HITACHI Inspire the Next

LED LCD TV User Manual



LE24EC05AU LE32EC05AU LE42EC05AU LE46EC05AU _____

Thank you for purchasing this HITACHI product. To obtain the best performance and safety, please read this manual carefully. Please keep this manual for future reference. Thank you for purchasing this HITACHI LED LCD TV.

The instructions in this manual are described mainly with the remote control. You can also use the buttons on the TV if they have the same names as those on the remote control. To obtain the best performance and safety, please read this manual carefully. Please keep this manual for future reference.

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Trademark Information

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

Important Safety Instructions

Read Instructions

All the safety and operating instructions should be read before the product is operated.

Retain Instructions

The safety and operating instructions should be retained for future reference.

Heed Warnings

All warnings on the product and in the operating instructions should be adhered to.

Follow Instructions

All operating and use instructions should be followed.

Cleaning

Unplug the product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a dry cloth for cleaning.

Attachments

Only use attachments/accessories specified by the manufacturer.

Water and Moisture

Do not use the product near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.

Accessories

Do not place the product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer. The product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

Ventilation

Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. The product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

Power Sources

The product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company.

Power Cord Protection

Power cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

Lightning

For added protection for the product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

Power Lines

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

Overloading

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

Object and Liquid Entry

Never push objects of any kind into the product through any openings as they may touch dangerous voltage points or short-out parts that can result in a fire or electric shock. Never spill liquid of any kind on the product.

Servicing

Do not attempt to service the product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Repairing

Unplug the product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the product.
- If the product has been exposed to rain or water.

- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a service technician to restore the product to its normal operation.
- If the product has been dropped or damaged in any way.
- When the product exhibits a distinct change in performance this indicates a need for service.

Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

Safety Check

Upon completion of any service or repairs to the product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Heat

Do not install the product near any heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

Installation Location

Place the product on a firm and flat surface. Avoid placing the product in areas of direct sunlight, heating radiators, closed automobiles, high temperature, high humidity, excessive dust, strong vibration, impact or strong magnetic fields, as the internal parts may be seriously damaged.

Hazards of Electrical Shock and Fire

Do not touch the power cord with wet hands. Hold the plug when disconnecting the power cord. Do not pull the power cord. Unplug the power cord from the wall socket outlet when the product is not used for long periods of time.

Hearing Safety

Listen at a moderate volume. Using headphones at high volume can impair your hearing.

Handling the product

Be careful when handling the product. Do not drop, hit any objects or scratch the frame or stand. These actions may damage the frame and stand.

WARNING

- The appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
 - Young children should be supervised to ensure they do not play with the appliance.

CAUTION

 Do not let your child's finger get caught in the gap between the TV stand and the table surface. It may cause injury to the child's finger.

Cleaning and Maintenance

CAUTION

• Disconnect the power plug from the wall socket outlet before cleaning the product.

Cleaning the TV Panel

Wipe the TV panel with a dry lint-free cloth in order to prevent damage to the panel surface. In case of greasy dirt, wipe gently with a lint-free cloth slightly moistened with water.



- Do not use a chemical cloth or spray cleaner. It may cause discolouration and damage to the panel surface.
- Do not use a dusty or hard cloth and rub the screen hard. It may cause scratches on the panel surface.

Cleaning the Cabinet

Wipe the cabinet with a lint-free cloth. In case of heavy dirt, wipe with a soft cloth slightly moistened with water.

- Do not use a dusty cloth and rub the cabinet surface. It may cause scratches on the cabinet surface.
 - Do not use chemicals such as benzene, thinner or other chemical products. Do not spray volatile solutions such as insecticide over the cabinet. Using these chemicals may result in cabinet material degradation or coating removal.
 - Do not leave the cabinet in prolonged contact with plastic or rubber materials. It may cause cabinet material degradation or coating removal.

Common Phenomena of the TV Panel

The followings are the common phenomena when operating the TV panel. This is a structual property of the TV panel that is adapted to the industry standards and will have no impact on the performance of the product.

Defective Spots on TV Panel

The TV panel is manufactured with highprecision technology. It consists of large number of pixels. However, some of them may appear constantly on the screen as black spots, brilliant spots of light (red, green or blue) and/or illuminated spots (pixel of white colour).

Residual Image

When a still image or On Screen Display menu is displayed on the screen for a short time (about a minute) and then switched to another image, it may leave an "after-image" on the screen. The residual image will disappear on its own.

Surface on TV Panel

The TV panel is made with fine processing glass. Therefore do not impact strongly on the panel surface as this may cause damage to it.

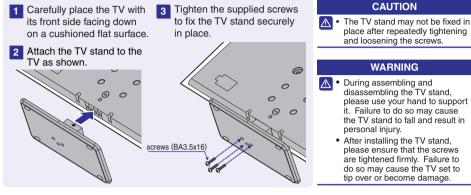
The Usage Under Low Temperature Environment

Due to the structual characteristics of the TV panel, the response speed of the TV panel becomes slower when the ambient temperature around the panel becomes too low. In some cases, it may cause the residual image. The residual image will disappear on its own as the temperature goes up and back to normal.

Preparation

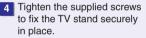
Attach the TV Stand

For model LE24EC05AU only



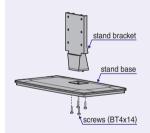
For model LE32EC05AU only

- 1 Attach the stand bracket to the stand base as shown.
- 2 Carefully place the TV with its front side facing down on a cushioned flat surface.
- Attach the TV stand to the TV as shown.



CAUTION

WARNING



3 Tighten the supplied screws

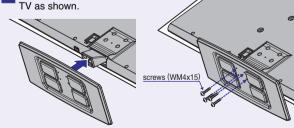
in place.

to fix the TV stand securely

screws (BM4x15)

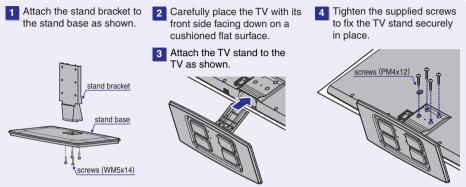
For model LE42EC05AU only

- 1 Carefully place the TV with its front side facing down on a cushioned flat surface.
- 2 Attach the TV stand to the



Attach the TV Stand (continue)

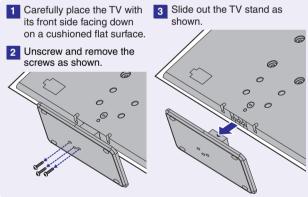
For model LE46EC05AU only



Detach the TV Stand for Wall Mount

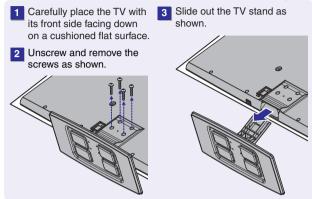
Before mounting the TV on the wall, the TV stand must be removed.

For model LE24EC05AU only



Detach the TV Stand for Wall Mount (continue)

For model LE46EC05AU/LE42EC05AU/LE32EC05AU only



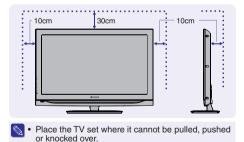
- The illustrations used here are based on model LE46EC05AU. There may be a slight difference in the illustrations, if you are using model LE42EC05AU or LE32EC05AU.
 - Fasten the wall mount bracket to the TV using the supplied spacers and screws.



 For wall mount bracket installation, refer to the wall mount bracket installation guide.

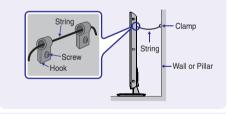
Position the TV Set

Place the TV on a firm and flat surface, leaving a space of at least 10cm around the TV set and 30cm from the top of the TV set to the wall or cabinet.



Secure the TV Set

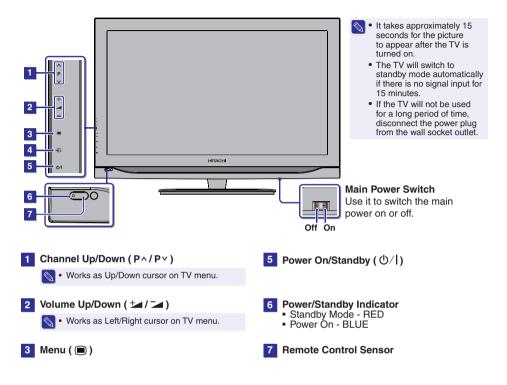
It is recommended to install the TV on a stable place and implement safety measure against overtuning. Use a commerically available string and secure the TV to a wall or pillar.



• The clamp, string and hooks are not supplied.

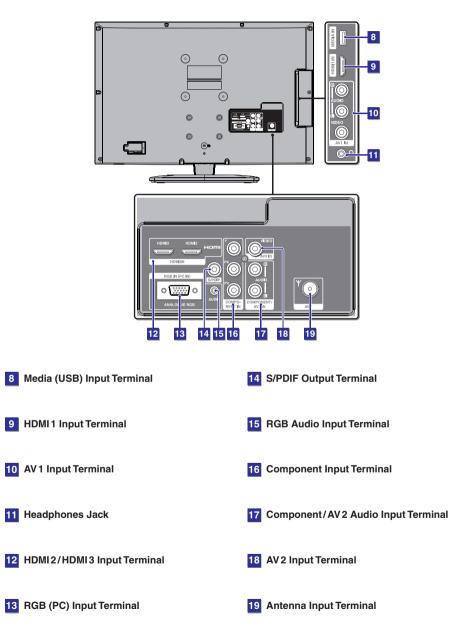
Functional Overview

Front Panel

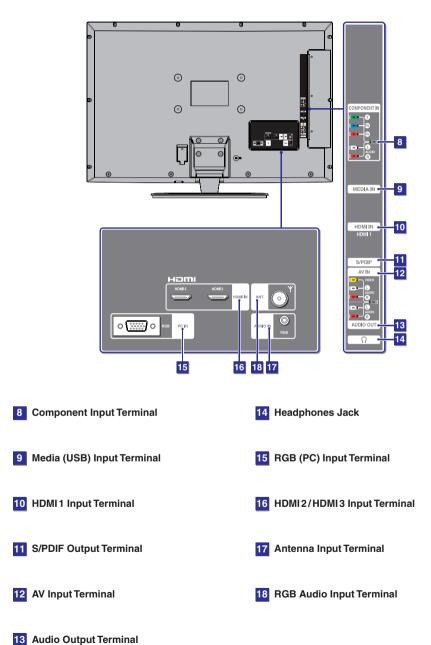


4 Input Select (→)

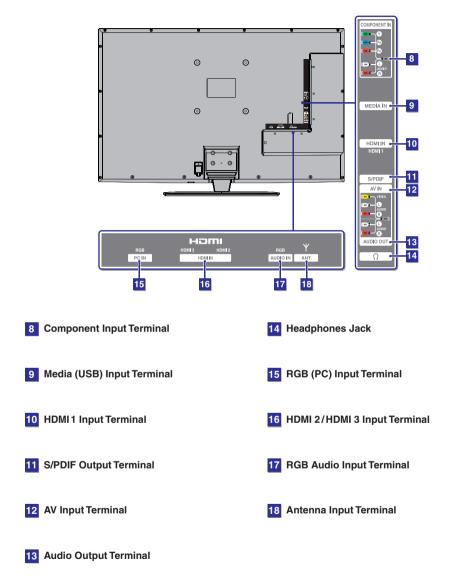
Rear Panel - LE24EC05AU



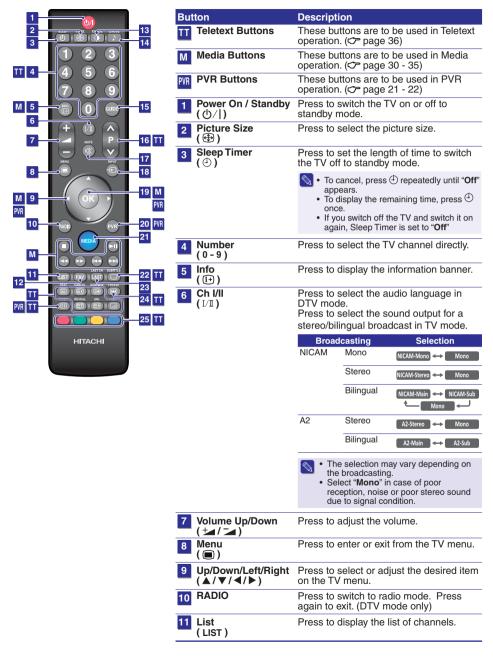
Rear Panel - LE32EC05AU



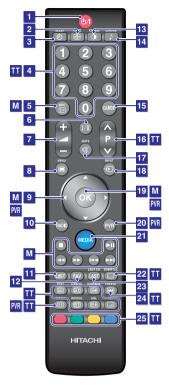
Rear Panel - LE46EC05AU/LE42EC05AU



Remote Control



Remote Control (continue)



But	ton	Description
12	Favourite Channel (FAV)	Press to display the favourite channel list.
13	Picture Mode	Press to select the picture mode.
14	Sound Mode (♪)	Press to select the sound mode.
15	EPG (GUIDE)	Press to display Programme Guide in DTV mode.
16	Channel Up / Down (P^/P [~])	Press to select next/previous channel.
17	Mute (唙)	Press to mute the sound. Press again to cancel.
18	Input Select (-∋)	Press to select the input source.
19	OK (OK)	Press to confirm and execute the selection.
20	PVR	Press to start PVR recording.
21	MEDIA	Press to access MEDIA mode directly.
22	Subtitle ()	Press to turn on the subtitle. Press again to cancel.
23	Last Channel (LAST CH)	Press to return to previously viewed channel.
		• "Last Channel" is only available in TV and DTV mode.
24	Freeze (M)	Press to freeze the picture. Press again to cancel.
25	Colour buttons	Press to execute the prompt function in DTV mode.

Insert Batteries



Connection

Connecting Antenna Cable

Connect the 75 ohm coaxial cable (commerically available) to the antenna input terminal.

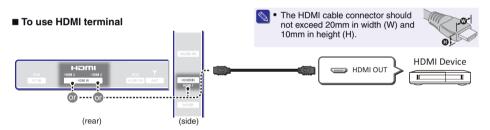
- To obtain better picture guality, use an outdoor antenna.
- If your outdoor antenna uses 75 ohm coaxial cable with an F-type connector, connect it directly to the antenna input terminal at the rear panel.
- If your outdoor antenna uses flat cable, connect it with a 75 ohm adapter (commercially available) and then to the antenna input terminal at the rear panel.

Connecting External Equipment

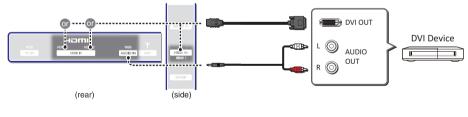
You can select the appropriate connection depending on the equipment that you are connecting and the level of picture quality you are trying to achieve. To view external source images, press 🕤 to select input source. (🗢 page 17)

· Please refer to the user manual of the external equipment for more information on the connection to the TV.

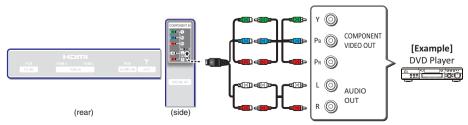
- · Please disconnect all the power supplies to the external equipment and TV before connection.
- The illustrations used here are based on model LE46EC05AU. There may be a slight difference in the illustrations, if you are using model LE42EC05AU, LE32EC05AU or LE24EC05AU.



If the external equipment has DVI output, you can connect it to the HDMI terminal using a HDMI-DVI cable. In case of using the HDMI-DVI cable, connect analogue audio signal to RGB audio input terminal.

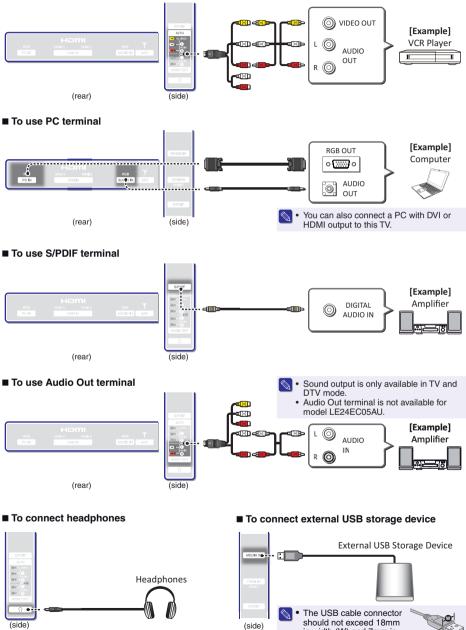


To use Component Video terminal



Connecting External Equipment (continue)

To use Composite Video terminal



in width (W) and 7mm in

height (H).

Basic Operation

Power On/Off

To switch on the TV

- **1** Press the main power switch located on the underside of the TV.
 - The power indicator lights in red, indicating that the TV is in standby mode.

2 Press 신/l.

The power indicator lights in blue and the TV switches on.

To switch off the TV

- 1 Press U/I.
 - The power indicator lights in red and the TV switches off to standby mode.
- Press the main power switch located on the underside of the TV to completely power off the TV.
- It takes approximately 15 seconds for the picture to appear after the TV is turned on.
 - The TV will switch to standby mode automatically if there is no signal input for 15 minutes.
 - If the TV will not be used for a long period of time, unplug the TV from the wall socket outlet.

Input Source Selection

To select input source

- 1 Press D.
- 2 Press ▲/▼ to select the desired input source (DTV, TV, AV, AV1, AV2, COMPONENT, HDMI1, HDMI2, HDMI3, RGB, MEDIA).
- 3 Press OK to set your selection.
- "AV1" and "AV2" are only available for model LE24EC05AU.
 - "AV" is not available for model LE24EC05AU.

Volume Adjustment

To change the volume

- Press to increase the sound volume.
- 2 Press at to decrease the sound volume.

To mute the sound

- 1 Press ^I to temporarily turn off the sound.
- Press [™] or [™] to restore the sound to previous level.
- You can decrease the sound volume by pressing while the sound is muted.

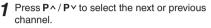
On-Screen Display (OSD)Selection and Adjustment

- **1** Press **(** to display the main menu.
- Press ◀/ ► to select a menu.
 The selected menu page displays.
- 3 Press ▲ / ▼ or OK to set your selection.
- **4** Press \blacktriangle / \bigtriangledown to choose an item on the menu page.
- 5 Press ◀/ ► to adjust an item value or choose options.
- 6 Press I to return to the previous menu screen, or press I repeatedly to exit the menu.
- The OSD menu screen will be closed automatically when no operation has been made for a certain time.

Channel Selection

You can select channels in the following ways:

Using Channel Up/Down



• Tł P

 The skipped channels cannot be selected by P^/PY button.

Using Channel List

- Press LIST to display the Channel List.
- **2** Press \blacktriangle / \bigtriangledown to select the channel and press **OK**.

Using Favourite Channel List

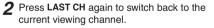
- **1** Press **FAV** to display the Favourite Channel List.
- **2** Press \blacktriangle / \blacktriangledown to select the channel and press **OK**.
- 📎 🔹 🗇 page 26 to create list of favourite channels.

Using Number Buttons

- 1 Enter the channel number by using the **Number** buttons and press **OK**.
 - The channel is switched if the channel number is valid.

Using Last Channel

1 Press LAST CH to switch to the previous selected channel.



 LAST CH will not work if no channel has been changed after the TV is turned on.

Information Banner

The information banner displays brief programme information about the current programme. Each time a channel is changed, the information appears at the bottom of the screen.

To display information banner

1 Press **i**+ to display the information banner.

In DTV mode, the information banner may contain:

- Channel number and name
- Current time
- Current programme name, start time and end time
- · Signal resolution
- Programme information (if available)
- Not all channels broadcast all programme information data. Some channels do not provide programme name and details. In such case, only channel name is displayed.

Subtitle Selection

Some programmes are broadcast with subtitle languages. You can select the desired subtitle language.

To select subtitle language

- **1** Press is to display the Subtitle Languages list.
- **2** Press \blacktriangle / \bigtriangledown to select the desired subtitle language and press **OK**.

Electronic Programme Guide (EPG)

An EPG is an on-screen guide of current and future programmes. It also allows you to view programme information, set recorder and set reminders

Press GUIDE to display the PROGRAMME GUIDE screen.

Current Date and Time



Press ▲/▼ to select the top bar and press ◀/► to change the display by channel

Current Channel Name and Programme Name

The following remote control buttons will enable you to use the EPG functions.

Button	Action			
GUIDE	Press to display or exit PROGRAMME GUIDE screen.			
RED	Press to set recorder.			
GREEN	Press to display information on the selected programme.			
YELLOW	Press to display schedule list.			
BLUE Press to set reminder.				
$\langle A / A / V \rangle$	Press to select the item in the list.			
 The EPG will only be available when you are receiving digital broadcasting signals. 				

Schedule Recorder

You can schedule a recording of future programmes using PROGRAMME GUIDE.

- Press GUIDE to display the PROGRAMME 1 GUIDE screen.
- Select the programme to be recorded.
- 3 Press the **RED** button.
 - A Recorder menu will be shown with the correct time, channel and duration. It also provides the following setting options.

Start Time	Set the time and date to start recording.
End Time	Set the time and date to end recording.
Mode	Select a mode for recording at the same time.

- **\square** Press $\blacksquare / \blacksquare$ to choose an item and $\triangleleft / \blacksquare$ to change the setting.
- Press **OK** to enter the programme to the Schedule List.
 - An updated Schedule List will be shown.
- "Timer Overlay" appears on the screen if the current scheduled recording is overlapped with the previous scheduled recording. "Time Past" appears on the screen if the start time
 - has already past.
 - · Programme highlighted in yellow indicates a recording is scheduled for that programme.

Current Channel Number and Name

	E GUIDE	18 Jul •	Press ▲/▼ to select
• •	CH 1 ONE	►	top bar and press < to select the date. o
14:59-15:58	Swimming: FI	NA World Ch	
			to select "TIME" to
			change the display
			time.
			Current Programme
			Name

[Display by channel]

Schedule Reminder

You can set reminders for your favourite programmes. The channel will be switched to the selected programme at the schedule time if you are watching another programme.

- **1** Press **GUIDE** to display the PROGRAMME GUIDE screen.
- Press ◀/ ► to select the programme for reminder.
- 3 Press the BLUE button.
 - A Reminder Setting menu will be shown. It provides the following setting options.

Channel	Select the channel.		
Minute	Set the time.		
Hour			
Month	Set the month.		
Date	Set the date.		
Mode	Select a mode for reminder.		

- 4 Press ▲ / ▼ to choose an item and ◄ / ► to change the setting.
- **5** Press **OK** to enter the programme to the Schedule List.
 - An updated Schedule List will be shown.
- During the last 10 seconds of the preset reminder time, an on-screen countdown will be displayed. Press any button on the remote control or TV during the countdown will cancel the reminder.

Viewing Schedule List

You can browse and change the future scheduled recordings or reminders.

- **1** Press **GUIDE** to display the PROGRAMME GUIDE screen.
- **2** Press the **YELLOW** button to display the Schedule List.



- 3 To delete a scheduled recording or reminder from the list, press ▲ / ▼ to select and press the RED button to delete.
 - Once a programme is recorded or reminded, it will be removed from the Schedule List.

PVR Operation

About PVR

This TV has a Personal Video Recorder (PVR) that allows you to record digital TV programmes to an external USB storage device (e.g. hard disk drive). With PVR, you can pause Live TV and you can even set up to record a series so you never miss an episode of your favourite programme.

After the new USB storage device is connected to the USB port, you should format it first in order to record. (page 27)

CAUTION

- Δ
 - Safe Removal of USB Storage Device Do not disconnect the USB storage device while it is being accessed. Doing so can damage the
 - device or the files stored on the device. You can safely connect or disconnect the USB storage device when the TV is at standby mode.
 - Back up all of the data in the USB storage device in case if data was lost due to unexpected accident.
 We do not assume any liability for the losses by misuse or malfunction.
 - Not all USB storage devices are compatible with this TV.
 - The file names and folder names that are not in English may not be detected or displayed correctly.
 - The On Screen Display (OSD) shown in this manual may be different from your TV.



3 Channel Name

Control Items

■ Press
I b to select
or
and press OK to execute the selection.

- 5 Current Time
- 6 Available USB Storage Device Recording Time
 - The recording will be automatically named based on the programme that was being watched when you first press PVR.
 - No other channel can be selected while the recording is in progress.
 - Input source is not selectable during PVR recording.

Instant Recording

When watching TV, you can start an instant record of the current programme.

- **1** Press **PVR** to record the channel that you are watching.
- **2** To end the recording, press **PVR** to display the Control Bar.
- 3 Press </ >
 I > to select and press OK.

Time Shifting

Time Shifting is a non-linear recording and playback system. You can pause a broadcast channel with Time Shifting function and watch it later at a more convenient time.

- Press **PVR** to start time shift recording.
- **2** Press **PVR** to display the Control Bar.
- **3** Press \triangleleft / \triangleright to select \triangleright and press **OK** to playback the recording.
- 4 To end the playback and return to the current live broadcast recording, press PVR to display the Control Bar.
 - Press \triangleleft / \triangleright to select \blacksquare and press **OK**.
 - Only 1/ 1, 1% and PVR buttons are functional in Time Shift mode.

Viewing Your Recorded Programme

You can access to previously recorded programmes. You can sort and view the recorded list by programme, time or channel, and delete the recorded programmes.

- 1 Press i to display Recorded List.
- Press (i) repeatedly to sort the list by programme, time or channel.
- **3** To see more details of the recorded programme, press \blacktriangle / \bigtriangledown to select and press • or (i+).
- **1** To delete a recorded programme from the list, press ▲ / ▼ to select and press the RED button to delete.
- **5** To playback a recorded programme from the list, press ▲ / ▼ to to select and press OK to start playback.

PVR Playback

You can simply select the recorded programme from the Recorded List and press OK to start playback.







Control Bar 3

Press PVR to display the Control Bar during the playback.

Control Items

Press item and press OK to execute the selection.

Use these control items on the Control Bar to control the PVR playback.

Control Item / Button

Plav

Resume normal playback.

Search Backward

Search backward the playback.

- Select << and press OK repeatedly to</p> select the search backward speeds: FR2X. FR4X, FR8X, FR16X.
 - Select ► and press OK to resume normal playback.

Search Forward

Search forward the plavback.

- Select ►► and press OK repeatedly to select the search forward speeds: FF2X, FF4X. FF8X. FF16X.
- Select ► and press OK to resume normal plavback.

I⊲⊲ Previous

Skip to the previous recorded programme.

►►I Next

Skip to the next recorded programme.

Pause

Pause the playback.

Stop

Stop the playback.

Menu Operation

Picture Menu

Selected Items			Setup Hints
Picture Mode	Dynamic		Select the most suitable picture mode according to
	Natural		your lighting condition.
	Cinema		_
	Favourite		
Brightness *			Adjust to brighten or darken the picture.
Contrast *			Adjust to increase or decrease the picture contrast.
Colour *			Adjust to increase or decrease the colour intensity.
Tint *			Adjust to obtain natural skin colour.
			 "Tint" can only be selected and adjusted when receiving NTSC signal.
Sharpness *			Adjust to sharpen or soften the picture.
Colour Temperature	Cool		Select the most suitable settings depending on your
	Normal		preferred colour tone.
	Warm		_
	Favourite	Red **	
		Green **	
		Blue **	
Picture Size	Full		Select the desired picture size.
	4:3		CAUTION
	Auto		• When displaying the image in "4:3" Picture Size for a
	Panoramic		long time, it can cause a permanent after-image on the TV screen.
	Zoom		
	Cinema		 In PC mode, only "4:3" and "Full" are available for "Picture Size". If Wide Screen Signalling (WSS) is not transmitted and detected, TV will automatically set Picture Size as "Full".
DNR	Off		Set to reduce noise in the picture due to weak
(Digital Noise Reduction)	Low		signal condition.
	Middle		
	High		

Menu items that are not selectable are grayed out.
 The menu items indicated by "*" are only available when "Picture Mode" is set to "Favourite".
 The menu items indicated by "**" are only available when "Colour Temperature" is set to "Favourite".

- "Picture Size" is not available in MEDIA mode.
- "Colour", "Sharpness" and "DNR" are not available in RGB mode.

Audio Menu

Selected Items			Setup Hints
Sound Mode	Standard		Select the most suitable sound mode according to
	Movie		your watching contents.
	Music		
	Speech		
	Favourite		
Bass *			Adjust the low-pitched sound.
Treble *			Adjust the high-pitched sound.
Balance			Adjust the left and right sound channel volume.
			 "Balance" is only available when "Surround Sound" is set to "Off".
Perfect Volume	Off On		Select " On " to automatically adjust the volume to its average level each time you change the channel.
Surround Sound	Off On		Select "On" to activate Surround Sound.
AD Switch (Audio Description Switch)	Audio Description	Off On	Select " On " to activate the auditory narration of visual representations.
, ,	AD Volume		• "AD Volume" is only available when "Audio Description" is set to "On".
Digital Audio Output	Auto PCM Dolby Digita	ıl	Select "PCM" to output audio signal by PCM format. Select "Auto" to output audio signal by Dolby Digital or PCM format. Dolby Digital format is output if the audio track of the broadcasting programme is in Dolby Digital format. In case the broadcasting programme is in MPEG format, PCM format will be selected.

Menu items that are not selectable are grayed out.
 The menu items indicated by " * " are only available when "Sound" is set to "Favourite".

• "Digital Audio Output" and "AD Switch" are only available in DTV mode.

Setup Menu (TV and DTV mode only)

Selected Items			Setup Hints
Auto Tuning	DTV + TV		Tune for all available digital and analogue broadcasting channels automatically.
	DTV		Tune for all available analogue broadcasting channels automatically.
	TV		Tune for all available digital broadcasting channels automatically.
DTV Manual Tuning			Search for the digital broadcasting channel manually.
			To manual tune for the digital broadcasting channel
			1 Press \triangleleft / \triangleright to select the channel number.
			2 Press OK to begin the search for the channel.
TV Manual Tuning	Save To		Press ◄ / ▶ to select the position you want to store the current channel.
	Sound System	BG	Select the appropriate sound system.
		I DK	 If the sound is not clear, select another sound system.
	Current Ch	-	Select the channel you want to tune.
	Search		Press $\triangleleft/\blacktriangleright$ to search the frequency.
	Fine Tuning	1	Fine tune the current channel.
	i ilio i al ilig		Press \triangleleft / \blacktriangleright to decrease or increase the frequency.
	Frequency		Display the current channel frequency.
Channel Edit			Set the channels according to your preference. You can set your favourite channels, move, rename, delete or skip the channels you want.
			To delete the channel
			1 Press $\blacktriangle / \blacktriangledown$ to select the channel to be deleted.
			2 Press the RED button.
			3 Press the RED button again to delete the channel.
			 The selected channel is deleted, all the following channels are shifted up one position. The deleted channel cannot be found unless you perform a channel search again.

Setup Menu (TV and DTV mode only) (continue)

Selected Items	Setup Hints
Channel Edit	To rename the channel (TV mode only)
	Press ▲ / ▼ to select the channel to be renamed.
	2 Press the GREEN button.
	3 Press \blacktriangle / \blacktriangledown to input the desired characters.
	4 Press \blacktriangleright to move to the next character.
	5 Press OK when the renaming is completed.
	• The name will be displayed on the screen when the channel is selected.
	To move the channel
	1 Press \blacktriangle / \bigtriangledown to select the channel to be moved.
	2 Press the YELLOW button.
	3 Press $\blacktriangle / \checkmark$ to select the new position for the channel.
	4 Press the YELLOW button to move the channel.
	To skip the channel
	Press ▲ / ▼ to select the channel to be skipped.
	2 Press the BLUE button (<i>A</i> symbol appears).
	 The channel will then be skipped when you select channels with P^/PY.
	 You can still select a skipped channel using the Number buttons. To unskip the channel, select the channel and press the BLUE button (A symbol is removed).
	the DECE button (*** symbol is removed).
	To set favourite channel
	1 Press $\blacktriangle / \checkmark$ to select the favourite channel.
	2 Press the FAV button (b symbol appears).
	• To cancel the favourite channel, select the channel and press the FAV button (symbol is removed).
Signal Information	Display information about signal of currently selected channel.
Section 4 Provide the selectable are grayed out.	
• "Signal Information" is only available in DTV mode.	

Function Menu

Selected Items		Setup Hints
OSD Language	English	Show the on-screen display language.
	Linglish	
		• The OSD language is English only.
Hearing Impaired	On	Select "On" to display the subtitles for the hearing
	Off	impaired.
Country	Australia	Show the country of the local area.
	New Zealand	
PVR File System	Select Disk USB	Select the USB port that the USB storage device is connected.
	Disk	Select the partition (if available) of the USB storage device.
	Check PVR File Syst	em Select to check the PVR File System.
	USB Disk	Show the status of the PVR File System checking.
	Format PVR Fil System Type	 Select to format the USB storage device. The USB storage device can be formatted as "FAT32" or "Hi Speed".
		CAUTION
		 All data in the USB storage device will be erased when it is formatted.
	PVR Fil	e Select the desired recording capacity.
	System Size	• "PVR File System Size" is only available when "PVR File System Type" is set to "Hi Speed".
		 The recording capacity depends on the video format that is being recorded.
	Time Shift Size	Show the time shift disk size.
	Speed	Show the speed of the USB storage device.
	Free Record Limit	Select the maximum recording time.
Time	Time Zone	Select the local time zone.
		 This function allows you to select the local time zone in case the time displayed in the EPG does not match the local time of your area.
	Clock	Set the current time for the TV.
		 If you turn off the TV by switching off the main power switch, you will need to set the clock again.
		 "Clock" can only display the clock time when on a digital broadcasting channel and the time information is available.
	Sleep Timer Off 10 Min.	Set the length of time to switch the TV off to standby mode.
	20 Min.	• To cancel, press (2) repeatedly until "Off" appears.
	30 Min.	 To display the remaining time, press
	60 Min.	 If you switch off the TV and switch it on again, Sleep Timer is set to "Off".
	90 Min.	
	120 Min	
	180 Min	

Function Menu (continue)

Selected Items			Setup Hints		
Time	Auto Off	On	Select "On" to switch the TV off to standby mode		
		Off	automatically if there is no signal input for 15 minutes.		
DivX Registration			Obtain the DivX VOD Registration Code of the TV.		
DivX Deactivation			Obtain the DivX Deregistration Code of the TV.		
100/120Hz Scan	On		Select "On" to reduce motion blur during fast moving		
	Off		scenes.		

Menu items that are not selectable are grayed out.

• "Hearing Impaired" and "PVR File System" are only available in DTV mode.

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

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

Advanced Setup Menu

Selected Items		Setup Hints	Setup Hints		
Set Password			Set the password for Advanced Setup menu. The factory default password is "0000".		
Parental Control	No Block P	Set to control the programmes that can be on your TV.			
	C	Rating	Description		
	G	No Block	Cancel the blocking.		
	PG	Pre-school (P)	Content is suitable for pre-schoolers under age 5.		
	MA	Children (C)	Content is suitable for children age 6-7.		
	AV	General (G)	For general exhibition. All ages may watch.		
R	К	Parental guidance recommended (PG)	Parental guidance is recommended for young viewers.		
		Mature audience 15+ (M)	Recommended for mature audience.		
		Mature adult audience 15+ (MA)	Not suitable for people under age 15.		
		Adult audience strong violence 15+ (AV)	Not suitable for people under age 15. The programmes contain violence content.		
		Restricted 18+ (R)	Not suitable for people under age 18.		
Daylight Saving	On	Select "On" to upd	ate the date and time for your TV.		
	Off				
Software Update		For software updating.			
Restore Default		Restore all settings to the default factory settings.			

• A password is require to access the Advanced Setup menu.

In case you have forgotten your password, enter "9999" to disable lock and reset the password to factory default
password.

- You can view blocked programmes by entering the password when prompted. This temporarily switches off the
 Parental Control for the current channel until the TV is turned off, the channel is changed or a programme with a
 higher rating starts.
- "Parental Control" is only available in DTV mode.
- "Software Update" is only available in TV and DTV mode.

RGB Mode Setup Menu (RGB mode only)

Selected Items	Setup Hints		
Auto Adjust	Auto adjust the screen position, phase and clock.		
H Position	Adjust the horizontal position of the picture.		
V Position	Adjust the vertical position of the picture.		
Clock Phase	Adjust to minimize the blurring of the letters and stripes on the horizontal row.		
	Make sure to adjust "H Clock" before adjusting "Clock Phase".		
H Clock	Adjust to minimize the vertical stripes on the screen.		

 RGB Mode Setup menu is only available in RGB mode and when receiving a compatible RGB//PC signal via RGB Input terminal.

Media Operation

You can play video, photo, music and text files from your USB storage device.

To playback media file

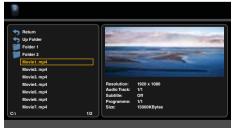
- **1** Connect the USB storage device into the MEDIA input terminal.
- **2** Press **MEDIA** to display the Media Selection Menu.



3 Press **◄**/**▶** to select the desired media and press **OK** to display the Drive Selection Menu.

¢			
RETURN	C:	D:	

- To return to Media Selection Menu, press ◀/ ► to select "RETURN" and press OK.
- 4 Press ◀/ ► to select the desired drive and press OK to display the Media (Video, Music, Photo or Text) Menu.



- 5 Press ▲/▼ to select the desired folder and press OK to open the folder; or press ▲/▼ to select the desired file and press ►II to start playback.
- The currently highlighted media file will automatically start playing in the preview window if the file type is supported.

CAUTION

Safe Removal of USB Storage Device Do not disconnect a USB storage device while it is being accessed. Doing so can damage the device or the files stored on the device. You can safely

- or the files stored on the device. You can sately connect or disconnect the USB storage device when the TV is at standby mode.
 Back up all of the data in the USB storage device in
- Back up all of the data in the USB storage device in case if data was lost due to unexpected accident.
 We do not assume any liability for the losses by misuse or malfunction.
- Not all USB storage devices are compatible with this TV.
 - The file names and folder names that are not in English may not be detected or displayed correctly.
 - The On Screen Display (OSD) shown in this manual may be different from your TV.

To playback selected media files

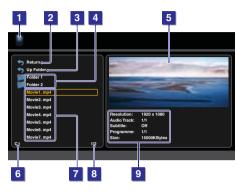
- 1 At the Media Menu, press ▲ / ▼ to select the media file and press OK to mark (tick symbol appears).
- 2 Repeat Step 1 if you want to add more media files to playback, or press ►II to start playback.
- To deselect the media file, select the media file and press **OK** (tick symbol is removed).
 - If no media files are marked, all media files in the folder will be playback.

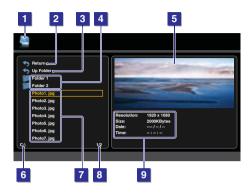
To set background music for photo/text playback

- 1 At the Music Menu, press ▲/▼ to select the music file and press OK to mark (tick symbol appears).
- **2** Repeat Step 1 if you want to add more music files for the background music.
- **3** Exit the Music Menu after you had selected the music files.
- 4 During the photo/text playback, press i⇒ to display the Control Bar
- **5** Press **◄**/**▶** to select **♬** and press **OK** to play the background music.
- **6** To stop the background music, press $\triangleleft / \triangleright$ to select (a) and press **OK**.

Media Menu

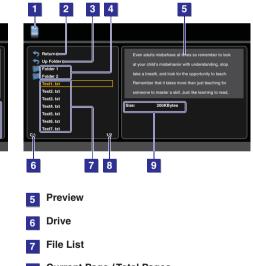
Video Menu





Text Menu

Photo Menu



3 Up Folder ■ Press ▲ / ▼ to select and press OK to move to upper level folder.

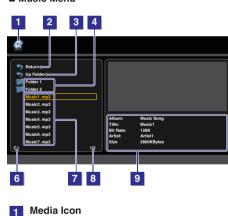
■ Press ▲ / ▼ to select and press OK to return to Drive Selection Menu



Return

1

2



- 8 Current Page / Total Pages
- 9 File Info

Music Menu

Video Playback 2 3 C. 00:00:15 / 00:03:50 II 🔫 🍉 I44 🕬 🔳 🚳 💬 8 6 7 Δ 5 Progress Bar File Information Elapsed Time / Total Playback Time **Control Bar** 4 Press it to display the Control Bar during the video playback. 5 Left Cursor 6 Down Cursor Press V to hide the Control Bar. **Right Cursor** ■ Press > to select the desired control item. **Control Items** 8 Press item and press OK to execute the selection Use these control items on the Control Bar or these buttons on the remote control to control the video playback. **Control Item / Button** Pause Pause the playback. Play Resume the playback. ►II Plav/Pause Pause or resume the playback. Search Backward Search backward the playback. Press repeatedly to select the search backward speeds: FR2X, FR4X, FR8X, FR16X,

Press ►II to resume normal playback.

Search Forward Search forward the plavback. Press repeatedly to select the search forward speeds: FF2X, FF4X, FF8X, FF16X.

Press ►II to resume normal playback.

Idd Skip Backward

Skip to the previous video file. ►►I Skip Forward

Skip to the next video file.

Stop Stop the plavback and return to Video Menu screen.

Play Modes

(1) Repeat Current

Playback the current video file repeatedly.

(A) Repeat All Playback all the video files repeatedly.

Repeat None Cancel repeat.

(Repeat AB

- Set the starting and ending of a time segment to repeat.
- Select 🗇 and press OK once at your chosen start point.
- Press OK again at your chosen end point.

• The time segment will then repeat continuously.

■ To cancel, select 💬 and press OK repeatedly until 🗇 🖙 is shown on the screen.

🗏 List

Display the list of video files.

 To close the list, press ▶ to select "Close" and press OK.

(i) File Info

Display the current video file information.

 To close the information, press ▲ / ▼ to select "Close" and press OK.

① Time Search

Plavback from the desired position by specifying the time.

- Press to display the Time Search window.
- Enter the time (Hour : Minute : Second).

Zoom In Zoom In Zoom in the current playback.

Zoom Out

- Q Zoom out the current playback.
- +<u>†</u>→ Pan
 - Select ⁺ and press OK.
 - Press $\langle A \rangle \langle V \rangle$ to pan the zoomed playback.
 - To exit pan mode, press **OK**.
 To return to normal playback picture size, press $\triangleleft/\triangleright$ to select \bigcirc and press **OK** to adjust the picture size.

Music Playback



Use these control items on the Control Bar or these buttons on the remote control to control the music playback.

muo	ic playback.
Со	ntrol Item / Button
	Pause Pause the playback.
	Play Resume the playback.
►II	Play/Pause Pause or resume the playback.
	 Search Backward Search backward the playback. Press repeatedly to select the search backward speeds: FR2X, FR4X, FR8X, FR16X.
	Press ►II to resume normal playback.
••	 Search Forward Search forward the playback. Press repeatedly to select the search forward speeds: FF2X, FF4X, FF8X, FF16X.
	Sector Press ►II to resume normal playback.
I44	Previous Skip to the previous music file.
>>	Next Skip to the next music file.
	Stop Stop the playback and return to Music Menu screen.
	Play Modes
Ð	Repeat Current Playback the current music file repeatedly.
¢	Repeat All Playback all the music files repeatedly.
0	Repeat None Cancel repeat.
Ŵ	Mute Press to mute the sound. Press again to cancel.
Ξ	List Display the list of music files.
	● To close the list, press ► to select "Close" and press OK.
<i>i</i>)	File Info Display the current music file information.
	• To close the information, press OK .
0	Time Search Display the Time Search window. Enter the time (Hour : Minute : Second).

Photo Playback



1 File Information

2 Control Bar

Press I to display the Control Bar during the photo playback.

3 Left Cursor

4 Down Cursor

■ Press ▼ to hide the Control Bar.

5 Right Cursor

■ Press ► to select the desired control items.

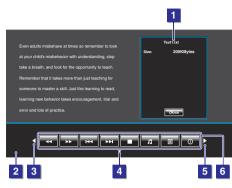
6 Control Items

■ Press ◀/ ▶ to select the desired control items and press **OK** to execute the selection.

Use these control items on the Control Bar or these buttons on the remote control to control the photo playback.

prior	o playback.
Co	ntrol Item / Button
	Pause
	Pause the playback. Play
	Resume the playback.
►I	Play/Pause Pause or resume the playback.
 44	Previous Skip to the previous photo file.
>>	Next Skip to the next photo file.
	Stop Stop the playback and return to Photo Menu screen.
വ	Play Modes Repeat Current Playback the current photo file permanently. No slideshow is performed.
Ф	Repeat All Playback all the photo files repeatedly.
0	Repeat None Cancel repeat.
3	Stop Background Music Stop the background music.
IJ	Play Background Music Play the background music while viewing the photo files. (page 30)
	 If no background music is set, all the music files in the same folder as the photo files will be played back.
	List Display the list of photo files.
	Solution To close the list, press ► to select "Close" and press OK.
<i>(i)</i>	File Info Display the current photo file information.
	Solution • To close the information, press OK.
Ċ	Rotate Clockwise Rotate the current photo clockwise.
	Sector Secto
ى	Rotate Counter Clockwise Rotate the current photo counter clockwise.
	Sector Press ►II to resume normal playback.
Ð	Zoom In Zoom in the current photo.
Q	Zoom Out Zoom out the current photo.
¢	Pan ■ Select [•] and press OK. ■ Press ▲ / ▼ / ▶ to pan the zoomed photo.</th
	Sector Press ►II to resume normal playback.

Text Playback



1 File Information

2 Control Bar

Press (1) to display the Control Bar during the text playback.

3 Left Cursor

4 Down Cursor

■ Press ▼ to hide the Control Bar.

5 Right Cursor

■ Press ► to select the desired control items.

6 Control Items

■ Press ◀/ ▶ to select the desired control items and press **OK** to execute the selection.

• To minimize the loss of characters in multilanguage content, you can save the text file with unicode encoding. Use these control items on the Control Bar or these buttons on the remote control to control the text playback.

ieni playback.					
Co	ntrol Item / Button				
	Search Backward Display the previous page of the text file.				
••	 Search Forward Display the next page of the text file. 				
⊲⊲	Previous Skip to the previous text file.				
>>	Next Skip to the next text file.				
	Stop Stop the playback and return to Text Menu screen.				
3	Stop Background Music Stop the background music.				
f	Play Background Music Play the background music while viewing the text files. (C> page 30)				
	 If no background music is set, all the music files in the same folder as the text files will be played back. 				
Ξ	List Display the list of text files.				
	Solution To close the list, press ► to select "Close" and press OK.				
<i>i</i>	File Info Display the current text file information.				
	• To close the information, press OK .				

Playable File Types

Video	
File Type	File Extension Name
MPEG	.mpg .mpeg
 All program playback or 	nmes recorded by this TV can be n this TV via MEDIA mode.
■ Music	
File Type	File Extension Name
MP3	.mp3
Photo	
File Type	File Extension Name
JPEG	.jpg .jpeg
■ Text	
File Type	File Extension Name
ТХТ	.txt (Encoding standard : Unicode)

Teletext Operation

Teletext is a free service broadcast provided by most TV stations. It provides information on the current affairs news, weather forecasts, programme previews, stock market report and many other topics.

	Button	Description
I	Button	Description
	Number buttons (0 - 9)	Press to select a Teletext page. (Enter 3 digits)
	2 TV/Text (🚍)	Press to enter Teletext mode. Press again to exit Teletext mode.
789 60 Guide		 If "No Teletext" appears on the screen, it may mean that the channel you have selected does not support teletext.
	3 Cancel (🗟)	Press to return to TV programme temporarily while searching for a Teletext page. When the search is done, the page number with black background will be displayed on the upper left of the screen. Press again to return to the Teletext page.
	4 Index (🗐)	Press to display the main index page.
	5 Reveal (🗊)	Press to display the hidden text (e.g. the answers of puzzles or riddles). Press again to close the revealed answer.
	6 Page Select (P^/P ^V)	Press to move to the next or previous Teletext page.
	7 Subtitle ()	Press to access subtitle service directly (if the channel has the subtitle service broadcasting).
HITACHI	8 Hold (🝽)	Press to hold the current Teletext page. Press again to cancel the hold mode.
	9 Sub Page (🗐)	Press to enter or exit sub page mode (if sub page is available). Press ▲ / ▼ to select the desired sub page.
	10 Mix (🖃)	Press to superimpose the teletext over the TV programme. Press again to cancel the mix mode.
	11 Size (📑)	Press to enlarge the top half of the page. Press again to enlarge the bottom half of the page. Press again to return to the normal size.
	12 Colour buttons	Press to access to a link page displayed at the bottom of the Teletext page. (Select the corresponding coloured page)

Troubleshooting

Before calling service personnel, please check the following troubleshooting guide. If any problem still persists, unplug the TV set and call for servicing.

Symptom	Check List		
No picture, no sound	 Check if the main power of the TV is turned on. Check the connection of the power cord and/or other cables. 		
Normal picture, no sound	 Check the volume level. Check if the [™] button has been pressed or not. Check the connection of the external equipment. 		
Poor colour or no colour, normal sound	• Check the value level of "Brightness", "Contrast" and "Colour" in Picture menu.		
Multiple images, normal sound	 Check the antenna connection and direction. Fine tuning the TV. Check the connection of the external equipment. The TV station may have broadcast difficulties. Try another channel. 		
Snowy picture, poor sound	 Check the antenna connection and direction. The TV station may have broadcast difficulties. Try another channel. 		
Intermittent interference	 Check if the source of interference is shield well. Remove those kinds of electrical devices away from the TV. 		
Poor stereo sound	• The TV station may have broadcast difficulties. Try to change to mono mode.		
Remote control does not work	 Check if the batteries are installed correctly. The batteries may be exhausted. Replace them with new ones. Remove all obstruction between the remote control and the remote control sensor. Ensure there is no strong light shining on the remote control sensor. 		
HITACHI logo appears on the screen	 The TV cannot detect any signals from any input terminals. Check if the cable is connected correctly and firmly. Check if the power of any external equipment is turned on. Check if the input source selection is correct. 		
HITACHI logo or "Unsupported Signal" appears on the screen (RGB mode only)	 Check if the display resolution and frequency from your PC is a valid mode for the TV. Refer to the recommended RGB input signal chart 		
Image not centered (RGB mode only)	 Adjust the "H Position" and "V Position" in the RGB Mode Setup menu. 		

Specifications

Model Name		LE46EC05AU	LE42EC05AU	LE32EC05AU	LE24EC05AU	
Panel	Size	Approx. 46 inches	Approx. 42 inches	Approx. 32 inches	Approx. 24 inches	
	Resolution	1920x1080	1920×1080	1366x768	1920x1080	
Power Requirement		AC 100-240V,	AC 100-240V,	AC 100-240V,	AC 100-240V,	
		50/60Hz	50/60Hz	50/60Hz	50/60Hz	
Power Consu	mption	160W	140W	80W	45W	
Audio Output		10W + 10W	10W + 10W	5W + 5W	3W + 3W	
Dimensions	With Stand	1110x744x221mm	1013x689x220mm	778x560x210mm	580x421x148mm	
(WxHxD)	Without Stand	1110x700x47mm	1013x636x54mm	778x510x46mm	580x379x44mm	
Weight	With Stand	19.0kg	16.2kg	10.3kg	4.5kg	
	Without Stand	16.4kg	13.6kg	9.0kg	4.85kg	
Terminals / Input Signals	Tuner Analogue	PAL BG, DK, I SECAM DK (44.25MHz ~ 863.25	MHz)			
	Digital	DVB-T (177.5MHz ~ 809MH	lz)			
	AV IN *2, AV1 IN *1, AV2 IN *1	CVBS PAL, SECAM, NTSC				
	COMPONENT IN	YPBPR 480i/p, 576i/p, 720p(50/60), 1080i(50/60), 1080p(50/60)				
HDMI1 IN , HDMI2 IN , HDMI3 IN		480i/p, 576i/p, 720p(50/60), 1080i(50/60), 1080p(24/50/60)				
	RGB IN (Analogue)	640x480(60), 800x600(60), 1024x768(60), 1280x1024(60)				
	MEDIA IN	USB Port				
	AUDIO IN	Diameter 3.5mm Mi	ni Jack			
Terminals /	AUDIO OUT*2	Analogue or Digital TV only				
Output	S/PDIF	Digital Audio Output (Coaxial)				
Signals	Headphones	Diameter 3.5mm Mini Jack				
Environment		Working Temperature: 5 ~ 35°C				
		Working Humidity: 20 ~ 80%				
		Storage Temperature: 15 ~ 45°C				
Cumplied Acc		Storage Humidity: 10 ~ 90%				
Supplied Acce	essones	User Manual (x1) Product Warranty Info Sheet (x1)				
		Remote Control (x1)				
		AAA Battery (x2)				
		Stand (x1)				
		Component Video Adaptor (x1) *2				
		Composite Video Adaptor (x1) *2				
		USB Extension Cable (x1) Spacers (x4) and Screws (x4) for Wall Mount Bracket Installation				
		Screws for Stand Installation: LE24EC05AU (x3); LE32EC05AU (x10);				
		LE42EC05AU (x4); LE46EC05AU (x8)				

*1 Available for model LE24EC05AU only. *2 Not available for model LE24EC05AU.

Design and specifications are subject to change without notice.
 Weight and dimensions shown are approximate values only.

RGB Input Signal Chart

Resolution		Vertical Frequency (Hz)	Horizontal Frequency (kHz)	Dot Clock Frequency (MHz)
VGA	640 x 480	60	31.47	25.18
SVGA	800 x 600	60	37.88	40.00
XGA	1024 x 768	60	48.36	65.00
SXGA	1280 x 1024	60	63.98	108.00
WXGA	1280 x 768	60	47.78	79.50

If the message "Unsupported Signal" appears on the screen, adjust the PC display setting as in the above chart.
 Modes that are not listed in the above chart may not be supported. For an optimal picture, it is recommended to choose a mode listed in the chart.

• Sometimes, the image may be disrupted due to the frequency standard from the VGA card. This is not an error. You may improve this situation by selecting "Auto Adjust" or adjusting the position, phase and clock settings in the RGB Mode Setup menu manually.

• If you switch off the TV, interference lines may occur on the TV screen. This is normal.

HDMI Input Signal Chart

Resolution		Vertical Frequency (Hz)	Horizontal Frequency (kHz)	Dot Clock Frequency (MHz)
VGA	640 x 480	60	31.47	25.18
576i	720(1440) x 576	50	15.63	27.00
480i	720(1440) x 480	60	15.73	27.00
576p	720 x 576	50	31.25	27.00
480p	720 x 480	60	31.47	27.00
1080i/50	1920 x 1080	50	28.13	74.25
1080i/60	1920 x 1080	60	33.75	74.25
720p/50	1280 x 720	50	37.50	74.25
720p/60	1280 x 720	60	45.00	74.25
1080p/50	1920 x 1080	50	56.25	148.50
1080p/60	1920 x 1080	60	67.50	148.50
1080p/24	1920 x 1080	24	27.00	74.25

