

Panasonic[®]

Operating Instructions
LCD Television

Model No. TX-L32S10B TX-L37S10B TX-L42S10B

























Please read these instructions before operating your set and retain them for future reference. The images shown in this manual are for illustrative purposes only.

U.K. Standard

English



Features

■ Receives DVB digital terrestrial broadcasts

Select the programme or set Timer Programming easily by using TV Guide. (p. 18 - p. 20) Register and instantly call up favourite channels with Favourites Edit. (p. 37)

• DVB - Digital Video Broadcasting

- ■VIERA TOOLS Display special feature icons and accesses easily (p. 14)
 VIERA TOOLS is the easy way to access the special features with the VIERA TOOLS button.
- Sharp pictures with HDMI connection (p. 64)
 Enjoy high-definition digital picture and high-quality sound by using an HDMI cable.
- Dolby Digital decoder

Possible to decode Dolby Digital audio track (multi-channel sound) and output as Dolby Digital multi-channel sound signal from DIGITAL AUDIO OUT terminal.

■ GUIDE Plus+ (p. 18)

This TV supports Gemstar-TV Guide sent from the GUIDE Plus+ system.

■ Owner ID (p. 43)

Owner ID is an anti-theft function. Entering the PIN number and owner's personal information will help the Police to determine the owner.

■ AVCHD

Possible to play the moving pictures recorded in SD Card by AVCHD format. AVCHD is a high definition recording format. (p. 50-51)

■ SDHC Card

This TV supports SDHC Card. SDHC is a high storage capacity card (more than 4 GB).

■SD Card viewer - VIERA IMAGE VIEWER (p. 48)

Enjoy your photos or movies recorded in SD Card on the TV screen.

- Links up and controls the connected equipment with "Q-Link" and "VIERA Link" (p. 52 59) Easy recording and playback, create home theatre without complicated settings, etc.
- Provides suitable images for playing games (p. 30)
 Selecting "Game" in Viewing Mode provides fast response to the input signal and you can enjoy playing games.
- Supports Audio Description signal (p. 15 and p. 31)

This function can add an additional sound track to describe events on-screen (narration) and aids understanding and enjoyment, particularly for visually-impaired viewers.

You can switch Audio Description service Auto or Off, and adjust the volume of the description sound track.

Digital Switchover for Terrestrial broadcasts

Starting in late 2007 and ending in 2012, TV services in the UK will go completely digital, TV region by TV region.

If you have any questions, please call Digital UK on **08456 50 50 50** or visit **www.digitaluk.co.uk**

Digital Switchover will cover a period of several weeks. When it starts you will lose all Analogue TV channels and some Digital TV channels will be missing.

You will need to retune your TV each time this happens to recover your digital channels.

To retune your TV → "Auto Setup" in "DVB Tuning Menu"-DVB mode (p. 34 and p. 35) Users of cable or satellite boxes should still retune the TV to continue to receive Freeview channels via their aerial. (Your Analogue channel for viewing Cable or Satellite services will change to a new position.)

Due to the digital reception technologies involved, quality of the digital signals may be relatively low in some cases, despite good reception of analogue channels.



FULL HD

This TV uses a high definition panel to produce high definition pictures close to their original resolution.



Wide Viewing Angle (TX-L32S10B, TX-L37S10B) This LCD panel offers 178-degree viewing angle. This delivers beautiful images regardless of the viewing angle.



IPS panel (TX-L32S10B, TX-L37S10B) This TV uses IPS (In Plane Switching) panel.



24p Movie Playback

Can support 1080p, 24 frames per second source materials.



Fco Mode

Adjusts picture settings automatically dependent on ambient lighting conditions.



V-Audio Surround

Utilises Panasonic's advanced digital amplification technology.

Up to 60,000 hours LCD Panel Lifetime

The LCD display panel used in the 2009 VIERA TV range is rated for up to 60,000 hours.*



*This measurement is based on the time taken for the brightness of the panel to reduce to half of it's maximum level.

The time taken to reach this level may vary depending on the image content and the environment where the TV is used. Malfunctions are not taken into account.



digital tick

The digital tick logo indicates that a digital Approved product tuner is built-in.

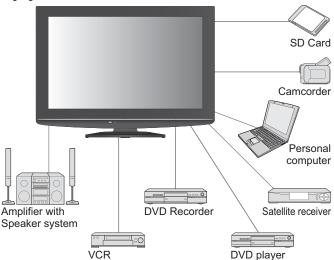


Freeview

Freeview is the way to enjoy digital TV for free. There are up to 48 digital TV channels.

Turn your living room into a home theatre!

Enjoy rich multi-media



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Enjoy your TV!

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Safety Precautions

Warning & Caution

Handling the mains plug and lead

 Ensure that the mains plug is easily accessible at all times. The On / Off switch on this model does not fully disconnect the TV from the mains supply. Remove the mains plug from the wall socket when the TV is not used for a prolonged period of time.

Do not expose to direct sunlight and other sources of heat

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

Do not place the TV on sloped or unstable surfaces

The TV may fall off or tip over.

Power source

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

Do not remove the cover **NEVER** modify the TV yourself

(High-voltage components may cause serious electrical shock)

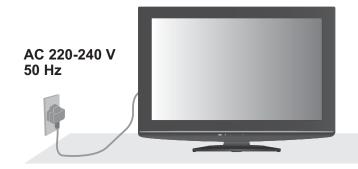
- Have the TV checked, adjusted, or repaired at your local Panasonic dealer.
- Do not remove the rear cover as live parts are accessible when it is removed. There are no user serviceable parts inside.

Do not expose your ears to excessive volume from the headphones

Irreversible damage can be caused

To prevent fall and injury, remove TV from its fixed wall position when it is no longer in use.

Remove the mains plug from the wall socket before connecting or disconnecting leads.



IMPORTANT: THE MOULDED MAINS PLUG

FOR YOUR SAFETY, PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This TV is supplied with a moulded three pin mains plug for your safety and convenience. A 5 amp fuse is fitted in this mains plug. Shall the fuse need to be replaced, please ensure that the replacement fuse has a rating of 5 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse. If the mains plug contains a removable fuse cover, you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the mains plug must not be used until a replacement cover is obtained.

A replacement fuse cover may be purchased from your local Panasonic dealer.

If the fitted moulded mains plug is unsuitable for the socket outlet in your home, then the fuse shall be removed and the mains plug cut off and disposed of safety. There is a danger of severe electrical shock if the cut off mains plug is inserted into any 13 amp socket.

If a new mains plug is to be fitted, please observe the wiring code as shown below.

If in any doubt, please consult a qualified electrician.

IMPORTANT: - The wires in this mains lead are coloured in accordance with the following code: -Blue: Neutral Brown: Live

As the colours of the wire in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your mains plug, proceed as follows.

The wire which is coloured BLUE must be connected to the terminal in the mains plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the mains plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the Earth terminal of the three pin mains plug, marked with the letter E or the earth symbol \bigoplus . How to replace the fuse

For plug type shown in example 1:

Lift out the removable fuse compartment with a screwdriver and replace the fuse, then refit securely into the mains plug (see example 1).

For plug type shown in example 2:

Lift open the fuse compartment, in the mains plug, with a screwdriver, and replace the fuse, then press the fuse cover down securely (see example 2).





Do not expose to rain or excessive moisture

To prevent damage which might result in electric shock or fire, do not expose this TV to rain or excessive moisture. This TV must not be exposed to dripping or splashing water and objects filled with liquid, such as vases, must not be placed on top of or above the TV.

Do not block the rear ventilation openings

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

Allow sufficient space around the TV for radiated heat

Minimum distance





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

Use only the dedicated pedestals / mounting equipment

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

Do not allow children to handle SD Card

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

Notes

■ Auto power standby function

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

■ Keep the TV away from these types of equipment

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

Maintenance

First, remove the mains plug from the socket outlet.

Display panel

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

Caution

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

Cabinet, Pedestal

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

Caution

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

Mains plug

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

Accessories / Options

Standard accessories Check that you have the accessories and items shown ☐ Remote Control ☐ Batteries for the ☐ Clamper ☐ Cleaning cloth N2QAYB000328 ■ TMM8E18048 TXFPE01RLTB Remote Control (2) R6 (UM3) ☐ Operating Instructions ☐ Pedestal ☐ Assembly screw ■ TBLA0408 for Pedestal (4) XYM4+C10FJK (TX-L32S10B) ☐ Pan European Guarantee Card TBLA0412 (TX-L37S10B) □ CRM TBL0E0101 (Customer Relationship Management) $M4 \times 10$ (TX-L42S10B)

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

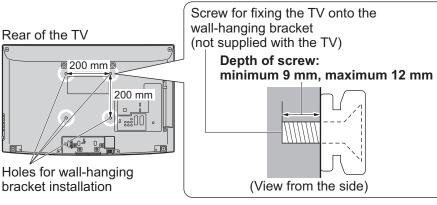
Optional accessories

Wall-hanging bracket

TY-WK3L2RW



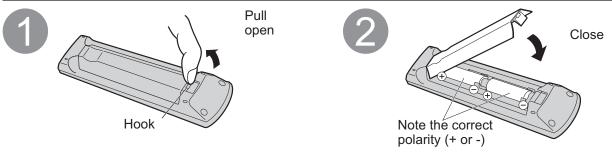
Please contact your nearest Panasonic dealer to purchase the recommended wall-hanging bracket. For additional details, please refer to the wall-hanging bracket installation manual.



WARNING!

- Failure to use a Panasonic bracket or choosing to mount the unit yourself will be done at the risk of the consumer. Any damage resulting from not having a professional installer mount your unit will void your warranty.
- Always be sure to ask a qualified technician to carry out set-up.
 Incorrect fitting may cause equipment to fall, resulting in injury and product damage.
- Do not mount the unit directly below ceiling lights (such as spotlights, floodlights or halogen lights) which typically give off high heat. Doing so may warp or damage plastic cabinet parts.
- Take care when fixing wall brackets to the wall. Always ensure that there are no electrical cables or pipes in the wall before hanging bracket.
- When using the angled-type wall hanging bracket, please ensure that there is sufficient space for the connecting cables not to press against the wall when the TV is tilted forward.

Installing / removing remote's batteries



Caution

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

Attaching the pedestal

Warning

Do not disassemble or modify the pedestal.

Otherwise the TV may fall over and become damaged, and personal injury may result.

Caution

Do not use any other TV and displays.

Otherwise the TV may fall over and become damaged, and personal injury may result.

Do not use the pedestal if it becomes warped or physically damaged.

• If you use the pedestal while it is physically damaged, personal injury may result. Contact your nearest Panasonic dealer immediately.

During set-up, make sure that all screws are securely tightened.

• If insufficient care is taken to ensure screws are properly tightened during assembly, the pedestal will not be strong enough to support the TV, and it might fall over and become damaged, and personal injury may result.

Ensure that TV does not fall over.

If the TV is knocked or children climb onto the pedestal with the TV installed, the TV may fall over and personal injury may result.

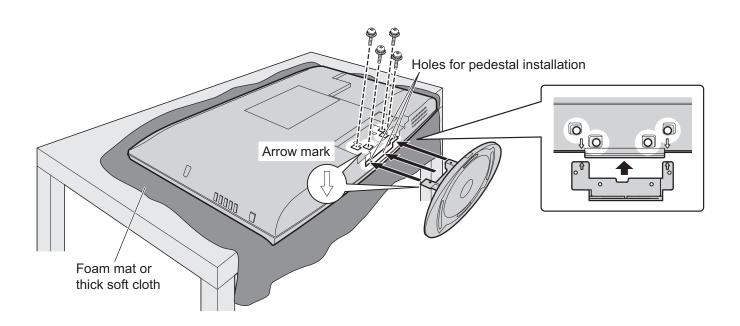
Two or more people are required to install and remove the TV.

If two or more people are not present, the TV may be dropped, and personal injury may result.

■ Securing the TV

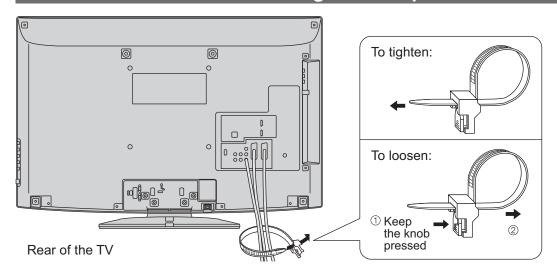
Use only the supplied assembly screws to fasten securely.

- Make sure that the screws are securely tightened.
- Carry out the work on horizontal and level surface.



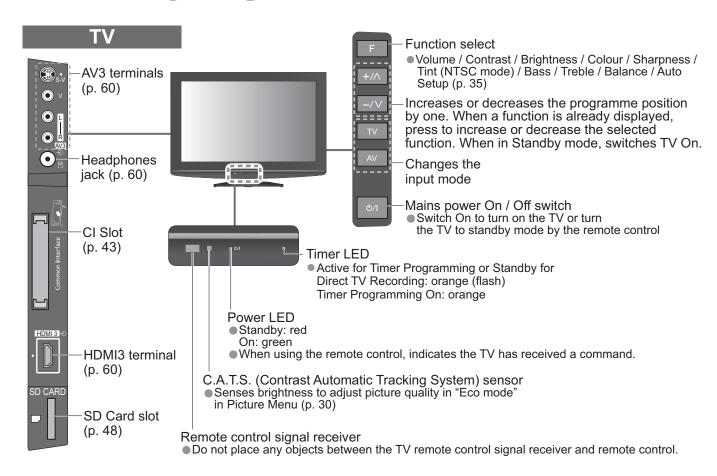
Accessories / Options

Using the clamper



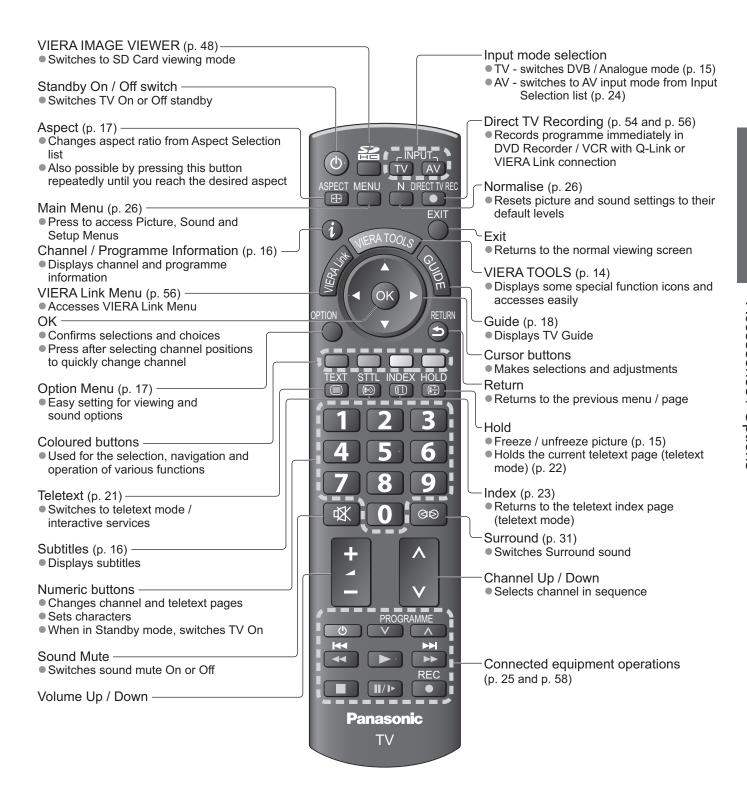
- Do not bundle the RF cable and mains lead together (could cause distorted image).
- Fix cables with clampers as necessary.
- When using the optional accessory, follow the option's assembly manual to fix cables.

Identifying Controls



Identifying Controls

Remote Control



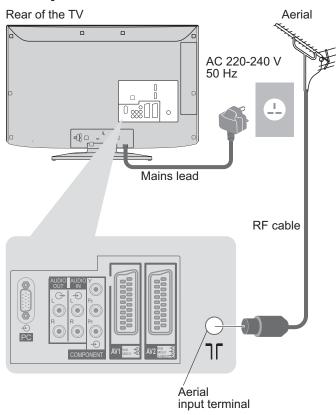
Basic Connection

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

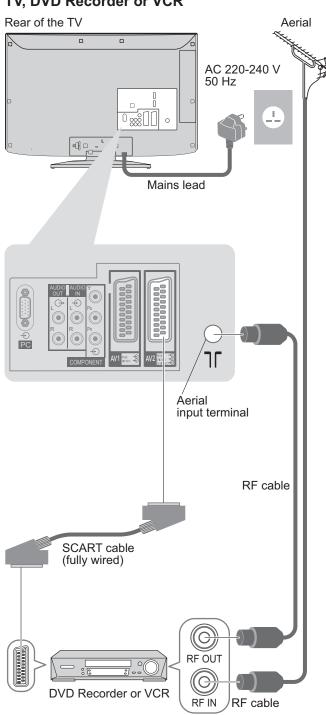
Example 1 Connecting aerial

Example 2 Connecting DVD Recorder / VCR

TV only



TV, DVD Recorder or VCR

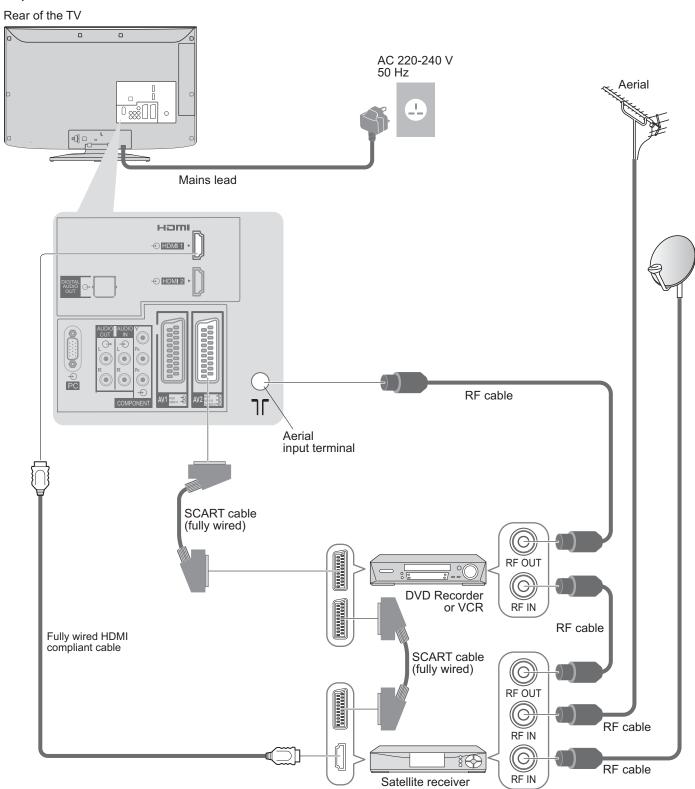


Note

- Connect to the TV"s AV2 for a DVD Recorder / VCR supporting Q-Link (p. 54).
- Connect to the TV"s AV1 for a Satellite Receiver.
- For HDMI-compatible equipment, possible to connect to HDMI terminals (HDMI1 / HDMI2 / HDMI3) by using HDMI cable (p. 60).
- Q-Link connection ⇒ p. 52
- VIERA Link connection ⇒ p. 52 and p. 53
- Read the manual of the equipment too.

Example 3 Connecting DVD Recorder / VCR and Satellite receiver

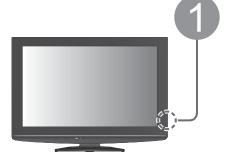
TV, DVD Recorder / VCR and Satellite receiver



Auto Setup

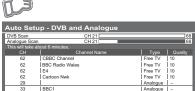
Search and store TV channels automatically.

- These steps are not necessary if the setup has been completed by your local dealer.
- Please complete connections (p. 10 and p. 11) and settings (if necessary) of the connected equipment before starting Auto Setup. For details of settings for the connected equipment, read the appropriate manual.



Plug the TV into mains socket and switch On

(Takes a few seconds to be displayed)



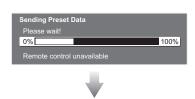
 Auto Setup will start to search for TV channels and store them in the numbered order as specified by the broadcasters.



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TV



- If Q-Link, or similar technology (p. 54), compatible recorder with analogue tuner is connected, analogue channel setting is automatically downloaded to the recorder. (Digital channel setting is not downloaded.)
- If downloading has failed, you can download later through the Setup Menu.
 - → "Q-Link Download" (p. 32)



Please enter your own choice of PIN number, name, etc. to help the police to crack crime.

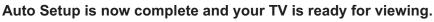
- Make a note of the PIN number in case you forget it.
- You can skip this step and input the Owner ID later.
 - → "Owner ID" (p. 43)



Select "Home"









- To check channel list at-a-glance
- ⇒ "Using TV Guide" (p. 18)
- To edit channels
 - "Tuning and Editing Channels" (p. 36 - 39)

Using the On Screen Displays

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

■ How to use remote control



Move the cursor / select the menu item



Move the cursor / adjust levels / select from a range of options



Access the menu / store settings after adjustments have been made or options have been set



Return to the previous menu



Exit the menu system and return to the normal viewing screen

■ ON SCREEN HELP Instructions box - Operation guide

(example: Owner ID)



Open the main menu

Operation guide will help you.

Note `

- If tuning has failed → "Auto Setup" (p. 34 and p. 35)
- To initialize all settings ⇒ "Shipping Condition" (p. 41)
- If you turned the TV Off during Standby mode last time, the TV will be in Standby mode when you turn the TV On with Mains power On / Off switch.

■How to input Owner ID

Enter the PIN number (4 digits)



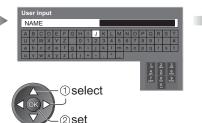
Enter the PIN number twice at first setting. Select NAME / HOUSE NO / POSTCODE and access the "User input" mode







Set characters one by one



You can set characters by using numeric buttons.

"Characters table for numeric buttons" (p. 63) Return to select other items RFTURN



 \circ r

Exit the menu to go to next step



■"Shop" mode (for shop display use only)

Automatic Demo Off / On selection screen is displayed.

You can change the viewing environment at this stage





②set

(This is not available in "Home" mode)

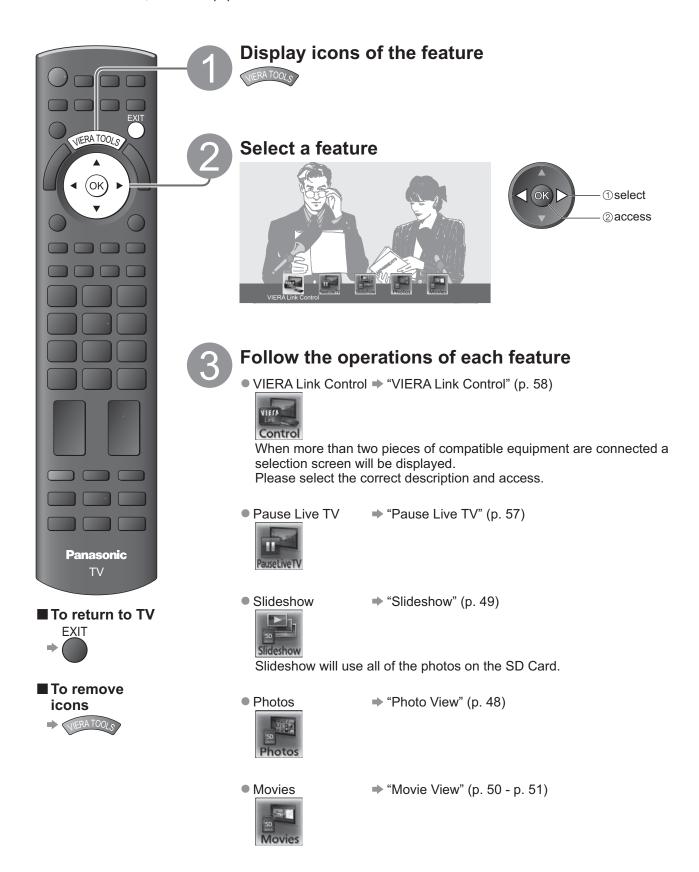
Auto Setup is complete

- If you set to "Off" or "On" in Automatic Demo Off / On selection screen, the TV will be in "Shop" viewing environment (p. 70), and Auto Setup will be complete.
- To change viewing environment later on, you will need to initialise all settings by accessing Shipping Condition and go through Auto Setup again.
 - "Shipping Condition" (p. 41)

How to Use VIERA TOOLS

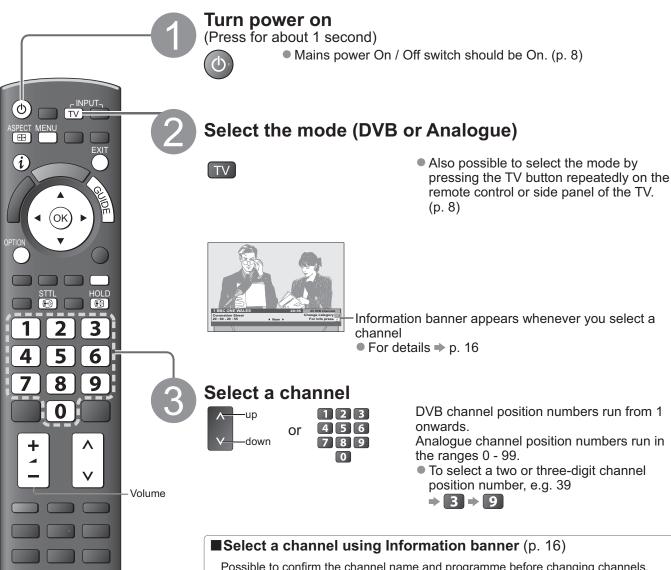
You can access some special features easily by using the VIERA TOOLS function.

- For "VIERA Link Control" and "Pause Live TV" functions to operate correctly, ensure the connections and settings are completed.
 - → "Summary of Q-Link and VIERA Link features" (p. 52 and p. 53), "Preparations" (p. 55) After connection, turn the equipment on and then switch the TV on.



Watching TV

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



Note

To watch pay-TV

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TV

"Common Interface" (p. 43) Possible to confirm the channel name and programme before changing channels.

Display Information banner if it is While the banner is displayed, not displayed select the channel



 Possible to set display timeout in "Banner Display Timeout" (p. 33).

■Select a channel using TV Guide (p. 18)

Possible to confirm the TV Guide (EPG) before changing channels

Display TV Select the programme Select "View"

Guide now on the air



now on the air

①select
②access





①select channel

② watch

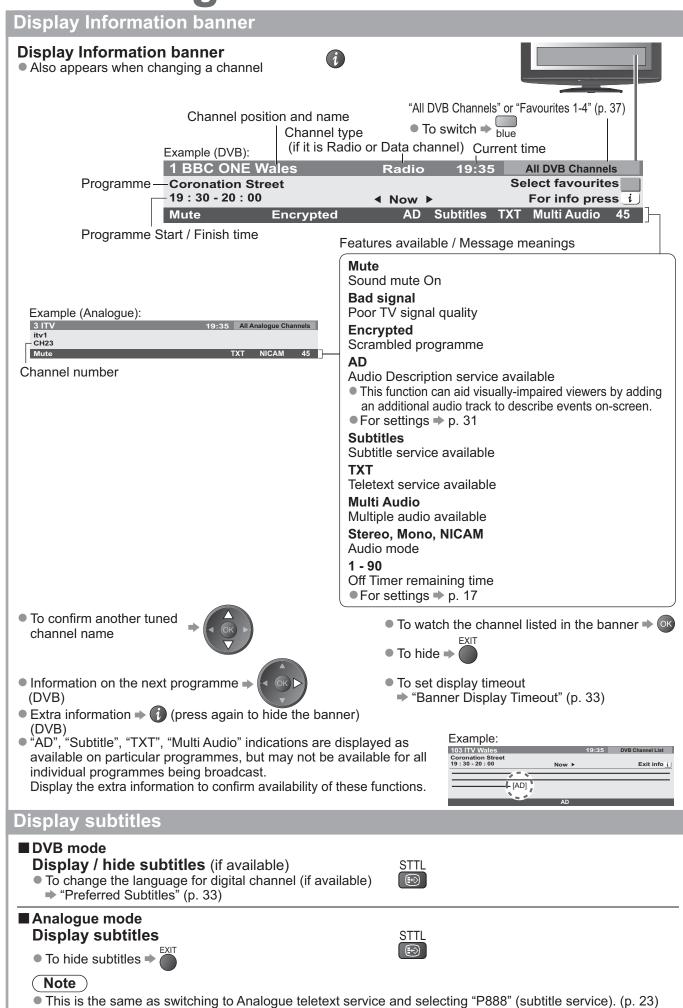
■ Other useful functions

Hold

Freeze / unfreeze picture



Watching TV



You cannot change the channel when this function is active.

Aspect

Change the aspect ratio (image size)

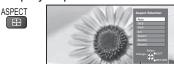


Enjoy viewing the image at its optimum size and aspect.

Normally programmes have the Aspect Control Signal (Widescreen signal, etc.), and the TV will choose the aspect ratio automatically according to the Aspect Control Signal (p. 62).

■ If you would like to change the aspect ratio manually

Display Aspect Selection list



While the list is displayed, select the mode



To change the mode using the ASPECT button only

ASPECT / Press repeatedly until you reach the desired mode



The best ratio is chosen and the image expanded to fill the screen. For details p. 62



Directly displays the image at 16:9 without distortion (anamorphic).

Aspect Selection list



Displays the image at the standard 4:3 without distortion.



Displays a 16:9 letterbox (anamorphic) image full-screen without distortion.



Displays the image at the standard 14:9 without distortion.



Displays a 16:9 letterbox or 4:3 image without distortion.



Displays a 2.35:1 letterbox (anamorphic) image full-screen without distortion. At 16:9, displays the image at its maximum (with slight enlargement).

Note

- Only "16:9" and "4:3" are available in PC input mode.
- Not available when the subtitle function is active.
- Not available in teletext service.
- Aspect mode can be memorized separately for SD (Standard definition) and HD (High definition) signals.

Display the selectable settings for the current programme

Check or change the current programme status instantly



■ To change ⇒



Multi Audio (DVB mode)

Allows you to select between alternative language for sound tracks (if available)

Subtitle Language (DVB mode)

Allows you to select the language in which subtitles should appear (if available)

NICAM (Analogue mode)

Sound Menu (p. 31)

Volume Correction

Adjusts volume of individual channel or input mode

Audio Description (DVB mode)

Set to "Auto" if the programme has Audio Description service, then you will hear an additional audio track to describe events on-screen

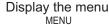
- To adjust the volume for Audio Description
 - "Audio Description Menu" (p. 31)

(Note)

Also possible to change the settings in Menu list (p. 30 - 33).

Off Timer

Turn the TV off automatically after a fixed period













- To cancel ⇒ Set to "Off" or turn the TV off.
- To display the remaining time → Information banner (p. 16)

Note)

When the remaining time is within 3 minutes, the remaining time will flash on the screen.

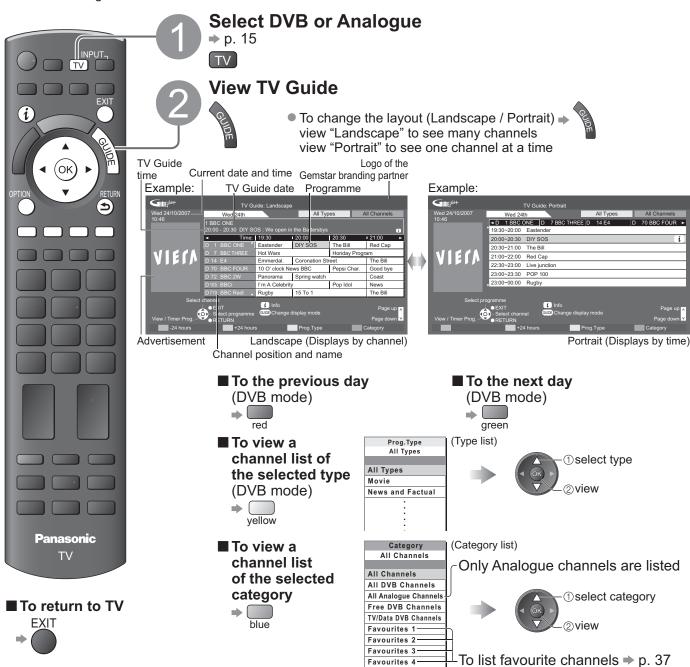
Using TV Guide

TV Guide—Electronic Programme Guide (EPG) provides an on-screen listing of the programmes currently broadcast and the forthcoming broadcasts over the next seven days (depending on the broadcasters).

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

DVB or Analogue mode

- This TV supports the GUIDE Plus+ system in DVB or Analogue mode.
- The Gemstar branding partner will supply the rating informations in the programme information and the recommended group in the Prog. Type list.
- Analogue channels will be listed after DVB channels but there will be no listings. "D" means DVB channel and "A" means Analogue channel.



View advertisement

Enter your postcode when using this function for the first time

Postcode in "GUIDE Plus+ Settings" (p. 33)

If you have already entered your postcode in "Auto Setup" - when first using the TV (p. 12), you do not have to enter again.

If you enter an incorrect postcode for your area, or no postcodes are entered, advertisement may not be displayed correctly.

Display advertisement information

OPTION

To display the latest advertisement, you will need to update the

To update the information continuously, the TV must be left in Standby mode at night.

■ To change advertisements



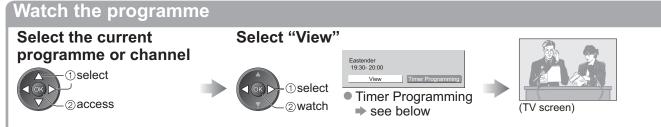
■ To return to TV Guide



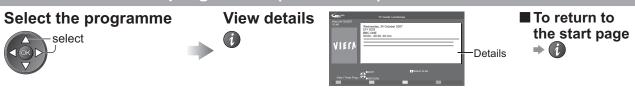
(Note)

- Some advertisements are for future programmes. In this case it is possible to use the Guide link recording function (p. 20).
- The advertisements displayed on the TV Guide are sent from the GUIDE Plus+ system so that they cannot be deleted manually or will not be lost even when the TV is turned Off with Mains power On / Off switch.

■ Other useful functions (Operate whilst viewing TV Guide)



View details of the programme (DVB mode)



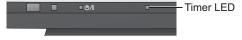
Timer Programming (DVB mode)

Select the forthcoming programme to output to external recorder

(Timer Programming screen)



Timer LED will turn on if Timer Programming is set.



Orange Timer LED (Blinking during timer active)

(Note

- While recording, you cannot watch any other channels except the one being recorded.
- When recording programmes, you must make the proper settings on
 - the recorder connected to the TV. If a compatible recorder with Q-Link or similar technologies is connected
 - to the TV (p. 54) and the "Link Settings" (p. 32) are completed, no setting of the recorder is required. Also read the manual of the recorder.
- If you select the current programme, a screen asking you to confirm whether you wish to watch or record it will appear. Select "Timer Programming" to record from the time you finish the Timer Programming setting.





Using TV Guide

■ Other useful functions (Operate whilst viewing TV Guide)

Guide link recording (Timer Programming from the TV Guide signal)

Guide link recording is a timer programme controlled by information from the TV Guide.

Programme start and end times may be changed by broadcasters and sent to the TV for timer programme to follow the change.

Split Programme is a programme which is interrupted by one or more other programmes.

Both of the above are subject to signals being sent by broadcasters.

Select the forthcoming programme to output to external recorder

(Timer Programming screen)



if the timer is set from the TV Guide "S/P" is displayed if the timer is set from the TV Guide and the programme is a Split Programme

'Guide" is displayed

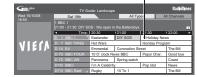
"O" will be displayed in the TV Guide if Timer Programming is set.



Timer LED will turn on if

■ To check / change / cancel a Guide link recording event

- "Timer Programming" (p. 45)
- If you edit the start time or end time of Guide link recording more than 10 minutes after setting to record, it will no longer be performed as Guide link recording. The recording will be performed according to the time setting in Timer Programming.



■ To return to TV Guide → FETURN

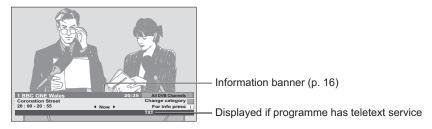
Note

- Not available in Analogue mode.
- Whilst making Split Programme recording, it is not possible to record any other programmes between the interrupted programmes.
- The Split Programme recording does not work if the separated parts are broadcast on differing channels.

Viewing Teletext

You can enjoy news, weather forecasts and subtitles, etc. (depending on the broadcaster)

• The availability of teletext services for a programme is indicated by "TXT" in the information banner.

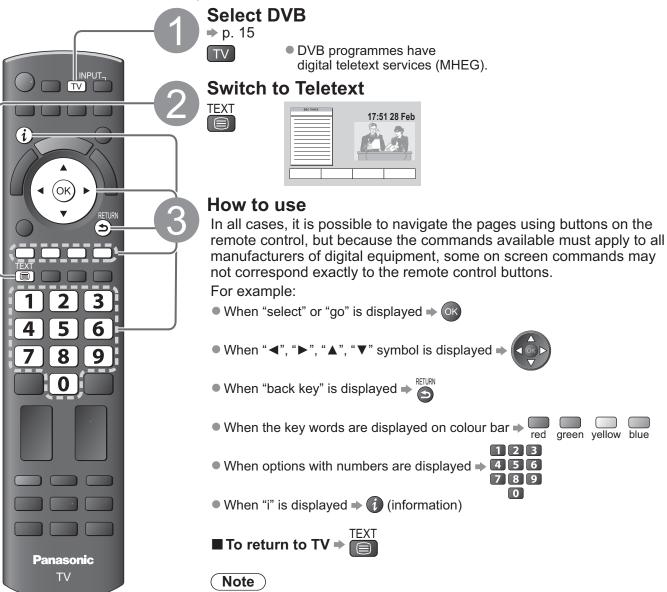


Digital teletext (MHEG)

Digital teletext services

Digital teletext services differ greatly from analogue teletext.

When you switch to a digital teletext service, the images you see can contain graphics and text, laid out and controlled in a manner decided by the broadcaster.



- As soon as you switch to a digital channel with links to a teletext service, software is downloaded in the background to enable the teletext function. This means that when switching to a digital channel, you should wait for approximately 5 seconds before pressing the TEXT button this will allow the software to download. If you press the TEXT button before download is complete, there will be a short delay before the text screen is displayed.
- While navigating digital teletext, you will find there is a short delay when moving between pages while the page downloads. There is often a prompt shown somewhere on the page (for example "Loading") to let you know that this is happening.

Viewing Teletext

Analogue teletext

Analogue teletext services

Analogue teletext services are the text information provided by the broadcaster.

The features may vary depending on the broadcaster.

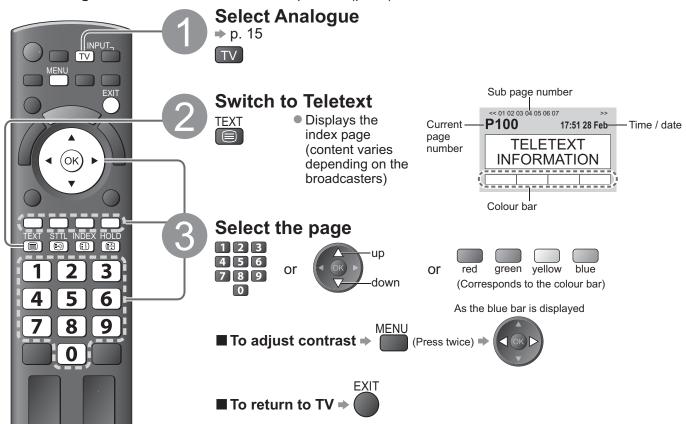
What is FASTEXT mode?

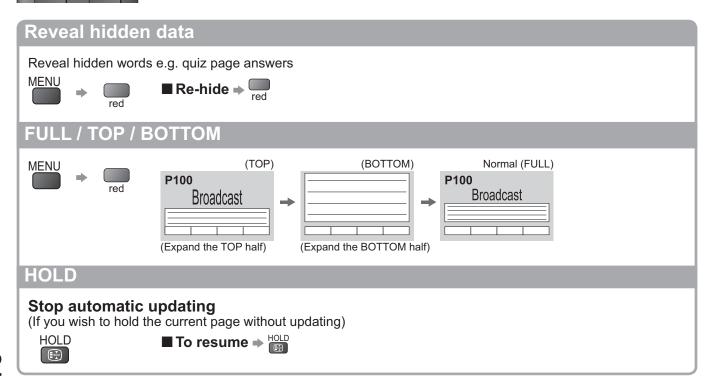
In FASTEXT mode, four differently coloured subjects are situated at the bottom of the screen. To access more information about one of these subjects, press the appropriately coloured button. This facility enables fast access to information on the subjects shown.

What is List mode?

In List mode, four differently coloured page numbers are situated at the bottom of the screen. Each of these numbers can be altered and stored in the TV's memory. ("Store frequently viewed pages", p. 23)

■ To change mode ⇒ "Teletext" in the Setup Menu (p. 33)





INDEX

Return to the main index page



Subtitles

View a favourite page stored



Factory setting is "P888" (subtitle service) on the blue button (List mode).

View in multi window

Watch TV and Teletext in two windows at once





- Operations can be made only in Teletext screen.
- _ T\/ **◄**__

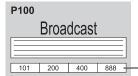
Store frequently viewed pages

Store frequently viewed pages in the colour bar

(List mode only)

As page is displayed





 If you wish to use Subtitles, do not change number on blue button.

200 400 888 — The number changes to white.

■ To change stored pages

Enter new page number







View sub page

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



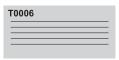


■ To view specific sub page









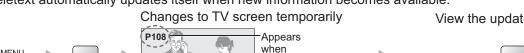
Sub pages:

The number of sub pages varies depending on the broadcasters (up to 79 pages). It may take some time for searching, during which time you can watch TV.

Watch TV while waiting for update

View the TV picture while searching for a teletext page

Teletext automatically updates itself when new information becomes available.



updating is

completed

(You cannot change the channel.)

The news page provides a function that indicates arrival of latest news ("News Flash").

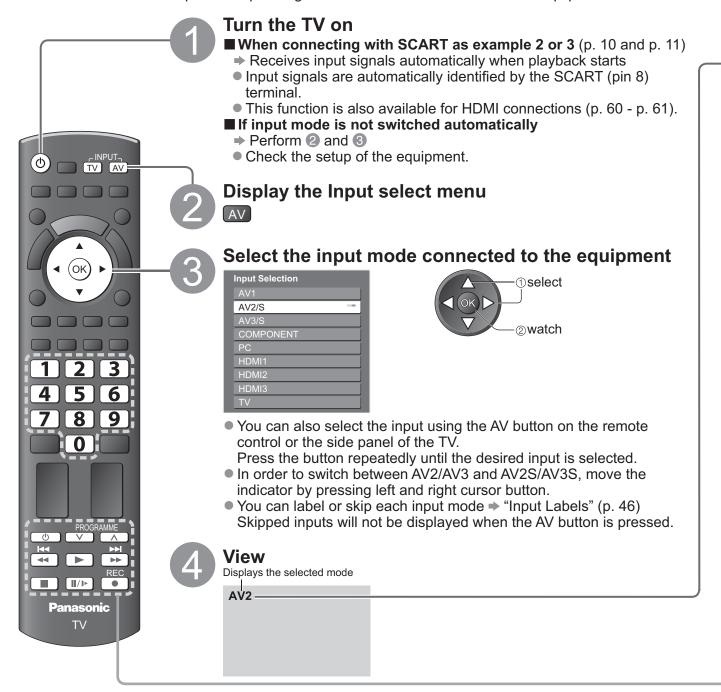
View the updated page

yellow

Watching External inputs

Connect the external equipment (VCRs, DVD equipment, etc.) and you can watch through the input.
■ To connect the equipment ⇒ p. 10 - p. 11 and p. 60 - p. 61

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



■ To return to TV

(Note)

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

Screen display

	Terminal	AV1	AV2	AV3	COMPONENT	РС	HDMI1	HDMI2	HDMI3
/defau		AV1 AV1-RGB	AV2 AV2-S-Video AV2-RGB	AV3 AV3-S-Video	COMPONENT	PC	HDMI1	HDMI2	HDMI3
_	input node or RA Link	EC/AV1 EC/AV1-RGB	EC/AV2 EC/AV2-S-Video EC/AV2-RGB	_	_	_	EC/HDMI1 Applicable for EC mode and VIERA Link	EC/HDMI2 Applicable for VIERA Link	EC/HDMI3 Applicable for VIERA Link

ullet If the above information is permanently displayed on the top left of the screen, press the i button to clear.

Operating the equipment with the TV remote control

The equipment connected to the TV can be directly operated with the below buttons of this TV remote control.

O	Standby Set to Standby mode / Turn on
	Play Playback videocassette / DVD
	Stop Stop the operations
44	Rewind / Skip / Search VCR: Rewind, view the picture rapidly in reverse DVD: Skip to the previous track or title Press and hold to search backward
₩	Fast-forward / Skip / Search VCR: Fast-forward, view the picture rapidly forward DVD: Skip to the next track or title Press and hold to search forward
11/1>	Pause Pause / Resume DVD: Press and hold to play at slow speed
PROGRAMME	Channel Up / Down Select channel
REC	Record Start recording

■ How to change the code for the type of the equipment

Each type of the Panasonic equipment has its own remote control code.

Please change the code according to the equipment you want to operate.

If you operate the connected equipment in VIERA Link (p. 58), select the code 73.

Press and hold during the following operations

Enter the appropriate code, 4 5 6 see table below



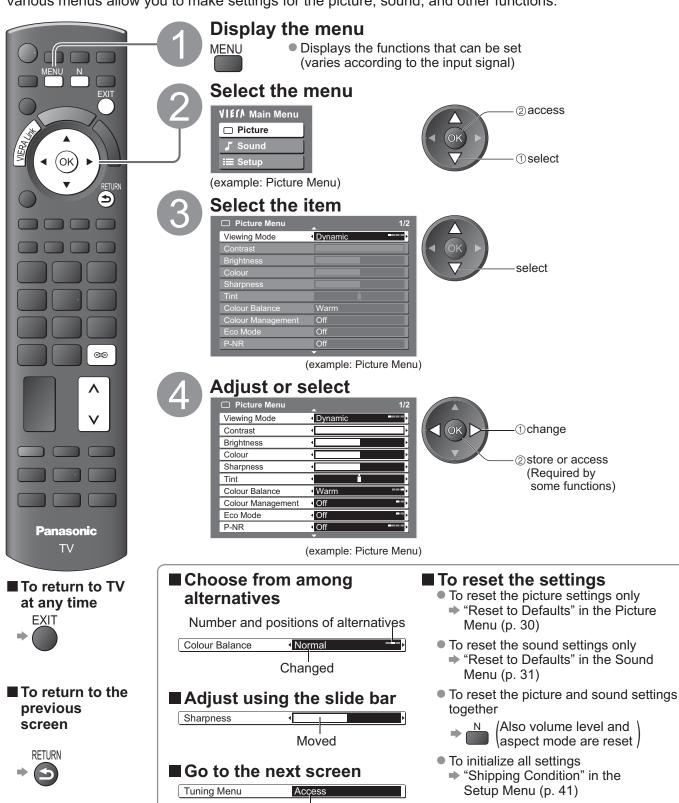


Type of the equipment	Code
DVD Recorder, DVD Player	70 (default)
Player theatre, Blu-ray Disc theatre	71
VCR	72
The equipment using in VIERA Link → "VIERA Link Control" (p. 58)	73

Note `

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

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

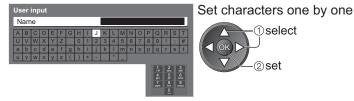


To change menu pages



■ Enter characters by free input menu
You can enter names or numbers freely for some items.

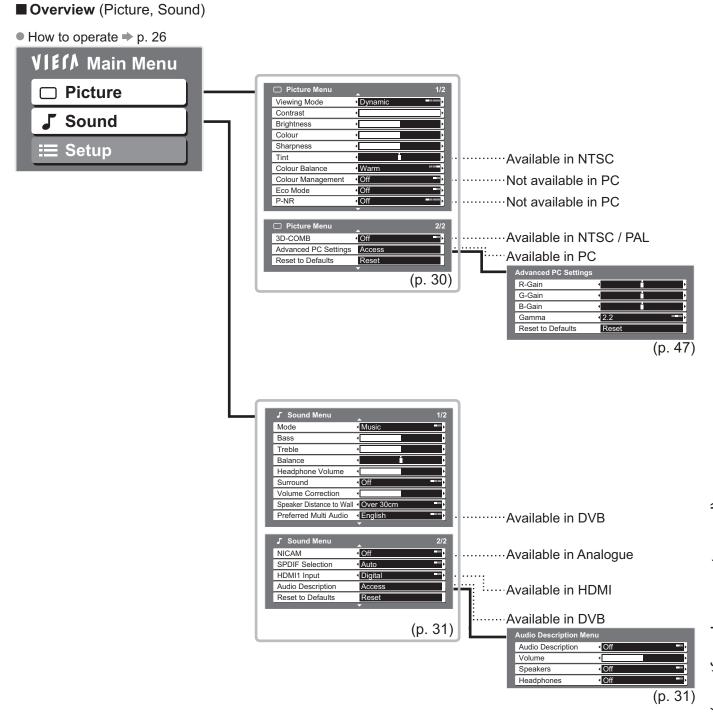
Displays the next screen

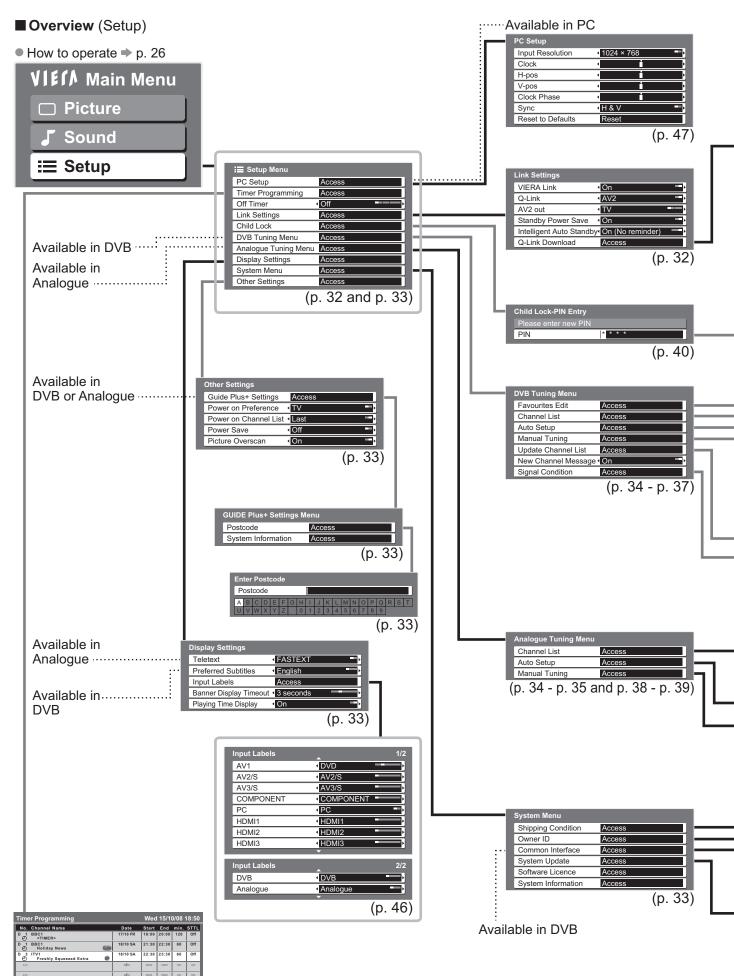


Store

RETURN

- You can set characters by using numeric buttons.
 - "Characters table for numeric buttons" (p. 63)





(p.44)



■ Menu list

Menu	Item	Adjustments / Configurations (alternatives)
	Viewing Mode	Selects four different screen settings (Dynamic / Normal / Cinema / Game) In each Viewing Mode setting, Contrast, Brightness, Colour, Sharpness, Tint, Colour Balance, Colour Management, Eco Mode 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.) Set for each input signal Changes will be stored automatically Dynamic: Provides enhanced picture contrast and sharpness when viewing in a bright room Normal: Recommended for viewing under normal ambient room lighting conditions Cinema: For watching movies in a darkened room producing a cinema-like picture Game: Fast response signal specifically to provide suitable images for playing games Not valid on TV mode A continuous record of time spent using Game mode can be displayed in the top right of the screen. "Playing Time Display" (p. 33)
	Contrast, Brightness, Colour, Sharpness	Increases or decreases the levels of these options according to your personal preference
	Tint	With an NTSC signal source connected to the TV, the picture hue can be adjusted to suit your taste • For NTSC signal reception only
Picture	Colour Balance	Allows you to set the overall colour tone of the picture (Cool / Normal / Warm)
	Colour Management	Automatically adjusts colours to vivid ones (Off / On) Not valid on PC signal
	Eco Mode	Adjusts picture settings automatically dependent on ambient lighting conditions (Off / On)
	P-NR	Picture Noise Reduction Automatically reduces unwanted picture noise and flicker noise in the contoured parts of a picture (Off / Min / Mid / Max) Not valid on PC signal
	3D-COMB	Occasionally, whilst viewing still or slow moving pictures, colour patterning may be seen Set to "On" to display sharper and more accurate colours (Off / On) For PAL or NTSC signal reception only Not valid on RGB, S-Video, Component, PC, HDMI and SD Card
	Reset to Defaults	Press the OK button to reset the present Picture Viewing Mode to the default settings

Menu		Item	Adjustments / Configurations (alternatives)
	Мо	ode	Select two different sound settings (Music / Speech) In each Sound Mode setting, Bass and Treble can be adjusted and stored to suit your particular sound requirement Changes to any settings in a mode will affect all signal sources Sound quality can be improved
	Ва	ss	Increases or decreases level to enhance or minimise lower, deeper sound output
	Tre	eble	Increases or decreases level to enhance or minimise sharper, higher sound output
	Ва	lance	Adjusts volume level of right and left speakers
	Не	adphone Volume	Adjusts the volume of the headphones
	Su	rround	Surround sound settings (Off / V-Audio / V-Audio Surround) V-Audio: Provides a dynamic enhancer of width to simulate improved spatial effects V-Audio Surround: Provides a dynamic enhancer of width and depth to simulate improved spatial effects Switching is also possible by the Surround button on the remote control (p. 9).
	Vo	lume Correction	Adjusts the volume of individual channel or input mode
Sound	Speaker Distance to Wall		Adjusts the low frequency sound (Over 30cm / Up to 30cm) If the back space between the TV and wall is over 30 cm, "Over 30cm" is recommended. If the back space between the TV and wall is within 30 cm, "Up to 30cm" is recommended.
	Pre	eferred Multi Audio	Selects the preferred language for digital channel multi audio (depending on the broadcaster)
	NICAM		NICAM (Near Instantaneous Companded Audio Multiplex) A format for digital sound over television Reproduces stereo sound (Off / On) Off if reception is poor (FM monaural sound) Analogue mode only
	SPDIF Selection		Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT terminal (Auto / PCM) Auto: Dolby Digital is output as Dolby Digital Bitstream. MPEG is output as PCM. PCM: Digital output signal is fixed to PCM. Movie View mode only
	HDMI1 / 3 Input		Select to fit the input signal (Digital / Analogue) (p. 64) Digital : HDMI cable connection Analogue: HDMI-DVI adapter cable connection HDMI input mode only HDMI2 terminal is for digital signal only No setting for HDMI2 available
	Audio [Audio Description	Useful for visually-impaired viewers (Off / Auto) Set to "Auto" to activate the description sound track if available • DVB mode only • The availability of audio description sound track is indicated by "AD" in the information banner (p. 16).
	escrip	Volume	Adjusts the volume for Audio Description • DVB mode only
	Description Menu	Speakers	Set to "On" to activate the description sound track from TV speakers (Off / On) • DVB mode only
	enu	Headphones	Set to "On" to activate the description sound track from headphones (Off / On) • DVB mode only
	Reset to Defaults		Press the OK button to reset the present Sound Mode to the default settings • Effective to Bass, Treble, Balance, Headphone Volume and Surround

<sup>A different menu will be displayed while PC or SD Card is used. (p. 47 and p. 48)
Only available items can be selected.</sup>

■ Menu list

Menu	Item		Adjustments / Configurations (alternatives)
	Tin	ner Programming	Records forthcoming channels (p. 44)
	Off	Timer	Sets the time the TV automatically turns Off (Off / 15 / 30 / 45 / 60 / 75 / 90 minutes)
		VIERA Link	Sets to use VIERA Link functions (Off / On) (p. 55)
		Q-Link	Selects which AV terminal is to be used for data communication between this TV and a compatible recorder (AV1 / AV2) (p. 54) Select the connected terminal to the recorder even it is not compatible with Q-Link.
	Link S	AV1 / AV2 out	Chooses the signal to be transmitted from the TV to Q-Link (TV / AV1 / AV2 / AV3 / Monitor) Monitor: Image displayed on screen Component, PC and HDMI signals cannot be outputted.
	Link Settings	Standby Power Save	Controls the power consumption in Standby mode of the connected equipment to reduce the consumption (Off / On) (p. 56) This function is available when "VIERA Link" is set to "On".
		Intelligent Auto Standby	Makes non-watched or non-used connected equipment go into Standby mode to reduce the power consumption (Off / On (With reminder) / On (No reminder)) (p. 56) This function is available when "VIERA Link" is set to "On".
		Q-Link Download	Downloads analogue channel information to a Q-Link compatible equipment connected to the TV
Se	Ch	ild Lock	Locks a channel / AV input to prevent access to it (p. 40)
Setup		Favourites Edit	Creates list of favourite DVB channels (p. 37)
		Channel List	Skips the unwanted DVB channels or edits DVB channels (p. 37)
	DVB	Auto Setup	Automatically sets the DVB channels received in the area (p. 34 and p. 35)
	Tuni	Manual Tuning	Sets the DVB channels manually (p. 37)
	Tuning Menu	Update Channel List	Updates DVB Channel List with keeping your settings (p. 36)
	_	New Channel Message	Selects whether to give a notification message when a new DVB channel is found (p. 36)
		Signal Condition	Checks the DVB signal condition (p. 36)
	Analog	Channel List	Skips the unwanted Analogue channels or edits Analogue channels (p. 39)
	Analogue Tuning Menu	Auto Setup	Automatically sets the Analogue channels received in the area (p. 34 and p. 35)
	Menu	Manual Tuning	Sets the Analogue channels manually (p. 39)

Menu	ltem			Adjustments / Configurations (alternatives)
	Disp	Teletext		Analogue teletext display mode (FASTEXT / List) (p. 22)
		Preferred Subtitles		Selects the preferred language for digital channel subtitles (depending on the broadcaster) ■ To display subtitles ⇒ p. 16
	ay Se	Input	Labels	Labels or skips each input terminal (p. 46)
	Display Settings	Banne	er Display Timeout	Sets how long the information banner (p. 16) stays on screen (0 (No display) / 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 seconds)
		Playin	g Time Display	Set to "On" to display a continuous record of time spent using Game mode (Off /On) This function is available when "Game" is selected in "Viewing Mode" (p. 30).
		Shipp	ing Condition	Resets all settings, for example, when moving house (p. 41)
	Sy	Owne	r ID	Inputs the owner ID (p. 43)
	System Menu	Comn	non Interface	Uses include to watch pay-TV (p. 43)
Š	1 Mer	Syste	m Update	Downloads new software to TV (p. 42)
	ח	Software Licence		Displays the software licence information
		System Information		Displays the system information of this TV
Setup		GUIDE Plus- Settings	Postcode	Sets your postcode to display advertisements in the GUIDE Plus+ system (p. 19)
		Plus+ ings	System Information	Displays the system information of the GUIDE Plus+ system
	Other Settings	Powe	r on Preference	Automatically selects the input when the TV is turned on (TV / AV) Set to "TV" to view picture from TV tuner. Set to "AV" to view input from an external equipment connected to a SCART terminal, e.g. cable TV box. The external equipment must be switched on and sending a control signal for automatic switching at power on to occur.
		Power on Channel List		Automatically selects All Channels or Favourites list in the Information banner (p. 16) when the TV is turned on (All Channel List / Last) Set to "All Channel List" to display all the channels. Set to "Last" to display the one you selected last time.
		Power Save		Reduces brightness of picture to economise on power consumption (Off / On)
		Pictur	re Overscan	Selects the screen area displaying the image (Off / On) On: Enlarged the image to hide the edge of the image. Off: Displayed the image in the original size. Set to "On" if noise is generated on the edge of the screen. This function is available when aspect is set to Auto (16:9 signal only) or 16:9. This function can be memorized separately for SD (Standard definition) and HD (High definition) signals.

[•] A different menu will be displayed while PC or SD Card is used. (p. 47 and p. 48)

Only available items can be selected.

[•] If "Demo Settings" item is displayed in the Setup Menu, the TV is in "Shop" viewing environment (p. 13). To return to "Home" viewing environment initialise all settings by accessing Shipping Condition.

^{⇒ &}quot;Shipping Condition" (p. 41)

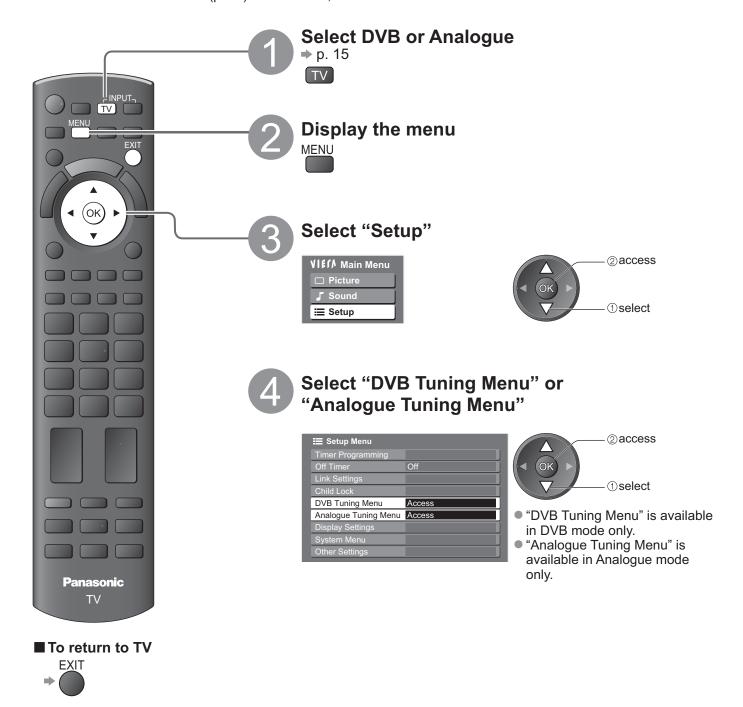
Retuning from Setup Menu

Auto Setup retunes all channels automatically.

DVB or Analogue channels

Automatically retune all DVB or Analogue channels received in the area.

- Only DVB channels are retuned in DVB mode.
- Only Analogue channels are retuned in Analogue mode.
- All the previous tuning settings are erased.
- If a Child Lock PIN number (p. 40) has been set, it must be entered.

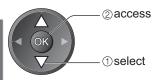


DVB or Analogue channels



Select "Auto Setup"





Analogue:

Analogue Tuning Menu	
Channel List	
Auto Setup	Access
Manual Tuning	

Start Auto Setup





Settings are made automatically

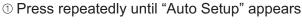
The analogue settings are downloaded to a Q-Link compatible equipment connected to the TV in Analogue mode.

When the operation is completed, the channel at channel position "1" will be displayed.

■ To return to TV



■For Auto Setup, using the buttons on the side panel of the TV (p. 8)

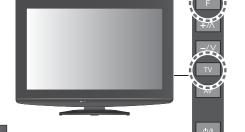


② Access "Auto Setup"

TV

Start "Auto Setup"

TV



■ To return to TV ⇒

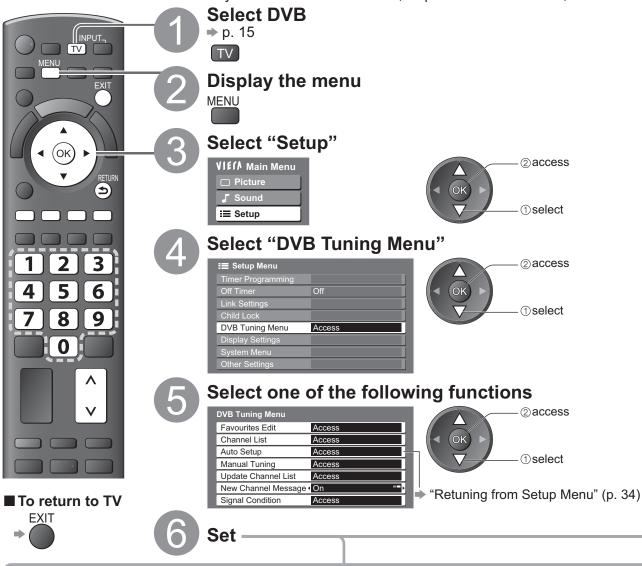
Note)

• If tuning has not been done completely ⇒ "Manual Tuning" (p. 37 and p. 39)

Tuning and Editing Channels

(DVB)

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



Update DVB channel automatically Update Channel List

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



 Channel List is updated with keeping your settings in Favourites Edit, Channel List, Child Lock, Timer Programming, etc.

Display a notification message New Channel Message

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

New channels found! Press OK to update Channel List Press EXIT to ignore. • Selecting OK will perform "Update Channel List".

Check DVB signal Signal Condition

Selects a channel and checks the DVB signal condition.

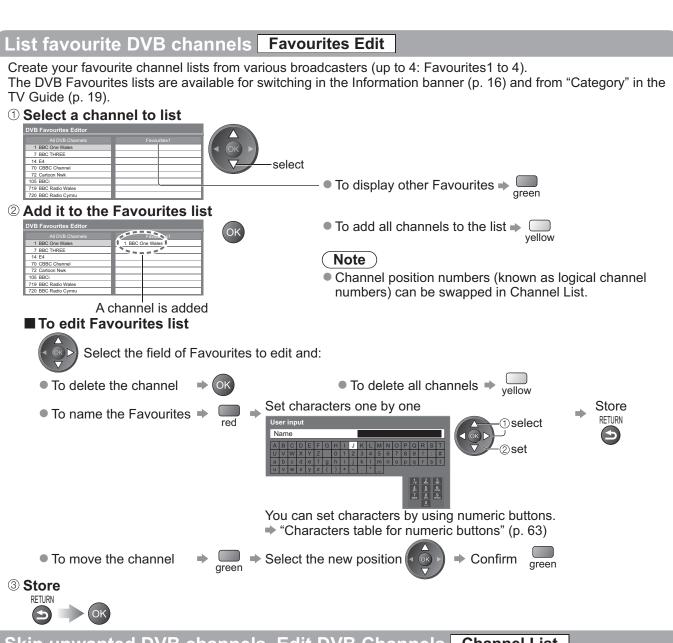
■ To change the channel ⇒



DVB Signal Condi	ition
Channel Name	1 CBBC Channel
Signal Quality	
Signal Strength	0 10
Network Name	Wenvoe
Parameter	[CH62] 802 MHz

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

- Green bar → Good
- Yellow bar ⇒ Poor
- Red bar ⇒ Bad (Check the Terrestrial aerial)



Skip unwanted DVB channels, Edit DVB Channels **Channel List**

You can hide unwanted DVB channels.

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





■ To edit channels

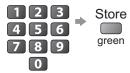
You can also edit each channel in Channel List.



Select a channel to edit and:



- To retune each channel (Manual Tuning)
 → red (see below)
- ➡ Enter the new position number To swap the channel position



Set DVB channel manually Manual Tuning

Normally use "Auto Setup" or "Update Channel List" to retune DVB channels.

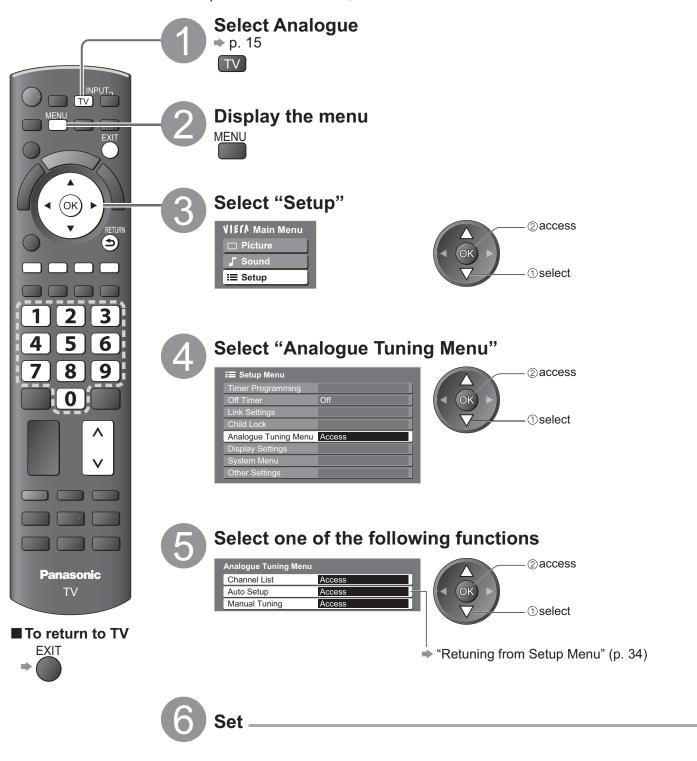
If tuning has not been done completely or for adjusting the direction of the aerial, use this function.

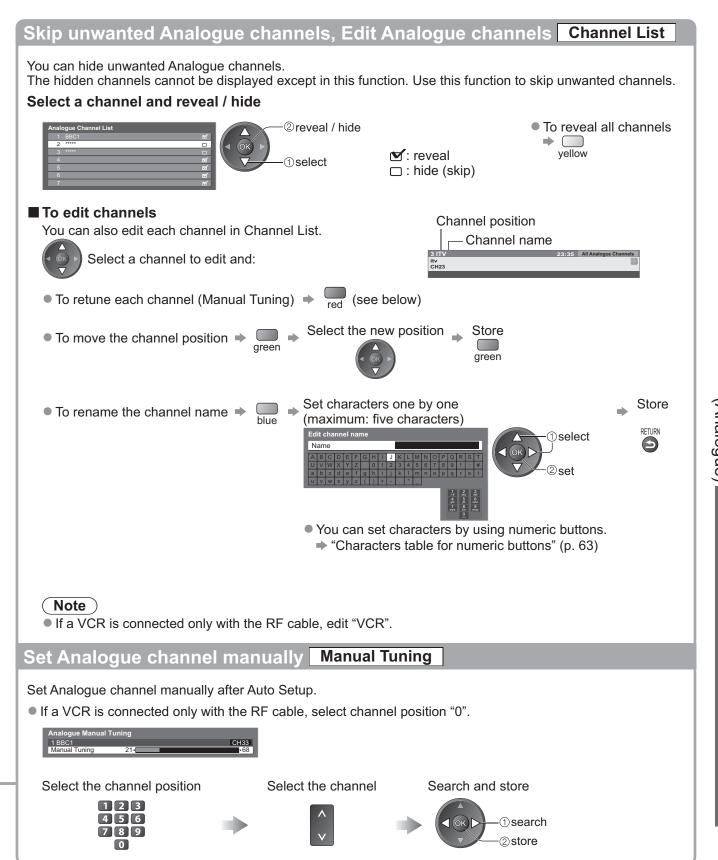


Tuning and Editing Channels

(Analogue)

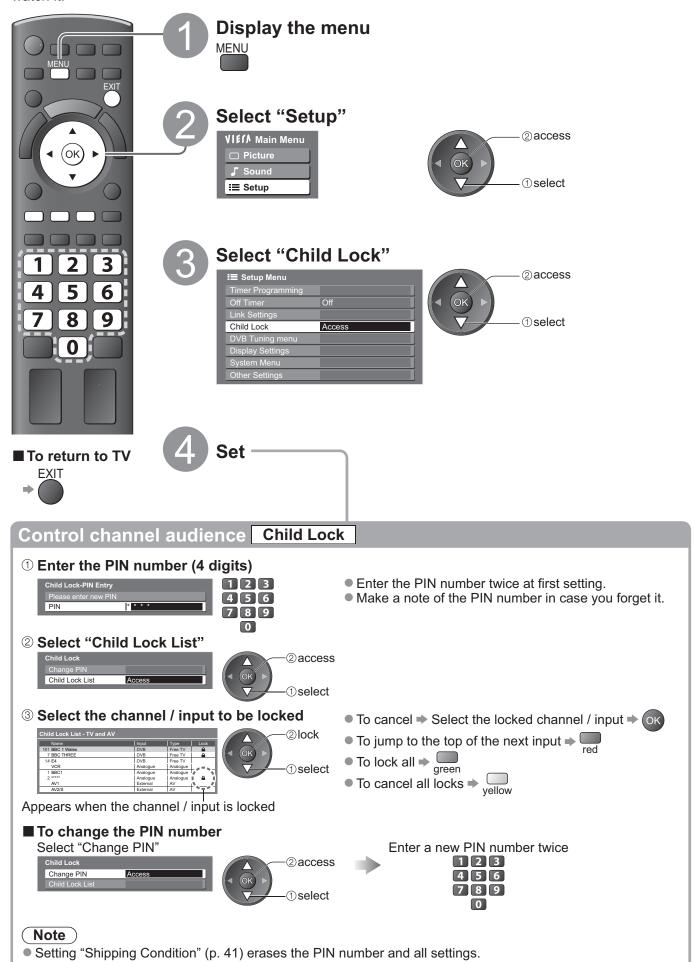
You can retune channels or skip unwanted channels, edit channels etc.





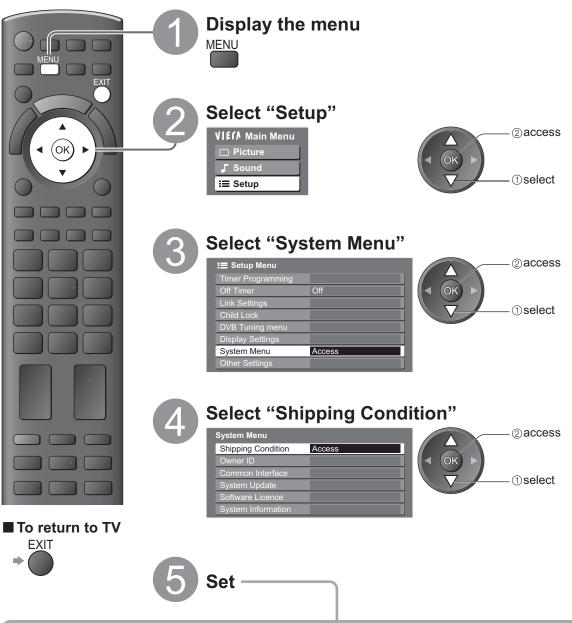
Child Lock

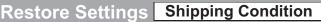
You can lock specific channels / AV input terminals and control who watches them. When the locked channel / input is selected, a message appears; by entering the PIN number, you can watch it.



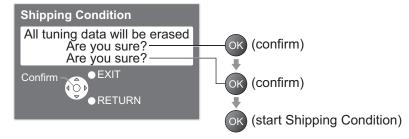
Shipping Condition

Resets the TV to its original condition, i.e. no channels tuned in. All settings other than "Owner ID" are reset (channels, picture, sound settings, etc.).





1 Check the message and initialise



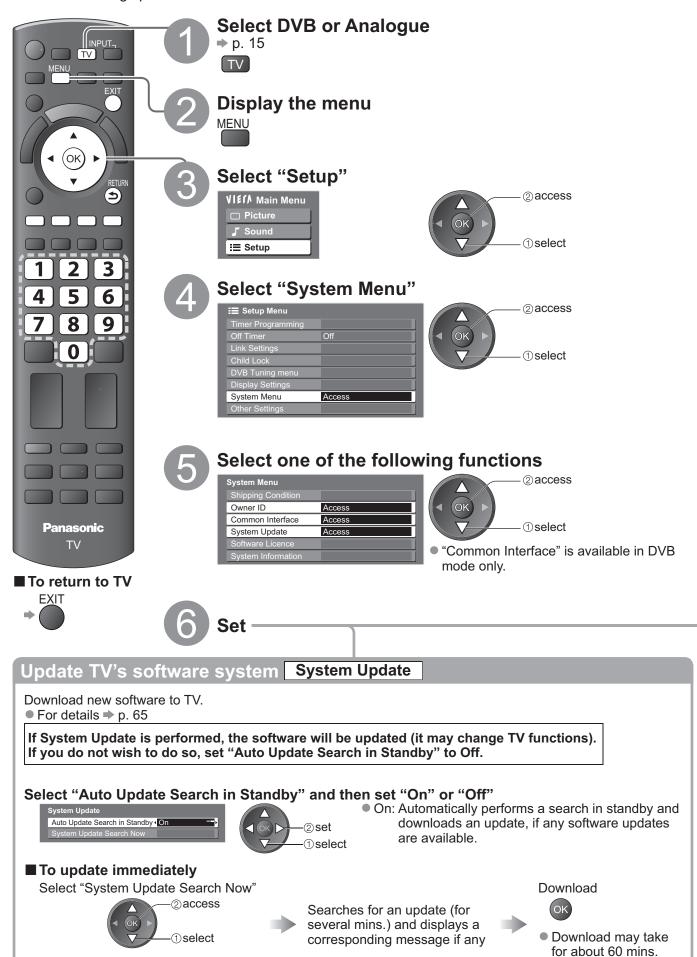
② Follow the on-screen instructions

Reset to Factory Shipping Condition Completed. Please switch off TV.

- "Auto Setup" will automatically start when Mains power On / Off switch is next turned On. (p. 12)
- To retune TV channels only, e.g. after moving house
 - * "Retuning from Setup Menu" (p. 34 and p. 35)

Advanced Settings

Advanced Settings provide various features.



Input owner ID Owner ID

Entry of the PIN number and personal information (your name, address and postcode). In the unfortunate event of theft it will help the Police to determine the owner.

1 Enter the PIN number (4 digits)



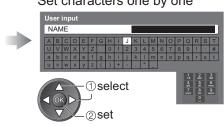
- Enter the PIN number twice at first setting.
- Make a note of the PIN number in case you forget it.

② Enter your name, address, and postcode, in that order

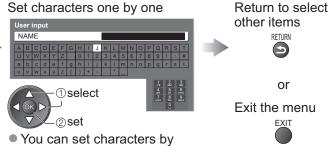




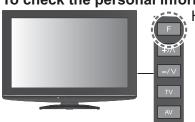




- using numeric buttons.
 - "Characters table for numeric buttons" (p. 63)



■ To check the personal information stored



Hold down for about 6 sec.

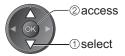


The PIN number is not displayed.

■ To change the PIN number









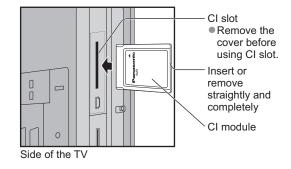
Common Interface

The Common Interface Module menu provides access to software contained on Common Interface (CI) Modules.

This TV receiver works only Pay TV modules complying with CI standard.

Caution

- Turn Off Mains power On / Off switch whenever inserting or removing the CI module.
- If a view card and a card reader come as a set, first insert the card reader, then insert the view card into the card reader.
- Do not insert the module up side down.



1 Insert the CI module (optional)

- The features that appear on screen are dependent on the contents of the selected CI module.
- Normally pay-TV channels will appear without ② and ③. If pay-TV channel does not appear, perform (2) and (3).
- For more details, see the manual of the CI module, or check with the broadcaster.

2 Access "Common Interface"





③ Follow the on-screen instructions

example: select, go ⇒ (ok







 On-screen operation guide may not correspond to the remote control buttons.







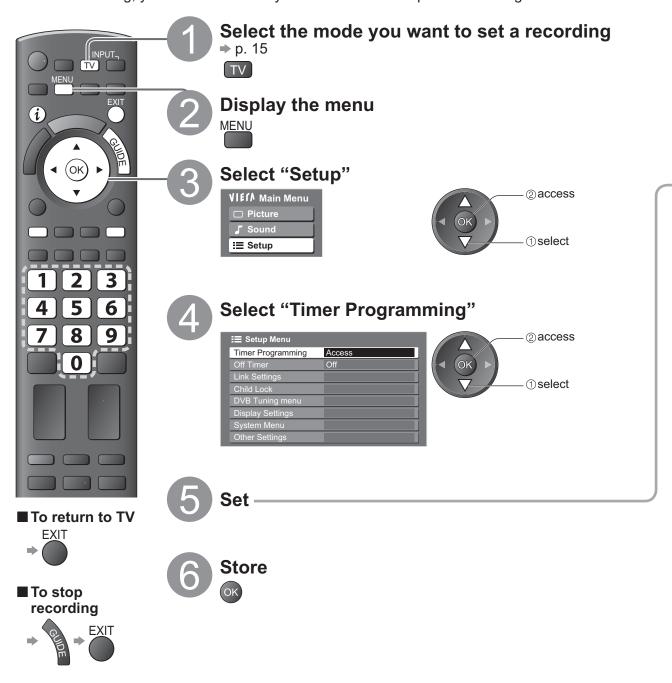


Recording Controls

Timer Programming from Menu

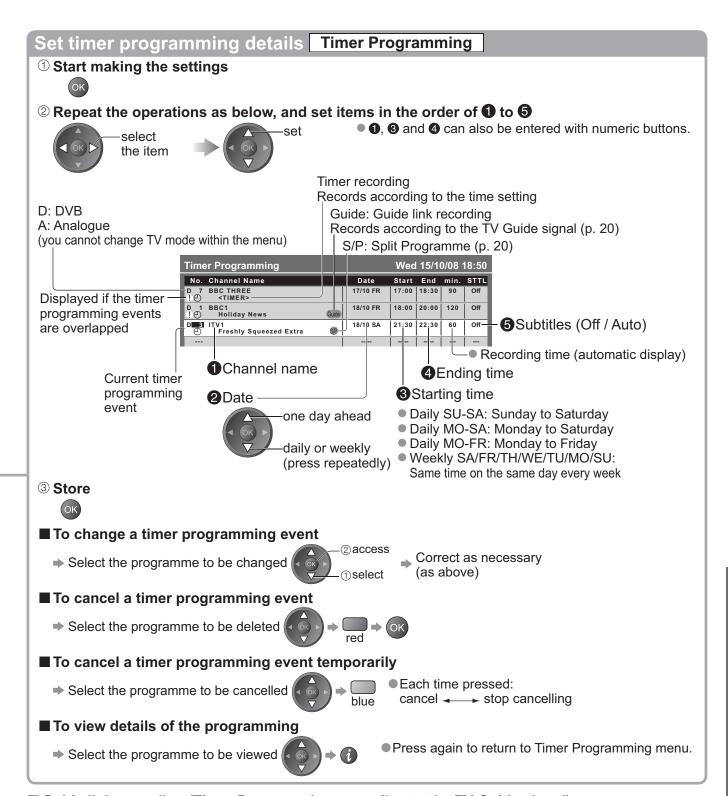
The Timer programming menu allows you to choose programmes that you wish to record. At the correct time, the TV will switch on and tune to the correct channel (even if the TV is in Standby mode). TV Guide may also be used to set timer programming. (p. 20)

- If the recorder is compatible with Q-Link or similar technologies (p. 54), and setup / connection are done completely (p. 52 and p. 54), you do not need to programme the recorder – the TV will control the recording progress.
- If the recorder is not compatible with Q-Link or similar technologies, set "Q-Link" in the Setup Menu (p. 32) to the connected terminal (AV1 or AV2), and make timer programming of the recorder (Read the manual of the recorder).
- Recording is possible in composite video via SCART only including HD content.
- While recording, you cannot watch any other channels except the one being recorded.



Caution

- The TV must either be On or in standby.
- For preparations of a recorder, read the manual of the recorder.
- No other channel can be selected during recording.
- It may not be possible to record an encrypted programme (which is copy-protected).



■ Guide link recording (Timer Programming according to the TV Guide signal) → p. 20

Not available in Analogue.

Guide link recording is a timer programme controlled by information from the TV Guide.

Programme start and end times may be changed by broadcasters and sent to the TV for timer programme to follow the change.

Split Programme is a programme which is interrupted by one or more programmes.

Both of the above are subject to signals being sent by broadcasters.

■ Direct TV Recording ⇒ p. 54 and p. 56

You can record the current programme to DVD Recorder / VCR immediately.

Note

- Check that the Timer LED (Orange) is lit. If not, timer programmes are not active or not stored.
- "!" will identify any timer programming events that have been set and overlap. If this occurs then the first timer programming event will start and finish as programmed. The next timer programming event can then start.
- 2 mins. before the starting time, a reminder message appears.

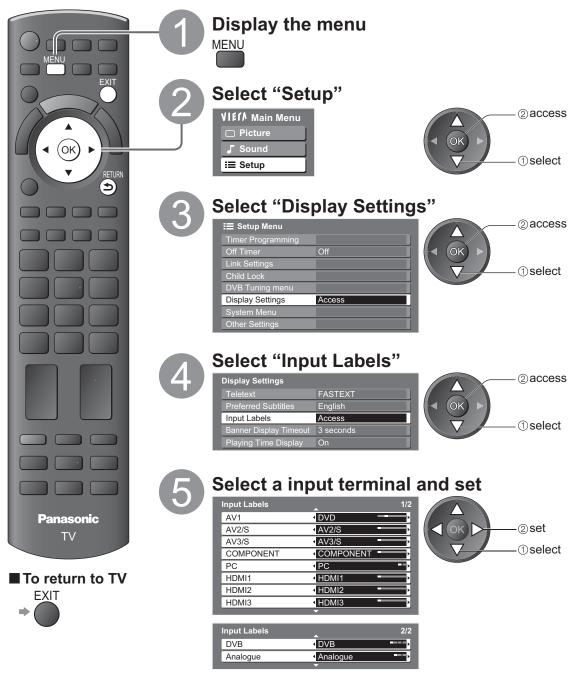
(To remove the message → OK); To cancel the programming → EXIT

- A Timer Programming event will automatically change to the desired channel 10 seconds before the start time.
- To stop Timer Programming event directly prior to the start time, it is necessary to stop the recorder manually.
- Timer Programming will be performed even if the TV is in Pause Live TV recording (p. 57). In this case, Pause Live TV recording will be cancelled.

Input Labels

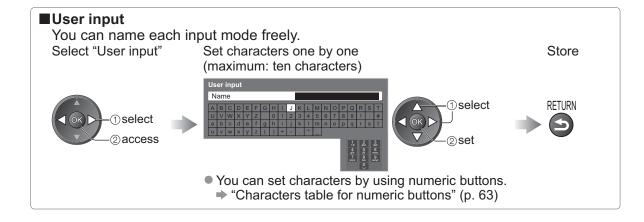
For easier identification and selection of the input mode, you can label each input mode or skip terminal that is not connected to any equipment.

To select the input mode ⇒ p. 24



The labels you set will be displayed in "Input Selection" menu (p. 24), "TV Selection" menu (p. 15) or banner.

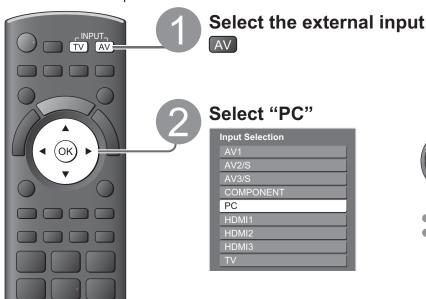
• If "Skip" is selected, you cannot select the mode.

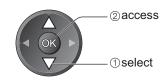


Displaying PC Screen on TV

The screen of the PC connected to the TV can be displayed on the TV. You can also listen to PC sound with the audio cable connected.

To connect PC ⇒ p. 60





- Corresponding signals ⇒ p. 66
- If "H-freq." or "V-freq." is shown in red, the signals may not be supported.

- To return to TV
 - ⇒ TV
- PC menu setting (changed as desired)
- To make settings → "How to Use Menu Functions" 1 to 4 (p. 26)

Menu	It	em	Adjustments / Configurations (options)
		R-Gain	Adjusts the white balance for red areas
פַ	Advanced PC	G-Gain	Adjusts the white balance for green areas
ct		B-Gain	Adjusts the white balance for blue areas
Picture	Settings	Gamma	Switches the gamma curve (2.0 / 2.2 / 2.5)
Ф	-	Reset to Defaults	Press the OK button to reset to the default Advanced PC Settings
		Input Resolution	Switches to a wide view VGA (640 × 480 pixels), WVGA (852 × 480 pixels), XGA (1,024 × 768 pixels), WXGA (1,280 × 768 pixels, 1,366 × 768 pixels) Options change depending on signals
	PC Setup	Clock	Set to the minimum level if noise occurs
G		H-pos	Adjusts horizontal position
Setup		V-pos	Adjusts vertical position
۱		Clock Phase	Eliminates flicker and distortion • Adjust after Clock adjustment • Set to the minimum level if noise occurs
		Sync	Chooses another synchronous signal if the image is distorted (H & V / On Green) H & V : by the horizontal and vertical signals from your PC On Green: by the green signal from your PC (if available)
		Reset to Defaults	Press the OK button to reset to the default PC Setup settings

Other items ⇒ p. 30 - 33

Note

[•] For HDMI-compatible PC, possible to connect to HDMI terminals (HDMI1 / HDMI2 / HDMI3) by using HDMI cable (p. 64).

Viewing from SD Card

(VIERA IMAGE VIEWER)

Photo View: Still images recorded by digital cameras will be displayed.

Movie View: Moving pictures recorded by digital video cameras will be played back.

- During the operation, sound signal is output from AV1, AV2, AUDIO OUT and DIGITAL AUDIO OUT terminals. But no video signals are output.
- "Date" shows the date on which the recording was made by the digital camera or digital video camera. The file without record of the date is shown "**/**/****
- For details on SD Cards ⇒ p. 63



Photo View



(1)

(ok)

 \odot

Insert the SD Card

Select "Photo View"



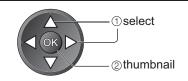


- You can also access directly by using VIERA TOOLS
 - "How to Use VIERA TOOLS" (p. 14)



Select the folder to display the thumbnail



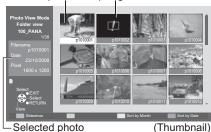


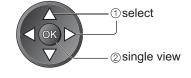
The files which are not into a folder will be collected to the folder named "/".



Select the file from the thumbnail to be viewed

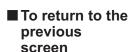
Selected Error display (images that could not be loaded, etc.) photo



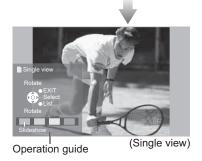


Slideshow ⇒ p. 49

■ To return to TV



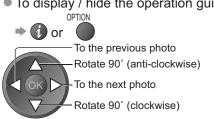




information is displayed

Displayed one at a time

To display / hide the operation guide



■ To return to thumbnail ⇒



Slideshow

■ Start Slideshow (operate in step 4)

Select the photo for the first view

Start Slideshow









■ To return to Single view ⇒



Note `

- Slideshow is done within the thumbnail.
- You can also start slideshow directly by using VIERA TOOLS ⇒ "How to Use VIERA TOOLS" (p. 14)

■ Slideshow settings (operate in Photo View Mode)









Other Items ⇒ p. 30 and p. 31

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

■To display all the photos

Display the thumbnail of all the photos in SD Card.







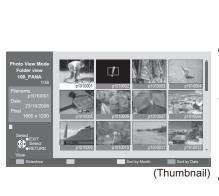


■To sort by date or month recorded

Display the list of groups sorted by the same date or the same month.

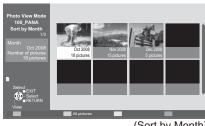
• The group of the photos without record of the date is shown as "Unknown".

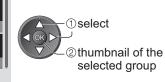
yellow





green





(Sort by Month)

(Thumbnail - All pictures)





Viewing from SD Card

(VIERA IMAGE VIEWER)

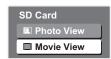
Movie View



Insert the SD Card

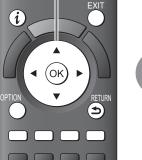
2

Select "Movie View"





- You can also access directly by using VIERA TOOLS
- → "How to Use VIERA TOOLS" (p. 14)

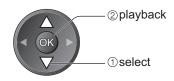


Select the file to be viewed



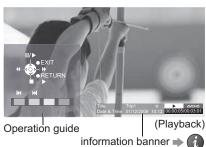
File format:
 Only AVCHD or MPEG2 are supported.
 For details ⇒ p. 63

-Selected movie



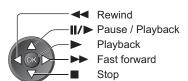






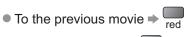
Playback will start

- To display the operation guide
 - red green yellow blue or
- To hide the operation guide → ♠





- To change aspect ratio (only for the 4:3 movie content)
 - ASFEC



■ To the next movie ⇒ green



■ To return to TV

■ To return to the

previous

Audio Settings

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

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

Display the Option menu

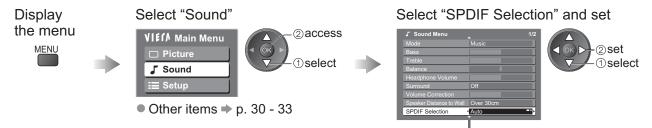
Change the sound (if the movie has multiple audio signals)





change • It may take several seconds to change the sound.

■ Audio output settings (operate in step ③)



Menu	Item	Adjustments / Configurations (alternatives)
Sound	SPDIF Selection	SPDIF: A standard audio transfer file format Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT terminal (Auto / PCM) Auto: Dolby Digital is output as Dolby Digital Bitstream. MPEG is output as PCM. PCM: Digital output signal is fixed to PCM.

Link Functions (Q-Link VIERA Link

Q-Link connects the TV and DVD Recorder / VCR, and enables easy recording, playback, etc. (p. 54) VIERA Link (HDAVI Control™) connects the TV and the equipment with VIERA Link function, and enables easy control, convenient recording, playback, energy saving, creating home theatre, etc., without complicated setting. (p. 55 - 59)

You can use Q-Link and VIERA Link functions together.

• This TV supports "HDAVI Control 4" function. But available features are depending on the connected equipment's version of HDAVI Control. Please refer to the manual of the equipment to confirm the version.

Summary of Q-Link and VIERA Link features

■ Q-Link (SCART connection only)

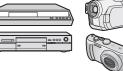
= = (e • : • • :									
Connected equipment		Connection							
Features	with Q-Link connection								
Analogue channel download	0								
Easy playback	0	SCART cable DVD Recorder / VCR with Q-Link function							
Power on link	0								
Power off link	0	 Use fully wired SCART cable. Connect the DVD Recorder / VCR supporting Q-Link 							
Direct TV Recording	0	to the TV's AV1 or AV2 terminal via a SCART cable.							

■ VIERA Link (HDMI connection only)

Connected equipment Features	DIGA Recorder with VIERA Link function	DVD Player / Blu-ray Disc Player with VIERA Link function	HD Video Camera / LUMIX Camera with VIERA Link function
Analogue channel download	_	-	_
Easy playback	0	0	0
Power on link	0	0	0
Power off link	0	0	0
Reduce unnecessary power consumption in standby	* 3	○* 3	-
Auto standby for unnecessary equipment	○* 1	○* 1	_
Pause Live TV programme	○ * 3	-	-
Direct TV Recording	O*3	-	-
Control the menu of the connected equipment by VIERA remote control	<u></u> *1	O*1	<u></u> *1
Speaker control	-	-	-

Connection





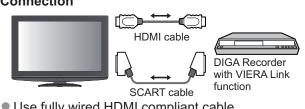
DIGA Recorder / DVD Player / Blu-ray Disc Player / HD Video Camera / LUMIX Camera with VIERA Link function

- Use fully wired HDMI compliant cable.
- Connect the equipment supporting VIERA Link to the TV's HDMI1, HDMI2 or HDMI3 terminal via an HDMI cable.
- About HDMI cable for connecting Panasonic HD Video Camera or LUMIX Camera, read the manual of the equipment.

■ VIERA Link (HDMI and SCART connections)

Connected equipment	DIGA Recorder with
Features	VIERA Link function
Analogue channel download	0
Easy playback	0
Power on link	0
Power off link	0
Reduce unnecessary power consumption in standby	○ *3
Auto standby for unnecessary equipment	○* 1
Pause Live TV programme	○*2 *4
Direct TV Recording	○*2
Control the menu of the connected equipment by VIERA remote control	○* 1
Speaker control	_

Connection



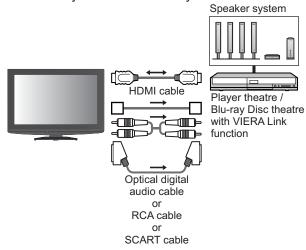
- Use fully wired HDMI compliant cable.
- Connect the equipment supporting VIERA Link to the TV's HDMI1, HDMI2 or HDMI3 terminal via an HDMI cable.
- Use fully wired SCART cable.
- Connect the equipment supporting VIERA Link to the TV's AV1 or AV2 terminal via a SCART cable.

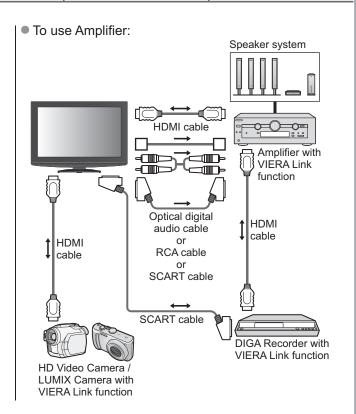
■ VIERA Link (HDMI and Audio out connections)

Connected equipment Features	Player theatre with VIERA Link function	Blu-ray Disc theatre with VIERA Link function	Amplifier with VIERA Link function						
Analogue channel download	_	_	_						
Easy playback	<u></u> *5	<u></u> *5	_						
Power on link	0	0	_						
Power off link	0	0	0						
Reduce unnecessary power consumption in standby	-	○* 3	_						
Auto standby for unnecessary equipment	○*1 *6	○*1 *6	○ *1						
Pause Live TV programme	_	_	_						
Direct TV Recording	_	-	_						
Control the menu of the connected equipment by VIERA remote control	○* 1	○* 1	_						
Speaker control	0	0	0						

Connection







- Use fully wired HDMI compliant cable.
- Connect the equipment supporting VIERA Link to the TV's HDMI2 or HDMI3 terminal via an HDMI cable.
- Use fully wired SCART cable.
- Connect the equipment supporting VIERA Link to the TV's AV1 or AV2 terminal via a SCART cable.
- Use any one of the optical digital audio cable, RCA cable and SCART cable for audio output from the TV.
- *1: Available with the equipment which has "HDAVI Control 2 or later" function. *2: Available with the equipment which has "HDAVI Control 3 or later" function. *3: Available with the equipment which has "HDAVI Control 4" function.

- *4: Available with DIGA Recorder which has HDD.
- *5: while playingback a disc
- *6: except for watching a disc

Note)

VIERA Link features may be available even with other manufacturers' equipment supporting HDMI CEC.

Link Functions (Q-Link VIERA Link)

Q-Link

■ Preparations

- Connect the DVD Recorder / VCR with the following logos:
 "Q-Link", "NEXTVIEWLINK", "DATA LOGIC", "Easy Link", "Megalogic" or "SMARTLINK"
- ■Q-Link connection ⇒ p. 52
- Use fully wired SCART cable.
- Set up the DVD Recorder / VCR. Read the manual of the recorder.
- Q-Link terminal setup in the Setup Menu ⇒ "Q-Link" (p. 32), "AV1 / AV2 out" (p. 32)
- Download Analogue channel setting → "Analogue channel download" (see below)

■ Features available

Analogue channel download

Analogue channel setting can be downloaded to the recorder with analogue tuner. Digital channel setting is not downloaded.

To download Analogue channel setting → "Q-Link Download" (p. 32) or "Auto Setup" in Analogue mode (p. 35) or "Auto Setup" - when first using the TV (p. 12)

Direct TV Recording - What you see is What you record

Recording the current programme in DVD Recorder / VCR immediately.



Available conditions:

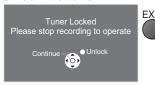
Picture source	Mode	Recording from
Analogue	TV	TV monitor out
Analogue	AV	Recorder's tuner
DVB	TV	TV monitor out
AV (watching recorder's tuner)	AV	Recorder's tuner
AV (watching recorder's external input)	AV	Recorder's external input
AV (watching TV's external input)	AV	TV monitor out

- When Direct TV Recording is performed, the recorder is automatically turned on if it is in Standby mode.
- Changing channel or turning off the TV is available while the recorder is recording from its own tuner.
- Changing channel is not available while the recorder is recording from the TV tuner.

■ To stop recording

Unlock the tuner





Power on link and Easy playback

When DVD Recorder / VCR starts playback or direct navigator / function menu for the equipment are activated, the TV is turned on and input mode is switched automatically so that you can view the content. (Only when the TV is in Standby mode.)

Power off link

When TV is set to Standby mode, the recorder is also automatically set to Standby. (Only when the videocassette or disc is not active.)

- This function will work even if the TV enters standby mode automatically by Off Timer function or auto power standby function.
- "DATA LOGIC" (a trademark of Metz Corporation)
- "Easy Link" (a trademark of Philips Corporation)
- "Megalogic" (a trademark of Grundig Corporation)
- "SMARTLINK" (a trademark of Sony Corporation)

Note

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

VIERA Link "HDAVI Control™"*

*Enjoy additional HDMI Inter-Operability with Panasonic products which have "HDAVI Control" function. This TV supports "HDAVI Control 4" function.

Connections to the equipment (DIGA Recorder, HD Video Camera, Player theatre, Amplifier, etc.) with HDMI and SCART cables allow you to interface them automatically (p. 52 and p. 53).

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

- Some functions are not available depending on the equipment's version of HDAVI Control. Please confirm the connected equipment's version of HDAVI Control.
- VIERA Link "HDAVI Control", based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers' equipment that supports HDMI CEC cannot be quaranteed.
- Please refer to individual manuals for other manufacturers' equipment supporting VIERA Link function.
- About applicable Panasonic equipment, consult your local Panasonic dealer or refer to the URL: www.panasonic.co.uk

■ Preparations

- Connect the equipment supporting VIERA Link.
- ■VIERA Link connection ⇒ p. 52 and p. 53
- Use fully wired HDMI compliant cable. Non-HDMI-compliant cables cannot be utilized.

Recommended Panasonic's HDMI cable part number:

- RP-CDHG10 (1.0 m)
- RP-CDHG30 (3.0 m)
- RP-CDHG15 (1.5 m)
- RP-CDHG50 (5.0 m)
- RP-CDHG20 (2.0 m)
- Use fully wired SCART cable.
- Set up the connected equipment. Read the manual of the equipment.
- For optimal recording, the settings of the recorder might be required. For details, read the manual of the recorder.
- ■Download Analogue channel setting ⇒ "Analogue channel download" (see below)
- Set VIERA Link On in the Setup Menu → "VIERA Link" (p. 32)
- Set up the TV
 - → After connection, turn the equipment on and then switch the TV on. Select the input mode to HDMI1, HDMI2 or HDMI3 (p. 24), and make sure that an image is displayed correctly.

This setup should be done each time when the following conditions occur:

- · for the first time
- when adding or reconnecting equipment
- when changing setup

■ Features available

Analogue channel download

Analogue channel setting can be downloaded to the recorder with analogue tuner. Digital channel setting is not downloaded.

To download Analogue channel setting → "Q-Link Download" (p. 32) or "Auto Setup" in Analogue mode (p. 35) or "Auto Setup" - when first using the TV (p. 12)

Easy playback

Automatic Input switching - When the connected equipment is operated, input mode is switched automatically. When it is stopped operating, input mode is returned.

Power on link

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

Power off link

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

 This function will work even if the TV enters standby mode automatically by Off Timer function or auto power standby function.

Link Functions (Q-Link VIERA Link)

■ Features available

Reduce unnecessary power consumption in standby Standby Power Save

Set Standby Power Save "On" in the Setup Menu to use this function

⇒ "Standby Power Save" (p. 32)

The power consumption in Standby mode of the connected equipment is controlled higher or lower in synchronization with the TV On / Off state to reduce the consumption.

When the TV is set to Standby mode, the connected equipment is automatically set to Standby and the power consumption in Standby mode of the connected equipment is automatically minimized.

When the TV is turned on, the connected equipment is still in Standby mode, but the power consumption is increased to make startup time early.

 This function is effective if the connected equipment can change the power consumption in Standby mode and is set to higher consumption.

Auto standby for unnecessary equipment Intelligent Auto Standby

Set Intelligent Auto Standby "On (With reminder)" or "On (No reminder)" in the Setup Menu to use this function

"Intelligent Auto Standby" (p. 32)

When the TV is On, non-watched or non-used connected equipment goes into Standby mode automatically to reduce the power consumption.

- If you select "On (With reminder)", the on screen message will be displayed to be noticed before working this function.
- This function may not work properly depending on the connected equipment. If required, set to "Off".

■ Features available (Using VIERA Link Menu)

Direct TV Recording - What you see is What you record Direct TV Rec

Recording the current programme in DIGA Recorder immediately.

- If you connect plural recorders including other manufacturers' recorders at the same time, please connect DIGA Recorder to the TV's lower HDMI terminal number. For example, if you use HDMI1 and HDMI2 for two recorders, in this case connect DIGA Recorder to HDMI1.
- If you cannot operate, check the settings and the equipment
 "Summary of O Link and VIEBA Link features" (p. 52 and p. 5
 - ⇒ "Summary of Q-Link and VIERA Link features" (p. 52 and p. 53), "Preparations" (p. 55)
- Changing channel or turning off the TV is available while the recorder is recording from its own tuner.
- Changing channel is not available while the recorder is recording from the TV tuner.



■ Features available (Using VIERA Link Menu)

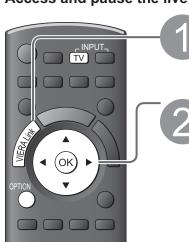
Pause Live TV programme Pause Live TV

You can pause the live TV programme and resume later.

Live TV programme will be recorded on HDD of the connected DIGA Recorder.

- This function is available with DIGA Recorder which has HDD.
- If you connect plural recorders including other manufacturers' recorders at the same time, please connect DIGA Recorder which has HDD to the TV's lower HDMI terminal number. For example, if you use HDMI1 and HDMI2 for two recorders, in this case connect DIGA Recorder which has HDD to HDMI1.
- If you cannot operate, check the settings and the equipment
 - ⇒ "Summary of Q-Link and VIERA Link features" (p.52 and p. 53), "Preparations" (p. 55)

Access and pause the live TV programme



Panasonic

TV

Display "VIERA Link Menu"



Select "Pause Live TV" and pause





The TV picture will be paused.

- You can also pause directly by using VIERA TOOLS
 - → "How to Use VIERA TOOLS" (p. 14)
- Live TV programme is recorded on HDD from where it was paused.
- If the paused TV picture disappears after a few minutes
 - (the paused picture will be restored)
- Follow the operation guide to operate Pause Live TV function.

■ To operate Pause Live TV



 Operations may be different depending on the recorder. In this case, follow the operation guide or read the manual of the recorder.

■ To return to Live TV

(stop playback of Pause Live TV / cancel pause)



will be deleted from HDD.



 If you stop playback or cancel pause, the recorded programme will be deleted from HDD.

Link Functions (Q-Link VIERA Link)

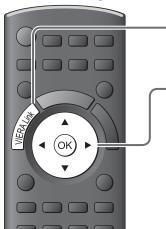
■ Features available (Using VIERA Link Menu)

Control the menu of the connected equipment by VIERA remote control VIERA Link Control

You can control some functions of the connected equipment with this TV remote control (point the remote control at the TV's signal receiver).

- If you cannot operate, check the settings and the equipment
- Summary of Q-Link and VIERA Link features" (p.52 and p. 53), "Preparations" (p. 55)
- For details of the operations for the connected equipment, read the manual of the equipment.

Access and operate the menu of the equipment



Display "VIERA Link Menu"



Select "VIERA Link Control"





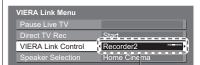
Select the equipment you want to access
The type of the connected equipment is displayed.
Select the type of the equipment and access.





If multiple recorders or players are connected

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



Recorder1-2 / Player1-2

The number is given from the TV's lower HDMI terminal number connected to the same type equipment. For example, two recorders to HDMI1 and HDMI2, in this case the recorder connected to HDMI1 is displayed as "Recorder1", and the recorder connected to HDMI2 is displayed as "Recorder2".

■ If you access non-VIERA Link equipment



The type of the connected equipment is displayed. You can access the menu of the equipment. But you cannot operate it. Use its own remote control to operate the equipment.

Recorder / Player / Home Cinema / Video Camera / LUMIX / Other

- You can also access directly by using VIERA TOOLS
 → "How to Use VIERA TOOLS" (p. 14)
- "Home Cinema" means Player theatre, Blu-ray Disc theatre or Recorder theatre.
- "Other" means Tuner set top box.



The menu of the accessed equipment (Input mode will be changed automatically)

Operate the menu of the equipment Available VIERA remote control buttons: (depending on the connected equipment)



① Set the code of the remote control to "73"

"How to change the code for the type of the equipment" (p. 25)

2 Follow the operation guide

- To display the operation guide ⇒ If other manufacturers' equipment is accessed, Setup / Contents Selection menu may be displayed.
- When the key words are displayed on colour bar



Note)

 Some operations may not be available depending on the equipment. In this case use its own remote control to operate the equipment.



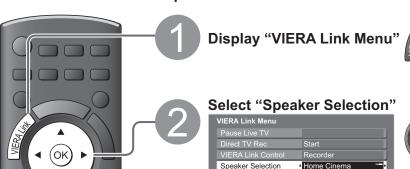
■ Features available (Using VIERA Link Menu)



You can control the theatre speaker with this TV remote control (point the remote control at the TV's signal receiver).

- If you cannot operate, check the settings and the equipment
 - ⇒ "Summary of Q-Link and VIERA Link features" (p. 52 and p. 53), "Preparations" (p. 55)

Access and control the speaker volume







■ Home Cinema

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

- Volume up / down
 - (Volume slide bar will be displayed when adjusting the volume of the equipment.)
- ●Mute ⇒ 🔣
- The sound of TV speakers is mute.
- When the equipment is turned off, TV speakers will be active.

■ TV

TV speakers are active.

Note

- If you wish to enjoy the multi-channel sound (e.g. Dolby Digital 5.1ch) via an Amplifier, connect with HDMI cable and Optical digital audio cable (p. 59), and then select "Home Cinema".
- To enjoy the sound from the DIGA Recorder in multi-channel sound, connect an HDMI cable from the DIGA Recorder to the Amplifier (p. 53).

Note)

蚁

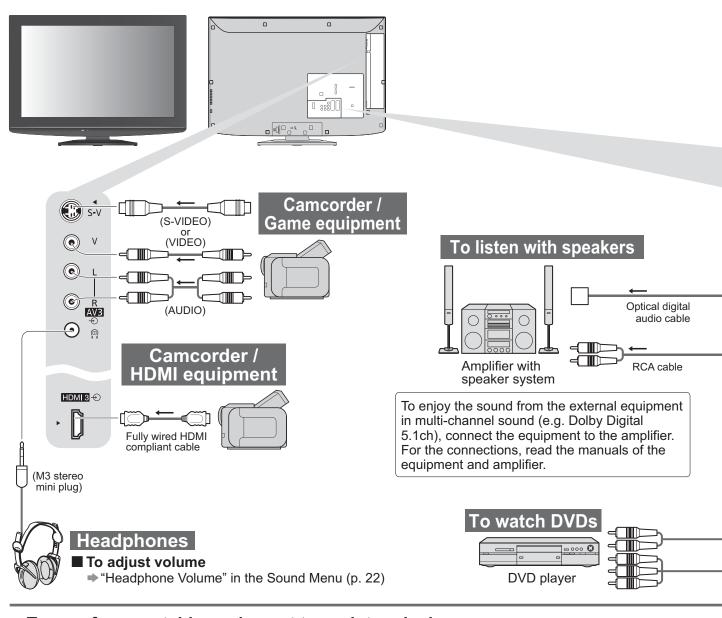
Panasonic

TV

- These functions may not work properly depending on the connected equipment.
- Image or sound may not be available for the first few seconds when Input mode is switched.
- Easy playback may be available by using the remote control for Player theatre, Blu-ray Disc theatre or Amplifier.
 Read the manual of the equipment.
- "HDAVI Control 4" is the newest standard (current as of December, 2008) for HDAVI Control compatible equipment. This standard is compatible with conventional HDAVI equipment.
- To confirm this TV's version of HDAVI Control → "System Information" (p. 33)

External Equipment

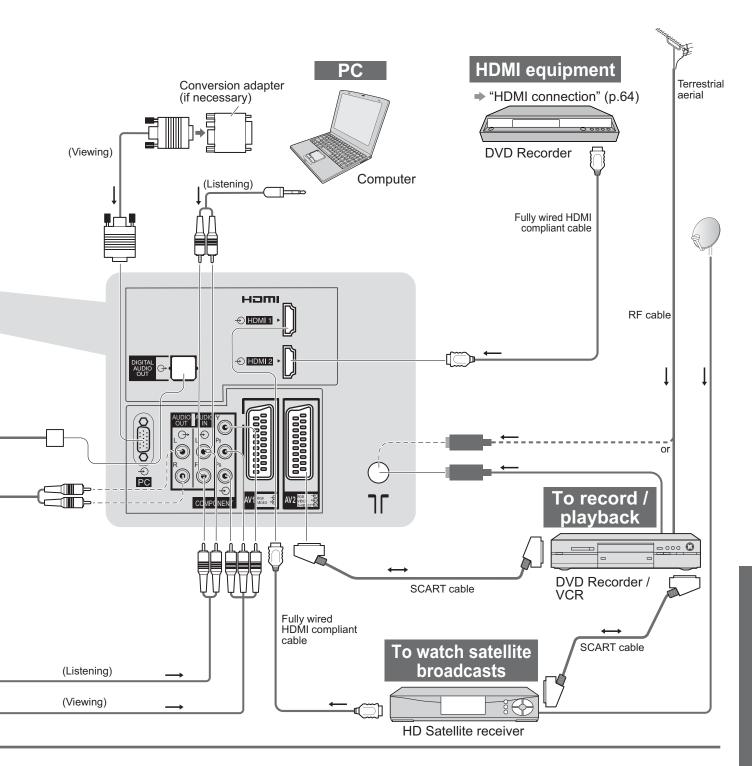
These diagrams show our recommendations for connection of your TV to various pieces of equipment. For other connections, consult the instructions for each piece of equipment, the table below, and the specifications (p. 71).



■ Types of connectable equipment to each terminal

Terminal Recording / Playback (equipment)	AV1	AV2	AV3 (Side panel of TV)	
To record / playback videocassettes / DVDs (VCR / DVD recorder)	0	0		
To watch DVDs (DVD player)	0	0	0	
To watch camcorder images (Video camera)	0	0	0	
To watch cable broadcasts (Set top box)	0	0	0	
To play games (Game equipment)	0	0	0	
To use amplifier with speaker system				
Q-Link	0	0		
VIERA Link	(with HDMI)	(with HDMI)		
Direct TV Recording				

 $[\]bigcirc$: Recommended Connection



COMPONENT	AUDIO OUT	DIGITAL AUDIO OUT		l	
			1	3	
0			0	0	0
			\circ	0	0
			\circ		
			\circ	0	
	0	\circ			
			0		
			\circ	0	0

Technical Information

Auto Aspect

The optimum size and aspect can be chosen automatically, and you can enjoy finer images. (p. 17)

■ Aspect Control Signal

"WIDE" will appear in the top left of the screen if a Widescreen signal (WSS) or a Control signal through SCART / HDMI terminal is found.

The aspect will switch to the appropriate 16:9 or 14:9 widescreen ratio.

This function will work in any aspect mode.

			Aspect Control Signal
Input terminal	Input signal format	Widescreen signal (WSS)	Control signal through SCART (pin8) / HDMI terminal
	DVB	0	
RF	PAL I	0	
Kr	PAL 525/60 6.0 MHz	_	
	M.NTSC 6.0 MHz	_	
A) / / / (Q)	PAL	0	0
AV1 (Composite)	PAL 525/60	_	0
AV2 (Composite or S-Video)	M.NTSC	_	0
AV3 (Composite or S-Video)	NTSC	_	0
	525 (480) / 60i	_	
	525 (480) / 60p	_	
	625 (576) / 50i	0	
COMPONENT	625 (576) / 50p	0	
COMPONENT	750 (720) / 60p	_	
	750 (720) / 50p	_	
	1,125 (1,080) / 60i	_	
	1,125 (1,080) / 50i	_	
	525 (480) / 60i	_	0
	525 (480) / 60p	_	0
	625 (576) / 50i	_	0
	625 (576) / 50p	_	0
HDMI1	750 (720) / 60p	_	0
HDMI2	750 (720) / 50p	_	0
HDMI3	1,125 (1,080) / 60i	_	0
	1,125 (1,080) / 50i	_	0
	1,125 (1,080) / 60p	_	0
	1,125 (1,080) / 50p	_	0
	1,125 (1,080) / 24p	_	0

■ Auto mode

Auto mode determines the best aspect ratio to fill the screen. It does this using a four step process (WSS, Control signal through SCART / HDMI terminal, Letterbox detection, or Justify to fill the screen) to determine. This process may take several minutes, depending on the darkness of the image.

Letterbox detection: If black bands at the top and bottom of the screen are detected, Auto mode chooses the best ratio and expands the image to fill the screen.

If no aspect signals are detected, Auto mode enhances the image for optimum viewing pleasure.

Note)

- The ratio varies depending on the programme, etc. If the ratio is out of the standard 16:9, black bands at the top and bottom of the screen may appear.
- If the screen size looks unusual when a widescreen-recorded programme is played back on a VCR, adjust the tracking of the VCR. Read the manual of the VCR.

SD Card

■ Cautions in handling SD Card

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

■ Data format for Card browsing

Photo: Still images recorded with digital still cameras compatible with JPEG files of DCF* and EXIF standards
 Data format - Baseline JPEG (Sub-sampling 4:4:4, 4:2:2 or 4:2:0)

Max. number of files - 9,999

Image resolution - 160 × 120 to 10,000,000

- Movie: S D-Video Standard Ver. 1.2 [MPEG-2 (PS format)] and AVCHD Standard compatible files with an audio format that is either MPEG-1/Layer-2 format or Dolby Digital format (A modified data with a PC may not be displayed correctly.)
- Compliant card type (maximum capacity): SDHC Card (32 GB), SD Card (2 GB), miniSD Card (2 GB) (requiring miniSD adapter)
- If miniSD Card is used, insert / remove it together with the adapter.
- Check the latest information on the card type at the following website. (English only) http://panasonic.co.jp/pavc/global/cs/

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

Note

- Format the card with the recording equipment.
- The picture may not appear correctly on this TV depending on the recording equipment used.
- Display may take some time when there are many files and folders.
- This function cannot display Motion JPEG and still image not DCF formatted (i.e. TIFF, BMP).
- A data modified with a PC may not be displayed.
- Images imported from a PC must be compatible with EXIF (Exchangeable Image File) 2.0, 2.1, and 2.2.
- Partly degraded files might be displayed at a reduced resolution.
- All ".JPG" extension datas in the card will be read in Photo View Mode.
- The folder and file names may be different depending on the digital camera used.
- Do not use two-byte characters or other special codes.
- The card may become unusable with this TV if the file or folder names are changed.

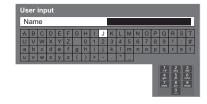
Characters table for numeric buttons

You can enter characters by using numeric buttons for free input items.

Press the numeric button repeatedly until you reach the desired character.

1 2 3 • The character is set automatically if you leave for one second.

You can also set the character by pressing the OK button within one second.



Characters table:

0

The number of times to press Numeric buttons	1	2	3	4	5	6	7	8	9	10	11
1		1	!	:	#	+	-	*	_	()
2	а	b	С	2	А	В	С				
3	d	е	f	3	D	Е	F				
4	g	h	i	4	G	Н	I				
5	j	k	I	5	J	K	L				
6	m	n	О	6	М	N	0				
7	р	q	r	S	7	Р	Q	R	S		
8	t	u	V	8	Т	U	V				
9	W	Х	у	Z	9	W	Х	Y	Z		
0	Space	0									

Technical Information

HDMI connection

HDMI (high-definition multimedia interface) is the world's first complete digital consumer AV interface complying with a non-compression standard.

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

HDMI-compatible equipment (*1) with an HDMI or DVI output terminal, such as a set top box or a DVD player, can be connected to the HDMI terminal using an HDMI compliant (fully wired) cable.

About connections, see "External Equipment" (p. 60).

■ Applicable HDMI features

- Input audio signal: 2ch Linear PCM (sampling frequencies 48 kHz, 44.1 kHz, 32 kHz)
- Input video signal: 480i, 480p, 576i, 576p, 720p, 1080i and 1080p
 - → "Input signal that can be displayed" (p. 66)

Match the output setting of the digital equipment.

• Input PC signal : → "Input signal that can be displayed" (p. 66)

Match the output setting of the PC.

VIERA Link (HDAVI Control 4): → "VIERA Link" (p. 55)

■ DVI connection

If the external equipment has only a DVI output, connect to the HDMI1 / 3 terminal via a DVI to HDMI adapter cable (*2).

When the DVI to HDMI adapter cable is used, connect the audio cable to the audio input terminal (HDMI1: use COMPONENT-AUDIO terminals / HDMI3: use AV3 audio terminals).

Note

- Audio settings can be made on the "HDMI1 / 3 Input" in the Sound Menu. (p. 31)
- HDMI2 terminal is for digital audio signal only.
- If the connected equipment has an aspect adjustment function, set the aspect ratio to "16:9".
- These HDMI connectors are "type A".
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- An equipment having no digital output terminal may be connected to the input terminal of either "COMPONENT", "S-VIDEO", or "VIDEO" to receive analogue signals.

(*1): The HDMI logo is displayed on HDMI-compliant equipment.

(*2): Enquire at your local digital equipment retailer shop.

PC connection

A PC may be connected to this TV so that the PC screen is displayed and sound is heard from the TV.

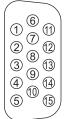
- PC signals that can be inputted: Horizontal scanning frequency 31 to 69 kHz; vertical scanning frequency 59 to 86 Hz (more than 1,024 signal lines could result in incorrect display of the image).
- A PC adapter is not necessary for the DOS/V-compliant D-sub 15-pin connector.

Note

- Some PC models cannot be connected to this TV.
- To listen to PC sound from the TV, connect the audio cable to COMPONENT-AUDIO terminals. (p. 61)
- When using PC, set the colour display quality of PC to the highest position.
- For details of the applicable PC signals
 - "Input signal that can be displayed" (p. 66)
- Max. display resolution

A = = = = 4	4:3	1,440 × 1,080 pixels
Aspect	16:9	1,920 × 1,080 pixels

D-sub 15-pin connector signal



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

Updating the TV software

From time to time, a new version of software may become available for download to enhance the performance or operations of the TV.

■ To download from a notification banner

A notification banner will appear when you search for a new version software by using the "System Update Search Now" function (p. 42).

In DVB mode, a notification banner will appear when one of the BBC channels is tuned if a new available software is found.

Found new software version ***.

Press OK to start update (may take 40 mins)
or Press EXIT to ignore
and you can update when TV is in standby.

To start downloading press the OK button, this may take up to 60 minutes to complete.

To ignore the new software press the EXIT button.

You can update later automatically when the TV is in Standby mode

→ "To download any new software automatically" (see below)

If you do not wish to update, set "Auto Update Search in Standby" to "Off", but the notification banner will keep appearing during the period of new software availability, usually 2 to 3 days.

■ To download any new software automatically

Ensure that the "Auto Update Search in Standby" function in the System Update menu is set to "On" (p. 42). The TV will then download new software automatically at night if it is left in standby without any timer programming in progress.

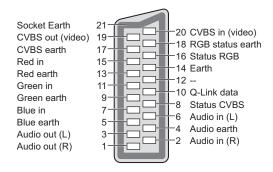
Note

During software download and update, DO NOT switch off the TV.

SCART, S-VIDEO and HDMI terminal information

■ AV1 SCART terminal (RGB, VIDEO, Q-Link)

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

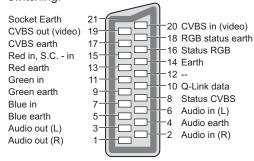


■ AV3 S-VIDEO 4 pin terminal

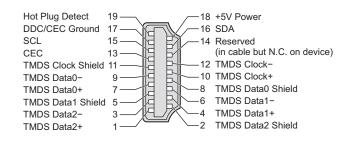


■ AV2 SCART terminal (RGB, VIDEO, S-VIDEO, Q-Link)

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



■ HDMI terminal



Technical Information

Input signal that can be displayed

COMPONENT (Y, PB, PR), HDMI

* Mark: Applicable input signal

Signal name	COMPONENT	HDMI
525 (480) / 60i	*	*
525 (480) / 60p	*	*
625 (576) / 50i	*	*
625 (576) / 50p	*	*
750 (720) / 60p	*	*
750 (720) / 50p	*	*
1,125 (1,080) / 60i	*	*
1,125 (1,080) / 50i	*	*
1,125 (1,080) / 60p		*
1,125 (1,080) / 50p		*
1,125 (1,080) / 24p		*

PC (from D-sub 15P) Applicable input signal for PC is basically compatible to VESA standard timing.

TO (HOILID COD TOT)	Applicable input eighar for 1 6 to bacie	Applicable input digital for 1 & 16 bacically compatible to 1267 total add a timing.			
Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)			
640 × 400 @70 Hz	31.47	70.07			
640 × 480 @60 Hz	31.47	59.94			
640 × 480 @75 Hz	37.50	75.00			
800 × 600 @60 Hz	37.88	60.32			
800 × 600 @75 Hz	46.88	75.00			
800 × 600 @85 Hz	53.67	85.06			
852 × 480 @60 Hz	31.44	59.89			
1,024 × 768 @60 Hz	48.36	60.00			
1,024 × 768 @70 Hz	56.48	70.07			
1,024 × 768 @75 Hz	60.02	75.03			
1,024 × 768 @85 Hz	68.68	85.00			
1,280 × 768 @60 Hz	47.70	60.00			
1,280 × 1,024 @60 Hz	63.98	60.02			
1,366 × 768 @60 Hz	48.39	60.04			
Macintosh13" (640 × 480)	35.00	66.67			
Macintosh16" (832 × 624)	49.73	74.55			
Macintosh21" (1,152 × 870)	68.68	75.06			

PC (from HDMI terminal) Applicable input signal for PC is basically compatible to HDMI standard timing.

Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)
640 × 480 @60 Hz	31.47	60.00
750 (720) / 60p	45.00	60.00
1,125 (1,080) / 60p	67.50	60.00

(Note)

- Signals other than above may not be displayed properly.
- The above signals are reformatted for optimal viewing on your display.
- PC signal is magnified or compressed for display, so that it may not be possible to show fine detail with sufficient clarity.

FAQs

Before requesting service or assistance, please follow these simple guides to resolve the problem. If the problem still persists, please contact your local Panasonic dealer or Panasonic Customer Care Centre for assistance. For details (p. 72)

White spots or shadow images (noise)





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

Neither image nor sound is produced

- Is the TV in AV mode?
- Check the correct AV input mode is selected.
- Check the mains lead is plugged into the socket outlet.
- Has the TV been turned On?
- Check the Picture Menu (p. 30) and volume.
- Check all required SCART cables and connections are firmly in place.

Auto aspect

- Auto aspect is designed to provide you with the best ratio to fill the screen. (p. 62)
- Press the ASPECT button if you would like to change the aspect ratio manually (p. 17).

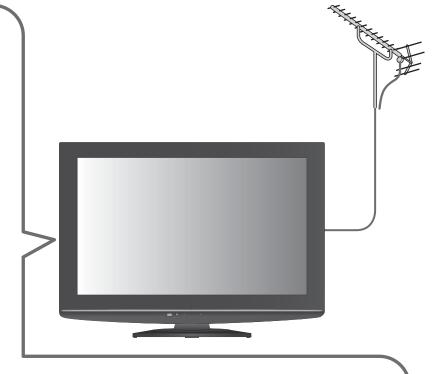
S-Video / black and white picture

 Check that the output of the external equipment matches the input of the TV.
 If the output of the external equipment is set to S-Video, the TV must also be set to S-Video (p. 24).

No programmes shown on TV Guide



- Reset channels (p. 34 and p. 35).
- Check the digital transmitter.
- Adjust the direction of the aerial to another transmitter installed nearby.
- Check the analogue broadcast.
 If the image quality is poor, check the aerial and consult your nearest dealer.



Remains channel number, input mode, etc. on the TV screen -I.e. EC/AV1

Press the *i* button to clear these.
 Press again to redisplay.

Q-Link function does not work

Confirm SCART cable and connection.
 Also set "AV1 / AV2 out" in the Setup Menu (p. 32).

"VIERA Link" function does not work and an error message appears

- Confirm the connection. (p. 52 and p. 53)
- Turn the connected equipment on and then switch the TV on. (p. 55)

Recording does not start immediately

- Check the settings of the recorder. For details, read the manual of the recorder.
- Timer programming might be performed.

FAQs

	Problem		Actions
Screen	Chaotic image, noisy		 Set "P-NR" in the Picture Menu (to remove noise). (p. 30) Check nearby electrical products (fluorescent lamp, DECT phones, mobile phones, microwaves, etc.).
	No image can be displayed		 Is "Colour" or "Contrast" in the Picture Menu set to the minimum? (p. 30) Please also refer to "Neither image nor sound is produced" (p. 67)
	Blurry or distorted image (no sound or low volume)		Reset channels. (p. 34 and p. 35)Please also refer to "Neither image nor sound is produced" (p. 67)
	Unusual image is displayed		 Turn the TV Off with Mains power On / Off switch, then turn it On again. If the problem persists, perform "Shipping Condition" (p. 41).
So	No sound is produced		 Is "Sound mute" active? (p. 9) Is the volume set to the minimum? Please also refer to "Neither image nor sound is produced" (p. 67)
Sound	Sound level is low or sound is distorted		 Sound signal reception may be deteriorated. Set "NICAM" (p. 31) in the Sound Menu to "Off". (Analogue only) Please also refer to "Neither image nor sound is produced" (p. 67)
	 Due to the digital reception technologies some cases, despite good reception of 		volved, quality of the digital signals may be relatively low in loque channels.
Digital Channel	Interference or frozen / disappearing image in DVB mode	>	 Check "Signal Condition" (p. 36). If "Signal Quality" or "Signal Strength" are displayed in red, the signal is weak. Check the aerial. Check your postcode area is able to receive the freeview channels at www.freeview.co.uk Digital signals may be relatively low to prevent interference with analogue signals for the period of Digital Switchover. Check the plan of Digital Switchover at www.digitaluk.co.uk Weather conditions will affect signal reception (heavy rain, snow, etc.), in particular in poor reception areas. Even during good weather the high pressure can cause poor reception of some channels. Turn the TV off with the Mains power On / Off switch, then turn it On again. Reset channels. (p. 34 and p. 35)
	Some channels cannot be tuned		• Check the aerial.
	Cannot find a channel you have previously watched		 The channel may broadcast for part of the day. Check the channel in the TV Guide. (p. 18 and p. 19) Channel position numbers may be changed by broadcasters. Reset channels. (p. 34 and p. 35)
ᆂᅵ	Sound is unusual		 Set the sound setting of the connected equipment to "2ch L.PCM". Check the "HDMI1 / 3 Input" setting in the Sound Menu. (p. 31) If digital sound connection has a problem, select analogue sound connection. (p. 64)
HDMI	Pictures from external equipment are unusual when the equipment is connected via HDMI		 Check the HDMI cable is connected properly. (p. 60) Turn the TV and equipment Off, then turn them On again. (p. 55) Check an input signal from the equipment. (p. 66) Use an equipment compliant with EIA/CEA-861/861B.
	The TV does not switch On		 Press and hold the standby On / Off switch on the remote control for about 1 second if Power LED is red. Check the mains lead is plugged into the socket outlet. The fuse in the mains plug may have blown. Replace it with one of an identical rating (p. 4).
	The TV goes into "Standby mode"		Off Timer function is activated.The TV enters "Standby mode" about 30 mins. after analogue broadcasting ends.
Other	The remote control does not work or is intermittent		 Are the batteries installed correctly? (p. 6) Has the TV been switched On? The batteries may be running low. Replace them. Point the remote control directly at the front of the TV (within a 30 degree angle of the front of the TV). Situate the TV away from sunshine or other sources of bright light not to shine on the TV's remote control signal receiver.
	There may be red spots, blue spots, green spots and black spots on the screen		• This is a characteristic of liquid crystal panels and is not a problem. The liquid crystal panel is built with very high precision technology giving you fine picture details. Occasionally, a few non-active pixels may appear on the screen as a fixed point of red, green, blue or black. Please note this does not affect the performance of your LCD.
	The LCD panel moves slightly when it is pushed with a finger Clattered sound might be heard		 There is some flexibility around the panel to prevent damage to the panel. The panel might move slightly when it is pushed with a finger, and clattered sound might be heard. This is not a malfunction.
	An error message appears		Follow the message's instructions.If the problem persists, contact the authorized Service Centre.

On screen messages

Message	Meaning / Action
All tuning data will be erased	"Shipping Condition" will erase all tuning data (p. 41).
Are you sure ?	Confirm correct operation.
Are you sure you want to delete this timer? Press OK to delete timer Press RETURN to return	Confirm correct operation.
Bad signal	 The signal is weak. Check the aerial is plugged in properly. It may be necessary to have an aerial installer check the signal and aerial alignment Reset channels. (p. 34 and p. 35)
Child Lock is active ! Press OK to enter PIN.	• The selected channel is locked in Child Lock (p. 40). You must enter the PIN number before the channel will be displayed.
Feature not available	 It is not possible to record from COMPONENT, HDMI or PC. Connect the recorder to the TV using a fully wired SCART cable for recording from the TV tuner. Confirm Q-Link and VIERA Link settings (p. 52 - p. 55)
Found new software version ***. Press OK to start update (may take 40 mins) or Press EXIT to ignore. and you can update when TV is in standby.	● There is a new software available.
Invalid operation - Please check settings and connections.	Check the Q-Link or VIERA Link connection and setting (p. 52 - 55).
Invalid system time. Please exit!	Cannot get the time information. Check the connection of the RF cable.
Max. number of Timers already set !	▶ • The maximum number of timer programming events is 15.
New channels found! Press OK to update Channel List Press EXIT to ignore.	 There may be new channels available. This message will appear each time a change is made by the broadcasters. This message can be deactivated by setting "New Channel Message" to Off i "DVB Tuning Menu". Selecting OK will be performed "Update Channel List".
No channel found. Please check aerial or local channel availability. Press OK to start Auto Setup.	Please follow the message. If it is still failed, consult your local Panasonic dealer.
No module inserted	Check the CI module inserted completely (p. 43).
No recording - Check media	▶ • The tape or disc may be "write protected", missing or damaged.
No recording - Already recording	► The equipment may already be recording.
No recording - Unknown reason	 The recording may not be performed. Check the equipment. Disc or tape may be full.
No service	 The broadcaster has stopped the service. Check the channel in the TV Guide. (p. 18 and p. 19)
No signal	▶ • The TV cannot detect the signal. Check the connection of the RF cable.
PIN incorrect!	● The PIN number you entered is wrong.
Please check settings and connections on HDMI devices.	Communication error in VIERA Link function (p. 55).
Please wait.	A function is in progress.
Recording this channel now	The recorder is recording the programme from its own tuner. You can turn the TV off and leave the equipment recording in the normal way.
Reset to Factory Shipping Condition Completed. Please switch off TV.	"Auto Setup" will automatically start when Mains power On / Off switch is next turned On. (p. 12)
Sending Preset Data Please wait!	Q-Link or VIERA Link channel download is in progress.
Software successfully updated. Press EXIT to continue.	■ The software updating is finished.

Software update failed. Please try again later. Press EXIT to continue.

Perform "System Update Search Now" in System Update (p. 42).
 If this is still unsuccessful, there may not be any new software available.

On screen messages

Message	Meaning / Action		
This timer will not follow the TV Guide information Press OK to continue, RETURN to restore original timer	 If you edit the start time or end time of Guide link recording more than 10 minutes, it will no longer be performed as Guide link recording. The recording will be performed according to the time setting. 		
Timer already expired !	Starting time in Timer Programming is already past. Set correctly (p. 44).		
Timer Event Due to Start DVB 1: BBC1 has been programmed for recording at **:**	• This message will appear 2 minutes before timer programming event due to start.		
Timer incorrect !	Set Start and End times in Timer Programming correctly (p. 44).		
Timer overlap Press OK to keep, RETURN to edit	• Timer programming events are overlapped. If you press the OK button, the first timer programming event will start and finish, the next timer programming event can then start.		
Tuner Locked Please stop recording to operate	If you want to unlock, cancel Direct TV Recording (p. 54 and p. 56) or Timer Programming (p. 44).		
Unable to download, please check equipment	The tape or disc is active. Stop the equipment and try again.		
■ SD Card			
Cannot read file	 The file is broken or unreadable. The TV does not support the format. (For the applicable formats and data ⇒ p. 63) 		
Please confirm the SD card is OK	● The inserted SD card has a problem.		
No SD card inserted	Confirm SD Card is inserted correctly.		
No valid file to play	● The card has no data.		
Over 9999 pictures found (max. is 9999)	Maximum valid number of photos is 9,999.		
This operation is not possible	Your operation is not available.		

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Glossary

- DVB
- _ Digital Video Broadcasting
- _ Digital Versatile Disc
- **D**V
- _ Digital Visual Interface
- EPG
- Electronic Programme Guide **HDMI**
- _ High-Definition Multimedia Interface
- NTSC

National Television System Committee

One of the television signals used in USA, etc.

- RF
 - Radio Frequency Signal received from terrestrial aerial
- RGB / S-Video / Video

Choose between these three video formats depending on personal preference and equipment requirement (RGB - Red, Green and Blue)

SCART

21 pin connection used for video, audio and switching signals (Also known as Euro SCART and Peritel)

Shop viewing environment
Shop viewing environment is the
demonstration mode to explain
main features of this TV in an easy
understandable way. This mode will work if
you select "Shop" in "Auto Setup" (p. 12).

■ VCR

Video Cassette Recorder

Specifications

			TX-L32S10B	TX-L37S10B	TX-L42S10B			
Power Source			AC 220-240 V, 50 Hz					
Power Consumption			115 W	130 W	180 W			
Power Consumption in Standby mode		tion in	0,3 W (Without monitor out recording) 13 W (With monitor out recording) 14 W (With monitor out recording)					
Displa panel	Aspect Rati	0	16:9	1 67				
Display panel	Visible scre	en size	80 cm (diagonal) 697 mm (W) × 392 mm (H)	106 cm (diagonal) 930 mm (W) × 523 mm (H)				
	Number of p	oixels	2,073,600 (1,920 (W) × 1,080 ((H))				
Sound	Speaker		160 mm × 42 mm × 2 pcs, 8 Ω					
Ind	Audio Outp	ut	20 W (10 W + 10 W), 10% THE)				
	Headphone	S	M3 (3.5 mm) stereo mini Jack	× 1				
PC s	ignals		VGA, SVGA, XGA SXGA ····· (compressed) Horizontal scanning frequency Vertical scanning frequency 59	31 - 69 kHz - 86 Hz				
Receiving Systems / Band name			DVB-T : Digital terrestrial services via UHF aerial input. PAL I : UHF E21-68 PAL 525/60 : Playback of NTSC tape from some PAL Video recorders (VCR) or NTSC disc playback from DVD player and recorder. M.NTSC : Playback from M.NTSC Video recorders (VCR). NTSC (AV input only) : Playback from NTSC Video recorders (VCR).					
Aeria	al input		UHF					
Ope	rating Condit	ions	Temperature: 0 °C - 35 °C Humidity: 20 % - 80 % RH (non-condensing)					
Co	AV1 (Scart t	erminal)	21 Pin terminal (Audio/Video in, Audio/Video out, RGB in, Q-Link)					
nne	AV2 (Scart t	erminal)	21 Pin terminal (Audio/Video in, Audio/Video out, RGB in, S-Video in, Q-Link)					
ctio		VIDEO	RCA PIN Type × 1 1.0 V[p-p] (75 Ω)					
n de	AV3	S-VIDEO	Mini DIN 4-pin	Y:1.0 V[p-p] (75 Ω) C:0.286 V[[p-p] (75 Ω)			
m m		AUDIO L - R	RCA PIN Type × 2	0.5 V[rms]				
Connection Terminals	COMPONENT	COMPONENT VIDEO Y PB, PR		1.0 V[p-p] (including synchronization) ±0.35 V[p-p]				
		AUDIO L - R	RCA PIN Type × 2	0.5 V[rms]				
		HDMI 1 / 2 / 3	TYPE A Connectors	This TV supports "HDAVI Control 4" function.				
	Others PC HIGH-DENSITY D-SUB		HIGH-DENSITY D-SUB 15PIN	15PIN R,G,B/0.7 V[p-p] (75 Ω) HD, VD/TTL Level 2.0 - 5.0 V[p-p] (high impedance)				
		Card slot	SD Card slot × 1	Card slot × 1				
		AUDIO L - R	RCA PIN Type × 2	0.5 V[rms] (high impedance))			
	Output	DIGITAL AUDIO OUT	PCM / Dolby Digital, Fiber option					
Dime	Dimensions (W × H × D)		798 mm × 551 mm × 217 mm (With Pedestal) 798 mm × 511 mm × 93 mm (TV only)	1 915 mm × 620 mm × 287 mm (With Pedestal) 915 mm × 577 mm × 97 mm (TV only) 1021 mm × 636 mm × (TV only)				
Mass			13.0 kg Net (With Pedestal) 11.5 kg Net (TV only)	16.5 kg Net (With Pedestal) 21.0 kg Net (With Pedes 14.5 kg Net (TV only) 21.0 kg Net (TV only)				

Note

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

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

Information for Users on Collection and Disposal of Old Equipment and used Batteries



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste. For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.



By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

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



Cd

For business users in the European Union

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

[Information on Disposal in other Countries outside the European Union]

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

Sales and Support Information

Customer Care Centre

- For customers within the UK: 0844 844 3852
 For customers within the Republic of Ireland: 01 289 8333
- Visit our website for product information www.panasonic.co.uk
- E-mail: customer.care@panasonic.co.uk

Direct Sales at Panasonic UK

- For customers: 0844 844 3856
- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Care Centre Monday Thursday 9:00am 5:30pm, Friday 9:30am 5:30pm (Excluding public holidays).
 Or go on line through our Internet Accessory ordering application at www.panasonic.co.uk.
- Most major credit and debit cards accepted.
- All enquiries transactions and distribution facilities are provided directly by Panasonic UK Ltd.
- It couldn't be simpler!
- · Also available through our Internet is direct shopping for a wide range of finished products, take a browse on our website for further details.

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Customer's Record

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

Model Number Serial Number

Panasonic (U. K.) Ltd.

Willoughby Road, Bracknell, Berks RG12 8FP

Web Site: http://www.panasonic.net

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