

Panasonic®

TH-L39EV6A

***e*HELP**

Watching

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Letters enclosed in a box indicate remote control buttons.



Letters in cyan indicate on-screen display items.



References in this eHELP

- The images shown in this eHELP are for illustrative purposes only.

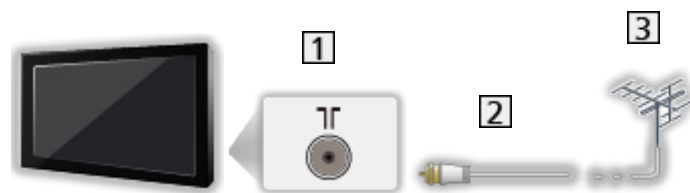
Watching

Basic

Basic connection

Please ensure that the unit is disconnected from the mains socket before attaching or disconnecting any cables.

■ Aerial



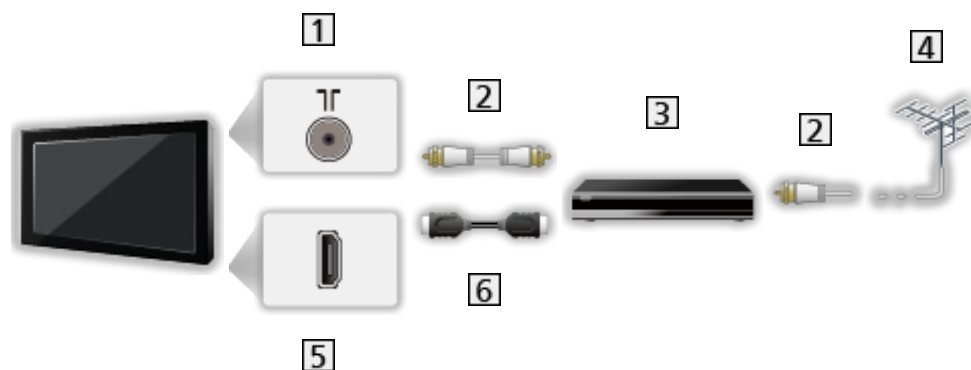
1 Aerial terminal

2 RF cable

3 Aerial

- Keep RF (antenna) 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.

■ DVD Recorder / VCR

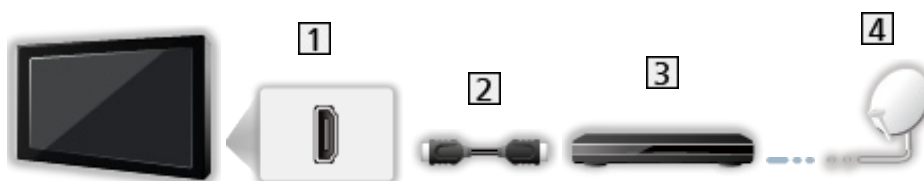


- 1** Aerial terminal
- 2** RF cable
- 3** DVD Recorder / VCR
- 4** Aerial
- 5** HDMI terminal
- 6** HDMI cable

- For VIERA Link connections

 → [Functions > VIERA Link "HDAVI Control™" > Summary of VIERA Link](#)

■ Set top box



- 1** HDMI terminal
- 2** HDMI cable
- 3** Set top box
- 4** Satellite dish

- For VIERA Link connections

 → [Functions > VIERA Link "HDAVI Control™" > Summary of VIERA Link](#)

= Note =

- External equipment and cables shown are not supplied with this TV.
- Please also read the manual of the equipment being connected.
- 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 affected.
- When using an HDMI cable, it is recommended to use fully wired one.

- Check the terminal type and cable plugs are correct when connecting.

Selecting channel

1. Select Digital TV or Analogue TV with **TV**

- You can also select the mode pressing INPUT/OK/HOLD for MENU button repeatedly on the control panel of the TV.
- The selected mode is displayed on the top left of the screen.

2. Select a channel with Channel Up / Down or numeric buttons



- Press the numeric buttons to select a channel position with 2 or more-digit (e.g. 399, press **3** **9** **9**).

■ To select a channel from the channel list

1. Display the channel list with **OK**
2. Select a channel from the list with **△ / ▽** and press **OK** to watch

■ To select a channel using information banner

1. Display information banner with **INFO** if it is not displayed
2. Select a channel with **△ / ▽** and press **OK** to watch while the banner is displayed

→ Watching > Basic > Information banner

■ To select a channel using TV Guide

1. Display TV Guide with **GUIDE**
2. Select the current programme or channel with **△ / ▽ / ◀ / ▶** and press **OK** to watch

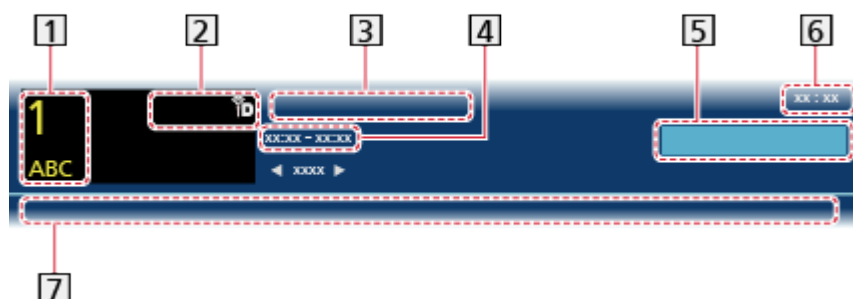
→ Watching > TV Guide > Using TV Guide

Information banner

Display information banner with **INFO**.

- Also appears when changing a channel.

(Example)



- 1 Channel position and name
- 2 Channel type (Radio, etc.) / encrypted channel (🔒) / TV mode (📺, 📻)
- 3 Programme
- 4 Programme start / finish time (Digital TV)
Channel position, etc. (Analogue TV)
- 5 Category
- 6 Current time
- 7 Features available / message meanings



Sound mute is on

Rating:

Rating information

→ [Functions > Child Lock > Parental Rating](#)

Bad signal:

Poor quality TV signal



Subtitle service available



Multiple image or audio available

∞, I, II, ▽ :

Audio mode

→ [Settings > Sound > Advanced settings](#)

AD:

Audio Description service available

- This function can aid visually-impaired viewers by adding an additional audio track to describe events on screen.

→ [Settings > Sound > Audio Description](#)

1 – 90:

Off Timer remaining time

 → [Watching](#) > [Basic](#) > [Off Timer](#)

- To confirm another tuned channel

△ / ▽

- To watch the channel listed in the banner

OK

- Information on the next programme (Digital TV)

▷

- Extra information (Digital TV)

INFO

– Press again to hide the banner.

- To hide the banner

EXIT

- To update the TV software (if available)

 (red)

- To select a favourite list (Digital TV)

 (blue)

– If the favourite list is created in [Favourites Edit](#).

 → [Watching](#) > [Tuning and editing channels](#) > [Favourites Edit](#)

- To adjust banner timeout, set [Banner Display Timeout](#).

 → [Settings](#) > [Setup](#) > [Display Settings](#)

Option Menu

Confirm or change the current status.

1. Display [Option Menu](#) with **OPTION**
 2. Select one of the following items with △ / ▽ and press **OK** to access
[Audio Description](#) / [Audio Selection](#) / [Dual Audio](#) / [MPX](#) / [Volume Correction](#)
 3. Set with △ / ▽ / ◀ / ▶ and press **OK** to store
-

Audio Description

Set to [Auto](#) if the programme has Audio Description service, then you will hear an additional audio track to describe events on screen.

- To adjust the volume for Audio Description

 → Settings > Sound > Audio Description

- For Digital TV
-

Audio Selection

Selects between alternative languages for sound tracks (if available).

- For Digital TV
-

Dual Audio

Selects stereo / monaural (if available).

- For Digital TV
-

MPX

Selects multiplex sound mode (if available).

 → Settings > Sound > Advanced settings

- For Analogue TV
-

Volume Correction

Adjusts the volume of each individual channel or input mode.

Subtitle

Display / hide subtitles (if available) with **STTL**.

- For Digital TV

Off Timer

Turn the TV Standby mode automatically after a fixed period.

1. Display the menu with **MENU**
2. Select **Timer** > **Off Timer** with Δ / ∇ and press **OK** to access
3. Select the time in 15-minute increments with Δ / ∇ and press **OK** to set
90 / 75 / 60 / 45 / 30 / 15 / Off (minutes)
 - To cancel, set to **Off** or turn the TV off.
 - The remaining time displays on the information banner.

 → Watching > Basic > Information banner

- When the remaining time is less than 3 minutes, the remaining time will flash on the screen.

Still

Freeze / unfreeze picture with **STILL**.

Last view

Switch to a previously viewed channel or input mode easily with **LAST VIEW**.

- Press again to return to the current view.

= Note =

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

Adjusting time

■ Adjust the standard time

Select the region where you live to adjust the standard time. (Base on GMT)

1. Display the menu with **MENU**
2. Select **Timer** > **Clock Settings** > **Region Select** with Δ / ∇ and press **OK** to access
3. Select the region with Δ / ∇ and press **OK** to set

NSW / ACT / Victoria / Queensland / South Australia / Western Australia / Northern Territory / Tasmania

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

NSW / ACT / Victoria / Queensland / Tasmania: +10:00

South Australia / Northern Territory: +9:30

Western Australia: +8:00

■ Adjust for Summer Time

Select time offset from the standard time for Summer Time. (Base on GMT)

1. Display the menu with **MENU**
2. Select **Timer** > **Clock Settings** > **Daylight Saving Time** with Δ / ∇ and press **OK** to access
3. Select **Auto / Off / + 1/2 hour / + 1 hour** with Δ / ∇ and press **OK** to set
 - If there is a gap between displayed time and actual time, set this function.
 - Normally select **Auto** to adjust as following for the region has been set in **Region Select**.

NSW / ACT / Victoria / Tasmania: +11:00

South Australia: +10:30

Queensland: +10:00

Northern Territory: +9:30

External equipment

External connection

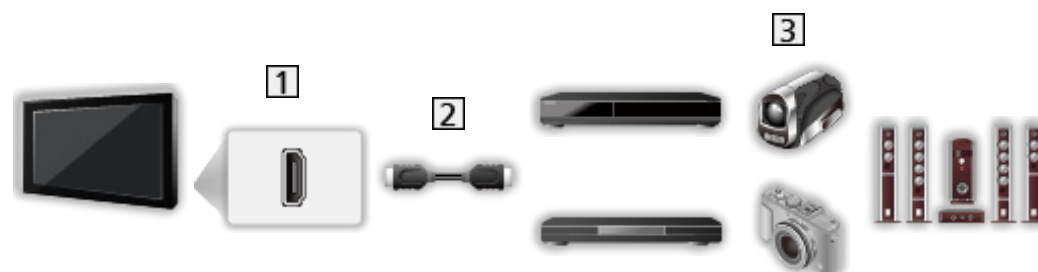
These diagrams show our recommendations for connection of your TV to various pieces of equipment. For other connections, consult the instructions for each piece of equipment.

- For basic connection

 → [Watching](#) > [Basic](#) > [Basic connection](#)

- Check the terminal type and cable plugs are correct when connecting.

■ HDMI equipment



1 HDMI terminal

2 Fully wired HDMI compliant cable

3 Recorder / Player / Set top box / Camcorder / Amplifier with speaker system

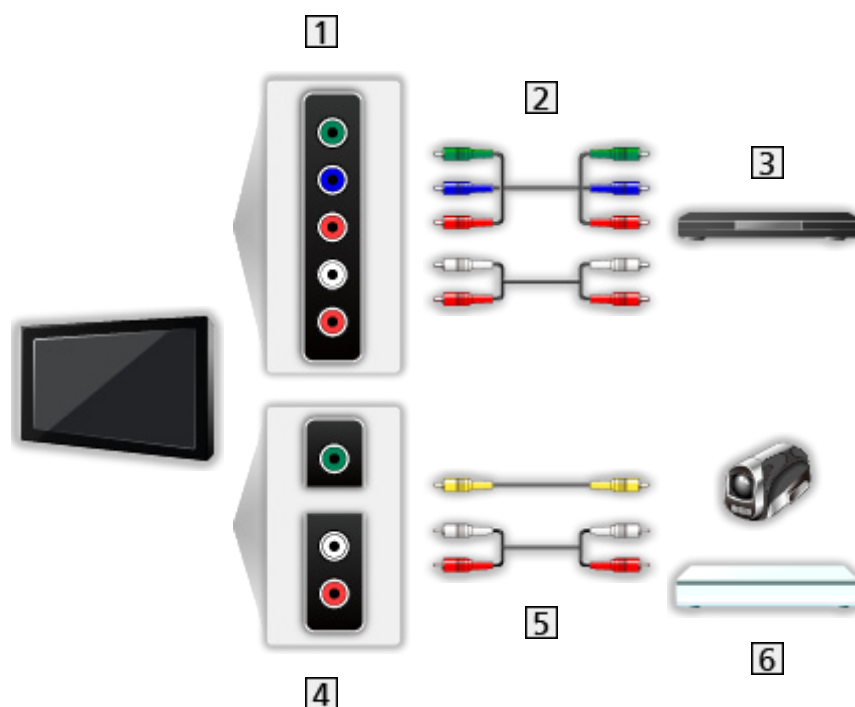
= Note =

- For VIERA Link connections

 → [Functions](#) > [VIERA Link "HDAVI Control™"](#) > [Summary of VIERA Link](#)

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

■ AV devices



1 AV1 IN (COMPONENT) terminal

2 Component cables

3 DVD player

4 AV1 IN (VIDEO) terminal

5 Composite cables

6 Camcorder / Game equipment

■ USB devices



1 USB port

2 USB devices

= Note =

- It is recommended to connect the devices to the TV's USB ports directly.
- You cannot use two or more of the same kind of USB devices simultaneously except USB Flash Memory.
- Some USB devices or USB HUB may not be used with this TV.
- You cannot connect any devices by using USB card reader.
- Additional information for the devices may be on the following website.

(English only)

<http://panasonic.net/viera/support>

■ To listen with speakers



1 DIGITAL AUDIO OUT

2 Optical digital audio cable

3 Amplifier with speaker system

- 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.

Watching external input

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

1. Display the input selection menu with **AV**
2. Select the input mode connected to the equipment with \triangle / ∇ and press **OK** to watch (The selected mode is displayed on the top left of the screen)
 - You can also select the input pressing **AV** on the remote control or INPUT/OK/HOLD for MENU button on the control panel of the TV. Press repeatedly until the desired input is selected.
 - To switch between **COMPONENT** and **VIDEO** in **AV1**, select with $\triangleleft / \triangleright$.
 - You can label or skip each input mode. Skipped inputs will not be displayed when **AV** is pressed. ([Input Labels](#))

 → [Settings](#) > [Setup](#) > [Display Settings](#)

- To return to TV mode

TV

= Note =

- If the external equipment has an aspect adjustment function, set it to **16:9**.
- For details, read the manual of the equipment or ask your local dealer.

HDMI features

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* 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.

 → [Watching](#) > [External equipment](#) > [External connection](#)

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

■ Applicable HDMI features

- Input audio signal:

2ch Linear PCM (sampling frequencies - 48 kHz, 44.1 kHz, 32 kHz)

- Input video signal:

Matches the output setting of the digital equipment.

 → [Watching](#) > [External equipment](#) > [Valid input signals](#)

- VIERA Link (HDAVI Control 5)

 → [Functions](#) > [VIERA Link “HDAVI Control™”](#) > [Summary of VIERA Link](#)

- Content Type

- Audio Return Channel

- Audio Return Channel (ARC) is a function to send digital sound signals via an HDMI cable.
- For HDMI2 terminal

■ DVI connection

If the external equipment has only a DVI output, connect to the HDMI terminal via a DVI to HDMI adaptor cable. When using the DVI to HDMI adaptor cable, connect the audio cable to the audio input terminal (use AV1 IN audio terminals).

- Enquire HDMI adaptor cable at your local digital equipment retailer shop.

= Note =

- Audio settings can be made on [HDMI1 / 2 Input](#) in the Sound Menu.

 → [Settings](#) > [Sound](#) > [Advanced settings](#)

- 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.
- Equipment having no digital output terminal may be connected to the input

terminal of component or video to receive analogue signals.

- This TV incorporates HDMI™ technology.

Valid input signals

■ COMPONENT (Y, Pb/Cb, Pr/Cr), HDMI

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

= Note =

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

For best picture

Viewing Mode

1. Display the menu with **MENU**
2. Select **Picture** > **Viewing Mode** with **△** / **▽** and press **OK** to access
3. Select the mode with **△** / **▽** and press **OK** to set

Viewing Mode

(**Dynamic** / **Normal** / **Cinema** / **True Cinema** / **Custom**)

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, [Backlight](#), [Contrast](#), [Brightness](#), [Colour](#), [Tint](#), [Sharpness](#), [Colour Temperature](#), [Vivid Colour](#), [Adaptive Backlight Control](#), [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.

Ambient Sensor

1. Display the menu with **MENU**
 2. Select [Picture](#) > [Ambient Sensor](#) with Δ / ∇ and press **OK** to access
 3. Select [On](#) / [Off](#) with Δ / ∇ and press **OK** to set
-

Ambient Sensor




([On](#) / [Off](#))

- Automatic Brightness Control function

Adjusts picture settings automatically depending on ambient lighting conditions.

Auto power standby function

The TV will automatically go into Standby mode in the following conditions:

- [Off Timer](#) is active.
 → [Watching](#) > [Basic](#) > [Off Timer](#)
- No operation is performed for 4 hours while [Auto Standby](#) is set to [On](#).
 → [Settings](#) > [Timer](#) > [Auto Standby](#)
- No signal is received and no operation is performed for 10 minutes while [No signal Power off](#) is set to [On](#).
 → [Settings](#) > [Timer](#) > [No signal Power off](#)

Aspect

Change the aspect ratio (image size) with **ASPECT**.

- Enjoy viewing the image at its optimum size and aspect.

■ To change the aspect ratio manually

1. Display **Aspect Selection** list with **ASPECT**
2. Select the mode with \triangle / ∇ and press **OK** to set
 - You can also change the mode pressing **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.

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.

Advanced Settings

You can adjust and set up the detailed picture settings for each input when **Viewing Mode** is set to **True Cinema** or **Custom**.

 → **Watching** > **For best picture** > **Viewing Mode**

1. Select the input mode with **AV** or **TV**

2. Display the menu with **MENU**
3. Select **Picture** > **Viewing Mode** with Δ / ∇ and press **OK** to access
4. Select the mode with Δ / ∇ and press **OK** to set
True Cinema / **Custom**

■ Adjust the detailed picture settings

1. Display the menu with **MENU**
2. Select **Picture** > **Advanced Settings** > **Adaptive Gamma Control** / **Black Expander** / **White Balance** / **Colour Management** / **Gamma** with Δ / ∇ and press **OK** to access
3. Set with Δ / ∇ / \triangleleft / \triangleright and press **OK** to store

■ Adaptive Gamma Control

Adaptive Gamma Control

Adjusts the gamma curve to make the image brighter.

- Not valid when **Adaptive Backlight Control** is set to **Off**

■ Black Expander

Black Expander

Gradually adjusts the shades of black.

■ 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](#)

([2.6](#) / [2.4](#) / [2.2](#) / [2.0](#) / [1.8](#))

Switches the gamma curve.

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

[Reset Gamma](#)

Resets to the default Gamma.

■ Reset Picture Defaults

[Reset Picture Defaults](#)

Resets [Advanced Settings](#) to the default settings.

Copy Adjustment

Copies the picture settings of [True Cinema](#) or [Custom](#) to those of another input or another Viewing Mode.

1. Display the menu with **MENU**
2. Select [Picture](#) > [Copy Adjustment](#) > [Destination Viewing Mode](#) / [Destination Input](#) with \triangle / ∇ and press **OK** to access
3. Select the destination to copy to with \triangle / ∇ and press **OK** to set
4. Select [Copy Start](#) with \triangle / ∇ and press **OK** to copy
5. When the confirmation screen is displayed, select [Yes](#) with \triangleleft / \triangleright and press **OK** to set

= Note =

- [Option Settings](#) and [Screen Settings](#) will not be copied.

For best audio

Sound mode

1. Display the menu with **MENU**
 2. Select [Sound](#) > [Mode](#) with \triangle / ∇ and press **OK** to access
 3. Select the mode with \triangle / ∇ and press **OK** to set
-

Mode

([Standard](#) / [Music](#) / [Speech](#) / [User](#))

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 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.

 → [Settings](#) > [Sound](#) > [Basic settings](#)

TV Guide

Using TV Guide

TV Guide - Electronic Programme Guide (EPG) provides an on-screen listing of the programmes currently broadcast and the forthcoming broadcasts over the next seven days (depending on the broadcasters).

1. Select Digital TV or Analogue TV with **TV**
2. Press **GUIDE** to view TV Guide
 - Press again to change the layout ([Landscape](#) / [Portrait](#)).
 - View [Landscape](#) to see several channels.

- View **Portrait** to see one channel by time.

(Example)



1 TV Guide date

2 TV Guide time

3 Programme

4 Channel position and name

- To watch the programme

1) Select the current programme with $\triangle / \nabla / \triangleleft / \triangleright$

2) Press **OK** to exit TV Guide

- To the previous day (Digital TV)

 (red)

- To the next day (Digital TV)

 (green)

- To view a channel list of the selected type (Digital TV)

1) Display the type list with  (yellow)

2) Select the type with \triangle / ∇ and press **OK** to view

- To view a channel list of the selected favourite list

1) Display the favourite list with  (blue)

2) Select the favourite with \triangle / ∇ and press **OK** to view

- To list favourite channels, set **Favourites Edit**.

 \rightarrow **Watching > Tuning and editing channels > Favourites Edit**

- To view more details of the programme (Digital TV)

1) Select the programme with $\triangle / \nabla / \triangleleft / \triangleright$

2) Press **INFO** to view

- Press again to return to TV Guide.
- To exit TV Guide

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 TV Guide is completely shown.
- Digital TV and Analogue TV channels are displayed on the same TV Guide screen. **D** means Digital TV channel and **A** means Analogue TV channel. There will be no programme listings for Analogue channels.

Tuning and editing channels

Setting menu

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

1. Select Digital TV or Analogue TV with **TV**
2. Display the menu with **MENU**
3. Select **Setup > Tuning Menu** with **△ / ▽** and press **OK** to access
Digital TV Tuning Menu / Analogue TV Tuning Menu
 - The menu name varies depending on the TV mode.
4. Select one of the functions with **△ / ▽** and press **OK** to access
Favourites Edit / Channel List / Auto Tuning / Manual Tuning / Update Channel List / New Channel Message / Signal Condition

Favourites Edit

■ List favourite Digital TV channels




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 and the TV Guide screen.

 → **Watching > Basic > Information banner**


 → **Watching > TV Guide > Using TV Guide**




1. Select **Favourites Edit** with **△ / ▽** and press **OK** to access
2. Select a channel to list from all Digital TV channels with **△ / ▽**

-  appears when the channel is encrypted.
 - To display other Favourites
 (green)
3. Press **OK** to add it to **Favourite List**
- To add all channels to the list
 (yellow)
4. Press **RETURN** and **OK** to store

■ Edit Favourites list

You can edit the favourites list while the cursor is on the channel in the favourites list.

- To move the channel
 - 1) Select the channel with \triangle / ∇
 - 2) Press  (green)
 - 3) Select the new position with \triangle / ∇ or numeric buttons

1	2	3
4	5	6
7	8	9
0		
 - 4) Press  (green) to store
- To delete the channel
 - 1) Select the channel with \triangle / ∇
 - 2) Press **OK** to delete
 - Press  (yellow) to delete all channels
- To name the Favourites
 - 1) Press  (red)
 - 2) Enter characters (maximum 10 characters) with $\triangle / \nabla / \triangleleft / \triangleright$ or numeric buttons, and press **OK** to set

1	2	3
4	5	6
7	8	9
0		
 - 3) Press **RETURN** to store

= Note =

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

Channel List

■ Skip unwanted Digital TV / Analogue TV channels

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

1. Select **Channel List** with \triangle / ∇ and press **OK** to access
2. Select a channel with \triangle / ∇
3. Press **OK** to set **Reveal** / **Hide** (skip)

☒ : **Reveal**

☐ : **Hide** (skip)


- To reveal all channels

 (yellow)

■ Edit Digital TV / Analogue TV Channels

- To swap / move the channel position (if available)

1) Press  (green) to edit

2) Set the new position with \triangle / ∇ or numeric buttons, and press  (green) to store



- To retune each channel (**Manual Tuning**)

 (red)

 → **Watching > Tuning and editing channels > Manual Tuning**

- To rename the channel name (Analogue TV)

1) Press  (blue) to edit

2) Enter characters (maximum 5 characters) with \triangle / ∇ / \triangleleft / \triangleright or numeric buttons, and press **OK** to set



3) Press **RETURN** to store

= Note =

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

Auto Tuning

Automatically retunes the channels received in the area.

- All the previous tuning settings are erased.
- Search begins in the order from the lower channels to the higher channels.
- If tuning has not been done completely, set [Manual Tuning](#).

 → [Watching](#) > [Tuning and editing channels](#) > [Manual Tuning](#)

1. Select [Auto Tuning](#) with \triangle / ∇ and press **OK** to access
2. The confirmation screen is displayed and press **OK** to start [Auto Tuning](#) (Settings are made automatically)
 - When the operation is completed, the channel at the lowest position will be displayed.
 - This setting is applicable only for the selected TV mode.

■ Auto Tuning using the buttons on the TV

1. Press and hold INPUT/OK/HOLD for MENU button for 3 seconds to display the menu
2. Set [Auto Tuning](#) with following control panel buttons
 - Move the cursor / select from a range of options / select the menu item (up and down only)



- Access the menu / store settings after adjustments have been made or options have been set with INPUT/OK/HOLD for MENU button.

Manual Tuning

■ Digital TV

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, use this function.

- All Digital channels found will be added to [Channel List](#).

1. Select physical channel with \triangle / ∇ and select offset with \triangleleft / \triangleright
2. Press **OK** to search

■ Analogue TV

Set Analogue TV channel manually after [Auto Tuning](#).

1. Select the channel position with numeric buttons



2. Select the channel with Channel Up / Down button



3. Search with ◀ / ▶

4. Select **Store** with ▲ / ▼ and press **OK** to set

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

Update Channel List

By updating the Digital TV channel list, you can add new channels, delete removed channels or change channel names and positions automatically.

- 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.

New Channel Message

Selects whether to give a notification message when a new Digital TV channel is found.

- When a notification message appears, you can perform [Update Channel List](#) pressing **OK**.
- Sometimes, mainly during summer months at night, the TV may pick up distant TV stations outside your broadcast due to favourable short term ionosphere conditions. In such circumstances when you press **OK**, the TV does not add any new channels. This is normal.

Signal Condition

Selects a channel and checks the signal condition.

A good Signal Strength is not an indication of suitable signal for Digital TV reception.

- Use the Signal Quality indicator as follows.
 - Green bar: Good
 - Yellow bar: Poor
 - Red bar: Bad (Check the aerial)
- Vertical lines show the maximum signal value of the selected channel.
- To change the channel



- For Digital TV

Home network

DLNA / Web Browser

Information for DLNA

This TV is a DLNA Certified™ product.

DLNA® (Digital Living Network Alliance) is a standard that makes DLNA Certified digital electronics easier and more convenient to use on a home network. To learn more, visit www.dlna.org.

- To enable this function, connect this TV to your home network.

 → [Home network > Network connections](#)

 → [Home network > Network settings](#)

■ Playback of sharing contents stored in the media server

Store photos, videos or music contents into the DLNA Certified media server (for example, PC with Windows 7 / Windows 8 installed, DIGA Recorder, etc.) connected to your home network. And then you can enjoy these contents on this TV.

(Example)



- For watching and operating contents on this TV

 → [Home network > DLNA / Web Browser > Using DLNA](#)

- For supported file formats

 → [Home network > Technical information](#)

- To use a PC as a media server

Prepare the PC with Windows 7 / Windows 8 or ensure the server software is installed on the PC. “Windows 7 / Windows 8” and “Twonky 7 (installed on the PC with Windows XP or Mac)” are the server software that has been tested for compatibility with this TV (as of November, 2012). Any other server software has not been tested with this TV, therefore compatibility and performance cannot be assured.

- Windows 7 / Windows 8

The setup for homegroup settings of Windows 7 / Windows 8 is required.

For details, refer to the help functions of Windows 7 / Windows 8.

- Twonky

“Twonky” is the product of PacketVideo Corporation.

To obtain the Installation Guides for installing and setting “Twonky”, visit the website of TwonkyMedia.

Additional fees may be charged to obtain server software.

= Note =

- For more information about the server software, please consult each software company.
- When server software for the media server is installed on the PC, the data on the PC may be at risk of being accessed by other people. Please take care of the settings and connections under the network circumstances in office, hotel or even at home when not using a router.

- To use a DLNA compatible DIGA Recorder as a media server

By connecting a DLNA compatible DIGA Recorder to your home network, you can control it as one of the media servers.

- Please read the manual of your DIGA Recorder to check if the recorder is compatible with DLNA.

■ Playback of sharing contents on this TV with the DMC (Digital Media Controller) network equipment

You can enjoy contents stored in the media server by controlling with the DMC network equipment (smartphone, PC with Windows 7 / Windows 8 installed, etc.) connected to your home network.

- To use this function with your smartphone or Windows 7 / Windows 8, set [VIERA remote](#) of this TV to [On](#).

 → [Home network](#) > [Network settings](#) > [VIERA remote Settings](#)

And you need to install the application for controlling VIERA on your smartphone. For information of the application (English only):

<http://panasonic.net/viera/support>

For the operations, refer to the support information of the application.

- “Windows 7 / Windows 8” are the OS that have been tested for compatibility of this TV (as of November, 2012). For the operations, refer to the help functions of Windows 7 / Windows 8.

■ Sharing the contents of this TV with another piece of network equipment

You can enjoy the contents * of this TV on another DLNA Certified VIERA connected to your home network.

*: Available contents:

- Contents that can be played back in Media Player of this TV and another piece of network equipment
- To use this function with another DLNA Certified VIERA, set [Network Link Settings](#) of this TV.

 → [Home network](#) > [Network settings](#) > [Network Link Settings](#)

= Note =

- To use this function, turn this TV on.
- This function is available only with 1 piece of other equipment.
- This function may not be available in the following conditions of this TV:
 - When in internet service
 - When accessing the media server
 - When the data service is active

Using DLNA

To use DLNA® features, ensure the preparations of the media server, network connections and network settings are completed.

 → [Home network](#) > [DLNA / Web Browser](#) > [Information for DLNA](#)

 → [Home network](#) > [Network connections](#) > [DLNA connection](#)

 → [Home network](#) > [Network settings](#)

1. Display VIERA TOOLS with **VIERA TOOLS**
2. Select [Media Server](#) with ◀ / ▶ and press **OK** to access
3. Select one of the media servers with ▲ / ▼ and press **OK** to access
 - For the operations to access another TV, select the name of another TV from the displayed media server list.
 - To display / hide information of the highlighted media server

INFO

4. Select the file with \triangle / ∇ and press **OK** to access
(Example)



- Depending on the condition of media server, you may need to select the folder before selecting the file.
- To display / hide information of the highlighted file

INFO

= Note =

- Non-playable files are also listed but cannot be selected.

Using Web Browser

You can access [Web Browser](#) and enjoy various network contents.

1. Display VIERA TOOLS with **VIERA TOOLS**
2. Select [Web Browser](#) with \triangle / ∇ and press **OK** to access
3. Follow the on-screen instructions

= Note =

- If you cannot access the internet contents, check the network connections and settings.

 → [Home network](#) > [Network connections](#) > [Internet connection](#)

 → [Home network](#) > [Network settings](#)

- [Web Browser](#) is subject to change without notice.
- Not all the features of the websites are available.
- Be sure to update the software when a software update notice is displayed on the TV screen. If the software is not updated, you will not be able to use [Web Browser](#). You can update the software later manually.

 → [Home network](#) > [Network settings](#) > [Software Update](#)

- The services through [Web Browser](#) are operated by their respective service providers and such service may be discontinued either temporarily or permanently without notice. Therefore, Panasonic will make no warranty for the contents or the continuity of the services.
- Some contents may be inappropriate for some viewers.
- Some contents may only be available for specific countries and may be presented in specific languages.

- Depending on the connection environment, the internet connection may be slow or may not be successful.
- During the operation, audio signal is output from AUDIO OUT, DIGITAL AUDIO OUT and HDMI2 (ARC function) terminals. But no video signals are output. To use HDMI2 with ARC function, connect an amplifier that has ARC function and set to use theatre speakers.

 → [Functions > VIERA Link "HDAVI Control™"](#)

- You can restrict access to internet service.

 → [Functions > Child Lock > Using Child Lock](#)

Network connections

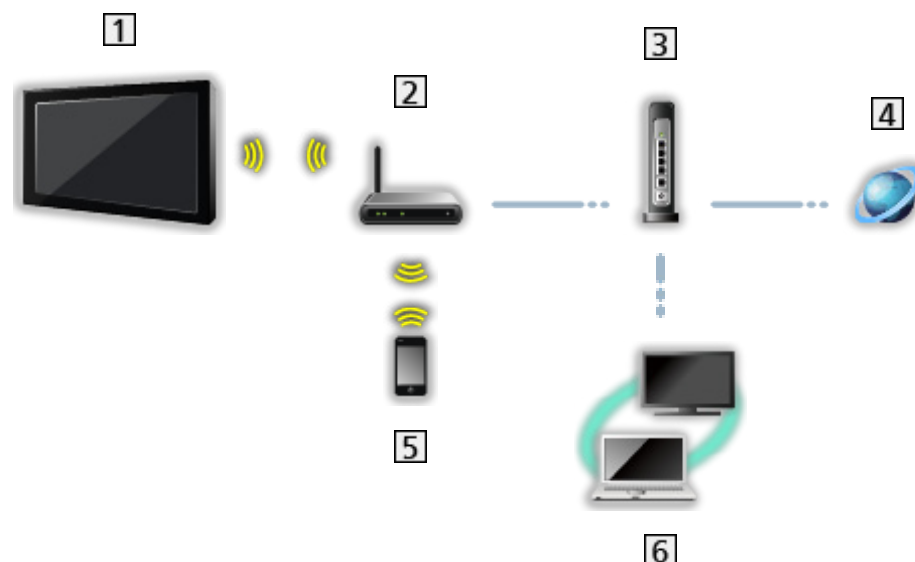
DLNA connection

To use DLNA features, you need a home network environment and you can operate the features without a broadband network environment.

- To use internet service, you need a broadband network environment.

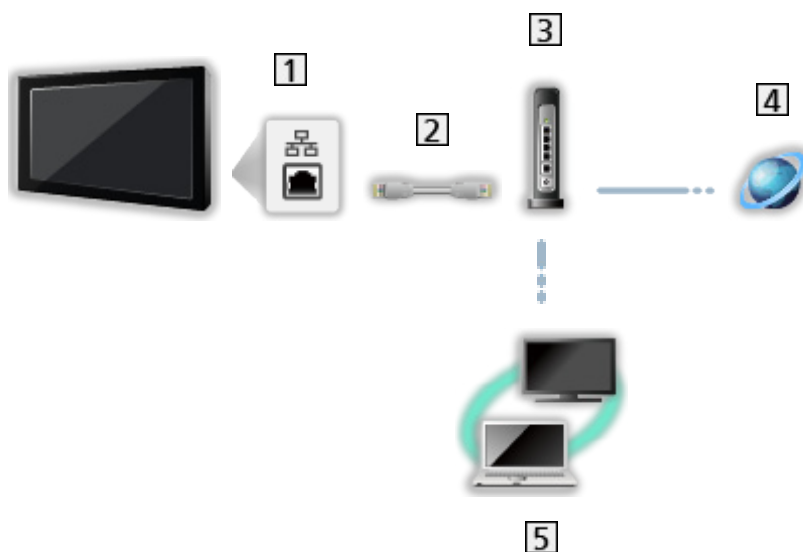
 → [Home network > Network connections > Internet connection](#)

■ Wireless connection (For DLNA and internet service)



- 1** Built-in wireless LAN (Rear of the TV)
- 2** Access point
- 3** Hub or Router
- 4** Internet environment
- 5** Smartphone
- 6** DLNA Certified media server

■ Wired connection (For DLNA and internet service)



1 ETHERNET terminal

2 LAN cable (Shielded)

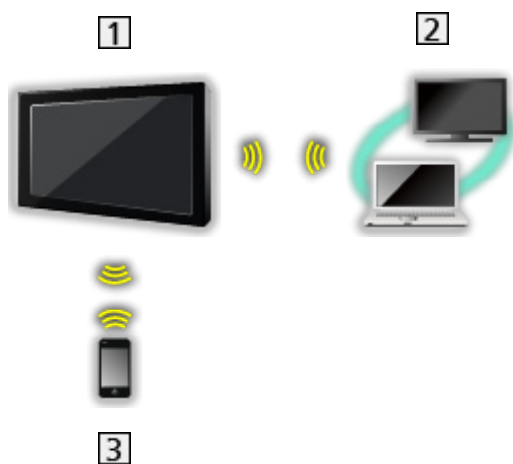
- Use the Shielded Twist Pair (STP) LAN cable.

3 Hub or Router

4 Internet environment

5 DLNA Certified media server

■ Wireless connection (For DLNA)



1 TV

- To use the TV as a wireless access point

 → Home network > Network settings > Custom - Wireless Access Point

2 DLNA Certified media server

3 Smartphone

Internet connection

To use internet service, you need a broadband network environment.

- If you do not have any broadband network services, please consult your retailer for assistance.
- Dial-up internet connections cannot be used.
- Required speed (effective): at least 1.5 Mbps for SD (Standard Definition) and 6 Mbps for HD (High Definition) picture quality, respectively. If the transfer speed is not enough, contents may not be played back properly.

■ Wireless connection

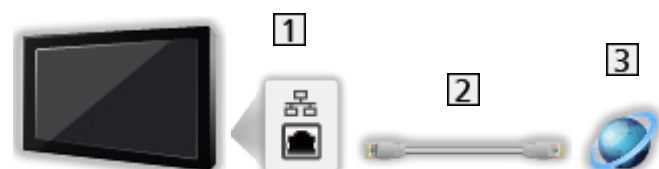


1 Built-in wireless LAN (Rear of the TV)

2 Access point

3 Internet environment

■ Wired connection



1 ETHERNET terminal

2 LAN cable (Shielded)

- Use the Shielded Twist Pair (STP) LAN cable.

3 Internet environment

Note

- Ensure to use a LAN straight cable.
- Set up and connect equipment required for the network environment. You cannot make such settings on this TV. Read the manual of the equipment.
- If you use the equipment compatible only with 100BASE-TX, category 5 or later LAN cables are required.
- Turn the TV off, and then on again when changing or making the network connection again.

■ Notices for Internet connection

- If your modem has no broadband router functions, use a broadband router.
- If your modem has broadband router functions but there are no vacant ports, use a hub.
- Ensure that the broadband routers and hubs are compatible with 10BASE-T / 100BASE-TX.
- Contact your Internet Service Provider (ISP) or telecommunications company for further assistance regarding the network equipment.
- Confirm the terms and conditions of the contracts with your Internet Service Provider (ISP) or telecommunications company. Depending on the contracts, additional fees may be charged or multiple connections to the internet may be impossible.


Network settings

Network Connection

Ensure the connections are completed before starting network setup.

 → Home network > Network connections

■ Quick setup - Wireless

1. Display the menu with **MENU**
2. Select **Network** > **Network Connection** with \triangle / ∇ and press **OK** to access
 - Confirm the encryption key, settings and position of your access point before starting setup. For details, read the manual of the access point.
3. Select **Quick setup** with \triangleleft / \triangleright and press **OK** to access
 - When the LAN cable is connected, wired setup will be done automatically.
4. Select your desired access point with \triangle / ∇ and press **OK** to access
 - Available Wireless Networks are displayed automatically.
 -  : Encrypted access point
 - For WPS(Push button)
 - 1) Select **Easy setup with Push button** with \triangle / ∇ and press **OK** to access
 - 2) Press the WPS button on the access point until the light flashes
 - 3) Connect the TV with the access point with **OK**
 - WPS: Wi-Fi Protected Setup™
 - If the connection has failed, check the settings and positions of your access point. And then, follow the on-screen instructions.

- It is recommended to select the encrypted access point.
5. Enter the encryption key of the access point with Δ / ∇ / \triangleleft / \triangleright and press **OK** to set

- You can set characters using numeric buttons.



- Press **RETURN** to store
6. Automatically setup is done and the **Network Status** screen is displayed

 → Home network > Network settings > Network Status

7. Select **Exit** with \triangleleft / \triangleright and press **OK** to set

- To set manually

 → Home network > Network settings > Custom - Wireless

■ Quick setup - Wired

1. Display the menu with **MENU**
2. Select **Network** > **Network Connection** with Δ / ∇ and press **OK** to access
3. Select **Quick setup** with \triangleleft / \triangleright and press **OK** to access
4. Automatically setup is done and the **Network Status** screen is displayed

 → Home network > Network settings > Network Status

5. Select **Exit** with \triangleleft / \triangleright and press **OK** to set



- To set manually




 → Home network > Network settings > Custom - Wired

Custom - Wireless

Ensure the connections are completed before starting network setup.

 → Home network > Network connections

1. Display the menu with **MENU**
2. Select **Network** > **Network Connection** > **Custom** > **Wireless** with Δ / ∇ / \triangleleft / \triangleright and press **OK** to access
 - Confirm the encryption key, settings and position of your access point before starting setup. For details, read the manual of the access point.
3. Select your desired access point with Δ / ∇ and press **OK** to access
 - Available Wireless Networks are displayed automatically.
 -  : Encrypted access point
 - For **WPS(Push button)**
 - 1) Press  (red)

- 2) Press the WPS button on the access point until the light flashes
- 3) Connect the TV with the access point with **OK**
 - WPS: Wi-Fi Protected Setup™
 - If the connection has failed, check the settings and positions of your access point. And then, follow the on-screen instructions.
- For **WPS(PIN)**
 - 1) Press  (green)
 - 2) Enter the PIN code to the access point
 - 3) Connect the TV with the access point with **OK**
- For **Manual**
 - 1) Press  (yellow)
 - 2) You can set up SSID, security type, encryption type, and encryption key manually
 - 3) Follow the on-screen instructions and set manually
 - When you use 11n (5 GHz) for the wireless system between the built-in wireless LAN and access point, select **AES** for the encryption type.
- To search access points again
 (blue)
- To display / hide information of the highlighted access point
INFO
- It is recommended to select the encrypted access point.
4. Enter the encryption key of the access point with \triangle / ∇ / \triangleleft / \triangleright and press **OK** to set
 - You can set characters using numeric buttons.
 - Press **RETURN** to store
5. The **VIERA Name/IP/DNS Settings** screen is displayed

VIERA Name

- You can set your favourite name for this TV.
 - This name will be used as the name of this TV on the screen of the other network equipment.
-

Acquire IP Address / Acquire DNS Address

- [Auto](#) is recommended.
 - Available settings are displayed automatically.
 - To set manually, select and set [IP Address](#) / [Subnet Mask](#) / [Default Gateway](#) / [DNS Address](#).
-

Proxy Settings

- It is not required for normal household use.
- Some internet services may not be available depending on the proxy settings.

Proxy:

This is the address of the relay server connected between the browser and the target server and sends data to the browser.

- 1) Select [Proxy](#) with \triangle / ∇ and press **OK** to access
- 2) Enter the address with \triangle / ∇ / \triangleleft / \triangleright or numeric buttons, and press **OK** to set



- 3) Press **RETURN** to store

Proxy Port:

This number is also specified by the provider with the Proxy address.

- 1) Select [Proxy Port](#) with \triangle / ∇
- 2) Enter the number with numeric buttons



- 3) Press **RETURN** to store
-

6. Select [Network Status](#) with \triangle / ∇ and press **OK** to access

 → [Home network](#) > [Network settings](#) > [Network Status](#)

7. Select [Exit](#) with \triangleleft / \triangleright and press **OK** to set

Custom - Wired

Ensure the connections are completed before starting network setup.

 → [Home network](#) > [Network connections](#)

1. Display the menu with **MENU**
2. Select [Network](#) > [Network Connection](#) > [Custom](#) > [Wired](#) with \triangle / ∇ / \triangleleft / \triangleright and press **OK** to access

3. The **VIERA Name/IP/DNS Settings** screen is displayed

VIERA Name

- You can set your favourite name for this TV.
 - This name will be used as the name of this TV on the screen of the other network equipment.
-

Acquire IP Address / Acquire DNS Address

- **Auto** is recommended.
 - Available settings are displayed automatically.
 - To set manually, select and set **IP Address** / **Subnet Mask** / **Default Gateway** / **DNS Address**.
-

Proxy Settings

- It is not required for normal household use.
- Some internet services may not be available depending on the proxy settings.

Proxy:

This is the address of the relay server connected between the browser and the target server and sends data to the browser.

- 1) Select **Proxy** with \triangle / ∇ and press **OK** to access
- 2) Enter the address with \triangle / ∇ / \triangleleft / \triangleright or numeric buttons, and press **OK** to set



- 3) Press **RETURN** to store

Proxy Port:

This number is also specified by the provider with the Proxy address.

- 1) Select **Proxy Port** with \triangle / ∇
- 2) Enter the number with numeric buttons



- 3) Press **RETURN** to store
-

4. Select **Network Status** with \triangle / ∇ and press **OK** to access

 → **Home network** > **Network settings** > **Network Status**

5. Select [Exit](#) with / and press **OK** to set

Custom - Wireless Access Point

You can use the TV as a wireless access point and connect the network equipment without an access point.

- Confirm the PIN code, network settings of the equipment before starting setup. For details, read the manual of the equipment.
1. Display the menu with **MENU**
 2. Select [Network](#) > [Network Connection](#) > [Custom](#) > [Wireless Access Point](#) with / / / and press **OK** to access
 3. Select [Connect to device in WPS](#) with / and press **OK** to access
 - To set manually, select [Change settings](#). (see below)
 4. Select and set [WPS\(Push button\)](#) / [WPS\(PIN\)](#) with / and press **OK** to access

[WPS\(Push button\)](#):

Set the equipment to WPS (Push button) mode. For details, read the manual of the equipment.

[WPS\(PIN\)](#):

Enter the PIN code of the equipment.

- If the connection has failed, check the settings and positions of the equipment. And then, follow the on-screen instructions.

■ Change settings

You can set up [Network name\(SSID\)](#), [Encryption key](#), [Wireless type](#) and [Channel setting method](#) manually.

Follow the on-screen instructions and set manually.

- Set [Reset settings](#) to reset the items of [Change settings](#).

= Note =

- You cannot connect the internet service while the TV is set to [Wireless Access Point](#).
- You can connect up to 7 devices. But the transfer rate will vary according to communication environment or the numbers of connected equipment.
- To confirm the current network settings
 → [Home network](#) > [Network settings](#) > [Network Status](#)
- Ensure the equipment to connect supports WPS for this setup.
- WPS: Wi-Fi Protected Setup™

Network Status

Displays and checks the network status (MAC Address, current network settings, etc.).

1. Display the menu with **MENU**
2. Select **Network** > **Network Status** with \triangle / ∇ and press **OK** to access
3. Automatically testing is done and the **Network Status** screen is displayed

Try Again:

Performs automatic testing of the network connection for the TV and displays the current status again.

Status Details:

Displays the detailed network status (SSID, security type, encryption type, etc.).

- For more information of the network connection, select **Help**.

VIERA remote Settings

Sets to control the TV with any VIERA remote connected to your network.

1. Display the menu with **MENU**
2. Select **Network** > **VIERA remote Settings** with \triangle / ∇ and press **OK** to access
3. Select one of the following items with \triangle / ∇ and press **OK** to access

VIERA remote

(On / Off)

Enables to control the TV from the network equipment (smartphone, etc.).

- You need to install the application for controlling VIERA on your smartphone. For information of the application (English only):

<http://panasonic.net/viera/support>

For the operations, refer to the support information of the application.

Device to upload contents

Selects device to upload contents from the network equipment (smartphone, etc.).

= Note =

- Depending on the area, this function may not be available. For details, consult your local Panasonic dealer.

Network Link Settings

Sets to control the TV with devices connected to the network.

1. Display the menu with **MENU**
 2. Select **Network** > **Network Link Settings** with \triangle / ∇ and press **OK** to access
 3. Select one of the following items with \triangle / ∇ and press **OK** to access
DLNA Server / **Registration Type** / **Remote Device List**
 4. Set with \triangle / ∇ / \triangleleft / \triangleright and press **OK** to store
-

DLNA Server

(On / Off)

Enables to share the contents of this TV with the network equipment (DLNA Certified VIERA, etc.).

- To use this function with another VIERA, select the name of this TV from the DLNA server list of another VIERA, and then select the content to share. Also read the manual of another VIERA.
-

Registration Type

(Auto / Manual)

Selects the type to restrict the access to this TV for each piece of equipment on the home network.

Auto:

All available equipment on the home network is accessible. (maximum 16 pieces of equipment)

Manual:

Sets the restrictions for each piece of equipment in the **Remote Device List**.

Remote Device List

Lists the equipment accessible to this TV on the home network.

= Note =

- Depending on the area, this function may not be available. For details, consult your local Panasonic dealer.

Software Update

Accesses the specific website to update the TV's software if any updates are

available.

1. Display the menu with **MENU**
2. Select **Network** > **Software Update** with \triangle / ∇ and press **OK** to access
3. Follow the on-screen instructions

New Software Message

Selects whether to give a notification message when new software is found via network.

1. Display the menu with **MENU**
2. Select **Network** > **New Software Message** with \triangle / ∇ and press **OK** to access
3. Select **On** / **Off** with \triangle / ∇ and press **OK** to set

Photos

Selecting file

Ensure the preparations of the media server, network connections and network settings are completed.

 → **Home network** > **DLNA / Web Browser** > **Information for DLNA**

 → **Home network** > **Network connections**

 → **Home network** > **Network settings**

1. Display VIERA TOOLS with **VIERA TOOLS**
2. Select **Media Server** with \triangleleft / \triangleright and press **OK** to access
3. Select one of the media servers with \triangle / ∇ and press **OK** to access
 - For the operations to access another TV, select the name of another TV from the displayed media server list.
 - To display / hide information of the highlighted media server
4. Select the file with \triangle / ∇ and press **OK** to access
 - Depending on the condition of media server, you may need to select the folder before selecting the file.
 - To display / hide information of the highlighted file

INFO

INFO


= Note =

- Non-playable files are also listed but cannot be selected.

Viewing photo


■ Playback

Photos are displayed one at a time.

- To operate Single view
 - ◀ : To the previous photo
 - ▶ : To the next photo
 - ▽ : Stop (return to list)
 - OK : Slideshow
- To display / hide the operation guide
INFO
- To rotate 90°
 (blue)
- To return to list
RETURN

Using slideshow

Slideshow ends when all photos within the list are viewed.

1. Select the file from the thumbnail of photos for the first view with ▲ / ▼ / ◀ / ▶
2. Start Slideshow with  (red) and OK
 - To display / hide the operation guide
INFO
 - To pause (return to Single view)
OK
 - To return to list
RETURN

■ Slideshow Settings

Set up the settings for photo file operations on this TV.

1. Display the option menu with OPTION
2. Select [Slideshow Settings](#) with ▲ / ▼ and press OK to access
3. Select one of the following items with ▲ / ▼ and press OK to access
[Transition Effect](#) / [Auto Makeup](#) / [Interval](#) / [Repeat](#) / [Back Ground Music](#)
4. Set with ▲ / ▼ / ◀ / ▶ and press OK to store

Transition Effect

(Off / Fade / Dissolve / Motion / Random)

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

Fade:

The next photo fades in gradually.

Dissolve:

Each photo is dissolved when switching to the next photo.

Motion:

Each photo is displayed with an effect of enlarging, reducing, moving up or moving down.

Random:

The transition effect is selected at random.

Auto Makeup

(On / Off)

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

Interval

(Long / Normal / Short)

Selects slideshow interval.

- Not valid when [Transition Effect](#) is set to [Motion](#)
-

Repeat

(On / Off)

Slideshow repeat

Back Ground Music

(Off / Type1 / Type2 / Type3 / Type4 / Type5)

Selects the background music during Photo mode.

Videos

Selecting file

Ensure the preparations of the media server, network connections and network settings are completed.

 → Home network > DLNA / Web Browser > Information for DLNA

 → Home network > Network connections

 → Home network > Network settings

1. Display VIERA TOOLS with **VIERA TOOLS**
2. Select **Media Server** with ◀ / ▶ and press **OK** to access
3. Select one of the media servers with ▲ / ▼ and press **OK** to access
 - For the operations to access another TV, select the name of another TV from the displayed media server list.
 - To display / hide information of the highlighted media server

INFO

4. Select the file with ▲ / ▼ and press **OK** to access
 - Depending on the condition of media server, you may need to select the folder before selecting the file.
 - To display / hide information of the highlighted file

INFO

= Note =

- Non-playable files are also listed but cannot be selected.

Watching video

■ Playback

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

- To operate playback

▲ : **Manual skip**

- Press to skip forward approx. 30 seconds.

◀ : Rewind

▶ : Fast forward

▼ : Stop


OK : Pause (displays the time seek bar) / Playback

- To display / hide the operation guide and information banner

INFO

- To the previous content

 (red)

- To the next content
 (green)
- To change aspect
 - 1) Display [Aspect Selection](#) list with **ASPECT**
 - 2) Select the mode with \triangle / ∇ and press **OK** to set
[Aspect1](#):
 Displays the content enlarged without distortion.
[Aspect2](#):
 Displays the content full-screen.
[Original](#):
 Displays the content original size.
 - You can also change the mode pressing **ASPECT**. (Press repeatedly until you reach the desired mode.)
 - Aspect cannot be changed depending on the content.
- To return to list
RETURN

Video Setup

Set up the settings for video file operations on this TV.

1. Display the option menu with **OPTION**
 2. Select [Video Setup](#) with \triangle / ∇ and press **OK** to access
 3. Select one of the following items with \triangle / ∇ and press **OK** to access
[Video Preview](#) / [Audio Selection](#) / [Dual Audio](#) / [Dual Mono Audio](#) / [Subtitle](#) / [Subtitle Text](#) / [Repeat](#)
 - Menu items and selectable options vary depending on the content.
 4. Set with \triangle / ∇ / \triangleleft / \triangleright and press **OK** to store
-

[Video Preview](#)

([On](#) / [Off](#))

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

- Images may not be displayed for an instant in the thumbnail view. Set the preview [Off](#) to solve this.
-

[Audio Selection](#), [Dual Audio](#), [Dual Mono Audio](#)

Selects for selectable sound tracks (if available).

- It may take several seconds to change the sound.

- This function is available during playback.
-

Subtitle

Display / hide subtitles (if available).

- This function is available during playback.
-

Subtitle Text

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

- This function is available during playback.
-

Repeat

(On / Off)

Playback repeat within the selected file

Audio output settings

You can enjoy the multi-channel sound via an amplifier connected to DIGITAL AUDIO OUT or HDMI2 (ARC function) terminal.

- To confirm or change the current sound status

 → Home network > Videos > Video Setup

1. Display the menu with **MENU**
 2. Select **Sound** > **SPDIF Selection** with **△** / **▽** and press **OK** to access
 3. Select **Auto** / **PCM** with **△** / **▽** and press **OK** to set
-

SPDIF Selection

(Auto / PCM)

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

- SPDIF is a standard audio transfer file format.

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 / Network services.

PCM:

Digital output signal is fixed to PCM.

- ARC (Audio Return Channel) is a function of digital audio output using HDMI cable.

Music

Selecting file

Ensure the preparations of the media server, network connections and network settings are completed.

 → Home network > DLNA / Web Browser > Information for DLNA

 → Home network > Network connections

 → Home network > Network settings

1. Display VIERA TOOLS with **VIERA TOOLS**
2. Select **Media Server** with ◀ / ▶ and press **OK** to access
3. Select one of the media servers with ▲ / ▼ and press **OK** to access
 - For the operations to access another TV, select the name of another TV from the displayed media server list.
 - To display / hide information of the highlighted media server
4. Select the file with ▲ / ▼ and press **OK** to access
 - Depending on the condition of media server, you may need to select the folder before selecting the file.
 - To display / hide information of the highlighted file

INFO

INFO

= Note =

- Non-playable files are also listed but cannot be selected.

Playing music

■ Playback

- To operate playback
 - ◀ : Rewind
 - ▶ : Fast forward
 - ▽ : Stop
 - OK** : Pause / Playback
- To display / hide the operation guide
- To the previous track

 (red)

- To the next track

 (green)

- To return to list

RETURN

Music Setup

Set up the settings for music file operations on this TV.

1. Display the option menu with **OPTION**
2. Select **Music Setup** > **Repeat** with **OK**
3. Select **Folder** / **One** / **Off** with Δ / ∇ and press **OK** to set

Folder:

Playback repeat within the selected folder

One:

Playback repeat of the selected one file

DIGA Recorder

Controlling DIGA Recorder

Ensure the preparations of the media server, network connections and network settings are completed.

 → **Home network** > **DLNA / Web Browser** > **Information for DLNA**

 → **Home network** > **Network connections**

 → **Home network** > **Network settings**

1. Display VIERA TOOLS with **VIERA TOOLS**
2. Select **Media Server** with \triangleleft / \triangleright and press **OK** to access
3. Select **DIGA** with Δ / ∇ and press **OK** to access
4. The screen of the DIGA Recorder will be displayed. You can control the functions of the DIGA Recorder with this TV's remote control according to the operation guide.

(Example)



- Before operating, register this TV on the DIGA Recorder.
- For details, read the manual of the DIGA Recorder.

Technical information

Photo format

■ Supported Photo formats

- 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.
-

= Note =

- Some files may not be played back even if they fulfil 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.

Video format

■ Supported Video formats

- 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.
-

- 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:

MPEG1, MPEG2

Audio codec:

Dolby Digital, LPCM, MPEG Audio

- TS (.mts, .m2ts, .tp, .trp, .ts, .tts)

Video codec:

H.264 BP/MP/HP, MPEG1, MPEG2

Audio codec:

AAC, Dolby Digital, HE-AAC, MPEG Audio

■ Supported Subtitles formats

- 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”.
-

= Note =

- Some files may not be played back even if they fulfil 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.
- Supported Video formats are different in Media Player and media server.

 → [Media Player](#) > [Technical information](#) > [Video format](#)

Music format

■ Supported Music formats

- 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)

= Note =

- Some files may not be played back even if they fulfil 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.

Media Player

Using Media Player

Information

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

(Example)

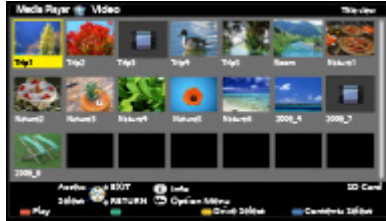


Photo mode:

Still pictures recorded with digital cameras will be displayed.

Video mode:

Moving pictures recorded with digital video cameras and digital video data will be played back.

Music mode:

Digital music data will be played back.

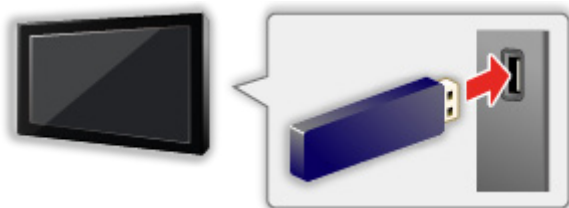
- During operation, audio signals are output from AUDIO OUT, DIGITAL AUDIO OUT and HDMI2 (ARC function) terminals, however, no video signals are output. To use HDMI2 with ARC function, connect an amplifier that has ARC function and set to use theatre speakers.

 → **Functions > VIERA Link "HDAVI Control™"**

- **Date** shows the date on which the recording was made with the recording equipment. "**/**/**" appears on a file on which recording date has not been recorded.
- Pictures may not appear correctly on this TV depending on the recording equipment used.
- Displaying may take some time when there are many files and folders.
- Partially degraded files may be displayed with reduced resolution.
- Picture setting may not work depending on the conditions.
- Folder and file names may be different from those on the digital camera or digital video camera used.

■ To insert or remove the USB Flash Memory

Ensure alignment is straight and complete when inserting or removing.



- To remove the USB Flash Memory safely from the TV, perform [Safely remove USB](#) in [USB Device Setup](#).

 → [Settings](#) > [Setup](#) > [USB Device Setup](#)

- Connect the USB Flash Memory to the USB 1 or 2 port.

= Note =

- Check the terminal type and devices are correct when connecting.
- For the information of the devices

 → [Media Player](#) > [Technical information](#)

- For supported file formats

 → [Media Player](#) > [Technical information](#)

Selecting device / mode

1. Insert the USB Flash Memory to the TV

 → [Media Player](#) > [Using Media Player](#) > [Information](#)

2. Display VIERA TOOLS with **VIERA TOOLS**

3. Select [Media Player](#) with ◀ / ▶ and press **OK** to access

4. Select the device with ◀ / ▶ and press **OK** to access

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

5. Select [Photo](#) / [Video](#) / [Music](#) with ◀ / ▶ and press **OK** to access

[Photo](#)

 → [Media Player](#) > [Photo mode](#)

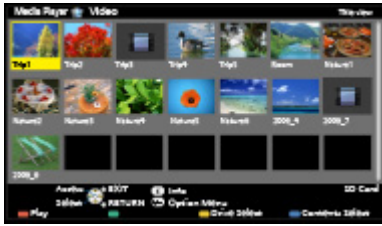
[Video](#)

 → [Media Player](#) > [Video mode](#)

[Music](#)

 → [Media Player](#) > [Music mode](#)

6. The thumbnail view will be displayed
(Example)



- To display / hide information of the highlighted content




INFO

= Note =

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

■ To change the device

You can change the current device to another device directly in the same mode when two or more available devices are connected.

1. Display the device selection screen with  (yellow) while the thumbnail is displayed
2. Select the device with  /  and press **OK** to access

■ To change the mode

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










1. Display the contents selection screen with  (blue) while the thumbnail is displayed
2. Select the contents with  /  and press **OK** to access
 - The mode can be switched in the current device.

Photo mode

Selecting file

Select the file in the thumbnail view with  /  /  /  and press **OK** to start playback.

 : Error display

- To change the size of photos in the thumbnail view
 - 1) Display the option menu with **OPTION**
 - 2) Select **Change Size** with  /  and press **OK** to change
- For supported file formats

 → Media Player > Technical information > Photo format

■ Thumbnail view

- To display / hide information of the highlighted content



- To display [Slideshow Settings](#)

 (red)

 → Media Player > Photo mode > Using slideshow

- To Sort

 (green)

- To change the device

 (yellow)

- To change the contents

 (blue)

Viewing photo

■ Playback

- To operate Single view

◀ : To the previous photo

▶ : To the next photo

▽ : Stop (return to thumbnail)

 : Slideshow

- To display / hide the operation guide



- To rotate 90°



 (blue)

- To return to thumbnail



Sorting photos

■ To sort by folder, recorded date or recorded month

1. Display the view selection in the thumbnail view with  (green)
2. Select [Folder view](#) / [Sort by Date](#) / [Sort by Month](#) with ▲ / ▼ and press  to set




Folder view:

Displays the thumbnail grouped by folder.

- Files which are not in a folder will be collected to the folder named “/”.






Sort by Date / Sort by Month:

Displays the thumbnail grouped by the same date or month.

- The group of the photos without recorded dates is shown as [Unknown](#).
- To return to the thumbnail of all photos
 - 1) Display the view selection in the thumbnail view with  (green)
 - 2) Select [All photos](#) with  /  and press **OK** to set







Using slideshow

Slideshow ends when all photos within the current thumbnail are viewed.

1. Select the file from the thumbnail of photos for the first view with  /  /  / 
2. Start Slideshow with  (red) and **OK**
 - To display / hide the operation guide
INFO
 - To pause (return to Single view)
OK
 - To return to thumbnail
RETURN
 - You can change the back ground music by setting [Back Ground Music](#) in [Slideshow Settings](#) (see below).

■ Slideshow Settings

Set up the settings for Photo mode.

1. Display the option menu with **OPTION**
2. Select [Slideshow Settings](#) with **OK**
3. Select one of the following items with  /  and press **OK** to access
[Frame](#) / [Colour Effect](#) / [Transition Effect](#) / [Auto Makeup](#) / [Screen Mode](#) /
[Burst Playback](#) / [Interval](#) / [Repeat](#) / [Back Ground Music](#)
4. Set with  /  /  /  and press **OK** to store

[Frame](#)

(Off / Multi / Collage / Drift (+ calendar) / Drift / Gallery (+ calendar) / Gallery / Cinema)

Selects the frame type of the slideshow.

Multi:

9 photos are displayed orderly at once.

Collage:

Each photo is displayed at a random position and random scale.

Drift (+ calendar) / Drift:

Photos are displayed with flow images.

- You can select whether to display the calendar or not. The month of calendar is changed with ◀ / ▶.

Gallery (+ calendar) / Gallery:

Various sizes of photos in the frames are displayed.

- You can select whether to display the calendar or not. The month of calendar is changed with ◀ / ▶.

Cinema:

Photos are displayed as old films (sepia tone).

Colour Effect

(Off / Sepia / Gray scale)

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

- Not valid when **Frame** is set to **Drift**, **Gallery** or **Cinema**
-

Transition Effect

(Off / Fade / Dissolve / Motion / Random)

Selects the transition effect for switching photos during the slideshow.

Fade:

The next photo fades in gradually.

Dissolve:

Each photo is dissolved when switching to the next photo.

Motion:

Each photo is displayed with an effect of enlarging, reducing, moving up or moving down.

Random:

The transition effect is selected at random.

- This function is available when **Frame** is set to **Off**.

Auto Makeup

(On / Off)

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

Screen Mode

(Normal / Zoom)

Selects enlarged or normal viewing in Single view and Slideshow.

- Not valid when **Frame** is set to **Collage**, **Drift**, **Gallery**, **Cinema** or when **Transition Effect** is set to **Motion**
 - Depending on the photo size, the photo may not be fully enlarged to fill the screen (e.g. portrait style picture).
-

Burst Playback

(On / Off)

Selects whether to display burst photos in a fast-paced slideshow mode or not.

- Not valid when **Frame** is set to **Drift**, **Gallery**, **Cinema** or when **Transition Effect** is set to **Motion**
-

Interval

(Long / Normal / Short)

Selects slideshow interval.

- Not valid when **Frame** is set to **Drift**, **Gallery**, **Cinema** or when **Transition Effect** is set to **Motion**
-

Repeat

(On / Off)

Slideshow repeat

Back Ground Music

(Off / Type1 / Type2 / Type3 / Type4 / Type5 / User / Auto)

Selects the background music during Photo mode.

Type1 - 5:

Music files installed on this TV at the factory settings will be played back.

Auto:

Music files 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 played back.

User:

Music files in the device registered by yourself will be played back.

- If no music files have been registered or the device which had registered music files is removed, no sound will be played back.

● To register music

1) Select the music file with  /  and press **OK** to access

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

2) Select **File** / **Folder** with  /  and press **OK** to set

File:

The selected music file will be registered.

Folder:

All the music files in the folder which contains the selected music file will be registered.

= Note =

- Picture quality may be degraded depending on the slideshow settings.
- Picture setting may not work depending on the slideshow settings.

Video mode

Selecting file

1. Select the title in the thumbnail view with  /  /  / 

 : Error display

 : The file does not support thumbnail view.

- The preview will start when the title / scene is highlighted in the thumbnail view if it supports a preview. To turn off the preview, set **Video Preview** to **Off**.

 → **Media Player** > **Video mode** > **Video Setup**

2. Start playback with  (red)

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

- For supported file formats



→ Media Player > Technical information > Video format

■ Thumbnail view

- To display / hide information of the highlighted content

INFO

- To start playback



(red)

- To change the device



(yellow)

- To change the contents



(blue)

Watching video

■ Playback

- To operate playback

◀ : Rewind

▶ : Fast forward

▽ : Stop

OK : Pause (displays the time seek bar) / Playback

- To jump to the specified time point

1) Display the time seek bar with **OK**

2) While the time seek bar is displayed

Press ◀ / ▶ :

Search approx. 10 seconds

Press and hold ◀ / ▶ :

Search rapidly

3) Jump to the specified time point with **OK**

- To display / hide the operation guide and information banner

INFO

- To the previous title / scene



(red)

- To the next title / scene



(green)

- To change aspect
 - 1) Display [Aspect Selection](#) list with **ASPECT**
 - 2) Select the mode with \triangle / ∇ and press **OK** to set

[Aspect1](#):
Displays the content enlarged without distortion.

[Aspect2](#):
Displays the content full-screen.

[Original](#):
Displays the content original size.

 - You can also change the mode pressing **ASPECT**. (Press repeatedly until you reach the desired mode.)
 - Aspect cannot be changed depending on the content.
- To return to thumbnail

RETURN

Video Setup

Set up the settings for Video mode.

1. Display the option menu with **OPTION**
2. Select [Video Setup](#) with **OK**
3. Select one of the following items with \triangle / ∇ and press **OK** to access
[Video Preview](#) / [Audio Selection](#) / [Dual Mono Audio](#) / [Subtitle](#) / [Subtitle Text](#) / [Repeat](#)
 - Menu items and selectable options vary depending on the content.
4. Set with \triangle / ∇ / \triangleleft / \triangleright and press **OK** to store

[Video Preview](#)

([On](#) / [Off](#))

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

- Images may not be displayed for an instant in the thumbnail view. Set the preview [Off](#) to solve this.
 - This function is available in the thumbnail view.
-

[Audio Selection](#), [Dual Mono Audio](#)

Selects for selectable sound tracks (if available).

- It may take several seconds to change the sound.
- This function is available during playback.

Subtitle

Display / hide subtitles (if available).

- This function is available during playback.

Subtitle Text

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

- This function is available during playback.

Repeat

(On / Off)

Playback repeat within the title or selected file (depending on the content)

Audio output settings

You can enjoy the multi-channel sound via an amplifier connected to DIGITAL AUDIO OUT or HDMI2 (ARC function) terminal.

- To confirm or change the current sound status

 → Media Player > Video mode > Video Setup

1. Display the menu with **MENU**
2. Select **Sound** > **SPDIF Selection** with \triangle / ∇ and press **OK** to access
3. Select **Auto** / **PCM** with \triangle / ∇ and press **OK** to set

SPDIF Selection

(Auto / PCM)

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

- SPDIF is a standard audio transfer file format.

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 / Network services.






PCM:

Digital output signal is fixed to PCM.

- ARC (Audio Return Channel) is a function of digital audio output using HDMI cable.

Music mode

Selecting file

1. Select the folder in the thumbnail view with  /  /  / 
2. Start playback with  (red)

- For supported file formats

 → [Media Player](#) > [Technical information](#) > [Music format](#)

■ Thumbnail view

- To display / hide information of the highlighted content



- To start playback

 (red)

- To change the device

 (yellow)

- To change the contents

 (blue)

Playing music

■ Playback of the selected file in the folder


1. Select the folder with  /  /  /  and press  to access
2. Select the file with  /  /  / 
3. Start playback with  (red)

■ Playback

- To operate playback

 : Rewind

 : Fast forward

 : Stop


 : Pause / Playback

- To display / hide the operation guide



- To the previous track

 (red)

- To the next track
 (green)
- To return to thumbnail

RETURN

Music Setup

Set up the setting for Music mode.

- This function is available in the thumbnail view.
1. Display the option menu with **OPTION**
 2. Select **Music Setup** > **Repeat** with **OK**
 3. Select **Folder** / **One** with \triangle / ∇ and press **OK** to set

Folder:

Playback repeat within the selected folder

One:

Playback repeat of the selected one file

USB Sharing

USB Sharing

You can copy the contents from one device to another using the USB ports.

- To enable this function, connect the source drive and destination drive to the TV.



 → **Media Player** > **Using Media Player** > **Information**

Source drive:

The device (USB Flash Memory) which contains the data to be copied.

Destination drive:

The device (USB Flash Memory) which you copy to.

1. Display VIERA TOOLS with **VIERA TOOLS**
2. Select **USB Sharing** with \triangleleft / \triangleright and press **OK** to access
3. Select the drive from **Source drive** list with \triangle / ∇ and press **OK** to access
4. Select the folder or file to copy with \triangle / ∇ and press  (red) to set
 - To select all folders or files at once
 (green)
5. Press \triangleright to go to **Destination drive** list
6. Select the drive with \triangle / ∇ and press **OK** to access
 - You cannot select the source drive as the destination drive.

7. Select **Copy Here** with \triangle / ∇ and press **OK** to access
8. When the confirmation screen is displayed, select **Yes** with $\triangleleft / \triangleright$ and press **OK** to start copying
 - Copy progress is shown on the top right of the TV screen. When copying is finished, **Complete!!** is displayed.
 - To cancel the copying, select **USB Sharing** from VIERA TOOLS again.
 - To watch TV while data copying is in progress, press **TV**.

■ Create a folder or delete a folder

You can create a new folder or delete an old folder while the cursor is in **Destination drive** list.

- To create a new folder
 - 1) Display the option menu with **OPTION**
 - 2) Select **Create Folder** with \triangle / ∇ and press **OK** to access
 - 3) Enter characters (maximum 16 characters) with $\triangle / \nabla / \triangleleft / \triangleright$ or numeric buttons, and press **OK** to set

1	2	3
4	5	6
7	8	9
0		
 - 4) Press **RETURN** to store
- To delete an old folder
 - 1) Select the folder with \triangle / ∇
 - 2) Display the option menu with **OPTION**
 - 3) Select **Delete** with \triangle / ∇ and press **OK** to access
 - 4) When the confirmation screen is displayed, select **Yes** with $\triangleleft / \triangleright$ and press **OK** to delete

= Note =

- Some files may not be copied properly.
- Please note there may be a risk of file corruption due to power failure or sudden shut down during **USB Sharing** process.
- In consideration of possible loss of the data included in your USB devices for any reasons, Panasonic recommends to store or back up the data included in the USB devices to the other places (storage medium) before inserting the same in the USB port, and please do not turn the TV off during data communication / transfer.

Technical information

Device handling caution

- Data modified with a PC may not be displayed.
- Do not remove the device while the TV is accessing data. Otherwise this can damage the 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 the 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.

USB devices

- It is recommended to connect the USB Flash Memory to the TV's USB ports directly.
- Some USB devices or USB HUB may not be used with this TV.
- You cannot connect any devices using a USB card reader.
- Additional information for the devices may be found on the following website. (English only)

<http://panasonic.net/viera/support>

■ USB Flash Memory

(for playing back in Media Player)

USB Flash Memory format:

FAT16, FAT32 or exFAT

Photo format

■ Supported Photo formats

- 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.
-

= Note =

- Some files may not be played back even if they fulfil 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.

Video format

■ Supported Video formats

● 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.
-

● 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

■ Supported Subtitles formats

- MicroDVD, SubRip, TMPlayer (.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”.
-

= Note =

- Some files may not be played back even if they fulfil 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.
- Supported Video formats are different in Media Player and media server.

 → [Home network](#) > [Technical information](#) > [Video format](#)

Music format

■ Supported Music formats

- 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)
-

= Note =

- Some files may not be played back even if they fulfil 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.

Functions

VIERA TOOLS

Using VIERA TOOLS

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

1. Display icons of the feature with **VIERA TOOLS**

(Example)



2. Select one of the following items with ◀ / ▶ and press **OK** to access

[VIERA Link](#) / [Web Browser](#) / [Media Player](#)* / [Media Server](#)* / [USB Sharing](#) / [Eco Navigation](#) / [eHELP](#)

*: When two or more available devices are connected, a selection screen will be displayed. Please select the correct description and access.

[VIERA Link](#)

 → [Functions](#) > [VIERA Link "HDAVI Control™"](#)

[Web Browser](#)

 → [Home network](#) > [DLNA / Web Browser](#) > [Using Web Browser](#)

[Media Player](#)

 → [Media Player](#) > [Using Media Player](#) > [Information](#)

[Media Server](#)

 → [Home network](#) > [DLNA / Web Browser](#) > [Using DLNA](#)

[USB Sharing](#)

 → [Media Player](#) > [USB Sharing](#)

[Eco Navigation](#)

 → [Settings](#) > [Setup](#) > [Eco Navigation](#)

- To return to TV

EXIT / **VIERA TOOLS**

VIERA Link “HDAVI Control™”

Summary of VIERA Link

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

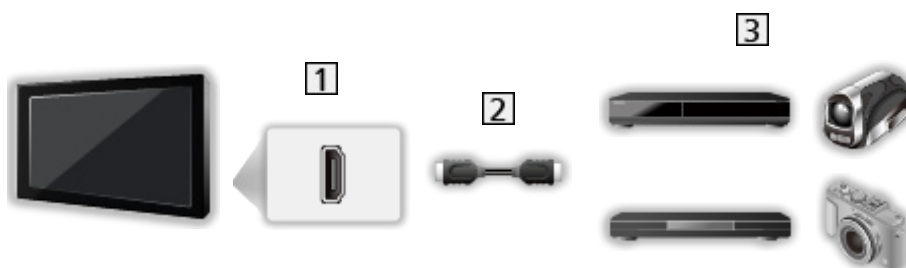
VIERA Link (HDAVI Control) connects the TV and the equipment with VIERA Link function, and enables easy control, playback, energy saving, creating home theatre, etc., without complicated settings. Connections to the equipment (DVD Recorder, HD Video Camera, Player theatre, Amplifier, etc.) with HDMI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

- This TV supports “HDAVI Control 5” function.
- Some functions are not available depending on the equipment’s version of HDAVI Control. Confirm the connected equipment’s version of HDAVI Control.
- 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’ product that supports HDMI CEC cannot be guaranteed.
- Please refer to individual manuals for other manufacturers’ product supporting VIERA Link function.
- About applicable Panasonic product, consult your local Panasonic dealer.

■ VIERA Link (HDMI 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.



1 HDMI terminal

2 HDMI cable

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

■ Available features (HDMI connection)

DIGA Recorder / DVD Player / Blu-ray Disc Player

- Easy playback
 - Power on link
 - Power off link
 - Standby Power Save^{*2}
 - Intelligent Auto Standby^{*2}
 - VIERA Link Control^{*1}
-

HD Video Camera / LUMIX Camera

- Easy playback
 - Power on link
 - Power off link
 - VIERA Link Control^{*1}
-

*1 : For equipment which has “HDAVI Control 2 or later” function.

*2 : For equipment which has “HDAVI Control 4 or later” function.

■ VIERA Link (HDMI and Audio out connections)

- 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 or RCA cable for audio output from the TV.



1 HDMI terminal / DIGITAL AUDIO OUT / AUDIO OUT

2 HDMI cable

3 HD Video Camera / LUMIX Camera with VIERA Link function

4 HDMI cable / Optical digital audio cable* or RCA cable*

5 Player theatre / Blu-ray Disc theatre with VIERA Link function

6 Speaker system

7 Amplifier with VIERA Link function

8 DIGA Recorder with VIERA Link function

*: 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.

■ Available features (HDMI and Audio out connections)

Player theatre

- Easy playback*³
- Power on link
- Power off link
- Intelligent Auto Standby*^{2*4}
- VIERA Link Control*¹

- Speaker Selection

Blu-ray Disc theatre

- Easy playback^{*3}
 - Power on link
 - Power off link
 - Standby Power Save^{*2}
 - Intelligent Auto Standby^{*2*4}
 - VIERA Link Control^{*1}
 - Speaker Selection
-

Amplifier

- Power off link
 - Intelligent Auto Standby^{*2}
 - Speaker Selection
-

*1 : For equipment which has “HDAVI Control 2 or later” function.

*2 : For equipment which has “HDAVI Control 4 or later” function.

*3 : While playing a disc.

*4 : Except for watching a disc.

■ VIERA Link Control of compatible equipment

The following is the 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.

 → [Functions](#) > [VIERA Link “HDAVI Control™”](#) > [VIERA Link Control](#)

- Recorder:
Maximum 3 (DIGA Recorder, etc.)
- Player:
Maximum 3 (DVD Player, Blu-ray Disc Player, HD Video Camera, LUMIX Camera, Digital Camera, Player theatre, Blu-ray Disc theatre, etc.)
- Audio system:
Maximum 1 (Player theatre, Blu-ray Disc theatre, Amplifier, etc.)

- Tuner:
Maximum 4 (Set top box, etc.)

Preparations

- Connect the equipment supporting VIERA Link.
- For VIERA Link connections
 → [Functions > VIERA Link “HDAVI Control™” > Summary of VIERA Link](#)
- Use a fully wired HDMI compliant cable. Non-HDMI-compliant cables cannot be used.
- Set up the connected equipment. Read the manual of the equipment.
- Set [VIERA Link](#) to [On](#) in the Setup Menu.
 → [Settings > Setup > VIERA Link Settings](#)
- Set up the TV. After connection, turn the equipment on and then switch the TV on. Select the HDMI input from [Input Selection](#) with  and make sure that an image is displayed correctly. (This setup should be done each time the following conditions occur.)
 - first time operation
 - adding or reconnecting equipment
 - changing setup

Easy playback

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

Power on Link

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

 → [Settings > Setup > VIERA Link Settings](#)

When the connected equipment starts playback or direct navigator / function menu for the equipment is 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.

 → [Settings > Setup > VIERA Link Settings](#)

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.

 → **Settings > Setup > VIERA Link Settings**

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 start the connected equipment 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.

 → **Settings > Setup > VIERA Link Settings**

When the TV is on, 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. In this case, set to **Off**.

VIERA Link Control

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

1. Display VIERA TOOLS with **VIERA TOOLS**
2. Select **VIERA Link** with ◀ / ▶ and press **OK** to access
3. Select **VIERA Link Control** with ▲ / ▼ and press **OK** to access
4. Select one of the following items with ▲ / ▼ and press **OK** to access
Recorder / Player / Home Cinema / Video Camera / LUMIX / Digital Camera / Other

(The menu of the accessed equipment will be displayed. The input mode will be changed automatically.)

- 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.

5. Follow the on-screen instructions to operate the menu of the equipment

- To display the operation guide

OPTION

(If other manufacturers' product is accessed, Setup / Contents Selection menu may be displayed.)

- Available VIERA remote control buttons depend on the connected equipment.

■ If multiple recorders or players are connected

Each recorder / player is numbered. The number is given from the TV's lower number of HDMI terminal connected to the same type of equipment. For example, when two recorders are connected to HDMI1 and HDMI2, the recorder connected to HDMI1 is displayed as **Recorder1**, and the recorder connected to HDMI2 is displayed as **Recorder2**.

■ 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 the remote control of the connected equipment.

= Note =

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

 → **Functions > VIERA Link "HDAVI Control™" > Summary of VIERA Link**

- Some operations may not be available depending on the equipment. In this case, use the remote control of the connected equipment.
- For details of the operations for the connected equipment, read the manual of the equipment.

Speaker Selection

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

1. Display VIERA TOOLS with **VIERA TOOLS**
2. Select **VIERA Link** with ◀ / ▶ and press **OK** to access
3. Select **Speaker Selection** with ▲ / ▼ and press **OK** to access
4. Select **Home Cinema / TV** with ▲ / ▼ and press **OK** to set

Home Cinema:

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

- The sound of TV speakers is mute. When the equipment is turned off, TV speakers will be activated.
- You can use the Volume Up / Down button and **MUTE**.



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, and then select [Home Cinema](#). If your Amplifier has the “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.

= Note =

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

 → [Functions](#) > [VIERA Link “HDAVI Control™”](#) > [Summary of VIERA Link](#)

Note

- These functions may not work properly depending on the connected equipment.
- Image or sound may not be delivered for the first few seconds when the input mode is switched.
- “HDAVI Control 5” is the newest standard for HDAVI Control compatible equipment. This standard is compatible with conventional HDAVI equipment.
- To confirm the HDAVI Control version of this TV

 → [Support](#) > [Information](#) > [Using Help menu](#)

Child Lock





Using Child Lock

You can lock specific channels / AV input terminals to restrict access to them.

When the locked channel / input is selected, a message appears. Enter the PIN number to watch.

1. Display the menu with **MENU**
2. Select **Setup** > **Child Lock** with \triangle / ∇ and press **OK** to access
3. Enter the PIN number (4 digits) with the numeric buttons



- 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.
4. Select **Child Lock List** with \triangle / ∇ and press **OK** to access
 5. Select the channel / input with \triangle / ∇ and press **OK** to lock
 -  appears when the channel / input is locked.
 - To cancel
 - 1) Select the locked channel / input with \triangle / ∇
 - 2) Press **OK**
 - To lock all
 (green)
 - To cancel all locks
 (yellow)
 - To jump to the head of the next channel / input group
 (blue)

PIN number

You can change the PIN number.

1. Select **Change PIN** with \triangle / ∇ and press **OK** to access
2. Enter a new PIN number twice with the numeric buttons



= Note =

- Setting **Shipping Condition** erases the PIN number and all settings.
- If you have forgotten your changed PIN, input “6969” as the PIN number.

Parental Rating

To watch the Digital TV programme that has rating information on the selected

age, enter the PIN number (depending on the broadcaster).

1. Select **Parental Rating** with \triangle / ∇ and press **OK** to access
2. Select an age for the restriction of programmes with \triangle / ∇ and press **OK** to set

■ Meaning of rating

No Block: Not classified

R: Restricted 18+

AV 15+: Adult strong Violence 15+

MA 15+: Mature Adult 15+

M: Mature

PG: Parental Guidance recommended

G: General

C: Children

P: Pre school

= Note =

- Setting **Shipping Condition** erases the PIN number and all settings.
- If you have forgotten your changed PIN, input “6969” as the PIN number.

Shipping Condition

Shipping Condition

Resets the TV to its original condition (i.e. no channels tuned in).

All settings are reset (channels, picture, sound settings, etc.).

1. Display the menu with **MENU**
2. Select **Setup** > **System Menu** > **Shipping Condition** with \triangle / ∇ and press **OK** to access
3. When the confirmation screen is displayed, select **Yes** with \triangleleft / \triangleright and press **OK** to set
4. Follow the on-screen instructions
 - **Auto Tuning** will automatically start.

= Note =

- To retune TV channels only (e.g. after moving house), set **Auto Tuning**.

 → **Watching** > **Tuning and editing channels** > **Auto Tuning**

Updating the TV Software

Information

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 and the channel has the update information, a notification message is displayed.

- To download

OK

- Press **EXIT** when not downloading

Auto update

You can update new software automatically.

1. Display the menu with **MENU**
2. Select **Setup > System Menu > System Update > Auto Update Search in Standby** with **△ / ▽** and press **OK** to access
3. Select **Immediately / 1 hour after / Off** with **△ / ▽** and press **OK** to set
 - If System Update is performed, the software will be updated (TV functions may be changed). If you do not want to do so, set **Auto Update Search in Standby** to **Off**.
 - Every time you set, the TV automatically performs search in Standby and downloads an update if any software updates are available.
 - The automatic updating is performed under the following conditions:
 - Standby (TV turned off by the remote control)

= Note =

- Download may take a few hours.
- During software download and update, DO NOT switch off the TV.
- A notification message may be a reminder. In this case, schedule information (the date when 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.

Manual update

You can update new software manually.

1. Display the menu with **MENU**
2. Select **Setup > System Menu > System Update > System Update Search Now** with **△ / ▽** and press **OK** to access
3. Searches for an update (for several minutes) and displays a corresponding

message if any

4. Download with 

= Note =

- Download may take a few hours.
- During software download and update, DO NOT switch off the TV.
- To update via the Internet


 → Home network > Network settings > Software Update

Setting characters

Using numeric buttons

You can enter characters for free input items using numeric buttons.

Press the numeric button repeatedly until you reach the desired character.

 : . @ / 1 ! : # + - * _ () “ ‘ % & ? , ; = \$ [] ~ < > { } | ` ^ \

 : a b c 2 A B C

 : d e f 3 D E F

 : g h i 4 G H I

 : j k l 5 J K L


 : m n o 6 M N O

 : p q r s 7 P Q R S

 : t u v 8 T U V

 : w x y z 9 W X Y Z

 : Space 0






- The character is set automatically if you leave for 1 second.
- You can also set the character pressing  or other numeric buttons less than 1 second.
- The characters may vary depending on the input items.

Settings

Setting menu

How to use

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

1. Display the menu with **MENU**
 - Displayed items vary depending on the input signal.
2. Select the menu with \triangle / ∇ and press **OK** to access
3. Select the items with \triangle / ∇ and press **OK** to access
 - Only available items can be selected.
 - You can also access from **eHELP** pressing  (red) at each item. (if available)
- You can select from among alternatives with \triangle / ∇ and press **OK** to set.
- You can adjust using the slide bar with \triangleleft / \triangleright and press **OK** to set.
- You can go to the next screen with **OK**.
- You can enter names or numbers freely for some items.
 - 1) Enter characters one by one with \triangle / ∇ / \triangleleft / \triangleright and press **OK** to set
 - You can set characters using numeric buttons.
 → **Functions > Setting characters > Using numeric buttons**
 - 2) Press **RETURN** to store
- To reset the settings
 - To initialise picture or sound settings only, select **Reset Picture Defaults** in the Picture Menu or **Reset Sound Defaults** in the Sound Menu.
 → **Settings > Picture > Reset Picture Defaults**
 → **Settings > Sound > Reset Sound Defaults**
 - To initialise all settings, select **Shipping Condition**.
 → **Settings > Setup > System Menu**
- To exit the menu screen
EXIT
- To return to the previous screen
RETURN
- To change menu pages



= Note =

- A different menu will be displayed in the mode of Media Player or Network services.



→ Media Player > Using Media Player



→ Home network > DLNA / Web Browser > Using DLNA

■ Using control panel buttons

1. Press and hold INPUT/OK/HOLD for MENU button for 3 seconds to display the menu
2. Select and set with following control panel buttons
 - 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 with INPUT/OK/HOLD for MENU button.

Picture

Viewing Mode

Selects your favourite picture mode for each input.

(Dynamic / Normal / Cinema / True Cinema / Custom)

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, [Backlight](#), [Contrast](#), [Brightness](#), [Colour](#), [Tint](#), [Sharpness](#), [Colour Temperature](#), [Vivid Colour](#), [Adaptive Backlight Control](#), [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.

Basic settings

[Backlight](#), [Contrast](#), [Brightness](#), [Colour](#), [Tint](#), [Sharpness](#)

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

[Colour Temperature](#)

([Cool2](#) / [Cool1](#) / [Normal](#) / [Warm1](#) / [Warm2](#))

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

[Vivid Colour](#)

([On](#) / [Off](#))

Automatically adjusts colours to vivid ones.

[Adaptive Backlight Control](#)

Automatically controls the level of backlight according to the images.

- If the uncomfortable dark images occur, set to [Off](#).

Ambient Sensor

Automatic Brightness Control function

Adjusts picture settings automatically depending on ambient lighting conditions.

([On](#) / [Off](#))

Noise reduction settings

[Noise Reduction](#)

([Auto](#) / [Max](#) / [Mid](#) / [Min](#) / [Off](#))

Reduces unwanted picture noise.

- Not valid when [1080p Pixel Direct](#) is set to [On](#)
-

[MPEG Noise Reduction](#)

([Auto](#) / [Max](#) / [Mid](#) / [Min](#) / [Off](#))

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

- Not valid when [1080p Pixel Direct](#) is set to [On](#)

Advanced Settings

You can adjust and set up the detailed picture settings.



→ [Watching](#) > [For best picture](#) > [Advanced Settings](#)

- To use this function completely, set [Viewing Mode](#) to [True Cinema](#) or [Custom](#).



→ [Watching](#) > [For best picture](#) > [Viewing Mode](#)

Option Settings

Film Cadence Mode

([On](#) / [Off](#))

Improves vertical resolution for movie images.

- This function is available for interlaced signals.

1080p Pixel Direct

([On](#) / [Off](#))

Reproduces the original image quality in detail for 1080p (HDMI) input signal.

HDMI Content Type

([Graphics](#) / [Photos](#) / [Auto](#) / [Off](#))

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

[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, select [Auto Detail Setting](#).
- For HDMI input

HDMI RGB Range

([Auto](#) / [Full](#) / [Normal](#))

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

(On / Off)

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 connection

Screen Settings

16:9 Overscan

(On / Off)

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

(H-Size1 / H-Size2)

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

(On / Off)

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.

Copy Adjustment

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

 → [Watching](#) > [For best picture](#) > [Copy Adjustment](#)

Reset Picture Defaults

Resets the current Picture Viewing Mode to the default settings.

Sound

Mode

Selects your favourite sound mode for each input.

([Standard](#) / [Music](#) / [Speech](#) / [User](#))

[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.

 → [Settings](#) > [Sound](#) > [Basic settings](#)

Basic settings

[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 Δ / ∇ .
 - 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](#) with \triangleleft / \triangleright and press **OK**.
-

Balance

Adjusts volume level of right and left speakers.

Surround

([On](#) / [Off](#))

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

Volume settings

Auto Gain Control

([On](#) / [Off](#))

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

([Up to 30cm](#) / [Over 30cm](#))

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.

Audio Description

Audio Description

([Auto](#) / [Off](#))

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.

- For Digital TV

Volume

Adjusts the volume for Audio Description.

- For Digital TV

Speakers

(On / Off)

Set to **On** to activate the description sound track from TV speakers.

- For Digital TV

Advanced settings

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

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

- Meanings of mode indicators

∞ : STEREO

I : MAIN I

II : SUB II

▽ : MONO

■ Available mode indicator for each type of broadcast

- NICAM - Used in New Zealand, Singapore, Hong Kong, etc.
 - 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.
 - Regular broadcast (Standard Audio): No Indicator / **▼**
 - BILINGUAL or DUAL MONO (MAIN I / SUB II): **I / II**
 - STEREO: **∞ / ▼**

= Note =

- If the stereo signal is poor or the receiving conditions are not optimum or if STEREO:MONO automatic switching occurs, it is recommended to 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 pressing the Sound Selection button.
- DUAL, also known as DUAL MONO or as BILINGUAL is not currently transmitted in some countries.

Digital Audio Preference

(Dolby D / MPEG)

Selects the initial setting for audio tracks.

Dolby D:

The priority is given to Dolby Digital.

MPEG:

The priority is given to MPEG.

- Dolby Digital is the method of coding digital signals developed by the Dolby Laboratories. Apart from stereo (2ch) audio, these signals can also be multi-channel audio.
- MPEG is an audio compression method that compresses audio to the smaller size without any considerable loss of audio quality.
- For Digital TV

SPDIF Selection

(Auto / PCM)

SPDIF is 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 / Network services.

PCM:

Digital output signal is fixed to PCM.

- ARC (Audio Return Channel) is a function of digital audio output using HDMI cable.
- For Digital TV or video contents of Media Player / Network services

 → Media Player > Video mode > Audio output settings

 → Home network > Videos > Audio output settings

HDMI1 / 2 Input

(Digital / Analogue)

Selects to fit the input signal.

 → Watching > External equipment > HDMI features

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.

Network

Network Connection

Sets the network setting to use this TV in your network environment.

 → Home network > Network settings > Network Connection

Network Status

Displays and checks the network status (MAC Address, current network settings, etc.).

 → Home network > Network settings > Network Status

VIERA remote Settings

Sets to control the TV from network equipment (smartphone, etc.).

 → Home network > Network settings > VIERA remote Settings

Network Link Settings

Sets to control the TV with devices connected to the network.

 → [Home network](#) > [Network settings](#) > [Network Link Settings](#)

Other settings

Software Update

Checks for available software updates from the Panasonic website.

 → [Home network](#) > [Network settings](#) > [Software Update](#)

New Software Message

([On](#) / [Off](#))

Selects whether to give a notification message when new software is found via network.

 → [Home network](#) > [Network settings](#) > [New Software Message](#)

Timer

Off Timer

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

([90](#) / [75](#) / [60](#) / [45](#) / [30](#) / [15](#) / [Off](#) ([minutes](#)))

 → [Watching](#) > [Basic](#) > [Off Timer](#)

Clock Settings

Mode

([Auto](#) / [Manual](#))

Selects the clock setting mode for this TV.

- Set to [Auto](#) to adjust the time automatically using the time information from the digital broadcast. Set to [Manual](#) to adjust manually.

Date

Sets the current date manually.

Time

Sets the current time manually.

Daylight Saving Time

Selects time offset from the standard time for Summer Time.

(Auto / Off / + 1/2 hour / + 1 hour)

 → [Watching](#) > [Basic](#) > [Adjusting time](#)

Region Select

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

([NSW](#) / [ACT](#) / [Victoria](#) / [Queensland](#) / [South Australia](#) / [Western Australia](#) / [Northern Territory](#) / [Tasmania](#))

 → [Watching](#) > [Basic](#) > [Adjusting time](#)

Auto Standby

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

([On](#) / [Off](#))

- 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.

([On](#) / [Off](#))

- 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.

USB Device Setup

Safely removes USB device.

Child Lock

Applies access control for channels or inputs to prevent unwanted access.

 → [Functions](#) > [Child Lock](#)

Tuning Menu

Favourites Edit


Creates a list of favourite channels.

 → [Watching](#) > [Tuning and editing channels](#) > [Favourites Edit](#)

- For Digital TV
-

Channel List

Skips unwanted channels or edits channels.

 → [Watching](#) > [Tuning and editing channels](#) > [Channel List](#)

Auto Tuning

Automatically searches for receivable channels.

 → [Watching](#) > [Tuning and editing channels](#) > [Auto Tuning](#)

Manual Tuning

Searches for channels manually.

 → [Watching](#) > [Tuning and editing channels](#) > [Manual Tuning](#)

Update Channel List

Updates the channel list while keeping your settings.

 → [Watching](#) > [Tuning and editing channels](#) > [Update Channel List](#)

- For Digital TV
-

New Channel Message

(On / Off)

Selects whether to give a notification message when a new channel is found.

 → [Watching](#) > [Tuning and editing channels](#) > [New Channel Message](#)

- For Digital TV
-

Signal Condition

Checks the signal condition.

 → [Watching](#) > [Tuning and editing channels](#) > [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.
-

= Note =

The settings in [Tuning Menu](#) are applicable only for the selected TV mode. The menu name varies depending on the TV mode. ([Digital TV Tuning Menu](#) / [Analogue TV Tuning Menu](#))

Display Settings

Teletext

This item is not used for this model.

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](#) or banner.

 → [Watching](#) > [External equipment](#) > [Watching external input](#)

- 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

([10](#) / [9](#) / [8](#) / [7](#) / [6](#) / [5](#) / [4](#) / [3](#) / [2](#) / [1](#) / [0](#) (No display) (seconds))

Sets how long the information banner stays on screen.

VIERA Link Settings

VIERA Link

([On](#) / [Off](#))

Sets to use VIERA Link functions.

 → [Functions](#) > [VIERA Link "HDAVI Control™"](#)

Power on Link

([On](#) / [Off](#))

Sets to use Power on Link functions.

 → [Functions](#) > [VIERA Link "HDAVI Control™"](#) > [Power on Link](#)

Power off Link

([On](#) / [Off](#))

Sets to use Power off Link functions.

 → [Functions](#) > [VIERA Link “HDAVI Control™”](#) > [Power off Link](#)

Standby Power Save

([On](#) / [Off](#))

Controls the connected equipment to reduce power consumption in Standby.

 → [Functions](#) > [VIERA Link “HDAVI Control™”](#) > [Standby Power Save](#)

- This function is available when [VIERA Link](#) is set to [On](#) and [Power off Link](#) is set to [On](#).
-

Intelligent Auto Standby

([On](#) / [Off](#))

Makes non-watched or non-used connected equipment go into Standby mode to reduce the power consumption.

 → [Functions](#) > [VIERA Link “HDAVI Control™”](#) > [Intelligent Auto Standby](#)

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

System Menu

Shipping Condition

Resets all settings to the original condition.

 → [Functions](#) > [Shipping Condition](#)

System Update

Downloads new software to this TV.

 → [Functions](#) > [Updating the TV Software](#)

Licence Menu

Displays the software licence information.

Other Settings

Power Save

([On](#) / [Off](#))

Reduces brightness of the picture to economise on power consumption.

Support

FAQs

Picture

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

If the problem still persists, please contact your local Panasonic dealer for assistance.

Black and white picture

- Check that the output of the external equipment matches the input of the TV.
-

Chaotic image, noisy

- Set [Noise Reduction](#) and [MPEG Noise Reduction](#) in the Picture Menu to remove noise.

 → [Settings > Picture > Noise reduction settings](#)

- Check nearby electrical equipment (car, motorcycle, fluorescent lamp).
-

Blurry or distorted image (no sound or low volume)

- Reset channels.

 → [Watching > Tuning and editing channels > Auto Tuning](#)

White spots or shadow images (noise)

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

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/subpixel failures that still allow the panel to be defined as a good panel. It is not possible to guarantee absolutely no pixel loss.

[Shop](#) appears on screen at switch on

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



→ [Functions](#) > [Shipping Condition](#) > [Shipping Condition](#)

Digital TV

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

If the problem still persists, please contact your local Panasonic dealer for assistance.

Connecting devices such as DTV recorder / PVR / VCR etc. that also require an antenna connection to the digital television

- To maintain optimum antenna signal quality, use an 'F' type TV signal splitter when connecting two or more devices to the same antenna socket.

Hint: Some degradation of the DTV signal may occur if you are connecting the aerial through an external device (e.g. DVD Recorder or Set Top Box). In this case it is better to use a splitter and connect the aerial directly to both devices.

After digital TV tuning, (or re-tuning) some or all DTV channels are missing

- 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.
-

Picture infrequently pixelates on some or all channels

- Electrical interference caused by local or distant lightning 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.

Picture regularly pixelates on some channels, or **No signal** message

- Check **Signal Condition** via TV Setup menu. If **Signal Quality** or **Signal Strength** is red/orange or constantly changing, check aerial/cable/connections. If the 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 the 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 the 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.
- Turn the TV off with Mains power On / Off switch, then turn it On again.

= 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.

- For further reading, please visit at the following website where you can download ‘The Digital TV Antenna Systems for Homes Handbook’

information pdf file:

<http://www.digitalready.gov.au/publications.aspx>

- For your safety, the antenna and cabling should be inspected / installed by a licensed installer that should comply with Australian Standard AS1417.1 for Domestic installations or AS1367 for MATV installations.

Sound

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

If the problem still persists, please contact your local Panasonic dealer for assistance.

No sound is produced

- Is “Sound mute” active? Press **MUTE** to switch sound mute on or off.
 - Is the volume set to the minimum?
-

Sound level is low or sound is distorted

- Sound signal reception may be poor.
- Set **MPX** in the Sound Menu to **Mono**. (Analogue TV)

 → **Settings > Sound > Advanced settings**

HDMI

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

If the problem still persists, please contact your local Panasonic dealer for assistance.

Sound is unusual

- Set the sound setting of the connected equipment to “2ch L.PCM”.
- Check the **HDMI1 / 2 Input** setting in the Sound Menu.



 → **Settings > Sound > Advanced settings**

- If digital sound connection has a problem, select analogue sound connection.

 → **Watching > External equipment > HDMI features**

Pictures from external equipment are unusual when the equipment is

connected via HDMI






- Check the HDMI cable is connected properly.
 → [Watching](#) > [External equipment](#) > [External connection](#)
- Turn the TV and equipment off, then turn them on again.
- Check an input signal from the equipment.
 → [Watching](#) > [External equipment](#) > [Valid input signals](#)
- Use equipment compliant with EIA/CEA-861/861D.

Network



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

If the problem still persists, please contact your local Panasonic dealer for assistance.

Cannot connect to the network

- Check the LAN cable or wireless LAN is connected properly.
 → [Home network](#) > [Network connections](#)
 - Check the connections and settings.
 → [Home network](#) > [Network connections](#)
 → [Home network](#) > [Network settings](#)
 - Check the network equipment and network environment.
 - The router may not be set to issue IP address automatically. If the network administrator prefers to allocate an IP address, set an IP address manually.
 → [Home network](#) > [Network settings](#)
 - The router may be using MAC address filtering (security setting). Confirm the MAC Address of this TV and set the router to use it.
 → [Settings](#) > [Network](#) > [Network Status](#)
-

Cannot select the file during DLNA operations

- Is media server of the connected equipment prepared?
 → [Home network](#) > [DLNA / Web Browser](#) > [Information for DLNA](#)
- Check applicable data format.
 → [Home network](#) > [Technical information](#)
- Check the settings of [Network Link Settings](#)

Other

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

If the problem still persists, please contact your local Panasonic dealer for assistance.

[VIERA Link](#) function does not work and an error message appears

- Check the connections.

 → [Functions](#) > [VIERA Link “HDAVI Control™”](#) > [Summary of VIERA Link](#)

- Turn the connected equipment on and then switch the TV on.

 → [Functions](#) > [VIERA Link “HDAVI Control™”](#)

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.
-

Overcurrent error message appears

- The connected USB device may cause this error. Remove the device and turn the TV off with Mains power On / Off switch, then turn it on again.
 - Check foreign objects are not inside the USB port.
-

An error message appears

- Follow the message’s instructions.
 - If the problem persists, contact your local Panasonic dealer or the authorised service centre.
-

The LCD panel moves slightly when it is pushed with a finger

Clattered sound might be heard

- There is some flexibility around the panel to prevent 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.

Maintenance

Care and Cleaning

First, remove the mains plug from the socket outlet.

■ Display panel, Cabinet, Pedestal

Regular care:

Gently wipe the surfaces of the display panel, cabinet, or pedestal 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 lead to fire or electrical shock.

Information

Using Help menu

1. Display the menu with **MENU**
2. Select **Help** with **△ / ▽** and press **OK** to access

3. Select **TV Self Test / System Information** with \triangle / ∇ and press **OK** to access
-

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.

Optional accessories

Wall-hanging bracket

■ Wall-hanging bracket

Choosing to wall mount the TV shall be done at the owner's risk. Always use a qualified installer to perform a TV wall bracket installation. Incorrect fitting may cause equipment to fall, resulting in injury and product damage. Any such damage will void your warranty.

= Warning =

- When optional accessories such as wall brackets etc. are used, always read and follow the manufactures installation and usage instructions.
- Do not mount the unit directly below ceiling lights (such as spotlights or halogen lights) which typically give off high heat. Doing so may warp or damage plastic cabinet parts.
- When installing wall brackets you must ensure the wall bracket is not electrically grounded to metal wall studs. Always ensure that there are no electrical cables, pipes etc. in the wall before you begin the wall bracket installation.
- To prevent fall and injury, remove the TV from its fixed wall position when it is no longer in use.

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Licence

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