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.
Turn your own living room into a movie theatre!

Experience an amazing level of multi-

Receive digital terrestrial services using an integrated Digital TV tuner
Sharp pictures with HDMI terminal
Create home theatre and DVD recorder link-ups with “VIERA Link”
without complicated settings!

Notice about Digital TV Functions

- The MPEG-4 AVC feature was designed to specifications as we know them today. This specification may be subject to future changes beyond our control that may not guarantee the decoding of such services.

July 2009
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media excitement

Enjoy rich multimedia

Amplifier with Speaker system
SD card
Camcorder
Personal computer
DVD Recorder
Set top box
DVD player

VCR

Basic
Advanced
Technical
Quick Start Guide

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## Safety Precautions

### Handling the mains plug and lead
- Insert the mains plug fully into the socket outlet. If the mains plug is loose, it could generate heat and cause fire.
- Ensure that the mains plug is easily accessible.
- Do not touch the mains plug with a wet hand. This may cause electrical shock.
- Do not damage the mains lead. A damaged lead may cause fire or electrical shock.
- Do not move the TV with the lead plugged in the socket outlet.
- Do not twist the lead, bend it excessively, or stretch it.
- Do not pull on the lead. Hold onto the mains plug body when disconnecting lead.
- Do not use a damaged mains plug or socket outlet.

### Warning

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

AC 220-240 V, 50/60 Hz

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

### Do not remove covers
**NEVER modify the TV yourself**
- High-voltage components may cause serious electrical shock.
- Have the TV checked, adjusted, or repaired at your local Panasonic dealer.

### Do not expose to direct sunlight and other sources of heat
- Avoid exposing the TV to direct sunlight and other sources of heat. To prevent fire never place any type of candle or naked flame on top or near the TV.

### Avoid exposing the TV to high atmospheric moisture (such as tropical rain) or night time dew condensation
- This TV is designed and manufactured for indoor use only.

### Do not place foreign objects inside the TV
- Do not allow any objects to drop into the TV through the air vents. Fire or electrical shock may result.

### Do not place the TV on sloped or unstable surfaces
- The TV may fall off or tip over.

### Use only the dedicated pedestals / mounting equipment
- Using an unapproved pedestal or other fixtures may make the TV unstable, risking injury. Be sure to ask your local Panasonic dealer to perform setup.
- Use approved pedestals / mounts (p. 7).

### Do not allow children to handle SD card
- As with a small object, SD card can be swallowed by young children. Please remove SD card immediately after use and store out of reach of children.
**Important Installation Notices**

**Install TV on a stable surface**
If a television is not positioned in a sufficiently stable location, it can be potentially hazardous due to falling. Many injuries, particularly to children, can be avoided by taking simple precautions such as:
- Using cabinets or stands recommended by the manufacturer of the television.
- Only using furniture that can safely support the television.
- Ensuring the television is not overhanging the edge of the supporting furniture.
- Not placing the television on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television to a suitable support.
- Not standing the televisions on cloth or other materials placed between the television and supporting furniture.
- Educating children about the dangers of climbing on furniture to reach the television or its controls.

**When cleaning the TV, remove the mains plug**
- Cleaning an energized TV may cause electrical shock.

**When the TV is not going to be used for a long period of time, remove the mains plug**
- This TV will still consume some power even in the Off mode, as long as the mains plug is still connected to a live socket outlet.

**Transport only in upright position**

**Allow sufficient space around the TV for radiated heat**

Minimum distance

![Diagram showing the minimum distance of 10 cm around the TV](image)

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

**Do not block the rear air vents**
- Blocked ventilation by newspapers, table cloths, curtains, etc. may cause overheating, fire or electrical shock.

**Do not expose your ears to excessive volume from the headphones**
- Irreversible damage can be caused.

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

**Keep the TV away from these types of equipment**
- Electronic equipment
- In particular, do not place video equipment near the TV. Electromagnetic interference may distort images / sound.
- Equipment with an infrared sensor
- This TV also emits infrared rays. This may affect operation of other equipment.
### Maintenance

First, remove the mains plug from the socket outlet.

#### Display panel

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

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

#### Cabinet, Pedestal

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

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

#### Mains plug

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

### Licence

- DVB and the DVB logos are trademarks of the DVB Project.
- VGA is a trademark of International Business Machines Corporation.
- S-VGA is a registered trademark of the Video Electronics Standard Association.
- SDHC Logo is a trademark.
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- HDAVI Control™ is a trademark of Panasonic Corporation.
- “AVCHD” and the “AVCHD” logo are trademarks of Panasonic Corporation and Sony Corporation.
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- Macintosh is a trademark of Apple Inc.

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**This product is licensed under the AVC patent portfolio license for the personal and non-commercial use of a consumer to (i) encode video in compliance with the AVC Standard (“AVC Video”) and/or (ii) decode AVC Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a video provider licensed to provide AVC Video. No license is granted or shall be implied for any other use. Additional information may be obtained from MPEG LA, LLC. See http://www.mpegla.com.**
Quick Start Guide

Accessories / Options

Standard accessories

Check that you have the accessories and items shown

- Remote Control
  - N2QAYB000352
  - N2QAYB000401

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

- Pedestal

- Assembly screw for Pedestal (3)
  - M4

- Operating Instructions with Warranty Statement

- Fall-prevention parts p. 8

Caution

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

Optional accessories

- Wall-hanging bracket
  - TY-WK23LR2W

Please contact your nearest Panasonic dealer to purchase the recommended wall-hanging bracket.

For additional details, please refer to the wall-hanging bracket installation manual.

WARNING!

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

Installing remote’s batteries

1. Pull open Hook Note the correct polarity (+ or -)
2. Close

Caution

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

- Fix securely with assembly screws A. (Total 3 screws)
- Tighten screws firmly.

**Foam mat or thick soft cloth**

---

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

**Do not disassemble or modify the pedestal.**
- Otherwise the TV may fall over and become damaged, and personal injury may result.

**Caution**
- Do not use any other TV and displays.
- Otherwise the TV may fall over and become damaged, and personal injury may result.

**Do not use the pedestal if it becomes warped or physically damaged.**
- If you use the pedestal when it is physically damaged, personal injury may result. Contact your nearest Panasonic Dealer immediately.

**During set-up, make sure that all screws are securely tightened.**
- If sufficient care is not taken to ensure screws are properly tightened during assembly, the pedestal will not be strong enough to support the TV, and it might fall over and become damaged, and personal injury may result.

---

**Preventing the TV from falling over**

This TV could fall over if it’s pushed, pulled or knocked down. We therefore recommend the TV is secured to the base as illustrated.

**Fall-prevention parts**

- Band TKLA4401
- Screw
- Wood screw

**Securing to a base**

Fix pedestal and base together with band.

---

This image is for illustrative purposes only.
Tilt the LCD panel to your desired angle

The LCD panel can be tilted between 3° forward and 8° backward.

Identifying Controls

TV

- Change the input mode
- Change the channel up/down.
  When a function is displayed, press up/down to adjust the setting of the selected function. When in standby mode, switches TV on.
- Function select
  - Volume / Contrast / Brightness / Colour / Sharpness / Tint (NTSC mode) /
  - Bass / Treble / Balance / "Digital TV Auto Tuning" or "Analogue TV Auto Tuning" (p. 24 - 25)
- Mains power On / Off switch
  - Switch On to turn on the TV
- Power LED
  - Standby: red
  - On: green
  - When using the remote control, indicates the TV has received a command.
- C.A.T.S. (Contrast Automatic Tracking System) sensor
  - Senses brightness to adjust picture quality in "Eco Mode" in Picture Menu (p. 24)
- Remote control signal receiver
  - Do not place any objects between the TV remote control signal receiver and remote control.

Headphone jack (p. 46)
SD card slot (p. 35)

Quick Start Guide

Identifying Controls

Accessories / Options

Identifying Controls

Headphone jack (p. 46)
SD card slot (p. 35)
Identifying Controls

Remote Control

SD Card (p. 35)
- Switches to SD Card viewing mode

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

Aspect (p. 16)
- Changes aspect ratio from Aspect Selection list
- Also possible by pressing this button repeatedly until you reach the desired aspect

Main Menu (p. 22)
- Press to access Picture, Sound and Setup menus

Channel / Programme Information (p. 15)
- Displays channel and programme information

VIERA TOOLS (p. 45)
- Displays functions of the linked equipment and SD card

VIERA Link (p. 38)
- Press to access VIERA Link Menu

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

Option menu (p. 16)
- Easy setting for sound options

Teletext (p. 18)
- Switches to teletext mode

Subtitles (p. 14)
- Displays subtitles

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

Sound mute
- Switches sound mute On or Off

Volume Up / Down

Input mode selection
- TV - switches Digital TV / Analogue TV mode (p. 14)
- AV - switches to AV input mode from Input Selection list (p. 20)

Off timer (p. 15)
- Turns the TV off automatically after a fixed period of time

Stereo / Bilingual Sound Selection (p. 48)
- Changes the sound track when more than two choices are available (Digital TV mode) (p. 16)

Exit
- Returns to the normal viewing screen

Guide (p. 17)
- Displays TV Guide

Cursor buttons
- Makes selections and adjustments

Return
- Returns to the previous menu

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

Hold
- Freeze / unfreeze picture (p. 14)
- Holds the current teletext page (teletext mode) (p. 19)

Index (p. 19)
- Returns to the teletext index page (teletext mode)

Surround (p. 24)
- Switches surrounding sound setting

Channel Up / Down
- Selects channel in sequence

VCR / DVD Panasonic equipment operations (p. 20)
Basic Connection

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

Connecting aerial

TV only

Connecting DVD Recorder / VCR

TV, DVD Recorder or VCR

Note

- Do not put the RF cable close to the mains lead to avoid noise.
- Do not place the RF cable under the TV.
- To obtain optimum quality picture and sound, an Aerial, the correct cable (75 Ω coaxial) and the correct terminating plug are required.
- If a communal Aerial system is used, you may require the correct connection cable and plug between the wall Aerial socket and the TV.
- Your local Television Service Centre or dealer may be able to assist you in obtaining the correct Aerial system for your particular area and the accessories required.
- Any matters regarding Aerial installation, upgrading of existing systems or accessories required, and the costs incurred, are the responsibility of you, the Customer.
- VIERA Link connection  p. 38
- Read the manual of the equipment too.
Auto Tuning

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

**Plug the TV into mains socket and switch On**

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

**Select your area**

Select Auto Scan Type

Select Auto Scan Type

Auto Scan Type

Digital TV Channels only

All Channels

**Start Auto Tuning**

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

**Select the viewing environment**

Select State / Territory

Queensland

South Australia

Victoria

New South Wales / Australian Capital Territory

Western Australia

Northern Territory

Tasmania

If you select “Shop” by mistake

Return to the “Home” or “Shop” Selection menu

Once you press the OK button in this menu, the TV is set to Shop mode. Please reset all settings to set to “Home” mode.

“Shipping Condition” (p. 32)
Many features available on this TV can be accessed via the On-Screen Display menu.

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

### How to use remote control

- **Open the main menu**
- **Move the cursor / select the menu**
- **Move the cursor / adjust levels / select from a range of options**
- **Access the menu / store settings after adjustments have been made or options have been set**
- **Return to the previous menu**
- **Exit the menu system and return to the normal viewing screen**

### On-screen operation guide

- **Move the cursor / select the menu**
- **Move the cursor / adjust levels / select from a range of options**
- **Access the menu / store settings after adjustments have been made or options have been set**
- **Return to the previous menu**
- **Exit the menu system and return to the normal viewing screen**

### Note

- To edit channels ⇒ "Editing Channels" (p. 28)
- If tuning have failed ⇒ "Tuning Channels" (p. 30).
- To reset all settings ⇒ "Shipping Condition" (p. 32).
- If you turned the TV Off during Standby mode last time, the TV will be in Standby mode when you turn the TV On with Mains power On / Off switch.
Watching TV

1. Turn power on
   - Mains power On / Off switch should be On. (p. 9)

2. Select Digital TV or Analogue TV mode
   - Also possible to select the mode using the TV button on the top panel of the TV. (p. 9)
   - Information banner appears whenever you select a channel.
   - For details ➔ p. 15

3. Select a channel
   - To select the two or three-digit channel number, e.g. 39 (in a short time)
   - If one or two-digit channel number quickly changes the channel
   - To select from the Channel List ➔

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

Select a channel using information banner (p. 15)
Possible to confirm the programme name before selecting channels.
   - Display information banner if it is not displayed
   - Possible to set display timeout in "Banner Display Timeout" (p. 25).

Select a channel using TV Guide (Digital TV mode) (p. 17)
Possible to confirm the TV Guide (EPG) before selecting channels.
   - Display TV Guide
   - Select a channel

Other useful functions

<table>
<thead>
<tr>
<th>Hold</th>
<th>Freeze / unfreeze picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOLD</td>
<td></td>
</tr>
<tr>
<td>STTL</td>
<td>Display / hide subtitles (if available)</td>
</tr>
</tbody>
</table>
Other useful functions

Display information banner

- Also appears when changing channels
- Programme name  Channel  Current time

Digital TV: Programme Start / Finish time
Analogue TV: Channel status

Features available / Message meanings

<table>
<thead>
<tr>
<th>Feature</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound mute On</td>
<td>On</td>
</tr>
<tr>
<td>Audio mode (p. 48)</td>
<td>(Digital TV mode)</td>
</tr>
<tr>
<td>Encrypted (Analogue TV mode)</td>
<td>(Digital TV mode)</td>
</tr>
<tr>
<td>Rating:</td>
<td>(Digital TV mode)</td>
</tr>
<tr>
<td>Rating information (p. 48)</td>
<td>Subtitle service available 1 - 90</td>
</tr>
<tr>
<td>(Digital TV mode)</td>
<td>Off Timer remaining time</td>
</tr>
<tr>
<td>(Digital TV mode)</td>
<td>For settings → See below</td>
</tr>
</tbody>
</table>

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

Off Timer

- To cancel “Off Timer” and set the time
- To display the remaining time
- Information banner

Adjust the standard time
- Select the region where you live to adjust the standard time.

- The time contained in the broadcast signal is UTC (Universal Time coordinated) formally known as GMT (Greenwich Mean Time).

Adjust for Summer Time
- Select time offset from the standard time for Summer Time.
- Normally select “Auto”.
- If there is a gap between displayed time and actual time, set this function.

Daylight Saving Time
- These items can be set from “Other settings” in Setup Menu. (p. 23, 25)
Watching TV

Other useful functions

**Display the selectable settings for the current programme**

<table>
<thead>
<tr>
<th>OPTION</th>
<th>Check or change the current programme status instantly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Audio selection** (Digital TV mode)
Allows you to select between alternative language for sound tracks (if available)

**MPX** (Analogue TV mode)
= Sound Menu (p. 24)

**Volume Correction**
Adjusts volume of individual programme or input mode

**Note**
= Also possible to change the settings in Menu list (p. 24 and p. 25).

**Change aspect ratio**

Enjoy viewing the picture at its optimum size and aspect.

**ASPECT**

Display the selectable settings for the current programme

<table>
<thead>
<tr>
<th>ASPECT</th>
<th>Aspect Selection list</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

While the list is displayed, select the mode

**Select**

**Change**

**EXIT**

**RETURN**

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

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

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

**4:3 Full**
Displays a “4:3” image enlarged horizontally to fit the screen.

**Zoom1**
Displays a “16:9” image full-screen without distortion. At “16:9”, displays the image at its maximum (with slight enlargement).

**Zoom2**
Displays a “16:9” letterbox (anamorphic) image full-screen without distortion.

**Zoom3**
Displays a “2.35:1” letterbox (anamorphic) image full-screen without distortion. At “16:9”, displays the image at its maximum (with slight enlargement).

**Note**

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

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

**View TV Guide**
Each time pressed, the layout will be changed. (Landscape / Portrait)

- **Landscape (Displays by channel)**
  - **Current date and time**
  - **Programme name**
  - **TV Guide time**
  - **TV Guide date**
- **Example:**
  - Landscape (Displays by channel)

- **Portrait (Displays by time)**
  - **Channel**
  - **Programme**
  - **Tv Guide time**
  - **Tv Guide date**
- **Example:**
  - Portrait (Displays by time)

**To the previous day**
**To the next day**
**To watch the programme**

- **Select**
- **Watch**

**To view details of the programme**
Select the programme

- **Select**
- **Watch**

**Press again to return to TV Guide.**

**To view a channel list of the selected favourite list**

- **Select a favourite list**
- **View**

**To list favourite channels**

- **p. 29**

**To view a channel list of the selected type**

- **Select type**
- **View**

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

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

To change mode

1. **Switch to Teletext**
   - Displays Index (content varies depending on the broadcasters)

2. **Select the page** (up to page 899)
   - or
   - or
   - or

To adjust contrast

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

To return to TV

- TEXT or EXIT

What is FASTEXT mode?

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

What is TOP mode? (in case of TOP text broadcasting)

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

- Fast overview of the teletext information available
- Easy to use step-by-step selection of the topical subject
- Page status information at the bottom of the screen
- Available page up / down
- To select among subject blocks
- To select next subject within the subject block
- (After the last subject, it moves to the next subject block.)

What is List mode?

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

Using teletext conveniently
Using teletext conveniently

**HOLD**

Stop automatic updating
(If you wish to hold the current page without updating)
To resume ➤ HOLD

**INDEX**

Return to the main index page
➤ FASTEXT mode only.

Store frequently viewed pages

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

Corresponding colour button
(As page is displayed)

To change stored pages

Press and hold

Enter new page number
Press and hold

Display subtitles

Call up Subtitles
➤ Call up P801 (subtitle page) if available.
➤ If you press this button during P801 is displayed, teletext mode will be cancelled and return to TV.

Watch TV and Teletext in two windows at once

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

Menu (press twice) ➤ TEXT

To exit multi window ➤ TEXT

View sub page

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

Appears at top of the screen

To view specific sub page

Enter the 4-digit number

Example: P6

View the TV picture while searching for a teletext page

Teletext automatically updates itself when new information becomes available.

Appears when updating is completed

Changes to TV screen temporarily

(You cannot change the programme.)

The news page provides a function that indicates arrival of latest news ("News Flash").
Watching Videos and DVDs

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

To connect the equipment p. 11
You can operate some functions of selected Panasonic external equipment with this remote control.

1. Display the Input Selection menu

2. Select the input mode of the connected equipment

3. View

   Displays the selected mode

   - You can also select the input using the AV button on the top panel of the TV.
   - Press the button repeatedly until the desired input is selected.
   - You can label or skip each input mode ⇒ “Input Labels” (p. 26)

Note

- If the external equipment has an aspect adjustment function, set to “16:9”.
- For details, see the manual of the equipment or ask your local dealer.
Panasonic equipment connected to the TV can be directly operated with the remote control.

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POWER</strong></td>
<td>Standby / Turn on</td>
</tr>
<tr>
<td><strong>Play</strong></td>
<td>Playback videocassette / DVD</td>
</tr>
<tr>
<td><strong>Stop</strong></td>
<td>Stop operations</td>
</tr>
<tr>
<td><strong>Rewind / Skip / Search</strong></td>
<td>VCR: Rewind, view the picture rapidly in reverse DVD: Skip to the previous track or title Press and hold to search backward</td>
</tr>
<tr>
<td><strong>Fast-forward / Skip / Search</strong></td>
<td>VCR: Fast-forward, view the picture rapidly forward DVD: Skip to the next track or title Press and hold to search forward</td>
</tr>
<tr>
<td><strong>Pause</strong></td>
<td>Pause / Restart DVD: Press and hold to play at slow speed</td>
</tr>
<tr>
<td><strong>Programme Up / Down</strong></td>
<td>Select programme</td>
</tr>
<tr>
<td><strong>REC</strong></td>
<td>Start recording</td>
</tr>
</tbody>
</table>

**How to change the code for each equipment**
Each type of Panasonic equipment has its own remote control code. Please change the code for each equipment you want to operate.

Press and hold **POWER** during the following operations:
- Enter the appropriate code
- Press **REC**

See table below:

<table>
<thead>
<tr>
<th>Type of equipment</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVD Recorder / DVD Player / Blu-ray Disc Player</td>
<td>70 (default)</td>
</tr>
<tr>
<td>Player theatre / Blu-ray Disc theatre</td>
<td>71</td>
</tr>
<tr>
<td>VCR</td>
<td>72</td>
</tr>
<tr>
<td>VIERA Link compatible equipment</td>
<td>73</td>
</tr>
</tbody>
</table>

**Note**
- Confirm if the remote control works correctly after changing the code.
- The codes will be reset to default values if batteries are replaced.
- Some operations may not be possible on some equipment models.
How to Use Menu Functions

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

1. **Display the menu**
   - Displays the functions that can be set (varies according to the input signal)

2. **Select the menu**
   - (example)
   - ① select
   - ② access

3. **Select the item**
   - (example)
   - ① select

4. **Adjust or select**
   - (example)
   - ① change
   - ② store or access (Required by some functions)

---

**Choose from among alternatives**

Number and positions of alternatives:
- Colour Balance: Normal
- Charged

**Adjust using the slide bar**
- Sharpness: Moved

**Go to the next screen**
- Digital TV Tuning Menu: Displays the next screen

**Enter characters by free input menu**
- To delete a character
- To delete all characters

Every press changes the character by one. Leave it for a second to set the character, or press OK or any numeric button within a second.

See the table below for the corresponding characters for each numeric button.
Depending on the received signals, available items are varied.
## How to Use Menu Functions

### Menu list

<p>| Menu       | Item                                      | Adjustments / Configurations (alternatives) | Not valid on |   |
|------------|-------------------------------------------|--------------------------------------------|--------------|
| <strong>Viewing Mode</strong> | Basic picture mode  (Dynamic / Normal / Cinema / Game) | Dynamic: Provides enhanced picture contrast and sharpness when viewing in a bright room | None         |   |
|            |                                           | Normal: Recommended for viewing under normal ambient room lighting conditions |              |   |
|            |                                           | Cinema: For watching movies in a darkened room producing a cinema-like picture |              |   |
|            |                                           | Game: Game playing time is displayed only when connecting a game equipment |              |   |
|            |                                           | Set for each input signal                   |              |   |
| <strong>Contrast, Brightness, Colour, Sharpness</strong> | Increases or decreases the levels of these options according to your personal preference | With an NTSC signal source connected to the TV, the picture hue can be adjusted to suit your taste |              |   |
|            |                                           | Set to “On” to display sharper and more accurate colours |              |   |
| <strong>Picture</strong> | Colour Balance | Allows you to set the overall colour tone of the picture  (Cool / Normal / Warm) |              |   |
|            | Colour Management | Automatically adjusts colours to vivid ones  (Off / On) |              |   |
|            | Eco Mode | Adjusts picture settings automatically dependent on ambient lighting conditions  (Off / On) |              |   |
|            | P-NR | Picture Noise Reduction | Automatically reduces unwanted picture noise and flicker noise in the contoured parts of a picture  (Off / Min / Mid / Max) |              |   |
|            | 3D-COMB | Occasionally, whilst viewing still or slow moving pictures, picture patterning may be seen | Set to “On” to display sharper and more accurate colours |              |   |
|            | Reset Picture Defaults | Press the OK button to reset the present Picture Menu to the default settings |              |   |
| <strong>Sound</strong> | Mode | Basic sound mode  (Music / Speech) |              |   |
|            | Bass | Increases or decreases level to enhance or minimise lower, deeper sound output |              |   |
|            | Treble | Increases or decreases level to enhance or minimise sharper, higher sound output |              |   |
|            | Balance | Adjusts volume level of right and left speakers |              |   |
|            | Headphone Volume | Adjusts the volume of the headphones |              |   |
|            | Surround | Surround sound settings  (Off / V-Audio / V-Audio Surround) |              |   |
|            | Speaker Distance to Wall | Adjusts the low frequency sound  (Over 30cm / Up to 30cm) |              |   |
|            | Volume Correction | Adjusts volume of individual channel or input mode |              |   |
|            | MPX | Select stereo / monaural  (Mono / Stereo)  (p. 48) |              |   |
|            | Digital Audio Preference | Selects the initial setting for Audio tracks  (Dolby D / MPEG) |              |   |
|            | SPDIF Selection | Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT terminal  (Auto / PCM) |              |   |
|            | MPEG Optical Level | You can adjust the audio level of MPEG output from DIGITAL AUDIO OUT terminal as the initial setting |              |   |</p>
<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments / Configurations (alternatives)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sound</strong></td>
<td>HDMI1 Input</td>
<td>Select to fit the input signal (Digital / Analogue) (p. 34)</td>
</tr>
<tr>
<td></td>
<td>Digital: HDMI cable connection</td>
<td>Analogue: HDMI-DVI adapter cable connection</td>
</tr>
<tr>
<td></td>
<td>HDMI input mode only</td>
<td>HDMI2 terminal is for digital signal only</td>
</tr>
<tr>
<td></td>
<td>No setting for HDMI2 is available</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reset Sound Defaults</td>
<td>Press the OK button to reset the present Sound Menu to the default settings</td>
</tr>
<tr>
<td><strong>Setup</strong></td>
<td>Off Timer</td>
<td>Sets the time the TV automatically turns Off (Off / 15 / 30 / 45 / 60 / 75 / 90 minutes) (p. 15)</td>
</tr>
<tr>
<td></td>
<td>Favourites Edit</td>
<td>Creates list of favourite channels (Digital TV mode) (p. 29)</td>
</tr>
<tr>
<td></td>
<td>Channel List</td>
<td>Skips the unwanted channels / Edits channels (p. 29)</td>
</tr>
<tr>
<td></td>
<td>Auto Tuning</td>
<td>Sets all Digital TV or Analogue TV channels automatically (p. 30)</td>
</tr>
<tr>
<td></td>
<td>Manual Tuning</td>
<td>Sets the TV channels manually (p. 31)</td>
</tr>
<tr>
<td></td>
<td>Update Channel List</td>
<td>Update the channel list (Digital TV mode) (p. 31)</td>
</tr>
<tr>
<td></td>
<td>New Channel Message</td>
<td>Displays a message when new Digital TV channels are found. (Off / On) (p. 31)</td>
</tr>
<tr>
<td></td>
<td>Signal Condition</td>
<td>Checks the Digital TV signal condition (p. 31)</td>
</tr>
<tr>
<td></td>
<td>Add MPEG-4 AVC Channels</td>
<td>Activates the reception of MPEG-2 and MPEG-4 AVC channels</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use this function if MPEG-4 AVC services start in your area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All previous tuning settings are erased.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Once activated, this option is removed from the Digital TV Tuning Menu.</td>
</tr>
<tr>
<td><strong>Display Settings</strong></td>
<td>Teletext</td>
<td>Teletext display mode (TOP (FASTEXT) / List) (p. 18)</td>
</tr>
<tr>
<td></td>
<td>Input Labels</td>
<td>Labels or skips each input mode (p. 26)</td>
</tr>
<tr>
<td></td>
<td>Banner Display Timeout</td>
<td>Sets how long the information banner stays on screen from 0 (No display) to 10 sec. in 1-sec. increments</td>
</tr>
<tr>
<td></td>
<td>Playing Time Display</td>
<td>Displays the length of time in every thirty minutes for playing game (Off / On)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When “Viewing Mode” is set to “Game”</td>
</tr>
<tr>
<td></td>
<td>VIERA Link</td>
<td>Sets to use VIERA Link functions (Off / On)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VIERA Link functions become available when “VIERA Link” is set to “On” (p. 40)</td>
</tr>
<tr>
<td></td>
<td>Power on Link</td>
<td>Sets to use Power on Link function (Off / On) (p. 40)</td>
</tr>
<tr>
<td></td>
<td>Power off Link</td>
<td>Sets to use Power off Link function (Off / On) (p. 40)</td>
</tr>
<tr>
<td></td>
<td>Standby Power Save</td>
<td>Controls the power consumption in Standby mode of the connected equipment to reduce the consumption (Off / On) (p. 40)</td>
</tr>
<tr>
<td></td>
<td>Intelligent Auto Standby</td>
<td>Makes unwatched or unused connected equipment go into Standby mode to reduce the power consumption (Off / On (With reminder) / On (No reminder)) (p. 40)</td>
</tr>
<tr>
<td><strong>System Menu</strong></td>
<td>Shipping Condition</td>
<td>Resets all settings to the original conditions (p. 32)</td>
</tr>
<tr>
<td></td>
<td>System Update</td>
<td>Downloads new software to TV (p. 27)</td>
</tr>
<tr>
<td></td>
<td>Software Licence</td>
<td>Displays the software licence information</td>
</tr>
<tr>
<td></td>
<td>System Information</td>
<td>Displays the system information of this TV</td>
</tr>
<tr>
<td><strong>Other Settings</strong></td>
<td>Power Save</td>
<td>Reduces brightness of picture to minimise power consumption (Off / On)</td>
</tr>
<tr>
<td></td>
<td>Picture Overscan</td>
<td>Selects the screen area displaying the image (Off / On)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Off : Displays the image in the original size</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Set to “On” if noise is generated on the edges of the image</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This function is available when aspect is set to “16:9”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This function can be memorized separately for SD (Standard definition) and HD (High definition) signals</td>
</tr>
<tr>
<td></td>
<td>Region Select</td>
<td>Selects the region where you live to adjust the standard time (NSW / ACT / Victoria / Queensland / South Australia / Western Australia / Northern Territory / Tasmania) (p. 15)</td>
</tr>
<tr>
<td></td>
<td>Daylight Saving Time</td>
<td>Select time offset from the standard time for Summer Time (Auto / Off / +1/2 hour / +1 hour) (p. 15)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Set to “Auto” normally</td>
</tr>
</tbody>
</table>

- A different menu will be displayed while PC, DVI to HDMI adapter cable or SD Card is used. (p. 33 and p. 35)
- Only available items can be selected.
Input Labels

For easier identification and selection of the input mode, you can label each input terminal or skip terminal that is not connected to any equipment (p. 20).

1. Display the menu
   MENU

2. Select “Setup”

3. Select “Display Settings”

4. Select “Input Labels”

5. Select an input terminal and set

The labels you set will be displayed in “Input Selection” menu (p. 20) or banner.
• If “Skip” is selected, you cannot select the mode.

User input
You can name each input terminal freely.

Select “User input”
(maximum: ten characters)
You can set characters by using numeric buttons.
• p. 22
Digital TV Settings

Digital TV Settings provide access to various advanced features.

1. Select Digital TV mode
2. Display the menu
3. Select “Setup”
4. Select “System Menu”
5. Select “System Update”
6. Set

To return to TV ➔ EXIT

**Update TV’s software system**

- **System Update**
  - Download new software to TV.
  - For details ➔ p. 48
  
  **If System Update is performed, the software will be updated. It may change TV functions.**
  - If you do not wish to do so, set “Auto Update Search in Standby” to Off.

  **Select “Auto Update Search in Standby” and then set “On” or “Off”**
  - When the TV is switched to standby, there will be a clicking sound after a short delay. Similar clicking sounds will also occur at 3:00 AM and 5:00 AM (p. 48) when “Auto Update Search in Standby” is set to “On”. These sounds are normal.

  **To update immediately**
  - Select “System Update Search Now”
  - During downloading, the TV will display a blank screen for 40 to 50 seconds. Do not interrupt the TV during this procedure.

  **Download may take about 1 hour.**
Editing Channels

You can make your favourite channel lists, skip unwanted channels, etc.

1. Select Digital TV or Analogue TV

2. Display the menu

3. Select “Setup”

4. Select “Digital TV Tuning Menu” or “Analogue TV Tuning Menu”

5. Select “Favourites Edit” or “Channel List”

6. Set
Create your favourite channel list (Favourites) from various broadcasters (up to 4: Favourites1 to 4). The list is added to “Favourites” list in TV Guide (p. 17) and information banner (p. 15) and then easily accessed.

Select a channel and add it to the list

To select favourite list

To add all channels to the list

A channel is added

Select the field of List to edit and:

To name the Favourites

Set characters

You can set characters by using numeric buttons. p. 22

To move the channel

Select the new position

Confirm

To delete the channel

To delete all channels

Note

Channel numbers are defined by the broadcaster and cannot be changed.

Hidden channels (see below) can be selected but not viewed.

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

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

Select a channel and add / delete

You can edit channels.

If a VCR is connected only with the RF cable, edit “VCR” (Analogue TV mode).

Select a channel to edit

To change the displayed name when selecting channels (Only in Analogue TV mode)

You can set characters by using numeric buttons. p. 22

To swap channels
Tuning Channels

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

1. Select Digital TV or Analogue TV
2. Display the menu
3. Select “Setup”
4. Select “Digital TV Tuning Menu” or “Analogue TV Tuning Menu”
5. Select a function
6. Set

To return to TV

For Auto Tuning, using the buttons on the top panel of the TV (p. 9)
① Press repeatedly until “Auto Tuning” appears
② Access “Auto Tuning”
③ Start “Auto Tuning”
④ To return to TV

Set all Digital TV or Analogue TV channels automatically automatically

Digital TV Auto Tuning or Analogue TV Auto Tuning

Automatically retune all Digital TV or Analogue TV channels received in the area.
- Only Digital TV channels are retuned in Digital TV mode.
- Only Analogue TV channels are retuned in Analogue TV mode.

Start Auto Tuning

Settings are made automatically

- All the previous tuning settings are erased.
- When the operation is completed, the channel at channel position “1” will be displayed.
- Search begins in the order from the lower channels to the higher channels. Channels received during this process are added to the list. (p. 31)
- If tuning has not been done completely “Digital TV Manual Tuning”, “Analogue TV Manual Tuning” (p. 31)
Set Digital TV channel manually

Digital TV Manual Tuning

Normally use “Digital TV Auto Tuning” or “Update Channel List” to update Digital TV channels on your channel list.

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

- select physical channel
- adjust frequency (set where the level of “Signal Quality” becomes the maximum)
- search

All channels found will be added to the Digital TV Channel List.

Set Analogue TV channel manually

Analogue TV Manual Tuning

Set Analogue TV channel manually after Analogue TV Auto Tuning.

- If a VCR is connected only with the RF cable, select channel position “0”.

Update channels automatically

Update Channel List

You can add new channels, delete duplicated channels, update channel name and position automatically to Channel List.

The Digital TV Channel List is updated with the current settings saved as they are.

Display a message

New Channel Message

Selects whether to give a message when new Digital TV channels are found. (Off / On).

Check Digital TV signal

Digital TV Signal Condition

Selects a channel and checks the Digital TV signal condition.

To change the channel

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

- Green bar ➔ Good
- Yellow bar ➔ Poor
- Red bar ➔ Bad (Check the aerial)
Follow the on-screen instructions

1. Check the message and reset
   - Shipping Condition
     - All tuning data will be erased
     - Are you sure?
     - Are you sure?

2. Follow the on-screen instructions
   - "Auto Tuning" will automatically start when Mains power On / Off switch is next turned On. (p. 12)

To re-tune TV channels only, e.g. after moving house
- "Digital TV Auto Tuning" or "Analogue TV Auto Tuning" (p. 30)
Displaying PC Screen on TV

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

To connect PC ➔ p. 46

1. Select the external input
   ![Remote control with AV input button highlighted]

2. Select “PC”
   ![Remote control with PC button highlighted]

To return to TV ➔ TV

PC menu setting (changed as desired)

<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments / Configurations (options)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picture</td>
<td>R-Gain</td>
<td>Adjusts the white balance for red areas</td>
</tr>
<tr>
<td>Advanced PC</td>
<td>G-Gain</td>
<td>Adjusts the white balance for green areas</td>
</tr>
<tr>
<td>Settings</td>
<td>B-Gain</td>
<td>Adjusts the white balance for blue areas</td>
</tr>
<tr>
<td></td>
<td>Gamma</td>
<td>(2.0 / 2.2 / 2.5)</td>
</tr>
<tr>
<td></td>
<td>Reset PC Settings</td>
<td>Press the OK button to reset to the default Picture settings</td>
</tr>
<tr>
<td>Setup</td>
<td>Input Resolution</td>
<td>Switches to a wide view</td>
</tr>
<tr>
<td></td>
<td>VGA (640 x 480 pixels), WVGA (852 x 480 pixels), XGA (1,024 x 768 pixels), WXGA (1,280 x 768 / 1,366 x 768 pixels)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clock</td>
<td>Set to the minimum level if noise occurs</td>
</tr>
<tr>
<td></td>
<td>H-pos</td>
<td>Adjusts horizontal position</td>
</tr>
<tr>
<td></td>
<td>V-pos</td>
<td>Adjusts vertical position</td>
</tr>
<tr>
<td></td>
<td>Clock Phase</td>
<td>Eliminates flicker and distortion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adjust after Clock adjustment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Set to the minimum level if noise occurs</td>
</tr>
<tr>
<td></td>
<td>Sync</td>
<td>PC sync signal type (H &amp; V / SOG)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H &amp; V : Horizontal and Vertical sync from your PC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SOG : Sync on Green sync from your PC</td>
</tr>
<tr>
<td></td>
<td>Reset PC Settings</td>
<td>Press the OK button to reset to the default Setup settings</td>
</tr>
</tbody>
</table>

● Other items ➔ p. 24 and p. 25.

Restore Settings (Shipping Condition) Displaying PC Screen on TV

Power OFF Timer

EXIT

INPUT

AV

TV

MENU

ASPECT

OPTION

RETURN

R

G

Y

B

POWER
HDMI Functions

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

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

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

| Note |

- HDMI is the world’s first complete digital consumer AV interface complying with a non-compression standard.
- Audio settings can be made on the “HDMI1 Input” menu screen. (p. 25)
- Applicable audio signal sampling frequencies (2ch L.PCM): 48 kHz, 44.1 kHz, 32 kHz
- HDMI2 terminal is for digital audio signal only.
- Use with a PC is not guaranteed. Only HDMI video formats in the HDMI table (p. 50) are applicable.
- If the connected equipment has an aspect adjustment function, set the aspect ratio to “16:9”.
- These HDMI connectors are “type A”.
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- An equipment having no digital output terminal may be connected to the input terminal of either “COMPONENT” or “VIDEO” to receive analogue signals.
- The HDMI input terminal can be used only with the following image signals: 480i, 480p, 576i, 576p, 720p, 1080i and 1080p. Match the output setting of the digital equipment.
- For details of the applicable HDMI signals, see p. 50

**DVI connection**

- If the external equipment has only a DVI output, connect to the HDMI1 terminal via a DVI to HDMI adapter cable (*2):
- When the DVI to HDMI adapter cable is used, connect the audio cable to the audio input terminal (HDMI1: use AV2 IN AUDIO terminals)

**DVI Position Settings**

If the picture position is not fit to the screen during the DVI connection, adjust the position on “DVI Position Settings” in Setup Menu. The settings are memorized for each HDMI terminals and input signals.

- To make settings ⇒ “How to Use Menu Functions” ① to ③ (p. 22)

<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setup</td>
<td>DVI Position Settings</td>
<td>H-pos</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V-pos</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reset DVI Position Settings</td>
</tr>
</tbody>
</table>

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

(VIERA IMAGE VIEWER)

Photo View: Still images recorded by digital cameras will be displayed.
Movie View: Moving pictures recorded by digital video cameras will be played back.

During the operation, no signals are output from any of the AV terminals. But the sound in Movie View can be output from AUDIO OUT and DIGITAL AUDIO OUT terminals.

“Date” shows the date on which the recording was made by the digital camera or digital video camera. It is shown with asterisks when the file has no record of the date.

For details on SD Cards  p. 49

To insert SD Card
Label surface
Push until a click is heard

To remove SD Card
Press the centre of the card

Photo View

1
1
2
2

Insert the SD Card

Select “Photo View”

Select a folder to display the thumbnail

(Folder view)

Selected photo

Selected photo information is displayed

4
4

Select a photo from the thumbnail to be viewed

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

Selected photo

Displayed one at a time

Operation guide

To display / hide the operation guide
To previous photo
Rotate 90° (anti-clockwise)
To next photo
Rotate 90° (clockwise)
To return to thumbnail
**Viewing from SD Card**

*VIERA IMAGE VIEWER*

**Slideshow**

- **Start Slideshow** (operate in step 3)
  - Select the photo for the first view

**Note**
- Slideshow is done within the thumbnail.

**Slideshow settings** (operate in Photo View Mode)

- Display the menu
- Select "Viewing Setup"
- Select the items and set

**Menu** | **Item** | **Adjustments / Configurations (alternatives)**
---|---|---
**Viewing Setup** | Back Ground Music | Selects the back ground music *(Off / Type1 / Type2 / Type3)*
| Effect | Selects the effect for switching the photo during the slideshow *(Off / Fade / Slide / Dissolve / Random)*
| Fade : The next photo fades in gradually
| Slide : The next photo slides and appears from the left side
| Dissolve : The photo is replaced by an indefinite block unit
| Random : Selects each effect at random
| Interval | Select slideshow interval *(5 / 10 / 15 / 30 / 60 / 90 / 120 seconds)*
| Repeat | Slideshow repeat *(Off / On)*

**To display all the photos**

Display the thumbnail of all the photos in SD Card.

**To sort by date or month recorded**

Display the list of groups sorted by the same date or the same month.
- The group of the photos without record of the date is shown as "Unknown".

---

---

---
To confirm or change the current sound status (during playback)

---

Audio output settings (operate in step 3)

Display the menu

Select “Sound”

Select “SPDIF Selection” and set

Menu Item Adjustments / Configurations (alternatives)

Sound SPDIF: A standard audio transfer file format
Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT terminal

Auto: Dolby Digital is output as Dolby Digital Bitstream. MPEG is output as PCM.

PCM: Digital output signal is fixed to PCM.
**VIERA Link “HDAVI Control™”**

Enjoy additional HDMI interoperability with Panasonic products which have “HDAVI Control” function. This TV supports “HDAVI Control 4” function.

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

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

**VIERA Link features and connections**

<table>
<thead>
<tr>
<th>Features</th>
<th>DIGA Recorder</th>
<th>DVD Player / Blu-ray Disc Player</th>
<th>HD Video Camera / LUMIX Camera</th>
<th>Player theatre</th>
<th>Blu-ray Disc theatre</th>
<th>Amplifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel download</td>
<td>○¹</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Easy playback</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>–</td>
</tr>
<tr>
<td>Power on link</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>–</td>
</tr>
<tr>
<td>Power off link</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>–</td>
</tr>
<tr>
<td>Reduce unnecessary power consumption in standby</td>
<td>○²</td>
<td>○³</td>
<td>–</td>
<td>–</td>
<td>○¹</td>
<td>–</td>
</tr>
<tr>
<td>Auto standby for unnecessary equipment</td>
<td>○³</td>
<td>○³</td>
<td>–</td>
<td>○²</td>
<td>○³</td>
<td>○³</td>
</tr>
<tr>
<td>Pause Live TV programme</td>
<td>○³</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Direct TV Recording</td>
<td>○⁴</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Control the menu of the connected equipment by VIERA remote control</td>
<td>○³</td>
<td>○³</td>
<td>○³</td>
<td>○³</td>
<td>○³</td>
<td>–</td>
</tr>
<tr>
<td>Speaker control</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

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

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

DIGA Recorder / DVD Player / Blu-ray Disc Player / HD Video Camera / LUMIX Camera with VIERA Link function

HDMI cable

To use Player theatre / Blu-ray Disc theatre:

Speaker system

Player theatre / Blu-ray Disc theatre with VIERA Link function

Optical digital audio cable

or

RCA cable

To use Amplifier:

Speaker system

Amplifier with VIERA Link function

HDMI cable

HD Video Camera / LUMIX Camera with VIERA Link function

DIGA Recorder with VIERA Link function

Note

This function may not work properly depending on the connected equipment.

For DIGA Recorder / DVD Player / Blu-ray Disc Player / HD Video Camera / LUMIX Camera with VIERA function, connect to HDMI1 or HDMI2 terminal via an HDMI cable.

For Player theatre / Blu-ray Disc theatre / Amplifier, connect to HDMI1 or HDMI2 terminal via an HDMI cable and/or either the optical digital audio cable or RCA cable for audio output from the TV.

Use fully wired HDMI compliant cable. Non-HDMI-compliant cables cannot be utilized.

Recommended Panasonic’s HDMI cable part number:

• RP-CDHG10 (1.0 m) • RP-CDHG15 (1.5 m) • RP-CDHG20 (2.0 m)
• RP-CDHG30 (3.0 m) • RP-CDHG50 (5.0 m)
### Preparations
- Connect the equipment supporting VIERA Link.
- Set up the connected equipment. Read the manual of the equipment.
- For optimal recording, the settings of the recorder might be required. For details, read the manual of the recorder.
- Set VIERA Link On in Setup Menu ⇒ “VIERA Link Settings” ⇒ “VIERA Link” (p. 25)
- Set up the TV ⇒ After connection, turn the equipment on and then switch the TV on. Select the input mode to HDMI1 or HDMI2 (p. 20), and make sure that an image is displayed correctly. This setup should be done each time when the following conditions occur:
  - for the first time / • when adding or reconnecting equipment / • when changing setup

### Features available

<table>
<thead>
<tr>
<th>Channel download</th>
<th>Easy playback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic input switching - When the connected equipment is operated, input mode is switched automatically.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power on link</th>
<th>Power off link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set Power on Link “On” in Setup Menu to use this function ⇒ “Power on Link” (p. 25) When the connected equipment starts playback or direct navigator / function menu for the equipment are activated, the TV is automatically turned on. (Only when TV is in Standby mode.)</td>
<td></td>
</tr>
</tbody>
</table>
| Set Power off Link “On” in Setup Menu to use this function ⇒ “Power off Link” (p. 25) When the TV is set to Standby mode, the connected equipment is also automatically set to Standby.  
  * This function will work even if the TV enters standby mode automatically by Off Timer function or auto power standby function. |

<table>
<thead>
<tr>
<th>Reduce unnecessary power consumption in standby</th>
<th>Standby Power Save</th>
</tr>
</thead>
</table>
| Set Standby Power Save “On” in the Setup Menu to use this function ⇒ “Standby Power Save” (p. 25) The power consumption in Standby mode of the connected equipment is controlled higher or lower in synchronization with the TV On / Off state to reduce the consumption. When the TV is set to Standby mode, the connected equipment is automatically set to Standby and the power consumption in Standby mode of the connected equipment is automatically minimized. When the TV is turned on, the connected equipment is still in Standby mode, but the power consumption is increased to make startup time early.  
  * This function is effective if the connected equipment can change the power consumption in Standby mode and is set to higher consumption. |

<table>
<thead>
<tr>
<th>Auto standby for unnecessary equipment</th>
<th>Intelligent Auto Standby</th>
</tr>
</thead>
</table>
| Set Intelligent Auto Standby “On (With reminder)” or “On (No reminder)” in the Setup Menu to use this function ⇒ “Intelligent Auto Standby” (p. 25) When the TV is on, the connected equipment not in use go into Standby mode automatically to reduce the power consumption.  
  * If you select “On (With reminder)”, the on screen message will be displayed to be noticed before working this function. |
Features available (Using VIERA Link Menu)

Direct TV Recording - What you see is What you record

Direct TV Rec

Recording the current programme in DIGA Recorder immediately.
- If you connect two recorders including other manufacturers' recorder at the same time, please connect DIGA Recorder to the TV's lower HDMI terminal number.
- If you cannot operate, check the settings and the equipment = "VIERA Link features and connections" (p. 38 - 39)

1 Display “VIERA Link Menu”

2 Select “Direct TV Rec” and start recording

To stop recording
Select “Stop” in “Direct TV Rec” and access
Pause Live TV programme
Pause Live TV

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

- This function is available with DIGA Recorder which has HDD.
- If you connect two recorders including other manufacturers’ recorder at the same time, please connect DIGA Recorder which has HDD to the TV’s lower HDMI terminal number.
- If you cannot operate, check the settings and the equipment “VIERA Link features and connections” (p. 38 - 39)

Access and pause the live TV programme

1. Display “VIERA Link Menu”
2. Select “Pause Live TV” and pause

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

To operate Pause Live TV

- search backward
- pause
- search forward
- playback
- stop

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

Select “Yes”

- If you stop playback or cancel pause, the recorded programme will be deleted from HDD.
**Features available (Using VIERA Link Menu)**

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

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

- If you cannot operate, check the settings and the equipment ⇒ “VIERA Link features and connections” (p. 38 - 39)
- For details of the operations for the connected equipment, read the manual of the equipment.

**Access and operate the menu of the equipment**

1. **Display “VIERA Link Menu”**
2. **Select “VIERA Link Control”**
3. **Select the equipment you want to access**
   The type of the connected equipment is displayed. Select the type of the equipment and access.

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

4. **Operate the connected equipment**
   1. Set the remote control code to “73” (p. 21)
   2. Follow the operation guide

   - To display the operation guide
   - Move the cursor / select the menu
   - Move the cursor / access / adjust
   - When the key words are displayed on colour bar

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

**If several recorders or players are connected**
You can connect up to two recorders or players at the same time.

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

**If you access the invalid equipment**
When the equipment with “HDAVI Control” function is connected

Type of the connected equipment is displayed. You can access the menu of the equipment. But you cannot operate it. Use its own remote control to operate the equipment.
**VIERA Link “HDAVI Control™”**

**Features available (Using VIERA Link Menu)**

**Speaker control**
You can control the theatre speaker with this TV remote control by pointing at the TV’s signal receiver.
- If you cannot operate, check the settings and the equipment ⇒ “VIERA Link features and connections” (p. 38 - 39)

**Access and control the speaker volume**

1. Display “VIERA Link Menu”
2. Select “Speaker Selection”
3. Set to “Home Cinema” or “TV”

**Home Cinema**
Player theatre, Blu-ray Disc theatre or Amplifier will be automatically turned on if it is in Standby mode and the sound is from theatre speakers connected to the equipment.
- Volume up / down
  - Volume slide bar will be displayed when adjusting the volume of the equipment.
- Mute
- The sound of TV speakers is mute.
- When the equipment is turned off, TV speakers will be active.

**TV**
TV speakers are active.

**Note**
- These functions may not work properly depending on the connected equipment.
- Image or sound may not be available for the first few seconds when input mode is switched.
- Easy playback may be available by using the remote control for Player theatre, Blu-ray Disc theatre or Amplifier. Read the manual of the equipment.
- “HDAVI Control 4” is the newest standard (current as of December, 2008) for HDAVI Control compatible equipment. This standard is compatible with conventional HDAVI equipment.
- To confirm this TV’s version of HDAVI Control ⇒ “System Information” (p. 25)
VIERA Tools

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

1 Display VIERA Tools Menu

2 Select a feature

3 Follow the operation of each feature

- VIERA Link Control (p. 43)
  The connected device can be operated with the VIERA remote control. When multiple devices are connected, an indicator appears below the icon so that one device can be selected.

- Pause Live TV (p. 42)
  A live TV programme can be paused and resumed later.

- Direct TV Rec (p. 41)
  What is on TV can be recorded immediately.

- Speaker Control (p. 44)
  Theatre speaker can be set.

- SD card slideshow (p. 36)
  Photo slideshow will start.

- SD card photo view (p. 35)
  Photo folders are displayed.

- SD card movie view (p. 37)
  The title list for SD movie image is displayed.
External Equipment

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

Types of connectable equipment to each terminal

<table>
<thead>
<tr>
<th>Recording / Playback (equipment)</th>
<th>AV1 IN</th>
<th>AV2 IN</th>
<th>DIGITAL AUDIO OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>To record / playback videocassettes / DVDs (VCR / DVD recorder)</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
<tr>
<td>To watch DVDs (DVD player)</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
<tr>
<td>To watch camcorder images (Video camera)</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
<tr>
<td>To watch satellite broadcasts (Set top box)</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
<tr>
<td>To play games (Game equipment)</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
<tr>
<td>To use amplifier with speaker system</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
</tbody>
</table>

VIERA Link

○: Recommended Connection
To record / playback
- RF cable
- DVD Recorder / VCR

To watch satellite broadcasts
- Set top box
- Fully wired HDMI compliant cable

External Equipment

Advanced

Monaural Audio Out

Digital Audio Out

To watch DVDs
- DVD player

Connect the COMPONENT or VIDEO terminal when using AV2 IN terminals.

HDMI terminal
- Hot Plug Detect
- DDC/DEC Ground
- SCL
- CEC
- TMDS Clock
- TMDS Data0–
- TMDS Data0+
- TMDS Data1–
- TMDS Data1+
- TMDS Data2–
- TMDS Data2+
- +5V Power
- SDA
- Reserved
- TMDS Clock–
- TMDS Clock+
- TMDS Data0 Shield
- TMDS Data1 Shield
- TMDS Data2 Shield

Satellite dish
Satellite cable

Set top box

DVD Recorder

Fully wired HDMI compliant cable

Components and connections

(Viewing)

(Listening)

Connect the COMPONENT or VIDEO terminal when using AV2 IN terminals.

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Technical Information

Channel Allocation (Analogue TV mode)

<table>
<thead>
<tr>
<th>CH Display / Receive Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH 0 - CH 5</td>
</tr>
<tr>
<td>CH 5A</td>
</tr>
<tr>
<td>S 2 - S 10</td>
</tr>
<tr>
<td>CH 6 - CH 9</td>
</tr>
<tr>
<td>CH 9A</td>
</tr>
<tr>
<td>CH 10 - CH 12</td>
</tr>
<tr>
<td>S 11 - S 44</td>
</tr>
<tr>
<td>CH 20 - CH 75</td>
</tr>
</tbody>
</table>

Rating (Digital TV mode)

<table>
<thead>
<tr>
<th>Rating</th>
<th>Meaning</th>
<th>Rating</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>Not classified</td>
<td>M</td>
<td>Mature</td>
</tr>
<tr>
<td>P</td>
<td>Pre school</td>
<td>MA 15+</td>
<td>Mature Adult 15+</td>
</tr>
<tr>
<td>C</td>
<td>Children</td>
<td>AV 15+</td>
<td>Adult strong Violence 15+</td>
</tr>
<tr>
<td>G</td>
<td>General</td>
<td>R</td>
<td>Restricted 18+</td>
</tr>
<tr>
<td>PG</td>
<td>Parental Guidance recommended</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Update the software system (Digital TV mode)

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

- To download new software, press "OK". Downloading (approx. 1 hour)
- If you choose not to download, press "EXIT".

To update automatically
Set “Auto Update Search in Standby” to “On” (p. 27)
- The automatic updating sequence is carried out at 3:00 AM and 5:00 AM every morning under the following condition.
  - Standby (TV turned Off with the remote control)
  - Recording is not in progress.

To update manually
Perform “System Update Search Now” (p. 27)
- If there is an update available, a notification banner is displayed.

Note
- During downloading, do not turn Off the TV or touch any buttons.
  - (The TV is automatically activated after downloading is completed.)
- When the TV is switched to standby, there will be a clicking sound after a short delay. Similar clicking sounds will also occur at 3:00 AM and 5:00 AM when “Auto update Search in Standby” (p. 27) is set to “On”. These sounds are normal.

Stereo / Bilingual Sound Selection (Analogue TV mode)

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

Audio Signal | STEREO | MAIN I | SUB II | MONO
---|--------|--------|--------|--------
Mode Indicator | Yes | Yes | Yes | Yes

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

<table>
<thead>
<tr>
<th>Type of broadcast</th>
<th>Regular broadcast</th>
<th>Regular + NICAM MONO</th>
<th>NICAM STEREO</th>
<th>NICAM DUAL MONO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode Indicator</td>
<td>No Indicator</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

A2 (German) Used in Australia, Malaysia etc.

<table>
<thead>
<tr>
<th>Type of broadcast</th>
<th>Regular broadcast</th>
<th>BILINGUAL or DUAL MONO</th>
<th>STEREO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode Indicator</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

- If the stereo signal is poor or the receiving conditions are not optimum or if STEREO/MONO automatic switching occurs, it is recommended you switch from STEREO to MONO.
- Even when the contents of the receiving signal undergo changes, selection mode is kept intact.
- When the receiving conditions deteriorate, listening will be easier if the mode is set to the MONO position, using the stereo / bilingual sound selection button.
- DUAL, also known as DUAL MONO or as BILINGUAL is not currently transmitted in some countries.
Cautions in handling SD Card
- Do not remove the card while the TV is accessing data (this can damage card or TV).
- Do not touch the pins on the back of the card.
- Do not subject the card to a high pressure or impact.
- Insert the card in the correct direction (otherwise, card may be damaged).
- Electrical interference, static electricity, or erroneous operation may damage the data or card.
- Back up the recorded data at regular intervals in case of deteriorated or damaged data or erratic operation of the TV. (Panasonic is not liable for any deterioration or damage of recorded data.)

Data format for Card browsing

Photo: Still images recorded with digital still cameras compatible with JPEG files of DCF* and EXIF standards
- Max. number of files: 9,999
- Image resolution: 8 x 8 to 30,719 x 17,279 pixels

Movie: SD-Video Standard Ver. 1.2 [MPEG-2 (PS format)] and AVCHD Standard compatible files
- with an audio format that is either MPEG-1/Layer-2 format or Dolby Digital format (AVCHD files recorded with vertical frequency 50Hz are applicable. A modified data with a PC may not be displayed correctly.)

- Compliant card type (maximum capacity): SDHC Card (32 GB), SD Card (2 GB) and miniSD Card (2 GB) (requiring miniSD adapter)
- If miniSD Card is used, insert / remove it together with the adapter.
- Check the latest information on the card type at the following website. (English only)
  http://panasonic.co.jp/pavc/global/cs/

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

Note
- Format the card with the recording equipment.
- The picture may not appear correctly on this TV depending on the recording equipment used.
- Display may take some time when there are many files and folders.
- This function cannot display Motion JPEG and still image not JPEG formatted (i.e. TIFF, BMP).
- A JPEG image modified with a PC may not be displayed.
- Images imported from a PC must be compatible with EXIF (Exchangeable Image File) 2.0, 2.1, and 2.2.
- Partly degraded files might be displayed at a reduced resolution.
- All "JPG" extension data in the card will be read in Photo View Mode.
- The folder and file names may be different depending on the digital camera used.
- Do not use two-byte characters or other special codes.
- The card may become unusable with this TV if file or folder names are changed.

On screen messages

<table>
<thead>
<tr>
<th>Message</th>
<th>Meaning / Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannot read file</td>
<td>● The file is broken or unreadable.</td>
</tr>
<tr>
<td></td>
<td>▶ The TV does not support the format.</td>
</tr>
<tr>
<td></td>
<td>(For the applicable formats and data, see above.)</td>
</tr>
<tr>
<td>Please confirm the SD card is OK</td>
<td>● The inserted SD card has a problem.</td>
</tr>
<tr>
<td>No SD card inserted</td>
<td>▶ Insert a SD Card.</td>
</tr>
<tr>
<td>No valid file to play</td>
<td>▶ The card has no data.</td>
</tr>
<tr>
<td>Over 9999 pictures found (max. is 9999)</td>
<td>● Maximum valid number of photos is 9,999.</td>
</tr>
<tr>
<td>This operation is not possible</td>
<td>▶ Your operation is not available.</td>
</tr>
</tbody>
</table>
## Technical Information

### PC connection

A PC may be connected to this TV so that the PC screen is displayed and sound is heard from the TV.  
- PC signals that can be input: Horizontal scanning frequency 31 to 69 kHz; vertical scanning frequency 59 to 86 Hz (more than 1,024 signal lines could result in incorrect display of the image).  
- A PC adapter is not necessary for the DOS/V-compliant D-sub 15-pin connector.  
- Some PC models cannot be connected to this TV.  
- When using PC, set the colour display quality of PC to the highest position.  
- Max. display resolution
  - Aspect 4:3 1,024 x 768 pixels
  - Aspect 16:9 1,366 x 768 pixels

### D-sub 15-pin connector signal

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Signal Name</th>
<th>Pin No.</th>
<th>Signal Name</th>
<th>Pin No.</th>
<th>Signal Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>R</td>
<td>6</td>
<td>GND (Ground)</td>
<td>11</td>
<td>NC (not connected)</td>
</tr>
<tr>
<td>2</td>
<td>G</td>
<td>7</td>
<td>GND (Ground)</td>
<td>12</td>
<td>NC (not connected)</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
<td>8</td>
<td>GND (Ground)</td>
<td>13</td>
<td>NC (not connected)</td>
</tr>
<tr>
<td>4</td>
<td>NC (not connected)</td>
<td>9</td>
<td>NC (not connected)</td>
<td>14</td>
<td>HD</td>
</tr>
<tr>
<td>5</td>
<td>NC (not connected)</td>
<td>10</td>
<td>GND (Ground)</td>
<td>15</td>
<td>NC (not connected)</td>
</tr>
</tbody>
</table>

### Input signal that can be displayed

**COMPONENT (Y, Pb/Cb, Pr/Cr), HDMI**

<table>
<thead>
<tr>
<th>Signal name</th>
<th>COMPONENT</th>
<th>HDMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>525 (480) / 60i</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>625 (576) / 50i</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>625 (576) / 50p</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>750 (720) / 60p</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>1,125 (1,080) / 60i</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>1,125 (1,080) / 60p</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>1,125 (1,080) / 24p</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>1,280 x 768 @60 Hz</td>
<td>68.36</td>
<td>60.00</td>
</tr>
<tr>
<td>1,280 x 768 @75 Hz</td>
<td>60.02</td>
<td>75.03</td>
</tr>
<tr>
<td>1,280 x 768 @85 Hz</td>
<td>68.88</td>
<td>85.00</td>
</tr>
</tbody>
</table>

### Signal name

<table>
<thead>
<tr>
<th>Signal name</th>
<th>Horizontal frequency (kHz)</th>
<th>Vertical frequency (Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>640 x 400 @70 Hz</td>
<td>31.47</td>
<td>70.07</td>
</tr>
<tr>
<td>640 x 480 @60 Hz</td>
<td>31.47</td>
<td>59.94</td>
</tr>
<tr>
<td>640 x 480 @75 Hz</td>
<td>37.50</td>
<td>75.00</td>
</tr>
<tr>
<td>640 x 480 @85 Hz</td>
<td>46.88</td>
<td>60.32</td>
</tr>
<tr>
<td>640 x 600 @75 Hz</td>
<td>53.87</td>
<td>75.00</td>
</tr>
<tr>
<td>640 x 600 @85 Hz</td>
<td>61.67</td>
<td>60.00</td>
</tr>
<tr>
<td>640 x 600 @95 Hz</td>
<td>66.88</td>
<td>60.00</td>
</tr>
<tr>
<td>640 x 768 @70 Hz</td>
<td>65.48</td>
<td>70.07</td>
</tr>
<tr>
<td>640 x 768 @75 Hz</td>
<td>60.02</td>
<td>75.03</td>
</tr>
<tr>
<td>640 x 768 @85 Hz</td>
<td>68.88</td>
<td>85.00</td>
</tr>
<tr>
<td>1,024 x 768 @60 Hz</td>
<td>68.88</td>
<td>60.00</td>
</tr>
<tr>
<td>1,024 x 768 @70 Hz</td>
<td>68.36</td>
<td>70.07</td>
</tr>
<tr>
<td>1,024 x 768 @85 Hz</td>
<td>66.88</td>
<td>85.00</td>
</tr>
<tr>
<td>1,280 x 768 @60 Hz</td>
<td>64.70</td>
<td>60.00</td>
</tr>
<tr>
<td>1,280 x 768 @75 Hz</td>
<td>48.39</td>
<td>60.04</td>
</tr>
<tr>
<td>1,280 x 768 @85 Hz</td>
<td>49.73</td>
<td>74.55</td>
</tr>
<tr>
<td>1,366 x 768 @60 Hz</td>
<td>68.68</td>
<td>66.67</td>
</tr>
<tr>
<td>1,366 x 768 @75 Hz</td>
<td>68.36</td>
<td>74.55</td>
</tr>
<tr>
<td>1,366 x 768 @85 Hz</td>
<td>64.70</td>
<td>85.00</td>
</tr>
</tbody>
</table>

### Note

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

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

White spots or shadow images (noise)

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

The main unit is hot

- The main unit radiates heat and some of the parts may become hot. This is not a problem for performance or quality.
- Setup in a location with good ventilation.
- Do not cover the ventilation holes of the TV with a tablecloth, etc., and do not place on top of other equipment.

Neither image nor sound is produced

- Is the TV in “AV mode”?
- Is the mains lead plugged into the socket outlet?
- Is the TV turned On?
- Check Picture Menu (p. 24) and volume.

An error message appears

- Follow the message’s instructions.
- If the problem persists, contact your local Panasonic dealer.

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

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

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

Clattered sound might be heard

- There are some looseness around the panel to prevent the damage to the panel.
- The panel might move slightly when it is pushed with a finger, and clattered sound might be heard. This is not a malfunction.

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

White spots or shadow images (noise)

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

The main unit is hot

- The main unit radiates heat and some of the parts may become hot. This is not a problem for performance or quality.
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- The panel might move slightly when it is pushed with a finger, and clattered sound might be heard. This is not a malfunction.
# FAQs

<table>
<thead>
<tr>
<th>Problem</th>
<th>Actions</th>
</tr>
</thead>
</table>
| Chaotic image, noisy | ● Set “P-NR” in the Picture Menu (to remove noise). (p. 24)  
● Check nearby electrical products (car, motorcycle, fluorescent lamp). |
| No image can be displayed | ● Is “Colour” or “Contrast” in the Picture Menu set to the minimum? (p. 24) |
| Blurry or distorted image (no sound or low volume) | ● Reset channel. (p. 32) |
| Unusual image is displayed | ● Turn off the TV with Mains power On / Off switch, then turn it on again. |
| “Shop” appears on screen at switch on | ● “Shop” was selected in “Auto Tuning” (p. 12).  
Reset all settings in “Shipping Condition” (p. 32), then select “Home” in “Auto Tuning” (p. 12). |
| No sound is produced | ● Is “Sound mute” active? (p. 10)  
● Is the volume set to the minimum? |
| Sound level is low or sound is distorted | ● Sound signal reception may be deteriorated.  
● Set “MPX” (p. 24) in the Sound Menu to “Mono”. |
| Sound is unusual | ● Set the sound setting of the connected equipment to “2ch L.PCM”.  
● Check the “HDMI1 Input” setting in the Sound Menu. (p. 25)  
● If digital sound connection has a problem, select analogue sound connection. (p. 34) |
| Pictures from external equipment are unusual when the equipment is connected via HDMI | ● Is the HDMI cable connected properly? (p. 46)  
● Turn Off the TV and equipment, then turn them On again.  
● Check an input signal from the equipment. (p. 50)  
● Use an equipment compliant with EIA/CEA-861/861B. |
Technical Frequently Asked Question

Digital TV

Problem

After Digital TV Auto Tuning only some or no services are found

Aerial connection when using DTV and VCR / DVD Recorder

Actions

- Check to ensure your area is covered by DVB transmissions.
- Check that the aerial and antenna cable are designed for DVB. For your safety, the aerial and cable should be inspected / installed by a licenced installer that should comply with Australian Standard AS1417.1.
- Note: If you live within 5-10 Km of DVB transmission towers, a combined VHF / UHF aerial should be adequate. Outside this area, separate VHF and UHF aerials provide superior reception performance.
- If you live in a unit or apartment, check to ensure the Master Antenna TV (MATV) system is designed for analogue and DVB-T reception. Please consult your body corporate.

Digital TV

Picture regularly breaks up on some programmes, or “No Signal” message

- Check “Signal Condition”. (p. 31) If “Signal Quality” or “Signal Strength” are displayed in red or constantly changing, check aerial.
- Check that the aerial and antenna cable are designed for DVB. For your safety, the aerial and cable should be inspected / installed by a licenced installer that should comply with Australian Standard AS1417.1.
- Interference (known as impulse noise) from household appliances such as light switches, fridges etc may cause picture break up and / or audio distortion. Use high quality quad shielded coaxial cable fly lead between TV and antenna wall socket to minimise impulse noise pickup. If problem persists consult your local TV aerial installer.
- When “No Signal” message is displayed check TV aerial connection.
- The received signal may be too weak to allow the TV to reliably lock to the desired “No Signal” programme to generate a stable picture. Repeat the tuning procedure (p. 31). If problem persists consult your local TV aerial installer.

Picture very infrequently breaks up on some or all programmes

- Electrical atmospheric interference caused by local or distant lighting storms or heavy rain with wind in “leafy” locations may cause pictures to break up and audio to mute or distort momentarily.
- Impulse noise interference from an infrequently used electrical appliance, or a passing vehicle or lawn mower with a “noisy” ignition system.

To maintain optimum signal quality from TV aerial, use a TV aerial splitter (as illustrated) when connecting two or more equipments to the same aerial.
<table>
<thead>
<tr>
<th>Problem</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV takes so long to turn on</td>
<td>Like your computer, the TV has to run a number of diagnostic and software checks before it can display any programmes.</td>
</tr>
<tr>
<td>The programme cannot be changed</td>
<td>Is the TV in Teletext mode? (p. 18)</td>
</tr>
<tr>
<td>The programme cannot be selected</td>
<td>Is the programme skipped? (p. 29)</td>
</tr>
<tr>
<td>TV goes into “Standby mode”</td>
<td>Off Timer function is activated. The TV enters “Standby mode” about 30 mins. after analogue broadcasting ends.</td>
</tr>
<tr>
<td>The remote control does not work</td>
<td>Are the batteries installed correctly? (p. 7)</td>
</tr>
<tr>
<td></td>
<td>Has the TV been switched On?</td>
</tr>
</tbody>
</table>
# Specifications

<table>
<thead>
<tr>
<th>Power</th>
<th>Power rating</th>
<th>AC 220-240 V, 50/60 Hz 0.35A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Normal (Home) mode</td>
<td>36 W</td>
</tr>
<tr>
<td></td>
<td>Standby condition</td>
<td>0.9 W</td>
</tr>
<tr>
<td>Aspect Ratio</td>
<td>16:9</td>
<td></td>
</tr>
<tr>
<td>Visible screen size</td>
<td>47 cm (diagonal) 409.8 mm (W) x 230.4 mm (H)</td>
<td></td>
</tr>
<tr>
<td>Number of pixels</td>
<td>1,049,088 (1,366 (W) x 768 (H))</td>
<td></td>
</tr>
<tr>
<td>Speaker</td>
<td>Full range x 2 pcs, 8 Ω</td>
<td></td>
</tr>
<tr>
<td>Audio Output</td>
<td>6 W (3 W + 3 W), 10% THD</td>
<td></td>
</tr>
<tr>
<td>Headphones</td>
<td>M3 (3.5 mm) stereo mini Jack x 1</td>
<td></td>
</tr>
<tr>
<td>Display panel</td>
<td>VGA, SVGA, XGA SXGA ... (compressed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Horizontal scanning frequency 31 - 69 kHz</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vertical scanning frequency 59 - 86 Hz</td>
<td></td>
</tr>
<tr>
<td>PC signals</td>
<td>PAL B/G Reception of Off air broadcasts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DVB-T 7 MHz VHF / UHF (Australia) free-to-air TV broadcast reception</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PAL 60 Hz Playback of NTSC tape from some PAL Video recorders (VCR)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M.NTSC Playback from M. NTSC Video recorders (VCR)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NTSC Playback from NTSC Video recorders (VCR)</td>
<td></td>
</tr>
<tr>
<td>Aerial - Rear</td>
<td>VHF / UHF</td>
<td></td>
</tr>
<tr>
<td>Operating Conditions</td>
<td>Temperature : 0 °C - 35 °C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humidity : 20 % - 80 % RH (non-condensing)</td>
<td></td>
</tr>
<tr>
<td>AV1 Input</td>
<td>AUDIO L - R RCA PIN Type x 2 0.5 V[rms]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VIDEO RCA PIN Type x 1 1.0 V[p-p] (75 Ω)</td>
<td></td>
</tr>
<tr>
<td>AV2 Input</td>
<td>AUDIO L - R RCA PIN Type x 2 0.5 V[rms]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VIDEO RCA PIN Type x 1 1.0 V[p-p] (75 Ω)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMPONENT Y 1.0 V[p-p] (including synchronization) ±0.35 V[p-p]</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>HDMI1 - 2 Input TYPE A Connectors @ This TV supports “HDAVI Control 4” function.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PC Input HIGH-DENSITY D-SUB 15PIN R, G, B/0.7 V[p-p] (75 Ω)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DIGITAL AUDIO OUT PCM / Dolby Digital, Fiber optic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Card slot SD Card slot x 1</td>
<td></td>
</tr>
<tr>
<td>Monitor Output</td>
<td>AUDIO L - R RCA PIN Type x 2 0.5 V[rms] (high impedance)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VIDEO RCA PIN Type x 1 1.0 V[p-p] (75 Ω)</td>
<td></td>
</tr>
<tr>
<td>Dimensions ( W x H x D )</td>
<td>472 mm x 361 mm x 174 mm (With Pedestal)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>472 mm x 323 mm x 67 mm (TV only)</td>
<td></td>
</tr>
<tr>
<td>Mass</td>
<td>5.5 kg Net (With Pedestal) 5.0 kg Net (TV only)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.
1. The product is warranted for 12 months from the date of purchase. Subject to the conditions of this warranty Panasonic or its Authorised Service Centre will perform necessary service on the product without charge for parts or labour if, in the opinion of Panasonic, the product is found to be faulty within the warranty period.

2. This warranty only applies to Panasonic products purchased in Australia and sold by Panasonic Australia or its Authorised Distributors or Dealers and only where the products are used and serviced within Australia or its territories. Warranty cover only applies to service carried out by a Panasonic Authorised Service Centre and only if valid proof of purchase is presented when warranty service is requested.

3. This warranty only applies if the product has been installed and used in accordance with the manufacturer’s recommendations (as noted in the operating instructions) under normal use and reasonable care (in the opinion of Panasonic). The warranty covers normal domestic use only and does not cover damage, malfunction or failure resulting from use of incorrect voltages, incorrect installation, accident, misuse, neglect, build-up of dirt or dust, abuse, maladjustment of customer controls, mains supply problems, thunderstorm activity, infestation by insects or vermin, tampering or repair by unauthorised persons (including unauthorised alterations), exposure to abnormally corrosive conditions or any foreign object or matter having entered the product.

4. This warranty does not cover the following items unless the fault or defect existed at the time of purchase:
   (a) Primary Pictures Tube (CRT) based Television Receivers (screen size greater than 60cm); Rear Projection TV’s; Plasma/LCD TV’s
   (b) Convection/Combination Microwave Ovens
   (c) Shaver Heads or Cutters
   (d) Video or Audio Heads and Stylii resulting from wear and tear in normal use
   (e) User replaceable Batteries
   (f) Thermal Paper, Toner/Ink Cartridges, Drums, Developer, Film (ink/Ribbon), Film Cartridge, Printer Heads
   (g) Microwave Oven cook plates.
   (h) Kneader mounting shaft unit
   (i) Kneader mounting shaft unit
   (j) Kneader mounting shaft unit

5. If warranty service is required you should:
   - Telephone Panasonic’s Customer Care Centre on 132600 or visit our website and use the Service Centre Locator for the name/address of the nearest Authorised Service Centre.
   - Send or bring the product to a Panasonic Authorised Service Centre together with your proof of purchase receipt as a proof of purchase date.
   - Please note that freight and insurance to and/or from your nearest Authorised Service Centre must be arranged by you.
   - Note that home or pick-up/delivery service is available for the following products in the major metropolitan areas of Australia or the normal operating areas of the nearest Authorised Service Centres:
     - (a) Picture tube (CRT) based Television Receivers (screen size greater than 60cm); Rear Projection TV’s; Plasma/LCD TV’s (screen size greater than 103 cm)
     - (b) Convection/Combination Microwave Ovens
     - (c) Whiteboard (except portable type) televisions / displays
   - The warranties hereby conferred do not extend to, and exclude, any costs associated with the installation, de-installation or re-installation of a product, including costs related to the mounting, de-mounting or remounting of any screen, (and any other ancillary activities), delivery, handling, freighting, transportation or insurance of the product or any part thereof or replacement of and do not extend to, and exclude, any damage or loss occurring by reason of, during, associated with, or related to such installation, de-installation, re-installation or transit.

Panasonic Australia Pty. Limited
ACN 001 592 187 ABN 83 001 592 187
Locked Bag 505, Frenchs Forest, NSW 2086

THIS WARRANTY CARD AND THE PURCHASE DOCKET (OR SIMILAR PROOF OF PURCHASE) SHOULD BE RETAINED BY THE CUSTOMER AT ALL TIMES

If you require assistance regarding warranty conditions or any other enquiries, please visit the Panasonic Australia website www.panasonic.com.au or by phone on 132 600

If phoning in, please ensure you have your operating instructions available.

Panasonic Australia Pty. Limited
ACN 001 592 187 ABN 83 001 592 187
Locked Bag 505, Frenchs Forest, NSW 2086
www.panasonic.com.au
23-11-2005

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

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Serial Number</th>
</tr>
</thead>
</table>

Panasonic Corporation
Web Site: http://panasonic.net/
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