

# OWNER'S MANUAL LCD TV

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

CS56\*\*

# **LICENSES**

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# **TABLE OF CONTENTS**

# 2 LICENSES

# 6 INSTALLATION PROCEDURE

# 6 ASSEMBLING AND PREPAR-ING

- 6 Unpacking
- 8 Parts and buttons
- 10 Lifting and moving the TV
- 11 Setting up the TV
- 11 Attaching the stand
- 11 Not using the Desk Type stand
- 12 Mounting on a table
- 14 Mounting on a wall
- 15 Tidying cables

# 16 REMOTE CONTROL

# 17 WATCHING TV

- 17 Connecting an antenna
- 17 Turning the TV on for the first time
- 18 Watching TV
- 18 Managing programmes
- Automatically setting up programme
- Cable DTV Setting (In Cable mode only)
- Manually setting up programme (In digital mode)
- Manually setting up programme (In analogue mode)
- 23 Editing your programme list
- 25 CI [Common interface] Information
- Selecting the programme list
- 26 EPG (Electronic Programme Guide) (In digital mode)
- 27 Switch on/off EPG
- 27 Select a programme

- 27 NOW/NEXT Guide Mode
- 27 8 Day Guide Mode
- 27 Date Change Mode
- 28 Extended Description Box
- 28 Remind Setting Mode
- 28 Schedule List Mode
- 28 Using additional options
- 28 Adjusting aspect ratio
- 30 Using the input list
- Locking the buttons on the TV (Child Lock)
- 32 Using the quick menu
- 33 Using the Customer Support
- 33 Testing Software Update
- 34 Testing the Picture / Sound
- 34 Using Signal Test
- 34 Using the product or service information

# 35 ENTERTAINMENT

- 35 Connecting USB storage devices
- 36 Browsing files
- 37 Viewing movies
- 40 Viewing photos
- 42 Listening to music
- 44 DivX® VOD Guide

# 45 CUSTOMIZING TV SETTINGS

- 45 Accessing main menus
- 46 Customizing settings
- 46 SETUP settings
- 47 PICTURE settings
- 52 AUDIO settings
- 55 TIME settings
- 56 LOCK settings
- 57 OPTION settings

# 60 MAKING CONNECTIONS

- 61 Connection overview62 Connecting to a HD receiver, DVD, or VCR player
- 62 HDMI connection
- 62 DVI to HDMI connection
- 62 Component connection
- 63 Euro Scart connection
- 63 Composite connection
- 64 Connecting to a PC
- 64 HDMI connection
- 64 DVI to HDMI connection
- 64 RGB Connection
- 65 Connecting to an audio system
- 65 Digital optical audio connection
- 66 Headphone connection
- 66 Connecting to a USB
- 66 Connecting to a CI Module
- 67 SIMPLINK connection
- 67 Activating the SIMPLINK feature

# 68 TELETEXT

- 68 Switch On/Off
- 68 Simple Text
- 68 Page selection
- 68 Top Text
- 68 Block / Group / Page Selection
- 68 Direct Page Selection
- 69 Fastext
- 69 Page selection
- 69 Special Teletext Function

# 70 DIGITAL TELETEXT

- 70 Teletext within digital service
- 70 Teletext in digital service

# 71 MAINTENANCE

- 71 Cleaning your TV
- 71 Screen and frame
- 71 Cabinet and stand

- 71 Power cord
- 72 Preventing "Image burn" or "Burn-in" on your TV screen

# 73 TROUBLESHOOTING

# 75 SPECIFICATIONS

# 79 IR CODES

# 80 EXTERNAL CONTROL DEVICE SETUP

- 80 RS-232C Setup
- 80 Type of connector; D-Sub 9-Pin Male
- 80 RS-232C Configurations
- 81 Communication Parameters
- 81 Command reference list
- 82 Transmission / Receiving Protocol

# 87 OPEN SOURCE LICENSE

87 Open source software notice



### 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.

# INSTALLATION PROCEDURE

- 1 Open the package and make sure all the accessories are included.
- 2 Attach the stand to the TV set.
- 3 Connect an external device to the TV set.

# ASSEMBLING AND PREPARING

# Unpacking

Check your product box for the following items. If there are any missing accessories, contact the local dealer where you purchased your product. The illustrations in this manual may differ from the actual product and item.



#### **CAUTION**

- Do not use any unapproved items to ensure the safety and product life span.
- · Any damages or injuries by using unapproved items are not covered by the warranty.



#### **NOTE**

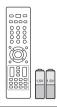
- The items supplied with your product may vary depending on the model.
- Product specifications or contents of this manual may be changed without prior notice due to upgrade of product functions.
- For an optimal connection, HDMI cables and USB devices should have bezels less than 10 mm thick and 18 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.

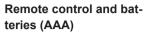




\*A ≤ 10 mm

\*B ≤ 18 mm





(See p.16)



#### Owner's manual



Polishing cloth (Depending on model) Use this to remove dust from the cabinet.



Screw for assembly 8EA, M4 x 20 (See p.11)



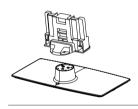
Screw for fixing (Only 32/42CS56\*\*) (See p.12)



**Power Cord** 



Protection cover (See p.11)



Stand Body / Stand Base (See p.11)

# Parts and buttons



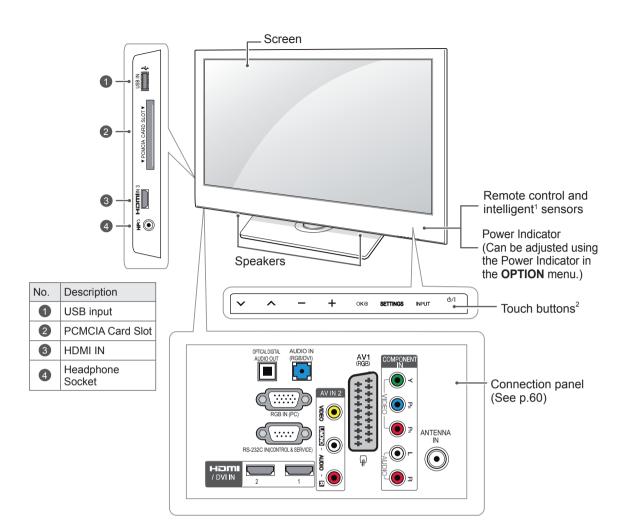
# NOTE

- 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.



#### CAUTION

- Do not step on the glass stand or subject it to any impact. It may break, causing possible injury from fragments of glass, or the TV may fall.
- Do not drag the TV. The floor or the product may be damaged.
- · Some models have a thin film attached on to the screen and this must not be removed.



Touch Button	Description
<b>~</b> ^	Scrolls through the saved programmes.
- +	Adjusts the volume level.
OK ⊚	Selects the highlighted menu option or confirms an input.
SETTINGS	Accesses the main menu, or saves your input and exits the menus.
INPUT	Changes the input source.
ტ/I	Turns the power on or off.

- 1 Intelligent sensor Adjusts the image quality and brightness based on the surrounding environment.
- 2 All of the buttons are touch sensitive and can be operated through simple touch with your finger.

# Lifting and moving the TV

When moving or lifting the TV, read the following advice to prevent the TV from being scratched or damaged and for safe transportation regardless of its type and size.

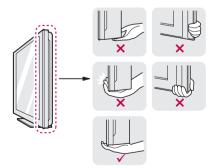


# **CAUTION**

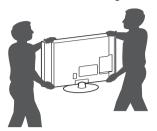
- · Avoid touching the screen at all times, as this may result in damage on the screen or some of the pixels used to create images.
- It is recommended to move the TV in the box or packing material that the TV originally came
- Before moving or lifting the TV, disconnect the Power cord and all cables.
- When holding the TV, the screen should face away from you to prevent the screen from scratches.



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



- When transporting a large TV, there should be at least 2 people.
- · When transporting the TV by hand, hold the TV as shown in the following illustration.



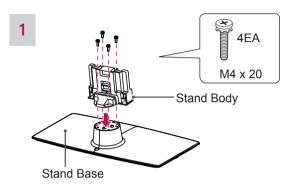
- When transporting the TV, do not expose the TV to jolts or excessive vibration.
- · When transporting the TV, keep the TV upright, never turn the TV on its side or tilt towards the left or right.

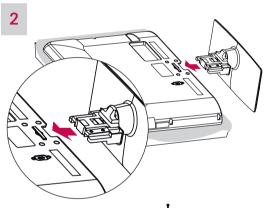
# Setting up the TV

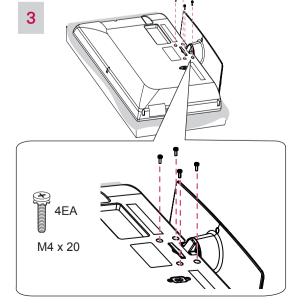
Put your TV on a pedestal stand and mount the TV on a table or wall.

# Attaching the stand

If you are not mounting the TV to a wall, use the following instructions to attach the stand.









 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.



 Tighten the screws firmly to prevent the TV from tilting forward. Do not over tighten.

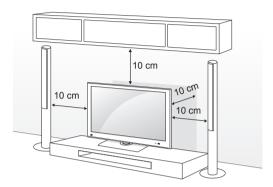
# Not using the Desk Type stand

 Push the supplied Protection cover into the opening at the bottom of the TV until clicking sound.



# Mounting on a table

- Image shown may differ from your TV.
- Lift and tilt the TV into its upright position on a table.
  - Leave a 10 cm (minimum) space from the wall for proper ventilation.



Connect the Power cord to a wall outlet.

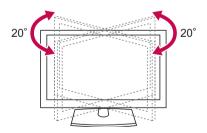


### **CAUTION**

· Do not place the TV near or on sources of heat, as this may result in fire or other damage.

#### Adjusting the angle of the TV to suit view

Swivel 20 degrees to the left or right and adjust the angle of the TV to suit your view.





#### **CAUTION**

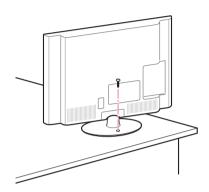
- · When adjusting the angle of the product, watch out for your fingers.
  - »Personal injury may occur if hands or fingers are pinched. If the product is tilted too much, it may fall, causing damage or injury.

#### Securing the TV to a table

#### (Only 32/42CS56\*\*)

Fix the TV to a table to prevent from tilting forward, damage, and potential injury.

Mount the TV on a table, and then insert and tighten the supplied screw on the rear of the stand.



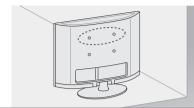


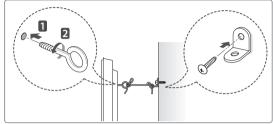
### WARNING

 To prevent the TV from falling over, the TV should be securely attached to the floor/ wall per installation instructions. Tipping, shaking, or rocking the TV may cause injury.

### Securing the TV to a wall

(This feature is not available for all models.)





- 1 Insert and tighten the eye-bolts, or TV brackets and bolts on the back of the TV.
  - If there are bolts inserted at the eye-bolts position, remove the bolts first.
- 2 Mount the wall brackets with the bolts to the wall.
  - Match the location of the wall bracket and the eye-bolts on the rear of the TV.
- 3 Connect the eye-bolts and wall brackets tightly with a sturdy rope.
  - Make sure to keep the rope horizontal with the flat surface.



### **CAUTION**

 Make sure that children do not climb on or hang on the TV.



#### NOTE

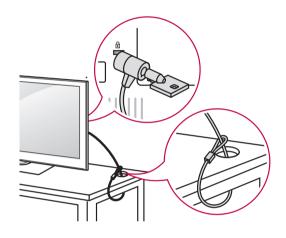
- Use a platform or cabinet that is strong and large enough to support the TV securely.
- Brackets, bolts and ropes are not provided.
   You can obtain additional accessories from your local dealer.

### Using the Kensington security system

(Depending on model)

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 <a href="http://www.kensington.com">http://www.kensington.com</a>.

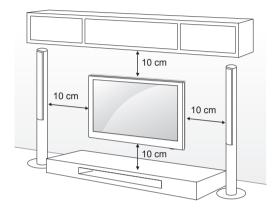
Connect the Kensington security system cable between the TV and a table.



# Mounting on a wall

Attach a wall mount bracket at the rear of the TV carefully and install the wall mount bracket on a solid wall perpendicular to the floor. When you attach the TV to other building materials, please contact qualified personnel.

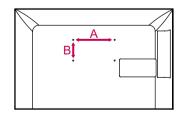
LG recommends that wall mounting be performed by a qualified professional installer.



Make sure to use screws and wall mount bracket that meet the VESA standard. Standard dimensions for the wall mount kits are described in the following table.

#### Separate purchase(Wall Mounting Bracket)

Model	32CS56**	42/47CS56**
VESA (A x B)	200 x 100	200 x 200
Standard screw	M4	M6
Number of screws	4	4
Wall mount	LSW100B	LSW200BX
bracket		





### CAUTION

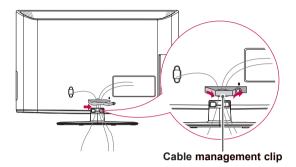
- · Disconnect the power first, and then move or install the TV. Otherwise electric shock may occur.
- If you install the TV on a ceiling or slanted wall, it may fall and result in injury. Use an authorized LG wall mount bracket and contact the local dealer or qualified personnel.
- Do not over tighten the screws as this may cause damage to the TV and void your warrantv.
- Use the screws and wall mount bracket that meet the VESA standard. Any damages or injuries by misuse or using an improper accessory are not covered by the warranty.



- · Use the screws that are listed on the VESA standard screw specifications.
- The wall mount kit includes an installation. manual and necessary parts.
- 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 bracket.

# Tidying cables

- 1 Gather and bind the cables with the Cable management clip.
- 2 Fix the Cable management clip firmly to the TV.





# NOTE

 Do not move the TV by holding the Cable management clip, as the Cable management clip may break, and injuries and damage to the TV may occur.

# 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  $\oplus$  and  $\bigcirc$  ends to the label inside the compartment, and close the battery cover. Be sure to point the remote control to the remote control sensor on the TV.

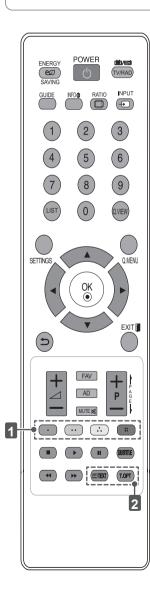


To remove the batteries, perform the installation actions in reverse.



# **CAUTION**

• Do not mix old and new batteries, as this may damage the remote control.



eØ ENERGY SAVING	Adjusts the brightness of the screen to reduce energy consumption.
ပ် POWER	Turns the TV on or off.
TV / RAD ≅i/⊠	Selects Radio, TV and DTV programme.
GUIDE	Shows programme guide.
INFOФ INFO	Views the information of the current programme and screen.
RATIO	Resizes an image.
<b>⊕</b> INPUT	Changes the input source.
Number buttons	Enters numbers.
LIST	Accesses the saved programme list.
Q.VIEW	Returns to the previously viewed programme.
SETTINGS	Accesses the main menus.
Q.MENU	Accesses the Quick menus.
Navigation buttons (up/down/left/right)	Scrolls through menus or options.
OK ⊚	Moves to the previous or next screen.
Þ	Returns to the previous level.
EXIT	Clears all on-screen displays and return to TV viewing.
⊿+-	Adjusts the volume level.
P+-	Scrolls through the saved programmes.
FAV	Accesses your favourite programme list.
AD	Switches the Audio Description on or off.
MUTE	Mutes all sounds.
← PAGE ←	Moves to the previous or next screen.
Coloured buttons	These access special functions in some menus. ( : Red, : Green, : Yellow, : Blue)
SUBTITLE	Recalls your preferred subtitle in digital mode.
Control buttons (■, ▶, II, ◀◀, ▶▶)	Controls the MY MEDIA menus, or the SIMPLINK compatible devices (USB,SIMPLINK).
2 TELETEXT BUT- TONS	These buttons are used for teletext.

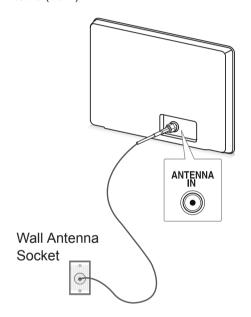
# **WATCHING TV**

# Connecting an antenna

Connect an antenna to watch TV while referring to the following.

To prevent damage do not connect to the mains outlet until all connections are made between the devices.

Connect the TV to a wall antenna socket with an RF cable (75  $\Omega$ ).





#### **NOTE**

- For optimum picture quality, adjust antenna direction.
- In poor signal areas, to achieve better picture quality it may be necessary to install a signal amplifier to the antenna.
- If the image quality is poor with an antenna connected, aim the antenna to the correct direction.
- An antenna cable and converter are not supplied.

# Turning the TV on for the first time

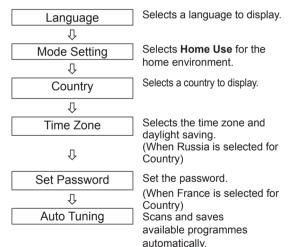
When you turn the TV on for the first time, the Initial setting screen appears. Select a language and customize the basic settings.

- 1 Connect the Power cord to a power outlet.
- 2 In Standby mode, press **也(POWER)** 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 menus.
- 3 Follow the on-screen instructions to customize your TV settings according to your preferences.





#### NOTE

- For those countries without confirmed DTV broadcasting standards, some DTV features might not work, depending on the DTV broadcasting environment.
- When France is selected for Country. password is not '0', '0', '0', '0' but '1', '2'. '3', '4'.
- When the basic settings are complete, press OK.



#### NOTE

- 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.
- To turn the TV off, press **(POWER)**.

# Watching TV

- 1 In Standby mode, press ψ(POWER) to turn the TV on.
- 2 Press INPUT and select Antenna.
- 3 To turn the TV off, press **Φ**(**POWER**). The TV switches to Standby mode.

# Managing programmes

# Automatically setting up programme

#### Selecting Antenna,

Use this to automatically find and store all available programmes.

When you start auto programming, all previously stored service information will be deleted.

- Press **SETTINGS** to access the main menus
- 2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.
- 3 Press the Navigation buttons to scroll to Auto Tuning and press OK.
- 4 Press the Navigation buttons to scroll to Antenna and press OK.
- 5 Select Start to start automatic tuning. The TV scans and saves available programmes automatically.
- 6 When you are finished, press **EXIT.** When you return to the previous menu, press BACK.



# NOTE -

- If the TV scans a blocked programme, you will be prompted to enter your password to keep the programme scanned.
- You can store up to 1,000 programmes. The number of programmes that you can store differs depending on the broadcasting signal environment.
- Automatic Numbering: Decide whether to use the programme numbers as sent by broadcasting stations for tuning.
- When select **Italy** in the Country menu, if the pop up is displayed when the conflicted programme after Auto Tuning, select a broadcaster for conflicting programme number to solve.
- In the following country, DVB cable can be used: Germany, Netherlands, Sweden, Switzerland, Denmark, Austria, Finland, Norway, Slovenia, Hungary, Ukraine, Ireland, Poland, Romania, Spain, Bulgaria, Russia, Lithuania, Estonia, Latvia, Czech. (The supported country can be added.)

#### Selecting Cable,

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to SETUP and press OK.
- 3 Press the Navigation buttons to scroll to Auto Tuning and press OK.
- 4 Press the Navigation buttons to scroll to **Cable** and press **OK**.
- 5 Press the Navigation buttons to scroll to Comhem or Other Operators and press OK.
- 6 Press the Navigation buttons to scroll to Quick or Full and press OK.
- 7 Press the Navigation buttons or Number buttons to scroll make appropriate adjustments (Except for Full mode) and press **OK**.
- 8 Select Start to start automatic tuning. The TV scans and saves available programmes automatically.
- When you are finished, press EXIT.
  When you return to the previous menu, press BACK.



#### NOTE -

- If the TV scans a blocked programme, you will be prompted to enter your password to keep the programme scanned.
- When you select the Cable, the Cable Service Operator selection screen can differ or not exist by the Cable situation of the applicable country.
- The popup window to select Service Operator is only shown initially for the 3 cases when you accessing the Initial Setting menu, when you change from Antenna to Cable or when you access the menu after changing the Country.

- When you want to select Service Operator aside from the above 3 cases, you can do so by selecting Setup->Cable DTV Setting-> Service Operator.
- Acquired certification SO: Sweden(Comhem, Canal Digital), Denmark(YouSee, Canal Digital, Stofa), Norway(Canal Digital), Netherlands(Ziggo, UPC Digitaal), Ukraine(Volia-Cable), Germany(KDG), Switzerland(CableCom, UPC), Austria(UPC Digital), Hungary(UPC Digital), Ireland(UPC Digital), Poland(UPC Digital), Romania(UPC Digital), Russia(OnLime)(The acquired certification SO can be added.)
- If there are not any Service Operator that you want, select Other Operators.
- If you select "Other Operators", or the selected country supports "Other Operators" only, it may take some time to search all the channels, or it may not search some of the channels.
- If some of the channels do not appear, follow the steps below:
- 1. SETUP -> Auto Tuning -> Cable -> Setting
  2. Switch Home Tuning from "Off" to "On"
  3. Input additional values such as the frequency, symbol rate, modulation, and network ID. (You can ask your cable service provider for the above information.)

The following values are needed in order to search all available programmes quickly and correctly.

The commonly used values are provided as "default".

However, for correct settings, please inquire of the cable service provider.

When running Auto Tuning in DVB cable mode, selecting Full will search through all frequencies to find available channels.

In the case when the programme is not searched by selecting the Default, perform the searching by selecting the Full.

However, in the case when the programme is searched by selecting the Full, the Auto Tuning time can be taken too much.

If some channels are not detected when Full is selected, select the In detail checkbox and then try tuning again.

- Frequency : Enter a user-defined frequency.
- Symbol rate : Enter a user-defined symbol rate (Symbol rate: Speed at which a device such as modem sends symbols to a channel).
- Modulation: Enter a user-defined modulation. (Modulation: Loading of audio or video signals onto carrier).
- · Network ID : Unique identifier allocated for each user.
- · Start Frequency: Enter a user-defined start frequency range.
- End Frequency : Enter a user-defined end frequency range.

# Cable DTV Setting (In Cable mode only)

The range that a user can select from the Service Operator menu differs depending on number of Service Operator supported by each country, and if number of supported Service Operator for each country is 1, corresponding function becomes nonactivation.

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to SETUP and press OK.
- 3 Press the Navigation buttons to scroll to Cable DTV Setting and press OK.
- 4 Press the Navigation buttons to scroll to **Serv**ice Operator or Channel Auto update and press OK.
- 5 Select your desired Source.
- 6 When you are finished, press **EXIT.** When you return to the previous menu, press BACK.
  - · If you select Cable, you can see Cable DTV Setting menu.
  - When Channel Auto Update is On, you can update information for all the programmes that can be updated, including the programme currently being watched.
  - When Channel Auto Update is Off, you can only update information for the programme currently being watched.
  - · You can not select the Cable DTV Setting when the service operator is set to "Ziggo".

# Manually setting up programme (In digital mode)

Manual Tuning lets you manually add a programme to your programme list.

#### Selecting Antenna,

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to SETUP and press OK.
- 3 Press the Navigation buttons to scroll to Manual Tuning and press OK.
- 4 Press the Navigation buttons to scroll to DTV and press OK.
- 5 Scroll through the programme types, and then add or delete programmes.
- 6 When you are finished, press EXIT. When you return to the previous menu, press BACK.



#### 1OTE

- If the TV scans a blocked programme, you will be prompted to enter your password to keep the programme scanned.
- You can select SBAND when the country is set to "Norway, Latvia."

#### Selecting Cable,

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to SETUP and press OK.
- 3 Press the Navigation buttons to scroll to Manual Tuning and press OK.
- 4 Press the Navigation buttons to scroll to Cable DTV and press OK.
- 5 Make appropriate adjustments.
- 6 When you are finished, press **EXIT.**When you return to the previous menu, press **BACK**



- If the TV scans a blocked programme, you will be prompted to enter your password to keep the programme scanned.
- Symbol rate: Enter a user-defined symbol rate (Symbol rate: Speed at which a device such as modem sends symbols to a channel).
- **Modulation**: Enter a user-defined modulation. (Modulation: Loading of audio or video signals onto carrier).
- You can not select the Cable DTV when the service operator is set to "Ziggo" or "Other Operators" of Netherlands.

# Manually setting up programme (In analogue mode)

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

- 1 Press SETTINGS to access the main menus.
- 2 Press the Navigation buttons to scroll to SETUP and press OK.
- 3 Press the Navigation buttons to scroll to Manual Tuning and press OK.
- 4 Press the Navigation buttons to scroll to TV or Cable TV and press OK.
- 5 Scroll through the programme types, and then add or delete programmes.
- 6 Press the Navigation buttons to scroll to TV System.
- 7 Press the Navigation buttons to scroll to V/UHF or Cable.
- 8 Press the Navigation buttons or Number buttons to scroll to the desired channel number.
- 9 Press the Navigation buttons to scroll to commence searching.
- 10 Press the Navigation buttons to scroll to Store and press OK.
- 11 When you are finished, press EXIT. When you return to the previous menu, press BACK.



#### NOTE

- · If the TV scans a blocked programme, you will be prompted to enter your password to keep the programme scanned.
- L : SECAM L/L' (France)
- BG: PAL B/G, SECAM B/G (Europe / East Europe / Asia / New Zealand / M.East / Africa)
- I: PAL I (U.K. / Ireland / Hong Kong / South
- DK: PAL D/K, SECAM D/K (East Europe / China / Africa / CIS)
- To store another channel, repeat steps 5 to 10.

#### Assigning a station name

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

- 1 Press SETTINGS to access the main menus.
- 2 Press the Navigation buttons to scroll to SETUP and press OK.
- 3 Press the Navigation buttons to scroll to Manual Tuning and press OK.
- 4 Press the Navigation buttons to scroll to TV or Cable TV.
- 5 Press the Navigation buttons to scroll to Name and press OK.
- 6 Press the Navigation buttons to scroll Select the position and make your choice of the second character, and so on. You can use an the alphabet A to Z, the number 0 to 9, +/-, and blank and press OK.
- 7 Press the Navigation buttons to scroll to Close and press OK.
- 8 Press the Navigation buttons to scroll to Store and press OK
- 9 When you are finished, press **EXIT.** 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.

You can change the programme number using "Move"function, if "Automatic Numbering" is unchecked when you start Auto Tuning.

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to SETUP and press OK.
- 3 Press the Navigation buttons to scroll to Programme Edit and press OK.
- 4 Press the Navigation buttons to select a programme to be stored or skipped.
- When you are finished, press EXIT.
  When you return to the previous menu, press BACK.

#### In DTV/RADIO mode

#### Skipping a programme number

- 1 Press the Navigation buttons to scroll to select a programme number to be skipped.
- 2 Press Blue button to turn the programme number.
- 3 Press Blue button to release.



#### NOTE

- When programmes are to be skipped, the skipped programme shows in blue and these programmes will not be selected by the P + or - buttons during TV viewing.
- If you wish to select a skipped programme, directly enter the programme number with the NUMBER buttons or select it in the programme edit or EPG.

#### Locking a programme number

- 1 Press the Navigation buttons to scroll to select a programme number to be locked.
- 2 Press Yellow button to turn the programme number.
- 3 Press Yellow button to release.



#### NOTE

 It can be registered as Lock programme even when Lock System is turned Off.

#### In TV mode

#### Deleting a programme

- 1 Press the Navigation buttons to scroll to select a programme number to be deleted.
- 2 Press Red button to turn the programme number.



#### NOTE -

· The selected programme is deleted, all the following programmes are shifted up one.

#### Moving a programme

- 1 Press the Navigation buttons to scroll to select a programme number to be moved.
- 2 Press the Green button to turn the programme number and press the Navigation buttons.
- 3 Press Green button to release.

#### Skipping a programme number

- 1 Press the Navigation buttons to scroll to select a programme number to be skipped.
- 2 Press Blue button to turn the programme number.
- 3 Press Blue button to release.



#### NOTE -

- · When programmes are to be skipped, the skipped programme shows in blue and these programmes will not be selected by the P +
- buttons during TV viewing.
- If you wish to select a skipped programme, directly enter the programme number with the NUMBER buttons or select it in the programme edit.

#### **Auto Sort**

1 Press the Navigation buttons to start Auto Sort and press OK.



#### NOTE

 After activating Auto Sort once, you can no longer edit programmes.

#### Locking a programme number

- 1 Press the Navigation buttons to scroll to select a programme number to be locked.
- 2 Press Yellow button to turn the programme number
- 3 Press Yellow button to release.



#### NOTE -

· It can be registered as Lock programme even when Lock System is turned Off.

#### Selecting favourite programme

- 1 Press the Navigation buttons to scroll to select your desired programme.
- 2 Press the FAV to add corresponding programme to Favourite list of current Favourite group.
- 3 Press FAV to release.

#### Selecting favourite programme group

- 1 Press the Navigation buttons to scroll to select your desired programme.
- 2 Press the Q.MENU to display a pop-up window where Favourite group can be changed.
- 3 Press the Navigation buttons to scroll to select a Favourite group and press OK.

# CI [Common interface] Information

· This feature is not available in all countries.

This function enables you to watch some encrypted services (pay services). If you remove the CI Module, you cannot watch pay services. When the module is inserted into the CI slot, you can access the module menu.

To purchase a module and smart card, contact your dealer. Do not repeatedly insert or remove a CI module from the TV. This may cause a malfunction. When the TV is turned on after inserting a CI Module, you may not have any sound output.

This may be incompatible with the CI module and smart card.

CI (Common Interface) functions may not be possible depending upon the country broadcasting circumstances.

When using a CAM(Conditional Access Module), please make sure it meets fully the requirements of either DVB-CI or CI plus.

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to SETUP and press OK.
- 3 Press the Navigation buttons to scroll to CI Information and press OK.
- 4 Select the desired item: Module information, smart card information, language, or software download etc and press OK.
- 5 When you are finished, press **EXIT**.



#### NOTE -

- This OSD is only for illustration and the menu options and screen format will vary according to the Digital pay services provider.
- It is possible for you to change CI (Common Interface) menu screen and service by consulting your dealer.

# Selecting the programme list

You can check which programmes are stored in the memory by displaying the programme list.

#### Displaying programme LIST

- 1 Press LIST to access the Programme List.
- 2 Press Blue button to turn the programme edit.



#### NOTE -

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

#### Selecting a programme in the programme list

- Press Navigation buttons to select programme.
- 2 Press **OK** to switch to the chosen programme number.



#### NOTE -

 Press TV/RAD. (The mode will be switched between TV, DTV, and Radio from the programme you are currently watching.)

### Paging through a programme list

- 1 Press the **P** + buttons to turn the pages.
- 2 Press LIST to return normal TV viewing.

#### Displaying the favourite programme list

- Press FAV to access the Favourite Programme List.
- 2 When you are finished, press **EXIT**.

Button	Description
Blue button	Turn the programme edit.
Yellow button	Current channel is registered/ cancelled as preferred channel on currently selected Group.
ОК	Selects a programme to view
< or >	Favourite group is changed.

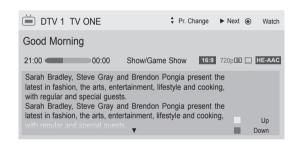
# EPG (Electronic Programme Guide) (In digital mode)

This system has an Electronic Programme Guide (EPG) to help your navigation through all the possible viewing options.

The EPG supplies information such as programme listings, start and end times for all available services. In addition, detailed information about the programme is often available in the EPG (the availability and amount of these programme details will vary, depending on the particular broadcaster).

This function can be used only when the EPG information is broadcast by broadcasting companies. You must set the Clock in the **Time** menu, before using EPG function.

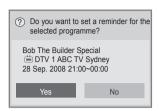
The EPG displays the programme details for 8 days.



Press INFO to show current programme information.

illioitiation.		
Displayed with a TV or DTV Programme.		
Displayed with a Radio Programme.		
Displayed with a MHEG Programme.		
Displayed with a HE-AAC Programme.		
Aspect ratio of broadcasting programme.		
Aspect ratio of broadcasting programme.		
Displayed with a Teletext Programme.		
Displayed with a Subtitle Programme.		
Displayed with a Scramble Programme.		
Displayed with a Dolby Digital Programme.		
Displayed with a Dolby Digital PLUS Programme.		
576i/p, 720p, 1080i/p: Resolution of broadcasting programme		
Broadcasted programme with the icon may		
not be displayed in Monitor Out depending on		
the information of the programme.		

>	Shows next programme information.
v or ^	Shows other programme information.



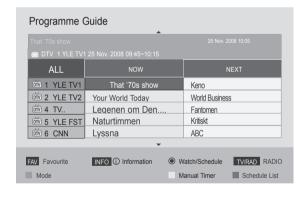
ок	A pop-up window for remind settings appear.
<>	Select Timer Remind setting mode.

# Switch on/off EPG

1 Press **GUIDE** to switch on or off EPG.

# Select a programme

1 Press Navigation buttons or P + - to select desired programme.



# NOW/NEXT Guide Mode

You can view a programme being broadcasted and one scheduled to follow.

Button	Description
Red button	Change EPG mode.
Yellow button	Enter Manual Timer mode.
Blue button	Enter Schedule List mode.
ок	When 'Now' is selected, it is moved to selected programme and EPG disappears When 'Next' is selected, a reservation pop-up window appears.
< >	Select NOW or NEXT Programme.
^ ∨	Select the Broadcast Programme.
P + -	Page Up/Down.
GUIDE	
BACK	Switch off EPG.
EXIT	
TV/RAD	Select DTV or RADIO Programme.
INFO	Detail information on or off.

# 8 Day Guide Mode

Button	Description	
Red button	Change EPG mode.	
Green button	Enter Date setting mode.	
Yellow button	Enter Manual Timer mode.	
Blue button	Enter Schedule List mode.	
ок	When 'Currently broadcasting programme is selected, it is moved to selected programme and EPG disappears When 'Future broadcasting programme is selected, a reservation pop-up window appears.	
< >	Select Programme.	
^ ~	Select the Broadcast Programme.	
P + -	Page Up/Down.	
GUIDE		
BACK	Switch off EPG.	
EXIT		
TV/RAD	Select DTV or RADIO Programme.	
INFO	Detail information on or off.	

# Date Change Mode

Button	Description
Green button	
<b>v</b>	Switch off Date setting mode.
BACK	
OK	Change to the selected date.
< >	Select a date.
GUIDE	Switch off EPG.
EXIT	

# **Extended Description Box**

Button	Description
INFO	The detail information on or off.
^ ~	Text Up/Down.
< >	Select Timer Record/Remind setting mode.
GUIDE	Switch off EPG.
EXIT	

# Remind Setting Mode

Button	Description
BACK	Switch off Manual Timer mode.
OK	Appear Repeat Option popup.
Navigation button	Select the date to schedule.
Yellow button	Change to Guide mode.
Blue button	Change to Schedule List mode.

# Schedule List Mode

If you've created a schedule list, a scheduled programme is displayed at the scheduled time even when you are watching a different programme at the time.

Button	Description	
Yellow button	Change to Manual Timer mode.	
Blue button	Change to Guide mode.	
GUIDE		
ок	Select your desired Option (Modify/ Delete/Delete All).	
^ ~	Select programme.	
P + -	Page Up/Down.	
BACK	Switch off Schedule List.	

# Using additional options

# Adjusting aspect ratio

Resize an image to view at its optimal size by pressing RATIO while you are watching TV.



- You can also change the image size by pressing Q. MENU or accessing Aspect Ratio in the Picture menus.
- For Zoom Setting, select 14:9, Zoom and Cinema Zoom in Ratio Menu. After completing Zoom Setting, the display goes back to Q.Menu.
- You can only select 4:3, 16:9 (Wide), 14:9, Zoom/Cinema Zoom in Component mode.
- You can only select 4:3, Original, 16:9 (Wide), 14:9, Zoom/Cinema Zoom in HDMI mode.
- You can only select 4:3, 16:9 (Wide) in RGB-PC, HDMI-PC mode only.
- In DTV/HDMI/Component (over 720p) mode, Just Scan is available.
- In Analogue/DTV/AV/Scart mode, Full Wide is available.

- 16:9: Resizes images to fit the screen width.



- Just Scan: Displays video images in the original size without removing parts at the edge of the image.
  - Just Scan



 If you select Just Scan, you may see image noises at the edge of the original signal.



picture format broadcasted.

screen signal it will automatically change to the



- Full Wide: When TV receives the wide screen signal, it will let you adjust the picture horizontally or vertically, in a linear proportion,to fill the entire screen fully.
  - 4:3 and 14:9 video is supported in full screen without any video distortion through DTV input.



**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.
 The 14:9 screen is viewed in the same way as in 4:3, but is moved to the up and down.



Zoom: Enlarges an image to fit the screen width. The top and bottom of the image may not appear.





### **NOTE**

- If you access, Aspect Ratio in the quick menus,
  - Press the Navigation buttons to stretch an image vertically.
  - Press the Navigation buttons to move the zoom focus up or down.
- Cinema Zoom 1: Enlarges an image in the cinemascope ratio, 2.35:1.
- To change the ratio of the cinema zoom, press the Navigation buttons and its range is from 1 to 16.
- To move the zoom focus up or down, press the Navigation buttons.





#### NOTE

· If you enlarge or reduce an image, the image may be distorted.

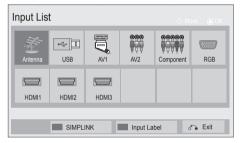
# Using the input list

#### Selecting an input source

- 1 Press **INPUT** to access the input sources.
  - The connected device displays on each input source.



- You can also access the input source list by selecting INPUT in the main menus.
- 2 Press Navigation buttons to scroll to one of the input sources and press OK.
  - · Image shown may differ from your TV.



Input source	Description	
Antenna or Cable	Select it when watching the DTV/RADIO/TV.	
USB	Select it when using USB depends on connector.	
AV	Select it when watching the VCR or external equipment.	
Component	Select it when using the DVD or the Digital set-top box depends on connector.	
RGB	Select it when using PC depends on connector.	
HDMI	Select it when using DVD, PC or Digital set-top box depend on connector.	

The connected input sources display in black and the disconnected input sources in grey.

- To add an input label, press the Blue button.
   You can easily identify a device connected to each input source
- To access the SIMPLINK, press the Red button. If you select "SIMPLINK and On", the pop-up window for the HDMI input will not display.

# Adding an Input label

Add a label to an input source so that you can easily identify a device connected to each input source.

· Image shown may differ from your TV.



- 1 Press **INPUT** to access the input sources.
- 2 Press the Blue button.
- 3 Press the Navigation buttons to scroll to one of the input sources.
- 4 Press the Navigation buttons to scroll to one of the input labels.
- When you are finished, press EXIT.
  When you return to the previous menu, press BACK.

# Locking the buttons on the TV (Child Lock)

Lock the buttons on the TV to prevent any unwanted operations or accidents by children.

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to LOCK and press OK.
- 3 Press Navigation buttons to scroll to Key Lock and press OK.
- 4 Select **On** to activate the Key lock feature.
- To deactivate the Key lock feature, select Off.
- When you are finished, press EXIT.
  When you return to the previous menu, press BACK.

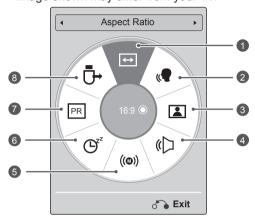


- The TV is programmed to remember the last setting after you turn the TV off.
- If you turn the TV off with the Key Lock feature activated, press the o, INPUT, P
   + - or Number buttons on the remote control
- If you press any button on the TV with the Key lock feature activated, Key Lock appears on the screen.

# Using the quick menu

Customize the frequently using menus.

- 1 Press Q. MENU to access the quick menus.
- 2 Press Navigation buttons to scroll through the following menus and press OK.
  - Image shown may differ from your TV.



	Menu	Description
1	Aspect Ratio	Changes the image size (16:9, Just Scan, Original, Full Wide, 4:3, 14:9, Zoom, Cinema Zoom)
2	Clear Voice II	By differentiating the human sound range from others, it helps users listen to human voices better.
3	Picture Mode	Changes the image mode (Vivid, Standard, Cinema, Sport, Game, Expert1, Expert2)
4	Sound Mode	Changes the sound mode (Standard, Music, Cinema, Sport, Game)
6	Audio or Audio Language	Changes the sound output.
6	Sleep Timer	Sets the length of time until the TV to turns off
0	Skip Off/On	Sets the Skip Off/On.
8	USB Device	Ejects a USB device when a USB device is connected



- The available menus and options may differ from the input source that you are using.
- 3 Press Navigation buttons to scroll to the option you want.
- 4 When you are finished, press Q. MENU.

# Using the Customer Support

# **Testing Software Update**

To download software through the digital terrestrial broadcasting system.

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Red button to scroll Customer Support.
- 3 Press the Navigation buttons to scroll Software Update.
- 4 Press the Navigation buttons to scroll to **On** and press **OK**.
  - If you select **On**, a user confirm message box will be displayed to notify that new software is found.
- When you are finished, press **EXIT.**When you return to the previous menu, press **BACK**.

# - Download starts when "**Yes**" is selected. At this time, progressing pop-up window does not display.

- Download progress status can be checked from Software Update menu.



 TV is restarted when download is completed.



# When setting "Software Update"

 Occasionally, a transmission of updated digital software information will result in the following menu on the TV screen.



- Simple Update : for current update stream



- Schedule Update : for scheduled update stream
- When the Software Update menu is "**Off**", the message to change it to "**On**" appears.



- During Progress of a Software Update, please note the following:
  - Power to the TV must not be interrupted.
  - The antenna must not be disconnected.
  - After Software Update, you can confirm the updated software version in Software Update menu.
  - It may take hours to download the software, so make sure that the power stays on during the download.
  - The software is downloaded only in Standby mode or in MUX with Software Update Service, and stops when the Power cord is unplugged or when viewing MUX without Software Update Service.
  - When you return to Standby mode or MUX with Software Update Service, the software download will resume from where it stopped.

# Testing the Picture / Sound

To execute picture and sound tests.

- 1 Press SETTINGS to access the main menus.
- 2 Press the Red button to scroll Customer Support.
- 3 Press the Navigation buttons to scroll **Picture** Test or Sound Test.
- 4 Press the Navigation buttons to scroll to **Yes** and press OK.
- 5 When you are finished, press **EXIT**. When you return to the previous menu, press BACK.

# **Using Signal Test**

To view information on the Manufacturer, Model/ Type, Serial Number and Software Version.

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Red button to scroll Customer Support.
- 3 Press the Navigation buttons to scroll **Signal**
- 4 Press OK.
  - Manufacturer, Model/Type, Serial Number, Software Version and information of Channel.
- 5 When you are finished, press **EXIT**. When you return to the previous menu, press BACK.



#### NOTE

- This displays the information and signal strength of the tuned \*MUX.
- · This displays the signal information and service name of the selected MUX. (\*MUX: A higher directory of channels in digital broadcasting (a single MUX contains multiple channels.))

# Using the product or service information

To check the product or service information

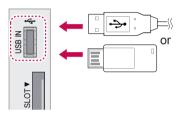
- 1 Press SETTINGS to access the main menus.
- 2 Press the Red button to scroll Customer Support.
- 3 Press the Navigation buttons to scroll **Product/** Service Info..
  - You can check the various product/Service infomation based on your model.
- 4 When you are finished, press EXIT. When you return to the previous menu, press BACK.

# **ENTERTAINMENT**

# Connecting USB storage devices

Connect USB storage devices such as a USB flash memory, external hard drive to the TV and use multimedia features (See "Browsing files" on p.36).

Connect a USB flash memory or USB memory card reader to the TV as shown on the following illustration. The My media screen appears.



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 USB Device and press OK.
- 3 Press the Navigation buttons to scroll to Eject and press OK.
- 4 Disconnect the USB storage device only when the message says that it is safe to remove.



### **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 warranty.

#### 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 maneuvered 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 FAT32 file system, NTFS file system provided with the Windows operating system. In case of a storage device formatted as a different utility programme which is not supported by Windows, it may not be recognized.
- Please connect power to a USB storage device(over 0.5 A) which requires an external power supply. If not, the device may not be recognized.
- 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.
- File alignment method of USB storage device is similar to Window XP and filename can recognize up to 100 English characters.
- 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 the USB HDD does not have an external power source, the USB device may not be detected. So be sure to connect the external power source.
  - Please use a power adaptor for an external power source. We do not guarantee an USB

cable for an external power source.

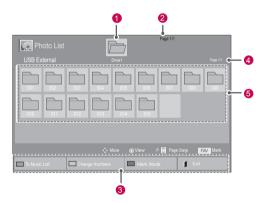
- · If your USB memory device has multiple partitions, or if you use a USB multi-card reader, you can use up to 4 partitions or USB memory devices.
- If a USB memory device is connected to a USB multi-card reader, its volume data may not be detected.
- If the USB memory device does not work properly, disconnect and reconnect it.
- How fast a USB memory device is detected differs from device to device.
- If the USB is connected in Standby Mode. specific hard disk will automatically be loaded when the TV is turned on.
- 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.
- If a USB external hard disk with a "Energy Saving" function does not work, turn the hard disk off and on again to make it 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.

# Browsing files

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

- Connect a USB storage device.
- Press **SETTINGS** to scroll to main menus.
- 3 Press the Navigation buttons to scroll to My Media 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 upper level folder	
2	Current page/Total pages	
3	Corresponding buttons on the remote control	
4	Current page/ total pages of contents under the folder focused on 1	
5	Contents under the folder focused on 1	
Button	Description	
Green button	Repeatedly, press the GREEN button to converted to Photo List->Music List, Music List->Movie List->Photo List.	
Yellow button	A method to view in 5 large thumbnail or simple list.	
Blue button	Convert to Mark Mode.	

#### Supported file format

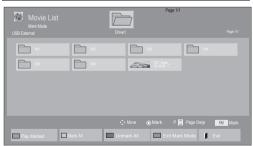
T	Commonted file former
Type	Supported file format
Movie	DAT,MPG,MPEG,VOB,AVI,DIVX,MP4,MKV, TS,TRP,TP,ASF,WMV,FLV)
	Movie(*.mpg/*.mpeg/*dat/*.ts/*.trp/*.tp/*.vob/*.mp4/*.mov/*.mkv/*.divx/*.avi/*.asf/*.wmv/*.flv/*.avi(motion-jpeg)/*.mp4(motion-jpeg)/*.mkv(motion-jpeg))supporting file
	Video format: DivX3.11, DivX4.12, DivX5.x, 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, AAC, Mpeg, MP3, LPCM, HE-AAC, ADPCM, WMA
	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)
Photo	JPEG
	Baseline : 64 x 64 to 15360 x 8640 Progressive : 64 x 64 to 1920 x 1440
	You can play JPEG files only.     Non-supported files are displayed in the form of predefined icon.
Music	MP3
	Bit rate 32 to 320 • 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

### Viewing movies

Play video files on the TV. Your TV displays all of the video files saved in a USB storage device or shared folder on a PC.

- Press the Navigation buttons to scroll to My
   Media and press OK.
- 2 Press the Navigation buttons to scroll to Movie List and press OK.
- 3 Select **Drive1** to access the connected USB storage device.
- 4 Press the Navigation buttons to scroll to a folder you want and press OK.
- 5 Press the Navigation buttons to scroll to a file you want and press OK.





Menu	Description
Play Marked	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.
Unmark All	Deselect all marked movie files.
Exit Mark Mode	Exit the Mark Mode.

Play a movie.



#### NOTE

- · Non-supported files are displayed the preview image by icon only 5
- · Abnormal files are displayed in the form of bitmap 5.
- 7 Control playback by using the following buttons.



D.:44	D
Button	Description
	Stops the playback
•	Plays a video
П	Pauses or resumes the playback
44	Scans backward in a file
•	Scans forward in a file
SETTING or Q.MENU	Show the <b>Option</b> menu.
BACK	Hide the menu on the full-sized screen.
EXIT	Return to Movie List.
< or >	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.
ENERGY SAVING	Press the <b>ENERGY SAVING</b> button repeatedly to increase the brightness of your screen.

#### 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.
- 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 1920x1080@25/30P or 1280x720@50/60P are supported, depending on the frame.
- · Videos with resolutions higher than 1920X1080@25/30P or 1280x720@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 video 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) may not be played.

#### 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.



#### NOTE -

- Option values changed in Movie List does not affect Photo List and Music List.
- Option value changed in Photo List and Music List are changed likewise in Photo List and Music List excluding Movie List.
- When replaying the video file after stopping, you can play from where it stopped previously.

Sync	Adjusts the time synchronisation of the subtitle from -10 secs to +10 secs by steps of 0.5 secs during movie play.
Position	Changes the position of the subtitle either up or down during movie play.
Size	Selects your desired Subtitle size during movie play.
Repeat	Turn on/off repeat function of movie playback. When turned on, the file within the folder will be played back repeatedly. Even when the repeated playback is turned off, it can run the playback if the file name is similar to the previous file.

When you select the Set Video Play,,

- 1 Press the Navigation buttons to scroll to show the Picture Size, Audio Language, Subtitle Language or Repeat.
- 2 Press the Navigation buttons to scroll to make appropriate adjustments.

Menu	Description
Picture Size	Selects your desired picture format during movie play.
Audio Lan- guage	Changes the Language Group of the audio during movie play. Files with a single audio track cannot be selected.
Subtitle Language	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.

Subtitle	Support Language
Language	5 5
Latin1	English, Spanish, French, German, Italian, Swedish, Finnish, Dutch, Portuguese, Danish, Romanian, Norwegian, Albanian, Gaelic, Welsh, Irish, Catalan, Valencian
Latin2	Bosnian, Polish, Croatian, Czech, Slovak, Slovenian, Serbian, Hungarian
Latin4	Estonian, Latvian, Lithuanian
Cyrillic	Bulgarian, Macedonian, Russian, Ukrainian, Kazakh
Greek	Greek
Turkish	Turkish



#### 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 the RATIO button.

When you select the Set Video,,

1 Press the Navigation buttons to scroll to make appropriate adjustments. (See p.47)

When you select the Set Audio,,

- 1 Press the Navigation buttons to scroll to show the Sound Mode, Auto Volume, Clear Voice II or Balance.
- 2 Press the Navigation buttons to scroll to make appropriate adjustments. (See p.52)

you want and press OK.

Photo List

5 Press the Navigation buttons to scroll to a file



Menu	Description
View Marked	Display the selected photo file.
Mark All	Mark all photo files on the screen.
Unmark All	Deselect all marked photo files.
Exit Mark Mode	Exit the Mark Mode.

6 View photos.

### Viewing photos

View image files saved in a USB storage device or shared folder on a PC through the network connection. The displays on the screen may differ from the model.

- 1 Press the Navigation buttons to scroll to My Media and press OK.
- 2 Press the Navigation buttons to scroll to **Photo** List and press OK.
- 3 Press the Navigation buttons to select Drive1 to access the connected USB storage device.
- 4 Press the Navigation buttons to scroll to a folder you want and press OK.



#### NOTE

- · Non-supported files are displayed the pre-
- · Abnormal files are displayed in the form of bitmap 🌉.

#### Using photo options

Use the following options while viewing photos.



Option	Description
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 <b>Option</b> .
BGM	Turns the background music on or off. To set the background music folder, select <b>Option</b> . You can adjust Option by Q.MENU or SETTINGS button on the remote control.
り(Rotate)	Rotates photos clockwise (90°, 180°, 270°, 360°).  NOTE  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.
Q	View the photo by zoom in 2, 4 times.
ENERGY SAVING	Press the <b>ENERGY SAVING</b> button repeatedly to change the brightness

of your screen.

Option	Slide Speed: Selects a slideshow speed (Fast, Medium, Slow).     BGM: Selects a music folder for the background music.      NOTE     You cannot change the music folder while the background music is playing.     You can only select the MP3 folder saved on the device that currently displays the photo.
Hide	Hides the option window. To display the options, press <b>OK</b> .
EXIT	Return to <b>Photo List</b> .

#### Photo options

- 1 Press Q. MENU or SETTINGS to show the Option menus.
- 2 Press the Navigation buttons to scroll to Set Photo View., Set Video. or Set Audio. and press OK.



#### NOTE

- Option values changed in Movie List does not affect Photo List and Music List.
- Option value changed in Photo List and Music List are changed likewise in Photo List and Music List excluding Movie List.

When you select the Set Photo View,

- 1 Press the Navigation buttons to scroll to select Slide Speed or BGM.
- 2 Press the Navigation buttons to scroll to make appropriate adjustments.

When you select the Set Video,

1 Press the Navigation buttons to scroll to make appropriate adjustments. (See p.47)

When you select the Set Audio,,

- 1 Press the Navigation buttons to scroll to show the Sound Mode, Auto Volume, Clear Voice II or Balance.
- 2 Press the Navigation buttons to scroll to make appropriate adjustments. (See p.52)

### Listening to music

- 1 Press the Navigation buttons to scroll to My Media and press OK.
- 2 Press the Navigation buttons to scroll to Music List and press OK.
- 3 Press the Navigation buttons to select **Drive1** to access the connected USB storage device.
- 4 Press the Navigation buttons to scroll to a folder you want and press OK.
- 5 Press the Navigation buttons to scroll to a file you want and press OK.





Menu	Description
Play Marked	Display the selected music file.
Mark All	Mark all music files on the screen.
Unmark All	Deselect all marked music files.
Exit Mark Mode	Exit the Mark Mode.

- 6 Play music.
- 7 Control playback by using the following buttons.



_	
Button	Description
	Stops playback
· ·	Plays a music file
II	Pauses or resumes playback
**	Skips to the next file
44	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.
Green button	Start playing the selected music files and then move to the <b>Photo List</b> .
ENERGY SAVING	Press the <b>ENERGY SAVING</b> button repeatedly to change the brightness of your screen.
SETTING or Q.MENU	Show the Option menu.
Hide	Hides the option window. To display the options, press <b>OK</b> .
EXIT	When you press the <b>EXIT</b> button while the Music player is displayed, only the music will be stopped and the player will not return to normal TV viewing. When you press the <b>EXIT</b> button while the music is stopped or while the music player is hidden, the player will return to normal TV viewing.
< or >	When using the < or > button during playback a cursor indicating

#### Tips for playing music files

· This unit cannot support the ID3 Tag embedded MP3 files.



#### NOTE -

- Non-supported files are displayed the preview image by icon only
- Abnormal files are displayed in the form of bitmap .
- A damaged or corrupted music does not play but displays 00:00 in playtime.
- A music downloaded from a paid service with copyright protection does not start but displays inappropriate information in playtime.
- If you press OK, buttons, screen saver is stopped.
- The PLAY( ), Pause( ), , , ,
   buttons on the remote control are also available in this mode.
- You can use the button to select the next music and the button to select the previous music.



#### Music options

- 1 Press Q. MENU to access the Pop-Up menus.
- 2 Press the Navigation buttons to scroll to Set Audio Play. or Set Audio. and press OK.



#### NOTE

- Option values changed in Movie List does not affect Photo List and Music List.
- Option value changed in Photo List and Music List are changed likewise in Photo List and Music List excluding Movie List.

When you select the Set Audio Play.,

- 1 Press the Navigation buttons to scroll to select the **Repeat** or **Random**.
- 2 Press the Navigation buttons to scroll to make appropriate adjustments.

When you select the Set Audio,,

- 1 Press the Navigation buttons to scroll to select the Sound Mode, Auto Volume, Clear Voice II or Balance.
- 2 Press the Navigation buttons to scroll to make appropriate adjustments.(See p.52)

#### 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 MY MEDIA and press OK.
- 3 Press the Blue button.
- 4 Press the Navigation buttons to scroll to **DivX** VOD 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.



#### 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 MY MEDIA and press OK.
- 3 Press the Blue button
- 4 Press the Navigation buttons to scroll to **DivX** 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

- Movie files are supported as follows Resolution: under 1920x1080 WxH pixels Frame rate: under 30 frames/ sec(1920x1080), under 60 frames/ sec(under 1280x720)
- Video Codec : MPEG 1, MPEG 2, MPEG 4, H.264/AVC, DivX 3.11, DivX 4.12, DivX 5.x, DivX 6, 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.



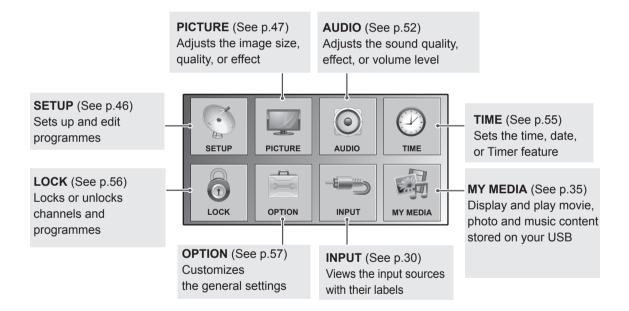
#### NOTE

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

# **CUSTOMIZING TV SETTINGS**

### 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 Navigation buttons to scroll to the setting or option you want and press **OK**.
- 4 When you are finished, press **EXIT**.
  - · Image shown may differ from your TV.



# **Customizing settings**

### **SETUP** settings

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to **SETUP** and press **OK**.
- 3 Press the Navigation buttons to scroll to the setting or option you want and press OK.
  - To return to the previous level, press BACK.
- 4 When you are finished, press **EXIT.**

· Image shown may differ from your TV.



The available Programme settings are described in the following:

Setting	Description
Auto Tuning	Tunes and stores all available programmes through antennas or cable inputs (See p.18).
Manual Tuning	Tunes and stores the programmes you want manually (See p.21).
Programme Edit	Edits programmes. (See p.23).
CI information	Enables you to watch some encrypted services (pay services).(See p.25).
Cable DTV Setting (In Cable mode only)	The range that a user can select from the <b>Service Operator</b> menu differs depending on number of <b>Service Operator</b> supported by each country, and if number of supported <b>Service Operator</b> for each country is 1, corresponding function becomes non-activation.  After changing <b>Service Operator</b> , a warning window saying that channel map will be deleted when OK button is pressed or <b>Close</b> is selected, and a Auto-tuning pop-up window appears when ' <b>YES</b> ' is selected.(See p.20).

# PICTURE settings

- Image shown may differ from your TV.
- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to **PICTURE** and press OK.
- 3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
  - To return to the previous level, press **BACK**.
- 4 When you are finished, press **EXIT.**

PICTURE Aspect Ratio Picture Wizard e
 Energy Saving : Auto Picture Mode : Intelligent Sensor Backlight 100 Contrast 100 Brightness Sharpness • Tint Colour Temp. 0 Advanced Control
 Picture Resest • Screen

Setting			
	Description		
Aspect Ratio	Changes the image	size to view images at its optimal size (See p.28).	
Picture Wizard	Adjusts the image quality and calibrates the screen by following the on-screen instructions. The customized options will be saved as <b>Expert1</b> in the <b>Picture Mode</b> .		
	Standard	Mode to set standard picture quality. (Black Level, White Level, Tint, Colour, Horizontal Sharpness, Vertical Sharpness, Backlight)	
	Preferred	Mode to set user preferred picture quality rather than standard picture. (Black Level, White Level, Tint, Colour, Sharpness, Dynamic Contrast, Colour Temperature, Backlight)	
	<ul> <li>NOTE</li> <li>If you stop the setting before the final stage, the changes will not be applied.</li> <li>If you use Picture Wizard, the Energy saving feature will turn off automatically.</li> <li>To reset changes made by Picture Wizard, operate Picture Reset when Picture Mode is on Expert1.</li> <li>In RGB-PC/HDMI-PC/DVI-PC mode, the changed Colour, Tint and H/V Sharpness values are not applied.</li> </ul>		
Energy Saving	·	consumption by adjusting the screen brightness.	
	Option		
	Option		
	Auto	The most suitable brightness is automatically adjusted according to the surrounding conditions.	
	-		
	Auto	rounding conditions.	
	Auto Off Minimum/Medium/	rounding conditions.  The Energy Saving is off	

Setting	Description			
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. The available preset picture modes vary depending on the TV.			
	Mode			
	Intelligent sensor	Adjusts picture according to the surrounding conditions.		
	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 image for a cinematic look to enjoy movies as if you are in a movie theater.		
	Sport	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.		
	Expert	Adjusts the detailed video image settings for video experts as well as general viewers.		
	Picture Mode adjusts the TV for the best picture appearance. Select the preset value in the Picture Mode menu based on the programme category.     When the Intelligent sensor function is on, the most suitable picture is automatically adjusted according to the surrounding conditions.     You can also adjust Picture Mode in the Q. Menu.			
SCREEN	Customizes the PC display options.			
	Option			
	Resolution	Selects a proper resolution when your PC uses.		
	Auto Configure	Sets the TV to optimize the options automatically for the TV display.		
	Position	Locates the image at the proper position.		
	Size	Adjusts the image size.		
	Phase	Eliminates horizontal streaking.		
	Reset	Restores the options to the default setting.		

### Basic image options

Setting	Description
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.  • If you use the "Energy saving - Auto, Maximum", Backlight will not be available.  • Benefits of using Backlight  - The electricity consumption is reduced by up to 60 %.  - The black brightness is reduced. (As the black has greater depth, you can enjoy a better quality definition.)  - You can adjust brightness with maintaining original signal resolution.
Contrast	Increases or decreases the gradient of the video signal. You may use <b>Contrast</b> 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 Temp.	Set to warm to enhance hotter colours such as red, or set to cool to enhance cooler colours such as blue.
Advanced Control or Expert Control	Customizes the advanced options
Picture Reset	Restores the options of each mode to the factory default



# NOTE

• You cannot adjust colour, sharpness and tint in the RGB-PC/HDMI-PC mode.

### Advanced image options

Setting	Description
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, green and white look more vivid.
Clear White	Makes the white area of the screen brighter and clearer.
Skin Colour	Adjusts skin colour of the picture so that user can set his favourite skin colour.
Noise Reduction	Reduces screen noise without compromising video quality.
Digital Noise Reduction	Reduces noise regarding MPEG compressed video.
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	Sets black level of the screen to proper level. This function is available in the following modes: AV (NTSC-M), HDMI, Component.  » Low: The reflection of the screen gets darker.  » High: The reflection of the screen gets brighter.  » Auto: Sets black level of the screen to High or Low automatically according to the input signal level.
Eye Care	Adjusts the brightness of the screen to prevent the screen from being too bright. Dims extremely bright pictures.  This feature is disable in "Picture Mode-Vivid, Cinema, Expert1, Expert2, Intelligent Sensor."
Real Cinema	Makes video clips recorded in film look more natural by eliminating judder effect. DVD and Blu-ray movies are filmed at 24 frames per second (fps). With LG RealCinema, every frame is consistently processed 5 times in 1/24 of a second producing 120 fps with TruMotion or 2 times in 1/24 of a second producing 48 fps without TruMotion, thus totally eliminating the judder effect.
Colour Gamut	Maximizess the utilization of colour to increase colour quality.  » Standard: Displays standard set of colours.  » Wide: Increase number of colours used.
(available in Cinema and Expert modes)	*This feature is not available for all models. This is the function to express richer colours. This feature represents rich colours as much as a conventional video signal. This function is enabled in "Picture Mode - Cinema, Expert" when xvYCC signal is inputted through HDMI.
Expert Pattern (available in Expert mode)	This is the pattern necessary for expert adjustment. This function is enabled in "Picture Mode - Expert" when you watch DTV.
Colour Filter (available in Expert mode)	This is the function to filter the specific colours of the video. You can use the RGB filter to set colour saturation and hue accurately.

### Advanced image options

Setting		Des	scription	
Colour Temperature	Adjusts the overall color of the screen by changing the white baseline.			
	LCD TV	a. Method: 2 Points Pattern: Inner, Outer Red/Green/Blue Contrast, Red/ Green/Blue Brightness: The adjustment range is -50 to +50.	<ul> <li>b. Method: 10 Point IRE</li> <li>Pattern: Inner, Outer</li> <li>IRE (Institute of Radio Engineers) is the unit to display the size of the video signal and can be set among 10, 20, 30 - 100. You can adjust Red, Green or Blue according to each setting.</li> <li>Luminance: This function displays calculated luminance value for 2.2 gamma. You can input luminance value you want at 100 IRE, than the target luminance value for 2.2 gamma is displayed at every 10 steps from 10 IRE to 90 IRE.</li> <li>Red/Green/Blue: The adjustment range is -50 - +50.</li> <li>c. Apply to all inputs</li> </ul>	
Colour Management	As the tool used by	the experts to make adiu		
System	As the tool used by the experts to make adjustments by using the test patterns, this does not affect other colours but can be used to selectively adjust the 6 colour areas (Red/Green/Blue Cyan/Magenta/Yellow).  Colour difference may not be distinctive even when you make the adjustments for the general video.  Adjusts Red/Green/Blue/Yellow/Cyan, Magenta.  Red/Green/Blue/Yellow/Cyan, Magenta Colour: The adjustment range is -30 - +30.  Red/Green/Blue/Yellow/Cyan, Magenta Tint: The adjustment range is -30 - +30.  This feature is disable in RGB-PC and HDMI-PC mode.			

### **AUDIO** settings

- · Image shown may differ from your TV.
- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to AUDIO and press OK.
- 3 Press the Navigation buttons to scroll to the setting or option you want and press OK.
  - To return to the previous level, press **BACK**.
- When you are finished, press EXIT.



The available audio settings are described in the following.

Setting	Description			
Auto Volume	Activates the Auto Volume feature to keep the volume level consistent whenever you change channels. The volume level may not be consistent due to different signal conditions of broadcasting stations.			
Clear Voice II	Sets whether to enhance human voice clarity. You can adjust the level of clarity when you set this feature on.			
	NOTE  • If you select "On" for Clear Voice II, Infinite Surround feature will not work.  • Select levels from '-6' to '+6'.			
Balance	Adjust balance be	tween the left and right speakers according to your room environment.		
Sound Mode	Selects one of the	preset sound modes or customizes options in each mode.		
	Mode			
	Standard	Select when you want standard-quality sound.		
	Music	Select when you listen to music.		
	Cinema Select when you watch movies.			
	Sport	Select when you watch sports events.		
	Game Select when you play games.			
	Option	Option		
	Infinite Surround	<b>Infinite Surround</b> is a patented LG proprietary sound processing technology that strives immersive 5.1 surround sound impression with front two loudspeakers.		
	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.		

Setting	Description			
Digital Audio Out	This function allows you to select your preferred Digital Audio Output. When Dolby Digital is available, selecting Auto in the Digital Audio Out menu will set SPDIF(Sony Philips Digital InterFace) output to Dolby Digital. If Auto is selected in the digital audio out menu when Dolby Digital is not available, SPDIF output will be PCM(Pulse-code modulation). Even if both Dolby Digital and Audio language have been set in a channel which broadcast Dolby Digital Audio, only Dolby Digital will be played.			
	Item	Audio Input	Digital Audio output	
	Auto	MPEG Dolby Digital Dolby Digital Plus HE-AAC	PCM Dolby Digital Dolby Digital Dolby Digital	
	PCM	All	PCM	
	<ul> <li>When the TV speaker is turned off while the Simplink home theater is operating, output automatically switches to the Home theater speaker, but when the TV speaturned on, the sound output the TV speaker.</li> <li>Some menus in AUDIO are disabled when TV Speaker is set to Off.</li> </ul>			
	When the TV output autom turned on, th	natically switches to the Home the e sound output the <b>TV speaker</b> .	ater speaker, but when the TV speaker is	
DTV Audio Setting(In Dig- ital Mode only)	When the TV output autom turned on, th     Some menus	natically switches to the Home the e sound output the TV speaker. s in AUDIO are disabled when TV	ater speaker, but when the TV speaker is	
Setting(In Dig-	When the TV output autom turned on, the Some menus  When different aud	natically switches to the Home the e sound output the TV speaker. s in AUDIO are disabled when TV	ater speaker, but when the TV speaker is  Speaker is set to Off.	
Setting(In Dig-	When the TV output autom turned on, the Some menus  When different aud you want.	natically switches to the Home the e sound output the TV speaker. It is in AUDIO are disabled when TV io types exist in an input signal, the Automatically outputs in the order MPEG.(Except for Italy)	ater speaker, but when the TV speaker is  Speaker is set to Off.	
Setting(In Dig-	When the TV output autom turned on, the Some menus  When different aud you want.  Mode	natically switches to the Home the e sound output the TV speaker. It is in AUDIO are disabled when TV is in AUDIO are disabled when TV is in types exist in an input signal, the Automatically outputs in the order MPEG.(Except for Italy) Automatically outputs in the order Digital.(Only Italy)  Allows users to select the audio for ex) If MPEG is selected, MPEG in the TV speaker.	ater speaker, but when the TV speaker is  Speaker is set to Off.  Dis function allows you to select the audio type  THE-AAC > Dolby Digital+ > Dolby Digital >  THE-AAC > Dolby Digital+ > MPEG > Dolby  Type they want.	

#### Stereo/Dual Reception (In Analogue Mode Only)

When a programme is selected, the sound information for the station appears with the programme number and station name.

- 1 Press Q. MENU and press the Navigation to access the Audio or Audio Language and press OK.
- 2 Press the Navigation button to scroll to the sound output and press OK.

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

#### Mono sound selection

If the stereo signal is weak in stereo reception, you can switch to mono. In mono reception, the clarityof 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.

**DUALI** Sends the primary broadcast language to the loudspeakers. DUALII Sends the secondary broadcast language to the loudspeakers.

**DUAL I+I I** Sends a separate language to each loudspeaker.

#### Nicam Reception (In Analogue Mode Only)

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.
- 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, Component, RGB and 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

• Image shown may differ from your TV.

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to **TIME** and press **OK**.
- 3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
  - To return to the previous level, press **BACK**.
- 4 When you are finished, press **EXIT**.



The available time settings are described in the following.

Setting	Description		
Clock	Sets the time, date, time zone, and daylight-saving time feature.  The time will be set automatically according to a digital channel signal which includes time information provided by the broadcasting station. If not, set the time and date manually.		
	Mean Time) which is rece a digital signal.	time offset information based on Time Zone and GMT (Greenwich eived with the broadcast signal and the time is set automatically by Time Zone is changed into offset, you can change time by 1 hour. changed in <b>Auto</b> mode.	
	Time Zone	This Table means the Time Zone table of 9 area of Russia.	
	Magadan, Kamchatka Vladivostok	and when the user selects the Time Zone for his or her area, it automatically sets the time for the corresponding area.  However, even though the user selected his or her area, if	
	Yakutsk		
	Irkutsk	the broadcasting station's local time offset is not offered, or	
	Krasnoyarsk	if the region information does not match, then the user may select the Offset from the Time Zone to set the correct time.	
	Omsk		
	Omsk Yekaterinburg		

Setting	Description
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.
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.
Automatic Standby	If you do not press any button when Automatic Standby function is on, the TV automatically switches to the standby mode.
	NOTE  This function does not work on Store Demo mode or while software update.

### LOCK settings

· Image shown may differ from your TV.

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to LOCK and press OK.
- 3 Press the Navigation buttons to scroll to the setting or option you want and press OK.
  - To return to the previous level, press **BACK**.
- 4 When you are finished, press **EXIT**.



The available lock settings are described in the following.

Setting	Description
Set Password	Changes the 4-digit password. The default PIN is "0 0 0 0".  When France is selected for Country, password is not '0','0','0','0' but '1','2','3','4'.  When France is selected for Country, password cannot be set as '0','0','0','0'.  If you forget your password, press '0', '3','2', '5' on the remote control handset.
Lock System	Activates or deactivates the lock system.
Block Programme	Blocks the programmes that contain inappropriate contents for children by pressing the Green 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.  To watch a locked channel, enter the password.  It is available to use this function in <b>Lock System</b> "On"
Parental Guidance (In Digital Mode only)	This function operates according to information from the broadcasting station. Therefore if the signal has incorrect information, this function does not operate.  A password is required to gain access to this menu.  This set is programmed to remember which option it was last set to even if you switch the set off. Prevents children from watching certain adult's TV programmes, according to the ratings limit set. Enter a password to watch a blocked programme.  Rating differs by country.
Input Block	Block the input sources. It is available to use this function in <b>Lock System</b> "On"
Key Lock	Locks or unlocks the buttons on the TV.

### **OPTION** settings

· Image shown may differ from your TV.

**OPTION** 

Set ID
 Mode Setting

• Language(Language)
• Country

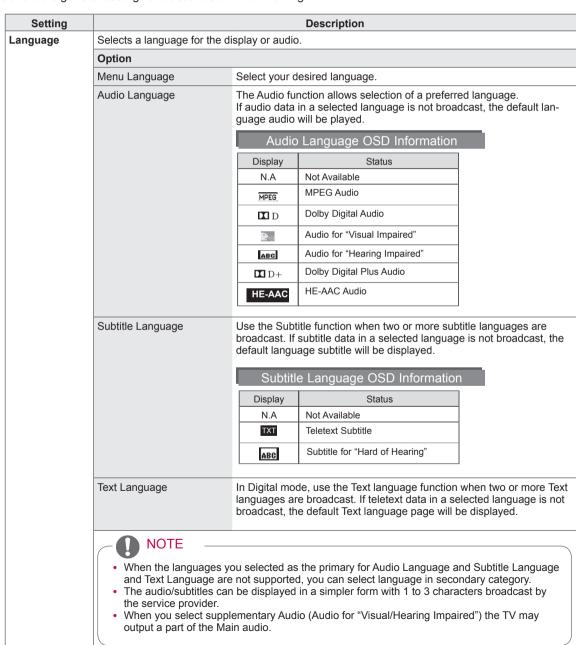
Disability Assistance
Power Indicator
Factory Reset

: UK

Home Use

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to OPTION and press OK.
- 3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
  - To return to the previous level, press BACK.
- 4 When you are finished, press **EXIT.**

The available general settings are described in the following.



Country Se	the OSD (On Screer up is completed whe If you select the wromand some problems	Display) the inever the TV i	llation Guide by pressing BACK or if you time out on installation menu will continuously appear until the set
	the OSD (On Screer up is completed whe If you select the wromand some problems	Display) the inever the TV i	
	circumstances.  DTV mode control be circumstances.  In country that Digita work depending on country Setting.  If the country setting.	may occur dur erface) function uttons may not il broadcasting digital broadca: "UK" should o is set to "", E	s switched on. y, teletext may not appear correctly on the screen ing teletext operation. n may not be applied based on country broadcasting function based on country broadcasting regulation isn't fixed, some DTV function may not sting circumstances.
	ption		
ance (In Digital Handle only)	lard of Hearing	This function is for the hearing impaired.	
A	udio Description	This function is for the blind, and provides explanatory audio describing the current situation in a TV programme in addition to the basic audio.  When <b>Audio Description On</b> is selected, basic audio and Audio Description are provided only for those programmes that have Audio Description included.	
		Volume	Changes the Audio Description volume
		Веер	Beeps when a programme with Audio Description information is selected
Power Indicator Se	ets to turn on or off the in	dicator light or	the TV.
0	ption		
St	tandby Light	Set to turn on	or off the indicator light in Standby mode.
Pr	ower Light	Set to turn on	or off the indicator light when you turn on the power.
	This function allow users to choose between MHEG (Digital Teletext) and Teletext if both exist at the same time.		
Factory Reset Th	his function initializes all	settings.	
	• In Lock System "Or control handset.	<b>n"</b> , if you forge	et your password, press '0', '3', '2', '5' on the remote
Set ID Ad	dds an ID to the connecte	ed devices	

Setting	Description	
Mode Setting	Default selection is " <b>Home Use</b> ". We recommend setting the TV to " <b>Home Use</b> " mode for the best picture in your home environment.	
	Option	
	Home Use	Selects it for the home environment.
	Store Demo	Selects it for the retail environment.
	Demo Mode	Sets to show special features of the TV. You can cancel the demo mode by pressing any buttons except the Volume and Mute buttons.  NOTE  It is not possible to use Demo Mode in Home Use mode.  In Store Demo, Demo Mode is automatically set to On.  Once Demo Mode is set to Off in Store Demo, Demo Mode does not run and only the screen is reset.  The screen is reset automatically after 5 minutes in Demo Mode.

# MAKING CONNECTIONS

Connect various external devices to the TV and switch input modes to select an external device. For more information of external device's connection, refer to the manual provided with each device.

Available external devices are: HD receivers, DVD players, VCRs, audio systems, USB storage devices, PC, gaming devices, and other external devices.



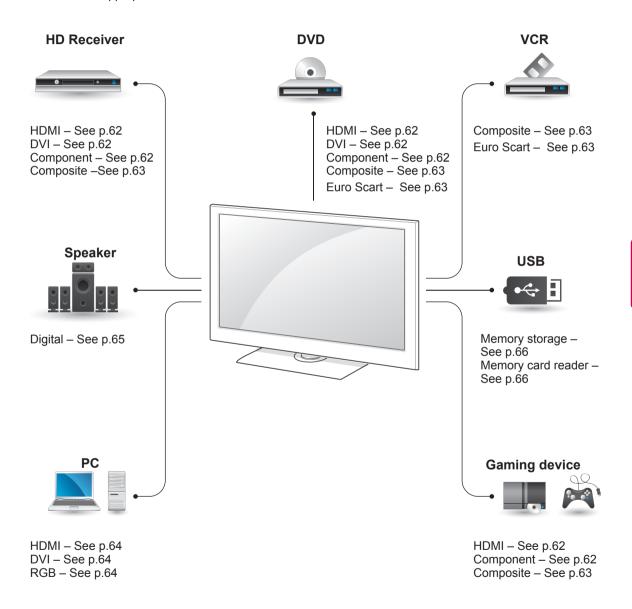
#### NOTE

- · 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 on recording, refer to the manual provided with the connected device.
- · The external device connection may differ from the model.
- · Connect external devices to the TV regardless of the order of the TV port.

### Connection overview

Connect various external devices to the ports on the TV back panel.

- 1 Find an external device you want to connect to your TV as shown on the following illustration.
- 2 Check the connection type of the external device.
- 3 Go to the appropriate illustration and check the connection details.





#### NOTE

• If you connect a gaming device to the TV, use the cable supplied with the gaming device.

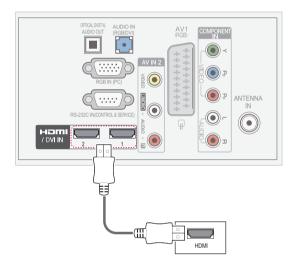
· Image shown may differ from your TV.

# Connecting to a HD receiver, DVD, or VCR player

Connect a HD receiver, DVD, or VCR player to the TV and select an appropriate input mode.

#### **HDMI** connection

Transmits the digital video and audio signals from an external device to the TV. Connect the external device and the TV with the HDMI cable as shown in the following illustration.



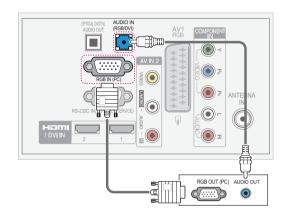


#### **NOTE**

- The TV can receive video and audio signals simultaneously when using an HDMI cable.
- If the DVD does not support Auto HDMI, you must set the output resolution appropriately.
- Check that your HDMI cable is High Speed HDMI Cable. If the HDMI cables are not High Speed HDMI Cable, flickering or no screen display can result. Please use the High Speed HDMI Cable.

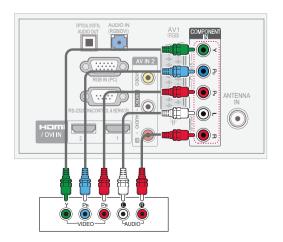
#### DVI to HDMI connection

Transmits the digital video signal from an external device to the TV. Connect the external device and the TV with the DVI-HDMI cable as shown in the following illustration. To transmit an audio signal, connect an audio cable.



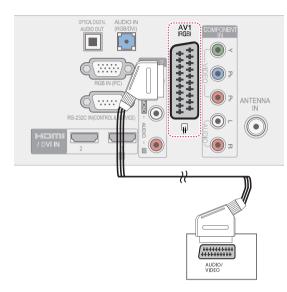
### Component connection

Transmits the analogue video and audio signals from an external device to the TV. Connect the external device and the TV with the component cable as shown in the following illustration.



#### **Euro Scart connection**

Transmits the video and audio signals from an external device to the TV set. Connect the external device and the TV set with the Euro Scart cable as shown on the following illustration. To display images by using progressive scan, make sure to use the Euro Scart cable.



Output Type Current input model	AV1 (TV Out¹)
Digital TV	Digital TV
Analogue TV, AV	Analogue TV
Component / RGB	Analogue TV
HDMI	Analogue TV

1 TV Out: Outputs Analogue TV or Digital TV signals.

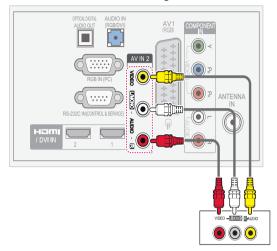


#### **NOTE**

 Any Euro scart cable used must be signal shielded.

### Composite connection

Transmits the analogue video and audio signals from an external device to the TV. Connect the external device and the TV with the composite cable as shown in the following illustration.





#### NOTE

 If you have a mono VCR, connect the audio cable from the VCR to the AUDIO L/ MONO jack of the TV.

# Connecting to a PC

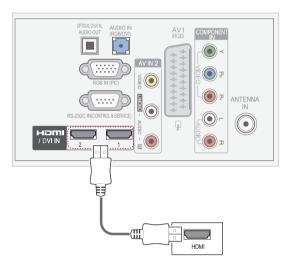


#### **NOTE**

 It is recommended to use the TV set with the HDMI connection for the best image quality.

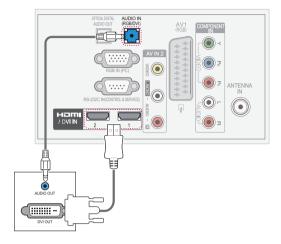
#### HDMI connection

Transmits the digital video and audio signals from your PC to the TV. Connect the PC and the TVwith the HDMI cable as shown in the following illustrations.



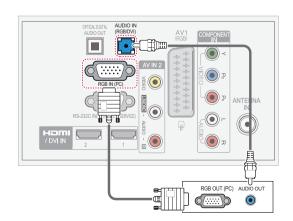
#### DVI to HDMI connection

Transmits the digital video signal from your PC to the TV. Connect the PC and the TV with the DVI-HDMI cable as shown in the following illustration. To transmit an audio signal, connect an audio cable.



#### **RGB** Connection

Transmits the analogue video signal from your PC to the TV. Connect the PC and the TV with the supplied D-sub 15 pin signal cable as shown in the following illustrations. To transmit an audio signal, connect an audio cable.





#### NOTE

- Avoid keeping a fixed image on the set's screen for prolonged periods of time. The fixed image may become permanently imprinted on the screen; use a screen saver when possible.
- There may be interference relating to resolution, vertical pattern, contrast or brightness in PC mode. Change the PC mode to another resolution or change the refresh rate to another rate or adjust the brightness and contrast on the menu until the picture is clear. If the refresh rate of the PC graphic card can not be changed, change the PC graphic card or consult the manufacturer of the PC graphic card.
- The synchronization input waveform for Horizontal and Vertical frequencies are separate.
- We recommend using 1920x1080, 60 Hz, for the PC mode, this should provide the best picture quality.
- Connect the signal cable from the monitor output port of the PC to the RGB (PC) port of the TV or the signal cable from the HDMI output port of the PC to the HDMI IN (or HDMI/DVI IN) port on the TV.
- Connect the audio cable from the PC to the Audio input on the TV. (Audio cables are not included with the TV).
- If using a sound card, adjust PC sound as required.
- If the graphic card on the PC does not output analogue and digital RGB simultaneously, connect only one of either RGB or HDMI IN (or HDMI/DVI IN) to display the PC output on the TV.
- DOS mode may not work depending on the video card if you use an HDMI to DVI cable.
- If you use too long an RGB-PC cable, there may be interference on the screen. We recommend using under 5m of cable. This provides the best picture quality.

# Connecting to an audio system

Use an external audio system instead of the builtin speaker.

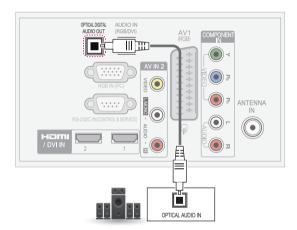


#### NOTE

 If you use an external audio device instead of the built-in speaker, set the TV speaker feature to off (See p.53).

### Digital optical audio connection

Transmits the digital audio signal from the TV to an external device. Connect the external device and the TV with the optical audio cable as shown in the following illustration.



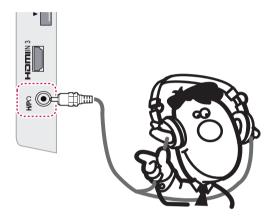


#### NOTE

 Do not look into the optical output port.
 Looking at the laser beam may damage your vision.

### Headphone connection

Transmits the headphone signal from the TV to an external device. Connect the external device and the TV with the headphone as shown on the following illustration.



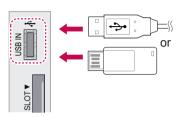


#### NOTE

- AUDIO menu items are disabled when connecting a headphone.
- Optical Digital Audio Out is not available when connecting a headphone.
- Headphone impedance: 16 Ω
- Max audio output of headphone: 10 mW to 15 mW
- · Headphone jack size: 0.35 cm

# Connecting to a USB

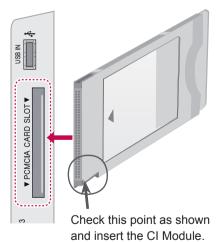
Connect a USB storage device such as s USB flash memory, external hard drive or a USB memory card reader to the TV and access the My media menu to use various multimedia files. See "Connecting USB storage devices" on p.35 and see "Browsing files" on p.36.



# Connecting to a CI Module

View the encrypted (pay) services in digital TV mode.

See p.25.





#### **NOTE**

 Check if the CI module is inserted into the PCMCIA card slotin the right direction. If the module is not inserted properly, this can cause damage to the TV and the PCMCIA card slot.

### SIMPLINK connection

Use the TV remote control to play and control the AV device connected with the HDMI cable through HDMI-CEC. Your TV only works with the devices that support HDMI-CEC.

Connect one end of the HDMI cable to the HDMI/ DVI IN or HDMI IN terminal on the rear of the TV and the other end to the SIMPLINK device.

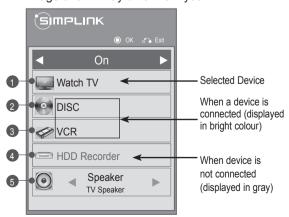


#### NOTE

- If the connected device does not support HDMI-CEC, the SIMPLINK feature is unavailable.
- To operate SIMPLINK, an High Speed HDMI Cable with \*CEC function should be used. (\*CEC: Consumer Electronics Control).

### Activating the SIMPLINK feature

- 1 Press **INPUT** to access the input sources.
- 2 Press the RED buttons to access the SIM-PLINK menus.
- 3 Press the Navigation buttons to scroll to On.
- 4 Press the Navigation buttons to scroll to one of the devices and press OK.
  - Image shown may differ from your TV.



No.	Description
1	Displays the previously viewed TV channel.
2	Plays discs. When multiple discs are available, the title of the disc appears at the bottom of the screen.
3	Controls the connected VCR.
4	HDD recordings playback: Controls the recording stored in HDD.
5	Audio out to home theater speaker or Audio out to TV: Changes the audio output between Home theater speaker and TV speaker.

- A check mark appears in front of the selected device.
- Available devices display in a bright colour.
- Unavailable devices display in grey.
- 5 Control the selected AV device.
  - Direct Play: After connecting AV devices to the TV, you can directly control the devices and play media without additional settings.
  - Select AV device: Enables you to select one of the AV devices connected to the TV.
  - Disc playback: Control connected AV devices by pressing the Navigation buttons, OK,
     11. ◀ and ▶ buttons.
  - Power off all devices: When you power off the TV. all connected devices are turned off.
  - Switch audio-out: Offers an easy way to switch audio-out.
  - **Sync Power on**: When the equipment with SIM-PLINK function connected HDMI terminal starts to play, The TV will automatically turn on.



#### **NOTE**

- If you change the input source by pressing INPUT, the progressing function of the SIMPLINK device will stop.
- If you select a device that has the home theater feature, the sound output automatically switches to the home theater speaker and the TV speaker turns off.
- If a connected SIMPLINK home theater system does not play the audio from the TV, connect the DIGITAL AUDIO OUT terminal on the rear of the TV to the DIGITAL AUDIO IN terminal on the back of the SIMPLINK device with an optical cable.

# **TELETEXT**

 This feature is not available in all countries. Teletext is a free service broadcast by most TV stations which gives up-to-theminute information on news, weather, television programmes, share prices and many other topics.

The teletext decoder of this TV can support the SIMPLE, TOP and FASTEXT systems. SIMPLE (standard teletext) consists of a number of pages which are selected by directly entering the corresponding page number. TOP and 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

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 reenter the correct page number.
- 2 The P + button can be used to select the preceding or following page.

# Top Text

The user guide displays four fields-red, green. vellow and blue at the bottom of the screen. The yellow field denotes the next group and the blue field indicates the next block.

### Block / Group / Page Selection

- 1 With the blue button you can progress from block to block.
- 2 Use the yellow button to proceed to the next group with automatic overflow to the next block.
- With the green button you can proceed to the next existing page with automatic overflow to the next group.
- Alternatively the P + button can be used. The red button returns to the previous selection. Alternatively the P - button can be used.

### Direct Page Selection

As with SIMPLE teletext mode, you can select a page by entering it as a three digit number using the NUMBER buttons in TOP mode.

### **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 T.OPT button and then use Navigation buttons to select menu. Display the index page.
- 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**

Press the **T. OPT** button and then use Navigation buttons to select the **Text Option** menu.

· Image shown may differ from your TV.



#### **■ 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 left-hand 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.

#### Language(Depending on model)

In digital mode, Displays the currently available language information and you can change the desired Teletext language.



#### NOTE

 In UK(In digital mode), T. OPT button does not work.

# **DIGITAL TELETEXT**

 This function works in UK. Ireland only. The TV gives you access to digital teletext which is greatly improved in various aspects such as text, graphics etc. This digital teletext can access special digital teletext services and specific services which broadcast digital teletext.

### Teletext within digital service



- 1 Press the numeric or P + button to select a digital service which broadcasts digital teletext.
- 2 Follow the indications on digital teletext and move onto the next step by pressing TEXT, OK, Navigation button, Red, Green, Yellow, Blue or NUMBER buttons and etc.
- 3 To change digital teletext service, select a different service by the numeric or P + - button.

### Teletext in digital service



- Press the numeric or P + button to select a certain service which broadcasts digital teletext.
- 2 Press the **TEXT** or coloured button to switch on teletext.
- 3 Follow the indications on digital teletext and move onto the next step by pressing OK, Navigation button, Red, Green, Yellow, Blue or NUMBER buttons and so on.
- 4 Press the **TEXT** or colour button to switch off digital teletext and return to TV viewing.
  - Some services may allow you to access text services by pressing the Red button.

# **MAINTENANCE**

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

# Cleaning your TV



#### **CAUTION**

- · 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 and frame

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.



#### CAUTION

- 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, such as waxes, benzene, alcohol, thinners, insecticides, air fresheners, lubricants, as these may damage the screen's finish and cause discolourations.

#### Cabinet and stand

To remove dust or light dirt, wipe the cabinet with a dry, clean, and soft cloth.

To remove major dirt, wipe the cabinet with a soft cloth dampened in a clean water or water containing a small amount of mild detergent. Then wipe immediately with a dry cloth.



#### **CAUTION**

- Do not spray liquid onto the surface. If water enters the TV, it may result in fire, electric shock, or malfunction.
- Do not use any chemicals as this may deteriorate the surface.

#### 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

Problem	Resolution
Cannot control the TV with the remote control.	<ul> <li>Check the remote control sensor on the product and try again.</li> <li>Check if there is any obstacle between the product and the remote control.</li> <li>Check if the batteries are still working and properly installed (⊕ to ⊕, ⊝ to ⊝).</li> </ul>
No image display and no sound is produced.	<ul> <li>Check if the product is turned on.</li> <li>Check if the Power cord is connected to a wall outlet.</li> <li>Check if there is a problem in the wall outlet by connecting other products.</li> </ul>
Image appears slowly when the TV turns on.	<ul> <li>The image is muted during the product start up 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.</li> </ul>
Cannot connect external devices.	Refer to the "Connection overview" and connect an external device.
The TV turns off suddenly.	<ul> <li>Check the power control settings. The power supply may be interrupted.</li> <li>Check if the Auto sleep feature is activated in the Time settings. Refer to the "Sleep Timer".</li> <li>If there is no signal while the TV is on, the TV will turn off automatically after 15 minutes of inactivity.</li> </ul>

# Audio

Problem	Resolution
No sound is produced while images are displaying.	<ul> <li>Press ∠ + or - button.</li> <li>Check if the sound is muted by pressing MUTE.</li> <li>Scroll to other channels. There may a problem with the broadcast.</li> <li>Check if the audio cables are connected properly.</li> </ul>
One of the speakers produce noises or does not produce sound.	<ul> <li>A change in ambient humidity or temperature may result in an unusual noise when the product turns on or off.</li> <li>There is no problem with your product.</li> </ul>

# Video

Problem	Resolution
An image displays in black and white or the colour quality is poor.	<ul> <li>Adjust the colour setting in the PICTURE menu.</li> <li>Keep a sufficient distance between this product and other electronic products.</li> <li>Scroll to other channels. There may a problem with the broadcast.</li> </ul>
Horizontal or vertical bars appears or images blur	<ul> <li>Check if there are local interferences such as an electrical appliance or power tool.</li> </ul>
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	<ul> <li>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.</li> </ul>
The power is on but the screen appears extremely dark.	Adjust the brightness and contrast in the PICTURE menu.
"No Signal" appears on the screen.	<ul> <li>Check if the signal cable is connected between the TV and products properly.</li> <li>Check the selected input source by pressing INPUT.</li> </ul>
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.	<ul> <li>Adjust the position setting in the PICTURE menu.</li> <li>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.</li> </ul>
Thin lines appear in the background of the screen.	Check the video cable connections.
Horizontal noises appear or characters blur.	Adjust the Phase setting in the <b>PICTURE</b> menu. Refer to the "SCREEN".
The reception on some channels is poor	<ul> <li>Scroll to other channels. There may a problem with the broadcast.</li> <li>The station signal may be weak. Aim the antenna to the proper direction.</li> <li>Check if there is local interference such as an electrical appliance or power tool.</li> </ul>

# **SPECIFICATIONS**

MODELS		32CS56**	42CS56**	47CS56**
IX	MODELS	32CS560-ZD	42CS560-ZD	47CS560-ZD
	With stand(mm)	795.0 x 568.0 x 207.0	1019.0 x 698.0 x 265.0	1132.0 x 762.0 x 265.0
(W x H x D)	Without stand(mm)	795.0 x 504.0 x 73.5	1019.0 x 631.0 x 76.5	1132.0 x 695.0 x 76.5
Weight	With stand(kg)	9.6	15.1	19.0
	Without stand(kg)	8.5	13.4	17.3
Power requir	rement	AC 100-240 V~ 50 / 60	AC 100-240 V~ 50 / 60	AC 100-240 V~ 50 / 60
		Hz	Hz	Hz
Power Consumption		120 W	170 W	230 W

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

For the power supply and power consumption, refer to the label attached to the product.

CI Module Size(W x H x D)		100.0 mm x 55.0 mm x 5.0 mm
	Operating Temperature	0 °C to 40 °C
Environment	Operating Humidity	Less than 80 %
condition	Storage Temperature	-20 °C to 60 °C
	Storage Humidity	Less than 85 %

	Digital TV <sup>1</sup>	Digital TV	Analogue TV
Television system	DVB-T/T2	DVB-T	SECAM L/L'2, PAL/SECAM
_	DVB-C	DVB-C	B/G/D/K, PAL I/II
Programme coverage	VHF, UHF		VHF: E2 to E12, UHF: E21
			to E69, CATV: S1 to S20,
			HYPER: S21 to S47
Maximum number of storable	1.000		
programmes	1,000		
External antenna impedance	75 Ω		

- 1 Only DVB-T2 support models
- 2 Except for DVB-T2 support models

# RGB-PC, HDMI/DVI-PC supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
720x400	31.468	70.08
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60.00
1360x768	47.72	59.80
1280x1024	63.981	60.02
1920x1080 (RGB-PC)	66.587	59.93
1920x1080 (HDMI-PC)	67.5	60.00

# HDMI/DVI-DTV supported mode

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
720x480	31.469 31.5	59.94 60
720x576	31.25	50
1280x720	37.5 44.96 45	50 59.94 60
1920x1080	33.72 33.75 28.125 26.97 27 33.716 33.75 56.25 67.43 67.5	59.94 60 50 23.97 24 29.976 30.00 50 59.94 60

# Component port connecting information

Component ports on the TV	Y	P <sub>B</sub>	P <sub>R</sub>
	Y	P <sub>B</sub>	P <sub>R</sub>
Video output ports on DVD player	Y	B-Y	R-Y
	Y	Cb	Cr
	Υ	Pb	Pr

Signal	Component
480i/576i	0
480p/576p	0
720p/1080i	0
1080p	O (50 Hz / 60 Hz only)

# Video supported mode

File Extension name	Video Decoder	Audio Codec	Max Resolution
mpg, mpeg	MPEG1, MPEG2	MP2,MP3,Dolby Digital,LPCM	
dat	MPEG1	MP2	
ts,trp,tp	MPEG2, H.264/AVC, VC1	MP2,MP3,Dolby Digital, AAC,HE-AAC	
vob	MPEG1, 2	MP2,MP3,Dolby Digital,LPCM	
mp4, mov	MPEG4,DivX 3.11, DivX 4.12, DivX 5.x, DivX 6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10- beta1/2, H.264/AVC		1920x1080@30p
mkv	HE-AAC,LPCM		(only , Motion JPEG
divx, avi	4 DivX 5 DivX 6 Xvid 1 00 Xvid MP2 MP3 Dolby Digital I PCM		640x480@30p)
Motion JPEG (avi, mp4, mkv)	JPEG LPCM, ADPCM		
asf, wmv	VC1	WMA	
flv	Sorenson H.263, H.264/AVC	MP3, AAC	

# **IR CODES**

Code (Hexa)	Function	Note
08	<b>O</b> (POWER)	Remote control Button (Power On/Off)
95	ENERGY SAVING	Remote control Button
F0	TV/RAD	Remote control Button
AB	GUIDE	Remote control Button
AA	INFO	Remote control Button
79	RATIO	Remote control Button
0B	INPUT	Remote control Button
10-19	Number Key 0-9	Remote control Button
53	LIST	Remote control Button
1A	Q.VIEW	Remote control Button
43	SETTINGS	Remote control Button
45	Q.MENU	Remote control Button
28	<b>⇒</b> BACK	Remote control Button
5B	EXIT	Remote control Button
44	ОК	Remote control Button
40	٨	Remote control Button
41	v	Remote control Button
07	<	Remote control Button
06	>	Remote control Button
02	⊿+	Remote control Button
03	⊿ -	Remote control Button
1E	FAV	Remote control Button
91	AD	Remote control Button
09	MUTE	Remote control Button
00	P <b>+</b>	Remote control Button
01	P-	Remote control Button
72	RED	Remote control Button
71	GREEN	Remote control Button
63	YELLOW	Remote control Button
61	BLUE	Remote control Button
B1		Remote control Button
В0	<b>&gt;</b>	Remote control Button
ВА	II	Remote control Button
8E	<b>&gt;&gt;</b>	Remote control Button
8F	44	Remote control Button
39	SUBTITLE	Remote control Button
20	TEXT	Remote control Button
21	T.OPT(T.Option)	Remote control Button

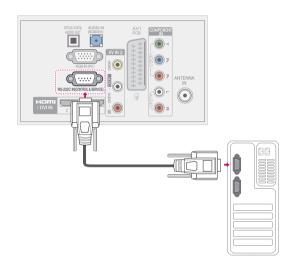
# **EXTERNAL CONTROL DEVICE SETUP**

# RS-232C Setup

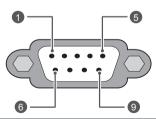
Connect the RS-232C (serial port) input jack to an external control device (such as a computer or an A/V control system) to control the product's functions externally.

Connect the serial port of the control device to the RS-232C jack on the product back panel.

Note: RS-232C connection cables are not supplied with the product.

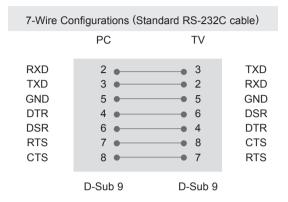


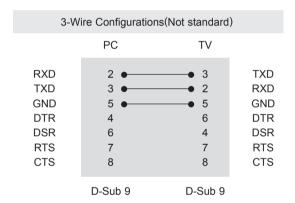
# Type of connector; D-Sub 9-Pin Male



No.	Pin name
1	No connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection

# **RS-232C Configurations**





### Set ID

Set ID number. "Real Data Mapping" on See p.86

- 1 Press **SETTINGS** to access the main menus.
- 2 Press the Navigation buttons to scroll to OPTION and press OK.
- 3 Press the Navigation buttons to scroll to SET ID and press OK.
- 4 Scroll left or right to select a set ID number and select **Close**. The adjustment range is 1-99.
- 5 When you are finished, press **EXIT.**

# **Communication Parameters**

• Baud rate: 9600 bps (UART)

· Data length: 8 bits • Parity : None

• Stop bit: 1 bit

· Communication code: ASCII code • Use a crossed (reverse) cable.

# Command reference list

	COMMAND1	COMMAND2	DATA (Hexadeci- mal)		COMMAND1	COMMAND2	DATA (Hexadeci- mal)
01. Power	k	а	00 to 01	13. Treble	k	r	00 to 64
02. Aspect Ratio	k	С	(See p.83)	14. Bass	k	s	00 to 64
03. Screen Mute	k	d	(See p.83)	15. Balance	k	t	00 to 64
04. Volume Mute	k	е	00 to 01	16. Colour Temperature	x	u	00 to 64
05. Volume Control	k	f	00 to 64	17. Energy Saving	j	q	00 to 05
06. Contrast	k	g	00 to 64	18. Auto Configuration	j	u	01
07. Brightness	k	h	00 to 64	19. Tune Com- mand	m	а	(See p.85)
08. Colour	k	i	00 to 64	20. Programme Add/Skip	m	b	00 to 01
09. Tint	k	j	00 to 64	21. Key	m	С	Key Code
10. Sharpness	k	k	00 to 64	22. Control Back Light	m	g	00 to 64
11. OSD Select	k	I	00 to 01	23. Input select (Main)	x	b	(See p.86)
12. Remote Control Lock Mode	k	m	00 to 01				

• \* Note : During USB operations such as DivX or EMF, all commands except Power(ka) and Key(mc) are not executed and treated as NG.

# Transmission / Receiving Protocol

# Transmission

# [Command1][Command2][ ][Set ID][ ][Data][Cr]

: First command to control the TV.(j, k, m or x)

[Command 2] : Second command to control the TV.

[Set ID] : You can adjust the set ID to choose desired monitor ID number in option menu.

Adjustment range is 1 to 99. When selecting Set ID '0', every connected set is controlled.

Set ID is indicated as decimal (1 to 99) on menu and as Hexa decimal (0x0 to 0x63) on

transmission/receiving protocol.

: To transmit command data. Transmit 'FF' data to read status of command. [DATA]

: Carriage Return [Cr]

ASCII code '0x0D'

[ ] : ASCII code 'space (0x20)'

# **OK Acknowledgement**

# [Command2][ ][Set ID][ ][OK][Data][x]

\* The set transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is data read mode, it indicates present status data. If the data is data write mode, it returns the data of the PC computer.

## Error Acknowledgement

# [Command2][ ][Set ID][ ][NG][Data][x]

\* The set transmits ACK (acknowledgement) based on this format when receiving abnormal data from non-viable functions or communication errors.

# Data 00: Illegal Code

### 01. Power (Command: k a)

► To control Power On/Off of the set.

### Transmission[k][a][ ][Set ID][ ][Data][Cr]

Data 00 : Power Off 01 : Power On

### Ack [a][ ][Set ID][ ][OK/NG][Data][x]

► To show Power On/Off.

# Transmission [k][a][ ][Set ID][ ][FF][Cr] Ack [a][ ][Set ID][ ][OK/NG][Data][x]

- \* Similarly, if other functions transmit '0xFF' data based on this format, Acknowledgement data feed back presents status about each function.
- \* OK Ack., Error Ack. and other message may display on the screen when TV is power On.

### 02. Aspect Ratio (Command: k c) (Main Picture Size)

➤ To adjust the screen format. (Main picture format) You can also adjust the screen format using the Aspect Ratio in the Q.MENU. or PICTURE menu.

### <u>Transmission [k][c][ ][Set ID][ ][Data][Cr]</u>

Data 01 : Normal screen 07 : 14:9 (4:3) 09 : Just Scan

02: Wide screen (16:9) OB: Full Wide

04 : Zoom 10 to 1F : Cinema Zoom 1 to 16

06 : Original

## Ack [c][ ][Set ID][ ][OK/NG][Data][x]

- \* Using the PC input, you select either 16:9 or 4:3 screen aspect ratio.
- \* In DTV/HDMI (1080i 50 Hz / 60 Hz, 720p 50Hz / 60 Hz, 1080p 24 Hz / 30 Hz / 50 Hz / 60 Hz), Component( 720p, 1080i, 1080p 50 Hz / 60 Hz) mode, Just Scan is available.
- \* Full Wide is supported only for Digital, Analogue, AV.

### 03. Screen Mute (Command: k d)

► To select screen mute on/off.

### <u>Transmission [k][d][ ][Set ID][ ][Data][Cr]</u>

Data 00: Screen mute off (Picture on)

Video mute off

01: Screen mute on (Picture off)

10: Video mute on

## Ack [d][ ][Set ID][ ][OK/NG][Data][x]

\* In case of video mute on only, TV will display On Screen Display(OSD). But, in case of Screen mute on, TV will not display OSD.

### 04. Volume Mute (Command: k e)

To control volume mute on/off. You can also adjust mute using the MUTE button on remote control.

### Transmission [k][e][ ][Set ID][ ][Data][Cr]

Data 00 : Volume mute on (Volume off) 01 : Volume mute off (Volume on)

# Ack [e][ ][Set ID][ ][OK/NG][Data][x]

### 05. Volume Control (Command: k f)

▶ To adjust volume.

You can also adjust volume with the VOLUME buttons on remote control.

# Transmission [k][f][ ][Set ID][ ][Data][Cr]

Data Min: 00 to Max: 64

\* Refer to 'Real data mapping'. See p.86.

### Ack [f][ ][Set ID][ ][OK/NG][Data][x]

### 06. Contrast (Command: k g)

To adjust screen contrast.
 You can also adjust contrast in the PICTURE menu.

# Transmission [k][g][ ][Set ID][ ][Data][Cr]

Data Min: 00 to Max: 64

\* Refer to 'Real data mapping'. See p.86.

### Ack [g][ ][Set ID][ ][OK/NG][Data][x]

### 07. Brightness (Command: k h)

To adjust screen brightness. You can also adjust brightness in the PICTURE menu.

### Transmission [k][h][ ][Set ID][ ][Data][Cr]

Data Min: 00 to Max: 64

\* Refer to 'Real data mapping'. See p.86.

### Ack [h][ ][Set ID][ ][OK/NG][Data][x]

### 08. Colour (Command: k i)

To adjust the screen colour. You can also adjust colour in the PICTURE menu.

### <u>Transmission</u> [k][i][ ][Set ID][ ][Data][Cr]

Data Min: 00 to Max: 64

\* Refer to 'Real data mapping'. See p.86.

### Ack [i][ ][Set ID][ ][OK/NG][Data][x]

### 09. Tint (Command: k j)

To adjust the screen tint. You can also adjust tint in the PICTURE menu.

### Transmission [k][j][ ][Set ID][ ][Data][Cr]

Data Red: 00 to Green: 64

\* Refer to 'Real data mapping'. See p.86.

### Ack [j][ ][Set ID][ ][OK/NG][Data][x]

### 10. Sharpness (Command: k k)

To adjust the screen sharpness. You can also adjust sharpness in the PICTURE menu.

## <u>Transmission [k][k][ ][Set ID][ ][Data][Cr]</u>

Data Min: 00 to Max: 64

\* Refer to 'Real data mapping'. See p.86.

### Ack [k][ ][Set ID][ ][OK/NG][Data][x]

### 11. OSD Select (Command: k I)

To select OSD (On Screen Display) on/off when controlling remotely.

# Transmission [k][l][ ][Set ID][ ][Data][Cr]

Data 00: OSD off 01: OSD on

# Ack [I][ ][Set ID][ ][OK/NG][Data][x]

### 12. Remote control lock mode (Command: k m)

▶ To lock the front panel controls on the monitor and remote control.

### Transmission [k][m][ ][Set ID][ ][Data][Cr]

Data 00: Lock off 01: Lock on

### Ack [m][ ][Set ID][ ][OK/NG][Data][x]

- \* If you are not using the remote control, use this mode. When main power is on/off, external control lock is
- \* In the standby mode, if key lock is on, TV will not turn on by power on key of IR & Local Key.

### 13. Treble (Command: k r)

To adjust treble.

You can also adjust treble in the AUDIO menu.

### <u>Transmission [k][r][ ][Set ID][ ][Data][Cr]</u>

Data Min: 00 to Max: 64

\* Refer to 'Real data mapping'. See p.86.

### Ack [r][ ][Set ID][ ][OK/NG][Data][x]

### 14. Bass (Command: k s)

To adjust bass.

You can also adjust bass in the AUDIO menu.

### <u>Transmission [k][s][ ][Set ID][ ][Data][Cr]</u>

Data Min: 00 to Max: 64

\* Refer to 'Real data mapping'. See p.86.

### Ack [s][ ][Set ID][ ][OK/NG][Data][x]

### 15. Balance (Command: k t)

To adjust balance.

You can also adjust balance in the AUDIO menu.

### Transmission [k][t][ ][Set ID][ ][Data][Cr]

Data Min: 00 to Max: 64

\* Refer to 'Real data mapping'. See p.86.

## Ack [t][ ][Set ID][ ][OK/NG][Data][x]

### 16. Colour Temperature (Command: x u)

▶ To adjust colour temperature. You can also adjust Colour Temperature in the PICTURE menu.

### <u>Transmission [x][u][ ][Set ID][ ][Data][Cr]</u>

Data Min: 00 to Max: 64

\* Refer to 'Real data mapping'. See p.86.

# Ack [u][ ][Set ID][ ][OK/NG][Data][x]

### 17. Energy Saving (Command: j q)

► To reduce the power consumption of the TV. You can also adjust Energy Saving in **PICTURE** menu.

### <u>Transmission [j][q][ ][Set ID][ ][Data][Cr]</u>

Po	ower Fund	Savi ction	ng		Level			Description	
7	6	5	4		3	2	1	0	
0	0	0	0	Low Power	0	0	0	0	Off
0	0	0	0	Low Power	0	0	0	1	Minimum
0	0	0	0	Low Power	0	0	1	0	Medium
0	0	0	0	Low Power	0	0	1	1	Maximum
0	0	0	0	Low Power	0	1	0	1	Screen Off
0	0	0	0	Low Power	0	1	0	0	Auto

### Ack [q][ ][Set ID][ ][OK/NG][Data][x]

### 18. Auto Configure(Command: j u)

To adjust picture position and minimize image shaking automatically. It works only in RGB (PC) mode.

### Transmission [j][u][ ][Set ID][ ][Data][Cr]

Data 01: To set

# Ack [u][ ][Set ID][ ][OK/NG][Data][x]

### 19. Tune Command (Command: m a)

► Select channel to following physical number.

# Transmission [m][a][ ][Set ID][ ][Data0][ ][Data1][ ][Data2][Cr]

Data00 : High channel data
Data01 : Low channel data
ex. No. 47 -> 00 2F (2FH)
No. 394 -> 01 8A (18AH),

DTV No. 0 -> Don't care
Data02 : 0x00 : Analogue Main

0x10 : DTV Main 0x20 : Radio

Channel data range

Analogue - Min: 00 to Max: 63 (0 to 99) Digital - Min: 00 to Max: 3E7 (0 to 999)

(Except For Sweden, Finland, Norway, Denmark,

Ireland)

Digital - Min: 00 to Max: 270F (0 to 9999)

(Only Sweden, Finland, Norway, Denmark, Ireland)

### Ack [a][ ][Set ID][ ][OK/NG][Data][x]

Data Min: 00 to Max: 7DH

### 20. Programme Add/Skip(Command: m b)

▶ To set skip status for the current Programme.

### Transmission [m][b][ ][Set ID][ ][Data][Cr]

Data 00 : Skip 01 : Add

### Ack [b][ ][Set ID][ ][OK/NG][Data][x]

### 21. Key(Command: m c)

► To send IR remote key code.

### <u>Transmission [m][c][ ][Set ID][ ][Data][Cr]</u>

Data Key code - Refer to page 79.

### Ack [c][ ][Set ID][ ][OK/NG][Data][x]

### 22. Control Back Light (Command: m g)

► To Control the back light.

### <u>Transmission [m][g][ ][Set ID][ ][Data][Cr]</u>

Data: data Min: 00 to Max: 64

### Ack [g][ ][Set ID][ ][OK/NG][Data][x]

# 23. Input select (Command: x b)

(Main Picture Input)

▶ To select input source for main picture.

# <u>Transmission [x][b][ ][Set ID][ ][Data][Cr]</u>

Data Structure

MSB							LSB
0	0	0	0	0	0	0	0
L	Externa	l Input	٦	Lır	nput Nu	ımber	

E	Externa	al Inpu	ıt	Data
0	0	0	0	DTV
0	0	0	1	Analogue
0	0	1	0	AV
0	1	0	0	Component
0	1	1	0	RGB
0	1	1	1	
1	0	0	0	HDMI
1	0	0	1	וואוטח
1	0	1	0	

I	nput N	lumbe	r	Data
0	0	0	0	Input1
0	0	0	1	Input2
0	0	1	0	Input3
0	0	1	1	Input4

# Ack [b][ ][Set ID][ ][OK/NG][Data][x]

\* Real data mapping

00: Step 0

A: Step 10 (Set ID 10)

:

F: Step 15 (Set ID 15) 10: Step 16 (Set ID 16)

Step 100 64 :

Ξ

6E: Step 110

73: Step 115 74: Step 116

:

CF: Step 199

FE: Step 254 FF: Step 255

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	- libpng
	- md5 checksum
	- tinyxml
	- zlib
X.net license	- libicu
BSD license	- strace
	- xySSL
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	- e2fsprogs
	- gdbserver
	- jfsutils
	- mtd-utils
	- procps
	- u-boot
	- udhcpc
GNU LGPL v2.1	- directFB
	- gconv
	- glibc
MPL 1.1	- nanox

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Version 2.1, February 1999

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Discusses general use and applications of FreeType, as well as future and wanted additions to the library and distribution. If you are looking for support, start in this list if you haven't found anything to help you in the documentation. freetype-devel@nongnu.org

Discusses bugs, as well as engine internals, design issues, specific licenses, porting, etc.

Our home page can be found at http://www.freetype.org

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