Panasonic®

Operating Instructions
Progressive Plasma Television

Model No. **TH-37PA30**
TH-42PA30

Pedestal stand shown above is optional extra.

Q Link   SD™

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

English

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.

Contents

Important Safety Notice

WARNING

1) To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or moisture.
   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 harm 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.

CAUTION:

Symptoms	Check
After-images appear Panasonic	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. Without signals and operations for 2 minutes, the level of the contrast decreases automatically to prevent image retention. **Note:** 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.

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-ST42PX20
- Display stand TY-DP4201W, TY-S42PX20W (TH-42PA30), TY-S37PX20W (TH-37PA30)
- Wall-hanging bracket (vertical) TY-WK42PV3W
- Wall-hanging bracket (angle) TY-WK42PR2W

Always be sure to ask a qualified technician to carry out set-up.

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 spilt 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.

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.

Avoid installing this product near electronic equipment that is easy to receive electromagnetic waves.
- It will cause interference in image, sound, etc. In particular, keep video equipment away from this product.

■ 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 stick 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.

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, they shall not be used.

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 damages, 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.
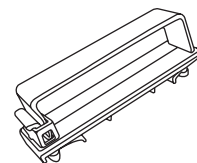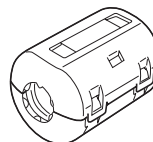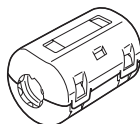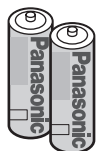
Accessories

Check that you have the accessories and items shown ☑

☐ Operating Instruction book (TQBC0711)	☐ Remote Control Transmitter (EUR7635020)	☐ Mains Lead	☐ TV Guarantee
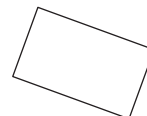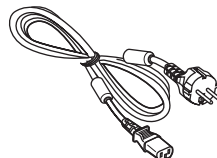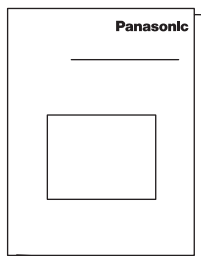
☐ Batteries for the Remote Control Transmitter (2 × R6 (UM3) size)	☐ Ferrite core (Small size) × 5	☐ Ferrite core (Large size) × 2	☐ Clamper × 2

Installing the ferrite core (Small size)

1

2 Open

3

Pull back the tabs. (in two places)

Press the cable through and close.

Installing the ferrite core (Large size)

1

2 Open

3

Pull back the tabs. (in two places)

Press the cable through and close.

Fitting remote control batteries

①
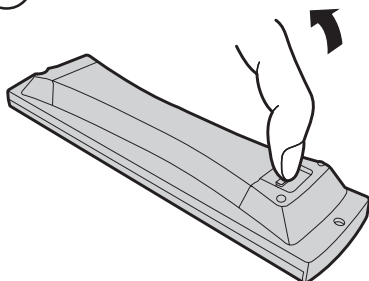
Pull and hold the hook, then open the battery cover.

②
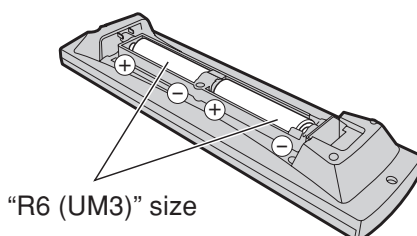
"R6 (UM3)" size

Insert batteries - note correct polarity (+ and −).

③
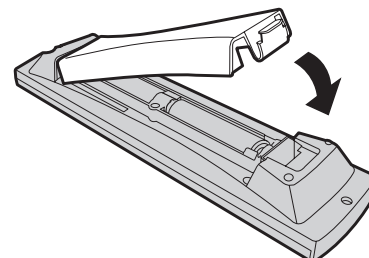
Replace the cover.

- 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.

How to open the front cover
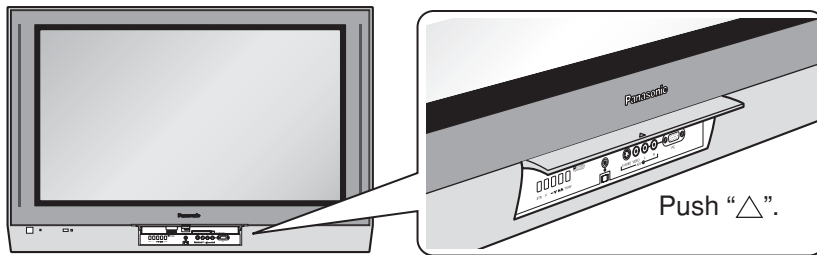
Push "△".

Terminal cover open and close

Open
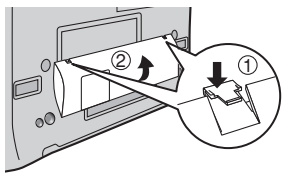
1. Push down hooks and pull the cover slightly towards yourself to disengage the claws (at 4 points).
2. Slowly pull out in the downward direction.

Close
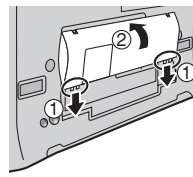
1. Insert the claws (at 4 points) at the bottom end.
2. Push until it clicks.
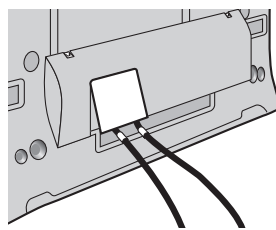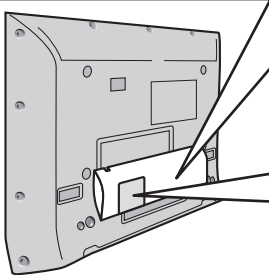
When connecting the Scart cable to the TV's Scart terminals, connect through this window. (This window cannot close completely when connecting the Scart cable.)
Other cables should be connected before closing the terminal cover.

Fastening method

Clamper
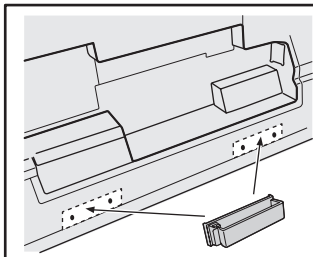
Open

Close
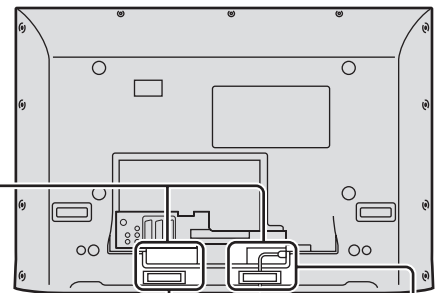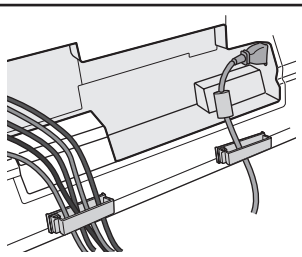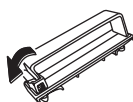
Fastening of Mains Lead and other cables

① → ②

Fastening method of other cables
Attach the clamper on the installation hole, and fasten them. Bundle the cable with the cable fastening clamper.
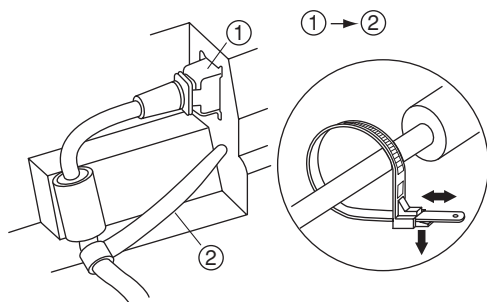
Fastening method of Mains Lead
1. Insert the power plug into the main body.
2. Fasten with the mains lead fastening band.

Fastening band

Fastening	Loosening
To tighten.	Pull off. Keep the knob pressed.

Quick Start Guide

SET TOP BOX

RF cable
(Not supplied)

OR

Scart cables
(Not supplied)

AV4   AV2   AV1   RGB

S VIDEO / VIDEO /RGB   VIDEO S VIDEO   VIDEO

VCR / DVD recorder

Plug in aerial and connect ancillary equipment.
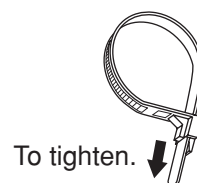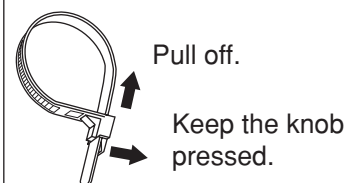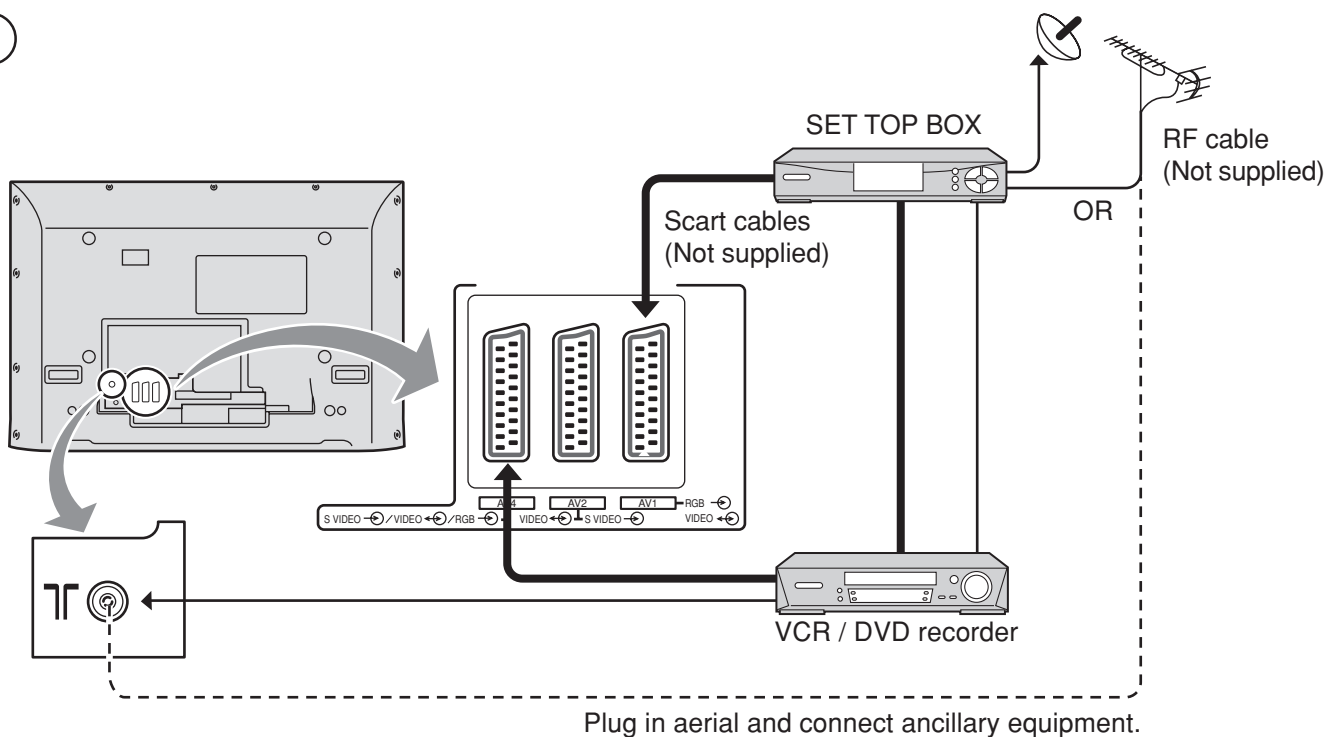
②
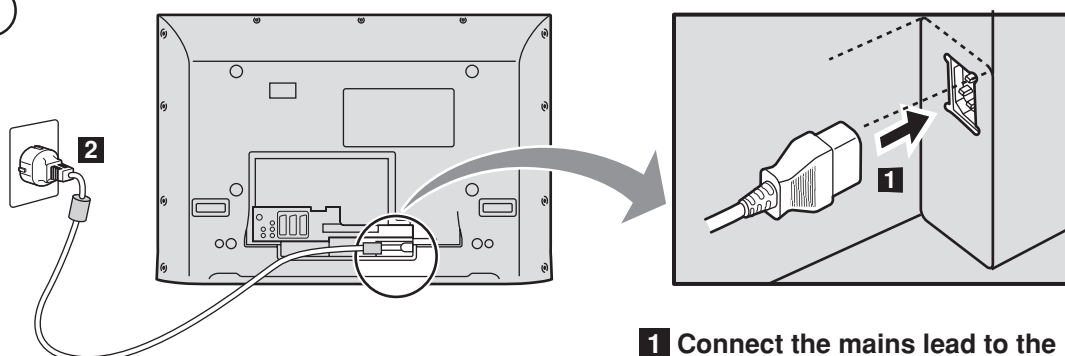
1 **Connect the mains lead to the Plasma TV.**

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

③

☐ ⏻/I Press the ☐⏻/I 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 switched to Standby mode.

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

Remote control signal sensor

Power Indicator

C.A.T.S sensor
Plasma C.A.T.S (Contrast Automatic Tracking System)
Plasma C.A.T.S automatically senses the ambient light conditions and adjusts the brightness and gradation accordingly, to optimise contrast.
(Effective when Viewing mode is set to Auto.)

LED Indicator	
Standby	: Red
On	: No Light

Panasonic
TV

Quick Start Guide

④

Land
Deutschland
Österreich
France
Italia
España
Portugal
Nederland
Danmark
Sverige
Norge
Suomi
Belgien
Schweiz
ELLADA
Polska
Ceska republika
Magyarország
E.Eu

| Start ATP | Suchlauf | | Abbruch |

CH12

AUTO SETUP IN PROGRESS
SEARCHING :   PLEASE WAIT

02   78:01   41

EXIT   : To exit

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
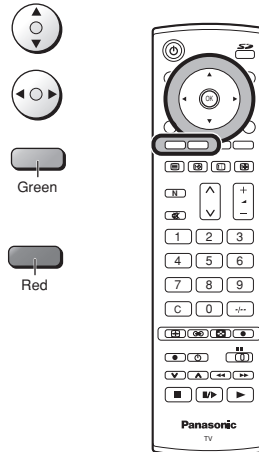
⑤ Once **Auto setup** is complete, if you are installing a new Q-Link compatible recording device, you can now switch it **On**. Downloaded tuning data will match the television's. Not all devices support this download of programme information, some may require to be started manually. See the device's instruction book for details.
- 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.
- If **Q-Link** is not operating correctly, check it is connected to the TV's correct Scart terminal, the Scart cable is a "full function" type, and the device is compatible with **Q-Link**, NEXTVIEWLINK or similar technologies. Ask your dealer for further details.
- For further information on **Q-Link** and connecting equipment. See page 20, 37.

⑥ We recommend that as soon as the **Auto setup** feature is completed, the picture controls are reset to normal viewing levels. To do this, press the **N** button.

N

Basic controls: front panel and remote control

SD Card slot
(see page 29)

PC Card slot
(see page 29)

MAINS Power
On / **Off** switch

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

TV/AV button
(see page 36)

AV3 terminals
(see page 36)

PC input terminal
(see page 38)

Headphones jack (see page 36)

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**.

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**.

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

Photo View mode button
(see page 28-31)

Switch between viewing TV or AV input.
(see page 36)

Status button
Press to display programme position, programme name, channel number, time, **MPX** mode, Receiving system, **Aspect** mode and programme table.

Press to store settings in Sound menu, Tuning menu and Teletext, or to change between Multi and Single mode during Photo View mode.

Menu button
Press to access the **Picture, Sound** and **Setup** menus. (see page 11-14)

Cursor buttons to make selections and adjustments.

Exit the mode.

Teletext buttons (see page 33-35)

Coloured buttons used for
Aspect functions (see page 21-23)
Programme edit functions
(see page 16, 17)
Teletext functions (see page 33-35)
AV selection (see page 36)

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

Channel up / down button

Sound mute **On** / **Off**

Volume up / down button

Programme / channel change buttons (0-9) and Teletext page buttons.
(see page 33, 34)
When in **Standby** mode, switches TV **On**.

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.

Programme position for selection of two digit programmes (10-99) using numeric buttons.

ASPECT control button
(see page 21-23)

DIRECT TV RECord button
(see page 20)

MULTI WINDOW button
(see page 24, 25)

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

VCR / **DVD** buttons
(see page 32)

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10

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.

MENU

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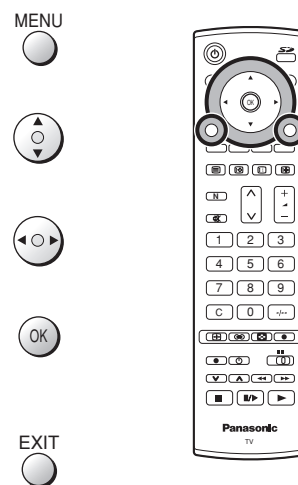
An On Screen Help box is displayed whenever a menu is displayed on the TV. This Help box indicates which buttons on the remote control are used to navigate the menu shown, see above for descriptions of button functions.

ON SCREEN HELP 'Instructions' box

Select
Adjust
Return
Exit

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

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.

MENU

EXIT

Main menu
Picture menu
Sound menu
Setup menu

Viewing mode
The Viewing mode menu allows you to select three different screen settings - **Dynamic**, **Normal, Cinema** and **Auto**.
In each Viewing mode setting, Contrast, Brightness, Colour, Sharpness, Tint (in NTSC only), Colour balance, 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.)
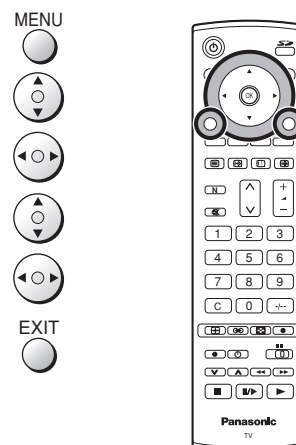Viewing mode offers you up to a maximum of three separate settings for each signal source: RF, AV1, AV2, AV3 and AV4. Changes will be stored automatically.
By analysing and processing the incoming picture, all three modes feature automatic enhancement.

Picture menu	
Viewing mode	Dynamic
Contrast	
Brightness	
Colour	
Sharpness	
Tint	
Colour balance	Normal
P-NR	Auto
MPEG NR	Off
3D-COMB	On

Contrast, Brightness, Colour, Sharpness
Increase or decrease the levels of these options according to your personal preference.

Tint
The picture hue can be adjusted to suit your taste.
Note:
When the TV is receiving NTSC, YUV(60Hz) signals, Tint is displayed.

Picture menu	
Viewing mode	Dynamic
Contrast	− +
Brightness	− +
Colour	− +
Sharpness	− +
Tint	
Colour balance	Normal
P-NR	Auto
MPEG NR	Off
3D-COMB	On

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

P-NR
Automatically reduces unwanted picture noise.

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 or digital broadcasting. The effect will be changed based on the scene and image.
Note:
MPEG Compression technology of the image signal adopted by DVD, VCD or digital broadcasting.

Picture menu	
Viewing mode	Dynamic
Contrast	
Brightness	
Colour	
Sharpness	
Tint	
Colour balance	Normal
P-NR	Auto
MPEG NR	Off
3D-COMB	On

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 input and AV4C input mode.
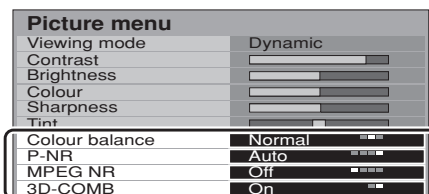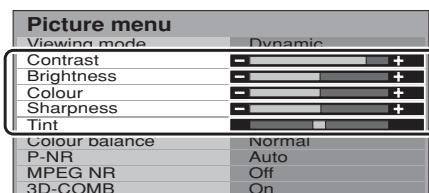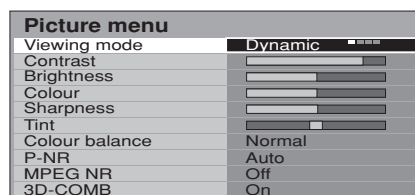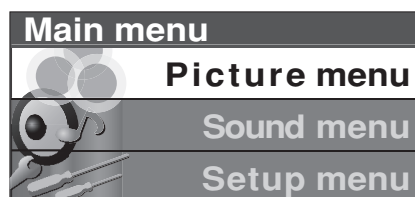
Sound menu

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.

Pressing the **OK** button after having adjusted some features will store the setting as the default (replacing the factory setting).

MENU

EXIT

OK

Main menu
Picture menu
Sound menu
Setup menu

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

Sound menu
Bass
Treble
Balance
Headphone volume
MPX — No service
Mode — Music
Ambience — Off

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.

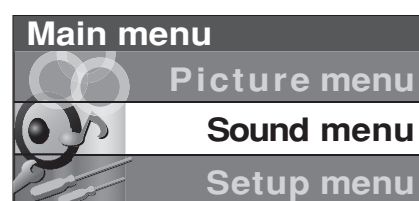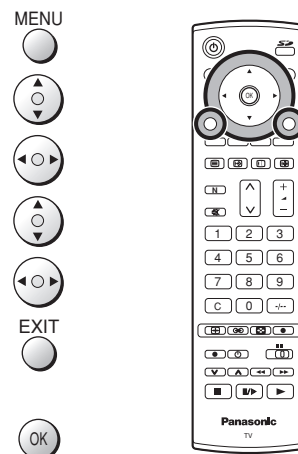| Headphone volume	Can be adjusted independently of the TV speakers so that everyone can enjoy listening at a level comfortable for them.

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.

Sound menu
Bass
Treble
Balance
Headphone volume
MPX — No service
Mode — Music
Ambience — Off

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

Sound menu
Bass
Treble
Balance
Headphone volume
MPX — No service
Mode — Music
Ambience — Off

Ambience	To enjoy a concert hall effect, turn Ambience **On**. Switching is also possible by pressing the **Ambience** button. The benefits of Ambience sound are enormous. You can be completely enveloped in sound; just as if you were at a concert hall or cinema. The Ambience effect can be obtained without the use of external Ambience speakers.

Sound menu
Bass
Treble
Balance
Headphone volume
MPX — No service
Mode — Music
Ambience — Off

Setup menu

Press the **MENU** button.

Move to choose **Setup menu**.

Access **Setup menu**.
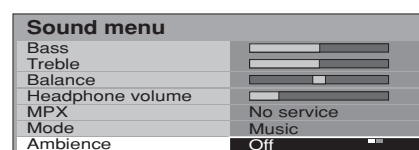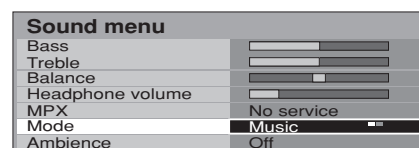
Move to choose menu option.

Adjust chosen option or access chosen menu.

Press the **EXIT** button at any time to go back to watching TV.
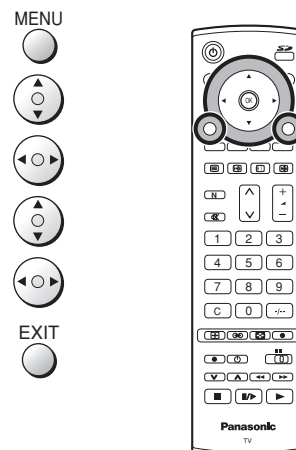
Q-Link — Allows you to select which AV terminal is to be used for data communication between this TV and a compatible recording device. Choose from **Off**, **AV2** and **AV4**. See page 20.

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.

Teletext — Allows you to choose between **TOP** or **List** mode. See page 33-35.

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 availabe 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 after-image, illuminate the side panels.

Side panel

4 : 3
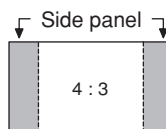
Power save — By reducing the brighness of picture, power consumption can be lowered.

Tuning menu — Provides access to many other features including **Programme edit** and **Auto setup**. See page 16-18.

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

MENU

EXIT

Main menu

Picture menu

Sound menu

Setup menu

Setup menu	
Q-Link	AV2
AV2 out	TV
Teletext	TOP
Off timer	Off
Text language	West
Side panel	Off
Power save	Off
Tuning menu	
OSD language	

Setup menu	
Q-Link	AV2
AV2 out	TV
Teletext	TOP
Off timer	Off
Text language	West
Side panel	Off
Power save	Off
Tuning menu	Access
OSD language	

Setup menu	
Q-Link	AV2
AV2 out	TV
Teletext	TOP
Off timer	Off
Text language	West
Side panel	Off
Power save	Off
Tuning menu	
OSD language	Access

AV mode

Setup menu	
Q-Link	AV2
AV2 out	TV
Teletext	TOP
Off timer	Off
Colour system	Auto
Volume correction	
Text language	West
Side panel	Off
Power save	Off
OSD language	

Tuning menu – overview

Press the **MENU** button.

Move to choose **Setup menu**.

Access **Setup menu**.

Move to choose **Tuning menu**.

Access **Tuning menu**.
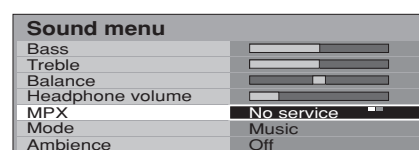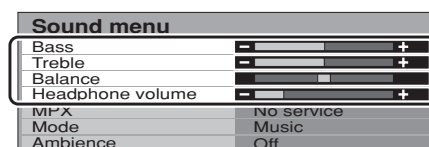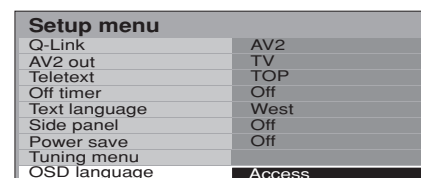
Move to choose menu option.

Adjust chosen option or access chosen menu.

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

Pressing the **OK** button after having adjusted some features will store the setting as the default (replacing the factory setting).

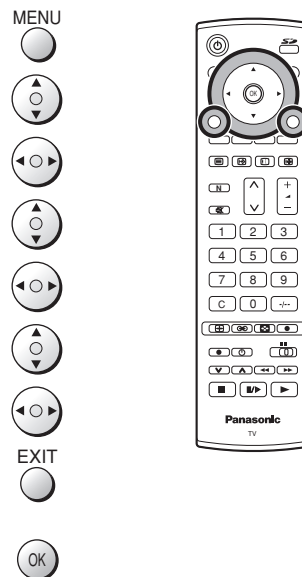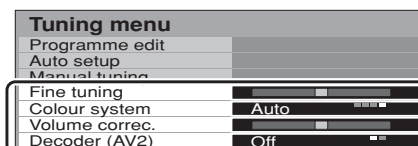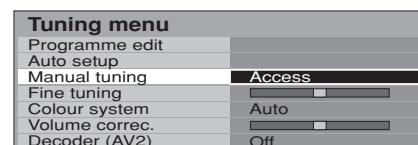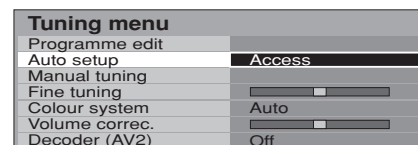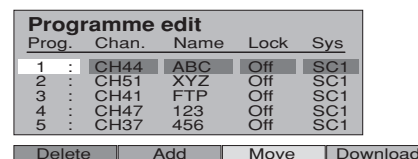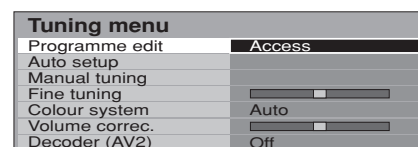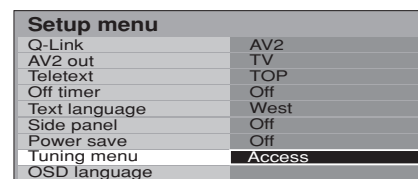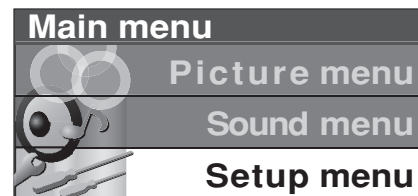|	
Programme edit	Access in order to customize your programme settings (e.g., adding or deleting a programme position). See page 16, 17.
Auto setup	Allows you to automatically retune the TV. Useful if you move house and wish to retune your TV to the local stations. See page 18.
Manual tuning	Allows individual 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).

Main menu

Picture menu

Sound menu

Setup menu

Setup menu

Q-Link	AV2
AV2 out	TV
Teletext	TOP
Off timer	Off
Text language	West
Side panel	Off
Power save	Off
Tuning menu	Access
OSD language	

Tuning menu

Programme edit	Access
Auto setup	
Manual tuning	
Fine tuning	
Colour system	Auto
Volume correc.	
Decoder (AV2)	Off

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

Delete	Add	Move	Download

Tuning menu

Programme edit	
Auto setup	Access
Manual tuning	
Fine tuning	
Colour system	Auto
Volume correc.	
Decoder (AV2)	Off

Tuning menu

Programme edit	
Auto setup	
Manual tuning	Access
Fine tuning	
Colour system	Auto
Volume correc.	
Decoder (AV2)	Off

Tuning menu

Programme edit	
Auto setup	
Manual tuning	
Fine tuning	
Colour system	Auto
Volume correc.	
Decoder (AV2)	Off

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**.
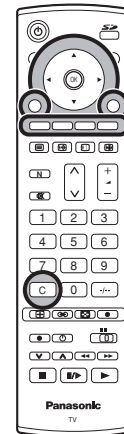
Access **Programme edit**.

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.

Pressing the **OK** button after having adjusted some features stores the change made.
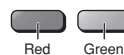
MENU

EXIT

OK

Adding / deleting a programme channel

Make sure the cursor is in the **Prog.** column.

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.

Red   Green

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

Make sure the cursor is in the **Prog.** column.

Press the **Yellow** button.

Choose the new position for the programme channel.

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

Yellow

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.

C

OK

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	■	Off	SC1
2 :	CH51	XYZ	Off	SC1
3 :	CH41	FTP	Off	SC1
4 :	CH47	123	Off	SC1
5 :	CH37	456	Off	SC1

ABCDEFGHIJKLMNOPQRST
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 37 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.

Blue

DOWNLOAD IN PROGRESS
PLEASE WAIT
Programme : 63
Remote control unavailable

> **Note:**
> This is not available when you choose Q-Link Off in Setup menu.

17

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.
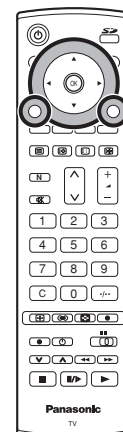
```
        WARNING
   All  current  tuning
   data  will  be  erased

Start Auto Setup
        Return        Exit
```
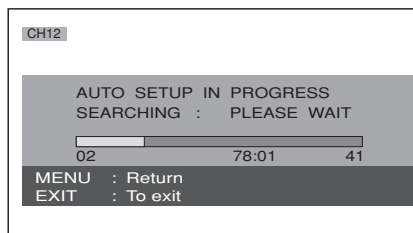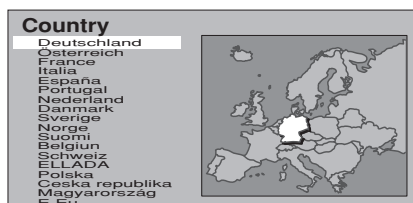
Press to start **Auto setup**.

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

```
Country
   Deutschland
   Österreich
   France
   Italia
   España
   Portugal
   Nederland
   Danmark
   Sverige
   Norge
   Suomi
   Belgiun
   Schweiz
   ELLADA
   Polska
   Ceska republika
   Magyarország
   E.Eu
```

```
CH12

   AUTO  SETUP  IN  PROGRESS
   SEARCHING  :      PLEASE  WAIT

   02                78:01         41
MENU    : Return
EXIT    : To 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**.
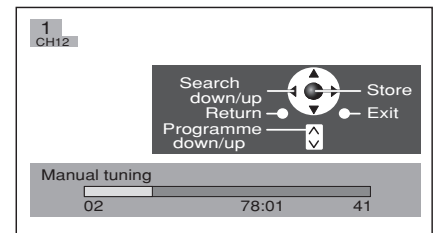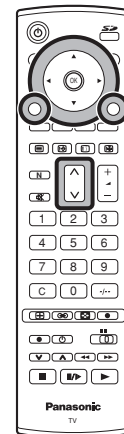
Access **Manual tuning**.

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.

MENU

1
CH12

Search down/up		Store
Return		Exit
Programme down/up		

Manual tuning
02   78:01   41

Note:
When using a VCR without video and audio input / output terminals, it is convenient to connect the antenna cable as indicated in the instruction book of VCR and to set the designated channel to programme No."0". In that case, perform Manual tuning after setting the Colour system in advance. Further, in multi-system VCR, it is more convenient to set the designated channel to several programme numbers.

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.

F

Press the **–**/∨ or **+**/∧ button to access **Tuning mode**.

−/∨ +/∧

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

TV/AV

Press the **–**/∨ or **+**/∧ 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.

STR

Repeat above procedure to tune additional programme positions.

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

F

STR F −/∨ +/∧ TV/AV

1
CH12
SC1

Manual tuning
−, +   : Search
TV / AV : Move cursor
STR   : To store
F   : To exit
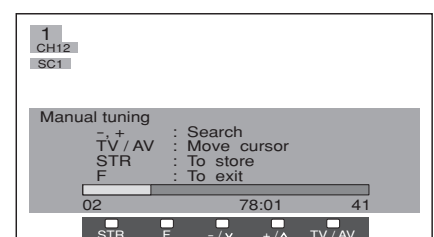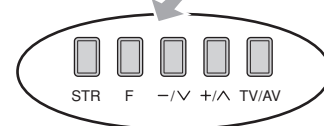02   78:01   41

STR   F   - /∨   + /∧   TV / AV

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.

Important Note:
Not all recording devices support this type of data communication system. Some may support certain features, but not others. Refer to the recording device's instruction book.
If Q-Link is inoperative, first confirm that your Scart cable is a "fully wired" type. Ask your dealer for further details.

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	No recording -Check tape or disc
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.	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.
Some other devices may support this feature. Refer to the device's instruction book.
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:
These recording devices may support some or all of the above functions.
Not all recording devices support this type of data communication system. Somemay support certain features, but not others. Refer to the device's instruction book. Some features are only available from the device connected to the Scart terminal selected using "Q-Link". See page 14.
If Q-Link is inoperative, first confirm that your Scart cable is a "fully wired" type. Ask your dealer for further details.

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, Just, 4:3 and Zoom

<div align="center">

OR

</div>

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 (except PC mode and Photo View mode).

ASPECT

Red   Green
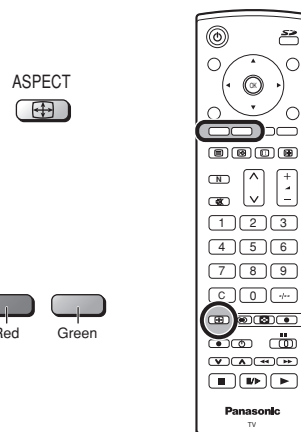
Panasonic Auto

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:

"WIDE" appears in the top left of the screen if a widescreen identification signal (WSS) is found or a signal found through a Scart terminal.
Panasonic Auto switches to the appropriate widescreen ratio.
"Panasonic Auto" appears in the top left of the screen if black stripes above and below the picture are detected.
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

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

Panasonic Auto

"Panasonic Auto" appears in the top left of the screen. The best ratio is chosen and the picture expanded to fill the screen.
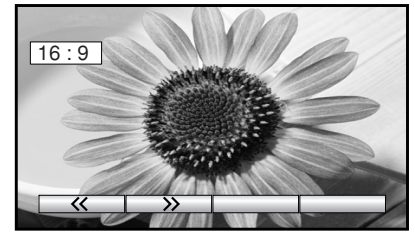
Panasonic Auto
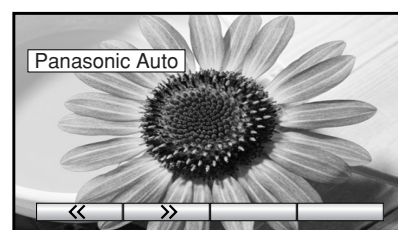
Press the **ASPECT** button, then use the **Red** or **Green** buttons to move in either direction through the eight aspect options.
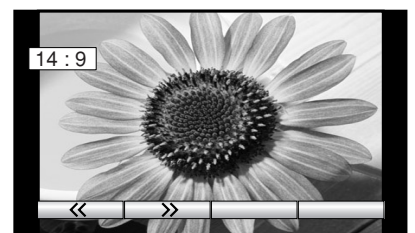
Aspect Controls

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

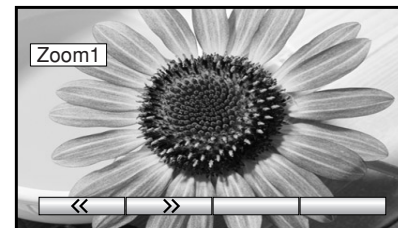**4:3** will display a 4:3 picture at its standard 4:3 size with no aspect distortions.
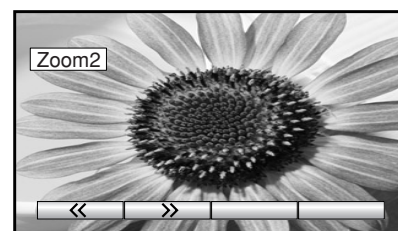
4 : 3

22

Aspect Controls

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.
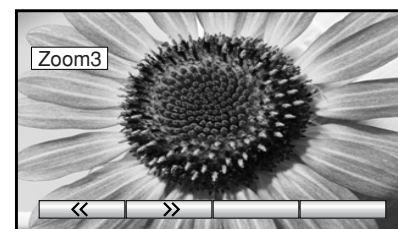

Zoom2

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 sligth 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** feature, **picture out of picture** and **picture and picture** feature.
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.
Note:
This TV has one tuner. When the main and sub windows are both TV mode, these are the same TV channel.

MULTI WINDOW
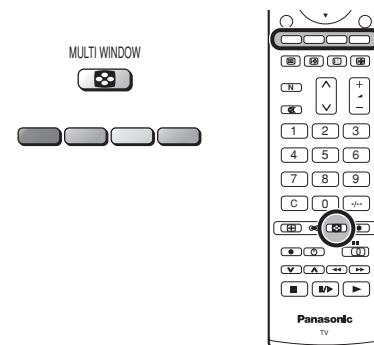
Picture in picture

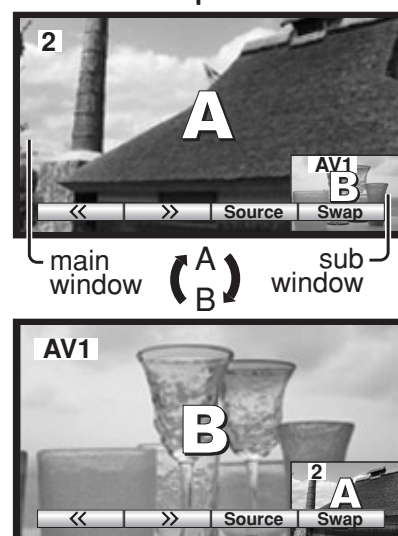Allows two pictures to be viewed at the same time.
Press the **Yellow** button to select the contents of the smaller window, switching between displaying a TV channel and all AV sources in turn.
To change the TV channel: press the **Yellow** button until the currently selected TV channel is shown, then 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 in picture mode

main window (A over B) sub window

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

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 all 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 mode

Picture and picture

Allows two pictures to be viewed at the same time.
Press the **Yellow** button to select the contents of the right window, switching between displaying a TV channel and all 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 and picture mode

Still

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

HOLD

Channel search

Press the **INDEX** button to show freeze-frames of the programmes being broadcast on all of the stored channels. These images are displayed in series, starting from the top left.
The feature cycles through the stored channels until the **INDEX** button is pressed to exit the feature.
Press the **Red** button to select each channel's freeze-frame in turn.
Press the **Green** button to watch the selected channel, exiting the feature.
Press the **Blue** button to watch the current programme, exiting the feature.

INDEX

Red   Green   Blue

Channel search

| 1	2	3
4	5	6
7	8	9
Select	OK	Exit
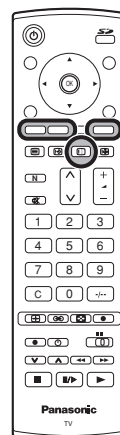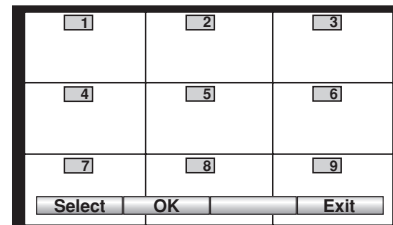
Picture and text

Press the **TV/TEXT** button, followed by the **MULTI WINDOW** button to move between viewing teletext and the picture and text feature. Picture and text 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 **TV/TEXT** button to return to watching the programme on its own then make the desired changes.

TV/TEXT

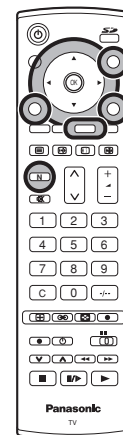MULTI WINDOW

Teletext mode

Teletext

Picture and text mode

TV   Teletext
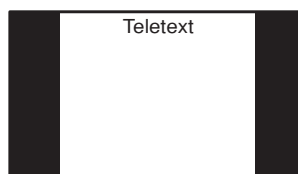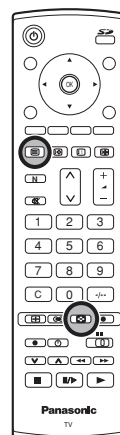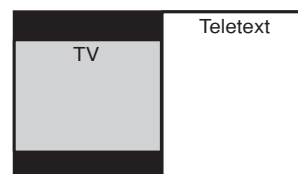
PC mode

When you switch to PC input (AV3/PC), the menu will be changed.

Press the **TV/AV** button. Whilst the on screen selector keys are
displayed, press the **Yellow** button to access PC mode.
Press the **TV/AV** button again to go back to watching TV.

TV/AV

Yellow

Picture

During **PC mode**

Press the **MENU** button.

Move to choose **Picture**.

Access **Picture**.

Move to choose menu option.

Adjust chosen option or access chosen menu.

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

MENU

OK

EXIT

Note:
Press the **N** button or press ⟨◦⟩ whilst the cursor is at the "Normalise"
position to reset all settings to their default levels.

|	
Picture Mode	The Picture Mode menu allows you to select four different screen settings - **Normal, Dynamic, Cinema** and **Auto**. In each Picture Mode setting, Contrast, Brightness and Sharpness can be adjusted and stored to suit your particular viewing requirement.
Contrast, Brightness, Sharpness	
	Increase or decrease the levels of these options according to your personal preference.
White balance	Allows you to set the overall colour tone of the picture. Choose from **Cool, Normal** and **Warm**.
Advanced settings	Advanced settings **On** enables fine picture adjustment 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 :	S Curve ⟵⟶ 2.0 ⟵⟶ 2.2 ⟵⟶ 2.5

PC Menu

Picture

Picture Pos. /Size

Signal

Picture

Normalise   Normal
Picture Mode   ◄   Normal   ►
Contrast   25
Brightness   0
Sharpness   0
White balance   ◄   Normal   ►
Advanced settings   ◄   On   ►

Advanced settings

Normalise   Normal
W/B High R   0
W/B High B   0
W/B Low R   0
W/B Low B   0
Gamma   ◄   2. 2   ►

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.
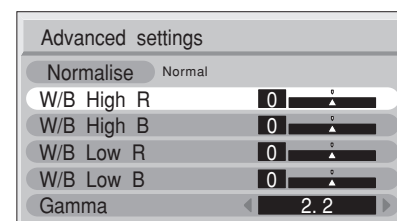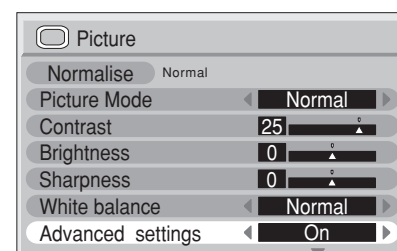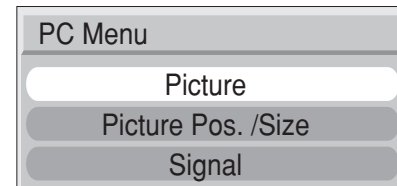
PC mode

Picture Pos. /Size

During **PC mode**

Press the **MENU** button.

Move to choose **Picture Pos. /Size**.

Access **Picture Pos. /Size**.

Move to choose menu option.

Adjust chosen option or access chosen menu.

Press the **EXIT** button at any time to exit Picture Pos. /Size.
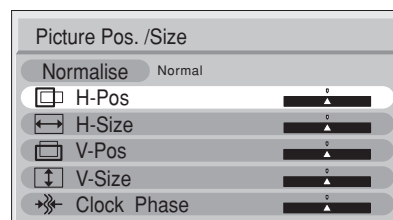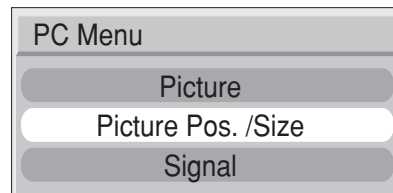
Note:
Press the **N** button or press ◄○► whilst the cursor is at the "Normalise" position to reset all settings to their default levels.
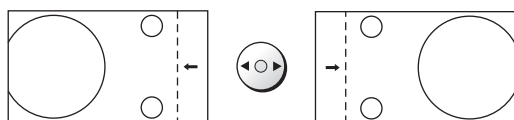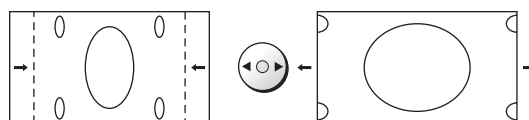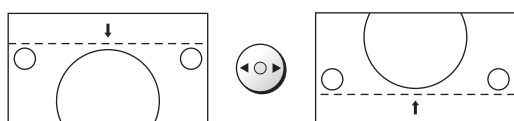
MENU

PC Menu

Picture

Picture Pos. /Size

Signal

Picture Pos. /Size

Normalise   Normal

H-Pos	0
H-Size	0
V-Pos	0
V-Size	0
Clock Phase	0

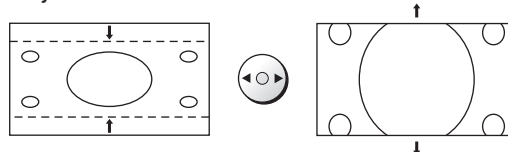**H-Pos**   Adjust the horizontal position.

H-Size   Adjust the horizontal size.

V-Pos   Adjust the vertical position.

V-Size   Adjust the vertical size.

Clock Phase   Eliminate the flickering and distortion.

Signal

During **PC mode**

Press the **MENU** button.

Move to choose **Signal**.

Access **Signal**.

Adjust **Sync**.

Press the **EXIT** button at any time to exit Signal.

PC Menu

Picture

Picture Pos. /Size

Signal

Signal

Sync	◄ H & V ►
H-Freq.	0.0 kHz
V-Freq.	0.0 Hz
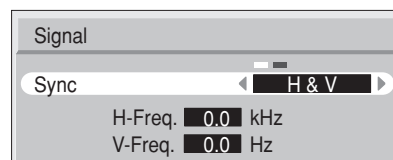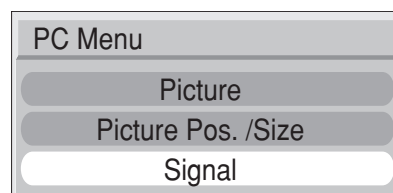
Sync   **H & V** : To synchronize by the horizontal and vertical signals from your PC.

          on G : To synchronize by the green signal form your PC (if available).

Photo View mode

Still image data (JPEG) made with a digital camera or digital video camera can be played back using an SD Card / PC Card.

Displayable Image Formats: Baseline JPEG 64 × 64 − 8,192 × 8,192 pixels (sub-sampling 4:2:2 or 4:2:0)
Displayable number of folders: Max 100

Notes:
• Some parts of an image may not be displayed or the image may be displayed on a smaller scale depending on the size of the image.
• Only EXIF standard JPEG images can be displayed on this TV.
• Photo view cannot support over 3000 JPEG files.
• Cards must be formatted with FAT12 or FAT16 in order to be viewed on this TV.
• Photo view is not compatible with card type hard disk (Micro Drive, Mobile type hard disk).
• Some PC Cards may not be usable.
• Without operations for 5 minutes, Screensaver will start automatically to prevent image retention (except Slide show). To exit, press any button.

Card Data Protection
• Do not remove the card whilst it is being accessed.
• Do not touch the terminals on the back of the SD Card / PC Card.
• Electrical interference, electrostatic discharges and malfunctions of the TV set or card may all result in damage to the card or data loss. It is recommended that any important data also be backed up on a PC.
• 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.
• Before inserting or removing the PC Card, make sure that the TV is turned off. Otherwise, it may damage the unit. Do not insert anything other than the PC Card.

Cautions:
• Always insert card in the correct direction. Failure to do so may result in damage to the card and this set.
• The SD Card and PC Card are precision devices. Do not subject them to excessive pressure or strong impacts.
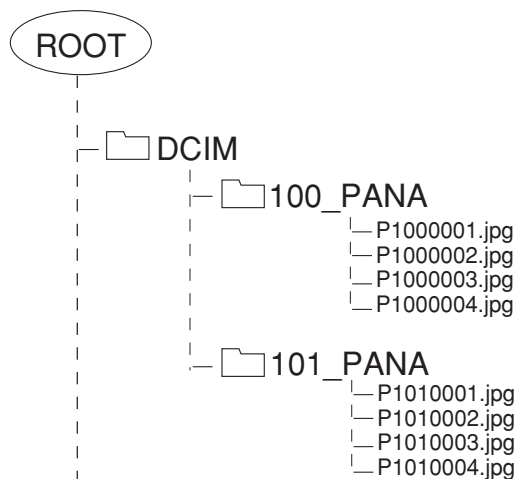
Warning:
As with any small object, SD Cards can be swallowed by young children. Do not allow children to handle the SD Card. Please remove the SD Card immediately after use.

Folders and Files
Digital cameras that are compliant with DCF specifications use folders with a specific structure. The following diagram shows an example of the folder structure.

Example:
If the Card file hierarchy is displayed on the PC as shown below.

```
      ROOT
        |
        |--- DCIM
              |--- 100_PANA
              |         |--- P1000001.jpg
              |         |--- P1000002.jpg
              |         |--- P1000003.jpg
              |         |--- P1000004.jpg
              |
              |--- 101_PANA
                        |--- P1010001.jpg
                        |--- P1010002.jpg
                        |--- P1010003.jpg
                        |--- P1010004.jpg
```

DCIM Folder
The digital camera creates this folder automatically.

100_PANA Folder
Folder names consist of a 3-digit folder number which is followed by five arbitrary characters. Digital camera images are stored within these folders.

JPEG files in the 100_PANA folder are displayed when a Card, which is structured as shown left, is inserted.

Notes:
• The folder name may vary according to the digital camera being used.
• When a directory or file is created, only the characters "A-Z", "a-z", "0-9" and "_" are used. Two-byte characters or other special codes shall not be used.
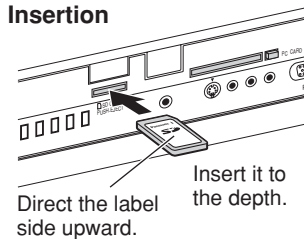
P1000001.JPG: DCF File
File names consist of four arbitrary characters followed by a 4-digit file number. DCF files are image files (normally JPEG files) that have been taken by a digital camera.
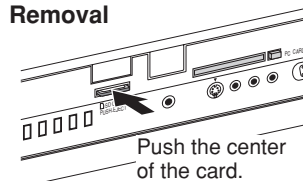
Photo View mode

SD Card

Insertion

Direct the label side upward.

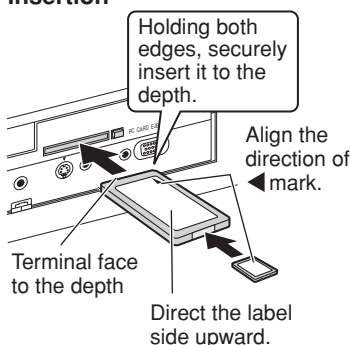Insert it to the depth.

Removal
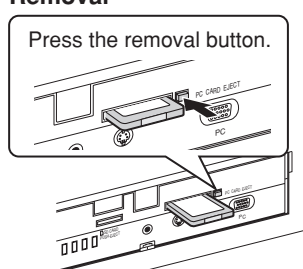
Push the center of the card.

PC Card

Before inserting or removing the PC Card, make sure that the TV is turned off. Otherwise, it may damage the unit. Do not insert anything other than the PC Card.

Insertion

Holding both edges, securely insert it to the depth.

Align the direction of ◀ mark.

Terminal face to the depth

Direct the label side upward.

Removal

Press the removal button.

If PC Card cannot be removed
Push in PC Card again, and press the removal button.

Caution
If PC Card adapter is used, remove it together with the adapter.

Compatible Card

SD Card slot	PC Card slot
SD Card	Compact Flash*
Multi Media Card	Smart Media*
miniSD Card	Memory Stick*
	xD Picture Card*
	Flash ATA Card*

• miniSD Card requires miniSD™ adapter.
• The media* listed in the right column above can be read via the PC Card in the PC Card adapter.
• Hard disk PC Cards and other recorded media cannot be used.
• Place the selected media onto the PC Card and then insert into the PC Card Slot.
• When both SD Card and PC Card are inserted, the SD Card contents have priority and will be displayed.
• If the Card is incompatible, "This type of card is not supported" is displayed on screen. Remove the Card only when Access indication is not displayed.
• If the file is not formatted with FAT12 or FAT16, "This type of format is not supported" is displayed.
• If the JPEG file is corrupted and cannot be decoded, "This type of image is not supported" is displayed.
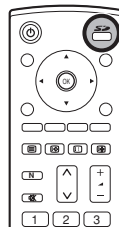**Notes:**
• Insert / remove Card while Card Menu Screen or "Card is not inserted correctly" is displayed.
• Be sure Access indication is not displayed before Card insertion / removal.
• Before reinserting a Card after removing it, wait until "Card is not inserted correctly" is displayed. If there are Cards in both Card Slots, wait until the Card Menu Screen of the other Slot is displayed and Access indication is no longer displayed before reinserting a Card.
• If the JPEG is modified using a PC, it will not be displayed on the TV.
• It may take long time to display the thumbnail if there are lots of files or if the file size is big.

Press the **SD** button.

The screen below is displayed automatically when a card is inserted. If "Card is not inserted correctly" appears, confirm that a card is correctly inserted.
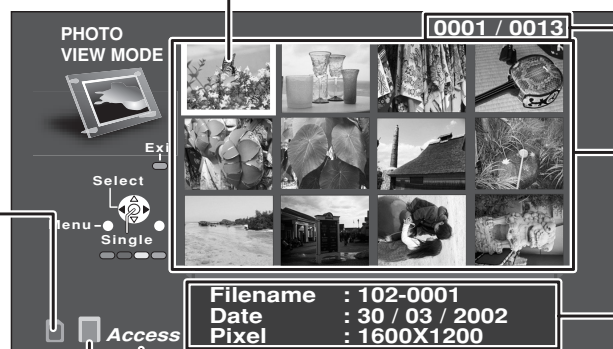Press the **SD** button again to exit Photo View mode.

Card Menu Screen

Selected File

PHOTO VIEW MODE

Exit

Select

Menu

Single

0001 / 0013

Selected File number / Total number of Files

Index Area
12 files are displayed here.

SD Card Indication
This indication is displayed whilst SD Card is inserted.

PC Card Indication
This indication is displayed whilst PC Card is inserted.

Access

Access Indication
Access is displayed whilst data is read.

Filename : 102-0001
Date : 30 / 03 / 2002
Pixel : 1600X1200

File Data
The information of the selected file (framed in yellow) is displayed.

Photo View mode

Picture menu

During **Photo View mode**

Press the **MENU** button.

MENU

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.

EXIT

Contrast, Brightness, Colour, Sharpness

Increase or decrease the levels of these options according to your personal preference.

Tint

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**.

Main menu	
	Picture menu
	Viewing setup

Picture menu	
Contrast	− +
Brightness	− +
Colour	− +
Sharpness	− +
Tint	
Colour balance	Normal

Picture menu	
Contrast	
Brightness	
Colour	
Sharpness	
Tint	
Colour balance	Normal

Viewing setup

During **Photo View mode**

Press the **MENU** button.

MENU

Move to choose **Viewing setup**.

Access **Viewing setup**.

Move to choose menu option.

Adjust chosen option or access chosen menu.

Press the **EXIT** button at any time to exit Viewing setup.

EXIT

Main menu	
	Picture menu
	Viewing setup

Slide show	Provides access to Slide Show mode. See page 31.
Interval	When the Slide Show, allows you to select the display intervals between 5 to 90 seconds.
Sequence	When the Slide Show, allows you to select the **Order** or **Random**.
Repeat	When Repeat is **On**, the Slide Show repeats automatically.
Card	Select either **SD** or **PC** when both cards are inserted in the slots.

Viewing setup	
Slide show	Access
Interval	5Sec
Sequence	Order
Repeat	On
Card	PC

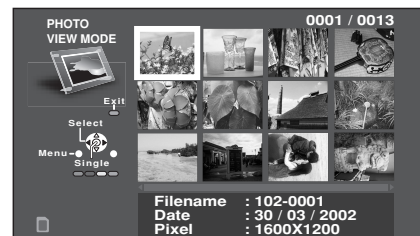| Viewing setup	
Slide show	
Interval	5Sec
Sequence	Order
Repeat	On
Card	PC

Photo View mode

When you press the **SD** button, thumbnail screen is displayed automatically.
After that you can choose your desirable view mode between the following three modes.

Multi mode

12 images are displayed.

Press to select desired image.

Press the **OK** button to display Single mode.

```
PHOTO                              0001 / 0013
VIEW MODE
                    [thumbnail grid]
        Exit
      Select
   Menu
      Single
                    Filename  : 102-0001
                    Date      : 30 / 03 / 2002
                    Pixel     : 1600X1200
```
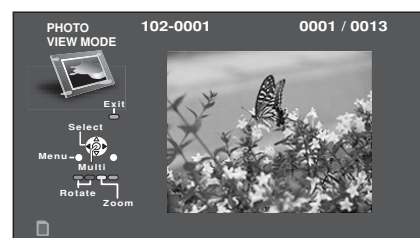
Single mode

A single image selected from the index area fills the screen.
You can also rotate or magnify the image.

Press to select the next or previous image.

Press the **OK** button to display Multi mode.

Press the **Red** or **Green** button to rotate the image.
Each press rotates images 90 °.

Red   Green
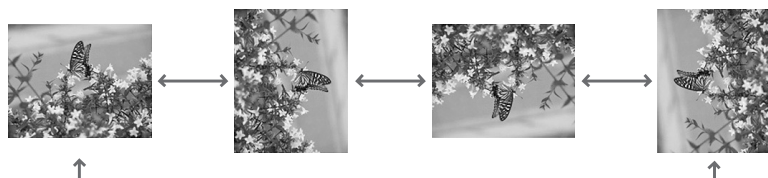
Press the **Yellow** button to magnify the image.
To restore press the **Blue** button.

Yellow   Blue

```
PHOTO        102-0001        0001 / 0013
VIEW MODE
        Exit
      Select
   Menu
      Multi
      Rotate
           Zoom
```

Slide Show

Images are displayed one after another as a slide show.

To start Slide Show access **Viewing setup**.
After setting Interval, Sequence and Repeat, access **Slide show**.
When both SD Card and PC Card are inserted, move to choose
Card and select SD or PC before accessing Slide show.
See page 30.

Press the **OK** button at any time to return to the Single mode.

Note:
When you are in the Slide Show mode, you can change the Aspect
of the image on screen by pressing the **ASPECT** button on the
remote control.

```
Viewing setup
Slide show
Interval          5Sec
Sequence          Order
Repeat            On
Card              PC
```

```
Viewing setup
Slide show        Access
Interval          5Sec
Sequence          Order
Repeat            On
Card              PC
```

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.

⏻	**Standby** Press to switch the VCR, DVD or DVD recorder to Standby mode. Press again to switch back on.
VCR ■■ DVD	**VCR / DVD switch** Use this switch to select whether controls operate the DVD equipment or VCR.
▶	**Play** Press to playback the tape or DVD.
■	**Stop** Press to stop the tape or DVD.
▶▶	**Skip / Fast Forward / Cue** VCR: Press to fast forward the tape. In Play mode, press to view the picture rapidly forward (Cue). DVD: Press once to skip to the next track.
◀◀	**Skip / Rewind / Review** VCR: Press to rewind the tape. In Play mode, press to view the picture rapidly in reverse (Review). DVD: Press once to skip to the previous track.
‖/▶	**Pause / Still** Press in Play mode, the picture will pause. Press again to restart play.
PROGRAMME ∨ ∧	**Programme Up / Down** Press to increase or decrease the programme position by one.
REC	**Record** Press this button to start recording.

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 ◄○► 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 [+/−] 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 mode?
In TOP 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.

Note:
If Teletext is in use, the aspect ratio is set to 16:9.

TV / Teletext mode
Press the **TV**/**TEXT** button to switch between the current programme.

Page Selection
Pages can be selected in two ways :
a. Press the Up / Down buttons to increase or decrease the page number by one.
b. 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 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.
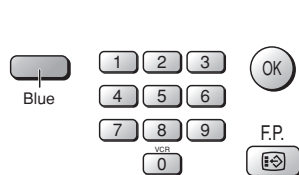

HOLD
To hold the Teletext page when viewing multi-page information.
Press again to return to automatic page update.

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 **TV**/**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 **TV**/**TEXT** button to return to normal TV operation.
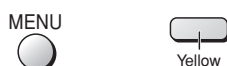
Update
Press the **MENU**, **Yellow** buttons to see the update of information on certain pages.
When an update is received, the page number will be displayed at the top left of the screen.
Press the **Yellow** button to view the page.
Press the **TV**/**TEXT** button to return to normal TV operation.

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.

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.

MENU

Blue

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 **TV**/**TEXT** button to return to normal TV operation.

INDEX

INDEX

When in TOP 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.

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:
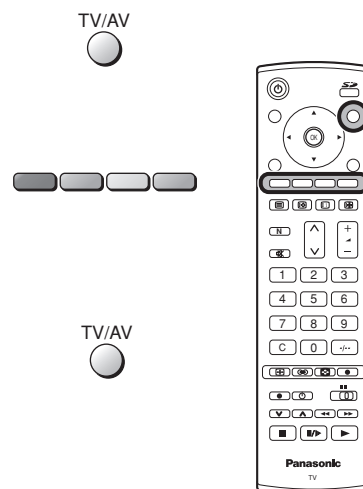
Press the **TV/AV** button.

Whilst the on screen selector keys are displayed, press coloured buttons to select the AV source you wish to view.
   Red button   : AV1 Scart terminal
   Green button   : AV2 Scart terminal
   Yellow button   : AV3 Audio, Video, S-Video / PC terminals
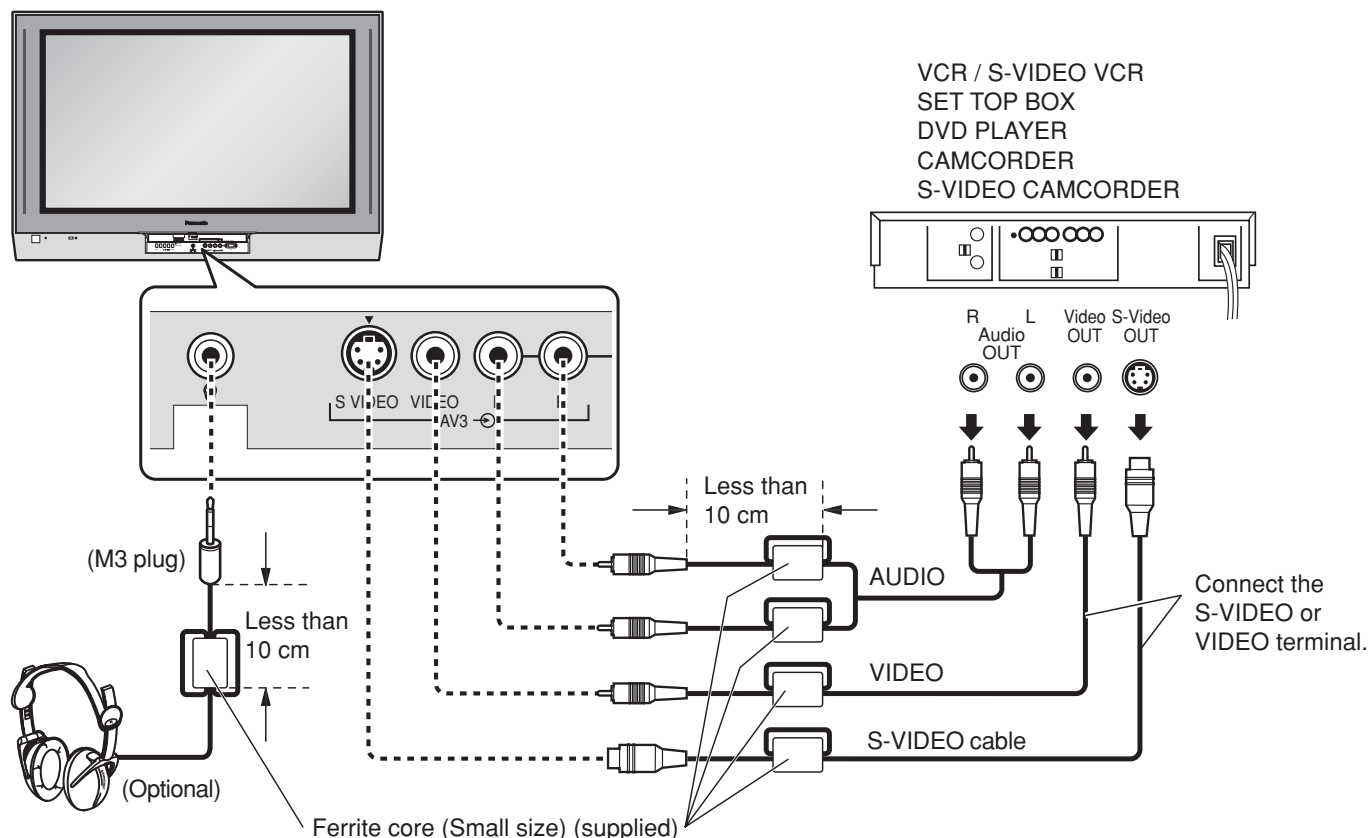   **Blue** button   : AV4 Scart, Component terminals
The on screen selector keys that appear clear after a few seconds. If you want to select an input when the keys are not shown, press the **TV/AV** button again and the keys will reappear.

   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).

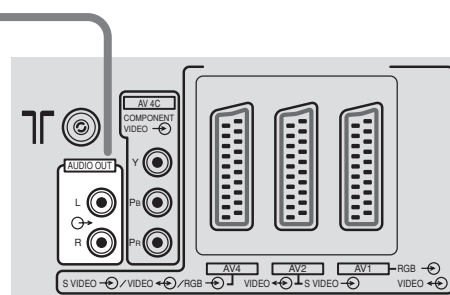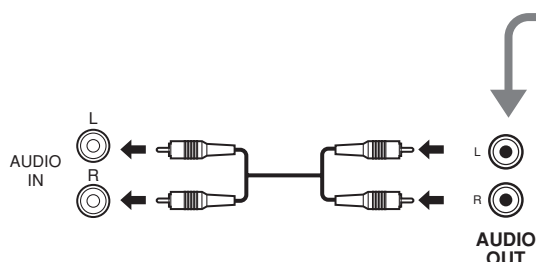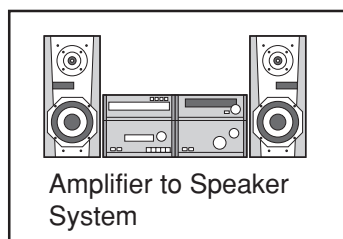## How to connect the Headphones / AV3 terminals

VCR / S-VIDEO VCR
SET TOP BOX
DVD PLAYER
CAMCORDER
S-VIDEO CAMCORDER

R   L   Video S-Video
Audio   OUT   OUT
OUT

(M3 plug)

Less than 10 cm

Less than 10 cm

AUDIO

Connect the S-VIDEO or VIDEO terminal.

VIDEO

S-VIDEO cable

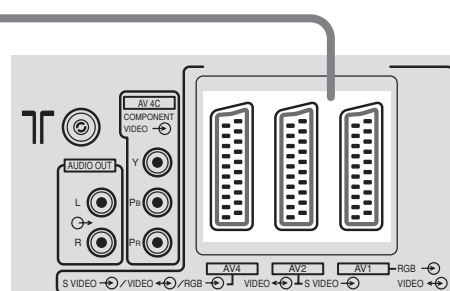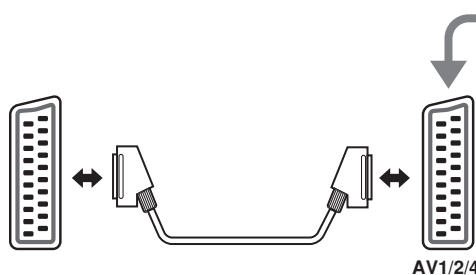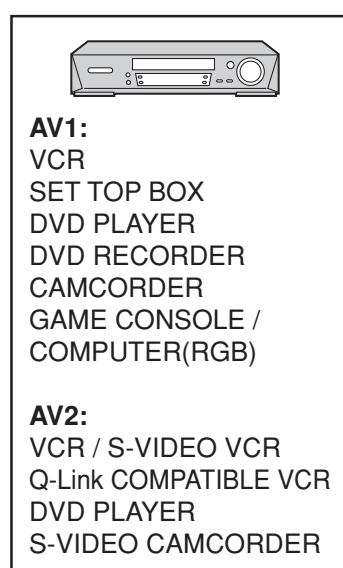(Optional)

Ferrite core (Small size) (supplied)

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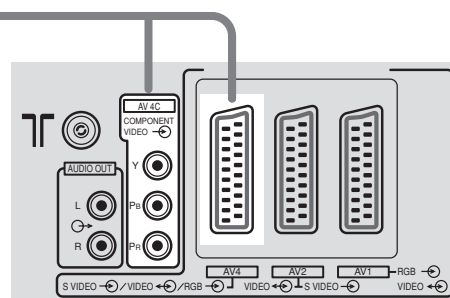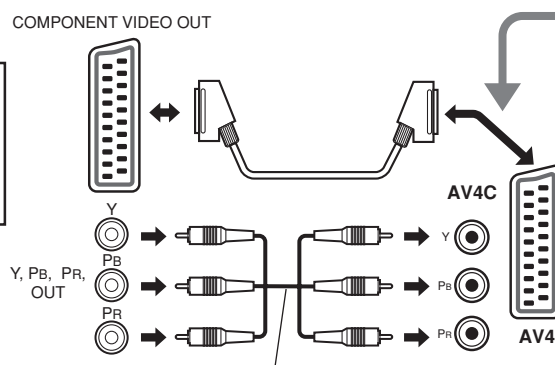• Additional equipment and cables shown are not supplied with this TV set.

Connections

How to connect the Audio Output terminals

Amplifier to Speaker System

AUDIO IN

L
R

AUDIO OUT

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
S-VIDEO CAMCORDER

AV4:
Q-Link COMPATIBLE
            DVD RECORDER
DVD PLAYER
SET TOP BOX
VCR / S-VIDEO VCR
S-VIDEO CAMCORDER

AV1/2/4

How to connect the Component Input terminals

COMPONENT VIDEO OUT

DVD PLAYER

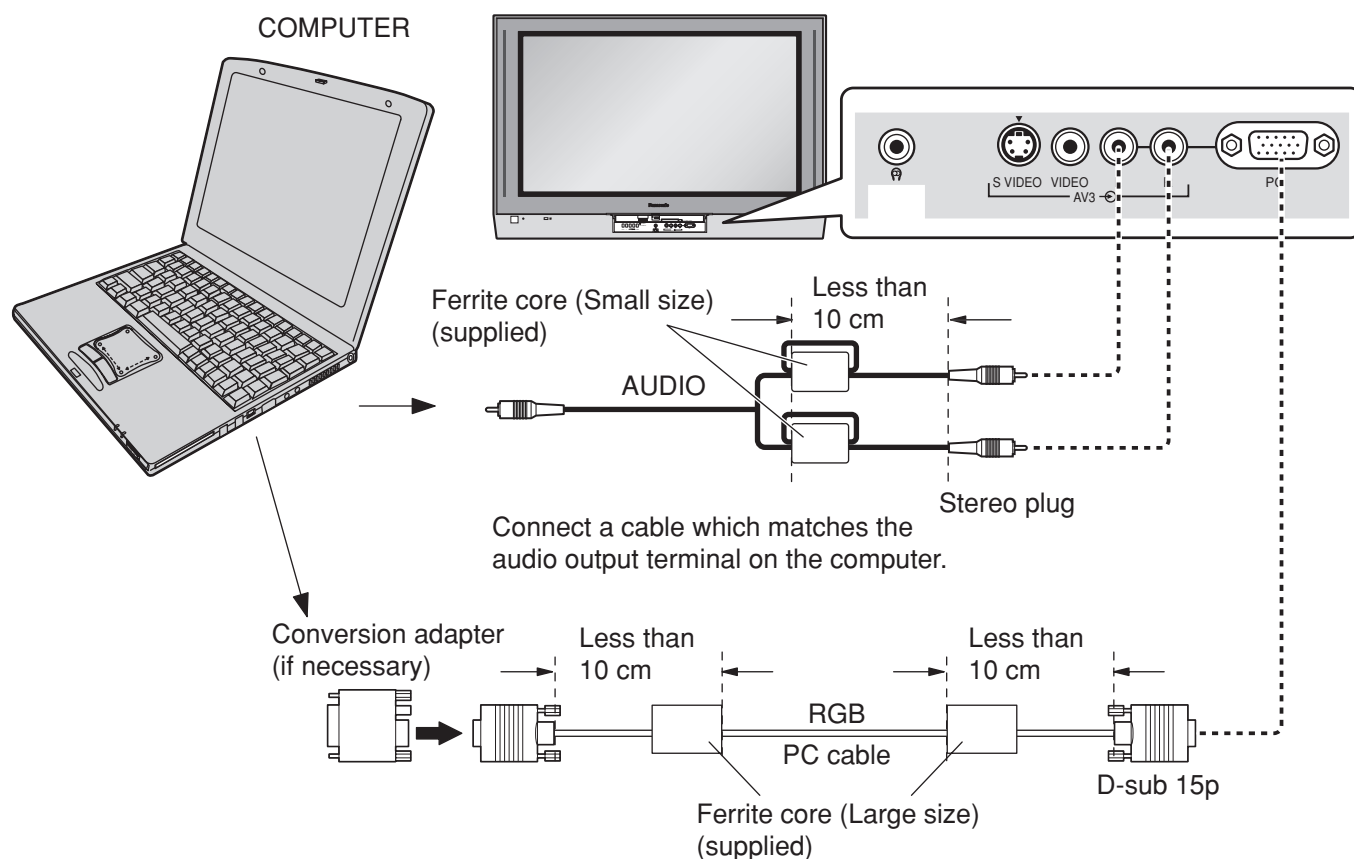Y, PB, PR, OUT

AV4C

AV4

This terminal accepts normal interlace format as well as progressive format.

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 information see page 40.
• When a Monaural VCR is used, connect the Monaural Audio cable to the Audio "L"(Left) terminal.

Connections

How to connect the PC Input terminals

COMPUTER

Ferrite core (Small size)
(supplied)

Less than
10 cm

AUDIO

Stereo plug

Connect a cable which matches the
audio output terminal on the computer.

Conversion adapter
(if necessary)

Less than
10 cm

Less than
10 cm

RGB
PC cable

D-sub 15p

Ferrite core (Large size)
(supplied)

Notes:
• Computer signals which can be input are those with a horizontal scanning frequency of 15 to 110 kHz and vertical scanning frequency of 48 to 120 Hz. (However, the image will not be displayed properly if the signals exceed 1,200 lines.)
• The display resolution is a maximum of 640 × 480 dots when the aspect mode is set to "4:3", and 852 × 480 dots 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.
• The PC input terminals are DDC1/2B-compatible. If the computer being connected is not DDC1/2B-compatible, you will need to make setting changes to the computer at the time of connection.
• 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.
• Component Input is possible with the pin 1, 2, 3 of the D-sub 15P Connector.

Signal Names for D-sub 15P Connector
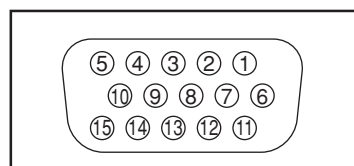
Pin Layout for PC Input Terminal

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

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**	**Checks**
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.

Plasma TV panel

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. Without signals and operations for 2 minutes, the level of the contrast decreases automatically to prevent image retention. **Note:** 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)

Socket Earth	21	20	CVBS in (video)
CVBS out (video)	19	18	RGB status earth
CVBS earth	17	16	Status RGB
Red in	15	14	Earth
Red earth	13	12	- -
Green in	11	10	- -
Green earth	9	8	Status CVBS
Blue in	7	6	Audio in (L)
Blue earth	5	4	Audio earth
Audio out (L)	3	2	Audio in (R)
Audio out (R)	1		
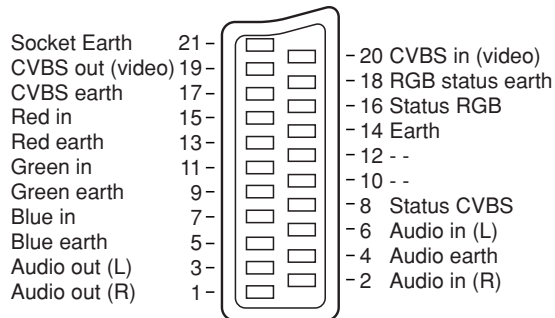
Suitable inputs for AV1 include
RGB (Red / Green / Blue).

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

Socket Earth	21	20	CVBS in (video)
CVBS out (video)	19	18	Earth
CVBS earth	17	16	- -
S.C. - in	15	14	Earth
Earth	13	12	- -
- -	11	10	Q-Link data
Earth	9	8	Status CVBS
- -	7	6	Audio in (L)
Earth	5	4	Audio earth
Audio out (L)	3	2	Audio in (R)
Audio out (R)	1		
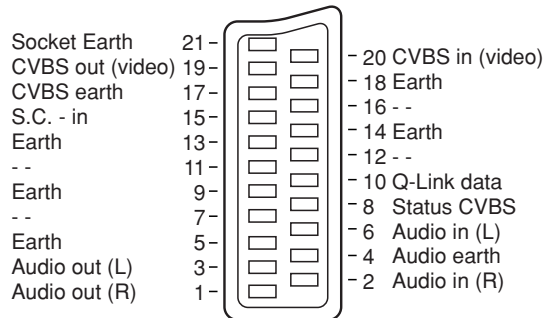
AV2 - Pins 15 and 20 are dependent
on AV2 S-VHS / VIDEO switching.

AV3 S-VIDEO 4 pin terminal

Chrominance in   Luminance in

Chrominance earth   Luminance earth
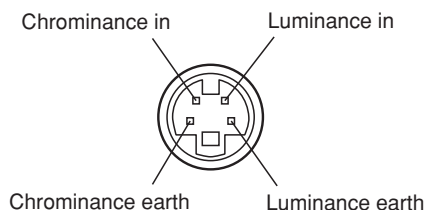
AV4 Scart terminal (RGB, VIDEO, S-VIDEO, Q-Link)

Socket Earth	21	20	CVBS in (video)
CVBS out (video)	19	18	Earth
CVBS earth	17	16	Status RGB
Red in	15	14	Earth
Red earth	13	12	- -
Green in	11	10	Q-Link data
Green earth	9	8	Status CVBS
Blue in	7	6	Audio in (L)
Blue earth	5	4	Audio earth
Audio out (L)	3	2	Audio in (R)
Audio out (R)	1		
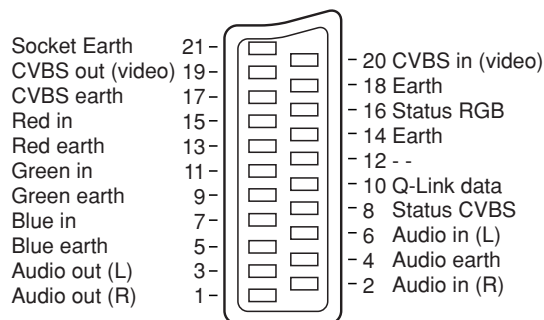
AV4 - Pins 15 and 20 are dependent
on AV4 S-VHS / VIDEO switching.

Input signal can be displayed

Applicable input signals for PC Input (D-sub 15P) (∗ Mark)

	Signal name	Horizontal frequency(kHz)	Vertical frequency(Hz)	PC
1	640 × 400 @70 Hz	31.47	70.00	∗
2	640 × 480 @60 Hz	31.47	59.94	∗
3	Macintosh13" (640 × 480)	35.00	66.67	∗
4	640 × 480 @75 Hz	37.50	75.00	∗
5	852 × 480 @60 Hz	31.50	60.00	∗
6	800 × 600 @60 Hz	37.88	60.32	∗
7	800 × 600 @75 Hz	46.88	75.00	∗
8	800 × 600 @85 Hz	53.67	85.06	∗
9	Macintosh16" (832 × 624)	49.73	74.55	∗
10	1,024 × 768 @60 Hz	48.36	60.00	∗
11	1,024 × 768 @70 Hz	56.48	70.07	∗
12	1,024 × 768 @75 Hz	60.02	75.03	∗
13	1,024 × 768 @85 Hz	68.68	85.00	∗
14	Macintosh21" (1,152 × 870)	68.68	75.06	∗
15	1,280 × 1,024 @60 Hz	63.98	60.02	∗
16	1,280 × 1,024 @75 Hz	79.98	75.03	∗
17	1,280 × 1,024 @85 Hz	91.15	85.02	∗
18	1,600 × 1,200 @60 Hz	75.00	60.00	∗

Note:
Signals other than above may not be displayed properly.

Specifications

	TH-37PA30	TH-42PA30
Power Source	220 V - 240 V 50 Hz / 60 Hz A.C.	
Power Consumption		
Normal use	245 W	315 W
Standby	1.8 W	
Power-OFF	1.0 W	
Plasma Display panel		
Drive method	AC type	
Aspect Ratio	16:9	
Contrast Ratio	4000:1	
Screen size	37-inch	42-inch
(No.of pixels)	818 mm (W) × 461 mm (H) × 939 mm (diagonal)	920 mm (W) × 518 mm (H) × 1,056 mm (diagonal)
	408,960 (852 (W) × 480 (H)) [2,556 × 480 dots]	
Sound		
Speaker	Woofer ϕ 80 mm × 2, Tweeter 16 mm × 73 mm × 8	
Audio Output	26 W [8 W + 8 W, 5 W + 5 W] (10 % THD)	
Headphone	M3 (3.5 mm) Jack × 1	
Applicable signals		
Colour System	NTSC, PAL, PAL60, SECAM, Modified NTSC	
Scanning format	525 (480) / 60i · 60p, 625 (575) / 50i · 50p	
PC signals	VGA display VGA SVGA, XGA, SXGA, UXGA ······ (compressed) Horizontal scanning frequency 15 - 110 kHz Vertical scanning frequency 48 - 120 Hz	

Receiving Systems/ Band name

PAL B, G, H, I, SECAM B, G SECAM L / L'

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)

PAL D, K, SECAM D, K

VHF R1- R2	VHF R3 - R5
VHF R6 - R12	UHF E21 - E69

PAL 525/60	Playback of NTSC tape from some PAL video recorders (VCR)
M.NTSC	Playback from M.NTSC Videorecorders (VCR)
NTSC (AV INPUT ONLY)	Playback from NTSC Videorecorders (VCR)

OUTPUT		
AUDIO OUT	AUDIO L-R (RCA Pin Type × 2)	0.5 Vrms
INPUT		
AV3-Front	VIDEO (RCA Pin Type × 2)	1.0 Vp-p (75 Ω)
	S-VIDEO (MINI DIN 4-pin)	Y:1.0 Vp-p (75 Ω) C:0.286 Vp-p (75 Ω)
	AUDIO L-R (RCA Pin Type × 2)	0.5 Vrms
AV4C-Rear	Y	1.0 Vp-p (including synchronization)
	P_B/P_R	±0.35 Vp-p
PC	(HIGH-DENSITY D-SUB 15PIN)	R,G,B/0.7 Vp-p (75 Ω)
		HD, VD/1.0 - 5.0 Vp-p (high impedance)
Others	SD Card slot × 1, PC Card slot × 1	
INPUT/OUTPUT		
AV1-Rear	21 Pin terminal (Audio/Video in, TV out, RGB in)	
AV2-Rear	21 Pin terminal (Audio/Video in, Audio/Video out, S-Video in, Q-Link)	
AV4-Rear	21 Pin terminal (Audio/Video in, Audio/Video out, S-Video in, RGB in, Q-Link)	
ANT-Rear	UHF / VHF	
Operating Conditions	Temperature : 0 ° - 40 °C Humidity : 20 % - 80 % RH (non-condensing)	
Accessories Supplied		
Remote Control Transmitter	EUR7635020	
Batteries	2 × R6 Size	
Clamper	TMME206 × 2	
Ferrite core	Large size × 2, Small size × 5	
Dimensions (W × H × D)	1,040 mm × 697 mm × 139 mm	1,140 mm × 757 mm × 139 mm
Mass (Weight)	34.5 kg	41.0 kg

Notes:
- Design and specifications are subject to change without notice. Mass and dimensions shown are approximate.
- This equipment complies with the EMC standards listed below.
  EN55013, EN61000-3-2, EN61000-3-3, EN55020.

Customer' 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

Matsushita Electric Industrial Co., Ltd.
Web Site : http://www.panasonic.co.jp/global/

MBS0204S0