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.

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Precautions for daily use

Observe the following items

Maintenance of the cabinet

- When cleaning the cabinet, use a soft cloth (made of cotton, floss, etc.) to clean gently.
- Do not use a dry or damp rag mixed with chemicals, as this could cause the ingredients of the cabinet body to deteriorate or crack.Be careful not to use an abrasive cloth for cleaning or clean with excessive force, as this could scratch the surface of the cabinet.
- If the cabinet is greatly soiled, clean with a soft cloth (made of cotton, floss, etc.) soaked with a small amount of diluted neutral detergent and wrung out, and then clean with a soft dry cloth.
- Because the cabinet is made of plastic, solvents such as benzene or thinner could cause it to deteriorate, or make its coating come off. Therefore do not use such solvents to clean the cabinet.
- Because plasticizer is included in the plastics, deterioration or the coating peeling off could occur when the cabinet comes into contact with some substances. Therefore keep it away from volatile substances such as insecticide. In addition, do not let it come into contact with objects made of rubber, resin, etc. for a long time.

Maintenance of the LCD panel

- Before cleaning the LCD panel, be sure to turn off the TV set and unplug the power cord from the outlet.
- When cleaning the LCD panel, use a dry and soft cloth (made of cotton, floss, etc.) to clean the surface of the LCD panel gently. For protecting the LCD panel, do not clean with a dirty cloth, detergent, or a dry or damp rag mixed with chemicals, as this could cause peeling of the panel surface.
- Be careful not to clean with an abrasive cloth or with excessive force, as this could cause the panel surface to be scratched.
 If the LCD panel is greatly soiled, clean it gently with a soft cloth (made of cotton, floss, etc.) soaked with a small amount of water (Do
- not clean with excessive force, so as to avoid the scratch of the panel surface).
- If dust sticks on the surface of the LCD panel, clean the panel with a commercially available cleaning brush (anti-static brush).

Important safety precautions



Important Safety Precautions

3D glasses

Prevention of accidental ingestion

- Keep the accessory out of the reach of small children. Small children can accidentally swallow these parts. -If a child accidentally swallows any of these parts, seek immediate medical attention.
- Do not disassemble

• Do not disassemble the 3D glasses except when disposing the batteries. Do not modify the 3D glasses.

Caution for lithium ion polymer rechargeable battery

• Do not expose the battery to excessive heat, such as direct sunlight or fire, etc.

Handling the 3D glasses

- Do not drop, exert pressure on, or step on the 3D glasses. Doing so may damage the glass section, which may result in iniurv.
- Be careful not to trap your finger in the hinge section of the 3D glasses. Doing so may result in injury.
- -Pay special attention when children are using this product.

Using the 3D glasses

- The 3D glasses vision should be limited. Security advisory establishes a maximum of 3 hours visualization, and in any case no more than one show length, break included.
- Use only the 3D glasses recommended for this TV.
- Use the 3D glasses only for the specified purpose.
- Do not move around while wearing the 3D glasses. The surrounding area appears dark, which may result in falling or other accidents that may cause injury.

Caring for the 3D glasses

- Use only the cloth provided with the 3D glasses to clean the lenses. Remove dust and soil from the cloth. Any dust or other soiling on the cloth may result in scratches on the product. Do not use solvents such as benzene or thinners as doing so may cause the coating to peel off.
- When cleaning the 3D glasses, take care not to allow water or other fluids to come into contact with the glasses.
- Always store the 3D glasses in the case provided when not in use.
- When storing the 3D glasses, avoid very humid or hot locations.

Viewing 3D images

• If you experience dizziness, nausea, or other discomfort while viewing 3D images, discontinue use and rest your eyes. • Do not use the 3D glasses if they are cracked or broken.

Keep away from heat

Do not place the 3D glasses in a fire, near heat or in an area with high humidity. This product may cause a fire or injury from ignition or explosion of the built-in lithium ion polymer rechargeable battery.

Caution regarding power supply for 3D glasses

When lightning occurs, stop using 3D glasses with power supplied by a USB cable. Remove the USB cable from the USB terminal on the TV and the power supply terminal on the 3D glasses. Otherwise, electric shock may occur.

Caution regarding rechargeable battery

• Use the supplied USB cable to connect to a USB terminal of a 3D compatible SHARP TV when recharging. Recharging using other devices may lead to battery leakage, heat generation or explosion.

Caution for rechargeable battery

Use the supplied USB cable to connect to a USB terminal of a 3D compatible SHARP TV for supplying power. Supplying power using other devices may lead to heat generation or explosion.

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Accessories

Supplied accessories

Make sure the following accessories are provided with the product.



The listed optional accessories are available for this LCD colour TV. 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.

Part name	Part number	Note
3D glasses	AN-3DG30	Rechargeable

NOTE

In the following cases, recharge the product before using it:

when you use the product for the first time after purchase.

- if you have not used the product for a long period of time
- For how to recharge the product, refer to the operation manual.

Attaching the stand unit

- Before attaching (or detaching) the stand, unplug the AC power cord from the AC power outlet.
- Before performing work, spread cushioning over the surface on which you will be laying the TV. This will prevent it from being damaged.

- 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.
 LC-52LX640H/LC-60LX640H



Protection against overturning

There is a danger of the product overturning in the case of a disaster or sudden collision. Carry out the following tip-resistant measurement for your safety.

LC-60LX640H

Anchoring the TV to the wall or a pillar



Use the 2 screws (supplied) to attach the 2 clamps (supplied) to the rear of the TV. Attach the TV to the wall using extra strong



ties (commercially available).



LC-52LX640H/LC-60LX640H

Place the TV on the table.

Fixing the TV to the table



3

Pull the attached restraining bracket out so

that it is at a 90 degrees angle.

Insert commercially available screws in the holes of the restraining bracket and tighten the screws to secure the TV to the table.

• Use commercially available screws of the proper size to firmly secure the TV.



Restraining bracket (attached)

2 Tie (commercially available)3 Screws for attaching clamps (supplied)

Cup hook (commercially available)

Grews for attaching cla
 Clamps (supplied)

NOTE

A

- When the attaching clamps is out of use, pull it in 90° so that hiding in the base.
- The illustrations of this page are according to LC-60LX840H.

- As this product is heavy, use a table that is wide enough to support the product and capable of withstanding the product's weight. The table should be set where it will not be overturned.
- Be sure to use at least two people when moving the TV.

Handling and precautions with the wall-mounted TV

- You can mount the TV on the wall using the optional bracket.
- For details, refer to the instructions supplied with the optional bracket.

- This TV should be mounted on a wall only with a wall mount bracket recommended by SHARP. The use of other wall mount brackets may result in an unstable installation and may cause serious injuries.
- Installing the TV requires special skills 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.

Using a SHARP recommended bracket to mount the TV

- You can ask a qualified service professional about using a SHARP recommended bracket to mount the TV to the wall.
- Carefully read the instructions that come with the bracket before beginning work.

• If you want to mount the TV on the wall, use the screws provided with the wall-mount bracket to affix the bracket to the rear of the TV.

Part names

TV (Front / Side)



• The illustrations and on-screen displays in this operation manual are for explanation purposes and may vary slightly from the actual operations.

The illustrations used throughout this operation manual are based on LC-60LX640H.

TV (Rear)

- *1 Audio Return Channel (ARC) (See page 62.)
 *2 The HDMI 2/ PC AUDIO INPUT(L/R) terminal share the same audio input terminal (HDMI 2/PC). However, the proper item must be selected in the "Audio select" menu. (See pages 58 and 66.)
- *3 Use this terminal if the recharging of the USB HDD is by USB.



- The speakers do not output volume when headphones are plugged in.
- The "Audio" menu cannot be operated when headphones are • plugged in.
- You can set the volume to different levels for each input source.



Remote control unit



POWER (Standby/On) 1

To switch the power on and off. (See page 20.)

EXT MEDIA buttons 2

- EXT MEDIA buttons are used for AQUOS LINK function and Time shift functions,etc.
 - AQUOS LINK (See page 63.)
- Time shift (See page 76.)
- 3 A-TV (Analogue TV) Press to access analogue TV mode. (See page 44.) D-TV (Digital TV)
 - Press to access digital TV mode. (See page 44.) 0 - 9
- 4 Set the channel. (See page 24.)

5

S Flashback Press to return to the previous selected channel or external input mode. (See page 29.)

- 6 3D function (See pages 54 to 55.)
- $\land / \bigtriangledown / \blacklozenge / \blacklozenge$ (Cursor) Select a desired item on the setting screen. 7 ENTER Execute a command.

8 EXIT

- Turn off the On-Screen Display. 9 🕸 (Mute)
- Mute the sound. (See page 29.) VOL+/-10
- Set the volume. (See page 24.)
- 11 EPG
- D-TV only: To display EPG (Electronic Programme Guide) screen. (See pages 46 to 49.) 12 INFO
- D-TV only: Display the programme information. (See page 45.)
- 13 AV MODE
- Select a video/audio setting. (See page 37.)
- WIDE 14
- Change the wide image mode. (See pages 36, 66 and 87.) 15 CONTROL
 - Display a panel to operate some functions on the screen. (See pages 76, 83 and 87.)
- 16 MPX
 - Select the sound multiplex mode. (See page 31.)

TV/VIDEO (INPUT SOURCE) 17 Select an input source. (A-TV, D-TV, HDMI1, HDMI2, HDMI3, INPUT4, INPUT5, PC, USB media, Home network) (See pages 17, 58 to 59, and 79.)

18 HOME

Display the "HOME" screen for enjoying Internet connection and Home network functions, as well as performing settings for the TV. (See page 72.)

- **19 MENU**
 - Displays the menu screen. (See page 22.)

20 RETURN

- MENU mode: Return to the previous menu screen. (See page 22.) 21 DISPLAY
- Displays the channel or input information.
- **22 CH///** TV input mode: Select the channel. (See page 24.)
- 23 Colour Buttons (R / G / Y / B)

The coloured buttons are used to select correspondingly to the coloured items on the screen. (e.g., AQUOS LINK, D-TV, USB media, Home network, EPG)

- 24 (Subtitle)
- To turn the subtitles on/off. (See pages 30, 49 and 83.) 25 TEXT
- D-TV only: To display MHEG-5 broadcasts. (See page 49.) 26 SLEEP
- Set the sleep timer. (See page 34.) FREEZE 27

Freeze a motion picture on the screen. (See page 29.)

Before turning on the power

Notes on installing the TV

- Avoid direct sunlight and place the TV in a well-ventilated location.
- Place the TV in a level location.
- Do not turn on the power of the TV before connecting the AC cord.



• TO PREVENT RISK OF ELECTRIC SHOCK, DO NOT TOUCH UN-INSULATED PARTS OF ANY CABLES WITH THE AC CORD CONNECTED.

Connecting external devices

You can connect many types of external equipment to your TV, like a VCR, game console, camcorder, DVD player, Digital TV Set Top Box (STB) and PC. To view external source images, select the input source from **TV/VIDEO** on the remote control unit or **TV/VIDEO** on the TV.

- To protect all equipment, always turn off the TV before connecting to a VCR, game console, camcorder, DVD player, Digital TV Set Top Box (STB), PC or other external equipment.
- Refer to the relevant operation manual (VCR, DVD player, etc.) carefully before making connections.

When using component cable (commercially available)



When using composite cable (commercially available)



NOTE

• Insert the terminals by colour.

When using HDMI cable (commercially available)



NOTE

- When using a DVI-HDMI adaptor, input the audio signal from the HDMI2/PC AUDIO INPUT terminal. (See page 66.)
- Some commercially available devices may have not been properly certified. When they are connected to the TV via HDMI, there may be no sound at all. In this case, it is recommended to use HDMI2 and HDMI2/PC AUDIO INPUT terminal to input audio signals.

When using RGB cable (commercially available) connecting to a PC (see page 65)



NOTE

• Macintosh adaptor may be required for use for some Macintosh computers.

Connecting an AV amplifier

Set Top Box (STB)



NOTE

- If the image is not in sync with the audio, check the settings of the connected surround system.
- Letting the TV output the audio to an AV amplifier:
- When you connect ARC-compatible equipment, use the HDMI1 terminal.

Connecting a USB hard disk drive (HDD)

You can use USB2 (HDD) terminal when connecting a USB hard disk drive.



Connecting to the Network

See page 71.

Inserting the batteries

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



2 Insert the two supplied "AAA" size alkaline batteries.







 Place batteries with their terminals corresponding to the (+) and (-) indications in the battery compartment.

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.
- 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.
- Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.

Using the remote control unit

Use the remote control unit by pointing it towards the remote sensor window.

Objects between the remote control unit and sensor window may prevent proper operation.



Cautions regarding the remote control unit

- Do not subject the remote control unit to shock. In addition, do not soak the remote control unit with liquids or place it 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 sensor window of the TV is under direct sunlight or strong lighting. In such cases, change the angle of the lighting or TV, or operate the remote control unit closer to the remote sensor window.





Turning on/off the power

To turn on the power

Press **POWER** on the TV. (After several seconds, an image appears with sound.)

NOTE

• Wait more than five seconds until you press **POWER** on the TV after inserting the power plug.

• To turn off the power

Switch it off by pressing **POWER** on the TV.

Standby mode

To standby mode

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

Switching on from standby

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

<u>NOTE</u>

- If you are not going to use this TV for a long period of time, be sure to remove the AC cord from the AC outlet.
- Minor power is consumed when the unit is in standby mode.

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?

2

3

- Press **POWER** on the TV.
 - The initial auto installation wizard appears.
 - Press \blacktriangle/ \lor to select the desired language, and then press **ENTER**.



Press **◄**/**▶** to select "HOME" or "STORE", and then press **ENTER**.

- HOME STORE
 HOME: "STANDARD" will be the default value for the "AV mode" setting.
 STORE: "DYNAMIC (Fixed)" will be the default value for the "AV mode" setting. If the "AV mode" is changed, the
- the "AV mode" setting. If the "AV mode" is changed, the TV will automatically switch back to "DYNAMIC (Fixed)" when there is no further change to TV setting for 10 minutes. When selecting "STORE", press ◄/► to select "Yes"or "No" to confirm.
- Press **◄**/**▶** to select "Digital Search" or "Analogue Search" and then press **ENTER**.
- 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 **RETURN**.

🖄 NOTE

4

- HOME mode: Settings are optimised for normal home viewing and energy efficiency.
- STORE mode: Settings are designed for maximum impact in retail store displays.
 To change the "STORE" mode to "HOME" mode, please refer to
- page 91 to reset the unit.
- If you turn off the power on the TV after performing step 4, the initial auto installation wizard may not appear. The auto installation function allows you to execute the auto installation again from the "Setup" menu. (See page 23.)
- The initial auto installation wizard will go off if you leave the TV
 unattended for 30 minutes before searching for channels in step 4.

Supplying electric power to the antenna

When you set-up the D-TV antenna for the first time, or connect the antenna to a community antenna, you need to proceed to set the antenna by following this manual.







Press **D-TV** to access D-TV mode.

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

3

5

6

Press \mathbf{V}/\mathbf{A} to select "View setting".



Press ▲/▼ to select "Antenna setup-DIGITAL" and then press **ENTER**.

- Press ▲/▼ to select "Supply voltage" and then press ENTER.
 - Press **◄/**▶ to select "On" and then press ENTER.

Selected item	Description		
On	Select "On" when your antenna is set-up and connected independently. Typical supply voltage: 5V Typical supply current: 50mA		
Off	Select "Off" when you do not need to supply voltage to your antenna, i.e. when your antenna is connected to a community antenna. (The factory default setting of this function is "Off".)		

Checking signal strength and channel strength

If you install a D-TV 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.

Press **MENU** and the MENU screen displays. Press $\nabla/\langle \rangle$ to select "View setting". Press ▲/▼ to select "Channel settings" and 3 then press ENTER. Press \blacktriangle/V to select "Antenna setup-DIGITAL", 4 and then press ENTER.

Power supply setting to antenna terminal

Press ▲/▼ to select "Supply Voltage" and then press ENTER.Press ◀/► to select "On" or "Off".

Supply voltage		
Signal strength		
Channel strength		
	On	Off

Checking signal strength

Press \blacktriangle/∇ to select "Signal strength".



Checking channel strength

Press \blacktriangle/∇ to select "Channel strength", and then press ENTER.

Supply voltage Signal strength	Frequency	4	82.	0 _{MHz}	
Channel strength	CH No.	22			
	Signal strengt	th 			
	Current	0	Max.	0	
	Quality				
	Current	0	Max.	0	



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

SNOTE

5

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

About Menu operations

What is 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 can be operated with the remote control unit.

Basic menu operations





Press MENU and the MENU screen displays.



2 Press $\blacktriangle/ \bigtriangledown/ \checkmark/ \checkmark$ to select the desired menu item.

Press **ENTER** to proceed if necessary.



- Press \blacktriangle/ \lor or $\checkmark/ \triangleright$ to select the desired item or adjust the item to the desired level. Press **ENTER** if necessary.
- 4 Press **EXIT** or **MENU** to exit the MENU. Press **RETURN** as necessary to return to the previous MENUs.

Using the control panel of the TV

You can also operate the Menu using the control panel of the TV.

Button operations on the control panel correspond to the ones on the remote control as shown below.



TV control panel buttons	Remote control buttons	
MENU	MENU	
TV/VIDEO	ENTER	
СН 🔨	A	
СН 🗸	▼	
VOL +	•	
VOL –	•	

S 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.

About guide display

The operations differ depending on the functions and menu items. Refer to the guide display for the key buttons.

Setting channels automatically

You can run auto installation again, even after setting up the preset channels.





Press $\ensuremath{\textbf{MENU}}$ and the MENU screen displays.

2 Press ▼/ ◀/ ► to select "View setting".



3 Press ▲/▼ to select "Auto installation", and then press ENTER. Menu CH list Setup © CH list CH L



Press ▲/▼ to select the desired language listed on the screen, and then press ENTER. Press ◄/► to select "Digital Search" or "Analogue Search", and then press ENTER. You do not need to do anything during the auto search.

Selecting programmes

You can change channels in several ways.

- Using CH \wedge/\vee on the remote control unit
- Press $\mathbf{CH} \wedge$ to increase the channel number.
- Press \mathbf{CH} \bigvee to decrease the channel number.



NOTE

• CH \wedge / \vee on the TV operates the same as CH \wedge / \vee on the remote control unit.



Using 0 - 9 on the remote control unit

Select the channels directly by pressing buttons **0** to **9**.



EXAMPLE

- To select a 1-digit channel (e.g. channel 2):
- Press 0, followed by 2.
- To select a 2-digit channel (e.g. channel 12):
- Press 1, followed by 2.
- To select a 3-digit channel (e.g. channel 123):
- Press 1, followed by 2 and 3.

Channel display

(Example)



Adjusting the volume



Changing the volume

You can change the volume on the TV or on the remote control unit.

- To increase the volume, press VOL + .
- $\bullet\,$ To decrease the volume, press $\textbf{VOL}\,$.



NOTE

• "TV (A-TV, D-TV)", "HDMI1", "HDMI2", "HDMI3", "INPUT4", "INPUT5", "PC", "USB media" and "Home network" modes can store volume adjustment values separately.

Setting channels to your preference

You can run the auto search procedure again at any time by accessing the "Setup" menu and "Programme setup". Channels can be tuned automatically or manually.



Digital settings

You can reconfigure D-TV services settings automatically or manually.

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



Press \mathbf{V}/\mathbf{A} to select "View setting".

3 Pr

Press \blacktriangle/ \lor to select "Channel settings" and then press **ENTER**.

4 Press ▲/▼ to select "Programme setup", and then press **ENTER**. If you have already set the password, enter it here.

• See page 32 for setting a password. The "Digital setting" screen displays and then press **ENTER**.



Press $\blacktriangle/ \bigtriangledown$ to select the desired menu item, and then press **ENTER**.



Press $\triangleleft/\triangleright$ to select "Yes", and then press **ENTER**.

NOTE

• "Digital setting" is available only in the D-TV mode.

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) buttons.



Press $\blacktriangle/ \mathbf{V}$ to select the desired service.

1

- 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

Menu items	Remote control buttons	Description
Lock	R	When the service is locked, you must enter your password whenever you tune to the service.
CH skip	G	Services with a ✓ mark are passed over when pressing ∧/∨ in the TV/ remote control unit.
Delete	Y	The service is deleted from the list. Execute one of "Auto installation", "Additional search" or "Manual search" to watch the deleted service again.



system, and then press ENTER.

Manual setting for each channel (Analogue) (continued)

Sound system (Broadcasting system)



2

Press $\blacktriangle/ \bigtriangledown/ \checkmark/ \checkmark/$ to select the channel you want to edit, and then press ENTER.

- · The selected channel information displays.
- Press \blacktriangle/∇ to select "Sound sys.", and then press ENTER.
 - Receivable sound systems (Broadcasting systems) are listed.



Press $\blacktriangle/ \mathbf{V}$ to select the optimum sound system, and then press ENTER.

NOTE

Check the sound system if the sound output were not correct.

Labelling channels

You can change individual channel names.



want to edit, and then press ENTER. • The selected channel information displays.

- Press \blacktriangle/ \lor to select "Label", press **ENTER**, 2 and then press ENTER again.
 - The software keyboard will be displayed.
- Use the software keyboard to input the new 3 name.

• Refer to "Using Software keyboard" at the bottom of this page.

The name can be 5 characters or less. Select "Done" to set the channel name.





1 Char. Set

Changes character set into the alphabet, numbers, symbols, etc.

2 Caps

Changes characters to capital/lower case.

3 Done

Confirm the entry.

Cancel

Abort input and close the software keyboard.

Skipping channels

Channels with "Skip" set to "On" are passed over when using $CH \land / V$ even if selected while watching the image from the TV.

1	 Press ▲/▼/ ◄/ ► to select the channel you want to edit, and then press ENTER. The selected channel information will be displayed.
2	 Press ▲/▼ to select "Skip", and then press ENTER. Skip menu displays.
3	Press $\blacktriangle/ \blacksquare$ to set "Skip" to "On", and then press ENTER .
Setting	g the child lock
You ca	n block the viewing of any channel.
1	Press $\blacktriangle/ \bigtriangledown/ \lt/ \blacktriangleright$ to select the channel you want to edit, and then press ENTER .

- The selected channel information will be displayed.
- Press ▲/▼ to select "Lock", and then press



- Child lock menu will be displayed.
- Press ▲/▼ to set "Lock" to "On", and then З press ENTER.

ENTER.

NOTE

- See page 32 for setting a password.
- If "Lock" is set to "On" for a channel, "Child lock has been activated" is displayed when you select the channel, and the image and sound of the channel is blocked.
- When pressing RETURN while "Child lock has been activated" is displayed, password input menu will be displayed. Inputting the correct password lifts the child lock temporarily until the power is turned off.

5 R/G/Y/B (Colour) buttons

Selects the coloured items on the screen.

- 6 Input cursor
 - Press \triangleleft b to move the cursor when highlighted.

7 Input field

The text you enter is displayed as you type it in.

Character 8

Input characters by using these buttons.

- 9
- Put a line break.

10 Clear

Erases the character string.

- When the cursor is somewhere in a line: the character string to the right of the cursor will be erased
- When the cursor is at the right end of a line: the entire line will be erased.

11 Delete

If the cursor is at the right end of a line, this erases text one character at a time.

 You can also delete text by pressing **RETURN** on the remote control unit.



Useful viewing functions

Freezing the image

Allows you to capture and freeze one frame from a moving image that you are watching.

EPG	INFO	TEXT	
AV MODE	WIDE	FREEZE	SLEEP

Press FREEZE.

· Captures one frame from a moving image.



Press FREEZE again to cancel the function.

NOTE

- The still image automatically goes out after 30 minutes.
- You also can press RETURN to cancel the function.
- This function may be disable depending on the input sources.

Returning to the previously selected channel

7	8	9
ţ,	0	TV/ VIDEO

Press S to switch the currently tuned channel to the previously tuned channel.

Press S again to switch back to the currently tuned channel.

Press 🗲 to toggle between the currently selected input source and the previously selected one.

Muting the audio temporarily

Using 🕸 (Mute) on the remote control unit

K (Mute) mutes the current sound output.



- The sound is silenced.
- "is displayed while the mute function is on. . Mute



Press X (Mute) again within 30 minutes to cancel the mute.

• Before 30 minutes, the volume level returns to the previous setting.

Mute will be cancelled after 30 minutes. However, the TV will not suddenly output loud sound as the volume level will be set to 0 automatically. Increase the volume level by pressing VOL+.

Outputting only audio

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

1	Press MENU and the MENU screen displays.
2	Press ▼/ ◀/► to select "ECO".
3	Press ▲/▼ to select "Audio only", and then press ENTER .
1	Press $\blacktriangle/\blacksquare$ to select "On", and then press

ENTER.

Selected item	Description
On	Audio is output without screen image.
Off	Both picture and audio are output.

When you make operations that change the picture on the TV such as by changing the input source, the "Audio only" function is set to "Off".

Quick start

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

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



Press \mathbf{V}/\mathbf{A} to select "View setting".

3

Press \blacktriangle/∇ to select "Quick start", and then press ENTER.

4 ENTER.

Press $\blacktriangle/ \mathbf{V}$ to select "On", and then press

Selected item	Description	
On	The TV quickly starts up from standby, approximately 21 W of power consumption is required during standby.	
Auto (Time shift)	The "Quick start" mode will automatically turn on and off depending on the Time shift status. If playable data exists on the USB storage device registered for Time shift, "Quick start" will be automatically set to the same status as "On".	
Off	Power consumption is small during standby.	

Menu language settings

You can also select a language from setup menu. Select from among 3 languages: English, Simplified Chinese and Traditional Chinese.





Δ

Press \mathbf{V}/\mathbf{A} to select "View setting".

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

Press \blacktriangle/Ψ to select "Language", and then press **ENTER**.

Press $\blacktriangle/ \blacksquare$ to select the desired language listed on the screen, and then press **ENTER**.

Switching subtitle languages

Each time you press ... (Subtitle) on the remote control, the subtitle switches when the broadcast contains subtitle information.



Selecting the Language

Set up two preferred subtitle languages to display if the subtitle languages are available.

Press **MENU** and the MENU screen displays. Press \mathbf{V}/\mathbf{A} to select "View setting". 2 Press \blacktriangle/∇ to select "Individual setting" and 3 then press ENTER. Press \blacktriangle/∇ to select "Subtitle", and then press Δ ENTER. Press ▲/▼ to select "1st language" or "2nd 5 language", and then press ENTER. Press \blacktriangle/V to select the desired language, 6 and then press ENTER.

- If subtitles for the selected language are not included in a received broadcast, subtitles will not be shown for that language.
- Subtitles may not be displayed properly in 3D mode.

Displaying subtitles for the hearing impaired

If the broadcast includes subtitles for the hearing impaired, they will take precedence over other subtitles.



will be not displayed even when set to "Yes". Subtitles may not be displayed properly in 3D mode.

Digital audio language

Set up to three preferred multi audio languages to display if the audio languages are available.



Press \blacktriangle/V to select the desired language, and then press **ENTER**.

NOTE

6

- This function depends on audio language information from broadcasters.
- If audio for the selected language is not included in a received broadcast, audio will not be output for that language.

Switching the analogue audio format

You can switch between multiple audio modes when watching a multiple audio or stereo broadcast programme.



In the NICAM TV broadcasts When receiving a stereo signal

Each time you press **MPX**, the mode switches between NICAM STEREO and MONO.

Stereo mode



When receiving a bilingual signal

Each time you press **MPX**, the mode switches among NICAM CH A, NICAM CH B, NICAM CH AB and MONO.



When receiving a monaural signal

Each time you press $\ensuremath{\textbf{MPX}}$, the mode switches between NICAM MONO and MONO.

Monaural mode



In the TV mode of A2 TV broadcasts When receiving a stereo signal

Each time you press **MPX**, the mode switches between STEREO and MONO.

Stereo mode



When receiving a bilingual signal

Each time you press $\ensuremath{\textbf{MPX}}$, the mode switches among CH A, CH B and CH AB.

Bilingual mode



When receiving a monaural signal

When you press **MPX**, "MONO" displays.

Monaural mode



• "BBC2", "99" and "PAL" are tentative network name, channel and colour system.

Switching the digital audio format

If multi sound modes are received, each time you press $\ensuremath{\text{MPX}}$ the mode switches as follows.

(Example)



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

Auc	dio (ENG	i) : STEF	REO
L/R	L	R	LR

🖄 NOTE

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

Password setting for the child lock

Allows you to use a password to protect certain settings from being accidentally changed.





Setting a password

Register a 4-digit password number to use the Child Lock function.



3

4

5

Press \mathbf{V}/\mathbf{A} to select "View setting".

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

Press \blacktriangle/ \lor to select "Individual setting" and then press **ENTER**.

Press \blacktriangle/ ∇ to select "Password", and then press **ENTER**.

If you already set the password, enter it here. $\boxed{- - - -}$

6 Press **◄**/**▶** to select "Yes", and then press **ENTER**.



Enter the 4-digit number as a password using **0 - 9**.

7



8 Enter the 4-digit number as in step 7 to confirm.

9 Press ENTER to complete.

 Password
Press ENTER to complete
 OK
(ENTER) : Enter

NOTE

 To view a locked channel (Lock setting in Programme setup "Manual adjust" is set to "On"), you must enter a password. (See this page.) When you select a locked channel, a password prompt message pops up. Press **RETURN** to display the password input window.

Deleting the password

Allows you to clear your password.



- As a precautionary measure, make a note of your password on page 95, cut it out and keep it in a safe place that children cannot reach.
- This function is only available for TV input mode.
- To relock a channel which has been temporarily unlocked by inputting the correct password, turn power off and then on again.

Parental rate

This function allows TV channels to be restricted. It prevents children from watching violent or sexual scenes that may be considered inappropriate.



2

3

Press \blacktriangle/ \lor to select "Parental rating", and then press **ENTER**. If you have already set the password, enter it here.

Repeat steps 1 to 3 in Setting a password.

• See page 32 for setting a password.

Press $\blacktriangle/ \blacksquare$ to select your desired rating, and then press **ENTER**.

Selected item	Description
None	Cancel the blocking.
Age 4-18 years	Select desired age to block. (Example) If age 14 is selected, programmes rated for ages of 15 or more are blocked.

Programme title display

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

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



Press $\mathbf{\nabla}/\mathbf{A}$ to select "Option".



Press \blacktriangle/V to select "Screen effect" and then press \blacksquare

Press $\blacktriangle/ \blacksquare$ to select "Programme title display".



Δ

Press ◀/► to select "Yes".

NOTE

The Programme title display function is only available for the D-TV mode.

Key lock

This function allows you to lock the buttons on the TV or remote control in order to prohibit children from changing the channel or volume.

Off		Unlock the buttons.
Selected item		Description
5	Press <	◀/► to select "Yes", and then press
4	Press "Button	✓▼ to select "RC control lock" or control lock", and then press ENTER.
3	Press press E	✓ to select "Key lock", and then NTER.
2	Press	✓ ◀/► to select "Option".
1	Press N	IENU and the MENU screen displays.

Off	Unlock the buttons.
RC control lock	The operation with remote control is blocked.
Button control lock	The operation with main unit buttons is blocked.

NOTE

• You cannot set both "RC control lock" and "Button control lock" at the same time.

Cancelling the lock

To cancel "RC control lock" follow the below steps using the TV control panel buttons on the TV.



Press **MENU** on the TV and **VOL +/-** to select "Setup".



Press **CH** \bigvee and **VOL**+/- to select "Option".



Press CH/V to select "Key lock" and then press TV/VIDEO.

4 Press $CH \land / \lor$ to select "Off" and then press TV/VIDEO.

🖄 NOTE

- See page 22 for the functions of the TV control panel buttons.
- To cancel "Button control lock", use the remote control.

Energy conservation settings

Auto power-off at a designated time

This function is conveniently used when, for instance, going to bed while watching TV.



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

Using Sleep timer on the menu screen



Press $\mathbf{\nabla}/\mathbf{A}$ to select "ECO".



Press \blacktriangle/ \lor to select "Sleep timer", and then press **ENTER**.

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



5

Press \blacktriangle/ \lor to select "Change", and then press **ENTER**.

Press \blacktriangle/ ∇ to select the desired item, and then press **ENTER**.

NOTE

• When the time has been set, countdown automatically starts.

• Five minutes before the preset of time expires, the remaining time displays each minute.

ECO picture control

This function automatically detects the image source and decreases the power consumption while keeping the brightness of the image unchanged.



- This function does not work when "AV mode" is set to "DYNAMIC (Fixed)", "DYNAMIC" or "Auto".
- This function is greyed out in 3D mode.
- This function does not work when "Energy Save" is set to "Standard" or "Advanced".

Energy save

Off

This function enables you to automatically reduce the backlight brightness in order to decrease the power consumption and increase the backlight life span.



mode ".

The backlight brightness is the same value of your settings in the selected "AV

Energy conservation settings (Continued)

Auto power-off after the end of broadcast

You can set the TV to automatically power off in about 15 minutes after the TV goes into a state of receiving no programme signals, such as the end of a broadcast day.



Press $\blacktriangle/ \mathbf{V}$ to select "No signal off", and then press ENTER.

Press ◀/► to select "Enable".

• Five minutes before the power shuts down, the remaining time displays every minute.

3

4

- "Disable" is the factory preset value.
- When a TV programme finishes, and the TV receives signal input, this function may not operate.

Auto power-off when there are no operations performed

You can set the TV to automatically power off when no TV operation is performed for 30 minutes or more than 3 hours.



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



Press \mathbf{V}/\mathbf{A} to select "ECO".



Δ

Press ▲/▼ to select "No operation off", and then press ENTER.

Press ▲/▼ to select "30 min.", "3 hr." or "Disable". · Five minutes before the power shuts down, the remaining time displays every minute.

• "Disable" is the factory preset value.

Picture size settings

Selecting the Wide Screen Signalling (WSS) picture size automatically

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



Press ◀/► to select "On" or "Off".

4

- The channel switching speed may be slower when WSS is turned on.
- Try to set 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.
- This function is available for 3D images converted from 2D images or normal 2D images.
- In case of weak or unstable signals, it is recommended to turn WSS "Off" to avoid signal misjudgment.

4:3 Mode

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



4:3 mode "Full"

4:3 mode "Normal"





Selected item	Description
Full	Wide image without side bars
Normal	Normal range keeping 4:3 or 16:9 aspect ratio

Selecting the picture size manually

Manual Selection

You can select different picture sizes that account for the kind of each picture.





Press WIDE.

- The "Wide mode" menu displays.
- The menu lists the wide mode options selectable for the type of TV/video signal currently received.



- 2
 - Press **WIDE** or ▲/▼ while the "Wide mode" menu displays on the screen.
 - As you toggle down the options, each mode is immediately reflected on the TV.

Auto Selection

If you set "WSS" and "4:3 Mode" in the Setup menu on page 35, the optimum WIDE mode is automatically chosen for every broadcast containing the WSS information.

"WSS" menu

To enable Auto Selection, set "WSS" in the Setup menu to "On". (See page 35.)

"4:3 Mode" menu

To set the type of the wide screen, select "Full" or "Normal" in the 4:3 Mode menu. (See page 35.)





4:3 Mode set to "Full"

4:3 Mode set to "Normal"

- "WSS" is also available in D-TV mode.
- If the broadcast signal contains no WSS information, Auto Selection will not function even when the WSS option is enabled.
- You can also use wide mode from the menu screen.
- You may not be able to change the wide mode while in 3D mode.

Selected item	Description
Normal	For 4:3 standard pictures. A side bar appears on each side.
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.
Dot by Dot	Display an image with the same number of pixels on the screen (only when receiving 1080i / 1080p signal).
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.
Auto	Keeps the original aspect ratio and enlarges the picture as much as possible.
Original	Keeps the original aspect ratio and size.



NOTE

• Some picture sizes may not be

- displayable depending on the input signal. "Auto" and "Original" can be selected only during video playback in "Video mode" of
- USB media/Home network on page 87. • "Zoom 14:9" and "Cinema 14:9" only available for the D-TV or A-TV mode.
Selecting a preset AV mode

The "AV mode" function enables you to select appropriate settings for audio and video to account for 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.

Using AV MODE on the remote control unit

AV MODE WIDE FREEZE SLEEP			
Press AV mode . • Present "AV mode" displays.			
Press AV mode again before the mode displayed on the screen disappears.The mode changes as shown below.			
TV input mode (2D)			
AV MODE: STANDARD			
AV MODE: AUTO AV MODE: GAME			
AV MODE: DYNAMIC (Fixed) AV MODE: USER [TV]			
External input mode (2D)			
AV MODE: STANDARD			
AV MODE: AUTO AV MODE: GAME			
AV MODE: DYNAMIC (Fixed) AV MODE: PC			
AV MODE: DYNAMIC			

TV or external input mode (3D)



Using "AV mode" on the menu screen

Press MENL	and the	MENU	screen	display	/s.
------------	---------	------	--------	---------	-----

1 2

4

Press \mathbf{V}/\mathbf{A} to select "Picture".

Press \blacktriangle/∇ to select "AV mode", and then 3 press **ENTER**.

Press \blacktriangle/Ψ to select the desired item, and then press ENTER.

Selected item	Description
Αυτο	The TV automatically sets the appropriate selection from the "AV mode" menu depending on the lighting conditions and the type of programme watched.
STANDARD	For a highly defined image in a normally bright room
MOVIE	For a movie
GAME	Lowers image brightness for easier viewing.
PC*	For PC. (Available only when inputting a HDMI or PC signal.)
USER	Allows the user to customise settings as desired. You can set the mode for each input source.
DYNAMIC	For a clear-cut image emphasising high contrast for sports viewing.
DYNAMIC (Fixed)	Changes the image and sound settings to the factory preset values. No adjustments are allowed.
STANDARD (3D)	
MOVIE (3D)	Reter to page 55 for details.
GAME (3D)	

S NOTE

- You can select a different "AV mode" item for each input mode. (For example, select "STANDARD" for TV input and "DYNAMIC" for VIDEO input.)
- The item marked with * is available only when selecting "HDMI 1", "HDMI 2", "HDMI 3" or "PC" from the "INPUT" in the "CH list" menu.

Manual picture settings

Picture adjustment

You can adjust the picture to your preference. Follow the steps to adjust the picture.



Press **ENTER** to proceed if necessary.

Press $\blacktriangle/ \blacksquare$ or $\blacktriangleleft/ \blacktriangleright$ to select the desired item or adjust the item to the desired level. Press ENTER if necessary.

NOTE

4

- For resetting all adjustment items to factory preset values, press ▲/▼ to select "Reset", press ENTER, press ▲/▼ to select "Yes", and then press ENTER.
 When "Backlight" is adjusted, "OPC" is set to "Off".

Selected item	∢ button	▶button	
OPC	Sets whether or not the screen brightness is automatically adjusted according to the lighting condition in the room. (OPC setting: See this page.)		
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	
Advanced	For finer picture adjustments. (See pages 39 to 40.)		
Reset	Resets all picture adjustment items to the factory preset values.		

OPC (Optical Picture Control) setting

You can set the TV to automatically adjust the screen to suitable backlight brightness according to the lighting conditions.

Using "OPC" on the menu screen

Selected item	Description
Off	The brightness is fixed at the value set in "Backlight" (See this page).
On	Automatically adjusts
On: Display	Displays the OPC effect on the screen while adjusting the brightness of the screen.



NOTE

• Make sure no object obstructs the OPC sensor, which could affect its ability to sense surrounding light.

Advanced picture settings

The advanced settings enable you to set the picture adjustment in more detail.



Press \mathbf{V}/\mathbf{A} to select "Picture".



4

Press \blacktriangle/ \lor to select "Advanced", and then press **ENTER**.

Press MENU and the MENU screen displays.

Press \blacktriangle/ \lor to select the desired menu, and then press **ENTER**.

C.M.S.-hue

This function adjusts the hue of a selected colour using a six-colour adjustment system.

C.M.S.-saturation

This function increases or decreases the saturation of a selected colour using a six-colour adjustment system.

C.M.S.-value

This function makes the image brighter or darker depending on the value of the setting.

Colour temp. (Colour temperature)

Adjusts the colour temperature to give the best white image.

Selected item	Description
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.
10 point * setting	Finely adjusts each colour temperature between 1 to 10 points.
R/G/B Gain (LO), R/G/B Gain (HI)	Adjusts the white balance by changing the value of each item.

NOTE

 The item marked with * is available only when selecting "STANDARD", "MOVIE", "STANDARD (3D)", or "MOVIE (3D)" from the "AV mode" menu.

Fine Motion

Using the advanced Fine Motion function can view the high speed motion image more clearly.

Selected item	Description
Enhanced	Make the motion image clearer with the frame interpolation technology and the backlight control technology.
Standard	Reduce smearing with the frame interpolation technology. When "Low" is set, the original image quality is preserved.
Low	
Off	Turn off the Fine Motion function.

"Fine Motion" may cause image noise. If this occurs, turn the function to "Off".

Gamma adjustment

Adjust mid-level brightness. The adjustment range of the gamma can be set to a maximum of +2 and a minimum of -2 by pressing \triangleleft or \triangleright .

Film mode

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

Selected item	Selected item
Advanced	Adjust effect to reduce judder from film contents. Select a desired level of judder reduction from 0 to +10.
Standard	Display every picture frame in equal time, feeling like watching in cinema.
Off	Film mode off.

NOTE

• Film mode is not selectable depending on the input signal type.

Active contrast

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

DNR (Digital Noise Reduction)

Reduces noise on screen and produces a clearer video image. ("Auto", "High", "Middle", "Low", "Off").

Advanced picture settings (Continued)

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.

Selected item	Description
Max.	-15 through +16
Min.	-16 through +15

- 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.

Other picture settings

Adjusting the image position

For adjusting a picture's horizontal and vertical position.

1	Press MENU and the MENU screen displays.	
2	Press	✓/◀/► to select "Option".
3	Press / press E	▼ to select "Screen effect" and then NTER .
4	Press / press E	✓▼ to select "Position", and then NTER.
5	Press	/▼ to select "H-Pos." or "V-Pos.".
5	_	
5		Position Display position adjustment H-Pos. [0] -8 -8 V-Pos. [0] -8
Select	ted item	Position Display position adjustment H-Pos. [0] -8 +8 V-Pos. [0] -8 +8

H-Pos.	Centres the image by moving it to the left or right.
V-Pos.	Centres the image by moving it up or down.
Reset	Resets all adjustment items to the factory preset values.



Press \triangleleft b to adjust the item to your desired position.

NOTE

- For resetting all adjustment items to the factory preset values, press ▲/▼ to select "Reset", and then press ENTER.
- Adjustments are stored separately according to input source.
- Images may not be displayed properly depending on the settings and/or signals.
- This function is available for 3D images converted from 2D images or normal 2D images.

Game play time

This function displays the elapsed game time so you do not lose track of the time.

To display the elapsed time, select "GAME" under "AV mode" for the input mode of the terminal connected to the game console before starting the game.



Selected item	Description
On	The elapsed time is displayed every 30 minutes when you switch to GAME mode in external input mode.
Off	No adjustment

NOTE

- "Game play time" is displayed in the external input mode.
- "Game play time" is reset after performing the following operations:

operations:

1. When toggling the input.

2. When changing "AV mode".

Indicating time on the screen



Press \mathbf{V}/\mathbf{A} to select "View setting".



5

Press \blacktriangle/ \lor to select "Individual setting" and then press **ENTER**.

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

Press $\blacktriangle/ \blacksquare$ to select "Clock setup" and then press **ENTER**.

Press $\blacktriangle/ \blacksquare$ to select the desired item and then press **ENTER**.

Time adjustment

When the TV cannot receive the time via digital broadcast, perform "Manual timer setting" after setting the clock.

Input the current time difference between your area and GMT (Greenwich Mean Time).

Example of time difference with GMT

Local	GMT off set
Hong Kong	+8:00

NOTE

- If you select "No", the TV will try to get the time for the broadcast.
- You cannot set the manual clock setting during Time shift recording.



Time display

This function allows you to display the clock time in the lower-right corner of the screen.

Press \blacktriangle/∇ to select the desired item and then press **ENTER**.

Time adjustment		
Time display		
Time format		
Clock type	On	
	On (half-houly)	Displays the clock
	Off	every hair hour

• When "On" is set, you can press DISPLAY on the remote control to show or hide the time information.

Time format

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

Press $\triangleleft/\triangleright$ to select the desired time format and then press **ENTER**.

Time adjustment	
Time display	Selecting time format
Time format	
Clock type	
	24HR AM/PM

• The displayed time may differ depending on the programmes because of the programme information.

Clock type

You can select the clock type (either "Digital" or "Analogue").

Press $\triangleleft/\triangleright$ to select the desired clock type and then press **ENTER**.

Time adjustment		
Time display		
Time format		
Clock type		
	Digital Analogue	e
	. 12. 16:15 9. 天3 • 6 •	

NOTE

 You cannot set the "Clock type" in either the USB media mode or the Home network mode. Even if you selected "Analogue", a "Digital" clock is still displayed in these two modes.

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Audio adjustment

You can adjust the audio of the selected AV mode.



Press ▼/◀/► to select "Audio".

Press \blacktriangle/ ∇ to select the desired menu item. Press **ENTER** to proceed if necessary.

Press \blacktriangle/∇ or $\checkmark/\triangleright$ to select the desired item or adjust the item to the desired level. Press **ENTER** if necessary.

Selected item	∢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

NOTE

For resetting all adjustment items to the factory preset values, press ▲/▼ to select "Reset", press ENTER, press ▲/▼ to select "Yes", and then press ENTER.

Surround

The surround function produces a surround effect from the speakers.



Press ▼/◀/► to select "Audio".



4

Press \blacktriangle/ \lor to select "Surround", and then press **ENTER**.

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

Press \blacktriangle/Ψ to select the desired item.

Press ENTER to proceed if necessary.

Selected item	Description
3D Stadium	Reproducing lifelike experience of excitements such that live sports or concert performances in a stadium create.
3D Hall	Reproduces a concert hall experience with realistic live surround sound based on reverberant sounds measured in a concert hall.
3D Movie	Reproduces a movie theater experience with realistic live surround sound based on reverberant sounds measured in a movie theater.
3D Standard	Creates three-dimensional surround sound with detailed control of the signal phase.
Normal	Provides limited surround sound.
Off	Outputs normal sound.

Bass enhancer

This function allows you to enjoy bass-enhanced sound.
Press **MENU** and the MENU screen displays.



Automatic volume adjustment

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.



Press ▲/▼ to select "High", "Middle", "Low" or "Off", and then press **ENTER**.

Selected item	Description
High	Reduces the volume gaps among different sound sources strongly.
Middle	Operates on a level between "High" and "Low".
Low	Reduces the volume gaps among different sound sources slightly.
Off	Does not reduce the volume gaps among different sound sources.

Clear voice

4

This function emphasises speech against background noise for greater intelligibility.



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4

Wall mount audio setup

When you mount the TV on a wall, you can adjust the sound to a more suitable one by setting this function to "Yes".

the MENU screen displays.

1	Press MENU and
2	Press ▼/◀/► to

Press $\mathbf{\nabla}/\mathbf{A}$ to select "View setting".

Press \blacktriangle/ \lor to select "Wall mount audio setup", and then press **ENTER**.

Press \blacktriangle/ ∇ to select "Yes", and then press **ENTER**.

Digital audio output

This function allows you to select your favourite audio output system.

1	Press MEN	IU and	d the N	ЛЕNU	screen	displays.

Press \mathbf{V}/\mathbf{A} to select "Option".

3 Press \blacktriangle/ \lor to select "Terminal setting", and then press **ENTER**.

- Press \blacktriangle/ ∇ to select "Digital audio output", and then press **ENTER**.
- **5** Press \blacktriangle/ \lor to select your desired output system, and then press **ENTER**.



Selected item	Description
РСМ	To stereo audio system.
Bitstream	Dolby Digital or DTS is output when the Dolby Digital or DTS audio formats are received.

NOTE

- Analog channel audio and video input audio are output in PCM mode even when "Bitstream" is selected.
- PCM digital input signals are output in PCM mode even when "Bitstream" is selected.

Headphone/Audio out select

You can select which device is used for outputting audio.



3

Press **MENU** and the MENU screen displays. Press $\forall/ \langle \rangle$ to select "option".



Press \blacktriangle/ \forall to select "Headphone/Audio out select", and then press **ENTER**.



Press \blacktriangle/ \lor to select the desired item, and then press **ENTER**.

Selected item	Description
Headphone	Output audio through headphones.
Audio out	Output audio through an A/V receiver or surround audio controller.

• This terminal is also used for headphones. Reduce the volume before using headphones. Overwhelming sound may damage your hearing.

🚫 NOTE

- For resetting all adjustment items to factory preset values, press ▲/▼ to select "Reset", press ENTER, press ▲/▼ to select "Yes", and then press ENTER.
- If you select "Audio out" when a cable is inserted in the AUDIO OUT terminal, the TV speakers are muted.
- When you select "Audio out", you can adjust the TV sound volume with the VOL+/- buttons on the TV or on the remote control unit.

A-TV (Analogue TV)/D-TV (Digital TV) buttons

Use the following buttons on the remote control to operate the menu.



A–TV (Analogue TV): Press to switch to analogue TV mode. After switching from digital TV or external input mode to analogue TV mode, the TV jumps to the most recently viewed analogue channel.

D–TV (Digital TV): Press to switch to digital TV mode. After switching from analogue TV or external input mode to digital TV mode, the TV jumps to the most recently viewed digital TV channel.

When you watch the TV for the first time

When the TV powers on for the first time after purchase, perform the auto installation.

A-TV (Analogue TV)

You can run the auto installation to set channels automatically.



To watch the analogue TV, select "Auto installation" from "Setup" menu. (See page 23.)



After setting the channels, you can select a channel using CH/V or 0-9 on the remote control unit. (See page 24.)

D-TV (Digital TV)

You can run the auto installation to set channels automatically.



To watch D-TV broadcasts, select "Digital Search" from "Auto installation" menu. (See page 20.)



After setting the channels, you can select a channel using CH/V or 0-9 on the remote control unit. (See page 24.)

Info

While watching D-TV you can check the extended programme information on the screen using **INFO** on the remote control.



• If there is more information, pressing *◄/*▶ allows you to go to the next page or return to the previous page.

• You can cancel this info by pressing **INFO** again.

Using Info on the menu screen



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

Press ▼/ ◀/ ► to select "Option".

Press \blacktriangle/ \lor to select "Option for view" and then press **ENTER**.



Press \blacktriangle/\lor to select "Programme info." and then press **ENTER**.

EPG

What is an EPG?

An "EPG" (Electronic Programme Guide) is a programme schedule, which is displayed on the TV screen. The EPG is broadcasted together with D-TV. The TV screen shows the EPG when the viewer presses **EPG** on the remote control, provided that the TV is receiving the digital broadcasting signal. The EPG enables you to search for a programme, view the programme schedule in detail.

Basic settings

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



Press $\triangleleft/\triangleright$ to select the desired item.

EPG (setting for receiving EPG data)

EPG setup must be selected to "Yes" to enable automatic capturing of data for all available channels while the TV set is in standby mode. If EPG is set to "No", only EPG data for the current channel will be updated.

Selecting EPG to "Yes" will result in higher power consumption*. Selecting EPG to "No" will save power consumption.

* Approximately 21W for 15-30 minutes (depending on number of channels tuned) after power off from remote control.

NOTE

6

• EPG data will not update if the TV is turned off from the mains power switch.

EPG display settings

1	Press MENU and the MENU screen displays.
2	Press ▼/ ◀/► to select "Option".
3	Press $\blacktriangle/ \blacksquare$ to select "EPG setup", and then press ENTER .
4	Press \blacktriangle/∇ to select "Display range setup" or "Genre icon setup" and then press ENTER .
5	Press \blacktriangle/∇ to select the desired item.

Display range setup

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

Selected item	Description
Mode1 (Wide angle)	Display six hours of programme information.
Mode2 (Zoom)	Display three hours of programme information.
Mode3 (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	H	Arts/Culture (without music)
	Show/Game show		Social/Political issues/Economics
*	Sports	ĿĹ	Education/Science/ Factual topics
	Children's/Youth programmes		Leisure hobbies

NOTE

• You can easily distinguish the Genre icons by darkening or lightening the icon's shade.

Selecting a programme using EPG

Basic operation



(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

Press A/V/A/b to select the programme you want to check.

Press R.

2

Programme information

.

20:00 - 21:00		Programme	9 Info.				
		R Back to	EPG	E	Next		
		Ø 20	② 21	③ 22	① 23	0	
TV1	001	SD Moving	SD Moving		SD Moving	3	
TV2	002	H264 SD_Color P	H264 SD_Color F	attern	H264 SD_C	olor Pattarn	
TV4	004	H264 HD=Monosco	H264 HD=Monos	100	H264 HD=0	Vonosco	



Press ENTER to tune to the selected programme.

🔊 NOTE

- You can also display the EPG screen from "Menu" → "EPG" → "EPG".
- The time displayed on the EPG is information sent by the TV station.

Search a programme in a category
1 1000 G.
2 Press $\blacktriangle/\blacksquare$ to select the desired genre, and then press ENTER .
Press $\blacktriangle/ \mathbf{V}$ to select a programme you want to watch, and then press ENTER .
EPG [D-TV-TV] <u>Today</u> [Sat]2 [Sun]3 [Mon]4 [Tue]5 [Wed]6 [Thu]7 [Fri]8 [Fri] 1/4 20:00
Search by genre
Image: Movie/Drama Image: Codexy 1 12-0 [Sat] 2 0-12 [Sat] 2 12-0 [Sun] 3 0-12 Image: Movie/Drama Image: Codexy 1 12-0 Image: Codexy 1 12-0 [Sun] 3 0-12 Image: Movie/Drama Image: Codexy 1 12-0 Image: Codexy 1 12-0 [Sun] 3 0-12 Image: Movie/Drama Image: Codexy 1 12-0 Image: Codexy 1 12-0 Image: Codexy 1 12-0 [Sun] 3 0-12 Image: Sports Image: Codexy 1 12-0 Image: Codexy 1 12-0<
Social/Political issues/Economics Education/Science/Factual topics Eleisure hobbies
★ Select ENTEP : Enter (ETUR) : Back (EPG) : Exit IR Back to EPG
 The genre information depends on the broadcasts. You can also display the EPG screen from "Menu" → "EPG" → "Search by genre". Search for a programme by date/time Press Y. Press ▲/▼/ ◄/► to select the desired time span and then press ENTER.
EPG [D-TV-TV] Today [Sat]2 [Sun]3 [Mon]4 [Tue]5 [Wed]6 [Thu]7 [Fri]8 [Fri] 1/4 20:00
Search by time [Sat]2 0 - 6 6 - 12 12 - 18 18 - 0 ▶ Next ▶ : Select time BNER : Enter ℝ Back to EPG © Enter Y + 1 Week ▶ Next
▼0 6 0 7 0 8 0 9 © 10 © 11 > TV1 001 SD Moving SD Moving<
TV2 002 HD ColorBar HD ColorBar HD ColorBar T/0 000 1000000000000000000000000000000000000
TV3 003 H264 SD-Color Pattern H264 SD-Color Pattern TV4 004 H264 HD-Monosco H264 HD-Monosco
حْث≻ Select আ Back (ביס) : Exit

3

3 Press \blacktriangle/ \lor to select the desired programme, and then press **ENTER**.

NOTE

• When you select a programme outside of the current time span, the timer setting screen displays. (See page 49.)

Timer setting using EPG Cancelling the timer setting You can select TV programmes using data from the EPG. Press EPG. • You can also enable this function from "Menu" \rightarrow Press EPG. 1 "EPG" \rightarrow "EPG" . • You can also enable this function from "Menu" \rightarrow "EPG " \rightarrow "EPG". Press A/V/A/b to select the programme on 2 timer setup, and then press ENTER. Press $\blacktriangle / \checkmark / \checkmark / \checkmark$ to select the programme 2 Press \triangleleft b to select "Cancel", and then press you want to set, and then press ENTER. 3 ENTER. Press \triangleleft b to select the timer setting, and 3 Press \triangleleft b to select "Yes", and then press then press ENTER. 4 ENTER. • If you select "No", the TV returns to the EPG screen. Press **ENTER** to cancel timer setup. 5 Cancelling using B button on the remote control Watch S Time shift Press EPG. Press **B** to display the timer list screen. 2 Selecting "Watch" or "Time shift"in the timer setup screen Press ▲/▼ to select a programme you want 3 This setting allows you to switch to a programme at a to change, and then press ENTER. set time. Press \triangleleft b to select "Cancel", and then press ① Press ◀/▶ to select "Watch" or "Time shift", and 4 ENTER. then press ENTER. (2) Press \checkmark to select "Yes", and then press Press $\triangleleft/\triangleright$ to select "Yes", and then press 5 ENTER. ENTER. (3) Press **ENTER** to set time. Switching subtitle languages • The selected TV programme is marked with an icon. **NOTE** Each time you press ... on the remote control, the

- You cannot select "Time shift" when the registered USB storage device is not connected to the USB port.
- A combined total of 16 timer settings ("Watch" and "Time shift") can be set.
- subtitle switches.

Subtitle OFF ----> Subtitle 1 ON Subtitle 3 ON 🔸 – Subtitle 2 ON 🔺

NOTE

- When there is no subtitle broadcast, "No subtitle Data" will be displayed.
- The number of subtitle languages available differs depending on the programme.

Text

MHEG-5 data broadcast is scheduled in Hong Kong. You can watch a MHEG-5 data broadcast after pressing the **TEXT** button.

S NOTE

- MHEG-5 may not be displayed correctly in 3D mode.
- MHEG-5 is not displayed during Time shift recording or playing.

You can use special 3D glasses to watch 3D-supported images on this TV.

- You can enjoy 3D movies on this TV by viewing the movie through optional 3D glasses that sold separately.
- To produce 3D images, liquid crystal shutters in the 3D glasses alternately open and close imperceptibly fast to exactly match alternating left and right video images displayed by the TV.
- Not all consumers can experience and enjoy 3D TV. Some people suffer from stereo blindness which prevents them from
 perceiving the intended depth of 3D entertainment. Also, some people who watch 3D programming may experience initial feelings
 of motion sickness as they adjust to the picture. Others may experience headaches, eye fatigue or continued motion sickness, or
 some viewers might also experience epileptic seizures or strokes. Like a roller coaster, the experience is not for everyone.

- The 3D glasses are precision equipment. Handle them with care.
- Improper use of the 3D glasses or failure to follow these instructions can result in eye strain.
- If you experience dizziness, nausea, or other discomfort while viewing 3D images, immediately discontinue use of the 3D glasses. Using the binocular disparity 3D system of this TV with incompatible 3D broadcasts or software can make images appear with a cross talk blur or create overlapping images.
- When viewing 3D images continuously, be sure to take a break periodically to prevent eye strain.
- If you are nearsighted or farsighted or have astigmatism or a different level of eyesight between the left and right eyes, you should take the necessary steps, such as wearing eyeglasses, to correct your eyesight before viewing 3D images. The 3D glasses can be worn over eyeglasses.
- When viewing 3D images, keep the 3D glasses horizontally level with the TV screen. If you tilt the 3D glasses with respect to the TV screen, the images viewed by the left and right eyes may appear significantly different or images may appear overlapping.
 View 3D images at the appropriate distance from the TV screen. The recommended distance is three times the effective height of the TV
- View 3D images at the appropriate distance from the TV screen. The recommended distance is three times the effective height of the TV screen.

Examples of recommended distances:

- 52-inch screen: Approx. 1.9 m
- Viewing should not be done closer than the recommended distance.
- Be careful of your surroundings when viewing 3D images. When you view 3D images, objects may appear at a distance closer or farther than
 the actual TV screen. This may cause you to misjudge the distance to the TV screen and possibly result in injury if you accidentally hit the
 screen or surrounding objects.
- The 3D glasses are not recommended for people aged less than 6 years old.
- When children are viewing 3D images, be sure a parent or guardian is present. Monitor children viewing 3D images, and if they show signs of discomfort, immediately discontinue use of the 3D glasses.
- People with a known history of photosensitivity and people with heart problems or poor health should not use the 3D glasses. This can worsen
 existing health conditions.
- Do not use the 3D glasses for other purposes (such as general eyeglasses, sunglasses, or protective goggles).
- Do not use the 3D function or 3D glasses while walking or moving around. This may result in injuries due to running into objects, tripping, and/ or falling.
- When using the 3D glasses, take care not to accidentally strike the TV screen or other people. Viewing 3D images may cause you to misjudge the distance to the TV screen and accidentally strike the screen, resulting in possible injury.
- It is recommended that you do not view 3D images if you are sleep deprived or if you have been drinking alcohol.

Display format for 3D and 2D images

	Display format	Displays for input signals	Description
	$2D \rightarrow 3D$		• Converts normal 2D images into 3D images.
3D mode (using the 3D glasses)	Side by Side		• Creates 3D images from 3D images displayed side by side. The image is split into a left and right image, and then the images are stretched and displayed sequentially to create a 3D image.
	Top and Bottom	L ° R °	 Creates 3D images from 3D images displayed on the top and bottom. The image is split into a top and bottom image, and then the images are stretched and displayed sequentially to create a 3D image.
2D mode (without	Side by Side \rightarrow 2D		• Creates 2D images from 3D images displayed side by side. Only the left image is stretched and displayed. The image does not appear in 3D.
using the 3D glasses)	Top and Bottom \rightarrow 2D		• Creates 2D images from 3D images displayed on the top and bottom. Only the top image is stretched and displayed. The image does not appear in 3D.

You can enjoy 3D-supported images on the TV when you wear the supplied 3D glasses or optional 3D glasses.

S NOTE

• Some menu items are greyed out in 3D mode. This is not a malfunction.

Preparing for the 3D glasses

Confirm how to use the 3D glasses before watching 3D-supported images. These 3D glasses are only for use with SHARP LCD TVs supporting 3D.

Part name



- 3D/2D/OFF switch 3
 - This button switches between 2D, 3D and OFF modes.

Nose pad mount 5

> • The dedicated nose pad can be mounted here (Please see page 52.)

Power supply in progress: Lights up in green.

S NOTE

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- Do not soil or apply stickers or other obstacles to the infrared receiver. Doing so may block signals from the TV and prevent the 3D glasses from working correctly.
- Interference from other infrared communications equipment may prevent you from viewing 3D images correctly.

Attaching the nose pad

Attach either of the supplied nose pads as needed (such as when the glasses do not fit properly). The glasses come with a large and small nose pad.





Turn on/off the power

Slide the switch to 2D or 3D to turn on the power. Slide the switch to OFF to turn off the power.

• When the power is turn on, the LED light lights up in green for 2 seconds and then starts slow blinking (once every 3.0 seconds).

S NOTE

- If you use the 3D glasses first time, please recharge the 3D glasses battery.
- When the battery power is low, the LED light blinks once every second after the power is turned on.

Switching between 2D and 3D modes

When viewing 3D images, you can slide the switch between 2D and 3D modes. This is useful when several people are viewing 3D images on the same TV with some people wanting to watch in 3D and some people wanting to watch in 2D.



Viewing 2D images

When you slide the switch to 2D while viewing 3D images, the 3D images switch to 2D images via 3D glasses.

Viewing 3D images

When you slide the switch to 3D while viewing 2D images, the 2D images switch to 3D images via 3D glasses.

Usage Range of the 3D Glasses

The 3D glasses can be used by receiving an infrared signal sent from the TV.

The 3D glasses turn off automatically after 10 minutes if no signal is received from the TV.

Operating range

From directly in front of the 3D infrared transmitter on the TV: approx. 5 m (within approx. 30° horizontally and 20° vertically)

Recharging the 3D glasses battery

When the battery power is low, the LED light blinks in green every 0.5 seconds. If the 3D glasses battery is low, you can recharge the 3D glasses by connecting the supplied USB cable to the TV and the USB terminal on the 3D glasses.



2

Turn off the TV, and then slide the switch on the 3D glasses to OFF.

- Connect the cable shown at step 3 of this procedure and then turn on the TV. Make sure the cable is connected before turning on the TV
- The LED light lights in red, and then starts recharging.
- When the LED light goes off, the recharge is complete. It takes approximately 90 minutes to complete the recharge.
- If the 3D Glasses do not work properly even after the recharge is complete, consult your nearest SHARP customer service center.

After the recharge has completed, turn off the 3 TV, and then remove the USB cable from the 3D glasses.



- (1) (2) USB cable (Supplied accessory)
- USB terminal

• Do not recharge while wearing the 3D glasses.

S NOTE

- Be sure to turn on the TV when you recharge the 3D glasses. If the TV is turned off, the 3D glasses may not recharge.
- When you recharge the 3D glasses, only connect the supplied USB cable to a USB terminal on the TV..
- The battery will not recharge during usage with the USB cable connected. The 3D Glasses battery will not be recharged if the switch is set to 2D or 3D. To recharge the battery, set the switch to OFF
- Recharge the battery within the operating temperature (50°F–104°F/10°C–40°C). The battery may not be able to recharge outside of the operating temperature.
- To prevent the product from prematurely becoming worn out, be sure to recharge it on at least a half-yearly basis.

Using the 3D glasses with an external power supply

If you slide the switch to 3D or 2D after taking steps 1 and 2 in Recharging the 3D Glasses, you will be able to supply power to the 3D glasses while using the glasses (battery will not be recharged).

S NOTE

- Do not move around while wearing the 3D glasses. Doing so may result in getting your feet caught in the USB cable, the TV falling or other accidents that may cause injury.
- When you supply power to the 3D glasses, only connect a USB cable (commercially available) to a USB terminal on the TV.
- When you use the USB cable connecting the 3D glasses, be careful not to get your feet caught in the USB cable. It may result in falling or other accidents that may cause injury.

Disposal of 3D Glasses

The following instruction and procedure is provided solely as a guide for the safe removal of the Liion battery for proper disposal. This product is not repairable. Do not attempt to replace the battery; once the 3D glasses are taken apart, they cannot be reassembled or used again.

- Please take special care in handling small parts such as screws specially around children that can accidentally swallow them.

- Be very careful in handling the battery to prevent it from leaking.

- Do not attempt to dismantle or puncture the battery. - Do not use this battery for any other purpose. Recycle properly after removing it from the 3D Glasses.

Destroy the lower portion of the hinges using a tool such as nippers. Remove the metal joints. Take away the nose pads and temple arms. 1 (2)

2

Remove the eight screws with a Phillips screwdriver (commercially available).



Pull the front casing outward with your fingers



Used batteries should be disposed in accordance with local laws and regulations.

Viewing 3D images



NOTE

 The TV screen may temporarily become black when the TV is trying to detect a 3D image signal and when switching from 3D to 2D mode.

Receiving a 3D image signal that can be detected automatically

The image signal may contain a 3D identification signal. You can enable the TV to automatically detect the 3D image type (See page 50).



Go to "Menu" \rightarrow "Setup" \rightarrow "Option" \rightarrow "3D setup" \rightarrow "3D auto change".

When "3D auto change" is set to "Mode1"or "Mode2"

• The 3D display format is detected automatically and the appropriate 3D image is displayed.



When "3D auto change" is set to "Off" The confirmation message is displayed. Press 3D.

(2) Press $\triangleleft/\triangleright$ to select "Yes", and then press **ENTER**.



Turn on the power of the 3D glasses, and then wear the 3D glasses.

NOTE

- If you do not want to switch to 3D mode automatically, set "3D auto change" to "Off".
- When the TV is receiving a 3D image signal that can be detected automatically, the 3D mode icon is displayed in the channel display.

Switching 3D to 2D mode

When you press **3D** while you are watching the TV in 3D mode, the TV switches to 2D mode.



Press **3D** during the 3D mode.



Select "Yes", and then press **ENTER** to switch to 2D mode.



Take off the 3D glasses and turn off the power of the 3D glasses by switching them to **OFF**.

- If the input signal switches to 2D, 2D images are displayed automatically.
- 3D mode is canceled automatically when the setting is changed, input source is changed, the input signal resolution is changed or the power is turned off.

Receiving a 3D image signal that cannot be detected automatically

When the TV receives a 3D image signal that cannot be detected automatically, you can select between 3D and 2D image viewing.



• A screen appears prompting you to select between 3D and 2D image viewing.

3D



Press \triangleleft b to select "3D" or "2D", and then press **ENTER**.

To view in 3D mode

 Press ◄/► to select the 3D signal type ("2D → 3D", "Side by Side" or "Top and Bottom"), and then press ENTER.



- You can select only "2D → 3D" in A-TV mode.
 If you select the same system as that of the input
- signal, 3D images are displayed.
- ② Turn on the power of the 3D glasses, and then wear the 3D glasses.

To view in 2D mode

 Switching from 3D to 2D mode. Press ◄/► to select the 2D signal type ("Side by Side" or "Top and Bottom"), and then press ENTER.



• If you select the same system as that of the input signal, 2D images are displayed.

Watching 2D images in 3D

You can convert normal 2D images into 3D images.



Press $\triangleleft/\triangleright$ to select "2D \rightarrow 3D", and then press **ENTER**.

Turn on the power of the 3D glasses, and then wear the 3D glasses.

NOTE

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- The confirmation message to select either 3D or 2D mode is displayed on the screen once per hour.
- When the TV converts normal 2D images into 3D images, you can display the "2D \rightarrow 3D convert effect" menu to adjust the convert effect by pressing **R**.

Switching to the previous mode

You can switch back to the previous mode by pressing **3D**.

Press **3D**.

• A confirmation message is displayed.

Select "Yes", and then press **ENTER**.

• The TV returns to the previous mode.

3D menu

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Pressing **3D** in 3D mode displays the 3D menu. Press the coloured buttons to make the necessary settings.



Buttons	Description
R button	2D → 3D convert effect. (See page 56.) • "2D → 3D convert effect" is available only when selecting "2D → 3D". (refer to Watching 2D images in 3D shown above.)
Y button	3D surround. (See page 42.)The surround mode changes each time you press Y.
B button	3D setup. (See page 56.)

NOTE

• The keys are available only before the 3D menu disappears.

Configuring the TV settings to enhance 3D image viewing

You can make various settings to enhance 3D image viewing.



3D picture adjustments

Basic operation

Go to "Menu" \rightarrow "Setup" \rightarrow "Picture" \rightarrow select/ adjust the item you want to set.

🔊 NOTE

• Which items can be selected/adjusted differs depending on whether the TV is in 2D mode or in 3D mode.

AV mode

The audio and video settings can be changed to suit the programme or input content being watched.

Selected item	Description
STANDARD (3D)	For a highly defined image in a normally bright room.
MOVIE (3D)	For a movie.
GAME (3D)	Lowers image brightness for easier viewing.

• You can select "AV mode" by pressing **AV mode** on the remote control unit.

3D setup

Basic operation

Go to "Menu" \rightarrow "Setup" \rightarrow "Option" \rightarrow "3D setup" \rightarrow select the menu you want to set.

3D auto change

This function allows the TV to switch to 3D mode automatically when a 3D identification signal is detected.

Selected item	Description
Mode 1	Switches 3D image detecting 3D identification signal.
Mode 2	Switches 3D image detecting 3D pattern plus mode1.
Off	Automatic change is not performed.

NOTE

- 3D signals may not be detected depending on the signal format.
- When selecting "Mode 2", the TV maybe misjudge non-3D content as 3D content. In this case, please select "Mode 1" or "Off".

2D \rightarrow **3D** convert effect

You can adjust the 3D effect when converting images from 2D mode to 3D mode. Select a desired level of convert effect from +1 to +16.

- This function is only available when converting 2D images to 3D images.
- When you use this function, image conversion on the TV will result in some differences in the original images and how they appear.
- 2D images that have been converted to 3D images may be viewed only for personal use.

3D depth control

Select the method for adjusting the 3D still image effect (depth).

Selected item	Description
Auto	Adjusts the still image effect (depth) automatically.
Manual	Manually adjust the still image effect (depth).

NOTE

- When you manually adjust the still image effect (depth), please note that the greater the deviation from the center, the more easily eye fatigue can be caused.
- This function can be adjusted when viewing 3D still images in USB mode.
- Even if you selected "Auto", the 3D still image effect (depth) may not be correctly adjusted depending on the 3D still image.
 3D still images taken in macro mode will be displayed with
- SD still images taken in macro mode will be displayed with excessive depth.If you experience discomfort while viewing 3D images,
- If you experience disconfort while viewing 3D images, immediately discontinue viewing.
- "Auto" is not available when converting 2D images to 3D images.

Viewing time info

This function allows you to display the elapsed time of 3D image viewing on the screen.

Selected item	Description
Yes	The elapsed time is displayed in one-hour increments after you start watching 3D images.
No	Hide the time.

3D test

This function displays 3D images for testing the 3D operation. Clicking "Start" on the screen plays back 3D test images.

🚫 NOTE

• If you press **EXIT** during playback, the previous screen will be displayed.

Specifications – 3D glasses

Product	3D glasses
Model number	AN-3DG30
Lens type	Liquid crystal shutter
Power supply	DC5V (supplied by a USB terminal of a SHARP TV)
Battery	Lithium ion polymer rechargeable battery (DC3.7V 70mAh)
Usage time after each recharge*1	Approx. 50 hours of continuous use
Charging time	Approx. 90 minutes
Dimension (W x H x D)	176.1 × 36.9 × 163.5 mm
Weight	Approx.36.0 g (including the lithium ion polymer rechargeable battery)
Operating temperature	10°C to 40°C (The 3D Glasses cannot operate fully at extreme high or low temperatures. Please use them within the specified usage temperature range)

*1 Usage time after each recharge: A rechargeable battery becomes depleted from repetitive usage, and the battery life gradually becomes shorter (the battery life varies with your usage environment). The above is the value at the factory default state and quality is not guaranteed by the value.

Settings when using external devices

Settings when using HDMI output devices

HDMI terminals can carry audio and visual signals to the TV with an HDMI certified cable. When you want to output the audio and picture from an HDMI output device on the TV, select "HDMI 1", "HDMI 2" or "HDMI 3" by switching the input source.

Connecting an HDMI output device



HDMI (High-Definition Multimedia Interface) Auto View

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To watch an HDMI equipment image, select "HDMI 1", "HDMI 2" or "HDMI 3" using TV/VIDEO on the remote control unit or on the TV.

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

Press \mathbf{V}/\mathbf{A} to select "Option".

Press \blacktriangle/∇ to select "Terminal setting", and then press ENTER.

Press ▲/▼ to select "HDMI auto view", and 5 then press **ENTER**.

> • The HDMI auto view can be selected only when "HDMI 1", "HDMI 2" or "HDMI 3" is selected.





Press \blacktriangle/V to select the desired item, and then press ENTER.

Selected item	Description
Enable/Disable	Set whether or not to use "Wide mode" based on signal recognition, including an HDMI signal.

ΝΟΤΕ

- Refer to your external equipment operation manual for the above settings.
- When connecting a DVI-HDMI conversion adaptor/cable to the HDMI terminal, the image may not come in clearly.

Controlling HDMI devices

This system is using the HDMI CEC (Consumer Electronics Control) technology.

What you can do with CEC capable using HDMI devices

✓ Single remote control operation

The TV automatically recognises the connected HDMI devices and you can use the remote control provided with this TV to control the TV and the relative devices at the same time. (See page 65 to 70)

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.
- These operations affect the HDMI device selected as the current input source. If the device does not operate, turn on the device and select the appropriate input source using TV/VIDEO.
- 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 "HDMI1", "HDMI2" or "HDMI3" from the "INPUT SOURCE" menu.

Audio select for connecting HDMI

When connecting HDMI to the HDMI 2 terminal, and inputting analogue audio signals from the AUDIO IN terminal.

Go to "MENU" \rightarrow "Setup" \rightarrow "Option" \rightarrow "Terminal setting" \rightarrow "Audio select".

Selected item	Description
HDMI	When connecting devices with HDMI cable to the HDMI 2 terminal.
HDMI + Analogue	When connecting devices with HDMI cable to the HDMI 2 terminal and inputting analogue audio signals from the AUDIO IN terminal.

NOTE

 When connecting an DVI-HDMI conversion adaptor/cable to HDMI 2 terminal, you must set to "HDMI+Analogue". If "HDMI (Digital)" is set, there will be no sound output.

Selecting the input source

Can use for selecting the input source.

Using TV/VIDEO on the remote control unit or on the TV $\ensuremath{\mathsf{TV}}$

TV/VIDEO allows you to choose from the available input sources.





Press **TV/VIDEO** on the remote control unit or on the TV.

- 2 Press **TV/VIDEO** on the remote control unit or on the TV to select the input source.
 - The image and sound from the selected source are output on the TV.
 - You can also select the input source by pressing ▲/▼.

Settings when using external devices

Labelling input sources

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

7	8	9
Ű,	0	TV/ VIDEO



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Press **TV/VIDEO** to select the desired input source.

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



Press \mathbf{V}/\mathbf{A} to select "Option".

4 Press \blacktriangle/ \lor to select "Terminal setting", and then press **ENTER**.

Press \blacktriangle/Ψ to select "Input label", and then press \blacksquare

- Select each character of the new name for the input source with using the software keyboard. (See page 27.)
- 7 Repeat the above until the name is fully spelt out, and then select "Done".
 - The name can be 6 characters or less.
 - When you want to set an input source name of less than 6 characters, select "Done".

NOTE

 You cannot change labels if the input source is "A-TV", "D-TV", "USB media" or "Home network".

Skipping an input

This setting allows you to skip an input on the "Input skip" menu.

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

Press \mathbf{V}/\mathbf{A} to select "Option".

then press **ENTER**.



Press \blacktriangle/∇ to select "Terminal setting", and



Press \blacktriangle/V to select "Input skip", and then press ENTER.



Press \blacktriangle/∇ to select the Input you wish to skip.





3

Press $\triangleleft/\triangleright$ to select "Yes".

NOTE

 When you select "A-TV", "D-TV", the skip function works only when using the **INPUT** button on the TV.

Colour system settings

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

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



- Press \blacktriangle/ \lor to select "Colour system", and then press **ENTER**.
- 4 Press \blacktriangle/∇ to select a compatible video signal system of your equipment, and then press **ENTER**.

Auto	
PAL	
SECAM	
NTSC3.58	
NTSC4.43	
PAL-60	

NOTE

- Factory preset value is "Auto".
- If "Auto" is selected, colour system for input signal is automatically set. If an image does not display clearly, select another colour system (e.g. PAL, NTSC 4.43).
- You can choose from "Auto", "PAL", "SECAM" and "NTSC3.58" in the "A-TV" mode.
- "Colour system" is selectable only when inputting an composite signal.

Channel selecting effect

This function sets a screen effect when choosing or changing channels.

Press MENU and the MENU screen displays.
 Press ▼/ ◄/ ► to select "Option".
 Press ▲/▼ to select "Screen effect" and then press ENTER.
 Press ▲/▼ to select "Channel selecting effect".
 Press ◄/► to select "Yes".

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) .

NOTE

- Please check the availability of AQUOS LINK-compatible AQUOS BD players and AQUOS LINK-compatible audio systems in your country.
- AQUOS LINK does not work while using Time shift functions.

What you can do with AQUOS LINK

✓ 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

You can also call up the external player's top menu or AQUOS BD player's title list provided that the devices support AQUOS LINK.

✓ Controlling the AQUOS LINK-compatible audio system

You can adjust the volume and select the sound mode of the AQUOS LINK-compatible audio system.

✓ Multiple control of HDMI devices

You can select which HDMI device to operate using the "Link operation" menu.

NOTE

- Point the remote control toward the TV, not to the connected HDMI device.
- Video noise may occur depending on the type of HDMI-certified cables used. Make sure to use a HDMI-certified cable.
- Up to 2 pieces of HDMI recording equipment and one AV amplifier can be connected using this system.
- These operations affect the HDMI device selected as the current input source. If the device does not operate, turn on the device and select the appropriate input source using **TV/VIDEO**.
- When you insert/remove HDMI-certified 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 "HDMI 1", "HDMI 2" or "HDMI 3" from the "INPUT SOURCE" menu.



AQUOS LINK connection

First connect the AQUOS LINK-compatible audio system or an AQUOS BD player 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 **TV/VIDEO**, select the appropriate input source and verify the audiovisual output.
- The cables illustrated in the following explanation are commercially available items.



AQUOS BD player

Regarding "Select recording device"

Select the device for recording from connected devices.

NOTE

- This function enables you to select either the USB storage device for Time shift use or the HDMI device with CEC protocol.
- $\label{eq:constraint} \begin{array}{l} \textbf{1} \mbox{ Go to "Menu"} \rightarrow "Setup" \rightarrow "View setting" \rightarrow "Select recording device". \end{array}$
- 2 Select the device for recording using the **REC** on the remote control unit.
 - \bullet Select "USB storage" when using the REC locom for Time shift recording.
 - Select "HDMI device" when using the **REC** for recording to the HDMI device.
- 3 Press RETURN to end the operation.

AQUOS LINK setup

AQUOS LINK control

1	Press MENU and the MENU screen displays.
2	Press $\triangleleft/\triangleright$ to select "Link operation".
3	Press \blacktriangle/∇ to select "AQUOS LINK setup" and then press ENTER .
4	Press \blacktriangle/∇ to select "AQUOS LINK control".
5	Press ◀/▶ to select "On".

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.



NOTE

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

AQUOS LINK

Selecting recorder

You can select a recorder for the recording from several connected recorders.



 If you have connected the AQUOS LINK-compatible audio system between the TV and a CEC-compatible recorder, the input source's indication changes from "HDMI 3" to "HDMI 3 (Sub)" as it is shown below.



Selecting channel key

This function allows you to select the channel of the connected HDMI device using the TV's remote control unit.



5 Press \blacktriangle/ ∇ to select the input source of the connected HDMI device you want to control using the TV's remote control unit.

6 Press **∢**/**▶** to select "On".

Audio return channel (ARC)

If this function is set to "Auto", the TV can send audio data for video content shown on the TV to a connected audio device with just one ARC-compatible cable. Using this function eliminates the need to use a separate analogue audio cable.



Connection for using "Audio return channel"

You need to use ARC-compatible cables/devices and connect to the HDMI 1(ARC) terminal to activate this function. The connection method is the same as the **"Connecting an AQUOS BD player only"** on page 61.

• The ARC (Audio Return Channel) function works only when using the HDMI 1(ARC) terminal.

Operating an AQUOS LINK device

AQUOS LINK allows you to operate the HDMIconnected device with one remote control.

Use the following procedures to start playback.

Press b to start playback of a title.

- See this page, section "Playback of titles using AQUOS LINK" if you want to start playback using the list of the titles of the AQUOS BD player.
- Press >>> to fast forward.

Press **4** to reverse.

Press 🚺 to stop.

Press I to pause.

Press **SOURCE** () to turn the HDMIconnected device on/off.

Use the following procedures to start recording.

Check the following items before recording.

- Make sure the antenna cable is connected properly.
- Check if the recording media (HDD, DVD, etc.) has enough capacity for recording a programme.
- Select the equipment for recording in Selecting Recorder.
 - After you selected recording media (HDD, DVD, etc.) in the menu, please make sure the recording menu in the ready condition.

Press **REC** to record a programme.



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Press **REC STOP** to stop recording.

Recorder power on/off

This function is for turning of the CEC-compatible recorder on/off.

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

Press \checkmark to select "Link operation".



3

Press \blacktriangle/ \lor to select "Recorder power on/off", and then press **ENTER**.

4 Every time you press **ENTER** in "Recorder power on/off", the CEC-compatible recorder will be turned on/off.

Playback of titles using AQUOS LINK

This section explains how to play back a title in the AQUOS BD player.

- Power on the AQUOS BD player and select the appropriate external input. Press **MENU** and the MENU screen displays. 2 Press **◄**/**▶** to select "Link operation". 3 Press $\blacktriangle/ \mathbf{V}$ to select "Top menu/title list", and 4 then press **ENTER**. Recorder power on/off Top menu/title list Setup menu Media change Recorder EPG Change audio output device [By AQUOS audio SP] Sound mode change Model select AQUOS LINK setup • 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 displays.
 - Select the title with $\blacktriangle/ \bigtriangledown/ \checkmark/ \land/ \triangleright$, and then press \triangleright to start playback.

Setup menu

You can call up the menu of an HDMI CEC-compatible external device (player, recorder, decoder, etc.) using the "Setup menu" function.



5

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



Press $\triangleleft/\triangleright$ to select "Link operation".



Press \blacktriangle/∇ to select "Setup menu", and then



If a connected device does not have this function or the device is in a status where the menu cannot be displayed (recording, entering standby, etc.), this function may not be available.

AQUOS LINK

Selecting media type for CEC-compatible recorder

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

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



Press ◀/► to select "Link operation".



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Press \blacktriangle/ ∇ to select "Media change", and then press **ENTER**.

Select the desired medium, such as DVD or HDD. The media type changes every time you press **ENTER**.

Recording via the CEC-compatible recorder's EPG (only for recorders)

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

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



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Press \triangleleft b to select "Link operation".

Press \blacktriangle/Ψ to select "Recorder EPG", and then press **ENTER**.

• The external input source switches and the recorder's EPG is displayed.

Select the programme to record.

• You can use ▲/▼/◀/▶, **RETURN, EXIT** and the coloured buttons.

SNOTE

• Refer to the operation manual of the recorder for details.

HDMI device selection

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



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



Press \checkmark to select "Link operation".



Press \blacktriangle/ \forall to select "Model select", and then press **ENTER**. The HDMI device changes every time you press **ENTER**.

Use the PC terminals to connect a PC.

Analogue connection



Signal names for 15-pin mini D-sub connector



Pin No.	Signal name	Pin No.	Signal name	Pin No.	Signal name
1	R	6	GND (Ground)	1	Not connected
2	G	\overline{O}	GND (Ground)	(12)	SDA
3	В	8	GND (Ground)	13	HD
(4)	Not connected	9	+5V	14	VD
(5)	CSYNC	10	GND (Ground)	(15)	SCL

NOTE

- Macintosh adaptor may be required for use for some Macintosh computers.
 Pin No. (5) is not used for inputting the signal.

PC compatibility chart

Reso	lution	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	~	~	~
UXGA	1600 ×1200	75.0 kHz	60 Hz	~	~	~
1080p	1920 ×1080	67.5 kHz	60 Hz	~	~	—

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.

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

HDMI connection



NOTE

- Some PC may not be displayed properly under HDMI
- connection.
- * The analogue audio input is available only for HDMI 2/PC.

Displaying a PC image on the screen

Audio select for connecting a PC

When using the PC terminal, you must select which terminal uses the AUDIO (R/L) jack for analogue audio input.

Go to "MENU" \rightarrow "Setup" \rightarrow "Option" \rightarrow "Terminal setting" \rightarrow "Audio select".

Selected item	Description
Video	When connecting devices with AV cable to the PC terminal, display images without audio.
Video+Audio	When connecting a PC to the PC terminal, and inputting analogue audio signals from the AUDIO IN terminal.





NOTE

- Connect the PC before making adjustments.
- Selectable picture size may vary with input signal type.
- You may not be able to change the wide mode while in 3D mode.

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 RGB cable, etc.

1	Press MENU and the	MENU screen displays.
2	Press ▼/ ◀/► to sele	ct "Option".
3	Press $\blacktriangle/ \blacksquare$ to select "then press ENTER .	Terminal setting", and
4	Press $\blacktriangle/ \blacksquare$ to select "then press ENTER .	PC signal setting" and
5	Press ▲/▼ to select "	Auto sync.".
6	Press ◀/► to select " ENTER. • Auto Sync. starts.	Yes", and then press
		Мори
	CH list	Setup
	ENTER :Enter RETURN :Back	Terminal setting
		PC signal setting
	ſ	Auto sync.
		Auto adjustment of image display parameters

NOTE

- Auto Sync. is likely to succeed when an input PC image has wide vertical stripes (e.g. pattern with high contrast stripes, or cross-hatched).
- It may fail when an input PC image is solid (low contrast).Be sure to connect the PC to the TV and switch it on before starting Auto Sync.
- This function is available for 3D images converted from 2D images or normal 2D images.

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 MENU and the MENU screen displays.
2	Press ▼/ ◀/▶ to select "Option".
3	Press $\blacktriangle/ \blacksquare$ to select "Terminal setting", and then press ENTER .
4	Press \blacktriangle/∇ to select "PC signal setting" and then press ENTER .
5	Press \blacktriangle/∇ to select "Fine sync.", and then press ENTER .
•	Press \blacktriangle / \blacksquare to select a specific adjustment

item among "H-Pos.", "V-Pos.", "Clock" and "Phase".



Selected item	Description
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.

7 Press **∢**/**▶** to adjust the item to your desired position.

NOTE

- For resetting all adjustment items to the factory preset values, press ▲/▼ to select "Reset", and then press ENTER.
- Images may not be displayed properly depending on the settings and/or input signals.
- This function is available for 3D images converted from 2D images or normal 2D images.

PC control of the TV

- When a programme is set, the TV can be controlled from the PC using the RS-232C or IP.
 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) or LAN cable (commercially available) for the connections.

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

Communication conditions for IP

Connect to the TV with the following settings made for IP on the PC.

IP protocol	TCP/IP
Host IP address	Set the IP address on the TV menu.
Service	None (do not select Telnet or SSH).
TCP port#	Set a port number on the TV menu (Control port).

When you set your ID and password on the TV menu, you need to enter them as soon as you connect to the TV.

NOTE

2

3

4

• The connection will be cut off when there has been no communication for 3 minutes.

IP Control

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

Press ▼/ ◀/ ▶ to select "View setting".

Press \blacktriangle/ \lor to select "Network setup", and then press **ENTER**.

Press \blacktriangle/\lor to select "IP Control setup", and then press **ENTER**.

Select Device Names

Set the name of the TV displayed on external devices.

• Use the software keyboard to set the name. See page 27 for details on the software keyboard.

Detailed Settings

Make the detailed settings (Login ID, password, etc.). Follow the on-screen instructions to configure the settings.

Communication conditions for RS-232C

Set the RS-232C communications settings on the PC to match the communications conditions of the TV. The communications settings of the TV 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.

Command format

Eight ASCII codes + CR

	C1	C2	C3	C4	P1	P2	P3	P4	₽	
			/		<u> </u>		1		$ \leftarrow$	
Command 4-digits					aram	eter 4	-diaits	s F	Return	1 code

Command 4-digits: Command. The text of four characters. Parameter 4-digits: Parameter 0 - 9, space, ?

Parameter

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

When the input parameter is not correct, "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



Return code (0DH)

Problem response (communication error or incorrect command)



Return code (0DH)

RS-232C Commands List

RS-232C Commands

• Commands not indicated here are not guaranteed to operate.

CONTROL ITEM		OMN	ЛAN	D	PARAMETER				CONTROL CONTENTS
POWER SETTING	Ρ	0	W	R	0	_	_	_	POWER OFF (STANDBY)
INPUT SELECTION A	1	Т	G	D	_	_	_	_	INPUT SWITCHING (TOGGLE)
	Ι	Т	V	D	_	_	_	_	TV (CHANNEL FIXED)
	Ι	D	Т	V	_	_	_	_	D-TV (CHANNEL FIXED)
	Ι	A	V	D	*	-	-	-	HDMI1-3 (1-3), INPUT4-5 (4-5), PC (6)
CHANNEL	D	С	С	н	*	*	_	_	TV DIRECT CHANNEL (1-99)
	С	н	U	Ρ	_	_	_	_	CHANNEL UP
	С	н	D	W	_	_	_	_	CHANNEL DOWN
	D	Т	V	D	*	*	*	-	D-TV DIRECT CHANNEL (1-999)
	D	Т	U	Ρ	_	_	_	_	D-TV CHANNEL UP
	D	Т	D	W	_	_	_	_	D-TV CHANNEL DOWN
AV MODE SELECTION	А	V	М	D	0	_	_	_	TOGGLE
	А	V	М	D	1	_	_	_	STANDARD
	А	V	М	D	2	_	_	_	MOVIE
	А	V	М	D	3	_	_	_	GAME
	А	V	М	D	4	_	_	_	USER
	А	V	М	D	5	_	_	_	DYNAMIC (Fixed)
	А	V	М	D	6	_	_	_	DYNAMIC
	А	V	М	D	7	_	_	_	PC
	А	V	М	D	1	0	0	_	AUTO
	А	V	М	D	1	4	_	_	STANDARD (3D)**
	А	V	М	D	1	5	_	_	MOVIE (3D)**
	А	V	М	D	1	6	_	_	GAME (3D)**
VOLUME	V	0	L	М	*	*	*	_	VOLUME (0-100)
POSITION	Н	Ρ	0	s	*	*	*	_	H-POSITION (AV) (-nn ~ nn)
	н	Ρ	0	s	*	*	*	_	H-POSITION (PC) (-nn ~ nn)
	V	Ρ	0	s	*	*	*	_	V-POSITION (AV) (-nn ~ nn)
	V	Ρ	0	s	*	*	*	_	V-POSITION (PC) (-nn ~ nn)
	С	L	С	к	*	*	*	_	CLOCK (-90 – 90)
	Р	н	s	E	*	*	*		PHASE (-20 – 20)
WIDE MODE	W	1	D	E	0			-	TOGGLE (AV)
	w	1	D	E	1				NORMAL (AV)
	W	1	D	E	2	-	-	-	ZOOM 14:9 (AV)
	W		D	E	3	-	-	-	PANORAMA (AV)
	w	·		F	4	-	-	-	
	W/			F	5	-	-	-	
	W			F	6	-	-	-	
	WV			F	7	-	-	-	
	VV	L '			1	-	-	-	NOT WIAL (FO)

CONTROL ITEM	COMMAND		P/	RA	MET	ER	CONTROL CONTENTS		
WIDE MODE		Ι	D	E	8	_	_	_	CINEMA (PC)
	W	Ι	D	E	9	_	_	_	FULL (PC)
	W	Ι	D	E	1	0	_	_	DOT BY DOT (AV/PC)
	W	Ι	D	Е	1	1	_	_	UNDERSCAN (HDMI)
	W	Ι	D	E	1	2	-	-	AUTO (During playback USB/ Home network video only)
	W	I	D	E	1	3	-	-	ORIGINAL (During playback USB/Home network video only)
MUTE	М	U	Т	E	0	_	_	_	TOGGLE
	М	U	Т	E	1	_	_	_	MUTE ON
	М	U	Т	E	2	_	_	_	MUTE OFF
SURROUND	А	С	S	U	0	_	_	_	SURROUND TOGGLE
	А	С	S	U	1	_	_	_	SURROUND Normal
	А	С	S	υ	2	_	_	_	SURROUND OFF
	А	С	S	υ	4	_	_	_	SURROUND 3D HALL
	А	С	S	U	5	_	_	_	SURROUND 3D MOVIE
	А	С	S	U	6	_	_	_	SURROUND 3D STANDARD
	А	С	S	U	7	_	_	_	SURROUND 3D STADIUM
AUDIO CHANGE	А	С	н	А	_	_	_	_	TOGGLE
SLEEP TIMER	0	F	Т	М	0	_	_	_	OFF
	0	F	Т	М	1	_	_	_	SLEEP TIMER 30 MIN
	0	F	Т	М	2	_	_	_	SLEEP TIMER 1 HOUR
	0	F	Т	М	3	_	_	_	SLEEP TIMER 1 HOUR 30 MIN
	0	F	Т	М	4	_	_	_	SLEEP TIMER 2 HOUR
	0	F	Т	М	5	_	_	_	SLEEP TIMER 2 HOUR 30 MIN
3D	Т	D	С	н	0	_	_	_	3D OFF
	Т	D	С	н	1	_	_	_	$2D \rightarrow 3D$
	Т	D	С	н	2	_	_	_	SIDE BY SIDE
	Т	D	С	н	3	_	_	_	TOP AND BOTTOM
	Т	D	С	Н	4	_	_	_	$3D \rightarrow 2D$ (SIDE BY SIDE)
	Т	D	С	н	5	_	_	_	$3D \rightarrow 2D$ (TOP AND BOTTOM)
	Т	D	С	н	6	_	_	_	3D AUTO
	Т	D	С	Н	7				$3D \rightarrow 2D^{**}$

S NOTE

- If an underbar (_) appears in the parameter column, enter a space.
 If an asterisk (*) appears, enter a value in the range indicated in brackets under CONTROL CONTENTS.
- ** These commands are available only during 3D mode.

Network function

Connecting to the Network

To enjoy internet services, you need to connect the TV to a router with a high speed connection to the internet. You can also connect the TV to your Home network server through a router.

NOTE

- If you do not have a broadband internet connection, consult the store where you purchased your TV or ask your internet service provider or telephone company.
- A stable connection speed is required to play back streaming content, otherwise you may not be able to watch normally.
- As there are lot of formats in the internet, some formats may not be supported by this TV unit.

Installation

Switch on the router (commercially available). Refer to the router's operation manual for switching on. Connect the LAN terminal on the TV to the router (commercially available) with a LAN cable (commercially available).

Wired connection overview



How to connect



LAN setting

Go to "Menu" \rightarrow "Setup" \rightarrow "View setting" \rightarrow "Network setup" \rightarrow "LAN setting".

IP setup		
	[IP address Netmask Gateway DNS MAC address	Current setup] : Auto : Auto : Auto : Auto : 78:1c:5a:46:f2:8a
	Change	Initialize

Wired installation

1

2

- Go to "Menu" \rightarrow "Setup" \rightarrow "View setting" \rightarrow "Network setup" \rightarrow "LAN setting".
- Press \blacktriangle/\lor to select "IP setup", press **ENTER**, select "change" and then press **ENTER**.

TV [SetupView set	tingNetwork	setupLAN setting]
1P setup	IP address Netmask Gate way	Get the IP address automatically Yes No en an an en an an Next

- Set "Get the IP address automatically" and "Get the DNS address automatically?" to "Yes", to finish the network setup.
- The wired network is now established automatically. If you want to manually change the settings, go to "Menu" → "Setup" → "View setting" → "Network setup" → "LAN setting" → "IP setup" and follow the on-screen instructions and the operation manual of the router.
- 3 Select "OK", and then select "Complete".
 - If you have failed to connect to the Internet in the above operation, an error message will appear.

NOTE

- To connect your TV to the internet, you must have a broadband internet connection.
- As there are lot of formats in the internet, some formats may not be supported by this TV unit.

Network function



You can easily launch to enjoy Internet connection and Home network function and to perform settings for the TV from this "HOME" screen.

- Some of these service requires internet connection.
- SHARP is not responsible for the service of thirdparty. Parental consent is necessary for children to use the
- internet service.

Basic operation



Display the HOME screen

Press HOME and the "HOME" screen displays.

You can also display the "HOME" screen from "Menu" \rightarrow "Setup" \rightarrow "Option" \rightarrow "Option for view" \rightarrow "Home UI".

Select an item

Press $\blacktriangle/ \nabla / \triangleleft / \blacktriangleright$ to select the desired service or menu, and then press ENTER.

The operation will exit the "HOME" screen if you press **EXIT** before it is completed.

- * When 🛋 displays, you are not connected to USB devices. If I is displayed, check your USB device's connection.
- When I displays, you cannot connect to TV's network. If 1200 is displayed, check your TV's network settings and connection.

Selecting in the HOME

1 Youtube

You can enjoy Youtube on your AQUOS TV.

2 TV Menu

Call up the OSD (On-screen Display) to perform settings for the TV. The OSD (On-screen Display) for the settings is called "TV Menu". The "TV Menu" enables various settings and adjustments.(See page 22.)

3 Using AQUOS.NET

By connecting the TV to the Internet, you can enjoy a variety of broadband content.

Example : The image shown below, which is only for explanation, is subject to change.



NOTE

- Additional applications will be available in the future.
- The delivery speed of applications varies depending on the network speed. Check the web site of the provider for details on application setup and other information.
- · As there are lot of formats in the internet, some formats may not be supported by this TV unit.
Network function

Selected item	Description
	Go back to the previous page.
	Go to the next page.
S	Refresh the page.Interrupt a page while it is loading.
***	Display the bookmarks list.
+	Display the AQUOS NET.
36	Display the Browser menu.
(*)	Change to cursor or pointer.
${}$	Add the current page to your bookmarks.

Press A/V/A/b to select the "address bar", and then press ENTER.

The software keyboard will pop up when you press **ENTER** again.

Use the software keyboard to input the "URL", and then press **ENTER**.



1 Input field

The text you enter is displayed as you type it in.

(2) Input candidate

While you are entering text, likely input conversion candidates are displayed based on what you typed in.

You can also enter text by pressing ▲/▼/ ◀/► on the remote control unit.

③ 0-9 keys

Input characters by using these buttons.

(4) Shift key

Changes characters to capital/lower case by pressing \clubsuit on the remote control unit.

5) 💶 (space)

You can input a space by pressing $\ensuremath{\text{TV/VIDEO}}$ on the remote control unit.

6 Back space key

Erases the character string by pressing $\ensuremath{\textbf{RETURN}}$ on the remote control unit.

7 Key guidance

- Select the coloured item on the screen.
- R : Language selection
- **G** : Changes character set into the alphabet, numbers, symbol, etc.
- **Y** : Changes the display position of the software keyboard.

4 CH List

You can check the CH list and view detailed information.

5 USB Media

(See pages 80 to 85.) 6 Home network

(See pages 85 to 88.)

7 Input change

r input change

(See page 58.)

8 TV Menu

Call up the OSD (On-screen Display) to perform settings for the TV. The OSD (On-screen Display) for the settings is called "TV Menu". The "TV Menu" enables various settings and adjustments.(See page 22.)

NOTE

You can call up "TV Menu" screen by press MENU.

9 IP Control (See page 69.)

10 Network setup (See pages 71.)

Clear browser setting

You can clear browser setting, which includes cookies, bookmarks and caches.Go to "Menu" \rightarrow "Setup" \rightarrow "View setting" \rightarrow "Clear browser setting".

S NOTE

• Password input is required when executing "Clear browser setting" if Password is set.

• If you exercise this operation, browser setting will be completely initialized. If there is important information take notes before executing.

About links

- Web pages on the Internet often include "links" that allow you to jump to other web pages (or sites).
- "Links" can take various forms, including words or images, but they always work in the same way letting you jump to the link destination when you select them.
- You can jump from a "link" to the corresponding link destination.

 If the power is cut due to a power failure or the TV being unplugged while you are using the Internet, information such as bookmarks or cookies may not be saved correctly.

🖄 NOTE

- To users who access the Internet from a PC
- When you access the Internet from this TV, the procedures may not be the same as regular browser-based access on a PC.
- You cannot download files nor install programs.
- Video and audio* may not be played, and text or images may not be displayed correctly.
- Depending on the data format, some formats may not be supported.
- As there are lot of formats in the internet, some formats may not be supported by this TV unit.

You can connect the TV to a USB memory device, USB hard disk drive (HDD) or home network server to enjoy viewing pictures, listening to music, and watching videos.

NOTE

- Depending on the USB memory device/USB hard disk drive (HDD)/home network server, the TV may not be able to recognise the recorded data.
- It may take time to read the recorded data if the USB memory device/USB hard disk drive (HDD)/home network server contains many files or folders.
- Use only alphanumeric characters for naming files.
- File names over 80 characters (may vary depending on character set) may not be displayed.
- External subtitles for some video files may not be supported.
 Partitioned USB hard disk drives are not supported. Therefore, use only USB hard disk drives that are not partitioned.
- Only compatible file formats are displayed.

Connecting a USB memory device/USB hard disk drive (HDD)

Insert the USB memory device with recorded photos, music or videos into the USB 1 or USB2 terminal on the TV. • If USB memory devices are inserted into all terminals, the USB 1 terminal has priority.



Connect to the USB2 terminal if connecting to an external HDD.

- When connecting a USB hard disk drive, be sure to use a hard disk drive with an AC adapter.
- Do not remove a USB memory device or memory card from the TV while transferring files, using the slide show function, or switching screens, or before you exit "USB media" from the INPUT list.
- Do not insert and remove a USB memory device/USB hard disk drive to and from the TV repeatedly.
- When using a card reader, be sure to insert Memory first before using the card reader.
- The TV may not be able to recognise the card reader.

(^(f))CAUTION

- Do not use a USB extension cable when connecting a USB memory device to the USB terminal on the TV.
- Using a USB extension cable with the USB memory device may prevent the TV from performing correctly.

USB storage device registration

It is necessary to first perform USB storage device registration for USB storage devices used for Time shift. Directly connect only one USB storage device to the USB port while registering the USB storage device (when two USB storage devices are connected, USB storage device registration is not available).

• The screen prompt pops up.

When the USB storage device is connected to the TV

Register the USB storage device. Follow the onscreen instructions to register the USB storage device.

• All the data on the USB storage device is deleted after USB storage device registration.

NOTE

- In order to use Time shift, it is necessary to change the "Quick start" setting to "Auto (Time shift)" or "On".
- Only one USB storage device for Time shift can be registered on the TV. Two USB storage devices for Time shift cannot be used at the same time.

For Time shift

You need to complete the following procedures to use the USB storage device for Time shift. After selecting "Time shift", the TV starts initialising the USB storage device. Follow the screen prompt to complete the setting.

Press $\triangleleft/\triangleright$ to select "Yes", and then press **ENTER**.

• Reconfirm use of the USB storage device for Time shift.

NOTE

- When you have inserted two USB storage devices in the ports, an error message appears. Insert only one USB storage device for Time shift.
- You can also set the USB storage device to be used for Time shift in the "Device registration" menu.
- At least 1 GB is required for a USB storage device for Time shift.



Press $\triangleleft/\triangleright$ to select "Yes", and then press **ENTER**.

- The TV starts initializing the USB storage device.
- Delete the data in the USB storage device.

NOTE

• Do not disconnect the USB storage device when the TV is recognising the memory for Time shift.



Select "OK". Press **ENTER**.

NOTE

• If an error message is displayed on the screen, follow the screen prompts and remove the USB storage device.

Go to **Time shift** on page 76-78.

For USB media

After selecting "USB media", the TV switches to the USB media.

Go to USB media/Home network on page 80-85.

NOTE

- Depending on the USB device, the TV may not be able to recognise the contained data.
- Use only alphanumeric characters for naming files.
- File names over 80 characters (may vary depending on the character set) may not be displayed.
- Do not disconnect a USB device or memory card from the TV while transferring files, using the slide show function, when a screen is switching to another or before you exit "USB media" from the "INPUT" menu.

Disconnecting the USB device

When you disconnect the USB device, be sure to the following steps.

For Time shift

Go to "Menu" \rightarrow "setup" \rightarrow "View setting" \rightarrow "Time shift setting" \rightarrow "Device removal".

- This menu item cannot be selected when a USB storage device for Time shift is not registered.
- The USB storage device registration for Time shift is cancelled in the following cases:
- When the USB storage device is removed.
- When another USB storage device is registered for Time shift; only one USB device can be registered for Time shift.

For USB media

Press **B** on the remote control unit while the "Photo", "Music", "Video" folder or a sub-folder is selected.

Time shift (DTV only)

This function enables you to record the digital TV programme and watch it again from the recorded.

- Do not unplug the AC cord or turn off the MAIN POWER switch during Time shift timer setting or Time shift recording.
- When the AC cord is unplugged or the MAIN POWER switch is turned off:
- The Time shift timer setting is cancelled.Recorded data is deleted.
- Time shift recording may be automatically stopped when signal reception is poor.
- Only this TV can playback the programme recorded on the USB storage device connected to this TV. The programmes cannot playback on other TV or PC.

SHARP corporation bears no responsibility regarding compensation for content when recording does not take place, loss of recorded data or other direct or indirect damages related to these matters. Please be forewarned.

Buttons for Time shift operation

Remote control unit

Control panel





Buttons	Description
REC ●	 Start recording the programme you are watching. You cannot playback the recorded programme until approximately three seconds after pressing REC to start recording.
REC STOP	Stop recording.
	Playback the recorded programme.
	Stop the programme in playback and go back to the real time broadcast (live).
"	Pause the programme in playback (Time shift recording continues).This function is released in 15 minutes.
44	Reverse (each time you press this button, the reverse speed changes in three levels).
••	Fast forward (each time you press this button, the fast forward speed changes in three levels).
I4	Jump backward to the previous chapter point*.
	Jump forward to the next chapter point*.
<u>^</u>	Playback will resume after jumping backward by the time interval you set in "Jump time setting" (Page 78).
	Playback will resume after jumping forward by the time interval you set in "Jump time setting" (Page 78).

* Chapter points are fixed at 10 minute increments.

🔊 NOTE

- Refer to Regarding "Select recording device" (Page 61)
- Instead of pressing buttons on the remote control unit, most of the operations shown to the left are also available on the screen with the control panel. You can call up this control panel by pressing **CONTROL** on the remote control unit or select "Control (Time shift)" from "Menu" → "Setup" → "Option" → "Option for view".
- When the amount of memory used for Time shift reaches "Full" and the yellow point is around the left edge of the bar (see ② and ③ in the Counter section on page 78), you cannot operate some functions (III (Pause), ◄< (Reverse), I◄< (Jumping backward to the previous chapter point), (Jumping backward by the time interval you set in "Jump time setting")).
- Time shift recording stops if no operation detected for three hours.
- When recording operations are not stopped manually,
- recording will automatically stop after six hours.
 To release Time shift, press **REC STOP**, change the
- DTV channel or change "INPUT".Some functions do not work during Time shift.
- As Time shift is not actually a recording function, recorded data will be reset when the MAIN POWER switch is turned off or when the AC cord is unplugged.
- Time shift does not start automatically, but starts only when REC is pressed or when a Time shift timer setting is started.
- Do not disconnect the USB storage device used for Time shift during Time shift operation.

Time shift recording

You can record the programme you are watching to the registered USB storage device.

Starting Time shift recording

Press REC

• The TV starts Time shift recording.

NOTE

- You can also operate from the control panel by pressing CONTROL.
- You cannot switch the channel or the input source during Time shift recording.
- Time shift overwrites existing data when a new recording starts.
- The TV starts overwriting data in order from the oldest recorded data when the memory for the USB storage device is full. Use a high capacity USB storage device when you want to record longer programmes.
- During Time shift recording, the TV cannot display photos or play music from the internet, Home network, or USB storage devices.
- You cannot record programmes that have a copy control signal that prohibits recording (they can only be watched on the TV).

Completing Time shift recording

1 Press REC STOP

- The screen prompt pops up.
- 2 Press **∢**/**▶** to select "Yes", and then press **ENTER**.
 - Time shift recording has completed.

NOTE

• You can also operate from the control panel by pressing **CONTROL**.

Time shift timer setting

You can set the Time shift timer setting for programmes you want to record.

NOTE

- To prevent the first part of the programme from being cut, start recording the programme a few seconds earlier than time set to start recording.
- When recording/viewing timer settings are set continuously for multiple programmes, schedule the recording of the previous programme to end earlier than the end of the programme itself. Recording/viewing timer setting of the next programme will start after that.
- A message will be displayed when the scheduled time overlaps with an existing schedule. Make changes in accordance with the on-screen instructions.
- It is not possible to newly schedule a recording that overlaps with a timer setting that is currently running (recording). When urgent setting of a schedule is desired, stop recording before scheduling.
- Only one Time shift timer setting can be set.

EPG timer setup

You can select the programme you want to record and set the timer setting with EPG (Pages 49).

Manual timer setting

"Manual timer setting" enables you to set date, recording start/stop time and channel.

1 Press EPG.

- 2 Press B to display the timer list.
- **3** Press **B** again to display the "Manual timer setting" screen.
- **4** Set date, recording start/stop time and channel.
- 5 Press **◄**/**▶** to select "Time shift", and then press **ENTER**.

• A confirmation screen will be displayed for the timer setting.

5 Press **∢**/**▶** to select "Yes", and then press **ENTER**.

Timer list

A list of programmes scheduled for recording can be displayed.

1 Press EPG.

- 2 Press B to display the timer list.
- You can also display the timer list from "Menu" \rightarrow "EPG" \rightarrow "Timer list".

Time shift playback

Playback recorded scenes of the programme being recorded.

Press ▶ during Time shift recording.

- The last recorded programme can be replayed after the end of recording.
- Press REC STOP to return the scene that is broadcasting.

NOTE

- You can also operate from the control panel by pressing CONTROL.
- Time shift playback may take a few moments to start.
- Time shift playback will stop and the TV will return to normal broadcasting when a program is fast-forwarded to a scene that is near to the scene currently being broadcast. The timing at which it returns depends on the speed of fast-forwarding.

Display information regarding Time shift

Channel display

Channel information displays by pressing **DISPLAY** on the remote control unit.



- The recording icon shows up when **REC** is pressed and the TV is recording the programme.
- 2 The status icon shows up depending on what is shown on the screen.
- S This icon is displayed when the TV has playable Time shift memory. Press ► to playback the contents of the Time shift memory.

Counter

The counter displays when you set "On" in "Display the Time shift memory" (Go to "Menu" \rightarrow "Setup" \rightarrow "View setting" \rightarrow "Time shift setting").



- 1 The grey bar shows how much memory is in use.
- This yellow point shows how much time has progressed.
- "FULL" shows up when the grey bar reaches the right edge. The TV starts overwriting the previously recorded data.

Useful settings for Time shift

Clear the Time shift memory

You can clear the Time shift memory.

Go to "Menu" \rightarrow "Setup" \rightarrow "View setting" \rightarrow "Time shift setting" \rightarrow "Clear the Time shift memory".

Auto input selection

You can choose whether or not to switch the input source automatically when receiving an AQUOS LINK compatible signal on the TV during Time shift operations.

Go to "Menu" \rightarrow "Setup" \rightarrow "View setting" \rightarrow "Time shift setting" \rightarrow "Auto input selection".

Selected item	Description
Enable	Release Time shift when receiving an AQUOS LINK compatible signal. Switch input source automatically.
Disable	Time shift continues to work. The TV does not switch input source automatically even when receiving an AQUOS LINK compatible signal.

Jump time setting

You can set the time interval for playback to resume after jumping backwards/forward.

Go to "Menu" \rightarrow "Setup" \rightarrow "View setting" \rightarrow "Time shift setting" \rightarrow "Jump time setting".

• A time interval from 10 seconds to 99 minutes can be selected.

You can use the time interval you set using the r or r buttons on the control panel.

Device registration

You need to perform this function to register the USB storage device for the Time shift.

Go to "Menu" \rightarrow "Setup" \rightarrow "View setting" \rightarrow "Time shift setting" \rightarrow "Device registration".

• Refer to For Time shift (Page 75) for registering a USB storage device.

- Only one USB storage device can be registered for Time shift. Remove all USB storage devices except the one used for Time shift.
- At least 1 GB is required for a USB storage device for Time shift.
- Some USB storage devices, such as ones which have multiple drives, etc., cannot be used for Time shift.

Device check

You can manually check the condition of a USB storage device to be used for Time shifting.

Go to "Menu" \rightarrow "Setup" \rightarrow "View setting" \rightarrow "Time shift setting" \rightarrow "Device check" \rightarrow select "Yes".

NOTE

• This menu item cannot be selected when a USB storage device for Time shift is not registered.

Select the files to play back





- To play back data on a USB memory device, insert the USB memory device on the TV. Select "USB media" from "INPUT".
- Use the above procedure to switch back to USB mode after switching from USB mode to another mode.
- The corresponding file format is different between "USB media" and "Home network".



Select "USB media" or "Home Network" from INPUT list screen.

2 Press B.

USB memory device

- Press ▲/▼ to select "Select USB drive", and then press ENTER.
 - The available selections are "Select USB drive" and "Folder display setting".
- (2) Press ▲/▼/ ◀/► to select the USB device where you want to find your files, and then press ENTER.
 - You can select from "All" or "Folder" for the type of folder directory in "Folder display setting".

Example

USB1-1 USB1-2 USB 2

• If the TV is turned off and then on again, the number assigned to the USB drive may change.

Home network

Press \blacktriangle/∇ to select the Home network server where you want to find your files, and then press **ENTER**.

Press Y to search for servers.

Example



3 Press ◀/► to select "Photo mode", "Music mode" or "Video mode", and then press ENTER.

Example



Press $\triangleleft/\triangleright$ to select the desired folder, and then press **ENTER**.

🚫 NOTE)

4

- You cannot switch the input mode if a USB memory device is not connected.
- You do not need to select the drive/server in step 2 when there is only one drive in the connected USB memory device or there is only one home network server connected to the TV.
- "Wide mode" is fixed during "Photo mode". During "Video mode", you can select "Auto", "Original" or "Full".
- You cannot enter these modes when there is no server connected to the TV in home network mode.
- The key guide display disappears automatically after a few seconds. To display the key guide display again, press DISPLAY.

Playing back files on a USB memory device

Photo mode

Viewing thumbnails

Example





Buttons for thumbnail operations

Buttons	Description
ENTER	When selecting a folder icon: Enter this directory. When selecting a photo thumbnail: Enlarge the photo.
▲/▼/◀/► (Cursor)	Select a desired item.
RETURN	Return to the previous operation.
R button	Select/deselect items (rark appears on the selected items).
G button	All*: Select Background music (BGM) for the slide show. Folder*: Return to top menu.
Y button	Start the slide show.
B button	Display "USB media menu". 3D display Select slide show interval Select slide show Background music (BGM) Set all slide show image Reset all slide show image USB device removal

The mode selected in "Folder display setting" on page 89.

NOTE

- Only compatible file formats are displayed.
- The 3D icon appears on the thumbnails of 3D images. If you do not switch to 3D mode for the 3D images, they will be displayed in 2D.
- You can see the file name, shooting date, file size and pixel size of the selected photo in the lower-left corner of the screen (shooting date is only available in the EXIF file format).

Viewing individual photos

The photo selected on the thumbnail selection screen is displayed.

Buttons for individual display operation

Buttons	Description
◄/►(Cursor)	Go to the previous/next photo in the same directory.
RETURN	Return to the thumbnail selection screen.
3D	Switch between 2D and 3D modes.
R button	Rotate the photo by 90 degrees to the left.
G button	Rotate the photo by 90 degrees to the right.
B button	Display "USB media menu". • USB device removal
DISPLAY	Reveal/hide the guide display.

🖄 NOTE

• Rotating photos only applies to the temporarily selected item and this setting is not saved.

Slide show

The photos displayed on the thumbnail selection screen are displayed as a slide show.

Buttons for slide show operation

Buttons	Description
RETURN	Return to the previous operation.
3D	Switch between 2D and 3D modes.
B button	Display "USB media menu". • Select slide show interval • USB device removal
DISPLAY	Reveal/hide the guide display.

S NOTE

- The selected background music (BGM) is played repeatedly.
- The slide show continues until you press **RETURN**.
- For setting the slide show speed, select "Select slide show interval" on the "USB media menu" screen.

USB media menu

3D display

You can view photos in 3D.

Press B to display the "USB media menu" screen.



Press \blacktriangle/∇ to select "3D display", and then press ENTER.

Press ◀/▶ to select "On", and then press ENTER.

NOTE

- In 3D mode, you cannot rotate the photos.
- You can select "3D display" from "USB media menu" only when the thumbnails screen for the photo mode in USB mode is displayed on the screen.

Select slide show interval

Specify the length of time before the next image appears.



Press B to display the "USB media menu" screen.

2

3

Press $\blacktriangle/ \blacksquare$ to select "Select slide show interval", and then press **ENTER**.

Press ▲/▼ to select "10sec", "30sec" or "60sec", and then press ENTER.

NOTE

Depending on the photo files, the length of the slide show interval may differ from the selected interval time.

Select slide show Background music (BGM)

You can select the music to be played in the

background while the slide show is being displayed.

2

3

Press B to display the "USB media menu" screen.

Press \blacktriangle/V to select "Select slide show BGM", and then press ENTER.

- The list screen is displayed.
- You can display the list screen by pressing G when setting "Folder display setting" to "All".

Select the music.

• Checkmarks are added to the selected music. Example



Press **RETURN** to display the thumbnail selection screen, and then press **Y** to start the slide show and the background music.

Buttons for slide show Background music (BGM) select operation

Buttons	Description
ENTER	When selecting a music file: Play music.
▲/▼/◀/► (Cursor)	Select a desired item.
RETURN	When music is stopped: Return to the previous operation. When music is being played: Stop music.
R button	Select/deselect items (rark appears on the selected items).
G button	All*: Stop music. Folder*: Complete the slide show BGM selection.
Y button	Play/pause music.
B button	Display "USB media menu". • Set all Background music (BGM) • Reset all Background music (BGM) • USB device removal

* The mode selected in "Folder display setting" on page 79.

S NOTE

1

2

• All of the music files are selected by default.

Set/Reset all slide show image

Set or reset the images to be displayed.



Press B to display the "USB media menu"

Press \blacktriangle/ ∇ to select "Set all slide show image" or "Reset all slide show image", and then press ENTER.

- When you select "Set all slide show image", checkmarks are added to all the images.
- . When you select "Reset all slide show image", remove all the checkmarks from all the images.

Example



Press Y to start the slide show. 3

NOTE

2

• If no images have been selected, "Cannot display the data" is displayed and the slide show does not start.

USB device removal

Set or reset the images to be displayed.

Press B to display the "USB media menu" screen.

Press ▲/▼ to select "USB device removal", and then press **ENTER**.

Press ◀/▶ to select "Yes" or "No", and then 3 press ENTER.

 When you select "Yes", the USB device can be safely removed.





Buttons for music mode

Buttons	Description
ENTER	When selecting a music file: Play music.
▲/▼/ ◀/► (Cursor)	Select a desired item.
RETURN	When music is stopped: Return to the previous operation. When music is being played: Stop music.
R button	Select/deselect items (mark appears on the selected items).
G button	All*: Stop music. Folder*: Return to top menu.
Y button	Play/pause music.
B button	Display "USB media menu". • Set all auto play • Reset all auto play • USB device removal

The mode selected in "Folder display setting" on page 79.

NOTE

- Only compatible file formats are displayed.
- The displayed play time may differ slightly from the actual play time depending on the files.

USB media menu

Set/Reset all auto play

Set or reset the music to be played back.



2

Press **B** to display the "USB media menu" screen.

- Press ▲/▼ to select "Set all auto play" or "Reset all auto play", and then press ENTER.
 When you select "Set all auto play", checkmarks are added to all the music files.
- When you select "Reset all auto play", remove all the checkmarks from all the music files.

Press Y to play back the music.

S NOTE

3

- If no music files have been selected, "Cannot playback the audio file" is displayed and the music is not played back automatically.
- See page 81 for details on the "USB device removal" function.

Video mode

	Example		
··· Root	Demo	Sample	
	Video 01 wmv	2.05	
	Video 02.wmv	3:15	
	Video 03.wmv		
	Video 04.wmv		
A CONTRACT	Video 05.wmv		
	Video 06.wmv		
	Video 07.wmv		
	Video 08.wmv		
	Video 09.wmv		
	Video 10.wmv		

Buttons for file selecting operations

Buttons	Description
ENTER	When selecting a folder icon: Enter this directory. When selecting a video file: Play the video.
▲/▼/ ◀/▶ (Cursor)	Select a desired item.
RETURN	Return to the previous operation.
R button	Select/deselect items (rark appears on the selected items).
G button	All*: - Folder*: Return to top menu.
B button	Display "USB media menu". • Set all auto play • Reset all auto play • USB device removal

* The mode selected in "Folder display setting" on page 79.

Buttons for playing mode

Buttons	Description
ENTER	When video is being played: Pause the video. When video is paused: Play the video.
▲ (Cursor)	Go to the beginning of a file by pressing \blacktriangle once and the previous file by pressing \blacktriangle twice.
▼ (Cursor)	Go to the next file.
◄/► (Cursor)	Reverse/fast forward a video.
RETURN	Go back to the file selection screen.
3D	Switch between 2D and 3D modes.
R button	Start playback from the previously stopped scene.
G button	Stop a video.
Y button	Display the USB control panel.
B button	Display "USB media menu". • Title (edition) • Chapter • Show video information • USB device removal
0-9	Jump to scenes at 10% increments (0%–90%). • Limited to files without chapters.
DISPLAY	Reveal/hide the guide display.

NOTE

 Reverse/fast forward continues from one file to another during continuous playback.

Using the operation panel

You can use the operation panel for video playback operations.

You can call up this operation panel by pressing **CONTROL** on the remote control unit or selecting "Control (USB media)" from "Menu" \rightarrow "Setup" \rightarrow "Option" \rightarrow "Option for view".



▲	Hold down to go in reverse.
•	Starts playback.
•	Hold down to fast forward.
He e	Video without chapters: Press once to return to the previous playback point.* Press twice to return to the previous file. Video with chapters: Press once to return to the previous chapter. Press twice to return to the previous file.
Π	Sets pauses and still pictures.
►►I	Video without chapters: Press once to advance to the next playback point.* Press twice to display the next file. Video with chapters: Press once to advance to next chapter. Press twice to advance to next file.
Audio	Change the audio when multiple audio is available for the video you are watching.
	Playback stops.
 (Subtitle)	Each time you press (Subtitle) on the remote control, the subtitle switches.
Title	Displays the title list.
Resume jump	Jump to the scene where playback was last stopped.

* During playback of a file without chapters, playback points are set automatically. Playback points are set at intervals of a one-tenth of playback time.

Example for a file with a playback time of 100 minutes: Playback points are set every 10 minutes. Pressing once after viewing the file for 15 minutes jumps to the 20-minute playback point.

NOTE

- The key guide is shown when playback is resumed.
- Reverse/fast forward continues from one file to another during continuous playback in the USB media mode. (Jump forward/ back may not be available depending on the files in the home network mode.)

USB media menu

Set/Reset all auto play

Set or reset the video to be played back.

Press **B** to display the "USB media menu" screen.

- **2** Press \blacktriangle/ \lor to select "Set all auto play" or "Reset all auto play", and then press **ENTER**.
 - When you select "Set all auto play", checkmarks are added to all the video files.
 - When you select "Reset all auto play", remove all the checkmarks from all the video files.

3

Press **ENTER** to play back the video.

NOTE

• See page 81 for details on the "USB device removal" function.

Title/Chapter

This function can be used for files without a title list or chapters. Select the title or chapter you want to play back.

1 Pr

Press **B** to display the "USB media menu" screen.



Press \blacktriangle/ \lor to select "Title(edition)" or "Chapter", and then press **ENTER**.

- **3** Press \blacktriangle/\lor to select the desired title or chapter, and then press **ENTER**.
 - The selected title or chapter is played back.
 "0-9" is displayed for files without chapters. Playback jumps to the playback point of the selected number.

NOTE

- If there is Edition information, this screen is displayed when the title is selected.
- See page 81 for details on the "USB device removal" function.

Show video information

The information of the current file is displayed.



Press **B** to display the "USB media menu" screen.



Press \blacktriangle/Ψ to select "Show video information", and then press **ENTER**.

then press **ENTER**.

DivX[®] setup

1

2

3

This is the function to confirm your registration code. You need to register the code at http://www.divx.com. Press **MENU** to display the menu screen.

DivX[®] VOD registration

You can find your registration code on this menu. You need to register the TV at http://www.divx.com before playing the DivX content.

DivX® VOD deregistration

You can find your deregistration code on this menu. You need to deregister the TV at http://www.divx.com to release the registration.

List of file formats compatible with USB mode

Press \mathbf{V}/\mathbf{A} to select "View setting".

Press $\blacktriangle/{\bf V}$ to select "DivX (R) setup", and

USB device	USB Memory, USB card reader (Mass Storage class), USB hard disk drive
File system	FAT/FAT32/NTFS (USB hard disk drive only)
Photo file format	JPEG (.jpg) (DCF2.0 compliant) Multi-Picture Format (.mpo) (CIPA DC-007 Compliant)
Music file format	 MP3 (.mp3) Bitrate: 32 k, 40 k, 48 k, 56 k, 64 k, 80 k, 96 k, 112 k, 128 k, 160 k, 192 k, 224 k, 256 k, 320 kbps Sampling frequency: 32 k, 44.1 k, 48 kHz FLAC (.flac) Bitrate: 128 kbps ~2304kbps Sampling frequency: 8k, 16k, 22.05k, 24k, 32k, 44.1k, 48k, 88.2k, 96 kHz
Subtitle format	SRT/SUB/ASS/SSA/SMI

Video file format						
File extension	Container	Video decoder	Supported resolutions	Audio decoder	frame rate (fps)	bit rate (Mbps)
		DivX 3.11/4.x/5.1/6.0	1920×1080		30	40
		XviD	1920×1080	MP3 Dolby Digital	30	40
*.avi	AVI	H.264	1920×1080	LPCM	30	40
		MPEG4	1920×1080	ADPCM DTS	30	40
		Motion Jpeg	1280×720		30	40
		DivX 3.11/4.x/5.x/6.0	1920×1080	MP3	30	40
* mlau		XviD	1920×1080	Dolby Digital	30	40
.111KV	IVIR	H.264	1920×1080	ADPCM	30	40
		MPEG4	1920×1080	DTS	30	40
		H.264	1920×1080	MP3	30	40
*.mp4 MP4	MP4	MPEG4	1920×1080	AAC Dolby Digital	30	40
		Motion Jpeg	1280×720	Dolby Digital Plus	30	40
*.mpg		MPEG2	1920×1080	Dolby Digital	30	40
*.mpeg	PS	MPEG1	768×576	MPEG LPCM	30	1.8
.rm/.rmvb	RM	RV8/9/10	1920×1080	Real Audio9/10	30	25
		DivX 3.11/4.x/5.1/6.0	1920×1080		30	40
	ASF	Xvid	1920×1080	MP3 Dolby Digital LPCM WMA	30	40
.wmv/.asf		MPEG4	1920×1080		30	40
		VC-1	1920×1080		30	40
		Window Media Vedio v9	1920×1080		30	40

NOTE

- Progressive format jpeg files are not supported.
- USB 1.1 devices may not be played properly.
- Operation using USB hubs is not guaranteed.
- Video in Motion JPEG format with a resolution higher than 1280x720 may not be played back correctly.
- Some file formats in the above list may not be played back correctly (including images, sounds, subtitles, etc.).
- Depending on the bit rate, some files may not be played back.
- The TV supports DTS encoded video files instead of DTS surround sound formats.
- Some subtitles may not be displayed correctly and this may affect the TV operation.

Connecting a home network server

Connect the TV to the home network server using a LAN cable.



NOTE

- You can also connect a home network server by using a wireless LAN.
- To connect a home network server, refer to Home Network setup (See pages 71)
- Depending on the home network server, the TV may not be able to recognise the contained data.
- Do not disconnect a home network server from the TV while transferring files, when a screen is switching to another or before you exit "Home network" from the INPUT list.
- Do not connect and disconnect a home network server from the TV repeatedly.
- The software environment of the home network server is Windows 7 or Windows Media Player 12.
- Because of character restrictions, some file names may not display completely.

Playing back files on a home network server



Photo mode

Viewing thumbnails

Example



Buttons for thumbnail operations

Buttons	Description
▲ / ▼ / ◄ / ▶	Select a desired item.
ENTER	When selecting a folder icon: Enter this directory. When selecting a photo thumbnail: Enlarge the photo.
RETURN	Return to the previous operation.
G	Return to top menu.
Υ	Start the slide show.
В	Display the home network menu screen.

NOTE

- Only compatible file formats are displayed.
- You can see the file name, shooting date, file size and pixel size of the selected photo in the lower-left corner of the screen (shooting date is only available in the EXIF file format).

Viewing individual photos

The photo selected on the thumbnail selection screen is displayed.

Buttons for individual	display	operatio	on
------------------------	---------	----------	----

Buttons	Description
	Go to the previous/next photo in the same directory.
RETURN	Return to the thumbnail selection screen.
3D	Switches between 2D and 3D modes.
R	Rotate the photo by 90 degrees to the left.
G	Rotate the photo by 90 degrees to the right.

🚫 NOTE)

- Rotating photos only applies to the temporarily selected item and this setting is not saved.
- In 3D mode, you cannot rotate the photos.

Slide show

The photos displayed on the thumbnail selection screen are displayed as a slide show.

Buttons for slide show operation

Buttons	Description
RETURN	Return to the previous operation.
3D	Switches between 2D and 3D modes.
В	Display the home network menu screen.

NOTE

- The slide show continues until you press **RETURN**.
- For setting the slide show speed, display the home network menu screen.

Home network menu

Select slide show interval

Specify the length of time before the next image appears.

Press **B** to display the "Home network" menu screen.



Press \blacktriangle/ \lor to select "10sec", "30sec" or "60sec", and then press **ENTER**.

🛇 NOTE

• Depending on the photo files, the length of the slide show interval may differ from the selected interval time.



Music mode

Example

/Root/N Folder1	lusic/Folders/Music	
	Folder2 Folder3	
	SONG_01	3:05
	SONG_02	3:15
	SONG_03	3:02
	SONG_04	6:05
	SONG_05	
	SONG_06	
	SONG_07	
	SONG_08	
	SONG_09	

Buttons for music mode

Buttons	Description
▲ /▼/ ◄ /►	Select a desired item.
ENTER	When selecting a folder icon: Enter this directory. When selecting a music file: Play music.
RETURN	When music is stopped: Return to the previous operation. When music is being played: Stop music.
G	Return to top menu.
Y	Play music.

NOTE

- Only compatible file formats are displayed.
- The displayed play time may differ slightly from the actual play time depending on the files.

Video mode



Buttons for file selecting operations

Buttons	Description
▲ /▼/ ◄ /►	Select a desired item.
ENTER	When selecting a folder icon: Enter this directory. When selecting a video file: Play the video.
RETURN	Return to the previous operation.
G	Return to top menu.

Buttons for playing mode

Buttons	Description
▲	Go to the beginning of a file by pressing \blacktriangle once and the previous file by pressing \blacktriangle twice.
▼	Go to the next file.
►</th <th>Reverse/fast forward a video.*1</th>	Reverse/fast forward a video.*1
RETURN	Go back to the file selection screen.
ENTER	Play/Pause the video.
3D	Switches between 2D and 3D modes.
G	Stop a video.
Y	Display the home network control panel.*2

- ^{*1} Jump forward/back and Pause may not be available depending on the files.
- *2 You can display this control panel by pressing CONTROL on the remote control unit or selecting "Control (Home network)" from "Option" → "Option for view". See page 83 for details on the operation panel. (Operation panel may be slightly different in home network mode because the screen image is for USB mode.)

List of file formats compatible with home network mode

Photo file format	JPEG
Music file format	LPCM, MP3
Video file format	MPEG2-PS, MPEG2-TS, WMV, ASF, MP4, MOV, AVI

NOTE

- Progressive format jpeg files are not supported.
- Some video file formats may not be played depending on the file or the server.
- WMV, ASF, MP4, MOV, AVI are non–DLNA contents.

Selecting the picture size for video mode in USB and home network mode

You can select the picture size in "Video mode".

- Select "Video mode".
 - Refer to **Select the files to play back** on page 79.



3

- The "Wide mode" menu displays.
- Press **WIDE** or $\blacktriangle/\blacksquare$ to select the desired item.
- As you toggle the options, each is immediately reflected on the screen. There is no need to press **ENTER**.



Selected item	Description	
Auto	Keeps the original aspect ratio in a full screen display.	
Original	Keeps the original aspect ratio and size.	
Full	An image fully fills the screen.	

Playing Back Files from a Portable Device or PC

With the remote playback function, you can use your portable device to playback pictures, video and music on the home network server.

- The TV has obtained DLNA's Digital Media Renderer (DMR) certification.
- To use the remote playback function, your portable device must be a DLNA Certified Digital Media Controller.
- Please ensure that the TV and portable device or PC are in the same network environment, and set portable device as the server of TV.

For the network setting of TV, please refer to pages 71.

Easy share setting



- **2** Press \blacktriangle/∇ to select "Network Setup", and then press **ENTER**.
- 3

4

Press \blacktriangle/V to select "Easy share setting", and then press **ENTER**.

Press \blacktriangle/∇ to select the specific adjustment item, and then press **ENTER** to set each item.

Set easy share permission

Before this function can be used, you need to set the TV to the status of being able to receive contents.

On: Receiving and playing contents from portable device or PC are allowed.

Off: Receiving contents from portable device or PC is not allowed.

Timeout Setup

- This sets the time until the TV returns automatically to TV mode after remote playback ends.
 - **10 sec./60 sec.:** When the set time has elapsed after remote playback ends, the TV returns automatically to TV mode.

No: Select this to manually switch the TV after remote playback ends.

NOTE

- This function may not work while an Internet application is being used.
- Due to reasons including network environment, it may take some time for the TV to start playing after the dragging operation.
- Some file formats may not match. For the file formats supported by this function, please see "List of file formats compatible with home network mode" on page 87.

Troubleshooting

The problems described below are not always caused by malfunctions. Check the TV again before having the TV serviced.

Problem	Possible solution	
No power.	 Is the AC cord disconnected? (See page 16.) Has the power been turned on? (See page 20.) When the power switch does not work, remove the power plug and insert it again, and press POWER on the TV after waiting more than five seconds. 	
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 the TV or unplugging the AC cord and re-plugging it in after 1 or 2 minutes.	
 Remote control unit does not operate. 	 Are batteries inserted with polarity (+, -) aligned? (See page 19.) Are batteries worn out? (Replace with new batteries.) Are you using it under strong or fluorescent lighting? Is a fluorescent light shining on the remote control sensor? 	
Picture is cut off.	 Is the image position correct? (See page 40.) Are screen mode adjustments such as picture size made correctly? (See pages 35, 36, 66 and 87.) 	
 Strange colour, light colour, or dark, or colour misalignment. 	 Adjust the picture tone. (See pages 38 to 40.) Is the room too bright? The picture may look dark in a room that is too bright. Check the colour system setting. (See pages 26 and 59.) Check the "HDMI auto view" setting. (See page 57.) 	
Power is suddenly turned off.	 The unit's internal temperature has increased. Remove any objects blocking the vent or clean. Check the "ECO" setting. (See pages 34 and 29.) Is the sleep timer, no signal off or no operation off set? (See page 34 and 35.) 	
No picture.	 Is the connection to external equipment correct? (See pages 17 and 18.) Is the correct input selected? (See page 58.) Is the picture adjustment correct? (See pages 38 to 40.) Is the antenna connected properly? (See page 16.) Is "On" selected in "Audio only"? (See page 29.) 	
No sound.	Is the volume too low? (See page 24.)Make sure that headphones are not connected. (See page 14.)	
The TV sometimes makes a cracking noise.	 This is not a malfunction. This happens when the cabinet slightly expands and contracts according to changes in temperature. This does not affect the TV's performance. 	
Cannot select the desired channel.	Switch between Digital TV and Analogue TV modes. (See page 44.)	
Cannot connect to the Network	 Is the LAN cable connected correct (See page 71.) Check the "LAN setting". 	

Troubleshooting - Digital broadcasting

Problem	Error code	Possible solution	
No picture or no sound.	Is the correct Input source selected? (See page 58.)		
 Block noise appears on the screen. 	 Is the antenna pointing in the correct direction? Check the "Signal strength" and "Quality". (See page 21.) Are physical objects blocking the antenna? Is the antenna or antenna cable compatible with D-TV broadcas 		
D-TV broadcasts cannot be received.	E202	 Is the D-TV antenna set up properly? Is the antenna cable connected properly? (See page 16.) Is the channel settings correct? (See page 25.) 	
A specific channel cannot be received.	—	Check the "Signal strength" and "Quality". (See page 21.)	
No broadcast now	E203	Check the current broadcast.	

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: -20°C to +60°C.

Troubleshooting - 3D images

Problem	Possible solution
3D images are not displayed.	 Is "3D auto change" set to "Off"? Press 3D to switch to 3D mode. If "3D auto change" is set to "Mode1" or "Mode2" but no 3D images are displayed, check the display format of the content being viewed. Some 3D image signals may not be recognised as 3D images automatically. Press 3D to select the appropriate display format for the 3D glasses turned on? Are the 3D glasses set to 2D mode? Is there an obstacle between the 3D glasses operate by receiving a signal from the TV. Do not place anything between the 3D infrared emitter on the TV and the infrared receiver on the 3D glasses.
 Non-3D images switch to 3D images automatically. 	 Is "3D auto change" set to "Mode2"? If yes, the TV may misjudge non-3D content as 3D content. In this case, go to "Menu" → "Setup" → "Option" → "3D setup" → "3D auto change" and select "Mode1" or "Off".
The 3D glasses turn off automatically.	 Is there an obstacle between the 3D glasses and the TV, or is something covering the infrared receiver on the 3D glasses? The 3D glasses turn off automatically after 10 minutes if no signal is received from the TV. Do not place anything between the 3D infrared emitter on the TV and the infrared receiver on the 3D glasses.
 Pressing the power button on the 3D glasses does not cause the LED light to light. 	 Is the battery in the 3D glasses exhausted? If the LED light does not light after turning on the power, the battery is exhausted. Recharge the battery.

3D glasses lenses

- Do not apply pressure to the lenses of the 3D glasses. Also, do not drop or bend the 3D glasses.
- Do not scratch the surface of the lenses of the 3D glasses with a pointed instrument or other object. Doing so may damage the 3D glasses and reduce the quality of 3D images.
- Use only the cloth provided with the 3D glasses to clean the lenses.

3D glasses infrared receiver

- Do not allow the infrared receiver to become dirty, and do not attach stickers to or otherwise cover the infrared receiver. Doing so may prevent the receiver from operating normally.
- If the 3D glasses are affected by other infrared data communication equipment, 3D images may not be displayed correctly.

Caution during viewing

- Do not use devices that emit strong electromagnetic waves (such as cellular phones or wireless transceivers) near the 3D glasses. Doing so may cause the 3D glasses to malfunction.
- The 3D glasses cannot operate fully at extreme high or low temperatures. Use them within the specified usage temperature range.
 If the 3D glasses are used in a room with fluorescent lighting (50/60 Hz), the light within the room may appear to flicker. In this case, either darken or turn off the fluorescent lights when using the 3D glasses.
- Wear the 3D glasses correctly. 3D images will not be correctly visible if the 3D glasses are worn upside down or back-to-front.
- Other displays (such as computer screens, digital clocks, and calculators) may appear dark and difficult to view while wearing the 3D glasses. Do not wear the 3D glasses when watching anything other than 3D images.
- If you lie on your side while watching the TV with 3D glasses, the picture may look dark or may not be visible.
- Be sure to stay within the viewing angle and optimum TV viewing distance when watching 3D images. Otherwise, you may not be able to enjoy the full 3D effect.
- The 3D glasses may not work properly if there is any other 3D product or electronic device turned on near the glasses or TV. If this occurs, turn off the other 3D product or electronic device or keep the device as far away as possible from the 3D glasses.
- Stop using this product in any of the following situations:
- When images consistently appear doubled while you are wearing the 3D glasses.
- When you have difficultly perceiving the 3D effect.
- If the 3D glasses are faulty or damaged, stop using them immediately. Continued use of the 3D glasses may cause eye
 fatigue, headaches and illness.
- If you have any abnormal skin reaction, stop using the 3D glasses. In very rare instances, such reactions may be due to an allergic reaction to the coating or materials used.
- If your nose or temples become red or you experience any pain or itchiness, stop using the 3D glasses. Pressure caused by long periods of use may lead to such reactions and may result in skin irritation.
- You may not be able to use several menu items while you are watching the TV in 3D mode.
- You cannot use the 3D function in radio or data mode.

NOTE

• These 3D glasses are only for use with SHARP LCD TVs supporting 3D.

Reset

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

1	Press MENU and the MENU screen displays.
2	Press \mathbf{V}/\mathbf{A} to select "View setting".
3	Press $\blacktriangle/ \blacksquare$ to select "Reset", and then press ENTER .
4	If you have already set the password, enter it here.
	 "Return to factory pre-settings" displays on the screen.
5	Press \triangleleft b to select "Yes", and then press ENTER .
	 "Now, TV will restart automatically. OK?" displays on the screen.
6	Press ◄/ ► to select "Yes", and then press ENTER .
	 "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.
	After factory presetting, TV will restart automatically
	Now initialising
7	Press \blacktriangle/∇ to select the desired language listed on the screen, and then press ENTER .
	Press ◄ / ▶ to select "HOME" or "STORE", and then press ENTER .
8	Press ◄/▶ to select "Digital Search" or "Analogue Search", and then press ENTER .
9	The TV searches for, sorts and stores all the receivable TV stations according to their
	settings and the connected antenna.
	RETURN.

NOTE

- When the TV is in "STORE" mode, repeat steps 1 to 7 to change to "HOME" mode.
- "Reset" is greyed out in 3D mode. To select the "Reset" menu, you need to switch to 2D mode.

Download setup

The TV automatically determines whether a new software version is available when the TV is in standby mode. Go to "Menu" \rightarrow "Setup" \rightarrow "View setting" \rightarrow "Individual setting" \rightarrow "Standby search" \rightarrow "Download setup".

Selected item	Description	
Yes	Automatically searches for new software updates available when the TV is in standby mode.	
No	Does not search for update information.	
Now	Checks if there is new software immediately.	

Downloading the software

You can select the method of update.

1 If the software is updated, the confirmation message "New download information has been detected." appears.

• If the TV receives the update service while in standby mode, a confirmation message displays after turning on the power.

2 Follow the screen prompts.

Selected item	Description	
Yes	 Starts downloading immediately. Typically, it takes approximately 30 minutes for download. You cannot carry out other operations while downloading. Cancels the download by pressing ENTER on the remote control unit when "Discontinue" is displayed on the screen during the update. 	
Νο	Starts downloading automatically several minutes after entering standby mode.	

NOTE

Updating the software may take several hours in the worst case.

 The TV must remain in standby mode for download. Do not turn off the power using **POWER** on the TV.

Information

Message list

When a new broadcast station is detected, the message is updated in the "Message list" of the "Information" menu.

S NOTE

 If there are unread messages in the "Message list", "New information" is displayed on "Channel display". (See page 24.)

Receiver report

Display reports regarding failures and changes for timer settings.

Identification

You can check the current version of the software on the screen.

1

Updating your TV via USB/Network

This function allows you to transform to the latest software via a USB device or network.

- Go to "Menu" \rightarrow "Setup" \rightarrow "Information" \rightarrow "Software update" \rightarrow "USB update".
 - Also can transform to the latest software via network. Go to "Menu" → "Setup" → "Information" → "Software update"→ "Network update", and follow the on-screen instructions.
 - A broadband connection and network setup are required to update the software using the internet. (see page 71)
- 2 Insert the USB device containing the system data file and then press **ENTER**.



• Be sure to insert the USB device correctly into the terminal.



The TV displays a confirmation screen while checking the data in the inserted USB device.

- If the software is not compatible with the system, an error message appears on the screen. Repeat step 2 and step 3 after pressing **ENTER**.
- When an error message displays, check to see if:
 - The USB device is inserted firmly.
 - The USB memory has two or more software files.
 - No software for updating the system exists in the USB memory.
 - The software file is broken.
 - The software file is not compatible with your TV's software.
 - The current software is same as the updated software.The USB device is not formated by FAT32 or FAT.





- Press $\triangleleft/\triangleright$ to select "Yes" to update the system, and then press **ENTER**.
- The TV restarts automatically, and the software updating will be completed.
- This operation may take a while.

 Version up may take several time according to network speed. Please do not turn off TV or execute other operations during version up.

Information on the software license for this product

Go to "Menu" → "Setup" → "Information" → "Software licence".You can read the software licences in this menu.

Specifications

Item			Model	LC-52LX640H	LC-60LX640H	
Resolution	Resolution			2,073,600 pixels (1920 (H) × 1080 (V))	•	
Video colo	ur system			PAL/SECAM/NTSC 3.58/PAL 60		
TV function		TV-Standard		PAL: B/G, D/K, I SECAM: B/G, D/K, K/K1 NTSC: M		
		Receiving	Digital	DMB-T/H		
			VHF/UHF	44.25-863.25 MHz		
			CATV	S1-S41ch (including Hyperband)		
		Digital terrestrial broadcast		470MHz-862MHz		
		STEREO/BILINGUAL		NICAM: B/G, I, D/K A2 stereo: B/G		
TV tuning s	system	Analogue		Auto preset 99 channel		
		Digital		Auto preset 999 channel		
Audio amp	Audio amplifier			10W x 2		
Speaker			(150 mm x 34 mm) x 2			
Terminals	Side	AUDIO OUTPUT/Headphones		Ø 3.5 mm jack		
		USB 1		USB 2.0		
		USB 2 (HDD)		USB 2.0		
		HDMI 1 (ARC)		HDMI (HDMI input) (480I, 576I, 480P, 576P, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz, 1080P/50Hz, 1080P/60Hz, 1080P/24Hz)		
		HDMI 2		HDMI (HDMI input) (480I, 576I, 480P, 576P, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz, 1080P/50Hz, 1080P/60Hz, 1080P/24Hz), AUDIO in (shared usage with PC) (Ø 3.5 mm jack)		
	Rear	HDMI 3		HDMI (HDMI input) (480I, 576I, 480P, 576P, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz, 1080P/50Hz, 1080P/60Hz, 1080P/24Hz)		
		INPUT4		COMPONENT in (480I, 576I, 480P, 576P, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz), AUDIO in		
		INPUT5		VIDEO in, AUDIO in		
		PC		15 pin mini D-sub, AUDIO in (shared usage with HDMI2) (Ø 3.5 mm jack)		
		RS-232C		9 pin D-Sub male connector		
		LAN (ETHERNET (10/100))		Network connector		
		AUDIO in		HDMI/PC AUDIO INPUT (Ø 3.5 mm jack)		
	Underside	Analogue antenna		UHF/VHF 75 Ω Din type		
		Digital antenna		UHF/VHF 75 Ω Din type		
OSD langu	OSD language			English/Simplified Chinese/Traditional Chinese		
Power requirement			AC 110–240 V, 50 Hz			
Power consumption (Standby)			130W (0.50W)	180W (0.5W)		
Weight		Without stand	ł	22.0kg	25.0kg	
		With stand		24.5kg	27.5kg	
Operating temperature			0 °C to +40 °C			
As a part of policy of continuous improvement. SHARP res			provement, SHAR	reserves the right to make design and specification changes for product improvement without prior notice		

^{*1} The HDMI 2 and PC terminals share the same audio input terminal.

Dimensional drawings

LC-52LX640H

Unit: mm



LC-60LX640H







NOTE

• As a precautionary measure, make a note of your password above, remove it from this manual, and keep it in a familiar place.