

TOSHIBA
Leading Innovation >>>

OWNER'S MANUAL

LED LCD TV

HDMI[®]
HIGH-DEFINITION MULTIMEDIA INTERFACE

DOLBY
DIGITAL

DIVX+
HD

MHL
Mobile High-Definition Link

40TL20 Series 46TL20 Series

Owner's Record

You will find the model number and serial number on the back of the TV. Record these numbers in the spaces provided below. Refer to them whenever you call upon your TOSHIBA dealer regarding this product.

Model number:

Serial number:

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Welcome to Toshiba

- Thank you for purchasing this Toshiba LED LCD TV. This manual will help you use the exciting features of your new TV.
- Instructions in this manual are based on using the remote control.
- You also can use the controls on the TV if they have the same name as those referred to on the remote control.
- Please read all safety and operating instructions in this manual carefully, and keep this manual for future reference.

Important Safety Instructions

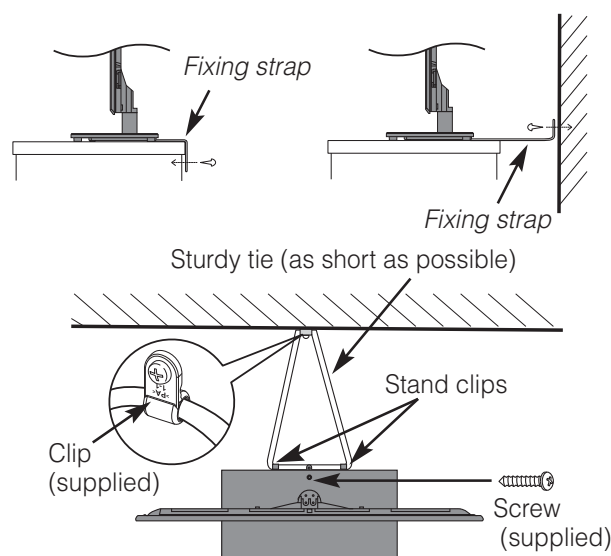
Be sure to observe the following instructions and precautions to ensure safe use of this TV.

Installation

1) WARNING: To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

Install the TV in a horizontal, stable location. Attach the TV to the stand with the mounting screw provided, or secure the TV to the level surface using the strap if fitted, or to a wall using a sturdy tie to the clip provided.

- If the TV is not installed securely, it may lean or fall over and cause an injury.
- To prevent injury, use the exclusive optional stand or wall-hanging bracket to install this TV on the floor or wall securely in accordance with a qualified technician.



2) Never place the TV in an unstabilized location such as on a shaky table, incline or location subject to vibration.

- Only use cabinets or stands recommended by the TV manufacturer.
- Only use furniture that can safely support the TV.
- Ensure that the TV is not hanging over the edge of the supporting furniture.
- Never place the TV on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the TV to a suitable support.
- Never stand the TV on cloth or other material placed between the TV and supporting furniture.

The TV may drop or fall off, which may cause an injury or damage.



3) Never stand or climb on the TV.

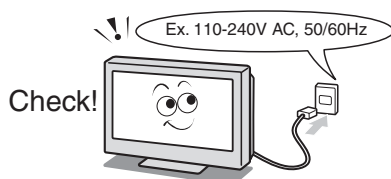
- Educate children about the dangers of climbing on furniture to reach the TV or its controls.

Be especially careful in households with children to prevent them through climbing on top of the TV. It may move, fall over, break, become damaged or cause an injury.



4) Always connect the power plug to an appropriate electrical outlet equipped with 110-240V, AC 50/60Hz.

Never use the TV outside the specified voltage range. It may cause a fire or an electric shock.

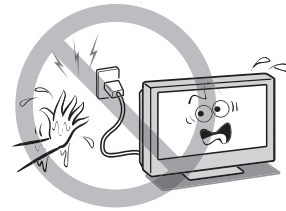


About the fuse (only for E models)

In a three pin earthing-type, the fuse fitted in this plug is approved by ASTA or BSI to BS1362. It should only be replaced by a correctly rated and approved type and the fuse cover must be refitted.

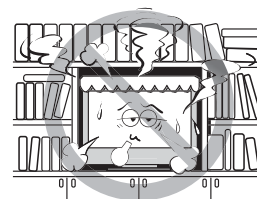
5) Never insert or remove the power plug with wet hands.

This may cause an electric shock.



6) Never block or cover the slots and openings in the cabinet.

- Never place the TV so that it is facing upward or on its side.
- Never place the TV in a closet, bookcase or other similar area where the ventilation is poor.
- Never drape a newspaper, tablecloth or curtain on the TV.
- When installing the TV against a wall, always keep the TV at least 10 cm away from the wall.
- Never place the TV on a soft unstable surface, such as a carpet, or a cushion. The inside of this TV will overheat if the ventilation holes are covered, blocked or sealed, which may result in a fire.



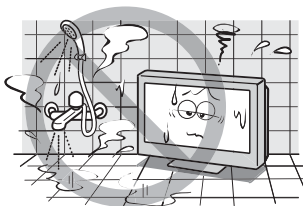
7) Never place the TV near a heater or in direct sunlight.

The surface of the cabinet or power cord may melt and result in a fire or an electric shock.



- 8) **Never place the TV in an area exposed to high humidity levels, such as in a bathroom or close to a humidifier.**

This may cause a fire or an electric shock.



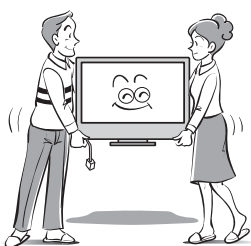
- 9) **Never place the TV next to a stove where it will be exposed to oil, smoke, or steam, or in a location where there is a large quantity of dust.**

This may cause a fire or an electric shock.



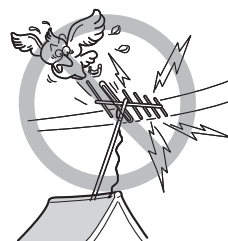
10) **Precautions for moving the TV**

- When moving the TV, be sure to remove the plug from the wall outlet and disconnect the aerial cable and audio/video cables, any steady ties and mounting screw. A fire or an electric shock may result if the power cord is damaged.
- When carrying the TV, at least two people are needed. Be sure to carry it upright.
- Never carry the TV with the screen facing up or down.



11) **Precautions for installing on outdoor aerial**

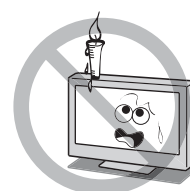
An outside aerial system should not be located in the vicinity of overhead power lines, or other electric light or power circuits. If the aerial falls down or drops, it may cause an injury or an electric shock.



Use

- 1) **Never place hot objects or open flame sources, such as lighted candles or nightlights, on or close to the TV.**

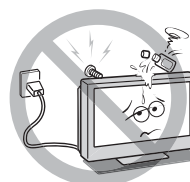
High temperatures can melt plastic and lead to fires.



- 2) **The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.**

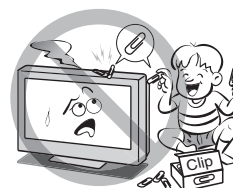
When liquids are spilled or small items are dropped inside the TV, this may cause a fire or an electric shock.

If small objects drop inside the TV, turn off the TV and remove the power plug from the outlet immediately and contact a service technician.



- 3) **Never insert objects (metal or paper) or pour water inside the TV through ventilation holes and other openings.**

These items may cause a fire or an electric shock. If these objects are inserted inside the TV, turn off the TV and remove the power plug from the outlet immediately and contact a service technician. Be especially careful that children do not insert objects in the TV.



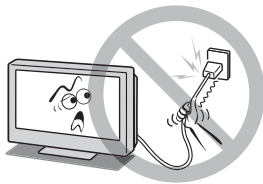
4) When the TV will not be used for a long period of time, such as during vacation or travel, remove the power plug from the wall outlet for safety.

- The TV is not completely disconnected from the power supply line, as minute current is consumed even when the ⏻ Power switch is turned off.
- The Mains plug or an appliance coupler is used as the disconnect device, therefore the disconnect device shall remain readily operable.



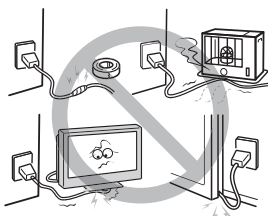
5) Never pull on the power cord when removing the plug from the wall outlet.

Always hold the plug firmly when removing it. If the power cord is yanked, the cord may become damaged and a fire or an electric shock may occur.



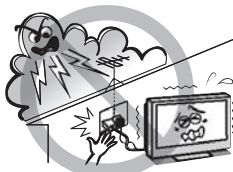
6) Never cut, break, modify, twist, bunch up or bent the cord or apply excessive force or tension to it.

Never place heavy objects on the cord or allow it to overheat as this may cause damage, a fire or an electric shock. Contact a service technician if the power cord is damaged.



7) If there is thunder or lightning, never touch the aerial cable or other connected cables.

You may suffer an electric shock.



Service

1) Never repair, modify or disassemble the TV by yourself.

It may cause a fire or an electric shock.

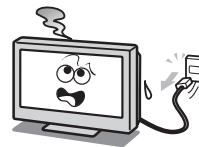
Consult a service technician for inspection and repairs.



2) When a malfunction occurs, or if smoke or an unusual odor comes from the TV, turn off the TV and remove the power plug from the outlet immediately.

Make sure that the smoke or smell has stopped, then contact a service technician.

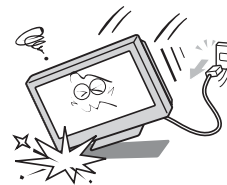
If the TV is still used in this condition, it may cause a fire or an electric shock.



3) If the TV is dropped or the cabinet is broken, turn off the TV and remove the power plug from the outlet immediately.

If the TV has power in this condition, it may cause a fire or an electric shock. If the cabinet is broken, be careful when handling the TV to prevent an injury.

Contact a service technician for inspection and repair.



4) When the TV reaches the end of its useful life, ask a qualified service technician to properly dispose of the TV.



Cleaning

CAUTION: Avoid using chemicals (such as air refreshers, cleaning agents, etc.) on or near the TV pedestal. Studies indicate that plastics may weaken and crack over time from the combination effects of chemical agents and mechanical stress (such as weight of TV). Failure to follow these instructions could result in serious injury and/or permanent damage to TV and TV pedestal.

1) Remove the power plug before cleaning.

Never use solvents such as benzene or thinner to clean the TV.

- These solvents may distort the cabinet or damage its finish.
- If rubber or vinyl products remain in contact with the TV for a long time, a stain may result.

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

When cleaning the surface of the LCD display, wipe the panel surface gently with a soft, dry cloth.



2) Periodically disconnect the power plug from the outlet and check it.

If dust has collected on the power plug connectors, clean off the dust with a dry cloth.

This dust may cause a fire due to reduced insulation on the plug.



Important information

1) About LCD screen

- If you have the LCD screen facing to the sun, the LCD screen will be damaged. Be aware of locating the TV close to a window or outdoors.
- Never press the LCD screen strongly or scratch it, and never put anything on it. These actions will damage the LCD screen.

2) About cabinet and LCD screen

Never spray volatile compounds such as insecticide on the cabinet and LCD screen. This may cause a discolouration or damage the cabinet and LCD screen.

3) About afterimage

If a still picture is displayed, an afterimage may remain on the screen, however it will disappear. This is not a sign of malfunction.

4) Some pixels of the screen do not light up

The LCD display panel is manufactured using an extremely high level of precision technology, however sometimes some pixels of the screen may be missing picture elements or have luminous spots. This is not sign of malfunction.

5) About Interference

The LCD display may cause interference in image, sound, etc. of other electronic equipment that receives electromagnetic waves (e.g. AM radios and video equipment).

6) About using under the low temperature places

If you use the TV in the room of 0°C or less, the picture brightness may vary until the LCD monitor warms up. This is not a sign of malfunction.

Exemptions

- Toshiba is not liable for any damage caused by fires, natural disaster (such as thunder, earthquake, etc.), acts by third parties, accidents, owner's misuse, or uses in other improper conditions.
- Toshiba is not liable for incidental damages (such as profit loss or interruption in business, modification or erasure of record data, etc.) caused by use or inability to use of product.
- Toshiba is not liable for any damage caused by neglect of the instructions described in the owner's manual.
- Toshiba is not liable for any damage caused by misuse or malfunction through simultaneous use of this product and the connected equipment.

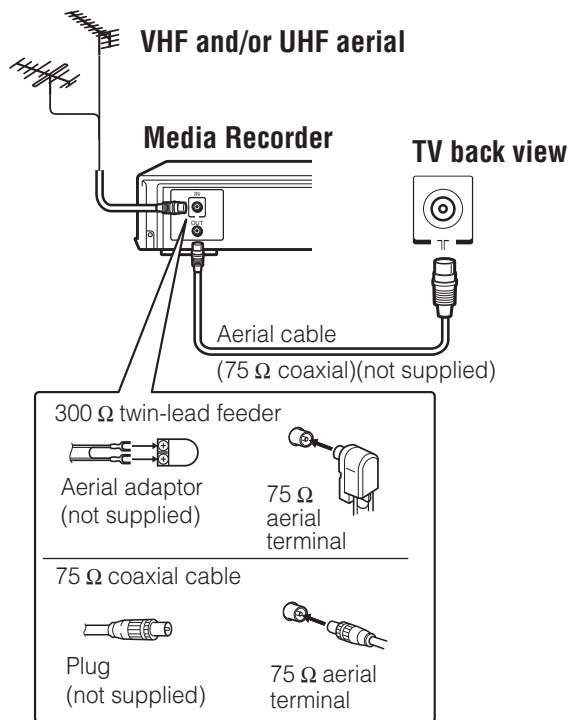
Connecting an aerial

Optimum reception of colour requires a good signal and will generally mean that an outdoor aerial must be used.

The exact type and positioning of the aerial will depend upon your particular area.

Your Toshiba dealer or service personnel can best advise you on which aerial to use in your area.

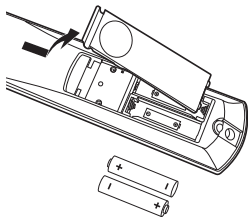
Before connecting the aerial cable, turn off all main power switches.



Exploring your new TV

Installing the remote control batteries

Remove the battery cover. Insert two R6 (AA) batteries matching the -/+ polarities of the battery to the -/+ marks inside the battery compartment.



Cautions:

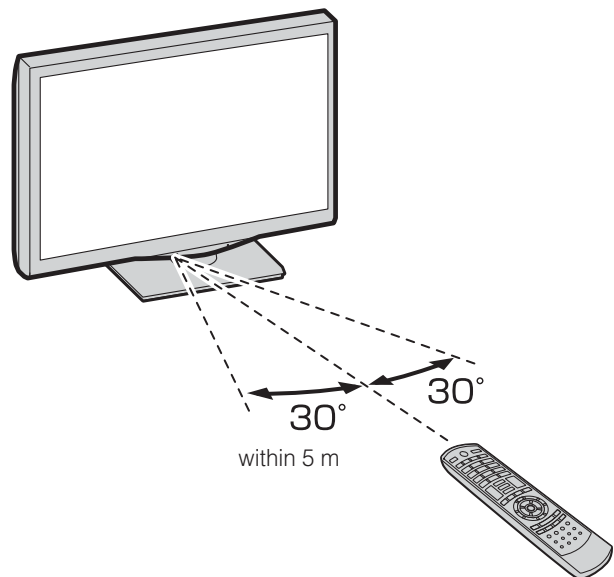
- Dispose of batteries in a designated disposal area. Batteries must not be exposed to excessive heat such as sunshine, fire or the like.

- Attention should be drawn to the environmental aspects of battery disposal.
- Never mix battery types or combine used batteries with new ones.

Notes:

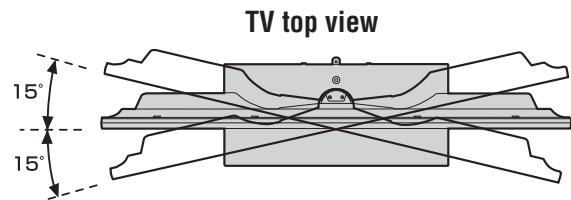
- If the remote control does not operate correctly, or if the operating range becomes reduced, replace both batteries with new ones.
- If the batteries are dead or if you will not use the remote control for a long time, remove the batteries to prevent battery acid from leaking into the battery compartment.

Effective range



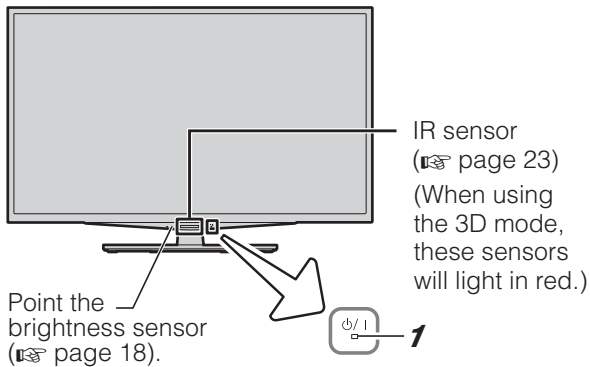
TV panel controls

- You can operate your TV using the buttons on the side panel or the remote control. The back of the panel provide the terminal connections to connect other equipment to your TV (→ "Connecting your TV" pages 30 – 42).
- For the use of each control, see the pages in brackets.



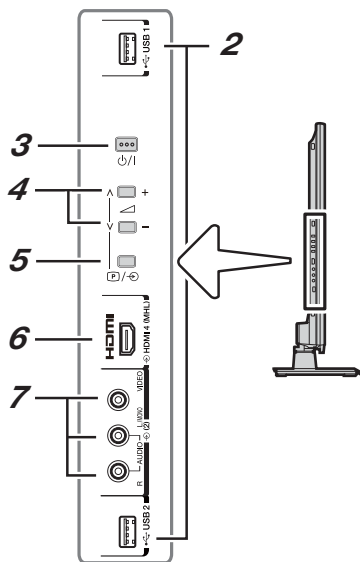
You can swivel the TV screen.
Swivel angle: 15 degrees to left and right.

TV front view



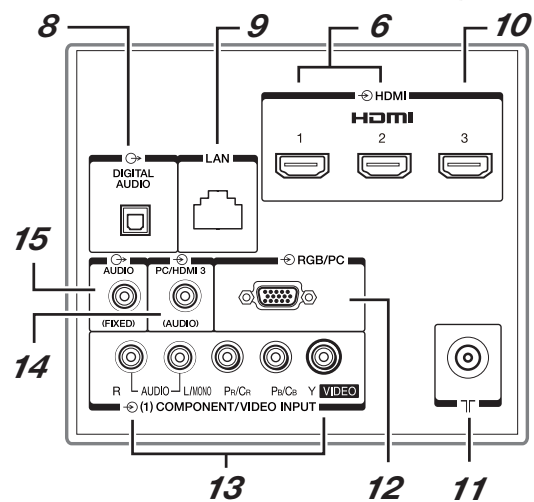
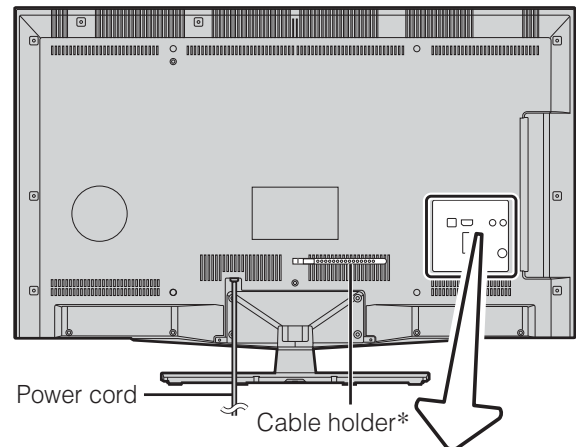
- 1 **⏻/⏻ (power LED)** — Power indicator (page 10).

Left side view



- 2 **USB 1-2 (input terminals)** — Insert your USB storage device (photo, movie, music) (page 36).
- 3 **⏻/⏻ (power on/standby)** — Press to turn the TV on/ standby (page 10).
- 4 **◀ - + (volume)** — These buttons adjust the volume level.
^ v (mode up/down) — These buttons select programme position or input source.
- 5 **⏻/⏻ (programme position or input source)** — This button switches to the programme position or the input source selection.
- 6 **⏻ HDMI1, 2, 4 (input terminals)** — High-Definition Multimedia Interface input receives digital audio and uncompressed digital video from an HDMI device (page 32).
- 7 **⏻ (2) (Video 2 input terminals)** — Standard (composite) video and standard (analogue) stereo audio inputs (page 31).

TV back view



Cable holder *

* You can use the cable holder to hold the aerial cable, video and audio cables etc.

Never grasp the holder when moving the TV.

- 8 **⏻ DIGITAL AUDIO (OPTICAL) (output terminal)** — For use when connecting an amplifier with optical type digital audio input (page 31).
- 9 **LAN port** — For use when connecting to DLNA CERTIFIED™ products (page 35).
- 10 **⏻ HDMI3 (input terminal)** — High-Definition Multimedia Interface input receives digital audio and uncompressed digital video from an HDMI device or uncompressed digital video from a DVI device (pages 32, 33).
- 11 **⏻ (aerial input terminal)** — Analogue aerial signal input (page 7).
- 12 **⏻ RGB/PC (input terminal)** — For use when connecting a personal computer (PC) (page 33).

Turning the TV on

Switching on the TV

Connect the power cord to a wall outlet, the O/I power indicator lights in red (standby mode).

- 1 Press O/I on the remote control or O/I on the TV left side panel, the O/I power indicator lights in green.

Note:

If you watch black and white programmes when the **Colour System** mode is set to Auto, colour noise may appear on the screen. In this case select the appropriate **Colour System** (For the system of each country or region, refer to pages 13, 49).

Switching off the TV

- 1 Press O/I on the remote control or the Touch Keys on the TV left side panel to switch to the standby mode.

Notes:

- When the TV will not be used for a long period of time, such as during vacation or travel, remove the power plug from the wall outlet.
- If power is cut off while you are viewing the TV, the Last Mode Memory function turns on the TV automatically when power is applied again. If power is going to be off for a long time and you are going to be away from your TV, unplug the power cord to prevent the TV from turning on in your absence.

Tuning the TV for the first time

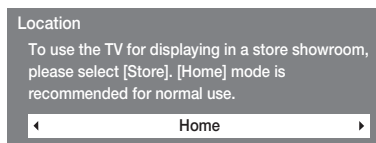
Before switching on the TV, put your decoder and media recorder to standby, if they are connected, and ensure that the aerial is connected. To setup the TV, use the buttons on the remote control as detailed on page 9.

- 1 Press O/I . The **Menu Language** screen will appear. This screen will appear the first time that the TV is switched on.

Menu Language		
English	中文	Melayu
ไทย	Tiếng Việt	Русский
عربي	فارسی	Français

- 2 Press ∇ , \triangle , \triangleleft or \triangleright to select the **Menu Language** (English, Chinese (CS), Malay, Thai, Vietnamese, Russian, Arabic, Persian or French).

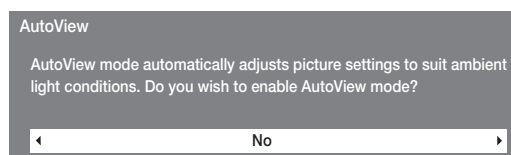
- 3 Press OK , to display the **Location** menu (page 14). Press \triangleleft or \triangleright to select **Store** or **Home**. For normal home use, select **Home**.



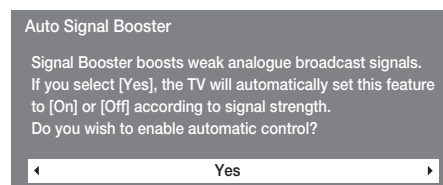
Store mode:

- A confirmation menu will appear.
- **AutoView** menu is not available.

- 4 Press OK to display the **AutoView** menu (page 16). Press \triangleleft or \triangleright to select **Yes** or **No**.



- 5 Press OK to display the **Auto Signal Booster** menu (pages 13), and then press \triangleleft or \triangleright to select **Yes** or **No**.



Yes mode :

This function performs automatic distinction of On or Off.

- 6 Press OK to display the **Auto Tuning** startup screen. Press OK to start the automatic search.



- 7 When the automatic search is completed, the TV will automatically return to 1 position and appear the position list on the screen.

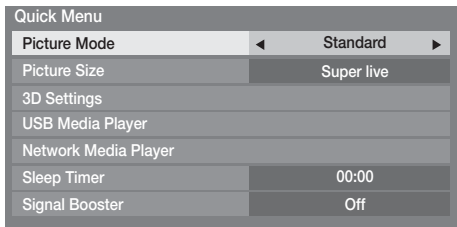
Note:

The **Quick Setup** menu can also be display at any time from the **SETUP** menu.

Using the Quick Menu

Quick Menu helps you access some options quickly, such as **Picture Mode**, **Picture Size**, **Media Player** etc.

Press **QUICK** to display the **Quick Menu** and use ∇ or \triangle to select the option.



Note:

Quick Menu items are different depending on the current mode.

Quick menu item	Description
Picture Mode	page 16.
Picture Size	page 15.
3D Settings	page 24–27.
USB Media Player	page 36.
Network Media Player	page 37.
Sleep Timer	page 20.
Signal Booster	page 13.
Interval Time	page 38.
Repeat (Photo)	page 38.
PICTURE	page 17.
SOUND	page 18.
Background Music	page 38.
Play List (Photo)	page 38.
Repeat (Movie)	page 39.
Play List (Movie)	page 39.
Repeat (Music)	page 41.
Play List (Music)	page 41.

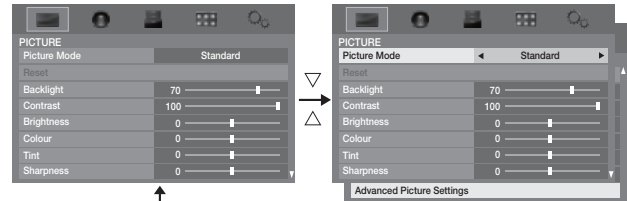
Learning about the menu system

We suggest you familiarize yourself with the display charts before using the menu system:

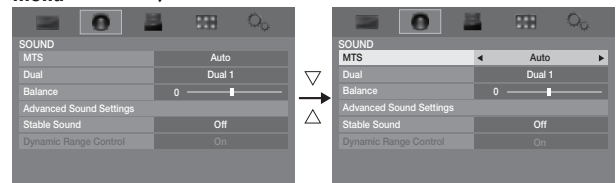
- Press **MENU** to display menu, then press \triangleleft or \triangleright to select main menu headings.
- Press ∇ or \triangle to select an item.
- Press \triangleleft or \triangleright to select or adjust setting.
- Press **(OK)** to display the next menu.

Displaying the menu chart

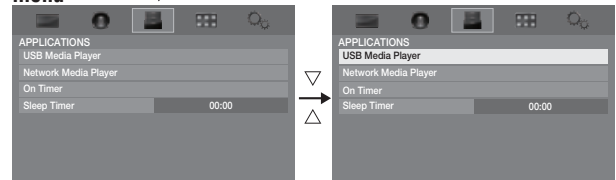
PICTURE menu



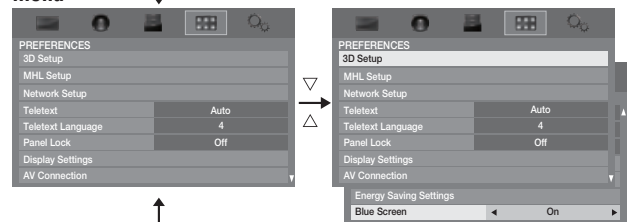
SOUND menu



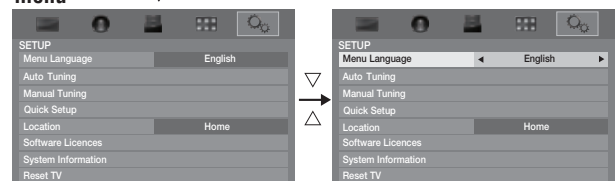
APPLICATIONS menu



PREFERENCES menu



SETUP menu



Notes:

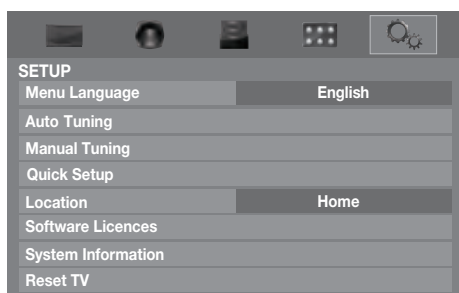
- In the video input mode (DVI , DVI2 and HDMI), **Auto Tuning**, **Manual Tuning** and **Quick Setup** are not available.
- If you do not make a selection for a while, the menu display disappears automatically.
- If you want to close the menu display instantly, press **EXIT** or **MENU**.
- To return to the previous menu, press **BACK**.
- In the PC input mode, **PC Settings** is available in the **Display Settings** menu (page 34).
- When you use the colour management function (page 17), you can select the **Base Colour Adjustment** in the **Advanced Picture Settings** menu.

Watching TV programmes

Selecting the menu language

Choose from 9 different languages (English, Chinese (CS), Malay, Thai, Vietnamese, Russian, Arabic, Persian or French) for the on-screen display.

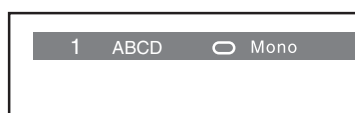
- 1 Press **MENU**, then press ◀ or ▶ to display **SETUP** menu.



- 2 Press ▼ or ▲ to select **Menu Language**.
- 3 Press ◀ or ▶ to select the desired language.

Changing the position

- 1 Enter the desired position number using the **Number** buttons on the remote control. For positions below 10, use 0 and the required number e.g., for position 1.



- 2 You can also change the position by using **P▲** or **P▼**. The position will be displayed on the screen with the Mono/Stereo/Dual audio status.

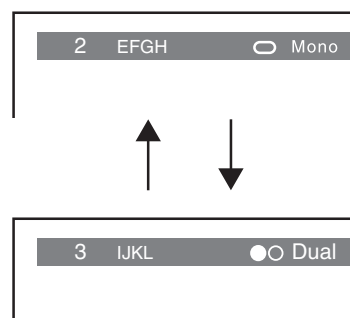
Note:

Changing positions between different format channels takes several seconds.

Switching between two positions

You can switch two positions without entering actual position number each time.

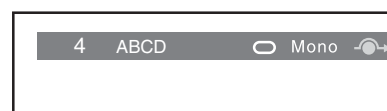
- 1 Select the first position you want to view.
- 2 Select the second position with the **Number** buttons (0-9).
- 3 Press **↔**. The previous channel will be displayed.



Each time you press **↔**, the TV will switch back and forth between the two positions.

Displaying the on-screen information

- 1 Press **ⓘ** to display the following on-screen information.



The information will disappear in 5 seconds.

- Position or external input mode selected
- Position skip on/off information
- Label (if set)
- Mono/Stereo/Dual audio status

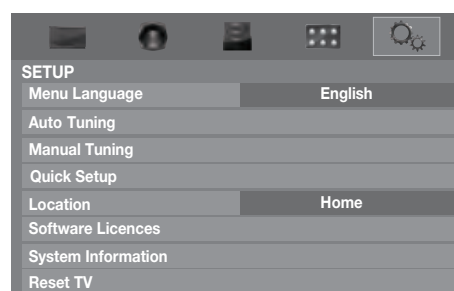
- 2 To erase the display instantly, press **ⓘ** again.

Programming channels into the TV's channel memory

- First, use the Auto Tuning function to preset all the active channels in your area automatically. Then, arrange the preset channels with the Manual Tuning function so that you can tune into only desired channels.
- Use the Manual Tuning operation if desired channels cannot be preset with the Auto Tuning or if you would like to preset channels to specific position numbers one by one.

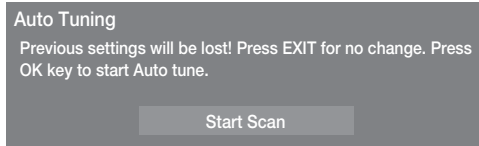
Auto Tuning

- 1 From the **SETUP** menu, press ▼ or ▲ to select **Auto Tuning**.



2 Press **OK** to display the **Auto Signal Booster** menu (page 10), press **◀** or **▶** to select **Yes** or **No**.

3 Press **OK** to display the **Auto Tuning** menu.



4 Press **OK** to start the automatic search. The search will begin for all available stations.



5 When the automatic search is completed, the TV will automatically return to 1 position.

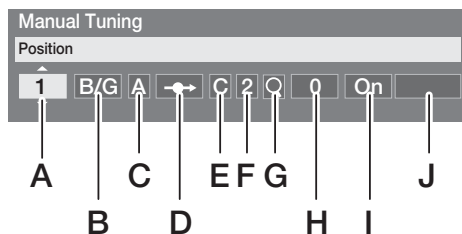
Manual Tuning

1 From the **SETUP** menu, press **▽** or **△** to select **Manual Tuning**.

2 Press **OK** to display the **Manual Tuning** menu. Press **▽** or **△** to select the programme position you want to arrange.

Pos.	Channel	Label
1	C-02	
2	C-04	
3	C-05	
4	C-07	
5	C-09	
6	C-12	
7	S-17	
8	S-19	

3 Press **OK** to display the breakdown menu. Press **◀** or **▶** to select an item, then press **▽** or **△** to select the item as shown below.



A. Position selection

B. System (Sound) (page 49)

C. Colour System (page 49)

A : Automatic (factory set), **P** : PAL,
S : SECAM, **N4** : NTSC 4.43 (MHz),
N3 : NTSC 3.58 (MHz)

If the colour of a certain channel is abnormal, the automatic colour system selection (A) may have malfunctioned, or sound system selection is wrong. In such a case, select another colour and/or sound system (page 49).

D. Position skip selection

Press **▽** or **△** to turn the position skip option on “**↔**” or off “**→**”.

The position will then be skipped when you select channels with **P^** or **Pv**.

The “**↔**” mark will appear when you use the **Number** button on the remote control.

E. Signal Class selection

 (page 47)

Press **▽** or **△** to select C or S.

C: 1 ch - 12 ch, 21 ch - 70 ch

S: 1 ch - 41 ch, 51 ch - 55 ch

F. Channel selection

Press **▽** or **△** until your desired channel is displayed (page 47).

G Search operation

Press **△** to search up the band or **▽** to search down the band.

Press **▽** or **△** repeatedly until your desired signal is displayed.

NEVER PRESS ANY OTHER BUTTONS WHILE THE SET IS TUNING.

H Manual Fine Tuning

Press **▽** or **△** until better picture and sound are obtained.

I. Signal Booster

If the receiving signal is weak/strong and the picture is noisy, the picture may be improved when using this function.

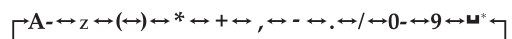
Press the **▽** or **△** to turn the **Signal Booster On** or **Off**.

J. Label

Station labels appear under the programme position display each time you turn on the TV, select a channel, or press **[It]**.

To change or create station labels:

1) Press **▽** or **△** repeatedly to select a character for the first space, then press **◀** or **▶**.



*(blank space)

2) Repeat step 1) to enter the rest of the characters. If you would like a blank space in the label name, you must choose a blank space from the list of characters.

Press **OK** to store your settings.

Sorting positions

TV channels may be moved and stored to the position of your choice.

- 1 From the **SETUP** menu, press ∇ or \triangle to select **Manual Tuning**.
- 2 With the list of channels now showing, press ∇ or \triangle to select the channel you want to move and press \triangleright .

Manual Tuning		
Pos.	Channel	Label
1	C-02	ABCD
2	C-04	EFGH
3	C-05	IJKL
4	C-07	MNOP
5	C-09	
6	C-12	
7	S-17	
8	S-19	

- 3 Use ∇ or \triangle to move through the list to your preferred position. As you do so, the other channels will move to make room.
- 4 Press \triangleleft to store your move. Repeat as necessary, and then press **EXIT**.

Setting the Location

You can select either **Home** or **Store** mode.

Home is recommended for normal home use. Select **Store** when using a TV for displaying in a shop, etc.




- 1 From the **SETUP** menu, press ∇ or \triangle to select **Location**.
- 2 Press \triangleleft or \triangleright to select **Home** or **Store**.

Using the TV's features

Picture adjustment

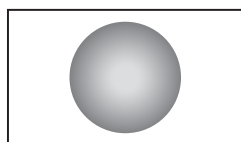
- Most of the picture controls and functions are available. However, features not available will be greyed out.

Selecting the Picture Size

- 1 Press  until the picture size list appears on the screen, then press ∇ or \triangle to select the appropriate picture size (or press  repeatedly to select the desired picture size directly).
- 2 Press .

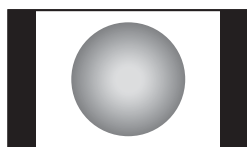
Wide

Use this setting when watching a wide-screen DVD, widescreen video tape or a 16:9 broadcast (when available). Due to the range of wide-screen formats (16:9, 14:9, 20:9 etc.), you may see bars on the top and bottom of the screen.



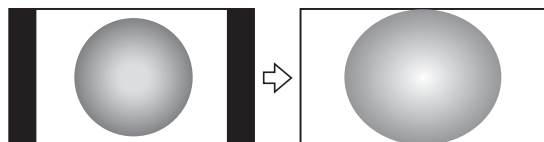
4:3

Use this setting to view a true 4:3 broadcast.



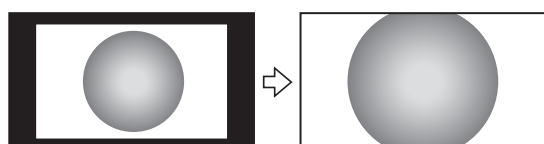
Super Live

This setting will enlarge a 4:3 image to fit the screen by stretching the image horizontally and vertically, holding better proportions at the centre of the image. Some distortion may occur.



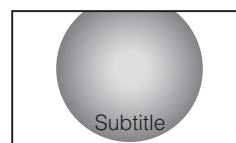
Cinema

When watching "all sides panel format" films/video tapes, this setting will eliminate or reduce the black bars on all the sides of the screen by zooming in and selecting the image without distortion.



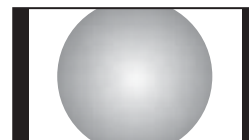
Subtitle

When subtitles are included on a letterbox format broadcast, this setting will raise the picture so that the most of text is displayed.



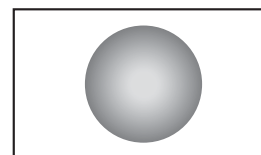
14:9

Use this setting when watching a 14:9 broadcast.



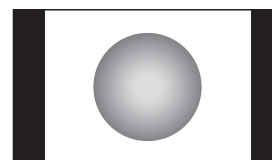
Native

This setting will display the image correctly without distortion or picture clipping.



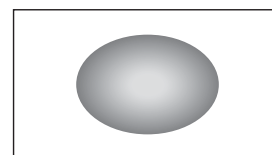
PC Normal

Use this setting for PC connected via HDMI or RGB/PC terminal when receiving PC signal format. This setting will display the image correctly without distortion or picture clipping.



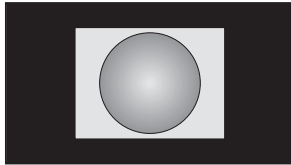
PC Wide

Use this setting for PC connected via HDMI or RGB/PC terminal when receiving PC signal format. This setting will display the image without picture clipping.



Dot by Dot



"Dot by Dot" is a non-scaling display. Depending on the input signal format, the picture is displayed with side panels and/or bars at the top and bottom (i.e. VGA input source).

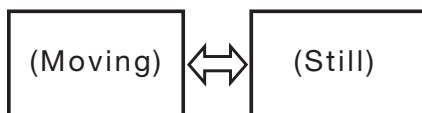


Notes:

- Using the special functions to change the size of the displayed image (e.g. changing the height/width ratio) for the purpose of public display or commercial gain may infringe on copyright laws.
- If the aspect ratio of the selected format is different from the one of the TV transmission or video programme, it can cause a difference in vision. Change to the correct aspect ratio picture size.
- When using the PC connected via HDMI or RGB/PC terminal, the moving image quality may be deteriorated.

Using the picture still

- Press  to freeze the picture. Even if an image is frozen on the TV screen, the pictures are running on the input source. Audio continues to be output as well. To return to a moving picture, press  again.



Note:




If you use this function except for the purpose of your private viewing and listening, it may infringe the copyright protected by the copyright laws.

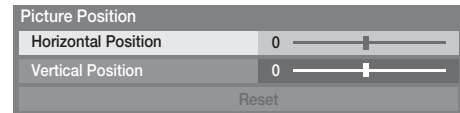
Adjusting the Picture Position


Adjustment to the position of the picture may be made to suit your viewing preferences.

- 1 From the **Display Settings** in the **PREFERENCES** menu, press  or  to select **Picture Position**.



- 2 Press , then press  or  to select the item you want to adjust.



- 3 Press  or  to adjust the settings as desired.






Notes:


- When the picture size is in **Wide** or **4:3** mode, only the Horizontal position can be adjusted.
- When the picture size is in **Native**, **PC Wide**, **PC Normal** and **Dot by Dot** mode, none of this function will be available.

Resetting the Picture Position

This function resets your picture position settings to the factory settings.

- 1 From the **Picture Position** menu, press  or  to select **Reset**.
- 2 Press .

Activating the Picture Mode

This TV offers the choice of the personalized picture style. Press  to view the different modes available.

AutoView, **Dynamic**, **Standard**, **Movie 1**, **Movie 2**, **Store**, **Game** and **PC** are preset options and affect many features/settings within the TV.

Notes:







- **Store** mode is only available when Location is set to **Store**.
- **Game** mode is available in external input mode (other than aerial input). When you select **Game** mode, suitable widescreen formats will be selected.
- **PC** mode is available in RGB/PC input mode or HDMI input mode.
- The **Picture Mode** you select affects the current input only. You can select a different **Picture Mode** for each input.

Resetting the Picture Mode

This feature resets all picture settings to the factory settings.

Note:

If no picture settings have been changed, **Reset** is not available.

- 1 From the **PICTURE** menu, press  or  to select **Reset**, and then press .
- 2 A confirmation message will appear. Press  or  to select **Yes**, and then press .

Activating the picture preferences

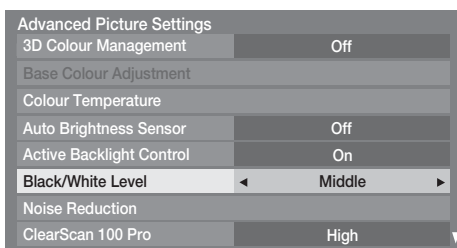
You can customise current **Picture Mode** settings as desired. For example, while selecting "**Dynamic**", if you change the following items, such as **Backlight, Contrast, Brightness, Colour, Tint, Sharpness**, and the **Advanced Picture Settings** items, your new settings are saved for "**Dynamic**" **Picture Mode**.

- 1 From the **PICTURE** menu, press ∇ or \triangle to select either **Backlight, Contrast, Brightness, Colour, Tint** or **Sharpness**.
- 2 Press \triangleleft or \triangleright to adjust the settings as desired.

Setting the Black/White Level

Black/White Level improves the definition of dark areas of the picture.

- 1 From the **PICTURE** menu, press ∇ or \triangle to select **Advanced Picture Settings**.
- 2 Press ∇ or \triangle to select **Black/White Level**.



- 3 Press \triangleleft or \triangleright to select **Middle, High, Off** or **Low**.

Using the ClearScan 100 Pro

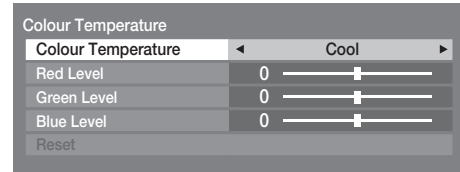
This feature will reduce picture blur without decreasing image brightness or adding flicker.

- 1 From the **Advanced Picture Settings** menu, press ∇ or \triangle to select **ClearScan 100 Pro**.
- 2 Press \triangleleft or \triangleright to select **High, Middle, Standard** or **Off**.

Adjusting the Colour Temperature

Colour Temperature increases the warmth or coolness of the picture by setting the red, green or blue tint.

- 1 From the **Picture Settings** menu, press ∇ or \triangle to select **Colour Temperature**, then press **OK**.
- 2 Press \triangleleft or \triangleright to select **Cool, Natural**, or **Warm** to suit your preference.



- 3 Press ∇ or \triangle to select **Red Level, Green Level** or **Blue Level**, then press \triangleleft or \triangleright to adjust the setting as required.

Resetting the Colour Temperature

This function resets your colour temperature settings to the factory settings.

- 1 From the **Colour Temperature** menu, press ∇ or \triangle to select **Reset**, then press **OK**.

Activating the Noise Reduction (NR)

If the receiving signal of MPEG is a mosquito (grained) noise depending on the compression and conversion, the picture is weak and the picture is blurry, the picture may be improved when using this function.

- 1 From the **Advanced Picture Settings** menu, press ∇ or \triangle to select **Noise Reduction**, and then press **OK**.



- 2 Press ∇ or \triangle to select **Auto NR**, and then press \triangleleft or \triangleright to select **On** or **Off**.

Off mode :

MPEG NR menu and **DNR** menu are available.

- **MPEG NR** mode: **Low, Middle, High** or **Off**
- **DNR** (Digital Noise Reduction) mode: **Low, Middle, High** or **Off**

Adjusting the Colour Management

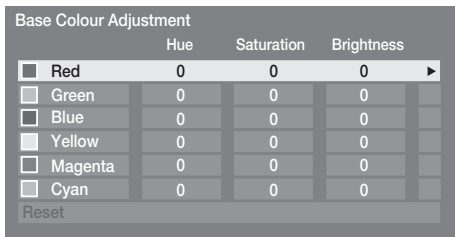
You can adjust the picture colour quality by selecting from 6 base colour adjustments : **Red, Green, Blue, Yellow, Magenta** or **Cyan**.

- 1 From the **Advanced Picture Settings** menu, press ∇ or \triangle to select **3D Colour Management**.
- 2 Press \triangleleft or \triangleright , then press \triangleleft or \triangleright to select **On**.



- 3 Press **OK**, then press ∇ or \triangle to select **Base Colour Adjustment**.

- Press **OK**, then press ∇ or \triangle to select an item you want to adjust.



- Press \triangleright , then press \triangleleft or \triangleright to select **Hue**, **Saturation** or **Brightness**.
- Press ∇ or \triangle to adjust the settings as required.



Note:

If you select colour management **Off** mode, this mode is not available.

Resetting the Base Colour Adjustment

The reset function adjusts the base colour adjustment to the factory settings.

- From the **Base Colour Adjustment** menu, press ∇ or \triangle to select **Reset**.
- Press **OK**.

Using the Active Backlight Control

In order to improve screen visibility, the **Active Backlight Control** sets the screen brightness automatically during dark scenes.

- From the **Advanced Picture Settings** menu, press ∇ or \triangle to select **Active Backlight Control**.
- Press \triangleleft or \triangleright to select **On** or **Off**.

Activating Auto Brightness Sensor

When the **Auto Brightness Sensor** is activated, it will automatically optimise the backlighting levels to suit ambient light conditions.

- From the **Advanced Picture Settings** menu, press ∇ or \triangle to select **Auto Brightness Sensor**.
- Press \triangleleft or \triangleright to select **On** or **Off**.

Resetting the Advanced Picture Settings

This feature allows you to reset the current **Advanced Picture Settings** to the default values.

- From the **Advanced Picture Settings** menu, press ∇ or \triangle until **Reset** is selected.
- Press **OK**.

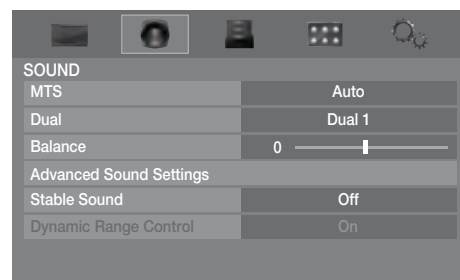
Sound adjustment

Setting the MTS (Multi-channel TV Sound)

Auto mode

The MTS Auto mode automatically recognize stereo/bilingual programmes depending on the broadcast signal.

- Press **MENU**, and then press \triangleleft or \triangleright to display the **SOUND** menu.



- Press ∇ or \triangle to select **MTS**, and then press \triangleleft or \triangleright to select **Auto** or **Mono**.

Mono mode

If you experience noise or poor reception of any stereo/bilingual programme, set the **MTS** mode to **Mono**.

Noise will be reduced and reception may improve.

Note:

If you experience noise with a particular programme on whose channel reception is usually good, try setting MTS mode to **Auto**, then switch **(D/L)** to \square Mono (monaural).

Selecting the Dual 1 or Dual 2 mode


You can hear only Dual 1 or Dual 2 sound selected, whenever bilingual programmes are received.

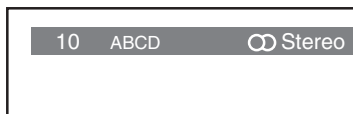
- Press **MENU**, and then press \triangleleft or \triangleright to display the **SOUND** menu.
- Press ∇ or \triangle to select **Dual**, and then press \triangleleft or \triangleright to select **Dual 1** or **Dual 2**.




Notes:

- When the MTS setting is in **Mono** mode, the **Dual** menu is not selectable.
- The **Dual** menu setting status remains even if the TV is turned off.

Selecting the stereo programmes



- 1 When a stereo programme is received,  **Stereo** appears.






- 2 Press  to select the stereo/monaural mode.  **Stereo** and  **Mono** appear cyclically on the screen.



Selecting the bilingual programmes


- 1 When a bilingual programme is received,  **Dual** appears.
- 2 Press  to select the sound to be heard. The sound differs according to the transmission system: NICAM or German stereo/bilingual broadcast.





Display	Sound to be heard	
	NICAM	German stereo/bilingual broadcast
 Dual 1	Sub I sound	Main sound
 Dual 2	Sub II sound	Sub sound
 Mono	Main sound	—

Note:


These settings are not stored in the TV memory.

Selecting the monaural programmes



If sound distortion, interruptions or silence arises in the low sound volume level, setting the  **Mono 2** mode will mitigate the problem.



- 1 When a monaural programme is received,  **Mono** appears.
- 2 Press  to select a monaural mode that is easy to hear.  **Mono 1** and  **Mono 2** appear cyclically to the screen.

Note:

On some cases, the reception of stereo/bilingual broadcasts may not be possible after switching on the  **Mono 2** mode.

Adjusting the sound Balance

- 1 From the **SOUND** menu, press  or  to select the **Balance**.




- 2 Press  or  to adjust the settings as desired.

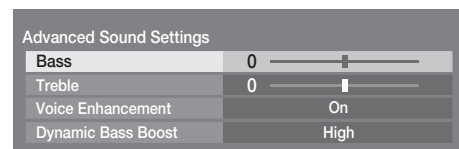
Using the Advanced Sound Settings





Bass and **Treble** help to adjust the basic sound quality.

Dynamic Bass Boost helps to emphasize the bass sound. Please use this function in your favorite.

Voice Enhancement helps to emphasize dialogue. It will be easier to hear voices over other background audio.

- 1 From the **SOUND** menu, press  or  to select **Advanced Sound Settings** and press .





- 2 Press  or  to select Bass or Treble you want to adjust and press  or  to adjust the settings as desired.

Voice Enhancement : **On** or **Off**.

Dynamic Bass Boost : **Low**, **High** or **Off**.

Using the Stable Sound

The Stable sound function limits the highest volume level to prevent extreme changes in volume when the signal source changes (for example, to prevent the sudden increase in volume that often happens when a TV programme switches to a commercial).

- 1 From the **SOUND** menu, press  or  to select **Stable Sound**.

- 2 Press  or  to select **On** or **Off**.

Dynamic Range Control

This feature allows control of compression for digital audio signal excluding those with MPEG-1 and MPEG-2 audio.

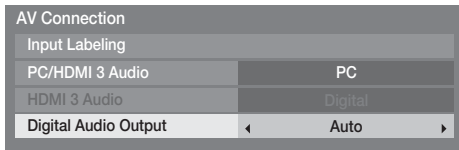
- 1 From the **SOUND** menu, press  or  to select **Dynamic Range Control**.

- 2 Press  or  to select **On** or **Off**.

Setting the Digital Audio Output

- 1 From the **PREFERENCES** menu, press  or  to select **AV Connection** and press .

- Press ∇ or \triangle to select **Digital Audio Output**.



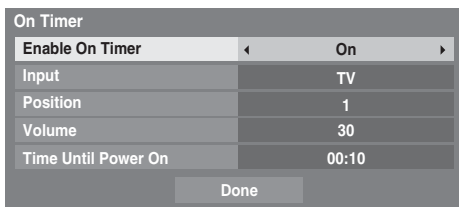
- Press \triangleleft or \triangleright to select **Auto** or **PCM**.
Auto: This mode outputs Dolby Digital or PCM to the digital audio output socket providing it is being broadcast.
PCM: Select this when a 2ch digital stereo amplifier is connected to the TV. When you select a Dolby Digital or MPEG audio track, the sound is converted to the PCM (2ch) format and output.

Other features settings

Setting the On Timer menu

The feature allows you to set the TV to turn on automatically to a preset position or input.

- Press **APPLICATIONS** menu, press ∇ to select **On Timer**, and then press **OK**.
- Press ∇ or \triangle to select **Enable On Timer**, and then press \triangleleft or \triangleright to select **On**.



- Press ∇ or \triangle to go through the list adding the details of the on timer by using the **Number** buttons and \triangleleft or \triangleright to make selections and press **OK**.
Input: Select a video input source (TV, EXT 1, EXT 2, HDMI 1, HDMI 2, HDMI 3, HDMI 4 or PC).
Position: Set the position that will be tuned when the TV turns on.
Volume: Select the volume level that will be set when the TV turns on.
Time Until Power On: Set the amount of time from now until the TV turns on using the **Number** buttons (maximum of 12 hours).
- When all the details have been entered, select **Done** and press **OK** to start the timer.

To cancel the On Timer

- In the **On Timer** menu, select **Enable On Timer**.
- Press \triangleleft or \triangleright to select **Off**, and then select **Done** and press **OK**.

Setting the Sleep Timer

The Sleep Timer is especially useful if you want the TV to turn itself off after a selected period of time.

- Press **APPLICATIONS** menu, press ∇ to select **Sleep Timer**.
- Press the **Number** buttons (0-9) to enter the amount of time until the TV turns off. Alternatively, press \triangleleft or \triangleright to adjust the time in blocks of 10 minutes up to 12 hours.
- Press **EXIT** to start the timer.

To display the remaining Sleep Timer:

Press **SLEEP**.

To cancel the sleep time:

Press \triangleleft , \triangleright or **SLEEP** until the time is set to 00:00.

Using the Auto Format

When the TV receives a true HDMI signal picture and the **Auto Format** is **On**, it will automatically be displayed in HDMI signal format, irrespective of the TV's previous setting.

- From the **Display Settings** in the **PREFERENCES** menu, press ∇ or \triangle to select **Auto Format**.



- Press \triangleleft or \triangleright to select **On** or **Off**.

Activating Blue Screen

When **Blue Screen** is set to **On**, the screen will turn blue and the sound will be muted when no signal is received.

- From the **PREFERENCES** menu, press ∇ or \triangle to until **Blue Screen** is selected.
- Press \triangleleft or \triangleright to select **On** or **Off**.

Note:

Some external inputs may not mute the sound.

Activating the 4:3 Stretch

When 4:3 stretch is activated, this function will switch 4:3 format programmes into a full screen picture.

- 1 From the **Display Settings** menu, press ∇ or \triangle to select **4:3 Stretch**.
- 2 Press \triangleleft or \triangleright to select **On** or **Off**.

Note:

This feature is not available when **Auto Format** is set to **Off**.

Panel Lock

Panel Lock disables the buttons on the TV. All buttons on the remote control can still be used.

- 1 From the **PREFERENCES** menu, press ∇ or \triangle to select **Panel Lock**.
- 2 Press \triangleleft or \triangleright to select **On** or **Off**.

Note:

When **Panel Lock** is **On**, a reminder will appear when the keys on the TV are touched. If the standby key is touched, the TV will switch off and can only be brought out of standby by using the remote control.

Setting the Automatic Power Down

The TV will automatically turn itself off (standby) after approximately 4 hours, if you do not operate the control buttons on the remote control or on the TV control panel.

- 1 From the **PREFERENCES** menu, press ∇ or \triangle until **Energy Saving Settings** is selected, and then press OK .
- 2 Press ∇ or \triangle to select **Automatic Power Down**, press \triangleleft or \triangleright to select **On** or **Off**, and then press **EXIT**.

Notes:

1 minute before switching to standby, a warning message will appear.

Setting No Signal Power Down

The TV will automatically turn itself off after 15 minutes when no signal is detected. You can change the setting to Off for the following purposes:

- Low signal strength of analog channel (no signal detection).
- Only Audio L/R is connected to an external input in order to listen to music through the TV speakers.

- 1 From the **Energy Saving Settings** menu, press OK .

- 2 Press ∇ or \triangle to select **No Signal Power Down** and press OK .

- 3 Press ∇ or \triangle to select the item you want to change and press \triangleleft or \triangleright to select **On** or **Off**.

Notes:

- Default setting is all **On**.
- A warning message will appear 1 minute before turning off.

Viewing the Software Licences

The licences for the software used in this TV are available for viewing on screen.

- 1 From the **SETUP** menu, press ∇ or \triangle to select **Software Licences**.
- 2 Press OK .

A screen will appear displaying all of the licencing information required for the TV's software.

Confirming software version

- 1 From the **SETUP** menu, press ∇ or \triangle to select **System Information**.
- 2 Press OK to display the software version.



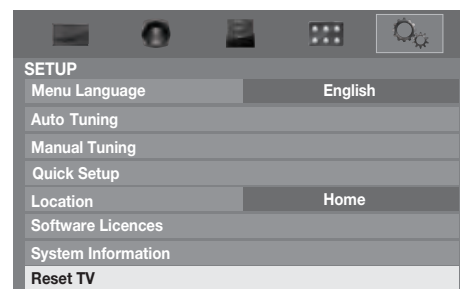
Note:

The software version displayed is just for the illustration.

Resetting the TV

Reset TV will reset all TV settings, including stored channels, to their original factory values.

- 1 From the **SETUP** menu, press ∇ or \triangle to select **Reset TV**.



- 2 Press OK to select.

A screen will appear warning that all settings will be lost. Select **Yes**, and then press **OK** to continue.

When the set powers back on, the first time screen will appear (see page 10). Press **OK** to continue, and proceed to the **Auto Tuning** menu (see page 12).

If 3D PIN code has been set, the 3D PIN screen will appear (see page 26).

Viewing 3D images

Cautions on watching 3D images

- Some viewers may experience a seizure or blackout when exposed to certain flashing images or lights contained in certain 3D television pictures or video games.

Anyone who has had a seizure, loss of awareness, or other symptoms linked to an epileptic condition, or has a family history of epilepsy, should contact a health care provider before using the 3D function.

- Avoid use of the 3D function when under the influence of alcohol.
- If you are ill or feel ill, you should refrain from viewing 3D images, and consult your health care provider as may be appropriate.
- If you experience any of the following symptoms when viewing 3D video images, stop viewing and contact your health care provider:

Convulsions, eye or muscle twitching, loss of awareness, altered vision, involuntary movements, disorientation, eye strain, nausea/vomiting, dizziness, headaches.

- If you feel eye fatigue or other discomfort from viewing 3D video images, remove the 3D glasses and discontinue use until the condition is eliminated.
- Viewing in 3D may cause dizziness and/or disorientation for some viewers.

Therefore, to avoid injury do not place your TV near open stairwells, balconies, or wires. Also do not sit near objects that could be broken if accidentally hit.

- When viewing 3D images, always wear 3D glasses.

Watching 3D images without 3D glasses may cause eye strain.

Use specified 3D glasses.

- When watching 3D images, do not wear 3D glasses at an angle and do not lie down. If you watch while lying down or with the glasses tilted, the 3D effect is lost and it may cause eye strain.
- It is recommended that the viewer's eyes and 3D glasses are level with the screen.
- Use the Manual Tuning operation if desired channels cannot be preset with the Auto.
- If you have prescription eye glasses or contact lenses, wear the 3D glasses over them.

Watching 3D images without appropriate eyewear may cause eye strain.

- If 3D images often appear in double or if you cannot see the images in 3D, stop viewing. Continuous viewing may cause eye strain.
- Due to the possible impact on vision development, viewers of 3D video images should be age 6 or above.

Children and teenagers may be more susceptible to health issues associated with viewing in 3D and should be closely supervised to avoid prolonged viewing without rest.

- Watching TV while sitting too close to the screen for an extended period of time may cause eye strain.

The ideal viewing distance should be at least three times the screen height.

Health precautions:

- Due to the possible impact on vision development, viewers of 3D programming should be age 6 or above. Children may be more susceptible to health effects from viewing 3D images and should be closely supervised.
- Some viewers may experience a seizure or blackout when exposed to certain flashing images or lights contained in certain 3D TV pictures or video games. Anyone who has had a seizure, loss of awareness, or other symptoms linked to an epileptic condition, or has a family history of epilepsy, should consult a health care provider before using the 3D feature of this product.

Notes on IR communication

- Do not block the IR sensor for 3D glasses on the TV by placing objects in front of it.
- Do not cover the IR sensor on the 3D glasses with stickers or labels.
- Keep the IR sensor on the 3D glasses clean.

- The use of 3D glasses could interfere with other IR communication devices. Other IR communication devices may cause the 3D glasses not to work correctly. Use the TV and 3D glasses in a place where they will not interfere with other devices or products.

Notes on watching the TV

- 3D effect and image quality may vary depending upon content quality and display device capability/functionality/settings.
- If you use any device, such as a mobile phone or mobile wireless device, near the 3D glasses, the 3D glasses may not work correctly.
- Use the product in the following temperature range; otherwise, the quality of the 3D image or the reliability of the product cannot be guaranteed.
 - 3D glasses: 0°C - 40°C (32°F - 104°F)
 - TV: 0°C - 35°C (32°F - 95°F)
- If you use a fluorescent light, it may flicker depending on the frequency of the light. In this case, reduce the brightness of the fluorescent light, or use another light.
(It is not recommended to watch the TV in a dark room, especially for children.)
- Wear the 3D glasses properly, otherwise you may not see the correct 3D image.
- When not viewing 3D images on this unit, take off the 3D glasses; otherwise, it may be difficult to see the display on other products such as PC, digital clock or calculator, etc.

About the connecting cable

- Use a high-speed and high-quality HDMI cable when you connect a device such as 3D compatible BD player or PC to the TV. When you use a standard HDMI cable, 3D images may not be shown.

Viewing 3D programming requires the following:

- Compatible TOSHIBA 3D glasses (not supplied)
- Compatible 3D playback device or 3D source
- 3D capable high quality HDMI cable

For 3D signal formats, see page 46.

Using 3D functions

Incoming video signals can either be in 2D or 3D format. A 2D signal can be viewed in either 2D or 3D, and 3D can be viewed in either 2D or 3D. If the TV can detect the fact that a signal is 3D, it can change to 3D mode automatically – see “**3D Auto Start**” (🔍 page 25). Otherwise you can change the viewing mode using the 3D button. Finally, the format of the 3D signal can be either Side by Side (SBS) or Top and Bottom (TB). You may have to choose the correct format if the TV can not detect it automatically – see “selecting 3D format”, next page.

Moreover, you can change 2D images to 3D images by pressing the 3D button when viewing in 2D.

Notes:




- *When 3D format signal is not received, the display mode will not switch to 3D.*
- *If the appropriate mode and format are not selected, the 3D image will not display correctly.*
- *The **Picture Size** settings are not available for 3D Mode, 3D to 2D Mode and 2D to 3D Mode.*
- *There are individual differences in perception of 3D images.*
- *When viewing 3D images, wear the 3D glasses.*
- *The **Auto Format** function is not available for 3D Mode, 3D to 2D Mode and 2D to 3D Mode.*
- *The **Picture Position** control is not available for 3D Mode, 3D to 2D Mode and 2D to 3D Mode.*
- *Depending on some condition will not be displayed of the aspect ratio correctly on the screen for 3D Mode, 3D to 2D Mode and 2D to 3D Mode.*
- *The 2D to 3D conversion function is activated and controlled by you according to your personal preferences.*
- *The 2D to 3D conversion function is meant for enjoyment of 2D home video, and other 2D content you create, in 3D according to your personal preferences.*
- *The 2D to 3D conversion function is not intended for use with pre-recorded 2D copyrighted content owned by a third-party unless the copyright owner has given direct or indirect permission, or unless applicable law permits such use.*
- *The picture at the edges of the screen may be slightly hidden in 2D to 3D mode.*

Switching the display mode or selecting the 3D format

There are four modes for watching TV.

Mode	Description
3D	Displays 3D images.
2D	Changes 3D images to 2D.
2D to 3D	Changes 2D images to 3D.
Native	Displays the received signal format as it is.

3D signals can be sent in one of three formats.

3D format	Description
Side by Side (SBS)	Images for the left and right eyes are positioned side-by-side. 
Top and Bottom (TAB)	Images for the left and right eyes are positioned at the top and bottom of the screen. 
Frame Packing (FP) *	Two frames of images (one for the left eye, one for the right eye) are positioned at the top and bottom of the screen. 

* This format cannot be selected manually.

The 3D button's operation:


The 3D key's behaviour when in Native mode is different depending on the input mode.















Depending on the input mode, the screen for selecting 2D, 3D or 2D to 3D is displayed or the display mode switches between 2D, 3D and 2D to 3D.

If you can see the left and right images on the screen in **Native** mode, select SBS.

If you can see top and bottom images on the screen in **Native** mode, select TAB.

To switch to 3D mode:












- Set **3D Auto Start** to **3D**.
- Press  while viewing 2D mode or Native mode.

Trigger of Switching Display Mode				Press 3D button	
Input Signal					
Type	Additional Information	Format	Source Signal	Select 3D	Select 2D to 3D
3D Format Signal	With 3D Auto Detect Information	FP		* 	
		SBS		* 	
		TAB		* 	
	Without 3D Auto Detect Information	SBS		* 	
		TAB			
	2D Format Signal				

* Correct 3D image


To select the 3D format from the Quick menu in 3D mode:













- 1 Press **QUICK**. Select **3D Settings**.
- 2 Press ∇ or \triangle to select **3D Format Select**. Press \odot .
- 3 Press \triangleleft or \triangleright to select **Side by Side** or **Top and Bottom**.

Trigger of Switching Display Mode				Quick menu	
Input Signal					
Type	Additional Information	Format	Source Signal	SBS	TAB
3D Format Signal	With 3D Auto Detect Information	FP			
		SBS			
		TAB			
	Without 3D Auto Detect Information	SBS		* 	
		TAB			* 
	2D Format Signal				

* Correct 3D image

To switch to 2D mode:






















- Set **3D Auto Start** to **2D**.
- Press  while viewing 3D mode.

Trigger of Switching Display Mode				Press 3D button
Input Signal				
Type	Additional Information	Format	Source Signal	
3D Format Signal	With 3D Auto Detect Information	FP		* 
		SBS		* 
		TAB		* 
	Without 3D Auto Detect Information	SBS		
		TAB		
2D Format Signal				* 

* Correct 2D image

To select 2D format from the Quick menu in 2D mode:

- 1 Press **QUICK**. Select **3D Settings**.
- 2 Press ∇ or \triangle to select **2D Format Select**. Press **OK**.
- 3 Press \triangleleft or \triangleright to select **Side by Side, Top and Bottom** or **Native**.



Trigger of Switching Display Mode				Quick menu			
Input Signal				2D Format Select			
Type	Additional Information	Format	Source Signal	SBS	TAB	Native	
3D Format Signal	With 3D Auto Detect Information	FP					
		SBS		* 			
		TAB			* 		
	Without 3D Auto Detect Information	SBS		* 			
		TAB			* 		
2D Format Signal						* 	

* Correct 2D image

Note:

Take off the 3D glasses in 2D mode.

To switch to Native mode:

- Press  while viewing 3D mode.
- Press  while viewing 2D to 3D mode.

From the Quick Menu in 2D mode.

- From the **Quick Menu** in 2D mode.

- 1 From the **PREFERENCES** menu, press ∇ or \triangle to select **3D Setup** and press **OK**.
- 2 Press ∇ or \triangle to select **2D Format Select**. Press **OK**.
- 3 Press \triangleleft or \triangleright to select **Native**.

Notes:

- When 3D format signal with 3D Auto Detect Information is received, it is not possible to switch to **Native**.
- When Frame Packing is input, 3D Settings will be greyed out.

To switch to 2D to 3D mode:

Press 3D and select 2D to 3D while viewing 2D or Native mode.

Note:

Depending on the input mode, the display mode switches between 2D and 3D.

Setting the Auto Start mode

This mode controls what the TV does when it detects a 3D format signal with 3D Auto Detect Information.

- 1 From the **QUICK** menu, press ∇ or \triangle to select **3D Settings** and press **OK**.
- 2 Press ∇ or \triangle to select **3D Auto Start** and press \triangleleft or \triangleright to select **3D**, **2D** or **Off**.

Option	Description
3D	Displays as 3D mode automatically when 3D format signal with 3D Auto Detect Information is received.
2D	Displays as 2D mode automatically when 3D format signal with 3D Auto Detect Information is received.
Off	Displays a screen that allows you to select 3D or 2D when 3D format signal with 3D Auto Detect Information is received.

Setting the 3D PIN code

A 3D PIN code is necessary for using the 3D Safety Settings.

The 3D button's operation:

- 1 From the **3D Setup** menu, press **OK** and press ∇ or \triangle to select **3D PIN**.
- 2 Press **OK** and press the **Number** buttons to enter a 4-digit number. Confirm the code.

Note:

PIN code cannot be set to "0000".

To change or delete your PIN code:

- 1 From the **3D PIN** menu, press the **Number** buttons to enter your 4-digit PIN code.
- 2 Select **Change PIN** or **Delete PIN** and press **OK**.

Notes:

- *PIN code cannot be set to "0000".*
- *If PIN is deleted, 3D Safety Settings is greyed out, and the settings are reset to the factory defaults.*

Setting 3D Start Message

When this feature is set to **On**, a message is displayed on the screen when a 3D signal is received.

- 1 From the **3D PIN** menu, press ∇ or \triangle to select **3D Safety Settings** and press **OK**.
- 2 Enter your 4-digit 3D PIN code and press ∇ or \triangle to highlight **3D Start Message** and press \triangleleft or \triangleright to select **On** or **Off**.

Setting 3D Lock

When this feature is set to **On**, you must enter the 3D PIN code in order to enable 3D display mode.

- 1 From the **3D Safety Settings** menu, press **OK** and Enter your 4-digit 3D PIN code.
- 2 Press ∇ or \triangle to select **3D Lock** and press \triangleleft or \triangleright to select **On** or **Off**.

Setting the 3D Timer Lock

When the 3D Timer Lock feature is set to **On**, neither the PIN input window nor the 3D start message will be shown while the 3D Enable timer is active, even if a switch to 3D Mode occurs. This helps to avoid having to enter the 3D Lock PIN and view the 3D start message every time when switching to 3D.

- 1 From the **3D Safety Settings** menu, press **OK** and Enter your 4-digit 3D PIN code.
- 2 Press ∇ or \triangle to select **3D Timer Lock** and press \triangleleft or \triangleright to select **On** or **Off**.

Note:

The PIN input window appears when "continue" is selected in the reminder dialogue for Enable 3D Timer, even if 3D Timer Lock is activated.

Setting Enable 3D Timer

This feature helps to remind you not to watch 3D video for extended periods of time. Once a set period of time has passed, a dialogue will be shown asking you if you wish to continue viewing in 3D or not.

- 1 From the **3D Safety Settings** menu, press **OK** and Enter your 4-digit 3D PIN code.
- 2 Press ∇ or \triangle to select **Enable 3D Timer** and press \triangleleft or \triangleright to select **Off**, **30**, **60**, **90** or **120** minutes.

Displaying the 3D Important Info

This feature helps to remind you not to watch 3D video for extended periods of time. Once a set period of time has passed, a dialogue will be shown asking you if you wish to continue viewing in 3D or not.

- 1 From the **3D Setup** menu, press **OK** and press \triangleleft or \triangleright to select **3D Important Info**.
- 2 Press **OK**.

Adjusting 2D to 3D Depth

You can adjust an effect quantity to change the 2D mode for the 3D mode.

From the Menu:

- 1 From the **PREFERENCES** menu, press \triangleleft or \triangleright to select **3D Setup** and press **OK**.
- 2 Press ∇ or \triangle to select **2D to 3D Depth** and press **OK**.
- 3 Press ∇ or \triangle to select **1**, **2**, **3**, **4**, or **5**.

From the Quick Menu:

- 1 Press **QUICK** on the remote to open the **Quick Menu**.
- 2 Press ∇ or \triangle to select **2D to 3D Depth** and press **OK**.
- 3 Press ∇ or \triangle to select **1**, **2**, **3**, **4**, or **5**.

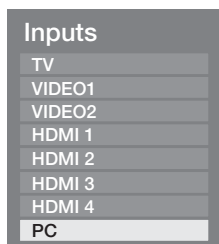
Switching left and right images

The left and right eye shutter timing of the glasses can be swapped. If 3D images look blurred, switch the left and right sides of the 3D image.

- 1 Press **QUICK** on the remote to open the **Quick Menu**.
- 2 Press ∇ or \triangle to select **3D Settings** and press **OK**.
- 3 Press ∇ or \triangle to select **Left and Right Image** and press \triangleleft or \triangleright to select **Swapped** or **Normal**.

Selecting the video input source to view

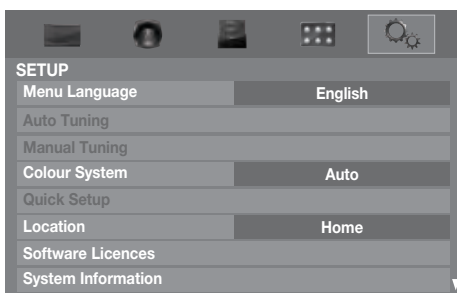
- 1 Press \odot on the remote control until the video input mode list appears on the screen, then press ∇ , \triangle or \odot to select appropriate input source (or touch P/\odot and \wedge or \vee on the TV left side panel to select required input source directly).



- 2 Press **OK**.
VIDEO1 (\odot (1), COMPONENT/VIDEO INPUT, standard or component video input),
VIDEO2 (\odot (2), standard video input),
HDMI1, HDMI2, HDMI3, HDMI4 (HDMI input),
PC (\odot RGB/PC, PC input)

Setting the Colour System

- 1 Press **MENU**, and then press \triangleleft or \triangleright to display the **SETUP** menu.



- 2 Press ∇ or \triangle to select **Colour System**, and then press \triangleleft or \triangleright to select **Auto**, **PAL**, **SECAM**, **NTSC 4.43** or **NTSC 3.58**.

- 3 Press **OK** to store your settings.

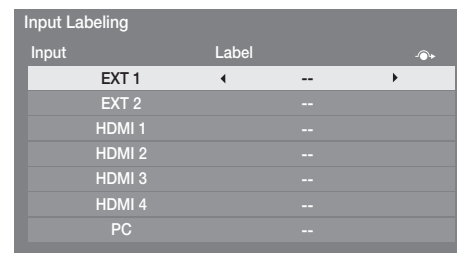
Notes:

- Confirm that **Colour System** is set to **"Auto"**. If not, select **"Auto"** with \triangleleft or \triangleright .
- This feature is available in Standard video (composite) inputs mode.

Labeling video input sources

These input labels are shown in the input selector. You can label video inputs according to the devices you have connected to the TV.

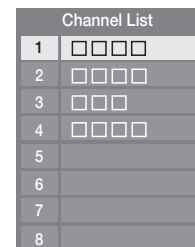
- 1 From the **AV Connection** in the **PREFERENCES** menu and press **OK**.
- 2 Press ∇ or \triangle to select **Input Labeling** and press **OK**.



- 3 Press ∇ or \triangle to select the item you want to label and press \triangleleft or \triangleright to select **--**, **Amplifier**, **Cable**, **DVD**, **Game**, **PC**, **Recorder**, **Satellite** or **VCR**, or press the **RED** button to turn on the skip.
- 4 Repeat step 3 for other video inputs.

Channel List

- 1 Press **LIST**. The Channel List will appear.



- 2 Press ∇ or \triangle to select a channel, and then press to watch.

Teletext

This TV has a multi-page Teletext memory, which takes a few moments to load and it offers two ways of viewing Teletext **Auto** and **List** which are explained below.

Setting up the Teletext mode

To select a language for Teletext:

The language 1-4 option enables the display of different language when using Teletext.

- 1 From the **PREFERENCES** menu, and then press ∇ or \triangle to select **Teletext Language**.
- 2 Press \triangleleft or \triangleright to select the required language.
 - **Language 1:** English, German, Dutch, Flemish, Russian, Bulgarian, Ukranian, Lettish, Lithuanian, Czech, Slovak, Estonian
 - **Language 2:** Polish, German, Dutch, Flemish, Estonian, Lettish, Lithuanian, French, Serbian, Croatian, Slovenian, Czech, Slovak, Rumanian
 - **Language 3:** English, French, Hebrew, Turkish, Arabic
 - **Language 4:** English, French, Hebrew, Turkish, Farsi (Iranian/Persian)

To select Teletext mode:

Select a channel position with the desired Teletext service.

- 1 From **PREFERENCES** menu, press ∇ or \triangle to select **Teletext**.
- 2 Press \triangleleft or \triangleright to select **Auto** or **List** mode.

Notes:

- It may take a few moments for the multi-page teletext memory to load.
- You must exit teletext mode in order to display the main menu.

Teletext general information

TEXT button:

Pressing **TEXT** once will bring up the teletext screen. Press again to superimpose the teletext over a normal broadcast picture. Press again to return to normal TV mode. You need to return to normal viewing if you wish to change channels. When you first press **TEXT** to access the text service, the first page you see will be the initial page.

In **Auto** mode, this displays the main subjects available and their relevant page numbers.

In **List** mode, you will see the page numbers currently stored on the **each colour** button.

Sub-pages:

Once in this chosen page, if there are sub-pages they will automatically load into memory without changing the one you are reading. If there are many sub-pages, it will take a long time for them all to load and this will depend on the speed with which the broadcaster transmits them.

To access the sub-pages in memory, press \triangleleft or \triangleright to view them.

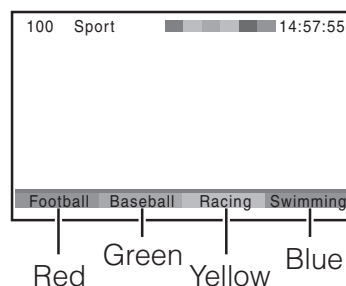
Using Subtitles

- 1 Press **SUBTITLE** on the remote control to display the current Subtitle status. While this status is displayed, press again to change the setting.

Using Auto mode

There are two Modes: **Auto** will display FASTEXT, if available. **List** will display your four favorite pages. In either mode, as an alternative to the coloured buttons, you can access a page by entering a 3-digit number, using the **Number** buttons on the remote control, or to advance to the next page, press **P \wedge** , to go back to the previous page press **P \vee** . To change between **Auto** and **List**, see above.

- Press **TEXT** to access teletext.

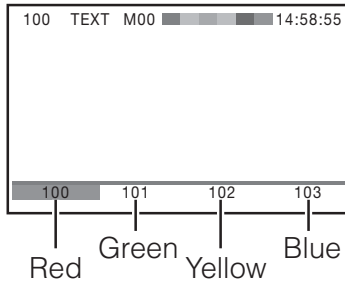


If FASTEXT is available, you will see 4 coloured titles at the base of the TV screen. To access any given subject, simply press the relevant coloured button on the remote control.

If FASTEXT is not available, you can access any page simply by entering a 3-digit page number or pressing the corresponding coloured button. For further information on your particular text system(s), see the broadcast teletext index page or consult your local Toshiba dealer.

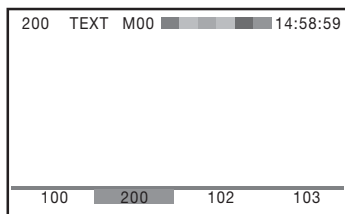
Using List mode

- 1 Press **TEXT** to access teletext.



The four choices at the bottom of the screen are now number – **100, 101, 102** and **103**, which have been programmed into the TV's memory.

- 2** To view these pages, use the coloured prompt buttons.
e.g. press the Green button to view page 101.
- 3** If you want to change these stored pages, press the coloured button for the colour you want to change.
e.g. Press the Green button and enter the 3-digit number.



This number will change and blinking.

- 4** Press **OK** to store your choice.
- 5** You may view other pages by simply entering the 3-digit page number – but NEVER press **OK** or you will lose the favorite already stored.

Teletext buttons on the remote control

Below is an introduction to the teletext buttons on your remote control and their functions.

TEXT To display a page of teletext:

Press **TEXT** to display teletext. Press again to superimpose the teletext over a normal broadcast picture. Press again to return to normal TV mode.

Index To display an index/initial page:

In Auto-mode

Press **Index** to access the index page. The one displayed is dependant on the broadcaster.

In List-mode

Press **Index** to return to the 100 page or initial page.

Help To reveal concealed text:

Some pages cover topics such as quizzes and jokes. To discover the solutions, press **Help**.

Hold To hold a wanted page:

This function is included as it is part of the broadcast teletext system but you will not need it as this TV allows you to control the display of sub-pages.

Enlarge To enlarge the teletext display size:

Press **Enlarge** once to enlarge the top half of the page, press again to enlarge the bottom half of the page. Press again to revert to the normal size.

Normal To select a page while viewing a normal picture:

When in teletext mode, if a page selection is made and then **Normal** is pressed, a normal picture will be displayed. The TV will indicate when the page is present by displaying the title bar of the text page at the top of the screen. Press **Normal** to view the page.

Note:

*It will not be possible to change programme position while in Teletext mode, you will have to cancel the teletext first by pressing **TEXT** to return to a normal TV picture.*

Time To select the time display:

If you press **Time** while watching a normal TV broadcast, you will see a time display from the broadcaster. It will remain on the screen for about 5 seconds.

9:56 and 25 seconds p.m.

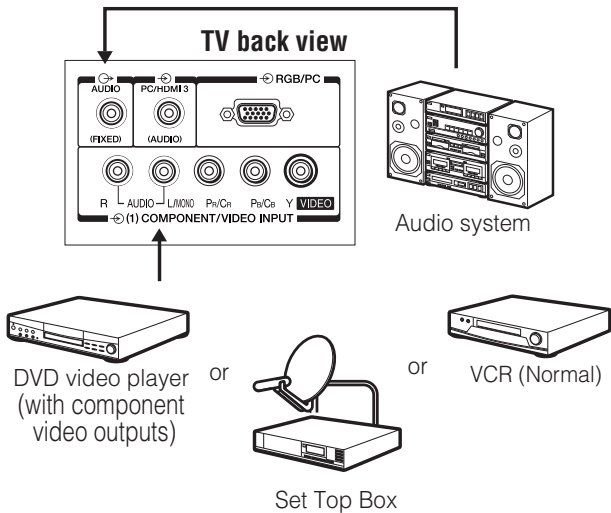


Connecting your TV

- Most of the picture/sound controls and functions are available. However features not available will be greyed out.

Back connections

Connection example



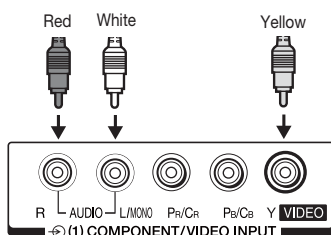
- Before connecting any external equipment, turn off all main power switches.
- The unauthorized recording of TV programmes, DVDs, video tapes and other materials may infringe upon the provisions of copyright law.
- The **COMPONENT VIDEO INPUT** consists of three component video signals (**Y**, **P_B/C_B**, **P_R/C_R**) and provides the best picture performance. These terminals can only be used with the component video compatible equipment e.g. DVD video player, etc.
- If you connect to COMPONENT VIDEO for the **COMPONENT / VIDEO INPUT** terminals, screen display will appear changes to **COMPONENT**.
- Additional equipment and cables shown are not supplied with this TV.

Note:

Ⓜ (1) COMPONENT / VIDEO INPUT terminals

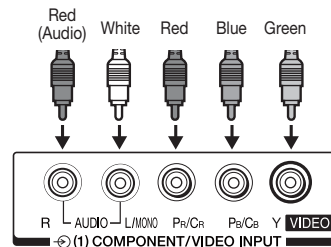
Standard video mode:

Use terminals **Y**, **L** and **R**.



Component video mode:

Use terminals **Y**, **P_B/C_B**, **P_R/C_R**, **L** and **R**.



Connecting an audio system

You can enjoy high quality dynamic sound by connecting the TV to an audio system.

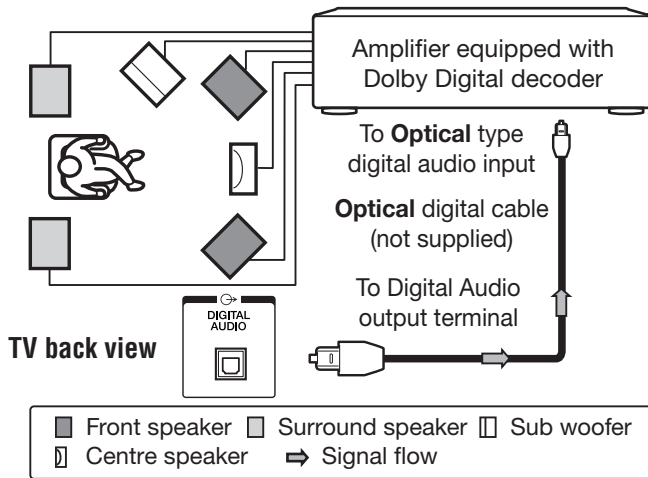
Notes:

- **DO NOT** connect the **DIGITAL AUDIO** output terminal to the AC-3 RF input of a Dolby Digital Receiver with a built-in Dolby Digital decoder.
- Connect the **DIGITAL AUDIO** output terminal to the **OPTICAL** input of a receiver or processor.
- Refer to the owner's manual of the connected equipment as well.
- When you connect the TV to other equipment, be sure to turn off the power and unplug all of the equipment from the wall outlet before making any connections.
- The output sound of the TV has a wide dynamic range. Be sure to adjust the audio amplifier's volume to a moderate listening level before turning on the power. Otherwise, the speakers and your hearing may be damaged by sudden high volume audio.
- Turn off the amplifier before you connect or disconnect the TV's power cord. If you leave the amplifier power on, the speakers may be damaged.

Warning:

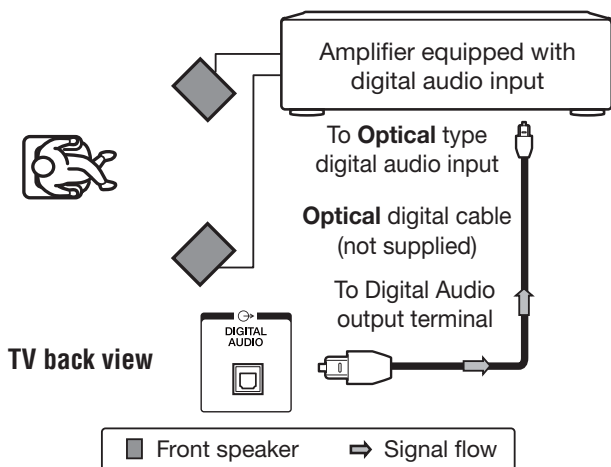
When you are connecting (via the **DIGITAL AUDIO** output terminal) an AV decoder that does not have Dolby Digital decoding function, be sure to set **PCM** for Digital Output menu (page 19). Otherwise, the speakers and your hearing may be damaged by sudden high volume audio.

Connecting an amplifier equipped with a Dolby Digital decoder



You can enjoy dynamic realistic sound by connecting the TV to an amplifier equipped with a Dolby Digital decoder or Dolby Digital processor. When using this setup, select **Auto** in the Digital Output menu (page 19).

Connecting an amplifier equipped with a digital audio (optical) input



You can enjoy the dynamic sound of a 2-channel digital stereo by connecting the TV to an amplifier equipped with a digital audio (optical) input and speaker system (right and left front speakers). When using this setup, select **PCM** in the Digital Output menu (page 19).

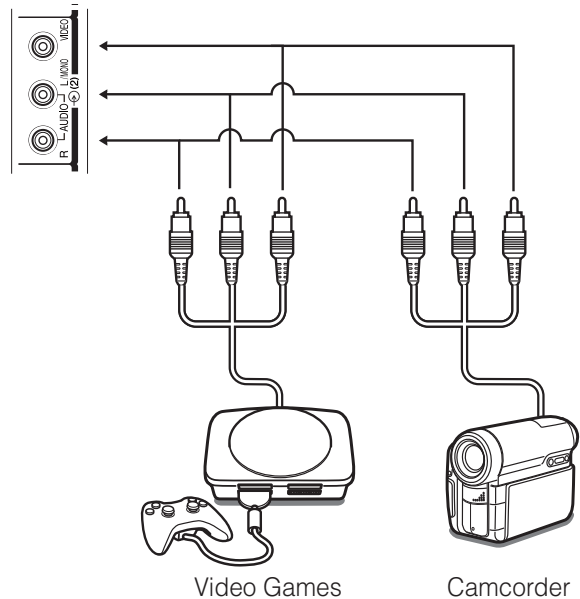
Side connections

You can connect a wide variety of auxiliary equipment via the terminals located on the left side of the TV (2).

Please always refer to the owner's manual of the equipment to be connected for full details.

Connection example

Left side of the TV



- To select the side inputs, press \odot until the video input mode list appears on the screen, then press ∇ or \triangle to select **VIDEO2** (page 27), then press **OK**.
- Before connecting any external equipment, turn off all main power switches.
- If you connect mono sound equipment to \odot (2), connect the audio output of the equipment to the **L/MONO** jack on the TV.
- You can enjoy Video Games with this TV. However shooting games, where the player shoots at a target on the TV screen with a light gun, may not work because of the LED LCD TV properties.

Connecting HDMI or DVI devices

- When turning on your electronic components, turn on the TV first, and then the HDMI and DVI device.
- When turning off your electronic components, turn off the HDMI and DVI device first, and then the TV.
- This TV may not be compatible with features and/or specifications that may be added in the future.
- This TV is only operable with L-PCM and Dolby Digital on 32/44.1/48 kHz. If there is no sound when using HDMI, use the analogue audio cables to connect the TV and the HDMI device, and select **Analogue** in **HDMI 3 Audio** of the **AV Connection** menu (page 33).

Connecting your TV

- This TV is able to connect with HDMI devices. But it is possible that some HDMI devices may not operate properly with this TV.

Connecting an HDMI or a DVI device

The HDMI input on your TV receives digital audio and uncompressed digital video from an HDMI device and uncompressed digital video from a DVI device.

This input is designed to accept HDCP programme material in digital from CEA-861-D compliant consumer electronic devices (such as a set top box and DVD player with HDMI and DVI output).

The HDMI input is designed for best performance with 1080i (50 Hz/60 Hz) and 1080p (24/50/60 Hz) high-definition video signals, but will also accept and display 480i, 480p, 576i, 576p, and 720p (50Hz/60 Hz) and VGA (VESA 640 × 480 @ 60/72/75 Hz) signals.

- HDMI: High-Definition Multimedia Interface
 - DVI: Digital Video Interface
 - HDCP: High-bandwidth Digital Content Protection
 - CEA-861-D compliance covers the transmission of uncompressed digital video with high-bandwidth digital content protection, which is being standardized for reception of high-definition video signals. Because this is an evolving technology, it is possible that some devices may not operate properly with the TV.
 - Acceptable PC signal format:
S-VGA: VESA 800 × 600 @ 56/60/72/75 Hz
XGA: VESA 1024 × 768 @ 60/70/75 Hz
W-XGA: VESA 1280 × 768 @ 60/75 Hz
W-XGA: VESA 1360 × 768 @ 60 Hz
S-XGA: VESA 1280 × 1024 @ 60/75 Hz
- However, these signal formats are converted to match the number of pixels of the LCD panel.

Therefore, the TV may not display small text properly.

If you connect this unit to your PC, the compressed image is displayed in S-XGA mode, therefore the picture quality may deteriorate and characters may not be read.

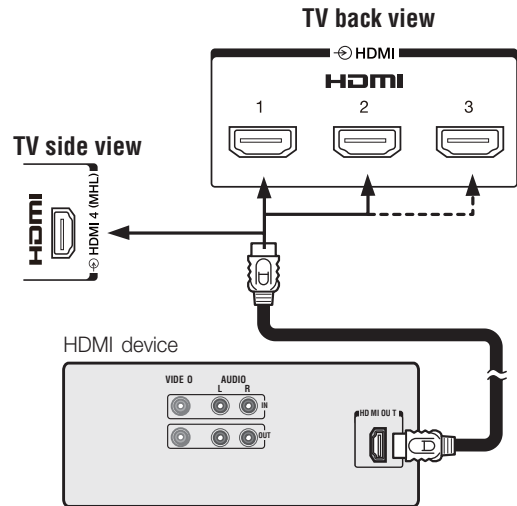
- L-PCM: Linear-Pulse Code Modulation.
- Supported Audio format: L-PCM, Dolby Digital, sample rate 32/44.1/48 kHz

Connecting an HDMI device

One HDMI cable (type A connector)

For proper operation, it is recommended that you use a short HDMI cable.

HDMI cable transfers both video and audio.



Connecting a DVI device

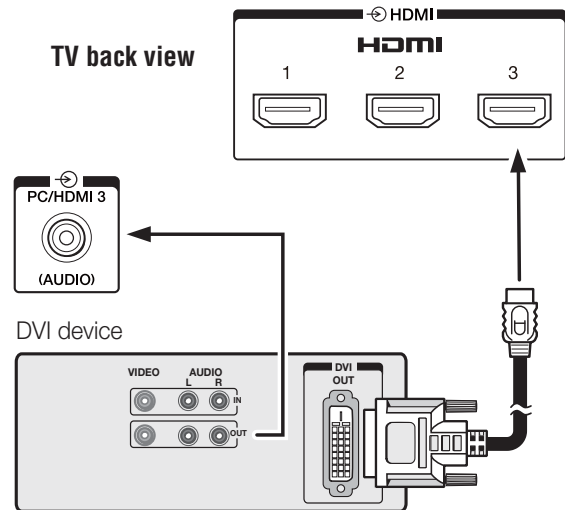
One HDMI (type A connector)-to-DVI adapter cable and audio cables

HDMI (type A connector)-to-DVI adapter cable

For proper operation, the length of an HDMI-to-DVI adapter cable should not exceed 3m. The recommended length is 2m.

Standard analogue audio cables

An HDMI-to-DVI adapter cable transfers only video. Separate analogue audio cables are required.



Selecting the PC/HDMI 3 Audio mode

You can select PC audio or HDMI audio when using this function.

- 1 From the **PREFERENCES** menu and press ∇ or \triangle to select **AV Connection**.
- 2 Press OK to display the **AV Connection** menu.

Connecting your TV



- 3** Press ∇ or \triangle to select **PC/HDMI 3 Audio** and press \triangleleft or \triangleright to select **PC** or **HDMI3**.

Setting the HDMI 3 Audio mode

You can select sound of an HDMI or DVI device connected to the HDMI input terminals from three modes:

Auto, Digital or Analogue.

Note:

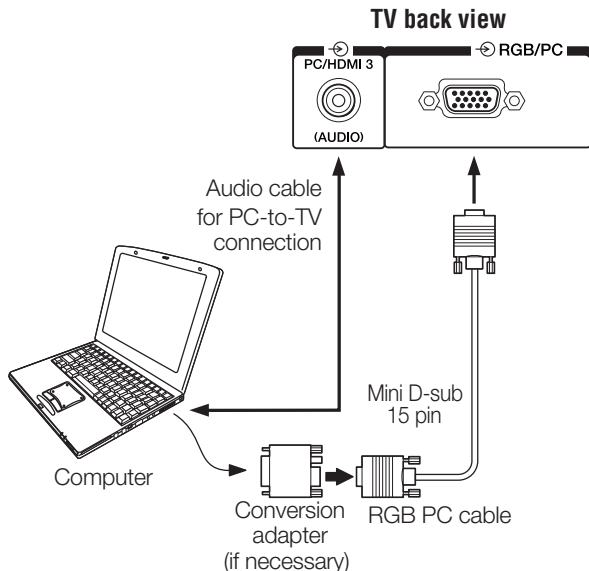
This function is available only when the **PC/HDMI 3 Audio** mode is set to **HDMI3**.

- 1** From the **AV Connection** menu, press ∇ or \triangle to select **HDMI 3 Audio**.
- 2** Press \triangleleft or \triangleright to select **Auto, Digital** or **Analogue**.

Connecting a computer

To connect a PC to the RGB/PC terminal on the TV:

An analogue RGB (15 pin) computer cable can be connected.



Connect a PC cable from the computer to the \ominus **RGB/PC** terminal on the back of the TV.

The following signals can be displayed:

VGA: VESA 640 × 480 @ 60/72/75 Hz
 S-VGA: VESA 800 × 600 @ 56/60/72/75 Hz
 XGA: VESA 1024 × 768 @ 60/70/75 Hz
 W-XGA: VESA 1280 × 768 @ 60/75 Hz

W-XGA: VESA 1360 × 768 @ 60 Hz
 S-XGA: VESA 1280 × 1024 @ 60/75 Hz
 1920 × 1080p @ 60Hz (Horizontal Frequency: 67.5 kHz (H), Pixel Clock Frequency: 148.5 MHz)

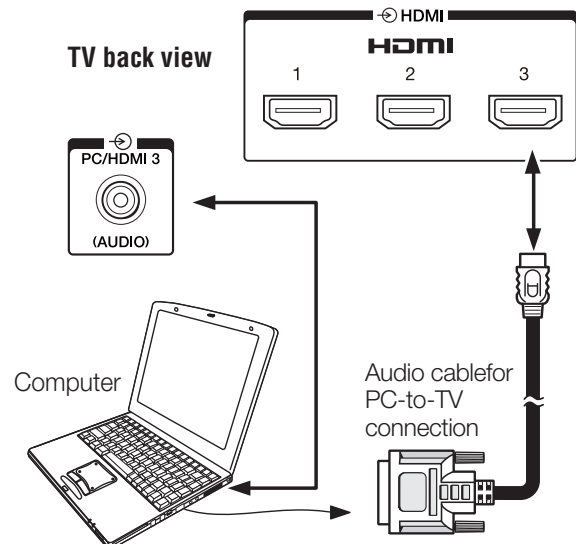
Notes:

- Some PC models cannot be connected to this TV.
- If connecting a certain PC model that signal is particular, the PC signal may not be detected correctly.
- There is no need to use an adapter for computers with DOS/V compatible mini D-sub 15 pin terminal.
- A bar may appear in the upper, lower, right or left side of the screen, or parts of the picture may be obscured depending on some signals. This is not the malfunction.
- If the edges of the picture are stretched, readjust the picture position adjustments in the **PC Settings** menu.
- Depending on the specification of the PC you are playing the DVD-Video on, and the DVD's title, some scenes may be skipped, or you may not be able to pause during multi-angle scenes.

To connect a PC to the HDMI terminal on the TV:

When connecting a PC to the HDMI terminal on the TV, use an HDMI-to DVI adapter cable and analogue audio cables.

If connecting a PC with an HDMI terminal, use an HDMI cable (type A connector). Separate analogue audio cables are not necessary.

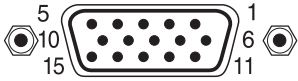


Notes:

- The edges of the images may be hidden.
- If connecting a certain PC model that signal is particular, the PC signal may not be detected correctly.

Signal names for mini D-sub 15 pin connector

Pin assignment for RGB/PC terminal



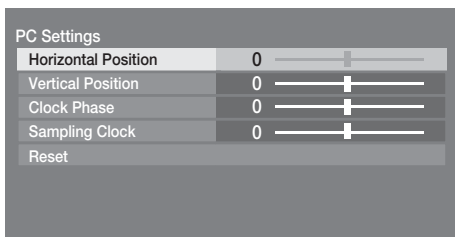
Pin No.	Signal name	Pin No.	Signal name
1	R	9	NC
2	G	10	Ground
3	B	11	NC
4	NC (not connected)	12	NC
5	Ground	13	H-sync
6	Ground	14	V-sync
7	Ground	15	NC
8	Ground		

Using the PC Settings

- First press until the video input mode list appears on the screen, then press ∇ or \triangle and in order to select the PC input mode (see page 27).
- This function may not be available for some signal or if no signal is received.
- The optimum points of the **Clock Phase** and **Sampling Clock** adjustments may be incomprehensible according to the input signals.

Adjusting the picture position

- 1 From the **Display Settings** in the **PREFERENCES** menu, press ∇ or \triangle to select **PC Settings**.
- 2 Press to display the **PC Settings** menu.



- 3 Press ∇ or \triangle to select an option you want to adjust. Press \triangleleft or \triangleright to adjust the settings as required.

Adjusting the Clock Phase of the picture

If the **Clock Phase**, which synchronize the PC signal and LCD display, is not optimized, the picture will blur.

This function enables you to adjust **Clock Phase** and display a clear picture.

- 1 From the **PC Settings** menu, press ∇ or \triangle to select **Clock Phase**.
- 2 Press \triangleleft or \triangleright to obtain a clear picture.

Adjusting the Sampling Clock

If the **Sampling Clock** does not match with the dot clock frequency of the PC, blurred picture detail will occur, or screen width will change, or drift patterns in vertical lines may be apparent. This function enables you to adjust it and optimize the picture.

- 1 From the **PC Settings** menu, press ∇ or \triangle to select **Sampling Clock**.
- 2 Press \triangleleft or \triangleright to optimize the picture.

Resetting the PC Settings

The **Reset** function adjusts the **PC Settings** to the factory settings.

- 1 From the **PC Settings** menu, press ∇ or \triangle to select **Reset**.
- 2 Press .

Note:

When a PC is connected using HDMI none of these function will be available.

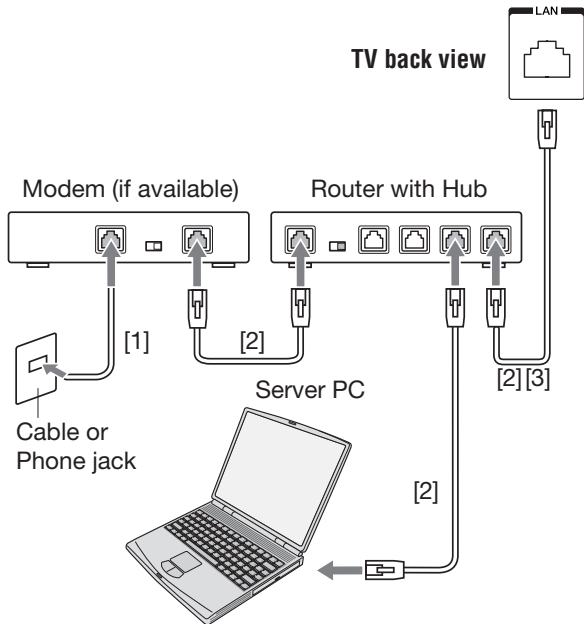
Using a home network

The LAN port allows your Toshiba TV to connect to your home network. You can use this revolutionary home entertainment networking system to access photo, video and audio files that are stored on a DLNA CERTIFIED™ server and play/display them on your TV .

Notes:

- *The TV's home network connection allows access to file sharing only. You will NOT be able to use the TV to access the Internet.*
- *If you connect to a shared-network outside your home, please use the router, and use DLNA CERTIFIED™ product in a private network environment.*
- *If you use a Hub or switch to connect the TV to your home network, you may not be able to use the automatic setup and have to manually set up the network address.*
- *If you use a router with built-in DHCP functionality, use the automatic setup. Manual setup may not work.*
- *If you connect the TV and PC directly, use a crossover LAN cable.*

To connect the TV to a home network



- [1] Coaxial or telephone cable (depending on your modem type)
- [2] Standard LAN cable
- [3] Do NOT connect a phone jack directly to the TV's LAN port.

Using your home network

This TV is a DLNA CERTIFIED™ Player. This TV can play digital content stored on a DLNA CERTIFIED™ product with server function. If you want to use this TV as a DLNA CERTIFIED™ Player, you will have to configure the network on your TV. If you want to use your home network, you will have to configure the network on your TV. Change the network settings if necessary.

Setting up the Network

Network Setup

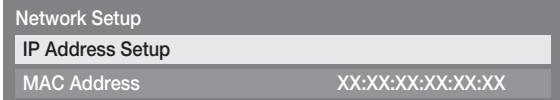
Notes:

- When the DHCP function of the router connected with this TV is On, you can set **Auto Setup** to On or Off. (This should usually be set to On.)
- When the DHCP function of the router is Off, set **Auto Setup** to Off, and set the IP Address manually.

IP Address Setup

Auto Setup:

- 1 From the **PREFERENCES** menu, select **Network Setup** and press **OK**.



- 2 Press **▽** or **△** to select **IP Address Setup**, and press **OK**.
- 3 Select **Auto Setup**, and then press **◀** or **▶** to select **On**.



Note:

Other items will be greyed out when **Auto Setup** is set to **On**.

Manual Setup:

- 1 From the **PREFERENCES** menu, select **Network Setup** and press **OK**.
- 2 Press **▽** or **△** to select **IP Address Setup**, and press **OK**.
- 3 Select **Auto Setup**, and then press **◀** or **▶** to select **Off**.
- 4 Press **▽** or **△** to select **IP Address**.
- 5 Press **◀** or **▶** to select the field you want to change, and then use the **Number** buttons to input the IP address. To save the setting, press **OK**.

Note:

IP address field numbers must be between 0 and 255. After each field number has been set, press **OK** to store the entire address. If the entire IP Address is invalid, a warning message will appear after **OK** is pressed.

- 6 Press **▽** or **△** to select **Subnet Mask**, and edit in the same way as IP Address.

Note:

If you manually set the IP address, you must not use the same IP address for any other device. The IP address you use should be a private address.

MAC Address

You can view the fixed MAC address for the TV, if one is installed.

- 1 From the **PREFERENCES** menu, select **Network Setup** and press **OK**.
- 2 Press **▽** or **△** to select **MAC Address**, and press **OK**.

Using the Media Player

This TV allows you to enjoy movie, music and photo files stored on a USB device connected to the USB port.

Moreover, you can also play photos, movies or music files from your PC by connecting the TV to your home network.

Terminology:

DMP: DLNA CERTIFIED™ Player

DMS: DLNA CERTIFIED™ Server

- DMP: The TV can control and play content from a DMS.
- A DMS is a device that can function as a server for DMP.

Notes:

- Do not insert/remove USB device while in use.
- MENU is not available during playback.

Media Player Specifications

Device

USB device

Interface version: USB2.0 HS

USB Mass Storage Class devices (MSC)

Notes:

- Connectivity is not guaranteed for all devices.
- Incorrect behaviour may occur with a USB hub connection.
- Turn off the TV before connecting a USB HDD devices.
- The **Picture Size** settings are not available.
- The **Auto Format** function is not available.
- The **Picture Position Control** is not available.
- Depending on some condition will not be displayed of the aspect ratio correctly.

File system: FAT16 and FAT32

DLNA CERTIFIED™ Server: Your PC (for example)

You must obtain any required permission from copyright owners to download or use copyrighted content. TOSHIBA cannot and does not grant such permission.

Basic operation

Using Media Player with USB

When Auto Start is enabled, you will be asked if you want to start the Media Player whenever a USB device is inserted. If Auto Start is disabled (or if you want to connect to a DMS on the network), you must manually start the Media Player from the menu.

To change the Auto Start setting:

- 1 From the **APPLICATIONS** menu, press ▾ or △ to select **USB Media Player** and press **OK**.
- 2 Press ▾ or △ to select **Setup**.
- 3 Press ▾ or △ to select **USB Auto Start** and press ◀ or ▶ to select **On** or **Off**.

Auto Start:

- 1 Insert USB device into the USB socket on the left side of the TV. A prompt will appear.
- 2 Press ◀ or ▶ to select **Yes** and press **OK**.
- 3 Press ▾ or △ to select **Photo**, **Movie** or **Music** and press **OK**.
- 4 Select the connected USB device and press **OK**.

Multi View will appear.

Note:

If **USB Auto Start** is set to **Off**, you can start the Media Player manually.

Manual Start:

- 1 Insert USB device into the USB socket on the left side of the TV.
- 2 From the **APPLICATIONS** menu, press ▾ or △ to select **USB Media Player** and press **OK**.
- 3 Press ▾ or △ to select **Photo**, **Movie** or **Music** and press **OK**.
- 4 Select the connected USB device and press **OK**.

Multi View will appear.

To select a file in the Multi View:

- 1 Press ▾, △, ◀ or ▶ to select a file or folder.
- 2 Press **OK** to move to the next layer, or press **BACK** to return to the previous layer.

Note:

You can also return to the previous layer by selecting the icon at the top left of the **Multi View** screen and pressing **OK**.

To close the Media Player:

- 1 Press **EXIT**.

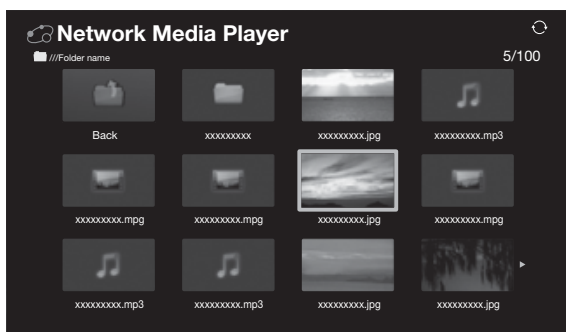
Using the Media Player with a DLNA CERTIFIED™ Server

You need to configure a home network before using this feature (see page 35).

- 1 From the **APPLICATIONS** menu, press ∇ or \triangle to select **Network Media Player** and press **OK**.
- 2 Select the server you want to use and press **OK**.

Multi View will appear.

Multi View (DMS)



Photo, Movie and Music files and folders are displayed in the **Multi View** (DMS).

To select a file in the Multi View:

- 1 Press ∇ , \triangle , \triangleleft or \triangleright to select a file or folder.
- 2 Press **OK** to move to the next layer, or press **BACK** to return to the previous layer.

Note:

You can also return to the previous layer by selecting the icon at the top left of the **Multi View** screen and pressing **OK**.

Files are displayed according to the type first selected (**Photo**, **Movie** or **Music**).
e.g. If you first selected a Photo file, only Photo files will be displayed.

To close the Media Player:

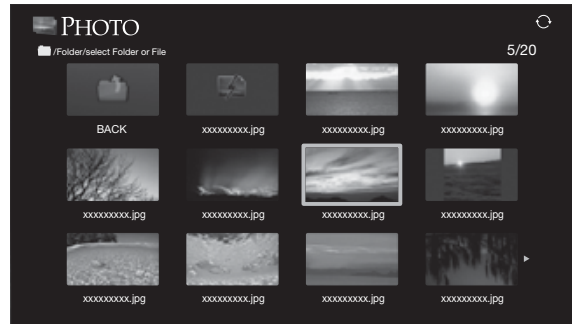
- 1 Press **EXIT**.

Viewing photo files (on a DLNA CERTIFIED™ Server or USB device)

There are three types of viewing modes.

Multi View (USB Photo)

This view allows you to search for photos in a grid format.
The pictures are displayed using thumbnail data in each image file.



The initial highlighted position will be on the top left thumbnail in the Multi View.

- 1 Press ∇ , \triangle , \triangleleft or \triangleright to move the highlight in one window. If all of the photos will not fit in one screen, when pressing \triangleleft at the top left thumbnail, the screen will move to the previous page. Conversely, when pressing \triangleright at the bottom right thumbnail, the screen will move to the next page.

P^{\wedge} (or \ll / \curvearrowright) / P^{\vee} (or \gg / \curvearrowleft) buttons can be used to page up/down the **Multi View** when there are more photos than will fit onto one screen. When the P^{\wedge} (or \ll / \curvearrowright) / P^{\vee} (or \gg / \curvearrowleft) buttons are pressed, the highlight shall be on the photo at the top left of Previous/Next **Multi View**.

Note:

The page down function on the last page and page up function on the first page are not available.

- 2 When you select a folder, press **OK** to move to the next layer. Press **BACK** to move back to the previous layer.
- 3 Press **OK** to view the selected photo in Single View mode.

Single View

In this mode, only files located in the selected directory will be displayed. This view allows you to change the photo content manually. When moving from Multi View to Single View, the currently selected photo will be displayed.

- 1 Press \triangleright to view the next photo. Press \triangleleft to view the previous photo.
- 2 Press \triangle to rotate the image 90° clockwise. Press ∇ to rotate the image 90° counterclockwise.

Note:

The information may not be correctly displayed depending on the contents or DMS.

Slide Show

This view allows you to watch a slide show of your photos. In this mode, only files located in the selected directory will be played.

- 1 To start slideshow, press **OK** in the Single View mode.
- 2 Press **◀** or **▶** to view the previous/next photo.
- 3 Press **[+]** to display file status information.

Note:

Pressing **▽** or **△** while in the **Slide Show** mode will stop the slideshow and rotate the photo.

To set Interval Time and Repeat settings:

- 1 Press **QUICK** to open the **Quick Menu**.
- 2 Press **▽** or **△** to select **Interval Time** or **Repeat**.
- 3 Press **◀** or **▶** to adjust the setting.

To set Background Music (USB only)

- 1 Press **QUICK** to open the **Quick Menu** while in the Slide Show mode.
- 2 Press **▽** or **△** to select **Background Music** and press **◀** or **▶** to select **On**.
The music file in the same folder as the displayed photo will start playing.

Note:

To stop music file playback, select **Off** in **Background Music**.

To zoom in/out photos

During the Single View mode or Slide Show mode, the zoom function can be used.

RED button (Zoom in)

USB: x1 → x2 → x4 → x8 zoom
DMP: x1/8 → x1/4 → x1/2 → x1 → x2 → x4 → x8 zoom

GREEN button (Zoom out)

USB: x8 → x4 → x2 → x1 zoom
DMP: x8 → x4 → x2 → x1 → x1/2 → x1/4 → x1/8 zoom

BACK button: Normal playback

▽△◀▶ buttons: Vertical or Horizontal scrolling

Note:

Using the zoom function while in the **Slide Show** mode will stop the slideshow and zoom in/out the photo.

To select a photo from Play List

While in the Single View mode or Slide Show mode, you can select a different photo from the Play List.

- 1 Press **QUICK** to open the **Quick Menu** from **Single View** mode or **Slide Show** mode.
- 2 Press **▽** or **△** to select **Play List** and press **OK**.
- 3 Press **◀** or **▶** to select a file name and press **OK**.

Viewing movie files (on a DLNA CERTIFIED™ Server or USB device)

You can select movies from a **Multi View** of available files.

File Compatibility

See page 43.

Multi View (USB Movie)



- 1 Press **▽**, **△**, **◀** or **▶** to select a file or folder. **P^** (or **◀/↶**)/ **Pv** (or **▶/↷**) buttons can be used to page up/down the **Multi View** when there are more files than will fit onto one screen.

Note:

The page down function on the last page and page up function on the first page are not available.

- 2 When you select a folder, press **OK** to move to the next layer. Press **BACK** to move back to the previous layer.
- 3 With the desired file selected, press **OK** or **▶** (play) to start playback.

Note:

On preview screen, if you highlight the file without pressing **OK**, the content is played on a preview screen. When **OK** is pressed, it is played in full screen mode.

- 4 Press **■** to stop playback.

Note:

If playback finishes before ■ is pressed, the screen will return to the **Multi View**.

During playback:

- Press **II/III▶** to pause.
PAUSE may not be available depending on the contents or DMS.
- To resume normal playback, press **▶** (play).
- To play in fast reverse or fast forward directions, press **◀◀** or **▶▶** during playback. Each time you press the **◀◀** or **▶▶**, the playback speed will change.
- To locate a specific file, press **◀◀** or **▶▶** repeatedly.
- Press **[I+]** to display the file status information (content number, movie title, progress time etc.).

Notes:

- The information may not be correctly displayed depending on the contents or DMS.
- During playback, you can adjust the **PICTURE** and **SOUND** menu functions from the **Quick Menu**.
- The playback speed (**◀◀** / **▶▶**) may not change depending on the stream.

To select subtitle and audio languages (USB only)

- Press **[SUBTITLE]** repeatedly to select your preferred subtitle language.
- Press **[D/L/A]** repeatedly to select your preferred audio language.

Note:

This feature is not available depending on the contents.

Setting the repeat mode

- 1** Press **QUICK** to open the **Quick Menu**.
- 2** Press **▽** or **△** to select **Repeat**.
- 3** Press **◀** or **▶** to select **Off**, **All** or **1**.

Mode	Description
Off	The file is played back only once.
All	Files in the same folder are repeatedly played back.
1	The same file is repeatedly played back.

- 4** Press **BACK**.

Note:

When in the **DMS** and **Multi View** modes, this feature cannot be used.

Resume Play (USB only)

You can resume playback from where it was last stopped.

Press **■** while playing the movie to memorize the stopped position.

On the **Multi View** screen, if you select a movie whose stopped position has been memorized, the message "Resume Play?" will appear. Select **Yes** to resume playback from the last stopped position.

Note:

If you play different content or exit **Media Player**, the memorized stopped position will be deleted.

To select a movie from Play List

While playing a movie, you can select a different movie from the **Play List**.

- 1** Press **QUICK** to open the **Quick Menu**.
- 2** Press **▽** or **△** to select **Play List** and press **[OK]**. The **Movie List** will appear.
- 3** Press **◀** or **▶** to select a file name and press **[OK]**.

To close the Movie Viewer

- 1** Press **EXIT**.

File Compatibility

See page 43.

To register your TV to a DivX® account:

This TV allows you to play back files purchased or rented from **DivX® Video-On Demand (VOD)** services. When you purchase or rent **DivX® VOD** files on the internet, you will be asked to enter a registration code.

- 1** From the **USB Media Player** menu, press **▽** or **△** to select **Setup** and press **[OK]**.
- 2** Press **▽** or **△** to select **DivX® VOD** and press **[OK]**.
- 3** Press **▽** or **△** to highlight **DivX® VOD Registration** and press **[OK]**.
- 4** The **DivX® VOD** window will appear and you will see the registration code. For details on registration, please visit the **DivX®** website at <http://vod.divx.com>.
- 5** Copy the activation file to a memory device and play it on the TV.

To deactivate your device

- 1** In step 3 above, highlight **DivX® VOD Deactivation**, and then press **[OK]**.
- 2** A confirmation message will appear. Select **Yes** and press **[OK]**.

- 3** The **DivX® VOD** window will appear and you will see the registration code. For details on registration, please visit the DivX® website at <http://vod.divx.com>.

ABOUT DIVX VIDEO: DivX® is a digital video format created by DivX, LLC, a subsidiary of Rovi Corporation. This is an official DivX CertifiedR device that plays DivX video. Visit divx.com for more information and software tools to convert your files into DivX video.

ABOUT DIVX VIDEO-ON-DEMAND: This DivX Certified® device must be registered in order to play purchased DivX Video-on-Demand (VOD) movies. To obtain your registration code, locate the DivX VOD section in your device setup menu. Go to vod.divx.com for more information on how to complete your registration.

DivX Certified® to play DivX® and DivX Plus™ HD (H.264/MKV) video up to 1080p HD including premium content.

To playback DivX Plus HD content:

- To play in fast reverse or fast forward directions, press ◀◀ or ▶▶ during playback. Each time you press ◀◀ or ▶▶, the playback speed will change.
- This TV generates original chapter point in 10% increments for 10 chapters in total, that are accessible by using the Number buttons on the remote control.

During playback, press ▶▶ to skip to the beginning of the next chapter. When ▶▶ is pressed twice in succession, it will repeat two times of above. If ▶▶ is pressed at the last chapter, playback will skip to the beginning of the next content.

Press ◀◀ to skip to the beginning of the current chapter. When ◀◀ is pressed twice in succession, it will skip to the beginning of the previous chapter. If ◀◀ is pressed twice in succession at the first chapter, stop playing the current content and skip to the beginning of the previous content.

The Number button is used for direct jump. If the 3 button is pressed, playback will jump to the beginning of 3rd chapter.

Even if the playback content has authored chapters, the Number button is used to jump directly to Auto Generated Chapter.

If the content has Authored Chapters, ◀◀ / ▶▶ are using for Authored Chapters.

Notes:

- Depending on the content data will not be operated.

- The playback speed (◀◀ / ▶▶) may not change depending on the stream.

To playback DivX Plus HD content:

DivX Plus HD files may contain up to 100 titles.

You can change the title (It contains same video file) by pressing the **RED** button.

When the **RED** button is pressed, it will display the title change window at the bottom on the screen (same as Subtitle or Audio change window).

The title is changed cyclically each time the **RED** button is pressed. Playback will start from start time of selected title every press **RED** button.

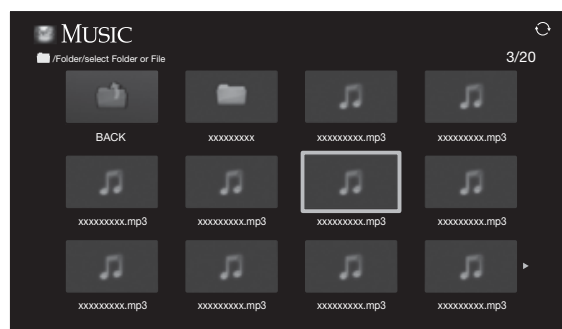
Note:

Depending on the content data will not be operated.

Playing music files (on a DLNA CERTIFIED™ Server or USB device)

You can listen to music from a **Multi View** of available files.

Multi View (USB Music)



- 1 Press ▾, ▴, ◀ or ▶ to select a file or folder. P^ (or ◀◀ / ⌂) / Pv (or ▶▶ / ⌂) buttons can be used to page up/down the **Multi View** when there are more files than will fit onto one screen.

Note:

The page down function on the last page and page up function on the first page are not available.

- 2 When you select a folder, press (OK) to move to the next layer. Press **BACK** to move back to the previous layer.
- 3 With the desired file selected, press (OK) or ▶ (play) to start playback.

Note:

If you highlight the file without pressing (OK), the content is played on a **Multi View**. When (OK) is pressed, it is played in full screen mode.

4 Press **■** to stop playback.

Notes:

- Depending on the file size, it may take some time for playback to begin.
- During playback, you can adjust the **SOUND** menu functions from the **Quick Menu**.

During playback:

- Press **⏸** to pause.
- To resume normal playback, press **▶** (play). PAUSE may not be available depending on the contents or DMS.
- To play in fast reverse or fast forward directions, press **◀◀** or **▶▶** during playback. Each time you press **◀◀** or **▶▶**, the playback speed will change.

To set the repeat mode:

- 1 Press **QUICK** to open the **Quick Menu**.
- 2 Press **▽** or **△** to select **Repeat**.
- 3 Press **◀** or **▶** to select **Off**, **All** or **1**.

Mode	Description
Off	Files in the same folder are played back once.
All	Files in the same folder are repeatedly played back.
1	The same file is repeatedly played back.

4 Press **BACK**.

Note:

When in the DMS and Multi View modes, this feature cannot be used.

To select a music file from Play List

While playing a music file, you can select a different music file from the **Play List**.

- 1 Press **QUICK** to open the **Quick Menu**.
- 2 Press **▽** or **△** to select **Play List** and press **OK**. The Music List will appear.
- 3 Press **▽** or **△** to select a file name and press **OK**.

To display the file status information

- 1 Press **⏏** during playback. The information will be displayed on the bottom of the screen.
- 2 Press **⏏** again to remove the information.

Note:

The information may not be correctly displayed depending on the contents or DMS.

Closing the Music Player:

1 Press **EXIT**.

File Compatibility

See page 45.

Using the MHL Function

You can use the following functions by connecting the HDMI 4 port on the TV and the USB port on a mobile phone, etc. with the MHL cable.

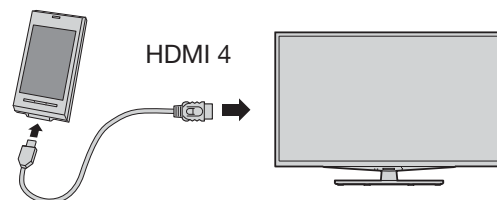
- MHL: Mobile High-definition Link
- Charging the mobile phone from the TV.
- Remote operation from the TV to the mobile phone.
- Video/Audio output from the mobile phone.

Notes:

- These functions may not be available depending on the connected device.
- If there is no battery in the connected device, charging will not start (TV standby only).

Connecting an MHL-compatible Device

Connect the device to the HDMI 4 port on the TV using an MHL cable (not supplied).



- When you connect an MHL-compatible device to the HDMI 4 port on the TV with the MHL cable, charging starts automatically.

Note:

Do not connect an MHL-compatible device to any port other than the HDMI 4 port.

Selecting the MHL Setup

Selecting whether or not input automatically switches to the HDMI 4 port when an MHL-compatible device is connected.

- 1 From the **PREFERENCES** menu, press **▽** or **△** to select **MHL Setup**.
- 2 Press **OK** to display the **TV Auto Input Switch** menu and press **◀** or **▶** to select **On** or **Off**.

Notes:

- Do not turn off the AC power source while the TV is turned on and a device is connected.

- *Do not turn off the AC power source while the TV is in standby mode and a device is connected.*
- *Depending on the connected MHL-compatible device, it may be possible to perform operations from the device.*

Exemptions

Interoperability with MHL devices of other manufacturers is not guaranteed. Toshiba does not provide any guarantee, therefore, against operational failure such as that described below when an MHL source is connected to the TV.

- No picture or sound
- Some of the functions do not work by remote operation from the TV

If the MHL does not work properly, also contact the manufacturer of the source device for advice on its use.

APPENDIX

Media Player Supported Formats

Media Player	Media Format	File Extention	Video/Audio codec	USB	DMS	Note
Photo	JPEG	.jpg .jpeg	JPEG	yes	yes	<USB> Data compatibility: JPEG Exif ver 2.2 Maximum viewable resolution: 4096 × 4096 (HW decode) 8000 × 80000 (SW decode) Maximum photo size: 9 MB Maximum number of files: 1000 / folder <DMS> Data compatibility: JPEG Exif ver 2.2 Maximum viewable resolution: 4096 × 4096 Maximum number of files: 1000 / folder *) Some files may not be played depending on file size.
	BMP	.bmp	BMP	yes	no	Maximum viewable resolution: 4096 × 4096 Maximum number of files: 1000 / folder *) Some files may not be played depending on file size.
Movie	AVI	.avi	Video) MPEG-2 MPEG-4 part2 H.264 (MPEG-4 AVC) DivX Xvid Sorenson H.263 (FLV1) Audio) MPEG-1/2 Layer2 MPEG-1/2 Layer3 Dolby Digital (AC-3) L-PCM ADPCM MPEG-2/4 LC AAC MPEG-4 HE-AAC	yes	no	<USB> Maximum number of files: 1000 per folder Maximum viewable resolution: • Motion-JPEG: 640 × 480 • Other: 1920 × 1080 *) Some files may not be played.
	MPEG-2 PS	.mpg .mpeg	Video) MPEG-1 Video MPEG-2 Video	yes	yes	
			Audio) MPEG-1/2 Layer2 MPEG-1/2 Layer3 Dolby Digital (AC-3)			
Audio) L-PCM	yes	yes				

Reference section

Media Player	Media Format	File Extention	Video/Audio codec	USB	DMS	Note
Movie	MPEG-2 TS	.ts .trp .tp	Video) MPEG-2 Video H.264 (MPEG-4 AVC) VC-1(WMV9)	yes	yes	
			Audio) MPEG-1/2 Layer2 MPEG-1/2 Layer3 Dolby Digital (AC-3) L-PCM MPEG-4 LC AAC MPEG-4 HE-AAC			
	MPEG-2 VOB	.vob	Video) MPEG-1 Video MPEG-2 Video	yes	no	
			Audio) MPEG-1/2 Layer2 MPEG-1/2 Layer3 Dolby Digital (AC-3) L-PCM			
	MOV	.mov	Video) H.264 (MPEG-4 AVC) MPEG-4 part2	yes	no	
			Audio) MPEG-1/2 Layer3 MPEG-2/4 LC AAC MPEG-4 HE-AAC			
	MP4	.mp4 .m4v	Video) H.264 (MPEG-4 AVC) MPEG-4 part12,14	yes	yes	
			Audio) MPEG-1/2 Layer3 MPEG-2/4 LC AAC MPEG-4 HE-AAC			
ASF	.asf .wmv	Video) VC-1 (WMV9)	yes	no		
		Audio) WMA7/8/9 Std WMA9 Pro				
DivX	.divx .div	Video) DivX 3, 4, 5, 6	yes	no		
		Audio) MPEG-1/2 Layer2 MPEG-1/2 Layer3 Dolby Digital (AC-3) PCM ADPCM				
Xvid	.xvid	Video) Xvid	yes	no		
		Audio) MPEG-1/2 Layer2 MPEG-1/2 Layer3 Dolby Digital (AC-3) PCM ADPCM				

Reference section

Media Player	Media Format	File Extention	Video/Audio codec	USB	DMS	Note
Movie	MKV	.mkv	Video) MPEG-1 Video MPEG-2 Video MPEG-4 part2 H.264 (MPEG-4 AVC)	yes	no	
			Audio) MPEG-1/2 Layer2 MPEG-1/2 Layer3 Dolby Digital (AC-3) L-PCM MPEG-2/4 LC AAC MPEG-4 HE-AAC			
	RealMedia	.rm .rmvb	Video) RealVideo 8, 9, 10	yes	no	
			Audio) Dolby Digital (AC-3) MPEG-2/4 LC AAC			
	Flash Video (FLV1)	.flv .swf	Video) Sorenson H.263(FLV1) H.264 (MPEG-4 AVC)	yes	no	
			Audio) MPEG-1/2 Layer3 MPEG-2/4 LC AAC L-PCM ADPCM			
3GPP	.3gp	Video) MPEG-4 part2 H.264 (MPEG-4 AVC)	yes	no		
		Audio) MPEG-2/4 LC AAC AMR				
Motion JPEG	.avi .mp4 .mkv	Video) JPEG	yes	no		
		Audio) L-PCM ADPCM				
Music	MP3	.mp3	MPEG-1/2 Layer-3	yes	yes	<USB> Maximum number of files: 1000 per folder
	MP4	.m4a	MPEG-2/4 LC AAC	yes	yes	
	WMA	.wma	WMA7/8/9/ Std	yes	yes	
			WMA9 Pro	yes	no	
WAV	.wav	LPCM ADPCM MPEG-1/2 Layer-3 WMA7/8/9/ Std WMA9 Pro	yes	no		

3D Support Format

Resolution	Aspect ratio	V.Frequency	H.Frequency	Pixel Clock Frequency	3D Structure		
720 × 480p	16:9	59.940/60.000 Hz	31.469/31.500 kHz	27.000/27.027 MHz	Side by Side (Full)		
					Side by Side (Half)		
					Top and Bottom		
720 × 576p	16:9	50.000 Hz	31.250 kHz	27.000 MHz	Side by Side (Full)		
					Side by Side (Half)		
					Top and Bottom		
1280 × 720p	16:9	59.940/60.000 Hz	90.0/89.91 kHz	148.352/148.500 MHz	Frame Packing		
			44.955/45.000 kHz	74.176/74.250 MHz	Side by Side (Half) Top and Bottom		
		50.000 Hz	75.000 kHz	148.500 MHz	Frame Packing		
			37.500 kHz	74.250 MHz	Side by Side (Half) Top and Bottom		
		1920 × 1080i	16:9	59.940/60.000 Hz	33.716/33.750 kHz	74.176/74.250 MHz	Side by Side (Half) Top and Bottom
					50.000 Hz	28.125 kHz	74.250 MHz
1920 × 1080p	16:9	24.000 Hz	54.000 kHz	148.500 MHz	Frame Packing		
			27.000 kHz	74.250 MHz	Side by Side (Half) Top and Bottom		
		30.000 Hz	67.433/67.500 kHz	148.352/148.500 MHz	Frame Packing		
			33.716/33.750 kHz	74.176/74.250 MHz	Side by Side (Half) Top and Bottom		
		50.000 Hz	56.250 kHz	148.500 MHz	Side by Side (Half)		
					Top and Bottom		
		59.940/60.000 Hz	67.433/67.500 kHz	148.352/148.500 MHz	Side by Side (Half) Top and Bottom		

Signal Class Table

C mode

OSD	RF Frequency [MHz]
C1	44.25
C2	48.25
C3	55.25
C4	62.25
C5	175.25
C6	182.25
C7	189.25
C8	196.25
C9	203.25
C10	210.25
C11	217.25
C12	224.25
C21	471.25
C22	479.25
C23	487.25
C24	495.25
C25	503.25
C26	511.25
C27	519.25
C28	527.25
C29	535.25
C30	543.25
C31	551.25
C32	559.25
C33	567.25
C34	575.25
C35	583.25
C36	591.25
C37	599.25
C38	607.25
C39	615.25
C40	623.25
C41	631.25
C42	639.25
C43	647.25
C44	655.25

OSD	RF Frequency [MHz]
C45	663.25
C46	671.25
C47	679.25
C48	687.25
C49	695.25
C50	703.25
C51	711.25
C52	719.25
C53	727.25
C54	735.25
C55	743.25
C56	751.25
C57	759.25
C58	767.25
C59	775.25
C60	783.25
C61	791.25
C62	799.25
C63	807.25
C64	815.25
C65	823.25
C66	831.25
C67	839.25
C68	847.25
C69	855.25
C70	863.25

S mode

OSD	RF Frequency [MHz]
S1	105.25
S2	112.25
S3	119.25
S4	126.25
S5	133.25
S6	140.25
S7	147.25
S8	154.25

OSD	RF Frequency [MHz]
S9	161.25
S10	168.25
S11	231.25
S13	238.25
S14	245.25
S15	252.25
S16	259.25
S17	266.25
S18	273.25
S19	280.25
S20	287.25
S21	294.25
S22	303.25
S23	311.25
S24	319.25
S25	327.25
S26	335.25
S27	343.25
S28	351.25
S29	359.25
S30	367.25
S31	375.25
S32	383.25
S33	391.25
S34	399.25
S35	407.25
S36	415.25
S37	431.25
S38	439.25
S39	447.25
S40	455.25
S41	463.25
S51	69.25
S52	76.25
S53	83.25
S54	90.25
S55	97.25

Troubleshooting

Before calling a service technician, please check the following table for a possible cause of the symptom and some solutions.

Symptom and solution


TV will not turn on

- Make sure the power cord is plugged in, and then press \odot .
- The remote control batteries may be dead. Replace the batteries.

No picture, no sound

- Check the aerial connections.

No sound, picture OK

- The sound may be muted. Press \triangleleft +, - or .
- The station may have broadcast difficulties. Try another channel.

Poor sound, picture OK

- The station may have broadcast difficulties. Try another channel.

Poor picture, sound OK

- Check the aerial connections.
- The station may have broadcast difficulties. Try another channel.
- Adjust the **PICTURE** menu.

Poor reception of broadcast channels

- Check the aerial connections.
- The station may have broadcast difficulties. Try another channel.
- Make sure the **Colour System** is properly set.

Teletext problems

- Check the aerial connections. Good performance of text depends on a good strong broadcast signal.

Some pixels of the screen do not light up

- The LCD display panel is manufactured using an extremely high level of precision technology, however, sometimes some pixels of the screen may be missing picture elements or have luminous spots. This is not a sign of a malfunction.

The picture brightness varies when you display switch the TV on.

- If you switch the TV on at 0°C and under, wait until the warms up.

Multiple images

- The station may have broadcast difficulties. Try another channel.
- Aerial reception may be poor. Use a high directional outdoor aerial.
- Check if the direction of the aerial has changed.




Poor colour or no colour

- The station may have broadcast difficulties. Try another channel.
- Adjust the **Tint** and/or **Colour** in the **PICTURE** menu.

The remote control does not operate

- Remove all obstructions between the remote control and the remote control sensor on the TV.
- The remote control batteries may be dead. Replace the batteries.

3D problems

- If 3D images are not correct, the 3D format may be different. Change the 3D format from **Quick Menu** ( page 24).
- The left and right sides of 3D images may be reversed. Switch the left and right ( page 27).
- If 2D images are not correct, the 2D format may be different. Change the 2D format from **Quick Menu** ( page 25).
- Remove all obstructions between the 3D Glasses and the TV.
- Replace the 3D Glasses' battery.

Broadcast system

Broadcast transmission systems of each country or region

Asia M.E.

Country or region	Colour	Sound
Bahrain, Kuwait, Israel, Oman, Qatar, United Arab Emirates, Yemen, etc. Indonesia, Malaysia, Singapore, Thailand, etc.	PAL	B/G
China, Vietnam	PAL	D/K
China Hong Kong	PAL	I
Iraq, Islamic Republic of Iran, Lebanon, Saudi Arabia, etc.	SECAM	B/G
Russian Federation, etc.	SECAM	D/K
Myanmar, Republic of the Philippines, etc.	NTSC	M

Oceania

Country or region	Colour	Sound
Australia, New Zealand, etc.	PAL	B/G

Africa

Country or region	Colour	Sound
Republic of South Africa, etc.	PAL	I

South America

Country or region	Colour	Sound
Brazil	PAL	M
Chile, Colombia, etc.	NTSC	M

Note:

PAL, SECAM and NTSC 3.58 (MHz) are different colour signal broadcast transmission systems applicable to different countries or region. NTSC 4.43 (MHz) is used in special VCRs to playback NTSC recorded video tapes through PAL TV equipment.

Specifications

LED LCD TV

Model

40TL20 Series,
46TL20 Series

Power source

110V-240V AC, 50/60Hz

Power consumption

40" : 112 W, 0.3 W (standby)
46" : 134 W, 0.3 W (standby)

Dimensions

40" : 923 mm (W) 628 mm (H) 240 mm (D)
46" : 1,056 mm (W) 703 mm (H) 287 mm (D)

Mass (Weight)

40" : 14.5 kg
46" : 16.5 kg

TV system (Aerial input)

Channel coverage:

PAL	B/G (CCIR)	VHF	2 - 12
		UHF	21 - 69
		CATV	X - Z+2, S1 - S41
PAL	I (UK)	VHF	-
		UHF	21 - 69
		CATV	-
PAL	D/K (CHINA)	VHF	1 - 12
		UHF	13 - 57
		CATV	Z1 - Z38
SECAM	B/G (CCIR)	VHF	2 - 12
		UHF	21 - 69
		CATV	X - Z+2, S1 - S41
SECAM	D/K (OIRT)	VHF	1 - 12
		UHF	21 - 69
		CATV	X1 - X19
NTSC	M (US)	VHF	2 - 13
		UHF	14 - 79
		CATV	A6 - A1, A - W, AA - ZZ, AAA, BBB
NTSC	M (JAPAN)	VHF	1 - 12
		UHF	13 - 62
		CATV	M1 - M10, S1 - S41

Special RF signal:

NTSC 4.43 colour system

5.5/6.0/6.5 MHz sound system

PAL 60 Hz colour system

5.5/6.0/6.5 MHz sound system

COMPONENT VIDEO INPUT terminals (the signal format)

480i, 480p, 576i, 576p, 720p (50/60 Hz),
1080i (50/60 Hz)

(These signal formats are converted to match the number of pixels of the LCD panel.)

Colour System

PAL, SECAM, NTSC 3.58/4.43

Aspect ratio

16 : 9

Visible size (diagonal)

40" : 101.6 cm
46" : 116.8 cm

Number of pixels

1920 (H) dots × 1080 (V) dots

Audio power

10 W + 10 W

Speakers

Main 42 × 160 mm 2pcs.

Input/Output terminals

⊖ (1)	Input	
COMPONENT / VIDEO INPUT	Standard video or Component video	Y, Pb/Cb, Pr/Cr
	Phono jacks	Audio L / Mono +R
⊖ (2)	Input	
	Phono jacks	A/V
⊕ DIGITAL AUDIO (optical)	Output	Bitstream / PCM
⊕ AUDIO (FIXED)	Output	3.5 mm (Diameter) stereo
⊖ RGB/PC	Input	Mini D-sub 15 pin Analogue RGB
⊖ PC/HDMI 3 (AUDIO)	Input	3.5 mm (Diameter) stereo
⊖ HDMI1-4	Input (type A)	19 pin A/V Digital HDMI (Lip Sync)
USB port 1-2	Media Player Interface version:	USB 2.0
	USB class:	Mass Storage
	File system:	FAT16 and FAT32
LAN port		RJ-45

Operating condition

Temperature 0°C - 35°C
Humidity 20% - 80% (No moisture condensation)

Supplied accessories

Owner's manual (1), Remote control (1), Batteries (2), Clip (1) (☞ page 2), Screw (1) (☞ page 2), Pedestal stand (1)

Optional accessories

Toshiba 3D glasses

- Design and specifications are subject to change without notice.
- Never service or remodel the TV by yourself. It may expose you to a fire hazard or dangerous voltages.

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