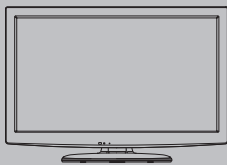


Panasonic®

Model No.
TH-L32X20A

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.

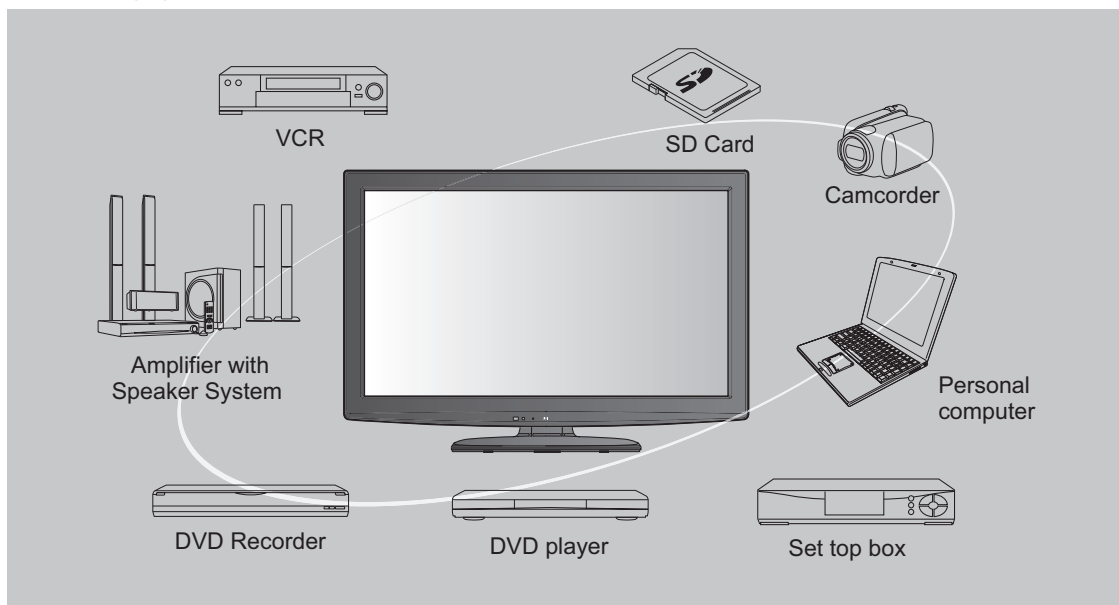
English

TQB4GC0373

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>.

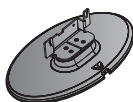
Standard accessories

Check that you have the accessories and items shown ☒

- ☐ Remote Control
- N2QAYB000494



- ☐ Pedestal ➔ p. 6



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



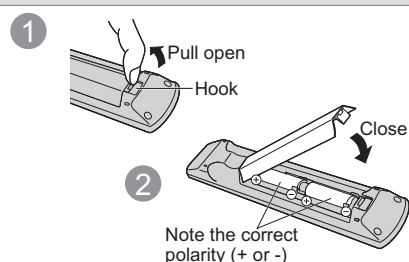
- ☐ Fall-prevention parts ➔ p. 7

- ☐ 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
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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 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.
- Not placing the television on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television to a suitable support.
- Not standing the televisions 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

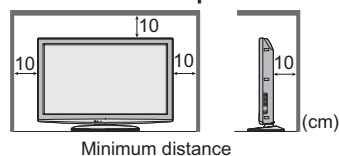
- Cleaning an energized TV may cause electrical shock.

■ 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 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.

■ Do not expose your ears to excessive volume from the headphones

- Irreversible damage can be caused.

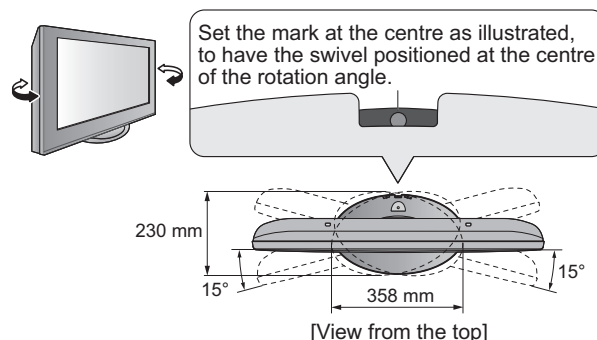
■ Auto power standby function

- 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



- 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.

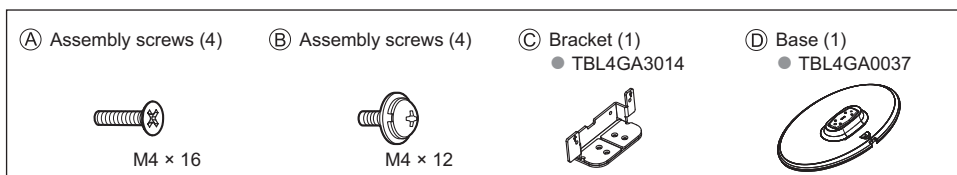
- If insufficient care is taken to ensure screws are properly tightened during assembly, the pedestal will not be strong enough to support the TV, and it might fall over and become damaged, and personal injury may result.

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.

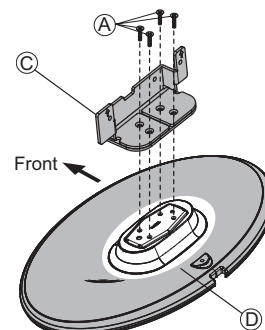
- If two or more people are not present, the TV may be dropped, and personal injury may result.



Assembling the pedestal

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

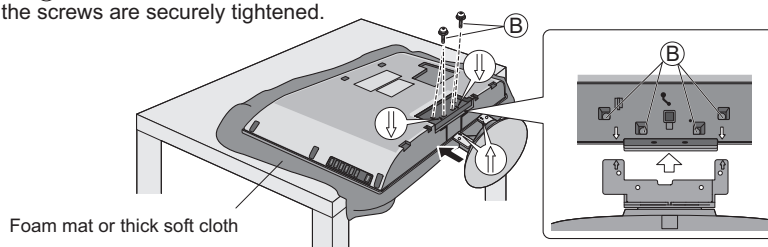
- Make sure that the screws are securely tightened.



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.

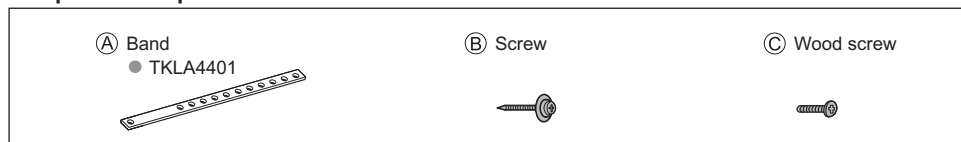


Preventing the TV from falling over

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.

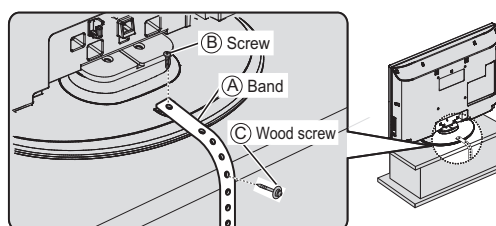
- This measure is designed to reduce the risk of injury from a falling TV. However, it cannot guarantee protection in all cases.

Fall-prevention parts



Securing to a furniture

Fix pedestal and furniture together with band.



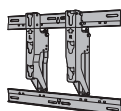
This image is for illustrative purposes only.

Optional accessories

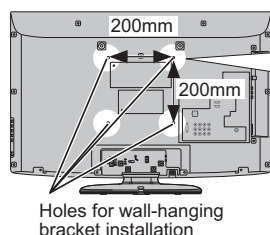
Please contact your nearest Panasonic dealer to purchase the recommended wall-hanging bracket. For additional details, please refer to the wall-hanging bracket installation manual.

Wall-hanging bracket

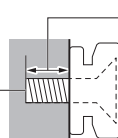
- TY-WK3L2RW



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

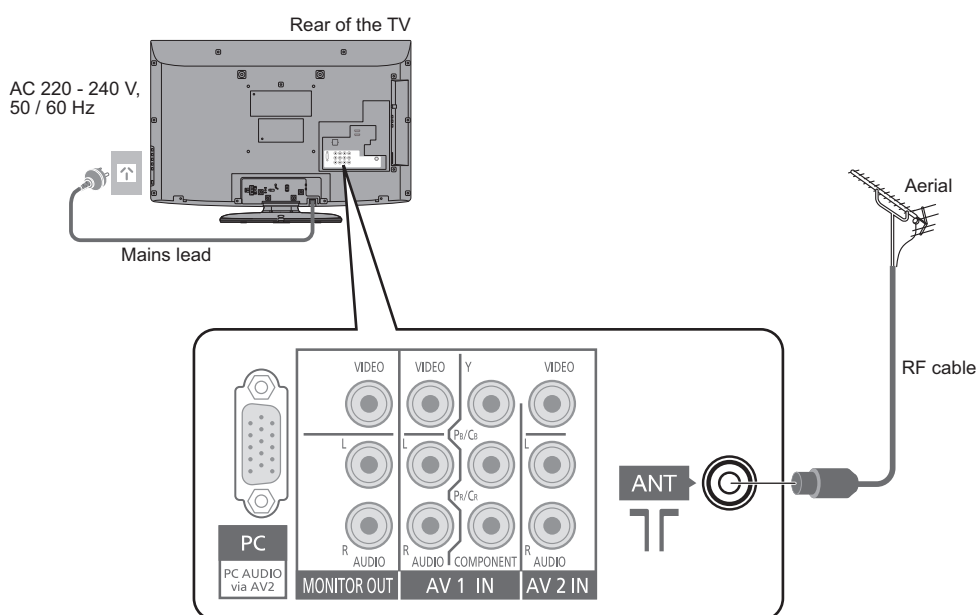
- Using other wall-hanging brackets, or installing a wall-hanging bracket by yourself have the risk of personal injury and product damage. In order to maintain the unit's performance and safety, be absolutely sure to ask your dealer or a licenced contractor to secure the wall-hanging brackets. Any damage 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 aerial

TV only

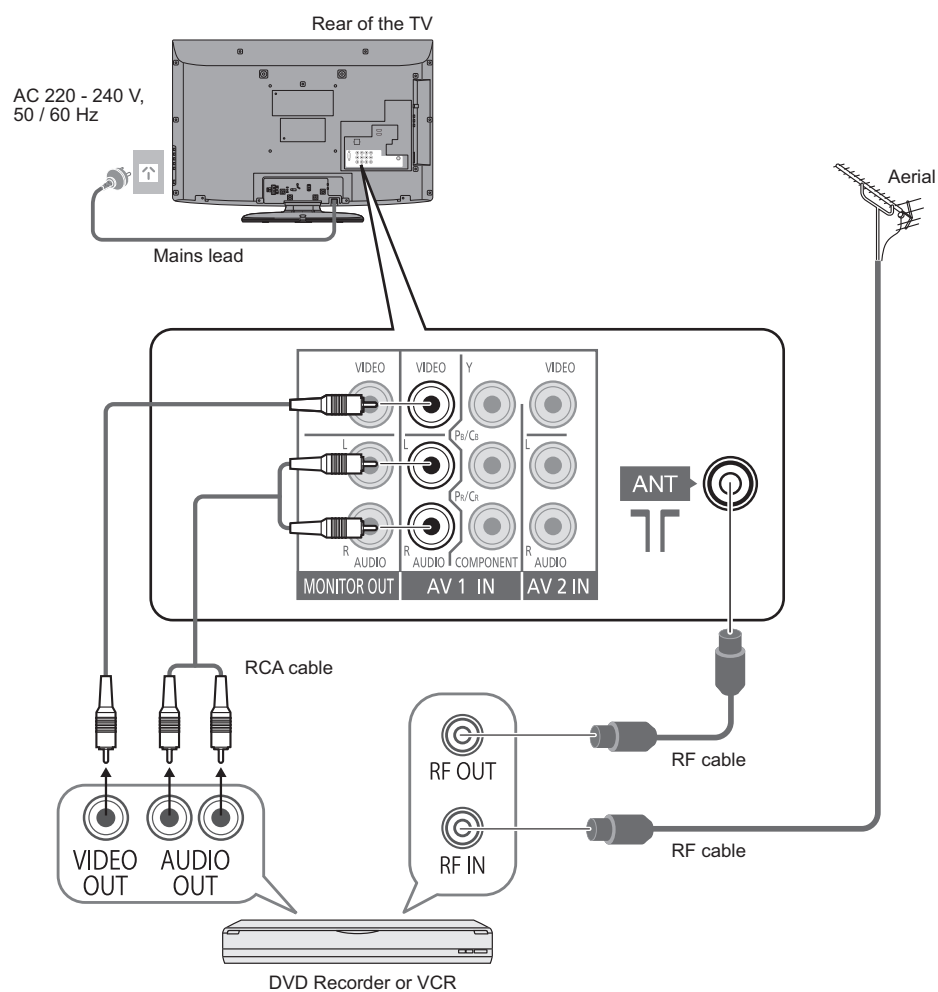


Note

- 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. 41
- Read the manual of the equipment, too.
- Another equipments connection ➔ p. 46, 47

Connecting DVD Recorder / VCR

TV, DVD Recorder or VCR

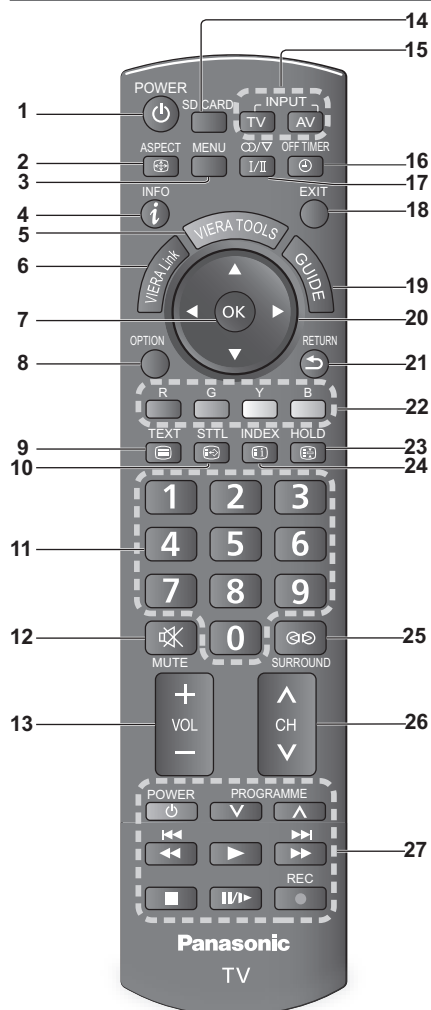


Quick Start
Guide

Basic Connection

Identifying Controls

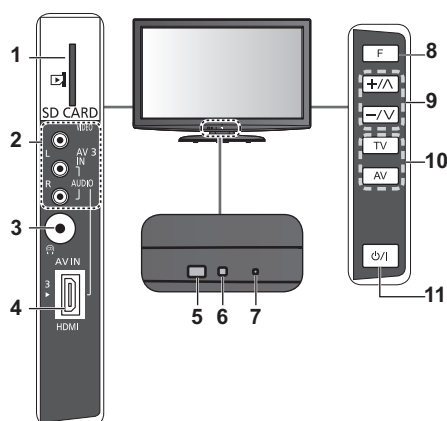
Remote control



- 1 **Standby On / Off switch**
 - Switches TV On or Off standby
- 2 **Aspect (p. 15)**
 - Changes aspect ratio from Aspect Selection list
 - Also possible by pressing this button repeatedly until you reach the desired aspect
- 3 **Main Menu (p. 23)**
 - 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 and accesses easily
- 6 **VIERA Link (p. 41)**
 - 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 SD Card viewing / listening mode
- 15 **Input mode selection**
 - TV - switches 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. 48)**
 - 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 the 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 surrounding sound setting
- 26 **Channel Up / Down**
 - Selects channel in sequence
- 27 **Connected equipment operations (p. 20)**

TV



- 1 SD card slot
- 2 AV3 terminals
- 3 Headphone jack
- 4 HDMI3 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 - 27)
- 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

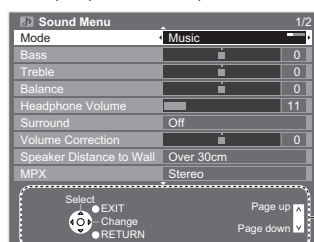
Quick Start Guide

Identifying Controls

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

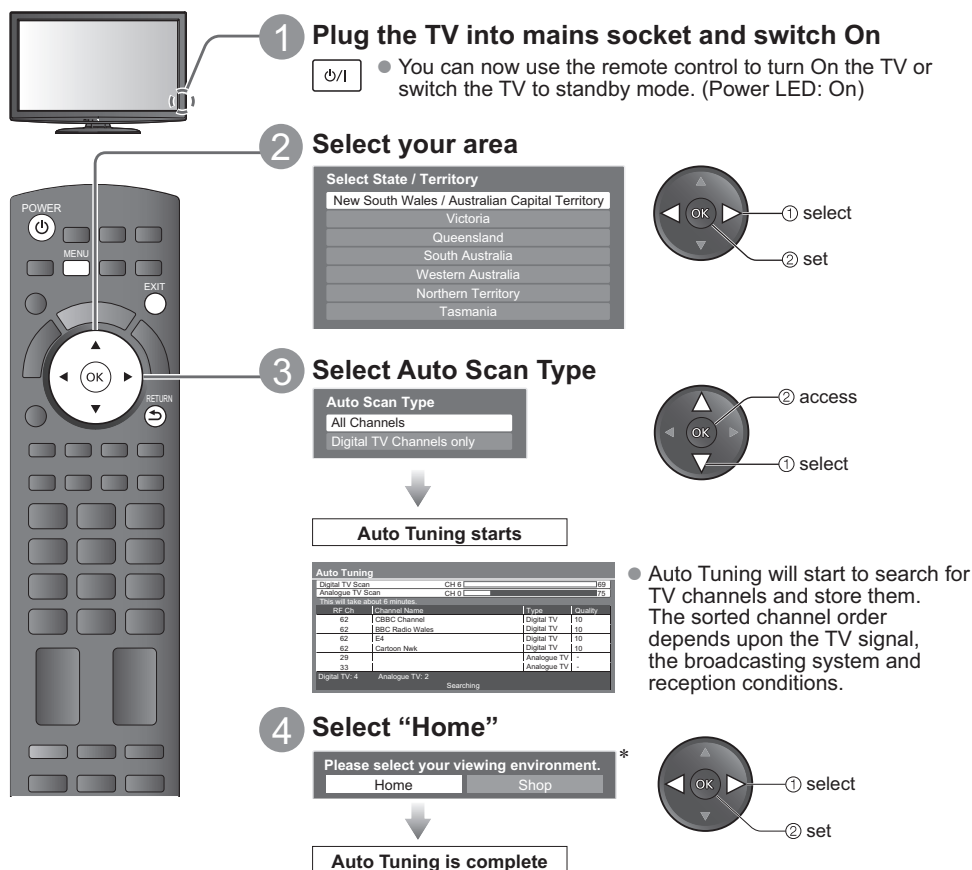
- MENU**
Open the Main Menu
- Move the cursor / select the menu item**
- Move the cursor / adjust levels / select from a range of options**

- OK**
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).

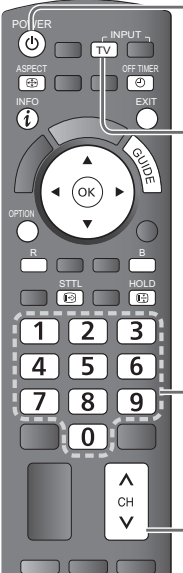
Shop : Demonstration mode to explain main features of this TV (for in-store display). "Viewing Mode" is set as "Dynamic" (p. 24).

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



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

Watching TV



- 1 Turn power on**
POWER
● Mains power On / Off switch should be On (p. 11).
- 2 Select Digital TV or Analogue TV mode**
TV
● Also possible to select the mode pressing the TV button repeatedly on the remote control or side panel 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**
CH up or down
● 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
➔ 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.

Auto Tuning
Watching TV

Basic

Select a channel using information banner (p. 14)

Possible to confirm the programme name before selecting channels.

Display information banner if it is not displayed



Possible to set display timeout in "Banner Display Timeout" (p. 26).

While the banner is displayed, select a channel



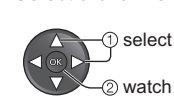
Select a channel using TV Guide (Digital TV mode) (p. 16)

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

Turn the TV off automatically after a fixed period of time (Off / 15 / 30 / 45 / 60 / 75 / 90 minutes)

OFF TIMER



Press repeatedly until desired time appears.

- 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

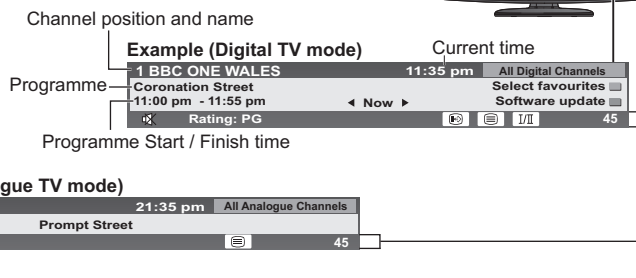
Other useful functions

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. 48) (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. 48) (Analogue TV mode)
1 - 90	Off Timer remaining time ● For settings → p. 13

Display the selectable settings for the current programme



Check or change the current programme status instantly

- To change



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)


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




② store
① select

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




Directly displays the image at "16:9" without distortion (anamorphic).

14:9




Displays the image at the standard "14:9" without distortion.

Just




Displays a "4:3" image full-screen. Stretching is only noticeable at the left and right edges.

4:3




Displays the image at the standard "4:3" without distortion.

4:3 Full




Displays a "4:3" image enlarged horizontally to fit the screen.
● Digital TV mode and HD signal only

Zoom1




Displays a "16:9" letterbox or "4:3" image without distortion.

Zoom2



Displays a "16:9" letterbox (anamorphic) image full-screen without distortion.

Zoom3



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

- For HD signal in Digital TV mode, only "16:9" and "4:3 Full" are available.
- For SD signal in Digital TV mode, only "16:9", "4:3", and "4:3 Full" are available.
- 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.

System Update Adjust the standard time	Daylight Saving Time Adjust for Summer Time																						
<p>Select the region where you live to adjust the standard time.</p> <ul style="list-style-type: none"> ● The time contained in the broadcast signal is UTC (Universal Time coordinated) formally known as GMT (Greenwich Mean Time). 	<p>Select time offset from the standard time for Summer Time.</p> <ul style="list-style-type: none"> ● Normally select "Auto". ● If there is a gap between displayed time and actual time, set this function. 																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Region</th> <th style="width: 25%;">Standard time</th> <th style="width: 50%;">Daylight Saving Time: Auto (During Summer Time)</th> </tr> </thead> <tbody> <tr> <td>NSW / ACT</td> <td rowspan="2" style="text-align: center;">+10:00</td> <td rowspan="2" style="text-align: center;">+11:00</td> </tr> <tr> <td>Victoria</td> </tr> <tr> <td>Queensland</td> <td colspan="2" style="text-align: center;">+10:00</td> </tr> <tr> <td>South Australia</td> <td style="text-align: center;">+9:30</td> <td style="text-align: center;">+10:30</td> </tr> <tr> <td>Western Australia</td> <td style="text-align: center;">+8:00</td> <td style="text-align: center;">+9:00</td> </tr> <tr> <td>Northern Territory</td> <td colspan="2" style="text-align: center;">+9:30</td> </tr> <tr> <td>Tasmania</td> <td style="text-align: center;">+10:00</td> <td style="text-align: center;">+11:00</td> </tr> </tbody> </table> <p style="text-align: right;">(Based on GMT)</p>		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	+9:00	Northern Territory	+9:30		Tasmania	+10:00	+11:00
Region	Standard time	Daylight Saving Time: Auto (During Summer Time)																					
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Western Australia	+8:00	+9:00																					
Northern Territory	+9:30																						
Tasmania	+10:00	+11:00																					
<ul style="list-style-type: none"> ● 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)

Example:

TV Guide time
TV Guide date
Current date and time
Programme

Landscape (Displays by channel)

Portrait (Displays by time)

To watch the programme

① select
② watch

To view a channel list of the selected favourite list

B

(favourite list)

Favourites
All Channels
All Digital Channels
All Analogue Channels
Favourites1
Favourites2
Favourites3
Favourites4

① select a favourite list
② view

To list favourite channels ➔ p. 29

To return to TV

EXIT

To view details of the programme
Select the programme

select

INFO • Press again to return to TV Guide.

To the previous day ➔ R

To the next day ➔ G

To view a channel list of the selected type

Y

(Type list)

Prog. type
All Types
All Types
Movie
News
Entertainment
Sport
Children's
Music
...

① select type
② view

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 appropriately 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 ➔ 

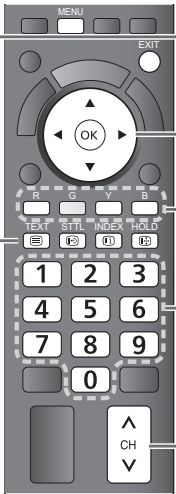
To select next subject within the subject block

(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</p> <p> Stop automatic updating (If you wish to hold the current page without updating)</p> <p>To resume ➔ </p>	<p> ➔  Reveal hidden words e.g. quiz page answers</p> <p>To rehide ➔ </p>
INDEX	Call up Subtitle
<p>INDEX</p> <p> Return to the main index page</p>	<p>STTL</p> <p> 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

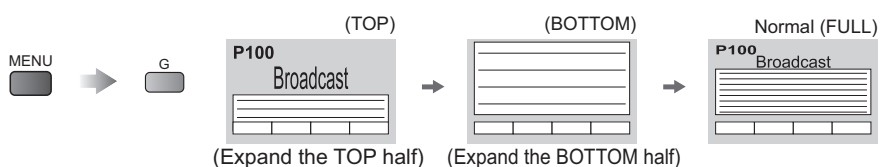
Watch TV and Teletext in two windows at once

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



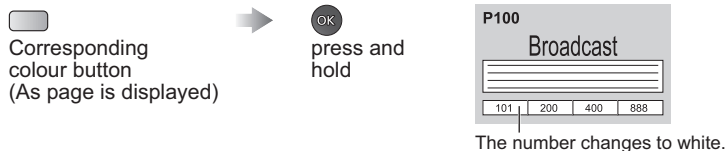
- Operations can be made only in Teletext screen.

FULL / TOP / BOTTOM

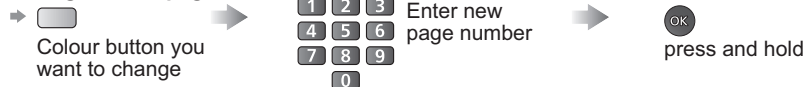


Store frequently viewed pages

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

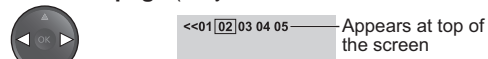


To change stored pages

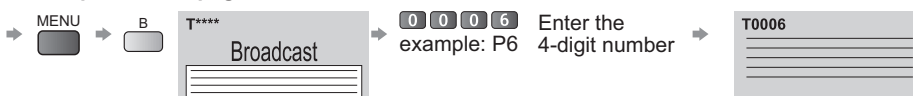


View sub page

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



To view specific sub page

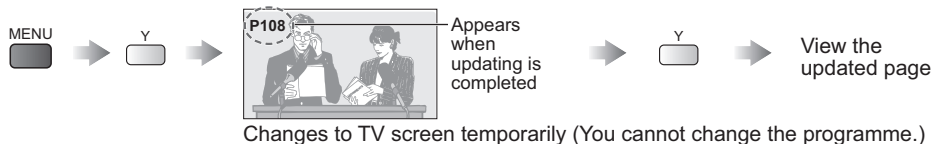


- Sub pages:
The number of sub pages varies depending on the broadcasters.
It may take some time for searching, during which time you can watch TV.

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.



- 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. 46, 47

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.



To return to TV
➔ TV

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	



② watch

① select

3 View

The selected mode is displayed on the screen.

Example (AV2)

AV2
16:9

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

Example (PC)






PC
640X480
16:9

- You can also listen to PC sound with the 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 HDMI-compatible PC, possible to connect to HDMI terminals (HDMI1 / HDMI2 / HDMI3) by using HDMI cable (p. 49).

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 operations
	Rewind / Skip / Search VCR: Rewind, view the picture rapidly in reverse DVD: 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: 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. 41), select the code "73".

Press and hold  during the following operations

Enter the appropriate code
(see table below)

 ⇒ Press 

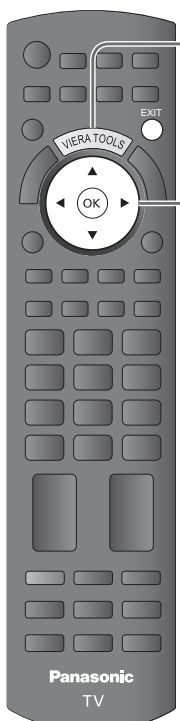
Type of equipment	Code
DVD Recorder / DVD Player	70 (default)
Player theatre / Blu-ray Disc theatre	71
VCR	72
The equipment using in VIERA Link ⇒ "VIERA Link Control" (p. 44)	73

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

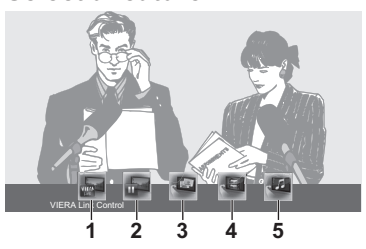
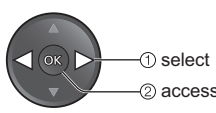
1 VIERA Link Control → "VIERA Link Control" (p. 44)

2 Pause Live TV → "Pause Live TV" (p. 43)

3 Photo → "Photo mode" (p. 37)

4 Video → "Video mode" (p. 38)

5 Music → "Music mode" (p. 40)

To return to TV
EXIT or VIERA TOOLS

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.

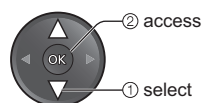


1 Display the menu

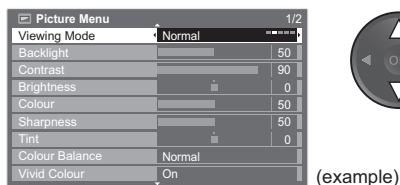


- Displays the functions that can be set (varies according to the input signal)

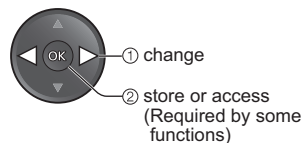
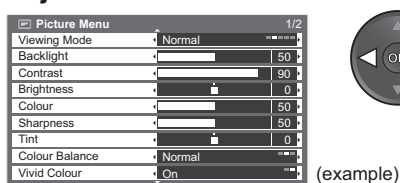
2 Select the menu



3 Select the item



4 Adjust or select



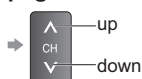
To return to TV at any time



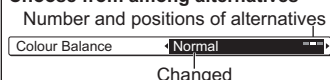
To return to the previous screen



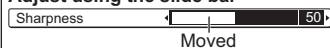
To change menu pages



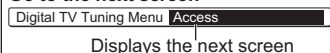
Choose from among alternatives



Adjust using the slide bar



Go to the next screen

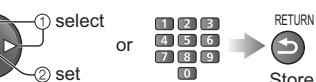


Enter characters by free input menu



To reset the settings

- To reset the picture settings only
➔ "Reset Picture Defaults" in Picture Menu (p. 24)
- To reset the sound settings only
➔ "Reset Sound Defaults" in Sound Menu (p. 26)
- To reset all settings
➔ "Shipping Condition" (p. 27) in Setup Menu



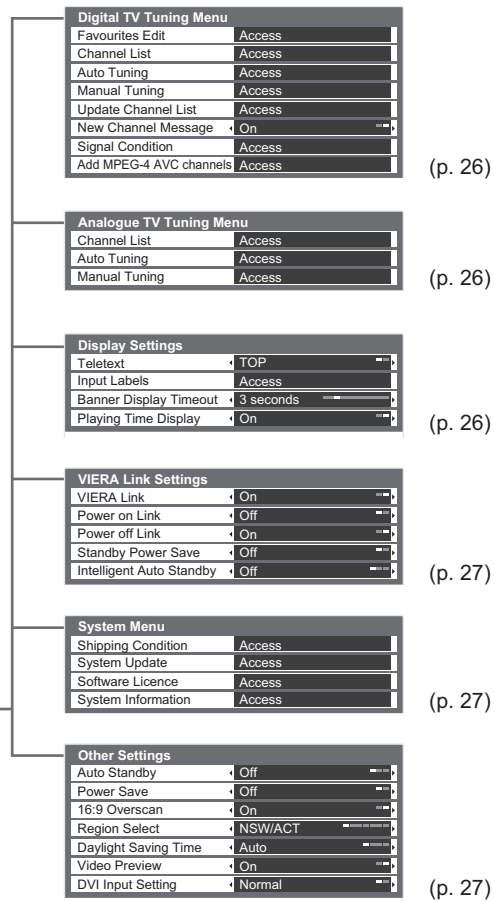
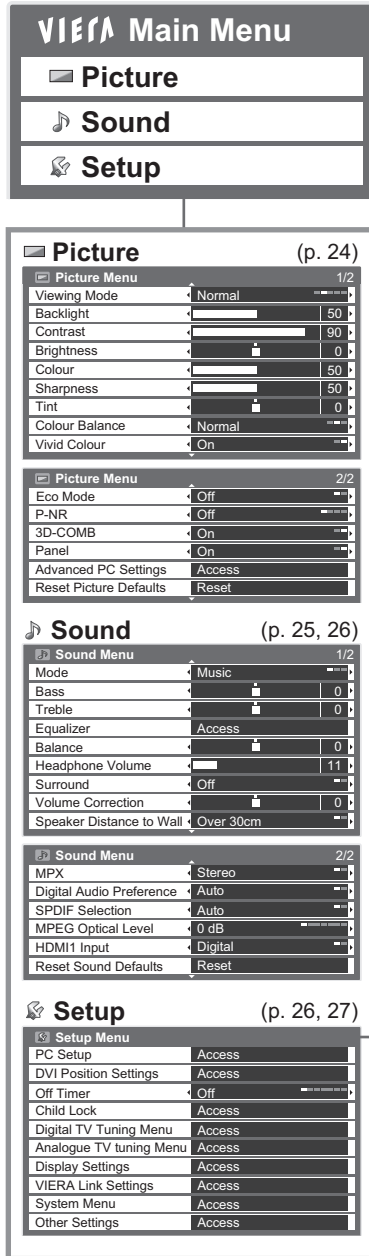
- To delete a character ➔ R

- 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

Overview



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	R-Gain, G-Gain, B-Gain Adjusts each gain
		R-Cutoff, G-Cutoff, B-Cutoff Cuts off each areas
		Gamma Changes the gamma curve (1.8 / 2.0 / 2.2 / 2.4 / 2.6)
		Reset PC Settings Press the OK button to reset to the present Advanced PC Settings to the default.
	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. Music : Improves sound quality for watching music video, etc. Speech : Improves sound quality for watching news, drama, etc. <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. User : Adjusts the sounds manually by using the equalizer to suit your favourite sound quality. <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 Sound Defaults" by using cursor button, and then press the OK button.
	Balance	Adjusts the volume level of right and left speakers
	Headphone Volume	Adjusts the volume of the headphones
	Surround	<p>Surround sound settings (Off / V-Audio)</p> <p>V-Audio: Provides a dynamic enhancer of width to simulate improved spatial 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. 49)</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. 38)
	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 larger 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. 49). 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, Headphone Volume, 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)
	Display Settings	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.
		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 to use VIERA Link functions (Off / On) ● VIERA Link functions become available when "VIERA Link" is set to "On" (p. 42).
		Power on Link Sets to use Power on Link functions (Off / On) (p. 42)
		Power off Link Sets to use Power off Link functions (Off / On) (p. 42)
		Standby Power Save Controls the power consumption in Standby mode of the connected equipment to reduce the power consumption (Off / On) (p. 42) ● 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. 42) ● 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. 14)
		Daylight Saving Time Select time offset from the standard time for Summer Time (Auto / Off / +1/2 hour / +1 hour) (p. 14) ● Set to "Auto" normally.
		Video Preview Selects the displaying of the preview window when a video file is selected (Off / On)
		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 - 40).
- Only available items can be selected.

Tuning and Editing Channels

You can make Auto Tuning, listing your favourite channels, skipping unwanted channels, etc.



1 Select Digital TV or Analogue TV

2 Display the menu

3 Select "Setup"

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


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	



② access
① select


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



② access
① select


6 Set (see next page)



② access
① select


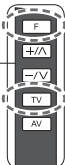
To return to TV

➔ EXIT



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

- ① Press repeatedly until "Auto Tuning" appears
- ② Access "Auto Tuning"
- ③ Start "Auto Tuning"

● To return to TV

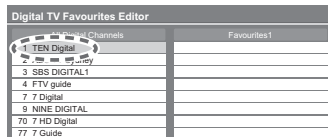
➔ F

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).

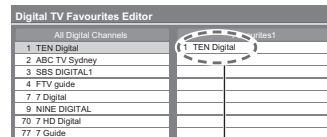
① Select a channel to list



- 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).



Store

- To move the channel



Select the new position



Confirm

- To delete the channel



- To delete all channels



③ Store

RETURN

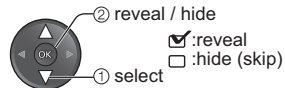


Note

- 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



- To reveal all channels



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



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

To edit channels

You can also edit each channel in Channel List.

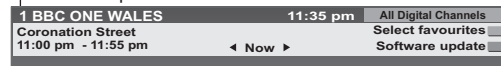


or



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

Digital TV Auto Tuning

All digital TV tuning data will be erased

Start Auto Tuning  EXIT 



Settings are made automatically

Digital TV Auto Tuning

Scan CH CT 69

This will take about 7 minutes.

RF Ch	Channel Name	Type	Quality
62	[CH32] Channel	Digital TV	10
62	[BBC Radio Wales	Digital TV	10
62	E4	Digital TV	10
62	Cartoon Nekk	Digital TV	10

Digital TV: 4 Searching

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

Digital TV Manual Tuning

Physical Channel [CH32] 562.00 MHz

Signal Quality 0 10

Signal Strength 0 10

No.	Channel Name	Type	New

Digital TV: 0 Stopped

Normally use "Auto Tuning" or "Update Channel List" to update Digital TV channels on your channel list. If tuning has not been done completely or for adjusting the direction of the aerial, use this function.



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

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

Update Channel List Update channels automatically

Digital TV Update Channel List

Scan CH CT 69

This will take about 7 minutes.

RF Ch	Channel Name	Type	Quality

Digital TV: 0 Searching

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

New channels found!
Press OK to update channel list.
Press EXIT to ignore.

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)

Digital TV Signal Condition

Channel Name 101 DZFinokanal

Signal Quality

Signal Strength 0 2 4 6 8 10

Network Name RiksTV

RF Parameter [CH32] 562.00 MHz

Analogue TV Tuning Menu

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

Select a channel and reveal / hide

☒ 1 BBC1
☐ 2 *****
☐ 3 *****
☐ 4 *****
☒ 5 *****
☒ 6 *****
☒ 7 *****

② reveal / hide
☒ : reveal
☐ : hide (skip)
 ① select

● To reveal all channels → Y

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

To edit channels

You can also edit each channel in Channel List.

Channel position
 Channel name

Select a channel to edit and:

● To move the channel position → G → Select the new position → G → Store
 ● To rename the channel name → B

User input

Name

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

(maximum: five characters)

① select
 ② set
 RETURN
 Store

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

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

Analogue TV Manual Tuning

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

1 2 3
4 5 6
7 8 9
0

Select a channel

CH
V

Search and store

① search
② 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"

Name	Input	Type	Lock
1 BBC1	Digital TV	Digital TV	
2	Digital TV	Digital TV	
7 BBC THREE	Digital TV	Digital TV	
14 E4	Digital TV	Digital TV	
101 BBC 1 Wales	Digital TV	Digital TV	
AV1	External	AV	
AV2	External	AV	



To set "Parental Rating"

Child Lock
Change PIN
Child Lock List
Parental Rating No Block



- Parental Rating → p. 48

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

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.


Note

- Performing "Shipping Condition" (p. 34) erases the PIN number and all settings.

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**
MENU
- 2 Select "Setup"**

VIERA Main Menu	
Picture	
Sound	
Setup	
- 3 Select "Display Settings"**

Setup Menu	
Off Timer	Off
Child Lock	
Digital TV Tuning Menu	
Display Settings	Access
VIERA Link Settings	
System Menu	
Other Settings	
- 4 Select "Input Labels"**

Display Settings	
Teletext	TOP
Input Labels	Access
Banner Display Timeout	3 seconds
Playing Time Display	On
- 5 Select an input terminal and set**

Input Labels	
AV1	AV1
AV2	AV2
AV3	AV3
PC	PC
HDMI1	HDMI1
HDMI2	HDMI2
HDMI3	HDMI3
Digital TV	Digital TV
Analogue TV	Analogue TV

Child Lock Input Labels

Advanced

To return to TV

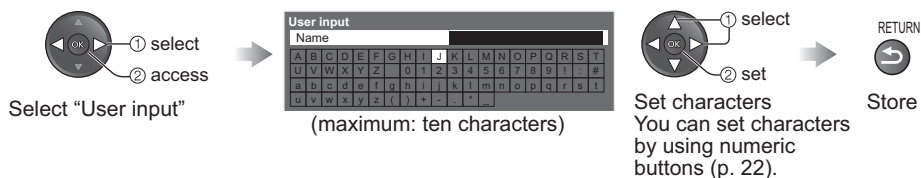


The labels you set will be displayed in "Input Selection" menu (p. 19) or banner.

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

User input

You can name each input terminals freely.



Select "User input"

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

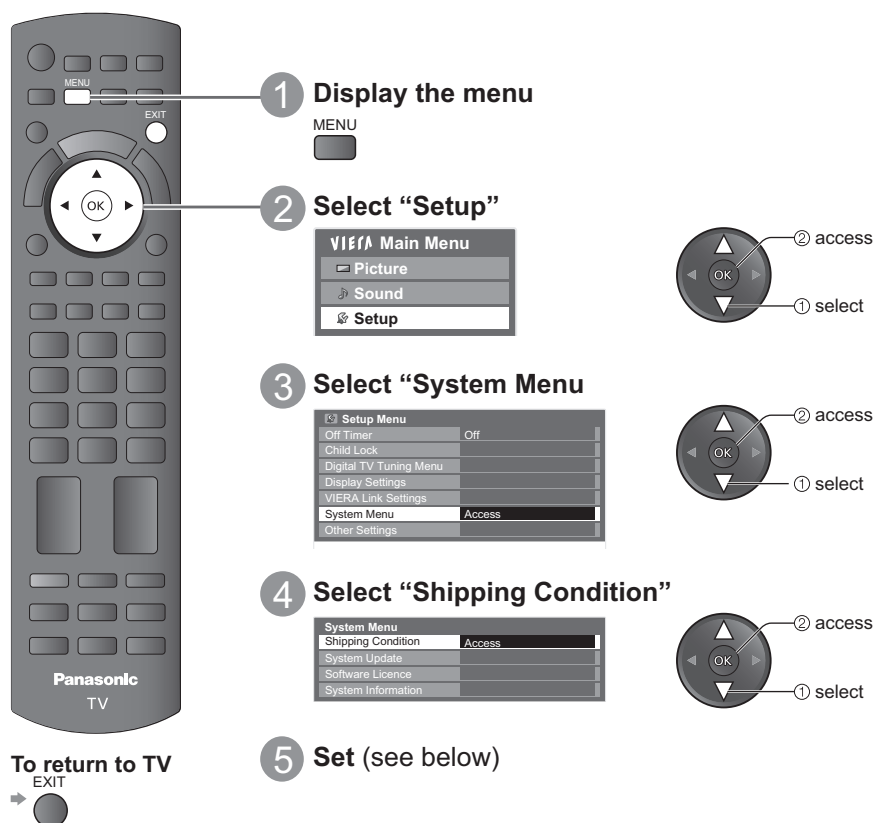
(maximum: ten characters)

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

Store

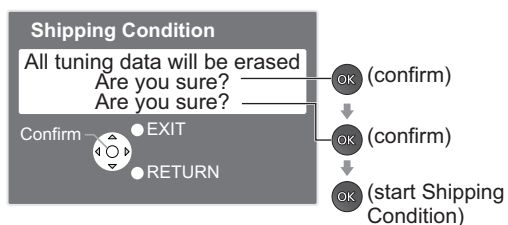
Shipping Condition (Reset settings)

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



Shipping Condition Reset Settings

① Check the message and reset



② Follow the on screen instructions

Reset to Factory Shipping Condition Completed.
Please switch off TV.



- "Auto Tuning" will automatically start when Mains power On / Off switch is next turned On (p. 12).


To retune TV channels only, e.g. after moving house

➔ "Auto Tuning" in "Tuning and Editing Channels" (p. 30, 31)

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 →  ● If you choose not to download → 
- You can update any new software automatically or manually.



- 1 Display the menu**
- 2 Select "Setup"**
- 3 Select "System Menu"**
- 4 Select "System Update"**
- 5 Set (see below)**

VIERA Main Menu

- Picture
- Sound
- Setup**

Setup Menu

- Off Timer
- Child Lock
- Digital TV Tuning Menu
- Display Settings
- VIERA Link Settings
- System Menu**
- Other Settings


System Menu

- Shipping Condition
- System Update**
- Software Licence
- System Information

② access
① select


② access
① select

② access
① select

To return to TV
→ 

System Update | Update TV's software system

To update automatically



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

② set
① select

- Every time you 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

② start
① select

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 for about 60 mins.
- During software download and update, DO NOT switch Off the TV or press any buttons. The TV will automatically activated after downloading is completed.
- The message might be the notification beforehand. 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.

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

Advanced

Using Media Player

Viewing from SD Card (VIERA IMAGE VIEWER)

Photo Mode: View still pictures recorded on a digital camera.

Video Mode: Play back video recorded on a digital video camera.

Music Mode: Play back music recorded on a digital recorder.

When these functions are used, the audio signal is output from AV1, AV2, and DIGITAL AUDIO OUT terminals, but video signals are not output.

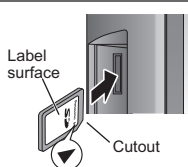
- "Date" shows the date on which the recording was made by the digital camera, digital video camera or digital recorder. "***/**/*****" is displayed for files that do not have the date recorded.

- For details on SD Cards ➔ p. 51

To insert SD Card

Gently insert the SD Card label surface facing front.

Push until a click is heard



To remove SD Card

Push the centre of the card

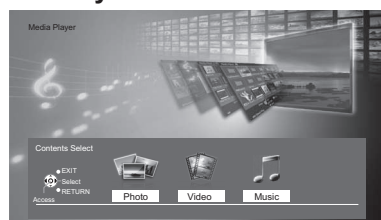


Contents Select



1 Insert the SD Card

2 Select your desired contents (Photo / Video / Music)



(Example)



- You can also select contents directly by using VIERA TOOLS.
➔ "How to Use VIERA TOOLS" (p. 21)

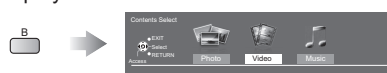
The thumbnail images of the selected contents are displayed.

- Photo ➔ "Photo mode" (p. 37)
- Video ➔ "Video mode" (p. 38)
- Music ➔ "Music mode" (p. 40)

To switch to the other mode

Display the contents selection screen

Select the contents



To return to TV

EXIT or SD CARD

To return to the previous screen

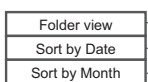
RETURN

To sort by folder, date recorded or month recorded (Photo mode)

Display the view selection

Select the sort type

G



- Folder view — Displays thumbnails of photos grouped by folder
- Sort by Date — Displays thumbnails of photos grouped by date
- Sort by Month — Displays thumbnails of photos grouped by month

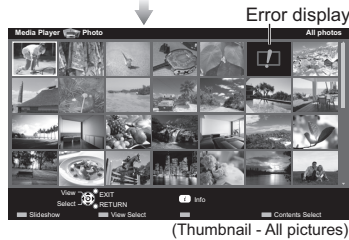
- Files that are not stored in a folder are grouped in a folder named "I".
- Photos without a recorded date are displayed as "I" or "Unknown".

- To return to the thumbnail (All photos)



Photo mode

Photo mode will read all ".jpg" extension files in the card.
Insert the SD Card, and then select "Photo" mode (p. 36)



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

Thumbnail images of all photos on the SD Card are displayed.

- To change the background music
→ "Photo Setup" (see below)
- To display the information of the highlighted photo



In case of all photos

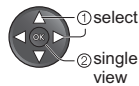


File name: p1010001.JPG
Date: 23/10/2009
Pixel: 1600X1200

In case of folder view (p. 36)

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

Single view - Display one photo at a time.
Select the photo that you want to view



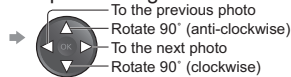
Operation guide

(Single view)

- To display / hide the operation guide



- To operate Single view



- 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

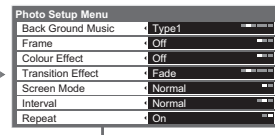
- To return to thumbnail view → RETURN

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 SD Card randomly User : Plays music set by you ● For setting → p. 40
	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".
	Screen Mode	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.
	Interval	Selects slideshow interval (Short / Normal / Long)
	Repeat	Slideshow repeat (Off / On)

Using Media Player

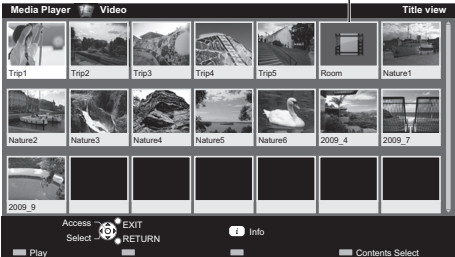
Viewing from SD Card (VIERA IMAGE VIEWER)

Video mode

Video mode supports AVCHD and MPEG2 file formats.

Access to "Video" mode (p. 36)

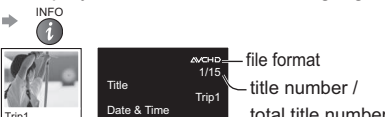
Error display (titles that could not be loaded, etc.)



(Thumbnail - Title view)

Thumbnails of video titles in the SD Card are displayed. When a title is highlighted, preview starts (if the title supports previewing).

- To turn preview off
 - ➔ "Video Setup" (p. 39)
- To display the information of the highlighted title
 - ➔ INFO



file format
title number / total title number

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

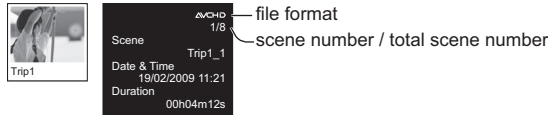



(Thumbnail - Scene view)

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

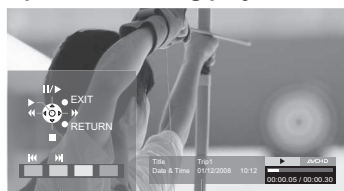
- To turn preview off
 - ➔ "Video Setup" (p. 39)

- To repeat playback
 - ➔ "Video Setup" (p. 39)
- To display the information of the highlighted scene
 - ➔ INFO



file format
scene number / total scene number

Operations during playback



Operation guide information banner

- To display / hide the operation guide and information banner → INFO
- To operate the playback
 - ◀◀ Rewind
 - ⏸ Pause / Playback
 - ▶▶ Fast forward
 - Stop
- To change the aspect ratio (only for the 4:3 movie content) → ASPECT
- 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

OPTION Audio Selection Stereo
(Current sound status)

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

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

Audio output settings

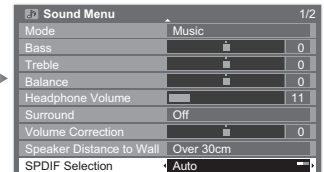
Display the menu

Select "Sound"



- Other items → p. 24 - 27

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

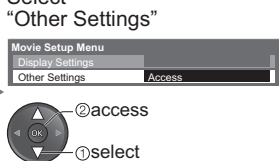
Display the menu

Select "Video Setup"



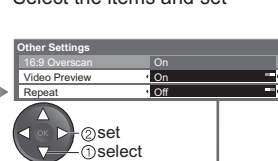
- Other items → p. 24, 25, 37

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	<p>Video Preview</p> <p>Sets whether to start previewing the title or scene in a thumbnail screen (Off / On)</p> <ul style="list-style-type: none"> ● Images may not be displayed for a short time in the thumbnail screen. To resolve this problem, set preview to "Off". <p>Repeat</p> <ul style="list-style-type: none"> ● Playback repeat within the title (Off / On)

Note

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

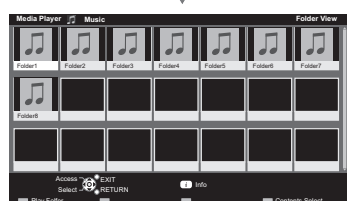
Using Media Player

Listening from SD Card

Music mode

Music mode supports MP3 file format.

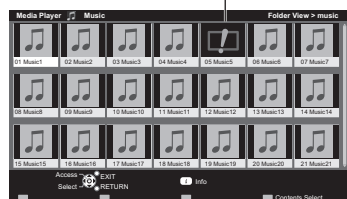
Insert the SD Card, and then select "Music" mode (p. 36)



(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 :

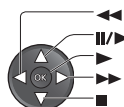
Select the folder

Start playback



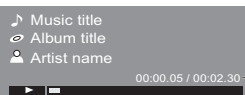
Operation during playback

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



Rewind
Pause / Playback
Playback
Fast forward
Stop

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



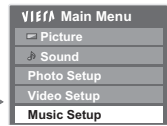
Elapsed time / Total playing time

Music Setup Setup for Music mode

Display the menu



Select "Music Setup"



- Sound Menu → p. 25

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"



VIERA Link Functions

VIERA Link "HDAVI Control"™³⁾

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 equipments. 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}	○ ^{*3}	○ ^{*3}
Pause Live TV programme		○ ^{*4}	—	—	—	—	—
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 playback a disc

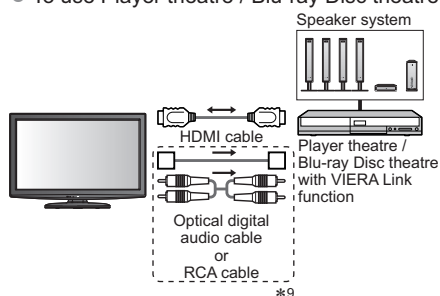
^{*8}: except for watching a disc

Connection

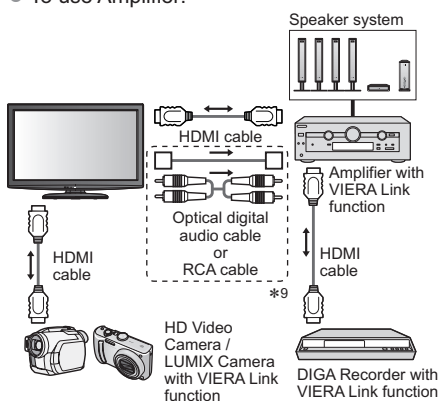
- To use DIGA Recorder / DVD Player / Blu-ray Disc Player / HD Video Camera / LUMIX Camera



- 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 or RCA 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 either the optical digital audio cable or RCA 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 HDD of the connected DIGA Recorder.

- This function is available with DIGA Recorder which has 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
 ➔ "Summary of features", "Connection", "Preparations" (p. 41, 42)

① Display "VIERA Link Menu"

② Select "Pause Live TV" and pause

VIERA Link Menu

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

② pause → TV picture will be paused.
 ① select

- 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.
- search backward
 pause
 search forward
 playback
 stop

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

➔ TV ➔

Pause Live TV

Stop Pause Live TV?

Yes No

Select "Yes"

① select
 ② stop

- 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 DIGA Recorder to HDMI1.
- If you cannot operate, check the settings and the equipment
 ➔ "Summary of features", "Connection", "Preparations" (p. 41, 42)

① Display "VIERA Link Menu"

② Select "Direct TV Rec" and start recording

VIERA Link Menu

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

② start
 ① select

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

VIERA Link Menu

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

① select
 ② stop

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
 - ➔ “Summary of features”, “Connection”, “Preparations” (p. 41, 42)
- For details of the operations for 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 Player theatre, Blu-ray Disc theatre or Recorder 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 ➔ OPTION Store / set / access ➔ OK

Move the cursor / select the menu ➔ RETURN Return to the previous menu ➔ RETURN

Move the cursor / access / adjust ➔ EXIT Exit the menu ➔ EXIT

When the key words are displayed on colour bar ➔ R G Y B

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.

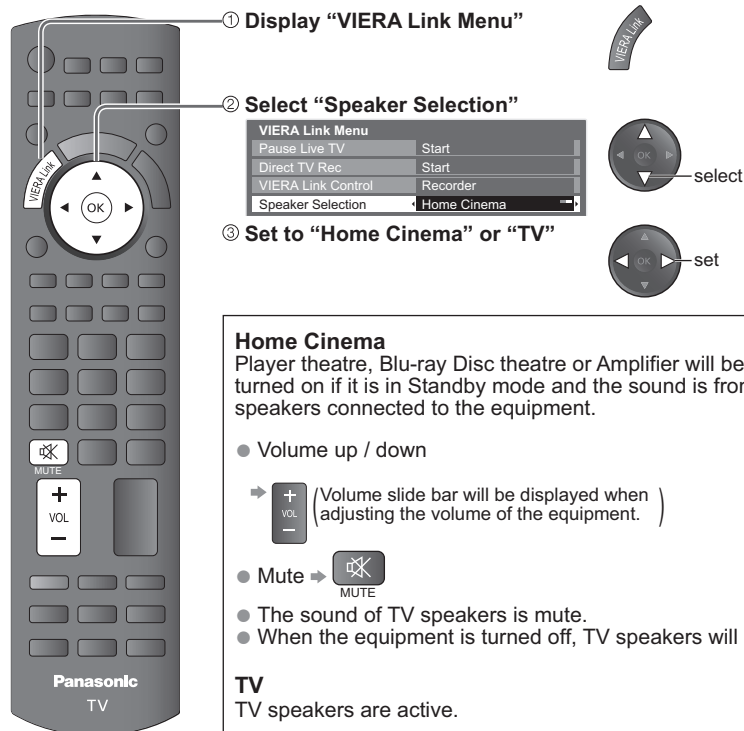
Features available (Using VIERA Link Menu)

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
➔ "Summary of features", "Connection", "Preparations" (p. 41, 42)



① Display "VIERA Link Menu"



② Select "Speaker Selection"

③ Set to "Home Cinema" or "TV"

VIERA Link Menu

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

Home Cinema
Player theatre, Blu-ray Disc 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 TV speakers is mute.
- When the equipment is turned off, TV speakers will be active.

TV
TV speakers are active.

Note

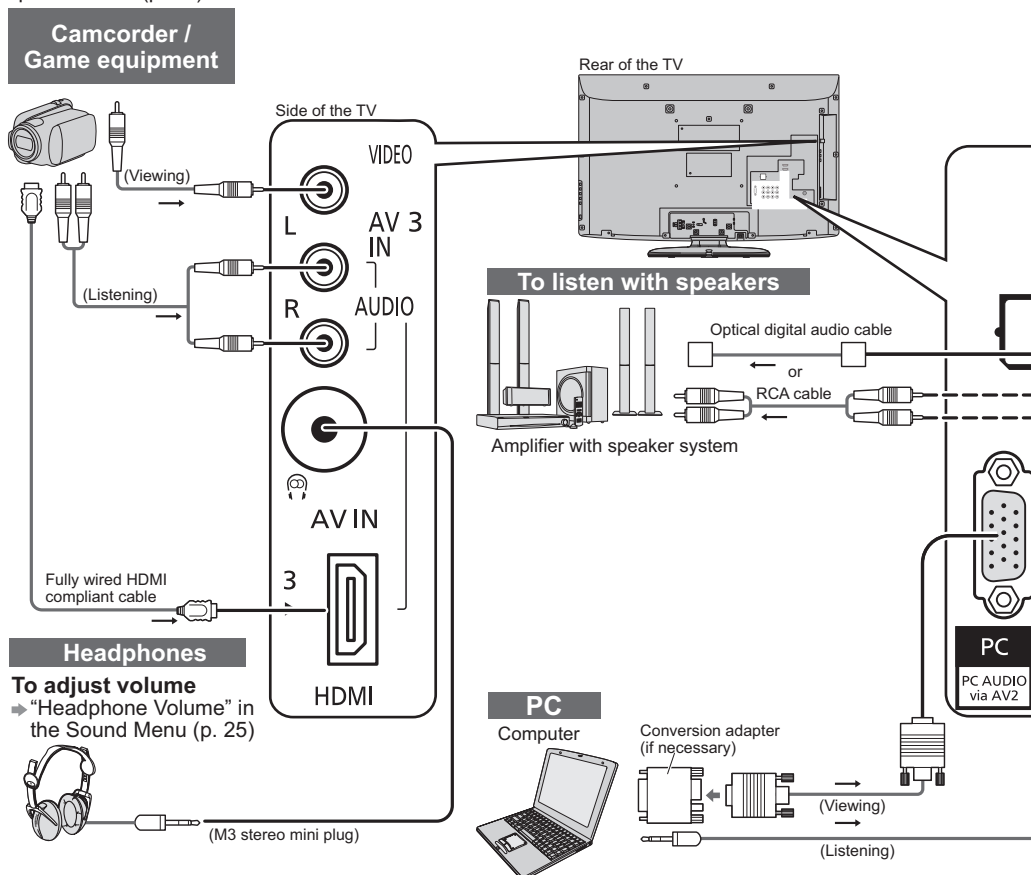
- If you wish to enjoy the multi-channel sound (e.g. Dolby Digital 5.1ch) via an Amplifier, connect with HDMI cable and Optical digital audio cable (p. 41), and then select "Home Cinema". If your Amplifier has "HDAVI Control 5" function, you can connect only with HDMI cable. In this case, connect your 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. 41).

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 Player theatre, Blu-ray Disc 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. 55).

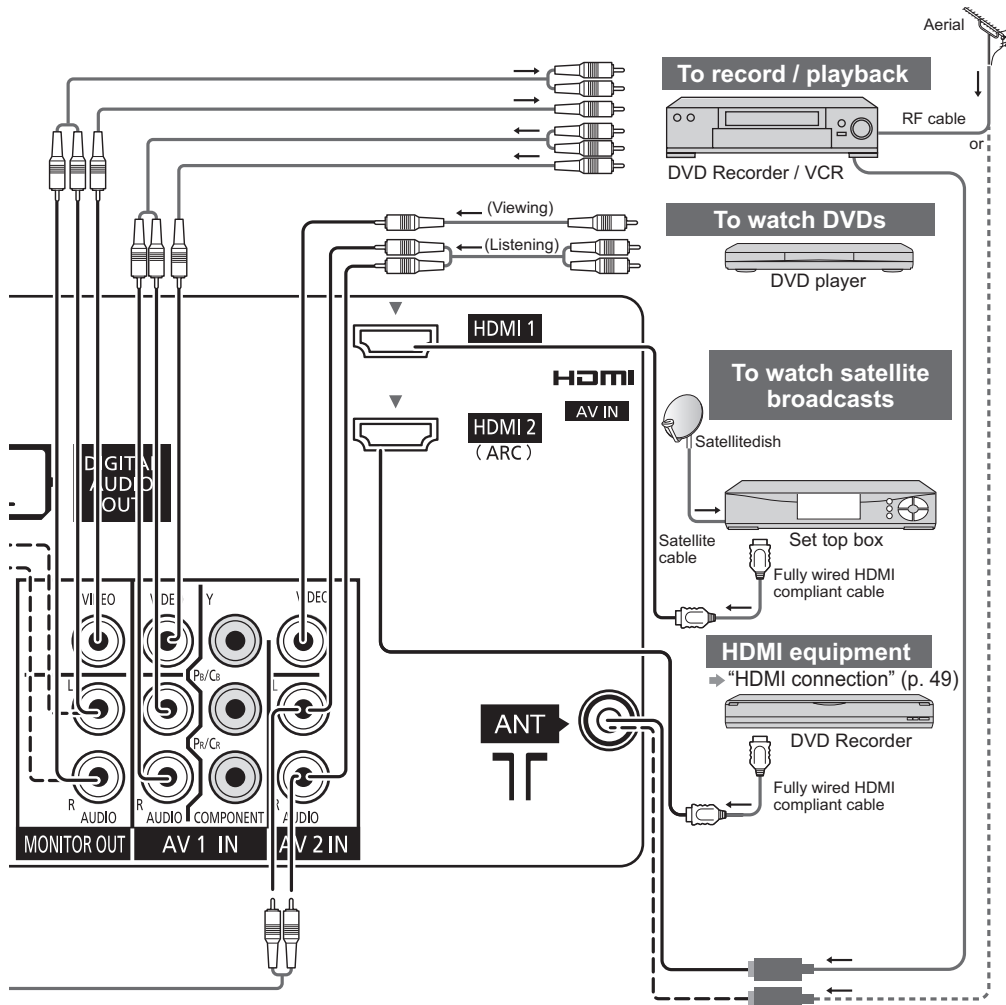


Types of connectable equipment to each terminal

Terminal	AV1 IN AV2 IN AV3 IN (Side of the TV)	MONITOR OUT	DIGITAL AUDIO OUT	HDMI		
				1	2	3
Recording / Playback (equipment)						
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



External Equipment

Advanced

HDMI terminal			
Hot Plug Detect	19	18	+5V Power
DDC/CEC Ground	17	16	SDA
SCL	15	14	Reserved
CEC	13	(in cable but N.C. on device)	
TMDS Clock Shield	11	12	TMDS Clock-
TMDS Data0-	9	10	TMDS Clock+
TMDS Data0+	7	8	TMDS Data0 Shield
TMDS Data1 Shield	5	6	TMDS Data1-
TMDS Data2-	3	4	TMDS Data1+
TMDS Data2+	1	2	TMDS Data2 Shield

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 	 	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. 46, 47).

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. 50)
 - Match the output setting of the digital equipment.
- Input PC signal : ➔ "Input signal that can be displayed" (p. 50)
 - Match the output setting of the PC.
- VIERA Link (HDAVI Control 5) : ➔ "VIERA Link" (p. 41)
- 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 COMPONENT-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.

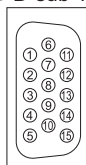
- PC signals that can be inputted: Horizontal scanning frequency 31 to 69 kHz; vertical scanning frequency 59 to 86 Hz. More than 1,024 signal lines could result in incorrect display of the image.
- A PC adapter is not necessary for the DOS/V-compliant D-sub 15-pin connector.

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. 50.
- 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.

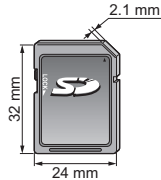
Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)
640 × 480 @60 Hz	31.47	60.00
750 (720) / 60p	45.00	60.00
1,125 (1,080) / 60p	67.50	60.00

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.)

Data format for Card 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 - 8 × 8 to 30,719 × 17,279 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 (.mp3)
- 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/>

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

Note

- Format the card 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).
- A 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 video camera used.
- Do not use two-byte characters or other special codes.
- The card may become unusable with this TV if the file or folder names are changed.

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 SD card 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.

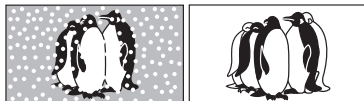
Mains plug

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.

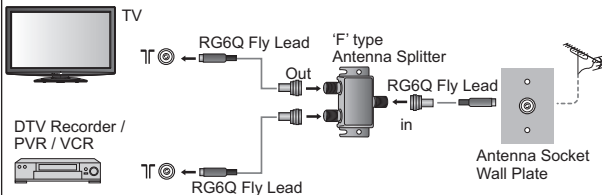
The LCD panel moves slightly when it is pushed with a finger. Clattered sound might be heard

- 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.

	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. 32), 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. 49)
	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. 46, 47) ● Turn Off the TV and equipment, then turn them On again. ● Check an input signal from the equipment. (p. 51) ● Use an equipment compliant with EIA/CEA-861/861B.
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. 	
	Connecting devices such as DTV recorder / PVR / VCR etc that also require an antenna connection to the digital television	<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. 
	After digital TV tuning, (or re-tuning) some or all DTV channels are missing	<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.

FAQs

	Problem	Actions
Digital TV	Picture regularly pixelates on some channels, or 'No Signal' message	<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.
	Picture infrequently pixelates on some or all channels	<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.
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-L32X20A			
Power	Power rating	AC 220 - 240 V, 50 / 60 Hz 0.52 A	
	Normal (Home) mode	69 W	
	Standby condition	0.3 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	
	Headphones	M3 (3.5 mm) stereo mini Jack × 1	
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)
	Monitor Output	AUDIO L - R	RCA PIN Type × 2 0.5 V[rms] (high impedance)
		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 mpedance)
		DIGITAL AUDIO OUT	PCM / Dolby Digital, Fiber optic
		Card slot	SD Card slot × 1
Dimensions (W × H × D)		798 mm × 217 mm × 551 mm (With Pedestal) 798 mm × 83 mm × 511 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.

WARRANTY - Australia only

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), 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) Video or Audio Tapes	(d) Cabinet Parts	(g) Microwave Oven cook plates.
(b) Video or Audio Heads and Stylus resulting from wear and tear in normal use	(e) User replaceable Batteries	(h) Kneader mounting shaft unit (bread bakery)
(c) Shaver Heads or Cutters	(f) Thermal Paper, Toner/Ink Cartridges, Drums, Developer, Film (Ink/Ribbon), Film Cartridge, Printer Heads	
 5. 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.
 - Note that home or pick-up/delivery service is available for the following products in the major metropolitan areas of Australia or the normal operating areas of the nearest Authorised Service Centres:

(a) Picture tube (CRT) based Television Receivers (screen sizes greater than 66cm); Rear Projection TV's; Plasma/LCD televisions / displays (screen size greater than 103 cm)	(b) Convection/Combination Microwave Ovens
	(c) Whiteboard (except portable type)
 6. 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, freighting, 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.
- November 2005

**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 visit the **Panasonic Australia** 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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www.panasonic.com.au

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23-11-2005

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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