

Panasonic[®]

TC-32ES600C TC-40ES600C TC-49ES600C

*e***HELP**

 English

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 Press the Remote control button

INFO Letters in box : Remote control button

Menu Letters in Cyan : Menus on screen display

 References in this eHELP

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

- This eHELP covers all models, however, some features may not be available on certain models.
- Refer to the paper manual and the actual menu in the TV etc. to confirm your model's features.

Using Home Screen

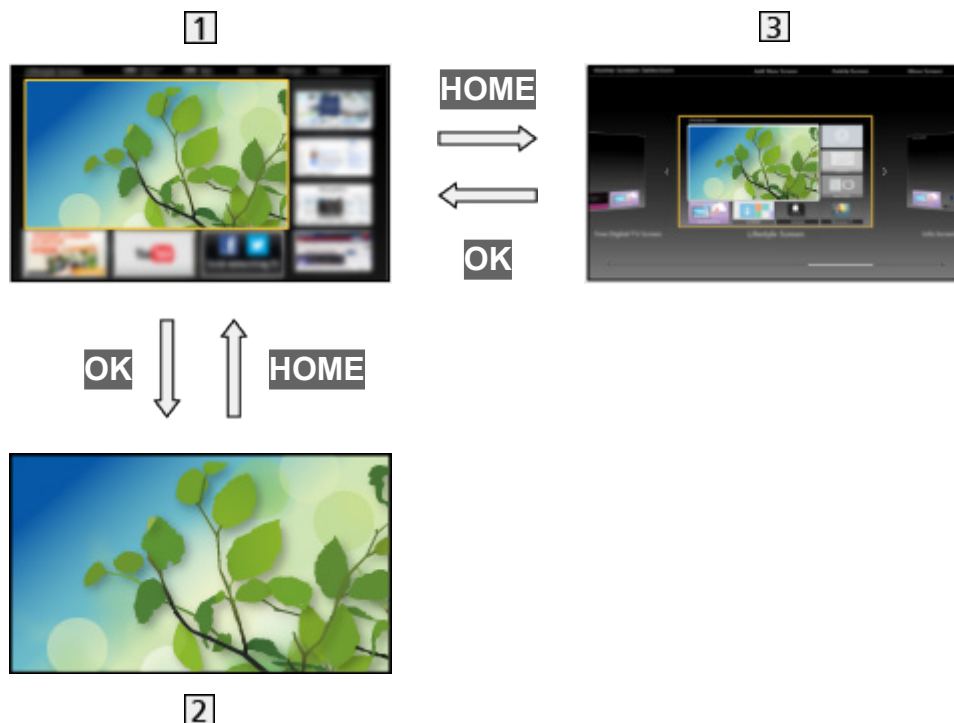
my Home Screen

Features

my Home Screen is a gateway to the TV, applications, and more. It provides easy access to special features such as the Media Player, videos, games, communication tools, etc.

■ Home Screen

(Example)



1 Home Screen (Full Screen TV, Various Home Screen, etc.)

2 Selected content screen (TV, application, etc.)

3 Home Screen Selection

- Choose your preferred Home Screen layout.

How to use

The Home Screen provides access to special features such as the Media Player, TV, Internet content, data services, communication tools, etc.

1. Display Home Screen with **HOME**.

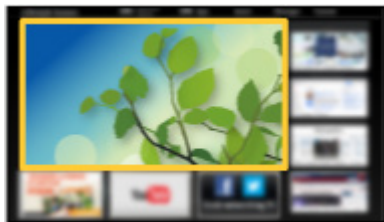


- The last viewed Home Screen is displayed each time the TV is turned on.
- Press **HOME** again to return to Home Screen Selection.
- You can change the default Home Screen when the TV is turned on.

 → Using Home Screen > my Home Screen > Settings

2. Select a Home Screen icon using $\triangle / \nabla / \triangleleft / \triangleright$ and press **OK** to access the feature.

- To watch full-screen TV
 - 1) Select the TV window with $\triangle / \nabla / \triangleleft / \triangleright$



- 2) Press **OK** to watch



- Also refer to **Tutorial** from the tool guide.
Select **Tutorial** from tool guide on the top of the screen and press **OK**.
 - Press **HOME** to display the tool guide, if it is not displayed.

Settings

Select the setup menu from the tool guide on the top of the screen.

(Example)



■ Home Screen Selection

1. Display **Home Screen Selection** with **HOME**.

(Example)



2. Select the type of Home Screen with ◀ / ▶ and press **OK** to set.

● Full Screen TV

Exits the Home Screen and displays the TV picture in full-screen.

- To Keep Full Screen TV

While watching the TV on this full-screen, select **Settings** from tool guide. Then, set the **Power ON Option**.

- Press **HOME** to display the tool guide, if it is not displayed.

● Various Home Screens

You can change the layout of the Home Screen according to your lifestyle and personal preferences.

■ Settings

You can customize Home Screen. For example, you can change the wallpaper, rename the screen, add / delete or set your preferred Home screen, edit applications, etc.

1. Select **Settings** from the tool guide
2. Follow the on-screen instructions

■ Search

You can search for content from various sources.

1. Select **Search** from the tool guide

2. Follow the on-screen instructions

- To use this function fully, you need a broadband network environment. Ensure the network connections and network settings are completed.
- 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 my Home Screen. You can update the software later manually.

Using APPS list

Features

Special features (Internet contents, network contents, Media Player, etc.) can be accessed easily from Apps (applications) list.

■ APPS list



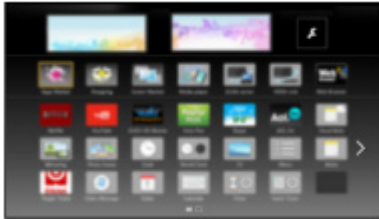
- Apps list is subject to change without notice.

How to use

You can access special features such as Internet content, network content, Media Player, etc. from Apps list (applications list).

1. Display APPS list with **APPS**.

(Example)




- To exit APPS list



2. Select an icon of the features with \triangle / ∇ / \triangleleft / \triangleright and press **OK** to access

Settings

You can set up Apps list manually. (For example, Screen Settings, Account Information, Restriction, etc.)

1. Display APPS list with **APPS**.
2. Select the setup menu on APPS list with $\triangle / \nabla / \triangleleft / \triangleright$ and press  to access



3. Follow the on-screen instructions
 - Setup items may be changed without notice

My App

You can assign your favorite application to **MY APP** of the TV's remote control. After setting, you can easily start the application only by pressing **MY APP**.

- The internet video service is assigned at the factory setting.
- Only one application can be assigned to **MY APP**.

■ To change the application to assign

1. Display the menu with **MENU**.
2. Select **Setup** > **MY APP setting** and press **OK** to access.
3. Select the application to assign and press **OK** to set.
 - To use this function fully, you need a broadband network environment. Ensure the network connections and network settings are completed.

Watching TV

Cable / Satellite / Fiber Optic box

Initial setting

1. Connecting

Select the wiring method connecting your box to the TV, **AV IN** or **Antenna/Cable in**.

- HDMI will provide the best HD picture

2. Change INPUT



Press the **INPUT** button to select the proper connection. Wait for 2 seconds.

- The menu choices vary depending on which input is selected.

3. Power on your Cable, Satellite or Fiber Optic box

Use the box's remote control to change channels.

- If the box is connected to the TV using a COAX cable (Antenna/Cable in), then set the TV channel to CH3 or CH4. Note that the picture will not be in HD.
- CC/SAP is not available when watching TV with a Cable or Satellite box connected via HDMI.
- If you have a High Definition box, ensure that it is outputting 720p or 1080i signal.

Tip: press the TV's **INFO** button to verify.

- Check your box's "aspect" or "format" settings. It should be set to 16:9, Widescreen or Full.
- If the audio volume is too low, check the box's audio settings.
- Contact your Cable or Satellite provider for instructions of any box settings.

Antenna / Cable service without a box

Initial setting

1. Connect coax

Connect a COAX wire from either an Antenna or Basic Cable service to the TV's "ANTENNA/CABLE IN" screw terminal.



1 TV (ANTENNA/CABLE IN)

2 Antenna

2. Scan the channel

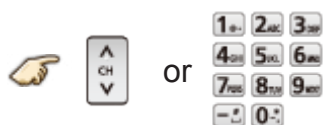
 **MENU** → **Menu** > **Setup** > **ANTENNA/Cable setup** > **ANTENNA/Cable signal, Auto program**

- 1) Select either Cable or Antenna programming source in **ANTENNA/Cable signal**.
- 2) Select **Auto program** and then the appropriate scan mode:
(**All channels** / **Analog only** / **Digital only**)
- 3) Start scanning.

- The tuner setup menu (auto scan, etc.) is only available when INPUT is set to TV.
- If no channels are found by the end of the scan, then check the following:
 - Antenna's position - or availability of Cable service.
 - Cable, Satellite or Fiber Optic services with a box are typically connected to the TV's A/V inputs, preferably HDMI, for best HD picture. In such case, the channel scanning is not needed.


Select channels



■ Select desired channel



- CH buttons are also available on the TV.

■ Select desired digital channel

To directly enter a digital channel number use  button to enter the dash.

(e.g. CH15-1 →    )

Favorite channels

Channel numbers registered in Favorite are displayed on the favorite tune screen. Select the desired broadcast station with the cursor or use the number buttons.

- Favorite channels cannot be set when using Cable or Satellite box

■ Set the Favorite channel

 **OPTION** ⇒ **Options menu** > **Set favorite**


Select the list number using Δ / ∇ and **OK** or **0-9** / **9** / **-** directly to save the displayed channel.

■ Delete a Favorite channel

 **OPTION** ⇒ **Options menu** > **Set favorite**

Select the list number using Δ / ∇ and **OK** to delete.

- To change the page in **Set favorite**


 **FAVORITE** or \triangleleft / \triangleright repeatedly

■ Display a Favorite channel

 **FAVORITE** ⇒ **Favorite channels**

Select the list number using Δ / ∇ and **OK** or **0-9** / **9** / **-** directly.

- To change the page in **Favorite channels**

 **FAVORITE** or \triangleleft / \triangleright repeatedly

Closed Caption

■ Viewing with Closed Caption



Switches the Closed Caption mode.

(**On mute** / **On** / **Off**)

- CC is not available when watching TV with a Cable or Satellite box connected via HDMI.
- Contact your Cable or Satellite operator for instructions on enabling CC with their box.
- The TV's CC button does not operate the Satellite or Cable box's CC function.
- For viewing the CC of digital broadcasting, set the aspect to Full (If viewing with JUST, ZOOM or 4:3, characters might be cut off).
- If the CC is set to On on both the receiver and TV when the signal is 480i (except for the HDMI connection), the CC may overlap on the TV.
- If a digital program is being output in analog format, the CC data will also be output in analog format.
- If the recorder or output monitor is connected to the TV, the CC needs to be set up on the recorder or output monitor.

SAP

■ Listen with SAP (Secondary Audio Programming)

- SAP is not available when watching TV with a Cable or Satellite box connected via HDMI.
- Contact your Cable or Satellite operator for instructions on enabling SAP with their box.
- The TV's **SAP** button does not operate the Satellite or Cable box's **SAP** function.

Select the Audio mode for watching TV.



Digital mode:

Select available audio service when receiving a digital channel.

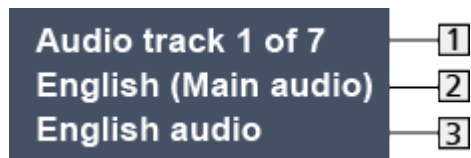
Audio track is automatically selected as **Preferred audio type** and **Preferred SAP language** settings.

 **MENU** → **Menu** > **Sound** > **Preferred audio type**

 **MENU** → **Menu** > **Setup** > **Language** > **Preferred SAP language**

- If you change the audio settings with the **SAP** button, **Preferred SAP language** and **Preferred audio type** settings will not change.

(Example)



1 Track number / Number of tracks

2 Current audio track information

3 Audio service information

Analog mode:

Select the desired Audio mode.

(**Stereo** / **SAP** / **Mono**)

Other

1. Information banner

Displays TV status information. Also, when watching programs via the Antenna/Cable input, INFO will include the channel banner.



Channel / Station identifier / Program title / Closed Caption / SAP / Rating level / Signal resolution / Picture mode / Aspect ratio / Sleep timer remaining time / Clock

2. Options menu

This menu consists of shortcuts to convenient functions.

(Options menu is also available in [Menu](#).)



Channel surf mode:

Specifies favorites or type of channels to view when pressing the channel up/down button.

Set favorite:

Sets favorite channel.

Edit CH caption:

Edits the channel identifier.

Signal meter:

Checks the antenna's signal strength.

- Options menu is only available when the TV is using the Antenna/Cable input, not when using Cable or Satellite box.

Blu-ray, DVD, Game Console, etc.

Connecting and viewing


1. Connect device

Verify that the device is connected to the TV properly and connect to desired terminal. Note which terminal the device is connected to (HDMI 1, HDMI 2, Component or Video)

Component and Composite (Video) in terminals are shared.

Please be careful not to confuse the connection when you use Component or Video.

- For Example of AV connections

 → [Watching TV > Blu-ray, DVD, Game Console, etc. > Example of AV connections.](#)

2. Select Input

- 1) Display **Input select** menu (with the connected equipment turned ON)



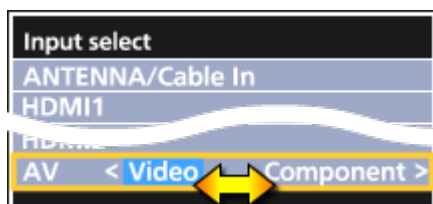
INPUT

- 2) Select the input used in step 1

Select correct input source, using Δ / ∇ and press 

When you connect to Component or Video input, you need to select **Video** or **Component**.

- Press **INPUT** and select **AV: Video** ↔ **Component**.
- Press \triangleleft / \triangleright to choose **Video** or **Component**.



- To edit and customize the TV's input label

 → [All settings > Setup > Display customization](#)

- 3) Operate using your device's remote control

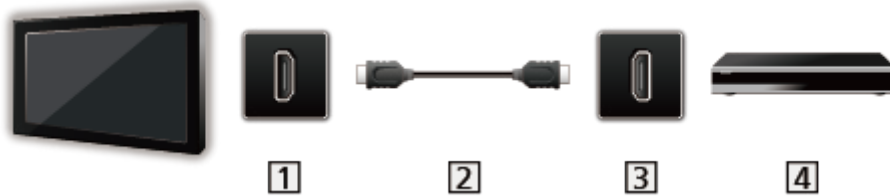
- The menu choices vary depending on which input is selected.

Example of AV connections

External equipment and cables shown are not supplied with this TV.

■ Connecting to the HDMI input (Best for HD viewing)

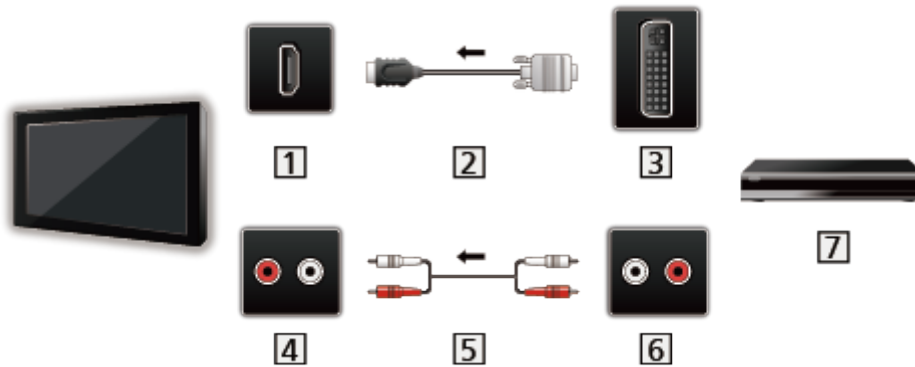
Recommended to use this connection, if the connected equipment has HDMI terminal.



- 1 HDMI IN
- 2 HDMI cable
- 3 HDMI OUT
- 4 AV Equipment (e.g. Blu-ray Disc player)

■ For devices with DVI output

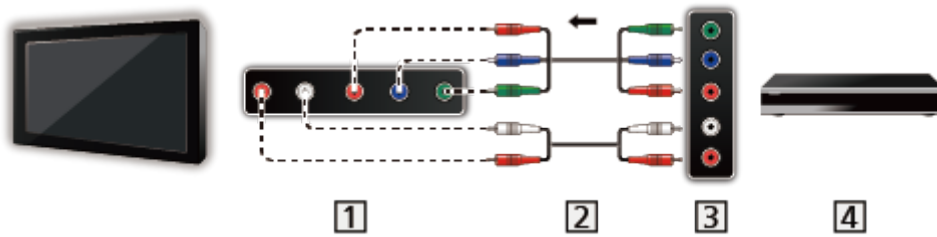
Recommended to use this connection, if the connected equipment has DVI terminal only.



- 1 HDMI IN
- 2 HDMI-DVI Conversion cable
- 3 DVI OUT
- 4 AUDIO IN
- 5 Audio cable
- 6 AUDIO OUT
- 7 AV Equipment (e.g. Blu-ray Disc player)

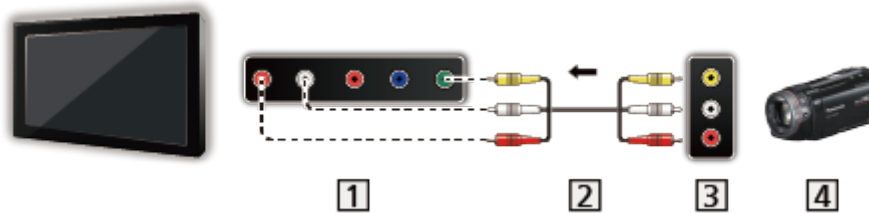
■ Connecting to the COMPONENT input

Recommended to use this connection, if the connected equipment has the Component terminal only.



- 1 COMPONENT IN
- 2 Component cable
- 3 COMPONENT OUT
- 4 AV Equipment (e.g. Blu-ray Disc player)

■ Connecting to the VIDEO input (For SD (Standard Definition) only)



- 1 COMPOSITE IN
- 2 VIDEO cable
- 3 COMPOSITE OUT
- 4 AV Equipment (e.g. Camcorder)

HDMI connection notice

HDMI (High-Definition Multimedia Interface) allows you to enjoy high-definition digital images and high-quality sound by connecting the TV unit and HD devices.

HDMI-compatible equipment*¹ with an HDMI or DVI output terminal, such as a Cable or Satellite box or a DVD player, can be connected to the HDMI connector using an HDMI compliant (fully wired) cable.

- HDMI is the world's first complete digital consumer AV interface complying with a non-compression standard.
- If the external equipment has only a DVI output, connect to the HDMI terminal via a DVI to HDMI adapter cable*².
- When the DVI to HDMI adapter cable is used, connect the audio cable to the audio input terminal.
- Audio settings can be made on the **HDMI in** menu screen. Applicable audio signal sampling frequencies (L.PCM): 48 kHz, 44.1 kHz, 32 kHz

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

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

*² : Inquire at your local digital equipment retailer shop.

HDMI connection caution

- Audio settings can be made on **HDMI audio format** / **HDMI input** in the Sound menu.

 → All settings > Sound

- If the connected device has an aspect adjustment function, set the aspect ratio to “16:9”.
- The HDMI connectors are “type A”.
- The HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- Devices with no digital output terminal may be connected to the input terminal of either “COMPONENT IN”, or “VIDEO IN” to receive analog signals.

Input signal

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

■ Component, HDMI

Input signal	Component	HDMI
480/60i	○	○
480/60p	○	○
720/60p	○	○
1,080/60i	○	○
1,080/60p	○	○
1,080/24p		○

○ : Applicable input signal

For best picture

Picture mode

1. Change picture mode to suit your settings and preferences.

- 1) Select **Picture mode**

 **MENU** → **Menu > Picture > Picture mode**

Select desired menu using Δ / ∇ from menu bar and press 

- 2) Adjust using Δ / ∇

- HDMI will provide the best HD picture

2. Picture mode type

Vivid:

Provides enhanced picture contrast and sharpness for viewing in a well-lit room.

Standard:

Recommended for normal viewing conditions with subdued room lighting.

Home theater:

For watching movies in a darkened room. It provides a soft, film-like picture.

Cinema:

Reproduces the original image quality precisely without any revision.

Allows you to set the professional picture settings in **Pro settings**.

■ Use the mode below to adjust the picture mode in more detail.

Custom:

Customizes each item according to your preference.

Allows you to set the professional picture settings in **Pro settings**.

- Adjust the Picture mode in more detail.

 → **All settings > Picture > Pro settings**

Auto brightness (ECO)

Contrast Automatic Tracking System (C.A.T.S.) adjusts the screen brightness and contrast according to the room's ambient light conditions. This ECO feature automatically dims the brightness of the screen when the room lighting is lowered.

C.A.T.S. features a built-in delay when the lighting conditions change. The adjustment happens gradually.

If you prefer a consistent brightness, disable C.A.T.S. by:

- **Menu > Picture >** scroll down to **C.A.T.S.** and turn it off.


Or

- **Menu > Picture > Picture mode** then select viewing mode such as **Custom**.

Aspect setting

Use this function when the picture has black bars (sides or top/bottom) or to zoom the picture.

Use **FORMAT** button to change the aspect ratio.

 **FORMAT** (to cycle through the aspect modes)

480i, 480p: Full/JUST/4:3/ZOOM

1080p, 1080i, 720p: Full/JUST/4:3/ZOOM/H-FILL/SIDECUT JUST/
SIDECUT ZOOM

- For screen format settings

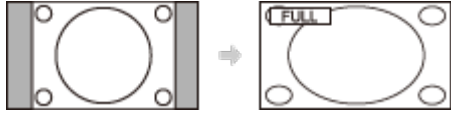
 → [All settings](#) > [Picture](#) > [Screen settings](#)

Screen mode

Adjust the screen mode when the picture has black bars (sides or top/bottom)

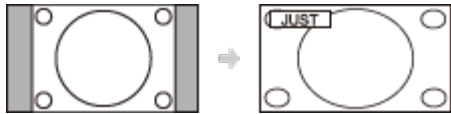
- Mainly for Standard Definition (480i, 480p)

Full



Enlarges the image horizontally to the screen's edges.

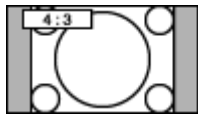
JUST



Justifies the image by stretching it to the four corners on the screen.

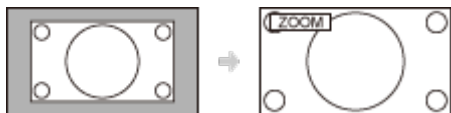
(Recommended for normal TV broadcast)

4:3



Displays the image as original size.

ZOOM



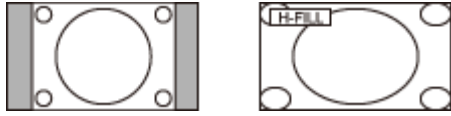
Enlarges the image to the entire screen.

(Recommended for Letterboxed content)

■ Side cut mode for High Definition (1080p, 1080i, 720p)

If the High Definition image has the bars on the both side of the screen, side cut it to enlarge the image to 16:9.

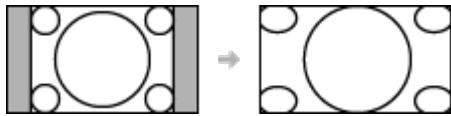
H-FILL



Enlarges the image horizontally to the screen's side edges.

The side edges of the image are cut off.

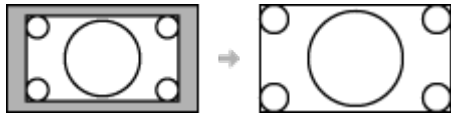
SIDECUT JUST



Justifies the image by stretching it to the four corners on the screen.

The aspect ratio remains the same around the center and enlarges the left and right side of the image.

SIDECUT ZOOM



Enlarges the image to the entire screen.

The side edges of the image are cut off.

Zoom adjustments

If there is a problem with the image position on the screen, vertical image position and size can be adjusted in “ZOOM”

1. Select **Zoom adjustments** in the **Picture** menu.

 **MENU** → **Menu** > **Picture** > **Screen settings** > **Zoom adjustments**

2. Adjust the **V-position** or **V-size**.

V-position:

Vertical position adjustment

Adjust using Δ / ∇ to desired position.



V-size:

Vertical size adjustment

Adjust using \triangleleft / \triangleright to desired size.



- Press  to reset

For best audio

Sound mode

Selects your favorite sound mode.

- The selected mode affects all input signals.

 **MENU** → **Menu** > **Sound** > **Sound mode**

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 equalizer to suit your favorite sound quality.

- For the **User** mode, **Equalizer** will appear on the Sound Menu instead of **Bass** and **Treble**. Select **Equalizer** and adjust the frequency.
- Gray-out when using Home Theater.
- Adjusts the Sound mode in more detail.

 → **All settings** > **Sound**

DIGITAL AUDIO OUT terminal

You can enjoy your Home Theater by connecting a Dolby Audio (Dolby Digital) 5.1 channel decoder and “Multi Channel” amplifier to the DIGITAL AUDIO OUT terminals.

- Depending on your DVD player and DVD-Audio software the copyright protection function may operate and disable optical output.
- When an ATSC channel is selected, the output from the DIGITAL AUDIO OUT jack will be Dolby Audio (Dolby Digital). When an NTSC channel is selected, the output will be PCM.
- When playing the movie on Movie player, when the sound has been recorded in Dolby Audio (Dolby Digital), then the output from the DIGITAL AUDIO OUT terminal will be Dolby Audio (Dolby Digital). When the sound is recorded in other formats, the output will be PCM.

Network services

Connect to network

Network connections

1. Contact your broadband Internet service provider

To obtain broadband Internet service:

- Required speed (effective): at least 1.5 Mbps for SD and 6 Mbps for HD picture quality, respectively.
- Dial-up Internet Access cannot be used.

2. Select wired or wireless connection

If a wired network connection is available near the TV, then using this LAN (Ethernet) connection is recommended.

- Wired LAN connection

Recommended for viewing high quality video at high bit-rates and to avoid interference with 2.4 GHz devices.

- Wireless LAN connection

Use when your network router is not close enough to the TV or when a wired connection is not feasible.

3. Connecting to the network

- There are some connection type.

 → [Network services > Connect to network > Network connection types](#)

Network connection types

■ Wireless connection



- 1 TV (Built-in Wireless LAN)
- 2 Home network (Modem/Wireless router)
- 3 Computer/DLNA Certified media server

- To use and operate only DLNA features, a broadband network service is not needed.

You can simply connect the TV directly to the equipment with a LAN crossover cable.

■ Wired connection (Using Router)



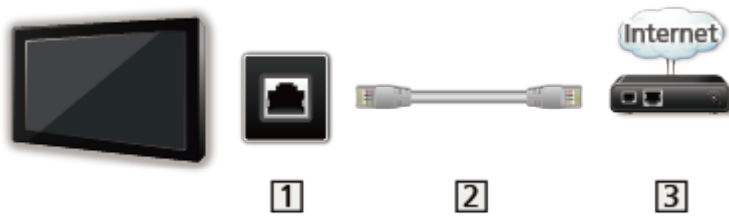
- 1 TV (Ethernet port)
- 2 LAN (Ethernet) cable
- 3 Home network (Modem/Router)
- 4 Computer/DLNA Certified media server

- To use and operate only DLNA features, a broadband network service is not needed.

You can simply connect the TV directly to the equipment with a LAN crossover cable.

■ Wired connection (Directly connected)

If you are not using the network for connecting anything else but the TV, you can just connect the TV directly to the Cable/DSL Ethernet modem with LAN (Ethernet) cable.



- 1 TV (Ethernet port)
- 2 LAN (Ethernet) cable
- 3 Modem

Network settings

Setting the menu

This menu is used for connecting to a broadband service.

1. Display the **Menu** and select **Network**

 **MENU** → **Menu** > **Network**

Select **Network** using \triangle / ∇ from menu bar and press 

2. Select the options and set

(**Network connection/Network status/my Home Cloud settings/
VIERA network name/TV Remote App settings/Network link/
File sharing settings/Mirroring settings/Software update/
New software notice**)

Network connection/Network status

1. Select **Network connection** using \triangle / ∇ and press **OK**

2. Select **Quick setup** to launch **Network connection setup wizard**.

Follow the directions on the screen to complete the network connection.

- Manual settings are also available.

Select **Custom** and select your connection type.

Displays setting menu according to selected connection type.

Set the desired menu and complete the network connection.

3. Displays **Network status**

Select **Try again** and press **OK** to start connection test.

Success

→ Completion message is displayed.

Error

→ Select **Status details/Help** and press **OK** to display solution of the connection error.

Follow the directions on the screen to complete the network settings.

- You can also display **Network status** from **Network** menu.

(**Network** > **Network status**)

4. Exit the screen

Select **Done** and press **OK** to exit from this screen.

my Home Cloud settings

Displays the terms of service.

1. Select **my Home Cloud settings** using \triangle / ∇ and press OK .
2. Select **Notices**.
3. Follow directions on the screen.

VIERA network name

Set your favorite name for this TV.

1. Select **VIERA network name** using \triangle / ∇ and press **OK**
2. Enter favorite name with screen keyboard

TV remote App settings

1. Select **TV Remote App settings** using \triangle / ∇ and press **OK**
2. Select the item and set

■ TV Remote

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

- Set to **On** to enable the settings below.
 1. Select **TV Remote** using \triangle / ∇ and press **OK**
 2. Switch **On** or **Off** with \triangle / ∇

■ Wake on LAN / Wireless LAN

This function allows you to turn on the TV when you use Remote control via IP.

1. Select **Wake on LAN / Wireless LAN** using \triangle / ∇ and press **OK**
2. Switch **Off** or **On** with \triangle / ∇

■ Device to upload contents

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

1. Select **Device to upload contents** using \triangle / ∇ and press **OK**
2. Select device and press **OK**

Network link

Setting for DLNA server.

■ DLNA server

Enables to use this TV as DMS (Digital Media Server) for network devices (DLNA Certified VIERA).

- Set to **On** to enable the settings below.
 1. Select **DLNA server** using Δ / ∇ and press **OK**
 2. Switch **On** or **Off** with Δ / ∇

■ Registration type

Selects the limitation of access to this TV for each device on the home network.

1. Select **Registration type** using Δ / ∇ and press **OK**
2. Switch **Auto** or **Manual** with Δ / ∇

Auto:

All the available device on the home network are accessible. (maximum 16 equipment)

Manual:

Sets the access limitation for each device in the Remote device List.

■ Remote device list

Lists the available device on the home network.

1. Select **Remote device list** using Δ / ∇ and press **OK**
2. Select the desired device with Δ / ∇ and set access limitation.

File sharing settings

■ Network device list

You can select and play movies, photos and music files on Network Devices with Media player.

1. Select [File sharing settings](#)

2. Select [Network device list](#)

Display connected network devices.

3. Select desired network device and press .

4. Registration screen is displayed.

Enter the necessary information to register.

- For registered network device, enter User ID and Password.

5. Press  to register

- Regarding performance, not all servers are guaranteed.
 - Up to 16 devices can be registered.

Mirroring settings

1. Select **Mirroring settings** using \triangle / ∇ and press **OK**.
2. Select the item and set.

■ Easy Mirroring



Enables starting the mirroring function from the other devices (smartphone, etc.) without operating the TV.

1. Select **Easy Mirroring** using \triangle / ∇ and press **OK**.
2. Switch **On** or **Off** with \triangle / ∇ .
 - Not available when the TV is set to **TV as Access Point**.

■ Delete All Pairings

Delete the pairing information for all paired devices.

Software update

1. Select **Software update** using \triangle / ∇ and press 
2. Press  to start the Software update screen
3. Follow directions on the screen
 - Make sure to set this TV's **Clock** before the update starts.

New software notice

Select On/Off to display new software update information when TV is turned on.

1. Select **New software notice** using \triangle / ∇
2. Switch **On** or **Off** with \triangle / ∇

How to use

Operate

Now, you can access and enjoy Network services in various scenes.

- USB keyboard is available. Set **Keyboard type** in **Setup** menu.

 **MENU** → **Menu** > **Setup** > **System** > **Keyboard type**

- You need a broadband environment to use this service.
- Please confirm Network connections and Network settings before using this function.
- Depending on the usage conditions, it may take a while to download all the data.
- Internet services available for this TV are subject to change without notice.
- Not all content is available depending on the country and area.

Home network “DLNA”

Get started

Information

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. It allows you to share photos, videos and music stored in the DLNA Certified media server (for example, PC) connected to your home network, and enjoy the contents on the TV screen.

- Please confirm Network connection and Network settings before using this function.

 → [Network services > Connect to network](#)

■ Media server

You can share the content (Photo, Video, Music, etc.) stored in DLNA Certified media server with your home network system.

- For data information

 → [Support / FAQ > Information > Data information](#)

Photos

Viewing Photos

1. Display APPS list with **APPS**.
2. Display **DLNA server**.

Select **DLNA server** using Δ / ∇ / \triangleleft / \triangleright and press **OK**



3. **Select server** (Available DLNA servers are displayed)

Select desired server using Δ / ∇ from DLNA server list and press **OK**

4. **Select photo** (Thumbnails and contents are displayed)

Select desired content using Δ / ∇ from file list and press **OK**

5. **View**

Follow the Navigation and guide to operate.

- Displayed Navigation and guide will be different depending on data type.

Photo view

■ Thumbnail view



Display [Slideshow settings](#)



Information panel (File name, Date, Size, etc.)

- Information differs depending on selected data.

■ Playback screen



Display/hide Guide and Banner

Photo status:

Displays current photo status (Slideshow/Single view)

Navigation Guide:

Displays available functions.

- In DMR mode, Slideshow is not available.
- In DMR mode, OK/Next/Prev. are not available.

Options menu

In Photo view, some optional menus are available by pressing the **OPTION** button.

1. Display Options menu with **OPTION.**

(Options menu is also available in **Menu**.)

2. Select the item

Select the desired menu using Δ / ∇ and press **OK**

(**Slideshow settings**)

- Available menus are displayed on **Options menu** depending on data condition and situation.

Using Slideshow

1. Display **Slideshow settings**

  → **Slideshow settings**

2. Adjust items

Select the item by Δ / ∇ and adjust the settings using Δ / ∇

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

3. Start Slideshow

After adjusting each setting, select **Start slideshow** with Δ / ∇ and press



 **RETURN** → Stop in mid-cycle

Slideshow settings

Transition effect

(**Off**/Fade in/Dissolve/Motion/Random)

Selects the Transition effect shown between photos.

Display interval

(**Long**/Normal/Short)

Sets the time each image is displayed in the Slideshow mode.

Repeat playback

(**On**/Off)

Turn the Slideshow Repeat (cycle) function on or off.

Soundtrack settings

(**Off**/Music 1/Music 2/Music 3/Music 4/Music 5)

Select the music.

Videos

Viewing Videos

1. Display APPS list with **APPS**.

2. Display **DLNA server**.

Select **DLNA server** using \triangle / ∇ / \triangleleft / \triangleright and press **OK**

3. **Select server** (Available DLNA servers are displayed)

Select desired server using \triangle / ∇ from DLNA server list and press **OK**

4. **Select video** (Thumbnails and contents are displayed)

Select desired content using \triangle / ∇ from file list and press **OK**

5. **Play**

Follow the Navigation and guide to operate.

- Displayed Navigation and guide will be different depending on data type.

Video view

■ Thumbnail view



INFO



Information panel (File name, Date, Size, etc.)

- Information differs depending on selected data.

■ Playback screen



INFO



Display/hide Guide and Banner

Movie banner:

Displays current Video status

(Drive type, Date and time or File name and Elapsed time.)

Navigation Guide:

Displays available functions.

- In DMR mode, Next skip/Prev. skip are not available.

Forward/Reverse:

Five levels of speed from 1 to 5 are available.

- | |
|--|
| <ul style="list-style-type: none">• In DMR mode, Resume playback is not available• Subtitles are not supported in MKV format. |
|--|


Options menu

In Video view, some optional menus are available by pressing the **OPTION** button.

1. Display **Options menu** with **OPTION**.

(Options menu is also available in **Menu**.)

2. Select the item

Select the desired menu using \triangle / ∇ and press 

(**Video options**)

● **Multi audio, Dual Mono**

Selects for selectable sound tracks (if available).

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

● **Subtitle settings**

Sets the subtitle setting.

- This function is available during playback.

Subtitle:

Display / hide subtitles (if available).

Subtitle Text:

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

Subtitle text size:

Selects the font size of subtitles.

Subtitle text color:

Selects the color of subtitles.

Subtitle text position:

Adjusts the position of subtitles on the screen.

Subtitle text delay:

Adjusts the delay time for the subtitles.

● **Repeat playback**

Set play repeat function (**Off/On**)

- Available menus are displayed on **Options menu** depending on the data condition and situation.

Music

Playing Music

1. Display APPS list with **APPS**.

2. Display **DLNA server**.

Select **DLNA server** using $\triangle / \nabla / \triangleleft / \triangleright$ and press **OK**

3. **Select server** (Available DLNA servers are displayed)

Select desired server using \triangle / ∇ from the DLNA server list and press **OK**

4. **Select music** (Thumbnails and contents are displayed)

Select desired content using \triangle / ∇ from file list and press **OK**

5. **Play**

Follow the Navigation and guide to operate.

- Displayed Navigation and guide will be different depending on the data type.

Music view

■ Thumbnail view



INFO



Information panel (File name, Date, Size, etc.)

- Information differs depending on selected data.

■ Playback screen



INFO



Display/hide Guide and Banner

Music Guide:

Displays current Music status

(Artist name/Album name/Song name, Elapsed time)

Navigation Guide:

Displays available functions.

Forward/Reverse:

Five levels of speed from 1 to 5 are available.

- In DMR mode, Next skip/Prev. skip/User BGM settings are not available.

Options menu

In Music view, some optional menus are available by pressing the **OPTION** button.

1. Display Options menu with **OPTION.**

(Options menu is also available in **Menu**.)

2. Select the item

Select the desired menu using \triangle / ∇ and press **OK**

(**Music options**)

● **Repeat playback**

Set play repeat function (**Off/Repeat folder/One song**)

- | |
|---|
| <ul style="list-style-type: none">• Available menus are displayed on Options menu depending on the data condition and situation. |
|---|

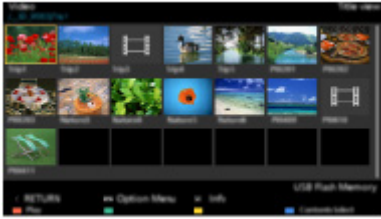
Media player

Get started

Information

You can view still and motion images and play music saved on a USB flash memory.

(Example)



■ USB flash memory

When you use a USB device, insert straight in and pull straight out.



- Media player only supports USB Mass storage class devices.
- Remove USB device safely with **USB device setup**.
(**Setup** > **USB device setup**)

Media warning messages

Message	Meaning
No media. Please insert a USB storage device.	<ul style="list-style-type: none">• The device is not inserted.
No media. Device removed.	<ul style="list-style-type: none">• The device is removed.
No photos/No movies/No music files to play/No playable media	<ul style="list-style-type: none">• The device has no data or this type of data is not supported.
Cannot read file	<ul style="list-style-type: none">• The file is broken or unreadable. The TV does not support the format.

File sharing

■ Viewing from Network device

You can select and play movies, photos, and music files on Network Devices as the USB Devices connected to the TV with Media player.

- For more information about settings, refer to the page below.

 → [Network services](#) > [Network settings](#) > [File sharing settings](#)

Notice

- The picture may not appear correctly on this TV depending on the recording equipment used.
- When there are many files and folders, operation may take time to complete or some files may not be displayed or playable.
- Depending on how you create the files and the structure of folders, the files and folders may not be displayed.
- Partly degraded files might be displayed at a reduced resolution.
- The folder and file names may be different depending on the digital camera used.
- The function cannot display still images that are not DCF formatted (i.e. TIFF, BMP).
- Images imported from a PC must be compatible with EXIF 2.0, 2.1 and 2.2.

Photos


Viewing Photos

1. **Insert Media / Prepare Network devices to share the files.**
2. **Display Media player.**

 **MEDIA PLAYER** → **Media player**

- You can also access from APPS list.

3. **Select the device in **Drive select** (Displays connected drive)**

Select the drive using ◀ / ▶ and press 

- The network device already connected to the TV is also displayed.

 : Enter User ID / Password to access.

 : User ID / Password are already entered.

4. **Select the Photos in **Media select**.**

Select the media using ◀ / ▶ and press 

5. **Select the photo in thumbnail view.**

Select the data using ▲ / ▼ / ◀ / ▶ and press 

- How data is displayed depends on data storage conditions.

6. **View.**

Follow the Navigation and guide to operate.

- Displayed Navigation and guide may differ depending on data type.

- For File sharing/How to register the network devices, refer to the page below.

 → [Network services > Network settings > File sharing settings](#)

Photo view

■ Thumbnail view



Display **Slideshow settings**



Display **Sort**



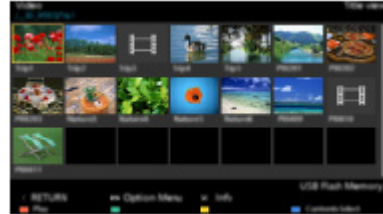
Display **Drive select**



Display **Media select**



Information panel (File name, Date, Size, etc.)



- Information differs depending on selected data.
- Displays function guide for each color button on the bottom of the screen.

■ Playback screen



Display/Hide Guide and Banner

Photo status:

Displays current photo status (Slideshow/Single view)

Navigation Guide:

Displays available functions.

Sort the photos

1. Display Sort select menu

  → Sort select menu (**Folders/Sort by date/Sort by month**)

2. Select the sort type

Select the type using \triangle / ∇ and press 

3. Displayed each screen

Folders:

Ascending order of numeric/alphabetical

Sort by date:

Ascending order of the day

Sort by month:

Ascending order of the month

Options menu

In Photo view, some optional menus are available by pressing the **OPTION** button.

1. Display Options menu with **OPTION.**

(Options menu is also available in **Menu**.)

2. Select the item

Select the desired menu using \triangle / ∇ and press **OK**

(**Slideshow settings/Thumbnails size**)

- Available menus are displayed on **Options menu** depending on the data condition and situation.

Thumbnails size

To change the number of photos on a thumbnail screen at a time.

Using Slideshow

1. Display **Slideshow settings**

  → **Slideshow settings**

2. Adjust items

Select the item by Δ / ∇ and adjust the settings using Δ / ∇

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

3. Start Slideshow

After adjusting each setting, select **Start slideshow** with Δ / ∇ and press



 **RETURN** → Stop in mid-cycle

Slideshow settings

Transition effect

(Off/Fade in/Dissolve/Motion/Random)

Selects the Transition effect shown between photos.

Photo size

(Normal/ZOOM)

Removes the black borders that are added according to the size of the photo being displayed.

Display interval

(Long/Normal/Short)

Sets the time each image is displayed in the Slideshow mode.

Repeat playback

(On/Off)

Turn the Slideshow Repeat (cycle) function on or off.

Soundtrack settings

(Off/Music 1/Music 2/Music 3/Music 4/Music 5/User selected/Auto)

Select the music.

User selected:

Plays the soundtrack registered in the **Soundtrack settings** menu.

Auto:

Plays the songs on the USB flash memory.

Soundtrack settings

You can register the favorite songs as soundtracks.

1. Select **Soundtrack settings** in **Slideshow settings** using Δ / ∇
2. Select **User selected** using Δ / ∇
3. Displays **Soundtrack** popup menu, then select the desired song with Δ / ∇ and press **OK** to register

This song:

Registers current music.

All songs in folder:

Registers the music in a folder.

- Picture settings may not work depending on the slideshow settings.

Videos

Viewing Videos

1. **Insert Media / Prepare Network devices to share the files.**
2. **Display Media player.**

 **MEDIA PLAYER** → **Media player**


- You can also access from APPS list.

3. **Select the device in **Drive select** (Displays connected drive)**


Select the drive using ◀ / ▶ and press 

- The network device already connected to the TV is also displayed.

 : Enter User ID / Password to access.

 : User ID / Password are already entered.

4. **Select the Videos in **Media select**.**

Select the media using ◀ / ▶ and press 

5. **Select the video in thumbnail view.**

Select the data using ▲ / ▼ / ◀ / ▶ and press 

- How data is displayed depends on data storage conditions.

6. **Play.**









Follow the Navigation and guide to operate.

- Displayed Navigation and guide will be different depending on data type.
- For File sharing/How to register the network devices refer to the page below.

 → [Network services > Network settings > File sharing settings](#)

Video view

■ Thumbnail view

-   → Play the video
-   → Display **Drive select**
-   → Display **Media select**
-   → Information panel (File name, Date, Size, etc.)



- Information differs depending on selected data.
- Displays function guide for each color button on the bottom of the screen.

■ Playback screen

-   → Display/Hide Guide and Banner

Movie banner:

Displays current Video status

(Drive type, Date and time or File name and Elapsed time.)

Navigation Guide:

Displays available functions.

Forward/Reverse:

Five levels of speed from 1 to 5 are available.

- Subtitles are not supported in MKV format.

Options menu

In Video view, some optional menus are available by pressing the **OPTION** button.

1. Display Options menu with **OPTION.**

(Options menu is also available in **Menu**.)

2. Select the item

Select the desired menu using \triangle / ∇ and press **OK**

(**Video options**)

● **Multi audio, Dual Mono**

Selects for selectable sound tracks (if available).

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

● **Repeat playback**

Set play repeat function (**Off/On**)

● **Subtitle settings**

Sets the subtitle setting.

- This function is available during playback.

Subtitle:

Display / hide subtitles (if available).

Subtitle Text:

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

Subtitle text size:

Selects the font size of subtitles.

Subtitle text color:

Selects the color of subtitles.

Subtitle text position:

Adjusts the position of subtitles on the screen.

Subtitle text delay:

Adjusts the delay time for the subtitles.

- | |
|---|
| <ul style="list-style-type: none">• Available menus are displayed on Options menu depending on data condition and situation. |
|---|

Music


Playing Music

1. **Insert Media / Prepare Network devices to share the files.**
2. **Display Media player.**

 **MEDIA PLAYER** → **Media player**

- You can also access from APPS list.

3. **Select the device in **Drive select** (Displays connected drive)**

Select the drive using ◀ / ▶ and press .

- The network device already connected to the TV is also displayed.

 : Enter User ID / Password to access.

 : User ID / Password are already entered.

4. **Select the Music in **Media select**.**

Select the media using ◀ / ▶ and press .

5. **Select the music in thumbnail view.**

Select the data using ▲ / ▼ / ◀ / ▶ and press .

- How data is displayed depends on data storage conditions.

6. **Play.**

Follow the Navigation and guide to operate.






- Displayed Navigation and guide will be different depending on data type.

- For File sharing/How to register the network devices refer to the page below.

 → [Network services > Network settings > File sharing settings](#)

Music view

■ Thumbnail view

-   → Play folder
-  → Display **Drive select**
-  → Display **Media select**
-  → Information panel (File name, Date, Size, etc.)



- Information differs depending on selected data.
- Displays function guide for each color button on the bottom of the screen.

■ Playback screen

-   → Display/Hide Guide

Music Guide:

Displays current Music status

(Artist name/Album name/Song name, Elapsed time)

Navigation Guide:

Displays available functions.

Forward/Reverse:

Five levels of speed from 1 to 5 are available.

Options menu

In Music view, some optional menus are available by pressing the **OPTION** button.

1. Display Options menu with **OPTION.**

(Options menu is also available in **Menu**.)

2. Select the item

Select the desired menu using \triangle / ∇ and press **OK**

(**Music options**)

● **Repeat playback**

Set play repeat function (**Off/Repeat folder/One song**)

- | |
|---|
| <ul style="list-style-type: none">• Available menus are displayed on Options menu depending on data condition and situation. |
|---|

Convenience features

Timer


Setting the menu

The TV can automatically turn Off at a designated of time.

1. Display the menu

 **MENU** → **Menu**

2. Select **Timer**

Select desired menu using Δ / ∇ from menu bar and press 

3. Select the item and adjust

Select desired item using Δ / ∇ and adjust with Δ / ∇

- Set Sleep timer.

 → [All settings > Timer > Sleep \(Off timer\)](#)

Parental control

Setting the menu

Locks specified channels or shows to prevent children from watching inappropriate content.

You will be asked to enter your password each time you display the Lock menu.

Set **Custom** in **Mode** to specify **Channel**, **Game** and **Program** settings.

1. Display the menu

 **MENU** → **Menu**

2. Select **Setup** from menu bar

Select desired menu using Δ / ∇ from menu bar and press 

3. Select **Parental control**

Select the menu using Δ / ∇ and press 

4. Select the item and adjust

Select desired item using Δ / ∇ and adjust with Δ / ∇

- The Off rating is independent of other ratings.
- When placing a lock on a specific-age-based-rating level, the Off rating and any other more restrictive ratings will also be blocked.
- The channels will be blocked regardless of the program rating.

- For Parental control settings

 → [All settings > Setup > Parental control](#)

Password setting

You need to enter the password when you access locked channels or inputs.



(Input your 4-digit password)

- If it is your first time entering the password, enter the password twice in order to register it.
- Make a note of your password. Do not forget it. (If you have forgotten your password, consult your local dealer.)
- When you select a locked channel, a message will be displayed that allows you to view the channel after you input your password.

Parental control ratings

“V-chip” technology enables you to lock channels or shows according to standard ratings set by the entertainment industry.

■ U.S. MOVIE RATINGS (MPAA)

NR	Not Rated.
G	All children and General Audience.
PG	Parental Guidance suggested.
PG-13	Parental Guidance for children under 13.
R	Restricted Viewing, parental guidance is suggested for children under 17.
NC-17/X	No one 17 or under allowed.

■ U.S. TV PROGRAMS RATINGS (U. S. TV) - Age-Based Ratings

TV-NR	Not Rated.
TV-Y	All children.
TV-Y7	Directed to children age 7 and older.
TV-G	General Audience.
TV-PG	Parental Guidance suggested.
TV-14	Parents strongly cautioned, parental guidance is suggested for children under 14.
TV-MA	Mature Audience only.

■ CANADIAN ENGLISH RATINGS (C. E. L. R.)

E	Exempt programming.
C	All children.
C8+	Children 8 years and older.
G	General programming.
PG	Parental Guidance.
14+	Viewers 14 and older.
18+	Adult programming.

■ CANADIAN FRENCH RATINGS (C. F. L. R.)

E	Exempt programming.
G	General programming.
8 ans+	Not recommended for young children.
13 ans+	Not recommended for ages under 13.
16 ans+	Not recommended for ages under 16.
18 ans+	Programming restricted to adults.

■ Contents-Based Ratings

FV	Fantasy Violence.
D	Suggestive Dialogue.
L	Strong Language.
S	Sexual situations.
V	Violence.

The V-Chip system used in this set is capable of blocking “NR” programs (non rated, not applicable and none) as per FCC Rules Section 15.120(e) (2). If the option of blocking “NR” programs is chosen “unexpected and possibly confusing results may occur, and you may not receive emergency bulletins or any of the following types of programming:”

- Emergency Bulletins (Such as EAS messages, weather warnings and others)
- Locally originated programming
- News
- Political
- Public Service Announcements
- Religious
- Sports
- Weather

Closed Caption

Setting the menu


The television includes a built-in decoder that is capable of providing a text display of the audio. The program being viewed must be transmitting the Closed Caption (CC) information.

- The settings are “Analog” or “Digital” depending on the broadcaster.

1. Display the menu



2. Select **Setup** from menu bar

Select desired menu using Δ / ∇ from menu bar and press 

3. Select **Closed Caption** in **Display customization**

Select the menu using Δ / ∇ and press 

4. Select the item and adjust

Select desired item using Δ / ∇ and adjust with Δ / ∇

- Some functions will be disabled depending on the type of input signal.
Reset to defaults will be grayed out if no changes are made.

- For Closed Caption settings

 \rightarrow All settings > Setup > Closed Caption

- For Smart TV Internet content CC settings (U.S. only)

“IPTV-CC settings” App is available on the APPS list.

- Some Internet services have their own separate CC settings.

Closed Caption notices

- For viewing the CC of digital broadcasting, set the aspect to **Full** (If viewing with **H-FILL**, **JUST**, **ZOOM** or **4:3**, characters might be cut off).
- The CC can be displayed on the TV only when the receiver (such as a Cable box or satellite receiver) has the CC set to ON within the device itself. Check with your Cable or Satellite provider for instructions. The TV's CC button does not operate the Satellite or Cable box's CC function.
- If the CC is set to On on both the receiver and TV when the signal is 480i (except for the HDMI connection), the CC may overlap on the TV.
- If a digital program is being output in analog format, the CC data will also be output in analog format.
- If the recorder or output monitor is connected to the TV, the CC needs to be set up on the recorder or output monitor.

VIERA Link™ “HDAVI Control™”

Basic feature

Simultaneously control all Panasonic “HDAVI Control” equipped components using one button on the TV remote. Enjoy additional HDMI Inter-Operability with compatible Panasonic products. This TV supports “HDAVI Control 5” function. Connections to equipment (Blu-ray Disc player, DVD recorder, HD Camcorder, Home Theater System, Amplifier, etc.) with HDMI cables enables VIERA Link controls.

■ Available HDAVI Control functions

Version	Operations
HDAVI Control or later	<ul style="list-style-type: none">• Automatic Input Switching• Power on link• Power off link• Speaker control
HDAVI Control 2 or later	<ul style="list-style-type: none">• VIERA Link control only with the TV’s remote control• Unselected device auto off (for available equipment only)
HDAVI Control 3 or later	<ul style="list-style-type: none">• Automatic lip-sync function
HDAVI Control 5	<ul style="list-style-type: none">• Audio Return Channel <p>Audio Return Channel (ARC) is a function that enables digital sound signals to be sent via an HDMI cable back from the TV to a connected audio device.</p>

Connecting note

■ When adding new equipment...

When adding new equipment, reconnecting equipment or changing the setup after the connection, turn the equipment on and then switch the TV on. Set the input mode to correct HDMI terminal, and make sure that the image is displayed correctly.

VIERA Link “HDAVI Control”, is based on the control functions provided by HDMI and industry standard known as HDMI CEC (Consumer Electronics Control), with unique function that we have developed and added. As such, its operation with other manufacturers’ equipment that supports HDMI CEC cannot be guaranteed. Please refer to the individual manuals for other manufacturers’ equipment supporting the VIERA Link function.

■ HDMI cable

This function needs an HDMI compliant (fully wired) cable. Non-HDMI-compliant cables cannot be utilized.

- For more details on the external equipment’s connections, please refer to the operating manual for the equipment.

HDMI connections to some Panasonic equipment allow you to interface automatically.

- This function may not work normally depending on the equipment condition.
- The equipment can be operated by other remote controls with this function on, even if the TV is in Standby mode.
- Image or sound may not be available for the first few seconds when playback starts.
- Image or sound may not be available for the first few seconds when input mode is switched.
- Volume function will be displayed when adjusting the volume of the equipment.
- If you connect equipment that has “HDAVI Control 2” or later function to the TV with an HDMI cable, the sound from the DIGITAL AUDIO OUT terminal can be output as multi-channel surround.
- “HDAVI Control 5” is the newest standard for the HDAVI Control compatible equipment.

This standard is compatible with the conventional HDAVI equipment.

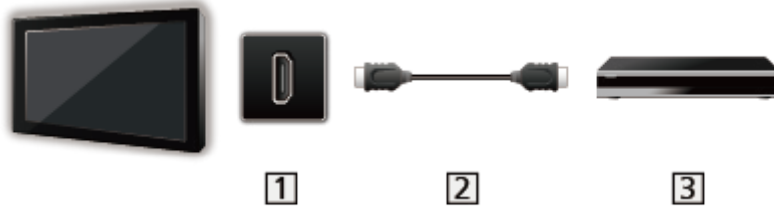
If the connection (or setting) of equipment compatible with HDAVI control is changed, switch the power of this unit Off and On again while the power of all equipment is On (so that the unit can correctly recognize the connected equipment) and check that the connected equipment playback operates.

VIERA Link connections

■ Connecting Blu-ray Disc player/DVD Recorder

Connect the HDMI terminal of this TV to the DVD recorder with VIERA Link function using a fully wired HDMI cable.

- You can use any HDMI terminal on this TV.



- 1 TV (HDMI)
- 2 HDMI cable
- 3 DVD recorder with VIERA Link function

■ Connecting Home theater system/AV amp

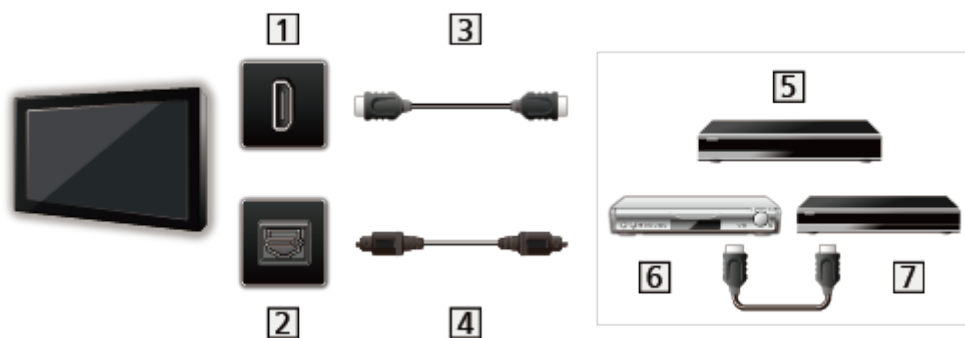
HDMI and Audio connection.

Connect the HDMI terminal and DIGITAL AUDIO OUT to Home Theater System/AV amp with VIERA Link function using each fully wired HDMI cable and Optical audio cable.

- HDMI 2 is recommended.
- No optical cable is necessary when connecting a Home Theater supporting “HDAVI control 5” with an HDMI cable.

Audio will be supported via ARC (Audio Return Channel)

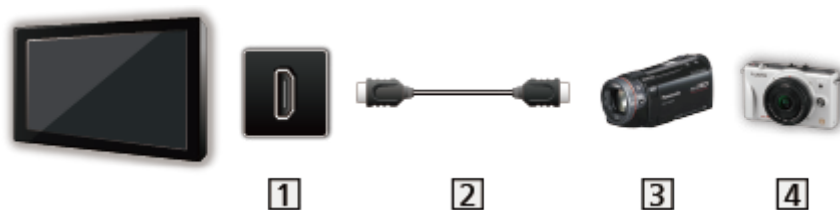
- One AV amp and one Blu-ray Disc player/DVD recorder can be operated with this unit by connecting with an HDMI cable.



- 1 TV (HDMI)
- 2 TV (DIGITAL AUDIO OUT)
- 3 HDMI cable
- 4 Optical cable
- 5 Home theater system with VIERA Link function
- 6 AV amp with VIERA Link function
- 7 DVD recorder with VIERA Link function

■ Connecting an HD Camcorder/Digital camera

Press **INPUT** and select an available HDMI terminal, then connect the HD camcorder/Digital camera with VIERA Link function to this input with fully wired HDMI/mini HDMI cable.



- 1 TV (HDMI)
- 2 HDMI / mini HDMI cable
- 3 HD Camcorder with VIERA Link function
- 4 LUMIX with VIERA Link function

- Individual HDMI equipment may require additional menu settings specific to each model. Please refer to their respective manuals.
- When audio from other equipment connected to this unit via the HDMI is output using “DIGITAL AUDIO OUT” of this unit, the system switches to 2CH audio.
(When connecting to an AV amp via HDMI, you can enjoy higher sound quality.)
- Some devices use Mini-HDMI terminal. HDMI (type A) to Mini-HDMI (type C) cable or adapter should be used.

VIERA Link settings

To use all VIERA Link functions: After everything is connected, set **VIERA Link** to **On** in VIERA Link settings menu.

Some features are disabled depending on the “HDAVI Control” version of the equipment.

1. Display the menu

 **MENU** → **Menu** > **Setup**

2. Select **VIERA Link settings**

Select **VIERA Link settings** with \triangle / ∇ and press **OK**.

3. Select **VIERA Link** and set to **On**

Select **VIERA Link** and press **OK** then select **On** with \triangle / ∇

4. Select and set other **VIERA Link settings**

(**Power on link/Power off link/Unselected device auto off**)

VIERA Link settings feature

■ Automatic Input Switching

When using a Blu-ray Disc player, DVD player/recorder or Home theater system, the TV will automatically change to the appropriate input, when playback begins on one of those devices.

- For a Home Theater System the speakers automatically switch to the theater system.

■ Power on link

Yes:

The TV is turned on automatically and switches to the appropriate HDMI input whenever VIERA Link compatible equipment is initially turned on and the Play mode is selected.

■ Power off link

When **Yes** is selected and the TV is turned off, all connected VIERA Link compatible equipment is also automatically turned off.

- A Panasonic DVD Recorder will not turn off if it is still in Rec mode.
- The TV remains on even if the VIERA Link compatible equipment is turned off.

■ Unselected device auto off

On:

The connected VIERA Link compatible equipment will be turned off automatically when not in use under these conditions.

- The connected equipment has “HDAVI Control 2 or later” (for available equipment only)

(Example)

- When the input is switched from HDMI.

■ Automatic lip-sync function

Minimizes time delay between the picture and audio when you connect to a Panasonic theater system or Amplifier.

VIERA Link

Some features are disabled depending on the “HDAVI Control” version of the equipment.

1. Display the **VIERA Link** menu

 **APPS** → **APPS list**

2. Select the item and set (**VIERA Link control/Speaker output/Back to TV**)

Select the desired menu using Δ / ∇ and set with Δ / ∇

- Items in the VIERA Link menu may be grayed out if no compatible equipment is connected (must be HDAVI Control 2 or later) or if the equipment has not initiated a connection with the TV. In that case, switch the equipment's power Off and On while the TV is On.

VIERA Link menu

■ Speaker control

You can select the Home theater or TV speakers for audio output. Control the theater speakers with the TV remote control. This function is available only when a Panasonic Amplifier or Player theater is connected.

1. Select **Speaker output** using Δ / ∇
2. Select **Home theater** or **TV** with Δ / ∇

Home theater:

Adjustment for the equipment

VOL(+/-) and **MUTE** buttons are available

- The sound of the TV is muted.
- When the equipment is turned off, the TV speakers take over.
- Selecting **Home theater** turns the equipment on automatically if it is in Standby mode.

TV:

The TV speakers are on.

■ VIERA Link control only with the TV's remote control

1. Select **VIERA Link control** using Δ / ∇
2. Select the desired equipment with Δ / ∇

(You can select available items only.)

(**Recorder/Home theater/Player/Camcorder/LUMIX/Other**)

- If there is more than one equipment item, a number after the name indicates the number of items. (e.g. Recorder 1/Recorder 2/Recorder 3...)
 - The number of equipment items that can be connected is three for recorders, and a total of three for Home Theater/Player/Camcorder/LUMIX/Others.
3. Operate the equipment with the TV remote control, pointing it at the TV

- There is a limit to the number of HDMI connectors.
- To operate the equipment, read the manual for the equipment.
- For available TV remote control buttons, whether or not an operation is available depends on the connected equipment.

■ Back to TV

Returns the input selection of the device selected with the VIERA Link Control to the TV input.

1. Select **Back to TV** using Δ / ∇ and press 

Control by Smartphone, etc.

Smartphone remote

You can use your smartphone as the TV's remote control.

1. Select **Network**

 **MENU** → **Menu** > **Network**

2. Select **TV Remote** in **TV Remote App settings**

Select desired menu using Δ / ∇

3. Set the item

Switch to **On** using Δ / ∇

- This function is subject to change without notice.

For more information

 → [Support / FAQ > Information > Detailed information](#)

Turn on the TV via IP

This function enables you to turn on the TV with control command by the PC etc.

- When you need to turn on the TV using this system, set **Wake on LAN / Wireless LAN** to **On**.

 **MENU** → **Menu** > **Network** > **TV Remote App settings** > **Wake on LAN / Wireless LAN**

Mirroring

You can watch and display images of other devices (smartphone, etc.) on the TV screen using a mirroring function.



1 Smartphone, etc.

2 TV

1. Display APPS list with **APPS**.

2. Select **Mirroring** and press **OK**.

3. Follow the on-screen instructions.

- Pairing information of the device (smartphone, etc.) is registered once you use this function.

■ Easy Mirroring

You can also start the mirroring function from the other devices (smartphone, etc.) when **Easy Mirroring** is set to **On**.

 → [All settings > Network > Network settings](#)

- You cannot use Easy mirroring function while the TV is set to **TV as Access Point**.

- This function may be available with the other devices (smartphone, etc.) supporting the mirroring function. For details, refer to the operating instructions of the device.

Using USB Keyboard

Keyboard

Keyboards requiring the drivers are not supported.

■ To select the language type for the keyboard

 **MENU** → **Menu** > **Setup** > **System** > **Keyboard type**

■ Key map

Some of the keys of USB keyboards may correspond to the operation of the remote control.

Keyboard	Remote Control
↑ / ↓ / ← / →	△ / ▽ / ◀ / ▶
Enter	OK
Back Space	RETURN
ESC	EXIT
0 - 9	Numeric buttons
F1	HOME
F2	APPS
F3	MENU
F4	INPUT
F5 / F6	Channel down/Channel up
F7 / F8	Volume down/Volume up
F9 / F10 / F11 / F12	Colored buttons

All settings

How to use

Setting the menu

Various menus allow you to set the picture, sound, and other functions.

- Some menus are grayed out depending on the input signal or condition.
(e.g. **Zoom adjustments** will be grayed out if the aspect is not set to **ZOOM**.)

1. Display the menu

 **MENU** → **Menu**

2. Select the menu from menu bar

Select desired menu using \triangle / ∇ from menu bar and press 

3. Select the item and adjust

Select desired item using \triangle / ∇

- You can also access to desired menu using \triangleleft / \triangleright
 - Adjust the item: Using \triangleleft / \triangleright
 - Set/change the item: Using \triangle / ∇

Picture

Basic settings

Adjust the image or picture quality.

 **MENU** → **Menu** > **Picture**

Picture mode

(**Vivid/Standard/Home theater/Cinema/Custom**)

Select from preset picture modes for optimal viewing. Mode is saved separately for each input.

- This function can be memorized respectively for input or TV mode.
-

Back light

Adjusts backlight's luminance (light intensity).

Contrast, Brightness, Color, Tint, Sharpness

Adjusts the color, brightness, etc. for each picture mode to suit your preference.

- Display range
 - **Contrast/Color/Sharpness**: 0 - 100
 - **Brightness/Tint**: -50 - +50
-

Color temp.

Selects color temperature preference, from “cool” (bluish) to “warm” (reddish) or normal.

Vivid color

(**On/Off**)

Enhances green and blue color reproduction, especially outdoor scenes.

Adaptive backlight control

Adjusts backlight level to make dark areas of the picture appear more natural. If the picture appears unnatural, try setting it **Off**.

C.A.T.S.

(On/Off)

Contrast Automatic Tracking System (C.A.T.S.) adjusts the screen brightness and contrast according to the room's ambient light conditions.

This ECO feature automatically dims the brightness of the screen when the room lighting is lowered. C.A.T.S. features a built-in delay when the lighting conditions change. The adjustment happens gradually.

If you prefer a consistent brightness, disable C.A.T.S. by:

Menu > Picture > scroll down to **C.A.T.S.** and turn it off.

Or

Menu > Picture > Picture mode then select viewing mode such as **Custom**.

Video NR

(Auto/High/Mid/Low/Off)

Reduces noise, commonly called snow. Leave it off when receiving a strong signal.

- Gray-out conditions:
 - Pure direct menu is set to **On**.
-

MPEG NR

(Strong/Medium/Weak/Off)

Reduces noise of specific digital signals of DVD, Cable box, etc.

- Gray-out conditions:
 - Pure direct menu is set to **On**.
 - Gray-out conditions:
 - Pure direct menu is set to **On**.
-

Clear motion

(On/Off)

Makes the moving pictures clearer by controlling the level of backlight.

- Gray-out conditions:
 - Photo content

Pro settings

Adjusts the picture mode in more detail.

Set **Picture mode** to **Custom/Cinema** first.

 **MENU** → **Menu** > **Picture** > **Pro settings**

W/B detail adjustment

W/B high R, G, B (+/-50)

Adjusts the white balance for light red/green/blue areas.

W/B low R, G, B (+/-50)

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

Reset to defaults

Resets **W/B detail adjustment** to factory defaults settings.

Gamma detail adjustment

Gamma

Gamma correction. Adjusts the intermediate brightness of the image.

Reset to defaults

Resets **Gamma detail adjustment** to factory defaults settings.

Reset to defaults

Resets all **Pro settings** adjustments to factory default settings.

Advanced picture

 **MENU** → **Menu** > **Picture** > **Advanced picture**

3:2 pulldown

(Auto/On/Off)

Reduces judder in film-based content by transforming 24 fps to 30 fps (non-HDMI).

- Available for interlaced content (480i or 1080i) via analog source.
-

Black level

(Light/Dark)

Select **Dark** when details are washed out in dark areas of picture.

3D Y/C filter

(On/Off)

Minimizes rough edges (dot crawl) in the picture from a composite source.

Screen settings

 **MENU** → **Menu** > **Picture** > **Screen settings**

Screen format

SD signal:

Full / JUST / 4:3 / ZOOM

HD signal:

Full / JUST / 4:3 / ZOOM / H-FILL / SIDECUT JUST / SIDECUT ZOOM

Changes the format (aspect ratio). Lets you choose the aspect depending on the format of received signal.

Overscan

(On/Off)

Selects the screen area displaying the image for FULL 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 is generated on the edge of the screen.

H size

Adjusts the horizontal display range to reduce noise of both side edges of an image.

- Gray-out conditions:
 - Photo content
-

Zoom adjustments

Adjusts vertical position and size when FORMAT setting is set to **JUST** or **ZOOM**.

JUST:

V-size max is 3

ZOOM:

V-size max is 15

Screen display

(On/Off)

Turns the screen off when you select.

- The sound is active even if the screen turns off.
- Press any buttons to turn the screen on.
- This feature is effective in reducing power consumption when listening to the sounds without watching the TV screen.

Other settings

Reset to defaults

Resets all picture adjustments to factory default settings except for the advanced settings.

Sound

Basic settings

Adjusts audio quality.

 **MENU** → **Menu** > **Sound**

Sound mode

(**Standard/Music/Speech/User**)

Selects your favorite sound mode.

- The selected mode affects all input signals.

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 equalizer to suit your favorite sound quality.

- For the **User** mode, **Equalizer** will appear on the Sound Menu instead of **Bass** and **Treble**. Select **Equalizer** and adjust the frequency.

- Gray-out when using the Home Theater.
-

Bass

Increases or decreases the bass response.

- Gray-out if **Sound mode** is set to **User**.
 - Gray-out when using Home Theater.
-

Treble


Increases or decreases the treble response.

- Gray-out if **Sound mode** is set to **User**.
 - Gray-out when using Home Theater.
-

Equalizer

(150Hz/250Hz/500Hz/1kHz/2kHz/4kHz/8kHz/12kHz/Reset to defaults)

Adjusts the frequency level to suit your favorite sound quality.

- This function is available when **Sound mode** is set to **User**.
 - Select the frequency and change the frequency level by using the cursor button.
 - To enhance the bass sound, raise the level of the lower frequency. To enhance the treble sound, raise the level of the higher frequency.
 - To reset the levels of each frequency to the default settings, select **Reset to defaults** by using the cursor button, and then press the  button.
 - Gray-out when using Home Theater.
-

Balance

Emphasizes the left/right speaker volume.

- Gray-out when using Home Theater.

Advanced settings

 **MENU** ➔ **Menu** > **Sound**

Surround

(On/Off)

Enhances audio L/R response when listening to stereo.

Ideal for music and action movies.

- Gray-out when using Home Theater.
-

TV speakers

(On/Off)

Enables the TV's built-in speakers.

Switch to **Off** when using external speakers.

A.I. sound

(On/Off)

Equalizes overall volume levels across all channels and external inputs.

- Gray-out when using Home Theater.
-

Volume leveler

Minimizes volume disparity after switching to external inputs.

- Gray-out when using Home Theater.
-

Preferred audio type

(Main Audio/Hearing Impaired/Visually Impaired)

Allows setting of the accessible audio format when its broadcast and the language setting matches.

Digital audio out selection

(Auto/PCM)

Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT and HDMI 2 (ARC function) terminals.

Auto:

Dolby Audio (Dolby Digital, Dolby Digital Plus) and HE-AAC multi-channel are output as Dolby Digital Bitstream. MPEG is output as PCM.

PCM:

Digital output signal is fixed to PCM.

- For TV mode, video content
- ARC (Audio Return Channel):

A function of digital audio output using HDMI cable.

HDMI audio format

(Auto/Bitstream/PCM)

Selects valid audio format when HDMI viewing.

Auto:

When the TV speakers are active, audio format is fixed to PCM. When the sound is delivered from theater speakers, audio format is fixed to Bitstream.

Bitstream:

Dolby Audio (Dolby Digital, Dolby Digital Plus) is output as Dolby Audio Bitstream. Other digital audio output signals are output as PCM.

PCM:

Digital audio signal is output as PCM.

HDMI input

(Digital/Analog)

The default setting is **Digital** for the HDMI connection. (Digital input signal)

Select audio input terminal when a DVI cable is connected along with an analog audio input signal.

Reset to defaults

Resets all Audio adjustments to factory default settings.

- Gray-out when using Home Theater.

Network

Network settings

 **MENU** → **Menu** > **Network**

Network connection

Connects the TV to the home network. Searches for wireless network or establishes wired connection.

Follow the directions on the screen to complete the network settings.

Network status

Tests the connection between the TV to the local router and the Internet.

Displays Current settings and status screen. (Network type/Wireless settings/MAC address/IP Address, etc.)

- Displayed items differ depending on the type of network connection.
-

my Home Cloud settings

Notices:

Displays the terms of service.

VIERA network name

Set your favorite name for this TV.

TV Remote App settings

Sets a network-based remote control.

TV Remote:

(On/Off)

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

- Set to **On** to enable the settings below.

Wake on LAN / Wireless LAN:

(On/Off)

Turns on the TV via Ethernet using a wake-up message sent from a device within the home network.

Device to upload contents:

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

Network link

Settings for DLNA Server.

DLNA server:

(On/Off)

Enables to use this TV as DMS for network devices (DLNA Certified VIERA)

- Set to **On** to enable the settings below.

Registration type:

(Auto/Manual)

Selects the limitation of access to this TV for each device on the home network.

Auto:

All the available devices on the home network are accessible.
(maximum 16 equipment)

Manual:

Sets the access limitation for each device in the Remote device List.

Remote device list

Lists the available device on the home network.

File sharing settings

Network device list:

You can select and play movies, photos and music files on Network Devices as USB Devices connected to the TV with Media player.

Mirroring settings

You can set the items for mirroring function.

Easy Mirroring:

(On/Off)

Enables starting the mirroring function from the other devices (smartphone, etc.) without operating the TV.

- To deactivate wireless, set **Easy Mirroring** to **Off** and confirm the network connection type is set to **Ethernet cable**.



→ [Network services > Network settings > Network connection/Network status](#)

- Not available when the TV is set to **TV as Access Point**.

Delete All Pairings:

Delete the pairing information for all paired devices.

Software update

Check if software (firmware) update for the TV is available.

Press to start the Software update screen. Follow directions on the screen.

- Set **Clock** first.
-

New software notice

(On/Off)

Selects whether or not to display a notification message when a software (firmware) update is available for download. Follow the directions on the screen to download.

Timer

Sleep (Off timer)

 **MENU** → **Menu** > **Timer** > **Sleep**

Sleep

(**90 minutes/60 minutes/30 minutes/15 minutes/Off**)

Selects how long the TV stays on before it automatically turns off.

Clock settings

 **MENU** ➔ **Menu** > **Timer** > **Clock**

Mode

(**Auto/Manual**)

Sets the date and time manually or automatically via an Internet connection.

Date, Time

Sets current date or time.

Time zone

(**EST/CST/MST/PST/AKST/HST/NST/AST**)

Selects your time zone, to enable correct automatic date and time settings.

DST

(**On/Off**)

Selects if Daylight Saving Time is currently observed.

Auto turn off settings

 **MENU** ➔ **Menu** > **Timer**

No activity for 4 hours

(Power TV off/Stay on)

To conserve energy, the TV automatically turns off when no operation of remote and side panel key continues for more than 4 hours.

- Changing the default configuration may increase Annual Power Consumption.

No signal for 10 minutes

(Power TV off/Stay on)

To conserve energy, the TV automatically turns off when NO SIGNAL and NO OPERATION continue for more than 10 minutes.

Setup

MY APP setting

 **MENU** → **Menu** > **Setup** > **MY APP setting**

MY APP setting

Assigns your favorite application to MY APP of the TV's remote control.

USB device setup

 **MENU** ➔ **Menu** > **Setup** > **USB device setup**

Remove USB device safely to prevent the damage of the data or device.

Parental control

 **MENU** → **Menu** > **Setup** > **Parental control**

Change password

Creates a new password. Input the new 4-digit password twice.

Mode

(**Custom/All/Off**)

Locks (**All**) or Unlocks (**Off**) all channels, programs or inputs. For **Custom**, locks specified inputs of **Channel**, **Game** and **Program**.

Set **Custom** in **Mode** to specify **Channel**, **Game** and **Program** settings.

Channel

These channels will be blocked regardless of the program ratings.

Mode:

(**Custom/All/Off**)

Locks (**All**) or Unlocks (**Off**) all channels. For **Custom**, locks specified channels. Set **Channel 1** - **Channel 7**.

Channel 1-7:

Designates channel number to be blocked at any time, regardless of its broadcast content.

Game

(**On/Off**)

Restricts access to channel 3, channel 4 and all the TV's inputs.

Program

Prohibits viewing of TV content based on the rating provided by the broadcasters.

Mode

(On/Off)

Sets program lock status. "V-chip" technology enables restricted shows to lock according to TV ratings. Sets each rating level (MPAA, U.S.TV, C.E.L.R., C.F.L.R.).

MPAA:

Selects U.S. movie ratings to lock.

U.S.TV:

U.S. TV program ratings.

C.E.L.R.:

Canadian English ratings.

C.F.L.R.:

Canadian French ratings.

DRRT:

This television is designed to support the "Downloadable U.S. Region Rating System" when available. (Currently available only in U.S.)

ANTENNA/Cable setup

 **MENU** → **Menu** > **Setup** > **ANTENNA/Cable setup**

ANTENNA/Cable signal

(**Cable/Antenna**)

Selects signal source connected directly to the ANTENNA/Cable In terminal.

- When using a Cable or Satellite box, it is recommended to connect the box to an AV IN terminal and skip this setting.

Channel surf mode

(**All/Favorite/Analog only/Digital only**)

Sets the mode to select the channel with the Channel up/down button.

Favorite:

Only channels registered as FAVORITE.

Auto program

(**All channels/Digital only/Analog only**)

- Select scan type and press **OK** to start scanning automatically.
After the scanning is completed, select **Apply**.
- All previously saved channels are erased.

Manual program

Changes the channel setting or channel display.

Edit

Edits these items.

Caption:

Changes the station identifier. (maximum 7 characters available)

Favorite:

Registers channels to the Favorite List from **Set favorite**.

Add:

Adds (**Yes**) or skips (**No**) channels

Apply

After the editing is completed, press **OK** to save the settings.

Cancel

Cancels the changes.

Signal meter

Check the signal strength if interference is found or freezing occurs on a digital image.

- If the signal is weak, check the antenna.
- If you cannot figure out the problem, consult your local dealer.
- Not available if **Cable** is selected in **ANTENNA/Cable signal**.
- Available only for digital antenna channels.

Language settings

 **MENU** → **Menu** > **Setup** > **Language**

Menus language

(**English/Español/Français**)

Selects the screen menu language.

Preferred SAP language

(**English/Spanish/French**)

Selects the preferred language for hearing or visually impaired, if offered during digital broadcast

- Preferred language takes precedence over the preferred audio type.
(Available only in the U.S.)

Display customization

 **MENU** → **Menu** > **Setup** > **Display customization**

Input labels

Selects the terminal and label of the external equipment. Devices connected to external input terminals can be labeled for easier identification during the input selection.

- When you label an input as **Not used**, then it will be hidden from the **Input select** menu.
- Select **Customize** to enter your own labels for the input (ex. "Computer").

Closed Caption

 **MENU** ➔ **Menu** > **Setup** > **Display customization** > **Closed Caption**

Mode

(**CC on mute/On/Off**)

CC on mute:

Displays Closed Captions when the audio is muted. (When not using, select **Off**.)

On:

Displays Closed Captions.

Analog

(**CC1-4/T1-4**)

Choose the Closed Caption service of Analog broadcasting.

CC1-4:

Information related to pictures (Appears at the bottom of the screen)

T1-4:

Textual information (Appears over the entire screen)

Digital

(**Primary/Second./Service 3/Service 4/Service 5/Service 6**)

The Digital Closed Caption menu lets you configure the way you choose to view the digital captioning.

Digital setting

Sets display settings in digital programs.

Size:

Selects the text size.

Font:

Selects the text font.

Style:

Selects the text style (Raised, Depressed, etc.).

Foreground:

Selects the color of text.

Foreground opacity:

Selects the opacity of text.

Background:

Selects the color of text box.

Background opacity:

Selects the opacity of text box.

Outline:

Selects the outline color of text (Identifies the settings options on the screen).

Reset to defaults

Resets all Closed Caption settings to factory default settings.

VIERA Link settings

 **MENU** → **Menu** > **Setup** > **VIERA Link settings**

VIERA Link

(On/Off)

To use all VIERA Link functions, set to **On** after everything is connected.

Power on link

(Yes/No)

The TV is turned on automatically and switches to the appropriate HDMI input whenever VIERA Link compatible equipment is initially turned on and the Play mode is selected.

Power off link

(Yes/No)

When **Yes** is selected and the TV is turned off, all connected VIERA Link compatible equipment is also automatically turned off. The TV remains on even if the VIERA Link compatible equipment is turned off.

Unselected device auto off

(On/Off)

The connected VIERA Link compatible equipment will be turned off automatically when not in use under these conditions. The connected equipment has “HDAVI Control 2 or later” (for available equipment only)

System settings

 **MENU** → **Menu** > **Setup** > **System**

Keyboard type

(**U.S./Canadian French/Canadian multilingual std./Spanish(Latin America)/Spanish (Spain)**)

Selects the country/region of the keyboard connected to this TV.

Factory defaults

Clears all TV settings and memory to factory defaults.

License

Displays the software license information.

Other settings

 **MENU** → **Menu** > **Setup** > **Other settings**

Power save

(**Saving/Standard**)

Reduces screen brightness to lower power consumption. Eye-friendly for viewing in a dark room.

Support / FAQ

Help menu

Using Help menu

The TV's built-in self-help resources.

1. Display the menu

 **MENU** → **Menu**

2. Select **Help** from menu bar

Select desired menu using Δ / ∇ from menu bar and press 

3. Select the Help menu

Select desired menu using Δ / ∇ and press 

(**eHELP/TV Self-test/Version/Device information**)

eHELP:

This screen

TV Self-test:

Verifies proper function of the TV for picture and sound.

- Follow the instructions on the screen to complete the self test.

Version:

Displays TV's software (firmware) version.

Device information:

Displays the device information of this TV.

FAQ

Picture - Viewing

■ Frequently Asked Questions

For updated information, please visit Panasonic web site.

How do I view the picture from devices such as: Cable/Satellite box, game console, Blu-ray or DVD player?

- Press the **INPUT** button on the remote to select the correct input source.
- Check that the device is turned on and functioning correctly.

Why doesn't the picture look like it is in High Definition?

- Press the **INFO** button on the remote to confirm the type of signal being received. HD signal should be 720p, 1080i or 1080p.
- Select a High Definition channel from your HD source (Cable, Satellite or fiber optic service). HD channels sometimes broadcast non-HD content.
- Ensure that your HD source (HD box, Blu-ray player, etc.) is connected to the TV with an HDMI or Component cable and set to output an HD video signal.

Picture - Snowy / none

Why is there no picture or just a blue, black or snowy screen being displayed?

- Press **MENU** and select **Help**. Then select **TV Self-test**. If the test picture displays correctly, then the problem is with the external device (ex. Cable box, DVD player, etc.) or its connection to the TV.
- Check if the power cord is plugged in and the TV is turned on (front red LED light should be on; not blinking)
- Press the **INPUT** button on the remote to select the correct input source.
- Ensure all connections are correct and secure. Especially check for Component and VIDEO connection since these terminals are shared.
- When using an external video source, such as a Cable/Satellite box or DVD player, check that the device is on and functioning correctly.
- Press **MENU** on the TV's remote control. If the menu is displayed, then the TV is working; recheck above steps.

Why is the picture snowy when **ANTENNA/Cable setup** is selected?

- When using a cable service (without a box), check that all connections are secure.
- When using a cable or satellite box, change the connection (wiring) to Composite, Component or HDMI.
- If you're using an antenna, then check that connections are secure. Change the position or direction of the antenna and check the **Signal meter**.

 **MENU** → **Menu** > **Setup** > **ANTENNA/Cable setup** > **Signal meter**

Picture - Distortion

The picture is distorted after selecting the “AV” input. What should I do?

- Ensure that the device is connected correctly to the TV's Video/Component green connector.
- If using VIDEO or COMPONENT:

Press **INPUT**, scroll to AV, press ◀ / ▶ to select **Video** or **Component**.



Why do black bars appear on the top and bottom and/or sides of the screen?



- Change the format (aspect ratio) of the picture by pressing the **FORMAT** button on the remote control.
- Check the aspect settings on your external video source, such as Cable/Satellite box, DVD/Blu-ray Disc player, etc.
- Some content, such as film-based movies, are available in extra-wide format. Top and bottom bars are unavoidable.

Why is the picture chaotic and/or torn and/or with a buzz in the speakers?

- Check if electrical products such as kitchen appliances, fluorescent lights or light dimmers are nearby. They may interfere with the TV's picture.
- Try viewing a picture from another device, such as a DVD player or a game console, to narrow down the source of the problem.

Picture - Unusual

Why the pictures from external equipment are unusual when the equipment is connected via HDMI?

- Check the HDMI cable is connected properly.
 → [Watching TV > Blu-ray, DVD, Game Console, etc. > Connecting and viewing](#)
- Turn the TV and equipment off, then turn them on again.
- Check an input signal from the equipment.
 → [Watching TV > Blu-ray, DVD, Game Console, etc. > Input signal](#)
- Use equipment compliant with EIA/CEA-861/861D.

Picture - Continue

Why is there a black box on the screen?

- Check the settings of Closed Caption (CC).

Why do some small spots on the screen remain bright or dark?

- The panel is made up of a few million pixels and is produced with advanced technology through an intricate process. Sometimes, a few pixels may be bright or dark.
- These pixels do not indicate a defective panel and will have no impact on the performance of the TV.

Why is the picture brightness changing?

- Turn the C.A.T.S. feature off.

 **MENU** → **Menu** > **Picture** > **C.A.T.S.**

Sound - None

Why is there no sound coming from the TV?

- Make sure the volume is up and mute is off.
- Check that the correct **SAP** (Secondary Audio Program) is selected by pressing the **SAP** button on the remote control.
- If the TV is connected to a Panasonic Home Theater via HDMI cable, then check VIERA Link controls.
- If the TV is connected to a Home Theater via optical cable, then: Check the connection, the audio system is on, the correct input is selected.
- Check **HDMI in** analog/digital audio settings.

 **MENU** → **Menu** > **Sound** > **HDMI input**

Sound - Unusual

Why is the sound unusual, distorted, low volume or in another language?

- Check that the correct **SAP** (Secondary Audio Program) is selected by pressing the **SAP** button on the remote control.
- Check that all connections of external equipment connected to the TV are secure.
- When using Cable or Satellite box, check the device's audio settings.
(Example: try changing the box's Audio Range to "narrow")

Why is there a clicking, ticking or buzzing sound coming from the TV unit?

- When TV power is turned on or shut off there are electrical components that make a click sound. This is normal operation.
- Changes in the temperature and humidity of the room may cause thermal expansion and contraction that can produce sounds. This is not a sign of faulty operation or a malfunction.

Networking

How do I get Internet services to work on my TV?

1. You need a broadband (High-Speed) Internet service with a speed of no less than 1.5 Mbps.
2. Connect the TV to the Internet through your router by an Ethernet cable or a Panasonic Wireless LAN (built-in).
3. Start **Network connection** wizard, then follow the directions on the screen to connect. If the connections still fails, then check with your Internet service provider or router/modem manufacturer if there are firewall, content filter or proxy settings that may block the TV from accessing the Internet.

Software update

How do I check for the latest software (firmware) version for my TV?

- In the main menu, select **Network**. Select **Software update**. The current version and latest version software will be displayed. If software update is grayed out, the TV is not connected to the Internet. If a newer version is available, update your TV. Follow the on screen instructions, do not power off the TV until the update is complete. Be patient; firmware update may take a while.

How do I get the software update information and download periodically?

- In the main menu, select **Network**. Highlight **New software notice**. Make sure that setting is **On**.

When the TV is turned On, update message is displayed if available. Follow the directions on the screen to download.

Other

What is the easiest and best way to connect a High-Definition Cable or Satellite box to the TV?

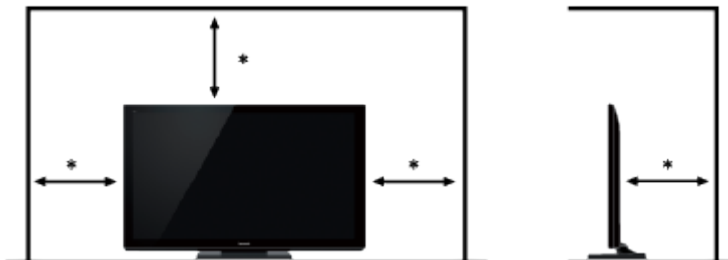
- Use an HDMI cable. It carries both digital video and audio signal in HD. The HDMI cable is the only cable needed to connect an HD device to the TV.

Why does the **CC** button not display Closed Caption?

- Check if the setting is turned **On** or **CC on mute**.
- When viewing TV via an HDMI connected device, such as a Cable or Satellite box, CC must be enabled on the device.
- Closed Caption is available only for supported TV programming and supported contents via Video (Composite) input.

Why does the screen and back cover of the TV get warm?

- The main unit radiates heat and some of the parts may become hot. This is normal operation and does not affect the performance of the set.
- Ensure good ventilation.
- Do not block the ventilation holes of the TV and do not place the TV on top of other equipment.



* 4 " (10 cm)

Where is the power source and power consumption?

- For information about the power source and power consumption, refer to the nameplate on the rear enclosure.

Menu - Gray-out or missing items

Why the **Antenna/Cable** option or available inputs are not listed in the **Input select** menu?

- When you label an input as **Not used**, then it will be hidden from the **Input select** menu. To make the input visible again:
 1. Display the **Menu** and select **Setup**.
 2. Select **Input labels** from **Display customization** and press **OK**.
 3. Select desired input and press **OK** to change the label.

Some menu items are grayed-out and unable to be selected. Why?

- Depending on certain modes or the selected input, some options are not available.

Reset to factory defaults

How do I reset my TV to all factory defaults and settings?

- In the main menu, select **Setup** and then select **System**. Highlight **Factory defaults** and press **OK**.

Enter your password (if locked).

Confirmation message will be displayed.

Follow the directions on screen to reset the TV to its original factory defaults.

Information

Detailed information

Support information about the application, optional devices, operation, etc. may be found on the following website.

<http://panasonic.jp/support/global/cs/tv/> (English only)

Data information

■ Supported Photo format for Media player/DLNA

- JPEG files (DCF and EXIF standards)
Sub-sampling - 4:4:4, 4:2:2 and 4:2:0
Image resolution - 8 x 8 to 30,719 x 17,279 pixels

■ Supported Video format for Media player/DLNA

- MP4 files
Video codec:
H.264/H.265 (HEVC)/MPEG1/MPEG2
Audio codec:
AAC/Dolby Audio (Dolby Digital, Dolby Digital Plus)/HE-AAC/MPEG
Audio/MP3
- MKV files
Video codec:
H.264/H.265 (HEVC)/MPEG1/MPEG2
Audio codec:
AAC/Dolby Audio (Dolby Digital, Dolby Digital Plus)/HE-AAC/MPEG
Audio/MP3/Vorbis
- FLV files
Video codec:
H.264
Audio codec:
AAC/MP3
- 3GPP files
Video codec:
H.264
Audio codec:
AAC/HE-AAC

- PS files

Video codec:

H.264*/MPEG1/MPEG2

Audio codec:

AAC*/Dolby Audio (Dolby Digital, Dolby Digital Plus)*/HE-AAC*/
LPCM/MPEG Audio/MP3*

- TS files

Video codec:

H.264/H.265 (HEVC)/MPEG1/MPEG2

Audio codec:

AAC/Dolby Audio (Dolby Digital, Dolby Digital Plus)/HE-AAC/MPEG
Audio/MP3*

* : for Media player only

■ Supported Music format for Media player/DLNA

- MP3 files (MP3)
- M4A files (AAC)
 - Copy-protected files cannot be played back.
- FLAC files (FLAC)
- WAV files (LPCM)

■ Supported Subtitles formats

● MicroDVD, SubRip, TMLayer (.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”.

- Some files may not be played back even if they fulfill these conditions.
- Some files may not be played back correctly depending on the resolution, frame rate condition, etc.
- Some subtitles or chapter functions may not be available.
- Do not use multi-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.

Care and Cleaning

Display panel

First, unplug the Power cord plug from the wall outlet.

■ Display panel

The front of the display panel has been specially treated. Wipe the panel surface gently using only a cleaning cloth or a soft, lint-free cloth.

- If the surface is particularly dirty, after cleaning up the dust, soak a soft, lint-free cloth in diluted mild liquid dish soap (1 part mild liquid dish soap diluted by 100 times the amount of water) and then wring the cloth to remove excess liquid. Use this cloth to wipe the surface of the display panel, then wipe it evenly with a dry cloth of the same type until the surface is dry.
- Do not scratch or hit the surface of the panel with fingernails or other hard objects. Furthermore, avoid contact with volatile substances such as insect sprays, solvents, and thinner, otherwise, the quality of the surface may be adversely affected.

Cabinet

First, unplug the Power cord plug from the wall outlet.

■ Cabinet

If the cabinet becomes dirty, wipe it with a soft, dry cloth.

- If the cabinet is particularly dirty, soak the cloth in a weak mild liquid dish soap and then wring the cloth dry. Use this cloth to wipe the cabinet and then wipe it dry with a dry cloth.
- Do not allow any mild liquid dish soap to come into direct contact with the surface of the TV. If water droplets get inside the unit, operating problems may result.
- Avoid contact with volatile substances such as insect sprays, solvents, and thinner, otherwise, the quality of the cabinet surface may be adversely affected or the coating may peel off.
- Do not let articles made from rubber or PVC be in contact with the TV for long periods of time.

Pedestal / Power cord

First, unplug the Power cord plug from the wall outlet.

■ Pedestal

Cleaning

- Wipe the surfaces with a soft, dry cloth. If the unit is particularly dirty, clean it using a cloth soaked with water to which a small amount of mild liquid dish soap has been added and then wipe with a dry cloth. Do not use products such as solvents, thinner, or household wax for cleaning, as they can damage the surface coating. (If using a chemically-treated cloth, follow the instructions supplied with the cloth.)
- Do not attach sticky tape or labels, as they can make the surface of the pedestal dirty. Do not allow long-term contact with rubber, vinyl products, or the like. (Doing so will cause deterioration.)

■ Power cord

- Wipe the plug with a dry cloth at regular intervals. (Moisture and dust can lead to fire or electrical shock.)

