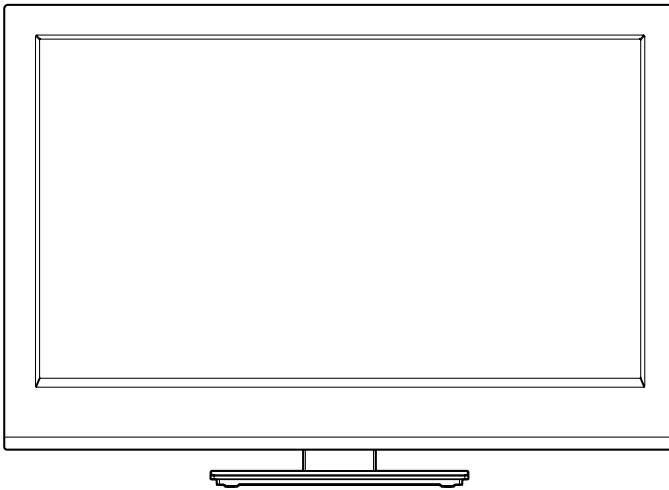


# JVC

## LT-22HG22J

### LCD-TV

Operating Instructions



**HD**  
ready  
**1080p**

**DVB**  
Digital Video  
Broadcasting

**HDMI**<sup>®</sup>  
HIGH-DEFINITION MULTIMEDIA INTERFACE

Before operating the unit, please read this manual thoroughly.

## Features

- 16:9 LCD screen
- LED-Backlight-Technology - It realize thin profile, low power consumption, eco-friendly Hg-less design and high contrast picture.
- On-Screen Language Display in 15 languages (English, Spanish, German, French, Italian, Swedish, Dutch, Russian, Portuguese, Turkish, Greek, Finnish, Polish, Danish and Norwegian)
- Hyperband cable DVB-T Combi-Tuner
- Electronic Progr. Guide (EPG) for DVB-T
- 999 Channel position memory for Digital CH and 100 Channel position memory for Analogue CH
- Videotext – Fastext/TOPTtext
- Remote control
- Sleep timer
- COMPONENT input
- Headphone Jack (for mini plug)
- PC Connection (VGA) (see page 22)
- HDMI-connection
- Auto Power Off after 4 hours with no operation

### Headphone Warning

Loud music can damage your hearing irreversibly, therefore do not set the volume to a high level when listening through headphones, particularly for extended listening periods.

### Battery notice (valid in EU only)

Look after our environment - contact your local authorities for advice on how to safely dispose of exhausted batteries. The crossed out wheelee bin symbol indicates that used batteries should not be disposed of with your normal household waste! A separate collection system for used batteries is in place to allow the correct treatment and recycling in accordance with current legislation. Please contact your local authority for details on collection and recycling schemes in your area.

### Information for the DVB-T function

- Any function relative to the digital television (with the DVB logo) is available only within the country or area where such signals are transmitted. Verify with the salesman if it is possible to receive a DVB-T signal in the zone where you live.
- A DVB-T antenna (not supplied) must be connected for DVB-T reception.
- Even if the television conforms to the DVB-T specifications, the compatibility to future digital DVB-T transmissions is not guaranteed.
- Some digital television functions may not be available in some countries.
- The DVB-T system present in this device is FTA (Free to air).

Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range.

Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplek utstyr – og er tilkoplek et kabel-TV nett, kan forårsake brannfare.

For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel-TV nettet.

Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand.

För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.

Dear Customer,

[European Union]

This apparatus is in conformance with the valid European directives and standards regarding electromagnetic compatibility and electrical safety.

European representative of Victor Company of Japan, Limited is:

JVC Technical Services Europe GmbH Postfach 10 05 04

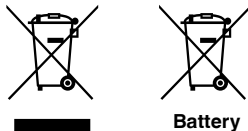
61145 Friedberg

Germany

## Information for Users on Disposal of Old Equipment and Batteries

### [European Union]

These symbols indicate that the electrical and electronic equipment and the battery with this symbol should not be disposed of as general household waste at its end-of-life. Instead, the products should be handed over to the applicable collection points for the recycling of electrical and electronic equipment as well as batteries for proper treatment, recovery and recycling in accordance with your national legislation and the Directive 2002/96/EC and 2006/66/EC.



**Notice :**  
The sign Pb below the symbol for batteries indicates that this battery contains lead.

By disposing of these products correctly, you will help to conserve natural resources and will help to prevent potential negative effects on the environment and human health which could otherwise be caused by inappropriate waste handling of these products. For more information about collection points and recycling of these products, please contact your local municipal office, your household waste disposal service or the shop where you purchased the product.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

### [Business users]

If you wish to dispose of this product, please confirm attached “KESA ELECTRICALS SAFETY INSTRUCTIONS” to obtain information about the take-back of the product.

### [Other countries outside the European Union]

These symbols are only valid in the European Union.

If you wish to dispose of these items, please do so in accordance with applicable national legislation or other rules in your country for the treatment of old electrical and electronic equipment and batteries.

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\* DVB and the DVB logos are trademarks of the DVB Project.

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

## Important safety information

This unit has been produced according to all current safety regulations. The following safety tips should safeguard users against careless use and the dangers connected with such use.

- Although this appliance has been carefully manufactured and rigorously checked prior to leaving the factory, as with all electrical appliances it is possible for problems to develop. If you notice smoke, an excessive build-up of heat or any other unexpected phenomena, you should disconnect the plug from the mains power socket immediately.
- Ensure that the unit is sufficiently ventilated! Never place next to or underneath curtains!
- This set should be only be connected to an AC 220~240V / 50Hz mains power supply - do not attempt to connect it to any other type of supply.
- The socket-outlet must be installed near the equipment and easily accessible.
- Any repairs must be carried out by qualified service personnel only.
- Do not open this unit. A non-expert attempting to repair the unit could be dangerous and potentially cause a fire hazard.
- Keep away from rodents. Rodents (and also cockatiels) enjoy biting into electric flexes.
- The animal can cause a short cut (fire hazard!) and receive a fatal electric shock.
- Always hold plug when pulling out plug from power mains supply system. Do not pull on flex. The flex can become overloaded and cause a short cut.
- Never wet clean. Only use a damp cloth, the same as when cleaning furniture.
- Do not submerge in or under water!
- Set up unit so that no one is able to trip over the flex.
- This unit is recommended to be installed on shock-free benches in order to avoid any danger from falling.
- Take note that toddlers can pull the unit down from the table or cupboard by means of its flex. Children can hurt themselves when doing this.
- Do not use the unit near heat sources. The casing and flex could be damaged by the impact of heat.
- Watch out for kiddies copying what adults do! Do not stick any objects through the vents!
- The vents must remain open! No newspapers or covers should be put on the unit!
- The remote control is not a toy! Toddlers could swallow the batteries. If a battery has been swallowed, please seek out a doctor immediately.
- The screen is made of glass and can break if damage is done to it. Be careful when collecting sharp-edged glass splitters.
- You could be hurt or the unit could be damaged.
- If the unit is mounted on the wall, contact the shop where you purchased the unit for advice, and leave the installation work to experts. Incomplete installation work can cause you injuries.
- Taking fall-prevention measures
  - If these measures are not taken, the unit can fall and you could be injured.
  - Contact the shop where you purchased the unit to obtain full details of the measures.
- When a TV stand is used,
  - Ensure the unit is fully on the stand and placed in the centre.
  - Do not leave the stand doors open.
  - You could be hurt as a result of the unit falling or breaking, or your fingers being caught or jammed. Take extra precautions if you have children.
- Avoid placing the unit on any surfaces that may be subject to vibrations or shocks.
- To protect the unit during a thunder storm unplug the AC power cord and disconnect the antenna. Caution: Do not touch the antenna connector.
- When you leave your home for a long period of time, unplug the AC power cord for safety reasons.
- The unit becomes warm when in operation. Do not place any covers or blankets on the unit in order to prevent overheating. The ventilation holes are not to be blocked. Do not set up near radiators. Do not place in direct sunshine. When placing on a shelf leave 10 cm free space around the whole unit. Make some space around TV (Correct shelf assembly).
- The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.  
Liquids spilled into the unit can cause serious damage. Switch the set OFF and disconnect the mains power supply, then consult a qualified service person before attempting to use the unit again.

### **Please pay attention to the following instructions in order to avoid receiving a life-threatening electric shock:**

- Protect against moisture. Never use in the bath or sauna.
- Never use near a bath, shower or swimming pool.
- Never use the unit if it has got wet. This can also mean condensation moisture, which occurs in the winter when the cold unit is brought into a heated flat. Wait before operating the unit especially after it has been transported in the winter, until the cold unit has adjusted to the room temperature.
- Do not place any heavy objects on the flex. Electrical isolation could be damaged.
- Never wrap insulating tape around damaged flexes or on damaged plugs. These should be repaired or replaced by qualified service personnel.
- Never use this unit if the cabinet is defective. Do not make provisional repairs if the cabinet is damaged - this should be replaced by a new cabinet if necessary.
- Unplug the unit from the mains power supply prior to the cleaning of the unit.

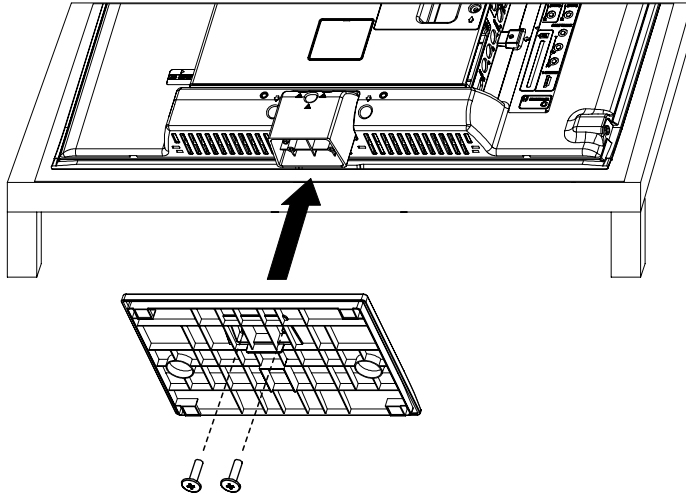
## Important safety information

### How to attach the stand

#### NOTE:

- Unplug the AC cord from the AC INPUT terminal.
- Before beginning this process, assure that TV is laid on a clean, safe, and cushioned space to avoid any damage to the unit.
- Do not touch or press the TV-screen, glass might break under pressure.
- Be sure to follow the instructions. Incorrect installation of the stand may result in the TV falling over.

- 1) Place the TV on its front onto a table.
- 2) Align the stand's bottom-plate (supplied) as seen here. It will fit in only one direction.
- 3) Hold the unit and attach the stand slowly. Finally secure the bottom-plate with 2 screws(included).



#### NOTE:

- To detach the stand, perform these steps in reverse order.

### Dismantling the base

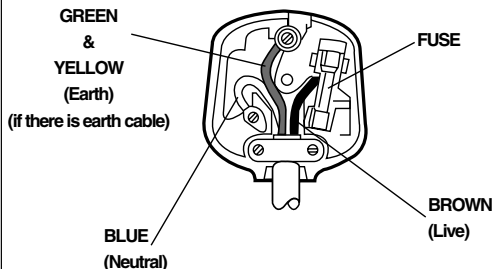
For wall mounting, the base must be dismantled. To do this, remove 3 screws (M, see page 10) from the back. Take off the base entirely.

## Important Instruction

For your own safety read following instruction carefully before attempting to connect this unit to the mains supply.

### MAINS (AC) OPERATION

The wires in the mains lead are coloured in accordance with the following code :



#### IMPORTANT

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured green and yellow must be connected to the terminal which is marked with the letter E, or by the earth symbol, or coloured green or green and yellow.

The wire which is coloured blue or black must be connected to the terminal which is marked with the letter N or coloured Black.

The wire which is coloured brown or red must be connected to the terminal which is marked with the letter L or coloured Red.

For continued protection against risk of fire, replace only with same type and rating of fuse (ASTA approved 5A 250VAC fuse).

## Important safety information

### WARNING

- To prevent fire, never place any type of candle or open flame on the top or near the TV set.



#### Moving the unit or carrying by hand

When the unit is moved a long way, unplug the power cord and disconnect the antenna, connecting cables and any fall-prevention apparatus.

- Moving without doing so could result in damage to the power cord, a fire, electric shocks or injuries from dropping the unit.

Ensure that unpacking and transfer of the unit is carried out by two or more people and that the unit stays upright when doing this.

When the TV stand has casters, remove caster cups from the stand and push it while supporting the unit.

- Ensure that you support the unit when the stand is pushed, as this can cause the unit to fall and you could be injured.
- The appliance could leave indentations in wooden tables with extremely soft wooden surfaces due to its heavy weight.
- Furniture polish could corrode and dissolve rubber feet. Black imprints could be visible on the table. You should therefore only use TV benches, which have been constructed for this specific purpose.

#### Secure the casters when the unit is installed on a TV stand with casters.

- The stand can move and you could be hurt if the casters are not secured. Remove casters when the stand is placed on a soft surface such as a mat and carpet.

The distance between eyes and the screen should be about 3 ~ 4 times as long as height of the screen.

- Viewing from too close a distance can cause strain for your eyes.

When installing the Monitor on a table, be careful not to place the edge of its stand.

- This may cause the Monitor to fall, causing serious injury to a child or adult, and serious damage to the Monitor.

**Possible Adverse Effects on LCD Screen:** If a fixed (non-moving) pattern remains on the LCD screen for long periods of time, the image can become permanently engrained in the LCD TV panel and cause subtle but permanent ghost images. This type of damage is NOT COVERED BY YOUR WARRANTY. Never leave your TV on for long periods of time while it is displaying the following formats or images:

- Fixed Images, such as stock tickers, video game patterns, TV station logos, and websites.
- Special Formats that do not use the entire screen. For example, viewing letterbox style (16:9) media on a normal (4:3) display (Black bars at top and bottom of screen); or viewing normal style (4:3) media on a widescreen (16:9) display (Black bars on left and right sides of screen).

#### Attention!

Cleaning instructions for your LCD TV.

#### Safety note:

Before you start to clean, switch the set's power off completely and disconnect the plug from the mains power supply.

Be careful not to scratch the plastic coated front panel - it is highly vulnerable to accidental scratching (e.g. by fingernails or other sharp items). (While cleaning, do not wear jewelry) that could cause surface scratching (such as rings, wrist-watch, etc.). Use a lint-free cloth and pure water to clean with, but make sure the cloth is thoroughly wrung out so that it is just damp and not soaking wet - also make sure that the cloth is free from any dirt that could cause scratching to the surface.

Wipe the set clean using minimal pressure.

Do not use standard window cleaning fluid. Its alcohol / ammonia will dissolve the front window's coating.

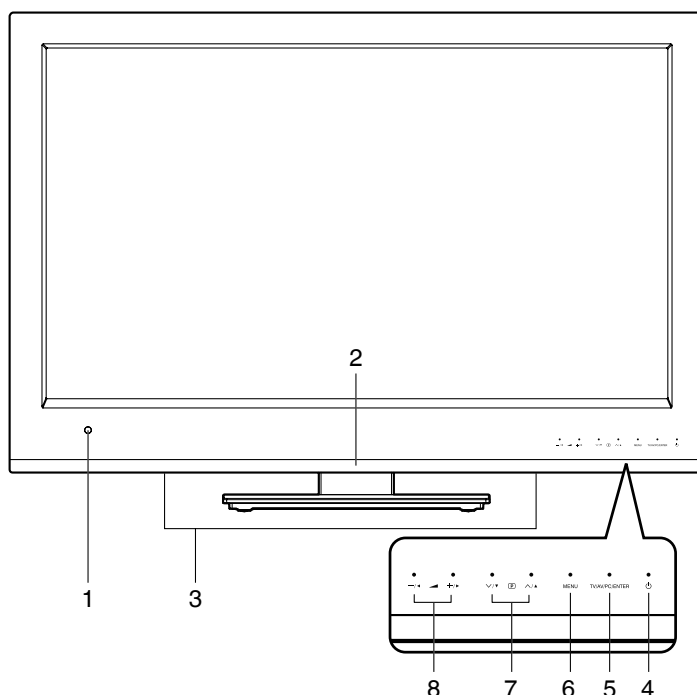
Never use solvent or thinner. Never use special cleaners which are designed for cleaning PC Monitors or CRT TVs. Finally carefully rub dry with a clean dry lint-free cloth.

Do not use paper towels or tissues to clean the set - paper can disintegrate when wet or may leave a trail of dust behind. Some paper can also be abrasive and scratch your screen.

#### Saving electricity

The backlight's brightness (power) can be set manually to match the surrounding illumination. At bright daylight the backlight's full power is required to perform a brilliant result. During lower illumination, e.g. at night, you set a lower backlight-brightness (see p. 19). Figures lower than 100 reduce the brightness, save energy and offer a dazzlefree fatigueless watching at night.

## Location of controls



### Description of Indicators and Controls

#### 1. Remote sensor

2. **⏻ (Standby/On) indicator:** The LED indicator lights up red in standby mode, and blue in the power ON mode.

#### 3. Loudspeakers

4. **⏻ (Power)-button:** Preparation: Connect power-cable to AC220~240V/50Hz.

- a) If standby-LED is red, you may power-off. To power-off, press power-button 1x and release. For confirmation, standby-LED will change to dark. Power-on by remote control is not available.
- b) If standby-LED is off, you may power-on. To power-on, press power-button 1x and release. For confirmation, standby-LED will change to blue.

5. **TV/AV/PC/ENTER button:** Select input mode. Press **TV/AV/PC/ENTER**. Then press **▲/▼** to select input source. Then press **▶**. In Menu : Using as **ENTER** button.

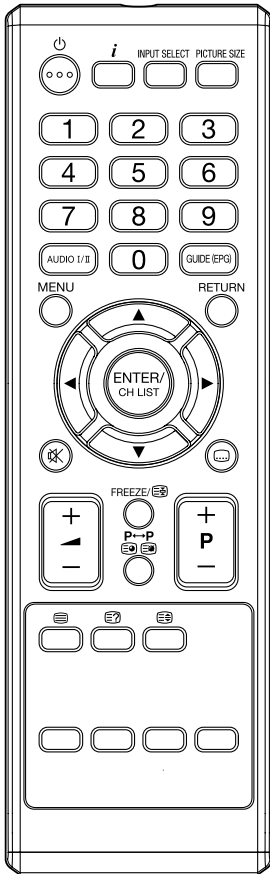
6. **MENU button:** To display the menu screen.

7. **⏮ ▲/▼/⏭ buttons:** Press **▲** to change to a higher numbered channel set into memory. Press **▼** to change to a lower numbered channel set into memory. In Menu: Setting.

8. **⏮ +/-/⏭ buttons / In Menu: Setting.**

For complete disconnection from the mains power supply, remove the supplied power cable from the socket.

## Remote Control



	Function	Page
	Enter standby mode or turn on the power	11
	Display program information	13
	Select an input source	12
	Select picture format	18
	Select channel Select Teletext page Enter password	13 14 16
	Select between the available broadcast audio	13, 14
	Display the EPG (Electronic Progr. Guide)	16
	Activate menu	11
	In menu, return 1 step / exit menu	
	Cursor buttons	
	Memorize Channel List	13
	Turn the sound on/off	14
	Display the subtitle	
	Volume	
	Still picture Hold the text page	14 14
	Switches between the present channel and the last selected channel Sub Page selection	14 14
	Change the TV channel or Teletext page up or down	13
	Teletext ON / Text mix / OFF	14
	Reveal quiz page answers	14
	Teletext enlargement	14
	Fasttext/TOPText buttons	14



## Remote Control

### Install the batteries

Use batteries type UM4 (AAA-Size).

Do not use old or weak batteries. The remote control may not work properly with a weak voltage from such batteries. Replace exhausted batteries with new ones. Never try to recharge normal batteries - this could cause an explosion.

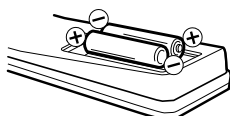
#### Note:

- Exhausted batteries can leak corrosive electrolyte, which may cause damage to the remote control - therefore remove exhausted batteries immediately.
- Batteries should not be exposed to excessive heat such as sunshine, fire or the like.

- 1** Open the battery compartment.



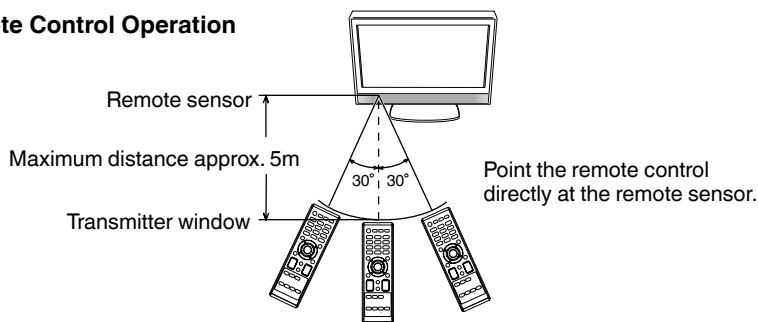
- 2** Install the batteries as shown below, ensuring the correct polarity.



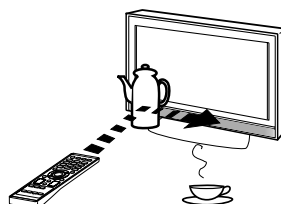
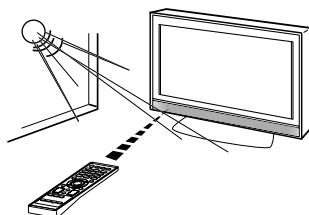
- 3** Close the battery compartment.



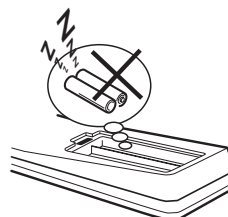
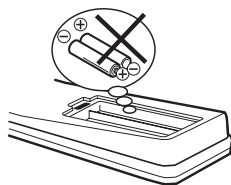
### Distance of Remote Control Operation



The remote control handset will not work properly in the following cases:



- a) If bright sunlight directly beams onto the unit front. b) If an obstacle is placed between the unit and the handset.



- c) If the batteries have not been installed according to their polarities.

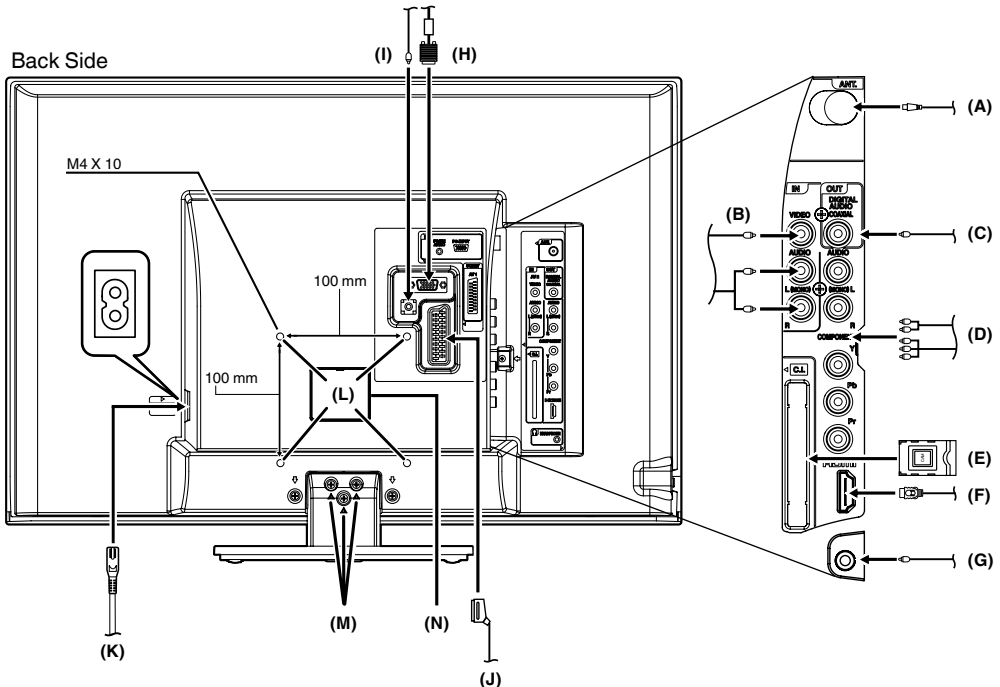
- d) If the batteries are weak.

## Antenna connection

**Note:** Before you connect other appliances:

- To avoid potentially damaging your set, make sure all items are switched off and disconnected from the mains power when you make the connections.
- Arrange the desired connection.
- When you have finished making the connections, reconnect the mains power to the unit and switch it back on.

Connect your antenna as shown below (A). Connections to other equipment is explained further on P.24, 25. If you have problems with reception, consult a specialist of antenna.





- (A) **DVB-T antenna:** Connect a DVB-T antenna if DVB-T is already available in your transmission area. Or connect to an analogue cable connection.  
The built-in tuner receives all analogue cable programmes and DVB-T channels.
- (B) **AV2 input:** Input for analogue AV-Signal (Composite) See P.25.
- (C) **DIGITAL AUDIO COAXIAL output:** digital output for DVB-T sound (see page 25).
- (D) **COMPONENT input:** See P.25.
- (E) **C.I. slot:** for DVB-T-PayTV (if PayTV-provider supports this)
- (F) **HDMI/DVI input:** See P.23.
- (G) **HEADPHONE jack:** Plug headphones with a mini plug (3.5 mm) into this jack.
- (H) **PC-INPUT (PC):** See P.22.
- (I) **PC/DVI AUDIO input:** See P.22, 23.
- (J) **SCART socket (AV1):** For the connection of SCART cables. See P.24, 25.  
AV1: Transmits RGB, S-Video and CVBS in, and CVBS tuner out.
- (K) **Power supply:** Connect the supplied power cable to an AC 220-240V/50Hz mains power supply only - do not attempt to connect it to any other type of supply. Never try to repair a damaged AC power cord with isolation-tape - this should be repaired by a specialist or replaced. Do not let your pet loose near the cable. Animals biting into the cable could receive a fatal electric shock, and could cause a hazard to others.
- (L) **Bracket holes:** To attach a wall mounting bracket (not supplied), remove the screw, then attach where indicated in the drawing above.
- (M) To hang the television on a wall, remove these screws and then remove a stand.  
Before performing work spread cushioning over the base area to lay the TV on.
- (N) **Service connector cover:** Please do not open this cover. There is a socket only for service purpose inside.

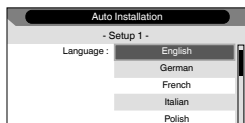
## Auto setup

Your television has an Automatic Tuning System which makes tuning in your television easy. This Automatic tuning System scans the entire reception range in your area and automatically stores all available analogue and digital channels of suitable signal strength in the correct order e.g. BBC1 will tune into channel 1, BBC2 will tune into channel 2, etc.

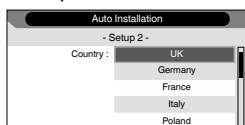
### Preparation:

Press  (Power) on the unit or press  (On/Standby) on the remote.

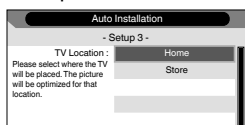
- 1 Auto Installation menu will appear. Press **▲** or **▼** to select desired language. Then press **ENTER**.



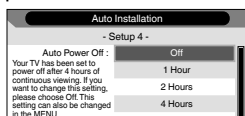
- 2 Press **▲** or **▼** to select your country. Then press **ENTER**.



- 3 Press **▲** or **▼** to select Home. Then press **ENTER**.



- 4 If you cancel Auto Power Off (see page 20), press **▲** or **▼** to select Off. Then press **ENTER**.



- 5 TV will search for Digital TV-channels at first. Connect your DVB-T antenna now. Continue with **ENTER** to start auto tuning. The tuning's progress will be displayed in percent for confirmation.



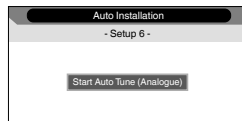
### Note:

- Please be patient - the Auto Tuning process can take several minutes to complete.

- 6 When the tuning for Digital TV-channels is completed, you will be asked if you want to proceed to autotuning for Analogue TV-channels. If you wish to start autotune Analogue TV-channels, connect your Analogue cable-TV antenna and press **ENTER**.

### Note:

- If you do not wish to carry out the autotuning for Analogue TV-channels, press **MENU** to exit the menu.



- 7 When the display reads 100%, normal TV-screen will appear.

### Note:

- To cancel the auto tuning, press **RETURN** during the process.

**THE AUTOMATIC TUNING PROCESS WILL ONLY START BY ITSELF THE FIRST TIME YOU SWITCH THE SET ON. HOWEVER YOU CAN RESTART THIS PROCESS VIA THE MENU SYSTEM (see page 12).**

- If you could not set up a correct pair of language and country in this auto setup process, you will be able to make your preferred language selection as illustrated in page 12 (On-screen Language Selection).

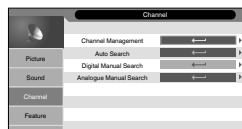
## Quick guide for Menu operation

Make sure the antenna connection and power supply are connected as per the description on previous page.

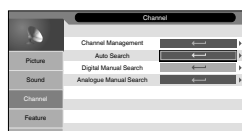
Call Menu and for example: Select Auto Search.

- 1 Press **INPUT SELECT**. Select TV or DTV, then press **ENTER**. Press **MENU**.

- 2 Press **▲** or **▼** to select Channel then press **►**.



- 3 Press **▲** or **▼** to select Auto Search, then press **►**.



... on the following pages the MENU can be called in the same way as here.

- 4 Press **MENU** to exit the menu.

### Note:

- The Menu screen disappears automatically after a defined period of time with OSD Timer. (see page 21)

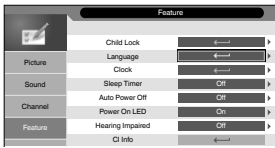
## Selecting the input source

Press **INPUT SELECT** to view a signal from another device connected to your TV, such as a VCR or DVD player. You can select each input source depending on which input jacks you used to connect your devices.

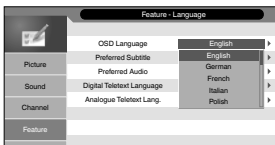
To select the video input source, press **▲/▼**, then press **ENTER**.

## On-screen Language Selection

- 1 Select Feature (unless you have already selected when the set was first switched on) then press **▶**. Then press **▲** or **▼** to select Language, then press **▶**.



- 2 Press **▲** or **▼** to select OSD Language, then press **▶**. Press **▲** or **▼** to select the desired language.

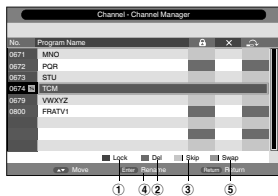


- 3 Press **MENU** to exit the menu.

## Changing the order of stored channels

The Automatic station presetting stores the stations in a specific order. However, this order can be changed if you wish.

- 1 Press **MENU**. Select Channel Management option in Channel menu, then press **▶**.
- 2 Press **▲/▼** or **◀▶** to select the channel that you want to change, then select desired option from the below of the TV-screen. Then press the appropriate coloured button on the remote control.

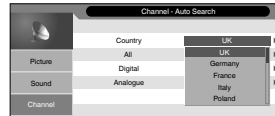


- ① **Lock (red button):** Red mark will appear. (Lock is available only when Child Lock is On. See page16.)
- ② **Del (green button):** Green mark will appear.
- ③ **Skip (yellow button):** Yellow mark will appear.
- ④ **Rename (ENTER button):** You can change the name of a channel on the cursor screen with **▲/▼**, **ENTER** and **Red/Green/Yellow** buttons.
- ⑤ **Swap (blue button):** Press **▲** or **▼** to select the position that you want to swap the channel with, then press **ENTER**.

## Station search

**Warning! All previously saved channels are deleted in Step 4. A new channel search then starts automatically.**

- 1 Press **MENU**. Select Auto Search option in Channel menu, then press **▶**.
- 2 Press **▶** and then press **▲** or **▼** to select the desired country, then press **ENTER**.



- 3 Press **▲** or **▼** to select the searching mode, then press **▶**. The confirmation screen will be displayed.

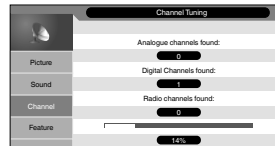


**All:** Search for the both of Digital, Analogue and Radio channel.

**Digital:** Search for Digital and Radio channel.

**Analogue:** Search for Analogue channel only.

- 4 Select **OK** and press **ENTER** to start Auto Search.



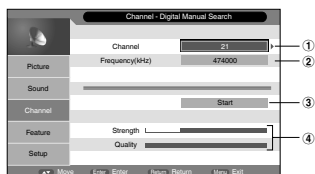
**Note:**

- Press **RETURN** if you return to step 2.

- 5 When the display reads 100%, press **MENU** to exit the menu.

## Manual Station search

### Digital Manual Search

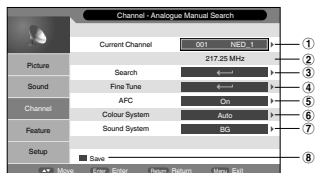


#### Preparation:

Select DTV in INPUT SELECT. Press **MENU**. Select Digital Manual Search option in Channel menu, then press **▶**.

- ① Press **▶**, then press **▲** or **▼** to select the channel to search for, then press **ENTER**.
- ② Frequency of Digital channel to be searched.
- ③ Select Start, then press **ENTER** to start searching.
- ④ You can verify the signal strength and quality of the selected service here. If necessary, adjust the direction of the antenna to obtain the maximum signal strength.

### Analogue Manual Search



#### Preparation:

Select TV in INPUT SELECT. Press **MENU**. Select Analogue Manual Search option in Channel menu, then press **▶**.

- ① Press **▶**, then press **▲** or **▼** to select the current channel, then press **ENTER**.
- ② Frequency of current selected Analogue channel.
- ③ Press **▶**, then press **◀** or **▶** to perform intermittent search from current selected Analogue channel's frequency position.
- ④ Already correctly and optimally installed. Do not change anything here. Any changes can cause picture or sound disruption. The video can also be affected.
- ⑤ Press **▶**, then press **▲** or **▼** to select AFC On or Off, then press **ENTER**.
- ⑥ Colour System has already been preset to Auto. Do not change anything here. Any changes can cause picture or sound disruption.
- ⑦ The correct sound system is already installed. Any changes can cause sound disruption.
- ⑧ Finally, press red button to save the searched channel.

## Basic Operation

### Channel selection

With the **numbered buttons**.

Example:

- No. 2: Press **2**.
- No. 29: Press **2** and within 2 seconds, press **9**.
- No. 929: Press **9**, **2**, **9** same as above.

Press **P +** or **-** to change up or down a channel. This takes approx. 2 seconds. If the auto search only stored 5 stations, only these 5 will appear. Skipped channels will not appear (see P.12).

### Channel List

The Channel List shows a list for each receivable programmes for TV/DTV and Radio.

Press **CH LIST** to display the Channel List.

Press **▲** or **▼** to select the desired channel.

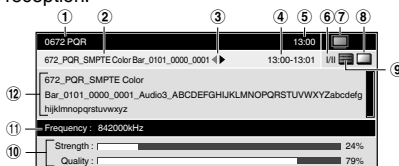
Press **CH LIST** to display the selected channel.

### Information display

Press **i**. The program information will appear for approx. 4 seconds.

- If you press **i** twice, more information and signal strength and quality will appear.

The following figure is an example of DVB-channel reception.



- ① Channel Name
- ② Program Title
- ③ Next program detail and current program detail alternate by **◀▶** buttons
- ④ Program Duration
- ⑤ Current time
- ⑥ There are two or more audio languages. (see below)
- ⑦ Radio icon will appear in case of Radio channel.
- ⑧ There is one or more subtitle languages. (see below)
- ⑨ DVB Teletext available
- ⑩ Signal strength and quality
- ⑪ Frequency of channel
- ⑫ Program Detail

#### Note:

- There is no sound output from the main unit's speakers when a DVB-channel with Dolby Digital audio is selected. You can only hear Dolby Digital audio through the amplifier equipped with a Dolby Digital decoder. (see P.25)
- Dolby is a trademark of Dolby Laboratories

### Audio/Subtitle language for DVB-channel

If the current watching DVB-channel has more than one audio language or subtitle language, you can change them with **AUDIO I/II** or **☺**.

- Press **AUDIO I/II**. Audio language menu will appear. Then press **▲** or **▼** to select the Audio language.
- You can also select the audio format (Stereo, Left or Right) by pressing of **◀▶**.
- Press **☺**, then press **◀▶** to select DTV Subtitle. Then press **▲** or **▼** to select the Subtitle language. Then press **ENTER**.

#### Note:


- Some DVB-broadcasts may not provide subtitle language service.
- To cancel the Audio/Subtitle language menu, press **RETURN**.




## QuickView

**P**↔**P** button allows you to go back to the last selected TV channel.

- This feature is not available in external input mode and also it can not step over the ATV-input mode and DTV-input mode.

## MUTING

Press . The sound will be cut off.

The muting can be released by pressing  again or  + or .

## Still picture

Press **FREEZE** to make a still picture. To cancel the still picture, press **FREEZE** again.

### Note:

- The still picture function is not available for 1080p (50Hz/60Hz)-input mode.
- During still picture mode, PICTURE SIZE feature is not available. (If you press **PICTURE SIZE**, still picture mode will be canceled.)
- If you performed the still picture function in DTV-input mode, this function works with also the external output signal from SCART socket.

### Note:

- During TV or external input mode (except PC input mode), if there is no signal reception, the TV will change to standby after approx. 15 minutes (in PC input mode: 2 minutes).
- Some functions are activated and de-activated with the same key. Others require **RETURN** key for de-activating.

## Teletext

Teletext is sent page by page. This unit is able to automatically store up to 800 pages, but they can only be accessed once they have been stored. This can take a few moments.

The Teletext language menu allows the installation of the teletext language.

The languages displayed are only those supported by the channel.


## Fastext/TOPtext

The Fastext/TOPtext is teletext with a special directory. On the lower part of the screen there are four different coloured fields (red, green, yellow and blue). These fields lead directly to the pages shown within. The coloured buttons on the remote control correspond to the coloured fields. Press the appropriate coloured button in order to activate the desired colour field.


## Switch on / off Teletext

Teletext is not transmitted by all channels.


Select a channel that shows teletext.

Press . You will now see a teletext page.

(If "100" is shown without any text information, it may mean that the channel you have selected does not support teletext.)

Press  again. Teletext and TV picture are shown simultaneously.

Press  again in order to switch off teletext.

Press  again in order to switch on teletext again. The last page which was stored is now shown.

### Note:



- You cannot select any other channels as long as teletext is switched on. Switch teletext off when you want to switch over to another channel.

## Select Page

Press **P** + or - until the page you desire appears. Or ... enter the requested page number by using the **10 Number Buttons**.





And if you mistype something, just enter the complete 3-digit wrong page number then enter the desired number again. Or ... press one of the coloured teletext buttons so that a page from Fastext/TOPtext is shown.

## Hold Pages



Some pages are divided up into subpages by the channel. Subpages are automatically shown in turn, as they are transmitted. In order to hold the page, press . Press  again in order to display the next subpage.

## Directly Select Subpages


You can directly select the subpages if required. You may use one of two operations.

1. Press   in order to select subpage 2. 0 0 0 0 is shown. Enter **0 0 0 2**. It can take a minute before subpage 0002 appears. Press   again in order to switch off the subpage feature.


Or:

2. Wait a few seconds, and the right now available subpages will be shown in the bottom line. Select your page with  or .

## Enlargement


In order to enlarge the display, press .

Either the upper or lower half of the screen is enlarged.


Each time you press  you switch between the display of the upper or lower half of the screen or the full picture.

## Answering Quiz Questions

Some pages contain quiz questions with concealed answers.

Press  in order to show the answers.

## Stereo reception in analogue cable TV channel mode

You can see the each signal type of STEREO, Nicam Mono, and DUAL I/II, etc. on the TV-screen when you press .

**When 2-channel sound reception is available, you can select your preferred audio with the AUDIO I/II.**

Each time you press **AUDIO I/II**, the sound channel will switch to the alternative channel available.

### Note:

- In case of bad reception, the stereo sound also can be disturbed.
- The broadcast sound type may not be saved if Power off.

## Remarks on DVB-T system

DVB-T is at present still being developed. You can get information regarding the current stage of development from your specialist retailer.

As a digital service DVB-T basically works differently to previous analogue TV reception.

### Reception Possibilities:

In contrast to cable TV, DVB-T is received via room or roof antennas. A room antenna is sufficient for reception within the reception area of a DVB-T transmitter. A roof antenna may perhaps be necessary for reception in a fringe area. Existing roof antennas may have to be turned in a different direction.

Contact your specialist retailer to find out about the location of the reception areas or fringe areas. You cannot get DVB-T reception outside the fringe area. Ask a certified antenna specialist for advice on interference with reception. The tuner of this appliance cannot provide active room antennas with operating voltage. Active room antennas have to be equipped with a separate power supply.

### Reception Quality:

DVB-T reception principally either works really well or not at all. There is not a smooth transition with a constant reduction in reception quality. Digital interference occurs at maximum reception range:

the image freezes, the picture becomes blocky, the sound breaks up or reception cuts out altogether at times. If you notice interference with DVB-T reception then this is usually not due to a fault on the TV appliance. Please contact an antenna specialist if you have interference with reception. Inspection of the quality of DVB-T reception is not included in the free warranty to be provided by the manufacturer of the TV appliance.

### Image and Sound Quality:

An individual transmitter transmits up to 4 TV channels on one transmission frequency. This is possible through compression in accordance with the MPEG standard, which is similar to digital data storage on a DVD. The data rate of DVB-T is just a lot lower; at present the max. video bit rate is approx. 4Mbps and the max. audio bit rate is at 256kbps. Visible interference (e.g. blocky picture) can result at extremely low data rates despite there being excellent reception quality within vicinity of the transmitter. Blocky pictures are no fault of the receiver. They are the result of the low data rate transmitted. The digital DVB-T sound can be transmitted to the digital amplifier via the digital output of your TV set.

### Image Format

Images are transmitted in 4:3 format, 4:3 letterbox format (with black bars above and below the picture) and anamorphic 16:9 format (without black bars). The max. transmitted resolution at present is 704x576.

### Child Lock

Like DVDs, DVB-T offers can also provide age-restricted access. At the moment, no channels are equipped with this restriction. This appliance does, however, already offer the feature of setting up password protected age restrictions, which only work when the respective programmes are broadcast.

### DVB-T Update

The DVB-T norm earmarks the transfer of firmware updates. The transfer of firmware updates is called Over Air Download or OAD for short.

If this product happens to require a firmware update in future, this update could be received via DVB-T. If the available software for updating is detected, the confirmation message whether start the software to download is displayed. The rest please proceed to download-operation according to the directions of a TV screen.

### EPG (Electronic Program Guide)

EPG is part of the DVB-T-signal with 8-days-schedule. This TV can receive and display the EPG-information included into DVB-T. This TV's EPG-Decoder will not work with cable- and Satellite-TV.

## Password Setup (Parental lock)

Parental lock is a function of the channel provider. If it is not supported by the channel, parental lock is without function. Currently there are no channels supporting parental lock.

- 1 Press **MENU**. Select Child Lock option in Feature menu, then press **▶**.
- 2 'Password' will appear. Press '0 0 0 0' using the **Number buttons (0-9)**. (This is the default password.)
- 3 Select the desired option, then press **▶**.

**Child Lock:** To activate the Lock feature in Channel Management, select On with **▲/▼**, then press **ENTER**.

**Parental Lock:** Press **▲** or **▼** to select desired parental rating, then press **ENTER**.

### Change Pin Code:

- Old Password  
Enter the current password with Number buttons.
- New Password  
Enter your chosen new password (please call Service, if you have forgotten the new number).
- Confirm New Password  
After you have entered the new password, you need to enter the same password again for confirmation.

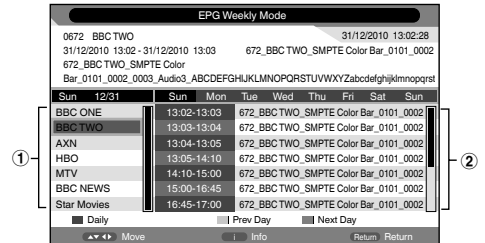
- 4 Press **RETURN** several times to return to the normal screen.

While toggling between channels, if a service which has a parental rating (higher than your setting) and you have set the Child Lock to On is selected, the channel will be locked. The password entering screen will appear. Then enter the password to view that channel.

## EPG (Electronic Program Guide)

The Guide menu shows the available programme listings for the next 8 days only, including today.

- 1 Press **GUIDE (EPG)** to display the Guide menu.



- ① Service list :  
Lists all the services that are currently available. As you scroll through the service list by pressing **▲** or **▼**, the Event list will be refreshed accordingly.

- ② Events list :  
List the events in a grid of rows. Press **▶** to enter the Events list. You can press **▲** or **▼** to navigate through the rest of the events. You can easily move to the Previous day or Next day in the Events List by pressing **Yellow** or **Blue** button (the date of the programme information you are currently viewing is shown in the top left hand corner).

### Note:

- You can change to Daily mode by pressing of **Red**.

- 2 From within the Events list, you can open the Event detail for the currently highlighted programme by pressing **i**.

The Event detail shows the extended event description of an event.

To return to the Events list, press **i**.

To clear the menu screen, press **MENU** or **RETURN**.

## Using the Digital Service

Some services bring you programmes with the Digital Service, letting you experience DTV interactively.

When provided, the Digital Service will start when you press **⊞**.





## Picture size and resolution

### Resolution and picture quality

Broadcast wide screen films in different resolutions. The following table shows the resolution options for wide screen film broadcast media.

Resolution of the wide screen signal	Broadcast media						
	Analogue cable TV	Digital cable TV	DVB-T	Satellite (DVB-S)	DVD	HDTV Satellite (DVB-S2)	Blu-ray-Disc
432i x 768 (Letterbox)	Yes	Yes	Yes	Yes	Yes	Yes	No
576i x 768 (anamorphic)	No	Yes	Yes	Yes	Yes	Yes	No
720 x 1280 (HD)	No	Yes*	No	No	No	Yes	Yes
1080i x 1920 (HD)	No	Yes*	No	No	No	Yes	Yes
1080p x 1920 (HD)	No	No	No	No	No	No	Yes

\* Digital Cable receiver with HDMI output required.

Best picture quality is achieved when the input signal has a resolution of 1920 x 1080i. If a signal with a lower resolution is input (e.g. analogue cable TV), there is a visibly poorer picture quality.

This is understandable as, if the same picture quality were available at a lower resolution, the broadcasting companies would not need to take the trouble to send the signal at the higher resolution.

### Why are there different resolutions?

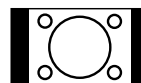
Analogue cable TV uses a standardised TV signal. Each analogue 4:3- tube TV, however old it is, can process this signal. That is the advantage of standardisation. The disadvantage is that the resolution has not changed since the end of the Second World War. The resolution has been max. 576 x 768 for over 60 years.

For comparison: today's TVs feature a FullHD-resolution of 1080 x 1920.

The analog cable-network offers the 16:9-format at a low resolution of only 432 x 768. This input covers only 16% of a FullHD-screen's area. 84% of the screen would stay black, if the TV would not make up the rest by some special mathematics. 84% of what you see had been made up artificially by magnifying the tiny input-signal to full-screen-size. That's the reason for the analog cable-network's low picture-quality seen on every FullHD-TV.

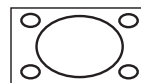
### Picture quality and black bars

Wide screen films come in different formats. The format is the relationship between the width and height of the picture. For example, with a 16:9 film the width to height ratio is 16:9 or 1.78:1. Only 16:9 films can fill a HD-ready screen without black bars. Therefore, black bars are always visible when a format other than 16:9 is received. E.g. 4:3, A 4:3 displays vertical black bars to the right and left.



4:3 picture 1:1 on 16:9 screen

If a 4:3 picture is increased to 16:9 format then it either appears distorted (see illustration) or some parts of the picture are cropped off at the top and the bottom. This is completely normal and is not a fault in the wide screen TV.



4:3 picture zoomed on 16:9 screen

Super Cinemascope films are wider than 16:9 films. They are in the format 2.4:1 or 22:9, for example. This is clearly wider than 16:9. Therefore, Super Cinemascope films display black bars at the top and bottom on any HDTV set.

### Picture format and resolution

There is no connection between the picture format and the resolution received. For example, the Super Cinemascope format can be received in all resolutions, even in the HD resolution 1080i x 1920. For HDTV reception too an HDTV set may display black bars at the top and bottom.

## Picture format

### Picture Size

The required picture format can be set by pressing the **PICTURE SIZE** button. Press **PICTURE SIZE** until the required format is displayed.

You move through the following formats when you press the button: Auto, 4:3, 16:9, 14:9, Cinema, Real (HDMI mode only).

### Auto

The picture is automatically only then shown in a format-filling display when a WSS-TV signal is received.

### Note:

- Auto is not available in Component mode.

### Example:

If the analogue tuner receives a letterbox image with WSS signal then the resulting image looks like this:

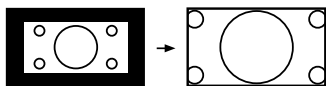


illustration 1:  
Letterbox image is increased

### WSS:

Public broadcasters include 16:9 identification, the WSS signal (WideScreenSignalling), during transmission in order to ensure automatic conversion to 16:9.

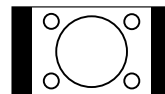
Some private broadcasters do not transmit a WSS signal. Automatic does not recognise anything without WSS signal and does not automatically alter the picture size. Use the **PICTURE SIZE** button to set the required picture size for private channels.

### Other formats

Press **PICTURE SIZE** until the desired size is reached.

#### 4:3

The picture is displayed in 4:3 format with black bars to the right and left.



#### 16:9

The width of the picture will be zoomed evenly.

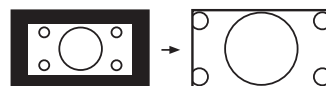
**16:9** is particularly suitable for DVD players, DVB-T, DVB-C and satellite receivers, which can transmit and show 16:9 feature films without black bars. In the set-up menu of the set, adjust it to show that a 16:9 TV set is connected.

#### 14:9

The picture is increased somewhat but not up to the full screen width. Black bars remain on the right and left and also at the top and bottom.

### Cinema

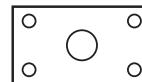
Use Cinema to increase a small 4:3 letterbox signal. How do you recognise whether the broadcasting station / the set operating is using a 4:3 letterbox signal that is too low? Press the **PICTURE SIZE** button on the remote control until the 4:3 format appears. If the picture is surrounded by a black border as in the illustration, this is a 4:3 letterbox signal. Limited by the broadcasting station / the set operating, this signal is much too low for a 16:9 HD screen. Cinema increases this picture that is too small as far as possible. Natural visible poor focus emerges, rather as if a postcard were being increased to poster size. This unfocused appearance is conditioned by input signals that are too low and is in no way a production fault in this TV set.



4:3 Letterbox picture increased to Cinema format.

### Real (HDMI mode only)

All images are displayed on the TV screen of 16:9 ratio without overscanning.



### Note:


- In PC mode, the picture size feature is available only for 16:9- or 4:3- format.
- External receivers can automatically adjust the picture size via a SCART cable. Please read the instructions for the external receiver.
- If you select Real, the image might become a horizontal expansion according to the signal format. In this case, select an appropriate aspect with **PICTURE SIZE**.

## Other convenience functions

You can change the default settings to convenience use.

Selected Items	Setup hint								
Picture									
Picture Mode <table border="1" data-bbox="311 313 625 446"> <tr> <td data-bbox="311 313 625 343">Standard</td> <td data-bbox="625 313 1106 343">Standard picture quality (factory-set)</td> </tr> <tr> <td data-bbox="311 343 625 373">Vivid</td> <td data-bbox="625 343 1106 373">Enhanced picture contrast and sharpness (factory-set)</td> </tr> <tr> <td data-bbox="311 373 625 403">Soft</td> <td data-bbox="625 373 1106 403">Intended for bad-quality signals (factory-set)</td> </tr> <tr> <td data-bbox="311 403 625 446">User</td> <td data-bbox="625 403 1106 446">Your personal preferences</td> </tr> </table>	Standard	Standard picture quality (factory-set)	Vivid	Enhanced picture contrast and sharpness (factory-set)	Soft	Intended for bad-quality signals (factory-set)	User	Your personal preferences	
Standard	Standard picture quality (factory-set)								
Vivid	Enhanced picture contrast and sharpness (factory-set)								
Soft	Intended for bad-quality signals (factory-set)								
User	Your personal preferences								
Brightness / Contrast / Sharpness / Colour / Tint (available only when you selected "User" at Picture Mode)	You can adjust the picture to your preference. <ul style="list-style-type: none"> <li>Tint is available in NTSC-signal mode or Component/HDMI-signal with 60Hz.</li> </ul>								
Backlight (available only when you selected "User" at Picture Mode)	You can use the Backlight feature to adjust the screen brightness for improved picture clarity.								
Colour Temperature	Neutral (Standard) / Reddish (Warm) / Bluish (Cool)								
Noise Reduction <table border="1" data-bbox="311 666 625 799"> <tr> <td data-bbox="311 666 625 799">Off / Low / Middle / High</td> <td data-bbox="625 666 1106 799">               Sometimes it is not possible to input a high-quality HD signal. The actual signal input is too small and noisy, e.g. a video film in letterbox format, or a noisy analogue cable TV signal. This feature can slightly reduce interferences caused by the faulty input signal.               <ul style="list-style-type: none"> <li>This option is not available in DTV, Component1080i/p, HDMI1080i/p and DVI mode.</li> </ul> </td> </tr> </table>	Off / Low / Middle / High	Sometimes it is not possible to input a high-quality HD signal. The actual signal input is too small and noisy, e.g. a video film in letterbox format, or a noisy analogue cable TV signal. This feature can slightly reduce interferences caused by the faulty input signal. <ul style="list-style-type: none"> <li>This option is not available in DTV, Component1080i/p, HDMI1080i/p and DVI mode.</li> </ul>							
Off / Low / Middle / High	Sometimes it is not possible to input a high-quality HD signal. The actual signal input is too small and noisy, e.g. a video film in letterbox format, or a noisy analogue cable TV signal. This feature can slightly reduce interferences caused by the faulty input signal. <ul style="list-style-type: none"> <li>This option is not available in DTV, Component1080i/p, HDMI1080i/p and DVI mode.</li> </ul>								
Reset	Select "Reset" to reset Picture options to the factory preset values.								
Sound									
Sound Mode <table border="1" data-bbox="311 922 625 975"> <tr> <td data-bbox="311 922 625 975">Standard / Movie / Music / Speech / User</td> <td data-bbox="625 882 1106 975">               You can change the sound mode setting. If you select "User", you can change the setting of Bass and Treble and TV memorizes your setting.             </td> </tr> </table>	Standard / Movie / Music / Speech / User	You can change the sound mode setting. If you select "User", you can change the setting of Bass and Treble and TV memorizes your setting.							
Standard / Movie / Music / Speech / User	You can change the sound mode setting. If you select "User", you can change the setting of Bass and Treble and TV memorizes your setting.								
Bass / Treble / Balance	You can adjust the sound quality to your preference.								
Surround <table border="1" data-bbox="311 1046 625 1134"> <tr> <td data-bbox="311 1046 625 1134">On / Off</td> <td data-bbox="625 1010 1106 1134">               The Surround feature processes the audio signal to expand the listening field wider and deeper to create a 'pseudo surround-sound' from the TV's speakers. The feature works with stereo signals from TV broadcast or AV input.             </td> </tr> </table>	On / Off	The Surround feature processes the audio signal to expand the listening field wider and deeper to create a 'pseudo surround-sound' from the TV's speakers. The feature works with stereo signals from TV broadcast or AV input.							
On / Off	The Surround feature processes the audio signal to expand the listening field wider and deeper to create a 'pseudo surround-sound' from the TV's speakers. The feature works with stereo signals from TV broadcast or AV input.								
Stable Sound <table border="1" data-bbox="311 1169 625 1195"> <tr> <td data-bbox="311 1169 625 1195">On / Off</td> <td data-bbox="625 1134 1106 1195">               This will automatically adjust volume so each channel and input has the same average volume level.             </td> </tr> </table>	On / Off	This will automatically adjust volume so each channel and input has the same average volume level.							
On / Off	This will automatically adjust volume so each channel and input has the same average volume level.								
Reset	Select "Reset" to reset Sound Mode, Bass, Treble and Balance to the factory preset values.								
Channel	See page 12-13.								

## Other convenience functions

Selected Items	Setup hint
Feature	
Child Lock	See page 16.
Language	
OSD Language	See page 12.
Preferred Subtitle	Select preferred subtitle language, if the current watching DTV channel has more than one subtitle language. If the preferred subtitle language set here is not transmitted in the channel, the first displayed subtitle language in Subtitle language menu (P.13) is automatically selected. <ul style="list-style-type: none"> <li>This option is not available for ATV channel.</li> </ul>
Preferred Audio	Select preferred audio language, if the current watching DTV channel has more than one audio language. If the preferred audio language set here is not transmitted in the channel, the first displayed audio language in Audio language menu (P.13) is automatically selected. <ul style="list-style-type: none"> <li>This option is not available for ATV channel.</li> </ul>
Digital Teletext Language	If a DTV-channel name or information-display in the Channel banner (page 13) or EPG has a data of each language, the first preferred display language can be set here. <ul style="list-style-type: none"> <li>This option works also for continental countries.</li> <li>In continental countries, if a DTV-channel has a Teletext data of each language, the first preferred Teletext language can be set here.</li> </ul>
Analogue Teletext Lang.	See page 14.
Clock	
Date	The date/time is displayed that is recognized on this unit.
Time	<ul style="list-style-type: none"> <li>You can not adjust the date/time manually.</li> </ul>
Time Zone	If the time displayed on the Channel Information differs from the actual time, adjust the time offset until the correct time zone is shown. <ul style="list-style-type: none"> <li>Normally, this would be done by selecting "Auto".</li> </ul>
DST	If DST is set to "On", time is displayed one hour earlier. <ul style="list-style-type: none"> <li>This option is not available if you set Time Zone to Auto.</li> </ul>
On / Off	
Sleep Timer	Sleep timer switches the TV to standby after a defined period of time. To cancel the Sleep Timer, set to "Off".
Off/15/30/45/60 Min	
Auto Power Off	When the Set and Remote key operation are not operated with specified period by this setting(1/2/4 Hours), the power status is changed to stand by mode automatically.
Off/1/2/4 Hour	
Power On LED	To cancel the lighting of indicator (P.7 (2)) during operation, set to "Off".
On / Off	
Hearing Impaired	The hearing impaired subtitle type is output preferentially. <ul style="list-style-type: none"> <li>Even if you set this option to On, the subtitle of Hearing Impaired is not displayed. Press  on the remote control to display the subtitle.</li> </ul>
On / Off	
CI Info	You can access the Common Interface module information from this menu option. <ul style="list-style-type: none"> <li>This unit supports the C.I. card of "Top Up TV" and "Boxer".</li> </ul>

## Other convenience functions

Selected Items		Setup hint
Setup		
OSD Timer	5/10/15/20/25/30 Seconds/Never	The OSD is cleared automatically as per this setting. But if you select "Never", the OSD is not cleared automatically. (Press <b>RETURN</b> to clear.)
AV 1 Input		
	Auto	Factory setting, normally OK.
	RGB	when RGB is input.
	CVBS	when Composite is input.
	S-Video	When S-Video is input.
PC Setup		See page 22.
HDMI Mode		See page 23.
Blue Back		You can set the TV to automatically change to a blue screen and mute the sound if the signal is weak or absent.
	On / Off	<ul style="list-style-type: none"> <li>This option is not available for DTV, PC and Radio mode.</li> </ul>
Reset TV Setting		Press <b>▶</b> to enter the Reset TV Setting screen. Press <b>◀</b> to select "OK", then press <b>ENTER</b> . Reset the TV function will now begin, and this unit will automatically turn off.
Software Upgrade		This option is not available because of service purpose only.
Version		If you press <b>▶</b> , the $\mu$ -com's software version is displayed.

## PC connection

Follow these steps: On your PC monitor choose a resolution of 1360 × 768 at 60Hz and save this configuration. Shut down your PC and connect the shut off LCD TV. Use a screensaver to avoid burning-in of static picture content.

### Select PC input

Switch on the LCD-TV.

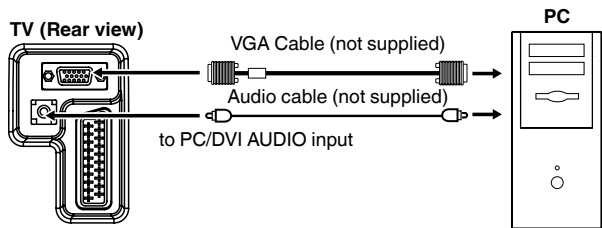
Select the PC input mode (see page 12).

#### Note:

- If no signal or a signal with a non-supported resolution is connected, No Signal is displayed
- As this LCD-TV is not a PC monitor correct display cannot be guaranteed for every PC / graphics card.

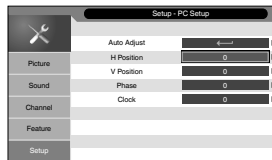
Supported PC resolutions	
resolution	fps (Hz)
640x480	60
800x600	60
1024x768	60
1280x720	60
1280x768	60
1360x768	60
1280x1024	60
1440x900	60
1920x1080	60

Use a PC-VGA cable (not supplied) to connect the LCD-Monitor to your PC. Make the connections carefully so as not to break or bend the contacts inside the plug.



**Example:** Adjust the H Position.

**1** During PC mode press **MENU**.



**2** Select Setup/PC Setup/H Position, then press **ENTER**. Press ◀ or ▶ to adjust H Position.

**3** Press **RETURN** several times to return to the normal screen.

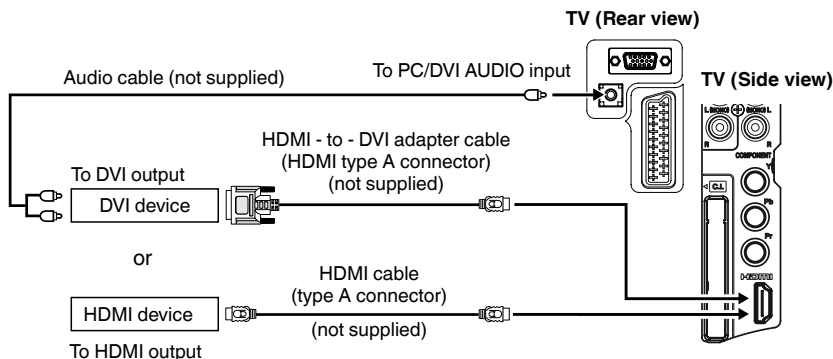
Selected Items	Setup hint
Setup	
PC Setup	
Auto Adjust	H Position, V Position, Phase and Clock are adjusted automatically as per the input PC video signal. <ul style="list-style-type: none"> <li>• When PC-input mode was selected and a PC-signal was input, Auto Adjust will be performed automatically.</li> </ul>
H Position	To adjust the horizontal placing of the image.
V Position	To adjust the vertical placing of the image.
Phase	Eliminates the horizontal (PHASE) interfering lines.
Clock	Eliminates the vertical (CLOCK) interfering lines.

## Connecting an HDMI or a DVI device to the HDMI input

The HDMI input receives digital audio and uncompressed video from a HDMI equipped device or uncompressed digital video from a DVI equipped device.

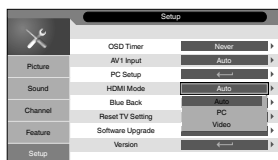
When you connect to a DVI device with a HDMI-to-DVI adapter cable, it only transfers the video signal, so it is necessary to use separate analogue leads to transfer the audio signals.

Select the HDMI input mode (see P.12).



## Selecting the HDMI signal

- 1 Select Setup/HDMI Mode option. Then press ►.



- 2 Then press ▲ or ▼ to select the desired mode. Then press ►.

**Auto:** Auto (factory setting), can remain in this mode. Change not necessary.

**PC:** PC (for PC), if desired.

**Video:** Video (for Video), if desired.

- 3 Press **MENU** to exit the menu.

### Note:

- Please notice the operating manual for the HDMI device to be set up.

## Connection to other equipment

### 1. Connecting to other equipment

#### Attention: Preparation:

- Disconnect all equipment from the AC-supply, to prevent any possible damage.
- Make the necessary connections.
- Make sure all connections are safe & secure before reconnecting your equipment the AC-supply.

Please connect your satellite-receiver or DVD player via SCART (AV1). Make sure your SCART cable's cross-section is at least 1 cm or more. SCART cables with less thickness may cause visible noise.

Please make the following settings inside your receiver's / DVD-player's setup-menu:

Video signal: RGB

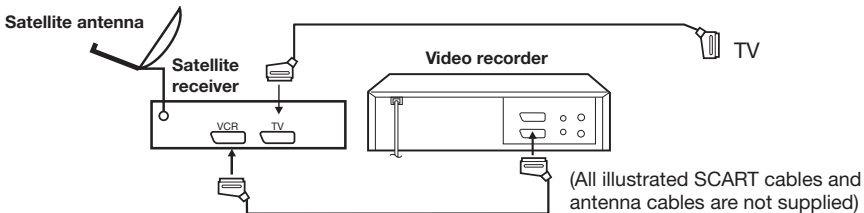
TV-Format: 16:9

If you miss to make these settings properly, picture quality will be inferior and parts of the picture might be missing. This is not a fault of this TV-set.

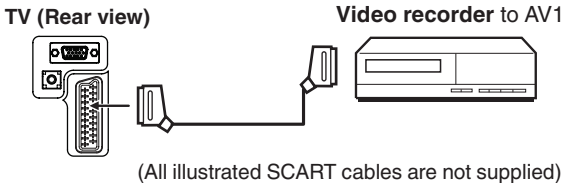
In case you need help to make this adjustment with your satellite-receiver / DVD-player, please consult the related instructions or contact the supplier or maker of those apparatus for support.

Please use the satellite's remote-control handset to select Teletext or desired TV-station. Generally it is not possible to store satellite TV-stations into a standard TV.

If the TV does not automatically switch to AV-1, please select INPUT AV1 manually, as seen on page 12.



### 2. Connect video recorder (e.g. to record from DVB-T)



#### Note:

- Programme the video recorder timer to the desired time. The TV appliance cannot switch the video recorder on or off.
- In external input mode, Analogue TV-signal will be output from SCART socket.
- When the scrambled DTV channel is received, it is not output from SCART even if the scramble has been released by the CI card.



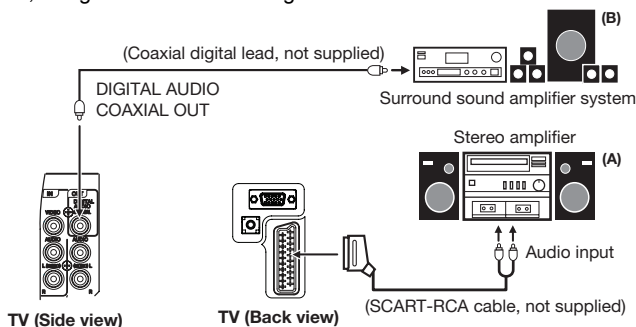
## Connection to other equipment

### 3. Connecting an audio system

You can supply the TV sound to the stereo equipment (A) with the SCART socket. Use a special SCART cable for the connection which sold at the accessory shop. (please consult your hi-fi instructions for details). If you have a surround sound amplifier/decoder (B) with a coaxial digital input, you can connect the Coaxial Digital Audio Output to it, using a suitable coaxial digital lead.

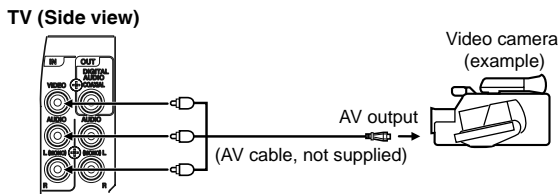
**Note:**

- You can hear only the sound received with a built-in tuner in the connection of (A), but you can not hear the sound input to an external input terminal.
- The Balance/Bass/Treble adjustments (see P.19) only function with the sound from the TV speakers - it does not affect the audio output sockets.



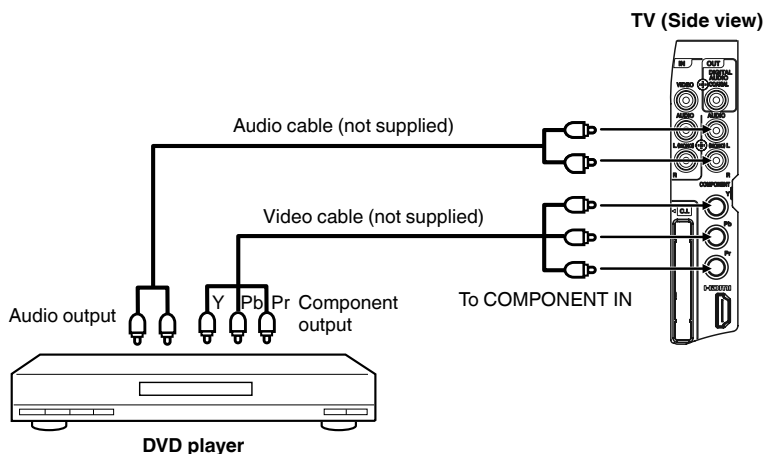
### 4. Connecting a Video camera or Games console to AV-2

Select the AV-2 input mode (see P.12).



### 5. Connecting to a DVD player or other AV device with Component Video outputs

If your DVD player (or other device) has Component Video output jacks, use a suitable set of leads (RCA/Phono) to connect these to the Component Video inputs on this TV as shown - it can greatly enhance the picture quality and performance. Please remember that you will also need to connect separate leads (RCA/Phono) for the audio signals. Select the COMPONENT input mode (see P.12).



**Note:**

- The Component Video input of this unit are for use with equipment which outputs interlaced signals (PAL: 576i/1080i or NTSC: 480i/1080i) and progressive signals (PAL: 576p/720p or NTSC: 480p/720p).

## Troubleshooting table

Please check the following list before requesting service.

Symptom	Possible solution	Page
No picture, no sound	Switch on the set.	7
	Check that the mains power outlet is properly connected.	12
	Select appropriate input mode. Unplug unit for 1 minute, then plug it back in.	
No reception with built-in tuner.	Do not connect scart cable at first. Select input ATV or DTV. On the remote control press the 1-key once and release.	12
	Connect the antenna.	10
	Try another antenna.	10
The TV switches off with missing antenna or external input signal	This is normal. 15 minutes after the antenna or external input signal has disappeared, the set will change to standby mode. (in PC input mode: after 2 minutes)	14
Channel menu cannot be selected.	The unit is set to AV mode. Press 1 on the remote control.	12
Wrong Colours	Colour and Brightness errors can occur when the viewing angle/ ambient air temperature (see technical specifications) are exceeded.	
While viewing a DVB (digital) channel, there is sound but no picture.	Some channel offers audio content only. It is normal.	
Blocky image or image stops intermittently.	Check all antenna connections. Move the antenna away from areas of possible interference. Try using an antenna booster.	10
Some digital channels cannot be viewed.	Contact the service provider to subscribe.	
No colour or picture black.	AV input set to Auto.	21

- The LCD panel is a very high technology product, giving you fine picture details. Occasionally, a few nonactive pixels may appear on the screen as a fixed point of blue, green or red. Please note that this does not affect the performance of your product.

## Specifications

System	Analogue: PAL(B/G, D/K, I), SECAM(B/G, D/K), SECAM(L, L') Digital: DVB-T for UK
Video Colour System	PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60
Preset channels	Digital 100 Carrier (999 Service), Analogue 100 Carrier
Frequency Range	Analogue: 45.75MHz~858MHz Digital: E2~E69
Power Supply	AC 220-240V, 50Hz
Power Consumption	Operation: 24W at AC230V, 50Hz
	Standby: 0.7W at AC230V, 50Hz
LCD	55 cm visible
	TFT low-glass Active Matrix Colour LCD, 1920 x 1080 Pixel
HDMI input	HDMI compliant (type A connector), HDCP compliant
	Suggested scan rates: PAL: 576i/576p/720p/1080i/1080p NTSC: 480i/480p/720p/1080i/1080p HDMI Audio: 2-channel PCM, 32/44.1/48 kHz sampling frequency 16/20/24 bits per sample
Output Power	1.5W (MAX) x 2
Surrounding temperature	Operation: 5°C ~ 40°C/Storage: -20°C ~ 60°C
Operating Humidity	Less than 80%RH
Dimensions (W) x (H) x (D)	54 x 39 x 15 cm
Weight (w/o Accessories)	3.5 kg
Accessories	2 batteries (AAA/R3/UM-4)/Remote control unit/AC cord/Stand/2 Screws for stand

Weight and dimensions are approximate. Because we continually strive to improve our products we may change specifications and designs without prior notice.

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The following open source software component is included in this product:

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Italy	DARTY IT	800928884	<a href="http://www.darty.it/">http://www.darty.it/</a>	<a href="mailto:scrivici@darty.it">scrivici@darty.it</a>
Czech	DATART	810 328 278	<a href="http://www.datart.cz/">http://www.datart.cz/</a>	<a href="mailto:infolinka@datart.cz">infolinka@datart.cz</a>

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