Panasonic

Operating Instructions
LCD TV

Model No. **TH-L37X10K**
TH-L37X10M
TH-L37X10R
TH-L37X10S
TH-L37X10X

VIERA

VIERA IMAGE VIEWER

HDMI HIGH-DEFINITION MULTIMEDIA INTERFACE

VIERA Link

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.

English

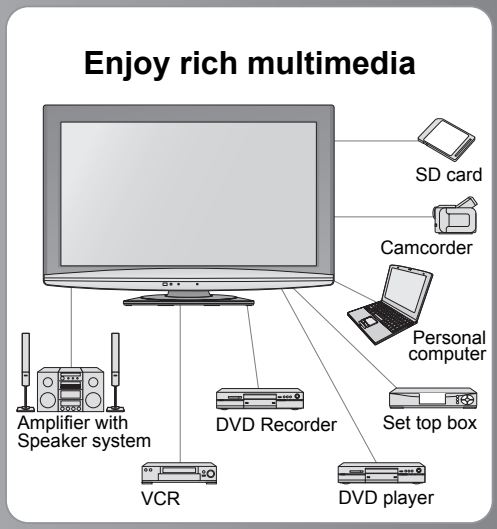
SN
TQB4GC0246

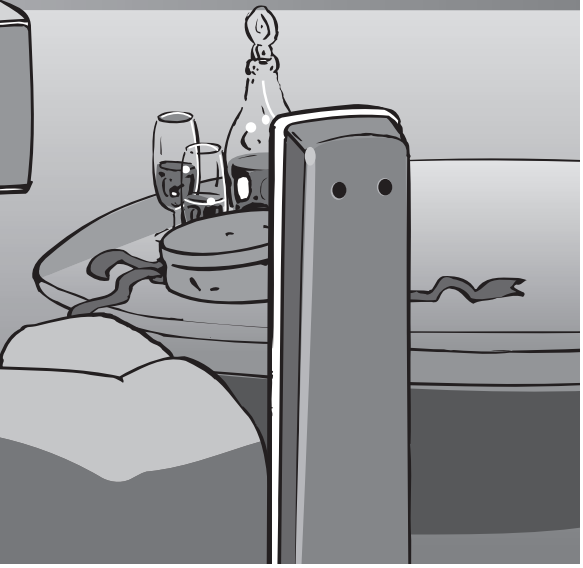
Turn your own living room into a movie theatre!

Experience an amazing level of multi-

Sharp pictures with HDMI terminal
Create home theatre and DVD recorder link-ups with “VIERA Link” without complicated settings!

media excitement





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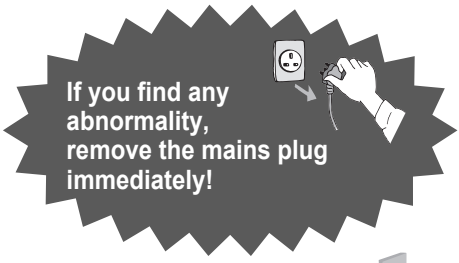
Safety Precautions

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.
- Do not touch the mains plug with a wet hand. This may cause 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.



AC AUTO 110-240 V, 50/60 Hz
(TH-L37X10R only:
AC Single 220-240 V, 50/60 Hz)

- Mains plug types vary between countries.

Power Source

- This TV is designed to operate on AC AUTO 110-240 V, 50/60 Hz. (TH-L37X10R only: AC Single 220-240 V, 50/60 Hz)

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

This appliance is intended for use in tropical climates

When cleaning the TV, remove the mains plug

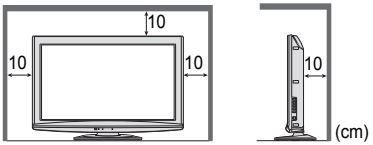
- Cleaning an energized TV may cause electrical shock.

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.

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 surface where the TV is set.
- 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.

Auto power standby function

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

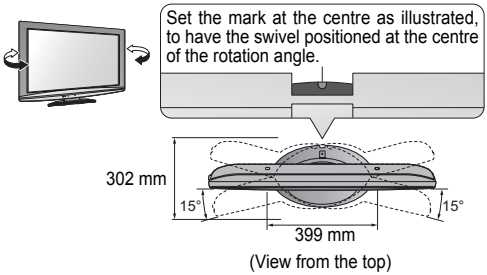
Keep the TV away from these types of equipment

- 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.

Transport only in upright position

Adjust the LCD 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.



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.

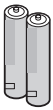
Accessories / Options

Standard accessories

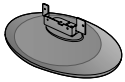
Check that you have the accessories and items shown

Remote Control
- N2QAYB000370
- N2QAYB000399

Batteries for the Remote Control (2)
- R6 (AA)



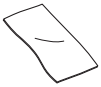
Pedestal
- TBL4GA0015



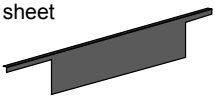
Assembly screw for Pedestal (4)

M4

Cleaning cloth



Pedestal hole cover sheet



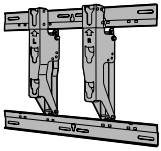
☐ Operating Instructions

Caution

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
- TY-WK3L2RW

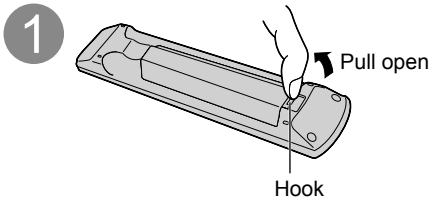


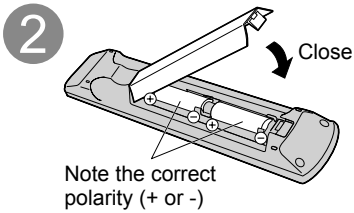
Please contact your nearest Panasonic dealer to purchase the recommended wall-hanging bracket. For additional details, please refer to the wall-hanging bracket installation manual.

WARNING!

- Failure to use a Panasonic bracket or choosing to mount the TV yourself will be done at the risk of the consumer.
  Any damage resulting from not having a professional installer mount your TV will void your warranty.
- Always be sure to ask a qualified technician to carry out set-up.
  Incorrect fitting may cause equipment to fall, resulting in injury and product damage.
- Do not mount the TV directly below ceiling lights (such as spotlights, floodlights or halogen lights) which typically give off high heat. Doing so may warp or damage plastic cabinet parts.

Installing remote's batteries

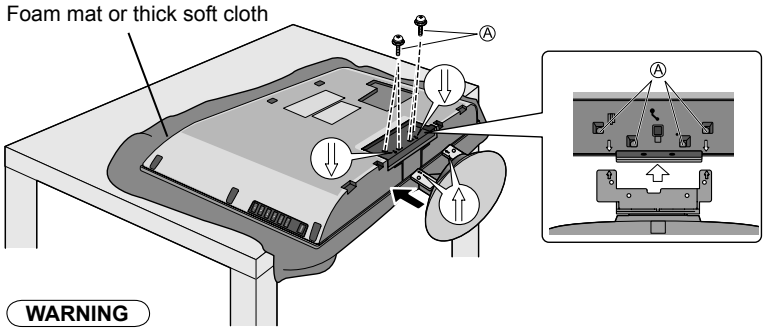




Caution

- 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 to TV



- Fix securely with assembly screws Ⓐ. (Total 4 screws)
- Tighten screws firmly.

WARNING

- Always be sure to ask a qualified technician to carry out set-up. Incorrect fitting may cause equipment to fall, resulting in injury and product damage.

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.

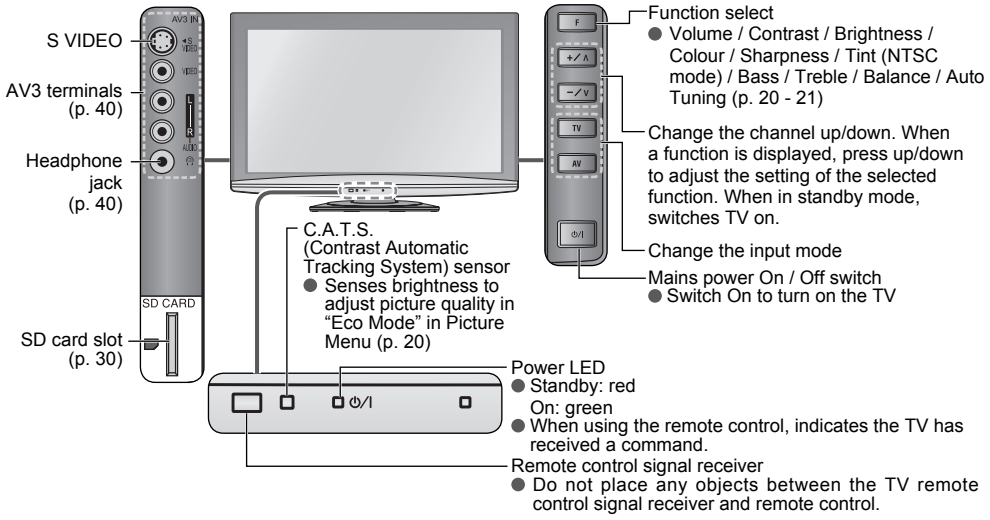
- If you use the pedestal when it is physically damaged, personal injury may result. Contact your nearest Panasonic Dealer immediately.

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

- If sufficient care is not 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.

Identifying Controls

TV



Identifying Controls

Remote Control

Standby On / Off switch
- Switches TV On or Off standby

Stereo / Bilingual Sound Selection (p. 43)

Main Menu (p. 18)
- Press to access Picture, Sound and Setup menus

Aspect (p. 13)
- Changes aspect ratio from Aspect Selection list
- Also possible by pressing this button repeatedly until you reach the desired aspect

VIERA TOOLS (p. 39)
- Displays functions of the linked equipment and SD card.

VIERA Link (p. 34)
- Press to access VIERA Link Menu

Cursor buttons
- Make selections and adjustments

Option menu (p. 13)
- Easy setting for viewing and sound options

Teletext (p. 14)
- Switches to teletext mode

Viewing a favourite teletext channel (p. 15)

Numeric buttons
- Changes channel and teletext pages
- When in Standby mode, switches TV On

Sound mute
- Switches sound mute On or Off

Volume Up / Down

Input mode selection
- PC - switches to PC input mode (p. 29)
- TV - switches to TV mode (p. 12)
- AV - switches to AV input mode from Input Selection list (p. 16)

Off timer (p. 13)
- Turns the TV off automatically after a fixed period of time

Surround (p. 20)
- Switches surrounding sound setting

EXIT
- Returns to the normal viewing screen

SD Card (p. 30)
- Switches to SD Card viewing mode

OK
- Confirms selections and choices
- Press after selecting channel positions to quickly change channel

Return
- Returns to the previous menu

Coloured buttons
- Used for the selection, navigation and operation of various functions

Hold
- Freeze / unfreeze picture (p. 12)
- Holds the current teletext page (teletext mode) (p. 15)

Index (p. 15)
- Returns to the teletext index page (teletext mode)

Programme Information (p. 12)

Channel Up / Down
- Selects channel in sequence

VCR / DVD Panasonic equipment operations (p. 17)

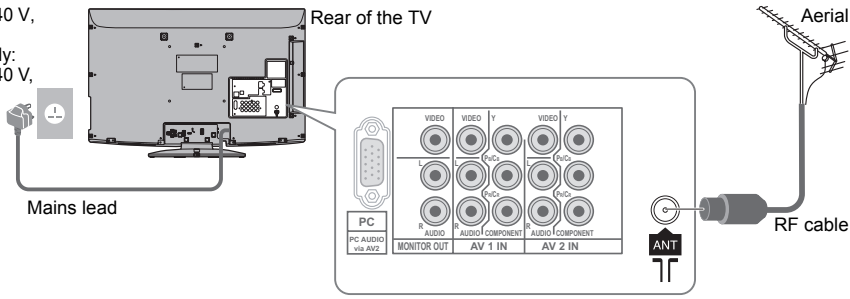
Basic Connection

External equipment and cables shown are not supplied with this TV.
Please ensure that the TV 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.

Connecting aerial

TV only

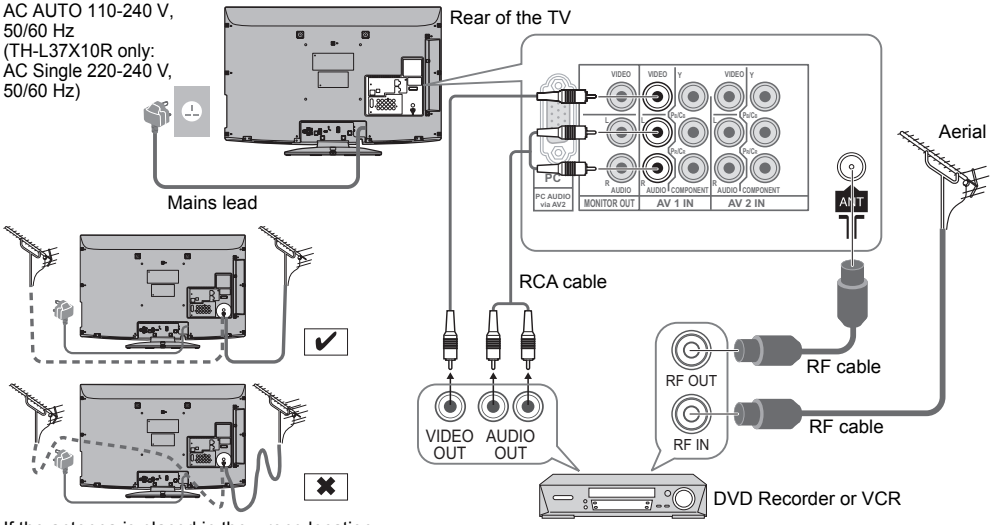
AC AUTO 110-240 V, 50/60 Hz
(TH-L37X10R only: AC Single 220-240 V, 50/60 Hz)



Connecting DVD Recorder / VCR

TV, DVD Recorder or VCR

AC AUTO 110-240 V, 50/60 Hz
(TH-L37X10R only: AC Single 220-240 V, 50/60 Hz)



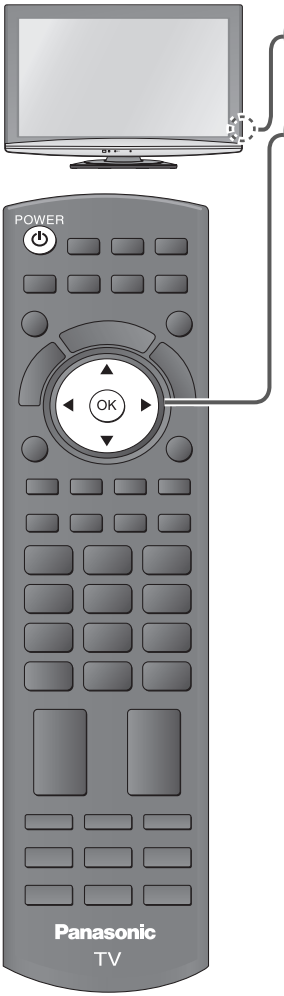
If the antenna is placed in the wrong location, interference might happen.

Note

- Do not put the RF cable close to the mains lead to avoid noise.
- Do not place the RF cable under the TV.
- To obtain optimum quality picture and sound, an Aerial, the correct cable (75 Ω coaxial) and the correct terminating plug are required.
- If a communal Aerial system is used, you may require the correct connection cable and plug between the wall Aerial socket and the TV.
- Your local Television Service Centre or dealer may be able to assist you in obtaining the correct Aerial system for your particular area and the accessories required.
- Any matters regarding Aerial installation, upgrading of existing systems or accessories required, and the costs incurred, are the responsibility of you, the Customer.
- VIERA Link connection ➡ p. 33
- Read the manual of the equipment too.

Auto Tuning

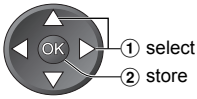
Search and store TV channels automatically.
These steps are not necessary if the setup has been completed by your local dealer.



1 Plug the TV into mains socket and switch On

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

2 Select your language



3 Select your area

- CATV/Other :
  Press OK ➡ displays sub menu

*1) Refer to the table below or the display, to select your area.

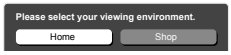
Asia / W. Europe	Malaysia, Singapore, Thailand, India, Kuwait, United Arab Emirates, Saudi Arabia, Iran, etc.
CIS /E. Europe	CIS Countries, Viet Nam, etc.

4 Start Auto Tuning

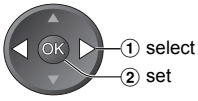
OK

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

5 Select the viewing environment



- "Home" is the recommended mode for viewing at home. Select "Home" for optimal picture / power consumption.
  "Shop" is for in-store display.
  Home: "Viewing Mode" is set as "Normal". (p. 20)
  Shop: "Viewing Mode" is set as "Dynamic". (p. 20)



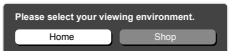
Auto Tuning is complete

If you select "Shop" by mistake

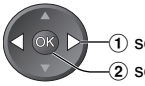
Return to the "Home" or "Shop" Selection menu

RETURN

Select "Home"



Auto Tuning is complete

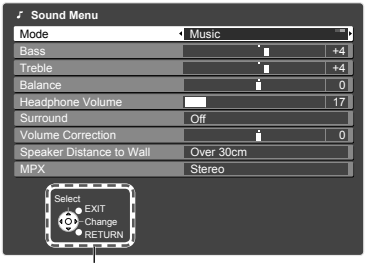


- Once you press the OK button in this menu, the TV is set to Shop mode.
  Please reset all settings to set to "Home" mode.
  ➡ "Shipping Condition" (p. 28)

Using the On-Screen Displays

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

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



On-screen operation guide

How to use remote control

MENU — Open the main menu

Move the cursor / select the menu

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

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

RETURN — Return to the previous menu

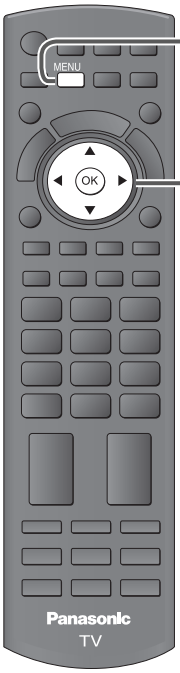
EXIT — Exit the menu system and return to the normal viewing screen

Note

- To edit channels
  ➡ “Editing Channels” (p. 24)
- If tuning have failed ➡ “Tuning Channels” (p. 26).
- To reset all settings ➡ “Shipping Condition” (p. 28)
- 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.

Language Setting

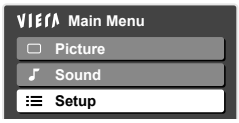
You can change language for on-screen displays.

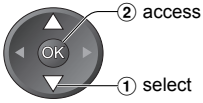


1 Display the menu

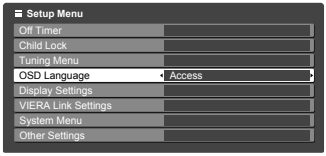
MENU

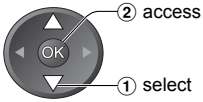
2 Select “Setup”



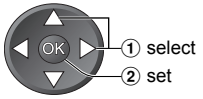


3 Select “OSD Language”

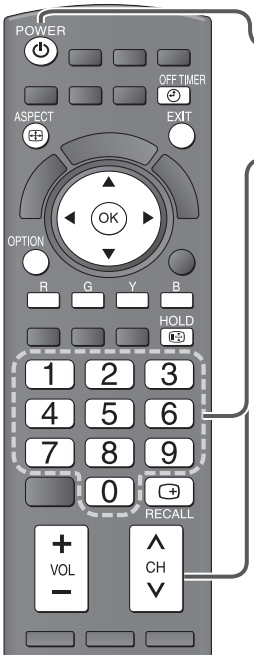




4 Select the language



Watching TV



1 Turn power on

POWER

- Mains power On / Off switch should be On. (p. 7)

2 Select a channel

CH up / down or 1 2 3 / 4 5 6 / 7 8 9 / 0

- To select the two-digit channel number, e.g. 39
  ➡ 3 ➡ 9 (in a short time)
- If one or two-digit channel number
  ➡ OK ➡ quickly changes the channel

Note

- When the TV is switched to standby, there will be a clicking sound after a short delay. This is normal.

Other useful functions

Hold

HOLD

Freeze / unfreeze picture

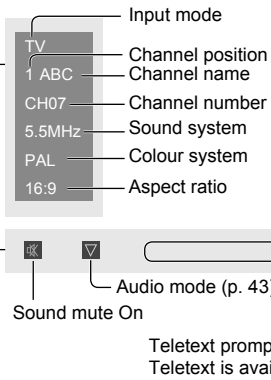
Display information banner

RECALL

Display information banner

- Also appears when changing channels.

- To set display timeout
  ➡ "Banner Display Timeout" (p. 21)



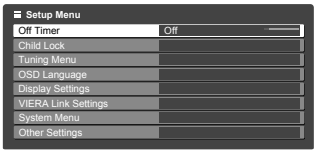
Note

- Colour system will not be displayed if it is set to "Auto".

Off Timer

Turn the TV off automatically after a fixed period of time (Off / 15 / 30 / 45 / 60 / 75 / 90 minutes)

OFF TIMER Press repeatedly to set the time or MENU

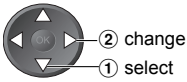


Select “Off Timer” and set the time

- To cancel ➡ Set to “0”, set to “Off” or turn the TV off.
- To display the remaining time ➡ Information banner
- When the remaining time is within 3 minutes, the remaining time will flash on screen.

Display the selectable settings for the current programme

OPTION **Check or change the current programme status instantly**



Change the settings

Channel Colour Set
Sets colour depth
Teletext Character Set
Sets the teletext language
➡ Setup Menu (p. 21)

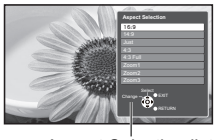
MPX
Select Stereo / Mono ➡ Sound Menu (p. 20)
Volume Correction
Adjusts volume of individual programme or input mode

Note

- Also possible to change the settings in Menu list (p. 20 and p. 21).

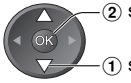
Change aspect ratio

ASPECT **Change the aspect ratio**



Aspect Selection list

Enjoy viewing the picture at its optimum size and aspect.

ASPECT Display Aspect Selection list ➡ 

While the list is displayed, select the mode

- To change the mode using the ASPECT button only
  ➡ ASPECT Press repeatedly until you reach the desired mode

16:9

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

14:9

Displays the image at the standard “14:9” without distortion.

Just

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

4:3

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

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).

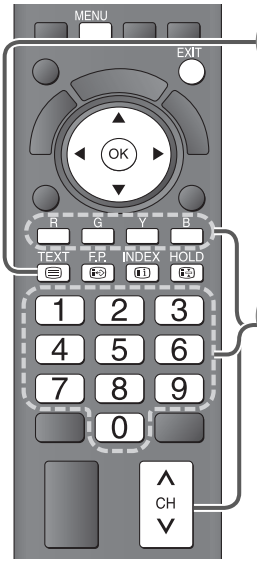
Note

- Only “16:9” and “4:3” are available in PC mode.
- Only “16:9” is available when “Viewing Mode” is set to “Game”.
- Not available in teletext mode.
- Aspect mode can be memorized separately for each input mode, SD (Standard definition) and HD (High definition) signals.

Viewing Teletext

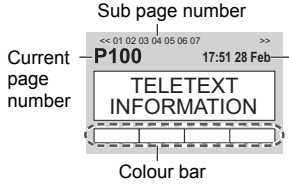
You can enjoy teletext broadcasting, including news, weather forecasts and subtitles, if this service is provided by the broadcasters.

To change mode ➡ “Teletext” in Setup Menu (p. 21)



1 Switch to Teletext

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



F.P. ● Pressing this button while watching TV programme directly accesses to the favourite page stored in “blue”.

2 Select the page (up to page 899)

1 2 3 4 5 6 7 8 9 0 or OK up down or CH or R G Y B (Corresponds to the colour bar)

To adjust contrast

MENU ➡ (Press three times) ➡ OK ➡ As the blue bar is displayed

To return to TV

TEXT or EXIT ➡

What is FASTEXT mode?

In FASTEXT 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 ➡ R G

To select among subject blocks ➡ B

To select next subject within the subject block

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

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. 15)

Using teletext conveniently

Reveal hidden data

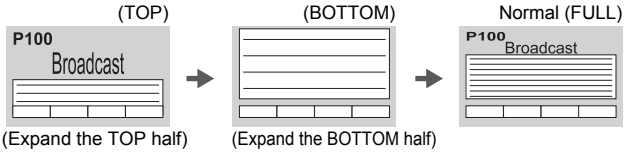
MENU ➡ R

Reveal hidden words e.g. quiz page answers

● **Re-hide** ➡ R

FULL / TOP / BOTTOM

MENU ➡ G



HOLD

HOLD **Stop automatic updating**

(If you wish to hold the current page without updating)

To resume ➡ HOLD

INDEX

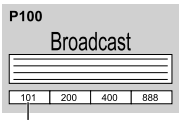
INDEX **Return to the main index page**

- FASTEXT mode only.

Store frequently viewed pages

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

Corresponding colour button (As page is displayed) ➡ OK press and hold



The number changes to white.

To change stored pages

➡ Colour button you want to change ➡ 1 2 3 4 5 6 7 8 9 0 Enter new page number ➡ OK press and hold

Call up a favourite page

F.P. **View a favourite page stored**

- Call up the page stored in “blue”.
- Factory setting is “P103”.

View in multiwindow

Watch TV and Teletext in two windows at once

- Operations can be made only in Teletext screen.
- Select Picture and text On or Off

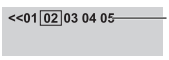
MENU (press twice) ➡ OK

To exit multi window ➡ TEXT

View sub page

View sub page (Only when teletext is more than one page)

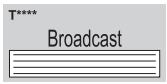
OK



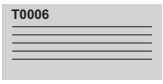
Appears at top of the screen

To view specific sub page

➡ MENU ➡ B



➡ 0 0 0 6 example: P6 Enter the 4-digit number ➡



- Sub pages:
  The number of sub pages varies depending on the broadcasters.
  It may take some time for searching, during which time you can watch TV.

Watch TV while waiting for update

View the TV picture while searching for a teletext page

Teletext automatically updates itself when new information becomes available.

MENU ➡ Y ➡

Appears when updating is completed ➡ Y ➡ View the updated page

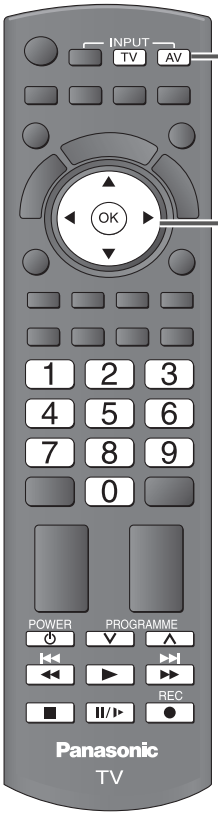
Changes to TV screen temporarily
(You cannot change the programme.)

- The news page provides a function that indicates arrival of latest news (“News Flash”).

Watching Videos and DVDs

Connect the external equipment (VCRs, DVD equipment, etc.) and you can watch the input.
- To connect the equipment ➡ p. 9

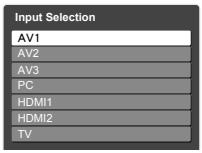
You can operate some functions of selected Panasonic external equipment with this remote control.

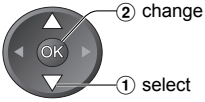


1 Display the Input Selection menu

AV

2 Select the input mode of the connected equipment





- You can also select the input using the AV button on 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. 22)

3 View

Displays the selected mode

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.

To return to TV ➡ TV

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

POWER	**Standby** Set to Standby mode / Turn on
▶	**Play** Playback videocassette / DVD
■	**Stop** Stop the operations
⏮ ◀◀	**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
⏭ ▶▶	**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
❚❚/▶	**Pause** Pause / Restart DVD: Press and hold to play at slow speed
PROGRAMME ∨ ∧	**Programme Up / Down** Select programme
REC ●	**Record** Start recording

How to change the code for each equipment

Each type of Panasonic equipment has its own remote control code.
Please change the code for each equipment you want to operate.
Press and hold POWER during the following operations

Enter the appropriate code
See table below
1 2 3 4 5 6 7 8 9 0 ➡ Press ■

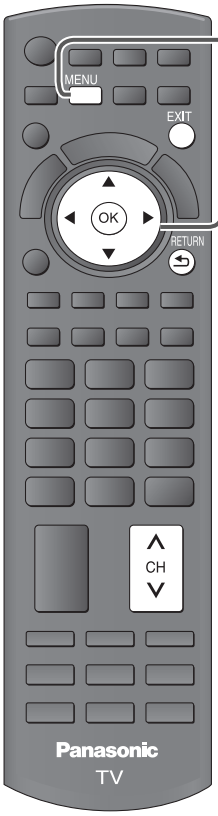
Type of equipment	Code
DVD Recorder / DVD Player	70 (default)
Player theatre / Blu-ray Disc theatre	71
VCR	72
VIERA Link compatible equipment ➡ “VIERA Link Control” (p. 37)	73

Note

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

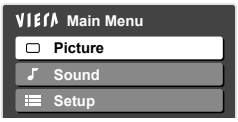


1 Display the menu

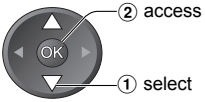
MENU

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

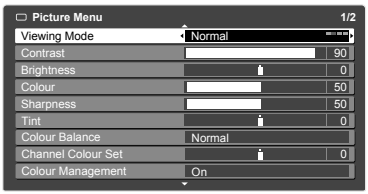
2 Select the menu



(example)

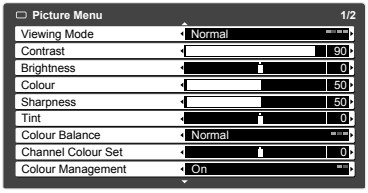


3 Select the item

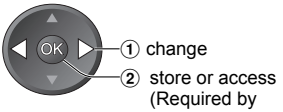


(example)

4 Adjust or select



(example)



To return to TV at any time

EXIT

To return to the previous screen

RETURN

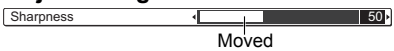
To change menu pages

CH ∧ up
CH ∨ down

Choose from among alternatives

Number and positions of alternatives

Adjust using the slide bar



Go to the next screen

Enter characters by free input menu

- To delete a character ➡ R
- To delete all characters ➡ B

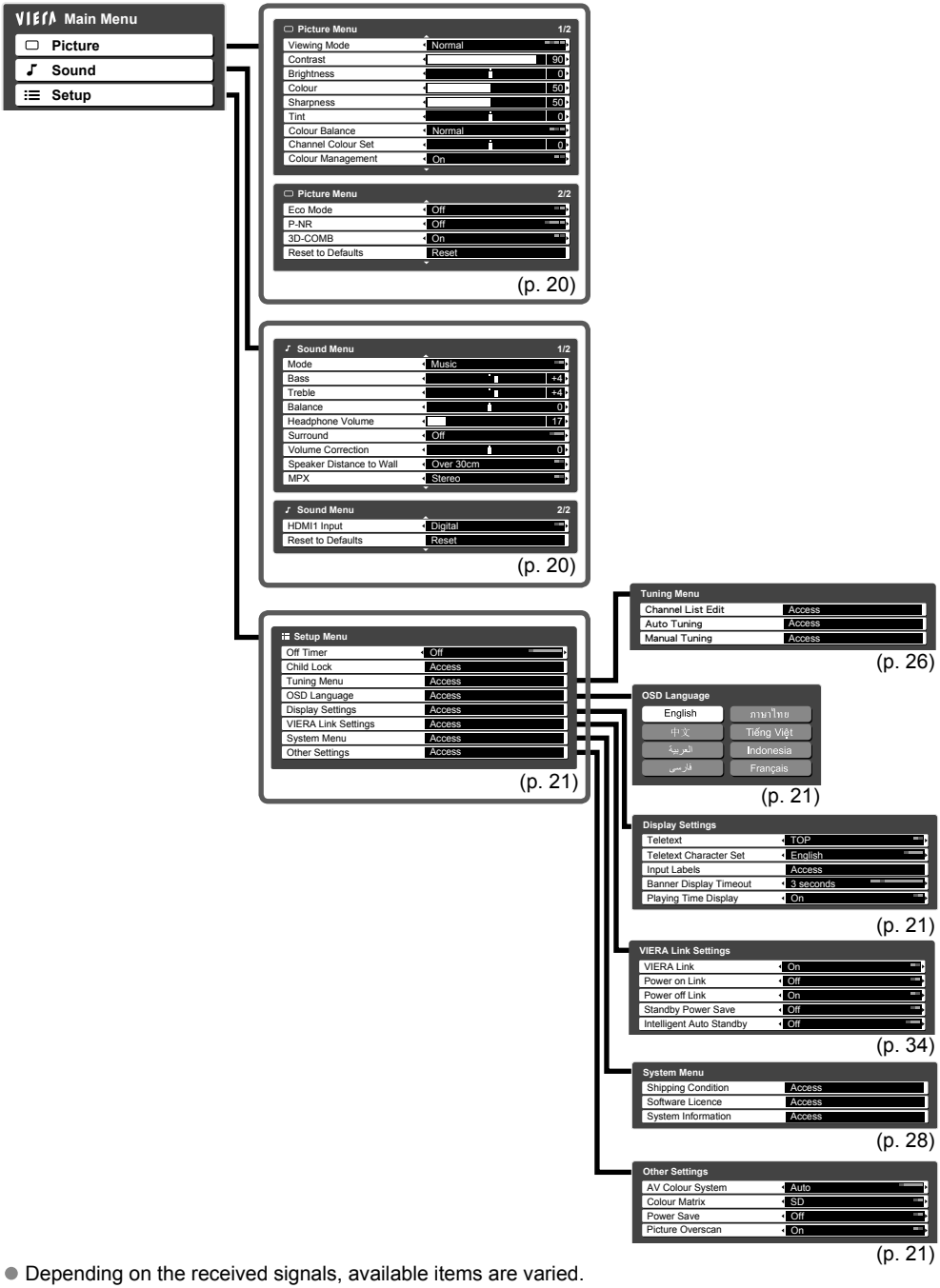
Every press changes the character by one. Leave it for a second to set the character, or press OK or any numeric button within a second.
See the table below for the corresponding characters for each numeric button.

Numeric buttons	Characters	Numeric buttons	Characters
1	. 1 ! : # + - * _ ( )	6	m n o 6 M N O
2	a b c 2 A B C	7	p q r s 7 P Q R S
3	d e f 3 D E F	8	t u v 8 T U V
4	g h i 4 G H I	9	w x y z 9 W X Y Z
5	j k l 5 J K L	0	Space 0

To reset the settings

- To reset the picture settings only
  ➡ "Reset to Defaults" in Picture Menu (p. 20)
- To reset the sound settings only
  ➡ "Reset to Defaults" in Sound Menu (p. 20)
- To reset all settings
  ➡ "Shipping Condition" in Setup Menu (p. 28)

Overview



● Depending on the received signals, available items are varied.

How to Use Menu Functions

Menu list

Menu	Item	Adjustments / Configurations (alternatives)
Picture	**Viewing Mode**	Basic picture mode **(Dynamic / Normal / Cinema / Game)** 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 Game : Game playing time is displayed only when connecting a game equipment ● 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 or Component / HDMI input signal reception only
	Colour Balance	Allows you to set the overall colour tone of the picture **(Cool / Normal / Warm)**
	Channel Colour Set	Colour density varying between broadcast channels can be adjusted to three levels for each reception channel ● Select the channel you want to adjust and set this function
	Colour Management	Automatically adjusts colours to vivid ones **(Off / On)** ● Not valid on PC signal
	Eco Mode	Adjusts picture settings automatically dependent on ambient lighting conditions **(Off / On)**
	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 S-Video, Component, PC, HDMI and SD Card
	Reset to Defaults	Press the OK button to reset the present Picture Menu to the default settings
Sound	**Mode**	Basic sound mode **(Music / Speech)** ● Set for each input signal
	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	Surround sound settings **(Off / V-Audio / V-Audio Surround)** V-Audio: Provides a dynamic enhancer to simulate improved spatial effects V-Audio Surround : Provides a dynamic enhancer of width and depth to simulate improved spatial effects ● Switching is also possible by the Surround button on the remote control (p. 8)
	Volume Correction	Adjusts volume of individual channel or input mode
	Speaker Distance to Wall	Adjusts the low frequency sound **(Over 30cm / Up to 30cm)** ● Over 30cm: Recommended when the back space between the TV and wall is over 30 cm ● Up to 30cm: Recommended when the back space between the TV and wall is within 30 cm
	MPX	Select stereo / monaural **(Mono / Stereo)** (p. 43) ● Normally : Stereo ● Stereo signal cannot be received : Mono ● M1/M2 : Available while mono signal is transmitted
	HDMI1 Input	Select to fit the input signal **(Digital / Analogue)** (p. 45) Digital: HDMI cable connection Analogue: HDMI-DVI adapter cable connection ● HDMI input mode only ● HDMI2 terminal is for digital signal only ● No setting for HDMI2 is available
	Reset to Defaults	Press the OK button to reset the present Sound Menu to the default settings

Menu list

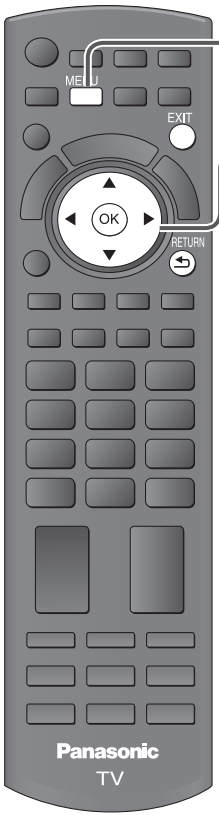
Menu	Item		Adjustments / Configurations (alternatives)
Setup	**Off Timer**		Sets the time the TV automatically turns Off **(Off / 15 / 30 / 45 / 60 / 75 / 90 minutes)** (p. 13)
	Child Lock		Locks a channel / AV input to prevent access to it (p. 23)
	Tuning Menu	**Channel List Edit**	Skips the unwanted channels / Edits channels (p. 25)
		Auto Tuning	Sets all TV channels automatically (p. 27)
		Manual Tuning	Sets the TV channels manually (p. 27)
	OSD Language		Changes language for on-screen displays **(English / 中文 / العربية / فارسی / ภาษาไทย / Tiếng Việt / Indonesia / Français)**
	Display Settings	**Teletext**	Teletext display mode **(TOP (FASTEXT) / List)** (p. 14)
		Teletext Character Set	Select teletext language **(English / CIS / E.Europe / Persian)**
		Input Labels	Labels or skips each input mode (p. 22)
		Banner Display Timeout	Sets how long the information banner stays on screen from 0 (No display) to 10 sec. in 1-sec. increments
		Playing Time Display	Displays the length of time in every thirty minutes for playing game **(Off / On)** ● When “Viewing Mode” is set to “Game”
	VIERA Link Settings	**VIERA Link**	Sets to use VIERA Link functions **(Off / On)** (p. 34) ● VIERA Link functions become available when “VIERA Link” is set to “On” (p. 33)
		Power on Link	Sets to use Power on Link function **(Off / On)** (p. 34)
		Power off Link	Sets to use Power off Link function **(Off / On)** (p. 34)
		Standby Power Save	Controls the power consumption in Standby mode of the connected equipment to reduce the consumption **(Off / On)** (p. 34)
		Intelligent Auto Standby	Makes unwatched or unused connected equipment go into Standby mode to reduce the power consumption **(Off / On (With reminder) / On (No reminder))** (p. 34)
	System Menu	**Shipping Condition**	Resets all settings, for example, when moving house (p. 28)
		Software Licence	Displays the software licence information
		System Information	Displays the system information of this TV
	Other Settings	**AV Colour System**	Selects optimum colour system based on video signals in AV mode **(Auto / PAL / SECAM / M.NTSC / NTSC)**
		Colour Matrix	Available only with 480p or 576p input on video signals in a natural colour from digital equipment connected to AV1/AV2 component or HDMI1 / HDMI2 terminals. Select SD or HD to adjust suitable colour parameters for SD (standard definition) or HD (high definition) ● SD: Input signal is a normal TV system ● HD: Input signal is a high definition system
		Power Save	Reduces brightness of picture to minimise power consumption **(Off / On)**
		Picture Overscan	Selects the screen area displaying the image **(Off / On)** On : Enlarges the image to hide the edge of the image Off : Displays the image in the original size ● Set to “On” if noise is generated on the edges of the image ● This function is available when aspect is set to “16:9” ● This function can be memorized separately for SD (Standard definition) and HD (High definition) signals

● A different menu will be displayed while PC or SD Card is used. (p. 29 and p. 31)
● Only available items can be selected.

Input Labels

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

● To select the input mode ➡ p. 16



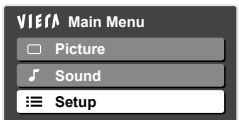
To return to TV

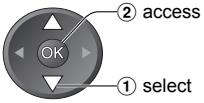
EXIT ➡

1 Display the menu

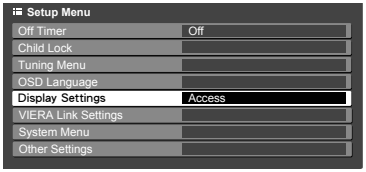
MENU

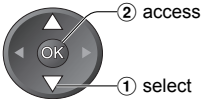
2 Select “Setup”



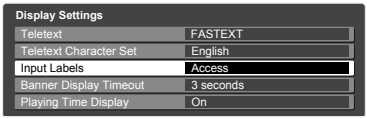


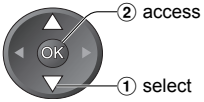
3 Select “Display Settings”



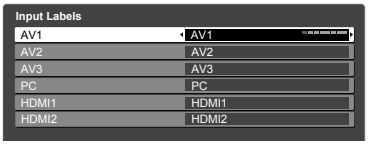


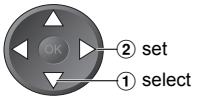
4 Select “Input Labels”





5 Select an input terminal and set



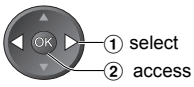


The labels you set will be displayed in “Input Selection” menu (p. 16) or banner.

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

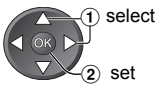
User input

You can name each input terminal freely.



Select “User input”

(maximum: ten characters)
You can set characters by using numeric buttons.
➡ p. 18



Set characters

Store

Control Channel Audience

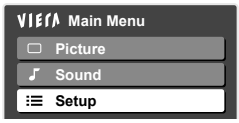
You can lock specific channels / AV input terminals and control who watches them.
When the locked channel / input is selected, a message appears; by entering the PIN number, you can watch it.

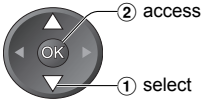
To return to TV ➡ EXIT

1 Display the menu

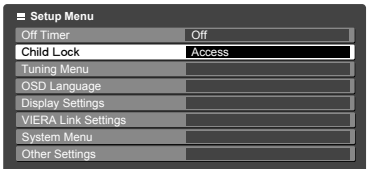
MENU

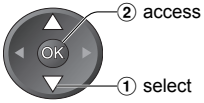
2 Select “Setup”





3 Select “Child Lock”





4 Set

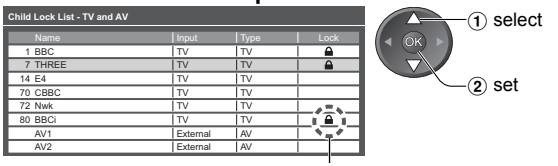
Control channel audience **Child Lock**

① Enter the PIN number (4 digits)

- 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”

③ Select the channel / input to be locked



Appears when the channel / input is locked

- To cancel
  ➡ Select the locked channel / input
  ➡ OK
- To lock all ➡ G
- To cancel all locks ➡ Y
- To jump to the next block of channels ➡ R

To change the PIN number

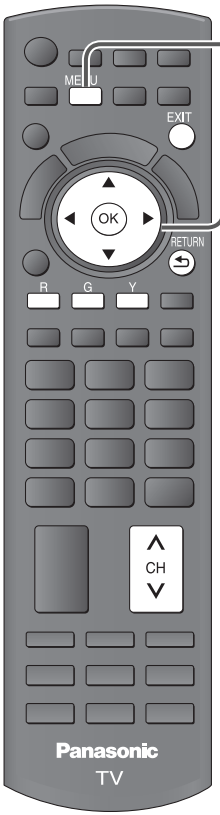
Select “Change PIN” in “Child Lock” and enter a new PIN number twice.

Note

- Setting “Shipping Condition” (p. 28) erases the PIN number and all settings.

Editing Channels

You can skip unwanted channels, etc.

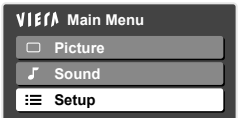


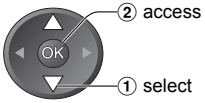
To return to TV ➡ EXIT

1 Display the menu

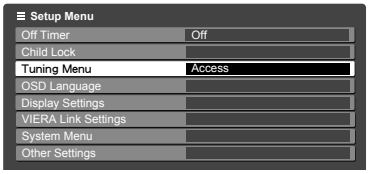
MENU

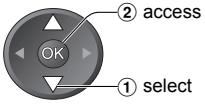
2 Select “Setup”



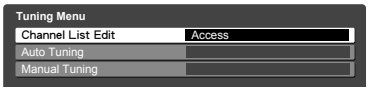


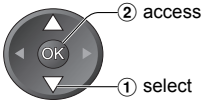
3 Select “Tuning Menu”





4 Select “Channel List Edit”



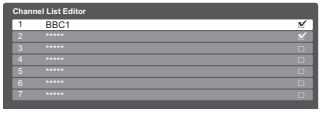


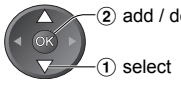
5 Set

Skip unwanted channels / Edit channels (Change name, Move) Channel List Editor

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

Select a channel and add / delete



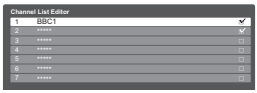


:add
:delete (skip)

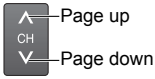
● To retune each channel (Manual Tuning) (p. 27)
➡ R

You can edit channels.
● If a VCR is connected only with the RF cable, edit “VCR”.

① Select a channel to edit

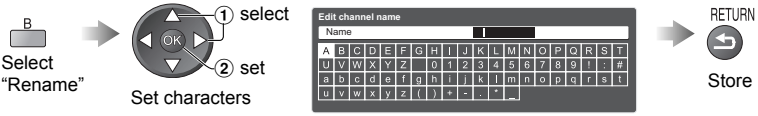


or



② Edit

To change the displayed name when selecting channels

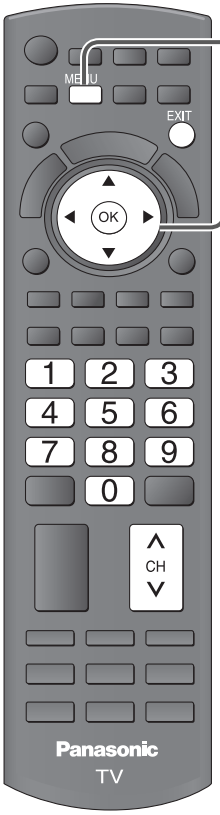


(maximum: five characters)
You can set characters by using numeric buttons. ➡ p. 18

To move channel position

Tuning Channels

You can retune all the TV channels when moving house.

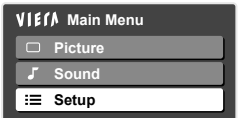


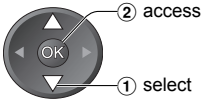
To return to TV ➡ EXIT

1 Display the menu

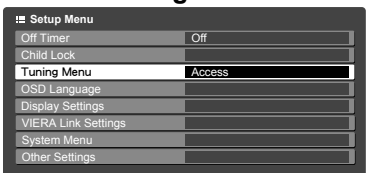
MENU

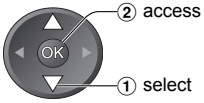
2 Select “Setup”



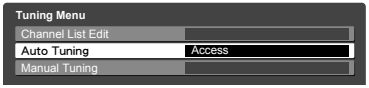


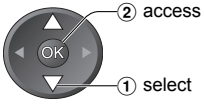
3 Select “Tuning Menu”





4 Select a function





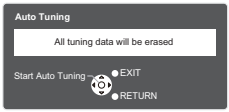
5 Set

Set all channels automatically **Auto Tuning**

Automatically retune all channels received in the area.

Start Auto Tuning

Access "Auto Tuning"



OK

Settings are made automatically

- All the previous tuning settings are erased.
- When the operation is completed, the channel at channel position "1" will be displayed.
- If tuning has not been done completely ➡ "Manual Tuning"

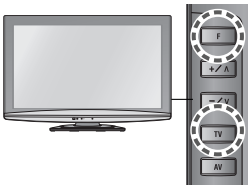
For Auto Tuning, using the buttons on the side panel of the TV (p. 7)

① Press repeatedly until "Auto Tuning" appears [F]

② Access "Auto Tuning" [TV]

③ Start "Auto Tuning" [TV]

- To return to TV ➡ [F]



Set channel manually **Manual Tuning**

Fine Tuning

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

Manual Tuning

Set channel manually after Auto Tuning.

- 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 channel position "0".

Select the channel position ➡ Select the channel ➡ Search and store

Sound System

Allows you to change the sound system used for a programme channel.
(4.5MHz / 5.5MHz / 6.0MHz / 6.5MHz)

Select the channel you want to adjust ➡ Set this function ➡ OK

Colour System

Lets you select the correct transmission standard for the transmission signal being received
(Auto / PAL / SECAM / M.NTSC / NTSC)

Select the channel you want to adjust ➡ Set this function ➡ OK

- Normally, select "Auto".

Restore Settings

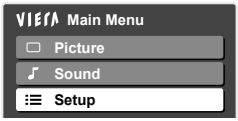
Resets the TV to its original condition, i.e. no channels tuned in.
All settings (channels, picture, sound quality, etc.) are reset.

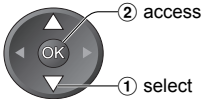
To return to TV ➡ EXIT

1 Display the menu

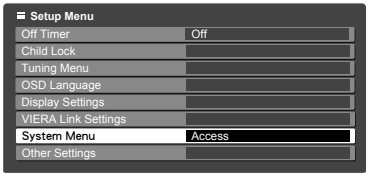
MENU

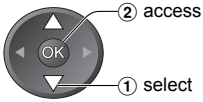
2 Select “Setup”



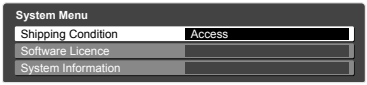


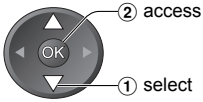
3 Select “System Menu”





4 Select “Shipping Condition”

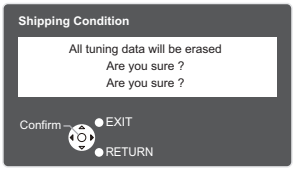




5 Set

Restore Settings | **Shipping Condition**

① Check the message and reset



OK

② Follow the on-screen instructions

- “Auto Tuning” will automatically start when Mains power On / Off switch is next turned On. (p. 10)

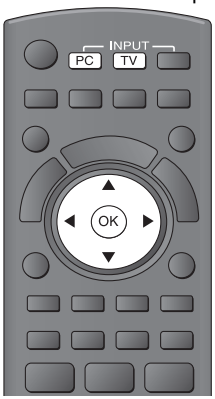
To re-tune TV channels only, e.g. after moving house

➡ “Auto Tuning” (p. 27)

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. 40



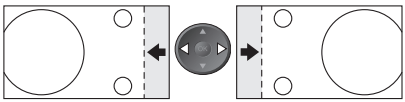
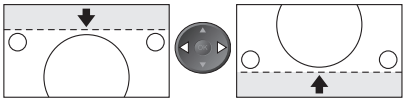
1 Select the PC input

PC ● Corresponding signals (p. 46)

2 To change the settings, see the table below

To return to TV ➡ TV

PC menu setting (changed as desired)

Menu	Item		Adjustments / Configurations (options)
Picture	Advanced PC Settings	R-Gain	Adjusts the white balance for red areas
		G-Gain	Adjusts the white balance for green areas
		B-Gain	Adjusts the white balance for blue areas
		Gamma	**(2.0 / 2.2 / 2.5)**
		Reset to Defaults	Press the OK button to reset to the default Picture settings
Setup	PC Setup	Input Resolution	Switches to a wide view ● VGA (640 x 480), WVGA (852 x 480 pixels), XGA (1,024 x 768), WXGA (1,280 x 768 / 1,366 x 768 pixels) ● Options change depending on signals ● If “H-freq.” or “V-freq.” is shown in red, the signals may not be supported.
		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	PC sync signal type **(H & V / On Green)** ● H & V : Horizontal and Vertical sync from your PC (Most common sync format) On Green : Sync on Green sync from your PC
		Reset to Defaults	Press the OK button to reset to the default Setup settings

● Other items ➡ p. 20 and p. 21.

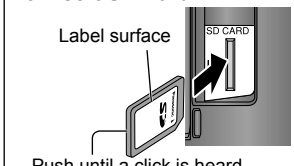
Viewing from SD Card

(VIERA IMAGE VIEWER)

Photo View: Still images recorded by digital cameras will be displayed.

- During the operation, no signals are output from any of the AV terminals.
- "Date" shows the date on which the recording was made by the digital camera. The file without record of the date is shown "****/**/**".
- For details on SD Cards ➡ p. 44

To insert SD Card



To remove SD Card

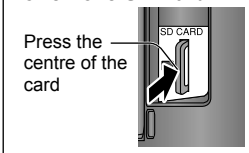


Photo View

1 Insert the SD Card

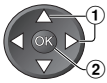
2 Enter SD mode (Photo View Mode)

OK

- All photos in SD Card are displayed by thumbnail.

3 Select a folder to display the thumbnail

(Folder view)

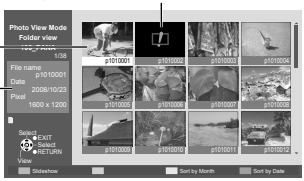


- The files which are not in a folder will be collected to the folder named "/".
- To display all the photos ➡ p. 31

4 Select a photo to be viewed

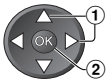
Error display
(images that could not be loaded, etc.)

Selected photo

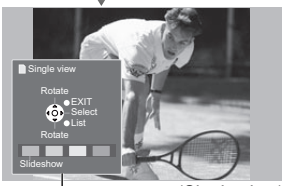


(Thumbnail)

Selected photo information is displayed



- Slide show ➡ p. 31
- To sort by date or month recorded ➡ p. 31



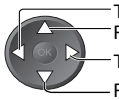
Operation guide

(Single view)

Displayed one at a time

- To display / hide the operation guide

RECALL



- To return to thumbnail ➡ RETURN

To return to the previous screen

➡ RETURN

To return to TV

➡ EXIT or SD CARD

Slideshow

Start Slideshow (operate in step ❹)

Select the photo for the first view

Start Slideshow

- To pause ➡
- To return to Single view ➡

Note

- Slideshow is done within the thumbnail.

Slideshow settings

Display the menu

Select “Viewing Setup”

Select the items and set

- Other items ➡ p. 20-21

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

To display all the photos

Display the thumbnail of all the photos in SD Card.

(Folder view)

G

(Thumbnail - All pictures)

To sort by date or month recorded

Display the list of groups sorted by the same date or the same month.

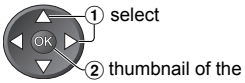
- The group of the photos without record of the date is shown as “Unknown”.

(Thumbnail)

Y

G

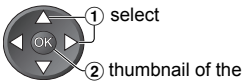
(Sort by Month)



B

G

(Sort by Date)



VIERA Link "HDAVI Control™"

Enjoy additional HDMI interoperability with Panasonic products which have "HDAVI Control" function. This TV supports "HDAVI Control 4" function.
Connections to the equipment (DIGA Recorder, HD Video Camera, Player theatre, Amplifier, etc.) with HDMI cable allow you to interface them automatically.
These features are limited to models incorporating "HDAVI Control" and "VIERA Link".

- 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 the equipment.
  About applicable Panasonic equipment, consult your local Panasonic dealer.

VIERA Link features and connections

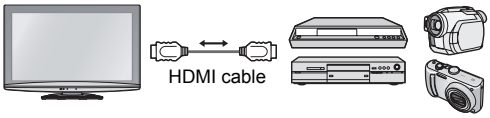
VIERA Link

Features \ Connected equipment with VIERA Link function	DIGA Recorder*1	DVD Player / Blu-ray Disc Player*1	HD Video Camera / LUMIX Camera*1	Player theatre*2	Blu-ray Disc theatre*2	Amplifier*2
Channel download	○*4	–	–	–	–	–
Easy playback	○	○	○	○*7	○*7	–
Power on link	○	○	○	○	○	–
Power off link	○	○	○	○	○	○
Reduce unnecessary power consumption in standby	○*5	○*5	–	–	○*5	–
Auto standby for unnecessary equipment	○*3	○*3	–	○*3 *8	○*3 *8	○*3
Pause Live TV programme	○*4 *6	–	–	–	–	–
Direct TV Recording	○*4	–	–	–	–	–
Control the menu of the connected equipment by VIERA remote control	○*3	○*3	○*3	○*3	○*3	–
Speaker control	–	–	–	○	○	○

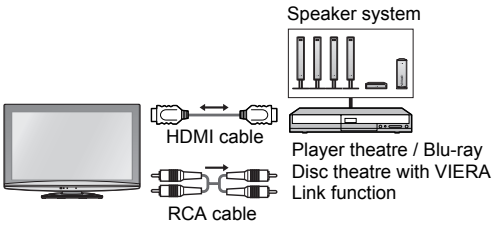
∗1: HDMI Connection only
∗2: HDMI and Audio out connections
∗3: available with the equipment which has "HDAVI Control 2 or later" function
∗4: available with the equipment which has "HDAVI Control 3 or later" function
∗5: available with the equipment which has "HDAVI Control 4" function
∗6: available with DIGA Recorder which has HDD
∗7: while playingback a disc
∗8: except for watching a disc

Connection

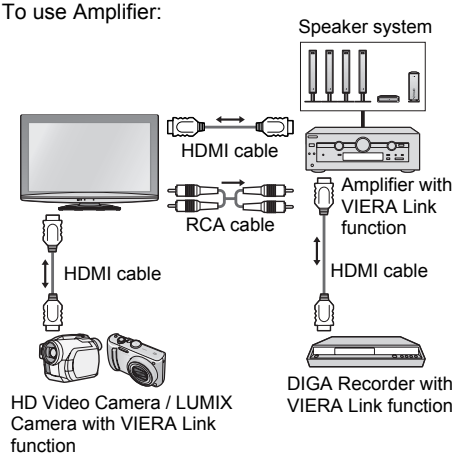
- To use DIGA Recorder / DVD Player / Blu-ray Disc Player / HD Video Camera / LUMIX Camera



- To use Player theatre / Blu-ray Disc theatre:



- To use Amplifier:



Note

- This function may not work properly depending on the connected equipment.
- For DIGA Recorder / DVD Player / Blu-ray Disc Player / HD Video Camera / LUMIX Camera with VIERA function, connect to HDMI1 or HDMI2 terminal via an HDMI cable.
- For Player theatre / Blu-ray Disc theatre / Amplifier, connect to HDMI1 terminal via an HDMI cable and/or RCA cable for audio output from the TV.
- 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)

VIERA Link "HDAVI Control™"

Preparations

- Connect the equipment supporting VIERA Link.
- 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.
- Set VIERA Link On in Setup Menu ➡ "VIERA Link Settings" ➡ "VIERA Link" (p. 21)
- Set up the TV ➡ **After connection, turn the equipment on and then switch the TV on. Select the input mode to HDMI1 or HDMI2 (p. 16), 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

Channel download

Channel setting can be downloaded to the recorder.

Easy playback

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

Power on link

Set Power on Link "On" in Setup Menu to use this function ➡ "Power on Link" (p. 18-19, 21)
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 "On" in Setup Menu to use this function ➡ "Power off Link" (p. 18-19, 21)
When the TV is set to Standby mode, the connected equipment is also automatically set to Standby.

- This function will work even if the TV enters standby mode automatically by Off Timer function or auto power standby function.

Reduce unnecessary power consumption in standby **Standby Power Save**

Set Standby Power Save "On" in the Setup Menu to use this function
➡ "Standby Power Save" (p. 21)
The power consumption in Standby mode of the connected equipment is controlled higher or lower in synchronization with the TV On / Off state to reduce the consumption.
When the TV is set to Standby mode, the connected equipment is automatically set to Standby and the power consumption in Standby mode of the connected equipment is automatically minimized.
When the TV is turned on, the connected equipment is still in Standby mode, but the power consumption is increased to make startup time early.

- This function is effective if the connected equipment can change the power consumption in Standby mode and is set to higher consumption.

Auto standby for unnecessary equipment **Intelligent Auto Standby**

Set Intelligent Auto Standby "On (With reminder)" or "On (No reminder)" in the Setup Menu to use this function ➡ "Intelligent Auto Standby" (p. 21)
When the TV is on, the connected equipment not in use go into Standby mode automatically to reduce the power consumption.

- If you select "On (With reminder)", the on screen message will be displayed to be noticed before working this function.

Features available (Using VIERA Link Menu)

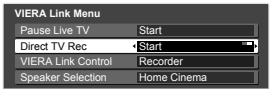
Direct TV Recording - What you see is What you record **Direct TV Rec**

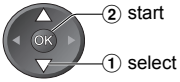
Recording the current programme in DIGA Recorder immediately.

- If you connect two recorders including other manufacturers' recorder at the same time, please connect DIGA Recorder to the TV's lower HDMI terminal number.
- If you cannot operate, check the settings and the equipment ➡ "VIERA Link features and connections" (p. 32 - 33)

① **Display "VIERA Link Menu"**

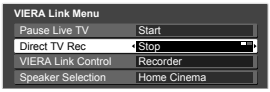
② **Select "Direct TV Rec" and start recording**

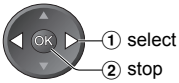




To stop recording

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





VIERA Link "HDAVI Control™"

Features available (Using VIERA Link Menu)

Pause Live TV programme **Pause Live TV**

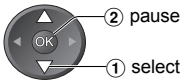
You can pause the live TV programme and resume later.
Live TV programme will be recorded on HDD of the connected DIGA Recorder.

- This function is available with DIGA Recorder which has HDD.
- If you connect two recorders including other manufacturers' recorder at the same time, please connect DIGA Recorder which has HDD to the TV's lower HDMI terminal number.
- If you cannot operate, check the settings and the equipment ➡ "VIERA Link features and connections" (p. 32 - 33)

Access and pause the live TV programme

① **Display "VIERA Link Menu"**

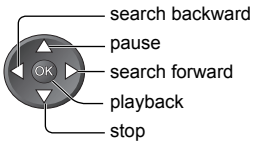
② **Select "Pause Live TV" and pause**



TV picture will be paused.

- Live TV programme is recorded on HDD from where it was paused.
- Follow the operation guide to operate Pause Live TV function.

To operate Pause Live TV



To return to Live TV
(stop playback of Pause Live TV / cancel pause)

Select "Yes"

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

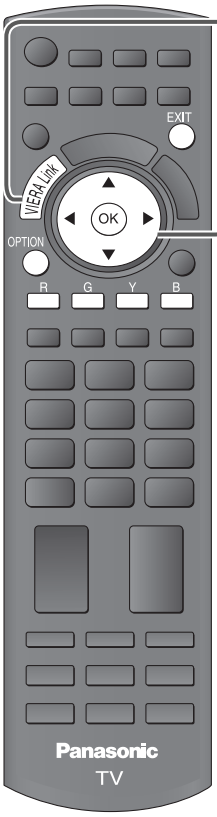
Features available (Using VIERA Link Menu)

Operate the connected equipment with VIERA remote control **VIERA Link Control**

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

- If you cannot operate, check the settings and the equipment ➡ "VIERA Link features and connections" (p. 32 - 33)
- For details of the operations for the connected equipment, read the manual of the equipment.

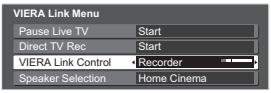
Access and operate the menu of the equipment



① Display "VIERA Link Menu"

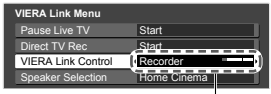
VIERA Link

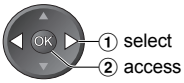
② Select "VIERA Link Control"



③ Select the equipment you want to access

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





Recorder / Player / Home Cinema / Video Camera / LUMIX / Other

- "Home Cinema" means Player theatre, Blu-ray Disc theatre or Recorder theatre.
- "Other" means Tuner set top box.

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

④ Operate the connected equipment

1. Set the remote control code for TV (p. 17)
2. Follow the operation guide

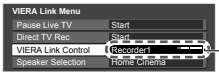
To display the operation guide ➡ OPTION
Store / set / access ➡ OK
Move the cursor / select the menu ➡
Return to the previous menu ➡ RETURN
Move the cursor / access / adjust ➡
Exit the menu ➡ EXIT
When the key words are displayed on colour bar ➡ R G Y B

Note

- Some operations may not be available for some equipment. If so, use its own remote control.

If two recorders or players are connected

You can connect up to two recorders or players at the same time.

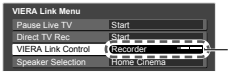


Recorder1-2 / Player1-2

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

If you access the invalid equipment

When the equipment with "HDAVI Control" function is connected



Recorder / Player / Home Cinema / Video Camera

Type of the connected equipment is displayed. You can access the menu of the equipment. But you cannnot operate it.
Use its own remote control to operate the equipment.

VIERA Link "HDAVI Control™"

Features available (Using VIERA Link Menu)

Speaker control **Speaker Selection**

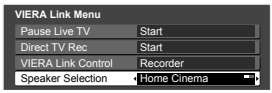
You can control the theatre speaker with this TV remote control by pointing at the TV's signal receiver.

- If you cannot operate, check the settings and the equipment ➡ "VIERA Link features and connections" (p. 32 - 33)

Access and control the speaker volume

① **Display "VIERA Link Menu"**

② **Select "Speaker Selection"**



③ **Set to "Home Cinema" or "TV"**

Home Cinema

Player theatre, Blu-ray Disc theatre or Amplifier 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

  ➡

  (Volume slide bar will be displayed when adjusting the volume of the equipment.)

- 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

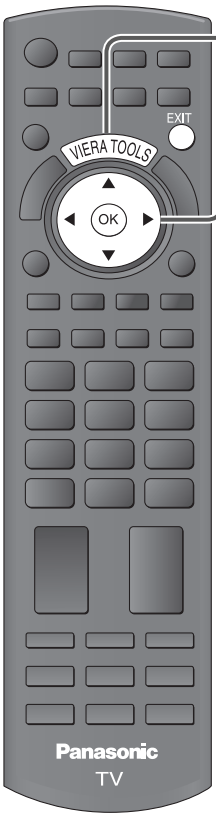
- If you wish to enjoy the multi-channel sound (e.g. Dolby Digital 5.1ch) via an Amplifier, connect with HDMI cable (p. 33), and then select "Home Cinema". To enjoy the sound from the DIGA Recorder in multi-channel sound, connect an HDMI cable from the DIGA Recorder to the Amplifier (p. 33).

Note

- These functions may not work properly depending on the connected equipment.
- Image or sound may not be available for the first few seconds when input mode is switched.
- Easy playback may be available by using the remote control for Player theatre, Blu-ray Disc theatre or Amplifier. Read the manual of the equipment.
- "HDAVI Control 4" is the newest standard (current as of December, 2008) 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. 21)

VIERA Tools

With VIERA Tools, you can directly access to some of the useful functions of connected equipment or SD card.



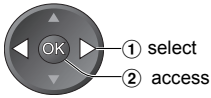
To return to TV

EXIT or VIERA TOOLS

1 Display VIERA Tools Menu

VIERA TOOLS

2 Select a feature



3 Follow the operation of each feature

VIERA Link Control

VIERA Link Control (p. 37)
The connected device can be operated with the VIERA remote control.
When multiple devices are connected, an indicator appears below the icon so that one device can be selected.

Pause Live TV

Pause Live TV (p. 36)
A live TV programme can be paused and resumed later.

Direct TV Rec

Direct TV Rec (p. 35)
What is on TV can be recorded immediately.

Speaker Selection

Speaker Control (p. 38)
Theatre speaker can be set.

Slideshow

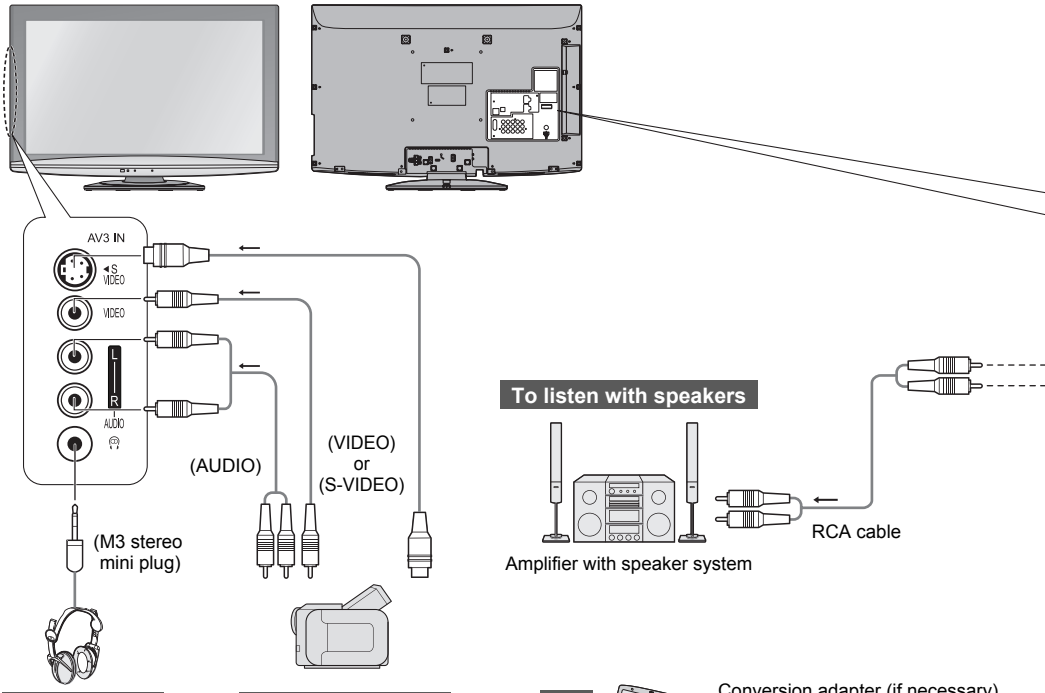
SD card slideshow (p. 31)
Photo slideshow will start.

Photos

SD card photo view (p. 30)
Photo folders are displayed.

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. 50).



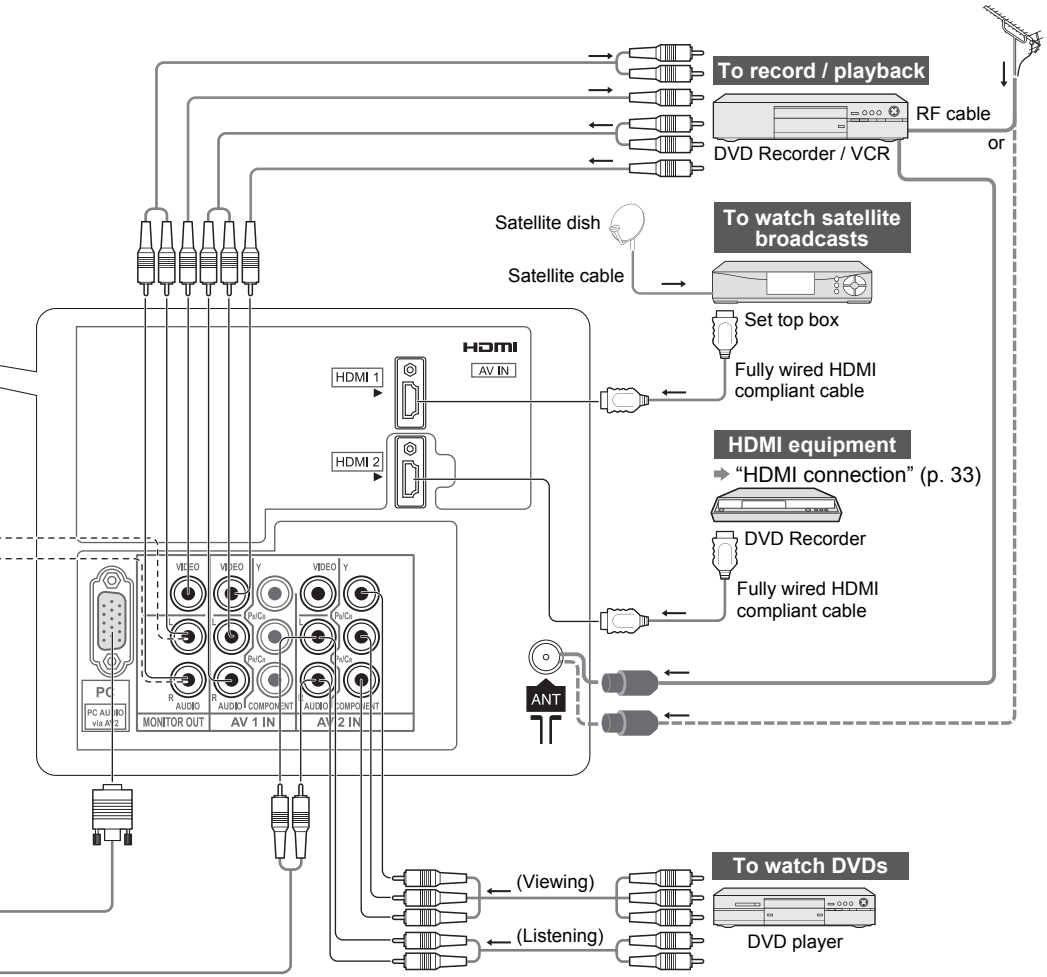
To adjust volume

➡ "Headphone Volume" in the Sound Menu (p. 20)

Types of connectable equipment to each terminal

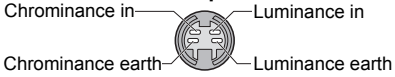
Recording / Playback (equipment) \ Terminal	AV1 IN	AV2 IN	AV3 IN	
To record / playback videocassettes / DVDs (VCR / DVD recorder)	○	○	○	
To watch DVDs (DVD player)	○	○	○	
To watch camcorder images (Video camera)	○	○	○	
To watch satellite broadcasts (Set top box)	○	○	○	
To play games (Game equipment)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

○: Recommended Connection

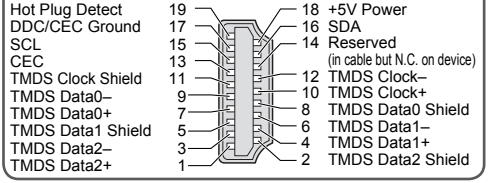


MONITOR OUT	HDMI 1	HDMI 2
○		
	○	○
	○	○
	○	○
	○	○
○	○	○
	○	○

S VIDEO 4 pin terminal



HDMI terminal



- Connect the S VIDEO or VIDEO terminal when using AV3 IN terminals.
- Connect the COMPONENT or VIDEO terminal when using AV1 / AV2 IN terminals.

Technical Information

Channel Allocation

Channel Plan	China	Hong Kong	Asia/M.East	NZ / Indonesia	Viet Nam	Indian CATV	CIS / E.Europe	South Africa	American System	American CATV	Japan
CH DISPLAY	Receive channel										
0	–	–	–	–	–	–	–	–	–	–	–
1	1	–	–	1	1	1	1	1	–	1	1
2	2	–	2	2	2	2	2	2	2	2	2
3	≀	–	≀	≀	≀	3	≀	≀	≀	≀	≀
4	≀	–	≀	≀	≀	4	≀	≀	≀	≀	≀
5	≀	–	≀	≀	≀	S'1	≀	≀	≀	≀	≀
6	≀	–	≀	≀	≀	S'2	≀	≀	≀	≀	≀
7	≀	–	≀	≀	≀	S'3	≀	≀	≀	≀	≀
≀	≀	–	≀	≀	≀	S1	≀	≀	≀	≀	≀
11	≀	–	11	11	11	S2	11	11	≀	≀	≀
12	12	–	12	–	12	S3	12	12	≀	≀	12
13	13	–	–	–	–	S4	–	13	13	≀	13
14	≀	–	–	–	–	≀	–	–	14	≀	≀
15	≀	–	–	–	–	≀	–	–	≀	≀	≀
16	≀	–	–	–	–	≀	–	–	≀	≀	≀
≀	≀	–	–	–	–	≀	–	–	≀	≀	≀
19	≀	–	–	–	–	S10	–	–	≀	≀	≀
20	≀	–	–	–	–	5	–	–	≀	≀	≀
21	≀	21	21	21	21	6	21	21	≀	≀	≀
22	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀
23	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀
24	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀
≀	≀	≀	≀	≀	≀	12	≀	≀	≀	≀	≀
28	≀	≀	≀	≀	≀	S11	≀	≀	≀	≀	≀
≀	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀
57	57	≀	≀	≀	≀	S40	≀	≀	≀	≀	≀
58	–	≀	≀	≀	≀	S41	≀	≀	≀	≀	≀
59	–	≀	≀	≀	≀	21	≀	≀	≀	≀	≀
≀	–	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀
62	–	62	62	62	62	24	62	62	62	62	62
63	–	63	63	63	63	25	63	63	63	63	C13
≀	–	≀	≀	≀	≀	≀	≀	≀	≀	≀	≀
69	–	69	69	69	69	31	69	69	69	≀	≀
70	–	–	–	–	–	32	–	–	–	≀	≀
≀	–	–	–	–	–	≀	–	–	–	≀	≀
73	–	–	–	–	–	≀	–	–	–	≀	≀
74	–	S'1	S'1	S'1	S'1	≀	S'1	S'1	–	≀	≀
75	–	S'2	S'2	S'2	–	≀	–	S'2	–	≀	≀
76	–	S'3	S'3	S'3	–	≀	–	S'3	–	≀	≀
77	–	–	–	–	–	≀	–	–	–	≀	≀
78	–	–	–	–	–	≀	–	–	–	≀	≀
79	–	–	–	–	–	41	–	–	–	≀	≀
80	–	S1	S1	S1	S1	42	S1	S1	–	≀	≀
81	Z1	S2	S2	S2	S2	≀	S2	S2	–	≀	≀
≀	≀	≀	≀	≀	≀	≀	≀	≀	–	≀	≀
89	Z9	S10	S10	S10	S10	51	S10	S10	–	≀	≀
90	Z10	S11	S11	S11	S11	52	S11	–	–	≀	≀
91	Z11	S12	S12	S12	S12	≀	S12	–	–	≀	≀
92	Z12	S13	S13	S13	S13	≀	S13	–	–	≀	≀
93	Z13	S14	S14	S14	S14	≀	S14	S14	–	≀	≀
94	Z14	S15	S15	S15	S15	≀	S15	S15	–	≀	≀
95	Z15	S16	S16	S16	S16	≀	S16	S16	–	≀	≀
96	Z16	S17	S17	S17	S17	≀	S17	S17	–	≀	≀
97	Z17	S18	S18	S18	S18	≀	S18	S18	–	≀	≀
98	Z18	S19	S19	S19	S19	≀	S19	S19	–	≀	≀
99	Z19	S20	S20	S20	S20	61	S20	S20	–	99	C49
100	Z20	S21	S21	S21	S21	62	S21	S21	–	100	–
≀	≀	≀	≀	≀	≀	≀	≀	≀	–	≀	–
107	≀	≀	≀	≀	≀	69	≀	≀	–	≀	–
≀	≀	≀	≀	≀	≀	70	≀	≀	–	≀	–
117	Z37	≀	≀	≀	≀	–	≀	≀	–	≀	–
118	–	≀	≀	≀	≀	–	≀	≀	–	≀	–
≀	–	≀	≀	≀	≀	–	≀	≀	–	≀	–
120	–	S41	S41	S41	S41	–	S41	S41	–	≀	–
≀	–	–	–	–	–	–	–	–	–	≀	–
125	–	–	–	–	–	–	–	–	–	125	–

Stereo / Bilingual Sound Selection

○○/▽ I/II When you receive the stereo / bilingual sound system, sound output modes can be selected by pressing the **Stereo / Bilingual Sound Selection** button.

Audio Signal	STEREO	MAIN I	SUB II	MONO
Mode Indicator	○○	I	II	▽

NICAM .....Used in New Zealand, Singapore, Hong Kong etc.

Type of broadcast	Regular broadcast (Standard Audio)	Regular + NICAM MONO I (MAIN I)	NICAM STEREO	NICAM DUAL MONO (MAIN I / SUB II)
Mode Indicator	No Indicator ⟷ ▽	I ⟷ ▽	○○ ⟷ ▽	I → II ▽

A2 (German) .....Used in Australia, Malaysia etc.

Type of broadcast	Regular broadcast (Standard Audio)	BILINGUAL or DUAL MONO: MAIN I / SUB II	STEREO
Mode Indicator	No Indicator ⟷ ▽	I ⟷ II	○○ ⟷ ▽

Note

- If the stereo signal is poor or the receiving conditions are not optimum or if STEREO:MONO automatic switching occurs, it is recommended you switch from STEREO to MONO.
- Even when the contents of the receiving signal undergo changes, selection mode is kept intact.
- When the receiving conditions deteriorate, listening will be easier if the mode is set to the MONO position, using the stereo / bilingual sound selection button.
- DUAL, also known as DUAL MONO or as BILINGUAL is not currently transmitted in some countries.

Technical Information

SD Card

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.)

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 x 120 to 10,000,000

- Compliant card type (maximum capacity): SDHC Card (32 GB), SD Card (2 GB) and miniSD Card (2 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

- Format the card with the recording equipment.
- The picture may not appear correctly on this TV depending on the recording equipment used.
- Display may take some time when there are many files and folders.
- This function cannot display Motion JPEG and still image not DCF formatted (i.e. TIFF, BMP).
- 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 file or folder names are changed.

On screen messages

Message	Meaning / Action
Cannot read file	▶ ● The file is broken or unreadable. ● The TV does not support the format. (For the applicable formats and data, see above.)
Please confirm the SD card is OK	▶ ● The inserted SD card has a problem.
No SD card inserted	▶ ● Insert a SD Card.
No valid file to play	▶ ● The card has no data.
Over 9999 pictures found (max. is 9999)	▶ ● Maximum valid number of photos is 9,999.

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 set top box or a DVD player, can be connected to the HDMI terminal using an HDMI compliant (fully wired) cable.
About connections, see “External Equipment” (p. 40).

- 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 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 AV2 IN AUDIO terminal).
- Audio settings can be made on the “HDMI1 Input” menu screen. (p. 20)
- 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 guaranteed. Only HDMI video formats indicated in the HDMI table (p. 46) are applicable.
- 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. 46.

(*1): The HDMI logo is displayed on HDMI-compliant equipment.
(*2): Enquire at your local digital equipment retailer shop.

PC connection

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

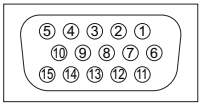
- PC signals that can be input: Horizontal scanning frequency 31 to 69 kHz; vertical scanning frequency 59 to 86 Hz (more than 1,024 signal lines could result in incorrect display of the image).
- A PC adapter is not necessary for the DOS/V-compliant D-sub 15-pin connector.

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 page 46.
- Max. display resolution

Aspect	**4:3**	1,024 x 768 pixels
	16:9	1,366 x 768 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)

Technical Information

Input signal that can be displayed

COMPONENT (Y, P_B/C_B, P_R/C_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 x 400 @70 Hz	31.47	70.07
640 x 480 @60 Hz	31.47	59.94
640 x 480 @75 Hz	37.50	75.00
800 x 600 @60 Hz	37.88	60.32
800 x 600 @75 Hz	46.88	75.00
800 x 600 @85 Hz	53.67	85.06
852 x 480 @60 Hz	31.44	59.89
1,024 x 768 @60 Hz	48.36	60.00
1,024 x 768 @70 Hz	56.48	70.07
1,024 x 768 @75 Hz	60.02	75.03
1,024 x 768 @85 Hz	68.68	85.00
1,280 x 1,024 @60 Hz	63.98	60.02
1,280 x 768 @60 Hz	47.70	60.00
1,366 x 768 @60 Hz	48.39	60.04
Macintosh13” (640 x 480)	35.00	66.67
Macintosh16” (832 x 624)	49.73	74.55
Macintosh21” (1,152 x 870)	68.68	75.06

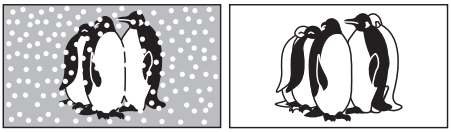
Note

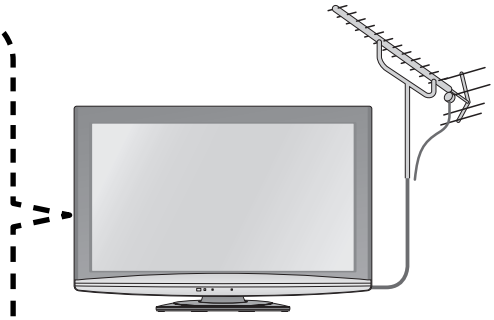
- Signals other than above may not be displayed properly.
- The above signals are reformatted for optimal viewing on your display.
- Applicable input signal for PC is basically compatible to VESA standard timing.
- PC signal is magnified or compressed for display, so that it may not be possible to show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

FAQs

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

The main unit is hot

- The main unit radiates heat and some of the parts may become hot. This is not a problem for performance or quality.

  Setup in a location with good ventilation.

  Do not cover the ventilation holes of the TV with a tablecloth, etc., and do not place on top of other equipment.

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. 20) and volume.

An error message appears

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

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

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

  Please note this does not affect the performance of your LCD and it is not a quality problem.

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

Clattered sound might be heard

- There are some looseness around the panel to prevent the damage to the panel.

  The panel might move slightly when it is pushed with a finger, and clattered sound might be heard. This is not a malfunction.

FAQs

	Problem	Actions
Screen	**Chaotic image, noisy**	● Set “P-NR” in the Picture Menu (to remove noise). (p. 20) ● Check nearby electrical products (car, motorcycle, fluorescent lamp).
	No image can be displayed	● Is “Colour” or “Contrast” in the Picture Menu set to the minimum? (p. 20) ● Check Colour System. (p. 27) ● Check AV Colour System. (p. 21)
	Blurry or distorted image (no sound or low volume)	● Reset channel. (p. 28)
	Unusual image is displayed	● Turn off the TV with Mains power On / Off switch, then turn it on again.
Sound	**No sound is produced**	● Is “Sound mute” active? (p. 8) ● Is the volume set to the minimum?
	Sound level is low or sound is distorted	● Sound signal reception may be deteriorated. ● Check Sound system. (p. 27) ● Set “MPX” (p. 20) in the Sound Menu to “Mono”.
HDMI	**Sound is unusual**	● Set the sound setting of the connected equipment to “2ch L.PCM”. ● Check the “HDMI1 Input” setting in the Sound Menu. (p. 20) ● If digital sound connection has a problem, select analogue sound connection. (p. 43)
	Pictures from external equipment are unusual when the equipment is connected via HDMI	● Is the HDMI cable connected properly? (p. 45) ● Turn Off the TV and equipment, then turn them On again. ● Check an input signal from the equipment. (p. 46) ● Use an equipment compliant with EIA/CEA-861/861B.
Other	**TV goes into “Standby mode”**	● Off Timer function is activated. ● The TV enters “Standby mode” about 30 min. after broadcasting ends.
	The remote control does not work	● Are the batteries installed correctly? (p. 6) ● Has the TV been switched On? ● Has the battery run down?

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- VGA is a trademark of International Business Machines Corporation.
- Macintosh is a registered trademark of Apple Inc., USA.
- S-VGA is a registered trademark of the Video Electronics Standard Association.
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- HDAVI Control™ is a trademark of Panasonic Corporation.
- SDHC Logo is a trademark.

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Specifications

Power Source			AC AUTO 110-240 V, 50/60 Hz (TH-L37X10R only: AC Single 220-240 V, 50/60 Hz)	
Power Consumption	**Average use**		158 W	
	Standby condition		0.7 W	
Display panel	**Aspect Ratio**		16:9	
	Visible screen size		94 cm (diagonal) 819 mm (W) x 460 mm (H)	
	Number of pixels		1,049,088 (1,366 (W) x 768 (H))	
Sound	**Speaker**		Full range x 2 pcs, 8 Ω	
	Audio Output		20 W (10 W + 10 W), 10% THD	
	Headphones		M3 (3.5 mm) stereo mini Jack x 1	
PC signals			VGA, SVGA, XGA SXGA ···· (compressed) Horizontal scanning frequency 31 - 69 kHz Vertical scanning frequency 59 - 86 Hz	
Receiving Systems / Band name			1 PAL B, G, H 2 PAL I 3 PAL D, K 4 SECAM B, G 5 SECAM D, K 6 SECAM K1 7 NTSC M (NTSC 3.58/4.5 MHz) → Reception of broadcast transmissions and Playback from Video Cassette Tape Recorders	8 NTSC 4.43/5.5 MHz 9 NTSC 4.43/6.0 MHz 10 NTSC 4.43/6.5 MHz 11 NTSC 3.58/5.5 MHz 12 NTSC 3.58/6.0 MHz 13 NTSC 3.58/6.5 MHz 14 SECAM I → Playback from Special VCR's or DVD 15 PAL 60 Hz/5.5 MHz 16 PAL 60 Hz/6.0 MHz 17 PAL 60 Hz/6.5 MHz → Playback from Special Disc Players and Special VCR's or DVD
Receiving Channels (Analogue TV)			**VHF BAND** 2-12 (PAL/SECAM B, K1) 0-12 (PAL B AUST.) 1-9 (PAL B N.Z.) 1-12 (PAL/SECAM D) 1-12 (NTSC M Japan) 2-13 (NTSC M USA)	**UHF BAND** 21-69 (PAL G, H, I/SECAM G, K, K1) 28-69 (PAL B AUST.) 13-57 (PAL D, K) 13-62 (NTSC M Japan) 14-69 (NTSC M USA) **CATV** S1-S20 (OSCAR) 1-125 (USA CATV) C13-C49 (JAPAN) S21-S41 (HYPER) Z1-Z37 (CHINA) 5A, 9A (AUST.)
Aerial - Rear			VHF / UHF	
Operating Conditions			**Temperature** : 0 °C - 40 °C **Humidity** : 20 % - 80 % RH (non-condensing)	
Connection Terminals	**AV1 Input**	**AUDIO L - R**	RCA PIN Type x 2	0.5 V[rms]
		VIDEO	RCA PIN Type x 1	1.0 V[p-p] (75 Ω)
		COMPONENT	Y P_B/C_B, P_R/C_R	1.0 V[p-p] (including synchronization) ±0.35 V[p-p]
	AV2 Input	**AUDIO L - R**	RCA PIN Type x 2	0.5 V[rms]
		VIDEO	RCA PIN Type x 1	1.0 V[p-p] (75 Ω)
		COMPONENT	Y P_B/C_B, P_R/C_R	1.0 V[p-p] (including synchronization) ±0.35 V[p-p]
	AV3 Input	**AUDIO L - R**	RCA PIN Type x 2	0.5 V[rms]
		VIDEO	RCA PIN Type x 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)
	Others	**HDMI1 / 2 Input**	TYPE A Connectors	● This TV supports "HDAVI Control 4" function.
		PC Input	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 x 1	
	Monitor Output	**AUDIO L - R**	RCA PIN Type x 2	0.5 V[rms] (high impedance)
		VIDEO	RCA PIN Type x 1	1.0 V[p-p] (75 Ω)
Dimensions (W x H x D)			915 mm x 620 mm x 287 mm (With Pedestal) 915 mm x 577 mm x 97 mm (TV only)	
Mass			17.0 kg Net (With Pedestal) 14.5 kg Net (TV only)	

Note

- Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.

Memo

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

Panasonic Corporation
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