

SHARP®

LC-42XL2E

LC-42XL2S

LC-46XL2E

LC-46XL2S

LC-52XL2E

LC-52XL2S

LCD COLOUR TELEVISION

LCD-FARBFERNSEHGERÄT

TÉLÉVISEUR COULEUR À ÉCRAN

CRISTAUX LIQUIDES (LCD)

TELEVISORE A COLORI LCD

LCD-KLEURENTELEVISIE

TELEVISIÓN EN COLOR LCD

OPERATION MANUAL
BEDIENUNGSANLEITUNG
MODE D'EMPLOI
MANUALE DI ISTRUZIONI
GEBRUIKSAANWIJZING
MANUAL DE MANEJO

ENGLISH

DEUTSCH

FRANÇAIS

ITALIANO

NEDERLANDS

ESPAÑOL

AQUOS



HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

DVB
Digital Video
Broadcasting

HD
ready
1080p

DOLBY
DIGITAL

SRS
TruSurround XT

100Hz
DOUBLE FRAME DRIVING



SPECIAL NOTE FOR USERS IN THE U.K.

The mains lead of this product is fitted with a non-rewireable (moulded) plug incorporating a 13A fuse. Should the fuse need to be replaced, a BSI or ASTA approved BS 1362 fuse marked  or  and of the same rating as above, which is also indicated on the pin face of the plug, must be used.

Always refit the fuse cover after replacing the fuse. Never use the plug without the fuse cover fitted.

In the unlikely event of the socket outlet in your home not being compatible with the plug supplied, cut off the mains plug and fit an appropriate type.

DANGER:

The fuse from the cut-off plug should be removed and the cut-off plug destroyed immediately and disposed of in a safe manner.

Under no circumstances should the cut-off plug be inserted elsewhere into a 13A socket outlet, as a serious electric shock may occur.

To fit an appropriate plug to the mains lead, follow the instructions below:

IMPORTANT:

The wires in the mains lead are coloured in accordance with the following code:

Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead of this product may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The wire which is coloured blue must be connected to the plug terminal which is marked N or coloured black.
- The wire which is coloured brown must be connected to the plug terminal which is marked L or coloured red.

Ensure that neither the brown nor the blue wire is connected to the earth terminal in your three-pin plug.

Before replacing the plug cover make sure that:

- If the new fitted plug contains a fuse, its value is the same as that removed from the cut-off plug.
- The cord grip is clamped over the sheath of the mains lead, and not simply over the lead wires.

IF YOU HAVE ANY DOUBT, CONSULT A QUALIFIED ELECTRICIAN.

- The illustrations and on-screen displays in this operation manual are for explanation purposes and may vary slightly from the actual operations.
- The examples used throughout this manual are based on the LC-42XL2E model.

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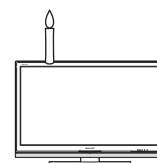
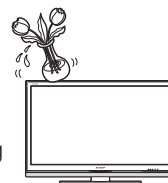
Introduction

Dear SHARP customer

Thank you for your purchase of the SHARP LCD colour TV product. To ensure safety and many years of trouble-free operation of your product, please read the Important Safety Precautions carefully before using this product.

Important Safety Precautions

- **Cleaning**—Unplug the AC cord from the AC outlet before cleaning the product. Use a damp cloth to clean the product. Do not use liquid cleaners or aerosol cleaners.
- **Water and moisture**—Do not use the product near water, such as bathtub, washbasin, kitchen sink, laundry tub, swimming pool and in a wet basement.
- **Do not place vases or any other water-filled containers on this product.**
The water may spill onto the product causing fire or electric shock.
- **Stand**—Do not place the product on an unstable cart, stand, tripod or table. Doing so can cause the product to fall, resulting in serious personal injuries as well as damage to the product. Use only a cart, stand, tripod, bracket or table recommended by the manufacturer or sold with the product. When mounting the product on a wall, be sure to follow the manufacturer's instructions. Use only the mounting hardware recommended by the manufacturer.
- When relocating the product placed on a cart, it must be moved with utmost care. Sudden stops, excessive force and uneven floor surface can cause the product to fall from the cart.
- **Ventilation**—The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a bed, sofa, rug or other similar surface, since they can block ventilation openings. This product is not designed for built-in installation; do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.
- The LCD panel used in this product is made of glass. Therefore, it can break when the product is dropped or impact applied. If the LCD panel is broken, be careful not to be injured by broken glass.
- **Heat sources**—Keep the product away from heat sources such as radiators, heaters, stoves and other heat-generating products (including amplifiers).
- To prevent fire, never place any type of candle or naked flames on the top or near the TV set.
- To prevent fire or shock hazard, do not place the AC cord under the TV set or other heavy items.
- Do not display a still picture for a long time, as this could cause an afterimage to remain.
- There is power consumption always if main plug is connected.
- **Servicing**—Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified person to perform servicing.



The LCD panel is a very high technology product, giving you fine picture details. Due to the very large number of pixels, occasionally a few non-active pixels may appear on the screen as a fixed point of blue, green or red. This is within product specifications and does not constitute a fault.

Precautions when transporting the TV

When transporting the TV, never carry it by holding onto the speakers. Be sure to always carry the TV by two people holding it with two hands — one hand on each side of the TV.

WARNING:

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Trademarks

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



- Manufactured under license from Dolby Laboratories.
- "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.

- TruSurround XT, SRS and (●●) symbol are trademarks of SRS Labs, Inc.

- The "HD ready 1080P" Logo is a trademark of EICTA.

- The DVB logo is the registered trademark of the Digital Video Broadcasting - DVB - project.

Remote control unit

NOTE

- The symbols **DVD**, **STB** and **VCR** indicate that the buttons become available in respective operating mode when using as a universal remote control.

1 **TV** (TV Standby/On) (Page 10)

2 **LIGHT** **DVD** **STB** **VCR**

When pressed, buttons that are frequently used (**P**, **^**/**v**, **◀** **+**/**-**, **0-9** numeric buttons, **⏮** and **⏭**) will light. The lighting will turn off if no operations are performed within about 5 seconds. This button is used for performing operations in low-light situations.

3 **FUNCTION** **DVD** **STB** **VCR**

Press this button briefly (for more than 0.2 second), and the remote control switches for DVD, SetTopBox or VCR operation and currently controlled devices will be indicated in the LCD window. See page 38 for how to use this unit as a universal remote control.

4 **LCD window** **DVD** **STB** **VCR**

This screen shows which device you are currently controlling. (TV, DVD, STB or VCR)

5 **0-9 numeric buttons** **STB**

Set the channel.
Enter desired numbers.
Set the page in teletext mode.

6 **⏮** (Flashback)

Press to return to the previous image in normal viewing mode.

7 **ATV**

Press to access conventional analogue TV mode.

8 **DTV**

Press to access DTV mode.

9 **◀** **(+/-)** (Volume)

Increase/decrease TV volume.

10 **⏸** (Mute)

TV sound on/off.

11 **R/G/Y/B** (Colour) buttons

On the menu screen, the coloured buttons are correspondingly used to select the coloured items on the screen. (e.g. EPG, MHEG-5, TELETEXT)

12 **▲/▼/◀/▶** (Cursor) **DVD**

Select a desired item on the setting screen.

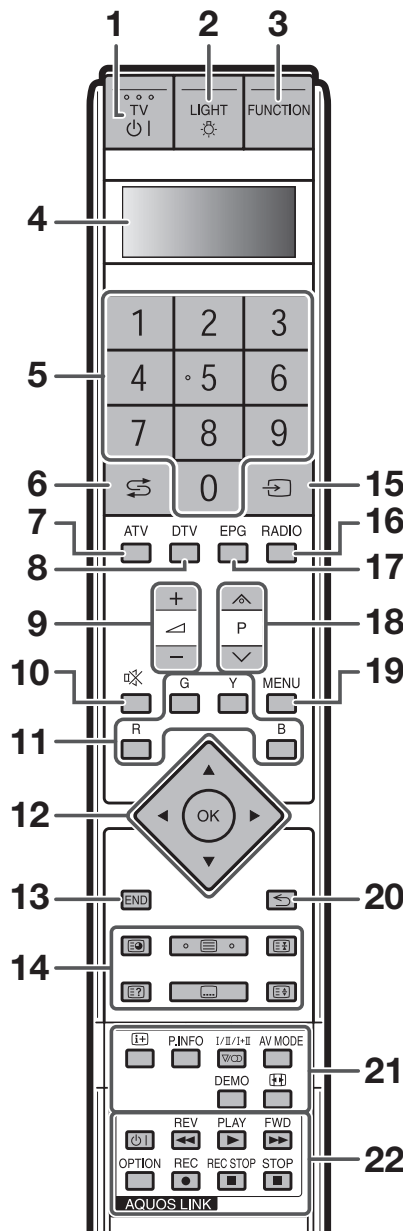
OK **DVD** **STB**

ATV/DTV/DVD/STB: Execute a command within the menu screen.

ATV/DTV: Display the programme list when no other menu screen is running.

13 **END**

Exit the menu screen.



14 **Buttons for useful operations**

⏮ (Subpage) (Page 14)

⏮ (Teletext)

ATV: Display analogue teletext. (Page 14)

DTV: Select MHEG-5 and teletext for DTV. (Page 14)

⏮ (Freeze/Hold)

Press to freeze a moving image on the screen.

TELETEXT: Stop updating Teletext pages automatically or release the hold mode.

⏮ (Reveal hidden Teletext) (Page 14)

⏮ (Subtitle)

ATV/DTV/External: Switch subtitle languages on/off. (Pages 14 and 28)

⏮ (Top/Bottom/Full)

Set the area of magnification in teletext mode. (Page 14)

15 **⏮** (INPUT SOURCE)

Select an input source. (TV, EXT1, EXT2, EXT3, EXT4, EXT5, EXT6, EXT7, EXT8) (Page 10)

16 **RADIO**

DTV: Switch between Radio and Data mode.

- When only data broadcasting (no radio broadcasting) is transmitted by DVB, the radio broadcasting will be skipped.

17 **EPG**

DTV: Display the EPG screen. (Pages 11 - 13)

18 **P** (**^**/**v**) **DVD** **STB** **VCR**

Select the TV channel.
In analogue TV mode, external sources can also be selected.

19 **MENU** **DVD**

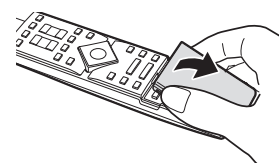
ATV/DTV: Menu screen on/off.
DVD: Title menu on/off.

20 **⏮** (Return)

Return to the previous menu screen.

21 **Buttons for other useful features**

Flip open the remote control cover on the front.



i+ (Display information)

Press to display the station information (channel number, signal, etc.) in the upper right corner of the screen. (Page 31)

P. INFO

Press to display programme information which is transmitted through digital video broadcasting in the upper left corner of the screen. (DTV only)

I/I+I+I (Sound mode)
Select the sound multiplex mode. (Page 10)

AV MODE

Select a video setting. (Page 25)

DEMO

Demonstrate the 100 Hz effects in a dual screen format. (Page 24)

⏮ (WIDE MODE)

Select the wide mode. (Pages 29 and 33)

22 **AQUOS LINK buttons** **DVD** **STB** **VCR**

TV mode: If external equipment such as a AQUOS BD Player is connected via HDMI cables and is AQUOS LINK compatible, you can use these AQUOS LINK buttons. See pages 20 and 22 for details.

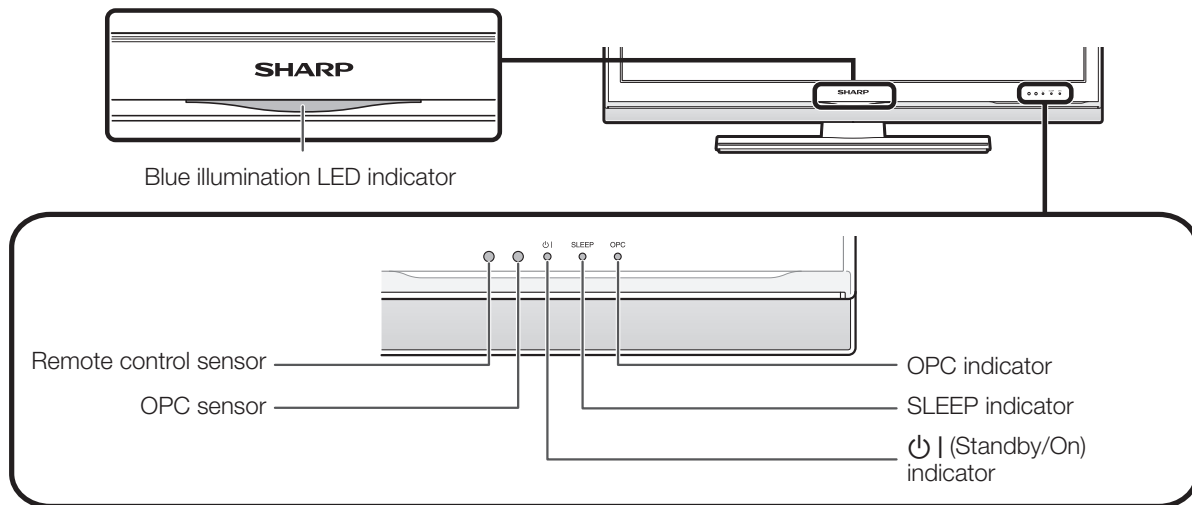
DVD/VCR mode: Press **OPTION** to pause the picture.

- The buttons except **OPTION** are correspondingly used to select the items on the screen.

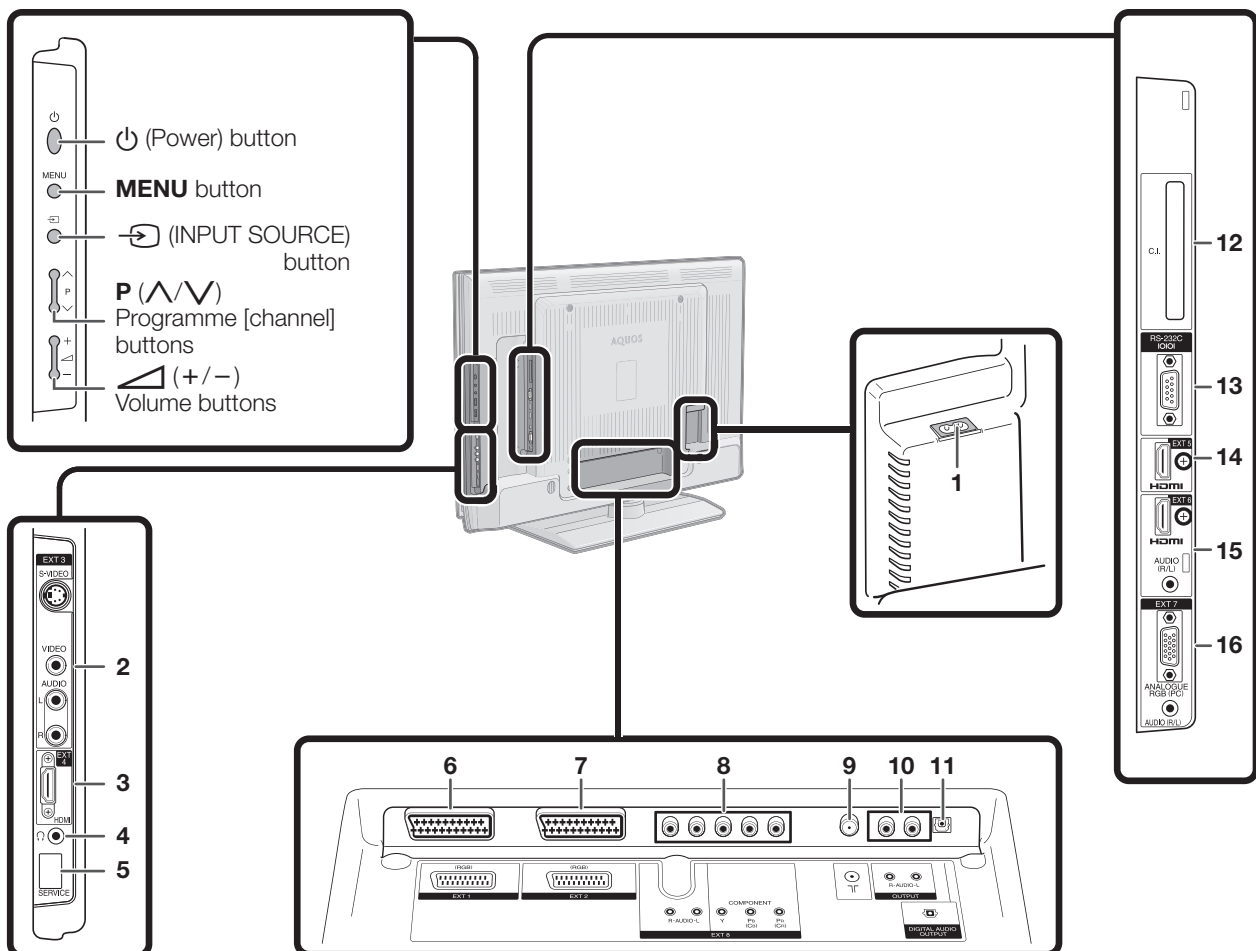
STB mode: Only the **⏮** button can be used to operate on STB.

Introduction

TV (Front view)



TV (Rear view)



- 1 AC INPUT terminal
- 2 EXT 3 terminals
- 3 EXT 4 (HDMI) terminal
- 4 Headphones
- 5 SERVICE socket

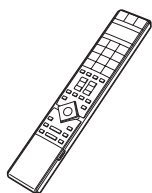
- 6 EXT 1 (RGB) terminal
- 7 EXT 2 (RGB) terminal
- 8 EXT 8 (COMPONENT/AUDIO) terminals
- 9 Antenna terminal
- 10 OUTPUT (AUDIO) terminals
- 11 DIGITAL AUDIO OUTPUT terminal

- 12 COMMON INTERFACE slot
- 13 RS-232C terminal
- 14 EXT 5 (HDMI) terminal
- 15 EXT 6 (HDMI/AUDIO) terminals
- 16 EXT 7 (ANALOGUE RGB/AUDIO) terminals

Preparation

Supplied accessories

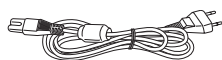
Remote control unit
(× 1)



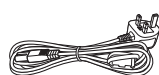
Pages 3 and 6

AC cord

(For Europe, except
U.K. and Eire)



(For U.K. and Eire)



U.K. type 3-pin AC cord is only included with
models LC-42XL2E, LC-46XL2E and LC-52XL2E.

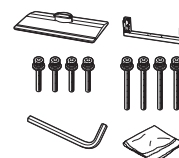
Page 8

Cable clamp (× 1)



Page 8

Stand unit (× 1)



Page 5

• Operation manual (This publication)

• “AAA” size alkaline battery (× 2) ... Page 6

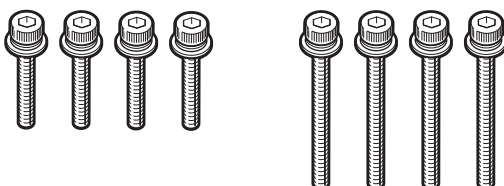
Attaching the stand unit

- Before attaching (or detaching) the stand, unplug the AC cord from the AC INPUT terminal.
- Before performing work spread cushioning over the base area to lay the TV on. This will prevent it from being damaged.

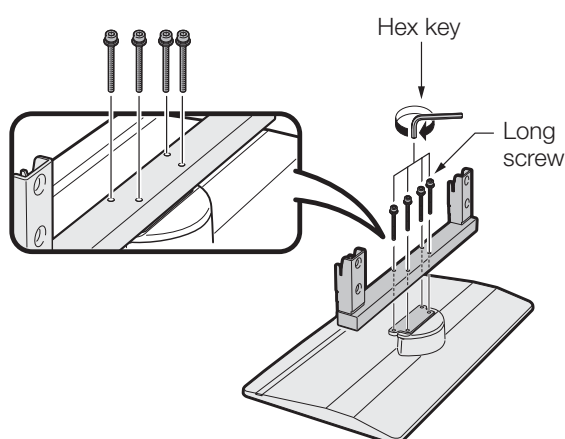
CAUTION

- **Attach the stand in the correct direction.**
- **Be sure to follow the instructions. Incorrect installation of the stand may result in the TV falling over.**

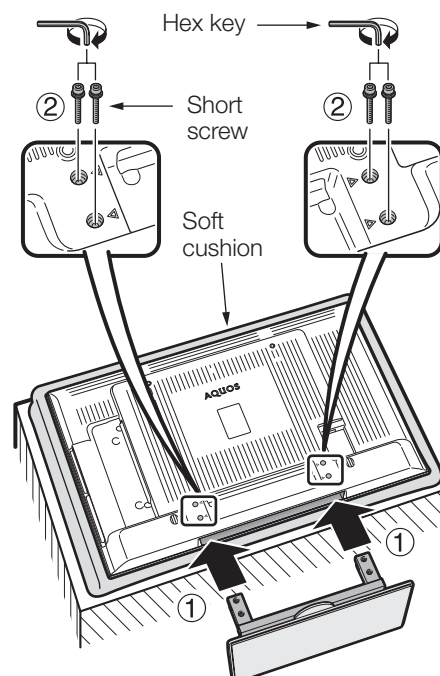
- 1** Confirm that there are 8 screws (4 short screws and 4 long screws) with the stand unit.



- 2** Attach the supporting post for the stand unit onto the base using the 4 long screws with the hex key (supplied) as shown.



- 3** ① Insert the stand into the openings on the bottom of the TV. (Hold the stand so it will not drop from the edge of the base area.)
② Insert and tighten the 4 short screws into the 4 holes on the rear of the TV.



NOTE

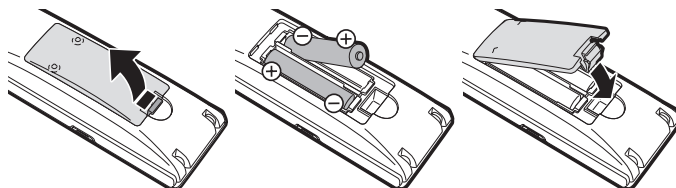
- To detach the stand unit, perform the steps in reverse order.

Preparation

Inserting the batteries

Before using the TV for the first time, insert two “AAA” size batteries (supplied). When the batteries become depleted and the remote control unit fails to operate, replace the batteries with new “AAA” size batteries.

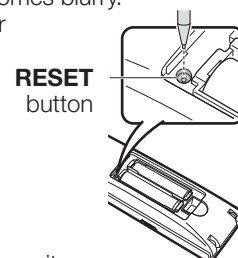
- 1 Open the battery cover.
- 2 Insert two supplied “AAA” alkaline size batteries.
 - Place batteries with their terminals corresponding to the (+) and (–) indications in the battery compartment.
- 3 Close the battery cover.



CAUTION

Improper use of batteries can result in chemical leakage or explosion. Be sure to follow the instructions below.

- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries or cause chemical leakage in old batteries.
- Remove batteries as soon as they have worn out. Chemicals that leak from batteries can cause a rash. If you find any chemical leakage, wipe thoroughly with a cloth.
- When replacing the batteries, use alkaline batteries instead of manganese ones.
- Do not overuse the light-up function of the **LIGHT** button, doing so may shorten the battery life. Replace the batteries when the light on the LCD window or the light-up function becomes weak or when the window becomes blurry.
- Do not continue to use the remote control unit with the batteries running low. This may result in error message or malfunction. Should this happen replace the batteries and leave it unused for a while. Otherwise, you may open the rear battery cover and press the **RESET** button. When you press the **RESET** button, your Universal remote control settings will be deleted.
- The remote control unit has a internal memory of external devices. In order not to lose the data, replace the batteries quickly. If the manufacturer code is initialised and lost, you can input the manufacturer code again. (See page 38 - 41.)
- The batteries supplied with this product may have a shorter life expectancy due to storage conditions.
- If you will not be using the remote control unit for an extended period of time, remove the batteries from it.



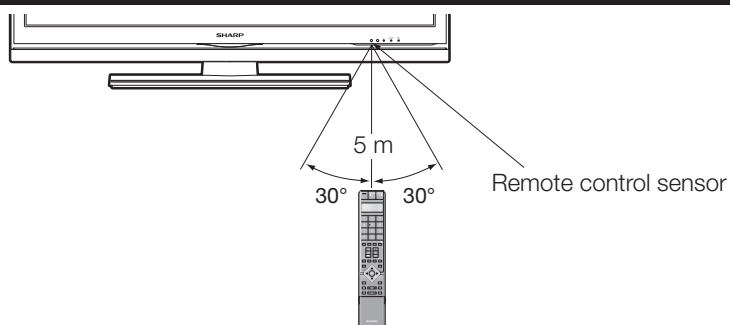
Note on disposing batteries:

The batteries provided contain no harmful materials such as cadmium, lead or mercury.

Regulations concerning used batteries stipulate that batteries may no longer be thrown out with the household rubbish. Deposit any used batteries free of charge into the designated collection containers set up at commercial businesses.

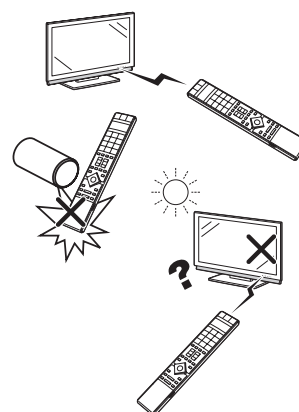
Using the remote control unit

Use the remote control unit by pointing it towards the remote control sensor. Objects between the remote control unit and sensor may prevent proper operation.



Cautions regarding the remote control unit

- Do not expose the remote control unit to shock. In addition, do not expose the remote control unit to liquids, and do not place in an area with high humidity.
- Do not install or place the remote control unit under direct sunlight. The heat may cause deformation of the unit.
- The remote control unit may not work properly if the remote control sensor of the TV is under direct sunlight or strong lighting. In such case, change the angle of the lighting or TV, or operate the remote control unit closer to the remote control sensor.



Quick guide

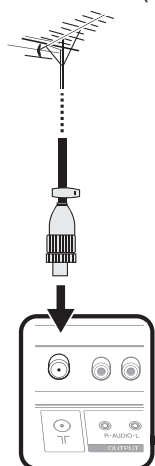
Initial installation overview

Follow the below steps one by one when using the TV for the first time. Some steps may not be necessary depending on your TV installation and connection.

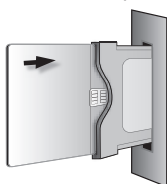
1

Preparation

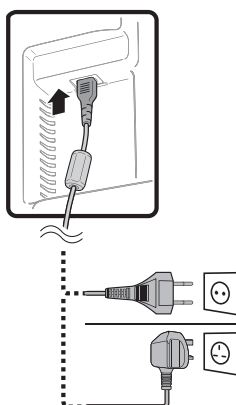
- 1 Connect antenna cable to the antenna terminal. (Page 8)



- 2 If necessary, insert CA card into the CI slot to watch scrambled broadcasts. (Pages 8 and 19)



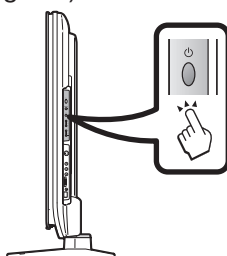
- 3 Connect the AC cord to the TV. (Page 8)



2

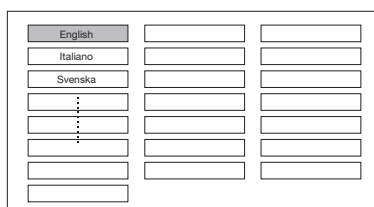
Power on and run the auto installation

- 1 Turn on the TV power with . (Page 10)

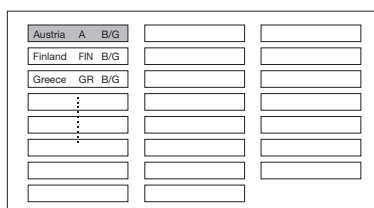


- 2 Run the initial auto installation. (Page 9)

✓ Language setting



✓ Country setting



✓ Channel search setting



Start searching channels

3

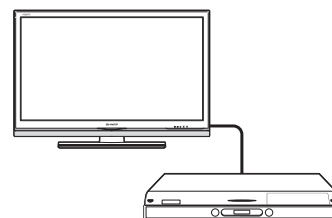
Watch TV

- 1 **Congratulations!**
Now you can watch TV.

- 2 If necessary, adjust the antenna to attain maximum signal reception. (Page 9)

Connect external devices

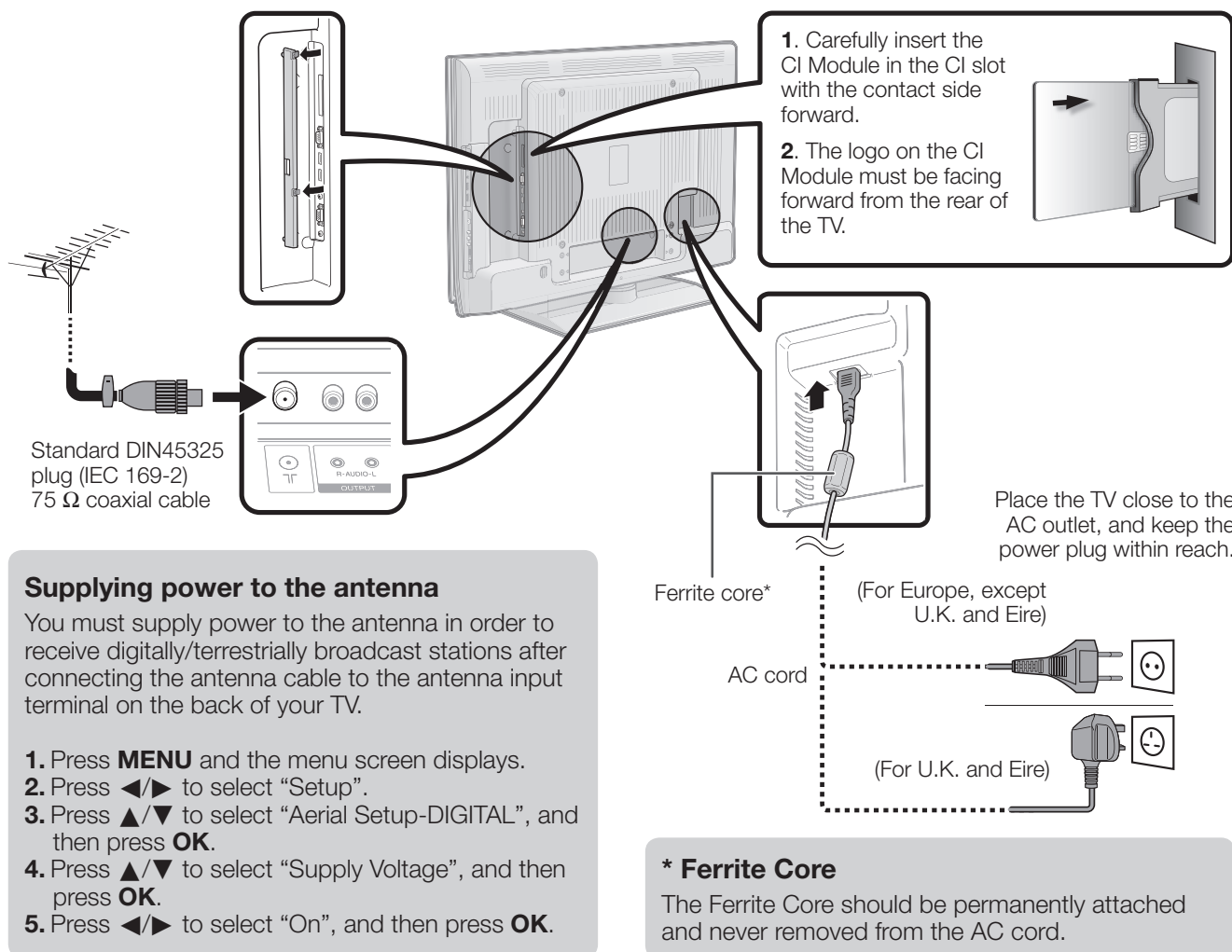
- 1 Connect external devices such as a DVD as instructed. (Pages 15 - 17)



- 2 Connect external audio devices such as speakers/amplifier as instructed. (Pages 15 and 18)



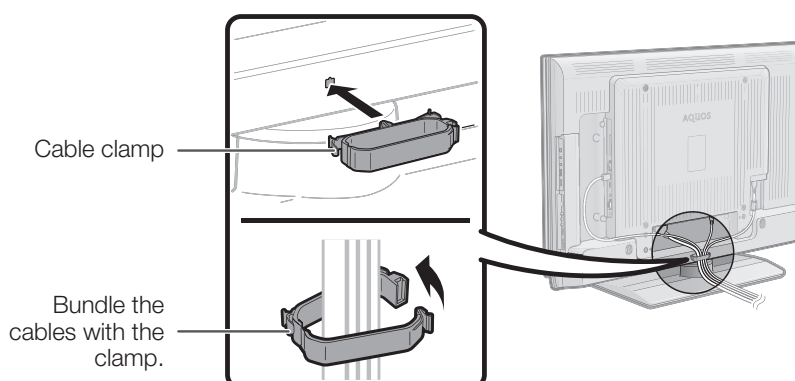
Before turning on the power



Setting the TV on the wall

- This TV should be mounted on the wall only with the wall mount bracket available from SHARP. (Page 43) The use of other wall mount brackets may result in an unstable installation and may cause serious injuries.
- Installing the LCD Colour TV requires special skill that should only be performed by qualified service personnel. Customers should not attempt to do the work themselves. SHARP bears no responsibility for improper mounting or mounting that results in accident or injury.
- You can ask a qualified service personnel about using an optional bracket to mount the TV to the wall.
- To use this TV mounted on a wall, first remove the adhesive tape at the 2 locations on the rear of the TV, and then use the screws supplied with the wall mount bracket to secure the bracket to the rear of the TV.
- When you mount the TV on the wall, you should attach the supporting post.

Bundling the cables



Initial auto installation

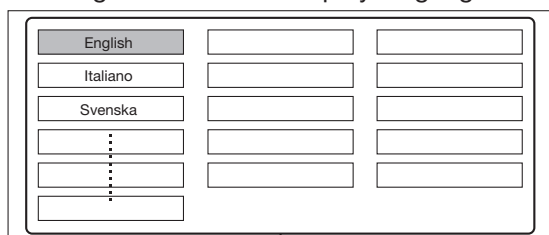
When the TV powers on for the first time after purchase, the initial auto installation wizard appears. Follow the menus and make the necessary settings one after another.

Confirm the following before turning on the power

- Is the antenna cable connected?
- Is the AC cord plugged in?

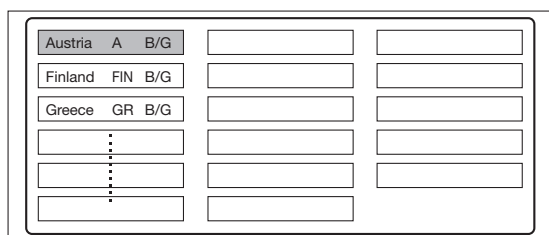
- 1 Press **⏻** on the TV.
 - The initial auto installation wizard appears.

- 2 Setting the on-screen display language



Press **▲/▼/◀/▶** to select the desired language, and then press **OK**.

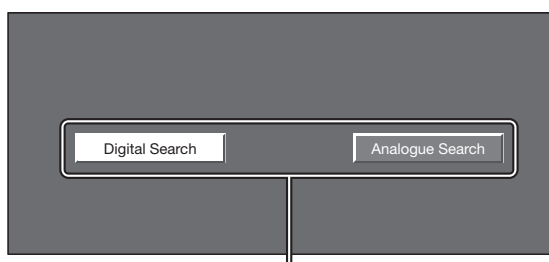
- 3 Setting the country (Location of TV set screen)



Press **▲/▼/◀/▶** to select your country or area, and then press **OK**.

- The Location of TV set screen only appears during the first installation.

- 4 Starting channel search



Press **◀/▶** to select "Digital Search" or "Analogue Search", and then press **OK**.

- If you want to search for more broadcasts, execute "Auto Installation" again from the Setup menu.

- 5 The TV searches for, sorts and stores all the receivable TV stations according to their settings and the connected antenna.
 - To abort the initial auto installation in progress, press **END**.

NOTE

- If you turn off the power on the TV after performing step 4, the initial auto installation wizard does not appear. The auto installation function allows you to execute the installation again from the Setup menu. (Page 26)
- The initial auto installation wizard will go off if you leave the TV unattended for 30 minutes before searching for channels in step 5.

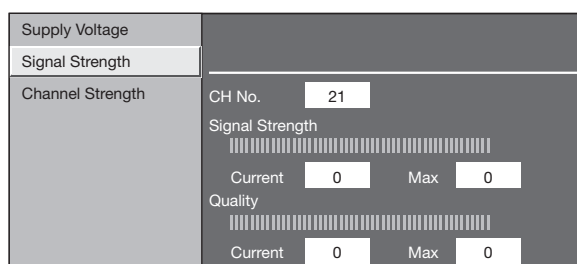
Checking signal strength and channel strength

If you install a DVB-T antenna for the first time or relocate it, you should adjust the alignment of the antenna to receive a good reception while checking the antenna setup screen.

- 1 Press **MENU** and the menu screen displays.
- 2 Press **◀/▶** to select "Setup".
- 3 Press **▲/▼** to select "Aerial Setup-DIGITAL", and then press **OK**.

● Checking signal strength

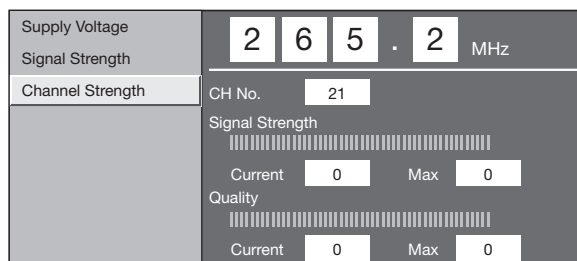
Press **▲/▼** to select "Signal Strength".



● Checking channel strength

Press **▲/▼** to select "Channel strength", and then press **OK**.

- You can input a specified frequency band using **0 - 9** numeric buttons.



- 4 Position and align the antenna so that the maximum possible values for "Signal Strength" and "Quality" are obtained.

NOTE

- The values of "Signal Strength" and "Quality" indicate when to check the appropriate alignment of the antenna.

Watching TV

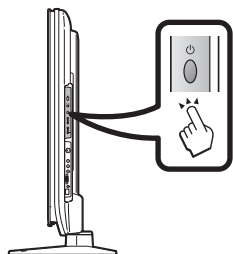
Daily operation

Switching on/off

Turning on/off the power

Press  on the TV.

Switch it off by pressing  on the TV.



- However, please bear in mind that EPG data (electronic programme guide) will be lost, and programmed timer recordings will not be performed by the TV.

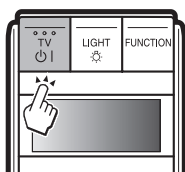
Standby mode

To standby mode

If the TV set is switched on, you can switch it to standby by pressing **TV**  on the remote control.

Switching on from standby

From standby, press **TV**  on the remote control.



TV indicator status

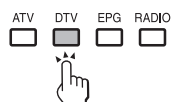
 indicator	Status
Off	Power off
Green	Power on
Red	Standby

NOTE

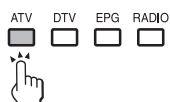
- If you are not going to use this TV for a long period of time, be sure to remove the AC cord from the power outlet.
- A small amount of electric power is still consumed even when  is turned off.

Switching between analogue and digital broadcasts

Watching digital broadcasts



Watching analogue broadcasts



Changing channels

With **P**  **P** :

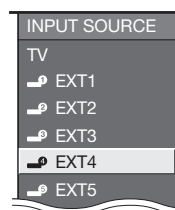


With **0 - 9**:



Selecting external video source

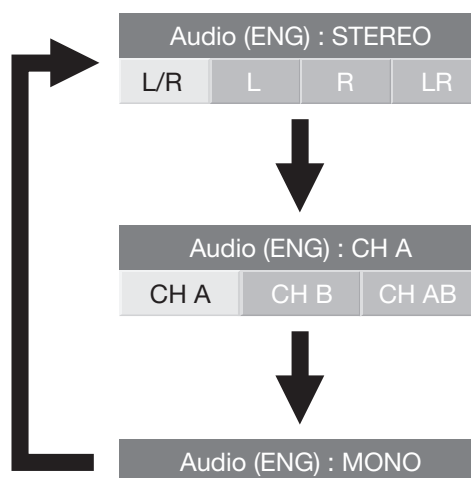
Once the connection is made, press  to display the INPUT SOURCE screen, and then press / to switch over to the appropriate external source with **OK**.



Selecting Sound mode

DTV mode:

- If multi sound modes are received, each time you press  the mode switches as follows.



- Press / to select L or R sound when the STEREO or DUAL MONO screen is displayed.



NOTE

- The sound mode OSD disappears in 6 seconds.
- Selectable items vary depending on the received broadcasts.

ATV mode:

Each time you press , the mode switches as illustrated in the following tables.

NICAM TV broadcasts selection	
Signal	Selectable items
Stereo	NICAM STEREO, MONO
Bilingual	NICAM CH A, NICAM CH B, NICAM CH AB, MONO
Monaural	NICAM MONO, MONO
A2 TV broadcasts selection	
Signal	Selectable items
Stereo	STEREO, MONO
Bilingual	CH A, CH B, CH AB
Monaural	MONO

NOTE

- When no signal is input, the sound mode will display "MONO".

EPG (Electronic Programme Guide)

EPG (Electronic Programme Guide) is a programme list that is displayed on the screen. With the EPG, you can check the schedule of DTV/RADIO/DATA, view detailed information about them, tune to an event currently on-air and set a timer for future events.

EPG Overview

Basic functions

- Select a programme using EPG (Page 12)
- Check programme information (Page 12)

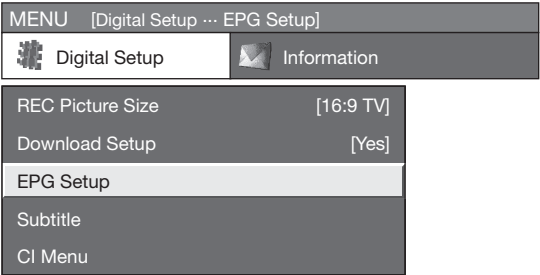
Useful functions

- Search for a programme by category (Page 12)
- Search for a programme by date and time (Page 12)
- Timer recoding using EPG (Page 13)

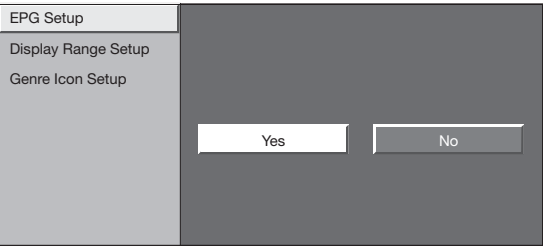
Useful settings for using EPG

Common Operation

- Press **MENU** to display the menu screen.
- Press **Left/Right** to select “Digital Setup”.



- Press **Up/Down** to select “EPG Setup”, and then press **OK**.



- Press **Left/Right** to select “Yes” or “No”, and then press **OK**.

EPG display settings

EPG Setup (setting for receiving EPG data)

If you want to use the EPG for digital stations, select “Yes”. The EPG data must be automatically captured while the TV set is in standby mode. After setting to “Yes”, it may take some time to turn off the power using the remote control due to the process of the data capture.

NOTE

- If the TV main power is switched off, the EPG data will not capture.

Display Range Setup

The Display range setup allows you to select three types of time spans for display on the screen.

Item

Wide Angle: Display six hours of programme information.
Zoom: Display three hours of programme information.
Vertical Angle: Change to the EPG display format with a vertical time span.

Genre Icon Setup

You can grey out or place a mark on desired genres and smoothly search for programmes you frequently watch.

Genre Icon List

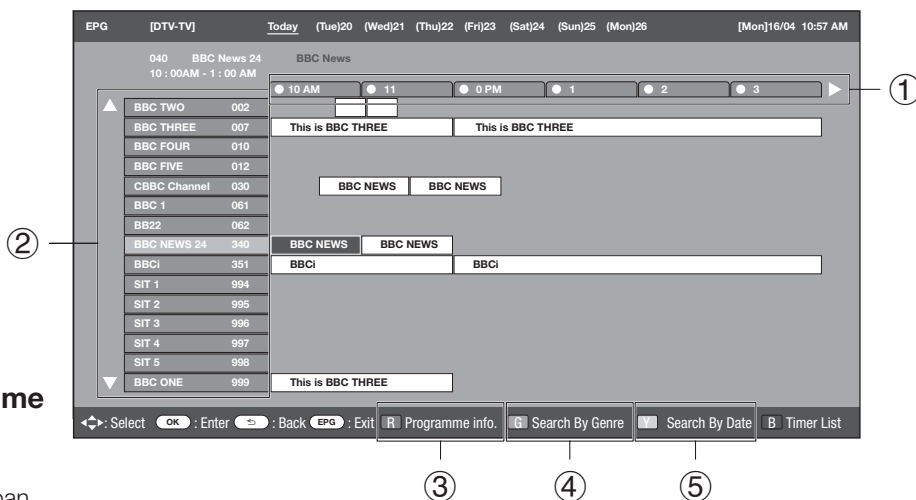
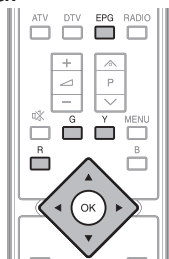
Icon	Genre	Icon	Genre
	Movie/Drama		Music/Ballet/Dance
	News/Current affairs		Arts/Culture (without music)
	Show/Game show		Social/Political Issues/Economics
	Sports		Education/Science/Factual Topics
	Children's/Youth programmes		Leisure hobbies

Selecting a programme using EPG

Basic Operation

● Display the EPG screen

Press **EPG**.



● Select a programme

① Press **◀/▶** to select the time span you want to search.

- Continue to press **▶** to display programmes in the next time span.

② Press **▲/▼** to select the desired programme.

- If **▲** or **▼** are displayed on the left of the services, continue to press **▲/▼** to display next or previous screen.

● Close the EPG screen

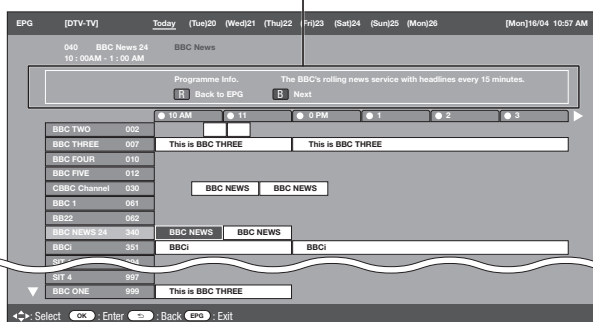
Press **EPG** again.

Selecting a programme

③ Check programme information

- 1 Press **▲/▼/◀/▶** to select the programme you want to check.
- 2 Press **R**.

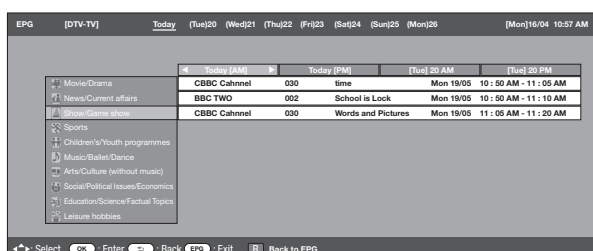
Programme Information



③ Press **OK** to tune to the selected programme.

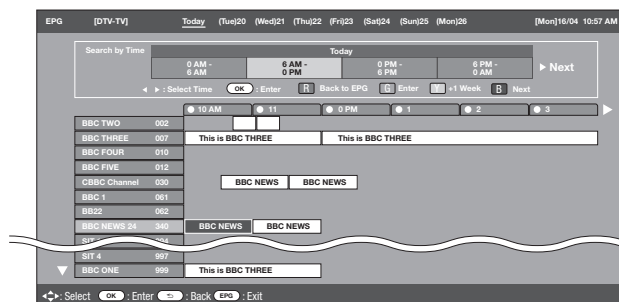
④ Search a programme in a category

- 1 Press **G**.
- 2 Press **▲/▼** to select the desired genre, and then press **OK**.
- 3 Press **▲/▼** to select a programme you want to watch, and then press **OK**.



⑤ Search for a programme by date/time

- 1 Press **Y**.
- 2 Press **◀/▶** to select the desired time span and then press **OK**.



③ Press **▲/▼** to select the desired programme, and then press **OK**.

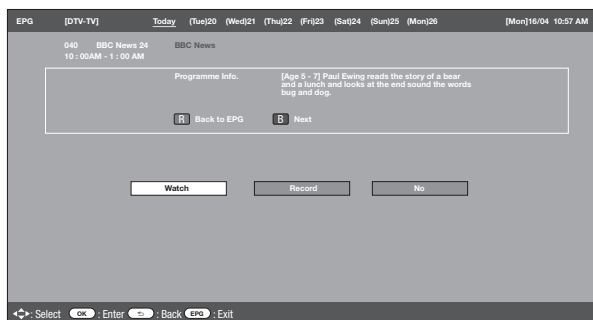
NOTE

- When you select a programme outside of the current time span, the timer setting screen displays. (Page 13)

Timer recording using EPG

You can record TV programmes using data from the EPG.

- 1 Press **EPG**.
- 2 Press **▲/▼/◀/▶** to select the programme you want to record, and then press **OK**.
- 3 Press **◀/▶** to select the preferred timer setting, and then press **OK**.



- If you select “No”, the TV returns to the EPG screen.

● Selecting “Watch” in the timer setup screen

This setting allows you to switch to a programme at a set time.

- ① Press **◀/▶** to select “Watch”, and then press **OK**.
- ② Press **◀/▶** to select “Yes”, and then press **OK**.
 - The selected TV programme is marked with an icon.

● Selecting “Record” in the timer setup screen

This setting allows you to record a programme at a set time.

- ① Press **◀/▶** to select “Record”, and then press **OK**.
- ② Press **◀/▶** to select the preferred timer recording type, and then press **OK**.

Item

AQUOS LINK: Record a programme at a set time when a device compatible with AQUOS LINK is connected.

AV LINK: Record a programme at a set time when a device compatible with AV LINK is connected.

VHS tape: Record a programme at a set time when a device compatible with VHS tape is connected.

NOTE

- Refer to pages 15-17 and 21 for connecting external devices.
- The selected TV programme is marked with an icon.

Cancelling the timer recording

- 1 Press **EPG**.
- 2 Press **▲/▼/◀/▶** to select the programme on timer setup, and then press **OK**.
- 3 Press **◀/▶** to select “Cancel”, and then press **OK**.

● Cancelling using B button on the remote control

- 1 Press **EPG**.
- 2 Press **B** to display the timer recording screen.
- 3 Press **▲/▼** to select a programme with a set timer recording you want to change, and then press **OK**.
- 4 Press **◀/▶** to select “Cancel” and then press **OK**.

Teletext

What is Teletext?

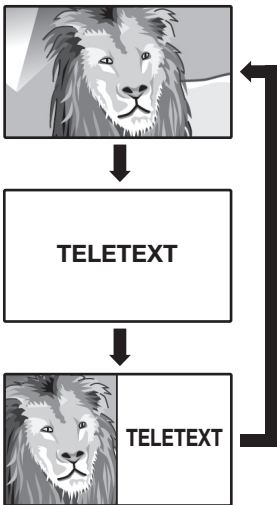
Teletext broadcasts pages of information and entertainment to specially equipped television sets. Your TV receives Teletext signals broadcast by a TV network, and decodes them into graphical format for viewing. News, weather and sports information, stock exchange prices and programme previews are among the many services available.

Turning on and off Teletext

- 1 Select a TV channel or external source providing a Teletext programme.
- 2 Press  to display the Teletext.



- Many stations use the TOP operating system, while some use FLOF (e.g. CNN). Your TV supports both these systems. The pages are divided into topic groups and topics. After switching on the teletext, up to 2000 pages are stored for fast access.
- Each time you press , the screen switches as shown below.
- Press  again to display the Teletext on the right screen and the normal image on the left screen.
- If you select a programme with no Teletext signal, "No Teletext available." displays.
- The same message displays during other modes if no Teletext signal is available.



NOTE

- Teletext will not work if the selected signal type is RGB. (See page 32)

Buttons for teletext operations

Buttons	Description
P ( / )	Increase or decrease the page number.
Colour (R / G / Y / B)	Select a group or block of pages displayed in the coloured brackets at the bottom of the screen by pressing the corresponding Colour (R/G/Y/B) on the remote control unit.
0 - 9	Directly select any page from 100 to 899 by using 0 - 9 .
 (Top/Bottom/Full)	Switch the Teletext image to Top, Bottom or Full.
 ((Reveal hidden Teletext))	Reveal or hide hidden information such as an answer to a quiz.
 ((Freeze/Hold))	Stop updating Teletext pages automatically or release the hold mode.
 ((Subtitle for Teletext))	Display the subtitle or exit the subtitle screen. • Subtitles will not be displayed when the service does not contain subtitle information.
 ((Subpage))	Reveal or hide subpages. • R button: Move to the previous subpage. • G button: Move to the following subpage. • These two buttons are shown on the screen by the signs - and +.

Using the MHEG5 application (UK only)

Some services bring you programmes with the MHEG (Multimedia and Hypermedia Expert Group) application encoded, letting you experience DTV interactively. When provided, the MHEG5 application will start when you press .

Sample MHEG5 screen



Connecting external devices

Before connecting ...

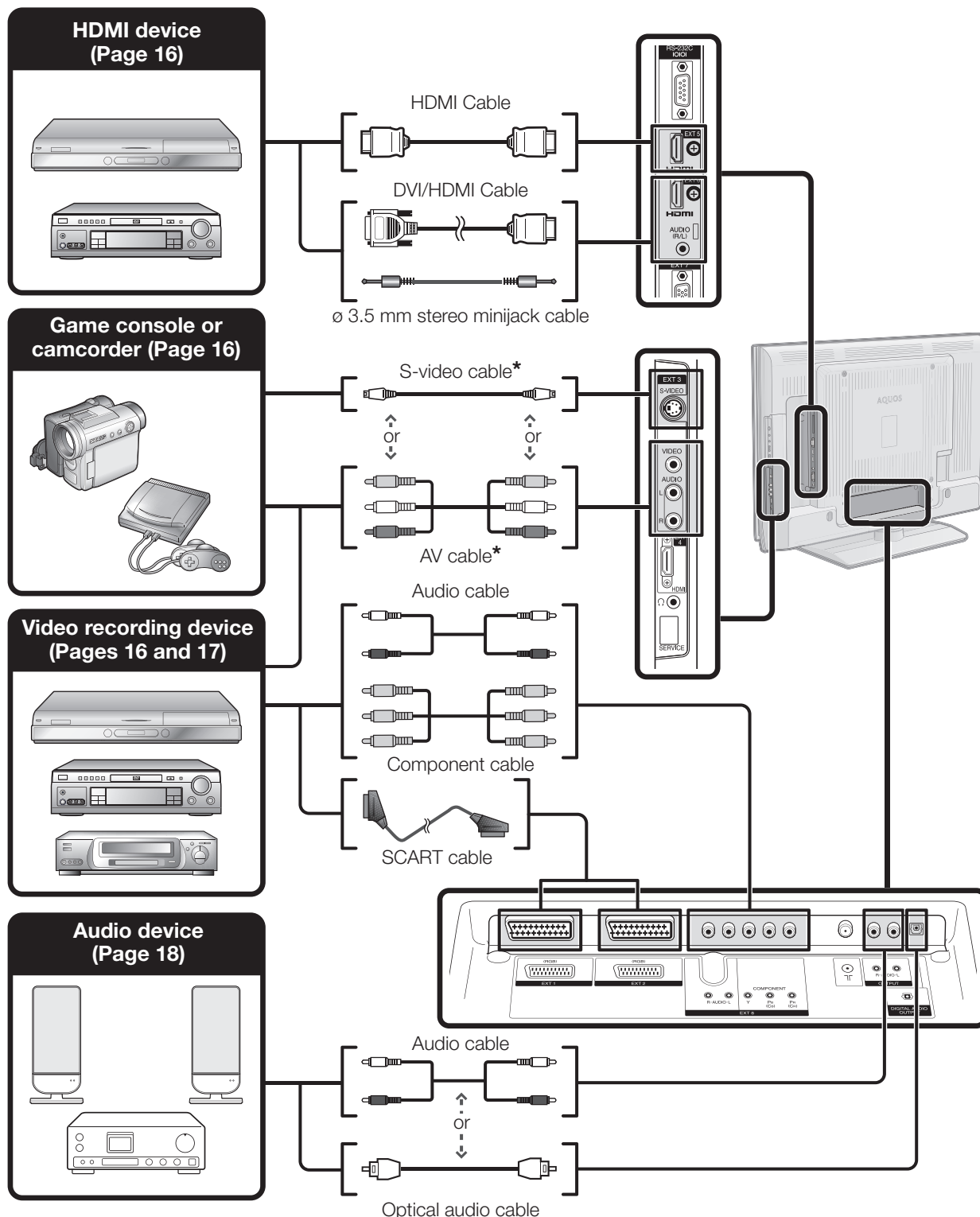
- Be sure to turn off the TV and any devices before making any connections.
- Firmly connect a cable to a terminal or terminals.
- Carefully read the operation manual of each external device for possible connection types. This also helps you get the best possible audiovisual quality to maximise the potential of the TV and the connected device.

Introduction to connections

The TV is equipped with the terminals as showed below. Find the cable corresponding the TV's terminal and connect the device.

NOTE

- The cables illustrated in pages 15 to 18 are commercially available items.



* When using an S-video cable, you also need to connect an audio cable (R/L).

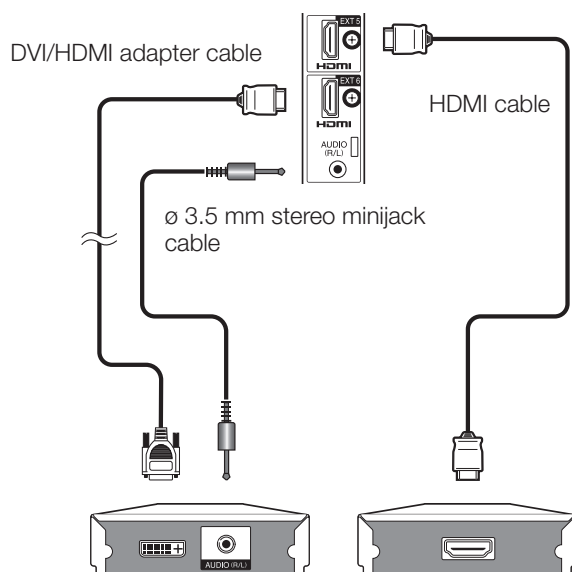
Connecting external devices

HDMI connection

Example of connectable devices

- DVD ● Blu-ray player/recorder

The HDMI connections (High Definition Multimedia Interface) permit digital video and audio transmission via a connection cable from a player/recorder. The digital picture and sound data are transmitted without data compression and therefore lose none of their quality. Analogue/digital conversion is no longer necessary in the connected devices, which also would result in quality losses.



DVI/HDMI conversion

Using an DVI/HDMI adapter cable, the digital video signals of a DVD can also be played via the compatible HDMI connection. The sound must be fed in additionally.

Both HDMI and DVI use the same HDCP copy protection method.

After connecting

HDMI Audio Select

After connecting, you must set the audio signal compatible with the cable you use for the HDMI device.

- 1 Go to MENU > Option > HDMI Audio Select
- 2 Select "Digital" for audio signals via the HDMI terminal. Select "Analogue" for audio signals via the AUDIO jack (EXT6).

NOTE

- If a connected HDMI device is AQUOS LINK compatible, you can take advantage of versatile functions. (Pages 20 - 22)
- Video noise may occur depending on the type of HDMI cable used. Make sure to use certified HDMI cable.
- When playing the HDMI image, the best possible format for the picture will be detected and set automatically.

Supported video signal:

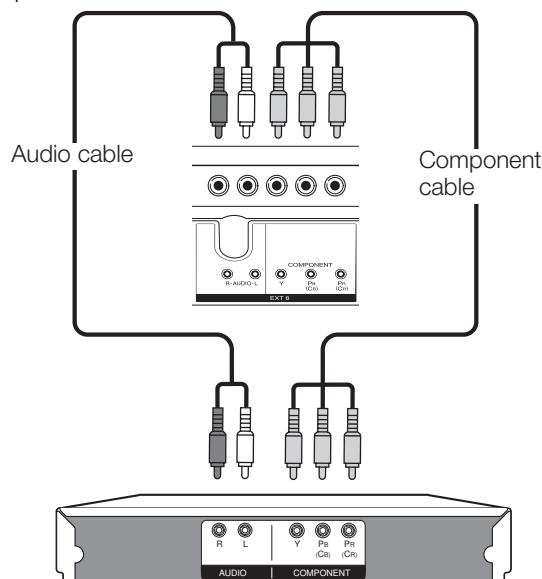
576i, 576p, 480i, 480p, 1080i, 720p, 1080p
See page 36 for PC signal compatibility.

Component connection

Example of connectable devices

- VCR ● DVD ● Blu-ray player/recorder

You will enjoy accurate colour reproduction and high quality images through the EXT 8 terminal when connecting a DVD recorder or other recording equipment.

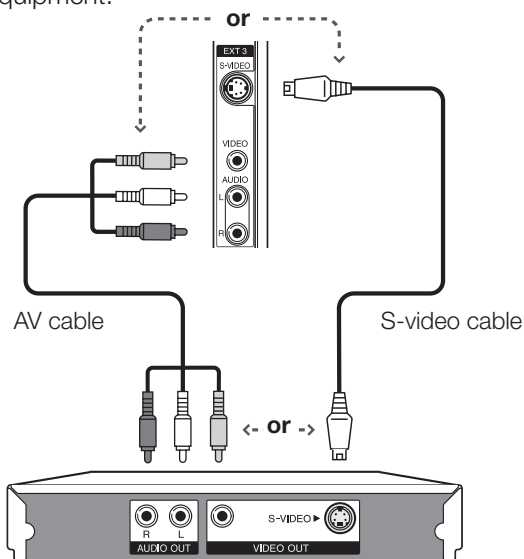


S-VIDEO/VIDEO connection

Example of connectable devices

- VCR ● DVD ● Blu-ray player/recorder
- Game console ● Camcorder

You can use the EXT 3 terminal when connecting to a game console, camcorder, a DVD recorder and some other equipment.



NOTE

- When using an S-video cable, you also need to connect an audio cable (R/L).
- EXT3: The S-VIDEO terminal has priority over the VIDEO terminal.

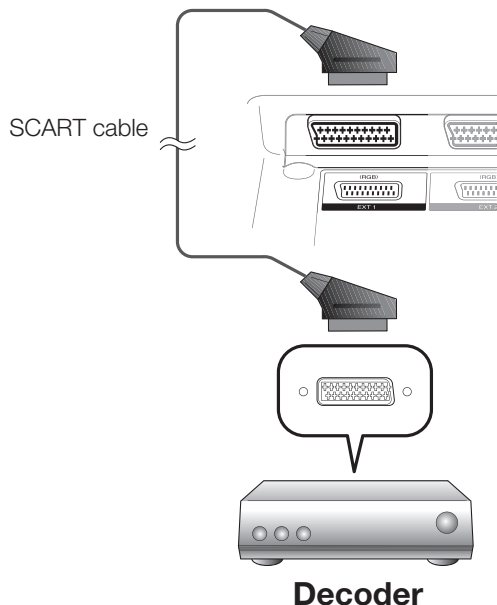
Connecting external devices

SCART connection

Example of connectable devices

- Decoder

● When using the EXT 1 (SCART) terminal

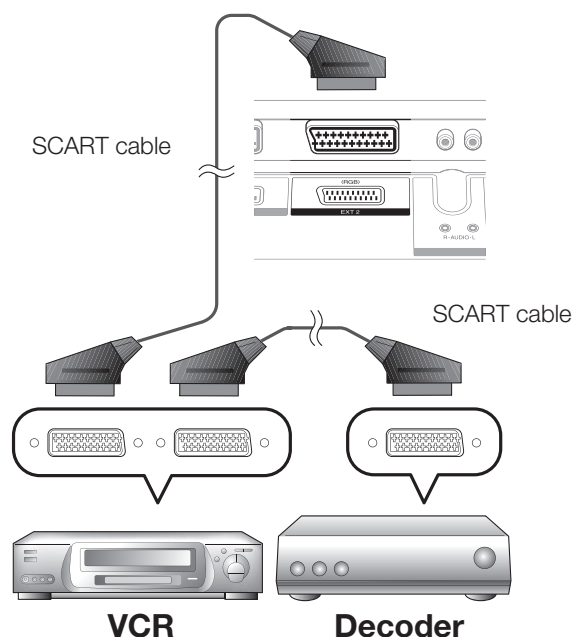


Example of connectable devices

- VCR ● DVD recorder

● When using the EXT 2 (SCART) terminal

If your VCR supports TV-VCR advanced AV Link systems, you can connect the VCR using a fully wired SCART cable.



NOTE

- In cases when the decoder needs to receive a signal from the TV, make sure to select the appropriate input terminal to which the decoder is connected in "Manual adjust" in the "Analogue Setting" menu. (Page 27)
- TV-VCR advanced AV Link systems may not be compatible with some external sources.
- Do not connect the decoder to the EXT2 terminal.
- You cannot connect the VCR with Decoder using a fully wired SCART cable when selecting "Y/C" under the EXT2 in the "Input Select" menu.

Controlling devices with SCART using AV Link

This TV incorporates four typical AV Link functions for smooth connections between the TV and other audiovisual equipment.

One Touch Play

While the TV is in standby mode, it automatically turns on and plays back the image from the audiovisual source (e.g. VCR, DVD).

TV Standby

When the TV enters standby mode, the connected audiovisual equipment (e.g. VCR, DVD) enters standby mode as well.

WYSIWYR (What You See Is What You Record)

When the remote control unit of the connected VCR has the WYSIWYR button, you can automatically start recording by pressing the WYSIWYR button.

Preset Download

Automatically transfers the channel preset information from the tuner on the TV to the one on the connected audiovisual equipment (e.g. VCR) via the EXT 2 terminal.

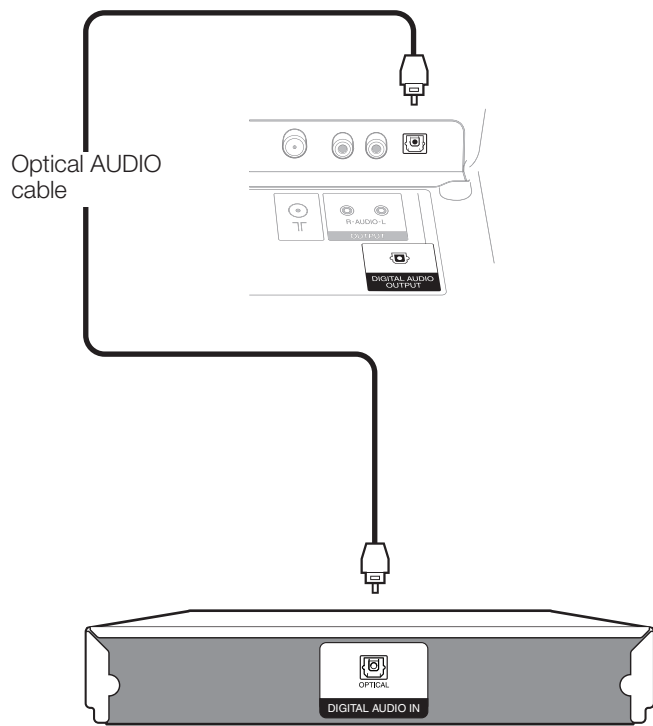
NOTE

- Refer to the operation manuals of external equipment for the details.
- Only works when the audiovisual equipment is connected to the EXT 2 terminal on the TV with AV Link via a fully wired SCART.
- The use of the AV Link function is only possible if the TV-set has enforced a complete auto installation with the connected audiovisual equipment. (Page 9, initial auto installation)
The availability of the AV Link function depends on the audiovisual equipment used. Depending on the manufacturer and type of equipment used, it is possible that the described functions may be completely or partially unusable.

Speaker/amplifier connection

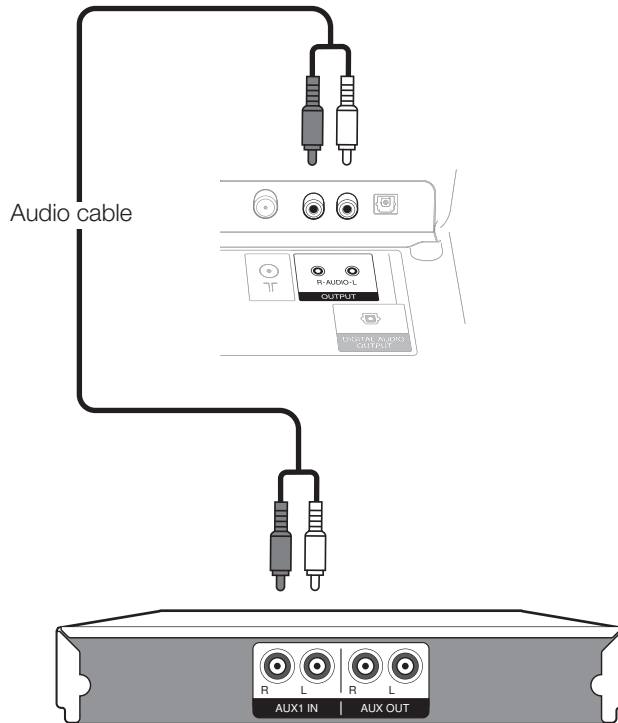
Connect an amplifier with external speakers as shown below.

● Connecting an amplifier with digital audio input



**Amplifier with
digital audio input**

● Connecting an amplifier with analogue audio input



**Amplifier with
analogue audio input**

● After connecting

Digital audio output setting

After connecting an amplifier with digital audio input and external speakers as shown, you should set an audio output format compatible with the programme you are watching or the device connected.

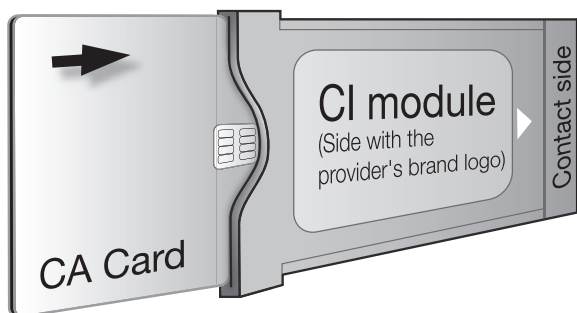
Go to MENU > Option > Digital Audio Output
> select "PCM" or "Dolby Digital"

Inserting a CA Card

In order to receive coded digital stations, a Common Interface Module (CI Module) and a CA Card must be inserted in the CI slot of your TV set. (Page 8)
The CI Module and the CA Card are not supplied accessories. They are usually available from your dealer.

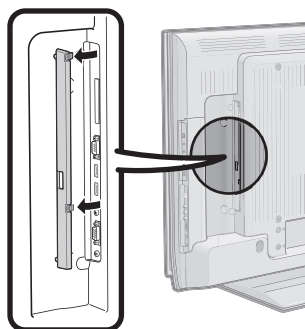
Inserting the CA Card into the CI Module

- 1 With the side with the gold coloured contact chip facing the side of the CI Module marked with the provider's logo, push the CA Card into the CI Module as far as it will go. Note the direction of the arrow printed on the CA Card.



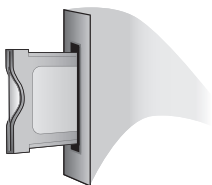
Inserting the CI Module in the CI slot

- 2 Remove the rear terminal cover.



- 3 Carefully insert the CI Module in the CI slot with the contact side forward.

The logo on the CI Module must be facing forward from the rear of the TV. Do not use excessive force. Make sure the module is not bent in the process.



Checking CI Module information

NOTE

- Make sure that the CI Module is properly inserted.
- This menu is only available for digital stations.

- 1 Press **MENU** and the menu screen displays.
- 2 Press **◀/▶** to select "Digital Setup".
 - The content of this menu depends on the provider of the CI Module.
- 3 Press **▲/▼** to select "CI Menu", and then press **OK**.
- 4 Press **▲/▼** to select the following desired item, and then press **OK**.

● Module

General information on CI Module displays.

● Menu

Adjustment parameters of each CA CARD displays.

● Enquiry

You can input numerical values such as passwords here.

NOTE

- The content of each screen depends on the manufacturer of the CI module.

Removing the CI Module

- 1 Remove the cover from the rear of the set.
- 2 Remove the module from the set.
- 3 Replace the cover.



AQUOS LINK

Controlling HDMI devices using AQUOS LINK

What is AQUOS LINK?

Using the HDMI CEC (Consumer Electronics Control) protocol, with AQUOS LINK you can interactively operate compatible system devices (AV amplifier, DVD, Blu-ray Disc device) using a single remote control.

NOTE

- AQUOS LINK-compatible AQUOS BD Player, AQUOS AUDIO speaker system and AQUOS Recorder are to be on sale after the release of this TV. (As of September 2007)

What you can do with AQUOS LINK

✓ One Touch Recording (DTV only)

You do not have to search for the remote control of your recording device. Press the **REC** ● or **REC STOP** ■ buttons inside the flip cover to start/stop recording what you see on the recorder.

✓ One Touch Play

While the TV is in standby mode, it automatically turns on and plays back the image from the HDMI source.

✓ Single remote control operation

The AQUOS LINK automatically recognises the connected HDMI device and you can control the TV and the devices as if using a universal remote control.

✓ Operating Title list of external devices

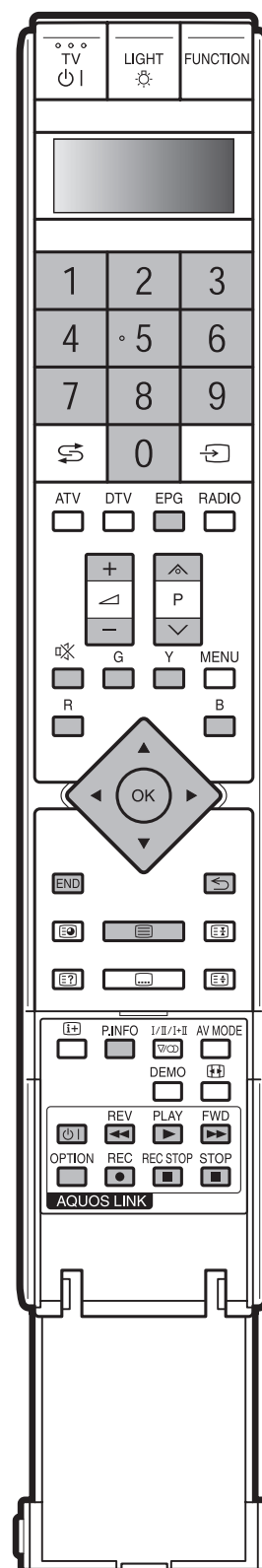
In addition to displaying the TV's own Timer list (Page 12), you can also call up the external player's Top menu or AQUOS BD Player's/AQUOS Recorder's Title list provided that the devices support AQUOS LINK.

✓ Multiple control of HDMI devices

You can select which HDMI device to operate using the **OPTION** button.

NOTE

- Point the remote control toward the TV, not to the connected HDMI device.
- Video noise may occur depending on the type of HDMI cable used. Make sure to use a certified HDMI cable.
- Up to 3 HDMI recording devices, one AV amplifier and two players can be connected using this system.
- These operations affect the HDMI device selected as the current external source. If the device does not operate, turn on the device and select the appropriate external source using →.
- When you insert/remove HDMI cables or change connections, turn on all connected HDMI devices before turning on the TV. Confirm that picture and audio are correctly output by selecting "EXT4", "EXT5" or "EXT6" from the INPUT SOURCE menu.



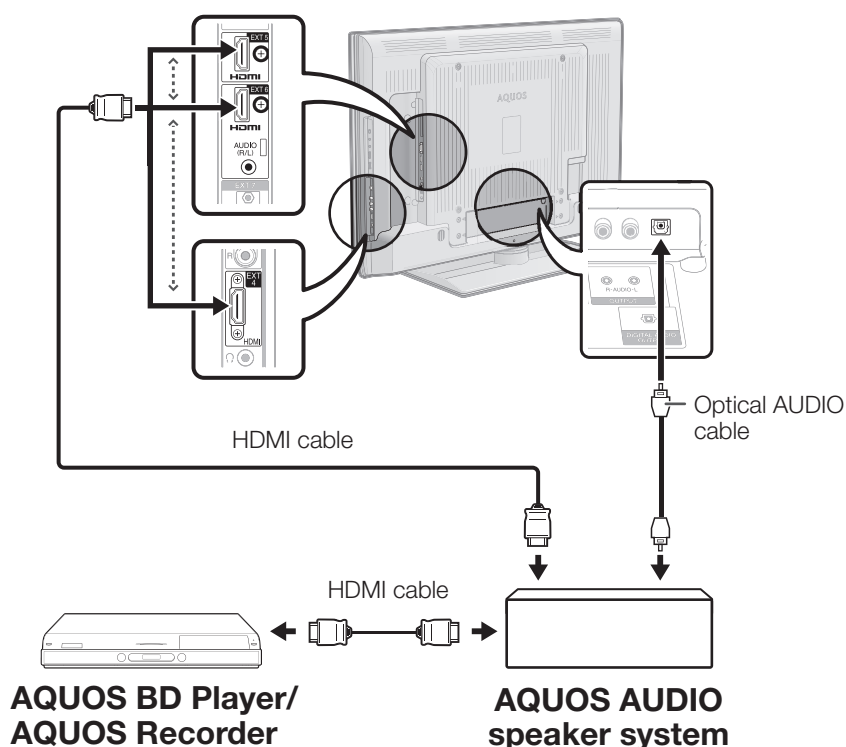
AQUOS LINK connection

First connect the AQUOS AUDIO speaker system or an AQUOS BD Player/AQUOS Recorder that supports the HDMI CEC protocol.

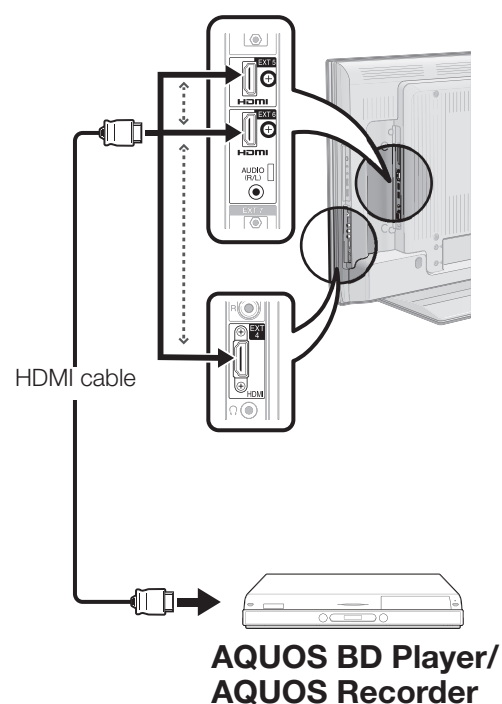
NOTE

- Refer to the operation manual of the device to be connected for further details.
- After unplugging connection cables or changing the connection pattern, first turn on the power of the TV with all relevant device's power turned on. Change the external input source by pressing , select the appropriate external source and verify the audiovisual output.
- The cables illustrated in the following explanation are commercially available items.

Connecting an AQUOS BD Player/AQUOS Recorder via the AQUOS AUDIO speaker system



Connecting an AQUOS BD Player/AQUOS Recorder only



AQUOS LINK Setup

AQUOS LINK Auto power on

If this is activated, the One Touch Play function is enabled. While the TV is in standby mode, it automatically turns on and plays back the image from the HDMI source.

- 1 Press **MENU** and the menu screen displays.
- 2 Press  to select "Option".
- 3 Press  to select "AQUOS LINK Setup", and then press **OK**.
- 4 Press  to select "Auto Power On", and then press **OK**.
- 5 Press  to select "On", and then press **OK**.

NOTE

- The factory default for this item is "Off".

Selecting recorder

Here, you can select a recorder for the recording from several connected recorders.

- 1 Repeat steps 1 to 3 in **AQUOS LINK Auto power on**.
- 2 Press  to select "Selecting Recorder", and then press **OK**.
- 3 Select the recorder, and then press **OK**.

NOTE

- If you have connected the AQUOS AUDIO speaker system between the TV and an AQUOS Recorder, the external source's indication changes from "EXT5" to "EXT5 (Sub)".

Using Genre Info.

This function allows you to automatically switch to the appropriate sound mode depending on the genre information included the digital broadcast.

- 1 Repeat steps 1 to 3 in **AQUOS LINK Auto power on**.
- 2 Press  to select "Using Genre Info.", and then press **OK**.
- 3 Press  to select "On", and then press **OK**.

Operating an AQUOS LINK device

AQUOS LINK allows you to operate the HDMI-connected device with one remote control.

- 1 Open the remote control's flip cover.
- 2 Press **PLAY** ► to start playback of a title.
 - See the right column, section “**Playback of titles using AQUOS LINK**” if you want to start playback using the list of the titles of the AQUOS BD Player/AQUOS Recorder.
- 3 Press **FWD** ►► to fast forward.
 Press **REV** ◀◀ to reverse.
 Press **STOP** ■ to stop.
 Press **⏻** | to turn the HDMI-connected device on/off.

Listening with the AQUOS AUDIO speaker system

You can opt to listen to the TV sound only from the AQUOS AUDIO speaker system.

- 1 Open the remote control's flip cover.
- 2 Press **OPTION**.

AQUOS LINK Menu
Recorder EPG
Top Menu/Title List
Media change
By AQUOS AUDIO SP
By AQUOS SP
Sound mode change
Model select

- 3 Press **▲/▼** to select “By AQUOS AUDIO SP”, and then press **OK**.
 - The sound from the TV speaker and headphone terminal is silenced and only the sound from the AQUOS AUDIO speaker system is audible.

Listening with the AQUOS TV speaker system

You can opt to listen to the TV sound only from the AQUOS TV speaker system.

- 1 Open the remote control's flip cover.
- 2 Press **OPTION**.
 - The AQUOS LINK Menu displays.
- 3 Press **▲/▼** to select “By AQUOS SP”, and then press **OK**.

Manually changing the AQUOS AUDIO speaker system's sound mode

- 1 Open the remote control's flip cover.
- 2 Press **OPTION**.
 - The AQUOS LINK Menu displays.
- 3 Press **▲/▼** to select “Sound mode change”.
- 4 The sound mode changes every time you press **OK**.
 - Refer to the operation manual of the AQUOS AUDIO speaker system for details.

Playback of titles using AQUOS LINK

This section explains how to play back a title in the AQUOS BD Player/AQUOS Recorder.

- 1 Open the remote control's flip cover.
- 2 Press **OPTION**.
 - The AQUOS LINK Menu displays.
- 3 Press **▲/▼** to select “Top Menu/Title List”, and then press **OK**.
 - The linked recorder now powers on and the TV automatically selects the appropriate external input source.
 - The title list data from the connected AQUOS BD Player/AQUOS Recorder displays.
- 4 Select the title with **▲/▼/◀/▶**, and then press **PLAY** ►.

Selecting media type for CEC-compatible recorder

If your recorder has multiple storage media, select the media type here.

- 1 Open the remote control's flip cover.
- 2 Press **OPTION**.
 - The AQUOS LINK Menu displays.
- 3 Press **▲/▼** to select “Media change”, and then press **OK**.
- 4 Select the desired medium, such as DVD or HDD. The media type changes every time you press **OK**.

HDMI device selection

If multiple HDMI devices are connected in a daisy chain, you can specify which device to control here.

- 1 Open the remote control's flip cover.
- 2 Press **OPTION**.
 - The AQUOS LINK Menu displays.
- 3 Press **▲/▼** to select “Model select”, and then press **OK**. The HDMI device changes every time you press **OK**.

Recording via the AQUOS Recorder EPG (only for recorders)

You can call up the CEC-compatible recorder's EPG and preset timer recordings using the TV's remote control.

- 1 Open the remote control's flip cover.
- 2 Press **OPTION**.
 - The AQUOS LINK Menu displays.
- 3 Press **▲/▼** to select “Recorder EPG”, and then press **OK**.
 - The external input source switches and the recorder's EPG is displayed.
- 4 Select the programme to record.
 - Refer to the operation manual of the recorder for details.

Menu operation

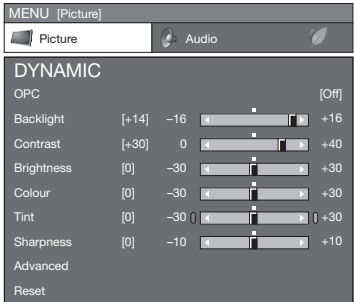
What is the Menu?

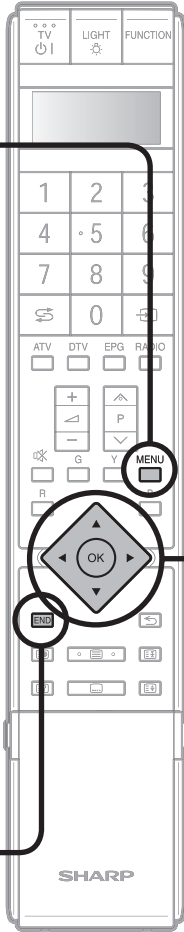
- You need to bring up the On-Screen Display to perform settings for the TV. The On-Screen Display for the settings is called "Menu".
- The Menu enables various settings and adjustments.
- The Menu can be operated with the remote control unit.

Common operations

1 Display the Menu Screen

Press **MENU** and the MENU screen displays.



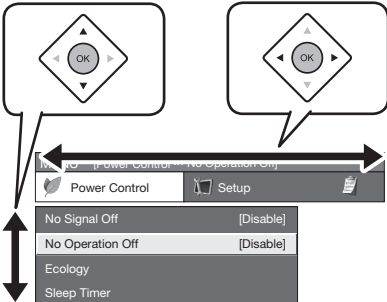


2 Select an item

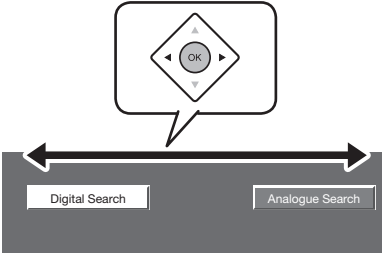
Press **▲/▼/◀/▶** to select/adjust the desired menu, and adjust the item to the desired level, and then press **OK**.

Press **↶** to return to the previous Menu page.

● **Selecting in the Menu**



● **Selecting options**



3 Exit the Menu screen

The operation will exit the menu screen if you press **END** before it is completed.

NOTE

- Menu options differ in the selected input modes, but the operating procedures are the same.
- The screens in the operation manual are for explanation purposes (some are enlarged, others cropped) and may vary slightly from the actual screens.
- Items with cannot be selected for various reasons.

Operation without a remote control

This function is useful when there is no remote control within your reach.



- 1 Press **MENU** briefly to display the direct control screen.
- 2 Press **P ▲/▼** instead of **▲/▼** or **◀/▶** instead of **◀/▶** to select the item.
- 3 Press **→** to complete the setting.

NOTE

- The direct control menu screen will disappear if left unattended for several seconds.

About the Guide Display

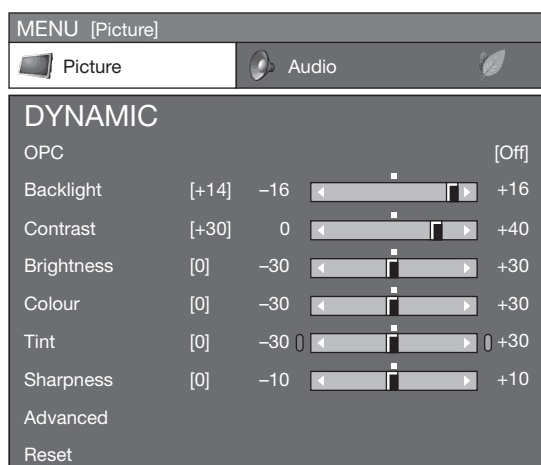
The Guide Display at the bottom of the screen shows operations with an On-Screen Display.



The bar above is an operational guide for the remote control. The bar will change in accordance with each menu setting screen.

Basic adjustment

Picture Settings



Picture OPC

Automatically adjust the brightness of the screen.

Item

Off: The brightness is fixed at the value set in Backlight.
On: Automatically adjusts
On:Display: Displays the OPC effect on the screen while adjusting the brightness of the screen.

NOTE

- When set to "On", the TV senses the surrounding light and automatically adjusts the backlight brightness. Make sure no object obstructs the OPC sensor, which could affect its ability to sense surrounding light.

Picture Picture adjustments

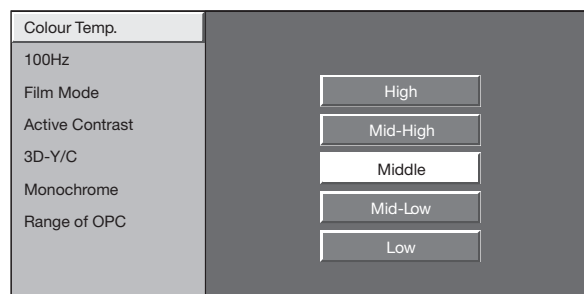
Adjust the picture to your preference with the following picture settings.

Adjustment items

Selectable items	◀ button	▶ button
Backlight	The screen dims	The screen brightens
Contrast	For less contrast	For more contrast
Brightness	For less brightness	For more brightness
Colour	For less colour intensity	For more colour intensity
Tint	Skin tones become purplish	Skin tones become greenish
Sharpness	For less sharpness	For more sharpness

Picture Advanced

This TV provides various advanced functions for optimising the picture quality.



Colour Temp.

Adjust the colour temperature to give the best white image.

Item

High: White with bluish tone
Mid-High: Intermediate tone between High and Middle
Middle: Natural tone
Mid-Low: Intermediate tone between Middle and Low
Low: White with reddish tone

100Hz

100Hz technology provides superior solutions for digital display picture quality removing motion blur.

NOTE

- Press **DEMO** on the remote control unit to show 100Hz demonstration in a dual screen format.
- This effect is greater on fast moving images.
- 100 Hz will have no effect in the following cases;
 - 1) The type of signal received is a PC signal.
 - 2) An OSD is being displayed.
 - 3) Teletext is activated.
- If images appear blurred, set the "Film Mode" to "Off".

Film Mode

Automatically detects a film-based source (originally encoded at 24/25 frames/second, depending on the vertical frequency), analyses it and then recreates each still film frame for high-definition picture quality.

Active Contrast

Automatically adjusts the contrast of an image according to the scene.

3D-Y/C

Provide high quality images with minimal dot crawl and cross colour noise by detecting changes in the image.

Item

Standard: Normal adjustment
Fast: Set the optimum image quality for fast-moving images.
Slow: Set the optimum image quality for slow-moving images.
Off: No detecting

NOTE

- 3D-Y/C may not operate depending on the input signal type or noisy input signal.
- 3D-Y/C has even more effect on composite video signals (CVBS).

Basic adjustment

Monochrome

For viewing a video in monochrome.

Range of OPC

The brightness level range of the OPC sensor's automatic adjustments can be set according to your preferences. The adjustment range of the OPC sensor can be set to a maximum of +16 and a minimum of -16.

Selectable items	Description
Max.	-16 through +16
Min.	-16 through +16

NOTE

- This function is available only when the "OPC" setting is set to "On" or "On: Display".
- The maximum setting cannot be set to a smaller number than the minimum setting.
- The minimum setting cannot be set to a bigger number than the maximum setting.
- The maximum and minimum settings cannot be set to the same number.
- Depending on the brightness of the surrounding light, the OPC sensor might not operate if the adjustment range is small.

AV Mode

AV Mode gives you five viewing options to choose from to best match the system environment, which can vary due to factors like room-brightness, type of programme watched or the type of image input from external equipment.

- 1 Press **AV MODE**.
- 2 Each time you press **AV MODE**, the mode changes.
 - You can also switch the mode on the "Picture" and "Audio" menu screen by pressing **AV MODE**.

Item

STANDARD: For a highly defined image in a normally bright room.

MOVIE: For viewing a movie in a darkened room.

GAME: For playing of video games.

PC*: For PC.

xvYCC:** Produce realistic colour on the TV screen unlike any other signal.

USER: Allows the user to customise settings as desired. You can set the mode for each input source.

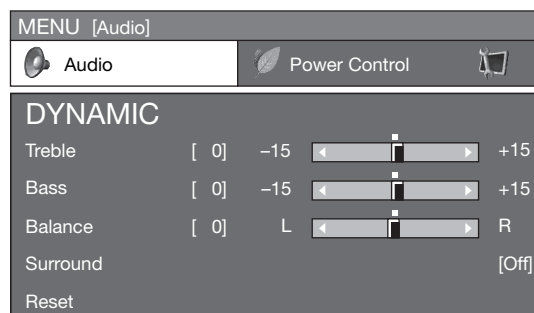
DYNAMIC (Fixed): For a clear-cut image emphasising high contrast for sports viewing. (The Picture and Audio settings cannot be adjusted.) Each setting value cannot be changed in this mode.

DYNAMIC: For a clear-cut image emphasising high contrast for sports viewing.

NOTE

- The item marked with * is available only when selecting "EXT4", "EXT5", "EXT6" or "EXT7" from the INPUT SOURCE menu.
- The item marked with ** is available only when accepting an xvYCC signal through an HDMI terminal.

Audio Settings



Audio

Audio adjustment

You can adjust the sound quality to your preference with the following settings.

Selectable items	◀ button	▶ button
Treble	For weaker treble	For stronger treble
Bass	For weaker bass	For stronger bass
Balance	Decrease audio from the right speaker	Decrease audio from the left speaker

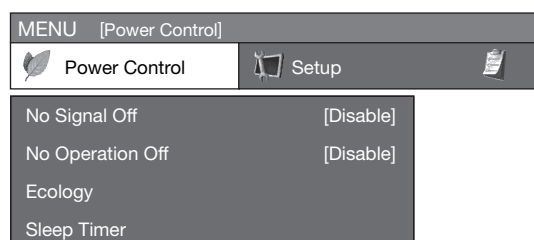


Audio

Surround

This function allows you to enjoy realistic "live" sound.

Power Save Settings



Power Control

No Signal Off

When set to "Enable" the TV will automatically enter the standby mode if there is no signal input for 15 minutes.

- Five minutes before the TV enters standby mode, the remaining time displays every minute.

NOTE

- When a TV programme finishes, this function may not operate.

Basic adjustment



Power Control

No Operation Off

The TV will automatically enter the standby mode if no operations are performed during the time span you set ("30min." or "3hr.").

- Five minutes before the TV enters standby mode, the remaining time displays every minute.



Power Control

Ecology

When set to "Yes" the TV activates the following power saving mode.

- OPC set to "On" (Page 24)
- Standby Mode set to "Mode 2" (Page 32)
- No Signal Off set to "Enable" (Page 25)
- No Operation Off set to "3hr." (Page 26)



Power Control

Sleep Timer

Allows you to set a time when the TV automatically switches to standby.

NOTE

- Select "Off" to cancel the sleep timer.
- When the time has been set, countdown automatically starts.
- Five minutes before the preset of time expires, the remaining time displays each minute.

Channel Settings

Auto Installation



Setup

Auto Installation

The TV automatically detects and stores all available services in your area. This function also allows you to perform the channel setting for "Digital" and "Analogue" individually and reconfigure the settings after the initial auto installation has been completed.

- 1 After selecting "Yes" on the screen, you can set language and channel search the same as in the initial auto installation. Follow steps 2, 4 and 5 on page 9.

NOTE

- You cannot set the country setting in "Auto Installation" in the Setup menu. If you want to reconfigure the country setting, automatically execute initial auto installation after executing "Reset" from the Setup menu.
- The current country setting is displayed on the screen.

Digital channel settings



Setup

Programme Setup

Digital Setting

You can reconfigure DTV services settings automatically or manually.

Additional Search

Use this menu to add new services automatically after auto installation has been completed.

Manual Search

Add new services within a specified frequency band.

- Enter the frequency using **0 - 9** numeric buttons.

Manual Adjust

Configure various settings for each service using the **Colour (R, G, Y, B)** buttons.

MENU [Setup ... Programme Setup ... Digital Setting ... Manual Adjust]

	Service No.	Service Name	Lock	CH Skip	EPG Skip	Old LCN
DTV	993	SIT 3				
DTV	994	SIT 2	✓		✓	
DTV	995	SIT 1		✓		
DTV	996	Monosco 576-2				
DTV	997	Monosco 576-1				
DTV	998	Color Bar 576i				
DTV	999	HD Monosco				
R : Lock G : CH Skip Y : EPG Skip B : Sort						

- 1 Press **▲/▼** to select the desired service.
- 2 Press the colour button on the remote control corresponding with the item you want to reconfigure.
 - The **✓** mark indicates the operation is set to on. Each time the colour button is pressed, you can switch the corresponding operation on/off.

Buttons for Manual Adjust operation

Lock: Press R button.

When the service is locked, you must enter your PIN whenever you tune to the service.

CH Skip: Press G button.

Services with a **✓** mark are passed over when pressing **P▲/▼** in the TV/remote control unit.

EPG Skip: Press Y button.

Services with a **✓** mark are passed over in the Electronic Programme Guide (EPG).

Sort: Press B button.

The item position of services can be sorted.

- ① Press **▲/▼** to select the service whose item position you want to move, and then press **OK**.

DTV	994	SIT 2	✓	✓
DTV	995	SIT 1		✓

- ② Press **▲/▼** to move it to the desired position, and then press **OK**.

DTV	994	SIT 1		✓
DTV	995	SIT 2	✓	✓

- ③ Repeat steps 1 and 2 until all desired service items are sorted.

Analogue channel settings



Setup

Programme Setup

Analogue setting

You can reconfigure Analogue TV channels settings automatically or manually.

● Additional search

Use this menu to add new channels automatically after auto installation has been made.

- Start searching channels after selecting colour system and sound system.

● Manual Adjust

Use this menu to set up analogue TV channels manually.

After selecting "Yes" on the screen, press **▲/▼/◀/▶** to select the channel you want to set and the press **OK**.

Fine

You can adjust the frequency to the desired position.

NOTE

- Adjust while checking the background picture as a reference.
- Instead of pressing **◀/▶** to adjust the frequency, you can set by directly entering the frequency number of the channel with **0 - 9**.

EXAMPLE

- 179.25 MHz: Press **1 → 7 → 9 → 2 → 5**.
- 49.25 MHz: Press **4 → 9 → 2 → 5 → OK**.

Colour sys.

Select the optimum colour system to receive. (Auto, PAL, SECAM)

Sound sys. (Broadcasting systems)

Select the optimum sound systems (Broadcasting systems) to receive. (B/G, D/K, I, L/L')

Label

When a TV channel sends its Network Name, the Auto Installation detects the information and assigns a name to it. However, you can change individual channel names.

- 1 Press **▲/▼/◀/▶** to select each character of the new name for the channel, and then press **OK**.
- 2 Repeat step 1 above until the name is fully spelt out.

NOTE

- The name can be 5 characters or less.
- If a channel name is less than 5 characters, select "END" to set the channel name.

Skip

Channels with "Skip" set to "On" are passed over when using **P▲/P▼** even if selected while watching the image from the TV.

Decoder

When connecting a decoder to the unit, you need to select EXT1 or EXT2.

NOTE

- "Off" is factory preset value.

Lock

You can block the viewing of any channel.

NOTE

- See "Child Lock" for setting a PIN.
- When Lock is set to "On" for a channel, "Child lock has been activated." displays, and the image and sound of the channel are blocked.
- When pressing **↵** while "Child lock has been activated." displays, the PIN input menu will display. Inputting the correct PIN lifts the child lock temporarily until the power is turned off.

● Sort

Channel positions can be sorted freely.

- 1 Press **◀/▶** to select "Yes", and then press **OK**.
- 2 Press **▲/▼/◀/▶** to select the channel you want to move, and then press **OK**.
- 3 Press **▲/▼/◀/▶** to move it to the desired position, and then press **OK**.
- 4 Repeat steps 3 and 4 until all desired channels are sorted.

● Erase Programme

An individual programme can be erased.

- 1 Press **◀/▶** to select "Yes", and then press **OK**.
- 2 Press **▲/▼/◀/▶** to select the channel you want to erase, and then press **OK**.
 - A message screen pops up.
- 3 Press **◀/▶** to select "Yes", and then press **OK** to erase the selected programme. All the subsequent programmes move up.
- 4 Repeat steps 3 and 4 until all desired channels are erased.

Useful Viewing functions

Selecting the WSS picture size automatically



Setup

WSS

WSS allows a television to switch automatically among the different screen formats.

NOTE

- Use WIDE MODE if an image does not switch to the correct screen format. When the broadcast signal contains no WSS information, the function will not work even if enabled.

Selecting the WSS picture size manually



Setup

4:3 Mode

The WSS signal has 4:3 auto-switching that allows you to select between Panorama and Normal.

Item

Normal: Normal range keeping 4:3 or 16:9 aspect ratio
Panorama: Wide image without side bars

WSS signal 4:3 screen

4:3 mode "Normal"



4:3 mode "Panorama"



Selecting the picture size manually

You can select the picture size. Selectable picture size varies with the type of signal received.

Basically, if you set WSS to "On" in the Setup menu, the optimum Wide mode is automatically chosen for every broadcast. You can however, change the screen format manually as explained below.

NOTE

- Aside from manually changing the Wide modes as explained herein, the TV may detect and select the optimum Wide mode according to the signal received.

- 1 Press .
 - The WIDE MODE menu displays.
 - The menu lists the wide mode options selectable for the type of video signal currently received.
- 2 Press or / while the WIDE MODE menu displays on the screen.
 - As you toggle the options, each is immediately reflected on the screen. There is no need to press OK.

Item (for SD [Standard] signals)

Normal: Keeps the original aspect ratio in a full screen display.

Zoom 14:9: For 14:9 letterbox pictures. A thin side bar appears on each side, and you may also see bars on the top and bottom with some programmes

Panorama: In this mode the picture is progressively stretched toward each side of the screen.

Full: For 16:9 squeeze pictures.

Cinema 16:9: For 16:9 letterbox pictures. Bars may appear on the top and bottom with some programmes.

Cinema 14:9: For 14:9 letterbox pictures. Bars may appear on the top and bottom with some programmes.

Item (for HD [High-Definition] signals)

Full: Display with an Overscan image. Crops all sides of screen.

Underscan: Display with an Underscan image only when receiving a 720p signal. Display with the High-Definition image adjusted optimally. Noise may appear on the edge of the screen with some programmes.

Dot by Dot: Displays an image with the same number of pixels on the screen when receiving 1080i/1080p signals only.

NOTE

- Some items do not appear depending on the type of received signal.

Useful Viewing functions

Selecting the recording picture size manually

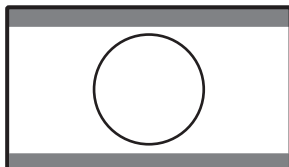


Digital Setup

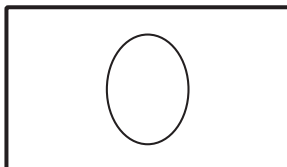
REC Picture Size

You can use this menu to set the appropriate picture size for viewing a 16:9 format TV programme on a 4:3 TV.

Setting to "4:3 TV"



Setting to "16:9 TV"



NOTE

- This function must be set before recording.

Selecting the HDMI picture size automatically



Setup

HDMI Auto View

This function allows you to automatically change to the appropriate picture size when viewing an HDMI signal using the EXT 4, 5 and 6 terminals.

Other Picture and audio settings

Adjusting image position



Setup

Position

For adjusting a picture's horizontal and vertical position.

Item

- H-Pos.:** Centres the image by moving it to the left or right.
V-Pos.: Centres the image by moving it up or down.

NOTE

- Adjustments are stored separately according to input source.
- Depending on the input signal type or WIDE MODE setting, a position setting may not be available.

Reducing noise on the screen



Option

DNR

DNR (Digital Noise Reduction) produces a clearer image. (Off, High, Low)

Automatic volume adjustment



Option

Auto Volume

Different sound sources sometimes do not have the same volume level, such as a programme and its commercial breaks. The Automatic Volume Control (Auto Volume) reduces this problem by equalizing levels.

Clear Voice



Option

Clear Voice

This function emphasises speech against background noise for greater intelligibility. It is not recommended for music sources.

Audio Only



Option

Audio Only

When listening to music from a music programme, you can set the TV off and enjoy audio only.

Item

- Off:** Both screen images and audio are output.
On: Audio is output without a screen image.

Display Settings

Channel display

You can display the channel information pressing **i+** on the remote control.

DTV Mode	ATV Mode
BBC2 DTV 001 Audio (ENG) : STEREO Picture : 1080i Subtitle : 1/3 ENG New Information	BBC1 ATV 01 PAL NICAM Subtitle : Teletext Off New Information

● Time display in channel information

You can display the time information included in DTV and Teletext broadcasts.

NOTE

- Skip step 1 if receiving DTV broadcasts.

- 1 Select a TV channel. (The time information is automatically captured.)
- 2 Press **i+**. The channel display will appear on the TV.
- 3 Press **i+** again within the several seconds that the channel display is on the screen. Time information will display below the channel display for several seconds.
- 4 Even when you change the TV channel, you can display the time information with steps 2 and 3 above.

NOTE

- If acquired successfully, the time information will appear in the upper-right corner of the screen by pressing **MENU**.

Time and Title display



Option

Time Display

Time Display

This function allows you to display the clock time on the lower right screen.

Item

- On:** Display the clock time.
- On (half-hourly):** Display the clock time in 30 minutes increments.
- Off:** Hide the clock time.

Time Format

You can select the time format (either 24HR or AM/PM) for the clock time.



Option

Game Play Time

This function allows you to display the elapsed time on the screen when AV MODE is set to "GAME".

Item

- On:** Under connecting a game console to the TV, the elapsed time is displayed in 30-minute increments after you start playing a game.
- Off:** Hide the time.



Option

Programme Title Display

This function allows you to display programme information on the screen including the title and airtime by tuning a channel.

Other useful features

Setting when using external devices

Input source settings



Option

Input Select

For setting the signal type of external equipment.

Item

- EXT 1:** Y/C, CVBS, RGB
- EXT 2:** Y/C, CVBS, RGB
- EXT 3:** Auto, S-VIDEO, VIDEO

NOTE

- If no (colour) image displays, try changing to another signal type.
- Check the operation manual of the external equipment for the signal type.
- When the signal type is set to "Auto", the input terminal where a cable is connected is automatically selected.



Setup

Input Label

You can assign each input source a label as you prefer.

- 1 Press to select the desired input source.
- 2 Go to MENU> Setup> Input Label.
- 3 Press /// to select each character of the new name for the input source, and then press **OK**.

4

DVD

A	B	C	D	E	F	G	H	I	J	CLEAR
K	L	M	N	O	P	Q	R	S	T	BACK
U	V	W	X	Y	Z	+	-	.	_	
0	1	2	3	4	5	6	7	8	9	END

- 4 Repeat until the name is fully spelt out.

NOTE

- The name can be 6 characters or less.
- When you want to set an input source name of less than 6 characters, select "END" to set the name.

INPUT SOURCE

TV

EXT1

EXT2

EXT3

DVD

EXT5

EXT6

NOTE

- You cannot change labels if the input source is TV.

Skipping specified input



Setup

Input Skip

This setting allows you to skip the SCART, HDMI or RGB input on the "Input Select" menu.

EXT 1 (SCART)

EXT 2 (SCART)

EXT 4 (HDMI)

EXT 5 (HDMI)

EXT 6 (HDMI)

EXT 7 (RGB)

Yes

No

Colour system settings



Option

Colour System

You can change the colour system to one that is compatible with the image on the screen.

NOTE

- The factory preset value is "Auto".
- If "Auto" is selected, the colour system for each channel is automatically set. If an image does not display clearly, select another colour system (e.g. PAL, SECAM).

Additional features



Setup

Standby Mode

You can reduce the TV's start-up time after turning on the power with the remote control unit.

Item

- Mode1:** The TV quickly starts up from standby. 30W or more of power consumption is required.
- Mode2:** Power consumption is small during standby.



Setup

Blue Illumination

The LED on the front of the TV is blue when illuminated.

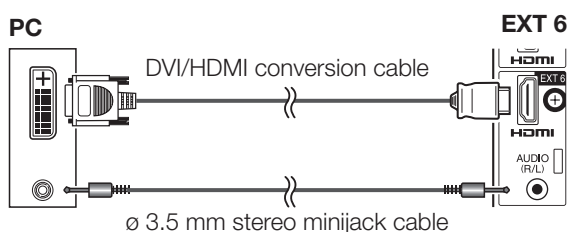
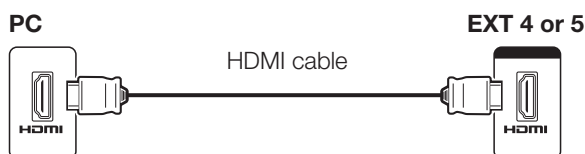
NOTE

- The factory default setting is "On".
Set to "Off" if you do not want the LED to illuminate.

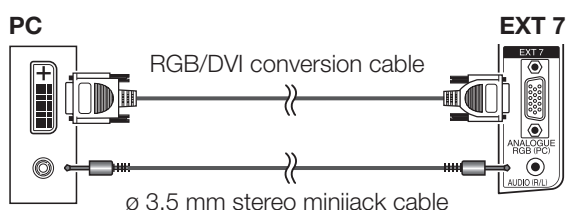
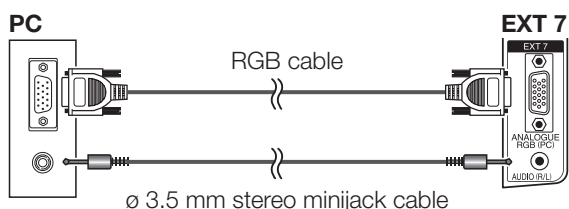
Connecting a PC

Connecting a PC

HDMI Connection



Analogue Connection



NOTE

- The PC input terminals are DDC1/2B-compatible.
- Refer to page 36 for a list of PC signals compatible with the TV.
- Macintosh adaptor may be required for use for some Macintosh computers.
- When connecting to a PC, the correct input signal type is automatically detected except 1024 × 768 and 1360 × 768 signals.

Displaying a PC image on the screen

Selecting the picture size

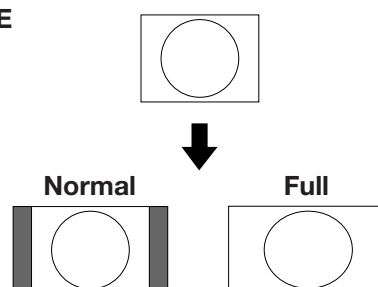
You can select the picture size.

- 1 Press .
 - The WIDE MODE menu displays.
- 2 Press or or to select a desired item on the menu.

NOTE

- Connect the PC before making adjustments.
- Selectable picture size may vary with input signal type.

EXAMPLE



Item

Full: An image fully fills the screen.

Cinema: For letter box pictures. Bars may appear on the top and bottom with some programmes.

Normal: Keeps the original aspect ratio in a full screen display.

Dot by Dot: Displays an image with the same number of pixels on the screen.

NOTE

- Refer to page 29 for AV signals (480i/480p/576i/576p/720p/1080i/1080p). The analogue D-sub terminal (EXT7) is not compatible with 480i/576i/1080p signals.

Connecting a PC

Adjusting the PC image automatically

This function enables the screen to be automatically adjusted to its best possible condition when the analogue terminals of the TV and PC are connected with a commercially available DVI/D-sub conversion cable, etc.

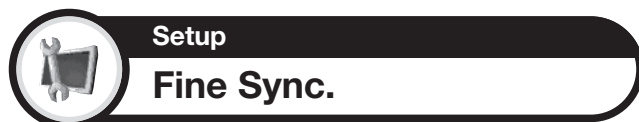


NOTE

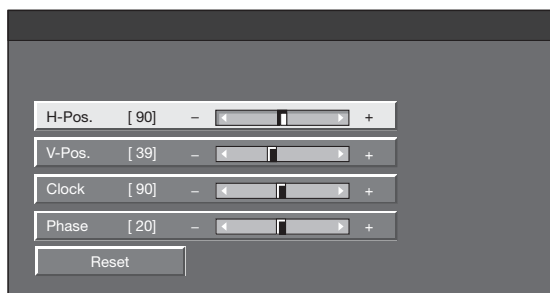
- When "Auto Sync." is successful, "Auto Sync completed successfully" displays. If not, "Auto Sync." failed.
- "Auto Sync." may fail even if "Auto Sync completed successfully" displays.
- "Auto Sync." may fail if the computer image has low resolution, has unclear (black) edges, or is moved while executing "Auto Sync."
- Be sure to connect the PC to the TV and switch it on before starting "Auto Sync."
- "Auto Sync." can be executed only when inputting analogue signals through the EXT 7 terminal.

Adjusting the PC image manually

Ordinarily you can easily adjust the picture as necessary to change image position using Auto Sync. In some cases, however, manual adjustment is needed to optimise the image.



- 1 Press ▲/▼ to select the specific adjustment item.
- 2 Press ◀/▶ to adjust the item to the desired position.



Item

H-Pos.: Centres the image by moving it to the left or right.

V-Pos.: Centres the image by moving it up or down.

Clock: Adjusts when the image flickers with vertical stripes.

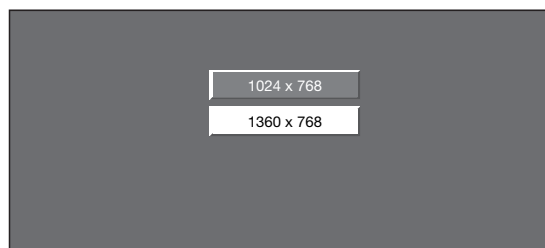
Phase: Adjusts when characters have low contrast or when the image flickers.

NOTE

- For resetting all adjustment items to the factory preset values, press ▲/▼ to select "Reset", and then press **OK**.
- "Clock" and "Phase" in the "Fine Sync." menu can be adjusted only when inputting analogue signals.

Selecting input resolution

- Some input signals may have to be registered manually to display properly.
- The pairs of input signals (resolutions) in the list below are not distinguishable when received. In such cases, you have to set the correct signal manually. After setting once, it will display when the same signal (resolution) is input again.



(Example)

NOTE

- You can only select the "Input Signal" on the Setup menu when receiving one of the 2 input signals listed above.

Connecting a PC

RS-232C port specifications

PC Control of the TV

- When a programme is set, the TV can be controlled from the PC using the RS-232C terminal. The input signal (PC/video) can be selected, the volume can be adjusted and various other adjustments and settings can be made, enabling automatic programmed playing.
- Use an RS-232C cable cross-type (commercially available) for the connections.

NOTE

- This operation system should be used by a person who is accustomed to using PCs.



RS-232C serial control cable
(cross type)

Communication conditions

Set the RS-232C communications settings on the PC to match the TV's communications conditions. The TV's communications settings are as follows:

Baud rate:	9,600 bps
Data length:	8 bits
Parity bit:	None
Stop bit:	1 bit
Flow control:	None

Communication procedure

Send the control commands from the PC via the RS-232C connector.

The TV operates according to the received command and sends a response message to the PC.

Do not send multiple commands at the same time.

Wait until the PC receives the OK response before sending the next command.

Make sure to send "A" with the carriage return and confirm that "ERR" returns before operating.

Command format

Eight ASCII codes + CR



Command 4-digits

Parameter 4-digits

Return code

Command 4-digits: Command. The text of four characters.

Parameter 4-digits: Parameter 0 – 9, blank, ?

Parameter

Input the parameter values, aligning left, and fill with blank(s) for the remainder. (Be sure that four values are input for the parameter.)

When the input parameter is not within an adjustable range, "ERR" returns. (Refer to "Response code format".)

0			
---	--	--	--

0	0	0	9
---	---	---	---

-	3	0	
---	---	---	--

1	0	0	
---	---	---	--

0	0	5	5
---	---	---	---

When "?" is input for some commands, the present setting value responds.

?			
---	--	--	--

?	?	?	?
---	---	---	---

Response code format

Normal response

O	K	↵
---	---	---

Return code (0DH)

Problem response (communication error or incorrect command)

E	R	R	↵
---	---	---	---

Return code (0DH)

After sending the return code (0DH), make sure to send line feed (0AH) as well.

Connecting a PC

PC compatibility chart

Resolution		Horizontal Frequency	Vertical Frequency	Analogue (D-Sub)	Digital (HDMI)	VESA Standard
VGA	640 × 480	31.5 kHz	60 Hz	✓	✓	✓
SVGA	800 × 600	37.9 kHz	60 Hz	✓	✓	✓
XGA	1024 × 768	48.4 kHz	60 Hz	✓	✓	✓
WXGA	1360 × 768	47.7 kHz	60 Hz	✓	✓	✓
SXGA	1280 × 1024	64.0 kHz	60 Hz	✓	✓	✓
SXGA+	1400 × 1050	65.3 kHz	60 Hz		✓	✓

VGA, SVGA, XGA, WXGA, SXGA and SXGA+ are registered trademarks of International Business Machines Corporation.

NOTE

- This TV has only limited PC compatibility, correct operation can only be guaranteed if the video card conforms exactly to the VESA 60Hz standard. Any variations from this standard will result in picture distortions.

RS-232C command list

CONTROL ITEM	COMMAND	PARAMETER	CONTROL CONTENTS	CONTROL ITEM	COMMAND	PARAMETER	CONTROL CONTENTS
POWER SETTING	P O W R	0 _ _ _	POWER OFF	POSITION	H P O S	* * * _	H-POSITION (AV/PC)
INPUT SELECTION A	I T G D	_ _ _ _	INPUT SWITCHING (TOGGLE)		V P O S	* * * _	V-POSITION (AV/PC)
	I T V D	_ _ _ _	TV (CHANNEL FIXED)		C L C K	* * * _	CLOCK (0 - 180)
	I D T V	_ _ _ _	DTV (CHANNEL FIXED)		P H S E	* * _ _	PHASE (0 - 40)
	I A V D	* _ _ _	EXT1 - 8 (1 - 8)	WIDE MODE	W I D E	0 _ _ _	TOGGLE (AV)
CHANNEL	D C C H	* * _ _	TV DIRECT CHANNEL (1 - 99)		W I D E	1 _ _ _	NORMAL (AV)
	C H U P	_ _ _ _	CHANNEL UP		W I D E	2 _ _ _	ZOOM 14:9 (AV)
	C H D W	_ _ _ _	CHANNEL DOWN		W I D E	3 _ _ _	PANORAMA (AV)
	D T V D	* * * _	DTV DIRECT CHANNEL (1 to 999)		W I D E	4 _ _ _	FULL (AV)
	D T U P	_ _ _ _	DTV CHANNEL UP		W I D E	5 _ _ _	CINEMA 16:9 (AV)
	D T D W	_ _ _ _	DTV CHANNEL DOWN		W I D E	6 _ _ _	CINEMA 14:9 (AV)
INPUT SELECTION B	I N P 1	0 _ _ _	EXT1 (Y/C)		W I D E	7 _ _ _	NORMAL (PC)
	I N P 1	1 _ _ _	EXT1 (CVBS)		W I D E	8 _ _ _	CINEMA (PC)
	I N P 1	2 _ _ _	EXT1 (RGB)		W I D E	9 _ _ _	FULL (PC)
	I N P 2	0 _ _ _	EXT2 (Y/C)		W I D E	1 0 _ _	DOT by DOT (AV/PC)
	I N P 2	1 _ _ _	EXT2 (CVBS)		W I D E	1 1 _ _	UNDERSCAN (AV)
	I N P 2	2 _ _ _	EXT2 (RGB)	MUTE	M U T E	0 _ _ _	TOGGLE
	I N P 3	0 _ _ _	EXT3		M U T E	1 _ _ _	MUTE ON
	I N P 3	1 _ _ _	EXT3 (S-VIDEO)		M U T E	2 _ _ _	MUTE OFF
	I N P 3	2 _ _ _	EXT3 (VIDEO)	SURROUND	A C S U	0 _ _ _	SURROUND TOGGLE
AV MODE SELECTION	A V M D	0 _ _ _	TOGGLE		A C S U	1 _ _ _	SURROUND ON
	A V M D	1 _ _ _	STANDARD		A C S U	2 _ _ _	SURROUND OFF
	A V M D	2 _ _ _	MOVIE	AUDIO CHANGE	A C H A	_ _ _ _	TOGGLE
	A V M D	3 _ _ _	GAME		O F T M	0 _ _ _	OFF
	A V M D	4 _ _ _	USER	SLEEP TIMER	O F T M	1 _ _ _	SLEEP TIMER 30 MIN
	A V M D	5 _ _ _	DYNAMIC (Fixed)		O F T M	2 _ _ _	SLEEP TIMER 1 HOUR
	A V M D	6 _ _ _	DYNAMIC		O F T M	3 _ _ _	SLEEP TIMER 1 HOUR 30 MIN
	A V M D	7 _ _ _	PC		O F T M	4 _ _ _	SLEEP TIMER 2 HOUR
	A V M D	8 _ _ _	xvYCC		O F T M	5 _ _ _	SLEEP TIMER 2 HOUR 30 MIN
	A V M D	? ? ? ?	1 to 8	TEXT	T E X T	0 _ _ _	TEXT OFF
	A V M D	? ? ? ?	1 to 8		T E X T	1 _ _ _	TEXT ON (TOGGLE)
	A V M D	? ? ? ?	1 to 8		D C P G	* * * _	DIRECT PAGE JUMP (100 - 899)
VOLUME	V O L M	* * _ _	VOLUME (0 - 60)				

Appendix

Troubleshooting

Problem	Possible Solution
No power.	- Check if you pressed TV  on the remote control unit. If the indicator on the TV lights up red, press TV . - Is the AC cord disconnected? - Check if you pressed  on the TV.
Unit cannot be operated.	External influences such as lightning, static electricity, etc., may cause improper operation. In this case, operate the unit after first turning the power off, or unplugging the AC cord and re-plugging it in after 1 or 2 minutes.
Remote control unit does not operate.	- Is the FUNCTION button set correctly? Set it to the TV setting position. (Page 38) - Are batteries inserted with polarity (+, -) aligned? - Are batteries worn out? (Replace with new batteries.) - Are you using it under strong or fluorescent lighting? - Is a fluorescent light illuminated onto the remote control sensor?
Picture is cut off.	- Is the image position correct? - Are screen mode adjustments (WIDE MODE) such as picture size made correctly? (Pages 29 and 33)
Strange colour, light colour, or dark, or colour misalignment.	- Adjust the picture tone. - Is the room too bright? The picture may look dark in a room that is too bright. - Check the colour system setting. (Pages 27 and 32)
Power is suddenly turned off.	- The unit's internal temperature has increased. Remove any objects blocking the vent or clean. - Is the sleep timer set? Select "Off" from the "Sleep Timer" menu. (Page 26) - Is "No signal off" activated?
No picture.	- Are connections to external equipment correct? (Pages 15-17) - Is the input signal type selected correctly after connection? (Page 32) - Is the correct input source selected? (Page 10) - Is a non-compatible signal being input? (Page 36) - Is the picture adjustment correct? (Pages 24-25) - Is the antenna connected properly? (Page 8) - Is "On" selected in "Audio Only"? (Page 30)
No sound.	- Is the volume too low? - Make sure that headphones are not connected. - Check if you pressed  on the remote control unit.
The TV sometimes makes a cracking sound.	This is not a malfunction. This happens when the cabinet slightly expands and contracts according to change in temperature. This does not affect the TV's performance.

Cautions regarding use in high and low temperature environments

- When the unit is used in a low temperature space (e.g. room, office), the picture may leave trails or appear slightly delayed. This is not a malfunction, and the unit will recover when the temperature returns to normal.
- Do not leave the unit in a hot or cold location. Also, do not leave the unit in a location exposed to direct sunlight or near a heater, as this may cause the cabinet to deform and the LCD panel to malfunction.
Storage temperature: +5°C to +35°C.

Information on the software license for this product

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We are unable to answer any questions about the source code for the open source software. The source code for the software components whose copyrights are held by SHARP is not distributed.

Acknowledgements

The following open source software components are included in this product:

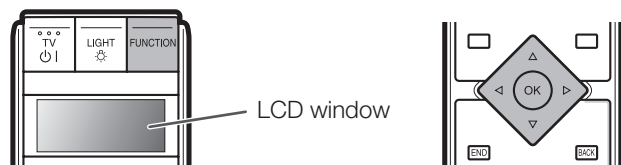
- linux kernel • modutils • glibc • zlib • libpng

Using the universal remote control

You can operate connected AV products (DVD player/recorder, SetTopBox, VCR and others) by setting up your remote control as a universal remote control unit.

NOTE

- Some manufacturer code indicated in the operational manual and the universal remote control device do not correspond. When recording a signal other than the signal being watched, some signals cannot be recorded depending on the signal being viewed.



Presetting the manufacturer code

- Press **FUNCTION** repeatedly until you reach the device you wish to control. (TV, DVD1, DVD2, STB1, STB2 and VCR)
 - Press this button briefly (for more than 0.2 seconds) to move between the items.
- Press and hold both **FUNCTION** and **OK** for 3 seconds.
 - In the LCD window, the 3-digit manufacturer code input screen blinks.
- Enter the 3-digit manufacturer code using **▲/▼/◀/▶**, and then press **OK**.
 - The TV returns to the normal TV mode.

LCD Window Display	Category	Manufacturer
DVD1/DVD2	DVD player	Magnum - Zenith
	DVD recorder	JVC - Yukai
	DVD/LD	Pioneer
	DVD part of DVD/VCR	Bush - Toshiba
	DVD part of DVD/DVR	Panasonic - Toshiba
	HTIB*	Aiwa - Sony
	DVD part of SAT/DVD	Humax
VCR	DVD part of TV/DVD	Bush - Toshiba
	VCR part of DVD/VCR	Bush - Toshiba
	VCR part of TV/VCR	Aiwa - Toshiba
STB1/STB2**	VCR	Adelsound - Yoko
	SAT part of SAT/DVD	Humax
	SAT part of SAT-DVR	BSSkyB - Zehnder
	Satellite	AB Sat - Woorisat
	Satellite receiver	Hauppauge
	Satellite receiver/recorder	Humax - Kathrein
	Cable box	ABC - Wittenberg

* Home Theatre in a Box System

** SAT and CBL are integrated

Manufacturer code

DVD	Manufacturer Code	DVD	Manufacturer Code
Sharp	029 128 143 177 191	Magnavox	002 106 165
Magnum	101	Marantz	049 098 200 201
Acoustic Solutions	001	Matsui	030
Aiwa	004 039 131 231	MBO	001 145
Akai	034 095	Mediencom	150
Akura	108	Medion	096 101 112 128 158
Alba	001 014 017 018 040	Metz	094
Apex	139	MICO	104
Awa	001	Micromaxx	096 101 128
Axon	001	Micromedia	002
Best Buy	107	Micromega	171
Boston	152	Microstar	096 101 128
Brainwave	034	Mirror	158
Brandt	002 012 030	Mitsubishi	125 166
Britannia	150	Mizuda	106 107
Bush	001 019 032 042 045 087 092	Monyka	103
	102 106 149 158 209 223 224	Mustek	001 100 198
	225 226	Mx Onda	104
Cambridge Audio	104 163	NAD	143
CAT	153 154	Naiko	109
Celestial	161	Nakamichi	147
Centrex	109	Neufunk	103
Centrum	154	NU-TEC	102
CGV	104	Omni	150
CineVision	157	Onkyo	002 097 165
Classic	001 100	Optim	151
Clatronic	106	Optimus	168
Coby	001	Orava	106
Conia	102	Orion	087
Crypto	159	Ortron	096
C-Tech	105	P&B	106
CyberHome	003 022 025 036	Pacific	105
Daewoo	023 038 078 113 114 115	Palsonic	149
Dalton	162	Panasonic	013 079 093 123 164 194 195
Dansai	034 151 227		214 232
Daytek	005 020	Philips	233 002 006 027 035 043 044
DEC	106		049 074 098 121 127 165 171
Denon	123 138 164 188 199 210		181 202
Denver	106 108 133	Philips Magnavox	121
Denzel	103	Pioneer	007 008 010 046 094 168 174
Desay	155		178 183 207 220
Diamond	104 105	Proline	109
Digitor	160	Provision	106
DK Digital	032 176	Raite	103
Dmtech	111	RCA	135
Dual	001 103	REC	149 150
D-Vision	034	RedStar	108
DVX	105	Reoc	105
Easy Home	107	Revoy	156
Eclipse	104	Roadstar	001 014 106 149
Elta	034 124 134	Rowa	102 109
Emerson	129	Rownsonic	154
Enzer	103	Saba	012 030
Euroline	034	Sabaki	105
Finlux	104	Sampo	136
Fisher	132	Samsung	011 076 077 126 175 186 213
Global Solutions	105		217
Global Sphere	105	Sansui	104 105
Go Video	126	Sanyo	028 033 089 179 189 218
GoldStar	015	ScanMagic	001
Goodmans	001 014 018 045 106 109 158	Schneider	096 110 111 112
	203 228	Scientific Labs	105
Graetz	103	Scott	017 162
Grundig	018 038 099 109 127	SEG	014 026 103 105 110 141
H&B	106 156	Sherwood	140
Haaz	104 105	Shinco	135
Harmon/Kardon	144	Sigmathek	107
HE	001	Silva	108
HIMAX	107	Singer	104 105
Hitachi	011 047 088 101 103 107 126	Skymaster	001 026 100 105 134
	190 196 206 215	Skyworth	108
Home Electronics	001	SM Electronic	001 105
Humax	048	Sony	004 009 021 031 041 075 122
Innovation	096 101 128		169 180 204 205 221 222
JDB	001	Soundmaster	105
Jeutech	152	Soundmax	105
JVC	002 016 080 081 082 083 084	Standard	105
	085 120 173 182 184 212	Star Cluster	105
Kenwood	037 123 142 170 208 211 219	Starmedia	106
	229	Supervision	001 105
Kingavon	106	Synn	105
Kiss	103 156	TCM	096 101 128
Koda	106	Teac	094 102 105 192
KXD	107	Tec	108
Lawson	105	Technics	101 164 193 232
Lecson	151	Technika	034
Lenco	106	Technosonic	034
LG	015 024 090 129 185 216	Telefunken	154
Life	096 128	Tevion	096 101 105 128 162
Lifetec	096 101 128	Thomson	012 091 116 117 118 119 148
Limit	105		167 172 197
Loewe	044 127	Tokai	103 108
LogicLab	105	Toshiba	002 086 087 121 165 187
Luxor	109	TruVision	107

Appendix

DVD	Manufacturer Code
United	001
Voxson	001
Vtrek	159
Wharfedale	104 105 130
Wintel	152
Xbox	167
Xlogic	105
XMS	149
Yakumo	109
Yamada	109
Yamaha	006 013 123 137 164 230
Yamakawa	103 146
Yukai	001
Zenith	002 129 165

DVD Recorder	Manufacturer Code
JVC	057 058 059 060
LG	065
Panasonic	052 062
Philips	050 051 053 061 063 064
Sony	054 055 056
Toshiba	067 068 069
Yukai	066

DVD/LD	Manufacturer Code
Pioneer	007

DVD/VCR Combo	Manufacturer Code
Sharp	029 (DVD)/028 032 (VCR)
Bush	087 (DVD)/036 (VCR)
Daewoo	078 (DVD)/029 (VCR)
Hitachi	088 (DVD)/025 (VCR)
JVC	080 081 082 083 084 085 (DVD)/007 025 033 034 (VCR)
LG	015 (DVD)/014 030 (VCR)
Orion	087 (DVD)/038 (VCR)
Panasonic	079 (DVD)/031 037 (VCR)
Philips	074 (DVD)/026 (VCR)
Samsung	076 077 (DVD)/210 (VCR)
Sanyo	089 (DVD)/039 (VCR)
Sony	075 (DVD)/027 (VCR)
Toshiba	086 (DVD)/035 (VCR)

DVD/DVR	Manufacturer Code
Panasonic	052 062
Pioneer	070 071 072
Samsung	073
Toshiba	067

HTIB	Manufacturer Code
Alwa	231
DK Digital	176
Hitachi	215
JVC	184
Kenwood	219
LG	216
Mustek	198
Panasonic	194 195 214
Pioneer	220
Samsung	213
Sanyo	189 218
Sony	205 221 222

SAT/DVD	Manufacturer Code
Humax	048

TV/DVD Combo	Manufacturer Code
Bush	092
LG	090
Panasonic	093
Thomson	091
Toshiba	087

TV VCR combo	Manufacturer Code
Alwa	042
Bush	042
Daewoo	021 040
GoldStar	209
Goodmans	047
Grundig	041
Orion	045
Philips	041 046
Roadstar	042 045
Samsung	043
Sony	044
Tatung	042
Toshiba	042 043 045 048

VCR	Manufacturer Code
Sharp	001 015 028 032 063 064 073 089 149 150 151 153 165
Adelsound	056

VCR	Manufacturer Code
Adyson	055
Alwa	014 026 042 045 049 050 051 059 060 102 111 149 150 153

Akai	045 050 058 060 128 149 150 153 158 193
Akiba	055
Akura	050 055 060
Alba	021 026 045 051 052 055 058 061 128 129 130

Allorgan	043 126
Ambassador	052 058
Amstrad	026 049 055 061 149 162 189
Anitech	055
Ansonic	056

ASA	053 054 059 149 150 153
Asuka	026 049 053 054 055 059 149
ASWO	179
AudioSonic	061
AudioTon	058

Baird	021 026 049 050 060 061 123 154
Basic Line	021 051 052 055 058 061
Bauer	160 187
Baur	054 070
Beaumarck	157

Bestar	021 052 058 061
Black Panther Line	021 061
Blaupunkt	006 008 054 057 069 070 071 083 119 124 125 149 150 151 153 171 179

Blue Sky	051 059
Bondstec	052 055 058
Brandt	009 060 132
Brandt Electronique	154
Brinkmann	051

Broksonic	155 157
BSR	188
Bush	021 026 036 042 045 051 055 061 075 127 128 129 130

Carrefour	121
Casio	026
Cathay	061
Catron	052 058
CGE	026 049 050 060 149

Cimline	051 055
Clatronic	052 055 058
Combitech	045
Condor	021 052 058 061
Continental Edison	154

Crown	021 052 055 058 061
Curtis Mathes	157
Cybermaxx	072
Daewoo	018 021 029 040 045 052 058 061 072 121

Dansai	055 061
Dantax	051
Daytron	021 061
De Graaf	054
Decca	007 026 049 050 054 060

DeGraaf	063 120 123
Denko	055
Denon	098
Diamant	059 209
Dual	026 050 054 060 061 154

Dumont	026 049 054 123
Elbe	061
Elcatech	055
Elin	067 126
Elsay	055

Elta	055 061
Emerson	055 121 155
ESC	021 058 061 126
Etzuko	055
Europhon	058

Ferguson	007 009 026 050 060 071 132 201 202 204
Fidelity	026 049 055
Finlandia	026 054 063 120 123
Finlux	026 049 050 054 080 120 123 149 150 153 197 207

Firstline	018 051 053 055 059 080 114 120 121 127
Fisher	058 122 123 149 150 153 159 178
Flint	051
Formenti/Phoenix	054
Frontech	052 058

Fujitsu	026 049
Funai	026 049 149 150 153 188
Galaxy	026 049
GBC	052 055 058
GE	157

GEC	054
Geloso	055
General	052 058
General Technic	006 043 051

VCR	Manufacturer Code
Genexa	123
Go Video	157
GoldHand	055
GoldStar	026 049 053 059 149 150 153 155 157 209

Goodmans	021 026 047 049 051 052 053 055 058 059 061 067 073 126 127
Graetz	050 060 123 126
Granada	026 054 057 059 063 071 120 123 126

Grandin	021 026 049 052 053 055 058 059 061 072
Grundig	009 041 054 055 057 069 070 071 074 075 076 090 125 149 150 153 173 179 181 182 187

Hanseatic	053 054 059 061
Hantor	058
Harwood	055
HCM	055 075
Hinari	045 051 055 056 060 061 075 127

Hisawa	045 051 166
Hitachi	005 016 019 026 049 050 054 056 060 098 115 120 123 126 149 150 153 175 185

Hypson	051 055 061
Impego	052 058
Imperial	026 049 126 149
Ingersol	056 126
Inno Hit	021 052 054 055 058 061 067 126

Innovation	006 043 051
Interbuy	053 055 059
Interfunk	054 123
Intervision	026 049 051 059 061 209
Irradio	053 055 059

ITT	050 060 077 123 126
ITT Nokia	154
ITV	021 053 058 059 061
JBL	147
JC Penney	098 155 157

JVC	007 025 033 034 050 060 077 078 079 098 105 106 140 149 150 153 154 161 200 204
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Kaisui	055
Karcher	054
Kendo	018 021 051 052 055 059 128
Kenwood	050 060
Kimari	122

Kneissel	045 051
Korpel	055
Kuba	122
Kyoto	055
Lenco	021
Leyco	055

LG	010 014 024 026 030 049 053 059 112
Lifetec	006 043 051 072
Loewe	006 137
Loewe Opta	053 054 056 057 059 071 124 131 151 169 179 209

Logik	055 056 067 126
Lumatron	021 061 072
Luxor	055 063 073 080 114 122 123 149 150 153 180 195

M Electronic	026 049 059
Magnin	157
Manesth	018 055 121
Marantz	054 057 071 073 179
Mark	061

Matsui	026 045 051 053 056 059 126 133 162 164
Mediator	054
Medion	006 043 051 072
M-Electronic	026 059 209

Memorex	026 049 053 059 063 098 122 123 155
Memphis	055
Metz	006 008 057 070 071 124 125 131 179 181 187

MGN	157
Micromaxx	006 043 051 072
Microstar	006 043 051 072
Migros	026 049
Minerva	070 071 125 181 187

Minolta	098
Mitsubishi	007 049 054 080 107 114 149 150 153 155 170 199
Multitech	026 049 052 054 055 058 123
Murphy	026 049
National	006 069 124

NEC	007 050 060 154 155 177
Neckermann	050 054 057 060 154 179
NEI	054

VCR	Manufacturer Code
Nesco	026 045 055
Nikkai	052 055 058 061
Nokia	050 060 061 063 067 120 123 126 128 180 195

Nordmende	007 009 050 060 077 124 134 149 150 153 154 161 201 204 205
Oceanic	026 049 050 060 063 123
Okano	051 055 061 128
Optimus	155 156

Orion	038 045 051 056 129 130 155 163 166 188 191 192
Orson	026 049
Osaki	026 049 053 055 059
Osume	127
Otake	129 130

Otto Versand	054 187
Palladium	050 053 055 056 057 059 060 071 126 128
Panasonic	002 006 008 023 031 037 069 086 091 101 124 131 137 149 150 151 153 155 167 169 171 174 190 198

Pathe Cinema	056 114
Pathe Marconi	050 060 154
Pentax	098
Perdio	026 049
Philco	055 098

Philips	005 011 017 019 020 026 041 046 054 057 062 065 071 076 077 087 090 092 093 095 100 104 108 110 136 149 150 153 179
Phonola	054
Pioneer	007 054 120 149 150 153 156 203

Portland	021 052 058 061
Prinz	026 049
Profex	055
Profi-Tronic	126
Proline	026 049 075 127

Prosonic	026 051 061
Pulsar	157
Pye	005 054
Quasar	155
Quelle	049 054 057 070 071 149 150 153 179 181 182 187

Radialva	055 059 063
Radio Shack	155
Radiola	054 151
Realistic	155 157
Rex	050 060 077 154 161

RFT	052 054 055 058
Roadstar	021 042 045 053 055 059 061 067 126
Royal	055
Saba	009 050 060 077 138 139 149 150 153 154 161

Saisho	051 055 056 162
Salora	080 114 123 149 150 153 180
Samsung	210 043 067 126 157 176 194 196
Samurai	007 052 055 060
Sansui	007 050

Sanwa	056
Sanyo	039 063 099 109 122 123 149 150 153 180
Saville	045 061 126
SBR	054
Schaub Lorenz	026 049 050 060 123

Schneider	018 021 026 049 051 052 053 054 055 059 061 126 149 150 153
Scott	155
Sears	098 155
SEG	055 061 067 126

SEI-Sinudyne	054 056 188
Seleco	050 058 059 060 154 161
Sentra	052 055 058 127
Sentron	055
Shintom	055 123

Shivaki	053 059
Shorai	056
Siemens	053 057 059 070 071 123 125 179 181 187
Silva	053 059
Silver	061

Sinudyne	054 056
Solavox	052 058
Solovox	058
Sonitron	122
Sonneclair	055

Appendix

VCR	Manufacturer Code
Sony	003 004 013 022 027 044 066 068 082 083 084 085 088 094 096 097 103 113 116 117 118 119 145 146 147 160 168 184 185 186
Soundwave	059
Standard	021 061
Starlite	059 123
Stern	061
Sunkai	051
Sunstar	026 049
Suntronic	026 049
Sunwood	055
Supra	059 126
Symphonic	026 055
Taisho	051 056
Tandberg	061 070
Tansai	149
Tashiko	026 049 059 063 126
Tatung	026 042 049 050 054 060 063 114
TCM	006 043 051 072
Teac	026 060 061
Tec	052 055 058 061
Technics	006 069
Teleavia	050 060
Telefunken	007 009 050 060 077 078 081 132 135 149 150 153 154 161 206
Teletech	055 061
Tenosai	055
Tensai	026 049 053 055 056 059 149
Tevion	006 043 051 072
Thomson	007 009 050 060 065 077 078 098 132 134 138 141 142 143 144 148 152 154 156 157 161 201 204
Thorn	050 059 060 123 154 161 208
Tivo Hdd	065 088
Tokai	053 055 059 060 123 149
Tonsai	055
Toshiba	012 018 035 042 043 045 048 050 054 060 077 080 114 121 154 162 172
Towada	055 183
Towika	055
TVA	052 058
Uher	053 059 126 154
Ultravox	061
Unitex	067 126
United Quick Star	021 061
Universum	026 049 051 053 054 057 059 070 071 076 125 126
Victor	007 078
Videon	006 043 051
Wards	155 157
Weltblick	053 059
Yamishi	055
Yokan	055
Yoko	052 053 055 058 059 067 126

SAT/DVR	Manufacturer Code
Humax	005
BSkyB	035
Humax	007
TechniSat	347 011
Zehnder	034

Satellite	Manufacturer Code
AB Sat	004 056 066 103
AGS	056
Akai	077 001 139
Alba	004 086 095 332 006 036 037 105 106 127 141
Aldes	080 086 003 105 106 107
Alisat	068 076 077 298 003 042 108 139
Allsonic	049 080 088 002 039 106
Alltech	004 097
Alpha	077
Altai	089
Amitronica	004
Ampere	045 089 001 109
Amstrad	004 008 045 050 060 061 079 084 089 098 099 101 165 279 282 292 295 305 313 331 002 038 140
Anglo	004
Ankaro	004 049 078 080 088 286 305 313 331 002 039 106
Antron	076 095 334 002 036 106
Arcon	045 078 337 003 109 110 123
Armstrong	077 001 038
ASA	090
Asat	077 001 139

Satellite	Manufacturer Code
ASLF	004
AST	082 288 001 114
Astacom	056 161
Astra	004 053 071 085 093 288 005 038 111 112 113 133
Astro	020 022 048 049 050 053 088 095 159 004 039 040 106 107
AudioTon	095 002 042 106
Aurora	059
Austar	059 065
Avalon	089
Axiel	056
Axis	049 087 088 093 003 039 113 119
Barcom	305 313 331 001 110
Best	049 088 002 039 110
Blaupunkt	020 022 001 040
Blue Sky	004 061
Boca	004 045 094 160 177 180 192 197 204 207 208 216 223 250 260 269 002 038 133
Boston	045 056
Brain Wave	078 083 001 041
Broadcast	085 001 117
Broco	004 093
BSkyB	008 165
BT	056
BT Satellite	161 001 143
Bubu Sat	004
Bush	068 076 086 005 037 108 118 127 141
BVV	078
Cable	296
Cambridge	050 160 305 313 331
Canal Satellite	048 081 166
Canal+	048 001 142
Channel Master	086 001 105
Chaparral	305 313 322 331 001 136
CHEROKEE	056 066 285
Chess	004 047 052 001 147
CityCom	044 053 057 065 002 037 120 294
Clatronc	083 001 041
Clearmax	275
Colombia	045
Columbia	045
COLUMBUS	285 001 125
Comag	045
Commander	078
Commilink	080 001 106
Comtec	080 087
Condor	049 053 088 001 039
Connexions	049 088 089 001 116
Conrad	044 045 049 050 053 088 094 156
Conrad Electronic	004 053
Contec	087 094 002 119 120
Daewoo	002 004
Dansat	068 076 001 108
D-Box	168
DDC	086 001 105
Dew	087 001 119
Digitality	053
Digipro	062
Discoverer	047 052
Discovery	056
Diseqc	056
Distratel	061
Distrisat	077
DNR	078
DNT	077 089 002 116 139
Drake	305 307 313 331 001 123
DSiv	059
Dune	049 088
Dynasat	055
Echostar	004 066 089 166 167 238 241 245 273 274 276 285 290 305 310 313 325 330 331 002 116 147
Einhell	004 045 050 079 080 003 036 038 106
Elap	004 056
Elsat	004 099
Elta	049 077 088 298 332 004 036 039 042 139
EmmeEsse	049 055 088 167 003 039 118 129 312
Engel	004
EURIEULT	046 060 061 274
Eurocrypt	071
Europa	050 053 077 078 094
Europhon	045 053
Eurosat	298 001 038
Eurosky	044 045 049 050 053 088 002 038 039

Satellite	Manufacturer Code
Eurostar	044 053 055 057 104 001 038
Eutelsat	004
Eutra	097
Exator	095 002 036 106
Fenner	004 047 049 052
Ferguson	068 076 158 327 328 335 336 004 037 043 108 118
Fidelity	050 079 098
Finlandia	071 001 037
Finlux	071 091 156 329 340 003 037 111 126
Flair Mate	004
Foxtel	059 064 065
Fracaro	167 305 313 331 334 001 141
Freecom	022 050 002 036 128
Freeeat	060 097
FTE	088 094 160 291 308 337 002 109 130
FTEmaximal	004 049
Fuba	022 044 049 071 088 089 274 285 300 334 009 036 039 040 110 112 116 125 126 139
Fugionkyo	062
Funai	323
Galaxis	044 049 059 065 080 087 088 093 144 289 298 326 008 039 042 106 113 119 127 145 246
Galaxisat	082
Gardiner	057
Glucar Record	305 313 331
Goldbox	048 081 166
Gooding	051
Granada	071 001 111
Grandin	046 069
Grundig	008 020 022 050 051 059 061 074 084 162 164 165 236 237 240 297 305 313 331 006 037 040 106 118 140
G-Sat	076
Hanseatic	052 157 001 135
Hänsel & Gretel	045 053
Hantor	083 003 036 041 132
Hase & Igel	078
Helicom	053 001 109
Helium	053
Hinari	076 086 001 105
Hirschmann	020 021 022 049 050 053 056 060 089 090 092 153 156 340 002 040 129
Hisawa	083 001 041
HNE	045
Houston	078
Humax	005 007 017 065 144 272 001
Huth	045 053 063 078 080 083 085 087 094 007 038 041 042 106 117 119 129
Hypson	046 274
ID Digital	065
Imex	046
Ingele	060
International	045
Interstar	062
Intervision	053 096 001 042
ITT/Nokia	071 090 156 168
JEEMON	298 305 313 331
Johansson	083 305 313 324 331 001 041
JOK	056 100 161
JVC	051
Kamm	004
Kathrein	003 004 005 010 015 016 020 022 044 056 057 066 077 092 095 159 169 287 288 305 308 313 331 040 120 130 136 139
Kathrein Eurostar	044
Key West	045
Klap	056
Konig	053 329
Kosmos	092 308 003 128 129 130
KR	095 097 001 106
Kreiselmeier	020 022 001 040
K-SAT	004
Kyostar	045 095 001 036
L&S Electronic	045 049
Lasat	044 045 047 049 053 087 088 160 005 039 107 131 132 133
Lemon	078
Lenco	004 044 049 053 078 088 093 334 003 036 128 134
Lenson	050 001 050
Lexus	077
Lifesat	004 045 047 049 052 088 157 005 039 135 145 147 150
Lorenzen	045 053 078 101
Lupus	049 088 001 039

Satellite	Manufacturer Code
Luxor	050 071 084 156 168 288 305 306 313 331 001 111
M & B	052 157
Manata	004 045 046 056 161
Manhattan	056 161 298 004 037 042 107 118
Mascom	092 001 107
Maspro	004 020 022 051 070 078 097 162 288 305 313 331 003 037 118 136
Matsui	020 022 051 056 086 161 346 001 143
Max	053
MB	052 157 001 135
Mediabox	048 081 166
Mediasat	048 050 081 093 166 001 113
Medion	004 045 049 088 005 039 135 145 147 150
Medison	004
Mega	077 001 139
Meletronic	057
Memphis	322
Metronic	004 046 057 061 069 080 095 036 106 107 110
Metz	020 022 297 001 040
Micro	004 050 053
Micro electronic	004
Micro Technology	004 093 001 124
Micromaxx	049 005 039 135 145 147 150
Microtec	004
Minerva	051 297 001 040
MNet	296
Morgan's	004 045 077 094 160 003 038 133 139
Motorola	058
Multichoice	059 001 059
Multistar	308 002 130 132
Multitec	047 001 147
Muratto	082 002 115 128
Mysat	004
Navex	083 001 041
NEC	075 001 137
Network	076
Neuhaus	004 050 053 078 093 094 003 042 113
Neusat	004 078
NextWave	063
Nikko	004 001 038
Nokia	012 013 023 071 090 156 168 176 188 190 196 210 211 214 219 221 224 227 247 249 253 257 268 271 280 281 283 288 340 005 037 111 118 171
Nordmende	083 086 158 333 334 335 336 005 036 037 043 105 107
Nova	059
Novis	083 001 041
Octagon	078 087 095 334 003 036 106 119
Okano	308 003 038 129 130
Ondigital	032 072 073
Optex	274 298 002 042 120
Optus	048 059 063
Orbitech	047 048 050 094 154 155 001 036
Osat	084 001 106
Pace	008 027 032 056 066 068 076 163 165 239 240 242 243 277 284 305 313 331 332 006 037 040 108 118 127 140
Packsat	056
Palcom	086 285 305 313 331 004 050 105 112 125
Palladium	050 051 001 038
Palsat	047 050 291
Panasat	054 059
Panasonic	001 008 165 003 037 118 140
Panda	022 053 068 071 002 037 108
Patriot	045 056
Philips	011 020 022 048 051 056 057 072 073 076 077 078 081 094 095 161 162 164 166 169 235 240 242 004 037 118 139 170 076 087 002 119 127
Phoenix	076 087 002 119 127
Phonotrend	080 144 004 037 042 106 129
Pioneer	048 166 315
Predki	083 001 041
Preisner	045 089 094 160
Premier	048
Premiere	048 065 081 166 183 210 211 217 227 271 002 042 142
Profile	056
Prosat	080 086 096 305 313 331 004 105 106 127 141
Prosonic	101

Appendix

Satellite	Manufacturer Code
Pye	051
Quadrant	049 056 066 080 086 088 094
	096 161 311 341 342 343 344
	003 039 105 106
Quelle	044 053 079 001 040
Radiola	077 001 139
Radix	009 060 089 097 116 203 213
	256 003 172 174
Rainbow	095 097 001 106
Red Star	049 088
Redpoint	093 001 113
Rex	334
RFT	077 078 080 154 002 106 139
RITAR	288
Roadstar	004
Roch	046
Rover	004 049 096
Saba	044 053 056 061 076 078 100
	158 161 333 339 004 107 118
	124 141
Sagem	102 001 043
Sakura	087 305 313 331 002 119 127
Salora	071 288 306 002 111 137
Samsung	006 019 275 308 314 001 036
SAT	050 082 098 003 105 114 115
Sat Cruiser	063
Sat Partner	050
Sat Team	004
Satcom	052 053 085 157 309 334 002
	117 135
Satec	004 076 001 118
Satelco	049 088
Satford	085 001 117
Satline	096
Satmaster	085 001 117
SatPartner	083 006 036 041 106 107 128
	129
Satplus	047
Schacke	095
Schneider	047 056 164 004 039 145 147
	150
Schwaiger	045 047 052 053 061 076 094
	157 006 120 122 135 144 146
	246
SCS	044
Sedea Electronique	045 062
Seemann	088 093 003 038 113 116
SEG	049 052 083 088 101 157 184
	186 189 199 206 215 225 258
	261 263 334 004 036 039 041
	135
Seleco	167 334 001 042
Septimo	061
Servi Sat	004 046
Siemens	020 022 160 294 297 001 040
Skantin	004
Skardin	093 001 113
Skinsat	050
SKR	004
SKY	058
Skymaster	004 014 034 047 052 080 096
	104 157 182 199 202 205 212
	223 229 262 267 003 106 135
	147
Skymax	077 001 139
SkySat	004 047 050 052 053 335
SL	045 078
SM Electronic	004 047
Smart	004 044 045 060
Sony	048 244 001 140
SR	045 002 038 133
Starland	004 001 147
Starring	083 001 041
Strong	049 059 062 088 186 187 189
	193 198 201 210 216 227 228
	248 270 291 299 305 312 313
	331 005 036 039 106 128 141
STVI	046 274
Sunny Sound	049 088
Sunsat	004 093
Sunstar	045 049 088 002 038 133
Super Sat	055
Supermax	063
Systec	045
Tandberg	285 001 043
Techniland	085 001 117
TechniSat	347 011 047 048 050 067 077
	154 155 173 175 179 181 191
	194 195 220 251 259 264 301
	302 345 004 116
Technology	059
Technosat	063
Technowelt	045 053 061
Telanor	285 300 001 105

Satellite	Manufacturer Code
Telesat	044 052 053 157 001 135
Tele Piu	296
Teleciel	095
Telecom	004
Teledirekt	076
Telefunken	056 161 334 338 003 036 118
	143
Teleka	050 053 078 089 092 095 162
	003 038 106 116
Telesat	052 053 157 001 135
Telesat	047 048 050 001
Teletech	104
Televies	045 050 002 037 149
Tempo	063
Tensai	303
Tevion	004 005 039 135 145 147 150
Thomson	004 024 026 028 030 031 044
	048 053 056 081 158 230 231
	232 233 234 242 335 037 043
	143
Thorn	305 313 331 003 037 108 118
Tioko	045 001 120
Tokai	077
Tonna	004 050 085 003 037 042 117
Triad	082 003 114 115 128
Triasat	050 091 001 126
Triax	004 044 045 050 091 316 317
	318 319 320 002 040
Tristar	291
Turnsat	004
Twiner	004 045 046 001 149
UEC	059 064
Uher	047
Ultravox	298
Uniden	098 278 293 305 313 331 001
	138
Unisat	045 077 087 002 038 119
Universum	020 022 044 051 053 090 098
	101 001 040
Variosat	020 022
Vega	049
Ventana	077 001 139
Vestel	101
Viasat	066
Visionic	062
Visosat	004 056 100 041 042 147 148
Viva	078
Vivid	064
Vortec	032 321 334 001 036
VTech	057 001 115 082 100 114
Wela	094
Welltech	047
WeTeKom	047 050 052
Winersat	083 305 313 324 331 001 041
Wintergarten	080
WINTERITZ	279 288
Wisi	020 022 050 053 082 089 094
	100 116 178 185 190 191 197
	200 209 218 219 220 222 226
	252 254 255 256 265 266 318
	005 037 040 114 115
World	083
Worldsat	056
Xrypton	049 088
XSat	004 066
Zaunkonig	078
Zehnder	025 044 049 057 082 088 101
	304 308 318 005 039 107 110
	115 130
Zenith	058
Zinwell	065
Zodiac	095 001 106
Cabletime	305 313 331
Kenwood	305 313 331
Apollo	036
Aston	148
Brandt	143
Clemens Kamphus	129
CNT	107
Comtech	119
Cosat	042
Crown	038
Cybermaxx	150
Daeryung	116
Decca	121
Delega	105
Diamond	122
Diskexpress	110
Ditristrad	042
Dong Woo	132
Elekta	107
Emanon	036
Ep Sat	037
Eurodec	043

Satellite	Manufacturer Code
Eurospace	124
Finnsat	043 119
France Satellite/TV	125
Galaxi	110
GMI	038
GoldStar	128
Goodmans	037 127
Grothusen	036 128
Hanuri	107
Hitachi	037 118
Houston	042
Imperial	127 141
Innovation	039 135 145 147 150
Intertronic	038
ITT Nokia	037 111 118
JSR	042
Leng	041
Lennox	042
LG	128
Life	145
Lifetec	039 135 145 147 150
Lion	124
Lorraine	128
Lyonnaise	043
Macab	043
Marantz	139
Mediamarkt	038
Microstar	039 135 145 147 150
Mitsubishi	037 040 143
Mitsumi	133
Morgan Sydney	149
Next Wave	146
Nomex	151
Oceanic	122 124
Orbit	114
Origo	124
Otto Versand	040
Pacific	122
Paltec	112
Polsat	043
Polytron	120
Priesner	038
Profi	134
Promax	037
Protek	122
Provision	107
Quiero	043
Rediffusion	137
Redstar	039
Ruefach	134
Sabre	037
Silva	128
Sky Digital	140
Skyvision	042
Start Trak	036
Sumida	038
Tandy	106
Tantec	037 050 118 125
Tatung	121
TCM	039 135 145 147 150
Teco	038 133
Telemaster	107
Telemax	131
Telewire	042
Thorens	122
TPS	102
Unitor	041 110
Variostat	040
Vector	124
Via Digital	024
Vivanco	152
Wevasat	037
Wewa	037
Woorisat	107

Satellite Receiver	Manufacturer Code
Hauppauge	018 029

Satellite Receiver/Recorder	Manufacturer Code
Humax	005
Kathrein	033

Cable Box	Manufacturer Code
ABC	375
Alcatel	373 374
Amstrad	378 380
Arcon	380
Axis	380
Cabletime	348 349 350 366 368 370
Clyde Cablevision	351
Comcrypt	376

Cable Box	Manufacturer Code
Cryptovision	352
Fidelity	380
Filmnet	376
Filmnet Cablecrypt	353 369
Filmnet Comcrypt	353
Finlux	355
Foxtel	378
France Telecom	371 372 377
Freebox	379
GEC	351
General Instrument	367 375
Gooding	354
Grundig	380 354
Hirschmann	355
ITT Nokia	355
Jerrold	356 362 364 367 375
JVC	354
Macab	372 377
Maspro	354
Matsui	354
Minerva	354
Mnet	369 376
Movie Time	361
Mr Zapp	377
Multichoice	376
Nokia	355
Noos	377
Palladium	354
Philips	354 363 371 372 377
Pioneer	380 357 358
PVP Stereo Visual Matrix	364
Sagem	372 377
SAT	380
Scientific Atlanta	359 360
Starcom	375
Tele+1	353 369 376
Telepiu	369 376
Torx	375
United Cable	364
Universum	354 355
Videoway	365
Visiopass	355 371 372 377
Wittenberg	380

SAT/DVD	Manufacturer Code
Humax	005 (SAT)/048 (DVD)

Updating your TV via DVB-T

To ensure that your TV software version is always up to date, from time to time SHARP will make updated TV base software and DVB software available.



Digital Setup

Download Setup

Searching for updates*

* The country except UK and Sweden is set to “Yes” on this function.

The TV automatically determines whether a new software version is available when the TV is in standby mode.

Item

Yes: Search automatically if there is software available for update when the TV is in standby mode.

No: Do not search for update information.

Now: Check whether or not there is a new software immediately.

NOTE

- The TV must remain in standby mode for download. Do not switch off the TV with the main power switch.
- Updating the software may take some time.

Downloading the software

If the software is updated, the confirmation message “New download information has been detected.” appears. You can select the method of update.

- 1 When you tune to the service that provides the update, a confirmation message displays.
- 2 Follow the screen prompts.

Item

Yes: Start downloading immediately. It takes approximately one hour to update. You cannot carry out other operations while downloading.

No: Start downloading automatically several minutes after entering standby mode. The Timer settings will be executed.

- Cancel the download by pressing **OK** on the remote control when displaying “Discontinue” on the screen during the update.



Information

Message List

When software is detected in the “Download Setup” menu and “No” is selected, you can update the software from the “Message List” menu.

Press **◀/▶** to select “Yes” after confirming the message, and then press **OK**.

NOTE

- When the TV succeeds at downloading new software, the message is updated in the “Message List” of the “Information” menu.
- The software update will not be carried out if there is no new software available at the specified download time.



Information

Receiver Report

Display reports regarding failures and changes for timer settings.

Reset

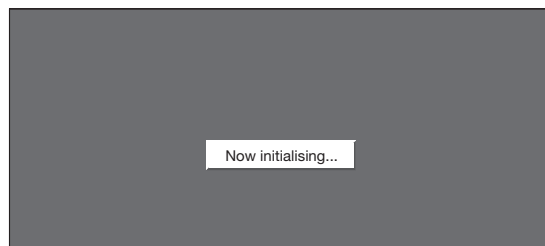
If complex adjustments are made so that the settings cannot be restored to normal, you can reset the settings to the factory preset values.



Setup

Reset

- 1 Press **◀/▶** to select “Yes”, and then press **OK**.
 - “Now, TV will restart automatically. OK?” displays on the screen.
- 2 Press **◀/▶** to select “Yes”, and then press **OK**.
 - “Now initialising...” displays on the screen and blinks.
 - After the reset has completed, the power shuts off and then comes back on. The screen will have returned to its original settings.



Identification



Setup

Identification

You can check the TV ID on the screen for reporting to customer service.

CLEARING THE PASSWORD

- 1 Go to MENU > Setup.
- 2 Press **▲/▼** to select “Auto Installation”, “Programme Setup”, “Child Lock”, “Reset”, and the PIN input screen displays.

- - - -
- 3 Press and hold both **CH ▲** and **VOL +** on the TV simultaneously until the message appears on the screen.

Specifications

Item			42" LCD COLOUR TV, Model: LC-42XL2E, LC-42XL2S	46" LCD COLOUR TV, Model: LC-46XL2E, LC-46XL2S	52" LCD COLOUR TV, Model: LC-52XL2E, LC-52XL2S
LCD panel			42" Advanced Super View & BLACK TFT LCD	46" Advanced Super View & BLACK TFT LCD	52" Advanced Super View & BLACK TFT LCD
Number of dots			6,220,800 dots (1920 × 1080 × 3 dots)		
Video Colour System			PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60		
TV Function	TV-Standard	Analogue	CCIR (B/G, I, D/K, L/L')		
		Digital	DVB-T (2K/8K OFDM)		
	Receiving Channel	VHF/UHF	E2–E69ch, F2–F10ch, I21–I69ch, IR A–IR Jch (Digital: E5–E69ch)		
		CATV	Hyper-band, S1–S41ch		
	TV-Tuning System		Auto Preset 999 ch, Auto Label, Auto Sort		
	STEREO/BILINGUAL		NICAM/A2		
Brightness			450 cd/m²		
Backlight life			60,000 hours (at Backlight Standard position)		
Viewing angles			H : 176° V : 176°		
Audio amplifier			15W × 2		
Speaker			(100 mm × 40 mm) × 4		
Terminals	Antenna		UHF/VHF 75 Ω Din type (Analogue & Digital)		
	RS-232C		D-Sub 9 pin male connector		
	EXT 1		SCART (AV input, Y/C input, RGB input, TV output)		
	EXT 2		SCART (AV input/monitor output, Y/C input, AV Link, RGB input)		
	EXT 3		S-VIDEO (Y/C input), RCA pin (AV input)		
	EXT 4		HDMI		
	EXT 5		HDMI		
	EXT 6		HDMI, Ø 3.5 mm jack		
	EXT 7		15 pin mini D-sub, Ø 3.5 mm jack		
	EXT 8		COMPONENT IN: Y/Pb(Cb)/Pr(Cr), RCA pin (L/R)		
	DIGITAL AUDIO OUTPUT		Optical SPDIF Digital audio output		
	C. I. (Common Interface)		EN50221, R206001		
	OUTPUT		RCA pin (Audio)		
	Headphones		Ø 3.5mm jack (Audio output)		
OSD language			Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Norwegian, Polish, Portuguese, Russian, Slovak, Slovene, Spanish, Swedish, Turkish		
Power Requirement			AC 220–240 V, 50 Hz		
Power Consumption			222W (0.5 W Standby) (Method IEC60107)	253W (0.5 W Standby) (Method IEC60107)	280W (0.5 W Standby) (Method IEC60107)
Weight			22.5 kg (Without stand), 27.0 kg (With stand)	25.5 kg (Without stand), 30.5 kg (With stand)	29.0 kg (Without stand), 34.0 kg (With stand)
Operating temperature			0°C to +40°C		

- As a part of policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

NOTE

- Refer to the inside back cover for dimensional drawings.

Optional accessory

The listed optional accessories are available for the LCD colour TVs. Please purchase them at your nearest shop.

- Additional optional accessories may be available in the near future. When purchasing, please read the newest catalogue for compatibility and check the availability.

No.	Part name	Part number
1	Wall mount bracket	AN-52AG4



Attention: Your product is marked with this symbol. It means that used electrical and electronic products should not be mixed with general household waste. There is a separate collection system for these products.

A. Information on Disposal for Users (private households)

1. In the European Union

Attention: If you want to dispose of this equipment, please do not use the ordinary dust bin!

Used electrical and electronic equipment must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of used electrical and electronic equipment. Following the implementation by member states, private households within the EU states may return their used electrical and electronic equipment to designated collection facilities free of charge*. In some countries* your local retailer may also take back your old product free of charge if you purchase a similar new one.

*) Please contact your local authority for further details.

If your used electrical or electronic equipment has batteries or accumulators, please dispose of these separately beforehand according to local requirements.

By disposing of this product correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling.

2. In other Countries outside the EU

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

For Switzerland: Used electrical or electronic equipment can be returned free of charge to the dealer, even if you don't purchase a new product. Further collection facilities are listed on the homepage of www.swico.ch or www.sens.ch.

B. Information on Disposal for Business Users

1. In the European Union

If the product is used for business purposes and you want to discard it:

Please contact your SHARP dealer who will inform you about the take-back of the product. You might be charged for the costs arising from take-back and recycling. Small products (and small amounts) might be taken back by your local collection facilities.

For Spain: Please contact the established collection system or your local authority for take-back of your used products.

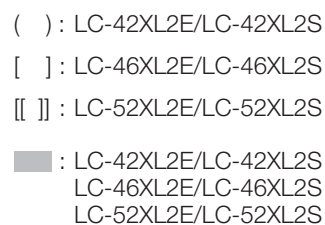
2. In other Countries outside the EU

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

Rating table for Child Lock

Broadcasted rating User-adjusted rating	AGE														
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Universal viewing	✓	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parental approval pref.	✓	✓	✓	✓	✓	—	—	—	—	—	—	—	—	—	—
X-rated	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Broadcasted rating User-adjusted rating	Universal viewing	Parental approval pref.	X-rated
Universal viewing	—	—	—
Parental approval pref.	✓	—	—
X-rated	✓	✓	—



:LC-42XL2E/LC-42XL2S

SHARP®

SHARP ELECTRONICS (Europe) GmbH

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SHARP CORPORATION

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Printed in Poland
Gedruckt in Polen
Imprimé en Pologne
Stampato in Polonia
Gedruckt in Polen
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PIN

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