

# User Manual

32PFH5300  
32PFT5300  
40PFH5300  
40PFT5300  
50PFH5300  
50PFT5300

**PHILIPS**

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# My new TV

## 1.1

### Smart TV

Connect this Philips Smart LED TV to the Internet and discover a new world of television. You can make a wired connection to your router or you can link up wirelessly with Wi-Fi.

With the TV connected to your home network, a smartphone can show a photo on TV, you can play videos stored on your computer or control the TV with your tablet.

With your TV connected to the Internet, you can watch a rental video from an online video store, read the online TV guide or record your favourite TV show on a USB Hard Drive.

The Smart TV Apps add to the fun with all sorts of entertainment and convenient services.

In **Help**, press **Keywords** and look up **Smart TV** for more information.

## 1.2

### App gallery

Open the **App gallery** in Smart TV to browse the Apps, the collection of tailored websites for TV.

Find the App for YouTube videos, a national newspaper, an online photo album, Twitter, etc.

There are Apps to rent a video from an online video store and Apps for watching programmes you missed.

If the App gallery does not hold what you are looking for, try the World Wide Web and surf the Internet on TV.

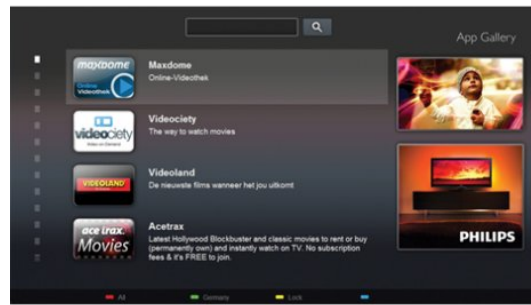
In **Help**, press **Keywords** and look up **App gallery** for more information.

## 1.3

### Rental videos

To watch a **rental video**, you don't need to leave your home.

Simply rent the latest movie from your regional online video store.



Start Smart TV and add the video store App to the Smart TV start page.

Open the video store App, create your personal account, select the movie and press play. No fuss with downloading, you can watch the movie immediately\*.

In **Help**, press **Keywords** and look up **Rental videos** for more information.

\* Depending on the video streaming service of the selected video store.

## 1.4

### Social networks

No need to get up to check your friend's messages on your computer.

On this TV you get the messages from your **social network on your TV screen**. You can send a return message from your couch. You can find the Twitter App on the Home menu tab **Apps**.

In **Help**, press **Keywords** and look up **App gallery** for more information.

## 1.5

### Pause TV and recordings

If you connect a **USB Hard Drive**, you can pause and record a broadcast from a digital TV channel.



Pause your TV and answer that urgent phone call or simply take a break during a sports match, while the TV stores the broadcast on the USB Hard Drive. You can start watching again later.

With a USB Hard Drive connected, you can also record digital broadcasts. You can record while you are watching a programme or schedule a recording

of an upcoming programme.

In **Help**, press **Red** **Keywords** and look up **Pause TV** or **Recording** for more information.

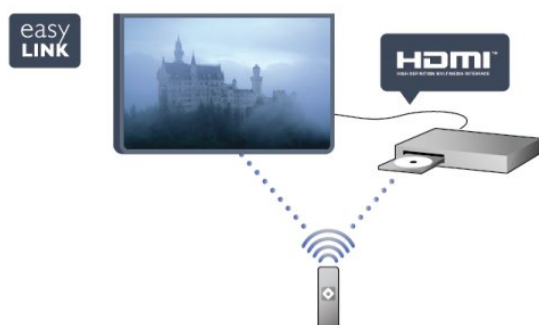
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1.6

## EasyLink

With EasyLink you can operate a connected device, like a Blu-ray Disc player, with the remote control of the TV.

EasyLink uses HDMI CEC to communicate with the connected devices.



In **Help**, press **Red** **Keywords** and look up **EasyLink** for more information.

# Setting up

## 2.1

### Read safety

Read the safety instructions first before you use the TV.

In Help, go to **Safety and care > Safety**.

## 2.2

### TV stand and wall mounting

#### TV stand

You can find the instructions for mounting the TV stand in the Quick Start Guide that came with the TV. In case you lost this guide, you can download it from [www.philips.com](http://www.philips.com).

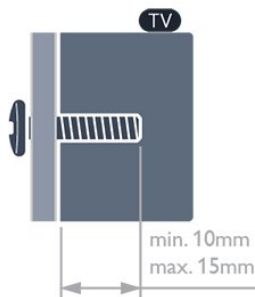
Use the product type number of the TV to look for the Quick Start Guide to download.

#### Wall mounting

Your TV is also prepared for a VESA-compliant wall mount bracket (sold separately).

Use the following VESA code when purchasing the wall mount . . .

To fix the bracket securely, use screws with a length indicated in the drawing.



- For 5300 series 32-inch TV  
VESA MIS-F 100x100, M4
- For 5300 series 40-inch TV  
VESA MIS-F 200x200, M4
- For 5300 series 50-inch TV  
VESA MIS-F 400x200, M6

#### Caution

Wall mounting the TV requires special skills and should only be performed by qualified personnel. The TV wall mounting should meet safety standards according to the TV's weight. Also read the safety

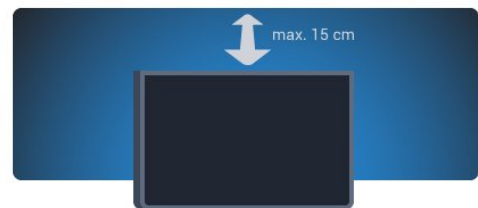
precautions before positioning the TV.

TP Vision Europe B.V. bears no responsibility for improper mounting or any mounting that results in accident or injury.

## 2.3

### Tips on placement

- Position the TV where light does not shine directly on the screen.
- Position the TV up to 15 cm away from the wall.
- The ideal distance to watch TV is 3 times its diagonal screen size. When seated, your eyes should be level with the centre of the screen.

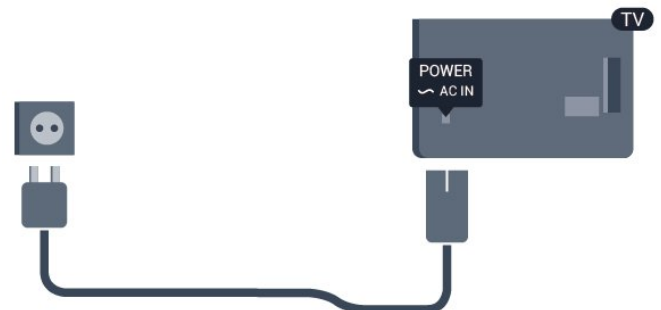


## 2.4

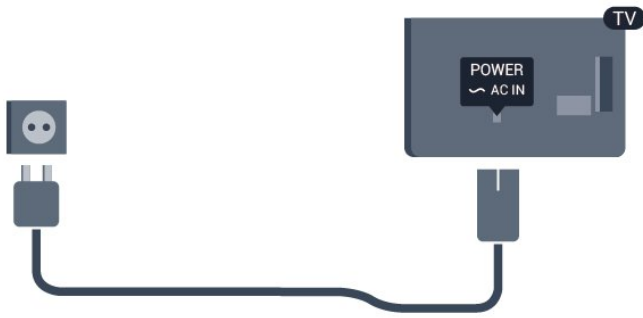
### Power cable

- Insert the power cable into the **POWER** connector on the back of the TV.
- Make sure the power cable is securely inserted in the connector.
- Make sure that the power plug, in the wall socket, is accessible at all times.
- When you unplug the power cable, always pull the plug, never pull the cable.

For 32"/40"



For 50"



Although this TV has a very low standby power consumption, unplug the power cable to save energy if you do not use the TV for a long period of time.

In **Help**, press **Keywords** and look up **Switching** on for more information on switching the TV on or off.

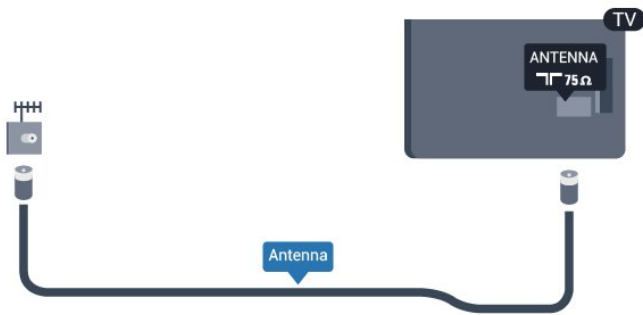
## 2.5

# Antenna cable

Insert the antenna plug firmly into the **ANTENNA** socket at the back of the TV.

You can connect your own antenna or an antenna signal from an antenna distribution system. Use an IEC Coax 75 Ohm RF antenna connector.

Use this antenna connection for DVB-T and DVB-C input signals.



# Network

## 3.1

### Wireless network

#### What you need

To connect the TV wirelessly to the Internet, you need a wireless router. Use a high-speed (broadband) connection to the Internet..



#### Network devices

The TV can connect to other devices in your wireless network, like your computer or smartphone. You can use a computer with Microsoft Windows or Apple OS X.

#### File sharing

On this TV, you can open photos, music and videos stored on your computer. Use a recent version of media server software like Philips MediaManager\*, Windows Media Player 11, Twonky™ or similar.

Install the media server software on your computer and set it up to share your media files with the TV. Read the manual of the media server software for more information. This software must be running on your computer to view or play your files on TV.

\* You can download the Philips MediaManager software from the Philips support site [www.philips.com/support](http://www.philips.com/support)

### Make the connection

Follow steps 1 to 5.

**Step 1** - Make sure that the router of your wireless network is switched on.

**Step 2** - Press **Home** and select **Setup** and press **OK**.

**Step 3** - Select **Connect to network** and press **OK**.

**Step 4** - Select **Connect** and press **OK**.

**Step 5** - Select **Wireless** and press **OK**.

**Step 6** - Select **Scan** to scan for your wireless network. If you have a router with WPS (Wi-Fi Protected Setup), you can select **WPS**. Select your

choice and press **OK**.

#### • Scan

Select **Scan** to scan for your wireless network (your wireless router). The TV might find several wireless networks in your proximity.

#### • WPS

If your router has WPS, you can directly connect to the router without scanning. Go to the router, press the WPS button and return to the TV within 2 minutes. Then press **Connect** to make the connection.

If you have devices in your wireless network that use the WEP security encryption system, you cannot use WPS.

If you must use the **WPS PIN code** to connect, select **Scan** instead of WPS.

**Step 7** - In the list of networks found, select your wireless network and press **OK**.

If your network is not in the list because the network name is hidden (you switched off the SSID broadcast of the router), select **Manual entry** to enter the network name yourself.

**Step 8** - Depending on the type of router, you can now enter your encryption key (WEP, WPA or WPA2). If you entered the encryption key for this network before, you can select **Next** to make the connection immediately.

If your router supports WPS or WPS PIN, you select **WPS**, **WPS PIN** or **Standard**. Select your choice and press **OK**.

#### • Standard

Select **Standard** to enter the encryption key (password, passphrase or security key) manually. You can use the keyboard on the RC to enter the encryption key. Once you have entered the key, press **Connect**.

#### • WPS PIN

To make a secured WPS connection with a PIN code, select **WPS PIN** and press **OK**. Write down the 8-digit PIN code shown and enter it in the router software on your PC. Return to the TV and press **Connect**. Consult the router manual on where to enter the PIN code in the router software.

**Step 9** - A message will be shown when the connection is successful.

#### Network configuration

If the connection fails, you can check the DHCP setting of the router. DHCP should be set to **On**. Alternatively, if you are an advanced user and want to install your network with Static IP addressing, set the TV to Static IP.

To set the TV to Static IP, press **Home** and select **Setup** and press **OK**. Select **Network settings** > **Network configuration** > **Static IP**. With Static IP selected in the menu, you can set the IP address and other necessary settings in **Static IP configuration** in the same menu.

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## Network problems

### Wireless network not found or distorted

- Microwave ovens, DECT phones or other Wi-Fi 802.11b/g/n devices in your proximity might disturb the wireless network.
- Make sure that the firewalls in your network allow access to the TV's wireless connection.
- If the wireless network does not work properly in your home, try the wired network installation.

### Internet does not work

- If the connection to the router is OK, check the router connection to the Internet.

### The PC and Internet connection are slow

- Look in your wireless router's user manual for information on indoor range, transfer rate and other factors of signal quality.
- Use a high-speed (broadband) Internet connection for your router.

---

3.2

## Wired network

### What you need

You need a network **router** to connect the TV to the Internet. Use a router with a high-speed (broadband) connection to the Internet.



### File sharing

On this TV, you can open photos, music and videos stored on your computer. Use a recent version of media server software like Philips MediaManager\*, Windows Media Player 11, Twonky™ or similar. Install the media server software on your computer and set it up to share your media files with the TV. Read the manual of the media server software for more information. This software must be running on your computer to view or play your files on TV.

\* You can download the Philips MediaManager software from the Philips support site [www.philips.com/support](http://www.philips.com/support)

In **Help**, press **Keywords** and look up **Media server software**, supported for an overview of

supported media server software.

---

## Connect the router

To connect and setup the router follow steps 1 to 5.

- 1 - Connect the router to the TV with a network cable (Ethernet cable\*\*).
- 2 - Make sure that the router is switched on.
- 3 - Press **▲** and select **Setup** and press **OK**.
- 4 - Select **Connect to network** and press **OK**.
- 5 - Select **Wired** and press **OK**.

The TV constantly searches for the network connection. A message will be shown when the connection is successful.

### Network configuration

If the connection fails, you can check the DHCP setting of the router. DHCP should be set to On. Alternatively, if you are an advanced user and want to install your network with static IP addressing, set the TV to Static IP.

To set the TV to Static IP, press **▲** and select **Setup** and press **OK**.

Select **Network settings** > **Network settings** > **Network configuration** > **Static IP**. With Static IP selected in the menu, you can set the IP address and other necessary settings in **Static IP configuration** in the same menu.

\*\*To fulfill EMC regulations, use a shielded FTP Cat. 5E Ethernet cable.

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3.3

## Network settings

To open the Network settings . . .

- 1 - Press **▲** and select **Setup** and press **OK**.
- 2 - Select **Network settings** and press **OK**.

### • View network settings

All current network settings are shown here. The IP and MAC address, signal strength, speed, encryption method, etc.

### • Network settings

#### - Network type

Sets the network to Wired or Wireless.

#### - Network configuration

Sets the network configuration to DHCP or Static IP.

### • Wi-Fi media playback

To receive multimedia files from smartphones or tablets, set the DMR to On.

### • Static IP configuration



If Static IP is selected in Network Settings menu, you can set all necessary static IP settings here.


- **Wi-Fi Miracast**

For more information on Wi-Fi Miracast, press  **Keywords** and look up **Wi-Fi Miracast™**.

- **Reset Wi-Fi Miracast group**

Clear the list of connected and blocked devices that are used with Miracast.

- **Wi-Fi smart screen**

For more information on Wi-Fi smart screen, press  **Keywords** and look up **Wi-Fi smart screen**.

- **TV network name**

If you have more than one TV in your network, you can rename the TVs here.

- **Netflix Settings**

Adjust Netflix settings.

- **Clear Internet memory**

With Clear Internet memory, you can clear all Internet files stored on your TV. You clear your Philips Smart TV registration and parental rating settings, your video store app logins, all Smart TV app favourites, Internet bookmarks and history. Interactive MHEG applications can also save so-called 'cookies', on your TV. These files will also be cleared.

# Connections

## 4.1

### Tips on connections

#### Connectivity guide

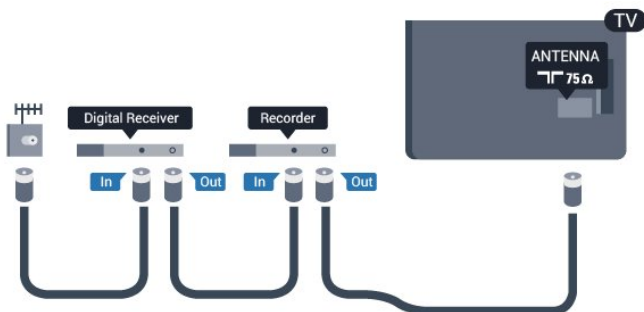
Always connect a device to the TV with the highest quality connection available. Also, use good quality cables to ensure a good transfer of picture and sound.

If you need help to connect several devices to the TV, you can visit the Philips TV connectivity guide. The guide offers information on how to connect and which cables to use.

Go to [www.connectivityguide.philips.com](http://www.connectivityguide.philips.com)

#### Antenna

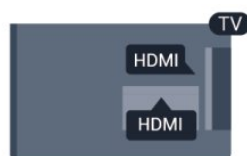
If you have a Set-top box (a digital receiver) or Recorder, connect the antenna cables to run the antenna signal through the Set-top box and/or Recorder first before it enters the TV. In this way, the antenna and the Set-top box can send possible additional channels to the Recorder to record.



#### HDMI

##### HDMI CEC

An HDMI connection has the best picture and sound quality. One HDMI cable combines video and audio signals. Use an HDMI cable for High Definition (HD) TV signals. For best signal quality transfer, use a High speed HDMI cable and do not use an HDMI cable longer than 5 m.



##### EasyLink HDMI CEC

If your devices are connected with HDMI and have EasyLink, you can operate them with the TV remote control. EasyLink HDMI CEC must be switched On on the TV and the connected device.

For more information on using EasyLink, press **Keywords** and look up EasyLink CEC.

##### DVI to HDMI

Use a DVI to HDMI adapter if your device only has a DVI connection. Use one of the HDMI connections and add an Audio L/R cable (mini-jack 3.5mm) to AUDIO IN for sound, on the back of the TV.

##### Copy protection

DVI and HDMI cables support HDCP (High-bandwidth Digital Content Protection). HDCP is a copy protection signal that prevents copying content from a DVD disc or Blu-ray Disc. Also referred to as DRM (Digital Rights Management).

##### HDMI ARC

All of the HDMI connections on the TV have HDMI ARC (Audio Return Channel).

If the device, typically a Home Theatre System (HTS), also has the HDMI ARC connection, connect it to any of the HDMI connections on this TV. With the HDMI ARC connection, you do not need to connect the extra audio cable that sends the sound of the TV picture to the HTS. The HDMI ARC connection combines both signals.

You can use any HDMI connection on this TV to connect the HTS but ARC is only available for 1 device/connection at a time.

In case you prefer to switch off ARC on the HDMI connections, press **Home** and select **Setup** and press **OK**. Select **TV settings > Sound > Advanced > HDMI ARC**.

#### Y Pb Pr – Audio L R

Y Pb Pr – Component Video is a high quality connection. The YPbPr connection can be used for High Definition (HD) TV signals. Next to the Y, Pb and Pr signals add the Audio Left and Right signals for sound.

- Y shares the same jack with CVBS.
- Component and Composite share audio jacks.

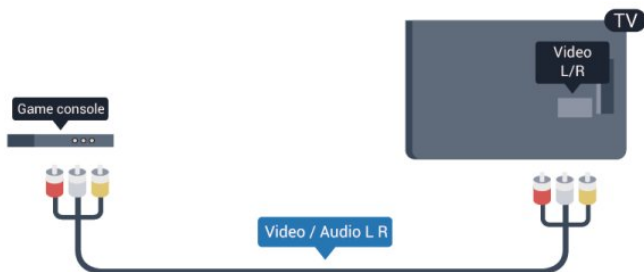


- Only for TVs with component connectors.

## CVBS - Audio L R

CVBS - Composite Video is a high quality connection. Next to the CVBS signal adds the Audio Left and Right signals for sound.

- Y shares the same jack with CVBS.
- Component and Composite share audio jacks.



- Only for TVs with component/composite connectors.

## Scart

SCART is a good quality connection. The SCART connection can be used for CVBS and RGB video signals but cannot be used for High Definition (HD) TV signals. The SCART connection combines video and audio signals.

Use the SCART adapter cable to connect your device.



## Audio Out - Optical

Audio Out - Optical is a high quality sound connection. This optical connection can carry 5.1 audio channels. If your device, typically a Home Theatre System (HTS), has no HDMI ARC connection, you can use this connection with the Audio In - Optical connection on the HTS. The Audio Out - Optical connection sends the sound from the TV to the HTS.



You can set the type of the audio out signal to fit the audio capabilities of your Home Theatre System. For more information, press **Keywords** and look up **Audio Out settings**.

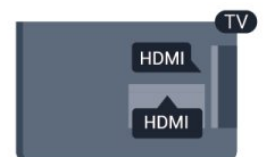
If the sound does not match the video on screen, you can adjust the audio to video synchronisation. For more information, press **Keywords** and look up **Audio to video sync**.

4.2

## EasyLink HDMI CEC

### EasyLink

With EasyLink you can operate a connected device with the TV remote control. EasyLink uses HDMI CEC (Consumer Electronics Control) to communicate with the connected devices. Devices must support HDMI CEC and must be connected with an HDMI connection.



### EasyLink setup

The TV comes with EasyLink switched on. Make sure that all HDMI CEC settings are properly set up on the connected EasyLink devices. EasyLink might not work with devices from other brands.

### HDMI CEC on other brands


The HDMI CEC functionality has different names on different brands. Some examples are: Anynet, Aquos

Link, Bravia Theatre Sync, Kuro Link, Simplink and Viera Link. Not all brands are fully compatible with EasyLink.



Example HDMI CEC branding names are property of their respective owners.

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## Operate devices

To operate a device connected to HDMI and set up with EasyLink, select the device – or its activity – in the list of TV connections. Press  **SOURCES**, select a device connected to an HDMI connection and press **OK**.



Once the device is selected, the TV remote control can control the device. However  and  **OPTIONS** keys and some other TV keys are not forwarded to the device.

If the key you need is not on the TV remote control, you can select the key in the Options menu.

Press  **OPTIONS** and select **Controls** in the menu bar. On the screen, select the device key you need and press **OK**.

Some very specific device keys might not be available in the Controls menu.

Note: Only devices that support **EasyLink remote control** function will respond to the TV remote control.



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## EasyLink settings

The TV comes with all EasyLink settings switched on. You can switch off any EasyLink setting independently.

### EasyLink

To switch off EasyLink completely . . .

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **TV settings > General settings > EasyLink**, and press **OK**.
- 3 - Select **Off** and press **OK**.
- 4 - Press , repeatedly if necessary, to close the menu.

### EasyLink Remote Control

If you want devices to communicate but you don't want to operate them with the TV remote control, you can switch off EasyLink remote control separately. In the EasyLink settings menu, select **EasyLink**

**remote control** and select **Off**.

### Pixel Plus Link

Some devices, a DVD or Blu-ray Disc player, might have their own picture quality processing. To avoid bad picture quality caused by interference with the TV processing, the picture processing of these devices should be disabled. The TV comes with Pixel Plus Link switched on and disables the picture quality processing of recent Philips devices connected to the TV.

To switch off Pixel Plus Link, in the EasyLink settings menu, select **Pixel Plus Link** and select **Off**.

### Auto switch off devices

You can set the TV to switch off the connecting HDMI-CEC compliant devices if they are not the active source. The TV switches the connected device to standby after 10 minutes of inactivity.

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## 4.3

## Common interface – CAM

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### CI+

This TV is ready for the CI+ Conditional Access.

With CI+ you can watch premium HD programmes, like movies and sports, offered by digital TV broadcasters in your region. These programmes are scrambled by the TV broadcaster and descrambled with a prepaid CI+ module.

Digital TV broadcasters provide this CI+ module (Conditional Access Module – CAM) when you subscribe to their premium programmes. These programmes have a high level of copy protection.

Contact a digital TV broadcaster for more information on terms & conditions.

For more information on connecting a CAM module, press  **Keywords** and look up **Common Interface CAM**.



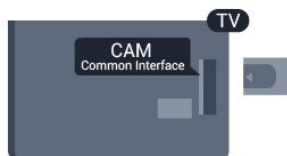
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## CAM

### Insert a CAM module

Switch off the TV before inserting a CAM.

Look on the CAM for the correct method of insertion. Incorrect insertion can damage the CAM and TV.



Use the Common Interface slot on the TV to insert the CAM card.

With the front of the card facing towards you, gently insert the CAM as far as it will go.

Leave the card in the slot permanently.

It may take a few minutes before the CAM is activated. Removing the CAM will deactivate the broadcast service on TV.

If a CAM is inserted and subscription fees are paid, (connection methods can differ), you can watch the TV broadcast. The inserted CAM is exclusively for your TV.

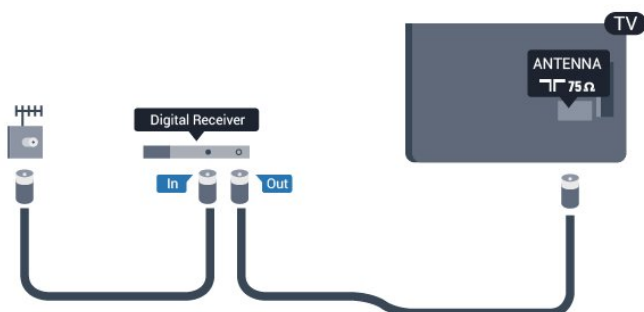
### CAM settings

To set passwords or PIN codes for the CAM TV broadcast, press **Home** and select **Setup** and press **OK**. Select **Channel settings** > **Common Interface**. Select the CAM TV broadcaster and press **OK**.

4.4

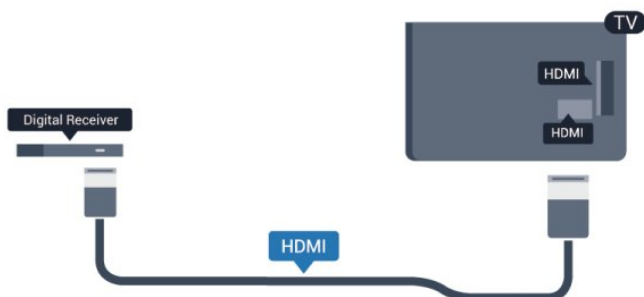
## Set-top box - STB

Use 2 antenna cables to connect the antenna to the Set-top box (a digital receiver) and the TV.



Next to the antenna connections, add an HDMI cable to connect the Set-top box to the TV.

Alternatively, you can use a SCART cable if the Set-top box has no HDMI connection.



Switch off timer

Switch off this automatic timer, if you only use the remote control of the Set-top box. Do this to prevent the TV from switching off automatically after a 4 hour period without a key press on the remote control of the TV.

To switch off the Switch off timer, press **Home** and select **Setup** and press **OK**.

Select **TV settings** > **General settings** > **Switch off timer** and set the slider bar to **Off**.

4.5

## Home Theatre System - HTS

### Connect HTS

Use an HDMI cable to connect a Home Theatre System (HTS) to the TV. You can connect a Philips Soundbar or an HTS with a built-in disc player. Alternatively, you can use a SCART cable if the device has no HDMI connection.

### HDMI ARC

If your Home Theatre System has an HDMI ARC connection, you can use any HDMI connection on the TV to connect. With HDMI ARC, you do not need to connect the extra audio cable. The HDMI ARC connection combines both signals.

All HDMI connections on the TV can offer the Audio Return Channel (ARC) signal. But once you have connected the Home Theatre System, the TV can only send the ARC signal to this HDMI connection.



If the Home Theatre System has no HDMI ARC connection, add an optical audio cable (Toslink) to send the sound of the TV picture to the Home Theatre System.



## Audio to video synchronisation (sync)

If the sound does not match the video on screen, you can set a delay on most Home Theatre Systems with a disc player to match the sound with the video.

For more information, press  **Keywords** and look up **Audio to video sync**.

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## Audio Out settings

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### Audio Out delay

With a Home Theatre System (HTS) connected to the TV, the picture on TV and the sound from the HTS should be synchronised.



### Automatic audio to video sync

With recent Philips Home Theatre Systems, the audio to video sync is done automatically synchronised and always correct.

### Audio sync delay

For some Home Theatre Systems you might need to adjust the audio sync delay to synchronise the audio to the video. On the HTS, increase the delay value until there is a match between picture and sound. A delay value of 180ms may be required. Read the user manual of the HTS. With a delay value set up on the HTS, you need to switch off Audio out delay on the TV.

To switch off the Audio Out delay . . .



- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **TV settings > Sound > Advanced > Audio out delay**.
- 3 - Select **Off** and press **OK**.
- 4 - Press , repeatedly if necessary, to close the menu.

---

### Audio Out offset

If you cannot set a delay on the Home Theatre System, you can set the TV to sync the sound. You can set an offset that compensates for the time necessary for the Home Theatre System to process the sound of the TV picture. You can set the value in steps of 5ms. Maximum setting is -60ms. The Audio Out delay setting should be switched on.

To synchronise the sound on the TV . . .



- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **TV settings > Sound > Advanced > Audio out offset**.
- 3 - Use the slider bar to set the sound offset and press **OK**.
- 4 - Press , repeatedly if necessary, to close the menu.

---

## Audio Out format

If you have a Home Theatre System (HTS) with multichannel sound processing capabilities like Dolby Digital, DTS® or similar, set the Audio out format to Multichannel. With Multichannel, the TV can send the compressed multichannel sound signal from a TV channel or connected player to the Home Theatre System. If you have a Home Theatre System without multichannel sound processing, select Stereo.

To set the Audio out format . . .



- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **TV settings > Sound > Advanced > Audio out format**.
- 3 - Select **Multichannel** or **Stereo**.
- 4 - Press , repeatedly if necessary, to close the menu.

---

## Audio Out levelling

Use the Audio Out levelling setting to level the volume (loudness) of the TV and the Home Theatre System when you switch over from one to another. Volume differences can be caused by differences in sound processing.

To level the difference in volume . . .

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **TV settings > Sound > Advanced > Audio out levelling**.
- 3 - If the volume difference is large, select **More**. If the volume difference is small, select **Less**.
- 4 - Press , repeatedly if necessary, to close the menu.

Audio Out levelling affects both the Audio Out - Optical and HDMI ARC sound signals.

---

## Problems with HTS sound

### Sound with loud noise

If you watch a video from a plugged in USB flash drive or connected computer, the sound from your Home Theatre System might be distorted. This noise is heard when the audio or video file has DTS sound but the Home Theatre System has no DTS sound processing. You can fix this by setting the **Audio out format** of the TV to **Stereo**.

Press  and select **Setup > TV settings > Sound > Advanced > Audio out format**.

### No sound

If you cannot hear the sound from the TV on your Home Theatre System, check the following . . .

- Check if you connected the HDMI cable to an **HDMI**



ARC connection on the Home Theatre System. All HDMI connections on the TV are HDMI ARC connections.

- Check if the **HDMI ARC** setting on the TV is switched On.

Press **⏠** and select **Setup > TV settings > Sound > Advanced > HDMI ARC**.

4.6

## Blue-ray Disc player

Use a **High speed HDMI** cable to connect the Blu-ray Disc player to the TV.



If the Blu-ray Disc player has EasyLink HDMI CEC, you can operate the player with the TV remote control.

For more information on EasyLink, press **⏠** **Keywords** and look up EasyLink HDMI CEC.

4.7

## DVD player

Use an **HDMI** cable to connect the DVD player to the TV.

Alternatively, you can use a **SCART** cable, if the device has no HDMI connection.



If the DVD player is connected with HDMI and has EasyLink CEC, you can operate the player with the TV remote control.

For more information on EasyLink, press **⏠** **Keywords** and look up EasyLink HDMI CEC.

4.8

## Game console

### HDMI

For best quality, connect the game console with an **High speed HDMI** cable to the TV.



### Y Pb Pr – Audio LR

Connect the game console with a **component video** cable (Y Pb Pr) and an **audio L/R** cable to the TV.



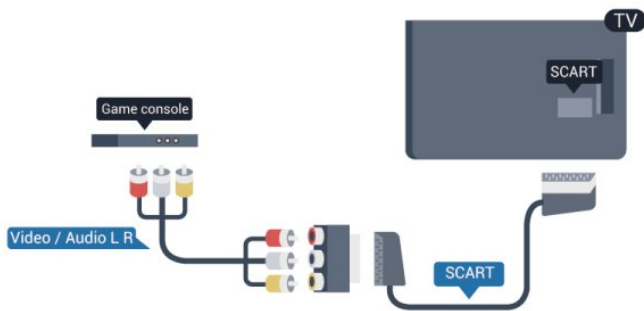
- Y shares the same jack with CVBS.
- Component and Composite share audio jacks.

### CVBS – Audio L R / Scart

Connect the game console to the TV with a **composite** cable (CVBS) and an **audio L/R** cable to the TV.

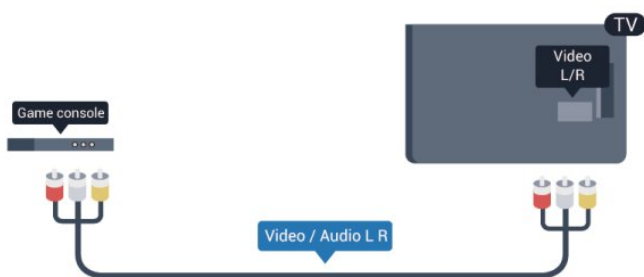
If your game console only has Video (CVBS) and Audio L/R output, use a **Video Audio L/R to SCART** adapter to connect to the SCART connection.

Note: the CVBS to SCART Adapter is not provided in the TV set.



## CVBS - Audio L R

Connect the game console to the TV with a composite cable (CVBS) and an audio L/R cable to the TV.



- Y shares the same jack with CVBS.
- Component and Composite share audio jacks.

4.9

## USB Hard Drive

### What you need

If you connect a USB Hard Drive, you can pause or record a TV broadcast. The TV broadcast must be a digital broadcast (DVB broadcast or similar).

#### To pause

To pause a broadcast, you need a USB 2.0 compatible Hard Drive with a minimum of 32GB disk space.

#### To record

To pause and record a broadcast, you need a minimum of 250GB disk space.



### TV guide

Before you decide to buy a USB Hard Drive to record, you can check if it is possible to record digital TV channels in your country.

Press **TV GUIDE** on the remote control. If there is a Record button on the TV guide page, you can record.

For more information on how to install a USB Hard Drive, press **Keywords** and look up **USB Hard Drive, installation**.

## Installation

Before you can pause or record a broadcast, you must connect and format a USB Hard Drive. If you want to record a broadcast with TV guide data from the Internet, you need to have the Internet connection installed on your TV before you install the USB Hard Drive. Formatting removes all files from the USB Hard Drive.

- 1 - Connect the USB Hard Drive to one of the **USB** connections on the TV. Do not connect another USB device to the other USB ports when formatting.



- 2 - Switch on the USB Hard Drive and the TV.
- 3 - When the TV is tuned to a digital TV channel, press **II** (Pause). Trying to pause will start the formatting.

Follow the instructions on screen.

When the USB Hard Drive is formatted, leave it connected permanently.

### Warning

The USB Hard Drive is formatted exclusively for this TV, you cannot use the stored recordings on another TV or PC. Do not copy or change recording files on the USB Hard Drive with any PC application. This will corrupt your recordings. When you format another USB Hard Drive, the content on the former will be lost. A USB Hard Drive installed on your TV will need reformatting for use with a computer.

For more information, press **Keywords** and look up **Pause TV or Recording**.



## USB keyboard or mouse

### USB keyboard

Connect a USB keyboard (USB-HID type) to enter text on your TV.

You can connect a keyboard and a mouse to the TV. Use one of the **USB** connections to connect.



#### Install the keyboard

To install the USB keyboard, switch on the TV and connect the USB keyboard to one of the **USB** connections on the TV. When the TV detects the keyboard for the first time, you can select your keyboard lay-out and test your selection. If you select a Cyrillic or Greek keyboard lay-out first, you can select a secondary Latin keyboard lay-out.

To change the keyboard lay-out setting when a lay-out was selected...

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > General settings > USB keyboard settings** and press **OK**.

#### Keys for channel renaming

- Enter key = OK
- Backspace = delete character before cursor
- Arrow keys = navigate within a text field
- To switch between keyboard lay-outs, if a secondary lay-out is set, press the **Ctrl + Shift** keys simultaneously.

#### Keys for Smart TV Apps and Internet pages

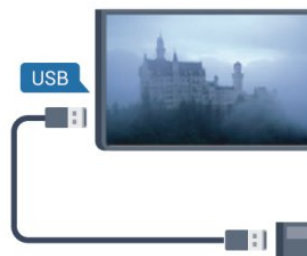
- Shift + Tab = Next and Previous
- Home = scroll to the top of the page
- End = scroll to the bottom of the page
- Page Up = jump one page up
- Page Down = jump one page down
- + = zoom in one step
- - = zoom out one step
- \* = fit the web page to the screen width.

### USB mouse

#### Connect USB mouse

You can connect a USB mouse (USB-HID type) to navigate pages on the Internet.

On an Internet page, you can select and click on links more easily.



#### Connect the mouse

Switch the TV on and connect the USB mouse to one of the **USB** connections on the TV. You can also connect the USB mouse to a connected USB keyboard.

#### Mouse clicks

- Left click = OK

You can use the scroll wheel to scroll pages up and down.

For more information on how to connect a keyboard, press **Keywords** and look up **USB keyboard**.

#### Mouse speed

You can adjust the speed of the mouse moving on screen.

To adjust the speed ...

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings** and press **OK**.
- 3 - Select **General settings > Pointer / Mouse settings** and press **OK**.
- 4 - Press the arrows **▲** (up) or **▼** (down) to increase or lower the speed.
- 5 - Press **OK** to store and close the setting.
- 6 - Press **⬅**, repeatedly if necessary, to close the menu.

## USB flash drive

You can view photos or play your music and videos from a connected USB flash drive.

Insert a USB flash drive in one of the **USB** connections on the TV while the TV is switched on.



The TV detects the flash drive and opens a list showing its content.

If the contents list does not appear automatically, press **SOURCES**, select **USB** and press **OK**.

To stop watching the USB flash drive content, press **TV EXIT** or select another activity.

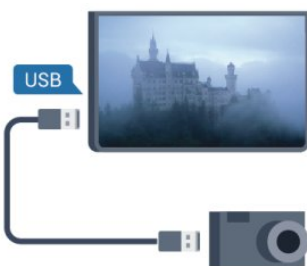
To disconnect the USB flash drive, you can pull out the flash drive anytime.

For more information on watching or playing content from a USB flash drive, press **Keywords** and look up Your photos, videos and music.

## Photo camera

To view photos stored on your digital photo camera, you can connect the camera directly to the TV.

Use one of the **USB** connections on the TV to connect. Switch on the camera after you made the connection.



If the contents list does not appear automatically, press **SOURCES**, select **USB** and press **OK**. Your camera might need to be set to transfer its content with PTP (Picture Transfer Protocol). Read the user manual of the digital photo camera.

For more information on viewing photos, press **Keywords** and look up Your photos, videos and music.

## Ultra HD on USB

You can view photos in Ultra HD resolution from a connected USB device or flash drive. The TV will downscale the resolution to Ultra HD if the resolution of the photo is higher. You cannot play a native Ultra HD video on any of the USB connections.

## Camcorder

### HDMI

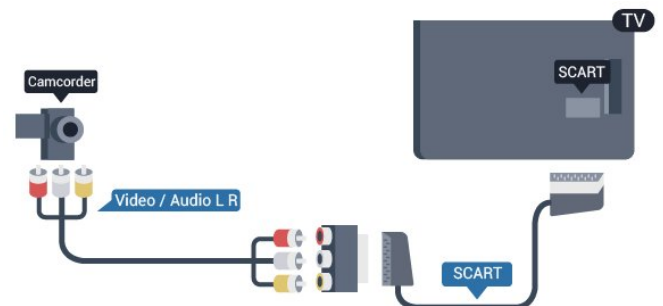
For best quality, use an HDMI cable to connect the camcorder to the TV.



### CVBS - Audio L R / Scart

You can use an HDMI, YPbPr or SCART connection to connect your camcorder. If your camcorder only has Video (CVBS) and Audio L/R output, use a Video Audio L/R to SCART adapter to connect to the SCART connection.

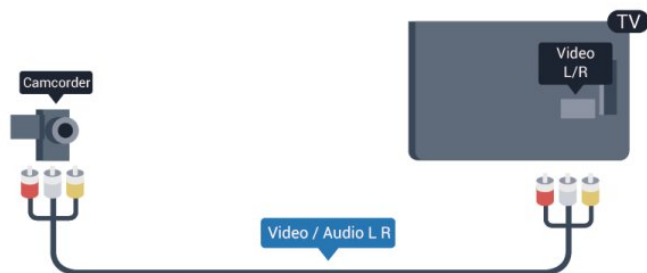
Note: the CVBS to Scart Adaptor is not provided in the TV set.



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## CVBS - Audio L R

Use a Video Audio L/R cable to connect the camcorder to the TV.



- Y shares the same jack with CVBS.
- Component and Composite share audio jacks.

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4.14

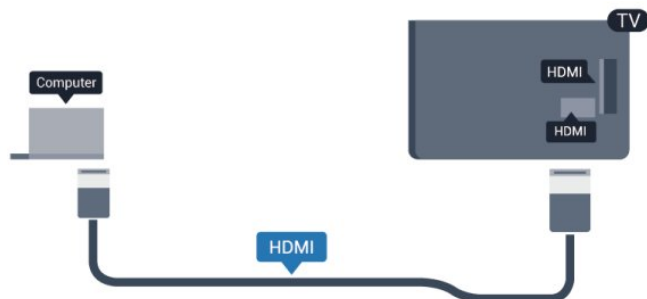
## Computer

### Connect

You can connect your computer to the TV and use the TV as a PC monitor.

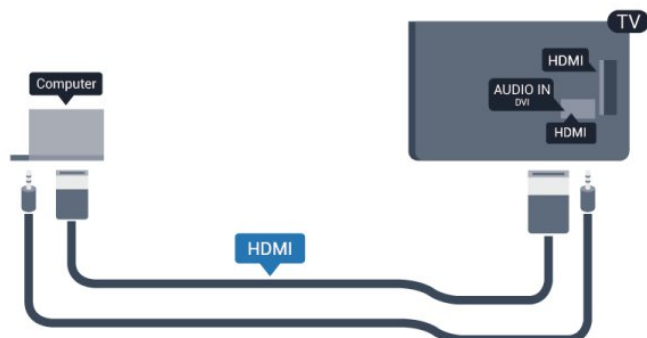
#### With HDMI

Use an HDMI cable to connect the computer to the TV.



#### With DVI to HDMI

Alternatively, you can use a DVI to HDMI adapter to connect the PC to HDMI and an audio L/R cable (mini-jack 3.5mm) to AUDIO IN L/R on the back of the TV.



---

## Settings

### Ideal monitor setting

If your computer is added as a Computer type of device in the Source menu (the list of connections), the TV is set to the ideal Computer setting automatically.

If you use your computer to watch movies or use it to play games, you might want to set the TV back to the ideal TV watching or gaming setting.

To set the TV to the ideal setting manually . . .


- 1 - Press **Home** and select **Setup** and press **OK**.
- 2 - Select **TV settings** > **Picture** > **Advanced** > **Activity style** and press **OK**.
- 3 - Select **Game** (for gaming) or select **Computer** (for watching a movie) and press **OK**.
- 4 - Press **Back**, repeatedly if necessary, to close the menu.

Remember to set the Game or computer setting back to **Computer** when you stop playing the game.

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4.15

## Headphones

You can connect a set of headphones to the  connection on the TV. The connection is a mini-jack 3.5mm. You can adjust the volume of the headphones separately.

To adjust the volume . . .

- 1 - Press **Home** and select **Setup** and press **OK**.
- 2 - Select **TV settings** > **Sound** > **Headphones volume** and press **OK**.
- 3 - Press **Up** (up) or **Down** (down) to adjust the volume.
- 4 - Press **Back**, repeatedly if necessary, to close the menu.



# Switch on

## 5.1

### On or Standby

Make sure you plugged in the mains power on the back of the TV before you switch on the TV.

If the red indicator light is off, press the Joystick on the right side or on the back of the TV to put the TV in standby – the red indicator will light up.



With the TV in standby, press  on the remote control to switch the TV on.



### Switch to standby

To switch the TV to standby, press  on the remote control.

### Switch Off

To switch the TV Off, press the Joystick on the right or on the back. The red indicator light is off. The TV is still connected to the mains power but consumes a minimum of energy.

To switch off the TV completely, disconnect the power plug.

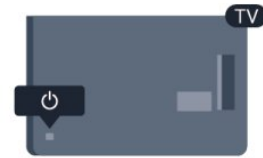
When disconnecting the power plug, always pull the power plug, never the cord. Ensure that you have full access to the power plug, power cord and outlet socket at all times.

## 5.2

### Keys on TV

While the on-screen display is on, press the Joystick to display the menu.

- Use the arrow/navigation keys to navigate up, down, left or right.
- Press the Joystick to confirm a selection or setting.

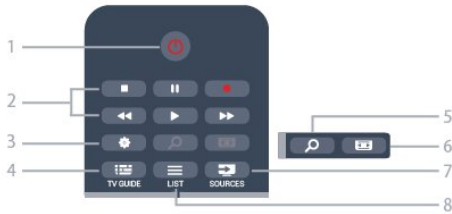


# Remote control

## 6.1

### Key overview

#### Top



1 - Standby / On

To switch the TV On or back to Standby.

2 - Playback and record keys

- Play , to playback.
- Pause , to pause playback
- Stop , to stop playback
- Rewind , to rewind
- Fast forward , to go fast forward
- Record , to record now

3 - Settings

To open the Settings menu.

4 - TV GUIDE

To open or close the TV guide.

5 - SEARCH

To open the Popular searches page.

6 - Picture format

To open or close the Picture format menu.

7 - SOURCES

To open or close the Sources menu - the list of connected devices.

8 - LIST

To open or close the channel list

#### Middle



1 - SMART TV

To open the Smart TV start page.

2 - Colour keys

Follow on screen instructions. Blue key , opens Help.

3 - INFO

To open or close programme info.

4 - BACK

To switch back to the previous channel you selected.  
To close a menu without changing a setting.  
To go back to the previous Smart TV page.

5 - HOME

To open or close the home menu.

6 - TV EXIT

To switch back to watching TV.

7 - OPTIONS

To open or close the Options menu.

8 - OK key

To confirm a selection or setting.

9 - Arrow / navigation keys

To navigate up, down, left or right.

10 - MULTIVIEW

To open an extra small screen.

#### Bottom



1 - Volume

To adjust the volume level.

2 - Number keys and text keypad

To select a TV channel directly or to enter text.

3 - SUBTITLE

To switch subtitles on, off or Automatic.

4 - Mute

To mute the sound or to restore it.

5 - Channel

To switch to the next or previous channel in the channel list.

To open the next or previous page in Text or start the next or previous chapter on a disc.

6 - TEXT

To open or close Text / Teletext.

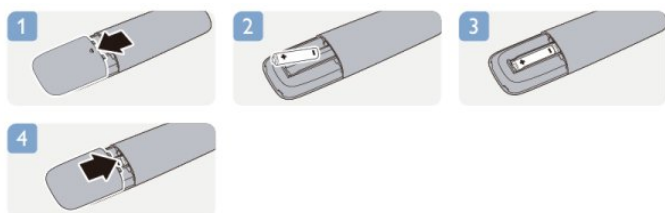
## IR sensor

The TV can receive commands from a remote control that uses IR (infrared) to send commands. If you use such a remote control, always make sure you point the remote control at the infrared sensor on the front of the TV.



## Batteries

- 1 - Slide the battery door in the direction shown by the arrow.
- 2 - Replace the old batteries with 2 type **AAA-R03-1.5V** batteries. Make sure the + and the - ends of the batteries line up correctly.
- 3 - Reposition the battery door and slide it back until it clicks.



Remove the batteries if you are not using the remote control for a long time.  
Safely dispose of your old batteries according to the end of use directions.

For more information, press **Keywords** and look up **End of use**.

## Cleaning

Your remote control is treated with a scratch-resistant coating.

To clean the remote control, use a soft damp cloth.  
Never use substances such as alcohol, chemicals or household cleaners on the remote control.

# TV channels

7.1

## Watching TV channels

### Switch channels

To watch TV channels, press **TV**. The TV tunes to the TV channel you last watched.

Alternatively, press **Home** to open the Home menu and select **Watch TV** and press **OK**.



To switch channels, press **Grid** + or **Grid** -. If you know the channel number, type in the number with the number keys. Press **OK** after you entered the number to switch channels.

To switch back to the previously tuned channel, press **Back**.

To switch to a channel from a channel list

While watching a TV channel, press **LIST** to open the channel lists.



The channel list can have several pages with channels. To view the next or previous page, press **Grid** + or **Grid** -.

To close the channel lists without switching channels, press **LIST** again.

### Radio channels

If digital broadcasting is available, digital radio stations are installed during installation. Switch to a radio channel just like you switch to a TV channel.

## Channel list

### Favourite channels

You can create a favourite channel list that only holds the channels you want to watch. With the Favourite channel list selected, you will only see your favourite channels when you switch through channels.

#### Create your favourite channel list

- 1 - While watching a TV channel, press **LIST** to open the channel list.
- 2 - Select **All** to view all channels.
- 3 - Select the channel, and press **Star** to mark as favourite.
- 4 - The selected channel is marked with a **Star**.
- 5 - To finish, press **Back**. The channels are added to the Favourites list.

To remove a channel from the favourites list, select the channel with **Star**, then press **Star** again to unmark as favourite.

### Reorder

You can reorder — reposition — channels in the Favourite channel list.

- 1 - In the channel list **Favourites**, highlight the channel you want to reposition.
- 2 - Press **Move**.
- 3 - Select the channel to reorder and press **OK**.
- 4 - Press the **Navigation** buttons to move the highlighted channel to another location and press **OK**.
- 5 - Once complete, press **TV EXIT** to exit from the Favourite channel list.

You can highlight another channel and do the same.

### Channel list views

In the channel lists, you can find all installed TV and radio channels.

Next to the channel list **All**, which holds all installed channels, you can set up a list of **Favourites**, view the installed **Radio** stations separately or discover the newly added channels in **New**.

### Channel logos

In some countries, the TV can show the channel logos. If you do not want these logos to appear, you can switch them off.

To switch off Channel logos . . .


- 1 - Press **Home** and select **Setup** and press **OK**.
- 2 - Select **TV settings** > **General settings** > **Channel logos** and press **OK**.
- 3 - Select **Off** and press **OK**.
- 4 - Press **Back**, repeatedly if necessary, to close the menu.



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## Rename channels

You can rename channels in the channel list.


- 1 - Select the channel you want to rename in one of the channel lists.
- 2 - Select the channel to rename.
- 3 - Press .


You can enter text with the remote control keyboard or open the on-screen keyboard.

With the on-screen keyboard

- To open the on-screen keyboard, place the cursor in the name text field and press **OK**.
- To delete the character in front of the cursor, press  **Backspace**.
- To enter a character, select the character with the arrow keys and press **OK**.
- To select uppercase characters, press .
- To select numbers or special characters, press .
- When you are ready, press  to close the on-screen keyboard.
- To finish renaming, select **Done** and press **OK**.

**With the remote control keyboard\***

- To delete a character, position the cursor behind the character and press .
- To enter a character, press the character on the keyboard.
- When you are ready, press **OK** to select **Done**. Press **OK** again to finish renaming.

For more information on using the keyboard, press  **Keywords** and look up **Remote control, keyboard**.

\* Only for the remote control with keyboard

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

## Lock a channel


To prevent children from watching a channel or a programme, you can lock channels or lock age rated programmes.

### Lock a channel

You can lock a channel to prevent children from watching it. To watch a locked channel you need to enter the Child lock code. You cannot lock programmes from connected devices.

To lock a channel . . .

- 1 - While watching a TV channel, press  **LIST** to open the **Channel list**.
- 2 - In any list, select the channel you want to lock.
- 3 - Press  **OPTIONS** and select **Lock channel**. In a channel list, a locked channel is marked with a lock .



To unlock a channel, select the locked channel in the channel list. Press  **OPTIONS** and select **Unlock channel**. You will need to enter the Child lock code.

## Parental rating

To prevent children from watching a programme not suitable for their age, you can use an age rating.

Some digital broadcasters have age rated their programmes. When the age rating of a programme is equal to or higher than the age you have set as age rating for your child, the programme will be locked. To watch a locked programme you must enter the child lock code. The parental age rating is set for all channels.

To set an age rating . . .


- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **Channel settings > Child lock > Parental rating** and press **OK**.
- 3 - Enter a 4-digit Child lock code and confirm. Now you can set an age rating.
- 4 - Set the age and press **OK**.
- 5 - Press , repeatedly if necessary, to close the menu.

To switch off the parental age rating, select **None** as age setting.

The TV will ask for the code to unlock the programme. For some broadcasters / operators, the TV only locks programmes with a higher rating.

## Set or change the lock code


To set the lock code or to change the current code . . .

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **Channel settings > Child lock > Change code** and press **OK**.
- 3 - If a code is set already, enter the current Child lock code and then enter the new code twice.

The new code is set.

## Forgotten your Child lock code?

If you forgot your code, you can override the current code and enter a new code.

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **Channel settings > Child lock > Change code** and press **OK**.
- 3 - Enter the overriding code **8888**.
- 4 - Now enter a new Child lock code and enter it again to confirm.

---

## Options for channels

While watching a channel, depending on the type of channel (analogue or digital) you are watching or depending on the TV settings you made, some options are available.

### Open the options menu

While watching a channel, press  **OPTIONS**.





## Universal access


With Universal access switched on, you can set some options for hearing impaired and visually impaired people.

For more information, press **Keywords** and look up **Universal access**.

## Video selection

Digital TV channels can offer multi video signals (multi-feed broadcast), different camera viewpoints or angles of the same event or different programmes on one TV channel. The TV shows a message if any such TV channels are available.

## Subtitles

Switch **Subtitles on** or **Subtitles off** with this options. Select **Automatic** to show subtitles only when the sound is muted with .

## Subtitle language

For digital broadcast, you can select an available subtitle language temporarily if none of your preferred languages are available.

For more information, press **Keywords** and look up **Subtitles**.

## Audio languages

For digital broadcast, you can select an available audio language temporarily if none of your preferred languages are available.

For more information, press **Keywords** and look up **Audio languages**.

## Dual I-II

If an audio signal contains two audio languages but one language — or both — has no language indication, this option is available.

## Common interface

If prepaid premium content is available from a CAM, you can set the provider settings with this option.

## HbbTV on this channel

You can block the HbbTV pages from a channel that offers HbbTV.

For more information, press **Keywords** and look up **HbbTV**.

## MHP applications

Enable or disable the MHP applications.

For more information, press **Keywords** and look up **MHP**.

## Status

Select **Status** to view technical information on the channel (if it is analogue or digital) or a connected device you are watching.


## Share

Enables the user to communicate his activity with his social networks (such as Twitter or email).

## Picture format

If black bars appear on top and bottom or on both sides of the picture, you can adjust the picture format to a format that fills the screen.

To change the picture format . . .

1 - While watching a TV channel, press  to open the **Picture format** menu.

2 - Select a format from the list and press **OK**.

The following format can be available according the picture on screen . . .

- **Basic**
  - Fill screen
  - Fit to screen
- **Advanced**
  - Last setting
  - Shift
  - Zoom
  - Stretch
  - Native
  - Undo

## Text / Teletext

### Text pages

To open Text (Teletext) while you are watching TV channels, press **TEXT**.

To close Text, press **TEXT** again.



### Select a Text page

To select a page . . .

- 1 - Enter the page number with the number keys.
- 2 - Use the arrow keys to navigate.
- 3 - Press a colour key to select a colour-coded subject at the bottom of the screen.

#### Text sub-pages

A Text page number can hold several subpages. The subpage numbers are shown on a bar next to the main page number.

To select a subpage, press ◀ or ▶.

#### T.O.P. Text pages

Some broadcasters offer T.O.P. Text.

To open T.O.P. Text pages within Text, press ≡ OPTIONS and select T.O.P. overview.

---

#### Text options

In Text, press ≡ OPTIONS to select the following . . .

- **Freeze page**

To stop the automatic rotation of subpages.

- **Dual screen / Full screen**

To show the TV channel and Text alongside each other.

- **T.O.P. overview**

To open T.O.P. Text.

- **Enlarge**

To enlarge the Text page for comfortable reading.

- **Reveal**

To unhide hidden information on a page.

- **Cycle subpages**

To cycle subpages when these are available.

- **Language**

To switch the group of characters that Text uses to display correctly.

- **Text 2.5**

To activate the Text 2.5 for more colours and better graphics.

---

#### Text setup

##### Text language

Some digital TV broadcasters have several Text languages available.

To set your primary and secondary Text language . . .

- 1 - Press 🏠 and select **Setup** and press **OK**.
- 2 - Select **Channel settings > Language**.
- 3 - Select **Primary Teletext** or **Secondary Teletext**.
- 4 - Select your preferred Text languages.
- 5 - Press ⏮, repeatedly if necessary, to close the menu.

##### Text 2.5

If available, Text 2.5 offers more colours and better graphics. Text 2.5 is activated as a standard factory

setting.

To switch off Text 2.5 . . .

- 1 - Press **TEXT**.
- 2 - While watching the teletext, press ≡ **OPTIONS**.
- 3 - Select **Text 2.5 > Off**.
- 4 - Press ⏮, repeatedly if necessary, to close the menu.

---

#### Menu language

To change the language or the TV menus and messages . . .

- 1 - Press 🏠 and select **Setup** and press **OK**.
- 2 - Select **TV settings > General settings > Menu language** and press **OK**.
- 3 - Select the language you want and press **OK**.
- 4 - Press ⏮, repeatedly if necessary, to close the menu.

---

#### Audio languages

If the TV channel broadcasts multiple or dual audio languages, you can select your preferred audio language.

- 1 - While you watch TV, press ≡ **OPTIONS**.
- 2 - For digital channels, select **Audio language**. For analogue channels, select **Alternate audio**. Press **OK** to confirm your selection.
- 3 - Select from the available languages, then press **OK**.

##### Note:

If you have selected **Alternate audio** for analogue channels, select between:

- **Main:** Primary audio language or
- **SAP:** Secondary audio language

---

#### Subtitles and languages

##### Subtitles

##### Switch subtitles on

To open the Subtitle menu, press **SUBTITLE**. You can set subtitles to **On**, **Off** or **Automatic**. To show subtitles when the broadcasted programme is not in your language — the language you set for the TV, select **Automatic**. Also, this setting will show subtitles when you mute the sound with 🔊<sup>x</sup>. For analogue channels, subtitles must be made available in **Text**.



## Subtitles for digital channels

There is no need to set subtitles in Text for digital channels.

Digital channels can offer several subtitle languages for a programme. You can set a preferred primary and secondary subtitle language. If subtitles in one of these languages are available, the TV will show them. If none of the preferred subtitle languages are available, you can select another subtitle language which is available.

To set the primary and secondary subtitle language . . .

- 1 - Press **HOME** and select **Setup** and press **OK**.
- 2 - Select **Channel settings** and select **Languages > Primary subtitles language** or **Secondary subtitles language** and press **OK**.
- 3 - Select a language and press **OK**.
- 4 - Press **BACK**, repeatedly if necessary, to close the menu.

To select a subtitle language when none of your preferred languages are available . . .

- 1 - Press **≡ OPTIONS** .
- 2 - Select **Subtitle language** and select a language you want temporarily and press **OK**.

## Subtitles for analogue channels

For analogue channels, you need to make the subtitles available for each channel manually.

- 1 - Switch to a channel and press **TEXT** to open Text.
- 2 - Enter the page number for subtitles, usually **888**.
- 3 - Press **TEXT** again, to close Text.

If you select On in the Subtitle menu when watching this analogue channel, subtitles will be shown if available.

To know if a channel is analogue or digital, switch to the channel and open **Status** in the **Options** menu.

---

## Audio languages

Digital TV channels can broadcast audio with several spoken languages for a programme. You can set a preferred primary and secondary audio language. If audio in one of these languages is available, the TV will switch to this audio.

If none of the preferred audio languages is available, you can select another audio language which is available.

To set the primary and secondary audio language . . .

- 1 - Press **HOME** and select **Setup** and press **OK**.
- 2 - Select **Channel settings** and select **Languages > Primary audio language** or **Secondary audio language** and press **OK**.
- 3 - Select a language and press **OK**.
- 4 - Press **BACK**, repeatedly if necessary, to close the menu.

To select an audio language when none of your preferred audio language is available . . .

- 1 - Press **≡ OPTIONS** .
  - 2 - Select **Audio language** and select an audio language you want temporarily and press **OK**.
- Audio languages for the hearing and visually impaired**

Some digital TV channels broadcast special audio and subtitles adapted for people who are hearing or visually impaired.

For more information, press **RED** **Keywords** and look up **Universal access**.

---

## Menu language

To change the language or the TV menus and messages . . .

- 1 - Press **HOME** and select **Setup** and press **OK**.
- 2 - Select **TV settings > General settings > Menu language** and press **OK**.
- 3 - Select the language you want and press **OK**.
- 4 - Press **BACK**, repeatedly if necessary, to close the menu.

---

## Interactive TV

### About iTV

With interactive TV, some digital broadcasters combine their normal TV programme with information or entertainment pages. On some pages, you can respond to a programme or vote, do online shopping or pay for a video-on-demand programme.

### HbbTV, MHEG, ...

Broadcasters use various interactive TV systems: HbbTV(Hybrid Broadcast Broadband TV) or iTV(Interactive TV - MHEG). Interactive TV is sometimes referred to as Digital Text or Red button. But each system is distinct.

Visit the broadcaster's Internet website for more information.

---

## What you need

Interactive TV is only available on digital TV channels. To enjoy the full benefits of Interactive TV, you need a high-speed (broadband) Internet connection to the TV.

### HbbTV

If a TV channel offers HBBTV pages, you must first switch on HbbTV in the TV settings to view the pages.

- 1 - Press **Home** and select **Setup** and press **OK**.
- 2 - Select **TV settings** and select **General settings** > **HbbTV** and press **OK**.
- 3 - Select **On** and press **OK**.
- 4 - Press **Back**, repeatedly if necessary, to close the menu.

If you want to avoid access to HbbTV pages on a specific channel, you can block the HbbTV pages for this channel only.

- 1 - Tune to the channel of which you want to block the HbbTV pages.
- 2 - Press **Menu** **OPTIONS** and select **HBB TV on this channel** and press **OK**.
- 3 - Select **Off** and press **OK**.

---

## Use iTV

### Open iTV pages

Most channels that offer HbbTV or iTV invite you to press the **Red** key or **OK** key to open their interactive programme.

### Navigate iTV pages

You can use the arrow and colour keys, the number keys and the **Back** key to navigate the iTV pages. You can use the **Play** (▶), **Pause** (⏸) and **Stop** (■) keys to watch videos within iTV pages.

### Digital Text (UK only)

To open Digital Text, press **TEXT**. To close, press **Back**.

### Close iTV pages

Most iTV pages inform you which key to use to close. To force an iTV page to close, switch to the next TV channel and switch back.

---

## About interactive TV

With interactive TV, some digital broadcasters combine their normal TV programme with information or entertainment pages.

### Note:

- You cannot download files to your TV with this

feature.

- Not all TV programmes, commercials and features include closed captioning information.
- You cannot respond to the digital content.

Visit the broadcaster's Internet website for more information.

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## 7.2

# Channel installation

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## Update channels

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### Automatic update

If you receive digital channels, you can set the TV to automatically update the list with new channels. Alternatively, you can start a channel update yourself.

### Automatic channel update

Once a day, at 6 AM, the TV updates the channels and stores new channels. New channels are stored in the All channels list but also in the New channels list. Empty channels are removed. If new channels are found or if channels are updated or removed, a message is shown at TV start up. The TV must be in standby to automatically update channels.

To switch off the message at start up . . .

- 1 - Press **Home** and select **Setup** and press **OK**.
- 2 - Select **Channel settings** and press **OK**.
- 3 - Select **Channel installation** > **Channel update message** > **Off**.

To switch off the Automatic channel update . . .

- 1 - Press **Home** and select **Setup** and press **OK**.
- 2 - Select **Channel settings** and press **OK**.
- 3 - Select **Channel installation** > **Automatic channel update** > **Off** and press **OK**.

### Start an update

To start an update yourself . . .

- 1 - Press **Home** and select **Setup** and press **OK**.
- 2 - Select **Search for channels** and press **OK**.
- 3 - Select **Update channels** and follow the instructions on screen. The update may take a few minutes.

In certain countries, the Automatic channel update is done while watching TV or any moment when the TV is in standby.

---


## Reinstall channels

You can search for and reinstall channels and leave all other TV settings untouched. Alternatively, you can do a full new TV installation.

If a child lock code is set, you will need to enter this code before you can reinstall channels.

### Reinstall channels

To reinstall the channels only . . .

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **Search for channels > Re-install channels** and press **OK**.
- 3 - Select the country where you install the TV.
- 4 - Select **Antenna (DVB-T)** or **Cable (DVB-C)** . The channel search may take a few minutes. Follow the instructions on screen.



### Full installation

To redo a full TV installation . . .

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **TV settings > General settings > Reinstall TV** and press **OK**. The installation may take a few minutes. Follow the instructions on screen.

### Factory settings

Factory settings sets the TV back to the original TV settings for picture and sound. To switch back to the original Factory settings . . .

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **TV settings > General settings > Factory settings** and press **OK**.
- 3 - Press **OK** to confirm.
- 4 - Press , repeatedly if necessary, to close the menu.

---

## Channel list copy

### Introduction


Channel list copy is intended for dealers and expert users. In some countries, Channel list copy is only available for copying satellite channels.

With **Channel list copy**, you can copy the channels installed on one TV onto another Philips TV of the same range. With Channel list copy, you avoid the time-consuming channel search by uploading a predefined channel list on a TV. Use a USB flash drive of minimum 1 GB.

### Conditions

- Both TVs are from the same year range.
- Both TVs have the same hardware type. Check the hardware type on the TV type plate on the back of the TV. Typically noted as Q . . . LA
- Both TVs have compatible software versions.


### Current version

You can check the current version of the TV software with **Current software info** in  > **Setup** > **Software settings**.

---

### Copy channel list

To copy a channel list . . .

- 1 - Switch on the TV which has its channels installed. Plug in a USB memory device.
- 2 - Press  and select **Setup** and press **OK**.
- 3 - Select **TV settings > General settings > Channel list copy > Copy to USB** and press **OK**. To copy the channel list from this TV, you might be asked to enter the Child lock code you entered during the installation.
- 4 - When copying is done, unplug the USB memory device.

Now you can upload the copied channel list onto another Philips TV.


---

### Upload channel list



#### Upload a copied channel list

Depending on whether your TV is already installed or not, you must use a different way to upload a channel list.


#### To a TV that is not yet installed

- 1 - Plug in the power plug to start the installation and select language and country. You can skip Search for channels. Finish the installation.
- 2 - Plug in the USB memory device that holds the channel list of the other TV.
- 3 - To start the channel list upload, press  and select **Setup** and press **OK**.
- 4 - Select **TV settings > General settings > Channel list copy > Copy to TV** and press **OK**. You might be asked to enter the Child lock code of this TV.
- 5 - The TV notifies you if the channel list is copied to the TV successfully. Unplug the USB memory device.

#### To an already installed TV

- 1 - Verify the country setting of the TV. (To verify this setting, press  and select **Setup** and press **OK**. Select **Search for channels > Re-install channels** and press **OK**. Press  and later **Cancel** to leave the Search for channels.)

If the country is correct continue with step 2.

If the country is not correct, you need to start a reinstallation. To start the reinstallation, press  and select **Setup** and press **OK**. Select **TV settings > General settings > Reinstall TV > OK**. Select the correct country and skip the Search for channels. Finish the installation. When done, continue with step 2.

- 2 - Plug in the USB memory device that holds the channel list of the other TV.

- 3 - To start the channel list upload, press **⬆** and select **Setup** and press **OK**.
- 4 - Select **TV settings > General settings > Channel list copy > Copy to TV** and press **OK**. You might be asked to enter the Child lock code of this TV.
- 5 - The TV notifies you if the channel list is copied to the TV successfully. Unplug the USB memory device.

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## DVB-T or DVB-C

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### DVB-T or DVB-C reception

If both DVB-T and DVB-C reception is available in your country and if this TV is ready to receive DVB-T and DVB-C for your country, you have selected one or the other during the channel installation.

If you want to change the DVB setting to start a new channel installation . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **Channel settings** and press **OK**.
- 3 - Select **Channel installation > Antenna connection > Antenna (DVB-T) or Cable (DVB-C)** and press **OK**.
- 4 - Select the DVB setting you want.
- 5 - Press **⬅**, repeatedly if necessary, to close the menu.

### DVB-C channel installation

For ease of use, all DVB-C settings are set to automatic.

If your DVB-C provider gave you specific DVB-C values, the network ID or network frequency, enter these values when the TV asks for them during installation.

It might be necessary to adjust the scanning (full or quick scan) or enter a specific symbol rate in the **Settings** menu while installing. To set a **Symbol rate**, first set the Symbol rate to **Manual**.

### Channel number conflicts

In some countries, different TV channels (broadcasters) might have the same channel number. While installing, the TV shows the list with channel number conflicts. You need to select which TV channel you want to install on a channel number with multiple TV channels.

### DVB-T + DVB-C

If you can use a DVB-T antenna input but also a DVB-C input, you can set up your TV for both DVB-T and DVB-C. Install one system followed by the other with the necessary settings.

Once each system is installed, you need to switch the antenna input signal on the **Antenna** connection on the back of the TV and set the TV in the appropriate system to view the installed channels on TV.

To select the DVB-T or DVB-C setting, see above.

---

## DVB settings

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### Access DVB settings

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **Search for channels** and press **OK**.
- 3 - Select **Re-install Channels**.
- 4 - Select the country where you install this TV.
- 5 - Select **Cable (DVB-C)**.
- 6 - Select **Start to search channels**, or select **Settings for DVB-C settings** .
- 7 - Press **⬅**, repeatedly if necessary, to close the menu.

---

### Symbol rate mode

If your cable provider did not give you a specific **symbol rate** value to install the TV channels, leave the **Symbol rate mode** setting on **Automatic**.

If you received a specific symbol rate value, select **Manual**. However, the value you received could be in the predefined list of symbol rates already. Select **Predefined symbol rates** to check if your value is available automatically.

---

### Symbol rate

With the **Symbol rate mode** set to **Manual**, you can enter the symbol rate value you received from your cable provider. To enter the value, use the number keys.

---

### Network frequency mode

If you intend to use the fast **Quick scan** method in **Frequency scan** to search for channels, select **Automatic**. The TV will use 1 of the predefined network frequencies (or HC - homing channel) as used by most cable providers in your country.

If you received a specific network frequency value to search for channels, select **Manual**.

---

### Network frequency

With the **Network frequency mode** set to **Manual**, you can enter the network frequency value received from your cable provider here. To enter the value, use the number keys.

---

### Frequency scan

Select the method of searching for channels. You can select the faster **Quick scan** method and use the predefined settings used by most cable providers in

your country.

If this results in having no channels installed or if some channels are missing, you can select the extended **Full scan** method. This method will take more time to search for and install channels.

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### Digital channels

If you know your cable provider is not offering digital channels, you can skip searching for digital channels. Select **Off**.

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### Analogue channels

If you know your cable provider is not offering analogue channels, you can skip searching for analogue channels. Select **Off**.

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### Free / Scrambled

If you have a subscription and a CAM - Conditional Access Module for pay TV services, select **Free + scrambled**. If you did not subscribe to pay TV channels or services, you can select **Free channels** only.

For more information, press **Keywords** and look up **CAM - Conditional Access Module**.

---

### Reception quality

If you receive digital channels, you can check the quality and signal strength of a channel.

If you have your own antenna, you can reposition the antenna to try and improve the reception.

To check the reception quality of a digital channel . . .

1 - Tune to the channel.

2 - Press **Home** and select **Setup** and press **OK**.

3 - Select **Channel settings > Channel installation > Digital : reception test** and press **OK**.

The digital frequency is shown for this channel. If the reception is poor, you can reposition your antenna. To check the signal quality of this frequency again, select **Search** and press **OK**.

To enter a specific digital frequency yourself, use the remote control digit keys. Alternatively, select the frequency, position the arrows on a number with **Left** and **Right** and change the number with **Up** and **Down**. To check the frequency, select **Search** and press **OK**.

If you use DVB-C to receive channels, the option **Symbol rate mode** is available. For Symbol rate mode, select **Automatic**, unless your cable provider gave you a specific symbol rate value. To enter the symbol rate value, use the number keys.

---

### Manual installation

Analogue TV channels can be manually installed, channel by channel.

To install analogue channels manually . . .

1 - Press **Home** and select **Setup** and press **OK**.

2 - Select **Channel settings > Channel installation > Analogue : Manual installation** and press **OK**.

- **System**

To set up the TV system, select **System** and press **OK**. Select your country or the part of the world where you are now.

- **Search channel**

To find a channel, select **Search channel** and press **OK**. Select **Search** and press **OK**. You can also enter a frequency yourself. If the reception is poor, press **Search** again. If you want to store the channel, select **Done** and press **OK**.

- **Fine tune**

To fine tune a channel, select **Fine tune** and press **OK**. You can fine tune the channel with **Up** or **Down**.

If you want to store the channel found, select **Done** and press **OK**.

- **Store current channel / Store as new channel**

You can store the channel on the current channel number or as a new channel number.

Select **Store current channel** or **Store as new channel**.

You can redo these steps until you have found all available analogue TV channels.

# Home menu

From the Home menu, you can start any activity you can do with the TV.

Open the Home menu to start watching TV or start watching a disc on your Home Theatre System. Also in the Home menu, you can open Smart TV to surf the Internet or open Help if you need information on using the TV.

## Open the Home menu

- 1 - To open the Home menu, press **HOME**.
- 2 - Select an activity using the arrow keys and press **OK** to start the activity.
- 3 - To close the Home menu without changing the current activity, press **BACK**.



### • Help

Select **Help** and press **OK** to open the on screen Help. You can look up a topic in an alphabetical list.

### • Setup

Select **Setup** to install channels or adjust all TV settings.

### • Satellite

Select **Satellite** and press **OK** to watch satellite channels.

### • TV

Select **TV** and press **OK** to watch TV channels.

### • Smart TV

Select **Smart TV** and press **OK** to open the Smart TV start page.

### • Source

Select **Source** and select a connected device in the list underneath the icon. Press **OK** to switch to the selected device.

### • TV guide

Select **TV guide** and press **OK** to open a list of the current and scheduled TV programmes of your channels.

### • Recordings

Select **Recordings** and press **OK** to open the list of your recordings.

### • Demo

Select **Demo** to watch demonstration videos.



# TV guide

## 9.1

### What you need

With the TV guide you can view a list of the current and scheduled TV programmes of your channels. Depending on where the TV guide information (data) is coming from, analogue and digital channels or only digital channels are shown. Not all channels offer TV guide information.

The TV can collect TV guide information for the channels that are installed on the TV (e.g the channels you watch with Watch TV). The TV cannot collect the TV guide information for channels viewed from a digital receiver.

## 9.2

### Using the TV guide

#### Open the TV guide

To open the TV guide, press **TV GUIDE**.

Press **TV GUIDE** again to close.



The first time you open the TV guide, the TV scans all TV channels for programme information. This may take several minutes. TV guide data is stored in the TV.

#### Tune to a programme

##### Switch to a programme

From the TV guide, you can switch to a current programme.

To select a programme, use the arrow keys to highlight the programme name.

Navigate to the right to view programmes scheduled later that day.

To switch to the programme (channel), select the programme and press **OK**.

##### View programme details

To call up the details of the selected programme, press **INFO**.

### Change day

The TV guide can show scheduled programmes for the upcoming days (maximum up to 8 days).

If the TV guide information comes from the broadcaster, you can press **+** to view the schedule of one of the next days. Press **-** to go back to the previous day.

Alternatively, you can press **OPTIONS** and select **Change day**.

Select **Previous day**, **Today** or **Next day** and press **OK**, to select the day of the schedule.

### Set a reminder

You can set reminders that alert you of the start of a programme with a message on screen.

- To set a reminder, select the programme in the schedule and press **Set reminder**. The programme is marked with a clock.
- To cancel the reminder, press the **Clear reminder**.
- To view a list of all reminders you have set, press **OPTIONS**, and select **All reminders**.

### Search by genre

If the information is available, you can look up scheduled programmes by genre like movies, sports, etc.

To search for programmes by genre, press **OPTIONS** and select **Search by genre**. Select a genre and press **OK**. A list with the found programmes appears.

## 9.3

### Recording

From the TV guide, you can instantly record or schedule a recording of a TV programme. To store the recordings, connect a USB Hard Drive to the TV.

For more information on Recording, press **Keywords** and look up **Recording**.

# Sources

## 10.1

### Sources list

In the list of connections – the Source menu – you can find the devices connected to the TV. From this Source menu, you can switch to a device.

#### Sources menu

To open the Sources menu, press **SOURCES**.  
To switch to a connected device, select the device with the arrows **◀** (left) or **▶** (right) and press **OK**. For some devices (HDMI-CEC devices), you can select an activity directly in the list underneath the device icon.  
Select the device and select an activity and press **OK**.  
To close the Source menu without switching to a device, press **SOURCES** again.



#### Automatic detection

When you connect a new device to the TV, the device is detected automatically and put in the Sources menu. The device is shown as an icon (the device type) and has a name. If the device type does not correspond with the device, e.g. the TV says it is a player but it is not, you can change the type. To change the type of the device, press **Change type** and select a type that fits the device and press **OK**.

If the name does not fit the device or you want to give the device a name of your own, press **Rename**. Use the remote control keypad to enter a new name.

An appropriate device type helps you in using the device. The device type determines picture and sound styles, resolution values, specific settings or the position within the Sources menu.

When you connect a new device to the TV, the icon of the device jumps to the front of the Sources menu.

If the TV does not detect the device automatically, select the connection you used to connect the device and adjust the Device type and name.

#### Original name and icon

To restore the device icon to its original name and type icon, press **OPTIONS**. Select **Original name**

and icon and press **OK**.

#### Scan connections

To rescan all TV connections and update the Sources menu, press **OPTIONS**, select **Scan connections** and press **OK**.

## 10.2

### From standby

With the TV in standby, you can switch on a connected device with your TV remote control.

#### Play

To switch on both disc player and TV from standby and start playing the disc or programme immediately, press **▶** (play) on the TV remote control. The device should be connected with an HDMI cable and both TV and device must have HDMI CEC switched on.



#### Home Theatre System

You can switch on your Home Theatre System to listen to an audio disc or a radio channel and leave the TV in standby.

To only switch on the HTS, with the TV in standby, press **SOURCES** on the TV remote control.

## 10.3

### EasyLink

With **EasyLink** you can operate a connected device with the TV remote control. EasyLink uses HDMI CEC to communicate with the connected devices. Devices must support HDMI CEC and must be connected with an HDMI connection.

For more information, press **Keywords** and look up **EasyLink**.


# Timers and clock

## 11.1


### Sleeptimer

With the sleep timer, you can set the TV to switch to standby automatically after a preset time.

To set the sleep timer . . .


- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **TV settings > General settings > Sleep timer**.

With the slider bar you can set the time to up to 180 minutes in increments of 5 minutes. If set to **0 mins**, the sleep timer is switched off. You can always switch off your TV earlier or reset the time during the countdown.

- 3 - Press , repeatedly if necessary, to close the menu.



## 11.2

### Clock



To know what time it is, press  **TV GUIDE** to find the time in the TV guide.

In some countries, digital broadcasts do not send UTC - Coordinated Universal Time information. The daylight saving change might be ignored and the TV might show an incorrect time.

To correct the TV clock . . .

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **TV settings > General settings > Clock > Auto clock mode**, and select **Country dependent**.
- 3 - Select **Daylight saving** and select the appropriate setting.
- 4 - Press , repeatedly if necessary, to close the menu.

To set the TV clock manually . . .



- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **TV settings > General settings > Clock > Auto clock mode**, and select **Manual**.
- 3 - Select **Date** and **Time** to adjust.
- 4 - Press , repeatedly if necessary, to close the menu.


### Switch off timer

If you do not press a key on the remote control during a 4 hour period, or if the TV receives no input signal nor remote control commands for 10 minutes, the TV switches off automatically to save energy.

If you use the TV as a monitor or use a digital receiver to watch TV (a Set-top box - STB) and you do not use the remote control of the TV, you should deactivate the automatic switch off.

To deactivate the **Switch off timer** . . .

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **TV settings > General settings > Switch off timer** and set the slider bar to **Off**.
- 3 - Press , repeatedly if necessary, to close the menu.

For more information on environmentally friendly TV settings, press  **Keywords** and look up **Eco settings**.

---


# Games

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## 12.1

### Play a game

With a game console connected to the TV, you can play games on TV.

For more information on connecting a game console, press  **Keywords** and look up **Game console**, connect.

#### Start a game

- 1 - Press  **SOURCES** , select the game console and press **OK**.
- 2 - On the game console, start the game and select the multi or two-player mode.



#### Ideal game setting

For some games, where speed and precision is needed, set the TV to the ideal **Game** setting before you start playing.

If your game console is added as a **Game** type of device in the **Sources** menu (list of connections), the TV is set to the ideal **Game** setting automatically.

If the type of your game console is set as **Player** and used as a disc player most of the time, leave the device type set to **Player**.

To set the TV to the ideal setting manually . . .

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Advanced > Activity style** and press **OK**.
- 3 - Select **Game** and press **OK**.
- 4 - Press , repeatedly if necessary, to close the menu. Remember to set **Activity Style** setting back to **TV** when you stop playing the game.

# Your photos, videos and music

13.1

## From a USB connection or network computer

### What you need

You can view your photos or play your music and videos from a connected USB flash drive or USB Hard Drive. If you have a computer in your home network, you can view and play your files from your computer on the TV.

#### From a USB device

With the TV switched on, plug in a USB flash drive or USB Hard Drive to one of the USB connections. The TV detects the device and lists your files.

If the list does not appear automatically, press **SOURCES**, select **Browse USB** and press **OK**.



#### Warning

If you try to pause or record a programme with a USB Hard Drive connected, the TV will ask you to format the USB Hard Drive. This formatting will delete all current files on the USB Hard Drive.

#### From a computer

If the TV and the computer are in the same network, the TV can browse and play files stored on your computer.

On your computer, you need to install media server software like Twonky™ to share your files with the TV. The TV shows your files and folders as they are organised on your computer.

To browse the files on your computer, press **SOURCES**, select **Browse network** and press **OK**.

## Menu bar and sorting

With a USB device connected, the TV sorts the files by type. Navigate to the menu bar and select the type of file you are looking for.

If you browse files from a computer, you can only browse the files and folders as they are organized on the computer.

#### The menu bar

Navigate to the menu bar and select the type of file you want to watch or play.

Select **Photos**, **Music** or **Videos**.

Alternatively, you can open the **Folders** view and browse your folders to look for a file.

#### Sorting

To browse your photos by date, month, year or alphabetically by name, press **Sort**.

To browse your music by album, artist, genre or alphabetically by name, press **Sort**.

Videos are sorted alphabetically.

## View photos

To view photos, select **Photos** in the menu bar, select a photo thumbnail and press **OK**.

If there are several photos in the same folder, select a photo and press **Slide show** to start a slide show of all photos in this folder.

To jump to the next or previous photo, press **+** or **-**.

To stop the slide show or close the photo, press **LIST** or **(Stop)**.

You can play music with a slide show.

Start the slide show after you started the music.

1 - Select a song or a folder with songs and press **OK**.

2 - Press **LIST** and select **Photos**.

3 - Select a photo or a folder with photos and press **Slide show**.

#### Info

To view info on a photo (size, creation date, file path, etc.), select a photo and press **INFO**.

Press again to hide the info.

#### Options

Press **OPTIONS**.

##### • Shuffle

Shows your photos in a random order.

##### • Repeat


Plays the slide show continuously.

##### • Slide show speed

Sets the speed of the slide show.

##### • Slide show transition


Sets the style of the photo transitions.



To close **Browse USB** or **Browse network**, press  and select another activity.

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## Play music



To play music, select  **Music** in the menu bar, select a song and press **OK**.

If there are more songs in the same folder, press  **Play all** to play all songs in this folder.

To jump to the next or previous song, press  **+** or  **-**.



To pause the music, press **OK**. Press **OK** again to continue.

To make a 10-second jump in a song or 10-second jump back, press  or .


To rewind or fast forward, press  or . Press the keys several times to speed up - 1/4x, 1/2x, 2x, 4x, 8x, 16x, 32x.

\*1/4x and 1/2x are only available in DLNA.

To stop the music playback, press  (Stop).


If you press  **LIST** or , the music keeps on playing.

### Info

To view song info (title, artist, duration, etc.), select the song and press  **INFO**.

Press again to hide the info.

### Options


Press  **OPTIONS**.

- **Shuffle**

Plays your music randomly.

- **Repeat**


Plays the song once or continuously.



To close **Browse USB** or **Browse network**, press  and select another activity.

---

## Play videos



To play a video, select  **Videos** in the menu bar, select a video and press **OK**.

If there are more videos in the same folder, press  **Play all** to play all videos in this folder.


To jump to the next or previous video, press  **+** or  **-**.

To pause the video, press **OK**. Press **OK** again to continue.


To make a 10-second jump forward or backward in a video, press  or .

To rewind or go fast forward, press  or . Press the keys several times to speed up - 1/4x, 1/2x, 2x, 4x, 8x, 16x, 32x.

\*1/4x and 1/2x are only available in DLNA.

To stop the video playback, press  (Stop).

### Info

To view info on a video (playhead position, duration, title, date, etc.), select the video and press  **INFO**. Press again to hide the info.

### Options

Press  **OPTIONS**.

- **Subtitles**


If available, you can switch subtitles **On**, **Off** or **On** during mute.

- **Shuffle**

Plays your videos in a random order.

- **Repeat**

Plays a video once or continuously.

To close **Browse USB** or **Browse network**, press  and select another activity.

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13.2

## Wi-Fi Miracast

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### About Wi-Fi Miracast

Your TV is a **Wi-Fi Certified Miracast™** device. With Miracast™, you can watch and share the screen of your smartphone, tablet or computer on your TV screen wirelessly. You can stream videos (audio and video), share photos or anything else that's on screen of the device. No need to connect the device to your home network. Both the TV and the device must be Wi-Fi Certified Miracast™ devices and have Miracast switched on.



For more information on Wi-Fi Certified Miracast™ go to [www.wi-fi.org](http://www.wi-fi.org)



Wi-Fi®, the Wi-Fi CERTIFIED logo, the Wi-Fi logo are registered trademarks of the Wi-Fi Alliance. **Wi-Fi CERTIFIED Miracast™**, **Miracast™** are trademarks of the Wi-Fi Alliance.

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## Switch Miracast On or Off



### Switch on Miracast

Make sure Wi-Fi Miracast is switched on.

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **Network settings > Wi-Fi Miracast > On** and press **OK**.
- 3 - Press , repeatedly if necessary, to close the menu.

### Switch off Miracast

If you do not want the TV to receive requests for screen sharing from other devices, you can switch off Miracast on the TV.

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **Network settings > Wi-Fi Miracast > Off** and press **OK**.
- 3 - Press , repeatedly if necessary, to close the menu.

---

## Share a screen on TV

To share the screen of your smartphone, tablet or computer on the TV . . .

- 1 - Switch on the TV.
- 2 - On the device, open an application such as Wi-Fi Miracast, Wi-Fi Direct™, Intel®Wireless Display\* or similar and start scanning for other Miracast devices.
- 3 - In the list of found devices, select the TV and connect.
- 4 - On the TV, agree to the request to connect to the TV. You might be asked to enter a PIN code from the device on the TV - enter the numbers with the digit keys on the remote control. Alternatively, you might be asked by the TV to enter a PIN code on the device. If you connect, the TV will show the screen of the device.
- 5 - On the device, select the videos, photos or files you want to watch on TV.

\* Miracast is supported by WiFi 3.5 onwards.

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## Stop sharing




You can stop sharing a screen from the TV or from the mobile device.

### From the device

With the application you use to start Miracast, you can disconnect and stop watching the screen of the device on TV. The TV will switch back to the last selected programme.

### From the TV

To stop watching the screen of the device on TV, you can . . .

- press  to watch a TV broadcast
- press  to start another activity on TV
- press  **SOURCES** to open the Sources menu and select a connected device.

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## Block a device



The first time you receive a request to connect from a device, you can block the device. This request, and all requests in the future, from this device, will be ignored.

To block a device, select **Block . . .** in the request window and press **OK**.

### Unblock all devices

All previously connected and blocked devices are stored in the Wi-Fi Miracast list of connections. If you clear this list, all blocked devices will be unblocked.

To unblock all blocked devices . . .

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **Network settings > Reset Miracast group** .
- 3 - Press **OK** to clear the list.
- 4 - Press , repeatedly if necessary, to close the menu.

### Blocking a previously connected device

If you want to block a device that you previously connected, you need to clear the Wi-Fi Miracast connections list first. If you clear this list, you will have to confirm or block the connection for every device again.

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## Screen delay

The normal delay when sharing a screen with Miracast is about 1 second. The delay might be longer if you are using older devices/computers with less processing power.

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## Specifics


- Miracast on this TV is subject to the HDCP protocol and cannot display copy-protected premium content sent by a device.
- The maximum video resolution supported is 720p.

# Pause TV


You can pause a TV broadcast and resume watching it later. Only digital TV channels can be paused. You must connect a USB Hard Drive to buffer the broadcast. You can pause a broadcast for a maximum time span of 90 minutes.

For more information, press  **Keywords** and look up **USB Hard Drive**.


## Pause or resume a broadcast

To pause a broadcast, press  (Pause). A progress bar appears briefly on screen.

To call up the progress bar, press  (Pause) again.

To resume watching, press  (Play). The icon on screen indicates you are watching a paused broadcast.

## Back to the actual TV broadcast



To switch back to the actual TV broadcast, press  (Stop).


The moment you switch to a digital channel, the USB Hard Drive starts buffering the broadcast. When you switch to another digital channel, the broadcast of the new channel is buffered and the broadcast of the former channel is cleared. When you switch to a connected device (a Blu-ray Disc player or digital receiver) the USB Hard Drive stops buffering and the broadcast is cleared. Also when you switch the TV to standby the broadcast is cleared.

Whilst recording a programme on the USB Hard Drive, you cannot pause a broadcast.



## Instant replay

Whilst watching a broadcast from a digital TV channel, you can easily instant replay the broadcast.

To replay the last 10 seconds of a broadcast, press  (Pause) and press  (Left).


You can press  repeatedly until you reach the start of the broadcast buffer or the maximum time span.

## Progress bar

With the progress bar on screen, press  (Rewind) or press  (Forward) to select from where you want to start viewing the paused broadcast. Press these keys repeatedly to change speed.

## Specifics

- The Audio Description audio (commentary) for the visually impaired is not available for playback in Pause TV or Recording.

- You can buffer the digital (DVB) subtitles of a channel. You cannot buffer subtitles that come from Text services. To check if digital (DVB) subtitles are available, tune to the TV channel and press  **OPTIONS**, select **Subtitle language** to open the list

of Subtitles. You can only buffer a subtitle language preceded by a DVB icon.



# Recording

## 15.1

### What you need

To record a TV programme you need . . .

- a connected USB Hard Drive formatted on this TV
- digital TV channels installed on this TV (the channels you watch with Watch TV)
- to receive channel information for the built-in TV guide (from the broadcaster or from the Internet)

For more information, press **Keywords** and look up USB Hard Drive, installation.

## 15.2

### Record a programme

#### Record now

To record the programme you are watching, press **Record** (Record) on the remote control.



If you receive TV guide information from the Internet, you can adjust the end time of the recording in the pop-up window before you confirm the recording. If you receive TV guide information from the broadcaster, the recording starts immediately. You can adjust the end time of the recording in the list of recordings.

To stop recording, press **Stop** (Stop).

#### Schedule a recording

You can schedule a recording of an upcoming programme for today or a few days from today (maximum of 8 days away).

1 – To schedule a recording, press **TV Guide**. On the TV guide page, select the channel and programme you wish to record. You can enter the channel number to jump to the channel in the list.

Press **Right** or **Left** to scroll through the programmes of a channel.

To change the date of the list, press **OPTIONS** and select **Change day**. In the list, select the day you

want and press **OK**. If the TV guide comes from the Internet, you can select the date at the top of the page and press **OK**.

2 – With the programme highlighted, press **Record**.

The TV adds some time buffer at the end of the programme. You can add some extra buffer if needed.

3 – Select **Schedule** and press **OK**. The programme is scheduled for recording. A warning will appear / will be shown automatically when overlapping recordings are scheduled.

If you plan to record a programme in your absence, remember to leave the TV switched to standby and the USB Hard Drive switched on.

### List of recordings

To view the list of recordings and scheduled recordings, press **Home**, select **Recordings** and press **OK**.

In this list, you can select a recording to watch, remove recorded programmes, adjust the end time of an ongoing recording or check the free disk space. Also in this list, if the TV guide comes from the Internet, you can schedule a recording for which you set the beginning and end time yourself, as a timed recording not linked to a programme. To set a timed recording, select **Schedule recording** at the top of the page and press **OK**. Set the channel, date and time span. To confirm the recording, select **Schedule** and press **OK**.

#### Remove a scheduled recording

To remove a scheduled recording, select the upcoming recording in the list and press **OK**. Alternatively, you can select the scheduled recording and press **OPTIONS** and select **Cancel recording**.

### Specifics

- While recording a programme, you can watch a previously recorded programme.
- While recording, you cannot switch TV channels.
- While recording, you cannot pause the TV broadcast.
- To Record, broadcasters need a reliable clock setting. If you reset the TV clock manually, recordings may fail.
- The Audio Description audio (commentary) for the visually impaired cannot be recorded.
- You can record the digital (DVB) subtitles of channel. You cannot record subtitles that come from Text services. To check if digital (DVB) subtitles are available, tune to the TV channel and press **OPTIONS**, select **Subtitle language** to open the list of Subtitles. You can only record a subtitle








language preceded by a DVB icon.

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15.3

## Watch a recording

To watch a recording . . .

- 1 - Press , select  **Recordings** and press OK.
- 2 - In the list, select the recording and press  (Play) to start the playback. You can use the  (Forward),  (Rewind),  (Pause) or  (Stop) keys on the remote control.


### Expired recording

Broadcasters can limit the number of days a recording can be viewed. A recording in the list can show the number of days before it expires.

### Failed recording

When a scheduled recording was prevented by the broadcaster or when the broadcast was interrupted, a recording is marked as **Failed**.

### Delete a recording

To delete a made recording, select the recording in the list, press  **OPTIONS** and select **Delete recording**.

For more information, press  **Keywords** and look up **Record a programme**.

# Smart TV

## 16.1

### About Smart TV

Connect this **Philips Smart LED TV** to the Internet and discover a new world of television. You can make a wired connection to your router or you can link up wirelessly with Wi-Fi.

With the TV connected to your home network, a smartphone can show a photo on TV, you can play videos stored on your computer or control the TV with your tablet.

With your TV connected to the Internet, you can watch a rental video from an online video store, read the online TV guide or record your favourite TV show on a USB Hard Drive. The Smart TV Apps add to the fun with all sorts of entertainment and convenient services.

## 16.2

### What you need

To enjoy **Smart TV Apps** you must connect the TV to a router with a high-speed (broadband) connection to the Internet. You can use a home network connected to the Internet. You do not need a computer.

For more information, press  **Keywords** and look up **Network**.


#### Tip

To enter text or to navigate an Internet page more easily, you can consider to connect a USB keyboard and a USB mouse to the TV.

For more information, press  **Keywords** and look up **USB keyboard** or **USB mouse**.

## 16.3

### Setup Smart TV

The first time you open Smart TV, you need to configure your connection. Read and agree to the terms and conditions to continue. If you do not want to set up Smart TV, press .

#### Register

To register with Club Philips . . .

- 1 - Select **Register** and press **OK**.
- 2 - Enter your email address, select **Continue** and press **OK**.
- 3 - Confirm the email address.

#### Parental control

To lock Adult 18+ rated apps . . .

- 1 - Switch on Smart TV parental control by selecting **Enable** and then press **OK**.
- 2 - Enter an unlock PIN code of your choice.
- 3 - Confirm your PIN code.

Adult 18+ rated apps are now locked. To open a locked app, select the app and press **OK**. The TV will ask you to enter your 4-digit code.

## 16.4

### Smart TV Apps

#### Open Smart TV


The Smart TV start page is your link to the Internet. You can rent movies online, read newspapers, watch videos and listen to music, also shop online, open your social network page (Twitter, . . .) or watch TV programmes when it suits you with Online TV. To do this, you open Apps - Internet sites which are tailored for TV. With your TV connected to the Internet, you can open Smart TV.

#### Open Smart TV

To open the Smart TV start page, press  **Smart TV** . Alternatively, you can press , select **Smart TV** and press **OK**.

The TV connects to the Internet and opens the Smart TV start page. This may take a few seconds.

#### Close Smart TV

To close the Smart TV start page, press  and select another activity.

TP Vision Europe B.V. bears no responsibility regarding the content and the quality of the content provided by the content service providers.

### Smart TV start page

- 1 - Now on your TV
- 2 - Your Apps
- 3 - App gallery
- 4 - Internet
- 5 - Recommended Apps
- 6 - Search
- 7 - Colour keys for control

#### Your Apps

You start Apps from the Smart TV start page. If the start page does not hold any Apps yet, you can add Apps from the App gallery.

#### App gallery

In the App gallery you find all available Apps.

## Internet

The Internet App opens the World Wide Web on your TV.

On your TV, you can view any Internet website but most of them are not tailored for a TV screen.

- Some plug-ins (e.g. to view pages or videos) are not available on your TV.

- Internet pages are shown one page at a time and full screen.


## Recommended Apps

In this window, Philips presents a range of recommended Apps for your country, Apps for Online TV or a selection of rental movies from Video stores.

You can select and open them from the Recommended Apps window.

## Search



With Search, you can search the App gallery for relevant Apps.

Enter a keyword in the text field, select  and press **OK** to start searching. You can enter names, titles, genres and description keywords to search. Alternatively, you can leave the text field empty and search for the most popular searches/keywords for a range of categories. In the list of found keywords, select a keyword and press **OK** to search for items with that keyword.

---


## Open an App

To open an App, you must add it to your list of Apps in the Smart TV start page first. You can add Apps to your list from the App gallery.

The list of your Apps on the Smart TV start page can be several pages long. Use the arrow keys to go to the next or previous page. Alternatively, press  + (Next page) or  - (Previous page).

### Open an App

To open an App . . .

1 - Press  and select **Smart TV**.


2 - On the start page, select an App icon and press **OK**.

In an App, press  to go back 1 step or page.

### Close an App


To close an App and return to the Smart TV start page, press  **Smart TV** .

### Reload an App page

If an App page did not load properly, press  **OPTIONS** and select **Reload** to reload the page.

## Zoom

To zoom in on an App page . . .



1 - Press  **OPTIONS** and select **Zoom page**.

2 - Use the slider bar to set the zoom level.


3 - Return to normal view by resetting the slider bar.

## View security info

You can check the security level of an App page.

On an App page, press  **OPTIONS** and select **Security info**. If a lock  is shown next to the loading animation on the bottom of the screen while loading a page, the transfer is secured.


## Feedback on an App

Select the App and press  **Feedback** to select a 'like' or 'don't like' button and send a suggestion or remark to us. You can also report an App malfunction.


## Manage your Apps

In the list of Apps on the Smart TV start page you can . . .


- **Remove an App**


To remove an App from the list, select the App icon and press  **Remove** . The App is still available in the App gallery.


- **Move an App**

To reposition an App in the list, select the App icon, press  **Move** and use the arrow keys to reposition the App. Press **OK** to confirm the position.

- **Lock an App**

To lock an App, select the App icon and press  **Lock** .

When you lock an App, you must enter the 4 digit PIN code you set for Parental control when you configured Smart TV. In the list, a locked App is marked with a lock .

To unlock an App, select the App icon and press  **Unlock** . You must enter the 4 digit PIN code to unlock.

---

## App gallery

Open the **App gallery** in Smart TV to browse the Apps, the collection of tailored websites for TV.

Find the App for YouTube videos, a national newspaper, an online photo album, Twitter, etc. There are Apps to rent a video from an online video store and Apps for watching programmes you missed. If the App gallery does not hold what you are looking for, try the World Wide Web and surf the Internet on TV.

---

## Rental video Apps

With the video store Apps in Smart TV, you can rent your favourite movie from an online rental video store. You can pay securely with your credit card.

### Rent a movie

- 1 - Open a Video store App in your list of Apps or select a recommended video on the Smart TV start page.
- 2 - Select a movie.
- 3 - Make the online payment.
- 4 - Start watching. You can use the ► (Play) and || (Pause) keys.

Most Video stores ask you to create a login account.

### Streaming video

With this TV, you can watch rental movies sent as a streaming video format. You can almost instantly watch the movie. You might need a USB Hard Drive to store some video buffer. If you have a USB Hard Drive connected, you can also download rental movies from video stores that offer movie downloading only. You can pause or restart a downloaded rental movie. Consult the video store regarding the rental duration of rental movies.

### Internet traffic

Streaming or downloading many videos may exceed your monthly Internet traffic limit.



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## Online TV


With the Online TV App on the Smart TV start page\*, you can watch TV programmes you missed or watch programmes whenever it suits you best.

### Open Online TV

To open the Online TV App . . .

- 1 - Press  **Smart TV** .
- 2 - On the start page, select the  **Online TV** icon and press OK.
- 3 - Select a programme on the page and press OK to start watching. You can use the ► (Play) and || (Pause) keys.

### List per broadcaster

To view the Online TV programmes ordered by broadcaster, press  **All broadcasters** . Select a broadcaster and press OK.

\* If available in your region.





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16.5

## Multi view

While you are on a Smart TV App or the Internet, you can watch the current TV channel. **Multi view** opens a small screen for the TV channel next to the Smart TV screen.

To open Multi view...

- 1 - Press  **SMART TV** to open Smart TV.
- 2 - Press  **MULTI VIEW** to open the small screen.
- 3 - Press  + or  - to change the TV channel in the small screen.

With Multi view open, you cannot use the Remote Control Pointer nor use a connected USB mouse in the Smart TV screen.

---


16.6

## Reset Smart TV

To reset your connection with Smart TV, clear the Internet memory on the TV.

You will clear your Philips Smart TV registration and parental rating setting, your video store app logins, all Smart TV app favourites, Internet bookmarks and history.

To clear the Internet memory . . .

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **Network settings** > **Clear Internet memory** and press **OK**.

# Multi room

## 17.1

### About Multi room

With Multi Room you can watch a TV programme that comes from another TV in your home. The programme is streamed from one TV to the other. You can stream a programme to a TV that has no antenna connection or has no Smart card subscription of its own. You can also stream a recorded programme from a TV with a connected Hard Drive.


The TV that streams the programme to the other TV, must be switched on and must tune to the channel or play the recording.

Streaming a TV programme with Multi Room will reduce the picture resolution to 720p maximum. You cannot stream radio channels. Some broadcasters protect their programmes to prevent this kind of streaming.

## 17.2

### What you need



To stream a TV programme from one TV to another, the programme must come from a digital TV channel.

Both TVs must be connected to your wireless home network. For more information, press  **Keywords** and look up **Wireless Network**.

Also, both TVs must have a Philips model number that ends with an 8 or higher – e.g. xxXXXxxx8. It might be necessary to update the older TV with its latest software. On the older TV, read the Help chapter on updating software.

Make sure that both TVs have the setting **Switch on with Wi-Fi (WoWLAN)** switched on in the TV setup.

To check this setting on this TV...

- 1 – Press , select **Setup** and press **OK**.
- 2 – Select **Network settings** > **Switch on with Wi-Fi** and select **On**, and press **OK**.
- 3 – Press  **BACK** repeatedly if necessary, to close the menu.

## 17.3

### Using Multi room

### First time use









When you start Multi room for the first time, switch on both TVs.

Once this TV made a connection with the other TV, the other one will appear automatically in the **Browse network** menu even when it's in standby.

### Stream a TV channel

With Multi room, you can watch the current TV channel or open the channel list of the other TV. If you select a channel from the list, the other TV will also switch to the channel you selected. If the other TV has a build-in satellite tuner with installed channels or a connected Hard Disc Drive (HDD) with recordings\*, you can also watch these on this TV. You cannot switch channels while the other TV is recording or in Pause TV mode.

To watch a TV channel from the other TV . . .


- 1 – Make sure the other TV is in standby\* or switched on.
- 2 – On this TV, press  **SOURCES** , select **Browse network** and press **OK**.
- 3 – If the TV is not yet connected to your home network, the network installation will start automatically. If the TV is already connected, go to step 4.
- 4 – In the **Browse network** menu, select the name of the other TV and press **OK**. If you have several TVs in your home, you might want to change the name of the other TV. You can do that on the TV itself.
- 5 – Select what you want to watch from the other TV . . .
  - to watch the current channel of the other TV, select **Current channel** and press **OK**.
  - to open the channel list of the other TV, select **Watch TV** and press  (Right).
  - to open the satellite channel list of the other TV, select **Watch satellite** and press  (Right).
  - to open the list of recordings\* on the other TV, select **Watch recordings** and press  (Right).
  - you can switch channels with  +  and  –  . You cannot switch channels when the other TV is recording or in Pause TV mode.

\* To switch on the other TV from standby or to watch its recordings from a connected HDD, both TVs must have a type number that ends with an 8 or higher – e.g. xxXXXxxx8 or xxXXXxxx9.

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## TV name

To change the TV name . . .

Press  > Setup > Network settings > TV network name.




# Settings

18.1


## Setup menu

### Quick picture and sound settings

With Quick picture and sound settings you can set your basic picture preferences in a few easy steps. The settings you made are stored under the **Picture style - Personal**. You can return to your picture preference if some settings were changed. You can set a preferred picture setting for every TV activity or connected device individually.

To return to your preferred picture setting, while watching a TV channel, press , select **Picture style** and select **Personal**.

To set a Quick picture setting . . .

- 1 - Press , select **Setup** and press **OK**.
- 2 - Select **Quick picture and sound settings** and press **OK**. Go through the steps and finish.

For more information, press  **Keywords** and look up **Picture style**.


### TV settings

In the **TV settings** menu you can set all settings. The item **General settings** in the menu holds a collection of settings like **Menu language**, **Sleep timer**, **Switch off timer**, **Universal access** and more.

For more information, press  **Keywords** and look up the topic you need.

### Search for channels

With **Search for channels**, you can update your current channel list and possible newly found channels are added to the channel list. You can also do a re-installation of all channels. A channel update or a channel reinstall may take some time.

Press  **Keywords** and look up **Channel, update** or **Channels, re-install**.

## Channel settings

In the **Channel settings** menu, you can set your language preferences or set **Hearing impaired** and **Audio description** for people who are hearing and visually impaired. You can set an age rating to prevent children from watching a rated programme and set or change your **Child lock** code. You can switch on the **Automatic channel update**, do a **digital reception test** or install analogue channels manually.


### Languages

Press  **Keywords** and look up **Audio language** or **Subtitles**.

### Universal access

Press  **Keywords** and look up **Universal access** for visually and hearing impaired users settings.


### Channel installation

Press  **Keywords** and look up **Automatic channel update** or **Channel update message**. Also look up **Manual installation** for installing analogue channels or **DVB** to switch the antenna connection.


### Child lock

Press  **Keywords** and look up **Child lock**.


## Connect to network

Press  **Keywords** and look up **Network, wireless** or **Network, wired**.


## Network settings

Press  **Keywords** and look up **Network, settings**.

## Update software

Press  **Keywords** and look up **Software, Internet update** or **Software, USB update**.

## Update software

Press  **Keywords** and look up **Software, USB update**.

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## Software settings

Press **Keywords** and look up **Software**, current version.

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## Watch demo

With **Demo** in **Home** menu, you can watch some demonstration videos of some of the picture quality features of your TV.

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18.2

## Picture

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### Picture style

For easy picture adjustment, you can select a preset setting with **Picture style**.

- 1 - While watching a TV channel, press **Settings**, then select **Picture style**.
- 2 - Select a style and press **OK**.

The available Picture styles are . . .

- **Personal** - Your preferences made in Quick picture settings
- **Vivid** - Ideal for daylight viewing
- **Natural** - Natural picture settings
- **Standard** - Factory standard settings
- **Movie** - Ideal for watching movies
- **Photo** - Ideal for viewing photos

### Restore a Style

With a **Picture Style** selected, you can adjust any picture setting in **Setup > TV settings > Picture...** The selected style will store the changes you made. We recommend to adjust the picture settings for the style **Personal** only.

To restore the style to its original setting...

- 1 - Press **Home** and select **Setup**, and press **OK**.
- 2 - Select **TV settings > Picture > Picture style** and select the style you want to reset.
- 3 - Press **Restore Style**.
- 4 - Select **Yes** and press **OK**. The style is restored.
- 5 - Press **Back**, repeatedly if necessary, to close the menu.

For more information on adjusting individual picture settings, press **Keywords** and look up **Picture**.

### Home or Shop

If the **Picture style** is switched back to **Vivid** every time you switch on the TV, the TV location is set to **Shop**. A setting meant for in-store promotion. To set the TV for Home use . . .

- 1 - Press **Home** and select **Setup** and press **OK**.
- 2 - Select **TV settings > General settings > Location** and press **OK**.
- 3 - Select **Home** and press **OK**.
- 4 - Press **Back**, repeatedly if necessary, to close the menu.

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## Picture settings

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### Colour

With **Colour**, you can adjust the colour saturation of the picture.

To adjust the colour . . .

- 1 - Press **Home** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Colour**.
- 3 - Press **Right** and adjust the value with **Up** (up) or **Down** (down).
- 4 - Press **Back**, repeatedly if necessary, to close the menu.

---

### Contrast

With **Contrast**, you can adjust the contrast of the picture.

To adjust the contrast . . .

- 1 - Press **Home** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Contrast**.
- 3 - Press **Right** and adjust the value with **Up** (up) or **Down** (down).
- 4 - Press **Back**, repeatedly if necessary, to close the menu.

---

### Sharpness

With **Sharpness**, you can adjust the level of sharpness in fine detail of the picture.

To adjust the sharpness . . .

- 1 - Press **Home** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Sharpness**.
- 3 - Press **Right** and adjust the value with **Up** (up) or **Down** (down).
- 4 - Press **Back**, repeatedly if necessary, to close the menu.

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## Advanced picture settings

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### Colour settings

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## Colour enhancement

With **Colour enhancement**, you can enhance the colour intensity and the details in bright colours.

To adjust the level . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Advanced > Colour > Colour enhancement**.
- 3 - Press **▶** (right) and select **Maximum, Medium, Minimum** or **Off**.
- 4 - Press **⬅**, repeatedly if necessary, to close the menu.

---

## Colour temperature

With **Colour temperature**, you can set the picture to a preset colour temperature or select **Custom** to set a temperature setting yourself with **Custom colour temperature**. **Colour temperature** and **Custom colour temperature** are settings intended for expert users.

To select a preset . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Advanced > Colour > Colour temperature**.
- 3 - Press **▶** (right) and select **Normal, Warm** or **Cool**. Select **Custom** if you want to set a colour temperature yourself.
- 4 - Press **⬅**, repeatedly if necessary, to close the menu.

---

## Custom colour temperature

With **Custom colour temperature**, you can set a colour temperature yourself. To set a **Custom colour temperature**, first select **Custom** in the **Colour temperature** setting to make the **Custom colour temperature** menu available. **Custom colour temperature** is a setting intended for expert users.

To set a custom colour temperature . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Advanced > Colour > Custom colour temperature**.
- 3 - Press **▶** (right).
- 4 - Select a setting with the arrow keys.
- 5 - Press **OK** to confirm a setting.
- 6 - Press **⬅**, repeatedly if necessary, to close the menu.

---

## Contrast settings

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## Contrast modes

With **Contrast modes**, you can set the level at which power consumption can be reduced by dimming the intensity of the screen. Choose for the best power consumption or for the picture with the best intensity.

To adjust the level . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Advanced > Contrast > Contrast modes**.
- 3 - Press **▶** (right) and select **Best Picture, Best Power, Standard** or **Off**.
- 4 - Press **⬅**, repeatedly if necessary, to close the menu.

---

## Brightness

With **Brightness**, you can set the level of brightness of the picture signal. Brightness is a setting intended for expert users. We recommend non-expert users to adjust the brightness of the picture with the **Contrast** setting.

To adjust the level . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Advanced > Contrast > Brightness**.
- 3 - Press **▶** (right) and adjust the value with **▲** (up) or **▼** (down).
- 4 - Press **⬅**, repeatedly if necessary, to close the menu.

---

## Video contrast

With **Video contrast**, you can decrease the range of the video contrast.

To adjust the level . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Advanced > Contrast > Video contrast**.
- 3 - Press **▶** (right) and adjust the value with **▲** (up) or **▼** (down).
- 4 - Press **⬅**, repeatedly if necessary, to close the menu.

---

## Gamma

With **Gamma**, you can set a non-linear setting for picture luminance and contrast. Gamma is a setting intended for expert users.

To adjust the level . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Advanced > Contrast > Gamma**.

- 3 - Press **▶** (right) and adjust the value with **▲** (up) or **▼** (down).
- 4 - Press **↵**, repeatedly if necessary, to close the menu.

---

## Sharpness settings

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### Super resolution

With **Super resolution**, you switch on a superior sharpness in line edges and contours.

To switch on or off . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Advanced > Sharpness > Super resolution**.
- 3 - Press **▶** (right) and select **On** or **Off**.
- 4 - Press **↵**, repeatedly if necessary, to close the menu.

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## Noise reduction

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With **Noise reduction**, you can filter out and reduce the level of image noise.

To adjust the noise reduction . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Advanced > Sharpness > Noise reduction**.
- 3 - Press **▶** (right) and select **Maximum**, **Medium**, **Minimum** or **Off**.
- 4 - Press **↵**, repeatedly if necessary, to close the menu.

---

## MPEG artefact reduction

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With **MPEG artefact reduction**, you can smoothen the digital transitions in the picture. MPEG artefacts are mostly visible as small blocks or jagged edges in images.

To reduce the MPEG artefacts . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Advanced > Sharpness > MPEG artefact reduction**.
- 3 - Press **▶** (right) and select **Maximum**, **Medium**, **Minimum** or **Off**.
- 4 - Press **↵**, repeatedly if necessary, to close the menu.

---

## Game or computer

You can switch the TV to the ideal picture setting for gaming or for using the TV as a computer monitor. There is a different setting for **Game** or **Computer**. If a device has a correct type set in the Source menu - Game console or Computer - the TV switches automatically to the ideal setting when you switch to the device. If you switch the setting manually, do not forget to switch it off when you switch to watching TV or another connected device.

To switch the setting manually . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Picture > Advanced > Activity style**.
- 3 - Select **Game**, **Computer** or **TV**. The setting TV returns to the picture settings for watching TV.
- 4 - Press **↵**, repeatedly if necessary, to close the menu.

---

## Location

If the TV is located in a shop, you can set the TV to display an in store promotion banner. The **Picture style** is set to **Vivid** automatically. The automatic **Switch off timer** is switched off.

To set the TV to Shop location . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > General settings > Location** and press **OK**.
- 3 - Select **Shop** and press **OK**.
- 4 - Press **↵**, repeatedly if necessary, to close the menu.

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## 18.3

## Sound

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### Sound style

For easy sound adjustment, you can select a preset setting with **Sound style**.

- 1 - While watching a TV channel, press **⚙**, then select **Sound style**.

- 2 - Select a style and press **OK**.

The different Sound styles are . . .

- **Personal** - Your personal choices made in Personalise sound
- **Original** - Factory standard
- **Movie** - Ideal for watching movies
- **Music** - Ideal for listening to music
- **Game** - Ideal for gaming
- **News** - Ideal for speech

## Restore a Sound style

With a Sound style selected, you can adjust any sound setting in **Setup > TV settings > Sound...**  
The selected style will store the changes you made.  
We recommend to adjust the sound settings for the style **Personal only**

To restore the style to its original setting...

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Sound > Sound style** and select the style you want to reset.
- 3 - Press **— Restore Style**.
- 4 - Select **Yes** and press **OK**. The style is restored.
- 5 - Press **⬅** BACK repeatedly if necessary, to close the menu.

Press **— Keywords** and look up **Sound** for adjusting individual sound settings.

---

## Sound settings

### Bass

With **Bass**, you can adjust the level of low tones in the sound.

To adjust the level . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Sound > Bass**.
- 3 - Press **▶** (right) and adjust the value with **▲** (up) or **▼** (down).
- 4 - Press **⬅**, repeatedly if necessary, to close the menu.

---

### Treble

With **Treble**, you can adjust the level of high tones in the sound.

To adjust the level . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Sound > Treble**.
- 3 - Press **▶** (right) and adjust the value with **▲** (up) or **▼** (down).
- 4 - Press **⬅**, repeatedly if necessary, to close the menu.

---

### Surround mode

With **Surround mode**, you can set the sound effect of the TV speakers.

To set the surround mode . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Sound > Surround mode**.
- 3 - Press **▶** (right) and select **Stereo, Incredible surround**.

- 4 - Press **⬅**, repeatedly if necessary, to close the menu.

---

## Headphones volume

With **Headphones volume**, you can set the volume of a connected headphones separately.

To adjust the volume . . .

- 1 - Press **⚙** and select **Headphones volume** in the menu bar.
- 2 - Press **▲** (up) or **▼** (down) to adjust the volume.
- 3 - Press **⬅**, repeatedly if necessary, to close the menu.

---

## Advanced sound settings

### Auto volume levelling

With **Auto volume levelling**, you can set the TV to automatically level out sudden volume differences. Typically at the beginning of adverts or when you are switching channels.

To switch on or off . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings > Sound > Advanced > Auto volume leveling**.
- 3 - Press **▶** (right) and select **On** or **Off**.
- 4 - Press **⬅**, repeatedly if necessary, to close the menu.

---

## TV speakers

You can send the TV sound to a connected audio device – a Home Theatre System or audio system. With **TV speakers**, you select where you want to hear the TV sound and how you want to control it.

- If you select **Off**, you permanently switch off the TV speakers.
- If you select **TV speakers**, the TV speakers are always on.

With an audio device connected with HDMI CEC, you can use one of the EasyLink settings.

- If you select **EasyLink**, the TV sends the TV sound to the audio device. The TV will switch off the TV speakers when the device is playing the sound.
- If you select **EasyLink autostart**, the TV will switch on the audio device, send the TV sound to the device and switch off the TV speakers.

With **EasyLink** or **EasyLink autostart** selected, you can still switch to TV speakers or device speakers in sound menu.

To set the TV speakers . . .

- 1 - Press **⬆** and select **Setup** and press **OK**.

- 2 - Select **TV settings > Sound > Sound output**.
- 3 - Press ► (right) and select **Off, TV speakers, EasyLink or EasyLink autostart**.
- 4 - Press ⬅, repeatedly if necessary, to close the menu.

To switch speakers directly . . .

- 1 - While watching TV, press ≡ **OPTIONS** and select **Picture and sound**.
- 2 - Select **Speakers** and select **TV or Amplifier** (audio device).
- 3 - Press ⬅, repeatedly if necessary, to close the menu.

---

## Clear sound

With **Clear Sound**, you improve the sound for speech. Ideal for news programmes. You can switch the speech improvement on or off.

To switch on or off . . .

- 1 - Press 🏠 and select **Setup** and press **OK**.
- 2 - Select **TV settings > Sound > Advanced > Clear Sound**.
- 3 - Press ► (right) and select **On or Off**.
- 4 - Press ⬅, repeatedly if necessary, to close the menu.

---

## HDMI ARC

If you do not need an Audio Return Channel (ARC) on any of the HDMI connections, you can switch the ARC signal off.

For more information, press 🔴 **Keywords** and look up **HDMI ARC**.

---

## Audio out format

With **Audio out format** you can set the audio out signal of the TV to fit the sound processing capabilities of your Home Theatre System.

For more information, press 🔴 **Keywords** and look up **Audio Out format**.

---

## Audio out levelling

With **Audio out leveling** you can level the sound volume of the Home Theatre System with the volume of the TV when you switch over from one to another.

For more information, press 🔴 **Keywords** and look up **Audio Out leveling**.

---

## Audio out delay

If you set an Audio sync delay on your Home Theatre System, to synchronise the sound with the picture, you must switch off **Audio out delay** on the TV.

For more information, press 🔴 **Keywords** and look up **Audio Out delay**.

---

## Audio out offset

If you cannot set a delay on the Home Theatre System, you can set a delay on the TV with **Audio out offset**.

For more information, press 🔴 **Keywords** and look up **Audio Out offset**.

---

## Speakers

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### Home Theatre System

You can send the TV sound to a connected audio device - a Home Theatre System or audio system.

You can select where you want to hear the TV sound and how you want to control it.

- If you select **Off**, you permanently switch off the TV speakers.
- If you select **TV speakers**, the TV speakers are always on.

With an audio device connected with HDMI CEC, you can use one of the EasyLink settings.

- If you select **EasyLink**, the TV sends the TV sound to the audio device. The TV will switch off the TV speakers when the device is playing the sound.
- If you select **EasyLink autostart**, the TV will switch on the audio device, send the TV sound to the device and switch off the TV speakers.

With EasyLink or EasyLink autostart selected, you can still switch to TV speakers if necessary.

To set the TV speakers . . .

- 1 - Press 🏠 and select **Setup** and press **OK**.
- 2 - Select **TV settings > Sound > Sound output**.
- 3 - Press ► (right) and select **Off, TV speakers, EasyLink or EasyLink autostart**.
- 4 - Press ⬅, repeatedly if necessary, to close the menu.



To switch to speakers directly . . .

- 1 - While watching TV, press ⚙ .
- 2 - Select **Speakers** and select **TV or Amplifier** (audio system).
- 3 - Press ⬅, repeatedly if necessary, to close the menu.

---

## TV placement

As part of the first installation, this setting is set to either **On a TV stand** or **Wall mounted**. If you have changed the placement of the TV since then, adjust this setting accordingly for best sound reproduction.

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **TV settings > General settings > TV placement** and press **OK**.
- 3 - Select **On a TV stand** or **Wall mounted** and press **OK**.
- 4 - Press , repeatedly if necessary, to close the menu.

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18.4



## Universal access

### Switch on

With **Universal access** switched on, the TV is set for use for hearing and visually impaired people.

#### Switch on

If you did not switch on **Universal access** during the installation, you can still switch it on in **Setup**.  
To switch on **Universal access** . . .

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **TV settings > General settings > Universal access** and press **OK**.
- 3 - Select **On** and press **OK**.
- 4 - Press , repeatedly if necessary, to close the menu.

With **Universal access** switched on in **Setup**, the **Universal access** option is added in the **Options** menu.

---

## Hearing impaired


### Switch on



Some digital TV channels broadcast special audio and subtitles adapted for hearing impaired people.


With **Hearing impaired** switched on, the TV automatically switches to the adapted audio and subtitles, if available. Before you can switch on **Hearing impaired**, you have to switch on **Universal access**.

#### Switch on

To switch on **Hearing impaired** . . .

- 1 - Press , select **Universal access** and press **OK**.
- 2 - Select **Hearing impaired**, select **On** and press **OK**.

To check whether a hearing impaired audio language is available, press  **OPTIONS**, select **Audio language** and look for an audio language marked with a .

If **Universal access** does not appear in the **Options** menu, switch on **Universal access** in **Setup**.  
For more information, press  **Keywords** and look up **Universal access**.

---

## Audio description

### Switch on

Digital TV channels can broadcast special audio commentary describing what is happening on screen.


To be able to set the visually impaired audio and effects, you have to switch on **Audio description** first.


Also, before you can switch on **Audio description**, you have to switch on **Universal access**.

#### Audio description

With **Audio description**, a narrator's commentary is added to the normal audio.

To switch on the commentary (if available) . . .

- 1 - With **Universal access** switched on, press  **OPTIONS** and select **Universal access**.
- 2 - Select **Audio description** and press **OK**.
- 3 - Select **On** and press **OK**.

You can check if an audio commentary is available. In the **Options** menu, select **Audio language** and look for an audio language marked with a .



---

## Speakers / Headphones

With **Speakers / Headphones**, you can select where you want to hear the audio commentary.

On the TV speakers only, on the headphones only or on both.

To set **Speakers / Headphones** . . .

- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **Channel settings > Languages > Audio description > Speakers / Headphones** and press **OK**.
- 3 - Select **Speakers**, **Headphones** or **Speakers + headphones** and press **OK**.
- 4 - Press , repeatedly if necessary, to close the menu.






---

## Mixed volume

You can mix the volume of the normal audio with the audio commentary.

To mix the volume . . .



- 1 - Press  **OPTIONS** and select **Universal access** in the menu bar.
- 2 - Select **Mixed volume** and press **OK**.
- 3 - Use  or  to set the slider bar.
- 4 - Press **OK** to confirm.

---

## Audio effect

Some audio commentary can hold extra audio effects, like stereo or fading sound.

To switch on **Audio effects** (if available) . . .



- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **Channel settings > Languages > Audio description > Audio effects** and press **OK**.
- 3 - Select **On** or **Off** and press **OK**.
- 4 - Press , repeatedly if necessary, to close the menu.

---

## Speech

The audio commentary can also hold subtitles for the words which are spoken.

To switch on these subtitles (if available) . . .


- 1 - Press  and select **Setup** and press **OK**.
- 2 - Select **Channel settings > Languages > Audio description > Speech** and press **OK**.
- 3 - Select **Descriptive (audio)** or **Subtitles** and press **OK**.
- 4 - Press , repeatedly if necessary, to close the menu.

---

## Key beep

**Key beep** gives an audio feedback each time you press a key on the remote control. The volume of the beep is fixed.

To switch on **Key beep** . . .

- 1 - Press  **OPTIONS**, select **Universal access** and press **OK**.
- 2 - Select **Key beep** and select **On**.

If **Universal access** does not appear in the **Options** menu, switch on **Universal access** in **Setup**.

For more information, press  **Keywords** and look up **Universal access**.

# Specifications


## 19.1

### Environmental

#### Saving energy

The **Eco settings** bundle the settings that help the environment.

While you are watching TV channels, press  icon, then select **Eco settings**, press **OK**.

Active settings are marked with a . You can mark or unmark each setting with the **OK** key.

Press  again to close **Eco settings**.


#### Energy saving

This Picture style sets the picture, in the most ideal energy conscious setting.

For more information, press  **Keywords** and look up **Picture style**.

#### Screen off

If you only listen to music, you can switch off the TV screen to save energy.

Select **Screen off** and press **OK**. To switch the screen back on, press any key on the remote control. (Except  key)

#### Light sensor\*

To save energy, the built-in ambient light sensor lowers the brightness of the TV screen when the surrounding light darkens. The built-in light sensor automatically adjusts the picture, to the lighting conditions of the room.

\* Only for TVs with light sensor

#### Switch off timer

If you do not press a key on the remote control during a 4 hour period, or if the TV receives no signal for 10 minutes, the TV switches off automatically to save energy.

If you use the TV as a monitor or use a digital receiver to watch TV (a Set-top box - STB) and you do not use the remote control of the TV, deactivate the automatic switch off.

In addition to the Eco settings, your TV also has environmentally friendly technology with regard to power consumption.

#### Inactive devices off

Switch off connected EasyLink HDMI-CEC (Consumer Electronic Control) compliant devices that are inactive.

### European energy label

The European Energy Label informs you on the energy efficiency class of this product. The greener the energy efficiency class of this product is, the lower the energy it consumes.

On the label, you can find the energy efficiency class, the average power consumption of this product in use and the average energy consumption for 1 year. You can also find the power consumption values for this product on the Philips website for your country at [www.philips.com/TV](http://www.philips.com/TV)

### End of use

#### Disposal of your old product and batteries

Your product is designed and manufactured with high quality materials and components, which can be recycled and reused.



When this crossed-out wheeled bin symbol is attached to a product it means that the product is covered by the European Directive 2002/96/EC.



Please inform yourself about the local separate collection system for electrical and electronic products.

Please act according to your local rules and do not dispose of your old products with your normal household waste. Correct disposal of your old product helps to prevent potential negative consequences for the environment and human health.

Your product contains batteries covered by the European Directive 2006/66/EC, which cannot be disposed with normal household waste.



Please find out for yourself about the local rules on separate collection of batteries because correct disposal will help to prevent negative consequences for the environment and human health.

## Reception

- Aerial input : 75 ohm coaxial (IEC75)
- Tuner bands : Hyperband; S-Channel; UHF; VHF
- DVB :
  - For model name with PxH: DVB-T (terrestrial, antenna) COFDM 2K/8K; DVB-C (cable) QAM
  - For model name with PxT: DVB-T2; DVB-C (cable) QAM
- Analogue video playback : NTSC; SECAM; PAL
- Digital video playback : MPEG2 SD/HD (ISO/IEC 13818-2); MPEG4 SD/HD (ISO/IEC 14496-10)
- Digital audio playback (ISO/IEC 13818-3)

**Note:** See selected countries on the TV type plate

## Display

### Type

- Diagonal screen size :
  - 81 cm / 32 inch
  - 102 cm / 40 inch
  - 127 cm / 50 inch
- Display resolution :
  - PFxxxx9 : 1920x1080p
  - PHxxxx9 : 1366x768p

### Input resolution for HD/FHD TVs

#### Video formats

Resolution — Refresh rate

- 480i – 60 Hz
- 480p – 60 Hz
- 576i – 50 Hz
- 576p – 50 Hz
- 720p – 50 Hz, 60 Hz
- 1080i – 50 Hz, 60 Hz
- 1080p – 24 Hz, 25 Hz, 30 Hz, 50 Hz, 60 Hz

#### Computer formats

Resolutions (amongst others)

- 640 x 480p – 60 Hz
- 800 x 600p – 60 Hz
- 1024 x 768p – 60 Hz
- 1280 x 768p – 60 Hz
- 1360 x 765p – 60 Hz
- 1360 x 768p – 60 Hz
- 1280 x 1024p – 60 Hz
- 1920 x 1080p – 60 Hz

## Power

Product specifications are subject to change without notice. For more specification details of this product, see [www.philips.com/support](http://www.philips.com/support)

### Power

- Mains power : AC 220–240V +/-10%
- Ambient temperature : 5°C to 35°C
- Standby power consumption : < 0.3W
- Power saving features : Energy saving, Screen off, Light sensor, Switch off timer, Inactive devices off.

The power rating stated on the product typeplate is the power consumption for this product during normal household use (IEC 62087 Ed.2). The maximum power rating, stated between brackets, is used for electrical safety (IEC 60065 Ed. 7.2).

## Dimensions and weights

### 32Pxx5300

- without TV stand:  
Width 726.5 mm – Height 435.6 mm – Depth 76.8 mm  
– Weight ±4.98 kg
- with TV stand:  
Width 726.5 mm – Height 485.4 mm – Depth 185.6 mm – Weight ±5.73 kg

### 40Pxx5300

- without TV stand:  
Width 903.5 mm – Height 523.1 mm – Depth 88.1 mm  
– Weight ±7.82 kg
- with TV stand:  
Width 903.5 mm – Height 576.7 mm – Depth 222.1 mm – Weight ±9.72 kg

### 50Pxx5300

- without TV stand:  
Width 1123.6 mm – Height 646.7 mm – Depth 63.8 mm  
– Weight ±12.9 kg
- with TV stand:  
Width 1123.6 mm – Height 709.2 mm – Depth 259.3 mm – Weight ±15.48 kg

## Connectivity

### TV Rear

- Audio In (DVI to HDMI): Stereo mini-jack 3.5mm
- CVBS: Audio L/R, CVBS in, RGB
- SCART: Audio L/R, CVBS in, RGB
- YPbPr : Y Pb Pr, Audio L/R : Stereo mini-jack 3.5mm
- Digital Audio out: Optical, Toslink
- Network LAN : RJ45

- HDMI in with ARC

#### TV Side

- HDMI in with ARC
- USB 2.0
- Common interface slot: CI+/CAM
- Headphones: Stereo mini-jack 3.5mm

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19.7

## Multimedia

#### Connections

- USB 2.0
- Ethernet LAN RJ-45
- Wi-Fi 802.11b/g/n (built-in)

#### Supported USB file systems

- FAT 16, FAT 32, NTFS

#### Playback formats

- Containers : 3GP, AVCHD, AVI, MPEG-PS, MPEG-TS, MPEG-4, Matroska (MKV), Quicktime (MOV, M4V, M4A), Windows Media (ASF/WMV/WMA)
- Video Codecs : MPEG-1, MPEG-2, MPEG-4 Part 2, MPEG-4 Part 10 AVC (H264), VC-1, WMV9
- Audio Codecs : AAC, HE-AAC (v1/v2), AMR-NB, Dolby Digital, Dolby Digital Plus, DTS 2.0 + Digital Out™, MPEG-1/2/2.5 Layer I/II/III (includes MP3), WMA (v2 to v9.2), WMA Pro (v9/v10)
- Subtitles :
  - Formats : SAMI, SubRip (SRT), SubViewer (SUB), MicroDVD (TXT), mplayer2 (TXT), TMPlayer (TXT)
  - Character encodings : UTF-8, Central Europe and Eastern Europe (Windows-1250), Cyrillic (Windows-1251), Greek (Windows-1253), Turkish (Windows-1254), Western Europe (Windows-1252)
- Image Codecs : JPEG
- Limitations :
  - Maximum supported total bit rate for a media file is 30Mbps.
  - Maximum supported video bit rate for a media file is 20Mbps.
  - MPEG-4 AVC (H.264) is supported up to High Profile @ L4.1.
  - VC-1 is supported up to Advanced Profile @ L3.

#### Wi-Fi Certified Miracast™

This TV supports WiDi 4.x devices.

#### Supported media server software (DMS)

- PC – Microsoft Windows XP, Vista or Windows 7
  - You can use any DLNA certified® media server software.
  - Microsoft – Windows Media Player
- Mac OS X
  - You can use any DLNA certified® media server software.
- Mobile devices
  - Philips TV Apps – iOS, Android
  - Interoperability and performance may vary, depending on the capabilities of the mobile device

and the software used.

#### ESD regulations

This apparatus meets performance criteria A for ESD. In case the apparatus does not recover in file sharing mode due to electrostatic discharge, user interference is required.

# Software

## 20.1

## Software update

### Update from USB

It might be necessary to update the TV software. You need a computer with an high-speed Internet connection and a USB memory device to upload the software on the TV. Use a USB memory device with 256MB free space. Make sure that write protection is switched off.

#### 1 – Start the update on TV

Press **▲**, select **Setup** and press **OK**.  
Select **Update software > USB** and press **OK**.

#### 2 – Identify the TV

Insert the USB memory into one of the USB connections of the TV.

Select **Start** and press **OK**. An identification file is written on the USB memory device.

#### 3 – Download the TV software

Insert the USB memory into your computer.

On the USB memory device, locate the file **update.htm** and double click it.

Click on **Send ID**.

If new software is available, download the .zip file.

After the download, unzip the file and copy the file **autorun.upg** onto the USB memory device.

Do not place this file in a folder.

#### 4 – Update the TV software

Insert the USB memory into the TV again. The update starts automatically.

The TV switches itself off for 10 seconds and then back on again. Please wait.

Do not . . .

- use the remote control
- remove the USB memory device from the TV

If a power cut occurs during the update, never remove the USB memory device from the TV. When the power returns, the update will continue.

At the end of the update, the message **Operation successful** appears on screen. Remove the USB memory device and press **⏻** on the remote control.

Do not . . .

- press **⏻** twice
- press the power switch on the TV

The TV switches itself off (for 10 seconds) and then back on again. Please wait.

The TV software has been updated. You can use the TV again.

To prevent an accidental update of the TV software, delete the **autorun.upg** file from the USB memory

device.

### Update from Internet

If the TV is connected to the Internet, you may receive a message from TP Vision to update the TV software. You need a high-speed (broadband) Internet connection.

If you receive this message, we recommend you carry out the update.

Select **Update**. Follow the instructions on screen.

You can also look for new updates yourself.

To look for an update . . .

1 – Press **▲** and select **Setup** and press **OK**.

2 – Select **Update software > TV with Internet**, then press **OK**. Follow the instructions on screen.

When the update is complete, the TV switches off and back on again automatically.

Wait for the TV to switch itself back on.

## 20.2

## Software version

To view the current TV software version . . .

1 – Press **▲** and select **Setup** and press **OK**.

2 – Select **Software settings** and press **OK**.

3 – Select **Current software info** and see **Release Version** .

4 – Press **⏻**, repeatedly if necessary, to close the menu.

## 20.3

## Open source software

This television contains open source software. TP Vision Europe B.V. hereby offers to deliver, upon request, a copy of the complete corresponding source code for the copyrighted open source software packages used in this product for which such offer is requested by the respective licences.

This offer is valid up to three years after product purchase to anyone in receipt of this information. To obtain the source code, please write in English to . . .

Intellectual Property Dept.  
TP Vision Europe B.V.  
Prins Bernhardplein 200  
1097 JB Amsterdam  
The Netherlands

## Open source license

Acknowledgements and License Texts for any open source software used in this Philips TV.

This is a document describing the distribution of the source code used on the Philips TV, which fall either under the GNU General Public License (the GPL), or the GNU Lesser General Public License (the LGPL), or any other open source license. Instructions to obtain source code for this software can be found in the user manual.

PHILIPS MAKES NO WARRANTIES WHATSOEVER, EITHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, REGARDING THIS SOFTWARE. Philips offers no support for this software. The preceding does not affect your warranties and statutory rights regarding any Philips product(s) you purchased. It only applies to this source code made available to you.

### Freetype (2.4.3)

FreeType is a software font engine that is designed to be small, efficient, highly customizable, and portable while capable of producing high-quality output (glyph images).

This piece of software is made available under the terms and conditions of the FreeType Project license, which can be found below.

Source: <http://freetype.sourceforge.net>

### zlib (1.2.3)

The 'zlib' compression library provides in-memory compression and decompression functions, including integrity checks of the uncompressed data.

This piece of software is made available under the terms and conditions of the zlib license, which can be found below.

Source: <http://www.zlib.net/>

### Fraunhofer AAC Ecnoder (3.3.3)

AAC Ecnoder.

Source: Android JB source code

### unicode (3.2)

This library is used to perform UNICODE string manipulation.

This piece of software is made available under the terms and conditions of the ICU license, which can be found below.

Source: <http://www.icu-project.org/>

### libpng (1.2.43)

PNG decoder.

This piece of software is made available under the terms and conditions of the libpng license, which can

be found below.

Source: <http://www.libpng.org/pub/png/libpng.html>

### libjpg (6b)

This library is used to perform JPEG decoding tasks. This piece of software is made available under the terms and conditions of the libjpg license, which can be found below.

Source: <http://www.ijg.org/>

### libmng (1.0.10)

libmng -THE reference library for reading, displaying, writing and examining Multiple-Image Network Graphics.MNG is the animation extension to the popular PNG image-format.

This piece of software is made available under the terms and conditions of the libmng license, which can be found below.

Source:

<http://sourceforge.net/projects/libmng/files/>

### u-Boot loader (1.3.4)

Used by boot loader and only linked with boot loader, GPL license.

This piece of software is made available under the terms and conditions of the u-Boot loader license, which can be found below.

Source: <http://sourceforge.net/projects/u-boot/files/u-boot/U-Boot-1.1.4/u-boot-1.1.4.tar.bz2/download>

### Libcurl (7.21.7)

HTTP client;libcurl is a free and easy-to-use client-side URL transfer library, supporting FTP, FTPS, HTTP, HTTPS, SCP, SFTP, TFTP, TELNET, DICT, LDAP, LDAPS, FILE, IMAP, SMTP, POP3 and RTSP. libcurl supports SSL certificates, HTTP POST, HTTP PUT, FTP uploading, HTTP form based upload, proxies, cookies, user+password authentication (Basic, Digest, NTLM, Negotiate, Kerberos4), file transfer resume, http proxy tunneling and more!

This piece of software is made available under the terms and conditions of the Libcurl license, which can be found below.

Source: <http://curl.haxx.se/>

### c-ares (1.7.4)

c-ares is a C library that performs DNS requests and name resolves asynchronously.

This piece of software is made available under the terms and conditions of the c-ares license, which can be found below.

Source: <http://c-ares.haxx.se/c-ares-1.7.1.tar.gz>

### openssl (1.0.0d)

OpenSSL is an open source implementation of the SSL and TLS protocols. The core library (written in the C programming language) implements the basic cryptographic functions and provides various utility functions. Wrappers allowing the use of the OpenSSL library in a variety of computer languages are

available.

This piece of software is made available under the terms and conditions of the 1.7.4 license, which can be found below.

Source:

<http://www.openssl.org/source/openssl-1.0.0.tar.gz>

#### Expat (2.01)

xml parser; Expat is an XML parser library written in C. It is a stream-oriented parser in which an application registers handlers for things the parser might find in the XML document (like start tags). An introductory article on using.

This piece of software is made available under the terms and conditions of the Expat license, which can be found below.

Source: <http://expat.sourceforge.net/>

#### DirectFB include SAWMAN (1.4.0)

It is a software library for GNU/Linux/UNIX based operating system with a small memory footprint that provides graphics acceleration, input device handling and abstraction layer, and integrated windowing system with support for translucent windows and multiple display layers on top of the Linux framebuffer without requiring any kernel modifications.

This piece of software is made available under the terms and conditions of the DirectFB license, which can be found below.

Source: [http://sourceforge.net/projects/jointspace/files/remote\\_applications\\_SDK/remote\\_applications\\_SDK\\_v1.3.1/DirectFB141\\_source\\_1.3.1.7z/download](http://sourceforge.net/projects/jointspace/files/remote_applications_SDK/remote_applications_SDK_v1.3.1/DirectFB141_source_1.3.1.7z/download)

#### SAWMAN

SquashFS is a compressed read-only file system for Linux. SquashFS compresses files, inodes and directories, and supports block sizes up to 1 MB for greater compression. SquashFS is also the name of free/open software, licensed under the GPL, for accessing SquashFS filesystems.

Source: <http://squashfs.sourceforge.net/>

#### Linux Kernel (3.0)

The Linux kernel is an operating system kernel used by the Linux family of Unix-like operating systems. This piece of software is made available under the terms and conditions of the Linux Kernel license, which can be found below.

Source: <http://www.kernel.org>

#### SQLite (3.7.2)

SQLite is a in-process library that implements a self-contained, serverless, zero-configuration, transactional SQL database engine.

This piece of software is made available under the terms and conditions of the SQLite license, which can be found below.

Source: <http://www.sqlite.org/download.html>

#### SquashFS (3.4)

SquashFS is a compressed read-only file system for Linux. SquashFS compresses files, inodes and directories, and supports block sizes up to 1 MB for greater compression. SquashFS is also the name of free/open software, licensed under the GPL, for accessing SquashFS filesystems.

This piece of software is made available under the terms and conditions of the SquashFS license, which can be found below.

Source: <http://squashfs.sourceforge.net/>

#### glibc (2.6.1)

Any Unix-like operating system needs a C library: the library which defines the "system calls" and other basic facilities such as open, malloc, printf, exit...The GNU C library is used as the C library in the GNU system and most systems with the Linux kernel. This piece of software is made available under the terms and conditions of the glibc license, which can be found below.

Source: <http://www.gnu.org/software/libc/>

#### mtd-utils (1)

The aim of the system is to make it simple to provide a driver for new hardware, by providing a generic interface between the hardware drivers and the upper layers of the system. Hardware drivers need to know nothing about the storage formats used, such as FTL, FFS2, etc., but will only need to provide simple routines for read, write and erase. Presentation of the device's contents to the user in an appropriate form will be handled by the upper layers of the system. This piece of software is made available under the terms and conditions of the mtd-utils license, which can be found below.

Source: <http://www.linux-mtd.infradead.org/index.html>

#### libusb (1.0.6)

This is the home of libusb, a library that gives user level applications uniform access to USB devices across many different operating systems. libusb is an open source project licensed under the GNU Lesser General Public License version 2.1. Many participants in the libusb community have helped and continue to help with ideas, implementation, support and improvements for libusb.

This piece of software is made available under the terms and conditions of the libusb license, which can be found below.

Source:

<http://libusb.wiki.sourceforge.net>

<http://www.libusb.org/>

#### libusb-compat (0.1.3)

Library to enable user space application programs to communicate with USB devices.

This piece of software is made available under the terms and conditions of the libusb-compat license,



which can be found below.

Source:

<http://libusb.wiki.sourceforge.net/LibusbCompat0.1>

NTFS-3G Read/Write Driver (2010.5.22)

NTFS-3G is an open source cross-platform implementation of the Microsoft Windows NTFS file system with read-write support. NTFS-3G often uses the FUSE file system interface, so it can run unmodified on many different operating systems. It is runnable on Linux, FreeBSD, NetBSD, OpenSolaris, BeOS, QNX, WinCE, Nucleus, VxWorks, Haiku, MorphOS, and Mac OS X. It is licensed under either the GNU General Public License or a proprietary license. It is a partial fork of ntfsprogs and is under active maintenance and development. This piece of software is made available under the terms and conditions of the NTFS-3G Read/Write Driver license, which can be found below.  
Source: <http://www.tuxera.com>

WPA Supplicant (0.5.10 & 0.6.7)

These packages are used to provide WiFi access. The supplier for these tools is Atheros. These pieces of software are made available under the terms and conditions of the GPL v2 license, which can be found below.

This piece of software is made available under the terms and conditions of the WPA Supplicant license, which can be found below.

Source: [http://hostap.epitest.fi/wpa\\_supplicant/](http://hostap.epitest.fi/wpa_supplicant/)

ntfsprogs (2.0.0)

Some useful tool for ntfs file system.

This piece of software is made available under the terms and conditions of the ntfsprogs license, which can be found below.

Source: <http://sourceforge.net/projects/linux-ntfs>

fuse (2.8.4)

Fuse is a simple interface for userspace programs to export a virtual filesystem to the linux kernel.

This piece of software is made available under the terms and conditions of the fuse license, which can be found below.

Source: <http://fuse.sourceforge.net/>

libiconv (1.11.1)

This library provides an iconv() implementation, for use on systems which don't have one, or whose implementation cannot convert from/to Unicode. . This piece of software is made available under the terms and conditions of the libiconv license, which can be found below.

Source: <http://ftp.gnu.org/pub/gnu/libiconv>

electric-fence (2.1.13)

Used for memory corruption detection.

This piece of software is made available under the terms and conditions of the electric-fence license,

which can be found below.

Source: [http://perens.com/FreeSoftware/ElectricFence/electric-fence\\_2.1.13-0.1.tar.gz](http://perens.com/FreeSoftware/ElectricFence/electric-fence_2.1.13-0.1.tar.gz)

liveMedia

When Wifi Display or streaming RtspPlayer are enabled.

This piece of software is made available under the terms and conditions of the electric-fence license, which can be found below.

Source: [www.live555.com](http://www.live555.com)

QT (4.7.0)

Netflix skype besttv pandora picasa? will use QT.

This piece of software is made available under the terms and conditions of the QT license, which can be found below.

Source: <http://qt.nokia.com/>

e2fsprogs (1.41.14)

e2fsprogs provides the filesystem utilities for use with the ext2 filesystem, it also supports the ext3 and ext4 filesystems.

This piece of software is made available under the terms and conditions of the e2fsprogs license, which can be found below.

Source: <http://e2fsprogs.sourceforge.net/>

alsa (1.0.24.1)

Advanced Linux Sound Architecture (ALSA).

This piece of software is made available under the terms and conditions of the alsa license, which can be found below.

Source: <http://www.alsa-project.org>

lvm2 (2.02.89)

DM\_VERITY.

This piece of software is made available under the terms and conditions of the lvm2 license, which can be found below.

Source:

<ftp://sources.redhat.com/pub/lvm2/releases/>

encfs (1.3.2)

A library provides an encrypted filesystem in user-space.

Source: <http://www.arg0.net/encfs>

boost (1.15.0)

A library provides free peer-reviewed portable C++ source libraries is used for encfs.

Source: <http://www.boost.org>

rlog (1.4)

A library that provides a flexible message logging facility for C programs and libraries is used for encfs.

Source: <http://www.arg0.net/rlog>

iptables (1.4.15)

For Cross connection.

Source: <http://www.netfilter.org/projects/iptables/>

#### bash (3.2.48)

Bash is the shell, or command language interpreter, that will appear in the GNU operating system.

Bash is an sh-compatible shell that incorporates useful features from the Korn shell (ksh) and C shell (csh).

It is intended to conform to the IEEE POSIX P1003.2/ISO 9945.2 Shell and Tools standard.

It offers functional improvements over sh for both programming and interactive use.

In addition, most sh scripts can be run by Bash without modification.

Source: <http://www.gnu.org/software/bash/>

#### coreutils (6.9)

The GNU Core Utilities are the basic file, shell and text manipulation utilities of the GNU operating system.

These are the core utilities which are expected to exist on every operating system.

Source: <http://www.gnu.org/software/coreutils/>

#### findutils (4.2.31)

The GNU Find Utilities are the basic directory searching utilities of the GNU operating system.

These programs are typically used in conjunction with other programs to provide modular and powerful directory search and file locating capabilities to other commands.

Source: <http://www.gnu.org/software/findutils/>

#### gawk (3.1.5)

If you are like many computer users, you would frequently like to make changes in various text files wherever certain patterns appear, or extract data from parts of certain lines while discarding the rest.

To write a program to do this in a language such as C or Pascal is a time-consuming inconvenience that may take many lines of code.

The job is easy with awk, especially the GNU implementation: gawk.

Source: <http://www.gnu.org/software/gawk/>

#### grep (2.5.1a)

The grep command searches one or more input files for lines containing a match to a specified pattern. By default, grep prints the matching lines.

Source: <http://www.gnu.org/software/grep/>

#### gzip (1.3.12)

GNU Gzip is a popular data compression program originally written by Jean-loup Gailly for the GNU project. Mark Adler wrote the decompression part.

Source: <http://www.gnu.org/software/gzip/>

#### inetutils (1.4.2)

Inetutils is a collection of common network programs.

Source: <http://www.gnu.org/software/inetutils/>

#### iputils (s20101006)

The iputils package is set of small useful utilities for Linux networking. It was originally maintained by Alexey Kuznetsov.

Source: <http://www.skbuff.net/iputils/>

#### module-init-tools (3.12)

Provides developer documentation for the utilities used by Linux systems to load and manage kernel modules (commonly referred to as "drivers").

Source: [https://modules.wiki.kernel.org/index.php/Main\\_Page](https://modules.wiki.kernel.org/index.php/Main_Page)

#### ncurses (5.7)

The Ncurses (new curses) library is a free software emulation of curses in System V Release 4.0, and more.

It uses Terminfo format, supports pads and color and multiple highlights and forms characters and function-key mapping, and has all the other SYSV-curses enhancements over BSD Curses.

Source: <http://www.gnu.org/software/ncurses/>

#### net-tools (1.6)

The Net-tools package is a collection of programs for controlling the network subsystem of the Linux kernel.

Source: <http://www.linuxfromscratch.org/blfs/view/6.3/basicnet/net-tools.html>

#### procps (ps, top) (3.2.8)

procps is the package that has a bunch of small useful utilities that give information about processes using the /proc filesystem.

The package includes the programs ps, top, vmstat, w, kill, free, slabtop, and skill.

Source: <http://procps.sourceforge.net/index.html>

#### psmisc (22.13)

This PSmisc package is a set of some small useful utilities that use the proc filesystem. We're not about changing the world, but providing the system administrator with some help in common tasks.

Source: <http://psmisc.sourceforge.net/>

#### sed (4.1.5)

sed (stream editor) isn't an interactive text editor.

Instead, it is used to filter text, i.e., it takes text input, performs some operation (or set of operations) on it, and outputs the modified text.

sed is typically used for extracting part of a file using pattern matching or substituting multiple occurrences of a string within a file.

Source: <http://www.gnu.org/software/sed/>

#### tar (1.17)

GNU Tar provides the ability to create tar archives, as well as various other kinds of manipulation.

For example, you can use Tar on previously created archives to extract files, to store additional files, or to

update or list files which were already stored.

Source: <http://www.gnu.org/software/tar/>

util-linux-ng (2.18)

Various system utilities.

Source: <http://userweb.kernel.org/~kzak/util-linux-ng/>

udhcp (0.9.8cvs20050303-3)

Udhcp is a very small DHCP client geared towards embedded systems.

Source: <http://udhcp.sourceforge.net/downloads/0.9.8cvs20050303-3/>

Libxml2 (2.7.8)

The "libxml2" library is used in AstroTV as a support for the execution of NCL application. This library was developed for the GNOME software suite and is available under a "MIT" license.

Source: <http://www.xmlsoft.org>

uriparser (0.7.7)

For MPEG-DASH

Source: <http://uriparser.sourceforge.net/>

xerces-c++ (3.1.1)

For MPEG-DASH

Source: <http://xerces.apache.org/>

webp (0.2.1)

For Netflix

Source: <https://code.google.com/p/webp/>

wget (1.10.2)

GNU Wget is a free software package for retrieving files using HTTP, HTTPS and FTP, the most widely-used Internet protocols.

It is a non-interactive commandline tool, so it may easily be called from scripts, cron jobs, terminals without X-Windows support, etc.

Source:

<http://ftp.gnu.org/gnu/wget/wget-1.10.2.tar.gz>

wireless\_tools (0.29)

The Wireless Tools (WT) is a set of tools allowing to manipulate the Wireless Extensions.

They use a textual interface and are rather crude, but aim to support the full Wireless Extension.

Source: [http://www.hpl.hp.com/personal/Jean\\_Tourrilhes/Linux/Tools.html](http://www.hpl.hp.com/personal/Jean_Tourrilhes/Linux/Tools.html)

ezxml (0.8.6)

ezXML is a C library for parsing XML documents. Used inside Philips libraries.

Source: <http://sourceforge.net/projects/ezxml/>

SQLite (3.7.7.1)

SQLite is an in-process library that implements a self-contained, serverless, zero-configuration, transactional SQL database engine.

Source: <http://www.sqlite.org/download.html>

AES (aes-src-29-04-09.zip)

Advanced Encryption Standard (AES) is a

specification for the encryption of electronic data.

Used inside Philips libraries.

Source: <http://gladman.plushost.co.uk/oldsite/AES/>

microhttpd (libmicrohttpd-0.9.9.tar.gz)

GNU libmicrohttpd is a small C library that is

supposed to make it easy to run an HTTP server as part of another application.

The original download site for this software is :

<http://www.gnu.org/software/libmicrohttpd/> This piece of software is made available under the terms and conditions of the LGPL v2.1 license

Source: <http://ftp.gnu.org/gnu/libmicrohttpd/libmicrohttpd-0.9.9.tar.gz>

yajl (lloyd-yajl-2.0.1-0-gf4b2b1a.tar.gz)

YAJL is a small event-driven (SAX-style) JSON parser written in ANSI C, and a small validating JSON generator. YAJL is released under the ISC license.

The original download site for this software is :

<http://lloyd.github.com/yajl/> This piece of software is made available under the terms and conditions of the ISC license

Source: <http://pkgs.fedoraproject.org/repo/pkgs/yajl/lloyd-yajl-2.0.1-0-gf4b2b1a.tar.gz/df6a751e7797b9c2182efd91b5d64017/lloyd-yajl-2.0.1-0-gf4b2b1a.tar.gz>

HMAC-SHA1 (0.1)

keyed-hash message authentication code (HMAC) is a specific construction for calculating a message authentication code (MAC) involving a cryptographic hash function in combination with a secret cryptographic key.

As with any MAC, it may be used to simultaneously verify both the data integrity and the authentication of a message.

Any cryptographic hash function, such as MD5 or SHA-1, may be used in the calculation of an HMAC; the resulting MAC algorithm is termed HMAC-MD5 or HMAC-SHA1 accordingly.

Source:

[http://www.deadhat.com/wlancrypto/hmac\\_sha1.c](http://www.deadhat.com/wlancrypto/hmac_sha1.c)

gSoap (2.7.15)

The gSOAP toolkit is an open source C and C++ software development toolkit for SOAP/XML Web services and generic (non-SOAP) C/C++ XML data bindings.

Part of the software embedded in this product is gSOAP software. Portions created by gSOAP are Copyright 2000-2011 Robert A. van Engelen, Genivia inc. All Rights Reserved.

Source: <http://sourceforge.net/projects/gsoap2/>

jquery (1.10.2)

jQuery is a fast and concise JavaScript Library that simplifies HTML document traversing, event handling, animating, and Ajax interactions for rapid web development.  
Source: <http://jquery.com/>

Libupnp (1.2.1)  
The Linux\* SDK for UPnP\* Devices (libupnp) provides developers with an API and open source code for building control points, devices, and bridges that are compliant with Version 1.0 of the UPnP Device Architecture Specification.  
Source: <http://upnp.sourceforge.net/>

mDNSResponder (mDNSResponder-320.10.80)  
The mDNSResponder project is a component of Bonjour, Apple's ease-of-use IP networking initiative:<<http://developer.apple.com/bonjour/>>  
In our project, Bonjour is used for the automatic discovery of devices and services  
Source: <http://developer.apple.com/bonjour/>

# Troubleshooting and support

## Troubleshooting

### Channels

#### No digital channels found during the installation

See the technical specifications to make sure that your TV supports DVB-T or DVB-C in your country. Make sure that all cables are properly connected and that the correct network is selected.

#### Previously installed channels are not in the channel list

Make sure that the correct channel list is selected.

### General

#### The TV does not switch on

- Disconnect the power cable from the power outlet. Wait for one minute then reconnect it.
- Make sure that the power cable is securely connected.

#### Creaking sound at startup or switch off

When you are turning the TV on, off or to standby, you hear a creaking sound from the TV chassis. The creaking sound is due to the normal expansion and contraction of the TV as it cools and warms up. This does not affect performance.

#### TV does not respond to the remote control

The TV requires some time to start up. During this time, the TV does not respond to the remote control or TV controls. This is normal behaviour. If the TV continues to be unresponsive to the remote control, you can check if the remote control is working by means of a mobile phone camera. Put the phone in camera mode and point the remote control to the camera lens. If you press any key on the remote control and you notice the infra red LED flicker through the camera, the remote control is working. The TV needs to be checked. If you do not notice the flickering, the remote control might be broken or its batteries are low. This method of checking the remote control is not possible with remote controls which are wirelessly paired with the TV.

#### The TV goes back to standby after showing the Philips startup screen

When the TV is in standby, a Philips startup screen is displayed, then the TV returns to standby mode. This is normal behaviour. When the TV is disconnected and reconnected to the power supply, the startup screen is displayed at the next startup. To switch on the TV from standby, press on the remote control or the TV.

#### The standby light keeps on blinking

Disconnect the power cable from the power outlet. Wait 5 minutes before you reconnect the power cable. If the blinking reoccurs, contact Philips TV Consumer Care.

#### Wrong menu language

Change the language back to your language.

- 1 - Press **⬆** and select **Setup** and press **OK**.
- 2 - Select **TV settings** > **General settings** > **Menu language** and press **OK**.
- 3 - Select the language you want and press **OK**.
- 4 - Press **⬅**, repeatedly if necessary, to close the menu.

### Picture

#### No picture / distorted picture

- Make sure that the antenna is properly connected to the TV.
- Make sure that the correct device is selected as the display source.
- Make sure that the external device or source is properly connected.

#### Sound but no picture

- Make sure that the picture settings are set correctly.

#### Poor antenna reception

- Make sure that the antenna is properly connected to the TV.
- Loud speakers, unearthed audio devices, neon lights, high buildings and other large objects can influence reception quality. If possible, try to improve the reception quality by changing the antenna direction or moving devices away from the TV.
- If reception on only one channel is poor, fine-tune this channel.

#### Poor picture from a device

- Make sure that the device is connected properly.
- Make sure that the picture settings are set correctly.

#### Picture settings change after a while

Make sure that **Location** is set to **Home**. You can change and save settings in this mode.

#### A commercial banner appears

Make sure that **Location** is set to **Home**.

#### Picture does not fit the screen

Change to a different picture format. Press **⏏**.

## Picture format keeps changing with different channels

Select a non 'Auto' picture format.

## Picture position is incorrect

Picture signals from some devices may not fit the screen correctly. Check the signal output of the connected device.

## Computer picture is not stable

Make sure that your PC uses the supported resolution and refresh rate.

---

## Sound

### No sound or poor sound quality

If no audio signal is detected, the TV automatically switches the audio output off — this does not indicate malfunction.

- Make sure that the sound settings are correctly set.
- Make sure that all cables are properly connected.
- Make sure that the volume is not muted or set to zero.
- Make sure that the TV audio output is connected to the audio input on the Home Theatre System. Sound should be heard from the HTS speakers.
- Some devices may require you to manually enable HDMI audio output. If HDMI audio is already enabled, but you still do not hear audio, try changing the digital audio format of the device to PCM (Pulse Code Modulation). Refer to the documentation accompanying your device for instructions.

---

## Connections

### HDMI

- Note that HDCP (High-bandwidth Digital Content Protection) support can delay the time taken for a TV to display content from an HDMI device.
- If the TV does not recognise the HDMI device and no picture is displayed, switch the source from one device to another and back again.
- If there are intermittent sound disruptions, make sure that output settings from the HDMI device are correct.
- If you use an HDMI-to-DVI adapter or HDMI-to-DVI cable, make sure that an additional audio cable is connected to AUDIO IN (mini-jack only), if available.

### EasyLink does not work

- Make sure that your HDMI devices are HDMI-CEC compatible. EasyLink features only work with devices that are HDMI-CEC compatible.

### No volume icon shown

- When a HDMI-CEC audio device is connected this

behaviour is normal.

Photos, videos and music from a USB device do not show

- Make sure that the USB storage device is set to Mass Storage Class compliant, as described in the storage device's documentation.
- Make sure that the USB storage device is compatible with the TV.
- Make sure that the audio and picture file formats are supported by the TV.

### Choppy playback of USB files

- The transfer performance of the USB storage device may limit the data transfer rate to the TV which causes poor playback.

---

21.2

## Register

Register your TV and enjoy a range of benefits including full support (including downloads), privileged access to information about new products, exclusive offers and discounts, the chance to win prizes and even participate in special surveys about new releases.

Go to [www.philips.com/welcome](http://www.philips.com/welcome)


---

21.3


## Help

This TV offers help on screen.


### Open Help

- 1 - Press  to open the Home menu.
- 2 - Select **Help** and press **OK**.

To look up topics alphabetically, select **Keywords**.  
To read the Help as a book, select **Book**.

Before you execute the Help instructions, close Help.  
To close Help, press .

### Direct help

Press the  key (blue) to open Help immediately.  
Help will open on the chapter that is most relevant to what you are doing or what is selected on TV.

For some activities, like Text (Teletext), the colour keys have specific functions and cannot open Help.

### TV Help on your tablet, smartphone or computer

To carry out extended sequences of instructions more easily, you can download the TV Help in PDF format to read on your smartphone, tablet or computer. Alternatively, you can print the relevant Help page from your computer.

To download the Help (user manual) go to [www.philips.com/support](http://www.philips.com/support)

---

21.4

## Online help

To solve any Philips TV related problem, you can consult our online support. You can select your language and enter your product model number.

Go to [www.philips.com/support](http://www.philips.com/support) .

On the support site you can find your country's telephone number to contact us as well as answers to frequently asked questions (FAQs). In some countries, you can chat with one of our collaborators and ask your question directly or send a question by email. You can download new TV software or the manual to read on your computer.

---

21.5

## Consumer Care / Repair

For support and repair, call the Consumer Care hotline in your country. Find the telephone number in the printed documentation that came with the TV. Or consult our website [www.philips.com/support](http://www.philips.com/support) .

### TV model number and serial number

You might be asked to provide the TV product model number and serial number. Find these numbers on the packaging label or on the type label on the back or bottom of the TV.

### Warning

Do not attempt to repair the TV yourself. This may cause severe injury, irreparable damage to your TV or void your warranty.



# Safety and care

22.1

## Safety

### Important

Read and understand all safety instructions before you use the TV. If damage is caused by failure to follow instructions, the warranty does not apply.

### Secure the TV from falling over

Always use the supplied wall bracket to secure the TV from falling over. Mount the bracket and secure the TV onto the bracket, even if you put the TV on the floor.

You can find the mounting instructions in the Quick Start Guide that came with the TV. In case you lost this guide, you can download the guide from

[www.philips.com](http://www.philips.com)

Use the product type number of the TV to look for the Quick Start Guide to download.

### Risk of electric shock or fire

- Never expose the TV to rain or water. Never place liquid containers, such as vases, near the TV. If liquids are spilt on or into the TV, disconnect the TV from the power outlet immediately. Contact Philips TV Consumer Care to have the TV checked before use.
- Never expose the TV, remote control or batteries to excessive heat. Never place them near burning candles, naked flames or other heat sources, including direct sunlight.
- Never insert objects into the ventilation slots or other openings on the TV.
- Never place heavy objects on the power cord.
- Avoid force coming onto power plugs. Loose power plugs can cause arcing or fire. Ensure that no strain is exerted on the power cord when you swivel the TV screen.
- To disconnect the TV from the mains power, the power plug of the TV must be disconnected. When disconnecting the power, always pull the power plug, never the cord. Ensure that you have full access to the power plug, power cord and outlet socket at all times.

### Risk of injury or damage to the TV

- Two people are required to lift and carry a TV that weighs more than 25 kg or 55 lbs.
- If you mount the TV on a stand, only use the supplied stand. Secure the stand to the TV tightly. Place the TV on a flat, level surface that can support the weight of the TV and the stand.
- When wall mounted, ensure that the wall mount can safely bear the weight of the TV set. TP Vision bears no responsibility for improper wall mounting that results in accident, injury or damage.
- Parts of this product are made of glass. Handle with care to avoid injury or damage.

#### Risk of damage to the TV !

Before you connect the TV to the power outlet, ensure that the power voltage matches the value printed on the back of the TV. Never connect the TV to the power outlet if the voltage is different.

### Risk of injury to children

Follow these precautions to prevent the TV from toppling over and causing injury to children:

- Never place the TV on a surface covered by a cloth or other material that can be pulled away.
- Ensure that no part of the TV hangs over the edge of the mounting surface.
- Never place the TV on tall furniture, such as a bookcase, without anchoring both the furniture and TV to the wall or a suitable support.
- Teach children about the dangers of climbing on furniture to reach the TV.

#### Risk of swallowing batteries !

The remote control may contain coin-type batteries which can easily be swallowed by small children. Keep these batteries out of reach of children at all times.

### Risk of overheating

Never install the TV in a confined space. Always leave a space of at least 10 cm or 4 inches around the TV for ventilation. Ensure curtains or other objects never cover the ventilation slots on the TV.

---

## Lightning storms

Disconnect the TV from the power outlet and antenna before lightning storms.

During lightning storms, never touch any part of the TV, power cord or antenna cable.

---

## Risk of hearing damage

Avoid using earphones or headphones at high volumes or for prolonged periods of time.

---

## Low temperatures

If the TV is transported in temperatures below 5°C or 41°F, unpack the TV and wait until the TV temperature reaches room temperature before connecting the TV to the power outlet.

---

## Humidity

In rare occasions, depending on temperature and humidity, minor condensation can occur on the inside of the TV glass front (on some models). To prevent this, do not expose the TV to direct sunlight, heat or extreme humidity. If condensation occurs, it will disappear spontaneously while the TV is playing for a few hours.

The condensation moisture will not harm the TV or cause malfunction.

---

22.2

## Screen care

- Never touch, push, rub or strike the screen with any object.
- Unplug the TV before cleaning.
- Clean the TV and frame with a soft damp cloth and wipe gently. Avoid touching the Ambilight LEDs on the backside of the TV. Never use substances such as alcohol, chemicals or household cleaners on the TV.
- To avoid deformations and colour fading, wipe off water drops as quickly as possible.
- Avoid stationary images as much as possible.

Stationary images are images that remain onscreen for extended periods of time. Stationary images include onscreen menus, black bars, time displays, etc. If you must use stationary images, reduce screen contrast and brightness to avoid screen damage.

# Terms of use, copyrights and licenses

## 23.1

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The written material packaged with the TV and the manual stored in the memory of the TV or downloaded from the Philips website are believed to be adequate for the intended use of the system.

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property of the display (within common industry standards) and is not a malfunction. CE compliance This product is in compliance with the essential requirements and other relevant provisions of Directives 2006/95/EC (Low Voltage), 2004/108/EC (EMC) and 2011/65/EU (ROHS). Compliance with EMF TP Vision Europe B.V. manufactures and sells many products targeted at consumers which, like any electronic apparatus, in general have the ability to emit and receive electromagnetic signals. One of Philips' leading Business Principles is to take all necessary health and safety measures for our products, to comply with all applicable legal requirements and to stay well within the Electro Magnetic Field (EMF) standards applicable at the time of producing the products. Philips is committed to develop, produce and market products that cause no adverse health effects. TP Vision confirms that, as long as its products are handled properly for their intended use, they are safe to use according to scientific evidence available today. Philips plays an active role in the development of international EMF and safety standards, enabling Philips to anticipate further developments in standardisation for early integration in its products.

## 23.2

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