

OWNER'S MANUAL

Integrated Digital LCD TV



32AV800A 26/32EL800A 32/40LV800A 32/42HL800A

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.

	8 8 6 1
Model number:	
Serial number:	

Contents

Introduction	
Welcome to Toshiba4	1
Important Safety Instructions4	
Installation4	
Use	
Service	
Important information	
Getting started	•
Connecting an antenna9	9
Exploring your new TV9	9
Installing the remote control batteries9	
Effective range9	
TV front and side panel controls	
Learning about the remote control1	
Learning about the remote control	5
TV SETUP menu chart1	5
Turning on the TV16	
Switching on the TV	
Switching off the TV	
Quick Setup	
Auto Tuning	
Manual Tuning1	
ATV Manual Tuning1	
DTV Manual Tuning18	
DTV Settings	
Channel Edit	
Channel Sort	
Skip Watched Channel	9
Lock Watched Channel20	
Automatic Power Down	
Reset TV	
General Control	
Switching between two programme positions 20	
Stereo and Bilingual transmissions	0
Time Display2	
Quick Access	
Information	1
Using the TV's features (General)	_
Picture Control 2: Widescreen viewing 2:	
Still Picture	
Picture Mode	
Backlight24	
Contrast, Brightness and Colour24	
Tint	
Sharpness	
Cinema Mode	
Static Gamma	
Colour Temperature25	
Active Backlight Control25	
DNR29	
MPEG NR	
Blue Screen	
Sound Adjustment	
Volume	
Sound Mute25	
Dual	
Balance, Bass and Treble	b

Ot III O I [®]	~~
Stable Sound®	
Surround Sound	
Bass Boost	
SPDIF Type	26
PC/HDMI 1 Audio	26
HDMI Audio	26
Lip Sync	
Headphone Setting	
Selecting the stereo programmes	
Only the Stereo programmes	21
Selecting the bilingual programmes	21
Applications Control	
On Timer	
Sleep Timer	
Local Time Setting	
Input Selection	28
REGZA-LINK Controls	28
Equipment Control	
Input Source Selection	
Pass-Through Control	
REGZA-LINK Menus	
One Touch Play	
System Standby	29
System Audio Control	
Enable REGZA-LINK	
Auto Power On	30
Auto Standby	30
Amplifier Control	30
Speaker Preference	30
Media Player	30
Media Player Specifications	30
Enter Media Player	
Photo Multi-View	
Playing Photo	
Viewing Music Files	
Playing Music	32
Viewing Video Files	
Enjoying Video	33
Preference Control	33
Auto Format	
4:3 Stretch	
Subtitle Language	
Subtitle Type	
Audio Language	
Audio Type	
Parental control	
Programme Lock	
Change Password	
Panel Lock	35
Programme Guide	35
Guide	35
EPG	
Teletext	
Setting the Mode	
Text Information	
Control buttons	
	30
Connecting your TV	
Back Connections	
Connecting an audio system	37
Connecting an amplifier equipped with a Dolby	
Digital decoder	38
Connecting an amplifier equipped with an MPE	G
decoder	
Connecting an amplifier equipped with a digital	
audio (coaxial) input	
Side Connections	

Co	onnecting an HDMI or a DVI device	41
	Connecting an HDMI or a DVI device	41
	Connecting an HDMI device	41
	Connecting a DVI device	41
RE	EGZA-LINK Connections	42
Co	onnecting a computer	43
Us	sing the PC setting	43
	Adjusting the picture settings	43
	Auto Adjust for PC	43
Ac	ccepted Video signals through HDMI terminals	44
Ac	ccepted PC signals through HDMI terminals	44
Referer	nce section	
Tr	oubleshooting	45
	Symptom and solution	45
Sp	pecifications	
Informa		
Lic	cense Information for software used with Toshiba	
Te	levisions	48
Ap	pendix A – MPEG Audio	49
	pendix B – JPEG decoder	
	ppendix C – PNG decoder	
Ap	ppendix D – Zlib	51
	•	

Welcome to Toshiba

- Thank you for purchasing this Toshiba LCD Colour television. This manual will help you use the exciting features of your new TV.
- Instructions in this manual are based on using the remote control and not the buttons on the television.
- 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

 Always connect the power plug to an appropriate electrical outlet equipped with 220-240V, AC 50Hz.

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



Never insert or remove the power plug with wet hands.

This may cause an electric shock.



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

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



- 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.



 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.



 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.



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

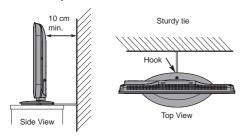
This may cause a fire or an electric shock.



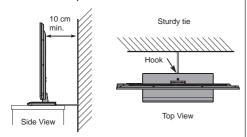
Always place the TV on the floor or a sturdy, level, stable surface that can support the weight of the unit.

To secure the TV, use a sturdy strap from the base plate backside hook to a wall stud, pillar, or other firm immovable structure. Make sure the strap is tight, secure, and parallel to the floor.

32AV800A | 32/40LV800A



26/32EL800A | 32/42HL800A



Wall mounting of the TV should only be performed by qualified servicing personnel. Use only with the wall mount bracket specified by the manufacturer.

9) Precautions for moving the TV

When moving the TV, be sure to remove the plug from the wall outlet and disconnect the antenna and audio/video cables, as well as any steady ties. Fire or 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.



10) Precautions for installing on outdoor antenna

An outside antenna system should not be located in the vicinity of overhead power lines, or other electric light or power circuits.

If the antenna falls down or drops, it may cause injury or electric shock.



Use

 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.



 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.



 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 into the TV.



4) Never stand or climb on the TV.

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.



- 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 ① / 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.



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.



 Never cut, break, modify, twist, bunch up or bend the cord or apply excessive force or tension to

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.



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

You may suffer an electric shock.



Service

 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.



 When a malfunction occurs, or if smoke or an unusual odour comes from the TV, turn off the TV and remove the power plug from the content 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.



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 is still power used 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.



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

Note:

The lamp unit contains a small amount of mercury. Disposal of mercury may be regulated due to environmental considerations.

Dispose of the used lamp unit by the approved method for your area. For disposal or recycling information, please contact your local authorities.



Cleaning

1) Remove the power plug before cleaning.

Never use solvents such as benzine 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.



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 dry cloth.

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



Important information

If a television is not positioned in a sufficiently stable location, it can be potentially hazardous due to falling. Many injuries, particularly to children, can be avoided by taking simple precautions such as:

- Only using furniture that can safely support the television.
- Ensuring the television is not overhanging the edge of the supporting furniture.
- Not placing the television on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television to a suitable support.
- Not standing the televisions on cloth or other materials placed between the television and supporting furniture.
- Educating children about the dangers of climbing on furniture to reach the television or its controls.

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 in the place such as window side or outside of the room.

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) 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.

Note: Interactive video games that involve shooting a "gun" type of joystick at an onscreen target may not work with this TV.

4) 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).

5) 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 a malfunction.

6) 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.

Exemptions

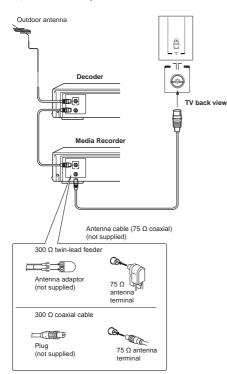
- Toshiba is not liable for any damage caused by fires, natural disaster (such as thunder, earthquake, etc.), acts by third parties, accidents, owner's misuse, or uses in other improper conditions.
- Toshiba is not liable for incidental damages (such as profit loss or interruption in business, modification 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.

Trademark Information

- Manufactured under license from Dolby Laboratories.
 Dolby and the double-D symbol are trademarks of Dolby Laboratories.
- HDMI, the HDMI logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries
- DVB is a registered trademark of Digital Video Broadcasting Project.
- MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson.

Connecting an antenna

Optimum reception of colour requires a good signal and will generally mean that an outdoor antenna must be used. The exact type and positioning of the antenna will depend upon your particular area. Your Toshiba dealer or service personnel can best advise you on which antenna to use in your area. Before connecting the antenna cable, turn off all main power switches.



Exploring your new TV

Installing the remote control batteries

Remove the battery cover.

Insert two AAA, 1.5V batteries matching the –/+ polarities of the battery to the –/+ marks inside the battery compartment.



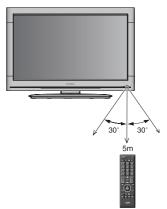
Cautions:

- Dispose of batteries in a designated disposal area.
 Never throw batteries into a fire.
- 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.

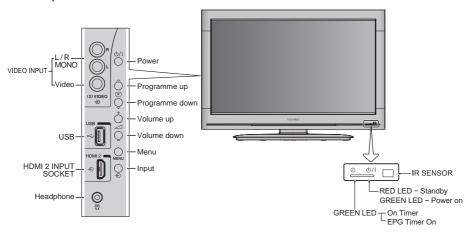
Effective range



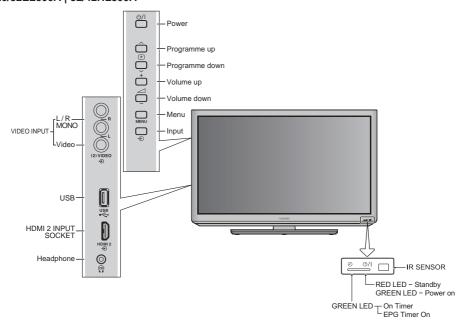
TV front and side panel controls

You can operate your TV using the buttons on the TV control panel or the remote control. The back and side of the panel provide the terminal connections to connect other equipment to your TV. (pp page 37 Connecting your TV)

32AV800A | 32/40LV800A



26/32EL800A | 32/42HL800A



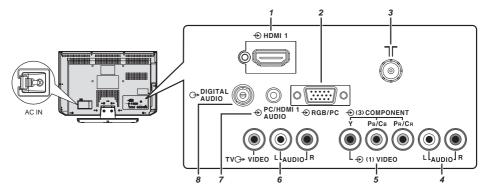
也/ Power	Press to turn the TV on or standby.	
^P~	Program position: When no menu is on-screen, these buttons select the programme position. Menu up/down: When a TV menu is on-screen, these buttons function as up/down menu navigation buttons.	
-⊿+	Volume: When no menu is on- screen, these buttons adjust the volume level. Menu left/right: When a TV menu is on-screen, these buttons are used for left/right menu navigation and to adjust settings.	
Menu	Menu: Press to access the TV menu. RETURN: When a TV menu is on-screen, this button will take you back to the previous menu.	
- ⊚ Input	Input Source: When no menu is on-screen, this button selects the input source. () page 28 Input Selection) OK: When a TV menu is onscreen, this button will make a selection or take you to the next available menu layer.	

IR Sensor	Point your remote control at this area when selecting programme position or adjusting the volume level, etc.	
① Timer LED	Green LED: On Timer/EPG Timer On.	
也/ Power LED	Red LED: Standby Green LED: Power On	
AV terminal	Standard (composite) video and standard audio inputs.	
USB port	For use when inserting a USB disk. (Movies: MKV, AVI, MPEG, MPG, VOB, Photo: JPEG, Music: MP3) (Also served for software upgrade.)	
(ii) Headphone jack	For use with headphones. (page 27 <u>Headphone</u> <u>Setting</u>)	
HDMI input	High-Definition Multimedia Interface input receives digital audio and uncompressed digital video from an HDMI device or uncompressed digital video from a DVI device. (ISP page 41 Connecting an HDMI or a DVI device)	

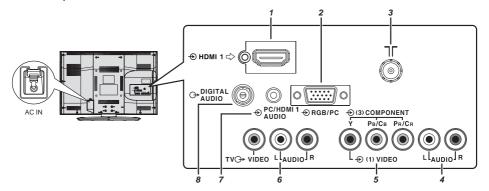
TV back panel connections

Before connecting any external equipment, turn off all main power switches. If there is no switch, remove the mains plug from the wall socket.

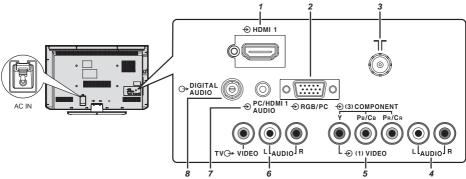
26EL800A



32AV800A | 32/40LV800A



32EL800A | 32/42HL800A



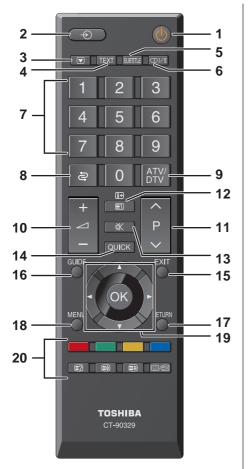
- 2 PC input terminal For use when connecting a personal computer (PC). (PS page 43 Connecting a computer)
- 4 Audio input terminal Standard audio inputs for use when connecting component video input or composite video input.
- 5 Ocomponent input terminals
 - For use when connecting a high-definition component video device with standard audio output. (page 37 Back Connections).
 - For use when connecting a standard (composite) video and standard audio inputs.
- 6 TV output terminals For use when connecting an ATV/DTV video recorder with standard video and standard audio input.
- 7 PC/HDMI 11 Audio Input terminals PC audio input terminal is shared with the HDMI 1 analogue audio input terminal, and their use can be configured in the SETUP menu. (Page page 26 PC/HDMI 1 Audio, page 43 Connecting a computer)

8 Digital Audio (coaxial) output terminal —
For use when connecting an amplifier with coaxial type digital audio input. (ISP page 38 Connecting an amplifier equipped with a Dolby Digital decoder, page 38 Connecting an amplifier equipped with an MPEG decoder, page 39 Connecting an amplifier equipped with a digital audio (coaxial) input)

Learning about the remote control

Location of controls

Simple at-a-glance reference of your remote control.



- For On/Standby mode
- 2. To select input from external sources
- 3. Still Picture
- 4. To call up Teletext services
- 5. To turn the subtitle On/Off
- 6. Stereo/Bilingual transmissions
- 7. Number buttons
- 8. To return to the previous programme
- 9. To toggle between ATV and DTV mode
- 10. To alter the volume
- 11. To change programme
- 12. In TV mode: To display onscreen information In Text mode: To access index page
- 13. To mute the sound
- 14. To display Quick access menu
- 15. To exit menus
- 16. To display the programme guide
- To return to the previous level of the on-screen menu
- 18. To display the on-screen menu
- ▲, ▼, ◄, ►: To move Up, down, left or right in the on-screen menu

OK: To confirm the selection

- 20. Colour button: Text control buttons
 - To reveal concealed text
 - To hold a wanted page
 To enlarge text display size
 - ⑤/図 In normal picture mode: To display clock on TV screen.

In Teletext mode: To toggle between Teletext and normal picture mode

Learning about the menu system

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

- Press [™] to display menu, then press ◀ or ► to select main menu headings.
- Press (③), ◀ or ► to select the required choice.
 Follow the on-screen instructions. (The functions of each menu are described in detail throughout the manual).
- Press to return the previous level of the on-screen menu.
- If you want to close the menu, press \(\bigcirc
 \).

TV SETUP menu chart

PICTURE menu



SOUND menu ⊲Î⊳



APPLICATIONS menu ⊲Î⊳







SETUP menu ⊲ Î⊳



Note for menu system:

 If you do not make a selection for a while, the menu display disappears automatically.

Turning on the TV

Switching on the TV

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

Press ⑤ on the remote control or Φ/I on the TV control panel, the Φ/I power indicator lights in green.

Switching off the TV

Press on the remote control or 0/I on the TV control panel to switch to the standby mode.

Notes

- This TV is not fully disconnected from the main supply, as minute current is consumed even when the TV is turned off. 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.

Quick Setup

Before switching on the TV, put your decoder and media recorder to **Standby** if they are connected and ensure the antenna is connected. To setup the TV, use the buttons on the remote control. (PSP page 14 <u>Learning</u> about the remote control)

- Connect the television to the main power and press the POWER button. The Quick Setup screen will appear at the first use.
- Press ◀ or ▶ to select your time zone and press ôs to the next step.



 Press ◀ or ▶ to select the Location and press ® to the next step.



4. Press ◀ or ▶ to select the Tuning Mode.



- Press ▲ or ▼ to select Bandwidth and press ◀ or ► adjust your preference.
- 6. To start channel scan, use ▲ or ▼ to select Start Scan and press ⊚.



The search will begin for all available stations. The slide bar will move along the line as the search progresses.

Note: If you skip this step, the channel scan can still be performed later in the Setup Menu.

Setting the programmes

Note: When the **Channel Block** is activated, a 4-digit password is needed to enter the **Channel Option** submenu under **DTV Settings** menu.

Auto Tuning

The **Auto tuning** will completely re-tune the television and update the channel list.

It is recommended that Auto tuning is run periodically to ensure that all new services are added.

Note: All the programmes and settings that were previously saved will be lost.

 Press Ö. Use ◀ or ▶ to select SETUP and then press ⊛ to enter.





3. Press ◀ or ▶ to select the Tuning Mode.



- Press ▲ or ▼ to select Bandwidth and press ◀ or ► adjust your preference.
- 5. To start channel scan, use ▲ or ▼ to select **Start Scan** and press Ø.

Manual Tuning

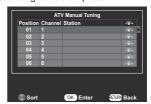
ATV Manual Tuning

Search the new channels that are not in the programme list.

- Press [™] and then press ◀ or ▶ to select SETUP.
- Press ▲ or ▼ to highlight ATV Manual Tuning and press () to enter.



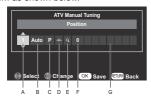
Press ▲ or ▼ select the programme position you want to arrange and then press ►.



 Press ▲ or ▼ move through the list to your preferred position. As you do so the other stations will move to make room.

Press ◀ to store programme position.





А	Position	The number to be pressed on the remote control.	
В	System	Specific to certain areas.	
С	Colour System	Factory set to Auto, should only be changed if problems are experienced.	
D	Skip	The channel will be skipped when press ▲ or ▼.	
E	Searching	Search up and down for a signal.	
F	Manual Fine Tuning	Adjust the phase of signal to get better quality.	
G	Station	Station identification. Use the ▲ or ▼ and ◀ or ▶ buttons to enter up to seven characters.	

6. Press on to save.

DTV Manual Tuning

Scan single RF channel. You can check the Signal Strength and the Signal Quality.

1. Select DTV Manual Tuning from the SETUP menu.



2. Press ◀ or ▶ to adjust your preference.



- Press ▲ or ▼ to select Bandwidth and press ◀ or ► adjust your preference.
- Press ▲ or ▼ to select the Start Scan and press ⊗ to start scanning.

DTV Settings

Channel Edit

Edit the channel number.

1. Select DTV Setting from the SETUP menu.





 Press ▲ or ▼ to select the channels you want to edit, then press the RED button on the remote control.

Change the **Position** by using the number buttons 0~9.



Channel Skip

To prevent certain programmes from being viewed, the programme position can be skipped. The remote control must be removed as the channels will still be available using the number buttons. Programmes can then be watched as normal using the controls on the television, but the television will not show the skipped programme position.

- 1. Select DTV Setting from the SETUP menu.
- Press ▲ or ▼ to select the channels you want to skip, then press the BLUE button on the remote control.
 - A icon appears.



The skipped programme positions **cannot** be selected by $P \land$ and $P \checkmark$, or by the controls on the television, but **can** still be accessed by the number buttons on the remote control.

Channel Sort

Change the order of the programme list.

- 1. Select DTV Setting from the SETUP menu.

 Press ▲ or ▼ select the desired channel and then press ^(N). A tick icon appears.



 Press ▲ or ▼ to select the channel you wish to swap with the one selected in Step 3 and then press ⊗.



Skip Watched Channel

This function is to setup the Skip for currently watched channel.

- 1. Select DTV Setting from the SETUP menu.
- Press ▲ or ▼ to highlight the Channel Option and press
 to select.



3. Press ◀ or ▶ to highlight the skip (♠) box and press ⋈ to set. A tick appears.



Lock Watched Channel

This function is to setup the Lock for currently watched channel.

- 1. Select DTV Setting from the SETUP menu.
- Press ▲ or ▼ to highlight the Channel Option and press () to select.
- 3. Press ◀ or ▶ to highlight the lock () box and press o to set. A tick appears.



Automatic Power Down

The TV will automatically turn itself off (standby) after approximately 4 hours, if you do not touch the control buttons on the remote control or on the TV control panel. The TV will also automatically turn off if no input signal is detected after approximately 15 minutes.

 In the SETUP menu, press ▲ or ▼ to highlight Automatic Power Down.



2. Press ◀ or ▶ to select On or Off.

Reset TV

Selecting **Reset TV** will reset all TV settings to their original factory default settings.



2. Select Yes to confirm, or select No to exit.



Note: After **Reset TV** is completed, the **Quick Setup** screen will appear.

General Control

Selecting programme positions

After you have tuned the TV, you have several ways to navigate through all programmes:

- Press the Number buttons (a channel number has 3 digits) and you may omit the leading zeroes, which will be appended automatically; (Please note that if you have channels with different frequencies but the same channel number, the TV will always tune to the first channel that has been stored into the channel database. To view the other duplicating channels, you can select the channels by using P ^ / P >> buttons.)
- Press P ∧ / P ∨ to view the previous and next programme. The channels are arranged in ascending order according to the channel number.
- Press
 ® when there is no menu on screen. The
 Channel List will appear. You can use ▲ or ▼ to
 choose the programme you want. Then, press to
 show the programme.

Switching between two programme positions

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

- 1. Select the first programme position you want to view.
- 2. Select the second programme 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 programme positions.

Stereo and Bilingual transmissions

If stereo or dual language broadcasts are transmitted the word Stereo or Dual will appear on the screen each time programme positions are changed, disappearing after a few seconds. If the broadcast is not in stereo the word Mono will appear.

Stereo... ① I/II Press to select Stereo or Mono.

Bilingual... Bilingual transmissions are rare. If they are transmitted the word Dual will display. Choose the required programme number and if the word Dual appears press ① I/II to select Dual 1 or Dual 2.

Time Display

The time display facility allows the current broadcasted time to be seen on the television screen.

Press (1) So on the remote control while watching a normal television broadcast to see the time display from the broadcaster. It will remain on screen for about 5 seconds.

Quick Access

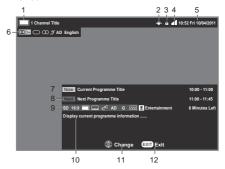
Quick Access menu helps you access some options quickly, such as **Picture Size**, **Sleep Timer**, **Media Player** and **REGZA-LINK**. Press **QUICK** button to display the **Quick Access** menu and press ▲ or ▼ to select the option.



Information

The on-screen information will give the details of the channel programme currently being viewed.

 Press (i+), the information screen will appear giving details of the programme and event currently being viewed.



1	Service type
2	Skip
3	Channel block
4	Signal strength
5	Current time and date
6	Audio information
7	Current programme and time
8	Next programme and time
9	Event information
10	Current programme information
11	Change between Now and Next programme list
12	Exit the information screen

2. Press i+ again to close the information screen.

Picture Control

Widescreen viewing

Wide	Use this setting when watching a widescreen DVD, widescreen video tape or a 16:9 broadcast (when available). Due to the range of widescreen formats (16:9, 14:9, 20:9 etc.) black bars may be visible 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 letterbox format films/ video tapes, this setting will eliminate or reduce the black bars at the top and bottom 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 to ensure that all the text is displayed.	Subtile
14:9	Use this setting when watching a 14:9 broadcast.	
Native	When using a PC connected via HDMI this setting will show the picture without over scan, i.e. WYSIWYG. This option is only available when watching video signal source via HDMI.	

Press QUICK to display the Quick Access menu and use ▲ or ▼ to select the Picture Size and press ◀ or ► to select the option.



You can choose the picture size from Wide, 4:3, Super Live, Cinema, Subtitle, 14:9, Native, Normal, or Dot by Dot.

Available Picture Size and Position Control

Screen Mode	SD (up to 576p)	HD (up to 1080p)	PC
Wide	Yes	Yes	Yes
4:3	Yes	Yes	No
Super Live	Yes	Yes	No
Cinema	Yes	Yes	No
Subtitle	Yes	No	No
14:9	Yes	No	No
Native	Yes (only in HDMI)	Yes	No
Normal	No	No	Yes
Dot by Dot	No	No	Yes

Notes:

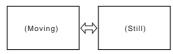
- Using the special functions to change the size of the displayed image (e.g. changing the height/width ratio) for the purpose of public display or commercial gain may infringe on copyright laws.
- · When using a PC connected via HDMI or RGB/PC terminal, moving image quality may deteriorate.

Still Picture

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 T 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.

Picture Mode

You can adjust the best picture appearance by selecting the preset value in picture mode based on the programme category.

Press [™] and use ◀ or ▶ to select PICTURE and press [™] to select.



Press ▲ or ▼ to select Picture Settings and press
 to select.





Backlight

Adjusting the **Backlight** can improve the clarity of the screen when viewing.

- In the Picture Settings menu, and press ▲ or ▼ to highlight Backlight.
- 2. Use ◀ or ▶ to adjust your preference.

Contrast, Brightness and Colour

- In the Picture Settings menu, press ▲ or ▼ to select Contrast, Brightness, or Colour.
- 2. Use ◀ or ▶ to adjust your preference.

Tint

Adjusts the picture tint.

- In the Picture Settings menu, press ▲ or ▼ to select Tint.
- 2. Use ◀ or ▶ to adjust your preference.

Note: This function does not work in PC mode.

Sharpness

This function increase or decrease the sharpness of the picture. The picture shows the clear edge when you increase the values.

- In the Picture Settings menu, press ▲ or ▼ to select Sharpness.
- 2. Use ◀ or ▶ to adjust your preference.

Black/White Level

This function increases the strength of dark areas of the picture, which improves picture definition.

- In the Picture Settings menu, press ▲ or ▼ to select Black/White Level.
- 2. Use ◀ or ▶ to select Low, Middle, High, or Off.

Cinema Mode

The frame rate of a movie film is generally 24 frames a second whereas the movie software such as DVD, etc. that you enjoy watching on television at home is 30 or 25 frames a second. The difference in frame rate may cause flickers whilst viewing the films on television; set the **Cinema Mode** to convert the signal to reproduce a smooth motion and picture quality.

- In the Picture Settings menu, press ▲ or ▼ to highlight Cinema Mode.
- 2. Use ◀ or ▶ to select On or Off.

Static Gamma

The **Static Gamma** feature allows you to adjust the levels of black in the picture.

- In the Picture Settings menu, press ▲ or ▼ to highlight Static Gamma and press ► to select.
- 2. Use ◀ or ▶ to adjust your preference.

Colour Temperature

Colour Temperature increases the 'warmth' or 'coolness' of a picture by increasing the red or blue tint.

- In the Picture Settings menu, press ▲ or ▼ to highlight Colour Temperature and press ► to select.
- 2. Use ◀ or ▶ to select Standard, Warm, or Cool.

Active Backlight Control

When Active Backlight is activated, it will automatically optimise the backlighting levels for dark scenes.

 In the PICTURE menu, press ▲ or ▼ to highlight Active Backlight Control.



2. Press ◀ or ▶ to select On or Off.

DNR

DNR (Digital Noise Reduction) enables you to 'soften' the screen representation of a weak signal to reduce the noise effect.

 In the PICTURE menu, press ▲ or ▼ to highlight DNR



2. Press or ► to select Low, Middle, High, or Off.

MPEG NR

If the receiving signal of MPEG is a grained noise depending on the compression and conversion, the noise may be reduced when using this function.

 In the PICTURE menu, press ▲ or ▼ to highlight MPEG NR.



2. Press ◀ or ▶ to select Low, Middle, High, or Off.

Blue Screen

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

- In the PREFERENCES menu, press ▲ or ▼ to highlight Blue Screen.
- 2. Press ◀ or ▶ to select On or Off.

Note: The **Blue Screen** will be greyed out in DTV and PC mode.

PC

This option only shows and is available in PC mode, which provides several items for the PC display fine tunings.

- Press ♥. Press ◀ or ▶ to select SETUP and then press ⋈ to enter.
- Press ▲ or ▼ to select Auto Adjust for adjusting the settings automatically, or select PC Setting to adjust your preference.

Sound Adjustment

Volume

Press

or

to adjust the volume.

Sound Mute

Press once to turn the sound off and again to cancel.

Dual

If a programme or film is being broadcast with a soundtrack in more than one language, the **DUAL** feature allows selection between them.

Press ♥ or ► to select SOUND and press
 to select SOUND and press



Press ▲ or ▼ to select Dual, and press ◀ or ► to choose between Dual1 or Dual2.

Note: The Dual feature is only available in ATV mode.

Balance, Bass and Treble

 In the SOUND menu, press ▲ or ▼ to select Bass, Treble, or Balance.



2. Press ◀ or ▶ to change the setting.



Stable Sound®

Stable Sound reduces the volume level differences between channels. It automatically remains on the same volume level when you change channels.

- In the SOUND menu, press ▲ or ▼ to select Stable Sound.
- 2. Use ◀ or ▶ to switch function On or Off.

Surround Sound

This function enriches (expending and deepening) the sound quality.

- In the SOUND menu, press ▲ or ▼ to select Surround.
- 2. Use ◀ or ▶ to switch function On or Off.

Bass Boost

Bass Boost enhances the depth of the sound on the TV speakers. The difference will only be noticeable on sound with a strong bass.

- In the SOUND menu, press ▲ or ▼ to highlight Bass Boost.
- 2. Use ◀ or ▶ to change the setting.

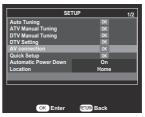
SPDIF Type

SPDIF is a digital output format sending digital audio to an external audio system.

- In the SOUND menu, press ▲ or ▼ to highlight SPDIF Type.
- 2. Use ◀ or ▶ to switch function Auto or PCM.

PC/HDMI 1 Audio

Receive sound from a connected PC or HDMI device.



Press ▲ or ▼ to select PC/HDMI 1 Audio, press ◀ or ► to select PC or HDMI 1.



HDMI Audio

If the connected HDMI source does not support digital audio, plug the audio cable into PC/HDMI 1 (Audio) on the back of the TV, then use the HDMI 1 Audio setting. If the sound is missing, select an alternative setting.

- In the AV connection menu, press ▲ or ▼ to highlight Lip Sync.
- Press ▲ or ▼ to highlight HDMI Audio, press ◀ or ► to select Analogue or Digital.

Lip Sync

Activates an audio/video display timing adjustment that allows HDMI devices to automatically synchronize accurately. Available for HDMI source only.

- In the AV connection menu, press ▲ or ▼ to select Lip Sync.
- 2. Press ◀ or ▶ to select On or Off.

Headphone Setting

This setting is used to set the sound output when headphones are connected.

Speaker Link	Headphone	Speakers
On	Sound is output (+ is available.)	No sound
Off	Sound is output (Headphone level menu is available.)	Sound is output (- — + is available.)

- From SOUND menu, press ▲ or ▼ to select Headphone Setting and then press ^(N).
- Press ▲ or ▼ to select Speaker Link and then press ◄ or ► to select On or Off.



3. If you select **Off**, next select **Headphone Level**, and then press ◀ or ▶ to adjust the headphone sound.

Selecting the stereo programmes

- When a stereo programme is received, Stereo appears.
- Press ☼ I/I to select the Auto/Mono mode. Stereo and Mono appear cyclically on the screen.

Selecting the bilingual programmes

- When a bilingual programme is received, **Dual** appears.
- Press

 I/I to select the sound to be heard. The sound differs according to the transmission system: NICAM or German stereo/bilingual broadcast.

	Sou	nd to be heard
Display	NICAM	German stereo / bilingual broadcast
Dual 1	Sub I sound	Main sound
Dual 2	Sub II sound	Sub sound

Note: These settings are not stored in the TV memory.

Applications Control

On Timer

This feature allows you to set the television to turn on automatically to a preset channel at a certain time of day or after a certain length of time. When **On timer** is set to **On**, the green On Timer indicator on the front of the television is lit.

 Press ♥ or ► to select APPLICATIONS and press ♥ to select.



Press ▲ or ▼ to highlight On Timer and press ⊗ to select.



 Press ▲ or ▼ to highlight Enable On Timer, Enable DTV Clock, Power On Time, Repeat, Input, Channel, Volume, or Time Until Power On and ◀ or ▶ to change the setting.



Notes:

- The settings are only available when Enable On Timer is On.
- Power On Time and Repeat are only available when Enable DTV Clock is On.
- Channel is only available when ATV or DTV mode.
- Time Until Power On is only available when Enable DTV Clock is Off.

Sleep Timer

The television can be set to turn itself **Off** after a selected period of time.

- Use ▲ or ▼ to highlight Sleep Timer in the APPLICATIONS menu.
- Use ◀ or ► to set the timer from 0, 10, 20, 30, 40, 50, 60, 90, or 120 Minutes.



Note:

To cancel the Sleep Timer, set this option 0 Minutes.

Local Time Setting

The time is set automatically when receiving a digital signal. (You can set the time manually only if the TV has no DTV signal.)

You must set the time correctly before using Power On/ Off Timer function.

- Press ▲ or ▼ to select Time Zone and use ◀ or ► to select your region.



You can set the Time manually by using ◀ or ▶.

Input Selection

Defining the INPUT and OUTPUT sockets so that the television recognises connected equipment.

See page 12 <u>TV back panel connections</u> for a clear view of the back connection recommendations.

Alternatively press the external source selection button \odot until the picture from connected equipment is shown.

Use the Input Selection if the television does not switch over automatically.



HDMI[®] displays equipment connected to Input HDMI on the back of the television. It is designed for best performance with 1080p high definition signals.

REGZA-LINK Controls

This feature uses CEC (Consumer Electronics Control) technology, and allows the control of Toshiba REGZA-LINK compatible equipment from the television's remote control.

Note: Not all Toshiba products currently support REGZA-LINK.

Equipment Control

The **REGZA-LINK** mode on the television's remote control allows the control of connected **REGZA-LINK** equipment being watched.

To control the **REGZA-LINK** input source, first select the equipment with **REGZA-LINK** input source selection, then switch the mode on the remote control to **REGZA-LINK** and press any buttons.

The available functions are dependent on the equipment connected. Not all the remote control keys may be available. Please refer to the operation manual for each piece of equipment connected.

Note: The television features that can be controlled by the connected equipment are: Standby, Volume, Channel, Sound Mute, Display Information, Number Buttons and Previous Programme.

Input Source Selection

When any equipment using **CEC** technology is connected, the **REGZA-LINK** icon will appear in the input source list allowing selection of individual devices.

- Press
 A list will appear on screen showing modes and all stored external equipment.
- The REGZA-LINK icon appears automatically after detected with REGZA-LINK compatible equipment. Press

 to highlight the input source shown with the REGZA-LINK icon.



- Press ▶. A second selection screen will appear showing all connected REGZA-LINK equipment.
- Press ▲ or ▼ to highlight an input source, and then press ⋈ to select.

Notes:

- When the television is switched on, it will take a few minutes for the REGZA-LINK icon to appear in the list, when an HDMI cable is removed, it will take a few minutes for the logo to disappear.
- If the HDMI cable from the connected equipment is changed, or HDMI equipment settings are changed, the Enable REGZA-LINK in the REGZA-LINK Setup menu may need to be reset to On.
- When the REGZA-LINK input source is selected, some REGZA-LINK equipment may automatically switch on.

The following features are dependent on the connected equipment. For operating information, refer to the operation manual for all connected equipment.

Pass-Through Control

The Pass-Through feature allows you to control the connected REGZA-LINK device by the television's remote control.

 Press ▲ or ▼ to select REGZA-LINK in the Quick Access Menu, and then press [®]. The control panel will appear.

When there are two or more REGZA-LINK devices connected to the television, a device selection menu will appear. Highlight the device you want to control, and then press 8 to select.



Press the key on the television's remote control as guided by the control panel shown.

Note: The available functions are dependent on the connected equipment, not all the remote functions may be available. Please refer to the operation manual of the connected equipment.

REGZA-LINK Menus

By activating the **Enable REGZA-LINK** feature in the **REGZA-LINK** setup menu, individual REGZA-LINK features can then be activated.

One Touch Play

The function of **REGZA-LINK** will automatically power on the television that was in standby mode and switch the television's input source to the port connected with the audio/video equipment by powering-on or playing from the audio/video equipment.

Note: This feature is dependent on the connected equipment and television setting.

System Standby

This feature automatically switches the connected equipment into standby when the television goes into standby and conversely for the television to switch into standby when connected equipment goes into standby. It is selected in the REGZA-LINK Setup menu.

Note: This feature is dependent on the connected equipment and television setting.

System Audio Control

Using the **Speaker Preference** feature allows the televisions remote control to adjust the volume or mute the sound of the speakers connected to the television via an AV amplifier.

Ensure that the connected AV amplifier and REGZA-LINK equipment are selected in the input source selection and that the Speaker Preference is set to Amplifier in the REGZA-LINK Setup menu.

Note: When the AV Amplifier is switched on, its input source changed or the volume adjusted, the sound will be output from the AV Amplifier's speakers even if TV Speakers has been selected. Turn the television off then on again to output the sound from the TV's speakers.

The full function may not work and is dependent on the Amplifier being used.

Enable REGZA-LINK

When the **Enable REGZA-LINK** is set to On, it allows the other functions to be enabled.

Press ♥ Press ■ or ► to select PREFERENCES and press ♥ to select.





 Use ▲ or ▼ to select the Enable REGZA-LINK, then press ◀ or ► to select On or Off.



Auto Power On

The **Auto Power On** setting allows the television to be automatically switched On or Off if a **REGZA-LINK** device is turned On or Off.

- Highlight the REGZA-LINK Setup in the PREFERENCES menu, and press (s) to select.
- Use ▲ or ▼ to select the Auto Power On, then press ◄ or ► to select On or Off.

Auto Standby

When the **Auto Standby** is enabled, switching off the television will automatically switch off all connected REGZA-LINK equipment.

- Highlight the REGZA-LINK Setup in the PREFERENCES menu, and press
 on to select.
- Use ▲ or ▼ to select the Auto Standby, then press
 or ► to select On or Off.

Amplifier Control

When the Amplifier Control is enabled, REGZALINK allows some of the amplifier features to be controlled with the television remote control

- Highlight the REGZA-LINK Setup in the PREFERENCES menu, and press (s) to select.
- Use ▲ or ▼ to select the Amplifier Control, then press ◄ or ► to select On or Off.

Speaker Preference

This feature allows the audio output preference to be set to the TV speakers or AV amplifier speakers. The AV Amplifier option lets the televisions remote control adjust or mute the volume of the audio.

- Highlight the REGZA-LINK Setup in the PREFERENCES menu. and press (%) to select.
- 2. Use ▲ or ▼ to select the Speaker Preference, then press ◀ or ► to select Speakers or Amplifier.



Media Player

Media Player Specifications

Device

USB device: USB Mass Storage Class devices (MSC)

Notes: Connectivity is not quaranteed for all devices.

Supported file system: FAT16 and FAT32

Enter Media Player

The Media Player allows the viewing of photos, music and video stored in a USB storage device. (Connectivity is not quaranteed for all devices.)

 To open Media Player, highlight the Media Player in the APPLICATIONS menu and press .



2. Press ▲ or ▼ to highlight Photo, Music or Video, then press ⊚, the Media Player will open.



Notes:

- The Media Player will open even if there are no images on the USB flash drive.
- On-screen menus will not display while the Media Player is being used.
- MP3 is the MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson.
- The maximum thickness of the USB flash drive should not exceed 9mm.

Photo Multi-View

This view mode allows all the images within a selected folder to be viewed simultaneously, using thumbnail views in a grid. The initial highlighted position will be the top left image within the grid.

 Open Media Player. Press ▲ or ▼ to highlight Photo and press ⋈.



Press ▲, ▼, ◄, or ▶ to select a folder then press
 All the images in the folder will appear in the Multi View grid.



- 3. Press ▲, ▼, ◄, or ▶ to move through the images. If there are too many images for the screen, pressing ◄ on the top left image will show the previous page moving the highlight to the bottom right image. Alternatively, pressing ▶ on the bottom right image will show the next page moving the highlight to the top left image. If there is more than one page of images within the folder pressing P ^ and P ➤ will move through the pages.
- Press MENU to open the Feature menu: Press ▲ or ▼ to select the options and press ◄ or ► to adjust your preferences.



- · Interval Time: Set interval time.
- · Repeat: Set repeat mode.
- 5. Press RETURN to return to the Media Plaver.

Playing Photo

The Photo Viewer allows you to playback image files from a USB storage device.

- In the Multi View grid, press ▲, ▼, ◄, or ► to highlight an image. Press ⊗. Slideshow will now display all the images in the selected folder.
- Press ◄, or ► will display next or previous images.
 The images can also be rotated by pressing ▲ or



Press
 os to display all images in a selected folder as a slideshow.

Press MENU to change the settings when playing photo.



- Interval Time: Set interval time.
- · Repeat: Set repeat mode.
- Background Music: Set the background music to be played during the slideshow. (page 32 <u>Playing Music</u>)
- · Sleep Timer: Set sleep timer.

Viewing Music Files

This view mode allows all the music files within a selected folder to be viewed simultaneously, using thumbnail views in a grid. The initial highlighted position will be the top left image within the grid.

1. Open Media Player. Press ▼ to highlight Music.



Press ▲ or ▼ to select a folder then press ⊗. All
the music files in the folder will appear in the Multi
View grid.



Press ▲ or ▼ to move through the music files.
 If there is more than one page of music within the folder pressing P and P will move through the pages.

- Press MENU to open the Feature menu: Press ▲ or ▼ to select the options and press ◄ or ► to adjust your preferences.
 - Sort: Sort by file name or by date.
 - Repeat: Set repeat mode.
- 5. Press RETURN to return to the Media Plaver.

Playing Music

The Music feature plays MP3 files stored on a USB storage device.

- In the Multi View grid, press ▲ or ▼ to highlight a music file. Press
 on to start playing the selected music file.
- 2. Press (to pause, press it again to play.
- Press MENU to change the settings when playing photo.



- · Sound: Access to SOUND menu quickly.
- · Repeat: Set repeat mode.
- Sleep Timer: Set sleep timer.
- Speaker Preference: when customer turn on the amplifier control of REGZA-LINK. TV have to detect the amplifier of CEC signal, then this option will be selected.

Notes: MP3 is the MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson

Viewing Video Files

This view mode allows all the video files within a selected folder to be viewed simultaneously, using thumbnail views in a grid. The initial highlighted position will be the top left image within the grid.

1. Open Media Player. Press ▼ to highlight Video.



Press ▲ or ▼ to select a folder then press ⊗. All
the video files in the folder will appear in the Multi
View grid.



- Press ▲ or ▼ to move through the video files.
 If there is more than one page of images within the folder pressing P ^ and P ✓ will move through the pages.
- Press MENU to open the Feature menu: Press ▲ or ▼ to select the options and press ◄ or ► to adjust your preferences.
 - · Sort: Sort by file name or by date.
 - Repeat: Set repeat mode.
- 5. Press RETURN to return to the Media Player.

Enjoying Video

The Video feature allows you to playback video from a USB storage device.

- 2. Press (k) to pause, press it again to play.
- Press MENU to change the settings when playing video.



- Sort: Sort by file name or by date.
- · Repeat: Set repeat mode.
- Speaker Preference: when customer turn on the amplifier control of REGZA-LINK. TV have to detect the amplifier of CEC signal, then this option will be selected.

Supported format:

		ı .		
File Extension	Container	Video Codec	SPEC	Bite Rate (Mbit/sec)
AVI	AVI(1.0, 2.0), DMF0,1,2	H.264	1080p @ 30fps	20Mbit/sec
		MPEG-1		
		MPEG-2		
MKV	MKV	H.264	1080p @ 30fps	20Mbit/sec
		MPEG-1		
		MPEG-2		
MPG, MPEG	MPEG	MPEG-1	1080p @ 30fps	20Mbit/sec
		MPEG-2		
VOB	MPEG2-PS	MPEG-2	1080p @ 30fps	20Mbit/sec

Notes:

- The table above identifies supported formats for USB playback.
- The media file operation is not guaranteed.
- · Do not remove the USB device during playback.

Preference Control

Auto Format

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

- In the PREFERENCES menu, press ▼ to highlight Auto format.
- 2. Use ◀ or ▶ to select On or Off.

4:3 Stretch

If the **4:3 Stretch** is **On**, the picture size will auto stretch to 4:3 aspect ratio in Widescreen format.

- In the PREFERENCES menu, press ▼ to highlight 4:3 stretch.
- 2. Use ◀ or ▶ to select On or Off.

Note: The **4:3 stretch** feature is only activated when **Auto format** is set to **On**.

Subtitle Language

Use the **Subtitle** function when two or more subtitle languages are broadcast. If subtitle data in a selected language is not broadcast, the default language subtitle will be displayed.

- In the DTV Setting menu, press ▲ or ▼ to highlight Subtitle and Audio and press (to enter.
- Use ▲ or ▼ to select the Primary Subtitle Language or Secondary Subtitle Language and use ◀ or ► to select the language.

Note: If the language in the Subtitle Language is not available, the Secondary Subtitle Language will be displayed.

Subtitle Type

You can choose the **Subtitle Type** from **Normal** or **For Hard of Hearing**. If the **"For Hard of Hearing"** is selected, it provides subtitle services to deaf and hard of hearing viewers with additional descriptions.

- In the Subtitle and Audio menu, press ▲ or ▼ to highlight Subtitle Type.
- Use ▲ or ▼ to select Subtitle Type and press ◀ or ► to select Normal or For Hard of Hearing.



Audio Language

This feature allows a programme or film to be viewed with a choice of soundtrack language, provided they are currently being broadcast.

- In the Subtitle and Audio menu, press ▼ to highlight Primary Audio Language or Secondary Audio Language.
- Use ◀ or ▶ to select the language.

Audio Type

- In the Subtitle and Audio menu, press ▲ or ▼ to highlight Audio Type.
- Use ▲ or ▼ to select Audio Type and press ◀ or ► to select Normal or For Hard of Hearing.

Parental control

This function blocks channels or programmes that you do not want to or that you do not want your children to watch.

Note: When Programme Block is activated, you will need to enter the 4-digit password before you enter the channels submenu under the **SETUP**. After **Auto Tuning**, all the channel blocks will be cleared.

Programme Lock

This function prevents children from watching certain TV programmes, according to the rating limit set.

This function operates according to information from the broadcasting station. Therefore if the signal has no information, this function does not operate.

- Highlight Parental Control in the DTV Setting menu, and press to enter.
- 2. Enter the 4-digit password.



3. Use ◀ or ▶ to adjust the setting.



Change Password

Change and set the 4-digit password.

 Highlight Pin Setting in the DTV Setting menu, and press
 to enter.



2. Enter the 4-digit password.



3. Press (to change the password.



4. Enter the 4-digit new password, and re-enter the new password again to confirm.



Panel Lock

You can lock the control buttons on your TV by using this **Panel Lock**. When this function enables, the TV can be controlled only by the remote control.

- In the PREFERENCES menu, press ▲ or ▼ to highlight the Panel lock.
- Use ◀ or ▶ to select On or Off.

Note: When the **Panel Lock** is set to **On**, TV can be turned off by pressing the power keys on the TV or the remote control, but can be turned on only by the remote control

Programme Guide

The programme guide gives access to programme details for all available channels.

Guide

- Select the on-screen guide by pressing
 on, the guide screen will appear highlighting details of the programme and event currently being viewed. This may take a few moments to appear.
- Press ◀ or ▶ for information on other events scheduled for the programme selected.
- For details of other programmes currently available, press ▲ and ▼ to scroll up and down the programme list.

EPG

EPG (Electronic Programme Guide) supports 8 sets of timers. You can set or cancel a timer for a selected programme within the guide. When the TV is on and the timer activates, a dialogue box is shown informing you that the programme is about to start. When the TV is in standby mode and the timer activates, the TV will wake up with backlight off, speaker mute on, and change to the channel selected.

You must set the time correctly before using this function. All set timers are cleared when performing a new channel scan.



Press ▲ or ▼ to select the desired channel. Press ► to select programme schedule, and then press ல to enter the Programme Timer.



- Ok) button: Press Ok) to enter the Programme Timer.
- BLUE button: Press the BLUE button on the remote to display the Timer List.
- 3. Press the **BLUE** button on the remote control to enter the Timer List menu.



- RED button: Press the RED button on the remote to delete the set timer.
- GREEN button: Press the GREEN button on the remote to edit the timer information.

- Press ▲ or ▼ to select the desired programme and press GREEN button on the remote.
- Press ▲ or ▼ to select the setting of Repeat and press

 ór volume to setting.

Notes:

- Time can be set manually in the Menu/Timer/Time
 OSD menu
 - After adjustment, the TV clock will not match the time in the EPG Programme Guide. The EPG Programme Guide time follows the broadcast stream time which can not be adjusted.
- For the recording operation to work properly, the media recorder must be set to the same time as the TV. Regarding the process for recording, please refer to the owner's manual of the recording equipment.

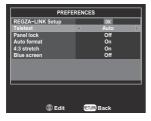
Teletext

This television has a multi-page text memory, which takes a few moments to load.

Setting the Mode

You can set the teletext mode.

 In the PREFERENCES menu, press ▲ and ▼ to highlight Teletext.



2. Use ◀ or ▶ to select Auto or List.

Text Information

The first text page shown will be the index page.

Any text page can be accessed by entering the 3 digit page number using the numbered buttons, pressing the coloured buttons or pressing $\mathbf{P} \sim$ to advance to the next page and $\mathbf{P} \sim$ to go back to the previous page.

Control buttons

Below is a guide to the functions of the remote control text buttons.

To display the index/initial page:

Press (a) to access the index/initial page. The one displayed is dependant on the broadcaster.

To reveal concealed text:

To discover the solutions on quiz and joke pages press the €? button.

E To hold a wanted page:

At times it is convenient to hold a page of text. Press and will appear in the top of the screen. The page will be held on screen until the button is pressed again.

To enlarge the text display size:

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

⑤ EX To toggle between Teletext and normal picture mode:

Enter the page number then press ③ 图, a normal picture will be displayed. The television will indicate when the page is present by displaying the page number at the top of the screen.

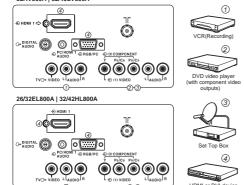
Back Connections

Connection example:

TV back view

TV back view

32AV800A | 32/40LV800A



- Before connecting any external equipment, turn off all main power switches. If there is no switch, remove the mains plug from the wall socket.
- The unauthorized recording of television 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. Y input could also be used for a standard (composite) video.
- Additional equipment and cables shown are not supplied with this TV.
- TV OUTPUT

That will only support ATV/DTV signal to display out or by VCR TV signal recording use.

Connecting an audio system

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

Notes:

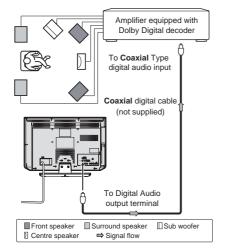
- DO NOT connect the DIGITAL AUDIO output terminal to the AC-3 RF input of a Dolby Digital Receiver with a built-in Dolby Digital decoder.
- Connect the DIGITAL AUDIO output terminal to the Coaxial input of a Receiver or Processor.
- Refer to the owner's manual of the connected equipment as well.
- When 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 a sudden high volume sound.
- 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:

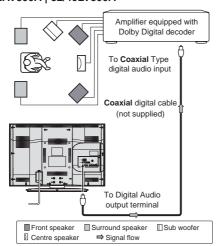
When you are connecting (via the **DIGITAL AUDIO** output terminal) an AV decoder that does not have Dolby Digital or MPEG decoding function, be sure to set **PCM** in **SPDIF Type** under **SOUND** menu. Otherwise, the speakers and your hearing may be damaged by a sudden high volume sound.

Connecting an amplifier equipped with a Dolby Digital decoder

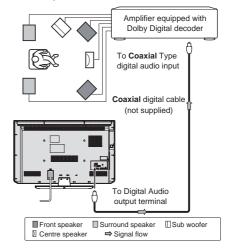
26EL800A



32AV800A | 32/40LV800A

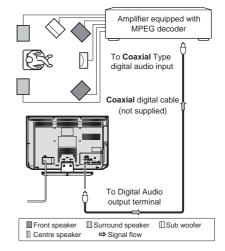


32EL800A | 32/42HL800A

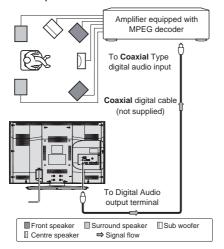


Connecting an amplifier equipped with an MPEG decoder

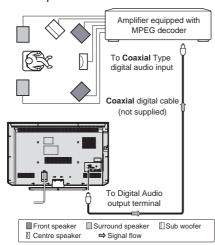
26EL800A



32AV800A | 32/40LV800A

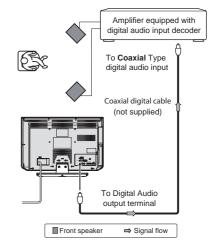


32EL800A | 32/42HL800A

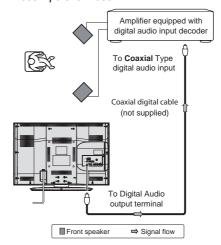


Connecting an amplifier equipped with a digital audio (coaxial) input

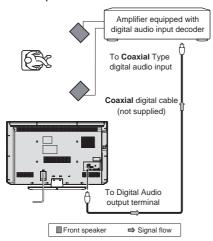
26EL800A



32AV800A | 32/40LV800A



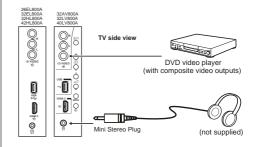
32EL800A | 32/42HL800A



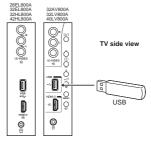
You can enjoy dynamic sound of 2-channel digital stereo by connecting the TV to an amplifier equipped with a digital audio (coaxial) input and speaker system (right and left front speakers). When using this setup, select **PCM** in **SPDIF Type** under **SOUND** menu.

Side Connections

Connection example:



 The audio from the speaker will be muted when connecting the headphone to this terminal.



• Do not intentionally connect USB flash drive without any movie, picture or audio file stored in it.

Connecting an HDMI or a DVI device

- When turning on your electronic components, turn on the TV first, and then the HDMI or DVI device.
- When turning off your electronic components, turn off the HDMI or 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.
- Some early HDMI equipment may not work properly with your latest HDMI TV, due to the adoption of a new standard.
- This TV is only operable with L-PCM on 32/44. 1/48 kHz and 16/20/24 bits.

Connecting an HDMI or a DVI device

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

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

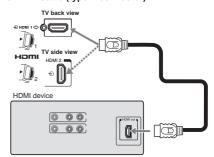
For acceptable video signal formats (R page 44 Accepted Video signals through HDMI terminals).

The HDMI input is designed for best performance with 1080i high-definition video signals, but will also accept and display VGA, SVGA, XGA, WXGA, SXGA, 480i, 480p, 576i, 576p, 720p, and 1080p signals.

- · HDMI: High-Definition Multimedia Interface
- DVI: Digital Video Interface
- HDCP: High-bandwidth Digital Content Protection
- EIA/CEA-861/861B compliance covers the transmission of uncompressed digital video with highbandwidth 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.
- E-EDID: Enhanced-Extended Display Identification Data
- · L-PCM: Linear-Pulse Code Modulation

Connecting an HDMI device

One HDMI cable (type A connector)



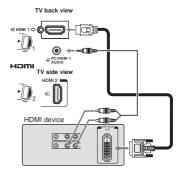
For proper operation, it is recommended that you use a short HDMI cable with the HDMI Logo (Harmi').

HDMI cable transfers both video and audio.

Note: It is possible that some HDMI device may not operate properly with this TV.

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 are 2 metres.

Standard analogue audio cables

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

Note: When connecting a DVI device, please connect to the **HDMI 1** port only.

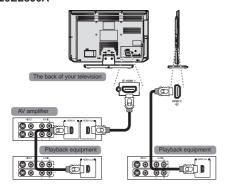
Note: HDMI, the HDMI logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing, LLC in the United States and other countries.

REGZA-LINK Connections

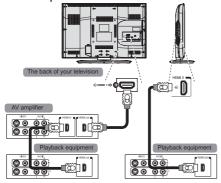
The basic functions of connected audio/video equipment can be controlled using the television's remote control if a REGZA-LINK compatible device is connected.

Connection example:

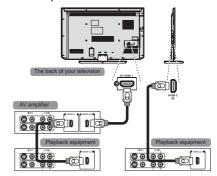
26EL800A



32AV800A | 32/40LV800A



32EL800A | 32/42HL800A

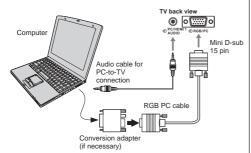


Notes:

- It is recommended that for correct operation all audio/ video devices are connected using HDMI cables branded with the HDMI logo (HITTI). If several devices are connected, the REGZA-LINK feature may not operate properly. After connecting the equipment use the REGZA-LINK menus to setup the desired options. The connected equipment must also be set. For details see the operation manual for each connected device.
- The REGZA-LINK feature uses CEC Technology as regulated by the HDMI standard. This feature is limited to models incorporating Toshiba's REGZA-LINK. However, Toshiba is not liable for those operations. Refer to individual instruction manuals for compatibility information.

Connecting a computer

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



Connect a PC cable from the computer to the -
⊕ RGB/ PC terminal on the back of the TV.

For acceptable PC signal formats () page 44 Accepted PC signals through HDMI terminals).

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.

Notes:

- Some PC models cannot be connected to this TV.
- 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 of PICTURE 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.

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	VGA-5V
2	G	10	Ground
3	В	11	NC (not
			connected)
4	NC (not connected)	12	VGA-SDA
5	NC (not connected)	13	H-sync
6	Ground	14	V-sync
7	Ground	15	VGA-SCL
8	Ground		

Using the PC setting

- 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 settings

- 1. Press and use ◀ or ▶ to select SETUP.
- 2. Use ▲ and ▼ to select PC Setting and press ③.
- Use ▲ or ▼ to select Horizontal Position, Vertical Position, Clock Phase, or Sampling Clock and use ◀ or ▶ to adjust your preference..

Auto Adjust for PC

Adjust Horizontal Position, Vertical Position, Horizontal Clock, and Clock Phase automatically. Depending on the type of the signal, there is a possibility that the display may not be adjusted in its optimum condition with this function. In that case, please adjust each item manually.

- Press and use

 or

 to select SETUP.

Accepted Video signals through HDMI terminals

Resolution	H. Frequency (KHz)	V. Frequency (Hz)
480i	15.734	60.000
480p	31.500	60.000
576i	15.625	50.000
576p	31.250	50.000
720p	37.500	50.000
720p	45.000	60.000
1080i	28.125	50.000
1080i	33.750	60.000
1080p	27.000	24.000
1080p	28.125	25.000
1080p	33.750	30.000
1080p	56.250	50.000
1080p	67.500	60.000

Accepted PC signals through HDMI terminals

Resolution	H (KHz)	V(Hz)	Pixel Clock (MHz)	H-Polarity	V-Polarity	H-Total	V-Total
640 x 480	31.369	59.940	25.175	Negative	Negative	800	525
640 x 480	37.500	75.000	31.500	Negative	Negative	840	500
800 x 600	37.879	60.317	40.000	Positive	Positive	1056	628
800 x 600	46.875	75.000	49.500	Positive	Positive	1056	625
1024 x 768	48.363	60.004	65.000	Negative	Negative	1344	806
1024 x 768	56.476	70.000	75.000	Negative	Negative	1328	806
1024 x 768	60.023	75.029	78.750	Positive	Positive	1312	800
1280 x 768	47.776	59.870	79.500	Negative	Positive	1664	798
1280 x 768	60.289	74.890	102.250	Negative	Positive	1696	805
1360 x 768	47.712	60.015	85.500	Positive	Positive	1792	795
1280 x 1024	63.981	60.020	108.000	Positive	Positive	1688	1066
1280 x 1024	79.976	75.025	135.000	Positive	Positive	1688	1066

HDMI, the HDMI logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing, LLC in the United States and other countries.

Note: For PC input, only the supported PC signal displays the correct resolution on TV display.

Reference section

Troubleshooting

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

Symptom and solution

Why is there no sound or picture?

 Check that the television is on and that all connections are made properly.

Why doesn't the video/DVD being played show onscreen?

 Make sure the VCR or DVD player is connected to the television, then select the correct input by pressing —.

Why is there a good picture but no sound?

 Check all cable connections and that the volume has not been turned down or that the sound has not been muted.

What else can cause a poor picture?

- Interference or a weak signal. Try a different television station. Manual fine tuning may help:
- Select the ATV/DTV Manual Tuning in the SETUP menu
 - Highlight the station and press ⊚, then press ◀ or ▶ to select Manual fine tuning.



Why doesn't the remote control work?

Check that the batteries aren't dead or inserted incorrectly.

Why are there problems with text?

 Good performance of text depends on a strong broadcast signal. If the text is unreadable or garbled, check the aerial, satellite or cable connection. Go to the main index page of the text service and look for the User Guide. This will explain the basic operation of text in some detail.

Why are the four coloured text numbers visible but no text?

 Text has been selected while viewing an external source. No text will appear onscreen or a box may appear stating no information is available. Select a broadcasting channel and press (a) to access.

Why don't the devices connected via HDMI operate properly?

Make sure to use cables with the HDMI logo
 (Hami). Some early HDMI equipment may not work properly with the latest HDMI TV products, due to adoption of new standards.

Why is the VCR/DVD picture in black and white?

 Check the correct input has been choose AV or YP.P.

Why did TV turn off by itself?

 After roughly 15 minutes without any input video signal at TV mode, the TV will turn off to save power.

Do not remember PIN. (See the PIN Setting menu step1)

 Use the Master PIN (code of 1276), then change to a number of your choice. Ensure that no-one else can use the Master PIN by removing the Owner's Manual.

Reference section

Specifications

Model

26EL800A, 32AV800A, 32LV800A, 32EL800A, 32HL800A, 40LV800A, 42HL800A

Power source

~220-240 50/60 HZ

Power consumption

26EL800A: 70W 32AV800A: 132W 32LV800A: 132W 32EL800A: 83W 32EL800A: 90W 40LV800A: 225W 42HL800A: 142W

Standby (approx.)

< 0.5W

Dimensions (includes foot stand)

 26EL800A:
 466.7mm(H)
 643.3mm(W)
 178.9mm(D)

 32AV800A:
 557.7mm(H)
 785.6mm(W)
 233mm(D)

 32LV800A:
 557.7mm(H)
 785.6mm(W)
 233mm(D)

 32EL800A:
 542mm(H)
 769.9mm(W)
 198.6mm(D)

 32HL800A:
 542mm(H)
 769.9mm(W)
 198.6mm(D)

 40LV800A:
 678.6mm(H)
 977mm(W)
 272mm(D)

 42HL800A:
 677mm(H)
 1006.9mm(W)
 235mm(D)

Mass (Weight)

26EL800A: 6.5kg 32AV800A: 9.5kg 32LV800A: 9.5kg 32EL800A: 10.0kg 32HL800A: 10.0kg 40LV800A: 16.5kg 42HL800A: 14.5kg

Analogue TV system (Antenna input)

Channel coverage:

PAL B/G (CCIR) VHF 0 - 12 UHF 27 - 69 CATV C2, C10, C31, S2 - S44

Digital TV System

Compliant Standard: DVB-T Video Decoding: MP @ ML & MP @ HL Audio Decoding: Dolby® Digital, MPEG (I & II) Audio Sampling Rate: 32, 44.1, 48 kHz

Digital TV Terrestrial Tuner / Demodulator

Frequency: 51~858 MHz Loop Through: 51-858 MHz Bandwidth: 7 MHz/8MHz Demodulator: COFDM FFT Mode: 8 K Constellation: OPSK 64 QA

Constellation: QPSK, 64 QAM Guard Interval: 1/8, 1/16 Inner Coding Rate: 2/3, 3/4

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.)

Composite colour system (analogue TV system)

PAL, SECAM, NTSC 3.58/4.43

Aspect ratio

16:9

Visible size (diagonal)

26EL800A: 66cm 32AV800A: 80cm 32LV800A: 80.1cm 32EL800A: 80.1cm 32HL800A: 80.1cm 40LV800A: 101.6cm 42HL800A: 106.7cm

Number of pixels

26EL800A, 32AV800A, 32EL800A: 1366(H) x 768(V) dots 32LV800A, 32HL800A, 40LV800A, 42HL800A: 1920(H) x 1080(V) dots

Sound output (at 10 % distortion)

26EL800A, 32AV800A, 32LV800A, 32EL800A, 32HL800A: 5W + 5W 40LV800A, 42HL800A: 7W + 7W

Reference section

Input/Output terminals

Antenna Input: 75 Ω RF Input

Composite Input:

Video: RCA, CVBS Audio: RCA, L/Mono+R

Component Input:

Video: RCA, Y (or CVBS), P_B/C_B, P_R/C_R

Audio: RCA, L/Mono+R

HDMI Input (type A): 19 pin, A/V Digital

RGB/PC Input:

Mini D-sub: 15 pin, Analogue RGB

Audio: 3.5mm USB Input: USB 2.0

Flash Drive thickness: 9mm (max.)

Media Player Interface Version: USB 2.0

> USB class: Mass Storage File system: FAT16 and FAT32

TV Output:

Video: RCA

Audio: RCA, L/Mono+R

Digital Audio Output: Bitstream/PCM

Headphone jack: 3.5mm (Diameter) stereo

Operating condition

Temperature: 0°C - 35°C (32°F - 94°F)

Humidity: 20% - 80% (No moisture condensation)

Supplied accessories

Owner's manual (1), Remote control (1), Batteries (2), Power cord (1)

- 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.

License Information for software used with Toshiba Televisions

The software pre-installed in the TOSHIBA Digital Televisions consists of multiple, independent software components. Each software component is copyrighted by TOSHIBA or a third party.

The TOSHIBA Digital Televisions uses software components that are distributed as freeware under a third-party enduser license agreement or copyright notice (hereinafter referred to as a "EULA"). Some EULAs require that the source code of the applicable component be disclosed as the condition for distributing the software component in executable format.

You can check the software components subject to such EULA requirements on the following Home Page:

URL: http://www.mytoshiba.com.au

In addition, some of the software components which are used in Toshiba Digital Televisions include the software that are made or developed originally by TOSHIBA. These software and accompanied documents are copyrighted by TOSHIBA, and protected by Copyright Act, an international treaty's articles and other governing laws. The software components which are made or developed originally by TOSHIBA and not subject to EULAs are not a target of source code offering.

The Toshiba warranty provided in respect of the Digital TV is the only warranty provided and no additional warranties are provided in respect of the software components subject to EURAs.

Some of the software components distributed under EULAs are made available for use by the user on the premise that they are not copyrighted or warranted by TOSHIBA or any third party. These software components are licensed to the user free of charge and therefore not covered by any warranty within the scope of the applicable laws. These software components are provided in "as is" condition without any warranty, whether express or implied. "Warranty" here includes, but not limited to, an implied warranty for marketability or fitness for specific uses. All risks associated with the quality or performance of these software components are assumed by the user. TOSHIBA shall not be liable whatsoever for any cost of repair or correction or other incidental expense incurred in connection with a defect found in any of these software components. Unless specified under the applicable laws or in a written agreement, a party who changes or redistributes the software with consent from the copyright holders or based on the aforementioned licenses shall not be held liable whatsoever for any loss arising from the use of or inability to use such software components. The same applies even when the copyright holders or relevant third parties have been informed of the possibility of such loss. "Loss" here includes normal, special, incidental and indirect loss (including, but not limited to, the loss of data or its accuracy; loss incurred by the user or any third party; and interface incompatibility with other software). Please read each EULA for details on the use conditions and items that must be observed regarding these software components.

The table below lists the software components pre-installed in the TOSHIBA Digital Televisions, which are subject to EULAs. The user should read the applicable EULAs carefully before using these software components. The EULAs are exhibited in their original text (English) as exactly written by the respective parties other than TOSHIBA.

Function	Library	Link	License	Header
MP3 decoder	libmpg123.c	http://mpg123.org/	GNU Lesser General Public License	Appendix A
JPEG decoder	jpeglib.h	http://www.koders.com/c/fidE- 2795B75345089E3EACAAAEA77B58CB48742FF59. aspx?s=md5	Free	Appendix B
PNG decoder	libpng 1.0.2	http://www.filewatcher.com/p/libpng-1.0.2.tar.gz.225386/libpng-1.0.2.htm	Free	Appendix C
Zlib	Zlib 1.1.3	ftp://ftp.cdrom.com/pub/infozip/zlib/	Free	Appendix D

Appendix A – MPEG Audio

Header part:

libmpg123: MPEG Audio Decoder library

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Appendix B – JPEG decoder

Header part:

The authors make NO WARRANTY or representation, either express or implied, with respect to this software, its quality, accuracy, merchantability, or fitness for a particular purpose. This software is provided "AS IS", and you, its user, assume the entire risk as to its quality and accuracy.

This software is copyright (C) 1991-1998, Thomas G. Lane. All Rights Reserved except as specified below.

Permission is hereby granted to use, copy, modify, and distribute this software (or portions thereof) for any purpose, without fee, subject to these conditions:

- (1) If any part of the source code for this software is distributed, then this README file must be included, with this copyright and no-warranty notice unaltered; and any additions, deletions, or changes to the original files must be clearly indicated in accompanying documentation.
- (2) If only executable code is distributed, then the accompanying documentation must state that "this software is based in part on the work of the Independent JPEG Group".
- (3) Permission for use of this software is granted only if the user accepts full responsibility for any undesirable consequences; the authors accept NO LIABILITY for damages of any kind.

These conditions apply to any software derived from or based on the IJG code, not just to the unmodified library. If you use our work, you ought to acknowledge us.

Permission is NOT granted for the use of any IJG author's name or company name in advertising or publicity relating to this software or products derived from it. This software may be referred to only as "the Independent JPEG Group's software".

We specifically permit and encourage the use of this software as the basis of commercial products, provided that all warranty or liability claims are assumed by the product vendor.

ansi2knr.c is included in this distribution by permission of L. Peter Deutsch, sole proprietor of its copyright holder, Aladdin Enterprises of Menlo Park, CA. ansi2knr.c is NOT covered by the above copyright and conditions, but instead by the usual distribution terms of the Free Software Foundation; principally, that you must include source code if you redistribute it. (See the file ansi2knr.c for full details.) However, since ansi2knr.c is not needed as part of any program generated from the IJG code, this does not limit you more than the foregoing paragraphs do.

The Unix configuration script "configure" was produced with GNU Autoconf. It is copyright by the Free Software Foundation but is freely distributable. The same holds for its supporting scripts (config.guess, config.sub, Itconfig, Itmain. sh). Another support script, install-sh, is copyright by M.I.T. but is also freely distributable.

It appears that the arithmetic coding option of the JPEG spec is covered by patents owned by IBM, AT&T, and Mitsubishi. Hence arithmetic coding cannot legally be used without obtaining one or more licenses. For this reason, support for arithmetic coding has been removed from the free JPEG software. (Since arithmetic coding provides only a marginal gain over the unpatented Huffman mode, it is unlikely that very many implementations will support it.) So far as we are aware, there are no patent restrictions on the remaining code.

The IJG distribution formerly included code to read and write GIF files. To avoid entanglement with the Unisys LZW patent, GIF reading support has been removed altogether, and the GIF writer has been simplified to produce "uncompressed GIFs". This technique does not use the LZW algorithm; the resulting GIF files are larger than usual, but are readable by all standard GIF decoders.

"The Graphics Interchange Format(c) is the Copyright property of CompuServe Incorporated. GIF(sm) is a Service Mark property of CompuServe Incorporated."

Appendix C – PNG decoder

Header part:

/* png.h - header file for PNG reference library

- * libpng 1.0.2 June 14, 1998
- * For conditions of distribution and use, see the COPYRIGHT NOTICE below.
- * Copyright (c) 1995, 1996 Guy Eric Schalnat, Group 42, Inc.
- * Copyright (c) 1996, 1997 Andreas Dilger
- * Copyright (c) 1998 Glenn Randers-Pehrson
- * COPYRIGHT NOTICE:
- * The PNG Reference Library is supplied "AS IS". The Contributing Authors
- * and Group 42, Inc. disclaim all warranties, expressed or implied,
- * including, without limitation, the warranties of merchantability and of
- * fitness for any purpose. The Contributing Authors and Group 42, Inc.
- * assume no liability for direct, indirect, incidental, special, exemplary,
- * or consequential damages, which may result from the use of the PNG
- $\ensuremath{^{*}}$ Reference Library, even if advised of the possibility of such damage.
- * Permission is hereby granted to use, copy, modify, and distribute this
- * source code, or portions hereof, for any purpose, without fee, subject
- * to the following restrictions:
- * 1. The origin of this source code must not be misrepresented.
- * 2. Altered versions must be plainly marked as such and must not be
- * misrepresented as being the original source.
- * 3. This Copyright notice may not be removed or altered from any source or
- * altered source distribution.
- * The Contributing Authors and Group 42, Inc. specifically permit, without
- * fee, and encourage the use of this source code as a component to
- * supporting the PNG file format in commercial products. If you use this
- * source code in a product, acknowledgment is not required but would be
- * appreciated.

*/

Appendix D - Zlib

Header part:

Copyright (C) 1995-1998 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

- The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If
 you use this software in a product, an acknowledgment in the product documentation would be appreciated but is
 not required.
- Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
- 3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly

Mark Adler

jloup@gzip.org

madler@alumni.caltech.edu

TOSHIBA CORPORATION

