



# Panasonic®

## Operating Instructions High Definition Plasma Television

Model No. **TH-37PV500E**  
**TH-42PV500E**  
**TH-50PV500E**



The image shown is for illustration only.  
Pedestal stand shown above is optional extra.



Please read these instructions before operating your set and retain them for future reference.

English

TQB0E0169U-1

# Welcome

Dear Panasonic Customer,

We hope that you have many years of enjoyment from your new TV. The **Quick Start Guide** section at the beginning of this instruction book will allow you to use the TV as quickly as possible. We recommend that you then read the complete instruction book, and keep it to refer to as you explore the range of advanced features that this Plasma TV offers.

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U. S. patent No. 4,907,093.

# Important Safety Notice

## WARNING

- 1) 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 set. (including on shelves above, etc.)
- 2) To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.
- 3) Do not remove the earthing pin on the power plug. This apparatus is equipped with a three pin earthing-type power plug. This plug will only fit an earthing-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician.  
Do not defeat the purpose of the earthing plug.

## CAUTION


- 1) This appliance is intended for use in environments which are relatively free of electromagnetic fields. Using this appliance near sources of strong electromagnetic fields or where electrical noise may overlap with the input signals could cause the picture and sound to wobble or cause interference such as noise to appear. To avoid the possibility of damage to this appliance, keep it away from sources of strong electromagnetic fields.
- 2) If a static electricity discharge occurs inside the front cover, the screen may momentarily flicker. This is not a malfunction.  
The screen will return to normality in a short while.

To prevent electric shock, ensure the grounding pin on the AC cord power plug is securely connected.

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- HDMI, the HDMI Logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

## CAUTION:

Symptoms	Check
<p>After-images appear</p> 	<p>Do not allow a still picture to be displayed for an extended period, as this can cause a permanent after-image to remain on the Plasma TV. Examples of still pictures include logos, video games, computer images, teletext and images displayed in 4:3 mode. With no signal present, and without any user operation, the Panasonic screensaver will appear automatically after a few minutes to prevent image retention.</p> <p><b>Note:</b> The permanent after-image on the Plasma TV resulting from fixed image use is not an operating defect and as such is not covered by the Warranty. This product is not designed to display fixed images for extended periods of time.</p>

# Safety Precautions

## WARNING

### ■ Setup

**This Plasma TV is for use only with the following optional accessories. Use with any other type of optional accessories may cause instability which could result in the possibility of injury.**

(All of the following accessories are manufactured by Matsushita Electric Industrial Co., Ltd.)

- Pedestal ..... TY-ST42PX500 (TH-37PV500E, TH-42PV500E),  
TY-ST50PX500 (TH-50PV500E)
- Display stand ..... TY-S37PX500W (TH-37PV500E),  
TY-S42PX500W (TH-42PV500E),  
TY-S50PX500W (TH-50PV500E)
- Wall-hanging bracket (vertical)..... TY-WK42PV3W
- Wall-hanging bracket (angle) ..... TY-WK42PR2W

Always be sure to ask a qualified technician to carry out installation.

**Do not place the Plasma TV on sloped or unstable surfaces.**

- The Plasma TV may fall off or tip over.

**Do not place any objects on top of the Plasma TV.**

- If water is spilled onto the Plasma TV or foreign objects get inside it, a short-circuit may occur which could result in fire or electric shock. If any foreign objects get inside the Plasma TV, please consult your local Panasonic dealer.

**Ventilation should not be impeded by covering the ventilation openings with items such as newspapers, table cloths and curtains.**

**If using the pedestal (optional accessory), leave a space of at least 10 cm at the top, left and right, at least 6 cm at the bottom, and at least 7 cm at the rear. If using some other setting-up method, leave a space of at least 10 cm at the top, bottom, left and right, and at least 1.9 cm at the rear of the Plasma TV.**

**Electromagnetic interference may occur if electronic equipments are placed near each other.**

- It will cause interference in image, sound, etc. In particular, keep video equipment away from this product.

**Keep unneeded small parts and other objects out of the reach of small children. These objects can be accidentally swallowed. Also, be careful about packaging materials and plastic sheets.**

### ■ When using the Plasma TV

**The Plasma TV is designed to operate on 220 - 240 V AC, 50/60 Hz.**

**Do not cover the ventilation holes.**

- Doing so may cause the Plasma TV to overheat, which can cause fire or damage to the Plasma TV.

**Do not insert any foreign objects into the Plasma TV.**

- Do not insert any metal or flammable objects into the ventilations holes or drop them onto the Plasma TV, as doing so can cause fire or electric shock.

**Do not remove the cover or modify it in any way.**

- High voltages which can cause severe electric shocks are present inside the Plasma TV. For any inspection, adjustment and repair work, please contact your local Panasonic dealer.

**Ensure that the mains plug is easily accessible.**

**Securely insert the power cord plug as far as it will go.**

- If the plug is not fully inserted, heat may be generated which could cause fire. If the plug is damaged or the wall socket plate is loose, do not use them.

**Do not handle the power cord plug with wet hands.**

- Doing so may cause electric shocks.

**Do not do anything that may damage the power cable. When disconnecting the power cable, pull on the plug body, not the cable.**

- Do not damage the cable, make any modifications to it, place heavy objects on top of it, heat it, place it near any hot objects, twist it, bend it excessively or pull it. To do so may cause fire and electric shock. If the power cable is damaged, have it repaired at your local Panasonic dealer.

**If the Plasma TV is not going to be used for any prolonged length of time, unplug the power cord plug from the wall outlet.**

# Safety Precautions

## ■ If problems occur during use

**If a problem occurs (such as no picture or no sound), or if smoke or an abnormal odour starts to come out from the Plasma TV, immediately unplug the power cord plug from the wall outlet.**

- If you continue to use the Plasma TV in this condition, fire or electric shock could result. After checking that the smoke has stopped, contact your local Panasonic dealer so that the necessary repairs can be made. Repairing the Plasma TV yourself is extremely dangerous, and should never be attempted.

**If water or foreign objects get inside the Plasma TV, if the Plasma TV is dropped, or if the cabinet becomes damaged, disconnect the power cord plug immediately.**

- A short circuit may occur, which could cause fire. Contact your local Panasonic dealer for any repairs that need to be made.

## CAUTION

## ■ When using the Plasma TV

**Do not bring your hands, face or objects close to the ventilation holes of the Plasma TV.**

- Heated air comes out from the ventilation holes at the top of Plasma TV will be hot. Do not bring your hands or face, or objects which cannot withstand heat, close to this port, otherwise burns or deformation could result.

**Be sure to disconnect all cables before moving the Plasma TV.**

- If the Plasma TV is moved while some of the cables are still connected, the cables may become damaged, and fire or electric shock could result.

**Disconnect the power cord plug from the wall socket as a safety precaution before carrying out any cleaning.**

- Electric shocks can result if this is not done.

**Clean the power cable regularly to prevent it becoming dusty.**

- If dust built up on the power cord plug, the resultant humidity can damage the insulation, which could result in fire.  
Pull the power cord plug out from the wall outlet and wipe the mains lead with a dry cloth.

**This Plasma TV radiates infrared rays, therefore it may affect other infrared communication equipment. Install your infrared sensor in a place away from direct or reflected light from your Plasma TV.**

# Maintenance

**The front of the display panel has been specially treated. Wipe the panel surface gently using only a cleaning cloth or a soft, lint-free cloth.**

- If the surface is particularly dirty, wipe with a soft, lint-free cloth which has been soaked in pure water or water to which a small amount of neutral detergent has been added, and then wipe it evenly with a dry cloth of the same type until the surface is dry.
- Do not scratch or hit the surface of the panel with fingernails or other hard objects, otherwise the surface may become damaged. Furthermore, avoid contact with volatile substances such as insect sprays, solvents and thinner, otherwise the quality of the surface may be adversely affected.

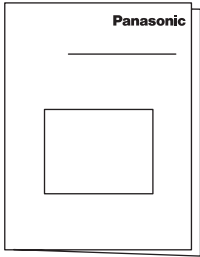
**If the cabinet becomes dirty, wipe it with a soft, dry cloth.**

- If the cabinet is particularly dirty, soak the cloth in water to which a small amount of neutral detergent has been added and then wring the cloth dry. Use this cloth to wipe the cabinet, and then wipe it dry with a dry cloth.
- Do not allow any detergent to come into direct contact with the surface of the Plasma TV.  
If water droplets get inside the unit, operating problems may result.
- Avoid contact with volatile substances such as insect sprays, solvents and thinner, otherwise the quality of the cabinet surface may be adversely affected or the coating may peel off. Furthermore, do not leave it for long periods in contact with articles made from rubber or PVC.

# Accessories

Check that you have the accessories and items shown

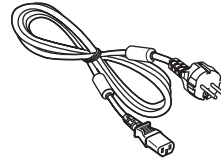
Operating Instructions



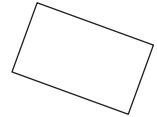
Remote Control Transmitter (N2QAKB000060)



Mains Lead



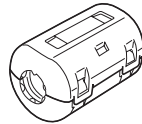
Pan European Guarantee Card



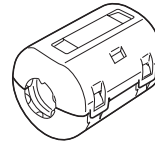
Batteries for the Remote Control Transmitter (2 x R6 (UM3) size)



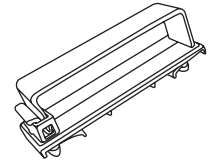
Ferrite core (Small size) x 1



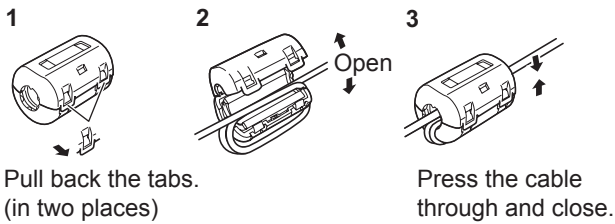
Ferrite core (Large size) x 1



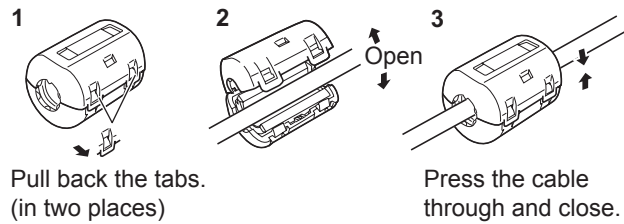
Clamper x 2



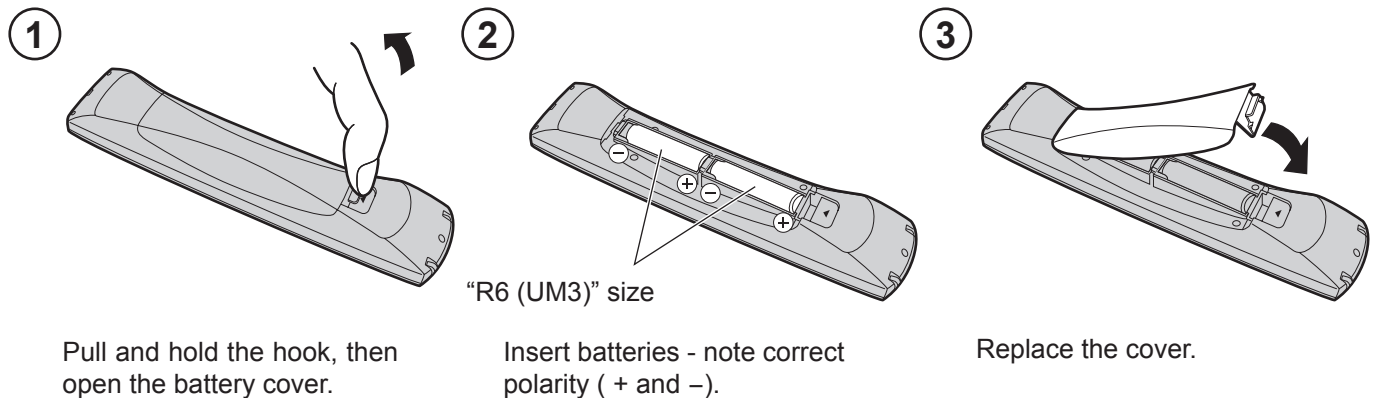
**Installing the ferrite core (Small size)**  
See page 38.



**Installing the ferrite core (Large size)**  
See page 41.



## Fitting remote control batteries

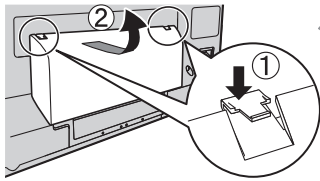


- Make sure that the batteries are fitted the correct way round.
- Do not mix old batteries with new batteries. Remove old, exhausted batteries immediately.
- Do not mix different battery types, i.e. Alkaline and Manganese or use rechargeable (Ni-Cad) batteries.

# Cable binding instructions

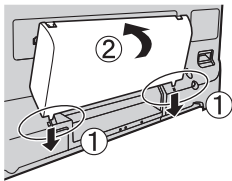
## Cable cover

### Removal

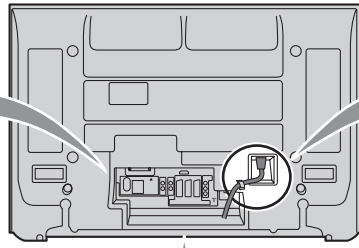


1. Push down hooks and pull the cover slightly towards yourself to disengage the claws (at 2 points).
2. Slowly pull out in the downward direction.

### Fitting

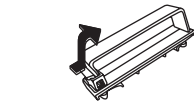


1. Insert the claws (at 2 points) at the bottom end.
2. Push until it clicks.

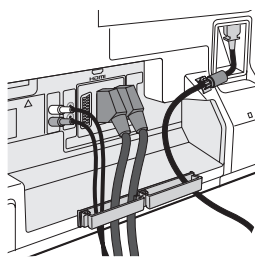
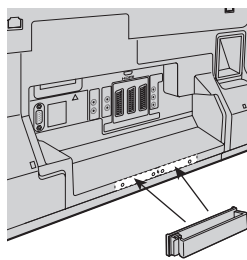
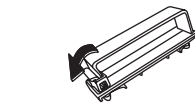


## Clamper

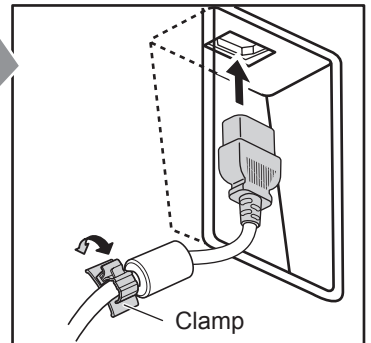
### Open



### Close



## Mains Lead

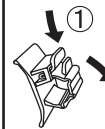


### How to fix:



Fix by pushing in till a clicking sound is heard.

### How to release:



Pull down while drawing the knob.

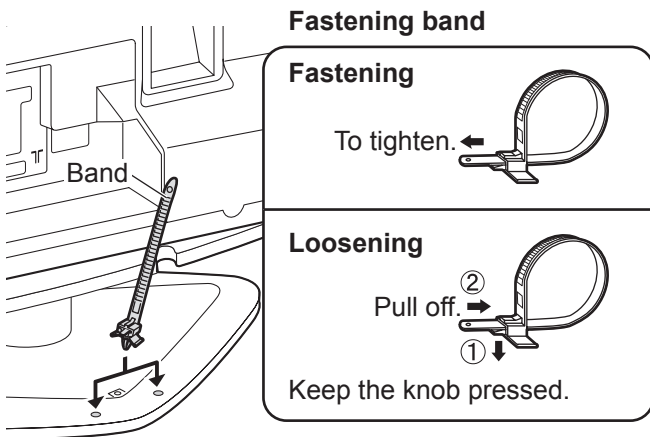
## Note:

To avoid interference appearing on the screen, do not bundle the RF cable and mains lead together.

## For using the pedestal

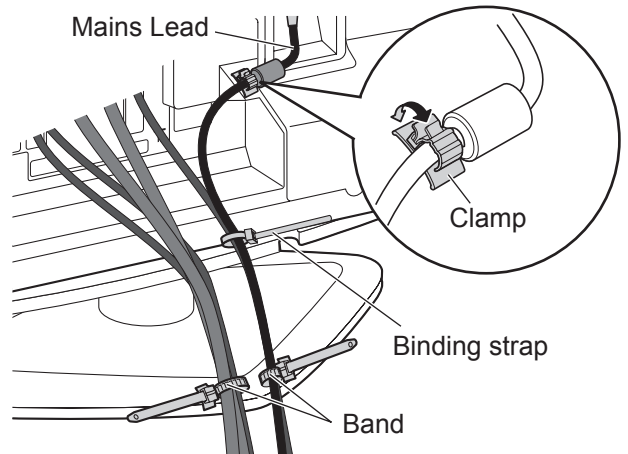
### Attach the bands.

Insert the spigot on the two bands into the pedestal.

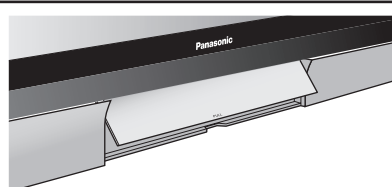
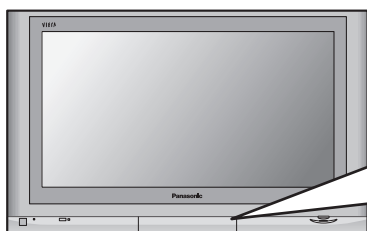


### Connect cables.

Example of "connection cable routing"



## How to open the front cover

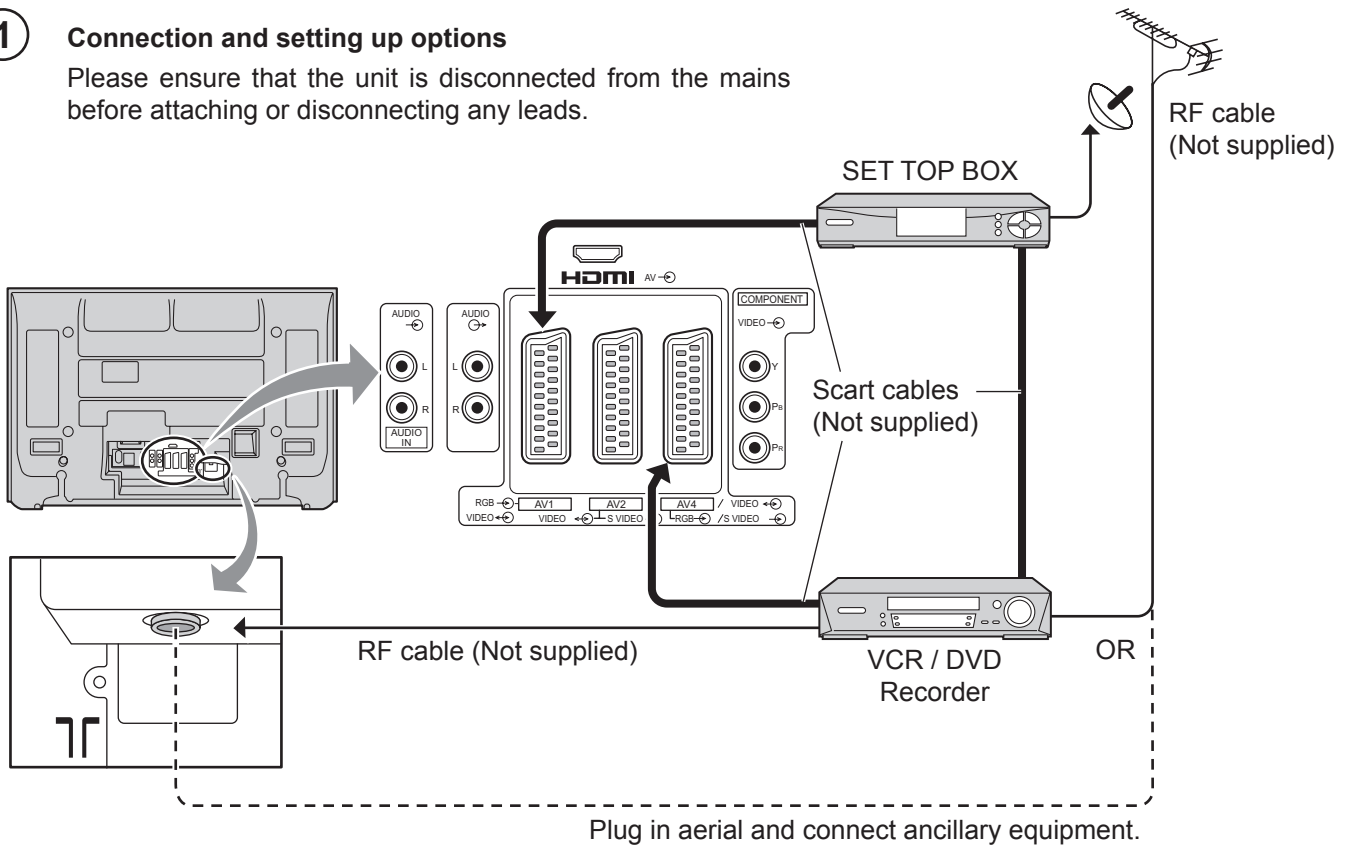


Raise the lower part of the door labeled "PULL".

# Quick Start Guide

## 1 Connection and setting up options

Please ensure that the unit is disconnected from the mains before attaching or disconnecting any leads.



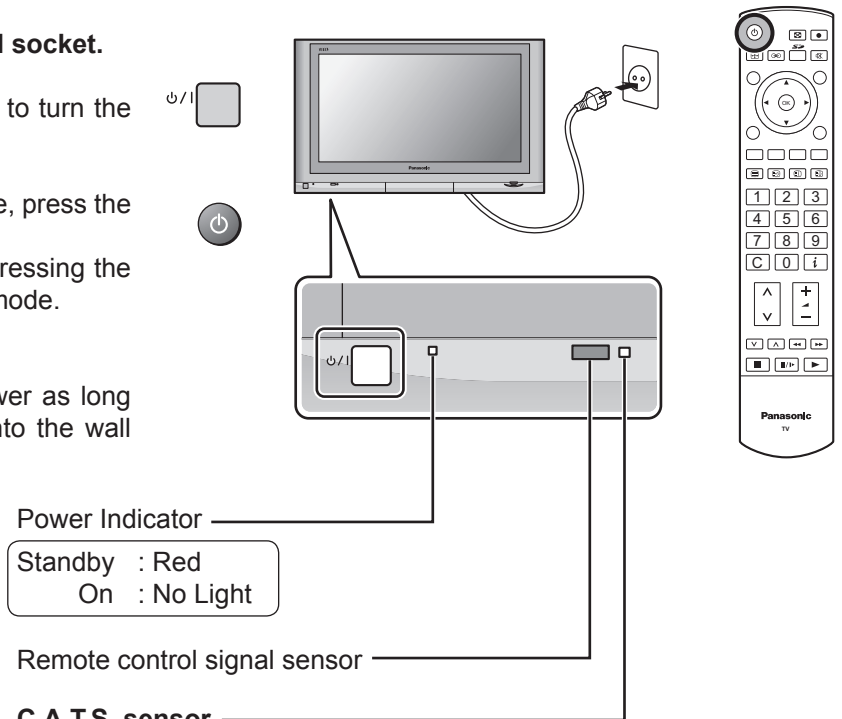
## 2 Connect the mains plug to the wall socket.

Press the [⏻/⏻] switch on the TV set to turn the set on.

To switch the TV set to Standby mode, press the [⏻] button on the remote control. The TV set can be switched on by pressing the [⏻] button again if it was in Standby mode.

### Note:

This TV will still consume some power as long as the mains plug is still inserted into the wall socket.



### C.A.T.S. sensor

Plasma C.A.T.S. (Contrast Automatic Tracking System) automatically senses the ambient light conditions and adjusts the brightness and gradation accordingly, to optimize contrast.

C.A.T.S. is in effect when Viewing mode is set to Auto. See page 12.



# Quick Start Guide

## 3 Select your country.

For Belgium, Switzerland and E.Eu, select the desired language.  
If you wish to perform manual tuning, press the **Green** button.  
See page 19.

Press the **Red** button to start **Auto Setup**.

Auto setup will begin, your stations will be located and stored.

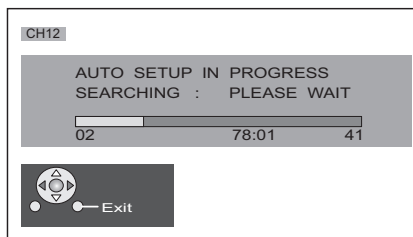
If a compatible recording device is connected to the correct Scart terminal, programme data will be downloaded to the device via Q-Link.  
See page 20.



Green



Red



## 4 TV to VCR or DVD Recorder Download

If a "Q-Link", "NEXTVIEWLINK" or compatible recording device has been connected to a Scart terminal before starting Step 2, programme information will be downloaded to that device.

DOWNLOAD IN PROGRESS  
PLEASE WAIT  
Programme : 63  
Remote control unavailable

The programme positions will be downloaded to the recording device, in the same order as stored in the TV.  
See page 20.

Not all VCRs / DVD Recorders support this download of programme information, some may require to be started manually.

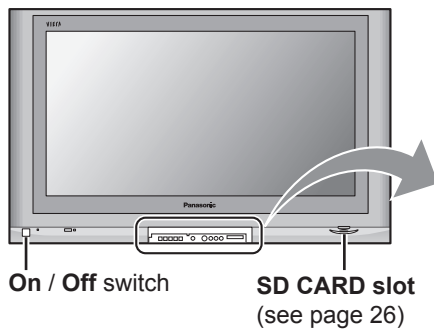
Refer to the recording device's operating instruction book.

If a recording device other than those described above has been connected, then there will be no download operation.

### Notes:

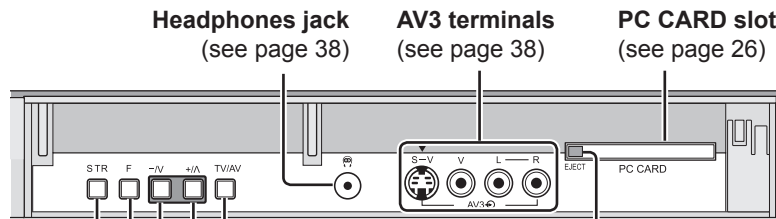
- If the recording device has not accepted download data from the TV, you may need to select the Download option from the device's menu system. Refer to the recording device's operating instruction book.
- If Q-Link is not operating correctly, check the following:
  - The Scart cable is connected to the TV's Scart terminal, AV2 or AV4, and correctly setup in the menu.
  - The Scart cable is connected to the recording device's compatible (Q-Link, NEXTVIEWLINK or similar technology) Scart terminal.
  - The Scart cable is a "fully wired" type.
- For further information on Q-Link and connecting equipment, see page 20, 39, 43.

# Basic controls: front panel and remote control



**On / Off switch**  
**SD CARD slot** (see page 26)

**STR** (Normalization store)  
Used to store tuning and other function settings.



**Headphones jack** (see page 38)  
**AV3 terminals** (see page 38)  
**PC CARD slot** (see page 26)

**TV/AV button** (see page 38)  
**PC CARD EJECT button** (see page 26)

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

**F** (Function select)

Displays the On Screen Display functions, use repeatedly to select from the available functions - **Volume, Contrast, Brightness, Colour, Sharpness, Tint** (in **NTSC** mode), **Bass, Treble, Balance** and **Tuning mode**.

**Standby On / Off button**  
Switches TV **On** or **Off** (Standby mode).

**Ambience On / Off** (see page 13)

**ASPECT** control button  
(see page 21, 22)

**N** (Normalize) button  
Resets all settings to their default levels.

Press to confirm selections and choices.

**Menu button**  
Press to access the **Picture, Sound** and **Setup** menus. (see page 12-14)

Coloured buttons used for the selection, navigation and operation of various functions.

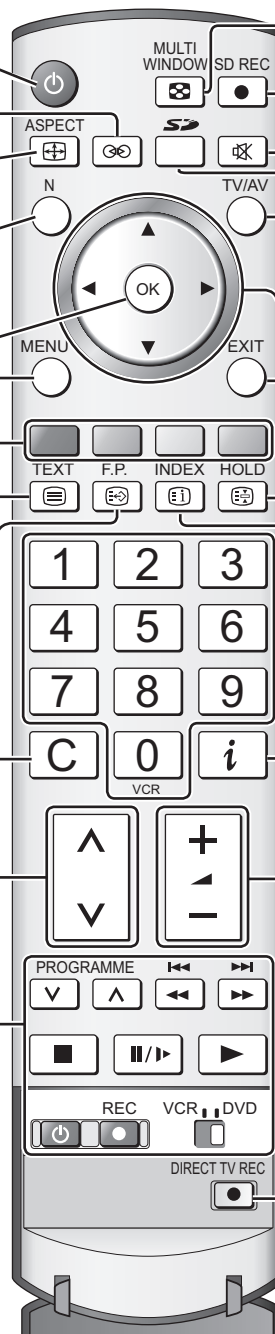
**Teletext button** (see page 35-37)

**Text F.P. button** (see page 36)

**Direct channel access**  
During normal TV viewing or when in the **Tuning, Programme edit** or **Manual tuning** menus, press and then enter channel number using the numeric buttons.

**Channel up / down button**

**VCR / DVD buttons**  
(see page 34)



**MULTI WINDOW button**  
(see page 23)

**SD Record button** (see page 28)

**Sound mute On / Off**

**SD button**  
Access Card operations. (see page 26-33)

Switch between viewing TV or AV input. (see page 38)

Cursor buttons to make selections and adjustments.

Exit the mode.

**Text Hold / Picture Still button**  
(see page 33, 35)

**Text Index button** (see page 37)

**Programme / channel change buttons (0-9)** and **Teletext page buttons**. (see page 35-37)  
When in **Standby** mode, switches TV **On**.

**Information button**  
Press to display status information for the current Programme position, Programme name, Channel number, MPX mode, Receiving system and ASPECT mode. Press again to remove the information.

**Volume up / down button**

**DIRECT TV Record button**  
(see page 20)

# Using the On Screen Displays

Many features available on this TV can be accessed via the On Screen Display menu system. Use the remote control as shown below to access and adjust features as desired.

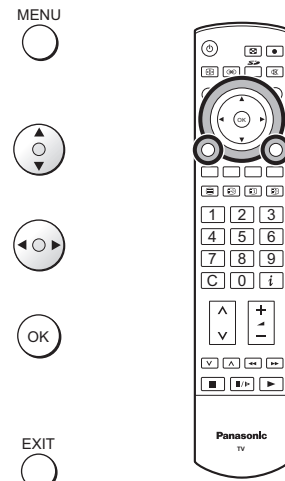
The **MENU** button is used to open the main menus and also to return to the previous menu.

The up and down cursor buttons are used to move the cursor and select menus.

The left and right cursor buttons are used to access menus, adjust levels or to select from a range of options.

The **OK** button is used with a number of features to store settings after adjustments have been made or options have been set.

The **EXIT** button is used to exit the menu system and return to the normal viewing screen.



An On Screen Help box is displayed whenever a menu is displayed on the TV. This Help box indicates which buttons on the remote control are used to navigate the menu shown, see above for descriptions of button functions.

**Note:**

The Help box is not shown in the menu pictures in this instruction book due to space limitations.

Sound menu	
Bass	- [ ] +
Treble	[ ]
Balance	[ ]
Headphone volume	[ ]
MPX	No service
Mode	Music
Ambience	Off



**ON SCREEN HELP**  
**'Instructions' box**

# Picture menu

Press the **MENU** button.

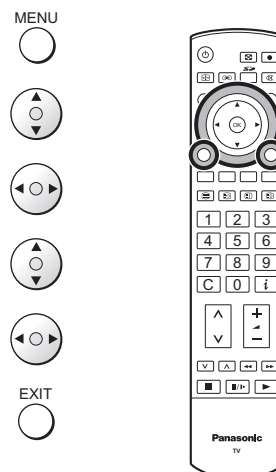
Move to choose **Picture menu**.

Access **Picture menu**.

Move to choose menu option.

Adjust chosen option or access chosen menu.

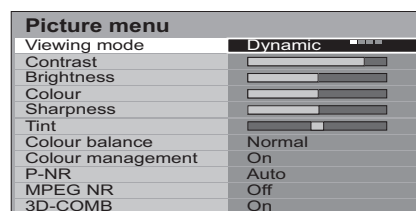
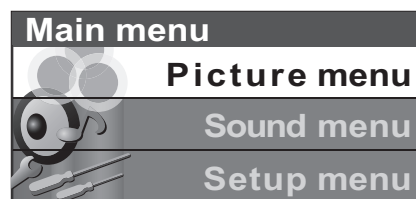
Press the **EXIT** button at any time to go back to watching TV.



## Viewing mode

The Viewing mode menu allows you to select four different screen settings - **Dynamic**, **Normal**, **Cinema** and **Auto**. In each Viewing mode setting, Contrast, Brightness, Colour, Sharpness, Tint (in NTSC only), Colour balance, Colour management, P-NR, MPEG NR and 3D-COMB can be adjusted and stored to suit your particular viewing requirement. (e.g., you may require different settings for viewing sports, films, news etc.)

Viewing mode offers you up to a maximum of four separate settings for each signal source: RF, AV1, AV2, AV3, AV4, Component, PC, HDMI and Card operations. Changes will be stored automatically. By analysing and processing the incoming picture, all four modes feature automatic enhancement.



## Contrast, Brightness, Colour, Sharpness

Increase or decrease 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.

## Colour balance

Allows you to set the overall colour tone of the picture. Choose from **Cool**, **Normal** and **Warm**.

## Colour management

Enables vivid colour adjustment automatically.

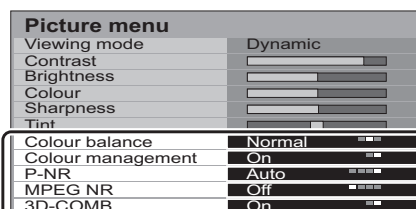
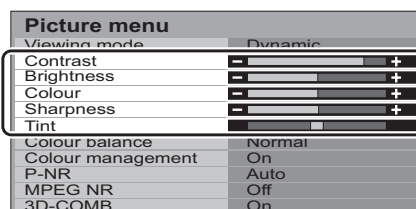
## P-NR

Automatically reduces unwanted picture noise. Not available during PC, HDMI and HD signal input.

## MPEG NR

Reduces MPEG noise. Allows you to choose from **Off**, **Min**, **Mid** and **Max**. This function is effective in reducing the digital block noise when viewing DVD, VCD, SD card or digital broadcasting. The effect will be changed based on the scene and image.

**MPEG:** Compression technology of the image signal adopted by DVD, VCD, SD card or digital broadcasting.



## 3D-COMB

Occasionally, whilst viewing still or slow moving pictures, colour patterning may be seen. Set 3D-COMB to **On** to display sharper and more accurate colours. Displayed only when receiving PAL or NTSC signals. Not displayed during RGB Video, S-Video, Component, PC, HDMI input and Card operations (thumbnail).

# Sound menu

Press the **MENU** button.

Move to choose **Sound menu**.

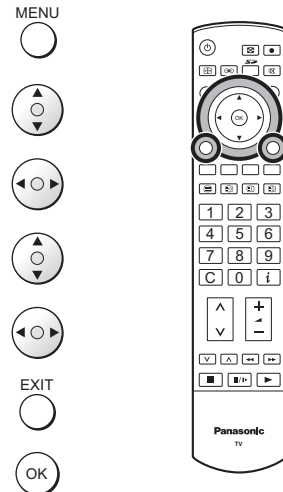
Access **Sound menu**.

Move to choose menu option.

Adjust chosen option or access chosen menu.

Press the **EXIT** button at any time to go back to watching TV.

Press the **OK** button after having adjusted some features to store the new settings as the default (replacing the factory setting).



**Bass** Increase or decrease level to enhance or minimise lower, deeper sound output.

**Treble** Increase or decrease level to enhance or minimise sharper, higher sound output.

**Balance** The levels of sound between the left and right speakers can be adjusted to suit your listening position.

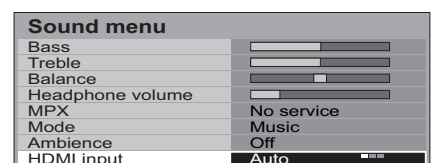
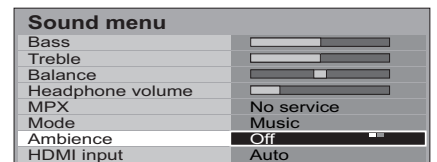
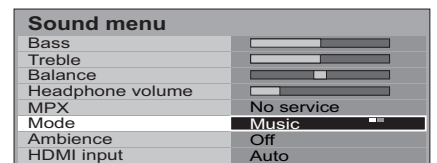
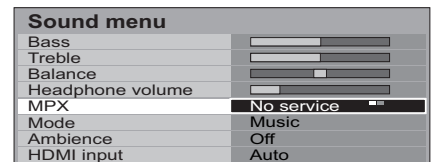
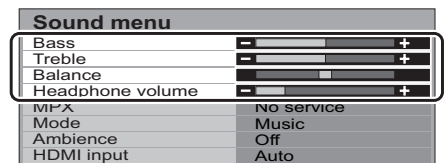
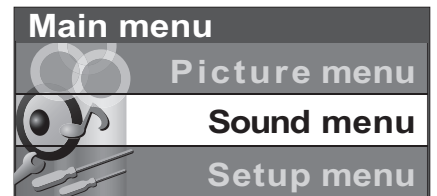
**Headphone volume** Can be adjusted independently of the TV speakers so that everyone can enjoy listening at a level comfortable for them.

**MPX** Usually set to **Stereo** to provide the best reproduction, but if reception deteriorates or if the service is not available then switch to **Mono**. **Mono (M1)** and **(M2)** can also be selected if a mono signal is being transmitted.

**Mode** Sound quality can be improved when watching music scene or drama by selecting the appropriate **Music** or **Speech** mode.

**Ambience** Ambience provides a dynamic enhancer to simulate improved spatial effects. Switching is also possible by pressing the **Ambience** button.

**HDMI input** Displayed during HDMI input mode. Allows you to choose from **Auto**, **Digital** and **Analogue**. Select to fit the input signal.  
**Auto** : Set in normal use  
**Digital** : HDMI cable connection  
**Analogue** : HDMI-DVI adapter cable connection  
 See page 40.



# Setup menu

Press the **MENU** button.

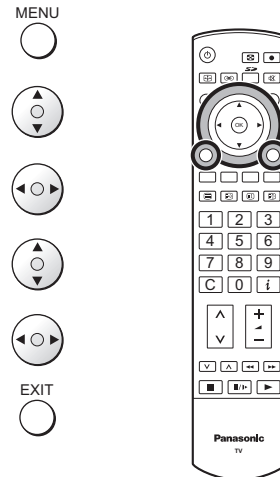
Move to choose **Setup menu**.

Access **Setup menu**.

Move to choose menu option.

Adjust chosen option or access chosen menu.

Press the **EXIT** button at any time to go back to watching TV.



**Q-Link** Allows you to select which AV terminal is to be used for data communication between this TV and a compatible recording device. Choose from **Off**, **AV2** and **AV4**. See page 20.

**AV2 / AV4 out** Offers a choice of signals to send to the Scart terminal selected in the Q-Link option. You can choose from the current **TV** programme position, the signal entering **AV1 / AV2 / AV3 / AV4** or **Monitor** - the picture displayed on screen. Component signal input cannot be output to these Scart terminals.

**Teletext** Allows you to choose between **TOP/FASTTEXT** or **List** mode. See page 35-37.

**Off timer** Switches the TV off within a preset time which you can choose from between 0 to 90 minutes in 15 minute intervals.

**Text language** Select character set, so that all characters needed are available for text on teletext pages (e.g., cyrillic characters, etc.).

### Mode Languages

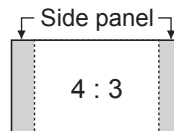
**West:** English, French, German, Greek, Italian, Spanish, Swedish, Turkish

**East1:** Czech, English, Estonian, Lettish, Rumanian, Russian, Ukrainian

**East2:** Czech, English, German, Hungarian, Lettish, Polish, Rumanian

**Side panel** Allows you to choose from **Off**, **Low**, **Mid** and **High**. Do not display a picture in 4:3, 14:9, Picture out of picture, Picture and picture, Picture and text modes for an extended period, as this can cause an after-image to remain on the side panels either side of the display field.

To prevent the appearance of such an afterimage, illuminate the side panels.



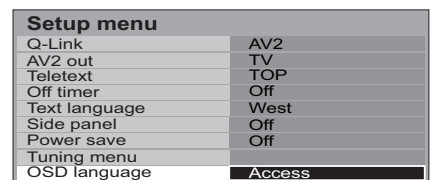
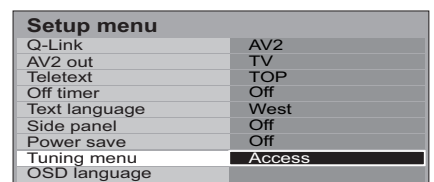
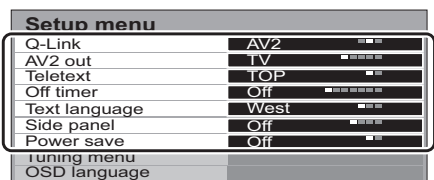
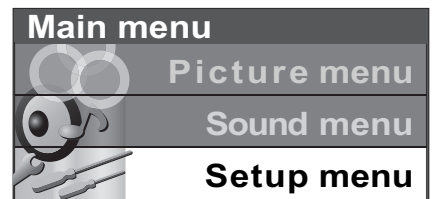
**Power save** By reducing the brightness of picture, power consumption can be lowered.

**Tuning menu** Provides access to many other features including **Programme edit** and **Auto setup**. See page 15-19.

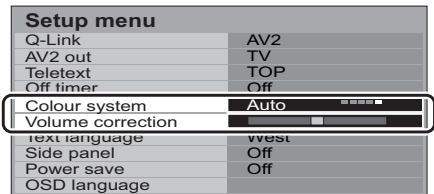
**OSD language** When you first install the TV, the On Screen Display language is set according to your choice of country. **OSD language** lets you change the language used for On Screen Displays.

**Colour system** During **AV** mode, Colour system is displayed. See page 15.

**Volume correction** During **AV**, **PC** and **HDMI** mode, Volume correction is displayed. You can adjust volume level of AV, PC and HDMI mode. Volume level is memorised.



### AV mode



# Tuning menu – overview

Press the **MENU** button.

Move to choose **Setup menu**.

Access **Setup menu**.

Move to choose **Tuning menu**.

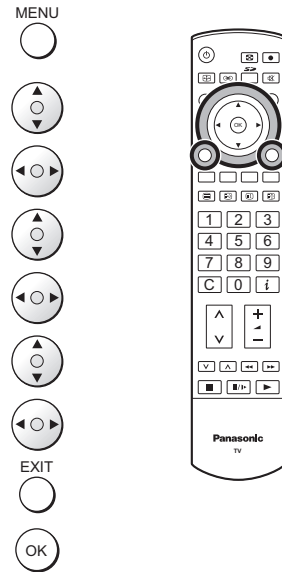
Access **Tuning menu**.

Move to choose menu option.

Adjust chosen option or access chosen menu.

Press the **EXIT** button at any time to go back to watching TV.

Press the **OK** button after having adjusted some features to store the new settings as the default (replacing the factory setting).



**Programme edit** Access in order to customize your programme settings (e.g., adding or deleting a programme position). See page 16, 17.

**Auto setup** Allows you to automatically retune the TV. Useful if you move house and wish to retune your TV to the local stations. See page 18.

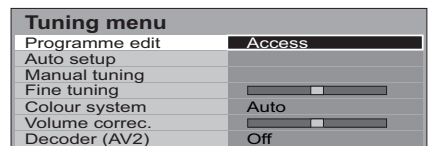
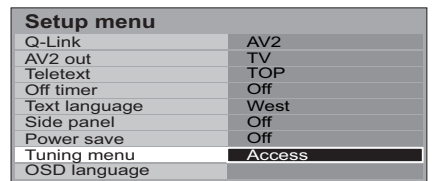
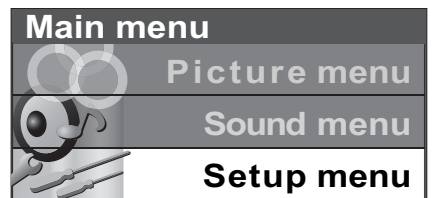
**Manual tuning** Allows individual programme positions to be tuned manually. See page 19.

**Fine tuning** Use to make small adjustments to the tuning of an individual station (useful for example when weather conditions are affecting reception quality of a programme).

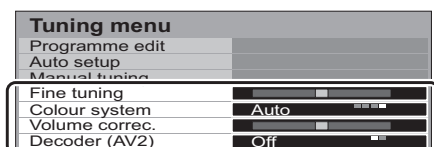
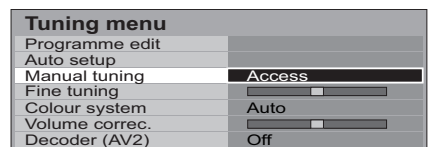
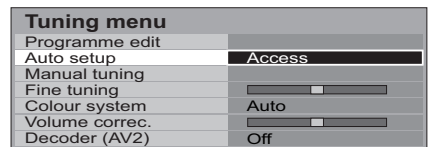
**Colour system** Lets you select the correct transmission standard for the transmission signal being received.

**Volume correc.** Lets you adjust the volume level of individual stations. Use this feature if the volume level varies significantly between stations. Adjusting one station's volume to bring it into line with the other stations means you can avoid having to adjust the volume each time you change channels.

**Decoder (AV2 / AV4)** This option is used when a decoder is connected via AV2 / AV4. Store the setting as **On** so that every time this programme position is selected, the TV software is set to handle the decoded information (this is important if your decoder unit is connected to AV2 / AV4 via a Q-Link device).



Programme edit				
Prog.	Chan.	Name	Lock	Sys
1	CH44	ABC	Off	SC1
2	CH51	XYZ	Off	SC1
3	CH41	FTP	Off	SC1
4	CH47	123	Off	SC1
5	CH37	456	Off	SC1



# Tuning menu – Programme edit

Press the **MENU** button.

Move to choose **Setup menu**.

Access **Setup menu**.

Move to choose **Tuning menu**.

Access **Tuning menu**.

Move to choose **Programme edit**.

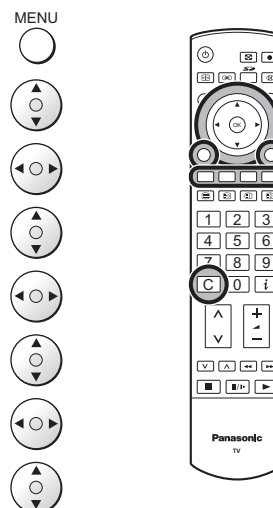
Access **Programme edit**.

Move to choose programme position (e.g., Prog. 3).

Make required change, e.g., moving a programme channel (see the relevant procedure below).

Press the **EXIT** button at any time to go back to watching TV.

Press the **OK** button after having adjusted some features to store the new settings.

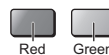


## Adding / deleting a programme channel

Move the cursor to the programme to be deleted or added.

Press the **Green** button to add a programme channel to the programme position, or the **Red** button to delete one.

Press the same button again to confirm your decision.



Programme edit				
Prog.	Chan.	Name	Lock	Sys
1	CH44	ABC	Off	SC1
2	CH51	XYZ	Off	SC1
3	CH41	FTP	Off	SC1
4	CH47	123	Off	SC1
5	CH37	456	Off	SC1

Add Cancel

## Moving a programme channel

Move the cursor to the programme to be moved.

Press the **Yellow** button.

Choose the new position for the programme channel.

Press the **Yellow** button again to confirm your decision.



Programme edit				
Prog.	Chan.	Name	Lock	Sys
1	CH44	ABC	Off	SC1
2	CH51	XYZ	Off	SC1
3	CH41	FTP	Off	SC1
4	CH47	123	Off	SC1
5	CH37	456	Off	SC1

Confirm Cancel

## Tuning a programme channel

Move to the **Chan.** column.

Increase or decrease the programme channel number (you will see the TV retune to the new number as you change it) or use the **C** button for Direct Channel Access. See page 10.

Press the **OK** button to store this change.



Programme edit				
Prog.	Chan.	Name	Lock	Sys
1	CH44	ABC	Off	SC1
2	CH51	XYZ	Off	SC1
3	CH41	FTP	Off	SC1
4	CH47	123	Off	SC1
5	CH37	456	Off	SC1



# Tuning menu – Programme edit

## Renaming a programme channel

Move to the **Name** column.



Choose the new character. The box at the bottom of the screen shows the character currently selected.



Move to the next character position.



Continue until renaming is done.

Press the **OK** button to store the new name.



Programme edit				
Prog.	Chan.	Name	Lock	Sys
1	CH44	ABC	Off	SC1
2	CH51	XYZ	Off	SC1
3	CH41	FTP	Off	SC1
4	CH47	123	Off	SC1
5	CH37	456	Off	SC1

ABCDEFGHIJKLMNQRST  
UVWXYZ+-\_ 0123456789

## Locking a programme channel

You may wish to lock a programme channel to prevent access to it.

Move to the **Lock** column.



Choose between Lock **On** or Lock **Off**.



Press the **OK** button to store the new setting.



Programme edit				
Prog.	Chan.	Name	Lock	Sys
1	CH44	ABC	Off	SC1
2	CH51	XYZ	Off	SC1
3	CH41	FTP	Off	SC1
4	CH47	123	Off	SC1
5	CH37	456	Off	SC1

### Note:

When a programme position is locked, Direct Channel Access using the **C** and numeric buttons on the remote control is not available.

## Changing the sound system for a channel

You can change the sound system used for a programme channel.

Move to the **Sys** column.



Choose the required sound system:

- SC1 : PAL B, G, H / SECAM B, G
- SC2 : PAL I
- SC3 : PAL D, K / SECAM D, K
- F : SECAM L / L'



Press the **OK** button to store the new setting.



Programme edit				
Prog.	Chan.	Name	Lock	Sys
1	CH44	ABC	Off	SC1
2	CH51	XYZ	Off	SC1
3	CH41	FTP	Off	SC1
4	CH47	123	Off	SC1
5	CH37	456	Off	SC1

## Copying programme information to a recording device

You can copy programme information to a compatible recording device connected to AV2 / AV4. See page 39 for connection information.

Press the **Blue** button.

Programme data will now be sent to the recording device(s). This might take a few seconds, depending on the number of stations stored. If the message "Feature not available" appears on the screen, the television is unable to send the programme information to the recording device(s). See the device's instruction book for further information.



DOWNLOAD IN PROGRESS  
PLEASE WAIT  
Programme : 63  
Remote control unavailable

### Note:

This is not available when you choose Q-Link Off in Setup menu.

# Tuning menu – Auto setup

Auto setup automatically retunes your TV. This feature is useful if, e.g., you move house and wish to retune your TV to receive the local stations.

Press the **MENU** button.

MENU



Move to choose **Setup** menu.



Access **Setup** menu.



Move to choose **Tuning** menu.



Access **Tuning** menu.



Move to choose **Auto setup**.



Access **Auto setup**.



Press to confirm start.



## Notes:

- If you proceed with the next step all tuning data will be erased (all stations and their programme positions stored in your TV's memory will be wiped out so the new settings can be stored).
- If you exit the procedure after this point and before **Auto setup** is complete, no station information will be stored. Restart and complete the Auto setup procedure so that the TV is retuned.

Select your country.



Press to start **Auto setup**.



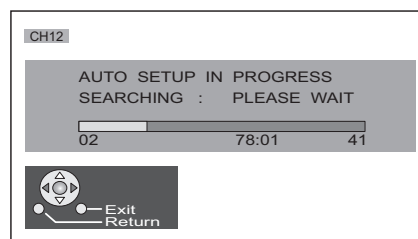
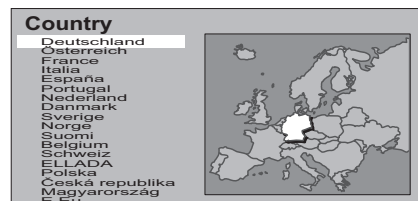
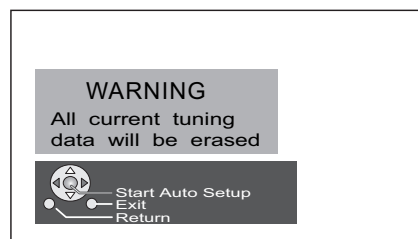
The TV will search for, locate, store and then sort into order your local stations.

If compatible recording device is connected via the AV2 / AV4 terminal, programme data will be sent to the device via Q-Link. See page 20.

Once this operation is completed the TV will display the programme now stored on programme position 1.

Press the **EXIT** button at any time to go back to watching TV (please read the **Notes** in the above procedure).

EXIT



## Tuning menu – Manual tuning

It is possible to retune individual programme positions:

Press the **MENU** button.

Move to choose **Setup menu**.

Access **Setup menu**.

Move to choose **Tuning menu**.

Access **Tuning menu**.

Move to choose **Manual tuning**.

Access **Manual tuning**.

Select the programme position to be tuned.

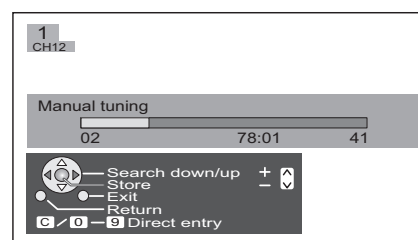
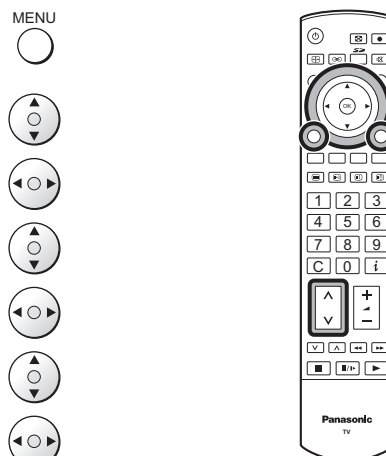
Press repeatedly until required station is found.

When the desired station is found, press the **OK** button to store. The programme position will flash.

Press the **EXIT** button at any time to go back to watching TV.

### Note:

If your VCR is connected to this TV by an RF cable only, choose programme position "0" to tune to the VCR signals.



## Manual tuning (via front panel)

It is also possible to use the control panel buttons on the front of your TV to tune individual programme positions:

Press the **F** button until **Tuning mode** is reached.

Press the **-/V** or **+/\A** button to access **Tuning mode**.

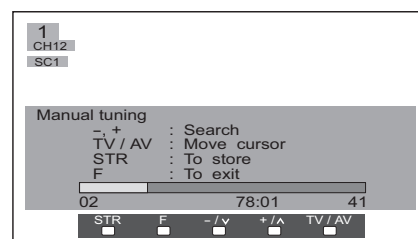
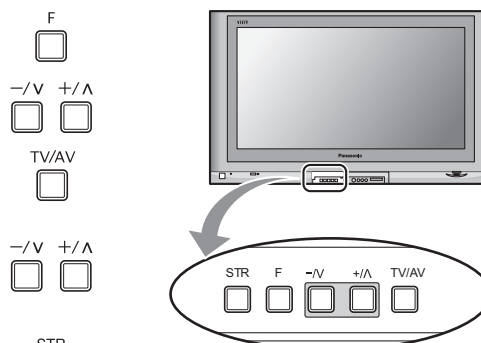
Press the **TV/AV** button to move between **Change programme, Search and Change TV system**.

Press the **-/V** or **+/\A** button to change programme position or start search.

When the desired station is found, press the **STR** button to store. The programme position will flash.

Repeat above procedure to tune additional programme positions.

Press the **F** button at any time to go back to watching TV.



# Q-Link

## Q-Link allows the television to communicate with a compatible VCR or DVD Recorder.

For Q-Link communication to work, the TV must be connected to a recording device with the “Q-Link”, “NEXTVIEWLINK”, “DATA LOGIC”, “Easy Link”, “Megalogic” or “SMARTLINK” logo using a “fully wired” Scart cable between the AV2 / AV4 terminal of the television and the appropriate terminal on your VCR or DVD Recorder.

For connection to the appropriate Scart terminal on the recording device, refer to the device’s instruction book.

### When using a “NEXTVIEWLINK” device the main features possible are the following:

#### Preset Download

This allows the programme order from the TV to be downloaded to the recording device, helping to ensure that correct recordings are made; there are several ways to perform this operation:

1. During installation as explained in the “Quick Start Guide” on page 8, 9.
2. When Auto setup is started from within the Tuning menu. See page 15.
3. Preset download started from the recording device, refer to the device’s instruction book.

#### What You See Is What You Record (DIRECT TV RECORDING)

This will allow the immediate recording of the programme currently shown on the TV, by the recording device attached to the Scart terminal, which can be chosen using “Q-Link”. See page 14.

Press the **DIRECT TV REC** button. 

If the recording device is in Standby mode with usable recording media inserted, it will automatically switch on when you press the **DIRECT TV REC** button.

If a “Q-Link” device is connected, a message will appear on the TV screen showing what is being recorded, or if it is not possible to record. Some “Q-Link” compatible devices will only display the message when on the VCR programme position “0” or in AV mode. Refer to the device’s instruction book.



### Recording in progress

The recording device is recording the programme signal from its own tuner. If you wish you can switch off the TV and leave the device recording in the normal way.

### No recording -Check tape or disc

The tape or disc may have been “write protected”, missing or may be damaged. The device may already be recording. Refer to the device’s instruction book.

### Additionally, when using a “Q-Link” device the main features possible are the following:

The following features are only available from the device connected to the Scart terminal selected using “Q-Link”. See page 14.

#### TV / Recording device Auto Power On

If you insert pre-recorded media into the recording device and press the Play button whilst the TV is in Standby mode, the TV will automatically switch on and select the correct AV input so that you can view the content.

#### Recording device Auto Power Standby

When the TV is switched into Standby mode, the recording device will also switch into Standby mode if there is no media inserted, or if there is media inserted and the device is in Rewind or Stop mode. If a VCR is rewinding a tape, it will not switch into Standby mode until rewinding has finished.

#### Recording device Image View On

If the TV is in Standby mode and the recording device sends a menu to be displayed on the TV screen (e.g., Main menu), the TV will automatically switch On and the menu will be displayed.

This TV will also communicate with other recording device’s that bear the following logos:

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

#### Important Note:

Some recording devices may not support all or some of the above functions. Refer to the instruction book for the device.

If Q-Link functions do not work, check the connection and ensure that the scart lead is a fully-wired type.

# Aspect Controls

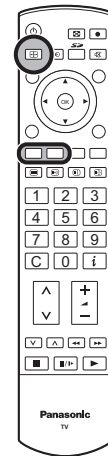
The Widescreen TV will allow you to enjoy viewing the picture at its optimum size and aspect, including widescreen cinema format pictures.

Press the **ASPECT** button repeatedly to move through the eight aspect options:

**Panasonic Auto, 16:9, 14:9, Just, 4:3, Zoom1, Zoom2 and Zoom3**  
PC mode: 16:9 and 4:3

OR

Press the **ASPECT** button. Whilst the on screen selector keys are displayed, use the **Red** or **Green** buttons to move in either direction through the eight aspect options.



## Note:

This is not available for 720p and 1080i signals input. Aspect is fixed to 16:9.

## Panasonic Auto

**Panasonic Auto** 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 **Panasonic Auto** detects a widescreen signal it switches into the appropriate widescreen mode. If **Panasonic Auto** does not detect a widescreen signal then this advanced TV set enhances the picture for optimum viewing pleasure.

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

**Panasonic Auto** switches to the appropriate widescreen ratio.

If black stripes above and below the picture are detected, aspect ratio changes automatically.

**Panasonic Auto** 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.

You may prefer to manually select one of the other aspect options available to view the picture.

## Notes:

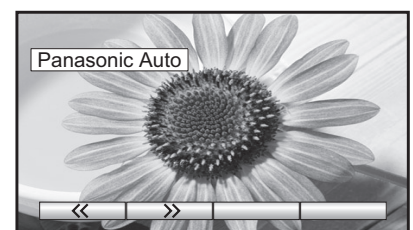
- If, in Panasonic Auto mode, you experience problems with the screen display size when playing back widescreen format recordings from your VCR then it is possible that the tracking control of your VCR requires adjustment (your VCR instruction book will contain adjustment details).
- The widescreen aspect ratios of different films and programmes can vary. If these are wider than a standard 16:9 aspect picture then a black band may be visible at the top and bottom of the screen.
- "WIDE" will appear in the top left corner of the screen and picture aspect changes accordingly in any aspect modes, if a widescreen identification signal (WSS) is detected or a control signal is found through a Scart terminal.
- Automatic aspect ratio adjustment by WSS signal is not available for progressive and high definition component signals input.



"WIDE" appears in the top left of the screen, **Panasonic Auto** switches to the appropriate 16:9 or 14:9 widescreen ratio.



"Panasonic Auto" appears in the top left of the screen. The best ratio is chosen and the picture expanded to fill the screen.

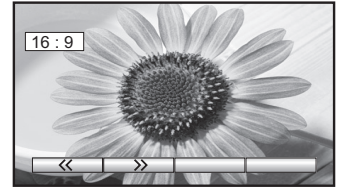


Press the **ASPECT** button, then use the **Red** or **Green** buttons to move in either direction through the eight aspect options.

# Aspect Controls

## 16 : 9

**16:9** will display a true 16:9 (anamorphic) picture with no aspect distortions.



16 : 9

## 14 : 9

**14:9** will display a 14:9 picture at its standard 14:9 size without any stretching.

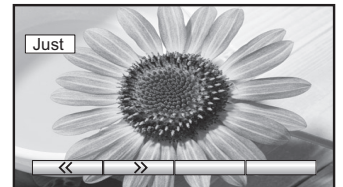


14 : 9

## Just

Use **Just** when you wish to expand a 4:3 picture to fill the whole screen (rather than watching a programme with black stripes down the left and right sides of the picture).

The 4:3 picture will be stretched horizontally so that the image fills the screen, this is done in such a way that the stretching is only obvious at the left and right edges of the screen.



Just

## 4 : 3

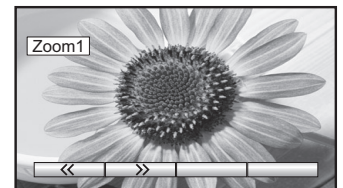
**4:3** will display a 4:3 picture at its standard 4:3 size with no aspect distortions.



4 : 3

## Zoom1

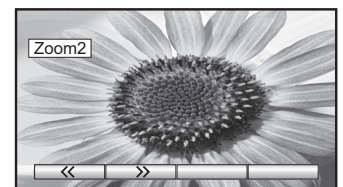
**Zoom1** will display 16:9 letterbox or 4:3 pictures with no aspect distortions.



Zoom1

## Zoom2

**Zoom2** will display 16:9 anamorphic letterbox pictures as a full screen display with no aspect distortions.

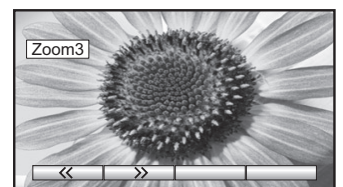


Zoom2

## Zoom3

**Zoom3** will display 21:9 letterbox pictures as a full screen display with no aspect distortions.

16:9 will display the picture at its maximum size but with slight stretching.



Zoom3

# Multi window

Press the **MULTI WINDOW** button. Whilst the on screen selector keys are displayed, use the **Red** or **Green** buttons to move between the **Picture in picture**, **Picture out of picture** and **Picture and picture** features.

The on screen selector keys that appear for the features clear after a few seconds. If you want to select an operation when the keys are not shown, press the **MULTI WINDOW** button again and the keys will reappear.

Press the **MULTI WINDOW** button (whilst the selector keys are displayed) to return to normal viewing.

## Notes:

- This TV has one tuner. When the main and sub windows are both TV mode, these are the same TV channel.
- This operation cannot be made during PC mode, HDMI mode, Card operations mode and progressive signal, 1080i signal input (Y, PB, PR).

## Picture in picture

Allows two pictures to be viewed at the same time.

Press the **Yellow** button to select the contents of the smaller window, switching between displaying a TV channel and AV sources in turn.

To change the TV channel: press the **Yellow** button until the currently selected TV channel is shown, then use the remote control to change channel (whilst the on screen selector keys are still displayed).

Press the **Blue** button to swap the contents of the two windows.

Use the remote control to select a TV channel or an AV source to appear in the main window.

## Picture out of picture

Allows two pictures to be viewed at the same time, as picture in picture does. The difference is how the two pictures are displayed: in Picture in picture the smaller window appears within the main picture; in Picture out of picture the smaller window appears to the right of the main picture.

Press the **Yellow** button to select the contents of the smaller window, switching between displaying a TV channel and AV sources in turn.

To change the TV channel: press the **Yellow** button until the currently selected TV channel is shown, then use the remote control to change channel (whilst the on screen selector keys are still displayed).

Press the **Blue** button to swap the contents of the two windows.

Use the remote control to select a TV channel or an AV source to appear in the main window.

## Picture and picture

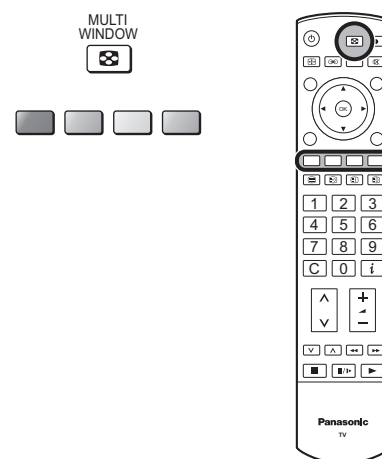
Allows two pictures to be viewed at the same time and same size.

Press the **Yellow** button to select the contents of the right window, switching between displaying a TV channel and AV sources in turn.

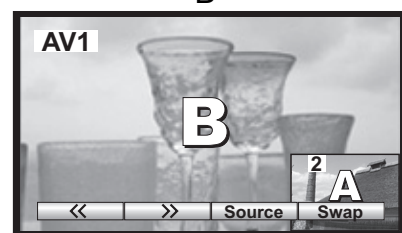
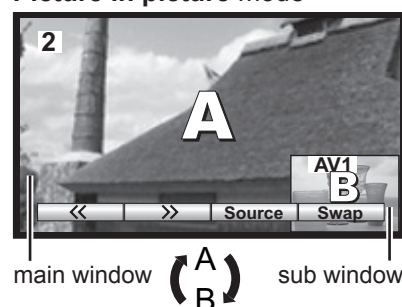
To change the TV channel: press the **Yellow** button until the currently selected TV channel is shown, then use the remote control to change channel (whilst the on screen selector keys are still displayed).

Press the **Blue** button to swap the contents of the two windows.

Use the remote control to select a TV channel or an AV source to appear in the left window.



## Picture in picture mode



Press the **Blue** button.

The two pictures have been swapped, the picture in the smaller window has become the main window picture.

## Picture out of picture mode



## Picture and picture mode

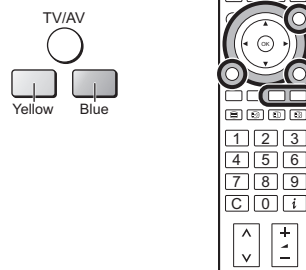


# PC mode

When you switch to PC input, the menu will be changed.  
About the PC connection, see page 41.

Press the **TV/AV** button. Whilst the on screen selector keys are displayed, press the **Blue** button to move to the next page, and then press the **Yellow** button to access PC mode.

Press the **TV/AV** button again to go back to watching TV.



## Picture menu

During **PC mode**

Press the **MENU** button.

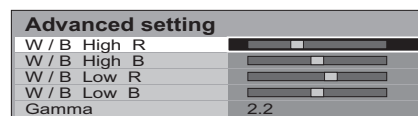
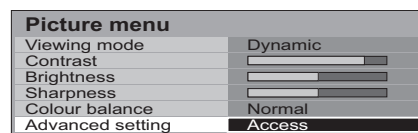
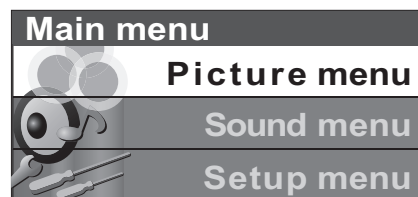
Move to choose **Picture menu**.

Access **Picture menu**.

Move to choose menu option.

Adjust chosen option or access chosen menu.

Press the **EXIT** button at any time to exit Picture menu.



**Viewing mode, Contrast, Brightness, Sharpness, Colour balance**  
About settings, see page 12.

**Advanced setting** Access to adjust to the fine picture at a professional level.

- W/B High R** : Adjusts the white balance for light red areas.
- W/B High B** : Adjusts the white balance for light blue areas.
- W/B Low R** : Adjusts the white balance for dark red areas.
- W/B Low B** : Adjusts the white balance for dark blue areas.
- Gamma** : 2.0  $\longleftrightarrow$  2.2  $\longleftrightarrow$  2.5  $\longleftrightarrow$  S Curve

### Note:

Carry out "W/B" adjustment as follows.

1. Adjust the white balance of the bright sections using the "W/B High R" and "W/B High B" settings.
2. Adjust the white balance of the dark sections using the "W/B Low R" and "W/B Low B" settings.
3. Repeat steps 1 and 2 to adjust.

Steps 1 and 2 affect each other's settings, so repeat each step in turn to make the adjustment.

## Sound menu

During **PC mode**

Press the **MENU** button.

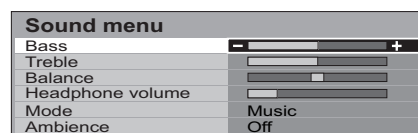
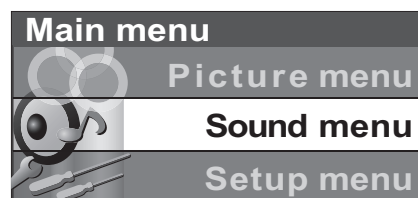
Move to choose **Sound menu**.

Access **Sound menu**.

Move to choose menu option.

Adjust chosen option or access chosen menu.

Press the **EXIT** button at any time to exit Sound menu.



**Bass, Treble, Balance, Headphone volume, Mode, Ambience**  
About settings, see page 13.



# PC mode

## Setup menu

### During PC mode

Press the **MENU** button.

Move to choose **Setup menu**.

Access **Setup menu**.

Move to choose menu option.

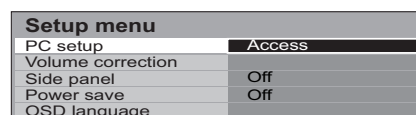
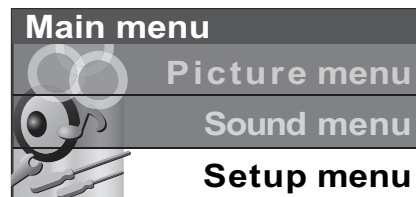
Adjust chosen option or access chosen menu.

Press the **EXIT** button at any time to exit Setup menu.

MENU



EXIT



### PC setup

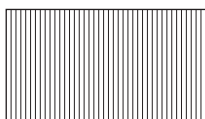
Access to adjust chosen option.

#### Input resolution

: Displayed during VGA(640 × 480 dots), WVGA(852 × 480 dots), XGA(1,024 × 768 dots), WXGA(1,366 × 768 dots) input signals.  
Select WVGA or WXGA during WVGA or WXGA input signal to avoid noise.

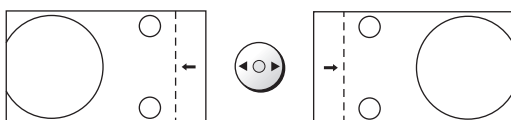
#### Clock

: If a periodic striped pattern (noise) occurs, carry out adjustments to reduce the noise to the lowest level.



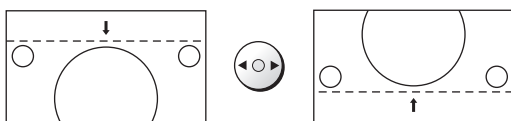
#### H-pos

: Adjust the horizontal position.



#### V-pos

: Adjust the vertical position.



#### Clock phase

: Eliminate the flickering and distortion.  
Carry out this adjustment after adjusting Clock.  
Adjust to reduce noise to the most inconspicuous level.

#### Sync

: **H & V** - To synchronize by the horizontal and vertical signals from your PC.  
**on G** - To synchronize by the green signal from your PC (if available).

### Volume correction, Side panel, Power save, OSD language

About settings, see page 14.

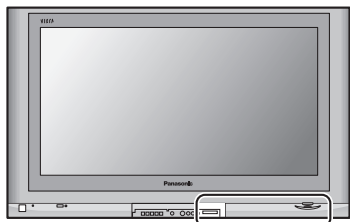
### H-freq. / V-freq.

If the input signal is not applicable, the characters will turn to red.  
For applicable PC signals information see page 44.

# Card operations

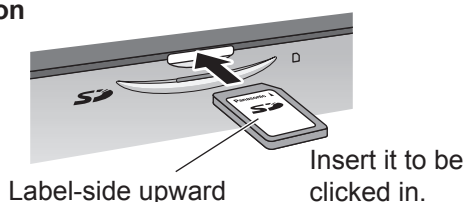
This function lets you display Still images (JPEG) or Moving pictures (MPEG4) recorded by this unit, DIGA, D-snap or digital camera on a memory card when it is inserted in the proper card slot.

## Inserting and removing a card

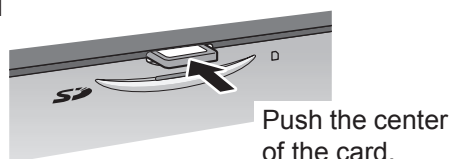


### SD CARD slot

#### Insertion



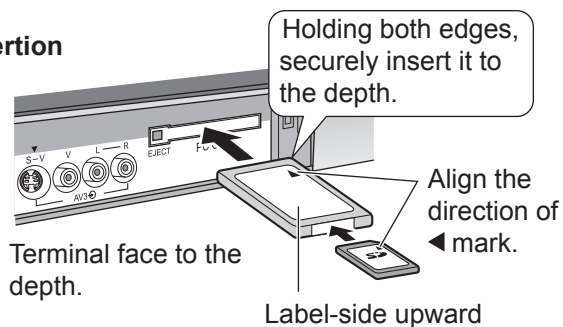
#### Removal



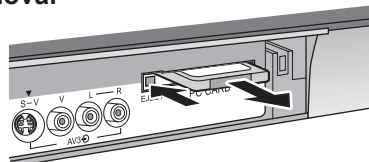
### PC CARD slot

Turn the TV off before inserting or removing a PC card.

#### Insertion



#### Removal



1. Push the EJECT button pops out.
2. Push it again.

#### If the EJECT button does not pop out

Push in PC card again, and then push again the EJECT button.

#### Note:

If the card adapter is used, remove it together with the adapter.

## Compatible card type and maximum card size

### SD CARD slot

- SD Card (1GB)
- Multi Media Card (128MB)
- miniSD Card\* (512MB)

### PC CARD slot

- SD Card (1GB)
- Multi Media Card (128MB)
- Smart Media (128MB)
- xD Picture Card (512MB)
- Memory Stick Pro (1GB)
- miniSD Card\* (512MB)
- Compact Flash (1GB)
- Memory Stick (128MB)
- Flash ATA (128MB)

The cards require standard PC card adapter.  
(Some PC card adapter will not be compatible.)

\* miniSD Card requires miniSD™ adapter.

- This function is not compatible with card type hard disk (Micro Drive, Mobile type hard disk, etc).
- Memory cards are not supplied with this television.
- When both SD card and PC card are inserted in the slot, SD card has the priority. You can change the priority. See page 31.

#### Note:

Suitable SD Memory Cards

Please confirm the latest information on the following website.

<http://panasonic.co.jp/pavc/global/cs>

(This site is in English only)

### Card Data Protection

- Do not remove the card or turn the unit off while the unit is accessing the information. Such action may damage the memory card or the unit itself.
- The blue LED lights during recording.
- Before inserting or removing the PC card, make sure that the TV is turned Off. Otherwise, it may damage the unit.
- Do not touch the terminals on the back of the SD card/PC card.
- Always insert a card in the correct direction. Failure to do so may result in damage to the card and this unit.
- Do not subject the card to excessive pressure or strong impacts.
- Electrical interference, electrostatic discharges and malfunctions of the unit or card may all result in data loss or damage to the card.
- Stored data should be periodically backed up as a protection against data corruption, data loss or device malfunction. Please note that our company shall not accept any liability for damage or loss of stored data.

**WARNING: As with an small object, SD card can be swallowed by young children. Do not allow children to handle SD card. Please remove SD card immediately after use.**

# Card operations

## Folders and Files

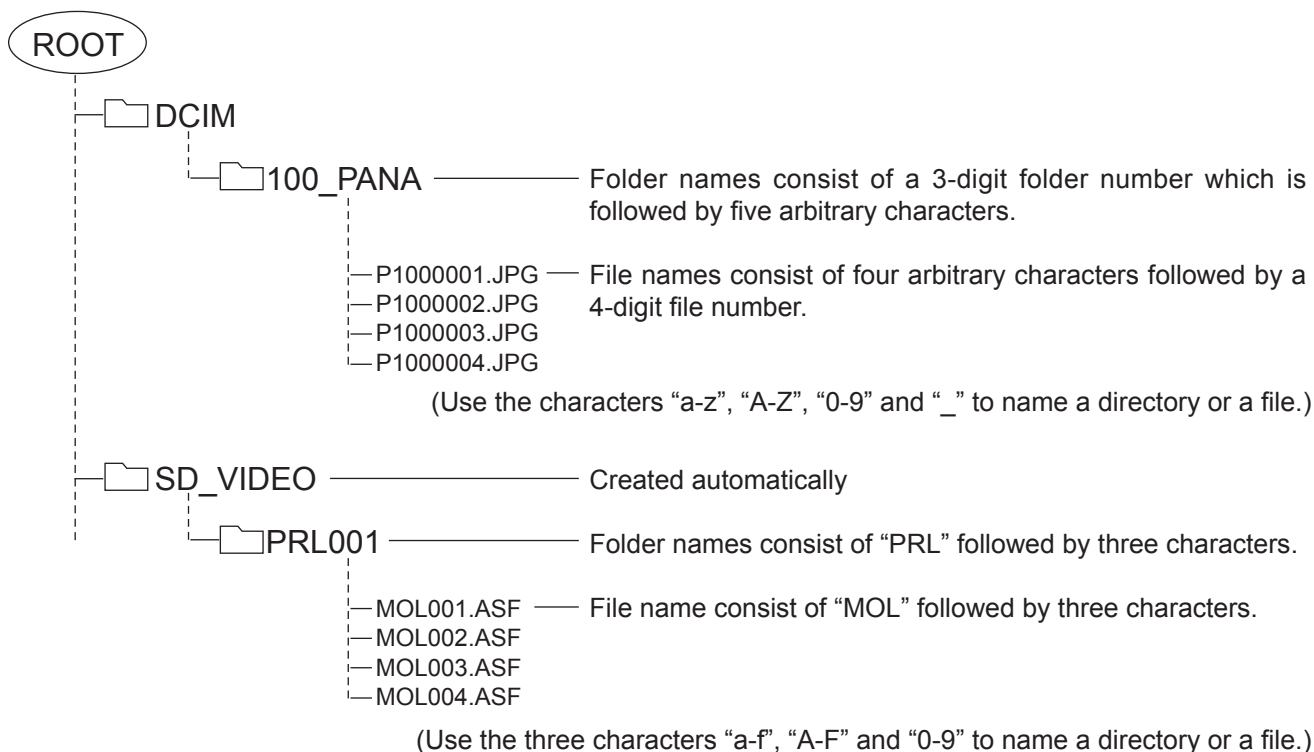
- Photo view can only show still images recorded by a digital still camera with DCF\* and EXIF standard JPEG file.
  - \* DCF (Design rule for Camera File system)  
Unified standard established by Japan Electronics and Information Technology Industries Association (JEITA).
- MPEG4 view can only show moving pictures recorded by this unit, Panasonic DVD recorder DIGA or mobile camera D-snap.
- When recording in MPEG4, format the SD card with this unit. The card may not operate properly if formatted with different equipment.
- Memory cards must be formatted with FAT12 or FAT16 in order to be viewed on TV. If the card is not formatted, it may cause incompatibility with certain memory card adapters. If this happens, reformat the card using your digital camera.

**Reformatting the card will erase the images and pictures stored in it.** Refer to your camera manual for more information.

- Maximum number of files that can be displayed: **65,535**.
- **Picture resolution:** Compatible in the range 8 x 8 - 5,120 x 3,840  
If the picture resolution is not compatible, the image will be shown as the error display.
- If the image is imported from a PC, it must follow the EXIF (Exchangeable image file format) 2.0, 2.1, 2.2 in addition to the DCF (design rule for Camera File system) format.
- The JPEG modified using a PC will not be displayed on TV.
- This function cannot display Motion JPEG and still image not DCF formatted (i.e. TIFF, BMP).
- If the file is partially corrupted, it may be shown in lower resolution.
- The displayed image size depends on the recorded image size.
- The number of pixels for movies is 320 x 240 (QVGA) or 176 x 144 (QCIF).
- When the number of files exceeds 65,535, no further recording is possible.
- The audio format used is G.726 (32 Kbps, 8 kHz sampling frequency, monaural).

### Example folder structure

When the Card file hierarchy is displayed on the PC as shown below.



### Notes:

- Folder and file names may vary according to the digital camera.
- Do not use two-byte characters or other special codes.
- The card may become unusable with this unit if file or folder names are changed.

# Card operations

## SD Record

The TV channels and AV1 input signals (PAL / SECAM) can be recorded on the SD card. During recording, it is possible to watch other terminals input signal.

Setup Rec mode and Rec time in Setup menu before recording. See page 32.

Select the channel you want to record.

Insert the SD card into the card slot.

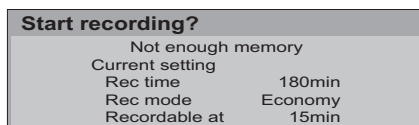
See page 26.

Press the **SD REC** button to start recording.

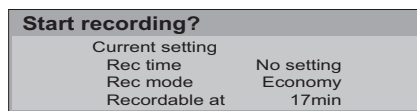
If the remaining time is not enough or Rec time in Setup menu is set to No setting, the message will appear.



Remaining time is not enough



Rec time is set to No setting



Press the **OK** button to start recording.

Press the **EXIT** button to cancel.

### Notes:

- You cannot record the copy protected signals.
- If the Off timer function is activated or press the [ ⏻ ] button during recording, the recording will not stop.
- Do not press the [ ⏻/⏮ ] switch on the TV during recording. Otherwise the file will be broken.
- Do not remove the SD card while recording. The data being recorded and other data stored on the SD card may become unreadable.
- SD recording may not be fully compatible or playable in some PC software or PDA devices.
- When two pictures are shown on the same screen as Multi window functions, the main window is the one that is recorded. The picture can be switched for the sub window.
- If the signal system is changed during recording, it cannot be recorded completely.
- The signals without video (only audio) cannot be recorded completely.

### To cancel the recording

Press the **SD REC** button during recording. The confirmation message will appear.



During the message appears, press the **OK** button.



### Recordable time for SD card

(Time is approximate)

Size	Extra fine	Super fine	Fine	Normal	Economy
64MB	7minutes	9minutes	23minutes	34minutes	1hour 21minutes
128MB	14minutes	18minutes	44minutes	1hour 6minutes	2hours 35minutes
256MB	28minutes	37minutes	1hour 32minutes	2hours 17minutes	5hours 20minutes
512MB	55minutes	1hour 10minutes	3hours	4hours 30minutes	10hours 40minutes
1GB	1hour 50minutes	2hours 20minutes	6hours	9hours	21hours 20minutes

This product is licensed under the MPEG-4 patent portfolio license for the personal and non-commercial use of a consumer to (i) encode video in compliance with the MPEG-4 Video Standard ("MPEG-4 Video") and/or (ii) decode MPEG-4 Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a licensed video provider. No license is granted or implied for any other use. Additional information may be obtained from MPEG LA. See <http://www.mpegla.com>.

# Card operations

## Basic operation

### To enter Card operations mode

Press the **SD** button.



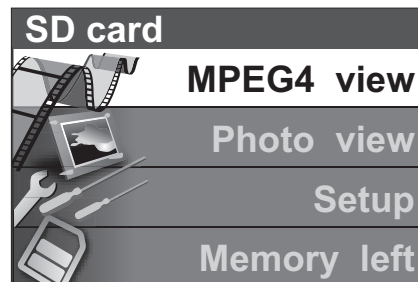
### To return to the SD card menu

Press the **EXIT** button.



### To exit Card operation

During the SD card menu is displayed, press the **SD** button to return to normal picture.



## MPEG4 view

The moving pictures recorded by this unit, DIGA or D-snap will be played back. This function is supported by SD cards only.

Press the **SD** button.



Move to choose **MPEG4 view**.



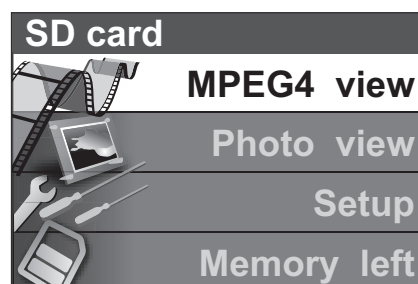
Access **MPEG4 view**.  
The thumbnail screen is displayed.



Select the file.



Press the **OK** button.  
The moving picture starts.

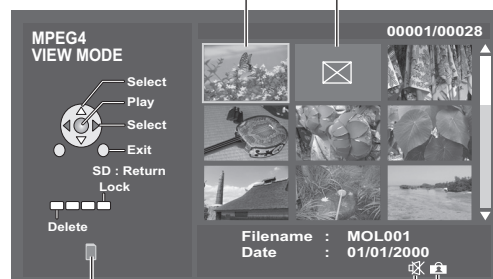


### Notes:

- Picture menu, Sound menu (in playback only) or Viewing setup (in thumbnail only) adjustment is possible by pressing the **MENU** button during MPEG4 view.
- "Date" shows the date on which the recording was made by this unit, DIGA or D-snap. Its format is 01/01/2000 when recordings are made without date signal.

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

Selected File



Inserted card displayed (this does not appear for PC cards)

Movie without sound

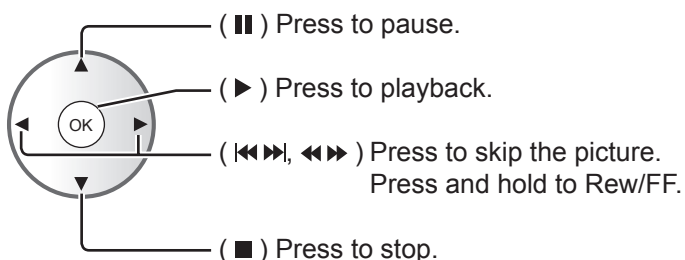
Movie for which lock has been set

# Card operations

## During the playback

When the operation guide is not displayed, press the **i** button to display it.

During the operation guide is displayed



### Notes:

- During the playback, the volume can be adjusted using the **Volume up/down** button.
- During the playback, no signals are output from the monitor output terminals.
- During the playback, the Aspect ratio can be changed by pressing the **ASPECT** button.

## Lock / Unlock the file

Select the file you want to lock in the thumbnail.

Press the **Blue** button to lock the file.

Press again to unlock.



## Delete the file

Select the file you want to delete in the thumbnail.

Press the **Red** button to delete the file.

Press again to confirm your decision.

### Note:

If the file is locked, it is not possible to delete.



## Viewing setup

Press the **MENU** button during MPEG4 view (thumbnail).

Move to choose **Viewing setup**.

Access **Viewing setup**.

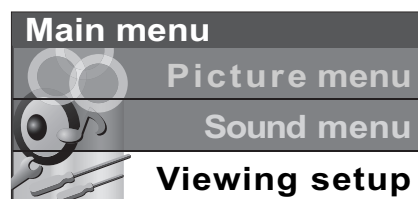
Move and adjust options.

### ■ Frame size (Normal or Large)

Select the Frame size of the playback picture.

### ■ Repeat (Off, One file or All)

Select the repeat mode.



# Card operations

## Photo view

The still images recorded by the digital camera will be displayed. This function supports both SD cards and PC cards.

Press the **SD** button.

Move to choose **Photo view**.

Access **Photo view**.  
The thumbnail screen is displayed.

Select the file.

Press the **OK** button to view.

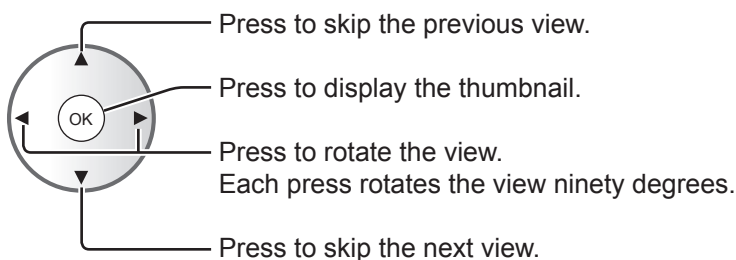
### Notes:

- Picture menu or Viewing setup adjustment is possible by pressing the **MENU** button during Photo view.
- During single view and Slide show, the Aspect ratio can be changed by pressing the **ASPECT** button.

### During single view

When the operation guide is not displayed, press the **i** button to display it.

During the operation guide is displayed



Press the **Red** button to zoom the view.  
During zoom mode, you can move the position by using the cursor buttons.

### Viewing setup

Press the **MENU** button during Photo view.

Move to choose **Viewing setup**.

Access **Viewing setup**.

Move and adjust options or access Slide show.

#### ■ Slide show

Select the settings of Interval and Repeat before accessing Slide show.

#### ■ Interval (5sec, 10sec, 15sec, 30sec, 60sec, 90sec or 120sec)

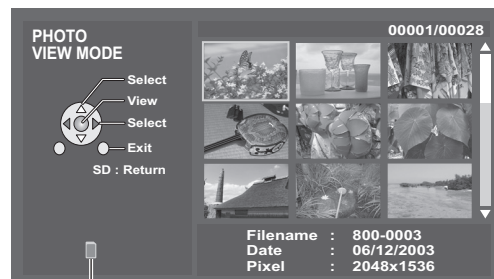
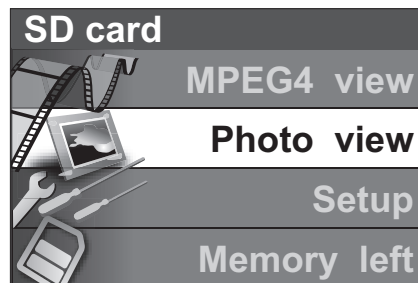
Select the length of time that a slide is being displayed on screen.

#### ■ Repeat (On or Off)

Select the repeat on or off.

#### ■ Card (SD or PC)

Select either SD or PC when both cards are inserted in the slots.  
Not selected when one card is inserted.



Inserted card displayed (this does not appear for a card which is not selected)



Viewing setup	
Slide show	Access
Interval	5sec
Repeat	Off
Card	SD

# Card operations

## Setup

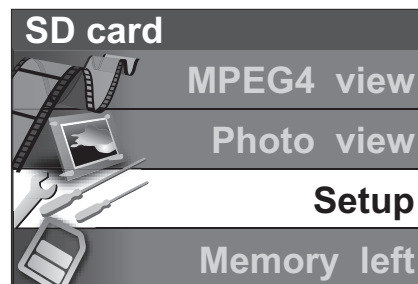
Press the **SD** button.

Move to choose **Setup**.

Access **Setup**.

Move to choose menu option.

Adjust chosen option or access chosen menu.



Setup	
Rec mode	Economy
Rec time	No setting
Card format	Access

### ■ Rec mode (Extra fine, Super fine, Fine, Normal or Economy)

The quality of picture can be changed.  
The recordable time will be changed by Rec mode.

#### Notes:

- Multi Media Cards do not support the Extra fine and Super fine recording mode. If the recording is started in these status, recording will automatically be performed in the Fine mode.
- The quality of audio is not changed.

### ■ Rec time (No setting, 5min, 10min, 15min, 30min, 60min, 90min, 120min or 180min)

Set the recording time before recording.

#### Note:

If you set Rec time to No setting, the recording does not stop until the card is fully recorded.

### ■ Card format

You can format the card.

#### Notes:

- If the card is formatted, all data is erased.
- Only cards that are supported by the SD card slot can be formatted.
- Do not remove the SD card while formatting. That may cause the card to not be able to record properly.

## Memory left

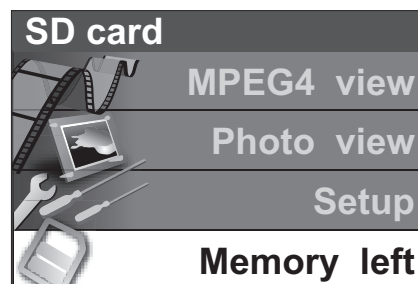
You can confirm the remaining time for recording in each Rec mode.

Press the **SD** button.

Move to choose **Memory left**.

Access **Memory left**.

The recordable time informations are displayed by each Rec mode.



Memory left		12MB
Recordable time		
Economy		15min
Normal		5min
Fine		3min
Super fine		1min
Extra fine	Less than	1min

(Time is approximate)

#### Note:

Since Multi Media Cards do not support the Extra fine and Super fine recording mode, "----" appears.



# Card operations

## Error messages

Is SD Card in?	Insert a card.
SD Card is locked Please unlock to operate	Unlock the SD card.
This file is locked Please unlock to operate	Unlock the file in the card.
This type of format is not supported	The card must be formatted with FAT 12 or FAT 16. Still image must be with DCF and EXIF standard JPEG file. Moving picture must be with MPEG4 standard ASF file.
This type of card is not supported	Incompatible card is inserted.
Broken file Cannot display image	The file is broken.
Memory full	The card memory is full.
Not enough memory	The card does not have enough memory to operate.
Cannot read file	The file is not readable.
Unrecordable source SD recording is stopped	It is not possible on restricted channels.
Error Check card	Re-insert the card. If the error persists, format the card.
Card recording in progress Please stop recording to operate	The tuning buttons for the main picture do not work while recording is in progress.

## Still










Press the **HOLD** button to freeze the picture.  
Press again to return to watching the current programme.



# VCR / DVD operation

The Remote Control is capable of operating some functions of selected Panasonic VCRs and DVD (Digital Versatile Disc) equipment. Some VCR and DVD equipment have different functions, so to ensure compatibility please refer to the equipment's instruction book or consult your dealer for details.



	<p><b>VCR / DVD switch</b> Use this switch to select whether controls operate the DVD equipment or VCR.</p>
	<p><b>Standby</b> Press to switch the VCR, DVD or DVD recorder to Standby mode. Press again to switch back on.</p>
	<p><b>Play</b> Press to playback the tape or DVD.</p>
	<p><b>Stop</b> Press to stop the tape or DVD.</p>
	<p><b>Skip / Fast Forward / Cue</b> VCR: Press to fast forward the tape. In Play mode, press to view the picture rapidly forward (Cue). When fast forwarding the tape, the picture noise may occur. DVD: Press to skip to the next track or title. Press and hold to search forward.</p>
	<p><b>Skip / Rewind / Review</b> VCR: Press to rewind the tape. In Play mode, press to view the picture rapidly in reverse (Review). DVD: Press to skip to the previous track or title. Press and hold to search backward.</p>
	<p><b>Pause / Still</b> Press in Play mode, the picture will pause. Press again to restart play. DVD: Press and hold for slow-motion play.</p>
	<p><b>Programme Up / Down</b> Press to increase or decrease the programme position by one.</p>
	<p><b>Record</b> Press this button to start recording.</p>

# Teletext operation

- Teletext features may vary depending on the Broadcasting Companies and is only available if the channel selected is transmitting Teletext.
- Pressing the **MENU** button whilst in Teletext operation will display the contrast function with a cyan bar, press the left and right cursor buttons to alter the setting as required.
- Pressing the **MENU** button whilst in Teletext operation will display special function options at the bottom of the screen.
- Pressing the **Volume up / down** button whilst in Teletext operation will display the volume function with a green bar, press the volume up / down button to alter the setting as required.

## 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.

## What is TOP/FASTEXT mode?

In TOP/FASTEXT mode, four differently coloured subjects are situated at the bottom of the display. 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.



### TV / Teletext mode

Press the **TEXT** button to switch between the current programme and teletext.



### Page Selection

Pages can be selected in two ways:

- Press the Up / Down cursor buttons to increase or decrease the page number by one.
- By entering the page number, using 0 - 9 on the remote control.



### Full / Top / Bottom

Press the **MENU** button to display special functions, followed by the **Green** button. Press the **Green** button again to expand the BOTTOM half. Press again to return to normal (FULL) size.



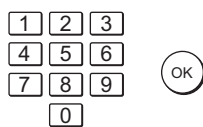
### Reveal

Press the **MENU** button to display special functions, followed by the **Red** button to reveal hidden words e.g., quiz page answers. Press again to hide.



### Red / Green / Yellow / Blue buttons

In TOP/FASTEXT mode they correspond to the differently coloured subjects. In List mode they correspond to the differently coloured page numbers.



### List Store

In List mode the four page numbers can be altered (programme positions 1 - 25 only). To do this, press one of the four coloured buttons and enter the new page number. Press and hold the **OK** button, the page numbers will change to white indicating that the page is stored.

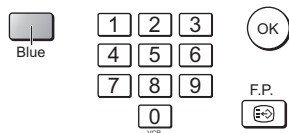


### HOLD

To hold the Teletext page when viewing multi-page information. Press again to return to automatic page update.

# Teletext operation

It is not possible to change the programme position when in News flash, Update or Sub Coded Page Access operation.



## Favourite Page (F.P.)

Stores a favourite page in memory for instant recall. To store such a page, the TV must be in List mode, and the programme position must be from 1 - 25.

Press the **Blue** button, select the page number, then press and hold the **OK** button. The page number is now stored.

Press **F.P.** to recall this page.

## Update Display

Press the **MENU** button to display special functions, followed by the **Yellow** button to view the TV picture whilst searching for a Teletext page (this is not necessary in Picture and text mode, as the picture is displayed on the left of the screen). When found, the screen will display the page number at the top left. Press the **Yellow** button to view the page.

Press the **TEXT** button again to return to normal TV operation.

## News Flash

When a news flash page has been selected, press the **MENU**, **Yellow** buttons, to view the TV picture. When an update is received, the page number will be displayed on screen.

Press the **Yellow** button to display the News Flash.

Press the **TEXT** button to return to normal TV operation.

## Update

Press the **MENU**, **Yellow** buttons to see the update of information on certain pages.

When an update is received, the page number will be displayed at the top left of the screen.

Press the **Yellow** button to view the page.

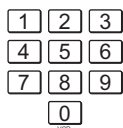
Press the **TEXT** button to return to normal TV operation.



## Accessing sub pages

When Teletext information exceeds one page, it may take some time for the automatic changing of the sub pages to reach the sub page you require. As each sub page is found its number is displayed at the top of the page so that you may select it; as more sub pages are picked up, the display at the top of the page changes, so that you are always offered the most recently transmitted selection of sub pages.

In Teletext operation, use the following procedure to access sub pages:



If the sub page you want to look at is not yet available, press the **MENU** button (to display special functions) followed by the **Yellow** button to view the TV picture whilst waiting for more sub pages to be found. The sub pages found will be displayed across the top of the screen.



When the sub page you are waiting for is available press the **Yellow** button to return to viewing the Teletext pages, then use the left and right cursor buttons to select the sub page of your choice.

The maximum number for sub page that can be entered is restricted to 79 by broadcasters.

## Notes:

- If you do not want to display the on screen selector keys on the TV picture whilst waiting for a sub page to be found, press the **MENU** button to clear the keys from the screen. Press again to redisplay the keys.
- If you have cleared the special function keys from the screen and then used the left and right cursor buttons to select a sub page, whilst still viewing the TV picture, you must press the **MENU** button then the **Yellow** button to display the Teletext page again.
- If the top of the page indicates that sub pages are being transmitted but the page displayed never changes, then the 'sub page number' is there to show the page contents have been updated, there are no sub pages.



# Teletext operation

Alternatively, if you know which sub page you require, press the **MENU** button (to display special functions) followed by the **Blue** button; T\*\*\*\* will be displayed where the page number is normally found.

Enter desired sub page number before the T\*\*\*\* disappears.

e.g., to select page 6 enter 0, 0, 0 and 6.

Press the **Yellow** button to view the TV picture whilst waiting for more sub pages to be found.

The sub pages found will be displayed across the top of the screen.

When the page is available, press the **Yellow** button to view the page. Regardless of how many pages are found, pressing the **Yellow** button will take you to the sub page which you requested.

Press the **TEXT** button to return to normal TV operation.



---

## INDEX

### When in TOP/FASTEXT operation

Press the **INDEX** button to return to the main index page.

Depending on the way information is transmitted, this may have to be pressed more than once to return to the main index page.



---

## Picture and text

Press the **TEXT** button, followed by the **MULTI WINDOW** button to move between viewing teletext and the Picture and text mode.

Picture and text mode lets you see the current programme and a page of teletext side by side. Whilst using this feature, the remote control affects the teletext page; if you wish to make changes to the programme viewed press the **TEXT** button to return to watching the programme on its own then make the desired changes.



# Connections

It is possible to connect a variety of additional equipment to this TV. The following pages detail how to connect external equipment to the front and rear of the TV.

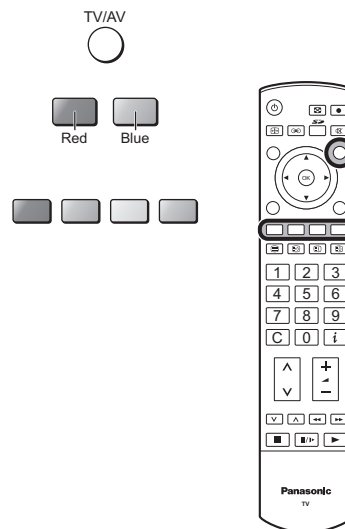
Once your equipment is connected, use the following procedure to view the input:

Press the **TV/AV** button.

Whilst the on screen selector keys are displayed, select the page by pressing the **Red** or **Blue** button and then press coloured buttons to select the AV source you wish to view.

- Red** button : AV1 Scart terminal / Back page
- Green** button : AV2 Video, S-Video Scart terminal / AV4 Video, S-Video Scart terminal
- Yellow** button : AV3 Audio, Video, S-Video terminals / Component, PC, HDMI terminals
- Blue** button : Next page / -

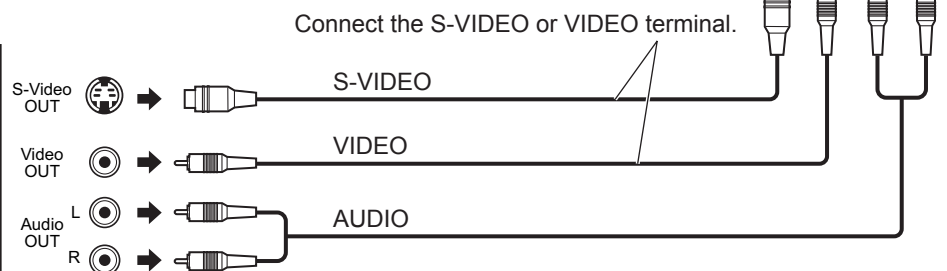
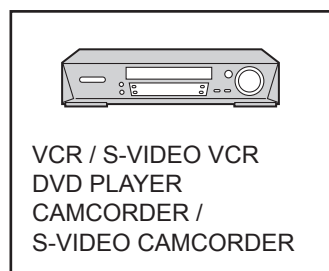
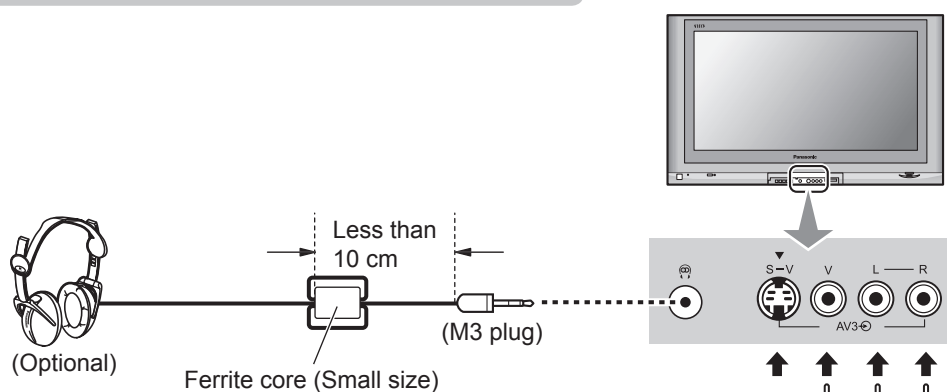
The on screen selector keys will disappear after a few seconds. If you want to select an input when the keys are not shown, press any one of the coloured buttons and the keys will reappear.



## Notes:

- You can also select an AV source using the **TV/AV** button on the front panel of the TV.  
Press the **TV/AV** button repeatedly until you reach the AV source you wish to view.
- When in **AV mode** a reduced number of options are available in the **Sound** and **Setup** menus (e.g., in the Setup menu there is no **Tuning menu** option).
- If the external devices have the aspect adjustment, set to 16:9.

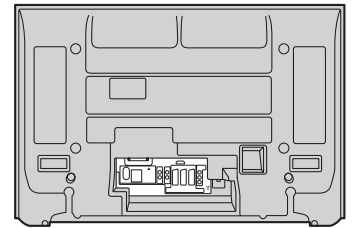
## How to connect the Headphones / AV3 terminals



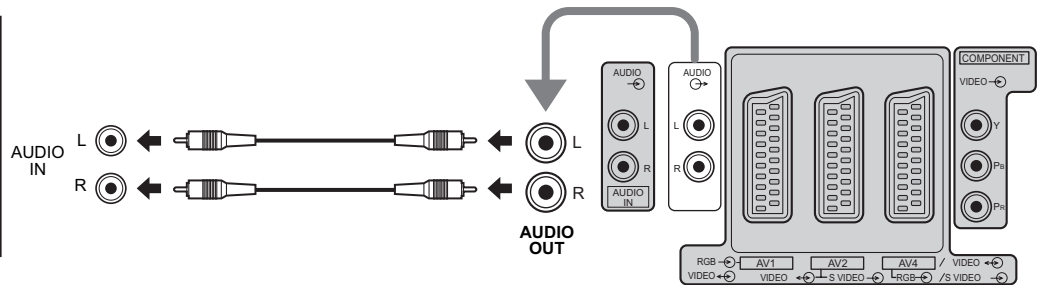
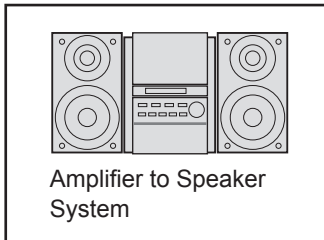
## Notes:

- The volume level of the headphones can be adjusted by selecting "Headphone volume" from the Sound menu.
- Additional equipment and cables shown are not supplied with this TV set.

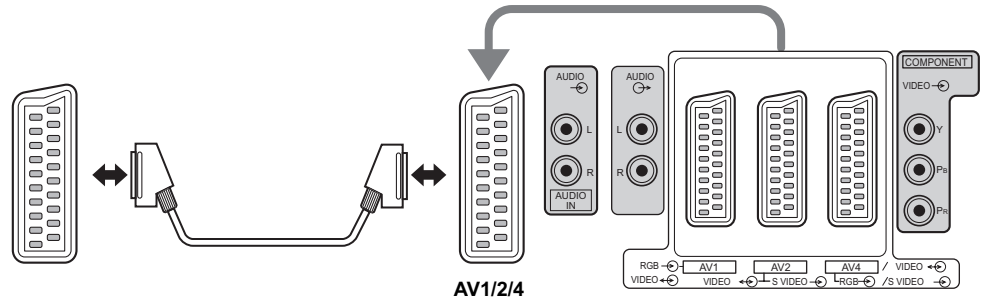
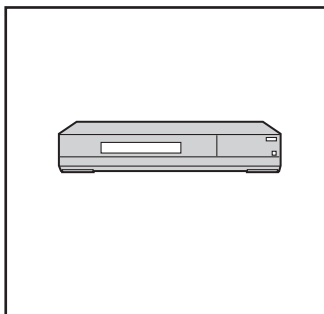
# Connections



## How to connect the Audio Output terminals



## How to connect the AV1 / 2 / 4 Scart terminals

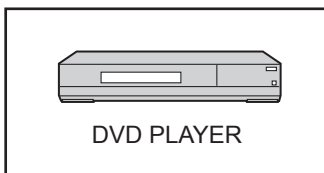


**AV1:**  
 VCR  
 SET TOP BOX  
 DVD PLAYER  
 DVD RECORDER  
 CAMCORDER  
 GAME CONSOLE /  
 COMPUTER(RGB)

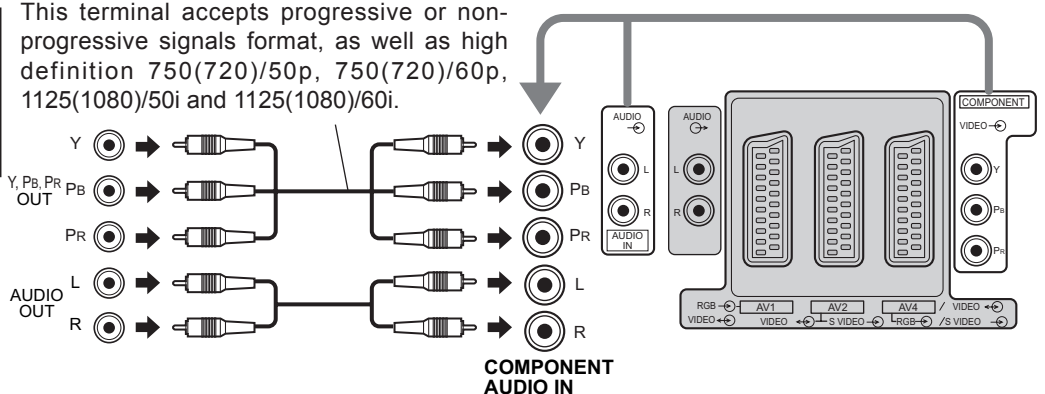
**AV2:**  
 VCR / S-VIDEO VCR  
 Q-Link COMPATIBLE VCR  
 DVD PLAYER  
 DVD RECORDER  
 Q-Link COMPATIBLE  
 DVD RECORDER  
 CAMCORDER /  
 S-VIDEO CAMCORDER

**AV4:**  
 VCR / S-VIDEO VCR  
 SET TOP BOX  
 Q-Link COMPATIBLE VCR  
 DVD PLAYER  
 DVD RECORDER  
 Q-Link COMPATIBLE DVD RECORDER  
 CAMCORDER / S-VIDEO CAMCORDER  
 GAME CONSOLE / COMPUTER(RGB)

## How to connect the Component Input terminals



This terminal accepts progressive or non-progressive signals format, as well as high definition 750(720)/50p, 750(720)/60p, 1125(1080)/50i and 1125(1080)/60i.



### Notes:

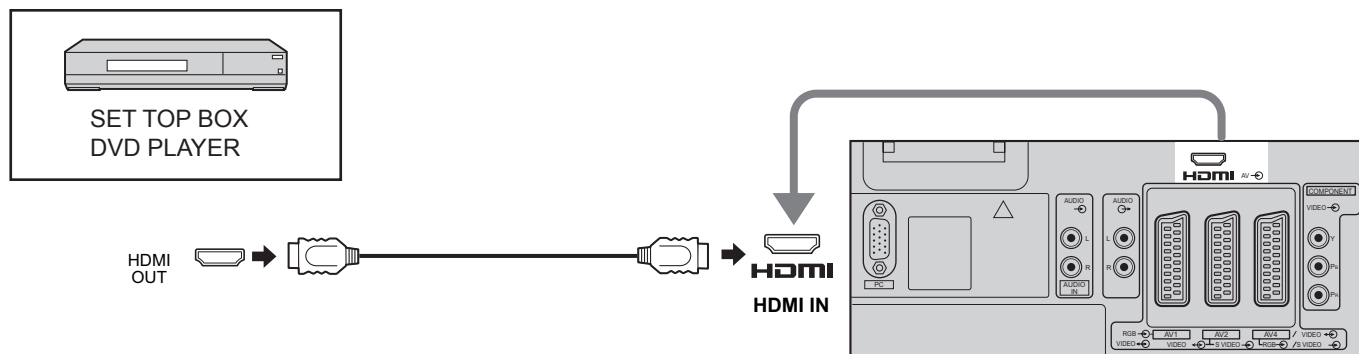
- Additional equipment and cables shown are not supplied with this TV set.
- Do not connect a computer with TTL output (5V) to this set.
- For Scart terminal wiring and applicable component signals information see page 43, 44.

# Connections

## How to connect the HDMI Input terminal

HDMI (High Definition Multi media Interface) is the first all-digital consumer electronics A/V interface that supports uncompressed standard. The HDMI terminal supports both video and audio information. An HDMI-compliant device\*<sup>1</sup>, such as a Set Top Box or DVD player with HDMI or DVI output terminal can be connected to the HDMI input terminal.

- If the external device has DVI output only, use a DVI to HDMI adapter cable\*<sup>2</sup> to connect to the HDMI terminal.
- Connect the audio cables to the AUDIO IN terminals when using a DVI to HDMI adapter cable.
- Select the audio setting in HDMI input. See page 13.



### Notes:

- This input terminal is not intended for use with computers.
- 720p/1080i signals will be re-formatted to view on your display.
- If the external devices have the aspect adjustment, set to 16:9.
- For applicable HDMI signals information see page 44.

### ■ Compatible sampling frequency of AUDIO signal through HDMI (L.PCM) : 48 kHz / 44.1 kHz / 32 kHz

### Notes:

- This HDMI connector is Type A.
- If you connect equipment without a digital output terminal, connect to the COMPONENT, S-VIDEO or VIDEO input terminal on the TV so you can receive an analogue signal.
- The HDMI IN terminal can only be used with 480i, 480p, 576i, 576p, 720p or 1080i picture signals. Set the Digital Set Top Box DIGITAL OUT terminal output setting to 480i, 480p, 576i, 576p, 720p or 1080i. For detailed information, refer to the Digital Set Top Box instruction manual. If you cannot display the picture because your Digital Set Top Box does not have a DIGITAL OUT terminal output setting, use the component input (or the S-Video input or Video input). In this case the picture will be displayed as an analogue signal.

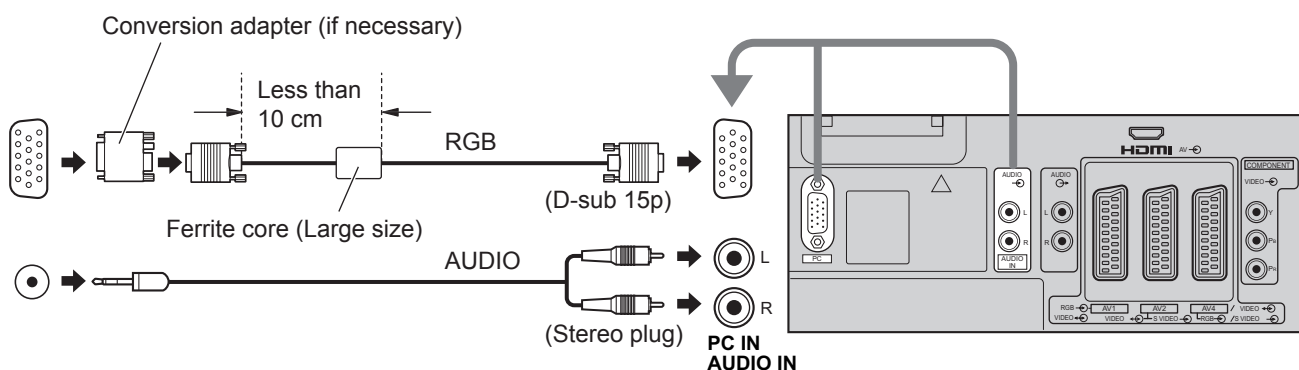
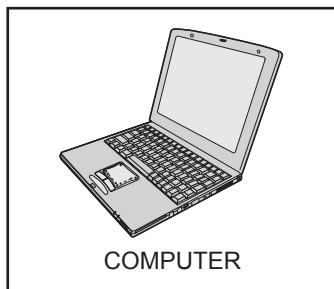
\*1. HDMI-compliant device is that has the HDMI Logo on it.

\*2. HDMI-DVI adapter cable: Consult your consumer electronics dealer for availability.



# Connections

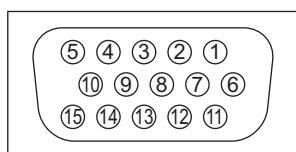
## How to connect the PC Input terminal



### Notes:

- Connect a cable which matches the audio output terminal on the computer.
- Computer signals which can be input are those with a horizontal scanning frequency of 31 to 69 kHz and vertical scanning frequency of 59 to 86 Hz. (However, the image will not be displayed properly if the signals exceed 1,024 lines.)
- The display resolution is a maximum of 768 × 720 dots (TH-37PV500E), 768 × 768 dots (TH-42PV500E), 1,024 × 768 dots (TH-50PV500E) when the aspect mode is set to “4:3”, and 1,024 × 720 dots (TH-37PV500E), 1,024 × 768 dots (TH-42PV500E), 1,366 × 768 dots (TH-50PV500E) when the aspect mode is set to “16:9”. If the display resolution exceeds these maximums, it may not be possible to show fine detail with sufficient clarity.
- Some PC models cannot be connected to the set.
- There is no need to use an adapter for computers with DOS/V compatible D-sub 15P terminal.
- The computer shown in the illustration is for example purposes only.
- Additional equipment and cables shown are not supplied with this set.
- Do not set the horizontal and vertical scanning frequencies for PC signals which are above or below the specified frequency range.
- For applicable PC signals information see page 44.

### Signal Names for D-sub 15P Connector



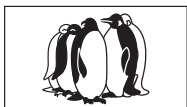




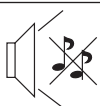

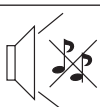

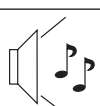
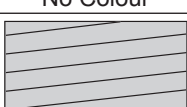





Pin Layout for PC Input Terminal

Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	R	⑥	GND (Ground)	⑪	NC (not connected)
②	G	⑦	GND (Ground)	⑫	NC (not connected)
③	B	⑧	GND (Ground)	⑬	HD/SYNC
④	NC (not connected)	⑨	NC (not connected)	⑭	VD
⑤	GND (Ground)	⑩	GND (Ground)	⑮	NC (not connected)


# Troubleshooting

If there is a problem with your TV please refer to the table below to determine the symptoms, then carry out the suggested check. If this does not solve the problem, please contact your local Panasonic dealer, quoting the model number and serial number (both found on the rear of the TV).

Symptoms		Checks
Picture	Sound	
 Snowy Picture	 Noisy Sound	Aerial location, direction or connection
 Multiple Images	 Normal Sound	Aerial location, direction or connection
 Interference	 Noisy Sound	Electrical appliances Cars / Motorcycles Fluorescent lights  Switch on P-NR in Picture menu to reduce picture noise.
 Normal Picture	 No Sound	Volume level  Sound mute switched on.
 No Picture	 No Sound	TV set to AV mode. Not plugged into AC outlet. Not switched on. Picture / Sound controls set at minimum levels. Check if in Standby mode.
 No Colour	 Normal Sound	Colour controls set at minimum levels.
 Poor or Distorted Picture	 Weak or No Sound	Retune Channel (s).
 Normal Picture	 Weak or Distorted Sound	Sound reception may have deteriorated. Switch MPX setting (Sound menu) to Off until reception improves.
H D M I	Poor Video. (Snow noise, no picture, picture runs, etc.)	HDMI cable is not connected securely. Turn the power supply of the TV and connected equipment off then turn on. Check compatibility of input signal from the connected equipment. The connected equipment must be EIA/CEA-861/861B compliant.
	Poor Audio.	Change the audio setting of the connected equipment to L.PCM. Check the setting of HDMI input in Sound menu. If the problem is due to the digital audio connection, change to the analogue audio connection.
	The error message appears.	Please consult an Authorized Service Center.
The SD card cannot be used even when it is formatted.		Please consult an Authorized Service Center.

# Troubleshooting

## CAUTION:

Symptoms	Check
Some parts of the screen do not light up.	The plasma TV panel is manufactured using an extremely high level of precision technology, however, sometimes some parts of the screen may be missing picture elements or have luminous spots. This is not a malfunction.
After-images appear 	Do not allow a still picture to be displayed for an extended period, as this can cause a permanent after-image to remain on the Plasma TV. Examples of still pictures include logos, video games, computer images, teletext and images displayed in 4:3 mode. With no signal present, and without any user operation, the Panasonic screensaver will appear automatically after a few minutes to prevent image retention. <b>Note:</b> The permanent after-image on the Plasma TV resulting from fixed image use is not an operating defect and as such is not covered by the Warranty. This product is not designed to display fixed images for extended periods of time.

## Sleep Feature

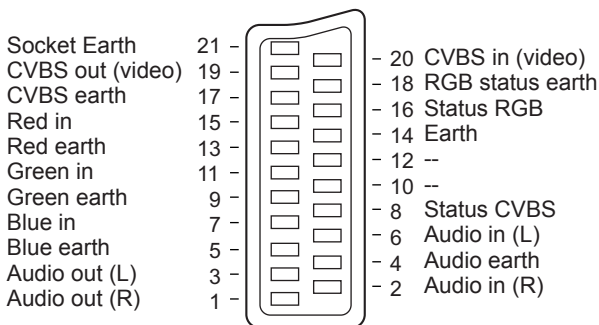
If the set is not switched off when the TV station stops transmitting, it will automatically go to standby mode after 30 minutes. This function will not operate when this TV is in AV mode.

### Notes:

- External surfaces of the unit may become hot during operation. But this is completely normal.
- See label on the base of this equipment for ratings and other information.

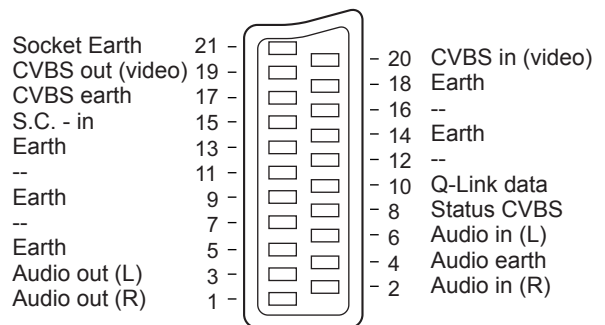
# Scart and S-video terminal information

## AV1 Scart terminal (RGB, VIDEO)



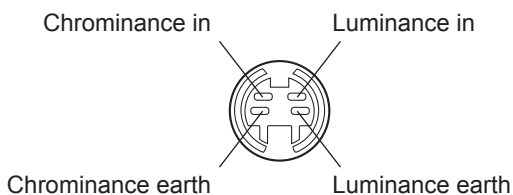
Suitable inputs for AV1 include RGB (Red / Green / Blue).

## AV2 Scart terminal (VIDEO, S-VIDEO, Q-Link)

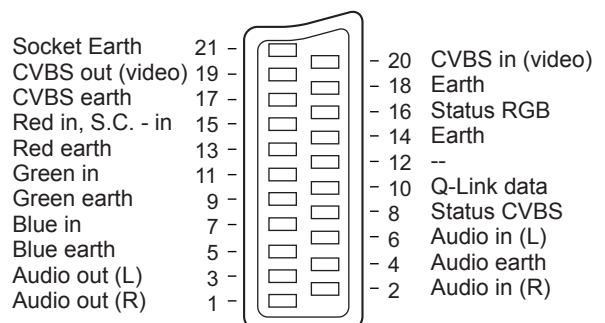


AV2 - Pins 15 and 20 are dependent on AV2 S-VHS / VIDEO switching.

## AV3 S-VIDEO 4 pin terminal



## AV4 Scart terminal (RGB, VIDEO, S-VIDEO, Q-Link)



AV4 - Pins 15 and 20 are dependent on AV4 S-VHS / VIDEO switching.

# Input signal that can be displayed

Applicable input signal for Component (Y, P<sub>B</sub>, P<sub>R</sub>), HDMI and PC (D-sub 15P) (\* Mark)

Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)	Component	HDMI	PC
525 (480) / 60i	15.73	59.94	*	*	
525 (480) / 60p	31.47	59.94	*	*	
625 (576) / 50i	15.63	50.00	*	*	
625 (576) / 50p	31.25	50.00	*	*	
750 (720) / 60p	45.00	60.00	*	*	
750 (720) / 50p	37.50	50.00	*	*	
1,125 (1,080) / 60i	33.75	60.00	*	*	
1,125 (1,080) / 50i	28.13	50.00	*	*	
640 × 400 @70 Hz	31.46	70.07			*
640 × 480 @60 Hz	31.47	59.94			*
640 × 480 @75 Hz	37.50	75.00			*
800 × 600 @60 Hz	37.88	60.32			*
800 × 600 @75 Hz	46.88	75.00			*
800 × 600 @85 Hz	53.67	85.06			*
1,024 × 768 @60 Hz	48.36	60.00			*
1,024 × 768 @70 Hz	56.48	70.07			*
1,024 × 768 @75 Hz	60.02	75.03			*
1,024 × 768 @85 Hz	68.68	85.00			*
1,280 × 1,024 @60 Hz	63.98	60.02			*
Macintosh13" (640 × 480)	35.00	66.67			*
Macintosh16" (832 × 624)	49.72	74.54			*
Macintosh21" (1,152 × 870)	68.68	75.06			*

**Note:**

Signals other than above may not be displayed properly.

# Specifications

		<b>TH-37PV500E</b>	
<b>Power Source</b>		AC 220-240 V, 50 / 60 Hz	
<b>Power Consumption</b>		Average use : 281 W Standby condition : 0.3 W	
<b>Plasma Display panel</b>			
<b>Drive method</b>		AC type	
<b>Aspect Ratio</b>		16:9	
<b>Contrast Ratio</b>		3000:1	
<b>Visible screen size (No.of pixels)</b>		94 cmV 818 mm (W) × 461 mm (H) × 939 mm (diagonal) 737,280 (1,024 (W) × 720 (H)) [3,072 × 720 dots]	
<b>Sound</b>			
<b>Speaker</b>		Woofer (φ 80 mm) × 2 pcs, Tweeter (16 mm × 73 mm) × 4 pcs	
<b>Audio Output</b>		26 W (13 W + 13 W ), 10% THD	
<b>Headphones</b>		M3 (3.5 mm) Jack × 1	
<b>Applicable signals</b>			
<b>Colour System</b>		NTSC, PAL, PAL60, SECAM, Modified NTSC	
<b>Scanning format</b>		480i(60Hz), 480p(60Hz), 576i(50Hz), 576p(50Hz), 720p(50Hz), 720p(60Hz), 1080i(50Hz), 1080i(60Hz)	
<b>PC signals</b>		VGA, SVGA, XGA SXGA ..... (compressed) Horizontal scanning frequency 31 - 69 kHz Vertical scanning frequency 59 - 86 Hz	
<b>Receiving Systems / Band name</b>		<b>PAL B, G, H, SECAM B, G SECAM L / L'</b> VHF E2 - E12 VHF H1 - H2 (ITALY) VHF A - H (ITALY) UHF E21 - E69 CATV (S01 - S05) CATV S1 - S10 (M1 - M10) CATV S11 - S20 (U1 - U10) CATV S21 - S41 (Hyperband) <b>PAL D, K, SECAM D, K</b> VHF R1 - R2 VHF R3 - R5 VHF R6 - R12 UHF E21 - E69 <b>PAL 525/60</b> Playback of NTSC tape from some PAL Video recorders (VCR) <b>M.NTSC</b> Playback from M. NTSC Video recorders (VCR) <b>NTSC (AV input only)</b> Playback from NTSC Video recorders (VCR)	
<b>Aerial - Rear</b>		UHF / VHF	
<b>Operating Conditions</b>		Temperature : 0 °C - 40 °C Humidity : 20 % - 80 % RH (non-condensing)	
<b>Connection Terminals</b>			
<b>AV1 (Scart connector)</b>		21 Pin terminal (Audio/Video in, Audio/Video out, RGB in)	
<b>AV2 (Scart connector)</b>		21 Pin terminal (Audio/Video in, Audio/Video out, S-Video in, Q-Link)	
<b>AV3</b>	<b>VIDEO</b>	RCA PIN Type × 1	1.0 Vp-p (75 Ω)
	<b>S-VIDEO</b>	Mini DIN 4-pin	Y:1.0 Vp-p (75 Ω) C:0.286 Vp-p (75 Ω)
	<b>AUDIO L - R</b>	RCA PIN Type × 2	0.5 Vrms
<b>AV4 (Scart connector)</b>		21 Pin terminal (Audio/Video in, Audio/Video out, RGB in, S-Video in, Q-Link)	
<b>Others</b>	<b>COMPONENT</b>	Y	1.0 Vp-p (including synchronization)
		PB, PR	±0.35 Vp-p
	<b>HDMI</b>	TYPE A Connector	
	<b>PC</b>	HIGH-DENSITY D-SUB 15PIN	R,G,B/0.7 Vp-p (75 Ω)
			HD, VD/TTL Level 2.0 - 5.0 Vp-p (high impedance)
<b>AUDIO L - R</b>	RCA PIN Type × 2	0.5 Vrms	
<b>Card slot</b>	SD CARD slot × 1, PC CARD slot × 1		
<b>Output</b>	<b>AUDIO L - R</b>	RCA PIN Type × 2	0.5 Vrms (high impedance)
<b>Dimensions ( W × H × D )</b>		1,038 mm × 670 mm × 138 mm	
<b>Weight</b>		35.0 kg Net	

## Notes:

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

		TH-42PV500E
<b>Power Source</b>		AC 220-240 V, 50 / 60 Hz
<b>Power Consumption</b>		Average use : 341 W Standby condition : 0.3 W
<b>Plasma Display panel</b>		
<b>Drive method</b>		AC type
<b>Aspect Ratio</b>		16:9
<b>Contrast Ratio</b>		3000:1
<b>Visible screen size (No.of pixels)</b>		106 cmV 920 mm (W) × 518 mm (H) × 1,056 mm (diagonal) 786,432 (1,024 (W) × 768 (H)) [3,072 × 768 dots]
<b>Sound</b>		
<b>Speaker</b>		Woofers (φ 80 mm) × 2 pcs, Tweeter (16 mm × 73 mm) × 4 pcs
<b>Audio Output</b>		26 W (13 W + 13 W ), 10% THD
<b>Headphones</b>		M3 (3.5 mm) Jack × 1
<b>Applicable signals</b>		
<b>Colour System</b>		NTSC, PAL, PAL60, SECAM, Modified NTSC
<b>Scanning format</b>		480i(60Hz), 480p(60Hz), 576i(50Hz), 576p(50Hz), 720p(50Hz), 720p(60Hz), 1080i(50Hz), 1080i(60Hz)
<b>PC signals</b>		XGA display VGA, SVGA, XGA SXGA ..... (compressed) Horizontal scanning frequency 31 - 69 kHz Vertical scanning frequency 59 - 86 Hz
<b>Receiving Systems / Band name</b>		<b>PAL B, G, H, SECAM B, G SECAM L / L'</b> VHF E2 - E12 VHF H1 - H2 (ITALY) VHF A - H (ITALY) UHF E21 - E69 CATV (S01 - S05) CATV S1 - S10 (M1 - M10) CATV S11 - S20 (U1 - U10) CATV S21 - S41 (Hyperband) <b>PAL D, K, SECAM D, K</b> VHF R1 - R2 VHF R3 - R5 VHF R6 - R12 UHF E21 - E69 <b>PAL 525/60</b> Playback of NTSC tape from some PAL Video recorders (VCR) <b>M.NTSC</b> Playback from M. NTSC Video recorders (VCR) <b>NTSC (AV input only)</b> Playback from NTSC Video recorders (VCR)
<b>Aerial - Rear</b>		UHF / VHF
<b>Operating Conditions</b>		Temperature : 0 °C - 40 °C Humidity : 20 % - 80 % RH (non-condensing)
<b>Connection Terminals</b>		
<b>AV1 (Scart connector)</b>		21 Pin terminal (Audio/Video in, Audio/Video out, RGB in)
<b>AV2 (Scart connector)</b>		21 Pin terminal (Audio/Video in, Audio/Video out, S-Video in, Q-Link)
<b>AV3</b>	<b>VIDEO</b>	RCA PIN Type × 1 1.0 Vp-p (75 Ω)
	<b>S-VIDEO</b>	Mini DIN 4-pin Y:1.0 Vp-p (75 Ω) C:0.286 Vp-p (75 Ω)
	<b>AUDIO L - R</b>	RCA PIN Type × 2 0.5 Vrms
<b>AV4 (Scart connector)</b>		21 Pin terminal (Audio/Video in, Audio/Video out, RGB in, S-Video in, Q-Link)
<b>Others</b>	<b>COMPONENT</b>	Y 1.0 Vp-p (including synchronization)
		PB, PR ±0.35 Vp-p
	<b>HDMI</b>	TYPE A Connector
	<b>PC</b>	HIGH-DENSITY D-SUB 15PIN R,G,B/0.7 Vp-p (75 Ω)
		HD, VD/TTL Level 2.0 - 5.0 Vp-p (high impedance)
<b>AUDIO L - R</b>	RCA PIN Type × 2 0.5 Vrms	
<b>Card slot</b>	SD CARD slot × 1, PC CARD slot × 1	
<b>Output</b>	<b>AUDIO L - R</b>	RCA PIN Type × 2 0.5 Vrms (high impedance)
<b>Dimensions ( W × H × D )</b>		1,138 mm × 730 mm × 138 mm
<b>Weight</b>		40.0 kg Net

## Notes:

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

		<b>TH-50PV500E</b>	
<b>Power Source</b>		AC 220-240 V, 50 / 60 Hz	
<b>Power Consumption</b>		Average use : 461 W Standby condition : 0.3 W	
<b>Plasma Display panel</b>			
	<b>Drive method</b>	AC type	
	<b>Aspect Ratio</b>	16:9	
	<b>Contrast Ratio</b>	3000:1	
	<b>Visible screen size (No.of pixels)</b>	127 cmV 1,106 mm (W) × 622 mm (H) × 1,269 mm (diagonal) 1,049,088 (1,366 (W) × 768 (H)) [4,098 × 768 dots]	
<b>Sound</b>			
	<b>Speaker</b>	Woofer (φ 80 mm) × 2 pcs, Tweeter (16 mm × 73 mm) × 4 pcs	
	<b>Audio Output</b>	26 W (13 W + 13 W ), 10% THD	
	<b>Headphones</b>	M3 (3.5 mm) Jack × 1	
<b>Applicable signals</b>			
	<b>Colour System</b>	NTSC, PAL, PAL60, SECAM, Modified NTSC	
	<b>Scanning format</b>	480i(60Hz), 480p(60Hz), 576i(50Hz), 576p(50Hz), 720p(60Hz), 1080i(50Hz), 1080i(60Hz)	
	<b>PC signals</b>	XGA display VGA, SVGA, XGA SXGA ..... (compressed) Horizontal scanning frequency 31 - 69 kHz Vertical scanning frequency 59 - 86 Hz	
<b>Receiving Systems / Band name</b>		<b>PAL B, G, H, SECAM B, G SECAM L / L'</b> VHF E2 - E12 VHF H1 - H2 (ITALY) VHF A - H (ITALY) UHF E21 - E69 CATV (S01 - S05) CATV S1 - S10 (M1 - M10) CATV S11 - S20 (U1 - U10) CATV S21 - S41 (Hyperband) <b>PAL D, K, SECAM D, K</b> VHF R1 - R2 VHF R3 - R5 VHF R6 - R12 UHF E21 - E69 <b>PAL 525/60</b> Playback of NTSC tape from some PAL Video recorders (VCR) <b>M.NTSC</b> Playback from M. NTSC Video recorders (VCR) <b>NTSC (AV input only)</b> Playback from NTSC Video recorders (VCR)	
<b>Aerial - Rear</b>		UHF / VHF	
<b>Operating Conditions</b>		Temperature : 0 °C - 40 °C Humidity : 20 % - 80 % RH (non-condensing)	
<b>Connection Terminals</b>			
<b>AV1 (Scart connector)</b>		21 Pin terminal (Audio/Video in, Audio/Video out, RGB in)	
<b>AV2 (Scart connector)</b>		21 Pin terminal (Audio/Video in, Audio/Video out, S-Video in, Q-Link)	
<b>AV3</b>	<b>VIDEO</b>	RCA PIN Type × 1	1.0 Vp-p (75 Ω)
	<b>S-VIDEO</b>	Mini DIN 4-pin	Y:1.0 Vp-p (75 Ω) C:0.286 Vp-p (75 Ω)
	<b>AUDIO L - R</b>	RCA PIN Type × 2	0.5 Vrms
<b>AV4 (Scart connector)</b>		21 Pin terminal (Audio/Video in, Audio/Video out, RGB in, S-Video in, Q-Link)	
<b>Others</b>	<b>COMPONENT</b>	Y	1.0 Vp-p (including synchronization)
		P <sub>B</sub> , P <sub>R</sub>	±0.35 Vp-p
	<b>HDMI</b>	TYPE A Connector	
	<b>PC</b>	HIGH-DENSITY D-SUB 15PIN	R,G,B/0.7 Vp-p (75 Ω) HD, VD/TTL Level 2.0 - 5.0 Vp-p (high impedance)
		<b>AUDIO L - R</b>	RCA PIN Type × 2
<b>Card slot</b>	SD CARD slot × 1, PC CARD slot × 1		
<b>Output</b>	<b>AUDIO L - R</b>	RCA PIN Type × 2	0.5 Vrms (high impedance)
<b>Dimensions ( W × H × D )</b>		1,327 mm × 843 mm × 138 mm	
<b>Weight</b>		52.0 kg Net	

## Notes:

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

## 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 can 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 \_\_\_\_\_

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## Matsushita Electric Industrial Co., Ltd.

Web Site : <http://www.panasonic.co.jp/global/>

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