



TX-40DX653E	TX-49DX653E	TX-55DX653E
TX-40DX650E	TX-49DX650E	TX-55DX650E
TX-40DX603E	TX-49DX603E	TX-55DX603E
TX-40DX600E	TX-49DX600E	TX-55DX600E
TX-40DXU601	TX-49DXU601	TX-55DXU601

*e*HELP

Read first

eHELP

- How to use 12

Features

- 4K resolution 13
- Info Frame 14
- Home Screen 15
- TV Anywhere 16
- DVB-via-IP 17
- Easy Mirroring 18

Home Screen

Home Screen

- Information 19
- How to use 21
- Pin to HOME 22
- Option menu 23

Live TV

- How to use 24
- Option menu 25

Apps

- How to use 26
- Option menu 27

Devices

- How to use 28
- Option menu 29

Watching

Basic

- Basic connection 30
- Selecting channel 33
- Information banner 35
- AV Options 38

• Subtitle	40
• Last view	41
• Off Timer	42
• Energy saving functions	43
• Adjusting time	46
• Language	47
4K resolution	
• 4K compatible equipment	48
• HDMI Auto Setting	49
• Valid 4K format	50
External equipment	
• External connection	51
• Watching external input	55
• Operating with TV's remote control	57
• HDMI features	59
• Valid input signals	61
For best picture	
• Viewing Mode	62
• Ambient Sensor	63
• Aspect	64
• Aspect Control Signal	65
• Basic settings	67
• Noise reduction settings	69
• Advanced Settings	70
• Option Settings	74
• Screen Settings	76
• Copy Adjustment	77
For best audio	
• Sound mode	78
• Basic settings	79
• Volume settings	81
• Voice Guidance Settings	83
• Audio Description	84

• Advanced settings	85
TV Guide	
• Using TV Guide	88
• Timer Programming	90
Teletext	
• Viewing Teletext	91
• Teletext mode	93
• Teletext Character Set	94
Tuning and editing channels	
• Setting menu	95
• Favourites Edit	96
• Channel List	98
• Auto Setup	101
• Manual Tuning	105
• Update Channel List	108
• New Channel Message	109
• Signal Condition	110
• Other settings	111
• Selectable satellites [This feature is available depending on your model.]	112
Recording	
USB HDD setup	
• Preparations	113
• Setting for USB HDD	115
Recording current programme	
• One Touch Recording	117
• REW LIVE TV	118
Timer Programming	
• Setting Timer Programming	120
• Editing Timer Programming	122
• Remote recording	123
• Note	124

Technical information	
• USB HDD	125

Media Player

Using Media Player	
• Information	126
• Selecting device / mode	128
• Network device	130
• Sharing file	131

Photo mode	
• Selecting file	132
• Viewing photo	133
• Sorting photos	134
• Using Slideshow	135

Video mode	
• Selecting file	137
• Watching video	138
• Video Setup	140
• Audio output settings	142

Music mode	
• Selecting file	143
• Playing music	144
• Music Setup	145

Recorded TV mode	
• Selecting content	146
• Watching recorded TV	147
• Grouping content	149
• Deleting content	150
• Chapter List	151
• Audio output settings	152

Technical information	
• Device handling caution	153
• USB devices	154

• Photo format	155
• Video format	156
• Music format	159

Network

Internet content

• Information	160
• Selecting internet content	161
• Note	162

DLNA

• In-House streaming	163
• Using DLNA	166

Network connections

• Internet connection	167
• DLNA connection	168
• Note	170

Network settings

• Network Connection	171
• Custom - Wireless	173
• Custom - Wired	176
• Custom - Wireless Access Point	178
• Network Status	179
• my Home Cloud Settings	180
• VIERA Name	181
• TV Remote App Settings	182
• Network Link Settings	184
• TV Anywhere Settings	186
• File Sharing Settings	187
• Mirroring Settings	188
• Do Not Track Setting	189
• Software Update	190
• New Software Message	191

Photos	
• Selecting file	192
• Viewing photo	193
• Using Slideshow	194
Videos	
• Selecting file	195
• Watching video	196
• Video Setup	198
• Audio output settings	200
Music	
• Selecting file	201
• Playing music	202
• Music Setup	203
DIGA Recorder	
• Controlling DIGA Recorder	204
Technical information	
• Photo format	205
• Video format	206
• Music format	209
Functions	
Info Frame	
• Information	210
• How to use	211
• Settings	212
Voice Control	
• Information	213
• How to use	214
• Settings	215
• Note	216
TV Anywhere	
• How to use	217
• TV Anywhere Settings	218

Mirroring	
• How to use	219
• Mirroring Settings	220
DVB-via-IP	
• DVB-via-IP client connection	221
• DVB-via-IP Server Selection	223
• Note	225
VIERA Link “HDAVI Control™”	
• Summary of VIERA Link	226
• Preparations	231
• Easy playback	232
• Power on Link	233
• Power off Link	234
• Standby Power Save	235
• Intelligent Auto Standby	236
• VIERA Link Control	237
• Speaker Selection	239
• Note	240
Child Lock	
• Using Child Lock	241
• PIN number	242
• Parental Rating	243
Data Service Application	
• Using Data Service Application	244
• Cookie	245
• Note	246
Common Interface	
• Caution	247
• Using Common Interface	248
Shipping Condition	
• Shipping Condition	249
Updating the TV Software	
• Information	250

• Auto update	251
• Manual update	252
Setting characters	
• Using Numeric buttons	253
Keyboard	
• Keyboard	254
Settings	
Setting menu	
• How to use	255
Picture	
• Viewing Mode	257
• Basic settings	258
• Ambient Sensor	260
• Noise reduction settings	261
• Advanced Settings	262
• Option Settings	263
• Screen Settings	265
• Copy Adjustment	266
• Reset to Defaults	267
Sound	
• Mode	268
• Basic settings	269
• Volume settings	270
• Voice Guidance Settings	271
• Audio Description	272
• Advanced settings	273
• Reset to Defaults	275
Network	
• Network Connection	276
• Network Status	277
• my Home Cloud Settings	278
• VIERA Name	279

• TV Remote App Settings	280
• Network Link Settings	281
• TV Anywhere Settings	282
• File Sharing Settings	283
• Mirroring Settings	284
• Do Not Track Setting	285
• Other settings	286

Timer

• Off Timer	287
• Timer Programming	288
• Time Zone	289
• Auto Standby	290
• No signal Power off	291

Setup

• Eco Navigation	292
• Voice Control Settings	293
• USB Device Setup	294
• Recording Setup	295
• Child Lock	296
• Tuning Menu	297
• Language	300
• Display Settings	301
• HDMI Auto Setting	303
• Common Interface	304
• VIERA Link Settings	305
• Data Service Application	306
• System Menu	307
• Other Settings	308

Support

Help menu

• Using Help menu	309
-------------------	-----

FAQs

• Picture	310
• Digital TV	312
• Analogue TV	314
• Sound	315
• HDMI	316
• Network	317
• Other	319
• Detailed information	321

Maintenance

• Care and Cleaning	322
---------------------	-----

Licence

• Licence	323
-----------	-----

Read first

eHELP

How to use

■ Meaning of signs

 :

Letters enclosed in brackets indicate remote control buttons.

Menu :

Letters in cyan indicate on-screen display items.

 → :

References in this eHELP

When the icon ( - ) is displayed, you can jump to the page for detailed descriptions pressing **Numeric buttons**.

 (red) :

Displays the menu related to the description (only for some descriptions)

= Note =

- Design and specifications are subject to change without notice.
- The images shown in this eHELP are for illustrative purposes only.

Features

4K resolution

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

 → Watching > 4K resolution > 4K compatible equipment

Info Frame

Info Frame is a convenient feature to provide you relevant information of the programme being watched, recommendations, etc. It is displayed on the edge of screen when you need it.

 → [Functions](#) > [Info Frame](#) > [Information](#)

Home Screen

“Home Screen” is a gateway to the TV programmes, applications and connected devices.

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

 → [Home Screen](#) > [Home Screen](#) > [Information](#)

TV Anywhere

You can watch TV and set timer event with the network equipment (smartphone, etc.) from outside the home network.

- Due to network conditions or certain broadcaster restrictions, this function may not be available.

 → [Functions > TV Anywhere > How to use](#)

DVB-via-IP

This TV has DVB-via-IP client function and can connect to DVB-via-IP server or SAT>IP compatible servers to receive broadcast streaming.



→ [Functions > DVB-via-IP > DVB-via-IP client connection](#)

Easy Mirroring

You can watch and display images of other devices (smartphone, etc.) on the TV screen using a mirroring function. You can also start the mirroring function from the other devices without operating the TV.

 → [Functions > Mirroring > How to use](#)

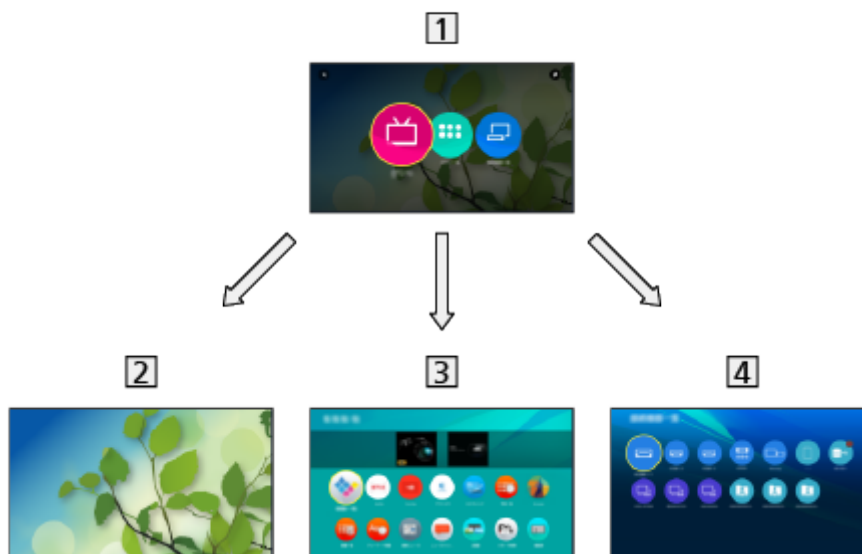
Home Screen

Home Screen

Information

“Home Screen” is a gateway to the TV programmes, applications and connected devices.

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



1 Home Screen

2 Live TV

- Gateway to TV programmes

 → Home Screen > Live TV

3 Apps

- Gateway to various applications (internet content, etc.)

 → Home Screen > Apps

4 Devices

- Gateway to connected devices (HDMI equipment, USB device, network device, etc.)

 → Home Screen > Devices

= Note =

- Be sure to update the software when a software update notice is displayed on the TV screen. If the software is not updated, you may not be able to use Home Screen. You can update the software later manually.



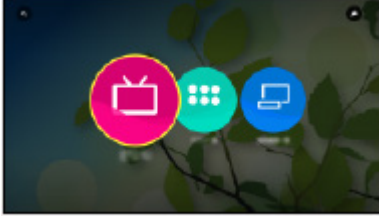
Network > Network settings > Software Update

How to use

From Home Screen, you can access all the features such as TV programmes, applications and connected devices.

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

(Example)



2. Select **Live TV** / **Apps** / **Devices** and press **OK** to access.

- To watch full-screen TV, select **Live TV**.

(Example)



- Also refer to  on the top right of Home Screen for the operations.

■ Search

You can search the content from various features.

1. Display Home Screen with **HOME**.
2. Select  on the top left of Home Screen and press **OK** to access.
3. Follow the on-screen instructions.

Pin to HOME

You can add a shortcut for a frequently used feature on Home Screen.

1. Display Home Screen with **HOME**.
2. Select [Live TV](#) / [Apps](#) / [Devices](#) and press **OK** to access.
3. Select a feature (TV programme / application / device).
4. Display the option menu with **OPTION**.
5. Select [Pin to HOME](#) and press **OK** to set.
 - To remove a shortcut from Home Screen, set [Unpin from HOME](#).

 → [Home Screen](#) > [Home Screen](#) > [Option menu](#)

Option menu

You can customise Home Screen.

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

[Unpin from HOME / Move](#)

3. Set the item and press **OK** to store.
-

[Unpin from HOME](#)

Remove a shortcut from Home Screen.

[Move](#)

Arranges the position of the icons.

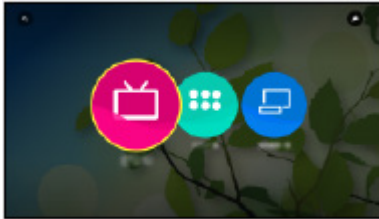
Live TV

How to use

Live TV is a gateway to the TV programmes.

1. Display Home Screen with **HOME**.
2. Select **Live TV**.

(Example)



3. Press **OK** to access.

(Example)



- For details of watching TV

 → **Watching > Basic**

- To add a shortcut icon

 → **Home Screen > Home Screen > Pin to HOME**

Option menu

1. Display the option menu with **OPTION**.
 2. Select one of the following items and press **OK** to access.
[Pin to HOME](#) / [Unpin from HOME](#) / [Accessibility](#) / [AV Options](#)
 3. Set the item and press **OK** to store.
-

[Pin to HOME, Unpin from HOME](#)

Adds / removes a shortcut for a frequently used feature on Home Screen.

 → [Home Screen > Home Screen > Pin to HOME](#)

[Accessibility](#)

Guidance settings for visually impaired users

 → [Watching > For best audio > Voice Guidance Settings](#)

[AV Options](#)

Easy optional setting for viewing, sound, etc.

 → [Watching > Basic > AV Options](#)

- Menu items and selectable options vary depending on the TV mode.

Apps

How to use

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

1. Display Home Screen with **HOME**.
2. Select [Apps](#) and press **OK** to access.

(Example)



- To exit [Apps](#)

EXIT

- To add a shortcut icon



→ Home Screen > Home Screen > Pin to HOME

3. Select an application and press **OK** to access.
4. Follow the on-screen instructions.

= Note =

- A broadband network environment is required to fully use this function.
- Design and specifications are subject to change without notice.

Option menu

1. Display the option menu with **OPTION**.
 2. Select one of the following items and press **OK** to access.
[Pin to HOME](#) / [Unpin from HOME](#) / [Move](#) / [Lock](#) / [Unlock](#) / [Uninstall](#) / [Show Info](#).
 3. Set the item and press **OK** to store.
-

[Pin to HOME](#), [Unpin from HOME](#)

Adds / removes a shortcut for a frequently used feature on Home Screen.

 → [Home Screen](#) > [Home Screen](#) > [Pin to HOME](#)

[Move](#)

Arranges the position of the applications.

[Lock](#), [Unlock](#)

Locks / unlocks a specific application to restrict access (if available).

- Child Lock PIN number is required to access to locked application.

 → [Functions](#) > [Child Lock](#) > [PIN number](#)

[Uninstall](#)

Deletes an application from [Apps](#) (if available).

[Show Info](#).

Displays the information about the selected application.

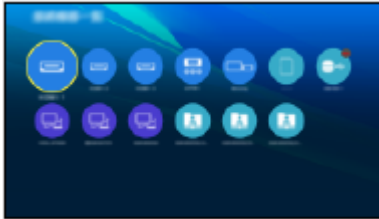
Devices

How to use

Connected devices (HDMI equipment, USB device, network device, etc.) can be accessed easily from [Devices](#).

1. Display Home Screen with **HOME**.
2. Select [Devices](#) and press **OK** to access.

(Example)



- To exit [Devices](#)

EXIT

- To add a shortcut icon

 → [Home Screen > Home Screen > Pin to HOME](#)

3. Select a device and press **OK** to access.

- For external equipment

 → [Watching > External equipment](#)

- For USB device, network device for Media Player

 → [Media Player](#)

- For network equipment for DLNA

 → [Network > DLNA](#)

- For mirroring function

 → [Functions > Mirroring](#)

= Note =

- Design and specifications are subject to change without notice.

Option menu

1. Display the option menu with **OPTION**.
 2. Select one of the following items and press **OK** to access.
[Pin to HOME](#) / [Unpin from HOME](#) / [Accessibility](#) / [Show Info](#).
 3. Set the item and press **OK** to store.
-

[Pin to HOME](#), [Unpin from HOME](#)

Adds / removes a shortcut for a frequently used feature on Home Screen.

 → [Home Screen](#) > [Home Screen](#) > [Pin to HOME](#)

[Accessibility](#)

Guidance settings for visually impaired users

 → [Watching](#) > [For best audio](#) > [Voice Guidance Settings](#)

[Show Info](#).

Displays the information about the selected device.

Watching

Basic

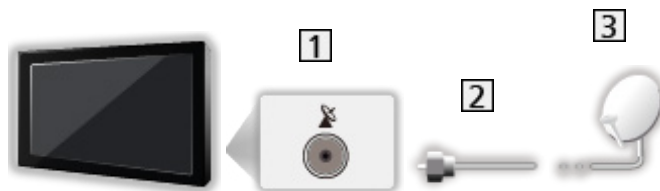
Basic connection

[Some features are not available on all models.]

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.

■ Satellite dish



1 Satellite terminal

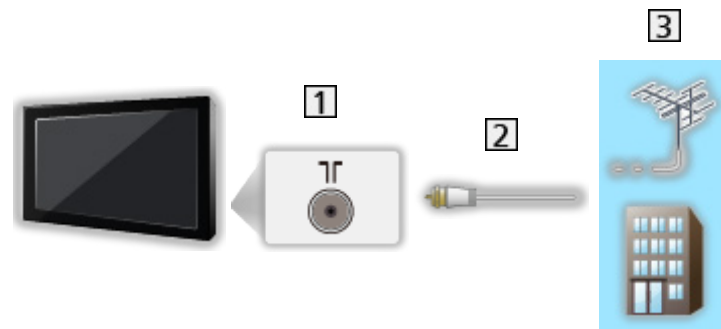
2 Satellite cable

3 Satellite dish

- For DVB-S
- To ensure your satellite dish is correctly installed, please consult your local dealer. Also consult the received satellite broadcasting companies for details.
- Selectable satellites and dish alignment to tune DVB-S channels

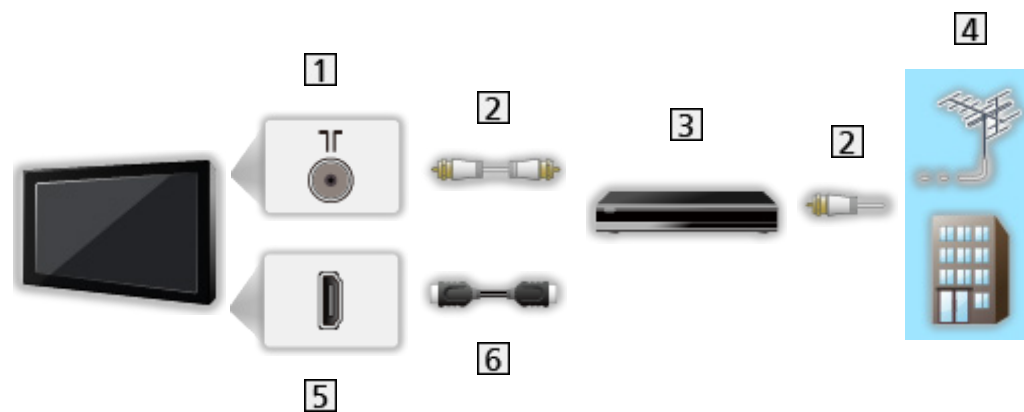
 → [Watching > Tuning and editing channels > Selectable satellites](#)

■ Aerial



- 1 Terrestrial / cable terminal
- 2 RF cable
- 3 Terrestrial aerial / Cable
 - For DVB-C, DVB-T, Analogue

■ DVD Recorder / VCR



- 1 Terrestrial / cable terminal
- 2 RF cable
- 3 DVD Recorder / VCR
- 4 Terrestrial aerial / Cable
- 5 HDMI terminal
- 6 HDMI cable

■ Set top box



1 HDMI terminal

2 HDMI cable

3 Set top box

4 Cable



1 HDMI terminal

2 HDMI cable

3 Set top box

4 Satellite dish

= Note =

- For details of DVB-via-IP connections

 → [Functions > DVB-via-IP](#)

- For details of VIERA Link connections

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

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

Selecting channel

[Some features are not available on all models.]

1. Select the mode with **TV**.

DVB-S / DVB-C / DVB-T / DVB-via-IP / Analogue

- 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**).

■ To select a channel from the channel list

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

- To sort channel names in alphabetical order



(red)

- To change the category



(blue)

■ To select a channel using information banner

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

 → Watching > Basic > Information banner

■ To select a channel using TV Guide

1. Display **TV Guide** with **GUIDE**.
2. Select the current programme and press **OK** to access.
 - The current programme is displayed on the top left of the screen.
3. Select **View** and press **OK** to watch.

 → Watching > TV Guide > Using TV Guide

- Not valid in Analogue

■ 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.

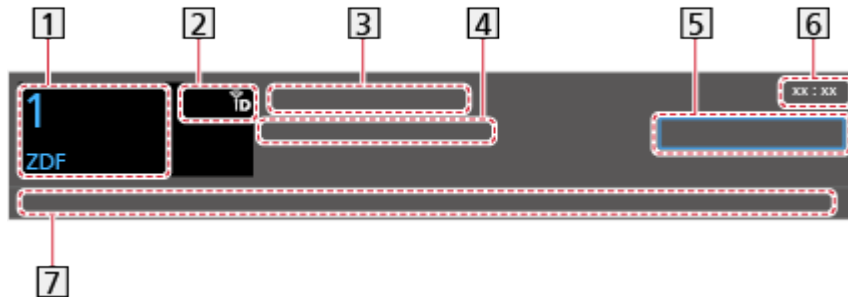
Information banner

[Some features are not available on all models.]

Display information banner with .

- Also appears when changing a channel.

(Example)



1 Channel position and name

2 Channel type (Radio, HDTV, etc.) / Encrypted channel () / TV mode ()

3 Programme

4 Start time / End time (except Analogue)

Channel position, etc. (Analogue)

Progress time indicator of the selected programme (except Analogue)

5 Category

- To change the category (DVB)
 - 1) Display the category list with  (blue).
 - 2) Select the category and press **OK** to change.

6 Current time

7 Features available / message meanings

Bad signal:

Poor quality TV signal

Dolby D+, Dolby D, HE-AAC:

Dolby Digital Plus, Dolby Digital or HE-AAC audio track

AD:

Audio Description service available

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

 → **Watching > For best audio > Audio Description**

 :

Subtitle service available



Teletext service available



Multiple audio available



Multiple video available



Multiple audio and video available

Stereo, Mono:

Audio mode



Data service (Hybrid Broadcast Broadband TV application) available



→ [Functions > Data Service Application > Using Data Service Application](#)

1 – 90:

Off Timer remaining time



→ [Watching > Basic > Off Timer](#)

- To confirm another tuned channel



- To watch the channel listed in the banner



- Information on the next programme (DVB)



- Extra information (DVB)



- Press again to hide the banner.

- To hide the banner



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

1) Display the menu with **MENU**.

2) Select [Setup > Display Settings > Banner Display Timeout](#) and press **OK** to access.

3) Set the item and press **OK** to store.

- To display the introduction banner for the internet service
 - 1) Display the menu with **MENU**.
 - 2) Select **Setup** > **Display Settings** > **Smart Banner** and press **OK** to access.
 - 3) Select **On** / **Off** and press **OK** to set.

AV Options

Confirm or change the current status.

- Display the full-screen TV to use this function.
1. Display the option menu with **OPTION**.
 2. Select **AV Options** and press **OK** to access.
 3. Select one of the following items and press **OK** to access.
[Audio Type](#) / [Multi Video](#) / [Multi Audio](#) / [Dual Audio](#) / [Sub Channel](#) / [Subtitle Language](#) / [Teletext Character Set](#) / [Teletext Language](#) / [MPX](#) / [Volume Correction](#)
 - The function items vary depending on the TV mode and country you select.
 4. Set the item and press **OK** to store.
-

Audio Type

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

- For DVB
- To adjust the volume for Audio Description

 → [Watching > For best audio > Audio Description](#)

Multi Video

Selects from a group of multiple videos (if available).

- This setting is not memorised and it returns to the default setting once you exit the current programme.
 - For DVB
-

Multi Audio

Selects between alternative language or Audio Description for sound tracks (if available).

- This setting is not memorised and it returns to the default setting once you exit the current programme.
 - For DVB
-

Dual Audio

Selects stereo / monaural (if available).

- For DVB

Sub Channel

Selects the multifeed programme - sub channel (if available).

- For DVB
-

Subtitle Language

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

- This setting is not memorised and it returns to the default setting once you exit the current programme.
 - For DVB
-

Teletext Character Set

Sets the teletext language font.

 → Watching > Teletext > Teletext Character Set

Teletext Language

Selects between alternative teletext languages (if available).

- This setting is not memorised and it returns to the default setting once you exit the current programme.
 - For DVB
-

MPX

Selects multiplex sound mode (if available).

 → Watching > For best audio > Advanced settings

- For Analogue
-

Volume Correction

Adjusts the volume of each individual channel or input mode.

Subtitle

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

- To select the preferred language for DVB subtitles (if available), set **Preferred Subtitles**.

 → **Watching > Basic > Language**

- To select the preferred subtitle type
 - 1) Display the menu with **MENU**.
 - 2) Select **Setup > Display Settings > Preferred Subtitle Type** and press **OK** to access.
 - 3) Select **Standard / Hard of Hearing** and press **OK** to set.
 - **Hard of Hearing** provides aids in understanding and enjoyment with DVB subtitles (depending on the broadcaster).
- **Preferred Subtitles 1 / 2** in Language are given priority.

 → **Watching > Basic > Language**

= Note =

- If you press **STTL** in Analogue, the TV switches to teletext service and calls up a favourite page. Press **EXIT** to return to TV mode.

Last view

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

- Press again to return to the current view.

= Note =

- Switching channel may not be available depending on the condition.
- Watching less than 10 seconds is not reflected in the previously viewed channel or input mode.

Off Timer

Switch to TV Standby mode automatically after a fixed period.

1. Display the menu with **MENU**.
2. Select **Timer** > **Off Timer** and press **OK** to access.
3. Select the time in 15-minute increments and press **OK** to set.
90 / 75 / 60 / 45 / 30 / 15 / Off (minutes)
 - To cancel, set to **Off** or turn the TV off.
 - The remaining time is displayed on the bottom right of the screen.
 - The remaining time will flash on the screen when less than 3 minutes.

Energy saving functions

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

The TV goes into Standby mode in the following conditions:

- **Eco Navigation** is set to **Set to Eco**.
- **Off Timer** is active.



→ **Watching > Basic > Off Timer**

- No operation is performed for 4 hours while **Auto Standby** is set to **On**.
- No signal is received and no operation is performed for 10 minutes while **No signal Power off** is set to **On**.

= Note =

- This function does not affect the recording.

■ Auto Standby

1. Display the menu with **MENU**.
2. Select **Timer > Auto Standby** and press **OK** to access.
3. Select **On / Off** and press **OK** to set.

Auto Standby

(**On / Off**)

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

- Automatic input switching with the connected equipment affects this function and time-count resets.
- A notification message will appear 3 minutes before going into Standby mode.
- Changing the default configuration may result in higher energy consumption of the product.

■ No signal Power off

1. Display the menu with **MENU**.
 2. Select **Timer** > **No signal Power off** and press **OK** to access.
 3. Select **On / Off** and press **OK** to set.
-

No signal Power off

(**On / Off**)

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

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

■ Eco Navigation

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

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

1. Display the menu with **MENU**.
 2. Select **Setup** > **Eco Navigation** and press **OK** to access.
 3. Select **Set to Eco** and press **OK** to set.
- **Auto Standby** and **No signal Power off** are active when **Eco Navigation** is set to **Set to Eco**.

■ Radio Mode

Sets the timer for turning off the screen automatically when a radio channel is selected.

1. Display the menu with **MENU**.
2. Select [Setup](#) > [Display Settings](#) > [Radio Mode](#) and press **OK** to access.
3. Select the time and press **OK** to set.

[20](#) / [15](#) / [10](#) / [5](#) / [Off](#) (seconds)

- Sound is active even if the screen is turned off. This function is effective in reducing power consumption when listening to a radio channel.
- Press any buttons except Standby On / Off switch, **Volume Up / Down** and **MUTE** to turn the screen on.



- Not valid in Analogue

Adjusting time

Adjusts the time data.

1. Display the menu with **MENU**.
2. Select **Timer** > **Time Zone** and press **OK** to access.
3. Set the item and press **OK** to store.
 - The time data are corrected based on GMT.

Language

1. Display the menu with **MENU**.
 2. Select **Setup > Language** and press **OK** to access.
 3. Select one of the following items and press **OK** to access.
OSD Language / Preferred Audio 1 / 2 / Preferred Subtitles 1 / 2 / Preferred Teletext
 4. Set the item and press **OK** to store.
-

OSD Language

Changes language for on-screen displays.

Preferred Audio 1 / 2

Selects the first and second preferred language for DVB multi audio (depending on the broadcaster).

Preferred Subtitles 1 / 2

Selects the first and second preferred language for DVB subtitles (depending on the broadcaster).

- To display subtitles

 → **Watching > Basic > Subtitle**

Preferred Teletext

Selects the preferred language for DVB teletext service (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.

HDMI Auto Setting

1. Display the menu with **MENU**.
 2. Select **Setup** > **HDMI Auto Setting** and press **OK** to access.
 3. Set the item and press **OK** to store.
-

HDMI Auto Setting

(**Mode1** / **Mode2**)

Reproduces the image more precisely with the expanded colour gamut when connecting the 4K compatible equipment. Select the mode depending on the equipment.

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.
- For HDMI1/2
- 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)

- Aspect is fixed to [16:9](#).
-

- DCI 4K

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

- Actual resolution is 3 840 × 2 160p.
 - Aspect is fixed to [V Full](#).
-

= Note =

- Connect to HDMI1 or HDMI2 for the following formats.
 - 4K UHD
30p, 25p, 24p / 4:4:4 (10 bit, 12 bit)
60p, 50p
 - DCI 4K
25p, 24p / 4:4:4 (10 bit, 12 bit)
60p, 50p, 30p
- The above signals are reformatted for optimal viewing on your display.
- For details of aspect

 → [Watching > For best picture > Aspect](#)

External equipment

External connection

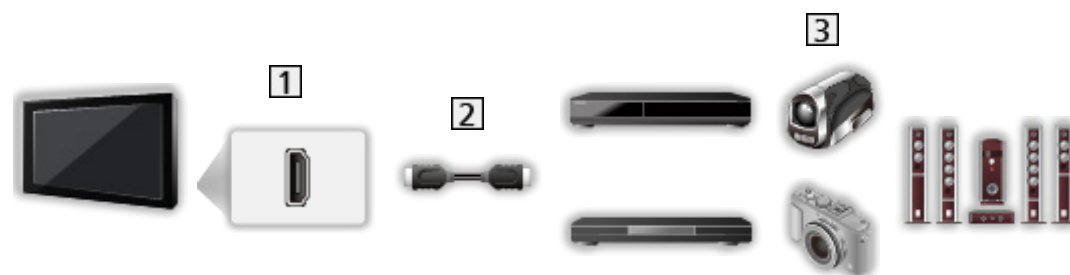
These diagrams show our recommendations for connection of your TV to various pieces of equipment. For other connections, consult the instructions for each piece of equipment.

- For details of basic connection

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

- 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

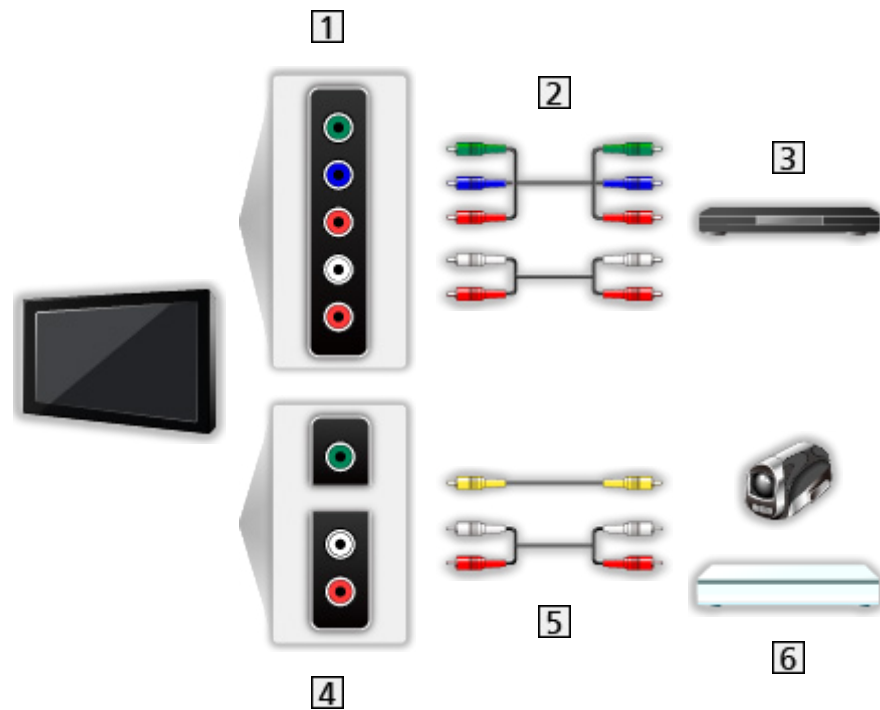
= Note =

- Use a fully wired HDMI compliant cable.
- For details of VIERA Link connections

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

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

■ AV devices



- 1 AV (COMPONENT) terminals
- 2 Component cables
- 3 DVD Player
- 4 AV (VIDEO) terminals
- 5 Composite cables
- 6 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.
- You cannot use two or more of the same kind of USB devices simultaneously except USB Flash Memory or USB HDD.
- Use USB 2 port for connecting the USB HDD.
- 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

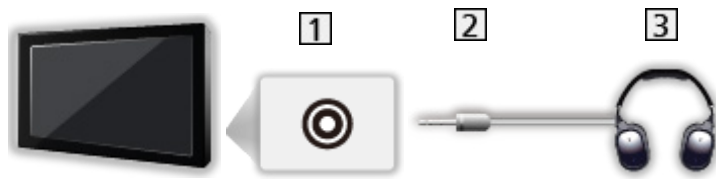
2 Optical digital audio cable

3 Amplifier with speaker system

- To enjoy multi-channel sound from external equipment (e.g. Dolby Digital 5.1ch), connect the equipment to the amplifier. For information about the connections, read the manuals of the equipment and amplifier.
- To select the sound output to adjust volume, set [TV Speaker Setting](#).

→ [Watching > For best audio > Volume settings](#)

■ Headphones



1 Headphone jack

2 M3 stereo mini plug

3 Headphones

- To adjust volume, set [Headphone Volume](#).

 → [Watching](#) > [For best audio](#) > [Volume settings](#)

- To select the sound output to adjust volume, set [TV Speaker Setting](#).

 → [Watching](#) > [For best audio](#) > [Volume settings](#)

Watching external input

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

1. Display the input selection menu with **AV**.
2. Select the input mode connected to the equipment and press **OK** to watch. (The selected mode is displayed on the top left of the screen.)
 - You can also select the input pressing **AV**. Press repeatedly until the desired input is selected.
 - You can select **COMPONENT** and **VIDEO** in **AV**.
 - You can label or skip each input mode. Skipped inputs will not be displayed when **AV** is pressed. ([Input Labels](#))
 - 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



= Note =

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

■ Input Labels

Accessing the input labels list allows you to change the input name or skip the input if unconnected, improving identification and selection in the [Input Selection](#) banner.



→ [Watching > Basic > Information banner](#)

1. Display the menu with **MENU**.
2. Select [Setup](#) > [Display Settings](#) > [Input Labels](#) and press **OK** to access.
3. Set the item and press **OK** to set.
 - To name each input mode freely, select [User input](#) and set characters (maximum 10 characters).
 - To skip the input mode, select [Skip](#).

■ Playing Time Display

Set to **On** to display a time period of continuous use in Game Mode on the top right of the screen every 30 minutes.

1. Display the menu with **MENU**.
2. Select **Setup** > **Display Settings** > **Playing Time Display** and press **OK** to access.
3. Select **On** / **Off** and press **OK** to set.
 - This function is available when **Game Mode** is set to **On**.

Operating with TV's remote control

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



:

Playback (VCR / DVD / video content)



:

Stop the operations



:

Rewind, view the picture rapidly in reverse (VCR)

Skip to the previous track, title or chapter (DVD / video content)



:

Rewind, view the picture rapidly in reverse (VCR)

Search backward (DVD / video content)



:

Fast-forward, view the picture rapidly forward (VCR)

Skip to the next track, title or chapter (DVD / video content)



:

Fast-forward, view the picture rapidly forward (VCR)

Search forward (DVD / video content)



:

Pause / Resume

Press and hold to play at slow speed (DVD)



:

[One Touch Recording](#)



→ [Recording > Recording current programme > One Touch Recording](#)

■ How to change the code

Each Panasonic product has its own remote control code. Change the code according to the product for operation.

1. Press and hold Standby On / Off switch during the following operations.



2. Enter the appropriate code as follows with **Numeric buttons**.



- Codes for each product and features

70: DVD Recorder, DVD Player, Blu-ray Disc Player

71: Player theatre, Blu-ray Disc theatre

72: VCR

73 (default):

Using in USB HDD recording, Media Player, DLNA features or VIERA Link

3. Press  to change.

= Note =

- Confirm if the remote control works correctly after changing the code.
- The codes may be reset to defaults if batteries are replaced.
- 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.



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

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

■ Applicable HDMI features

- Input audio signal:

2ch LPCM, Dolby Digital, Dolby Digital Plus

- Audio settings can be made on [HDMI Audio Format](#) in the Sound Menu.



→ [Watching > For best audio > Advanced settings](#)

- Input video signal:

Matches the output setting of the digital equipment.



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

- VIERA Link (HDAVI Control 5)



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

- Content Type

- Deep Colour

- Audio Return Channel

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

- For HDMI2

- x.v.Colour™

- 4K



→ [Watching > 4K resolution > Valid 4K format](#)

■ DVI connection

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

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

= Note =

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



→ [Watching](#) > [For best audio](#) > [Advanced settings](#)

- If the connected equipment has an aspect adjustment function, set the aspect ratio to “16:9”.
- These HDMI connectors are “type A”.
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- Equipment having no digital output terminal may be connected to the input terminal of component or video to receive analogue signals.
- This TV incorporates HDMI™ technology.

Valid input signals

■ COMPONENT, HDMI

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

○: Applicable input signal

= Note =

- Signals other than above may not be displayed properly.
- The above signals are reformatted for optimal viewing on your display.
- For details of valid 4K format



→ Watching > 4K resolution > Valid 4K format

For best picture

Viewing Mode

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

Viewing Mode

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

Selects your favourite picture mode for each input.

Dynamic:

Improves contrast and sharpness for viewing in a bright room.

Normal:

Normal use for viewing in a normal lighting condition.

Cinema:

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

True Cinema:

Reproduces the original image quality precisely without any revision.

Custom:

Adjusts each menu item manually to suit your favourite picture quality.

- The following items can be adjusted and stored for each mode.

Backlight / **Contrast** / **Brightness** / **Colour** / **Tint** / **Sharpness** / **Colour Temperature** / **Vivid Colour** / **Adaptive Backlight Control** / **Ambient Sensor** / **Noise Reduction** / **MPEG Remaster** / **Intelligent Frame Creation** / **Clear Motion**

Ambient Sensor

1. Display the menu with **MENU**.
 2. Select **Picture** > **Ambient Sensor** and press **OK** to access.
 3. Select **On / Off** and press **OK** to set.
-

Ambient Sensor

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

- Automatic Brightness Control function

Adjusts picture settings automatically depending on ambient lighting condition.

Aspect

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

■ To change the aspect ratio manually

1. Display **Aspect Selection** with **ASPECT**.
2. Select the mode and press **OK** to set.
 - You can also change the mode pressing **ASPECT**.
(Press repeatedly until you reach the desired mode.)

Auto:

The best ratio is selected automatically according to the “Aspect Control Signal”.

 → Watching > For best picture > Aspect Control Signal

16:9:

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

4:3:

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

Zoom:

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

V Full:

Displays the image enlarged vertically to fit the screen without distortion.

- For DCI 4K format

= Note =

- Display the image (TV, external input, etc.) full-screen to use this function completely.
- Aspect mode can be memorised separately for SD (Standard definition) and HD (High definition) signals.
- Aspect cannot be changed in teletext service.
- Aspect is fixed to **16:9** in the following conditions:
 - 4K content except DCI 4K
 - **Game Mode** is set to **On**.
 - **1080p Pixel by 4pixels** is set to **On**.
 - **1080p Pure Direct** is set to **On**.
 - **4K Pure Direct** is set to **On**.

Aspect Control Signal

[Some features are not available on all models.]

Programmes usually contain an “Aspect Control Signal”. (Widescreen signal, Control signal through HDMI terminal)

In **Auto** mode, aspect mode will appear in the top left of the screen if a Widescreen signal (WSS) or a Control signal through HDMI terminal is found. The aspect switches to the appropriate ratio.

 → Watching > For best picture > Aspect

■ Available conditions

- Satellite terminal (WSS only)

Valid input signal format:

DVB-S

- Terrestrial / cable terminal (WSS only)

Valid input signal format:

DVB-C

DVB-T / DVB-T2

PAL B, G, H, I, D, K

SECAM B, G, L, L', D, K

Invalid input signal format:

PAL 525/60 6.5 MHz

PAL 525/60 6.0 MHz

PAL 525/60 5.5 MHz

M.NTSC 6.5 MHz

M.NTSC 6.0 MHz

M.NTSC 5.5 MHz

- AV (VIDEO) terminals

Valid input signal format:

PAL

SECAM

PAL 525/60 *

M.NTSC *

NTSC *

*: Control signal through HDMI terminal only

- AV (COMPONENT) terminals (WSS only)

Valid input signal format:

625 (576) / 50i, 50p

Invalid input signal format:

525 (480) / 60i, 60p

750 (720) / 60p, 50p

1 125 (1 080) / 60i, 50i

- HDMI terminal

Valid input signal format:

525 (480) / 60i, 60p

625 (576) / 50i, 50p

750 (720) / 60p, 50p

1 125 (1 080) / 60i, 50i

1 125 (1 080) / 60p, 50p, 24p

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

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

- HDMI terminal does not receive WSS signal.
-

= Note =

- If the screen size looks unusual when a widescreen-recorded programme is played back on a VCR, adjust the tracking of the VCR. Read the manual of the VCR.
- For details of valid 4K format

 → [Watching > 4K resolution > Valid 4K format](#)

Basic settings

1. Display the menu with **MENU**.
 2. Select **Picture** and press **OK** to access.
 3. Select one of the following items and press **OK** to access.
Backlight / Contrast / Brightness / Colour / Tint / Sharpness / Colour Temperature / Vivid Colour / Adaptive Backlight Control / Intelligent Frame Creation / Clear Motion
 4. Set the item and press **OK** to store.
-

Backlight, Contrast, Brightness, Colour, Tint, Sharpness

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

- **Sharpness** is not available when **1080p Pixel by 4pixels** is set to **On**.
-

Colour Temperature

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

Vivid Colour

(**On / Off**)

Automatically adjusts colours to vivid ones.

Adaptive Backlight Control

Automatically controls the level of backlight according to the images.

Intelligent Frame Creation

(**Max / Mid / Min / Off**)

Automatically compensates the picture frame rate and removes juddering movements to make the images smooth.

- Depending on the content, images may be noisy. To prevent the noise, change the setting.
 - Not valid in the following conditions:
 - **Game Mode** is set to **On**.
 - **1080p Pixel by 4pixels** is set to **On**.
 - **1080p Pure Direct** is set to **On**.
 - **4K Pure Direct** is set to **On**.
-

Clear Motion

(On / Off)

Makes the moving pictures more clear by controlling the level of backlight.

Noise reduction settings

1. Display the menu with **MENU**.
 2. Select **Picture** > **Noise Reduction** / **MPEG Remaster** and press **OK** to access.
 3. Set the item and press **OK** to store.
-

Noise Reduction

(Auto / Max / Mid / Min / Off)

Reduces unwanted picture noise.

- Not valid in the following conditions:
 - 4K content
 - **Game Mode** is set to **On**.
 - **1080p Pixel by 4pixels** is set to **On**.
 - **1080p Pure Direct** is set to **On**.
 - **4K Pure Direct** is set to **On**.
-

MPEG Remaster

(Auto / Max / Mid / Min / Off)

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

- Not valid in the following conditions:
 - 4K content
 - **Game Mode** is set to **On**.
 - **1080p Pixel by 4pixels** is set to **On**.
 - **1080p Pure Direct** is set to **On**.
 - **4K Pure Direct** is set to **On**.

Advanced Settings

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

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

1. Select the input mode with **AV** or **TV**.
2. Display the menu with **MENU**.
3. Select **Picture > Viewing Mode** and press **OK** to access.
4. Select the mode and press **OK** to set.

Cinema / True Cinema / Custom

■ Adjust the detailed picture settings

1. Display the menu with **MENU**.
2. Select **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 Defaults

4. Set the item and press **OK** to store.

■ Contrast Control

Contrast Control

(**Custom / Auto / Off**)

Automatically adjusts the detailed contrast settings. Select **Custom** to set **Contrast Control Setting** manually.

Contrast Control Setting

Adaptive Gamma Control:

Adjusts the gamma curve to make the image brighter.

Black Expander:

Gradually adjusts the shades of black.

Clear White Effect:

Makes the white area clearer.

Reset to Defaults:

Resets items for **Contrast Control Setting**.

■ Colour Gamut

Colour Gamut

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

Reproduces image colour precisely according to the colour gamut standards.

[Auto](#):

Automatically adjusts the colour gamut according to the input signal.

[Normal](#):

Displays colours according to the colour gamut.

[Native](#):

Displays deep colours by expanding the colour gamut to its maximum.

■ White Balance

[R-Gain](#) / [G-Gain](#) / [B-Gain](#)

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

[R-Cutoff](#) / [G-Cutoff](#) / [B-Cutoff](#)

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

[More Detailed Adjustment](#)

Adjusts more detailed items for [White Balance](#).

[Input Signal Level](#):

Adjusts the input signal level.

[R-Gain](#) / [G-Gain](#) / [B-Gain](#):

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

[Reset to Defaults](#):

Resets items for [More Detailed Adjustment](#).

[Reset to Defaults](#)

Resets [White Balance](#) to the default settings.

■ Colour Management

[R-Hue](#) / [R-Saturation](#) / [R-Luminance](#)

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

[G-Hue](#) / [G-Saturation](#) / [G-Luminance](#)

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

[B-Hue](#) / [B-Saturation](#) / [B-Luminance](#)

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

[More Detailed Adjustment](#)

Adjusts more detailed items for [Colour Management](#).

[C-Hue](#) / [M-Hue](#) / [Y-Hue](#):

Adjusts the picture hue of cyan / magenta / yellow areas.

[C-Saturation](#) / [M-Saturation](#) / [Y-Saturation](#):

Adjusts the saturation of cyan / magenta / yellow areas.

[Reset to Defaults](#):

Resets items for [More Detailed Adjustment](#).

[Reset to Defaults](#)

Resets [Colour Management](#) to the default settings.

■ Gamma

Gamma

Switches the gamma curve.

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

More Detailed Adjustment

Adjusts more detailed items for [Gamma](#).

Input Signal Level:

Adjusts the input signal level.

Gain:

Adjusts the gain of gamma for selected signal level.

Reset to Defaults:

Resets items for [More Detailed Adjustment](#).

Reset to Defaults

Resets [Gamma](#) to the default settings.

■ Reset to Defaults

Reset to Defaults

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

Option Settings

1. Display the menu with **MENU**.
 2. Select **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**
/ **1080p Pixel by 4pixels** / **HDMI Content Type** / **HDMI RGB Range** / **AV Colour System** / **3D-COMB**
 4. Set the item and press **OK** to store.
-

Game Mode

(On / Off)

Provides suitable images for fast response signals when playing games.

- Not valid in the following conditions:
 - TV mode
 - **1080p Pixel by 4pixels** is set to **On**.
 - **1080p Pure Direct** is set to **On**.
 - **4K Pure Direct** is set to **On**.
 - To display a continuous record of time spent using Game Mode, set **Playing Time Display**.
-

Film Cadence Mode

(Auto / On / Off)

Improves vertical resolution for movie images.

- This function is available for interlaced signals (except in Network services or when **Game Mode** is set to **On**).
-

1080p Pure Direct

(On / Off)

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

- Not valid when **1080p Pixel by 4pixels** is set to **On**
-

4K Pure Direct

(On / Off)

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

1080p Pixel by 4pixels

(On / Off)

Displays like pixel by pixel to make the image sharper for 1080p signal.

- For HDMI
 - Not all image may be displayed as pixel by pixel precisely.
-

HDMI Content Type

(Graphics / Photos / Auto / Off)

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

Auto:

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

- To set the availability of each content type for Auto mode, select **Auto Detail Setting**.
 - For HDMI
-

HDMI RGB Range

(Auto / Full / Normal)

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

- When the black level is not suitable, select **Full**.
 - For HDMI
-

AV Colour System

(Auto / PAL / SECAM / M.NTSC / NTSC)

Selects optional colour system based on video signals.

- For AV (VIDEO)
-

3D-COMB

(On / Off)

Makes still or slow moving pictures more vivid.

- Occasionally, while viewing still or slow moving pictures, colour patterning may be seen. Set to **On** to display sharper and more accurate colours.
- For PAL / NTSC signal reception in TV mode or from composite connection

Screen Settings

1. Display the menu with **MENU**.
 2. Select **Picture** > **Screen Settings** and press **OK** to access.
 3. Select one of the following items and press **OK** to access.
16:9 Overscan / **Zoom Adjustments** / **Screen Display**
 4. Set the item and press **OK** to store.
-

16:9 Overscan

(On / Off)

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

On:

Enlarges the image to hide the edge of the image.

Off:

Displays the image in the original size.

- Set to **On** if noise occurs on the edge of the screen.
 - This function can be memorised for SD (Standard definition) and HD (High definition) signals respectively.
 - Not valid in the following conditions:
 - 4K content
 - Photo content
 - **Game Mode** is set to **On**.
 - **1080p Pixel by 4pixels** is set to **On**.
 - **1080p Pure Direct** is set to **On**.
 - **4K Pure Direct** is set to **On**.
-

Zoom Adjustments

Adjusts the vertical position and size when aspect is set to **Zoom**.

- Not valid for 4K content
-

Screen Display

(On / Off)

Turns the screen off when you select **Off**.

- This function is effective in reducing power consumption when listening to the sound without watching the TV screen.
- Press any buttons (except Standby On / Off switch) to turn the screen on.

Copy Adjustment

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

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

= Note =

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

For best audio

Sound mode

1. Display the menu with **MENU**.
 2. Select **Sound** > **Mode** and press **OK** to access.
 3. Select the mode and press **OK** to set.
-

Mode

(**Standard** / **Music** / **Ambience** / **User**)

Selects your favourite sound mode for each input.

Standard:

Provides the suitable sound quality for all types of scenes.

Music:

Improves sound quality for watching music videos, etc.

Ambience:

Improves spatial effects and provides clear sounds.

User:

Adjusts the sounds manually using the equaliser to suit your favourite sound quality.

- The following items can be adjusted and stored for each mode.

Bass / **Treble** / **Surround** / **Bass Boost**

- For the User mode, **Equaliser** is available in the Sound Menu instead of **Bass** and **Treble**. Select **Equaliser** and adjust the frequency.

 → **Watching** > **For best audio** > **Basic settings**

- This function is effective only for the sound from TV speakers.

Basic settings

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

1. Display the menu with **MENU**.
 2. Select **Sound** and press **OK** to access.
 3. Select one of the following items and press **OK** to access.
Bass / Treble / Equaliser / Balance / Surround / Bass Boost
 4. Set the item and press **OK** to store.
-

Bass

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

Treble

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

Equaliser

Adjusts the frequency level to suit your favourite sound quality.

- This function is available when **Mode** is set to **User**.
 - Select the frequency and 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.
 - To reset the levels of each frequency to the default settings, select **Reset to Defaults** and press **OK**.
 - This function is effective only for the sound from TV speakers.
-

Balance

Adjusts volume level of right and left speakers.

Surround

(Diffuse Surround / Virtual Surround / Off)

Selects surround sound settings.

Diffuse Surround:

Provides a more progressive enhancer and reverberation to simulate improved spatial effects.

Virtual Surround:

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

- This function is effective only for the sound from TV speakers.
-

Bass Boost

(On / Off)

Enhances the effect of bass sounds.

- This function is effective only for the sound from TV speakers.

Volume settings

1. Display the menu with **MENU**.
 2. Select **Sound** and press **OK** to access.
 3. Select one of the following items and press **OK** to access.
Speaker Selection / **TV Speaker Setting** / **Headphone Volume** / **Auto Gain Control** / **Volume Correction** / **Speaker Distance to Wall**
 4. Set the item and press **OK** to store.
-

Speaker Selection

(**TV** / **Home Cinema**)

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

TV:

TV speakers are active.

Home Cinema:

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

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



- This function is available when the theatre speakers supporting VIERA Link function is connected to this TV.
-

TV Speaker Setting

(**TV Speaker** / **Headphone** / **Off**)

Selects the sound output to adjust volume.

- Sound from TV speaker turns off when **Headphone** or **Off** is selected.
-

Headphone Volume

Adjusts the volume of headphones.

Auto Gain Control

(On / Off)

Automatically regulates large sound level differences between channels and inputs.

Volume Correction

Adjusts the volume of each individual channel or input mode.

Speaker Distance to Wall

(Up to 30cm / Over 30cm)

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

- If the back space between the TV and wall is within 30 cm, **Up to 30cm** is recommended.
- If the back space between the TV and wall is over 30 cm, **Over 30cm** is recommended.
- This function is effective only for the sound from TV speakers.

Voice Guidance Settings

1. Display the menu with **MENU**.
 2. Select **Sound** > **Voice Guidance Settings** and press **OK** to access.
 3. Select one of the following items and press **OK** to access.
Voice Guidance / **Speed** / **Volume** / **Language** / **User Level** / **Web Browser**
 4. Set the item and press **OK** to store.
-

Voice Guidance

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

Set to **On** to enable voice guidance of the basic features (on-screen messages, etc.) for visually impaired users.

Speed

(**Fast** / **Normal** / **Slow**)

Selects the readout speed for the voice guidance.

Volume

(**Max** / **Mid** / **Min**)

Selects the volume for the voice guidance.

Language

Changes language for the voice guidance.

- All languages may not be available. When the selected language is not supported, **Language** is set to **English** automatically.
-

User Level

(**Beginner** / **Expert**)

Selects the level of verbosity for the voice guidance.

Web Browser

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

Set to **On** to enable voice guidance of the network content in web browser function.

= Note =

- Voice guidance function may not correspond exactly.

Audio Description

1. Display the menu with **MENU**.
 2. Select **Sound** > **Audio Description** and press **OK** to access.
 3. Select one of the following items and press **OK** to access.
Preferred Audio Type / **Volume** / **Speakers** / **Headphones**
 4. Set the item and press **OK** to store.
-

Preferred Audio Type

(**Audio Description** / **Standard**)

Narration settings for visually impaired users

Set to **Audio Description** to activate the narration sound track when available on the broadcast.

- The availability of audio description sound track is indicated by **AD** in the information banner.
 - For DVB
-

Volume

Adjusts the volume for Audio Description.

- For DVB
-

Speakers

(**Mix** / **Standard**)

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

- For DVB
-

Headphones

(**Mix** / **Standard**)

Set to **Mix** to activate the description sound track from headphones.

- For DVB

Advanced settings

1. Display the menu with **MENU**.
 2. Select **Sound** and press **OK** to access.
 3. Select one of the following items and press **OK** to access.
MPX / Audio Preference / SPDIF Selection / HDMI Audio Format / PCM Optical Level / SPDIF Delay / HDMI Input
 4. Set the item and press **OK** to store.
-

MPX

Selects multiplex sound mode (if available).

Stereo:

Use this normally.

Mono:

When stereo signal cannot be received

M1 / M2:

Available while mono signal is transmitted

- For Analogue
-

Audio Preference

(**Auto / Multichannel / Stereo / MPEG**)

- Selectable options vary depending on the country you select.

Selects the initial setting for audio tracks.

Auto:

Automatically selects the audio tracks if a programme has two or more tracks. The priority is given in the following order - Dolby Digital Plus, HE-AAC, Dolby Digital, MPEG.

Multichannel:

The priority is given to multi-channel audio track.

Stereo:

The priority is given to stereo (2ch) audio track.

MPEG:

The priority is given to MPEG.

- Dolby Digital Plus and Dolby Digital are the methods of coding digital signals developed by Dolby Laboratories. Apart from stereo (2ch) audio, these signals can be multi-channel audio.

- HE-AAC is a perceptual coding method used to compress digital audio for efficient storage and transmission.
 - MPEG is an audio compression method that compresses audio to the smaller size without any considerable loss of audio quality.
 - Dolby Digital Plus and HE-AAC are the technologies for HD (High definition) programmes.
 - For DVB
-

SPDIF Selection

(Auto / PCM)

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

- SPDIF is a standard audio transfer file format.

Auto:

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

PCM:

Digital output signal is fixed to PCM.

- ARC (Audio Return Channel) is a function of digital audio output using HDMI cable.
- For DVB, video content

 → Media Player > Video mode > Audio output settings

 → Network > Videos > Audio output settings

HDMI Audio Format

(Auto / Bitstream / PCM)

Selects the audio format for the HDMI input signal.

Auto:

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

Bitstream:

Dolby Digital Plus and Dolby Digital are output as Dolby Digital Bitstream. Other digital audio output signals are output as PCM.

PCM:

Digital audio signal is output as PCM.

PCM Optical Level

Adjusts the audio level of PCM output from DIGITAL AUDIO and HDMI2 (ARC function) terminals to equalise with that of the other audio types.

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.

- For DVB
-

HDMI Input

(Digital / Analogue)

Selects to fit the input signal.



→ Watching > External equipment > HDMI features

Digital:

When sound is carried via the HDMI cable connection

Analogue:

When sound is not carried via the HDMI-DVI adaptor cable connection

- For HDMI

TV Guide

Using TV Guide

[Some features are not available on all models.]

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

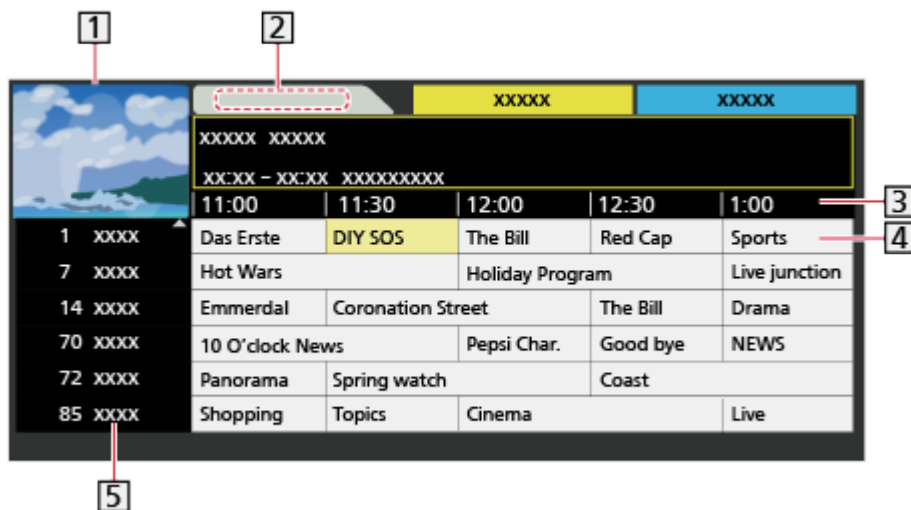
- Not valid in Analogue

1. Select the mode with **TV**.

DVB-S / DVB-C / DVB-T / DVB-via-IP

2. Display **TV Guide** with **GUIDE**.

(Example)



1 TV screen

2 Date

3 Time

4 Programme

5 Channel position and name

- To watch the programme

1) Select the current programme and press **OK** to access.

- The current programme is displayed on the top left of the screen.

2) Select **View** and press **OK** to watch.

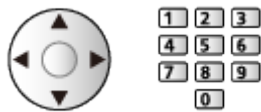
- To use **Timer Programming**

 → **Watching > TV Guide > Timer Programming**

- To the previous day

 (red)

- To the next day
 (green)
- To view a channel list of the selected type
 - 1) Display the type list with  (yellow).
 - 2) Select the type and press **OK** to view.
- To search programme titles and view a list of the searched programmes (if available)
 - 1) Display the search list with  (yellow).
 - 2) Select **Search** and press **OK** to access.
 - 3) Enter characters with **Cursor buttons** or **Numeric buttons**, and press **OK** to set.



- 4) Press  (green) to start searching.
 - All the programme titles including the word you set are listed.
 - Searching without any characters lists all programmes including current programmes.
- To view a channel list of the selected category
 - 1) Display the category list with  (blue).
 - 2) Select the category and press **OK** to view.
 - To list favourite channels, set **Favourites Edit**.

 → **Watching > Tuning and editing channels > Favourites Edit**

- To view more details of the programme
 - 1) Select the programme.
 - 2) Press  to view.
 - Press again to return to **TV Guide**.
- To exit **TV Guide**

EXIT

= Note =

- When this TV is turned on for the first time, or the TV is switched off for more than a week, it may take some time before TV Guide is completely shown.

Timer Programming

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

1. Display [TV Guide](#) with **GUIDE**.
2. Select the forthcoming programme and press **OK** to access.
 - You can also set a timer event pressing .
 - To check / change / cancel a timer event
 → [Recording > Timer Programming > Editing Timer Programming](#)
 - LED turns to orange in Standby mode when [Timer Programming](#) is set.
 - To return to [TV Guide](#)
BACK/RETURN
 - If you select the current programme, a confirmation screen asking whether you want to watch or record the programme appears. Select [Timer Programming](#) and press **OK** to set [USB HDD Rec.](#) to record from the time you finish the timer event setting.
 -  is displayed on the TV Guide screen if [Timer Programming](#) is set from [TV Guide](#).

= Note =

- Not valid in Analogue
- [Timer Programming](#) only works reliably if correct time information is received via the signal from the broadcaster or service provider.
- No other channels can be selected while recording of [Timer Programming](#) is in progress.
- When recording programmes to the USB HDD, be sure to format the USB HDD and enable it to record in [USB Device Setup](#).

 → [Recording > USB HDD setup](#)

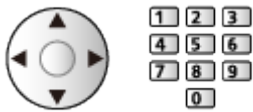
- To set timer programming events of this TV on the network equipment (smartphone, etc.) from outside the home network

 → [Recording > Timer Programming > Remote recording](#)

Teletext

Viewing Teletext

1. Switch to teletext with **TEXT**.
 - Displays the index page (content varies depending on the broadcaster).
 - Current / sub page numbers are displayed on the top left of the screen.
 - Time / date is displayed on the top right of the screen.
 - Colour bar is displayed on the bottom of the screen.
2. Select the page with **Cursor buttons**, **Numeric buttons** or     (coloured buttons).



- To adjust contrast
 - 1) Press **MENU** three times to display **Contrast**.
 - 2) Adjust and press **OK** to set.
- To exit teletext
EXIT

■ Reveal hidden data

1. Press **MENU**.
2. Reveal with  (red).
 - Press again to hide.

■ To view a favourite page stored

Press **STTL** to view a favourite page.

- Call up the page stored on  (blue). (List mode)
- Factory setting is "P103".

■ FULL / TOP / BOTTOM

1. Press **MENU**.
2. Press  (green) to change the layout.

■ Watch TV and teletext in two windows at once

1. Press **MENU** twice.
2. Set **Picture and text** to **On / Off**.
 - Operations can be made only in teletext screen.

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

1. Press     (coloured buttons) while the page is displayed.
2. Press and hold **OK**.
 - The stored page number changes to white.
 - To change stored pages
 - 1) Press     (coloured buttons) to change.
 - 2) Enter a new page number with **Numeric buttons**.



- 3) Press and hold **OK**.

■ View sub page

The number of sub pages is displayed on the top of the screen. Press ◀ / ▶ to view sub page. (Only when teletext has more than one page.)

- The number of sub pages varies depending on the broadcaster (up to 79 pages).
- Searching may take time while you are watching TV.
- To view a specific sub page
 - 1) Press **MENU**.
 - 2) Press  (blue).
 - 3) Enter the 4-digit number (e.g. P6, press    ).

Teletext mode

Teletext services are the text information provided by the broadcaster.

- The features may vary depending on the broadcaster.
1. Display the menu with **MENU**.
 2. Select **Setup** > **Display Settings** > **Teletext** and press **OK** to access.
 3. Select **TOP** (**FLOF**) / **List** and press **OK** to set.

■ TOP mode (For TOP text broadcasting)

TOP is a particular improvement of the standard teletext service that results in an easier search and effective guide.

- Fast overview of the teletext information available
- Easy to use step-by-step selection of the topical subject
- Page status information on the bottom of the screen
- Available page up / down

 (red) /  (green)

- To select among subject blocks

 (blue)

- To select next subject within the subject block

 (yellow)

(After the last subject, it moves to the next subject block.)

■ FLOF (FASTTEXT) mode (For FLOF (FASTTEXT) broadcasting)

In FLOF mode, four differently coloured subjects are situated on the bottom of the screen.

To access more information about one of these subjects, press the appropriate coloured button.

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

■ List mode

In List mode, four differently coloured page numbers are situated on the bottom of the screen. Each of these numbers can be changed and stored in the TV's memory.

 → **Watching** > **Teletext** > **Viewing Teletext**

Teletext Character Set

Selects teletext language font.

1. Display the menu with **MENU**.
 2. Select [Setup](#) > [Display Settings](#) > [Teletext Character Set](#) and press **OK** to access.
 3. Select the font and press **OK** to set.
-

[West:](#)

English, French, German, Greek, Italian, Spanish, Swedish, Turkish, etc.

[East1:](#)

Czech, English, Estonian, Lettish, Rumanian, Russian, Ukrainian, etc.

[East2:](#)

Czech, Hungarian, Lettish, Polish, Rumanian, etc.

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, edit channel lists, create your favourite channel lists, etc.

1. Select the mode with **TV**.

[DVB-S](#) / [DVB-C](#) / [DVB-T](#) / [DVB-via-IP](#) / [Analogue](#)

2. Display the menu with **MENU**.

3. Select [Setup](#) > [Tuning Menu](#) and press **OK** to access.

[DVB-S Tuning Menu](#) / [DVB-C Tuning Menu](#) / [DVB-T Tuning Menu](#) / [DVB-via-IP Tuning Menu](#) / [Analogue Tuning Menu](#)

- The menu name varies depending on the TV mode.

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

[Favourites Edit](#) / [Channel List](#) / [Auto Setup](#) / [Manual Tuning](#) / [Update Channel List](#) / [Favourite Network](#) / [New Channel Message](#) / [Service Replacement](#) / [Signal Condition](#) / [Attenuator](#) / [Add TV Signal](#)

- The function items vary depending on the TV mode and country you select.

Favourites Edit

■ List favourite DVB channels

Create your favourite channel lists from various broadcasters (up to 4: [Favourites 1 to 4](#)).

The favourites lists are available for switching in the information banner and the TV Guide screen.

 → Watching > Basic > Information banner

 → Watching > TV Guide > Using TV Guide

1. Select [Favourites Edit](#) and press **OK** to access.
2. Select a channel to list from all DVB channels.
 -  appears when the channel is encrypted.
 - To display other favourites
 -  (green)
 - To sort channel names in alphabetical order
 -  (red)
 - To change the category
 -  (blue)
3. Press **OK** to add it to favourites list.
 - To add all channels to the list (if available)
 - 1) Press  (yellow).
 - 2) Press  (green) to add all.
 - To add consecutive channels to the list at once
 - 1) Press  (yellow).
 - 2) Make the channel block and press **OK** to add.
4. Press **BACK/RETURN** and **OK** to store.

■ Edit DVB favourites list

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

- To move the channel
 - 1) Select the channel.
 - 2) Press  (green).
 - 3) Select the new position with **Cursor buttons**.



- 4) Press  (green) to store.
- To delete the channel
 - 1) Select the channel.
 - 2) Press  (blue) to delete.
 - Press  (yellow) to delete all channels.
 - To name the favourites
 - 1) Press  (red).
 - 2) Enter characters (maximum 10 characters) with **Cursor buttons** or **Numeric buttons**, and press **OK** to set.



- 3) Press **BACK/RETURN** to store.

Channel List

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

■ Edit DVB channels

You can edit the list of All DVB Channels by adding / deleting and moving channels.

- Channels not in all DVB channels list cannot be displayed except in this function.

1. Select [Channel List](#) and press **OK** to access.

- To swap / move the channel position

1) Press  (green) to edit.

2) Set the new position with **Cursor buttons** or **Numeric buttons**, and press  (green) to store.



- To delete the channel

 (blue)

- To delete all channels

 (yellow)

- To add channel

1) Select a channel from [Channels Found](#).

2) Press **OK** to add it to All DVB Channels.

- To sort channel names in alphabetical order in [Channels Found](#)

 (red)

- To add all channels (if available)

 (yellow)

- To change the category of [Channels Found](#)

 (blue)

2. Press **BACK/RETURN** and **OK** to store.

- To exchange channel list (DVB-S)

1) Display the menu with **MENU**.

2) Select **Setup** > **Other Settings** > **Exchange Channel List** and press **OK** to access.

3) Follow the on-screen instructions.

- During the operation, remove USB devices other than the USB Flash Memory used for this function.

 → **Settings** > **Setup** > **Other Settings**

■ Skip unwanted Analogue channels

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

1. Select **Channel List** and press **OK** to access.

2. Select a channel.

3. Press **OK** to set **Reveal** / **Hide** (skip).

☒ : **Reveal**

☐ : **Hide** (skip)

- To reveal all channels (if available)

 (yellow)

■ Edit Analogue Channels

- To swap / move the channel position (if available)
 - 1) Press  (green) to edit.
 - 2) Set the new position with **Cursor buttons** and press  (green) to store.



- To retune each channel ([Manual Tuning](#))

 (red)

- To rename the channel name

1) Press  (blue) to edit.

2) Enter characters (maximum 5 characters) with **Cursor buttons** or **Numeric buttons**, and press **OK** to set.



3) Press **BACK/RETURN** to store.

= Note =

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

Auto Setup

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

Automatically retunes the channels received in the area.

- This function is available if channel tuning is already performed.
- Only the selected mode is retuned. All the previous tuning settings are erased.
- Child Lock PIN number is required to retune locked channels.

 → Functions > Child Lock > PIN number

- If tuning has not been done completely, set [Manual Tuning](#).

 → Watching > Tuning and editing channels > Manual Tuning

■ DVB-S

1. Select [Antenna System](#) and press **OK** to access.
2. Select [One LNB](#) / [MiniDiSEqC](#) / [DiSEqC 1.0](#) / [Single Cable](#) and press **OK** to set.

[One LNB](#):

Compatible with single LNB.

[MiniDiSEqC](#):

Up to 2 LNBs can be controlled.

[DiSEqC 1.0](#):

Up to 4 LNBs can be controlled.

[Single Cable](#):

When using the Single Cable router, up to 32 user bands are available.

- You can receive several satellites if you have DiSEqC control antenna system.
- This TV supports DiSEqC Version 1.0.

3. Select [LNB Configuration](#) and press **OK** to access.

4. Select [LNB](#) / [Satellite](#) and set.

1) Set [LNB](#) first.

- If you set to [One LNB](#), [LNB](#) is not selectable.
- If you set to [MiniDiSEqC](#) or [Single Cable](#), select from LNB AA and AB.
- If you set to [DiSEqC 1.0](#), select from LNB AA, AB, BA and BB.

2) Set **Satellite** for the selected LNB.

- Select **No Satellite** if you do not know the connected satellite.
(Available satellite is searched in **Auto Setup**.)
- Select **User defined** to set **Test Transponder Frequency** manually.
- If you set to **Single Cable**, additional settings are required. Set **SingleCable Version**, **User Band**, **User Band Frequency** and **PIN** (depending on the Single Cable router you use). For details, read the manual of the Single Cable router.



→ **Watching > Tuning and editing channels > Selectable satellites**

5. Press **BACK/RETURN** to store.

6. Select **Auto Setup** and press **OK** to access.

7. Select **Search Mode / Scan Mode** and press **OK** to access.

8. Set the item and press **OK** to store.

- **Scan Mode**

Full:

Scans the whole frequency range.

Quick:

Scans the suitable frequency for the selected satellite.

- After settings, select **Start scan** and press **OK** to search.

9. A confirmation screen is displayed and press **OK** to start **Auto Setup**.
(Settings are made automatically.)

- When the operation is completed, the channel at the lowest position will be displayed.

■ DVB-C, DVB-T, Analogue

1. Select **Auto Setup** and press **OK** to access.
2. Set **DVB-C Auto Setup Settings** and press **OK** to store. (DVB-C)

- **Scan Mode**

- Full:**

- Scans the whole frequency range.

- Quick:**

- Scans the suitable frequency in your country.

- Normally set **Frequency**, **Symbol Rate** and **Network ID** to **Auto**. If **Auto** is not displayed or if necessary, enter each value specified by your cable provider with **Numeric buttons**.



- After settings, select **Start scan** and press **OK** to search.
3. A confirmation screen is displayed and press **OK** to start **Auto Setup**.
(Settings are made automatically.)
 - When the operation is completed, the channel at the lowest position will be displayed.

■ DVB-via-IP

- Ensure the network connections and network settings are completed.

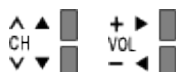
 → Functions > DVB-via-IP > DVB-via-IP client connection

 → Network > Network settings

1. Select **Auto Setup** and press **OK** to access.
2. A confirmation screen is displayed and press **OK** to access.
3. Select a server from **Server List**.
 - 1) Select a server and press **OK** to set.
 - 2) Select **Search Channels** and press **OK** to access.
4. Select a search mode and press **OK** to access.
5. Set **Client Settings**.
 - 1) Select **Client Settings** and press **OK** to access.
 - 2) Select **Unicast Environment** / **Multicast Environment** and press **OK** to set.
 - Select **Unicast Environment** to use in a home network.
 - Select **Multicast Environment** to use in multi family housing units, hotel, hospital, etc. (All servers are selected automatically.)
 - 3) Select **Server List** and press **OK** to access.
6. Select **Search Channels** and press **OK** to access.
7. Set **DVB-via-IP Search Mode** and press **OK** to start **Auto Setup**. (Settings are made automatically.)
 - Set **DVB-via-IP Satellite Configuration** to tune DVB-S channels.
 - When the operation is completed, the channel at the lowest position will be displayed.

■ Auto Setup using the buttons on the TV

1. Press and hold INPUT/OK/HOLD for MENU button for 3 seconds to display the menu.
2. Set **Auto Setup** with following control panel buttons.
 - Move the cursor / select from a range of options / select the menu item



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

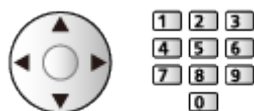
Manual Tuning

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

- Normally use [Auto Setup](#) or [Update Channel List](#) to retune DVB channels.
- If tuning has not been done completely or for adjusting the direction of the aerial or dish, use this function. (DVB)
- All DVB channels found are added to [Channel List](#).

■ DVB-S

- Please consult the received satellite broadcasting companies for the setting.
1. Select [Transponder Frequency](#) / [Symbol Rate](#) / [Polarisation](#) / [Modulation](#) / [Service ID](#) and set with **Cursor buttons** or **Numeric buttons**.



2. Select [Start scan](#) and press **OK** to search.

■ DVB-C

1. Enter the frequency with **Numeric buttons**.



- Normally set [Symbol Rate](#) and [Service ID](#) to [Auto](#).
2. Select [Start scan](#) and press **OK** to search.

■ DVB-T

1. Select a channel and adjust frequency for each channel.
 - Set where the level of [Signal Quality](#) becomes the maximum.
2. Press **OK** to search.

■ Analogue

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

- Set [Sound System](#) and [Colour System](#), and then perform this function.
Normally set [Colour System](#) to [Auto](#).
 - SC1: PAL B, G, H / SECAM B, G
 - SC2: PAL I
 - SC3: PAL D, K / SECAM D, K
 - F: SECAM L, L'

1. Select the channel position with **Numeric buttons**.



2. Select the channel with **Channel Up / Down**.



3. Set [Manual Tuning](#).
4. Select [Store](#) and press **OK** to set.
 - Use [Fine Tuning](#) to make small adjustments to the tuning of an individual programme (affected by weather conditions, etc.).
 - If a VCR is connected only with the RF cable, select channel position [0](#).

■ DVB-via-IP (DVB-S)

- Please consult the received satellite broadcasting companies for the setting.

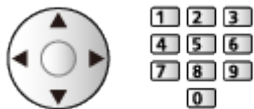
1. Select [Transponder Frequency](#) / [Symbol Rate](#) / [Polarisation](#) / [Modulation](#) / [FEC](#) / [Service ID](#) and set with **Cursor buttons** or **Numeric buttons**.



2. Select [Start scan](#) and press **OK** to search.

■ DVB-via-IP (DVB-C)

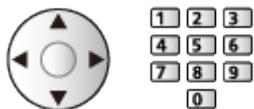
1. Select [Frequency](#) / [Bandwidth](#) / [Modulation Type](#) / [Symbol Rate](#) / [FEC](#) / [Service ID](#) and set with **Cursor buttons** or **Numeric buttons**.



- Normally set [Symbol Rate](#) to [Auto](#).
2. Select [Start scan](#) and press **OK** to search.

■ DVB-via-IP (DVB-T)

1. Select [Frequency](#) / [Bandwidth](#) / [Modulation](#) / [FEC](#) / [Service ID](#) and set with **Cursor buttons** or **Numeric buttons**.



2. Select [Start scan](#) and press **OK** to search.

= Note =

- For details of DVB-via-IP connections



→ [Functions](#) > [DVB-via-IP](#) > [DVB-via-IP client connection](#)

- Not valid when [Client Settings](#) is set to [Multicast Environment](#) (DVB-via-IP)

Update Channel List

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

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

- The channel list is updated while keeping your settings in [Favourites Edit](#), [Channel List](#), [Child Lock](#), etc.
- Depending on the signal condition, the update may not work properly.
- To update DVB-S channels, set [Search Mode](#) and [Scan Mode](#) before updating.
 - 1) Select [Search Mode](#) / [Scan Mode](#) and press **OK** to access.
 - 2) Set each item and press **OK** to store.
 - 3) After settings, select [Start scan](#) and press **OK** to search.

= Note =

- Not valid when [Client Settings](#) is set to [Multicast Environment](#) (DVB-via-IP)

New Channel Message

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

- When a notification message appears, you can perform [Update Channel List](#) pressing **OK**.
- Not valid in DVB-via-IP

Signal Condition

Selects a channel and checks the signal condition with indicators.

- A good Signal Strength is not an indication of suitable signal reception.
- Vertical lines show the maximum signal value of the selected channel.
- To change the channel



- For DVB

Other settings

Favourite Network

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

- For DVB-C, DVB-T
-

Service Replacement

(On / Off)

Set to **On** to display a message to switch to the available service (only available in some countries).

- For DVB-C, DVB-T
-

Attenuator

(On / Off)

Sets the antenna system to use plural LNBs for receiving several satellites.

- If the DVB-C signal is too strong, interference may occur. In this case, set to **On** to weaken the signal automatically.
-

Add TV Signal

Adds the TV mode.

- Allows you to add any TV mode which was skipped during initial **Auto Setup**.

Selectable satellites [\[This feature is available depending on your model.\]](#)

■ Selectable satellites and dish alignment to tune DVB-S channels

To ensure your satellite dish is correctly installed, please consult your local dealer.

Also please consult the received satellite broadcasting companies for details.

- Intelsat at 85.2° East
- ABS 1 at 75° East
- Express at 53° East
- Intelsat at 45° East
- Turksat at 42° East
- Express at 40° East
- Hellas at 39° East
- Eutelsat at 36° East
- Eutelsat at 33° East
- Astra at 28.2° East
- Arabsat at 26° East
- Eutelsat at 25.5° East
- Astra at 23.5° East
- Eutelsat at 21.5° East
- Astra at 19.2° East
- Eutelsat at 16° East
- Hot Bird at 13° East
- Eutelsat at 10° East
- Eutelsat at 9° East
- Eutelsat at 7° East
- Astra at 4.8° East
- Thor at 0.8° West / Intelsat at 1° West
- Amos at 4° West
- Eutelsat at 5° West
- Eutelsat at 7° West
- Eutelsat at 8° West
- Eutelsat at 12.5° West
- Telstar at 15° West
- NSS at 22° West
- Intelsat at 24.5° West
- Hispasat at 30° West

Recording

USB HDD setup

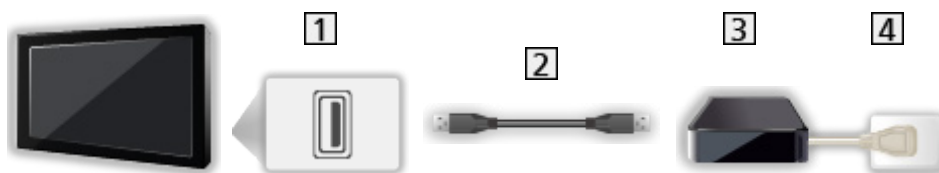
Preparations

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.
- Connect the USB HDD to the USB 2 port with the USB cable.
- Be sure to connect the USB HDD to the mains socket.
- To remove the USB HDD safely from the TV, perform [Safely remove USB](#) in [USB Device Setup](#).

 → [Recording > USB HDD setup > Setting for USB HDD](#)

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



- 1** USB 2 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 =

- Analogue TV programme cannot be recorded on the USB HDD.
- The data broadcasting (MHEG, etc.), 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.
- Depending on the network condition, recording function may not work properly in DVB-via-IP.
- 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 **Setup** > **USB Device Setup** 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.
 - To display information of the highlighted device

4. When the caution and confirmation screen for using USB HDD is displayed, select **Yes** and press **OK** to proceed.
5. When a confirmation screen of USB HDD name is displayed, select **Yes** and press **OK** to set.
 - The name for the USB HDD is created automatically. If you want to edit the name, select **Yes**.
 - 1) Enter characters with **Cursor buttons** or **Numeric buttons**, and press **OK** to set.

 - 2) Press **BACK/RETURN** to store.
6. When a confirmation screen to enable USB HDD for recording is displayed, select **Yes** and press **OK** to set.
 - If another formatted USB HDD for recording already exists, this confirmation screen will be displayed to switch to enable this USB HDD for recording.

- Mode of the USB HDD

 : The USB HDD is available for recording / playing back.

Only one USB HDD on the list is available for recording.

 : The USB HDD is available for playing back.

- To change the mode



- To edit USB HDD name

 (green)

- To format

 (red)

- To remove the USB HDD safely from the TV

 (yellow)

= 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

One Touch Recording

Records the current programme to the USB HDD immediately.

- Confirm the remote control code is “73”.



→ Watching > External equipment > Operating with TV's remote control

1. Display the menu with **MENU**.
2. Select **Setup** > **Recording Setup** > **One Touch Recording** and press **OK** to access.
3. Select the maximum recording time **30 / 60 / 90 / 120 / 180 (minutes)** and press **OK** to set.

■ To start One Touch Recording

Press  to start.

- Other channels cannot be selected while recording is in progress.

■ To stop recording in progress

Press  to stop.

■ To play back or delete the recorded content

Recorded TV programmes can be played back in Media Player.

1. Display Home Screen with **HOME**.
2. Select **Devices** and press **OK** to access.
3. Select USB HDD for recording and press **OK** to access.



→ Media Player > Recorded TV mode

- Even if **One Touch Recording** is in progress, you can play back all the content. (Depending on the USB HDD, playback may not be possible or the recording may not work properly during playback.)

REW LIVE TV

Records the current programme to the USB HDD constantly within the maximum recordable time.

- Confirm the remote control code is “73”.



→ Watching > External equipment > Operating with TV's remote control

1. Display the menu with **MENU**.
2. Select **Setup** > **Recording Setup** > **REW LIVE TV** and press **OK** to access.
3. Select **Auto** to start **REW LIVE TV**.
 - When you select **Auto**, recording will start automatically.
 - This recording may not start if another recording is in progress, TV signal condition is bad or there are no images displayed.

■ To operate REW LIVE TV

- To pause



- To search backward (up to 90 minutes)



- After pausing or searching backward, the following buttons are available for operation.

◀ : Search backward

▶ : Search forward

▽ : Return to the current programme

OK : Playback / Pause



: Search backward / Search forward



: Pause / Resume



: Playback



: Return to the current programme

■ To stop REW LIVE TV

1. Display the menu with **MENU**.
2. Select **Setup** > **Recording Setup** > **REW LIVE TV** and press **OK** to access.
3. Select **Off** to stop **REW LIVE TV**.
 - If you stop **REW LIVE TV**, the recorded content for **REW LIVE TV** will be deleted.
 - **REW LIVE TV** is stopped and the recorded content is deleted automatically in the following conditions: (Even if **REW LIVE TV** stops for the following conditions, as long as the setting is **Auto**, a new recording starts automatically in a condition that makes the recording available.)
 - Other channels selected
 - Locked channel selected
 - Invalid channel selected
 - No TV signal
 - External input selected
 - When the full-screen application (TV Guide, Media Player, eHELP, etc.) is launched
 - When the TV enters Standby or is turned off
 - When another recording starts

Timer Programming

Setting Timer Programming

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

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

- Not valid in Analogue

1. Select the mode with **TV**.

DVB-S / DVB-C / DVB-T / DVB-via-IP

2. Display the menu with **MENU**.

3. Select **Timer** > **Timer Programming** and press **OK** to access.

4. Press **OK** to start making the settings.

USB HDD Rec.:

Records the programme to the USB HDD.

5. Select and set the item (channel, date, start time, end time).

- **4** and **6** can also be entered with **Numeric buttons**.



(Example)

1	2	3	4	5	6
			1 ZDF	-- / --	--:-- --:-- (--- xxx)
				-- / --	--:-- --:-- (--- xxx)
				-- / --	--:-- --:-- (--- xxx)

1 !: Overlapped timer events

2 Function ([USB HDD Rec.](#))

3 TV mode

: DVB-S

: DVB-C

: DVB-T

: DVB-via-IP

– You cannot change the mode within the menu.

4 Channel position, channel name, etc.

5 Date

– [Daily Sun-Sat](#): Sunday to Saturday

– [Daily Mon-Sat](#): Monday to Saturday

– [Daily Mon-Fri](#): Monday to Friday

– [Weekly Sun / Mon / Tue / Wed / Thu / Fri / Sat](#): Same time on the same day every week

6 Start time / End time / Duration (automatic display)

6. Store with **OK**.

Editing Timer Programming

1. Display the menu with **MENU**.
2. Select **Timer** > **Timer Programming** and press **OK** to access.
3. Select the event.
 - To change a timer event
OK
 - Correct as necessary.
 → **Recording > Timer Programming > Setting Timer Programming**
 - To delete a timer event
 - 1) Press  (red).
 - 2) Press **OK** to delete.

■ To play back or delete the recorded content

Recorded TV programmes can be played back in Media Player.

1. Display Home Screen with **HOME**.
2. Select **Devices** and press **OK** to access.
3. Select USB HDD for recording and press **OK** to access.

 → **Media Player > Recorded TV mode**

Remote recording

You can set timer programming with the network equipment (smartphone, etc.) from outside the home network using TV Anywhere function.

- Ensure the network connections and network settings are completed.

 → [Network > Network connections](#)

 → [Network > Network settings](#)

- Set [TV Anywhere](#) to [On](#) to use this function.

 → [Functions > TV Anywhere](#)

- To use TV Anywhere function, you need to install the application for controlling VIERA on your smartphone.

 → [Support > FAQs > Detailed information](#)

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

= Note =

- This function is not available when the TV is turned off with Mains Power On / Off switch.
- Due to network conditions or certain broadcaster restrictions, this function may not be available.

Note

- [TV Guide](#) may also be used to set timer event.
 → [Watching > TV Guide > Timer Programming](#)
- [Timer Programming](#) can store up to 15 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.
- No other channels can be selected while recording of [Timer Programming](#) is in progress.
- Recording an encrypted (copy-protected) programme may not be possible.
- Depending on the network condition, recording function may not work properly in DVB-via-IP.
- When the start time comes, the channel will be switched automatically and the video and audio signals will be output. 2 minutes before the start time, a reminder message appears if you are watching TV.
 - To remove the message and start the programming, press **OK**.
 - To cancel the programming, press **EXIT**.
- LED turns to orange in Standby mode when [Timer Programming](#) is set.
- “!” identifies that two or more timer events are overlapped. As for the overlapped recording events, the first event starts and finishes as programmed. The next event can then start.
- The recording of [Timer Programming](#) automatically changes the channel to the programmed channel a few seconds before the start time.
- 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 3 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 / USB HDD / network device, and content recorded with this TV to the formatted USB HDD.

(Example)

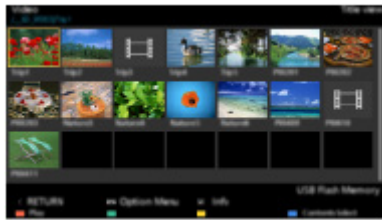


Photo mode:

Still pictures recorded with digital cameras are displayed.

Video mode:

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

Music mode:

Digital music data are played back.

Recorded TV mode:

(For exclusive USB HDD) TV programmes recorded on the USB HDD with this TV are played back.

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

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

- **Date** shows the date on which the recording was made by the recording equipment. For a file without a valid record date “* *” is shown.
- 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.

■ To insert or remove the USB Flash Memory

Ensure alignment is straight and complete when inserting or removing.



- To remove the USB Flash Memory safely from the TV, perform [Safely remove USB](#) in [USB Device Setup](#).
 - 1) Display the menu with **MENU**.
 - 2) Select [Setup](#) > [USB Device Setup](#) and press **OK** to access.
 - 3) Select the device and press **YELLOW** (yellow) to set.
- Connect the USB Flash Memory to the USB 1 or 2 port.

= Note =

- To connect the USB HDD
 -  → [Recording > USB HDD setup](#)
- Check the terminal type and devices are correct for connection.
- For details of the devices
 -  → [Media Player > Technical information](#)
- For details of supported file formats
 -  → [Media Player > Technical information](#)

Selecting device / mode

1. Insert the USB Flash Memory to the TV.

 → Media Player > Using Media Player > Information

- To play back content in the USB HDD, ensure the connection and settings are completed.

 → Recording > USB HDD setup

- To play back content in the network device, ensure the connection and settings are completed.

 → Media Player > Using Media Player > Network device

2. Display Home Screen with **HOME**.
3. Select **Devices** and press **OK** to access.
4. Select the device (USB Flash Memory / USB HDD / network device) and press **OK** to access.
 - When a confirmation screen about the network device is displayed, enter **User** / **Password** to access.
5. Select **Photo** / **Video** / **Music** / **Recorded TV** and press **OK** to access.

Photo

 → Media Player > Photo mode

Video

 → Media Player > Video mode

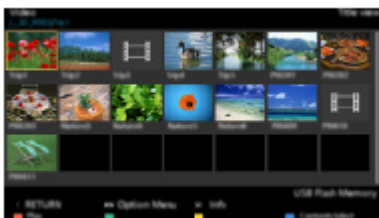
Music

 → Media Player > Music mode

Recorded TV

 → Media Player > Recorded TV mode

6. The thumbnail view is displayed.
(Example)



- To display / hide information of the highlighted content



= Note =

- **Recorded TV** is available for content recorded on the USB HDD with this TV.
- Select the appropriate device and content for playing back each file.
- You can use the following buttons during playback. Confirm the remote control code is "73".



 → **Watching > External equipment > Operating with TV's remote control**

■ To change the mode

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

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

Network device

You can enjoy photo, video or music stored in the network devices.

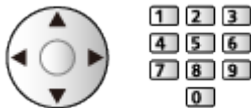
- To enable this function, connect this TV to your home network.

 → Network > Network connections

 → Network > Network settings

■ How to set User / Password

1. Display the menu with **MENU**.
2. Select **Network** > **File Sharing Settings** > **Network Device List** and press **OK** to access.
3. Select the network device and press **OK** to access.
4. Enter **User** / **Password** with **Cursor buttons** or **Numeric buttons** and press **OK** to set.



- Press **BACK/RETURN** to store.
 - To register the new network device, set **Server Name** / **Shared Folder**.
For details, read the manual of the equipment.
5. Select **Register** and press **OK** to set.
 - To delete the registered device, select **Delete** and press **OK** to set.

= Note =

- Regarding performance, not all servers are guaranteed.
- Up to 48 devices can be registered.

Sharing file

You can share the files between PC and devices connected to this TV.

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

 → Network > Network connections

 → Network > Network settings

1. Display the menu with **MENU**.
2. Select **Network** > **File Sharing Settings** > **File Sharing Server** and press **OK** to access.
3. Select **On** and press **OK** to set.
4. Operate your PC to share the files.
 - This function is not available when the TV is turned off with Mains Power On / Off switch. You can share the files in Standby mode when **DLNA Server** is set to **On**.

= Note =

- Regarding performance, not all PCs are guaranteed.
- Do not turn the TV off, pull out the mains plug or remove the device during operation (reading, copying, etc.). Doing so may cause malfunction of the device or damage the recorded data.
- All data in the USB HDD will be erased when you format the USB HDD with this TV for recording.
- To connect the USB HDD

 → Recording > USB HDD setup

- Picture noise may occur on the screen when playback starts during operation (reading, copying, etc.).
- For details of the devices

 → Media Player > Technical information

Photo mode

Selecting file

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

 : Error display

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

 → **Media Player > Technical information > Photo format**

■ Thumbnail view

- To display / hide information of the highlighted content



- To display **Slideshow Settings**

 (red)

 → **Media Player > Photo mode > Using Slideshow**

- To sort

 (green)

- To change the content

 (blue)

Viewing photo

■ Playback

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

Sorting photos

■ To sort by folder, recorded date or recorded month

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

[Folder view](#):

Displays the thumbnail grouped by folder.

- Files which are in the root folder are collected to the folder named *"/*.

[Sort by Date](#) / [Sort by Month](#):

Displays the thumbnail grouped by the same date or month.

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

Using Slideshow

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

1. Select the file from the thumbnail of photos for the first view.
2. Start Slideshow with  (red) and **OK**.
 - To display / hide the operation guide

 - To pause (return to Single view)
OK
 - To return to thumbnail
BACK/RETURN
 - You can change the back ground music by setting [Back Ground Music](#) in [Slideshow Settings](#) (see below).

■ Slideshow Settings

Set up the settings for Photo mode.

1. Display the option menu with **OPTION**.
 2. Select [Slideshow Settings](#) with **OK**.
 3. Select one of the following items and press **OK** to access.
[Screen Mode](#) / [Interval](#) / [Repeat](#) / [Back Ground Music](#)
 4. Set the item and press **OK** to store.
-

[Screen Mode](#)

([Normal](#) / [Zoom](#))

Selects enlarged or normal viewing.

- Depending on the photo size, the photo may not be fully enlarged to fill the screen (e.g. portrait style picture).
-

[Interval](#)

([Long](#) / [Normal](#) / [Short](#))

Selects slideshow interval.

[Repeat](#)

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

Slideshow repeat

Back Ground Music

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

Selects the background music during Photo mode.

Type1 - 5:

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

Auto:

Music files stored in the current device are played back.

- If there is no available music data, no sound is played back.

User:

Music files in the device registered by yourself are played back.

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

● To register music

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

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

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

File:

The selected music file is registered.

Folder:

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

= Note =

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

Video mode

Selecting file

1. Select the title in the thumbnail view.

 : Error display

 : The file does not support thumbnail view.

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

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

2. Start playback with  (red).

- If you have stopped the last playback halfway, a confirmation screen may be displayed to select whether to start from where you stopped last time or from the beginning.
- For details of supported file formats

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

■ Thumbnail view

- To display / hide information of the highlighted content



- To start playback

 (red)

- To change the content

 (blue)

Watching video

■ Playback from the selected scene in the title

Playback of the selected scene starts and continues until the end of the title.

1. Select the title and press **OK** to access.
2. Select the scene.
3. Start playback with  (red).
 - The structure of titles and scenes may vary depending on the digital video camera used.
 - Playback may not continue depending on the condition.
 - To repeat playback

 → Media Player > Video mode > Video Setup

■ Playback

- To operate playback
 - ◀ : Rewind
 - ▶ : Fast forward
 - ▽ : Stop
 - OK** : Pause (displays the time seek bar) / Playback
- To jump to the specified time point
 - 1) Display the time seek bar with **OK**.
 - 2) While the time seek bar is displayed
 - Press ◀ / ▶ :
 - Search approx. 10 seconds
 - Press and hold ◀ / ▶ :
 - Search rapidly
 - 3) Jump to the specified time point with **OK**.
- To display / hide the operation guide and information banner
 - 
- To the previous title / scene
 -  (red)
- To the next title / scene
 -  (green)

- To change aspect

- 1) Display **Aspect Selection** with **ASPECT**.
- 2) Select the mode and press **OK** to set.

Aspect1:

Displays the content in original size.

Aspect2:

Displays the content enlarged without distortion.

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

- To return to thumbnail

BACK/RETURN

Video Setup

Set up the settings for Video mode.

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

Video Preview / **Multi Audio** / **Dual Mono Audio** / **Repeat** / **Subtitle Settings**

- Menu items and selectable options vary depending on the content.

4. Set the item and press **OK** to store.
-

Video Preview

(On / Off)

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

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

Multi Audio, Dual Mono Audio

Selects for selectable sound tracks (if available).

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

Repeat

(On / Off)

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

Subtitle Settings

Sets the subtitle setting.

- This function is available during playback.

Subtitle:

Display / hide subtitles (if available).

Subtitle Text:

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

Subtitle Text Size:

Selects the font size of subtitles.

Subtitle Text Colour:

Selects the colour of subtitles.

Subtitle Text Position:

Adjusts the position of subtitles on the screen.

Subtitle Text Delay:

Adjusts the delay time for the subtitles.

Audio output settings

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

- To confirm or change the current sound status

 → Media Player > Video mode > Video Setup

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

SPDIF Selection

(Auto / PCM)

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

- SPDIF is a standard audio transfer file format.

Auto:

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

PCM:

Digital output signal is fixed to PCM.

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

Music mode

Selecting file

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

- For details of supported file formats



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

■ Thumbnail view

- To display / hide information of the highlighted content



- To start playback



(red)

- To change the content



(blue)

Playing music

■ Playback of the selected file in the folder

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

■ Playback

- To operate playback

 : Rewind

 : Fast forward

 : Stop

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

- To jump to the specified time point

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

2) While the time seek bar is displayed

Press  /  :

Search approx. 10 seconds

Press and hold  /  :

Search rapidly

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

- To display / hide the operation guide



- To the previous track

 (red)

- To the next track

 (green)

- To return to thumbnail

BACK/RETURN

Music Setup

Set up the setting for Music mode.

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

Folder:

Playback repeat within the selected folder

One:

Playback repeat of the selected one file

Recorded TV mode

Selecting content

- For exclusive USB HDD
- To play back content in the USB HDD, ensure the connection and settings are completed.

 → Recording > USB HDD setup

1. Content list of the selected device is displayed in Recorded TV mode.
 - Remaining capacity of the selected device is displayed on the top right. (This value may not be accurate depending on the condition.)
 - Content list is displayed as **All** or **Not Viewed**.

All:

All the recorded TV programmes are listed.

Not Viewed:

Content not played back yet are listed.

- Icons are displayed.

 : Content not played back yet (Once you play back the content, this icon will disappear.)

 : Protected content cannot be deleted.

 : Currently recording (You can play back this recording content.)

 : Group of content

2. Select the content and press **OK** to start playback.
 - If you have stopped the last playback halfway, a confirmation screen may be displayed to select whether to start from where you stopped last time or from the beginning.
 - If the content has multiple programmes with different parental ratings, the highest restriction is applied to the content. Once you unlock the restriction, all the programmes in the content can be played back.
- For details of supported file formats

 → Media Player > Technical information > Video format

Watching recorded TV

■ Playback

- To operate playback

 : [Manual skip](#)

- Press to skip forward approx. 30 seconds.
- Press and hold to skip backward approx. 15 seconds.

 : Rewind

 : Fast forward

 : Stop

 : Pause (displays the time seek bar) / Playback

- To jump to the specified time point
 - 1) Display the time seek bar with .
 - 2) While the time seek bar is displayed

Press  /  :

Search approx. 10 seconds

Press and hold  /  :

Search rapidly

- 3) Jump to the specified time point with .

- To display / hide the operation guide and information banner



- To repeat between the starting point “A” and finishing point “B”



(Set “A” and “B” in order.)

- The points are reset by pressing again or by other operations.

- To the previous / next chapter



- A recorded content is automatically divided into chapters (approx. 5 minutes for each).

- To change aspect





→ [Watching > For best picture > Aspect](#)

- To display the subtitle (if available)



- To confirm or change the current status (if available)

 → Watching > Basic > AV Options

- To return to list

BACK/RETURN

Grouping content

1. Select the content to edit and press  (blue) to tick in the content list.
2. Display the option menu with **OPTION**.
3. Select [Create Group](#) / [Release Group](#) / [Exclude from Group](#) / [Change Protect Status](#) and press **OK** to set.

[Create Group](#):

Create a group of content. Select and tick all the desired content, and then select [Create Group](#).

[Release Group](#):

Select the created group to release, and then select [Release Group](#).
(To release several groups at once, tick all the desired groups.)

[Exclude from Group](#):

Select the group and press **OK** to display the grouped content. To exclude specific content from the group, tick it and then select [Exclude from Group](#). (To exclude some of the content at once, tick all the desired content.)

[Change Protect Status](#):

Select the content to protect from deletion, and then select [Change Protect Status](#). Perform the same way to cancel the protection. (To change the status of some of the content at once, tick all the desired content.)

Deleting content

1. Select the content to edit and press  (blue) to tick in the content list.
2. Delete the content with  (red).
3. When a confirmation screen is displayed, select **Yes** and press **OK** to set.

Chapter List

You can start playback from the chapter list you select.

1. Display the chapter list with  (yellow).
2. Select the chapter and press  to start playback.

= Note =

- The chapter list is not displayed while the selected content is being recorded.
- Depending on the recorded programmes, some playback operations may not work properly.

Audio output settings

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

- To confirm or change the current sound status

 → Media Player > Video mode > Video Setup

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

SPDIF Selection

(Auto / PCM)

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

- SPDIF is a standard audio transfer file format.

Auto:

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

PCM:

Digital output signal is fixed to PCM.

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

Technical information

Device handling caution

- Data modified with a PC may not be displayed.
- Do not remove the device while the TV is accessing data. Otherwise this can damage the device or TV.
- Do not touch the pins on the device.
- Do not subject the device to a high pressure or impact.
- Insert the device in the correct direction. Otherwise this can damage the device or TV.
- Electrical interference, static electricity, or erroneous operation may damage the data or device.
- Back up the recorded data at regular intervals to prevent data deterioration, data damage or erratic operation of the TV. Panasonic is not liable for any deterioration or damage of recorded data.

USB devices

- It is recommended to connect the 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 or exFAT

- 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 3 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.

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.
- 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 Digital, Dolby Digital Plus, HE-AAC, LPCM, MP3, WMA, WMA Pro

- MP4 (.f4v, .m4v, .mp4)

Video codec:

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

Audio codec:

AAC, Dolby Digital, Dolby Digital Plus, 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 Digital, Dolby Digital Plus, HE-AAC, MP3, Vorbis

- ASF (.asf, .wmv)

Video codec:

MPEG4, VC-1, WMV9

Audio codec:

AAC, 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, .vro)

Video codec:

H.264, MPEG1, MPEG2, VC-1

Audio codec:

AAC, 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 Digital, Dolby Digital Plus, 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 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.
- Supported formats are different in Media Player and media server.

Music format

■ Supported Music formats

- MP3 (.mp3)

- AAC / Apple Lossless (.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 access some specific websites supported by Panasonic, and enjoy internet content such as videos, games, communication tools, etc. from [Apps](#).

(Example)



- 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 Screen > 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.

(Example)



- 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 > Keyboard

Note

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

 → Network > Network connections

 → Network > Network settings

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

 → Network > Network settings > Software Update

- 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.

DLNA

In-House streaming

This TV is a DLNA Certified™ product.

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

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

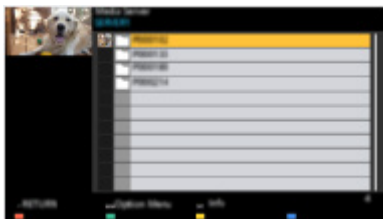
 → Network > Network connections

 → Network > Network settings

■ Playback of sharing content stored in the media server

Store photo, video or music content into the DLNA Certified media server (for example, PC, DIGA Recorder, etc.) connected to your home network. And then you can enjoy the content on this TV.

(Example)



- For details of watching and operating content on this TV

 → Network > DLNA > Using DLNA

- For details of supported file formats

 → Network > Technical information

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

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

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

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

You can enjoy content stored in the media server by controlling with the DMC network equipment (smartphone, PC, etc.) connected to your home network.

- To use this function with your smartphone or PC, set [TV Remote App Settings](#) of this TV.



→ [Network > Network settings > TV Remote App Settings](#)

And you need to install the application for controlling VIERA on your smartphone.



→ [Support > FAQs > Detailed information](#)

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

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

You can enjoy the content of this TV with another network equipment connected to your home network.

Available content:

- Photo, video or music content of this TV
- Current digital TV programme
- TV programmes recorded on USB HDDs with this TV

Available network equipment:

- DLNA Certified VIERA
- Smartphone, etc.
- To use this function with your smartphone, you need to install the application for controlling VIERA on your smartphone.



→ [Support > FAQs > Detailed information](#)

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

- To use this function with another DLNA Certified VIERA, set [Network Link Settings](#) of this TV.



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

- Sharing the current programme may not be available when selecting radio channels, encrypted (copy-protected) programmes or when the broadcast prohibits the output of video and audio.
- Display the TV full-screen for sharing the TV programme with another piece of network equipment.
- Only 1 piece of other equipment can share the content of this TV.

= Note =

- This function is not available when the TV is turned off with Mains Power On / Off switch.
- This function may not be available in the following condition of this TV:
 - While the recording is in progress

Using DLNA

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

 → Network > DLNA > In-House streaming

 → Network > Network connections

 → Network > Network settings

1. Display Home Screen with **HOME**.
2. Select **Devices** and press **OK** to access.
3. Select the media server and press **OK** to access.
 - To display / hide information of the highlighted media server
 - 1) Display the option menu with **OPTION**.
 - 2) Select **Show Info.** and press **OK** to access.
4. Select the file and press **OK** to access.

(Example)



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



= Note =

- Non-playable files are also listed but cannot be selected.
- You can use the following buttons during playback. Confirm the remote control code is “73”.



 → Watching > External equipment > Operating with TV's remote control

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

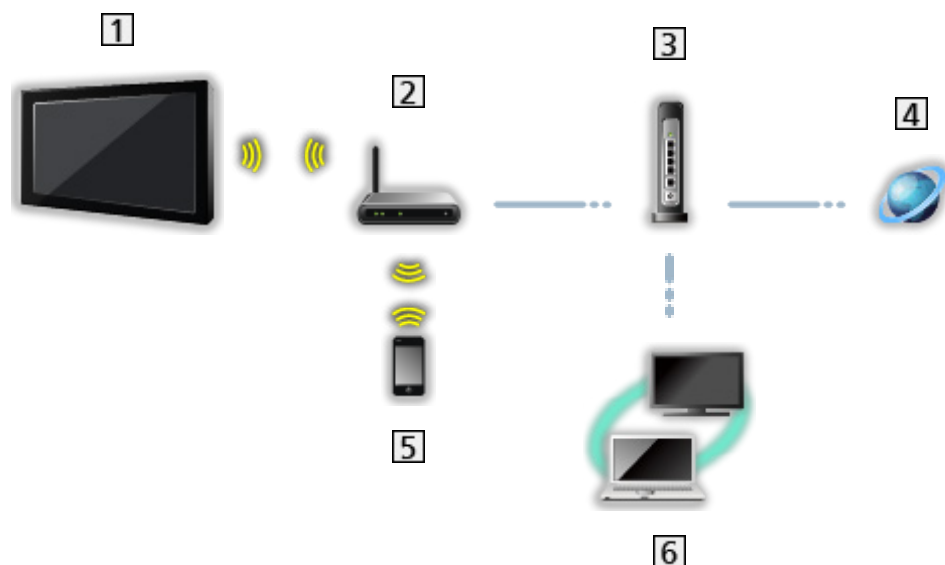
DLNA connection

To use DLNA 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.

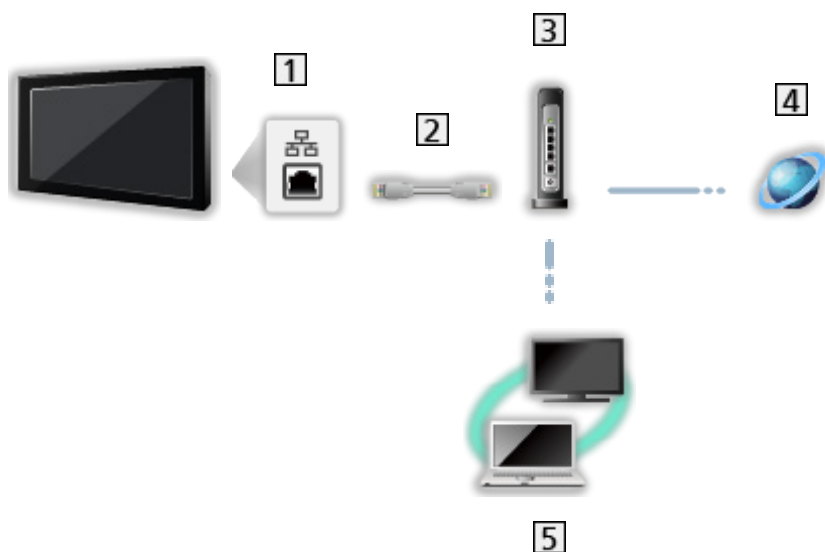
 → [Network > Network connections > Internet connection](#)

■ Wireless connection (For DLNA 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 DLNA Certified media server (PC, etc.)

■ Wired connection (For DLNA and internet service)



1 ETHERNET terminal

2 LAN cable (Shielded)

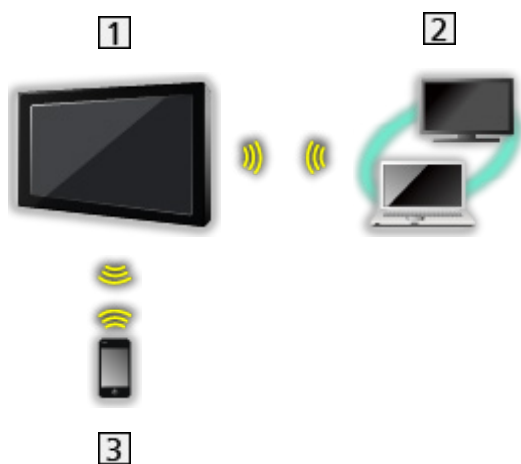
- Use Shielded Twist Pair (STP) LAN cable.

3 Hub / Router

4 Internet environment

5 DLNA Certified media server (PC, etc.)

■ Wireless connection (For DLNA)



1 TV

- To use the TV as a wireless access point

 → Network > Network settings > Custom - Wireless Access Point

2 DLNA Certified media server (PC, etc.)

3 Smartphone, etc.

Note

- Ensure to use a LAN straight cable.
- Set up and connect equipment required for the network environment. You cannot make such settings on this TV. Read the manual of the equipment.
- If 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, and then on again when changing or making the network connection again.
- Depending on the network condition, the content may not be played back properly.
- For details of DVB-via-IP connections



→ [Functions > DVB-via-IP > DVB-via-IP client connection](#)

Network settings

Network Connection

Ensure the connections are completed before starting network setup.

 → Network > Network connections

■ Quick setup - Wireless

1. Display the menu with **MENU**.
2. Select **Network** > **Network Connection** and press **OK** to access.
 - Confirm the encryption key, settings and position of your access point before starting setup. For details, read the manual of the access point.
3. Select **Quick setup** and press **OK** to access.
 - When the LAN cable is connected, wired setup will be done automatically.
4. Select your desired access point and press **OK** to access.
 - Available Wireless Networks are displayed automatically.
 : Encrypted access point
 - For WPS(Push button)
 - 1) Select **Easy setup with Push button** and press **OK** to access.
 - 2) Press the WPS button on the access point until the light flashes.
 - 3) Connect the TV with the access point with **OK**.
 - WPS: Wi-Fi Protected Setup™
 - If the connection fails, check the settings and positions of your access point. And then, follow the on-screen instructions.
 - It is recommended to select the encrypted access point.
5. Enter the encryption key of the access point and press **OK** to set.
 - You can set characters using **Numeric buttons**.



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

 → Network > Network settings > Network Status

7. Select **Exit** and press **OK** to set.
 - To set manually

 → Network > Network settings > Custom - Wireless

■ Quick setup - Wired

1. Display the menu with **MENU**.
2. Select **Network** > **Network Connection** and press **OK** to access.
3. Select **Quick setup** and press **OK** to access.
4. Automatically setup is done and **Network Status** is displayed.

 → **Network > Network settings > Network Status**

5. Select **Exit** and press **OK** to set.

- To set manually

 → **Network > Network settings > Custom - Wired**

= Note =

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

Custom - Wireless

Ensure the connections are completed before starting network setup.

 → Network > Network connections

1. Display the menu with **MENU**.
2. Select **Network** > **Network Connection** > **Custom** > **Wireless** and press **OK** to access.
 - Confirm the encryption key, settings and position of your access point before starting setup. For details, read the manual of the access point.
3. Select your desired access point and press **OK** to access.
 - Available Wireless Networks are displayed automatically.
 -  : Encrypted access point
 - For **WPS(Push button)**
 - 1) Press  (red).
 - 2) Press the WPS button on the access point until the light flashes.
 - 3) Connect the TV with the access point with **OK**.
 - WPS: Wi-Fi Protected Setup™
 - If the connection fails, check the settings and positions of your access point. And then, follow the on-screen instructions.
 - For **WPS(PIN)**
 - 1) Press  (green).
 - 2) Enter the PIN code to the access point.
 - 3) Connect the TV with the access point with **OK**.
 - For **Manual**
 - 1) Press  (yellow).
 - 2) You can set up SSID, security settings and encryption key manually.
 - 3) Follow the on-screen instructions and set manually.
 - To search access points again
 (blue)
 - To display / hide information of the highlighted access point

 - It is recommended to select the encrypted access point.

4. Enter the encryption key of the access point and press **OK** to set.

- You can set characters using **Numeric buttons**.



- Press **BACK/RETURN** to store.

5. **IP/DNS Settings** is displayed.

Acquire IP Address / Acquire DNS Address

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

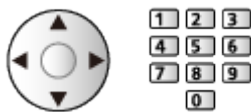
Proxy Settings

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

Proxy:

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

- 1) Select **Proxy** and press **OK** to access.
- 2) Enter the address with **Cursor buttons** or **Numeric buttons**, and press **OK** to set.



- 3) Press **BACK/RETURN** to store.

Proxy Port:

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

- 1) Select **Proxy Port**.
- 2) Enter the number with **Numeric buttons**.



- 3) Press **BACK/RETURN** to store.

6. Select **Network Status** and press **OK** to access.

 → **Network > Network settings > Network Status**

7. Select **Exit** and press **OK** to set.

Custom - Wired

Ensure the connections are completed before starting network setup.

 → Network > Network connections

1. Display the menu with **MENU**.
 2. Select **Network** > **Network Connection** > **Custom** > **Wired** and press **OK** to access.
 3. **IP/DNS Settings** is displayed.
-

Acquire IP Address / Acquire DNS Address

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

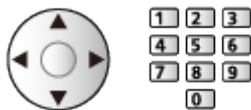
Proxy Settings

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

Proxy:

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

- 1) Select **Proxy** and press **OK** to access.
- 2) Enter the address with **Cursor buttons** or **Numeric buttons**, and press **OK** to set.



- 3) Press **BACK/RETURN** to store.

Proxy Port:

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

- 1) Select **Proxy Port**.
- 2) Enter the number with **Numeric buttons**.



- 3) Press **BACK/RETURN** to store.
-

4. Select **Network Status** and press **OK** to access.

 → **Network > Network settings > Network Status**

5. Select **Exit** and press **OK** to set.

= Note =

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

Custom - Wireless Access Point

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

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

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

Set up the equipment for [WPS\(Push button\)](#). For details, read the manual of the equipment.

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

Enter the PIN code of the equipment.

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

■ Change settings

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

Follow the on-screen instructions and set manually.

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

= Note =

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

Network Status

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

1. Display the menu with **MENU**.
2. Select [Network](#) > [Network Status](#) and press **OK** to access.
3. Automatically testing is done and [Network Status](#) is displayed.

[Try Again:](#)

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

[Status Details:](#)

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

- For information about the network connection, select [Help](#).

my Home Cloud Settings

Displays the terms of service.

1. Display the menu with **MENU**.
2. Select **Network** > **my Home Cloud Settings** > **Notices** and press **OK** to access.
3. Follow the on-screen instructions.

VIERA Name

Sets your favourite name for this TV.

1. Display the menu with **MENU**.
2. Select **Network** > **VIERA Name** and press **OK** to access.
3. Enter characters and press **OK** to set.
 - 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.

TV Remote App Settings

Sets to control the TV with the equipment (smartphone, etc.) connected to your network.

1. Display the menu with **MENU**.
 2. Select [Network](#) > [TV Remote App Settings](#) and press **OK** to access.
 3. Select one of the following items and press **OK** to access.
[TV Remote](#) / [Powered On by Apps](#) / [Networked Standby](#) / [Home Streaming](#) / [Device to upload contents](#)
 4. Set the item and press **OK** to store.
-

[TV Remote](#)

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

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

[Powered On by Apps](#)

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

Enables turning the TV on from the network equipment (smartphone, etc.).

- Depending on the network condition, you may have to turn the TV on with Standby On / Off switch of the TV's remote control.
 - Changing the default configuration may result in higher energy consumption of the product.
 - LED turns to orange in Standby mode when [Powered On by Apps](#) is set to [On](#).
-

[Networked Standby](#)

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

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.

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

Home Streaming

(Always / Only when powered on)

Enables sharing the TV programme and content of this TV with the network equipment (smartphone, etc.) in the home network.

- Changing the default configuration may result in higher energy consumption of the product.
 - LED turns to orange in Standby mode when [Home Streaming](#) is set to [Always](#).
-

Device to upload contents

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

= Note =

- This function is not available when the TV is turned off with Mains Power On / Off switch.
- You need to install the application for controlling VIERA on your smartphone.



→ [Support > FAQs > Detailed information](#)

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

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

Network Link Settings

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

1. Display the menu with **MENU**.
 2. Select [Network](#) > [Network Link Settings](#) and press **OK** to access.
 3. Select one of the following items and press **OK** to access.
[DLNA Server](#) / [Registration Type](#) / [Remote Device List](#)
 4. Set the item and press **OK** to store.
-

DLNA Server

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

Enables sharing the TV programme and content of this TV with the network equipment (DLNA Certified VIERA, etc.).

- To use this function with another VIERA, select the name of this TV from the DLNA server list of another VIERA, and then select the content to share. Also read the manual of another VIERA.
- To use this function with your smartphone, you need to install the application for controlling VIERA on your smartphone.

 → [Support > FAQs > Detailed information](#)

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

- Changing the default configuration may result in higher energy consumption of the product.
 - LED turns to orange in Standby mode when [DLNA Server](#) is set to [On](#).
-

Registration Type

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

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

[Auto](#):

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

[Manual](#):

Sets the restrictions for each piece of equipment in [Remote Device List](#).

Remote Device List

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

= Note =

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

TV Anywhere Settings

Settings for watching TV or editing timer programming with the network equipment (smartphone, etc.) from outside the home network.

 → [Functions](#) > [TV Anywhere](#) > [TV Anywhere Settings](#)

File Sharing Settings

File Sharing Server

(On / Off)

Sets to share the files between PC and devices connected to this TV.

 → Media Player > Using Media Player > Sharing file

Network Device List

Lists the accessible network devices to play back the content in Media Player.

 → Media Player > Using Media Player > Network device

Mirroring Settings

Settings for the mirroring function

 → [Functions](#) > [Mirroring](#) > [Mirroring Settings](#)

Do Not Track Setting

Sets to notify websites and some applications about tracking your browsing activities.

1. Display the menu with **MENU**.
 2. Select [Network](#) > [Do Not Track Setting](#) and press **OK** to access.
 3. Select [Tracking Mode](#) / [About Do Not Track](#) and press **OK** to access.
 4. Set the item and press **OK** to store.
-

[Tracking Mode](#)

([Mode1](#) / [Mode2](#) / [Mode3](#))

[Mode1](#):

Notifies websites that you want to be tracked.

[Mode2](#):

Notifies websites that you do not want to be tracked.

[Mode3](#):

Sends no configuration information about tracking.

[About Do Not Track](#)

Displays the information about tracking.

- A broadband network environment is required to be able to display the detailed information.

Software Update

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

1. Display the menu with **MENU**.
2. Select **Network** > **Software Update** and press **OK** to access.
3. Follow the on-screen instructions.
 - A broadband network environment is required to use this function.

New Software Message

Selects whether to give a notification message when new software is found via network or not.

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

Photos

Selecting file

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

 → Network > DLNA > In-House streaming

 → Network > Network connections

 → Network > Network settings

1. Display Home Screen with **HOME**.
2. Select **Devices** and press **OK** to access.
3. Select the media server and press **OK** to access.
 - To display / hide information of the highlighted media server
 - 1) Display the option menu with **OPTION**.
 - 2) Select **Show Info.** and press **OK** to access.
4. Select the file and press **OK** to access.
 - Depending on the condition of media server, you may need to select the folder before selecting the file.
 - To display / hide information of the highlighted file



= Note =

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

Viewing photo

■ Playback

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

Using Slideshow

Slideshow ends when all photos within the list are viewed.

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

2. Start Slideshow with  (red) and **OK**.

- To display / hide the operation guide



- To pause (return to Single view)

OK

- To return to list

BACK/RETURN

■ Slideshow Settings

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

1. Display the option menu with **OPTION**.

2. Select [Slideshow Settings](#) and press **OK** to access.

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

[Interval](#) / [Repeat](#) / [Back Ground Music](#)

4. Set the item and press **OK** to store.

[Interval](#)

([Long](#) / [Normal](#) / [Short](#))

Selects slideshow interval.

[Repeat](#)

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

Slideshow repeat

[Back Ground Music](#)

([Off](#) / [Type1](#) / [Type2](#) / [Type3](#) / [Type4](#) / [Type5](#))

Selects the background music during Photo mode.

Videos

Selecting file

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

 → Network > DLNA > In-House streaming

 → Network > Network connections

 → Network > Network settings

1. Display Home Screen with **HOME**.
2. Select **Devices** and press **OK** to access.
3. Select the media server and press **OK** to access.
 - To display / hide information of the highlighted media server
 - 1) Display the option menu with **OPTION**.
 - 2) Select **Show Info.** and press **OK** to access.
4. Select the file and press **OK** to access.
 - Depending on the condition of media server, you may need to select the folder before selecting the file.
 - To display / hide information of the highlighted file



= Note =

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

Watching video

■ Playback

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

- To operate playback

 : **Manual skip** (if available)

– Press to skip forward approx. 30 seconds.

 : Rewind

 : Fast forward

 : Stop

 : Pause (displays the time seek bar / slow playback) / Playback

- To jump to the specified time point
 - 1) Display the time seek bar with .
 - 2) While the time seek bar is displayed

Press  /  :

Search approx. 10 seconds

Press and hold  /  :

Search rapidly

- 3) Jump to the specified time point with .

- To play back slowly

- 1) Press and hold  for 5 seconds.

Press  /  :

Search slowly

- 2) Return to the normal playback with .

- To display / hide the operation guide and information banner



- To the previous content

 (red)

- To the next content

 (green)

- To change aspect

1) Display **Aspect Selection** with **ASPECT**.

2) Select the mode and press **OK** to set.

Aspect1:

Displays the content in original size.

Aspect2:

Displays the content enlarged without distortion.

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

- To return to list

BACK/RETURN

Video Setup

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

1. Display the option menu with **OPTION**.
2. Select [Video Setup](#) and press **OK** to access.
3. Select one of the following items and press **OK** to access.

[Video Preview](#) / [Multi Audio](#) / [Dual Audio](#) / [Dual Mono Audio](#) / [Repeat](#) / [Subtitle Settings](#)

- Menu items and selectable options vary depending on the content.

4. Set the item and press **OK** to store.
-

[Video Preview](#)

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

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

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

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

Selects for selectable sound tracks (if available).

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

[Repeat](#)

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

Playback repeat within the selected file

[Subtitle Settings](#)

Sets the subtitle setting.

- This function is available during playback.

[Subtitle](#):

Display / hide subtitles (if available).

[Subtitle Text](#):

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

[Subtitle Text Size](#):

Selects the font size of subtitles.

Subtitle Text Colour:

Selects the colour of subtitles.

Subtitle Text Position:

Adjusts the position of subtitles on the screen.

Subtitle Text Delay:

Adjusts the delay time for the subtitles.

Audio output settings

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

- To confirm or change the current sound status

 → Network > Videos > Video Setup

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

SPDIF Selection

(Auto / PCM)

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

- SPDIF is a standard audio transfer file format.

Auto:

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

PCM:

Digital output signal is fixed to PCM.

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

= Note =

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

 → Functions > VIERA Link "HDAVI Control™"

Music

Selecting file

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

 → Network > DLNA > In-House streaming

 → Network > Network connections

 → Network > Network settings

1. Display Home Screen with **HOME**.
2. Select **Devices** and press **OK** to access.
3. Select the media server and press **OK** to access.
 - To display / hide information of the highlighted media server
 - 1) Display the option menu with **OPTION**.
 - 2) Select **Show Info.** and press **OK** to access.
4. Select the file and press **OK** to access.
 - Depending on the condition of media server, you may need to select the folder before selecting the file.
 - To display / hide information of the highlighted file



= Note =

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

Playing music

■ Playback

- To operate playback

 : Rewind

 : Fast forward

 : Stop

 : Pause (displays the time seek bar) / Playback

- To jump to the specified time point
 - 1) Display the time seek bar with .
 - 2) While the time seek bar is displayed

Press  /  :

Search approx. 10 seconds

Press and hold  /  :

Search rapidly

- 3) Jump to the specified time point with .

- To display / hide the operation guide



- To the previous track

 (red)

- To the next track

 (green)

- To return to list



Music Setup

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

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

Folder:

Playback repeat within the selected folder

One:

Playback repeat of the selected one file

Technical information

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.
- 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 Digital, Dolby Digital Plus, HE-AAC, LPCM, MP3, WMA, WMA Pro

- MP4 (.f4v, .m4v, .mp4)

Video codec:

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

Audio codec:

AAC, Dolby Digital, Dolby Digital Plus, 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 Digital, Dolby Digital Plus, HE-AAC, MP3, Vorbis

- ASF (.asf, .wmv)

Video codec:

MPEG4, VC-1, WMV9

Audio codec:

AAC, 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, .vro)

Video codec:

MPEG1, MPEG2

Audio codec:

Dolby Digital, LPCM

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

Video codec:

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

Audio codec:

AAC, Dolby Digital, Dolby Digital Plus, HE-AAC

- 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 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.
- Supported formats are different in Media Player and media server.

Music format

■ Supported Music formats

- MP3 (.mp3)

- AAC / Apple Lossless (.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.

Functions

Info Frame

Information

Info Frame is a convenient feature to provide you relevant information of the programme being watched, recommendations, etc. It is displayed on the edge of screen when you need it.

(Example)



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

= Note =

- Design and specifications are subject to change without notice.

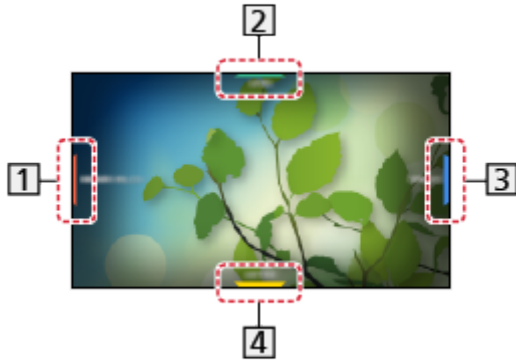
How to use

You can check useful information using Info Frame while watching TV.

1. Press and hold **HOME**.

- Info Frame is displayed on the edge of screen.

(Example)



1 Current programme information, etc.

2 Relevant information (weather forecast, etc.)

3 Notification message

4 Recommended content (TV programme, internet content, etc.)

2. Select one side of Info Frame with **Cursor buttons** or     (coloured buttons) while Info Frame is displayed.



3. Follow the on-screen instructions.

- To exit Info Frame

BACK/RETURN

= Note =

- Info Frame is displayed for several seconds each time the TV is turned on.



→ [Functions > Info Frame > Settings](#)

Settings

You can set items for Info Frame.

1. Display the menu with **MENU**.
 2. Select [Setup](#) > [Display Settings](#) > [Info Frame at Power on](#) and press **OK** to access.
 3. Set the item and press **OK** to store.
-

[Info Frame at Power on](#)

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

Displays Info Frame when the TV is turned on.

Voice Control

Information

Voice Control function allows you to operate the TV (e.g. selecting a channel), search the content from various features, etc. by your speech with your smartphone.

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

 → [Network > Network connections](#)

 → [Network > Network settings](#)

- To use this function with your smartphone, you need to install the application for controlling VIERA on your smartphone.

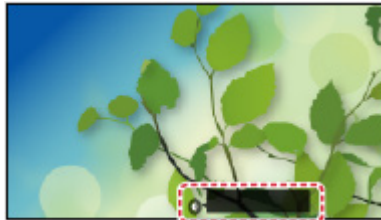
 → [Support > FAQs > Detailed information](#)

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

How to use

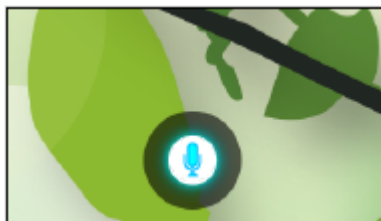
1. Press  on the screen of your smartphone to display the operation guide.
 - When a confirmation screen is displayed, read carefully and start Voice Control function.

(Example)



2. Say a key word (e.g. my Home Screen) to the microphone while the operation guide is displayed.

(Example)



- The operation guide turns to blue during processing.
- The operation guide automatically disappears after a certain period of time. Press  again to start the Voice Control function.

- To display voice command list



- To exit Voice Control function



Settings

You can set items for Voice Control function.

1. Display the menu with **MENU**.
 2. Select [Setup](#) > [Voice Control Settings](#) and press **OK** to access.
 3. Select one of the following items and press **OK** to access.
[Language](#) / [Speech Detection Level](#) / [Terms of Service](#) / [Instructions for Voice Control](#)
 4. Set the item and press **OK** to store.
-

[Language](#)

Select the language for Voice Control function.

- All languages may not be available. When the selected language is not supported, [Language](#) is set to [English](#) automatically.
-

[Speech Detection Level](#)

([High](#) / [Standard](#))

Adjusts the sensitivity to recognise your speech.

[Terms of Service](#)

Displays the terms of service.

[Instructions for Voice Control](#)

Displays details of Voice Control function in eHELP.

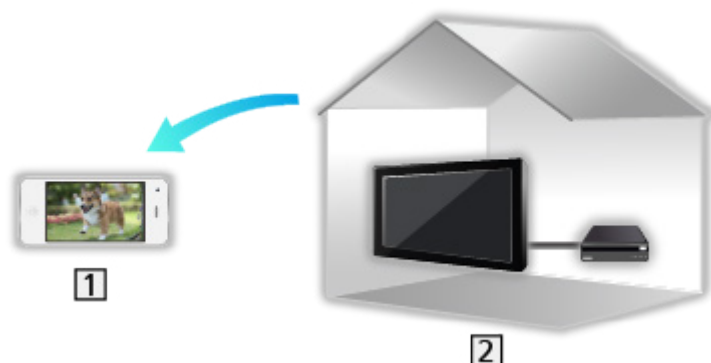
Note

- When you start Voice Control function, sound level of the TV becomes low.
- 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.
- Phrases other than Voice Command may not be recognised.
- Voice Control function may not work properly depending on the microphone of the smartphone.
- Design and specifications are subject to change without notice.
- A broadband network environment is required to fully 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 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.)

TV Anywhere

How to use

You can watch TV and set timer event with the network equipment (smartphone, etc.) from outside the home network.



1 Smartphone, etc.

2 TV

- Ensure the network connections and network settings are completed.

 → Network > Network connections

 → Network > Network settings

1. Set **TV Anywhere** to **On**.

 → Functions > TV Anywhere > TV Anywhere Settings

2. Connect the device (smartphone, etc.) to the home network and access to the TV.

- You need to install the application for controlling VIERA on your smartphone.

 → Support > FAQs > Detailed information

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

= Note =

- This function is not available when the TV is turned off with Mains Power On / Off switch.
- Due to network conditions or certain broadcaster restrictions, this function may not be available.

TV Anywhere Settings

1. Display the menu with **MENU**.
 2. Select [Network](#) > [TV Anywhere Settings](#) and press **OK** to access.
 3. Select one of the following items and press **OK** to access.
[TV Anywhere](#) / [Powered on by Swipe & Share](#) / [Device ID](#) / [Device Password](#)
 4. Follow the on-screen instructions.
-

[TV Anywhere](#)

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

Enables watching TV and setting timer event with the network equipment (smartphone, etc.) from outside the home network.

- Changing the default configuration may result in higher energy consumption of the product.
 - LED turns to orange in Standby mode when [TV Anywhere](#) is set to [On](#).
-

[Powered on by Swipe & Share](#)

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

Enables turning on the TV automatically when the Swipe & Share function is activated from the other devices (smartphone, etc.).

- Set [TV Anywhere](#) to [On](#) to use this function.
 - Use the Swipe & Share function to turn on the TV only when you can see the status of the TV.
-

[Device ID](#)

Displays the device ID of this TV.

[Device Password](#)

Displays the device password of this TV.

Mirroring

How to use

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



1 Smartphone, etc.

2 TV

1. Display Home Screen with **HOME**.
2. Select **Devices** and press **OK** to access.
3. Select **Mirroring** and press **OK**.
4. Follow the on-screen instructions.
 - Pairing information of the device (smartphone, etc.) is registered once you use this function.

■ Easy Mirroring

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

 → **Functions > Mirroring > Mirroring Settings**

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

 → **Network > Network settings > Network Status**

= Note =

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

Mirroring Settings

You can set items for the mirroring function.

1. Display the menu with **MENU**.
 2. Select [Network](#) > [Mirroring Settings](#) and press **OK**.
 3. Select one of the following items and press **OK** to access.
[Easy Mirroring](#) / [Powered On by Easy Mirroring](#) / [Delete All Pairings](#)
 4. Set the item and press **OK** to store.
-

[Easy Mirroring](#)

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

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

- To deactivate wireless, set [Easy Mirroring](#) to [Off](#) and confirm the network connection type is set to [Wired](#).



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

- Not valid when the TV is set to [Wireless Access Point](#)
-

[Powered On by Easy Mirroring](#)

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

Enables turning on the TV automatically when the mirroring function is activated from the other devices (smartphone, etc.).

- Changing the default configuration may result in higher energy consumption of the product.
 - Use the mirroring function to turn on the TV only when you can see the status of the TV.
 - Register the devices (smartphone, etc.) before using this function.
 - LED turns to orange in Standby mode when [Powered On by Easy Mirroring](#) is set to [On](#).
-

[Delete All Pairings](#)

Delete the pairing information for all paired devices.

DVB-via-IP

DVB-via-IP client connection

This TV has DVB-via-IP client function and can connect to DVB-via-IP server or SAT>IP compatible servers to receive broadcast streaming.

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

- It is recommended to connect to DVB-via-IP server with a LAN cable.

■ Wired connection



1 ETHERNET terminal

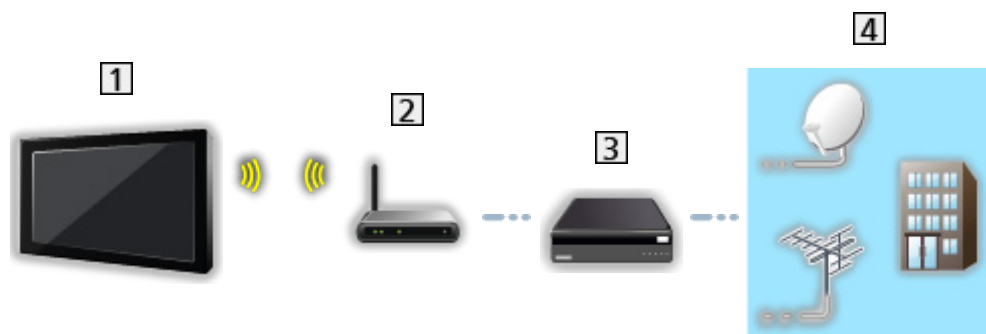
2 LAN cable (Shielded)

- Use Shielded Twist Pair (STP) LAN cable.

3 DVB-via-IP server

4 Satellite dish / Terrestrial aerial / Cable

■ Wireless connection



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

2 Access point

3 DVB-via-IP server

4 Satellite dish / Terrestrial aerial / Cable

= Note =

- External equipment and cables shown are not supplied with this TV.
- Check the terminal type and cable plugs are correct for connection.
- Due to network conditions or certain broadcaster restrictions, this function may not be available.
- To confirm the current network settings
 → Network > Network settings > Network Status
- For information about the connections, read the manual of the DVB-via-IP server.

DVB-via-IP Server Selection

■ Preparations

- Ensure the network connections and network settings are completed.
 -  → [Functions > DVB-via-IP > DVB-via-IP client connection](#)
 -  → [Network > Network settings](#)
- Ensure the server settings are completed. For details, read the manual of DVB-via-IP server.

■ DVB-via-IP Server Selection

1. Display the menu with **MENU**.
2. Select [Setup > Tuning Menu > Add TV Signal](#) and press **OK** to access.
3. Select [DVB-via-IP](#) and press **OK** to access.
4. Select [Start Auto Setup](#) and press **OK** to access.
5. Select a server from [Server List](#) and press **OK** to set.
6. Select [Client Settings](#) and press **OK** to access.
 - 1) Select [Unicast Environment / Multicast Environment](#) and press **OK** to set.
 - Select [Unicast Environment](#) to use in a home network.
 - Select [Multicast Environment](#) to use in multi family housing units, hotel, hospital, etc. (All servers are selected automatically.)
 - 2) Select [Server List](#) and press **OK** to access.
7. Select [Search Channels](#) and press **OK** to access.
8. Select a search mode and press **OK** to access.
9. Set [DVB-via-IP Search Mode](#) and press **OK** to start [Auto Setup](#). (Settings are made automatically.)
 - Depending on the server capability (tuner types), you may have to
 - Set [DVB-via-IP Satellite Configuration](#) to tune DVB-S channels.
 - Set DVB-via-IP configuration to tune DVB-C or DVB-T channels.
 - When the operation is completed, the channel at the lowest position will be displayed.

= Note =

- If tuning has not been done completely, set [Manual Tuning](#).



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

- Due to network conditions or certain broadcaster restrictions, this function may not be available.
- In case you install the DVB-via-IP client in multicast environment, please consult your professional dealer or server manufacturer.

Note

- Due to network conditions or certain broadcaster restrictions, this function may not be available.
- This function is not available when the TV is turned off with Mains Power On / Off switch.
- Please also read the manual of DVB-via-IP server.

VIERA Link “HDAVI Control™”

Summary of VIERA Link

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

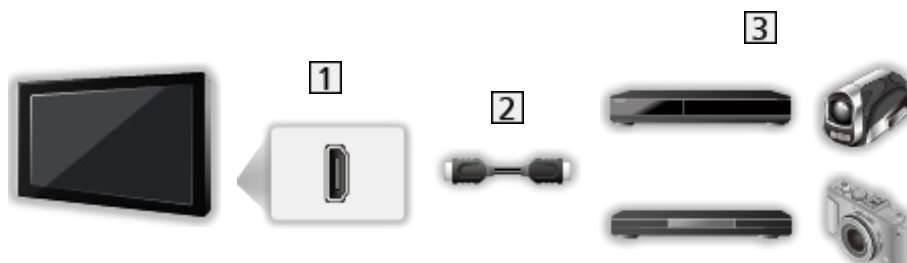
VIERA Link (HDAVI Control) connects the TV and the equipment with VIERA Link function, and enables easy control, playback, energy saving, creating home theatre, etc. without complicated settings. Connections to the equipment (DVD Recorder, HD Video Camera, Player theatre, Amplifier, etc.) with HDMI cable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

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

■ VIERA Link (HDMI connection)

- Use a fully wired HDMI compliant cable.
- Connect the equipment supporting VIERA Link to the TV's HDMI terminal via an HDMI cable.

About HDMI cable for connecting Panasonic HD Video Camera or LUMIX Camera, read the manual of the equipment.



1 HDMI terminal

2 HDMI cable

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

■ Available features (HDMI connection)

DVD Recorder / DVD Player / Blu-ray Disc Player

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

HD Video Camera / LUMIX Camera

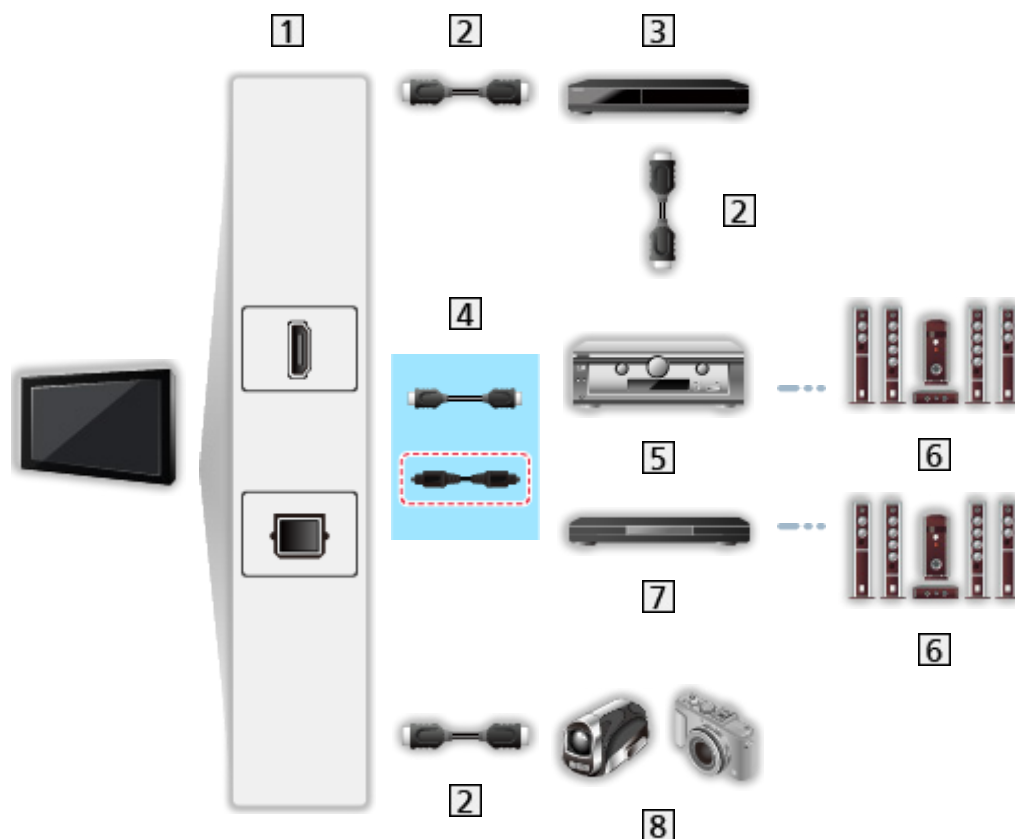
- Easy playback
 - Power on Link
 - Power off Link
 - VIERA Link Control*¹
-

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

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

■ VIERA Link (HDMI and Audio out connections)

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



1 HDMI terminal / DIGITAL AUDIO

2 HDMI cable

3 DVD Recorder with VIERA Link function

4 HDMI cable (Optical digital audio cable *)

5 Amplifier with VIERA Link function

6 Speaker system

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

8 HD Video Camera / LUMIX Camera with VIERA Link function

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

■ Available features (HDMI and Audio out connections)

Player theatre

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

Blu-ray Disc theatre

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

Amplifier

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

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

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

*3 : While playing a disc

*4 : Except for watching a disc

■ VIERA Link Control of compatible equipment

The following is the maximum number of compatible equipment that can be controlled by VIERA Link Control. This includes connections to equipment already connected to the TV.

For example, DVD Player connected to Amplifier which is connected to the TV via an HDMI cable.

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

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

Preparations

- Connect the equipment supporting VIERA Link.
- For details of VIERA Link connections
 → [Functions > VIERA Link "HDAVI Control™" > Summary of VIERA Link](#)
- Use a fully wired HDMI compliant cable.
- Set up the connected equipment. Read the manual of the equipment.
- Set [VIERA Link](#) to [On](#) in the Setup Menu.
- Set up the TV. After connection, turn the equipment on and then switch the TV on. Select the HDMI input from [Input Selection](#) with **AV** and make sure that an image is displayed correctly. (This setup should be done each time the following conditions occur.)
 - First time operation
 - Adding or reconnecting equipment
 - Changing setup

Easy playback

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

Power on Link

Set [Power on Link](#) to [On](#) in [VIERA Link Settings](#) to use this function.

When the connected equipment is operated, the TV is automatically turned on. (Only when the TV is in Standby mode.)

Power off Link

Set [Power off Link](#) to [On](#) in [VIERA Link Settings](#) to use this function.

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

- This function will work even if the TV enters Standby mode automatically by auto power standby function.

Standby Power Save

Set [Standby Power Save](#) to [On](#) in [VIERA Link Settings](#) to use this function.

The power consumption of the connected equipment in Standby mode is controlled higher or lower in synchronisation with the TV on / off state to reduce the consumption.

When the TV is set to Standby mode, the connected equipment is automatically set to Standby and the power consumption of the connected equipment is automatically minimised.

When the TV is turned on, the connected equipment is still in Standby mode, but the power consumption is increased to quickly start the connected equipment.

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

Intelligent Auto Standby

Set [Intelligent Auto Standby](#) to [On](#) in [VIERA Link Settings](#) to use this function.

When the TV is on, non-used connected equipment goes into Standby mode automatically to reduce the power consumption. For example, when the input mode is switched from HDMI or when [Speaker Selection](#) is changed to [TV](#) (except for watching a disc).

- This function may not work properly depending on the connected equipment. In this case, set to [Off](#).

VIERA Link Control

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

1. Display **Apps** with **APPS**.
2. Select **VIERA Link** and press **OK** to access.
3. Select **VIERA Link Control** and press **OK** to access.
4. Select one of the following items and press **OK** to access.

Recorder / **Player** / **Home Cinema** / **Video Camera** / **LUMIX** / **Digital Camera** / **Other**

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

- The displayed item may vary depending on the connected equipment.
 - **Home Cinema** means Player theatre, Blu-ray Disc theatre or Recorder theatre.
 - **Other** means Tuner set top box.
5. Follow the on-screen instructions to operate the menu of the equipment.

- Confirm the remote control code is "73".



→ **Watching > External equipment > Operating with TV's remote control**

- To display the operation guide

OPTION

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

- Available TV's remote control buttons depend on the connected equipment.

■ If multiple recorders or players are connected

Each recorder / player is numbered. The number is given from the TV's lower number of HDMI terminal connected to the same type of equipment. For example, when two recorders are connected to HDMI2 and HDMI3, the recorder connected to HDMI2 is displayed as **Recorder1**, and the recorder connected to HDMI3 is displayed as **Recorder2**.

■ If you access non-VIERA Link equipment

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

= Note =

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



→ Functions > VIERA Link “HDAVI Control™” > Summary of VIERA Link

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

Speaker Selection

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

1. Display **Apps** with **APPS**.
2. Select **VIERA Link** and press **OK** to access.
3. Select **Speaker Selection** and press **OK** to access.
4. Select **TV / Home Cinema** and press **OK** to set.

TV:

TV speakers are active.

Home Cinema:

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

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



■ Multi-channel sound

If you want to enjoy the multi-channel sound (e.g. Dolby Digital 5.1ch) via an Amplifier, connect it with an HDMI cable and Optical digital audio cable, and then select **Home Cinema**. If your Amplifier has the "HDAVI Control 5" function, you only need to connect it with an HDMI cable to the TV's HDMI2 terminal.

To enjoy multi-channel sound from DIGA Recorder, connect an HDMI cable from the DIGA Recorder to the Amplifier.

= Note =

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



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

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

Note

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



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

Child Lock

Using Child Lock

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

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



- Enter the PIN number twice at first setting.
 - Make a note of the PIN number in case you forget it.
 - “0000” may be stored as the default PIN number depending on the country you select.
4. Select **Child Lock List** and press **OK** to access.
 5. Select the channel / input and press **OK** to lock.
 -  appears when the channel / input is locked.
 - To cancel
 - 1) Select the locked channel / input.
 - 2) Press **OK**.
 - To sort channel names in alphabetical order
 (red)
 - To lock all
 (green)
 - To cancel all locks
 (yellow)
 - To jump to the head of the next channel / input group
 (blue)

■ Show Adult App

Set to **Off** to lock specific applications to restrict access to them (if available).

= Note =

- For internet content

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 [Shipping Condition](#) erases the PIN number and all settings.

Parental Rating

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

1. Select [Parental Rating](#) and press **OK** to access.
2. Select an age for the restriction of programmes and press **OK** to set.
 - The availability of this function depends on the country you select.

= Note =

- Setting [Shipping Condition](#) erases the PIN number and all settings.

Data Service Application

Using Data Service Application

[Some features are not available on all models.]

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

1. Select the mode with **TV**.
[DVB-S](#) / [DVB-C](#) / [DVB-T](#) / [DVB-via-IP](#)
2. Display the menu with **MENU**.
3. Select [Setup](#) > [Data Service Application](#) > [Service](#) and press **OK** to access.
4. Select [Auto Start On](#) and press **OK** to set.
 - A notification message will appear when the application is available. Follow the on-screen instructions.
 -  is displayed on the information banner if the programme has Hybrid Broadcast Broadband TV application.
 → [Watching](#) > [Basic](#) > [Information banner](#)
 - To terminate the running application. (The default application may start immediately.)

EXIT

Cookie

1. Display the menu with **MENU**.
 2. Select [Setup](#) > [Data Service Application](#) > [Store Cookie](#) / [Delete Cookie](#) and press **OK** to access.
-

[Store Cookie](#)

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

Enables storing the technical information that a data service application leaves into the TV in order to recognise to use it again.

[Delete Cookie](#)

Deletes all of technical information left by a data service application.

Note

- 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.

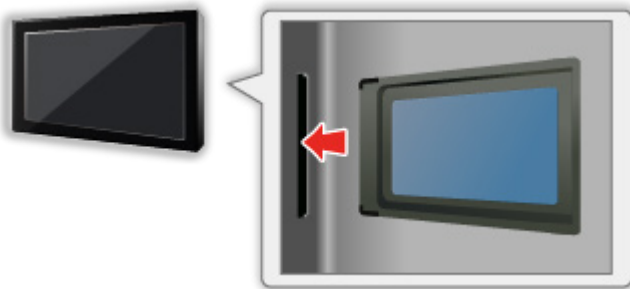
Common Interface

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+ v1.3 TV. In this case, please contact your content provider.

Using Common Interface

[Some features are not available on all models.]

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

- This function may not be available in some countries or regions.
- Video and audio signals may not be output depending on the broadcast or service.

Although CI module may enable you to view some services, this TV does not guarantee all services (e.g. encrypted pay-TV channels). Please use only the broadcaster-approved CI module. Consult the operator / broadcaster or CI module manufacturer for more information and conditions of the services.

■ Insert the CI module (optional)

- Normally encrypted channels will appear. (Viewable channels and their features depend on the CI module.) If encrypted channels do not appear, take the following steps.
- For details, read the manual of the CI module, or check with the content provider.

1. Select the mode with **TV**.

DVB-S / DVB-C / DVB-T

2. Display the menu with **MENU**.

3. Select **Setup** > **Common Interface** and press **OK** to access.

4. Select **Slot 1:**, press **OK** and follow the on-screen instructions.

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

Shipping Condition

Shipping Condition

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

All settings other than [USB Device Setup](#) are reset (channels, picture, sound settings, etc.).

1. Display the menu with **MENU**.
2. Select [Setup](#) > [System Menu](#) > [Shipping Condition](#) and press **OK** to access.
 - Child Lock PIN number is required depending on the country. If you have forgotten your changed PIN, input “6969” as the PIN number.
 → [Functions](#) > [Child Lock](#) > [PIN number](#)
3. When a confirmation screen is displayed, select [Yes](#) and press **OK** to set.
4. Follow the on-screen instructions.
 - [Auto Setup](#) automatically starts.

= Note =

- To retune TV channels only (e.g. after moving house), set [Auto Setup](#).

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

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 install new software, select **Standby** / **Now** and press **OK** to set.

Standby:

Installs new software in standby condition.

Now:

Installs new software now.

Auto update

You can update new software automatically.

1. Display the menu with **MENU**.
2. Select [Setup](#) > [System Menu](#) > [System Update](#) > [Auto Update Search in Standby](#) and press **OK** to access.
3. Select the time and press **OK** to set.
 - If any software updates are available, a notification message will appear. To install new software, select [Standby](#) / [Now](#) and press **OK** to set.

[Standby](#):

Installs new software in standby condition.

[Now](#):

Installs new software now.

- If System Update is performed, the software will be updated (TV functions may be changed). If you do not want to do so, set [Auto Update Search in Standby](#) to [Off](#).
- The automatic updating cannot be performed in the following conditions:
 - TV turned off with Mains Power On / Off switch
 - Recording is in progress.
 - DVB-via-IP

= Note =

- Download may take a few hours.
- During software download and update, DO NOT switch off the TV.
- A notification message may be a reminder. In this case, schedule information (the date when the new version can be used) will appear. You can set the reservation for update. The update will not start when the TV is off.

Manual update

You can update new software manually.

1. Display the menu with **MENU**.
2. Select [Setup](#) > [System Menu](#) > [System Update](#) > [System Update Search Now](#) and press **OK** to access.
3. Searches for an update (for several minutes) and displays a corresponding message if any.
4. Download with **OK**.

= Note =

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

Setting characters

Using Numeric buttons

You can enter characters for free input items using **Numeric buttons**.

Press **Numeric buttons** repeatedly until you reach the desired character.

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

2 : a b c 2 A B C

3 : d e f 3 D E F

4 : g h i 4 G H I

5 : j k l 5 J K L

6 : m n o 6 M N O

7 : p q r s 7 P Q R S

8 : t u v 8 T U V

9 : w x y z 9 W X Y Z

0 : Space 0

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

Keyboard

Keyboard

- Keyboards requiring the drivers are not supported.
- To change the language type, set [USB Keyboard Layout](#).
 - 1) Display the menu with **MENU**.
 - 2) Select [Setup](#) > [System Menu](#) > [USB Keyboard Layout](#) and press **OK** to access.
 - 3) Select the language and press **OK** to set.
- 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
Backspace	BACK/RETURN
Esc	EXIT
0 - 9 / Character	Numeric buttons
F1	HOME
F2	APPS
F3	MENU
F4	AV
F5 / F6	Channel Down / Up
F7 / F8	Volume Down / Up
F9 / F10 / F11 / F12	Coloured buttons

Settings

Setting menu

How to use

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

1. Display the menu with **MENU**.
 - Displayed items vary depending on the input signal.
 2. Select the menu and press **OK** to access.
 3. Select the items and press **OK** to access.
 - Only available items can be selected.
 - You can also access from **eHELP** pressing  (red) at each item (if available).
- You can select from among alternatives with $\triangle$ / ∇ and press **OK** to set.
 - You can adjust using the slide bar with $\triangleleft$ / $\triangleright$ and press **OK** to set.
 - You can go to the next screen with **OK**.
 - You can enter names or numbers freely for some items.
 - 1) Enter characters one by one with **Cursor buttons** and press **OK** to set.



- You can set characters using **Numeric buttons**.



→ Functions > Setting characters > Using Numeric buttons

- 2) Press **BACK/RETURN** to store.
- To reset the settings
 - To initialise picture or sound settings only, select **Reset to Defaults** in the Picture Menu or Sound Menu.
 - To initialise all settings, select **Shipping Condition**.



→ Functions > Shipping Condition

- To exit the menu screen

EXIT

- To return to the previous screen

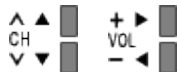
BACK/RETURN

= 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.

■ Using control panel buttons

1. Press and hold INPUT/OK/HOLD for MENU button for 3 seconds to display the menu.
2. Select and set with following control panel buttons.
 - Move the cursor / select from a range of options / select the menu item / adjust levels



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

Picture

Viewing Mode

Selects your favourite picture mode for each input.

([Dynamic](#) / [Normal](#) / [Cinema](#) / [True Cinema](#) / [Custom](#))



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

Basic settings

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

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

 → [Watching](#) > [For best picture](#) > [Basic settings](#)

- [Sharpness](#) is not available when [1080p Pixel by 4pixels](#) is set to [On](#).
-

[Colour Temperature](#)

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

 → [Watching](#) > [For best picture](#) > [Basic settings](#)

[Vivid Colour](#)

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

Automatically adjusts colours to vivid ones.

 → [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](#)

[Intelligent Frame Creation](#)

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

Automatically compensates the picture frame rate and removes juddering movements to make the images smooth.

 → [Watching](#) > [For best picture](#) > [Basic settings](#)

- Depending on the content, images may be noisy. To prevent the noise, change the setting.
 - Not valid in the following conditions:
 - [Game Mode](#) is set to [On](#).
 - [1080p Pixel by 4pixels](#) is set to [On](#).
 - [1080p Pure Direct](#) is set to [On](#).
 - [4K Pure Direct](#) is set to [On](#).
-

Clear Motion

(On / Off)

Makes the moving pictures more clear by controlling the level of backlight.



→ Watching > For best picture > Basic settings

Ambient Sensor

Automatic Brightness Control function

Adjusts picture settings automatically depending on ambient lighting condition.

(On / Off)



Watching > For best picture > Ambient Sensor

Noise reduction settings

Noise Reduction

(Auto / Max / Mid / Min / Off)

Reduces unwanted picture noise.

 → Watching > For best picture > Noise reduction settings

- Not valid in the following conditions:
 - 4K content
 - Game Mode is set to On.
 - 1080p Pixel by 4pixels is set to On.
 - 1080p Pure Direct is set to On.
 - 4K Pure Direct is set to On.
-

MPEG Remaster

(Auto / Max / Mid / Min / Off)

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

 → Watching > For best picture > Noise reduction settings

- Not valid in the following conditions:
 - 4K content
 - Game Mode is set to On.
 - 1080p Pixel by 4pixels is set to On.
 - 1080p Pure Direct is set to On.
 - 4K Pure Direct is set to On.

Advanced Settings

You can adjust and set up the detailed picture settings.



→ Watching > For best picture > Advanced Settings

- This function is available when [Viewing Mode](#) is set to [Cinema](#), [True Cinema](#) or [Custom](#).

Option Settings

Game Mode

(On / Off)

Provides suitable images for fast response signals when playing games.

 → Watching > For best picture > Option Settings

- Not valid in the following conditions:
 - TV mode
 - 1080p Pixel by 4pixels is set to On.
 - 1080p Pure Direct is set to On.
 - 4K Pure Direct is set to On.
-

Film Cadence Mode

(Auto / On / Off)

Improves vertical resolution for movie images.

 → Watching > For best picture > Option Settings

- This function is available for interlaced signals (except in Network services or when Game Mode is set to On).
-

1080p Pure Direct

(On / Off)

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

 → Watching > For best picture > Option Settings

- Not valid when 1080p Pixel by 4pixels is set to On
-

4K Pure Direct

(On / Off)

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

 → Watching > For best picture > Option Settings

1080p Pixel by 4pixels

(On / Off)

Displays like pixel by pixel to make the image sharper for 1080p signal.

 → Watching > For best picture > Option Settings

- For HDMI
- Not all image may be displayed as pixel by pixel precisely.

HDMI Content Type

(Graphics / Photos / Auto / Off)

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



→ Watching > For best picture > Option Settings

- For HDMI

HDMI RGB Range

(Auto / Full / Normal)

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



→ Watching > For best picture > Option Settings

- For HDMI

AV Colour System

(Auto / PAL / SECAM / M.NTSC / NTSC)

Selects optional colour system based on video signals.



→ Watching > For best picture > Option Settings

- For AV (VIDEO)

3D-COMB

(On / Off)

Makes still or slow moving pictures more vivid.



→ Watching > For best picture > Option Settings

- For PAL / NTSC signal reception in TV mode or from composite connection

Screen Settings

16:9 Overscan

(On / Off)

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

 → Watching > For best picture > Screen Settings

- Not valid in the following conditions:
 - 4K content
 - Photo content
 - Game Mode is set to On.
 - 1080p Pixel by 4pixels is set to On.
 - 1080p Pure Direct is set to On.
 - 4K Pure Direct is set to On.
-

Zoom Adjustments

Adjusts the vertical position and size when aspect is set to Zoom.

 → Watching > For best picture > Screen Settings

- Not valid for 4K content
-

Screen Display

(On / Off)

Turns the screen off when you select Off.

 → Watching > For best picture > Screen Settings

Copy Adjustment

Copies the picture settings of **True Cinema** or **Custom** to those of the other input mode or Viewing Mode.



→ **Watching > For best picture > Copy Adjustment**

Reset to Defaults

Resets the current Picture Viewing Mode to the default settings.

Sound

Mode

Selects your favourite sound mode for each input.

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



→ [Watching](#) > [For best audio](#) > [Sound mode](#)

Basic settings

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

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

Equaliser

Adjusts the frequency level to suit your favourite sound quality.

 → Watching > For best audio > Basic settings

Balance

Adjusts volume level of right and left speakers.

 → Watching > For best audio > Basic settings

Surround

(Diffuse Surround / Virtual Surround / Off)

Selects surround sound settings.

 → Watching > For best audio > Basic settings

Bass Boost

(On / Off)

Enhances the effect of bass sounds.

 → Watching > For best audio > Basic settings

Volume settings

Speaker Selection

(TV / Home Cinema)

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

 → Watching > For best audio > Volume settings

- This function is available when the theatre speakers supporting VIERA Link function is connected to this TV.
-

TV Speaker Setting

(TV Speaker / Headphone / Off)

Selects the sound output to adjust volume.

 → Watching > For best audio > Volume settings

Headphone Volume

Adjusts the volume of headphones.

 → Watching > For best audio > Volume settings

Auto Gain Control

(On / Off)

Automatically regulates large sound level differences between channels and inputs.

 → Watching > For best audio > Volume settings

Volume Correction

Adjusts the volume of each individual channel or input mode.

 → Watching > For best audio > Volume settings

Speaker Distance to Wall

(Up to 30cm / Over 30cm)

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

 → Watching > For best audio > Volume settings

Voice Guidance Settings

Voice Guidance

(On / Off)

Set to **On** to enable voice guidance of the basic features (on-screen messages, etc.) for visually impaired users.

 → [Watching > For best audio > Voice Guidance Settings](#)

Speed

(Fast / Normal / Slow)

Selects the readout speed for the voice guidance.

 → [Watching > For best audio > Voice Guidance Settings](#)

Volume

(Max / Mid / Min)

Selects the volume for the voice guidance.

 → [Watching > For best audio > Voice Guidance Settings](#)

Language

Changes language for the voice guidance.

 → [Watching > For best audio > Voice Guidance Settings](#)

User Level

(Beginner / Expert)

Selects the level of verbosity for the voice guidance.

 → [Watching > For best audio > Voice Guidance Settings](#)

Web Browser

(On / Off)

Set to **On** to enable voice guidance of the network content in web browser function.

 → [Watching > For best audio > Voice Guidance Settings](#)

Audio Description

Preferred Audio Type

([Audio Description](#) / [Standard](#))

Narration settings for visually impaired users

 → [Watching](#) > [For best audio](#) > [Audio Description](#)

- For DVB
-

Volume

Adjusts the volume for Audio Description.

 → [Watching](#) > [For best audio](#) > [Audio Description](#)

- For DVB
-

Speakers

([Mix](#) / [Standard](#))

Set to [Mix](#) to activate the description sound track from TV speakers.

 → [Watching](#) > [For best audio](#) > [Audio Description](#)

- For DVB
-

Headphones

([Mix](#) / [Standard](#))

Set to [Mix](#) to activate the description sound track from headphones.

 → [Watching](#) > [For best audio](#) > [Audio Description](#)

- For DVB

Advanced settings

MPX

Selects multiplex sound mode (if available).



→ Watching > For best audio > Advanced settings

- For Analogue
-

Audio Preference

(Auto / Multichannel / Stereo / MPEG)

Selects the initial setting for audio tracks.



→ Watching > For best audio > Advanced settings

- For DVB
-

SPDIF Selection

(Auto / PCM)

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



→ Watching > For best audio > Advanced settings

- For DVB, video content
-

HDMI Audio Format

(Auto / Bitstream / PCM)

Selects the audio format for the HDMI input signal.



→ Watching > For best audio > Advanced settings

PCM Optical Level

Adjusts the audio level of PCM output from DIGITAL AUDIO and HDMI2 (ARC function) terminals to equalise with that of the other audio types.



→ Watching > For best audio > Advanced 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 > Advanced settings

- For DVB
-

HDMI Input

(Digital / Analogue)

Selects to fit the input signal.



→ Watching > For best audio > Advanced settings

- For HDMI

Reset to Defaults

Resets the current Sound Mode to the default settings.

Network

Network Connection

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



Network > Network settings > Network Connection

Network Status

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

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

my Home Cloud Settings

Notices

Displays the terms of service.



→ Network > Network settings > my Home Cloud Settings

VIERA Name

Sets your favourite name for this TV.



→ [Network](#) > [Network settings](#) > [VIERA Name](#)

TV Remote App Settings

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



→ [Network](#) > [Network settings](#) > [TV Remote App Settings](#)

Network Link Settings

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



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

TV Anywhere Settings

You can set timer programming with the network equipment (smartphone, etc.) from outside the home network.



→ [Functions](#) > [TV Anywhere](#) > [How to use](#)

File Sharing Settings

File Sharing Server

(On / Off)

Sets to share the files between PC and devices connected to this TV.

 → Media Player > Using Media Player > Sharing file

Network Device List

Lists the accessible network devices to play back the content in Media Player.

 → Media Player > Using Media Player > Network device

Mirroring Settings

Settings for the mirroring function

 → [Functions](#) > [Mirroring](#) > [Mirroring Settings](#)

Do Not Track Setting

Sets to notify websites and some applications about tracking your browsing activities.

 → [Network](#) > [Network settings](#) > [Do Not Track Setting](#)

Other settings

Software Update

Checks for available software updates from the Panasonic website.

 → Network > Network settings > Software Update

New Software Message

(On / Off)

Selects whether to give a notification message when new software is found via network or not.

 → Network > Network settings > New Software Message

Timer

Off Timer

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

(90 / 75 / 60 / 45 / 30 / 15 / Off (minutes))



→ Watching > Basic > Off Timer

Timer Programming

Sets a timer to record forthcoming programmes.



→ [Recording > Timer Programming > Setting Timer Programming](#)

- For DVB

Time Zone

Adjusts the time data.

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

Auto Standby

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

(On / Off)

 → 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 10 minutes.

(On / Off)

 → Watching > Basic > Energy saving functions

Setup

Eco Navigation

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

 → [Watching > Basic > Energy saving functions](#)

Voice Control Settings

Settings for Voice Control function

 → [Functions](#) > [Voice Control](#) > [Settings](#)

USB Device Setup

Formats the USB HDD or safely removes USB device.



Recording > USB HDD setup > Setting for USB HDD

Recording Setup

Settings for the recording feature of the USB HDD

 → Recording > Recording current programme > One Touch Recording

 → Recording > Recording current programme > REW LIVE TV

Child Lock

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



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

Tuning Menu

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

Favourites Edit

Creates a list of favourite channels.

 → Watching > Tuning and editing channels > Favourites Edit

- Not valid in Analogue
-

Channel List

You can edit the channel list by adding / deleting and moving channels.

 → Watching > Tuning and editing channels > Channel List

Auto Setup

Automatically searches for receivable channels.

 → Watching > Tuning and editing channels > Auto Setup

Manual Tuning

Searches for channels manually.

 → Watching > Tuning and editing channels > Manual Tuning

Update Channel List

Updates the channel list while keeping your settings.

 → Watching > Tuning and editing channels > Update Channel List

- For DVB
-

Favourite Network

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

 → Watching > Tuning and editing channels > Other settings

- For DVB-C, DVB-T
-

New Channel Message

(On / Off)

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

 → Watching > Tuning and editing channels > New Channel Message

- For DVB
-

Service Replacement

(On / Off)

Set to On to display a message to switch to the available service (only available in some countries).

 → Watching > Tuning and editing channels > Other settings

- For DVB-C, DVB-T
-

Signal Condition

Checks the signal condition.

 → Watching > Tuning and editing channels > Signal Condition

- Not valid in Analogue
-

Antenna System

(One LNB / MiniDiSEqC / DiSEqC 1.0 / Single Cable)

Sets the antenna system to use plural LNBs for receiving several satellites.

 → Watching > Tuning and editing channels > Auto Setup

- For DVB-S
-

LNB Configuration

Selects the satellite for each LNB.

 → Watching > Tuning and editing channels > Auto Setup

- For DVB-S
-

Attenuator

(On / Off)

Automatically reduces the DVB-C signal to avoid the interference.

 → Watching > Tuning and editing channels > Other settings

Add TV Signal

Adds the TV mode.



→ Watching > Tuning and editing channels > Other settings

= Note =

- The settings in [Tuning Menu](#) are applicable only for the selected TV mode. The menu name varies depending on the TV mode. ([DVB-S Tuning Menu](#) / [DVB-C Tuning Menu](#) / [DVB-T Tuning Menu](#) / [DVB-via-IP Tuning Menu](#) / [Analogue Tuning Menu](#))

Language

OSD Language

Changes language for on-screen displays.

 → Watching > Basic > Language

Preferred Audio 1 / 2

Selects the first and second preferred language for DVB multi audio (depending on the broadcaster).

 → Watching > Basic > Language

Preferred Subtitles 1 / 2

Selects the first and second preferred language for DVB subtitles (depending on the broadcaster).

 → Watching > Basic > Language

Preferred Teletext

Selects the preferred language for DVB teletext service (depending on the broadcaster).

 → Watching > Basic > Language

Display Settings

Preferred Subtitle Type

([Standard](#) / [Hard of Hearing](#))

Selects the preferred subtitle type.

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

Teletext

([TOP \(FLOF\)](#) / [List](#))

Selects teletext display mode.

 → [Watching](#) > [Teletext](#) > [Teletext mode](#)

Teletext Character Set

([West](#) / [East1](#) / [East2](#))

Selects teletext language font.

 → [Watching](#) > [Teletext](#) > [Teletext Character Set](#)

Input Labels

Accessing the input labels list allows you to change the input name or skip the input if unconnected, improving identification and selection in the [Input Selection](#) banner.

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

Banner Display Timeout

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

Sets how long the information banner stays on screen.

 → [Watching](#) > [Basic](#) > [Information banner](#)

Smart Banner

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

Displays the introduction banner for the internet service.

 → [Watching](#) > [Basic](#) > [Information banner](#)

Playing Time Display

(On / Off)

Set to **On** to display a time period of continuous use in Game Mode on the top right of the screen every 30 minutes.

 → Watching > External equipment > Watching external input

- This function is available when **Game Mode** is set to **On**.
-

Radio Mode

(20 / 15 / 10 / 5 / Off (seconds))

Sets the timer for turning off the screen automatically when a radio channel is selected.

 → Watching > Basic > Energy saving functions

Info Frame at Power on

(On / Off)

Displays Info Frame when the TV is turned on.

 → Functions > Info Frame > Settings

Notification

(On / Off)

Displays a notification message.

HDMI Auto Setting

Set to [Mode1](#) when the image or sound in HDMI input is not played properly.

([Mode1](#) / [Mode2](#))



→ [Watching > 4K resolution > HDMI Auto Setting](#)

- For HDMI1/2

Common Interface

Sets to watch encrypted channels, etc.



→ [Functions](#) > [Common Interface](#) > [Using Common Interface](#)

VIERA Link Settings

VIERA Link

(On / Off)

Sets to use VIERA Link functions.

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

Power on Link

(On / Off)

Sets to use Power on Link functions.

 → Functions > VIERA Link "HDAVI Control™" > Power on Link

Power off Link

(On / Off)

Sets to use Power off Link functions.

 → Functions > VIERA Link "HDAVI Control™" > Power off Link

Standby Power Save

(On / Off)

Controls the connected equipment to reduce power consumption in Standby.

 → Functions > VIERA Link "HDAVI Control™" > Standby Power Save

- This function is available when **VIERA Link** is set to **On** and **Power off Link** is set to **On**.
-

Intelligent Auto Standby

(On / Off)

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

 → Functions > VIERA Link "HDAVI Control™" > Intelligent Auto Standby

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

Data Service Application

Service

(Auto Start On / Auto Start Off / Off)

Sets to use Hybrid Broadcast Broadband TV application.

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



→ Functions > Data Service Application > Using Data Service Application

- For DVB

Store Cookie

(On / Off)

Sets to store the information from a data service to the TV in order to access again quickly.



→ Functions > Data Service Application > Cookie

Delete Cookie

Deletes all the information from a data service.



→ Functions > Data Service Application > Cookie

System Menu

USB Keyboard Layout

Selects the language that your USB Keyboard supports.

 → Functions > Keyboard > Keyboard

Shipping Condition

Resets all settings to the original condition.

 → Functions > Shipping Condition > Shipping Condition

System Update

Downloads new software to this TV.

 → Functions > Updating the TV Software > Auto update

Licence Menu

Displays the software licence information.

Other Settings

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

Power Save

(On / Off)

Reduces brightness of the picture to economise on power consumption.

Exchange Channel List

Exports / Imports DVB-S Channel List settings using the USB device to share the same settings with VIERA which has the same function.



→ Watching > Tuning and editing channels > Channel List

Support

Help menu

Using Help menu

1. Display the menu with **MENU**.
 2. Select **Help** and press **OK** to access.
 3. Select **About Firefox OS** / **TV Self Test** / **System Information** / **Device Information** and press **OK** to access.
-

About Firefox OS

Displays the information about Firefox OS.

TV Self Test

Makes a diagnosis of picture or sound problems.

Follow the on-screen instructions.

System Information

Displays the system information of this TV.

Device Information

Displays the device information of this TV.

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](#).

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

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

Auto aspect

- Auto aspect is designed to provide you with the best ratio to fill the screen.

 → [Watching > For best picture > Aspect Control Signal](#)

- Press **ASPECT** if you want to change the aspect ratio manually.

 → [Watching > For best picture > Aspect](#)

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 > Noise reduction settings](#)

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

No image is displayed

- Check the correct input mode is selected.
- Check the setting of **AV** (**COMPONENT** / **VIDEO**) in **Input Selection** to match the signal being output by the external equipment.



→ **Watching > External equipment**

- Is **Backlight**, **Contrast**, **Brightness** 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 > Auto Setup**

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

[Some features are not available on all models.]

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.

Block noise, frozen or disappearing image occurs / Some channels cannot be tuned

- Check the position, direction and connection of the aerial or dish.
- Check [Signal Condition](#). If the level of [Signal Quality](#) is low, the DVB signal is weak. Connecting the aerial to the TV directly may improve signal quality than connecting the aerial through the equipment (Set top box, DVD, etc.).



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



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

- Weather conditions affect signal reception (heavy rain, snow, etc.), in particular in poor reception areas. Even during good weather, the high pressure can cause poor reception of some channels.
 - Due to the digital reception technologies involved, quality of the digital signals may be relatively low in some cases, despite good reception of analogue channels.
 - Check the network connections and settings (DVB-via-IP).
-  → [Functions > DVB-via-IP](#)
-  → [Network > Network settings](#)
- Turn the TV off with Mains Power On / Off switch, then turn it on again.
-

[DVB-S Auto Setup](#) cannot be done completely

- Check connections and dish alignment.
-  → [Watching > Basic > Basic connection](#)
- If the problem persists, consult your local dealer.
-

Faulty dish message appears

- The satellite cable may be short-circuited or there may be connection problems of the cable. Check the cable and connection and then turn the TV off with Mains Power On / Off switch, and turn it on again.
 - If the message persists, consult a dish installer for checking the dish and cable.
-

No programmes shown on [TV Guide](#)

- Check the digital transmitter.
- Adjust the direction of the aerial or dish to another transmitter installed nearby.

Analogue 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.

White spots or shadow image (ghosting) occurs / Some channels cannot be tuned

- Check the position, direction and connection of the aerial.
- Weather conditions affect signal reception (heavy rain, snow, etc.), in particular in poor reception areas. Even during good weather, the high pressure can cause poor reception of some channels.
- Turn the TV off with Mains Power On / Off switch, and then on again.
- If the problem persists, consult your local dealer or service provider for the availability of services.

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](#).

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

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](#)

- Ensure that [Speaker Selection](#) is set to [TV](#).

 → [Watching > For best audio > Volume settings](#)

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

- Ensure that [TV Speaker Setting](#) is set to [TV Speaker](#).

 → [Watching > For best audio > Volume settings](#)

Sound level is low or sound is distorted

- Sound signal reception may be poor.
- Set [MPX](#) in the Sound Menu to [Mono](#). (Analogue)

 → [Watching > For best audio > Advanced settings](#)

HDMI

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

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

Sound is unusual

- Check the setting of **HDMI Audio Format** in the Sound Menu to match the audio signal from the connected equipment.



→ Watching > For best audio > Advanced settings

- Check the **HDMI Input** setting in the Sound Menu.



→ Watching > For best audio > Advanced settings

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



→ Watching > External equipment > HDMI features

- 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

- 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

- 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 > Network Status](#)
 - If the problem persists, consult your Internet Service Provider or telecommunications company.
-

Cannot select the file during DLNA operations

- Is media server of the connected equipment prepared?
 → [Network > DLNA > In-House streaming](#)
 - Check applicable data format.
 → [Network > Technical information](#)
 - Check the settings of [Network Link Settings](#).
 → [Network > Network settings > Network Link Settings](#)
-

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.

VIERA Link function does not work and an error message appears

- Check the connections.



→ Functions > VIERA Link “HDAVI Control™” > Summary of VIERA Link

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



→ Functions > VIERA Link “HDAVI Control™”

Parts of the TV become hot

- 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

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

An error message appears

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

LED does not turn to red in Standby mode

- LED turns to orange in Standby mode in the following conditions:
 - Recording is in progress
 - [Timer Programming](#) is set.
 - [DLNA Server](#) is set to [On](#).
 - [Powered On by Apps](#) is set to [On](#).
 - [Home Streaming](#) is set to [Always](#).
 - [TV Anywhere](#) is set to [On](#).
 - [Powered On by Easy Mirroring](#) is set to [On](#).
-

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

- 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.

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

Licence

Licence

Even if no special notation has been made of company or product trademarks, these trademarks have been fully respected.

DVB and the DVB logos are trademarks of the DVB Project.

DiSEqC™ is a trademark of EUTELSAT.

DLNA®, the DLNA Logo and DLNA CERTIFIED™ are trademarks, service marks, or certification marks of the Digital Living Network Alliance.

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing, LLC in the United States and other countries.

x.v.Colour™ is a trademark.

HDAVI Control™ is a trademark of Panasonic Corporation.

Manufactured under license from Dolby Laboratories.

Dolby, Dolby Audio, and the double-D symbol are trademarks of Dolby Laboratories.

Speech Powered by Dragon

2002-2016 Nuance Communications, Inc. All rights reserved.

“PlayReady” is a trademark registered by Microsoft. Please be aware of the following.

(a) This product contains technology subject to certain intellectual property rights of Microsoft. Use or distribution of this technology outside of this product is prohibited without the appropriate license(s) from Microsoft.

(b) Content owners use Microsoft PlayReady™ content access technology to protect their intellectual property, including copyrighted content. This device uses PlayReady technology to access PlayReady-protected content and/or WMDRM-protected content. If the device fails to properly enforce restrictions on content usage, content owners may require Microsoft to revoke the device’s ability to consume PlayReady-protected content. Revocation should not affect unprotected content or content protected by other content access technologies.

Content owners may require you to upgrade PlayReady to access their content.

If you decline an upgrade, you will not be able to access content that requires the upgrade.

Firefox® OS is a registered trademark of the Mozilla Foundation.

This product incorporates the following software:

- (1) the software developed independently by or for Panasonic Corporation,
- (2) the software owned by third party and licensed to Panasonic Corporation,
- (3) Firefox OS is powered by Mozilla,
- (4) the software licensed under the GNU LESSER GENERAL PUBLIC LICENSE Version 2.1 (LGPL V2.1) and/or,
- (5) open sourced software other than the software licensed under the LGPL V2.1.

About the software categorized as (3), please refer to the “About Firefox OS” menu.

The software categorized as (4) and (5) are distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY, without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

Please refer to the detailed terms and conditions thereof shown in the “Software License” menu on this product.

At least three (3) years from delivery of this product, Panasonic will give to any third party who contacts us at the contact information provided below, for a charge no more than our cost of physically performing source code distribution, a complete machine-readable copy of the corresponding source code covered under LGPL V2.1 or the other licenses with the obligation to do so, as well as the respective copyright notice thereof.

Contact Information: cdrequest@unipf.jp

The source code and the copyright notice are also available for free in our website below.

<http://www.unipf.jp/dl/EUIDTV16/>

