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EN User Manual

**PHILIPS**

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# 1 Important

## Safety

### Precautions

Read and understand all instructions before you use your TV. If damage is caused by failure to follow the instructions, the warranty does not apply.

#### 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 Consumer Care to have the TV checked before use.
- Never place the TV, remote control or batteries near naked flames or other heat sources, including direct sunlight. To prevent the spread of fire, keep candles or other flames away from the TV, remote control and batteries at all times.



- Never insert objects into the ventilation slots or other openings on the TV.
- Never expose the remote control or batteries to rain, water or excessive heat.
- Avoid force coming onto power plugs. Ensure that the power plug is fully inserted into the power socket. Loose power plugs can cause arcing or fire.
- When the TV is swiveled, ensure that no strain is exerted on the power cord. Strain on the power cord can loosen connections and cause arcing.

- To disconnect the TV from the mains power, the power plug of the TV must be disconnected. When disconnecting the power, always pull the power plug, never the cord. Ensure that you have full access to the power plug, power cord and outlet socket at all times.

#### Risk of damage to the TV!

- Two people are required to lift and carry a TV that weighs more than 25kg or 55lbs.
- When stand mounting the TV, use only the supplied stand. Secure the stand to the TV tightly. Place the TV on a flat, level surface that can support the combined weight of the TV and the stand.
- When wall mounting the TV, use only a wall mount that can support the weight of the TV. Secure the wall mount to a wall that can support the combined weight of the TV and wall mount. TP Vision Netherlands B.V. bears no responsibility for improper wall mounting that results in accident, injury or damage.
- If you need to store the TV, disassemble the stand from the TV. Never lie the TV on its back with the stand installed.
- 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.
- Parts of this product can be made of glass. Handle with care to avoid injury and damage.

#### Risk of injury to children!

Follow these precautions to prevent the TV from toppling over and causing injury to children:

- Never place the TV on a surface covered by a cloth or other material that can be pulled away.
- Ensure that no part of the TV hangs over the edge of the 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.
- Educate children about the dangers of climbing on furniture to reach the TV.

#### **Risk of swallowing batteries!**

- The product/remote control may contain a coin type battery, which can be swallowed. Keep the battery 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 4 inches or 10 cm around the TV for ventilation. Ensure that curtains or other objects never cover the ventilation slots on the TV.

#### **Risk of injury, fire or power cord damage!**

- Never place the TV or any objects on the power cord.
- Disconnect the TV from the power outlet and aerial before lightning storms. During lightning storms, never touch any part of the TV, power cord or aerial 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 matches room temperature before connecting the TV to the power outlet.

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### **3D health warning**

#### **For 3D TVs only.**

- If you or your family has a history of epilepsy or photosensitive seizures, consult a medical professional before exposing yourself to flashing light sources, rapid image sequences or 3D viewing.

- To avoid discomfort such as dizziness, headache or disorientation, we recommend not watching 3D for extended periods of time. If you experience any discomfort, stop watching 3D and do not immediately engage in any potentially hazardous activity (for example driving a car) until your symptoms have disappeared. If symptoms persist, do not resume watching 3D without consulting a medical professional first.
- Parents should monitor their children during 3D viewing and ensure they do not experience any discomfort as mentioned above. Watching 3D is not recommended for children under six years of age as their visual system is not fully developed yet.
- Do not use the 3D glasses for any purpose other than watching this 3D TV.

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## **Care**

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### **Screen**

- Risk of damage to the TV screen! Never touch, push, rub or strike the screen with any object.
- Unplug the TV before cleaning.
- Clean the TV and frame with a soft damp cloth and wipe gently. Avoid touching the Ambilight LEDs on the back side of the TV. Never use substances such as alcohol, chemicals or household cleaners on the TV.
- To avoid deformations and color fading, wipe off water drops as soon as possible.
- Avoid stationary images as much as possible. Stationary images are images that remain onscreen for extended periods of time. Stationary images include onscreen menus, black bars, time displays, etc. If you must use stationary images, reduce screen contrast and brightness to avoid screen damage.

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## 3D glasses

### For sets with 3D glasses supplied.

Follow these instructions to take care of your glasses:

- Use a clean soft cloth (microfiber or cotton flannel) to clean the lenses to avoid scratching them. Never spray cleaner directly on the 3D glasses. You can use pre-moistened cleaning cloths from most well-known lens manufacturers of sunglasses.
- Do not expose the 3D glasses to direct sunlight, heat, fire or water. This may result in a product malfunction or fire.
- Do not drop, bend or apply force to the lenses of the 3D glasses.
- Do not use cleaning chemicals containing alcohol, solvent, surfactant, or wax, benzene, thinner, mosquito repellent or lubricant. Using these chemicals can cause discoloration or cracks.

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## Placement tips

- Position the TV where light does not shine directly on the screen.
- The ideal viewing distance of this TV is three times its diagonal screen size. For example, if the diagonal screen size of the TV is 81 cm / 32", the ideal viewing distance is ~2.5m / ~92" from the front of the screen.
- While seated, your eyes should be level with the center of the screen.

### TV placement

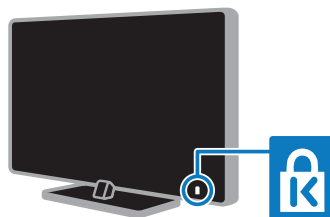
You can apply the best sound settings for your TV by selecting the TV placement (wall mount or stand mount).

1. Press **🏠**.
2. Select **[Setup]**, then press **OK**.
3. Select **[TV settings] > [General settings] > [TV placement]**.
4. Select **[On a TV stand]** or **[Wall mounted]**, then press **OK**.

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## Lock the TV

Your TV is equipped with a Kensington security slot at the base of the TV. To secure the TV, purchase a Kensington anti-theft lock (sold separately).




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## Legal

### Notice

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### 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.
- 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 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.

### Compliance with EMF

TP Vision Netherlands B.V. manufactures and sells many products targeted at consumers, which, like any electronic apparatus, in general have the ability to emit and receive electromagnetic signals.

One of Philips' leading Business Principles is to take all necessary health and safety measures for our products, to comply with all applicable legal requirements and to stay well within the Electro Magnetic Field (EMF) standards applicable at the time of producing the products.

Philips is committed to develop, produce and market products that cause no adverse health effects.

Philips plays an active role in the development of international EMF and safety standards, enabling Philips to anticipate further developments in standardization for early integration in its products.

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### Open source

This product contains software licensed under an open source license. For acknowledgments and license texts, please refer to the electronic in-product user manual. TP Vision Netherlands 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 source code, please send your request in English with product number to:

"Intellectual Property Department, TP Vision Netherlands B.V., P.O. Box 80077, 5600 KA Eindhoven, The Netherlands."

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ABOUT DIVX VIDEO-ON-DEMAND: This DivX Certified® device must be registered in order to play purchased DivX Video-on-Demand (VOD) movies. To obtain your registration code, locate the DivX VOD section in your device setup menu. Go to [vod.divx.com](http://vod.divx.com) for more information on how to complete your registration.



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AstroTV product is a software system developed by TQTVd that comprises of a complete implementation of the Ginga Middleware Standard, compliant with Brazilian SBTVD Standard nr. 6 (Vols 1, 2, 3 and 4 – see references below).

Astro TV Middleware acknowledges the use of the following libraries internally:

Boost – <http://www.boost.org>

Libxml2v – <http://www.xmlsoft.org/>

Webkit / OWB – <http://www.sand-labs.org/owb>

Libjpeg - <http://www.ijg.org/>

Lua – <http://www.lua.org/>

OpenSSL – <http://www.openssl.org/>

SWIG – <http://www.swig.org>

Luajava –

<http://www.keplerproject.org/luajava>

LibCURL – <http://curl.hazz.se>



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## Sustainability

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### Energy efficiency

This TV is designed with energy-efficient features. To access these features, press the **Green button** on the remote control.

- **Energy saving picture settings:** You can apply a combination of energy saving picture settings. While you watch TV, press the **Green button** and select **[Energy saving]**. Then select the **[Energy saving]** picture setting.
- **Screen off:** If you only want to listen to audio from the TV, you can switch off the TV display. Other functions continue to operate normally. While you watch TV, press the **Green button** and select **[Screen off]**.
- **Light sensor:** When the surrounding light darkens, the built-in ambient light sensor lowers the brightness of the TV screen. To switch on the sensor, press the **Green button** while you watch TV and select **[Light sensor]**.

- **Low standby power:** The advanced power circuitry reduces the power consumption of the TV to an extremely low level, without losing out on the constant standby functionality.
- **Auto switch off:** To conserve energy, set the TV to switch off automatically after a period of inactivity. While you watch TV, press the **Green button** and select **[Auto switch off]**. Then select the period after which the TV switches off.
- **Switch off inactive devices:** Switch off connected EasyLink HDMI-CEC (Consumer Electronic Control) compliant devices that are inactive. While you watch TV, press the **Green button** and select **[Inactive devices off]**.
- **Power management:** An advanced power management helps save the energy consumed by this TV. To view how your personalized TV settings affect the TV's relative power consumption, press **⬆**, then select **[Setup] > [Watch demos] > [Active Control demo]**.

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### Recycling

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 inform yourself about the local rules on separate collection of batteries because correct disposal helps to prevent negative consequences for the environmental and human health.



## Help and support

### Use Help

To access the onscreen **[Help]** menu, press the **Blue button**.

To exit from the **[Help]** menu, press **⬆**.

### Visit Philips website

If you can't find what you need in the onscreen **[Help]**, visit the Philips support website at [www.philips.com/support](http://www.philips.com/support).

At the Philips support website, you can also:

- Find answers to Frequently Asked Questions (FAQ)
- Download a printable PDF version of this user manual
- Email us a specific question
- Chat online with Philips Consumer Care (available in certain countries only)

### Use the Philips connectivity guide

An easy-to-use connectivity guide gives you guidance on how to connect your TV to other devices. Visit <http://www.connectivityguide.philips.com>.

### Search the TV forum

Your question may have already been answered by the Philips TV community of users. Visit [www.supportforum.philips.com](http://www.supportforum.philips.com).

### Contact Philips

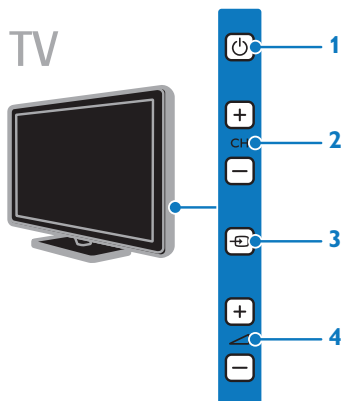
You can contact Philips Consumer Care in your country for support. The number is available in the leaflet accompanying this product, or online at [www.philips.com/support](http://www.philips.com/support).

Before you contact Philips, write down the model and serial number of your TV. You can find this information on the back of your TV or on the TV packaging.

## 2 Use your TV

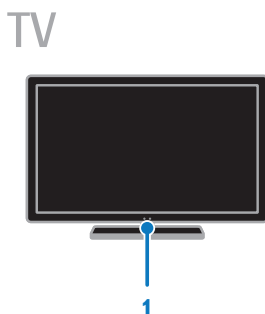
### TV controls

#### Rear controls



1. **⏻ (Standby):** Switch the TV on or off.
2. **CH +/-:** Switch to the next or previous channel.
3. **⏻ (Source):** Watch a connected device.
4. **▲/▼ +/- (Volume):** Increase or decrease volume.

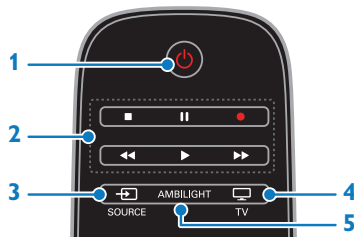
#### Sensors and indicators



#### 1. Standby indicator LED and remote control sensor

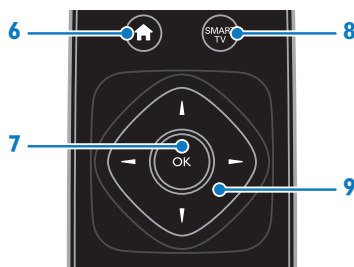
The standby LED indicates when your TV is in standby. Point the remote control at the sensor. Make sure that the line of sight between the remote control and the TV is not blocked.

#### IR remote control

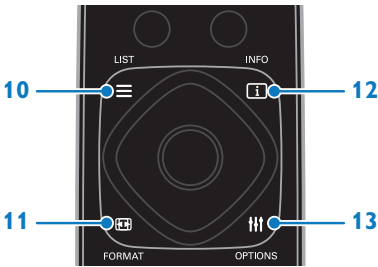


Infrared (IR) remote control for certain models only.

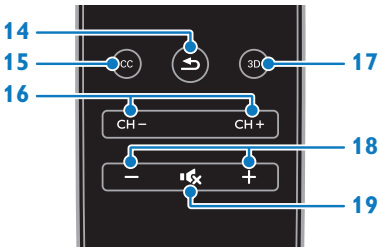
1. **⏻ (Standby):** Switch the TV on or to standby.
2. **Play buttons:** Control playback of multimedia files.
3. **⏻ SOURCE:** Watch a connected device.
4. **TV:** Watch TV.
5. **AMBILIGHT:** Switch Ambilight on or off.



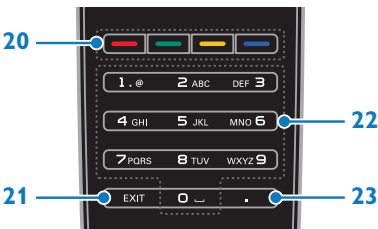
6. **🏠 (Home):** Access the Home menu.
7. **OK:** Confirm an entry or selection.
8. **SMART TV:** Access Smart TV.
9. **▲▼◀▶ (Navigation buttons):** Navigate through menus and select items.



10. **LIST**: Access the TV channel list.  
 11. **FORMAT**: Change picture format.  
 12. **INFO**: Display information about current activity.  
 13. **OPTIONS**: Access currently available options, picture and sound menus.

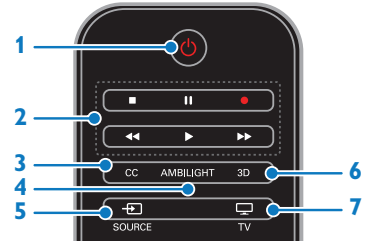


14. **Back**: Return to the previous menu page or exit from a TV function.  
 15. **CC**: Switch on or off closed captions. For programs that support closed captions.  
 16. **CH - / CH +**: Switch channels.  
 17. **3D**: Watch 3D.  
 18. **+/- (Volume)**: Adjust volume.  
 19. **Mute**: Mute or restore audio.



20. **Color buttons**: Select tasks or options.  
 21. **EXIT**: Exit from menus or TV functions.  
 22. **0-9 (Numeric buttons)**: Select TV channels or enter text.  
 23. **. (Dot)**: Enter digital sub-channels.

## RF remote control and pairing

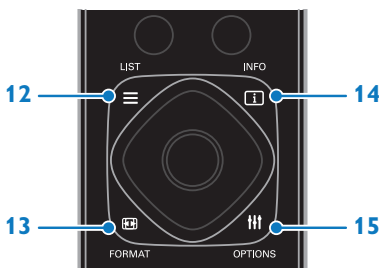


Radio frequency (RF) remote control for certain models only.

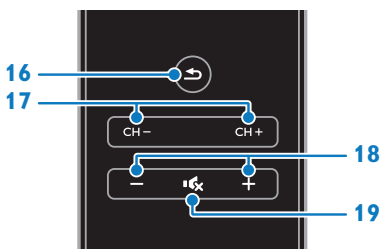
1. **Standby**: Switch the TV on or to standby.  
 2. **Play buttons**: Control playback of multimedia files.  
 3. **CC**: Switch on or off closed captions. For programs that support closed captions.  
 4. **AMBILIGHT**: Switch Ambilight on or off.  
 5. **SOURCE**: Watch a connected device.  
 6. **3D**: Watch 3D  
 7. **TV**: Watch TV.



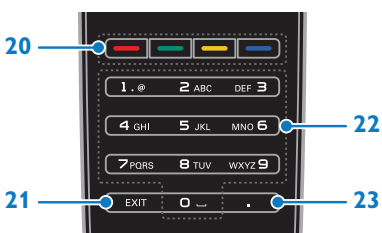
8. **Home**: Access the Home menu.  
 9. **OK**: Confirm an entry or selection.  
 10. **SMART TV**: Access Smart TV. Confirm an entry or selection.  
 11. **Navigation buttons**: Navigate through menus and select items.



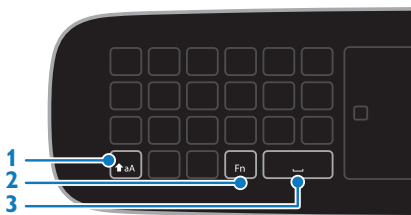
- 12. **LIST**: Access the TV channel list.
- 13. **FORMAT**: Change picture format.
- 14. **INFO**: Display information about current activity.
- 15. **OPTIONS**: Access currently available options, picture and sound menus.



- 16. **Back**: Return to the previous menu page or exit from a TV function.
- 17. **CH - / CH +**: Switch channels.
- 18. **+/- (Volume)**: Adjust volume.
- 19. **Mute**: Mute or restore audio.



- 20. **Color buttons**: Select tasks or options.
- 21. **EXIT**: Exit from menus or TV functions.
- 22. **0-9 (Numeric buttons)**: Select TV channels or enter text.
- 23. **.** (Dot): Enter digital sub-channels.



### RC keyboard

Turn the remote control over to enter text onscreen.

1. **aA (Shift)**: Press and hold to type uppercase characters.
2. **Fn**: Press and hold to type alternative or coloured characters, as displayed on the bottom-right hand corner of each button.
3. **Spacebar**: Enter a space.



4. **del (Delete)**: Delete the character in front of the text cursor.
5. **Enter**: Confirm an entry or selection.
6. **Navigation buttons**: Navigate through menus and select items.

### Pairing

This remote control uses radio frequency that allows you to send commands to the TV without pointing at the TV. Once you have paired the TV with the remote control, you can switch channels or change the volume from another room.

**Note:** You can pair up to a maximum of 5 remote controls with a TV. Once paired, you cannot use the remote control on another TV until you pair them.

Pairing is done when the TV was switched on for the first time. If not, follow the steps below to pair the remote control with your TV.

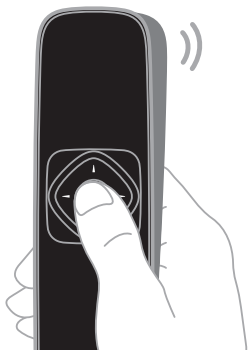
1. Point the remote control from a distance of 10cm to the standby LED on the TV.
2. Press **OK**.

A message appears to confirm successful pairing.

### To pair with another TV

1. Point the remote control from a distance of 10cm to the standby LED on the TV.
2. Press and hold the **Red** and **Blue** buttons at the same time.

A message appears to confirm successful pairing.



### Pointer

You can use the remote control as a pointer for selection of onscreen items.

1. Switch on the TV and point the remote control to the TV.
2. Position your thumb on the **OK** button to activate the pointer.

An arrow cursor, indicating the pointer position, appears onscreen.

**Tips:** Press any **Navigation buttons** to switch back to arrow keys navigation.

### Access a link

1. Hover the pointer on the desired location.
2. When a glow appears on the tip of the pointer, press **OK**.

### Change navigation mode

You can switch between arrow keys and pointer through the Smart TV Options menu. Make sure your TV is connected to the Internet.

1. Press **SMART TV**.
2. Press **III OPTIONS**.
3. Select **[Remote control navigation] > [Arrow keys]** or **[Pointer]**, then press **OK**.

### EasyLink controls

If you connect your TV to HDMI-CEC enabled devices, such as a Blu-ray player or home theater, you can control them at the same time with one remote control. Simply switch on EasyLink after connection.

Read more about Easylink in **Connect your TV > Set up Easylink devices > Control devices** (Page 57).

### Onscreen remote control

You can also control connected HDMI-CEC enabled devices through other buttons that are available through the onscreen remote control. Make sure that Easylink is switched on after connection. Read more about Easylink in **Connect your TV > Set up Easylink devices > Control devices** (Page 57).

### To access the onscreen remote control

1. While you watch a connected device, press **III OPTIONS**.
2. Select **[Controls]**, then press **OK**.
3. Select an onscreen button, then press **OK**.

### Smartphone control

With the smartphone application '**Philips MyRemote**', you can use your smartphone as a secondary remote, and even as a keyboard. You can also watch a slideshow of the images in your smartphone on the TV.

**Note:** Make sure that your TV and smartphone are connected to the same local network. For more information, see **Connect your TV > Connect to a network and the Internet** (Page 58).

Follow these instructions to download the application '**Philips MyRemote**':

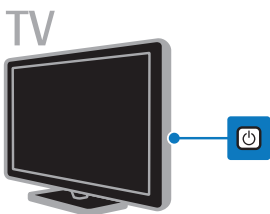
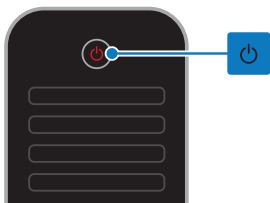
1. Visit the Apple App store or Google Play to download the application '**Philips MyRemote**' on your smartphone.
2. Follow the instructions provided at the applications store.

---

## Watch TV

---

### Switch TV on or off



### Switch the TV on

- Connect the TV to the mains outlet and switch on the main power.
- If the TV is not switched on, the standby LED remains off. Press  $\text{⏻}$  on the TV.
- If the standby LED is lit, press  $\text{⏻}$  on the remote control.

**Note:** There is a short delay before the TV responds.

**Tip:** If you cannot find your remote control and want to switch on the TV from standby, press any key on the TV.

### Switch TV to standby

Press  $\text{⏻}$  on the remote control.  
The standby LED on the TV switches to red.

### Switch off the TV

Press  $\text{⏻}$  on the TV.  
The standby LED switches to off.

**Note:** Though your TV consumes very little energy when it is in standby or switched off, it does use some energy. If you are not going to use the TV for an extended period of time, disconnect the TV from the mains plug.

### Automatic switch off

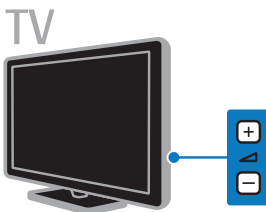
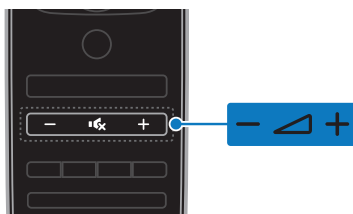
You can save energy with this TV's energy efficiency settings, which are enabled by default. If there is no user interaction (such as pressing a remote control button or a control on the TV) for four hours, the TV will automatically switch to standby.

### To disable automatic switch off

1. While you watch TV, press the **Green button** on the remote control.
2. Select [**Auto switch off**], then press **OK**.
3. Use the **Navigation buttons** to make a selection, then press **OK**.

---

### Adjust TV volume



### Increase or decrease the TV volume

- Press **+/-** on the remote control.
- Press  $\triangle$  **+/-** on the TV.

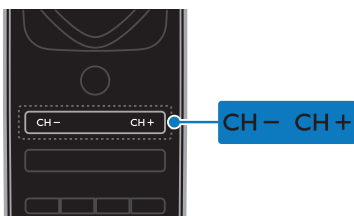
### Mute or restore the TV volume

- Press  $\text{⏸}$  on the remote control to mute the volume.
- Press  $\text{⏸}$  again to restore the volume.

### Adjust headphone volume

1. Press  $\text{⏴}$ .
2. Select [**Setup**] > [**TV settings**] > [**Sound**] > [**Headphone volume**], then press **OK**.
3. Select a level.

## Switch TV channels



## TV



- Press **CH +/-** on the remote control or TV.
- Press the **Numeric buttons** to enter a channel number.

## Manage favorite channels

### Create a list of your favorite channels

1. While you watch TV, press **≡ LIST**.
2. Select a channel, select **[Edit favorites]** at the bottom of the screen, and then press **OK**.

### Add favorite channels

1. Press **≡ LIST**.
2. Select a channel, then select **[Mark as favorite]**.

The selected channel is marked with an asterisk.

### Remove favorite channels

1. Press **≡ LIST**.
2. Select the channel, then select **[Unmark as favorite]**.

### Display your list of favorite channels

1. While you watch TV, press **≡ LIST**.
2. Press **↶** to access the top menu.
3. Select **[Favorites]**, then press **OK**.

Only channels in the favorites list are displayed.

## Manage channel lists

After the channels are installed, you can:

- Filter channels.
- Switch between antenna and cable channels.
- Rename channels.
- Hide channels.
- Lock a channel.
- Display channel logos.

### Filter channels

1. Press **≡ LIST**.
2. Press **≡ OPTIONS**, then select **[Digital / Analog]**.
3. Select an option, then press **OK**.

**Tips:** To select the menu tabs in the channel list, press **↶**

- **[Digital + Analog]:** Display all channels in the channel list.
- **[Digital TV channels]:** Display only digital channels.
- **[Analog channels]:** Display only analog channels.

### Switch between antenna and cable channels

You can switch between antenna and cable channels.

1. While you watch TV, press **⬆**.
2. Select **[Setup] > [Channel settings] > [Channel installation] > [Antenna connection]**.
3. Select **[Antenna]** to watch antenna channels or **[Cable]** to watch cable channels, then press **OK**.

### Rename channels

When you select a channel, its name appears. You can change this channel name.

1. While you watch TV, press **≡ LIST**. The channel list is displayed.
2. Select the channel to rename, then select **[Rename]** from the bottom of the screen.
3. Press any **Numeric button** to access the onscreen keyboard.
4. Press the **Navigation buttons** to select each character, then press **OK**.
5. Once complete, select **[Done]**, then press **OK** to confirm.

## Hide channels

You can hide unwanted channels.

1. While you watch TV, press **≡ LIST**.
2. Select the channel to hide, then press **≡ OPTIONS**.
3. Select **[Hide channel]**, then press **OK**.  
The channel is hidden.

## Lock a channel

You can prevent unauthorized access to channels by locking them.

1. While you watch TV, press **≡ LIST**.  
The channel list is displayed.
2. Select the channel to lock, then press **≡ OPTIONS**.
3. Select **[Lock channel]**, then press **OK**.
4. If prompted, enter the pin code.  
The channel is marked with a lock icon in the channel list.

**Tip:** To watch a locked channel, enter the pin code when prompted.

## Display channel logos

If channel logos are available from the broadcaster, you can display them in the channel list.

1. While you watch TV, press **≡ LIST**.  
The channel list is displayed.
2. Select a channel in the list, then press **≡ OPTIONS**.
3. Select **[Channel logos] > [On]**, then press **OK**.

---

## Watch connected devices

Before you can watch a device, connect the device to the TV. See **Connect your TV > Connect devices** (Page 45).

### Select a device with SOURCE

1. Press **☐ SOURCE**.
2. Select a device, then press **OK**.

### Select a device from the Home menu

1. Press **🏠**.
2. Select **[Source]**, then press **OK**.
3. Select the device, then press **OK**.

To add or manage your connected devices, see **Connect your TV > Watch connected devices > Change device settings** (Page 55).

---

## Use picture and sound presets

Your TV comes with predefined picture and sound settings. You can apply these settings or customize them.

### Select your preferred picture presets

1. While you watch TV, press **≡ OPTIONS**.
2. Select **[Picture and sound]** in the top bar, then press **OK**.
3. Select **[Picture style]**, then press **OK**.
4. Select an option, then press **OK**:
  - **[Personal]**: Apply your personalized picture settings.
  - **[Vivid]**: Rich and dynamic settings, ideal for daytime viewing.
  - **[Football]**: Ideal settings for football matches.
  - **[Standard]**: Default settings that suit most environments and types of video.
  - **[Movie]**: Ideal settings for movies.
  - **[Photo]**: Ideal settings for photos.
  - **[Energy saving]**: Settings that conserve the most energy.

### Select your preferred sound presets

1. While you watch TV, press **≡ OPTIONS**.
2. Select **[Picture and sound]** in the top bar, then press **OK**.
3. Select **[Sound style]**, then press **OK**.
4. Select an option, then press **OK**:
  - **[Personal]**: Apply your personalized sound settings.
  - **[Original]**: Settings that suit most environments and types of audio.
  - **[Movie]**: Ideal settings for movies.
  - **[Music]**: Ideal settings for listening to music.
  - **[Game]**: Ideal settings for games.
  - **[News]**: Ideal settings for spoken audio, such as the news.

---

## Change picture format

You can change the picture format to suit the video source.

1. Press **☐ FORMAT**.
2. Select a picture format, then press **OK**.

The available picture formats depend on the video source:



- **[Auto fill]:** Adjust the picture to fill the screen (subtitles remain visible). Recommended for minimal screen distortion but not for HD or PC.
- **[Auto zoom]:** Enlarge the picture to fill the screen. Recommended for minimal screen distortion but not for HD or PC.
- **[Super zoom]:** Remove the black bars on the sides of 4:3 broadcasts. Not recommended for HD or PC.
- **[4:3]:** Display the classic 4:3 format.
- **[Unscaled]:** Provide maximum detail for PC. Only available when PC mode is selected in the Picture menu.
- **[Movie expand 16:9]:** Scale 4:3 format to 16:9. Not recommended for HD or PC.
- **[Wide screen]:** Shows widescreen format content unstretched. Not recommended for HD or PC.
- **[16:9 stretch]:** Scale 4:3 format to 16:9.

---

## View program guide

---

### What you can do

You can view channel schedules and program synopses for digital TV channels using program guides provided by the broadcasters. The availability of program guides is dependent on your broadcaster.

You can view program guides through one of two methods:

- From the broadcaster
- From the Internet

You cannot view a channel's program guide information if:

- the age rating of the channel is equal or higher than the age rating set on your TV.
- the channel is locked.

---

## From the broadcaster

### Select broadcaster program guide

Before you use the program guide, check these settings:

1. Press **▲**.
2. Select **[Setup] > [TV settings] > [General settings] > [TV guide]**.
3. Select **[From the broadcaster]**, then press **OK**.

### Access broadcaster program guide

1. Press **▲**.
2. Select **[TV guide]**, then press **OK**.
3. If you are viewing the program guide for the first time, follow the onscreen instructions to update the guide.

### Customize broadcaster program guide

You can customize the displayed information to:

- Remind you when programs start.
- Display only preferred channels.
- Change day of display.
- Schedule recordings of programs. See **Use more of your TV > Record TV shows > Schedule recordings** (Page 28).

**Note:** Options may vary according to the program information available from the broadcaster.

1. In the program guide, press **III** **OPTIONS**.
2. Select an option, then press **OK**:
  - **[Acquire EPG data]:** Update program guide information.
  - **[Change day]:** Select the day to display program guide.
  - **[Search by genre]:** Search programs by genre.
  - **[All reminders]:** Display a list of all program reminders.

---

## From the Internet

Make sure that your TV is connected to the Internet through a high-speed broadband connection. See **Connect your TV >**

**Connect to a network and the Internet** (Page 58).

### Select Internet program guide

Before you use the program guide, check these settings:

1. Press **⬆**.
2. Select **[Setup] > [TV settings] > [General settings] > [TV guide]**.
3. Select **[From the Internet]**, then press **OK**.

### Access Internet program guide

1. Press **⬆**.
2. Select **[TV guide]**, then press **OK**.

**Note:** If you are viewing the program guide for the first time, follow the onscreen instructions to update the guide.

### Customize Internet program guide

You can use the program guide to:

- Schedule recordings of programs. See **Use more of your TV > Record TV shows > Schedule recordings** (Page 28).
- Identify channels.
- Select day of display.
- Reload and zoom into the program guide information.
- View security information.

**Note:** Options may vary according to the program information available from the broadcaster.

1. In the program guide, press **≡ OPTIONS**.
2. Select an option, then press **OK**:
  - **[Record]:** Set a scheduled recording.
  - **[Identify channel]:** Manually update channel information.
  - **[Select day]:** Select the day to display.
  - **[Manual record]:** Set a manual recording.
  - **[Reload page]:** Refresh the page display.
  - **[Zoom]:** Change zoom level of page display.
  - **[Security info]:** Display program security information.

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## Watch 3D

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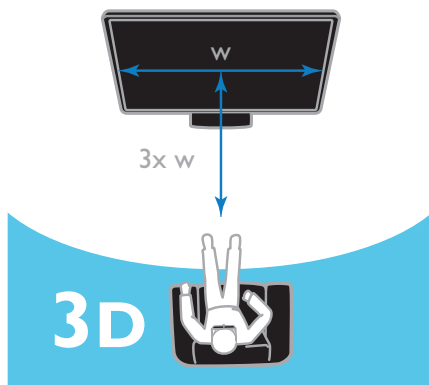
### What you need

Your TV is a 3D TV. Before you watch 3D, read the health warning information in **Important > Safety > 3D health warning** (Page 4).

To watch 3D on this TV, use the Philips Easy 3D passive glasses supplied with your TV.

#### Note:

- If you need additional glasses, purchase the Philips Easy 3D glasses, PTA417. 3D glasses from other brands may reduce or lose the 3D effect.
- Some 3D formats are not supported.



To experience the best 3D effect while you watch 3D programs:

- Sit at a distance that is at least three times the width (w) of the TV screen. Do not sit more than 6m away.

---

### Start 3D

#### Automatically enable 3D

The TV detects when 3D is available and prompts you to put on your 3D glasses to start watching. To set the response of the TV when a 3D signal is detected:

1. Press **⬆**.
2. Select **[Setup] > [TV settings] > [3D] > [Switch to 3D]**.
3. Select a setting, then press **OK**.

- **[Never]:** No notification.
- **[Notification only]:** TV displays notification first.
- **[Automatic]:** TV switches to 3D automatically.

### Select a source with 3D

For 3D discs:

1. Play the disc on a 3D Blu-ray disc player that is connected to the TV HDMI connector.
2. Press **☰ SOURCE**, then select the 3D Blu-ray disc player.

For 3D TV programs:

1. Select **[Watch TV]**, then switch to a TV channel that broadcasts 3D content.

**Note:**

- To switch back to 2D, press **3D**, then select **[2D]**.
- If you switch to another channel or a connected device, the TV switches to 2D.

### Select 3D input format

The TV detects when 3D is available and prompts you to put on your 3D glasses to start watching. If the TV cannot detect the 3D signal due to a missing 3D signal tag, it displays images that overlap.

To switch the overlapping images to 3D, change the 3D format.

1. Press **3D**.
  2. Select a setting, then press **OK**.
- **[3D - Side by side]:** Select if the TV displays pictures that overlap vertically.
  - **[3D - Top / bottom]:** Select if the TV displays pictures that overlap horizontally.
  - **[3D - Top / bottom inverted] or [3D - Side by side inverted]:** Select if the TV displays distorted images, such as the background appearing nearer to you.

### Convert 2D to 3D

You can convert any 2D program to watch it in 3D.

1. Press **3D**, then select **[2D to 3D conversion]**.

**To switch off 2D to 3D conversion:**

1. Press **3D**, then select **[2D]**.

**Note:** If you switch to another activity, the conversion stops.

**To adjust the 3D depth:**

1. Press **☰ OPTIONS**.
2. Select **[Picture and sound] > [3D effect]**.
3. Select an option, then press **OK**.

## Ambilight

### What you can do

Ambilight makes watching TV more relaxing. The light automatically changes to match the color and brightness of the TV picture.

### What you need



For the best Ambilight effect:

- Position the TV 25 cm away from the wall.
- Dim the light in the room.

### Switch on

1. Press **AMBILIGHT** on the remote control.
2. To switch Ambilight on or off, select **[On]** or **[Off]**.

---

## Switch on lounge light

To create a lounge light effect in your room, switch on Ambilight while the TV is in standby.

- While the TV is in standby, press **AMBILIGHT**.
- To toggle between Ambilight lounge light modes, press **AMBILIGHT** repeatedly.

**Note:** It may take more than five seconds for the lounge light to switch on.

---

## Change settings

1. While you watch TV, press **⬆**.
2. Select **[Setup] > [TV settings] > [Ambilight]**.
3. Select a setting, then press **OK**.
  - **[Mode]:** Select an Ambilight mode from **[Off]**, **[Dynamic]** or **[Static]**.
    - **[Off]:** Switch off Ambilight.
    - **[Dynamic]:** Select if you want Ambilight to respond to onscreen images.
    - **[Static]:** Select if you want to set a specific Ambilight color.
  - **[Brightness]:** Adjust Ambilight brightness.
  - **[Dynamic]:** Adjust the Ambilight response speed to the onscreen images. Available only if the selected Ambilight mode is **[Dynamic]**.
  - **[Static]:** Select the Ambilight color. This color is fixed and does not respond to changes in picture display. Available only if the selected Ambilight mode is set to **[Static]**.
    - **[Color]:** Select a predefined Ambilight color.
    - **[Custom color]:** Customize the Ambilight color. Available only if the selected Ambilight color mode is **[Custom]**.
  - **[Advanced]:** Select for more Ambilight settings.
    - **[Wall color]:** Select the color of your wall to apply suitable Ambilight settings.

- **[TV switch off]:** Select how Ambilight switches off when the TV is switched to standby.

- **[Lounge light mood]:** Select a predefined Ambilight color for a lounge light effect when the TV is switched to standby.

---

## Play multimedia files

---

### What you can do

You can play videos, photos, and music on your TV from:

- Your computer connected through the home network.
- A USB device connected to the TV.

**Note:** For information on file sharing through Wi-Fi Miracast™, see **Use more of your TV > Use Wi-Fi Miracast** (Page 30).

---

### Play files from computer

#### What you need

- A wired or wireless home network, connected with a Universal Plug and Play (uPnP) router.
- Optional: A LAN cable that connects your TV to your home network.
- A media server running on your computer.
- Appropriate settings on your computer firewall to allow you to run the media server.

#### Set up the network

1. Connect your TV and the computer to the same home network. See **Connect your TV > Connect to a network and the Internet** (Page 58).

2. Switch on your computer and the router.

#### Note:

If the apparatus does not return to DLNA mode due to external electrical disturbances (e.g. electrostatic discharge), user intervention is required.

## Set up media sharing

1. Install a media server on your computer to share media files. These are some media servers:

- **For PC:** Windows Media Player 11 (or higher) or TVeristy
- **For Mac:** Twonky

2. Switch on media sharing on your computer using the media server. For more information on how to set up the media server, refer to the website of the media server.

### Play files

1. Press **SOURCE**.
2. Select **[Browse network]**, then press **OK**.
3. Select a file from the media server, then press **OK** to start play.
4. Press the **Play buttons** to control play.
5. Optional: To select a different media server, select **[Media server]**.

---

## Play files from USB device

If you have photos, videos or music files on a USB storage device, you can play the files on TV.

### Caution:

- Do not overload the USB port. If you connect a USB storage device that consumes more than 500mA power, make sure that it is connected to its own external power supply.

### Browse USB device

1. Connect the USB device to the USB connector on the TV.
2. Press **SOURCE**, select **[Browse USB]**, and then press **OK**.
3. Select a file from the content browser, then press **OK** to start play.
4. Press the **Play buttons** to control play.
5. Optional: To select a different USB device, select **[USB device]** at the bottom of the TV screen.

### Tips:

- Select the top bar to filter your files by type.
- Select **[Sort]** to arrange the files by name, date, or other fields.

---

## Play options

### Watch video

1. Select **■** in the top bar.
2. Select a video, then press **OK**.
3. Optional: To play all the videos in a folder, select a video, then select **[Play all]**.
  - To skip to the next or previous video, press **CH+** or **CH-**.
  - To pause the video, press **OK**. Press **OK** again to resume playback.
  - To skip forward or backward 10 seconds, press **▶** or **◀**.
  - To search forward or backward, press **▶▶** or **◀◀**. Press the button repeatedly to toggle between different speeds.
  - To stop the video, press **■**.

### Video options


While you play video, press **≡ OPTIONS**, then press **OK** to select an option:

- **[Subtitles]:** Switch on or off closed captions. You can also select to display the closed captions only when the TV is muted.
- **[Audio language]:** Select an audio language.
- **[Repeat]:** Select **[Repeat]** to play the video file repeatedly or **[Play once]** to play the video file once.
- **[Media server]:** When you play content from a media server, you can select another media server.
- **[Shuffle on] / [Shuffle off]:** Enable or disable random play of video files.
- **[DivX(R) VOD]:** Display the DivX registration and deregistration codes for this TV.

### Note:

To view information about a video (for example, played position, duration, title, or date), select the video, then press **□ INFO**. To hide the information, press **□ INFO** again.

## Listen to music

1. Select  in the top bar.
2. Select a track, then press **OK**.
3. Optional: To play all the tracks in a folder, select a track, then select **[Play all]**.
  - To skip to the next or previous track, press **CH+** or **CH-**.
  - To pause the track, press **OK**. Press **OK** again to resume playback.
  - To skip forward or backward 10 seconds, press **▶** or **◀**.
  - To search forward or backward, press **▶▶** or **◀◀**. Press repeatedly to toggle between different speeds.
  - To stop the music, press **■**.

## Music options

While you play music, press **≡** **OPTIONS**, then press **OK** to select an option:

- **[Repeat]**: Select **[Repeat]** to play a track or an album repeatedly, or select **[Play once]** to play a track once.
- **[Media server]**: When you play content from a media server, you can select another media server.
- **[Shuffle on]** / **[Shuffle off]**: Enable or disable random play of tracks.

## Note:

To view information about a song (for example, title, artist or duration), select the song, then press **ⓘ** **INFO**.

To hide the information, press **ⓘ** **INFO** again.

## View photos

1. Select  in the top bar.
2. Select a photo thumbnail, then press **OK**.

## Start a slideshow

If there are multiple photos in a folder, select a photo, then select **[Play all]**.

- To stop the slideshow or close the photo, press **≡** **LIST** or **■**.

## Slideshow options

While you play a slideshow, press **≡** **OPTIONS**, then press **OK** to select an option:

- **[Shuffle off]** / **[Shuffle on]**: Enable or disable random display of pictures in the slideshow.
- **[Repeat]**: Select **[Repeat]** to watch a slideshow repeatedly or **[Play once]** to watch once.
- **[Slideshow time]**: Select the display time for each photo in the slideshow.
- **[Slideshow transitions]**: Select the transition from one photo to the next.
- **[Media server]**: When you play content from a media server, you can select another media server.

---

## Play DivX® VOD (Video On Demand)

This TV is DivX Certified(R) and plays high-quality DivX Video-On-Demand videos.

To play DivX VOD videos from a video store or from your computer, you must first activate DivX VOD on the TV. The DivX VOD activation of your TV is free of charge.

## Register the TV

If the TV is not yet activated when you start the playback of a rental DivX video, the TV displays the DivX registration code to activate this TV.

To register, follow these steps.

1. When the TV displays the 8 or 10-digit registration code, write down the code and go to <http://vod.divx.com>.
2. Download the DivX player software on your computer and install the software.
3. Start the DivX player software and create a DivX Account: Click **VOD > Create a DivX Account**.
4. In the DivX player, register the TV with the registration code of the TV: Click **VOD > Register a DivX Certified Device**.
5. When prompted, download and save the registration video to a USB flash drive or your connected media server.
6. Go to your TV and play the registration video on your TV. This completes the registration and activates DivX on your TV.

Consult the DivX website for detailed support.

#### To de-register this TV:

1. Press **SOURCE**.
2. Select **[Browse USB]**, then press **OK**.
3. Press **OPTIONS**, select **[DivX(R) VOD]**, and then press **OK**.
4. Follow the onscreen instructions.

## Smart TV

### What you can do

With Internet Applications (apps), which are specially adapted Internet websites for your TV, you can enjoy these features and more:

- Read newspaper headlines
- Watch and rent videos
- Check weather forecasts
- Catch up with TV programs that you missed

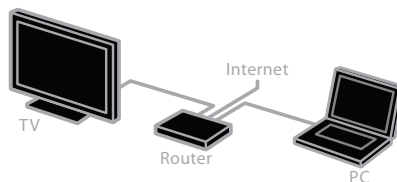
Find out more about Smart TV services from the Smart TV forum website, [www.supportforum.philips.com](http://www.supportforum.philips.com).

#### Note:

- Smart TV services and apps vary from country to country.
- Availability of catch-up TV apps and their TV programs is subject to the country setting of your TV. To find out which TV programs are available, access the program guide within the app.
- Smart TV displays one page at a time, in full screen view.
- Certain websites may not display completely. Functions that require plug-ins may be unavailable.
- TP Vision Netherlands B.V. bears no responsibility regarding the content and the quality of the content provided by the content service providers.

### What you need

1. On your home network, connect the TV to the Internet.
2. On your TV, configure Smart TV.
3. Optional: On your PC, register with Philips to enjoy exclusive benefits and receive updates on product information. You can register at any time.



### Connect the TV to the Internet

1. On your home network, connect a router with a high-speed connection to the Internet.
2. Switch on the router.
3. Install the network. See **Connect the TV > Connect to a network and the Internet** (Page 58).

### Start Smart TV

1. Press **SMART TV**.

The terms and conditions of use are displayed.

2. Follow the onscreen instructions to complete registration.

**Note:** The first time you start Smart TV, a prompt asks if you want to enable parental control to lock adult apps. If you lock an adult app, advertisements and web pages that are not adapted for Smart TV remain accessible.

### Access Smart TV apps

You can access apps through the Smart TV home page. The icons on this page represent the apps installed on your TV.

To access an app, select the app, then press **OK** to confirm.

## Add apps

1. Select **[App Gallery]**, then press **OK**.
2. Select an app, then press **OK** to add it to your home screen.
3. Follow the onscreen instructions to add the app.

### Tips:

- You can search for apps available in other countries.
- To return to the Smart TV home page, press **≡ LIST**.

**Note:** Smart TV services are updated automatically. To view the latest updates, in **[App Gallery]**, select **[All]**, then change to **[New]**.

## Access websites

1. Select an Internet app, then press **OK**.
2. Select the web address field, then press **OK**.

A keyboard appears on the screen.

3. For each character of the web address, select the character, then press **OK**.

**Tip:** You can also use the **Numeric buttons** on the TV remote control to enter a web address.

## Zoom page

To zoom in and out on an Internet page, do the following:

1. Press **≡ OPTIONS**, then select **[Zoom]**.
2. Use the slider bar to set the enlargement.
3. Use the **Navigation buttons** to jump between highlighted items and scroll through an Internet page.

## Scroll pages

Press the **Navigation buttons** **▲** and **▼** to scroll up and down on a web page.

## Reload page

If a page does not load correctly, press **≡ OPTIONS**, then select **[Reload page]**.

## View security info

To view security information about a page, press **≡ OPTIONS**, then select **[Security info]**.

---

## Smart TV options

### Clear Smart TV memory

You can clear the Smart TV memory completely, including your favorites, parental control code, passwords, cookies, and history.

**Warning:** This option resets the Smart TV memory completely. It also deletes the settings of other interactive applications such as DTVi (Digital TV interactive).

1. Press **▲**.
2. Select **[Setup]** > **[Network settings]**.
3. Select **[Clear Internet memory]**, then press **OK**.

---

## Rent online videos

### What you need

Make sure that your TV is connected to the Internet through a high-speed broadband connection. See **Connect your TV > Connect to a network and the Internet** (Page 58).

### Access a video store

1. Press **SMART TV**.
2. Access the **[App Gallery]** to search for available video store apps in your country.
3. Select a store, then press **OK** to confirm. The icon of the video store is added to the home page.
4. To access a store, select its icon and press **OK**.

### Rent a video

Follow the onscreen instructions to rent and watch the video.

1. Open a video store app. You may need to register or enter your log-in information.
2. Select a video.
3. Make the online payment.
4. Start watching the video.



---

## Interactive TV

---

### What you can do

With interactive TV, you can view additional information or entertainment pages provided by digital TV broadcasters. You can experience true interactivity by responding directly to the digital content.

**Note:** You cannot download files to your TV with this feature.

Broadcasters use various interactive TV systems such as:

- HbbTV (Hybrid Broadcast Broadband TV)
- iTV (Interactive TV - MHEG)
- MHP (Multimedia Home Platform)
- DTVi (Digital TV interactive)

Visit the broadcaster's website for more information to see which interactive system is available in your country.

Here are some examples of interactive activities you can enjoy:

- View information about TV programs
- Join a quiz or contest
- Play games
- Shop online
- Pay for a video-on-demand (VOD) program
- Vote
- Chat

---

### What you need

To enjoy this service, you need:

- Digital channels with interactive services
- A wired or wireless home network, connected through a Universal Plug and Play router (uPnP).

For network connection, see **Connect your TV > Connect to a network and the Internet** (Page 58).

---

## Access interactive TV

You can identify channels that offer interactive services by a message that invites you to press the **Red button** or **OK** to access an interactive program.

1. Switch to a digital channel with interactive services.

When the application is loading, a blinking symbol is displayed. When the application has loaded, an icon is displayed.

2. Press the **Red button** or **OK** to launch the interactive application.

3. Follow the onscreen instructions and use your remote control to navigate the interactive pages.

# 3 Use more of your TV

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## Pause TV

---

### What you can do

While you watch a digital channel, you can pause a program to answer a phone call or to have a break. The broadcast is stored on a USB hard drive that is connected to the TV. You can resume playback of the program at any time.

#### Note:

- You can pause a program for a maximum of 90 minutes.

---

### What you need

- Tune your TV to receive digital channels. See **Change your TV settings > Channels > Automatic installation** (Page 39).
- Connect a USB 2.0 compatible hard drive with a minimum capacity of 4 GB and a minimum transfer speed of 30 megabits per second. For optimal performance, use a hard drive with 32 GB disk space.

---

### Install USB hard drive

To pause TV, you must connect a USB hard drive to the TV and format it.

If the TV does not recognize the USB hard drive, use a PC to format it to NTFS or FAT32 system, and then try again.

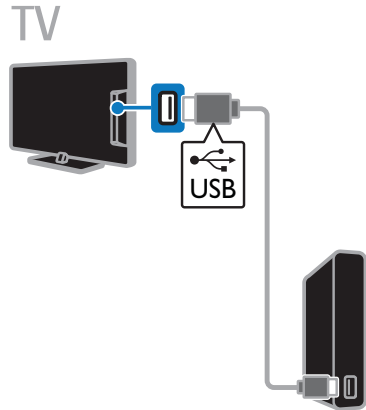
#### Caution:

- Formatting removes all data from the connected USB hard drive.
- The USB hard drive is formatted exclusively for this TV. Keep it permanently connected to the TV. You cannot access the contents of the USB hard drive from another TV or PC.

- Do not overload the USB port. If you connect a USB hard drive device that consumes more than 500mA power, make sure that it is connected to its own external power supply.

#### Note:

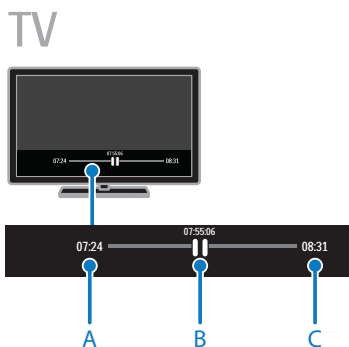
- Make sure that the TV and the USB hard drive are switched off.
- While you are formatting the USB hard drive, do not connect other USB devices to the TV.



1. Connect the USB hard drive directly to the TV, or if you intend to connect other USB devices in future, connect the USB hard drive through a USB hub.
2. Switch on the TV and the USB hard drive, if it has an external power source.
3. Switch to a digital TV channel.
4. Press **III** to start formatting the USB hard drive.
5. Follow the onscreen instructions to complete the formatting process.

**Warning:** The formatting process may take some time. Do not switch off the TV or disconnect the USB hard drive until this process is complete.

## Pause a live TV broadcast



1. On a digital channel, press **||** to pause a TV program.
2. Press **▶** to continue watching.

The status bar shows these time indicators:

**A.** When the program was paused for the first time.

**B.** Where the paused program is currently playing.

**C.** Where the live program is currently broadcast.

- To watch the stored broadcast, press **◀◀** or **▶▶** to search backward or forward.
- To change playback speed, press **◀◀** or **▶▶** repeatedly.
- To watch the live TV broadcast, press **■**.

**Note:** If a recording is in progress, you cannot pause the TV broadcast.

### The stored broadcast on the USB hard drive is deleted if you:

- Disconnect the USB hard drive.
- Start recording a TV program.
- Access Smart TV.
- Switch the TV to standby.
- Switch to another channel.
- Switch source to watch from a connected device, such as a Blu-ray disc player or digital receiver.

## Record TV shows

### What you can do

If your TV can receive program guides, you can record TV programs onto a USB hard drive. You can record both current TV programs as well as future TV programs.

#### Note:

Recording is only supported in countries with Internet program guides.

### What you need

- Tune your TV to receive digital TV channels such as DVB broadcasts. See **Change your TV settings > Channels > Automatic installation** (Page 39).
- Connect a USB 2.0 compatible hard drive with a minimum capacity of 32 GB and a minimum transfer speed of 30 megabits per second. For optimal performance, use a hard drive with 250 GB disk space. You can use the same USB hard drive to record and pause TV shows.

### Install USB hard drive

To record TV shows, you must connect a USB hard drive to the TV and format it.

If the TV does not recognize the USB hard drive, use a PC to format it to NTFS or FAT32 system, and then try again.

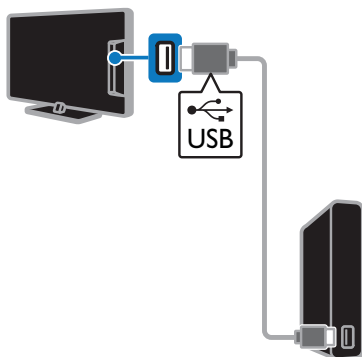
#### Caution:

- Formatting removes all data from the connected USB hard drive.
- The USB hard drive is formatted exclusively for this TV. Keep it permanently connected to the TV. You cannot access the contents of the USB hard drive from another TV or PC.
- Do not overload the USB port. If you connect a USB hard drive device that consumes more than 500mA power, make sure that it is connected to its own external power supply.

## Note:

- Make sure that the TV and the USB hard drive are switched off.
- While you are formatting the USB hard drive, do not connect other USB devices to the TV.

## TV



1. Connect the USB hard drive directly to the TV, or if you intend to connect other USB devices in future, connect the USB hard drive through a USB hub.
2. Switch on the TV and the USB hard drive, if it has an external power source.
3. Switch to a digital TV channel.
4. Press **||** to start formatting the USB hard drive.
5. Follow the onscreen instructions to complete the formatting process.

**Warning:** The formatting process may take some time. Do not switch off the TV or disconnect the USB hard drive until this process is complete.

---

## Start recording



### One-touch recording

You can record the program you are currently watching with a single button.

1. While you watch TV, press **●**. Recording starts immediately. A pop-up window is displayed, indicating the end time of the program.
2. Optional: Use the **Navigation buttons** to mark the end time of the recording.
3. Select **[Confirm]**, then press **OK**.
4. To stop recording, press **■**.

### Note:

- While recording, you cannot switch TV channels or pause a TV broadcast.
- If TV guide information is not available, a default time of 30 minutes is set for recording. You can change this if needed.

---

## Schedule recordings

### View program information

Depending on the status of a program, you can start watching it or schedule to record the program.

1. Press **▲**.
2. Select **[TV guide]**.
3. Select a channel and program, then press **OK**.

The program information is displayed.

**Note:** If you schedule recordings while you are away, make sure that you leave the TV in standby and keep the USB hard drive switched on.

## Schedule a TV program recording

You can schedule a recording of an upcoming program that will be broadcast today or up to eight days later. You can also schedule a timed recording that is not linked to any program, if program guide information is not available.

1. Press **🏠**, then select **[TV guide]**.
2. Select the channel and program to record.
3. Optional: To record a program that will be broadcast on another day: press **⏏** **OPTIONS**, select **[Select day]**, then select another day.
4. Select **[Record]**.  
A pop-up window is displayed.
5. Select and change the recording details with the **Numeric buttons** and **Navigation buttons**.
6. Select **[Confirm]**, then press **OK**.

## Change a scheduled recording

1. Press **🏠**.
2. Select **[Recordings]**, then press **OK**.  
A list of scheduled recordings is displayed.
3. Select the recording, then select **[Adjust time]**.
4. Change the recording time as needed, then select **[Confirm]**.

## Cancel a scheduled recording

1. Press **🏠**.
2. Select **[Recordings]**, then press **OK**.  
A list of recordings is displayed.
3. Select the recording, then select **[Remove]**.  
The schedule recording is canceled.

---

## Watch recordings

1. Press **🏠**.
2. Select **[Recordings]**, then press **OK**.  
A list of recordings is displayed.
3. Select a recording from the list, then press **OK**.  
The recording starts to play.

## Sort recordings

1. Press **🏠**.
2. Select **[Recordings]**, then press **OK**.  
A list of recordings is displayed.
3. Press **⏏** **OPTIONS**.
4. Select an option to sort by name, date, expiry date or type, then press **OK**.

## Note:

- If a broadcaster limits the number of days a recording can be viewed after the program is broadcast, the list of recordings shows the number of days before the recording expires.
- If a recording has expired or if a broadcaster restricts playback, the recording cannot be played.
- If a scheduled recording is prevented by the broadcaster or if the recording does not occur as per schedule, it is marked as **[Failed]** in the recordings list.

---

## Delete recordings

You can view a list of all recordings and the remaining USB hard disk space. To free up disk space, delete recordings.

1. Press **🏠**.
2. Select **[Recordings]**, then press **OK**.  
A list of recordings is displayed.
3. Select the recording, then select **[Remove]**.

---

## Use Wi-Fi Miracast

---

### What you can do

Your TV is a Wi-Fi Certified Miracast™ device. With Miracast, you can watch and share the screen of your smartphone, tablet or computer on your TV screen wirelessly. You can stream videos, share photos or anything else that is on the screen of your device, without needing to connect the device to your home network. For more information about Miracast, visit <http://www.wi-fi.org>.

### Note:

- Miracast on this TV is subject to the HDCP protocol and cannot display copy-protected premium content shared by your device.
- You cannot share video with a resolution greater than 720p.

---

### What you need

The device you want to share needs to support both Wi-Fi Direct™ and Miracast. Check your device's specifications or user documentation for details.

---

### Switch on Miracast

1. Press **⏠**.
2. Select **[Setup]** > **[Network settings]** > **[Wi-Fi Miracast]**.
3. Select **[On]**, then press **OK** to enable Miracast.

---

### Switch off Miracast

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

1. Press **⏠**.
2. Select **[Setup]** > **[Network settings]** > **[Wi-Fi Miracast]**.
3. Select **[Off]**, then press **OK**.

---

## Share a screen on TV

1. On your device, enable Wi-Fi Miracast, Wi-Fi Direct or similar (for example, 'screen mirroring').

The device starts scanning for other Miracast devices.

2. In the list of found devices, select your TV to connect to it.

3. A prompt appears on the TV asking for permission to connect to the device. Press **OK** to connect.

When pairing is successful, the TV displays the screen of the device.

4. On the device, select the video, photo or multimedia file that you want to watch on the TV.

**Note:** Depending on the processing power of your device, there may be some latency between your device display and what you see on the TV screen.

---

## Stop sharing

### From the device

Switch off Miracast, Wi-Fi Direct or similar (for example, 'screen mirroring') on your device. The TV switches back to the last selected program.

### From the TV

To stop watching the screen of the device on TV, press one of the following buttons on your TV's remote control:

- **EXIT**.
- **TV** to watch a TV broadcast.
- **SOURCE** to watch from a connected device.

---

## Block a new device

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

To block a device, select **[Block]** when prompted.

---

## Unblock all devices

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

1. Press **⏠**.
2. Select **[Setup]**, then press **OK**.
3. Select **[Network settings]** > **[Clear Wi-Fi Miracast devices]**, and then press **OK**.
4. Select **[Yes]**, then press **OK**.

---

## Blocking a previously connected device

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

1. Press **⏠**.
2. Select **[Setup]**, then press **OK**.
3. Select **[Network settings]** > **[Clear Wi-Fi Miracast devices]**, and then press **OK**.
4. Select **[Yes]**, then press **OK**.

---

## Use Skype™

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### What you can do

- Talk to anyone else on Skype, anywhere in the world, for free.
- Make low-cost calls to phones and mobiles. A Skype subscription is required. Visit [www.skype.com](http://www.skype.com).
- Participate in conference calls.
- Send and receive voicemails.
- Forward a call.
- Manage your online status, 'mood' message, and profile information.

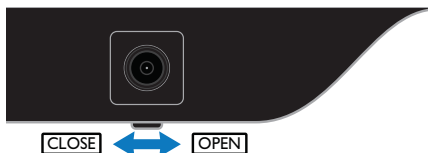


### Note:

- No emergency calls with Skype. Skype is not a replacement for your telephone and cannot be used for emergency calls.
- This TV comes with Skype pre-installed on it and ready to use. You do not need to install or download any files for using Skype. Simply connect a Philips TV video camera to use Skype.

---

### What you need



- For Skype integrated sets (PFL80x8G): Slide open the Skype camera at the base of the TV panel.
- For non-Skype integrated sets: A Philips TV video camera, PTA317/00 (sold separately), with built-in microphone. See **Connect your TV > Connect more devices > Video call camera**.
- An Internet connection.
- A wired or wireless home network. For network connection, see **Connect your TV > Connect to a network and the Internet** (Page 58).
- A Skype account. You can create a Skype account on this TV or from your computer.

**Tip:** If you have connected a USB keyboard to this TV, you can enter text from your keyboard. For keyboard connections, see **Connect your TV > Connect more devices > Keyboard and mouse** (Page 54).

---

### Start Skype

#### Sign in to your account

1. Press **⏠**, then select **[Skype]**.
2. Enter your **[Skype name]** and **[Password]**. To enter text, select each field and press **OK** to access the onscreen keyboard.
3. Select **[Sign in]**, then press **OK**. The Skype menu is displayed.

**Tip:** If you have forgotten your password, start Skype on your computer. Visit [www.skype.com](http://www.skype.com) to retrieve your password.

### Create an account

If you do not have a Skype name and password, you can create an account from your TV.

1. Select **[Don't have a Skype Name?]**, then press **OK**.
2. Read the Skype End User License Agreement, Terms of Service and Privacy Statement. Once complete, select **[Accept]** and press **OK**.
3. When prompted, add information about your name, Skype name, password and email address.
4. Once complete, select **[Create an account]** and press **OK**.

Your new account is accepted and you are signed in.

If prompted, follow the onscreen instructions to make changes to the entries.

### Sign out from Skype

In the Skype menu, select **[Sign Out]**, then press **OK**.

---

## Manage contacts

You can add and view contacts that are online or offline. You can also block or unblock a selected contact.

### Add a contact

1. In the Skype menu, select **[Contacts]**, then press **OK**.
2. Press **≡ OPTIONS**, then select **[Add Skype contact]** or **[Add SkypeOut Contact]**.
3. Press **OK** to display the onscreen keyboard.
4. Follow the onscreen instructions to enter the details.  
A list of profiles is displayed.
5. Select a contact, then press **OK**.

An invitation request is sent to the contact. The contact name appears offline until the contact accepts the request.

### Accept a contact request

Other Skype users can invite you to be on their contact list. You will be notified of their request, which you can accept or decline.

### Rename a contact

1. In the Skype menu, select **[Contacts]**, then press **OK**.
2. Select a contact, then press **≡ OPTIONS**.
3. Select **[Rename]**, then press **OK**.
4. Follow the onscreen instructions to edit the information.

### Block a contact

1. In the Skype menu, select **[Contacts]**, then press **OK**.
2. Select the contact, then press **≡ OPTIONS**.
3. Select **[Block]**, then press **OK**. When prompted, select **[Yes]** then press **OK**.

### Unblock a contact

1. In the Skype menu, select **[Settings] > [Blocked Contacts]**.
2. Select the blocked contact, then press **OK**.
3. Follow the onscreen instructions to unblock the contact.

### Contact info

To view the details of a contact, select a contact. The contact details are displayed on the right of the TV screen.

### Contact history

To view the calls which you have had with a contact, select **[History]**.

To open previous conversations, select a conversation and press **OK**.

**Note:** When you sign in with another Skype account on this TV, the history of your previous account is cleared.

### Online status

To see if a contact is online, check the online status icon next to the contact. Your online status is also shown on your contacts' page.

To change your online status:

1. In the Skype menu, select your Skype name, then press **OK**.
2. Select **[Online Status]**, then press **OK**.
3. Select a status, then press **OK**.



## Make voice and video calls

### Make a voice call

You can make a Skype call without video.

**Note:** Make sure that a video camera is connected for voice calls also.

1. In the Skype main menu, select **[Contacts]**, then press **OK**.
2. Select the contact, then press **OK**.
3. Select **[Call]**, then press **OK**.

### Voice call options

During a call, press **≡ OPTIONS** to access these options:

- **[Mute]:** Mute the microphone.
- **[Hold]:** Put the call on hold.
- **[End call]:** End the call.
- **[Dial pad]:** Access the dial pad.
- **[Start My Video]:** Start video camera.

### Make a video call

With video calls, you can talk face-to-face with live video from your TV for free.

1. From the Skype menu, select **[Contacts]**, then press **OK**.
2. Select the contact, then press **OK**.
3. Select **[Video call]**, then press **OK**.

### Full screen view

If your contact has a camera connected and accepts the call, you can see the person on your TV, in full screen. To check what your contact can see, view the display in the small screen on your TV.

1. During the call, press **≡ OPTIONS**.
2. Select **[Full view]**, then press **OK**.

### Zoom and pan your video

1. In **[Full view]**, select **[Zoom] +/-** to zoom in or zoom out.

A zoom and pan icon appears above the video display.

2. Use the **Navigation buttons** on the remote control to pan or tilt the camera.

### Video call options

During a video call, press **≡ OPTIONS** to access these options:

- **[Full view]:** See your contact in full screen view.
- **[Dial pad]:** Access dial pad.

- **[Hold]:** Put the call on hold. Full view will be stopped.
- **[Mute]:** Mute the microphone.
- **[Stop My Video]:** Stop the video feed to your contact's screen.

### Call a phone

With Skype, you can call land line phones and mobile phones.

#### **Note:**

No emergency calls with Skype. Skype is not a replacement for your telephone and cannot be used for emergency calls.



Before you can make a call, you will need to purchase Skype Credits or buy a Skype subscription on your computer. For more information, see **Use more of your TV > Use Skype > Skype settings**. (Page 34)

1. In the Skype menu, select **[Call phones]**, and then press **OK**.
2. Select **[Dial pad]** to access the onscreen dial pad or enter the telephone number with the **Numeric buttons**.
3. Once complete, select **[Call]**, and then press **OK** to start the call.
4. Optional: To mute your microphone during your call, press **≡ OPTIONS**, and then select **[Mute]**.
5. To end the voice call, select **[End call]**, and then press **OK**.

### Answer a call

If you are signed in to Skype, you are notified of incoming calls while watching TV.

1. A message appears onscreen with the caller's name. Select **[Answer]**, then press **OK**.

To enable video, select **[Answer with video]**, then press **OK**.

2. To decline, select **[Decline]**, and then press **OK**.

## Note:

If you accept a call while pausing or recording a TV program is paused, or while watching rental movies, Skype will interrupt the on-going activity.

- A paused TV program is stopped and the program storage is lost.
- Recording of a TV program is stopped. You will need to resume recording again after you finish the call.
- Playback of rental movies is stopped. To resume watching the rented movie, you need to go back to the video store or broadcast service. Some video stores and services do not allow you to restart the movie.

---

## Manage voicemails

If someone calls you on Skype and you are offline, they can leave a voice message in your Skype voicemail.

Before you can receive voicemail, you need to activate voicemail in your Skype account — this can only be done on your computer.

### Play voicemail

1. In the Skype menu, select **[History]** and press **OK**.
2. Select **[Voicemails]**, then press **OK**.
3. Select the voicemail, then press **OK** to play it.

### Delete voicemails

1. Select the voicemail from the list and press **III OPTIONS**.
2. Select **[Delete voicemail]**, then press **OK**.

---

## Skype settings

### Skype Credit

With Skype Credit, you can call land lines or mobile phones on your TV. To purchase Skype Credit, you need to log in to your Skype account on your computer. The amount of Skype Credit you purchase will appear when you log in to your Skype account on your TV.

## Automatic sign in

1. In the Skype menu, select **[Settings]**, and then press **OK**.
2. Select **[General settings]** > **[Sign me in when Skype starts]**, then press **OK**.

## Change your profile picture

1. In the Skype menu, select your **Skype name**, then press **OK**.
2. Select **[Profile picture]**, then press **▶**.
3. Choose a picture, select **[Apply]**, and then press **OK**.

## Change your Skype password

1. In the Skype menu, select **[Settings]**, then press **OK**.
2. Select **[Change Password]**, then press **▶**.
3. Follow the onscreen instructions to enter your current and new passwords.
4. Once complete, select **[Apply]** and then press **OK**.

---

## Play games

---

### What you can do

On this TV, you can play single or two-player games, in full-screen with optimized picture settings for games.

---

### What you need



- Connect your game console to this TV. See **Connect your TV > Connect devices > Game console** (Page 49). If the TV automatically adds the game console to the Source menu, it also applies the Game sound preset when you start playing games.
- A two-player kit (PTA436) for two-player full-screen gaming. The kit comes with two pairs of gaming glasses, labeled **PLAYER 1** or **PLAYER 2**.

---

## Start gaming

1. Press **SOURCE**.
2. Select the game console, then press **OK**.
3. If needed, load a game disc on the game console, then select a game to play.
4. Follow the onscreen instructions to start gaming.

---

## Start two-player full-screen gaming

Some games offer multi-player and split-screen gaming. The 3D technology of this TV can display the split-screens as two full screen views. With the two-player gaming glasses, each player can experience different views on the same TV.

1. Press **SOURCE**.
2. Select the game console, then press **OK**.
3. If needed, load a game disc on the game console.
4. On the game console, select a multi-player or two-player game, then select split-screen viewing.
5. Press **OPTIONS** on the TV remote control.
6. Select **[Picture and sound] > [Two-player gaming]**.
7. Select **[Top / bottom]** or **[Side by side]**, then press **OK**.
8. Put on the two-player glasses to view the different screens.
9. To exit, press **HOME** twice.

**Tip:** To view game menus or scores, press **OK** to switch viewing mode.

---

## Game settings

### Picture setting for games

You can optimize the TV display for gaming without picture lag.

1. Press **HOME**.
2. Select **[Setup] > [TV settings] > [Picture]**, then press **OK**.
3. Select **[Game or computer] > [Game]**.

### Sound preset for games

You can optimize sound effects for gaming.

1. Press **OPTIONS**.
2. Select **[Picture and sound] > [Sound style] > [Game]**, then press **OK**.

The TV is ready for gaming.

**Note:** When your gaming session ends, switch back to your usual sound setting.

---

## Set locks and timers

---

### Clock

You can display a clock on the TV. The clock displays the time that is broadcast by your TV service operator.

#### Display the TV clock

1. While you watch TV, press **OPTIONS**.
2. Select **[Clock]**, then press **OK**.

The clock is displayed on the top right-hand corner of the TV screen.

#### Change the clock mode

You can change the clock mode to automatic or manual. By default, it is set to automatic mode, which automatically synchronizes it to Coordinated Universal Time (UTC). If your TV cannot receive UTC transmissions, change the clock mode to **[Manual]**.

1. While you watch TV, press **HOME**.
2. Select **[Setup] > [TV settings] > [General settings]**.
3. Select **[Clock] > [Auto clock mode]**.
4. Select **[Automatic]** or **[Manual]**, then press **OK**.

#### Change the time zone

In countries with clock transmission data, you can change the time zone if **[Auto clock mode] > [Automatic]** is selected.

1. In the **[Clock]** menu, select **[Time zone]**.
2. Select your time zone, then press **OK**.

---

## Set the clock manually

You can set the date and time manually. Before you start, set the clock mode to **[Manual]**.

1. In the **[Clock]** menu, select **[Date]** or **[Time]**, then press **OK**.
2. Set the time or date with the **Navigation buttons**.
3. Select **[Done]**, then press **OK**.

---

## Sleep timer

You can switch the TV to standby after a specified time. During the countdown to the specified time, you can switch off your TV earlier or reset the sleep timer.

1. Press **⬆**.
2. Select **[Setup] > [TV settings] > [General settings] > [Sleep timer]**.
3. Select the sleep timer duration. The sleep timer can be set up for to 180 minutes. To switch off the sleep timer, set it to zero minutes.
4. Press **OK** to activate the sleep timer. After the specified time, the TV switches to standby.

---

## Child lock

To protect children from unsuitable TV programs, you can lock the TV or block age rated programs.

### Set or change the child lock code

1. Press **⬆**.
2. Select **[Setup] > [Channel settings] > [Child lock]**.
3. Select **[Set code]** or **[Change code]**.
4. Enter the code with the **Numeric buttons**.

**Tip:** If you access the channels from the channel list, you are prompted to enter your lock code. If you forget your code, enter '8888' to override any existing codes.

---

## Age rating

You can set your TV to display only programs with age ratings lower than your child's age. This restriction only applies to digital channels from broadcasters that rate their programs according to age.

1. Press **⬆**.
2. Select **[Setup] > [Channel settings]**.
3. Select **[Child lock] > [Age ratings lock]**. You are prompted to enter the child lock code.
4. Enter the child lock code with the **Numeric buttons**.
5. Select an age rating, then press **OK**. All programs above the selected age rating are blocked.

For information on child lock codes, see **Use more of your TV > Set locks and timers > Child lock**.

---

## Content rating

You can block programs with objectionable content.

1. Press **⬆**.
2. Select **[Setup] > [Channel settings]**.
3. Select **[Child lock] > [Content ratings lock]**. You are prompted to enter the child lock code.
4. Enter your code with the **Numeric buttons**.
5. Select the content to block, then press **OK**. The selected content is blocked.

# 4 Change your TV settings

## Picture and sound

### Settings assistant

You can select picture and sound settings with the help of the settings assistant, which demonstrates the effect of your chosen setting immediately.

1. While you watch TV, press **⏠**.
2. Select **[Setup]** > **[Quick picture and sound settings]**, then press **OK**.
3. Select **[Continue]**, then press **OK**.
4. Follow the onscreen instructions to choose your preferred settings.

### More picture settings

You can change the settings in the Picture menu.

1. Press **⏠**.
2. Select **[Setup]** > **[TV settings]** > **[Picture]**, then press **OK**.
3. Select a setting to change, then press **OK**.

- **[Picture style]**: Select a predefined picture setting.
- **[Backlight contrast]** / **[3D backlight contrast]**: Adjust the brightness of the display backlight.
- **[Color]**: Adjust the color saturation of the picture.
- **[Sharpness]**: Adjust the sharpness of the picture.
- **[Noise reduction]**: Select the amount of noise reduction for the picture.
- **[MPEG artifact reduction]**: Smoothen transitions and haziness in the digital picture.

- **[Pixel Precise HD]**: Fine-tune each pixel to match surrounding pixels and produce a brilliant, high-definition image.
  - **[HD Natural Motion]**: Remove motion judders.
  - **[Clear LCD]**: Enable superior motion sharpness, better black level, high contrast with a flicker-free, quiet image and a larger viewing angle.
  - **[Advance sharpness]**: Enable superior sharpness, especially on lines and contours in the picture.
  - **[Dynamic contrast]**: Dynamically enhance the details in the dark, medium, and light areas of the picture.
  - **[Dynamic backlight]**: Select a backlight level to optimize dynamic power consumption and picture contrast.
  - **[Color enhancement]**: Dynamically enhance the vividness and details of colors.
- **[Advanced]**: Access advanced settings such as gamma, tint settings and video contrast settings.
  - **[Light sensor]**: Adjust the brightness of the TV screen automatically according to the lighting conditions of the room.
  - **[Gamma]**: Adjust the non-linear setting for picture luminance and contrast.
  - **[Color temp.]**: Select a predefined color temperature.
  - **[Custom color temp.]**: Customize color temperature setting. Only available if **[Color temp.]** > **[Custom]** is selected.
  - **[Video contrast]** / **[3D video contrast]**: Adjust video contrast.
  - **[Brightness]**: Adjust screen brightness.
  - **[Tint]**: Adjust tint.

- **[Game or computer]:** When viewing content from a connected game console, select **[Game]** to apply game settings. When a computer is connected through HDMI, select **[Computer]**. Make sure that **[Format and edges] > [Picture format] > [Unscaled]** is selected to view maximum detail.
- **[Format and edges]:** Access advanced settings to control the display format of the picture.
  - **[Picture format]:** Change the picture format.
  - **[Screen edges]:** Change the picture size.
  - **[Picture shift]:** If available, move the position of the picture.
- **[Advanced]:** Access advanced settings to enhance your audio experience.
  - **[Auto volume leveling]:** Enable the reduction of sudden volume changes, for example, when switching channels.
  - **[TV speakers]:** Select the preferred speakers to stream audio from the TV. See **Connect your TV > Set up EasyLink devices > Select speaker output** (Page 57).
  - **[Clear sound]:** Enhance sound quality.
  - **[Audio Out format]:** Select the type of audio output through the digital audio output connector. Choose between **[Multichannel]** and **[Stereo]**.
  - **[Audio Out levelling]:** Set the output level for stereo audio. Select **[More]** for higher output level, **[Medium]** for medium output level, and **[Less]** for lesser output level.
  - **[HDMI ARC]:** Enable audio output from the ARC-compliant device connected to any HDMI connector.
  - **[Audio out delay]:** Automatically sync the image on the TV to the audio from a connected home theater. You do not need to use this setting when connecting the TV to a Philips home theater.
  - **[Audio out offset]:** Adjust the setting for audio output delay. Available if **[Audio out delay]** is switched on.

---

## More sound settings

You can change the settings in the Sound menu.

1. Press **⬆️**.
2. Select **[Setup] > [TV settings] > [Sound]**, then press **OK**.
3. Select a setting to change, then press **OK**.
  - **[Sound style]:** Access predefined sound settings.
  - **[Bass]:** Adjust the bass level of the speaker and headphones.
  - **[Treble]:** Adjust the treble level of the speaker and headphones.
  - **[Surround mode]:** Select a surround sound mode to enhance your audio experience.
  - **[Auto incredible surround 3D]:** Select a surround sound mode to enhance your audio experience in 3D mode.
  - **[Headphone volume]:** Adjust headphone volume.

---

## Audio format

If an analog TV channel broadcaster streams stereo audio in multiple formats, you can select an audio format.

1. Press **⬆️**.
2. Select **[Setup] > [Channel settings] > [Mono/Stereo]**.
3. Select a setting, then press **OK**.

---

## Reset picture and sound

You can restore the default picture and sound settings, while the channel installation settings remain the same.

1. While you watch TV, press **Home**.
2. Select **[Setup]** > **[TV settings]** > **[General settings]** > **[Factory settings]**, then press **OK**.
3. Select **[Reset]**, then press **OK**.

All TV settings (except for channel settings) are reset to the default factory settings.

---

## Channels

---

### Automatic installation

When the TV was switched on for the first time, a full installation of channels was performed.

To change your language, country, and reinstall all available TV channels, you can run this full installation again.

#### Start installation

**Note:** If you are prompted to enter a code, enter '8888'.

1. Press **Home**.
2. Select **[Setup]** > **[Search for channels]** > **[Reinstall channels]**, then press **OK**.
3. Select your country, then press **OK**.
4. Select your network, then press **OK**:
  - **[Antenna]:** Access free-to-air antenna transmissions.
  - **[Cable]:** Access cable transmissions.
5. Follow the onscreen instructions to select other options, if any.

The start menu for channel search is displayed.

6. Select **[Start]**, then press **OK**.
7. Once the channel search is complete, select **[Finish]**, then press **OK**.

**Tip:** Press **≡ LIST** to see the channel list.

**Note:** When digital TV channels are found, the list of installed channels may display empty channel numbers. You can rename these channels.

---

## Install digital channels

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 **Home**.
2. Select **[Setup]** > **[Channel settings]** > **[Channel installation]**.
3. Select **[Digital: Reception test]** > **[Search channel]**, then press **OK**.
4. Press the **Numeric buttons** to enter the channel frequency.
5. Select **[Search]**, then press **OK**.
6. When the channel is found, select **[Store]**, then press **OK**.

---

### Update channel list

1. Press **Home**.
2. Select **[Setup]** > **[Search for channels]** > **[Update channels]**, then press **OK**.
3. Follow the onscreen instructions to update the channels.

---

### Copy channels

**ATTENTION:** This feature is intended for dealers and service personnel.

You can copy channel lists from one Philips TV to another through a USB storage device. You do not need to search for channels or install them again on the second TV. The channel list file is small enough to fit on any USB storage device.

#### What you need

Two Philips TVs that have these properties:

- The same country setting
- The same year range
- The same hardware type, as indicated by the sticker on the back of the TV.  
For example: L12M3.1L LA
- Compatible software versions

**Note:** If you are prompted to enter a code, enter '8888'.

### Step 1: Check the country setting

1. Switch on the first TV (with the channels that you want to copy to the second TV).
2. Press **⬆**.
3. Select **[Setup]** > **[Search for channels]** > **[Reinstall channels]**, then press **OK**.  
The country menu is displayed.
4. Make a note of the current setting.
5. Press **⬆**.
6. Press **[Cancel]** to exit.

### Step 2: Copy channel list to USB

1. Connect a USB storage device to the first TV (with the channels installed on it).
2. Press **⬆**.
3. Select **[Setup]** > **[Channel settings]**.
4. Select **[Channel installation]** > **[Copy channel list]** > **[Copy to USB]**, then press **OK**.

The channel list is copied to the USB storage device.

5. Disconnect the USB storage device.

### Step 3: Copy channels to a TV with no channels installed

1. Switch on the second TV, on which you want to copy the channel list.  
Initial installation starts.
2. Follow the onscreen instructions and select the same country as the TV whose channel list you want to copy.
3. Skip the search for channels.
4. Connect the USB storage device.
5. Press **⬆**.
6. Select **[Setup]** > **[Channel settings]**.
7. Select **[Channel installation]** > **[Copy channel list]** > **[Copy to TV]**, then press **OK**.

The channel list is copied to the TV.

8. Disconnect the USB storage device.

### Step 3: Copy channels to a TV with pre-installed channels

1. Switch on the second TV, on which you want to copy the channel list.
2. Press **⬆**.
3. Select **[Setup]** > **[Search for channels]** > **[Reinstall channels]**, then press **OK**.

The country menu is displayed.

4. Make sure that the country setting is the same as the first TV.

5. Press **⬆**.

6. Press **[Cancel]** to exit.

7. If the country setting is different, reinstall the second TV to match the country setting of the first TV. See **Change your TV settings > Reset all** (Page 43).

8. Connect the USB storage device to the second TV.

9. Press **⬆**.

10. Select **[Setup]** > **[Channel settings]**.

11. Select **[Channel installation]** > **[Copy channel list]** > **[Copy to TV]**, then press **OK**.

The channel list is copied to the second TV.

12. Disconnect the USB storage device.

---

## Language settings

---

### Menu language

1. While you watch TV, press **⬆**.
2. Select **[Setup]** > **[TV settings]** > **[General settings]** > **[Menu language]**.
3. Select a menu language from the list, then 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



---

## Closed captions

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

**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 about channels with closed captions. The captioned programs are typically listed with service marks, such as 'CC', in the TV listings.

### Switch on closed captions

1. While you watch TV, press **III** **OPTIONS**.
2. Select **[Closed captions]**.
3. Select **[On]**, then press **OK**.

### Select type of closed captions

1. While you watch TV, press **III** **OPTIONS**.
2. Select **[Caption service]**.
3. Select the correct type of closed captions, then press **OK**.

---

## Universal access settings

### Switch on

Some digital TV broadcasters provide special audio and subtitle features for people who are hearing or visually impaired. You can switch these features on or off.

1. Press **▲**.
2. Select **[Setup] > [TV settings] > [General settings]**.
3. Select **[Universal access] > [On]** or **[Off]**, then press **OK**.

---

### Set audio feedback

When you press a button on the remote control or TV, you can set the TV to play a beep.

1. While you watch TV, press **III** **OPTIONS**.
2. Select **[Universal access - key beep] > [On]**, then press **OK**.

---

## Other settings

---

### TV demo

You can watch a demo to find out more about the features on this TV.

1. While you watch TV, press **▲**.
2. Select **[Setup] > [Watch demos]**, then press **OK**.
3. Select a demo, then press **OK**.

---

### Home mode

Some TV settings may not be available in **Shop** mode. To make sure that the correct TV settings are applied, set the TV to **Home** mode.

1. While you watch TV, press **▲**.
2. Select **[Setup]**, then press **OK**.
3. Select **[TV settings] > [General settings] > [Location]**.
4. Select **[Home]** or **[Shop]**, then press **OK**.
5. Restart the TV.

---

## Update software

### Check version

1. Press **▲**.
2. Select **[Setup] > [Software settings] > [Current software info]**, then press **OK**.

The current software version is displayed.

**Caution:** Do not install a lower version of software than the current version installed on your product.

Update the software through one of these methods:

- update with USB storage device
- update from digital broadcast
- update from the Internet

---

## Update with USB

### What you need

- A USB storage device that has at least 256 megabytes of storage space, is FAT or DOS formatted, and has its write protection disabled.
- Access to a computer with a USB connector and Internet access.
- A file archiver program that supports the ZIP file format: for example, WinZip® for Microsoft® Windows®, or Stuffit® for Macintosh®.

**Note:** Do not use a USB hard drive.

### Download the latest software

1. Connect the USB flash drive to your computer.
2. On your computer, launch a browser such as Internet Explorer® or Safari®, and see [www.philips.com/support](http://www.philips.com/support).
3. Find your TV and locate the software and drivers available for your TV set. The software upgrade is available as a compressed file (\*.zip).
4. If the software version is higher than the version on your TV, click the software upgrade link.
5. Accept the license agreement and download the ZIP file to the USB flash drive.

**Note:** Some Internet browsers, such as Mozilla® Firefox® or Google® Chrome®, may download the ZIP file directly to your computer. If this happens, copy the file to your USB flash drive.

6. **For Internet Explorer:** Using a file archiver, extract autorun.upg from the downloaded ZIP file. Do not copy or place the extracted file into a folder.
6. **For Safari:** When the download is complete, autorun.upg is automatically extracted from the ZIP file to your computer. Copy the file to the USB flash drive. Do not copy or place the file into a folder.
7. Eject and disconnect the USB flash drive from the computer.

## Upgrade the TV software

### Caution:

- Do not switch off the TV or remove the USB flash drive during the software upgrade.
- If a power failure occurs during the upgrade, do not remove the USB flash drive from the TV. The TV continues the upgrade as soon as power is restored.
- If an error occurs during the upgrade, retry the upgrade from the beginning. If the error reoccurs, contact Philips Consumer Care.

1. Remove all USB devices such as a Wi-Fi adapter from the TV, then switch on the TV.
2. Connect the USB flash drive to the TV. The software upgrade starts automatically. The upgrade is complete when a notification message appears on screen.
3. Before you restart the TV, disconnect the USB flash drive from the TV.
4. Press **⏻** on the remote control — do not press **⏻** more than once. The TV switches off, then back on again. The upgrade is complete.
5. To prevent accidental updates to the TV software, reconnect the USB flash drive to your computer and delete autorun.upg.

---

## Update from digital broadcast

When available, the TV can receive software updates through digital broadcasts. When a software update is received, you are prompted to update the software. We strongly recommend that you update the software when prompted.

Follow the onscreen instructions.

If you do not update the TV software when the update is received, you are prompted to save the update file. To update the software later:

1. Press **🏠**.
2. Select **[Setup] > [Software settings] > [Local updates]**.
3. Select the file that you downloaded and follow the onscreen instructions to complete the update.

---

## Update from the Internet

You can also update the TV software directly from the Internet by connecting the TV to the Internet. See **Connect your TV >**

**Connect to a Network and the Internet** (Page 58).

1. Press **⏠**.
2. Select **[Setup] > [Update software] > [TV with Internet]**, then press **OK**.
3. Follow the onscreen instructions to start the update.

When the update is complete, the TV switches to standby and on again automatically. Wait for the TV to switch back on. Do not switch on the TV yourself.

### Note:

- If the TV is connected to the Internet, the TV displays the availability of new software at startup.
- Philips may occasionally push a software upgrade to your TV over the Internet. Follow the onscreen instructions to upgrade the TV software.

---

## Reset all

You can reset all picture and sound settings and reinstall all TV channels on your TV.

1. Press **⏠**.
2. Select **[Setup] > [TV settings] > [General settings] > [Reinstall TV]**, then press **OK**.
3. Follow the onscreen instructions.

# 5 Connect your TV

## About cables

### Cable quality

#### Overview

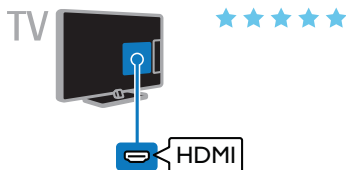
Before you connect devices to the TV, check the available connectors on the device. Connect the device to the TV with the highest quality connection available. Good quality connectors transfer picture and sound better.

The connections shown in this user manual are recommendations only. Other solutions are possible. For more examples, visit <http://www.connectivityguide.philips.com>.

### HDMI

An HDMI connection has the best picture and sound quality.

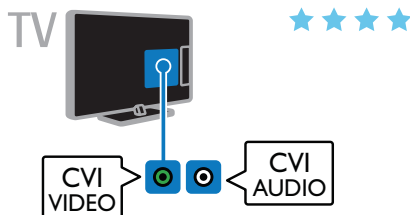
- An HDMI cable combines video and audio signals. Connect HDMI for high-definition (HD) TV signals, and to switch on EasyLink.
- An HDMI Audio Return Channel (ARC) connector allows output of TV audio to an HDMI ARC compliant device.
- Connect HDMI cables shorter than 5 meters/16.4 feet.



### Y Pb Pr

Component video (Y Pb Pr) only transmits video. Use the supplied Y Pb Pr and audio adapter cable to connect device to the CVI connectors on your TV.

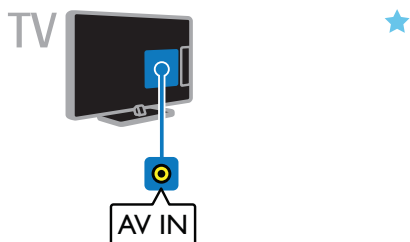
The Y Pb Pr connection can handle high-definition (HD) TV signals.



### CVBS

Composite video (CVBS) transmits video. Use the supplied CVBS and audio adapter cable to connect device to the AV IN connector on your TV.

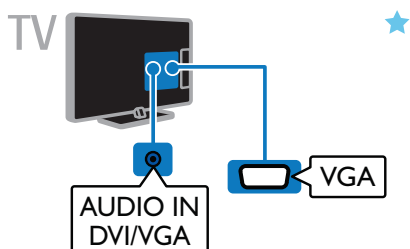
- CVBS connections provides standard picture quality.



### VGA

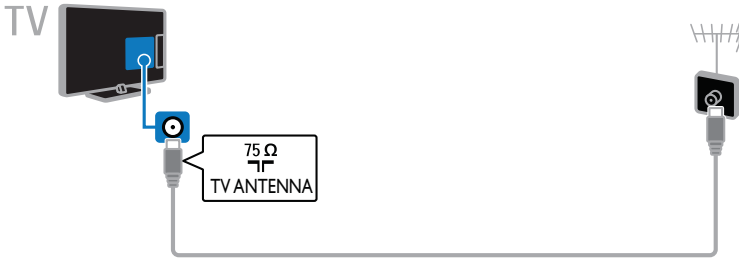
You can connect VGA to display PC content on the TV.

VGA only transmits video. For sound, also connect to AUDIO IN.



## Connect antenna

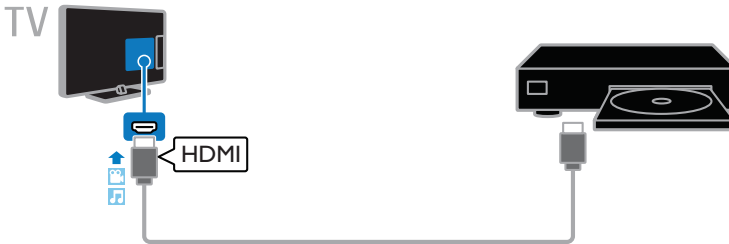
Connect the antenna to the TV.



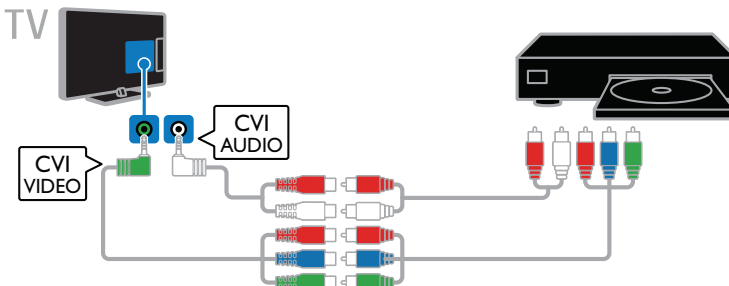
## Connect devices

### Blu-ray or DVD disc player

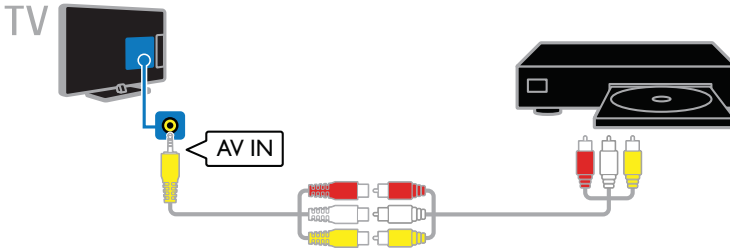
Connect the disc player with an HDMI cable to the TV.



Connect the disc player with the supplied component video cable (Y Pb Pr) and audio L/R cable to the TV.



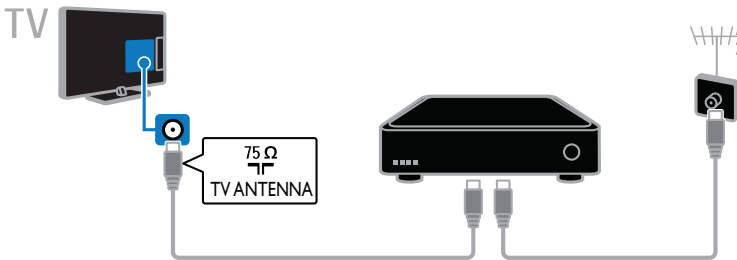
Connect the disc player with the supplied composite video (CVBS) and audio L/R cable to the TV.



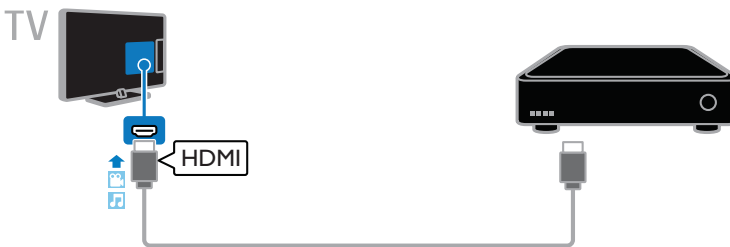
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### TV receiver

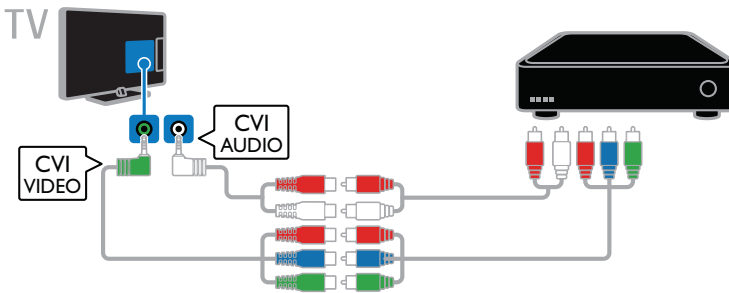
Connect the digital TV receiver with an antenna cable to the TV.



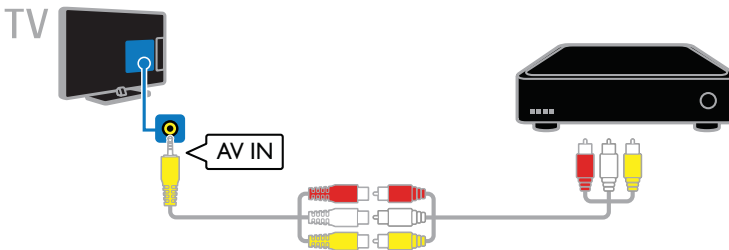
Connect the digital TV receiver with an HDMI cable to the TV.



Connect the digital TV receiver with the supplied component video cable (Y Pb Pr) and audio L/R cable to the TV.

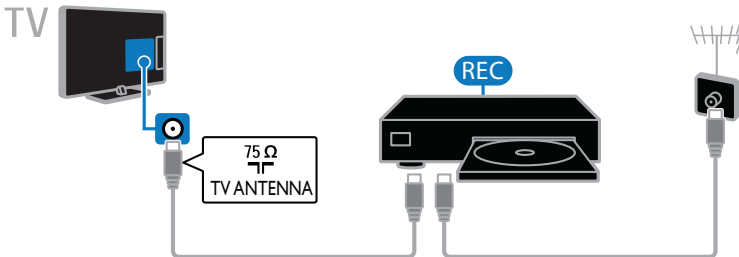


Connect the digital TV receiver with the supplied composite video (CVBS) and audio L/R cable to the TV.



## Video recorder

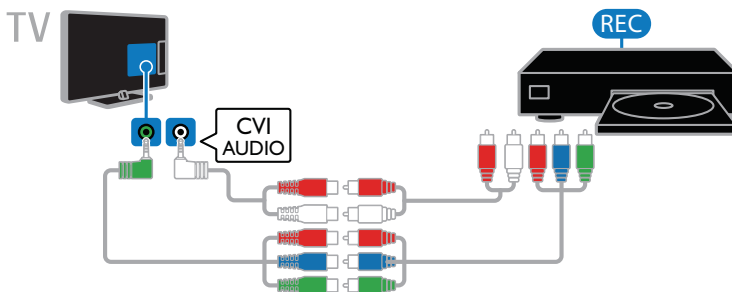
Connect the recorder with an antenna cable to the TV.



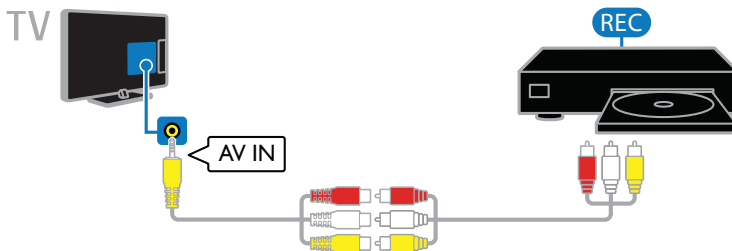
Connect the recorder with an HDMI cable to the TV.



Connect the recorder with the supplied component video cable (Y Pb Pr) and audio L/R cable to the TV.



Connect the recorder with the supplied composite video (CVBS) and audio L/R cable to the TV.



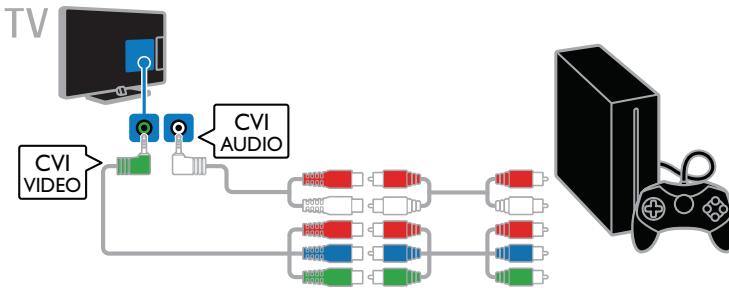


## Game console

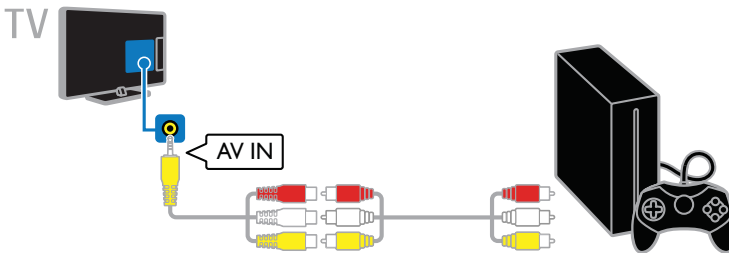
Connect the game console with an HDMI cable to the TV.



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



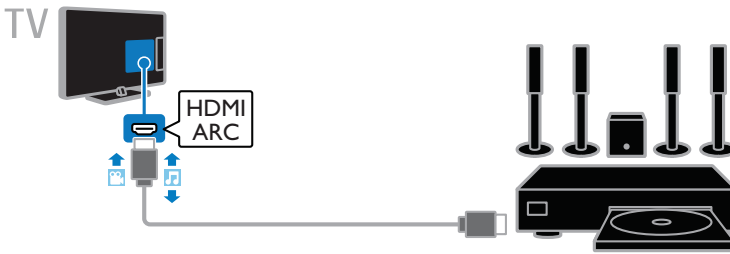
Connect the game console with the supplied composite video (CVBS) and audio L/R cable to the TV.



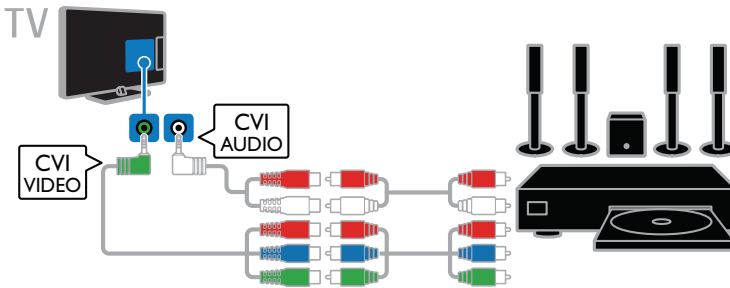
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## Home theater

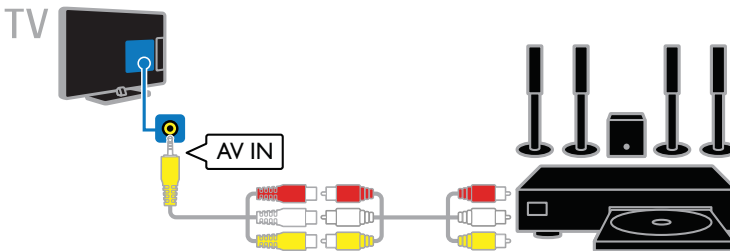
Connect an HDMI-ARC compliant home theater with an HDMI cable to the TV.



Connect the home theater with the supplied component video cable (Y Pb Pr) and audio L/R cable to the TV.

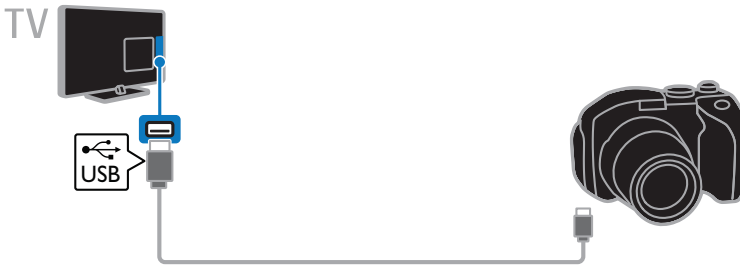


Connect the home theater with the supplied composite video (CVBS) and audio L/R cable to the TV.



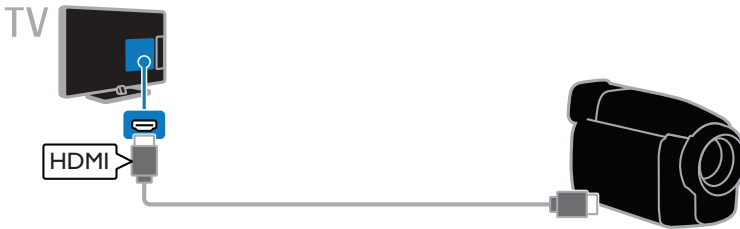
## Digital camera

Connect the digital camera with a USB cable to the TV.

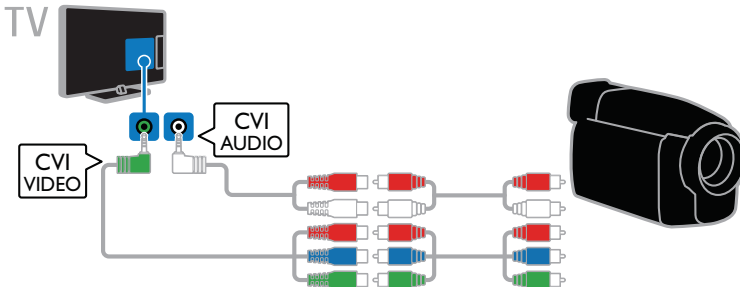


## Digital camcorder

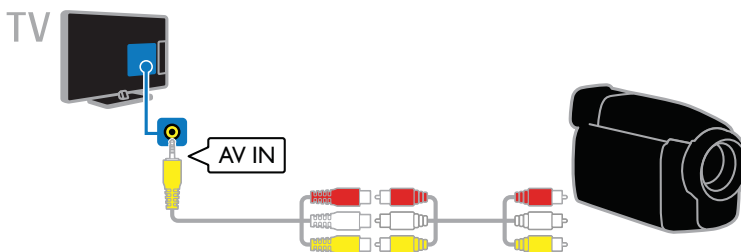
Connect the digital camcorder with an HDMI cable to the TV.



Connect the digital camcorder with the supplied component video cable (Y Pb Pr) and audio L/R cable to the TV.



Connect the digital camcorder with the supplied composite video(CVBS) and audio L/R cable to the TV.

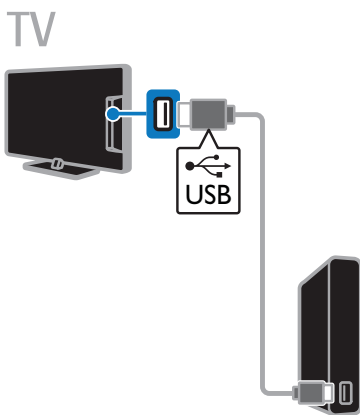


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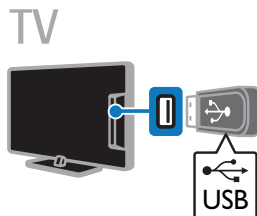
## Connect more devices

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### USB storage device



Connect the USB hard drive with a USB cable to the TV.



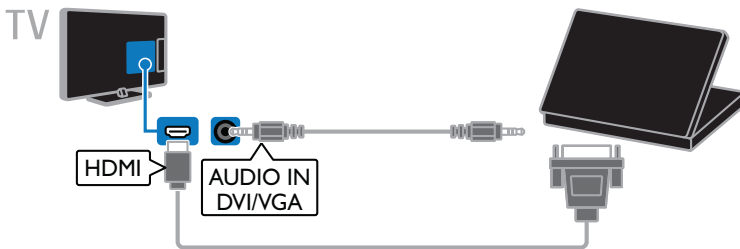
Connect the USB flash drive with a USB cable to the TV.

## Computer

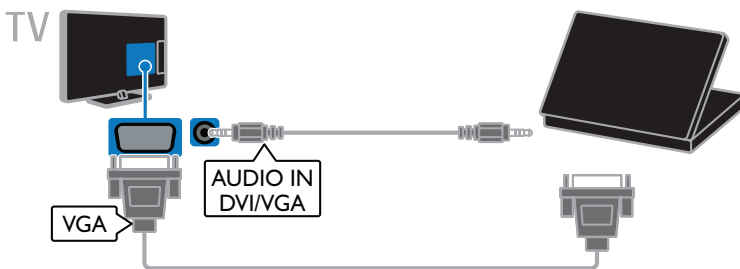
Connect the computer with an HDMI cable to the TV.



Connect the computer with a DVI-HDMI cable and an audio cable to the TV.



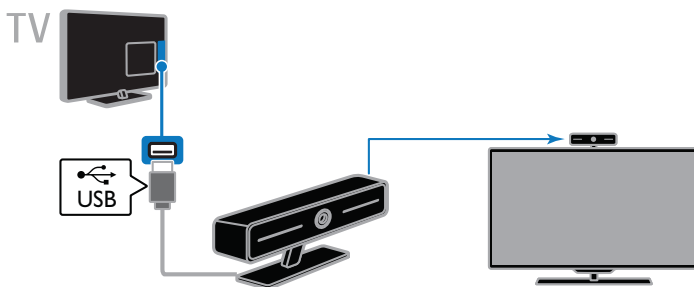
Connect the computer with a VGA cable and an audio cable to the TV.



---

## Video call camera

For PFL70x8G only: Connect the Philips TV video camera - PTA317 (sold separately) with a USB cable to the TV.



---

## Keyboard and mouse

### USB keyboard

You can connect a USB keyboard to enter text such as device names on the TV or text for Smart TV apps.

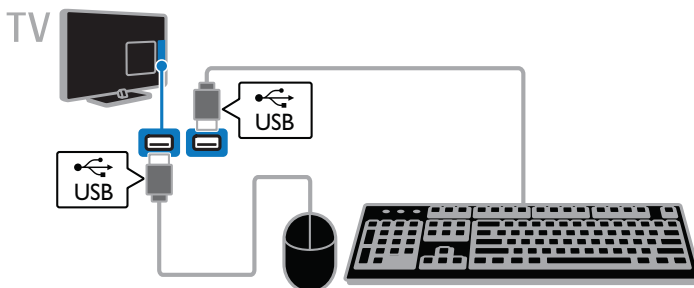
### USB mouse

You can connect a USB mouse to navigate pages on the Internet and click on links.

### Note:

- If you need extra USB connectors, use a USB hub.
- You can also connect the USB mouse to a connected USB keyboard.

Connect the keyboard and mouse with a USB cable to the TV.



When the TV detects the keyboard, you can select the keyboard layout and test your selection.

1. Press **Home**.
2. Select **[Setup] > [TV settings] > [General settings] > [USB keyboard settings]**.
3. Change the keyboard settings.

### TV keys on your keyboard

To make a text entry, use the following keys:

- **Enter** **↵**: Confirm an entry.
- **Backspace** **←**: Delete a character before the cursor.
- **Navigation keys**: Navigate within a text field.

## Smart TV keys on your keyboard

- **Enter** : Confirm an entry.
- **Backspace** : Go to the previous page.
- **Navigation keys**: Navigate between fields.
- **Tab**: Go to the next field.
- **Tab and Shift**: Go to the previous field.
- **Home**: Scroll to the top of the page.
- **End**: Scroll to the bottom of the page.
- **Page Up**: Scroll up the page.
- **Page Down**: Scroll down the page.
- **+/-**: Zoom in or out.

When the TV detects the mouse, you can set the tracking speed.

1. Press .
2. Select **[Setup]** > **[TV settings]** > **[General settings]** > **[Pointer/mouse settings]**.
3. Change the mouse settings.

### Use the USB mouse with your TV

- **OK**: Left mouse button (left-click).
- (**Back**): Right mouse button (right-click).
- **Scroll wheel**: to scroll up and down an Internet page.

**Note:** The USB mouse cannot navigate in the TV menus.

## Watch connected devices

### Select a device

Before you can watch a device, connect the device to the TV. See **Connect your TV > Connect device** (Page 45).

### Automatically detect a device

When you connect a new **HDMI** device to the TV, the device is detected automatically and added to the Source menu.

### Select a device with SOURCE

1. Press **SOURCE**.
2. Select a device, then press **OK**.

### Select a device from Home menu

1. Press .
2. Select **[Source]**, then press **OK**.
3. Select a device, then press **OK**.

### Update the source list

If you add or remove a device, update the source list.

1. Press **SOURCE**.
2. Press **OPTIONS**.
3. Select **[Scan connections]**, then press **OK**.
4. Follow the onscreen instructions.

### Change device settings

#### Change the device type

You can change the device type automatically assigned by the TV.

1. Press **SOURCE**.
2. Select the device, then press **[Change type]**.
3. Select a suitable device type.
4. Select **[Continue]**, then press **OK**.

#### Rename a device

You can rename a device after it is added to the Source menu.

1. Press **SOURCE**.
2. Select the device, then press **[Rename]**.
3. Use the onscreen keypad to enter a new name
4. When complete, select **[Done]**, then press **OK**.

#### Reset device settings

You can reset the type and name of the device to default settings.

1. In the Source menu, select the device and press **OPTIONS**.
2. Select **[Original name and icon]**, then press **OK**.
3. Select **[Yes]**, then press **OK**.

---

# Set up EasyLink devices

---

## What you can do

You can get the most out of your HDMI-CEC-compliant devices with Philips EasyLink enhanced control features. Connect your HDMI-CEC compliant devices through HDMI to your TV and control them at the same time with your TV remote control.


**Note:** Other brands describe HDMI-CEC functionality differently. Some examples are Anynet (Samsung), Aquos Link (Sharp) or BRAVIA Sync (Sony). Not all brands are fully compatible with Philips EasyLink.

After you switch on Philips EasyLink, the following features are available:

### One-touch play

When you play an HDMI-CEC compliant device, the TV switches on from standby and switches to the correct source.

### One-touch standby

When you press  on the TV remote control, the TV and all HDMI-CEC compliant devices switch to standby mode.

### Auto switch off inactive devices

If a HDMI-CEC compliant device has been inactive for some time, it switches to standby mode.

### EasyLink remote control

You can control multiple HDMI-CEC compliant devices with your TV remote control.

### System audio control

If you connect an HDMI-CEC compliant device that includes speakers through the HDMI ARC connector, you can choose to hear the TV audio from those speakers instead of the TV speakers.

### Retain picture quality

If your TV picture quality is affected by the picture-processing features of other devices, you can switch on Pixel Plus Link to retain picture quality.

## Maximize display for subtitled video


Some video subtitles can create a separate subtitle bar under the video, which limits the video display area. To maximize the video display area, you can switch on auto subtitle shift and display the subtitles on the video image.

---

## What you need

- Connect a HDMI-CEC compliant device to the TV. You can connect more than one HDMI-CEC device. See **Connect your TV > Connect devices** (Page 45).
- Configure each HDMI-CEC compliant device properly.
- Switch on EasyLink.

### Switch on EasyLink


1. Press .
2. Select **[Setup] > [TV settings] > [General settings] > [EasyLink]**.
3. Select **[EasyLink] > [On]**, then press **OK**.

---



## Control devices

If you connect multiple HDMI-CEC devices that support this setting, you can control all such devices through the TV remote control.

**Note:** This is an advanced setting. Devices that do not support this setting cannot respond to the TV remote control.

1. Press .
2. Select **[Setup] > [TV settings] > [General settings] > [EasyLink] > [EasyLink remote control]**.
3. Select **[On]** or **[Off]**, then press **OK**.

### Tips:

- To switch back to TV control, press , then select **[Watch TV]**.
- To control another device, press , then select the device from the Home menu.



## EasyLink buttons

You can control HDMI-CEC compliant devices with these buttons on the TV remote control:

- Switch the TV and the connected device on or to standby.
- **Play buttons:** Control video or music play.
- **Numeric buttons:** Select a title, chapter or track.
- **OK:** Start, pause or resume play on the connected device, activate a selection, or access the device menu.
- Display the TV Home menu.

## Switch off connecting devices

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

1. Press .
2. Select **[Setup] > [TV settings] > [General settings] > [EasyLink]**.
3. Select **[Auto switch off devices] > [On]**, then press **OK**.

---

## Select speaker output

If a connected device is HDMI Audio Return Channel (HDMI ARC) compliant, you can output TV audio through an HDMI cable. Additional audio cables are not required. Make sure you connect the device to the HDMI ARC connector on the TV. See **Connect your TV > About cables > HDMI** (Page 44).

## Switch on HDMI ARC

1. Press .
2. Select **[Setup] > [TV settings] > [Sound] > [Advanced] > [HDMI 1 - ARC]**.
3. Select one of the following, then press **OK**.
  - **[On]:** Hear the TV audio through the connected HDMI-ARC compliant device.
  - **[Off]:** Hear the TV audio through the TV speakers, or through a device connected through the digital audio out connector.

**Note:** Make sure that all HDMI-CEC settings are properly set up on the connected device.

## Set up TV speakers

1. Press .
2. Select **[Setup] > [TV settings] > [Sound] > [Advanced] > [TV speakers]**.
3. Select an option, then press **OK**:
  - **[Off]:** Switch off TV speakers.
  - **[On]:** Switch on TV speakers.
  - **[EasyLink]:** Switch off TV speakers, and stream TV audio to a connected HDMI-CEC audio device.
  - **[EasyLink autostart]:** When a HDMI-CEC audio device is connected, automatically switch off TV speakers and stream TV audio to the device.

## Change TV audio streaming

You can switch audio between TV speakers and a connected amplifier at any time.

1. Press **OPTIONS**.
2. Select **[Picture and sound] > [Speakers]**.
3. Select one of the following, then press **OK**.
  - **[TV]:** On by default.  
Stream TV audio through TV and the connected HDMI-CEC audio device until the connected device switches to system audio control. TV audio is then streamed through the connected device.
  - **[Amplifier]:** Stream audio through the connected HDMI-CEC device. If system audio mode is not enabled on the device, audio continues to stream from the TV speakers. If **[EasyLink autostart]** was selected, the TV prompts the connected device to switch to system audio mode.

---

## Retain picture quality

If your TV picture quality is affected by the picture-processing features of other devices, you can switch on Pixel Plus Link.

### Switch on Pixel Plus Link

1. Press **⏠**.
2. Select **[Setup] > [TV settings] > [General settings] > [EasyLink]**.
3. Select **[Pixel Plus Link] > [On]**, then press **OK**.

---

## Maximize video display

Some subtitles create a separate subtitle bar under the video that limits the video display area. To maximize the video display area, you can switch on auto subtitle shift. The subtitles then display over the video image.

### Switch on auto subtitle shift

1. Press **⏠**.
2. Select **[Setup] > [TV settings] > [General settings] > [EasyLink]**.
3. Select **[Auto subtitle shift] > [On]**, then press **OK**.

---

## Connect to a network and the Internet

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### What you can do

#### View Media

If you connect the TV to a home network, you can play photos, music and videos from your computer. See **Use your TV > Play multimedia files** (Page 20).

#### Smart TV

If you connect the TV to a home network with an Internet connection, you can browse Smart TV. Smart TV offers Internet services and websites tailored to your TV. Play music and videos, consult infotainment, rent movies and much more. See **Use your TV > Smart TV** (Page 23).

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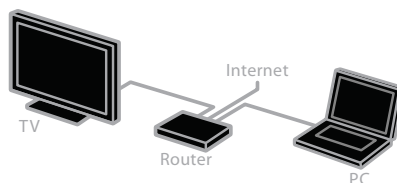
## What you need

**Warning: This TV complies with the EMC directive only when you use a shielded Cat5 Ethernet cable.**

- A computer network that includes:
  - a) A universal plug-and-play (UPnP) router and
  - b) A computer with one of these operating systems: Microsoft Windows XP, Microsoft Windows Vista, Mac OS X, or Linux.
- To connect your TV to computers, you need to install and configure a media server on your computer. See **Use your TV > Play multimedia files** (Page 20).
- To connect your TV to the Internet, you also need a high-speed connection to the Internet.

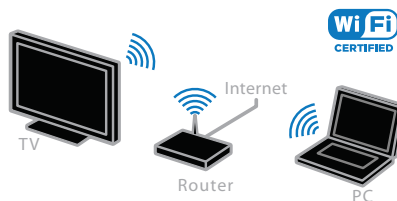
---

## Connect



You can connect this TV to your home network through a wired or wireless connection.

- For a wired connection, see **Connect your TV > Connect to a network and the Internet > Wired connection** (Page 59).



- For a wireless connection, see **Connect your TV > Connect to a network and the Internet > Wi-Fi integrated** (Page 59).

---

## Wired connection

1. Switch on the router and switch on its DHCP setting.
2. Connect the router with an Ethernet cable to the TV.
3. Press **⬆**, then select **[Setup]**.
4. Select **[Connect to network]**, then press **OK**.
5. Follow the onscreen instructions to install the network.
6. Wait for the TV to find the network connection.
7. If you are prompted, agree to the End User License Agreement.

---

## Wi-Fi integrated

### This section is only applicable for Wi-Fi integrated TVs.

You can connect your TV to your home network wirelessly.

#### Note:

- The wireless network operates in the same 2.4 GHz frequency spectrum as common household devices, such as Dect phones, microwave ovens or Bluetooth devices, which can cause Wi-Fi interference. Move these devices away from the TV.
- For optimum Wi-Fi performance, place the TV at a distance of less than 10 m from the wireless router. Avoid obstructions such as concrete walls between the router and the TV.
- Reception quality depends on the location of the wireless router, and the local Internet service provider.
- To reduce network traffic, switch off unused network equipment in the home network.
- While you play video over your wireless home network, we recommend that you use an IEEE 802.11 N router. The connection speed may differ according to the operating environment of your wireless home network.

## Start wireless setup

1. Switch on your wireless network router.
2. Press **⬆** on the TV remote control.
3. Select **[Setup]** > **[Connect to network]**, then press **OK**.
4. Follow the onscreen instructions.

## WPS - Wi-Fi Protected Setup

1. If your router supports Wi-Fi Protected Setup (WPS), press the WPS button on the router.
2. After 2 minutes, select **[WPS]** on the TV, then press **OK**.

The TV connects to your network. This takes about 2 minutes.

Most new wireless routers have the WPS system and carry the WPS logo. The WPS system uses WPS security encryption and cannot be combined with devices on your network that use the WEP (Wired Equivalent Privacy) security encryption.

If you still need the WEP devices in your network, install with **[Scan]** > **[Custom]**.

## Scan for routers

If you have several routers in your network, you can select the network you need.

1. To select a specific network router, press **[Scan]** on the first page of the installation. The routers with WPS and the strongest signal are shown first in the list on screen.

2. Select the router you need, then press **OK**.

- If you are connecting to a WPS router, select **[WPS]** on the TV.
- If you want to set the PIN code in your router software to connect, select **[WPS pin]** and note down the code.
- To enter the encryption key manually, select **[Standard]** and enter the key when prompted.

## Set secured connection with WPS encryption

1. To set the secured connection with a PIN code, select the **[WPS pin]** and press **OK**.
2. Write down the 8-digit PIN code shown on TV and enter it in the router software on your PC.

See the router manual on where to enter the PIN code.

### Set secured connection with WPA encryption

If your router has Wi-Fi Protected Access (WPA) security, enter the pass phrase with the remote control.

1. To enter the encryption key manually, select **[Standard]** and press **OK**.
2. To access the onscreen keyboard, select the text entry field, then press **OK**.

### Set secured connection with WEP encryption

If your router has WEP security, the TV asks for the WEP encryption key in hexadecimal numbers.

1. Locate the hexadecimal key in the router software on your PC and make a note of the first key in the WEP keys list.
2. Enter the security key on the TV with the remote control to connect to the router.
3. If prompted, agree to the End User License Agreement.

### Switch on remote recording

This TV supports remote recording scheduled from a Wi-Fi device.

**Note:** If you switch on remote recording, the TV consumes more power in standby.

1. Press **⏠**.
2. Select **[Setup]** > **[Network settings]** > **[MyRemote Recording]**.
3. Select **[On]**, then press **OK**.

---

## Network settings

### TV network name

If you have more than one TV in your home network, you can rename this TV to give it a unique name.

1. Press **⏠**.
2. Select **[Setup]** > **[Network settings]** > **[TV network name]**, then press **OK**.
3. Use the onscreen keyboard or the remote control keypad to enter the name.

### Switch on Miracast

This TV is a Miracast-certified TV. To seamlessly display content from a Wi-Fi device on your TV, switch on Miracast.

**Note:** Miracast only works with certain mobile devices.

1. Press **⏠**.
2. Select **[Setup]** > **[Network settings]** > **[Wi-Fi Miracast]**.
3. Select **[On]**, then press **OK** to enable Miracast.

**Tip:** To clear the history of all Wi-Fi Miracast devices, select **[Setup]** > **[Network settings]** > **[Clear Wi-Fi Miracast devices]**.

# 6 Troubleshooting

## General issues

### 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.

### When you are turning the TV on, off or to standby, you hear a creaking sound from the TV chassis:

No action is required. 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.

### The TV does not respond to remote control or TV controls when switched on:

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, view the remote control sensor through a digital camera -- if you press any button on the remote control and notice red flickering at the sensor, the remote control is working but the TV may need to be checked by Philips Consumer Care. This troubleshooting procedure is not applicable to remote controls that are paired wirelessly with the TV.

### When the TV is in standby, a startup splash screen is displayed, then TV returns to standby mode:

This is normal behavior. 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 press any key on the TV.

### The standby light on the TV blinks red:

Disconnect the power cable from the power outlet. Wait until the TV cools down before you reconnect the power cable. If the blinking reoccurs, contact Philips Consumer Care.

### The TV audio is in the wrong language:

Change your audio language by pressing **⏻** **OPTIONS**, then select **[Audio language]** or **[Alternate audio]**.

### The TV or Smart TV menu is in the wrong language:

Change the menu to your preferred language.

For more information, see **Change your TV settings > Language settings > Menu language** (Page 40).

### You forgot the 4-digit code to unlock the channel blocking feature (child lock):

Enter '8888'.

### You want to upgrade your TV software:

Visit [www.philips.com/support](http://www.philips.com/support) and download the latest software package for your TV. Software installation instructions and release notes indicating what's been updated are also available at the site. Full instructions on how to upgrade your TV software are also available at **Change your TV settings > Update software** (Page 41).

## Channel issues

### You want to install TV channels:

See **Change your TV settings > Automatic installation** (Page 39) for instructions on installing analog or digital channels.

### Previously installed channels do not appear in the channel list:

Make sure that the correct channel list is selected.

### No digital channels were found during the installation:

- See the technical specifications to make sure that your TV supports SATVD-T or SBTVD-T in your country.

- Make sure that all cables are properly connected and that the correct network is selected.

---

## Picture issues

### The TV is on, but there is no picture or the picture is distorted:

- 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.

### There is sound but no picture:

Make sure that the picture settings are set correctly.

### There is poor TV reception from an antenna connection:

- 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.

### There is poor picture quality from connected devices:

- Make sure that the devices are connected properly.
- Make sure that the picture settings are set correctly.

### The TV did not save your picture settings:

Make sure that the TV location is set to **Home**. You can change and save settings in this mode.

### The picture does not fit the screen - it is too big or too small:

Change to a different picture format.

### The picture format keeps changing with different channels:

Instead of the picture format **[Auto zoom]**, select a different picture format.

### The picture position is incorrect:

Picture signals from some devices may not fit the screen correctly. Check the signal output of the device.

### An "e-sticker" banner displaying information appears on the TV display:

The TV is in **[Shop]** mode. To remove the e-sticker, set the TV to **[Home]** mode, then restart the TV. See **Change your TV settings > Other settings > Home mode** (Page 41).

### The computer display on the TV is not stable:

- Make sure that your PC uses the supported resolution and refresh rate. See **Specifications > Display resolutions** (Page 65).
- Change the TV picture format to **[Unscaled]**.

---

## Sound issues

### There is picture but no sound from the TV:

If no audio signal is detected, the TV automatically switches the audio output off — this does not indicate malfunction.

- 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 speakers setting is selected. Press **III** **OPTIONS**, select **[Picture and sound] > [Speakers]**, and then select **[TV]**.
- Make sure that the TV audio output is connected to the audio input on the HDMI-CEC enabled or EasyLink compliant home theater device. Sound should be heard from the home theater 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.

**There is picture but sound quality is poor:**

Make sure that the sound settings are correctly set.

---

## Connection issues

**There are problems with HDMI devices:**

- 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 L/R or AUDIO IN (mini-jack only).

**You cannot use EasyLink features:**

Make sure that your HDMI devices are HDMI-CEC compatible. EasyLink features only work with devices that are HDMI-CEC compatible.

**If an HDMI-CEC compliant audio device is connected to the TV and the TV does not display any mute or volume icon when the volume is muted, increased or decreased:**

When a HDMI-CEC audio device is connected this behavior is normal.

**USB device content is not displayed:**

- 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.

**Audio and picture files on your USB storage device do not play or display smoothly:**

The transfer performance of the USB storage device may limit the data transfer rate to the TV which causes poor playback.

---

## Network issues

**You want to establish a wireless connection between your TV and home network:**

Refer to **Connect your TV > Connect to a network and the Internet > Wi-Fi integrated** (Page 59) for instructions on how to connect your TV wirelessly to your home network.

**Smart TV does not work:**

Check that the router is properly connected to the TV, and that your router has open access to the Internet. If your router has a firewall or security settings, make sure that it allows Smart TV data to pass through - check your router documentation for details.

**Internet access via Smart TV is slow:**

- Try to improve the signal quality between the router and TV if you are accessing the Internet wirelessly. Refer to the router's documentation for details.
- Always use a fast broadband wherever possible.
- Update your TV with the latest software to ensure browsing speed is optimal.

**Your network is slow:**

If you are accessing your PC wirelessly, refer to the router's documentation to improve the signal quality between the router and TV.

### **Wireless network is distorted or not found:**

- Make sure that the wireless network is not disturbed by microwave ovens, DECT phones, or other neighboring Wi-Fi devices.
- If the wireless network is not working, try a wired network connection.
- Make sure that the firewalls in your network allow access to the TV wireless connection.

---

## **Contact Philips**

**Warning: Do not attempt to repair the TV yourself. This may cause severe injury, irreparable damage to your TV or void your warranty.**

If you are not able to resolve your problem, refer to the frequently asked questions (FAQs) for this TV at [www.philips.com/support](http://www.philips.com/support). You can also consult and contribute to the Philips TV community at [www.supportforum.philips.com](http://www.supportforum.philips.com).

If you wish to speak with or email a Philips representative, contact the Philips Consumer Care in your country. You can find the contact details in the leaflet accompanying this TV or at [www.philips.com/support](http://www.philips.com/support).

Take note of your TV model and serial number before you contact Philips. These numbers are printed on the back of the TV and on the packaging.



# 7 Specifications

## Power and reception

Product specifications are subject to change without notice.

### Power

- Mains power : AC 110-240V (50-60Hz)
- Standby power consumption : < 0.5 W
- Ambient temperature : 5 to 40 degree Celsius
- For power consumption, see the product specifications at [www.philips.com/support](http://www.philips.com/support).

### Reception

- Antenna input: 75 ohm coaxial (F-type)
- TV system: PAL M, PAL N, NTSC M, SATVD-T, SBTVD-T
- Video playback: NTSC, PAL

## Display and sound

### Picture / Display

- Display type: LED backlight Full HD
- Diagonal size:
  - 119 cm / 47 inches
  - 140 cm / 55 inches
- Aspect ratio: 16:9 (widescreen)
- Panel resolution: 1920 x 1080 p
- Picture enhancement: Pixel Precise HD

### Picture / Display

- Perfect Motion Rate (PMR): 840 Hz
- Ambilight: Ambilight Spectra 2
- 3D: 3D TV

### Sound

- Output power (RMS): 20 W @ 10% THD
- Incredible Surround
- Clear Sound
- Mono / Smart Stereo / 3D wOOx

## Display resolutions

### Computer formats - HDMI (Resolution - refresh rate)

640 × 480 - 60 Hz  
 800 × 600 - 60 Hz  
 1024 × 768 - 60 Hz  
 1280 × 1024 - 60 Hz  
 1360 × 768 - 60 Hz  
 1920 × 1080 - 60 Hz

### Computer formats - VGA (Resolution - refresh rate)

640 × 480 - 60 Hz  
 800 × 600 - 60 Hz  
 1024 × 768 - 60 Hz  
 1280 × 1024 - 60 Hz  
 1360 × 768 - 60 Hz  
 1920 × 1080 - 60 Hz

### Video formats

#### (Resolution - refresh rate)

480i - 60 Hz  
 480p - 60 Hz  
 576i - 50 Hz  
 576p - 50 Hz  
 720p - 50Hz, 60 Hz  
 1080i - 50Hz, 60 Hz  
 1080p - 24Hz, 25Hz, 30Hz, 50Hz, 60 Hz

## Multimedia

**Note:** Multimedia file names must not exceed 128 characters.

### Supported multimedia connections

- USB: Connect only USB devices which consume 500mA of power or less.
  - NTFS, FAT 16 (Read only)
  - FAT 32
- Ethernet LAN RJ-45

### Supported image files

- JPEG: \*.jpg, \*.jpeg, \*.mpo
- GIF (87a, 89a): \*.gif
- PNG: \*.png
- BMP: \*.bmp, \*.dib
- JPS: \*.jps
- PNS: \*.pns
- BMS: \*.bms

## Supported audio/video formats

File Extensions	Container	Video codec	Maximum resolution	Max. Frame Rate (fps)	Max. Bit Rate (Mbps)	Audio codec	USB	Media server	CE-HTML	HTML5	YouTube
.mpg .mpeg .vob	PS	MPEG-1	1920x1088	25p, 30p, 50p, 60p	30	MPEG-1 (L1&L2), MPEG-1.2,2.3 L3, AAC/HE-AAC (v1&v2), DVD-PCM, Dolby Digital	Yes	Yes	Yes	Yes	No
		MPEG-2	1920x1088	25p, 30p, 50p, 60p	30		Yes	Yes	Yes	Yes	No
		MPEG-4 ASP	1920x1088	25p, 30p, 50p, 60p	30		Yes	Yes	Yes	Yes	No
		H.264	1920x1088	25p, 30p, 50p, 60p, 60i	30		Yes	Yes	Yes	Yes	No
.ts	TS	MPEG-2	1920x1088	25p, 30p, 50p, 60p	30	MPEG-1 (L1&L2), MPEG-1.2,2.3 L3, AAC/HE-AAC (v1&v2), Dolby Digital, Dolby Digital Plus	Yes	Yes	Yes	Yes	No
		MPEG-4 ASP	1920x1088	25p, 30p, 50p, 60p	30		Yes	Yes	Yes	Yes	No
		H.264	1920x1088	25p, 30p, 50p, 60p, 60i	30		Yes	Yes	Yes	Yes	No
		MVC	1920x1080p @ field rate = 50, 60Hz 1920x1080p @ frame rate = 24, 25, 30Hz 1280x720p @ frame rate = 50, 60Hz	-	30		Yes	Yes	Yes	Yes	No

## Supported audio/video formats

File Extensions	Container	Video codec	Maximum resolution	Max. Frame Rate (fps)	Max. Bit Rate (Mbps)	Audio codec	USB	Media server	CE-HTML	HTML5	YouTube
.ts .m2ts .mts .m2	M2TS TTS	MPEG-2	1920x1088	25p, 30p, 50p, 60p	30	MPEG-1 (L1&L2), MPEG-1.2,2.3 L3, AAC/HE-AAC (v1&v2), Dolby Digital, Dolby Digital Plus	Yes	Yes	No	No	No
		MPEG-4 ASP	1920x1088	25p, 30p, 50p, 60p	30		Yes	Yes	No	No	No
		H.264	1920x1088	25p, 30p, 50p, 60p, 60i	30		Yes	Yes	No	No	No
		MVC	1920x1080p @ field rate = 50, 60Hz 1920x1080p @ frame rate = 24, 25, 30Hz 1280x720p @ frame rate = 50, 60Hz	-	30		Yes	Yes	No	No	No
.ts .m2ts .mts	AVCHD	MPEG-2	1920x1088	25p, 30p, 50p, 60p	30	MPEG-1 (L1&L2), MPEG-1.2,2.3 L3, AAC/HE-AAC (v1&v2), Dolby Digital, Dolby Digital Plus	Yes	Yes	No	No	No
		MPEG-4 ASP	1920x1088	25p, 30p, 50p, 60p	30		Yes	Yes	No	No	No
		H.264	1920x1088	25p, 30p, 50p, 60p, 60i	30		Yes	Yes	No	No	No

## Supported audio/video formats

File Extensions	Container	Video codec	Maximum resolution	Max. Frame Rate (fps)	Max. Bit Rate (Mbps)	Audio codec	USB	Media server	CE-HTML	HTML5	YouTube
.ts .m2ts .mts	AVCHD	MVC	1920x1080 @ field rate = 50, 60Hz 1920x1080p @ frame rate = 24, 25, 30Hz 1280x720p @ frame rate = 50, 60Hz	-	30	MPEG-1 (L1&L2), MPEG-1.2,2.3 L3, AAC/HE-AAC (v1&v2), Dolby Digital, Dolby Digital Plus	Yes	Yes	No	No	No
.m4v	M4V	H.264	1920x1088	25p, 30p, 50p, 60p, 60i	30	AAC	Yes	Yes	Yes	Yes	No
.ism/Manifest .mpd	frag MP4	H.264	1920x1088	25p, 30p, 50p, 60p, 60i	30	AAC/HE-AAC (v1&v2), Dolby Digital, Dolby Digital Plus, WMA, WMA-PRO	No	No	Yes	Yes	Yes
		MVC	1920x1080 @ field rate = 50, 60Hz 1920x1080p @ frame rate = 24, 25, 30Hz 1280x720p @ frame rate = 50, 60Hz	-	30		No	No	Yes	Yes	Yes

## Supported audio/video formats

File Extensions	Container	Video codec	Maximum resolution	Max. Frame Rate (fps)	Max. Bit Rate (Mbps)	Audio codec	USB	Media server	CE-HTML	HTML5	YouTube
.mp4	MP4	MPEG-4 ASP	1920x1088	25p, 30p, 50p, 60p	30	AAC/HE-AAC (v1&v2), Dolby Digital, Dolby Digital Plus, WMA, WMA-PRO	Yes	Yes	Yes	Yes	Yes
		H.264	1920x1088		30		Yes	Yes	Yes	Yes	No
		MVC	1920x1080p @ field rate = 50, 60Hz 1920x1080p @ frame rate = 24, 25, 30Hz 1280x720p @ frame rate = 50, 60Hz	-	30		Yes	Yes	Yes	Yes	No
		WHM9/VC1	1920x1088	30p, 60i	30		Yes	Yes	Yes	Yes	No
.mkv .mk3d	MKV	MPEG-4 ASP	1920x1088	25p, 30p, 50p, 60p	30	MPEG-1 (L1&L2), MPEG-1.2,2.3 L3, AAC/HE-AAC (v1&v2), Dolby Digital, Dolby Digital Plus, WMA, WMA-PRO	Yes	Yes	No	No	No
		H.264	1920x1088		30		Yes	Yes	No	No	No

## Supported audio/video formats

File Extensions	Container	Video codec	Maximum resolution	Max. Frame Rate (fps)	Max. Bit Rate (Mbps)	Audio codec	USB	Media server	CE-HTML	HTML5	YouTube
.asf .wmv	ASF	MPEG-2	1920x1088	25p, 30p, 50, 60	20	MPEG-1 (L1&L2), MPEG-1.2.2.5 L3, AAC/HE-AAC (v1&v2), Dolby Digital Plus, Dolby Digital, WMA, WMA-PRO	Yes	Yes	Yes	Yes	No
		MPEG-4 ASP	1920x1088	25p, 30p, 50, 60	20		Yes	Yes	Yes	Yes	No
		WMV9VC1	1920x1088	30p, 60	20		Yes	Yes	Yes	Yes	No
.avi .avid	AVI	MPEG-4 ASP	1920x1088	25p, 30p, 50, 60	4	MPEG-1 (L1&L2), MPEG-MPEG-1 (L1&L2), MPEG-1.2.2.5 L3, AAC/HE-AAC (v1&v2), Dolby Digital Plus, Dolby Digital, WMA, WMA-PRO	Yes	Yes	No	No	No
		DivX 3.11	1920x1088	30p, 60	4		Yes	Yes	No	No	No
.webm	WebM	VP8	1920x1088	-	5	Ogg Vorbis	Yes	Yes	Yes	Yes	No
.swf	SWF	Contains FLV	-	-	30	-	No	No	No	No	Yes
.divx	DMF (DIVX)	MPEG-4 ASP	1920x1088	25p, 30p, 50, 60	20	MPEG-1 (L1&L2), MPEG-1.2.2.5 L3, AAC/HE-AAC (v1&v2), Dolby Digital Plus, Dolby Digital, WMA, WMA-PRO	Yes	No	No	No	No
		DivX 3.11	1920x1088	30p, 60	20		Yes	No	No	No	No

## Supported audio/video formats

File Extensions	Container	Video codec	Maximum resolution	Max. Frame Rate (fps)	Max. Bit Rate (Mbps)	Audio codec	USB	Media server	CE-HTML	HTML5	YouTube
.3gp .3g2	3GP	MPEG-4 ASP	1920x1088	25p, 30p, 50, 60	30	AAC/HE-AAC (v1&v2), AMR	Yes	Yes	No	No	No
		H.264	1920x1088	25p, 30p, 50p, 60p, 60i	30		Yes	Yes	No	No	No
		H.263	1920 x 1088	30p	30		Yes	Yes	No	No	No
.mov .qt	QuickTime	-	-	-	30	-	Yes	Yes	No	No	No

## Supported audio formats

File Extensions	Container	Video codec	Maximum resolution	Frequency (kHz)	Max. Bit Rate (Mbps)	Audio codec	USB	Media server	CE-HTML	HTML5	YouTube
.mp3	MP3	-	-	48	384	MPEG-1,2,2.5 L3	Yes	Yes	Yes	Yes	No
.wma .asf	WMA (V2 up to V9.3)	-	-	48	192	WMA	Yes	Yes	Yes	Yes	No
.wma	WMA Pro	-	-	96	768	WMA, WMA Pro	Yes	Yes	Yes	Yes	No
.lpcm (PC) .pcm (PC)	LPCM	-	-	192	768	LPCM	No	Yes	No	No	No
.wav (PC)	LPCM	-	-	192	768	LPCM	Yes	Yes	No	No	No
.aif (mac) .aiff (mac)	LPCM	-	-	192	768	LPCM	Yes	Yes	No	No	No
.aac .mp4 .m4a	AAC	-	-	48	1024	AAC, HE-AAC (v1&v2)	Yes	Yes	Yes	Yes	No
.pls .m3u	Playlists	-	-	-	-	-	Yes	Yes	No	No	No
.m4a	M4A	-	-	48	1024	AAC, HE-AAC (v1&v2)	Yes	Yes	Yes	Yes	No

## Supported audio formats

File Extensions	Container	Video codec	Maximum resolution	Frequency (kHz)	Max. Bit Rate (Mbps)	Audio codec	USB	Media server	CE-HTML	HTML5	YouTube
.amr	AMR-NB (Smart TV only)	-	-	8 16	12.8 6.6 8.85 12.65 14.25 15.85 18.25 19.85	AMR	Yes	Yes	No	No	No
.ogg .oga	Ogg	-	-	48	498	Ogg Vorbis	Yes	Yes	No	No	No

## Supported subtitle formats

Format	File Extension	USB	Media Server	CE-HTML	HTML5	YouTube
SRT	.srt	Yes	No	No	No	No
MKV/SRT	-	Yes	Yes	No	No	No
SUB	.sub	Yes	No	No	No	No
TXT	.txt	Yes	Yes	No	No	No
Substation alpha V4	.ssa	Yes	Yes	No	No	No
Advanced substation alpha V4+	.ass	Yes	Yes	No	No	No
DVB	-	Yes	Yes	No	No	No
SAMI	.smi .sami	Yes	No	Yes	Yes	No
XSUB, XSUB+	.avi .divx	Yes	No	No	No	No
TTML	.ttml	No	No	Yes	Yes	No

## Character encoding

- Windows-1250 (CP-1250): Central Europe and Eastern Europe Latin (Czech, Hungarian, Polish, Slovak, Slovenian, Croatian, Romanian, Serbian)
- Windows-1251 (CP-1251): Cyrillic
- Windows-1252 (CP-1252): Western Europe Latin
- Windows-1253 (CP-1253): Greek
- Windows-1254 (CP-1254): Turkish
- UTF-8: Multi-byte character encoding for Unicode

## Supported DLNA-compliant media server software

- Windows Media Player (Microsoft Windows)
- Twonky Media (Microsoft Windows, Mac OS X)
- Sony Vaio Media Server (Microsoft Windows)
- TVersity (Microsoft Windows)
- Nero MediaHome
- DiXiM (Microsoft Windows XP)
- Macrovision Network Media Server (Microsoft Windows)
- Fuppes (Linux)
- uShare (Linux)

---

# Connectivity

## Rear

- AUDIO IN (DVI/VGA): stereo 3.5mm mini-jack
- CVI AUDIO: Component Audio (Audio L/R)
- CVI VIDEO: Component video (Y Pb Pr)
- SERV.U: Service port
- NETWORK: Ethernet LAN RJ-45
- AV IN: Composite and Audio (CVBS, Audio L/R)
- VGA: PC input
- ANTENNA: 75 ohm coaxial
- USB 1
- HDMI 1, HDMI 2, HDMI 3: Audio Return Channel

## Side

- USB 2, USB 3
- HDMI SIDE
- Headphones: stereo 3.5mm mini-jack
- DIGITAL AUDIO OUT: Cinch (Optical)

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## Help version

UMv 313913705763

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