

Operating Instructions Plasma Television



VIERA

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Important Notice

Do not display any still part of the image for a long period

In such cases the still part of the image remains dimly on the plasma screen ("image retention"). This is not considered a malfunction and is not covered by the warranty.

Typical still image parts:

- Channel number, channel logo and other logos
- Still or moving pictures viewed in 4:3 or 14:9 aspect ratio
- Video games



To avoid image retention, the screen saver may be activated (VIERA logo moves) or the on-screen message may move after a few minutes if no signals are sent or no operations are performed.

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Safety Precautions

To help avoid risk of electrical shock, fire, damage or injury, please follow the warnings and cautions below:

■ Mains plug and lead

Warning

If you detect anything unusual, immediately remove the mains plug.



- This TV is designed to operate on AC 220-240 V, 50 / 60 Hz.
- Insert the mains plug fully into the socket outlet.
- Ensure that the mains plug is easily accessible.
- Disconnect the mains plug when cleaning the TV.
- Do not touch the mains plug with wet hands.



- Do not damage the mains lead.
- Do not place a heavy object on the lead.



- Do not place the lead near a high temperature object.



- Do not pull on the lead. Hold onto the mains plug body when disconnecting the plug.



- Do not move the TV with the lead plugged into a socket outlet.
- Do not twist the lead, bend it excessively or stretch it.
- Do not use a damaged mains plug or socket outlet.
- Ensure the TV does not crush the mains lead.
- Do not use any mains lead other than that provided with this TV.
- Ensure the earth pin on the mains plug is securely connected to prevent electrical shock.
- An apparatus with CLASS I construction shall be connected to a mains socket outlet with a protective earth connection.

■ Take care

Warning

- Do not remove covers and never modify the TV yourself as live parts are accessible when they are removed. There are no user serviceable parts inside.
- Do not expose the 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 insert foreign objects into the TV through the air vents.
- Do not use an unapproved pedestal / mounting equipment. Be sure to ask your local Panasonic dealer to perform the setup or installation of approved wall-hanging brackets.
- Do not apply strong force or impact to the display panel.
- Do not place the TV on sloped or unstable surfaces, and ensure that the TV does not hang over the edge of the base.



Important information

If the TV 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 TV.
- Only using furniture that can safely support the TV.
- Ensuring the TV is not overhanging the edge of the supporting furniture.
- Not placing the TV on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the TV to a suitable support.
- Not standing the TV on cloth or other materials placed between the TV and supporting furniture.
- Educating children about the dangers of climbing on furniture to reach the TV or its controls.

- Do not expose the TV to direct sunlight and other sources of heat.



To prevent the spread of fire, keep candles or other open flames away from this product at all times



■ Dangerous part / Small object

Warning

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

■ Pedestal

Warning

- Do not disassemble or modify the pedestal.

Caution

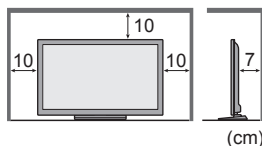
- Do not use any pedestal other than the one provided with this TV.
- Do not use the pedestal if it becomes warped or physically damaged. If this occurs, contact your nearest Panasonic dealer immediately.
- During setup, make sure that all screws are securely tightened.
- Ensure that the TV does not suffer any impact during installation of the pedestal.
- Ensure that children do not climb onto the pedestal.
- Install or remove the TV from the pedestal with at least two people.
- Install or remove the TV by the specified procedure.

■ Ventilation

Caution

Allow sufficient space around the TV in order to help prevent excessive heat, which could lead to early failure of some electronic components.

Minimum distance:



- Ventilation should not be impeded by covering the ventilation openings with items such as newspapers, tablecloths and curtains.
- Whether you are using a pedestal or not, always ensure the vents at the bottom of the TV are not blocked and there is sufficient space to enable adequate ventilation.



■ Moving the TV

Caution

Before moving the TV, disconnect all cables.

- The TV is heavy. Move the TV with at least two people. Support as shown to avoid injury by the TV tipping or falling.



- Transport only in upright position. Transporting the TV with its display panel facing upwards or downwards may cause damage to the internal circuitry.

■ When not in use for a long time

Caution

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.

- Remove the mains plug from the wall socket when the TV is not in use for a prolonged period of time.

■ Battery for the Remote Control

Caution

- Incorrect installation may cause battery leakage, corrosion and explosion.
- Replace only with the same or equivalent type.
- Do not mix old and new batteries.
- Do not mix different battery types (such as alkaline and manganese batteries).
- Do not use rechargeable batteries (Ni-Cd, etc.).
- Do not burn or break up batteries.
- Do not expose batteries to excessive heat such as sunshine, fire or the like.
- Make sure you dispose of batteries correctly.

Accessories

Remote Control

➔ (p. 9)



• N2QAYB000817

Batteries (2)

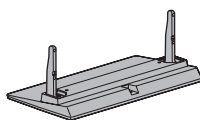
• R6

➔ (p. 9)



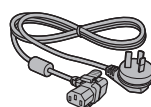
Pedestal

➔ (see below)



Mains lead

➔ (p. 6)



Operating Instructions with Warranty statement

- Accessories may not be placed all together. Take care not to throw them away unintentionally.

Fall-prevention parts

➔ (p. 5)

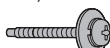
Assembling / Removing the pedestal

(A) Assembly screw (4)
(silver)



M5 × 18

(B) Assembly screw (4)
(black)

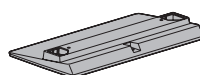


M5 × 30

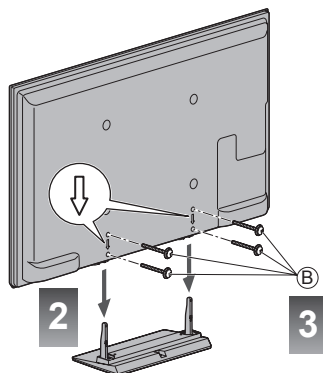
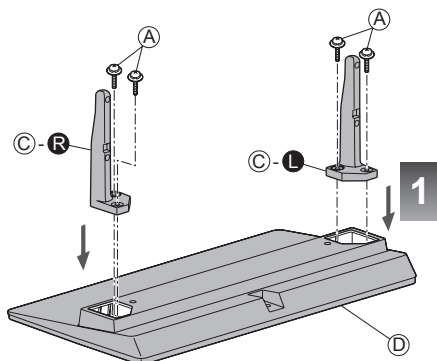
(C) Pole (2)



(D) Base



■ Assembling the pedestal



Removing the pedestal from the TV

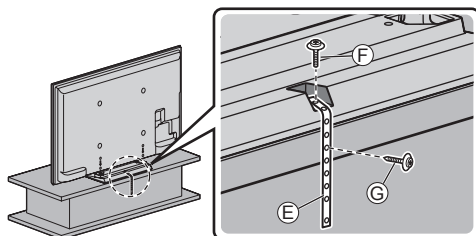
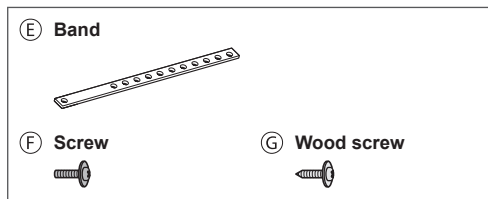
Be sure to remove the pedestal in the following way when using the wall-hanging bracket or repacking the TV.

- 1 Remove the assembly screws (B) from the TV.
- 2 Pull out the pedestal from the TV.
- 3 Remove the assembly screws (A) from the poles.

■ Preventing the TV from falling over

It is recommended to secure the pedestal to a furniture as shown to prevent the TV from falling over.

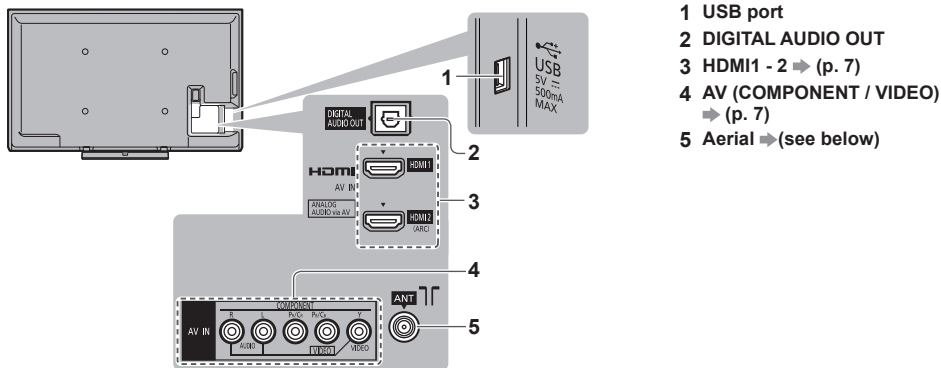
- This information is designed to reduce the risk of injuries caused by the TV falling over. However, no measure can guarantee protection in all cases.



Connections

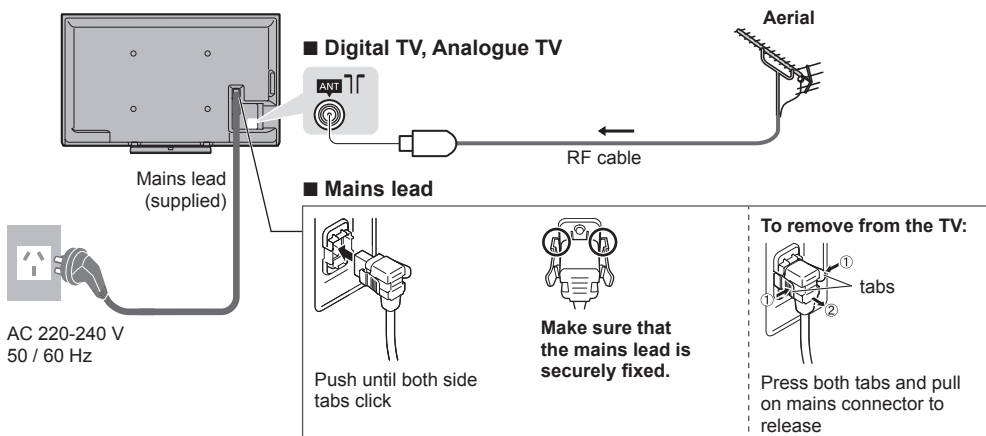
- External equipment and cables shown are not supplied with this TV.
- Ensure that the unit is disconnected from the mains socket before attaching or disconnecting any leads.
- Check the type of terminals and cable plugs are correct when connecting.
- Always use a fully wired HDMI cable.
- Keep the TV away from electronic equipment (video equipment, etc.) or equipment with an infrared sensor. Otherwise, distortion of image / sound may occur or operation of other equipment may be interfered.
- Also read the manual of the equipment being connected.

Terminals



Basic connections

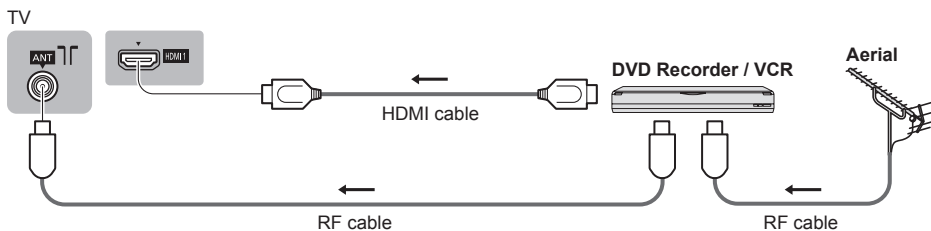
Mains lead and aerial



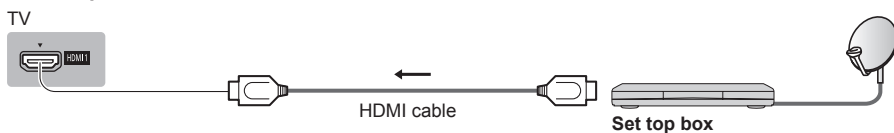
- Keep RF (aerial) cable away from the mains lead to avoid and minimise mains interference pickup.
- Do not place the RF cable under the TV.
- An aerial, correct cable (75 Ω coaxial) and correct terminating plug are required to obtain optimum quality picture and sound.
- If a communal aerial system is 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.

AV devices

■ DVD Recorder / VCR



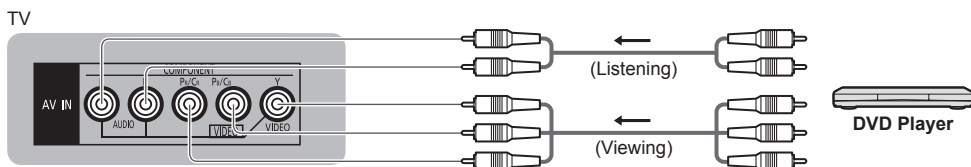
■ Set top box



Other connections

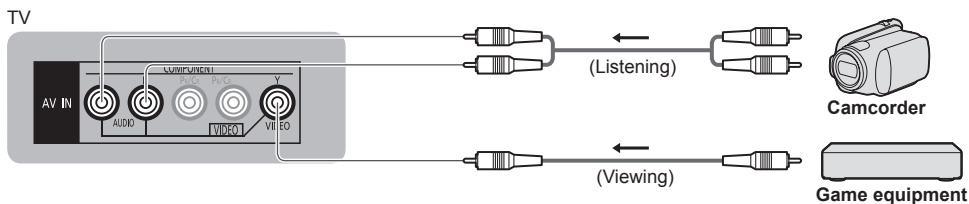
■ DVD player

(COMPONENT equipment)

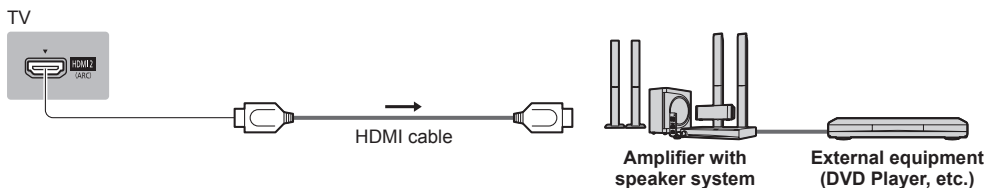


■ Camcorder / Game equipment

(VIDEO equipment)



■ Amplifier (to listen with speakers)



- Use HDMI2 for connecting an amplifier. This connection is applicable when using an amplifier that has ARC (Audio Return Channel) function.
As for an amplifier without ARC function, use DIGITAL AUDIO OUT.
- To enjoy the sound from the external equipment in multi-channel sound (e.g. Dolby Digital 5.1ch), connect the equipment to the amplifier. For the connections, read the manuals of the equipment and amplifier.

Types of connectable equipment to each terminal

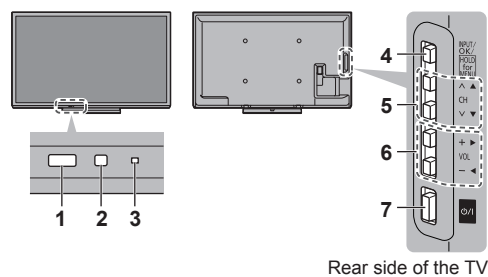
Features	Terminal			
	AV		DIGITAL AUDIO OUT	HDMI 1 - 2
	COMPONENT	VIDEO		
To play back videocassettes / DVDs (VCR / DVD Player)	○	○		○
To watch satellite broadcasts (Set top box)		○		○
To watch camcorder images (Video camera)		○		○
To play games (Game equipment)		○		○
To use amplifier with speaker system			○	○*
VIERA Link				○

- : Recommended Connection
- * Use HDMI2 for connecting an amplifier. This connection is applicable when using an amplifier that has ARC (Audio Return Channel) function.

Identifying Controls

Indicator / Control panel

- When pressing 4, 5, 6 buttons, the control panel guide appears on the side of the screen for 3 seconds to highlight the pressed button.



- 1 Remote control signal receiver**
 - Do not place any objects between the TV remote control signal receiver and remote control.

2 Ambient sensor
 - Senses brightness to adjust picture quality when [Ambient Sensor] in the Picture Menu is set to [On].
- 3 Power LED**

Red: Standby
Green: On

 - The LED blinks when the TV receives a command from the remote control.

4 Input mode selection
 - Press repeatedly until you reach the desired mode.

[Main Menu]

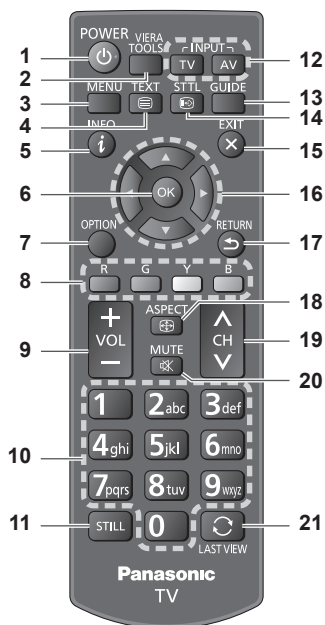
 - Press and hold for about 3 seconds to display main menu.

OK (when in the menu system)

5 Channel Up / Down
Cursor Up / Down (when in the menu system)

6 Volume Up / Down
Cursor Left / Right (when in the menu system)

7 Mains power On / Off switch
 - Use to switch the mains power.



1 Standby On / Off switch

2 VIERA TOOLS

Displays some special feature icons and accesses easily.



- [VIERA Link] ➔ (p. 29)
- [Photo] in Media Player ➔ (p. 23)
- [Video] in Media Player ➔ (p. 23)
- [Music] in Media Player ➔ (p. 23)
- [Eco Navigation] ➔ (p. 19)

3 [Main Menu] ➔ (p. 15)

Press to access Picture, Sound, Timer, Setup and Help Menus.

4 Teletext button ➔ (p. 13)

5 Information ➔ (p. 11)

Displays channel and programme information.

6 OK

Confirms selections and choices.
Press after selecting channel positions to quickly change channel.
Displays the Channel List.

7 [Option Menu]

Easy optional setting for viewing, sound, etc.

8 Coloured buttons

(red-green-yellow-blue)

Used for the selection, navigation and operation of various functions.

9 Volume Up / Down

10 Numeric buttons

Changes channel and teletext pages.

Sets characters.

When in Standby mode, switches TV on.

11 Still

Freezes / unfreezes the picture.

12 Input mode selection ➔ (p. 11, 12)

TV - switches to Digital TV / Analogue TV.

AV - switches to AV input mode from Input Selection list.

13 Freeview Guide ➔ (p. 14)

Displays Electronic Programme Guide.

14 Subtitles

Displays / hides subtitles. (if available)

15 Exit

Returns to the normal viewing screen.

16 Cursor buttons

Makes selections and adjustments.

17 Return

Returns to the previous menu / page.

18 Aspect ➔ (p. 11)

Displays Aspect Selection list to change aspect ratio.

- Selectable aspect modes may vary depending on the input signal.

19 Channel Up / Down

20 Sound Mute On / Off

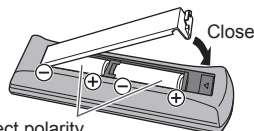
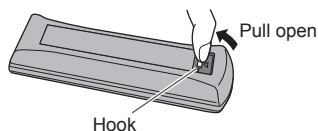
21 Last view

Switches to previously viewed channel or input mode.

- Press again to return to the current view.

- Watching less than 10 seconds is not regarded as the previously viewed channel or input mode.

■ Installing / Removing batteries



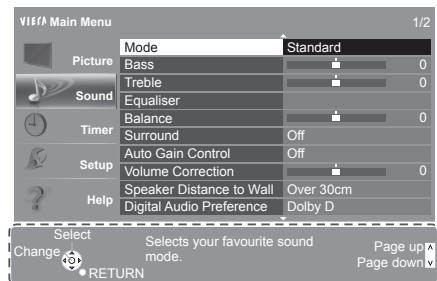
Note the correct polarity
(+ or -)

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

■ Operation guide

Operation guide will help your operation by using the remote control.

Example: [Sound Menu]



Operation guide

■ How to use remote control

MENU



Open the main menu



Move the cursor / select from a range of options / select the menu item (up and down only) / adjust levels (left and right only)



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

First time Auto Tuning

Automatically sets up the TV and searches for available TV channels when the TV is turned on for the first time.

- These steps are not necessary if the setup has been completed by your local dealer.
- Please complete connections (p. 6 - 8) and settings (if necessary) of the connected equipment before starting Auto Tuning. For details of settings for the connected equipment, read the manual of the equipment.

1 Plug the TV into mains socket and turn power on

POWER • Takes a few seconds to be displayed.



2 Select the following items

Set up each item by following the on-screen instructions.

Select [Home]

Select [Home] viewing environment to use in your home environment.

- [Shop] is for shop display.
- To change viewing environment later on, you will need to initialise all settings by accessing Shipping Condition.

Tick the TV signal mode to tune, and then select [Start Auto Tuning]

- ☒ : tune (search for the available channels)
- ☐ : skip tuning

Auto Tuning is now complete and your TV is ready for viewing.

If tuning has failed, check the connection of the RF cable, and then follow the on-screen instructions.

- To retune all channels ➔ [Auto Tuning] (p. 19)
- To add the available TV signal mode later ➔ [Add TV Signal] (p. 19)
- To initialise all settings ➔ [Shipping Condition] (p. 20)


Watching TV

1 Turn power on

 (TV)

or

POWER • Mains power On / Off switch should be on.

 (p. 8)
(Remote Control)

2 Select Digital TV or Analogue TV

 TV

3 Select a channel

 up
CH
 down

or

1	2	3
4	5	6
7	8	9
0		

• To select 2 or more-digit channel position number, e.g. 399

■ To select from the Channel List



All Digital Channels	
6	Cartoon Nwk
7	ABC Radio Wales
8	ABC Radio Cymru
1	ABC ONE Wales
2	ABC THREE
3	ABCi
4	CABC Channel

Note

- The TV will automatically go into Standby mode when no operation is performed for 4 hours if [Auto Standby] in the Timer Menu is set to [On].
- The TV will automatically go into Standby mode when no signal is received and no operation is performed for 10 minutes if [No signal Power off] in the Timer Menu is set to [On].

Aspect

Change the aspect ratio (image size)

ASPECT



[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.

[Zoom]: Displays a 16:9 letterbox or 4:3 image without distortion.

[4:3 Full]: Displays a 4:3 image enlarged horizontally to fit the screen.

• For HD (High definition) signals

[Sidecut Just]: Displays a 16:9 letterbox (anamorphic) image full-screen. Stretching is only noticeable at the left and right edges.

• For HD (High definition) signals

[Sidecut Zoom]: Displays a 16:9 letterbox (anamorphic) image full-screen without distortion.

• For HD (High definition) signals

Note

- Aspect mode can be memorised separately for SD (Standard definition) and HD (High definition) signals.
- Aspect cannot be changed in teletext service.

Information banner

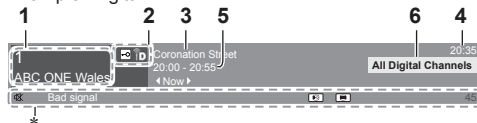
Display Information banner

INFO

- Also appears when changing a channel.



Example: Digital TV



- 1 Channel position and name
- 2 Channel type ([Radio], [Data], etc.) / Encrypted channel () / TV mode (D, A)
- 3 Programme
- 4 Current time
- 5 Programme Start / Finish time (Digital TV) Channel number, etc. (Analogue TV)
- 6 Category

***Features available / Message meanings**



Sound mute on

[Rating]

Rating information ➔ (p. 30)

[Bad signal]

Poor TV signal quality

[AD]

Audio Description service available

- This function can aid visually-impaired viewers by adding an additional audio track to describe events on-screen.
- For settings ➔ (p. 18)



Subtitle service available



Multiple image or audio available



Teletext service available



Audio mode ➔ (p. 30)

1 - 90

Off Timer remaining time

■ **To confirm another tuned channel name**



■ **To watch the channel listed in the banner**



■ **Information on the next programme**
(Digital TV)



■ **To hide**

EXIT



■ **Extra information (Digital TV)**

INFO



(Press again to hide the banner)

■ **To set display timeout**

➔ [Banner Display Timeout] (p. 19)

■ **To update the TV software (if available)**



(red)

■ **To select a favourite list (Digital TV)**



(blue)

Watching External Inputs

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

1 Turn the TV on

POWER



If input mode is not switched automatically

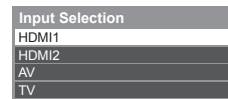
Perform **2** and **3**

- Check the setup of the equipment.

2 Display the input selection menu



3 Select the input mode connected to the equipment



① select

② watch

- You can also select the input by pressing the AV button repeatedly.
- To switch between [COMPONENT] and [VIDEO] in [AV], use left and right cursor button.

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 appropriate coloured button. This facility enables fast access to information on the subjects shown.

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.

■ To change mode ➔ [Teletext] (p. 19)

1 Switch to Teletext

TEXT



- Displays the index page (content varies depending on the broadcasters).

2 Select the page



Coloured button
(Corresponds to the colour bar)

■ To adjust contrast

MENU



(Press three times)



■ To return to TV

EXIT



View in multi window

- Operations can be made only in teletext screen.

MENU



Select [Picture and text] On or Off

(Press twice)



Reveal hidden data

Reveal hidden words e.g. quiz page answers

MENU



R (red)

- Press again to hide.

Call up a favourite page

View a favourite page stored

Call up the page stored on the blue button (List mode).

STTL



FULL / TOP / BOTTOM

MENU

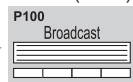
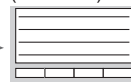
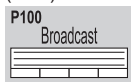


G (green)

(TOP)

(BOTTOM)

Normal (FULL)



Store frequently viewed pages

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

As page is displayed



(Corresponding coloured button)



press and hold

■ To change stored pages

1. Press the coloured button you want to change.
2. Enter new page number with numeric buttons.
3. Press and hold the OK button.

View sub page

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



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

■ To view specific sub page



Watch TV while waiting for update

View the TV picture while searching for a teletext page

Teletext automatically updates itself when new information becomes available.



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



Appears when updating is completed

View the updated page



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

Using the Freeview Guide (Digital TV)

Using the Freeview Guide enables you to select a programme easily, view programme information, etc. The Freeview Guide - Electronic Programme Guide (EPG) provides an on screen listing of the programmes currently broadcast and the future broadcasts over the next seven days (depending on the broadcasters).

If in Analogue TV

1 Select Digital TV

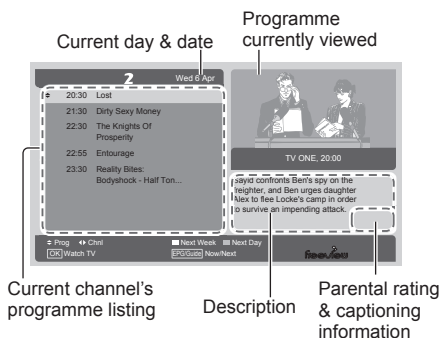


2 View the Freeview Guide



Each time pressed, the screen will be switched between the Freeview Guide Listing and What's on Now / Next.

Example: Freeview Guide Listing



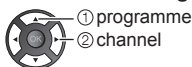
■ To the previous day



■ To the next day



■ To scroll through programme or channel

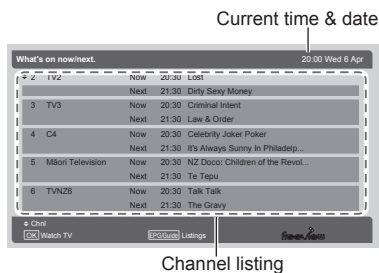


■ To watch the highlighted programme



■ To return to TV





■ To scroll through channels



■ To watch the highlighted programme



■ To return to the Freeview Guide Listings



■ To return to TV

EXIT



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 Freeview Guide is completely shown.
- The Freeview Guide screen and operations are subject to change without notice.

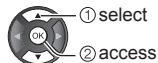
Using Menu Functions

1 Display the menu

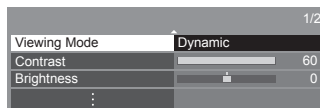
MENU



2 Select the menu



3 Select the item



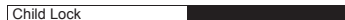
■ Choose from among alternatives



■ Adjust using the slide bar



■ Go to the next screen



■ Enter characters by free input menu

You can enter names or numbers freely for some items.



Set characters one by one



Store



- You can set characters by using numeric buttons.

Picture

Viewing Mode

Selects your favourite picture mode for each input.

[Dynamic]: Improves contrast and sharpness for viewing in a bright room.

[Normal]: Normal use for viewing in a normal lighting condition.

[Cinema]: Improves the performance of contrast, black and colour reproduction for watching movies in a darkened room.

[True Cinema]: Reproduces the original image quality precisely without any revision.

[Custom]: Adjusts each menu item manually to suit your favourite picture quality.

In each Viewing Mode, [Contrast], [Brightness], [Colour], [Tint], [Sharpness], [Colour Temperature], [Vivid Colour], [Ambient Sensor], [Noise Reduction] and [MPEG Noise Reduction] can be adjusted and stored.

When in [True Cinema] or [Custom] mode, [Advanced Settings] can be adjusted additionally. The settings in [True Cinema] or [Custom] mode can be stored for each input.

Contrast / Brightness / Colour / Tint / Sharpness

Adjusts the levels of these options according to your personal preference.

Colour Temperature

Sets the overall colour tone of the picture (bluer - redder).

Vivid Colour

Automatically adjusts colours to vivid ones.

Ambient Sensor

Automatic Brightness Control function

Adjusts picture settings automatically depending on ambient lighting conditions.

Noise Reduction

Reduces unwanted picture noise.

MPEG Noise Reduction

Reduces flicker noise in contoured parts of a picture and block noise.

Advanced Settings

■ Panel Luminance Setting

Changes the luminance level of the panel to adjust the overall brightness.

■ Adaptive Gamma Control

Adjusts the gamma curve to make the image brighter.

■ Black Expander

Gradually adjusts the shades of black.

■ Colour Gamut

Reproduces image colour precisely according to the colour gamut.

[Normal]: Displays colours according to the colour gamut.

[Native]: Displays deep colours by expanding the colour gamut to its maximum.

■ White Balance

[R-Gain] / [G-Gain] / [B-Gain]

Adjusts the white balance of bright red / green / blue areas.

[R-Cutoff] / [G-Cutoff] / [B-Cutoff]

Adjusts the white balance of dark red / green / blue areas.

[Reset White Balance]

Resets to the default White Balance.

■ Colour Management

[R-Hue] / [R-Saturation] / [R-Luminance]

Adjusts the picture hue / saturation / luminance of red areas.

[G-Hue] / [G-Saturation] / [G-Luminance]

Adjusts the picture hue / saturation / luminance of green areas.

[B-Hue] / [B-Saturation] / [B-Luminance]

Adjusts the picture hue / saturation / luminance of blue areas.

[Reset Colour Management]

Resets to the default Colour Management.

■ Gamma

[Gamma]

Switches the gamma curve.

• Please note the numerical values are reference for the adjustment.

[Reset Gamma]

Resets to the default Gamma.

■ Reset Advanced Settings

Resets [Advanced Settings] to the default settings.

Option Settings

■ Film Cadence Mode

Improves vertical resolution for movie images.

• This function is available for interlaced signals.

■ HDMI Content Type

Adjusts the picture settings of each HDMI input according to the selected content type.

• For HDMI input

[Auto]: Automatically adjusts the picture settings according to the received HDMI content if the connected equipment supports HDMI Content Type.

• To set the availability of each content type for [Auto] mode ➡ [Auto Detail Setting]

■ HDMI RGB Range

Adjusts the black level of the image for each HDMI input.

- When the black level is not suitable, select [Full].
- For HDMI input

■ 3D-COMB

Makes still or slow moving pictures more vivid.

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 / NTSC signal reception in TV mode or from composite

■ Refresh Rate

Changes the image processing of the panel (depending on the input signal).

- Set to [100Hz] normally.

Screen Settings

■ 16:9 Overscan

Selects the screen area displaying the image for 16:9 aspect.

[On]: Enlarges the image to hide the edge of the image.

[Off]: Displays the image in the original size.

- Set to [On] if noise occurs on the edge of the screen.
- This function can be memorised for SD (Standard definition) and HD (High definition) signals respectively.

■ H-Size

Switches the horizontal display range to reduce noise on the side edge of the image.

- For TV mode, AV and HDMI input

■ Zoom Adjustments

Adjusts the vertical position and size when aspect is set to [Just], [Sidecut Just], [Zoom] or [Sidecut Zoom].

■ Screen Display

Turns the screen off when you select [Off].

This function is effective in reducing power consumption when listening to the sound without watching the TV screen.

- Press any buttons (except Standby) to turn the screen on.

■ Side Panel

Adjusts the brightness of the side panel.

- The recommended setting is [High] to prevent panel "image retention".

■ Pixel Orbiter

Selects the mode for wobbling of the image to prevent panel "image retention".

[Auto]: Automatically works only for the appropriate images and you rarely recognise the wobbling.

■ Scrolling Bar

Displays scrolling bar pattern to assist elimination of panel "image retention".

- Press the OK button to start scrolling and press any buttons (except Standby) to exit this mode.
- For positive effect to eliminate "image retention", it may be necessary to display for a long time.

Copy Adjustment

Copies the selected [True Cinema] or [Custom] settings to those of the other input.

Reset Picture Defaults

Resets the current Picture Viewing Mode to the default settings.

Sound

Mode

Selects your favourite sound mode for each input.

[Standard]: Provides the suitable sound quality for all types of scenes.

[Music]: Improves sound quality for watching music videos, etc.

[Speech]: Improves sound quality for watching news, drama, etc.

[User]: Adjusts the sounds manually by using the equaliser to suit your favourite sound quality.

- In each mode, [Bass], [Treble] and [Surround] can be adjusted and stored.
- For the User mode, [Equaliser] will be available in the Sound Menu instead of [Bass] and [Treble]. Select [Equaliser] and adjust the frequency.

Bass

Adjusts level to enhance or minimise lower, deeper sound output.

Treble

Adjusts level to enhance or minimise sharper, higher sound output.

Equaliser

Adjusts the frequency level to suit your favourite sound quality.

- This function is available when [Mode] is set to [User].
- Select the frequency and change the frequency level by using the cursor button.
- To enhance the bass sound, raise the level of the lower frequency. To enhance the treble sound, raise the level of the higher frequency.
- To reset the levels of each frequency to the default settings, select [Reset Equaliser Settings] by using the cursor button.

Balance

Adjusts volume level of right and left speakers.

Surround

Provides a dynamic enhancer of width to simulate improved spatial effects.

Auto Gain Control

Automatically regulates large sound level differences between channels and inputs.

Volume Correction

Adjusts the volume of each individual channel or input mode.

Speaker Distance to Wall

Compensates for the low frequency sound due to the distance between the speakers and the wall.

- If the back space between the TV and wall is within 30 cm, [Up to 30cm] is recommended.
- If the back space between the TV and wall is over 30 cm, [Over 30cm] is recommended.

MPX

Selects multiplex sound mode. (if available)

[Stereo]: Use this normally.

[Mono]: When stereo signal cannot be received.

[M1] / [M2]: Available while mono signal is transmitted.

- For Analogue TV

Digital Audio Preference

Selects the initial setting for audio tracks.

[Dolby D]: The priority is given to Dolby Digital.

[HE-AAC]: The priority is given to HE-AAC.

- Dolby Digital is the method of coding digital signals developed by the Dolby Laboratories. Apart from stereo (2ch) audio, these signals can be multi-channel audio.
- HE-AAC is a perceptual coding method used to compress digital audio for efficient storage and transmission.
- For Digital TV

SPDIF Selection

SPDIF: A standard audio transfer file format

Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT and HDMI2 (ARC function) terminals.

[Auto]: Dolby Digital is output as Dolby Digital Bitstream. HE-AAC and MPEG are output as PCM. DTS is output as DTS for video contents of Media Player.

[PCM]: Digital output signal is fixed to PCM.

- ARC (Audio Return Channel): A function of digital audio output using HDMI cable
- For Digital TV or video contents of Media Player (p. 23)

Audio Description

Narration settings for visually impaired users.

Set to [Auto] to activate the narration sound track when available on the broadcast.

- The availability of audio description sound track is indicated by [AD] in the information banner (p. 12).
- For Digital TV

HDMI Input

■ HDMI1 / 2

Selects to fit the input signal. (p. 30)

[Digital]: When sound is carried via the HDMI cable connection

[Analogue]: When sound is not carried via the HDMI-DVI adaptor cable connection

- For HDMI input

Reset Sound Defaults

Resets the current Sound Mode to the default settings.

Timer

Off Timer

Sets the duration of time until the TV automatically goes into Standby mode.

Auto Standby

Automatically turns the TV to Standby mode for energy saving when no operation is performed for 4 hours.

- 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 into Standby mode.

No signal Power off

Automatically turns the TV to Standby mode to prevent unnecessary power consumption when no signal is received and no operation is performed for 10 minutes.

- The notification message will appear 3 minutes before going into Standby mode.

Setup

Eco Navigation

Automatically sets the TV to the most suitable energy-saving mode.

The concerned items and their current settings are displayed. Select [Set to Eco] to set them to the energy-saving settings at once.

Child Lock

Applies access control for channels or inputs to prevent unwanted access. (p. 22)

Tuning Menu*

■ Favourites Edit

Creates a list of favourite channels. (p. 21)

- For Digital TV

■ Channel List

Skips unwanted channels or edits channels. (p. 21)

■ Auto Tuning

Automatically searches for receivable channels. (p. 21)

■ Manual Tuning

Searches for channels manually. (p. 21)

■ Update Channel List

Updates the channel list while keeping your settings. (p. 22)

- For Digital TV

■ Signal Condition

Checks the signal condition.

- For Digital TV

■ Add TV Signal

Adds the TV mode.

- This function is available if you skip any modes to tune in [Auto Tuning] for first using the TV (p. 10).

Language

■ Preferred Audio Language

Selects the preferred language for Digital TV multi audio. (depending on the broadcaster)

■ Preferred Subtitles

Selects the default language for Digital TV subtitles. (depending on the broadcaster)

Display Settings

■ Teletext

Teletext display mode. (p. 13)

■ Input Labels

Accesses the input labels list to select the label of each input mode or set to skip unconnected one for easier identification and selection in [Input Selection] (p. 12) or banner.

- To name each input mode freely, select [User input] and set characters (maximum 10 characters).
- To skip the input mode, select [Skip].

■ Banner Display Timeout

Sets how long the Information banner stays on screen.

VIERA Link Settings

■ VIERA Link

Sets to use VIERA Link functions. (p. 28)

■ Power on Link

Sets to use Power on Link functions. (p. 28)

■ Power off Link

Sets to use Power off Link functions. (p. 28)

■ Standby Power Save

Controls the connected equipment to reduce power consumption in Standby. (p. 28)

- 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 (p. 28)

- This function is available when [VIERA Link] is set to [On].

System Menu

■ Shipping Condition

Resets all settings to the original condition.

■ System Update

Downloads new software to this TV. (p. 23)

■ Licence Menu

[Software Licence]

Displays the software licence information.

Other Settings

■ Power Save

Reduces brightness of the picture to economise on power consumption.

Help

TV Self Test

Makes a diagnosis of picture or sound problems.
Follow the on-screen instructions.

System Information

Displays the system information of this TV.

Note

*The menu name varies depending on the TV mode.

- A different menu will be displayed in the mode of Media Player. (p. 23)
- Only available items can be selected.

Tuning and Editing Channels

You can retune channels or make your favourite channel lists, skip unwanted channels, etc.

MENU  ➔ [Setup] ➔ [Tuning Menu]*

*The menu name varies depending on the TV mode.
([Digital TV Tuning Menu] / [Analogue TV Tuning Menu])

- The settings in [Tuning Menu] are applicable only for the selected TV mode.

Favourites Edit

Create your favourite channel lists from various broadcasters (up to 4: [Favourites]1 to 4). The Digital TV Favourites lists are available from "Favourites" in the Information banner.

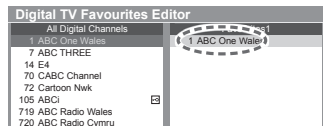
1 Select a channel to list ( : Encrypted channel)

Example: Digital TV



2 Add it to the Favourites list

Example: Digital TV



3 Store



To edit the list by using the coloured buttons

While the cursor is in the left field

- **Select favourites:** Displays other Favourites.

While the cursor is in the right field

- **Edit list name:** Names the Favourites.

- **Move:** Moves the channel.

- **Delete all:** Deletes all channels.

Note

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








Channel List

You can hide (skip) unwanted channels.

The hidden channels cannot be displayed except in this function.

Select a channel and reveal / hide

Example: Digital TV

All Digital Channels	
	70 CABG Channel
	72 Cartoon Nwk
	105 ABCi
	719 ABC Radio Wales
	720 ABC Radio Cymru
	1 ABC ONE Wales
	7 ABC THREE



- ☒ : [Reveal]
☐ : [Hide] (skip)

To edit the list by using the coloured buttons

- **Swap / Move:** Swaps / moves the channel position. (if available)

- **Reveal all:** Reveals all channels.

- **Tune:** Retunes each channel ([Manual Tuning]).

- **Rename:** Renames the channel name. (Analogue)

Note

- If a VCR is connected only with the RF cable in Analogue TV, edit [VCR].

Auto Tuning

Automatically retune the channels received in the area.

- All the previous tuning settings are erased.
- When the operation is completed, the channel at the lowest position will be displayed.
- Search begins in the order from the lower channels to the higher channels.
- If tuning has not been done completely ➔ **[Manual Tuning]** (see below)

Manual Tuning

Normally use [Auto Tuning] or [Update Channel List] to retune Digital TV channels.

If tuning has not been done completely or for adjusting the direction of the aerial or dish, use this function.

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

Digital TV:

1 Select physical channel and offset

Digital TV Manual Tuning			
Physical Channel	[CH21]	474.00 MHz	
Signal Quality	0	10	
Signal Strength	0	10	
No.	Channel Name	Type	New



- ① select physical channel
- ② select offset

2 Search



Analogue TV:

Analogue TV Manual Tuning	
Channel	CH 57
Manual Tuning	1

1 Select the channel position

1	2	3
4	5	6
7	8	9
0		

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

2 Select the channel



3 Search



4 Select [Store]

Update Channel List

You can add new channels, delete removed channels, update channel name and position automatically to the channel list.

- The channel list is updated while keeping your settings in [Favourites Edit], [Channel List], [Child Lock], etc.
- Depending on the signal condition, the update may not work properly.

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. Enter the PIN number to watch.

MENU

➡ [Setup] ➡ [Child Lock]

1 Enter the PIN number (4 digits)

- Enter the PIN number twice at first setting.
- Make a note of the PIN number in case you forget it.
- "0000" has been stored as the default PIN number.

2 Select [Child Lock List] and set the channel / input to be locked

Child Lock List - TV and AV				
Name	Input	Type	Lock	
101 ABC 1 Wales	Digital TV	Digital TV	Lock	
7 ABC THREE	Digital TV	Digital TV		
14 E4C	Digital TV	Digital TV		
VCR	Analogue TV	Analogue TV		
1 ABC1	Analogue TV	Analogue TV		
2 ****	Analogue TV	Analogue TV		
HDMI1	External	AV		



: Appears when the channel / input is locked

To edit the list by using the coloured buttons

■ **Lock all:** Locks all channels and input.

■ **Unlock all:** Cancels all locks.

■ **Next input:** Jumps to the top of the next input.

● In Digital TV, additional lock item will appear.

[Freeview Players]: Applies access control for some MHEG services.

■ To change the PIN number

Select [Change PIN] and enter a new PIN number twice

■ To set Parental Rating

To watch the Digital TV programme that has the rating information over the selected age, enter the PIN number to watch (depending on the broadcaster).

Select [Parental Rating] and set an age for the restriction of programmes.

● Rating ➡ (p. 30)

Note

- Setting [Shipping Condition] (p. 20) erases the PIN number and all settings.
- If you have forgotten your changed PIN, input "6969" as the PIN number.

Updating the TV Software

A new version of software may be released for download to enhance the performance or operations of the TV. If there is an update available, a notification message is displayed when the channel has the update information.

- To download



(Press the EXIT button not to download)

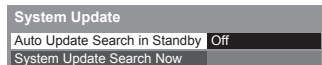
You can update new software automatically or update manually.

MENU

➔ [Setup] ➔ [System Menu] ➔ [System Update]

■ To update automatically

Select [Auto Update Search in Standby] and set



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

- 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 in Standby mode (TV turned off with the remote control).

■ To update immediately

1 Select [System Update Search Now]

2 Searches for an update (for several minutes) and displays a corresponding message if any

3 Download



Note

- Download may take for a few hours.
- During software download and update, DO NOT switch off the TV.
- The notification message might be a reminder. 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 off.

Using Media Player

Media Player allows you to enjoy photo, video or music recorded on a USB Flash Memory.

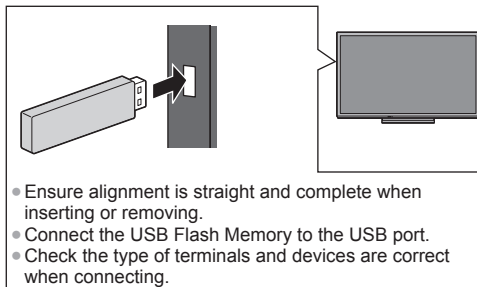
Photo mode: Digital photo data will be displayed.

Video mode: Digital video data will be played back.

Music mode: Digital music data will be played back.

- Supported file format ➔ **“Supported file format in Media Player” (p. 31)**
- During the operation, audio signal is output from DIGITAL AUDIO OUT and HDMI2 (ARC function) terminals. To use HDMI2 with ARC function, connect an amplifier that has ARC function and set to use theatre speakers (p. 27, 29).
- [Date] shows the date on which the recording was made by the recording equipment. The file without record of the date is shown “**/**/****”.
- 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.
- Partly degraded files might be displayed at a reduced resolution.
- Picture setting may not work depending on the conditions.
- The folder and file names may be different depending on the digital camera or digital video camera used.

■ To insert or remove the USB Flash Memory



1 Insert the USB Flash Memory to the TV

2 Display [VIERA TOOLS] and select the content (Photo / Video / Music)



- Select the appropriate device and content for playing back each file.

■ To change the device

While the thumbnail is displayed, display the device selection



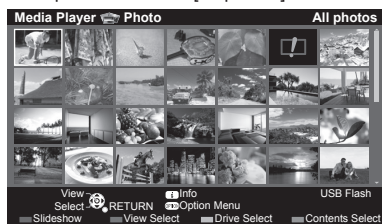
■ To change the contents

While the thumbnail is displayed, display the contents selection



Photo mode

Example: Thumbnail - [All photos]



: Error display

- To change the size of photos on a thumbnail screen

OPTION ➔ [Change Size]

[Single view] - Photos are displayed one at a time.

Select the file from the thumbnail of photos to be viewed

[Slideshow] - Slideshow completes when all photos are viewed within the current thumbnail.

1 Select the file from the thumbnail of photos for the first view

2 Start Slideshow



- To display / hide the operation guide



■ To sort by folder, recorded date or recorded month

1 Display the view selection in the thumbnail view



2 Select the sort type

[Folder view]:

Displays the thumbnail grouped by folder.

- The files which are not into a folder will be collected to the folder named "I".

[Sort by Date] / [Sort by Month]:

Displays the thumbnail grouped by the same date or month.

- The group of the photos without a recorded date is shown as [Unknown].

Photo Settings

OPTION ➔ [Slideshow Settings]

■ Frame

Selects the frame type of the slideshow.

■ Colour Effect

Selects the colour effect of photos on Single view and Slideshow.

- This function is not available when [Frame] is set to [Drift], [Gallery] or [Cinema].

■ Transition Effect

Selects the transition effect for switching the photo during the slideshow.

- This function is available when [Frame] is set to [Off].

■ Auto Makeup

Automatically detects the face in the photo and improves luminance and contrast.

■ Screen Mode

Selects enlarged or normal viewing on Single view and Slideshow.

- This function is not available when [Frame] is set to [Collage], [Drift], [Gallery] or [Cinema] / when [Transition Effect] is set to [Motion].
- Depending on the photo size, it may not be fully enlarged to fill the screen, e.g. portrait style picture.

■ Burst Playback

Selects whether to display burst photos in a fast-paced slideshow mode.

- This function is not available when [Frame] is set to [Drift], [Gallery] or [Cinema] / when [Transition Effect] is set to [Motion].

■ Interval

Selects slideshow interval.

- This function is not available when [Frame] is set to [Drift], [Gallery] or [Cinema] / when [Transition Effect] is set to [Motion].

■ Repeat

Slideshow repeat

■ Back Ground Music

Selects the back ground music during Photo mode.

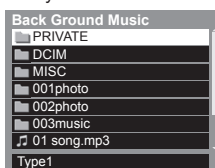
- [Type1 - 5] is fixed installed on this TV.

[User]: Music data in the device registered by yourself will be played back.

To register the music

1. Select the music file

Depending on the condition of the device, select folders until you reach the desired music file.



2. Select [File] or [Folder]

[File]: The selected music file will be registered.

[Folder]: All the music in the folder which contains the selected music file will be registered.

- If no music has been registered or the device which has the registered music is removed, no sound will be produced.

[Auto]: Music data stored in the root folder of the current device will be played back randomly.

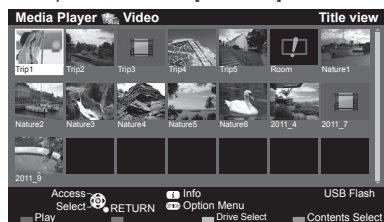
- If there is no available music data, no sound will be produced.

Note

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

Video mode

Example: Thumbnail - [Title view]



: Error display

: The file does not support thumbnail view.

The preview will start when the title / scene is highlighted if it supports a preview.

- To turn off the preview ➡ [Video Preview]

1 Select the title / scene

2 Start playback

R
 (red)

- If you stopped the last playback on the way, the confirmation screen is displayed to select whether to start from where you stopped last time or from the beginning.

- To display / hide the operation guide and information banner



- To change aspect



- To jump to the specified time point



While the time seek bar is displayed, use left and right cursor button.

Press: Search about 10 seconds

Press and hold: Search rapidly

Video Setup

OPTION



➡ [Video Setup]

■ Video Preview

Sets to start the preview of the title or scene in the thumbnail view.

- Image may not be displayed for an instant in the thumbnail view. Set the preview [Off] to resolve this.
- Only available in the thumbnail view

■ Audio Selection, Dual Mono Audio

Selects between selectable sound tracks (if available).

- It may take several seconds to change the sound.
- Only available during playback

■ Subtitle

Subtitles On / Off (if available).

- Only available during playback

■ Subtitle Text

Selects the font type to display subtitles correctly (if available).

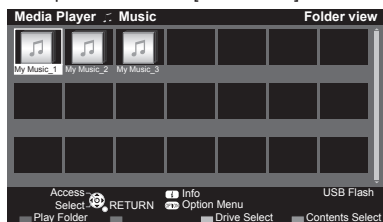
- Only available during playback

■ Repeat

Playback repeat within the selected file (depending on the content).

Music mode

Example: Thumbnail - [Folder view]



1 Select the folder / file

2 Start playback



- To display / hide the operation guide



Music Setup

OPTION



➡ [Music Setup]

■ Repeat

[Folder]: Playback repeat within the selected folder

[One]: Playback repeat of the selected one file

VIERA Link

VIERA Link “HDAVI Control”™

Enjoy additional HDMI Inter-Operability with Panasonic products which have “HDAVI Control”™ function.

VIERA Link (HDAVI Control) connects the TV and the equipment with VIERA Link function, and enables easy control, playback, energy saving, creating home theatre, etc., without complicated settings. Connections to the equipment (DIGA Recorder, HD Video Camera, Player theatre, Amplifier, etc.) with an HDMI cable allow you to interface them automatically (p. 27). These features are limited to models incorporating “HDAVI Control” and “VIERA Link”.

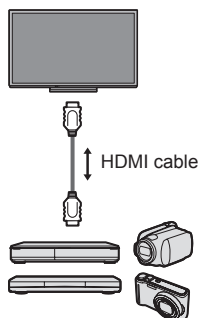
- This TV supports “HDAVI Control 5” function.
“HDAVI Control 5” is the newest standard for HDAVI Control compatible equipment. This standard is compatible with conventional HDAVI equipment.
- Some functions are not available depending on the equipment's version of HDAVI Control. Confirm the connected equipment's version of HDAVI Control.
- Some functions may not work properly depending on the connected equipment.
- VIERA Link features may be available even with other manufacturers' equipment supporting HDMI CEC.
- VIERA Link “HDAVI Control” is a unique function that we have developed and added based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control). As such, its operation with other manufacturers' equipment that supports HDMI CEC cannot be guaranteed.
- Please refer to individual manuals for other manufacturers' equipment supporting VIERA Link function.
- About applicable Panasonic equipment, consult your local Panasonic dealer.
- To confirm this TV's version of HDAVI Control
➡ **[System Information]** (p. 20)

Summary of VIERA Link features

■ VIERA Link (HDMI connection)

Connected equipment	DIGA Recorder	DVD Player / Blu-ray Disc Player	HD Video Camera / LUMIX Camera
Features			
Easy playback	○	○	○
Power on Link	○	○	○
Power off Link	○	○	○
Standby Power Save	○*2	○*2	—
Intelligent Auto Standby	○*2	○*2	—
VIERA Link Control	○*1	○*1	○*1
Speaker Selection	—	—	—

Connection

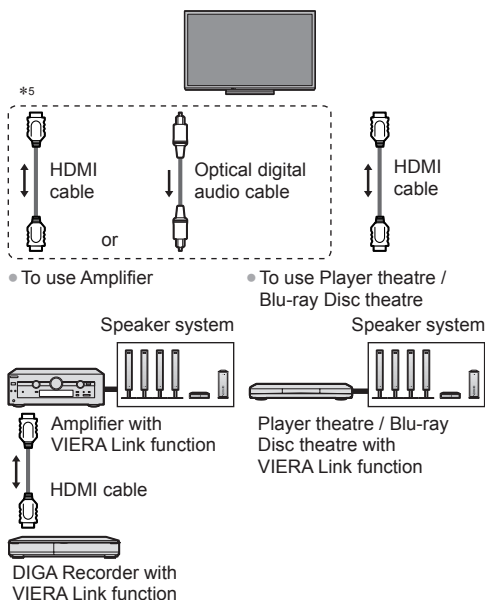


- Use a fully wired HDMI compliant cable.
- Connect the equipment supporting VIERA Link to the TV's HDMI terminal via an HDMI cable.
- About HDMI cable for connecting Panasonic HD Video Camera or LUMIX Camera, read the manual of the equipment.

■ VIERA Link (HDMI and Audio out connections)

Connected equipment	Player theatre	Blu-ray Disc theatre	Amplifier
Features			
Easy playback	○*3	○*3	—
Power on Link	○	○	—
Power off Link	○	○	○
Standby Power Save	—	○*2	—
Intelligent Auto Standby	○*2 *4	○*2 *4	○*2
VIERA Link Control	○*1	○*1	—
Speaker Selection	○	○	○

Connection



- Use a fully wired HDMI compliant cable.
- Connect the equipment supporting VIERA Link to the TV's HDMI terminal via an HDMI cable.
- Use the optical digital audio cable for audio output from the TV.

*1: Available with the equipment which has "HDAVI Control 2 or later" function.

*2: Available with the equipment which has "HDAVI Control 4 or later" function.

*3: While playing a disc.

*4: Except for watching a disc.

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

■ VIERA Link Control of compatible equipment

- Table below displays maximum number of compatible equipment that can be controlled by [VIERA Link Control]. This includes connections to equipment already connected to the TV.
For example, DIGA Recorder connected to Amplifier which is connected to the TV via an HDMI cable.

Type of the equipment	Maximum number
Recorder (DIGA Recorder, etc.)	3
Player (DVD Player, Blu-ray Disc Player, HD Video Camera, LUMIX Camera, Digital Camera, Player theatre, Blu-ray Disc theatre, etc.)	3
Audio system (Player theatre, Blu-ray Disc theatre, Amplifier, etc.)	1
Tuner (Set top box, etc.)	4

Operations

Preparations

- VIERA Link connection ➡ (p. 27)
- Set up the connected equipment. Read the manual of the equipment.
- Set [VIERA Link] to [On] in the Setup Menu. ➡ (p. 20)
- Set up the TV.

After connection, turn the equipment on and then switch the TV on.

Select the input mode from HDMI1 or HDMI2 (p. 12), 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

Easy playback

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

- Image or sound may not be available for the first few seconds when input mode is switched.

Power on Link

Set [Power on Link] to [On] in the Setup Menu to use this function ➡ (p. 20)

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] to [On] in the Setup Menu to use this function ➡ (p. 20)

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 auto power standby function.

Standby Power Save

Set [Standby Power Save] to [On] in the Setup Menu to use this function ➡ (p. 20)

The power consumption of the connected equipment in Standby mode is controlled higher or lower in synchronisation 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 of the connected equipment is automatically minimised.

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

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

Intelligent Auto Standby

Set [Intelligent Auto Standby] to [On] in the Setup Menu to use this function ➡ (p. 20)

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 or when [Speaker Selection] is changed to [TV] (except for watching a disc).

- This function may not work properly depending on the connected equipment. If required, set to [Off].

VIERA Link Control

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

- If you cannot operate, check the settings and the equipment.

1 Display [VIERA TOOLS] and select [VIERA Link]



2 Select [VIERA Link Control]

3 Select the type of the connected equipment to access



[Recorder] / [Player] / [Home Cinema] / [Video Camera] / [LUMiX] / [Digital Camera] / [Other]

- 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 will be displayed.

(Input mode will be changed automatically.)

4 Follow the operation guide to operate the menu of the equipment

- To display the operation guide

OPTION



- For details of the operations for the connected equipment, read the manual of the equipment.
- If other manufacturers' equipment is accessed, Setup / Contents Selection menu may be displayed.
- Available VIERA remote control buttons depend on the connected equipment.

Note

- Some operations may not be available depending on the equipment. In this case use its own remote control to operate the equipment.

■ If multiple recorders or players are connected

The number is given from the TV's lower number of HDMI terminal connected to the same type equipment. For example, two recorders to HDMI1 and HDMI2, the recorder connected to HDMI1 is displayed as [Recorder1], and the recorder connected to HDMI2 is displayed as [Recorder2].



[Recorder1-3 / Player1-3]

■ If you access non-VIERA Link equipment

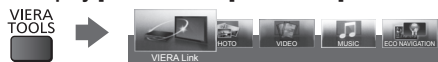
The type of the connected equipment is displayed. Although you can access the connected equipment, you cannot operate it. Use its own remote control to operate the equipment.

Speaker Selection

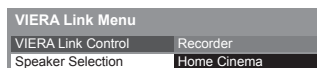
You can control the theatre speaker with this TV remote control pointing at the TV's signal receiver.

- If you cannot operate, check the settings and the equipment.

1 Display [VIERA TOOLS] and select [VIERA Link]



2 Select [Speaker Selection]



3 Set to [Home Cinema] or [TV]

[Home Cinema]: The sound is from theatre speakers. Player theatre, Blu-ray Disc theatre or Amplifier will be automatically turned on if it is in Standby mode.

- Volume up / down



- Mute



- The sound of TV speakers is mute. When the equipment is turned off, TV speakers will be active.

[TV]: TV speakers are active.

■ Multi-channel sound

If you want to enjoy the multi-channel sound (e.g. Dolby Digital 5.1ch) via an Amplifier, connect it with an HDMI cable and Optical digital audio cable (p. 27), and then select [Home Cinema]. If your Amplifier has "HDAVI Control 5" function, you only need to connect it with an HDMI cable 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. 27).

Technical Information

Rating (Digital TV)

Rating	Meaning
- (No Block)	Not classified
G	General
PGR	Parental Guidance Recommended
AO	Adults Only

Stereo / Bilingual Sound Selection (Analogue TV)

When you receive the stereo / bilingual sound system, sound output modes can be selected by using the [MPX] in the Sound Menu.

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

NICAMUsed in New Zealand, Singapore, Hong Kong etc.

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

A2 (German)Used in Australia, Malaysia etc.

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

- 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 Sound Selection button.
- DUAL, also known as DUAL MONO or as BILINGUAL is not currently transmitted in some countries.

HDMI connection

This TV incorporates HDMI™ technology. HDMI (high-definition multimedia interface) 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 game equipment, can be connected to the HDMI terminal using an HDMI compliant (fully wired) cable.

■ Applicable HDMI features

- Input audio signal: 2ch Linear PCM (sampling frequencies - 48 kHz, 44.1 kHz, 32 kHz)
- Input video signal ➡ **“Input signal that can be displayed” (p. 31)**
Match the output setting of the digital equipment.
- VIERA Link (HDAVI Control 5) ➡ **“VIERA Link” (p. 26)**
- Content Type
- x.v.Colour™
- 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 adaptor cable. When the DVI to HDMI adaptor cable is used, connect the audio cable to AV audio terminals.

Note

- Audio settings can be made on [HDMI Input] in the Sound Menu. (p. 18)
- If the connected equipment has an aspect adjustment function, set the aspect ratio to “16:9”.
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- Equipment having no digital output terminal may be connected to the input terminal of component or video to receive analogue signals.

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

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

Input signal that can be displayed

■ COMPONENT (AV) / HDMI terminal

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

○ : Applicable input signal

- Signals other than above may not be displayed properly.
- The above signals are reformatted for optimal viewing on your display.

Supported file format in Media Player

- Some files may not be played back even if they fulfill these conditions.
- Do not use two-byte characters or other special codes for file names.
- Connected devices may become unusable with this TV if the file or folder names are changed.

Photo

■ JPEG (.jpg / .jpeg)

Image resolution (pixel): 8 × 8 to 30,719 × 17,279
Sub-sampling: 4:4:4, 4:2:2, 4:2:0

- DCF and EXIF standards
- Progressive JPEG is not supported.

Video

■ AVI (.avi)

Video codec: H.264 BP/MP/HP, MPEG1, MPEG2, MPEG4 SP/ASP, VC-1, Windows Media Video Ver. 9
Audio codec: AAC, ADPCM, Dolby Digital, DTS core, HE-AAC, LPCM, MPEG Audio, MP3, WMA

- Some subtitles or chapter functions may not be available.
- WMA Pro and WMA Lossless are not supported.

■ MKV (.mkv)

Video codec: H.264 BP/MP/HP, MPEG1, MPEG2, MPEG4 SP/ASP
Audio codec: AAC, Dolby Digital, DTS core, HE-AAC, MPEG Audio, MP3

- Some subtitles or chapter functions may not be available.
- WMA Pro and WMA Lossless are not supported.

■ ASF (.asf / .wmv)

Video codec: MPEG4 SP/ASP, VC-1, Windows Media Video Ver. 9
Audio codec: AAC, Dolby Digital, HE-AAC, LPCM, MP3, WMA

- Copy-protected files cannot be played back.
- WMA Pro and WMA Lossless are not supported.

■ MP4 (.f4v / .m4v / .mp4)

Video codec: H.264 BP/MP/HP, MPEG1, MPEG2, MPEG4 SP/ASP
Audio codec: AAC, Dolby Digital, HE-AAC, MPEG Audio, MP3

- This TV supports this container recorded with Panasonic products. For details, read the manual of the products.

■ FLV (.flv)

Video codec: H.264 BP/MP/HP
Audio codec: AAC, MP3

■ 3GPP (.3gp / .3g2)

Video codec: H.264 BP/MP/HP, MPEG4 SP/ASP
Audio codec: AAC, HE-AAC

■ PS (.mod / .mpg / .mpeg / .vob / .vro)

Video codec: H.264 BP/MP/HP, MPEG1, MPEG2, VC-1
Audio codec: AAC, Dolby Digital, HE-AAC, LPCM, MPEG Audio, MP3

■ TS (.mts / .m2ts / .tp / .trp / .ts / .tts)

Video codec: H.264 BP/MP/HP, MPEG1, MPEG2, VC-1
Audio codec: AAC, Dolby Digital, DTS core, HE-AAC, MPEG Audio, MP3

Subtitles

■ MicroDVD, SubRip, TMLPlayer (.srt / .sub / .txt)

- The video file and subtitles text file are inside the same folder, and the file names are the same except for the file extensions.
- If there are more than one subtitles text files inside the same folder, they are displayed in the following order of priority: ".srt", ".sub", ".txt".

Music

■ MP3 (.mp3)

■ AAC (.m4a)

- Copy-protected files cannot be played back.

■ WMA (.wma)

- Copy-protected files cannot be played back.
- WMA Pro and WMA Lossless are not supported.

■ LPCM (.wav)

■ FLAC (.flac)

USB devices

- It is recommended to connect the USB device to the TV's USB port directly.
- Some USB devices or USB HUB may not be used with this TV.
- You cannot connect any devices by using USB card reader.
- You cannot use two or more same kind of USB devices simultaneously except USB Flash Memory.
- Additional information for the devices may be on the following website.
<http://panasonic.net/viera/support>

■ USB Flash Memory (for playing back in Media Player)

- USB Flash Memory format: FAT16, FAT32 or exFAT
- A USB HDD formatted on a PC is not guaranteed to work in Media Player.
- Data modified with a PC may not be displayed.
- Do not remove the device while the TV is accessing data. Otherwise this can damage device or TV.
- Do not touch the pins on the device.
- Do not subject the device to a high pressure or impact.
- Insert the device in the correct direction. Otherwise this can damage device or TV.
- Electrical interference, static electricity, or erroneous operation may damage the data or device.
- Back up the recorded data at regular intervals to prevent data deterioration, data damage or erratic operation of the TV. Panasonic is not liable for any deterioration or damage of recorded data.

Maintenance

First, remove the mains plug from the socket outlet.

Display panel, Cabinet, Pedestal

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:

First clean the dust on the surface. Dampen a soft cloth with clean water or diluted neutral detergent (1 part detergent to 100 parts water). 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, otherwise this may cause scratches on the surface.
- Take care not to subject the TV's surfaces to water or detergent. 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 cause fire or electrical shock.

FAQs

Before requesting service or assistance, please follow these simple guides to solve the problem.

When an error message appears, follow the message's instructions. If the problem still persists, contact your local Panasonic dealer or the authorised service centre.

White spots or shadow images (noise)

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

Picture quality problem

- Check the settings of the Picture Menu.
- Set [Noise Reduction] and [MPEG Noise Reduction] to remove noise (p. 16).
- Check nearby electrical products (car, motorcycle, fluorescent lamp).
- Reset channels.
- Check that the output of the external equipment matches the input of the TV.

Unable to receive signals with a high-performance aerial

- Install an aerial individually for the TV and VCR (or use a splitter).

Interference or frozen / disappearing image in Digital TV

- Check [Signal Condition] (p. 19). If [Signal Quality] is displayed in red, check aerial.
- Turn the TV off with Mains power On / Off switch, then turn it on again.
- Due to the digital reception technologies involved, quality of the Digital TV signals may be relatively low in some cases, despite good reception of Analogue TV channels.

Sound quality problem

- Check the volume level or sound mute.
- Check connections and setting of external equipment.
- Ensure that [Speaker Selection] is set to [TV] (p. 29).
- Sound signal reception may be deteriorated.
- Set [MPX] to [Mono] (p. 18).

Picture or sound problems with HDMI connection

- Check the HDMI cable is connected properly.
- Turn the TV and equipment off, then turn them on again.
- Check an input signal from the equipment.
- Use equipment compliant with EIA/CEA-861/861D.
- Set the sound setting of the connected equipment to "2ch L.PCM".
- Check the [HDMI Input] setting (p. 18).
- If digital sound connection has a problem, select analogue sound connection.

The TV does not switch on

- Check the mains lead is plugged into the TV and the socket outlet.

The TV goes into Standby mode

- Auto power standby function is activated.

The remote control does not work or is intermittent

- Are the batteries installed correctly? ➔ (p. 9)
- Has the TV been switched on?
- The batteries may be running low. Replace them with new ones.
- Point the remote control directly at the TV's remote control signal receiver (within about 7 m and a 30 degree angle of the signal receiver).
- Situate the TV away from sunshine or other sources of bright light not to shine on the TV's remote control signal receiver.

No image can be displayed

- Check the TV is turned on.
- Check the mains lead is plugged into the TV and the socket outlet.
- Check the correct input mode is selected.
- Check the setting of [AV] ([COMPONENT] / [VIDEO]) in [Input Selection] to match the output of the external equipment (p. 12).
- Check the settings of the Picture Menu.
- Check all required cables and connections are firmly in place.

Unusual image is displayed

- Turn the TV off with Mains power On / Off switch, then turn it on again.
- If the problem persists, initialise all settings.
➔ [Shipping Condition] (p. 20)

[Shop] appears on screen at switch on

- [Shop] was selected in [Auto Tuning] when the TV is turned on for the first time. Reset settings in [Shipping Condition], then select [Home] in [Auto Tuning].

Unusual sound from the TV

- When the power is on, drive noise may be heard from inside the TV (not a sign of faulty operation).

Parts of the TV become hot

- Even if the temperature of parts of the front, top and rear panels has risen, these temperature rises do not cause any problems in terms of performance or quality.

Permanently lit spots on screen

- Due to production process involved in this technology this may result in some pixels which are permanently lit or unlit. This is not a malfunction.

Overcurrent error message appears

- The connected USB device might cause this error. Remove the device and turn the TV to standby mode with Standby On / Off switch, then turn it on again.
- Check foreign objects are not inside the USB port.

Pixel Statement

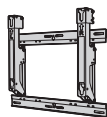
- An image on a LCD or Plasma TV screen is created by many small groups of dots known as pixels (which is similar to the image in a newspaper). It also naturally follows that higher panel resolutions contain more pixels. To create a colour image, each pixel consists of three tiny coloured dots (known 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/subpixel failures that still allow the panel to be defined as a good panel. It is not possible to guarantee absolutely no pixel loss.

Optional Accessories

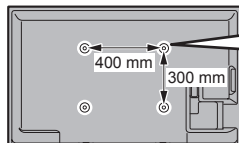
Please contact your local Panasonic dealer to purchase the recommended optional accessories. For additional details, please read the manual of the optional accessories.

■ Wall-hanging bracket

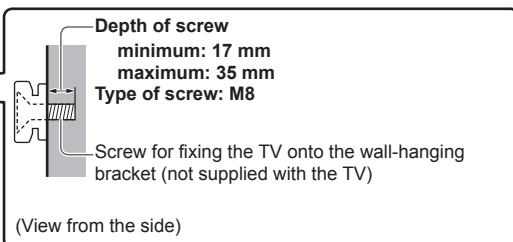
TY-WK4P1RW • Tilting angle for this TV: 0 (vertical) to 15 degrees



- Holes for wall-hanging bracket installation



Rear of the TV



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 licensed contractor to secure the wall-hanging brackets. Any damage caused by installing without a qualified installer will void your warranty.
- Carefully read the instructions accompanying optional accessories, and be absolutely sure to take steps to prevent the TV from falling off.
- Handle the TV carefully during installation since subjecting it to impact or other forces may cause product damage.
- 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.

Specifications

Model No.		TH-P50X60Z
Power	Rating	AC 220-240 V, 50 / 60 Hz 1.3 A
	Normal (Home) mode	122 W
	Standby power consumption	0.4 W
Visible screen size (diagonal)		127 cm
Display Resolution		1,024 (W) × 768 (H)
Panel		Plasma Display
Dimensions (W × H × D)		1,184 mm × 757 mm × 266 mm (With Pedestal) 1,184 mm × 716 mm × 81 mm (TV only)
Mass		21.5 kg Net (With Pedestal) 20.5 kg Net (TV only)
Sound	Speaker	(160 mm × 40 mm) × 2, 8 Ω
	Audio output	20 W (10 W + 10 W)
Operating conditions		Temperature: 0 °C - 35 °C Humidity: 20 % - 80 % RH (non-condensing)

Connection terminals	AV input (COMPONENT / VIDEO)	VIDEO	RCA PIN Type × 1	1.0 V[p-p] (75 Ω)	
		AUDIO L - R	RCA PIN Type × 2	0.5 V[rms]	
		Y	1.0 V[p-p] (including synchronisation)		
		Pb/Cb, Pr/Cr	±0.35 V[p-p]		
	HDMI 1 / 2 input	TYPE A Connectors HDMI1: Content Type, x.v.Colour™ HDMI2: Content Type, Audio Return Channel, x.v.Colour™ ● This TV supports “HDAVI Control 5” function.			
	USB	USB2.0 DC 5 V, Max. 500 mA			
Receiving systems / Band name	DIGITAL AUDIO OUT	PCM / Dolby Digital / DTS, Fibre optic			
	Digital TV	8 MHz UHF (New Zealand) free-to-air TV broadcast reception			
	PAL B / G	Reception of Off air broadcasts			
	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 input		Standard Belling & Lee connector VHF / UHF			

Note

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

This product incorporates the following software:

- (1) the software developed independently by or for Panasonic Corporation,
- (2) the software owned by third party and licensed to Panasonic Corporation,
- (3) open sourced software.

The software categorized as (3) is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY, without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. Please refer to the detailed terms and conditions thereof shown in the "Software Licence" menu on this product.

WARRANTY - New Zealand only

WE WARRANT that the Panasonic Television that you have purchased is free from defects in material and workmanship under normal home use and service.

Accordingly, we undertake to repair, or at our option, replace without cost to the owner, either for material or labour, any part which within 12 months from the date of delivery is found to be defective, provided that the appliance has been used for domestic purposes only and in accordance with the instructions given in the Instruction Book and not been subjected to misuse, neglect or installed, dismantled, repaired or serviced by any other than an authorised Panasonic New Zealand Dealer or Panasonic New Zealand Authorised Service Centre.

NOTE

- Before reporting a fault, please ensure that you read the item "Troubleshooting" in the information section of your Panasonic Instruction Book.
- It is important to retain your proof of purchase as this will be required by the serviceman or retailer as proof of purchase date, should service be required.
- In the event of service being required, contact your Panasonic New Zealand retailer or Panasonic New Zealand Authorised Service Centre.

IMPORTANT

Any request for warranty service must be through an Authorised Panasonic New Zealand Service Centre who during the period of the warranty, undertakes to make any necessary adjustment and fit any replacement part supplied by the manufacturer, during normal working hours, or alternatively will arrange for such service to be provided by some other Panasonic New Zealand Authorised Service Centre.

NEW ZEALAND

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Customer Care Center

Email: Customerservice@nz.panasonic.com

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Information on Disposal in other Countries outside the European Union



This symbol is only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

Customer's Record

The model number and serial number of this product may be found on its rear panel. You should note this 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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