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

Model Number

Serial Number

Panasonic Corporation
Web Site: http://panasonic.net/
© Panasonic Corporation 2009

Printed in Japan
PBS0709H0
Thank you for purchasing this Panasonic product.
Please read these instructions before operating your set and retain them for future reference.
The images shown in this manual are for illustrative purposes only.
Turn your own living room into a movie theatre!

Experience an amazing level of multi-

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

Notice about Digital TV Functions

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

February 2009
media excitement

Enjoy rich multimedia

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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.
- Ensure the earth 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 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 the lead.
- Do not use a damaged mains plug or socket outlet.

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

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

### 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.

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

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

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

### Use only the dedicated pedestals / mounting equipment
- Using an unapproved pedestal or other fixtures may make the display unit unstable, risking injury. Be sure to ask your local Panasonic dealer to perform setup.
- Use approved pedestals / mounts (p. 8).

### 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.

### Radio waves
- Do not place this TV in any medical institutions or locations with medical devices. Radio waves from this TV may interfere with the medical devices and cause accidents due to the malfunction.
- Do not use this TV near any automatic control devices such as automatic doors or fire alarms. Radio waves from this TV may interfere with the automatic control devices and cause accidents due to the malfunction.
- Keep the RF remote control, tuner box and wireless unit away at least 22 cm from the location where a cardiac pacemaker is implanted. Radio waves from this TV may interfere with the operation of the pacemaker.
- Do not disassemble RF remote control, tuner box or wireless unit. It may cause troubles such as difficulties in communication.

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

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

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

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

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

**Allow sufficient space around the display unit for radiated heat**

<table>
<thead>
<tr>
<th>Minimum distance</th>
<th>(cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
</tr>
</tbody>
</table>

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

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

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

**Display panel is made of glass. Do not apply strong force or impact to the display panel.**
- This may cause damage resulting in injury.

**The display unit is heavy. Handle the display unit by 2 or more people. Support as shown to avoid injury by the display unit tipping or falling.**
- When the wireless receiver is attached, avoid holding over it.

**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.
- The TV will automatically go to Standby mode if there are no signal and no operation between the display unit and the tuner box for a while.
- Tuner Box - after 1 minute
- Display Unit - after 10 minutes

**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.

**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**
- Programme 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. 55)
Maintenance

First, remove the mains plug from the socket outlet.

**Display panel**

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

**Caution**

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

**Cabinet, Pedestal, Tuner Box**

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

**Caution**

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

**Mains plug**

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

**Wireless Unit (Receiver and Transmitter)**

Wipe the glossy surface of the receiver and the transmitter gently with the cleaning cloth (included).

**Options**

**Optional accessories**

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.

Wall-hanging bracket

TY-WK5P1SW

Rear of the Display Unit

- a: 516 mm / b: 300 mm

**Caution**

- In order to maintain the TV’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 wall-hanging bracket, and be absolutely sure to take steps to prevent the display unit from falling off.
- Handle the display unit carefully during installation since subjecting it to impact or other forces may cause product damage.
- Take care when fixing wall brackets to the wall. Always ensure that there are no electrical cables or pipes in the wall before hanging bracket.
- To prevent fall and injury, remove the display unit from its fixed wall position when it is no longer in use.
# Accessories

## Standard accessories

Check if you have the accessories and items shown.

- **Display Unit**
  - TH-P54Z1AM

- **Remote control**
  - N2QBYB000006

- **Batteries for the Remote control (2)**
  - R6 (AA)

- **Cleaning cloth**

- **HDMI cable**
  - K1HY19YY0004

- **Tuner Box**
  - TU-Z100AR
  - p. 12 and p. 13

- **Wireless Unit (Receiver and Transmitter)**
  - TU-WH1A
  - p. 13

- **Speaker installation kit**
  - TXFKR01DKUA
  - p. 10

- **Operating Instructions with Warranty statement**

### Caution

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

1. Pull open the battery cover.
2. Note the correct polarity (+ or -) and install the batteries.
3. Close the battery cover.

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

Attaching the pedestal

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

Caution
- Do not use any other TV and displays.
- Otherwise the TV may fall over and become damaged, and personal injury may result.
- Do not use the pedestal if it becomes warped or physically damaged.
- If you use the pedestal while it is physically damaged, personal injury may result. Contact your nearest Panasonic dealer immediately.
- During set-up, make sure that all screws are securely tightened.
- If insufficient care is taken to ensure screws are properly tightened during assembly, the pedestal will not be strong enough to support the display unit, and it might fall over and become damaged, and personal injury may result.
- Ensure that the display unit does not fall over.
- If the display unit is knocked or children climb onto the pedestal with the display unit installed, the display unit may fall over and personal injury may result.
- Two or more people are required to install and remove the display unit.
- If two or more people are not present, the display unit may be dropped, and personal injury may result.

Pedestal

- **Base**: TBLA0460
- **Frame**: TBLA0466

Pedestal installation kit

- **Assembly screw (2)** (Silver): XYN8+F30FN
- **Assembly screw (4)** (Black): XSB4+10FNK
- **Assembly screw (4)** (Black): THEL062N
- **Holder cover**: TBLB3416

- M8 × 30
- M4 × 10
- M5 × 25
Assembling the pedestal

1. Remove the cable cover from the frame ⑧.
   • The cable cover will be used again after the pedestal is attached to the display unit.

2. Use the assembly screws C to fasten securely.
   • Make sure that the screws are securely tightened.
   • Be careful not to scratch the surface (part with gloss finish) of the base during assembly.

Securing the Display Unit

1. Slide the pedestal frame posts into the brackets on the rear of the display unit.
2. Use the assembly screws ② to fasten securely.
   • Make sure that the screws are securely tightened.

3. Attach the holder cover ③ with assembly screws ①.
   • Make sure that the screws are securely tightened.

4. Attach the cable cover.
   • Place a cable in the groove as necessary and attach the cable cover. The lower part of the groove is separated in right and left. Use the one suitable for you.
Attaching the Speakers

**Accessories**

**Speaker**
- **Speaker (2)**

**Speaker installation kit**
- **Mounting bracket-[Top] (2)**
  - TXFKR04DLUJ
- **Mounting bracket-[Lower right]**
  - TXFKR02JXUE
- **Mounting bracket-[Lower left]**
  - TXFKR03JXUE
- **Assembly screw**
  - TXFXY01DLUJB
  - (8)
- **Speaker cable (2)**
  - TXJ/SPDKUU-1
  - (8)

1. Use the assembly screws (E-a) to fasten the mounting brackets (B-C) to the rear of the display unit securely.
   - Make sure that the screws are securely tightened.
   **Note**
   - Loosen these screws to adjust the gap between the speaker and the display unit as necessary.

2. Insert the assembly screws (E-b) temporarily in the screw outermost holes of the speaker (A) and place the temporarily inserted screws into the counter sunk holes on the mounting brackets (B-C).

3. Use another two assembly screws (E-b) to fasten the speaker (A) to the mounting brackets (B-C).
Adjust the speaker position and make sure that the assembly screws (E) are securely tightened.

Connect the speaker (A) and the display unit with the speaker cable (F).
- Insert the terminal firmly.
- Connect the terminal near the ferrite core to the display unit.
- Fix the cable with the clamper on the mounting bracket (C).

Note
- Fix the other side speaker in the same way.
- There will be a gap between the display unit and the speaker.
- Do not hold the speaker part to transport the display unit.

Preventing the TV from falling over
This TV could fall over if it's pushed, pulled or knocked down. We therefore recommend the TV is secured to the base as illustrated.
- This measure is designed to reduce the risk of injury from a falling TV. However, it cannot guarantee protection in all cases.

Fall-prevention parts
- TXFKL01JUUJ

Securing to a base
Fix pedestal and base together with band.
Basic Connection

Connecting the Display Unit and the Tuner Box

Please ensure that the display unit and the tuner box are disconnected from the mains sockets before attaching or disconnecting any leads.

**Wired connection**
- If you are going to place the tuner box close to the display unit, it is recommended to connect them using supplied HDMI cable.

**Wireless connection**
You can place the tuner box and the display unit in a flexible way using the wireless unit (not using any cables between the display unit and the tuner box). If you choose to use the wireless connection between the display unit and the tuner box, ensure that the wireless transmitter and the wireless receiver are positioned to face each other without any obstructions.
- The wireless unit uses 60 (59.40 - 61.56) GHz frequency band. Do not use the wireless unit near the equipment using the same frequency band to avoid the interference.
- It may take a while to change the input mode when using the wireless unit. To resolve this, use supplied HDMI cable to connect the display unit and the tuner box.
- Picture and sound may be interrupted or the TV may not be operated properly depending on the setting place of the wireless transmitter or obstacles (furniture, AV equipment, rack, rack door, etc.) between the wireless transmitter and the wireless receiver. To resolve this, change the installation layout without any obstacles between the wireless transmitter and the wireless receiver.

**Transmission range of the Wireless Unit**

- Available area to place the wireless transmitter
- Available area to place the wireless receiver

**Caution**
- Do not place the wireless unit in the following locations to avoid poor signal condition or TV failures.
  - Location subject to be high temperature (near the heater, etc.)
  - Location with poor air circulation (at the end of a closed rack, etc.)
- Keep the wireless unit away from the devices such as wireless LAN, microwaves, mobile phones or other electric equipment to avoid radio wave interference. Otherwise malfunction or slow response may occur.

**Note**
- The range may be shortened depending on the obstacles, the surrounding environment or building structure.
- Ensure the wireless transmitter is facing the wireless receiver.

If the display unit is connected to external equipment other than the supplied tuner box by using HDMI cable, the following icon will be displayed on the screen.

- Some functions may not be available depending on the connected equipment.
Attach the wireless receiver [B] to the display unit with assembly screws [C].
- Insert the top tab into the groove of the display unit, and then insert the front tabs.
- Make sure that the screws are securely tightened.

Connect the wireless receiver [B] and the display unit with exclusive cable [D].

Connect the wireless transmitter [B] and the tuner box [A] with exclusive cable [D].

Bind the cables with cable clamps [E].
Basic Connection

External equipment and cables shown are not supplied with this TV. Please ensure that the tuner box is disconnected from the mains socket before attaching or disconnecting any leads.
● Read the manual of the equipment too.

Connecting the Tuner Box and aerial

- RF cable
- Terrestrial aerial
- Mains lead
- AC 220 - 240 V 50 / 60 Hz

For digital cable, digital terrestrial and analogue broadcasts
Connecting the Tuner Box and 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 tuner box.
- To obtain optimum quality picture and sound, an aerial, the correct cable (75 Ω coaxial) and the correct terminating plug are required.
- If a communal aerial system is used, you may require the correct connection cable and plug between the wall aerial socket and the TV.
- Your local Television Service Centre or dealer may be able to assist you in obtaining the correct aerial system for your particular area and the accessories required.
- Any matters regarding aerial installation, upgrading of existing systems or accessories required, and the costs incurred, are the responsibility of you, the customer.
- VIERA Link connection → p. 44
- Read the manual of the equipment, too.
Identifying Controls

Display Unit

- Power LED
  - Standby: red
  - On: green
  - When using the remote control, indicates the TV has received a command.

- C.A.T.S. (Contrast Automatic Tracking System) sensor
  - Senses brightness to adjust picture quality when “Eco Mode” in the Picture Menu is set to “On” (p. 30)

- Remote control signal receiver
  - Do not place any objects between the TV remote control signal receiver and remote control.

- Function select
  - Volume / Contrast / Brightness / Colour / Sharpness / Tint (NTSC mode) / Bass / Treble / Balance / Auto Tuning (p. 30 and p. 31)
  - Remote Pairing (p. 19)

- Volume Up / Down

- Mains power On / Off switch
  - Turn the display unit On or Off. When turning Off the display unit, tuner box will also be turned to Standby mode after 1 min.

- Standby switch
  - Turn the tuner box on or off to standby mode

- Change the channel up/down. When a function is displayed, press up/down to adjust the setting of the selected function. When in standby mode, switches TV on.

- C.A.T.S. (Contrast Automatic Tracking System) sensor
  - Senses brightness to adjust picture quality when “Eco Mode” in the Picture Menu is set to “On” (p. 30)

Tuner Box

- Power LED
  - Standby: red
  - On: green
  - When using the remote control, indicates the TV has received a command.

- Function select
  - Volume / Contrast / Brightness / Colour / Sharpness / Tint (NTSC mode) / Bass / Treble / Balance / Auto Tuning (p. 30 and p. 31)
  - Remote Pairing (p. 19)

- SD Card slot (p. 41)

- AV4 terminals (p. 50)

- HDMI4 terminal (p. 50)

- Changes the input mode

- Headphones jack (p. 50)

- PC terminal (p. 50)

Wireless Unit

Wireless Transmitter

- On and no communication: Red
- On and communication state good: Green
- On and communication state not good: Orange
- Indicates malfunction: Red (blinking)

Wireless Receiver

- On and no communication: Red
- On and communication state good: Green
- Indicates malfunction: Red (blinking)

- When the orange LED is lit, check the connection and transmission range. (p.12 and P.13)
- When the red LED is blinking, turn the power of the tuner box and display unit off and then on again.
  If the problem is not resolved, consult your local Panasonic dealer.
# Remote control

This remote control is RF (Radio Frequency) remote control. Signals are sent in virtually every direction, so that you can operate the TV even if the remote control is not facing the display unit or the tuner box. In addition, as the radio waves reflect on walls or other obstacles, the remote control is operable even there are obstacles between the remote control and the tuner box.

- This remote control uses 2.4 GHz frequency band.

### Quick Start Guide

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<th>Function</th>
</tr>
</thead>
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<tr>
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</tr>
<tr>
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</tr>
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<tr>
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</tr>
<tr>
<td>Sound Mute</td>
<td>Switches sound mute On or Off</td>
</tr>
<tr>
<td>Volume Up / Down</td>
<td></td>
</tr>
</tbody>
</table>

### Transmission range

Use the RF remote control within the range of 7 m from the tuner box. The range may be shortened depending on the obstacles, the surrounding environment or building structure.

- Caution

Keep the remote control away from the devices such as wireless LAN, microwaves, mobile phones or other electric equipment to avoid radio wave interference. Otherwise malfunction or slow response may occur.
Auto Tuning

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

- Please complete preparations and setup of all units before starting Auto Tuning. (p. 8 - 13)
- Please complete connections (p. 14 and p. 15) and settings (if necessary) of the connected equipment before starting Auto Tuning. For details of settings for the connected equipment, read the manual of the equipment.

1. Plug the display unit and tuner box into mains socket, and turn on the display unit
   - It takes a few seconds to start.

2. Pair the remote control with the TV
   - Press “OK” and “1” simultaneously for more than 3 seconds to make the remote control usable.
   - You can pair the remote control again after Auto Tuning.
   - “Pairing Remote Control” (p. 19)

3. Select your area
   - Select State / Territory
     - New South Wales / Australian Capital Territory
     - Queensland
     - South Australia
     - Tasmania
     - Victoria
     - Western Australia

4. Select Auto Scan Type
   - Auto Scan Type
     - All Channels
     - Digital TV Channels only

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

6. Select the viewing environment
   - “Home” is the recommended mode for viewing at home. Select “Home” for optimal picture / power consumption.
   - “Shop” is for in-store display.
   - Home: “Viewing Mode” is set as “Normal”. (p. 30)
   - Shop: “Viewing Mode” is set as “Dynamic”. (p. 30)

If you select “Shop” by mistake
Return to the “Home” or “Shop” Selection menu

If you select “Shop” by mistake
Return to the “Home” or “Shop” Selection menu

If you select “Shop” by mistake
Return to the “Home” or “Shop” Selection menu

Once you press the OK button in this menu, the TV is set to Shop mode. Please reset all settings to set to “Home” mode.
⇒ “Shipping Condition” (p. 38)
Using the On-Screen Displays

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

ON SCREEN HELP Instructions box (example: Sound Menu)

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<tr>
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<th>Music</th>
<th></th>
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<td></td>
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<tr>
<td>Balance</td>
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<td>Headphone Volume</td>
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<td></td>
</tr>
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<td>0</td>
<td></td>
</tr>
<tr>
<td>Speaker Distance to Wall</td>
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<td></td>
</tr>
<tr>
<td>Reset Sound Defaults</td>
<td>Reset</td>
<td></td>
</tr>
</tbody>
</table>

How to use remote control

- Press the button on the tuner box repeatedly until “Remote Pairing” menu is displayed.
- Press both “OK” and “1” button for about 3 seconds until this screen will disappear.

Note
- Performing “Shipping Condition” (p. 38) erases all the registered pairing data.

Pairing Remote Control

You can pair the remote control with the TV again after Auto Tuning (p. 18).

Use this function if you change or add the remote control.

- Up to five remote controls can be used at the same time.

1. Display “Remote Pairing” menu
   - Press the button on the tuner box repeatedly until “Remote Pairing” menu is displayed.

2. Select “Yes”
   - TV

3. Register the remote control
   - Press “OK” and “1” buttons simultaneously at least 3 seconds.

Note
- You can pair the remote control with the TV again after Auto Tuning (p. 18).
- Use this function if you change or add the remote control.
- Up to five remote controls can be used at the same time.
Watching TV

1. Turn power on
   - Mains power On / Off switch of the display unit should be On. (p. 16)

2. Select Digital TV or Analogue TV mode
   - Information banner appears whenever you select a channel.
   - Also possible to select the mode pressing the TV button repeatedly on the remote control or the TV button on the front of the tuner box. (p. 16)

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

Select a channel using information banner (p. 21)
   - Possible to confirm the programme name before selecting channels.
   - Display information banner if it is not displayed
     INFO
   - Possible to set display timeout in “Banner Display Timeout” (p. 31).

Select a channel using TV Guide (Digital TV mode) (p. 23)
   - Possible to confirm the TV Guide (EPG) before selecting channels.

Other useful functions

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

Off Timer

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

- To cancel ➔ Set to “Off” or turn the TV off.
- To display the remaining time ➔ Information banner
- When the remaining time is within 3 minutes, the remaining time will flash on screen.
Other useful functions

### Display information banner

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

**Display information banner**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Button</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>To confirm another tuned channel name</td>
<td></td>
<td>![Banner Display Timeout](p. 31)</td>
</tr>
<tr>
<td>To watch the programme listed in the banner</td>
<td>![Watch Banner](p. 31)</td>
<td>![Watch Banner](p. 31)</td>
</tr>
<tr>
<td>To select a favourite list (Digital TV mode)</td>
<td>![Select Favourites](p. 31)</td>
<td>![Select Favourites](p. 31)</td>
</tr>
<tr>
<td>Information on the next programme (Digital TV mode)</td>
<td>![Next Programme](p. 31)</td>
<td>![Next Programme](p. 31)</td>
</tr>
<tr>
<td>Features available / Message meanings</td>
<td>![Features Available](p. 31)</td>
<td>![Features Available](p. 31)</td>
</tr>
</tbody>
</table>

#### Sound mute On

- **Bad signal**
  - Poor TV signal quality
  - Teletext service available

#### Audio mode (p. 52)

- **Encrypted**
  - Scrambled programme
  - Multiple audio available

#### Rating:

- **Rating information**
  - Subtitle service available 1 - 90
  - Off Timer remaining time

**TO watch the programme listed in the banner**

**EXIT**

**To hide**

**INFO**

**To set display timeout**

**“Banner Display Timeout” (p. 31)**

**Extra information**

**press again to hide the banner**

**Digital TV mode**

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

- **Check or change the current programme status instantly**

<table>
<thead>
<tr>
<th>Audio Selection (Digital TV mode)</th>
<th>Volume Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allows you to select between alternative language for sound tracks (if available)</td>
<td>Adjusts volume of individual programme or input mode</td>
</tr>
<tr>
<td><strong>MPX (Analogue TV mode)</strong></td>
<td>![MPX](p. 30)</td>
</tr>
<tr>
<td>➤ Sound Menu (p. 30)</td>
<td></td>
</tr>
</tbody>
</table>

**Note**

- Also possible to change the settings in Menu list (p. 30 and p. 31).
Watching TV

Other useful functions

### Change aspect ratio

**ASPECT**

**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**
- **Press repeatedly until you reach the desired mode**

**ASPECT**

- **Directly displays the image at “16:9” without distortion (anamorphic).**
- **Displays the image at the standard “14:9” without distortion.**
- **Displays a “4:3” image enlarged horizontally to fit the screen.**
- **Displays a “4:3” image full-screen without distortion.**
- **Displays a “4:3” letterbox (anamorphic) image full-screen without distortion.**
- **Displays a “2.35:1” letterbox (anamorphic) image full-screen without distortion.**
- **At “16:9”, displays the image at its maximum (with slight enlargement).**

**Note**

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

### Multi window

**PIP**

**View in multi window** (p. 53)

- Remote control operations apply to the main screen.

Enjoy viewing two images at once, such as a TV programme and a DVD.

**Picture-in-Picture mode (PinP)**

**Picture-and-Picture mode (PandP)**

**Operations in multi window**

- To exit multi window (return to the single-screen view with main screen)
- To change the layout or images, first show the colour bar
- To change the layout
- To change the input mode of sub screen
- Swap sub screen for main screen
- Change the input mode with the remote control (p. 26)
- Swap again
Using TV Guide

Using TV Guide enables you to select programme easily, view programme 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).

View TV Guide

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

To the previous day ➤ R ➤ G
To the next day ➤ G ➤ R
To watch the programme

select ➤ OK

To view details of the programme
Select the programme

select ➤ INFO

Press again to return to TV Guide.

To view a channel list of the selected favourite list

select a favourite list ➤ OK ➤ view

To list favourite channels ➤ p. 35

To view a channel list of the selected type

select type ➤ OK ➤ view

Note

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

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

To change mode ⇒ “Teletext” in Setup Menu (p. 31)

1 Switch to Teletext

- Displays Index (content varies depending on the broadcasters)

2 Select the page (up to page 899)

- To adjust contrast
  ⇒ (Press three times) As the blue bar is displayed

- To return to TV ⇒ or

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

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

Available page up / down ⇒

To select among subject blocks ⇒

To select next subject within the subject block
(After the last subject, it moves to the next subject block.) ⇒

What is List mode?
In List mode, four differently coloured page numbers are situated at the bottom of the screen. Each of these numbers can be altered and stored in the TV’s memory. (“Store frequently viewed pages”, p. 25)

Using teletext conveniently

<table>
<thead>
<tr>
<th>Hold</th>
<th>Reveal hidden data</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOLD</td>
<td></td>
</tr>
</tbody>
</table>
| Stop automatic updating
(If you wish to hold the current page without updating) | MENU |
| To resume ⇒ HOLD |

<table>
<thead>
<tr>
<th>INDEX</th>
<th>Call up Subtitles</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDEX</td>
<td></td>
</tr>
<tr>
<td>Return to the main index page</td>
<td>STTL</td>
</tr>
<tr>
<td></td>
<td>Display subtitles</td>
</tr>
<tr>
<td></td>
<td>● Call up P801 (subtitle page) if available.</td>
</tr>
<tr>
<td></td>
<td>● If you press this button during P801 is displayed, teletext mode will be cancelled and return to TV.</td>
</tr>
</tbody>
</table>
Using teletext conveniently

**View in multiwindow**

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

- Select teletext only or picture / teletext.
- Operations can be made only in Teletext screen.

**FULL / TOP / BOTTOM**

- Menu (Press twice) → (TOP)  
- If the TV is on, the TV picture will appear on the top.

**Store frequently viewed pages**

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

- Corresponding colour button (As page is displayed)

- To change stored pages

- Colour button you want to change → Enter new page number → OK press and hold

**View sub page**

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

**To view specific sub page**

- Example: P6

**Watch TV while waiting for update**

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

- Teletext automatically updates itself when new information becomes available.

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

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

To connect the equipment p. 15
You can operate some functions of selected Panasonic external equipment with this remote control.

1. Display the input selection menu

2. Select the input mode of the connected equipment

3. View

Displays the selected mode

Note

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

<table>
<thead>
<tr>
<th>BD/DVD, TV</th>
<th>BD/DVD / TV switch*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Switch to BD/DVD to operate Panasonic DVD Recorder, DVD Player, Player theatre, Blu-ray Disc theatre or VCR</td>
</tr>
<tr>
<td></td>
<td>Radio frequency function (p. 17) is not available when you select “BD/DVD”.</td>
</tr>
<tr>
<td></td>
<td>Point the remote control at the connected equipment to operate.</td>
</tr>
<tr>
<td></td>
<td>Switch to TV to operate VIERA Link equipment</td>
</tr>
<tr>
<td></td>
<td>⇒ “VIERA Link Control” (p. 47)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POWER</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Set to Standby mode / Turn on</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Play</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Playback videocassette / DVD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Stop</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stop the operations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rewind / Skip / Search</th>
<th>VCR: Rewind, view the picture rapidly in reverse</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVD: Skip to the previous track or title</td>
<td></td>
</tr>
<tr>
<td>Press and hold to search backward</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fast-forward / Skip / Search</th>
<th>VCR: Fast-forward, view the picture rapidly forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVD: Skip to the next track or title</td>
<td></td>
</tr>
<tr>
<td>Press and hold to search forward</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROGRAMME</th>
<th>Programme Up / Down</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select programme</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REC</th>
<th>Record</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Start recording</td>
</tr>
</tbody>
</table>

*Setting your remote control to operate the Panasonic equipment

1. Switch to BD/DVD ➔ BD/DVD, TV
2. Press and hold POWER during the following operations

Enter the appropriate code
See table below

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

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

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

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

2. Select the menu
   - Select the menu

3. Select the item
   - Access the menu

4. Adjust or select
   - Change the setting

Choose from among alternatives
Number and positions of alternatives

<table>
<thead>
<tr>
<th>Colour Balance</th>
<th>Normal</th>
<th>Changed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharpness</td>
<td>50</td>
<td>Moved</td>
</tr>
</tbody>
</table>

Adjust using the slide bar

<table>
<thead>
<tr>
<th>Viewing Mode</th>
<th>Normal</th>
<th>Viewing Mode</th>
<th>Contrast</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brightness</td>
<td>50</td>
<td>Brightness</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>50</td>
<td>Colour</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Sharpness</td>
<td>50</td>
<td>Sharpness</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Tint</td>
<td>0</td>
<td>Tint</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Colour Balance</td>
<td>Normal</td>
<td>Colour Balance</td>
<td>Normal</td>
<td></td>
</tr>
<tr>
<td>Colour Management</td>
<td>On</td>
<td>Colour Management</td>
<td>On</td>
<td></td>
</tr>
<tr>
<td>x, y, Colour</td>
<td>Auto</td>
<td>x, y, Colour</td>
<td>Auto</td>
<td></td>
</tr>
</tbody>
</table>

Go to the next screen

Displays the next screen

Enter characters by free input menu

- To delete a character
- To delete all characters

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

See the table below for the corresponding characters for each numeric button.

<table>
<thead>
<tr>
<th>Numeric buttons</th>
<th>Characters</th>
<th>Numeric buttons</th>
<th>Characters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 ! : # + - ( )</td>
<td>6</td>
<td>m n o 6 MNO</td>
</tr>
<tr>
<td>2</td>
<td>a b c 2 A B C</td>
<td>7</td>
<td>p q r s 7 P Q R S</td>
</tr>
<tr>
<td>3</td>
<td>d e f 3 D E F</td>
<td>8</td>
<td>t u v 8 T U V</td>
</tr>
<tr>
<td>4</td>
<td>g h i 4 G H I</td>
<td>9</td>
<td>w x y z 9 W X Y Z</td>
</tr>
<tr>
<td>5</td>
<td>j k l 5 J K L</td>
<td>0</td>
<td>Space 0</td>
</tr>
</tbody>
</table>
Overview

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>
</table>
| **Picture**       | **Viewing Mode**                          | Basic picture mode *(Dynamic / Normal / Cinema / THX / Game)*  
Dynamic: Provides enhanced picture contrast and sharpness when viewing in a bright room  
Normal: Recommended for viewing under normal ambient light conditions  
Cinema: Provides the ultimate image quality and cinematic experience at home  
Game: Game playing time is displayed only when connecting a game equipment.  
  ● Set for each input signal. |
|                    | **Contrast, Brightness, Colour, Sharpness** | Increases or decreases the levels of these options according to your personal preference.  
Tint: With an NTSC signal source connected to the TV, the picture hue can be adjusted to suit your taste.  
  ● For NTSC or Component / HDMI input signal reception only |
|                    | **Colour Balance**                        | Allows you to set the overall colour tone of the picture *(Cool / Normal / Warm)*  
  ● Not valid when the viewing mode is set to THX |
|                    | **Colour Management**                     | Automatically adjusts colours to vivid ones *(Off / On)*  
  ● Not valid on PC signal |
|                    | **x.v.Colour**                            | Increases the colour gradations *(Off / Auto)*  
This is effective when watching HD moving pictures with extended gamut (xvYCC) from external equipment.  
  ● HDMI input mode or Movie View mode only  
  ● Not valid when the viewing mode is set to THX |
|                    | **Eco Mode**                              | Adjusts picture settings automatically dependent on ambient lighting conditions *(Off / On)*  
P-NR: Picture Noise Reduction  
  ● Automatically reduces unwanted picture noise and flicker noise in the contoured parts of a picture *(Off / Min / Mid / Max)*  
  ● Not valid on PC signal |
|                    | **3D-COMB**                               | Occasionally, whilst viewing still or slow moving pictures, colour patterning may be seen.  
Set to “On” to display sharper and more accurate colours. *(Off / On)*  
  ● For PAL or NTSC signal reception only  
  ● Not valid on S-Video, Component, PC, HDMI and SD Card |
|                    | **Multi Window**                          | Splits the screen into two windows. *(p. 22)*  
Advanced Settings: Set for colour balance, view and position. *(p. 39)*  
Set for colour balance in Normal, Cinema or THX viewing mode. |
|                    | **Reset Picture Defaults**                | Press the OK button to reset the present Picture Menu to the default settings. |
| **Sound**         | **Mode**                                  | Basic sound mode *(Music / Speech)*  
  ● Set for each input signal. |
|                    | **Bass**                                  | Increases or decreases level to enhance or minimise lower, deeper sound output |
|                    | **Treble**                                | Increases or decreases level to enhance or minimise sharper, higher sound output |
|                    | **Balance**                              | Adjusts volume level of right and left speakers |
|                    | **Headphone Volume**                      | Adjusts the volume of the headphones |
|                    | **Surround**                              | Surround sound settings *(Off / V-Audio / V-Audio Surround / V-Audio ProSurround)*  
V-Audio: Provides a dynamic enhancer to simulate improved spatial effects  
V-Audio Surround: Provides a dynamic enhancer of width and depth to simulate improved spatial effects  
V-Audio ProSurround: Provides a three-dimensional sound space with digital reverb effects  
  ● Switching is also possible by the Surround button on the remote control. *(p. 17)* |
|                    | **Volume Correction**                     | Adjusts volume of individual channel or input mode |
|                    | **Speaker Distance to Wall**              | Adjusts the low frequency sound *(Over 30cm / Up to 30cm)*  
  ● Over 30cm: Recommended when the back space between the display unit and wall is over 30 cm  
  ● Up to 30cm: Recommended when the back space between the display unit and wall is within 30 cm |
|                    | **MPX**                                  | Selects stereo / monaural *(Mono / Stereo)* *(p. 52)*  
  ● Normally: Stereo  
  ● Stereo signal cannot be received: Mono  
  ● M1 / M2: Available while mono signal is transmitted  
  ● Analogue TV mode only |
|                    | **Digital Audio Preference**              | Selects the initial setting for Audio tracks *(Dolby D / MPEG)*  
If programme has both Dolby Digital and MPEG audio tracks, priority is given to what you select.  
Dolby D:A method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2ch) audio, these signals can also be multi-channel audio.  
MPEG: An audio compression method that compresses audio to small size without any considerable loss of audio quality.  
  ● Digital TV mode only |
|                    | **SPDIF Selection**                      | Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT terminal *(Auto / PCM)*  
Auto: Dolby Digital is output as Dolby Digital Bitstream. MPEG is output as PCM.  
PCM: Dolby Digital is output as PCM. MPEG is output as PCM.  
  ● Digital TV mode only |
<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments / Configurations (alternatives)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sound</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MPEG Optical Level</td>
<td>You can adjust the audio level of MPEG output from DIGITAL AUDIO OUTPUT 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>*Digital TV mode only</td>
</tr>
<tr>
<td></td>
<td>HDMI1 / 4 Input</td>
<td>Select to fit the input signal. (Digital / Analogue) (p. 40)</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 / 3 terminals are for digital signal only</td>
</tr>
<tr>
<td></td>
<td>Reset Sound Defaults</td>
<td>Press the OK button to reset the present Sound Menu to the default settings.</td>
</tr>
<tr>
<td><strong>Tuning Menu</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Favourites Edit</td>
<td>Creates list of favourite channels (Digital TV mode) (p. 35)</td>
</tr>
<tr>
<td></td>
<td>Channel List</td>
<td>Skips the unwanted channels (p. 35)</td>
</tr>
<tr>
<td></td>
<td>Auto Tuning</td>
<td>Sets all Digital TV or Analogue TV channels automatically (p. 36)</td>
</tr>
<tr>
<td></td>
<td>Manual Tuning</td>
<td>Sets the TV channels manually (p. 37)</td>
</tr>
<tr>
<td></td>
<td>Update Channel List</td>
<td>Update the channel list. (Digital TV mode) (p. 37)</td>
</tr>
<tr>
<td></td>
<td>New Channel Message</td>
<td>Displays a message when new Digital TV channels are found. (Off / On) (p. 37)</td>
</tr>
<tr>
<td></td>
<td>Signal Condition</td>
<td>Checks the Digital TV signal condition (p. 37)</td>
</tr>
<tr>
<td></td>
<td>Add MPEG-4 AVC Channels</td>
<td>Activates the reception of MPEG-2 and MPEG-4 AVC channels</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Use this function if MPEG-4 AVC services start in your area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*All previous tuning settings are erased.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Once activated, this option is removed from the Digital TV Tuning Menu.</td>
</tr>
<tr>
<td><strong>Display Settings</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teletext</td>
<td>Teletext display mode (TOP (FASTEXT) / List) (p. 24)</td>
</tr>
<tr>
<td></td>
<td>Side Panel</td>
<td>Increases the brightness of the side panel (Off / Low / Mid / High)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*The recommended setting is “High” to prevent panel “image retention”.</td>
</tr>
<tr>
<td></td>
<td>Input Labels</td>
<td>Labels or skips each input mode (p. 32)</td>
</tr>
<tr>
<td></td>
<td>Banner Display Timeout</td>
<td>Sets how long the information banner stays on screen from 0 (No display) to 10 sec. in 1-sec. increments</td>
</tr>
<tr>
<td></td>
<td>Playing Time Display</td>
<td>Displays the length of time in every thirty minutes for playing game (Off / On)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*When “Viewing Mode” is set to “Game”</td>
</tr>
<tr>
<td></td>
<td>VIERA Link</td>
<td>Sets to use VIERA Link functions (Off / On)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*RIERA Link functions become available when “VIERA Link” is set to “On”. (p. 45)</td>
</tr>
<tr>
<td></td>
<td>Power on Link</td>
<td>Sets to use Power on Link functions (Off / On)</td>
</tr>
<tr>
<td></td>
<td>Power off Link</td>
<td>Sets to use Power off Link functions (Off / On)</td>
</tr>
<tr>
<td></td>
<td>Standby Power Save</td>
<td>Controls the power consumption in Standby mode of the connected equipment to reduce the power consumption (Off / On) (p. 45)</td>
</tr>
<tr>
<td></td>
<td>Intelligent Auto Standby</td>
<td>Makes unwatched or unused connected equipment go into Standby mode to reduce the power consumption (Off / On (With reminder) / On (No reminder)) (p. 45)</td>
</tr>
<tr>
<td><strong>System menu</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shipping Condition</td>
<td>Resets all settings to the original condition (p. 38)</td>
</tr>
<tr>
<td></td>
<td>System Update</td>
<td>Downloads new software to TV (p. 33)</td>
</tr>
<tr>
<td></td>
<td>Software Licence</td>
<td>Displays the software licence information</td>
</tr>
<tr>
<td></td>
<td>System Information</td>
<td>Displays the system information of this TV</td>
</tr>
<tr>
<td></td>
<td>Intelligent Frame Creation</td>
<td>Automatically compensates the picture frame rate to make the image smooth (Off / On)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Set to “Off” if noise is generated on the screen.</td>
</tr>
<tr>
<td></td>
<td>24p Smooth Film</td>
<td>Automatically compensates the picture frame rate to make the image smooth (Off / Mid / Max)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*24p signal input only</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Set to “Off” if noise is generated on the screen.</td>
</tr>
<tr>
<td></td>
<td>Power Save</td>
<td>Reduces brightness of picture to minimise power consumption (Off / On)</td>
</tr>
<tr>
<td></td>
<td>Picture Overscan</td>
<td>Selects the screen area for displaying the image (Off / On)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*On: Enlarges the image to hide the edge of the image</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Off: Displays the image in the original size</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Set to “On” if noise is generated on the edges of the image.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*This function is available when aspect is set to &quot;16:9&quot;</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>SD Card LED</td>
<td>Lights blue LED while SD Card is inserted (Off / On)</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. 21)</td>
</tr>
<tr>
<td></td>
<td>Daylight Saving Time</td>
<td>Select time offset from the standard time for Summer Time. (Auto / Off / +1/2 hour / +1 hour) (p. 21)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Set to “Auto” normally.</td>
</tr>
</tbody>
</table>

*A different menu will be displayed while PC, DVI to HDMI adapter cable or SD Card is used. (p. 39 - 43)

*Only available items can be selected.
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. (p. 26)

1. Display the menu
   - MENU

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

3. Select “Display Settings”
   - Setup Menu
     - Off Timer
     - Digital TV Tuning Menu
     - Display Settings
     - VIERA Link Settings
     - System Menu
     - Other Settings

4. Select “Input Labels”
   - Display Settings
     - Teletext
     - Side Panel
     - Input Labels
     - Banner Display Timeout
     - Display Time Display

5. Select an input terminal and set
   - Input Labels
     - AV1
     - AV2
     - AV3
     - AV4
     - PC
     - HDMI1
     - HDMI2
     - HDMI3
     - HDMI4

   The labels you set will be displayed in “Input Selection” menu (p. 26) or banner.
   ● If “Skip” is selected, you cannot select the mode.

User input
You can name each input terminals freely.

Select “User input”
(maximum: ten characters)
You can set characters by using numeric buttons.  &_p. 28
Digital TV Settings

Digital TV Settings provide access to various advanced features.

1. If in Analogue TV mode
   Select Digital TV mode
   TV

2. Display the menu
   MENU

3. Select “Setup”

4. Select “System Menu”

5. Select “System Update”

6. Set

---

Update TV’s software system

Download new software to TV.
For details p. 52

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. 52) 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.
Editing Channels

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

1. Select Digital TV or Analogue TV

2. Display the menu

3. Select “Setup”

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

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

6. Set

To return to TV ➩
List favourite channels (Digital TV mode) | Favourites Edit

Create your favourite channel list (Favourites) from various broadcasters (up to 4: Favourites 1 to 4). The list is added to “Favourites” list in TV Guide (p. 23) and information banner (p. 21) and then easily accessed.

Select a channel and add it to the list

To edit List

Select the field of List to edit and:

To name the Favourites

To move the channel

To delete the channel

Note

Channel numbers are defined by the broadcaster and cannot be changed.
Hidden channels (see below) can be selected but not viewed.

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

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

Select a channel and add / delete

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

Select a channel to edit

Edit

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

To move channel position

To swap channels

You can set characters by using numeric buttons. p. 28

You can set characters by using numeric buttons. p. 28

You can set characters by using numeric buttons. p. 28

You can set characters by using numeric buttons. p. 28
**Tuning Channels**

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

1. **Select Digital TV or Analogue TV**
   - TV

2. **Display the menu**
   - MENU

3. **Select “Setup”**
   - Main Menu
     - Picture
     - Sound
     - Setup

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

5. **Select a function**
   - Digital TV Tuning Menu
     - Favourites Edit
     - Clear List
     - Auto Tuning
     - Manual Tuning
     - Update Channel List
     - New Channel Message
     - Signal Condition
     - Favourites Edit

6. **Set**

---

**To return to TV**

For Auto Tuning, using the buttons on the front of the tuner box (p. 16)

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

**Digital TV Auto Tuning or Analogue TV Auto Tuning**

Automatically retune all Digital TV or Analogue TV channels received in the area.

- Only Digital TV channels are retuned in Digital TV mode.
- Only Analogue TV channels are retuned in Analogue TV mode.

**Start Auto Tuning**

- All digital TV tuning data will be erased

**Settings are made automatically**

- All the previous tuning settings are erased.
- When the operation is completed, the channel at channel position “1” will be displayed.
- Search begins in the order from the lower channels to the higher channels. Channels received during this process are added to the list. (p. 37)
- If tuning has not been done completely ⇒ “Digital TV Manual Tuning”, “Analogue TV Manual Tuning” (p. 37)
Set Digital TV channel manually [Digital TV Manual Tuning]

Normally use “Digital TV Auto Tuning” or “Update Channel List” to update Digital TV channels on your channel list. If tuning has not been done completely or for adjusting the direction of the aerial, use this function.

① select physical channel
② adjust frequency (set where the level of “Signal Quality” becomes the maximum)
③ search

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

Set Analogue TV channel manually [Analogue TV Manual Tuning]

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

Update channels automatically [Update Channel List]

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

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

Display a message [New Channel Message]

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

Check Digital TV signal [Digital TV Signal Condition]

Selects a channel and checks the Digital TV signal condition.

● To change the channel

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

Signal Quality:
● Green bar ➔ Good
● Yellow bar ➔ Poor
● Red bar ➔ Bad (Check the aerial)
Restore Settings (Shipping Condition)

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 “System Menu”

4. Select “Shipping Condition”

5. Set

To return to TV ➔

Check the message and reset

Shipping Condition
All tuning data will be erased
Are you sure?
Are you sure?

Follow the on-screen instructions

Reset to Factory Shipping Condition Completed.
Please disconnect the mains lead of the tuner unit from the socket outlet.

*“Auto Tuning” will automatically start when mains plug of the tuner box is reconnected to the socket outlet. (p. 16)

To retune TV channels only, e.g. after moving house
*“Digital TV Auto Tuning” or “Analogue TV Auto Tuning” (p. 36)
## 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.

### Select the external input
1. AV

### Select “PC”
1. access
2. select

- Corresponding signals: p. 54
- If “H-freq.” or “V-freq.” is shown in red, the signals may not be supported.

---

### PC menu setting (changed as desired)

<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments / Configurations (options)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Picture</strong></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>(S Curve / 2.0 / 2.2 / 2.5)</td>
</tr>
<tr>
<td>Reset Advanced Settings</td>
<td>Press the OK button to reset to the default Picture settings</td>
<td></td>
</tr>
</tbody>
</table>

| **Setup** | Input Resolution | Switches to a wide view
- VGA (640 × 480 pixels), WVGA (852 × 480 pixels),
- XGA (1,024 × 768 pixels), WXGA (1,280 × 768 pixels, 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 Λ p. 30 and p. 31*
HDMI Functions

HDMI (high-definition multimedia interface) allows you to enjoy high-definition digital images and high-quality sound by connecting the TV and the equipment. HDMI-compatible equipment (*1) with an HDMI or DVI output terminal, such as a set top box, a DVD player or a game equipment, can be connected to the HDMI terminal using an HDMI compliant (fully wired) cable.

About connections, see “External Equipment” (p. 50).

( 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 / 4 Input” menu screen. (p. 31)
- Applicable audio signal sampling frequencies (2ch L.PCM): 48 kHz, 44.1 kHz, 32 kHz
- HDMI2 and 3 terminals are for digital audio signal only.
- Use with a PC is not guaranteed. Only HDMI video formats in the HDMI table (p. 54) 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 only with the following image signals: 480i, 480p, 576i, 576p, 720p, 1080i and 1080p. Match the output setting of the digital equipment.
- For details of the applicable HDMI signals, see p. 54.

DVI connection

- If the external equipment has only a DVI output, connect to the HDMI1 / 4 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 / HDMI4: use AV4 IN AUDIO terminals).

DVI Position Settings

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

To make settings ⇒ “How to Use Menu Functions” ① to ④ (p. 28)

<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></td>
<td>V-pos</td>
<td>Adjusts vertical position</td>
</tr>
<tr>
<td></td>
<td>Reset DVI Position Settings</td>
<td>Press the OK button to reset to the default Setup settings</td>
</tr>
</tbody>
</table>

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

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

- During the operation, no signals are output from any of the AV terminals. But the sound in Movie View can be output from AUDIO OUT and DIGITAL AUDIO OUT terminals.
- "Date" shows the date on which the recording was made by the digital camera or digital video camera. The file without record of the date is shown "**/**/****".
- For details on SD Cards ⇒ p. 53

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

To remove SD Card
Blue LED
Press the centre of the card

Photo View

Insert the SD Card
1

Select "Photo View"
2

Select a folder to display the thumbnail
3

Select a photo from the thumbnail to be viewed
4

To return to TV
⇒ EXIT or 

To return to the previous screen
⇒ RETURN

Operation guide
(Single view)

Displayed one at a time
- To display / hide the operation guide ⇒ INFO
- To the previous photo
  - Rotate 90˚ (counter-clockwise)
- To the next photo
  - Rotate 90˚ (clockwise)
- To return to thumbnail ⇒ RETURN

Selected photo information is displayed
(Thumbnail)

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

SD Card
Folder view
(Folder view)

Movie View
Folder view

To sort by date or month recorded ⇒ p. 42

Slideshow
⇒ p. 42
To sort by date or month recorded ⇒ p. 42

To return to thumbnail ⇒ RETURN

To display / hide the operation guide ⇒ INFO
- To the previous photo
  - Rotate 90˚ (counter-clockwise)
- To the next photo
  - Rotate 90˚ (clockwise)
- To return to thumbnail ⇒ RETURN

Slideshow
⇒ p. 42
To sort by date or month recorded ⇒ p. 42

To return to thumbnail ⇒ RETURN

Operation guide
(Single view)

To sort by date or month recorded ⇒ p. 42

Viewing from SD Card (VIERA IMAGE VIEWER)
**Viewing from SD Card**

(VIERA IMAGE VIEWER)

### Slideshow

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

Start Slideshow

![Start Slideshow](image)

- To pause ➡️
- To return to Single view ➡️

**Note**

- Slideshow is done within the thumbnail.

**Slideshow settings (operate in Photo View Mode)**
Display the menu

![Display the menu](image)

Select “Viewing Setup”

![Select “Viewing Setup”](image)

- Other Items  ➔ p. 30 - 31

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

**To display all the photos**
Display the thumbnail of all the photos in SD Card.

![To display all the photos](image)

**(Folder view)**

**(Thumbnail - All pictures)**

---

**To sort by date or month recorded**
Display the list of groups sorted by the same date or the same month.

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

![To sort by date or month recorded](image)

**(Sort by Month)**

**(Sort by Date)**
**Movie View**

1. **Insert the SD Card**
2. **Select “Movie View”**
   - Select the file to be viewed

3. **Select the file to be viewed**
   - File format: Only AVCHD or MPEG2 is supported.
   - For details → p. 53
   - Play only AVCHD or MPEG2 is supported.

**To return to TV**

**To return to the previous screen**

**Audio Settings**

You can enjoy the multi-channel sound via an amplifier connected to DIGITAL AUDIO OUT terminal.

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

**Display the Option menu**

**Change the sound (if the movie has multiple audio signals)**

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

**Display the menu**

**Select “Sound”**

**Select “SPDIF Selection” and set**

<table>
<thead>
<tr>
<th>Menu</th>
<th>Item</th>
<th>Adjustments / Configurations (alternatives)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound</td>
<td>SPDIF Selection</td>
<td>SPDIF : A standard audio transfer file format&lt;br&gt; Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT terminal (Auto / PCM)&lt;br&gt; Auto: Dolby Digital is output as Dolby Digital Bitstream. MPEG is output as PCM.&lt;br&gt; PCM: Digital output signal is fixed to PCM.</td>
</tr>
</tbody>
</table>

**Note**

If the image is not displayed for a while, set the Movie Preview to “OFF” in the Other Settings of the Setup Menu.
Enjoy additional HDMI interoperability with Panasonic products which have “HDAVI Control” function. This TV supports “HDAVI Control 4” function. Connections to the equipment (DIGA Recorder, HD Video Camera, Player theatre, Amplifier, etc.) with HDMI cable allow you to interface them automatically. 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 the equipments. About applicable Panasonic equipment, consult your local Panasonic dealer.

VIERA Link features and connections

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

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

Connection

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

● To use Player theatre / Blu-ray Disc theatre:

● To use Amplifier:
Note

- This function may not work properly depending on the connected equipment.
- For DIGA Recorder / DVD Player / Blu-ray Disc Player / HD Video Camera / LUMIX Camera with VIERA Link function, connect to HDMI1, HDMI2, HDMI3 or HDMI4 terminal via an HDMI cable.
- For Player theatre / Blu-ray Disc theatre / Amplifier, connect to HDMI1, HDMI2, HDMI3 or HDMI4 terminal via an HDMI cable and/or either the optical digital audio cable or RCA cable for audio output from the TV.
- Use fully wired HDMI compliant cable. Non-HDMI-compliant cables cannot be utilized.

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. 31)
- Set up the TV After connection, turn the equipment on and then switch the TV on. Select the input mode to HDMI1, HDMI2, HDMI3 or HDMI4 (p. 26), and make sure that an image is displayed correctly.

This setup should be done each time when the following conditions occur:
- for the first time
- when adding or reconnecting equipment
- when changing setup

Features available

<table>
<thead>
<tr>
<th>Channel download</th>
<th>Channel setting can be downloaded to the recorder.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy playback</td>
<td>Automatic input switching - When the connected equipment is operated, input mode is switched automatically.</td>
</tr>
<tr>
<td>Power on link</td>
<td>Set Power on Link “On” in Setup Menu to use this function “Power on Link” (p. 31)</td>
</tr>
<tr>
<td></td>
<td>When the connected equipment starts playback or direct navigator / function menu for the equipment are activated, the TV is automatically turned on. (Only when the TV is in Standby mode.)</td>
</tr>
<tr>
<td>Power off link</td>
<td>Set Power off Link “On” in Setup Menu to use this function “Power off Link” (p. 31)</td>
</tr>
<tr>
<td></td>
<td>When the TV is set to Standby mode, the connected equipment is also automatically set to Standby.</td>
</tr>
<tr>
<td></td>
<td>This function will work even if the TV enters standby mode automatically by Off Timer function or auto power standby function.</td>
</tr>
<tr>
<td>Reduce unnecessary power consumption in standby</td>
<td>Standby Power Save</td>
</tr>
<tr>
<td>Set Standby Power Save “On” in the Setup Menu to use this function “Standby Power Save” (p. 31)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The power consumption in Standby mode of the connected equipment is controlled higher or lower in synchronization with the TV On / Off state to reduce the consumption.</td>
</tr>
<tr>
<td></td>
<td>When the TV is set to Standby mode, the connected equipment is automatically set to Standby and the power consumption in Standby mode of the connected equipment is automatically minimized.</td>
</tr>
<tr>
<td></td>
<td>When the TV is turned on, the connected equipment is still in Standby mode, but the power consumption is increased to make startup time early.</td>
</tr>
<tr>
<td></td>
<td>This function is effective if the connected equipment can change the power consumption in Standby mode and is set to higher consumption.</td>
</tr>
<tr>
<td>Auto standby for unnecessary equipment</td>
<td>Intelligent Auto Standby</td>
</tr>
<tr>
<td>Set Intelligent Auto Standby “On (With reminder)” or “On (No reminder)” in the Setup Menu to use this function “Intelligent Auto Standby” (p. 31)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When the TV is on, the connected equipments not in use go into Standby mode automatically to reduce the power consumption.</td>
</tr>
<tr>
<td></td>
<td>If you select “On (With reminder)”, the on screen message will be displayed to be noticed before working this function.</td>
</tr>
</tbody>
</table>

Recommended Panasonic’s HDMI cable part number:
• RP-CDHG10 (1.0 m) • RP-CDHG15 (1.5 m) • RP-CDHG20 (2.0 m) • RP-CDHG30 (3.0 m) • RP-CDHG50 (5.0 m)
### Direct TV Recording - What you see is What you record

**Direct TV Rec**

Recording the current programme in DIGA Recorder immediately.

- If you connect several recorders including other manufacturers’ recorders at the same time, please connect DIGA Recorder to the TV’s lower HDMI terminal number.
- If you cannot operate, check the settings and the equipment ➔ “VIERA Link features and connections” (p. 44)

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

<table>
<thead>
<tr>
<th>VIERA Link Menu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct TV Rec</td>
</tr>
<tr>
<td>Recorder</td>
</tr>
</tbody>
</table>

To stop recording

Select “Stop” in “Direct TV Rec” and access

<table>
<thead>
<tr>
<th>VIERA Link Menu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pause Live TV</td>
</tr>
<tr>
<td>Direct TV Rec</td>
</tr>
<tr>
<td>Stop</td>
</tr>
</tbody>
</table>

### Pause Live TV programme

**Pause Live TV**

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

- This function is available with DIGA Recorder which has HDD.
- If you connect several recorders including other manufacturers’ recorders at the same time, please connect DIGA Recorder which has HDD to the TV’s lower HDMI terminal number.
- If you cannot operate, check the settings and the equipment ➔ “VIERA Link features and connections” (p. 44)

Access and pause the live TV programme

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

<table>
<thead>
<tr>
<th>VIERA Link Menu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pause Live TV</td>
</tr>
<tr>
<td>Direct TV Rec</td>
</tr>
<tr>
<td>Stop</td>
</tr>
</tbody>
</table>

TV picture will be paused.

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

**To operate Pause Live TV**

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

**To return to Live TV**

(Stop playback of Pause Live TV / cancel pause)

Select “Yes”

- TV

**Pause Live TV**

<table>
<thead>
<tr>
<th>Stop Pause Live TV?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

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

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

- If you cannot operate, check the settings and the equipment “VIERA Link features and connections” (p. 44)
- For details of the operations for the connected equipment, read the manual of the equipment.

Access and operate the menu of the equipment

1. **Display “VIERA Link Menu”**

2. **Select “VIERA Link Control”**

3. **Select the equipment you want to access**
   - The type of the connected equipment is displayed. Select the type of the equipment and access.

4. **Operate the connected equipment**
   - **1. Switch to TV**
   - **2. Follow the operation guide**
     - To display the operation guide
     - Move the cursor / select the menu
     - Move the cursor / access / adjust
     - When the key words are displayed on colour bar

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

If several recorders or players are connected

You can connect up to three recorders or players at the same time.

The number is given from the TV’s lower HDMI terminal connected to the same type of equipment. For example, when two recorders are connected to HDMI2 and HDMI3, one connected to HDMI2 is displayed as Recorder1 and the other as Recorder2.

If you access the invalid equipment

When the equipment with “HDAVI Control” function is connected

Type of the connected equipment is displayed. You can access the menu of the equipment. But you cannot operate it. Use its own remote control to operate the equipment.
Features available (Using VIERA Link Menu)

You can control the theatre speaker with this TV remote control by pointing at the TV's signal receiver.

If you cannot operate, check the settings and the equipment ➔ “VIERA Link features and connections” (p. 44)

Access and control the speaker volume

1. Display “VIERA Link Menu”

2. Select “Speaker Selection”

3. Set to “Home Cinema” or “TV”

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

- Volume up / down
  - (Volume slide bar will be displayed when adjusting the volume of the equipment.)

- Mute
  - The sound of TV speakers is mute.
  - When the equipment is turned off, TV speakers will be active.

**TV**
TV speakers are active.

**Note**
- If you wish to enjoy the multi-channel sound (e.g. Dolby Digital 5.1ch) via an Amplifier, connect with HDMI cable and Optical digital audio cable (p. 44), and then select “Home Cinema”.
  - To enjoy the sound from the DIGA Recorder in multi-channel sound, connect an HDMI cable from the DIGA Recorder to the Amplifier (p. 44).
  - Easy playback may be available by using the remote control for Player theatre, Blu-ray Disc theatre or Amplifier. Read the manual of the equipment.

**Note**
- These functions may not work properly depending on the connected equipment.
- Image or sound may not be available for the first few seconds when input mode is switched.
- “HDAVI Control 4” is the newest standard (current as of December, 2008) for HDAVI Control compatible equipment. This standard is compatible with conventional HDAVI equipment.
- To confirm this TV’s version of HDAVI Control ➔ “System Information” (p. 31)
VIERA Tools

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

1. Display VIERA Tools Menu

2. Select a feature

3. Follow the operation of each feature

VIERA Link Control (p. 47)
The connected device can be operated with the VIERA remote control. When multiple devices are connected, an indicator appears below the icon so that one device can be selected.

Pause Live TV (p. 46)
A live TV programme can be paused and resumed later.

Direct TV Rec (p. 46)
What is on TV can be recorded immediately.

Speaker Control (p. 48)
Theatre speaker can be set.

SD card slideshow (p. 42)
Photo slideshow will start.

SD card photo view (p. 41)
Photo folders are displayed.

SD card movie view (p. 43)
The title list for SD movie image is displayed.
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. 58).

Types of connectable equipment to each terminal

<table>
<thead>
<tr>
<th>Recording / Playback (equipment)</th>
<th>Terminal</th>
<th>AV1 IN</th>
<th>AV2 IN</th>
<th>AV3 IN</th>
<th>AV4 IN</th>
<th>MONITOR OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>To record / playback videocassettes / DVDs (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

External Equipment

Headphones

To adjust volume ⇒ "Headphone Volume" in the Sound Menu (p. 30)

Conversion adapter (if necessary)

(Electro Video) (S-VIDEO) or (VIDEO)

(M3 stereo mini plug)

Headphones

To adjust volume

"Headphone Volume" in the Sound Menu (p. 30)

Conversion adapter (if necessary)
Connect the S VIDEO or VIDEO terminal when using AV3 / AV4 IN terminal.

Connect the COMPONENT or VIDEO terminal when using AV1 / AV2 IN terminal.
Technical Information

Channel Allocation (Analogue TV mode)

<table>
<thead>
<tr>
<th>CH Display / Receive Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH 0 - CH 5</td>
</tr>
<tr>
<td>CH 9A</td>
</tr>
<tr>
<td>CH 6 - CH 9</td>
</tr>
<tr>
<td>CH 20 - CH 75</td>
</tr>
</tbody>
</table>

Rating (Digital TV mode)

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

Updating the software system (Digital TV 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 channel has the update information.

To update automatically
Set “Auto Update Search in Standby” to “On” (p. 33)
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)
Recording is not in progress.

To update manually
Perform “System Update Search Now” (p. 33)
If there is an update available, a notification banner is displayed.

Note
- During downloading, do not turn Off the TV or touch any buttons.
- The TV is automatically activated after downloading is completed.
- When the TV is switched to standby, there will be a clicking sound after a short delay. Similar clicking sounds will also occur at 3:00 AM and 5:00 AM when “Auto update Search in Standby” (p. 33) is set to “On”. These sounds are normal.

Stereo / Bilingual Sound Selection (Analogue TV mode)

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

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

- 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.
### SD Card

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

#### 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 - 8 × 8 to 30,719 × 17,279 pixels**

**Movie:** SD-Video Standard Ver. 1.2 [MPEG-2 (PS format)] and AVCHD Standard compatible files with an audio format that is either MPEG-1/Layer-2 format or Dolby Digital format

(AVCHD files recorded with vertical frequency 50Hz are applicable. A modified data with a PC may not be displayed correctly.)

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

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

#### Note
- **Format the card with the recording equipment.**
- **The picture may not appear correctly on this TV depending on the recording equipment used.**
- **Display may take some time when there are many files and folders.**
- **This function cannot display Motion JPEG and still image not JPEG formatted (i.e. TIFF, BMP).**
- **A 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.**
- **Partly 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 the file or folder names are changed.**

#### On screen messages

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

#### Multi Window

You can watch two images at once. (p. 22)
- **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.**
- **This function is not available for PC or SD card.**
- **Component or HDMI input is available only as the main screen.**
- **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. 31).**
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>Resolution</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>8</td>
<td>GND (Ground)</td>
<td>11</td>
<td>NC (not connected)</td>
</tr>
<tr>
<td>2</td>
<td>G</td>
<td>7</td>
<td>GND (Ground)</td>
<td>10</td>
<td>NC (not connected)</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
<td>8</td>
<td>GND (Ground)</td>
<td>9</td>
<td>HD</td>
</tr>
<tr>
<td>4</td>
<td>NC (not connected)</td>
<td>6</td>
<td>NC (not connected)</td>
<td>4</td>
<td>VD</td>
</tr>
<tr>
<td>5</td>
<td>GND (Ground)</td>
<td>10</td>
<td>GND (Ground)</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>525 (480) / 60i</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>525 (480) / 60p</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>750 (720) / 60i</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>750 (720) / 50p</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>1,125 (1,080) / 60i</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>1,125 (1,080) / 50p</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>1,125 (1,080) / 60p</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>1,125 (1,080) / 50p</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>1,125 (1,080) / 24p</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>1,280 × 768 @60 Hz</td>
<td>47.70</td>
<td>60.00</td>
</tr>
<tr>
<td>1,366 × 768 @60 Hz</td>
<td>48.39</td>
<td>60.04</td>
</tr>
<tr>
<td>Macintosh13” (640 × 480)</td>
<td>35.00</td>
<td>66.67</td>
</tr>
<tr>
<td>Macintosh16” (832 × 624)</td>
<td>49.73</td>
<td>74.55</td>
</tr>
<tr>
<td>Macintosh21” (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.
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. 30) and volume.
- Check the connection between the display unit and the tuner box. (p. 12 and p. 13)

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

### “VIERA Link” function does not work and an error message appears
- Confirm the connection.
- Turn the connected equipment on and then switch the TV on. (p. 44)

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

### 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.

### Problem | Actions
--- | ---
**Chaotic image, noisy**  | ✔ Change the setting of “P-NR” in the Picture Menu (to remove noise). (p. 30)
                           | ✔ 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. 30)
**Blurry or distorted image**  | ✔ Reset channel. (p. 38)
(no sound or low volume)  | ✔ Remove the mains plug of the tuner box from the wall socket and connect it again to turn it on.
                           | ✔ If the problem persists, perform “Shipping Condition” (p. 38)
**Unusual image is displayed** | ✔ “Shop” was selected in “Auto Tuning” (p. 18).
                           | ✔ Reset all settings in “Shipping Condition” (p. 38), then select “Home” in “Auto Tuning” (p. 18).
**“Shop” appears on screen at switch on** | ✔ “Shop” was selected in “Auto Tuning” (p. 18).
                           | ✔ Reset all settings in “Shipping Condition” (p. 38), then select “Home” in “Auto Tuning” (p. 18).
## FAQs

<table>
<thead>
<tr>
<th>Problem</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sound</strong></td>
<td></td>
</tr>
</tbody>
</table>
| No sound is produced | ● Is “Sound Mute” active? (p. 17)  
● Is the volume set to the minimum?  

Sound level is low or sound is distorted | ● Sound signal reception may be deteriorated.  
● Set “MPX” (p. 30) in the Sound Menu to “Mono.”  

Sound is unusual | ● Set the sound setting of the connected equipment to “2ch L.PCM”.  
● Check the “HDMI1 / 4 Input” setting in the Sound Menu. (p. 31)  
● If digital sound connection has a problem, select analogue sound connection. (p. 40)  

Pictures from external equipment are unusual when the equipment is connected via HDMI | ● Is the HDMI cable connected properly? (p. 50)  
● Turn Off the TV and equipment, then turn them On again.  
● Check an input signal from the equipment. (p. 54)  
● Use an equipment compliant with EIA/CEA-861/861B.  

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.  

After Digital TV Auto Tuning only some or no services are found | ● Check “Signal Condition”. (p. 37) 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. 37). 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.  

Picture very infrequently breaks up on some or all programmes | ● Impulse noise interference from an infrequently used electrical appliance, or a passing vehicle or lawn mower with a “noisy” ignition system. |
<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. 24)</td>
</tr>
<tr>
<td>The programme cannot be selected</td>
<td>● Is the programme skipped? (p. 35)</td>
</tr>
</tbody>
</table>
| TV goes into “Standby mode” | ● Off Timer function is activated.  
● The TV enters “Standby mode” about 30 mins. after analogue broadcasting ends. |
| The remote control does not work or is intermittent | ● Are the batteries installed correctly? (p. 8)  
● Has the TV been switched On?  
● Has the remote control been registered? (p. 19)  
● The batteries may be running low. Replace them.  
● Use the remote control within the range of 7 m from the tuner box.  
● Keep the remote control away from the devices such as wireless LAN, microwaves, mobile phones or other electric equipment to avoid wave interference. |
| Cannot operate the TV | ● Turn the display unit and the tuner box off, and then on again.  
● Check the transmission range of the wireless unit if you use it. (p. 12)  
If the problem persists, use the supplied HDMI cable to connect the display unit and the tuner box instead of the wireless unit. (p. 12) |
| Parts of the display unit or the tuner box become hot | ● The temperature rises will not cause any problems in terms of performance or quality. |
## Specifications

### TH-P54Z1A

<table>
<thead>
<tr>
<th><strong>Power</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power rating</strong></td>
<td>Display Unit: AC 220 - 240 V, 50 / 60 Hz 2.25 A (with Wireless Receiver) &lt;br&gt; Tuner Box: AC 220 - 240 V, 50 / 60 Hz 0.43 A (with Wireless Transmitter)</td>
</tr>
<tr>
<td><strong>Normal (Home) mode</strong></td>
<td>348 W</td>
</tr>
<tr>
<td><strong>Standby condition</strong></td>
<td>Display Unit: 0.5 W &lt;br&gt; Tuner Box: 0.5 W</td>
</tr>
</tbody>
</table>

### Display

- **Aspect Ratio**: 16:9
- **Visible screen size**: 137 cm (diagonal) 1,198 mm (W) × 673 mm (H)
- **Number of pixels**: 2,073,600 (1,920 (W) × 1,080 (H)) [5,760 × 1,080 dots]

### Sound

- **Speaker**: Woofer (35 mm × 200 mm) × 2, Tweeter (23 mm × 100 mm) × 2
- **Audio Output**: 20 W (10 W + 10 W), 10% THD
- **Headphones**: M3 (3.5 mm) stereo mini Jack × 1

### PC signals

- **PAL/B/G**: Reception of Off air broadcasts
- **Digital TV**: 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)

### Receiving Systems / Band name

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

### Operating Conditions

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

<table>
<thead>
<tr>
<th>Connection Terminals</th>
<th>AV1 Input</th>
<th>AV2 Input</th>
<th>AV3 Input</th>
<th>AV4 Input</th>
<th>Monitor Output</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Audio L - R</strong></td>
<td>RCA Pin Type × 2</td>
<td>RCA Pin Type × 1</td>
<td>RCA Pin Type × 2</td>
<td>RCA Pin Type × 2</td>
<td>RCA Pin Type × 2</td>
</tr>
<tr>
<td><strong>Video</strong></td>
<td>RCA Pin Type × 1</td>
<td>1.0 V[p-p] (75 Ω)</td>
<td>RCA Pin Type × 1</td>
<td>RCA Pin Type × 1</td>
<td>RCA Pin Type × 1</td>
</tr>
<tr>
<td><strong>COMPONENT</strong></td>
<td>Y</td>
<td>1.0 V[p-p] (including synchronization)</td>
<td>Y</td>
<td>1.0 V[p-p] (including synchronization)</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Ps/Cs, Ps/Cr</td>
<td>±0.35 V[p-p]</td>
<td>Ps/Cs, Ps/Cr</td>
<td>±0.35 V[p-p]</td>
<td></td>
</tr>
<tr>
<td><strong>Audio L - R</strong></td>
<td>RCA Pin Type × 2</td>
<td>RCA Pin Type × 1</td>
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<td>RCA Pin Type × 1</td>
<td>RCA Pin Type × 1</td>
</tr>
<tr>
<td><strong>S Video</strong></td>
<td>Mini DIN 4-pin</td>
<td>Y:1.0 V[p-p] (75 Ω) C:0.286 V[p-p] (75 Ω)</td>
<td>Mini DIN 4-pin</td>
<td>Y:1.0 V[p-p] (75 Ω) C:0.286 V[p-p] (75 Ω)</td>
<td></td>
</tr>
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<td>Y:1.0 V[p-p] (75 Ω) C:0.286 V[p-p] (75 Ω)</td>
<td></td>
</tr>
</tbody>
</table>

### Others

- **HDMI1 - 4 Input**: TYPE A Connectors
- **PC Input**: HIGH-DENSITY D-SUB 15PIN <br> R, G, B/0.7 V[p-p] (75 Ω) <br> HD, VD/TTL Level 2.0 - 5.0 V[p-p] (high impedance)
- **DIGITAL AUDIO OUT**: PCM / Dolby Digital, Fiber optic
- **Card slot**: SD Card slot × 1

### Dimensions (W × H × D)

- **Display Unit**: 1,428 mm × 893 mm × 379 mm (with speakers and pedestal) <br> 1,428 mm × 820 mm × 25 mm (with speakers)
- **Tuner Box**: 430 mm × 59 mm × 249 mm
- **Wireless Transmitter**: 190 mm × 69 mm × 70 mm <br> 128 mm × 133 mm × 46 mm

### Mass

- **Display Unit**: 38.0 kg (with speakers and pedestal) <br> 32.0 kg (with speakers)
- **Tuner Box**: 3.0 kg
- **Wireless Transmitter**: 280 g <br> 400 g

---

**Note**

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