



Panasonic[®]

Operating Instructions Plasma Television

Model No. **TH-42PZ85EA**
TH-46PZ85EA

VIERA

VIERA
Link



DVB[®]

DOLBY
DIGITAL

BBE.ViVA
HD3D Sound



FULL
HD
1920x1080p

HD
ready
1080p

HDMI[™]
HIGH-DEFINITION MULTIMEDIA INTERFACE

Please read these instructions before operating your set and retain them for future reference.
The images shown in this manual are for illustrative purposes only.

Please refer to Pan European Guarantee Card if you need to contact your local Panasonic dealer for assistance.

English



TQB0E0723U

Turn your own living room into a movie theatre!

Experience an amazing level of multi-

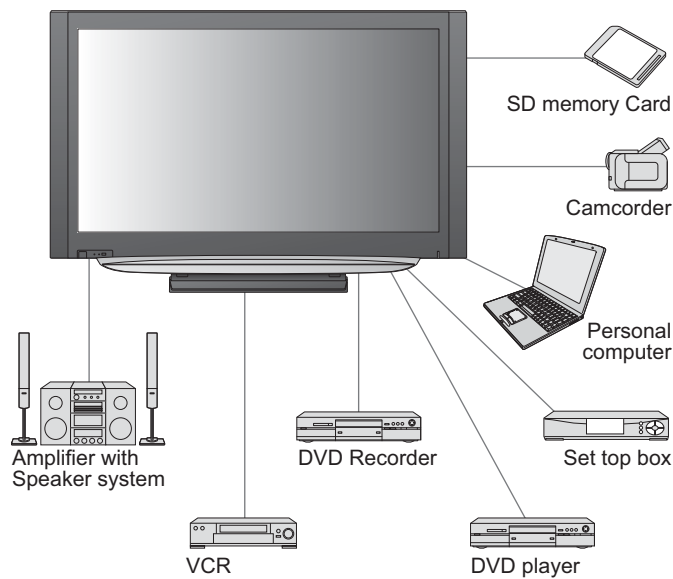


Notice for DVB functions

- Any functions related to DVB (Digital Video Broadcasting) will work in areas where DVB-T (MPEG2) digital terrestrial broadcasting are received. Consult your local Panasonic dealer with coverage areas.
- DVB functions may not be available in some countries.
- Some functions may not be available in some countries.
- This TV has the capability for DVB specifications. But future DVB services cannot be guaranteed.

media excitement

Enjoy rich multi-media



Up to 100,000 hours Plasma Panel Lifetime

The Plasma display panel used in the 2008 VIERA TV range is rated for up to 100,000 hours.*

*This measurement is based on the time taken for the brightness of the panel to reduce to half of its maximum level. The time taken to reach this level may vary depending on the image content and the environment where the TV is used. Image retention and malfunctions are not taken into account.

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Enjoy your TV!

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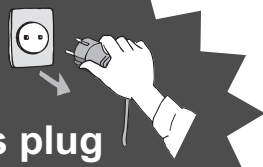
Safety Precautions

Warning

Handling the mains plug and lead

- Insert the mains plug fully into the socket outlet. (If the mains plug is loose, it could generate heat and cause fire.)
- Ensure that the mains plug is easily accessible.
- Ensure the earth pin on the mains plug is securely connected to prevent electrical shock.
 - An apparatus with CLASS I construction shall be connected to a mains socket outlet with a protective earthing connection.
- Do not touch the mains plug with a wet hand. (This may cause electrical shock.)
- Do not use any mains lead other than that provided with this TV. (This may cause fire or electrical shock.)
- Do not damage the mains lead. (A damaged lead may cause fire or electrical shock.)
 - Do not move the TV with the lead plugged in the socket outlet.
 - Do not place a heavy object on the lead or place the lead near a high-temperature object.
 - Do not twist the lead, bend it excessively, or stretch it.
 - Do not pull on the lead. Hold onto the mains plug body when disconnecting lead.
 - Do not use a damaged mains plug or socket outlet.

If you find any abnormality, remove the mains plug immediately!



AC 220-240 V
50 / 60 Hz



Power source

- This TV is designed to operate on 220-240 V, 50 / 60 Hz AC.

Do not remove covers NEVER modify the TV yourself

(High-voltage components may cause serious electrical shock.)

- Have the TV checked, adjusted, or repaired at your local Panasonic dealer.

Keep liquids away from the TV

- To prevent damage which may result in fire or shock hazard, do not expose this appliance to dripping or splashing.
- Do not place containers with water (flower vase, cups, cosmetics, etc.) above the TV. (including on shelves above, etc.)

Do not expose to direct sunlight and other sources of heat

- Avoid exposing the TV to direct sunlight and other sources of heat. To prevent fire never place any type of candle or naked flame on top or near the TV.

Do not place foreign objects inside the TV

- Do not allow any objects to drop into the TV through the air vents (fire or electrical shock may result).

Do not place the TV on sloped or unstable surfaces

- The TV may fall off or tip over.

Use only the dedicated pedestals / mounting equipment

- Using an unapproved pedestal or other fixtures may make the TV unstable, risking injury. Be sure to ask your local Panasonic dealer to perform setup.
- Use approved pedestals / mounts (p. 6).

Do not allow children to handle SD Card

- As with a small object, SD Card can be swallowed by young children. Please remove SD Card immediately after use.

Notes

Caution

■ When cleaning the TV, remove the mains plug

- Cleaning an energized TV may cause electrical shock.

■ When the TV is not going to be used for a long period of time, remove the mains plug

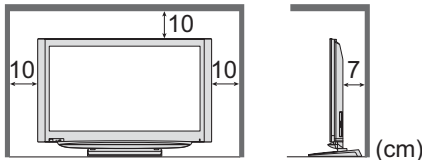
- This TV will still consume some power even in the Off mode, as long as the mains plug is still connected to a live socket outlet.

■ Transport only in upright position

- Transporting the TV with its display panel facing upright or downward may cause damage to the internal circuitry.

■ Allow sufficient space around the TV for radiated heat

Minimum distance



- When using the pedestal, keep the space between the bottom of the TV and the floor surface.
- In case of using Wall-hanging bracket, follow the manual of it.

■ Do not block the rear air vents

- Blocked ventilation by newspapers, table cloths, curtains, etc. may cause overheating, fire or electrical shock.

■ Do not expose your ears to excessive volume from the headphones

- Irreversible damage can be caused.

Do not display a still picture for a long time

This causes the image to remain on the plasma screen ("image retention"). This is not considered a malfunction and is not covered by the warranty.

Typical still images

- Programme number and other logos
- Image displayed in 4:3 mode
- Video game
- Computer image



To prevent image retention, contrast is lowered automatically after a few minutes if no signals are sent or no operations are performed. (p. 52)

■ Auto power standby function

- If no signal is received and no operation is performed in Analogue TV mode for 30 minutes, the TV will automatically go to standby mode.

■ Keep the TV away from these types of equipment

- Electronic equipment
In particular, do not place video equipment near the TV (electromagnetic interference may distort images / sound).
- Equipment with an infrared sensor
This TV also emits infrared rays (this may affect operation of other equipment).

Maintenance

First, remove the mains plug from the socket outlet.

Display panel

Regular care: Gently wipe the surface clean of dirt by using a soft cloth.

Major contamination: Wipe the surface clean using a soft cloth dampened with clean water or diluted neutral detergent (1 part detergent to 100 parts water). Then, using a soft dry cloth, evenly wipe the surface clean until it is dry.

Caution

- The surface of the display panel has been specially treated and may be easily damaged. Do not tap or scratch the surface with your fingernail or other hard object.
- Take care not to subject the surface to insect repellent, solvent, thinner, or other volatile substances (this may degrade surface quality).

Cabinet, Pedestal

Regular care: Wipe the surface clean using a soft dry cloth.

Major contamination: Dampen a soft cloth with clean water or water containing a small amount of neutral detergent. Then, wring the cloth and wipe the surface clean with it. Finally, wipe the surface clean with a dry cloth.

Caution

- Take care not to subject the TV's surfaces to detergent. (A liquid inside the TV could lead to product failure.)
- Take care not to subject surfaces to insect repellent, solvent, thinner, or other volatile substances (this may deteriorate the surface by peeling the paint).
- Do not allow the cabinet and pedestal to make contact with a rubber or PVC substance for a long time.

Mains plug

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

Accessories / Options

Standard accessories

- Remote Control
● N2QAYB000239

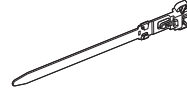


Check that you have the accessories and items shown

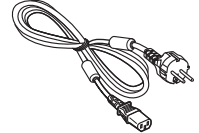
- Batteries for the Remote Control (2)
● R6 (UM3)



- Clamper
➔ p. 8



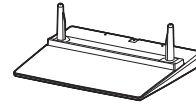
- Mains Lead
➔ p. 11



- Operating Instructions

- Cleaning cloth

- Pedestal
➔ p. 7



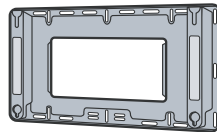
- Pan European Guarantee Card

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

Optional accessories

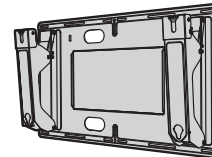
Wall-hanging bracket (vertical)

- TY-WK42PV4W



(angle)

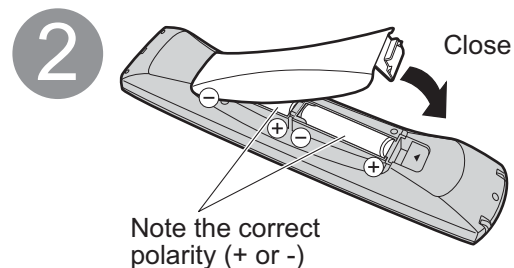
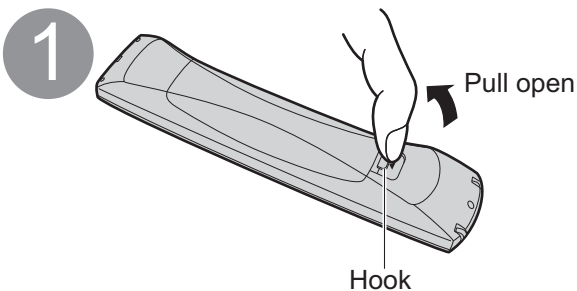
- TY-WK42PR4W



Caution

- In order to maintain the unit's performance and safety, be absolutely sure to ask your dealer or a licenced contractor to secure the wall-hanging brackets.
- Carefully read the instructions accompanying the pedestal, and be absolutely sure to take steps to prevent the TV from tipping over.
- Handle the TV carefully during installation since subjecting it to impact or other forces may cause product damage.

Installing / removing remote's batteries



Caution

- Incorrect installation may cause battery leakage and corrosion, resulting in damage to the remote control.
 - Do not mix old and new batteries.
 - Do not mix different battery types (such as alkaline and manganese batteries).
 - Do not use rechargeable (Ni-Cd) batteries.
 - Do not burn or breakup batteries.
- Batteries must not be exposed to excessive heat such as sunshine, fire or the like.

Attaching the pedestal

Warning

Do not disassemble or modify the pedestal.

- Otherwise the TV may fall over and become damaged, and personal injury may result.

Caution

Do not use any other TV and displays.

- Otherwise the TV may fall over and become damaged, and personal injury may result.

Do not use the pedestal if it becomes warped or physically damaged.

- If you use the pedestal while it is physically damaged, personal injury may result. Contact your nearest Panasonic dealer immediately.

During set-up, make sure that all screws are securely tightened.

- If insufficient care is taken to ensure screws are properly tightened during assembly, the pedestal will not be strong enough to support the TV, and it might fall over and become damaged, and personal injury may result.

Ensure that the TV does not fall over.

- If the TV is knocked or children climb onto the pedestal with the TV installed, the TV may fall over and personal injury may result.

Two or more people are required to install and remove the TV.

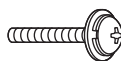
- If two or more people are not present, the TV may be dropped, and personal injury may result.

Ⓐ Assembly screw (4)
(silver)
● XYN5+F18FN



M5 × 18

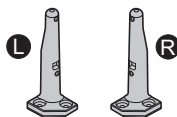
Ⓑ Assembly screw (4)
(black)
● THEL060N



M5 × 25

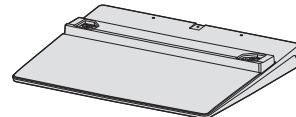
Ⓒ Pole (2)

- R: TBLA3614
- L: TBLA3615



Ⓓ Base

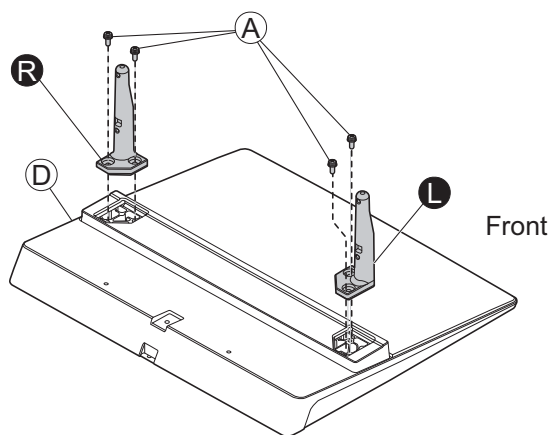
- TBLX0043 -1 (TH-42PZ85EA)
- TBLX0045 (TH-46PZ85EA)



Assembling the pedestal

Use the four assembly screws (A) to fasten the left and right poles to the base securely.

- Make sure that the screws are securely tightened.
- Forcing the assembly screws the wrong way will strip the threads.
- "L" or "R" mark is stamped on the bottom of the pole.

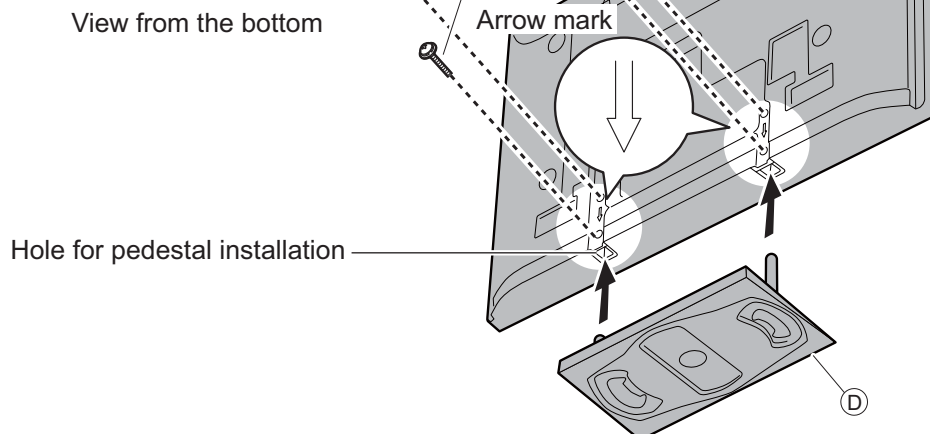


Securing the TV

Use the assembly screws (B) to fasten securely.

- Make sure that the screws are securely tightened.
- Carry out the work on a horizontal and level surface.

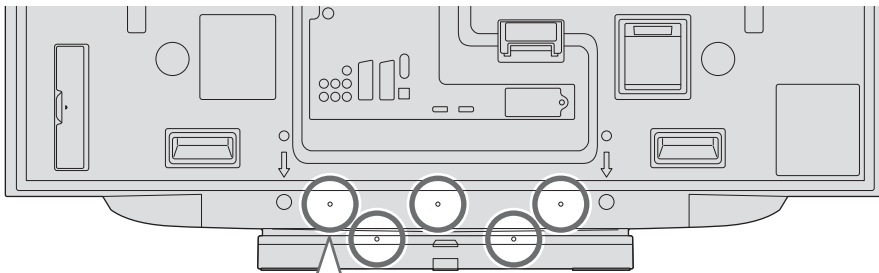
View from the bottom



Accessories / Options

Using the clammer

Rear of the TV



- Do not bundle the RF cable and mains lead together (could cause distorted image).
- Fix cables with clammers as necessary.
- When using the optional accessory, follow the option's assembly manual to fix cables.

■ Attach the clammer

hole

Insert the clammer in a hole

To remove from the TV:

snaps

① Keep pushing both side snaps

■ Bundle the cables

hooks

② Set the tip in the hooks

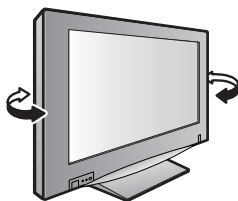
To loosen:

knob

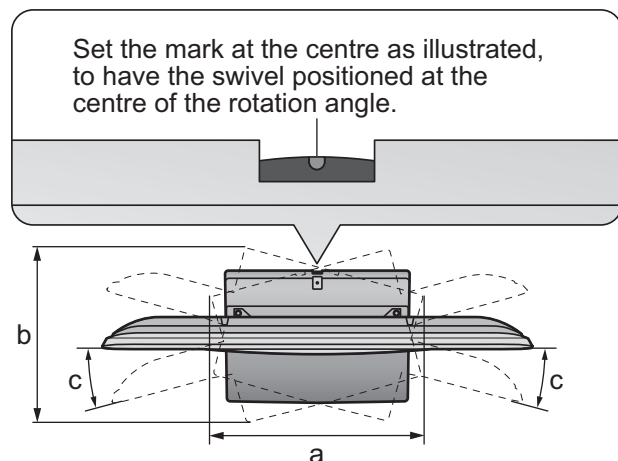
① Keep pushing the knob

Adjust the panel to your desired angle

- Ensure that the pedestal does not hang over the edge of the base even if the TV swivels to the full rotation range.
- Do not place any objects or hands within the full rotation range.



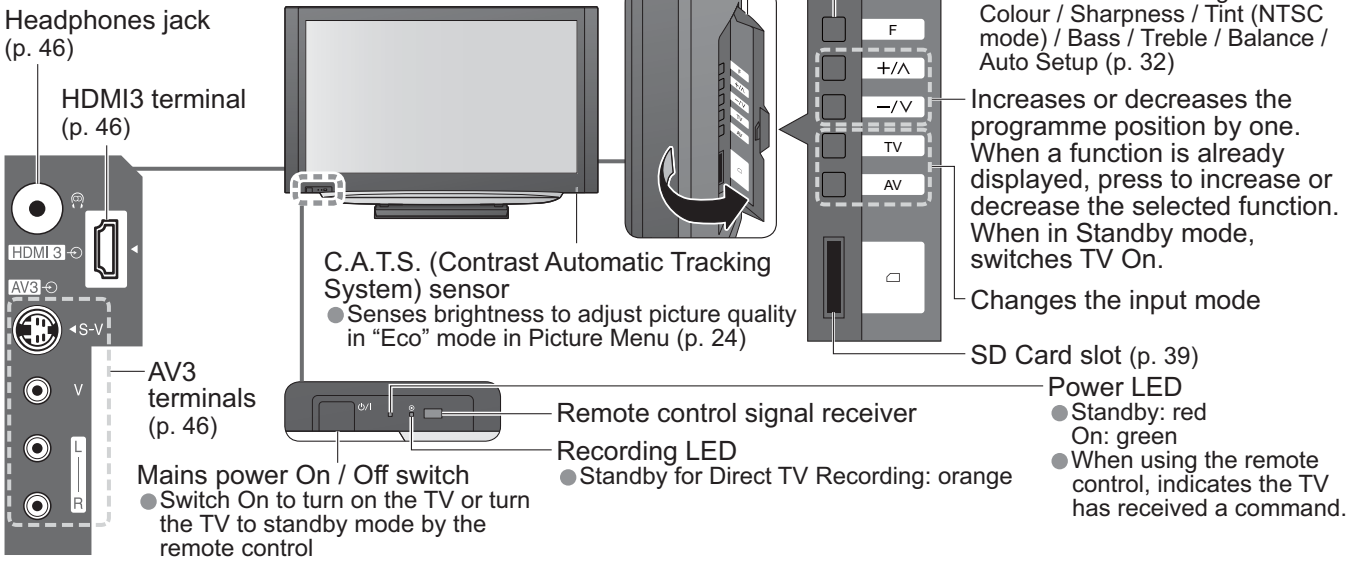
- TH-42PZ85EA
a: 521 mm / b: 425 mm / c: 15°
- TH-46PZ85EA
a: 513 mm / b: 453 mm / c: 10°



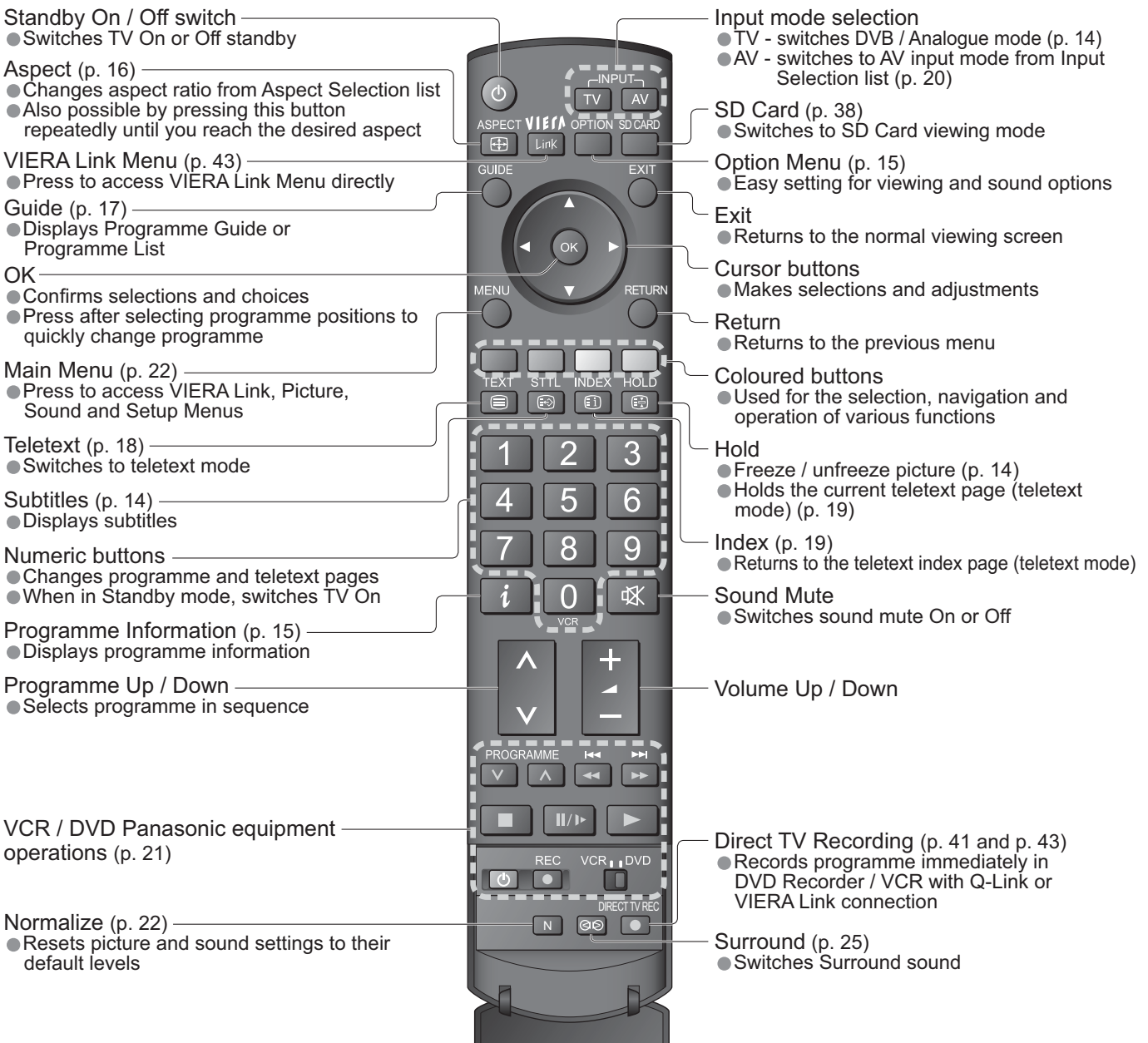
(View from the top)

Identifying Controls

TV



Remote Control



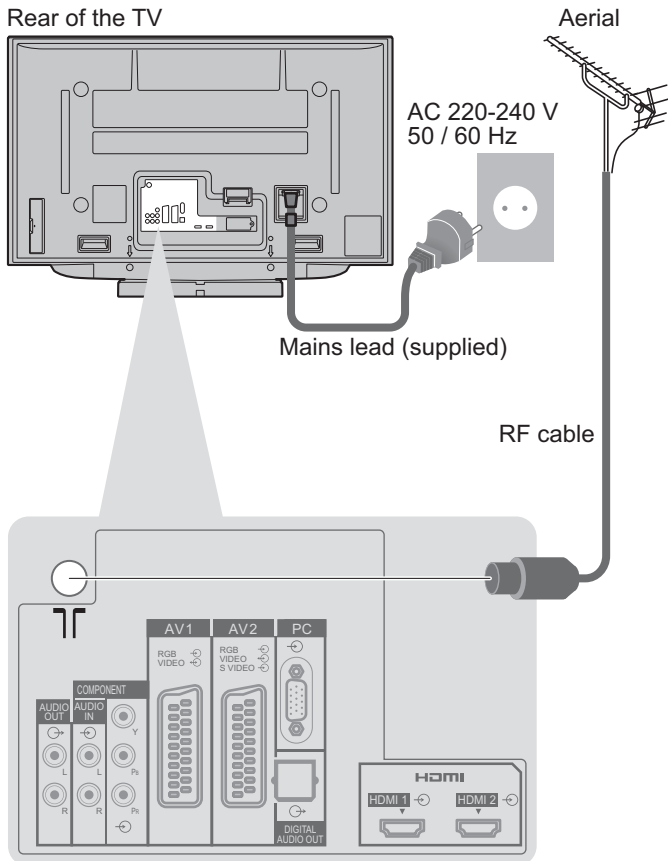
Basic Connection

External equipment and cables shown are not supplied with this TV.
Please ensure that the unit is disconnected from the mains socket before attaching or disconnecting any leads.
When disconnecting the mains lead, be absolutely sure to disconnect the mains plug at the socket outlet first.

Example 1 Connecting aerial

TV only

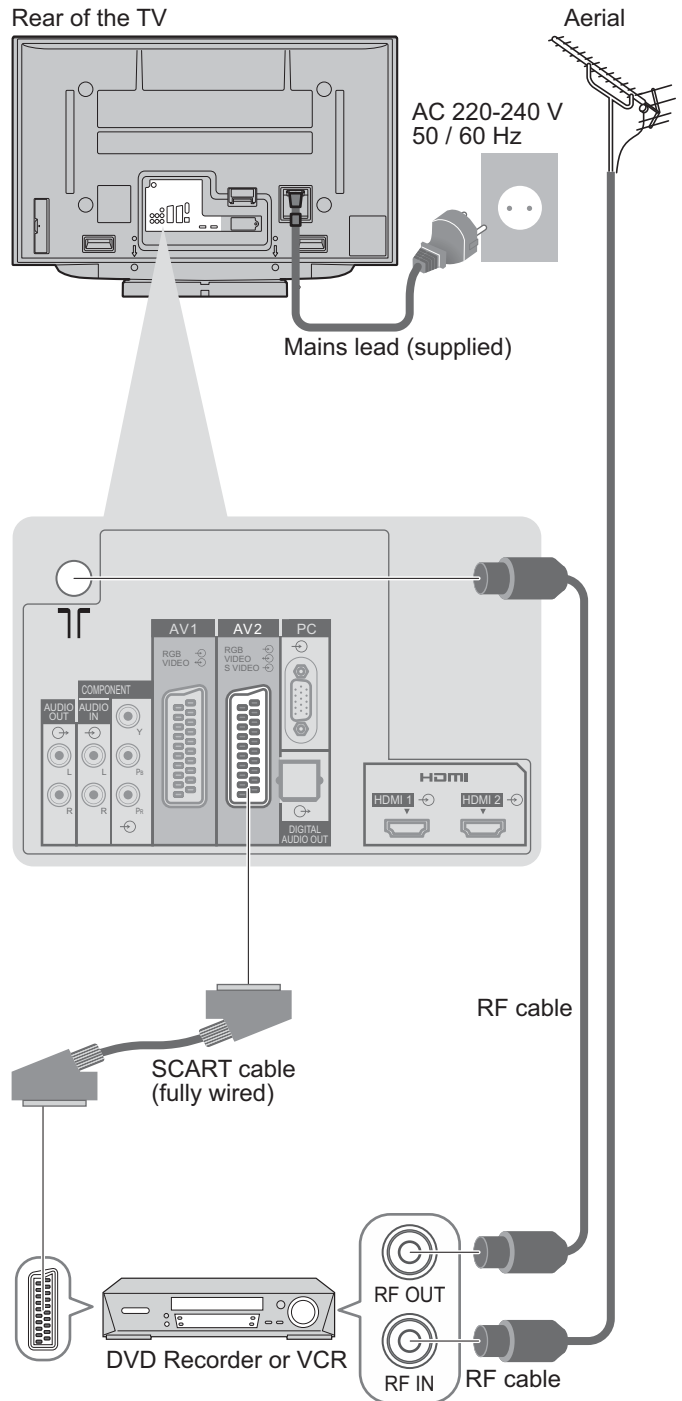
Rear of the TV



Example 2 Connecting DVD Recorder / VCR

TV, DVD Recorder or VCR

Rear of the TV



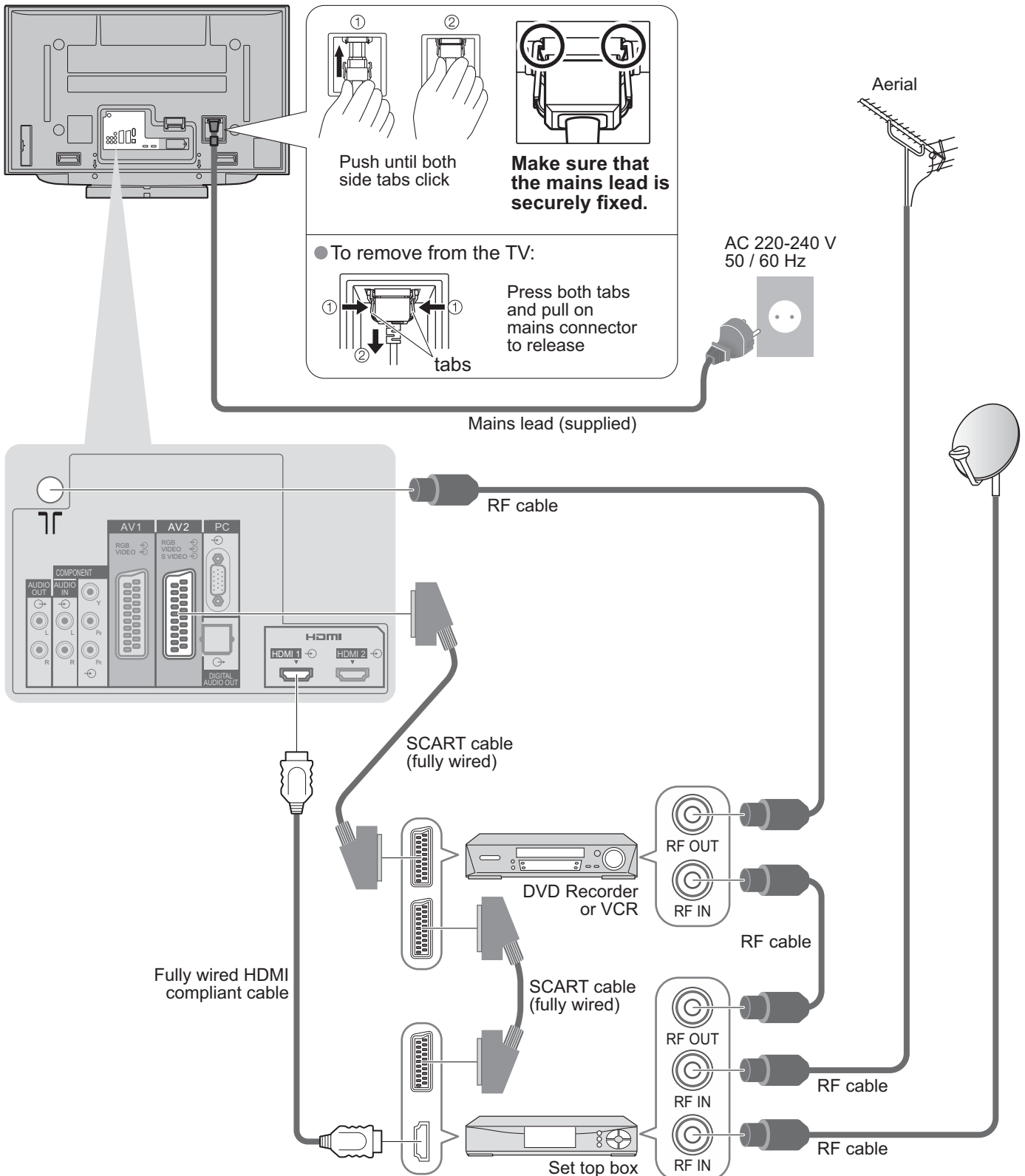
Note

- Connect to AV1 / AV2 for a DVD Recorder / VCR supporting Q-Link (p. 41).
- For HDMI-compatible equipment, possible to connect to HDMI terminals (HDMI1 / HDMI2 / HDMI3) by using HDMI cable (p. 46).
- Q-Link connection → p. 40
- VIERA Link connection → p. 40
- Read the manual of the equipment too.

Example 3 Connecting DVD Recorder / VCR and Set top box

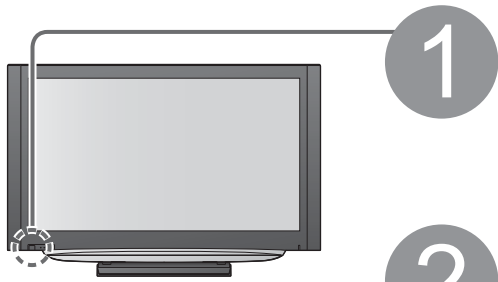
TV, DVD Recorder / VCR and Set top box

Rear of the TV



Auto Setup

Search and store TV programmes automatically.
These steps are not necessary if the setup has been completed by your local dealer.



1 Plug the TV into mains socket and switch On
(Takes a few seconds to be displayed)



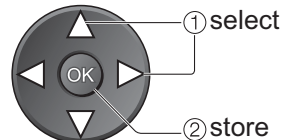
- You can now use the remote control to turn On the TV or turn the TV to standby mode. (Power LED: On)



2

Select the language

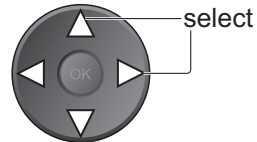
Menüsprache			
Deutsch	Dansk	Polski	Srpski
English	Svenska	čeština	Hrvatski
Français	Norsk	Magyar	Slovenščina
Italiano	Suomi	Slovenčina	Latviešu
Español	Türkçe	Български	eesti keel
Português	Ελληνικά	Română	Lietuvių
Nederlands			



3

Select your country

Country		
Germany	Denmark	Poland
Austria	Sweden	Czech
France	Norway	Hungary
Italy	Finland	Slovakia
Spain	Luxembourg	E. Eu
Portugal	Belgium	
Switzerland	Netherlands	
Malta	Turkey	
Andorra	Greece	



- Depending on the selected countries, you may also be required to select the region.

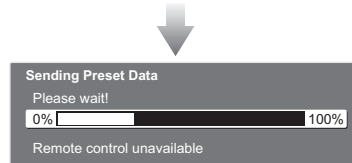
4

Start Auto Setup



Auto Setup - Digital and Analogue				
Digital Scan	5	60		
Analogue Scan	2	178	41	41
This will take about 8 minutes.				
Channel	Service Name	Type	Quality	
62	CBBC Channel	Free TV	10	
62	BBC Radio Wales	Free TV	10	
62	E4	Free TV	10	
62	Cartoon Nwk	Free TV	10	
29		Analogue	-	
33	BBC1	Analogue	-	
Free TV: 4 Play TV: 0 Radio: 0 Searching Data: 0 Analogue: 2				
EXIT RETURN				

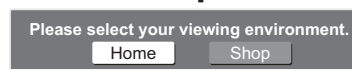
- Auto Setup will start to search for TV programmes and store them. The sorted programme order depends upon the TV signal, the broadcasting system and reception conditions.



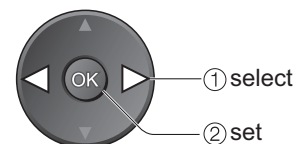
- If Q-Link, VIERA Link or similar technology (p. 40), compatible recorder is connected, programme, language, country / region settings are automatically downloaded to the recorder.

5

Select the picture setting



- "Shop" and "Home" are equal to "Dynamic" and "Normal" respectively - "Viewing Mode" in "Picture Menu" (p. 24)



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



- To edit programmes
➔ "Editing Programmes" (p. 30)

Using the
On Screen
Displays

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

■ How to use remote control



Open the main menu



Move the cursor / select the menu



Move the cursor / adjust levels / select from a range of options



Access the menu / store settings after adjustments have been made or options have been set

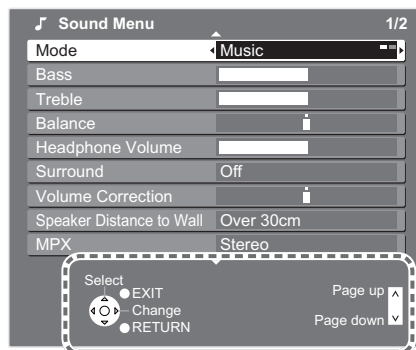


Return to the previous menu



Exit the menu system and return to the normal viewing screen

■ ON SCREEN HELP Instructions box (example: Sound Menu)



On-screen operation guide
will help you.

Note

- If tuning has failed ➔ “Auto Setup” (p. 33)
- If downloading has failed ➔ “Download” (p. 26)
- To initialize all settings ➔ “Shipping Condition” (p. 35)
- If you turned the TV Off during Standby mode last time, the TV will be in Standby mode when you turn the TV On with Mains power On / Off switch.

Watching TV



1

Turn power on
(Press for about 1 second)



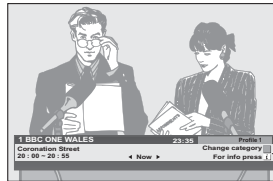
● Mains power On / Off switch should be On. (p. 9)

2

Select DVB (Digital Video Broadcasting) or Analogue mode



● Also possible to select the mode using the TV button on the side panel of the TV. (p. 9)

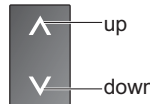


Information banner appears whenever you select a programme

● For details → p. 15

3

Select a programme

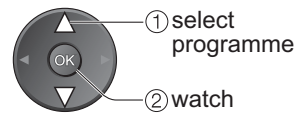
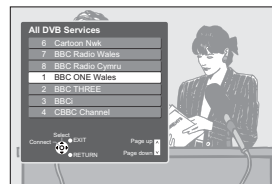


● To select the two or three-digit programme number, e.g. 39



(in a short time)

● To select from the Programme List



① select programme

② watch

Volume

Panasonic
TV

Note

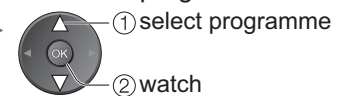
- To watch pay-TV → p. 29

■ **Select a programme using Information banner (p. 15)**
Possible to confirm the programme name before selecting programmes.

Display Information banner if it is not displayed



While the banner is displayed, select the programme



① select programme

② watch

- Possible to set display timeout in "Banner Display Timeout" (p. 27).

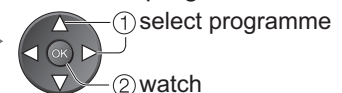
■ **Select a programme using Programme Guide (p. 17)**
Possible to confirm the Programme Guide or Programme List before selecting programmes.

● This function may not be available in some countries.

Display Programme Guide or Programme List



Select the programme



① select programme

② watch

Other useful functions

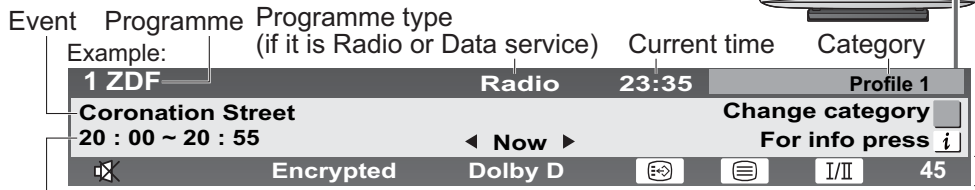
Hold	Freeze / unfreeze picture	HOLD
Display subtitles	Display / hide subtitles (if available) ● To change the language for DVB (if available) ➔ "Preferred Subtitles" (p. 26)	STTL

■ Other useful functions

Display Information banner





Display Information banner 







● Also appears when changing a programme



DVB: Event Start / Finish time
Analogue: Programme status

Features available / Message meanings


	Sound mute On		Teletext service available
Bad signal	Poor TV signal quality		Multiple audio available
Encrypted	Scrambled programme	Stereo, Mono	Audio mode
Dolby D	Dolby Digital audio track	1 - 90	Off Timer remaining time
	Subtitle service available	● For settings → see below	

- To confirm another tuned programme name → 
- To change the category → 
- Information on the next event (DVB mode) → 
- Extra information →  (press again to hide the banner)
- To watch the programme listed in the banner → 
- To hide → 
- To set display timeout → "Banner Display Timeout" (p. 27)

Display the selectable settings for the current programme

Check or change the current programme status instantly

OPTION 

- To change →  (1) select, (2) change

Multi Audio (DVB mode)
Allows you to select between alternative language for sound tracks (if available)

Subtitle Language (DVB mode)
Allows you to select the language in which subtitles should appear (if available)

Teletext Character Set
Sets the teletext language
→ Setup Menu (p. 27)

Teletext Language (DVB mode)
Allows you to select between alternative language for teletext (if available)

MPX (Analogue mode)
→ Sound Menu (p. 25)

Volume Correction
Adjusts volume of individual programme or input mode

Note

● Also possible to change the settings in Menu list (p. 25 - 27).

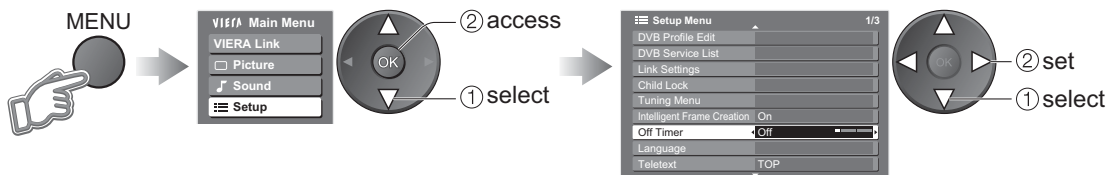
Off Timer

Turn the TV off automatically after a fixed period

Display the menu

Select "Setup"

Select "Off Timer" and set the time



- To cancel → Set to "Off" or turn the TV off.
- To display the remaining time → Information banner (above)
- When the remaining time is within 3 minutes, the remaining time will flash on screen.

Watching TV

Other useful functions

Change the aspect ratio

ASPECT

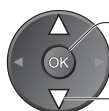


Enjoy viewing the picture at its optimum size and aspect.

Display Aspect Selection list

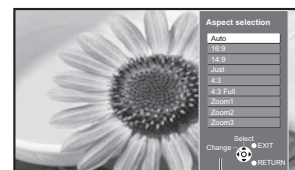


While the list is displayed, select the mode



② store

① select



Aspect Selection list

- To change the mode using the ASPECT button only



➔ (Press repeatedly until you reach the desired mode)

Auto



The best ratio is chosen and the picture expanded to fill the screen. For details ➔ p. 48

16:9



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

14:9



Displays the image at the standard "14:9" without distortion.

Just



Displays a "4:3" image full-screen. Stretching is only noticeable at the left and right edges.

4:3



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

4:3 Full



Displays a "4:3" image enlarged horizontally to fit the screen.
● HD signal only

Zoom1



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

Zoom2



Displays a "16:9" letterbox (anamorphic) image full-screen without distortion.

Zoom3



Displays a "2.35:1" letterbox (anamorphic) image full-screen without distortion. At "16:9", displays the image at its maximum (with slight enlargement).

Note

- Only "16:9" and "4:3" are available in PC mode.
- Not available in teletext mode.
- Aspect mode can be memorized separately for SD (Standard definition) and HD (High definition) signals.

Change aspect ratio

Using Programme Guide

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

- This function varies depending on the country you select (p. 12).
- Analogue programmes will be listed after DVB programmes. “D” means DVB programme and “A” means Analogue programme.

GUIDE View Programme Guide

- Each time pressed, the layout will be changed (Landscape / Portrait).
- Depending on the country, the postcode entry or update is required. Follow the message's instructions.
 - Also possible to setup manually from Setup Menu
 - ➔ “Update” / “Postcode” in “GUIDE Plus+ Settings” (p. 26)



Programme Guide time Current date and time

Example: Programme Guide date Event

Time	19:30	20:00	20:30	21:00
D 1 BBC ONE	Eastender	DIY SOS	The Bill	Red Cap
D 7 BBC THR	Hot Wars		Holiday Program	
D 14 E4	Emmerdal	Coronation Street	The Bill	
D 70 CBBC Cha	10 O' clock News BBC	Pepsi Char.	Good bye	
D 72 Cartoon	Panorama	Sex And The City	Terminator	
D 105 BBC1	I'm A Celebrity	Pop Idol	News	
D 119 BBC Radi	Rugby	15 To 1	The Bill	

Advertisement Landscape (Displays by programme) Programme

Example:

Portrait (Displays by time)

Time	19:30-20:00	20:00-21:00	21:00-22:00	22:30-23:00	23:00-23:30	23:00-00:00
D 1 BBC O	Eastender					
D 7 BBC T		DIY SOS				
D 14 E4		The Bill				
D 70 CBBC		Red Cap				
		Live Junction				
		POP 100				
						Rugby

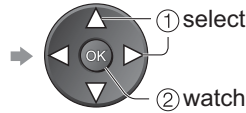
■ To return to TV



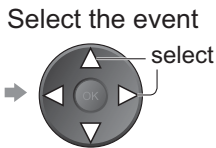
■ To the previous day (DVB mode) red

■ To the next day (DVB mode) green

■ To watch the programme
Select the event or programme now on the air



■ To view details of the event (DVB mode)



● Press again to return to Programme Guide.

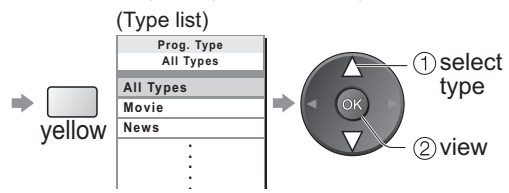
■ To view advertisement (Depending on the country)

If you enter an incorrect postcode for your area, or no postcodes are entered, advertisement may not be displayed correctly.

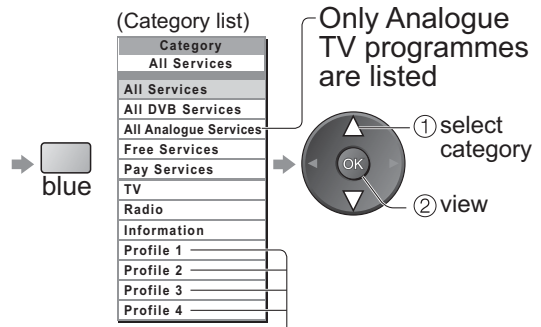


● Press the OPTION or RETURN button to return to Programme Guide.

■ To view a programme list of the selected type (DVB mode)



■ To view a programme list of the selected category



To list favourite programmes ➔ p. 31

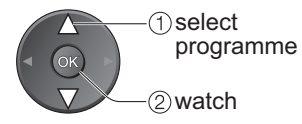
Note

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

■ Depending on the country you select, Programme Guide may not be supported. In this case, Programme List will appear.

Programme List

All DVB Services
6. Cartoon Nwk
7. BBC Radio Wales
8. BBC Radio Cymru
1. BBC ONE Wales
2. BBC THREE
3. BBC1
4. CBBC Channel



Viewing Using Programme Guide Watching TV

Viewing Teletext

You can enjoy teletext broadcasting, including news, weather forecasts and subtitles, if this service is provided by the broadcasters.

What is FLOF (FASTTEXT) mode?

In FLOF mode, four differently coloured subjects are situated at the bottom of the screen. To access more information about one of these subjects, press the appropriately coloured button. This facility enables fast access to information on the subjects shown.

What is TOP mode? (in case of 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 at the bottom of the screen

- Available page up / down →
- To select among subject blocks →
- To select next subject within the subject block (After the last subject, it moves to the next subject block.) →

What is List mode?

In List mode, four differently coloured page numbers are situated at the bottom of the screen. Each of these numbers can be altered and stored in the TV's memory. ("Store frequently viewed pages", p. 19)

■ To change mode → "Teletext" in Setup Menu (p. 27)

1 Switch to Teletext

TEXT ● Displays Index (content varies depending on the broadcasters)

Sub page number
 << 01 02 03 04 05 06 07 >>
 Current page number **P100** 17:51 28 Feb Time / date
TELETEXT INFORMATION
 Colour bar

2 Select the page

1 2 3
 4 5 6
 7 8 9
 0 VCR

or up down

or red green yellow blue
 (Corresponds to the colour bar)










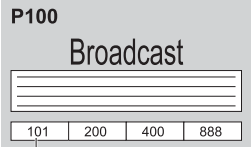



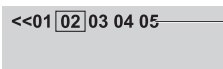








As the blue bar is displayed

■ To adjust contrast → MENU ● (Press three times) →

■ To return to TV → TEXT

Using teletext conveniently

Reveal hidden data	Reveal hidden words e.g. quiz page answers MENU ● → Re-hide →												
FULL / TOP / BOTTOM	<table border="0"> <tr> <td>MENU ● → </td> <td>(TOP)</td> <td>(BOTTOM)</td> <td>Normal (FULL)</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>(Expand the TOP half)</td> <td>(Expand the BOTTOM half)</td> <td></td> </tr> </table>	MENU ● →	(TOP)	(BOTTOM)	Normal (FULL)						(Expand the TOP half)	(Expand the BOTTOM half)	
MENU ● →	(TOP)	(BOTTOM)	Normal (FULL)										
	(Expand the TOP half)	(Expand the BOTTOM half)											

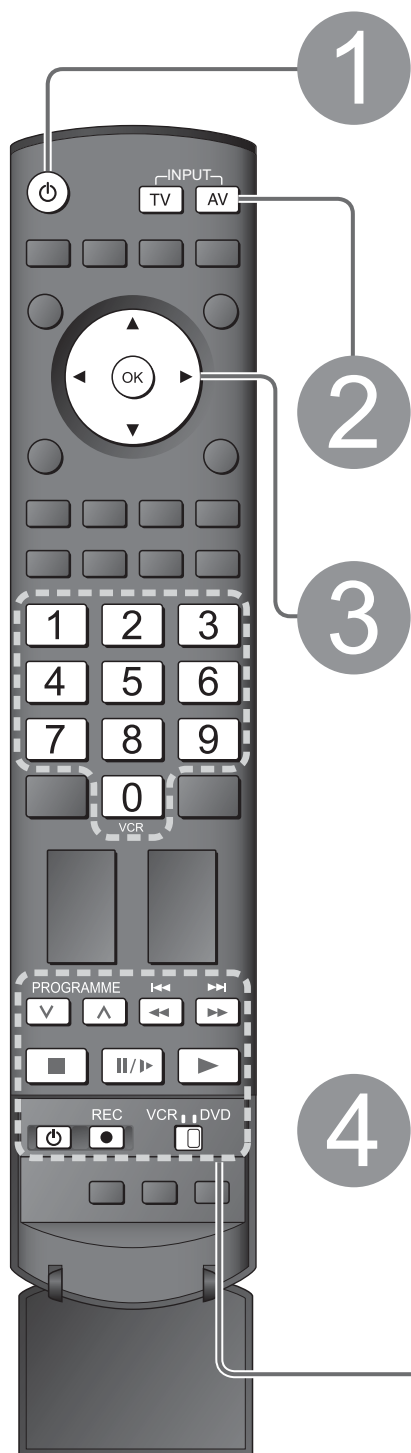
HOLD	<p>Stop automatic updating (If you wish to hold the current page without updating)</p> <p>HOLD  To resume → HOLD </p>												
INDEX	<p>Return to the main index page</p> <p>INDEX </p>												
Call up a favourite page	<p>View a favourite page stored</p> <p>STTL  ● Call up the page stored in “blue”. ● Factory setting is “P103”.</p>												
View in multi window	<p>Watch TV and Teletext in two windows at once</p> <p>MENU  (Press twice) →  ● Select Picture and text On or Off</p> <p>● Operations can be made only in Teletext screen.</p> 												
Store frequently viewed pages	<p>Store frequently viewed pages in the colour bar (List mode only)</p> <p>As page is displayed  Corresponding colour button →  press and hold</p>  <p>The number changes to white.</p> <p>To change stored pages</p> <p>→  Colour button you want to change → Enter new page number</p> <table border="1" data-bbox="754 1227 882 1361"> <tr><td>1</td><td>2</td><td>3</td></tr> <tr><td>4</td><td>5</td><td>6</td></tr> <tr><td>7</td><td>8</td><td>9</td></tr> <tr><td>0</td><td colspan="2">VCR</td></tr> </table> <p>→  press and hold</p>	1	2	3	4	5	6	7	8	9	0	VCR	
1	2	3											
4	5	6											
7	8	9											
0	VCR												
View sub page	<p>View sub page (Only when teletext is more than one page)</p> <p>  <<01 02 03 04 05 Appears at top of the screen</p> <p>To view specific sub page</p> <p>→ MENU  →  blue</p>  <p>→ Enter the 4-digit number example: P6</p>  <p>● Sub pages: The number of sub pages varies depending on the broadcasters (up to 79 pages). It may take some time for searching, during which time you can watch TV.</p>												
Watch TV while waiting for update	<p>View the TV picture while searching for a teletext page Teletext automatically updates itself when new information becomes available. Changes to TV screen temporarily</p> <p>MENU  →  yellow →  Appears when updating is completed →  yellow → View the updated page</p> <p>(You cannot change the programme.)</p> <p>● The news page provides a function that indicates arrival of latest news (“News Flash”).</p>												

Watching Videos and DVDs

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

● To connect the equipment → p. 10 and p. 11

The Remote Control is capable of operating some functions of selected Panasonic external equipment.



1 Turn the TV on

■ When connecting with SCART as example 2 or 3 (p. 10 and p. 11)

→ Receives input signals automatically when playback starts

● Input signals are automatically identified by the SCART (pin 8) terminal.

● This function is also available for HDMI connections (p. 46).

■ If input mode is not switched automatically

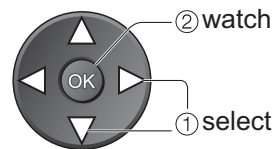
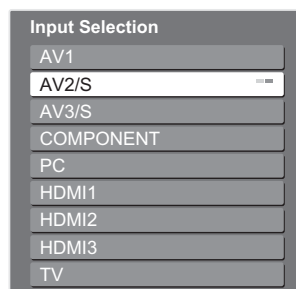
→ Perform 2 and 3

● Dependant on the setup of the equipment

2 Display the Input select menu



3 Select the input mode connected to the equipment



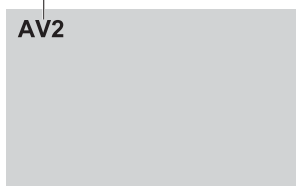
● You can also select the input using the AV button on the remote control or the side panel of the TV.

Press the button repeatedly until the desired input is selected.

● You can label or skip each input mode → "Input Labels" (p. 36)

4 View

Displays the selected mode












■ To return to TV





Note

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



Panasonic equipment connected to the TV can be directly operated with the remote control.

	<p>VCR / DVD switch* Select VCR to operate Panasonic VCR or DVD equipment Select DVD to operate Panasonic DVD equipment or Player home theatre</p>
	<p>Standby Set to Standby mode / Turn on</p>
	<p>Play Playback videocassette / DVD</p>
	<p>Stop Stop the operations</p>
	<p>Rewind / Skip / Search VCR: Rewind, view the picture rapidly in reverse DVD: Skip to the previous track or title Press and hold to search backward</p>
	<p>Fast-forward / Skip / Search VCR: Fast-forward, view the picture rapidly forward DVD: Skip to the next track or title Press and hold to search forward</p>
	<p>Pause Pause / Resume DVD: Press and hold to play at slow speed</p>
	<p>Programme Up / Down Select programme</p>
	<p>Record Start recording</p>

***Setting your remote control to operate Panasonic VCR, DVD, etc.**

- ① Set the VCR / DVD switch to the appropriate position → 
- ② Press and hold  during the following operations

Enter the appropriate code for the equipment to be controlled, see table below

 → Press 

“VCR” position

Equipment	Code
VCR	10 (default)
DVD	11

“DVD” position

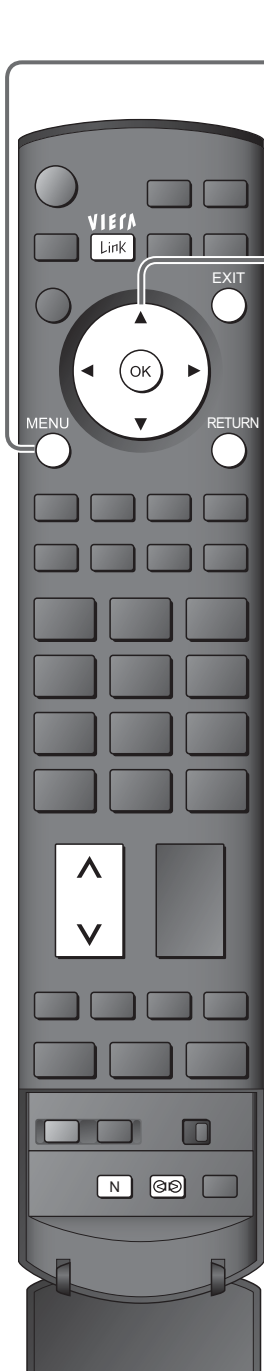
Equipment	Code
DVD	70 (default)
Player home theatre	71

Note

- Confirm if the remote control works correctly after changing the code.
- The codes will be reset to default values if batteries are replaced.
- “DVD” means DVD player, DVD recorders and Recorder home theatre.
- Some operations may not be possible on some equipment models.

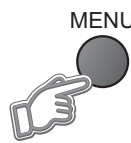
How to Use Menu Functions

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



1

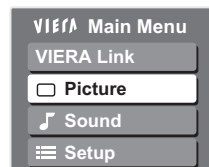
Display the menu



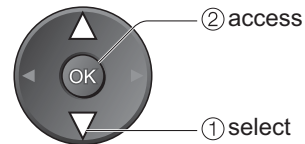
- Displays the functions that can be set (varies according to the input signal)

2

Select the menu

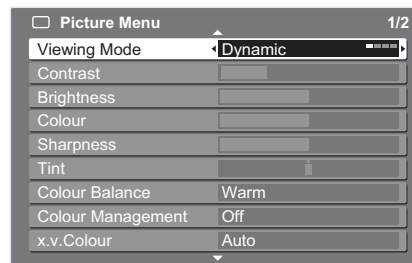


(example: Picture Menu)



3

Select the item

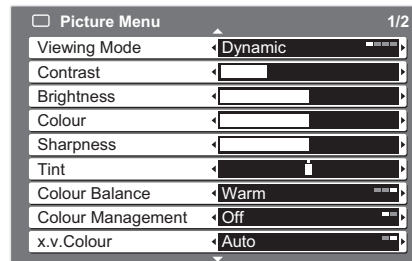


(example: Picture Menu)

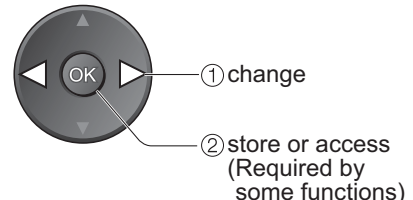


4

Adjust or select



(example: Picture Menu)



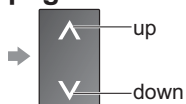
To return to TV at any time



To return to the previous screen



To change menu pages



Choose from among alternatives

Number and positions of alternatives



Changed

Adjust using the slide bar



Moved

Go to the next screen



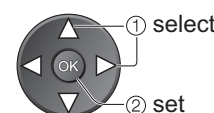
Displays the next screen

Enter characters by free input menu

You can enter names or numbers freely for some items.



Set characters



Store

RETURN



To reset the settings

- To reset the picture settings only
→ "Reset to Default" in Picture Menu (p. 24)
- To reset the sound settings only
→ "Reset to Default" in Sound Menu (p. 25)
- To reset the picture and sound settings together
→ **N** (Also volume level and aspect mode are reset)
- To initialize all settings
→ "Shipping Condition" in Setup Menu (p. 35)

■ Overview

VIERA Main Menu

- VIERA Link
- Picture
- Sound
- Setup

VIERA Link Menu

- Pause Live TV Access
- Direct TV Rec Start
- VIERA Link Control Recorder
- Speaker Selection Home Cinema

The menu of the accessed equipment

(p. 43)

Picture Menu 1/2

- Viewing Mode Dynamic
- Contrast
- Brightness
- Colour
- Sharpness
- Tint
- Colour Balance Warm
- Colour Management Off
- x.v.Colour Auto

(p. 24)

Picture Menu 2/2

- P-NR Off
- 3D-COMB Off
- Reset to Default Set

Sound Menu 1/2

- Mode Music
- Bass
- Treble
- Balance
- Headphone Volume
- Surround Off
- Volume Correction
- Speaker Distance to Wall Over 30cm
- MPX Stereo

(p. 25)

Sound Menu 2/2

- Audio Preference MPEG
- SPDIF Selection Auto
- MPEG Optical Level 0dB
- HDMI1 Input Auto
- Reset to Default Set

Setup Menu 1/3

- AV Colour System Auto
- DVB Profile Edit Access
- DVB Service List Access
- Analogue Service List Access
- Link Settings Access
- Child Lock Access
- Tuning Menu Access
- GUIDE Plus+ Settings Access
- Intelligent Frame Creation On
- Off Timer Off
- Language Access

Link Settings

- VIERA Link On
- Q-Link AV2
- AV2 out TV
- Power off Link Set
- Power on Link Set
- Download Access

(p. 26)

Setup Menu 2/3

- Teletext TOP
- Teletext Character Set West
- Shipping Condition Access
- Common Interface Access
- System Update Access
- Power Save Off
- Side Panel Off
- Picture Overscan On
- Input Labels Access

Tuning Menu

- Auto Setup Access
- DVB Manual Tuning Access
- Analogue Manual Tuning Access
- Add New DVB Services Access
- New Service Message On
- DVB Signal Condition Access

(p. 32)

Setup Menu 3/3

- Banner Display Timeout 3 seconds
- Time Zone Auto
- Software License Access
- System Information Access

(p. 26 and p. 27)

Language

- OSD Language Access
- Preferred Audio 1 English
- Preferred Audio 2 English
- Preferred Subtitles 1 English
- Preferred Subtitles 2 English
- Preferred Teletext English

(p. 26)

● Only available items can be selected.

● How to Use Menu Functions
(picture, sound quality, etc.)

Advanced

How to Use Menu Functions

■ Menu list

Menu	Item	Adjustments / Configurations (alternatives)
VIERA Link	Pause Live TV	Controls the connected equipment with VIERA Link function, and enables various convenient recording, playback, etc. (p. 43 - 45) ● You can also access VIERA Link Menu directly using the VIERA Link button on the remote control.
	Direct TV Rec	
	VIERA Link Control	
	Speaker Selection	
Picture	Viewing Mode	Basic picture mode (Dynamic / Normal / Cinema / Eco) Dynamic : Provides enhanced picture contrast and sharpness when viewing in a bright room Normal : Recommended for viewing under normal ambient room lighting conditions Cinema : For watching movies in a darkened room producing a cinema-like picture Eco : Adjusts picture settings automatically dependent on ambient lighting conditions ● Set for each input signal
	Contrast, Brightness, Colour, Sharpness	Increases or decreases the levels of these options according to your personal preference
	Tint	With an NTSC signal source connected to the TV, the picture hue can be adjusted to suit your taste. ● For NTSC signal reception only
	Colour Balance	Allows you to set the overall colour tone of the picture (Cool / Normal / Warm)
	Colour Management	Automatically adjusts colours to vivid ones (Off / On) ● Not valid on PC signal
	x.v.Colour	Increases the colour gradations (Off / Auto) This is effective when watching HD moving pictures from an external equipment ● HDMI input mode only
	P-NR	Picture Noise Reduction Automatically reduces unwanted picture noise and flicker noise in the contoured parts of a picture (Off / Min / Mid / Max) ● Not valid on PC signal
	3D-COMB	Occasionally, whilst viewing still or slow moving pictures, colour patterning may be seen Set to "On" to display sharper and more accurate colours (Off / On) ● For PAL or NTSC signal reception only ● Not valid on RGB, S-Video, Component, PC, HDMI and SD Card
	Reset to Default	Press the OK button to reset the present Picture Mode to the default settings

■ Menu list

Menu	Item	Adjustments / Configurations (alternatives)
Sound	Mode	Basic sound mode (Music / Speech)
	Bass	Increases or decreases level to enhance or minimise lower, deeper sound output
	Treble	Increases or decreases level to enhance or minimise sharper, higher sound output
	Balance	Adjusts volume level of right and left speakers
	Headphone Volume	Adjusts the volume of the headphones
	Surround	<p>Surround sound settings (Off / Simulated Surround / BBE ViVA)</p> <p>Simulated Surround: Provides a dynamic enhancer to simulate improved spatial effects</p> <p>BBE ViVA: BBE ViVA HD3D (High Definition 3D) Sound provides musically accurate natural 3D image with Hi-Fi sound. The clarity of the sound is improved by BBE while the width, depth and height of sound image are expanded by BBE's proprietary 3D sound process. BBE ViVA HD3D Sound is compatible with all TV programmes including news, music, dramas, movies, sports and electronic games.</p> <ul style="list-style-type: none"> ● Switching is also possible by the Surround button on the remote control (p. 9).
	Volume Correction	Adjusts volume of individual programme or input mode
	Speaker Distance to Wall	<p>Adjusts the low frequency sound (Over 30cm / Up to 30cm)</p> <ul style="list-style-type: none"> ● If the back space between the TV and wall is over 30 cm, "Over 30cm" is recommended. ● If the back space between the TV and wall is within 30 cm, "Up to 30cm" is recommended.
	MPX	<p>Select stereo / monaural (Mono / Stereo)</p> <ul style="list-style-type: none"> ● Normally: Stereo ● Stereo signal cannot be received: Mono ● M1 / M2: Available while mono signal is transmitted ● Analogue mode only
	Audio Preference	<p>Selects the initial setting for Audio tracks (Dolby Digital / MPEG)</p> <p>If programme has both Dolby Digital and MPEG audio tracks, priority is given to what you select</p> <p>Dolby Digital: A method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2ch) audio, these signals can also be multi-channel audio.</p> <p>MPEG: An audio compression method that compresses audio to small size without any considerable loss of audio quality.</p> <ul style="list-style-type: none"> ● DVB mode only
	SPDIF Selection	<p>Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT terminal (Auto / PCM)</p> <p>Auto: Dolby Digital is output as Dolby Digital Bitstream. MPEG is output as PCM.</p> <p>PCM: Dolby Digital is output as PCM. MPEG is output as PCM.</p> <ul style="list-style-type: none"> ● DVB mode only
	MPEG Optical Level	<p>Normally, MPEG sound is larger than Dolby Digital one</p> <p>You can adjust the audio level of MPEG output from DIGITAL AUDIO OUT terminal as the initial setting</p> <ul style="list-style-type: none"> ● 0dB to -12dB in -2dB reductions ● DVB mode only
HDMI1 / 3 Input	<p>Select to fit the input signal (Auto / Digital / Analogue) (p. 48)</p> <p>Auto : Automatic detection of digital or analogue sound source</p> <p>Digital : HDMI cable connection</p> <p>Analogue : HDMI-DVI adapter cable connection</p> <ul style="list-style-type: none"> ● HDMI input mode only ● HDMI2 terminal is for digital signal only ● No setting for HDMI2 available 	
Reset to Default	Press the OK button to reset the present Sound Mode to the default settings	

- A different menu will be displayed while PC or SD Card is used. (p. 37 and p. 39)
- Only available items can be selected.

How to Use Menu Functions

■ Menu list

Menu	Item	Adjustments / Configurations (alternatives)	
Setup	AV Colour System	Selects optional colour system based on video signals in AV mode (Auto / PAL / SECAM / M.NTSC / NTSC)	
	DVB Profile Edit	Creates list of favourite programmes (p. 31)	
	DVB Service List	Skips the unwanted DVB programmes (p. 31)	
	Analogue Service List	Skips the unwanted Analogue programmes or edits Analogue programmes (p. 31)	
	Link Settings	VIERA Link	Sets to use VIERA Link functions (Off / On) (p. 42)
		Q-Link	Selects which AV terminal is to be used for data communication between this TV and a compatible recorder (AV1 / AV2) (p. 41) ● Select the connected terminal to the recorder even it is not compatible with Q-Link.
		AV1 / AV2 out	Chooses the signal to be transmitted from the TV to Q-Link (TV / AV1 / AV2 / AV3 / Monitor) ● Monitor: Image displayed on screen ● Component, PC and HDMI signals cannot be outputted.
		Power off Link	Sets to use Power off Link function (No / Set) (p. 41 and p. 42)
		Power on Link	Sets to use Power on Link function (No / Set) (p. 41 and p. 42)
		Download	Downloads programme, language, country / region settings to a Q-Link or VIERA Link compatible equipment connected to the TV
		Child Lock	Locks a programme / AV input to prevent access to it (p. 34)
	Tuning Menu	Auto Setup	Automatically sets the programmes received in the area (p. 33)
		DVB Manual Tuning	Sets the DVB programmes manually (p. 33)
		Analogue Manual Tuning	Sets the Analogue programmes manually (p. 33)
		Add New DVB Services	Adds new DVB services (p. 33)
		New Service Message	Selects whether to give a notification message when a new DVB service is found (p. 33)
		DVB Signal Condition	Checks the DVB signal condition (p. 33)
	GUIDE Plus+ Settings	Update	Performs the update of the GUIDE Plus+ schedule and advertising informations for the GUIDE Plus+ system
		Postcode	Sets your postcode for using the GUIDE Plus+ system (p. 17)
		System Information	Displays the system information of the GUIDE Plus+ system
	Intelligent Frame Creation	Automatically compensates the picture frame rate to make the image smooth (Off / On) ● Not valid on PC and SD Card	
	Off Timer	Sets the time the TV automatically turns Off (Off / 15 / 30 / 45 / 60 / 75 / 90 minutes)	
	Language	OSD Language	Changes language for on-screen displays
		Preferred Audio 1 / 2	Selects the preferred language for DVB multi audio (depending on the broadcaster)
		Preferred Subtitles 1 / 2	Selects the preferred language for DVB subtitles (depending on the broadcaster) ● To display subtitles ➔ p. 14
		Preferred Teletext	Selects the preferred language for DVB teletext service (depending on the broadcaster)

■ Menu list

Menu	Item	Adjustments / Configurations (alternatives)
Setup	Teletext	Teletext display mode (TOP (FLOF) / List) (p. 18)
	Teletext Character Set	Selects teletext language (West / East1 / East2) <ul style="list-style-type: none"> ● 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.
	Shipping Condition	Resets all settings, for example, when moving house (p. 35)
	Common Interface	Uses include to watch pay-TV (p. 29)
	System Update	Downloads new software to TV (p. 29)
	Power Save	Reduces brightness of picture to economise on power consumption (Off / On)
	Side Panel	Increases the brightness of the side panel (Off / Low / Mid / High) <ul style="list-style-type: none"> ● The recommended setting is "High" to prevent panel "image retention".
	Picture Overscan	Selects the screen area displaying the image (Off / On) On : Enlarged the image to hide the edge of the image. Off : Displayed the image in the original size. <ul style="list-style-type: none"> ● Set to "On" if noise is generated on the edge of the screen. ● This function is available when aspect is set to Auto (16:9 signal only) or 16:9. ● This function can be memorized separately for SD (Standard definition) and HD (High definition) signals.
	Input Labels	Labels or skips each input terminal (p. 36)
	Banner Display Timeout	Sets how long the information banner (p. 15) stays on screen <ul style="list-style-type: none"> ● 0 (No display) to 10 sec. in 1-sec. increments
	Time Zone	Adjusts the time data (p. 29)
	Software License	Displays the software licence information
System Information	Displays the system information of this TV	

- A different menu will be displayed while PC or SD Card is used. (p. 37 and p. 39)
- Only available items can be selected.

DVB Settings (DVB mode)

DVB Settings provide access to various advanced features.

1 If in Analogue mode
Select DVB

2 **Display the menu**

3 **Select "Setup"**

4 **Select "Common Interface", "System Update" or "Time Zone"**

5 **Set** _____

■ To return to TV
EXIT

VIFF Main Menu

VIERA Link
Picture
Sound
Setup

Setup Menu 2/3

Teletext Character Set	West
Shipping Condition	
Common Interface	Access
System Update	Access
Power Save	Off
Side Panel	Off
Picture Overscan	On
Input Labels	
Banner Display Timeout	3 seconds

Setup Menu 3/3

Time Zone	Auto
Software License	
System Information	

② access
① select

② access
① select

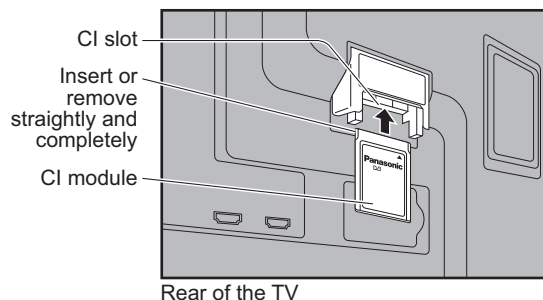
Pay-TV

Common Interface

The Common Interface Module menu provides access to software contained on Common Interface (CI) Modules.
 This function may not be available in some countries or regions.
 Although CI module may enable you to view some services, this TV does not guarantee all services (e.g. pay-TV).
 Please use only the approved CI module by the broadcaster.
 Consult your local Panasonic dealer or broadcasters for more information and conditions of the services.

Caution

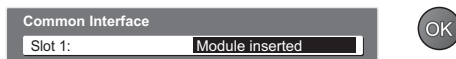
- Turn Off Mains power On / Off switch whenever inserting or removing the CI module.
- If a view card and a card reader come as a set, first insert the card reader, then insert the view card into the card reader.
- Do not insert the module up side down.



① Insert the CI module (optional)

- The features that appear on screen are dependent on the contents of the selected CI module.
- Normally pay-TV services will appear without ② and ③. If pay-TV service does not appear, perform ② and ③.
- For more details, see the manual of the CI module, or check with the broadcaster.

② Access "Common Interface"



③ Follow the on-screen instructions



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



Download new software to TV.

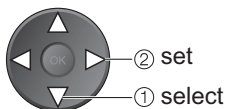
- For details → p. 49

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

Update TV's software system

System Update

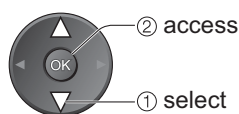
Select "Auto Update Search in Standby" and then set "On" or "Off"



- On: Automatically performs a search in standby and downloads an update, if any software updates are available

■ To update immediately

Select "System Update Search Now"



Searches for an update (for several mins.) and displays a corresponding message if any

Download

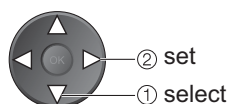


- Download may take for about 20 mins.

Adjust the time data automatically

Time Zone

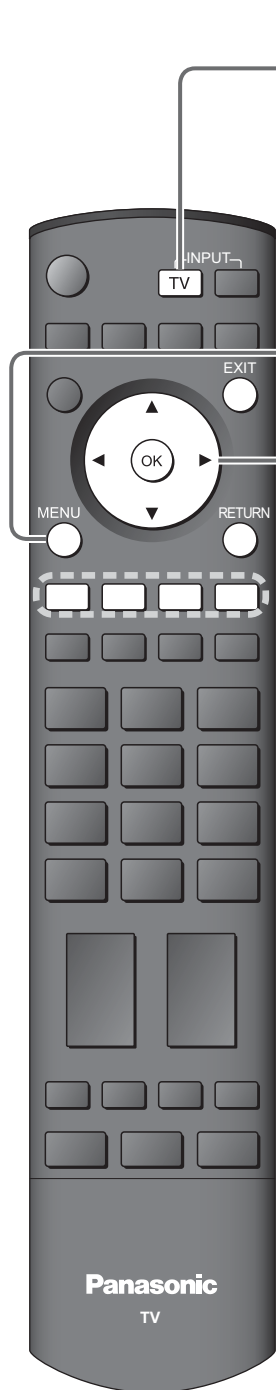
Set the time



Auto : The time data will be adjusted according to your area automatically.
 Others : The time data will be corrected based on GMT.

Editing Programmes

You can make your favourite programme lists and skip unwanted programmes, etc.



1

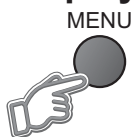
Select DVB or Analogue



- “DVB Profile Edit” and “DVB Service List” are available in DVB mode only.
- “Analogue Service List” is available in Analogue mode only.

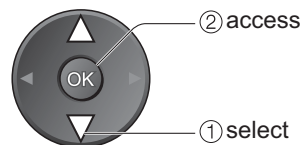
2

Display the menu



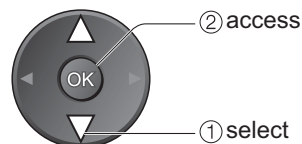
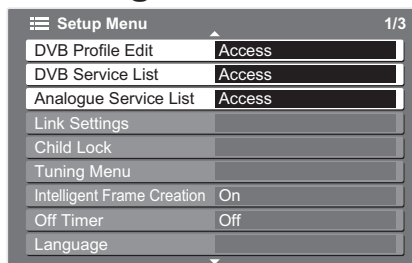
3

Select “Setup”



4

Select “DVB Profile Edit”, “DVB Service List” or “Analogue Service List”



5

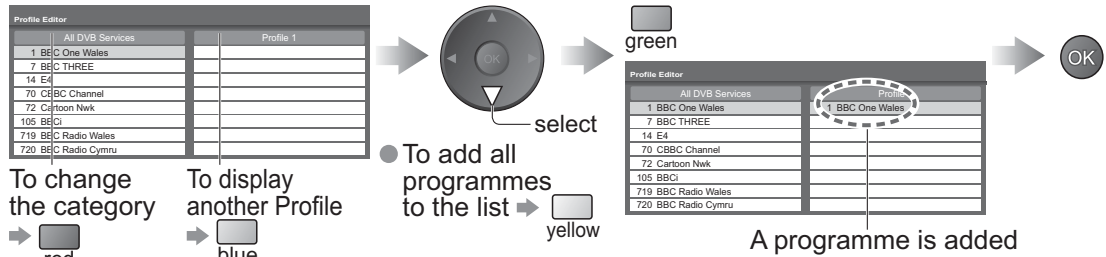
Set

■ To return to TV

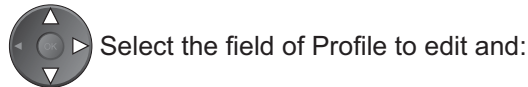


Create your favourite programme list (Profile) from various broadcasters (up to 4: Profile 1 to 4). The list is added to "Category" in Programme Guide (p. 17) and information banner (p. 15) and then easily accessed.

Select a programme and add it to the list



■ To edit Profile

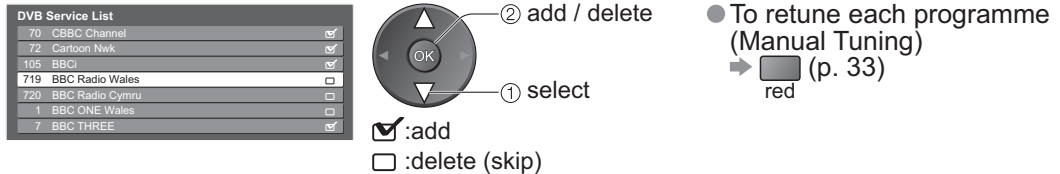


- To name the Profile → red → Select the character → OK → RETURN
- To move the programme → green → Select the new position → Confirm → green → OK
- To delete the programme → yellow → OK
- To delete all programmes → blue → OK

You can hide unwanted services. The deleted services cannot be displayed except in this function. Use this function to skip unwanted programmes.

- "DVB Service List" is listed all tuned DVB programmes in DVB mode.
- "Analogue Service List" is listed all tuned Analogue programmes in Analogue mode.

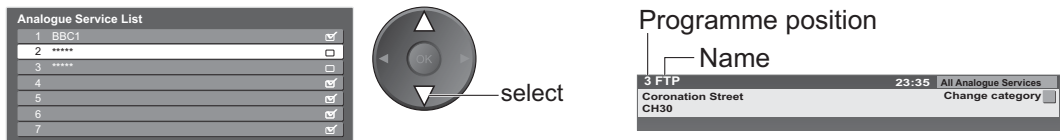
Select a service and add / delete



You can change the programme name and programme position for Analogue programmes.

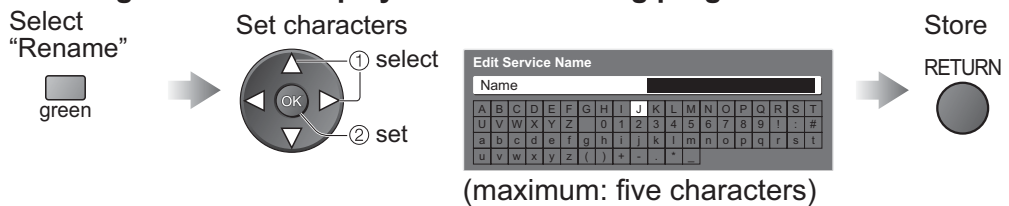
- This function is available in Analogue mode.
- If a VCR is connected only with the RF cable, edit "VCR".

① Select the programme to edit



② Edit

■ To change the name displayed when selecting programmes



■ To move the programme position



List favourite programmes

DVB Profile Edit
(DVB mode)

Skip unwanted programmes

DVB Service List

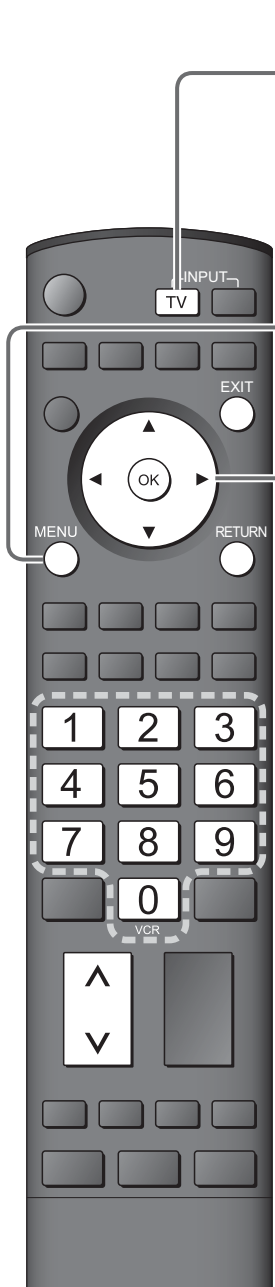
Analogue Service List

Edit analogue programmes (Change name, Move)

Analogue Service List

Tuning Programmes

You can retune all the TV programmes when moving house or search for new services which may have recently started broadcasting.



1

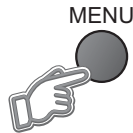
Select DVB or Analogue



- “DVB Manual Tuning”, “Add New DVB Services”, “New Service Message” and “DVB Signal Condition” are available in DVB mode only.
- “Analogue Manual Tuning” is available in Analogue mode only.

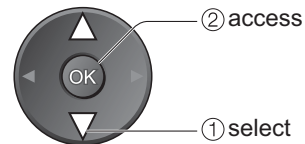
2

Display the menu



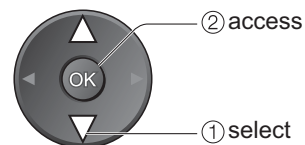
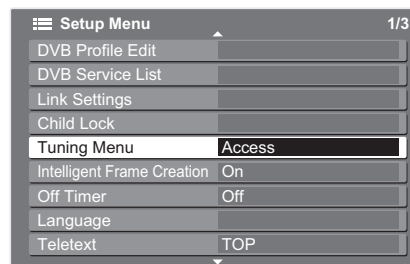
3

Select “Setup”



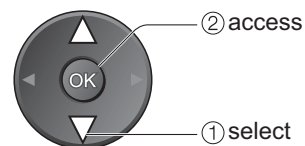
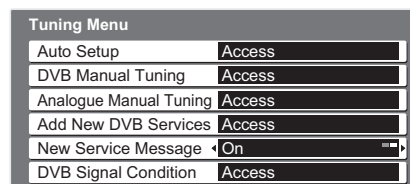
4

Select “Tuning Menu”



5

Select a function



To return to TV



6

Set

For Auto Setup, using the buttons on the side of the TV (p. 9)

- ① Press repeatedly until “Auto Setup” appears



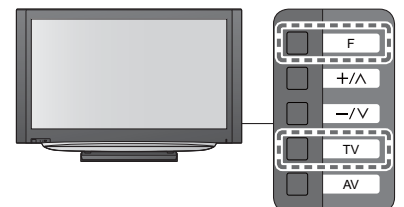
- ② Access “Auto Setup”



- ③ Start “Auto Setup”



● To return to TV →



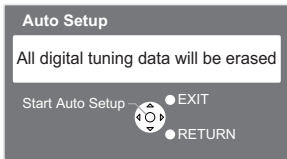
Set all DVB or Analogue programmes automatically

Auto Setup

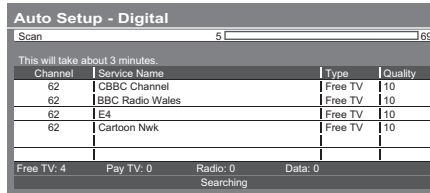
Automatically retune all DVB or Analogue programmes received in the area.

- Only DVB programmes are retuned in DVB mode.
- Only Analogue programmes are retuned in Analogue mode.
- If a Child Lock PIN number (p. 34) has been set, it must be entered.

Start Auto Setup



Settings are made automatically



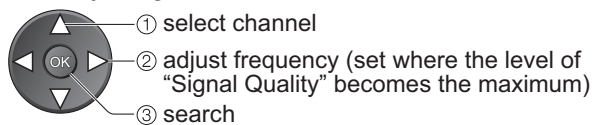
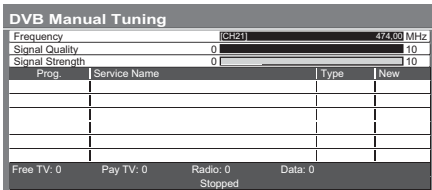
- All the previous tuning settings are erased.
- The programme, language, country / region settings are downloaded to a Q-Link or VIERA Link compatible equipment connected to the TV.
- When the operation is completed, the programme at programme position "1" will be displayed.
- If tuning has not been done completely → "DVB Manual Tuning", "Analogue Manual Tuning"

Set DVB programme manually

DVB Manual Tuning

Normally use "Auto Setup" or "Add New DVB Services" to add DVB programmes to your service list.

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



- All services found will be added to the DVB Service List.

Set Analogue programme manually

Analogue Manual Tuning

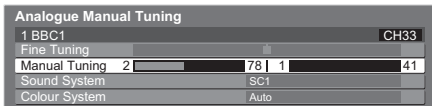
Fine Tuning

Use to make small adjustments to the tuning of an individual programme (affected by weather conditions, etc.)

Manual Tuning

Set Analogue programme manually after Auto Setup.

- Set Sound System and Colour System, and then perform this function. Normally set Colour System "Auto".
- If a VCR is connected only with the RF cable, select programme position "0".



SC1: PAL B, G, H / SECAM B, G
 SC2: PAL I
 SC3: PAL D, K / SECAM D, K
 F: SECAM L / L'

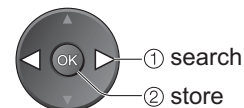
Select the programme position



Select the programme



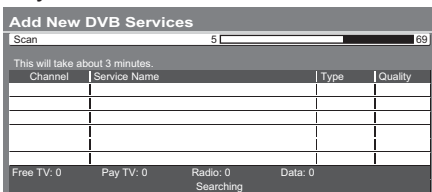
Search and store



Add DVB programme automatically

Add New DVB Services

Any new services found will be added to the DVB Service List.



- The new service is added with the current settings saved as they are.

Display a notification message

New Service Message

Selects whether to give a notification message when a new DVB service is found. (Off / On)

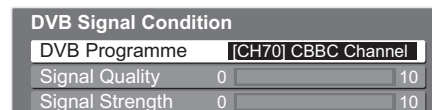


Check DVB signal

DVB Signal Condition

Selects a programme and checks the DVB signal condition.

- To change the programme



A good Signal Strength is not an indication of suitable signal for DVB reception. Please use the Signal Quality indicator as follows:

- Signal Quality:**
- Green bar → Good
 - Yellow bar → Poor
 - Red bar → Bad (Check the aerial)

Control Programme Audience

You can lock specific programmes / AV input terminals and control who watches them. (When the locked programme / input is selected, a message appears; by entering the PIN number, you can watch it.)

1 Display the menu
MENU

2 Select "Setup"

VIERA Main Menu
VIERA Link
Picture
Sound
Setup

3 Select "Child Lock"

Setup Menu	1/3
DVB Profile Edit	
DVB Service List	
Link Settings	
Child Lock	Access
Tuning Menu	
Intelligent Frame Creation	On
Off Timer	Off
Language	
Teletext	TOP

4 Set

■ To return to TV
EXIT

Control programme audience

Child Lock

① Enter the PIN number (4 digits)

Child Lock-PIN Entry	1 2 3
Please enter new PIN	4 5 6
PIN	7 8 9
	0

- Enter the PIN number twice at first setting.
- Make a note of the PIN number in case you forget it.

② Select "Child Lock List"

Child Lock	② access
Change PIN	
Child Lock List	① select

③ Select the programme / input to be locked

Name	Type	Lock
1 BBC One Wales	Free TV	🔒
7 BBC THREE	Free TV	
14 E4	Free TV	
VCR	Analogue	
1 BBC1	Analogue	
2 ****	Analogue	
AV1	AV	🔒
AV2/S	AV	

Appears when the programme / input is locked

- To cancel
➔ Select the locked programme / input
➔ OK
- To lock all ➔ yellow
- To cancel all locks ➔ blue

■ To change the PIN number
Select "Change PIN" in ② and enter a new PIN number twice.

Note

- Setting "Shipping Condition" (p. 35) erases the PIN number and all settings.

Restore Settings

Resets the TV to its original condition, i.e. no programmes tuned in. All settings (programmes, picture, sound quality, etc.) are reset.

1 Display the menu
 MENU

2 Select "Setup"
 VIERA Main Menu
 VIERA Link
 Picture
 Sound
 Setup

3 Select "Shipping Condition"
 Setup Menu 2/3
 Teletext Character Set West
 Shipping Condition Access
 Common Interface
 System Update
 Power Save Off
 Side Panel Off
 Picture Overscan On
 Input Labels
 Banner Display Timeout 3 seconds

4 Set
 EXIT

② access
① select

② access
① select

■ To return to TV
 → EXIT

Restore Settings

Shipping Condition

① **Check the message and initialise**

Shipping Condition

All tuning data will be erased
Are you sure?
Are you sure?

Confirm

● EXIT
● RETURN

② **Follow the on-screen instructions**

- "Auto Setup" will automatically start when Mains power On / Off switch is next turned On. (p. 12)

■ **To retune TV programmes only, e.g. after moving house**

- ➔ "Auto Setup" (p. 33)

Input Labels

For easier identification and selection of the input mode, you can label each input terminals or skip terminal that is not connected to any equipment.

● To select the input mode → p. 20

1 Display the menu
MENU

2 Select "Setup"

VIERA Main Menu
VIERA Link
Picture
Sound
Setup

3 Select "Input Labels"

Setup Menu	2/3
Teletext Character Set	West
Shipping Condition	
Common Interface	
System Update	
Power Save	Off
Side Panel	Off
Picture Overscan	On
Input Labels	Access
Banner Display Timeout	3 seconds

4 Select a input terminal and set

Input Labels	
AV1	DVD
AV2/S	AV2/S
AV3/S	AV3/S
COMPONENT	COMPONENT
PC	PC
HDMI1	HDMI1
HDMI2	HDMI2
HDMI3	HDMI3

■ To return to TV



The labels you set will be displayed in "Input Selection" menu (p. 20) or banner.

● If "Skip" is selected, you cannot select the mode.

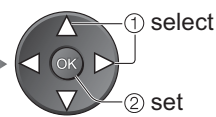
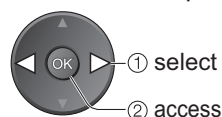
■ User input

You can name each input terminals freely.

Select "User input"

Set characters

Store




(maximum: ten characters)

Displaying PC Screen on TV


The screen of the PC connected to the TV can be displayed on the TV.
You can also listen to PC sound with the audio cable connected.

- To connect PC → p. 46

1 Select the external input

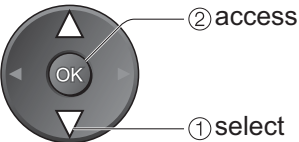


2 Select "PC"



Input Selection

- AV1
- AV2/S
- AV3/S
- COMPONENT
- PC**
- HDMI1
- HDMI2
- HDMI3
- TV



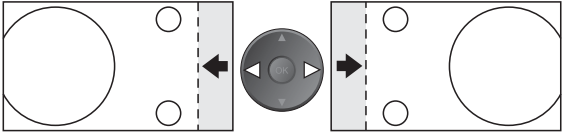
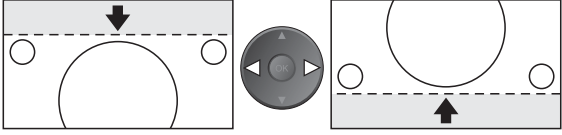
- Corresponding signals → p. 51
- If "H-freq." or "V-freq." is shown in red, the signals may not be supported.

■ To return to TV



■ PC menu setting (changed as desired)

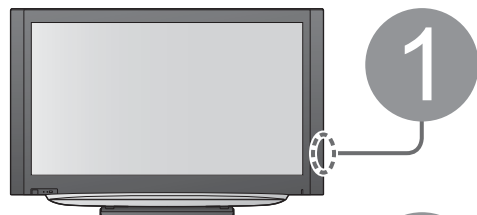
- To make settings → "How to Use Menu Functions" ① to ④ (p. 22)

Menu	Item	Adjustments / Configurations (options)	
Picture	Advanced PC Settings	W/B High R White balance of bright red area	
		W/B High B White balance of bright blue area	
		W/B Low R White balance of dark red area	
		W/B Low B White balance of dark blue area	
	Gamma	(S Curve / 2.0 / 2.2 / 2.5)	
	Reset to Default	Press the OK button to reset to the default Picture settings	
Setup	PC Setup	Input Resolution Switches to a wide view ● VGA (640 × 480 pixels), WVGA (852 × 480 pixels), XGA (1,024 × 768 pixels), WXGA (1,366 × 768 pixels) ● Options change depending on signals	
		Clock Set to the minimum level if noise occurs	
		H-pos Adjusts horizontal position	
		V-pos Adjusts vertical position	
		Clock Phase Eliminates flicker and distortion ● Adjust after Clock adjustment	● Set to the minimum level if noise occurs
		Sync Chooses another synchronous signal if the image is distorted (H & V / On G) ● H & V : by the horizontal and vertical signals from your PC On G : by the green signal from your PC (if available)	
		Reset to Default Press the OK button to reset to the default Setup settings	

- Other items → p. 24 - 27

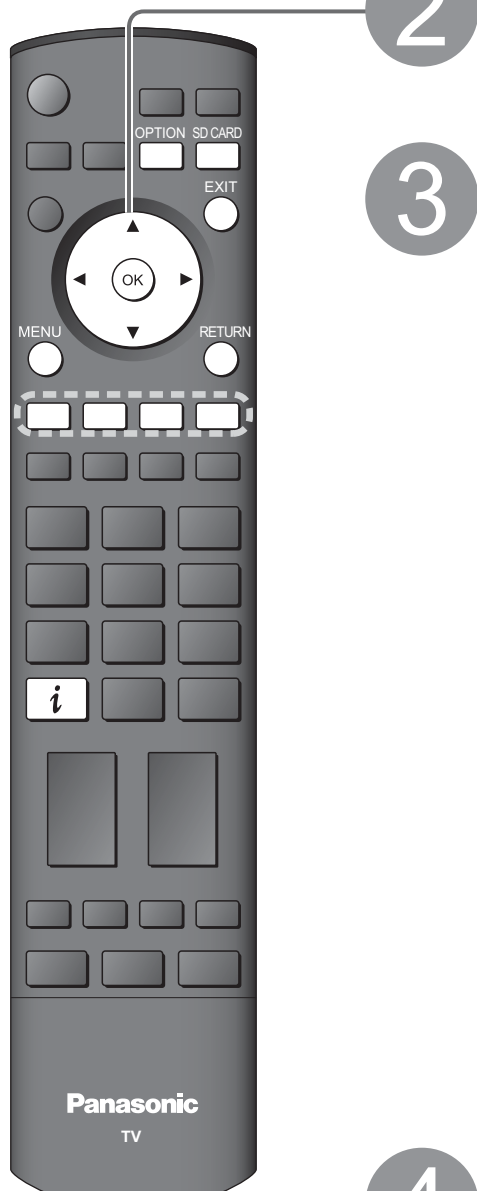
Viewing from SD Card

Still images recorded by digital cameras will be displayed.



1 Insert the SD Card

- Warning message for output signal is displayed.



2 Enter SD mode (Photo View Mode)



- All photos in SD Card are displayed by thumbnail.

3 Select the photo to be viewed

- Slide show → p. 39

Selected photo information is displayed

- The maximum number of characters for Filename is 8.
- The photo without record of the date is shown “**/**/****”.

■ To sort by date or month recorded

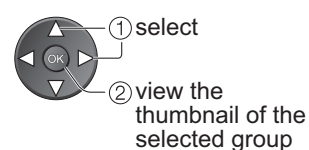
(Sort by Month / Sort by Date)

Display the thumbnail grouped by the same date or the same month

(Sort by Month)
yellow

(Sort by Date)
blue

Select the group to be viewed



Note

- The group of the photos without record of the date is shown as “Unknown”.

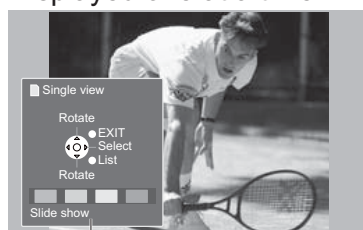
■ To return to TV



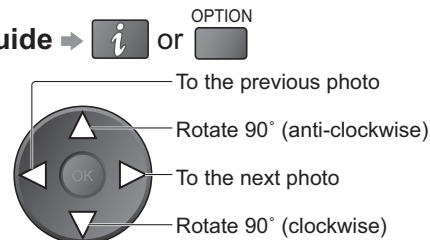
4 View

■ To display the operation guide → or

Displayed one at a time



Operation guide



- To return to thumbnail



Caution

- During the operation, no signals are output from the monitor output terminals.

(Photos)

SD Card

● For details on SD Cards → p. 49

■ **To insert**

Label surface → Push until a click is heard

■ **To remove**

Press the centre of the card

Slide show

■ **Start Slide show** (operate in step ③ or ④)

- ① Select the photo for the first view ② Start Slide show



● To pause →

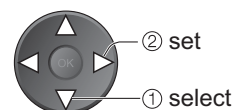
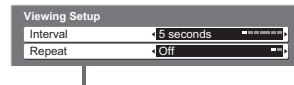
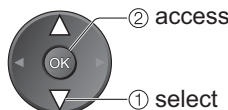
● To return to Single view →

Note

- Slide show is done within the same group if started from the view of the group.

■ **Slide show settings** (operate in step ③ or ④)

- ① Display the menu ② Select "Viewing Setup" ③ Select the items and set



● "Picture Menu" (p. 24)

Menu	Item	Adjustments / Configurations (alternatives)
Viewing Setup	Interval	Select slide show interval (5 / 10 / 15 / 30 / 60 / 90 / 120 seconds)
	Repeat	Slide show repeat (Off / On)

Cautions in handling SD Card

- Do not remove the card while the TV is accessing data (this can damage card or TV).
- Do not touch the pins on the back of the card.
- Do not subject the card to a high pressure or impact.
- Insert the card in the correct direction (otherwise, card may be damaged).
- Electrical interference, static electricity, or erroneous operation may damage the data or card.
- Back up the recorded data at regular intervals in case of deteriorated or damaged data or erratic operation of the TV. (Panasonic is not liable for any deterioration or damage of recorded data.)

On screen messages

Message	Meaning / Action
Cannot read file	<ul style="list-style-type: none"> ● The file is broken or unreadable. ● The TV does not support the format. (For the applicable formats and data, see p. 49.)
Is SD Card in?	<ul style="list-style-type: none"> ● Insert a SD Card.
No valid file to play	<ul style="list-style-type: none"> ● The card has no data.
Over 9999 pictures found	<ul style="list-style-type: none"> ● Maximum valid number of photos is 9,999.

Link Functions (Q-Link VIERA Link)

Q-Link connects the TV and DVD Recorder / VCR, and enables easy recording, playback, etc. (p. 41)
 VIERA Link (HDAVI Control™) connects the TV and the equipment with VIERA Link function, and enables easy control, convenient recording, playback, etc. (p. 42 - 45)
 You can use Q-Link and VIERA Link functions together.

Summary of Q-Link and VIERA Link functions

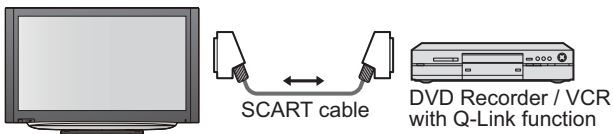
Features	Connection	Q-Link (SCART connection)	VIERA Link (HDMI connection only)	VIERA Link (SCART and HDMI connection)
Preset download		○	○**	○
Easy playback		○	○	○
Power on link		○	○	○
Power off link		○	○	○
Speaker control		—	○	○
Control the menu of the connected equipment by VIERA remote control		—	○*	○*
Direct TV Recording		○	—	○**
Pause Live TV programme		—	—	○**

* :Available with the equipment which has "HDAVI Control 2" or "HDAVI Control 3" function.
 ** :Available with the equipment which has "HDAVI Control 3" function.

Connections

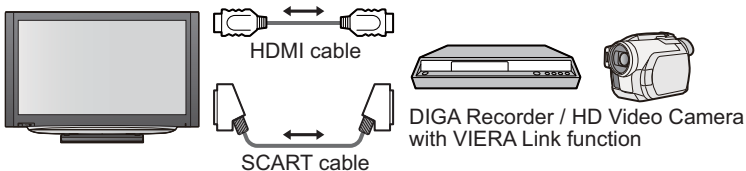
Read the manual of the equipment, too.

Q-Link



- Connect the DVD Recorder / VCR supporting Q-Link to the TV's AV1 or AV2 terminal via a fully wired SCART cable.

VIERA Link

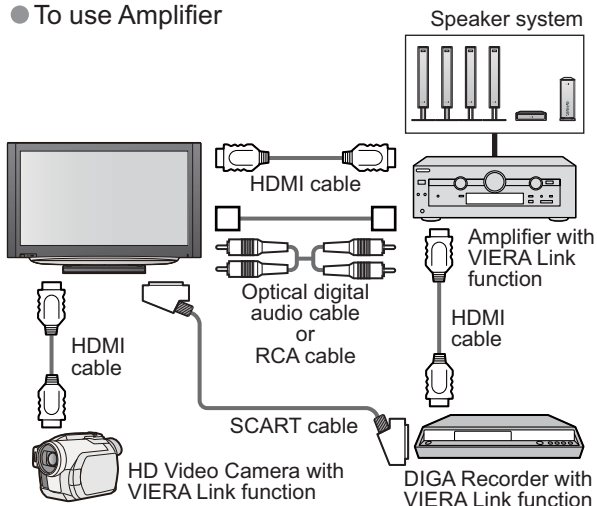


- Connect the equipment supporting VIERA Link to the TV's AV1, AV2, HDMI1, HDMI2 or HDMI3 terminals via fully wired SCART and HDMI cables together.
- Some functions are available only with HDMI cable connection. But use both HDMI and SCART cables to support many features normally.

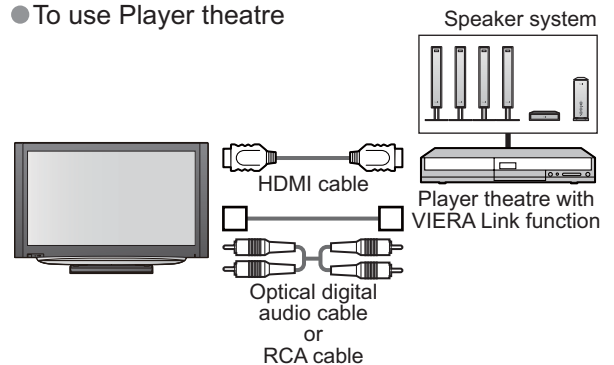
- SCART cable
Use fully wired SCART cable.
- HDMI cable
Use fully wired HDMI compliant cable. Non-HDMI-compliant cables cannot be utilized.
Recommended Panasonic's HDMI cable part number:
 • RP-CDHG10 (1.0 m)
 • RP-CDHG15 (1.5 m)
 • RP-CDHG20 (2.0 m)
 • RP-CDHG30 (3.0 m)
 • RP-CDHG50 (5.0 m)

For Speaker control (Home Cinema)

- To use Amplifier



- To use Player theatre



Q-Link

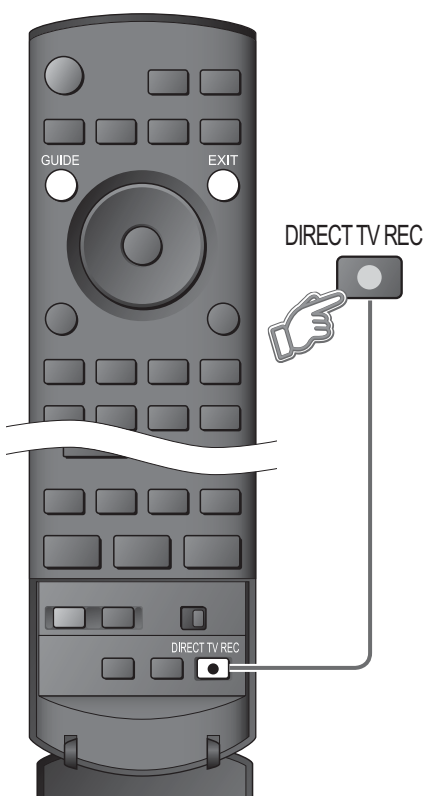
■ Preparations

- Connect the DVD Recorder / VCR with the following logos: "Q-Link", "NEXTVIEWLINK", "DATA LOGIC", "Easy Link", "Megalogic" or "SMARTLINK"
- Q-Link connection → p. 40
- Set up the DVD Recorder / VCR. Read the manual of the equipment.
- Q-Link terminal setup in Setup Menu → "Q-Link" (p. 26), "AV1 / AV2 out" (p. 26)
- Download preset - programme, language, country / region setting (Preset download)
 - "Download" (p. 26) or "Auto Setup" (p. 33) or "Auto Setup" - when first using the TV (p. 12)

■ Features available

Some recorders are not applicable. Read the manual of the recorder.

Recording the current programme in DVD Recorder / VCR immediately.



● Available conditions:

Current mode	Using tuner	How to record
Analogue	TV	TV monitor out
	Recorder	Recorder's tuner
DVB	TV	TV monitor out
AV (watching recorder's tuner)	Recorder	Recorder's tuner
AV (watching recorder's external input)	-	Recorder's external input
AV (watching TV's external input)	-	TV monitor out

- When Direct TV Recording is performed, the recorder is automatically turned on if it is in Standby mode.
- Changing programme or turning off the TV is available while the recorder is recording from its own tuner.
- Changing programme is not available while the recorder is recording from the TV tuner.
- Turning off the TV will stop the recording if the recording from an AV source connected to the TV.

■ To stop recording



Direct TV Recording -
What you see
is What you
record

Information
/ Message

Recording information or if recording is not possible, a message is displayed.

Power
on link
and Easy
playback

Set Power on Link "Set" in Setup Menu to use this function

→ "Power on Link" (p. 26)

When DVD Recorder / VCR starts playback or direct navigator / function menu for the equipment are activated, the TV is turned on and input mode is switched automatically so that you can view the content. (Only when TV is in Standby mode.)

Power off
link

Set Power off Link "Set" in Setup Menu to use this function

→ "Power off Link" (p. 26)

When TV is set to Standby mode, the recorder is also automatically set to Standby. (Only when the videocassette or DVD is not active.)

● Link Functions
(Q-Link / VIERA Link)

Advanced

• "DATA LOGIC" (a trademark of Metz Corporation)
• "Easy Link" (a trademark of Philips Corporation)

• "Megalogic" (a trademark of Grundig Corporation)
• "SMARTLINK" (a trademark of Sony Corporation)

Link Functions (Q-Link VIERA Link)

VIERA Link “HDAVI Control™”*

*Enjoy additional HDMI Inter-Operability with Panasonic products which have “HDAVI Control” function. This TV supports “HDAVI Control 3” function.

Connections to the equipment (DIGA Recorder, HD Video Camera, Player theatre, Amplifier, etc.) with HDMI and SCART cables allow you to interface them automatically.

These features are limited to models incorporating “HDAVI Control” and “VIERA Link”.

- Some functions are not available depending on the equipment’s version of HDAVI Control. Please confirm the connected equipment’s version of HDAVI Control.
- VIERA Link “HDAVI Control”, based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers’ equipment that supports HDMI CEC cannot be guaranteed.

Please refer to individual manuals for other manufacturers’ equipment supporting VIERA Link function. About applicable Panasonic equipment, consult your local Panasonic dealer.

■ Preparations

- Connect the equipment supporting VIERA Link.
- VIERA Link connection → p. 40
- Set up the connected equipment. Read the manual of the equipment.
- For optimal recording, the settings of the recorder might be required. For details, read the manual of the recorder.
- Download preset - programme, language, country / region setting (Preset download)
→ “Download” (p. 26) or “Auto Setup” (p. 33) or “Auto Setup” - when first using the TV (p. 12)
- Set VIERA Link On in Setup Menu → “VIERA Link” (p. 26)
- Set up the TV
 - **After connection, turn the equipment on and then switch the TV on. Select the input mode to HDMI1, HDMI2 or HDMI3 (p. 20), and make sure that an image is displayed correctly.**
This setup should be done each time when the following conditions occur:
 - for the first time
 - when adding or reconnecting equipment
 - when changing setup

■ Features available

Easy playback	Automatic Input switching - When the connected equipment is operated, input mode is switched automatically. When it is stopped operating, input mode is returned.
Power on link	Set Power on Link “Set” in Setup Menu to use this function → “Power on Link” (p. 26) When the connected equipment starts playback or direct navigator / function menu for the equipment are activated, the TV is automatically turned on. (Only when TV is in Standby mode.)
Power off link	Set Power off Link “Set” in Setup Menu to use this function → “Power off Link” (p. 26) When TV is set to Standby mode, the connected equipment is also automatically set to Standby. <ul style="list-style-type: none">● This function will work even if the TV enters standby mode automatically by Off Timer function or auto power standby function.

■ Features available (Using VIERA Link Menu)

Pause Live TV programme
(HDAVI Control 3 and Recorder with HDD)

Pause Live TV

You can pause the live TV programme and resume later.

- This function is available with DIGA Recorder which has HDD and "HDAVI Control 3" function.
- Connect DIGA Recorder with both HDMI and SCART cables to use this function.
- If you cannot operate, check the settings and the equipment → "Preparations" (p. 42)

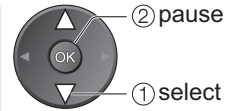
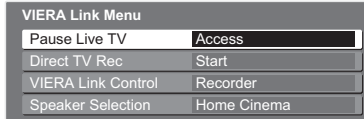
Access and pause the live TV programme



① Display "VIERA Link Menu"



② Select "Pause Live TV" and pause

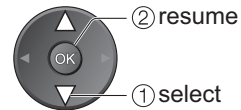


- Live TV programme is recorded on HDD from where it was paused.

■ To resume (stop pause)

Select "Pause Live TV" and access

- About the operations after resuming, read the manual of the equipment.



■ To return to Live TV

(cancel pause or resumed playback)

→ TV (change the input mode)

- If you cancel pause or resumed playback, the recorded programme will be deleted from HDD.

Recording the current programme in DIGA Recorder immediately.

- This function is available with DIGA Recorder which has "HDAVI Control 3" function.
- Connect DIGA Recorder with both HDMI and SCART cables to use this function.
- If you cannot operate, check the settings and the equipment → "Preparations" (p. 42)
- Changing programme or turning off the TV is available while the recorder is recording from its own tuner.
- Changing programme is not available while the recorder is recording from the TV tuner.
- Turning off the TV will stop the recording if the recording from an AV source connected to the TV.

Direct TV Recording -
What you see is What you record
(HDAVI Control 3)

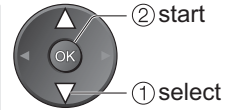
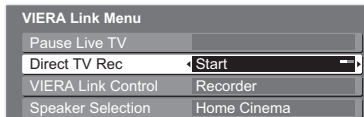
Direct TV Rec



① Display "VIERA Link Menu"



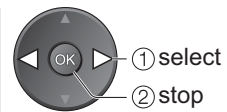
② Select "Direct TV Rec" and start recording



- You can also start recording directly →

■ To stop recording

Select "Stop" in "Direct TV Rec" and access



- You can also stop recording directly.



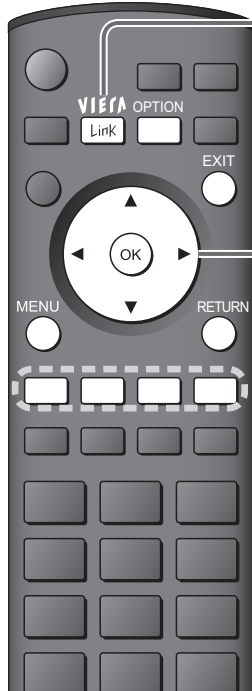
Link Functions (Q-Link VIERA Link)

■ Features available (Using VIERA Link Menu)

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

- This function is available with the equipment which has "HDAVI Control 2" or "HDAVI Control 3" function.
- If you cannot operate, check the settings and the equipment → "Preparations" (p. 42)

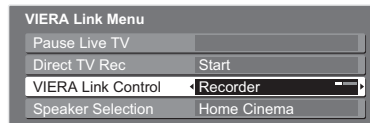
Access and operate the menu of the equipment



① Display "VIERA Link Menu"

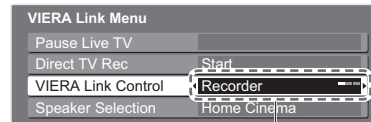


② Select "VIERA Link Control"



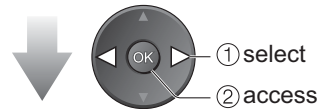
③ Select the equipment you want to access

- "Home Cinema" means Player theatre, Recorder theatre and Amplifier.



Recorder / Player / Home Cinema / Video Camera

The type of the connected equipment is displayed. Select the type of the equipment and access.



The menu of the accessed equipment (Input mode will be changed automatically)

④ Operate the menu of the equipment

- Available VIERA remote control buttons (depending on the connected equipment):

	Move the cursor / select the menu
	Move the cursor / access / adjust
	Store / set / access
	Return to the previous menu
	Exit the menu
	Display the operation guide for the equipment / The same functions with the OPTION button of the equipment
	Access when the key words are displayed on colour bar

- About the operations for the equipment, read the manual of the equipment.

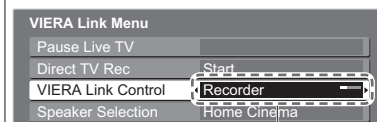
Control the menu of the connected equipment by VIERA remote control

(HDAVI Control 2)
(HDAVI Control 3)

VIERA Link Control

■ If you access the invalid equipment

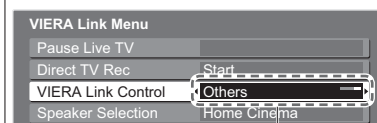
When the equipment with "HDAVI Control" function is connected



Recorder / Player / Home Cinema / Video Camera

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

When the equipment of other types or manufacturers is connected



Others

"Others" is displayed. You cannot access it. Use its own remote control to operate the equipment.

■ Features available (Using VIERA Link Menu)

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

- This function is available with the Amplifier or Player theatre which has "HDAVI Control" function.
- If you cannot operate, check the settings and the equipment → "Preparations" (p. 42)

Access and control the speaker volume

① Display "VIERA Link Menu"

② Select "Speaker Selection"

③ Set to "Home Cinema" or "TV"

Speaker control

Speaker Selection

VIERA Link Menu

Pause Live TV	
Direct TV Rec	Start
VIERA Link Control	Recorder
Speaker Selection	Home Cinema

Home Cinema
Amplifier or Player theatre will be automatically turned on if it is in Standby mode and the sound is from theatre speakers connected to the equipment.

- Volume up / down →
- Mute →
- The sound of TV speakers is mute.
- When the equipment is turned off, TV speakers will be active.

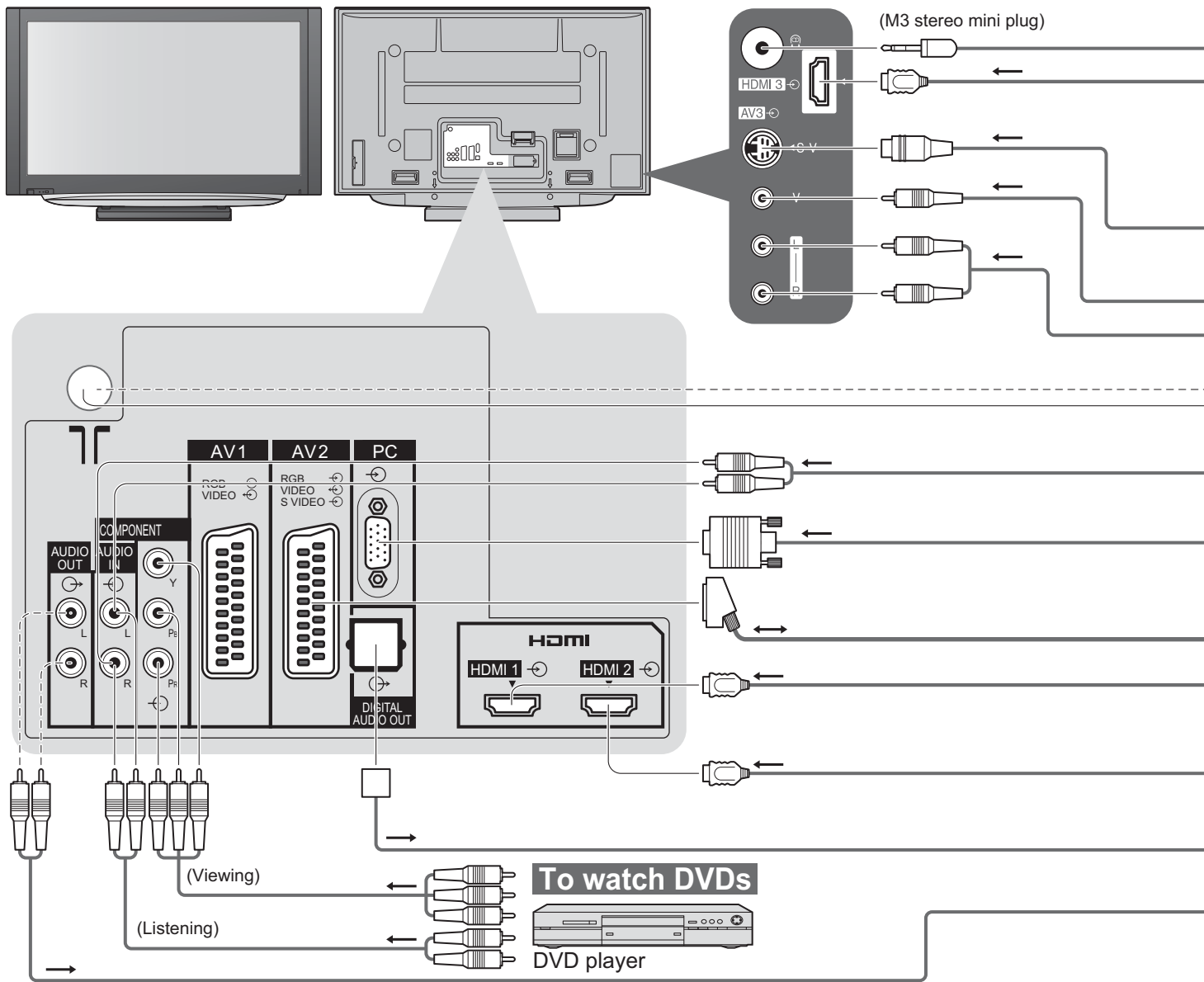
TV
TV speakers are active.

Note




- This function may not work properly depending on the connected equipment.
- Image or sound may not be available for the first few seconds when the playback starts.
- Image or sound may not be available for the first few seconds when Input mode is switched.
- Volume function will be displayed when adjusting the volume of the equipment.
- Easy playback is also available by using the remote control for Amplifier or Player theatre. Read the manual of the equipment.
- About HDMI cable for connecting Panasonic HD Video Camera, read the manual of the equipment.
- If more than one equipment of the same type are connected to the TV by HDMI cables, for example two DIGA Recorders to HDMI1 and HDMI2, VIERA Link will only be available for the lower terminal number, in this case HDMI1.
- "HDAVI Control 3" is the newest standard (current as of December, 2007) for HDAVI Control compatible equipment. This standard is compatible with conventional HDAVI equipment.
- To confirm this TV's version of HDAVI Control → "System Information" (p. 27)

External Equipment

These diagrams show our recommendations for how to connect the TV to your various equipment. For other connections, consult the instructions for each piece of equipment, the table below, and the specifications (p. 55).



Types of connectable equipment to each terminal

Terminal	AV1 	AV2 	AV3 (Side of TV) 
Recording / Playback (equipment)			
To record / playback videocassettes / DVDs (VCR / DVD recorder)	○	○	
To watch DVDs (DVD player)	○	○	○
To watch camcorder images (Video camera)	○	○	○
To watch satellite broadcasts (Set top box)	○	○	○
To play games (Game equipment)	○	○	○
To use amplifier with speaker system			
Q-Link	○	○	
VIERA Link	○ (with HDMI)	○ (with HDMI)	
Direct TV Recording	○	○	

○: Recommended Connection

Headphones

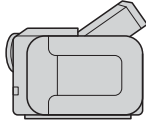
■ To adjust volume

→ “Headphone Volume” in the Sound Menu (p. 25)



Camcorder / HDMI equipment

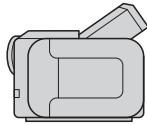
Fully wired HDMI compliant cable



Camcorder / Game equipment

(S-VIDEO)
or
(VIDEO)

(AUDIO)



(Listening)

(Viewing)

Conversion adapter
(if necessary)

PC

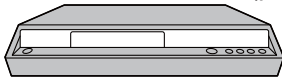


Computer

HDMI equipment

→ “HDMI connection” (p. 48)

Fully wired HDMI compliant cable



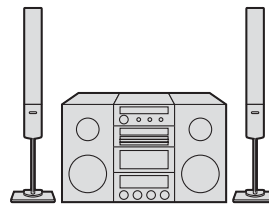
DVD Recorder

Optical digital audio cable

or

RCA cable

To listen with speakers



Amplifier with speaker system

To record / playback

DVD Recorder / VCR

To watch satellite broadcasts

Set top box

RF cable

or

SCART cable

SCART cable

Fully wired HDMI compliant cable

COMPONENT	AUDIO OUT	DIGITAL AUDIO OUT	HDMI		
			1	2	3
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Technical Information

Auto Aspect

The optimum size and aspect can be chosen, and you can enjoy finer images. (p. 16)

■ Auto

Auto aspect determines the best aspect ratio to use to fill your screen. It does this using a four step process to determine if the picture being viewed is a widescreen picture.

If Auto aspect detects a widescreen signal it switches into the appropriate 16:9 or 14:9 widescreen mode. If Auto aspect does not detect a widescreen signal then this advanced TV enhances the picture for optimum viewing pleasure.

The text shown on the screen indicates how Auto aspect determined which ratio to use:

“WIDE” appears in the top left of the screen if a widescreen identification signal (WSS) is found or a signal found through a SCART or HDMI terminal. Auto aspect switches to the appropriate 16:9 or 14:9 widescreen ratio. This function will also work in any aspect mode. “Auto” appears in the top left of the screen if black stripes above and below the picture are detected. Auto aspect chooses the best ratio and expands the picture to fill the screen.

This process can take several minutes, depending on the darkness of the picture.

Signal name	Aspect Control Signal									
	Widescreen signal (WSS)					Control signal through SCART (pin 8) or HDMI terminal				
	TV	AV1	AV2	AV3	COMPONENT	AV1	AV2	HDMI1	HDMI2	HDMI3
PAL	○	○	○	○	/	○	○	/	/	/
PAL 525/60	-	-	-	-		○	○			
DVB	○	-	-	-		-	-			
M.NTSC	-	-	-	-		○	○			
NTSC (AV input only)	-	-	-	-		○	○			
SD	525(480)/60i	/	/	/	-	/	/	○	○	○
	525(480)/60p				-			○	○	○
	625(576)/50i				○			○	○	○
	625(576)/50p				○			○	○	○
HD	750(720)/50p	/	/	/	-	/	/	○	○	○
	750(720)/60p				-			○	○	○
	1125(1080)/50i				-			○	○	○
	1125(1080)/60i				-			○	○	○
	1125(1080)/50p				-			○	○	○
	1125(1080)/60p				-			○	○	○
	1125(1080)/24p				-			○	○	○

Note

- The ratio varies depending on the programme, etc. If the ratio is greater than the standard “16:9”, black bands may appear at the top and bottom of the screen.
- If the screen size looks unusual when a widescreen-recorded programme is played back on a VCR, adjust the tracking of the VCR. (See the VCR manual.)

HDMI connection

HDMI (high-definition multimedia interface) allows you to enjoy high-definition digital images and high-quality sound by connecting the TV and the equipment.

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

About connections, see “External Equipment” (p. 46).

Note

- HDMI is the world’s first complete digital consumer AV interface complying with a non-compression standard.
- If the external equipment has only a DVI output, connect to the HDMI1 / 3 terminal via a DVI to HDMI adapter cable (*2).
- When the DVI to HDMI adapter cable is used, connect the audio cable to the audio input terminal (HDMI1: use COMPONENT-AUDIO terminals / HDMI3: use AV3 audio terminals).
- Audio settings can be made on the “HDMI1 / 3 Input” menu screen. (p. 25)
- Applicable audio signal sampling frequencies (2ch L.PCM): 48 kHz, 44.1 kHz, 32 kHz
- HDMI2 terminal is for digital audio signal only.
- Use with a PC is not assumed.
- 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.
- An equipment having no digital output terminal may be connected to the input terminal of either “COMPONENT”, “S-VIDEO”, or “VIDEO” to receive analogue signals.
- The HDMI input terminal can be used with only the following image signals: 480i, 480p, 576i, 576p, 720p, 1080i and 1080p. Match the output setting of the digital equipment.
- For details of the applicable HDMI signals, see p. 51.
- This TV incorporates HDMI™ (Version 1.3 with x.v.Color™) technology.

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

(*2): Enquire at your local digital equipment retailer shop.

Updating the software system (DVB mode)

Update system software regularly to ensure that you have latest version software.

If there is an update available, a notification banner is displayed when the service has the update information.

- To download new software, press "OK" ➔ Downloading (approx. 20 mins.)
If you choose not to download, press "EXIT".

■ To update automatically

Set "Auto Update Search in Standby" to "On" (p. 29)

If there is a new version software being broadcast, the TV will download this automatically.

- The automatic updating sequence is carried out at 3:00 AM and 5:00 AM every night under the following conditions.
Standby (TV turned Off with the remote control)
Recording is not in progress.

■ To update manually

Perform "System Update Search Now" (p. 29)

If there is an update available, a notification banner is displayed.

- To download new software, press "OK" ➔ Downloading (approx. 20 mins.)
If you choose not to download, press "EXIT".

Note

- During downloading, do not turn Off the TV or touch any buttons.
(The TV is automatically activated after downloading is completed.)
- The message might be the notification beforehand. In this case, the schedule information (the date that the new version can be used) will appear. You can set the reservation for update. The update will not start when the TV is set to Off.

Data format for Card browsing

Photo : Still images recorded with digital still cameras compatible with JPEG files of DCF* and EXIF standards

Data format : Baseline JPEG (Sub-sampling 4:4:4, 4:2:2 or 4:2:0)

Max. number of files: 9,999

Image resolution : 160 × 120 to 10,000,000

- Compliant card type (maximum capacity): SDHC Card (16 GB), SD Card (2 GB), Multi Media Card (128 MB), miniSD Card (1 GB) (requiring miniSD adapter)

- If miniSD Card is used, insert / remove it together with the adapter.

- Check the latest information on the card type at the following website. (English only)

<http://panasonic.co.jp/pavc/global/cs/>

*DCF (Design rule for camera file system): Unified standard established by Japan Electronics and Information Technology Industries Association (JEITA).

Note

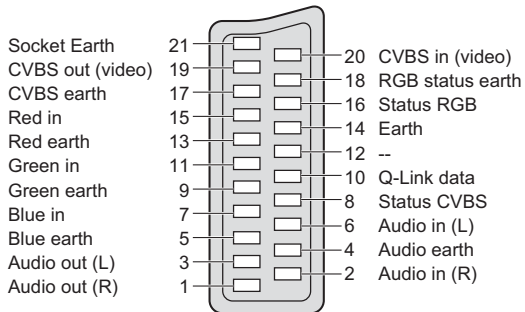
- A JPEG image modified with a PC may not be displayed.
- Images imported from a PC must be compatible with EXIF (Exchangeable Image File) 2.0, 2.1, and 2.2.
- Partly degraded files might be displayed at a reduced resolution.
- Only ".JPG" extension can be read by this TV.
- The folder and file names may be different depending on the digital camera used.
- Do not use two-byte characters or other special codes.
- The card may become unusable with this TV if the file or folder names are changed.

Technical Information

SCART, S-VIDEO and HDMI terminal information

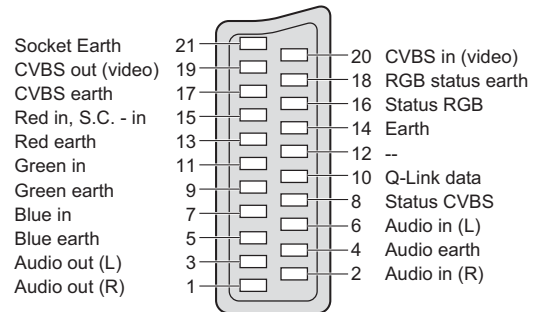
■ AV1 SCART terminal (RGB, VIDEO, Q-Link)

Suitable inputs for AV1 include RGB (Red / Green / Blue).

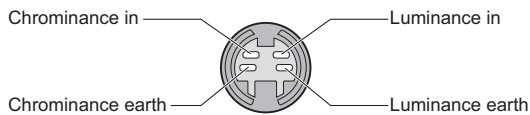


■ AV2 SCART terminal (RGB, VIDEO, S-VIDEO, Q-Link)

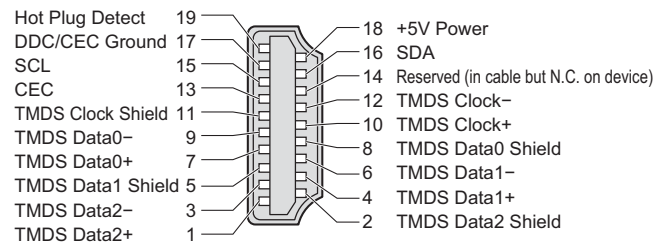
AV2 - Pins 15 and 20 are dependent on AV2 S-VHS / VIDEO switching.



■ AV3 S-VIDEO 4 pin terminal



■ HDMI terminal



PC connection

A PC may be connected to this TV so that the PC screen is displayed and sound is heard from the TV.

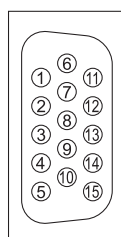
- PC signals that can be inputted: Horizontal scanning frequency 31 to 69 kHz; vertical scanning frequency 59 to 86 Hz (more than 1,024 signal lines could result in incorrect display of the image).
- A PC adapter is not necessary for the DOS/V-compliant D-sub 15-pin connector.

Note

- Some PC models cannot be connected to this TV.
- When using PC, set the colour display quality of PC to the highest position.
- For details of the applicable PC signals, see below.
- Max. display resolution

Aspect	4:3	1,440 × 1,080 pixels
	16:9	1,920 × 1,080 pixels

- D-sub 15-pin connector signal



Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	R	⑥	GND (Ground)	⑪	NC (not connected)
②	G	⑦	GND (Ground)	⑫	NC (not connected)
③	B	⑧	GND (Ground)	⑬	HD
④	NC (not connected)	⑨	NC (not connected)	⑭	VD
⑤	GND (Ground)	⑩	GND (Ground)	⑮	NC (not connected)

Input signal that can be displayed

COMPONENT (Y, P_B, P_R), HDMI

* Mark: Applicable input signal

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

PC (D-sub 15P)

Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)
640 × 400 @70 Hz	31.47	70.07
640 × 480 @60 Hz	31.47	59.94
640 × 480 @75 Hz	37.50	75.00
800 × 600 @60 Hz	37.88	60.32
800 × 600 @75 Hz	46.88	75.00
800 × 600 @85 Hz	53.67	85.06
852 × 480 @60 Hz	31.44	59.89
1,024 × 768 @60 Hz	48.36	60.00
1,024 × 768 @70 Hz	56.48	70.07
1,024 × 768 @75 Hz	60.02	75.03
1,024 × 768 @85 Hz	68.68	85.00
1,280 × 1,024 @60 Hz	63.98	60.02
1,366 × 768 @60 Hz	48.39	60.04
Macintosh13" (640 × 480)	35.00	66.67
Macintosh16" (832 × 624)	49.73	74.55
Macintosh21" (1,152 × 870)	68.68	75.06

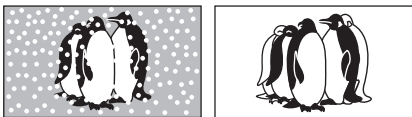
Note

- Signals other than above may not be displayed properly.
- The above signals are reformatted for optimal viewing on your display.
- Applicable input signal for PC is basically compatible to VESA standard timing.
- PC signal is magnified or compressed for display, so that it may not be possible to show fine detail with sufficient clarity.

FAQs

Before requesting service or assistance, please follow these simple guides to resolve the problem. If the problem still persists, please contact your local Panasonic dealer for assistance.

White spots or shadow images (noise)



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

Neither image nor sound is produced

- Is the TV in "AV mode"?
- Is the mains lead plugged into the socket outlet?
- Is the TV turned On?
- Check Picture Menu (p. 24) and volume.
- Check all required SCART cables and connections are firmly in place.


Auto aspect

- Auto aspect is designed to provide you with the best aspect ratio to use to fill your screen. For user control please see p. 48.

S-Video / black and white picture

- Using AV button please confirm your selection is S-Video i.e. AV2/S (p. 20).

On Screen messages - I.e. EC/AV1

- You can simply clear these →  Press again to redisplay.

No DVB programmes shown after Auto Setup

- Check the DVB transmitter.
- Adjust the direction of the aerial to another transmitter installed nearby.
- Check the analogue broadcast. If the image quality is poor, check the aerial and consult your nearest dealer.

An error message appears

- Follow the message's instructions.
- If the problem persists, contact the authorized Service Centre.

To customer using indoor aerial

In order to enjoy a good quality DVB image, it is important to receive a good quality DVB signal. For this purpose check "DVB Signal Condition" in Tuning Menu (p. 33). A level of at least 5 is required in order to provide a good picture. It may be necessary to adjust the position and direction of the aerial to achieve the best possible result.



Q-Link function does not work

- Please confirm SCART cable and connection. Also please set "AV1 / AV2 out" in the Setup Menu (p. 26).

"VIERA Link" function does not work and an error message appears

- Confirm the connection.
- Turn the connected equipment on and then switch the TV on. (p. 42)

Recording does not start immediately

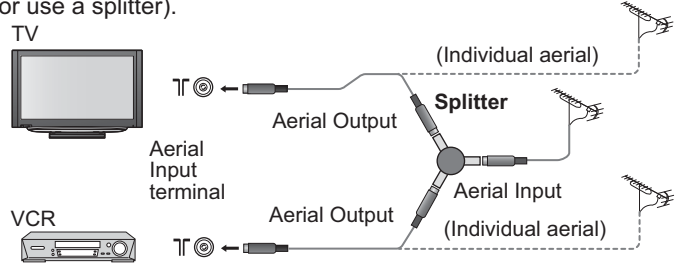
- Check the settings of the recorder. For details, read the manual of the recorder.

Permanently lit spots on screen

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

Contrast is reduced

- Contrast is lowered in the following conditions without any user operation for a few minutes:
 - no signal in DVB or AV mode
 - selected locked programme
 - selected invalid programme
 - selected radio service
 - displayed menu
 - Thumbnail or still picture in SD Card mode

	Problem	Actions
Screen	Chaotic image, noisy	<ul style="list-style-type: none"> ● Set "P-NR" in the Picture Menu (to remove noise). (p. 24) ● Check nearby electrical products (car, motorcycle, fluorescent lamp).
	No image can be displayed	<ul style="list-style-type: none"> ● Is "Colour" or "Contrast" in the Picture Menu set to the minimum? (p. 24) ● Check Colour System. (p. 33)
	Blurry or distorted image (no sound or low volume)	<ul style="list-style-type: none"> ● Reset programme. (p. 33)
	Unusual image is displayed	<ul style="list-style-type: none"> ● Turn off the TV with Mains power On / Off switch, then turn it On again.
Sound	No sound is produced	<ul style="list-style-type: none"> ● Is "Sound mute" active? (p. 9) ● Is the volume set to the minimum?
	Sound level is low or sound is distorted	<ul style="list-style-type: none"> ● Sound signal reception may be deteriorated. ● Set "MPX" (p. 25) in the Sound Menu to "Mono". (Analogue only)
	Whirling sound is heard	<ul style="list-style-type: none"> ● The sound is from built-in cooling fan (not a sign of faulty operation).
DVB	<ul style="list-style-type: none"> ● Due to the digital reception technologies involved, quality of the DTV signals may be relatively low in some cases, despite good reception of analogue programmes. 	
	Unable to receive signals with a high-performance aerial	<ul style="list-style-type: none"> ● Install an aerial individually for the TV and VCR (or use a splitter). 
	Interference or frozen / disappearing image in DVB	<ul style="list-style-type: none"> ● Check "DVB Signal Condition". (p. 33) If "Signal Quality" or "Signal Strength" are displayed in red, check aerial. If problem persists, consult your local Panasonic dealer. ● Turn the TV off with the Mains power On / Off switch, then turn it On again.
HDMI	Sound is unusual	<ul style="list-style-type: none"> ● Set the sound setting of the connected equipment to "2ch L.PCM". ● Check the "HDMI1 / 3 Input" setting in the Sound Menu. (p. 25) ● If digital sound connection has a problem, select analogue sound connection. (p. 48)
	Pictures from external equipment are unusual when the equipment is connected via HDMI	<ul style="list-style-type: none"> ● Is the HDMI cable connected properly? (p. 46) ● Turn Off the TV and equipment, then turn them On again. ● Check an input signal from the equipment. (p. 51) ● Use an equipment compliant with EIA/CEA-861/861B.
Other	TV goes into "Standby mode"	<ul style="list-style-type: none"> ● Off Timer function is activated. ● The TV enters "Standby mode" about 30 mins. after analogue broadcasting ends.
	The remote control does not work	<ul style="list-style-type: none"> ● Are the batteries installed correctly? (p. 6) ● Has the TV been switched On?

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- Macintosh is a registered trademark of Apple Inc., USA.
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Trade Mark of the DVB Digital Video Broadcasting Project (1991 to 1996)
TH-42PZ85EA Declaration of Conformity No. 5785, 23 June 2008
TH-46PZ85EA Declaration of Conformity No. 5784, 23 June 2008

Specifications

		TH-42PZ85EA	TH-46PZ85EA	
Power Source		AC 220-240 V, 50 / 60 Hz		
Power Consumption	Average use	385 W	470 W	
	Standby condition	0.4 W (Without monitor out recording) 20 W (With monitor out recording)		
Display panel	Aspect Ratio	16:9		
	Visible screen size	106 cm (diagonal) 922 mm (W) × 518 mm (H)	117 cm (diagonal) 1,019 mm (W) × 573 mm (H)	
	Number of pixels	2,073,600 (1,920 (W) × 1,080 (H)) [5,760 × 1,080 dots]		
Sound	Speaker	160 mm × 42 mm × 2 pcs, 6 Ω		
	Audio Output	20 W (10 W + 10 W), 10% THD		
	Headphones	M3 (3.5 mm) stereo mini Jack × 1		
PC signals		VGA, SVGA, XGA SXGA (compressed) Horizontal scanning frequency 31 - 69 kHz Vertical scanning frequency 59 - 86 Hz		
Receiving Systems / Band name		PAL B, G, H, I, SECAM B, G, SECAM L / L' VHF E2 - E12 VHF H1 - H2 (ITALY) VHF A - H (ITALY) UHF E21 - E69 CATV (S01 - S05) CATV S1 - S10 (M1 - M10) CATV S11 - S20 (U1 - U10) CATV S21 - S41 (Hyperband)		
		PAL D, K, SECAM D, K VHF R1 - R2 VHF R3 - R5 VHF R6 - R12 UHF E21 - E69		
		PAL 525/60 Playback of NTSC tape from some PAL Video recorders (VCR) DVB Digital terrestrial services via VHF / UHF aerial input. M.NTSC Playback from M. NTSC Video recorders (VCR) NTSC (AV input only) Playback from NTSC Video recorders (VCR)		
		● TV signals may not be received in some areas.		
Aerial - Rear		VHF / UHF		
Operating Conditions		Temperature : 0 °C - 35 °C Humidity : 20 % - 80 % RH (non-condensing)		
Connection Terminals	AV1 (Scart terminal)	21 Pin terminal (Audio/Video in, Audio/Video out, RGB in, Q-Link)		
	AV2 (Scart terminal)	21 Pin terminal (Audio/Video in, Audio/Video out, RGB in, S-Video in, Q-Link)		
	AV3	VIDEO	RCA PIN Type × 1	1.0 V[p-p] (75 Ω)
		S-VIDEO	Mini DIN 4-pin	Y:1.0 V[p-p] (75 Ω) C:0.286 V[p-p] (75 Ω)
		AUDIO L - R	RCA PIN Type × 2	0.5 V[rms]
	COMPONENT	VIDEO	Y	1.0 V[p-p] (including synchronization)
		AUDIO L - R	P_B, P_R	±0.35 V[p-p]
	Others	HDMI1 / 2 / 3	TYPE A Connectors	● This TV supports "HDMI Control 3" function.
		PC	HIGH-DENSITY D-SUB 15PIN	R,G,B/0.7 V[p-p] (75 Ω) HD, VD/TTL Level 2.0 - 5.0 V[p-p] (high impedance)
		Card slot	SD Card slot × 1	
	Output	AUDIO L - R	RCA PIN Type × 2	0.5 V[rms] (high impedance)
DIGITAL AUDIO OUT		PCM / Dolby Digital, Fiber optic		
Dimensions (W × H × D)		1,064 mm × 723 mm × 327 mm (With Pedestal) 1,064 mm × 674 mm × 92 mm (TV only)	1,168 mm × 792 mm × 387 mm (With Pedestal) 1,168 mm × 737 mm × 93 mm (TV only)	
Mass		34.0 kg Net (With Pedestal) 30.0 kg Net (TV only)	39.0 kg Net (With Pedestal) 35.0 kg Net (TV only)	

Note

- Design and Specifications are subject to change without notice. Mass and Dimensions shown are approximate.
- This equipment complies with the EMC standards listed below.
EN55013, EN61000-3-2, EN61000-3-3, EN55020, EN55022, EN55024.
- Pedestal: ST-42R3-W2 / ST-50R3-W2 (For safety approval)

Information for Users on Collection and Disposal of Old Equipment and used Batteries



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste. For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.

By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.



[Information on Disposal in other Countries outside the European Union]

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

Cd

Customer's Record

The model number and serial number of this product may be found on its rear panel. You should note this serial number in the space provided below and retain this book, plus your purchase receipt, as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

Model Number _____

Serial Number _____

Matsushita Electric Industrial Co., Ltd.

Web Site : <http://www.panasonic-europe.com>

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