LG
Life's Good

OWNERS MANUAL
Safety and Reference

LED TV*

*Disclaimer
LG LED TV applies LCD screen with LED backlights.

Please read this manual carefully before operating your set and retain it for future reference.

MT48*



www.lg.com
P/NO: MFL69446124(1603-REV00)

Service

Unplug the monitor from the wall outlet and refer servicing to qualified service personnel when :

- The power cord or plug is damaged or frayed.
- Liquid has been spilled into the monitor.
- The monitor has been exposed to rain or water.
- The monitor does not operate normally following the operating instructions. Adjust only those controls that are covered in the operating instructions. An improper adjustment of other controls may result in damage and often requires extensive work by a qualified technician to restore the monitor to normal operation.
- The monitor has been dropped or the cabinet has been damaged.
- The monitor exhibits a distinct change in performance.
- Snapping or popping from the monitor is continuous or frequent while the monitor is operating. It is normal for some monitors to make occasional sounds when being turned on or off, or when changing video modes.

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

Safety precautions

Please read these safety precautions carefully before using the product.

⚠ WARNING
If you ignore the warning message, you may be seriously injured or there is a possibility of accident or death.

⚠ CAUTION
If you ignore the caution message, you may be slightly injured or the product may be damaged.

Precautions in installing the Product

⚠ WARNING

- Keep away from heat sources like electrical heaters.
  ▶ Electrical shock, fire, malfunction or deformation may occur.
- Keep the packing anti-moisture material or vinyl packing out of the reach of children.
  ▶ Anti-moisture material is harmful if swallowed. If swallowed by mistake, force the patient to vomit and visit the nearest hospital. Additionally, vinyl packing can cause suffocation. Keep it out of the reach of children.
- Do not put heavy objects on the product or sit upon it.
  ▶ If the product collapses or is dropped, you may be injured. Children must pay particular attention.
- Do not leave the power or signal cable unattended on the pathway.
  ▶ The passerby can falter, which can cause electrical shock, fire, product breakdown or injury.
- Install the product in a neat and dry place.
  ▶ Dust or moisture can cause electrical shock, fire or product damage.
- If you can smell smoke or other odors or hear a strange sound unplug the power cord and contact the service center.
  ▶ If you continue to use without taking proper measures, electrical shock or fire can occur.
- If you dropped the product or the case is broken, turn off the product and unplug the power cord.
  ▶ If you continue to use without taking proper measures, electrical shock or fire can occur. Contact the service center.
- Do not drop an object on or apply impact to the product. Do not throw any toys or objects on the product screen.
  ▶ It can cause injury to human, problem to product and damage the display.
- Do not let the product fall or drop when connecting it with an external device.
  ▶ This may cause injury and/or damage to the product.
- When connecting it with a game device, keep a distance of four times as long as the diagonal measurement of the screen from the device.
  ▶ If the product falls because of the short cable, this may cause injury and/or damage to the product.
- Leaving a fixed image on the screen for a long time may cause damage to the screen and cause image burn-in. To use the product for a long period of time, use a screen saver on the PC or utilize the residual image prevention function on the product, and when the product is not used, turn off the power. Burn-in and related problems are not covered by the warranty on this product.
- Do NOT install this product on a wall where there is high risk of exposure to oil fumes or mist.
  ▶ This may damage product and cause is to fail.

⚠ CAUTION

- Make sure the product ventilation hole is not blocked. Install the product in a suitably wide place (more than 100 mm from the wall)
  ▶ If you install the product too close to the wall, it may be deformed or fire can break out due to internal heat.
- Do not block the ventilation hole of the product by a tablecloth or curtain.
  ▶ The product can be deformed or fire can break out due to overheating inside the product.
- Install the product on a flat and stable place that has no risk of dropping the product.
  ▶ If the product is dropped, you may be injured or the product may be broken.
- Install the product where no EMI occurs.
- Keep the product away from direct sunlight.
  ▶ The product can be damaged.
- If you install the product in a place that does not meet the recommended conditions, this may cause serious damage to the product's picture quality, life cycle and appearance. Please check with LG or a qualified installer before installing. This caution applies to a place where there is an abundance of fine dust or oil mist, chemical substances are used, the temperature is very high or low, the humidity is very high, or the product is likely to remain turned on for a long period of time (airport and train station), failure to do so will invalidate the warranty.
- Do not install the product in an area with poor ventilation (e.g.on a bookshelf, in a closet) or outside and avoid placing on cushions or carpets.
- In addition, do not install it where there are heating objects such as lighting equipment.

Precautions to the AC Adapter and Electrical Power

⚠ WARNING

- If water or any foreign substance goes inside the product (TV, monitor, power cord, or AC adapter), disconnect the power cord immediately and contact the service center.
  ▶ Otherwise, this may cause a fire or electric shock due to damage to the product.
- Do not touch the power plug or AC adapter with wet hands. If the pins of the plug are wet or dusty, wipe and dry them before use.
  ▶ Otherwise, this may cause a fire or electric shock.
- Make sure to completely insert the power cord into the AC adapter.
  ▶ If loosely connected, the poor connection may cause a fire or electric shock.
- Be sure to use power cords and AC adapters provided or approved by LG Electronics, Inc.
  ▶ The use of non-approved products may cause a fire or electric shock.

- When unplugging the power cord, always pull it by the plug. Do not bend the power cord with excessive force.
  ▶ The power line can be damaged, which may cause electric shock or fire.
- Be careful not to step or place heavy objects (electronic appliances, clothing, etc.) on the power cord or AC adapter. Be careful not to damage the power cord or AC adapter with sharp objects.
  ▶ Damaged power cords may cause a fire or electric shock.
- Never disassemble, repair or modify the power cord or AC adapter.
  ▶ This may cause a fire or electric shock.
- Make sure to connect the power cable to the grounded current.
  ▶ You may be electrocuted or injured.
- Use the rated voltage only.
  ▶ The product can be damaged, or you may be electrocuted.
- In the presence of thunder and lightning, never touch the power cord and signal cable because it can be very dangerous.
  ▶ It can cause electric shock.
- Do not connect several extension cords, electrical appliances or electrical heaters to a single outlet. Use a power bar with a grounding terminal designed for exclusive use with the computer.
  ▶ A fire can break out due to overheating.
- Do not touch the power plug with wet hands. Additionally, if the cord pin is wet or covered with dust, dry the power plug completely or wipe dust off.
  ▶ You may be electrocuted due to excess moisture.
- If you don't intend to use the product for a long time, unplug the power cable from the product.
  ▶ Covering dust can cause a fire, or insulation deterioration can cause electric leakage, electric shock or fire.
- Fix the power cable completely.
  ▶ If the power cable is not fixed completely, a fire can break out.
- Do not insert a conductor (like a metal chopstick) into one end of the power cable while the other end is connected to the input terminal on the wall. Additionally, do not touch the power cable right after plugging into the wall input terminal.
  ▶ You may be electrocuted.
- The appliance coupler is used as the disconnect device.
- Please make sure the device is installed near the wall outlet to which it is connected and that the outlet is easily accessible.
- As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if the unit is turned off.

⚠ CAUTION

- Be sure to keep the outlet, AC adapter, and pins of the power plug clean from dust and etc.
  ▶ This may cause a fire.
- Do not unplug the power cord while the product is in use.
  ▶ Electrical shock can damage the product.
- Use only the power cord supplied with the unit. If you use another power cord, make sure that it is certified by the applicable national standards when not provided by the supplier. If the power cable is faulty in any way, please contact the manufacturer or the nearest authorized repair service provider for a replacement.

Precautions in moving the product

⚠ WARNING

- Make sure to turn off the product.
  ▶ You may be electrocuted or the product can be damaged.
- Make sure to remove all cables before moving the product.
  ▶ You may be electrocuted or the product can be damaged.
- Make sure the panel faces forward and hold it with both hands to move. If you drop the product, the damaged product can cause electric shock or fire. Contact an authorized the service center for repair.
- Make sure the product is turned off, unplugged and all cables have been removed. It may take 2 or more people to carry larger apparatus. Do not press against or put stress on the front panel of the apparatus.

⚠ CAUTION

- Do not shock the product when moving it.
  ▶ You may be electrocuted or the product can be damaged.
- Do not dispose the product-packing box. Use it when you move.

Precautions in using the product

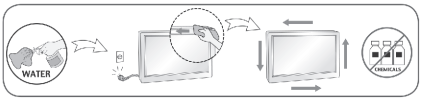
⚠ WARNING

- Do not disassemble, repair or modify the product at your own discretion.
  ▶ Fire or electric shock accident can occur.
  ▶ Contact the service center for check, calibration or repair.
- When the display is to be left unattended for an extended period of time, unplug it from the wall outlet.
- Keep the product away from water.
  ▶ Fire or electric shock accident can occur.
- Do not shock or scratch the front and sides of the screen with metallic objects.
  ▶ Otherwise, it may cause damage to the screen.
- Avoid high temperatures and humidity.

⚠ CAUTION

- Do not put or store inflammable substances near the product.
  ▶ There is a danger of explosion or fire due to careless handling of the inflammable substances.
- When cleaning the product, unplug the power cord and scrub gently with a soft cloth to prevent scratching. Do not clean with a wet cloth or spray water or other liquids directly onto the product. An electric shock may occur. (Do not use chemicals such as benzene, paint thinners or alcohol)
- Take a rest from time to time to protect your vision.
- Keep the product clean at all times.
- Take a comfortable and natural position when working with a product to relax the muscles.
- Take a regular break when working with a product for a long time.
- Do not press strongly upon the panel with a hand or sharp object such as nail, pencil or pen, or make a scratch on it.
- Keep the proper distance from the product.
  ▶ Your vision may be impaired if you look at the product too closely.
- Set the appropriate resolution and clock by referring to the User's Guide.
  ▶ Your vision can be impaired.

- Use authorized detergent only when cleaning the product. (Do not use benzene, thinner or alcohol.)
  ▶ Product can be deformed.
- Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus(e.g. on shelves above the unit).
- Batteries should not be exposed to excessive heat. For example, keep away from direct sunlight, open fireplace and electric heaters.
- Do NOT place non-rechargeable batteries in charging device.
- Using headsets (earphones) for a long time or listening loudly can cause damage to your hearing.
- Spray water onto a soft cloth 2 to 4 times, and use it to clean the front frame; wipe in one direction only. Too much moisture may cause staining.



- Do not use products using high voltage around the Monitor. (ex. Electrical Swatter)
  ▶ Monitor may have malfunction as its electrical shock.

Mounting on a wall

- Do not install this product by yourself. Contact the service technician qualified by the Manufacturer. It may cause injuries.

Licenses

Supported licenses may differ by model. For more information about licenses, visit *www.lg.com.*

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To play purchased DivX movies, first register your device at *vod.divx.com*. Find your registration code in the DivX VOD section of your device setup menu.

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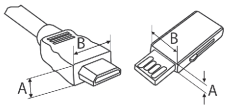
In addition to the source code, all referred license terms, warranty disclaimers and copyright notices are available for download.
LG Electronics will also provide open source code to you on CD-ROM for a charge covering the cost of performing such distribution (such as the cost of media, shipping, and handling) upon email request to *opensource@lge.com*. This offer is valid for three (3) years from the date on which you purchased the product.

Preparing

NOTE

- Image shown may differ from your TV.
- Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.
- The available menus and options may differ from the input source or product model that you are using.
- New features may be added to this TV in the future.
- The TV can be placed in standby mode in order to reduce the power consumption. And the TV should be turned off if it will not be watched for some time, as this will reduce energy consumption.
- The energy consumed during use can be significantly reduced if the level of brightness of the picture is reduced, and this will reduce the overall running cost.
- The items supplied with your product may vary depending on the model.
- Product specifications or contents of this manual may be changed without prior notice due to upgrade of product functions.
- For an optimal connection, HDMI cables and USB devices should have bezels less than 10 mm thick and 18 mm width.
- Use an extension cable that supports USB 2.0 if the USB cable or USB memory stick does not fit into your TV's USB port.



*A ≦ 10 mm
*B ≦ 18 mm

- Use a certified cable with the HDMI logo attached. If you do not use a certified HDMI cable, the screen may not display or a connection error may occur.
- Recommended HDMI cable types
  - High-Speed HDMI®/™ cable
  - High-Speed HDMI®/™ cable with Ethernet

CAUTION

- Do not use any unapproved items to ensure the safety and product lifespan of the product.
- Any damages or injuries by using unapproved items are not covered by the manufacturer's warranty.
- Some models have a thin film attached on to the screen and this must not be removed.

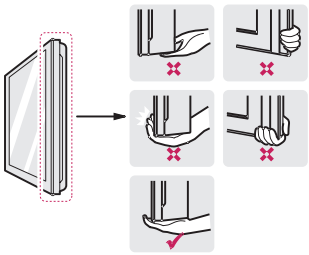
Lifting and moving the TV

Please note the following advice to prevent the TV from being scratched or damaged and for safe transportation regardless of its type and size.

- It is recommended to move the TV in the box or packing material that the TV originally came in.
- Before moving or lifting the TV, disconnect the power cord and all cables.
- When holding the TV, the screen should face away from you to avoid damage.



- Hold the top and bottom of the TV frame firmly. Make sure not to hold the transparent part, speaker, or speaker grille area.



- When transporting the TV, do not expose the TV to jolts or excessive vibration.
- When transporting the TV, keep the TV upright; never turn the TV on its side or tilt towards the left or right.
- Do not apply excessive pressure to cause flexing /bending of frame chassis as it may damage screen.

⚠ CAUTION

- Avoid touching the screen at all times, as this may result in damage to the screen.
- When handling the TV, be careful not to damage the protruding joystick button.

Setting up the TV

⚠ CAUTION

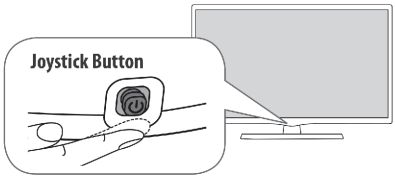
- Do not carry the TV upside-down by holding the stand body (or stand base) as this may cause it to fall off, resulting in damage or injury.
- When attaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.
- When detaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.
- If you don`t fasten the screw tightly, TV will fall down and get damaged.
- Tighten the screws firmly to prevent the TV from tilting forward. Do not over tighten.
- Lift up the latch at the bottom of the stand base and detach the stand base from the TV.

Using the joystick button

(Only 20/22/24/28MT48AF)

You can simply operate the TV functions, pressing or moving the joystick button up, down, left or right.

- Image shown may differ from your TV.



Basic functions

	**Power On**	When the TV is turned off, place your finger on the joystick button and press it once and release it.
	**Power Off**	When the TV is turned on, place your finger on the joystick button, press it once for a few seconds and release it. (However, if the menu button is on the screen, pressing and holding the joystick button will let you exit the menu.)
	**Volume Control**	If you place your finger over the joystick button and move it left or right, you can adjust the volume level you want.
	**Programmes Control**	If you place your finger over the joystick button and move it forward or backward you can scroll through the saved programmes you want.

NOTE

- If you press the joystick button first, you may not adjust the volume level and saved programmes.

CAUTION

- When your finger over the joystick button and push it to the up, down, left or right, be careful not to press the joystick button.

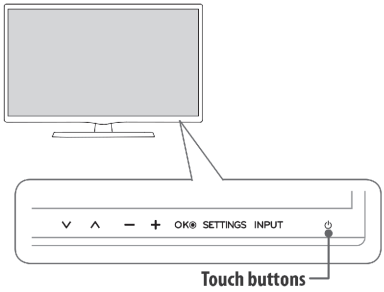
Adjusting the menu

When the TV is turned on, press the joystick button one time. You can adjust the menu items moving the joystick button up, down, left, or right.

⏻	Turns the power off.
⚙	Accesses the main menu.
✕	Clears on-screen displays and returns to TV viewing.
⇆	Changes the input source.

Using the touch buttons

(Only 29MT48AF)



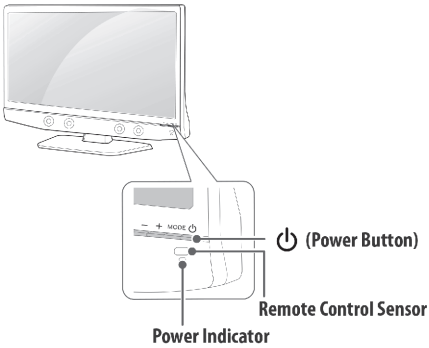
NOTE

- All of the buttons are touch sensitive and can be operated through simple touch with your finger.

∨ ∧	Scrolls through the saved programmes.
− +	Adjusts the volume level.
OK	Selects the highlighted menu option or confirms an input.
SETTINGS	Accesses the main menus, or saves your input and exits the menus.
INPUT	Changes the input source.
⏻	Turns the power on or off.

Using the buttons

(Only 22/24MT48AN, 22/24MT48AM)



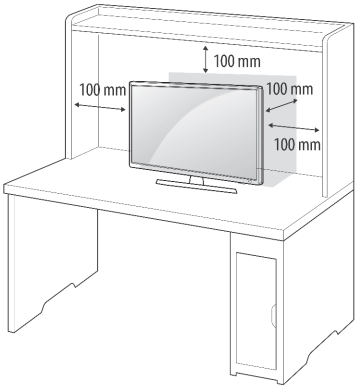
- Red : When the power is turned off
- Off : When the power is turned on

MODE	Selects the mode. (Programme → Volume → INPUT)	
	Programme	Scrolls through the saved programmes.
	Volume	Adjusts the volume level.
	INPUT	Changes the input source.
−/+	Adjusts the mode button level.	

Mounting on a table

• Image shown may differ from your TV.

1 Lift and tilt the TV into its upright position on a table.
- Leave a 100 mm (minimum) space from the wall for proper ventilation.



2 Connect the AC-DC Adapter and Power Cord to a wall outlet.

CAUTION

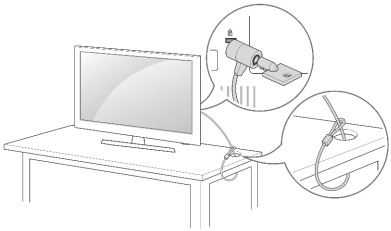
- Do not place the TV near or on sources of heat, as this may result in fire or other damage.
- Please be sure to connect the TV to the AC-DC power adapter before connecting the TV's power plug to a wall power outlet.

Using the kensington security system

(Features may vary depending on models)

• Image shown may differ from your TV.

The Kensington security system connector is located at the rear of the TV. For more information of installation and using, refer to the manual provided with the Kensington security system or visit *http://www.kensington.com*. Connect the Kensington security system cable between the TV and a table.



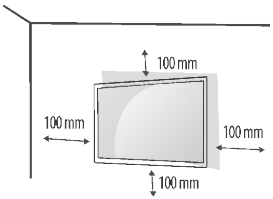
NOTE

- The Kensington security system is optional. You can obtain additional accessories from most electronics stores.

Mounting on a wall

(Depending on model)

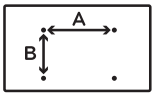
For proper ventilation, allow a clearance of 100 mm on each side and from the wall. Detailed installation instructions are available from your dealer, see the optional Tilt Wall Mounting Bracket Installation and Setup Guide.



If you intend to mount the TV to a wall, attach Wall mounting interface (optional parts) to the back of the TV. When you install the TV using the wall mounting interface (optional parts), attach it carefully so it will not drop.

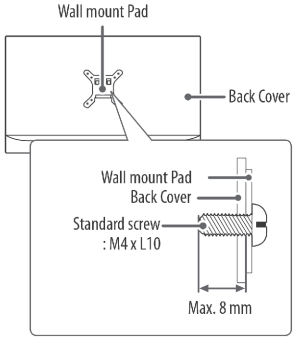
1 If you use screw longer than standard, the TV might be damaged internally.

2 If you use improper screw, the product might be damaged and drop from mounted position. In this case, LG Electronics is not responsible for it.

Model	20MT48* 22MT48* 24MT48*	28MT48* 29MT48*
Wall Mount (A x B) 	75 x 75	100 x 100
Standard screw	M4 x L10	
Number of screws	4	

CAUTION

- Disconnect the power cord first, and then move or install the TV. Otherwise electric shock may occur.
- If you install the TV on a ceiling or slanted wall, it may fall and result in severe injury. Use an authorized LG wall mount and contact the local dealer or qualified personnel.
- Do not over tighten the screws as this may cause damage to the TV and void your warranty.
- Use the screws and wall mounts that meet the VESA standard. Any damages or injuries by misuse or using an improper accessory are not covered by the manufacturer's warranty.
- Screw length from outer surface of back cover should be under 8 mm.



NOTE

- Use the screws that are listed on the VESA standard screw specifications.
- The wall mount kit includes an installation manual and necessary parts.
- The wall mount bracket is not provided. You can obtain additional accessories from your local dealer.
- The length of screws may differ depending on the wall mount. Make sure to use the proper length.
- For more information, refer to the manual supplied with the wall mount.

Connections (Notifications)

Connect various external devices to the TV and switch input modes to select an external device. For more information about an external device's connection, refer to the manual supplied with each device. Available external devices are: HD receivers, DVD players, VCRs, audio systems, USB storage devices, PC, camcorders or cameras, gaming devices, and other external devices.

NOTE

- The external device connection may differ from the model.
- Connect external devices to the TV regardless of the order of the TV port.
- If you record a TV programme on a DVD recorder or VCR, make sure to connect the TV signal input cable to the TV through a DVD recorder or VCR. For more information of recording, refer to the manual provided with the connected device.
- Refer to the external equipment's manual for operating instructions.
- If you connect a gaming device to the TV, use the cable supplied with the gaming device.
- In PC mode, there may be noise associated with the resolution, vertical pattern, contrast or brightness. If noise is present, change the PC output to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the PICTURE menu until the picture is clear.
- In PC mode, some resolution settings may not work properly depending on the graphics card.

Antenna connection

Connect the TV to a wall antenna socket with an RF cable (75 Ω) (Not Provided).

NOTE

- Use a signal splitter to use more than 2 TVs.
- If the image quality is poor, install a signal amplifier properly to improve the image quality.
- If the image quality is poor with an antenna connected, try to realign the antenna in the correct direction.
- An antenna cable and converter are not supplied.

Other connections

Connect your TV to external devices. For the best picture and audio quality, connect the external device and the TV with the HDMI cable. Some separate cable is not provided.

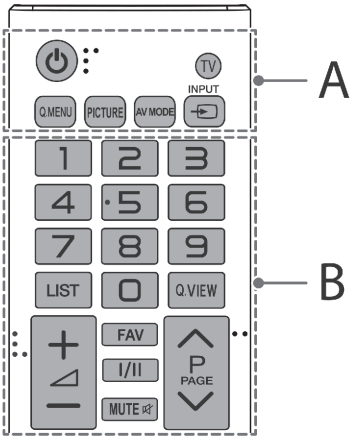
- USB port supports 0.5 A electric current. If you need more electric current in case of HDD, use the separate power adaptor.

Remote control

The descriptions in this manual are based on the buttons on the remote control. Please read this manual carefully and use the TV correctly. To replace batteries, open the battery cover, replace batteries (1.5 V AAA) matching the ⊕ and ⊖ ends to the label inside the compartment, and close the battery cover. To remove the batteries, perform the installation actions in reverse.

⚠ CAUTION

- Do not mix old and new batteries, as this may damage the remote control.
- In Analogue TV and some countries, some remote control buttons may not work.
- The remote control will not be included depending on sales market

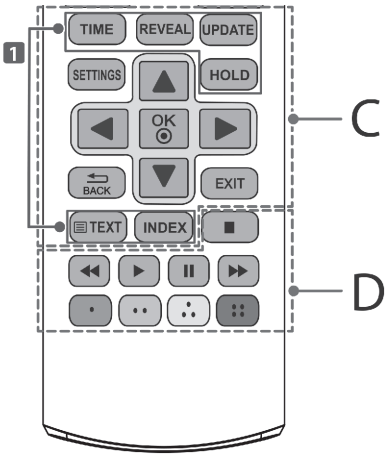


A

⏻ (Power) Turns the TV on or off.
TV Returns to the TV viewing from any mode.
Q.MENU Accesses the quick menus.
PICTURE Changes the image mode.
AV MODE Selects an AV mode.
INPUT Changes the input source.

B

Number buttons Enters numbers.
LIST Accesses the saved programme list.
Q.VIEW Returns to the previously viewed programme.
+ ◿ − Adjusts the volume level.
FAV Accesses your favourite programme list.
I/II Selects the sound output.
MUTE Mutes all sounds.
∧P∨ Scrolls through the saved programmes.
∧PAGE∨ Moves to the previous or next screen.



C

1 TELETEXT BUTTONS These buttons are used for teletext.
SETTINGS Accesses the main menus.
Navigation buttons (up/down/left/right) Scrolls through menus or options.
OK ⦿ Selects menus or options and confirms your input.
BACK Returns to the previous level.
EXIT Clears all on-screen displays and returns to TV viewing.

D

Control buttons (■, ▶, II, ◀◀, ▶▶) Controls the ENTERTAINMENT menus.
Coloured buttons These access special functions in some menus. (● : Red, ●● : Green, ⁂ : Yellow, ⁘ : Blue)

Watching TV

Turning the TV on for the first time

When you turn the TV on for the first time, the Initial setting screen appears. Select a language and customize the basic settings.

1 Connect the power cord to a power outlet. The Power indicator turns red and the TV switches to Standby mode.

2 In Standby mode, press the power button on the remote control or local key to turn the TV on. The Initial setting screen appears if you turn the TV on for the first time.
- You can also access Factory Reset by accessing **OPTION** in the main menu.

3 Follow the on-screen instructions to customize your TV settings according to your preferences.

Menu Language	Selects a language to display.
⇩	
Mode Setting	Selects **Home Use** for the home environment.
⇩	
Time Setting	Sets the time.
⇩	
Auto Tuning	Scans and saves available programmes automatically.

- To display images in the best quality for your home environment, select **Home Use**.
- **Store Demo** is suitable for the retail environment.
- If you select **Store Demo**, any customized settings will switch back to the default settings of **Store Demo** in 5 minutes.

4 When the basic settings are complete, press the **OK** ◉.
- If you do not complete the Initial setting, it will appear whenever the TV turns on.
- Disconnect the power cord from the power outlet when you do not use the TV for a long period of time.

5 To turn the TV off, press the power button on the remote control.

Watching TV

1 In Standby mode, press ⏻ **(Power)** to turn the TV on.

2 Press **INPUT** and select **TV**.

3 To turn the TV off, press ⏻ **(Power)**. The TV switches to Standby mode.

Managing programmes

Automatically setting up programme

Use this to automatically find and store all available programmes.

1 Press **SETTINGS** and the Navigation buttons to scroll to **SETUP** and press **OK** ◉.

2 Press the Navigation buttons to scroll to **Auto Tuning** and press **OK** ◉.

3 Press the Navigation buttons to scroll to **To Start** and select **To Start** to begin auto tuning. The TV scans and saves available programmes automatically.

4 When you return to the previous menu, press ⮌ **BACK**.

Manually setting up programme

Manual Tuning lets you manually tune and arrange the stations in whatever order you desire.

1 Press **SETTINGS** and the Navigation buttons to scroll to **SETUP**.

2 Press the Navigation buttons to scroll to **Manual Tuning**.

3 Press the Navigation buttons to scroll to **Storage**.

4 Press the Navigation buttons or Number buttons to select the desired programme number.

5 Press the Navigation buttons to scroll to **System**.

6 Press the Navigation buttons to scroll to **TV System**.

7 Press the Navigation buttons to scroll to **Band**.

8 Press the Navigation buttons to scroll to **V/UHF** or **Cable**.

9 Press the Navigation buttons to scroll to **Channel**.

10 Press the Navigation buttons and then select the desired programme number with the Navigation buttons or Number buttons.

11 Press the Navigation buttons to scroll to **Search**.

12 Press the Navigation buttons to scroll and start Searching.

13 Press the **OK** ◉ to store it.

14 When you return to the previous menu, press ⮌ **BACK**.

NOTE
- To store another programme, repeat steps 3 to 13.

Assigning a station name

You can assign a station name with five characters to each programme number.

1 Press **SETTINGS** and the Navigation buttons to scroll to **SETUP**.

2 Press the Navigation buttons to scroll to **Manual Tuning**.

3 Press the Navigation buttons to scroll to **Name**.

4 Press the Navigation buttons to scroll to select the position and make your choice of the second character, and so on. You can use the alphabet A to Z, the number 0 to 9, +/ -, and blank and press **OK** ◉.

5 Press the **OK** ◉ to store it.

6 When you return to the previous menu, press ⮌ **BACK**.

Fine Tuning

Normally fine tuning is only necessary if reception is poor.

1 Press **SETTINGS** and the Navigation buttons to scroll to **SETUP**.
2 Press the Navigation buttons to scroll to **Manual Tuning**.
3 Press the Navigation buttons to scroll to **Fine.**
4 Press the Navigation buttons to fine tune for the best picture and sound.
5 Press the **OK** ◉ to store it.
6 When you return to the previous menu, press ⮌ **BACK**.

Editing your programme list

When a programme number is skipped, it means that you will be unable to select it using ∧ P ∨ button during TV viewing. If you wish to select the skipped programme, directly enter the programme number with the NUMBER buttons or select it in the Programme edit menu. This function enables you to skip the stored programmes.

1 Press **SETTINGS** and the Navigation buttons to scroll to **SETUP**.
2 Press the Navigation buttons to scroll to **Programme Edit**.
3 Edit programmes using the following buttons.

Button	Description
Red button	Deletes a programme. Press the Red button twice. The selected programme is deleted, all the following programmes are shifted up one position.
Yellow button	Moves a programme. Press the Yellow button again to release this function.
Blue button	Selects a programme number to be skipped. Press the Blue button again to release the skipped programme.

4 When you return to the previous menu, press ⮌ **BACK**.

Selecting a programme on the programme list

1 Press **LIST** to access the programme list.
2 Press the Navigation buttons to select to desired programme and press **OK** ◉.
3 When you return to the previous menu, press **LIST**.

NOTE

- You may find some blue programmes. They have been set up to be skipped by auto programming or in the programme edit mode.
- Some programmes with the programme number shown in the programme list indicate there is no station name assigned.

Using additional options

Adjusting aspect ratio

Resize an image to view at its optimal size by pressing **Q.MENU** or accessing Aspect Ratio in the **PICTURE** menu.

- **16:9 :** Resizes images to fit the screen width.
- **Just Scan :** Displays video images in the original size without removing parts of the edge of the image. (This function works in HDMI Mode (720P/1080i/1080p).)
- **Original :** When your TV receives a wide screen signal it will automatically change to the picture format broadcasted.
- **4:3 :** Resizes images to the previous standard 4:3.
- **14:9 :** You can view a picture format of 14:9 or a general TV programme in the 14:9 mode.
- **Zoom :** Formats an image to fit the screen width. The top and bottom of the image may not appear.
- **Cinema Zoom 1 :** Formats an image to the cinemascope ratio, 2.35:1. To change the ratio of the cinema zoom, press < or > and its range is from 1 to 16.

NOTE

- The available ratio varies depending on the input source.
- If you select **Just Scan**, you may see image noises at the edge of the original signal.
- If you enlarge or reduce an image, the image may be distorted.

Changing AV modes

Each **AV MODE** has optimized image and sound settings.
Press **AV MODE** repeatedly to select an appropriate mode.

- **Off :** Changes to the previously customized settings.
- **Cinema :** Uses the optimized image and sound settings for a cinematic look.
- **Game :** Uses the optimized image and sound settings for fast gaming. When playing a video game using PlayStation or Xbox. It is recommended to use the Game mode. When in Game mode, functions related to picture quality will be optimized for playing games.

Using the input list

Selecting an input source

1 Press **INPUT** to access the input sources. The connected device displays on each input source.
2 Press the Navigation buttons or input button to scroll to one of the Input sources and press **OK** ◉.

- **AV :**Watch video from a VCR or other external devices.
- **RGB-PC :** View a PC display on the screen.
- **HDMI :** Watch video from a HTS or other high definition devices.
- **Antenna :** Watch TV over the air and cable broadcast.

Entertainment

(Depending on model)

- Image shown may differ from your TV.

Connecting USB storage devices

⚠ CAUTION

- Do not turn the TV off or remove a USB storage device while the USB storage device is connected to the TV, as this could result in loss of files or damage to the USB storage device.
- Back up your files saved on a USB storage device frequently, as you may lose or damage the files and this may be not covered by the manufacturer's warranty.

Connect USB storage devices (USB memory) to the TV and use multimedia features. Connect a USB flash memory or USB memory card reader to the TV. To disconnect a USB storage device, make sure to end the connection properly to prevent damages to the TV or files.

1 Press **Q.MENU** to access the quick menus.

2 Press the Navigation buttons to scroll to **Eject** and press **OK** ◉.

3 Disconnect the USB storage device only when the message says that it is safe to remove.

Tips for using USB storage devices

- Only a USB storage device is recognizable.
- If the USB storage device is connected through a USB hub, the device is not recognizable.
- A USB storage device using an automatic recognition programme may not be recognized.
- A USB storage device which uses its own driver may not be recognized.
- The recognition speed of a USB storage device may depend on each device.
- Please do not turn off the TV or unplug the USB device when the connected USB storage device is working. When such device is suddenly separated or unplugged, the stored files or the USB storage device may be damaged.
- Please do not connect the USB storage device which was artificially manoeuvred on the PC. The device may cause the product to malfunction or fail to be played. Never forget to use only a USB storage device which has normal music files, image files or movie files.
- Please use only a USB storage device which was formatted as a FAT16, FAT32, NTFS file system.
- Please connect a USB storage device with the cable offered by the device maker.
- Some USB storage devices may not be supported or operated smoothly.
- Be sure to back up important files since data stored in a USB memory device may be damaged. We will not be responsible for any data loss.
- If a USB memory device is connected to a USB multi-card reader, its volume data may not be detected.
- If the USB memory device does not work properly, disconnect and reconnect it.
- How fast a USB memory device is detected differs from device to device.
- The recommended capacity is 1 TB or less for a USB external hard disk and 32 GB or less for USB memory.
- Any device with more than the recommended capacity may not work properly.
- USB storage devices below USB 2.0 are supported as well. But they may not work properly in the movie list.
- Maximum of 999 folders or files can be recognized under one folder.
- If there are a lot of folders or files all within one folder, the device may not be able to access these properly.
- For external USB HDDs, it is recommended that you use devices with a rated voltage of less than 5 V and a rated current of less than 0.5 A.

Browsing files

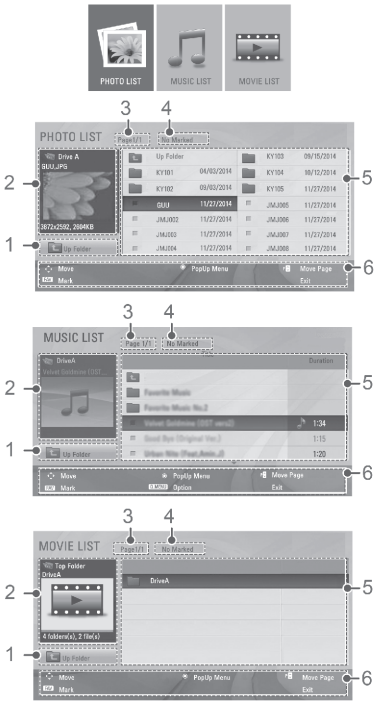
Access the photo, music, or movie lists and browse files.

1 Connect a USB storage device.

2 Press **SETTINGS** to access the main menus.

3 Press the Navigation buttons to scroll to **ENTERTAINMENT** and press **OK** ◉.

4 Press Navigation buttons to scroll to **PHOTO LIST**, **MUSIC LIST** or **MOVIE LIST** and press **OK** ◉.



No.	Description
1	Moves to the upper level folder.
2	Preview: Displays the thumbnail/folder name of the file in the selected folder.
3	Current page/Total pages.
4	Total number of marked files.
5	Contents under the folder focused on 1.
6	Available buttons on the remote control.

ENGLISH

Supported file format

Type	Supported file format
Photo	JPEG Available size Baseline : 64 pixel (W) x 64 pixel (H) - 15360 pixel (W) x 8640 pixel (H) Progressive : 64 x 64 to 1024 x 768 • You can play JPEG files only. • Non-supported files are displayed in the form of predefined icon.
Music	MP3 Bit rate : 32 kbps to 320 kbps • Sampling rate MPEG1 Layer3 : 32 kHz, 44.1 kHz, 48 kHz • Sampling rate MPEG2 Layer3 : 16 kHz, 22.05 kHz, 24 kHz • Sampling rate MPEG2.5 Layer3 : 8 kHz, 11.025 kHz, 12 kHz
Movie	DAT,MPG,MPEG,VOB,AVI,DIVX,MP4,MKV,TS,TRP,TP,ASF, WMV,FLV,RM,RMVB **Movie**(*.mpg/*.mpeg/*dat/*.ts/*.trp/*.tp/*.vob/ *.mp4/*.mov/*.mkv/*.divx/*.avi/*.asf/*.wmv/ *.flv/*.avi(motion-jpeg)/*.mp4(motion-jpeg)/ *.mkv(motion-jpeg)/*.rm/*.rmvb) supporting file **Video format** : DivX 3.11, DivX4, DivX5, DivX6, Xvid1.00, Xvid1.01, Xvid1.02, Xvid1.03, Xvid1.10 beta-1/beta-2, Mpeg-1, Mpeg-2, Mpeg-4, H.264/ AVC, VC1, JPEG, Sorenson H.263 **Audio format** : Dolby Digital, Mpeg, MP3, LPCM, ADPCM, WMA, AAC **Bit rate** : within 32 kbps to 320 kbps(MP3) **External Subtitle format** : *.smi/*.srt/ *.sub(MicroDVD,Subviewer1.0/2.0)/*.ass/*.ssa/ *.txt(TMPlayer)/*.psb(PowerDivX) **Internal Subtitle format** : only, XSUB (It is the subtitle format used in DivX6 files)

Viewing photos

View image files saved in a USB storage device. The displays on the screen may differ from the model.

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **ENTERTAINMENT** and press **OK** ◉.

3 Press Navigation buttons to scroll to **PHOTO LIST** and press **OK** ◉.

4 Press the Navigation buttons to scroll to a folder/file you want and press **OK** ◉.

5 View photos by using the following menus/buttons.



Button	Description
Navigation button	Scrolls through the files.
OK ◉	Views the highlighted file or enters the mark mode.
∧ **P** ∨	Moves to the previous or next page.
FAV	Enters the mark mode.
Menu	**Description**
View	Views the selected photo.
Mark All	Selects all files.
Close	Exits the Mark Mode.

NOTE

- Non-supported files are displayed the preview image by icon only ⚠.
- Abnormal files are displayed in the form of bitmap ⊗.

6 The following options are available while viewing photos.



- **Slideshow :** Starts or stops a slideshow with selected photos. If there are no selected photos, all photos saved in the current folder display during a slideshow. To set a slideshow speed, select **Option.**
- **BGM :** Turns the background music on or off. To set the background music folder, select **Option**.
- ↻ **(Rotate) :** Rotates photos clockwise (90°, 180°, 270°, 360°).
  - The supported photo size is limited. You cannot rotate a photo if the resolution of the rotated width is larger than the supported resolution size.
- **Hide :** Hides the option window. To display the options, press **OK** ◉.

Q.MENU options for photo list

1 Press **Q.MENU**. A pop-up window will appears.
2 Press the Navigation buttons to scroll to **Set photo view.** and press **OK** ◉.
3 Press the Navigation buttons to scroll to one of the following options and press **OK** ◉.

Set photo view.

- **Slide Speed :** Selects a slideshow speed (Fast, Normal, Slow).
- **Music Folder :** Selects a music folder for the background music.

Set video.

Allows you to change Video presets.

Set audio.

Allows you to change Audio presets.

Listening to music

1 Press **SETTINGS** to access the main menus.
2 Press the Navigation buttons to scroll to **ENTERTAINMENT** and press **OK** ◉.
3 Press the Navigation buttons to scroll to **MUSIC LIST** and press **OK** ◉.
4 Press the Navigation buttons to scroll to a folder/file you want and press **OK** ◉.
5 Play music by using the following menus/buttons.



Button	Description
Navigation button	Scrolls through the files.
OK ◉	Views the highlighted file or enters the mark mode.
∧**P**∨	Moves to the previous or next page.
FAV	Enters the mark mode.
Menu	**Description**
Play	Plays the selected music file.
Play with Photo	Displays photos during playback.
Mark All	Selects all files.
Close	Exits the Mark Mode.

6 Control playback by using the following buttons.

Button	Description
■	Stops playback
▶	Plays a music file
❚❚	Pauses or resumes playback
▶▶	Skips to the next file
◀◀	Skips to the previous file
◀◀ **or** ▶▶	When playing, When you press the ◀◀ button, the previous music file will be played. When you press the ▶▶ button, the next music file will be played.
EXIT	When you press the **EXIT** button, only the music will be stopped and the player will go to TV viewing.
∧ **or** ∨	When using the ∧ or ∨ button during playback a cursor indicating the position can be played.

Q.MENU options for music list

Press **Q.MENU**. A pop-up window will appears.

Set audio.

Allows you to change Audio presets.

NOTE

- The TV will not play copy protected files.
- If the TV is not in use for some time during playback, the information box as a screensaver will appear to prevent image burn. To return to the Music list screen, press **OK** ◉ or ⮌ **BACK**.

Viewing movies

1 Press **SETTINGS** to access the main menus.
2 Press the Navigation buttons to scroll to **ENTERTAINMENT** and press **OK** ◉.
3 Press the Navigation buttons to scroll to **MOVIE LIST** and press **OK** ◉.
4 Press the Navigation buttons to scroll to a folder/file you want and press **OK** ◉.
5 Play movie by using the following menus/buttons.



Button	Description
Navigation button	Scrolls through the files.
OK ◉	Views the highlighted file or enters the mark mode.
∧P∨	Moves to the previous or next page.
FAV	Enters the mark mode.
Menu	**Description**
Play	Play the selected movie file. Once a movie file finishes playing, the next selected one will be played automatically.
Mark All	Mark all movie files on the screen.
Close	Exit the Mark Mode.

6 Control playback by using the following buttons.

Button	Description
■	Stops the playback.
▶	Plays a video.
❚❚	Pauses or resumes the playback.
▶▶	Scans backward in a file.
◀◀	Scans forward in a file.
Q.MENU	Show the **Option** menu.
BACK	Hide the menu on the full-sized screen.
EXIT	Return to normal TV viewing.
< >	Skips to specific points in a file during playback. The time of a specific point will appear on the status bar. In some files, this function may not work properly.

Tips for using playing video files

- Some user-created subtitles may not work properly.
- Some special characters are not supported in subtitles.
- HTML tags are not supported in subtitles.
- Subtitles in languages other than the supported languages are not available.
- Changing font and colour in subtitles is not supported.
- Subtitles in languages other than one specified are not supported.
- Video files with subtitle files of 1 MB or larger may not be played properly.
- The screen may suffer temporary interruptions (image stoppage, faster playback, etc.) when the audio language is changed.
- A damaged movie file may not be played correctly, or some player functions may not be usable.
- Movie files produced with some encoders may not be played correctly.
- If the video and audio structure of recorded file is not interleaved, either video or audio is outputted.
- HD videos with a maximum of 1920 x 1080 @ 25/30p or 1280 x 720 @ 50/60p are supported, depending on the frame.
- Videos with resolutions higher than 1920 x 1080 @ 25/30p or 1280 x 720 @ 50/60p may not work properly depending on the frame.
- Movie files other than the specified types and formats may not work properly.
- Max bitrate of playable movie file is 20 Mbps. (only, Motion JPEG : 10 Mbps)
- We do not guarantee smooth playback of profiles encoded level 4.1 or higher in H.264/AVC.
- DTS Audio codec is not supported.
- A movie file more than 30 GB in file size is not supported for playback. The file size limit is dependent on the encoding environment.
- A DivX movie file and its subtitle file must be located in the same folder.
- A video file name and its subtitle file name must be identical for it to be displayed.
- Playing a video via a USB connection that doesn't support high speed may not work properly.
- Files encoded with GMC(Global Motion Compensation) and Qpel (Quarterpel Motion Estimation) may not be played.
- Trick Mode does not support other functions than if video files do not have index information.
- Video file names that contain special characters may not be playable.

Video options

1 Press **Q.MENU** to access the pop-up menus.

2 Press the Navigation buttons to scroll to **Set video play.**, **Set video.** or **Set audio.** and press **OK** ◉.

When you select the Set video play.

1 Press the Navigation buttons to scroll to show the **Picture Size, Audio Language, Subtitle**.

2 Press the Navigation buttons to scroll to make appropriate adjustments.

Menu	Description
Picture Size	Selects your desired picture format during movie play.
Audio Language	Changes the Language Group of the audio during movie play. Files with a single audio track cannot be selected.
Subtitle	Turn on/off the subtitle.
Language	Activated for SMI subtitle and can select the language within the subtitle.
Code Page	Can select the font for subtitle. When set to default, same font as general menu will be used.
Sync	Adjusts the time synchronisation of the subtitle from -10 secs to +10 secs by steps of 0.5 secs during movie play.

Code Page	Support Language
Latin1	English, French, Spanish, Portuguese, Bahasa Malaysia, Indonesian
Cyrillic	Russian
Thai	Thai
Hebrew	Hebrew
Arabic	Arabic, Persian, Kurdish
Vietnam	Vietnamese language

NOTE

- Only 10,000 of sync blocks can be supported within the subtitle file.
- When playing a video, you can adjust the Picture Size by pressing **Q.MENU** or accessing Aspect Ratio in the **PICTURE** menu.

When you select the Set video.

1 Press the Navigation buttons to scroll to make appropriate adjustments.

When you select the Set audio.

1 Press the Navigation buttons to scroll to show the **Sound Mode**, **Auto Volume**, **Balance**.

2 Press the Navigation buttons to scroll to make appropriate adjustments.

DivX® VOD Guide

DivX® VOD Registration

In order to play purchased or rented DivX® VOD contents, you should register your device with 10 digit DivX registration code from your device at *www.divx.com/vod*.

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **ENTERTAINMENT** and press **OK** ◉.

3 Press the Navigation buttons to scroll to **DivX(R) VOD** and press **OK** ◉.

4 Press the Navigation buttons to scroll to **Registration** and press **OK** ◉.

5 View the registration code of your TV.

6 When you are finished, press **EXIT**. When you return to the previous menu, press ⮌ **BACK**.

NOTE

- Movie files are supported as follows
- **Resolution** : under 1920 x 1080 (WxH) pixels
- **Frame rate** : under 30 frames/sec
- **Video Codec** : MPEG 1, MPEG 2, MPEG 4, H.264/AVC, DivX 3.11, DivX4, DivX5, DivX6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10-beta1, Xvid 1.10-beta2, JPEG, VC1, Sorenson H.263/H.264.

DivX® VOD Deregistration

You should deregister your device with 8 digit DivX deregistration code from your device at *www.divx.com/vod*.

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **ENTERTAINMENT** and press **OK** ◉.

3 Press the Navigation buttons to scroll to **DivX(R) VOD** and press **OK** ◉.

4 Press the Navigation buttons to scroll to **Deregistration** and press **OK** ◉.

5 Press the Navigation buttons to select **Yes** to confirm.

6 When you are finished, press **EXIT**. When you return to the previous menu, press ⮌ **BACK**.

NOTE

- Once the deregistration is executed, you must register your device again to see DivX® VOD contents.

Customizing TV setting

Accessing main menus

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to one of the following menus and press **OK** ◉.

3 Press the Navigation buttons to scroll to the setting or option you want and press **OK** ◉.

4 When you are finished, press **EXIT.**

Customizing Settings

SETUP Settings

SETTINGS ⇨ SETUP

- **Auto Tuning :** Tunes and stores all available programmes through antennas inputs.
- **Manual Tuning :** Tunes and stores the programmes you want manually.
- **Programme Edit :** Edits programmes.

PICTURE Settings

NOTE

- Depending on input signal or other picture settings, the range of detailed items for adjustment may differ.

SETTINGS ⇨ PICTURE ⇨ Aspect Ratio
Changes the image size to view images at its optimal size.

SETTINGS ⇨ PICTURE ⇨ Energy Saving
Reduces the power consumption by adjusting the screen brightness.

- **Off :** The **Energy Saving** is off.
- **Minimum/Medium/Maximum :** Selects the brightness level.
- **Screen off :** The screen turns off in 3 seconds.

NOTE

- When you select **Screen Off**, the screen will be turned off in 3 seconds and **Screen Off** will start.
- If you adjust "Energy Saving Maximum", Backlight feature will not work.

SETTINGS ⇨ PICTURE ⇨ Picture Mode
Selects one of the preset image or customizes options in each mode for the best TV screen performance. You are also able to customize advanced options of each mode.

- **Vivid :** Adjusts the video image for the retail environment by enhancing the contrast, brightness, colour, and sharpness.
- **Standard :** Adjusts the image for the normal environment.
- **Cinema :** Optimizes the video images for a cinematic look to enjoy movies as if you are in a movie theatre.
- **Soccer / Cricket** (Depending on model) **:** Optimizes the video image for high and dynamic actions by emphasizing primary colours such as white, grass, or sky blue.

- **Game :** Optimizes the video image for a fast gaming screen such as PCs or games.

SETTINGS ⇨ PICTURE ⇨ Eye Comfort Mode
If you turn this option on, color temperature will be automatically adjusted to reduce eye strain.

- **On :** Automatically adjusts the screen color temperature.
- **Off :** Turns off the **Eye Comfort Mode**.

SETTINGS ⇨ PICTURE ⇨ Screen (RGB-PC)
Customizes the PC display options in RGB mode.

- **Resolution :** Sets the desired resolution. Options may only be selected when the PC resolution is set to 1024 x 768 @ 60/ 1280 x 768 @ 60/1360 x 768 @ 60/ 1366 x 768 @ 60 (default).
- **Auto config. :** Sets to adjust the screen position, clock, and phase automatically. The displayed image may be unstable for a few seconds while the configuration is in progress.
- **Position/Size/Phase :**Adjusts the options when the picture is not clear, especially when characters are shaky, after the auto configuration.
- **Reset :** Restores the options to the default setting.

Basic image options

- **Backlight :** Adjusts the brightness of the screen by controlling the LCD backlight. If you decrease the brightness level, the screen becomes darker and the power consumption will be reduced without any video signal loss.
- **Contrast :** Increases or decreases the gradient of the video signal. You may use **Contrast** when the bright part of the picture is saturated.
- **Brightness :** Adjusts the base level of the signal in the picture.
- **Sharpness :** Adjusts the level of crispness in the edges between the light and dark areas of the picture. The lower the level, the softer the image.
- **Colour :** Adjusts intensity of all colours.
- **Tint :** Adjusts the balance between red and green levels.
- **Colour Temperature :** Choose one of three automatic colour adjustments. Set to warm to enhance hotter colours such as red, or set to cool to see less intense colours with more blue. You can control red, green, blue to adjust colour details.
- **Advanced Control :** Customizes the advanced options.
- **Reset :** Restores the options of each mode to the factory default.

Advanced image options

(Depending on model)

- **Dynamic Contrast :** Adjusts the contrast to keep it at the best level according to the brightness of the screen. The picture is improved by making bright parts brighter and dark parts darker.
- **Dynamic Colour :** Adjusts screen colours so that they look livelier, richer and clearer. This feature enhances hue, saturation and luminance so that red, blue and green white look more vivid.
- **Noise Reduction :** Reduces screen noise without compromising video quality.
- **Gamma :** You can adjust brightness of dark area and middle gray level area of the picture.
  - Low: Make the dark and middle gray level areas brighter.
  - Medium: Express the original picture level.
  - High: Make the dark and middle gray level area darker.
- **Black Level :** Adjusts the brightness and contrast of the screen to suit the black level of the input picture by using the blackness (black level) of the screen.
- **Motion Eye Care :** Adjusts screen brightness to prevent eye glare.
- **Film Mode :** Makes video clips recorded in film look more natural. This feature operates only in 480i / 576i / 1080i / 1080p(24 Hz) Resolution.
- **Colour Gamut : Advanced Control** Maximizes the utilization of colour to increase colour quality.
  - Standard: Displays standard set of colours.
  - Wide: Increase number of colours used.
- **Edge Enhancer :** Shows clearer and distinctive yet natural edges of the video.

AUDIO Settings

SETTINGS ⇨ AUDIO ⇨ Auto Volume

Activates the Auto Volume feature to keep the volume level consistent whenever you change programmes. The volume level may not be consistent due to different signal conditions of broadcasting stations.

SETTINGS ⇨ AUDIO ⇨ Balance

Adjust balance between the left and right speakers according to your room environment.

SETTINGS ⇨ AUDIO ⇨ Sound Mode

Selects one of the preset sound modes or customizes options in each mode.

- **Standard :** Select when you want standard-quality sound.
- **Music / Bollywood** (depending on model) **:** Select when you listen to music. (Bollywood is INDIA special music mode)
- **Cinema :** Select when you watch movies.
- **Soccer / Cricket** (Depending on model) **:** Select when you watch sports events.
- **Game :** Select when you play games.

- **Treble**: Controls the dominant sounds in the output. When you turn up the treble, it will increase the output to the higher frequency range.
- **Bass**: Controls the softer sounds in the output. When you turn up the bass, it will increase the output to the lower frequency range.
- **Reset**: Resets the sound mode to the default setting.

SETTINGS ⇨ AUDIO ⇨ TV Speaker

Turns off the internal speaker of the TV when using an external Hi-Fi system.

Stereo/Dual Reception

This feature may not be applied based on country broadcasting circumstance. When a programme is selected, the sound information for the station appears with the programme number and station name. Press I/II button to select the **Multi Audio** menu.

Broadcast	On Screen Display
Mono	MONO
Stereo	STEREO
Dual	DUAL I , DUAL II , DUAL I + II
NICAM	NICAM

- **Mono sound selection**

If the stereo signal is weak in stereo reception, you can switch to mono. In mono reception, the clarity of sound is improved.

- **Language selection for dual language broadcast**

If a programme can be received in two languages (dual language), you can switch to DUAL I, DUAL II or DUAL I+II.

DUAL I	Sends the primary broadcast language to the loudspeakers.
DUAL I I	Sends the secondary broadcast language to the loudspeakers.
DUAL I+I I	Sends a separate language to each loudspeaker.

Nicam Reception

If the TV is equipped with a receiver for NICAM reception, high quality NICAM (Near Instantaneous Companding Audio Multiplex) digital sound can be received. Sound output can be selected according to the type of broadcast received.

1 When **NICAM** mono is received, you can select **NICAM MONO** or **FM MONO**.

2 When **NICAM** stereo is received, you can select **NICAM STEREO** or **FM MONO**.
If the stereo signal is weak, switch to **FM MONO**.

3 When **NICAM** dual is received, you can select **NICAM DUAL I**, **NICAM DUAL II** or **NICAM DUAL I+II** or **FM MONO**.

Speaker Sound Output Selection

In AV, RGB-PC, HDMI mode, you can select output sound for the left and right loudspeakers. Select the sound output.

L+R:	Audio signal from audio L input is sent to the left loudspeaker and audio signal from audio R input is sent to the right loudspeaker.
L+L:	Audio signal from audio L input is sent to left and right loudspeakers.
R+R:	Audio signal from audio R input is sent to left and right loudspeakers.

TIME Settings

SETTINGS ⇨ TIME ⇨ Clock
Sets the time.

SETTINGS ⇨ TIME ⇨ Off Time/On Time
Sets the time to turn on or off the TV automatically. To use this function, you should set the current time and date in advance.

NOTE

- If you do not press any button within 2 hours after the TV turns on by the On Time feature, the TV enters the Standby mode automatically.
- If you set both Off time and On time features to the same time, the Off time feature overrides the On time feature.

SETTINGS ⇨ TIME ⇨ Sleep Timer
Sets the length of time until the TV to turns off. When you turn the TV off and turn it on again, the Sleep timer feature will be set to off.

SETTINGS ⇨ TIME ⇨ Auto Off(On Time)

If **On Time** is enabled, the TV will be turned on at the specified time. If you do not operate the TV for two hours, the TV will be turned off automatically.

SETTINGS ⇨ TIME ⇨ Automatic Standby (Depending on model)
If you do not press any button on the TV or remote control for a certain period, the TV will automatically switch to standby mode.

OPTION Settings

SETTINGS ⇨ OPTION ⇨ Menu Language
Selects a desired language.

SETTINGS ⇨ OPTION ⇨ Input Label
Indicates which device is connected to which input port.

SETTINGS ⇨ OPTION ⇨ USB AutoRun
When your TV is turned on with a USB device connected or when you connect a USB device to your TV, the photos or videos will be played automatically.

SETTINGS ⇨ OPTION ⇨ Factory Reset
Customizes the TV settings to suit your preference. The initial setup screen will appear when you turn on the TV for the first time.

- **Home Use :** Selects it for the Home environment.
- **Store Demo :** Selects it for the retail environment.

LOCK Settings

SETTINGS ⇨ LOCK ⇨ Lock System
Activates or deactivates the lock system.

SETTINGS ⇨ LOCK ⇨ Set Password
Changes the 4-digit password. The default PIN is "0 0 0 0".

SETTINGS ⇨ LOCK ⇨ Block Programme
Blocks the programmes that contain inappropriate contents for children by pressing the Blue button. The Lock icon appears in front of the blocked programmes. The programmes can be selected but the screen blank and the audio is muted.

SETTINGS ⇨ LOCK ⇨ Input Block
Blocks the input sources.

ENTERTAINMENT Settings

SETTINGS ⇨ ENTERTAINMENT ⇨ Photo List
View image files(photos) on TV which are stored on USB device.

SETTINGS ⇨ ENTERTAINMENT ⇨ Music List
Play back music files on TV which are stored on USB device.

SETTINGS ⇨ ENTERTAINMENT ⇨ Movie List
Play movie files on TV which are stored on usb device.

SETTINGS ⇨ ENTERTAINMENT ⇨ Game (Depending on model)
Play game contents on your TV.

SETTINGS ⇨ ENTERTAINMENT ⇨ DivX(R) VOD
View the registration code of your TV.

Teletext

- This feature is not available in all countries.

Teletext is a free service broadcast by most TV stations which gives up-to-the minute information on news, weather, television programmes, share prices and many other topics. The teletext decoder of this TV can support the SIMPLE and FASTEXT systems. SIMPLE(standard teletext) consists of a number of pages which are selected by directly entering the corresponding page number. FASTEXT are more modern methods allowing quick and easy selection of teletext information.

Switch On/Off

Press the **TEXT** button to switch to teletext. The initial page or last page viewed appears on the screen. Two page numbers, TV station name, date and time are displayed on the screen headline. The first page number indicates your selection, while the second shows the current page displayed. Press the **TEXT** button to switch off teletext. The previous mode reappears.

Simple Text

Page selection

1. Enter the desired page number as a three digit number with the NUMBER buttons. If during selection you press a wrong number, you must complete the three digit number and then re-enter the correct page number.
2. The ∧**P**∨ button can be used to select the preceding or following page.

Programming a colour button in LIST mode

If the TV is in SIMPLE text or FASTEXT mode, press the **LIST** button to switch to **LIST** mode. Four teletext page numbers of your choice can be colour coded and easily selected by pressing the corresponding coloured button on the remote control handset.

1. Press the **LIST** key.
2. Press a coloured button.
3. Using the Number buttons, select the page you wish to programme.
4. The selected page is stored as the selected page number, blinking once to confirm this. From now on, you can select this page with the same coloured button.
5. The three other coloured buttons are programmed in this way.

Fastext

The teletext pages are colour coded along the bottom of the screen and are selected by pressing the corresponding coloured button.

Page selection

1. Press the **INDEX** button to select the index page.
2. You can select the pages which are colour coded along the bottom line with corresponding coloured buttons.
3. As with SIMPLE teletext mode, you can select a page by entering its three digit page number with the Number buttons in FASTEXT mode.
4. The ∧**P**∨ button can be used to select the preceding or following page.

Special Teletext Function

INDEX : Select the each index page.
TIME : When viewing a TV programme, select this menu to display the time at the top right hand corner of the screen. In the teletext mode, press this button to select a sub page number. The sub page number is displayed at the bottom of the screen. To hold or change the sub page, press the Red/Green, < > or NUMBER buttons.
HOLD : Stops the automatic page change which will occur if a teletext page consists of 2 or more sub pages. The number of sub pages and the sub page displayed is, usually, shown on the screen below the time. When this menu is selected the stop symbol is displayed at the top lefthand corner of the screen and the automatic page change is inactive.
REVEAL : Select this menu to display concealed information, such as solutions to riddles or puzzles.
UPDATE : Displays the TV picture on the screen while waiting for a new teletext page. The display will appear at the top left hand corner of the screen. When the updated page is available then display will change to the page number. Select this menu again to view the updated teletext page.

Maintenance

Cleaning your TV

Clean your TV regularly to keep the best performance and to extend the product lifespan.

- Make sure to turn the power off and disconnect the power cord and all other cables first.
- When the TV is left unattended and unused for a long time, disconnect the power cord from the wall outlet to prevent possible damage from lightning or power surges.

Screen, frame, cabinet, and stand

To remove dust or light dirt, wipe the surface with a dry, clean, and soft cloth.
To remove major dirt, wipe the surface with a soft cloth dampened in clean water or a diluted mild detergent. Then wipe immediately with a dry cloth.

- Avoid touching the screen at all times, as this may result in damage to the screen.
- Do not push, rub, or hit the surface with your fingernail or a sharp object, as this may result in scratches on the screen and image distortions.
- Do not use any chemicals as this may damage the product.
- Do not spray liquid onto the surface. If water enters the TV, it may result in fire, electric shock, or malfunction.

Power cord

Remove the accumulated dust or dirt on the power cord regularly.

Preventing "Image burn" or "Burn-in" on your TV screen

- If a fixed image displays on the TV screen for a long period of time, it will be imprinted and become a permanent disfigurement on the screen. This is "image burn" or "burn-in" and not covered by the warranty.
- If the aspect ratio of the TV is set to 4:3 for a long period of time, image burn may occur on the letterboxed area of the screen.
- Avoid displaying a fixed image on the TV screen for a long period of time (2 or more hours for LCD) to prevent image burn.

Troubleshooting

General

Cannot control the TV with the remote control.

- Check the remote control sensor on the product and try again.
- Check if there is any obstacle between the product and the remote control.
- Check if the batteries are still working and properly installed (⊕ to ⊕, ⊖ to ⊖).

No image display and no sound is produced.

- Check if the product is turned on.
- Check if the power cord is connected to a wall outlet.
- Check if there is a problem in the wall outlet by connecting other products.

Image appears slowly when the TV turns on.

- The image is muted during the product startup process. This is normal. If the image does not appear in a few minutes, unplug the TV for 30 seconds and try again. If the image still does not appear, contact the authorized service center in your local area.

Cannot connect external devices.

- Refer to the "Other Connections" and connect an external device.

The TV turns off suddenly.

- Check the power control settings. The power supply may be interrupted.
- Check if the **Automatic Standby** (Depending on model) / **Sleep Timer** / **Off Time** feature is activated in the **TIME** settings.
- If there is no signal while the TV is on, the TV will turn off automatically after 15 minutes of inactivity.
- If On Time is enabled, the TV will be turned on at the specified time. If you do not operate the TV for two hours, the TV will be turned off automatically. To disable this function, use your remote control to go to **SETTINGS** ⇨ **TIME** ⇨ **Auto Off(On Time)** ⇨ **Off**.

Audio

No sound is produced while images are displaying.

- Press ◿ + or - button.
- Check if the sound is muted by pressing **MUTE**.
- Scroll to other programme. There may a problem with the broadcast.
- Check if the audio cables are connected properly.
- Check if the TV Speaker feature is activated in the menu option.

No output from one of the speakers.

- Adjust Balance in the menu option.

Unusual sound from inside the TV is produced.

- A change in ambient humidity or temperature may result in an unusual noise when the product turns on or off. There is no problem with your product.

Video

An image displays in black and white or the color quality is poor.

- Adjust the color setting in the menu option.
- Keep a sufficient distance between this product and other electronic products.
- Scroll to other programme. There may a problem with the broadcast.

Horizontal or vertical bars appears or images blur.

- Check if there are local interferences such as an electrical appliance or power tool.

Lines or streaks appear on images.

- Check the antenna or aim the antenna to the proper direction.

Afterimages (ghosts) appear when the product turns off.

- Pixels may have been damaged from a fixed image displayed for a long time (image burn). Use a screen saver to prevent the pixel damage on the screen.

The power is on but the screen appears extremely dark.

- Adjust the brightness and contrast in the menu option.

"No Signal" appears on the screen.

- Check if the signal cable is connected between the TV and products properly.
- Check the selected input source by pressing **INPUT**.

Black spots appear on the screen.

- Several pixels in red, green, white, or black may appear on the screen that can attribute to the characteristics of the panel.
- This is normal.

The display offset is wrong.

- Adjust the position setting in the Picture menu.
- Check if the video card resolution and frequency are supported by the product. If the frequency is out of range, set to the recommended resolution using the display settings on the external device.

Thin lines appear in the background of the screen.

- Check the video cable connections.

The reception on some programme is poor.

- Scroll to other programme. There may a problem with the broadcast.
- The station signal may be weak. Aim the antenna to the proper direction.
- Check if there is local interferences such as an electrical appliance or power tool.

Specifications

Product specifications shown above may be changed without prior notice due to upgrade of product functions.

Models	Dimensions (W x H x D) (mm)		Weight (kg)		Power consumption (Outgoing condition)	Power requirement
	With stand	Without stand	With stand	Without stand		
20MT48AF	467.0 x 330.5 x 146.3	467.0 x 278.0 x 52.7	2.4	2.2	20 W	19 V ⎓ 1.2 A
22MT48AF	507.6 x 358.0 x 146.3	507.6 x 316.5 x 52.7	3.0	2.9	28 W	19 V ⎓ 1.6 A
24MT48AF	556 x 387.3 x 146.3	556 x 345.2 x 53.1	3.4	3.2	30 W	19 V ⎓ 1.6 A
28MT48AF	641.5 x 435.5 x 186.1	641.5 x 396.3 x 57.5	4.7	4.5	32 W	19 V ⎓ 2.0 A
29MT48AF	668.6 x 447.5 x 186.1	668.6 x 410.3 x 71.3	4.7	4.5	32 W	19 V ⎓ 2.0 A
22MT48AN 22MT48AM	508.5 x 388.2 x 144.9	508.5 x 352.6 x 55.9	2.9	2.75	28 W	19 V ⎓ 2.0 A
24MT48AN 24MT48AM	558.6 x 415.1 x 144.9	558.6 x 379.4 x 55.9	3.65	3.48	32 W	19 V ⎓ 2.0 A

Environment condition		
	Operating Temperature	0 °C to 40 °C
	Operating Humidity	Less than 80 %
	Storage Temperature	-20 °C to 60 °C
	Storage Humidity	Less than 85 %

	22MT48AF / 24MT48AF	28MT48AF / 29MT48AF 22MT48AN / 24MT48AN 22MT48AM / 24MT48AM	20MT48AF
AC/DC Adapter	Manufacturer : Lien Chang Model : LCAP16A-E, LCAP16A-A, LCAP21A Manufacturer : Honor Model : ADS-40FSG-19 19032GPG, ADS-40FSG-19 19032GPCU, ADS-45EI-19 19032GPI, ADS-40LSI-19-2 19032G, ADS-40SG-19-3 19032G Manufacturer : APD Model : WA-32C19FI, DA-32F19	Manufacturer : Lien Chang Model : LCAP16B-E, LCAP16B-A, LCAP21C Manufacturer : Honor Model : ADS-45FSN-19 19040GPG, ADS-45FSN-19 19040GPCU, ADS-45EI-19 19040GPI, ADS-40LSI-19-2 19040G, ADS-45SN-19-3 19040G Manufacturer : APD Model : WA-40D19FI, DA-40I19	Manufacturer : Lien Chang Model : LCAP26-E, LCAP26-A, LCAP21 Manufacturer : Honor Model : ADS-40FSG-19 19025GPG-1, ADS-40FSG-19 19025GPCU-1, ADS-40SG-19-3 19025G
	In : AC 100 - 240 V ~ 50/60 Hz Out : DC 19 V ⎓ 1.7 A	In : AC 100 - 240 V ~ 50/60 Hz Out : DC 19 V ⎓ 2.1 A	In : AC 100 - 240 V ~ 50/60 Hz Out : DC 19 V ⎓ 1.3 A

Television system	PAL/SECAM-B/G/D/K, PAL-I, NTSC-M
Programme coverage	VHF, UHF, CATV
Maximum number of storable programmes	200
External antenna impedance	75 Ω

RGB (PC) supported mode

22MT48*

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
640 x 480	31.469	59.94
800 x 600	37.879	60.317
1024 x 768	48.363	60.0
1152 x 864	54.34	60.05
1280 x 1024	63.981	60.02
1600 x 900	55.54	60
1680 x 1050	64.674	59.883
	65.290	59.954
1920 x 1080	67.5	60

- The optimal display resolution is 1920 x 1080 @ 60 Hz. The optimal timing in each mode is vertical frequency 60 Hz

20/24/28/29MT48*

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
640 x 480	31.469	59.94
800 x 600	37.879	60.317
1024 x 768	48.363	60.0
1280 x 720	47.77	59.85
1152 x 864	54.34	60.05
1366 x 768	47.71	59.79

- The optimal display resolution is 1366 x 768 @ 60 Hz. The optimal timing in each mode is vertical frequency 60 Hz

HDMI (DTV) supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
720 x 480	31.469	59.94
	31.5	60.00
720 x 576	31.25	50.00
1280 x 720	44.96	59.94
	45	60.00
	37.5	50.00
1920 x 1080	28.125	50.00
	33.72	59.94
	33.75	60.00
	56.25	50.00
	67.432	59.94
	67.5	60.00
	27	24.00
	33.75	30.00
	26.97	23.97
	33.716	29.976

Environmental information

Information for environmental preservation

LGE. announced the 'LG Declaration for a Cleaner Environment' in 1994, and this ideal has served as a guiding managerial principle ever since. The Declaration is a foundation that has allowed us to undertake environmentally friendly activities in careful consideration of economic, environmental, and social aspects. We promote activities for environmental preservation, and we specifically develop our products to embrace the concept of environment-friendly. We minimize the hazardous materials contained in our products. For example, there is no cadmium to be found in our product.

Information for recycling

This product may contain parts which could be hazardous to the environment. It is important that this product be recycled after use.

LGE. handles all waste product through an environmentally acceptable recycling method. There are several take-back and recycling systems currently in operation worldwide. Many parts will be reused and recycled, while harmful substances and heavy metals are treated by an environmentally friendly method. If you want to find out more information about our recycling program, please contact your local LG vendor or a corporate representative of LG. We set our vision and policies on a cleaner world by selecting the issue of the global environment as a task for corporate improvement. Please visit our website for more information about our 'green' policies.
http://www.lg.com/global/sustainability/environment/take-back-recycling.jsp

WARNING!

Never place a television set in an unstable location. A television set may fall, causing serious personal injury or death. Many injuries, particularly to children, can be avoided by taking simple precautions such as:

- Using cabinets or stands recommended by the manufacturer of the television set.
- Only using furniture that can safely support the television set.
- Ensuring the television set is not overhanging the edge of the supporting furniture.
- Not placing the television set on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television set to a suitable support.
- Not placing the television set on cloth or other materials that may be located between the television set and supporting furniture.
- Educating children about the dangers of climbing on furniture to reach the television set or its controls.

If your existing television set is being retained and relocated, the same considerations as above should be applied.

Symbols

~	Refers to alternating current(AC).
⎓	Refers to direct current(DC).
⧈	Refers to class II equipment.
⏻	Refers to stand-by.
|	Refers to "ON" (power).
⚡	Refers to dangerous voltage.



Make sure to read the Safety Precautions before using the product. Keep the Owner's Manual in an accessible place for future reference. The model and serial numbers of the TV are located on the back of the TV. Record them below should you ever need service.

MODEL _____

SERIAL _____