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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Safety Precautions

Warning

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

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

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

Cleaning an energized TV may cause electrical shock.

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

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

Allow sufficient space around the TV for radiated heat

Minimum distance

- When using the pedestal, keep the space between the bottom of the TV and the 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.

Notes

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

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 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)
- Operating Instructions with Warranty statement

Installing remote’s batteries

1. Pull open
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.

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.

How to remove the TV Stand

- Remove four screws.

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.

Holes for wall-hanging bracket installation

Please note the holes are off-centred to the left by 50 mm, as shown on the diagram.
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

Example 2
Connecting DVD Recorder / 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.
Identifying Controls

- **Remote control signal receiver**
- **C.A.T.S. (Contrast Automatic Tracking System) sensor**
  - Senses brightness to adjust picture quality in “Eco” mode in Picture Menu (p. 20)
- **Power LED**
  - Standby: red
  - On: green
  - When using the remote control, indicates the TV has received a command.
- **Standby On / Off switch**
  - Switches TV On or Off standby
- **Guide**
  - Displays TV Guide
- **OK**
  - Confirms selections and choices
  - Press after selecting programme positions to quickly change programme (DVB) (p. 10)
- **Main Menu**
  - Press to access VIERA Link, Picture, Sound and Setup Menus
- **Aspect**
  - Changes aspect ratio from Aspect Selection list
  - Also possible by pressing this button repeatedly until you reach the desired aspect
- **VIERA Link Menu**
  - Press to access VIERA Link Menu directly
- **Numeric buttons**
  - Changes programme and teletext pages
  - When in Standby mode, switches TV On
- **Programme Information**
  - Displays programme information
- **Programme Up / Down**
  - Selects programme in sequence
- **Teletext**
  - Switches to teletext mode
- **Subtitles**
  - Displays Subtitles
- **VCR / DVD Panasonic equipment operations** (p. 15)
- **Function select**
  - Volume / Contrast / Brightness / Colour / Sharpness / Tint (NTSC mode) / Bass / Treble / Balance / Auto Tuning (p. 26)
- **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)
- **AV4 terminals** (p. 38)
- **Headphones jack** (p. 38)

---

### Diagram

- **SD Card slot** (p. 33)
- **Swing door to open**
- **Remote control**
- **Standby On / Off switch**
- **Guide**
- **OK**
- **Main Menu**
- **Aspect**
- **VIERA Link Menu**
- **Numeric buttons**
- **Programme Information**
- **Programme Up / Down**
- **Teletext**
- **Subtitles**
- **VCR / DVD Panasonic equipment operations**
- **Function select**
- **Input mode selection**
- **Exit**
- **Cursor buttons**
- **Return**
- **Coloured buttons**
- **SD Card**
- **Option Menu**
- **Sound Mute**
- **Volume Up / Down**
- **Hold**
- **Index**

---

### Examples

- **Cursor buttons**
  - Makes selections and adjustments
- **Standby On / Off switch**
  - Switches TV On or Off standby
- **Guide**
  - Displays TV Guide
- **OK**
  - Confirms selections and choices
  - Press after selecting programme positions to quickly change programme (DVB) (p. 10)
- **Main Menu**
  - Press to access VIERA Link, Picture, Sound and Setup Menus
- **Aspect**
  - Changes aspect ratio from Aspect Selection list
  - Also possible by pressing this button repeatedly until you reach the desired aspect
- **VIERA Link Menu**
  - Press to access VIERA Link Menu directly
- **Numeric buttons**
  - Changes programme and teletext pages
  - When in Standby mode, switches TV On
- **Programme Information**
  - Displays programme information
- **Programme Up / Down**
  - Selects programme in sequence
- **Teletext**
  - Switches to teletext mode
- **Subtitles**
  - Displays Subtitles
- **VCR / DVD Panasonic equipment operations** (p. 15)
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
   - Auto Tuning will start to search for TV services and store them in the numbered order as specified by the broadcasters.

3. Start Auto Tuning
   - “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)

4. Select the picture setting
   - 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.

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

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

■ How to use remote control

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

■ ON SCREEN HELP Instructions box

(example: Sound Menu)

On-screen operation guide will help you.
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 front 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⇒ 9 (in a short time)
   - If one or two-digit programme number quickly changes the programme
   - To select from the Programme List
     ⇒ OK
   - Possible to confirm the programme name before selecting programmes.
   - Possible to set display timeout in “Banner Display Timeout” (p. 21).

Other useful functions

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

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

Display Information banner
- Also appears when changing a 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) (DVB mode)
- To watch the programme listed in the banner
- To download new software to TV (p. 23)
- To hide
- To set display timeout “Banner Display Timeout” (p. 21)

Check or change the current programme status instantly

MPX (Analogue mode) ➤ Sound Menu (p. 20)

Volume Correction Adjusts volume of individual programme or input mode

Audio Selection (DVB mode) ➤ Sound Menu (p. 20)
Allows you to select between alternative language for sound tracks (if available)

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

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

• To change the mode using the ASPECT button only

ASPECT (Press repeatedly until you reach the desired mode)

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

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

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

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

4:3 Full
Displays a “4:3” image enlarged horizontally to fit the screen.
• Only available in DVB mode or HD signal

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)

### Example:

<table>
<thead>
<tr>
<th>Current date and time</th>
<th>TV Guide date</th>
<th>TV Guide time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed, 24.10.2007</td>
<td>3:07 am</td>
<td>3:00 am-3:30 am</td>
<td>DIY SOS: We open in the Battersbys</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3:30 am-4:00 am</td>
<td>Eastender</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4:00 am-4:30 am</td>
<td>DIY SOS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4:30 am-5:00 am</td>
<td>Eastender</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5:00 am-5:30 am</td>
<td>DIY SOS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5:30 am-6:00 am</td>
<td>Eastender</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6:00 am-6:30 am</td>
<td>DIY SOS</td>
</tr>
</tbody>
</table>

### 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

1. **select**
2. **watch**

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

1. **select type**
2. **view**

### To view a programme list of the selected favourites list

1. **select a favourites list**
2. **view**

To list favourite programmes

p. 25

### 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.

Display the Input select menu

Select the input mode connected to the equipment

- You can also select the input using the AV button on the remote control or the side panel of the TV.
- Press the button repeatedly until the desired input is selected.
- You can label or skip each input modes  “Input Labels” (p. 29)

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

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

<table>
<thead>
<tr>
<th>“VCR” position</th>
<th>“DVD” position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>Code</td>
</tr>
<tr>
<td>VCR</td>
<td>10 (default)</td>
</tr>
<tr>
<td>DVD</td>
<td>11</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
1. Displays Index (content varies depending on the broadcasters)

Sub page number
Current page number
Time / date
Colour bar

Select the page (up to page 899)

1. To adjust contrast ➔ (Press three times)
2. To return to TV ➔ or

Using teletext conveniently

Reveal hidden data
- Reveal hidden words e.g. quiz page answers

Re-store

FULL / TOP / BOTTOM
- Normal (FULL)
- Expand the TOP half
- Expand the BOTTOM half

Re-hide ➔ R

P100
Broadcast
(Expand the TOP half)
(Expand the BOTTOM half)
### Hold

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

<table>
<thead>
<tr>
<th>HOLD</th>
<th>HOLD</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOLD</td>
<td>To resume HOLD</td>
</tr>
</tbody>
</table>

### Index

**Return to the main index page**

<table>
<thead>
<tr>
<th>INDEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDEX</td>
</tr>
</tbody>
</table>

### Call up sub-titles

**Display sub-titles**

<table>
<thead>
<tr>
<th>STTL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call up P801 (subtitle page) if available.</td>
</tr>
<tr>
<td>If you press this button during P801 is displayed, teletext mode will be cancelled and return to TV.</td>
</tr>
</tbody>
</table>

### View in multi window

**Watch TV and Teletext in two windows at once**

- 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)

<table>
<thead>
<tr>
<th>P100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broadcast</td>
</tr>
<tr>
<td>101</td>
</tr>
</tbody>
</table>

- As page is displayed, corresponding colour button OK press and hold.

- The number changes to white.

- To change stored pages
  - Enter new page number
  - Colour button you want to change
  - press and hold

### View sub page

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

| <04 | 03 04 05 |
|------|
| Appears at top of the screen |

- To view specific sub page
  - Enter the 4-digit number example: P6
  - 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

**Watch the TV picture while searching for a teletext page**

Teletext automatically updates itself when new information becomes available.

- Changes to TV screen temporarily

<table>
<thead>
<tr>
<th>MENU</th>
<th>Y</th>
<th>P100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appears when updating is completed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>View the updated page</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- (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.

1. **Display the menu**
   - Use the MENU button to display the functions that can be set (varies according to the input signal).

2. **Select the menu**
   - Access the Viera Link Main Menu or Picture, Sound, or Setup under the Video menu.
   - (Example: Picture Menu)

3. **Select the item**
   - Select an item from the menu, such as Viewing Mode, Contrast, Brightness, etc.
   - (Example: Picture Menu)

4. **Adjust or select**
   - Change the settings to your preference.
   - Store or access the settings as required.
   - (Required by some functions)

- **Choose from among alternatives**
  - Number and positions of alternatives
  - Colour Balance: Normal
  - Changed

- **Adjust using the slide bar**
  - Sharpness: 50
  - Moved

- **Go to the next screen**
  - Tuning Menu: Access
  - Displays the next screen

- **Enter characters by free input menu**
  - You can enter names or numbers freely for some items.
  - User input: Name

- **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)
### VIERA Main Menu

- **VIERA Link**
- **Picture**
- **Sound**
- **Setup**

### How to Use Menu Functions

- **Overview**
- **VIERA Link Menu**
  - Pause Live TV
  - Direct TV Rec
  - VIERA Link Control
  - Speaker Selection

- **Picture Menu**
  - Viewing Mode
  - Contrast
  - Brightness
  - Colour
  - Sharpness
  - Tint
  - Colour Balance
  - Colour Management
  - P-NR
  - SD/HD

- **Sound Menu**
  - Mode
  - Bass
  - Treble
  - Balance
  - Headphone Volume
  - Surround
  - Volume Correction
  - Speaker Distance to Wall
  - MPX

- **Setup Menu**
  - DVB Favourites Edit
  - DVB Service List
  - Analogue Service List
  - Tuning Menu
    - Auto Tuning
    - DVB Manual Tuning
    - Analogue Manual Tuning
  - Off Timer
  - Teletext
  - Shipping Condition
  - System Update
  - Picture Overview
  - Input Labels

- **System Information**
  - Access

- **Software Licence**
  - Access

- **System Update**
  - Access

- **Banner Display Timeout**
  - 3 seconds

- **VIERA Link Settings**
  - Power on Link
  - Power off Link

- **DVB Signal Display**
  - Access

- **DVB Favourites Edit**
  - Access

- **Add New DVB Services**
  - Access

- **New Service Message**
  - Off

- **System Update**
  - Access

- **VIERA Link Control**
  - Access

- **Power on Link**
  - On

- **Power off Link**
  - Off

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

- Depending on the received signals, available items are varied.
### How to Use Menu Functions

#### Menu list

<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments / Configurations (alternatives)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pause Live TV</strong></td>
<td></td>
<td>Controls the connected equipment with VIERA Link function, and enables various convenient recording, playback, etc. (p. 34 - 37)</td>
</tr>
<tr>
<td><strong>Direct TV Rec</strong></td>
<td></td>
<td>• You can also access VIERA Link Menu directly using the VIERA Link button on the remote control.</td>
</tr>
<tr>
<td><strong>VIERA Link Control</strong></td>
<td></td>
<td><em>VIERA Link</em></td>
</tr>
<tr>
<td><strong>Speaker Selection</strong></td>
<td></td>
<td>Basic picture mode <em>(Dynamic / Normal / Cinema / Eco)</em></td>
</tr>
<tr>
<td><strong>Viewing Mode</strong></td>
<td></td>
<td>• Dynamic: Provides enhanced picture contrast and sharpness when viewing in a bright room</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Normal: Recommended for viewing under normal ambient room lighting conditions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cinema: For watching movies in a darkened room producing a cinema-like picture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Eco: Adjusts picture settings automatically dependent on ambient lighting conditions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Set for each input signal</td>
</tr>
<tr>
<td><strong>Contrast, Brightness,</strong></td>
<td></td>
<td>Increases or decreases the levels of these options according to your personal preference</td>
</tr>
<tr>
<td><strong>Colour, Sharpness</strong></td>
<td></td>
<td><em>Tint</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>With an NTSC signal source connected to the TV, the picture hue can be adjusted to suit your taste</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• For NTSC or Component / HDMI input signal reception only</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Colour Balance</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Allows you to set the overall colour tone of the picture <em>(Cool / Normal / Warm)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Colour Management</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Automatically adjusts colours to vivid ones <em>(Off / On)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Not valid on PC signal</td>
</tr>
<tr>
<td><strong>P-NR</strong></td>
<td></td>
<td>Picture Noise Reduction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Automatically reduces unwanted picture noise and flicker noise in the contoured parts of a picture <em>(Off / Min / Mid / Max)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Not valid on PC signal</td>
</tr>
<tr>
<td><strong>3D-COMB</strong></td>
<td></td>
<td>Occasionally, whilst viewing still or slow moving pictures, colour patterning may be seen</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Set to “On” to display sharper and more accurate colours <em>(Off / On)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• For PAL or NTSC signal reception only</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Not valid on S-Video, Component, PC, HDMI and SD Card</td>
</tr>
<tr>
<td><strong>Reset Picture Defaults</strong></td>
<td></td>
<td>Press the OK button to reset Viewing Mode on all inputs to default settings</td>
</tr>
<tr>
<td><strong>Mode</strong></td>
<td></td>
<td>Basic sound mode <em>(Music / Speech)</em></td>
</tr>
<tr>
<td><strong>Bass</strong></td>
<td></td>
<td>Increases or decreases level to enhance or minimise lower, deeper sound output</td>
</tr>
<tr>
<td><strong>Treble</strong></td>
<td></td>
<td>Increases or decreases level to enhance or minimise sharper, higher sound output</td>
</tr>
<tr>
<td><strong>Balance</strong></td>
<td></td>
<td>Adjusts volume level of right and left speakers</td>
</tr>
<tr>
<td><strong>Headphone Volume</strong></td>
<td></td>
<td>Adjusts the volume of the headphones</td>
</tr>
<tr>
<td><strong>Surround</strong></td>
<td></td>
<td>Surround sound settings <em>(Off / On)</em></td>
</tr>
<tr>
<td><strong>Volume Correction</strong></td>
<td></td>
<td>Adjusts volume of individual programme or input mode</td>
</tr>
<tr>
<td><strong>Speaker Distance to Wall</strong></td>
<td></td>
<td>Adjusts the low frequency sound <em>(Over 30cm / Up to 30cm)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If the back space between the TV and wall is over 30 cm, “Over 30cm” is recommended.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If the back space between the TV and wall is within 30 cm, “Up to 30cm” is recommended.</td>
</tr>
<tr>
<td><strong>MPX</strong></td>
<td></td>
<td>Select stereo / monaural <em>(Mono / Stereo)</em> <em>(p. 41)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Normally: Stereo</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Stereo signal cannot be received: Mono</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• M1 / M2: Available while mono signal is transmitted</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Analogue mode only</td>
</tr>
<tr>
<td><strong>DVB Audio Preference</strong></td>
<td></td>
<td>Selects the initial setting for Audio tracks <em>(Dolby Digital / MPEG)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MPEG: An audio compression method that compresses audio to small size without any considerable loss of audio quality.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• DVB mode only</td>
</tr>
<tr>
<td><strong>SPDIF Selection</strong></td>
<td></td>
<td>Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT terminal <em>(Auto / PCM)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Auto: Dolby Digital is output as Dolby Digital Bitstream. MPEG is output as PCM.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PCM: Dolby Digital is output as PCM. MPEG is output as PCM.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• DVB mode only</td>
</tr>
<tr>
<td><strong>MPEG Optical Level</strong></td>
<td></td>
<td>You can adjust the audio level of MPEG output from DIGITAL AUDIO OUT terminal as the initial setting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 0dB to -12dB in -2dB reductions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• DVB mode only</td>
</tr>
<tr>
<td><strong>Audio Selection</strong></td>
<td></td>
<td>Selects the preferred language for DVB multi audio (depending on the broadcaster)</td>
</tr>
<tr>
<td><strong>HDMI1 Input</strong></td>
<td></td>
<td>Select to fit the input signal <em>(Auto / Digital / Analogue)</em> <em>(p. 31)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Auto: Automatic detection of digital or analogue sound source</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Digital: HDMI cable connection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Analogue: HDMI-DVI adapter cable connection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• HDMI input mode only</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• HDMI2 terminal is for digital signal only</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• No setting for HDMI2 available</td>
</tr>
<tr>
<td><strong>Reset Sound Defaults</strong></td>
<td></td>
<td>Press the OK button to reset the present Sound Mode to the default settings</td>
</tr>
</tbody>
</table>

---

20
## Menu list

<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments / Configurations (alternatives)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setup</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>Tuning Menu</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)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• On : Enlarged the image to hide the edge of the image.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Off : Displayed the image in the original size.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Set to “On” if noise is generated on the edge of the screen.</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>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</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 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 (Auto / Off / +1/2 Hr / +1 Hr) (p. 23)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 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

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>Western Australia</td>
<td>+8:00</td>
<td>+9:00</td>
</tr>
<tr>
<td>Northern Territory</td>
<td></td>
<td>+8:00</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.

Update TV’s software system
System Update

Adjust the standard time
Region Select

Adjust for Summer Time
Daylight Saving Time

Download may take for about 20 mins.
Editing Programmes

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

1. 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
   - Press the MENU button.

3. Select “Setup”
   - Press the UP/DOWN button.
   - Press the RIGHT button.
   - Press the OK button.

4. Select “DVB Favourites Edit”, “DVB Service List” or “Analogue Service List”
   - Press the UP/DOWN button.
   - Press the OK button.

5. Set
   - Press the UP/DOWN button.
   - Press the RIGHT button.
   - Press the OK button.

To return to TV

SETUP
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 display another List ➔ B

● To add all programmes to the list ➔ Y

A programme is added

**To edit List**

Select the field of List to edit and:

● To name the List ➔ R ➔ Select the character ➔ OK ➔ RETURN

● To move the programme ➔ G ➔ Select the new position ➔ Confirm ➔ G ➔ OK

● To delete the programme ➔ Y ➔ OK

● To delete all programmes ➔ B ➔ OK

**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.

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

● “DVB Service List” is listed all tuned DVB programmes in DVB mode.

● “Analogue Service List” is listed all tuned Analogue programmes in Analogue mode.

**Select a service and add / delete**

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

● This function is available in Analogue mode.

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

1. **Select the programme to edit**

2. **Edit**

   ● To change the name displayed when selecting programmes

   Select “Rename” ➔ Set characters ➔ select ➔ set

   (maximum: five characters)

   ● To move the programme position

   Select new position ➔ Store

   ➔ Y

   ➔ select

   ➔ Y
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**

3. **Select “Setup”**

4. **Select “Tuning Menu”**

5. **Select a function**

6. **Set**

   For Auto Tuning, using the buttons on the front of the TV (p. 8)
   1. Press repeatedly until “Auto Tuning” appears
   2. Access “Auto Tuning”
   3. Start “Auto Tuning”
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**

- All 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”

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.

**Add DVB programme automatically**

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

**Add New DVB Services**

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

**Set Analogue programme manually**

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

**Set Analogue programme manually**

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

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

**Display a notification message**

- 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 MENU

2. Select “Setup”
   - press OK
   - select VIERA Main Menu
   - select Picture
   - select Sound
   - select Setup

3. Select “Shipping Condition”
   - press OK
   - select Access

4. Set
   - press OK

① Check the message and initialise

Shipping Condition
Analogue & DVB tuning data will be erased
Are you sure?
Are you sure?

Confirm
EXIT
RETURN

② Follow the on-screen instructions
   - “Auto Tuning” will automatically start when Mains power On / Off switch is next turned On. (p. 9)

③ 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”
   - Select “Input Labels”

2. To select the 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)

Store
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”

Corresponding signals (p. 42)
If “H-freq.” or “V-freq.” is shown in red, the signals may not be supported.
PC Audio input is via AV2 Audio connection. (p. 39)

- 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>
</table>
| Picture | Advanced PC Settings | R-Gain: Adjusts the white balance for red areas  
G-Gain: Adjusts the white balance for green areas  
B-Gain: Adjusts the white balance for blue areas  
Gamma: (2.0 / 2.2 / 2.5)  
Reset PC Settings: Press the OK button to reset to the default Picture settings                                                                                                                                                      |
|         | 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 Input” menu screen. (p. 20)
- Applicable audio signal sampling frequencies (2ch L.PCM): 48 kHz, 44.1 kHz, 32 kHz
- HDMI2 terminal is for digital audio signal only.
- Use with a PC is not guaranteed. Only HDMI video formats in page 42 HDMI table are applicable.
- If the connected equipment has an aspect adjustment function, set the aspect ratio to “16:9”.
- These HDMI connectors are “type A”.
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- An equipment having no digital output terminal may be connected to the input terminal of either “COMPONENT”, “S-VIDEO”, or “VIDEO” to receive analogue signals.
- The HDMI input terminal can be used with only the following image signals: 480i, 480p, 576i, 576p, 720p, 1080i and 1080p. Match the output setting of the digital equipment.
- For details of the applicable HDMI signals, see p. 42.

#### 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.

<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setup</td>
<td>H-pos</td>
<td>Adjusts horizontal position</td>
</tr>
<tr>
<td>DVI Position Settings</td>
<td>V-pos</td>
<td>Adjusts vertical position</td>
</tr>
<tr>
<td>Reset DVI Position Settings</td>
<td>Press the OK button to reset to the default Setup settings</td>
<td></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)
   - All photos in SD Card are displayed by thumbnail.

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.

To sort by date or month recorded
(Sort by Month / Sort by Date)

- Display the thumbnail grouped by the same date or the same month
- Select the group to be viewed

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

- **Start Slide show** (operate in step 3 or 4)
  1. Select the photo for the first view
  2. Start Slide show

  - To pause ➔
  - To return to Single view ➔

- **Slide show settings** (operate in step 3 or 4)
  1. Display the menu
  2. Select “Viewing Setup”
  3. Select the items and set

  - **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

<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. (For the applicable formats and data, see p. 41.)</td>
</tr>
<tr>
<td>Is SD Card in?</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</td>
<td>➔ Maximum valid number of photos is 9,999.</td>
</tr>
</tbody>
</table>
**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**
- **Power off link**
- **Speaker control**

- **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.)

### Connections

Read the manual of the equipment, too.

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

### 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” (p. 18-19, 21)
- Set up the TV ⇒ After connection, turn the equipment on and then switch the TV on. Select the input mode to HDMI1 or HDMI2 (p. 14), 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>Easy playback</th>
<th>Power on link</th>
<th>Power off link</th>
<th>Speaker control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic Input switching - When the connected equipment is operated, input mode is switched automatically. When it is stopped operating, input mode is not returned.</td>
<td>“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.)</td>
<td>“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.</td>
<td></td>
</tr>
</tbody>
</table>
**Features available (Using VIERA Link Menu)**

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)

1. Display “VIERA Link Menu”

2. Select “Pause Live TV” and pause

- 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.

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

1. Display “VIERA Link Menu”

2. Select “Direct TV Rec” and start recording

**To stop recording**
Select “Stop” in “Direct TV Rec” and access
**VIERA Link “HDAVI Control™”**

### Features available (Using VIERA Link Menu)

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

1. This function is available with the equipment which has “HDAVI Control 2” or “HDAVI Control 3” function.
2. 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.

### Control the menu of the connected equipment by VIERA remote control (HDAVI Control 2 / HDAVI Control 3)

**VIERA Link Control**

#### If you access the invalid equipment

When the equipment with “HDAVI Control” function is connected

<table>
<thead>
<tr>
<th>VIERA Link Menu</th>
<th>Pause Live TV</th>
<th>Direct TV Rec</th>
<th>VIERA Link Control</th>
<th>Recorded Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recorder / Player / Home Cinema / Video Camera</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>VIERA Link Menu</th>
<th>Pause Live TV</th>
<th>Direct TV Rec</th>
<th>VIERA Link Control</th>
<th>Recorded Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Others</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

#### Operate the menu of the equipment

- **Available VIERA remote control buttons (depending on the connected equipment):**
  - Store / set / adjust
  - Return to the previous menu
  - Exit the menu
  - Display the operation guide for the equipment / The same functions with the OPTION button of the equipment
  - Access when the key words are displayed on colour bar

- **About the operations for the equipment, read the manual of the equipment.**
**Features available (Using VIERA Link Menu)**

You can control the theatre speaker with this TV remote control (point the remote control at the TV’s signal receiver).
- This function is available with the Amplifier or Player theatre which has “HDAVI Control” function.
- If you cannot operate, check the settings and the equipment ⇒ “Preparations” (p. 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 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).

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 (Side of TV)</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>
<tr>
<td>VIERA Link</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Recommended Connection

Headphones

To adjust volume

“Headphone Volume” in the Sound Menu (p. 20)

Camcorder / Game equipment

Fully wired HDMI compliant cable

External Equipment

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 (Side of TV)</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>
<tr>
<td>VIERA Link</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Recommended Connection
To watch satellite broadcasts
Set top box

To record / playback
DVD Recorder / VCR

To watch DVDs
DVD player

To listen with speakers
Amplifier with speaker system

**MONITOR OUT**

**DIGITAL AUDIO OUT**

**HDMI**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**S VIDEO 4 pin terminal**

Chrominance in

HDMI terminal

<table>
<thead>
<tr>
<th>18</th>
<th>+5V Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>SDA</td>
</tr>
<tr>
<td>14</td>
<td>Reserved</td>
</tr>
<tr>
<td></td>
<td>(in cable but N.C. on device)</td>
</tr>
<tr>
<td>12</td>
<td>TMDS Clock-</td>
</tr>
<tr>
<td>10</td>
<td>TMDS Clock+</td>
</tr>
<tr>
<td>8</td>
<td>TMDS Data0 Shield</td>
</tr>
<tr>
<td>6</td>
<td>TMDS Data1-</td>
</tr>
<tr>
<td>4</td>
<td>TMDS Data1+</td>
</tr>
<tr>
<td>2</td>
<td>TMDS Data2 Shield</td>
</tr>
</tbody>
</table>

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 / CH 5</td>
<td>S 6 / S 10</td>
<td>CH 10 / CH 12</td>
</tr>
<tr>
<td>S 2 / S 5</td>
<td>CH 6 / CH 9</td>
<td>S 11 / S 44</td>
</tr>
<tr>
<td>CH 5A</td>
<td>CH 9A</td>
<td>CH 20 / 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 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 condition.
  - Standby (TV turned Off with the remote control)

**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.
Data format for Card browsing

Photo: Still images recorded with digital still cameras compatible with JPEG files of DCF* and EXIF standards
Data format: Baseline JPEG (Sub-sampling 4:4:4, 4:2:2 or 4:2:0)
Max. number of files: 9,999
Image resolution: 160 x 120 to 10,000,000
Transfer rate: 1.6 MB/Sec
Compliant card type (maximum capacity): SDHC Card (16 GB), SD Card (2 GB), Multi Media Card (128 MB), miniSD Card (1 GB) (requiring miniSD adapter)
If miniSD Card is used, insert / remove it together with the adapter.
Check the latest information on the card type at the following website. (English only)
http://panasonic.co.jp/pavc/global/cs/

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

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

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).

<table>
<thead>
<tr>
<th>Audio Signal</th>
<th>STEREO</th>
<th>MAIN I</th>
<th>SUB II</th>
<th>MONO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode Indicator</td>
<td>○○</td>
<td>I</td>
<td>II</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>Ⅰ ↔ ▽</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.
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>1,024 × 768 pixels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16:9</td>
<td>1,366 × 768 pixels</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>①</td>
<td>NC (not connected)</td>
</tr>
<tr>
<td>②</td>
<td>G</td>
<td>⑦</td>
<td>GND (Ground)</td>
<td>②</td>
<td>NC (not connected)</td>
</tr>
<tr>
<td>③</td>
<td>B</td>
<td>⑧</td>
<td>GND (Ground)</td>
<td>③</td>
<td>HD</td>
</tr>
<tr>
<td>④</td>
<td>NC (not connected)</td>
<td>⑨</td>
<td>GND (Ground)</td>
<td>④</td>
<td>VD</td>
</tr>
<tr>
<td>⑤</td>
<td>GND (Ground)</td>
<td>⑩</td>
<td>NC (not connected)</td>
<td>⑤</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 (50 Hz)</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>1,080p (60 Hz)</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>1,080p (50 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>852 × 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>75.06</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 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.

---

### Problem Actions

<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. 20)  
- Check nearby electrical products (car, motorcycle, fluorescent lamp). |
| No image can be displayed | - Is “Colour” or “Contrast” in the Picture Menu set to the minimum? (p. 20) |
| Blurry or distorted image (no sound or low volume) | - Reset programme. (p. 27) |
| 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. 9).  
- Reset settings in “Shipping Condition” (p. 28), then select “Home” in “Auto Tuning” (p. 9). |
| No sound is produced | - Is “Sound mute” active? (p. 8)  
- Is the volume set to the minimum? |
| Sound level is low or sound is distorted | - Sound signal reception may be deteriorated.  
- Set “MPX” (p. 20) in the Sound Menu to “Mono”. |
## FAQs

<table>
<thead>
<tr>
<th>Problem</th>
<th>Actions</th>
</tr>
</thead>
</table>
| Sound is unusual                                                      | • Set the sound setting of the connected equipment to “2ch L.PCM”.  
• Check the “HDMI1 Input” setting in the Sound Menu. (p. 20)  
• If digital sound connection has a problem, select analogue sound connection. (p. 31)                                               |
| Pictures from external equipment are unusual when the equipment is connected via HDMI | • Is the HDMI cable connected properly? (p. 38)  
• Turn Off the TV and equipment, then turn them On again.  
• Check an input signal from the equipment. (p. 42)  
• Use an equipment compliant with EIA/CEA-861/861B.                                                                                     |
| After DVB Auto Tuning only some or no DVB services are found           | • Digital TV reception technology requires high quality, robust DTV signals which in some domestic aerial installations, may be relatively poor despite good analogue reception.  
• 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. |
| Aerial connection when using DTV and VCR / DVD Recorder                | • 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. |
| DVB                                                                    | • Check “Signal Display”. (p. 27)  
• If “Signal Quality” or “Signal Strength” are displayed in red or constantly changing, check aerial.  
If problem persists consult your local TV aerial installer.  
• 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. 27). If problem persists consult your local TV aerial installer. |
| Picture regularly breaks up on some programmes, or “No Signal” message | • 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. |
<p>| Pictures very infrequently breaks up on some or all programmes         |                                                                                                                                                                                                     |</p>
<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. 16)</td>
</tr>
<tr>
<td>The programme cannot be selected</td>
<td>• Is the programme skipped? (p. 25)</td>
</tr>
<tr>
<td>TV goes into “Standby mode”</td>
<td>• Off Timer function is activated.</td>
</tr>
<tr>
<td></td>
<td>• 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. 6)</td>
</tr>
<tr>
<td></td>
<td>• Has the TV been switched On?</td>
</tr>
</tbody>
</table>

## 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 Panasonic Corporation.
• 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>Average use</td>
<td>145 W</td>
</tr>
<tr>
<td>Standby condition</td>
<td>0.3 W</td>
</tr>
<tr>
<td>Aspect Ratio</td>
<td>16:9</td>
</tr>
<tr>
<td>Visible screen size</td>
<td>80 cm (diagonal)</td>
</tr>
<tr>
<td>Number of pixels</td>
<td>1,049,088 (1,366 (W) × 768 (H))</td>
</tr>
<tr>
<td>Speaker</td>
<td>120 mm × 60 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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Display Panel</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Display panel</td>
<td>Aspect Ratio: 16:9</td>
</tr>
<tr>
<td>Visible screen size</td>
<td>80 cm (diagonal)</td>
</tr>
<tr>
<td>Number of pixels</td>
<td>1,049,088 (1,366 (W) × 768 (H))</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sound</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaker</td>
<td>120 mm × 60 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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PC signals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>VGA, SVGA, XGA</td>
<td>31 - 69 kHz</td>
</tr>
<tr>
<td>SXGA (compressed)</td>
<td>59 - 86 Hz</td>
</tr>
<tr>
<td>Horizontal scanning frequency</td>
<td>31 - 69 kHz</td>
</tr>
<tr>
<td>Vertical scanning frequency</td>
<td>59 - 86 Hz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Receiving Systems / Band name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DVB-T</td>
<td>7 MHz VHF / UHF (Australia) free-to-air TV broadcast reception</td>
</tr>
<tr>
<td>PAL 60 Hz</td>
<td>Playback of NTSC tape from some PAL Video recorders (VCR)</td>
</tr>
<tr>
<td>M. NTSC</td>
<td>Playback from M. NTSC Video recorders (VCR)</td>
</tr>
<tr>
<td>NTSC</td>
<td>Playback from NTSC Video recorders (VCR)</td>
</tr>
<tr>
<td>PAL 60 Hz</td>
<td>Reception of Off air broadcasts</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aerial - Rear</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Belling &amp; Lee connector</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Conditions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>0 °C - 35 °C</td>
</tr>
<tr>
<td>Humidity</td>
<td>20 % - 80 % RH (non-condensing)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Connection Terminals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AV1 Input</td>
<td></td>
</tr>
<tr>
<td>AUDIO L - R</td>
<td>RCA PIN Type × 2</td>
</tr>
<tr>
<td>VIDEO</td>
<td>RCA PIN Type × 1</td>
</tr>
<tr>
<td>COMPONENT</td>
<td>Rs/Cs, Rp/Cp</td>
</tr>
<tr>
<td>Y</td>
<td>1.0 V[p-p] (including synchronization)</td>
</tr>
<tr>
<td>±0.35 V[p-p]</td>
<td></td>
</tr>
</tbody>
</table>

| AV2 Input | |
| AUDIO L - R | RCA PIN Type × 2 |
| VIDEO | RCA PIN Type × 1 |
| COMPONENT | Rs/Cs, Rp/Cp |
| Y | 1.0 V[p-p] (including synchronization) |
| ±0.35 V[p-p] | |

| AV3 Input | |
| AUDIO L - R | RCA PIN Type × 2 |
| VIDEO | RCA PIN Type × 1 |
| S VIDEO | Mini DIN 4-pin |
| Y: 1.0 V[p-p] (75 Ω) C: 0.286 V[p-p] | |

| AV4 Input | |
| AUDIO L - R | RCA PIN Type × 2 |
| VIDEO | RCA PIN Type × 1 |
| S VIDEO | Mini DIN 4-pin |
| Y: 1.0 V[p-p] (75 Ω) C: 0.286 V[p-p] | |

| Monitor Output | |
| AUDIO L - R | RCA PIN Type × 2 |
| VIDEO | RCA PIN Type × 1 |
| S VIDEO | Mini DIN 4-pin |
| HD, VD/TTL Level | 2.0 - 5.0 V[p-p] (high impedance) |
| PC AUDIO via AV2 Input Audio L-R | |

<table>
<thead>
<tr>
<th>Others</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HDMI1 / 2 Input</td>
<td>TYPE A Connectors</td>
</tr>
<tr>
<td>HD, VD/TTL Level</td>
<td>2.0 - 5.0 V[p-p] (high impedance)</td>
</tr>
</tbody>
</table>

| Card slot | SD CARD slot × 1 |

<table>
<thead>
<tr>
<th>Dimensions ( W × H × D )</th>
<th>820 mm × 578 mm × 225 mm (With TV Stand)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>820 mm × 539 mm × 108 mm (TV only)</td>
</tr>
<tr>
<td>Mass</td>
<td>17.5 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 (bread bakery)

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.

<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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