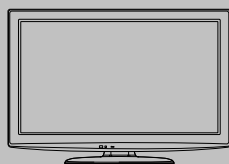


Panasonic[®]

Model No.
TH-L32X25A

Operating Instructions LCD TV



VIERA

VIERA
Link

VIERA
IMAGE VIEWER

AVCHD[™]

DOLBY
DIGITAL

SD
XC

HDMI

Thank you for purchasing this Panasonic product. Please read these instructions before operating your set and retain them for future reference. The images shown in this manual are for illustrative purposes only.

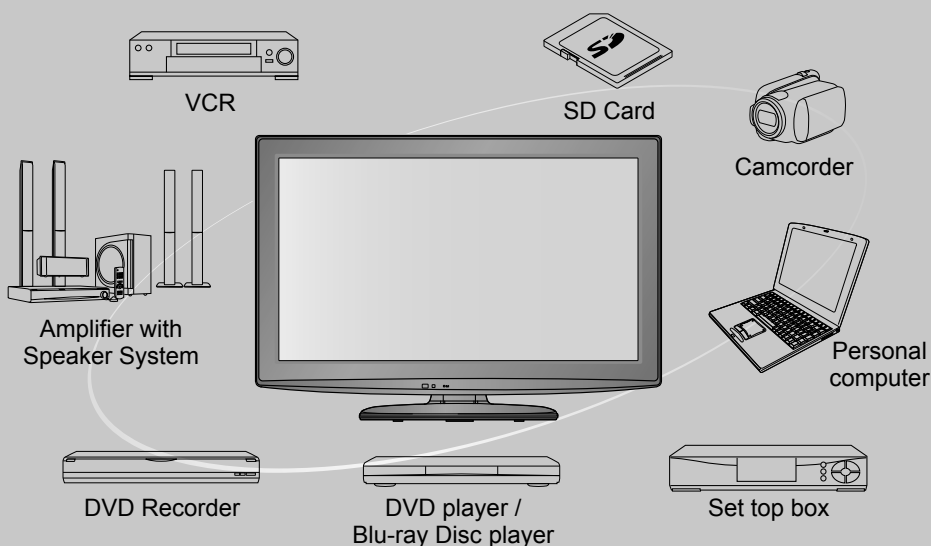
English

YW
TQB4GC0423-1

Experience an amazing level of multimedia excitement

Receive digital terrestrial services using an integrated Digital TV tuner
Sharp pictures with HDMI terminal
Create home theatre and DVD recorder link-ups with "VIERA Link" without complicated settings!

Enjoy rich multimedia



Notice about Digital TV Functions

- The MPEG-4 AVC feature was designed to specifications as we know them today. This specification may be subject to future changes beyond our control that may not guarantee the decoding of such services.

February 2010

This product is licensed under the AVC patent portfolio license for the personal and non-commercial use of a consumer to (i) encode video in compliance with the AVC Standard ("AVC Video") and/or (ii) decode AVC Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a video provider licensed to provide AVC Video. No license is granted or shall be implied for any other use. Additional information may be obtained from MPEG LA, LLC. See <http://www.mpegla.com>.

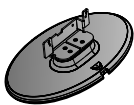
Standard accessories

Check that you have the accessories and items shown ☒

- ☐ Remote Control
- N2QAYB000494



- ☐ Pedestal ➔ p. 6



- ☐ Batteries for the Remote Control (2)
- R6 (AA)



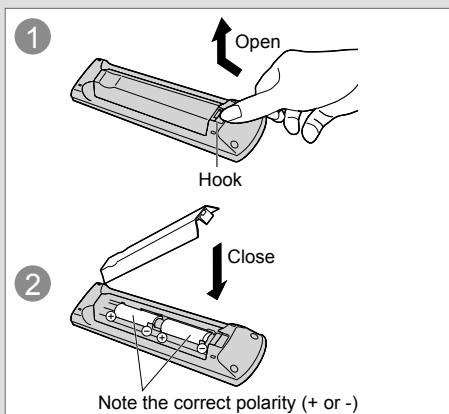
- ☐ Fall-prevention parts ➔ p. 7

- ☐ Operating Instructions with Warranty statement

Caution

- This product contains possibly dangerous parts (such as plastic bags), which can be breathed in or swallowed by young children accidentally. Keep these parts out of reach of young children.

Inserting and removing remote's batteries



Caution

- Incorrect installation may cause battery leakage and corrosion, resulting in damage to the remote control.
- Do not mix old and new batteries.
- Do not mix different battery types (such as alkaline and manganese batteries).
- Do not use rechargeable (Ni-Cd) batteries.
- Do not burn or breakup batteries. Batteries must not be exposed to excessive heat such as sunshine, fire or the like.
- Do not disassemble or modify the remote control.

Contents

Be sure to Read

- Safety Precautions 4
- (Warning / Important Installation Notices)

Quick Start Guide

- Accessories / Options 6
- Basic Connection 8
- Identifying Controls 10
- Auto Tuning 12

Quick Start Guide

Basic Features

- Watching TV 13
- Using TV Guide (Digital TV mode) 16
- Viewing Teletext 17
- Watching External Inputs 19

Basic

Advanced Features

- How to Use VIERA TOOLS 21
- How to Use Menu Functions 22
- Tuning and Editing Channels 28
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Advanced

Technical

- Technical Information 54
- Maintenance 58
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Technical

Safety Precautions

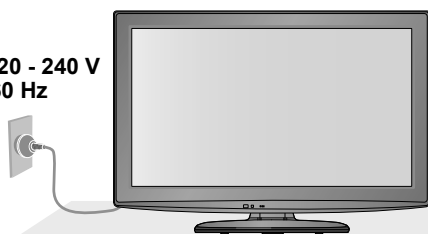
Warning

Handling the mains plug and lead

- Insert the mains plug fully into the socket outlet. (If the mains plug is loose, it could generate heat and cause fire.)
- Ensure that the mains plug is easily accessible.
- Do not touch the mains plug with a wet hand. (This may cause electrical shock.)
- Do not damage the mains lead. (A damaged lead may cause fire or electrical shock.)
 - Do not move the TV with the lead plugged in the socket outlet.
 - Do not place a heavy object on the lead or place the lead near a high-temperature object.
 - Do not twist the lead, bend it excessively, or stretch it.
 - Do not pull on the lead. Hold onto the mains plug body when disconnecting lead.
 - Do not use a damaged mains plug or socket outlet.

If you find any abnormality, remove the mains plug immediately!

**AC 220 - 240 V
50 / 60 Hz**



Power source / Installation

- This TV is designed for:
 - AC 220 - 240 V, 50 / 60 Hz
 - Indoor use
 - Table-top use

Do not remove covers and NEVER modify the TV yourself

- Do not remove the rear cover as live parts are accessible when it is removed. There are no user serviceable parts inside. (High-voltage components may cause serious electrical shock.)
- Have the TV checked, adjusted, or repaired at your local Panasonic dealer.

Do not expose to rain or excessive moisture

- To prevent damage which might result in electric shock or fire, do not expose this TV to rain or excessive moisture. This TV must not be exposed to dripping or splashing water and objects filled with liquid, such as vases, must not be placed on top of or above the TV.

Do not expose to direct sunlight and other sources of heat

- Avoid exposing the TV to direct sunlight and other sources of heat. To prevent fire never place any type of candle or naked flame on top or near the TV.

Do not insert foreign objects into the TV

- Do not allow any objects to drop into the TV through the air vents. (Fire or electrical shock may result.)

Do not place the TV on sloped or unstable surfaces

- The TV may fall off or tip over.

Use only the dedicated pedestals / mounting equipment

- Using an unapproved pedestal or other fixtures may make the TV unstable, risking injury. Be sure to ask your local Panasonic dealer to perform setup.
- Use approved pedestals (p. 6) / wall-hanging brackets (p. 7).

Do not allow children to handle SD Card

- As with any small object, SD Cards can be swallowed by young children. Please remove SD Card immediately after use and store out of reach of children.

Important Installation Notices

■ Install the TV on a stable surface

If a television is not positioned in a sufficiently stable location, it can be potentially hazardous due to falling. Many injuries, particularly to children, can be avoided by taking simple precautions such as:

- Using cabinets or stands recommended by the manufacturer of the television.
- Only using furniture that can safely support the television.
- Ensuring the television is not overhanging the edge of the supporting furniture.
- Do not place the television on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television to a suitable support.
- Do not place the television on cloth or other materials placed between the television and supporting furniture.
- Educating children about the dangers of climbing on furniture to reach the television or its controls.

■ When cleaning the TV, remove the mains plug

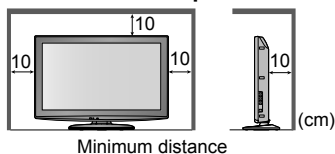
- Cleaning an energized TV may cause electrical shock.

■ When the TV is not going to be used for a long period of time, remove the mains plug

- This TV will still consume some power even in the Off mode, as long as the mains plug is still connected to a live socket outlet.

■ Transport only in the upright position

■ Allow sufficient space around the TV for radiated heat



- When using the pedestal, keep a space between the bottom of the TV and the surface where the TV is set.
- In case of using wall-hanging bracket, follow the manual of it.

■ Do not block the rear air vents

- Blocked ventilation by newspapers, table cloths, curtains, etc. may cause overheating, fire or electrical shock.

■ Do not apply strong force or impact to the display panel

- This may cause damage resulting in injury.

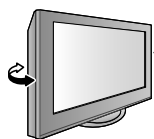
■ Auto power standby function

- If no signal is received and no operation is performed in Analogue TV mode for 30 minutes, the TV will automatically go to standby mode.

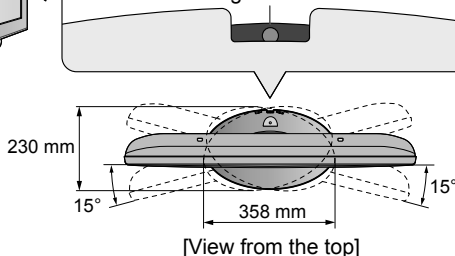
■ Keep the TV away from these types of equipment

- Electronic equipment
In particular, do not place video equipment near the TV. Electromagnetic interference may distort images / sound.
- Equipment with an infrared sensor
This TV also emits infrared rays. This may affect operation of other equipment.

Adjust the LCD panel to your desired angle



Set the mark at the centre as illustrated, to have the swivel positioned at the centre of the rotation angle.



[View from the top]

- Ensure that the pedestal does not hang over the edge of the base even if the TV swivels to the full rotation range.
- Do not place any objects or hands within the full rotation range.

Accessories / Options

Attaching the pedestal

Warning

Do not disassemble or modify the pedestal.

- Otherwise the TV may fall over and become damaged, and personal injury may result.

Caution

Do not use the pedestal for any other TV or displays.

- Otherwise the TV or the display may fall over and become damaged, and personal injury may result.

Do not use the pedestal if it becomes warped or physically damaged.

- If you use the pedestal while it is physically damaged, personal injury may result. Contact your nearest Panasonic dealer immediately.

During set-up, make sure that all screws are securely tightened.

- If insufficient care is taken to ensure screws are properly tightened during assembly, the pedestal will not be strong enough to support the TV, and it might fall over and become damaged, and personal injury may result.

Ensure that the TV does not fall over.

- If the TV is knocked or children climb onto the pedestal with the TV installed, the TV may fall over and personal injury may result.

Two or more people are required to install and remove the TV.

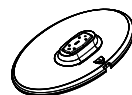
- If two or more people are not present, the TV may be dropped, and personal injury may result.

(A) Assembly screws (4)

(B) Assembly screws (4)

(C) Bracket (1)

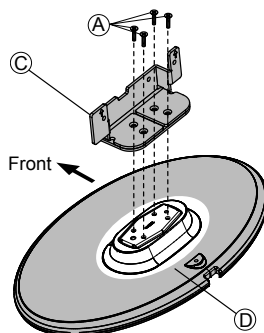
(D) Base (1)



Assembling the pedestal

Use the assembly screws (A) to fasten the bracket (C) to the base (D) securely.

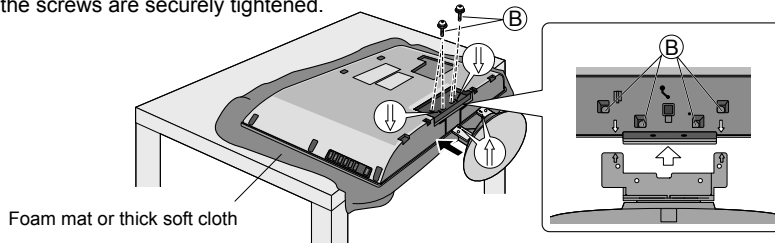
- Make sure that the screws are securely tightened.



Securing the TV

Insert the bracket into the TV, and then fasten securely with the assembly screws (B).

- Make sure that the screws are securely tightened.



Preventing the TV from falling over

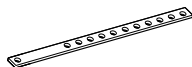
This TV could fall over if it is pushed, pulled or knocked down.

We therefore recommend the TV is secured to the furniture as illustrated.

- This measure is designed to reduce the risk of injury from a falling TV. However, it cannot guarantee protection in all cases.

Fall-prevention parts

(A) Band



(B) Screw

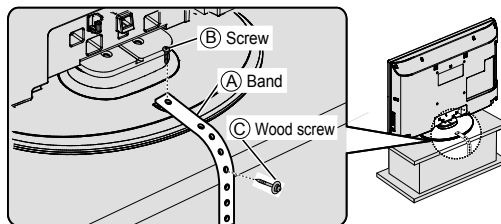


(C) Wood screw



Securing to a furniture

Fix pedestal and furniture together with band.



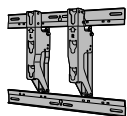
This image is for illustrative purposes only.

Optional accessories

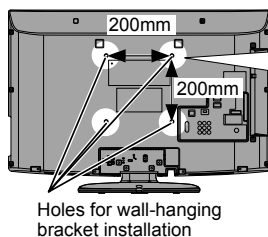
Please contact your nearest Panasonic dealer to purchase the recommended wall-hanging bracket. For additional details, please refer to the wall-hanging bracket installation manual.

Wall-hanging bracket

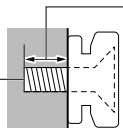
- TY-WK3L2RW



Rear of the TV



Screw for fixing the TV onto the wall-hanging bracket (not supplied with the TV)



Depth of screw:
minimum 10 mm,
maximum 12 mm

[View from the side]

Warning

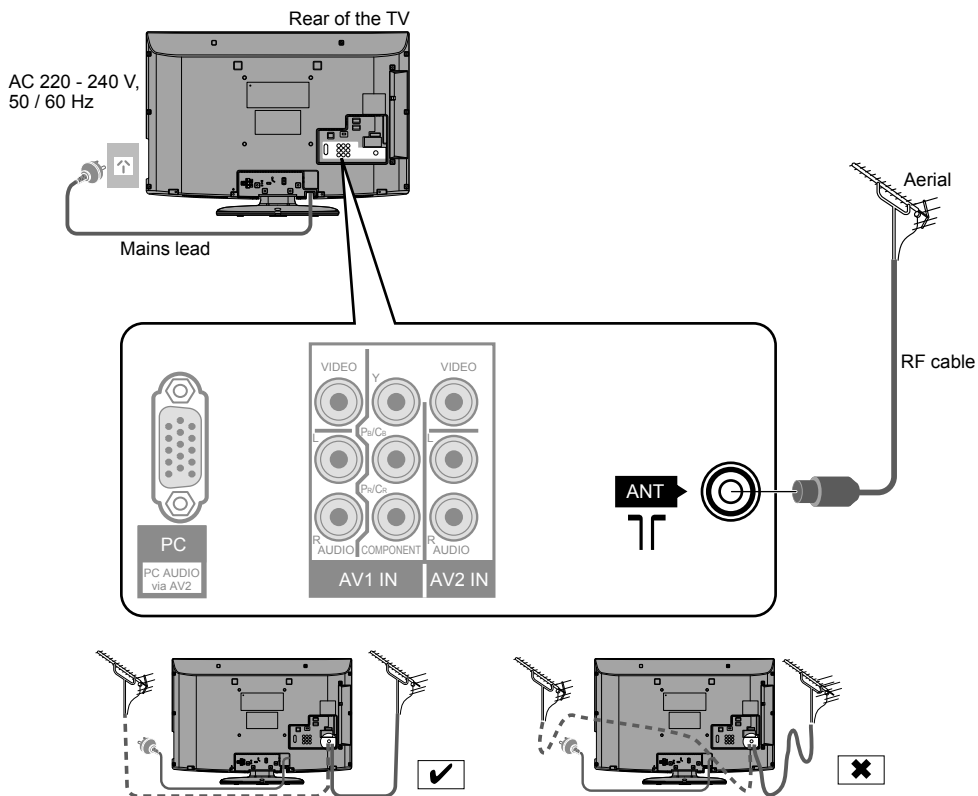
- Using other wall-hanging brackets, or installing a wall-hanging bracket by yourself carries the risk of personal injury and product damage. In order to maintain the unit's performance and safety, be absolutely sure to ask your dealer or a licenced contractor to secure the wall-hanging brackets. Any damage caused by installing without a qualified installer will void your warranty.
- Do not mount the unit directly below ceiling lights (such as spotlights, floodlights or halogen lights) which typically give off high heat. Doing so may warp or damage plastic cabinet parts.
- Take care when fixing wall brackets to the wall. Always ensure that there are no electrical cables or pipes in the wall before hanging bracket.
- To prevent fall and injury, remove the TV from its fixed wall position when it is no longer in use.

Basic Connection

External equipment and cables shown are not supplied with this TV.
Please ensure that the TV is disconnected from the mains socket before attaching or disconnecting any leads.

Connecting the aerial

TV only



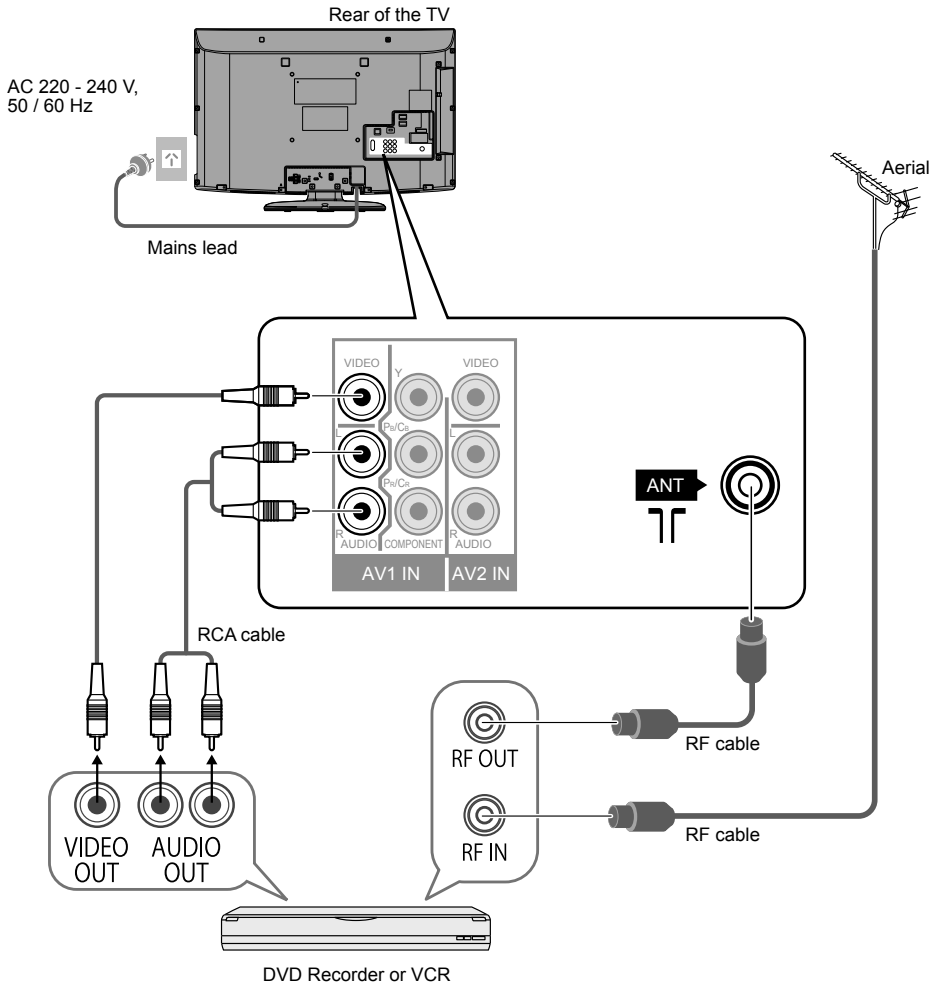
If the antenna is placed in the wrong location, interference might happen.

Note

- Do not put the RF cable close to the mains lead to avoid noise.
- Do not place the RF cable under the TV.
- To obtain optimum quality picture and sound, an aerial, the correct cable (75 Ω coaxial) and the correct terminating plug are required.
- If a communal aerial system is used, you may require the correct connection cable and plug between the wall aerial socket and the TV.
- Your local Television Service Centre or dealer may be able to assist you in obtaining the correct aerial system for your particular area and the accessories required.
- Any matters regarding aerial installation, upgrading of existing systems or accessories required, and the costs incurred, are the responsibility of you, the Customer.
- VIERA Link connection ➔ p. 47
- Read the manual of the equipment, too.
- Another equipments connection ➔ p. 52, 53

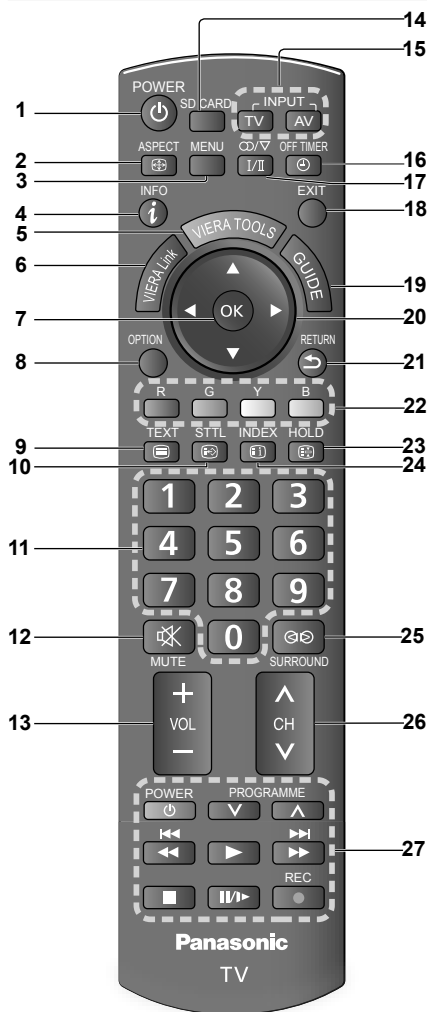
Connecting DVD Recorder / VCR

TV, DVD Recorder or VCR



Identifying Controls

Remote control



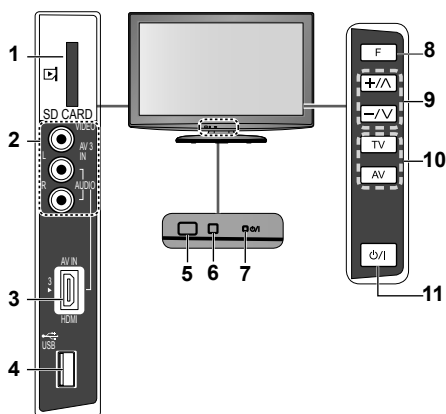
- 1 **Standby On / Off switch**
 - Switches TV On or Off standby
- 2 **Aspect (p. 15)**
 - Changes aspect ratio from Aspect Selection list
 - Pressing this button repeatedly changes aspect ratio as well
- 3 **Main Menu (p. 22)**
 - Press to access Picture, Sound and Setup Menus
- 4 **Channel / Programme Information (p. 14)**
 - Displays channel and programme information

- 5 **VIERA TOOLS (p. 21)**
 - Displays some special feature icons for easy access
- 6 **VIERA Link (p. 47)**
 - Accesses VIERA Link Menu
- 7 **OK**
 - Confirms selections and choices
 - Press after selecting channel positions to quickly change programme
- 8 **Option Menu (p. 14)**
 - Easy setting for viewing and sound options
- 9 **Teletext (p. 17)**
 - Switches to teletext mode
- 10 **Subtitles (p. 13)**
 - Displays subtitles
- 11 **Numeric buttons**
 - Changes channel and teletext pages
 - When in Standby mode, switches TV On
- 12 **Sound Mute**
 - Switches sound mute On or Off
- 13 **Volume Up / Down**
- 14 **SD Card (p. 36)**
 - Switches to Media Player viewing / listening mode
- 15 **Input mode selection**
 - TV - switches to Digital TV / Analogue TV mode (p. 13)
 - AV - switches to AV input mode from Input Selection list (p. 19)
- 16 **Off Timer (p. 13)**
 - Sets the time the TV automatically turns off
- 17 **Stereo / Bilingual Sound Selection (p. 50)**
 - Changes the sound track when more than two choices are available (Digital TV mode) (p. 14)
- 18 **Exit**
 - Returns to the normal viewing screen
- 19 **Guide (p. 16)**
 - Displays TV Guide
- 20 **Cursor buttons**
 - Makes selections and adjustments
- 21 **Return**
 - Returns to the previous menu / page
- 22 **Coloured buttons**
 - Used for selection, navigation and operation of various functions
- 23 **Hold**
 - Freeze / unfreeze picture (p. 13)
 - Holds the current teletext page (teletext mode) (p. 17)
- 24 **Index (p. 17)**
 - Returns to the teletext index page (teletext mode)
- 25 **Surround (p. 25)**
 - Switches surround sound setting
- 26 **Channel Up / Down**
 - Selects channel in sequence
- 27 **Connected equipment operations (p. 20)**

TV

Quick Start Guide

Identifying Controls



- 1 **SD card slot**
- 2 **AV3 terminals**
- 3 **HDMI3 terminal**
- 4 **USB terminal**
- 5 **Remote control signal receiver**
 - Do not place any objects between the TV remote control signal receiver and remote control

6 **C.A.T.S. (Contrast Automatic Tracking System) sensor**

- Senses brightness to adjust picture quality when "Eco Mode" in the Picture Menu is set to "On" (p. 24)

7 **Power LED**

- Standby: red On: green
- When using the remote control, indicates the TV has received a command.

8 **Function Select**

- Volume / Backlight / Contrast / Brightness / Colour / Sharpness / Tint (NTSC mode) / Bass ("Music" or "Speech" mode in the Sound Menu) / Treble ("Music" or "Speech" mode in the Sound Menu) / Balance / "Digital TV Auto Tuning" or "Analogue TV Auto Tuning" (p. 24 - 26)

9 **Increases or decreases the channel position by one. When a function is already displayed, press to increase or decrease the selected function. When in standby mode, switches TV on.**

10 **Changes the input mode**

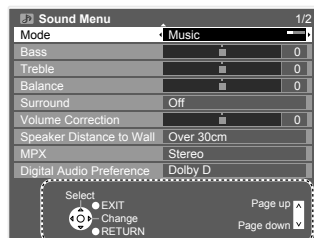
11 **Mains power On / Off switch**

- Switch On to turn on the TV or turn the TV to Standby mode by the remote control

Using the On Screen Displays

Many features available on this TV can be accessed via the On Screen Display menu.

Example (Sound Menu):



Operation guide will help you.

How to use remote control



Open the Main Menu



Move the cursor / select the menu item



Move the cursor / adjust levels / select from a range of options



Access the menu / store settings after adjustments have been made or options have been set

RETURN



Return to the previous menu

EXIT

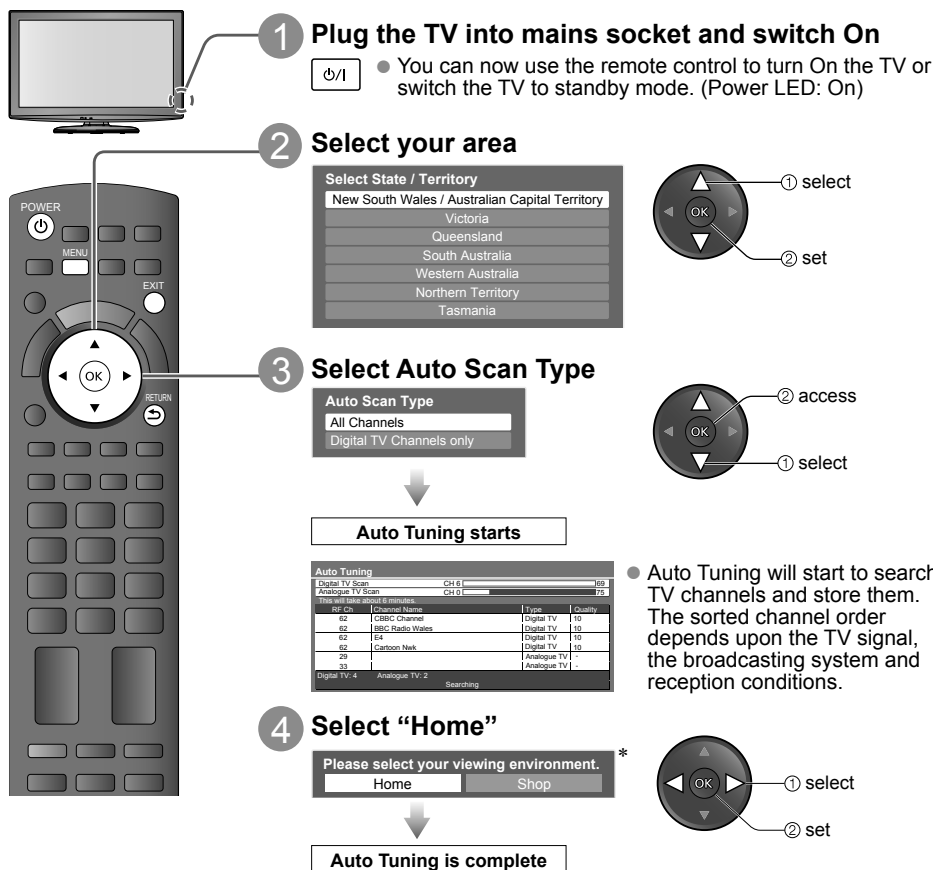


Exit the menu system and return to the normal viewing screen

Auto Tuning

Search and store TV channels automatically.

These steps are not necessary if the setup has been completed by your local dealer.

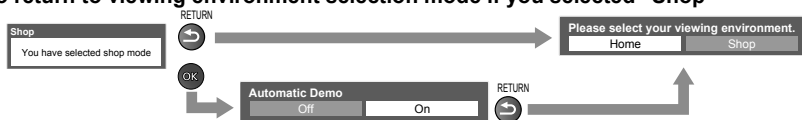


*Viewing environment mode

Home : Recommended mode for viewing at home. Select "Home" for optimal picture / power consumption. "Viewing Mode" is set as "Normal" (p. 24).

Shop : Demonstration mode to explain main features of this TV (for in-store display). "Viewing Mode" is set as "Dynamic" (p. 24).

To return to viewing environment selection mode if you selected "Shop"



● To change the viewing environment mode later on, reset all settings by accessing Shipping Condition. ➔ "Shipping Condition" (p. 34)

Watching TV



1 Turn power on

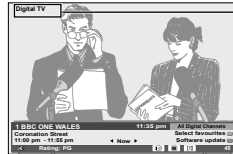


- Mains power On / Off switch should be On (p. 11).

2 Select Digital TV or Analogue TV mode



- It is also possible to select the mode by pressing the TV button repeatedly on the remote control or side panel controls of the TV (p. 11).

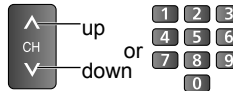


- The selected mode is displayed.
- For details ➔ p. 33

Information banner appears whenever you select a channel

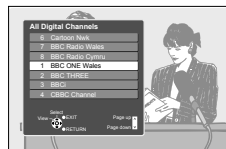
- For details ➔ p. 14

3 Select a channel



- To select the two or three-digit channel number, e.g. 39
➔ **3** ➔ **9** (in a short time)
- If one or two-digit channel number selected, pressing OK quickly changes the channel.

- To select from the Channel List ➔ **OK**



- ① select a channel
- ② watch

Note

- When the TV is switched to standby, there will be a clicking sound after a short delay. This is normal.

Select a channel using information banner (p. 14)

It is possible to confirm the programme name before selecting channels.

Display information banner if it is not displayed



It is possible to set display timeout in "Banner Display Timeout" (p. 26).

While the banner is displayed, select a channel

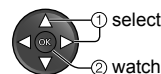


Select a channel using TV Guide (Digital TV mode) (p. 16)

It is possible to confirm the TV Guide (EPG) before selecting channels.

Display TV Guide

Select a channel



Other useful functions

Hold



Freeze / unfreeze picture

Display subtitles



Display / hide subtitles (if available)

Off Timer

OFF TIMER



Press repeatedly until the desired time appears.

- It is also possible to set the time from "Off Timer" in the Setup Menu (p. 26)
- To cancel ➔ Set to "0" or turn the TV off.
- To display the remaining time ➔ Information banner (p. 14)
- When the remaining time is within 3 minutes, the remaining time will flash on screen.

Watching TV

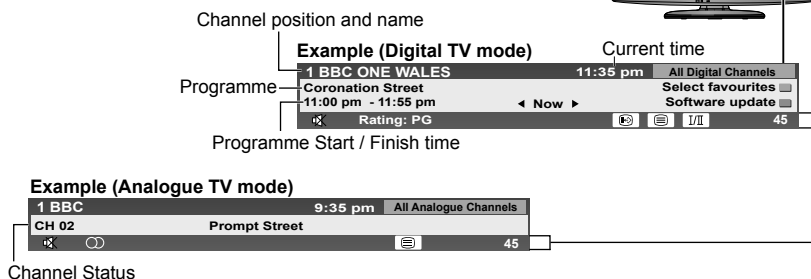
Other useful functions

Display information banner



Display information banner

- Also appears when changing a channel



- To confirm another tuned channel name →
- To watch the programme listed in the banner →
- Information on the next programme (Digital TV mode) →
- To select a favourite list (Digital TV mode) →
- To update the TV software →
- To hide →
- Extra information (press again to hide the banner) (Digital TV mode) →
- To set display timeout → "Banner Display Timeout" (p. 26)

Features available / Message meanings

- Sound mute On
- Rating** Rating information (p. 54) (Digital TV mode)
- Bad signal** Poor TV signal quality (Digital TV mode)
- Encrypted** Scrambled programme (Digital TV mode)
- Subtitle service available (Digital TV mode)
- Multiple image or audio available (Digital TV mode)
- Teletext service available
- Audio mode (p. 54) (Analogue TV mode)
- 1 - 90** Off Timer remaining time
 - For settings → p. 13

Display the selectable settings for the current programme

OPTION

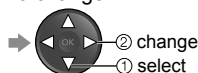


Check or change the current programme status instantly

Audio Selection (Digital TV mode)
Allows you to select between alternative language for sound tracks (if available)

Dual Audio (Digital TV mode)
Selects multiplex sound (if available)

- To change



MPX (Analogue TV mode)
Selects multiplex sound (if available)
→ Sound Menu (p. 25)

Volume Correction
Adjusts volume of individual programme or input mode → Sound Menu (p. 25)

Other useful functions

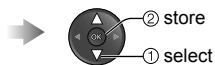
Change aspect ratio

Enjoy viewing the picture at its optimum size and aspect.

ASPECT Display Aspect Selection list











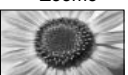
Aspect Selection	
16:9	
14:9	
Just	
4:3	
4:3 Full	
Zoom1	
Zoom2	
Zoom3	



While the list is displayed, select the mode

To change the mode using the ASPECT button only

ASPECT  Press repeatedly until you reach the desired mode

16:9 	14:9 	Just 
Directly displays the image at "16:9" without distortion (anamorphic).	Displays the image at the standard "14:9" without distortion.	Displays a "4:3" image full-screen. Stretching is only noticeable at the left and right edges.
4:3 	4:3 Full 	Zoom1 
Displays the image at the standard "4:3" without distortion.	Displays a "4:3" image enlarged horizontally to fit the screen. ● Digital TV mode and HD signal only	Displays a "16:9" letterbox or "4:3" image without distortion.
Zoom2 	Zoom3 	
Displays a "16:9" letterbox (anamorphic) image full-screen without distortion.	Displays a "2.35:1" letterbox (anamorphic) image full-screen without distortion. At "16:9", displays the image at its maximum (with slight enlargement).	

Note

- Only "16:9" and "4:3 Full" are available in Digital TV mode.
- Only "16:9" and "4:3" are available in PC input mode.
- Aspect is fixed to "16:9" when "Viewing Mode" is set to "Game" in the Picture Menu.
- Not available in teletext mode.
- Aspect mode can be memorized separately for each SD (Standard definition) and HD (High definition) signals except in Digital TV mode.

Region Select Adjust the standard time

Select the region where you live to adjust the standard time.

- The time contained in the broadcast signal is UTC (Universal Time coordinated) formally known as GMT (Greenwich Mean Time).

Daylight Saving Time Adjust for Summer Time

Select time offset from the standard time for Summer Time.

- Normally select "Auto".
- If there is a gap between displayed time and actual time, set this function.

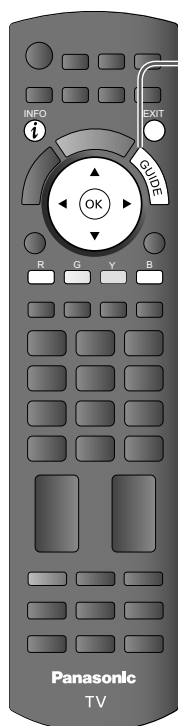
Region	Standard time	Daylight Saving Time: Auto (During Summer Time)
NSW / ACT	+10:00	+11:00
Victoria		
Queensland	+10:00	
South Australia	+9:30	+10:30
Western Australia	+8:00	
Northern Territory	+9:30	
Tasmania	+10:00	+11:00

(Based on GMT)

- These items can be set from "Other Settings" in Setup Menu. (p. 23, 27)

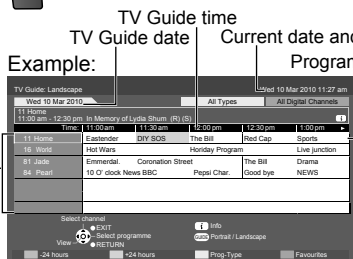
Using TV Guide (Digital TV mode)

Using TV Guide enables you to select programme easily, view programme informations, etc. TV Guide—Electronic Programme Guide (EPG) provides an on screen listing of the current and future programmes over the next seven days depending on broadcasters.



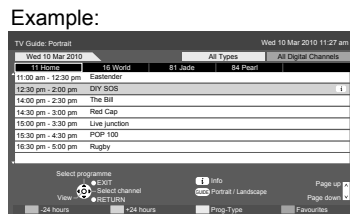
View TV Guide

Each time pressed, the layout will be changed. (Landscape / Portrait)



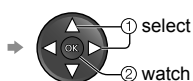
Landscape (Displays by channel)

Channel position and name

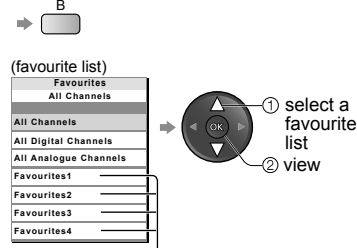


Portrait (Displays by time)

To watch the programme



To view a channel list of the selected favourite list



To list favourite channels → p. 29

To return to TV



To view details of the programme

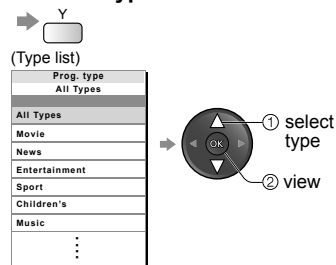
Select the programme



To the previous day → R

To the next day → G

To view a channel list of the selected type



Note

- When this TV is turned on for the first time, or the TV is switched off for more than a week, it may take some time before the TV Guide is completely shown.

Viewing Teletext

Teletext services are the text information provided by the broadcasters. The features may vary depending on the broadcasters.



What is FASTEXT mode?


In FASTEXT mode, four differently coloured subjects are situated at the bottom of the screen. To access more information about one of these subjects, press the corresponding coloured button. This facility enables fast access to information on the subjects shown.

What is TOP mode? (In case of TOP text broadcasting)


TOP is a particular improvement of the standard teletext service that results in an easier search and effective guide.

- Fast overview of the teletext information available
- Easy to use step-by-step selection of the topical subject
- Page status information at the bottom of the screen

Available page up / down ➡  

To select among subject blocks ➡ 

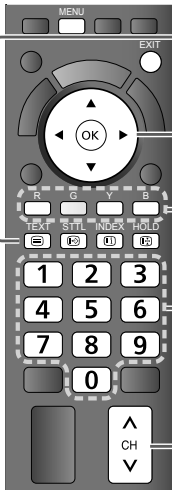
To select next subject within the subject block

(After the last subject, it moves to the next subject block.) ➡ 


What is List mode?

In List mode, four differently coloured page numbers are situated at the bottom of the screen. Each of these numbers can be altered and stored in the TV's memory. ("Store frequently viewed pages" ➡ p. 18)





To change mode ➡ "Teletext" in Setup Menu (p. 26)



1 Switch to Teletext



 ● Displays Index (content varies depending on the broadcasters)



2 Select the page (up to page 899)

 or  or  or 

(Corresponds to the colour bar)

To adjust contrast

➡  (press three times) ➡  As the blue bar is displayed

To return to TV ➡  or 

Sub page number








<< 01 02 03 04 05 06 07 >>

Current page number **P100** 17:51 28 Feb Time / date

TELETEXT INFORMATION

Colour bar

Functions (Teletext mode)

Hold	Reveal hidden data
<p>HOLD  Stop automatic updating (If you wish to hold the current page without updating)</p> <p>To resume ➡ HOLD </p>	<p>MENU  ➡ R  Reveal hidden words e.g. quiz page answers</p> <p>To hide ➡ R </p>
INDEX	Call up Subtitle
<p>INDEX  Return to the main index page</p>	<p>STTL  Display subtitles</p> <ul style="list-style-type: none"> ● Call up P801 (subtitle page) if available. ● If you press this button during P801 is displayed, teletext mode will be cancelled and return to TV.

Viewing Teletext

Functions (Teletext mode)

View in multi window

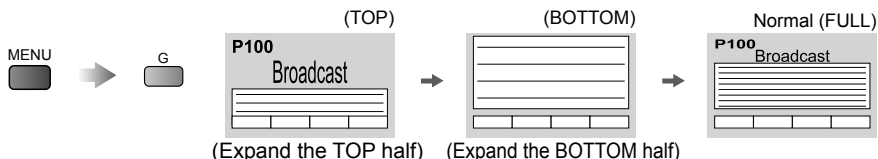
Watch TV and Teletext in two windows at once

MENU (press twice) →  Select teletext only or picture / teletext

- Operations can be made only in Teletext screen.



FULL / TOP / BOTTOM

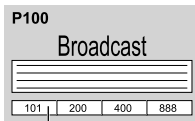


Store frequently viewed pages

Store frequently viewed pages in the colour bar (List mode only)


 Corresponding colour button (As page is displayed)

OK press and hold



The number changes to white.

To change stored pages

→  Colour button you want to change





Enter new page number

OK press and hold

View sub page

View sub page (Only when teletext is more than one page)

  <<01 02 03 04 05— Appears at top of the screen

To view specific sub page

→ MENU → B

T**** Broadcast

0 0 0 6 Enter the 4-digit number

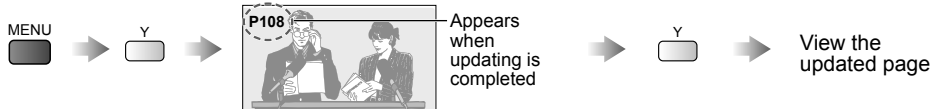
T0006

- Sub pages:
The number of sub pages varies depending on the broadcasters.
It may take some time for searching, during which time you can watch TV.

Watch TV while waiting for update

View the TV picture while searching for a teletext page

Teletext automatically updates itself when new information becomes available.



Changes to TV screen temporarily (You cannot change the programme.)

- The news page provides a function that indicates arrival of latest news ("News Flash").

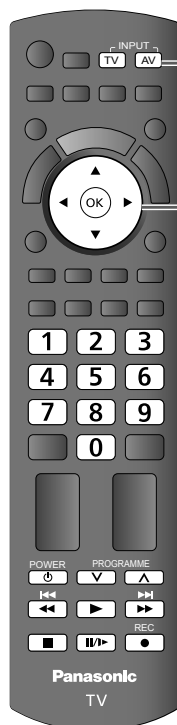
Watching External Inputs

Connect the external equipment (VCRs, DVD equipment, PC, etc.) and you can watch through the input.

- To connect the equipment ➔ p. 52, 53

The remote control is capable of operating some functions of selected external equipment.

For details, see the manual of the equipment or ask your local dealer.



1 Display the input selection menu

AV

2 Select the input mode of the connected equipment

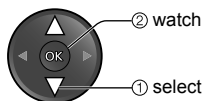
- You can also select the input using the AV button on the remote control or the side panel of the TV (p. 11). Press the button repeatedly until the desired input is selected.
- You can label or skip each input mode ➔ "Input Labels" (p. 33) Skipped inputs will not be displayed when the AV button is pressed.

Example (AV2)

Input Selection
AV1
AV2
AV3
PC
HDMI1
HDMI2
HDMI3
TV

Example (PC)

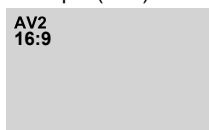
Input Selection
AV1
AV2
AV3
PC
HDMI1
HDMI2
HDMI3
TV



3 View

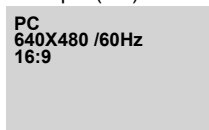
The selected mode is displayed on the screen.

Example (AV2)



- If the external equipment has an aspect adjustment function, set to "16:9".

Example (PC)



- You can also listen to PC sound with an audio cable connected.
- You can setup some functions, Advanced PC Settings (p. 24) in Picture Menu and PC setup (p. 26) in Setup Menu.
- For a HDMI-compatible PC (p. 55-56), it is possible to connect to HDMI terminals (HDMI1 / HDMI2 / HDMI3) by using HDMI cable.









To return to TV



Watching External Inputs

Operating the equipment with the TV remote control

The equipment connected to the TV can be directly operated with the below buttons of this TV remote control.


	Standby Set to Standby mode / Turn on
	Play Playback videocassette / DVD
	Stop Stop the operation
	Rewind / Skip / Search VCR: Rewind, view the picture rapidly in reverse DVD/iPod: Skip to the previous track or title Press and hold to search backward
	Fast-forward / Skip / Search VCR: Fast-forward, view the picture rapidly forward DVD/iPod: Skip to the next track or title Press and hold to search forward
	Pause Pause / Resume DVD: Press and hold to play at slow speed
	Programme Up / Down Select programme
	Record Start recording

How to change the code for each equipment

Each type of Panasonic equipment has its own remote control code.

Please change the code for each equipment you want to operate.

If you operate the connected equipment in VIERA Link (p. 47), select the code "73".

Press and hold  during the following operations

Enter the appropriate code
(see table below)

 ➡ Press 

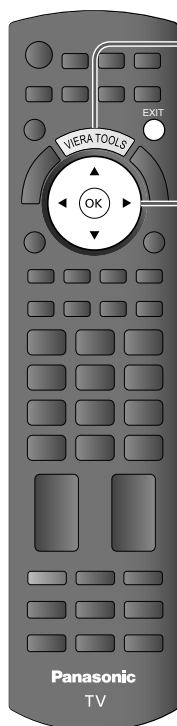
Type of equipment	Code
DVD Recorder / DVD Player	70 (default)
Player theatre / Blu-ray Disc theatre	71
VCR	72
The equipment using in VIERA Link ➡ "VIERA Link Control" (p. 46)	73
iPod (p. 45)	73

Note

- Confirm if the remote control works correctly after changing the code.
- The codes may be reset to default values if batteries are replaced.
- Some operations may not be possible on some equipment models.

How to Use VIERA TOOLS

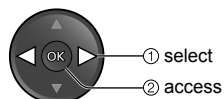
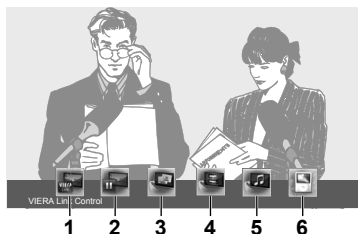
You can access some special features easily by using the VIERA TOOLS function.



1 Display icons of the feature



2 Select a feature



3 Follow the operation of each feature

1 VIERA Link Control

➔ "VIERA Link Control" (p. 50)



When two or more compatible equipment is connected, a selection screen will be displayed.
Please select the correct description and access.

2 Pause Live TV

➔ "Pause Live TV" (p. 49)



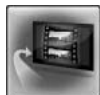
3 Photo

➔ "Photo mode" (p. 38)



4 Video

➔ "Video mode" (p. 40)



5 Music

➔ "Music mode" (p. 42)

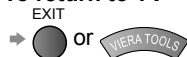


6 iPod

➔ "Playing an iPod" (p. 43)



To return to TV

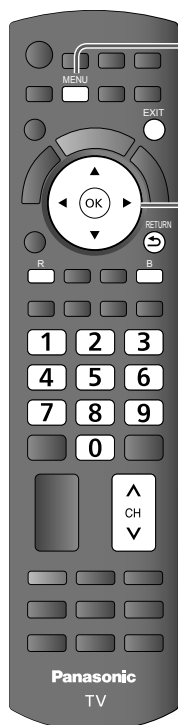


Watching External Inputs
How to Use VIERA TOOLS

Advanced

How to Use Menu Functions

Various menus allow you to make settings for the picture, sound, and other functions.

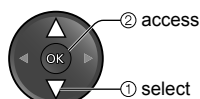


1 Display the menu

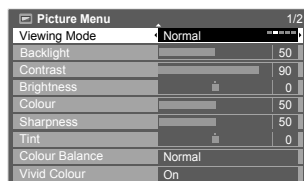


- Displays the functions that can be set (varies according to the input signal)

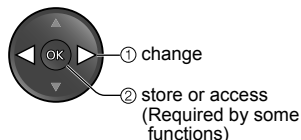
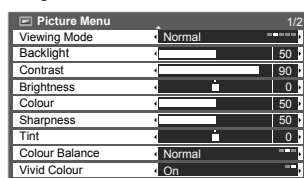
2 Select the menu



3 Select the item



4 Adjust or select



To return to TV at any time



To return to the previous screen

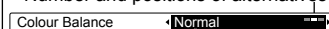


To change menu pages



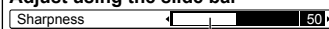
Choose from among alternatives

Number and positions of alternatives



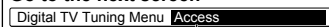
Changed

Adjust using the slide bar



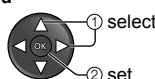
Moved

Go to the next screen



Displays the next screen

Enter characters by free input menu



- To delete a character → R
- To delete all characters → B

Every press changes the character by one. Leave it for a second to set the character, or press OK or any numeric button within a second.

See the table below for the corresponding characters for each numeric button.

Numeric buttons	Characters	Numeric buttons	Characters
1	. ! : # + - * _ ()	6	m n o 6 M N O
2	a b c 2 A B C	7	p q r s 7 P Q R S
3	d e f 3 D E F	8	t u v 8 T U V
4	g h i 4 G H I	9	w x y z 9 W X Y Z
5	j k l 5 J K L	0	Space 0

VIERA Main Menu

Picture

Sound

Setup

Picture (p. 24)

Picture Menu 1/2	
Viewing Mode	Normal
Backlight	50
Contrast	90
Brightness	0
Colour	50
Sharpness	50
Tint	0
Colour Balance	Normal
Vivid Colour	On

Picture Menu 2/2	
Eco Mode	Off
P-NR	Off
3D-COMB	On
Panel	On
Advanced PC Settings	Access
Reset Picture Defaults	Reset

Sound (p. 25, 26)

Sound Menu 1/2	
Mode	Music
Bass	0
Treble	0
Equalizer	Access
Balance	0
Surround	Off
Volume Correction	0
Speaker Distance to Wall	Over 30cm
MPX	Stereo

Sound Menu 2/2	
Digital Audio Preference	Dolby D
SPDIF Selection	Auto
MPEG Optical Level	0 dB
HDMI1 Input	Digital
Reset Sound Defaults	Reset

Setup (p. 26, 27)

Setup Menu	
PC Setup	Access
DVI Position Settings	Access
Off Timer	Off
Child Lock	Access
Digital TV Tuning Menu	Access
Analogue TV Tuning Menu	Access
Display Settings	Access
VIERA Link Settings	Access
System Menu	Access
Other Settings	Access

Digital TV Tuning Menu	
Favourites Edit	Access
Channel List	Access
Auto Tuning	Access
Manual Tuning	Access
Update Channel List	Access
New Channel Message	On
Signal Condition	Access
Add MPEG-4 AVC Channels	Access

(p. 26)

Analogue TV Tuning Menu	
Channel List	Access
Auto Tuning	Access
Manual Tuning	Access

(p. 26)

Display Settings	
Teletext	TOP
Input Labels	Access
Banner Display Timeout	3 seconds
Playing Time Display	On

(p. 26)

VIERA Link Settings	
VIERA Link	On
Power on Link	Off
Power off Link	On
Standby Power Save	Off
Intelligent Auto Standby	Off

(p. 27)

System Menu	
Shipping Condition	Access
System Update	Access
Software Licence	Access
System Information	Access

(p. 27)

Other Settings	
Auto Standby	Off
Power Save	Off
16:9 Overscan	On
Region Select	NSW/ACT
Daylight Saving Time	Auto
DVI Input Setting	Normal

(p. 27)

How to Use Menu Functions

Advanced

- Depending on the received signals, available items are varied.



Menu list

Menu	Item	Adjustments / Configurations (alternatives)
Picture	Viewing Mode	<p>Basic picture mode (Dynamic / Normal / Cinema / True Cinema / Game) In each Viewing Mode, Backlight, Contrast, Brightness, Colour, Sharpness, Tint, Colour Balance, Vivid Colour, Eco Mode, P-NR and 3D-COMB can be adjusted and stored to suit your particular viewing requirement.</p> <ul style="list-style-type: none"> ● Set for each input signal. <p>Dynamic : Provides enhanced picture contrast and sharpness when viewing in a bright room</p> <p>Normal : Recommended for viewing under normal ambient room lighting conditions.</p> <p>Cinema : For watching movies in a darkened room with improving the performance of contrast, black and colour reproduction</p> <p>True Cinema : Precisely reproduces the original image quality without any revision.</p> <p>Game : Fast response signal specifically to provide suitable images for playing games</p> <ul style="list-style-type: none"> ● Not valid on TV mode ● A continuous record of time spent using Game mode can be displayed in the top right of the screen. <p>➡ "Playing Time Display" (p. 26)</p>
	Backlight, Contrast, Brightness, Colour, Sharpness	Increases or decreases the levels of these options according to your personal preference
	Tint	<p>With an NTSC signal source connected to the TV, the picture hue can be adjusted to suit your taste.</p> <ul style="list-style-type: none"> ● For NTSC or Component / HDMI input signal reception only
	Colour Balance	Allows you to set the overall colour tone of the picture (Cool / Normal / Warm)
	Vivid Colour	<p>Automatically adjusts colours to vivid ones (Off / On)</p> <ul style="list-style-type: none"> ● Not valid on PC signal
	Eco Mode	<p>Automatically adjusts the screen brightness appropriately as the surrounding light level lowers to reduce the power consumption (Off / On)</p> <ul style="list-style-type: none"> ● Not available in shop mode (Dynamic picture mode)
	P-NR	<p>Picture Noise Reduction</p> <p>Automatically reduces unwanted picture noise and flicker noise in the contoured parts of a picture (Off / Min / Mid / Max)</p> <ul style="list-style-type: none"> ● Not valid on PC signal
	3D-COMB	<p>Makes still or slow moving pictures look more vivid (Off / On)</p> <ul style="list-style-type: none"> ● Occasionally, while viewing still or slow moving pictures, colour patterning may be seen. Set to "On" to display sharper and more accurate colours. ● For PAL or NTSC signal reception only ● Not valid on Component, PC, HDMI and SD Card
	Panel	<p>Turns the screen off when you select "Off" (Off / On)</p> <ul style="list-style-type: none"> ● The sound is active even if the screen turns off. ● Press any buttons to turn the screen on. ● This function is effective in reducing power consumption when listening to a sound without watching the TV screen.
	Advanced PC Settings	<p>R-Gain, G-Gain, B-Gain</p> <p>Adjusts each gain</p>
		<p>R-Cutoff, G-Cutoff, B-Cutoff</p> <p>Cuts off each area</p>
		<p>Gamma</p> <p>Changes the gamma curve (1.8 / 2.0 / 2.2 / 2.4 / 2.6)</p>
		<p>Reset PC Settings</p> <p>Press the OK button to reset to the present Advanced PC Settings to the default.</p>
	Reset Picture Defaults	Press the OK button to reset the present Picture Menu settings to the default.



Menu	Item	Adjustments / Configurations (alternatives)
Sound	Mode	<p>Selects basic sound mode (Music / Speech / User)</p> <ul style="list-style-type: none"> The selected mode affects all input signals. <p>Music : Improves sound quality for watching music video, etc.</p> <p>Speech: Improves sound quality for watching news, drama, etc.</p> <ul style="list-style-type: none"> In Music and Speech mode, you can adjust "Bass" and "Treble" settings, and those settings will be stored for each mode. <p>User : Adjusts the sounds manually by using the equalizer to suit your favourite sound quality.</p> <ul style="list-style-type: none"> For the User mode, "Equalizer" will appear on the Sound Menu instead of "Bass" and "Treble". Select the "Equalizer" and adjust the frequency. ➔ "Equalizer" (below)
	Bass	Increases or decreases level to enhance or minimise lower, deeper sound output
	Treble	Increases or decreases level to enhance or minimise sharper, higher sound output
	Equalizer	<p>Adjusts the frequency level to suit your favourite sound quality</p> <ul style="list-style-type: none"> This function is available when "Mode" is set to "User". Select the frequency and change the frequency level by using the cursor button. If you want to enhance the bass sound, raise the level of the lower frequency. If you want to enhance the treble sound, raise the level of the higher frequency. To reset the levels of each frequency to the default settings, select the "Reset Equalizer Settings" by using cursor button, and then press the OK button.
	Balance	Adjusts the volume level of right and left speakers
	Surround	<p>Surround sound settings (Off / V-Audio / V-Audio Surround / V-Audio ProSurround)</p> <p>V-Audio: Provides a dynamic enhancer of width to simulate improved spatial effects</p> <p>V-Audio Surround: Provides a dynamic enhancer of width and depth to simulate improved spatial effects</p> <p>V-Audio ProSurround: Provides a three-dimensional sound space with digital reverb effects</p> <ul style="list-style-type: none"> Switching is also possible by the Surround button on the remote control (p. 10).
	Volume Correction	Adjusts the volume of individual channel or input mode
	Speaker Distance to Wall	<p>Adjusts the low frequency sound (Over 30cm / Up to 30cm)</p> <ul style="list-style-type: none"> If the back space between the TV and wall is over 30 cm, "Over 30cm" is recommended. If the back space between the TV and wall is within 30 cm, "Up to 30cm" is recommended.
	MPX	<p>Selects multiplex sound mode (if available) (p. 54)</p> <ul style="list-style-type: none"> Normally : Stereo Stereo signal cannot be received: Mono M1 / M2 : Available while mono signal is transmitted Analogue TV mode only
	Digital Audio Preference	<p>Selects the initial setting for Audio tracks (Dolby D / MPEG)</p> <p>If programme has both Dolby Digital and MPEG audio tracks, priority is given to what you select</p> <p>Dolby D : A method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2ch) audio, these signals can also be multi-channel audio.</p> <p>MPEG : An audio compression method that compresses audio to small size without any considerable loss of audio quality.</p> <ul style="list-style-type: none"> Digital TV mode only
	SPDIF Selection	<p>SPDIF : A standard audio transfer file format</p> <p>Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT terminal (Auto / PCM)</p> <p>Auto : Dolby Digital is output as Dolby Digital Bitstream. HE-AAC and MPEG are output as PCM.</p> <p>PCM : Digital output signal is fixed to PCM.</p> <ul style="list-style-type: none"> For Digital TV mode or Video mode (p. 40)
	MPEG Optical Level	<p>Adjusts the audio level of MPEG output from DIGITAL AUDIO OUT terminal as the initial setting (0 / -2 / -4 / -6 / -8 / -10 / -12dB)</p> <ul style="list-style-type: none"> Normally, MPEG sound is louder comparing with the other types of audio track. Digital TV mode only




Menu	Item	Adjustments / Configurations (alternatives)
Sound	HDMI1 / 2 / 3 Input	Select to fit the input signal (Digital / Analogue) (p. 55). Digital : HDMI cable connection Analogue : HDMI-DVI adapter cable connection ● HDMI input mode only
	Reset Sound Defaults	Press the OK button to reset the present settings of Mode, Balance and Surround in Sound Menu to the default.
Setup	PC Setup	Input Resolution Switches to a wide view ● VGA (640 × 480 pixels), WVGA (852 × 480 pixels), XGA (1,024 × 768 pixels), WXGA (1,280 × 768 pixels, 1,366 × 768 pixels) ● Options change depending on signals
		Clock Set to the minimum level if noise occurs.
		H-pos Adjusts horizontal position 
		V-pos Adjusts vertical position 
		Clock Phase Eliminates flicker and distortion ● Adjust after Clock adjustment ● Set to the minimum level if noise occurs
		Sync PC sync signal type (H & V / SOG) H & V : by the horizontal and vertical signals from your PC SOG : Sync on Green sync from your PC
		Reset PC Settings Press the OK button to reset the present PC Setup settings to the default.
	DVI Position Setting	H-pos Adjusts horizontal position settings of DVI
		V-pos Adjusts vertical position settings of DVI
		Reset DVI Position Settings Press the OK button to reset the present DVI Position settings to the default.
	Off Timer Sets the time the TV automatically goes to Standby mode (Off / 15 / 30 / 45 / 60 / 75 / 90 minutes) (p. 13)	
	Child Lock Locks a channel / AV input to prevent access to it (p. 32)	
	Tuning Menu	Favourites Edit Creates list of favourite channels (Digital TV mode) (p. 29)
		Channel List Skips the unwanted channels or edits channels (p. 29, 31)
		Auto Tuning Sets all Digital TV or Analogue TV channels automatically (p. 30, 31)
		Manual Tuning Sets the TV channels manually (p. 30, 31)
		Update Channel List Updates the channel list with keeping your settings (Digital TV mode) (p. 30)
		New Channel Message Selects whether to give a notification message when a new channel is found (Digital TV mode) (Off / On) (p. 30)
		Signal Condition Checks the Digital TV signal condition (p. 30)
		Add MPEG-4 AVC Channels Activates the reception of MPEG-2 and MPEG-4 AVC channels ● Use this function if MPEG-4 AVC services start in your area. ● All previous tuning setting are erased. ● Once activated, this option is removed from the Digital TV Tuning Menu.
	Display Settings	Teletext Teletext display mode (TOP(FASTTEXT) / List) (p. 17)
		Input Labels Labels or skips each input terminal (p. 33)
		Banner Display Timeout Sets how long the information banner stays on screen (p. 14) (0 (No display) / 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 seconds)
		Playing Time Display Set to "On" to display a continuous record of time spent using Game mode every 30 mins (Off / On) ● This function is available when "Game" is selected in "Viewing Mode" (p. 24).

Menu	Item	Adjustments / Configurations (alternatives)
Setup	VIERA Link Settings	VIERA Link Sets the VIERA Link functions (Off / On) ● VIERA Link functions become available when "VIERA Link" is set to "On" (p. 48).
		Power on Link Sets to use Power on Link functions (Off / On) (p. 48)
		Power off Link Sets to use Power off Link functions (Off / On) (p. 48)
		Standby Power Save Controls the power consumption in Standby mode of the connected equipment to reduce the power consumption (Off / On) (p. 48) ● This function is available when "VIERA Link" is set to "On" and "Power off Link" is set to "On".
		Intelligent Auto Standby Makes non-watched or non-used connected equipment go into Standby mode to reduce the power consumption (Off / On (With reminder) / On (No reminder)) (p. 48) ● This function is available when "VIERA Link" is set to "On".
	System Menu	Shipping Condition Resets all settings to the original condition (p. 34)
		System Update Downloads new software to TV (p. 35)
		Software Licence Displays the software licence information
		System Information Displays the system information of this TV
	Other Settings	Auto Standby Sets the time the TV automatically goes to Standby mode when no operation is performed for the selected times (Off / 2 hours / 4 hours) ● Inserting the SD Card to the card slot does not affect this function. ● Automatic input switching with the connected equipment affects this function and time-count will be reset. ● The notification message will appear 3 minutes before going to Standby mode.
		Power Save Reduces brightness of picture to economise on power consumption (Off / On)
		16:9 Overscan Selects the screen area for displaying the image (Off / On) On: Enlarges the image to hide the edge of the image Off: Displays the image in the original size ● Set to "On" if noise is generated on the edges of the screen. ● This function is available when aspect is set to "16:9". ● This function can be memorized separately for SD (Standard Definition) and HD (High Definition) signals.
		Region Select Selects the region where you live to adjust the standard time (NSW / ACT / Victoria / Queensland / South Australia / Western Australia / Northern Territory / Tasmania) (p. 15)
		Daylight Saving Time Select time offset from the standard time for Summer Time (Auto / Off / +1/2 hour / +1 hour) (p. 15) ● Set to "Auto" normally.
		DVI Input Setting Changes the black level in the image for HDMI input mode with DVI input signal manually (Normal / Full) ● When the DVI input signal from the external equipment, especially from PC, is displayed, the black level may not be suitable. In this case, select "Full". ● The black level for HDMI input signal will be adjusted automatically.

- A different menu will be displayed in the mode of SD Card (p. 36 - 42).
- Only available items can be selected.

Tuning and Editing Channels

You can Auto Tune, list your favourite channels and skip unwanted channels.



1 Select Digital TV or Analogue TV

TV

• The selected mode is displayed on the screen (p. 13).

2 Display the menu

MENU

3 Select "Setup"


4 Select "Digital TV Tuning Menu" or "Analogue TV Tuning Menu"

Digital TV Tuning Menu

Setup Menu	
Off Timer	Off
Child Lock	
Digital TV Tuning Menu	Access
Display Settings	
VIERA Link Settings	
System Menu	
Other Settings	


Analogue TV Tuning Menu

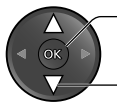
Setup Menu	
Off Timer	Off
Child Lock	
Analogue TV Tuning Menu	Access
Display Settings	
VIERA Link Settings	
System Menu	
Other Settings	



To return to TV

EXIT





5 Select a function

Digital TV Tuning Menu

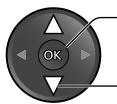
Digital TV Tuning Menu	
Favourites Edit	Access
Channel List	Access
Auto Tuning	Access
Manual Tuning	Access
Update Channel List	Access
New Channel Message	On
Signal Condition	Access

Analogue TV Tuning Menu

Analogue TV Tuning Menu	
Channel List	Access
Auto Tuning	Access
Manual Tuning	Access

• For details → p. 29, 30

• For details → p. 31



For Auto Tuning, using the buttons on the side panel of the TV (p. 11)

① Press repeatedly until "Auto Tuning" appears


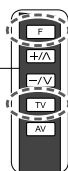
F

② Access "Auto Tuning"

TV

③ Start "Auto Tuning"

TV

• To return to TV

→ **F**

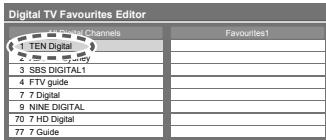
6 Set (see next page)

Digital TV Tuning Menu

Favourites Edit List favourite channels

Create your favourite channel lists (Favourites) from various broadcasters (up to 4: Favourites1 to 4). The Favourites lists are available from the Information banner (p. 14) and the TV Guide (p. 16).

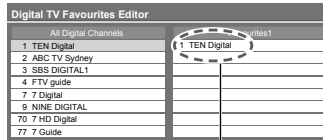
① Select a channel to list



- To display another Favourites



② Add it to the Favourites list



- To add all channels to the list



A channel is added

To edit List



Select the field of Favourites to edit and:

- To name the Favourites



(maximum: ten characters)



Set characters

- You can set characters by using numeric buttons (p. 22).

- To move the channel



Select the new position



Confirm

- To delete the channel



- To delete all channels



③ Store

RETURN

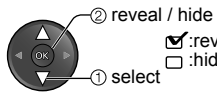


Note

- Channel numbers are defined by the broadcaster and cannot be changed.
- Hidden channels (see below) can be selected but not viewed.

Channel List Skip unwanted channels / Edit channels

Select a channel and reveal / hide



- ☒ :reveal
- ☐ :hide (skip)

You can hide unwanted channels. The hidden channels cannot be displayed except in this function. Use this function to skip unwanted channels.

- To reveal all channels



- To retune each channel (Manual Tuning) (p. 30)



To edit channels

You can also edit each channel in Channel List.



Select a channel to edit and:

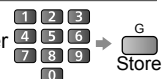
Channel position



- To swap the channel position (if available)



Enter the new position number



Store

- To move the channel position (if available)



Select the new position



Store

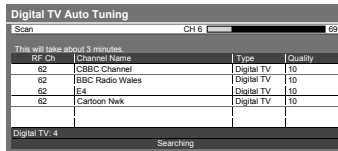
Digital TV Tuning Menu

Auto Tuning Set all channels automatically

Start Auto Tuning



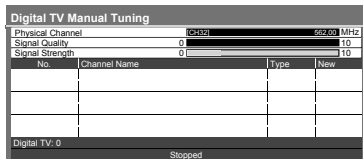
Settings are made automatically



Automatically retune all Digital TV channels received in the area.

- All the previous tuning settings are erased.
- When the operation is completed, the channel at channel position "1" will be displayed.
- Search begins in the order from the lower channels to the higher channels. Channels received during this process are added to the list (p. 29).
- If tuning has not been done completely → "Manual Tuning" (see below)

Manual Tuning Set Digital TV channel manually



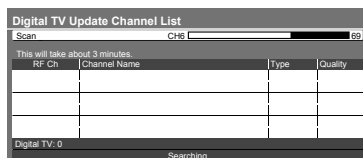
Normally use "Auto Tuning" or "Update Channel List" to update Digital TV channels on your channel list. Use this function if tuning has not been completed or if adjusting the aerial direction.



- ① select physical channel
- ② adjust frequency (set where the level of "Signal Quality" becomes the maximum)
- ③ search

- All channels found will be added to the Digital TV Channel List.

Update Channel List Update channels automatically



You can add new channels, delete duplicated channels, update channel name and position automatically to Channel List.

- Channel List is updated with keeping your settings in Favourites Edit, Channel List, Child Lock, etc.

New Channel Message Display a notification message

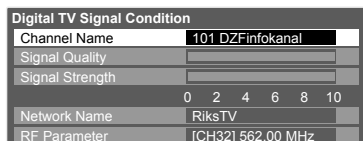


Selects whether to give a message when new Digital TV channel is found. (**Off / On**)

- Selecting OK will perform "Update Channel List".

Signal Condition Check Digital TV signal

- To change the channel →



Selects a channel and checks the Digital TV signal condition.

A good Signal Strength is not an indication of suitable signal for Digital TV reception. Please use the Signal Quality indicator as follows:

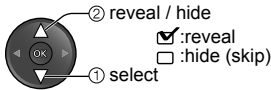
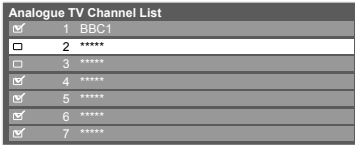
Signal Quality:

- Green bar → Good
- Yellow bar → Poor
- Red bar → Bad (Check the aerial)

Analogue TV Tuning Menu

Channel List Skip unwanted channels / Edit channels (Change name, Move)

Select a channel and reveal / hide



You can hide unwanted channels. The hidden channels cannot be displayed except in this function.
Use this function to skip unwanted channels.

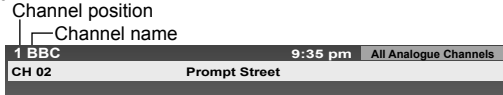
- To reveal all channels →

To edit channels

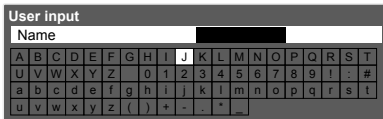
You can also edit each channel in Channel List.



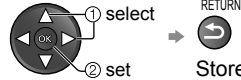
Select a channel to edit and:



- To move the channel position → → Select the new position → → Store
- To rename the channel name → → → Store



(maximum: five characters)



Set characters

- You can set characters by using numeric buttons (p. 22).

Note

- If a VCR is connected only with the RF cable, edit "VCR".

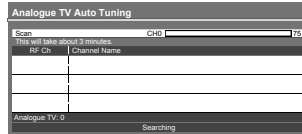
Auto Tuning Set all Analogue TV channels automatically

Start Auto Tuning



OK

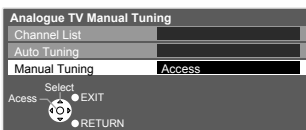
Settings are made automatically



Automatically retune all Analogue TV channels received in the area.

- All the previous tuning settings are erased.
- When the operation is completed, the channel at channel position "1" will be displayed.
- Search begins in the order from the lower channels to the higher channels. Channels received during this process are added to the list (see above).
- If tuning has not been done completely → "Manual Tuning" (see below)

Manual Tuning Set Analogue TV channel manually



Set Analogue TV channel manually after Auto Tuning.

- If a VCR is connected only with the RF cable, select channel position "0".

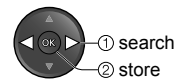
Select a channel position



Select a channel



Search and store



Child Lock

You can lock specific channels / AV input terminals and control who watches them. When the locked channel / input is selected, a message appears; by entering the PIN number, you can watch it.

- 1 **Display the menu**
MENU
- 2 **Select "Setup"**
VIERA Main Menu
Picture
Sound
Setup
- 3 **Select "Child Lock"**
Setup Menu
Off Timer Off
Child Lock Access
Digital TV Tuning Menu
Display Settings
VIERA Link Settings
System Menu
Other Settings
- 4 **Set (see below)**

To return to TV
EXIT

Child Lock Control channel audience

1 Enter the PIN number (4 digits)

Child Lock-PIN Entry
Please enter PIN for access

PIN

- "0000" has been stored as the default PIN number.

2 Select "Child Lock List" or "Parental Rating"

Child Lock
Change PIN
Child Lock List Access
Parental Rating No Block

To set "Child Lock List"

Child Lock List - TV and AV			
Name	Input	Type	Lock
888C.1	Digital TV	Digital TV	
888C.2	Digital TV	Digital TV	
888C.3	Digital TV	Digital TV	
14.64	Digital TV	Digital TV	
101 888C.1 Waves	Digital TV	Digital TV	
AV1	External	AV	
AV2	External	AV	

Appears when the channel / input is locked

- To cancel
➔ Select the locked channel / input ➔ OK
- To lock all ➔ G
- To cancel all locks ➔ Y
- To jump to the top of the next input ➔ R

Note

- Performing "Shipping Condition" (p. 34) erases the PIN number and all settings.
- If you have forgotten the PIN number which you have changed by yourself, input "6969" as the PIN number.
- Keep this Operating Instructions out of reach of children.

To set "Parental Rating"

Child Lock
Change PIN
Child Lock List
Parental Rating No Block

- Parental Rating ➔ p. 54

To change the PIN number

Select "Change PIN" in "Child Lock" and enter a new PIN number twice.

- Make a note of the PIN number in case you forget it.

Input Labels

For easier identification and selection of the input mode, you can label each input terminals or skip terminal that is not connected to any equipment.

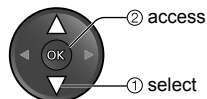
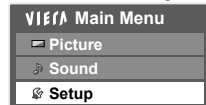
- To select the input mode ➔ p. 19



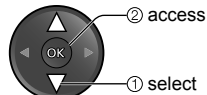
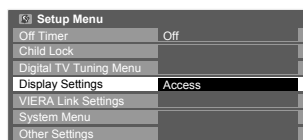
1 Display the menu



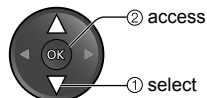
2 Select "Setup"



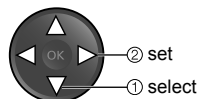
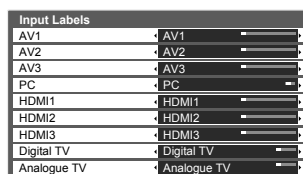
3 Select "Display Settings"



4 Select "Input Labels"



5 Select an input terminal and set



To return to TV

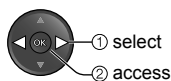


The labels you set will be displayed in "Input Selection" menu (p. 19) or banner.

- If "Skip" is selected, you cannot select the mode.

User input

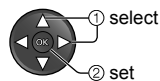
You can name each input terminals freely.



Select "User input"



(maximum: ten characters)



Set characters
You can set characters by using numeric buttons (p. 22).



Store

Child Lock
Input Labels

Advanced

Shipping Condition (Reset settings)

Resets the TV to its original condition, i.e. no channels tuned in.
All settings are reset (channels, picture, sound settings, etc.).

- 1 Display the menu**
MENU
- 2 Select "Setup"**
VIERA Main Menu
Picture
Sound
Setup
- 3 Select "System Menu"**
Setup Menu
Off Timer Off
Child Lock
Digital TV Tuning Menu
Display Settings
VIERA Link Settings
System Menu Access
Other Settings
- 4 Select "Shipping Condition"**
System Menu
Shipping Condition Access
System Update
Software Licence
System Information
- 5 Set (see below)**

To return to TV
EXIT

Shipping Condition Reset Settings	
① Check the message and reset 	② Follow the on screen instructions <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> Reset to Factory Shipping Condition Completed. Please switch off TV. </div> <ul style="list-style-type: none"> • "Auto Tuning" will automatically start when Mains power On / Off switch is next turned On (p. 12).
<p>To retune TV channels only, e.g. after moving house ➔ "Auto Tuning" in "Tuning and Editing Channels" (p. 30, 31)</p>	

Updating the TV Software (Digital TV mode)

From time to time, a new version of software may become available for download to enhance the performance or operations of the TV. If there is an update available, a notification banner is displayed when the channel has the update information. This function is available in Digital TV mode.

● To download ➡ **OK**

● If you choose not to download ➡ **EXIT**

You can update any new software automatically or manually.

- Display the menu**
- Select "Setup"**
- Select "System Menu"**
- Select "System Update"**
- Set (see below)**

To return to TV



Shipping Condition (Reset settings)
Updating the TV Software (Digital TV mode)

System Update Update TV's software system

To update automatically

Set "Auto Update Search in Standby" to "On"

- Once set, the TV automatically performs a search in standby and downloads an update, if any software updates are available.
- The automatic updating is performed at 3:00 AM and 5:00 AM every morning under the following conditions:
 - Standby (TV turned Off with the remote control)
 - Direct TV Recording is not in progress.

To update immediately

Select "System Update Search Now"

Searches for an update (for several mins.) and displays a corresponding message if any

Download **OK**

If System Update is performed, the software will be updated (it may change TV functions). If you do not wish to do so, set "Auto Update Search in Standby" to "Off".

Note

- Download may take about 60 mins.
- During software download and update, DO NOT switch Off the TV or press any buttons. The TV will automatically be activated after downloading is completed.
- The message might be an early notification of an update. In this case, the schedule information (the date that the new version can be used) will appear. You can set the reservation for update. The update will not start when the TV is set to Off.
- A clicking sound will occur at 3:00 AM and 5:00 AM when "Auto update Search in Standby" is set to "On". This sound is normal.
- During downloading, the TV will display a blank screen for 40 to 50 seconds. Do not interrupt the TV during this procedure.

Advanced

Using Media Player

Media Player allows you to enjoy photos, video or music stored on an SD Card and a USB Flash Memory. VIERA IMAGE VIEWER is the function of the easy viewing for photos or videos recorded on an SD Card on the TV screen by simply inserting into the SD card slot.

Photo mode : Still pictures recorded by digital cameras will be displayed.

Video mode : (For SD Card or USB Flash Memory) Moving pictures recorded by digital video cameras will be played back.

Music mode : Digital music data will be played back.

- "Date" shows the date on which the recording was made by the recording equipment. The file without record of the date is shown "***/**/*****".

Data format for SD Card / USB Flash Memory browsing

- Photo : Still images recorded with digital still cameras compatible with JPEG files of DCF* and EXIF standards
Data format - Baseline JPEG (Sub-sampling 4:4:4, 4:2:2 or 4:2:0)
Image resolution - 160 × 120 to 20,000,000 pixels
- Video : SD-Video Standard Ver. 1.2 [MPEG-2 (PS format)] and AVCHD Standard compatible files with an audio format that is either MPEG-1/Layer-2 format or Dolby Digital format
(A modified data with a PC may not be displayed correctly.)
- Music : Data format - MP3 and AAC (Copy-protected files cannot be played back.)
- SD Card format : SDXC Card - exFAT
SDHC Card / SD Card - FAT16 or FAT32
- Compliant card type (maximum capacity): SDXC Card (64 GB), SDHC Card (32 GB), SD Card (2 GB), miniSD Card (2 GB) (requiring miniSD adapter)
- If miniSD Card is used, insert / remove it together with the adapter.
- Check the latest information on the card type at the following website. (English only)
<http://panasonic.jp/support/global/cs/tv/>
- USB Flash Memory format : FAT16, FAT32 or exFAT

*DCF (Design rule for camera file system): Unified standard established by Japan Electronics and Information Technology Industries Association (JEITA).

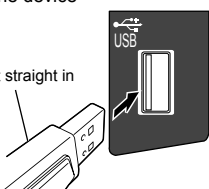
Note

- Format the media device with the recording equipment.
- The picture may not appear correctly on this TV depending on the recording equipment used.
- Display may take some time when there are many files and folders.
- This function cannot display Motion JPEG and still image not JPEG formatted (i.e. TIFF, BMP).
- Any data modified with a PC may not be displayed.
- Images imported from a PC must be compatible with EXIF (Exchangeable Image File) 2.0, 2.1, and 2.2.
- Partly degraded files might be displayed at a reduced resolution.
- The folder and file names may be different depending on the digital camera or digital video camera used.
- Do not use two-byte characters or other special codes.
- The device may become unusable with this TV if the file or folder names are changed.

To insert or remove the SD Card / USB Flash Memory

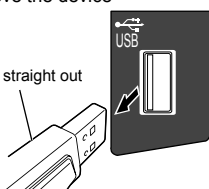
USB Flash Memory

- Insert the device



Insert straight in

- Remove the device

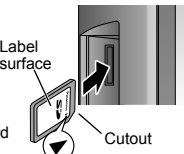


Pull straight out

- Media player only supports USB Flash Memory devices.

SD Card

- To insert SD Card
Gently insert the SD Card label surface facing front.





Label surface

Push until a click is heard

Cutout

- To remove SD Card
Push the centre of the card





Starting Media Player



1 Insert the SD Card or USB Flash Memory

- When the SD Card is inserted, switching to Media Player (Photo mode) will be done automatically. ➔ p. 38
- It is assumed the SD Card contains photos. If not, press the blue button to activate the "Contents Select" screen and select the other mode.
- ➔ "Change the contents" (p. 39)

2 Switch to Media Player



3 Select the device you want to access to

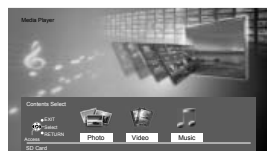


device name



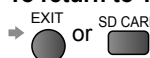
- If only one device is connected, this step will be skipped.

4 Select the content



- Photo ➔ "Photo mode" (p. 38)
- Video ➔ "Video mode" (p. 40)
- Music ➔ "Music mode" (p. 42)

To return to TV



To return to the previous screen



Change the device

You can change to the other device directly in the same mode if two devices are connected.

Display the menu



Select "Drive Select"



Select the device you want to access to



Using Media Player

Photo mode

Photo mode will read all ".jpg" extension files in the card or USB Flash Memory.

Error display (images that could not be loaded, etc.)



Thumbnail images of all photos on the SD Card or USB Flash Memory will be displayed.

- To change the background music
➔ "Photo Setup" (p. 39)
- To display the information of the highlighted photo



File name 1/48 — file number / total file number
Date p1010001.JPG
Pixel 23/10/2009
1600X1200

To sort by folder, recorded date or recorded month

Display the view selection



Select the sort type

Folder view
Sort by Date
Sort by Month



- To return to the thumbnail of all photos



Displays the thumbnail grouped by folder
● The files which are not into a folder will be collected to the folder named "I".

Displays the thumbnail grouped by the same date
● The group of the photos without recorded date is shown as "Unknown".

Displays the thumbnail grouped by the same month
● The group of the photos without recorded date is shown as "Unknown".

Select one of the sorted group to display the thumbnail of the selected group



① select

② thumbnail of the selected group

- To display the information of the highlighted group



Folder name 1/12 — group number / total group number
Number of files 23/10/2009 — folder name, date or month
3

Single view - Display one photo at a time.

Select the photo that you want to view



② single view



Operation guide

(Single view)

- To display / hide the operation guide



- To operate Single view

To the previous photo
Rotate 90° (anti-clockwise)
To the next photo
Rotate 90° (clockwise)

- To return to thumbnail view ➔ RETURN



Slideshow - Slideshow ends with the same thumbnail from which it started.

Select the photo that you want to start the slideshow from

Start Slideshow



- To display / hide the operation guide



- To pause (returns to Single view) ➔ OK

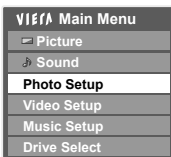
- To return to thumbnail view ➔ RETURN



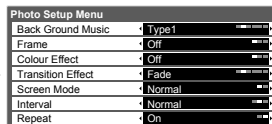
- Picture quality may become lower depending on the slideshow settings.
- Picture setting may not work depending on the slideshow settings.

Photo Setup Setup for Photo mode

Display
the menu



● Picture and
Sound Menu
⇒ p. 24 - p. 26



Menu	Item	Adjustments / Configurations (alternatives)
Photo Setup	Background Music	Selects the background music played during Photo mode (Off / Type1 / Type2 / Type3 / Auto / User) Type1 / 2 / 3 : Pre-installed music tracks Auto : Plays music in the root folder of the SD Card randomly User : Plays music you select, refer to p. 42 for setting
	Frame	Selects the display frame for the slideshow (Off / Multi / Collage) Multi : Display is divided into 9 sections in a tiled design Collage : Photos are displayed in random positions and random scale
	Colour Effect	Selects the colour effect of photos on Single view and Slideshow (Off / Sepia / Gray scale)
	Transition Effect	Selects the transition effect used when switching between photos during the slideshow (Off / Fade / Slide / Dissolve / Motion / Random) Fade : The next photo fades in gradually. Slide : The next photo slides and appears from the left side. Dissolve : The photo is replaced by an indefinite block unit. Motion : The photo is replaced with enlarged, reduced, moved up or moved down. Random : Each transition is selected at random. ● This function is only available when "Frame" is set to "Off".
		Selects whether to display photos in normal or enlarged size during Single view and Slideshow (Normal / Zoom) ● Depending on the photo size, the photo may not be enlarged.
		Selects slideshow interval (Short / Normal / Long)
	Interval Repeat	Slideshow repeat (Off / On)

Change the contents

You can switch to the other mode of Media Player from the thumbnail.

While the thumbnail is
displayed, display the
contents selection



Select the contents

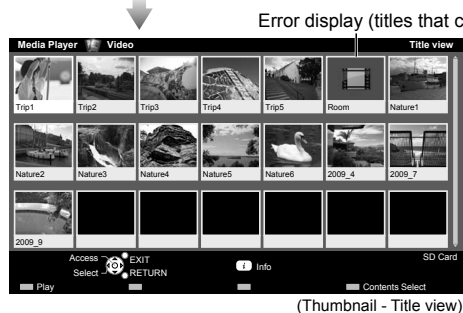
- Photo ⇒ "Photo mode" (p. 38)
- Video ⇒ "Video mode" (p. 40)
- Music ⇒ "Music mode" (p. 42)

Using Media Player

Video mode

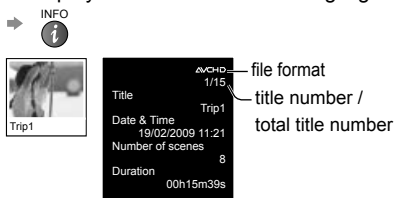
For SD Card or USB Flash Memory
Video mode supports AVCHD and MPEG2 file formats.

Access to "Video" mode (p. 37)



Thumbnails of video titles in the SD Card or USB Flash Memory will be displayed.
When a title is highlighted, preview starts (if the title supports previewing).

- To turn preview off
➔ "Video Setup" (p. 41)
- To display the information of the highlighted title



Playback from Title view

Playback of the selected title starts.
Select the title Start playback



Playback from the selected scene in the title

Playback starts from the selected scene, and runs to the end of the title.
Select the title Select the scene to start playback



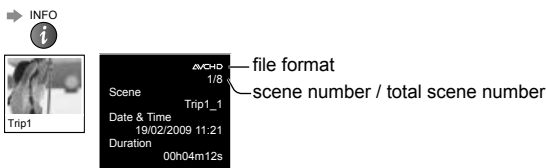
(Thumbnail - Scene view)



When a title is highlighted,
preview starts
(if the title supports previewing).

- To turn preview off
➔ "Video Setup" (p. 41)

- To repeat playback
➔ "Video Setup" (p. 41)
- To display the information of the highlighted scene



Operations during playback



Operation guide information banner

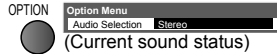
- To display / hide the operation guide and information banner → **INFO**
- To change the aspect ratio (only for the 4:3 movie content) → **ASPECT**
- To operate the playback
 - ◀◀ Rewind
 - ⏸ Pause / Playback
 - ▶▶ Fast forward
 - Stop
- To return to thumbnail → **RETURN**
- To the previous scene → **R**
- To the next scene → **G**

Sound Settings

You can enjoy multi-channel sound by connecting an amplifier to the DIGITAL AUDIO OUT terminal

To confirm or change the current sound status (during playback)

Display the Option menu



Change the sound (if the movie has multiple audio signals)



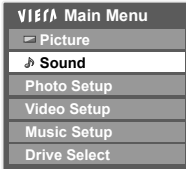
- It may take several seconds for the changes to take effect

Audio output settings

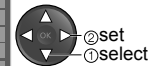
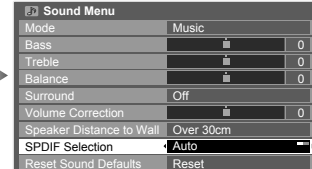
Display the menu



Select "Sound"



Select "SPDIF Selection" and set



Menu	Item	Adjustments / Configurations (alternatives)
Sound	SPDIF Selection	SPDIF : Standard audio transfer file format Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT terminal (Auto / PCM) Auto: Dolby Digital is output as Dolby Digital Bitstream. MPEG is output as PCM. PCM: Digital output signal is fixed to PCM.

Video Setup Setup for Video mode

Display the menu



Select "Video Setup"

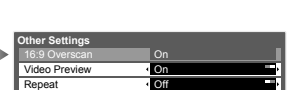


Select "Other Settings"



- Display Settings → p. 26

Select the items and set



- 16:9 Overscan → p. 27

Menu	Item	Adjustments / Configurations (alternatives)
Video Setup	Other Settings	
	Video Preview	Sets whether to start previewing the title or scene in a thumbnail screen (Off / On) • Images may not be displayed for a short time in the thumbnail screen. To resolve this problem, set preview to "Off".
	Repeat	• Playback repeat within the title (Off / On)

Note

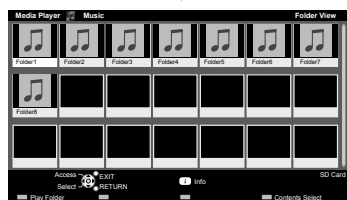
- The structure of titles and scenes may vary depending on the digital video camera used.

Using Media Player

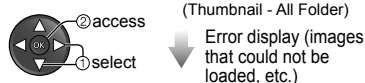
Music mode

Music mode supports MP3 and AAC file formats.

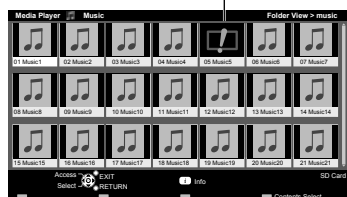
Access to "Music" mode (p. 37)



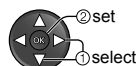
(Thumbnail - All Folder)



Error display (images that could not be loaded, etc.)



(Thumbnail - All music)



Playback starts

- To display the information of the highlighted folder or music
- To playback from folder view :

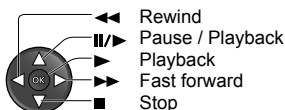
Select the folder

Start playback

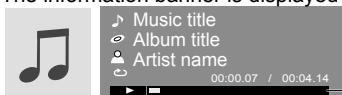


Operation during playback

- To display/ hide the operation guide
- To operate the playback :



- To the previous music
- To the next music
- The information banner is displayed as shown below.



Elapsed time / Total playing time

Music Setup Setup for Music mode

Display the menu

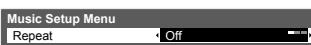


Select "Music Setup"



- Sound Menu → p. 25-26

Select the items and set



Menu	Item	Adjustments / Configurations (alternatives)
Music Setup	Repeat	Selects the repeated mode (Off / Folder / One) Folder: All music in the selected folder are played back repeatedly. One: The selected music is played back repeatedly.

To set the music as the background music during Photo mode

While playing music

Display the menu



Select "File" or "Folder"

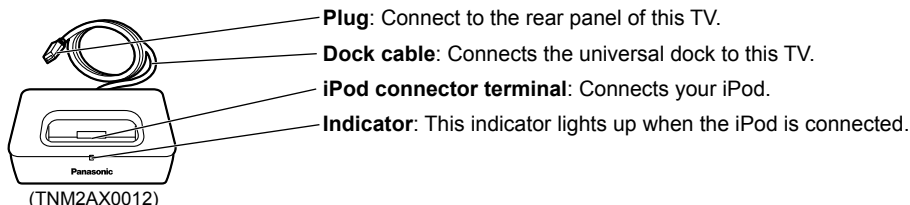


Playing an iPod on TV

You can enjoy iPod music/videos/photos on your TV, and you can also charge the battery by connecting the Universal Dock for iPod to your TV.

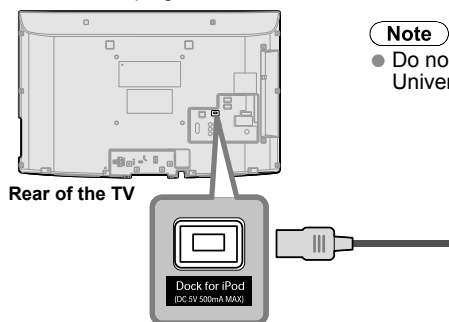
Set up Universal Dock for iPod

■ Controls and basic functions



■ Connecting the Universal Dock for iPod

Ensure that the power of this TV is switched off before you connected the Universal Dock. Connect the plug of the Universal Dock to the Dock for iPod terminal of this TV.

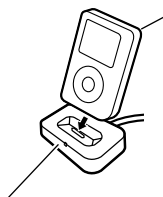


Note

- Do not connect any other optional dock. (Available included Universal Dock for iPod only)

■ Connecting your iPod

Insert your iPod into the connector's terminal of the Universal Dock.



The indicator lights up when the iPod is inserted, and charging begins.

Note

- Panasonic has no warranty for iPod data management.
- Do not twist your iPod when inserting it or taking it off from the universal dock, and be careful not to knock over this universal dock when your iPod is inserted. Do not take off your iPod from the universal dock while you play your iPod with the TV.
- It is recommended that you update your iPod software before using it with the universal dock. The updater for the iPod software is available on the Apple website.
- Attach the dock adapter (which should be supplied with your iPod) to the dock for the stable use of the iPod. If you need an adapter, consult your iPod dealer.

■ Charging your iPod

Your iPod can be recharged while your iPod is connected to the Universal Dock.

- iPod will start recharging regardless of whether this TV is on or off (standby).

■ Disconnecting the Universal Dock for iPod

Preparation

Switch off the power of the TV.

1. Switch off the iPod.
2. Pull out the plug of the Universal Dock from the Dock for iPod terminal of the TV

Playing an iPod on TV

Basic feature

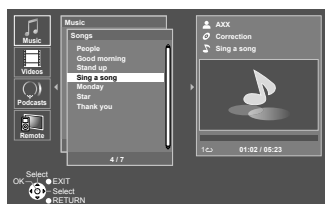
■ Feature

- You can enjoy music/videos/photos on your iPod on the TV screen.

■ Available modes for your iPod

TV control mode (Music/Video/Podcasts)

You can operate your iPod through the TV screen using TV remote control. (p. 45)



Remote mode (Remote)

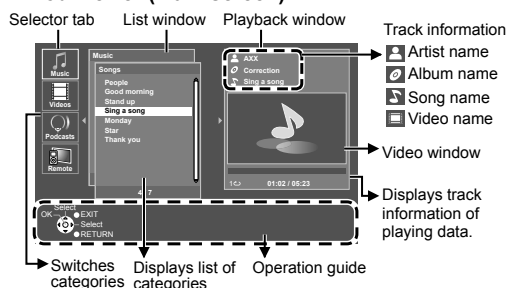
You can operate your iPod through the iPod screen using either TV remote control or the iPod itself. (p. 46)



- Remote mode lets you view videos (Camera Videos) recorded by iPod nano 5G Videos Camera function.

■ iPod menu feature

iPod viewer (Main screen)



Full screen (Only for video playback)



■ Compatible iPod models

iPhone			iPod						iPod nano					iPod mini	
3GS	3G	iPhone	touch (2G)	touch (1G)	classic	5G (video)	Photo/4G (colour display)	4G	5G (video camera)	4G (video)	3G (video)	2G (aluminium)	1G	2G	1G
16GB 32GB	8GB 16GB	4GB 8GB 16GB	8GB 16GB 32GB 64GB	8GB 16GB 32GB	80GB 120GB 160GB	30GB 60GB 80GB	20GB 30GB 40GB 60GB	20GB 40GB	8GB 16GB	8GB 16GB	4GB 8GB	2GB 4GB 8GB	1GB 2GB 4GB	4GB 6GB	8GB 16GB

- Compatibility depends on the software version of your iPod.
- For the iPod Touch/iPhone only music/video/photo services can be enjoyed on this TV.

iPod is a trademark of Apple Inc., registered in the U.S. and other countries.

iPhone is a trademark of Apple Inc.

"Made for iPod" means that an electronic accessory has been designed to connect specifically to iPod and has been certified by the developer to meet Apple performance standards.

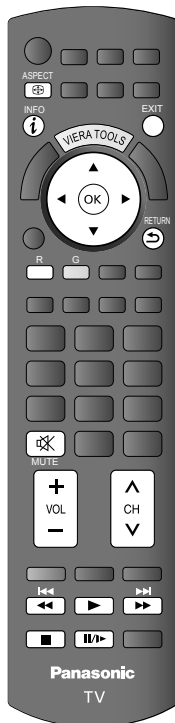
"Works with iPhone" means that an electronic accessory has been designed to connect specifically to iPhone and has been certified by the developer to meet Apple performance standards.

Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

Playing an iPod on this TV

Preparations

- Set up iPod Universal Dock for iPod (p. 43).
- Before connecting/disconnecting the iPod, turn the TV off or reduce the volume of the TV to its minimum.
- Use the menu on your iPod to select the appropriate video/photo output settings for your TV. (Refer to the operating instructions of your iPod.)



1 Display main window

Connect your iPod (not included) firmly

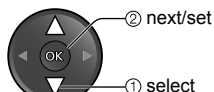
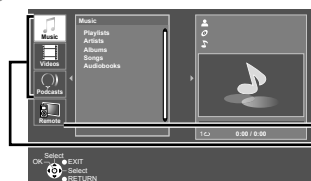


or

Select iPod icon in VIERA TOOLS (p. 21)



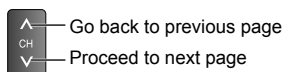
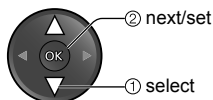
2 Select the category in Selector tab



- Remote mode
- TV control mode (Music/Video/ Podcasts playback)

3 Select track in List window and play

Full screen
(Only for video playback)



- To display / hide the operation guide ➡ INFO
- To change the aspect ratio (during Full Screen mode only)
➡ ASPECT (16:9 / 4:3 Full)
- For more information, refer to the operating instructions for iPod.

- To activate the TV remote control buttons for iPod, set remote control code to "73" (➡ p. 20)

Playing an iPod on TV

Advanced

Playing an iPod on TV

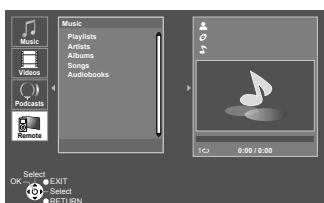
■ Available TV remote control buttons

	Play		Set/Access
	Stop		Return to previous menu
	One press : Skip reverse Press and hold : Reverse		Exit
	One press : Skip forward Press and hold : Forward		Mute
	Pause		Volume up / down
	Move the cursor/Select		

Remote mode

In ②

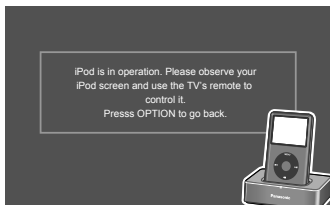
① Select "Remote"



Screen will be switched when "Remote" is selected.

② Operate

Operate your iPod through the iPod screen using either TV remote control or the iPod.



For iPod with touch screen, please use the touch screen to operate it.

- To go back to iPod menu



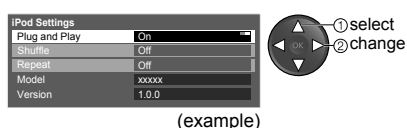
iPod Settings Setup for iPod

In ②

① Display the menu

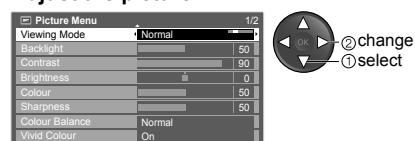


② Select the item and adjust



(example)

■ Adjust the picture



example :Picture menu
Picture menu/Sound menu (p. 24, 25)

■ Set automatic launch



■ Switch shuffle mode



■ Set up Repeat playback



VIERA Link Functions

VIERA Link "HDAVI Control™"

Enjoy additional HDMI interoperability with Panasonic products which have "HDAVI Control" function. This TV supports "HDAVI Control 5" function.

Connections to the equipment with HDMI cable such as DIGA Recorder, HD Video Camera, Player theatre, Amplifier, etc., allow you to interface them automatically.

These features are limited to models incorporating "HDAVI Control" and "VIERA Link".

- Some functions are not available depending on the equipment's version of HDAVI Control. Please confirm the connected equipment's version of HDAVI Control.
- VIERA Link "HDAVI Control", based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers' equipment that supports HDMI CEC cannot be guaranteed.
- Please refer to individual manuals for the equipment. About applicable Panasonic equipment, consult your local Panasonic dealer.

Summary of features

Features	Connected equipment with VIERA Link function	DIGA Recorder* ¹	DVD Player / Blu-ray Disc Player* ¹	HD Video Camera / LUMIX Camera* ¹	Player theatre* ²	Blu-ray Disc theatre* ²	Amplifier* ²
Channel download		○* ⁴	—	—	—	—	—
Easy playback		○	○	○	○* ⁷	○* ⁷	—
Power on link		○	○	○	○	○	—
Power off link		○	○	○	○	○	○
Reduce unnecessary power consumption in standby		○* ⁵	○* ⁵	—	—	○* ⁵	—
Auto standby for unnecessary equipment		○* ³	○* ³	—	○* ³ * ⁸	○* ³ * ⁸	○* ³
Pause Live TV programme		○* ⁴ * ⁶	—	—	—	—	—
Direct TV Recording		○* ⁴	—	—	—	—	—
Control the menu of the connected equipment by VIERA remote control		○* ³	○* ³	○* ³	○* ³	○* ³	—
Speaker control		—	—	—	○	○	○

*1: HDMI Connection only

*2: HDMI and Audio out connections

*3: available with the equipment which has "HDAVI Control 2 or later" function

*4: available with the equipment which has "HDAVI Control 3 or later" function

*5: available with the equipment which has "HDAVI Control 4 or later" function

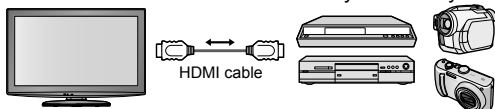
*6: available with DIGA Recorder which has HDD

*7: while playing back a disc

*8: except for watching a disc

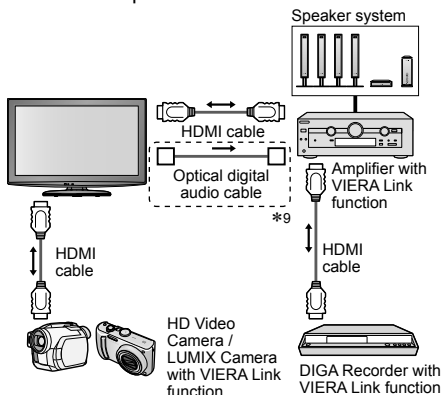
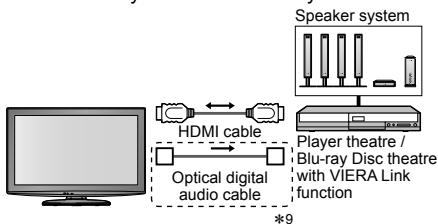
Connection

- To use DIGA Recorder / DVD Player / Blu-ray Disc Player / HD Video Camera / LUMIX Camera



DIGA Recorder / DVD Player / Blu-ray Disc Player / HD Video Camera / LUMIX Camera with VIERA Link function

- To use Player theatre / Blu-ray Disc theatre:
- To use Amplifier:



*9: If the connected equipment has "HDAVI Control 5" function, you do not have to use this audio cable (Optical digital audio cable). In this case, connect the equipment to the TV's HDMI2 terminal via an HDMI cable.

VIERA Link Functions

Note

- This function may not work properly depending on the connected equipment.
- For DIGA Recorder / DVD Player / Blu-ray Disc Player / HD Video Camera / LUMIX Camera with VIERA Link function, connect to HDMI1, HDMI2 or HDMI3 terminal via an HDMI cable.
- For Player theatre / Blu-ray Disc theatre / Amplifier, connect to HDMI1, HDMI2 or HDMI3 or terminal via an HDMI cable and/or the optical digital audio cable for audio output from the TV.
- Use fully wired HDMI compliant cable. Non-HDMI-compliant cables cannot be utilized.
Recommended Panasonic's HDMI cable part number:
 - RP-CDHS15 (1.5 m)
 - RP-CDHS30 (3.0 m)
 - RP-CDHS50 (5.0 m)

Preparations

- Connect the equipment supporting VIERA Link.
- Set up the connected equipment. Read the manual of the equipment.
- For optimal recording, the settings of the recorder might be required. For details, read the manual of the recorder.
- Set VIERA Link On in Setup Menu ➔ "VIERA Link" (p. 27)
- Set up the TV ➔ **After connection, turn the equipment on and then switch the TV on. Set the input mode to HDMI1, HDMI2 or HDMI3 (p. 19), and make sure that an image is displayed correctly.**
This setup should be done each time when the following conditions occur:
 - for the first time
 - when adding or reconnecting equipment
 - when changing setup

Features available

Channel download

Channel setting can be downloaded to the recorder.

Easy playback

Automatic input switching - When the connected equipment is operated, input mode is switched automatically.

Power on link

Set Power on Link "On" in Setup Menu to use this function ➔ "Power on Link" (p. 27)
When the connected equipment starts playback or direct navigator / function menu for the equipment are activated, the TV is automatically turned on. (Only when the TV is in Standby mode.)

Power off link

Set Power off Link "On" in Setup Menu to use this function ➔ "Power off Link" (p. 27)
When the TV is set to Standby mode, the connected equipment is also automatically set to Standby.
 ● This function will work even if the TV enters standby mode automatically by Off Timer function or auto power standby function.

Standby Power Save Reduce unnecessary power consumption in standby

Set Standby Power Save "On" in the Setup Menu to use this function

➔ "Standby Power Save" (p. 27)

The power consumption in Standby mode of the connected equipment is controlled higher or lower in synchronization with the TV On / Off state to reduce the consumption.

When the TV is set to Standby mode, the connected equipment is automatically set to Standby and the power consumption in Standby mode of the connected equipment is automatically minimized.

When the TV is turned on, the connected equipment is still in Standby mode, but the power consumption is increased to make startup time early.

- This function is effective if the connected equipment can change the power consumption in Standby mode and is set to higher consumption.
- This function will work when "Power off Link" is set to "On".

Intelligent Auto Standby Auto standby for unnecessary equipment

Set Intelligent Auto Standby "On (With reminder)" or "On (No reminder)" in the Setup Menu to use this function ➔ "Intelligent Auto Standby" (p. 27)

When the TV is On, non-watched or non-used connected equipment goes into Standby mode automatically to reduce the power consumption. For example, when the input mode is switched from HDMI, when Speaker Selection is changed to "TV" (except for watching a disc).

- If you select "On (With reminder)", the on screen message will be displayed to be noticed before working this function.
- This function may not work properly depending on the connected equipment. If required, set to "Off".

Features available (Using VIERA Link Menu)

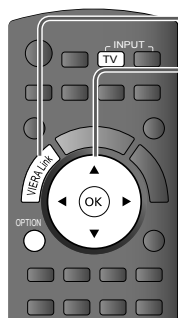
Pause Live TV Pause Live TV programme

Access and pause the live TV programme

You can pause the live TV programme and resume later.

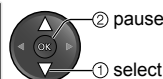
Live TV programme will be recorded on the HDD of the connected DIGA Recorder.

- This function is available with DIGA Recorders which have a HDD.
- If you connect several recorders including other manufacturers' recorders at the same time, please connect DIGA Recorder which has HDD to the TV's lower HDMI terminal number. For example, if you use HDMI1 and HDMI2 for two recorders, in this case connect DIGA Recorder which has HDD to HDMI1.
- If you cannot operate, check the settings and the equipment connections
 ➔ "Summary of features", "Connection", "Preparations" (p. 47, 48)



① Display "VIERA Link Menu"

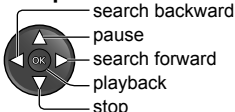
② Select "Pause Live TV" and pause



➔ TV picture will be paused.

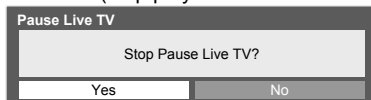
- You can also access Pause Live TV by using VIERA TOOLS. ➔ p. 21
- Live TV programme is recorded on HDD from where it was paused.
- If the paused TV picture disappears after a few minutes
 ➔ (the paused picture will be restored)

To operate Pause Live TV

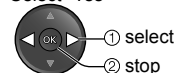


- Operations may be different depending on the recorder. In this case, follow the operation guide or read the manual of the recorder.

To return to Live TV (stop playback of Pause Live TV / cancel pause)



Select "Yes"

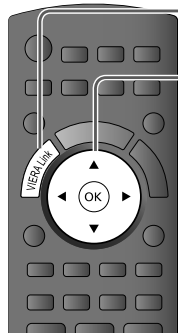


- If you stop playback or cancel pause, the recorded programme will be deleted from HDD.

Direct TV Rec Direct TV Recording - What you see is What you record

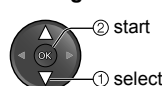
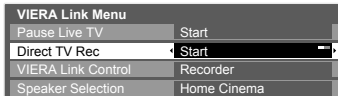
Recording the current programme in DIGA Recorder immediately.

- If you connect a variety of recorders including other manufacturers' recorders at the same time, please connect DIGA Recorder to the TV's lower HDMI terminal number. For example, if you use HDMI1 and HDMI2 for two recorders, in this case connect the DIGA Recorder to HDMI1.
- If you cannot operate, check the settings and the equipment connections
 ➔ "Summary of features", "Connection", "Preparations" (p. 47, 48)



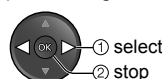
① Display "VIERA Link Menu"

② Select "Direct TV Rec" and start recording



To stop recording

Select "Stop" in "Direct TV Rec" and stop recording



VIERA Link “HDAVI Control™”

Features available (Using VIERA Link Menu)

VIERA Link Control Operate the connected equipment with VIERA remote control

Access and operate the menu of the equipment

You can control some functions of the connected equipment with this TV remote control by pointing at the TV's signal receiver.

- If you cannot operate, check the settings and the equipment connections
 - ➔ “Summary of features”, “Connection”, “Preparations” (p. 47, 48)
- For details of the operations of the connected equipment, read the manual of the equipment.

① Display “VIERA Link Menu”

② Select “VIERA Link Control”

③ Select the equipment you want to access

The type of the connected equipment is displayed. Select the type of the equipment and access.

Recorder / Player / Home Cinema / Video Camera / LUMIX / Digital Camera / Other

- You can also access VIERA Link control by using VIERA TOOLS. ➔ p. 21
- The displayed item may vary depending on the connected equipment.
- “Home Cinema” means Home theatre.
- “Other” means Tuner set top box.

The menu of the accessed equipment
(Input mode will be changed automatically)

④ Operate the connected equipment

1. Set the remote control code to “73” (p. 20)

2. Follow the operation guide

- To display the operation guide ➔ Store / set / access
- Move the cursor / select the menu ➔ Return to the previous menu
- Move the cursor / access / adjust ➔ Exit the menu
- When the key words are displayed on colour bar ➔

Note

- Some operations may not be available depending on the equipment. If so, use its own remote control.

If multiple recorders or players are connected

VIERA Link Menu	
Pause Live TV	Start
Direct TV Rec	Start
VIERA Link Control	Recorder2
Speaker Selection	Home Cinema

Recorder1-3 /
Player1-3

The number is given from the TV's lower HDMI terminal number connected to the same type equipment. For example, two recorders to HDMI2 and HDMI3, in this case the recorder connected to HDMI2 is displayed as “Recorder1”, and the recorder connected to HDMI3 is displayed as “Recorder2”.

If you access non-VIERA Link equipment

When the equipment with “HDAVI Control” function is connected

VIERA Link Menu	
Pause Live TV	Start
Direct TV Rec	Start
VIERA Link Control	Recorder
Speaker Selection	Home Cinema

Type of the
connected
equipment is
displayed.

You can access the menu of the equipment. But you cannot operate it. Use its own remote control to operate the equipment.

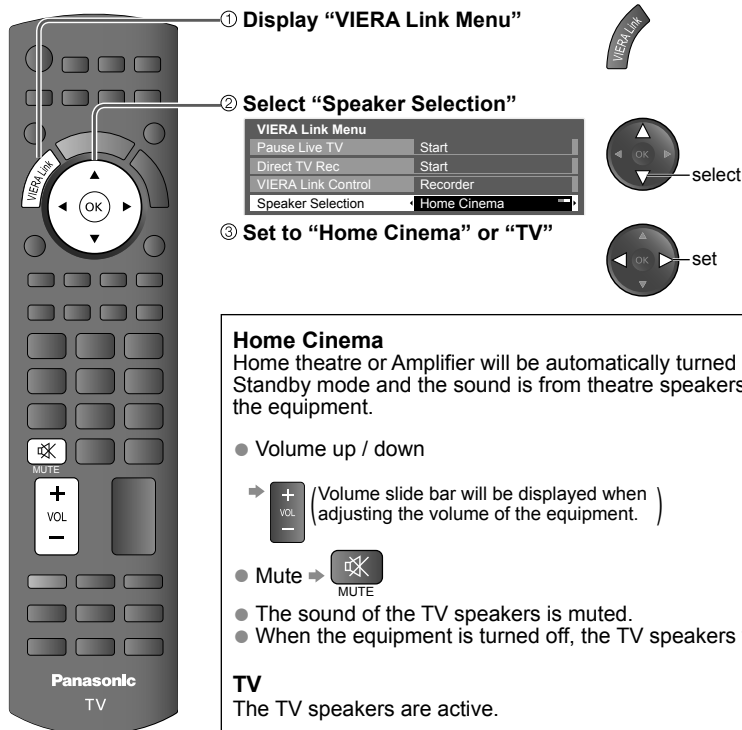
Features available (Using VIERA Link Menu)

Speaker Selection Speaker control

Access and control the speaker volume

You can control the theatre speaker with this TV remote control by pointing at the TV's signal receiver.

- If you cannot operate, check the settings and the equipment connections
➔ "Summary of features", "Connection", "Preparations" (p. 47, 48)





① Display "VIERA Link Menu"

② Select "Speaker Selection"

VIERA Link Menu	
Pause Live TV	Start
Direct TV Rec	Start
VIERA Link Control	Recorder
Speaker Selection	Home Cinema

③ Set to "Home Cinema" or "TV"

Home Cinema
Home theatre or Amplifier will be automatically turned on if it is in Standby mode and the sound is from theatre speakers connected to the equipment.

- Volume up / down
➔  (Volume slide bar will be displayed when adjusting the volume of the equipment.)
- Mute ➔ 
- The sound of the TV speakers is muted.
- When the equipment is turned off, the TV speakers will be active.

TV
The TV speakers are active.

Note

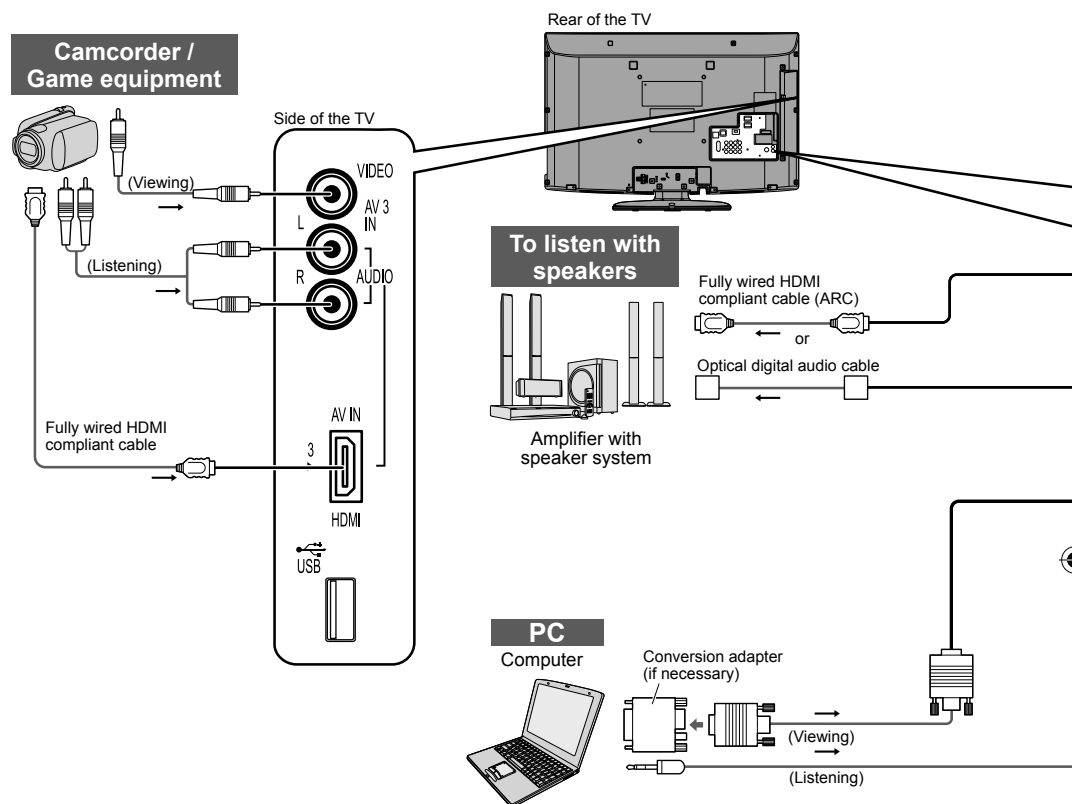
- If you wish to enjoy the multi-channel sound (e.g. Dolby Digital 5.1ch) via an Amplifier, connect with HDMI cable and Optical digital audio cable (p. 47), and then select "Home Cinema". If your Amplifier has "HDAVI Control 5" function, you can connect only with HDMI cable. In this case, connect your Amplifier to the TV's HDMI2 terminal.
To enjoy the sound from the DIGA Recorder in multi-channel sound, connect an HDMI cable from the DIGA Recorder to the Amplifier (p. 47).

Note

- These functions may not work properly depending on the connected equipment.
- Image or sound may not be available for the first few seconds when input mode is switched.
- Easy playback may be available by using the remote control for Home theatre or Amplifier. Read the manual of the equipment.
- "HDAVI Control 5" is the newest standard (current as of December, 2009) for HDAVI Control compatible equipment. This standard is compatible with conventional HDAVI equipment.
- To confirm this TV's version of HDAVI Control ➔ "System Information" (p. 27)

External Equipment

These diagrams show our recommendations for how to connect the TV to your various equipment. For other connections, consult the instructions for each piece of equipment, the table below, and the specifications (p. 63).

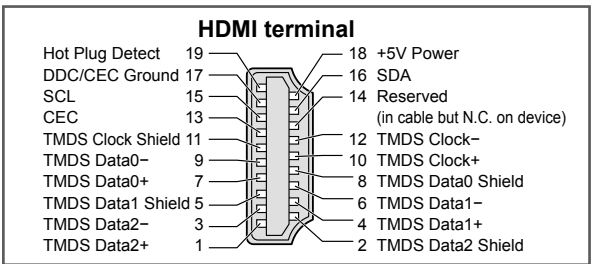
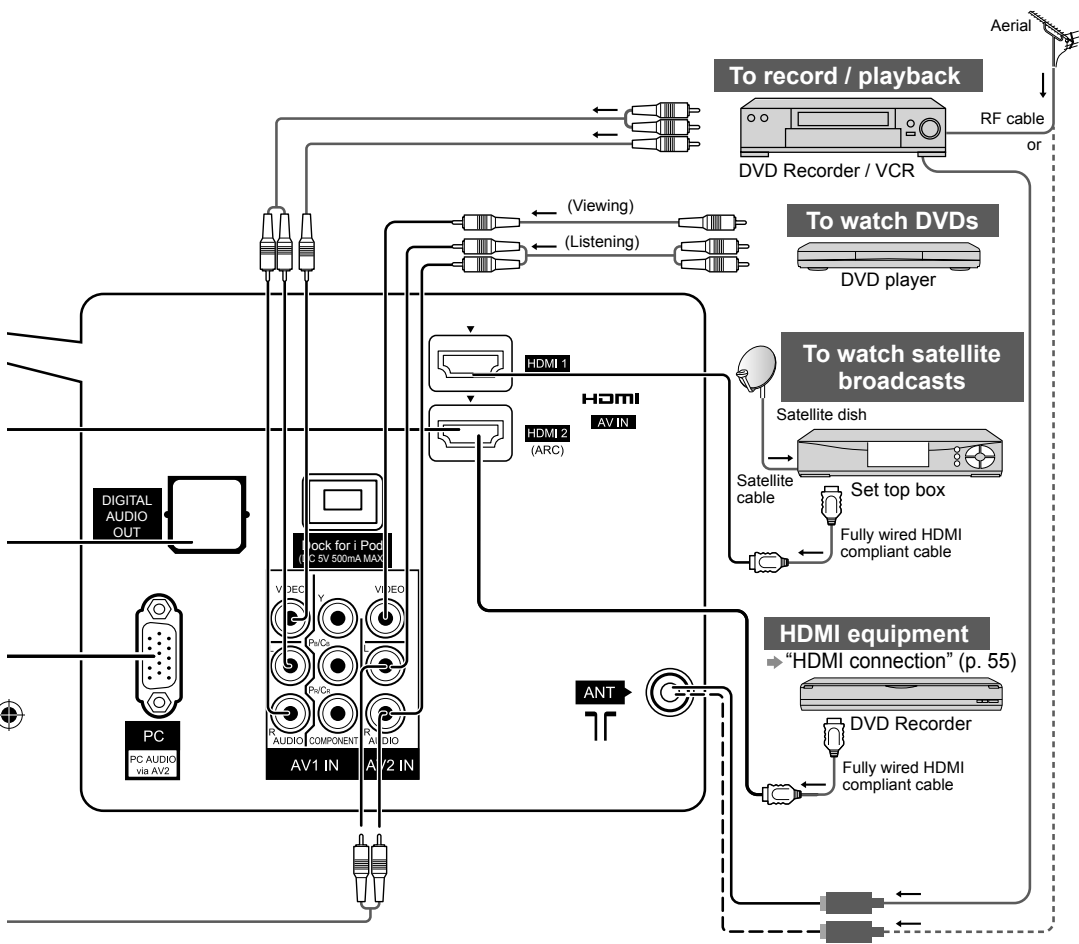


Types of connectable equipment to each terminal

Terminal Recording / Playback (equipment)	AV1 IN AV2 IN AV3 IN (Side of the TV)	DIGITAL AUDIO OUT	HDMI		
			1	2	3
To record / playback videocassettes / DVDs (VCR / DVD recorder)	○				
To watch DVDs (DVD player)	○		○	○	○
To watch camcorder images (Video camera)	○		○	○	○
To watch satellite broadcasts (Set top box)	○		○	○	○
To play games (Game equipment)	○		○	○	○
To use amplifier with speaker system		○		○*1	
VIERA Link			○	○	○

○: Recommended Connection

*1: applicable if your amplifier has ARC (Audio Return Channel) function



Technical Information


Channel Allocation (Analogue TV mode)



CH Display / Receive Channel			
CH 0 - CH 5	S 2 - S 10	CH 5A	CH 6 - CH 9
CH 9A	CH 10 - CH 12	S 11 - S 44	CH 20 - CH 75

Rating (Digital TV mode)











Rating	Meaning	Rating	Meaning
No Block	Not classified	M	Mature
P	Pre school	MA 15+	Mature Adult 15+
C	Children	AV 15+	Adult strong Violence 15+
G	General	R	Restricted 18+
PG	Parental Guidance recommended		

Stereo / Bilingual Sound Selection (Analogue TV mode)








 When you receive the stereo / bilingual sound system, sound output modes can be selected by pressing the **Stereo / Bilingual Sound Selection** button.

Audio Signal	STEREO	MAIN I	SUB II	MONO
Mode Indicator		I	II	

NICAMUsed in New Zealand, Singapore, Hong Kong etc.

Type of broadcast	Regular broadcast (Standard Audio)	Regular + NICAM MONO I (MAIN I)	NICAM STEREO	NICAM DUAL MONO (MAIN I / SUB II)
Mode Indicator	No Indicator  	I  	  	  

A2 (German)Used in Australia, Malaysia etc.

Type of broadcast	Regular broadcast (Standard Audio)	BILINGUAL or DUAL MONO: MAIN I / SUB II	STEREO
Mode Indicator	No Indicator  	I  	  

- If the stereo signal is poor or the receiving conditions are not optimum or if STEREO:MONO automatic switching occurs, it is recommended you switch from STEREO to MONO.
- Even when the contents of the receiving signal undergo changes, selection mode is kept intact.
- When the receiving conditions deteriorate, listening will be easier if the mode is set to the MONO position, using the stereo / bilingual sound selection button.
- DUAL, also known as DUAL MONO or as BILINGUAL is not currently transmitted in some countries.

HDMI connection

HDMI (high-definition multimedia interface) is the world's first complete digital consumer AV interface complying with a non-compression standard.

HDMI allows you to enjoy high-definition digital images and high-quality sound by connecting the TV and the equipment.

HDMI-compatible equipment (*1) with an HDMI or DVI output terminal, such as a DVD player, a set top box or a game equipment, can be connected to the HDMI terminal using an HDMI compliant (fully wired) cable. About connections, see "External Equipment" (p. 52, 53).

Applicable HDMI features

- Input audio signal : 2ch Linear PCM (sampling frequencies - 48 kHz, 44.1 kHz, 32 kHz)
- Input video signal : 480i, 480p, 576i, 576p, 720p, 1080i and 1080p
 - ➔ "Input signal that can be displayed" (p. 56)
 - Match the output setting of the digital equipment.
- Input PC signal : ➔ "Input signal that can be displayed" (p. 56)
 - Match the output setting of the PC.
- VIERA Link (HDAVI Control 5) : ➔ "VIERA Link" (p. 47)
- Audio Return Channel (*2) (HDMI2 terminal only)

DVI connection

If the external equipment has only a DVI output, connect to the HDMI terminal via a DVI to HDMI adapter cable (*3).

When the DVI to HDMI adapter cable is used, connect the audio cable to the audio input terminal (HDMI1 / 2: use AV2 audio terminals / HDMI3: use AV3 audio terminals).

If the picture position is not fit to the screen during the DVI connection, adjust the position on "DVI Position Settings" in Setup Menu (p. 26). The settings are memorized for each HDMI terminals and input signals.

Note

- Audio settings can be made on the "HDMI1 / 2 / 3 Input" in the Sound Menu. (p. 26)
- If the connected equipment has an aspect adjustment function, set the aspect ratio to "16:9".
- These HDMI connectors are "type A".
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- An equipment having no digital output terminal may be connected to the input terminal of either "COMPONENT" or "VIDEO" to receive analogue signals.
- This TV incorporates HDMI™ technology.

(*1): The HDMI logo is displayed on HDMI-compliant equipment.

(*2): Audio Return Channel (ARC) is a function to be able to send digital sound signals via an HDMI cable.

(*3): Enquire at your local digital equipment retailer shop.

PC connection

A PC may be connected to this TV so that the PC screen is displayed and sound is heard from the TV.

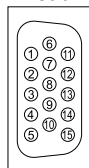
- PC signals that can be inputted: Horizontal scanning frequency 31 to 69 kHz; vertical scanning frequency 59 to 86 Hz. More than 1,024 signal lines could result in incorrect display of the image.
- A PC adapter is not necessary for the DOS/V-compliant D-sub 15-pin connector.

Note

- Some PC models cannot be connected to this TV.
- When using PC, set the colour display quality of PC to the highest position.
- For details of the applicable PC signals, see p. 56.
- Max. display resolution

Aspect	4:3	1,024 × 768 pixels
	16:9	1,366 × 768 pixels

- D-sub 15-pin connector signal



Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	R	⑥	GND (Ground)	⑪	NC (not connected)
②	G	⑦	GND (Ground)	⑫	NC (not connected)
③	B	⑧	GND (Ground)	⑬	HD
④	NC (not connected)	⑨	NC (not connected)	⑭	VD
⑤	GND (Ground)	⑩	GND (Ground)	⑮	NC (not connected)

Technical Information

Input signal that can be displayed

COMPONENT (Y, P_B/C_B, P_R/C_R), HDMI

* Mark: Applicable input signal

Signal name	COMPONENT	HDMI
525 (480) / 60i	*	*
525 (480) / 60p	*	*
625 (576) / 50i	*	*
625 (576) / 50p	*	*
750 (720) / 60p	*	*
750 (720) / 50p	*	*
1,125 (1,080) / 60i	*	*
1,125 (1,080) / 50i	*	*
1,125 (1,080) / 60p		*
1,125 (1,080) / 50p		*
1,125 (1,080) / 24p		*

PC (from D-sub 15P)

Applicable input signal for PC is basically compatible to VESA standard timing.

Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)
640 × 400 @70 Hz	31.47	70.07
640 × 480 @60 Hz	31.47	59.94
640 × 480 @75 Hz	37.50	75.00
800 × 600 @60 Hz	37.88	60.32
800 × 600 @75 Hz	46.88	75.00
800 × 600 @85 Hz	53.67	85.06
852 × 480 @60 Hz	31.44	59.89
1,024 × 768 @60 Hz	48.36	60.00
1,024 × 768 @70 Hz	56.48	70.07
1,024 × 768 @75 Hz	60.02	75.03
1,024 × 768 @85 Hz	68.68	85.00
1,280 × 1,024 @60 Hz	63.98	60.02
1,280 × 768 @60 Hz	47.70	60.00
1,366 × 768 @60 Hz	48.39	60.04
Macintosh13" (640 × 480)	35.00	66.67
Macintosh16" (832 × 624)	49.73	74.55
Macintosh21" (1,152 × 870)	68.68	75.06

PC (from HDMI terminal)

Applicable input signal for PC is basically compatible to HDMI standard timing.

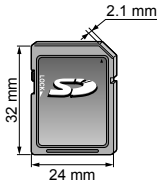
Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)
640 × 480 @60 Hz	31.47	60.00
750 (720) / 60p	45.00	60.00
1,125 (1,080) / 60p	67.50	60.00

Note

- Signals other than above may not be displayed properly.
- The above signals are reformatted for optimal viewing on your display.
- PC signal is magnified or compressed for display, so that it may not be possible to show fine detail with sufficient clarity.

SD Card

Use an SD Card which meets SD standards. If not, it may cause the TV to malfunction.



Cautions in handling SD Card

- Do not remove the card while the TV is accessing data (this can damage card or TV).
- Do not touch the pins on the back of the card.
- Do not subject the card to a high pressure or impact.
- Insert the card in the correct direction (otherwise, card may be damaged).
- Electrical interference, static electricity, or erroneous operation may damage the data or card.
- Back up the recorded data at regular intervals in case of deteriorated or damaged data or erratic operation of the TV. (Panasonic is not liable for any deterioration or damage of recorded data.)

On screen messages

Message	Meaning / Action
Cannot read file	<ul style="list-style-type: none"> ● The file is broken or unreadable. ● The TV does not support the format. (For the applicable formats and data, see above.)
Please confirm the SD card is OK	<ul style="list-style-type: none"> ● The inserted SD Card has a problem.
No Device inserted	<ul style="list-style-type: none"> ● Confirm SD Card is inserted correctly.
No valid file to play	<ul style="list-style-type: none"> ● The card has no data.
This operation is not possible	<ul style="list-style-type: none"> ● Your operation is not available.

Maintenance

First, remove the mains plug from the socket outlet.

Display panel, Cabinet, Pedestal

For regular care:

Gently wipe the surface of the display panel, cabinet, or pedestal by using a soft cloth to clean the dirt or fingerprints.

For stubborn dirt:

Dampen a soft cloth with clean water or diluted neutral detergent (1 part detergent to 100 parts water). Then wring the cloth and wipe the surface. Finally, wipe away all the moisture.

Caution

- Do not use a hard cloth or rub the surface too hard. This may cause scratches on the surface.
- Take care not to subject the TV's surfaces to water or detergent. A liquid inside the TV could lead to product failure.
- Take care not to subject the surfaces to insect repellent, solvent, thinner, or other volatile substances. This may degrade surface quality or cause peeling of the paint.
- The surface of the display panel is specially treated and may be easily damaged. Take care not to tap or scratch the surface with your fingernail or other hard objects.
- Do not allow the cabinet and pedestal to make contact with a rubber or PVC substance for a long time. This may degrade surface quality.

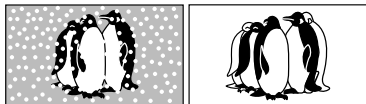
Mains plug

Wipe the mains plug with a dry cloth at regular intervals. Moisture and dust may lead to fire or electrical shock.

FAQs

Before requesting service or assistance, please follow these simple guides to resolve the problem. If the problem still persists, please contact your local Panasonic dealer for assistance.

White spots or shadow images (noise)



- Check the position, direction, and connection of the aerial.

Neither image nor sound is produced

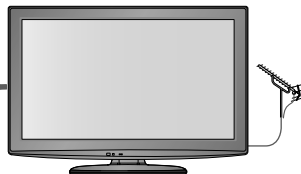
- Is the TV in "AV mode"?
- Is the mains lead plugged into the socket outlet?
- Is the TV turned On?
- Check Picture Menu (p. 24) and volume.
- Check all required cables and connections are firmly in place.

An error message appears

- Follow the message's instructions.
- If the problem persists, contact your local Panasonic dealer.

The LCD panel moves slightly when it is pushed with a finger Clattered sound might be heard

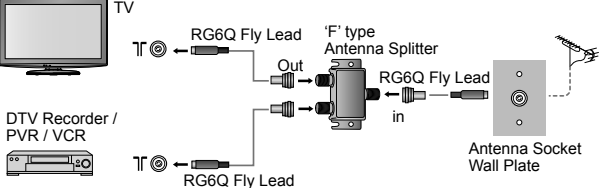
- There are some looseness around the panel to prevent the damage to the panel.
The panel might move slightly when it is pushed with a finger, and clattered sound might be heard. This is not a malfunction.



There may be red spots, blue spots, green spots and black spots on the screen

- An image on a LCD or Plasma TV screen is created by many small groups of dots known as pixels (which is similar to the image in a newspaper). It also naturally follows that higher panel resolutions contain more pixels. To create a colour image, each pixel consists of three tiny coloured dots (known as sub-pixels), one each of red, green and blue. Each one of these dots is precisely controlled by the electronics of the TV to produce the picture. Whilst Panasonic maintains the highest standards in manufacturing technology and processes in the construction of these panels, there are a number of allowable pixel/sub-pixel failures that still allow the panel to be defined as a good panel. It is not possible to guarantee absolutely no pixel loss.

FAQs

	Problem	Actions
Digital TV	<p>Note: Digital TV reception is only as good as the antenna and the antenna cabling delivering the DTV signals to the television. Reliable digital TV reception requires high quality, robust DTV signals which can only be achieved when using a TV antenna and cabling designed for digital TV reception.</p> <ul style="list-style-type: none"> ● Further reading please visit: http://www.digitalready.gov.au/publications.aspx where you can download 'The Digital TV Antenna Systems for Homes Handbook' information pdf file. ● For your safety, the antenna and cabling should be inspected / installed by a licenced installer that should comply with Australian Standard AS1417.1 for Domestic installations or AS1367 for MATV installations. 	
	<p>Connecting devices such as DTV recorder / PVR / VCR etc that also require an antenna connection to the digital television</p>	<ul style="list-style-type: none"> ● To maintain optimum antenna signal quality, use an 'F' type TV signal splitter (as illustrated) when connecting two or more devices to the same antenna socket.  <ul style="list-style-type: none"> ● Hint: Some degradation of the DTV signal may occur if you are connecting the aerial through an external device (e.g. DVD Recorder or Set Top Box). In this case it is better to use a splitter and connect the aerial directly to both devices.
	<p>After digital TV tuning, (or re-tuning) some or all DTV channels are missing</p>	<ul style="list-style-type: none"> ● Check to ensure your area is covered by DTV transmissions. ● Check that the aerial and antenna cable are designed for DTV reception. If you live within 5-10 Km of DTV transmission towers, a combined VHF / UHF Digital TV aerial should be adequate. Outside this area, separate VHF and UHF aerials provide superior reception performance. ● If you live in a unit or apartment, check to ensure the Master Antenna TV (MATV) system is designed for analogue and DTV reception. Please consult your body corporate.
	<p>Picture regularly pixelates on some channels, or 'No Signal' message</p>	<ul style="list-style-type: none"> ● Check "Signal Condition" via TV Setup menu. If "Signal Quality" or "Signal Strength" are red/orange or constantly changing, check aerial/cable/connections. If problem persists consult your local TV antenna installer. ● Too much signal; is "Signal Strength" always at full strength? If yes, try attenuating (reducing) the signal strength ● Check that the aerial and antenna cable are designed for DTV reception. ● The received signal may be too weak to allow the TV to reliably lock to the selected channel to generate a viewable picture. If problem persists consult your local TV aerial installer. ● Interference from household appliances (known as impulse noise) such as light switches, fridges etc may cause picture break up and / or audio distortion. Use high quality quad shielded coaxial cable (RG6Q) fly lead between TV and antenna wall socket to minimise impulse noise pickup. If problem persists consult your local TV aerial installer. ● Antenna installation may be using an aerial amplifier that is faulty or an older style aerial amplifier that was not designed for digital TV. ● Older style antenna cabling, loose fitting/corroded wall socket connections/terminals etc.
	<p>Picture infrequently pixelates on some or all channels</p>	<ul style="list-style-type: none"> ● Electrical interference caused by local or distant lighting storms, heavy rain, high wind etc may cause picture to break up and or audio to mute/distort momentarily. ● Impulse noise interference from an infrequently used electrical appliance, or a passing vehicle or lawn mower with a "noisy" ignition system. ● Older style antenna cabling, loose fitting/corroded wall socket connections/terminals etc.

	Problem	Actions
Screen	Chaotic image, noisy	<ul style="list-style-type: none"> ● Change the setting of "P-NR" in the Picture Menu (to remove noise). (p. 24) ● Check nearby electrical products (car, motorcycle, fluorescent lamp).
	No image can be displayed	<ul style="list-style-type: none"> ● Is "Colour" or "Contrast" in the Picture Menu set to the minimum? (p. 24)
	Blurry or distorted image (no sound or low volume)	<ul style="list-style-type: none"> ● Reset channels (p. 30, 31).
	Unusual image is displayed	<ul style="list-style-type: none"> ● Turn off the TV with Mains power On / Off switch, then turn it on again.
	"Shop" appears on screen at switch on	<ul style="list-style-type: none"> ● "Shop" was selected in "Auto Tuning" (p. 12) Reset settings in "Shipping Condition" (p. 34), then select "Home" in "Auto Tuning" (p. 12)
Sound	No sound is produced	<ul style="list-style-type: none"> ● Is "Sound Mute" active? (p. 10) ● Is the volume set to the minimum?
	Sound level is low or sound is distorted	<ul style="list-style-type: none"> ● Sound signal reception may be deteriorated. ● Set "MPX" in the Sound Menu to "Mono" (p. 25).
HDMI	Sound is unusual	<ul style="list-style-type: none"> ● Set the sound setting of the connected equipment to "2ch L.PCM". ● Check the "HDMI1 / 2 / 3 Input" setting in the Sound Menu. (p. 26) ● If digital sound connection has a problem, select analogue sound connection. (p. 55)
	Pictures from external equipment are unusual when the equipment is connected via HDMI	<ul style="list-style-type: none"> ● Is the HDMI cable connected properly? (p. 47, 52, 53) ● Turn Off the TV and equipment, then turn them On again. ● Check an input signal from the equipment. (p. 56) ● Use an equipment compliant with EIA/CEA-861/861B.
Other	TV goes into Standby mode	<ul style="list-style-type: none"> ● Auto power function is activated. ● The TV enters Standby mode about 30 mins. after analogue broadcasting ends.
	The remote control does not work or is intermittent	<ul style="list-style-type: none"> ● Are the batteries installed correctly? (p. 3) ● Has the TV been switched On? ● Point the remote control directly at the front of the TV (within about 7 m and a 30 degree angle of the front of the TV). ● Situate the TV away from sunshine or other sources of bright light not to shine on the TV's remote control signal receiver.

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Specifications

TH-L32X25A			
Power	Power rating	AC 220 - 240 V, 50 / 60 Hz 0.52 A	
	Normal (Home) mode	69 W	
	Standby condition	0.23 W	
Display panel	Aspect Ratio	16:9	
	Visible screen size	80 cm (diagonal) 698 mm (W) × 393 mm (H)	
	Number of pixels	1,049,088 (1,366 (W) × 768 (H))	
Sound	Speaker	160 mm × 40 mm × 2 pcs, 8 Ω	
	Audio Output	20 W (10 W + 10 W), 10% THD	
PC signals		VGA, SVGA, WVGA, XGA SXGA, WXGA (compressed) Horizontal scanning frequency 31 - 69 kHz Vertical scanning frequency 59 - 86 Hz	
Receiving Systems / Band name		PAL B/G Reception of Off air broadcasts	
		DVB-T 7 MHz VHF / UHF (Australia) free-to-air TV broadcast reception	
		PAL 60 Hz Playback of NTSC tape from some PAL Video recorders (VCR)	
		M. NTSC Playback from M. NTSC Video recorders (VCR)	
NTSC Playback from NTSC Video recorders (VCR)			
Aerial - Rear		Standard Belling & Lee connector	
Operating Conditions		Temperature : 0 °C - 35 °C Humidity : 20 % - 80 % RH (non-condensing)	
Connection Terminals	AV1 Input	AUDIO L - R	RCA PIN Type × 2 0.5 V[rms]
		VIDEO	RCA PIN Type × 1 1.0 V[p-p] (75 Ω)
		COMPONENT	Y 1.0 V[p-p] (including synchronization) P _B /C _B , P _R /C _R ±0.35 V[p-p]
	AV2 Input	AUDIO L - R	RCA PIN Type × 2 0.5 V[rms]
		VIDEO	RCA PIN Type × 1 1.0 V[p-p] (75 Ω)
	AV3 Input	AUDIO L - R	RCA PIN Type × 2 0.5 V[rms]
		VIDEO	RCA PIN Type × 1 1.0 V[p-p] (75 Ω)
	Others	HDMI1 - 3 Input	TYPE A Connectors ● This TV supports "HDAVI control 5" function.
		PC Input	HIGH-DENSITY D-SUB 15PIN R / G / B: 0.7 V[p-p] (75 Ω) HD / VD: TTL Level 2.0 - 5.0 V[p-p] (high impedance)
		DIGITAL AUDIO OUT	PCM / Dolby Digital, Fiber optic
		Card slot	SD Card slot × 1
		USB	USB 2.0 Type A connector × 1
Dock for iPod		DC 5V 500mA MAX	
Dimensions (W × H × D)		798 mm × 551 mm × 217 mm (With Pedestal) 798 mm × 511 mm × 83 mm (TV only)	
Mass		11.0 kg Net (With Pedestal) 9.5 kg Net (TV only)	

Note

- Design and Specifications are subject to change without notice. Mass and Dimensions shown are approximate.

Panasonic Warranty

1. The product is warranted for 12 months from the date of purchase. Subject to the conditions of this warranty Panasonic or its Authorised Service Centre will perform necessary service on the product without charge for parts or labour if, in the opinion of Panasonic, the product is found to be faulty within the warranty period.
2. This warranty only applies to Panasonic products purchased in Australia and sold by Panasonic Australia or its Authorised Distributors or Dealers and only where the products are used and serviced within Australia or its territories. Warranty cover only applies to service carried out by a Panasonic Authorised Service Centre and only if valid proof of purchase is presented when warranty service is requested.
3. This warranty only applies if the product has been installed and used in accordance with the manufacturer's recommendations (as noted in the operating instructions) under normal use and reasonable care (in the opinion of Panasonic). The warranty covers normal domestic use only and does not cover damage, malfunction or failure resulting from use of incorrect voltages, incorrect installation, accident, misuse, neglect, build-up of dirt or dust, abuse, maladjustment of customer controls, mains supply problems, thunderstorm activity, infestation by insects or vermin, tampering or repair by unauthorised persons (including unauthorised alterations), introduction of sand, humidity or liquids, commercial use such as hotel, office, restaurant, or other business or rental use of the product, exposure to abnormally corrosive conditions or any foreign object or matter having entered the product.
4. This warranty does not cover the following items unless the fault or defect existed at the time of purchase:

(a) Cabinet Part(s)	(e) DVD Video, Blu-ray, or Recordable Discs
(b) Video or Audio Tapes	(f) Video / Audio Heads from wear and tear in normal use
(c) SD cards or USB devices	(g) Information stored on Hard Disk Drive, USB stick or SD card
(d) User replaceable Batteries	(h) DTV reception issues caused by TV Aerial / Cabling / Wall socket(s) etc
5. Some products may be supplied with Ethernet connection hardware. The warranty is limited on such products and will not cover

(a) Internet and or DLNA connection / setup related problems
(b) Access fees and or charges incurred for internet connection
(c) The use of incompatible software or software not specifically stipulated in the product operations manual; and
(d) Any indirect or consequential costs associated with the incorrect use or misuse of the hardware, its connection to the internet or any other device.
6. If warranty service is required you should:
 - Telephone Panasonic's Customer Care Centre on 132600 or visit our website and use the Service Centre Locator for the name/address of the nearest Authorised Service Centre.
 - Send or bring the product to a Panasonic Authorised Service Centre together with your proof of purchase receipt as a proof of purchase date. Please note that freight and insurance to and / or from your nearest Authorised Service Centre must be arranged by you.
7. The warranties hereby conferred do not extend to, and exclude, any costs associated with the installation, de-installation or re-installation of a product, including costs related to the mounting, de-mounting or remounting of any screen, (and any other ancillary activities), delivery, handling, freight, transportation or insurance of the product or any part thereof or replacement of and do not extend to, and exclude, any damage or loss occurring by reason of, during, associated with, or related to such installation, de-installation, re-installation or transit.

Panasonic Authorised Service Centres are located in major metropolitan areas and most regional centres of Australia, however, coverage will vary dependant on product. For advice on exact Authorised Service Centre locations for your product, please telephone our Customer Care Centre on 132600 or visit our website and use the Service Centre Locator.

Unless otherwise specified to the consumer the benefits conferred by this express warranty are additional to all other conditions, warranties, guarantees, rights and remedies expressed or implied by the Trade Practices Act 1974 and similar consumer protection provisions contained in legislation of the States and Territories and all other obligations and liabilities on the part of the manufacturer or supplier and nothing contained herein shall restrict or modify such rights, remedies, obligations or liabilities.

Feb 2010

THIS WARRANTY CARD AND THE PURCHASE DOCKET (OR SIMILAR PROOF OF PURCHASE) SHOULD BE RETAINED BY THE CUSTOMER AT ALL TIMES

If you require assistance regarding warranty conditions or any other enquiries, please contact our Customer Care Centre via the Panasonic website www.panasonic.com.au or by phone on 132 600. If phoning in, please ensure you have your operating instructions available.

Panasonic Australia Pty, Limited

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Locked Bag 505, Frenchs Forest, NSW 2086

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Customer's Record

The model number and serial number of this product may be found on its rear panel. You should note the model number and the serial number in the space provided below and retain this book, plus your purchase receipt, as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

Model Number

Serial Number

Panasonic Corporation

Web Site: <http://panasonic.net>

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