parts only) DVD-V VCD Preset zoom ratios suitable for the following video formats are available. Auto 4:3 Standard 4:3 European Vista 1.66:1 16:9 Standard 16:9 American Vista 1.85:1 Cinemascope1 2.35:1 Cinemascope2 2.55:1 Manual Zoom RAM DVD-A (motion picture parts only) DVD-V VCD Fine adjustments Press [▲, ▼]. Bit Rate Display RAM DVD-A (Moving picture parts only) DVD-V VCD When you select "On": During play: shows the bitrate (approximate) of the video being played During pause: shows the data volume of the frame and type of picture (⇒ Glossary— I/P/B, page 34) GUI See-through To enable the on-screen menu to become translucent. GUI Brightness (-3 to +3) To adjust the brightness of the on-screen displays.
14	Other Menu Setup Open the Setup menu to change the player's settings (⇒ page 20). Play as DVD-Video or Play as DVD-Audio • Select "Play as DVD-Video" to play DVD-Video contents of DVD-Audio. Play as DVD-VR, Play as HighMAT or Play as Data Disc • Select "Play as Data Disc" to play JPEG files on DVD-RAM or to play HighMAT disc without using the HighMAT menus.

^{#1} For Australia, N.Z., the Middle East and Southeast Asia

^{#2} 480P/525P/625P, depending on the disc.

^{#3} 480I/525I/625I, depending on the disc.

^{#4} Auto For the Middle East

^{#5} Except for the Middle East

1 Show the Setup menu.	2 Select the menu tab.	3 Select the item.	4 Make the settings.	5 Press to exit.
---	---	---	---	---

- The settings remain intact even if you switch the unit to standby.
- Underlined items are the factory preset.

■ “Disc” tab—To choose the language and set a rating level

Audio Choose the audio language.	• <u>English</u> • Original^{#1}	• (Language options) • Other★★★★^{#2}	Language options Except for Southeast Asia (Actual languages depend on where you bought your system.) • French • German • Italian • Spanish • Polish • Swedish • Dutch • Portuguese • Russian For Southeast Asia • Chinese
Subtitle Choose the subtitle language.	• <u>Automatic</u>^{#3} • (Language options)	• English • Other★★★★^{#2}	
Menus Choose the language for disc menus.	• <u>English</u> • Other★★★★^{#2}	• (Language options)	

Changing the menu language from QUICK SETUP (➔ page 9) also changes this setting.

Advanced Disc Review Choose the mode for Advanced Disc Review (➔ page 19).	• <u>Intro Mode</u>: Plays the first few seconds of each title. • Interval mode: Plays a few seconds of the disc at ten-minute intervals.
--	--

Ratings

Set a ratings level to limit DVD-Video play. The password screen is shown when you select levels 0 to 7.

To enter a password

1. Input a 4-digit password with the numbered buttons.
 - If you enter a wrong number, press [SHIFT]+[CANCEL] to erase it.
 - Do not forget your password.
2. Press [ENTER].
 - The lock symbol appears closed to show the rating is locked.
3. Press [ENTER] to confirm the 4 digits.

Setting ratings (When level 8 is selected)

- 8 No Limit
- 1 to 7: Prohibits play of DVD-Video with corresponding ratings recorded on them.
- 0 Lock All: To prevent play of discs without ratings levels.

Changing ratings (When level 0 – 7 is selected)

- Unlock Player
- Change Level
- Change Password
- Temporary Unlock

If you insert a DVD-Video that exceeds the ratings limit you set, a message appears on the television. Follow the on-screen instructions.

^{#1} The original language of each disc is selected.

^{#2} Input a code number with the numbered buttons (➔ Language code list, page 21).

^{#3} If the language selected for “Audio” is not available, subtitles of that language automatically appear if available on the disc.

■ “Video” tab—To make settings to suit your television

TV Aspect

Choose the setting to suit your television and preference.

- Changing the TV aspect from QUICK SETUP (➔ page 9) also changes this setting.

- **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 software is shown in letterbox style on a 4:3 aspect television.



- **16:9**
Widescreen television (16:9)

TV Type

Select to suit the type of television.

- **Standard (Direct View TV)**
- CRT Projector
- Projection TV
- LCD TV/Projector
- Plasma TV

Time Delay

When connected with an AV amplifier and Plasma display, adjust if you notice the audio is out of sync with the video.

- 0ms
- 20ms
- 40ms
- 60ms
- 80ms
- 100ms

AV output

For the United Kingdom and Continental Europe

Choose the video signal format to be output from the SCART (AV) terminal.

- Video
- S-Video
- RGB

(Continued on next page)

Still Mode Specify the type of picture shown when paused.	• Automatic • Field • Frame
NTSC Disc Output Choose PAL 60 or NTSC output when playing NTSC discs (⇒ page 4, Video systems).	• PAL60: When connected to a PAL television. • NTSC: When connected to an NTSC television. (For Southeast Asia : NTSC is factory preset)

■ “Audio” tab—To make settings to suit your digital connection and other audio settings

PCM Digital Output Select the maximum sampling frequency of PCM digital output. Check the digital input limitations of the equipment you connect.	Up to 48 kHz: Signals over 48 kHz converted to 48 or 44.1 kHz Up to 96 kHz: Signals over 96 kHz converted to 48 or 44.1 kHz • Signals from copy-protected discs are converted to 48 or 44.1 kHz irrespective of the setting. • Some equipment cannot handle sampling frequencies of 88.2 kHz, even if it can handle 96 kHz. Read your equipment's operating instructions for details.
Dolby Digital	• Bitstream: Select if the equipment you connected can decode the signal.
DTS Digital Surround	• PCM: Select if the equipment you connected cannot decode the signal.
MPEG Except for Southeast Asia	• PCM: Select if the equipment you connected cannot decode the signal. • Bitstream: Select if the equipment you connected can decode the signal.
IMPORTANT If the equipment you connected cannot decode the signal, the setting must be changed to PCM. If not, signals the equipment cannot process will be output by this unit, causing high levels of noise which can damage your hearing and the speakers.	
Dynamic Range Compression (Dolby Digital only)	• Off • On: Adjust for clarity even when the volume is low through compressing the range of the lowest sound level and the highest sound level. Convenient for late night viewing.

■ “Display” tab—To choose the on-screen message language or to turn languages off

Menu Language Choose the language for these menus and the on-screen messages.	Except for Southeast Asia (Actual languages depend on where you bought your system.) • English • Français • Deutsch • Italiano • Español • Polski • Svenska • Nederlands • Português • Русский For Southeast Asia • English • 中文
On-Screen Messages Choose whether to show on-screen messages or not.	• On • Off

■ “Others” tab— To make other settings

QUICK SETUP	• Yes • No
Re-initialise Setting This returns all values in the SETUP menus to the default settings.	• Yes: The password screen is shown if “Ratings” (⇒ “Disc” tab, page 20) are set. Please enter the same password. Turn the unit off and on again. • No

Language code list

Abkhazian: 6566	Danish: 6865	Italian: 7384	Norwegian: 7879	Swedish: 8386
Afar: 6565	Dutch: 7876	Japanese: 7465	Oriya: 7982	Tagalog: 8476
Afrikaans: 6570	English: 6978	Javanese: 7487	Pashto, Pushto: 8083	Tajik: 8471
Albanian: 8381	Esperanto: 6979	Kannada: 7578	Persian: 7065	Tamil: 8465
Ameharic: 6577	Estonian: 6984	Kashmiri: 7583	Polish: 8076	Tatar: 8484
Arabic: 6582	Faroese: 7079	Kazakh: 7575	Portuguese: 8084	Telugu: 8469
Armenian: 7289	Fiji: 7074	Kirghiz: 7589	Punjabi: 8065	Thai: 8472
Assamese: 6583	Finnish: 7073	Korean: 7579	Quechua: 8185	Tibetan: 6679
Aymara: 6589	French: 7082	Kurdish: 7585	Rhaeto-Romance: 8277	Tigrinya: 8473
Azerbaijani: 6590	Frisian: 7089	Laotian: 7679	Romanian: 8279	Tonga: 8479
Bashkir: 6665	Galician: 7176	Latin: 7665	Russian: 8285	Turkish: 8482
Basque: 6985	Georgian: 7565	Latvian, Lettish: 7686	Samoan: 8377	Turkmen: 8475
Bengali, Bangla: 6678	German: 6869	Lingala: 7678	Sanskrit: 8365	Twai: 8487
Bhutani: 6890	Greek: 6976	Lithuanian: 7684	Scots Gaelic: 7168	Ukrainian: 8575
Bihari: 6672	Greenlandic: 7576	Macedonian: 7775	Serbian: 8382	Urdu: 8582
Breton: 6682	Guarani: 7178	Malagasy: 7771	Serbo-Croatian: 8372	Uzbek: 8590
Bulgarian: 6671	Gujarati: 7185	Malay: 7783	Shona: 8378	Vietnamese: 8673
Burmese: 7789	Hausa: 7265	Malayalam: 7776	Sindhi: 8368	Volapük: 8679
Byelorussian: 6669	Hebrew: 7387	Maltese: 7784	Singhalese: 8373	Welsh: 6789
Cambodian: 7577	Hindi: 7273	Maori: 7773	Slovak: 8375	Wolof: 8779
Catalan: 6765	Hungarian: 7285	Marathi: 7782	Slovenian: 8376	Xhosa: 8872
Chinese: 9072	Icelandic: 7383	Moldavian: 7779	Somali: 8379	Yiddish: 7473
Corsican: 6779	Indonesian: 7378	Mongolian: 7778	Spanish: 6983	Yoruba: 8979
Croatian: 7282	Interlingua: 7365	Nauru: 7885	Sundanese: 8385	Zulu: 9085
Czech: 6783	Irish: 7165	Nepali: 7869	Swahili: 8387	

The radio



Manual tuning

1

TUNER/
AUX

Select "FM" or
"AM".
FM → AM → AUX

2

∇ TV CH ∇
SLOW/SEARCH

Select the
frequency of the
desired station.

3

—TV VOL+
— +
VOLUME

Adjust the
volume.

- Press and hold [◀◀] or [▶▶] until the frequency starts scrolling to start automatic tuning. Tuning stops when a station is found.

"ST" is displayed when a stereo FM broadcast is being received.

If noise is excessive in FM

Press [PLAY MODE] to display "MONO".

To cancel, press [PLAY MODE] again.

The mode also cancels when you change the frequency.

For the United Kingdom and Continental Europe

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.

Displaying the text data, the name of a broadcasting station or a program type.

Press [DISPLAY].

Every time you press the button:

→ Station Name (PS) → Program Type (PTY) → Clock

M.O.R.M

PTY display (example)

"M.O.R. M" = "Middle of the road music"

Note

RDS displays may not be available if reception is poor.

For the Middle East and Southeast Asia

AM frequency step (main unit only)

The step is factory-set to 9 kHz, but you can change it to receive broadcasts allocated to 10 kHz steps.

1. Select "FM".

2. Press and hold [TUNER/AUX] on the main unit.

After a few seconds the display changes to show the current minimum frequency. Continue to hold the button down. The minimum frequency changes and the step is changed.

To return to the original step, repeat the above steps.

Note

Any preset stations are cleared by this procedure. Preset them again.

Preset tuning

Preset channels to make selection simpler. Up to 15 stations can each be set in the FM and AM bands.

Automatic presetting

Tune to the frequency where presetting is to begin (→ see above).

PGM

Press and hold.

(release when "AUTO" appears)

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

When finished, the last station to be set is played.

Manual presetting

Tune to the desired station (→ see above).

1

PGM

**Press to
select.**

("PGM" appears)

2

1 2 3
4 5 6
7 8 9
0 ±10

**Press while the
station is flashing to
select the channel.**

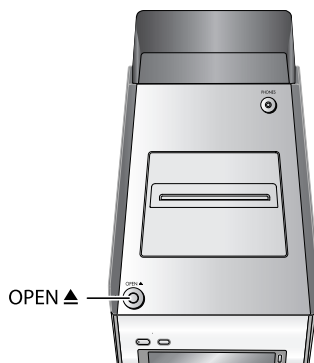
The station occupying a channel is erased if another station is preset in that channel.

Selecting channels

- Press [TUNER/AUX] to select "FM" or "AM".
- Press the numbered buttons or [◀◀/REW] or [▶▶/FF] to select the channel.

Cassette tapes — Play and Recording

Play



Cassette tape selection and care

Use normal position tapes.

High position and metal position tapes can be played, but the unit is not able to do full justice to the characteristics of these tapes.

- Tapes exceeding 100 minutes are thin and can break or get caught in the mechanism.
- Tape slack can get caught up in the mechanism and should be wound up before the tape is played.
- Endless tapes can get caught up in the deck's moving parts if used incorrectly. Use tapes appropriate to this unit's auto-reverse mechanism.

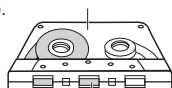
1



Press to open and insert a cassette.

Make sure that the cassette is fully inserted and close the lid by hand.

Side to be played back facing up.



Insert the cassette with the exposed tape facing you.

2

Start play.

For the United Kingdom and Continental Europe

Every press will change the direction.
F ▷: Forward side (front side) will play.
◁ R: Reverse side will play.

For Australia, N.Z., the Middle East and Southeast Asia

To play the other side of the tape, turn the tape over and restart play.



Volume adjustment



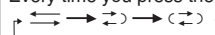
Stop



Reverse mode selection



Every time you press the button:



- One side is played.
- ↔ Both sides are played (forward → reverse).
- ↺ Both sides are played repeatedly until [■, STOP] is pressed.

Fast-forward and rewind (while stopped)



Finding the beginning of a track (TPS: Tape Program Sensor) (during play)

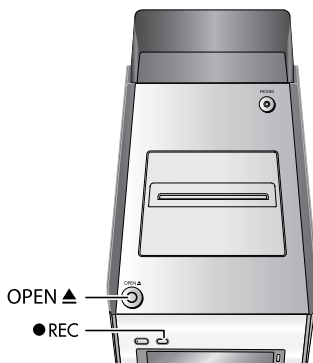


TPS finds the beginning of a track and resumes play from there. Each press increases the number of tracks skipped, up to a maximum of 9.

TPS may not operate correctly in the following situations:

- If the interval between tracks is less than 4 seconds
- If there is noise between tracks
- If there are silent parts within tracks

Recording



Types of tapes which can be recorded correctly

Use normal position tapes.

High position and metal position tapes can be used, but the unit will not be able to record or erase them correctly.

Before recording

1. Wind up the leader tape so recording can begin immediately.

For the United Kingdom and Continental Europe

2. Press [PLAY MODE] to select the reverse mode.



One side only records.



Both sides record (forward → reverse)

While recording, if a track is cut off in the middle at the end of the front side, it is re-recorded from the beginning on the reverse side.

At the end of the reverse side, recording stops and the current track will be interrupted.

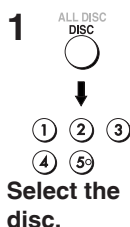
- “↔” automatically changes to “→” when you start recording.

Volume, surround effects, sound field and quality

- Recording level is set automatically.
- The volume, sound field and quality have no effect on recording. They can be adjusted for playback.
- Multi-channel sources are automatically down-mixed to 2 channels during recording.

Recording from disc(s)

- Insert the cassette (⇒ page 23)
- Insert the disc(s) you want to record (⇒ Discs—Basic play, page 12).



Recording specific disc(s) or tracks

- Insert the cassette (⇒ page 23)
- 1 Program the tracks (⇒ page 15).
 - 2 Press [SHIFT] + [●REC] (main unit: [●REC]) to start recording.

If the tape finishes before the disc

The disc continues playing. Press [■, STOP] to stop it.

Recording from the radio

- Insert the cassette (⇒ page 23)
- 1 Tune to the station (⇒ The radio, page 22).
 - 2 Press [SHIFT] + [●REC] (main unit: [●REC]) to start recording.
- When recording an AM broadcast, sound is momentarily interrupted when you start and stop the recording.

Recording from an external unit

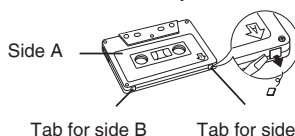
For connections and operation, ⇒ “Using an external unit”, page 30.

- Insert the cassette (⇒ page 23)

- 1 Press [TUNER/AUX] to select “AUX”.
- 2 Press [SHIFT] + [●REC] (main unit: [●REC]) to start recording.
- 3 Start play on the external source.
(For details, refer to the external unit's instruction manual.)

Erasure prevention

Use a screwdriver or similar object to break out the tab.



To record on the tape again, cover the hole with adhesive tape.



Erasing recordings

1. Press [TAPE ◀▶] and then [■, STOP].
2. Press [SHIFT]+[●REC] (main unit: [●REC]).

For the Middle East and Southeast Asia

Disconnect the microphone.

To stop recording

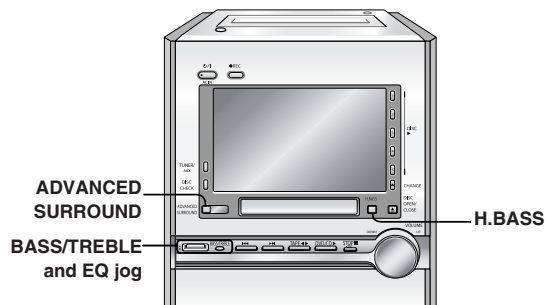
Press [■, STOP].

When recording discs, the disc also stops.

For Australia, N.Z., the Middle East and Southeast Asia

To record or erase the other side, turn the tape over.

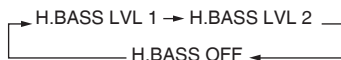
Your attention is drawn to the fact that recording pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.



SUBWOOFER H.BASS Enhancing the bass

Press [H.BASS] to select a setting.

Every time you press the button:



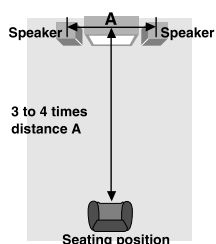
- Actual effect depends on the disc.

MORE-MASTER SURROUND Advanced Surround

(2 channels or more)

Enjoy a surround-like effect when using front speakers or headphones. The effect broadens when playing discs with surround effects and sound seems to come from speakers on either side of you.

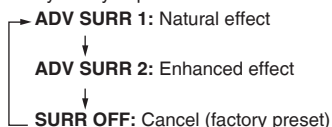
Optimum seating position



Press [SURROUND] (main unit: [ADVANCED SURROUND]).

ADV SURR 1

Every time you press the button:



- This does not work or has less effect with some discs.
- Turn off if it causes distortion.
- Do not use in combination with surround effects on other equipment.

APPLY SOUND Changing sound field and quality

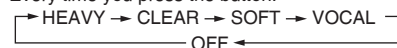
Preset EQ

1 Press and hold [SOUND] to select "PRESET EQ".

Every time you press and hold the button:
MANUAL EQ ↔ PRESET EQ

2 Press [SOUND] to select a setting.

Every time you press the button:



HEAVY: Adds punch to rock

CLEAR: Clarifies higher sounds

SOFT: For background music

VOCAL: Adds gloss to vocal

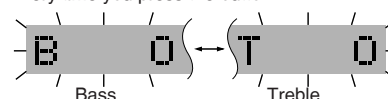
Manual EQ

1 Press and hold [SOUND] to select "MANUAL EQ".

Every time you press and hold the button:
MANUAL EQ ↔ PRESET EQ

2 Press [SOUND] to select a setting.

Every time you press the button:

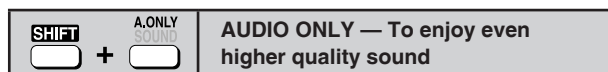


3 Press [–, +, VOLUME] while either "B" (bass) or "T" (treble) is flashing to change the level.

On the main unit

1. Press [BASS/TREBLE] to select "B" or "T".
2. Push the EQ jog up or down to change the level.

Sound field and sound quality



You can enjoy higher quality audio by stopping the video output.

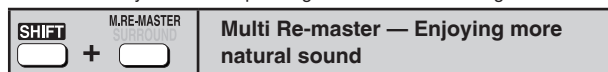
During play

Press **[SHIFT] + [A.ONLY]**.

- AUDIO ONLY cancels if you press [SHIFT]+[A.ONLY] again or switch the unit to standby.
- There is output to the screen only when:
 - the disc is stopped.
 - performing operations such as searching.
 - on screen display is displayed.

Note

The feature may not work depending on the discs' recording.



RAM DVD-A DVD-V CD

Discs recorded with multi channels LPCM at 44.1 kHz or 48 kHz

This feature gives you a more natural sound by adding the higher frequency signals not recorded on the disc.

WMA MP3

Discs recorded at 44.1 kHz or 48 kHz

This feature reproduces the frequencies lost during recording to give you a sound closer to the original.

During play

Press **[SHIFT]+[M.RE-MASTER]**.

M. RMTR 1

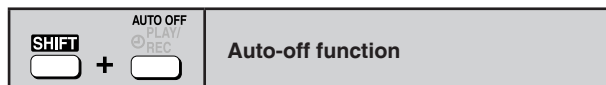
Setting	RAM DVD-A DVD-V CD Type of music	WMA MP3 Effect level
1	High tempo (e.g., pops and rock)	Light
2	Various tempos (e.g., jazz)	Medium
3	Low tempo (e.g., classical)	Strong
Off	Off	Off

Note

The actual output sampling frequency depends on the PCM Digital Output setting (⇒ PCM Digital Output, page 21) when using a digital connection (⇒ Home Theater — Enjoying more powerful sound, page 30).

Convenient functions

⇒ Page 11 for the position of the remote control buttons.



Only when disc or tape is selected as the source

To save power, the unit turns off if it is left unused for 10 minutes.

Press **[SHIFT] + [AUTO OFF]**.

"A.OFF" is shown on the display.

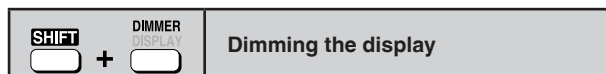
This function does not work if the source is tuner or AUX.

To cancel

Press **[SHIFT]+[AUTO OFF]** again to clear "A.OFF" from the display.

For your reference

"A.OFF" remains displayed if disc or tape is selected as the source.



Use this when you are going to sleep or any other time you would prefer to dim the display panel.

Press **[SHIFT] + [DIMMER]**.

To return to the original brightness, press **[SHIFT]+[DIMMER]** again.



Press **[MUTING]**.

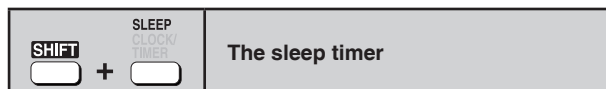


Volume is reduced to minimum.

To cancel

Press **[MUTING]** again or reduce the volume to minimum, then raise it to the required level.

Muting also cancels when you switch the unit to standby.



This timer turns the unit off after a set time.

While enjoying the desired source:

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

Every time you press the button:

SLEEP 30 → SLEEP 60 → SLEEP 90 → SLEEP 120 → SLEEP OFF

To cancel the sleep timer

Press **[SHIFT]+[SLEEP]** to select "SLEEP OFF".

To confirm the remaining time

Press **[SHIFT]+[SLEEP]** once.

The remaining time is shown for about 5 seconds.

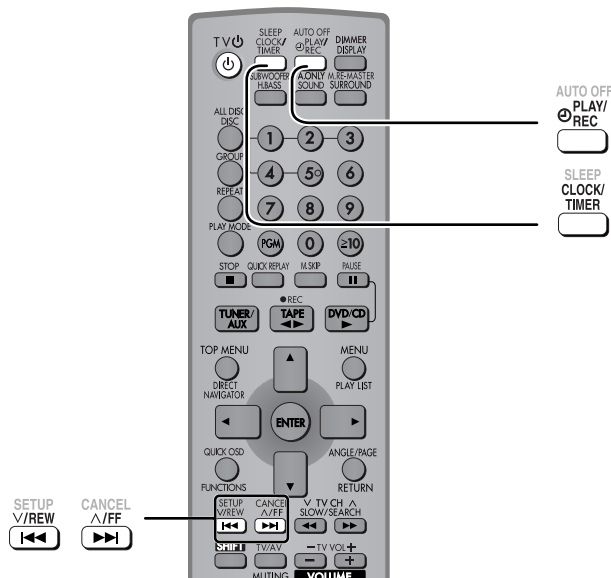
To change the setting

Press **[SHIFT]+[SLEEP]** to select the new setting.

You can use the sleep timer in combination with the play/record timer. Make sure the unit is off before the play/record timer's start time.

Note

The sleep timer will be turned off when you start recording from a disc.



The play/record timer

You can set the timer to come on at a certain time to wake you up (play timer) or to record a radio station or from the external source (record timer).

The play and record timers cannot be used together.

- **Switch on the unit and set the clock** (⇒ Setting the time, page 9).
- **For the play timer**, prepare the desired music source (tape, CD, radio, or external), and set the volume.
- **For the record timer**, check the cassette's erasure prevention tabs (⇒ Erasure prevention, page 24) and insert the tape (⇒ Cassette tapes, page 23). Tune to the radio station (⇒ The radio, page 22) or select the external source (⇒ Using an external unit, page 30).

1 Press [CLOCK/TIMER] to select the timer function.

Every time you press the button:

CLOCK → **PLAY** → **REC**

↑ Previous display ↓

PLAY: to set the play timer

REC: to set the record timer

2 ON time setting

① (Within 6 seconds or so)

Press [**REW**] or [**FF**] to set the start time.

② Press [CLOCK/TIMER].

3 OFF time setting

① Press [**REW**] or [**FF**] to set the finish time.

② Press [CLOCK/TIMER].

The start and finish times are now set.

4 Press [PLAY/REC] to display the timer indicator.

PLAY: to turn the play timer on

REC: to turn the record timer on

(The indicator doesn't appear if the start and finish times or the clock have not been set.)

5 Press [OFF] to turn the unit off.

The unit must be off for the timers to operate.

- **Play timer**: Play will start in the set condition at the set time with volume increasing gradually to the set level.
- **Record timer**: The unit comes on 30 seconds before the set time with the volume muted.

To cancel the timer

Press [**PLAY/REC**] to clear the timer indicator from the display. (The timer comes on at the set time everyday if the timer is on.)

To change the settings (when the unit is on)

To change the play/record times

Do steps 1, 2, 3 and 5.

To change the source or volume

1. Press [**PLAY/REC**] to clear the timer indicator from the display.
2. Make changes to the source or volume.
3. Do steps 4 to 5.

To change the timer

Press [**PLAY/REC**] to select the desired timer.

Every time the button is pressed:

PLAY → **REC**

↑ (off) ↓

To check the settings

Press [CLOCK/TIMER] while the unit is on to select "**PLAY**" or "**REC**".

The settings are shown in the following order:

Play timer: start time → finish time → source → volume

Record timer: start time → finish time → source

To check the settings while the unit is off, press [CLOCK/TIMER] twice.

If you use the unit after the timers are set

After using, check that the correct tape or disc is loaded before turning the unit off.

Note

- If you turn the unit off and on again while a timer is functioning, the finish time setting will not be activated.
- If you selected AUX as the source, when the timer comes on, the unit turns on and engages "AUX" as the source. If you want to playback or record from a connected unit, set that unit's timer to the same time. (See the connected unit's instruction manual.)



Before enjoying karaoke

- Lower the microphone volume with [SHIFT]+[MIC VOL], then connect the microphone to the microphone jack "MIC".
Use a dynamic microphone.
Plug type: 3.5 mm monaural.
- If a strange noise (howling) is emitted during use, move the microphone away from the speakers, or turn down the microphone volume.
- When you are not using the microphone, disconnect it from the microphone jack, and turn down the microphone volume level to "MIC OFF".

Enjoying karaoke with karaoke DVD and VCD

DVD-A DVD-V VCD

1



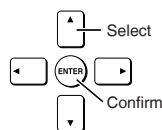
Start play.
(⇒ page 12)

2



Show the audio menu on the television.

3



Make the selection.
(⇒ see below)

4

Start singing.
(⇒ page 29, Mic volume adjustment)

Enjoying karaoke with other sources

You can also do karaoke with discs other than those described above, and also with the radio, cassettes, and equipment connected to this unit.

1

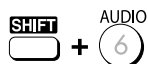
Start play.

Refer to the pages for the source

- Discs: ⇒ page 12
- The radio: ⇒ page 22
- Cassette tapes: ⇒ page 23
- An external sources: ⇒ page 30, Using an external unit

2

Only necessary if the vocals and melody are split between the left and right channels.



Make the selection.
(⇒ see below)

3

Start singing.
(⇒ page 29, Mic volume adjustment)

Even if the vocals and melody are not split, you may still be able to lower the volume of the vocals. (⇒ page 29, Vocal mute function)

Audio mode

Karaoke DVD-Video

Solo

- Off : No vocal
- On : Vocal

Duet

- Off : No vocal
- V1+V2 : Vocal 1 and 2
- V1 : Vocal 1
- V2 : Vocal 2

- Choose "Off" for karaoke.
- Choose "V1" or "V2" to duet with the player.

Karaoke VCD, DVD-RAM, and other sources

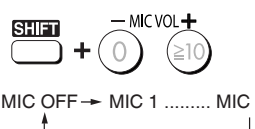
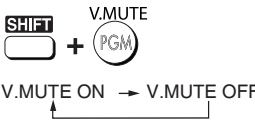
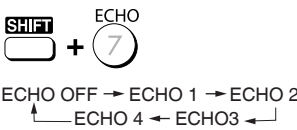
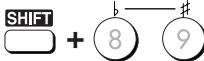
Television displays are shown in parentheses ().

NORMAL (LR): Left channel sound is heard from the left speaker and right channel sound is heard from the right speaker — vocal and accompaniment

MONO L (L): Only left channel sound — no vocal

MONO R (R): Only right channel sound — vocal

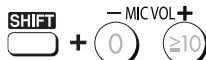
- Select no vocal for karaoke.
- Vocal and no vocal may be reversed.

Mic volume adjustment	 MIC OFF → MIC 1 MIC 7
Volume adjustment	 VOLUME
Vocal mute function	 V.MUTE ON → V.MUTE OFF Use this function when stereo. The voice portion of the track is blocked out but not the background music. Voice and/or static may be reproduced with the following types of software. • Software recorded monaural • Classical music or works performed by a limited number of instruments • Chorus works or duets
Adding an echo effect	 ECHO OFF → ECHO 1 → ECHO 2 ECHO 4 ← ECHO 3 ← The effect increases with the level.
Changing the key	 Key changes : # (raises the key) : - 6 to +6 b (lowers the key) : +6 to - 6

To record your karaoke performance

Prepare for recording (⇒ page 24).

Prepare and select the source and select the audio mode (⇒ page 28).

1  Adjust the mic volume.	2  Press and then start singing.
--	---

You can also use the microphone without any backing music.

- ① Press [SHIFT]+[●REC] and speak through the microphone.
- ② Adjust the mic volume.

To stop recording

Press [■, STOP].

Using other equipment

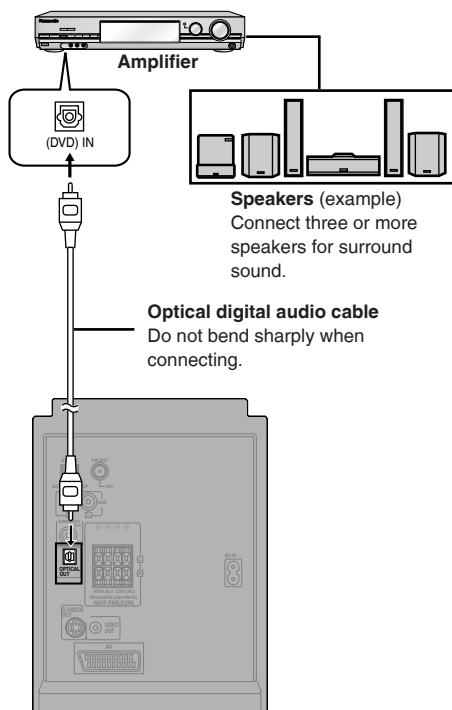
➔ Page 11 for the position of the remote control buttons.

Before connection

- Disconnect the AC mains lead.
- Turn off all equipment and read the appropriate operating instructions.
- The equipment connections described are examples only.

Home Theater — Enjoying more powerful sound

Enjoy the powerful movie theater and hall-like sound available with multiple channel audio found on DVD-Video by connecting an amplifier and speakers. **(DVD-A)** Even if using this connection, output will be only 2 channels.)



To enjoy multi-channel surround sound

Connect an amplifier with a built-in decoder or a decoder-amplifier combination.

Change the settings in "Audio" tab (➔ page 21).

- You can only use DTS Digital Surround decoders that are compatible with DVD.

Recording Output

- With DVD, the following conditions must be met:
 - the disc doesn't have protection preventing digital recording
 - the recording equipment can handle signals with a sampling frequency of 48 kHz
- You cannot record WMA/MP3.

When recording DVDs, make the following settings.

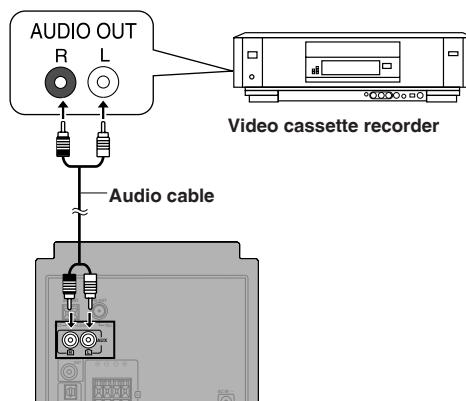
- Advanced Surround: SURR OFF (➔ page 25)
- PCM Digital Output: Up to 48 kHz (➔ page 21)
- Dolby Digital, DTS Digital Surround and MPEG¹ : PCM (➔ page 21)

¹ Except for Southeast Asia

Peripheral cables and equipment are sold separately unless otherwise indicated.

Using an external unit

You can playback the sound from a video cassette recorder, tape deck, laser disc player, etc., through this unit's speakers.



When connecting a record player

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

TUNER/AUX

To play

1 Press [TUNER/AUX] to select "AUX".

The unit comes on.

Every time you press the button:

FM → AM → **AUX**

2 Start playback from the external source.

(For details, refer to the external unit's instruction manual.)

Operating a television

Face the remote control at the television for the following operations.

Turning the television on/off

Press [SHIFT] + [TV ⏻].

Switching the television's video input mode

Press [SHIFT] + [TV/AV].

Changing channels

Press [SHIFT] + [^ TV CH] or [SHIFT] + [TV CH ∇].

Adjusting the volume

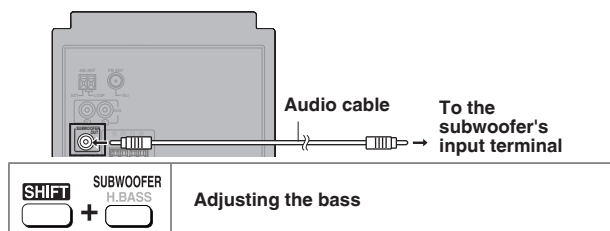
Press [SHIFT] + [– TV VOL] or [SHIFT] + [TV VOL +].

Note

Some models cannot be operated by this remote control.

Enjoying more powerful bass

- Connect an active subwoofer (not included).
- Place the subwoofer as close as possible to the front center.



Press [SHIFT] + [SUBWOOFER].

SUB.W ON

Every time you do this:

SUB.W ON ↔ SUB.W OFF

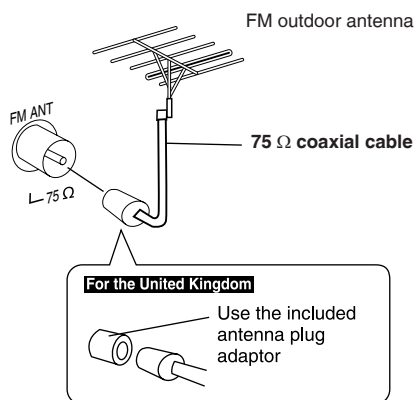
Adjust the volume on the subwoofer to suit your preference.

Other antenna connections

Use outdoor antennas if radio reception is poor.

FM outdoor antenna (using a television antenna)

- Disconnect the FM indoor antenna.
- The antenna should be installed by a competent technician.



Changing the remote control code

Change the code if you find the remote control unintentionally also controls other equipment.

1 Change the main unit's code.

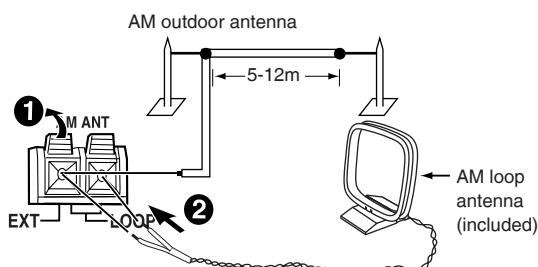
- ① Press [TUNER/AUX] to select "AUX".
- ② Press and hold [TUNER/AUX] on the main unit and then press and hold [2] (or [1]) on the remote control.
"REMOTE 2" appears on the display.

2 Change the remote control's code.

Press and hold [ENTER] and [2] (or [1]) on the remote control for at least 2 seconds.

If the remote control and main unit are using different codes, a message appears on the main unit's display showing the main unit's current code. Follow step 2 to change the remote control's code to match it.

AM outdoor antenna



- Run a piece of vinyl wire horizontally across a window or other convenient location.
- Leave the loop antenna connected.

Note

Disconnect the outdoor antenna when the unit is not in use.
Do not use the outdoor antenna during a lightning storm.

Troubleshooting guide

Before requesting service, make the following checks. If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, consult your dealer for instructions.

Reference pages are shown in parentheses ().

Power

No power.	• Insert the AC mains lead securely. (8)
The unit is automatically switched to the standby mode.	• The unit was switched to standby by the sleep timer or auto-off function. (26)

Operation

No response when any buttons are pressed.	• Some operations may be prohibited by the disc. • The unit may not be operating properly due to lightning, static electricity or some other external factor. Turn the unit off and then back to ON. Alternatively, press [⏻] to switch the unit to standby mode, disconnect the AC mains lead, and then reconnect it.
No operations can be performed with the remote control.	• 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 sensor and operate. (10)
Cannot switch on the television with the remote control.	• Press [SHIFT]+[TV ⏻] first to operate the television. (30)
Play doesn't start (or stops immediately) when you press [DVD/CD ▶].	• Condensation has formed: wait 1 to 2 hours for it to evaporate. • This unit cannot play discs other than the ones listed in these operating instructions. (4) • You can only play DVD-Video if their region number is the same or includes the same region number as the unit or if DVD-Video is marked "ALL". Confirm the region number for the unit on the rear panel. (Front cover) • The disc may be dirty and may require cleaning. (5) • Ensure that the disc is loaded with the label of the side to be played facing upwards. (12) • Check that the DVD-RAM has something recorded on it.
Cannot select alternative languages.	• This function is dependent on software availability. • Try selecting from the disc's menu if one is available. (13)
No menu play.	• This function is dependent on software availability.
No subtitles.	• This function is dependent on software availability. • Subtitles are cleared from the television. Turn on the subtitles. (14)
The position of the subtitles is incorrect.	• Change the position of the subtitles with "Subtitle Position" in the Display Menu. (19)
Soundtrack and/or subtitle language is not the one selected with the Setup menus.	• This function is dependent on software availability.
Cannot change angle.	• This function is dependent on software availability. Even if a disc has a number of angles recorded, these angles may be recorded for specific scenes only.
Cannot access the Setup menu.	• Select "DVD/CD" as the source. • Cancel program and random play. (14, 15)
Cannot add markers.	• You cannot add markers while playing a play list or if the disc's play time doesn't appear on the unit's display.
There are already markers. RAM	• The unit reads and displays the markers added with a DVD video recorder. You can clear them but they will reappear when you switch the unit to standby, change the source, or open the disc tray.
Cannot select random or program play.	• You cannot select random or program play with some DVD-Video.
Folders deeper than the eighth layer on a data disc are not displayed correctly.	• Folders deeper than the eighth layer are displayed as the eighth layer.
You have forgotten your ratings password. Reset all the Setup settings to the factory preset.	• While stopped and "DVD/CD" is the source, press and hold [■, STOP] on the unit and [⏻10] on the remote control for about 3 seconds until "Initialised" disappears from the television. Turn the unit off and on again. All settings will return to the default values.
Cannot eject disc.	• The unit may not operate properly if the disc is damaged or dirty. Press [⏻] and after the display disappears, wait a few seconds, then press [⏻] again and eject the disc.

Listening to the radio

Noise is heard. "ST" flickers or doesn't light. Sound is distorted.	• Adjust the position of the FM or AM antenna. • Use an outdoor antenna. (31)
A beat sound is heard.	• Turn the television off or separate it from the unit.
A low hum is heard during AM broadcasts.	• Separate the antenna from other cables and cords.
For the Middle East and Southeast Asia The correct AM frequency can't be tuned in.	• Change the frequency step. Press [TUNER/AUX] to select "FM", then press and hold [TUNER/AUX] on the unit for 10 seconds to change the step to suit your area. (22)

Using the cassette deck

Poor quality sound.	• Clean the heads. (34)
Recording is not possible.	• If the erasure prevention tabs have been removed, cover the holes with adhesive tape. (24)

Sound

No sound. Distorted sound.	• Check the connections. (6) • Turn the volume up. • Turn muting off. (26) • Turn Advanced surround off if it causes distortion. (25) • Switch off the unit, determine and correct the causes, then switch the unit on. Causes include: – Shorting (bare wires touching) of positive and negative speaker wires. – Using speakers with an impedance lower than that rated for this unit. – Straining of the speakers through excessive volume or power. – Using the unit in a hot environment without proper ventilation.
Piercing noise comes from the speakers.	• If you have connected this unit to other equipment through the OPTICAL OUT terminal, ensure you have selected the correct settings for "Dolby Digital", "DTS Digital Surround" and MPEG¹ in the Setup menus' "Audio" tab. (21) ¹ Except for Southeast Asia

Picture

Picture distorted.	• Some distortion is normal during search.
No picture.	• Check the connection. • Make sure the television is on. • Ensure the television's video input setting (e.g., VIDEO 1) is correct.
The picture shown on the television is not normal. (The sides of the picture are cut off, the picture is stretched horizontally, or black bands appear at the top and bottom of the screen.)	• Go to "Video" tab in the Setup menus, and change "TV Aspect" to suit your television. (20) • Use the television to change the aspect to the correct one. For Australia, N.Z., the Middle East and Southeast Asia If your television cannot change the aspect when input is progressive, try changing 4:3 Aspect in Display Menu. (19) • Ensure that the unit is connected directly to the television, and is not connected through a video cassette recorder. • Change the size with the zoom function. (19) • For Australia, N.Z., the Middle East and Southeast Asia Connect to the component video (480P) input terminals on a television compatible with this unit's copy guard system. You cannot view progressive video if your television is not compatible. (7)
For Australia, N.Z., the Middle East and Southeast Asia There is ghosting when progressive output is on.	• Change "Video Output Mode" to "480I" so "PROG." on the display goes out. This problem is caused by the editing method or material used on DVD-Video, but should be corrected if you use interlace output. (19)
Picture quality is poor.	• Check the settings in Picture Menu. (19)
The picture on the television disappears or stripes appear on the screen.	• Mobile telephone chargers can cause some disturbance. • The location and orientation of the antenna are incorrect. If you are using an indoor antenna, change to an outdoor antenna. (31) • The television antenna wire is too close to the unit. Separate the antenna wire of the television from the unit.
Menus not displayed correctly.	• Change the zoom ratio to "x1.00". (19) • Set "Subtitle Position" in Display Menu to "0". (19) • For Australia, N.Z., the Middle East and Southeast Asia Set "4:3 Aspect" in Display Menu to "Normal". (19)

Unit displays

Although the unit is in standby mode, the display lights up and changes continuously.	• Turn off the demo function. (If you set the clock, the demo function turns off automatically.) (9)
The display is dark.	• Press [SHIFT]+[DIMMER] until the display returns to the original brightness. (26)
"DVD NO PLAY"	• You inserted a disc which the unit cannot play; insert one that can. (4) • You inserted a blank DVD-RAM disc.
"DVD NO DISC"	• You haven't inserted a disc; insert one. • You haven't inserted the disc correctly; insert it correctly. (5, 12)
"F61"	• Check and correct the speaker cord connections. (6) If this does not fix the problem, there is a power supply problem. Consult the dealer.
"DVD U11"	• Disc is dirty. Wipe it clean. (5)
"ERROR"	• Incorrect operation performed. Read the instructions and try again.
"DVD H□□" □□ stands for a number.	• Trouble may have occurred. The number following "H" depends on the status of the unit. Reset procedure: Press [⏻] to switch the unit to standby mode and then back to ON. Alternatively, press [⏻] to switch the unit to standby mode, 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.

Television displays

"Cannot play(display) group xx, content xx."	• You are trying to display incompatible contents.
No on-screen display.	• Go to "Display" tab in the Setup menus, and select "On" for "On-Screen Messages". (21)
The disc's menu is displayed in a different language.	• Go to "Disc" tab in the Setup menus, and select the preferred language for "Menus". (20) (This function is dependent on software availability.)

Glossary

Decoder

A decoder restores the coded audio signals on DVDs to normal. This is called decoding.

Dolby Digital

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

DTS (Digital Theater Systems)

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

Dynamic range

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

Film and video

DVD-Videos are recorded using either film or video. Usually, film is recorded at 24 frames per second, the rate movies are filmed at, while video is recorded at 30 frames per second.

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.

Interlace and progressive output

NTSC, the video signal standard, has 480 interlaced (I) scan lines, whereas progressive scanning uses twice the number of scan lines. This is called 480P. The video signals output from this unit's COMPONENT VIDEO OUT terminals (Y, P_B, P_R) allow you to enjoy higher quality pictures than if the signals were output from the VIDEO OUT terminal or S-VIDEO OUT terminal.

I/P/B

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

I: Intra coded picture

This picture has the best quality and is the best to use when adjusting the picture.

P: Predictive coded picture

This picture is calculated based on past I or P-pictures.

B: Bidirectionally-predictive coded picture

This picture is calculated by comparing past and future I and P-pictures so it has the lowest volume of information.

Linear PCM (pulse code modulation)

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

Playback control (PBC)

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

Maintenance

To clean this unit, wipe with a soft, dry cloth.

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

For a cleaner, crisper sound (cassette deck)

Clean the heads regularly to assure good quality playback and recording. Use a cleaning tape (not included).

When moving the unit

- 1 Remove all discs.
- 2 Press **[⏻/I]** on the main unit to turn it off.
- 3 Disconnect the AC mains lead.



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

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

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Specifications

AMPLIFIER SECTION

RMS Output Power Stereo mode (Both channel driven)

10% total harmonic distortion	
1 kHz (Low channel)	40 W per channel (6 Ω)
8 kHz (High channel)	40 W per channel (6 Ω)
Total RMS Stereo mode power	160 W

For the United Kingdom, Continental Europe, Australia and N.Z.

DIN Output Power Stereo mode (Both channel driven)

10% total harmonic distortion	
1 kHz (Low channel)	35 W per channel (6 Ω)
8 kHz (High channel)	35 W per channel (6 Ω)
Total DIN Stereo mode power	140 W per channel

For the Middle East and Southeast Asia

PMPO Output power	1600 W
-------------------	--------

Phone jack terminal	Stereo, 3.5 mm jack
---------------------	---------------------

For the Middle East and Southeast Asia

MIC	0.7 mV, 680 Ω, Stereo, 3.5 mm jack
-----	------------------------------------

FM TUNER SECTION

Frequency range	87.50 – 108.00 MHz (50 kHz step)
Sensitivity	1.6 μV (IHF)
S/N 26 dB	1.5 μV
Antenna terminals	75 Ω (unbalanced)
Preset stations	15

AM TUNER SECTION

Frequency range	
For the United Kingdom, Continental Europe, Australia and N.Z.	522 – 1629 kHz (9 kHz steps)
For the Middle East and Southeast Asia	522 – 1629 kHz (9 kHz steps)
	520 – 1630 kHz (10 kHz steps)

Sensitivity	
S/N 20 dB at 999 kHz	560 μV/m
Image rejection at 999 kHz	40 dB
Preset stations	15

CASSETTE DECK SECTION

Track system	4-track, 2-channel
Heads	
Record/playback	Solid permalloy head
Erase	Double gap ferrite head
Motor	DC servo motor
Recording system	AC bias 100 kHz
	AC erase 100 kHz
Tape speed	4.8 cm/sec

Overall frequency response (+3, –6 dB) at DECK OUT	
Normal	35 Hz – 14 kHz
S/N ratio	50 dB (A weighted)
Wow and flutter	0.18% (WRMS)
Fast forward and rewind time	Approx. 120 seconds with C-60 cassette tape

DISC SECTION

Discs played [8 cm or 12 cm]

- (1) DVD-RAM (DVD-VR compatible, JPEG formatted disc)
- (2) DVD-Audio
- (3) DVD-Video
- (4) DVD-R (DVD-Video compatible)
- (5) DVD-RW, +R, +RW
- (6) CD-Audio (CD-DA)
- (7) Video CD
- (8) SVCD (Conforming to IEC62107)
- (9) CD-R/CD-RW (CD-DA, Video-CD, SVCD, MP3, WMA, JPEG formatted disc)
- (10) MP3/WMA¹
 - Compatible compression rates: MP3: between 32 kbps and 320 kbps WMA: between 48 kbps and 320 kbps
- (11) JPEG¹
 - Exif Ver 2.1 JPEG Baseline files
 - Picture resolution: between 320 x 240 and 6144 x 4096 pixels (Sub sampling is 4:2:2 or 4:2:0)
- (12) HighMAT Level 2 (Audio and Image)
- (13) HDCD

¹ The total combined maximum number of recognizable audio and picture contents and groups: 4000 audio and picture contents and 400 groups.

Audio output	
Number of channels	2
Digital audio output	
Optical digital output	Optical terminal
Pick up	
Wavelength	
DVD	662 nm
CD	785 nm
Laser power	CLASS 2/CLASS 3a
NORSK	
Boigelengde	
DVD	662 nm
CD	785 nm
Laserstyrke	Ingen farlig stråling sendes ut

VIDEO SECTION

Video system	PAL625/50, PAL525/60, NTSC
Composite video output	
Output level	1 Vp-p (75 Ω)
Terminal	Pin jack (1 system)
S-VIDEO output	
Y output level	1 Vp-p (75 Ω)
C output level	0.3 Vp-p (75 Ω) (PAL)
	0.286 Vp-p (75 Ω) (NTSC)
Terminal	S terminal (1 system)

For the United Kingdom and Continental Europe

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)
Terminal	SCART jack

For Australia, N.Z., the Middle East and Southeast Asia

Component video output (480P/480i)	
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)
Terminal	Pin jack (Y:green, PB: blue, PR:red)(1 system)

SPEAKER SECTION

Type	3 way, 3 speaker system (Bass reflex)
Speaker units	
Full range	10 cm cone type
Tweeter	6 cm cone type
Super tweeter	Dome type
Impedance	
High	6 Ω
Low	6 Ω
Input power (IEC)	80 W (Max)
Output sound pressure level	80 dB/W (1.0 m)
Crossover frequency	3 kHz, 10 kHz
Frequency range	42 Hz–50 kHz (–16 dB)
	52 Hz–45 kHz (–10 dB)
Dimensions (WxHxD)	145 x 249 x 225 mm
Mass	2.34 kg

GENERAL

Power supply	
For Continental Europe	AC 230 V, 50 Hz
For the United Kingdom, Australia and N.Z.	AC 230–240 V, 50 Hz
For the Middle East and Southeast Asia	AC 110 V/127 V/220–240 V, 50 Hz
Power consumption	
For the United Kingdom, Continental Europe, Australia and N.Z.	140 W
For the Middle East and Southeast Asia	145 W
Dimensions (WxHxD)	175 x 248 x 388 mm
Mass	
For the United Kingdom, Continental Europe, Australia and N.Z.	5.8 kg
For the Middle East and Southeast Asia	5.9 kg
Operating temperature range	+ 5°C to + 35°C (+ 41°F to + 95°F)
Operating humidity range	5% to 90% RH (no condensation)

Power consumption in standby mode

For the United Kingdom, Continental Europe, Australia and N.Z.	0.5 W
For the Middle East and Southeast Asia	0.6 W

Note

1. Specifications are subject to change without notice. Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.
3. The labels "HIGH (HF)" and "LOW (LF)" on the rear of the speakers refer to High frequency and Low frequency.

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!

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.

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

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.

For the Middle East and Southeast Asia

THIS UNIT IS INTENDED FOR USE IN TROPICAL CLIMATES.

For others

THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.

SUOMI

VAROITUS!

- ÄLÄ ASENNATA TAI LAITTA TÄTÄ LAITETTA KABINETTITYYPPISEEN KIRJAKAAPPIIN TAI MUUHUN SULJETTUUN TILAAN, JOTTA TUULETUS ONNISTUISI. VARMISTA, ETTÄ VERHO TAI MIKÄÄN MUU MATERIAALI EI HUONONNA TUULETUSTA, JOTTA VÄLTETTÄISIIN YLIKUUMENEMISESTÄ JOHTUVA SÄHKÖISKU- TAI TULIPALOVAARA.
- ÄLÄ PEITÄ LAITTEEN TUULETUSAUKKOJA SANOMALEHDELLÄ, PÖYTÄLIINALLA, VERHOLLA TAI MUULLA VASTAAVALLA ESINEELLÄ.
- ÄLÄ ASETA PALAVAA KYNTTILÄÄ TAI MUUTA AVOTULEN LÄHDETTÄ LAITTEEN PÄÄLLE.
- HÄVITÄ PARISTOT LUONTOA VAHINGOITTAMATTOMALLA TAVALLA.

VAROITUS!

LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTA AALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VAROITUS:

TULIPALO-, SÄHKÖISKUVAARAN TAI TUOTETTA KOHTAAVAN MUUN VAHINGON VÄHENTÄMISEKSI EI LAITETTA SAA ALTISTAA SATEELLE, KOSTEUDELLE, VESIPISAROILLE TAI ROISKEELLE, EIKÄ NESTETTÄ SISÄLTÄVIÄ ESINEITÄ, KUTEN ESIMERKIKSI MALJAKOITA, SAA ASETTAA LAITTEEN PÄÄLLE.

Laite tulee asettaa lähelle verkkopistorasiaa ja pistokkeen täytyy olla sellaisessa asennossa, että siihen on helppo tarttua ongelman sattuessa.

TÄMÄ LAITE ON TARKOITETTU KÄYTETTÄVÄKSI LEUDOSSA ILMASTOSSA.

NORSK

ADVARSEL!

- APPARATET MÅ IKKE Plasseres i en bokhylle, et innebygget kabinett eller et annet lukket sted hvor ventilasjonsforholdene er utilstrekkelige. Sørg for at gardiner eller lignende ikke forverrer ventilasjonsforholdene, så risiko for elektrisk sjokk eller brann forårsaket av overheting unngås.
- APPARATETS VENTILASJONSÅPNINGER MÅ IKKE DEKKES TIL MED AVISER, BORDDUKER, GARDINER OG LIGNENDE.
- Plasser ikke åpen ild, slik som levende lys, oppå apparatet.
- Brukte batterier må kasseres uten fare for miljøet.

ADVARSEL!

DETTE PRODUKTET ANVENDER EN LASER. BETJENING AV KONTROLLER, JUSTERINGER ELLER ANDRE INNGREP ENN DE SOM ER BESKREVET I DENNE BRUKSANVISNING, KAN FØRE TIL FARLIG BESTRÅLING. DEKSLER MÅ IKKE ÅPNES, OG FORSØK ALDRI Å REPARERE APPARATET PÅ EGENHÅND. ALT SERVICE OG REPARASJONSARBEID MÅ UTFØRES AV KVALIFISERT PERSONELL.

ADVARSEL:

FOR Å REDUSERE FAREN FOR BRANN, ELEKTRISK STØT ELLER SKADER PÅ PRODUKTET, MÅ DETTE APPARATET IKKE UTSETTES FOR REGN, FUKTIGHET, VANNDRÅPER ELLER VANNSPRUT. DET MÅ HELLER IKKE Plasseres gjenstander fylt med vann, slik som blomstervaser, oppå apparatet.

Utstyret bør plasseres i nærheten av AC-stikkontakten, og støpslet må være lett tilgjengelig hvis det skulle oppstå problemer.

DETTE APPARATET ER BEREGNET TIL BRUK UNDER MODERATE KLIMAFORHOLD.