

**LTV46DA**

**User's Manual**



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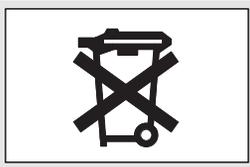
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## Conformity



This product fulfills the EC guidelines 89/336/EEC (EMC guideline) with amendments 93/68 EEC and 92/31 EEC and the EC guideline 73/23/EEC (low voltage guideline) with amendments 93/68/EEC.

## Disposal



This product is subject to the European guideline 2002/96/EC.

All electric and electronic devices must be disposed of separately from household waste at publicly established facilities.

Avoid hazard to the environment and dangers to your personal health by disposing the device properly.

For further information about the proper disposal, contact the relevant local government department, the disposal facility or the shop where you bought the device.

# Unpacking and Setup

## Scope of Supply

*Please check, that the delivery is complete.*

- 1 Unit
- 2 Remote control
- 3 Batteries
- 4 Mains cable

## Safety

- Read the following instructions carefully.
- Keep this manual at hand.
- Closely follow the instructions given.
- Proceed exactly as described in the instructions.
- Do not use the unit near water.
- Clean the unit with a dry cloth only.
- Ensure that the ventilation openings are not covered.
- Do not install the unit close to heat sources such as radiators, stoves or other devices (including amplifiers) radiating heat.
- Use grounded plugs (shock-proof plugs) and wall outlets only. If the provided plug does not fit your outlet, consult an electrician to replace the outdated outlet.
- Lay the power cable in a manner that does not obstruct anyone. Make sure the power cable is not damaged or stepped on, particularly at the plug and at the exit of the unit.
- In case you have to disconnect the unit quickly from the mains, make sure the wall socket is easily accessible. Connect the unit as described in the instructions by the manufacturer.
- To completely disconnect the unit from the electric power, unplug the power cable.
- Do not use any extension cables.
- Use the accessories specified by the manufacturer only.

- Only use suitable stands, supports, carts or tables that ensure the unit does not tip over.  
If you place the unit on a cart, move it with caution to prevent injuries or damage resulting from tip-over.
- Unplug the unit during lightning storms or if you will not use it for a longer period of time.
- Refer all servicing to qualified service personnel only. Servicing is required if the unit has been damaged, e.g. if the power cable or power plug are damaged, if liquid or objects entered the unit, if it was subject to rain or any other kind of humidity, if it has been dropped or if it does not operate properly.
- Safety instructions to handle the battery - to prevent leakage of the batteries and related health hazards or damage to material follow the instructions below:
  - Mind the polarity of the batteries (+/-) when inserting. Use only similar batteries (manufacturer, carbon, alkaline, old, new) together.
  - Remove the batteries, if you will not use the unit for a longer period.
- To avoid electric shock or fire, do not expose the unit to rain or humidity.
- Do not expose the unit to dripping or splashing water. Do not place any container with liquids (beverages, vases etc.) on the unit.
- Do not place any open fire (candles etc.) on the unit.
- If you use an outdoor antenna, make sure to ground the antenna to provide protection against voltage surges and build up of static charges.
- If you do not operate the unit in the Federal Republic of Germany, make sure to observe the local laws and regulations applicable in your country.



This symbol indicates additional safety instructions in the text.



This symbol indicates instructions to facilitate the operation.

## Location

### ➤ *The Best Distance*



The distance when watching programs on a television of this size should be approximately 2.2 to 2.7 metres. If the distance is too large or too small, this may lead to strain of your eyes. This may impair your health.

### ➤ *Background Light/Reflections*

When watching television at night, the television should not be the only source of light in the room. The big difference of brightness between the screen and the background causes continuous dark-light adaptation of the eyes. This leads to strain of the eyes and may cause headaches. It is better, if a dim, indirect light lights-up the environment of the television.

For the same reasons, make sure that no reflections on the screen impair the picture.

### ➤ *The Best Alignment*



Choose a location that allows you to sit in a relaxed position. Otherwise, tension and further impairments to your health may be the consequence.

### ➤ *Additional Information on the Location*

- Do not expose the unit to direct sunlight.
- Avoid humid and/or dusty environments.
- Place the unit on level, non-vibrating surfaces.
- Do not place the unit close to the outlets of air conditioners or heaters.
- Make sure the unit is easily accessible from all sides.
- Make sure that no liquids can enter the unit.
- Avoid extreme changes of temperature to prevent humidity condensing in the unit.

## Intended purpose

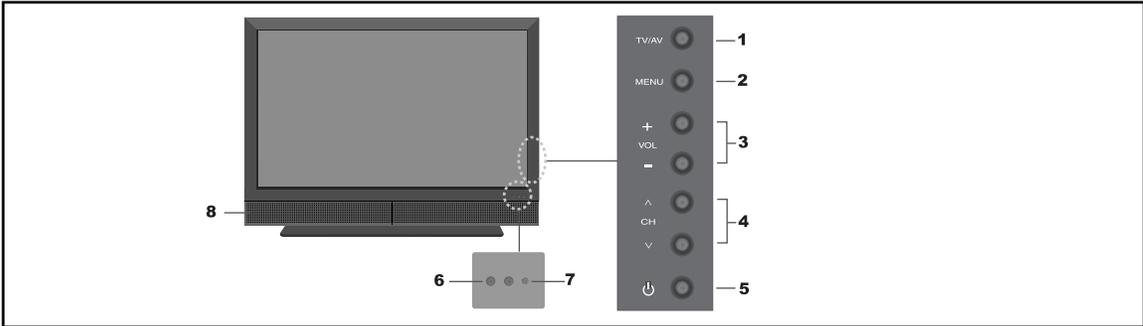
This is a unit for consumer electronics. It may only be used for private, non-industrial purposes. Furthermore the unit may only be operated indoors and not for commercial purposes.



Keep this user guide carefully.

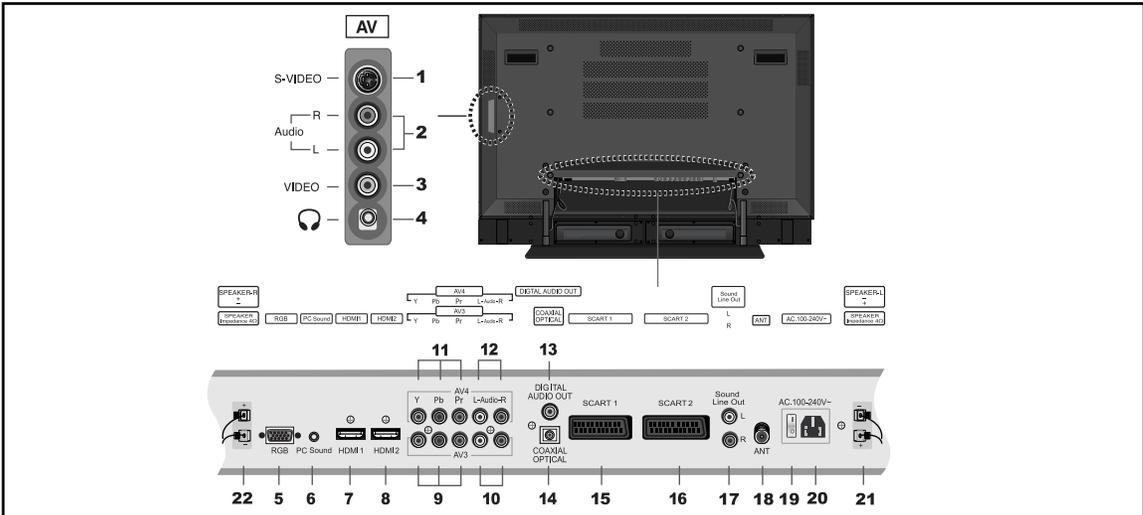
# Viewing the Control Panels

## Front View



- |  |                                |
|--|--------------------------------|
| <b>1</b> Input source selection button | <b>5</b> Power button          |
| <b>2</b> MENU selection button         | <b>6</b> Remote control sensor |
| <b>3</b> Volume adjustment button      | <b>7</b> Power Indicator       |
| <b>4</b> Channel selection button      | <b>8</b> Speaker               |

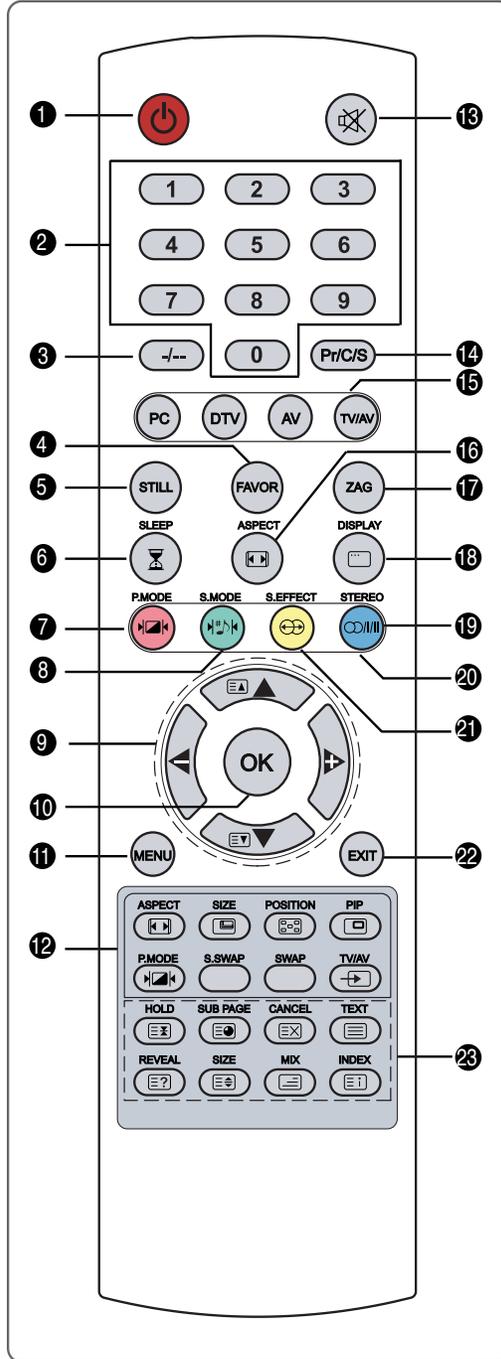
## Rear View



- |  |  |
|--|--|
| <b>1</b> AV S-VIDEO Input                    | - 5.1 channel sound output for Home-theater system through the coaxial cable |
| <b>2</b> AV AUDIO Input                      |  |
| <b>3</b> AV VIDEO Input                      |  |
| <b>4</b> Headphone Jack                      |  |
| <b>5</b> Analog RGB Input (PC)               |  |
| <b>6</b> Audio Input (PC)                    |  |
| <b>7</b> HDMI Input (HDMI1)                  |  |
| <b>8</b> HDMI Input (HDMI2)                  |  |
| <b>9</b> DTV/DVD Video (Y/Pb/Pr) Input (AV3) |  |
| <b>10</b> DTV/DVD Audio Input (AV3)          |  |
| <b>11</b> DVD Video (Y/Pb/Pr) Input (AV4)    |  |
| <b>12</b> DVD Audio Input (AV4)              |  |
| <b>13</b> Digital Audio Out (Coaxial)        |  |
| <b>14</b> Digital Audio Out (Optical)        | - 5.1 channel sound output for Home-theater system through the optical cable |
| <b>15</b> Euro-scart Jack (SCART1)           |  |
| <b>16</b> Euro-scart Jack (SCART2)           |  |
| <b>17</b> Sound Line Out                     |  |
| <b>18</b> Antenna Input Jack                 |  |
| <b>19</b> Power Switch (Main)                |  |
| <b>20</b> Power Inlet                        |  |
| <b>21</b> Speaker Out (Left)                 |  |
| <b>22</b> Speaker Out (Right)                |  |

# Remote Control

- 1 Power On/Off button
- 2 Numeric buttons
- 3 One/Two-Digit Channel Selection
- 4 Favorite Channel Selection
- 5 Picture Still
- 6 Sleep Timer
- 7 Picture Mode Selection (P.MODE)
- 8 Sound Mode Selection (S.MODE)
- 9 Control the Cursor in the OSD Menu  
▲ (▲) and ▼ (▼)  
(Channel Up / Down)  
(Teletext Page Up / Down)  
◀ and ▶  
(Volume Up / Down)
- 10 MENU Confirmation
- 11 Display OSD Menu
- 12 PIP Functions:
  - PIP On/Off (PIP)
  - Position Selection (POSITION)
  - Size Selection (SIZE)
  - Picture Mode Selection (P.MODE)
  - Swapping main and sub picture (SWAP)
  - Selecting the Input TV/AV (TV/AV)
  - PIP Picture Size Selection (ASPECT)
  - Swapping main and sub Sound (S.SWAP)



- 13 Temporary Sound Mute
- 14 TV Input Source Selection
- 15 External Source Input Selection
- 16 Picture Size Selection
- 17 Previous Channel
- 18 TV Information Display
- 19 Sound Selection :  
Mono/Stereo Dual Select (STEREO)
- 20 Fastext Functions
- 21 Sound Effect Selection (S.EFFECT)
- 22 - Exit from the OSD  
- Display the current time when the OSD is off
- 23 Teletext Functions:
  - Teletext On/Off (TEXT)
  - Cancel (CANCEL)
  - Sub Page On (SUB PAGE)
  - Page Hold (HOLD)
  - Index (INDEX)
  - Mix (MIX)
  - Size (SIZE)
  - Reveal (REVEAL)

# Connections and Start of Operation

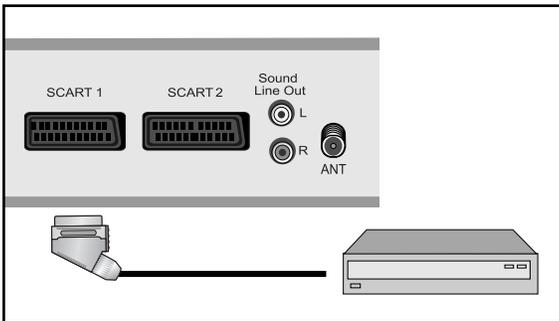
## Connections for TV Reception

You can connect roof aerial, cable reception, a satellite receiver, set top boxes (DVB-T) or video recorders etc. to the unit.

### Connecting a Satellite Receiver, a Set Top Box or a Video Recorder

#### ➤ *Connecting to a Device with SCART Socket*

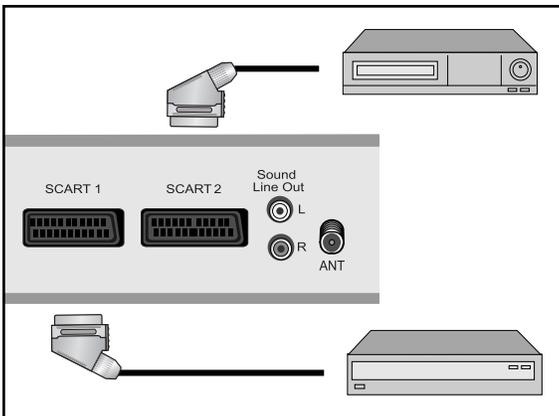
Use a SCART cable to connect the units.



- 1 Plug the SCART cable into the socket [SCART1] on the television set.
- 2 Plug the other end of the SCART cable into the output socket on the receiver.

#### ➤ *Connecting to two Devices with SCART Socket*

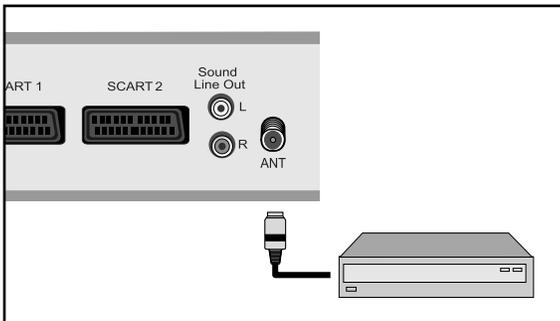
The unit has two SCART sockets. You can connect two devices by the SCART sockets at the same time. On how to select one device for display on the screen, see "Select Source" on Page 36.



- 1 Connect the first device as described above.
- 2 Plug the SCART cable of the second device into the socket [SCART2] on the television set.
- 3 Plug the other end of the SCART cable into the output socket on the receiver.

➤ *Connecting to a Device without SCART Socket*

Use a coaxial cable to connect the units.

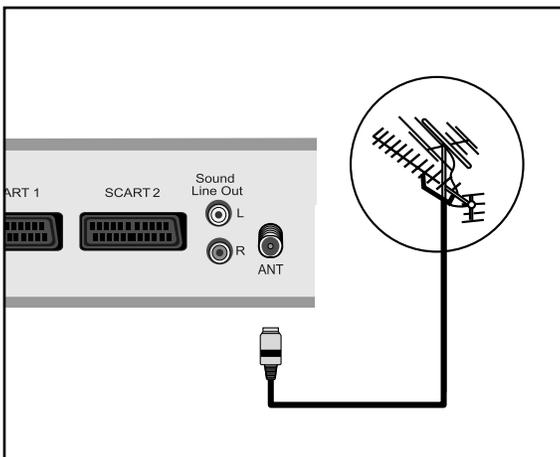


- 1 Plug the coaxial cable into the socket [ANT] on the television set.
- 2 Plug the other end of the coaxial cable into the output socket on the receiver.

## Connecting to the Roof Aerial

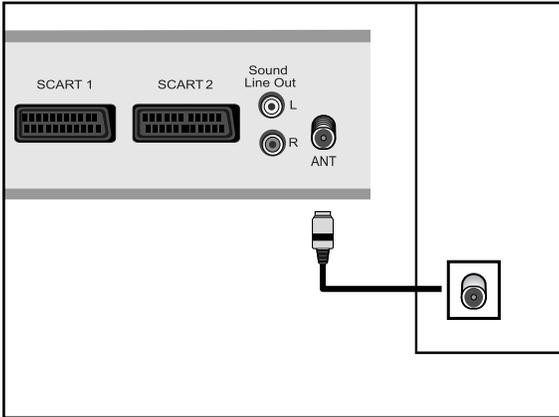


Ensure that the roof aerial is properly installed and grounded.  
If the roof aerial is not properly grounded, voltage may damage the unit and static charges may build up.



- 1 Plug the coaxial cable of the roof aerial into the socket [ANT].

## Connecting to Cable Reception



- 1 Plug the coaxial cable of the cable reception into the socket [ANT].

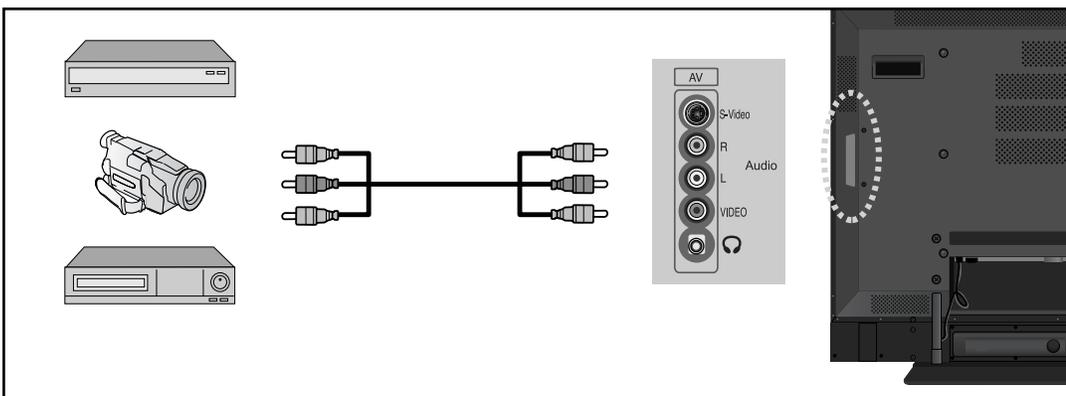
## Connecting to Headphones

The output for the headphone is on the right rear side of the unit. If you connect a headset to the unit, the main speaker will be switched off.

## Connecting Camcorders and Video Games

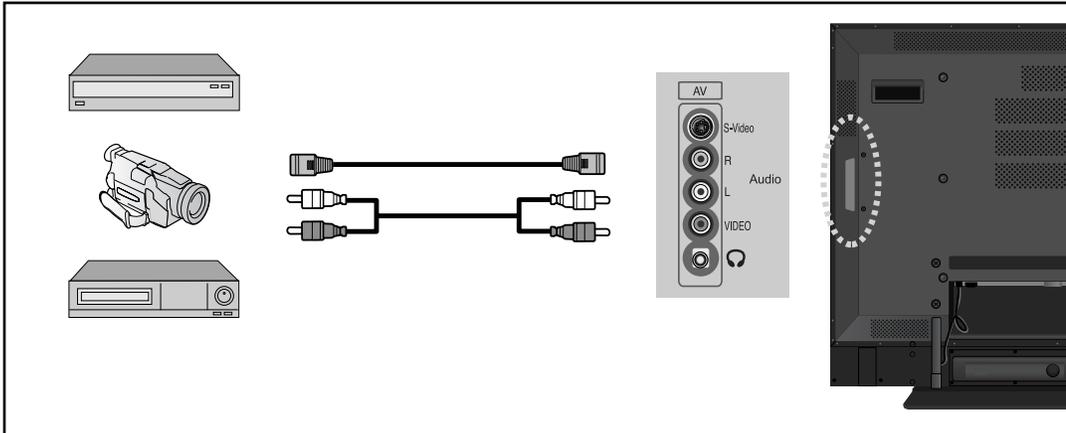
You can use the television set to connect camcorder and video games. Use either the cinch sockets or one of the SCART sockets.

### ➤ Connecting Camcorders and Video Games by AV Cable



- 1 Connect the AV cables according to the colours (red/white/yellow) to the sockets [VIDEO/AUDIO IN] and the output sockets of the external devices.

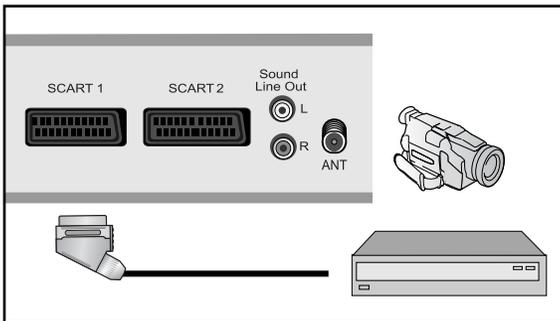
➤ *Connecting Camcorders and Video Games by S-Video Cable*



- 1 Connect the S-Video cable to the socket [S-VIDEO] and the output sockets of the external devices.
- 2 Plug the audio cable into the socket [AUDIO IN] on the television set and connect the cable to the output socket of the external device.

➤ *Connecting Camcorders and Video Games by SCART Cable*

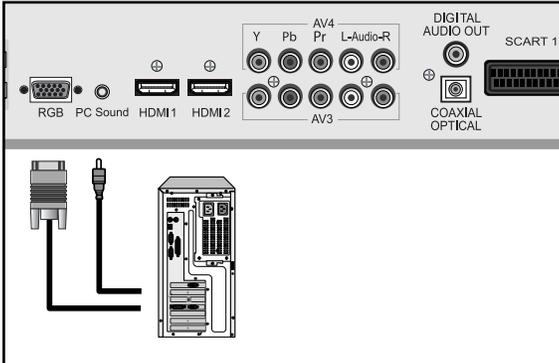
Use a SCART cable with a SCART plug on one end and AV plugs on the other end.



- 1 Plug the SCART cable into the socket [SCART1] on the television set and connect the other end with the output sockets of the external devices.

## Connecting to a Computer

You can use the television set as a monitor for the computer. This is possible parallel to television operation. Use a 15-pin D-Sub cable to connect the television set to the computer.



- 1 Plug the cable into the output socket of the graphic board.
- 2 Plug the other end of the cable into the socket [RGB].
- 3 Connect the audio cable according to the colours to the socket [PC Sound] on the television set and the output sockets of the graphic board.

Adjust the settings of the television picture corresponding to the settings for television operation. See "Settings" on Page 16.

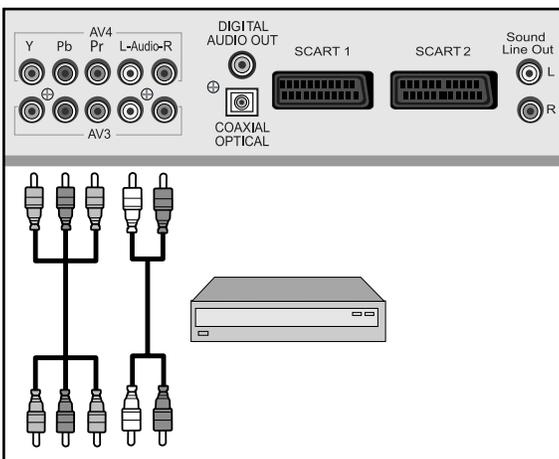


If the television set does not receive any signal, adjust the output of the computer. For information on how to setup the computer, refer to the corresponding manual of the computer.

## Connecting to External Devices with Component Input

You can use the television set to connect DVD recorder/player and set-top-box. Connect the audio and video cables from the external equipment's output jacks to the TV input jacks, as shown in the figure. When connecting the TV to external equipment, match the jack colors.

### ➤ Connecting to External Devices



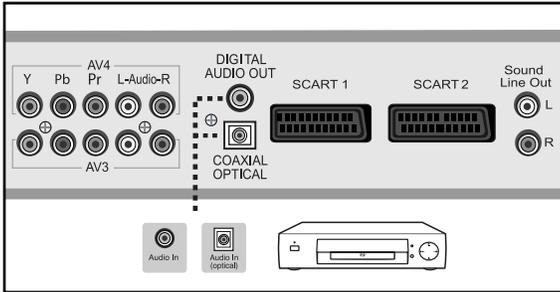
- 1 Plug the video cable according into the colours to the output sockets of the external devices.
- 2 Plug the other end of the video cable according to the colours into the Y, Pb, Pr sockets [AV 3 or AV 4] on the television set.
- 3 Plug the audio cable according to the colours to the audio output sockets of the external devices.
- 4 Plug the other of the audio cable according to the colours into the audio input socket on the television set.



If the external equipment has mono audio output, connect it only to left socket of the audio input/output.

## Connecting the Digital Audio Output

You can Connect optical digital audio cable to "DIGITAL AUDIO OUT" on the rear of the TV and the other end to "DIGITAL AUDIO IN" of the equipment with a digital output to enjoy digital sound (Multi-Channel Surround Sound, Stereo, Dolby Sound).



### 1 Connecting the OPTICAL Port

Connect the OPTICAL port of the DIGITAL AUDIO OUT on the rear of the TV to the optical audio input of the DVD Home Theater System (or AV Receiver Amplifier) using the optical cable.

### 2 Connecting the COAXIAL Port

Connect the COAXIAL port of the DIGITAL AUDIO OUT on the rear of the TV to the coaxial audio input of the DVD Home Theater System (or AV Receiver Amplifier) using the coaxial cable.

Decrease the TV volume to enjoy the more clear and grand sound through separate speakers.

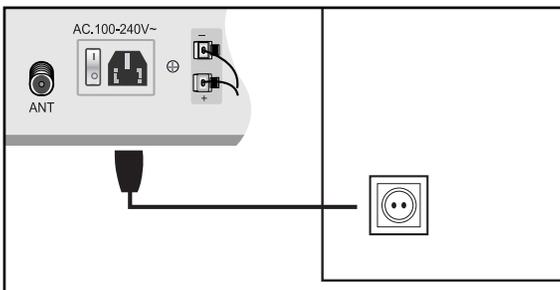


Refer to corresponding user's manual from the manufacturer for connecting the speaker to the DVD Home Theater System or AV Receiver Amplifier.

## Connecting Several Devices

You can use the connections described parallel. On how to select the desired source see "Select Source" on Page 36 and "Select Signal Source for PIP" on Page 37.

## Connecting Mains Cable



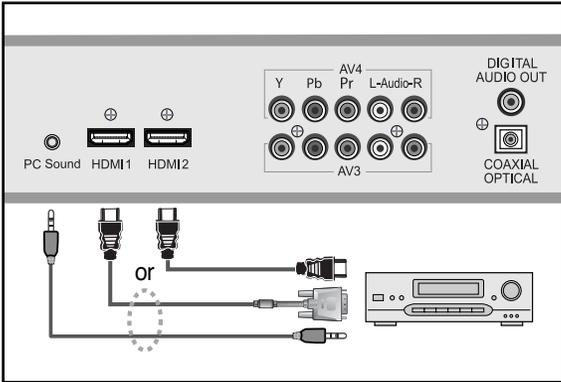
### 1 Connect the mains cable.

## Connecting to the HDMI Connection

This can be applied if there is the HDMI Output connector on the external device.

### What is HDMI (High-Definition Multimedia Interface)?

HDMI is a next generation interface that connects the digital audio and video signals using only one cable without compression. The sound signal supports multi-channel (5.1 Channel). So it is called a multimedia interface rather than a video terminal. The difference between HDMI and DVI is that the HDMI device is smaller in size, has the HDCP (High Bandwidth Digital Copy Protection) and supports multi channel audio.



### 1 Connecting HDMI/DVI Cable

Connect the HDMI/DVI cable and audio cable from the output jacks on the DVD player or Set-top box to the [HDMI 1] or [HDMI 2] input jack and PC Audio input jacks on the TV.

### 2 Connecting HDMI Cable

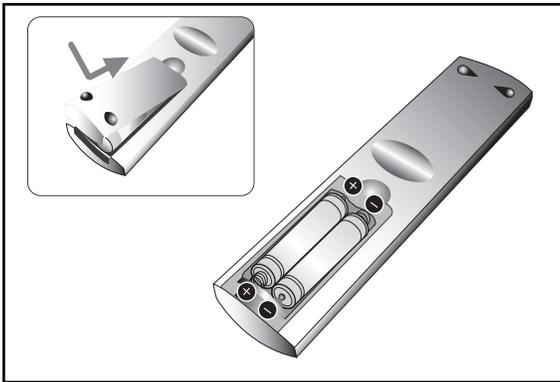
Connect the HDMI cable from the output jack on the DVD player or Set-top box to the [HDMI 1] or [HDMI 2] input jack on the TV.

## Inserting the Batteries

For the operation of the remote control 2 type R03 1.5V Size AAA batteries are included in the delivery.



When inserting the batteries, ensure the polarity is matched correctly (+ and - marking on the battery and on the unit).



- 1 Remove the cover on the back of the remote control and insert the batteries.

### ➤ Notes on Handling Batteries

When used properly batteries are a safe and reliable source of energy. However, when misused or not used according to the intention, they may leak. In extreme cases there is a danger of explosion or fire. Therefore please understand that the manufacturer will not be liable in case of misuse or improper use. For detailed information on how to handle the batteries, please contact the respective manufacturer.



Never try to recharge non-rechargeable batteries.



Disposal of batteries is clearly regulated by legal acts. Consumer quantities of batteries must be taken back by the dealer or by local public collectors. Never discharge batteries together with common waste. Make use of the free public collection system! Protect your environment. Return used batteries.

# Settings

## Switching On

- 1 Press the mains switch on the back of the unit.
- 2 Press  the remote control. This switches the unit on and it can be operated using the remote control.



If it is not explicitly stated otherwise, it will be assumed that the unit and the TV set are switched on and will be operated by the remote control.



By default, the unit is set to the English language. For information on how to change the on-screen language later, refer to: "Set Screen Language" on page 24.

## Switching Off

### ➤ *Stand by*

- 1 Press  on the remote control.



Please note that the unit also consumes a little power when in stand by mode.

### ➤ *Switch Stand by Off*

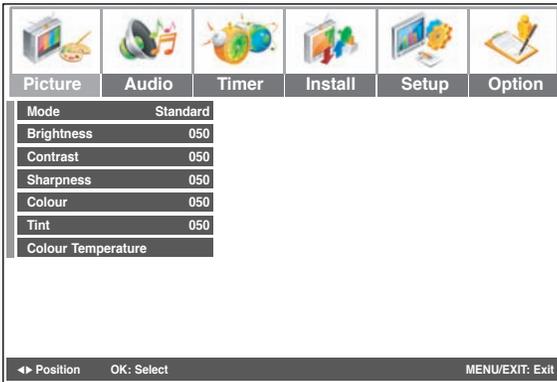
- 1 Press the mains switch on the back of the unit.  
Now the unit is switched off completely and does not consume any power.

## Setting up for Operation

You can adjust various settings of the unit to adapt it to your requirements.

## Open, Select and Close Menus

The settings of the unit are accessible via menus. To navigate in the menus proceed as follows:



- 1 Press .  
The main menu opens. The submenu selected last will be displayed.
- 2 If necessary, press to return to the main menu.
- 3 Press or to select the desired menu.  
Or
- 4 Press or to select the desired sub menu.
- 5 Press or to set the desired sub menu.
- 6 Press to move one menu level up.
- 7 Press or to select the desired setting.
- 8 Press to activate the desired setting.
- 9 Press to save the settings.

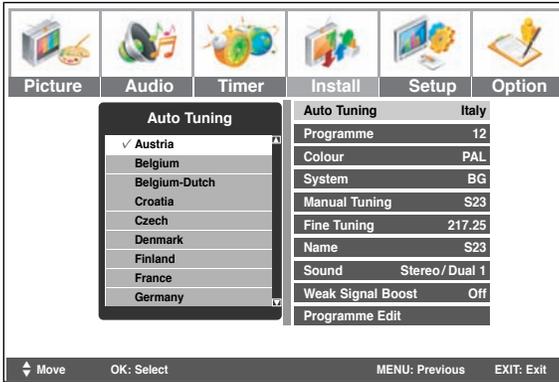
## Tuning

### ➤ *Starting Automatic Tuning TV Stations*

Use this feature to start automatic tuning. The TV channels will be tuned and stored. Later you can rearrange the sorting of the TV channels as you wish.



You only need to tune the TV channels, if the device is connected to a roof aerial. If you use a satellite receiver, a decoder or a similar device, the signal of this device will be shown. Press and select the desired device.



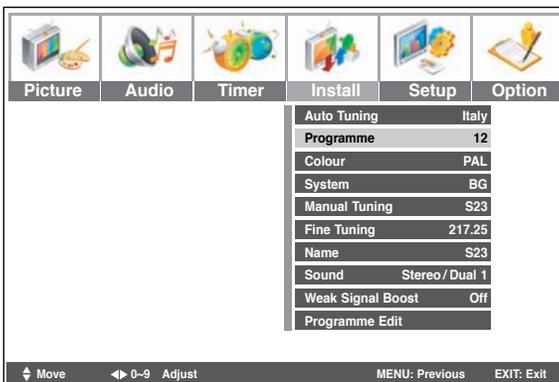
- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select **INSTALL**.
- 3 Press **▲** or **▼** and select **AUTO TUNING**.
- 4 Press **OK**.
- 5 Select the country where you want to operate the unit.
- 6 Press **▲** or **▼** to select the desired setting.
- 7 Press **OK** to start tuning.  
Press **MENU** to interrupt tuning.  
The tuning starts and the TV channels are listed.
- 8 After tuning is completed a menu in which you can make the settings opens.



You can also make the settings later. Note that TV must be selected as a signal source for this menu to be active.

## Change channel

Use this function to set the channel for individual stations.



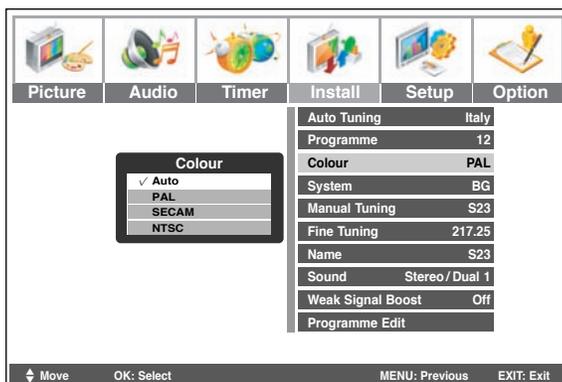
- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select **INSTALL**.
- 3 Press **▲** or **▼** and select **PROGRAMME**.
- 4 Press **◀** or **▶** and select the desired channel.
- 5 Adjust the settings in the other menus.
- 6 Press **EXIT** to save the settings.

## Set Colour System

Use this function to set the television signal to your national television standard.



These settings are made automatically by the automatic tuning function. You should only change the settings described in this section, if you are familiar with the reception of television signals.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select INSTALL.
- 3 Press **▲** or **▼** and select COLOUR.
- 4 Press **OK**.
- 5 Press **▲** or **▼** to select the desired setting.
- 6 Press **EXIT** to save the settings.

The following settings are available:  
Auto, PAL, SECAM, NTSC

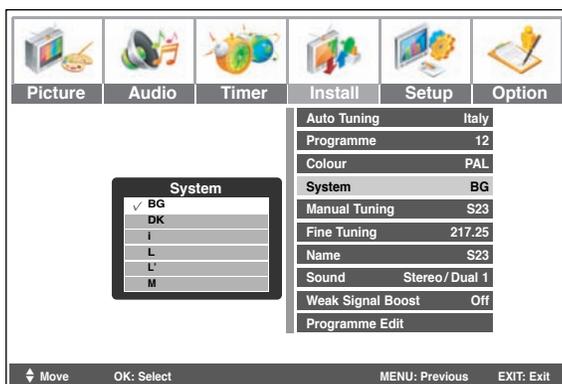
The automatic tuning function sets the unit automatically to the received signal. This is why the menu item AUTO cannot be selected.

## Set System

Use this function to set the sound signal to your national television standard.



These settings are made automatically by the automatic tuning function. You should only change the settings described in this section, if you are familiar with the reception of television signals.

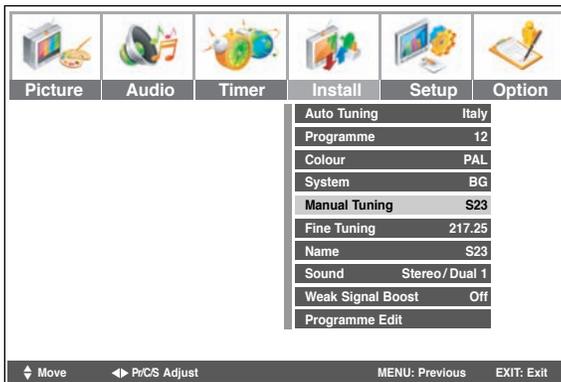


- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select INSTALL.
- 3 Press **▲** or **▼** and select SYSTEM.
- 4 Press **OK**.
- 5 Press **▲** or **▼** to select the desired setting.
- 6 Press **EXIT** to save the settings.

The following settings are available:  
BG, DK, I, L, L', M

## Manual Tuning

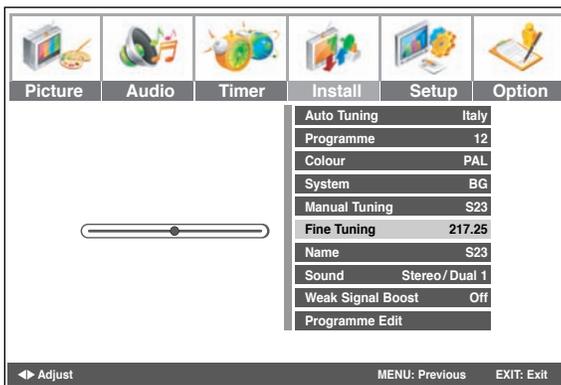
Use this function to tune the channels manually.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select INSTALL.
- 3 Press **▲** or **▼** and select PROGRAMME.
- 4 Press **◀** or **▶** and select the desired channel.
- 5 Press **▲** or **▼** and select MANUAL TUNING.
- 6 Press **◀** or **▶** and select the desired channel.
- 7 Press **PI/CS** to select C for standard channels or S for cable channels.
- 8 Adjust the settings in the other menus.
- 9 Press **EXIT** to save the settings.

## Fine Tuning

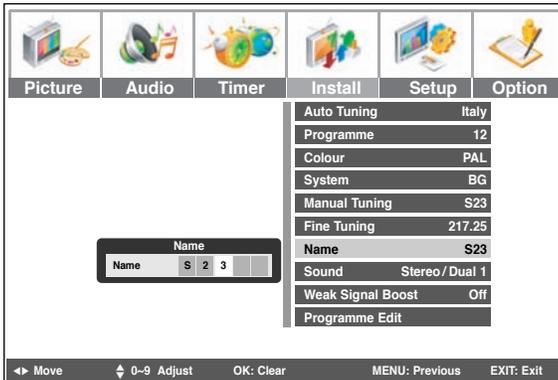
Use this function to adjust the tuning of the individual channels for a clearer picture.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select INSTALL.
- 3 Press **▲** or **▼** and select PROGRAMME.
- 4 Press **◀** or **▶** and select the desired channel.
- 5 Press **▲** or **▼** and select FINE TUNING.
- 6 Press **◀** or **▶** and adjust the fine tuning.
- 7 Press **EXIT** to save the settings.

## Change Channel Name

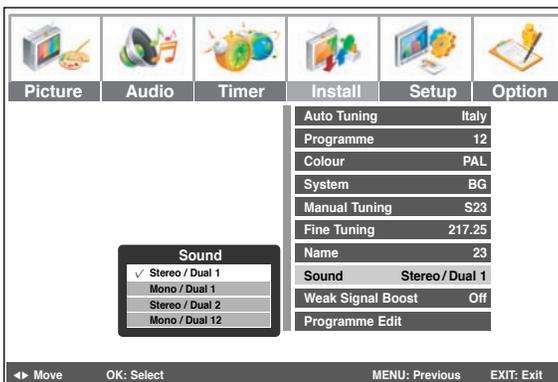
The names of the channels are programmed into the receiver. You can change these names manually.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select INSTALL.
- 3 Press **▲** or **▼** and select PROGRAMME.
- 4 Press **◀** or **▶** and select the desired channel.
- 5 Press **▲** or **▼** and select NAME.
- 6 Press **OK**.
- 7 Press **▲** or **▼** to select the desired letter.
- 8 Press **◀** or **▶** to move to the next letter.
- 9 Press **EXIT** to save the settings.

## Sound Settings

The unit can record and play back stereo sounds.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select INSTALL. Press **▲** or **▼** and select SOUND.
- 3 Press **OK**.
- 4 Press **▲** or **▼** to select the desired setting.
- 5 Press **EXIT** to save the settings.



This setting is only available if the tuner is receiving a signal from the roof aerial or the cable. If you have connected an external device, set the language on this device.

The following settings are available:

Stereo/Dual 1: National language stereo

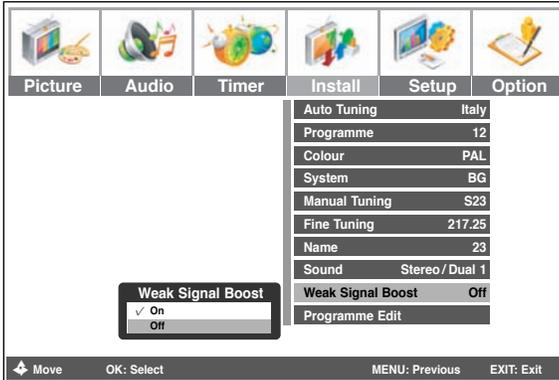
Mono/Dual 1: National language mono

Stereo/Dual 2: Foreign language of the program

Stereo/Dual 12: Both languages at the same time

## Improve Signal Quality

Use this function to improve poor signal quality.

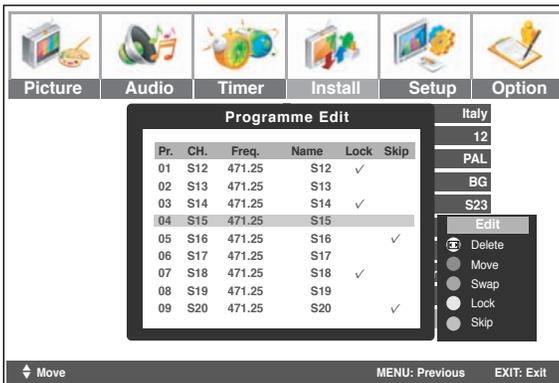


- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select INSTALL.
- 3 Press **▲** or **▼** and select WEAK SIGNAL BOOST.
- 4 Press **OK**.
- 5 Press **▲** or **▼** to select the desired setting.
- 6 Press **EXIT** to save the settings.

The following settings are available :  
On/Off

## Set Channel

Use this function to set the settings for individual channels.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select INSTALL.
- 3 Press **▲** or **▼** and select PROGRAMME EDIT.
- 4 Adjust the settings.
- 5 Press **EXIT** to save the settings.

The following settings are available:

Delete: Delete a channel.

Move: Move a channel up or down in the list of channels.

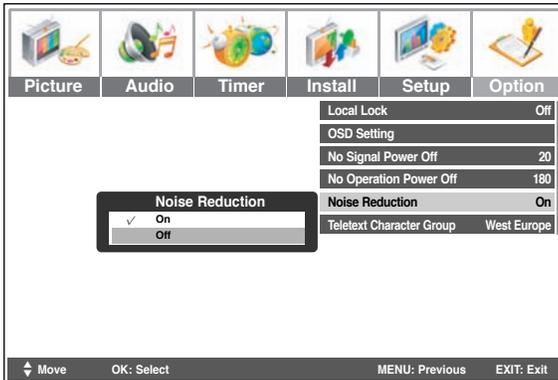
Swap: Swap selected channels.

Lock: Lock channel

Skip: Skip channels when scrolling

## Reduce Noise

Use this function to reduce picture noise.

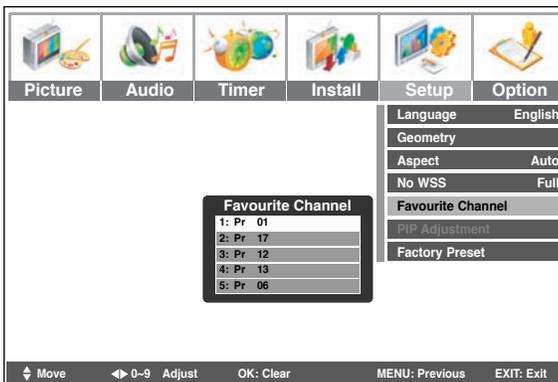


- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select **OPTION**.
- 3 Press **▲** or **▼** and select **NOISE REDUCTION**.
- 4 Press **OK**.
- 5 Press **▲** or **▼** to select the desired setting.
- 6 Press **EXIT** to save the settings.

The following settings are available:  
On/Off

## Channel Groups

Use this function to store channels in the list of favourites with access by **FAVOR**.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select **SETUP**.
- 3 Press **▲** or **▼** and select **FAVOURITE CHANNEL**.
- 4 Press **OK**.
- 5 Press **▲** or **▼** to select the desired line.
- 6 Press **◀** or **▶** to select the desired channel.
- 7 Press **EXIT** to save the settings.

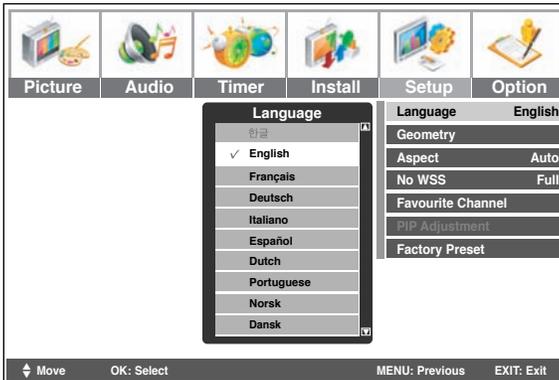
To delete a wrong entry press **OK**.

### ➤ Watch Favourite Channel

Press **FAVOR** to scroll through your favourite channels.

## Set Screen Language

By default, the unit is set to the English language. The screen display text can be displayed in several languages.

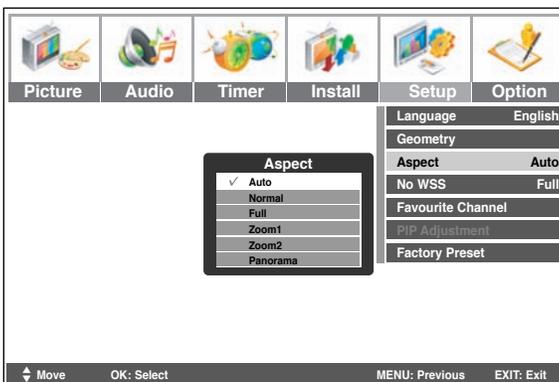


- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select SETUP.
- 3 Press **▲** or **▼** and select LANGUAGE.
- 4 Press **OK**.
- 5 Press **▲** or **▼** to select the desired setting.
- 6 Press **EXIT** to save the settings.
- 7 To return to the main menu, press **MENU** several times.

## Set Aspect Ratio

### ➤ Set Wide Screen Format

Use this function to display programmes broadcast in wide screen format.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select SETUP.
- 3 Press **▲** or **▼** and select ASPECT.
- 4 Press **OK**.
- 5 Press **▲** or **▼** to select the desired setting.
- 6 Press **EXIT** to save the settings.

The following settings are available:

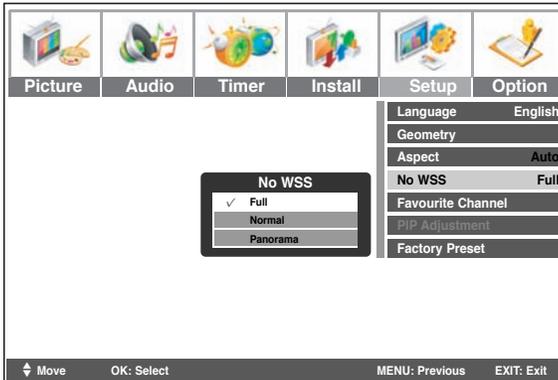
- Auto: Sets the display automatically to the broadcast format.
- Normal: The format 16:9 is suppressed. The format 4:3 is not adapted a black area is displayed on the left and the right.
- Full: The format 16:9 is displayed as broadcast. The format 4:3 is horizontally spread.
- Zoom1: The format 4:3 is vertically spread.
- Zoom2: Like zoom1 but the whole picture is moved upwards so that text at the bottom of the display becomes visible.
- Panorama: The format 16:9 is displayed as broadcast. The format 4:3 is horizontally spread. In this the outer areas of the picture are modified more than the centre of the picture.



You can scroll through the settings while watching. For this, press **MENU** **ESC**.

## ➤ Display if no Wide Screen Signal is Received

Most programs are broadcast together with a signal describing the format of the picture. With this function you can set the way the picture is displayed, if no such signal is received. This function is only available, if you have set the picture format to AUTO.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select SETUP.
- 3 Press **▲** or **▼** and select NO WSS.
- 4 Press **OK**.
- 5 Press **▲** or **▼** to select the desired setting.
- 6 Press **EXIT** to save the settings.

The following settings are available :

**Normal:** The format 16:9 is suppressed. The format 4:3 is not adapted a black area is displayed on the left and the right.

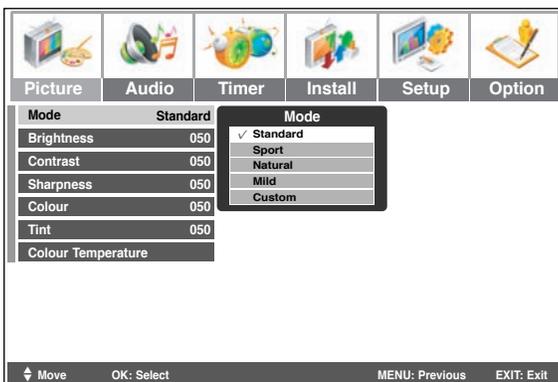
**Full:** The format 16:9 is displayed as broadcast. The format 4:3 is horizontally spread.

**Panorama:** The format 16:9 is displayed as broadcast. The format 4:3 is horizontally spread.

In this the outer areas of the picture are modified more than the centre of the picture.

## Set Picture Mode

Use this function to adapt the picture optimally to the content. You can also adapt the sound modes for these settings. See “Adjust Individual Audio Frequencies” on page 28.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶**, and select PICTURE.
- 3 Press **▲** or **▼**, and select MODE.
- 4 Press **OK**.
- 5 Press **▲** or **▼** to select the desired setting.
- 6 Press **EXIT** to save the settings.

The following settings are available :

**Standard:** Setting for a bright background of the television set.

**Sport:** Setting for a clearer picture.

**Natural:** Setting for films and music.

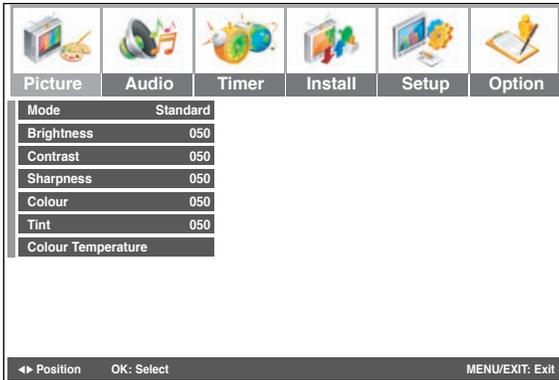
**Mild:** Setting for a dark background of the television set.

**Custom:** Select this mode if you want to adjust the settings individually. See “Additional Picture Settings” on page 26.

You can also select the picture mode manually. For this, press **PMODE**.

## ➤ Additional Picture Settings

Use this functions to adjust the picture settings individually, if you have selected the picture mode Custom.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select PICTURE.
- 3 Press **▲** or **▼** to select the desired menu.
- 4 Press **OK** to open the desired menu.
- 5 Press **◀** or **▶** to select the desired setting.
- 6 Press **EXIT** to save the settings. The settings will be saved in the picture mode Custom.

The following settings are available:

Brightness: Brightness of the picture

Contrast: Contrast of the picture

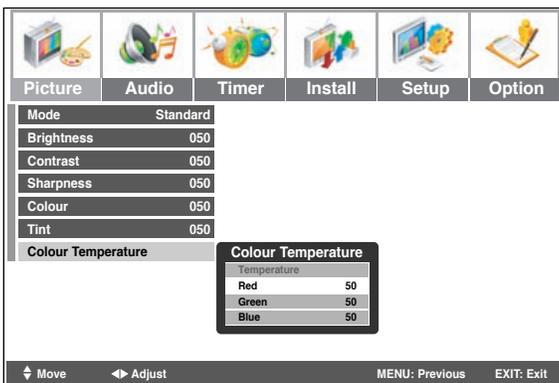
Sharpness: Sharpens the edges of the objects

Colour: Adjusts the intensity of the colours

Tint: Sets the hue

## ➤ Set Individual Colour Channels

Use this function to adjust the intensity of the individual colour channels.



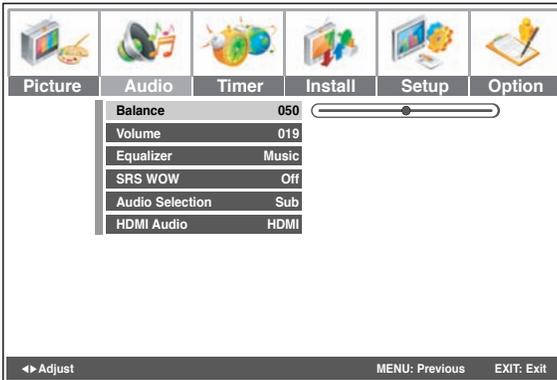
- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select PICTURE.
- 3 Press **▲** or **▼** and select COLOUR TEMPERATURE.
- 4 Press **OK**.
- 5 Press **▲** or **▼** to select the desired setting.
- 6 Press **EXIT** to save the settings.

The following settings are available:

Red/Green/Blue

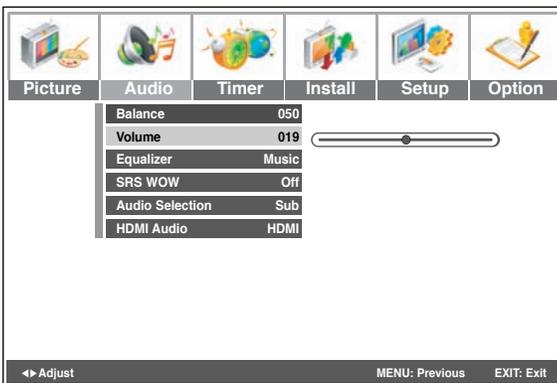
## Audio Settings

### ➤ Set Balance



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select AUDIO.
- 3 Press **▲** or **▼** and select BALANCE.
- 4 Press **OK**.
- 5 Press **◀** or **▶** to select the desired setting.
- 6 Press **EXIT** to save the settings.

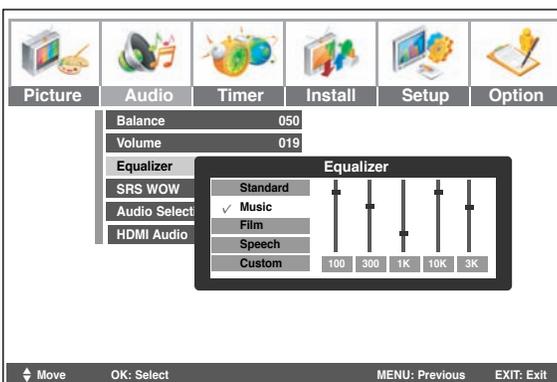
### ➤ Set volume



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select AUDIO.
- 3 Press **▲** or **▼** and select VOLUME.
- 4 Press **OK**.
- 5 Press **◀** or **▶** to select the desired setting.
- 6 Press **EXIT** to save the settings.

## Adjust Individual Audio Frequencies

Use this function to adjust the individual frequency ranges. The settings are allocated to the different picture modes. You can only adjust these settings, if the SRS function is turned off.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select AUDIO.
- 3 Press **▲** or **▼** and select EQUALIZER.
- 4 Press **OK**.
- 5 Press **◀** or **▶** to select the desired frequency.
- 6 Press **▲** or **▼** to select the desired setting.
- 7 Press **EXIT** to save the settings.

## Adjust Medium and Low Frequencies

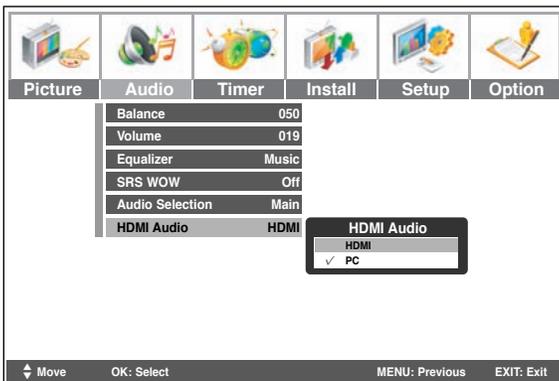
Use this function to boost the medium and low frequencies to create a better surround sound. For this the SRS WOW® technology is used.  is a registered trademark.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select AUDIO.
- 3 Press **▲** or **▼** and select SRS WOW.
- 4 Press **OK**.
- 5 Press **▲** or **▼** to select the desired setting.
- 6 Press **EXIT** to save the settings.

The following settings are available:  
On/Off

## Set the Audio Input (HDMI or PC)



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select AUDIO.
- 3 Press **▲** or **▼** and select HDMI AUDIO.
- 4 Press **OK**.
- 5 Press **▲** or **▼** to select the desired settings.
- 6 Press **EXIT** to save the settings.

The following settings are available:  
HDMI/PC

When connecting the PC to your TV with the HDMI/DVI cable, you should select PC.

## Set Sound Source

Use this function to set which sound you will hear when watching picture-in-picture mode.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select AUDIO.
- 3 Press **▲** or **▼** and select AUDIO SELECTION.
- 4 Press **OK**.
- 5 Press **▲** or **▼** to select the desired setting.
- 6 Press **EXIT** to save the settings.

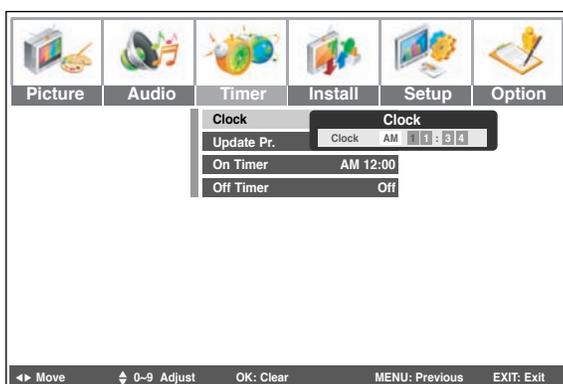
The following settings are available :

Main: You will hear the sound of the main screen

Sub: You will hear the sound of the small screen

## Set Time

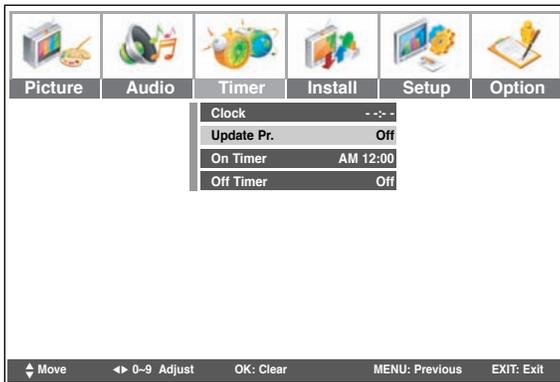
In order to set the correct times for switching on and off automatically, the clock in the receiver must be set correctly. By default, the unit receives the current time from the selected station. You can enter the time manually as well. Enter the time in 12-hour format.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select TIMER.
- 3 Press **▲** or **▼** and select CLOCK.
- 4 Press **OK**.
- 5 Press **▲** or **▼** and select AM for times between 0:00 hours and 12:00 hours or PM for the times between 12:00 hours and 24:00 hours.
- 6 Enter the time using the key pad.
- 7 Press **EXIT** to save the settings.

## ➤ Set Time by Station

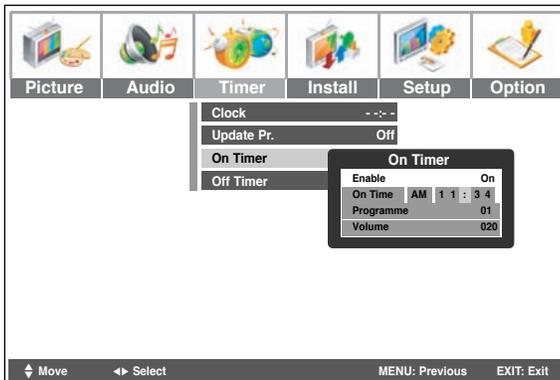
Use this function to set the time of the unit to the time broadcast by the station.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select **TIMER**.
- 3 Press **▲** or **▼** and select **UPDATE PR.**
- 4 Press **◀** or **▶** and select the desired channel.
- 5 Press **EXIT** to save the settings.

## Set Switch on Time

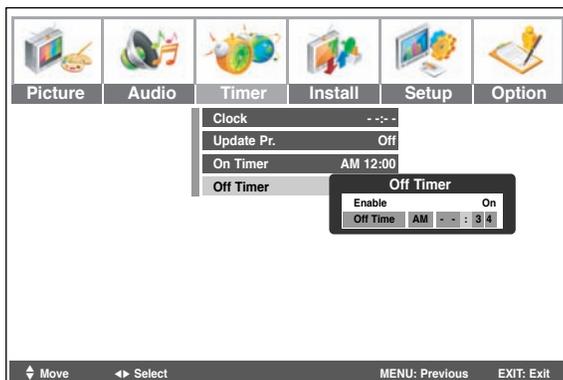
Use this function to set a time when the unit turns on.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select **TIMER**.
- 3 Press **▲** or **▼** and select **ON TIMER**.
- 4 Press **OK**.
- 5 Press **◀** or **▶** and select **ON** or **OFF**.
- 6 Press **▲** or **▼** and select **AM** for times between 00:00 hours and 12:00 hours or **PM** for the times between 12:00 hours and 24:00 hours.
- 7 Enter the time using the key pad.
- 8 Select the channel.
- 9 Set the volume.
- 10 Press **EXIT** to save the settings.

## Set Switch off Time

Use this function to set a time when the unit turns off.

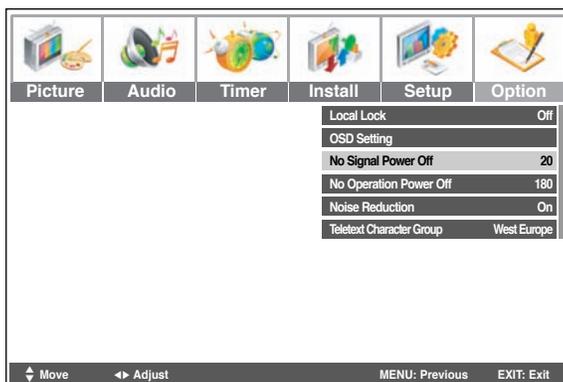


- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select **TIMER**.
- 3 Press **▲** or **▼** and select **OFF TIMER**.
- 4 Press **OK**.
- 5 Press **◀** or **▶** and select **ON** or **OFF**.
- 6 Press **▲** or **▼** and select **AM** for times between 00:00 hours and 12:00 hours or **PM** for the times between 12:00 hours and 24:00 hours.
- 7 Enter the time using the key pad.
- 8 Press **EXIT** to save the settings.

## Automatic Switch off

### ➤ Automatic Switch off if no Signal is Received

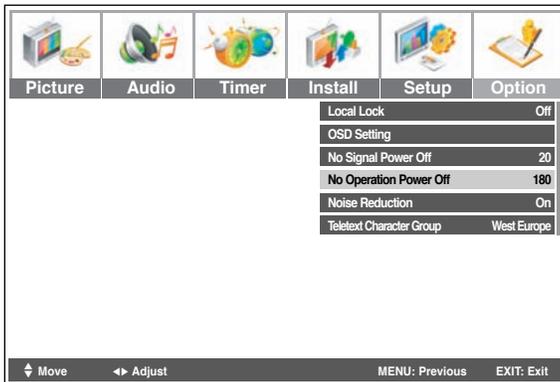
This function switches the unit automatically off, if no signal is received. (E.g. when a video tape was played completely and the video recorder turns off).



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select **OPTION**.
- 3 Press **▲** or **▼** and select **NO SIGNAL POWER OFF**.
- 4 Press **◀** or **▶** and select the time.
- 5 Press **EXIT** to save the settings.

### ➤ *Switch Off if no Key is Pressed*

This function switches the unit automatically off, if no key is pressed for a longer time.

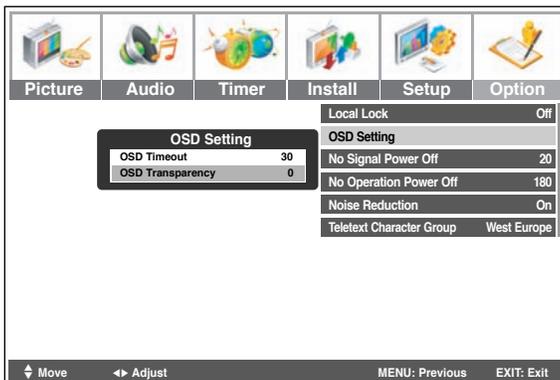


- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select **OPTION**.
- 3 Press **▲** or **▼** and select **NO OPERATION POWER OFF**.
- 4 Press **◀** or **▶** and select the time.
- 5 Press **EXIT** to save the settings.

## Set On-Screen Display

### ➤ *Set Duration*

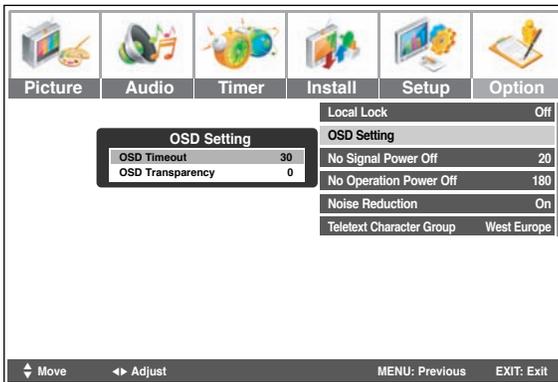
Use this function to set the time span for which the on-screen display will be shown.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select **OPTION**.
- 3 Press **▲** or **▼** and select **OSD SETTING**.
- 4 Press **OK**.
- 5 Press **▲** or **▼** and select **OSD TIMEOUT**.
- 6 Press **◀** or **▶** to select the desired setting.
- 7 Press **EXIT** to save the settings.

## ➤ Set Transparency

Use this function to set the transparency of the on-screen display.

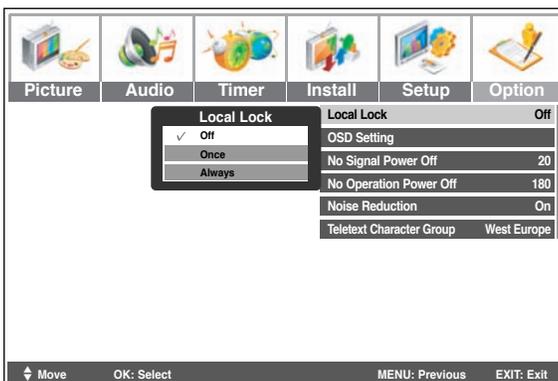


- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select **OPTION**.
- 3 Press **▲** or **▼** and select **OSD SETTING**.
- 4 Press **OK**.
- 5 Press **▲** or **▼** and select **OSD TRANSPARENCY**.
- 6 Press **◀** or **▶** to select the desired setting.
- 7 Press **EXIT** to save the settings.

## Child Lock

You can lock the keys on the front panel of the unit. Then the operation is only possible by the remote control. In this case keep the remote control out of the reach of children.

## ➤ Activate Child Lock



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select **OPTION**.
- 3 Press **▲** or **▼** and select **LOCAL LOCK**.
- 4 Press **OK**.
- 5 Press **▲** or **▼** to select the desired setting.
- 6 Press **EXIT** to save the settings.

If a deactivated key is pressed the message TV Key will appear

The following settings are available:

Off: No key lock.

Once: The key lock is active until the unit is turned on using the remote control.

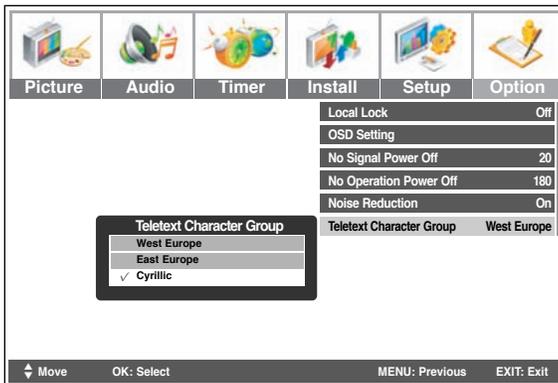
Always: The key lock is permanently active.

## ➤ Deactivate Child Lock

To deactivate child lock, proceed as described in chapter “Activate Child Lock” on page33 and select OFF.

## Set Characters for Teletext

Use this function to set the character set for teletext to your region.

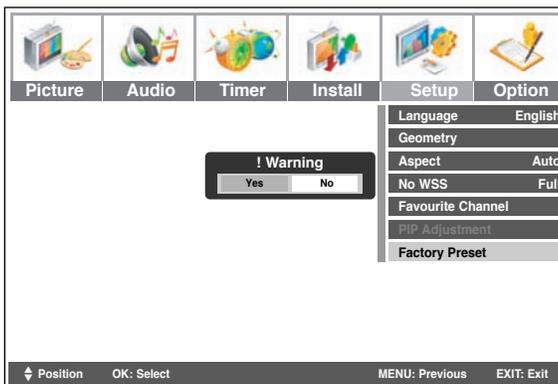


- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select **OPTION**.
- 3 Press **▲** or **▼** and select **TELETEXT CHARACTER GROUP**.
- 4 Press **▲** or **▼** and select the character set.
- 5 Press **EXIT** to save the settings.

The following settings are available :  
Western Europe, Eastern Europe, Cyrillic

## Restore Default

Use this function to set all settings you have made back to the default factory setting.



- 1 Press **MENU**. To return to the main menu, press **MENU** several times.
- 2 Press **◀** or **▶** and select **SETUP**.
- 3 Press **▲** or **▼** and select **FACTORY PRESET**.
- 4 Press **OK**.
- 5 Press the mains switch on the back of the unit.

## Settings for the Computer

If you are using the unit as a monitor for your computer make the applicable settings accordingly. Set the resolution to 1024 X 768 and the frequency to 60 Hz.

# Watching

## Watch Current Television Program

When you switch the unit on, the current television program will be displayed.

## Set Volume

1 Press ◀ or ▶ to set the desired volume.

### ➤ *Mute*

1 Press  to switch the sound temporarily off.

3 Press  to switch the sound on again.

## Change Channel

Press ▲ or ▼ to scroll through the channels.

### ➤ *Switch to Last Channel*

Use this function to toggle between the last two channels you have watched.

1 Press .

### ➤ *Show Channel Information*

Use this function to display the current station name and the channel.

1 Press .

2 Press  again to hide the information.

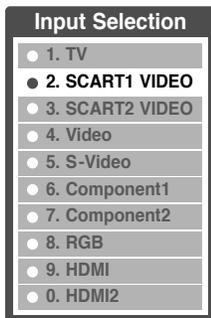
## Recall a Favourite Channel

Use this function to scroll through the channels or sources you have stored as your favourite stations. This way you do not need to scroll through all the stations, if you only want to watch specific subjects. On how to store channels as your favourites see: “Channel Groups” on page 23.

- 1 Press .
- 2 Press  repeatedly until you select the desired channel.

## Select Source

Use this function to select which signal will be displayed on the main screen, if you have connected several sources (e.g. a decoder and a roof aerial).



- 1 Press .

### ➤ Select Input

Use this function to switch directly between the different input channels. For this, press the keys below.

-  : Selects a RGB, HDMI or HDMI2 input .
-  : Selects a component input.
-  : Selects a SCART or AV input.
-  : Selects a TV.

## Watch Two Programs at the Same Time (PIP)

Use this function to display a second picture. This way you can watch two programs you are receiving by antenna or by the other inputs at the same time. You can display on large and one small picture or two pictures of the same size. You can adapt the size and the position of the small picture.

### ➤ Display Second Picture

- 1 Press .

### ➤ Select Signal Source for PIP

Use this function to select which signal to display on the sub screen, if you have connected several sources.

- 1 Press .

Whenever you press , you can choose the external signal source excluding the chosen signal source on the main picture.

### PIP

Main	PIP	TUNER	SCART1 Input			SCART2 Input			AV2 Input		Component Input		PC
		SUB	VIDEO	S-VIDEO	VIDEO	S-VIDEO	RGB	VIDEO	S-VIDEO	Component1	Component2	RGB	
TUNER	Main	△ *1	○	○	○	○	○	○	○	○	○	○	○
SCART1 Input	VIDEO	○	X	X	○	○	○	○	○	○	○	○	○
	S-VIDEO	○	X	X	○	○	○	○	○	○	○	○	○
	RGB	○	X	X	○	○	○	○	○	○	○	○	○
SCART2 Input	VIDEO	○	○	○	X	X	X	○	○	○	○	○	○
	S-VIDEO	○	○	○	X	X	X	○	○	○	○	○	○
AV2 Input	VIDEO	○	○	○	○	○	○	X	○	○	○	○	○
	S-VIDEO	○	○	○	○	○	○	○	X	○	○	○	○
Component Input	Component1	○	○	○	○	○	○	○	○	X	○	○	○
	Component2	○	○	○	○	○	○	○	○	○	X	○	○
PC	RGB	○	○	○	○	○	○	○	○	○	○	○	X
	HDMI	○	○	○	○	○	○	○	○	○	○	○	○

(\*1: 2 Tuner model only)

### ➤ Toggle between Two Pictures

- 1 Press .

This function is only available if you have selected a signal source for the main screen and the sub screen.

### ➤ Switch Second Picture Off

- 1 Press  several times.

### ➤ Toggle Sound between Main Screen and Sub Screen

- 1 Press .

### ➤ Display Two Pictures at the same Time

- 1 Press  several times.

This function is only available if you have selected a signal source for the main screen and the sub screen.

## Set Picture-in-Picture Size

Use this function to set the size of the small picture.

- 1 Press .
- 2 Press .
- 3 Press ▲ or ◀ or ▼ or ▶ and select the desired size.

You can also adjust this setting in the menu OPTIONS.

## Set Picture-in-Picture Position

Use this function to set where the sub screen will be displayed.

- 1 Press .
- 2 Press .
- 3 Press ▲ or ◀ or ▼ or ▶ and select the desired size.

You can also adjust this setting in the menu OPTIONS.

## Teletext

This function is only available if the current station broadcasts teletext.

- 1 Press  to display teletext.

Teletext is not available for PIP.

The following settings are available:

- : Cancels the current function.
- : Opens a sub page (if available). Enter the number of the sub page using the key pad.
- : Interrupts the display of several sequential pages. To continue the display, press the key again.
- : Shows hidden text (e.g. solutions in quiz shows).
- : Increases/decreases the display. Press the key several times to scroll through the different sizes.
- : Shows teletext on a transparent background.
- : Shows the index page of teletext.

## Still Picture

Use this function to hold the picture.

- 1 Press .  
During the display of the still picture the sound will continue to play.
- 2 Press  again to continue watching.

## Show Time

Use this function to display the time. If teletext is displayed, the time will not be shown.

- 1 Press .
- 2 Press  again to hide the time.

## Set Sleep Time

Use this function to set after how many minutes the unit will switch off.

- 1 Press  until the desired number of minutes is displayed.

## Set Picture Mode while Watching.

Use this function to adjust the picture optimally to the content.

- 1 Press  until the desired mode is displayed.

For further information on the settings refer to: "Set Picture Mode" on page 25.

## Adjust Picture Size while Watching

Use this function to set the picture size.

- 1 Press  until the desired size is displayed.

For further information on the settings refer to: "Set Aspect Ratio" on page 24.

## Set Sound Effect while Watching

Use this function to set the sound effects.

- 1 Press .
- 2 Press  again to switch the sound effect off.

For further information on the settings refer to: "Adjust Medium and Low Frequencies" on page 28.

## Set Sound while Watching

Use this function to adjust the sound optimally to the content.

- 1 Press  until the desired mode is displayed.

For further information on the settings refer to: "Adjust Individual Audio Frequencies" on page 28.

## Set Stereo/Mono while Watching

Use this function to turn the stereo sound on or off.

- 1 Press .

The  displays/controls the processing and output of the audio signal. When power is switched on, the mode is automatically preset to stereo or dual, depending on the current transmission.

For further information on the settings refer to: "Sound Settings" on page 21.

# Cleaning and Troubleshooting

## Cleaning



Use a dry cloth to clean the unit. Never use water, cleaning detergents or spray cleaners.

## Troubleshooting

If there are problems with the unit, please check the following points before contacting the technical service.



Never open the unit. This may lead to electric shocks and will void the warranty.

<p><b>No Picture or Sound</b></p>	<p>Make sure the receiver and the TV set are both connected to the mains and switched on. Check whether the antenna cable is in proper condition and if it is connected to the respective sockets. See chapter “Connecting a Satellite Receiver, a Set Top Box or a Video Recorder” on page 9, “Connecting to Cable Reception” on page 11 or “Connecting to the Roof Aerial” on page 10. If you are using a SCART cable, check whether it is properly connected.</p>
<p><b>Black Screen</b></p>	<p>Check whether a signal source is selected. See chapter “Select Source” on page 36 and “Select Input” on page 36.</p>
<p><b>Picture OK but no Sound</b></p>	<p>Check whether the sound is set to mute or if it is turned down. See chapter “Set Volume” on page 35. Check if the sound is ok on another channel. If this is the case, the program is broadcast improperly.</p>
<p><b>Poor Sound</b></p>	<p>Switch between stereo and mono sound. See chapter “Set Stereo/Mono while Watching” on page 40.</p>
<p><b>No Picture on Some Channels</b></p>	<p>Check if the channel has been tuned to a station. See chapter “Tuning” on page 17. Adjust the fine tuning. See chapter “Fine Tuning” on page 20.</p>
<p><b>Unstable, Poor Picture</b></p>	<p>Adjust the fine tuning. See chapter “Fine Tuning” on page 20. Check if strong electromagnetic fields, e.g. caused by electric devices nearby cause the impairments.</p>

<b>Some Channels Display Black and White</b>	Check if other channels display colours. If yes, the program is broadcast in black and white. Adjust the colour settings.
<b>Snow on one or Several Channels</b>	Check whether the antenna cable is in proper condition and if it is connected to the respective sockets. See chapter "Connecting a Satellite Receiver, a Set Top Box or a Video Recorder" on page 9, "Connecting to Cable Reception" on page 11 or "Connecting to the Roof Aerial" on page 10. Adjust the fine tuning. See chapter "Fine Tuning" on page 20.
<b>Remote Control Does Not Work</b>	Make sure the unit is connected to the mains. Check whether the batteries are inserted correctly and whether they are sufficiently charged. To do this, insert new batteries for testing. Check whether a function key for another device has been activated. See chapter "Restore Default" on page 34.
<b>Message "No Signal "</b>	Check whether the connecting cable is properly connected to the computer and the respective sockets.
<b>Message "Video not Supported"</b>	The resolution or the frequency of the graphic board in the computer cannot be displayed. Change the settings in the computer.
<b>Picture Scrolls Vertically</b>	Check whether the connecting cable is properly connected to the computer and the respective sockets.
<b>Parts of the Picture are not Displayed</b>	Check the resolution and the frequency of the graphic board in the computer. Adjust the settings. See chapter "Settings" on page 16.
<b>Picture Too Small or Too Large</b>	Adjust the settings. See chapter "Settings" on page 16.
<b>Horizontal or Vertical Bars</b>	Adjust the settings of the computer. See chapter "Settings for the Computer" on page 34.

# Technical specifications

General	
Input voltage	AC 220-240 V~, 50 Hz
Operating temperature	5 C° to 40 C°
Environment temperature	-20 C° to +60 C°
Remote control	
Type	Infrared
Battery	Type R03 1.5 V Size AAA
LCD	
Pixel	1366 x RGB x 768
Type	a-Si TFT active matrix
Video	
Frequency	UHF/VHF 75 ohm
Colour system	PAL/SECAM/AV/NTSC
Sound system	BG, D/K, I, L, L', M
Video system	CVBS, S-Video
Teletext	4000 pages
DiR Engine	Optional
3D Auto DNR	Yes
Comb Filter	3D digital
Component Input	
Y/Pb/Pr	Component 1/2; 480i/p, 576i/p, 720p, 1080i
SCART	
Video input	1,0 Vp-p @ 75 ohm
Audio input	500 mV RMS
RGB input	0,7 Vp-p @ 75 ohm
PC	
Synchronization	30~61 kHz horizontal 56~75 Hz vertical
Colour display	16,7 M (true)
Resolution Max.	1360 x 768
Input signal	RGB
Synchronization H/V separated	Positive or negative
HDMI	
HDMI	Ver. 1.1

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