





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. Please refer to Pan European Guarantee Card if you need to contact your local Panasonic dealer for assistance.



English

### Turn your own living room into a movie theatre! Experience an amazing level of multi-



### media excitement

Enjoy rich multi-media





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### **Enjoy your TV!**

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## **Safety Precautions**

### Warning

### Handling the mains plug and lead

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



### **Power source**

 This TV is designed to operate on 220-240 V, 50 Hz AC.

### Do not remove covers NEVER modify the TV yourself

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

### Keep liquids away from the TV

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

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

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

### Do not place foreign objects inside the TV

 Do not allow any objects to drop into the TV through the air vents (fire or electrical shock may result).

### Do not place the TV on sloped or unstable surfaces

The TV may fall off or tip over.

### Use only the dedicated pedestals / mounting equipment

- Using an unapproved pedestal or other fixtures may make the TV unstable, risking injury. Be sure to ask your local Panasonic dealer to perform setup.
- Úse approved pedestals / mounts (p. 6).

### Notes

### Caution

### When cleaning the TV, remove the mains plug

 Cleaning an energized TV may cause electrical shock.

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

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

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

#### Minimum distance



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

### Do not block the rear air vents

- Blocked ventilation by newspapers, table cloths, curtains, etc. may cause overheating, fire or electrical shock.
- Do not expose your ears to excessive volume from the headphones
- Irreversible damage can be caused.

### Auto power standby function

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

### Keep the TV away from these types of equipment

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

### Transport only in upright position

### Maintenance

### First, remove the mains plug from the socket outlet.

### **Display panel**

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

### Caution

• The surface of the display panel has been specially treated and may be easily damaged.

- Do not tap or scratch the surface with your fingernail or other hard object.
- Take care not to subject the surface to insect repellent, solvent, thinner, or other volatile substances (this may degrade surface quality).

### Cabinet, Pedestal

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

#### Caution

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

### Mains plug

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

# **Accessories / Options**



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.

Rear of the TV

To tighten:

distorted image).

manual to fix cables.

Fix cables with clampers as necessary.

### Installing remote's batteries Pull open Hook Close Note the correct polarity (+ or -)

#### Caution

the like.

- 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

### **Optional accessories**

Wall-hanging bracket TY-WK32LR2W



Please contact your nearest Panasonic dealer to purchase the recommended wall-hanging bracket. For additional details, please refer to the wall-hanging bracket installation manual.

Do not bundle the RF cable and mains lead together (could cause)

• When using the optional accessory, follow the option's assembly

Using the clamper

-1

To loosen:

Keep

the knob

pressed

ա

0 000 900 

### WARNING!

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

#### How to remove the Pedestal Remove four screws.





# **Identifying Controls**



Quick Start Guide Identifying Controls Accessories / Options

## **Basic Connection**

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



#### Note

- Connect to AV1 / AV2 for a DVD Recorder / VCR supporting Q-Link (p. 29).
- For HDMI-compatible equipment, possible to connect to HDMI terminals (HDMI1 / HDMI2) by using HDMI cable (p. 34).
- Q-Link connection ⇒ p. 28
- VIERA Link connection ⇒ p. 28
- Read the manual of the equipment too.

### Example 3 Connecting DVD Recorder / VCR and Set top box

### TV, DVD Recorder / VCR and Set top box

Rear of the TV



## **Auto Setup**

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





Note

- If tuning has failed ➡ "Auto Setup" (p. 25)
- If downloading has failed ➡ "Download" (p. 21)
- If you turned the TV Off during Standby mode last time, the TV will be in Standby mode when you turn the TV On with Mains power On / Off switch.



### Other useful functions

| Hold                                      | Freeze / unfreeze picture   | HOLD   |  |  |  |
|---|---|--|--|--|--|
| Display the                               | Check or change the current programme status instantly  | OPTION To change   |  |  |  |
| selectable<br>settings for<br>the current | Teletext Character<br>Sets the teletext language<br>→ Setup Menu (p. 21)  | <b>Volume Correction</b><br>Adjusts volume of individual programme or<br>input mode  |  |  |  |
| programme                                 | MPX<br>→ Sound Menu (p. 20)<br>Note   |  |  |  |  |
|   | Also possible to change the settings in Menu list (p. 20 and p. 21).  |  |  |  |  |
|   | Turn the TV off automatically after a fixed period  |  |  |  |  |
|   | Display the Select "Setup" menu   | Select "Off Timer" and set the time  |  |  |  |
| Off Timer                                 | MENU<br>VIERA Link<br>Picture<br>Sound<br>Setup   | S Setup Menu<br>Service List Edit<br>Link Settings<br>Child Lock<br>Turing Menu<br>Off Timer<br>OSD Language<br>Teletext<br>Shipping Condition |  |  |  |
|   | <ul> <li>To cancel ⇒ Set to "Off" or turn the TV off.</li> <li>To display the remaining time ⇒ Information banner (p. 13)</li> <li>When the remaining time is within 3 minutes, the remaining time will flash on screen.</li> </ul> |  |  |  |  |

#### Other useful functions



## **Viewing Teletext**

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

### What is FLOF (FASTEXT) mode?

In FLOF 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 + red green

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. 15)

■ To change mode 

 "Teletext" in Setup Menu (p. 21)

areen



Broadcast

(Expand the TOP half)

(Expand the BOTTOM half)

Broadcast

TOP / BOTTOM

| HOLD                                       | Stop automatic updating<br>(If you wish to hold the current page without updating)<br>HOLD<br>HOLD<br>HOLD<br>HOLD<br>HOLD<br>HOLD   |
|--|--|
| INDEX                                      | Return to the main index page  |
| Call up a<br>favourite<br>page             | View a favourite page stored         F.P.       • Call up the page stored in "blue".         Image: Control of the page stored in "blue".  |
| View in<br>multi<br>window                 | <ul> <li>Watch TV and Teletext in two windows at once</li> <li>MENU (Press twice) • Select Picture and text<br/>On or Off</li> <li>Operations can be made only in Teletext screen.</li> </ul>  |
| Store<br>frequently<br>viewed<br>pages     | Store frequently viewed pages in the colour bar (List mode only)<br>As page is Corresponding of the press and hold Broadcast<br>into the number changes to white.<br>To change stored pages<br>Colour button you want to change for the number of the press and hold for the number of the press and hold for the number of th |
| View sub<br>page                           | View sub page (Only when teletext is more than one page)<br>Control of the screen To view specific sub page Enter the Control of the screen Enter the Control of the screen Sub pages: The number of sub pages varies depending on the broadcasters (up to 79 pages). It may take some time for searching, during which time you can watch TV.   |
| Watch<br>TV while<br>waiting<br>for update | View the TV picture while searching for a teletext page<br>Teletext automatically updates itself when new information becomes available.<br>Changes to TV screen temporarily<br>MENU<br>Wenu<br>Updating is<br>Whenu<br>Updating is<br>Change the programme.)<br>• 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. 8 and p. 9

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



Note

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

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

|           | VCR / DVD switch*<br>Select VCR to operate Panasonic VCR or DVD equipment<br>Select DVD to operate Panasonic DVD equipment or Player home theatre                      |
|-----------|--|
| ٢         | <b>Standby</b><br>Set to Standby mode / Turn on  |
|           | <b>Play</b><br>Playback videocassette / DVD  |
|           | Stop<br>Stop the operations  |
| H4        | Rewind / Skip / Search<br>VCR: Rewind, view the picture rapidly in reverse<br>DVD: Skip to the previous track or title<br>Press and hold to search backward            |
| ¥<br>≯    | <b>Fast-forward / Skip / Search</b><br>VCR: Fast-forward, view the picture rapidly forward<br>DVD: Skip to the next track or title<br>Press and hold to search forward |
| /▶        | Pause<br>Pause / Resume<br>DVD: Press and hold to play at slow speed   |
| PROGRAMME | Programme Up / Down<br>Select programme  |
| REC       | Record<br>Start recording  |

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

① Set the VCR / DVD switch to the appropriate position  $\Rightarrow$  <sup>VCR ■DVD</sup>

2 Press and hold O during the following operations

1 2 3 Enter the appropriate code for the equipment  $456 \rightarrow$  Press to be controlled, see table below 7 8 9 

| "VCR" position |              | "DVD" position      |              |
|----------------|--------------|---------------------|--------------|
| Equipment      | Code         | Equipment           | Code         |
| VCR            | 10 (default) | DVD                 | 70 (default) |
| DVD            | 11           | Player home theatre | 71           |

#### Note

Confirm if the remote control works correctly after changing the code.
 The codes will be reset to default values if batteries are replaced.

"DVD" means DVD player, DVD recorders and Recorder home theatre.
Some operations may not be possible on some equipment models.

# How to Use Menu Functions

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







# How to Use Menu Functions

### Menu list

| Menu      | Item                                       | Adjustments / Configurations (alternatives)   |  |  |
|-----------|--|---|--|--|
| VIERA Lir | Pause Live TV                              |   |  |  |
|           | Direct TV Rec                              | Controls the connected equipment with VIERA Link function, and enables various convenient recording, playback, etc. (p. 31 - 33)  |  |  |
|           | VIERA Link Control                         | <ul> <li>You can also access VIERA Link Menu directly using the VIERA Link button on the<br/>remote control.</li> </ul>   |  |  |
| ık        | Speaker Selection                          |   |  |  |
|           | Viewing Mode                               | Basic picture mode (Dynamic / Normal / Cinema / Eco)<br>Dynamic : Provides enhanced picture contrast and sharpness when viewing in a bright room<br>Normal : Recommended for viewing under normal ambient room lighting conditions<br>Cinema : For watching movies in a darkened room producing a cinema-like picture<br>Eco : Adjusts picture settings automatically dependent on ambient lighting conditions<br>• Set for each input signal |  |  |
|           | Contrast, Brightness,<br>Colour, Sharpness | ncreases or decreases the levels of these options according to your personal preference   |  |  |
| Pic       | Tint                                       | With an NTSC signal source connected to the TV, the picture hue can be adjusted to suit your taste<br>● For NTSC signal reception only  |  |  |
| ture      | Colour Balance                             | Allows you to set the overall colour tone of the picture (Cool / Normal / Warm)   |  |  |
| P         | P-NR                                       | Picture Noise Reduction<br>Automatically reduces unwanted picture noise and flicker noise in the contoured parts o<br>a picture <b>(Off / Min / Mid / Max)</b>  |  |  |
|           | 3D-COMB                                    | Occasionally, whilst viewing still or slow moving pictures, colour patterning may be seen<br>Set to "On" to display sharper and more accurate colours <b>(Off / On)</b><br>For PAL or NTSC signal reception only<br>Not valid on RGB, S-Video, Component and HDMI   |  |  |
|           | Reset to Default                           | Press the OK button to reset the present Picture Mode to the default settings   |  |  |
|           | Mode                                       | Basic sound mode (Music / Speech)   |  |  |
|           | Bass                                       | Increases or decreases level to enhance or minimise lower, deeper sound output  |  |  |
|           | Treble                                     | Increases or decreases level to enhance or minimise sharper, higher sound output  |  |  |
|           | Balance                                    | Adjusts volume level of right and left speakers   |  |  |
|           | Surround                                   | Surround sound settings <b>(Off / On)</b><br>Provides a dynamic enhancer to simulate improved spatial effects<br>Switching is also possible by the Surround button on the remote control (p. 7).  |  |  |
| Sou       | Volume Correction                          | Adjusts volume of individual programme or input mode  |  |  |
| nd        | МРХ  | Select stereo / monaural <b>(Mono / Stereo)</b><br>Normally: Stereo<br>Stereo signal cannot be received: Mono<br>M1 / M2: Available while mono signal is transmitted  |  |  |
|           | HDMI1 Input                                | Select to fit the input signal <b>(Auto / Digital / Analogue)</b> (p. 37)<br>Auto : Automatic detection of digital or analogue sound source<br>Digital : HDMI cable connection<br>Analogue : HDMI-DVI adapter cable connection<br>• HDMI input mode only<br>• HDMI2 terminal is for digital signal only<br>• No setting for HDMI2 available   |  |  |
|           | Reset to Default                           | Press the OK button to reset the present Sound Mode to the default settings   |  |  |

### Menu list

| Menu | nu Item   |                  | Adjustments / Configurations (alternatives)  |                             |
|------|---|------------------|--|-----------------------------|
|      | AV Colour System  |                  | Selects optional colour system based on video signals in AV mode<br>(Auto / PAL / SECAM / M.NTSC / NTSC)   |                             |
|      | Service List Edit   |                  | Skips the unwanted programmes or edits programmes (p. 23)  |                             |
|      |   | VIERA Link       | Sets to use VIERA Link functions <b>(Off / On)</b> (p. 30)   |                             |
|      | Link  | Q-Link           | Selects which AV terminal is to be used for data communication between this TV and a compatible recorder <b>(AV1 / AV2)</b> (p. 29)<br>Select the connected terminal to the recorder even it is not compatible with Q-Link.  | E H                         |
|      | Settings  | AV1 / AV2 out    | Chooses the signal to be transmitted from the TV to Q-Link<br>(TV / AV1 / AV2 / AV3 / Monitor)<br>Monitor: Image displayed on screen<br>Component and HDMI signal cannot be outputted.<br>No NICAM available while watching HDMI.  | ow to Use N<br>picture, sou |
|      |   | Download         | Downloads programme, language, country / region settings to a Q-Link or VIERA Link compatible equipment connected to the TV  | /lenu Fu<br>nd quali        |
| Set  | Child Lock  |                  | Locks a programme / AV input to prevent access to it (p. 26)   | nctions<br>ty, etc.         |
| dn   | Auto Setup Automatically sets the programmes received in the area of the programmes received in the programmes |                  | Automatically sets the programmes received in the area (p. 25)   |                             |
|      | J Menu  | Manual Tuning    | Sets the programmes manually (p. 25)   | Ad                          |
|      | Off Timer   |                  | Sets the time the TV automatically turns Off (Off / 15 / 30 / 45 / 60 / 75 / 90 minutes)   | vance                       |
|      | OSD Language  |                  | Changes language for on-screen displays  | ď                           |
|      | Teletext  |                  | Teletext display mode <b>(TOP (FLOF) / List)</b> (p. 14)   |                             |
|      | Teletext Character  |                  | <ul> <li>Selects teletext language (West / East1 / East2)</li> <li>West: English, French, German, Greek, Italian, Spanish, Swedish, Turkish, etc.</li> <li>East1: Czech, English, Estonian, Lettish, Rumanian, Russian, Ukrainian, etc.</li> <li>East2: Czech, Hungarian, Lettish, Polish, Rumanian, etc.</li> </ul> |                             |
|      | Sh  | ipping Condition | Resets all settings, for example, when moving house (p. 27)  |                             |

### **Editing Programmes** You can skip unwanted programmes or edit programmes. **Display the menu** MENU Select "Setup" ок Main Menu 2 access VIERA Link Picture (1) select Setup Select "Service List Edit" (2) access Setup Menu Service List Edit Access Link Settings Child Lock Child Lock Tuning Menu Off Timer OSD Language Teletext (1) select ..... $\bigcirc$ Teletext Teletext Character Shipping Condition West

Set -

Panasonic

To return to TV



# **Tuning Programmes**

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





Advanced

## **Control Programme Audience**

You can lock specific programmes / AV input terminals and control who watches them. (When the locked programme / input is selected, a message appears; by entering the PIN number, you can watch it.)



### **Restore Settings**

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



Advanced

## Link Functions (Q-Link VIERA Link)

Q-Link connects the TV and DVD Recorder / VCR, and enables easy recording, playback, etc. (p. 29) VIERA Link (HDAVI Control<sup>™</sup>) connects the TV and the equipment with VIERA Link function, and enables easy control, convenient recording, playback, etc. (p. 30 - 32) You can use Q-Link and VIERA Link functions together.

### Summary of Q-Link and VIERA Link functions

| Connection<br>Features  | Q-Link<br>(SCART connection) | VIERA Link<br>(HDMI connection only) | VIERA Link<br>(SCART and HDMI connection) |
|---|------------------------------|--------------------------------------|---|
| Preset download   | 0                            | O**                                  | 0   |
| Easy playback   | 0                            | 0                                    | 0   |
| Speaker control   | -                            | 0                                    | 0   |
| Control the menu of the<br>connected equipment by<br>VIERA remote control | -                            | O*                                   | O*  |
| Direct TV Recording   | 0                            | -                                    | O**                                       |
| Pause Live TV programme   | -                            | -                                    | O**                                       |

Available with the equipment which has "HDAVI Control 2" or "HDAVI Control 3" function.
 Available with the equipment which has "HDAVI Control 3" function.

### Connections

Read the manual of the equipment, too.

### Q-Link



 Connect the DVD Recorder / VCR supporting Q-Link to the TV's AV1 or AV2 terminal via a fully wired SCART cable.

#### VIERA Link



 SCART cable Use fully wired SCART cable.

- HDMI cable
   Use fully wired HDMI compliant cable.
   Non-HDMI-compliant cables cannot be utilized.
   Recommended Panasonic's HDMI cable
  - part number:
- RP-CDHG10 (1.0 m)
- RP-CDHG15 (1.5 m)
- RP-CDHG20 (2.0 m)
- RP-CDHG30 (3.0 m) • RP-CDHG50 (5.0 m)
- Connect the equipment supporting VIERA Link to the TV's AV1, AV2, HDMI1 or HDMI2 terminals via fully wired SCART and HDMI cables together.
- Some functions are available only with HDMI cable connection. But use both HDMI and SCART cables to support many features normally.



### Q-Link

#### Preparations

- Connect the DVD Recorder / VCR with the following logos:
- "Q-Link", "NEXTVIEWLINK", "DATA LOGIC", "Easy Link", "Megalogic" or "SMARTLINK" ■ Q-Link connection ⇒ p. 28
- Set up the DVD Recorder / VCR. Read the manual of the equipment.
- Q-Link terminal setup in Setup Menu → "Q-Link" (p. 21), "AV1 / AV2 out" (p. 21)
- Download preset programme, language, country / region setting (Preset download) "Download" (p. 21) or "Auto Setup" (p. 25) or "Auto Setup" - when first using the TV (p. 10)

#### Features available

Some recorders are not applicable. Read the manual of the recorder.



- "DATA LOGIC" (a trademark of Metz Corporation)
- "Easy Link" (a trademark of Philips Corporation)
- "Megalogic" (a trademark of Grundig Corporation) • "SMARTLINK" (a trademark of Sony Corporation)

Unk Functions (Q-Link / VIERA Link)

Advanced

# Link Functions (Q-Link VIERA Link

### VIERA Link "HDAVI Control™"\*

\*Enjoy additional HDMI Inter-Operability with Panasonic products which have "HDAVI Control" function. This TV supports "HDAVI Control 3" function.

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

These features are limited to models incorporating "HDAVI Control" and "VIERA Link".

- Some functions are not available depending on the equipment's version of HDAVI Control. Please confirm the connected equipment's version of HDAVI Control.
- VIERA Link "HDAVI Control", based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers' equipment that supports HDMI CEC cannot be guaranteed.

Please refer to individual manuals for other manufacturers' equipment supporting VIERA Link function. About applicable Panasonic equipment, consult your local Panasonic dealer.

#### Preparations

- Connect the equipment supporting VIERA Link.
- VIERA Link connection = p. 28
- 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.
- Download preset programme, language, country / region setting (Preset download)

   "Download" (p. 21) or "Auto Setup" (p. 25) or "Auto Setup" when first using the TV (p. 10)

   Set VIERA Link On in Setup Menu → "VIERA Link" (p. 21)

- Set up the TV
  - After connection, turn the equipment on and then switch the TV on. Select the input mode to HDMI1 or HDMI2 (p. 16), 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





Link Functions (Q-Link / VIERA Link)

Advanced

# Link Functions (Q-Link VIERA Link)

### ■ Features available (Using VIERA Link Menu)



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



#### Note

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

## **External Equipment**

These diagrams show our recommendations for how to connect the TV to your various equipment. For other connections, consult the instructions for each piece of equipment, the table below, and the specifications (p. 43).



| Types of connectable equipment to each terminal                    |             |             |   |  |  |  |  |
|--|-------------|-------------|---|--|--|--|--|
| Terminal<br>Recording / Playback<br>(equipment)                    | AV1         | AV2         | <b>AV3</b> (Side of TV)<br><sup>8</sup> √ (☉)<br>↓ (☉)<br>↓ (☉) |  |  |  |  |
| To record / playback videocassettes / DVDs<br>(VCR / DVD recorder) | 0           | 0           | R 🕑   |  |  |  |  |
| To watch DVDs (DVD player)   | 0           | 0           | $\bigcirc$  |  |  |  |  |
| To watch camcorder images (Video camera)                           | 0           | 0           | 0   |  |  |  |  |
| To watch satellite broadcasts (Set top box)                        | 0           | 0           | 0   |  |  |  |  |
| To play games (Game equipment)                                     | 0           | 0           | 0   |  |  |  |  |
| To use amplifier with speaker system                               |             |             |   |  |  |  |  |
| Q-Link   | 0           | 0           |   |  |  |  |  |
| VIERA Link   | (with HDMI) | (with HDMI) |   |  |  |  |  |
| Direct TV Recording  | 0           | 0           |   |  |  |  |  |



| COMPONENT<br>v<br>o<br>l<br>o<br>l<br>o<br>l<br>o |   |   |   |
|---|---|---|---|
| R Pr  |   | 1 | 2 |
|   |   |   |   |
| 0   |   | 0 | 0 |
|   |   | 0 | 0 |
|   |   | 0 | 0 |
|   |   |   |   |
|   | 0 |   |   |
|   |   |   |   |
|   |   | 0 | 0 |
|   |   | 0 | 0 |

 $\bigcirc$ : Recommended Connection

## **Technical Information**

### **Auto Aspect**

The optimum size and aspect can be chosen, and you can enjoy finer images. (p. 13)

#### Auto

Auto aspect determines the best aspect ratio to use to fill your screen. It does this using a four step process to determine if the picture being viewed is a widescreen picture.

If Auto aspect detects a widescreen signal it switches into the appropriate 16:9 or 14:9 widescreen mode. If Auto aspect does not detect a widescreen signal then this advanced TV enhances the picture for optimum viewing pleasure.

The text shown on the screen indicates how Auto aspect determined which ratio to use:

"WIDE" appears in the top left of the screen if a widescreen identification signal (WSS) is found or a signal found through a SCART or HDMI terminal. Auto aspect switches to the appropriate 16:9 or 14:9 widescreen ratio. This function will also work in any aspect mode. "Auto" appears in the top left of the screen if black stripes above and below the picture are detected. Auto aspect chooses the best ratio and expands the picture to fill the screen. This process can take several minutes, depending on the darkness of the picture.

|                      |                | Aspect Control Signal   |  |     |   |           |     |     |       |       |
|----------------------|----------------|-------------------------|--|-----|---|-----------|-----|-----|-------|-------|
|                      |                | Widescreen signal (WSS) |  |     | Control signal through SCART (pin 8) or HDMI terminal |           |     |     |       |       |
| Signal name          |                | тν                      | AV1  | AV2 | AV3   | COMPONENT | AV1 | AV2 | HDMI1 | HDMI2 |
| PAL                  |                | 0                       | 0  | 0   | 0   |           | 0   | 0   |       |       |
| PAL 525/60           |                | _                       | _  | _   | _   |           | 0   | 0   |       |       |
| M.NTSC               |                | _                       | _  | _   | _   |           | 0   | 0   |       |       |
| NTSC (AV input only) |                | _                       | _  | _   | -   |           | 0   | Ο   |       |       |
| S                    | 525(480)/60i   |                         | < colored and set of the set of t |     |   | _         |     |     | Ο     | 0     |
|                      | 525(480)/60p   |                         |  |     | _   |           |     | Ο   | 0     |       |
| D                    | 625(576)/50i   |                         |  |     | 0   |           |     | 0   | 0     |       |
|                      | 625(576)/50p   |                         |  |     |   |           |     | Ο   | 0     | 0     |
|                      | 750(720)/50p   |                         |  |     |   | _         |     |     | Ο     | 0     |
| HD                   | 750(720)/60p   |                         |  |     |   | _         |     |     | Ο     | 0     |
|                      | 1125(1080)/50i |                         |  |     | <   | _         |     |     | 0     | 0     |
|                      | 1125(1080)/60i |                         |  |     | $\overline{}$   | _         |     |     | 0     | 0     |

Note

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

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

### **HDMI** connection

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

HDMI-compatible equipment (\*1) with an HDMI or DVI output terminal, such as a set top box or a DVD player, can be connected to the HDMI terminal using an HDMI compliant (fully wired) cable. About connections, see "External Equipment" (p. 34).

#### Note

- HDMI is the world's first complete digital consumer AV interface complying with a non-compression standard.
- If the external equipment has only a DVI output, connect to the HDMI1 terminal via a DVI to HDMI adapter cable (\*2).
- When the DVI to HDMI adapter cable is used, connect the audio cable to the audio input terminal (HDMI1: use COMPONENT-AUDIO terminals).
- Audio settings can be made on the "HDMI1 Input" menu screen. (p. 20)
- Applicable audio signal sampling frequencies (2ch L.PCM): 48 kHz, 44.1 kHz, 32 kHz
- HDMI2 terminal is for digital audio signal only.
- Use with a PC is not assumed.
- If the connected equipment has an aspect adjustment function, set the aspect ratio to "16:9".
- These HDMI connectors are "type A".
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- An equipment having no digital output terminal may be connected to the input terminal of either "COMPONENT", "S-VIDEO", or "VIDEO" to receive analogue signals.
- The HDMI input terminal can be used with only the following image signals:
- 480i, 480p, 576i, 576p, 720p and 1080i. Match the output setting of the digital equipment.
- For details of the applicable HDMI signals, see p. 39.
- This TV incorporates HDMI<sup>™</sup> (Version 1.3) technology.
  - (\*1): The HDMI logo is displayed on HDMI-compliant equipment.
  - (\*2): Enquire at your local digital equipment retailer shop.

## **Technical Information**

### SCART, S-VIDEO and HDMI terminal information

### AV1 SCART terminal

(RGB, VIDEO, Q-Link) Suitable inputs for AV1 include RGB (Red / Green / Blue).



#### AV3 S-VIDEO 4 pin terminal

Chrominance in --Luminance in Chrominance earth

Luminance earth

AV2 SCART terminal

(RGB, VIDEO, S-VIDEO, Q-Link) AV2 - Pins 15 and 20 are dependent on AV2 S-VHS / VIDEO switching



#### HDMI terminal



### Input signal that can be displayed

### **COMPONENT** (Y, PB, PR), **HDMI** \* Mark: Applicable input signal

| Signal name         | COMPONENT | HDMI |
|---------------------|-----------|------|
| 525 (480) / 60i     | *         | *    |
| 525 (480) / 60p     | *         | *    |
| 625 (576) / 50i     | *         | *    |
| 625 (576) / 50p     | *         | *    |
| 750 (720) / 60p     | *         | *    |
| 750 (720) / 50p     | *         | *    |
| 1,125 (1,080) / 60i | *         | *    |
| 1,125 (1,080) / 50i | *         | *    |

Note

Signals other than above may not be displayed properly.
 The above signals are reformatted for optimal viewing on your display.

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## FAQs

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

### White spots or shadow images (noise)





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

### Neither image nor sound is produced

- Is the TV in "AV mode"?
- Is the mains lead plugged into the socket outlet?
- Is the TV turned On?
- Check Picture Menu (p. 20) and volume.
   Check all required SCART cables and
- connections are firmly in place.

### Auto aspect

 Auto aspect is designed to provide you with the best aspect ratio to use to fill your screen. For user control please see p. 36.

### S-Video / black and white picture

 Using AV button please confirm your selection is S-Video I.e. AV2/S (p. 16).

### On Screen messages - I.e. EC/AV1

You can simply clear these → i
 Press again to redisplay.

### An error message appears

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

### Q-Link function does not work

 Please confirm SCART cable, connection and Q-Link settings. Also please set "AV1 / AV2 out" in the Setup Menu (p. 21).



### "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. 30)

### Recording does not start immediately

• Check the settings of the recorder. For details, read the manual of the recorder.

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

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

### The LCD panel moves slightly when it is pushed with a finger Clattered sound might be heard

• There are some looseness around the panel to prevent the damage to the panel.

The panel might move slightly when it is pushed with a finger, and clattered sound might be heard. This is not a malfunction.



### Licence

- HDMI, the HDMI Logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- HDAVI Control<sup>™</sup> is a trademark of Matsushita Electric Industrial Co., Ltd.

### **Specifications**

| Power Source                     |                      |             | AC 220-240 V, 50 Hz  |  |  |  |
|----------------------------------|----------------------|-------------|--|--|--|--|
| Pov<br>Consu                     | Average use          |             | 121 W  |  |  |  |
| ver<br>nption                    | Standby condition    |             | 1 W  |  |  |  |
| Disp                             | Aspect Ratio         |             | 16:9   |  |  |  |
| olay pa                          | Visible screen size  |             | 80 cm (diagonal)<br>697 mm (W) × 392 mm (H)  |  |  |  |
| hel                              | Number of pixels     |             | 1,049,088 (1,366 (W) × 768 (H))  |  |  |  |
| Sou                              | Speaker              |             | 189 mm × 42 mm × 2 pcs, 8 Ω  |  |  |  |
| nd                               | Audio Output         |             | 20 W (10 W + 10 W), 10% THD  |  |  |  |
|                                  | Headphones           |             | M3 (3.5 mm) stereo mini Jack × 1   |  |  |  |
| Receiving Systems /<br>Band name |                      | is /        | PAL B, G, H, I, SECAM B, G, SECAM L / L'<br>VHF E2 - E12VHF H1 - H2 (ITALY)<br>VHF A - H (ITALY)VHF A - H (ITALY)UHF E21 - E69<br>CATV (S01 - S05)CATV S10 (S01 - S05)CATV S1 - S10 (M1 - M10)<br>CATV S11 - S20 (U1 - U10)CATV S11 - S20 (U1 - U10)CATV S21 - S41 (Hyperband)PAL D, K, SECAM D, K<br>VHF R1 - R2VHF R3 - R5<br>UHF E21 - E69PAL 525/60Playback of NTSC tape from some PAL Video recorders (VCR)M.NTSC<br>NTSC (AV input only)Playback from NTSC Video recorders (VCR) |  |  |  |
| Aeri                             | al - Rear            |             | VHF / UHF  |  |  |  |
| Operating Conditions             |                      | ions        | Temperature<br>Humidity: 0 °C - 35 °C: 20 % - 80 % RH (non-condensing)   |  |  |  |
| Con                              | AV1 (Scart te        | erminal)    | 21 Pin terminal (Audio/Video in, A   | udio/Video out, RGB in, Q-Link)                        |  |  |
| necti                            | AV2 (Scart terminal) |             | 21 Pin terminal (Audio/Video in, Audio/Video out, RGB in, S-Video in, Q-Link)  |  |  |  |
| on Te                            |                      | VIDEO       | RCA PIN Type × 1   | 1.0 V[p-p] (75 Ω)                                      |  |  |
| rmin                             | AV3                  | S-VIDEO     | Mini DIN 4-pin   | Y:1.0 V[p-p] (75 Ω) C:0.286 V[p-p] (75 Ω)              |  |  |
| als                              |                      | AUDIO L - R | RCA PIN Type × 2   | 0.5 V[rms]   |  |  |
|                                  | COMPONENT            | VIDEO       | Ү<br>Рв, Рк  | 1.0 V[p-p] (including synchronization)<br>±0.35 V[p-p] |  |  |
|                                  |                      | AUDIO L - R | RCA PIN Type × 2   | 0.5 V[rms]   |  |  |
|                                  | Others               | HDMI1 / 2   | TYPE A Connectors  | This TV supports "HDAVI Control 3" function.           |  |  |
|                                  | Output               | AUDIO L - R | RCA PIN Type × 2   | 0.5 V[rms] (high impedance)                            |  |  |
| Dimensions ( W × H × D )         |                      | H×D)        | 820 mm × 573 mm × 250 mm (With Pedestal)<br>820 mm × 535 mm × 108 mm (TV only)   |  |  |  |
| Mass                             |                      |             | 15,5 kg Net (With Pedestal)<br>12,5 kg Net (TV only)   |  |  |  |

Note

Design and Specifications are subject to change without notice. Mass and Dimensions shown are approximate.
 This equipment complies with the EMC standards listed below. EN55013, EN61000-3-2, EN61000-3-3, EN55020, EN55022, EN55024.

Specifications
 Licence
 FAQs, etc.

### Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)



This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.

For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product.

Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate

waste handling. Please contact your local authority for further details of your nearest designated collection point.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

#### For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

### Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union.

If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

### **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

### Matsushita Electric Industrial Co., Ltd.

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