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-

- Full HD Plasma Panel
- 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

Enjoy rich multi-media

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

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Enjoy your TV!

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Safety Precautions

**Warning**

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

**AC 220-240 V**

50 / 60 Hz

---

**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.
- Ensure the grounding pin on the mains plug is securely connected to prevent electrical shock.
- Do not touch the mains plug with a wet hand. (This may cause electrical shock.)
- Do not place any mains lead other than that provided with this TV. (This may cause fire or 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.

---

**Do not remove covers**

**NEVER modify the TV yourself**

(High-voltage components may cause serious electrical shock.)
- Have the TV checked, adjusted, or repaired at your local Panasonic dealer.

---

**Keep liquids away from the TV**

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

---

**Do not expose to direct sunlight and other sources of heat**

- Avoid exposing the TV to direct sunlight and other sources of heat. To prevent fire never place any type of candle or naked flame on top or near the TV.

---

**Do not place foreign objects inside the TV**

- Do not 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.

---

**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 allow children to handle SD card**

- As with a small object, SD card can be swallowed by young children. Please remove SD card immediately after use.
Notes

Do not display a still picture for a long time
This causes the image to remain on the plasma screen ("image retention"). This is not considered a malfunction and is not covered by the warranty.

Typical still images
- Channel number and other logos
- Image displayed in 4:3 mode
- Video game
- Computer image

To prevent image retention, contrast is lowered automatically after a few minutes if no signals are sent or no operations are performed. (p. 40)

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 equipment
- Electronic equipment
  In particular, do not place video equipment near the TV (electromagnetic interference may distort images / sound).
- Equipment with an infrared sensor
  This TV also emits infrared rays (this may affect operation of other equipment).

Maintenance

First, remove the mains plug from the socket outlet.

Display panel
Regular care: Gently wipe the surface clean of dirt by using a soft cloth.
Major contamination: Wipe the surface clean using a soft cloth dampened with clean water or diluted neutral detergent 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.)

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

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

Transport only in upright position
Transporting the TV with its display panel facing upright or downward may cause damage to the internal circuitry.

Allow sufficient space around the TV for radiated heat
Minimum distance

Do not block the rear air vents
Blocked ventilation by curtains, etc. may cause overheating, fire or electrical shock.
Accessories / Options

Standard accessories

- Remote Control Transmitter (N2QAYB000122)
- Batteries for the Remote Control Transmitter (2) (R6 (AA))
- Clamper (2)
- Mains Lead
- Operating Instructions
- Guarantee

Installing remote’s batteries

1. Pull open
2. Snap open

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.

Using the clamper

1. Remove from the TV
2. Snap shut

Caution
- Do not bundle the RF cable and mains lead together (could cause distorted image).
- Fix cables with clamps as necessary.
- When using the optional accessory, follow the option’s assembly manual to fix cables.

Optional accessories

- Pedestal (TY-ST58D2-WK)
- Plasma TV stand (TY-S58PX700W)
- Wall-hanging bracket (vertical) (TY-WK42PV3W)

Caution
- In order to maintain the unit’s performance and safety, be absolutely sure to ask your dealer or a licenced contractor to secure the wall-hanging brackets.
- Carefully read the instructions accompanying the plasma TV stand or pedestal, and be absolutely sure to take steps to prevent the TV from tipping over.
- Handle the TV carefully during installation since subjecting it to impact or other forces may cause product damage.
Identifying Controls

• Volume / Contrast / Brightness / Colour / Sharpness / Tint (NTSC mode) / Bass / Treble / Balance / Auto Tuning (p. 24)

- Changes the input mode
- Headphones jack (p. 34)
- AV4 terminals (p. 34)
- HDMI3 terminal (p. 34)

Increases or decreases the programme position by one. When a function is already displayed, press to increase or decrease the selected function. When in Standby mode, switches TV On.

1. SD CARD slot (p. 31)
2. Function select
   - Changes the input mode
   - Television: switches DVB (digital broadcasting) / Analogue mode (p. 10)
   - AV: changes AV input mode (p. 14)
3. Viewing SD Card (p. 30)
4. Option menu
   - Sets the preferred settings of the current programme easily (p. 10)
5. EXIT (Returns to TV screen)
6. Cursor buttons to make selections and adjustments
7. Returns to the previous menu
8. Coloured buttons used for the selection, navigation and operation of various functions
9. Still picture (p. 10)
10. Teletext Hold (p. 17)
11. Teletext Index (p. 17)
12. Sound mute On / Off
13. Volume
14. Lift door to open
15. Remote control signal receiver
16. Standby On / Off switch
   - Standby: red
   - On: green
   (Switches TV On or Off standby)
17. Changes aspect ratio (p. 11)
18. Access VIERA Link Menu (p. 33)
19. TV Guide (p. 12)
20. OK button to confirm selections and choices
   - Press after selecting programme positions to quickly change programme.
21. Main Menu
   - Press to access VIERA Link, Picture, Sound and Setup menus (p. 18)
22. Subtitles
   - Shows subtitles (p. 10)
23. Programme / service change buttons (0-9) and Teletext page buttons. (p. 10 and p. 16)
   - When in Standby mode, switches TV On.
24. Programme Information (p. 11)
25. Selects services in sequence
26. VCR / DVD operations (p. 15)
27. Changes the sound track, if programme has multiple audio tracks (DVB)
28. Stereo / Bilingual Sound Selection (p. 37)
   - (Analogue)
29. Multi window (p. 11)
30. C.A.T.S. (Contrast Automatic Tracking System) sensor
   - (senses brightness to adjust picture quality in “Auto” Mode in Picture Menu) (p. 20)
31. Changes aspect ratio (p. 11)
32. TV Guide (p. 12)
33. OK button to confirm selections and choices
   - Press after selecting programme positions to quickly change programme.
34. Main Menu
   - Press to access VIERA Link, Picture, Sound and Setup menus (p. 18)
35. Subtitles
   - Shows subtitles (p. 10)
36. Programme / service change buttons (0-9) and Teletext page buttons. (p. 10 and p. 16)
   - When in Standby mode, switches TV On.
37. Programme Information (p. 11)
38. Selects services in sequence
39. VCR / DVD operations (p. 15)
40. Changes the sound track, if programme has multiple audio tracks (DVB)
41. Stereo / Bilingual Sound Selection (p. 37)
   - (Analogue)
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. When disconnecting the mains lead, be absolutely sure to disconnect the mains plug at the socket outlet first.

Example 1 Connecting aerial

TV only
Rear of the TV

Fastener

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.

Example 2 Connecting DVD Recorder / VCR

TV, DVD Recorder or VCR

If your recorder is not available for DVB ˖ p. 41
Rear of the TV

Aerial

AC 220-240 V 50 / 60 Hz

Mains lead (supplied)

DVD Recorder or VCR

RF cable

Fastener

To unfasten

Rear of the TV

RF cable
Auto Tuning

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

Plug the TV into mains socket and switch On (Takes a few seconds to be displayed)

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

Select your state

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

Start Auto Tuning

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

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

- To edit channels
  - Editing and Setting Channels (p. 24)
- If tuning has failed
  - “Auto Tuning” (p. 24).
- If you turned the TV Off during Standby mode last time, the TV will be in Standby mode when you turn the TV On with Mains power On / Off switch.

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

■ How to use remote control
  - 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.

2. Select DVB (Digital Video Broadcasting) or Analogue
   - You can also select the mode using the TV button on the front panel of the TV.

3. Select a service
   - To select the two or three-digit programme number, e.g. 39
     - \( \Rightarrow 3 \rightarrow 9 \) (in a short time)

Select a service using Information banner

Select a service using TV Guide
   - “Using TV Guide” (p. 12)

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

Other useful functions (Operate after 3)

<table>
<thead>
<tr>
<th>Hold</th>
<th>Display subtitles (if available)</th>
<th>Display the current programme status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeze / unfreeze picture</td>
<td>HOLD</td>
<td>OPTION</td>
</tr>
<tr>
<td>STTL</td>
<td></td>
<td>Volume Correction</td>
</tr>
</tbody>
</table>

Check or change the current programme status instantly
   - Volume Correction
     - Adjusts volume of individual channel or input mode

Note
   - Also possible to change the settings in Menu list (p. 20).
Other useful functions (Operate after 3)

Display programme information

- Information of another channel
- Information on next programme (DVB)
- To watch the programme listed in the banner
- Information banner operation

1st press Display banner
2nd press Banner + programme synopsis (DVB)
3rd press Exit

Change the aspect ratio (p. 36)
Enjoy viewing the picture at its optimum size and aspect.

- To change the mode
- During the list is displayed, select the mode

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

Note
In DVB mode, aspect ratio is fixed at 16:9.

View in multi window (p. 38)
Enjoy viewing two images at once, such as a TV programme and a DVD.

Operations in multi window
- To exit multi window (return to the single-screen view with main screen)
- To change the layout, images, first show the colour bar
- To change the input mode or position of sub screen
- Remote control operations apply to the main screen.

Change aspect ratio

Watch TV, DVD, etc. in multi window

Display information banner

Programme
DVB: Programme
Start / Finish time
Analogue: Programme
Status

Service
Sound
Stereo sound
mute
Current time
Rating information
(p. 36)
Teletext
Weak TV signal
Current
favourite list
Television Signal
Off timer
Multiple audio
Features available

11
Using TV Guide

TV Guide—Electronic Programme Guide (EPG) provides an on-screen listing of programmes currently broadcast and future broadcasts over the next seven days (depending on the broadcaster). Analogue broadcasts will be listed after DVB broadcasts. “D” means DVB channel and “A” means Analogue channel.

View TV Guide

To previous day (DVB mode)

To next day (DVB mode)

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

To view a programme list of the selected favourites list

Only analogue TV services are listed

(Displays by time)
Other useful functions (Operate after viewing TV Guide)

<table>
<thead>
<tr>
<th>View details of the programme (DVB mode)</th>
<th>Watch the programme</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Select the programme</strong></td>
<td><strong>View details</strong></td>
</tr>
<tr>
<td><img src="select" alt="Select the programme" /></td>
<td><img src="view" alt="View details" /></td>
</tr>
<tr>
<td><img src="info" alt="INFO" /></td>
<td><img src="info" alt="INFO" /></td>
</tr>
</tbody>
</table>

**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.

**Select the programme now on the air**

1. select
2. watch

![Select the programme now on the air](select-now-air)
Watching Videos and DVDs

Connect the external equipment (VCRs, DVD equipment, etc.) and you can watch the input.
To connect the equipment (p. 8)
The Remote Control is capable of operating some functions of selected Panasonic external equipment.

1 Display the Input select menu

2 Select the input mode connected to the equipment

- You can also select the input using the AV button on the remote control or the front 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. 27)

3 View

Displays the selected mode

AV2

Note
- If the external equipment has an aspect adjustment function, set to “16:9”.
- For details, see the manual of the equipment or ask your local dealer.

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

**VCR / DVD switch**
- Select VCR to operate Panasonic VCR or DVD equipment
- Select DVD to operate Panasonic DVD equipment or Player home theatre

**Standby**
- Set to Standby mode / Turn on

**Play**
- Playback videocassette / DVD

**Stop**
- Stop the operations

**Rewind / Skip / Search**
- VCR: Rewind, view the picture rapidly in reverse
- DVD: Skip to the previous track or title
  - Press and hold to search backward

**Fast-forward / Skip / Search**
- VCR: Fast-forward, view the picture rapidly forward
- DVD: Skip to the next track or title
  - Press and hold to search forward

**Pause**
- Pause / Restart
- DVD: Press and hold to play at slow speed

**Programme Up / Down**
- Select programme

**Record**
- Start recording

---

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

1. Set the VCR / DVD switch to the appropriate position

2. Press and hold **POWER** during the following operations.

   - Enter the appropriate code for the equipment to be controlled, see table below

### Equipment Code Table

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCR</td>
<td>10</td>
</tr>
<tr>
<td>DVD</td>
<td>11</td>
</tr>
<tr>
<td>DVD</td>
<td>70</td>
</tr>
<tr>
<td>Player home theatre</td>
<td>71</td>
</tr>
</tbody>
</table>

---

### Note

- Confirm correct operation after the code changed.
- 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

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

Select the page

■ To adjust contrast ⇒ “Teletext” in Setup Menu (p. 21)

To return to TV ⇒

Using teletext conveniently

Reveal hidden data

FULL / TOP / BOTTOM

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

MENU ⇒ G

Use your remote control to view Teletext

P100 (TOP) ➔ (Expand the TOP half)

P100 (BOTTOM) ➔ (Expand the BOTTOM half)

Normal (FULL) ➔
## Viewing

### Viewing Teletext

#### HOLD

If you wish to hold the current page without updating

**Stop or resume automatic updating**

- **HOLD**
- **To resume**

#### INDEX

**Return to the main index page**

**INDEX**

#### Call up a favourite pages

**STTL**

- Call up the page stored in “blue”.
- Factory setting is “P801” (subtitle page).

#### View in multi window

**MULTIP**

Operations can be made only in Teletext screen.

#### Store frequently viewed pages

- **As page is displayed**
  - **Corresponding colour button**
  - **OK**
  - **press and hold**

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

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

- **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

- **View sub page (Only when teletext is more than one page)**
  - **Changes to TV screen temporarily**
  - **Appears at upper-left corner of the screen**

- **View the TV picture while searching for a teletext page**
  - **Teletext automatically updates itself when new information becomes available.**
  - **(You cannot change the channel.)**
  - **The news page provides a function that indicates arrival of latest news (“News Flash”).**

- **MULTI PI**
  - **Watch TV and Teletext in two windows at once**
  - **Operations can be made only in Teletext screen.**

- **P108**
  - **Appears when updating is completed**
  - **View the updated page**
How to Use Menu Functions

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

1. **Display the menu**

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

2. **Select the menu**

   - (example: Picture Menu)

3. **Select the item**

   - (example: Picture Menu)

4. **Adjust or select**

   - (example: Picture Menu)

   - **Choose from among alternatives**
     - Number and positions of alternatives
     - Changed

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

   - **Go to the next screen**
     - Displays the next screen

   - **To change menu pages**
     - up
     - down

---

**Note**

- To return to TV at any time
  - EXIT

- To return to the previous screen
  - RETURN

- To initialize all settings
  - “Shipping Condition” (p. 26)
How to Use Menu Functions (picture, sound quality, etc.)

Overview

Advanced

VIERA Main Menu

- VIERA Link
- Picture
- Sound
- Setup

The menu of the accessed equipment

Sound Menu

- Mode
- Bass
- Treble
- Balance
- Headphone Volume
- Surround
- Volume Correction
- DVB Audio Preference
- SPDIF Selection

(1/2)

(2/2)

Setup Menu

- DVB Favourites Edit
- Tuning Menu
- Off Timer
- Teletext
- Shipping Condition
- System Update
- Power Save
- Side Panel
- Picture Overscan

(1/2)

(2/2)

Main Menu

- VIERA Link
- Picture
- Sound
- Setup

(19)

(20)

(21)

(24)

Only available items can be selected.
## Menu list

<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments / Configurations (alternatives)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIERA Link</td>
<td><strong>Adjustments / Configurations (alternatives)</strong></td>
<td></td>
</tr>
<tr>
<td>Speaker Selection</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></td>
<td>VIERA Link Control</td>
<td>Controls the connected Panasonic equipment <em>Easy control only with VIERA remote control</em> (p. 33)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Speaker control</em> (p. 33)</td>
</tr>
<tr>
<td></td>
<td><strong>Viewing Mode</strong></td>
<td>Basic picture mode <em>(Dynamic / Normal / Cinema / Auto)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>♦ Set for each input signal</td>
</tr>
<tr>
<td></td>
<td>Contrast, Brightness, Colour, Sharpness</td>
<td>Adjusts colour, brightness, etc. for each picture mode to suit your taste</td>
</tr>
<tr>
<td></td>
<td>Tint</td>
<td>Adjusts tint of image</td>
</tr>
<tr>
<td></td>
<td></td>
<td>♦ For NTSC signal reception only</td>
</tr>
<tr>
<td></td>
<td>Colour Balance</td>
<td>Chooses the colour balance of the entire image <em>(Cool / Normal / Warm)</em></td>
</tr>
<tr>
<td></td>
<td>Colour Management</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></td>
<td>P-NR</td>
<td>Picture Noise Reduction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Automatically reduces unwanted picture noise <em>(Off / Normal / Dynamic / Auto)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>♦ Not valid on HDMI, PC signal or DVB</td>
</tr>
<tr>
<td></td>
<td>3D-COMB</td>
<td>Automatically makes still pictures and slow pictures look more vivid <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, components, PC, HDMI and SD Card</td>
</tr>
<tr>
<td></td>
<td></td>
<td>♦ Cannot be used with DVB</td>
</tr>
<tr>
<td></td>
<td><strong>Reset Picture Defaults</strong></td>
<td>Press the OK button to reset the present Picture Mode to the default settings</td>
</tr>
<tr>
<td></td>
<td><strong>Sound</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mode</td>
<td>Basic sound mode <em>(Music / Speech)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bass</td>
<td>Adjusts the output level of deep bass</td>
</tr>
<tr>
<td></td>
<td>Treble</td>
<td>Adjusts the output level of high-pitch, shrill sound</td>
</tr>
<tr>
<td></td>
<td>Balance</td>
<td>Adjusts volume level of right and left speakers</td>
</tr>
<tr>
<td></td>
<td>Headphone Volume</td>
<td>Adjusts the volume of the headphones</td>
</tr>
<tr>
<td></td>
<td><strong>Surround</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>(Auto / Simulated Surround / SRS TruSurround XT)</em></td>
<td>Simulated Surround: Provides a dynamic enhancer to simulate improved spatial effects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SRS TruSurround XT: SRS TruSurround XT® creates a high quality surround sound effect using just two speakers from the source which can output surround encoded signals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>♦ Switching is also possible by the Surround button on the remote control (p. 7)</td>
</tr>
<tr>
<td></td>
<td><strong>Volume Correction</strong></td>
<td>Adjusts volume of individual channel or input mode</td>
</tr>
<tr>
<td></td>
<td><strong>DVB Audio Preference</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>(Auto / Dolby Digital / MPEG)</em></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</td>
</tr>
<tr>
<td></td>
<td></td>
<td>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></td>
<td><strong>SPDIF Selection</strong></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>Digital: Dolby Digital is output as PCM. MPEG is output as PCM.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>♦ DVB mode and Movie View Mode <em>(p. 31)</em> only</td>
</tr>
<tr>
<td></td>
<td><strong>MPEG Audio Level</strong></td>
<td>Normally, MPEG sound is larger than Dolby Digital one</td>
</tr>
<tr>
<td></td>
<td></td>
<td>You can adjust the audio level of MPEG 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></td>
<td><strong>HDMI1 / 3 Input</strong></td>
<td>Select to fit the input signal <em>(Auto / Digital / Analogue)</em> <em>(p. 29)</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></td>
<td><strong>Reset Sound Defaults</strong></td>
<td>Press the OK button to reset the present Sound Mode to the default settings</td>
</tr>
</tbody>
</table>
## Menu list

### Setup

<table>
<thead>
<tr>
<th>Item</th>
<th>Adjustments / Configurations (alternatives)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DVB Favourites Edit</strong></td>
<td>Creates list of favourite programmes (p. 23)</td>
</tr>
<tr>
<td><strong>Auto Tuning</strong></td>
<td>Automatically sets the channels received in the area (p. 24)</td>
</tr>
<tr>
<td><strong>Analogue Programme Edit</strong></td>
<td>Edits analogue channels (p. 25)</td>
</tr>
<tr>
<td><strong>DVB Manual Tuning</strong></td>
<td>Sets the DVB channels manually (p. 25)</td>
</tr>
<tr>
<td><strong>Analogue Manual Tuning</strong></td>
<td>Sets the analogue channels manually (p. 25)</td>
</tr>
<tr>
<td><strong>Add New DVB Services</strong></td>
<td>Adds new DVB services (p. 25)</td>
</tr>
<tr>
<td><strong>New Service Message</strong></td>
<td>Selects whether to give a notification message when a new DVB service is found (p. 25)</td>
</tr>
<tr>
<td><strong>DVB Signal Display</strong></td>
<td>Checks the DVB signal condition (p. 25)</td>
</tr>
<tr>
<td><strong>Off Timer</strong></td>
<td>Sets the time the TV automatically turns Off (Off / 15 / 30 / 45 / 60 / 75 / 90 minutes)</td>
</tr>
<tr>
<td><strong>Teletext</strong></td>
<td>Teletext display mode (TOP (FASTEXT) / List) (p. 16)</td>
</tr>
<tr>
<td><strong>Shipping Condition</strong></td>
<td>Resets all settings, for example, when moving house (p. 26)</td>
</tr>
<tr>
<td><strong>System Update</strong></td>
<td>Downloads new software to TV (p. 23)</td>
</tr>
<tr>
<td><strong>Power Save</strong></td>
<td>Reduces brightness of picture to economise on power consumption (Off / On)</td>
</tr>
<tr>
<td><strong>Side Panel</strong></td>
<td>Increases the brightness of the side panel (Off / Low / Mid / High)</td>
</tr>
<tr>
<td></td>
<td>• The recommended setting is “High” to prevent panel “image retention”</td>
</tr>
<tr>
<td><strong>Picture Overscan</strong></td>
<td>Selects the screen area displaying the image (Off / On)</td>
</tr>
<tr>
<td></td>
<td>• On : Enlarged the image to hide the edge of the image.</td>
</tr>
<tr>
<td></td>
<td>• Off : Displayed the image in the original size.</td>
</tr>
<tr>
<td></td>
<td>• Set to “On” if noise is generated on the edge of the screen.</td>
</tr>
<tr>
<td></td>
<td>• This function is available when aspect is set to 16:9.</td>
</tr>
<tr>
<td></td>
<td>• 1080i or 1080p signal only</td>
</tr>
<tr>
<td><strong>Input Labels</strong></td>
<td>Labels or skips each input terminals (p. 27)</td>
</tr>
<tr>
<td><strong>Banner Display Timeout</strong></td>
<td>Sets how long the information banner (p. 11) stays on screen</td>
</tr>
<tr>
<td></td>
<td>• 0 (No display) to 10 sec. in 1-sec. increments</td>
</tr>
<tr>
<td><strong>VIERA Link</strong></td>
<td>Sets to use VIERA Link functions (Off / On) (p. 32)</td>
</tr>
<tr>
<td><strong>Power off Link</strong></td>
<td>Set to “Set” to use Power off Link function (No / Set) (p. 33)</td>
</tr>
<tr>
<td><strong>Power on Link</strong></td>
<td>Set to “Set” to use Power on Link function (No / Set) (p. 33)</td>
</tr>
<tr>
<td><strong>SD Card LED</strong></td>
<td>Lights blue LED while SD Card is inserted (Off / On) (p. 31)</td>
</tr>
<tr>
<td><strong>Region Select</strong></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><strong>Daylight Saving Time</strong></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>• Set to “Auto” normally</td>
</tr>
<tr>
<td><strong>Refresh Rate</strong></td>
<td>Changes the image processing of the panel (depending on the input signal) (50Hz / 100Hz)</td>
</tr>
<tr>
<td></td>
<td>• Set to “100Hz” normally</td>
</tr>
<tr>
<td><strong>Software Licence</strong></td>
<td>Displays the software licence information</td>
</tr>
<tr>
<td><strong>System Information</strong></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. 28-29 and p. 31)

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
   - Access the Menu
   - Select Main Menu

3. Select “Setup”
   - Access the Setup Menu
   - Select “DVB Favourites Edit”, “System Update”, “Region Select” or “Daylight Saving Time”

4. Set
   - Access and select the desired menu option
   - Set the desired option

To return to TV
   - Press the TV button on the remote control
Create your favourite service List from various broadcasters (up to 4: FavList1 / FavList2 / FavList3 / FavList4). The list is displayed in information banner (p. 11), TV Guide (p. 12) and then easily accessed.

**Select a service and add it to the list**

![Diagram showing how to add a service to the list]

- To display another List
- To add all services to the list
- A service is added

**To edit List**

- Select the field of List to edit and:
  - To name the List
  - To move the service
  - To delete the service

- To delete all services

**Note**

- Channel numbers cannot be changed, due to broadcast restrictions.

**Download new software to TV.**

- For details (p. 37)

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”**

- Select “Auto Update Search in Standby” and then set “On” or “Off”

- On: Automatically performs a search in standby and downloads an update, if any software updates are available

**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.

**Adjust the standard time**

- Select the region where you live to adjust the standard time.
  - The time contained in the broadcast signal is UTC (Universal time, coordinated).

**Adjust for Summer Time**

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

**Region**

<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></td>
</tr>
<tr>
<td>Queensland</td>
<td>+9:30</td>
<td>+10:00</td>
</tr>
<tr>
<td>South Australia</td>
<td>+8:00</td>
<td>+9:00</td>
</tr>
<tr>
<td>Western Australia</td>
<td>+9:30</td>
<td></td>
</tr>
<tr>
<td>Northern Territory</td>
<td>+10:00</td>
<td>+11:00</td>
</tr>
<tr>
<td>Tasmania</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Based on GMT)

**Note**

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

**Create your favourite service List from various broadcasters (up to 4: FavList1 / FavList2 / FavList3 / FavList4).**

- The list is displayed in information banner (p. 11), TV Guide (p. 12) and then easily accessed.

**Select a service and add it to the list**

- To display another List
- To add all services to the list
- A service is added

**To edit List**

- Select the field of List to edit and:
  - To name the List
  - To move the service
  - To delete the service

- To delete all services

**Note**

- Channel numbers cannot be changed, due to broadcast restrictions.

**Download new software to TV.**

- For details (p. 37)

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”**

- Select “Auto Update Search in Standby” and then set “On” or “Off”

- On: Automatically performs a search in standby and downloads an update, if any software updates are available

**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.

**Adjust the standard time**

- Select the region where you live to adjust the standard time.
  - The time contained in the broadcast signal is UTC (Universal time, coordinated).

**Adjust for Summer Time**

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

**Region**

<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></td>
</tr>
<tr>
<td>Queensland</td>
<td>+9:30</td>
<td>+10:00</td>
</tr>
<tr>
<td>South Australia</td>
<td>+8:00</td>
<td>+9:00</td>
</tr>
<tr>
<td>Western Australia</td>
<td>+9:30</td>
<td></td>
</tr>
<tr>
<td>Northern Territory</td>
<td>+10:00</td>
<td>+11:00</td>
</tr>
<tr>
<td>Tasmania</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Based on GMT)
Editing and Setting Channels

The current channel settings can be changed according to your needs and reception conditions. You can re-tune all TV channels 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 Programme Edit” and “Analogue Manual Tuning” are available in Analogue mode only.

2. **Display the menu**

3. **Select “Setup”**

4. **Select “Tuning Menu”**

5. **Select a function**

6. **Set**

   Automatically set the DVB and Analogue channels received in the area.

   **Access “Auto Tuning”**
   - All previous settings are erased.
   - When the operation is completed, the digital service at programme position “1” will be displayed. If no DVB services are found, the first analogue service will be displayed.
   - If tuning has not done completely ⇒ “DVB Manual Tuning”, “Analogue Manual Tuning”

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

   **Settings are made automatically**

   - “DVB Manual Tuning”, “Add New DVB Services”, “New Service Message” and “DVB Signal Display” are available in DVB mode only.
   - “Analogue Programme Edit” and “Analogue Manual Tuning” are available in Analogue mode only.
Edit the analogue programme position settings

1. Select the channel to edit

2. Edit

   - To delete => After confirming, press □
   - To add => After confirming, press □
   - To move => Select new position □

3. To change the name of the broadcaster displayed when selecting channels

   - Select the “Name” field
   - Enter the “User input” mode
   - Select the character
   - Set
   - Store

Set DVB channel manually

DVB Manual Tuning

Set Analogue channel manually

Analogue Manual Tuning

Add DVB channel automatically

Add New DVB Services

Display a notification message

New Service Message

Check DVB signal

DVB Signal Display

To change channel number

“Analogue Manual Tuning”

Channel

Name

Coronation Street

Select Edit List

Edit the analogue programme position settings

• Delete
• Add
• Move
• Change name
• Skip

Set Analogue channel manually after Auto Tuning.
If a VCR is connected with only the RF cable, select programme position “0”.

Select the programme position

Select the channel

Search and store

Any new services found will be added automatically.

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

Selects whether to give a notification message when a new DVB service is found. (Off / On)

Selects a service and checks the DVB signal condition.
Use for adjusting the direction of the aerial.

信号 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 channels tuned in. All settings (channels, picture, sound quality, etc.) are reset.

 1 Display the menu

 2 Select “Setup”

 3 Select “Shipping Condition”

 4 Set

 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. (p. 9)

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

 “Auto Tuning” (p. 24)
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

2. Select “Setup”

3. Select “Input Labels”

4. Select a input terminal and set

The labels you set will be displayed in “Input Selection” menu (p. 14) or banner. • If “Skip” is selected, you cannot select the mode.

User input
You can name each input terminals freely.

Select “User input”

Set characters

(maximum: ten characters)

To return to TV

EXIT

RETURN
Select the external input

1. To return to TV ➤ [TV]

2. Select “PC”

PC menu setting (changed as desired)

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

<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments / Configurations (options)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picture</td>
<td>W/B High R</td>
<td>White balance of bright red area</td>
</tr>
<tr>
<td></td>
<td>W/B High B</td>
<td>White balance of bright blue area</td>
</tr>
<tr>
<td></td>
<td>W/B Low R</td>
<td>White balance of dark red area</td>
</tr>
<tr>
<td></td>
<td>W/B Low B</td>
<td>White balance of dark blue area</td>
</tr>
<tr>
<td></td>
<td>Gamma</td>
<td>(2.0 / 2.2 / 2.5 / S Curve)</td>
</tr>
<tr>
<td></td>
<td>Reset PC Settings</td>
<td>Press the OK button to reset to the default settings</td>
</tr>
<tr>
<td>PC Setup</td>
<td>Input Resolution</td>
<td>Switches to a wide view</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• VGA (640 × 480 pixels), WVGA (852 × 480 pixels), XGA (1,024 × 768 pixels), WXGA (1,366 × 768 pixels)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Options change depending on signals</td>
</tr>
<tr>
<td></td>
<td>Clock</td>
<td>Set to the minimum level if noise occurs</td>
</tr>
<tr>
<td></td>
<td>H-pos</td>
<td>Adjusts horizontal position</td>
</tr>
<tr>
<td></td>
<td>V-pos</td>
<td>Adjusts vertical position</td>
</tr>
<tr>
<td></td>
<td>Clock Phase</td>
<td>Eliminates flicker and distortion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adjust after Clock adjustment</td>
</tr>
<tr>
<td></td>
<td>Sync</td>
<td>PC sync signal type (H &amp; V / On G)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• H &amp; V : Horizontal and Vertical sync from your PC (Most common sync format)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• On G : Sync on Green sync from your PC</td>
</tr>
<tr>
<td></td>
<td>Reset PC Settings</td>
<td>Press the OK button to reset to the default settings</td>
</tr>
</tbody>
</table>

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. 34).

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### 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. For details of the applicable HDMI signals, see p. 39.

<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H-pos</td>
<td>Adjusts horizontal position</td>
</tr>
<tr>
<td></td>
<td>V-pos</td>
<td>Adjusts vertical position</td>
</tr>
<tr>
<td></td>
<td>Reset DVI Position Settings</td>
<td>Press the OK button to reset to the default settings</td>
</tr>
</tbody>
</table>

---

### HDMI Functions

#### Displaying PC Screen on TV

- HDMI functions allow 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. 34).

#### Note

- HDMI is the world’s first complete digital consumer AV interface complying with a non-compression standard.
- Audio settings can be made on the “HDMI1 / 3 Input” menu screen. (p. 20)
- Applicable audio signal sampling frequencies (2ch L.PCM): 48 kHz, 44.1 kHz, 32 kHz
- HDMI2 terminal is for digital audio signal only.
- Use with a PC is not assumed.
- If the connected equipment has an aspect adjustment function, set the aspect ratio to “16:9”.
- These HDMI connectors are “type A”.
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- An equipment having no digital output terminal may be connected to the input terminal of either “Component”, “S-VIDEO”, or “Video” to receive analogue signals.
- The HDMI input terminal can be used with only the following image signals: 480i, 480p, 576i, 576p, 720p, 1080i and 1080p. Match the output setting of the digital equipment.

#### DVI connection

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

#### HDMI2 terminal

- HDMI2 terminal is for digital audio signal only.
- Use with a PC is not assumed.
- If the connected equipment has an aspect adjustment function, set the aspect ratio to “16:9”.
- These HDMI connectors are “type A”.
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- An equipment having no digital output terminal may be connected to the input terminal of either “Component”, “S-VIDEO”, or “Video” to receive analogue signals.
- The HDMI input terminal can be used with only the following image signals: 480i, 480p, 576i, 576p, 720p, 1080i and 1080p. Match the output setting of the digital equipment.

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- Use with a PC is not assumed.
- If the connected equipment has an aspect adjustment function, set the aspect ratio to “16:9”.
- These HDMI connectors are “type A”.
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- An equipment having no digital output terminal may be connected to the input terminal of either “Component”, “S-VIDEO”, or “Video” to receive analogue signals.
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#### Note

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- Use with a PC is not assumed.
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- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
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- 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. 39.
Viewing from SD Card

Photo View: The still images recorded by the digital camera can be displayed.
Movie View: The moving pictures recorded by the digital video camera can be played back.

1. Insert the SD Card

2. Select “Photo View” or “Movie View”

3. Select the file to be viewed

4. View

Caution:
• Signal output from all AV terminals will be disabled during SD Card operations. But the sound in Movie View can be output from AUDIO out and DIGITAL AUDIO OUT terminals.
• “Date” shows the date on which the recording was made by the digital camera or digital video camera. It shows “**/**/****” when recordings are made without date signal.
**Photos and Movies**

**Slide show (Photo View)**

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

- **Slide show settings (operate in step 3 or 4)**
  1. Display the menu
  2. Access “Viewing Setup”
  3. Select the functions and set
  
<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments / Configurations (alternatives)</th>
</tr>
</thead>
<tbody>
<tr>
<td>View</td>
<td>Interval</td>
<td>Select slide show interval (5 / 10 / 15 / 30 / 60 / 90 / 120 seconds)</td>
</tr>
<tr>
<td></td>
<td>Repeat</td>
<td>Slide show repeat (Off / On)</td>
</tr>
</tbody>
</table>

**Audio Settings (Movie View)**

- **To confirm or change the current sound status (operate in step 4)**
  1. Display the current sound status
  2. Press repeatedly until the desired sound is selected (if the movie has multiple audio signals)

**Audio output settings (operate in step 3 or 4)**

- **SPDIF : A standard audio transfer file format**
  Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT terminal (Auto / PCM)
  - **Auto**: Dolby Digital is output as Dolby Digital Bitstream. MPEG is output as PCM.
  - **PCM**: Dolby Digital is output as PCM. MPEG is output as PCM.

**On screen messages**

- **Is SD Card in?**
  - Insert a SD card.

- **No valid file to play**
  - The card has no data.

- **Cannot read file**
  - The file is broken or unreadable.

- **This operation is not possible**
  - The TV does not support the format. (For the applicable formats and data, see p. 38.)

- **Confirm SD card**
  - The inserted SD card has a problem.
**VIERA Link “HDAVI Control™”**

• Enjoy additional HDMI Inter-Operability with Panasonic products which have “HDAVI Control” function. This TV supports “HDAVI Control 2” function.

  Connections to some Panasonic equipment (DVD Recorder DIGA, HD Video Camera, Player theatre, Amplifier, etc.) with HDMI cables allow you to interface them automatically.

  The equipment with “HDAVI Control” function enables the following operations:
  • Easy playback (p. 33)
  • Power on Link (p. 33)
  • Power off Link (p. 33)
  • Speaker control (p. 33)

  In addition, the equipment with “HDAVI Control 2” function enables the following operation:
  • Easy control only with VIERA remote control (p. 33)

  These features are limited to models incorporating Panasonic’s “HDAVI Control” and “VIERA Link”.

  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.

  Refer to individual manuals for compatibility information. About applicable equipment, consult your local Panasonic dealer.

■ **HDMI cable**

  This function needs an HDMI compliant (fully wired) cable. Non-HDMI-compliant cables cannot be utilized. It is recommended that you use Panasonic’s HDMI cable. Recommended part number:
  • RP-CDHG15 (1.5 m)
  • RP-CDHG30 (3.0 m)
  • RP-CDHG50 (5.0 m)

■ **Preparations**

  Setup the equipment to enable this function. Read the manuals of the equipment. About connections, see “External Equipment” (p. 35). Read the manuals of the equipment too.

■ **For the first time / When adding new equipment, reconnecting equipment or changing setup**

  After connection turn the equipment on and then switch the TV on.

  Select the input mode to HDMI1, HDMI2 or HDMI3 (p. 14), and make sure that an image is displayed correctly.

1. Display the menu

2. Select “Setup”

3. Select “VIERA Link Settings”

4. Select “VIERA Link” and set to “On”

---

**POWER INPUT**

**MULTI PIP SD CARD**

**ASPECT**

**F.P.**

**RECALL**

**CH**

**OPTION**

**EXIT**

**MUTE**

**VOL**

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

If you cannot access the menu, check the settings and the equipment (p. 32).

Access the menu of the equipment

1. Display “VIERA Link Menu”  
2. Select “VIERA Link Control”

3. Select the equipment you want to access

4. Operate the menu of the equipment

• Example:

TV speakers are active.

Power on Link

Set to “Set”

➢ When the connected Panasonic equipment starts playback or direct navigator / function menu for the equipment are activated, the TV is automatically turned on. (Only when TV is in Standby mode.)

Power off Link

Set to “Set”

➢ When TV is set to Standby mode, the connected Panasonic equipment is also automatically set to Standby.

The same functions with the OPTION button of the equipment

Speaker control

You can control the theatre speaker with TV’s remote control. This function is available when Panasonic Amplifier or Player theatre is connected.

If you cannot access the menu, check the settings and the equipment (p. 32).

1. Display “VIERA Link Menu”  
2. Select “Speaker Selection”

3. Set to “Home Cinema” or “TV”

The TV remains on even if the “VIERA Link” compatible equipment is turned off.
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. 43).

### Types of connectable equipment to each connector

<table>
<thead>
<tr>
<th>Connector</th>
<th>AV1 IN</th>
<th>AV2 IN</th>
<th>AV3 IN</th>
<th>AV4 IN (Front of TV)</th>
<th>MONITOR OUT</th>
<th>DIGITAL AUDIO OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recorder / playback (VCR / DVD recorder)</td>
<td>○</td>
<td>○</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>
<td>○</td>
<td></td>
</tr>
<tr>
<td>To watch camcorder images (Video camera)</td>
<td>○</td>
<td>○</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>
<td>○</td>
<td></td>
</tr>
<tr>
<td>To play games (Game equipment)</td>
<td>○</td>
<td>○</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>
<td>○</td>
<td></td>
</tr>
<tr>
<td>VIERA Link</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
</tbody>
</table>

○: Recommended Connection

- To record / playback videocassettes / DVDs
- To watch DVDs (DVD player)
- To watch camcorder images (Video camera)
- To watch satellite broadcasts (Set top box)
- To play games (Game equipment)
- To use amplifier with speaker system
- VIERA Link

### External Equipment

External connections allow you to connect your equipment to your AV receiver for better sound quality.

**Camcorder / Game equipment**

- AV1 IN
- AV2 IN
- AV3 IN
- AV4 IN (Front of TV)
- MONITOR OUT
- DIGITAL AUDIO OUT

**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. 43).
**To watch satellite broadcasts**

Set top box

--

**To listen with speakers**

Amplifier with speaker system

- Optical digital audio cable

**To watch DVDs**

- HDMI terminal

**To record / playback**

DVD Recorder / VCR

- RF cable

---

**VIERA Link** (p. 32)

- Use fully wired HDMI compliant cable.
- Read the manuals of the equipment too.

- Easy playback, Easy control only with VIERA remote control

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**Home Cinema**

- Panasonic DVD Recorder, HD Video Camera, etc.

---

**Panasonic Amplifier**

- Speaker system

---

**Panasonic DVD Recorder**

- Speaker system

---

**HD Video Camera**

---

**Speaker system**

---

**Component**

---

**Optical digital audio cable**

---

**Computer**

---

**Conversion adapter (if necessary)**

---

**VIERA Link**

---

**Set top box**

---

**PC**

---

**S VIDEO 4 pin terminal**

- Chrominance in
- Luminance in
- Chrominance earth
- Luminance earth

---

**HDMI terminal**

- Hot Plug Detect 19
- DDC/CEC Ground 17
- SCL 15
- CEC 13
- TMDS Clock Shield 11
- TMDS Data0− 9
- TMDS Data0+ 7
- TMDS Data1 Shield 5
- TMDS Data2− 3
- TMDS Data2+ 2
- +5V Power
- SDA
- Reserved (in cable but N.C. on device)
- TMDS Clock−
- TMDS Clock+
- TMDS Data0 Shield
- TMDS Data1−
- TMDS Data1+
- TMDS Data2 Shield

---

**Connecting S-VIDEO or VIDEO terminal**

- Connect the S-VIDEO or VIDEO terminal when using AV1 / AV4 IN terminals.

**Connecting COMPONENT or VIDEO terminal**

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

Channel Allocation (Analogue mode)

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

Rating (DVB mode)

<table>
<thead>
<tr>
<th>Signal name</th>
<th>Meaning</th>
<th>Rating</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAL</td>
<td>-</td>
<td>Not classified</td>
<td>M</td>
</tr>
<tr>
<td>PAL 525/60</td>
<td>P</td>
<td>Pre school</td>
<td>MA 15+</td>
</tr>
<tr>
<td>DVB-T</td>
<td>C</td>
<td>Children</td>
<td>AV 15+</td>
</tr>
<tr>
<td>M.NTSC</td>
<td>G</td>
<td>General</td>
<td>R</td>
</tr>
<tr>
<td>NTSC</td>
<td>PG</td>
<td>Parental Guidance recommended</td>
<td></td>
</tr>
<tr>
<td>Component/HDMI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>480i (60 Hz)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>480p (60 Hz)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>576i (50 Hz)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>576p (50 Hz)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>720p (50 Hz)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>720p (60 Hz)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,080i (50 Hz)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,080p (50 Hz)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,080i (60 Hz)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,080p (60 Hz)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Aspect Ratio

The optimum size and aspect can be chosen, and you can enjoy finer images. (p. 11)

The ratio varies depending on the programme, etc. If the ratio is greater than the standard "16:9", black bands may appear at the top and bottom of the screen.

If the screen size looks unusual when a widescreen-recorded programme is played back on a VCR, adjust the tracking of the VCR. (See the VCR manual.)

To select the ratio manually: (Only "16:9" or "4:3" in PC mode)

- **16:9**: Directly displays the image at "16:9" without distortion (anamorphic).
- **4:3**: Displays the image at the standard "4:3" without distortion.
- **4:3 Full**: Displays a "4:3" image enlarged horizontally to fit the screen.
- **Zoom1**: Displays a "16:9" letterbox (anamorphic) image full-screen without distortion. At "16:9", displays the image at its maximum (with slight enlargement).
Updating the software system

Update system software regularly to ensure that you have latest version software.
If there is an update available, a notification banner is displayed when the channel has the update information.

- To download new software, press “OK” ➔ Downloading (approx. 20 min.)
- 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 night under the following conditions.
  - Standby (TV turned Off with the remote control)
  - Recording is not in progress.

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

**Note**
- During downloading, do not turn Off the TV or touch any button.
  (The TV is automatically activated after downloading is completed.)

VIERA Link “HDAVI Control™”

HDMI connections to some Panasonic equipment allow you to interface them automatically. (p. 32)
- This function may not work normally depending on the equipment condition.
- Image or sound may not be available for the first few seconds when the playback starts.
- Image or sound may not be available for the first few seconds when Input mode is switched.
- Volume function will be displayed when adjusting the volume of the equipment.
- If you connect the equipment that has “HDAVI Control 2” function to the TV with HDMI cable, the sound from DIGITAL AUDIO OUT terminal can be output as multi channel surround.
- Easy playback is also available by using the remote control for Amplifier or Player theatre. Read the manuals of the equipment.
- If you connect the same kind of equipment at once (for example: one DIGA to HDMI1 / another DIGA to HDMI2), VIERA Link is available for the terminal with the smaller number.
- “HDAVI Control 2” is the newest standard (current as of February, 2007) for Panasonic’s HDAVI Control compatible equipment. This standard is compatible with Panasonic’s conventional HDAVI equipment.

Stereo / Bilingual Sound Selection (Analogue mode)

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

<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>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
</tbody>
</table>

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

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

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

<table>
<thead>
<tr>
<th>Type of broadcast</th>
<th>Regular broadcast (Standard Audio)</th>
<th>BILINGUAL or DUAL MONO: MAIN I / SUB II</th>
<th>STEREO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode Indicator</td>
<td>No Indicator ⬤ ⬤</td>
<td>⬤ ⬤</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, using the stereo / bilingual sound selection button.
- DUAL, also known as DUAL MONO or as BILINGUAL is not currently transmitted in some countries.
Multi Window

You can watch two images at once. (p. 11)
- The same input mode cannot be displayed at once.
- The sound is active for main screen only in multi window.
- You cannot change the aspect ratio in multi window.
- Multi window cannot be used with PC, SD card or HDMI (available for main screen only).
- Some signals are reformatted for suitable viewing on your display.
- The display timeout for the input mode or programme position can be adjusted by “Banner Display Timeout” in Setup Menu (p. 21).

Cautions in handling SD Card

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

Data format for Card browsing

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

Movie : SD-Video Standard Ver. 1.2 [MPEG-2 (PS format)] and AVCHD Standard compatible files with an audio format that is either MPEG-1/Layer-2 format or Dolby Digital format
(A modified data with a PC may not be displayed correctly.)
- Compliant card type (maximum capacity): SDHC Card (4 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
- Format the card with the recording equipment.
- The picture may not appear correctly on this TV depending on the recording equipment used.
- Display may take some time when there are many files and folders.
- This function cannot display Motion JPEG and still image not DCF formatted (i.e. TIFF, BMP).
- A data 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.
- Partially degraded files might be displayed at a reduced resolution.
- All “.JPG” extension datas in the card will be read in Photo View Mode.
- The folder and file names may be different depending on the digital camera used.
- Do not use two-byte characters or other special codes.
- The card may become unusable with this TV if file or folder names are changed.
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>Max. Res.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:3</td>
<td>1,440 × 1,080 pixels</td>
</tr>
<tr>
<td>16:9</td>
<td>1,920 × 1,080 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>15</td>
<td>NC (not connected)</td>
</tr>
<tr>
<td>2</td>
<td>G</td>
<td>7</td>
<td>GND (Ground)</td>
<td>16</td>
<td>HD</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
<td>8</td>
<td>GND (Ground)</td>
<td>17</td>
<td>VD</td>
</tr>
<tr>
<td>4</td>
<td>NC (not connected)</td>
<td>9</td>
<td>NC (not connected)</td>
<td>18</td>
<td>NC (not connected)</td>
</tr>
<tr>
<td>5</td>
<td>GND (Ground)</td>
<td>10</td>
<td>GND (Ground)</td>
<td>19</td>
<td></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>Horizontal frequency (kHz)</th>
<th>Vertical frequency (Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>480i (60 Hz)</td>
<td>31.47</td>
<td>59.94</td>
</tr>
<tr>
<td>480p (60 Hz)</td>
<td>37.50</td>
<td>60.32</td>
</tr>
<tr>
<td>576i (50 Hz)</td>
<td>37.88</td>
<td>60.02</td>
</tr>
<tr>
<td>576p (50 Hz)</td>
<td>46.86</td>
<td>75.00</td>
</tr>
<tr>
<td>720p (50 Hz)</td>
<td>53.67</td>
<td>75.06</td>
</tr>
<tr>
<td>720p (60 Hz)</td>
<td>31.44</td>
<td>59.89</td>
</tr>
<tr>
<td>1,080i (50 Hz)</td>
<td>37.88</td>
<td>60.32</td>
</tr>
<tr>
<td>1,080i (60 Hz)</td>
<td>46.86</td>
<td>75.00</td>
</tr>
<tr>
<td>1,080p (50 Hz)</td>
<td>53.67</td>
<td>75.06</td>
</tr>
<tr>
<td>1,080p (60 Hz)</td>
<td>31.44</td>
<td>59.89</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 @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 @85 Hz</td>
<td>46.86</td>
<td>75.00</td>
</tr>
<tr>
<td>852 × 480 @60 Hz</td>
<td>53.67</td>
<td>60.02</td>
</tr>
<tr>
<td>1,024 × 768 @60 Hz</td>
<td>35.00</td>
<td>66.67</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>49.73</td>
<td>74.55</td>
</tr>
<tr>
<td>Macintosh16&quot; (832 × 624)</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 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.

### Permanent spots on screen
- Due to production process involved in this technology this may result in some pixels which are permanently lit or unlit. This is not a malfunction.

### Contrast is reduced
- Contrast is lowered when the following conditions without any user operation for a few minutes:
  - no signal in DVB or AV mode
  - selected invalid channel
  - selected radio channel
  - displayed menu
  - Thumbnail, list or still picture in SD Card mode

<table>
<thead>
<tr>
<th>Problem</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Screen</strong></td>
<td></td>
</tr>
</tbody>
</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 channels. (p. 24) |
| Unusual image is displayed | Turn off the TV with Mains power On / Off switch, then turn it on again. |
| **Sound** | |
| No sound is produced | Is “Sound mute” active? (p. 7)  
Is the volume set to the minimum? |
| Sound level is low  
or sound is distorted | Sound signal reception may be deteriorated. |
| Whirling sound is heard | The sound is from built-in cooling fan  
(not a sign of faulty operation). |
| **HDMI** | |
| Sound is unusual | Set the sound setting of the connected equipment to “2ch L.PCM”.  
Check the “HDMI1 / 3 Input” setting in the Sound Menu. (p. 20)  
If digital sound connection has a problem, select analogue sound connection. (p. 29) |
| Pictures from external equipment  
are unusual when the equipment  
is connected via HDMI | Is the HDMI cable connected properly? (p. 34)  
Turn Off the TV and equipment, then turn them On again.  
Check an input signal from the equipment. (p. 39)  
Use an equipment compliant with EIA/CEA-861/861B. |
<table>
<thead>
<tr>
<th>Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aerial connection when using DTV and VCR / DVD Recorder</strong></td>
</tr>
<tr>
<td><strong>After DVB Auto Tuning only some or no DVB channels are found</strong></td>
</tr>
<tr>
<td><strong>Picture regularly breaks up on some channels, or “No Signal” message</strong></td>
</tr>
<tr>
<td><strong>Picture very infrequently breaks up on some or all channels</strong></td>
</tr>
<tr>
<td><strong>TV takes so long to turn on</strong></td>
</tr>
<tr>
<td><strong>The channel cannot be changed</strong></td>
</tr>
<tr>
<td><strong>The channel cannot be selected</strong></td>
</tr>
<tr>
<td><strong>TV goes into “Standby mode”</strong></td>
</tr>
<tr>
<td><strong>The remote control does not work</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital TV reception technology requires high quality, robust DTV signals which in some domestic aerial installations, may be relatively poor despite good analogue reception.</td>
</tr>
<tr>
<td>To maintain optimum signal quality from TV aerial, use a TV aerial splitter (as illustrated) when connecting two or more equipments to the same aerial.</td>
</tr>
<tr>
<td>Check to ensure your area is covered by DVB transmissions. (<a href="http://www.dba.org.au/">www.dba.org.au/</a>)</td>
</tr>
<tr>
<td>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. (<a href="http://www.dba.org.au/">www.dba.org.au/</a>)</td>
</tr>
<tr>
<td>Check “Signal Display”. (p. 25) If “Signal Quality” or “Signal Strength” are displayed in red or constantly changing, check aerial. If problem persists consult your local TV aerial installer.</td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td>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” channel to generate a stable picture. Repeat the tuning procedure (p. 24). If problem persists consult your local TV aerial installer.</td>
</tr>
<tr>
<td>Electrical atmospheric interference caused by local or distant lighting storms or heavy rain with wind in “leafy” locations may cause pictures to break up and audio to mute or distort momentarily.</td>
</tr>
<tr>
<td>Impulse noise interference from an infrequently used electrical appliance, or a passing vehicle or lawn mower with a “noisy” ignition system.</td>
</tr>
<tr>
<td>Like your computer, the TV has to run a number of diagnostic and software checks before it can display any broadcast channels.</td>
</tr>
<tr>
<td>Is the TV in Teletext mode? (p. 16)</td>
</tr>
<tr>
<td>Is the channel locked? (p. 25)</td>
</tr>
<tr>
<td>Off Timer function is activated. The TV enters “Standby mode” about 30 min. after broadcasting ends.</td>
</tr>
<tr>
<td>Are the batteries installed correctly? (p. 6)</td>
</tr>
<tr>
<td>Has the TV been switched On?</td>
</tr>
</tbody>
</table>
Licence

Trademark Credits

- 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 Computer, USA.
- S-VGA is a registered trademark of the Video Electronics Standard Association.
  Even if no special notation has been made of company or product trademarks, these trademarks have been fully respected.
- SDHC Logo is a trademark.
- HDMI, the HDMI Logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- HDAVI Control™ is a trademark of Matsushita Electric Industrial Co., Ltd.
- TruSurround XT, SRS and symbol are trademarks of SRS Labs, Inc.
  TruSurround XT technology is incorporated under license from SRS Labs, Inc.
- “AVCHD” and the “AVCHD” logo are trademarks of Matsushita Electric Industrial Co., Ltd. and Sony 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>680 W</td>
</tr>
<tr>
<td>Standby condition</td>
<td>0.4 W</td>
</tr>
<tr>
<td>Aspect Ratio</td>
<td>16:9</td>
</tr>
<tr>
<td>Visible screen size</td>
<td>147 cm (diagonal)</td>
</tr>
<tr>
<td>Number of pixels</td>
<td>2,073,600 (1,920 (W) × 1,080 (H)) [5,760 × 1,080 dots]</td>
</tr>
<tr>
<td>Speaker</td>
<td>Woofer (Φ80 mm) × 2 pcs, Tweeter (23 mm × 100 mm) × 2 pcs</td>
</tr>
<tr>
<td>Audio Output</td>
<td>31 W (15.5 W + 15.5 W), 10 % THD</td>
</tr>
<tr>
<td>Headphones</td>
<td>M3 (3.5 mm) stereo mini Jack × 1</td>
</tr>
</tbody>
</table>

**PC signals**
- VGA, SVGA, XGA
- SXGA ······ (compressed)
- Horizontal scanning frequency 31 - 69 kHz
- Vertical scanning frequency 59 - 86 Hz

**Receiving Systems / Band name**
- PAL B/G: Reception of Off air broadcasts
- DVB-T: 7 MHz VHF / UHF (Australia) free-to-air TV broadcast reception
- PAL 60 Hz: Playback of NTSC tape from some PAL Video recorders (VCR)
- M.NTSC: Playback from M. NTSC Video recorders (VCR)
- NTSC: Playback from NTSC Video recorders (VCR)

**Display**
- Aspect Ratio: 16:9
- Visible screen size: 147 cm (diagonal)
- Number of pixels: 2,073,600 (1,920 (W) × 1,080 (H)) [5,760 × 1,080 dots]
- Visible screen size: 1,284 mm (W) × 723 mm (H)
- Speaker: Woofer (Φ80 mm) × 2 pcs, Tweeter (23 mm × 100 mm) × 2 pcs
- Audio Output: 31 W (15.5 W + 15.5 W), 10 % THD
- Headphones: M3 (3.5 mm) stereo mini Jack × 1

**PC signals**
- VGA, SVGA, XGA
- SXGA ······ (compressed)
- Horizontal scanning frequency 31 - 69 kHz
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- M.NTSC: Playback from M. NTSC Video recorders (VCR)
- NTSC: Playback from NTSC Video recorders (VCR)

**Aerial - Rear**
- Standard Belling & Lee connector

**Operating Conditions**
- Temperature: 0 °C - 35 °C
- Humidity: 20 % - 80 % RH (non-condensing)

**Connection Terminals**

<table>
<thead>
<tr>
<th>Connection</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AV1 Input</strong></td>
<td>AUDIO L - R</td>
<td>RCA PIN Type × 2</td>
</tr>
<tr>
<td></td>
<td>VIDEO</td>
<td>RCA PIN Type × 1</td>
</tr>
<tr>
<td></td>
<td>S VIDEO</td>
<td>Mini DIN 4-pin</td>
</tr>
<tr>
<td><strong>AV2 Input</strong></td>
<td>AUDIO L - R</td>
<td>RCA PIN Type × 2</td>
</tr>
<tr>
<td></td>
<td>VIDEO</td>
<td>RCA PIN Type × 1</td>
</tr>
<tr>
<td></td>
<td>COMPONENT</td>
<td>Y, Pb/Cb, Pr/Cr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.0 V[p-p] (including synchronization)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>±0.35 V[p-p]</td>
</tr>
<tr>
<td><strong>AV3 Input</strong></td>
<td>AUDIO L - R</td>
<td>RCA PIN Type × 2</td>
</tr>
<tr>
<td></td>
<td>VIDEO</td>
<td>RCA PIN Type × 1</td>
</tr>
<tr>
<td></td>
<td>COMPONENT</td>
<td>Y, Pb/Cb, Pr/Cr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.0 V[p-p] (including synchronization)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>±0.35 V[p-p]</td>
</tr>
<tr>
<td><strong>AV4 Input</strong></td>
<td>AUDIO L - R</td>
<td>RCA PIN Type × 2</td>
</tr>
<tr>
<td></td>
<td>VIDEO</td>
<td>RCA PIN Type × 1</td>
</tr>
<tr>
<td></td>
<td>S VIDEO</td>
<td>Mini DIN 4-pin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Y: 1.0 V[p-p] (75 Ω) C: 0.286 V[p-p] (75 Ω)</td>
</tr>
<tr>
<td><strong>Monitor Output</strong></td>
<td>AUDIO L - R</td>
<td>RCA PIN Type × 2</td>
</tr>
<tr>
<td></td>
<td>VIDEO</td>
<td>RCA PIN Type × 1</td>
</tr>
<tr>
<td></td>
<td>COMPONENT</td>
<td>Y, Pb/Cb, Pr/Cr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.0 V[p-p]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>±0.35 V[p-p]</td>
</tr>
<tr>
<td><strong>Others</strong></td>
<td>HDMI1 / 2 / 3 Input</td>
<td>TYPE A Connectors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This TV supports “HDAVI Control 2” function</td>
</tr>
<tr>
<td><strong>PC Input</strong></td>
<td>HIGH-DENSITY D-SUB 15PIN</td>
<td>R, G, B/0.7 V[p-p] (75 Ω)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HD, VD/TTL Level 2.0 - 5.0 V[p-p] (high impedance)</td>
</tr>
<tr>
<td><strong>Audio Input</strong></td>
<td>RCA PIN Type × 2</td>
<td>0.5 V[m][rs]</td>
</tr>
<tr>
<td><strong>DIGITAL AUDIO OUT</strong></td>
<td>PCM / Dolby Digital, Fiber optic</td>
<td></td>
</tr>
<tr>
<td><strong>Card slot</strong></td>
<td>SD CARD slot × 1</td>
<td></td>
</tr>
</tbody>
</table>

**Dimensions (W × H × D )**
- 1,454 mm × 918 mm × 144 mm

**Mass**
- 64.0 kg Net

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**Note**

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

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

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

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**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>

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