Panasonic

Model No.

*e*HELP

English

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■ Meaning of signs

OK :

Letters enclosed in brackets indicate remote control buttons.

Menu :

Letters in cyan indicate on-screen display items.

📖 → :

References in this eHELP

You can jump to the page by pressing OK while the cursor is on the references.

■ Operation guide
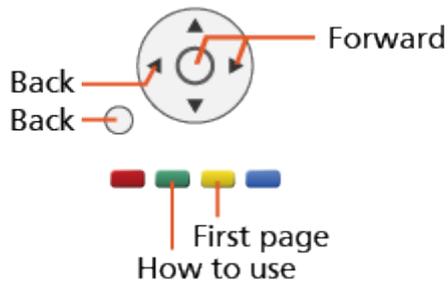
= Note =

- The design and specifications are subject to change without notice.

- 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.

Read first

Before use

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https://panasonic.net/cns/oss/tv/EUIDTV21M.html

Features

4K resolution

You can watch content in 4K format that has twice the horizontal and vertical resolution of the 1080p signal.

Home

"Home" is a gateway to the TV programmes, applications, etc.

It provides you an easy way to access all the features.

 Home > Home > Information

Recording

You can record the digital TV programmes to the connected USB HDD and enjoy playing back in various ways.

→ Recording > Timer Programming > Setting Timer Programming

Chromecast built-in

This TV is compatible with Chromecast-enabled apps. For detailed information of Chromecast-enabled apps, visit:

g.co/cast/apps

 Functions > Chromecast built-in > How to use

Data Service Application

You can enjoy Hybrid Broadcast Broadband TV application that is one of the interactive data services for digital broadcasting.

 → Functions > Data Service Application > Using Data Service Application

Home

Home

Information

"Home" is a gateway to the TV programmes, applications, etc.

Home is displayed by pressing HOME and it provides you an easy way to access all the features as shown below (example).
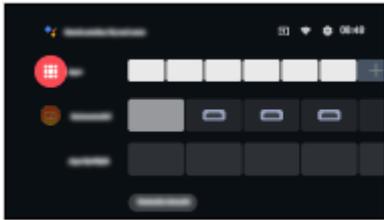
How to use

From Home, you can access all the features such as TV programmes, applications, etc.

- A broadband network environment is required to use internet services.

  📖 ➔ Network > Network connections > Internet connection

1. Display Home with HOME.

   (Example)

2. Select a feature and press OK to access.

- To watch full-screen TV, press EXIT, select Live TV from Apps, etc.

  (Example)

= Note =

- The design and specifications are subject to change without notice.

■ Freeview Play

- UK only

1. Display Home with HOME.

2. Select Freeview Play and press OK.

3. Follow the on-screen instructions.

- To display the terms of service and settings, select Settings > Channel > Advanced Options > Freeview Play Settings and press OK.

■ Search

You can search for content from various sources.

1. Display Home with HOME.

2. Select 🔵.

3. Follow the on-screen instructions.

- To use the voice control

    🖼️ ➔ Functions > Voice Control > Information

■ Customize channels

You can set the channels displayed on the home screen.

1. Display Home with HOME.

2. Select Customize channels and press OK.

3. Follow the on-screen instructions.

■ Preview

You can set the preview of video / audio.

1. Display the menu with MENU.

2. Select Settings > Device Preferences > Home screen and press OK to access.

3. Follow the on-screen instructions.

Apps

How to use

Various applications (internet content, etc.) can be accessed easily from Apps.

1. Display Apps with APPS.

   • To exit Apps

   BACK

2. Select an application and press OK to access.

3. Follow the on-screen instructions.

■ My App

You can assign a favourite application to MY APP of the TV's remote control.

1. Display Apps with APPS.

2. Select My App and press OK to access.

3. Select an application and press OK to assign a favourite application.

= Note =

• The design and specifications are subject to change without notice.

• Internet apps are provided by their respective service providers, and may be changed, interrupted, or discontinued at any time.

• A broadband network environment is required to fully use this function.

■ my Home Screen

my Home Screen can be edited to customise your favourite TV programmes, applications, etc.

1. Display Apps with APPS.

2. Select my Home Screen and press OK to access.

3. Follow the on-screen instructions.

■ Recently opened apps

1. Display the menu with MENU.

2. Select Settings > Apps and press OK.

3. Select an application from Recently opened apps and press OK to access.

4. Follow the on-screen instructions.

Watching

Basic

Basic connection

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

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

■ Aerial
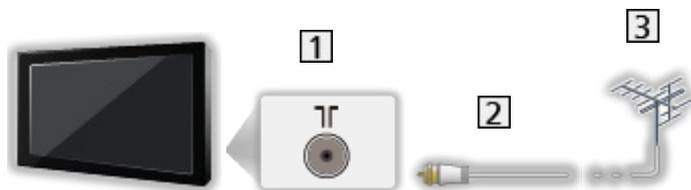
1 Terrestrial terminal

2 RF cable

3 Terrestrial aerial

■ DVD Recorder / Blu-ray Recorder, etc.
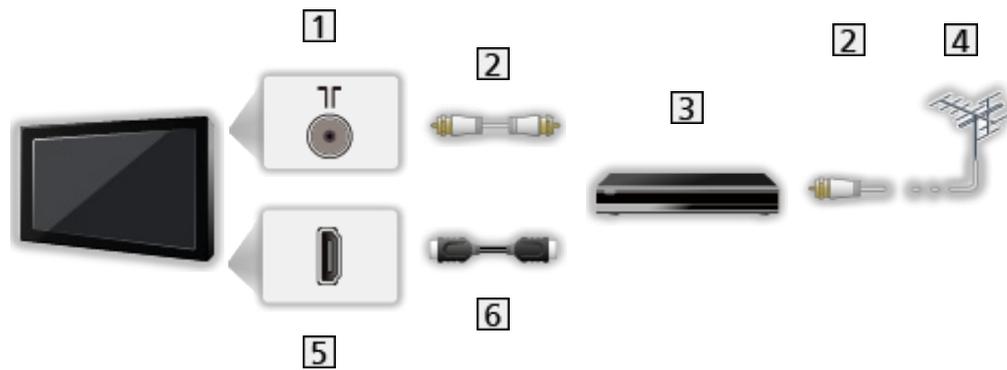
1. Terrestrial terminal
2. RF cable
3. DVD Recorder / Blu-ray Recorder, etc.
4. Terrestrial aerial
5. HDMI terminal
6. HDMI cable

■ Satellite receiver
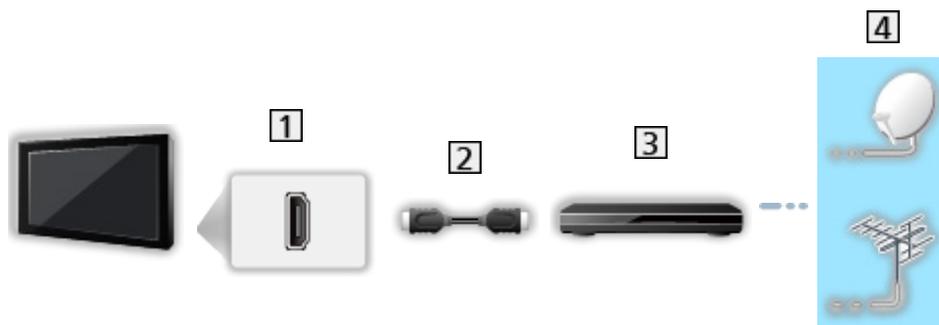
1 HDMI terminal

2 HDMI cable

3 Satellite receiver

4 Satellite dish / Terrestrial aerial

= Note =

- For details of HDMI CEC connections

  → Functions > HDMI CEC > CEC connection

- Please also read the manual of the equipment being connected.

- Keep the TV away from electronic equipment (video equipment, etc.) or equipment with an infrared sensor, otherwise distortion of image / sound may occur or operation of other equipment may be affected.

- Use a fully wired HDMI compliant cable.

- Use a high speed HDMI cable for high resolution images.

- Use a Premium High Speed HDMI cable for the HDR images.

- Check the terminal type and cable plugs are correct for connection.

Selecting channel

1. Select the mode with INPUT.

   - Selectable modes vary depending on the channels stored.

2. Select a channel with Channel Up / Down or Numeric buttons.
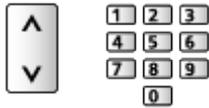
   - Press Numeric buttons to select a channel position with 2 or more-digit (e.g. 399, press 3 9 9).

■ Information banner

1. Display information banner with 🛈.

- Also appears when changing a channel.

■ Banner Display

You can set the banner display.

1. Display the menu with MENU.

2. Select Settings > Channel > Banner Display and press OK.

■ To select a channel from the channel list

1. Display the option menu with OPTION.

2. Select Channel List and press OK to access.

3. Select a channel from the list and press OK to watch.

- You can also select a channel from the channel list by pressing LIST.

- To edit the displayed channel when the TV is turned on

   1) Display the menu with MENU.

   2) Select Settings > Channel > Advanced Options > Power On Channel and press OK.

   3) Follow the on-screen instructions.

■ To select a channel from the favourite list

1. Display the option menu with `OPTION`.

2. Select Favourite List and press `OK` to access.

3. Select a channel from the list and press `OK` to watch.

- To add a channel to the favourite list

    1) Press `OPTION`.

    2) Press △.

    3) Select Add to My Favourites and press `OK` to add.

        – Press `OK` again to remove the channel from the favourite list.

■ To display Freeview Play Mini Guide (UK and Freeview only)

1. Display Freeview Play Mini Guide with `Freeview Play`.

2. Select the application and press `OK` to access.

- For the applications, follow the on-screen instructions.

■ To select a channel using TV Guide

1. Display Program Guide with `GUIDE`.

2. Select the current programme and press `OK` to access.

3. Select View and press `OK` to watch.

- Ireland only

- Select Timer Programming and press `OK` to record.

■ To watch pay-TV

- For details of the encrypted channels

     ➡ Functions > Common Interface > Using Common Interface

- Consult the operator / broadcaster or CI module manufacturer for more information and conditions of the services.

Multi audio

Selects for selectable sound tracks (if available).

■ Audio Channel / Audio Language

1. Display the menu with MENU.

2. Select Settings > Channel and press OK to access.

3. Select one of the following items and press OK to access.

   Audio Channel / Audio Language / 2nd Audio Language

Audio Channel

Selects multiplex sound mode (if available).

Audio Language

Selects the preferred language for digital channel multi audio (depending on the broadcaster).

2nd Audio Language

Selects the second preferred language for digital channel multi audio (depending on the broadcaster).

■ Sound Tracks

Selects multiplex sound mode (if available).

1. Display the menu with MENU.

2. Select Settings > Channel > Advanced Options > Sound Tracks and press OK to access.

3. Follow the on-screen instructions.

- You can also select multiplex sound mode from Sound Tracks by pressing OPTION.

Subtitle

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

- Select the language when the available options are displayed.

- For Digital TV

■ Subtitle settings

1. Display the menu with `MENU`.

2. Select Settings > Channel > Advanced Options > Subtitle and press `OK` to access.

3. Select one of the following items and press `OK` to access.

   Digital Subtitle Language / 2nd Digital Subtitle Language / Subtitle Type / Subtitle Language

---

Digital Subtitle Language / 2nd Digital Subtitle Language / Subtitle Language

Selects between alternative subtitle languages or types (if available).

Subtitle Type

Selects the preferred subtitle type.

Viewing Teletext

1. Switch to teletext with TEXT.

2. Follow the on-screen instructions.

■ Digital Teletext Language / Decoding Page Language

Selects teletext language font.

- Ireland only

1. Display the menu with MENU.

2. Select Settings > Channel > Advanced Options > Teletext and press OK to access.

3. Select Digital Teletext Language / Decoding Page Language and press OK to access.

4. Select a language and press OK to set.

Energy saving functions

The TV can be eco-friendly using energy-saving functions.

The TV goes into Standby mode in the following conditions:

- Power Off Timer Type is set to Once / On.

- Off Timer / Switch Off Timer is active.

- No signal is received and no operation is performed for the set time of No Signal Power Off.

■ Timer

1. Display the menu with MENU.

2. Select Settings > Timer > Power Off Timer Type / Power Off Timer and press OK to access.

Power Off Timer Type / Power Off Timer

Sets the time that the TV goes into Standby mode at within 24 hours.

■ Power

1. Display the menu with MENU.

2. Select Settings > Power > Off Timer / Switch Off Timer / Picture Off / No Signal Power Off and press OK to access.

Off Timer

Switch to TV Standby mode automatically after a fixed period.

Switch Off Timer

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

- Changing the default configuration may result in higher energy consumption of the product.

Picture Off

Turns the screen off.

No Signal Power Off

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

- A notification message will appear 1 minute before going into Standby mode.

- Changing the default configuration may result in higher energy consumption of the product.

Adjusting time

Settings for the system time of this TV.

1. Display the menu with MENU.

2. Select Settings > Device Preferences > Date & time and press OK to access.

3. Select one of the following items and press OK to access.

   Automatic date & time / Set date / Set time / Set time zone / Use 24-hour format

4. Follow the on-screen instructions.

Automatic date & time

Automatically set the date and time via the internet.

- Set to Off to enable the manual setting of Set date / Set time.

Set date

Sets the current date manually.

Set time

Sets the current time manually.

Set time zone

Adjusts the time data.

- The time data are corrected based on GMT.

Use 24-hour format

Select the 24-hour notation.

Language

1. Display the menu with MENU.

2. Select Settings > Device Preferences > Language and press OK to access.

3. Select the language for on-screen displays.

■ Audio Language

1. Display the menu with MENU.

2. Select Settings > Channel and press OK to access.

3. Select one of the following items and press OK to access.

   Audio Language / 2nd Audio Language

Audio Language

Selects the preferred language for digital channel multi audio (depending on the broadcaster).

2nd Audio Language

Selects the second preferred language for digital channel multi audio (depending on the broadcaster).

4K resolution

4K-compatible equipment

You can watch content in 4K format that has twice the horizontal and vertical resolution of the 1080p signal.

- For details of valid 4K format

   ➡ Watching > 4K resolution > Valid 4K format

- Connect the 4K-compatible equipment to HDMI terminal using a 4K-compatible cable and you can watch content in 4K format.

■ 4K-compatible equipment

1 HDMI terminal

2 HDMI cable

3 4K-compatible equipment

- Check the terminal type and cable plugs are correct for connection.

- Use a fully wired HDMI compliant cable.

- Use a high speed HDMI cable for high resolution images.

- Use a Premium High Speed HDMI cable for the HDR images.

HDMI Auto Setting

1. Display the menu with MENU.

2. Select Settings > Device Preferences > Inputs and press OK to access.

3. Set the item and press OK to store.

HDMI Auto Setting

Reproduces the image more precisely with the expanded colour gamut when connecting the 4K-compatible equipment. Mode2 is a mode that supports higher definition signals than Mode1. Set to Mode1 when the image or sound in HDMI input is not played properly.

Mode1:

For better compatibility. Set to Mode1 when the image or sound in HDMI input is not played properly.

Mode2:

For the 4K-compatible equipment that has the function to output the image precisely with the expanded colour gamut

- The setting can be stored for each HDMI input.
- Valid format (4K)
  - Mode1: 4:4:4 / 4:2:2 (30p, 25p, 24p), 4:2:0 (60p, 50p)
  - Mode2: 4:4:4 / 4:2:2 (30p, 25p, 24p), 4:4:4 / 4:2:2 / 4:2:0 (60p, 50p)

Valid 4K format

■ Valid 4K format (HDMI)

● 4K UHD

3 840 × 2 160 (60p, 50p, 30p, 25p, 24p)

● DCI 4K

4 096 × 2 160 (60p, 50p, 30p, 25p, 24p)

– Actual resolution is 3 840 × 2 160p.

= Note =

● The above signals are reformatted for optimal viewing on your display.

● For details of aspect

 Watching > For best picture > Aspect

External equipment

External connection

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

- For details of basic connection

  [📖] ➞ Watching > Basic > Basic connection

- To use the specific devices supporting Bluetooth wireless technology

  [📖] ➞ Functions > Bluetooth devices

- Check the terminal type and cable plugs are correct for connection.

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

■ HDMI equipment
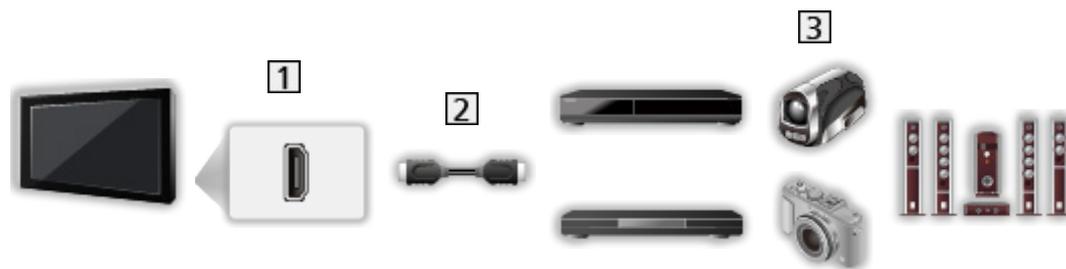
① HDMI terminal

② HDMI cable

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

= Note =

- Use a fully wired HDMI compliant cable.

- Use a high speed HDMI cable for high resolution images.

- Use a Premium High Speed HDMI cable for the HDR images.

- For details of HDMI CEC connections

  [📖] ➞ Functions > HDMI CEC > CEC connection

- Use HDMI2 to connect the TV to an amplifier which has ARC (Audio Return Channel) function.

■ AV devices connecting to TV with the composite cables
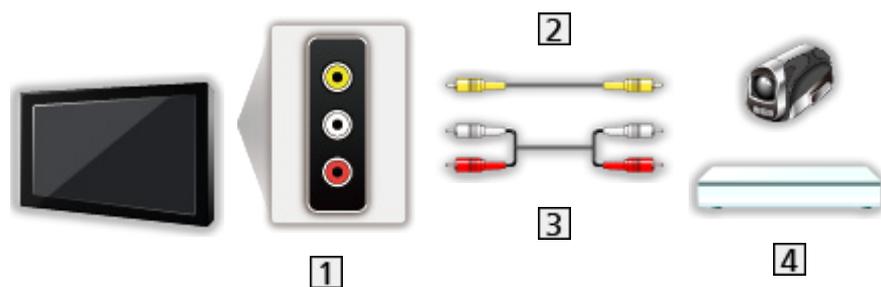
1 AV IN (VIDEO) terminals

2 Composite cable (Shielded)

- Use shielded composite cable.

3 Audio cables (Shielded)

- Use shielded audio cables.

4 Camcorder / Game equipment

■ USB devices

1 USB port

2 USB cable

3 USB HDD, etc.

= Note =

- It is recommended to connect the device to the TV's USB port directly.

- Use USB 2 port for connecting the USB HDD. USB 1 port is not available for connecting the USB HDD. (Refer to the terminal indication of TV set.)

- Some USB devices or USB HUB may not be used with this TV.

- You cannot connect any devices by using USB card reader.

■ Listening with external speakers

[1] DIGITAL AUDIO

[2] Optical digital audio cable

[3] Amplifier with speaker system

- To enjoy multi-channel sound from external equipment (e.g. Dolby Audio (Dolby Digital) 5.1ch), connect the equipment to the amplifier. For information about the connections, read the manuals of the equipment and amplifier.

■ Headphones
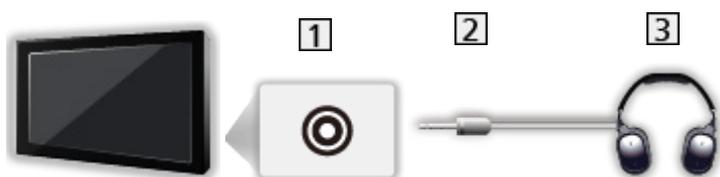
[1] Headphone jack

[2] 3.5 mm stereo mini plug

[3] Headphones

Watching external input

Connect the external equipment and you can watch through the input.

1. Display the input selection menu with INPUT.

2. Select the input mode connected to the equipment and press OK to watch.
   (The selected mode is displayed on the top right of the screen.)

- You can also select the input pressing INPUT. Press repeatedly until the desired input is selected.

- The remote control is capable of operating the content or external equipment.

  📖 ➡ Watching > External equipment > Operating with TV's remote control

- To return to TV mode

  INPUT

■ Standby Inputs

Accessing the input labels list allows you to change the input name or skip the input if unconnected, improving identification.

1. Display the menu with MENU.

2. Select Settings > Device Preferences > Inputs and press OK to access.

3. Select the input to edit and press OK.

4. Follow the on-screen instructions.

= Note =

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

Operating with TV's remote control

You can operate the content in Media Player, recording functions or the connected equipment with the following buttons of this TV's remote control.

- 41 -

▶ :

Playback

■ :

Stop the operations

◀◀ :

Search backward

▶▶ :

Search forward

❚❚ :

Pause / Resume

Press and hold to play at slow speed

● :

Start recording

= Note =

● Some operations may not be available depending on the equipment.

HDMI features

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

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

HDMI-compatible equipment* with an HDMI or DVI output terminal, such as a DVD player, a set top box or game equipment, can be connected to the HDMI terminal using a fully wired HDMI compliant cable.

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

■ Applicable HDMI features

- Input audio signal:

  LPCM, Dolby Audio (Dolby Digital, Dolby Digital Plus)

- Input video signal:

  Matches the output setting of the digital equipment.

- HDMI CEC

- Content Type

- Deep Colour

- ARC (Audio Return Channel)

  – ARC (Audio Return Channel) is a functions to send digital sound signals via an HDMI cable.

  – For HDMI2

- x.v.Colour™

- 4K

■ DVI connection

If the external equipment has only a DVI output, connect to the HDMI terminal via a DVI to HDMI adaptor cable.

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

= Note =

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

- These HDMI connectors are "type A".

- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.

- Equipment having no digital output terminal may be connected to the analogue input terminals to receive analogue signals.

- This TV incorporates HDMI™ technology.

Valid input signals

■ HDMI

Signal name
525 (480) / 60p
625 (576) / 50p
750 (720) / 60p, 50p
1 125 (1 080) / 60i, 50i
1 125 (1 080) / 60p, 50p, 24p
3 840 × 2 160 / 60p, 50p, 30p, 25p, 24p
4 096 × 2 160 / 60p, 50p, 30p, 25p, 24p

= Note =

- Signals other than those above may not be displayed properly.

- The above signals are reformatted for optimal viewing on your display.

- For details of valid 4K format

 → Watching > 4K resolution > Valid 4K format

For best picture

Viewing Mode

1. Display the menu with MENU.

2. Select Settings > Picture > Viewing Mode and press OK to access.

3. Select the mode and press OK to set.

Viewing Mode

(Dynamic / Normal / Cinema / Filmmaker / True Cinema / Sport / Game / Dolby Vision Vivid / Dolby Vision Bright / Dolby Vision Dark)

Selects your favourite picture mode for each input.

> Dynamic:
>
> Improves contrast and sharpness for viewing in a bright room.
>
> Normal:
>
> Normal use for viewing in a normal lighting condition.
>
> Cinema:
>
> Improves the performance of contrast, black and colour reproduction for watching a film in a darkened room.
>
> Filmmaker:
>
> Reproduces the original image quality precisely. Reacts to room brightness.
>
> True Cinema:
>
> Reproduces the original image quality precisely without any revision.
>
> Sport:
>
> Improves picture quality for watching sports, etc.
>
> *   The sound mode is automatically set to Sports when Viewing Mode is set to Sport. To cancel the linkage of the sound and viewing mode, set Sport Link to Off.
>
>   → Watching > For best audio > Basic settings
>
> Game:
>
> Improves picture quality for playing games, etc.
>
> Dolby Vision Vivid:
>
> Reproduces Dolby Vision content precisely in a bright room.
>
> Dolby Vision Bright:
>
> Reproduces Dolby Vision content precisely in a normal lighting condition.

Dolby Vision Dark:

   Reproduces Dolby Vision content precisely in a darkened room.

■ To change the viewing mode with PICTURE

You can change the viewing mode easily only by pressing PICTURE.

1. Display Viewing Mode with PICTURE.

2. Select the mode and press OK to set.

 • To set the viewing mode selection

   1) Display the menu with MENU.

   2) Select Settings > Picture > PICTURE Button Setting and press OK to access.

   3) Select the viewing mode to set.

Aspect

Changes the aspect ratio (image size).

■ To change the aspect ratio manually

1. Display the menu with MENU.

2. Select Settings > Picture > Screen Settings and press OK to access.

3. Select Aspect and press OK to access.

4. Set the item and press OK to store.

Auto:

The best ratio is selected automatically (if available).

16:9:

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

4:3:

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

Zoom:

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

= Note =

• Display the image full-screen to use this function completely.

Basic settings

1. Display the menu with MENU.

2. Select Settings > Picture and press OK to access.

3. Select one of the following items and press OK to access.

   Backlight / Brightness / Contrast / Colour / Tint / Sharpness / Colour Temperature / Vivid Colour / Colour Remaster / Rec.2020 Colour Remaster / Adaptive Backlight Control / Noise Reduction / MPEG Remaster / Resolution Remaster / Dynamic Range Remaster / Clear Motion / Copy Adjustment / Reset to Default

4. Set the item and press OK to store.

Backlight, Brightness, Contrast, Colour, Tint, Sharpness

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

Colour Temperature

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

Vivid Colour

Automatically adjusts colours to vivid ones.

Colour Remaster

Displays the vivid images with the expanded colour gamut.

Rec.2020 Colour Remaster

Displays the vivid images with the suitable colour gamut.

Adaptive Backlight Control

Automatically controls the level of backlight according to the images.

Noise Reduction

Reduces unwanted picture noise.

MPEG Remaster

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

Resolution Remaster

Enhances picture resolution to make the image sharper.

Dynamic Range Remaster

Enhances bright areas of the image closer to the original luminance making improved picture impact.

Clear Motion

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

Copy Adjustment

Copies the picture settings of Filmmaker, True Cinema, Dolby Vision Bright or Dolby Vision Dark to those of the other input mode or Viewing Mode.

- Option Settings and Screen Settings are not copied.

Reset to Default

Resets the current Picture Viewing Mode to the default settings.

Ambient Sensor

1. Display the menu with MENU.

2. Select Settings > Picture > Ambient Sensor and press OK to access.

3. Select On / Off and press OK to set.

Ambient Sensor

- Automatic Brightness Control function

Adjusts picture settings automatically depending on ambient lighting condition.

HDR Brightness Setting

1. Display the menu with MENU.

2. Select Settings > Picture > HDR Brightness Setting and press OK to access.

3. Select one of the following items and press OK to access.

   Dynamic HDR Effect / HDR Auto Brightness / HDR Brightness Enhancer

4. Set the item and press OK to store.

Dynamic HDR Effect

Automatically adjusts the luminance according to an HDR video signal.

HDR Auto Brightness

Automatically adjusts the luminance according to a lighting condition.

HDR Brightness Enhancer

Adjusts the luminance when watching an HDR video in a bright environment.

= Note =

- Supporting HDR does not increase the peak brightness capabilities of the TV panel.

Advanced Settings

You can adjust and set up the detailed picture settings when Viewing Mode is set to Cinema, Filmmaker, True Cinema, Game, Dolby Vision Bright or Dolby Vision Dark.

> 📖 ➡ Watching > For best picture > Viewing Mode

1. Select the input mode with INPUT.

2. Display the menu with MENU.

3. Select Settings > Picture > Viewing Mode and press OK to access.

4. Select the mode and press OK to set.

    Cinema / Filmmaker / True Cinema / Game / Dolby Vision Bright / Dolby Vision Dark

■ Adjust the detailed picture settings

1. Display the menu with MENU.

2. Select Settings > Picture > Advanced Settings and press OK to access.

3. Select one of the following items and press OK to access.

    Contrast Control / Colour Gamut / White Balance / Colour Management / Gamma / Reset to Default

4. Set the item and press OK to store.

Contrast Control

Automatically adjusts the detailed contrast settings.

Colour Gamut

Reproduces image colour precisely according to the colour gamut standards.

White Balance

Adjusts the detailed white balance of red / green / blue components.

Colour Management

Adjusts the picture hue / saturation / luminance of the colour.

Gamma

Switches the gamma curve.

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

Reset to Default

Resets Advanced Settings to the default settings.

Option Settings

1. Display the menu with MENU.

2. Select Settings > Picture > Option Settings and press OK to access.

3. Select one of the following items and press OK to access.

   Game mode / Film Cadence Mode / 1080p Pure Direct / 4K Pure Direct / EOTF Type / HDMI RGB Range

4. Set the item and press OK to store.

Game mode

Provides suitable images for fast response signals when playing games.

Film Cadence Mode

Improves vertical resolution for movie images.

1080p Pure Direct

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

4K Pure Direct

Reproduces the original image quality in detail for 4K (HDMI) input signal.

EOTF Type

Selects the EOTF type for each input. Set to Auto for general use.

- HDR10+ function is available when EOTF Type is set to Auto.

HDMI RGB Range

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

- For HDMI

Screen Settings

1. Display the menu with MENU.

2. Select Settings > Picture > Screen Settings and press OK to access.

3. Select one of the following items and press OK to access.

   Aspect / 16:9 Overscan

4. Set the item and press OK to store.

Aspect

Changes the aspect ratio (image size).

    → Watching > For best picture > Aspect

16:9 Overscan

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

For best audio

Sound Mode

1. Display the menu with MENU.

2. Select Settings > Sound > Sound Mode and press OK to access.

3. Select the mode and press OK to set.

Sound Mode

(User / Standard / Vivid / Sports / Movie / Music / News)

Basic settings

1. Display the menu with MENU.

2. Select Settings > Sound and press OK to access.

3. Select one of the following items and press OK to access.

   Balance / Bass / Treble / Sound Surround / Equalizer Detail / Sport Link / Speakers / Speaker Delay / Audio Output / Speaker Volume / Digital Output / SPDIF Delay / Auto Volume Control / Reset to Default

4. Set the item and press OK to store.

Balance

Adjusts the volume level of right and left speakers.

Bass

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

Treble

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

Sound Surround

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

Equalizer Detail

Adjusts the frequency level to suit your favourite sound quality.

- This function is available when Sound Mode is set to User.

- Select the frequency and adjust the frequency level.

- To enhance the bass sound, raise the level of the lower frequency. To enhance the treble sound, raise the level of the higher frequency.

Sport Link

Automatically sets the sound mode to Sports when Viewing Mode is set to Sport.

Speakers

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

TV Speaker:

TV speakers are active.

External Audio System:

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

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

- You can use Volume Up / Down and MUTE.

Speaker Delay

Adjusts the delay time of the sound.

Audio Output

Enables the audio output from the speakers when connecting the headphones.

Speaker Volume

Adjusts the volume of the speakers when connecting the headphones.

Digital Output

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

SPDIF Delay

Adjusts the delay time of the sound output from DIGITAL AUDIO and HDMI2 (ARC function) terminals if the sound does not synchronise the image.

Auto Volume Control

Automatically regulates large sound level differences between channels and inputs.

Reset to Default

Resets the current Sound Mode to the default settings.

Accessibility

1. Display the menu with MENU.

2. Select Settings > Device Preferences > Accessibility and press OK to access.

3. Select one of the following items and press OK to access.

   Audio Type / Visually Impaired / AC4 Dialogue Enhancement / Captions / High contrast text / Text to speech

4. Set the item and press OK to store.

Audio Type

Narration settings for visually impaired users

Visually Impaired

Voice guidance settings for visually impaired users

AC4 Dialogue Enhancement

Selects the audio format to enhance the dialogue quality.

Captions

Displays the closed captions and selects their settings (if available).

High contrast text

Enhances the intelligibility of dialogue and commentary.

Text to speech

Settings for the text-to-speech.

Tuning and editing channels

Setting menu

Some features are not available on all models. Available menu items are displayed on your TV screen.

You can retune channels, skip unwanted channels, etc.

1. Select the mode with INPUT.

2. Display the menu with MENU.

3. Select Settings > Channel > Channels and press OK to access.

4. Select one of the functions and press OK to access.

   Channel Scan / Manual Service Update / Digital Manual Scan / Favourite Network Select / Logical Channel Numbers / Channel Skip / Channel Move / Channel Swap / Channel Edit / Clear Channel List

Channel Scan

Automatically retunes the channels received in the area.

- Enable Auto Channel Update to update the new channels in Standby mode.

- Enable Channel Update Message to receive a notification message when a new digital TV channel is found.

- All the previous tuning settings are erased.

- Search begins in the order from the lower channels to the higher channels.

- Child Lock PIN number is required to retune locked channels.

  🖻 ➔ Functions > Parental Controls > PIN number

- If tuning has not been done completely, set Manual Service Update.

  🖻 ➔ Watching > Tuning and editing channels > Manual Service Update

Manual Service Update

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

- Depending on the signal condition, the update may not work properly.

Digital Manual Scan

Searches for digital channels.

Other settings

Some features are not available on all models. Available menu items are displayed on your TV screen.

Favourite Network Select

Selects your favourite network for each broadcaster (only available in some countries).

___

Logical Channel Numbers

Selects whether to use the logical channel number or not.

___

Channel Scan Type / Channel Store Type

Selects the type to scan / store.

___

Channel Skip / Channel Move / Channel Swap / Channel Edit / Clear Channel List

Skips unwanted channels or edits channels.

Set Up Your Sources

Sets up the channel sources already installed.

1. Display the menu with MENU.

2. Select Settings > Channel > Set Up Your Sources and press OK.

3. Follow the on-screen instructions.

System Information

Displays the system information of this TV.

1. Display the menu with MENU.

2. Select Settings > Channel > Advanced Options > System Information and press OK.

3. Follow the on-screen instructions.

Recording

USB HDD setup

Preparations

You can record the digital TV programmes to the connected USB HDD and enjoy playing back in various ways.

- Prepare the USB HDD for the exclusive use of recording with this TV.

- Use USB 2 port for connecting the USB HDD. USB 1 port is not available for connecting the USB HDD. (Refer to the terminal indication of TV set.)

- Be sure to connect the USB HDD to the mains socket.

- Check the terminal type and cable plugs are correct for connection.
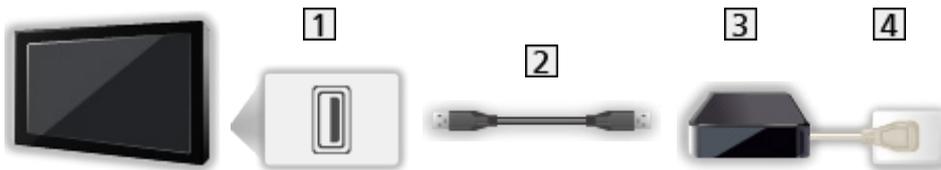
1 USB port
2 USB cable
3 USB HDD
4 Mains socket

= Caution =

- All data in the USB HDD will be erased in the following cases:

  – When formatting the USB HDD with this TV

     → Recording > USB HDD setup > Setting for USB HDD

  – When formatting the USB HDD to use on PC, etc.

- When the TV is repaired due to a malfunction, you may have to format the USB HDD again with this TV to use it. (All data will be erased after formatting.)

- To use the USB HDD with your PC after recording with this TV, format it again on your PC. (Special operations or tools may be necessary to format on your PC. For details, read the manual of the USB HDD.)

- The data recorded on the USB HDD with this TV can only be played back on this TV. You cannot play back its content with another TV (including the TV of the same model number) or any equipment.

- Do not turn the TV off, pull out the mains plug or remove the USB HDD during operation (formatting, recording, etc.). Doing so may cause malfunction of the device or damage the recorded data. (An electric outage may also be a cause of malfunction.)

= Note =

- The data broadcasting, radio broadcasting are not recorded, and also the recording function does not work during the period without any signal.

- Not all the programmes can be recorded depending on the broadcaster and service provider.

- You cannot copy the recorded TV programmes of the USB HDD.

- For details of the USB HDD

   → Recording > Technical information > USB HDD

Setting for USB HDD

Format and set up the USB HDD with this TV in order to use it for recording.

All the USB devices recognised as a mass storage device are listed.

- Please note that USB HDD will be formatted and all data in it will be erased after this setup.

- Before setting, connect the USB HDD and be sure to turn on the USB HDD.

  📖 → Recording > USB HDD setup > Preparations

1. Display the menu with MENU.
2. Select Settings > Channel > Record Setting > Device Info and press OK to access.
3. Select the USB HDD for recording and press OK to start setup.

   - Some USB HDD may not be displayed.

4. Select Set PVR and press OK to set.

 - To format

   1) Select Format and press OK to access.
   2) When a confirmation screen is displayed, select Yes and press OK to start formatting.

 - To measure the transfer speed, select Speed Test and press OK.

 - You can also format the USB HDD for recording as following steps.

   1) Select Settings > Device Preferences > Storage and press OK.
   2) Select the USB HDD for recording and press OK.
   3) Select Erase & format as removable storage and press OK.

= Note =

 - You can only select one USB HDD for recording at a time.

 - You cannot change the settings for the USB HDD while recording is in progress.

Recording current programme

How to use

Records the current programme to the USB HDD immediately.

■ To start recording

Press ⬛ to start.

- Other channels cannot be selected while recording is in progress. (A notification message will appear when selecting another channel.)

■ To stop recording in progress

Press ⬛ to stop.

■ To play back or delete the recorded content

Recorded TV programmes can be played back.

1. Display Apps with APPS.

2. Select Record List and press OK to access.

3. Follow the on-screen instructions.

Timer Programming

Setting Timer Programming

This function allows you to select programmes that you want to record to the USB HDD.

1. Display Apps with APPS.

2. Select Schedule List and press OK to access.

3. Select and set the item (channel, date, time, etc.).

   - To add a timer event

     ▭ (yellow)

   - To edit a timer event

     ▭ (red)

   - To delete a timer event

     ▭ (blue)

■ Setting the timer programming from TV Guide

1. Display Program Guide with GUIDE.

2. Select the forthcoming programme and press OK to access.

   - LED turns to orange in Standby mode when Timer Programming is set.

   - To return to Program Guide

     BACK

Editing Timer Programming

1. Display Apps with APPS.

2. Select Schedule List and press OK to access.

3. Select the event.

4. Follow the on-screen instructions.

■ To adjust the clock

If you cannot get the time information, set the clock manually.

1. Display the menu with MENU.

2. Select Settings > Device Preferences > Date & time and press OK to access.

3. Follow the on-screen instructions.

 • The clock settings may be are reset when the TV is turned off with Mains Power On / Off switch.

    → Watching > Basic > Adjusting time

■ To play back or delete the recorded content

Recorded TV programmes can be played back.

1. Display Apps with APPS.

2. Select Record List and press OK to access.

3. Follow the on-screen instructions.

Note

- Timer Programming can store up to 5 events.

- Timer Programming only works reliably if correct time information is received via the signal from the broadcaster or service provider.

- For recording using Timer Programming, the TV must be either on or in Standby.

- Recording an encrypted (copy-protected) programme may not be possible.

- LED turns to orange in Standby mode when Timer Programming is set.

- For details of the USB HDD

     → Recording > Technical information

Technical information

USB HDD

■ USB HDD

(for recording the digital TV programmes with this TV)

- The capacity of USB HDD that works with this TV is from 160 GB to 6 TB.

- Connect the USB HDD to the mains socket to record and play back properly with this TV.

- Use the USB HDD formatted with this TV.

   → Recording > USB HDD setup > Setting for USB HDD

- Regarding performance, not all USB HDDs are guaranteed.

= Note =

- Data modified with a PC may not be displayed.

- Do not remove the device while the TV is accessing data. Otherwise this can damage the device or TV.

- Do not touch the pins on the device.

- Do not subject the device to a high pressure or impact.

- Insert the device in the correct direction. Otherwise this can damage the device or TV.

- Electrical interference, static electricity, or erroneous operation may damage the data or device.

Media Player

Using Media Player

Information

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

Video:

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

Photo:

Still pictures recorded with digital cameras are displayed.

Audio:

Digital music data are played back.

- Pictures may not appear correctly on this TV depending on the recording equipment used.

- Displaying may take some time when there are many files and folders.

- Partially degraded files may be displayed with reduced resolution.

- Picture setting may not work depending on the condition.

- Folder and file names may be different from those on the digital camera or digital video camera used.

- Recorded TV programmes can be played back from Record List in Apps.

  ➡ Recording > Recording current programme > How to use

■ To insert or remove the USB Flash Memory

Ensure alignment is straight and complete when inserting or removing.

= Note =

- Check the terminal type and devices are correct for connection.

- For details of the devices

   → Media Player > Connected device

- For details of supported file formats

   → Media Player > Supported format

Selecting mode

1. Insert the USB Flash Memory to the TV.

    ➡ Media Player > Using Media Player > Information

2. Display Apps with APPS.

3. Select Media Player and press OK to access.

4. Select Video / Photo / Audio and press OK to access.

5. The thumbnail view is displayed.

   • To display / hide information of the highlighted content

   OPTION

Video

Selecting file

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

- To start / pause the playback

  OK

- For details of supported file formats

  🔖 → Media Player > Supported format > Video format

■ Settings

1. Display the option menu with OPTION.

2. Select one of the following items and press OK to access.

   Play / Pause / Repeat / Play Mode / Shuffle On / Shuffle Off / Change Subtitle / Show Info

3. Set the item and press OK to store.

Play / Pause

Play / pause the playback.

Repeat

Repeat the playback.

Play Mode

Select the playback mode.

Shuffle On / Shuffle Off

Files are played back at random.

Change Subtitle

Display / hide subtitles (if available).

Show Info

Displays the information of the content.

Photo

Selecting file

Select the file in the thumbnail view and press `OK` to start playback.

- To start / pause the slideshow

  `OK`

- For details of supported file formats

  📖 ➡ Media Player > Supported format > Photo format

■ Settings

1. Display the option menu with `OPTION`.

2. Select one of the following items and press `OK` to access.

   Play / Pause / Repeat / Play Mode / Shuffle On / Shuffle Off / Rotate / Zoom / Show Info

3. Set the item and press `OK` to store.

Play / Pause

Play / pause the slideshow.

Repeat

Repeat the playback.

Play Mode

Select the playback mode.

Shuffle On / Shuffle Off

Files are played back at random.

Rotate

Rotates the viewing image.

Zoom

Enlarges the viewing image.

Show Info

Displays the information of the content.

Audio

Selecting file

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

- To start / pause the slideshow

  OK

- For details of supported file formats

  📖 ➡ Media Player > Supported format > Music format

■ Settings

1. Display the option menu with OPTION.
2. Select one of the following items and press OK to access.

   Play / Pause / Repeat / Play Mode / Shuffle On / Shuffle Off / Show Info

3. Set the item and press OK to store.

Play / Pause

Play / pause the playback.

Repeat

Repeat the playback.

Play Mode

Select the playback mode.

Shuffle On / Shuffle Off

Files are played back at random.

Show Info

Displays the information of the content.

Connected device

Device handling caution

- Data modified with a PC may not be displayed.

- Do not remove the device while the TV is accessing data. Otherwise this can damage the device or TV.

- Do not touch the pins on the device.

- Do not subject the device to a high pressure or impact.

- Insert the device in the correct direction. Otherwise this can damage the device or TV.

- Electrical interference, static electricity, or erroneous operation may damage the data or device.

- Back up the recorded data at regular intervals to prevent data deterioration, data damage or erratic operation of the TV. Panasonic is not liable for any deterioration or damage of recorded data.

USB devices

- It is recommended to connect the device to the TV's USB port directly.

- Some USB devices or USB HUB may not be used with this TV.

- You cannot connect any devices using a USB card reader.

■ USB Flash Memory

USB Flash Memory format:

  FAT16, FAT32

- USB HDDs formatted on a PC are not guaranteed to work in Media Player.

■ USB HDD

- The capacity of USB HDD that works with this TV is from 160 GB to 6 TB.

- Connect the USB HDD to the mains socket to record and play back properly with this TV.

- Use the USB HDD formatted with this TV.

  → Recording > USB HDD setup > Setting for USB HDD

- Regarding performance, not all USB HDDs are guaranteed.

Supported format

Photo format

■ Supported Photo formats

● JPEG (.jpg, .jpeg)

Sub-sampling:

4:4:4, 4:2:2, 4:2:0

Image resolution (pixel):

8 × 8 to 30 719 × 17 279

• DCF and EXIF standards

• Progressive JPEG is not supported.

= Note =

• Some files may not be played back even if they fulfil these conditions.

• Some files may not be played back correctly depending on the resolution, etc.

• 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.

Video format

■ Supported Video formats

● AVI (.avi)

Video codec:

H.264, MPEG1, MPEG2, MPEG4, VC-1, WMV9

Audio codec:

AAC, ADPCM, Dolby Audio (Dolby Digital, Dolby Digital Plus), HE-AAC, LPCM, MP3, WMA, WMA Pro

● MP4 (.m4v, .mp4)

Video codec:

H.264, H.265 (HEVC), MPEG1, MPEG2, MPEG4

Audio codec:

AAC, Dolby Audio (Dolby Digital, Dolby Digital Plus, Dolby AC-4), HE-AAC, MP3

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

● MKV (.mkv)

Video codec:

H.264, H.265 (HEVC), MPEG1, MPEG2, MPEG4

Audio codec:

AAC, Dolby Audio (Dolby Digital, Dolby Digital Plus), HE-AAC, MP3, Vorbis

● ASF (.asf, .wmv)

Video codec:

MPEG4, VC-1, WMV9

Audio codec:

AAC, Dolby Audio (Dolby Digital, Dolby Digital Plus), HE-AAC, LPCM, MP3, WMA, WMA Pro

• Copy-protected files cannot be played back.

- FLV (.flv)

  Video codec:

  H.264

  Audio codec:

  AAC, MP3

- 3GPP (.3gp, .3g2)

  Video codec:

  H.264, MPEG4

  Audio codec:

  AAC, HE-AAC

- PS (.mod, .mpg, .mpeg, .vob)

  Video codec:

  H.264, MPEG1, MPEG2, VC-1

  Audio codec:

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

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

  Video codec:

  H.264, H.265 (HEVC), MPEG1, MPEG2, VC-1

  Audio codec:

  AAC, Dolby Audio (Dolby Digital, Dolby Digital Plus, Dolby AC-4), HE-AAC, MP3

- WebM (.webm)

  Video codec:

  VP9

  Audio codec:

  Vorbis

■ Supported Subtitles formats

● MicroDVD, SubRip, TMPlayer (.srt, .sub, .txt)

- The video file and subtitles text file are inside the same folder, and the file names are the same except for the file extensions.

- If there are more than one subtitles text files inside the same folder, they are displayed in the following order of priority: ".srt", ".sub", ".txt".

= Note =

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

- 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.

Music format

■ Supported Music formats

● MP3 (.mp3)

● AAC (.m4a)

• Copy-protected files cannot be played back.

● FLAC (.flac)

● WMA / WMA Pro (.wma)

• Copy-protected files cannot be played back.

● LPCM (.wav)

= Note =

• Some files may not be played back even if they fulfil these conditions.

• 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.

Network

Internet content

Information

You can enjoy internet content such as videos, games, communication tools, etc. from Apps.

- A broadband network environment is required to use this function. Ensure the network connections and network settings are completed.

   Network > Network connections

   Network > Network settings

Selecting internet content

1. Display Apps with APPS.

   - For details of Apps

     📖 ➡ Home > Apps

   - Depending on the usage conditions, it may take a while to read all the data.

2. Select the desired item and press OK to access.

   - To exit Apps

     EXIT

   - You can connect a keyboard for character input in the applications. You can also use the keyboard for TV operation.

     📖 ➡ Functions > Bluetooth devices

     📖 ➡ Functions > Keyboard

Note

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

   ⇒ Network > Network connections

   ⇒ Network > Network settings

- The design and specifications are subject to change without notice.

- The services through Apps are operated by their respective service providers and such service may be discontinued either temporarily or permanently without notice. Therefore, Panasonic will make no warranty for the content or the continuity of the services.

- Content may not be available depending on the country you select.

- Content may be presented in specific languages.

- Depending on the connection environment, the internet connection may be slow or may not be successful.

Network connections

Internet connection

A broadband network environment is required to use internet services.

- If you do not have any broadband network services, please consult your retailer for assistance.

- Dial-up internet connections cannot be used.

- Required speed (effective): at least 1.5 Mbps for SD (Standard Definition) and 6 Mbps for HD (High Definition) picture quality, respectively. If the transfer speed is not enough, content may not be played back properly.

■ Wireless connection

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

2 Access point

3 Internet environment

■ Wired connection

1 ETHERNET terminal

2 LAN cable (Shielded)

- Use Shielded Twist Pair (STP) LAN cable.

3 Internet environment

Home network connection

To use in-house streaming features, you need a home network environment and you can operate the features without a broadband network environment.

- A broadband network environment is required to use internet services.

   ⇒ Network > Network connections > Internet connection

■ Wireless connection (For home network and internet service)
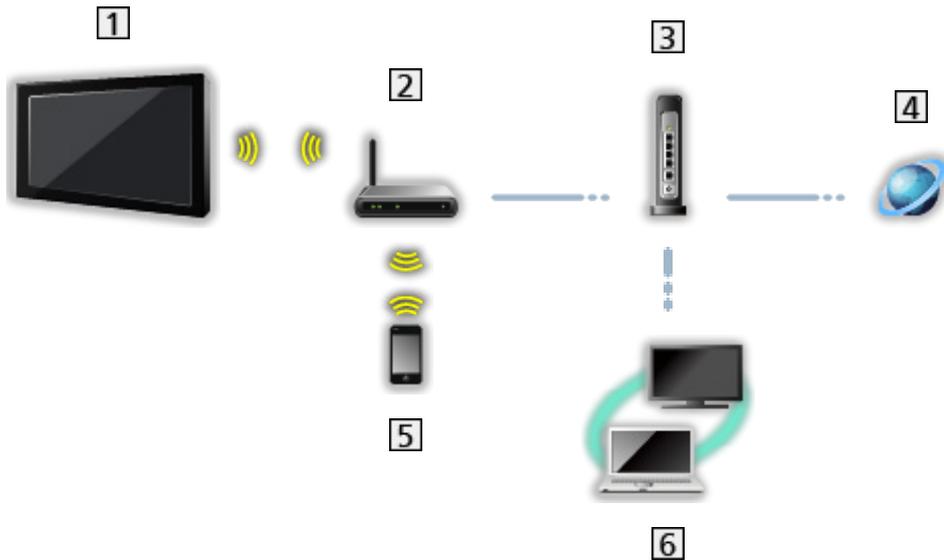
1 Built-in wireless LAN (Rear of the TV)

2 Access point

3 Hub / Router

4 Internet environment

5 Smartphone, etc.

6 Media server (PC, etc.)

■ Wired connection (For home network and internet service)
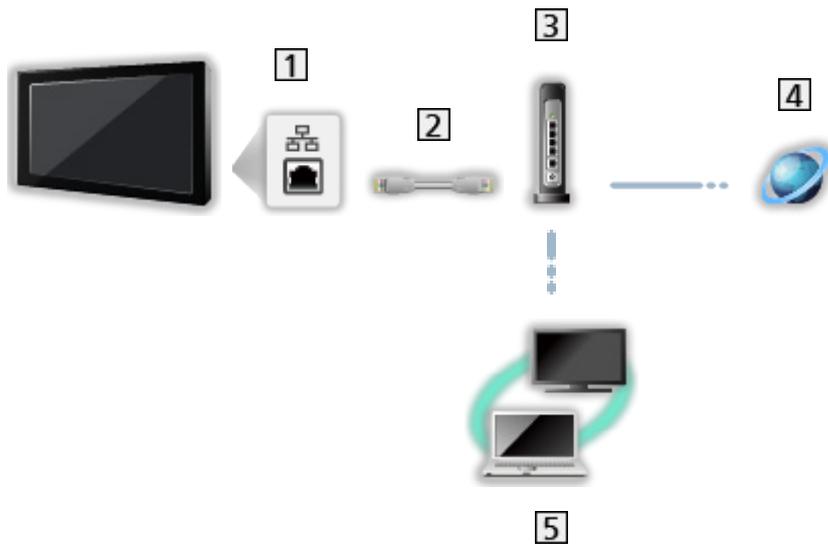
[1] ETHERNET terminal

[2] LAN cable (Shielded)

   • Use Shielded Twist Pair (STP) LAN cable.

[3] Hub / Router

[4] Internet environment

[5] Media server (PC, etc.)

Note

- For a secure connection, it is recommended to use the device supporting WPA2 / WPA3 as wireless LAN type. The encryption type depends on the connected device.

- Ensure to use a LAN straight cable.

- Wi-Fi function is disabled while the LAN cable is connected.

- Set up and connect equipment required for the network environment. You cannot make such settings on this TV. Read the manual of the equipment.

- If your modem has no broadband router functions, use a broadband router.

- If your modem has broadband router functions but there are no vacant ports, use a hub.

- Ensure that the broadband routers and hubs are compatible with 10BASE-T / 100BASE-TX.

- If you use the equipment compatible only with 100BASE-TX, category 5 or later LAN cables are required.

- Contact your Internet Service Provider (ISP) or telecommunications company for further assistance regarding the network equipment.

- Confirm the terms and conditions of the contracts with your Internet Service Provider (ISP) or telecommunications company. Depending on the contracts, additional fees may be charged or multiple connections to the internet may be impossible.

- Turn the TV off with Mains Power On / Off switch, then turn it on again when changing or making the network connection again.

- Depending on the network condition, the content may not be played back properly.

Network settings

Network connection

Ensure the connections are completed before starting network setup.

■ Wi-Fi

1. Display the menu with MENU.

2. Select Settings > Network & Internet and press OK to access.

3. Select and enable Wi-Fi.

   • When the LAN cable is connected, wired setup will be done automatically. (Wi-Fi function is disabled while the LAN cable is connected.)

4. Select your desired access point and press OK to access.

   • Available Wireless Networks are displayed automatically.

     🔒 : Encrypted access point

   • It is recommended to select the encrypted access point.

5. Follow the on-screen instructions.

• To select another access point, select Add new network / Scanning always available and follow the on-screen instructions.

■ Ethernet

1. Display the menu with MENU.

2. Select Settings > Network & Internet and press OK to access.

3. Select the items of Ethernet and follow the on-screen instructions.

= Note =

• To deactivate the wireless network (Wi-Fi), perform the following procedure to turn off the wireless network (Wi-Fi).

   – Select Settings > Network & Internet > Wi-Fi and disable the wireless function.

Device name

Sets your favourite name for this TV.

1. Display the menu with MENU.

2. Select Settings > Device Preferences > About > Device name and press OK to access.

3. Follow the on-screen instructions.

- This name is used as the name of this TV on the screen of the other network equipment.

- When you use two or more TVs in your network environment, set the names of the TVs for each.

Remote start via Wi-Fi / Remote start via LAN

Enables turning the TV on via the LAN cable or wireless LAN using a wake-up message sent from the network equipment in the home network.

1. Display the menu with MENU.

2. Select Settings > Network & Internet and press OK to access.

3. Select and enable Remote start via Wi-Fi / Remote start via LAN.

= Note =

- Changing the default configuration may result in higher energy consumption of the product.

- This function is not available when the TV is turned off with Mains Power On / Off switch.

- Depending on the network condition, this function may not be available.

Accounts & Sign In

Add Google account for login.

- Ensure the network connections and network settings are completed.

   ➞ Network > Network connections

   ➞ Network > Network settings

1. Display the menu with MENU.

2. Select Settings > Accounts & Sign In and press OK to access.

3. Follow the on-screen instructions.

System update

Updates the TV's software if any updates are available.

1. Display the menu with MENU.

2. Select Settings > Device Preferences > About > System update and press OK to access.

3. Follow the on-screen instructions.

 • A broadband network environment is required to use this function.

Functions

Voice Control

Information

The Google Assistant function allows you to operate the TV (e.g. selecting a channel), search the content from various features, etc. with your speech while this unit is connected to the internet.

- The Google Assistant function may be in preparation and the function will be available after the preparation is complete. The Google Assistant function may not be available depending on the country, area or broadcaster.

- A broadband network environment is required to use this function. Ensure the network connections and network settings are completed.

  🔳 ➜ Network > Network connections

  🔳 ➜ Network > Network settings

- Confirm the remote control is registered to this TV with Bluetooth wireless technology before using.

  🔳 ➜ Functions > Voice Control > Pairing

How to use

1. Press 🔵.

2. Say a key word (e.g. Volume up) to the microphone of remote control.

■ Settings

Settings for the Google Assistant function

1. Display the menu with MENU.

2. Select Settings > Device Preferences > Google Assistant and press OK to access.

3. Follow the on-screen instructions.

Pairing

The registration starts automatically when you press ![icon] after installing batteries. To register again, take the following steps.

1. Display the menu with MENU.

2. Select Settings > Remote Control > Pairing Start and press OK to access.

    • Select Unpair to unpair and delete the Bluetooth remote control information.

3. Follow the on-screen instructions.

Note

- When you start the Voice Control function, the sound level of the TV becomes low.

- The Voice Control function may not work properly in the following conditions:

  – Not pronouncing words clearly and correctly

  – Speaking too loudly or too quietly.

  – Surrounded by loud background noise.

- It is recommended to speak within approx. 15 cm from the microphone of remote control.

- The design and specifications are subject to change without notice.

- The operations and available services with this unit may vary from the Google Assistant function using smartphone, smart speakers, etc.

- A broadband network environment is required to use this function because this function accesses the speech recognition server with the internet connection. Even if you have the internet environment, this function may not be available depending on the proxy setting. Please connect to the internet without proxy settings. (Proxy settings are not required for normal household use. For details of the internet environment, consult your Internet Service Provider (ISP) or telecommunications company.)

- If using the 2.4 GHz band on the wireless router, simultaneous use with the remote control may result in connection interruptions. If your wireless router supports 5 GHz band, try using the 5 GHz band. If you have a wired LAN connection, try using the wired LAN connection.

Chromecast built-in

How to use

This TV is compatible with Chromecast-enabled apps. For detailed information of Chromecast-enabled apps, visit:

g.co/cast/apps

- Ensure the network connections and network settings are completed.

  🖼️ ➡ Network > Network connections

  🖼️ ➡ Network > Network settings

1. Connect your device (smartphone, etc.) to the same network as this unit.

2. Start the Chromecast-enabled app on your device (smartphone, etc.) and select this unit as the connecting device.

- You can watch and display image of your device (smartphone, etc.) on the TV screen.

■ Settings

Settings for the Chromecast-enabled apps, etc.

1. Display the menu with MENU.

2. Select Settings > Device Preferences > Google Cast and press OK to access.

3. Follow the on-screen instructions.

= Note =

- The design and specifications are subject to change without notice.

HDMI CEC

CEC connection

■ HDMI Connection

- Use a fully wired HDMI compliant cable.

- Connect the equipment supporting HDMI CEC to the TV's HDMI terminal via an HDMI cable.

1 HDMI terminal

2 HDMI cable

3 Equipment with CEC function

Consumer Electronic Control (CEC)

1. Display the menu with MENU.

2. Select Settings > Device Preferences > Inputs and press OK.

3. Select one of the following items and press OK to access.

   HDMI control / Device auto power off / TV auto power on / HDMI Auto Setting / CEC Device List

4. Set the item and press OK to store.

HDMI control

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

Device auto power off

When the TV is set to Standby mode, the connected equipment is also automatically set to Standby.

TV auto power on

When the connected equipment is operated, the TV is automatically turned on.

HDMI Auto Setting

Set to Mode1 when the image or sound in HDMI input is not played properly.

    ➡ Watching > 4K resolution > HDMI Auto Setting

CEC Device List

The connected equipment with CEC function is displayed.

■ CEC menu

• For HDMI

1. Display the option menu with OPTION.

2. Select Root / Setup / Contents and press OK to access.

3. Follow the on-screen instructions.

Note

- These functions may not work properly depending on the connected equipment.

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

Parental Controls

Parental Controls

You can lock specific channels / AV input terminals to restrict access to them. When the locked channel / input is selected, a message appears. Enter the PIN number to watch.

1. Display the menu with MENU.

2. Select Settings > Channel > Parental Controls and press OK to access.

3. Enter the PIN number (4 digits) with Numeric buttons.

   ```
   1 2 3
   4 5 6
   7 8 9
     0
   ```

   • Enter the PIN number twice at first setting.

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

4. Select Channels Blocked / Inputs Blocked and press OK to access.

5. Select the channel / input and press OK to lock.

   • 🔒 appears when the channel / input is locked.

■ Program Restrictions

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

1. Display the menu with MENU.

2. Select Settings > Channel > Parental Controls > Program Restrictions and press OK to access.

3. Follow the on-screen instructions.

PIN number

You can change the PIN number.

1. Select Change PIN and press OK to access.

2. Enter a new PIN number twice with Numeric buttons.

= Note =

- Setting Reset erases the PIN number and all settings.

Data Service Application

Using Data Service Application

You can enjoy Hybrid Broadcast Broadband TV application that may be provided via digital broadcasting as interactive data services.

- Data Service Applications is not effective on MHEG. (Ireland)

- A notification message will appear when the application is available. Follow the on-screen instructions.

- [D] is displayed on the information banner if the programme has Hybrid Broadcast Broadband TV application.

- To terminate the running application. (The default application may start immediately.)

  EXIT

HBBTV Settings

1. Display the menu with MENU.

2. Select Settings > Channel > Advanced Options > HBBTV Settings and press OK to access.

3. Follow the on-screen instructions.

Note

- Data Service Applications is not effective on MHEG. (Ireland)

- A broadband network environment is required to fully use Hybrid Broadcast Broadband TV application. Ensure the network connections and network settings are completed.

   ➔ Network > Network connections

   ➔ Network > Network settings

- Not all the data services are available depending on the country, area and broadcaster.

- Depending on the connection environment, the internet connection may be slow or may not be successful.

- Operations may vary depending on the broadcaster. Follow the on-screen instructions.

- On-screen instructions may not correspond to the remote control buttons.

Common Interface

Caution

If the encrypted message is displayed on the screen, the correct Common Interface (CI) Module and smart card that are required for this service are not inserted.

■ How to insert CI module and smart card

- Turn the TV off with Mains Power On / Off switch whenever inserting or removing the CI module.

- If a smart card and a CI module come as a set, first insert the CI module, then insert the smart card into the CI module.

- Insert or remove the CI module completely in the correct direction as shown.
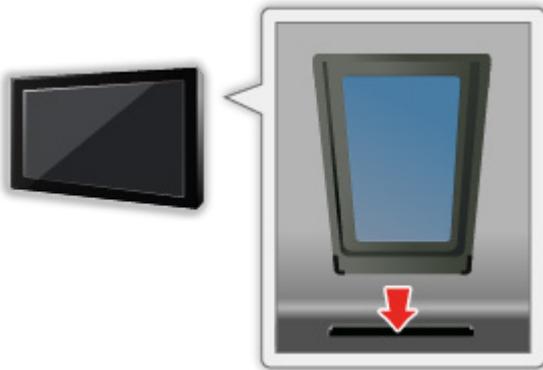
- Remove the CI module from the TV when placing the TV facing upward. This may cause damages to the CI module and CI slot.

= Note =

- There might be some CI modules in the market with older firmware versions that do not work fully interoperable with this new CI+ v1.4 TV. In this case, please contact your content provider.

Using Common Interface

The Common Interface Module menu provides access to software contained in Common Interface (CI) Modules.

- Video and audio signals may not be output depending on the broadcast or service.

■ Insert the CI module (optional)

- Follow the instructions that came with the viewing card to tune in the encrypted channels. If encrypted channels do not appear, perform the below to verify the card is recognised by the TV.

- For details, read the manual of the CI module, or check with the content provider.

1. Select the mode with INPUT.

2. Display the menu with MENU.

3. Select Settings > Channel > Advanced Options > Common Interface and press OK to access.

4. Follow the on-screen instructions.

Reset

Reset

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

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

1. Display the menu with MENU.

2. Select Settings > Device Preferences > About > Reset and press OK to access.

3. When a confirmation screen is displayed, select Reset and press OK to set.

4. Follow the on-screen instructions.

Updating the TV Software

Information

A new version of software may be released for download to enhance the performance or operations of the TV.

If there is an update available and the channel has the update information, a notification message is displayed.

- To download

  `OK`

  – Press `EXIT` when not downloading.

- To update via the internet

  🖼️ ➡ Network > Network settings > System update

= Note =

- Software updating may result in higher energy consumption of the product.

- Select Settings > Device Preferences > About > Service information and press `OK` to display the system information of this TV.

Bluetooth devices

Accessories

You can use Bluetooth keyboards*[1], Bluetooth mouses*[1] and Bluetooth audio devices*[2] (headphones, speaker, etc.) with this TV by setting Add accessory in the Setup Menu.

*1 : HID (Human Interface Device Profile) and HOGP (Human interface device Over Generic attribute Profile) compliant keyboards and mouses can be used.

*2 : A2DP (Advanced Audio Distribution Profile) and AVRCP (Audio Video Remote Control Profile) compliant audio devices can be used.

1. Display the menu with MENU.

2. Select Settings > Accessories and press OK to access.

3. Select one of the following items and press OK to access.

   Add accessory / Bluetooth Audio Settings

   • Select the device name to disconnect, change name or unpair.

4. Set the item and press OK to store.

Add accessory

Searches the available device and displays the status.

• Place the device within 50 cm from the TV while registration is in progress.

• Turn the device on for registering. The setup for registration may be required depending on the device. Read the manual of the device.

• To pair and register the remote control, set Pairing Start in Remote Control.

  📖➡ Functions > Voice Control > Pairing

Bluetooth Audio Settings

Adjusts the volume for an audio device, etc.

Audio Control:

   Sets to control a Panasonic Bluetooth audio device with this TV.

   • Settings on a Panasonic Bluetooth audio device are also required to use this audio control function.

Bluetooth Device Volume:

   Adjusts the volume of a Bluetooth audio device.

   • This function is available when Audio Control is set to On.

- This setup is not designed for the remote control supporting Bluetooth wireless technology.

- For a secure connection, it is recommended to use the device supporting Bluetooth 4.2 or later. The encryption type depends on the connected device.

- If using the 2.4 GHz band on the wireless router, simultaneous use with Bluetooth device including the Bluetooth remote control may result in connection interruptions. If your wireless router supports 5 GHz band, try using the 5 GHz band. If you have a wired LAN connection, try using the wired LAN connection.

  Also try to set Unpair in Remote Control to unpair and delete the Bluetooth remote control information. (Voice control function using the microphone of remote control is only disabled.)

   ➡ Functions > Voice Control > Pairing

- If the sound interruption occurs, place Bluetooth device closer to the TV.

- When a Bluetooth device is connected to the TV, it is possible that the Bluetooth audio output may not be synchronised (i.e. be delayed) with relation to the images on the screen. This is not a defect of the TV or the device. The delay time will differ depending on the device.

Keyboard

Keyboard

- Keyboards requiring the drivers are not supported.

- To change the language type, set Keyboard.

  1) Display the menu with MENU.

  2) Select Settings > Device Preferences > Keyboard and press OK to access.

  3) Follow the on-screen instructions.

- Characters may not be displayed correctly on the TV screen depending on the connected keyboard or the keyboard layout setting.

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

Keyboard	Remote Control
↑ / ↓ / ← / →	△ / ▽ / ◁ / ▷
Enter	OK
0 - 9 / Character	Numeric buttons

Settings

General setting

How to use

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

1. Display the menu with MENU.

    • Displayed items vary depending on the input signal.

2. Select the menu and press OK to access.

3. Select the items and press OK to access.

    • Only available items can be selected.

• You can select from among alternatives with △ / ▽ and press OK to set.

• You can adjust using the slide bar with ◁ / ▷ and press OK to set.

• You can go to the next screen with OK.

• You can enter names or numbers freely for some items.

    1) Enter characters one by one with Cursor buttons and press OK to set.

    2) Press BACK to store.

• To exit the menu screen

    EXIT

• To return to the previous screen

    BACK

• Select Edit from Quick setting menu to edit the quick accessible menu items.

= Note =

• Menu items and selectable options vary depending on the mode (TV mode, Media Player, Network services, etc.).

• Some settings in Picture menu may also affect the menu screen when watching content in 4K format.

Channel

Audio Language / 2nd Audio Language

Selects the preferred language for digital channel multi audio (depending on the broadcaster).

 → Watching > Basic > Multi audio

Channels

You can retune channels, skip unwanted channels, etc.

 ➡ Watching > Tuning and editing channels > Setting menu

Banner Display

You can set the banner display.

 Watching > Basic > Selecting channel

Auto Channel Update

Automatically updates the channels.

 ➡ Watching > Tuning and editing channels > Channel Scan

Channel Update Message

Selects whether to give a notification message when a new digital TV channel is found or not.

 ➡ Watching > Tuning and editing channels > Channel Scan

Advanced Options

Advanced settings for the optional functions

- 127 -

Parental Controls

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

📖 ➡ Functions > Parental Controls > Parental Controls

Record Setting

Settings for the recording feature of the USB HDD

 ➜ Recording > USB HDD setup > Setting for USB HDD

Picture

Viewing Mode

Selects your favourite picture mode for each input.

 ➡ Watching > For best picture > Viewing Mode

Basic settings

Dolby Vision Notification

Displays a Dolby notification.

Backlight, Brightness, Contrast, Colour, Tint, Sharpness

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

📖 ➡ Watching > For best picture > Basic settings

Colour Temperature

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

📖 ➡ Watching > For best picture > Basic settings

Vivid Colour

Automatically adjusts colours to vivid ones.

📖 ➡ Watching > For best picture > Basic settings

Colour Remaster

Displays the vivid images with the expanded colour gamut.

📖 ➡ Watching > For best picture > Basic settings

Rec.2020 Colour Remaster

Displays the vivid images with the suitable colour gamut.

📖 ➡ Watching > For best picture > Basic settings

Adaptive Backlight Control

Automatically controls the level of backlight according to the images.

📖 ➡ Watching > For best picture > Basic settings

Noise Reduction

Reduces unwanted picture noise.

📖 ➡ Watching > For best picture > Basic settings

MPEG Remaster

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

📖 ➡ Watching > For best picture > Basic settings

Resolution Remaster

Enhances picture resolution to make the image sharper.

🖼️ ➡ Watching > For best picture > Basic settings

Dynamic Range Remaster

Enhances bright areas of the image closer to the original luminance making improved picture impact.

🖼️ ➡ Watching > For best picture > Basic settings

Clear Motion

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

🖼️ ➡ Watching > For best picture > Basic settings

Copy Adjustment

Copies the picture settings of Filmmaker, True Cinema, Dolby Vision Bright or Dolby Vision Dark to those of the other input mode or Viewing Mode.

🖼️ ➡ Watching > For best picture > Basic settings

Reset to Default

Resets the current Picture Viewing Mode to the default settings.

🖼️ ➡ Watching > For best picture > Basic settings

Ambient Sensor

Automatic Brightness Control function

Adjusts picture settings automatically depending on ambient lighting condition.

📖 ➡ Watching > For best picture > Ambient Sensor

HDR Brightness Setting

You can adjust and set up the details of HDR brightness.

 ➔ Watching > For best picture > HDR Brightness Setting

Advanced Settings

You can adjust and set up the detailed picture settings.

 ➡ Watching > For best picture > Advanced Settings

Option Settings

Game mode

Provides suitable images for fast response signals when playing games.

🔖 ➡ Watching > For best picture > Option Settings

Film Cadence Mode

Improves vertical resolution for movie images.

🔖 ➡ Watching > For best picture > Option Settings

1080p Pure Direct

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

🔖 ➡ Watching > For best picture > Option Settings

4K Pure Direct

Reproduces the original image quality in detail for 4K (HDMI) input signal.

🔖 ➡ Watching > For best picture > Option Settings

EOTF Type

Selects the EOTF type for each input. Set to Auto for general use.

🔖 ➡ Watching > For best picture > Option Settings

Screen Settings

Aspect

Changes the aspect ratio (image size).

📖 ➡ Watching > For best picture > Aspect

16:9 Overscan

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

📖 ➡ Watching > For best picture > Screen Settings

PICTURE Button Setting

Sets the viewing mode selection when pressing PICTURE.

 → Watching > For best picture > Viewing Mode

Sound

System Sounds

Operation sound settings of this TV

Sound Mode

Selects your favourite sound mode for each input.

 → Watching > For best audio > Sound Mode

Basic settings

Balance

Adjusts the volume level of right and left speakers.

Watching > For best audio > Basic settings

Bass

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

Watching > For best audio > Basic settings

Treble

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

Watching > For best audio > Basic settings

Sound Surround

Selects surround sound settings.

Watching > For best audio > Basic settings

Equalizer Detail

Adjusts the frequency level to suit your favourite sound quality.

Watching > For best audio > Basic settings

Sport Link

Automatically sets the sound mode to Sports when Viewing Mode is set to Sport.

Watching > For best audio > Basic settings

Speakers

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

Watching > For best audio > Basic settings

Speaker Delay

Adjusts the delay time of the sound.

Watching > For best audio > Basic settings

Audio Output

Enables the audio output from the speakers when connecting the headphones.

🔖 ➡ Watching > For best audio > Basic settings

Speaker Volume

Adjusts the volume of the speakers when connecting the headphones.

🔖 ➡ Watching > For best audio > Basic settings

Digital Output

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

🔖 ➡ Watching > For best audio > Basic settings

SPDIF Delay

Adjusts the delay time of the sound output from DIGITAL AUDIO and HDMI2 (ARC function) terminals if the sound does not synchronise the image.

🔖 ➡ Watching > For best audio > Basic settings

Auto Volume Control

Automatically regulates large sound level differences between channels and inputs.

🔖 ➡ Watching > For best audio > Basic settings

Reset to Default

Resets the current Sound Mode to the default settings.

🔖 ➡ Watching > For best audio > Basic settings

Timer

Power Off Timer Type / Power Off Timer

Sets the time that the TV goes into Standby mode at within 24 hours.

 → Watching > Basic > Energy saving functions

Power

Off Timer

Switch to TV Standby mode automatically after a fixed period.

 ➔ Watching > Basic > Energy saving functions

Switch Off Timer

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

Picture Off

Turns the screen off.

→ Watching > Basic > Energy saving functions

No Signal Power Off

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

 ➡ Watching > Basic > Energy saving functions

Shop Mode

Shop Mode

Settings for the shop mode, demo mode, etc.

Network & Internet

Wi-Fi

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

 Network > Network settings > Network connection

Remote start via Wi-Fi / Remote start via LAN

Enables turning the TV on via the LAN cable or wireless LAN using a wake-up message sent from the network equipment in the home network.

 → Network > Network settings > Remote start via Wi-Fi / Remote start via LAN

Other options

Adds new network, scans, enables the scanning, etc.

 ➔ Network > Network settings > Network connection

Ethernet

Detailed settings for wired connection

 ➔ Network > Network settings > Network connection

Accounts & Sign In

Accounts & Sign In

Settings for Google account

Apps

Recently opened apps

The recently opened apps are displayed.

Device Preferences

About

System update

Downloads new software to this TV.

📖 ➡ Network > Network settings > System update

Device name

Sets your favourite name for this TV.

📖 ➡ Network > Network settings > Device name

Reset

Resets all settings to the original condition.

📖 ➡ Functions > Reset > Reset

Status

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

📖 ➡ Network > Network settings > Network connection

Legal information

Displays the software licence information.

Model / Version

Displays the model number / Android OS version of this TV.

TV self test

Makes a diagnosis of picture or sound problems.

Follow the on-screen instructions.

Service information

Displays the service information (Software version etc.) of this TV.

Date & time

Clock settings for this TV

 ➔ Watching > Basic > Adjusting time

Language

Language settings for this TV

 → Watching > Basic > Language

Keyboard

Selects the language that your USB or Bluetooth Keyboard supports.

 → Functions > Keyboard > Keyboard

Inputs

Settings for the external equipment to be connected

Storage

Displays the available data storage.

Home screen

Settings for the home screen

Google Assistant

Settings for the Google Assistant function

- 162 -

Google Cast

Displays the information for the Chromecast built-in function.

Screen saver

Enables the screen saver.

Location

Location setting of this TV

Usage & Diagnostics

Enables sending diagnostic information automatically to Google.

Accessibility

Guidance settings for visually impaired users

 ➔ Watching > For best audio > Accessibility

Reboot

Reboots this unit.

Remote Control

Remote Control

Pairing Start

Registration setting of the remote control for Voice Control function

 Functions > Voice Control > Pairing

Unpair

Unpair the registered remote control and delete the Bluetooth information of the remote control.

 Functions > Voice Control > Pairing

Accessories

Accessories

Settings for the specific devices supporting Bluetooth wireless technology

 ➔ Functions > Bluetooth devices > Accessories

Support

FAQs

Picture

Before requesting service or assistance, please follow these simple guides to solve the problem. Also makes a diagnosis of picture problem in TV self test.

📖 ➡ Settings > Device Preferences > About

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

Black and white picture

- -

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

Chaotic image, noisy

- -

- Set Noise Reduction and MPEG Remaster in the Picture Menu to remove noise.

  📖 ➡ Watching > For best picture > Basic settings

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

No image is displayed

- -

- Check the correct input mode is selected.

- Is Backlight, Brightness, Contrast or Colour in the Picture Menu set to the minimum?

  📖 ➡ Watching > For best picture > Basic settings

- Check all required cables and connections are firmly in place.

Blurry or distorted image (no sound or low volume)

- -

- Reset channels.

  📖 ➡ Watching > Tuning and editing channels > Channel Scan

White spots or shadow images (noise)

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

- Keep the space between the TV and RF cable.

There may be a short black image

- A black image is displayed to avoid picture distortion when an input signal changes.

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

- This is a characteristic of liquid crystal panels and is not a problem. The liquid crystal panel is built with very high precision technology giving you fine picture details. Occasionally, a few non-active pixels may appear on the screen as a fixed point of red, green, blue or black. Please note this does not affect the performance of the panel.

Digital TV

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

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

Unable to receive signals with a high-performance aerial

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

Interference or frozen / disappearing image

- Check System Information. If the level of Signal Quality is low, check aerial.

   📖 ➜ Watching > Tuning and editing channels > System Information
- Turn the TV off with Mains Power On / Off switch, then turn it on again.

No programmes shown on Program Guide

- Check the aerial connection to the Television set and if there are any current signalling issues in your area.
- Contact Panasonic Customer Support by visiting

   www.panasonic.co.uk/freeview
- Contact the digital services provider to check for any local transmission issues by visiting www.freeview.co.uk
- Consult an aerial engineer to check the alignment of your aerial.

Cannot find a channel you have previously watched

- The channel may broadcast for part of the day.
- Check the channel in the TV Guide.
- Channel position numbers may be changed by broadcasters.
- Reset channels.

   📖 ➜ Watching > Tuning and editing channels > Channel Scan

Sound

Before requesting service or assistance, please follow these simple guides to solve the problem. Also makes a diagnosis of sound problem in TV self test.

🖻 ➡ Settings > Device Preferences > About

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

No sound is produced

- -

- Is "Sound mute" active? Press MUTE to switch sound mute on or off.

- Is the volume set to the minimum?

- Check connections and setting of external equipment.

  🖻 ➡ Watching > External equipment

Sound level is low or sound is distorted

- -

- Sound signal reception may be poor.

HDMI

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

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

Sound is unusual

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- Set HDMI Auto Setting in the Setup Menu to Mode1.

  📖 ➡ Watching > 4K resolution > HDMI Auto Setting

Pictures from external equipment are unusual when the equipment is connected via HDMI

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- Check the HDMI cable is connected properly.

  📖 ➡ Watching > External equipment > External connection

- Turn the TV and equipment off, then turn them on again.

- Check an input signal from the equipment.

  📖 ➡ Watching > External equipment > Valid input signals

- Use equipment compliant with EIA/CEA-861/861D.

- Set HDMI Auto Setting in the Setup Menu to Mode1.

  📖 ➡ Watching > 4K resolution > HDMI Auto Setting

- The valid 4K format varies depending on the HDMI terminal.

  📖 ➡ Watching > 4K resolution > Valid 4K format

Network

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

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

Cannot connect to the network

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- Check the LAN cable or wireless LAN is connected properly.

  📖 ➡ Network > Network connections

- Check the connections and settings.

  📖 ➡ Network > Network connections

  📖 ➡ Network > Network settings

- Check the network equipment and network environment.

- The router may not be set to issue IP address automatically. If the network administrator prefers to allocate an IP address, set an IP address manually.

  📖 ➡ Network > Network settings

- The router may be using MAC address filtering (security setting). Confirm the MAC Address of this TV and set the router to use it.

  📖 ➡ Network > Network settings

- If the problem persists, consult your Internet Service Provider or telecommunications company.

Cannot operate internet content

- -

- Check the connections and settings.

  📖 ➡ Network > Network connections > Internet connection

  📖 ➡ Network > Network settings

- The server or connected line may be busy now.

Other

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

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

HDMI CEC function does not work and an error message appears

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- Check the connections.

   → Functions > HDMI CEC > CEC connection

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

   → Functions > HDMI CEC

Parts of the TV become hot

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- Parts of the TV may become hot. These temperature rises do not pose any problems in terms of performance or quality.

Overcurrent error message appears

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- The connected USB device may cause this error. Remove the device and turn the TV off with Mains Power On / Off switch, then turn it on again.

- Check foreign objects are not inside the USB port.

An error message appears

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- Follow the message's instructions.

- If the problem persists, contact your local Panasonic dealer or the authorised service centre.

Voice Control function does not work

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- Confirm the remote control is paired with this TV and the name of remote control is displayed on Accessories in Settings. If the remote control is not displayed, set Pairing Start in Remote Control.

  📖 ➡ Functions > Voice Control > Pairing

- Voice Control function may not work properly depending on the pronunciation, noise and network environment.

- Check the connections and settings.

  📖 ➡ Network > Network connections

  📖 ➡ Network > Network settings

- For details of the Voice Control function

  📖 ➡ Functions > Voice Control

LED does not turn to red in Standby mode

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- LED turns to orange in Standby mode in the following conditions:

  – Recording is in progress.

  – Timer Programming is set.

When pushed with a finger, the display panel moves slightly and makes a noise

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- There is a little gap around the panel to prevent damage to the panel. This is not a malfunction.

Detailed information

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

https://panasonic.jp/support/global/cs/tv/ (English only)

Maintenance

Care and Cleaning

First, remove the mains plug from the mains socket.

■ Display panel, Cabinet, Pedestal

Regular care:

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

For stubborn dirt:

(1) First clean the dust from the surface.

(2) Dampen a soft cloth with clean water or diluted neutral detergent (1 part detergent to 100 parts water).

(3) Wring out the cloth firmly. (Please note, do not let liquid enter the TV inside as it may lead to product failure.)

(4) Carefully wipe moisten and wipe away the stubborn dirt.

(5) Finally, wipe away all the moisture.

= Caution =

- Do not use a hard cloth or rub the surface too hard, otherwise this may cause scratches on the surface.

- Take care not to subject the surfaces to insect repellent, solvent, thinner or other volatile substances. This may degrade surface quality or cause peeling of the paint.

- The surface of the display panel is specially treated and may be easily damaged. Take care not to tap or scratch the surface with your fingernail or other hard objects.

- Do not allow the cabinet and pedestal to make contact with a rubber or PVC substance for a long time. This may degrade surface quality.

■ Mains plug

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