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 Video Broadcasting) tuner
- Sharp pictures with HDMI terminal
- Create home theatre and DVD recorder link-ups with “VIERA Link” without complicated settings!
media excitement

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**Enjoy your TV!**

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**Diagram**

Enjoy rich multi-media

```
Enjoy your TV!
Basic Features
Watching TV
Using TV Guide
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External Equipment
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WARRANTY
```
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 place a heavy object on the lead or place the lead near a high-temperature object.
   ● Do not twist the lead, bend it excessively, or stretch it.
   ● Do not pull on the lead. Hold onto the mains plug body when disconnecting lead.
   ● Do not use a damaged mains plug or socket outlet.

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

AC 220-240 V
50 / 60 Hz

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

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

Do not place foreign objects inside the TV
● Do not let metal or flammable objects 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.

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

Use only the dedicated stands / mounting equipment
● Using an unauthorized stand or other fixtures may make the TV shaky, risking injury. Be sure to ask your local Panasonic dealer to perform setup.
● Use optional stands / mounts (p. 6).

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

Do not allow children to handle SD card
● As with any small object, SD Cards can be swallowed by young children. Please remove SD Card immediately after use and store out of reach of children.
Cleaning an energized TV may cause electrical shock. When cleaning the TV, remove the mains plug. Caution Notes

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

Allow sufficient space around the TV for radiated heat
Minimum distance

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

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

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

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).

Transport only in upright position

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

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 by 100 times of 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.
  - Use care not to subject the surface to bug repellent, solvent, thinner, or other volatile substances (this may degrade surface quality).

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

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

Standard accessories

Check that you have the accessories and items shown

- Remote Control Transmitter
  - N2QAYB000228
- Batteries for the Remote Control Transmitter (2)
  - R6 (AA)
- Cleaning cloth
- Operating Instructions with Warranty statement

Installing remote’s batteries

1. Pull open

   Hook

2. Close

   Note the correct polarity (+ or -)

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.

Optional accessories

Wall-hanging bracket
- TY-WK32LR2W

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

How to remove the TV Stand

Remove four screws.
Basic Connection

External equipment and cables shown are not supplied with this TV. Please ensure that the unit is disconnected from the mains socket before attaching or disconnecting any leads.

Example 1  Connecting aerial

TV only

Rear of the TV

Aerial

AC 220-240 V
50 / 60 Hz

Mains lead

RF cable

Example 2  Connecting DVD Recorder / VCR

TV, DVD Recorder or VCR

If your recorder is not available for DVB ⇒ p. 44

Rear of the TV

Aerial

AC 220-240 V
50 / 60 Hz

Mains lead

RF cable

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.
Identifying Controls

Function select
- Volume / Contrast / Brightness / Colour / Sharpness / Tint (NTSC mode) / Bass / Treble / Balance / Auto Tuning (p. 26)

SD Card slot (p. 33)
- Increases or decreases the programme position by one. When a function is already displayed, press to increase or decrease the selected function. When in Standby mode, switches TV On.

Swing door to open

C.A.T.S. (Contrast Automatic Tracking System) sensor
- Senses brightness to adjust picture quality in “Eco” mode in Picture Menu (p. 20)

Remote control signal receiver

Input mode selection
- TV - switches DVB / Analogue mode (p. 10)
- AV - switches to AV input mode from Input Selection list (p. 14)

Exit
- Returns to the normal viewing screen

Cursor buttons
- Makes selections and adjustments

Return
- Returns to the previous menu

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

SD Card (p. 32)
- Switches to SD Card viewing mode

Option Menu (p. 11)
- Easy setting for viewing and sound options

Sound Mute
- Switches sound mute On or Off

Volume Up / Down

Hold
- Freeze / unfreeze picture (p. 10)
- Holds the current teletext page (teletext mode) (p. 17)

Index (p. 17)
- Returns to the teletext index page (teletext mode)

Mains power On / Off switch
- Switch On to turn on the TV or turn the TV to standby mode by the remote control

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

Guide (p. 13)
- Displays TV Guide

OK
- Confirms selections and choices
- Press after selecting programme positions to quickly change programme (DVB) (p. 10)

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

Aspect (p. 12)
- Changes aspect ratio from Aspect Selection list
- Also possible by pressing this button repeatedly until you reach the desired aspect

VIERA Link Menu (p. 35)
- Press to access VIERA Link Menu directly

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

Programme Information (p. 11)
- Displays programme information

Programme Up / Down
- Selects programme in sequence
- When in Standby mode, switches TV On

Teletext (p. 16)
- Switches to teletext mode

Subtitles (p. 10)
- Displays Subtitles

VCR / DVD Panasonic equipment operations (p. 15)

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. 20)
Auto Tuning

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

1. Plug the TV into mains socket and switch On

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

2. Select your state

   Select State / Territory
   New South Wales / Australian Capital Territory
   Victoria
   Overseas
   South Australia
   Western Australia
   Northern Territory
   Tasmania

3. Start Auto Tuning

   Auto Tuning - Digital (DVB) and Analogue

   Auto Tuning will start to search for TV services and store them in the numbered order as specified by the broadcasters.

4. Select the picture setting

   Please select your viewing environment.
   Home
   Shop

   "Home" is the recommended mode for viewing at home. Select "Home" for optimal picture / power consumption.
   "Shop" is for in-store display.
   • If "Shop" is selected, the word "Shop" appears every time the TV is switched on. (p. 10)
   Home: "Viewing Mode" is set as "Normal". (p. 20)
   Shop: "Viewing Mode" is set as "Dynamic". (p. 20)

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

• To edit channels
  > Editing Programmes (p. 24)
• If tuning has failed
  > "Auto Tuning" (p. 27).
• 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.

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

■ How to use remote control

Using the On Screen Displays

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

■ ON SCREEN HELP Instructions box

(example: Sound Menu)

- Page up
- Page down
- Exit
- Change
- Return

On-screen operation guide will help you.
Watching TV

1. Turn power on
   - Mains power On / Off switch should be On. (p. 8)
   - If “Shop” is displayed on the top right of the screen, reset settings in “Shipping Condition” (p. 28), and select “Home” in “Auto Tuning” (p. 9).

2. Select DVB (Digital Video Broadcasting) or Analogue mode
   - Also possible to select the mode using the TV button on the side panel of the TV. (p. 8)

   Information banner appears whenever you select a programme
   - For details  p. 11

3. Select a programme
   - To select the two or three-digit programme number, e.g. 39 ➔ 3 ➔ 9 (in a short time)
   - If one or two-digit programme number ➔ quickly changes the programme

   To select from the Programme List

   Select a programme using Information banner (p. 11)
   - Possible to confirm the programme name before selecting programmes.
   - Display Information banner if it is not displayed
   - While the banner is displayed, select the programme

   Select a programme using TV Guide (p. 13)
   - Possible to confirm the TV Guide (EPG) before selecting programmes.
   - Display TV Guide
   - Select the programme

   ■ Other useful functions

   | Hold            | Freeze / unfreeze picture | HOLD |
   | Display subtitles | Display / hide subtitles (if available) | STTL |

   • When the TV is switched to standby, there will be a clicking sound after a short delay. This is normal.
   • Possible to set display timeout in “Banner Display Timeout” (p. 21).
   • Channel changing is also possible when this function is active.
Other useful functions

Display Information banner

- Also appears when changing a programme

<table>
<thead>
<tr>
<th>Event</th>
<th>Programme</th>
<th>Current time</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 TEN Digital</td>
<td>10:30 am</td>
<td>All DVB Services</td>
<td></td>
</tr>
<tr>
<td>Coronation Street</td>
<td>9:00 am - 11:00 am</td>
<td>Now</td>
<td></td>
</tr>
</tbody>
</table>

DVB: Event Start / Finish time
Analogue: Programme status

Features available / Message meanings

- Sound mute On
- Audio mode (Analogue mode) (p. 41)
- Rating: Rating information (p. 40)
- Bad signal: Poor TV signal quality
- Encrypted: Scrambled programme

To confirm another tuned programme name
To change the category (To select a Fav List if you have defined)
Information on the next event (DVB mode)
Extra information (press again to hide the banner)

Check or change the current programme status instantly

- MPX (Analogue mode)
- Volume Correction (Analogue mode) (p. 20)
- Sound Menu (p. 20)
- Adjusts volume of individual programme or input mode

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

Display the selectable settings for the current programme

- MPX (Analogue mode)
- Sound Menu (p. 20)
- Volume Correction
Adjusts volume of individual programme or input mode

Off Timer

- Turn the TV off automatically after a fixed period

Display the menu
Select “Setup”
Select “Off Timer” and set the time

To cancel => Set to “Off” or turn the TV off.
To display the remaining time => Information banner (above)
When the remaining time is within 3 minutes, the remaining time will flash on screen.
Watching TV

Other useful functions

Change the aspect ratio

Enjoy viewing the picture at its optimum size and aspect.

Display Aspect Selection list  While the list is displayed, select the mode

ASPECT

To change the mode using the ASPECT button only

(Press repeatedly until you reach the desired mode)

16:9

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

14:9

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

Just

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

4:3 Full

Displays a "4:3" image enlarged horizontally to fit the screen.

Only available in DVB mode or HD signal

4:3

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

Zoom1

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

Zoom2

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

Zoom3

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

Note

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

Using TV Guide enables you to select programme easily, view event informations, 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).
- Analogue programmes will be listed after DVB programmes. “D” means DVB programme and “A” means Analogue programme.

View TV Guide

Each time pressed, the layout will be changed.
(Landscape / Portrait)

- To the previous day (DVB mode) ➤ R

- To the next day (DVB mode) ➤ G

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

- To return to TV ➤ EXIT

- To view details of the event (DVB mode)
  Select the event ➤ select

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.
Watching Videos and DVDs

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

To connect the equipment ⇒ p. 7

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

1 Display the Input select menu

2 Select the input mode connected to the equipment

3 View

Displays the selected mode

Note

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

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

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

1. Set the VCR / DVD switch to the appropriate position |
2. Press and hold POWER during the following operations |
   - Enter the appropriate code for the equipment to be controlled, see table below |

<table>
<thead>
<tr>
<th>“VCR” position</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCR</td>
<td>10 (default)</td>
</tr>
<tr>
<td>DVD</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>“DVD” position</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVD</td>
<td>70 (default)</td>
</tr>
<tr>
<td>Player home theatre</td>
<td>71</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.  
- “DVD” means DVD player, DVD recorders and Recorder home theatre.  
- Some operations may not be possible on some equipment models.
Viewing Teletext

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

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

**What is TOP mode?** (in case of TOP text broadcasting)
TOP is a particular improvement of the standard teletext service that results in an easier search and effective guide.
- Fast overview of the teletext information available
- Easy to use step-by-step selection of the topical subject
- Page status information at the bottom of the screen

Available page up / down -> R G
To select among subject blocks -> B
To select next subject within the subject block -> Y
(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. 17)

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

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

**Select the page** (up to page 899)

■ To adjust contrast ⇒ (Press three times)
■ To return to TV ⇒

**Using teletext conveniently**

Reveal hidden data
Reveal hidden words e.g. quiz page answers
MENU R
■ Re-hide ⇒ R

FULL / TOP / BOTTOM

Normal (FULL)

P100
Broadcast
(Expand the TOP half)

P100
Broadcast
(Expand the BOTTOM half)
### Viewing Teletext

| **HOLD** | Stop automatic updating  
(If you wish to hold the current page without updating)  
HOLD (Press)  
To resume  HOLD (Press) |
| **INDEX** | Return to the main index page  
INDEX (Press) |
| **Call up sub titles** | Display subtitles  
STTL (Press)  
- 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. |
| **View in multi window** | Watch TV and Teletext in two windows at once  
MENU (Press twice)  
- Select Picture and text  
On or Off  
Operations can be made only in Teletext screen. |
| **Store frequently viewed pages** | Store frequently viewed pages in the colour bar  
(List mode only)  
As page is displayed  
Corresponding colour button  
press and hold  
\[\text{The number changes to white.}\]  
\[\text{Press new page number}\]  
Colour button you want to change  
press and hold  
\[\text{The number changes to white.}\] |
| **View sub page** | View sub page (Only when teletext is more than one page)  
Appears at top of the screen  
\[\text{To view specific sub page}\]  
\[\text{Sub pages:}\]  
The number of sub pages varies depending on the broadcasters (up to 79 pages).  
It may take some time for searching, during which time you can watch TV. |
| **Watch TV while waiting for update** | View the TV picture while searching for a teletext page  
Teletext automatically updates itself when new information becomes available.  
Changes to TV screen temporarily  
Appears when updating is completed  
View the updated page  
(You cannot change the programme.)  
The news page provides a function that indicates arrival of latest news (“News Flash”). |
How to Use Menu Functions

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

Display the menu

MENU (press when displayed) Displays the functions that can be set (varies according to the input signal)

Select the menu (example: Picture Menu)

Select the item (example: Picture Menu)

Adjust or select (example: Picture Menu)

Choose from among alternatives

Number and positions of alternatives

Adjust using the slide bar

Go to the next screen

Enter characters by free input menu

You can enter names or numbers freely for some items.

To reset the settings

To reset the picture settings only

“Reset Picture Defaults” in Picture Menu (p. 20)

To reset the sound settings only

“Reset Sound Defaults” in Sound Menu (p. 20)

To initialize all settings

“Shipping Condition” in Setup Menu (p. 28)
Depending on the received signals, available items are varied.

The menu of the accessed equipment

(p. 20)

(p. 20)

(p. 21)

(p. 21, 34)

(p. 26)
## Menu list

<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments / Configurations (alternatives)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIERA Link</td>
<td>Pause Live TV</td>
<td>Controls the connected equipment with VIERA Link function, and enables various convenient recording, playback, etc. (p. 34 - 36)</td>
</tr>
<tr>
<td>VIERA Link</td>
<td>Direct TV Rec</td>
<td>You can also access VIERA Link Menu directly using the VIERA Link button on the remote control.</td>
</tr>
</tbody>
</table>
| VIERA Link | VIERA Link Control | Basic picture mode (Dynamic / Normal / Cinema / Eco)
Dynamic: Provides enhanced picture contrast and sharpness when viewing in a bright room
Normal: Recommended for viewing under normal ambient room lighting conditions
Cinema: For watching movies in a darkened room producing a cinema-like picture
Eco: Adjusts picture settings automatically dependent on ambient lighting conditions
Set for each input signal |
| VIERA Link | Speaker Selection | Viewing Mode
Basic picture mode (Dynamic / Normal / Cinema / Eco)
Dynamic: Provides enhanced picture contrast and sharpness when viewing in a bright room
Normal: Recommended for viewing under normal ambient room lighting conditions
Cinema: For watching movies in a darkened room producing a cinema-like picture
Eco: Adjusts picture settings automatically dependent on ambient lighting conditions
Set for each input signal |
| Picture | Contrast, Brightness, Colour, Sharpness | Increases or decreases the levels of these options according to your personal preference |
| Picture | Tint | With an NTSC signal source connected to the TV, the picture hue can be adjusted to suit your taste
For NTSC or Component / HDMI input signal reception only |
| Picture | Colour Balance | Allows you to set the overall colour tone of the picture (Cool / Normal / Warm)
Not valid on PC signal |
| Picture | Colour Management | Automatically adjusts colours to vivid ones (Off / On)
Not valid on PC signal |
| Picture | P-NR | Picture Noise Reduction
Automatically reduces unwanted picture noise and flicker noise in the contoured parts of a picture (Off / Min / Mid / Max)
Not valid on PC signal |
| Picture | 3D-COMB | Occasionally, whilst viewing still or slow moving pictures, colour patterning may be seen
Set to “On” to display sharper and more accurate colours (Off / On)
For PAL or NTSC signal reception only
Not valid on S-Video, Component, PC, HDMI and SD Card |
| Picture | Reset Picture Defaults | Press the OK button to reset Viewing Mode on all inputs to default settings. |
| Sound | Mode | Basic sound mode (Music / Speech) |
| Sound | Bass | Increases or decreases level to enhance or minimise lower, deeper sound output |
| Sound | Treble | Increases or decreases level to enhance or minimise sharper, higher sound output |
| Sound | Balance | Adjusts volume level of right and left speakers |
| Sound | Headphone Volume | Adjusts the volume of the headphones |
| Sound | Surround | Surround sound settings (Off / On) |
| Sound | Volume Correction | Adjusts volume of individual programme or input mode |
| Sound | Speaker Distance to Wall | Adjusts the low frequency sound (Over 30cm / Up to 30cm)
If the back space between the TV and wall is over 30 cm, “Over 30cm” is recommended.
If the back space between the TV and wall is within 30 cm, “Up to 30cm” is recommended. |
| Sound | MPX | Select stereo / monaural (Mono / Stereo) (p. 41)
Normally: Stereo
Stereo signal cannot be received: Mono
M1 / M2: Available while mono signal is transmitted
Analogue mode only |
| Sound | DVB Audio Preference | Selects the initial setting for Audio tracks (Dolby Digital / MPEG)
If programme has both Dolby Digital and MPEG audio tracks, priority is given to what you select
Dolby Digital: A method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2ch) audio, these signals can also be multi-channel audio.
MPEG: An audio compression method that compresses audio to small size without any considerable loss of audio quality.
DVB mode only |
| Sound | SPDIF Selection | Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT terminal (Auto / PCM)
Auto: Dolby Digital is output as Dolby Digital Bitstream. MPEG is output as PCM.
PCM: Dolby Digital is output as PCM. MPEG is output as PCM.
DVB mode only |
| Sound | MPEG Optical Level | Normally, MPEG sound is larger than Dolby Digital one
You can adjust the audio level of MPEG output from DIGITAL AUDIO OUT terminal as the initial setting
0dB to -12dB in -2dB reductions
DVB mode only |
| Sound | Audio Selection | Selects the preferred language for DVB multi audio (depending on the broadcaster) |
| Sound | HDMI1 / 3 Input | Select to fit the input signal (Auto / Digital / Analogue) (p. 31)
Auto: Automatic detection of digital or analogue sound source
Digital: HDMI cable connection
Analogue: HDMI-DVI adapter cable connection
HDMI input mode only
HDMI2 terminal is for digital signal only
No setting for HDMI2 available |
| Sound | Reset Sound Defaults | Press the OK button to reset the present Sound Mode to the default settings. |
## Menu list

<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments / Configurations (alternatives)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Setup</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DVB Favourites Edit</td>
<td>Creates list of favourite programmes (p. 25)</td>
</tr>
<tr>
<td></td>
<td>DVB Service List</td>
<td>Skips the unwanted DVB programmes (p. 25)</td>
</tr>
<tr>
<td></td>
<td>Analogue Service List</td>
<td>Skips the unwanted Analogue programmes or edits Analogue programmes (p. 25)</td>
</tr>
<tr>
<td></td>
<td>24p Film</td>
<td>Displays moving pictures smoothly when receiving 24p signals (Off / On)</td>
</tr>
<tr>
<td></td>
<td><strong>Tuning Menu</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Auto Tuning</td>
<td>Automatically sets the programmes received in the area (p. 27)</td>
</tr>
<tr>
<td></td>
<td>DVB Manual Tuning</td>
<td>Sets the DVB programmes manually (p. 27)</td>
</tr>
<tr>
<td></td>
<td>Analogue Manual Tuning</td>
<td>Sets the Analogue programmes manually (p. 27)</td>
</tr>
<tr>
<td></td>
<td>Add New DVB Services</td>
<td>Adds new DVB services (p. 27)</td>
</tr>
<tr>
<td></td>
<td>New Service Message</td>
<td>Selects whether to give a notification message when a new DVB service is found (p. 27)</td>
</tr>
<tr>
<td></td>
<td>DVB Signal Display</td>
<td>Checks the DVB signal condition (p. 27)</td>
</tr>
<tr>
<td></td>
<td>Off Timer</td>
<td>Sets the time the TV automatically turns Off (Off / 15 / 30 / 45 / 60 / 75 / 90 minutes)</td>
</tr>
<tr>
<td></td>
<td>Teletext</td>
<td>Teletext display mode (TOP (FASTEXT) / List) (p. 16)</td>
</tr>
<tr>
<td></td>
<td>Shipping Condition</td>
<td>Resets all settings, for example, when moving house (p. 28)</td>
</tr>
<tr>
<td></td>
<td>System Update</td>
<td>Downloads new software to TV (p. 23)</td>
</tr>
<tr>
<td></td>
<td>Picture Overscan</td>
<td>Selects the screen area displaying the image (Off / On) &lt;br&gt; On : Enlarged the image to hide the edge of the image. &lt;br&gt; Off : Displayed the image in the original size. &lt;br&gt; • Set to “On” if noise is generated on the edge of the screen. &lt;br&gt; • This function is available when aspect is set to 16:9. &lt;br&gt; • This function can be memorized separately for SD (Standard definition) and HD (High definition) signals.</td>
</tr>
<tr>
<td></td>
<td>Input Labels</td>
<td>Labels or skips each input terminals (p. 29)</td>
</tr>
<tr>
<td></td>
<td>Banner Display Timeout</td>
<td>Sets how long the information banner (p. 11) stays on screen &lt;br&gt; 0 (No display) to 10 sec. in 1-sec. increments</td>
</tr>
<tr>
<td></td>
<td>VIERA Link</td>
<td>Sets to use VIERA Link functions (Off / On) (p. 34)</td>
</tr>
<tr>
<td></td>
<td>Power off Link</td>
<td>Sets to use Power off Link function (No / Set) (p. 34)</td>
</tr>
<tr>
<td></td>
<td>Power on Link</td>
<td>Sets to use Power on Link function (No / Set) (p. 34)</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. 23)</td>
</tr>
<tr>
<td></td>
<td>Daylight Saving Time</td>
<td>Select time offset from the standard time for Summer Time &lt;br&gt; (Auto / Off / +1/2 Hr / +1 Hr) (p. 23) &lt;br&gt; • Set to “Auto” normally</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>
</tbody>
</table>

*A different menu will be displayed while PC, DVI to HDMI adapter cable or SD Card is used. (p. 30-31 and p. 33)*  
*Only available items can be selected.*
DVB Settings (DVB mode)

DVB Settings provide access to various advanced features.

1. If in Analogue mode, select DVB

2. Display the menu

3. Select “Setup”

4. Select “System Update”, “Region Select” or “Daylight Saving Time”

5. Set

To return to TV, press EXIT.
Download new software to TV.
● For details → p. 40

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”

Note
● 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. 40) when “Auto update Search in Standby” is set to “On”. These sounds are normal.

To update immediately
Select “System Update Search Now”

Note
● During downloading, the TV will display a blank screen for 40 to 50 seconds. Do not interrupt the TV during this procedure.

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).

<table>
<thead>
<tr>
<th>Region</th>
<th>Standard time</th>
<th>Daylight Saving Time: Auto (During Summer Time)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW / ACT</td>
<td>+10:00</td>
<td>+11:00</td>
</tr>
<tr>
<td>Victoria</td>
<td></td>
<td>+10:00</td>
</tr>
<tr>
<td>Queensland</td>
<td>+9:30</td>
<td>+10:30</td>
</tr>
<tr>
<td>South Australia</td>
<td>+8:00</td>
<td>+9:00</td>
</tr>
<tr>
<td>Western Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Territory</td>
<td></td>
<td>+9:30</td>
</tr>
<tr>
<td>Tasmania</td>
<td>+10:00</td>
<td>+11:00</td>
</tr>
</tbody>
</table>

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.
Editing Programmes

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

1. **Select DVB or Analogue**

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

2. **Display the menu**

   - Display the menu

3. **Select “Setup”**

   - Select “Setup”

4. **Select “DVB Favourites Edit”, “DVB Service List” or “Analogue Service List”**

   - Select “DVB Favourites Edit”, “DVB Service List” or “Analogue Service List”

5. **Set**

   - Set
Create your favourite programme list from various broadcasters (up to 4: Fav List1 / Fav List2 / Fav List3 / Fav List4).
The list is added to “Favourites” list in TV Guide (p. 13) and information banner (p. 11) and then easily accessed.

Select a programme and add it to the list

To edit List
- To name the List
- To move the programme
- To delete the programme
- To delete all programmes

Note
- Programme numbers (known as logical channel numbers) are defined by the broadcaster and cannot be changed.
- Hidden services (see below) can be selected but not viewed.

Skip unwanted programmes
- “DVB Service List” is listed all tuned DVB programmes in DVB mode.
- “Analogue Service List” is listed all tuned Analogue programmes in Analogue mode.

Select a service and add / delete

You can change the programme name and programme position for Analogue programmes.
- If a VCR is connected only with the RF cable, edit “VCR”.

Edit analogue programmes (Change name, Move)

■ To change the name displayed when selecting programmes
- Select “Rename”
- Set characters
- (maximum: five characters)

■ To move the programme position
- Select new position
- Store
Tuning Programmes

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

1. **Select DVB or Analogue**
   - "DVB Manual Tuning", "Add New DVB Services", "New Service Message" and "DVB Signal Display" are available in DVB mode only.
   - "Analogue Manual Tuning" is available in Analogue mode only.

2. **Display the menu**
   - Press the MENU button.

3. **Select "Setup"**
   - Press the OK button to select "Setup".

4. **Select "Tuning Menu"**
   - Press the OK button to select "Tuning Menu".

5. **Select a function**
   - Press the OK button to select the desired function.

6. **Set**
   - Press the OK button to confirm the selection.

---

**For Auto Tuning, using the buttons on the side of the TV (p. 8)**

1. Press repeatedly until "Auto Tuning" appears.
2. Access "Auto Tuning".
3. Start "Auto Tuning".

To return to TV.
Automatically retune all DVB or Analogue programmes received in the area.
• Only DVB programmes are retuned in DVB mode.
• Only Analogue programmes are retuned in Analogue mode.

**Start Auto Tuning**

![Auto Tuning](image)

- All the previous tuning settings are erased.
- When the operation is completed, the programme at programme position “1” will be displayed.
- If tuning has not been done completely ➔ “DVB Manual Tuning”, “Analogue Manual Tuning”

**Settings are made automatically**

![Settings are made automatically](image)

Normally use “Auto Tuning” or “Add New DVB Services” to add DVB programmes to your service list.
If tuning has not been done completely or for adjusting the direction of the aerial, use this function.

**DVB Manual Tuning**

Select a programme and checks the DVB signal condition.
- To change the programme

![DVB Signal Display](image)

- A good Signal Strength is not an indication of suitable signal for DVB reception. Please use the Signal Quality indicator as follows:
  - **Signal Quality**:
    - Green bar ➔ Good
    - Yellow bar ➔ Poor
    - Red bar ➔ Bad (Check the aerial)
**Restore Settings**

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

1. **Display the menu**
   - Press the MENU button on the remote control.

2. **Select “Setup”**
   - Use the cursor buttons to select “Setup” and press the OK button.

3. **Select “Shipping Condition”**
   - Use the cursor buttons to select “Shipping Condition” and press the OK button.

4. **Set**
   - Confirm the message and initialise.
   - **Shipping Condition**
     - Analogue & DVB tuning data will be erased
     - Are you sure?
     - Are you sure?

   - Follow the on-screen instructions
     - “Auto Tuning” will automatically start when Mains power On / Off switch is next turned On. (p. 9)

   - To retune TV programmes only, e.g. after moving house
     - “Auto Tuning” (p. 27)
Input Labels

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

To select the input mode  p. 14

1. Display the menu
   - Select “Setup”
     - Input Labels

2. Select “Setup”
   - Input Labels

3. Select “Input Labels”
   - AV1
   - AV2
   - AV3
   - AV4
   - PC
   - HDMI1
   - HDMI2
   - HDMI3
   - HDMI4

4. Select a input terminal and set
   - The labels you set will be displayed in “Input Selection” menu (p. 14) or banner.
   - If “Skip” is selected, you cannot select the mode.

   ■ User input
   - You can name each input terminals freely.
   - Select “User input”
   - Set characters
   - (maximum: ten characters)
Displaying PC Screen on TV

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

To connect PC ➔ p. 39

Select the external input

Select “PC”

To return to TV ➔ TV

PC menu setting (changed as desired)

To make settings ➔ “How to Use Menu Functions” 1 to 4 (p. 18)

<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></td>
<td>G-Gain</td>
<td>Adjusts the white balance for green areas</td>
</tr>
<tr>
<td></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>
</tbody>
</table>
| Setup         | Input Resolution      | Switches to a wide view
  • VGA (640 × 480 pixels), WVGA (852 × 480 pixels), XGA (1,024 × 768 pixels), WXGA (1,366 × 768 pixels)
  • Options change depending on signals                                                                                                                                                                                                  |
|               | Clock                 | Set to the minimum level if noise occurs                                                                                                                                                                                               |
|               | H-pos                 | Adjusts horizontal position                                                                                                                                                                                                            |
|               | V-pos                 | Adjusts vertical position                                                                                                                                                                                                                |
|               | Clock Phase           | Eliminates flicker and distortion
  • Adjust after Clock adjustment
  • Set to the minimum level if noise occurs                                                                                                                                                                                             |
|               | Sync                  | PC sync signal type (H & V / SOG)
  • H & V: Horizontal and Vertical sync from your PC (Most common sync format)
  • SOG: Sync on Green sync from your PC                                                                                                                                                                                                    |
|               | Reset PC Settings     | Press the OK button to reset to the default Setup settings                                                                                                                                                                             |

• Other items ➔ p. 20 and p. 21
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 or a DVD player, can be connected to the HDMI terminal using an HDMI compliant (fully wired) cable. About connections, see “External Equipment” (p. 38).

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 / 3 Input” menu screen. (p. 20)
- Applicable audio signal sampling frequencies (2ch L.PCM): 48 kHz, 44.1 kHz, 32 kHz
- HDMI2 terminal is for digital audio signal only.
- Use with a PC is not assumed.
- If the connected equipment has an aspect adjustment function, set the aspect ratio to “16:9”.
- These HDMI connectors are “type A”.
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- An equipment having no digital output terminal may be connected to the input terminal of either “COMPONENT”, “S-VIDEO”, or “VIDEO” to receive analogue signals.
- The HDMI input terminal can be used with only the following image signals: 480i, 576i, 576p, 720p, 1080i and 1080p. Match the output setting of the digital equipment.
- For details of the applicable HDMI signals, see p. 42.

DVI connection
- If the external equipment has only a DVI output, connect to the HDMI1 / 3 terminal via a DVI to HDMI adapter cable (*2).
- When the DVI to HDMI adapter cable is used, connect the audio cable to the audio input terminal (HDMI1: use AV2 IN AUDIO terminals / HDMI3: use AV4 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 ④ (p. 18)

<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H-pos</td>
<td>Adjusts horizontal position</td>
</tr>
<tr>
<td>Setup</td>
<td></td>
<td><img src="image.png" alt="Diagram" /></td>
</tr>
<tr>
<td></td>
<td>V-pos</td>
<td>Adjusts vertical position</td>
</tr>
<tr>
<td></td>
<td>Reset DVI Position Settings</td>
<td>Press the OK button to reset to the default Setup 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

Still images recorded by digital cameras will be displayed.

1. Insert the SD Card

2. Enter SD mode (Photo View Mode)

3. Select the photo to be viewed

4. View

To display the operation guide

Caution

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

SD Card

• For details on SD Cards ➔ p. 41

To insert

Label surface

Push until a click is heard

To remove

Press the centre of the card

Cautions in handling SD Card

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

Slide show

Start Slide show (operate in step 3 or 4)

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

Note

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

Slide show settings (operate in step 3 or 4)

1. Display the menu
2. Select “Viewing Setup”
3. Select the items and set

Menu Item Adjustments / Configurations (alternatives)

Viewing Interval
   Select slide show interval (5 / 10 / 15 / 30 / 60 / 90 / 120 seconds)

Repeat
   Slide show repeat (Off / On)

Cautions in handling SD Card

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

On screen messages

Message Meaning / Action

Cannot read file ➤ The file is broken or unreadable.
   ➤ The TV does not support the format.
   (For the applicable formats and data, see p. 41.)

Is SD Card in? ➤ Insert a SD Card.

No valid file to play ➤ The card has no data.

Over 9999 pictures found ➤ Maximum valid number of photos is 9,999.
**VIERA Link “HDAVI Control”**

- Enjoy additional HDMI Inter-Operability with Panasonic products which have “HDAVI Control” function. This TV supports “HDAVI Control 3” function. Connections to the equipment (DIGA Recorder, HD Video Camera, Player theatre, Amplifier, etc.) with HDMI cable allow you to interface them automatically. These features are limited to models incorporating “HDAVI Control” and “VIERA Link”.
- Some functions are not available depending on the equipment’s version of HDAVI Control. Please confirm the connected equipment's version of HDAVI Control.
- VIERA Link “HDAVI Control”, based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers' equipment that supports HDMI CEC cannot be guaranteed. Please refer to individual manuals for other manufacturers' equipment supporting VIERA Link function. About applicable Panasonic equipment, consult your local Panasonic dealer.

### Summary of VIERA Link functions

- **Easy playback**
  - Power on link
  - Control the menu of the connected equipment by VIERA remote control (Available with the equipment which has “HDAVI Control 2” or “HDAVI Control 3” function.)
  - Pause Live TV programme (Available with the equipment which has “HDAVI Control 3” function.)
  - Speaker control

- **Power on / off link**
  - Set Power on Link “Set” in Setup Menu to use this function
  - “Power on Link” (p. 18-19, 21)
  - When the connected equipment starts playback or direct navigator / function menu for the equipment are activated, the TV is automatically turned on. (Only when TV is in Standby mode.)

- **Power off link**
  - Set Power off Link “Set” in Setup Menu to use this function
  - “Power off Link” (p. 18-19, 21)
  - When 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.

### Connections

- **Easy playback**
  - HDMI cable
  - DIGA Recorder / HD Video Camera with VIERA Link function

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

### Preparations

- Connect the equipment supporting VIERA Link to the TV’s HDMI1, HDMI2 or HDMI3 terminals via fully wired HDMI cables.

### Features available

- **Easy playback**
  - Automatic Input switching - When the connected equipment is operated, input mode is switched automatically. When it is stopped operating, input mode is not returned.

- **Power on link**
  - Set Power on Link “Set” in Setup Menu to use this function
  - “Power on Link” (p. 18-19, 21)

- **Power off link**
  - Set Power off Link “Set” in Setup Menu to use this function
  - “Power off Link” (p. 18-19, 21)

- The TV remains on even if the “VIERA Link” compatible equipment is turned off.
You can pause the live TV programme and resume later.

- This function is available with DIGA Recorder which has HDD and “HDAVI Control 3” function.
- If you cannot operate, check the settings and the equipment ➜ “Preparations” (p. 34)

Available conditions:
- when watching TV programme
- when watching the input from DIGA Recorder

Access and pause the live TV programme

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

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

To resume (stop pause)
Select “Pause Live TV” and access
- About the operations after resuming, read the manual of the equipment.

To return to Live TV
(cancel pause or resumed playback) ➜ TV (change the input mode)
- If you cancel pause or resumed playback, the recorded programme will be deleted from HDD.

Recording the current programme in DIGA Recorder immediately.

- This function is available with DIGA Recorder which has “HDAVI Control 3” function.
- If you cannot operate, check the settings and the equipment ➜ “Preparations” (p. 34)

Available conditions:
- when watching TV programme
- The recording is performed by using the tuner of DIGA Recorder.
- Changing programme, input mode or turning off the TV is available during the recording.

1. Display “VIERA Link Menu”
2. Select “Direct TV Rec” and start recording

To stop recording
Select “Stop” in “Direct TV Rec” and access
- If you cancel pause or resumed playback, the recorded programme will be deleted from HDD.
VIERA Link “HDAVI Control”™

Features available (Using VIERA Link Menu)

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

- This function is available with the equipment which has “HDAVI Control 2” or “HDAVI Control 3” function.
- If you cannot operate, check the settings and the equipment ➔ “Preparations” (p. 34)

Access and operate the menu of the equipment

1. Display “VIERA Link Menu”
2. Select “VIERA Link Control”
3. Select the equipment you want to access
   - “Home Cinema” means Player theatre, Recorder theatre and Amplifier.
4. Operate the menu of the equipment
   - Available VIERA remote control buttons (depending on the connected equipment):

If you access the invalid equipment

When the equipment with “HDAVI Control” function is connected

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

When the equipment of other types or manufacturers is connected

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

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

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

Control the menu of the connected equipment by VIERA remote control (HDAVI Control 2) (HDAVI Control 3)
You can control the theatre speaker with this TV remote control (point the remote control at the TV’s signal receiver).

- This function is available with the Amplifier or Player theatre which has “HDAVI Control” function.
- If you cannot operate, check the settings and the equipment ⇒ “Preparations” (p. 34)

Access and control the speaker volume

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

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

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

**TV**
TV speakers are active.

**Note**
- This function may not work properly depending on the connected equipment.
- Image or sound may not be available for the first few seconds when the playback starts.
- Image or sound may not be available for the first few seconds when Input mode is switched.
- Volume function will be displayed when adjusting the volume of the equipment.
- Easy playback is also available by using the remote control for Amplifier or Player theatre. Read the manual of the equipment.
- About HDMI cable for connecting Panasonic HD Video Camera, read the manual of the equipment.
- If more than one equipment of the same type are connected to the TV by HDMI cables, for example two DIGA Recorders to HDMI1 and HDMI2, VIERA Link will only be available for the lower terminal number, in this case HDMI1.
- “HDAVI Control 3” is the newest standard (current as of December, 2007) for HDAVI Control compatible equipment. This standard is compatible with conventional HDAVI equipment.
- To confirm this TV’s version of HDAVI Control ⇒ “System Information” (p. 21)
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. 46).

![Diagram showing connections]

- **Headphones**
  - To adjust volume
  - “Headphone Volume” in the Sound Menu (p. 20)

- **Camcorder / Game equipment**
  - Fully wired HDMI compliant cable
  - (3.5mm stereo mini plug)
  - (VIDEO) or (S-VIDEO)

---

### Types of connectable equipment to each terminal

<table>
<thead>
<tr>
<th>Terminal</th>
<th>AV1 IN</th>
<th>AV2 IN</th>
<th>AV3 IN</th>
<th>AV4 IN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording / Playback (equipment)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To record / playback videocassettes / DVDs (VCR / DVD recorder)</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>To watch DVDs (DVD player)</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>To watch camcorder images (Video camera)</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>To watch satellite broadcasts (Set top box)</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>To play games (Game equipment)</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>To use amplifier with speaker system</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
</tbody>
</table>

☑️: Recommended Connection

---

38
To watch satellite broadcasts
Set top box

To listen with speakers
Amplifier with speaker system
Conversion adapter (if necessary)

To watch DVDs
DVD player

To record / playback
DVD Recorder / VCR
RF cable

<table>
<thead>
<tr>
<th>MONITOR OUT</th>
<th>DIGITAL AUDIO OUT</th>
<th>HDMI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

S VIDEO 4 pin terminal
Chrominance in
Luminance in
Chrominance earth
Luminance earth

HDMI terminal

- Connect the S VIDEO or VIDEO terminal when using AV3 / AV4 IN terminals.
- Connect the COMPONENT or VIDEO terminal when using AV1 / AV2 IN terminals.
Technical Information

Programme Allocation (Analogue mode)

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

Rating (DVB 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>

Updating the software system (DVB mode)

Update system software regularly to ensure that you have latest version software.
If there is an update available, a notification banner is displayed when the service has the update information.
• To download new software, press “OK” ➤ Downloading (approx. 20 mins.)
  If you choose not to download, press “EXIT”.

■ To update automatically
Set “Auto Update Search in Standby” to “On” (p. 23)
If there is a new version software being broadcast, the TV will download this automatically.
• The automatic updating sequence is carried out at 3:00 AM and 5:00 AM every morning under the following conditions.
  Standby (TV turned Off with the remote control)
  Recording is not in progress.

■ To update manually
Perform “System Update Search Now” (p. 23)
If there is an update available, a notification banner is displayed.
• To download new software, press “OK” ➤ Downloading (approx. 20 mins.)
  If you choose not to download, press “EXIT”.

Note
• During downloading, do not turn Off the TV or touch any buttons.
  (The TV is automatically activated after downloading is completed.)
• 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. 23) is set to “On”. These sounds are normal.
**Technical Information**

**Audio Signal**

- **STEREO**
- **MAIN I**
- **SUB II**
- **MONO**

<table>
<thead>
<tr>
<th>Mode Indicator</th>
<th>STEREO</th>
<th>MAIN I</th>
<th>SUB II</th>
<th>MONO</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td></td>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td></td>
<td></td>
<td>II</td>
<td></td>
</tr>
<tr>
<td>▼</td>
<td></td>
<td></td>
<td></td>
<td>▼</td>
</tr>
</tbody>
</table>

**NICAM**

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

<table>
<thead>
<tr>
<th>Type of broadcast</th>
<th>Regular broadcast (Standard Audio)</th>
<th>Regular + NICAM MONO I (MAIN I)</th>
<th>NICAM STEREO</th>
<th>NICAM DUAL MONO (MAIN I / SUB II)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode Indicator</td>
<td>No Indicator ← ▼</td>
<td>I ← ▼</td>
<td>○○ ← ▼</td>
<td>▼ ← ▼</td>
</tr>
</tbody>
</table>

**A2(German)**

- Used in Australia, Malaysia etc.

<table>
<thead>
<tr>
<th>Type of broadcast</th>
<th>Regular broadcast (Standard Audio)</th>
<th>BILINGUAL or DUAL MONO: MAIN I / SUB II</th>
<th>STEREO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode Indicator</td>
<td>No Indicator ← ▼</td>
<td>I ← II</td>
<td>○○ ← ▼</td>
</tr>
</tbody>
</table>

**Note**

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

---

**Data format for Card browsing**

- **Photo**: Still images recorded with digital still cameras compatible with JPEG files of DCF* and EXIF standards
- **Data format**: Baseline JPEG (Sub-sampling 4:4:4, 4:2:2 or 4:2:0)
- **Max. number of files**: 9,999
- **Image resolution**: 160 × 120 to 10,000,000
- **Transfer rate**: 1.6 MB/Sec

---

**Note**

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

---

**Stereo / Bilingual Sound Selection (Analogue mode)**

When you receive the stereo / bilingual sound system, sound output modes can be selected by "MPX" in the Sound Menu (p. 20).

---

**Data format**

- **Photo**: Still images recorded with digital still cameras compatible with JPEG files of DCF* and EXIF standards
- **Data format**: Baseline JPEG (Sub-sampling 4:4:4, 4:2:2 or 4:2:0)
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- **Data format**: Baseline JPEG (Sub-sampling 4:4:4, 4:2:2 or 4:2:0)
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- **Image resolution**: 160 × 120 to 10,000,000
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- **Image resolution**: 160 × 120 to 10,000,000
- **Transfer rate**: 1.6 MB/Sec

---

**Note**

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- Partly degraded files might be displayed at a reduced resolution.
- Only "*.JPG" extension can be read by this TV.
- The folder and file names may be different depending on the digital camera used.
- Do not use two-byte characters or other special codes.
- The card may become unusable with this TV if the file or folder names are changed.
Technical Information

PC connection

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

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

Note

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

<table>
<thead>
<tr>
<th>Aspect</th>
<th>4:3</th>
<th>1440 × 1080 pixels</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:9</td>
<td>1920 × 1080 pixels</td>
<td></td>
</tr>
</tbody>
</table>

- 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>7</td>
<td>GND (Ground)</td>
</tr>
<tr>
<td>2</td>
<td>G</td>
<td>7</td>
<td>GND (Ground)</td>
<td>8</td>
<td>GND (Ground)</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
<td>8</td>
<td>GND (Ground)</td>
<td>9</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></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>GND (Ground)</td>
<td>10</td>
<td>GND (Ground)</td>
<td>11</td>
<td>NC (not connected)</td>
</tr>
</tbody>
</table>

Input signal that can be displayed

COMPONENT (Y, Pb/Cb, Pr/CR), HDMI

* Mark: Applicable input signal

<table>
<thead>
<tr>
<th>Signal name</th>
<th>COMPONENT</th>
<th>HDMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>480i (60 Hz)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>480p (60 Hz)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>576i (50 Hz)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>576p (50 Hz)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>720p (60 Hz)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>720p (50 Hz)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>1,080i (60 Hz)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>1,080i (60 Hz)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>1,080p (50 Hz)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>1,080p (24 Hz)</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

PC (D-sub 15P)

<table>
<thead>
<tr>
<th>Signal name</th>
<th>Horizontal frequency (kHz)</th>
<th>Vertical frequency (Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>640 × 400 @70 Hz</td>
<td>31.47</td>
<td>70.07</td>
</tr>
<tr>
<td>640 × 480 @60 Hz</td>
<td>31.47</td>
<td>59.94</td>
</tr>
<tr>
<td>640 × 480 @75 Hz</td>
<td>37.50</td>
<td>75.00</td>
</tr>
<tr>
<td>800 × 600 @60 Hz</td>
<td>37.88</td>
<td>60.32</td>
</tr>
<tr>
<td>800 × 600 @75 Hz</td>
<td>46.88</td>
<td>75.00</td>
</tr>
<tr>
<td>800 × 600 @85 Hz</td>
<td>53.67</td>
<td>85.06</td>
</tr>
<tr>
<td>952 × 480 @60 Hz</td>
<td>31.44</td>
<td>59.89</td>
</tr>
<tr>
<td>1,024 × 768 @60 Hz</td>
<td>48.36</td>
<td>60.00</td>
</tr>
<tr>
<td>1,024 × 768 @70 Hz</td>
<td>56.48</td>
<td>70.07</td>
</tr>
<tr>
<td>1,024 × 768 @75 Hz</td>
<td>60.02</td>
<td>75.03</td>
</tr>
<tr>
<td>1,024 × 768 @85 Hz</td>
<td>68.68</td>
<td>85.00</td>
</tr>
<tr>
<td>1,280 × 1,024 @60 Hz</td>
<td>63.98</td>
<td>60.02</td>
</tr>
<tr>
<td>1,366 × 768 @60 Hz</td>
<td>48.39</td>
<td>60.04</td>
</tr>
<tr>
<td>Macintosh13&quot; (640 × 480)</td>
<td>35.00</td>
<td>66.67</td>
</tr>
<tr>
<td>Macintosh16&quot; (832 × 624)</td>
<td>49.73</td>
<td>74.55</td>
</tr>
<tr>
<td>Macintosh21&quot; (1,152 × 870)</td>
<td>68.68</td>
<td>75.08</td>
</tr>
</tbody>
</table>

Note

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

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

White spots or shadow images (noise)

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

Neither image nor sound is produced

- Is the TV in “AV mode”?
- Is the mains lead plugged into the socket outlet?
- Is the TV turned On?
- Check Picture Menu (p. 20) and volume.

An error message appears

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

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.

Pixel Statement

- An image on a LCD or Plasma TV screen is created by many small groups of dots known as pixels (which is similar to the image in a newspaper). It also naturally follows that higher panel resolutions contain more pixels. To create a colour image, each pixel consists of three tiny coloured dots (known as sub-pixels), one each of red, green and blue. Each one of these dots is precisely controlled by the electronics of the TV to produce the picture.
- Whilst Panasonic maintains the highest standards in manufacturing technology and processes in the construction of these panels, there are a number of allowable pixel/sub-pixel failures that still allow the panel to be defined as a good panel. It is not possible to guarantee absolutely no pixel loss.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chaotic image, noisy</td>
<td>Set “P-NR” in the Picture Menu (to remove noise). (p. 20) &lt;br&gt; • Check nearby electrical products (car, motorcycle, fluorescent lamp).</td>
</tr>
<tr>
<td>No image can be displayed</td>
<td>Is “Colour” or “Contrast” in the Picture Menu set to the minimum? (p. 20)</td>
</tr>
<tr>
<td>Blurry or distorted image (no sound or low volume)</td>
<td>Reset programme. (p. 27)</td>
</tr>
<tr>
<td>Unusual image is displayed</td>
<td>Turn off the TV with Mains power On / Off switch, then turn it on again.</td>
</tr>
<tr>
<td>“Shop” appears on screen at switch on</td>
<td>“Shop” was selected in “Auto Tuning” (p. 9).&lt;br&gt; Reset settings in “Shipping Condition” (p. 28), then select “Home” in “Auto Tuning” (p. 9).</td>
</tr>
<tr>
<td>No sound is produced</td>
<td>Is “Sound mute” active? (p. 8) &lt;br&gt; Is the volume set to the minimum?</td>
</tr>
<tr>
<td>Sound level is low or sound is distorted</td>
<td>Sound signal reception may be deteriorated. &lt;br&gt; Set “MPX” (p. 20) in the Sound Menu to “Mono”.</td>
</tr>
</tbody>
</table>
## FAQs

<table>
<thead>
<tr>
<th>Problem</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sound is unusual</strong></td>
<td>• Set the sound setting of the connected equipment to “2ch L.PCM”.&lt;br&gt;• Check the “HDMI1 / 3 Input” setting in the Sound Menu. (p. 20)&lt;br&gt;• If digital sound connection has a problem, select analogue sound connection. (p. 31)</td>
</tr>
<tr>
<td><strong>Pictures from external equipment are unusual when the equipment is connected via HDMI</strong></td>
<td>• Is the HDMI cable connected properly? (p. 38)&lt;br&gt;• Turn Off the TV and equipment, then turn them On again.&lt;br&gt;• Check an input signal from the equipment. (p. 42)&lt;br&gt;• Use an equipment compliant with EIA/CEA-861/861B.</td>
</tr>
<tr>
<td><strong>Aerial connection when using DTV and VCR / DVD Recorder</strong></td>
<td>• 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.</td>
</tr>
<tr>
<td><strong>After DVB Auto Tuning only some or no DVB services are found</strong></td>
<td>• Check to ensure your area is covered by DVB transmissions.&lt;br&gt;• 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.&lt;br&gt;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.&lt;br&gt;• 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.</td>
</tr>
<tr>
<td><strong>Picture regularly breaks up on some programmes, or “No Signal” message</strong></td>
<td>• Check “Signal Display”. (p. 27)&lt;br&gt;• If “Signal Quality” or “Signal Strength” are displayed in red or constantly changing, check aerial.&lt;br&gt;• If problem persists consult your local TV aerial installer.&lt;br&gt;• 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.&lt;br&gt;• 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.&lt;br&gt;• When “No Signal” message is displayed check TV aerial connection.&lt;br&gt;• 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. 27). If problem persists consult your local TV aerial installer.</td>
</tr>
<tr>
<td><strong>Picture very infrequently breaks up on some or all programmes</strong></td>
<td>• 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.&lt;br&gt;• Impulse noise interference from an infrequently used electrical appliance, or a passing vehicle or lawn mower with a “noisy” ignition system.</td>
</tr>
</tbody>
</table>
FAQs, etc.

Licence

- DVB is a trademark of the DVB Digital Video Broadcasting Project (1991 to 1996).
- VGA is a trademark of International Business Machines Corporation.
- Macintosh is a registered trademark of Apple Inc., USA.
- S-VGA is a registered trademark of the Video Electronics Standard Association. Even if no special notation has been made of company or product trademarks, these trademarks have been fully respected.
- SDHC Logo is a trademark.
- HDMI, the HDMI Logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- HDAVI Control™ is a trademark of Matsushita Electric Industrial Co., Ltd.
- Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.
## Specifications

<table>
<thead>
<tr>
<th>Power Source</th>
<th>AC 220-240 V, 50 / 60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Consumption</td>
<td>Average use 191 W</td>
</tr>
<tr>
<td>Standby condition</td>
<td>0.3 W</td>
</tr>
<tr>
<td>Display Size</td>
<td>Aspect Ratio 16:9</td>
</tr>
<tr>
<td>Visible screen size</td>
<td>94 cm (diagonal)</td>
</tr>
<tr>
<td></td>
<td>819 mm (W) × 460 mm (H)</td>
</tr>
<tr>
<td>Number of pixels</td>
<td>2,073,600 (1,920 (W) × 1,080 (H))</td>
</tr>
<tr>
<td>Speaker</td>
<td>160 mm × 42 mm × 2 pcs, 8 Ω</td>
</tr>
<tr>
<td>Audio Output</td>
<td>20 W (10 W + 10 W), 10% THD</td>
</tr>
<tr>
<td>Headphones</td>
<td>M3 (3.5 mm) stereo mini Jack × 1</td>
</tr>
<tr>
<td>PC signals</td>
<td>VGA, SVGA, XGA, SXGA</td>
</tr>
<tr>
<td>Receiving Systems / Band name</td>
<td>PAL B/G Reception of Off air broadcasts</td>
</tr>
<tr>
<td></td>
<td>DVB-T 7 MHz VHF / UHF (Australia) free-to-air TV broadcast reception</td>
</tr>
<tr>
<td></td>
<td>PAL 60 Hz Playback of NTSC tape from some PAL Video recorders (VCR)</td>
</tr>
<tr>
<td></td>
<td>M/NTSC Playback from M. NTSC Video recorders (VCR)</td>
</tr>
<tr>
<td>NTSC Playback from NTSC Video recorders (VCR)</td>
<td></td>
</tr>
<tr>
<td>Aerial - Rear</td>
<td>Standard Belling &amp; Lee connector</td>
</tr>
<tr>
<td>Operating Conditions</td>
<td>Temperature: 0 °C - 35 °C</td>
</tr>
<tr>
<td></td>
<td>Humidity: 20 % - 80 % RH (non-condensing)</td>
</tr>
<tr>
<td>Connection Terminals</td>
<td>AV1 Input</td>
</tr>
<tr>
<td></td>
<td>AUDIO L - R RCA PIN Type × 2 0.5 V[ms]</td>
</tr>
<tr>
<td></td>
<td>VIDEO RCA PIN Type × 1 1.0 V[p-p] (75 Ω)</td>
</tr>
<tr>
<td></td>
<td>COMPONENT Y 1.0 V[p-p] (including synchronization)</td>
</tr>
<tr>
<td></td>
<td>Ps/Cs, Ps/CR ±0.35 V[p-p]</td>
</tr>
<tr>
<td></td>
<td>AV2 Input</td>
</tr>
<tr>
<td></td>
<td>AUDIO L - R RCA PIN Type × 2 0.5 V[ms]</td>
</tr>
<tr>
<td></td>
<td>VIDEO RCA PIN Type × 1 1.0 V[p-p] (75 Ω)</td>
</tr>
<tr>
<td></td>
<td>COMPONENT Y 1.0 V[p-p] (including synchronization)</td>
</tr>
<tr>
<td></td>
<td>Ps/Cs, Ps/CR ±0.35 V[p-p]</td>
</tr>
<tr>
<td></td>
<td>AV3 Input</td>
</tr>
<tr>
<td></td>
<td>AUDIO L - R RCA PIN Type × 2 0.5 V[ms]</td>
</tr>
<tr>
<td></td>
<td>VIDEO RCA PIN Type × 1 1.0 V[p-p] (75 Ω)</td>
</tr>
<tr>
<td></td>
<td>S VIDEO Mini DIN 4-pin Y:1.0 V[p-p] (75 Ω) C:0.286 V[p-p] (75 Ω)</td>
</tr>
<tr>
<td></td>
<td>AV4 Input</td>
</tr>
<tr>
<td></td>
<td>AUDIO L - R RCA PIN Type × 2 0.5 V[ms]</td>
</tr>
<tr>
<td></td>
<td>VIDEO RCA PIN Type × 1 1.0 V[p-p] (75 Ω)</td>
</tr>
<tr>
<td></td>
<td>S VIDEO Mini DIN 4-pin Y:1.0 V[p-p] (75 Ω) C:0.286 V[p-p] (75 Ω)</td>
</tr>
<tr>
<td>Monitor Output</td>
<td>AUDIO L - R RCA PIN Type × 2 0.5 V[ms] (high impedance)</td>
</tr>
<tr>
<td></td>
<td>VIDEO RCA PIN Type × 1 1.0 V[p-p] (75 Ω)</td>
</tr>
<tr>
<td>Others</td>
<td>HDMI1 - 3 Input TYPE A Connectors This TV supports “HDAVI Control 3” function.</td>
</tr>
<tr>
<td></td>
<td>PC Input HIGH-DENSITY D-SUB 15PIN R, G, B/0.7 V[p-p] (75 Ω)</td>
</tr>
<tr>
<td></td>
<td>HD, VD/TTTL Level 2.0 - 5.0 V[p-p] (high impedance)</td>
</tr>
<tr>
<td></td>
<td>DIGITAL AUDIO OUT PCM / Dolby Digital, Fiber optic</td>
</tr>
<tr>
<td></td>
<td>Card slot SD CARD slot × 1</td>
</tr>
<tr>
<td>Dimensions ( W × H × D )</td>
<td>933 mm × 650 mm × 295 mm (With TV Stand)</td>
</tr>
<tr>
<td></td>
<td>933 mm × 608 mm × 105 mm (TV only)</td>
</tr>
<tr>
<td>Mass</td>
<td>23.0 kg Net</td>
</tr>
</tbody>
</table>

### Note

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

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) Video or Audio Tapes
   (b) Video or Audio Heads and Stylii resulting from wear and tear in normal use
   (c) Shaver Heads or Cutters
   (d) Cabinet Parts
   (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

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 sizes greater than 66cm); Rear Projection TV’s; Plasma/LCD televisions / displays (screen size greater than 103 cm)
     (b) Convection/Combination Microwave Ovens
     (c) Whiteboard (except portable type)

6. 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 Authorised Service Centres are located in major metropolitan areas and most regional centres of Australia, however, coverage will vary dependant on product. For advice on exact Authorised Service Centre locations for your product, please telephone our Customer Care Centre on 132600 or visit our website and use the Service Centre Locator.

Unless otherwise specified to the consumer the benefits conferred by this express warranty are additional to all other conditions, warranties, guarantees, rights and remedies expressed or implied by the Trade Practices Act 1974 and similar consumer protection provisions contained in legislation of the States and Territories and all other obligations and liabilities on the part of the manufacturer or supplier and nothing contained herein shall restrict or modify such rights, remedies, obligations or liabilities. November 2005

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

PRO-031-F01 Issue: 3.0

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.

Model Number

Serial Number