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**6801 series**

# User Manual

65PUG6801

**PHILIPS**

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# TV Tour

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## Ultra HD TV

This TV has an **Ultra HD** display. Its resolution is four times higher than normal HD displays. Ultra HD means 8 million pixels for the most refined and lifelike picture on a TV.

On top of this, the new **Ultra Pixel HD Engine** continuously converts any incoming TV signal into Ultra HD resolution. So you can enjoy this stunning picture quality the moment you switch on the TV. Or you can watch native Ultra HD videos through an HDMI connection. Ultra HD offers TV viewing that is crisp and sharp even on a big screen.



## Philips Android TV

This a **Philips Android TV™** with UHD.

Android TV offers thousands of movies, shows and games from Google Play, YouTube and your favorite apps.\*

Voice search and personalized recommendations mean more time being entertained and less time hunting for something good. With Google Cast built in, you can easily cast movies, shows and photos from your Chromebook or Android device to your TV.\*\*



With the **Philips TV Remote App** on your smartphone or tablet, you have your TV channels at your fingertips. Send a photo to the large TV screen or follow your favorite cooking show on your tablet in the kitchen. From now on, your TV is part of your mobile household.

Connect the TV to your home network and the Internet.

\* The TV must be connected to the Internet. Subscriptions might be required for certain content providers.

\*\* Casting optimized for selected services only.

Streaming quality for other content might vary. Supported operating systems and devices: Android 2.3 and higher, iOS® 7 and higher, Windows® 7 and higher, Mac OS® 10.7 and higher and Chrome OS (version 38 or higher).

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## Using Apps

To get you started, some practical **Apps** are pre-installed on your TV.

The Apps pages show the collection of Apps (Applications) on your TV. Like Apps on your smartphone or tablet, the Apps on your TV offer specific functions for an enriched TV experience. Apps like YouTube, Twitter, TV games or weather forecasts. Or start an Internet Browser App, like Google Chrome, to surf the Internet.

For more information, in **Help**, press the color key **Keywords** and look up **Apps**.

## Playing Games

This TV is your big screen for **gaming**. Big enough for two.

You can play a game from a connected Game Console, a game from an installed App or simply an online game on a website. You can set the TV to the ideal settings for gaming, to allow quick and responsive action. If you play a multi-player game with split screens, you can set the TV to show each screen as a full screen simultaneously. Each player can focus on playing their own game.

## 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 watch it again later.

With a USB Hard Drive connected, you can also

record digital broadcasts. You can record while you are watching a program or schedule a recording of an upcoming program.

For more information, in **Help**, press the color key **— Keywords** and look up **Pause TV** or **Recording**.

---

1.6

## Smartphones and Tablets

The new **Philips TV Remote App** is your new TV buddy.

With the TV Remote App on your smartphone or tablet, you are the master of the media around you. Send photos, music or videos to your big TV screen or watch any of your TV channels live on your tablet or phone. Open the TV Guide and schedule a recording for tomorrow. Your TV at home will do the job. With the TV Remote App you are in control. You can even lower the TV volume.

Download the Philips TV Remote App from your favorite app store today.

It's free.

The Philips TV Remote App is available for iOS and Android.

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1.7

## 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 networks** on your TV screen. You can send a return message from your couch.

For more information, in **Help**, press the color key **— Keywords** and look up **Apps**.

---

1.8

## Bluetooth Connection

Your TV comes with **Bluetooth** technology.

You can connect extra wireless speakers or a wireless headphone. Forget connecting cables, pairing your device with the TV is enough.

For more information, in **Help**, press the color key **— Keywords** and look up **Bluetooth** or **Wireless Speakers**.

# Setting Up

## 2.1

### Read Safety

Read the safety instructions first before you use the TV.

To read the instructions, in **Help**, press the color key **— Keywords** and look up **Safety instructions**.

## 2.2

### TV Stand and Wall Mounting

#### TV Stand

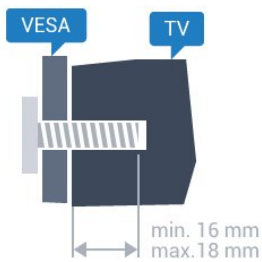
You can find the instructions for mounting the TV stand in the Quick Start Guide that came with the TV. In case you lost this guide, you can download it from [www.philips.com](http://www.philips.com).

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 . . .



• 65PUG6801  
VESA MIS-F 400x400, M6

#### Preparation

First remove the 4 plastic screw caps out of the threaded insert on the back of the TV.

Make sure that the metal screws to mount the TV to the VESA-compliant bracket go about 0.4 inches deep inside the threaded insert.

#### 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

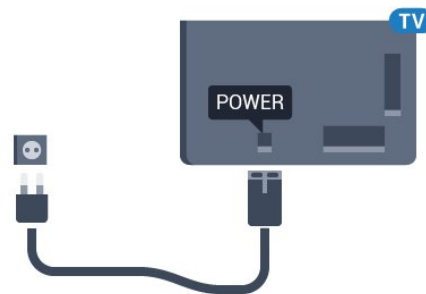
- Position the TV where light does not shine directly on the screen.
- Position the TV up to 6 inches away from the wall.
- The ideal distance to watch TV is 3 times its diagonal screen size. When seated, your eyes should be level with the center of the screen.



## 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.



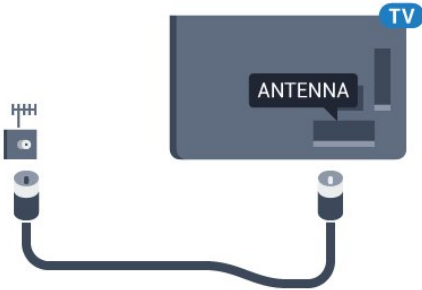
Although this TV has a very low standby power consumption, unplug the power cable to save energy if you do not use the TV for a long period of time.

For more information, in **Help**, press the color key **— Keywords** and look up **Switching On** for more information on switching the TV on or off.

## 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.



# Connect your Android TV

## Network and Internet

### Home Network

To enjoy the full capabilities of your Philips Android TV, your TV must be connected to the Internet.

Connect the TV to a home network with a high-speed Internet connection. You can connect your TV wirelessly or wired to your network router.

## Connect to Network

### Wireless Connection

#### What You Need

To connect the TV to the Internet wirelessly, you need a Wi-Fi router with a connection to the Internet.

Use a high-speed (broadband) Internet connection.



### Make the Connection

#### Wireless

To make a wireless connection...

- 1 - Press **⚙️**, select **All Settings** and press **OK**.
- 2 - Select **Wireless and Networks** and press **➤** (right) to enter the menu.
- 3 - Select **Wired or Wi-Fi > Connect to Network** and press **OK**.
- 4 - Select **Wireless** and press **OK**.
- 5 - In the list of found networks, select your wireless network. If your network is not in the list because the network name is hidden (you switched off the router's SSID broadcast), select **Add New Network** to enter the network name yourself.
- 6 - Depending on the type of router, enter your

encryption key - WEP, WPA or WPA2. If you entered the encryption key for this network before, you can select **OK** to connect immediately.

7 - A message will be shown when the connection is successful.

#### Wi-Fi On/Off

Make sure Wi-Fi is switched on before you try to make the connection...

- 1 - Press **⚙️**, select **All Settings** and press **OK**.
- 2 - Select **Wireless and Networks** and press **➤** (right).
- 3 - Select **Wired or Wi-Fi > Wi-Fi On/Off** and press **OK**.
- 4 - If it is switched off, select **On** and press **OK**.

#### WPS

If your router has WPS, you can directly connect to the router without scanning for networks. If you have devices in your wireless network that use the WEP security encryption system, you cannot use WPS.

- 1 - Press **⚙️**, select **All Settings** and press **OK**.
- 2 - Select **Wireless and Networks** and press **➤** (right) to enter the menu.
- 3 - Select **Wired or Wi-Fi > Connect to Network** and press **OK**.
- 4 - Select **WPS** then press **OK**.
- 5 - Go to the router, press the WPS button and return to the TV within 2 minutes.
- 6 - Select **Connect** to make the connection.
- 7 - A message will be shown when the connection is successful.

#### WPS with PIN Code

If your router has WPS with a PIN code, you can directly connect to the router without scanning for networks. If you have devices in your wireless network that use the WEP security encryption system, you cannot use WPS.

- 1 - Press **⚙️**, select **All Settings** and press **OK**.
- 2 - Select **Wireless and Networks** and press **➤** (right) to enter the menu.
- 3 - Select **Wired or Wi-Fi > Connect to Network** and press **OK**.
- 4 - Select **WPS with PIN code** and press **OK**.
- 5 - Write down the 8-digit PIN code shown on screen and enter it in the router software on your PC. Consult the router manual on where to enter the PIN code in the router software.
- 6 - Select **Connect** to make the connection.
- 7 - A message will be shown when the connection is successful.



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## 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.

### DHCP

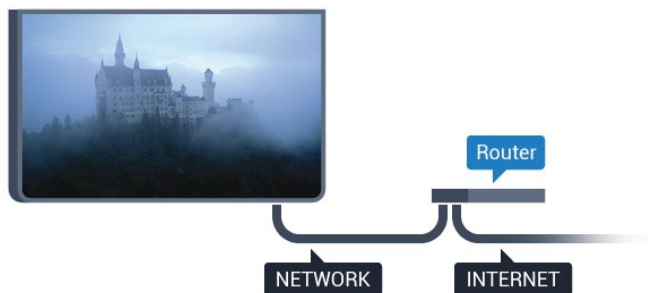
- If the connection fails, you can check the DHCP (Dynamic Host Configuration Protocol) setting of the router. DHCP should be switched on.

---

## Wired Connection

### What You Need

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



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## Make the Connection

To make a wired connection...

- 1 - Connect the router to the TV with a network cable (Ethernet cable\*\*).
- 2 - Make sure that the router is turned on.
- 3 - Press **⚙**, select **All Settings** and press **OK**.
- 4 - Select **Wireless and Networks** and press **➤** (right) to enter the menu.
- 5 - Select **Wired or Wi-Fi > Connect to Network** and press **OK**.
- 6 - Select **Wired** and press **OK**. The TV constantly searches for the network connection.

7 - A message will be shown when the connection is successful.

If the connection fails, you can check the DHCP setting of the router. DHCP should be switched on.

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

---

## Network settings

### View Network Settings

You can view all current network settings here. The IP and MAC address, signal strength, speed, encryption method, etc.

To view the current network settings...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Wireless and Networks** and press **➤** (right) to enter the menu.
- 3 - Select **Wired or Wi-Fi > View Network Settings** and press **OK**.
- 4 - Press **⬅** (left) repeatedly if necessary, to close the menu.

---

## Network Configuration

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...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Wireless and Networks** and press **➤** (right) to enter the menu.
- 3 - Select **Wired or Wi-Fi > Network Configuration** and press **OK**.
- 4 - Select **Static IP** and press **OK** to enable **Static IP Configuration**.
- 5 - Select **Static IP Configuration** and configure the connection.
- 6 - You can set the number for the **IP Address**, **Netmask**, **Gateway**, **DNS 1**, or **DNS 2**.
- 7 - Press **⬅** (left) repeatedly if necessary, to close the menu.

---

## Switch On with Wi-Fi (WoWLAN)

You can switch this TV on from your smartphone or tablet if the TV is on Standby. The setting **Switch On with Wi-Fi (WoWLAN)** must be switched on.

To switch on WoWLAN...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Wireless and Networks** and press **➤** (right) to enter the menu.
- 3 - Select **Wired or Wi-Fi > Switch On with Wi-Fi**

(WoWLAN) and press **OK**.

4 - Select **On** and press **OK**.

5 - Press **<** (left) repeatedly if necessary, to close the menu.

---

### Switch on Wi-Fi Connection

You can switch the Wi-Fi connection on your TV on or off.

To switch on Wi-Fi...

1 - Press **⚙**, select **All Settings** and press **OK**.

2 - Select **Wireless and Networks** and press **>** (right) to enter the menu.

3 - Select **Wired or Wi-Fi > Wi-Fi On/Off** and press **OK**.

4 - Select **On** and press **OK**.

5 - Press **<** (left) repeatedly if necessary, to close the menu.

---

### Digital Media Renderer - DMR

If your media files do not play on your TV, make sure that the Digital Media Renderer is turned on. As a factory setting, DMR is turned on.

To switch on DMR...

1 - Press **⚙**, select **All Settings** and press **OK**.

2 - Select **Wireless and Networks** and press **>** (right) to enter the menu.

3 - Select **Wired or Wi-Fi > Digital Media Renderer - DMR** and press **OK**.

4 - Select **On** and press **OK**.

5 - Press **<** (left) repeatedly if necessary, to close the menu.

---

### Wi-Fi Smart Screen

To watch digital TV channels on your smartphone or tablet with the Philips TV Remote App, you must switch on the Wi-Fi Smart Screen. Some scrambled channels might not be available on your mobile device.

To switch on the Wi-Fi Smart Screen...

1 - Press **⚙**, select **All Settings** and press **OK**.

2 - Select **Wireless and Networks** and press **>** (right) to enter the menu.

3 - Select **Wired or Wi-Fi > Wi-Fi Smart Screen** and press **OK**.

4 - Select **On** and press **OK**.

5 - Press **<** (left) repeatedly if necessary, to close the menu.

---

### TV Network Name

If you have more than one TV in your home network, you can give the TV a unique name.

To change the TV name...

1 - Press **⚙**, select **All Settings** and press **OK**.

2 - Select **Wireless and Networks** and press **>** (right) to enter the menu.

3 - Select **Wired or Wi-Fi > TV Network Name** and press **OK**.

4 - Enter the name with the on-screen keyboard or the remote control keyboard (if available).

5 - Select **✓** to confirm the change.

6 - Press **<** (left) repeatedly if necessary, to close the menu.

---

### Clear Internet Memory

With **Clear Internet Memory**, you can clear all Internet files and logins stored on your TV, such as passwords, cookies, and history.

To clear the Internet memory...

1 - Press **⚙**, select **All Settings** and press **OK**.

2 - Select **Wireless and Networks** and press **>** (right) to enter the menu.

3 - Select **Wired or Wi-Fi > Clear Internet Memory** and press **OK**.

4 - Select **OK** to confirm.

5 - Press **<** (left) repeatedly if necessary, to close the menu.

---

### File Sharing

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.

On this TV, you can open photos, music, and videos stored on your computer. Use any recent DLNA certified media server software.

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.

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## Google Account

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### Sign In




To enjoy the full capabilities of your Philips Android TV, you can sign in to Google with your Google Account.

By signing in you'll be able to play your favorite games across phone, tablet and TV. You'll also get customized video and music recommendations on your TV home screen as well as access to YouTube, Google Play and other apps.

### Sign In

Use your existing **Google Account** to sign in to Google on your TV. A Google Account consists of an email address and a password. If you don't have an Google Account yet, use your computer or tablet to create one ([accounts.google.com](https://accounts.google.com)). To play games with Google Play, you need a Google+ profile. If you did not sign in during the first TV installation, you can always sign in later.

To sign in after completing the TV installation...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Android Settings** and press **OK**.
- 3 - Press  (down) and select **Personal > Add account** and press **OK**.
- 4 - Select **SIGN IN** and press **OK**.
- 5 - With the remote control keyboard, enter your email address and press the small **OK** button to the right of the keyboard.
- 6 - Enter your password and press the same small **OK** button to sign in.
- 7 - Press  (left) repeatedly if necessary, to close the menu.



If you want to sign in with another Google Account, first sign out, and then sign in with the other account.

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## Android Settings

You can set or view several Android specific settings or information. You can find the list of apps installed on your TV and the storage space they need. You can set the language you would like to use with Voice Search. You can configure the on-screen keyboard or allow apps to use your location. Explore the different Android settings. You can go to [www.support.google.com/androidtv](http://www.support.google.com/androidtv) for more information on these settings.

To open these settings...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Android Settings**, and press **OK**.
- 3 - Explore the different Android settings.
- 4 - Press  **BACK** if necessary, to close the menu.

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## Philips App Gallery

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### Philips Apps

Connect the TV to the Internet to enjoy apps selected by Philips. These apps are made specially for TVs. The **Philips App Gallery** offers a wide diversity of apps. For some countries, you can install apps of a local Video Store or apps from TV broadcasters in your country. The latter may offer Catch-Up TV services.

The Philips App Gallery collection of apps may differ by country or region.



Some App Gallery apps are pre-installed on your TV. To install other apps from the App Gallery, you will be asked to agree to the Terms of Use. You can set the Privacy Settings according to your preferences.

---

## Terms of Use

To install and use the Philips App Gallery apps, you must agree to the Terms of Use. If you did not agree to these terms during the first TV installation, you can always agree to them later. The moment you agree to the Terms of Use, some apps will be available immediately and you can browse the Philips App Gallery to install other apps.

To agree to the Terms of Use after TV installation...

- 1 - Press  **HOME** and select **Philips Collection > App Gallery** and press **OK** to open the App Gallery.
- 2 - Select **Terms of Use**, then press **OK** to read.
- 3 - Select **Accept** and press **OK**. You cannot undo this approval.
- 4 - Press  **BACK** to close the menu.



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## Privacy Settings

You can set some privacy settings for the Philips App Gallery apps.

- You can allow technical statistics to be send to Philips.
- You can allow personal recommendations.
- You can allow cookies.
- You can switch on the Child Lock for 18+ rated apps.

To set the Philips App Gallery privacy settings...

- 1 - Press  **HOME** and select **Philips Collection > App Gallery** and press **OK** to open the App Gallery.
- 2 - Select **Privacy Policy**, then press **OK** to read.
- 3 - Select **Accept** and press **OK**. You cannot undo this approval.
- 4 - Press  **BACK** to close the menu.

# Connect Devices

## About Connections

### Connectivity Guide

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

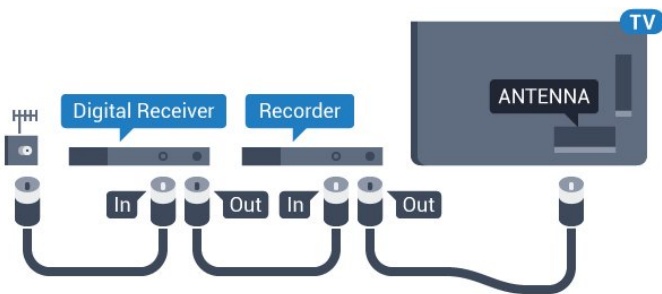
When you connect a device, the TV recognizes its type and gives each device a correct type name. You can change the type name if you wish. If a correct type name for a device is set, the TV automatically switches to the ideal TV settings when you switch to this device in the Sources menu.

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 port

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.

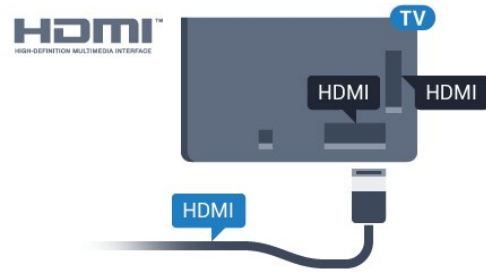


### HDMI ports

#### HDMI Quality

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) or Ultra HD (UHD) TV signals.

For best signal quality transfer, use a High speed HDMI cable and do not use an HDMI cable longer than 5 m.



#### Copy protection

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

Typically a Home Theater System (HTS) has an HDMI ARC connection. Connect it to **HDMI 1**, **HDMI 2**, or **HDMI 3** on this TV. With an HDMI ARC connection, you do not need to connect an 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 of **HDMI 1**, **HDMI 2**, or **HDMI 3** connection on this TV to connect the HTS, but ARC is only available for 1 device/connection at a time.

#### HDMI MHL

With **HDMI MHL**, you can send what you see on your Android smartphone or tablet to a TV screen.

The **HDMI 1** connection on this TV incorporates **MHL 2.0** (Mobile High-Definition Link).

This wired connection offers great stability and bandwidth, low latency, no wireless interference and good quality sound reproduction. On top of that, the MHL connection will charge the battery of your smartphone or tablet. Although connected, your mobile device will not be charging when the TV is on standby.

Inform yourself regarding which passive MHL cable is suited for your mobile device. In particular, with the HDMI connector for the TV on one side, the type of connector you need to connect to your smartphone or tablet.

MHL, Mobile High-Definition Link and the MHL Logo are trademarks or registered trademarks of the MHL, LLC.

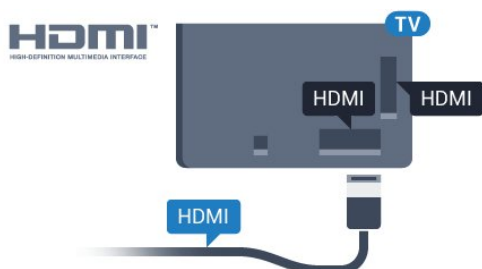
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## HDMI CEC - EasyLink

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### EasyLink

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) or Ultra HD (UHD) 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.

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 Theater 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.

---

### 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 the keys **HOME** and **OPTIONS** 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.

Only devices that support **EasyLink Remote Control** function will respond to the TV remote control.

---

### EasyLink On or Off

You can switch EasyLink on or off. The TV comes with the EasyLink settings switched on.

To switch off EasyLink completely...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **General Settings** and press **➤** (right) to enter the menu.
- 3 - Select **EasyLink**, press **➤** (right) and select **EasyLink** one step further.
- 4 - Select **Off**.
- 5 - Press **⬅** (left) 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.

To switch EasyLink Remote Control on or off...

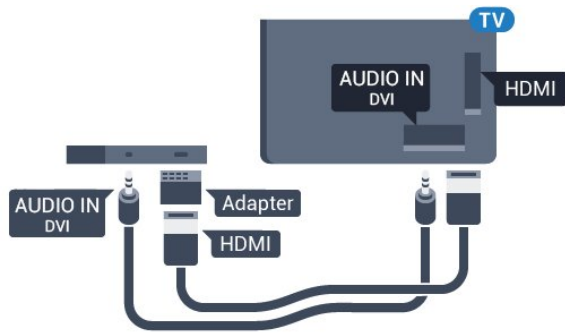
- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **General Settings** and press **➤** (right) to enter the menu.
- 3 - Select **EasyLink > EasyLink Remote Control** and press **OK**.
- 4 - Select **On** or **Off** and press **OK**.
- 5 - Press **⬅** (left) repeatedly if necessary, to close the menu.

---

### DVI to HDMI

If you still own a device that only has a DVI connection, you can connect the device to any of the **HDMI** connections with a DVI to HDMI adapter.

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.



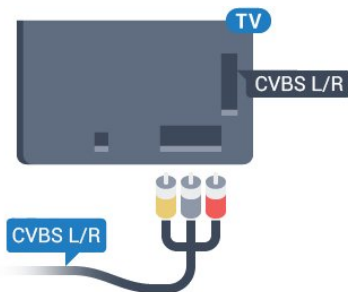
### Copy protection

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).

### CVBS - Composite

Next to the CVBS signals add the Audio Left and Right signals for sound.

Use an Audio L/R cinch cable if your device also has sound.



### Audio Out - Optical

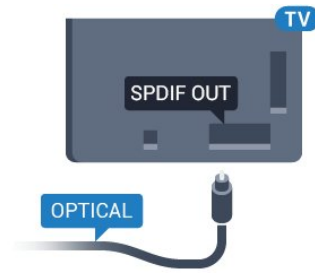
Audio Out - Optical is a high quality sound connection.

This optical connection can carry 5.1 audio channels. If your device, typically a Home Theater 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 Theater System. For more information, in **Help**, press the color key **— Keywords** and look up **Audio Out Settings**.

If the sound does not match the video on screen, you

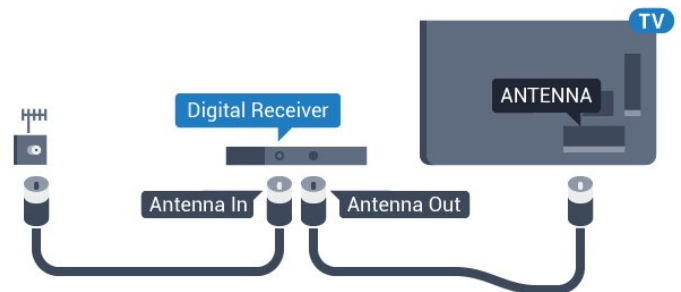
can adjust the audio to video synchronization. For more information, in **Help**, press the color key **— Keywords** and look up **Audio to Video Sync**.



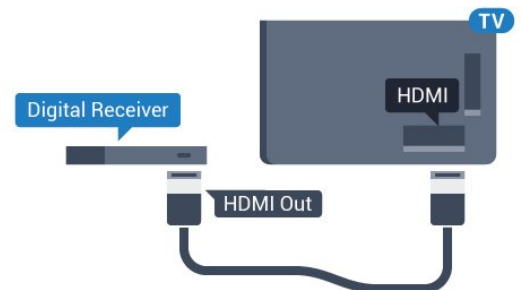
### 4.2

## Receiver - Set-Top Box

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.



### Switch Off Timer

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

For more information, in **Help**, press the color key **— Keywords** and look up **Switch Off Timer** for more information.

## Home Theater System - HTS

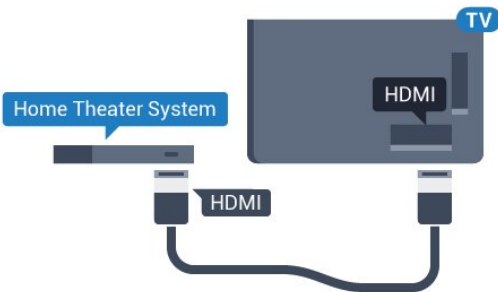
### Connect with HDMI ARC

Use an HDMI cable to connect a Home Theater System (HTS) to the TV. You can connect a Philips Soundbar or an HTS with a built-in disc player.

#### HDMI ARC

If your Home Theater 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 Theater System, the TV can only send the ARC signal to this HDMI connection.



#### Audio to video synchronization (sync)

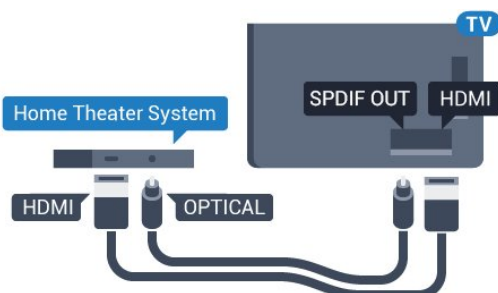
If the sound does not match the video on screen, you can set a delay on most Home Theater Systems with a disc player to match the sound with the video.

For more information, in **Help**, press the color key **— Keywords** and look up **Audio to Video Sync**.

### Connect with HDMI

Use an HDMI cable to connect a Home Theater System (HTS) to the TV. You can connect a Philips Soundbar or an HTS with a built-in disc player.

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



#### Audio to video synchronization (sync)

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

For more information, in **Help**, press the color key **— Keywords** and look up **Audio to Video Sync**.

### Audio Out Settings

#### Audio Out Delay

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

#### Automatic audio to video sync

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

#### Audio sync delay

For some Home Theater Systems you may need to adjust the audio sync delay to synchronize 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 Audio Out Delay...

- 1 - Press **⚙️**, select **All Settings** and press **OK**.
- 2 - Select **Sound** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Audio Out Delay** and press **OK**.
- 4 - Select **Off**.
- 5 - Press **⬅️** (left) repeatedly if necessary, to close the menu.

#### Audio Out Offset

If you cannot set a delay on the Home Theater System, you can set the TV to sync the sound. You can set an offset that compensates for the time necessary for the Home Theater 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 synchronize the sound on the TV...

- 1 - Press **⚙️**, select **All Settings** and press **OK**.
- 2 - Select **Sound** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Audio Out Offset** and

press **OK**.

4 - Use the slider bar to set the sound offset and press **OK**.

5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

## Audio Out Format

If you have a Home Theater 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 Theater System. If you have a Home Theater System without multichannel sound processing, select Stereo.

To set **Audio Out Format**...

1 - Press **⚙**, select **All Settings** and press **OK**.

2 - Select **Sound** and press **▶** (right) to enter the menu.

3 - Select **Advanced > Audio Out Format** and press **OK**.

4 - Select **Multichannel** or **Stereo (uncompressed)**, then press **OK**.

5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

## Audio Out Leveling

Use the Audio Out Leveling setting to level the volume (loudness) of the TV and the Home Theater 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 **⚙**, select **All Settings** and press **OK**.

2 - Select **Sound** and press **▶** (right) to enter the menu.

3 - Select **Advanced > Audio Out Leveling** and press **OK**.

4 - Select **More**, **Medium**, or **Less**, then press **OK**.

5 - If the volume difference is large, select **More**. If the volume difference is small, select **Less**.

6 - Press **◀** (left) repeatedly if necessary, to close the menu.

Audio Out Leveling 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 Theater System might be distorted. This noise is heard when the audio or video file has DTS sound but the Home Theater System has no DTS sound processing. You can fix this by setting the Audio Out Format of the TV to **Stereo**.

Press **⚙** for **All settings > Sound > advanced > Audio Out Format**.

### No sound

If you cannot hear the sound from the TV on your Home Theater System, check if you connected the HDMI cable to an **HDMI ARC** connection on the Home Theater System. All HDMI connections on the TV are HDMI ARC connections.

---

## 4.4

## Smartphones and Tablets

To connect a smartphone or tablet to the TV, you can use a wireless or wired connection.

### Wireless

For a wireless connection on your smartphone or tablet, download the Philips TV Remote App from your favorite app store.

### Wired

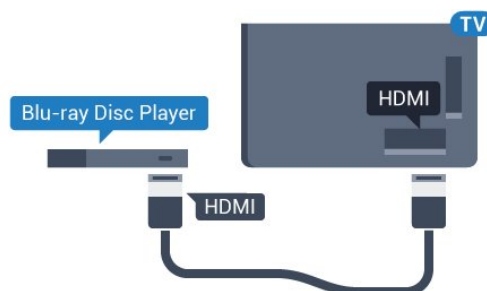
For a wired connection, use the **HDMI 1 MHL** connection on the back of the TV. In **Help**, press the color key **■ Keywords** and look up **HDMI MHL** for more information.

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## 4.5

## Blu-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



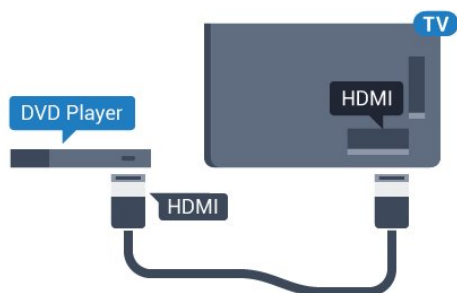
control.

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4.6

## DVD Player

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



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, in **Help**, press the color key **Red** **Keywords** and look up **EasyLink HDMI CEC**.

---

4.7

## Bluetooth - Speakers and Gamepads

### What You Need

You can connect a wireless device with Bluetooth® to this TV: a wireless speaker, a subwoofer, a sound bar, or headphones. You can also connect a wireless gamepad with Bluetooth LE.

To play the TV sound through a wireless speaker, you must pair the wireless speaker with the TV. You can pair up to 4 wireless speakers, but you can only play the sound through one wireless audio speaker at a time. If you connect a subwoofer, the sound is played through the TV and the subwoofer. If you connect a sound bar, the sound is played through the sound bar only.

#### Attention: Audio to Video synchronization

Many Bluetooth speaker systems have a high, so called, "latency." High latency means that the audio lags behind the video, causing unsynchronized "lip sync." Before you purchase a wireless Bluetooth speaker system, learn about the newest models and look for a device with a low latency rating. Ask your dealer for advice.

For more information on how to pair a wireless speaker, in **Help**, press the color key **Red** **Keywords** and look up **Bluetooth, Pairing**.

---

## Pairing a Device

Position the wireless speaker within a distance of about 16 feet from the TV. Read the user manual of the device for specific information on pairing and on wireless range. Make sure the TV's Bluetooth setting is switched on.

Once a wireless gamepad is paired, you can use it. When a wireless speaker is paired, you can select it to play the TV sound. When a device is paired, you do not need to pair it again unless you remove the device.

To pair a wireless speaker with the TV

- 1 - Switch on the wireless speaker and place it within range of the TV.
- 2 - Press **Settings**, select **All Settings** and press **OK**.
- 3 - Select **Wireless and Networks** and press **Right** to enter the menu.
- 4 - Select **Bluetooth** > **Search Bluetooth Device**, and press **OK**.
- 5 - Select **Search** and press **OK**. Follow the instructions on screen. You will pair the device with the TV and the TV will store the connection.
- 6 - Select the type of device (headphones, subwoofer, ...), select **Next** and press **OK**.
- 7 - Press **Left** repeatedly if necessary, to close the menu.

For more information on how to select the wireless speaker, in **Help**, press the color key **Red** **Keywords** and look up **Speakers, Select**.

For more information on the Bluetooth On or Off setting, in **Help**, press the color key **Red** **Keywords** and look up **Bluetooth, On or Off**.

---

## Select a Device

Once a wireless Bluetooth speaker is paired, you can select it to play the TV sound.

To select a speaker to play the TV sound...


- 1 - Press **Settings**, select **Speakers** and press **OK**.
- 2 - Select the speaker system you want and press **OK**.
- 3 - Press **Left** repeatedly if necessary, to close the menu.

---

## Remove a Device

You can connect or disconnect a wireless Bluetooth device. When a Bluetooth device is connected, you can use the gamepad or hear the TV sound through the wireless speaker. You can also remove a wireless Bluetooth device. If you remove a Bluetooth device, the device will be unpaired.


To remove or disconnect a wireless device...

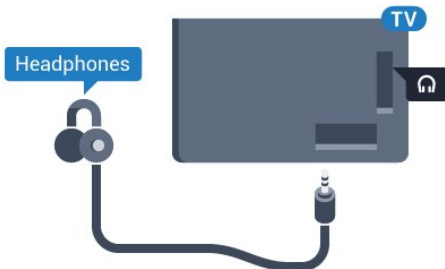
- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Wireless and Networks** and press **OK**.
- 3 - Select **Bluetooth > Remove Device** and press **OK**.
- 4 - In the list, select the wireless device and press **OK**.
- 5 - Select **Disconnect** or **Remove** and press **OK**.
- 6 - Select **OK** and press **OK** to confirm.
- 7 - Press **<** (left) repeatedly if necessary, to close the menu.

---


4.8

## Headphones

You can connect a set of headphones to the  connection on the back of 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 , select **Headphone Volume** and press **OK**.
- 2 - Press the arrows **^** (up) or **v** (down) to adjust the value.
- 3 - Press **<** (left) repeatedly if necessary, to close the menu.

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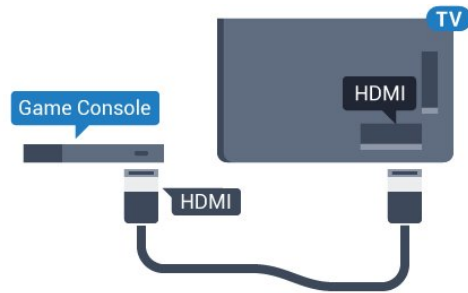
4.9

## Game Consoles

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## HDMI

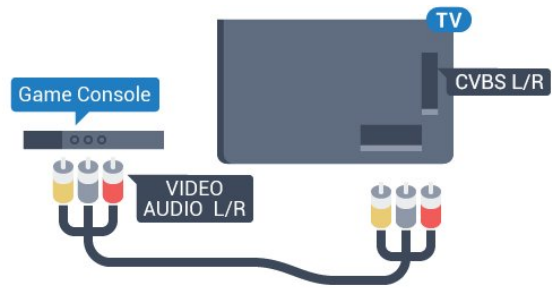
For best quality, connect the game console with a high-speed HDMI cable to the TV.



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## Video-Audio L/R

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




---

## Best Setting

Before you start playing a game from a connected game console, we advise you to set the TV in the ideal setting **Game**.

When you finish playing a game and start watching TV again, remember to switch the **Game** or **Computer** setting back to **Off**.

To set the TV to the ideal setting...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Picture > Advanced** and select **Game** or **Computer**.
- 3 - Select **Off**, **Game** or **Computer**.
- 4 - Press **<** (left) repeatedly if necessary, to close the menu.

## Gamepad

### Connect a Gamepad

To play games from the Internet on this TV, you can connect a selected range of wireless gamepads. You can use gamepads with a USB nano receiver or gamepads with Bluetooth.

To connect a gamepad with a USB nano receiver...

1 - Plug the small nano receiver into one of the USB connections on the side of the TV. The wireless nano receiver comes with the gamepad.

2 - If the gamepad is switched on, you can use the gamepad.

You can connect a second gamepad in the second USB connection on the side of the TV.

#### Bluetooth

To connect a wireless gamepad with Bluetooth, in **Help**, press the color key **— Keywords** and look up **Bluetooth, Pairing**.

### Suitable gamepads

A selected range of wireless gamepads are suited and tested for use on this TV. Other gamepads might not be fully compatible.

The suited gamepads are...

- Logitech F710
- Logitech F510
- Xbox 360 Wireless Controller for Windows
- Speedlink Strike FX Wireless Gamepad
- Sony Play Station wired
- Mad Catz C.T.R.L. Mobile Gamepad for Android
- Ipega, PG-9023
- Ipega, PG-9025
- PhoneJoy gamepad

### Problems

To solve possible interference with other wireless devices on TV...

- Use a USB extension cord and move the nano receiver about 3 feet away from the TV.
- Alternatively, you can use a powered USB hub connected to the TV and plug the nano receivers into the USB hub.

## 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 4GB of disk space.

#### To Record

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

For more information on how to install a USB Hard Drive, in **Help**, press the color key **— 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. Formatting removes all files from the USB Hard Drive.

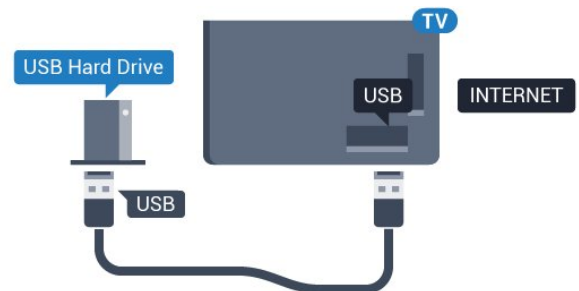
1 - Connect the USB Hard Drive to one of the **USB** connections on the TV. Do not connect another USB device to the other USB ports when formatting.

2 - Switch on the USB Hard Drive and the TV.

3 - When the TV is tuned to a digital TV channel, press **||** (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.

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## Formatting

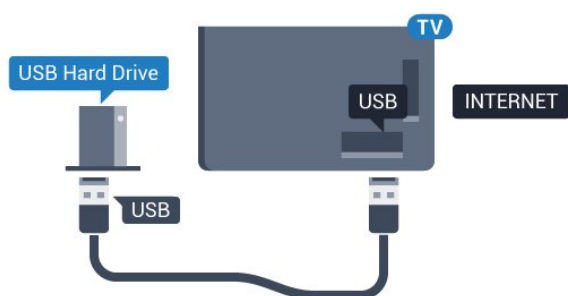
Before you can pause or record a broadcast, or store apps, you must connect and format a USB Hard Drive. Formatting removes all files from the USB Hard Drive. If you want to record broadcasts with TV Guide data from the Internet, you must setup the Internet connection first before you install the USB Hard Drive.

### 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.

To format a 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 **||** (Pause). Trying to pause will start the formatting. Follow the on-screen instructions.
- 4 - The TV will ask if you want to use the USB Hard Drive to store apps. Select Agree if you do.
- 5 - When the USB Hard Drive is formatted, leave it connected permanently.



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4.12

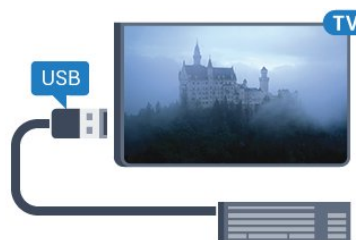
## USB Keyboard

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## Connect

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

Use one of the **USB** connections to connect.



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## Configure

### 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 layout first, you can select a secondary Latin keyboard layout.

To change the keyboard layout setting when a layout was selected...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **General Settings** and press **➤** (right) to enter the menu.
- 3 - Select **USB keyboard Settings**, and press **OK** to start the keyboard setup.

---

## Special Keys

### Keys for entering text

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

### Keys for Smart TV Apps and Internet pages

- Tab and 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 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 content list does not appear automatically, press **SOURCES** and select **USB**.

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

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

### 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.

For more information on watching or playing content from a USB flash drive, in **Help**, press the color key **Keywords** and look up **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 have made the connection.

If the content list does not appear automatically, press **SOURCES**, and click **USB**.

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.

### Ultra HD on USB

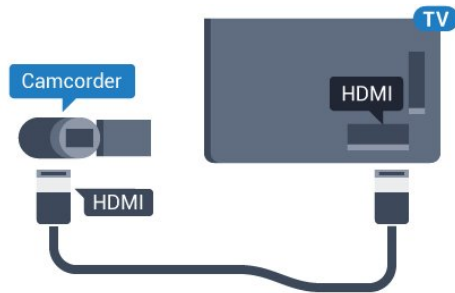
You can view photos in Ultra HD resolution from a connected USB device or flash drive. The TV will downscale the resolution to Ultra HD if the resolution of the photo is higher. You cannot play a native Ultra HD video on any of the USB connections.

For more information on viewing photos, in **Help**, press the color key **Keywords** and look up **Photos, Videos and Music**.

## Camcorder

### HDMI

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



### Video-Audio L/R

You can use a Video Audio L/R cable to connect the camcorder to the TV.

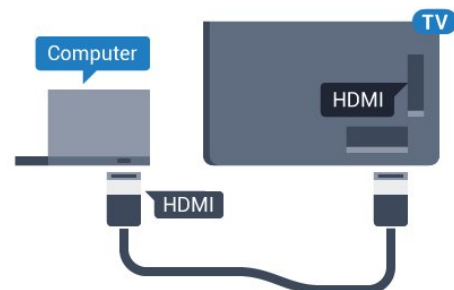
## Computer

### Connect

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

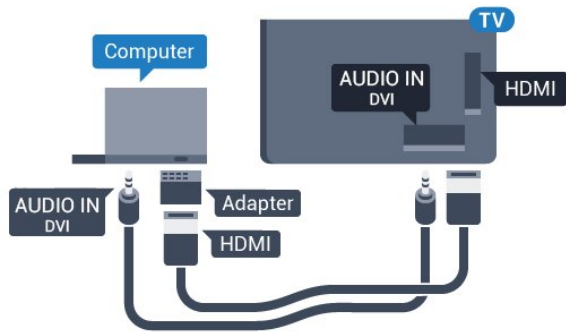
#### With HDMI

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



#### With DVI to HDMI

Alternatively, you can use a DVI to HDMI adapter (sold separately) 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.



---

## Ideal Setting

If you connect a computer, we advise you to give the connection, to which the computer is connected, the correct device type name in the Source menu. If you then switch to **Computer** in the Source menu, the TV is automatically set to the ideal settings for a computer.

You can manually switch the ideal setting to **Off** for watching TV or **Game** for playing a game from a connected TV or game console (remember to switch back to **Off** when you stop playing a game).

If you switch to a source and change the **Game** or **Computer** setting, it will be stored for this selected source.

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

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Game or Computer**, and press **OK**.
- 4 - Select **Game** (for gaming) or select **Computer** (for watching a movie).
- 5 - Press **⬅** (left) repeatedly if necessary, to close the menu.

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



# Switching On and Off

## 5.1


### On or Standby

Make sure the TV is connected to the mains AC power. Connect the supplied power cord to the AC in connector at the back of the TV. The indicator light at the bottom of the TV lights up.

#### Switch on

Press  on the remote control to switch the TV on. Alternately, press  HOME. You can also press the small joystick key on the back of the TV to switch the TV on in case you can't find the remote control or its batteries are empty.

#### Switch to standby

To switch the TV to standby, press  on the remote control. You can also press the small joystick key on the back of the TV.



In standby mode, the TV is still connected to the mains power but consumes very little 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

If you lost the remote control or its batteries are empty, you can still do some basic TV operations.

To open the basic menu...

- 1 - With the TV switched on, press the joystick key on the back of the TV to bring up the basic menu.
- 2 - Press left or right to select  Volume,  Channel, or  Sources. Select  Demo to start a demo movie.
- 3 - Press up or down to adjust the volume or tune to the next or previous channel. Press up or down to go through the list of sources, including the tuner selection. Press the joystick key to start the demo

movie.

- 4 - The menu will disappear automatically.

To switch the TV on standby, select  and press the joystick key.






## 5.3

### Sleep Timer

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 , select **All Settings** and press **OK**.
- 2 - Select **Region and Language** > **Clock**, and press **OK**.
- 3 - Select **Sleep Timer** and press  (right). With the slider bar you can set the time to up to 180 minutes in increments of 5 minutes. If set to 0 minutes, the Sleep Timer is switched off. You can always switch off your TV earlier or reset the time during the countdown.
- 4 - Press  (left) repeatedly if necessary, to close the menu.






## 5.4

### Switch Off Timer


If the TV receives a TV signal but you don't press a key on the remote control during a 4 hour period, the TV switches off automatically to save energy. Also, if the TV does not receive a TV signal or remote control command for 10 minutes, it switches off automatically.

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 this automatic switch off.

To deactivate the Switch Off Timer ...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Eco Settings** and press  (right) to enter the menu.
- 3 - Select **Switch Off Timer** and press **OK**.
- 4 - Press the arrows  (up) or  (down) to adjust the value. The value **0** deactivates the automatic switch off.
- 5 - Press  (left) repeatedly if necessary, to close the menu.

For more information on environmentally friendly TV

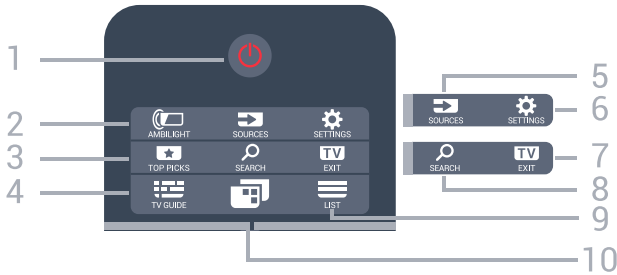
settings, in Help, press the color  
key  Keywords and look up Eco Settings.



# Remote Control

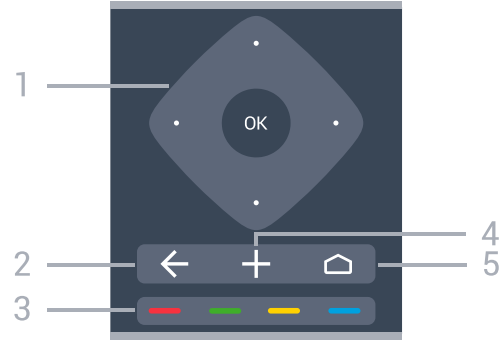
## Key overview

### Top



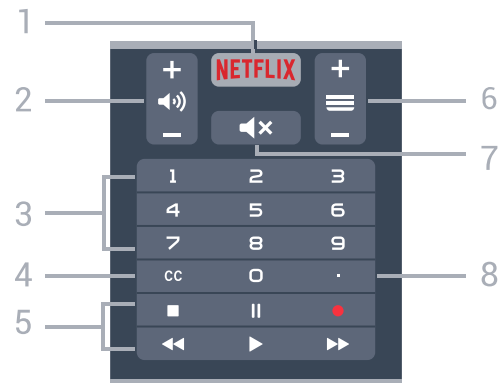
- 1 - Standby / On  
To switch the TV On or back to Standby.
- 2 - AMBILIGHT  
No function.
- 3 - TOP PICKS  
To open the menu with recommended programs. If available.
- 4 - TV GUIDE  
To open or close the TV Guide.
- 5 - SOURCES  
To open or close the Sources menu.
- 6 - SETTINGS  
To open the Frequent Settings menu and All Settings.
- 7 - EXIT  
To switch back to watch TV. To leave an interactive TV application.
- 8 - SEARCH  
To open the searches page.
- 9 - LIST  
To open or close the channel list.
- 10 - TV Menu  
To open the TV Menu with typical TV functions.

### Middle



- 1 - OK key / Arrow / Navigation keys  
To confirm a selection or setting.  
To navigate up, down, left or right.
- 2 - BACK  
To switch back to the previous channel you selected.  
To close a menu without changing a setting.  
To go back to the previous App/Internet page.
- 3 - Color keys  
Direct selection of options. Blue key , opens Help.
- 4 - OPTIONS  
To open or close the Options menu.
- 5 - HOME  
To open the Home menu.

### Bottom



- 1 - **NETFLIX**  
To open the Netflix App directly. With the TV switched on or from standby.
- 2 - Volume  
To adjust the volume level.
- 3 - Number keys  
To select a channel directly.
- 4 - CC  
To switch Subtitles on, off or on during mute.
- 5 - Playback and Record
  - Play , to playback.
  - Pause , to pause playback
  - Stop , to stop playback

- Rewind ◀◀, to rewind
- Forward ▶▶, to fast forward
- Record ●, to start recording

#### 6 - ≡ Channel

To switch to the next or previous channel in the channel list. To start the next or previous chapter on a disc.

#### 7 - 🔇 Mute

To mute the sound or to restore it.

#### 8 - (Dot)

To open digital sub-channels.



To write text...

- 1 - Select a text field if it is not yet selected.
- 2 - Turn the remote control keyboard facing upwards to activate the keyboard keys. Hold the remote control with two hands and type with both thumbs.
- 3 - To hide the on-screen keyboard, press ← BACK. Press OK to confirm the text.

#### On-screen Keyboard

If you use the on-screen keyboard to enter text, you can configure the keyboard layout to a layout you are used to.

To open these settings...

- Press 🏠 HOME, select All Settings and press OK.
  - 5 - Select Android Settings and press OK.
  - 6 - Select Preferences > ⌨️ Keyboard and press OK.
  - 7 - Select Configure > Language and press OK. You can set your language keyboard layout here.
  - 8 - Press ← BACK to close the menu to go back one step.
- Best distance to operate remote control with the TV is less than 16 ft.
  - When using the remote control keyboard, it's best to hold the remote control with the angle less than 50 degree.
  - Do not block the IR ray of the remote control.

6.2

## Keyboard

### Overview

Overview of a keyboard.



#### 1 - Character

Character position.

#### 2 - ⬆️Aa Shift

To type uppercase characters.

#### 3 - 🌐 Special characters

To open the On-screen keyboard to select accented characters or symbols.

#### 4 - Fn key

To type a number or punctuation character.

#### 5 - ␣ Spacebar

#### 6 - Navigation and OK

#### 7 - ➦ Share this

To share online what you are now watching.

## Writing Text

With the keyboard on the back of the remote control, you can write text in any text field on screen. Turn the keyboard facing upwards to activate the keyboard keys. Hold the remote control with two hands and type with both thumbs.

## Uppercase and Lowercase

To type an uppercase character, press the ⬆️Aa (Shift) key just before you type the character. To type several uppercase characters consecutively, press and hold the ⬆️Aa key while typing. To type uppercase constantly, press the ⬆️Aa key for 2 seconds to switch the keyboard in uppercase mode. To switch out of uppercase mode, press the ⬆️Aa key again. If no keys are pressed for 20 seconds, the uppercase mode switches off automatically. Also, if you press another modifier key, like Fn or 🌐, you switch out of uppercase mode.

---

## Numbers and Punctuation Characters

To type a number or punctuation character, press the Fn key just before you type the number or punctuation character you need. You can switch the Fn mode on or off as you do for the uppercase mode.

### Internet


You can use the Fn key to enter www. or .com.

---

## Accented Letters and Symbols

Accented characters and symbols are not directly available on the Remote Control Keyboard.

To type such a character, you can open the On-screen keyboard.

To open the on-screen keyboard, press  on the back of remote control. In the on-screen keyboard, you can navigate to the character you need. Switch the keyboard layout with the color keys. Press **OK** to enter a character. The on-screen keyboard disappears when you press a character on the Remote Control Keyboard.

---

### 6.3

## IR Sensor

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

### Warning

Do not put any objects in front of IR sensor of the TV as it may block the IR signal.

---

### 6.4

## Batteries

If the TV does not react on a key press on the remote control, the batteries might be empty.

To replace the batteries, open the battery compartment on the front-bottom of the remote control.

- 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 - 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**.

---

### 6.5

## 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.

# Channels

## Channel Lists

### About Channel Lists

After a channel installation, all channels appear the channel list. Channels are shown with their name and logo if this information is available.

For each type of tuner - Antenna or Cable - there is a channel list with all installed channels. You can filter this list to only show TV or only Radio channels.

With a channel list selected, you can only tune to the channels in that list when using **≡ +** or **≡ -** keys.

### Channel icons

After an Automatic Channel Update of the channel list, newly found channels are marked with a **★** (star).

If you lock a channel, it will be marked with a **🔒** (lock).

The 3 most popular channels being watched by others at this moment are marked with a **1**, **2** or **3**.

### Radio stations

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.

## Open a Channel List

Next to the list with all channels for each tuner, Antenna or Cable, you can select a filtered list or you can select one of the favorite lists you created.

To open the current channel list...

- 1 - Press **TV EXIT**, to switch to TV.
- 2 - Press **OK** to open the current channel list.
- 3 - Press **← BACK** to close the channel list.

To select one of the channel lists...

- 1 - With a channel list open on screen, press **+ OPTIONS**.
- 2 - Select **Select Channel List** and press **OK**.
- 3 - In the list menu, select one of the available channel lists and press **OK**.

Alternatively, you can select the list name at the top of the channel list and press **OK** to open the list menu.

## Filter a Channel List

You can filter a list with all channels. You can set the channel list to show only TV channels or only Radio stations. For Antenna/Cable channels you can set the list to show the Free-to-Air or the Scrambled channels.

To set a filter on a list with all channels...

- 1 - Press **TV EXIT**.
- 2 - Press **OK** to open the current channel list.
- 3 - Press **+ OPTIONS**.
- 4 - Select **Select Channel List** and press **OK**.
- 5 - Select the list you want to filter.
- 6 - In the **Options** menu, select the filter you want and press **OK** to activate. The name of the filter appears as part of the channel list name on top of the channel list.
- 7 - Press **←** (left) to go back one step or press **← BACK** to close the menu.

## Search for a Channel

You can search for a channel to find it in a long list of channels.

The TV can search for a channel within one of the channel lists - the Antenna or Cable channel list.

To search for a channel...

- 1 - Press **TV EXIT**.
- 2 - Press **OK** to open the current channel list.
- 3 - Press **+ OPTIONS**.
- 4 - Select **Select Channel List** and press **OK**.
- 5 - Select the list you want to filter and press **OK**.
- 6 - Select **Search Channel** and press **OK** to open a text field.
- 7 - Enter a number, a name or part of a name and select **Apply** and press **OK**. The TV will search for matching channel names in the list you selected.

Search results are listed as a channel list - see the list name at the top. The search results disappear once you select another channel list or close the list with search results.

## Watching TV Channels

### Tune to a Channel

To start watching TV channels, press **TV EXIT**. The TV tunes to the channel you last watched.

### Switch Channels

To switch channels, press **≡ +** or **≡ -**.  
If you know the channel number, tune in the number

with the number keys. Press **OK** after you entered the number to switch immediately.

### Now and next

While you're watching a TV channel, you can quickly scroll through the rest of the channels and see what's on.

Press **▲** (up) or **▼** (down) to open a scrolling list of channels. If the information is available, the TV shows the current program name and details followed by the next program name and details.

### Previous channel

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

---

## Lock a Channel

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### Lock and Unlock a Channel

To prevent children from watching a channel, you can lock a channel. To watch a locked channel, you must enter the 4 digit **Child Lock PIN** code first. You cannot lock programs from connected devices.

To lock a channel...

- 1 - While watching a TV channel, press **≡ LIST** to open the Channel List.
- 2 - Select the channel you want to lock.
- 3 - Press **⊕ OPTIONS** and select **Lock Channel** and press **OK**.
- 4 - Enter your 4 digit PIN code if the TV asks for it. A locked channel is marked with a **🔒** (lock).
- 5 - Press **←** (left) to go back one step or press **←** to close the menu.

To unlock a channel...

- 1 - While watching a TV channel, press **≡ LIST** to open the Channel List.
- 2 - Select the channel you want to unlock.
- 3 - Press **⊕ OPTIONS** and select **Unlock Channel** and press **OK**.
- 4 - Enter your 4 digit PIN code if the TV asks for it.
- 5 - Press **←** (left) to go back one step or press **←** to close the menu.

If you lock or unlock channels in a channel list, you only have to enter the PIN code just once until you close the channel list.

For more information, in **Help**, press the color key **— Keywords** and look up **Child Lock** for more information.

---

## Age Ratings

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

Digital channels can have their programs age rated. When the age rating of a program is equal to or higher than the age you have set as age rating for your child, the program will be locked. To watch a locked program, you must enter the **Child Lock** code first.

To set an age rating...

- 1 - Press **⚙️**, select **All Settings** and press **OK**.
- 2 - Select **Child Lock > Age Ratings Lock** and press **OK**.
- 3 - Enter a 4-digit **Child lock** code. If you did not set a code yet, click **Set Code** in **Child Lock**. Enter a 4-digit **Child lock** code and confirm. Now you can set an age rating.
- 4 - Back in **Age Ratings Lock**, select the age and press **OK**.
- 5 - Press **←** (left) repeatedly if necessary, to close the menu.

To switch off the parental age rating, select **None**. However, in some countries you must set an age rating.

For some broadcasters/operators, the TV only locks programs with a higher rating. The parental age rating is set for all channels.

---

## Channel Options

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### Open Options

While watching a channel, you can set some options.

Depending on the type of channel you are watching (analog or digital) or depending on your TV settings, some options are available.

To open the options menu...

- 1 - While watching a channel, press **⊕ OPTIONS**.
- 2 - Press **⊕ OPTIONS** again to close.

---

### Closed caption

Switch **Closed Caption On** or **Off** with this options. Select **On During Mute** to show closed captions only when the sound is muted with **🔊**.

---

### Caption service

Select the correct type of closed-caption services. For more information, in **Help**, press **— Keywords** and look up **Closed Caption**.

---

## Audio language

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

For more information, in **Help**, press **— Keywords** and look up **Audio language**.

---

## DTV Applications

Display the list of Digital TV interactive applications.

For more information, in **Help**, press **— Keywords** and look up **DTV**.

---

## Channel Info

You can view the technical characteristics of a particular channel, like digital or analog, sound type, etc.

To view the technical information on a channel...

- 1 - Tune to the channel.
  - 2 - Press **+** **OPTIONS**, select **Channel Info** and press **OK**.
  - 3 - To close this screen, press **OK**.
- 

## Mono / Stereo

You can switch the sound of an analog channel to Mono or Stereo.

To switch to Mono or Stereo...

- 1 - Tune to an analog channel.
  - 2 - Press **+** **OPTIONS**, select **Mono / Stereo** and press **OK**.
  - 3 - Select **Mono** or **Stereo** and press **OK**.
  - 4 - Press **<** (left) to go back one step or press **<** to close the menu.
- 

7.3

# Favorite Channels

---

## About favorite Channels

In a favorite channel list, you can collect the channels you like.

For each type of tuner, you can create 4 different lists of favorite channels for easy channel zapping. You can name each Favorites List individually. Only in a Favorites List you can reorder channels.

With a Favorites List selected, you can only tune to the channels in that list when using the **≡ +** or **≡ -** keys.

---

## Create a favorites List

To create a favorite channels list...

- 1 - Press **TV EXIT**, to switch to TV.
- 2 - Press **OK** to open the current channel list.
- 3 - Press **+** **OPTIONS**.
- 4 - Select **Create Favorites List** and press **OK**.
- 5 - In the list at the left, select a channel you want as a favorite and press **OK**. Channels come in the list at the right in the order you add them. To undo, select the channel in the list at the left and press **OK** again.
- 6 - If necessary, you can go on selecting and adding channels as favorites.
- 7 - To finish adding channels, press **<** **BACK**.

The TV will ask to rename the Favorites List. Delete the current name and enter a new name. When done, select **Close** and press **OK**.

The TV will switch to the newly created favorites List.

You can add a range of channels in one go or start a Favorites List by duplicating the channel list with all channels and removing the channels you do not want.

The channels in the Favorites List are renumbered.

---

## Add a Range of Channels

To add a consecutive range of channels to a Favorites List in one go, you can use **Select Channel Range**.

To add a range of channels...

- 1 - Open the Favorites List where you want to add a range of channels.
- 2 - Press **+** **OPTIONS**, select **Select Channel Range** and press **OK**.
- 3 - In the list at the left select the first channel of the range you want to add and press **OK**.
- 4 - Press **▼** (down) to select the last channel of the range you want to add. The channels are marked at the left.
- 5 - Press **OK** to add this range of channels and confirm.

You can also start creating a Favorites List from **Select Range**.

---

## Rename a Favorites List

You can only rename a Favorites List.

To rename a Favorites List...

- 1 - Open the Favorite List you want to rename.
- 2 - Press **+** **OPTIONS**, select **Rename Favorites List** and press **OK**.
- 3 - Delete the current name and enter a new name.

- 4 - When done, select **Apply** and press **OK**.
- 5 - Press **← BACK** to close the channel list.

---

## Remove a Favorites List

You can only remove a Favorites List.

To remove a Favorites List...

- 1 - Open the Favorites List you want to remove.
- 2 - Press **⊕ OPTIONS**, select **Remove Favorites List** and press **OK**.
- 3 - Confirm to remove the list.
- 4 - Press **← BACK** to close the channel list.

---

## Reorder Channels

Only in a Favorites List can you change the sequence of channels (reorder).

To change the sequence of channels...

- 1 - Open the Favorites List you want to reorder.
- 2 - Press **⊕ OPTIONS**, select **Reorder Channels** and press **OK**.
- 3 - In the Favorites List, select the channel you want to reorder and press **OK**.
- 4 - With the **▲** (up) or **▼** (down) keys move the channel where you want it.
- 5 - Press **OK** to confirm the new location.
- 6 - You can reorder channels with the same method until you close the Favorites List with the **← BACK** key.

---

7.4

## Closed captioning (CC) and language

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### Closed Caption

You can display closed captions at all times or only when the TV is muted.

To open **Closed Caption**, press **CC**.

**Note:**

- Digital TV interactive applications are not accessible when closed caption text is switched on.
- Not all TV programs, commercials, and features include closed captioning information. See your local TV program listings for channels with closed captions. The captioned programs are typically listed with service marks, such as "CC," in the TV listings.

**Switch on closed caption**

- 1 - While you watch TV, press **⊕ OPTIONS**.
- 2 - Select **Closed Caption > On** and press **OK**.

**Select type of closed caption**

- 1 - While you watch TV, press **⊕ OPTIONS**.
- 2 - Select **Caption Service**.
- 3 - Select the correct type of closed captions and press **OK**.

---

## Audio Language

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 analog 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 analog channels, select between:

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

---

## Menu Language

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

- 1 - Press **⚙**.
- 2 - Select **All Settings** and press **OK** to enter the menu.
- 3 - Select **Region and Language > Languages > Menu Language** and press **OK**.
- 4 - Select the language you need.
- 5 - Press **←** (left) repeatedly if necessary, to close the menu.

---

7.5

## Interactive TV

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### About Interactive TV

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

**Note:**

- You cannot download files to your TV with this feature.
- Not all TV programs, commercials and features include closed captioning information.
- You cannot respond to the digital content.

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.


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## Use Interactive TV

### Open iTV pages


Most channels that offer iTV invite you to press the color key  (red) or **OK** key to open their interactive program.

### Navigate iTV pages

You can use the arrow and color 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.

### 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 press  **BACK**.



---

# TV guide

---

## 8.1

## What You Need

With the TV Guide you can view a list of the current and scheduled TV programs of your channels. Depending on where the TV guide information (data) is coming from, analog 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. The TV cannot collect the TV Guide information for channels viewed from a digital receiver or decoder.

## 8.2

## TV Guide Data

The TV Guide receives information (data) from broadcasters or from the Internet. In some regions and for some channels, TV Guide information might not be available. The TV can collect TV Guide information for the channels that are installed on the TV. The TV cannot collect the TV Guide information from channels viewed from a digital receiver or decoder.


The TV comes with the information set to **From the Broadcaster**.

If TV Guide information comes from the Internet, the TV Guide can also list analog channels next to the digital channels. The TV Guide menu also shows a small screen with the current channel.

### From the Internet

If the TV is connected to the Internet, you can set the TV to receive the TV Guide information from the Internet.

To set the TV Guide information...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **General Settings** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > TV guide > From the Internet** and press **OK**.
- 4 - Press **◀** (left) repeatedly if necessary, to close the menu.

### Missing recordings

When some recordings seem to have disappeared from the list of recordings, the TV Guide info (data) might have changed. Recordings made with the setting **From the Broadcaster** become invisible in the list if you switch the setting to **From the**

**Internet** or vice versa. The TV might have switched to **From the Internet** automatically.

To make the recordings available in the list of recordings, switch to the setting that was selected when the recordings were made.

## 8.3

## Using the TV Guide

---

### Open the TV Guide

To open the TV Guide, press  **TV GUIDE**. The TV Guide shows the channels of the selected tuner.

Press  **TV GUIDE** again to close.

The first time you open the TV Guide, the TV scans all TV channels for program information. This may take several minutes. TV Guide data is stored on the TV.

---


### Tune to a Program

From the TV Guide, you can tune to a current program.

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

### View program details


To call up the details of the selected program...

- 1 - While watching TV, press  **OPTIONS**.
- 2 - Select **Channel Info**.
- 3 - Press **◀** **BACK** to close.

---

### Change Day


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

Press the color key  **Day** and select the day you need.



---

### Set a Reminder

You can set a reminder for a program. A message will alert you at the start of the program. You can tune to this channel immediately.

In the TV Guide a program with a reminder is marked with a .

To set a reminder...

- 1 - Press  **TV GUIDE** and select an upcoming program.
- 2 - Press  **OPTIONS**.
- 3 - Select **Set Reminder** and press **OK**.

4 - Press BACK to close the menu.

To clear a reminder...

1 - Press TV GUIDE and select the program with the reminder.

2 - Press OPTIONS.

3 - Select **Clear Reminder** and press **OK**.

4 - Press BACK to close the menu.

1 - Press TV GUIDE and select the program set for recording.

2 - Press the color key **Clear Recording**.

3 - Press BACK to close the menu.

\* See chapter **Recording and Pause TV** for more information.

---

## Search by Genre

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

To search for programs by genre...

1 - Press TV GUIDE.

2 - Press OPTIONS.

3 - Select **Search by Genre** and press **OK**.

4 - Select the genre you want and press **OK**. A list with the found programs appears.

5 - You can set reminders or schedule a recording on a selected program.

6 - Press BACK to close the menu.

---

## List of Reminders

You can view a list of the reminders you have set.

### List of Reminders

To open the list of reminders...

1 - Press TV GUIDE.

2 - Press the color key **Recordings**.

3 - At the top of the screen, select **Scheduled** and press **OK**.

4 - In the list of scheduled recordings and reminders, select the tab **Reminders** and press **OK** to view the reminders only.

5 - Press the color key **Remove** to remove the selected reminder. Press the color key **Record** to record the selected program.

6 - Press BACK to close the menu.

---

## Set a Recording

You can set a recording in the TV Guide\*.

In the TV Guide, a program set to be recorded is marked with a (red dot).

To record a program...

1 - Press TV GUIDE and select a future or ongoing program.

2 - Press the color key **Record**.

3 - Press BACK to close the menu.

To cancel a recording...

# Recording and Pause TV

## Recording

### What You Need

You can record a digital TV broadcast and watch it later.

To record a TV program you need...

- a connected USB Hard Drive formatted on this TV
- digital TV channels installed on this TV
- to receive channel information for the on-screen TV Guide
- a reliable TV clock setting. If you reset the TV clock manually, recordings may fail.

You cannot record when you are using Pause TV.

Some digital TV operators do not allow the recording of channels.

For more information on installing a USB Hard Drive, in **Help**, press the color key **Red** **Keywords** and look up **USB Hard Drive, Installation**.

### Record a Program

#### Record Now

To record the program you are watching right now, press **Red** (Record) on the remote control. The recording will start immediately.

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

When TV Guide data is available, the program you are watching will be recorded from the moment you pressed the recording key until the program ends. If no TV Guide data is available, the recording will only last 30 minutes. You can adjust the end time of the recording in the list of **Recordings**.

#### Schedule a Recording

You can schedule a recording of an upcoming program for today or a few days from today (maximum of 8 days away). The TV will use the data from the TV Guide to start and end the recording.

To record a program...

- 1 - Press **TV GUIDE**.
- 2 - On the TV Guide, select the channel and program you wish to record. Press **Right** or **Left** to

scroll through the channel's programs. Use the color key **Yellow** **Day** to select the day you need.

3 - With the program highlighted, press the color key **Red** **Record**. The program is now scheduled for recording. A warning will show automatically when overlapping recordings are scheduled. If you plan to record a program in your absence, remember to leave the TV switched to Standby and the USB Hard Drive switched on.

4 - The TV adds a time margin at the end of the program. You can adjust this margin with **Auto End Margin**.

5 - Press **Left** **BACK** to close the menu.

#### List of Recordings

You can view and manage your recordings in the list of recordings. Next to the list of recordings, there is a separate list for scheduled recordings and reminders.

To open the list of recordings...

- 1 - Press **TV GUIDE**.
- 2 - Press the color key **Green** **Recordings**.
- 3 - In the list of recordings, select the tabs **New**, **Watched** or **Expired** and press **OK** to filter your view.
- 4 - With a recording selected in the list, you can remove the recording with the color key **Red** **Remove** or stop an ongoing recording with the color key **Red** **Stop Recording**. You can rename a recording with the color key **Yellow** **Rename**.
- 5 - Press **Left** **BACK** to close the menu.

Broadcasters can limit the number of days a recording can be viewed. When this period expires, the recording will be marked as expired. A recording in the list shows the number of days before it expires.

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

#### Recording Conflicts

When two scheduled recordings are overlapping in time, there is a recording conflict. To solve a recording conflict, you can adjust the start and end time of one or both scheduled recordings.

To adjust the start or end time of a scheduled recording...

- 1 - Press **TV GUIDE**.
- 2 - Press the color key **Green** **Recordings**.
- 3 - At the top of the screen, select **Scheduled** and press **OK**.
- 4 - In the list of scheduled recordings and reminders, select the tab **Recordings** and press **OK** to view the scheduled recordings only.
- 5 - Select the scheduled recording that conflicts with

another scheduled recording and press the color key **Adjust time**.

6 - Select the start or end time and change the time with the **^** (up) or **v** (down) keys. Select **Apply** and press **OK**.

7 - Press **← BACK** to close the menu.

---

### Auto End Margin

You can set the time margin that the TV will add automatically at the end of each scheduled recording.

To set the automatic end time margin...

- 1 - Press **TV GUIDE**.
- 2 - Press **+** **OPTIONS** and select **Auto End Margin** and press **OK**.
- 3 - Press **^** (up) or **v** (down) and press **OK** to set the time margin added to a recording automatically. You can add up to 45 minutes to a recording.
- 4 - Press **← BACK** to close the menu.

---

### Manual Recording

You can schedule a recording that is not linked to a TV program. You will set the tuner type, channel, and the start and end times yourself.

To schedule a recording manually...

- 1 - Press **TV GUIDE**.
- 2 - Press the color key **Recordings**.
- 3 - At the top of the screen, select **Scheduled** and press **OK**.
- 4 - Press **+** **OPTIONS**, select **Schedule** and press **OK**.
- 5 - Select the tuner from where you want to record and press **OK**.
- 6 - Select the channel to record from and press **OK**.
- 7 - Select the day of the recording and press **OK**.
- 8 - Set the start and end time of the recording. Select a button and use the **^** (up) or **v** (down) keys to set the hours and minutes.
- 9 - Select **Schedule** and press **OK** to schedule the manual recording.

The recording will appear in the list of scheduled recordings and reminders.

---

### Watch a Recording

To watch a recording...

- 1 - Press **TV GUIDE**.
- 2 - Press the color key **Recordings**.
- 3 - In the list of recordings, select the recording you want and press **OK** to start watching.
- 4 - You can use the keys **||** (Pause), **▶** (Play), **◀◀**

(Rewind), **▶▶** (Forward) or **■** (Stop).  
5 - To switch back to watch TV, press **TV EXIT**.

---

9.2

## Pause TV

---

### What You Need

You can pause a digital TV broadcast and resume watching later.

To pause a TV program you need...

- a connected USB Hard Drive formatted on this TV
- digital TV channels installed on this TV
- to receive channel information for the on-screen TV Guide

With the USB Hard Drive connected and formatted, the TV continuously stores the TV broadcast you are watching. When you switch to another channel, the broadcast of the former channel is cleared. Also when you switch the TV to standby the broadcast is cleared.

You cannot use Pause TV when you are recording.

For more information, in **Help**, press the color key **Keywords** and look up **USB Hard Drive, installation**.

---

### Pause a Program

To pause and resume a broadcast...

To pause a broadcast, press **||** (Pause). A progress bar at the bottom of the screen appears briefly. To call up the progress bar, press **||** (Pause) again. To resume watching, press **▶** (Play).

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.

You can pause a broadcast for a maximum time span of 90 minutes.

To switch back to the live TV broadcast, press **■** (Stop).

---

### Replay

Since the TV stores the broadcast you are watching, you can replay the broadcast for a few seconds.

To replay a current broadcast...

- 1 - Press **||** (Pause)
- 2 - Press **◀◀** (Rewind). You can press **◀◀** repeatedly to select from where you want

to start viewing the paused broadcast. Press these keys repeatedly to change speed. At one point you will reach the start of the broadcast storage or the maximum time span.

3 - Press ► (Play) to watch the broadcast again.

4 - Press ■ (Stop) to watch the broadcast live.


---

# Top Picks

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## 10.1

## About Top Picks




With  TOP PICKS your TV recommends current TV programs, the latest rental videos and Online TV services for you to watch. Make sure you agree to the Terms of Use. To enjoy Top Picks connect your TV to the Internet.

The Top Picks information and services are only available in selected countries.

### Terms of Use

To allow the TV to make these recommendations, you must agree to the Terms of Use. To get personalized recommendations based on your viewing habits, make sure you checked the tick box for **Personal Recommendations Consent**.

To agree to the Terms of Use and agree to the Personal Recommendations Consent...

- 1 - Press  TOP PICKS.
- 2 - Press  OPTIONS, select Terms of Use and press OK.
- 3 - Select (... ..) and press OK.
- 4 - Press  BACK.


## 10.2

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## TV on Demand

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### About TV on Demand

With  TV on Demand , you can watch TV programs you missed or watch your favorite programs whenever it suits you best. This service is also called Catch up TV, Replay TV or Online TV. Programs available on TV on demand are free to watch.




You can let TV on demand make some personalized recommendations of programs, based on the TV installation and the programs you watch regularly.

The icon  will only appear at the top of the screen when TV on demand is available.

---

### Using TV on Demand

To open TV on demand...



- 1 - Press  TOP PICKS to open the Top picks menu.
- 2 - Select  TV on Demand at the top of the screen and press OK.
- 3 - Press  (down) to open the full screen page.

4 - You can select a specific broadcaster if more than one is available.

5 - Select a program icon and press OK to start watching.

6 - Press  BACK to close.

When you open TV on Demand, the TV may need a few seconds to refresh the page information.

Once a program has started, you can use the  (Play) and  (Pause) keys.

---

# Home Menu

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## 11.1

### About the Home Menu

To enjoy the benefits of your Android TV, connect the TV to the Internet.

Like on your Android smartphone or tablet, the Home menu is the center of your TV. From the Home menu you can start any application, switch to a TV channel, rent a movie, open a website or switch to a connected device. Depending on your TV setup and your country, the Home menu can contain different items.

The Home menu is organized in rows...

#### Recommendations

The first row suggests popular videos, music videos or Internet hits. You can set the Privacy settings in Terms of use to allow suggestions based on your personal viewing habits.

#### Philips Collection

This row contains suggestions from Apps.


#### Apps

The row of Apps contain all Apps that come with the TV and the Apps you download from the Google Play store yourself. In this row you will also find the Apps for TV, like **Watch TV**, **Sources**, **Media** and others. Apps you started recently will appear in front of the row.

#### Games

From here, you can start a game on TV. If you download a game, it will appear in this row.

#### Settings

From here, you can open a selection of settings. However, to find all settings, press  **SETTINGS** and select **All Settings**. You can also open **Help** here.



See also [www.support.google.com/androidtv](http://www.support.google.com/androidtv)

---


## 11.2


### Open the Home Menu

To open the Home menu and open an item...

- 1 - Press  HOME.
- 2 - Select an item and press **OK** to open or start it.
- 3 - Press  **BACK** to close the Home menu without starting anything.

## Search and Voice Search

You can search for videos, music or anything else on the Internet with the  icon in the Home menu. You can speak or type what you are looking for.

For more information, in **Help**, press the color key  **Keywords** and look up **Voice Search** for more information.

---

## 11.4

### Restricted Profile

You can restrict the use of certain apps by switching the TV to a restricted profile. This restricted profile will only allow the use of apps which you have selected. You can only switch out of this profile by entering a PIN code.

With the TV switched to a restricted profile you cannot...

- Find or open apps which are marked as Not allowed
- Access the Google Play Store
- Make purchases through Google Play Movies & TV, or through Google Play Games
- Use third-party apps that don't use the Google sign-in

With the TV switched to a restricted profile you can...

- Watch content already rented or purchased from Google Play Movies & TV
- Play games already purchased and installed from Google Play Games
- Access the following settings: Wi-Fi network, Speech and Accessibility
- Add Bluetooth accessories

The Google Account on TV will stay logged in. Using a restricted profile doesn't change the Google Account.

# TV Menu

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## About TV Menu



If the TV cannot be connected to the Internet, you can use the **TV Menu** as your Home menu.

In the TV Menu, you will find every TV function.

---

## Open TV Menu

To open TV menu and open an item...

- 1 - Press  to open **TV Menu**.
- 2 - Select an item and press **OK** to open or start it.
- 3 - Press  **BACK** to close TV menu without starting anything.



# Netflix

If you have a Netflix membership subscription, you can enjoy Netflix on this TV. Your TV must be connected to the Internet.

To open Netflix, press **NETFLIX** to open the Netflix App. You can open Netflix immediately from a TV in standby.

[www.netflix.com](http://www.netflix.com)



# Sources

## 14.1

### Switch to a device


From the list of Sources, you can switch to any of the connected devices. You can switch to a tuner to watch TV, open the content of a connected USB Flash Drive or see the recordings you made on a connected USB Hard Drive. You can switch to your connected devices to watch their programs, or to a digital receiver, or Blu-ray Disc player.

To switch to a connected device...

- 1 - Press  SOURCES to open the Sources menu.
- 2 - Select one of the items in the source list and press **OK**. The TV will show the program or content of the device.
- 3 - Press  SOURCES again to close the menu.

#### One Touch Play

With the TV on standby, you can switch on a disc player with your TV remote control.




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

## 14.2

### Options for TV Input

Some TV input devices offer specific settings.

To set the options for a specific TV input...

- 1 - Press  SOURCES.
- 2 - Select the TV input from the list and press **OK**.
- 3 - Press  OPTIONS. You can set the options for the selected TV input here.
- 4 - Press  OPTIONS again to close the Options menu.

Possible options...

#### Controls

With this option you can operate the connected device with the TV remote control. The device must be connected with an HDMI cable and both the TV and the device must have HDMI CEC switched on.

#### Device Info


Open this option to view information about the connected device.

### Device Name and Type





When you connect a new device to the TV and the TV detects the device, you can assign it an icon that fits the device type. If you connect a device with an HDMI cable and HDMI CEC, the TV detects the device type automatically and the device gets an appropriate icon.

The device type determines picture and sound styles, resolution values, specific settings and the position within the Sources menu. You don't have to worry about the ideal settings.

#### Rename or Change Type

You can always change the name or change the type of a connected device. Look for the  icon to the right of the device name in the Sources menu. Some TV input sources do not allow a name change.




To change the device type...

- 1 - Select the device in the Sources menu.
- 2 - Press  (right) to select the  icon and press **OK**.
- 3 - Press  **BACK** to hide the on-screen keyboard.
- 4 - Press  (down) to find all available device types. Select the type you want and press **OK**.

5 - If you want to reset the type of the device to the original connection type, select **Reset** and press **OK**.

6 - Select **Close** and press **OK** to close the menu.

To change the device name...

- 1 - Select the device in the Sources menu.
- 2 - Press  (right) to select the  icon and press **OK**.
- 3 - Press  **BACK** to hide the on-screen keyboard.
- 4 - Use the keyboard on the back of the remote control to delete the current name and enter a new one.
- 5 - If you want to reset the name of the device to the original connection name, select **Reset** and press **OK**.
- 6 - Select **Close** and press **OK** to close the menu.

## 14.4

### Game or Computer


The device type determines picture and sound styles, resolution values and other specifics. You don't have to worry about the ideal settings.

For some devices the device type is unclear. A game console can have a built-in Blu-ray Disc player, so the type is set to Player because it is used as a disc player most of the time. For this kind of device, you can temporarily switch to the ideal settings for

gaming. Or alternatively, switch to the ideal settings for a connected computer.

You can only use the setting **Game** or **Computer** when you switch to a connected device in the Sources menu. The Game or Computer setting is stored for the selected device.

To switch to the ideal settings for gaming or computer manually...

- 1 - Press  **SETTINGS**, select **All Settings** and press **OK**.
- 2 - Select **Picture > Advanced** and press **OK**.
- 3 - Select **Game**, **Computer** or **Off**.
- 4 - Press **←** (left) to go back one step or press **←** **BACK** to close the menu.

Remember to set this setting back to **Off** when you stop playing the game.



---

14.5

## Rescan Connections

You can rescan all TV connections to update the Sources menu with recently connected devices.

To rescan the connections...

- 1 - Press  **SOURCES** to open the Sources menu.
- 2 - Press **▲** (up) to select the  icon at the top right of the Sources menu.
- 3 - Press **OK** to start scanning the connections. Newly connected devices will be added to the Sources menu.

# Apps

## 15.1

### About Apps

You can find all installed apps in the **Apps** section of the Home menu.

Just like apps on your smartphone or tablet, the apps on your TV offer specific functions for an enriched TV experience, such as apps like YouTube, games, video stores, or weather forecasts. You can use the Internet app to surf the Internet.

Apps can come from the **Philips App Gallery** or the **Google Play™ Store**. To get you started, some practical apps are pre-installed on your TV.

To install apps from the Philips App Gallery or the Google Play Store, the TV must be connected to the Internet. You must agree to the Terms of Use to use apps from the App Gallery. You must sign in with a Google Account to use the Google Play apps and Google Play Store.

For more information, in **Help**, press the color key **Keywords** and look up **App Gallery**, **Terms of Use** or **App Gallery**, **Privacy Settings** for more information.

## 15.2

### Google Play

#### Movies and TV

With **Google Play Movies & TV**, you can rent or buy movies and TV shows to watch on TV.

##### What You Need

- your TV must be connected to the Internet
- you must sign in with your Google Account on the TV
- add a credit card to your Google Account to purchase movies and TV shows

To rent or buy a movie or TV show...

- 1 - Press **HOME**.
- 2 - Scroll down and select **Apps** > **Google Play Movies & TV** and press **OK**.
- 3 - Select a movie or TV show and press **OK**.
- 4 - Select the purchase you want and press **OK**. You will be taken through the purchase procedure.
- 5 - Alternatively, press **▶** (right) and select **Add to wishlist** and press **OK**. This video will be added to **My wishlist**.

To watch a rented or purchased movie or TV show...

- 1 - Press **HOME**.

- 2 - Scroll down and select **Apps** > **Google Play Movies & TV** and press **OK**.

- 3 - Select **My library** and select **My Movies** or **My TV Shows** and press **OK**.

- 4 - Select what you want to watch and press **OK**. You can use the **(Stop)**, **(Pause)**, **(Rewind)** or **(Forward)** keys on the remote control.

- 5 - To stop the **Movies & TV** app, press **BACK** repeatedly or press **EXIT**.

Some Google Play products and features aren't available in all countries.

Find more information on [support.google.com/androidtv](http://support.google.com/androidtv)

### Music

With **Google Play Music**, you can play your favorite music on TV.

With **Google Play Music** you can buy new music on your computer or mobile device. Or, on your TV, you can sign up for **All Access**, the **Google Play Music** subscription. Alternatively, you can play the music you already own that is stored on your computer.

##### What You Need

- your TV must be connected to the Internet
- you must sign in with your Google Account on the TV
- add a credit card to your Google Account to add a music subscription

To start **Google Play Music**...

- 1 - Press **HOME**.
- 2 - Scroll down and select **Apps** > **Google Play Music** and press **OK**.
- 3 - Select the music you want and press **OK**.
- 4 - To stop the **Music** app, press **BACK** repeatedly or press **EXIT**.

Some Google Play products and features aren't available in all countries.

Find more information on [support.google.com/androidtv](http://support.google.com/androidtv)

### Games

With **Google Play Games**, you can play games on TV, both online and offline.

You can see what your friends are playing currently or you can join the game and compete. You can track your achievements or start wherever you left off.





##### What You Need


- your TV must be connected to the Internet
- you must sign in with your Google Account on the TV

- add a credit card to your Google Account to purchase new games

Start the Google Play Games app to select and install new game apps on your TV. Some games are free of charge. A message appears if a particular game needs a gamepad to play the game.

To start or stop a Google Play Game...

- 1 - Press  HOME.
- 2 - Scroll down and select  Apps > Google Play Games and press OK.
- 3 - Select a game to play or select a new game to install and press OK.
- 4 - When done, press  BACK repeatedly or press  EXIT or stop the app with its dedicated exit/stop button.

The games you install will also appear in the row of  Games in the Home menu

Some Google Play products and features aren't available in all countries.

Find more information on [support.google.com/androidtv](https://support.google.com/androidtv)

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## Google Play Store

From the Google Play Store you can download and install new apps. Some apps are free of charge.

### What You Need

- your TV must be connected to the Internet
- you must sign in with your Google Account on the TV
- add a credit card to your Google Account to purchase apps





To install a new app...

- 1 - Press  HOME.
- 2 - Scroll down and select  Apps > Google Play Store and press OK.
- 3 - Select the app you want to install and press OK.
- 4 - To close the Google Play Store, press  BACK repeatedly or press  EXIT.

### Content Filtering (Parental controls)

In the Google Play Store, you can hide apps according to users'/buyers' maturity. You need to enter a PIN code to select or change the level of maturity.

To set the parental control...

- 1 - Press  HOME.
- 2 - Scroll down and select  Apps > Google Play Store and press OK.
- 3 - Select Settings > Content Filtering and press OK.
- 4 - Select the level of maturity you want.
- 5 - When prompted, enter the PIN code.
- 6 - To close the Google Play Store, press  BACK repeatedly or press  EXIT.

Some Google Play products and features aren't available in all countries.

Find more information on [support.google.com/androidtv](https://support.google.com/androidtv)

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15.3




## App Gallery

Connect the TV to the Internet to enjoy apps selected by Philips. These apps are made specially for TV. The Philips App Gallery offers a wide variety of apps. In some countries, you can install apps of a local video store or apps from TV broadcasters in your country. The latter can offer Catch-Up TV services. Downloading and installing App Gallery apps is free of charge.

The Philips App Gallery collection of apps may differ by country or region.

Some App Gallery apps are pre-installed on your TV. To install other apps from the App Gallery, you will be asked to agree to the Terms of Use. You can set the Privacy Settings according to your preferences.

To install an app from the App Gallery...

- 1 - Press  HOME.
- 2 - Scroll down and select  Philips Collection >  App Gallery and press OK.
- 3 - Select an app icon and press OK.
- 4 - Select Install and press OK.


---

15.4

## Start or Stop an App

You can start an app from the Home menu.

To start an app...

- 1 - Press  HOME.
- 2 - Scroll down to  Apps and select the app you want and press OK.
- 3 - To stop an app, press  BACK or press  EXIT or stop the app with its dedicated exit/stop button.

---

15.5

## Lock Apps

### About App Locks

You can lock apps that are unsuitable for children. You can lock 18+ rated apps from the App Gallery or set up a restricted profile in the Home menu.

18+

The 18+ app lock will ask for a PIN code when you try

to start an 18+ rated app. This lock is only valid for 18+ rated apps from the Philips App Gallery.

## Restricted profile

You can set up a restricted profile for the Home menu where only the apps you allow are available. You need to enter a PIN code to set up and switch on the restricted profile.

## Google Play Store - Maturity

In the Google Play Store, you can hide apps according to users'/buyers' maturity. You need to enter a PIN code to select or change the level of maturity. The level of maturity will determine which apps are available for installation.

For more information, in **Help**, press the color key **— Keywords** and look up **Google Play Store** for more information.

---

## Lock 18+ rated apps

You can lock 18+ rated apps from the Philips App Gallery. This setting controls the 18+ setting in the Philips App Gallery Privacy Settings.

To lock 18+ rated apps...

- 1 - Press **⚙️**, select **All Settings** and press **OK**.
- 2 - Select **Child Lock**, select **App Lock** and press **OK**.
- 3 - Select **On** and press **OK**.
- 4 - Press **⬅️** (left) repeatedly if necessary, to close the menu.

For more information, in **Help**, press the color key **— Keywords** and look up **Child Lock, Set PIN code** for more information.

---

## Restricted Profile

### About Restricted Profile

You can restrict the use of certain apps by switching the TV to a restricted profile. The Home menu will only show the apps you allowed. You need a PIN code to switch out of the restricted profile.

With the TV switched to a restricted profile you cannot...

- Find or open apps which are marked as Not allowed
- Access the Google Play Store
- Make purchases through Google Play Movies & TV, or through Google Play Games
- Use third-party apps that don't use the Google sign-in

With the TV switched to a restricted profile you can...

- Watch content already rented or purchased from Google Play Movies & TV

- Play games already purchased and installed from Google Play Games
- Access the following settings: Wi-Fi network, Speech and Accessibility
- Add Bluetooth accessories

The Google Account on TV will stay logged in. Using a restricted profile doesn't change the Google Account.

---

## Set Up

To set up the restricted profile...

- 1 - Press **⚙️**, select **All Settings** and press **OK**.
- 2 - Select **Android Settings** and press **OK**.
- 3 - Press **▼** (down) and select **Personal > Security & Restrictions** and press **OK**.
- 4 - Select **Restricted Profile** and press **OK**.
- 5 - Select **Settings** and press **OK**.
- 6 - Enter the PIN code with the remote control.
- 7 - Select **Allowed apps** and press **OK**.
- 8 - In the list of available apps, select an app and press **OK** to allow or not allow this app.
- 9 - Press **⬅️ BACK** to go back one step or press **TV EXIT** to close the menu.

Now you can enter the restricted profile.

With the PIN code, you can always change the PIN code or edit the list of allowed or not allowed apps.

---

## Enter

To enter (switch to) the restricted profile...

- 1 - Press **⚙️**, select **All Settings** and press **OK**.
- 2 - Select **Android Settings** and press **OK**.
- 3 - Press **▼** (down) and select **Personal > Security & Restrictions** and press **OK**.
- 4 - Select **Enter restricted profile** and press **OK**.
- 5 - Enter the PIN code with the remote control.
- 6 - Press **⬅️ BACK** to go back one step or press **TV EXIT** to close the menu.

You can tell when you have entered a restricted profile if an icon appears in the Home screen. Scroll down to **⚙️ Settings** and scroll to the far right.

---

## Exit

To exit the restricted profile...



- 1 - Press **🏠 HOME**, scroll down to **⚙️ Settings** and scroll far right.
- 2 - Select **Restricted Profile** and press **OK**.
- 3 - Select **Exit restricted profile** and press **OK**.
- 4 - Enter the PIN code. The TV will exit the restricted profile.

---

## Manage Apps

If you stop an app and return to the Home menu, the app is not really stopped. The app is still running in the background to be readily available when you start it again. To run fluidly, most apps need to save some data in the cache memory of the TV. It is good to stop an app completely or clear the cache data of a particular app to optimize the overall performance of apps and to keep memory usage low on your Android TV. Also, it is best to uninstall apps that you do not use anymore.

To open the list of downloaded and system apps...



- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Android Settings** and press **OK**.
- 3 - Select **Device > Apps** and press **OK**.
- 4 - Select an app and press **OK**. If the app is still running, you can force it to stop or you can clear the cache data. You can uninstall apps you downloaded.
- 5 - Press **← BACK** to go back one step or press ** EXIT** to close the menu.

If you are using a USB Hard Drive to store apps, you can move the app from the USB Hard Drive to the TV memory or vice versa.

## Storage

You can see how much storage space—internal TV memory—you are using for your apps, videos, music, etc. You can see how much free space you still have available for installing new apps. Check your storage if apps start to run slow or in case of app trouble.

To see how much storage you are using...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Android Settings** and press **OK**.
- 3 - Select **Device > Storage & Reset** and press **OK**.
- 4 - View the usage of the TV memory.
- 5 - Press **← BACK** to go back one step or press ** EXIT** to close the menu.

### USB Hard Drive

If you connect a USB Hard Drive, you can use the drive to extend the TV memory to store more apps. You can allow the USB Hard Drive to be used as an additional TV memory during the formatting process. The TV will try to store new apps on the USB Hard Drive first. Some apps are not allowed to be stored on a USB Hard Drive.

---

# Games

---

## 16.1

## What You Need

On this TV, you can play games...

- from the App Gallery in the Home menu
- from the Google Play Store in the Home menu
- from a connected Game Console

Games from the App Gallery or the Google Play Store must be downloaded and installed on the TV before you can play them. Some games need a gamepad to play.

To install game apps from the Philips App Gallery or the Google Play Store, the TV must be connected to the Internet. You must agree to the Terms of Use to use apps from the App Gallery. You must sign in with a Google Account to use the Google Play apps and Google Play Store.

For more information, in **Help**, press the color key **— Keywords** and look up **App Gallery**, **Terms of Use** or **App Gallery**, **Privacy Settings** for more information.

For more information on connecting to the Internet, in **Help**, press the color key **— Keywords** and look up **Network Installation**.

## 16.2

## Gamepads

To play games from the Internet on this TV, you can connect a selected range of wireless gamepads. The TV can support 2 connected gamepads at a time. When you connect the gamepad, you can use it immediately.

For more information on connecting a gamepad, in **Help**, press the color key **— Keywords** and look up **Gamepad**, **connect**.





## 16.3

## Play a Game

---

### From the Home menu

To start a game from the Home menu...




- 1 - Press  HOME.
- 2 - Scroll down to  Games, select a game, and press OK.
- 3 - Press  BACK repeatedly or press  EXIT or stop the app with its dedicated

exit/stop button.

---

## From a Game Console

To start a game from a Game Console...

- 1 - Switch on the Game Console.
- 2 - Press  SOURCES and select a game console or the name of the connection.
- 3 - Start the game.
- 4 - Press  BACK repeatedly or press  EXIT or stop the app with its dedicated exit/stop button.

For more information on connecting a Game Console, in **Help**, press the color key **— Keywords** and look up **Game Console**, **connect**.



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# Internet






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## Start Internet

You can browse the Internet on your TV. You can view any Internet website but most of them are not prepared for a TV screen.

- Some plug-ins (e.g., to view pages or videos) are not available on your TV.
- You cannot send or download files.
- Internet pages are shown one page at a time and full screen.



To start the Internet browser...

- 1 - Press  HOME.
- 2 - Scroll down and select **Apps** >  **Internet** and press **OK**.
- 3 - Enter an Internet address and select , press **OK**.
- 4 - To close the Internet, press  HOME or  EXIT.

## Internet Options

Some extras are available for the Internet.

To open the extras...

- 1 - With the website open, press  **OPTIONS**.
- 2 - Select one of the items and press **OK**.
- 3 - Press  (left) repeatedly if necessary, to close the menu.

### Enter Address

To enter a new Internet address.

### Show Favorites

To view the pages you marked as favorites.

### Reload Page

To load the Internet page again.

### Zoom Page

Use the slider bar to set the zoom percentage.

### Security Info

To view the security level of the current page.

### Mark as Favorite

To mark the current page as a favorite.

### Subtitles

To select subtitles if available.

# Videos, Photos and Music






## 18.1

### From a USB Connection

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

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

If the list of files does not appear automatically...

- 1 - Press  SOURCES, select  USB and press OK.
- 2 - Select  USB Devices and press  (right) to select the USB device you want.
- 3 - You can browse your files in the folder structure you have organized on the drive.
- 4 - To stop playing videos, photos and music, press  EXIT.

#### Warning

If you try to pause or record a program 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.

## 18.2

### From a Computer or NAS





You can view your photos or play your music and videos from a computer or a NAS (Network Attached Storage) in your home network.


The TV and computer or NAS must be in the same home network. On your computer or NAS, you need to install Media Server Software. Your Media Server must be set to share your files with the TV. The TV shows your files and folders as they are organized by the Media Server or as they are structured on your computer or NAS.

The TV does not support subtitles on video streams from a computer or NAS.

If the Media Server supports searching for files, a search field is available.

To browse and play the files on your computer...


- 1 - Press  SOURCES, select  Network and press OK.
- 2 - Select  SimplyShare Device and press  (right) to select the device you need.






- 3 - You can browse and play your files.
- 4 - To stop playing videos, photos and music, press  EXIT.

## 18.3

### From a Cloud Storage Service

You can view photos or play music and videos you uploaded to a storage service in the online cloud.\*

With the  Cloud Explorer app you can connect to Cloud Hosting Services. Use your login and password to connect.

- 1 - Press  HOME.
- 2 - Scroll down and select  Apps >  Cloud Explorer and press OK.
- 3 - Select the hosting service you use.
- 4 - Connect and sign in to the hosting service with your login and password.
- 5 - Select the photo or video you want to view and press OK.
- 6 - Press  (left) to go back one step or press  BACK to close the menu.

\* A storage service like Dropbox™.

## 18.4






### Play your Videos

#### Play Videos

How you open the list of your media files on the TV depends on the type of device where the files are stored. See the chapters above.

To play a video on the TV...

Select  Videos, select the file name and press OK.

- To pause the video, press OK. Press OK again to continue.
- To rewind or fast forward, press  or . Press the keys several times to speed up to 2x, 4x, 8x, 16x, 32x.
- To jump to the next video in a folder, press OK to pause, then select  on screen and press OK.
- To stop the video playback, press  (Stop).
- To go back to the folder, press  BACK.

#### Progress Bar

To show the progress bar when a video is playing (playhead position, duration, title, date, etc.),

press  INFO.

Press again to hide the info.

---

## Video Options

During the video playback, press **+** **OPTIONS** to...

- **Mark as Favorite** – Set the selected video as favorite.
- **Play All** – Play all video files in this folder.
- **Play One** – Play this video only.
  
- **Subtitles** – If available, you can switch subtitles **On**, **Off** or **On During Mute**.
- **Audio Language** – If available, select an Audio language.
- **Shuffle** – Play your files in a random order.
- **Repeat** – Play all videos in this folder once or continuously.

---

18.5

## View your Photos

### View Photos

How you open the list of your media files on the TV depends on the type of device where the files are stored. See the chapters above.

To view all photos on TV...

Select **Photos**, and select **All** and press **OK**.

To view a photo on TV...

Select **Photos**, and select the file name and press **OK**.

To start a slide show on TV...

If there are several photos in a folder, you can start a slide show.

To start a slide show...

- 1 - Select the folder with photos.
  - 2 - Press the color key **Slide Show**.
- To jump to the next or previous photo, press **▶** (right - next) or **◀** (left - previous).
  - To pause the slide show, press **OK**. To start again, press **OK** again.
  - To stop the slide show, press **OK** and press **← BACK**.

Info

To view info about a photo (size, creation date, file path, etc.), select a photo and press **INFO**. Press again to hide the info.

---

## Slide Show with Music

You can watch a slideshow of your photos and listen to your music at the same time. You must start the music before you start the photo slideshow.

To play music with the slide show...

- 1 - Select a song or a folder with songs and press **OK**.
- 2 - Press **INFO** to hide file info and progress bar.
- 3 - Press **← BACK**.
- 4 - Now use the navigation arrows to select the folder with photos.
- 5 - Select the folder with photos and press **Slide Show**.
- 6 - To stop the slide show, press **← BACK**.

---

## Photo Options

With a photo on screen, press **+** **OPTIONS** to...

- **Mark as Favorite** – Set the selected photo as favorite.
- **Slide Show** – Show photos one after the other.
  
- **Rotate** – Rotate the photo to landscape or portrait format.
- **Shuffle** – Play your files in a random order.
- **Repeat** – Play the slide show once or continuously.
  
- **Stop Music** – Stop the music playing in the background.
- **Slide Show Speed** – Set the speed of the slide show.
- **Slide Show Transition** – Set the style of the photo transitions.

---

18.6

## Play your Music

### Play Music

How you open the list of your media files on the TV depends on the type of device where the files are stored. See the chapters above.

To play a song on TV...

Select **Music**, and select the file name and press **OK**

If there are several songs in a folder, you can listen to them one after the other.

- To pause a song, press **OK**. Press **OK** again to continue.
- To rewind or fast forward, press **⏮** or **⏭**. Press the keys several times to speed up to 2x, 4x, 8x, 16x, 32x.
- To jump to the next song in a folder, press **OK** to

- pause and select ► on screen and press OK.
- To go back to the folder, press ← BACK, the music will keep on playing.
  - To stop the music playback, press ■ (Stop).

### Progress Bar

To show the progress bar when a song is playing (playhead position, duration, title, date, etc.), press ⓘ INFO .  
Press again to hide the info.

---

## Music Options

Options for playing music...

- **Mark as Favorite** – Set the selected photo as favorite.
- **Play All** – Play all songs in this folder.
- **Play One** – Play this song only.
  
- **Shuffle** – Play your files in a random order.
  
- **Repeat** – Play all songs in this folder once or continuously.

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# Smartphones and Tablets

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## Philips TV Remote App


The new Philips TV Remote App on your smartphone or tablet is your new TV buddy.

With the TV Remote App, you master your media around you. Send photos, music or videos to your big TV screen or watch any of your TV channels live on your tablet or phone. Look up what you want to watch on the TV Guide and watch it on your phone or TV. With the TV Remote App you can use your phone as a remote control.

Download the Philips TV Remote App from your favorite app store today.

The Philips TV Remote App is available for iOS and Android and is free of charge.

### Wi-Fi Smart Screen

To watch digital TV channels on your smartphone or tablet with the Philips TV Remote App, you must switch on Wi-Fi Smart Screen. For more information, in **Help**, press the color key  **Keywords** and look up **Wi-Fi Smart Screen**.

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## Google Cast

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### What You Need

If an app on your mobile device has Google Cast, you can cast your app on this TV. On the mobile app, look for the Google Cast icon. You can use your mobile device to control what's on TV. Google Cast works on Android and iOS.

Your mobile device must be connected to the same Wi-Fi home network as your TV.

### Apps with Google Cast

New Google Cast apps are available every day. You can already try it with YouTube, Chrome, Netflix, Photowall, or Big Web Quiz for Chromecast. See also [google.com/cast](http://google.com/cast)

Some Google Play products and features aren't available in all countries.

Find more information on [support.google.com/androidtv](http://support.google.com/androidtv)

---

## Cast to Your TV

To cast an app to the TV screen...

- 1 - On your smartphone or tablet, open an app that supports Google Cast.
- 2 - Tap the Google Cast icon.
- 3 - Select the TV you would like to cast to.
- 4 - Press play on your smartphone or tablet. What you selected should start playing on TV.

---

## AirPlay

To add AirPlay functionality to your Android TV, you can download and install one of the several Android apps that do just that. You can find several of these apps in the Google Play Store.

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# Multi View

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## Text and TV

You can watch a TV channel in the small screen of Multi View when you're watching Text.

To watch a TV channel while watching Text...

- 1 - Press  to open TV Menu.
- 2 - Select **Multi View**, and press **OK**.
- 3 - Select **Multi View: On** on screen. The channel you were watching appears in the small screen.




To hide the small screen, select **Multi View: Off** on screen.

---

## App Gallery and TV

You can watch a TV channel in the small screen of Multi View when you're watching a Nettv app in App Gallery.

To watch a TV channel while watching a Nettv app in App Gallery\*...

- 1 - Press  to open TV Menu.
- 2 - Select **Multi View**, and press **OK**.
- 3 - Select **Multi View: On** on screen. The channel you were watching appears in the small screen.
- 4 - Press  + or  - to switch channels in the small screen

To hide the small screen, select **Multi View: Off** on screen.


\* Not every Nettv app can support Multi View with a TV channel, if the app cannot support Multi View, then TV will show a message: **Multi View is not supported**.

---

## HDMI and TV

You can watch a TV channel in the small screen of Multi View when you're watching video from a connected HDMI device.

To watch a TV channel while watching video from connected HDMI device\*...

- 1 - Press  to open TV Menu.
- 2 - Select **Multi View**, and press **OK**.
- 3 - Select **Multi View: On** on screen. The channel you were watching appears in the small screen.

To hide the small screen, select **Multi View: Off** on

screen.

\* You can only watch TV channel image in Multi view mode, the audio of TV channel will be mute.

# Settings



## 21.1

### Picture

#### Picture Style

##### Select a Style

For easy picture adjustment, you can select a preset Picture Style.

- 1 - While watching a TV channel, press .
- 2 - Select **Picture Style**, and select one of the styles in the list.
- 3 - Press  (left) repeatedly if necessary, to close the menu.

The available styles are...

- **Personal** - The picture preferences you set during the first start up.
- **Vivid** - Ideal for daylight viewing
- **Natural** - Natural picture settings
- **Standard** - Most energy conscious setting - Factory setting
- **Movie** - Ideal for watching movies
  
- **Photo** - Ideal for viewing photos

##### Customize a Style




Any picture setting you adjust, like Color or Contrast, is stored in the currently selected **Picture Style**. This allows you to customize each style. Only the **Personal** style can save settings for each connected device in the Sources menu.

##### Restore a Style

With a Picture Style selected, you can adjust any picture setting in **All Settings > Picture...**

The selected style will store the changes you made. We recommend that you adjust the picture settings for the style **Personal** only. The Picture Style - Personal can save its settings for each individual connected device in Sources menu.

To restore the style to its original setting...




- 1 - While watching a TV channel, press .
- 2 - Select **Picture Style**, and select the Picture Style you want to restore.
- 3 - Press the color key  **Restore Style**, and press OK. The style is restored.
- 4 - Press  (left) repeatedly if necessary, to close

the menu.

#### Home or Store

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 , select **All Settings** and press **OK**.
- 2 - Select **General Settings** and press  (right) to enter the menu.
- 3 - Select **Location > Home** and press **OK**.
- 4 - Press  (left) repeatedly if necessary, to close the menu.

### Picture Settings

#### Color

With **Color**, you can adjust the color saturation of the picture.







To adjust the color...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Picture** and press  (right) to enter the menu.
- 3 - Select **Color** and press  (right).
- 4 - Press the arrows  (up) or  (down) to adjust the value.
- 5 - Press  (left) repeatedly if necessary, to close the menu.

#### Contrast

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

To adjust the contrast...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Picture** and press  (right) to enter the menu.
- 3 - Select **Contrast** and press  (right).
- 4 - Press the arrows  (up) or  (down) to adjust the value.
- 5 - Press  (left) 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 , select **All Settings** and press **OK**.
- 2 - Select **Picture** and press  (right) to enter the

menu.

- 3 - Select **Sharpness** and press **➤** (right) .
- 4 - Press the arrows **▲** (up) or **▼** (down) to adjust the value.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

## Advanced Picture Settings

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### Game or Computer

When you connect a device, the TV recognizes its type and gives each device a correct type name. You can change the type name if you wish. If a correct type name for a device is set, the TV automatically switches to the ideal TV settings when you switch to this device in the Sources menu.

If you have a game console with a built-in Blu-ray Disc player, you might have set the type name to Blu-ray Disc. With **Game or Computer** you can switch to the ideal settings for gaming manually. Don't forget to switch the Game or Computer setting off, when you return to watch TV.

To switch the setting manually...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Game or Computer**, and select the device type you want to use. To switch back to TV, select **Off**.
- 4 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

### Color Settings

---

#### Tint

With **Tint**, you can adjust the level of tint in fine detail of the picture.

To adjust the tint...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Color** and press **OK**.
- 4 - Select **Tint**, and press **➤** (right).
- 5 - Press the arrows **▲** (up) or **▼** (down) to adjust the value.
- 6 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

### Color Enhancement

With **Color Enhancement**, you can enhance the color intensity and the details in bright colors.

To adjust the level...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Color > Color Enhancement** and press **OK**.
- 4 - Select **Maximum, Medium, Minimum** or **Off**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

### Color Temperature

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

To select a preset...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Color > Color Temperature** and press **OK**.
- 4 - Select **Normal, Warm** or **Cool**. Or select **Custom** if you want to customize a color temperature yourself.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

### Custom Color Temperature

With **Custom Color Temperature**, you can set a color temperature yourself. To set a custom color temperature, first select **Custom** in the Color Temperature menu. Custom Color Temperature is a setting intended for expert users.

To set a custom color temperature...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Color > Custom Color Temperature** and press **OK**.
- 4 - Press the arrows **▲** (up) or **▼** (down) to adjust the value.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.



---


## Contrast Settings

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### Contrast Modes

With **Contrast Mode**, 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 , select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Contrast > Contrast Mode** and press **OK**.
- 4 - Select **Standard, Best power, Best picture, or Off**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

### Dynamic Contrast

With **Dynamic Contrast**, you can set the level at which the TV automatically enhances the details in the dark, middle and light areas of the picture.

To adjust the level...


- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Contrast > Dynamic Contrast** and press **OK**.
- 4 - Select **Maximum, Medium, Minimum or Off**.
- 5 - Press **◀** (left) 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 , select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Contrast > Brightness**, and press **OK**.
- 4 - Press the arrows **▲** (up) or **▼** (down) to adjust the value.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

## Light Sensor

The **Light Sensor** adjusts the picture settings automatically to the lighting conditions of the room. You can switch **Light Sensor** on or off.

To switch on or off...


- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Contrast > Light Sensor**, and press **OK**.
- 4 - Select **On or Off**.
- 5 - Press **◀** (left) 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 , select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Contrast > Gamma**, and press **OK**.
- 4 - Press the arrows **▲** (up) or **▼** (down) to adjust the value.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.


---

## Sharpness Settings

### Ultra Resolution

With **Ultra Resolution**, you switch on a superior sharpness in line edges and contours.

To switch on or off...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Sharpness > Ultra Resolution**, and press **OK**.
- 4 - Select **On or Off**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

### Noise Reduction

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

To adjust the noise reduction...

- 1 - Press , select **All Settings** and press **OK**.

- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Sharpness > Noise Reduction**, and press **➤** (right) to enter the menu.
- 4 - Select **Maximum, Medium, Minimum** or **Off**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

## MPEG Artifact Reduction

With **MPEG Artifact Reduction**, you can smooth the digital transitions in the picture. MPEG artifacts are mostly visible as small blocks or jagged edges in images.

To reduce the MPEG artifacts...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Sharpness > MPEG Artifact Reduction**, and press **➤** (right) to enter the menu.
- 4 - Select **Maximum, Medium, Minimum** or **Off**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

## Motion Settings

### Natural Motion

With **Natural Motion**, you can reduce the motion judder visible in movies on TV. HD Natural Motion makes any movement smooth and fluent.

To adjust the motion judder...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Motion > Natural Motion**, and press **OK**.
- 4 - Select **Maximum, Medium, Minimum** or **Off**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

## Picture Format

### Basic

If the picture is not filling the whole screen, if black bars are showing on the top or bottom or at both sides, you can adjust the picture to fill the screen completely.

To select one of the basic settings to fill the screen...

- 1 - While watching a TV channel, press **⚙**.
- 2 - Select **Picture Format > Fill Screen** or **Fit to Screen**, and press **OK**.

- 3 - Press **◀** (left) repeatedly if necessary, to close the menu.

- **Fill Screen** – automatically enlarges the picture to fill the screen. Picture distortion is minimal, subtitles remain visible. Not suitable for PC input. Some extreme picture formats can still show black bars.
- **Fit to Screen** – automatically zooms in the picture to fill the screen without distortion. Black bars may be visible. Not suitable for PC input.

---

## Advanced

If the two basic settings are inadequate to format the picture you want, you can use the advanced settings. With the advanced settings you manually format the picture on your screen.

You can zoom, stretch and shift the picture until it shows what you need – e.g. missing subtitles or scrolling text banners. If you format the picture for a specific Source – like a connected game console – you can return to this setting the next time you use the game console. The TV stores your last settings for each connection.

To format the picture manually...

- 1 - While watching a TV channel, press **⚙**.
- 2 - Select **Advanced** and press **OK**.
- 3 - Use **Shift, Zoom, Stretch** or **Original** to adjust the picture. Select **Undo** to return to the setting the picture had when you opened **Picture Format**.
  - **Shift** – Select on the arrows to shift the picture. You can only shift the picture when it is zoomed in.
  - **Zoom** – Select on the arrows to zoom in.
  - **Stretch** – Select on the arrows to stretch the picture vertically or horizontally.
- **Undo** – Select to return to the picture format you started with.
- **Original** – Shows the original format of the incoming picture. This is a 1:1 pixel on pixel format. Expert mode for HD and PC input.

---

## Quick Picture Setting

During the first installation, you did some picture settings in a few easy steps. You can redo these steps with **Quick picture setting**. To do these steps, make sure the TV can tune to a TV channel or can show a program from a connected device.

To set the picture in a few easy steps...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Picture** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Quick Picture Setting**, and press **OK**.
- 4 - Select **Start**.

5 - Select the picture setting you prefer and go to the next setting.

6 - Finally, select **Finish**.

7 - Press **◀** (left) repeatedly if necessary, to close the menu.

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21.2

## Sound

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### Sound Style

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#### Select a Style

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

1 - While watching a TV channel, press **⚙**.

2 - Select **Sound** and press **▶** (right) to enter the menu.

3 - Select **Sound Style**, and select one of the styles in the list.

4 - Press **◀** (left) repeatedly if necessary, to close the menu.

The available styles are...

- **Personal** - The sound preferences you set during the first start up.
- **Original** - Most neutral sound setting
- **Movie** - Ideal for watching movies
- **Music** - Ideal for listening to music
- **Game** - Ideal for gaming
  
- **News** - Ideal for speech

---

#### Restore a Style

With a Sound Style selected, you can adjust any sound setting in **Setup > Sound...**

The selected style will store the changes you made. We recommend that you adjust the sound settings for the style **Personal** only. The Sound Style - Personal can save settings for each individual connected device in the Sources menu.

To restore the style to its original setting...

1 - While watching a TV channel, press **⚙**.

2 - Select **Sound** and press **▶** (right) to enter the menu.

3 - Select **Sound Style**, and select the Sound Style you want to restore.

4 - Press the color key **■ Restore Style**. The style is restored

5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

## Sound Settings

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### Bass

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

To adjust the level...

1 - Press **⚙**, select **All Settings** and press **OK**.

2 - Select **Sound** and press **▶** (right) to enter the menu.

3 - Select **Bass** and press **▶** (right).

4 - Press the arrows **▲** (up) or **▼** (down) to adjust the value.

5 - Press **◀** (left) 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 **⚙**, select **All Settings** and press **OK**.

2 - Select **Sound** and press **▶** (right) to enter the menu.

3 - Select **Treble** and press **▶** (right).

4 - Press the arrows **▲** (up) or **▼** (down) to adjust the value.

5 - Press **◀** (left) 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 **⚙**, select **All Settings** and press **OK**.

2 - Select **Sound** and press **▶** (right) to enter the menu.

3 - Select **Surround Mode** and press **▶** (right) to enter the menu.

4 - Select **Stereo** or **Incredible Surround**.

5 - Press **◀** (left) repeatedly if necessary, to close the menu.

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## Advanced Sound Settings

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### Auto Volume Leveling

With **Auto Volume Leveling**, 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 , select **All Settings** and press **OK**.
- 2 - Select **Sound** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced** and press **➤** (right) to enter the menu.
- 4 - Select **Auto Volume Leveling** and press **➤** (right) to enter the menu.
- 5 - Select **On** or **Off**.
- 6 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

### Clear Sound


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

To switch on or off...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Sound** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Clear Sound** and press **OK**.
- 4 - Select **On** or **Off**, then press **OK**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.


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### Audio Out Format

For more information, in **Help**, press the color key  **Keywords** and look up **Audio Out Format**.

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### Audio Out Leveling


For more information, in **Help**, press the color key  **Keywords** and look up **Audio Out Leveling**.


---

### Audio Out Delay

If you set an Audio sync delay on your Home Theater System, to synchronize the sound with the picture, you must switch off **Audio Out Delay** on the TV.

To switch off Audio Out Delay...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Sound** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Audio Out Delay** and press **OK**.
- 4 - Select **Off**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.


For more information, in **Help**, press the color key  **Keywords** and look up **Audio Out Delay**.


---

### Audio Out Offset

If you cannot set a delay on the Home Theater System, you can set a delay on the TV with **Audio Out Offset**.

To synchronize the sound on the TV...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Sound** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced > Audio Out Offset** and press **OK**.
- 4 - Use the slider bar to set the sound offset and press **OK**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.


For more information, in **Help**, press the color key  **Keywords** and look up **Audio Out Offset**.

---

### Headphone volume

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

To adjust the volume...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Sound** and press **➤** (right) to enter the menu.
- 3 - Select **Headphone Volume** and press **OK**.
- 4 - Press the arrows **▲** (up) or **▼** (down) to adjust the value.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

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### Speakers

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#### TV Speakers

You can send the TV sound to a connected audio device - a Home Theater 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 **TV Speakers Off**, you permanently switch off the TV speakers.
- If you select **TV Speakers On**, 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 , select **All Settings** and press **OK**.
- 2 - Select **Sound** and press **➤** (right) to enter the menu.
- 3 - Select **Advanced** and press **➤** (right) to enter the menu.
- 4 - Select **TV Speakers** and press **➤** (right) to enter the menu.
- 5 - Select **TV Speakers On**, **TV Speakers Off**, **EasyLink**, or **EasyLink Autostart**.
- 6 - Press **◀** (left) repeatedly if necessary, to close the menu.

To switch to speakers directly...

- 1 - While watching TV, press .
- 2 - Select **Speakers** and select **TV** or **Audio System**.
- 3 - Press **◀** (left) repeatedly if necessary, to close the menu.

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## Wireless Speakers

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### What You Need

You can connect a wireless speaker – a subwoofer or a sound bar – to this TV.


A range of selected Philips wireless speaker products can connect and play the TV sound. Consult the Philips website for suited wireless audio products for this TV - [www.philips.com/tv](http://www.philips.com/tv)

To play the TV sound on a wireless speaker, you must pair the wireless speaker with the TV. You can pair up to 10 wireless speakers, but you can only play the sound on one wireless audio speaker at a time. If you connect a subwoofer, the sound is played on the TV and the subwoofer. If you connect a sound bar, the sound is played on the sound bar only.

---

### Select a Speaker


To connect a wireless speaker...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Sound** and press **➤** (right) to enter the menu.
- 3 - Select **Wireless Speakers > Connect a Speaker** and press **OK**.
- 4 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

### Remove a Speaker

To remove a wireless speaker...


- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Sound** and press **➤** (right) to enter the menu.

- 3 - Select **Wireless Speakers > Remove Speaker** and press **OK**.
- 4 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

### Subwoofer Volume

To adjust the volume of wireless speaker...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Sound** and press **➤** (right) to enter the menu.
- 3 - Select **Wireless Speakers > Subwoofer Volume** and press **OK**.
- 4 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

## Problems

### Lost connection

- Position the wireless speaker within 15 feet of the TV.
- Locations with high wireless activity—such as apartment buildings with many wireless routers—can make it difficult to connect wirelessly. Keep the router and wireless speakers as close to the TV as possible.

### Audio and video mismatch

- Some wireless speaker systems might have audio and video sync problems. We recommend using Philips wireless audio products.


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21.3

## Eco Settings

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### Energy Saving

**Eco Settings**  bundles the settings that help the environment.

#### Energy Saving

If you select **Energy Saving**, the TV switches to **Picture Style - Standard** automatically, the most ideal energy conscious setting for the picture.

To set the TV in Energy Saving...


- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Eco Settings** and press **➤** (right) to enter the menu.
- 3 - Select **Energy Saving**, the **Picture Style** is set to **Standard** automatically.
- 4 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

## Screen Off

If you only listen to music, you can switch off the TV screen to save energy.

To only switch off the TV screen...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Eco Settings** and press **➤** (right) to enter the menu.
- 3 - Select **Screen Off**.
- 4 - Press **◀** (left) repeatedly if necessary, to close the menu.



To switch the screen back on, press any key on the remote control.

---

## 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.

To activate the light sensor...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Eco Settings** and press **➤** (right) to enter the menu.
- 3 - Select **Light Sensor**. The icon  is shown in front of **Light Sensor** when it is active.
- 4 - Press **◀** (left) repeatedly if necessary, to close the menu.


---

## Switch Off Timer

If the TV receives a TV signal but you don't press a key on the remote control during a 4 hour period, the TV switches off automatically to save energy. Also, if the TV does not receive a TV signal or remote control command for 10 minutes, it switches off automatically.

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 this automatic switch off.

To deactivate the Switch Off Timer ...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Eco Settings** and press **➤** (right) to enter the menu.
- 3 - Select **Switch Off Timer**. Select inside the slider bar to adjust the value. The value **0** (Off) deactivates the automatic switch off.
- 4 - Press **◀** (left) repeatedly if necessary, to close the menu.

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21.4


## General Settings

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### EasyLink

#### EasyLink


To switch off EasyLink completely...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **General Settings** and press **➤** (right) to enter the menu.
- 3 - Select **EasyLink**, press **➤** (right) and select **EasyLink** one step further.
- 4 - Select **Off**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

### EasyLink Remote Control

To switch off EasyLink remote control...


- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **General Settings** and press **➤** (right) to enter the menu.
- 3 - Select **EasyLink > Easylink Remote Control**, and press **OK**.
- 4 - Select **Off**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

## Android Settings

You can set or view several Android specific settings or information. You can find the list of apps installed on your TV and the storage space they need. You can set the language you would like to use with Voice Search. You can configure the on-screen keyboard or allow apps to use your location. Explore the different Android settings. You can go to [www.support.google.com/androidtv](http://www.support.google.com/androidtv) for more information on these settings.

To open these settings...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Android Settings**, and press **OK**.
- 3 - Explore the different Android settings.
- 4 - Press **◀** **BACK** if necessary, to close the menu.

---

## USB Hard Drive

To set up and format a USB Hard Drive...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **General Settings** and press **➤** (right) to enter the menu.
- 3 - Select **USB Hard Drive**, and press **OK**.
- 4 - Select **Start**, then follow the on screen instructions.
- 5 - Press **⬅** (left) repeatedly if necessary, to close the menu.

For more information on how to install a USB Hard Drive, in **Help**, press the color key **■** **Keywords** and look up **USB Hard Drive**, installation.

---

## USB Keyboard Settings

To install the USB keyboard, switch on the TV and connect the USB keyboard to one of the **USB** connections on the TV.

To change the keyboard layout setting when a layout was selected...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **General Settings** and press **➤** (right) to enter the menu.
- 3 - Select **USB Keyboard Settings**, and press **OK** to start the keyboard setup.

---

## Home or Store

If the TV is installed in a store, you can set the TV to display an in store promotion banner. **Picture Style** is set to **Vivid** automatically. **Switch Off Timer** is switched off.

To set the TV to Store location...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **General Settings** and press **➤** (right) to enter the menu.
- 3 - Select **Location** > **Store**, and press **OK**.
- 4 - Press **⬅** (left) repeatedly if necessary, to close the menu.

If you use the TV at home, set the TV in **Home** location.

---

## Store Setup

If the TV is set to **Store**, you can set the availability of a specific demo for in store use.

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **General Settings** and press **➤** (right) to enter the menu.
- 3 - Select **Store Setup** and press **OK**.
- 4 - Select **Off** or **Feature Promotion Banner** as an in-store demo
- 5 - Press **⬅** (left) 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 **On the Wall**. If you have changed the placement of the TV since then, adjust this setting accordingly for best sound reproduction.

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **General Settings** and press **➤** (right) to enter the menu.
- 3 - Select **TV Placement** and press **OK**.
- 4 - Select **On a TV Stand** or **On the Wall**.
- 5 - Press **⬅** (left) repeatedly if necessary, to close the menu.

---

## TV guide

For more information, in **Help**, press the color key **■** **Keywords** and look up **TV Guide**, data and information.

---

## 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 the logos...


- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **General Settings** > **Advanced**, and press **OK**.
- 3 - Select **Channel Logos** and press **➤** (right) to enter the menu.
- 4 - Select **Off** and press **OK**.
- 5 - Press **⬅** (left) repeatedly if necessary, to close the menu.

---

## Factory Settings

You can set the TV back to the original TV settings (the factory settings) for picture and sound. The channel list remains unchanged.

To switch back to the original settings...


- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **General Settings** and press **➤** (right) to enter the menu.
- 3 - Select **Factory Settings** and press **OK**.
- 4 - Enter the PIN code if asked.
- 5 - Follow the instructions on screen. The installation may take a few minutes.

---

## Child Lock


### Age Ratings Lock

To set a minimum age to watch rated programs...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Child Lock > Age Ratings Lock**, and select one of the ages in the list.
- 3 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

### App Lock


For more information, in **Help**, press the color key  **Keywords** and look up **APP lock** for more information.

---

### Set Code / Change Code

The Child Lock PIN code is used to lock or unlock channels or programs.


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

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Child Lock > Set Code or Change Code** and press **OK**.
- 3 - Enter a 4 digit code of your choice. If a code is set already, enter the current Child lock code and then enter the new code twice.
- 4 - Press **◀** (left) repeatedly if necessary, to close the menu.

The new code is set.

### Forgot your Child lock PIN code?

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

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Child Lock > Change Code** and press **OK**.
- 3 - Enter the overriding code **8888**.

4 - Now enter a new Child lock PIN code and enter it again to confirm.

5 - Press **◀** (left) repeatedly if necessary, to close the menu.


The new code is set.

---

## Reinstall TV

You can redo the full TV installation. The TV is completely reinstalled.

To redo the full TV installation...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **General Settings** and select **Reinstall TV**.
- 3 - Follow the instructions on screen. The installation may take a few minutes.

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21.5

## Clock, Region and Language

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### Menu Language

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

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Region and Language** and press **➤** (right) to enter the menu.
- 3 - Select **Languages > Menu Language** and press **OK**.
- 4 - Select the language you need.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

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## Clock

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### Date and Time

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#### Automatic

To know what time it is, press  **HOME**. The **Home Menu** always shows what time it is.

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.

When you record programs scheduled in the TV Guide, we recommend that you do not change the time and date manually. In some countries, for some network operators, the **Clock** setting is hidden to avoid an incorrect clock setting.

To correct the TV clock automatically...

- 1 - Press , select **All Settings** and press **OK**.



- 2 - Select **Region and Language** and press **▶** (right) to enter the menu.
- 3 - Select **Clock > Auto Clock Mode**, and select **Automatic**.
- 4 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

## Manual

To set the TV clock manually...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Region and Language** and press **▶** (right) to enter the menu.
- 3 - Select **Clock > Auto Clock Mode**, and select **Manual**.
- 4 - Select **Date and Time** to adjust.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

## Time Zone

To set the time zone...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Region and Language** and press **▶** (right) to enter the menu.
- 3 - Select **Clock > Auto Clock Mode**, and select **Manual**.
- 4 - Select **Time Zone**, and press **OK**.
- 5 - Select the appropriate setting.
- 6 - Press **◀** (left) repeatedly if necessary, to close the menu.

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21.6

# Universal Access

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## Switch On

With **Universal Access** switched on, the TV is prepared for use for the deaf, hard of hearing, blind or partially sighted people.

### Switch on

If you did not switch on **Universal Access** during the installation, you can still switch it on in the **Universal Access** menu.

To switch on Accessibility...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Universal Access** and press **▶** (right) to enter the menu.
- 3 - Select **Universal Access** one step further.
- 4 - Select **On** and press **OK**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

With **Universal Access** switched on, the

option **Universal Access** is added in the **Options** menu.

---

## Voice Guidance

Switch on **Voice Guidance** to hear text in menus and messages as spoken text on your TV. (English only)

To switch on **Voice Guidance**...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Universal Access** and press **▶** (right) to enter the menu.
- 3 - Select **Voice Guidance** and press **▶** (right) to enter the menu.
- 4 - Select **On** and press **OK**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

---

## Hard of Hearing

Some digital TV channels broadcast special audio and subtitles adapted for the hard of hearing or deaf 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**.

To switch on **Hearing Impaired**...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Universal Access** and press **▶** (right) to enter the menu.
- 3 - Select **Hearing Impaired** and press **▶** (right) to enter the menu.
- 4 - Select **On** and press **OK**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

To switch on **Hearing Impaired** while watching TV...

- 1 - While watching a TV channel, press **⊕** **OPTIONS**, select **Universal Access** and press **OK**.
- 2 - Select **Hearing Impaired**, and select **On**.

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 Accessibility does not appear in the **Options** menu, switch on **Universal Access** in setup menu.

For more information, in **Help**, press the color key **—** **Keywords** and look up **Universal Access**.

---

## Audio Description

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### 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 turn on **Audio Description**, you have to turn on **Universal Access** in the setup menu.

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

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

To switch on **Audio Description**...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Universal Access** and press **➤** (right) to enter the menu.
- 3 - Select **Audio Description** and press **➤** (right) to enter the menu.
- 4 - Select **Audio Description** one step further
- 5 - Select **On** and press **OK**.
- 6 - Press **◀** (left) repeatedly if necessary, to close the menu.

To switch on **Audio Description** while watching TV...

- 1 - While watching a TV channel, press **⊕** **OPTIONS** , select **Universal Access** and press **OK**.
- 2 - Select **Audio Description**, and select **On**.

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 **⊕**.

---

## Mixed Volume

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

To mix the volume...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Universal Access** and press **➤** (right) to enter the menu.
- 3 - Select **Audio Description** > **Mixed Volume** and press **OK**.
- 4 - Press the arrows **▲** (up) or **▼** (down) to adjust the value.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

If an audio language with added audio commentary is available, you can also find this setting in **⊕** **OPTIONS** > **Universal Access** > **Mixed Volume**.

---

## Audio Effect

Some audio commentary can hold extra audio effects, like stereo or fading sound.

To switch on **Audio Effects** (if available)...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Universal Access** and press **➤** (right) to enter the menu.
- 3 - Select **Audio Description** > **Audio Effects** and press **OK**.
- 4 - Press **◀** (left) 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 **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Universal Access** and press **➤** (right) to enter the menu.
- 3 - Select **Audio Description** > **Speech** and press **OK**.
- 4 - Select **Descriptive** or **Subtitles** and press **OK**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

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# Wireless and Networks

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## Network

For more information, in **Help**, press the color key **— Keywords** and look up **Network**, for more information on connecting the TV to a network.

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## Bluetooth

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### What You Need

You can connect a wireless device with Bluetooth® to this TV: a wireless speaker, a subwoofer, a sound bar, or headphones. You can also connect a wireless gamepad with Bluetooth LE.

To play the TV sound through a wireless speaker, you must pair the wireless speaker with the TV. You can pair up to 4 wireless speakers, but you can only play the sound through one wireless audio speaker at a time. If you connect a subwoofer, the sound is played through the TV and the subwoofer. If you connect a sound bar, the sound is played through the sound bar only.

#### Attention: Audio to Video synchronization

Many Bluetooth speaker systems have a high, so called, "latency." High latency means that the audio lags behind the video, causing unsynchronized "lip sync." Before you purchase a wireless Bluetooth speaker system, learn about the newest models and look for a device with a low latency rating. Ask your dealer for advice.

For more information on how to pair a wireless speaker, in **Help**, press the color key **— Keywords** and look up **Bluetooth, Pairing**.

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### Pairing a Device

For more information, in **Help**, press the color key **— Keywords** and look up **Bluetooth, Pairing** for more information on pairing wireless devices.

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### Select a Device

For more information, in **Help**, press the color key **— Keywords** and look up **Bluetooth, Select device** for more information on how to select a wireless speaker.

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### Remove a Device

For more information, in **Help**, press the color key **— Keywords** and look up **Bluetooth, Remove device** for more information on how to unpair (remove) a wireless Bluetooth device.

---

### Bluetooth On or Off

To connect wireless Bluetooth devices, make sure Bluetooth is switched on.



To switch Bluetooth on...

- 1 - Press **⚙**, select **All Settings** and press **OK**.
- 2 - Select **Wireless and Networks** and press **OK**.
- 3 - Select **Bluetooth > Bluetooth On/Off** and press **OK**.
- 4 - Select **On** or **Off** and press **OK**.
- 5 - Press **◀** (left) repeatedly if necessary, to close the menu.

# Android Settings

You can set or view several Android specific settings or information. You can find the list of apps installed on your TV and the storage space they need. You can set the language you would like to use with Voice Search. You can configure the on-screen keyboard or allow apps to use your location. Explore the different Android settings. You can go to [www.support.google.com/androidtv](http://www.support.google.com/androidtv) for more information on these settings.

To open these settings...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Android Settings**, and press **OK**.
- 3 - Explore the different Android settings.
- 4 - Press  **BACK** if necessary, to close the menu.

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# Channel Installation

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## 24.1

### Antenna/Cable Installation

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#### Update Channels

You can always start a channel update.

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Channels > Antenna/Cable Installation** and press **OK**.
- 3 - Enter the PIN code if asked.
- 4 - Select **Search for Channels** and press **OK**.
- 5 - Select **Start** and press **OK**.
- 6 - Select **Update Digital Channels > Next** and follow the instructions on screen. The update may take a few minutes.

---


#### Reinstall Channels

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##### Reinstall Channels


You can reinstall all channels and leave all other TV settings untouched.

To reinstall channels...

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Channels > Antenna/Cable Installation** and press **OK**.
- 3 - Enter the PIN code if asked.
- 4 - Select **Search for Channels** and press **OK**.
- 5 - Select **Start** and press **OK**.
- 6 - Select **Reinstall Channels > Next** and follow the instructions on screen. The update may take a few minutes.

---

##### Reinstall TV

For more information, in **Help**, press the color key  **Keywords** and look up **Reinstall TV** for more information.

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## 24.2

### Channel List Copy

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#### Introduction


Channel List Copy is intended for dealers and expert users.

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 must be 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 software version

You can check the current version of the TV software with in  **> All settings > Update Software > Current Software Info**.

---

#### Copy Channel List

To copy a channel list...

- 1 - Switch on the TV. This TV should have channels installed.
- 2 - Plug in a USB flash drive.
- 3 - Press , select **All Settings** and press **OK**.
- 4 - Select **Channels** and press **➤** (right) to enter the menu.
- 5 - Select **Channel List Copy** and select **Copy to USB**. You might be asked to enter the Child lock PIN code to copy the channel list.
- 6 - When copying is done, unplug the USB flash drive.
- 7 - Press **◀** (left) repeatedly if necessary, to close the menu.

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

---

#### Upload Channel List



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##### To not Installed TVs

Depending on whether your TV is already installed or not, you must use a different method 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 the channel search. Finish the installation.
- 2 - Plug in the USB flash drive that holds the channel list of the other TV.






- 3 - To start the channel list upload, press .
- 4 - Select **Channels** and press  (right) to enter the menu.
- 5 - Select **Channel List Copy** and select **Copy to TV**. You might be asked to enter the Child lock PIN code of this TV.
- 6 - The TV notifies you if the channel list is copied to the TV successfully. Unplug the USB flash drive.

---

## To Installed TVs

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

### To an already installed TV


- 1 - Verify the country setting of the TV. (To verify this setting, press . Select **Antenna/Cable Installation** and select **Reinstall Channels**. Press  and later **Cancel** to leave the installation.) 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 . Select **Antenna/Cable Installation** and select **Reinstall Channels**. Select the correct country and skip the channels search. Finish the installation. When done, continue with step 2.
- 2 - Plug in the USB flash drive that holds the channel list of the other TV.
- 3 - To start the channel list upload, press .
- 4 - Select **Channels** and press  (right) to enter the menu.
- 5 - Select **Channel List Copy** and select **Copy to TV**. You might be asked to enter the Child lock PIN code of this TV.
- 6 - The TV notifies you if the channel list is copied to the TV successfully. Unplug the USB flash drive.

---

## 24.3

# Digital Channel Installation

If you know the channel frequency of the channels you want to install, you can search and store digital channels one by one. For best results, contact the service provider.

- 1 - Press , select **All Settings** and press **OK**.
- 2 - Select **Channels** > **Antenna/Cable Installation** and press **OK**.
- 3 - Enter the PIN code if asked.
- 4 - Select **Digital: Reception Test** > **Search** and press **OK**.
- 5 - Press the numbered buttons to enter the channel frequency.
- 6 - Select **Search** and press **OK**.
- 7 - When the channel is found, select **Done** and press **OK**.

---

# Software

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## 25.1

### Update Software

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#### Update from Internet

If the TV is connected to the Internet, you may receive a message to update the TV software. You need a high-speed (broadband) Internet connection. If you receive this message, we recommend you to carry out the update.

With the message on screen, select **Update** and follow the instructions on screen.

You can also look for a software update yourself.

During the software update, there is no picture and the TV will switch off and on again. This might happen several times. The update can take a few minutes. Wait until the TV picture comes back up. Do not press the power switch **⏻** on the TV or on the remote control during the software update.

To look for a software update yourself...

- 1 - Press **⚙️**, select **All Settings** and press **OK**.
- 2 - Select **Update Software > Search for Updates** and press **OK**.
- 3 - Select **Internet** and press **OK**.
- 4 - The TV will look for an update on the Internet.
- 5 - If an update is available, you can update the software right away.
- 6 - A software update can take several minutes. Do not press the **⏻** key on the TV or remote control.
- 7 - When the update is done, the TV will return to the channel you were watching.

---

#### Update from USB

It might be necessary to update the TV software. You need a computer with a high-speed Internet connection and a USB flash drive to upload the software on the TV. Use a USB flash drive with at least 500MB free space. Make sure that write protection is switched off.

To update the TV software...

- 1 - Press **⚙️**, select **All Settings** and press **OK**.
- 2 - Select **Update Software > Search for Updates** and press **OK**.
- 3 - Select **USB** and press **OK**.

#### Identify the TV

- 1 - Insert the USB flash drive into one of the USB connections of the TV.
- 2 - Select **Write to USB** and press **OK**. An identification file is written on the USB flash drive.

#### Download the software

- 1 - Insert the USB flash drive into your computer.
- 2 - On the USB flash drive, locate the file **update.htm** and double click it.
- 3 - Click **Send ID**.
- 4 - If new software is available, download the .zip file.
- 5 - After the download, unzip the file and copy the file **autorun.upg** onto the USB flash drive. Do not place this file in a folder.

#### Update the TV software

- 1 - Insert the USB Flash Drive into the TV again. The update starts automatically.
- 2 - A software update can take several minutes. Do not press the **⏻** key on the TV or remote control. Do not remove the USB flash drive.
- 3 - When the update is done, the TV will return to the channel you were watching.

If a power cut occurs during the update, never remove the USB flash drive from the TV. When the power returns, the update will continue.

To prevent an accidental update of the TV software, delete the autorun.upg file from the USB flash drive.

---

## 25.2

### Software Version

To view the current TV software version...

- 1 - Press **⚙️**, select **All Settings** and press **OK**.
- 2 - Select **Update Software > Current Software Info** and press **OK**.
- 3 - The version, release notes and creation date are shown.
- 4 - Press **⬅** (left) repeatedly if necessary, to close the menu.

---

## 25.3

### 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 licenses.

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 .

...

[open.source@tpvision.com](mailto:open.source@tpvision.com)

## Open Source License

README for the source code of the parts of TP Vision Netherlands B.V. TV software that fall under open source licenses.

This is a document describing the distribution of the source code used on the TP Vision Netherlands B.V. 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 copies of this software can be found in the Directions For Use.

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## Open Source

### Android (5.1.0)

This TV contains the Android Lollipop Software. Android is a Linux-based operating system designed primarily for touch screen mobile devices such as smartphones and tablet computers. This software will also be reused in TPVision Android based TV's. The original download site for this software is : <https://android.googlesource.com/> This piece of software is made available under the terms and conditions of the Apache license version 2, which can be found below. Android APACHE License Version 2 (<http://source.android.com/source/licenses.html>)

### Toolbox (N/A)

The original download site for this software is : <https://android.googlesource.com/> This piece of software is made available under the terms and conditions of the Apache license version 2, which can be found below. Android APACHE License Version 2 (<http://source.android.com/source/licenses.html>)

### linux kernel (3.10.27)

This TV contains the Linux Kernel. The original download site for this software is : <http://www.kernel.org/>. This piece of software is made available under the terms and conditions of the GPL v2 license, which can be found below. Additionally,

following exception applies : "NOTE! This copyright does \*not\* cover user programs that use kernel services by normal system calls - this is merely considered normal use of the kernel, and does \*not\* fall under the heading of "derived work". Also note that the GPL below is copyrighted by the Free Software Foundation, but the instance of code that it refers to (the linux kernel) is copyrighted by me and others who actually wrote it. Also note that the only valid version of the GPL as far as the kernel is concerned is `_this_` particular version of the license (ie v2, not v2.2 or v3.x or whatever), unless explicitly otherwise stated. Linus Torvalds"

### libcurl (7.21.7)

libcurl is a free and easy-to-use client-side URL transfer library, supporting DICT, FILE, FTP, FTPS, Gopher, HTTP, HTTPS, IMAP, IMAPS, LDAP, LDAPS, POP3, POP3S, RTMP, RTSP, SCP, SFTP, SMTP, SMTPS, Telnet and TFTP. libcurl supports SSL certificates, HTTP POST, HTTP PUT, FTP uploading, HTTP form based upload, proxies, cookies, user+password authentication (Basic, Digest, NTLM, Negotiate, Kerberos), file transfer resume, http proxy tunneling and more! The original download site for this software is :

[http://curl.haxx.se/libcurl/COPYRIGHT AND PERMISSION NOTICE](http://curl.haxx.se/libcurl/COPYRIGHT%20AND%20PERMISSION%20NOTICE)

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### libfreetype (2.4.2)

FreeType is a software development library, available in source and binary forms, used to render text on to bitmaps and provides support for other font-related operations



The original download site for this software is : <https://github.com/julienr/libfreetype-androidFreetype>  
License

#### libjpeg (8a)

This package contains C software to implement JPEG image encoding, decoding, and transcoding. This software is based in part on the work of the Independent JPEG Group.

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#### libpng (1.4.1)

libpng is the official Portable Network Graphics (PNG) reference library (originally called pnglib). It is a platform-independent library that contains C functions for handling PNG images. It supports almost all of PNG's features, is extensible. The original download site for this software is : <https://github.com/julienr/libpng-androidlibpng>  
license

#### openssl (1.0.1j)

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. The original download site for this software is : <http://openssl.org/OpenSSL> license

#### Zlib compression library (1.2.7)

zlib is a general purpose data compression library. All the code is thread safe. The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://tools.ietf.org/html/rfc1950> (zlib format), rfc1951 (deflate format) and rfc1952 (gzip format) Developed by Jean-loup Gailly and Mark Adler(C) 1995-2012 Jean-loup Gailly and Mark Adler This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software. Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions: 1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required. 2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software. 3. This notice may not be removed or altered from any source distribution. Jean-loup Gailly Mark Adler [jloup@gzip.org](mailto:jloup@gzip.org) [madler@alumni.caltech.edu](mailto:madler@alumni.caltech.edu)

#### dvbsnoop (1.2)

dvbsnoop is a DVB / MPEG stream analyzer program. For generating CRC32 values required for composing PAT, PMT, EIT sections

The original download site for this software is : <https://github.com/a4tunado/dvbsnoop/blob/master/src/misc/crc32.c>GPL v2  
<http://dvbsnoop.sourceforge.net/dvbsnoop.html>

#### ezxml (0.8.6)

ezXML is a C library for parsing XML documents.

The original download site for this software is : <http://ezxml.sourceforge.net>. Copyright 2004, 2005 Aaron Voisine. This piece of software is made available under the terms and conditions of the MIT license, which can be found below.

#### 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 2001-2009 Robert A. van Engelen, Genivia inc. All Rights Reserved. THE SOFTWARE IN THIS PRODUCT WAS IN PART PROVIDED BY GENIVIA INC AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

#### restlet (2.1.7)

Restlet is a lightweight, comprehensive, open source REST framework for the Java platform. Restlet is suitable for both server and client Web applications. It supports major Internet transport, data format, and service description standards like HTTP and HTTPS, SMTP, XML, JSON, Atom, and WADL. The original download site for this software is : <http://restlet.org> This piece of software is made available under the terms and conditions of the Apache License version 2.

#### Opera Web Browser (SDK 3.5)

This TV contains Opera Browser Software.

#### dlmalloc (2.7.2)

Opera uses Doug Lea's memory allocator

The original download site for this software is : <http://gee.cs.oswego.edu/dl/html/malloc.html>

#### double-conversion

Opera uses double-conversion library by Florian Loitsch, faster double : string conversions (dtoa and strtod). The original download site for this software is : <http://code.google.com/p/double-conversion/> Copyright 2006-2011, the V8 project authors. All rights reserved. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions

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#### EMX (0.9c)

Opera uses EMX, which is an OS/2 port of the gcc suite. Opera uses modified versions of the printf and scanf methods from this C library. \* The emx libraries are not distributed under the GPL. Linking an \* application with the emx libraries does not cause the executable \* to be covered by the GNU General Public License. You are allowed \* to change and copy the emx library sources if you keep the copyright \* message intact. If you improve the emx libraries, please send your \* enhancements to the emx author (you should copyright your \* enhancements similar to the existing emx libraries).

#### freetype (2.4.8)

Opera uses freetype FreeType 2 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). The original download site for this software is : <http://www.freetype.org/freetype2/index.html> Freetype License

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#### IANA (Dec 30 2013)

Opera uses Internet Assigned Numbers Authority: Character encoding tag names and numbers. The original download site for this software is : <https://www.iana.org>

#### ICU (3)

Opera uses ICU : International Components for Unicode: Mapping table for GB18030 The original download site for this software is : <http://site.icu-project.org/http://source.icu-project.org/repos/icu/icu/trunk/license.html>

#### MozTW (1.0)

Opera uses MoxTW : MozTW project: Big5-2003 mapping tables. The original download site for this software is : <https://moztw.org> This piece of software is made available under the terms and conditions of CCPL

#### NPAPI (0.27)

Opera uses NPAPI : Netscape 4 Plugin API: npapi.h, npfunctions.h, npruntime.h and nptypes.h. Distributed as part of the Netscape 4 Plugin SDK. The original download site for this software is : [wiki.mozilla.org](http://wiki.mozilla.org) This piece of software is made available under the terms and conditions of mozilla licence as described below.

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#### Webp (0.2.0)

Opera uses Webp : libwebp is a library for decoding images in the WebP format. Products may use it to decode WebP images. The turbo servers will eventually re-decode images to WebP. The original download site for this software is : <https://developers.google.com/speed/webp/?csw=1>  
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#### FaceBook SDK (3.0.1)

This TV contains Facebook SDK. The Facebook SDK for Android is the easiest way to integrate your Android app with Facebook's platform. The SDK provides support for Login with Facebook authentication, reading and writing to Facebook APIs and support for UI elements such as pickers and dialogs. The original download site for this software is : <https://developer.facebook.com/docs/android> This piece of software is made available under the terms and conditions of the Apache License version 2.

#### iptables (1.4.7)

iptables is a user space application program that

allows a system administrator to configure the tables provided by the Linux kernel firewall (implemented as different Netfilter modules) and the chains and rules it stores. Different kernel modules and programs are currently used for different protocols; iptables applies to IPv4. The original download site for this software is : <https://android.googlesource.com> This piece of software is made available under the terms and conditions of the GPL v2.

#### libyuv (814)

libyuv is an open source project that includes YUV conversion and scaling functionality. The original download site for this software is : <http://code.google.com/p/libyuv> This piece of software is made available under the terms and conditions BSD.

#### ffmpeg (2.1.3)

This TV uses FFmpeg. FFmpeg is a complete, cross-platform solution to record, convert and stream audio and video. The original download site for this software is : <http://ffmpeg.org> This piece of software is made available under the terms and conditions of the GPL v2 license, which can be found below.

#### u-boot (2011-12)

U-boot is a boot loader for embedded boards based on ARM, MIPS and other processors, which can be installed in a boot ROM and used to initialize and test the hardware or to download and run application code

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#### live555 (0.82)

Live555 provides RTP/RTCP/RTSP client. The original download site for this software is : <http://www.live555.com> This piece of software is made available under the terms and conditions of the LGPL v2.1 license, which can be found below.

#### Bluetooth Stack (Bluedroid)

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#### EXIF (NA)

Exif JPEG header manipulation tool. The original

download site for this software is :  
<http://www.sentex.net/~mwandel/jhead/Portions> of  
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#### EXPAT (2.1.0)

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#### neven face recognition library (NA)

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#### Unicode (4.8.1.1)

This TV uses Unicode which specifies the representation of text

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#### mtpd (NA)

mtpd is used for VPN Network. The original download site for this software is : <http://libmtp.sourceforge.net/>This piece of software is made available under the terms and conditions of Apache License version 2.0.

#### MDNS Responder (NA)

MDNS Responder. The Mdns Responder project is a component of Bonjour, Apple's ease-of-use IP networking initiative. The original download site for this software is : <http://www.opensource.apple.com/tarballs/mDNSResponder/>This piece of software is made available under the terms and conditions of Apache License version 2.0.

#### NFC (NA)

NFC Semiconductor's NFC Library. Near Field Communication (NFC) is a set of short-range wireless technologies, typically requiring a distance of 4cm or less to initiate a connection. NFC allows you to share small payloads of data between an NFC tag and an Android-powered device, or between two Android-powered devices. This piece of software is made available under the terms and conditions of Apache License version 2.0.

#### Skia (NA)

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#### Sonic Audio Synthesis library (NA)

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#### Sqlite (3071100)

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#### Nuance Speech Recognition engine (NA)

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#### C++Standard Template Library library (5)

This TV uses Implementation of the C++ Standard Template Library. The original download site for this software is : <http://stlport.sourceforge.net>Boris Fomitchev grants Licensee a non-exclusive, non-transferable, royalty-free license to use STLport and its documentation without fee. By downloading, using, or copying STLport or any portion thereof, Licensee agrees to abide by the intellectual property laws and all other applicable laws of the United States of America, and to all of the terms and

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#### tinyalsa (NA)

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#### Vorbis Decompression Library (NA)

This TV uses Tremolo ARM-optimized Ogg Vorbis decompression library. Vorbis is a general purpose audio and music encoding format contemporary to MPEG-4's AAC and TwinVQ, the next generation beyond MPEG audio layer 3 The original download site for this software is :

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#### wpa\_supplicant\_Daemon (v0.8)

Library used by legacy HAL to talk to wpa\_supplicant daemon. The original download site for this software is : [http://hostap.epitest.fi/wpa\\_supplicant/](http://hostap.epitest.fi/wpa_supplicant/) This piece of software is made available under the terms and conditions of GPL version 2.

#### gson (2.3)

Gson is a Java library that can be used to convert Java Objects into their JSON representation. It can also be used to convert a JSON string to an equivalent Java object. Gson can work with arbitrary Java objects including pre-existing objects that you do not have source-code of. The original download site for this software is : <https://code.google.com/p/google-gson/> This piece of software is made available under the terms and conditions of the Apache License 2.0

This software includes an implementation of the AES Cipher, licensed by Brian Gladman

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#### libUpNp (1.2.1)

The original download site for this software is : <http://upnp.sourceforge.net/> This piece of software is made available under the terms and conditions of the BSD.

#### dnsmasq

Dnsmasq is a lightweight, easy to configure DNS forwarder and DHCP server

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#### TomCrypt (1.1)

iwedia stack is using tomcrypt for sw decryption

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#### AsyncHttpClient (1.4.6)

The original download site for this software is : <http://loopj.com/android-async-http/> This piece of software is made available under the terms and conditions of the APACHE LICENSE 2.0

#### Jackson Parser (2.x)

lpepg client uses Jackson Parser for string manipulation. The original download site for this software is : <https://github.com/FasterXML/jackson-core> This piece of software is made available under the terms and conditions of the APACHE LICENSE 2.0

TP Vision Netherlands B.V. is grateful to the groups and individuals above for their contributions.

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[NOTE: The text of this Exhibit A may differ slightly from the text of

the notices in the Source Code files of the Original Code. You should

use the text of this Exhibit A rather than the text found in the

Original Code Source Code for Your Modifications.]



# Specifications

## 26.1

## Environmental

### 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.

## 26.2

## 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 110–240V +/-10%
- Ambient temperature: 5°C to 35°C
- Standby power consumption : < 0.8W
- Power saving features: Light sensor, Eco mode, Picture mute (for radio), Auto switch-off timer, Eco settings menu.

## 26.3

## Operating System

Android OS :

Android Lollipop 5.1

## 26.4

## Reception

- Antenna input: 75 ohm coaxial (F-type)
- TV system: PAL-M, PAL-N, NTSC-M, SATVD-T, SBTVD-T
- Video playback: NTSC; PAL

## 26.5

## Display Type

### Diagonal screen size

- 65PUG6801 : 164 cm / 65 inch

### Display resolution

- 3840 x 2160p

## 26.6

## Display Input Resolution

### 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
- 2160p – 24 Hz, 25 Hz, 30 Hz, \*50 Hz, \*60 Hz (\*HDMI 4 only)

### Computer formats

Resolutions (among 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
- 3840 x 2160p - 24 Hz, 25 Hz, 30 Hz, 50 Hz, 60 Hz

---

26.7

## Dimensions and Weights

### 65PUG6801

- without TV stand:  
Width 1457.9 mm - Height 834.5 mm - Depth 89.5 mm  
- Weight ± 23.4 kg
- with TV stand:  
Width 1503.44 mm - Height 897.36 mm - Depth 289.59 mm - Weight ± 24.4 kg

---

26.8

## Connectivity

### TV Side

- Headphones - Stereo mini-jack 3.5mm
- HDMI 1 in - ARC / MHL
- HDMI 2 in - ARC
- 1x USB 2.0
- 1x USB 3.0
- CVBS: Audio L/R, CVBS in, RGB

### TV Bottom

- HDMI 3 in - ARC
- HDMI 4 in - ARC - HDMI 2.0
- 1x USB 2.0
- Audio out - Optical
- Audio in (DVI to HDMI) - Stereo mini-jack 3.5mm
- Network LAN - RJ45
- Antenna (75 $\times$ )

---

26.9

## Sound

- wOOx
- HD Stereo
- Output power (RMS): 20W
- Dolby® Digital Plus
- DTS 2.0 + Digital out™

---

26.10

## Multimedia

### Connections

- USB 2.0
- Ethernet LAN RJ-45
- Wi-Fi 802.11a/b/g/n/ac (built-in)
- BT2.1 with EDR & BT4.0 with BLE

### 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), H.265 (HEVC), VC-1, WMV9
  - Audio Codecs: AAC, HE-AAC (v1/v2), AMR-NB, Dolby Digital, Dolby Digital Plus, DTS Premium Sound™, 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, JPS
  - 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 @ L5.1.
    - H.265 (HEVC) is supported up to Main / Main 10 Profile up to Level 5.1
    - VC-1 is supported up to Advanced Profile @ L3.
- ### Supported media server software (DMS)
- You can use any DLNA V1.5 certified media server software (DMS class).
  - You can use the Philips TV Remote app (iOS and Android) on mobile devices.
- Performance may vary, depending on the capabilities of the mobile device and the software used.

---

# Help and Support

---

27.1

## Register your TV

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)

27.2


## Using Help


This TV offers help on screen .

### Open Help

Press the  key (blue) to open Help immediately. Help will open to the chapter that is most relevant to what you are doing or what is selected on TV. To look up topics alphabetically, press the color key  **Keywords**.

To read the Help as a book, select **Book**.

You can also open  **Help** in the Home menu or TV menu.

Before you execute the Help instructions, close Help. To close Help, press the color key  **Close**.

For some activities, like Text (Teletext), the color 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)

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27.3

## Troubleshooting

---

## Switch On and Remote Control

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 power off

When you are switching 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 behavior. 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 on 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.

---

## Channels

### No digital channels found during the installation

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.

---

## 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.

### 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 Theater 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.

---

## HDMI and USB

### 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 recognize 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.

### HDMI 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 an HDMI-CEC audio device is connected and you use the TV Remote Control to adjust the volume level from the device, this behavior 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.

---

## HDMI and USB

### 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 recognize the HDMI device and no picture is displayed, switch the source from one device to another and back again.
- If the picture and sound of a device connected to HDMI 4 is distorted, connect the device to HDMI 1, HDMI 2, or HDMI 3 on this TV.
- 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.

### HDMI 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 an HDMI-CEC audio device is connected and you use the TV Remote Control to adjust the volume level from the device, this behavior 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.

---

## Wi-Fi, Internet and Bluetooth

### Wi-Fi 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.

### DHCP

- If the connection fails, you can check the DHCP (Dynamic Host Configuration Protocol) setting of the router. DHCP should be switched on.

### Bluetooth lost connection

- Position the wireless speaker within 15 feet of the TV.
- Locations with high wireless activity—such as apartment buildings with many wireless routers—can make it difficult to connect wirelessly. Keep the router and wireless speakers as close to the TV as possible.

### Bluetooth Audio and Video synchronization

- Before you purchase a wireless Bluetooth speaker, inform yourself about its quality of Audio to Video synchronization, commonly called "lip sync." Not all Bluetooth devices perform correctly. Ask your dealer for advice.

---

## 27.4

## 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.

---

## 27.5

## Support and Repair

For support and repair, call the Consumer Care hotline in your country. Our service engineers will take care of a repair, if necessary.

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) and select your country if needed.

### Support app

You can also look up the Support app in the Apps row of the Home menu.

Open this app to find the telephone number to contact us.

### 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

---

28.1

## 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 spilled 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 main 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

Follow these precautions to prevent the TV from falling over and causing injury:

- 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 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.

---

28.2

## 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. Never use substances such as alcohol, chemicals, or household cleaners on the TV.
- To avoid deformations and color fading, wipe off water drops as quickly as possible.
- Avoid stationary images as much as possible.

Stationary images are images that remain on screen for extended periods of time. Stationary images include on screen menus, black bars, time displays, etc. If you must use stationary images, reduce screen contrast and brightness to avoid screen damage.



---

# Terms of Use

---

## 29.1

## Terms of Use – TV

2016 © TP Vision Europe B.V. All rights reserved.

This product was brought to the market by TP Vision Europe B.V. or one of its affiliates, hereinafter referred to as TP Vision, which is the manufacturer of the product. TP Vision is the warranter in relation to the TV with which this booklet was packaged. Philips and the Philips Shield Emblem are registered trademarks of Koninklijke Philips N.V.

Specifications are subject to change without notice. Trademarks are the property of Koninklijke Philips N.V or their respective owners. TP Vision reserves the right to change products at any time without being obliged to adjust earlier supplies accordingly.

The written material packaged with the TV and the manual stored in the memory of the TV or downloaded from the Philips website [www.philips.com/support](http://www.philips.com/support) are believed to be adequate for the intended use of the system.

The material in this manual is believed adequate for the intended use of the system. If the product, or its individual modules or procedures, are used for purposes other than those specified herein, confirmation of their validity and suitability must be obtained. TP Vision warrants that the material itself does not infringe any United States patents. No further warranty is expressed or implied. TP Vision cannot be held responsible neither for any errors in the content of this document nor for any problems as a result of the content in this document. Errors reported to Philips will be adapted and published on the Philips support website as soon as possible.

Terms of warranty – Risk of injury, damage to TV or void of warranty!

Never attempt to repair the TV yourself. Use the TV and accessories only as intended by the manufacturer. The caution sign printed on the back of the TV indicates risk of electric shock. Never remove the TV cover. Always contact Philips TV Customer Care for service or repairs. 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) and select your country if needed. Any operation expressly prohibited in this manual, or any adjustments and assembly procedures not recommended or authorized in this manual, shall void the warranty.

Pixel characteristics

This LCD/LED product has a high number of color pixels. Although it has effective pixels of 99.999% or

more, black dots or bright points of light (red, green or blue) may appear constantly on the screen. This is a structural property of the display (within common industry standards) and is not a malfunction.

TP Vision is committed to developing, producing and marketing 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. TP Vision plays an active role in the development of international safety standards, enabling TP Vision to anticipate further developments in standardization for early integration in its products.



## 29.2

---

## Terms of Use – Smart TV

You can see the terms of use, privacy policy, and also set privacy settings of your Smart TV.

To open the terms of use of Smart TV page...

- 1 - Press  HOME to open the Home menu.
- 2 - Select  Apps to open Apps.
- 3 - Select Support.

## 29.3

---

## Terms of Use – Philips App Gallery

In Help, press the color key  Keywords and look up Terms of Use, App Gallery for more information.

---

# Copyrights

---

30.1

## MHL

MHL, Mobile High-Definition Link and the MHL Logo are trademarks or registered trademarks of the MHL, LLC.



30.2

## Ultra HD

The DIGITALEUROPE UHD Display Logo is a trademark of DIGITALEUROPE.



30.3

## HDMI

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



30.4

## Dolby Digital Plus

Dolby®

Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.



30.5

## Microsoft

Windows Media

Windows Media is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.



Microsoft PlayReady

Content owners use Microsoft PlayReady™ content access technology to protect their intellectual property, including copyrighted content. This device uses PlayReady technology to access PlayReady-protected content and/or WMDRM-protected content. If the device fails to properly enforce restrictions on content usage, content owners may require Microsoft to revoke the device's ability to consume PlayReady-protected content. Revocation should not affect unprotected content or content protected by other content access technologies. Content owners may require you to upgrade PlayReady to access their content. If you decline an upgrade, you will not be able to access content that requires the upgrade.

30.6

## Wi-Fi Alliance

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



## Kensington

(If applicable)

Kensington and Micro Saver are registered US trademarks of ACCO World Corporation with issued registrations and pending applications in other countries throughout the world.



## Other Trademarks

All other registered and unregistered trademarks are the property of their respective owners.

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