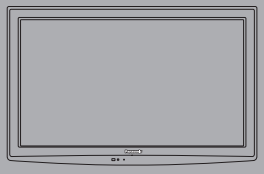
Panasonic

Model No.

TH-32LRH50U
TH-42LRH50U

Owner's Manual

Healthcare LCD HDTV



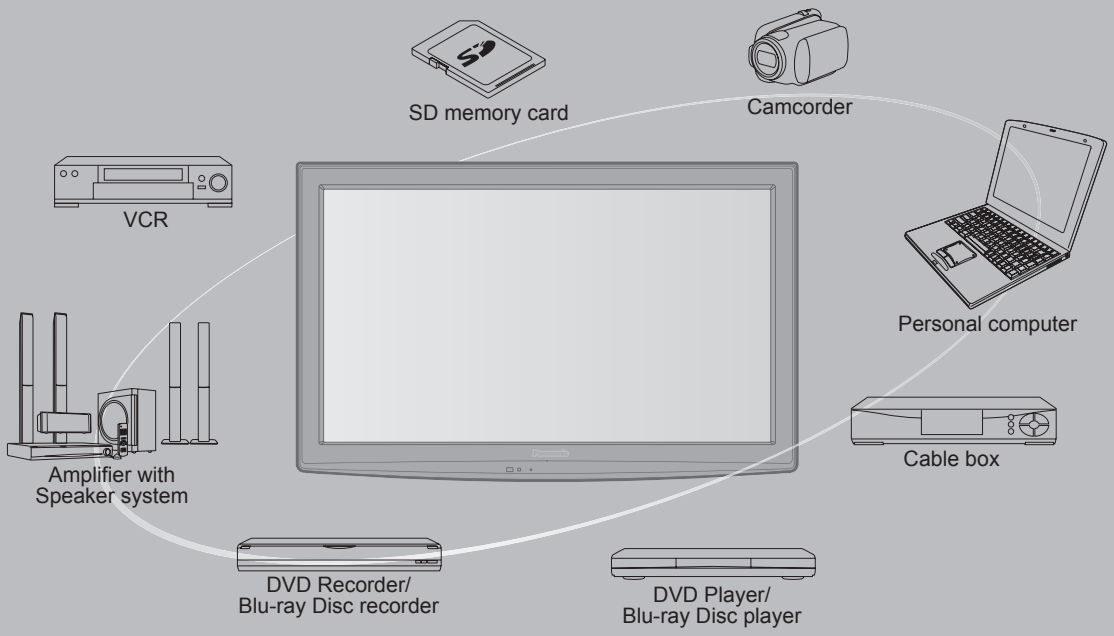
English

Thank you for purchasing this Panasonic product.
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.

TQB2AA0674E

Experience an amazing level of multimedia excitement

Enjoy rich multimedia



This product incorporates the following software or technology:
(1) the software developed independently by or for Panasonic Corporation,
(2) the software owned by third party and licensed to Panasonic Corporation,
(3) the software based in part on the work of the Independent JPEG Group,
(4) the software developed by the FreeType Project.
(5) open sourced software other than the software licensed under the GPL and the LGPL.

For the software categorized as (5), please refer to the applicable license terms included in the “Setup” menu on product.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

SDXC Logo is a trademark of SD-3C, LLC.

This product qualifies for ENERGY STAR in the factory default setting and this is the setting in which energy savings will be achieved. Any modifications to the factory default setting or other factory default settings could result in greater energy consumption beyond levels that meet ENERGY STAR qualifications.

Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.

Pro: Idiom is a trademark of Zenith Corporation.

www.CE.org/safety

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Enjoy your TV!

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Safety Precautions

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

WARNING: To reduce the risk of electric shock, do not remove cover or back. No user-serviceable parts inside. Refer servicing to qualified service personnel.

The lightning flash with arrowhead within a triangle is intended to tell the user that parts inside the product are a risk of electric shock to persons.

The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are in the papers with the appliance.

Note to CATV System Installer

This reminder is provided to direct the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Secure Ventilation

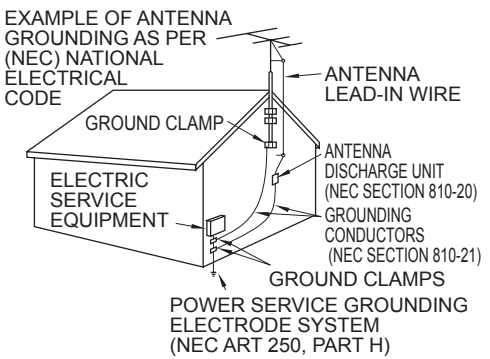
Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to ensure reliable operation of the LCD TV and to protect it from overheating. These openings must not be blocked or covered. There should be at least 4 inches (10 cm) of space around the TV. The openings should never be blocked by placing the LCD TV on a bed, sofa, rug or other similar surface. This LCD TV should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.

Important Safety Instructions

1) Read these instructions.
2) Keep these instructions.
3) Heed all warnings.
4) Follow all instructions.
5) Do not use this apparatus near water.
6) Clean only with dry cloth.
7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8) Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11) Only use attachments / accessories specified by the manufacturer.
12) Use only with the cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart / apparatus combination to avoid injury from tip-over.



13) Unplug this apparatus during lightning storms or when unused for long periods of time.
14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15) Operate only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home consult your television dealer or local power company.
16) Follow all warnings and instructions marked on the LCD TV.
17) Never push objects of any kind into this LCD TV through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the LCD TV.
18) If an outside antenna is connected to the television equipment, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. In the U.S. Section 810-21 of the National Electrical Code provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.



19) An outside antenna system should not be located in the vicinity of overhead power lines, other electric light, power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
20) Unplug this LCD TV from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    a. When the power cord or plug is damaged or frayed.
    b. If liquid has been spilled into the LCD TV.
    c. If the LCD TV has been exposed to rain or water.
    d. If the LCD TV does not operate normally by following the operating instructions.
        Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the LCD TV to normal operation.
    e. If the LCD TV has been dropped or the cabinet has been damaged.
    f. When the LCD TV exhibits a distinct change in performance - this indicates a need for service.
21) When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer that have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.
22) **WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING.**
    DO NOT PLACE LIQUID CONTAINERS (FLOWER VASES, CUPS, COSMETICS, ETC.) ABOVE THE SET (INCLUDING ON SHELVES ABOVE, ETC.).
23) **WARNING: SMALL PARTS CAN PRESENT CHOKING HAZARD IF ACCIDENTALLY SWALLOWED. KEEP SMALL PARTS AWAY FROM YOUNG CHILDREN.**
    DISCARD UNNEEDED SMALL PARTS AND OTHER OBJECTS, INCLUDING PACKAGING MATERIALS AND PLASTIC BAGS/SHEETS TO PREVENT THEM FROM BEING PLAYED WITH BY YOUNG CHILDREN, CREATING THE POTENTIAL RISK OF SUFFOCATION.
24) **WARNING: To prevent the spread of fire, keep candles or other open flames away from this product at all times.**



25) **WARNING: TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS PLUG WITH A RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.**
26) **WARNING: This LCD TV is for use only with the following optional accessory. Use with any other type of optional accessories may cause instability which could result in the possibility of injury.**
    (All of the following accessories are manufactured by Panasonic Corporation)
    • Wall-hanging bracket: TY-WK3L2RW
    Always be sure to ask a qualified technician to carry out set-up.
27) **WARNING: An apparatus with CLASS I construction shall be connected to a mains socket outlet with a protective earthing connection.**
28) **CAUTION:** The Power switch on this unit will not completely shut off all power from AC outlet. Since the power cord serves as the main disconnect device for the unit, you will need to unplug it from the AC outlet to shut down all power. Therefore, make sure the unit has been installed so that the power cord can be easily unplugged from AC outlet in case of an accident. To avoid fire hazard, the power cord should also be unplugged from the AC outlet when left unused for a long period of time (for example, when on vacation).
29) **CAUTION:** DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE.
30) **CAUTION:** This LCD TV is for Wall-Mount only. It is not intended to be touched by patient.
31) **CAUTION:** Always be sure to ask a qualified technician to install and connect the external equipment including Pillow speaker. The connection panel is not intended to be touched by patient.

NOTE: This equipment is designed to operate in North America and other countries where the broadcasting system and AC house current are exactly the same as in North America.

FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution:
To assure continued compliance, follow the attached installation instructions and use only shielded interface cables when connecting to computer or peripheral devices. Any changes or modifications not expressly approved by Panasonic Corp. of North America could void the user's authority to operate this device.

FCC Declaration of Conformity
Model No. TH-32LRH50U, TH-42LRH50U

Responsible Party:	Panasonic Corporation of North America Three Panasonic Way, 2F-5, Secaucus, NJ 07094
Contact Source:	Panasonic System Communications Company of North America 1-800-973-4390

Safety Precautions (Continued)

CEA CHILD SAFETY NOTICES

⚠WARNING

Flat panel displays are not always supported on the proper stands or installed according to the manufacturer's recommendations. Flat panel displays that are inappropriately situated on dressers, bookcases, shelves, desks, speakers, chests or carts may fall over and may cause personal injury or even death.

The consumer electronics industry (of which Panasonic is a member) is committed to making home entertainment enjoyable and safe. To prevent personal injury or death, be sure to follow the following safety guidelines:

TUNE INTO SAFETY:

- One size does NOT fit all. Follow the manufacturer's recommendations for the safe installation and use of your flat panel display.
- Carefully read and understand all enclosed instructions for proper use of this product.
- Don't allow children to climb on or play with furniture and television sets.
- Don't place flat panel displays on furniture that can easily be used as steps, such as a chest of drawers.
- Remember that children can become excited while watching a program, especially on "larger than life" flat panel displays. Care should be taken to install the display where it cannot be pushed, pulled over, or knocked down.
- Care should be taken to route all cords and cables connected to the flat panel display so that they cannot be pulled or grabbed by curious children.

WALL MOUNTING: TO WALL MOUNT YOUR FLAT PANEL DISPLAY, ALWAYS:

- Use a mount that has been recommended by the display manufacturer and/or listed by an independent laboratory (such as UL, CSA, ETL).
- Follow all instructions supplied by the display and wall mount manufacturers.
- If you have any doubts about your ability to safely install your flat panel display, contact your retailer about professional installation.
- Make sure the wall where you are mounting the display is appropriate. Some wall mounts are not designed to be mounted to walls with steel studs or old cinder block construction. If you are unsure, contact a professional installer.
- A minimum of two people are required for installation. Flat panel displays can be heavy.

The American Academy of Pediatrics discourages media viewing for children younger than two years. For more details, see www.aap.org.

CEA Consumer Electronics Association
www.CE.org/safety

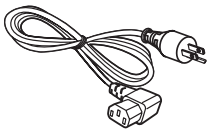
Accessories/Optional Accessory

Accessories

☑ Check you have all the items shown.

Accessories

☐ Operating Instructions ☐ Power cord ☐ Clamper and screw for power cord

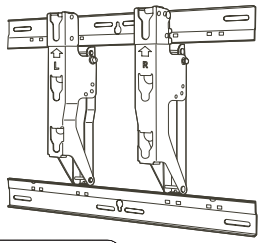




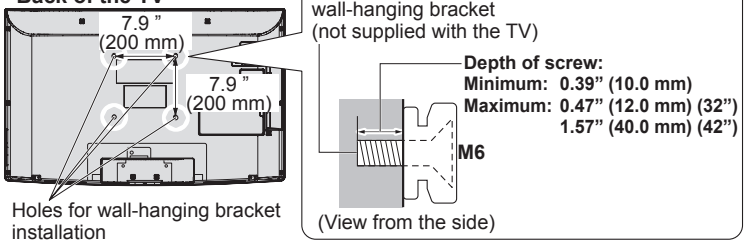
Optional Accessory

Remote Control Transmitter
- N2QAYB000485

Wall-hanging bracket
- TY-WK3L2RW

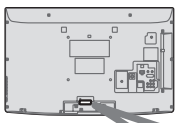


Please contact your nearest Panasonic dealer to purchase the recommended wall-hanging bracket. For additional details, please refer to the wall-hanging bracket installation manual.



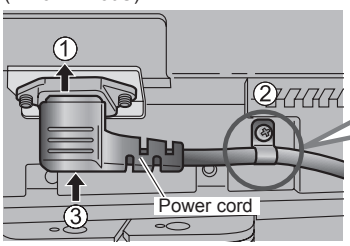
WARNING
- Customer assumes liability if mounting the unit themselves or if a Panasonic bracket is not used. Any damage resulting from not having a professional installer mount your unit will void your warranty.
- Always be sure to ask a qualified technician to perform any necessary set-up. Incorrect fitting may cause equipment to fall, resulting in injury and product damage.
- Do not mount the unit 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.
- Take care when fixing wall brackets to the wall. Always ensure that there are no electrical cables or pipes in the wall before hanging bracket.
- When using an angled-type wall hanging bracket, please ensure that there is sufficient space for the connecting cables so that they do not press against the wall when the TV is tilted forward.
- For safety reasons, remove units no longer being used from their wall-mounted locations.

Power cord connection

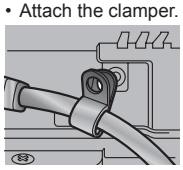


Back of the TV

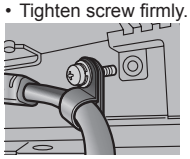
(TH-32LRH50U)



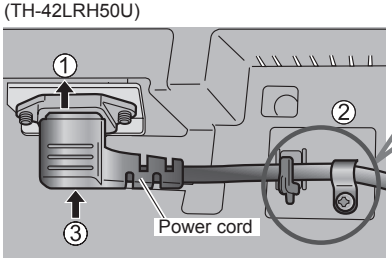
• Attach the clamper.



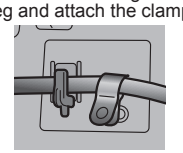
• Tighten screw firmly.



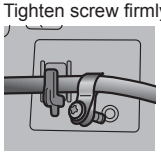
(TH-42LRH50U)



• Set the cord through the peg and attach the clamper.



• Tighten screw firmly.



Caution

①Insert the power cord plug firmly into place.
- Make sure that power plug is inserted straight into the unit.

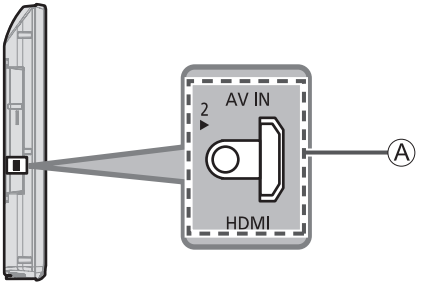
②Fix securely the power cord with clamper and screw.

③Confirm the plug is completely inserted.

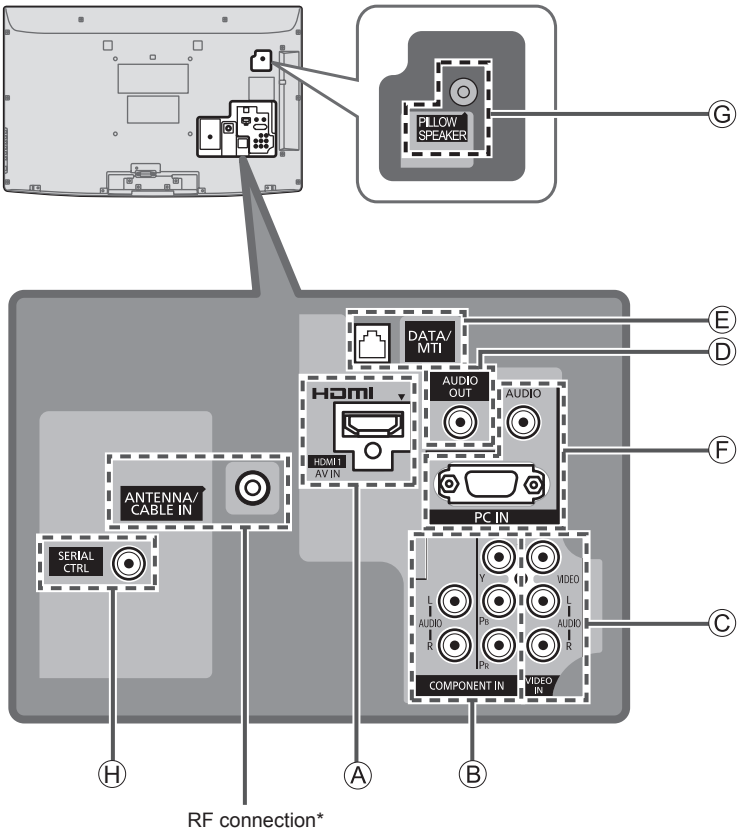
Connections

Connection panel

■Side panel



■Back panel

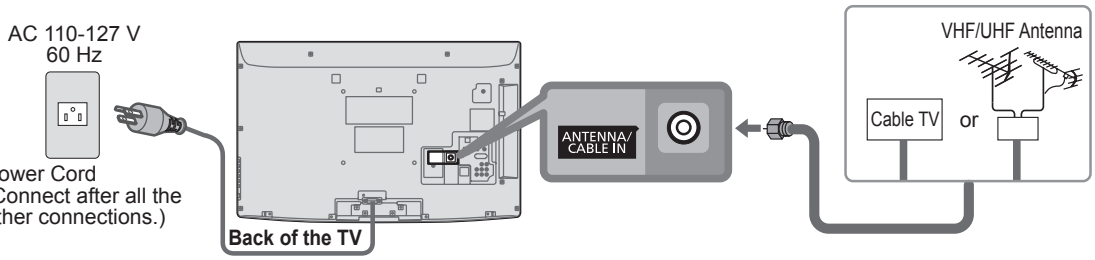


* For more details on the external equipment's connections, please refer to the operating manuals for the equipment.

Connecting Antenna

VHF/UHF Antenna

- NTSC (National Television System Committee):
  Conventional broadcasting
- ATSC (Advanced Television Systems Committee):
  Digital TV Standards include digital high-definition television (HDTV), standard-definition television (SDTV), data broadcasting, multichannel surround-sound audio and interactive television.



Cable

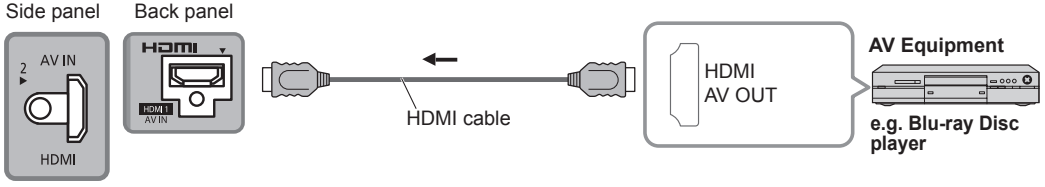
- You need to subscribe to a cable TV service to enjoy viewing their programming.
- You can enjoy high-definition programming by subscribing to a high-definition cable service.
  The connection for high-definition can be done with the use of HDMI or Component Video cable. (see below)
- To view high-definition programming, select the correct video input. (p. 13)

Note

- When disconnecting the power cord, be absolutely sure to disconnect the power cord plug from the wall outlet first.

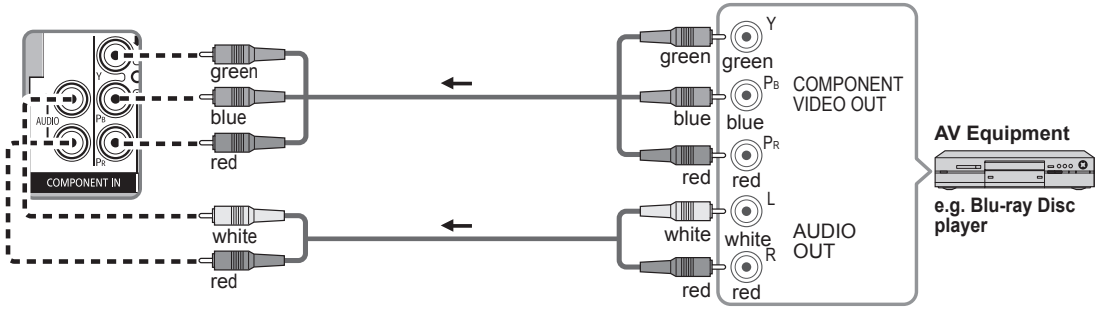
Example of connections

Ⓐ To use HDMI terminals



- Connecting to the HDMI terminals will enable you to enjoy high-definition digital images and high-quality sound.
- The HDMI connection is required for a 1080p signal.
- VIERA Link connection, please refer to p. 23

Ⓑ To use COMPONENT terminals



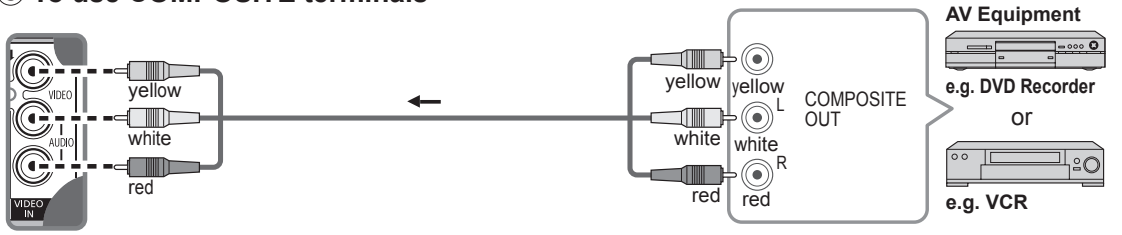
Note

- Not all cables and external equipment shown in this book are supplied with the TV.
- For more details on the external equipment's connections, please refer to the operating manual for the equipment.

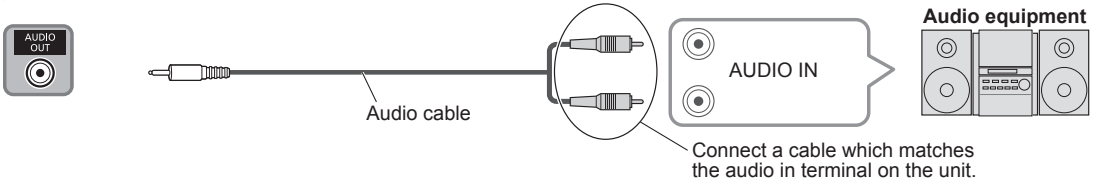
Connections (Continued)

Example of connections

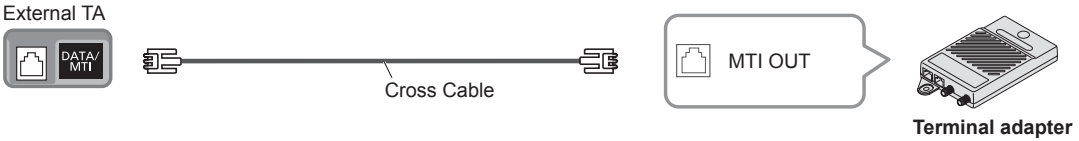
Ⓒ To use COMPOSITE terminals



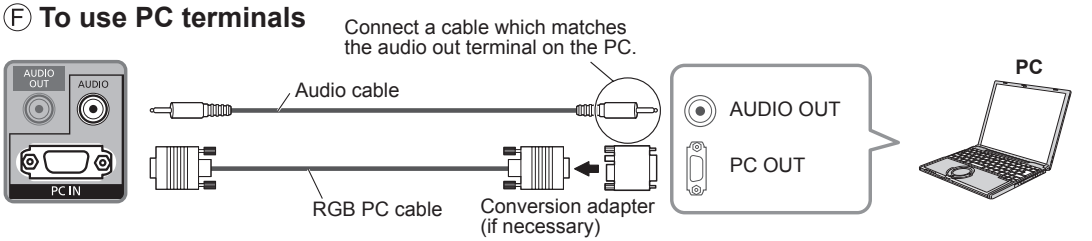
Ⓓ To use AUDIO OUT terminal



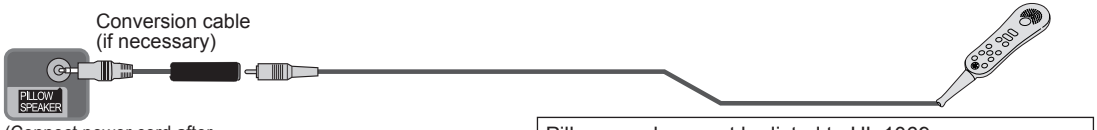
Ⓔ To use DATA/MTI teminal



Ⓕ To use PC terminals



Ⓖ To use PILLOW SPEAKER terminal



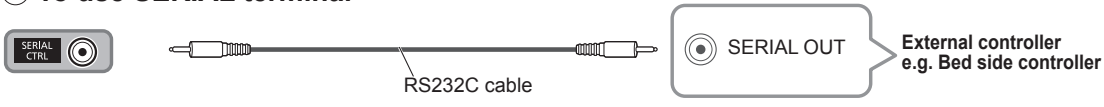
(Connect power cord after pillow speaker connection)

Pillow speaker must be listed to UL 1069.
Please refer about "Connectivity of PILLOW SPEAKER" to Panasonic Solutions Company.

Caution

- Do not connect or disconnect the Pillow speaker while this TV is turned on (including Standby condition).

Ⓗ To use SERIAL terminal



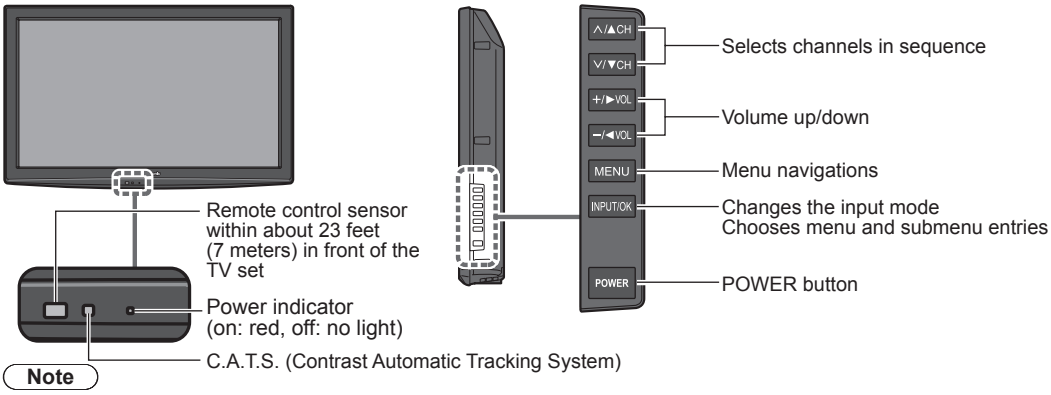
Note

- Not all cables and external equipment shown in this book are supplied with the TV.
- For more details on the external equipment's connections, please refer to the operating manual for the equipment.

Identifying Controls

TV controls/indicators

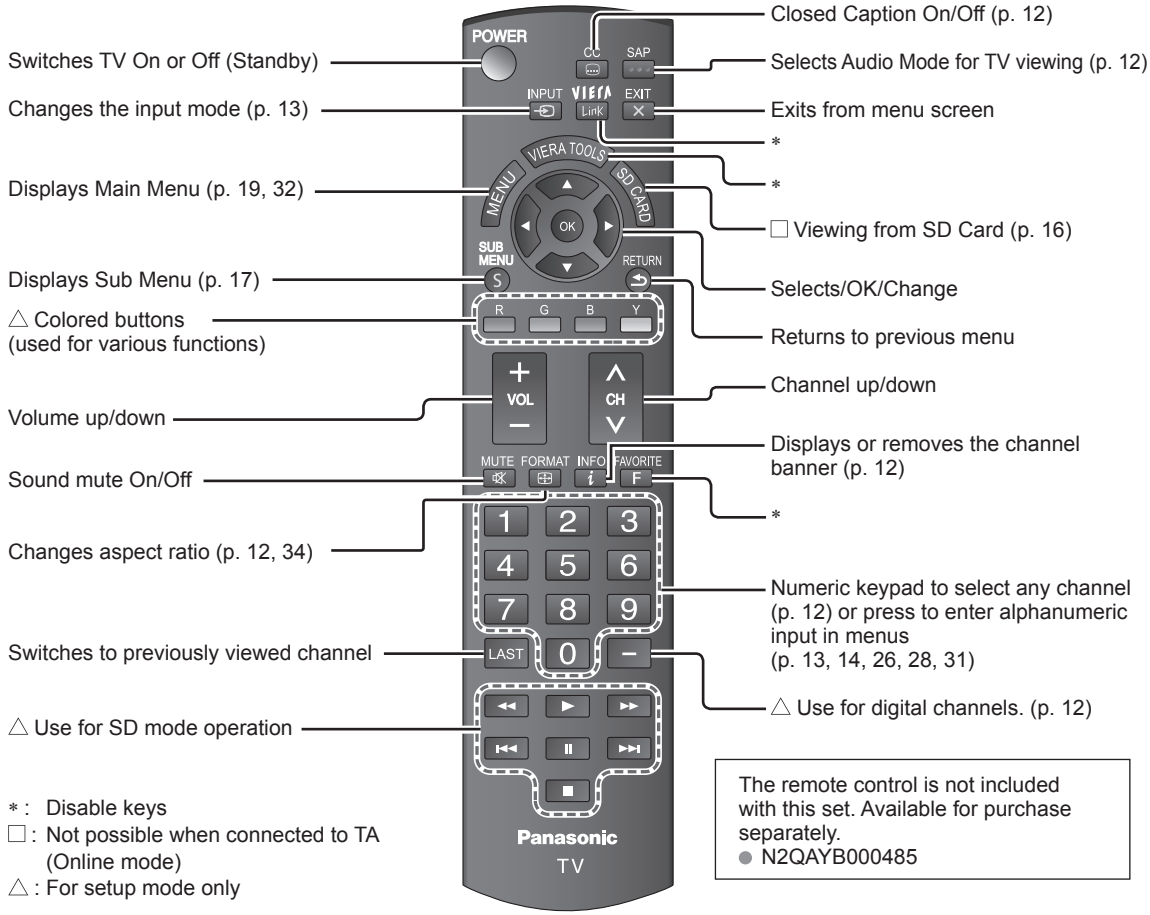
Front of the TV



Note

- The TV consumes a small amount of electric energy even when turned off.
- Do not place any objects between the TV remote control sensor and remote control.
- Do not place C.A.T.S. in a blocked area.

Remote control



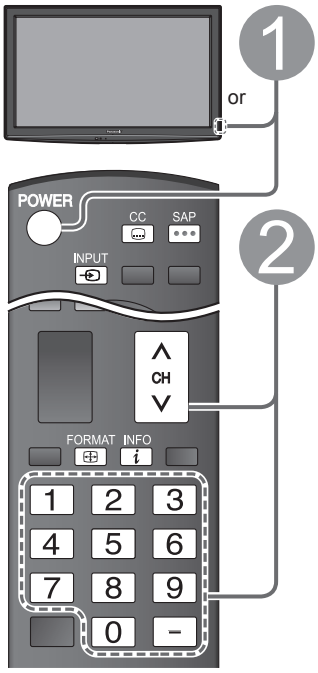
* : Disable keys
□ : Not possible when connected to TA (Online mode)
△ : For setup mode only

The remote control is not included with this set. Available for purchase separately.
- N2QAYB000485

- For other Remote control, please refer to the operating manual for it.

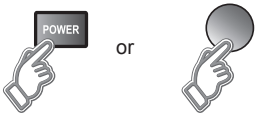
TV operation

Connections (p. 8-10)



1 Turn the TV On with the POWER button

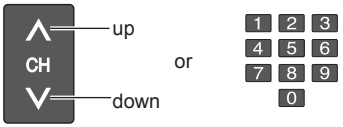
(TV) (Remote)



- Input select: press INPUT (p. 13)

2 Select a channel number

(Remote)



(TV)



■ To directly enter the digital channel number

– When tuning to a digital channel, press the button to enter the minor number in a compound channel number.

example: CH15-1: 1 5 – 1

Note

- Reselect “Cable” or “Antenna” in “ANT in” of “ANT/Cable setup” to switch the signal reception between cable TV and antenna. (p. 29)
- The channel number and volume level remain the same even after the TV is turned off.

■ Other Useful Functions (Operate after 2)

Listen with SAP (Secondary Audio Program)

■ Select Audio mode for watching TV



- **Digital mode**
  Press SAP to select next audio track (if available) when receiving a digital channel.

  Audio track 1 of 2
  English (Main Audio)
  English audio

- **Analog mode**
  Press SAP to select the desired audio mode.
  • Each press of SAP will change the audio mode. (Stereo/SAP/Mono)

Closed caption

■ Switches the Closed caption mode On or Off

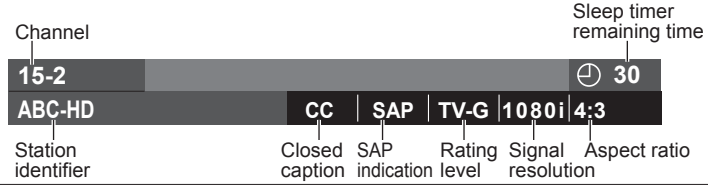


Closed caption Off → Closed caption On → Closed caption On mute

Information recall

■ Displays or removes the channel banner

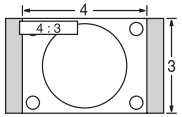




Change aspect ratio

■ Press FORMAT to cycle through the aspect modes (p. 34)





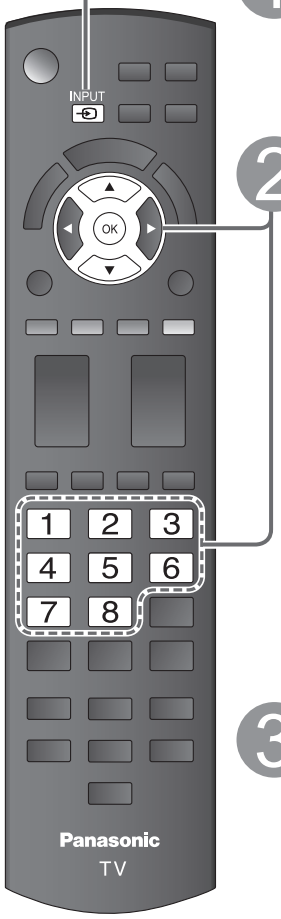
- 480i, 480p: FULL/JUST/4:3/ZOOM
- 1080p, 1080i, 720p: FULL/H-FILL/JUST/4:3/ZOOM

Watching Videos and DVDs

If you have applicable equipment connected to the TV, you can watch videos and DVDs on the TV screen.

Input Select

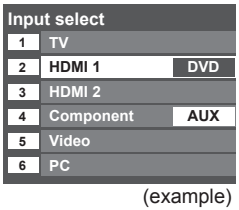
You can select the external equipment to access.



1 With the connected equipment turned On
Display the Input select menu



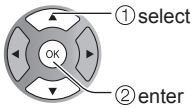
2 Select the input mode

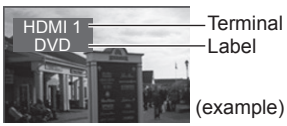


(example)



or





(example)

Press the corresponding NUMBER button on the remote control to select the input of your choice.

Select the input of your choice, then press OK.

- During the selection, if no action is taken for several seconds, the “Input select” menu disappears.
- The terminal and label of the connected equipment are displayed.
  To label each of the inputs, please refer to p. 31.

Note

- The input label will be displayed on the “Input select” screen if the Input label is set on p. 31.
- For more details on “Input labels”, refer to p. 31.

3 Operate the connected equipment using the remote control supplied with the equipment

Note

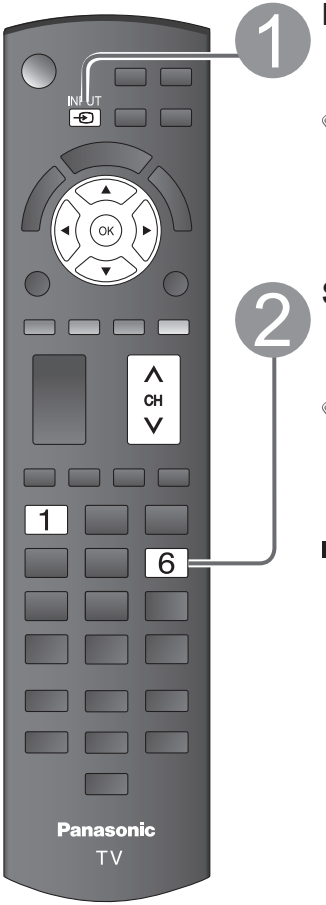
- For details, see the manual for the connected equipment.

■ **To return to TV**

INPUT → 1

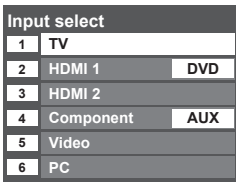
Displaying PC Screen on TV

The screen of the PC connected to the unit can be displayed on the TV.
You can also listen to PC sound with the audio cable connected. To connect PC (p. 10)



1 Display the Input select menu

INPUT



(example)

2 Select "PC"

6

PC

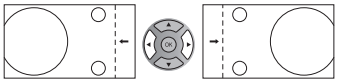
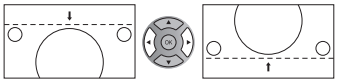
Displays PC screen

- Corresponding signals (p. 37)

■ **To return to TV** INPUT → 1 / CH

■ **PC menu setting** (change as desired)

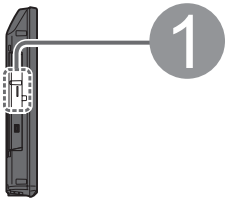
● Making settings ➡ "How to Use Menu Functions" ❶ to ❹ (p. 19)

Menu	Item		Adjustments/Configurations (options)
Picture	PC adjustments	Reset to defaults	Resets PC adjustments. Confirmation screen is displayed. Select "Yes" and press OK to reset.
		Sync	● H & V: The H and V sync signals are input from the HD/VD connector. (p. 37) ● On green: Uses a synchronized signal on the Video G signal, which is input from the G connector. (p. 37)
		Dot clock	Alleviates the problem if a picture appears to be vertically-striped, flickers partially or is blurred.
		H-position	Adjusts the horizontal position. 
		V-position	Adjusts the vertical position. 
		Clock phase	Alleviates the problem if the whole picture appears to flicker or is blurred. First adjust the Dot Clock to get the best possible picture, then adjust the Clock Phase so that a clear picture appears. **Note** It may not be possible to display a clear picture due to poor input signals.
		Input resolution	Switches to wide display. ● Input signal switched from 640×480 to 852×480 ● Input signal switched from 1024×768 to 1280×768 or 1366×768
		H-frequency V-frequency	Displays the H (Horizontal)/V (Vertical) frequencies. ● Display range Horizontal: 15 - 110 kHz Vertical: 48 - 120 Hz

● Audio menu (p. 20-21)

Viewing from an SD card

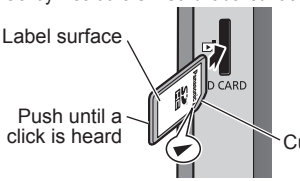
This function that lets you easily view still images on a television by simply inserting an SD card into the SD card slot. (Media other than SD Cards will not work.)



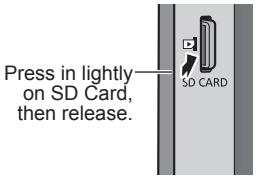
1 Insert the SD card

- Insert the card

Gently insert the SD Card label surface facing front.



- Remove the card



- Compliant card type (maximum capacity): SDXC Card (64 GB), SDHC Card (32 GB), microSDHC Card (16 GB), SD Card (2 GB), miniSD Card (2 GB), microSD Card (2 GB) (requiring microSDHC Card/miniSD Card/microSD Card adapter)
- If a microSDHC Card, miniSD Card or microSD Card is used, insert / remove it together with the adapter.
- For cautions and details on SD Cards (p. 35)



■ **Manual operation** (“Image viewer auto play” is “Off”)
Display “IMAGE VIEWER” (Thumbnail)



2 Select the data to be viewed

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





- To display/hide the Information area

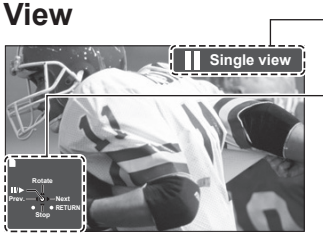


file number / total file number

Note

- Depending on the JPEG format, “Information” contents may not be displayed correctly. Refer to p. 35 (Data format for SD card browsing) for details.

3 View

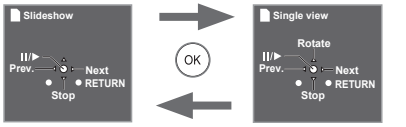


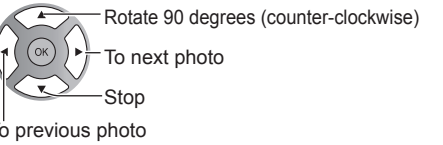
Displays one at a time

Photo status



Navigation Guide





- To display/hide the Navigation Guide ➡ INFO
- Return to the Thumbnail view RETURN

■ **Press to exit from a menu screen**
EXIT

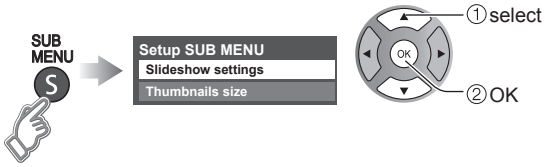
■ **Press to return to the previous screen**
RETURN

Display the SUB MENU

Note

- This operation is disabled when “Mode” in Hospital Mode menu is set to “On”.

① Display “Setup SUB MENU” and select item



■ **Slideshow settings** (see below)

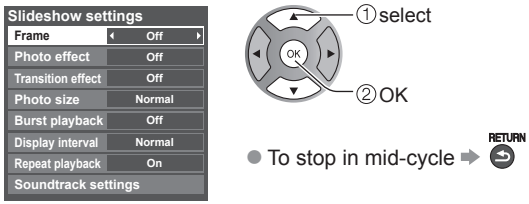
■ **Thumbnails size**

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

➡ (7 × 4 ⇔ 10 × 6)

Slideshow

① Adjust items



- To stop in mid-cycle ➡ RETURN

■ Slideshow settings

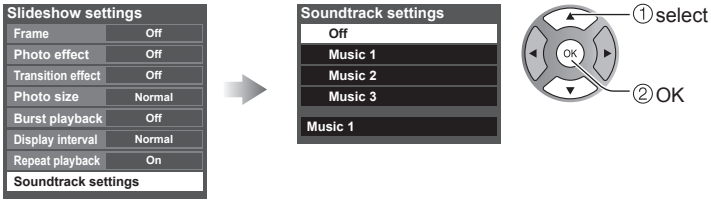
Settings	Item Description
Frame	Select the Frame (**Off/Array/Collage/Drift(with calendar)/Drift/Gallery(with calendar)/Gallery/Cinema**)
Photo effect	Select the display effect **(Off/Sepia/Gray scale)**
Transition effect	Select the Transition effect shown between photos **(Off /Fade in/Wipe ↓/Wipe ↑/Wipe →/Wipe ←/ Slide in ↓/Slide in ↑/Slide in →/Slide in ←/Zoom in/Comb ↑↓/Comb →←/Dissolve/Checker wipe/Motion/Random)**
Photo size	Removes the black borders that are added according to the size of the photo being displayed. **(Normal/Zoom)**
Burst playback	Continuously plays photos that were shot. **(On/Off)**
Display interval	Set “Display interval” each image is displayed in the Slideshow mode. **(Short/Fast/Normal/Slow/Very slow)**
Repeat playback	Turn the Slideshow Repeat (cycle) function on or off **(Off/On)**.
Soundtrack settings	Select the music **(Off/Music 1/Music 2/Music 3)**

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

■ Soundtrack settings

① Select “Soundtrack settings”

② Select the music



Viewing from an SD card (Continued)

Other settings in IMAGE VIEWER

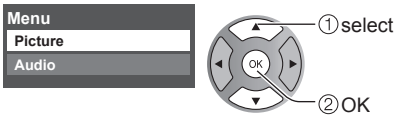
Note

- This operation is disabled when “Mode” in Hospital Mode menu is set to “On”.

① Display “Menu”

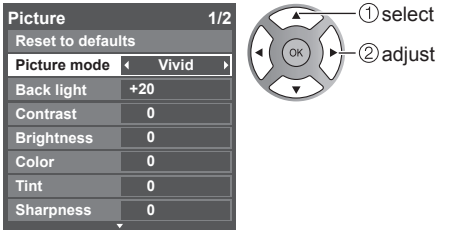


② Select the item



③ Set

■ Adjust the Picture and Audio



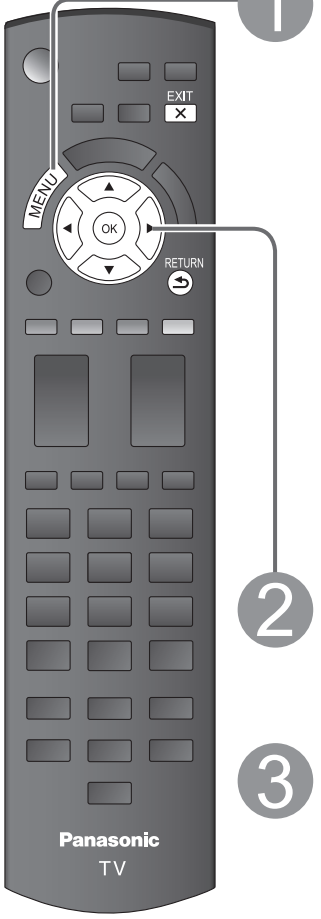
example: Picture menu

Picture menu/Audio menu (p. 20-21)

How to Use Menu Functions

Various menus allow you to make settings for the picture, sound, and other functions so that you can enjoy watching TV best suited for you.

● Guest menu (p. 32)

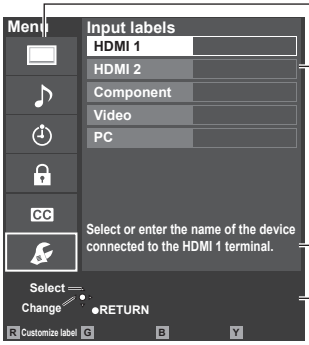


1 Display the menu



- Shows the functions that can be adjusted.
- Some functions will be disabled depending on the type of input signal.

Menu structure



Menu bar
Press OK to move to the Menu items.

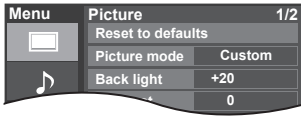
Menu items
Press OK to proceed to next screen if available.

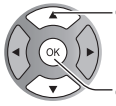
Help information

Operation guide

(example: Input labels)

2 Select the menu

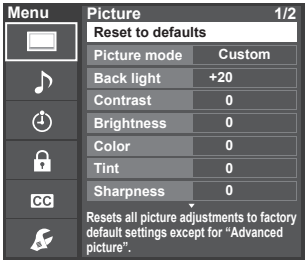


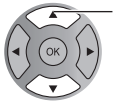


①select

②next

3 Select the item





select

(example: Picture menu)

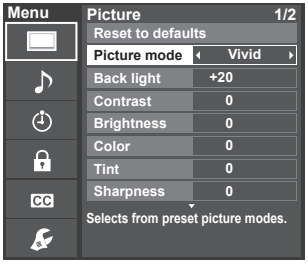
■ **Press to exit from a menu screen**

EXIT

■ **Press to return to the previous screen**

RETURN

4 Adjust or select





adjust
or
select

(example: Picture menu)

How to Use Menu Functions

■ Menu list

Menu	Item		Adjustments/Configurations (alternatives)
Picture	**Reset to defaults***		Resets all picture adjustments to factory default settings except for “Advanced picture”.
	Picture mode		Basic picture mode **(Vivid/Standard/Cinema/Custom)** (p. 36)
	Back light		Adjusts the luminance of the back light.
	Contrast, Brightness, Color, Tint, Sharpness		Adjusts color, brightness, etc. for each picture mode to suit your taste ● Display range **Contrast/Brightness/Color/Sharpness:** 0 - 100 **Tint:** -50 - +50
	Color temp.		Selects a choice of Cool (blue), Normal, or Warm (red) color. **(Cool/Normal/Warm)**
	Color mgmt.		On: Enhances green and blue color reproduction, especially outdoor scenes. **(Off/On)**
	A.I. picture		Controls dark areas without affecting the black level or brightness in the overall picture **(Off/On)**
	C.A.T.S.		Adjusts the brightness and gradation according to the ambient lighting condition. **(Off/On)**
	Video NR		Reduces noise, commonly called snow. Leave it off when receiving a strong signal. **(Off/On)**
	Aspect adjustments	**Screen format**	Changes the format (aspect ratio). **(FULL/H-FILL/JUST/4:3/ZOOM)** Lets you choose the aspect depending on the format of received signal. (p. 34)
		HD size	Selects between 95 % (Size 1) or 100 % (Size 2) for the scanning area with High-definition signal. **(Size 1/Size 2)** Select “Size 1” if noise is generated on the edges of the screen. ● Size 1: Selected item for “HD size”. Scanning 95 % ● Size 2: Selected item for “HD size”. Scanning 100 %
		H size	Adjusts the horizontal display range to reduce noise of both side edges of an image. **(Size 1/Size 2)** Size 2: Adjusts the image size according to the aspect mode for to reduce noise. (p. 36)
	PC adjustments		Sets PC display (p. 15)
	HDMI settings	**HDMI/DVI RGB range**	Prevents the blown out highlights and blocked up shadows when a wide-range signal is received. Selects between standard RGB range (16-235 bits) or non-compliance (0-255 bits). **(Auto/Standard (16-235)/Nonstandard)** Auto: Switches the RGB range (Standard (16-235)/Nonstandard) depending on the HDMI signal information.
		Contents type	Sets content type to each HDMI input. **(Off/Auto/Photo/Graphics)** Auto: Switches content type automatically depending on the HDMI signal information. Photo: Best setting for JPEG viewing. Graphics: Best setting for On-Screen display of connected equipment.
	Advanced picture	**3D Y/C filter**	Minimizes noise and cross-color in the picture. **(Off/On)**
		Color matrix	Selects image resolution of component-connected devices **(SD/HD)** ● SD: Standard Definition HD: High Definition ● Only used with 480p video signal.
		MPEG NR	Reduces noise of specific digital signals of DVD, STB, etc. **(Off/On)**
		Black level	Selects Dark or Light. Valid only for external input signals. **(Dark/Light)**
		3:2 pulldown	Adjusts the picture recorded in 24 fps for optimum quality. **(Off/On/Auto)**
Audio	**Reset to defaults***		Resets Bass, Treble, and Balance adjustments to factory default settings.
	Bass		Increases or decreases the bass response.
	Treble		Increases or decreases the treble response.
	Balance		Emphasizes the left / right speaker volume.

● In the AV mode, the Audio and Setup menus give fewer options.

* Confirmation screen is displayed. Select “Yes” and press OK to reset.

(Continued)

■ **Menu list**

Menu	Item		Adjustments/Configurations (alternatives)
Audio	Advanced audio	**Surround**	Enhances audio response when listening to stereo. **(Off/On)**
		Volume leveler	Minimizes volume disparity after switching to external inputs.
		TV speakers	Switches to “Off” when using external speakers **(Off/On)** ● “Surround” and “Volume leveler” do not work if “Off” is selected.
		HDMI 1 in **HDMI 2 in**	The default setting is “Digital” for the HDMI connection. (Digital input signal) Select audio input terminal when DVI cable is connected. (Analog audio input signal) **(Digital/Component/Video)**
	DTV language and SAP settings	**Preferred language**	Selected preferred language is used for automatic selection of service. **(English/Spanish/French)**
		Preferred audio type	Selected preferred audio type is used for automatic selection of service. **(Main Audio/Hearing Impaired/Visually Impaired)**
Timer	**Sleep**		The TV can automatically turn Off at the designated time **(0/15/30/60/90)**
Lock			Locks the programs. (p. 26)
Closed caption	**Closed caption**		Displays subtitles (Closed caption). (p. 30)
Setup	**Language**		Selects the screen menu language. **(English/Español/Français)**
	ANT/Cable setup		Sets channels. (p. 28)
	Input labels		Selects the terminal and label of the external equipment (p. 31)
	VIERA Link settings		See p. 24-25 for more detail.
	ECO/energy saving	**Power save**	Reduces screen brightness to lower power consumption. Eye-friendly for viewing in a dark room. **(Standard/Saving)**
		No signal for 10 minutes	To conserve energy, the TV automatically turns off when NO SIGNAL and NO OPERATION continue for more than 10 minutes. **(Stay on/Power TV off)** **Note** ● “No signal for 10 minutes was activated” will be displayed for about 10 seconds when the TV is turned on for the first time after the power was turned off by “No signal for 10 minutes”. ● The on-screen display will flash 3, 2 and 1 to indicate the last three (3) remaining minutes prior to the shut-off.
		No activity for 3 hours	To conserve energy, the TV automatically turns off when no operation of remote and side panel key continues for more than 3 hours. **(Stay on/Power TV off)** **Note** ● Not in use while “PC” is selected. ● “No activity for 3 hours was activated” will be displayed for about 10 seconds when the TV is turned on for the first time after the power was turned off by “No activity for 3 hours”. ● The on-screen display will flash 3, 2 and 1 to indicate the last three (3) remaining minutes prior to the shut-off.
	Advanced setup	**Image viewer auto play**	Set “Photos” to play back SD cards automatically. **(Photos/Off)**
		Fast boot	Set “On” to allow for faster booting from standby mode. Note that it consumes more electricity during the standby mode. **(Off/On)**
	About		Displays TV version and software license.
	Reset to defaults		Performing Reset will clear all items set with Setup, such as channel settings.

VIERA Link™ “HDAVI Control™”*

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

Equipment with the “HDAVI Control” function enables the following operations:

Version	Operations (See p. 24-25, for more information)
HDAVI Control or later	● Automatic Input Switching ● Power off link
HDAVI Control 2 or later	● VIERA Link control only with the TV’s remote control
HDAVI Control 3 or later	● Provides setting information (Language, time. etc.) ● Automatic lip-sync function
HDAVI Control 4 or later	———
HDAVI Control 5	● Audio Return Channel Audio Return Channel (ARC) is a function that enables digital sound signals to be sent via an HDMI cable back from the TV to a connected audio device.

■ When adding new equipment, reconnecting equipment or changing the setup after the connection, turn the equipment on and then switch the TV on. Set the input mode to HDMI1 or HDMI2 (p. 13), and make sure that the image is displayed correctly.

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

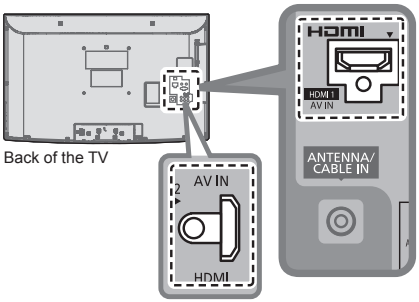
■ HDMI cable

This function needs an HDMI compliant (fully wired) cable. Non-HDMI-compliant cables cannot be utilized.
It is recommended that you use Panasonic’s HDMI cable. Recommended part number:
RP-CDHS15 (4.9 ft/1.5 m), RP-CDHS30 (9.8 ft/3.0 m), RP-CDHS50 (16.4 ft/5.0 m)

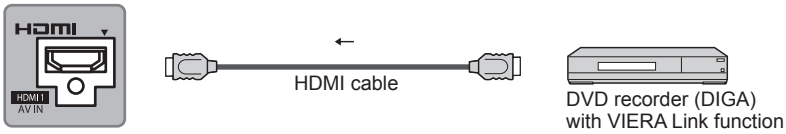
* For more details on the external equipment’s connections, please refer to the operating manual for the equipment.

VIERA Link™ Connections (with VIERA Link function)

■ Terminal overview

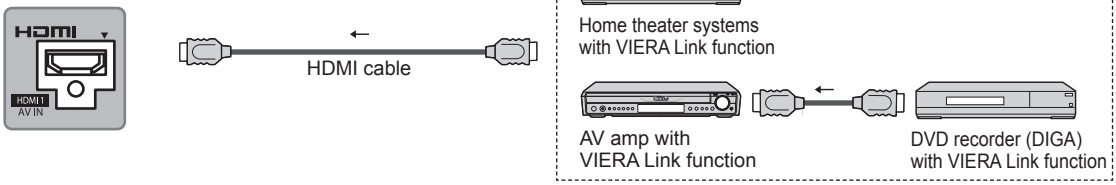


■ Connecting DVD Recorder (DIGA)



■ Connecting Home theater system/AV amp

HDMI 1 is recommended.

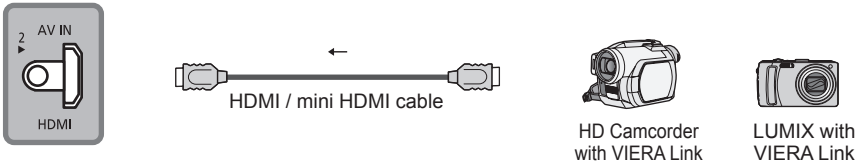


No optical cable is necessary when connecting a Home Theater supporting “HDAVI control 5” with an HDMI cable. Audio will be supported via ARC (Audio Return Channel) (p. 22)

- One AV amp and one DVD recorder (DIGA) can be operated with this unit.

■ Connecting HD Camcorder/Digital camera

Press INPUT and select an available HDMI terminal, then connect the camcorder to this input. After connection, confirm the HDAVI control functions. (p. 24-25)



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

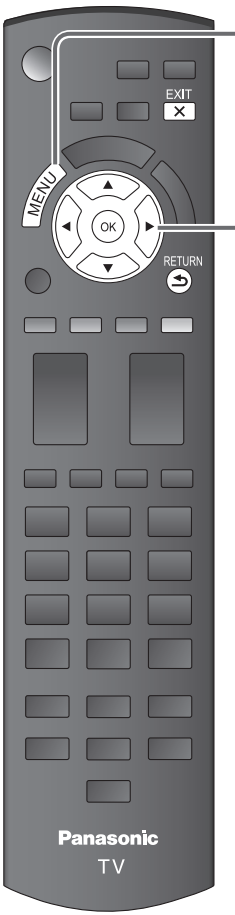
Note

- Individual HDMI equipment may require additional menu settings specific to each model. Please refer to their respective manuals.
- Some devices use Mini-HDMI terminal. HDMI (type A) to Mini-HDMI (type C) cable or adapter should be used.

VIERA Link™ "HDAVI Control™" (Continued)

VIERA Link settings and Available features

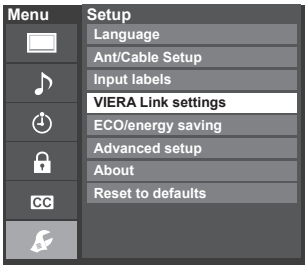
To use all VIERA Link functions : After everything is connected, in VIERA Link settings menu, set "VIERA Link" to "On".
Some features are disabled depending on the "HDAVI Control" version of the equipment.
Please check the list (p. 22)

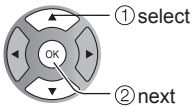


1 Display the menu

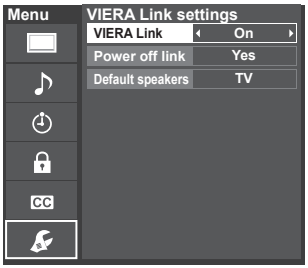


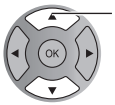
2 Select "VIERA Link settings" in "Setup"





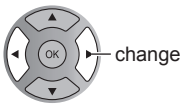
3 Select "VIERA Link"



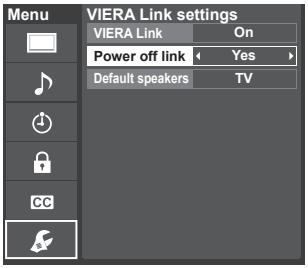


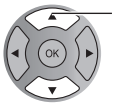
4 Select "On"

(default is On)



5 Select and make other settings





■ **Press to exit from a menu screen**

EXIT

■ **Press to go back to the previous screen**

RETURN

Automatic Input Switching

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

Power off link

When “Yes” is selected and the TV is turned off, all connected VIERA Link compatible equipment is also automatically turned off.
• A Panasonic DVD Recorder will not turn off if it is still in Rec mode.
• The TV remains on even if the VIERA Link compatible equipment is turned off.

Default speakers

“TV” is the default setting. To set the Home theater system as Default speakers, change the Default speakers setting from “TV” to “Theater”. Sound will be output from the Home theater whenever the TV is powered on.

Automatic lip-sync function

Minimizes lip-sync delays between the picture and audio when you connect to a Panasonic theater system or Amplifier.

TV provided setting information

The following information about the TV settings can be transmitted to each piece of equipment (Recorder/Home theater/Player) that has “HDAVI Control 3 or later” function connected to a TV with an HDMI cable.

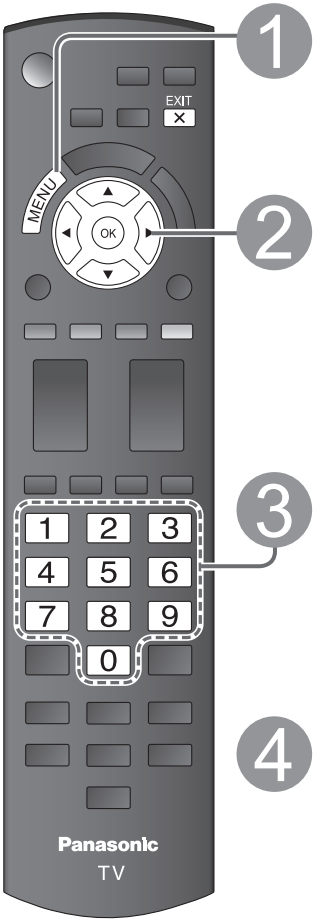
Transmittable data	Recorder	Home theater	Player
① On Screen Display Language setting (English/Español/Français)	○	○	○
② Panel Aspect Ratio (16:9 fixed)	○	○	○
③ Closed caption information (Mode/CC type/Digital setting)	○	---	---

Note

- There is a possibility that all the GUI language information might be set from equipment that has an HDMI CEC function connected to the TV with an HDMI cable. Depending on the operating conditions or the specification for each piece of equipment the setting may or may not be applied.
- For more details on the external equipment’s operation, please refer to the operating manual for the equipment.

Lock

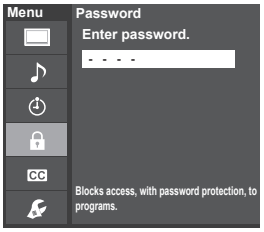
You can lock specified channels or shows to prevent children from watching objectionable content.

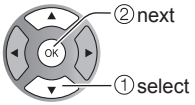


1 Display the menu



2 Select “Lock”





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

3 Input your 4-digit password

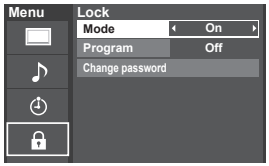
A 4-digit code must be entered to view a blocked program or change rating settings.

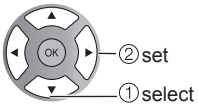




- If it is your first time entering the password, enter the password twice in order to register it.

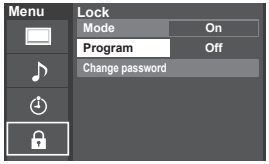
4 Select the Lock mode

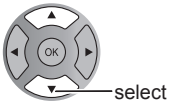




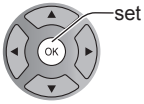
Off: Unlocks all the lock settings of “Program”.
On: Locks all the inputs regardless of the lock settings of “Program”.

5 Select the item





6 Set



■ Press to exit from a menu screen



Caution

- Make a note of your password in case you forget it. (If you have forgotten your password, consult your local dealer.)

Note

- When you select a locked channel, a message will be displayed that allows you to view the channel if you input your password.

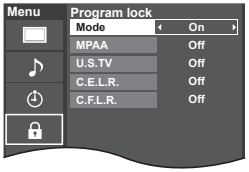
■ To select the channel or the rating of the program to lock

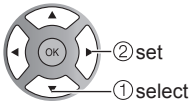
Program lock

■ To set a rating level

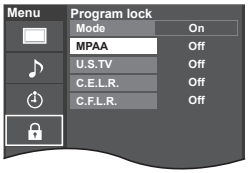
"V-chip" technology enables restricted shows to lock according to TV ratings.

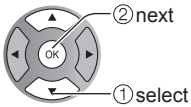
① Select "Mode" and set to "On"





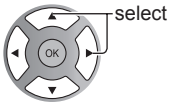
② Select the rating category you wish to follow





MPAA: U.S. movie ratings
U.S.TV: U.S. TV program ratings
C.E.L.R.: Canadian English ratings
C.F.L.R.: Canadian French ratings

③ Select the rating to lock



Example of "MPAA" (U.S. movie ratings)

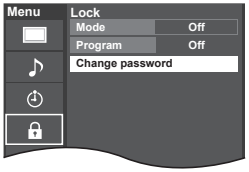
NR	No rating
G	General Audience: All ages admitted
PG	Parental Guidance Suggested
PG-13	Parents Strongly Cautioned: Inappropriate for children under 13
R	Restricted: Under 17 requires accompanying parent or adult guardian
NC-17	No one 17 and under admitted
X	Adults only

● To get more information (p. 33)

Change password

■ To change the password

① In ❹, select "Change password" and press OK
② Input the new 4-digit password twice



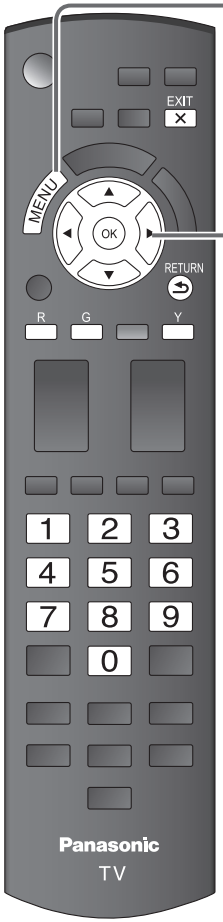


Note

- This television is designed to support the "Downloadable U.S. Region Rating System" when available. (Available only in U.S.A.)
- The Off rating is independent of other ratings.
- When placing a lock on a specific-age-based-rating level, the Off rating and any other more restrictive ratings will also be blocked.

Editing and Setting Channels

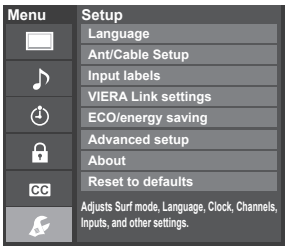
The current channel settings can be changed according to your needs and reception conditions.

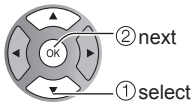


1 Display the menu

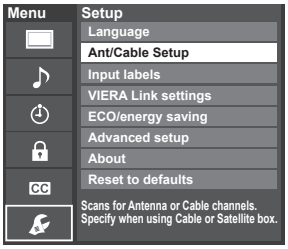


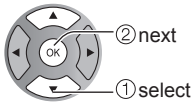
2 Select “Setup”



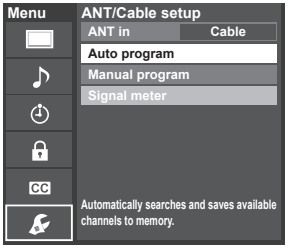


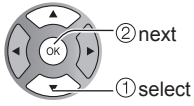
3 Select “ANT/Cable setup”





4 Select the function





5 Set

Auto program
Set automatically

Manual program
Set manually

Signal meter
Check signal strength

■ **Press to exit from a menu screen**

EXIT

■ **To reset the settings of the Setup menu**

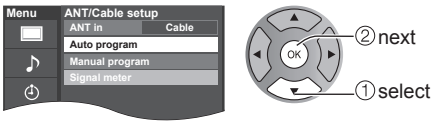
① Select “Reset to defaults” in the Setup menu (③) and press OK
② Input your 4-digit password with number buttons
③ Select “YES” on the confirmation screen and press OK

Automatically searches and adds available channels to the memory.

① Select “ANT in”

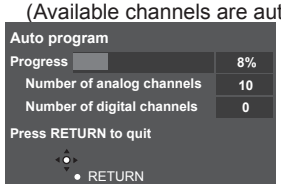
➡Select “Cable” or “Antenna”
Or select “Not used”.

② Select “Auto program”



③ Start scanning the channels

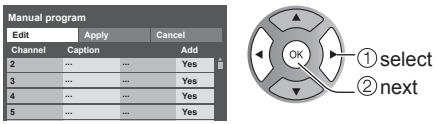
(Available channels are automatically set.)



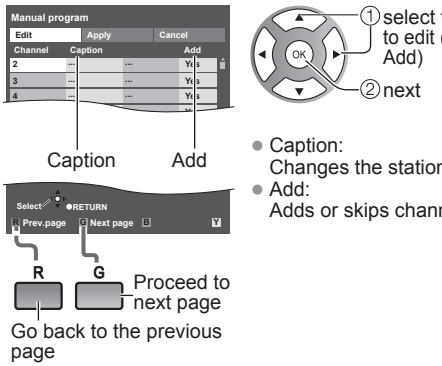
- After the scanning is completed, select “Apply”. (see below ⑤).
- All previously saved channels are erased.

Use this procedure when changing the channel setup or changing the channel display.
Also, use this to add or skip channels from the channel list manually.

① Select “Edit”



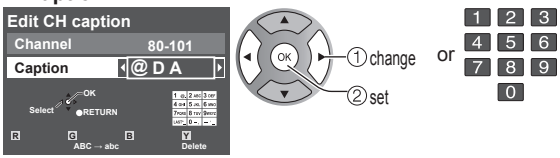
② Select the item to edit



- Caption:
  Changes the station identifier
- Add:
  Adds or skips channels

③ Edit

- **Caption**



Caption

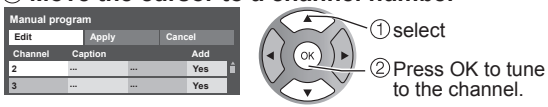
Select or edit the station identifier.
(maximum 7 characters available)

RETURN

- **Add**
  Press OK to select “Yes (add)” or “No (skip)”

RETURN

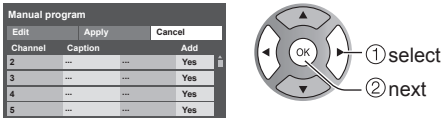
④ Move the cursor to a channel number



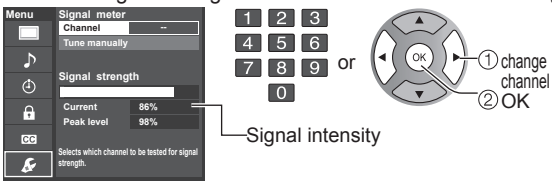
⑤ Select “Apply”



To cancel the Edit



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



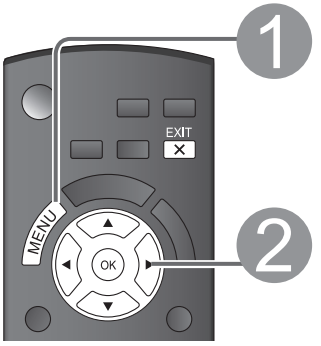
- If the signal is weak, check the antenna.
  If no problem is found, consult your local dealer.

Note

- Not available if “Cable” is selected in “ANT in” (see above).
- Available only for digital antenna channels.

- If “Lock” (p. 26) is activated and “ANT/Cable setup” is selected, “Enter password.” will be displayed.

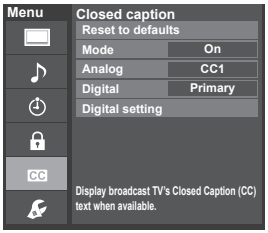
Closed Caption

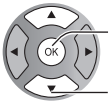


1 Display the menu



2 Select “Closed caption”





■ **Press to exit from a menu screen**

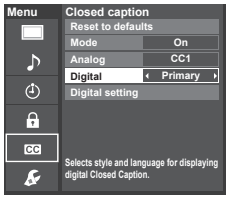
EXIT

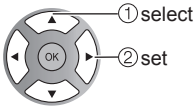
Closed caption

Display Closed caption

The television includes a built-in decoder that is capable of providing a text display of the audio. The program being viewed must be transmitting the Closed Caption (CC) information. (p. 34)

■ Select the item and set





- The settings in “Analog” or “Digital” depend on the broadcaster.

Mode On: To display Closed captions.
CC on mute: To display Closed captions when the audio is muted.
(when not using, select “Off”).

Analog (Choose the Closed caption service of Analog broadcasting.)

CC1-4: Information related to pictures (Appears at the bottom of the screen)

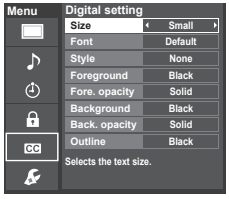
T1-4: Textual information (Appears over the entire screen)

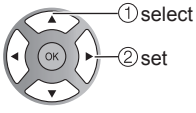
Digital (The Digital Closed caption menu lets you configure the way you choose to view the digital captioning.)

Select the setting.
- “Primary”, “Second.”, “Service 3”, “Service 4”, “Service 5”, “Service 6”

■ To make more in-depth display settings in digital programs

① Select “Digital setting” and press OK
② Select the item and set





Size Text size

Font Text font

Style Text style (Raised, Depressed, etc.)

Foreground Color of text

Fore. opacity Opacity of text

Background Color of text box

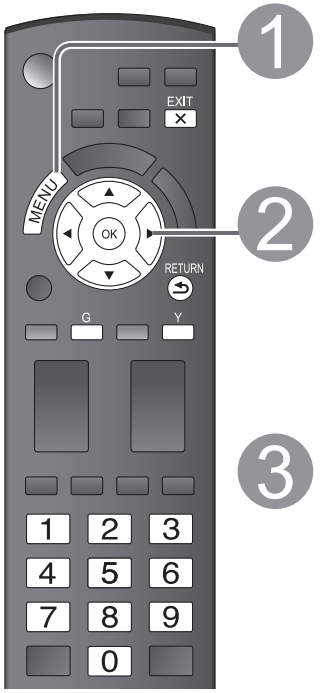
Back. opacity Opacity of text box

Outline Outline color of text (Identify the setting options on the screen.)

■ To reset the settings

① Select “Reset to defaults”. Confirmation screen is displayed.
② Select “Yes” and press OK.

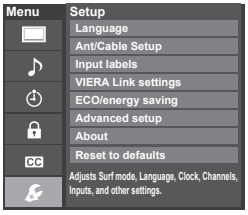
Input Labels

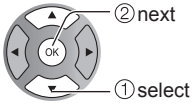


1 Display the menu

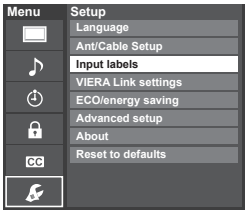


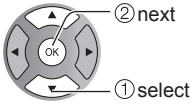
2 Select “Setup”





3 Select “Input labels”





■ **Press to exit from a menu screen**

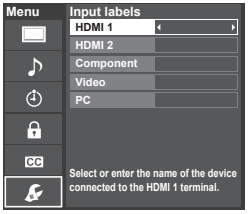
EXIT

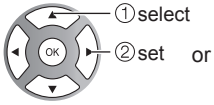
Input labels

Display labels of Connected devices

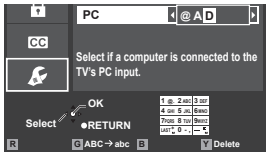
Devices connected to external input terminals can be labeled for easier identification during the input selection. (In selecting the input mode from p. 13 ❷)

■ **Select the terminal and label of the external equipment**





or



Follow the instructions on screen to complete the following operations.

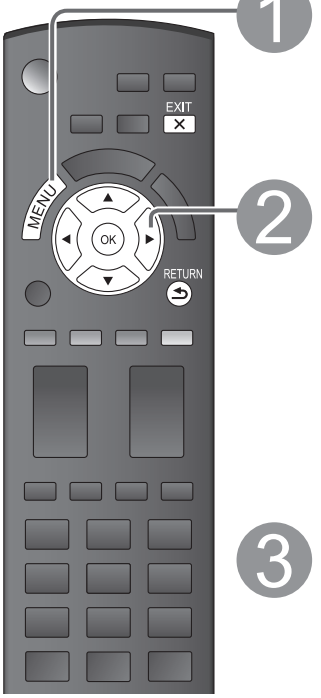
Label Terminal



[example]

- Terminals: HDMI 1-2/Component/Video/PC
- Label: [BLANK] Not used/Blu-ray/DVD/DVD REC/HOME THTR/GAME/COMPUTER/VCR/CABLE/SATELLITE/DVR/CAMERA/MONITOR/AUX/RECEIVER/MEDIA CTR/MEDIA EXT/OTHER
  For the PC terminal, only “Not used” is available.
- If “Not used” is selected, the INPUT button press will skip its input.
- Each selected label will be displayed on the “Input select” screen. (p. 13)

Guest Menu

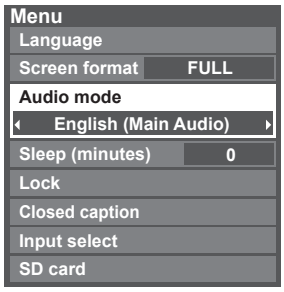


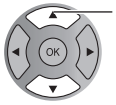
1 Display the menu



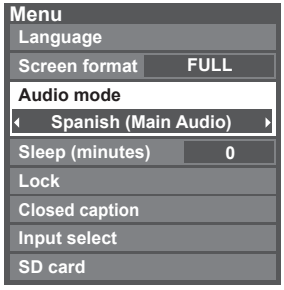
- Shows the functions that can be adjusted.
- Some functions will be disabled depending on the type of input signal.

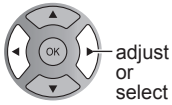
2 Select the item





3 Adjust or select





■ **Press to exit from a menu screen**

EXIT

■**Guest menu**

Item	Adjustments/Configurations (alternatives)
Language	Selects the screen menu language. **(English/Español/Français)**
Screen format	Changes the format (aspect ratio). **(FULL/H-FILL/JUST/4:3/ZOOM)** Lets you choose the aspect depending on the format of received signal. (p. 34)
Audio mode	Select Audio mode (p. 12)
Sleep (minutes)	The TV can automatically turn Off at the designated time **(0/15/30/60/90)**
Lock	Locks the programs. (p. 26)
Closed caption	Displays subtitles (Closed caption). (p. 30)
Input select	Select Input (p. 13)
SD card	Displays Image viewer (p. 16)

Ratings List for Lock

"V-chip" technology enables you to lock channels or shows according to standard ratings set by the entertainment industry. (p. 27)

■ U.S. MOVIE RATINGS (MPAA)

NR	NO RATING (NOT RATED) AND NA (NOT APPLICABLE) PROGRAMS. Movie which has not been rated or where rating does not apply.
G	GENERAL AUDIENCES. All ages admitted.
PG	PARENTAL GUIDANCE SUGGESTED. Some material may not be suitable for children.
PG-13	PARENTS STRONGLY CAUTIONED. Some material may be inappropriate for children under 13.
R	RESTRICTED. Under 17 requires accompanying parent or adult guardian.
NC-17	NO ONE 17 AND UNDER ADMITTED.
X	ADULTS ONLY.

■ U.S. TV PROGRAMS RATINGS (U. S. TV)

Age-based Group	Age-based Ratings	Possible Content Selections	Description
NR (Not Rated)	TV-NR	● Viewable ● Blocked	Not Rated.
Youth	TV-Y	● Viewable ● Blocked	All children. The themes and elements in this program are specifically designed for a very young audience, including children from ages 2-6.
	TV-Y7	● FV Blocked ● Viewable ● Blocked	Directed to older children. Themes and elements in this program may include mild physical or comedic violence, or may frighten children under the age of 7.
Guidance	TV-G	● Viewable ● Blocked	General audience. It contains little or no violence, no strong language, and little or no sexual dialogue or situations.
	TV-PG	● D,L,S,V (all selected) ● Any combination of D, L, S, V	Parental guidance suggested. The program may contain infrequent coarse language, limited violence, some suggestive sexual dialogue and situations.
	TV-14	● D,L,S,V (all selected) ● Any combination of D, L, S, V	Parents strongly cautioned. This program may contain sophisticated themes, sexual content, strong language and more intense violence.
	TV-MA	● L,S,V (all selected) ● Any combination of L, S, V	Mature audiences only. This program may contain mature themes, profane language, graphic violence, and explicit sexual content.

FV: Fantasy/Cartoon Violence. V: Violence S: Sex L: Offensive Language D: Dialogue with sexual content.

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

E	Exempt - Exempt programming includes: news, sports, documentaries and other information programming, talk shows, music videos, and variety programming.
C	Programming intended for children under age 8. No offensive language, nudity or sexual content.
C8+	Programming generally considered acceptable for children 8 years and over. No profanity, nudity or sexual content.
G	General programming, suitable for all audiences.
PG	Parental Guidance suggested. Some material may not be suitable for children.
14+	Programming contains themes or content which may not be suitable for viewers under the age of 14. Parents are strongly cautioned to exercise discretion in permitting viewing by pre-teens and early teens.
18+	18+ years old. Programming restricted to adults. Contains constant violence or scenes of extreme violence.

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

E	Exempt - Exempt programming.
G	General - Programming intended for audience of all ages. Contains no violence, or the violence content is minimal or is depicted appropriately.
8 ans+	8+ General - Not recommended for young children. Programming intended for a broad audience but contains light or occasional violence. Adult supervision recommended.
13 ans+	Programming may not be suitable for children under the age of 13 - Contains either a few violent scenes or one or more sufficiently violent scenes to affect them. Adult supervision strongly suggested.
16 ans+	Programming may not be suitable for children under the age of 16 - Contains frequent scenes of violence or intense violence.
18 ans+	Programming restricted to adults. Contains constant violence or scenes of extreme violence.

Caution

- The V-Chip system that is used in this set is capable of blocking "NR" programs (non rated, not applicable and none) as per FCC Rules Section15.120(e)(2). If the option of blocking "NR" programs is chosen "unexpected and possibly confusing results may occur, and you may not receive emergency bulletins or any of the following types of programming:"
  • Emergency Bulletins (Such as EAS messages, weather warnings and others)
  • Locally originated programming • News • Political • Public Service Announcements • Religious • Sports • Weather

Technical Information

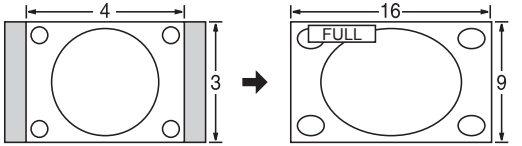
Closed caption (CC)

- For viewing the CC of digital broadcasting, set the aspect to FULL (If viewing with H-FILL, JUST, ZOOM or 4:3; characters might be cut off).
- The CC can be displayed on the TV if the receiver (such as a set-top box or satellite receiver) has the CC set On using the Component or HDMI connection to the TV.
- If the CC is set to On on both the receiver and TV when the signal is 480i (except for the HDMI connection), the CC may overlap on the TV.
- If a digital program is being output in analog format, the CC data will also be output in analog format.
- If the recorder or output monitor is connected to the TV, the CC needs to be set up on the recorder or output monitor.
- EIA-708 is the standard for closed captioning for ATSC digital television streams in the United States and Canada.
- EIA-608, also known as line 21 captions, used to be the standard for closed captioning for NTSC TV broadcasts in the United States and Canada.

Aspect Ratio (FORMAT)

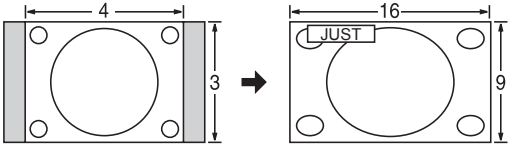
Press the FORMAT button to cycle through the aspect modes. This lets you choose the aspect depending on the format of the received signal and your preference. (p. 12)
(e.g.: in case of 4:3 image)

- FULL



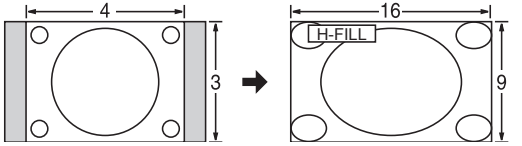
Enlarges the 4:3 image horizontally to the screen's side edges. (Recommended for anamorphic picture)

- JUST



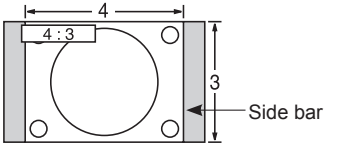
Stretches to justify the 4:3 image to the four corners of the screen.
(Recommended for normal TV broadcast)

- H-FILL



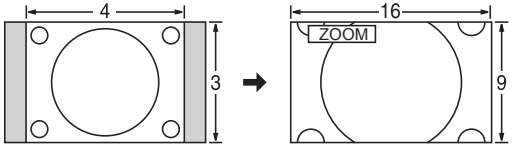
Enlarges the 4:3 image horizontally to the screen's side edges. The side edges of the image are cut off.

- 4:3



Standard
(Note that "Image retention" of the side bar may occur from displaying it for a long time.)

- ZOOM



Enlarges the 4:3 image to the entire screen.
(Recommended for Letter Box)

Note

- 480i (4:3), 480i (16:9), 480p (4:3), 480p (16:9): FULL, JUST, 4:3 or ZOOM
- 1080p / 1080i / 720p: FULL, H-FILL, JUST, 4:3 or ZOOM

Data format for SD 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 20,000,000

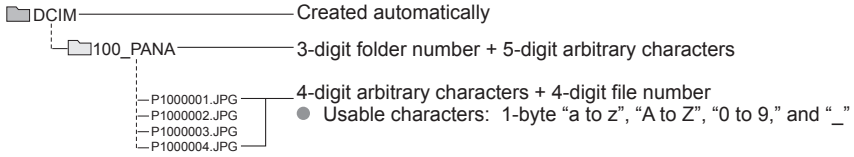
* DCF (Design rule for camera file system): A Japan Electronics and Information Technology Industries Association's standard
** EXIF (Exchangeable Image File Format)

Caution

- A JPEG image modified with a PC may not be displayed.
- Partly degraded files might be displayed at a reduced resolution.

Note

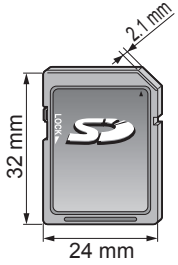
- Folder structure viewed in PC



- The folder and file names may be different depending on the digital camera used.
- For the suitable SD Memory Cards, please confirm the latest information on the following website.
  http://panasonic.jp/support/global/cs (This site is in English only)

Cautions in handling SD Card:

- Use an SD Card which meets SD standards. If not, it may cause the TV to malfunction.
- Do not remove the card while the unit is accessing data (this can damage card or unit).
- Do not touch the terminals on the back of the card.
- Do not subject the card to high pressure or impact.
- Insert the card in the correct direction (otherwise, card or unit 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 unit. (Panasonic is not liable for any deterioration or damage of recorded data.)



SD Card warning messages

Message	Meaning
Please insert SD memory card into the SD slot at the side of the TV.	The card is not inserted.
No photos	The card has no data or this type of data is not supported.
Cannot read file	The file is broken or unreadable. The TV does not support the format.

Technical Information (Continued)

HDMI connection

HDMI (high-definition multimedia interface) allows you to enjoy high-definition digital images and high-quality sound by connecting the TV unit and the devices.
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 connector using an HDMI compliant (fully wired) cable.

- HDMI is the world's first complete digital consumer AV interface complying with a non-compression standard.
- If the external equipment has only a DVI output, connect to the HDMI terminal via a DVI to HDMI adapter cable (*2).
- When the DVI to HDMI adapter cable is used, connect the audio cable to the audio input terminal.
- Audio settings can be made on the "HDMI 1 in" or "HDMI 2 in" menu screen. (p. 21)
  Applicable audio signal sampling frequencies (L.PCM): 48 kHz, 44.1 kHz, 32 kHz

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

Caution

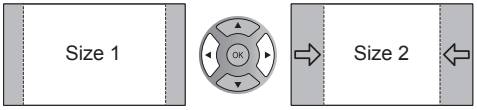
- Use with a PC is not assumed.
- All signals are reformatted before being displayed on the screen.
- If the connected device has an aspect adjustment function, set the aspect ratio to "16:9".
- These HDMI connectors are "type A".
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- A device having no digital output terminal may be connected to the input terminal of either "COMPONENT" or "VIDEO" to receive analog signals.
- The HDMI input terminal can be used with only the following image signals: 480i, 480p, 720p, 1080i, 1080p.
  Match the output setting of the digital device.
- For details of the applicable HDMI signals, see p. 37.

Picture mode

- Vivid: Provides enhanced picture contrast and sharpness for viewing in a well-lit room.
- Standard: Recommended for normal viewing conditions with subdued room lighting.
- Cinema: For watching movies in a darkened room. It provides a soft, film-like picture.
- Custom (Photo): Customizes each item according to your taste.
  Photo is displayed in JPEG menu.

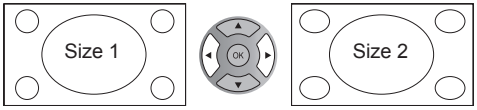
H size

- Aspect Ratio: 4:3



- The width will be decreased on both sides to reduce noise.

- Aspect Ratio: FULL/JUST(H-FILL/ZOOM)



- The width will be increased on both sides to reduce noise.

See page 20 for more information

Input signal that can be displayed

* Mark: Applicable input signal for Component (Y, PB, PR), HDMI and PC

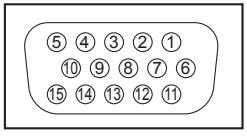
	horizontal frequency (kHz)	vertical frequency (Hz)	COMPONENT	HDMI	PC
525 (480) / 60i	15.73	59.94	*	*	
525 (480) /60p	31.47	59.94	*	*	
750 (720) /60p	45.00	59.94	*	*	
1,125 (1,080) /60i	33.75	59.94	*	*	
1,125 (1,080)/60p	67.43	59.94		*	
1,125 (1,080)/60p	67.50	60.00		*	
1,125(1,080)/24p	26.97	23.98		*	
1,125(1,080)/24p	27.00	24.00		*	
640 × 400 @70	31.47	70.08			*
640 × 480 @60	31.47	59.94			*
Macintosh13" (640 × 480)	35.00	66.67			*
640 × 480 @75	37.50	75.00			*
852 × 480 @60	31.44	59.89			*
800 × 600 @60	37.88	60.32			*
800 × 600 @75	46.88	75.00			*
800 × 600 @85	53.67	85.08			*
Macintosh16" (832 × 624)	49.73	74.55			*
1,024 × 768 @60	48.36	60.00			*
1,024 × 768 @70	56.48	70.07			*
1,024 × 768 @75	60.02	75.03			*
1,024 × 768 @85	68.68	85.00			*
Macintosh 21" (1,152 × 870)	68.68	75.06			*
1,280 × 768 @60	47.78	59.87			*
1,280 × 1,024 @60	63.98	60.02			*
1,366 × 768 @60	48.39	60.04			*

Note

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

PC Input Terminals Connection

- Computer signals which can be input are those with a horizontal scanning frequency of 15 to 110 kHz and vertical scanning frequency of 48 to 120 Hz. (However, the image will not be displayed properly if the signals exceed 1,200 lines.)
- Some PC models cannot be connected to the set.
- There is no need to use an adapter for computers with IBM PC/AT compatible D-sub 15P terminal.
- The maximum resolution: 1,280 × 1,024
  If the display resolution exceeds these maximums, it may not be possible to show fine detail with sufficient clarity.
- Signal Names for D-sub 15P Connector



Pin Layout for PC Input Terminal

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
③	B	⑧	GND (Ground)	⑬	HD/SYNC
④	NC (not connected)	⑨	NC (not connected)	⑭	VD
⑤	GND (Ground)	⑩	GND (Ground)	⑮	NC

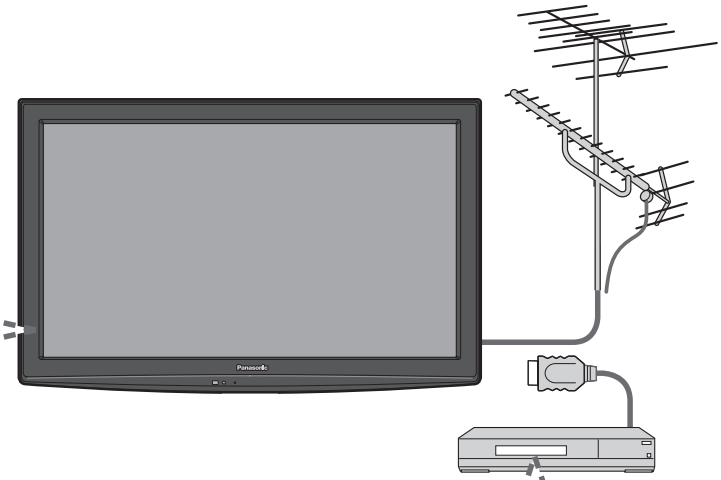
VIERA Link™ "HDAVI Control™"

HDMI connections to some Panasonic equipment allows you to interface automatically. (p. 23)

- This function may not work normally depending on the equipment condition.
- The equipment can be operated by other remote controls with this function on even if TV is in Standby mode.
- Image or sound may not be available for the first few seconds when the playback starts.
- Image or sound may not be available for the first few seconds when Input mode is switched.
- Volume function will be displayed when adjusting the volume of the equipment.
- If you connect equipment that has "HDAVI Control 2 or later" function to the TV with HDMI cable, the sound from DIGITAL AUDIO OUT terminal can be output as multi channel surround.
- "HDAVI Control 5" is the newest standard (current as of December, 2011) for the HDAVI Control compatible equipment. This standard is compatible with the conventional HDAVI equipment.

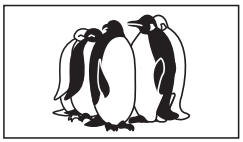
Troubleshooting

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



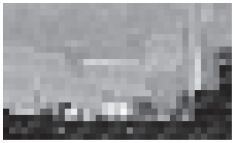
White spots or shadow images (noise)





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

Interference or frozen digital channels (intermittent sound)



- Change the direction of antenna for digital channels.
- Check “Signal meter” (p. 29). If the signal is weak, check the antenna and consult your local dealer.

The LCD panel moves slightly when it is pushed with a finger. A clattering sound might be heard

This is not a malfunction.

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

Pictures from external equipment are distorted when the unit is connected via HDMI

- Is the HDMI cable connected properly?
- Turn Off the TV unit and equipment, then turn them On again.
- Check an input signal from the equipment. (p. 37)
- Use equipment compliant with EIA/CEA-861/861B.

When the channel is changed on an STB that is connected with HDMI, “HDMI” may be displayed on the top left of the screen

- This is not a malfunction.

Recording does not start immediately

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

If there is a problem with your TV, please refer to the table below to determine the symptoms, then carry out the suggested check. If this does not solve the problem, please contact your local Panasonic dealer, quoting the model number and serial number (both found on the rear of the TV).

	Problem	Actions
Screen	**Some spots remain bright or dark**	● The LCD panel is made up of a few million pixels and is produced with advanced technology through an intricate process. Sometimes a few pixels may be bright or dark. These pixels do not indicate a defective panel and will have no impact on the performance of the TV.
	Chaotic image, noisy	● Check nearby electrical products. (car or motorcycle ignition systems, fluorescent lamp, etc.)
	No image is displayed on screen	● Check Picture menu (p. 20) ● Check the cable connections. ● Check that the correct input has been selected.
	Only spots are displayed instead of images	● Check the channel settings. (p. 28) ● Check the antenna cables.
	Neither image nor sound is produced	● Is the power cord plugged into the outlet? ● Is the TV unit turned On? ● Check Picture menu (p. 20) and volume. ● Check the AV cable connections. (p. 9-10) ● Check that the correct input has been selected. (p. 13)
	Black Box appears	● Change settings of Closed caption (CC). (p. 30)
Sound	**No sound is produced**	● Are the speakers' cables connected correctly? ● Is "Sound Mute" active? (p. 11) ● Is the volume set to the minimum? ● Is "TV speakers" set to "Off"? (p. 21) ● Change "SAP" settings. (p. 12) ● Check "HDMI 1 in" or "HDMI 2 in" settings. (p. 21) ● If the TV is connected to a Panasonic Home Theater via HDMI cable, then check VIERA Link controls. (p.22)
	Sound is unusual	● Set "SAP" setting to "Stereo" or "Mono". ● Check the HDMI device connected to the unit. ● Set the audio setting of the HDMI device to "Linear PCM". ● If digital sound connection has a problem, select analog sound connection.
	Unknown sound heard **1- Sounds from TV cabinet** **2- Tick/Click sound** **3- Buzzing sound**	1- Changes in the temperature and humidity of the room may cause the TV's cabinet to expand or contract and produce metallic sounds. This is not a sign of faulty operation or a malfunction. 2- When the TV is powered on, an electrical component in the TV activates producing a tick/click sound. This is not a sign of faulty operation or a malfunction. 3- Electrical circuits are active while the TV set is on. This is not a sign of faulty operation or a malfunction.
Other	**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. Set up 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.

Care and Cleaning

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

Display panel

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

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

Cabinet

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

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

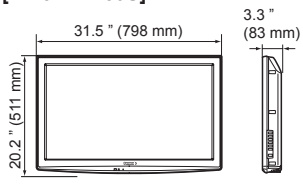
Power cord plug

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

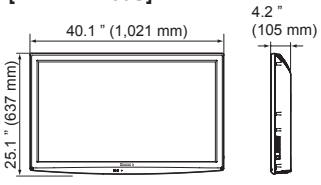
Specifications

		TH-32LRH50U	TH-42LRH50U
Power Source		AC 120 V, 60 Hz	
Power Consumption (Rated/Standby)		115 W / 0.9 W	205 W / 0.9 W
Display panel	**Aspect Ratio**	16:9	
	Visible screen size	32” class (31.5 inches measured diagonally)	42” class (42.0 inches measured diagonally)
	(W × H × Diagonal)	27.5 ” × 15.4 ” × 31.5 ” (698 mm × 392 mm × 800 mm)	36.6 ” × 20.6 ” × 42.0 ” (930 mm × 523 mm × 1,067 mm)
	(No. of pixels)	1,049,088 (1,366 (W) × 768 (H)) [4,098 × 768 dots]	2,073,600 (1,920 (W) × 1,080(H)) [5,760 × 1,080 dots]
Sound	**Speaker**	1-way 2 bottom SP System	
	Audio Output	20 W [10 W + 10 W] (10 % THD)	
PC signals		VGA, SVGA, XGA, WXGA, SXGA Horizontal scanning frequency 31 - 69 kHz Vertical scanning frequency 59 - 86 Hz	
Channel Capability-ATSC/NTSC (Digital/Analog)		VHF/ UHF: 2 - 69, CATV: 1 - 135 (support MPEG4 H.264 decode)	
Operating Conditions		Temperature: 32 °F – 95 °F (0 °C – 35°C) Humidity: 20 % – 80 % RH (non-condensing)	
Connection Terminals	**VIDEO IN**	VIDEO: RCA PIN Type × 1 1.0 V[p-p] (75 Ω) AUDIO L - R: RCA PIN Type × 2 0.5 V [rms]	
	COMPONENT IN	Y: 1.0 V [p-p] (including synchronization) PB, PR: ±0.35 V [p-p] AUDIO L-R: RCA PIN Type × 2 0.5 V [rms]	
	HDMI 1-2	TYPE A Connector × 2	
	PC	D-SUB 15PIN: R,G,B / 0.7 V [p-p] (75 Ω) HD, VD / 1.0 - 5.0 V [p-p] (high impedance) AUDIO: M3 JACK × 1 0.5 V [rms]	
	SERIAL CTRL	M3 Jack × 1 (RS232C)	
	PILLOW SPEAKER	M3 Jack × 1	
	DATA/MTI	RJ-11C (6pin) ● Multiple Television Interface (MTI)	
	AUDIO OUT	M3 JACK × 1 0.5 V [rms] (high impedance)	
	Card slot	SD CARD slot × 1	
Dimensions (W × H × D)		31.5 ” × 20.2 ” × 3.3 ” (798 mm × 511 mm × 83 mm)	40.1 ” × 25.1 ” × 4.2 ” (1,021 mm × 637 mm × 105 mm)
Mass		21.4 lb. (9.7 kg) NET	39.1 lb. (17.7 kg) NET

[TH-32LRH50U]



[TH-42LRH50U]



Note

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

Panasonic System Communications Company of North America
Unit of Panasonic Corporation of
North America
Three Panasonic Way, 2F-5,
Secaucus, NJ 07094

Panasonic Healthcare LCD HDTV
Limited Warranty

Panasonic System Communications Company of North America (referred to as "the Warrantor") will repair this product and all included accessories with new or refurbished parts, free of charge in the USA or Puerto Rico, of the original purchase in the event of a defect in materials or workmanship as follows:

Models or Parts	Part Warranty	Labor Warranty
Professional Flat Panel Display	2 Years	2 Years

On-site or carry-in service in the **USA and Puerto Rico** may be obtained during the warranty period by contacting Panasonic System Communications Company of North America Service toll free at
1-800-973-4390.

This warranty is extended only to the original purchaser and is non transferable. A purchase receipt or other proof of date of original purchase will be required before warranty service is rendered.

This warranty only covers failures due to defects in materials or workmanship, which occur during normal use. The warranty does not cover damage which occur in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from improper installation, set-up adjustments, improper antenna, inadequate signal pickup, maladjustment of consumer controls, improper operation, power line surge, improper voltage supply, lighting damage, or service by anyone other than an authorized repair facility, or damage that is attributable to acts of God.

LIMITS AND EXCLUSIONS

There are no express warranties except as listed above.

THE WARRANTOR SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITION, DAMAGE TO DISCS) RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THE WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may nor apply to you. This warranty gives you specific legal rights and you may other rights, which vary from state to state.

If you have a problem with this product that is not handled to your satisfaction, then write the Consumer Affairs Department at the Company address indicated above.

In the USA and Puerto Rico
FOR SERVICE
CALL TOLL FREE
1-800-973-4390

USA only: This product has a fluorescent lamp that contains mercury. Disposal may be regulated in your community due to environmental considerations. For disposal or recycling information, please visit Panasonic website: http://www.panasonic.com/environmental or call 1-888-769-0149.

Customer's Record
The model number and serial number of this product can be found on its back cover. 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 _____

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Panasonic System Communications Company of North America
Unit of Panasonic Corporation of North America

Executive Office :
Three Panasonic Way, 2F-5, Secaucus, NJ 07094