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7101 series

User Manual

55PUT7101
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PHILIPS

Contents

1 TV Tour 4
1.1 Ultra HD TV 4
1.2 High Dynamic Range - HDR 4
1.3 Philips Android TV 4
1.4 Watching Channels 4
1.5 Using Apps 4
1.6 FreeviewPlus 4
1.7 Playing Games 5
1.8 Rent a Movie 5
1.9 Pause TV and Recordings 5
1.10 Smartphones and Tablets 5
1.11 Social Networks 5
1.12 Ambilight 5
1.13 Ambilight + Hue 6
1.14 Bluetooth Connection 6

2 Setting Up 7
2.1 Read Safety 7
2.2 TV Stand and Wall Mounting 7
2.3 Tips on Placement 7
2.4 Power Cable 7
2.5 Antenna Cable 8
2.6 Satellite Dish 8

3 Connect your Android TV 9
3.1 Network and Internet 9
3.2 Google Account 11
3.3 Philips App Gallery 12

4 Connect Devices 13
4.1 About Connections 13
4.2 CAM with Smart Card - CI+ 16
4.3 Receiver - Set-Top Box 17
4.4 Home Theatre System - HTS 17
4.5 Smartphones and Tablets 19
4.6 Blu-ray Disc Player 19
4.7 DVD Player 19
4.8 Bluetooth - Speakers and Gamepads 19
4.9 Headphones 20
4.10 Game Console 21
4.11 Gamepad 21
4.12 USB Hard Drive 22
4.13 USB Keyboard 23
4.14 USB Flash Drive 23
4.15 Photo Camera 23
4.16 Camcorder 24
4.17 Computer 24

5 Switching On and Off 25
5.1 On or standby 25
5.2 Philips Logo Brightness 25
5.3 Keys on TV 25
5.4 Sleep Timer 25
5.5 Switch Off Timer 25

6 Remote Control 27
6.1 Key overview 27
6.2 Voice search 28
6.3 Keyboard 28
6.4 IR Sensor 30
6.5 Batteries 30
6.6 Cleaning 30

7 Channels 31
7.1 Install Channels 31
7.2 Channel Lists 31
7.3 Watching channels 32
7.4 Favourite Channels 34
7.5 Text / Teletext 35
7.6 Interactive TV 36

8 TV Guide 38
8.1 What You Need 38
8.2 TV Guide Data 38
8.3 Using the TV Guide 38

9 Recording and Pause TV 40
9.1 Recording 40
9.2 Pause TV 41

10 Top Picks 43
10.1 About Top Picks 43
10.2 Now on TV 43
10.3 TV on Demand 43
10.4 Video on Demand 44

11 Home Menu 45
11.1 About the Home Menu 45
11.2 Open the Home Menu 45
11.3 Search and Voice Search 45
11.4 Restricted Profile 45

12 TV Menu 46
12.1 About TV Menu 46
12.2 Open TV Menu 46

13 Netflix 47

14 FreeviewPlus 48

15 Sources 49
15.1 Switch to a device 49
15.2 Options for a TV Input 49
15.3 Device Name and Type 49
15.4 Game or Computer 49
15.5 Rescan Connections 50

16 Apps 51
16.1 About Apps 51
16.2 Google Play 51
16.3 App Gallery 52
16.4 Start or Stop an App 52
16.5 Lock Apps 52
16.6 Manage Apps 54
16.7 Storage 54

17 Games 55
17.1 What You Need 55
17.2 Gamepads 55
17.3 Play a Game 55
17.4 Ideal Game Settings 55

18 Internet 56
18.1 Start Internet 56
18.2 Options on Internet 56

19 Videos, Photos and Music 57
19.1 From a USB Connection 57
19.2 From a Computer or NAS 57
19.3 From a Cloud Storage Service 57
19.4 Play your Videos 57
19.5 View your Photos 58
19.6 Play your Music 58

20 Smartphones and Tablets 59
20.1 Philips TV Remote App 59
20.2 Google Cast 59
20.3 AirPlay 59
20.4 MHL 59
21 Ambilight 60
21.1 Ambilight Style 60
21.2 Ambilight Off 60
21.3 Ambilight Settings 60
22 Multi View 61
22.1 About Multi View 61
22.2 Text and TV 61
22.3 Nettv and TV 61
22.4 HDMI and TV 61
23 Settings 62
23.1 Picture 62
23.2 Sound 67
23.3 Ambilight Settings 70
23.4 Eco Settings 72
23.5 General Settings 73
23.6 Clock, Region and Language 76
23.7 Universal Access 78
24 Wireless and Networks 81
24.1 Network 81
24.2 Bluetooth 81
25 Android Settings 82
26 Channel Installation 83
26.1 Antenna/Cable Installation 83
26.2 Channel List Copy 85
27 Software 87
27.1 Update Software 87
27.2 Software Version 87
27.3 Open Source Software 87
27.4 Open Source License 88
27.5 Announcements 120
28 Specifications 121
28.1 Environmental 121
28.2 Power 121
28.3 Operating System 121
28.4 Reception 121
28.5 Display Type 121
28.6 Display Input Resolution 121
28.7 Dimensions and Weights 122
28.8 Dimensions and Weights 122
28.9 Dimensions and Weights 122
28.10 Connectivity 122
28.11 Sound 122
28.12 Multimedia 122
29 Help and Support 124
29.1 Register your TV 124
29.2 Using Help 124
29.3 Troubleshooting 124
29.4 Online Help 126
29.5 Support and Repair 126
30 Safety and Care 127
30.1 Safety 127
30.2 Screen Care 128
31 Terms of Use 129
31.1 Terms of Use - TV 129
31.2 Terms of Use - Smart TV 129
31.3 Terms of Use - Philips App Gallery 129
32 Copyrights 130
32.1 MHL 130
32.2 Ultra HD 130
32.3 HDMI 130
32.4 Dolby Digital Plus 130
32.5 DTS Premium Sound ™ 130
32.6 Microsoft 130
32.7 Wi-Fi Alliance 131
32.8 Kensington 131
32.9 Other Trademarks 131
Index 132

1

TV Tour

1.1

Ultra HD TV

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

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

1.2

High Dynamic Range - HDR

With HDR you can boost the brightness and contrast of the picture. HDR makes your picture much brighter with a higher level of contrast between lighter and darker parts. Colours are kept rich and saturated. Programmes recorded with HDR look much brighter, are more lifelike and are rich in colour and accurate in detail.

With **HDR upscaling** you can enjoy the benefits of HDR on any TV programme.

For more information, press the colour key **Keywords** and look up **HDR upscaling**.

1.3

Philips Android TV

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

Android TV offers thousands of movies, shows and games from Google Play, YouTube and your favourite apps.*
Personalised recommendations mean more time being entertained and less time hunting for something good. With Google Cast built in, you can easily cast movies, shows and photos from your Chromebook or Android device to your TV.**

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

Connect the TV to your home network and the Internet.

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

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

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1.4

Watching Channels

Of course, your TV is made for watching TV channels.

On this TV you can create several favourite lists, you can reorder a favourite list or rename a channel. Check out the programme recommendations in **Now on TV** or catch up on a TV series with **TV on Demand**. With **Top Picks**, you can open your personalised TV suggestions. The online TV Guide lets you set reminders or allows you to make recordings*.

* You need a connected USB Hard Drive.

1.5

Using Apps

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

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

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

1.6

FreeviewPlus

This TV is certified by **FreeviewPlus**.

FreeviewPlus* provides access to content and services from the Freeview networks. The FreeviewPlus service provides a 7+ day Electronic Program Guide, all available Catch Up TV on the TV, recommendations and the ability to set reminders and favourites. FreeviewPlus is available by pressing the Green button on the remote control.

*FreeviewPlus uses HbbTV technology which combines broadcast and broadband. Internet connection is required. Data usage charges and conditions apply.

1.7

Playing Games

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

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

For more information, press the colour key **Keywords** and look up **Gaming**.

1.8

Rent a Movie

To get a **rental video**, you don't need to leave the house.

With **Video on Demand** in **Top Picks**, you can select and play your recent favourite movie immediately. The video store will stream the movie to your TV at home. Video on Demand is available in selected countries.

For more information, press the colour key **Keywords** and look up **Video on Demand**.

1.9

Pause TV and Recordings

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

Pause your TV and answer that urgent phone call or simply take a break during a sports match, while the TV stores the broadcast on the USB Hard Drive. You can watch it again later.
With a USB Hard Drive connected, you can also record digital broadcasts. You can record while you are watching a programme or schedule a recording of an upcoming programme.

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

1.10

Smartphones and Tablets

With this Philips Android TV, you can easily share what's on your smartphone or tablet on the big screen.

Download and install the **Philips TV Remote App**. It's free and available for Android and iOS.

With the TV Remote App on your smartphone or tablet, you master your media around you. Send photos, music or videos to your big TV screen or watch any of your TV channels live on your tablet or phone. Open the TV Guide and schedule a recording for tomorrow. Your TV at home will do the job. Switch on Ambilight+hue and set the coziest colour effects in your living room. With the TV Remote App you are in control. You might consider to simply lower the TV volume.

1.11

Social Networks

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

On this TV you get the messages from your **social network** on your TV screen. You can send a return message from your couch.

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

1.12

Ambilight

Ambilight is the most elegant and exclusive feature of your new Philips TV.

A subtle glow of coloured light that comes from behind the screen - expanding your visual experience. With Ambilight your eyes relax but your mind is fully taken up by what you see. Select one of the many Ambilight styles to follow your mood.

With **Ambilight+hue** you even expand Ambilight further. Bringing in the wireless controlled bulbs of **Philips Hue** *. All of them will fill your room with colours that fit what's on TV.

You will miss Ambilight when you switch it off.

* Philips Hue is sold separately.

1.13

Ambilight + Hue

Your Ambilight TV

Philips' unique Ambilight technology goes beyond the ordinary. It not only makes your screen seem much wider, it also makes your viewing experience more immersive by projecting an extra-wide glow from the sides of your TV screen onto the surrounding wall. Colour, vibrancy and excitement move beyond the screen and into your living room, bringing with them a more thrilling, intense and immersive viewing experience.

Ambilight + Hue

Fill your space and your life with the wonder of Ambilight. Ambilight + hue* allows you to extend the Ambilight experience throughout your room.

With **Ambilight+hue** you even expand Ambilight further. Bringing in the wireless controlled bulbs of **Philips Hue***. All of them setup to fill your room with colours that fit what's on TV.

Your Ambilight TV and hue bulbs ‘talk’ wirelessly to each other, surrounding you in the emotion, power and colour of Ambilight.

*Hue kit available separately.

1.14

Bluetooth Connection

Your TV has **Bluetooth** technology inside.

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

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

2

Setting Up

2.1

Read Safety

Read the safety instructions first before you use the TV.

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

2.2

TV Stand and Wall Mounting

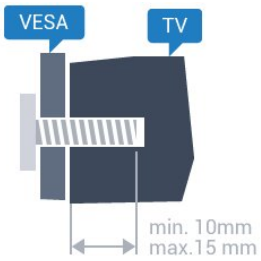
TV Stand

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

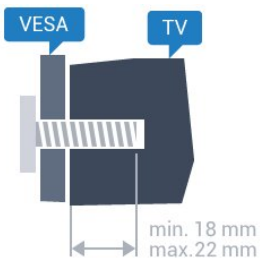
Use the product type number of the TV to look for the **Quick Start Guide** to download.

Wall Mounting

Your TV is also prepared for a VESA-compliant wall mount bracket (sold separately).
Use the following VESA code when purchasing the wall mount . . .



• 55PUT7101
VESA MIS-F 200x200, M6
• 65PUT7101
VESA MIS-F 400x200, M6



• 75PUT7101
VESA MIS-F 600x400, M8

Preparation

First remove the 4 plastic screw caps out of the threaded bushes on the back of the TV.
Make sure that the metal screws, to mount the TV to the VESA-compliant bracket, go about 10mm deep inside the threaded bushes of the TV.

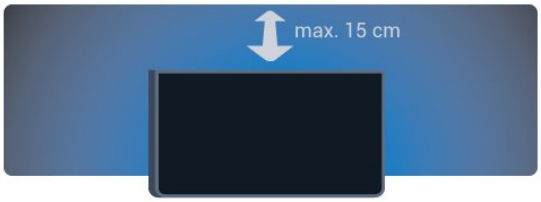
Caution

Wall mounting the TV requires special skills and should only be performed by qualified personnel. The TV wall mounting should meet safety standards according to the TVs weight. Also read the safety precautions before positioning the TV.
TP Vision Europe B.V. bears no responsibility for improper mounting or any mounting that results in accident or injury.

2.3

Tips on Placement

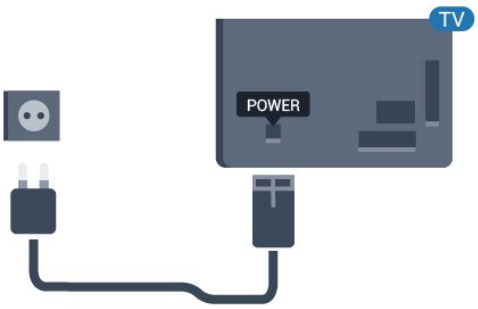
• Position the TV where light does not shine directly on the screen.
• Dim lighting conditions in the room for best Ambilight effect.
• Position the TV up to 15 cm away from the wall.
• The ideal distance to watch TV is 3 times its diagonal screen size. When seated, your eyes should be level with the centre of the screen.



2.4

Power Cable

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



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

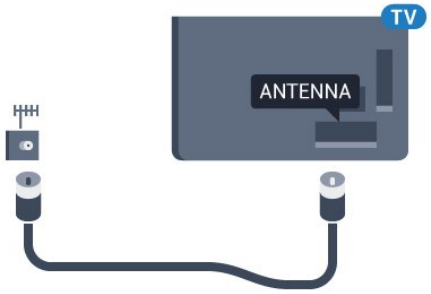
For more information, in Help, press the colour key Keywords and look up Switching On for more information on switching the TV on or off.

2.5

Antenna Cable

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

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

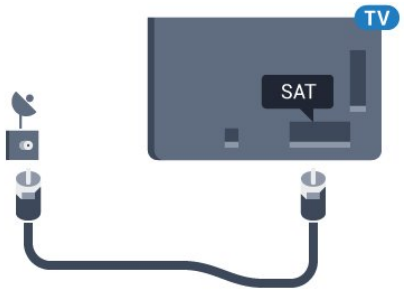


2.6

Satellite Dish

Note: Not support for countries in Asia Pacific, Middle East, and Africa.

Attach the satellite F-type connector to the satellite connection SAT at the back of the TV.



3

Connect your Android TV

3.1

Network and Internet

Home Network

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

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

Connect to Network

Wireless Connection

What You Need

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

Use a high-speed (broadband) connection to the Internet.



Make the Connection

Wireless

To make a wireless connection...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Wireless and Networks** and press **›** (right) to enter the menu.
3 - Select **Wired or Wi-Fi** > **Connect to Network** and press **OK**.
4 - Select **Wireless** and press **OK**.
5 - In the list of found networks, select on your wireless network. If your network is not in the list because the network name is hidden (you switched off the SSID broadcast of the router), select **Add New Network** to enter the network name yourself.
6 - Depending on the type of router, enter your encryption key - WEP, WPA or WPA2. If you entered the encryption key for this network before, you can select **OK** to make the connection immediately.
7 - A message will be shown when the connection is successful.

Wi-Fi On/Off

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

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

WPS

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

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

WPS with PIN Code

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

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

Problems

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

Internet does not work
• If the connection to the router is OK, check the router connection to the Internet.

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

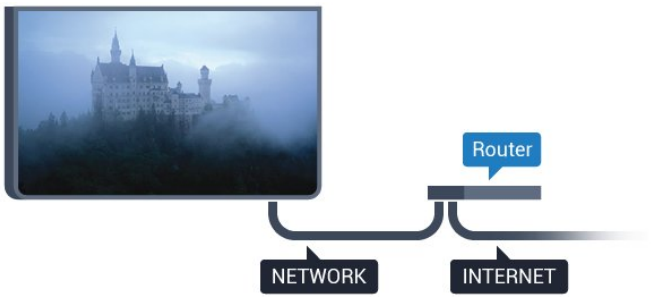
DHCP
• If the connection fails, you can check the DHCP (Dynamic Host Configuration Protocol) setting of the router. DHCP should be switched on.

In Help, press the colour key **Keywords** and look up **Troubleshooting** for more information.

Wired Connection

What You Need

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



Make the Connection

To make a wired connection...

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

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

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

Network Settings

View Network Settings

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

To view the current network settings...

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

Network Configuration

If you are an advanced user and want to install your network with Static IP addressing, set the TV to **Static IP**.

To set the TV to Static IP...

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

Switch On with Wi-Fi (WoWLAN)

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

To switch on WoWLAN...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Wireless and Networks** and

press › (right) to enter the menu.
3 - Select Wired or Wi-Fi > Switch On with Wi-Fi (WoWLAN) and press OK.
4 - Select On and press OK.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Switch on Wi-Fi connection

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

To switch on Wi-Fi...

1 - Press ⚙, select All Settings and press OK.
2 - Select Wireless and Networks and press › (right) to enter the menu.
3 - Select Wired or Wi-Fi > Wi-Fi On/Off and press OK.
4 - Select On and press OK.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Digital Media Renderer - DMR

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

To switch on DMR...

1 - Press ⚙, select All Settings and press OK.
2 - Select Wireless and Networks and press › (right) to enter the menu.
3 - Select Wired or Wi-Fi > Digital Media Renderer - DMR and press OK.
4 - Select On and press OK.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Wi-Fi Smart Screen

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

To switch on Wi-Fi Smart Screen...

1 - Press ⚙, select All Settings and press OK.
2 - Select Wireless and Networks and press › (right) to enter the menu.
3 - Select Wired or Wi-Fi > Wi-Fi Smart Screen and press OK.
4 - Select On and press OK.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

TV Network Name

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

To change the TV name...

1 - Press ⚙, select All Settings and press OK.
2 - Select Wireless and Networks and press › (right) to enter the menu.
3 - Select Wired or Wi-Fi > TV Network Name and press OK.
4 - Enter the name with the remote control keyboard.
5 - To finish, select ✓ and press OK.
6 - Press ‹ (left) repeatedly if necessary, to close the menu.

Clear Internet Memory

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

To clear the Internet memory...

1 - Press ⚙, select All Settings and press OK.
2 - Select Wireless and Networks and press › (right) to enter the menu.
3 - Select Wired or Wi-Fi > Clear Internet Memory and press OK.
4 - Select OK to confirm.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

File Sharing

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

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

3.2

Google Account

Sign In

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

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

Sign In

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

To sign in after you did the TV installation...

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

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

Android Settings

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

To open these settings...

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

3.3
Philips App Gallery

Philips Apps

Connect the TV to the Internet to enjoy apps selected by Philips. The **Philips App Gallery** apps are made specially for TV. Downloading and installing App Gallery apps is free of charge.

The Philips App Gallery collection of apps can differ per country or region.

Terms of Use

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

To agree on the Terms of Use after you did the TV installation...

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

Privacy Settings

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

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

To set the Philips App Gallery privacy settings...

1 - Press ⌂ **HOME** and select **Philips Collection** > **App Gallery** and press **OK** to open the App Gallery.
2 - You can select **Privacy Policy**, then press **OK**.
3 - Select each setting and press **OK** to allow or disallow. You can read about each setting in detail.
4 - Press ← **BACK** to close the menu.

4

Connect Devices

4.1

About Connections

Connectivity Guide

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

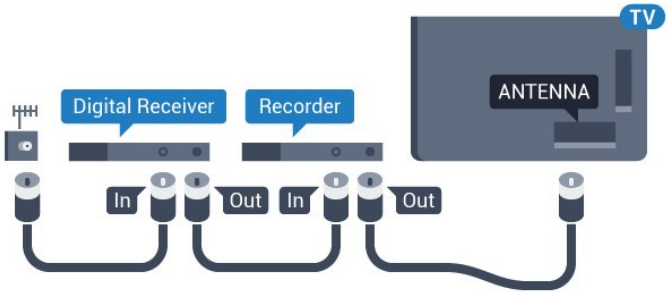
When you connect a device, the TV recognizes its type and gives each device a correct type name. You can change the type name if you wish. If a correct type name for a device is set, the TV automatically switches to the ideal TV settings when you switch to this device in the Sources menu.

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

Go to **www.connectivityguide.philips.com**

Antenna port

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



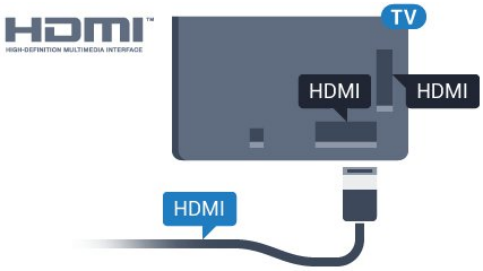
HDMI ports

HDMI Quality

An HDMI connection has the best picture and sound quality. One HDMI cable combines video and audio signals. Use an HDMI cable for TV signal.

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

If a device connected with HDMI is not working correctly, check if a different **HDMI Ultra HD** setting can solve this problem. In Help, press the colour key **Keywords** and look up **HDMI Ultra HD**.



Copy protection

HDMI cables support HDCP 2.2 (High-bandwidth Digital Content Protection). HDCP is a copy protection signal that prevents copying content from a DVD disc or Blu-ray Disc. Also referred to as DRM (Digital Rights Management).

HDMI ARC

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

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

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

HDMI MHL

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

The **HDMI 4** connection on this TV incorporates **MHL 2.0** (Mobile High-Definition Link).

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

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

MHL, Mobile High-Definition Link and the MHL Logo

are trademarks or registered trademarks of the MHL, LLC.

HDMI Ultra HD

This TV can display Ultra HD signals. Some devices - connected with HDMI - do not recognise a TV with Ultra HD and might not work correctly or show distorted picture or sound. To avoid the malfunctioning of such a device, you can set the signal quality to a level the device can handle. If the device is not using Ultra HD signals, you can switch off Ultra HD for this HDMI connection.

The setting **UHD 4:4:4/4:2:2** allows UHD YCbCr 4:4:4 / 4:2:2 signals. The setting **UHD 4:2:0** allows UHD YCbCr 4:2:0 signals.

To set the signal quality...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **General Settings** and press **>** (right) to enter the menu.
3 - Select **Advanced** > **HDMI Ultra HD** and press **OK**.
4 - Select **UHD 4:4:4/4:2:2**, **UHD 4:2:0** or **UHD Off** and press **OK**.
5 - Press **<** (left) repeatedly if necessary, to close the menu.

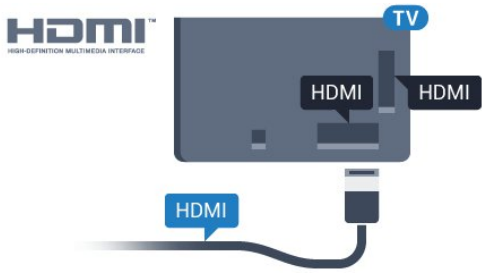
If the picture and sound of a device connected to **HDMI 1** or **HDMI 2** is distorted, connect the device to **HDMI 3** or **HDMI 4** on this TV.

In **Help**, press the colour key **Keywords** and look up **Problems, HDMI Connection** .

HDMI CEC - EasyLink

EasyLink

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



EasyLink HDMI CEC

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

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

EasyLink setup

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

HDMI CEC on other brands

The HDMI CEC functionality has different names on different brands. Some examples are: Anynet, Aquos Link, Bravia Theatre Sync, Kuro Link, Simplink and Viera Link. Not all brands are fully compatible with EasyLink.

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

Operate Devices

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

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

If the key you need is not on the TV remote control, you can select the key in the Options menu.
Press **+ OPTIONS** and select **Controls** in the menu bar. On the screen, select the device key you need and press **OK**.
Some very specific device keys might not be available in the Controls menu.

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

control.

EasyLink On or Off

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

To switch off EasyLink completely...

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

EasyLink Remote Control

If you want devices to communicate but you don't want to operate them with the TV remote control, you can switch off EasyLink Remote Control separately.

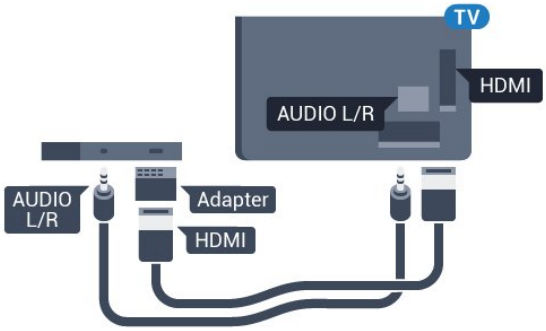
To switch EasyLink Remote Control on or off...

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

DVI to HDMI

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

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



Copy protection

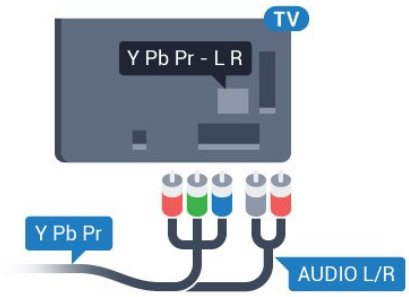
DVI and HDMI cables support HDCP (High-bandwidth Digital Content Protection). HDCP is a copy protection signal that prevents copying content from a DVD disc or Blu-ray Disc. Also referred to as DRM (Digital Rights Management).

Y Pb Pr - Component

Y Pb Pr - Component Video is a high quality connection.

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

Match the YPbPr (green, blue, red) connector colours with the cable plugs when you connect.
Use an Audio L/R cinch cable if your device also has sound.

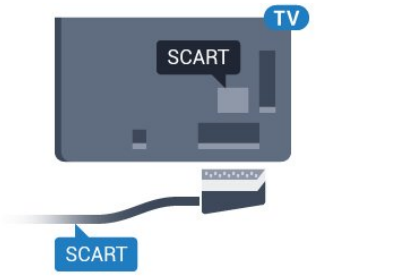


Scart

Note: Not support for countries in Asia Pacific, Middle East, and Africa.

SCART is a good quality connection.

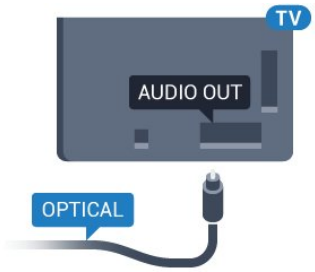
The SCART connection can be used for CVBS and RGB video signals but cannot be used for High Definition (HD) TV signals. The SCART connection combines video and audio signals. The SCART connection also supports NTSC playback.



Audio Out - Optical

Audio Out - Optical is a high quality sound connection.

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



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

If the sound does not match the video on screen, you can adjust the audio to video synchronisation.
For more information, in **Help**, press the colour key **Keywords** and look up **Audio to Video Sync**.

4.2

CAM with Smart Card - CI+

About CI+

Note: Not support for countries in Asia Pacific, Middle East, and Africa.

CI+

This TV is ready for the **CI+ Conditional Access** .

With CI+ you can watch premium HD programmes, like movies and sports, offered by digital TV operators in your region. These programmes are scrambled by the TV operator and descrambled with a prepaid CI+ module.
Digital TV operators provide a CI+ module (Conditional Access Module - CAM) and an accompanying smart card, when you subscribe to their premium programmes. These programmes have a high level of copy protection.

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

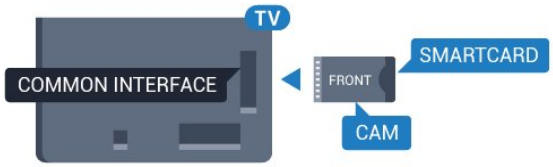
Smart Card

Digital TV operators provide a CI+ module (Conditional Access Module - CAM) and an accompanying smart card, when you subscribe to their premium programmes.

Insert the smart card into the CAM module. See the instruction you received from the operator.

To insert the CAM in the TV...

1 - Look on the CAM for the correct method of insertion. Incorrect insertion can damage the CAM and TV.
2 - While looking at the back of the TV, with the front of the CAM facing towards you, gently insert the CAM into the slot **COMMON INTERFACE**.
3 - Push the CAM in as far as it will go. Leave it in the slot permanently.



When you switch on the TV, it may take a few minutes before the CAM is activated. If a CAM is inserted and subscription fees are paid (subscription methods can differ), you can watch the scrambled channels supported by the CAM smart card.

The CAM and smart card are exclusively for your TV. If you remove the CAM, you will no longer be able to watch the scrambled channels supported by the CAM.

Passwords and PIN codes

For some CAMs, you must enter a PIN code to watch its channels. When you set the PIN code for the CAM, we recommend you to use the same code you are using to unlock the TV.

To set the PIN code for the CAM...

1 - Press **SOURCES** .
2 - Select the channel type you are using the CAM for **Watch TV**.
3 - Press **OPTIONS** and select **Common Interface**.

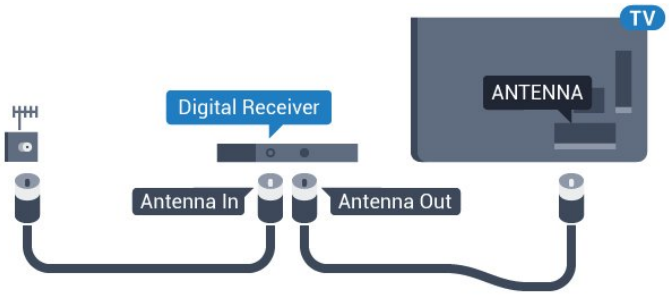
4 - Select the TV operator of the CAM. The following screens come from the TV operator. Follow the on-screen instruction to look up the PIN code setting.

4.3

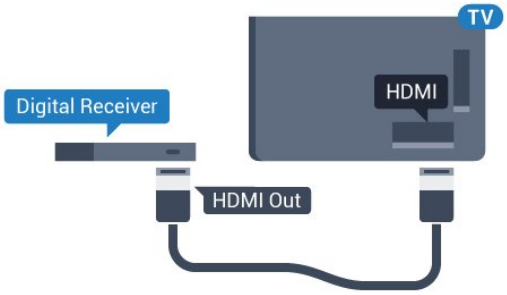
Receiver - Set-Top Box

Cable Box

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



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



Switch Off Timer

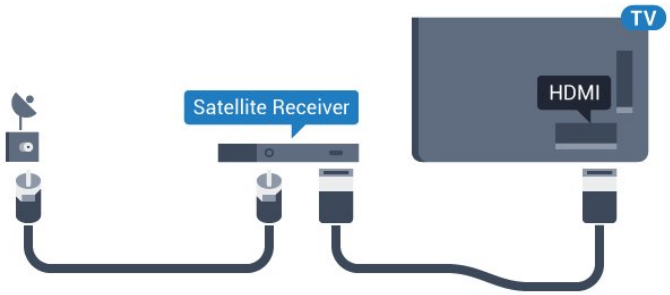
Switch off this automatic timer, if you only use the remote control of the Set-top box. Switch this timer off to prevent the TV from switching off automatically after a 4 hour period without a key press on the remote control of the TV.

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

Satellite Tuner

Connect the dish antenna cable to the Satellite receiver.

Next to the antenna connection, add an HDMI cable to connect the device to the TV.



Switch Off Timer

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

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

4.4

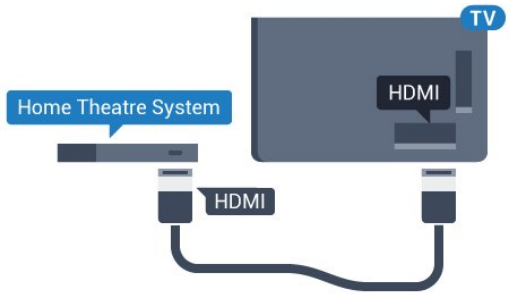
Home Theatre System - HTS

Connect with HDMI ARC

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

HDMI ARC

If your Home Theatre System has an HDMI ARC connection, you can use any HDMI connection on the TV to connect. With HDMI ARC, you do not need to connect the extra audio cable. The HDMI ARC connection combines both signals.
All HDMI connections on the TV can offer the Audio Return Channel (ARC) signal. But once you have connected the Home Theatre System, the TV can only send the ARC signal to this HDMI connection.



Audio to video synchronisation (sync)

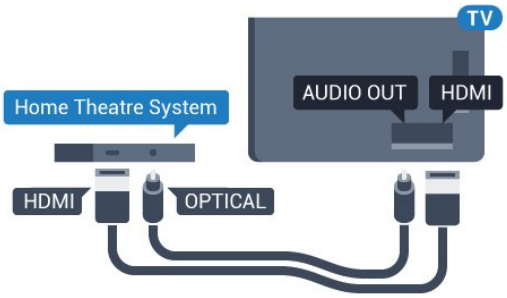
If the sound does not match the video on screen, you can set a delay on most Home Theatre Systems with a disc player to match the sound with the video.

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

Connect with HDMI

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

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



Audio to video synchronisation (sync)

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

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

Audio Out Settings

Audio Out Delay

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

Automatic audio to video sync

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

Audio sync delay

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

To switch off Audio Out Delay...

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

Audio Out Offset

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

The **Audio Out Delay** setting should be switched on.

To synchronise the sound on the TV...

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

Audio Out Format

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

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

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Sound** and press › (right) to enter the menu.
3 - Select **Advanced** > **Audio Out Format** and press **OK**.
4 - Select **Multichannel** or **Stereo (uncompressed)**, then press **OK**.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Audio Out Levelling

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

To level the difference in volume...

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

2 - Select **Sound** and press **>** (right) to enter the menu.
3 - Select **Advanced** > **Audio Out Levelling** and press **OK**.
4 - Select **More**, **Medium**, or **Less**, then press **OK**.

5 - If the volume difference is large, select **More**. If the volume difference is small, select **Less**.
6 - Press **<** (left) repeatedly if necessary, to close the menu.

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

Problems with HTS sound

Sound with loud noise

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

Press ⚙ for **All Settings** > **Sound** > **Advanced** > **Audio Out Format**.

No sound

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

4.5

Smartphones and Tablets

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

Wireless

For a wireless connection, on your smartphone or tablet download the Philips TV Remote App from your favourite app store. In **Help**, press the colour key **Keywords** and look up **Philips TV Remote App** for more information.

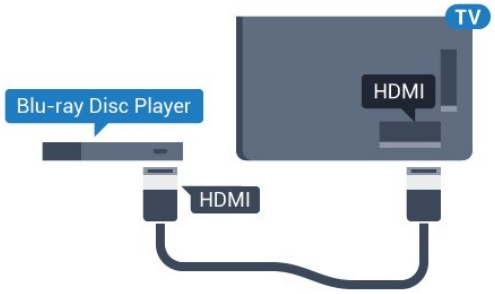
Wired

For a wired connection, use the HDMI 4 MHL connection on the back of the TV. In **Help**, press the colour key **Keywords** and look up **HDMI MHL** for more information.

4.6

Blu-ray Disc Player

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



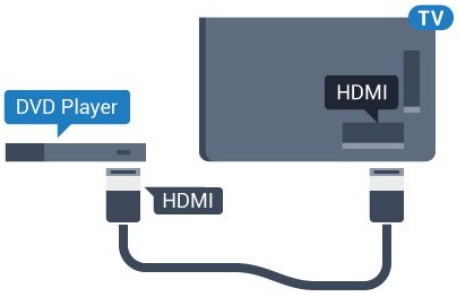
If the Blu-ray Disc player has EasyLink HDMI CEC, you can operate the player with the TV remote control.

In **Help**, press the colour key **Keywords** and look up **EasyLink HDMI CEC** for more information.

4.7

DVD Player

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



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

For more information on EasyLink, in **Help**, press the colour key **Keywords** and look up **EasyLink HDMI CEC**.

4.8

Bluetooth - Speakers and Gamepads

What You Need

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

To play the TV sound on a wireless speaker, you must pair the wireless speaker with the TV. You can pair some wireless speakers and a maximum of 4 Bluetooth LE (low energy) devices. The TV can only play the sound on one speaker at a time. If you connect a subwoofer, the sound is played on the TV and the subwoofer. If you connect a sound bar the sound is played on the sound bar only.

Attention - Audio to Video syncronisation

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

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

Pairing a Device

Position the wireless speaker within a distance of 5 meters from the TV. Read the user manual of the device for specific information on pairing and on wireless range. Make sure the Bluetooth setting on TV is switched on.

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

To pair a wireless speaker with the TV...

1 - Switch on the wireless speaker and place it within range of the TV.
2 - Press , select All Settings and press OK.
3 - Select Wireless and Networks and press (right) to enter the menu.
4 - Select Bluetooth > Search Bluetooth Device, and press OK.
5 - Select Start and press OK. Follow the instuctions on screen. You will pair the device with the TV and the TV will store the connection. You might need to unpair a paired device first if the maximum number of paired devices was reached.
6 - Select the type of device (headphone, subwoofer, ...) and press OK.
7 - Press (left) repeatedly if necessary, to close the menu.

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

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

Select a Device

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

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

1 - Press , select Speakers and press OK.
2 - Select the loudspeaker system you want and press OK.
3 - Press (left) repeatedly if necessary, to close the menu.

Remove a Device

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

To remove or disconnect a wireless device...

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

4.9

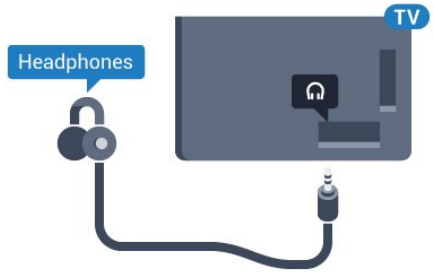
Headphones

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

To adjust the volume...

1 - Press , select Headphone Volume and press OK.
2 - Press the arrows (up) or (down) to adjust the value.

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

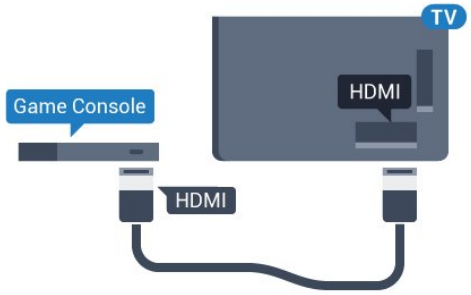


4.10

Game Console

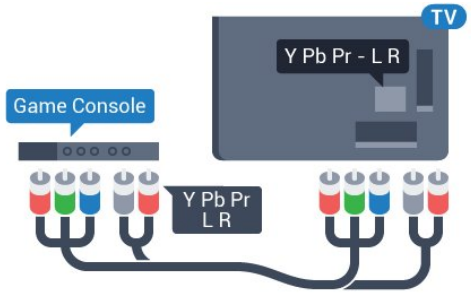
HDMI

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



Y Pb Pr

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



Best Setting

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

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

To set the TV to the ideal setting...

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

4.11

Gamepad

Connect a Gamepad

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

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

1 - Plug in the small nano receiver in one of the USB connections on the side of the TV. The wireless nano receiver comes with the Gamepad.
2 - If the Gamepad is switched on, you can use the Gamepad.

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

Bluetooth

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

Suitable Gamepads

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

The suited Gamepads are...

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

Problems

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

• Use a USB extension cord and move the nano receiver about 1 meter away from the TV.
• Alternatively, you can use a powered USB hub connected to the TV and plug in the nano receivers in the USB hub.

4.12

USB Hard Drive

What You Need

If you connect a USB Hard Drive, you can pause or record digital TV broadcasts (DVB broadcasts or similar).

Minimum Disk Space
• To Pause
To pause a broadcast, you need a USB 2.0 compatible Hard Drive with a minimum of 4GB disk space.
• To Record
To pause and record a broadcast, you need a minimum of 250GB disk space.

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

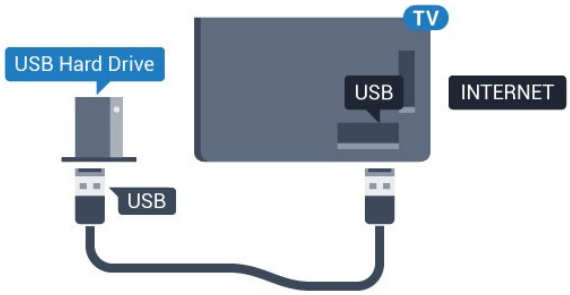
Installation

Before you can pause or record a broadcast, you must connect and format a USB Hard Drive. Formatting removes all files from the USB Hard Drive.

1 - Connect the USB Hard Drive to one of the **USB** connections on the TV. Do not connect another USB device to the other USB ports when formatting.
2 - Switch on the USB Hard Drive and the TV.
3 - When the TV is tuned to a digital TV channel, press ⏸ (Pause). Trying to pause will start the formatting.

Follow the instructions on screen.

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



Warning

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

Formatting

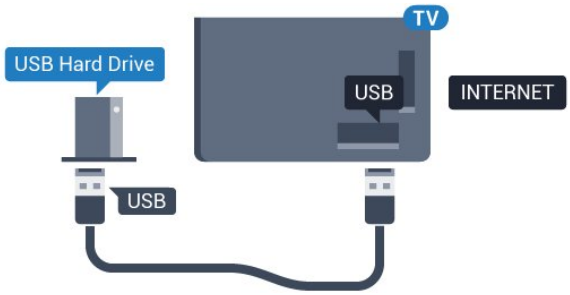
Before you can pause or record a broadcast, or store apps, you must connect and format a USB Hard Drive. Formatting removes all files from the USB Hard Drive. If you want to record broadcasts with TV Guide data from the Internet, you must setup the Internet connection first before you install the USB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

Warning

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

To format a USB Hard Drive...

1 - Connect the USB Hard Drive to one of the **USB** connections on the TV. Do not connect another USB device to the other USB ports when formatting.
2 - Switch on the USB Hard Drive and the TV.
3 - When the TV is tuned to a digital TV channel, press ⏸ (Pause). Trying to pause will start the formatting. Follow the instructions on screen.
4 - The TV will ask if you want to use the USB Hard Drive to store apps, agree to the question if you do.
5 - When the USB Hard Drive is formatted, leave it connected permanently.



4.13

USB Keyboard

Connect

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

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



Configure

Install the keyboard

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

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

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

Special Keys

Keys for entering text

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

Keys for apps and Internet pages

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

4.14

USB Flash Drive

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

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



The TV detects the flash drive and opens a list showing its content.
If the contents list does not appear automatically, press SOURCES and select **USB**.

To stop watching the USB flash drive content, press EXIT or select another activity.
To disconnect the USB flash drive, you can pull out the flash drive anytime.

Ultra HD on USB

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

For more information on watching or playing content from a USB flash drive, in **Help**, press the colour key — **Keywords** and look up **Photos, Videos and Music**.

4.15

Photo Camera

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

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

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

Ultra HD on USB

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

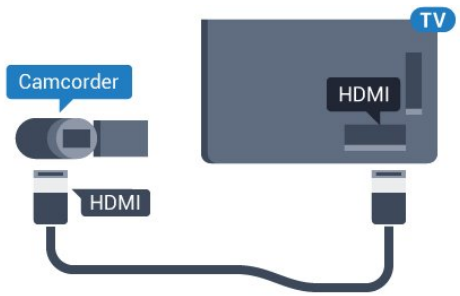
For more information on viewing photos, in Help, press the colour key Keywords and look up Photos, Videos and Music.

4.16

Camcorder

HDMI

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



4.17

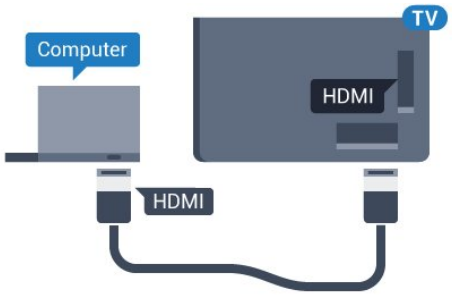
Computer

Connect

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

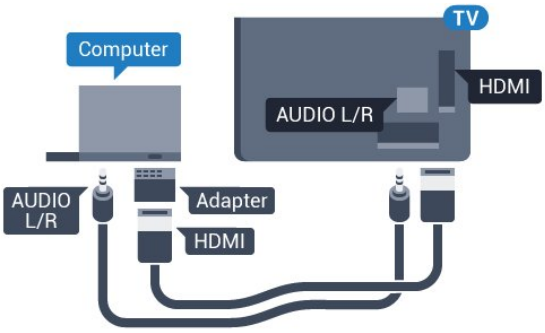
With HDMI

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



With DVI to HDMI

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



Ideal Setting

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

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

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

To set the TV to the ideal setting...

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

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

5

Switching On and Off

5.1

On or standby

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

Switch on

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

Switch to standby

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



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

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

5.2

Philips Logo Brightness

You can switch off or adjust the brightness of the Philips logo on the front of the TV.

To adjust or switch off...

1 - Press , select All Settings and press OK.
2 - Select General Settings and press (right) to enter the menu.
3 - Select Philips Logo Brightness, and press (right) to enter the menu.
4 - Select Minimum, Medium, Maximum, or Off to switch off the lighting of the logo, then press OK.
5 - Press (left) repeatedly if necessary, to close the menu.



5.3

Keys on TV

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

To open the basic menu...

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

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



5.4

Sleep Timer

With the Sleep Timer, you can set the TV to switch to Standby automatically after a preset time.

To set the Sleep Timer...

1 - Press , select Sleep Timer and press OK.
2 - With the slider bar you can set the time to up to 180 minutes in increments of 5 minutes. If set to 0 minutes, the Sleep Timer is switched off. You can always switch off your TV earlier or reset the time during the countdown.
3 - Press BACK to close the menu.

5.5

Switch Off Timer

If the TV receives a TV signal but you don't press a key on the remote control during a 4 hour period, the TV switches off automatically to save energy. Also, if the TV does not receive a TV signal nor a remote control command for 10 minutes, the TV switches off automatically.

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

To deactivate the Switch Off Timer ...

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

For more information on environmentally friendly TV settings, in **Help**, press the colour key **Keywords** and look up **Eco Settings**.

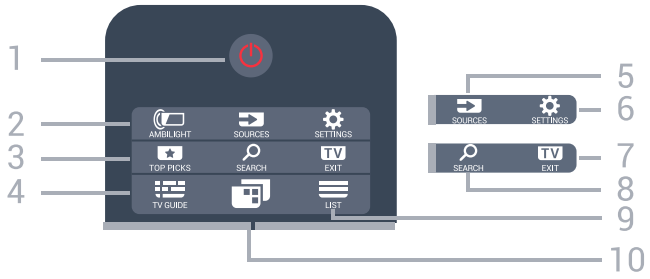
6

Remote Control

6.1

Key overview

Top



1 - Standby / On
To switch the TV on or back to Standby.

2 - AMBILIGHT
To select one of the Ambilight style.

3 - TOP PICKS
To open the menu with recommended programmes, Video on Demand (Rental Videos) or Online TV (Catch Up TV).
If available.

4 - TV GUIDE
To open or close the TV Guide.

5 - SOURCES
To open or close the Sources menu.

6 - SETTINGS
To open the Frequent Settings menu and All Settings.

7 - EXIT
To switch back to watching TV. To leave an interactive TV application.

8 - SEARCH
To open the searches page.

9 - LIST
To open or close the channel list.

10 - TV Menu
To open the TV Menu with typical TV functions.

Middle



1 - OK key / Arrow / navigation keys
To confirm a selection or setting.
To navigate up, down, left or right.

2 - BACK
To switch back to the previous channel you selected.
To close a menu without changing a setting.
To go back to the previous App/Internet page.

3 - Colour keys
Direct selection of options. Blue key, opens Help.

4 - OPTIONS
To open or close the Options menu.

5 - HOME
To open the Home menu.

Bottom



1 - NETFLIX
To open the Netflix App directly. With the TV switched on or from standby.

2 - Volume
To adjust the volume level.

3 - Number keys
To select a channel directly.

4 - SUBTITLE
To switch Subtitles on, off or on during mute.

5 - Playback and Record
• Play ▶, to playback.
• Pause ⏸, to pause playback
• Stop ■, to stop playback
• Rewind ◀◀, to rewind
• Fast forward ▶▶, to go fast forward
• Record ●, to start recording

6 - Channel
To switch to the next or previous channel in the channel list. To open the next or previous page in Text/Teletext. To start the next or previous chapter on a disc.

7 - Mute
To mute the sound or to restore it.

8 - TEXT
To open or close Text/Teletext.

6.2
Voice search

Download App from Google play

Use your Android smartphone or tablet as a remote for your Android TV. Easily switch between d-pad, touchpad, and gamepad modes to navigate content and play games on your Android TV device. Tap the microphone to start a voice search, or use the keyboard to input text on Android TV.

To get started, connect your Android phone or tablet to the same network as your Android TV device or find your Android TV via bluetooth.

Works with all Android TV devices.

*You need an Android phone or tablet running Android 4.3 or higher to use the Android TV Remote Control app.

Voice Search

Pairing with your TV

There is no microphone on your remote control, if you want to use voice search, you must install **Android TV Remote Control app** on your Android smartphone or tablet first.

1 - On your Android smartphone or tablet, search "Android TV Remote Control" in Google Play store.
2 - Download and install **Android TV Remote Control app*** on your Android smartphone or tablet .
3 - Connect your Android smartphone or tablet to the same network as your Android TV device.
4 - Select "PhilipsTv"** on your Android smartphone or tablet, then your Android TV will show a code on the screen.
5 - Enter the code on your Android smartphone or tablet to pair to your Android TV.

*You need an Android phone or tablet running Android 4.3 or higher to use the Android TV Remote Control app.

**The name of your Android TV is depends on the name you set in TV Network Name. The pre-set name is model name of this TV.

For more information, in **Help**, press the colour key **Keywords** and look up **Network, TV Network Name**.

Using Voice search

You can search for videos, music or anything else on the Internet with the icon at the top of the Home menu. You can start using Voice Search any time. Alternatively, you can use the remote control keyboard to enter text.

To use Voice Search...

1 - Tap icon on your smartphone to start a voice search.
2 - The icon is red on screen, the microphone is active.
3 - Speak out clearly what you are looking for. It might take some time for the results to appear.
4 - In the screen with search results, you can select the item you want.

See also www.support.google.com/androidtv

Voice Search settings

You can set the language you like to use with Voice Search.

To set the language for Voice Search...

1 - Press , select **All Settings** and press **OK**.
2 - Select **Android Settings** and press **OK**.
3 - Select **Preferences** > **Speech** and press **OK**.
4 - Select the language you want to use and press **OK**.
5 - Press ← **BACK** to go back one step or press **EXIT** to close the menu.

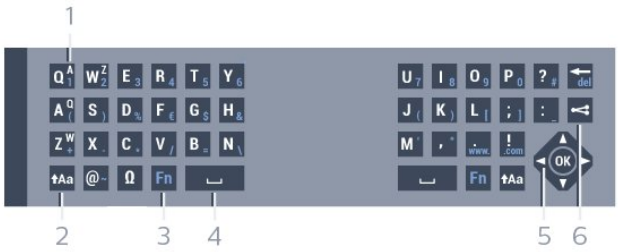
6.3

Keyboard

Overview

Qwerty and Azerty

Overview of a Qwerty/Azerty keyboard.*



1 - Azerty character
Character position if the keyboard layout is set to Azerty.

2 - ⬆Aa Shift
To type uppercase characters.

3 - Fn key
To type a number or punctuation character.

4 - ␣ Spacebar

5 - Navigation and OK

6 - Share this
To share online what you are watching at the moment.

* Your remote control has a Qwerty / Azerty or a Qwerty / Cyrillic keyboard, depending on your region.

Writing Text

With the keyboard on the back of the remote control, you can write text in any text field on screen.

To write text...

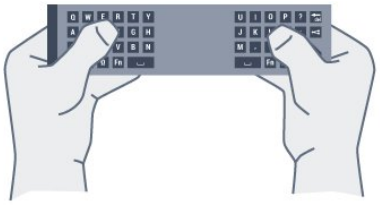
1 - Select a text field if it is not yet selected.
2 - Turn the remote control keyboard facing upwards to activate the keyboard keys. Hold the remote control with two hands and type with both thumbs.
3 - To hide the on screen keyboard, press ← BACK.
Press OK to confirm the text.

On-screen Keyboard

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

To open these settings...

Press ⌂ HOME, select All Settings and press OK.
5 - Select Android Settings and press OK.
6 - Select Preferences > ⌨ Keyboard and press OK.
7 - Select Configure > Language and press OK. You can set your language keyboard layout here.
8 - Press ← BACK to close the menu to go back one step.



• Best distance to operate remote control with the TV is less than 5 m.
• When using remote control keyboard, best to hold the remote control with the angle less than 50 degree.
• Do not block the IR ray of the remote control.

Uppercase and Lowercase

To type an uppercase character, press the ⬆Aa (Shift) key just before you type the character.

To type several uppercase characters consecutively, press and hold the ⬆Aa key while typing.

To type uppercase constantly, press the ⬆Aa key for 2 seconds to switch the keyboard in uppercase mode.

To switch out of uppercase mode, press the ⬆Aa key again. If no keys are pressed for 20 seconds, the uppercase mode switches off automatically. Also, if you press another modifier key, like Fn or ⌧, you switch out of uppercase mode.

Numbers and Punctuation Characters

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

Internet

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

Accented Letters and Symbols

Accented characters and symbols are not directly available on the Remote Control Keyboard.
To type such a character, you can open the on-screen keyboard.

Qwerty, Azerty and Cyrillic keyboard

The standard layout of the Remote Control Keyboard is Qwerty.

Azerty keyboard

Depending on your region, the Remote Control Keyboard can be set to Azerty. The Azerty characters are shown at the top right of the relevant keys.

To set the keyboard layout to Azerty...

1 - Press , select **All Settings** and press **OK**.
2 - Select **Region and Language** and press (right) to enter the menu.
3 - Select **Remote Control Keyboard** and press **OK**.
4 - Select **AZERTY** or **QWERTY** and press **OK**.
5 - Press (left) repeatedly if necessary, to close the menu.

Cyrillic keyboard

Depending on your region, the Remote Control Keyboard can be switched to Cyrillic characters. The Cyrillic characters are shown at the top right of the keyboard keys.

To write Cyrillic characters...

1 - Press on the remote control.
2 - Press again to switch back to Qwerty.

6.4
IR Sensor

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

Warning

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

6.5
Batteries

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

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

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

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

For more information, in **Help**, press the colour key **Keywords** and look up **End of use**.

6.6
Cleaning

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

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

7

Channels

7.1

Install Channels

For more information, in **Help**, press the colour key **Keywords** and look up **Channel, Antenna Installation** or **Channel, Cable Installation**.

7.2

Channel Lists

About Channel Lists

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

There is a channel list with all installed channels. You can only filter this list to show TV or only Radio channels.

With a channel list selected, press the arrows ^ (up) or v (down) to select a channel, then press **OK** to watch the selected channel. You only tune to the channels in that list when using ≡ + or ≡ – keys.

Channel icons

After an Automatic Channel Update of the channel list, newly found channels are marked with a ★ (star).
If you lock a channel, it will be marked with a 🔒 (lock).
The 3 most popular channels being watched by others at this moment are marked with a **1**, **2** or **3**.

Radio stations

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

This TV can receive digital television standard DVB . TV may not work properly with some operators of digital television , non-compliance with requirements of the standard in full.

Open a Channel List

Next to the list with all channels, you can select a filtered list or you can select one of the favourite lists you created.

To open the current channel list...

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

To select one of the channel lists...

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

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

Filter a Channel List

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

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

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

Search for a Channel

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

The TV can search for a channel within one of the 2 main channel lists - the Antenna or Cable channel list.

To search for a channel...

1 - Press TV.
2 - Press **OK** to open the current channel list.
3 - Press + **OPTIONS**.
4 - Select **Select Channel List** and press **OK**.
5 - Select **Filter Antenna Channels** or **Filter Cable Channels** and press **OK**.
6 - Select **Search Channel** and press **OK** to open a text field.You can use the remote control keyboard (if available) or the on-screen keyboard to enter text.
7 - Enter a number, a name or part of a name and select **Apply** and press **OK**. The TV will search for matching channel names in the list you selected.

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

7.3

Watching channels

Tune to a Channel

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

Switch Channels

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

If the information is available from the Internet, the TV shows the current programme name and details followed by the next programme name and details.

Previous channel

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

You can also tune to channels from a Channel List.

Lock a Channel

Lock and Unlock a Channel

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

To lock a channel...

1 - Press TV.
2 - Press OK to open the channel list. If necessary change the channel list.
3 - Select the channel you want to lock.
4 - Press + OPTIONS and select Lock Channel and press OK.
5 - Enter your 4 digit PIN code if the TV asks for it. A locked channel is marked with a (lock).
6 - Press < (left) to go back one step or press ← BACK to close the menu.

To unlock a channel...

1 - Press TV.
2 - Press OK to open the channel list. If necessary change the channel list.
3 - Select the channel you want to unlock.
4 - Press + OPTIONS and select Unlock Channel and press OK.
5 - Enter your 4 digit PIN code if the TV asks for it.
6 - Press < (left) to go back one step or press ← BACK to close the menu.

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

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

Parental Rating

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

Digital channels can have their programmes age rated. When the age rating of a programme is equal to or higher than the age you have set as age rating for your child, the programme will be locked. To watch a locked programme, you must enter the Parental Rating code first.

To set an age rating...

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

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

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

Channel Options

Open Options

While watching a channel, you can set some options.

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

To open the options menu...

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

Subtitles

Switch On

Digital broadcasts can have subtitles for their programmes.

To show the subtitles...

Press SUBTITLE.

You can switch subtitles On or Off. Alternatively you can select Automatic.

Automatic

If language information is part of the digital broadcast and the broadcasted programme is not in your language (the language set on TV), the TV can show subtitles automatically in one of your preferred subtitle languages. One of these subtitle languages must also be part of the broadcast.

You can select your preferred subtitle languages in Subtitle Language.

Subtitles from Text

If you tune to an analogue channel, you need to make the subtitles available for each channel manually.

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

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

To know if a channel is analogue or digital, switch to the channel and open Channel Info in + OPTIONS.

Subtitle Language

Preferred Subtitle Languages

A digital broadcast can offer several subtitle languages for a programme. You can set a preferred primary and secondary subtitle language. If subtitles in one of these languages are available, the TV will show the subtitles you selected.

To set the primary and secondary subtitle language...

1 - Press ⚙, select All Settings and press OK.
2 - Select Region and Language > Languages > Primary Subtitles or Secondary Subtitles.
3 - Select the language you need and press OK.
4 - Press ❮ (left) to go back one step or press ← BACK to close the menu.

Select a Subtitle Language

If none of the preferred subtitle languages are available, you can select another subtitle language if available. If no subtitle languages are available, you cannot select this option.

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

1 - Press + OPTIONS.
2 - Select Subtitle Language and select one of the languages as subtitles temporarily.

Audio Language

Preferred Audio Language

A digital broadcast can offer several audio languages (spoken languages) for a programme. You can set a preferred primary and secondary audio language. If audio in one of these languages is available, the TV will switch to the audio language.

To set the primary and secondary audio language...

1 - Press ⚙, select All Settings and press OK.
2 - Select Region and Language and select Languages > Primary Audio or Secondary Audio.
3 - Select the language you need and press OK.
4 - Press ❮ (left) to go back one step or press ← BACK to close the menu.

Select an Audio Language

If none of the preferred audio languages are available, you can select another audio language if available. If no audio languages are available, you cannot select this option.

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

1 - Press + OPTIONS.
2 - Select Audio Language and select one of the languages as audio temporarily.

HbbTV on this Channel

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

1 - Tune to the channel of which you want to block the HbbTV pages.
2 - Press + OPTIONS and select HbbTV on this Channel and press ❯ (right).
3 - Select Off and press OK.
4 - Press ❮ (left) to go back one step or press ← BACK to close the menu.

To block HbbTV on TV completely...

1 - Press ⚙, select All Settings and press OK.
2 - Select General Settings > Advanced > HbbTV.
3 - Select Off and press OK.
4 - Press ‹ (left) to go back one step or press ← BACK to close the menu.

Channel Info

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

To view the technical information on a channel...

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

Mono / Stereo

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

To switch to Mono or Stereo...

1 - Tune to an analoge channel.
2 - Press + OPTIONS, select Mono/Stereo and press › (right).
3 - Select Mono or Stereo and press OK.
4 - Press ‹ (left) to go back one step or press ← BACK to close the menu.

Reorder Channels

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

To change the sequence of channels...

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

7.4

Favourite Channels

About Favourite Channels

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

You can create 4 different lists of favourite channels for easy channel zapping. You can name each Favourites List individually. Only in a Favourites List you can reorder channels.

With a Favourites List selected, press the arrows ^ (up) or v (down) to select a channel, then press OK to watch the selected channel. You only tune to the channels in that list when using ≡ + or ≡ – keys.

Create a Favourites List

To create a favourite channels list...

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

The TV will ask to rename the Favourites List. You can use the on-screen keyboard or use the keyboard on the back of the remote control.

1 - Press ← BACK to hide the on-screen keyboard.
2 - Use the keyboard on the back of the remote control to delete the current name and enter a new name.
3 - When done, turn the remote control, select Close and press OK.

The TV will switch to the newly created Favourites List.

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

The channels in the Favourites List are renumbered.

Add a Range of Channels

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

To add a range of channels...

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

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

Rename a Favourites List

You can only rename a **Favourites List**.

To rename a **Favourites List**...

1 - Open the **Favourite List** you want to rename.
2 - Press + **OPTIONS**, select **Rename Favourites List** and press **OK**.
3 - Press ← **BACK** to hide the on-screen keyboard.
4 - Use the keyboard on the back of the remote control to delete the current name and enter a new name.
5 - When done, turn the remote control, select **Close** and press **OK**.
6 - Press ← **BACK** to close the channel list.

Remove a Favourites List

You can only remove a **Favourites List**.

To remove a **Favourites List**...

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

Reorder Channels

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

To change the sequence of channels...

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

7.5

Text / Teletext

Text Pages

To open Text/Teletext press **TEXT**, while you are watching TV channels.
To close Text, press **TEXT** again.

Select a Text page

To select a page . . .

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

Text sub-pages

A Text page number can hold several subpages. The subpage numbers are shown on a bar next to the main page number.
To select a subpage, press ‹ or ›.

T.O.P. Text pages

Some broadcasters offer T.O.P. Text.
To open T.O.P. Text pages within Text, press + **OPTIONS** and select **T.O.P. Overview**.

Favourite pages

The TV makes a list of the last 10 Text pages you opened. You can easily reopen them again in the Favourite Text pages column.

1 - In Text, select ♥ (heart) in the top left corner of the screen to show the column of favourite pages.
2 - Press ⌄ (down) or ⌃ (up) to select a page number and press **OK** to open the page.
You can clear the list with the option **Clear Favourite Pages**.

Search Text

You can select a word and scan Text for all occurences of this word.

1 - Open a Text page and press **OK**.
2 - Select a word or number with the arrow keys.
3 - Press **OK** again to jump immediately to the next occurence of this word or number.
4 - Press **OK** again to jump to the subsequent occurence.

5 - To stop searching, press ^ (up) until nothing is selected.

Text from a connected device

Some devices that receive TV channels can also offer Text.
To open Text from a connected device . . .

1 - Press SOURCES select the device and press OK.
2 - While watching a channel on the device, press + OPTIONS, select Show Device Keys and select the key and press OK.
3 - Press ← BACK to hide the device keys.
4 - To close Text, press ← BACK again.

Digital Text (UK only)

Some digital broadcasters offer dedicated Digital Text or interactive TV on their digital TV channels. This includes normal Text using the number, colour and arrow keys to select and navigate.

To close Digital Text, press ← BACK.

Text Options

In Text/Teletext, press + OPTIONS to select the following...

· Freeze page
To stop the automatic rotation of subpages.
· Dual screen / Full screen
To show the TV channel and Text alongside each other.
· T.O.P. overview
To open T.O.P. Text.
· Enlarge
To enlarge the Text page for comfortable reading.
· Reveal
To unhide hidden information on a page.
· Cycle subpages
To cycle subpages when these are available.
· Hide/Show Favourite Pages
To hide or show the list of favourite pages.
· Clear Favourite Pages
To clear the list of favourite pages.
· Language
To switch the group of characters that Text uses to display correctly.
· Text 2.5
To activate the Text 2.5 for more colours and better graphics.

Text Setup

Text language

Some digital TV broadcasters have several Text languages available.
To set your primary and secondary Text language . . .

1 - Press , select All Settings and press OK.
2 - Select Region and Language and press > (right) to enter the menu.
3 - Select Language > Primary Text or Secondary Text and press OK.
4 - Select your preferred Text languages.
5 - Press < (left) repeatedly if necessary, to close the menu.

Text 2.5

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

1 - Press TEXT.
2 - With Text/Teletext open on screen, press + OPTIONS.
3 - Select Text 2.5 > Off and press OK.
4 - Press < (left) repeatedly if necessary, to close the menu.

7.6

Interactive TV

About iTV

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

HbbTV, MHEG, . . .

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

Visit the broadcaster's Internet website for more information.

What You Need

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

HbbTV

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

1 - Press ⚙, select All Settings and press OK.
2 - Select General Settings > Advanced > HbbTV and press OK.
3 - Select On.
4 - Press ‹ (left) repeatedly if necessary, to close the menu.

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

1 - Tune to the channel of which you want to block the HbbTV pages.
2 - Press + OPTIONS and select HbbTV on This Channel.
3 - Select Off.

Use iTV

Open iTV pages

Most channels that offer HbbTV or iTV invite you to press the colour key ▬ (red) or OK key to open their interactive programme.

Navigate iTV pages

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

Digital Text (UK only)

To open Digital Text, press TEXT. To close, press ← BACK .

Close iTV pages

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

8

TV Guide

8.1

What You Need

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

The TV can collect TV Guide information for the channels that are installed on the TV. The TV cannot collect the TV Guide information for channels viewed from a digital receiver or decoder.

8.2

TV Guide Data

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

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

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

From the Internet

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

To set the TV Guide information...

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

Missing recordings

When some recordings seem to have disappeared from the list of recordings, the TV Guide info (data) might have changed. Recordings made with the setting **From the Broadcaster** become invisible in the list if you switch the setting to **From the Internet** or vice versa. The TV might have switched to **From the Internet** automatically.
To make the recordings available in the list of recordings, switch to the setting that was selected when the recordings were made.

8.3

Using the TV Guide

Open the TV Guide

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

Press **TV GUIDE** again to close.

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

Tune to a Programme

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

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

View programme details

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

1 - Press **+ OPTIONS**, select **Programme Info**, and press **OK**.
2 - Press **BACK** to close.

Change Day

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

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

Set a Reminder

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

In the TV Guide a programme with a reminder is marked with a (clock).

To set a reminder...

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

4 - Press ← BACK to close the menu.

To clear a reminder...

1 - Press ☰ TV GUIDE and select a programme with the reminder.
2 - Press + OPTIONS.
3 - Select Clear Reminder and press OK.
4 - Press ← BACK to close the menu.

Search by Genre

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

To search for programmes by genre...

1 - Press ☰ TV GUIDE.
2 - Press + OPTIONS.
3 - Select Search by Genre and press OK.
4 - Select the genre you want and press OK. A list with the found programmes appears.
5 - You can set reminders or schedule a recording on a selected programme.
6 - Press ← BACK to close the menu.

For more information on Recording, press the colour key ▬ Keywords and look up Recording.

List of Reminders

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

List of Reminders

To open the list of reminders...

1 - Press ☰ TV GUIDE.
2 - Press the colour key ▬ Recordings .
3 - At the top of the screen, select ⏰ Scheduled and press OK.
4 - In the list of scheduled recordings and reminders, select the tab Reminders and press OK to view the reminders only.
5 - Press the colour key ▬ Remove to remove the selected reminder. Press the colour key ▬ Record to record the selected programme.
6 - Press ← BACK to close the menu.

Set a Recording

You can set a recording in the TV Guide*.

To see the recording list, press ▬ Recordings , a programme set to be recorded is marked with a ● (red dot) on the front of the programme name.

To record a programme...

1 - Press ☰ TV GUIDE and select a future or ongoing programme.
2 - Press the colour key ▬ Record .
3 - Press ← BACK to close the menu.

To cancel a recording...

1 - Press ☰ TV GUIDE and select the programme set for recording.
2 - Press the colour key ▬ Clear Recording .
3 - Press ← BACK to close the menu.

* See chapter Recording and Pause TV for more information.

9

Recording and Pause TV

9.1

Recording

What You Need

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

To record a TV programme you need...

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

You cannot record when you are using Pause TV.

In terms enforcement of copyright legislation, some DVB providers can apply different restriction by means of DRM (Digital Right Management) technology. In case of broadcasting protected channels, recording, record validity or number of views may be restricted. Recording may be completely prohibited. In case of trying to record a protected broadcasting or play back an expired recording, an error message can appear.

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

Record a Programme

Record Now

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

To stop the recording, press ■ (Stop).

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

Schedule a Recording

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

To record a programme...

1 - Press **TV GUIDE**.
2 - On the TV Guide, select the channel and programme you wish to record. Press › (right) or ‹ (left) to scroll through the programmes of a channel. Use the colour key **Day** to select the day you need.
3 - With the programme highlighted, press the colour key **Record** . The programme is scheduled for recording. A warning will show automatically when overlapping recordings are scheduled. If you plan to record a programme in your absence, remember to leave the TV switched to Standby and the USB Hard Drive switched on.
4 - The TV adds some time margin at the end of the programme. You can adjust this margin with **Auto End Margin**.
5 - Press ← **BACK** to close the menu.

List of Recordings

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

To open the list or recordings...

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

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

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

Recording Conflicts

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

or both scheduled recordings.

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

1 - Press TV GUIDE.
2 - Press the colour key Recordings .
3 - At the top of the screen, select Scheduled and press OK.
4 - In the list of scheduled recordings and reminders, select the tab Recordings and press OK to view the scheduled recordings only.
5 - Select the scheduled recording that conflicts with another scheduled recording and press the colour key Adjust Time .
6 - Select the start or end time and change the time with the (up) or (down) keys. Select Apply and press OK.
7 - Press BACK to close the menu.

Auto End Margin

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

To set the automatic end time margin...

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

Manual Recording

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

To schedule a recording manually...

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

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

Watch a Recording

To watch a recording...

1 - Press TV GUIDE.
2 - Press the colour key Recordings .
3 - In the list of recordings, select the recording you need and press OK to start watching.
4 - You can use the keys (pause), (play), (rewind), (fast forward) or (stop).
5 - To switch back to watch TV, press EXIT.

9.2

Pause TV

What You Need

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

To pause a TV programme you need...

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

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

You cannot use Pause TV when you are recording.

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

Pause a Programme

To pause and resume a broadcast...

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

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

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

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

Replay

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

To replay a current broadcast...

1 - Press ⏸ (Pause)
2 - Press ◀◀ (Rewind). You can press ◀◀ repeatedly to select from where you want to start viewing the paused broadcast. Press these keys repeatedly to change speed. At one point you will reach the start of the broadcast storage or the maximum time span.
3 - Press ▶ (Play) to watch the broadcast again.
4 - Press ■ (Stop) to watch the broadcast live.

10

Top Picks

10.1

About Top Picks

With Top Picks your TV recommends...

- current TV programmes in Now on TV
- online TV services (Catch Up TV) in TV on Demand
- the latest rental videos in Video on Demand

To enjoy Top Picks, connect your TV to the Internet. Make sure you agree to the Terms of Use. The Top Picks information and services are only available in selected countries.

Terms of Use

To allow the TV to make these recommendations, you must agree to the Terms of Use. To get personalised recommendations based on your viewing habits, make sure you checked the box for Personalized Recommendations Service Opt-In.

To open the Terms of Use...

1 - Press TOP PICKS.
2 - Press + OPTIONS, select Terms of Use and press OK.
3 - Select Privacy Settings and press OK.
4 - Select Personalized Recommendations Service Opt-In and press OK to check the box.
Press OK again to uncheck.
5 - Press ← BACK to close the menu.

10.2

Now on TV

About Now on TV

With Now on TV , the TV recommends the 10 most popular programmes to watch at this moment.

The TV recommends programmes on TV now or starting within 15 minutes. The recommended programmes are selected from the channels you installed. The selection is made from channels of your country. Also, you can let Now on TV do some personalised recommendations for you, based on programmes you watch regularly.

To make the Now on TV information available...

- the Now on TV information must be available in your country.
- the TV must have channels installed.
- the TV must be connected to the Internet.
- the TV Clock must be set to Automatic or Country Dependent.
- you must accept the Terms of Use (You might have accepted already when you connected to the Internet.).

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

The TV does not store former recommendations.

Using Now on TV

To open Now on TV...

1 - Press TOP PICKS to open the Top Picks menu.
2 - Select Now on TV at the top of the screen and press OK.
3 - Press ← BACK to close.

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

In Now on TV you can...

- select and press OK on a programme icon to tune to the ongoing programme.
- select and press OK on a scheduled programme icon to tune to the channel already.

You can use the colour keys on the remote control to start, stop or clear a scheduled recording. You can also set or remove a reminder that warns you when a programme starts.

To leave Now on TV without tuning to another channel, press ← BACK.

10.3

TV on Demand

About TV on Demand

With TV on Demand , you can watch TV programmes you missed or watch your favourite programmes whenever it suits you best. This service is also called Catch Up TV, Replay TV or Online TV. Programmes available on TV on Demand are free to watch.

You can let TV on Demand do some personalised recommendations of programmes, based on the TV installation and the programmes you watch regularly.

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

Using TV on Demand

To open TV on Demand...

1 - Press TOP PICKS to open the Top Picks menu.
2 - Select TV on Demand at the top of the screen and press OK.
3 - Press (down) to open the page full screen.
4 - You can select a specific broadcaster if more than one is available.
5 - Select a programme icon and press OK to start watching.
6 - Press BACK to close.

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

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

10.4

Video on Demand

About Video on Demand

With Video on Demand , you can rent movies from an online rental video store.

You can let Video on Demand do some personalised recommendations of movies, based on your country, the TV installation and the programmes you watch regularly.

The icon will only appear at the top of the screen when Video on Demand is available.

Payment

When you rent or buy a movie, you can pay the video store securely with your credit card. Most video stores ask you to create a login account the first time you rent a movie.

Internet Traffic

Streaming a lot of videos may cause you to exceed your monthly Internet traffic limit.

Using Video on Demand

To open Video on Demand...

1 - Press TOP PICKS to open the Top Picks menu.
2 - Select Video on Demand at the top of the screen and press OK.
3 - Use the navigation keys to select a movie poster.
4 - Press BACK to close.

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

You can select a specific video store if more than one is available.

To rent a movie...

1 - Navigate the highlight on a movie poster. Limited info will show after some seconds.
2 - Press OK to open the movie page of the video store for a synopsis of the movie.
3 - Confirm your order.
4 - Make the payment on TV.
5 - Start watching. You can use the (Play) and (Pause) keys.

11

Home Menu

11.1

About the Home Menu

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

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

The Home menu is organised in rows...

Recommendations

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

Philips Collection

This row contains suggestions from Apps.

Apps

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

Games

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

Settings

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

See also www.support.google.com/androidtv

11.2

Open the Home Menu

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

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

11.3

Search and Voice Search

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

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

11.4

Restricted Profile

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

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

- Find or open apps which are marked as Not allowed
- Access the Google Play Store
- Purchase through Google Play Movies & TV, nor Google Play Games
- Use third-party apps that don't use the Google sign-in

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

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

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

12

TV Menu

12.1

About TV Menu

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

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

12.2

Open TV Menu

To open TV Menu and open an item...

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

13

Netflix

If you have a Netflix menbership subscription, you can enjoy Netflix on this TV. Your TV must be connected to the Internet. In your region, Netflix might only come available with future software updates.

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

www.netflix.com

14

FreeviewPlus

FreeviewPlus* is a new television service which provides a state of the art EPG and seamless access to Catch Up TV from free-to-air networks with the simple press of a button. FreeviewPlus provides an unrivalled user experience and places free to air television at the forefront of innovation, with services that include:

• A 7-day, easy-to-use EPG
• All available Catch Up TV on the TV screen
• Featured recommendations
• Ability to browse by genre and search programs for the next 7 days
• A Favourites function with reminders for live and Catch Up programs

What You Need

• you need a high-speed (broadband) Internet connection to the TV

To lauch FreeviewPlus

When you are watching TV, you will briefly see a prompt at the top left of the screen.

• Press the colour key — on the remote control to lauch FreeviewPlus.
• Follow the on-screen instructions and use the colour keys, arrow keys, and OK button to navigate.

*FreeviewPlus uses HbbTV technology which combines broadcast and broadband. Internet connection is required. Data usage charges and conditions apply.

Find more information on www.freeview.com.au

15

Sources

15.1

Switch to a device

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

To switch to a connected device...

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

One Touch Play

With the TV in standby, you can switch on a disc player with your TV remote control.
To switch on both disc player and TV from standby and start playing the disc immediately, press ▶ (play) on the TV remote control. The device must be connected with an HDMI cable and both TV and device must have HDMI CEC switched on.

15.2

Options for a TV Input

Some TV input devices offer specific settings.

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

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

Possible options...

Controls

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

Device Info

Open this option to view information on the connected device.

15.3

Device Name and Type

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

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

Rename or Change Type

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

To change the device type...

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

5 - If you want to reset the type of the device to the original connector type, select Reset and press OK.
6 - Select Close and press OK to close this menu.

To change the device name...

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

15.4

Game or Computer

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

For some devices the type of the device is not that clear. A game console can have a built-in Blu-ray Disc player and the type is set to Player because it is used as a disc player most of the time. For this kind of devices, you can temporarily switch to the ideal settings for gaming. Or alternatively, switch to the

ideal settings for a connected computer.

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

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

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

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

15.5

Rescan Connections

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

To rescan the connections...

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

16

Apps

16.1

About Apps

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

Like apps on your smartphone or tablet, the apps on your TV offer specific functions for an enriched TV experience. Apps like YouTube, games, video stores or weather forecasts (a.o.). You can use the Internet app to surf the Internet.

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

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

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

16.2

Google Play

Movies and TV

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

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

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

1 - Press HOME.
2 - Scroll down and select Apps > Google Play Movies & TV and press OK.
3 - Select a movie or TV show and press OK.
4 - Select the purchase you want and press OK. You will be taken through the purchase procedure.

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

1 - Press HOME.
2 - Scroll down and select Apps > Google Play Movies & TV and press OK.
3 - Select the movie or TV show from your library in the app, select the titel and press OK.
4 - You can use the ■ (stop), ❚❚ (pause), ◀◀ (rewind) or ▶▶ (fast forward) keys on the remote control.
5 - To stop the Movies & TV app, press ← BACK repeatedly or press TV EXIT.

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

Find more information on support.google.com/androidtv

Music

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

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

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

To start Google Play Music...

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

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

Find more information on support.google.com/androidtv

Games

With Google Play Games, you can play games on TV. Online or offline.

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

What You Need
- your TV must be connected with the Internet
- you must sign in with your Google Account on TV
- add a credit card to your Google Account to purchase new games

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

To start or stop a Google Play Game...

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

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

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

Find more information on support.google.com/androidtv

Google Play Store

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

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

To install a new app...

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

Parental controls

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

To set the parental control...

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

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

Find more information on support.google.com/androidtv

Payments

To make a payment on Google Play on TV, you must add a form of payment - a credit card (outside the United States) - to your Google Account. When you purchase a movie or TV show, you will be charged on this credit card.

To add a credit card ...

1 - On your computer, go to accounts.google.com and sign in with the Google Account you will use with Google Play on TV.
2 - Go to wallet.google.com to add a card to your Google Account.
3 - Enter your credit card data and accept the terms and conditions.

16.3
App Gallery

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

The Philips App Gallery collection of apps can differ per country or region.

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

To install an app from the App Gallery...

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

16.4
Start or Stop an App

You can start an app from the Home menu.

To start an app...

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

16.5

Lock Apps

About App Locks

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

18+

The 18+ app lock will ask for a PIN code when you try to start an 18+ rated app. This lock is only valid for 18+ rated apps from the Philips App Gallery.

Restricted profile

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

Google Play Store - Maturity

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

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

Lock 18+ rated apps

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

To lock 18+ rated apps...

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

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

Restricted Profile

About Restricted Profile

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

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

- Find or open apps which are marked as Not allowed
- Access the Google Play Store
- Purchase through Google Play Movies & TV, nor Google Play Games
- Use third-party apps that don't use the Google sign-in

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

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

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

Set Up

To set up the restricted profile...

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

Now you can enter the restricted profile.

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

Enter

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

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

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

Exit

To exit the restricted profile...

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

16.6

Manage Apps

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

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

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

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

16.7

Storage

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

To see how much storage you are using...

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

USB Hard Drive

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

17

Games

17.1

What You Need

On this TV, you can play games...

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

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

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

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

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

17.2

Gamepads

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

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

17.3

Play a Game

From the Home menu

To start a game from the Home menu...

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

From a Game Console

To start a game from a Game Console...

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

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

17.4

Ideal Game Settings

If you start playing a game app from the Home menu, the TV will switch to the ideal game settings automatically. If you start a game from a connected game console with the device type set to 'Game Console', also then the TV switches to the ideal game settings automatically. You can always switch the TV to the ideal game settings manually.

For more information, in **Help**, press the colour key **Keywords** and look up **Game or Computer** for more information.

18

Internet

18.1

Start Internet

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

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

To start the Internet browser...

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

18.2

Options on Internet

Some extras are available for the Internet.

To open the extras...

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

Enter Address

To enter a new Internet address.

Show Favourites

To view the pages you marked as favourites.

Reload Page

To load the Internet page again.

Zoom Page

Use the slider bar to set the zoom percentage.

Security Info

To view the security level of the current page.

Mark as Favourite

To mark the current page as a favourite.

Subtitles

To select subtitles if available.

19

Videos, Photos and Music

19.1

From a USB Connection

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

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

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

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

Warning

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

19.2

From a Computer or NAS

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

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

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

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

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

1 - Press SOURCES, select Network and press OK.
2 - Select SimplyShare Devices and press > (right) to select the device you need.
3 - You can browse and play your files.
4 - To stop playing videos, photos and music, press EXIT.

19.3

From a Cloud Storage Service

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

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

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

* A storage service like Dropbox™.

19.4

Play your Videos

Play Videos

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

To play a video on TV...

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

Progress Bar

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

Video Options

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

· **Play All** – Play all video files in this folder.
· **Play One** – Play this video only.
· **Shuffle** – Play your files in a random order.
· **Subtitles** – If available, you can switch subtitles On, Off or On During Mute.
· **Subtitle Language** – If available, select a Subtitle Language.
· **Audio Language** – If available, select an Audio Language.
· **Repeat** – Plays all videos in this folder once or continuously.

19.5

View your Photos

View Photos

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

To view a photo on TV...

Select the file name and press OK.

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

To start a slide show...

1 - Select the folder with photos.
2 - Press the colour key – Play All .
· To jump to the next or previous photo, press › (right - next) or ‹ (left - previous).
· To pause the slide show, press OK. To start again, press OK again.
· To stop the slide show, press OK and press ← BACK.

Info

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

Slideshow with Music

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

To play music with the slide show...

1 - Select a song or a folder with songs and press OK.
2 - Press OK to hide the progress bar.
3 - Press ← BACK.
4 - Now use the navigation arrows to select the folder with photos.
5 - Select the folder with photos and press – Play All.
6 - To stop the slideshow, press ← BACK.

Photo Options

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

· **Slide Show** – Show photos one after the other.
· **Shuffle** – Play your files in a random order.
· **Repeat** – Play the slide show once or continuously.
· **Rotate** – Rotate the photo to landscape or portrait format.
· **Stop Music** – Stop the music playing in the background.

19.6

Play your Music

Play Music

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

To play a song on TV...

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

· To pause a song, press OK. Press OK again to continue.
· To rewind or go fast forward, press ▶▶ or ◀◀. Press the keys several times to speed up - 2x, 4x, 8x, 16x, 32x.
· To jump to the next song in a folder, press OK to pause and select ▶❙ on screen and press OK.
· To go back to the folder, press ← BACK, the music will keep on playing.
· To stop the music playback, press ■ (Stop).

Progress Bar

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

Music Options

Options for playing music...

· **Play All** – Play all songs in this folder.
· **Play One** – Play this song only.

· **Shuffle** – Play your files in a random order.

· **Repeat** – Plays all songs in this folder once or continuously.

20

Smartphones and Tablets

20.1

Philips TV Remote App

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

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

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

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

Wi-Fi Smart Screen

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

20.2

Google Cast

What You Need

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

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

Apps with Google Cast

New Google Cast apps come available every day. You can already try it with YouTube, Chrome, Netflix, Photowall ... or Big Web Quiz for Chromecast. See also google.com/cast

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

Find more information on **support.google.com/androidtv**

Cast to Your TV

To cast an app to the TV screen...

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

20.3

AirPlay

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

20.4

MHL

This TV is MHL™ compliant.

If your mobile device is also MHL compliant, you can connect your mobile device with a MHL cable to the TV. With the MHL cable connected you can share what's on your mobile device on the TV screen. Your mobile device charges its battery at the same time. The MHL connection is ideal for watching movies or playing games from your mobile device on TV for a longer time.

Charging

With the MHL cable connected, your device will charge while the TV is switched on (not in standby).

MHL Cable

You need a passive MHL cable (HDMI to Micro USB) to connect your mobile device to the TV. You might need an extra adapter to connect to your mobile device. To connect the MHL cable to the TV use the **HDMI 4 MHL** connection.

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

21

Ambilight

21.1

Ambilight Style

Follow Video

You can set Ambilight to follow the video or the audio dynamics of a TV programme. Alternatively, you can set Ambilight to show a preset colour style or you can switch Ambilight off.

If you select **Follow Video**, you can select one of the styles that follow the dynamics of the picture on your TV screen.

To set the Ambilight Style...

1 - Press AMBILIGHT.
2 - Select **Follow Video** and press **OK**.
3 - Select the style you want and press **OK**.
4 - Press ‹ (left) to go back one step or press ← **BACK** to close the menu.

The available **Follow Video** styles are...

- **Standard** - Ideal for day to day TV watching
- **Natural** - Follows the picture or sound as truthful as possible
- **Immersive** - Ideal for action movies
- **Vivid** - Ideal for daylight conditions
- **Game** - Ideal for gaming
- **Comfort** - Ideal for a quiet evening
- **Relax** - Ideal for a lounge feeling

Follow Audio

You can set Ambilight to follow the video or the audio dynamics of a TV programme. Alternatively, you can set Ambilight to show a preset colour style or you can switch Ambilight off.

If you select **Follow Audio**, you can select one of the styles that follow the dynamics of the sound.

To set the Ambilight Style...

1 - Press AMBILIGHT.
2 - Select **Follow Audio** and press **OK**.
3 - Select the style you want and press **OK**.
4 - Press ‹ (left) to go back one step or press ← **BACK** to close the menu.

The available **Follow Audio** styles are...

- **Lumina** - Mixes audio dynamics with video colours
- **Colora** - Based on audio dynamics
- **Retro** - Based on audio dynamics
- **Spectrum** - Based on audio dynamics
- **Scanner** - Based on audio dynamics
- **Rhytm** - Based on audio dynamics
- **Party** - A mix of all Follow Audio styles, one after the other

Follow Colour

You can set Ambilight to follow the video or the audio dynamics of a TV programme. Alternatively, you can set Ambilight to show a preset colour style or you can switch Ambilight off.

If you select **Follow Colour**, you can select one of the preset colour styles.

To set the Ambilight Style...

1 - Press AMBILIGHT.
2 - Select **Follow Colour** and press **OK**.
3 - Select the style you want and press **OK**.
4 - Press ‹ (left) to go back one step or press ← **BACK** to close the menu.

The available **Follow Colour** styles are...

- **Hot Lava** - Red colour variations
- **Deep Water** - Blue colour variations
- **Fresh Nature** - Green colour variations
- **ISF Warm White** - Static colour
- **Cool White** - Static colour

21.2

Ambilight Off

To switch off Ambilight...

1 - Press AMBILIGHT.
2 - Select **Off** and press **OK**.
3 - Press ‹ (left) to go back one step or press ← **BACK** to close the menu.

21.3

Ambilight Settings

For more information, in **Help**, press the colour key **Keywords** and look up **Ambilight, Settings** for more information.

22

Multi View

22.1

About Multi View

The Multi View screen cannot display video in 3D or in Ultra HD. Multi View is not available for analogue TV channels. Not all Apps support Multi View.

22.2

Text and TV

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

To watch a TV channel while watching Text...

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

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

22.3

Nettv and TV

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

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

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

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

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

22.4

HDMI and TV

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

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

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

To hide the small screen, select Multi View: Off on screen.
* You can only watch TV channel image in Multi view mode, the audio of TV channel will be mute.

23

Settings

23.1

Picture

Picture Style

Select a Style

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

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

The available styles are...

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

• **Photo** - Ideal for viewing photos
• **ISF Day** - For ISF Calibration
• **ISF Night** - For ISF Calibration

Customise a Style

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

Restore a Style

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

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

To restore the style to its original setting...

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

Home or Shop

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

To set the TV for Home use...

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

Picture Settings

Colour

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

To adjust the colour...

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

Contrast

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

To adjust the contrast...

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

Sharpness

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

To adjust the sharpness...

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

2 - Select Picture and press › (right) to enter the menu.
3 - Select Sharpness and press › (right).
4 - Press the arrows ˄ (up) or ˅ (down) to adjust the value.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Advanced Picture Settings

Game or Computer

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

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

To switch the setting manually...

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

Colour Settings

Colour Enhancement

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

To adjust the level...

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

Colour Temperature

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

To select a preset...

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

Custom Colour Temperature

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

To set a custom colour temperature...

1 - Press ⚙, select All Settings and press OK.
2 - Select Picture and press › (right) to enter the menu.
3 - Select Advanced > Colour > Custom Colour Temperature and press OK.
4 - Press the arrows ˄ (up) or ˅ (down) to adjust the value. WP is white point and BL is black level. You can also select one of the presets in this menu.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Colour Control Settings

ISF Colour Control

With ISF Colour Control, an ISF expert can calibrate the colour reproduction of the TV. Colour Control is an ISF expert setting.

Get the most out of your TV display with ISF® Calibration. Ask a ISF calibration expert to come to your home and set the TV to the most optimal picture setting. Additionally the expert can set an ISF Calibration for Ambilight.
Ask your dealer for an ISF Calibration.

Calibration benefits are...

• better picture clarity and sharpness

• better detail in bright and dark parts
• deeper and darker blacks
• better colour purity and quality
• reduced energy consumption

The ISF Calibration expert stores and locks the ISF settings as 2 picture styles.
When the ISF Calibration is done, press ⚙ and select Picture Style and select ISF Day or ISF Night. Select ISF Day to watch TV during bright light conditions or select ISF Night when it's dark.

Hue

To adjust Hue value...

1 - Press ⚙, select All Settings and press OK.
2 - Select Picture and press › (right) to enter the menu.
3 - Select Advanced > Colour > Colour control and press OK.
4 - Select Hue, and press › (right).
5 - Press the arrows ∧ (up) or ∨ (down) to adjust the value.
6 - Press ‹ (left) repeatedly if necessary, to close the menu.

Saturation

To adjust Saturation value...

1 - Press ⚙, select All Settings and press OK.
2 - Select Picture and press › (right) to enter the menu.
3 - Select Advanced > Colour > Colour control and press OK.
4 - Select Saturation, and press › (right).
5 - Press the arrows ∧ (up) or ∨ (down) to adjust the value.
6 - Press ‹ (left) repeatedly if necessary, to close the menu.

Reset All

With Reset All, you can reset all value to default.

To reset all value in Colour Control menu...

1 - Press ⚙, select All Settings and press OK.
2 - Select Picture and press › (right) to enter the menu.
3 - Select Advanced > Colour > Colour control and press OK.
4 - Select Reset All, and OK.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

ISF RGB Only Mode

RGB Only Mode is an ISF expert setting to switch to RGB colours. To adjust values in RGB Only Mode menu, first set ISF Day or ISF Night in the Picture Style menu.

To adjust RGB Only Mode value...

1 - Press ⚙, select All Settings and press OK.
2 - Select Picture and press › (right) to enter the menu.
3 - Select Advanced > Colour > RGB Only Mode and press OK.
4 - Select Red, Green, Blue, or Off to turn off RGB mode.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Contrast Settings

Contrast Modes

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

To adjust the level...

1 - Press ⚙, select All Settings and press OK.
2 - Select Picture and press › (right) to enter the menu.
3 - Select Advanced > Contrast > Contrast Mode and press OK.
4 - Select Standard, Best Power, Best Picture, or Off and press OK.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

HDR upscaling

With HDR upscaling you can boost the brightness and contrast of the picture. The picture is much brighter and has a higher level of contrast between lighter and darker parts. HDR upscaling keeps colours rich and saturated. You can switch HDR upscaling on or off.

If you are watching HDR programmes - programmes recorded in HDR - there is no need to upscale to HDR and the setting HDR upscaling is unavailable. The TV can play HDR programmes from a HDMI connection, from an Internet source or from a connected USB memory device.

To switch HDR upscaling on or off...

1 - Press ⚙, select All Settings and press OK.
2 - Select Picture and press OK.
3 - Select Advanced > Contrast > HDR upscaling and press OK.

4 - Select On or Off and press OK.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Dynamic Contrast

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

To adjust the level...

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

Perfect Contrast

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

To adjust the level...

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

Brightness

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

To adjust the level...

1 - Press ⚙, select All Settings and press OK.
2 - Select Picture and press › (right) to enter the menu.
3 - Select Advanced > Contrast > Brightness, and press OK.
4 - Press the arrows ∧ (up) or ∨ (down) to adjust the value.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Video Contrast

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

To adjust the level...

1 - Press ⚙, select All Settings and press OK.
2 - Select Picture and press › (right) to enter the menu.
3 - Select Advanced > Contrast > Video Contrast, and press OK.
4 - Press the arrows ∧ (up) or ∨ (down) to adjust the value.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Light Sensor

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

To switch on or off...

1 - Press ⚙, select All Settings and press OK.
2 - Select Picture and press › (right) to enter the menu.
3 - Select Advanced > Contrast > Light Sensor, and press OK.
4 - Select On or Off.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Gamma

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

To adjust the level...

1 - Press ⚙, select All Settings and press OK.
2 - Select Picture and press › (right) to enter the menu.
3 - Select Advanced > Contrast > Gamma, and press OK.
4 - Press the arrows ∧ (up) or ∨ (down) to adjust the value.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Sharpness Settings

Ultra Resolution

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

To switch on or off...

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

Noise Reduction

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

To adjust the noise reduction...

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

MPEG Artefact Reduction

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

To reduce the MPEG artefacts...

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

Motion Settings

Perfect Natural Motion

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

To adjust the motion judder...

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

Clear LCD

With Clear LCD, you switch on a superior motion sharpness, better black level, high contrast with a flicker-free, quiet image and a larger viewing angle.

To switch on or off...

1 - Press ⚙, select All Settings and press OK.
2 - Select Picture and press › (right) to enter the menu.
3 - Select Advanced > Motion > Clear LCD, and press OK.
4 - Select On or Off.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Picture Format

Basic

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

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

1 - While watching a TV channel, press ⚙.
2 - Select Picture Format > Fill Screen or Fit to Screen, and press OK.
3 - Press ‹ (left) repeatedly if necessary, to close the menu.
· Fill Screen – automatically enlarges the picture to fill the screen. Picture distortion is minimal, subtitles remain visible. Not suitable for PC input. Some extreme picture formats can still show black bars.
· Fit to Screen – automatically zooms in the picture to fill the screen without distortion. Black bars may be visible. Not suitable for PC input.

Advanced

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

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

To format the picture manually...

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

Quick Picture Setting

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

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

1 - Press ⚙, select All Settings and press OK.
2 - Select Picture and press › (right) to enter the menu.
3 - Select Advanced > Quick Picture Setting, and press OK.
4 - Select Start and press OK. Use the navigation keys to select your choice.
5 - Finally, select Finish and press OK.
6 - Press ‹ (left) repeatedly if necessary, to close the menu.

23.2

Sound

Sound Style

Select a Style

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

1 - While watching a TV channel, press ⚙.
2 - Select Sound and press › (right) to enter the menu.
3 - Select Sound Style, and select one of the styles in the list.
4 - Press ‹ (left) repeatedly if necessary, to close the menu.

The available styles are...

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

· News - Ideal for speech

Restore a Style

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

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

To restore the style to its original setting...

1 - While watching a TV channel, press ⚙.
2 - Select Sound and press › (right) to enter the menu.
3 - Select Sound Style , and select the Sound Style you want to restore.
4 - Press the colour key ▬ Restore Style . The style is restored
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Sound Settings

Bass

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

To adjust the level...

1 - Press ⚙, select All Settings and press OK.
2 - Select Sound and press › (right) to enter the menu.
3 - Select Bass and press › (right).
4 - Press the arrows ˄ (up) or ˅ (down) to adjust the value.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Treble

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

To adjust the level...

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

3 - Select Treble and press › (right).
4 - Press the arrows ^ (up) or v (down) to adjust the value.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Surround mode

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

To set the surround mode...

1 - Press ⚙, select All Settings and press OK.
2 - Select Sound and press › (right) to enter the menu.
3 - Select Surround Mode and press › (right) to enter the menu.
4 - Select Stereo or Incredible Surround.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Advanced Sound Settings

Auto Volume Levelling

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

To switch on or off...

1 - Press ⚙, select All Settings and press OK.
2 - Select Sound and press › (right) to enter the menu.
3 - Select Advanced and press › (right) to enter the menu.
4 - Select Auto Volume Levelling and press › (right) to enter the menu.
5 - Select On or Off.
6 - Press ‹ (left) repeatedly if necessary, to close the menu.

Clear Sound

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

To switch on or off...

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

Audio Out Format

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

Audio Out Levelling

For more information, in Help, press the colour key ▬ Keywords and look up Audio Out Levelling.

Audio Out Delay

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

To switch off Audio Out Delay...

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

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

Audio Out Offset

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

To synchronise the sound on the TV...

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

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

Headphone volume

With Headphones Volume, you can set the volume of a connected headphone separately.

To adjust the volume...

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

menu.
3 - Select Headphones Volume and press OK.
4 - Press the arrows ^ (up) or v (down) to adjust the value.
5 - Press < (left) repeatedly if necessary, to close the menu.

Speakers

Select your Speakers

In this menu you can switch the TV speakers on or off. If you connect a Home Theatre System or a wireless Bluetooth speaker, you can select which device is playing the TV sound. All available loudspeaker systems are shown in this list.

If you use an HDMI CEC connection for an audio device (like a Home Theatre System), you can select EasyLink Autostart. The TV will switch on the audio device, send the TV sound to the device and switch off the TV speakers.

To select the speakers you want...

1 - Press ⚙, select Speakers and press OK.
2 - Select the loudspeaker system you want and press OK.
3 - Press < (left) to go back one step.

TV Speakers

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

You can select where you want to hear the TV sound and how you want to control it.
• If you select TV Speakers Off, you permanently switch off the TV speakers.
• If you select TV Speakers On, the TV speakers are always on.

With an audio device connected with HDMI CEC, you can use one of the EasyLink settings.
• If you select EasyLink, the TV sends the TV sound to the audio device. The TV will switch off the TV speakers when the device is playing the sound.
• If you select EasyLink Autostart, the TV will switch on the audio device, send the TV sound to the device and switch off the TV speakers.
With EasyLink or EasyLink Autostart selected, you can still switch to TV speakers if necessary.

To set the TV speakers...

1 - Press ⚙, select All Settings and press OK.
2 - Select Sound and press > (right) to enter the menu.
3 - Select Advanced and press > (right) to enter the menu.
4 - Select TV Speakers and press > (right) to enter the menu.
5 - Select TV Speakers On, TV Speakers Off, EasyLink, or EasyLink Autostart .
6 - Press < (left) repeatedly if necessary, to close the menu.

To switch to speakers directly...

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

Wireless Speakers

What You Need

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

To play the TV sound on a wireless speaker, you must pair the wireless speaker with the TV. You can pair some wireless speakers and a maximum of 4 Bluetooth LE (low energy) devices. The TV can only play the sound on one speaker at a time. If you connect a subwoofer, the sound is played on the TV and the subwoofer. If you connect a sound bar the sound is played on the sound bar only.

Attention - Audio to Video syncronisation

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

For more information on how to pair a wireless speaker, press the colour key – Keywords and look up Bluetooth, Pairing.

Select a Speaker

In Help, press the colour key – Keywords and look up Bluetooth, Pairing for more information on pairing wireless devices.

Remove a Speaker

To remove a wireless speaker...

1 - Press ⚙, select All Settings and press OK.
2 - Select Sound and press > (right) to enter the menu.
3 - Select Wireless Speakers > Remove a Speaker and press OK.

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

In Help, press the colour key ▬ Keywords and look up Bluetooth, Remove device for more information on how to unpair (remove) a wireless Bluetooth device.

Subwoofer Volume

If you connect a wireless Bluetooth subwoofer, you can slightly increase or decrease the volume of the subwoofer.

To adjust the volume a little...

1 - Press ⚙, select All Settings and press OK.
2 - Select Sound and press › (right) to enter the menu.
3 - Select Wireless Speakers > Subwoofer Volume and press OK.
4 - Press ˄ (up) or ˅ (down) to adjust the value.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Problems

Lost connection
• Position the wireless speaker within a range of 5 meters from the TV.
• Places with a high amount of wireless activity - apartments with lots of wireless routers - can hamper the wireless connection. Keep the router and wireless speaker as close to the TV as possible.

Audio and Video syncronisation
• Before you purchase a wireless Bluetooth speaker, inform yourself about its quality of Audio to Video syncronisation, commonly called 'lip sync'. Not all Bluetooth devices perform correctly. Ask your dealer for advice.

23.3

Ambilight Settings

Ambilight Style

For more information, in Help, press the colour key ▬ Keywords and look up Ambilight Style.

Ambilight Settings

Ambilight Brightness

With Ambilight Brightness, you can set the level of brightness of the Ambilight.

To adjust the level...

1 - Press ⚙, select All Settings and press OK.
2 - Select Ambilight and press › (right) to enter the menu.
3 - Select Brightness and press OK.
4 - Press the arrows ˄ (up) or ˅ (down) to adjust the value.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Ambilight Saturation

With Ambilight Saturation, you can set the level of colour saturation of the Ambilight.

To adjust the level...

1 - Press ⚙, select All Settings and press OK.
2 - Select Ambilight and press › (right) to enter the menu.
3 - Select Saturation and press OK.
4 - Press the arrows ˄ (up) or ˅ (down) to adjust the value.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Static Ambilight Colour

To adjust the level...

1 - Press ⚙, select All Settings and press OK.
2 - Select Ambilight and press › (right) to enter the menu.
3 - Select Static Ambilight Colour and press OK.
4 - Press the arrows ˄ (up) or ˅ (down) to adjust the value.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Advanced Ambilight Settings

Wall Colour

With Wall Colour, you can neutralise the influence of a coloured wall on the Ambilight colours. Select the colour of the wall behind the TV and the TV will modify the Ambilight colours to appear as they are intended.

To select the colour of the wall . . .

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

2 - Select Ambilight and press › (right) to enter the menu.
3 - Select Advanced > Wall Colour and press OK.
4 - In the colour palette, select the colour that matches the colour of the wall behind the TV.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

TV Switch Off

With TV Switch Off, you can set Ambilight to switch off immediately or slowly fade out when you switch off the TV. The slow fade out gives you some time to switch on the lights in your living room.

To select the way how Ambilight switches off...

1 - Press ⚙, select All Settings and press OK.
2 - Select Ambilight and press › (right) to enter the menu.
3 - Select Advanced > TV Switch Off and press OK.
4 - Select Fade Out to Off or Immediate Switch Off.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

ISF Tuning

When an ISF expert calibrates the TV, a static Ambilight colour can be calibrated. You can select any colour you want to calibrate. With the ISF Calibration done, you can select the static ISF colour.

To select the ISF static colour...

Press (Ambilight) and select ISF and press OK.

For more information, press the colour key — Keywords and look up ISF® Calibration.

Ambilight + Hue

Configure

Step 1 - Network

In this first step, you will prepare the TV to find the Philips Hue Bridge. The TV and the Philips Hue Bridge must use the same network.

Setting up...

1 - Connect the Philips Hue Bridge to the power outlet.
2 - Connect the Philips Hue Bridge to the same router you are using for the TV — use an Ethernet cable to connect.
3 - Switch on the Hue bulbs.

To start the configuration...

1 - Press ⚙, select All Settings and press OK.
2 - Select Ambilight > Ambilight+hue and press OK.
3 - Select Configure and press OK.
4 - Select Start and press OK. The TV will search for the Philips Hue Bridge. If the TV is not yet connected to your network, the TV will start the network setup first. If the Philips Hue Bridge appears in the list ...

go to Step 2 - Hue Bridge.

For more info on connecting the TV to your home network, press the colour key — Keywords and look up Network, wireless.

Step 2 - Hue Bridge

In the next step, you will link up the TV with the Philips Hue Bridge.
The TV can only be linked up to one Hue Bridge.

To link the Hue Bridge...

1 - With the TV connected to your home network, it will show the available Hue Bridges. If the TV did not find your Hue Bridge yet, you can select Scan again and press OK.
If the TV found the only Hue Bridge you have, select the Hue Bridge name and press OK.
If you have more than one Hue Bridge available, select the Hue Bridge you want to use and press OK.
2 - Select Start and press OK.
3 - Now go to the Philips Hue Bridge and press the link button in the middle of the device. This will link the Hue Bridge with the TV. Do this within 30 seconds. The TV will confirm if a Hue Bridge is now linked to the TV.
4 - Select OK and press OK.

With the Philips Hue bridge linked to the TV, go to page Hue bulbs.

Step 3 - Hue Bulbs

In the next step, you will select the Philips Hue bulbs that have to follow the Ambilight.
You can select a maximum of 9 Philips Hue bulbs for Ambilight+hue.

To select the bulbs for Ambilight+hue...

1 - In the list, mark the bulbs that have to follow the Ambilight. To mark a bulb, select the bulb name and press OK. When you mark a bulb, the bulb will blink once.
2 - When you're done, select OK and press OK.

With the bulbs marked for Ambilight+hue, go to page Configure bulb.

Step 4 - Configure Bulb

In the following step, you will configure each **Philips Hue bulb**.

To configure each Hue bulb...

1 - Select a bulb to configure and press **OK**. The bulb you selected is flashing.
2 - Select **Start** and press **OK**.
3 - First indicate where you placed the bulb relative to the TV. A correct setting of the **Angle** will send the correct Ambilight colour to the bulb. Select the slider bar to adjust the position.
4 - Secondly, indicate the **Distance** between the bulb and the TV. The further away from the TV, the weaker the Ambilight colour. Select the slider bar to adjust the distance.
5 - Finally, set the **Brightness** of the bulb. Select the slider bar to adjust the brightness.
6 - To stop configuring this bulb, select **OK** and press **OK**.
7 - In the **Configure Ambilight+hue** menu, you can do the same for each bulb.
8 - When all Ambilight+hue bulbs are configured, select **Finish** and press **OK**.

Ambilight+hue is ready for use.

Switch Off

To switch off Ambilight+hue...

1 - Press , select **All Settings** and press **OK**.
2 - Select **Ambilight** and press (right) to enter the menu.
3 - Select **Ambilight+hue** and press **OK**.
4 - Select **Off** or **On** and press **OK**.
5 - Press (left) repeatedly if necessary, to close the menu.

Immersion

With **Immersion**, you can adjust how accurate the Hue bulbs follow the Ambilight.

To adjust Ambilight+hue immersion...

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

View Configuration

With **View Configuration**, you can view current setup of the Ambilight+hue, network, the Bridge and bulbs.

To view Ambilight+hue configuration...

1 - Press , select **All Settings** and press **OK**.
2 - Select **Ambilight** and press (right) to enter the menu.
3 - Select **Ambilight+hue** > **View Configuration**, and press **OK**.
4 - Press (left) repeatedly if necessary, to close the menu.

Reset Configuration

To reset Ambilight+hue...

1 - Press , select **All Settings** and press **OK**.
2 - Select **Ambilight** and press (right) to enter the menu.
3 - Select **Ambilight+hue** > **Reset Configuration**, and press **OK**. The configuration is reset.
4 - Press (left) repeatedly if necessary, to close the menu.

23.4

Eco Settings

Energy Saving

Eco settings bundles the settings that help the environment.

Energy Saving

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

To set the TV in Energy Saving...

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

Screen Off

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

To only switch off the TV screen...

1 - Press , select **All Settings** and press **OK**.
2 - Select **Eco Settings** and press (right) to

enter the menu.
3 - Select Screen Off and press OK. The screen will switch off.
4 - Press ‹ (left) repeatedly if necessary, to close the menu.

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

Light Sensor

To save energy, the built-in ambient light sensor lowers the brightness of the TV screen when the surrounding light darkens. The built-in light sensor automatically adjusts the picture, together with Ambilight, to the lighting conditions of the room.

To activate the light sensor...

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

Switch Off Timer

If the TV receives a TV signal but you don't press a key on the remote control during a 4 hour period, the TV switches off automatically to save energy. Also, if the TV does not receive a TV signal nor a remote control command for 10 minutes, the TV switches off automatically.

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

To deactivate the Switch Off Timer ...

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

23.5

General Settings

EasyLink

EasyLink

To switch off EasyLink completely...

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

EasyLink Remote Control

To switch off EasyLink remote control...

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

Android Settings

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

To open these settings...

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

USB Hard Drive

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

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

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

Philips Logo Brightness

You can switch off or adjust the brightness of the Philips logo on the front of the TV.

To adjust or switch off...

1 - Press ⚙, select All Settings and press OK.
2 - Select General Settings and press › (right) to enter the menu.
3 - Select Philips Logo Brightness, and press › (right) to enter the menu.
4 - Select Minimum, Medium, Maximum, or Off to switch off the lighting of the logo, then press OK.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

USB Keyboard Settings

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

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

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

HbbTV

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

1 - Press ⚙, select All Settings and press OK.
2 - Select General Settings and press › (right) to enter the menu.
3 - Select Advanced > HbbTV, and press OK.
4 - Select On or Off.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

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

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

Home or Shop

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

To set the TV to Shop location...

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

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

Shop Setup

If the TV is set to Shop, you can set the availablility of a specific demo for in store use.

1 - Press ⚙, select All Settings and press OK.
2 - Select General Settings and press › (right) to enter the menu.
3 - Select Shop Setup and press › (right) to enter the menu.
4 - Change the settings according to your preference.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

TV Placement

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

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

TV Guide

For more information, in Help, press the colour key ▬ Keywords and look up TV Guide, data and information.

Channel Logos

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

To switch off the logos...

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

Factory Settings

You can set the TV back to the original TV settings (the factory settings).

To switch back to the original settings...

1 - Press ⚙, select All Settings and press OK.
2 - Select General Settings and press › (right) to enter the menu.
3 - Select Factory Settings and press OK.
4 - Select OK and press OK.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Child Lock

Parental Rating

To set a minumum age to watch rated programmes...

1 - Press ⚙, select All Settings and press OK.
2 - Select Child Lock and press › (right) to enter the menu.
3 - Select Parental Rating, and select one of the age in the list.
4 - Press ‹ (left) repeatedly if necessary, to close the menu.

App Lock

For more information, in Help, press the colour key ▬ Keywords and look up APP Lock for more information.

Set Code / Change Code

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

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

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

The new code is set.

Forgotten your Child Lock PIN code?

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

1 - Press ⚙, select All Settings and press OK.
2 - Select Child Lock and press › (right) to enter the menu.
3 - Select Change Code and press OK.
4 - Enter the overriding code 8888.
5 - Now enter a new Child Lock PIN code and enter it again to confirm.
6 - Press ‹ (left) repeatedly if necessary, to close the menu.

The new code is set.

Reinstall TV

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

To redo a full TV installation...

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

23.6

Clock, Region and Language

Menu Language

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

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

Language preferences

Audio Language Settings

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

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

To set the primary and secondary audio language...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Selec **Region and Language** nd press › (right) to enter the menu.
3 - Select **Languages** > **Primary Audio** or **Secondary Audio** and press **OK**.
4 - Select on the language you need.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Subtitles

Switch On

To switch on Subtitles, press **SUBTITLE**.

You can switch subtitles **On**, **Off** or **On During Mute**.
Or to show subtitles automatically when the broadcasted programme is not in language – the language set for the TV – select **Automatic**. This setting will also show Subtitles automatically when you mute the sound.

Subtitle Language Settings

Digital channels can offer several subtitle languages for a programme. You can set a preferred primary and secondary subtitle language. If subtitles in one of these languages are available, the TV will show the subtitles you selected.

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

To set the primary and secondary subtitle language...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Region and Language** and press › (right) to enter the menu.
3 - Select **Languages** > **Primary Subtitles** or **Secondary Subtitles** and press **OK**.
4 - Select on the language you need.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Subtitles from Text

If you tune to an analogue channel, you need to make the subtitles available for each channel manually.

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

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

Text / Teletext Languages

Text Pages

To open Text/Teletext press **TEXT**, while you are watching TV channels.
To close Text, press **TEXT** again.

Select a Text page

To select a page . . .

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

Text sub-pages

A Text page number can hold several subpages. The subpage numbers are shown on a bar next to the main page number.
To select a subpage, press ❮ or ❯.

T.O.P. Text pages

Some broadcasters offer T.O.P. Text.
To open T.O.P. Text pages within Text, press + OPTIONS and select T.O.P. overview.

Favourite pages

The TV makes a list of the last 10 Text pages you opened. You can easily reopen them again in the Favourite Text pages column.

1 - In Text, select the star in the top left corner of the screen to show the column of favourite pages.
2 - Press ⌄ (down) or ⌃ (up) to select a page number and press OK to open the page.
You can clear the list with the option Clear favourite pages.

Search Text

You can select a word and scan Text for all occurences of this word.

1 - Open a Text page and press OK.
2 - Select a word or number with the arrow keys.
3 - Press OK again to jump immediately to the next occurence of this word or number.
4 - Press OK again to jump to the subsequent occurence.
5 - To stop searching, press ⌃ (up) until nothing is selected.

Text from a connected device

Some devices that receive TV channels can also offer Text.
To open Text from a connected device . . .

1 - Press ⎆ select the device and press OK.
2 - While watching a channel on the device, press + OPTIONS, select Show device keys and select the ▤ key and press OK.
3 - Press ← BACK to hide the device keys.
4 - To close Text, press ← BACK again.

Digital Text (UK only)

Some digital broadcasters offer dedicated Digital Text or interactive TV on their digital TV channels. This includes normal Text using the number, colour and arrow keys to select and navigate.

To close Digital Text, press ← BACK.

Text Options

In Text/Teletext, press + OPTIONS to select the following...

· Freeze page
To stop the automatic rotation of subpages.
· Dual screen / Full screen
To show the TV channel and Text alongside each other.
· T.O.P. overview
To open T.O.P. Text.
· Enlarge
To enlarge the Text page for comfortable reading.
· Reveal
To unhide hidden information on a page.
· Cycle subpages
To cycle subpages when these are available.
· Language
To switch the group of characters that Text uses to display correctly.
· Text 2.5
To activate the Text 2.5 for more colours and better graphics.

Text Setup

Text language

Some digital TV broadcasters have several Text languages available.
To set your primary and secondary Text language . . .

1 - Press ⚙, select All Settings and press OK.
2 - Select Region and Language and press ❯ (right) to enter the menu.
3 - Select Language > Primary Text or Secondary Text and press OK.
4 - Select your preferred Text languages.
5 - Press ❮ (left) repeatedly if necessary, to close the menu.

Text 2.5

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

1 - Press TEXT.
2 - With Text/Teletext open on screen, press + OPTIONS.
3 - Select Text 2.5 > Off.
4 - Press ❮ (left) repeatedly if necessary, to close the menu.

Clock

Date and Time

Automatic

The standard setting for the TV clock is **Automatic**. The time information comes from the broadcasted UTC - Coordinated Universal Time information.

If the clock is not correct, you can set the TV clock to **Country Dependent**. For some countries, you can select a specific time zone or set a time offset. In some countries, for some network operators, the clock settings are hidden to avoid an incorrect clock setting.

To set the TV clock...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Region and Language** and select Clock > **Auto Clock Mode** and press **OK**.
3 - Select **Automatic** or **Country Dependent** and press **OK**.
4 - Press ❮ (left) to go back one step.

Manual

If none of the automatic settings display the time correctly, you can set the time manually.

However, if you schedule recordings from the TV Guide, we recommend not to change the time and date manually. In some countries, for some network operators, the clock settings are hidden to avoid an incorrect clock setting.

To set the TV clock manually (if available)...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Region and Language** and select Clock > **Auto Clock Mode** and press **OK**.
3 - Select **Manual** and press **OK**.
4 - Press ❮ (left) and select **Date** or **Time** and press **OK**.
5 - Press ^ (up) or v (down) to adjust the value.
6 - Press ❮ (left) to go back one step.

Time Zone

If none of the automatic settings display the time correctly, you can set the time manually.

However, if you schedule recordings from the TV Guide, we recommend not to change the time and date manually. In some countries, for some network operators, the clock settings are hidden to avoid an incorrect clock setting.

To set the TV clock manually (if available)...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Region and Language** and select Clock > **Auto Clock Mode** and press **OK**.
3 - Select **Manual** and press **OK**.
4 - Press ❮ (left) and select **Date** or **Time** and press **OK**.
5 - Press ^ (up) or v (down) to adjust the value.
6 - Press ❮ (left) to go back one step.

Remote Control Keyboard

To set the keyboard layout to Azerty...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Region and Language** and press ❯ (right) to enter the menu.
3 - Select **Remote Control Keyboard** and press **OK**.
4 - Select **Azerty** or **Qwerty** and press **OK**.
5 - Press ❮ (left) repeatedly if necessary, to close the menu.

23.7

Universal Access

Switch On

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

Switch on

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

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

Hard of Hearing

Some digital TV channels broadcast special audio and subtitles adapted for the hard of hearing or deaf people. With **Hearing impaired** switched on, the TV automatically switches to the adapted audio and subtitles, if available. Before you can switch on **Hearing impaired**, you have to switch on **Universal Access**.

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

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

2 - Select Universal Access and press > (right) to enter the menu.
3 - Select Hearing impaired and press > (right) to enter the menu.
4 - Select On and press OK.
5 - Press < (left) repeatedly if necessary, to close the menu.

To switch on Hearing impaired while watching TV...

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

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

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

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

Audio Description

Switch On

Digital TV channels can broadcast special audio commentary describing what is happening on screen.
To be able to set the visually impaired audio and effects, you have to switch on Audio Description first.
Also, before you can switch on Audio Description, you have to switch on Universal Access in setup menu.

With Audio Description, a narrator's commentary is added to the normal audio.
To switch on the commentary (if available)...

To switch on Audio Description...

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

To switch on Audio Description while watching TV...

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

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

Speakers/Headphones

With Speakers/Headphones, you can select where you want to hear the audio commentary.
On the TV speakers only, on the headphones only or on both.

To set Speakers/Headphones...

1 - Press , select All Settings and press OK.
2 - Select Universal Access and press > (right) to enter the menu.
3 - Select Audio Description > Speakers/Headphones and press OK.
4 - Select Speakers, Headphones or Speakers + Headphones and press OK.
5 - Press < (left) repeatedly if necessary, to close the menu.

Mixed Volume

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

To mix the volume...

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

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

Audio Effect

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

To switch on Audio effects (if available)...

1 - Press , select All Settings and press OK.
2 - Select Universal Access and press > (right) to enter the menu.
3 - Select Audio Description > Audio Effects and press OK.
4 - Press < (left) repeatedly if necessary, to close the menu.

Speech

The audio commentary can also hold subtitles for the words which are spoken.

To switch on these subtitles (if available) . . .

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

24

Wireless and Networks

24.1

Network

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

24.2

Bluetooth

What You Need

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

To play the TV sound on a wireless speaker, you must pair the wireless speaker with the TV. You can pair some wireless speakers and a maximum of 4 Bluetooth LE (low energy) devices. The TV can only play the sound on one speaker at a time. If you connect a subwoofer, the sound is played on the TV and the subwoofer. If you connect a sound bar the sound is played on the sound bar only.

Attention - Audio to Video syncronisation

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

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

Pairing a Device

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

Select a Device

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

Remove a Device

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

Bluetooth On or Off

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

To switch Bluetooth on...

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

25

Android Settings

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

To open these settings...

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

26

Channel Installation

26.1

Antenna/Cable Installation

Update Channels

Automatic Channel Update

If you receive digital channels, you can set the TV to automatically update these channels.

Once a day, at 6 AM, the TV updates the channels and stores new channels. New channels are stored in the Channels List and are marked with a ✸. Channels without a signal are removed. The TV must be in standby to automatically update channels. You can switch off Auromatic Channel Update.

To switch off the automatic update...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Channels** > **Antenna/Cable Installation** and press **OK**.
3 - Enter your PIN code if necessary.
4 - Select **Automatic Channel Update** and press **OK**.
5 - Select **Off** and press **OK**.
6 - Press ‹ (left) to go back one step or press ← BACK to close the menu.

When new channels are found or if channels are updated or removed, a message is shown at TV start up. To avoid this message to appear after every channel update, you can switch it off.

To switch off the message...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Channels** > **Antenna/Cable Installation** and press **OK**.
3 - Enter your PIN code if necessary.
4 - Select **Channel Update Message** and press **OK**.
5 - Select **Off** and press **OK**.
6 - Press ‹ (left) to go back one step or press ← BACK to close the menu.

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

Manual Channel Update

You can always start an channel update yourself.

To start a channel update manually...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Channels** > **Antenna/Cable Installation** and press **OK**.
3 - Enter your PIN code if necessary.
4 - Select **Search for Channels** and press **OK**.
5 - Select **Start** and press **OK**.
6 - Select **Update Digital Channels**, select **Next** and press **OK**.
7 - Select **Start** and press **OK** to update the digital channels. This can take a few minutes.
8 - Press ‹ (left) to go back one step or press ← BACK to close the menu.

Reinstall Channels

Reinstall All Channels

You can reinstall all channels and leave all other TV settings untouched.

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

To reinstall channels...

Note: Not support DVB-C.

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Channels** > **Antenna/Cable Installation** and press **OK**.
3 - Enter your PIN code if necessary.
4 - Select **Search for Channels** and press **OK**.
5 - Select **Start** and press **OK**.
6 - Select **Reinstall Channels**, select **Next** and press **OK**.
7 - Select the country where you are now and press **OK**.
8 - Select **Next** and press **OK**.
9 - Select the type of installation you want, **Antenna (DVB-T)** or **Cable (DVB-C)** and press **OK**.
8 - Select **Next** and press **OK**.
11 - Select the type of channels you want, **Digital and Analogue Channels** or **Only Digital Channels** and press **OK**.
8 - Select **Next** and press **OK**.
13 - Select **Start** and press **OK** to update the digital channels. This can take a few minutes.
14 - Press ‹ (left) to go back one step or press ← BACK to close the menu.

Reinstall TV

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

To redo a full TV installation...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **General Settings** > **Reinstall TV** and press **OK**.
3 - Enter your PIN code if necessary.
4 - Select **Yes** and press **OK** to confirm.
5 - The TV will reinstall completely. All settings will be reset and installed channels will be replaced. The installation can take a few minutes.

6 - Press ‹ (left) to go back one step or press ← BACK to close the menu.

DVB-T or DVB-C

DVB-T Reception

During the channel installation, just before you search for channels, you selected Antenna (DVB-T). Antenna DVB-T searches for terrestrial analogue channels and digital DVB-T2 channels.

Channel Number Conflicts

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

Note: Not support DVB-C.

DVB Settings

Network Frequency Mode

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

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

Network Frequency

With the Network Frequency Mode set to Manual, you can enter the network frequency value received from your cable operator here. To enter the value, use the number keys.

Frequency Scan

Select the method of searching for channels. You can select the faster Quick Scan method and use the predefined settings used by most cable operator in your country.

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

Frequency Step Size

The TV searches for channels in steps of 8MHz.

If this results in having no channels installed or if some channels are missing, you can search in smaller steps of 1MHz. Using the 1MHz steps will take more time to search for and install channels.

Digital Channels

If you know your cable operator is not offering digital channels, you can skip searching for digital channels.

Analogue Channels

If you know your cable operator is not offering analogue channels, you can skip searching for analogue channels.

Reception Quality

You can check the quality and signal strength of a digital channel. If you have your own antenna, you can reposition the antenna to try and improve the reception.

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

1 - Tune to the channel.
2 - Press ⚙, select All Settings and press OK.
3 - Select Channels > Antenna/Cable Installation and press OK. Enter your PIN code if necessary.
4 - Select Digital: Reception Test and press OK.
5 - Select Search and press OK. The digital frequency is shown for this channel.
6 - Select Search again and press OK to check the signal quality of this frequency. The test result is shown on screen. You can reposition the antenna or check the connections to possibly improve the reception.
7 - You can also change the frequency yourself. Select the frequency number one by one and use the ∧ (up) or ∨ (down) keys to change the value. Select Search and press OK to test the reception again.
8 - Press ‹ (left) repeatedly if necessary, to close the menu.

Manual Installation

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

To install analogue channels manually...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Channels** > **Antenna/Cable Installation** and press **OK**. Enter your PIN code if necessary.
3 - Select **Analogue: Manual Installation** and press **OK**.

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

• Search Channel
To find a channel, select **Search Channel** and press **OK**. You can enter a frequency yourself to find a channel or let the TV search for a channel.
Press › (right) to select **Search** and press **OK** to search for a channel automatically. The found channel is shown on screen and if the reception is poor, press **Search** again. If you want to store the channel, select **Done** and press **OK**.

• Store
You can store the channel on the current channel number or as a new channel number.
Select **Store Current Channel** or **Store as New Channel** and press **OK**. The new channel number is shown briefly.

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

26.2
Channel List Copy

Introduction

Channel List Copy is intended for dealers and expert users.

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

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

Current channel version

To check the current version of the channel list...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Channels**, select **Channel List Copy**, select **Current Version** and press **OK**.
3 - Press **OK** to close.

Current software version

To check the cuurent version of the TV software...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Update Software** and press › (right) to enter the menu.
3 - Select **Current Software Info** and press **OK**.
4 - The version, release notes and creation date are shown. Also, the Netflix ESN Number is shown if available.
5 - Press ‹ (left) repeatedly if necessary, to close the menu.

Copy a Channel List

To copy a channel list...

1 - Switch on the TV. This TV should have channels installed.
2 - Plug in a USB flash drive.
3 - Press ⚙, select **All Settings** and press **OK**.
4 - Select **Channels** > **Channel List Copy** and press **OK**.
5 - Select **Copy to USB** and press **OK**. You might be asked to enter the Child Lock PIN code to copy the channel list.
6 - When copying is done, unplug the USB flash drive.
7 - Press ‹ (left) repeatedly if necessary, to close the menu.

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

Channel list version

Check the current version of the channel list...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Channels** and press › (right) to enter the menu.
3 - Select **Channel List Copy** and select **Current Version**, then press **OK**.
4 - Press ‹ (left) repeatedly if necessary, to close the menu.

Upload a Channel List

To not Installed TVs

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

To a TV that is not yet installed

1 - Plug in the power plug to start the installation and select language and country. You can skip the channel search. Finish the installation.
2 - Plug in the USB flash drive that holds the channel list of the other TV.
3 - To start the channel list upload, press ⚙, select All Settings and press OK.
4 - Select Channels > Channel List Copy > Copy to TV and press OK. Enter your PIN code if necessary.
5 - The TV notifies you if the channel list is copied to the TV successfully. Unplug the USB flash drive.

To Installed TVs

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

To an already installed TV

1 - Verify the country setting of the TV. (To verify this setting, see chapter Reinstall All Channels. Start this procedure until you reach the country setting. Press ← BACK to cancel the installation.)
If the country is correct continue with step 2.
If the country is not correct, you need to start a reinstallation. See chapter Reinstall All Channels and start the installation. Select the correct country and skip the channels search. Finish the installation. When done, continue with step 2.
2 - Plug in the USB flash drive that holds the channel list of the other TV.
3 - To start the channel list upload, press ⚙, select All Settings and press OK.
4 - Select Channels > Channel List Copy > Copy to TV and press OK. Enter your PIN code if necessary.
5 - The TV notifies you if the channel list is copied to the TV successfully. Unplug the USB flash drive.

27

Software

27.1

Update Software

Update from Internet

If the TV is connected to the Internet, you may receive a message to update the TV software. You need a high-speed (broadband) Internet connection. If you receive this message, we recommend you to carry out the update.

With the message on screen, select **Update** and follow the instructions on-screen.

You can also look for a software update yourself.

During the software update, there is no picture and the TV will switch off and on again. This might happen several times. The update can take a few minutes. Wait until the TV picture comes back up. Do not press the power switch ⏻ on the TV or on the remote control during the software update.

To look for a software update yourself...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Update Software** > **Search for Updates** and press **OK**.
3 - Select **Internet** and press **OK**.
4 - The TV will look for an update on the Internet.
5 - If an update is available, you can update the software right away.
6 - A software update can take several minutes. Do not press the ⏻ key on the TV or remote control.
7 - When the update is done, the TV will return to the channel you were watching.

Update from USB

It might be necessary to update the TV software.

You need a computer with an high-speed Internet connection and a USB flash drive to upload the software on the TV. Use a USB flash drive with at least 500MB free space. Make sure that write protection is switched off.

To update the TV software...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Update Software** > **Search for Updates** and press **OK**.
3 - Select **USB** and press **OK**.

Identify the TV
1 - Insert the USB flash drive into one of the USB connections of the TV.
2 - Select **Write to USB** and press **OK**. An identification file is written on the USB flash drive.

Download the software
1 - Insert the USB flash drive into your computer.
2 - On the USB flash drive, locate the file **update.htm** and double click it.
3 - Click **Send ID**.
4 - If new software is available, download the .zip file.
5 - After the download, unzip the file and copy the file **autorun.upg** onto the USB flash drive. Do not place this file in a folder.

Update the TV software
1 - Insert the USB flash drive into the TV again. The update starts automatically.
2 - A software update can take several minutes. Do not press the ⏻ key on the TV or remote control. Do not remove the USB flash drive.
3 - When the update is done, the TV will return to the channel you were watching.

If a power cut occurs during the update, never remove the USB flash drive from the TV. When the power returns, the update will continue.

To prevent an accidental update of the TV software, delete the autorun.upg file from the USB flash drive.

27.2

Software Version

To view the current TV software version...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Update Software** > **Current Software Info** and press **OK**.
3 - The version, release notes and creation date are shown. Also, the Netflix ESN Number is shown if available.
4 - Press ❮ (left) repeatedly if necessary, to close the menu.

27.3

Open Source Software

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Intellectual Property Dept.
TP Vision Europe B.V.
Prins Bernhardplein 200

1097 JB Amsterdam
The Netherlands

27.4

Open Source License

README for the source code of the parts of TP Vision Netherlands B.V. TV software that fall under open source licenses.

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Android (5.1.0)

This TV contains the Android Lollipop Software. Android is a Linux-based operating system designed primarily for touch screen mobile devices such as smartphones and tablet computers. This software will also be reused in TPVision Android based TV's. The original download site for this software is : https://android.googlesource.com/This piece of software is made available under the terms and conditions of the Apache license version 2, which can be found below. Android APACHE License Version 2 (http://source.android.com/source/licenses.html)

Toolbox (N/A)

The original download site for this software is : https://android.googlesource.com/This piece of software is made available under the terms and conditions of the Apache license version 2, which can be found below. Android APACHE License Version 2 (http://source.android.com/source/licenses.html)

linux kernel (3.10.27)

This TV contains the Linux Kernel. The original download site for this software is : http://www.kernel.org/.This piece of software is made available under the terms and conditions of the GPL v2 license, which can be found below. Additionally, following exception applies : "NOTE! This copyright does *not* cover user programs that use kernel services by normal system calls - this is merely considered normal use of the kernel, and does *not* fall under the heading of "derived work". Also note that the GPL below is copyrighted by the Free Software Foundation, but the instance of code that it refers to (the linux kernel) is copyrighted by me and others who actually wrote it. Also note that the only valid version of the GPL as far as the kernel is concerned is _this_ particular version of the license (ie v2, not v2.2 or v3.x or whatever), unless explicitly otherwise stated. Linus Torvalds"

libcurl (7.21.7)

libcurl is a free and easy-to-use client-side URL transfer library, supporting DICT, FILE, FTP, FTPS, Gopher, HTTP, HTTPS, IMAP, IMAPS, LDAP, LDAPS, POP3, POP3S, RTMP, RTSP, SCP, SFTP, SMTP, SMTPS, Telnet and TFTP. libcurl supports SSL certificates, HTTP POST, HTTP PUT, FTP uploading, HTTP form based upload, proxies, cookies, user+password authentication (Basic, Digest, NTLM, Negotiate, Kerberos), file transfer resume, http proxy tunneling and more! The original download site for this software is : http://curl.haxx.se/libcurl/COPYRIGHT AND PERMISSION NOTICE

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libfreetype (2.4.2)

FreeType is a software development library, available in source and binary forms, used to render text on to bitmaps and provides support for other font-related operations

The original download site for this software is : https://github.com/julienr/libfreetype-androidFreetype License

libjpeg (8a)

This package contains C software to implement JPEG image encoding, decoding, and transcoding. This

software is based in part on the work of the Independent JPEG Group.

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libpng (1.4.1)

libpng is the official Portable Network Graphics (PNG) reference library (originally called pnglib). It is a platform-independent library that contains C functions for handling PNG images. It supports almost all of PNG's features, is extensible. The original download site for this software is : https://github.com/julienr/libpng-androidlibpng license

openssl (1.0.1j)

OpenSSL is an open-source implementation of the SSL and TLS protocols. The core library, written in the C programming language, implements the basic cryptographic functions and provides various utility functions. The original download site for this software is : http://openssl.org/OpenSSL license

Zlib compression library (1.2.7)

zlib is a general purpose data compression library. All the code is thread safe. The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files http://tools.ietf.org/html/rfc1950 (zlib format), rfc1951 (deflate format) and rfc1952 (gzip format) Developed by Jean-loup Gailly and Mark Adler(C) 1995-2012 Jean-loup Gailly and Mark Adler This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software. Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions: 1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required. 2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software. 3. This notice may not be removed or altered from any source distribution. Jean-loup Gailly Mark Adler jloup@gzip.org madler@alumni.caltech.edu

dvbsnoop (1.2)

dvbsnoop is a DVB / MPEG stream analyzer program. For generating CRC32 values required for composing PAT, PMT, EIT sections

The original download site for this software is : https://github.com/a4tunado/dvbsnoop/blob/master/src/misc/crc32.cGPL v2 http://dvbsnoop.sourceforge.net/dvbsnoop.html

ezxml (0.8.6)

ezXML is a C library for parsing XML documents.

The original download site for this software is : http://ezxml.sourceforge.net.Copyright 2004, 2005 Aaron Voisine. This piece of software is made available under the terms and conditions of the MIT license, which can be found below.

gSoap (2.7.15)

The gSOAP toolkit is an open source C and C++ software development toolkit for SOAP/XML Web services and generic (non-SOAP) C/C++ XML data bindings. Part of the software embedded in this product is gSOAP software. Portions created by gSOAP are Copyright 2001-2009 Robert A. van Engelen, Genivia inc. All Rights Reserved. THE SOFTWARE IN THIS PRODUCT WAS IN PART PROVIDED BY GENIVIA INC AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF

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restlet (2.1.7)

Restlet is a lightweight, comprehensive, open source REST framework for the Java platform. Rest let is suitable for both server and client Web applications. It supports major Internet transport, data format, and service description standards like HTTP and HTTPS, SMTP, XML, JSON, Atom, and WADL. The original download site for this software is : http://restlet.orgThis piece of software is made available under the terms and conditions of the Apache License version 2.

Opera Web Browser (SDK 3.5)

This TV contains Opera Browser Software.

dlmalloc (2.7.2)

Opera uses Doug Lea's memory allocator

The original download site for this software is : http://gee.cs.oswego.edu/dl/html/malloc.html

double-conversion

Opera uses double-conversion library by Florian Loitsch, faster double : string conversions (dtoa and strtod).The original download site for this software is : http://code.google.com/p/double-conversionCopyright 2006-2011, the V8 project authors. All rights reserved. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. * Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission. THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOTLIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FORA PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHTOWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOTLIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANYTHEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USEOF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

EMX (0.9c)

Opera uses EMX, which is an OS/2 port of the gcc suite. Opera uses modified versions of the sprintf and sscanf methods from this C library.* The emx libraries are not distributed under the GPL. Linking an * application with the emx libraries does not cause the executable * to be covered by the GNU General Public License. You are allowed * to change and copy the emx library sources if you keep the copyright * message intact. If you improve the emx libraries, please send your * enhancements to the emx author (you should copyright your * enhancements similar to the existing emx libraries).

freetype (2.4.8)

Opera uses freetype FreeType 2 is a software-font engine that is designed to be small, efficient, highly customizable and portable, while capable of producing high-quality output (glyph images).The original download site for this software is : http://www.freetype.org/freetype2/index.htmlFreetype License

HKSCS (2008)

Opera uses HKSCS: The Government of the Hong Kong Special Administrative Region HKSCS mappingsThe original download site for this software is : http://www.ogcio.gov.hkBefore downloading the Software or Document provided on this Web page, you should read the following terms (Terms of Use). By downloading the Software and Document, you are deemed to agree to these terms.1. The Government of the Hong Kong Special Administrative Region (HKSARG) has the right to amend or vary the terms under this Terms of Use from time to time at its sole discretion.2. By using the Software and Document, you irrevocably agree that the HKSARG may from time to time vary this Terms of Use without further notice to you and you also irrevocably agree to be bound by the most updated version of the Terms of Use.3. You have the sole responsibility of obtaining the most updated version of the Terms of Use which is available in the "Digital 21" Web site (http://www.ogcio.gov.hk/en/business/tech_promotion/ccli/terms/terms.htm).4. By accepting this Terms of Use, HKSARG shall grant you a non-exclusive license to use the Software and Document for any purpose, subject to clause 5 below.5. You are not allowed to make copies of the Software and Document except it is incidental to and necessary for the normal use of the Software. You are not allowed to adapt or modify the Software and Document or to distribute, sell, rent, or make

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IANA (Dec 30 2013)

Opera uses Internet Assigned Numbers Authority: Character encoding tag names and numbers. The original download site for this software is : https://www.iana.org

ICU (3)

Opera uses ICU : International Components for Unicode: Mapping table for GB18030The original download site for this software is : http://site.icu-project.org/http://source.icu-project.org/repos/icu/icu/trunk/license.html

MozTW (1.0)

Opera uses MoxTW : MozTW project: Big5-2003 mapping tables. The original download site for this software is : https://moztw.orgThis piece of software is made available under the terms and conditions of CCPL

NPAPI (0.27)

Opera uses NPAPI : Netscape 4 Plugin API: npapi.h, npfunctions.h, npruntime.h and nptypes.h. Distributed as part of the Netscape 4 Plugin SDK.The original download site for this software is : wiki.mozilla.orgThis piece of software is made available under the terms and conditions of mozilla licencse as described below.

Unicode (4.0)

Opera uses Unicode : Data from the Unicode character database. The original download site for this software is : www.unicode.orghttp://www.unicode.org/copyright.html

Webp (0.2.0)

Opera uses Webp : libwebp is a library for decoding images in the WebP format. Products may use it to decode WebP images. The turbo servers will eventually re-decode images to WebP. The original download site for this software is : https://developers.google.com/speed/webp/?csw=1 https://chromium.googlesource.com/webm/libwebp/ Additional IP Rights Grant (Patents)"This implementation" means the copyrightable works distributed by Google as part of the WebM Project.Google hereby grants to you a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section)patent license to make, have made, use, offer to sell, sell, import, transfer, and otherwise run, modify and propagate the contents of this implementation of VP8, where such license applies only to those patent claims, both currently owned by Google and acquired in the future, licensable by Google that are necessarily infringed by this implementation of VP8. This grant does not include claims that would be infringed only as a consequence of further modification of this implementation. If you or your agent or exclusive licensee institute or order or agree

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FaceBook SDK (3.0.1)

This TV contains Facebook SDK. The Facebook SDK for Android is the easiest way to integrate your Android app with Facebook's platform. The SDK provides support for Login with Facebook authentication, reading and writing to Facebook APIs and support for UI elements such as pickers and dialogs. The original download site for this software is : https://developer.facebook.com/docs/androidThis piece of software is made available under the terms and conditions of the Apache License version 2.

iptables (1.4.7)

iptables is a user space application program that allows a system administrator to configure the tables provided by the Linux kernel firewall (implemented as different Netfilter modules) and the chains and rules it stores. Different kernel modules and programs are currently used for different protocols; iptables applies to IPv4The original download site for this software is : https://android.googlesource.comThis piece of software is made available under the terms and conditions of the GPL v2.

libyuv (814)

libyuv is an open source project that includes YUV conversion and scaling functionality. The original download site for this software is : http://code.google.com/p/libyuvThis piece of software is made available under the terms and conditions BSD.

ffmpeg (2.1.3)

This TV uses FFmpeg. FFmpeg is a complete, cross-platform solution to record, convert and stream audio and video. The original download site for this software is : http://ffmpeg.orgThis piece of software is made available under the terms and conditions of the GPL v2 license, which can be found below.

u-boot (2011-12)

U-boot is a boot loader for embedded boards based on ARM, MIPS and other processors, which can be installed in a boot ROM and used to initialize and test the hardware or to download and run application code

This piece of software is made available under the terms and conditions of the GPL v2 license, which can be found below.

live555 (0.82)

Live555 provides RTP/RTCP/RTSP client. The original download site for this software is : http://www.live555.comThis piece of software is made available under the terms and conditions of the LGPL v2.1 license, which can be found below.

Bluetooth Stack (Bluedroid)

This TV uses Bluetooth stack. The original download site for this software is :This piece of software is made available under the terms and conditions of Android Apache License Version 2.

EXIF (NA)

Exif JPEG header manipulation tool. The original download site for this software is : http://www.sentex.net/mwandel/jhead/Portions of this source code are in the public domain

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EXPAT (2.1.0)

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neven face recognition library (NA)

This TV uses neven face recognition library which is used for face recognitionThis piece of software is made available under the terms and conditions of Android Apache License version 2.

Unicode (4.8.1.1)

This TV uses Unicode which specifies the representation of text

The original download site for this software is : http://icu-project.orgICU License - ICU 1.8.1 and later

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IPRoute2 (NA)

IPRoute2 is used for TCP/IP, Networking and Traffic control. The original download site for this software is : http://www.linuxfoundation.org/collaborate/workgroups/networking/iproute2This piece of software is made available under the terms and conditions of GPL V2.

mtpd (NA)

mtpd is used for VPN Network. The original download site for this software is : http://libmtp.sourceforge.net/This piece of software is made available under the terms and conditions of Apache License version 2.0.

MDNS Responder (NA)

MDNS Responder. The Mdns Responder project is a component of Bonjour, Apple's ease-of-use IP networking initiative. The original download site for this software is : http://www.opensource.apple.com/tarballs/mDNSResponder/This piece of software is made available under the terms and conditions of Apache License version 2.0.

NFC (NA)

NFC Semiconductor's NFC Library. Near Field Communication (NFC) is a set of short-range wireless technologies, typically requiring a distance of 4cm or less to initiate a connection. NFC allows you to share small payloads of data between an NFC tag and an Android-powered device, or between two Android-powered devices. This piece of software is made available under the terms and conditions of Apache License version 2.0.

Skia (NA)

Skia is a complete 2D graphic library for drawing Text, Geometries, and Images. The original download site for this software is : http://code.google.com/p/skia/Copyright (c) 2011 Google Inc. All rights reserved. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: * Redistributions of source code must retain the above copyright notice,

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Sonic Audio Synthesis library (NA)

The original download site for this software is : http://www.sonivoxmi.com/This piece of software is made available under the terms and conditions of Apache License version 2.0.

Sqlite (3071100)

The original download site for this software is : www.sqlite.org.This piece of software is made available under the terms and conditions of Apache License version 2.0.

Nuance Speech Recognition engine (NA)

The original download site for this software is : http://www.nuance.com/This piece of software is made available under the terms and conditions of Apache License version 2.0.

C++Standard Template Library library (5)

This TV uses Implementation of the C++ Standard Template Library. The original download site for this software is : http://stlport.sourceforge.netBoris Fomitchev grants Licensee a non-exclusive, non-transferable, royalty-free license to use STLport and its documentation without fee. By downloading, using, or copying STLport or any portion thereof, Licensee agrees to abide by the intellectual property laws and all other applicable laws of the United States of America, and to all of the terms and conditions of this Agreement. Licensee shall maintain the following copyright and permission notices on STLport sources and its documentation unchanged :Copyright 1999,2000 Boris Fomitchev

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svox (NA)

The original download site for this software is : http://www.nuance.com/This piece of software is made available under the terms and conditions of Apache License version 2.0.

tinyalsa (NA)

This TV uses tinyalsa: a small library to interface with ALSA in the Linux kernel The original download site for this software is :

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Vorbis Decompression Library (NA)

This TV uses Tremolo ARM-optimized Ogg Vorbis decompression library. Vorbis is a general purpose audio and music encoding format contemporary to MPEG-4's AAC and TwinVQ, the next generation beyond MPEG audio layer 3The original download site for this software is : http://wss.co.uk/pinknoise/tremoCopyright (c) 2002-2008 Xiph.org Foundation Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.- Redistributions in binary form must reproduce the above copy right notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.- Neither the name of the Xiph.org Foundation nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission. THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOTLIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FORA PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE FOUNDATIONOR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOTLIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANYTHEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USEOF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

wpa_supplicant_Daemon (v0.8)

Library used by legacy HAL to talk to wpa_supplicant daemonThe original download site for this software is : http://hostap.epitest.fi/wpa_supplicant/This piece of software is made available under the terms and conditions of GPL version 2.

gson (2.3)

Gson is a Java library that can be used to convert Java Objects into their JSON representation. It can also be used to convert a JSON string to an equivalent Java object. Gson can work with arbitrary Java objects including pre-existing objects that you do not have source-code of. The original download site for this software is : https://code.google.com/p/google-gson/This piece of software is made available under the terms and conditions of the Apache License 2.0

This software includes an implementation of the AES Cipher, licensed by Brian Gladman

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libUpNp (1.2.1)

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dnsmasq

Dnsmasq is a lightweight, easy to configure DNS forwarder and DHCP server

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TomCrypt (1.1)

iwedia stack is using tomcrypt for sw decryption

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AsyncHttpclient (1.4.6)

The original download site for this software is : http://loopj.com/android-async-http/This piece of software is made available under the terms and conditions of the APACHE LICENSE 2.0

Jackson Parser (2.x)

Ipepg client uses Jackson Parser for string manipualation. The original download site for this software is : https://github.com/FasterXML/jackson-coreThis piece of software is made available under the terms and conditions of the APACHE LICENSE 2.0

TP Vision Netherlands B.V. is grateful to the groups and individuals above for their contributions.

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Version 2.0, January 2004

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the notices in the Source Code files of the Original Code. You should

use the text of this Exhibit A rather than the text found in the

Original Code Source Code for Your Modifications.]

27.5

Announcements

You can receive an announcement on new TV software available for download or other software related issues.

To read these announcements...

1 - Press ⚙, select **All Settings** and press **OK**.
2 - Select **Update Software** > **Announcements**, and press **OK**.
3 - If there is an announcement, you can read it or select one of the announcements available.
4 - Press ‹ (left) repeatedly if necessary, to close the menu.

28

Specifications

28.1

Environmental

End of Use

Disposal of your old product and batteries

Your product is designed and manufactured with high quality materials and components, which can be recycled and reused.



When this crossed-out wheeled bin symbol is attached to a product it means that the product is covered by the European Directive 2012/19/EU.



Please inform yourself about the local separate collection system for electrical and electronic products.

Please act according to your local rules and do not dispose of your old products with your normal household waste. Correct disposal of your old product helps to prevent potential negative consequences for the environment and human health.

Your product contains batteries covered by the European Directive 2006/66/EC, which cannot be disposed with normal household waste.



Please find out for yourself about the local rules on separate collection of batteries because correct disposal will help to prevent negative consequences for the environment and human health.

28.2

Power

Product specifications are subject to change without notice. For more specification details of this product, see www.philips.com/support

Power

- Mains power : AC 220-240V +/-10%
- Ambient temperature : 5°C to 35°C
- Power saving features : Eco mode, Picture mute (for radio), Auto switch-off timer, Eco settings menu.

The power rating stated on the product typeplate is the power consumption for this product during normal household use (IEC 62087 Ed.2).

28.3

Operating System

Android OS :

Android Lollipop 5.1

28.4

Reception

- Aerial input : 75 ohm coaxial (IEC75)
- Tuner bands : Hyperband, S-Channel, UHF, VHF
- DVB : DVB-T2
- Analogue video playback : SECAM, PAL
- Digital video playback : MPEG2 SD/HD (ISO/IEC 13818-2), MPEG4 SD/HD (ISO/IEC 14496-10)
- Digital audio playback (ISO/IEC 13818-3)

28.5

Display Type

Diagonal screen size

- 55PUT7101 : 139 cm / 55 inch
- 65PUT7101 : 164 cm / 65 inch
- 75PUT7101 : 189 cm / 75 inch

Display resolution

- 3840 x 2160p

28.6

Display Input Resolution

Video formats

Resolution — Refresh rate

- 480i - 60 Hz
- 480p - 60 Hz
- 576i - 50 Hz
- 576p - 50 Hz
- 720p - 50 Hz, 60 Hz
- 1080i - 50 Hz, 60 Hz
- 1080p - 24 Hz, 25 Hz, 30 Hz
- 2160p - 24 Hz, 25 Hz, 30 Hz, 50 Hz, 60 Hz

Computer formats

Resolutions (amongst others)

• 640 x 480p - 60 Hz
• 800 x 600p - 60 Hz
• 1024 x 768p - 60 Hz
• 1280 x 768p - 60 Hz
• 1360 x 765p - 60 Hz
• 1360 x 768p - 60 Hz
• 1280 x 1024p - 60 Hz
• 1920 x 1080p - 60 Hz
• 3840 x 2160p - 24 Hz, 25 Hz, 30 Hz, 50 Hz, 60 Hz

28.7

Dimensions and Weights

55PUT7101
• without TV stand:
Width 1233.2 mm - Height 723.2 mm - Depth 62.2 mm - Weight ± 18.7 kg
• with TV stand:
Width 1233.2 mm - Height 787.9 mm - Depth 223.1 mm - Weight ± 19.4 kg

65PUT7101
• without TV stand:
Width 1452.9 mm - Height 836.42 mm - Depth 67.2 mm - Weight ± 28.05 kg
• with TV stand:
Width 1452.9 mm - Height 912.6 mm - Depth 263.3 mm - Weight ± 28.85 kg

75PUT7101
• without TV stand:
Width 1681.8 mm - Height 971.8 mm - Depth 67.3 mm - Weight ± 46.2 kg
• with TV stand:
Width 1685.8 mm - Height 1036.7 mm - Depth 334 mm - Weight ± 47.6 kg

28.8

Dimensions and Weights

49PUS6481
• without TV stand:
Width 1099.2 mm - Height 645.3 mm - Depth 78.6 mm - Weight ± 11.01 kg
• with TV stand:
Width 1099.2 mm - Height 699.7 mm - Depth 213.2 mm - Weight ± 11.31 kg

55PUS6481
• without TV stand:
Width 1239.2 mm - Height 724.7 mm - Depth 84.8 mm - Weight ± 16 kg
• with TV stand:
Width 1239.2 mm - Height 779.5 mm - Depth 231.7 mm - Weight ± 16.3 kg

28.9

Dimensions and Weights

55POS901F
• without TV stand:
Width 1239.2 mm - Height 724.7 mm - Depth 84.8 mm - Weight ± 16 kg
• with TV stand:
Width 1239.2 mm - Height 779.5 mm - Depth 231.7 mm - Weight ± 16.3 kg

28.10

Connectivity

TV Side
• HDMI 3 in - ARC
• HDMI 4 in - MHL - ARC
• USB 2 - USB 2.0
• USB 3 - USB 3.0 (blue)
• 1x Common Interface slot: CI+/CAM
• Headphones - Stereo mini-jack 3.5mm

TV Rear
• Audio In (DVI to HDMI) - Stereo mini-jack 3.5mm
• SCART: Audio L/R, CVBS in, RGB
• YPbPr : Y Pb Pr, Audio L/R

TV Bottom
• HDMI 1 in - HDCP 2.2
• HDMI 2 in - HDCP 2.2
• USB 1 - USB 2.0
• Audio out - Optical Toslink
• Network LAN - RJ45
• Antenna (75 ohm)

28.11

Sound

• wOOx
• HD Stereo
• Output power (RMS) : 30W
• Dolby Digital Plus®
• DTS Premium Sound ™

28.12

Multimedia

Connections
• USB 2.0 / USB 3.0
• Ethernet LAN RJ-45
• Wi-Fi 802.11a/b/g/n/ac (built-in)
• BT2.1 with EDR & BT4.0 with BLE

Supported USB file systems
• FAT 16, FAT 32, NTFS

Playback formats

• Containers : 3GP, AVCHD, AVI, MPEG-PS, MPEG-TS, MPEG-4, Matroska (MKV), Quicktime (MOV, M4V, M4A), Windows Media (ASF/WMV/WMA)
• Video Codecs : MPEG-1, MPEG-2, MPEG-4 Part 2, MPEG-4 Part 10 AVC (H264), H.265 (HEVC), VC-1, WMV9
• Audio Codecs : AAC, HE-AAC (v1/v2), AMR-NB, Dolby Digital, Dolby Digital Plus, DTS Premium Sound™, MPEG-1/2/2.5 Layer I/II/III (includes MP3), WMA (v2 to v9.2), WMA Pro (v9/v10)
• Subtitles :
– Formats : SAMI, SubRip (SRT), SubViewer (SUB), MicroDVD (TXT), mplayer2 (TXT), TMPlayer (TXT)
– Character encodings : UTF-8, Central Europe and Eastern Europe (Windows-1250), Cyrillic (Windows-1251), Greek (Windows-1253), Turkish (Windows-1254), Western Europe (Windows-1252)
• Image Codecs : JPEG, JPS, MPO
• Limitations :
– Maximum supported total bit rate for a media file is 30Mbps.
– Maximum supported video bit rate for a media file is 20Mbps.
– MPEG-4 AVC (H.264) is supported up to High Profile @ L5.1.
– H.265 (HEVC) is supported upto Main / Main 10 Profile up to Level 5.1
– VC-1 is supported up to Advanced Profile @ L3.

Supported media server software (DMS)

• You can use any DLNA V1.5 certified media server software (DMS class).
• You can use the Philips TV Remote app (iOS and Android) on mobile devices.

Performance may vary, depending on the capabilities of the mobile device and the software used.

ESD regulations

This apparatus meets performance criteria B for ESD. In case the apparatus does not recover in file sharing mode due to electrostatic discharge, user interference is required.

29

Help and Support

29.1

Register your TV

Register your TV and enjoy a range of benefits including full support (including downloads), privileged access to information about new products, exclusive offers and discounts, the chance to win prizes and even participate in special surveys about new releases.

Go to www.philips.com/welcome

29.2

Using Help

This TV offers help on screen .

Open Help

Press the key (blue) to open Help immediately. Help will open on the chapter that is most relevant to what you are doing or what is selected on TV. To look up topics alphabetically, press the colour key Keywords .

To read the Help as a book, select Book.

You can also open Help in the Home menu or TV menu.

Before you execute the Help instructions, close Help. To close Help, press the colour key Close .

For some activities, like Text (Teletext), the colour keys have specific functions and cannot open Help.

TV Help on your tablet, smartphone or computer

To carry out extended sequences of instructions more easily, you can download the TV Help in PDF format to read on your smartphone, tablet or computer. Alternatively, you can print the relevant Help page from your computer.
To download the Help (user manual) go to www.philips.com/support

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29.3

Troubleshooting

Switch On and Remote Control

The TV does not switch on

• Disconnect the power cable from the power outlet. Wait for one minute then reconnect it.
• Make sure that the power cable is securely connected.

Creaking sound at startup or switch off

When you are switching the TV on, off or to standby, you hear a creaking sound from the TV chassis. The creaking sound is due to the normal expansion and contraction of the TV as it cools and warms up. This does not affect performance.

TV does not respond to the remote control

The TV requires some time to start up. During this time, the TV does not respond to the remote control or TV controls. This is normal behaviour.
If the TV continues to be unresponsive to the remote control, you can check if the remote control is working by means of a mobile phone camera. Put the phone in camera mode and point the remote control to the camera lens. If you press any key on the remote control and you notice the infra red LED flicker through the camera, the remote control is working. The TV needs to be checked.
If you do not notice the flickering, the remote control might be broken or its batteries are low.
This method of checking the remote control is not possible with remote controls which are wirelessly paired with the TV.

The TV goes back to standby after showing the Philips startup screen

When the TV is in standby, a Philips startup screen is displayed, then the TV returns to standby mode. This is normal behaviour. When the TV is disconnected and reconnected to the power supply, the startup screen is displayed at the next startup. To switch on the TV from standby, press on the remote control or on the TV.

The standby light keeps on blinking

Disconnect the power cable from the power outlet. Wait 5 minutes before you reconnect the power cable. If the blinking reoccurs, contact Philips TV Consumer Care.

Channels

No digital channels found during the installation

See the technical specifications to make sure that your TV supports DVB-T in your country.
Make sure that all cables are properly connected and that the correct network is selected.

Previously installed channels are not in the channel

list

Make sure that the correct channel list is selected.

Picture

No picture / distorted picture

• Make sure that the antenna is properly connected to the TV.
• Make sure that the correct device is selected as the display source.
• Make sure that the external device or source is properly connected.

Sound but no picture

• Make sure that the picture settings are set correctly.

Poor antenna reception

• Make sure that the antenna is properly connected to the TV.
• Loud speakers, unearthed audio devices, neon lights, high buildings and other large objects can influence reception quality. If possible, try to improve the reception quality by changing the antenna direction or moving devices away from the TV.
• If reception on only one channel is poor, fine-tune this channel with Manual Installation.

Poor picture from a device

• Make sure that the device is connected properly.
• Make sure that the picture settings are set correctly.

Picture settings change after a while

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

A commercial banner appears

Make sure that **Location** is set to **Home**.

Picture does not fit the screen

Change to a different picture format.

Picture format keeps changing with different channels

Select a non 'Auto' picture format.

Picture position is incorrect

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

Computer picture is not stable

Make sure that your PC uses the supported resolution and refresh rate.

Sound

No sound or poor sound quality

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

• Make sure that the sound settings are correctly set.
• Make sure that all cables are properly connected.
• Make sure that the volume is not muted or set to zero.
• Make sure that the TV audio output is connected to the audio input on the Home Theatre System. Sound should be heard from the HTS speakers.
• Some devices may require you to manually enable HDMI audio output. If HDMI audio is already enabled, but you still do not hear audio, try changing the digital audio format of the device to PCM (Pulse Code Modulation). Refer to the documentation accompanying your device for instructions.

HDMI and USB

HDMI

• Note that HDCP (High-bandwidth Digital Content Protection) support can delay the time taken for a TV to display content from an HDMI device.
• If the TV does not recognise the HDMI device and no picture is displayed, switch the source from one device to another and back again.
• If the picture and sound of a device connected to **HDMI 1** or **HDMI 2** is distorted, connect the device to **HDMI 3** or **HDMI 4** on this TV.
• If the picture and sound of a device connected with HDMI is distorted, check if a different **HDMI Ultra HD** setting can solve this problem. In Help, press the colour key **Keywords** and look up **HDMI Ultra HD**.
• If there are intermittent sound disruptions, make sure that output settings from the HDMI device are correct.
• If you use an HDMI-to-DVI adapter or HDMI-to-DVI cable, make sure that an additional audio cable is connected to AUDIO IN (mini-jack only), if available.

HDMI EasyLink does not work

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

No volume icon shown

• When an HDMI-CEC audio device is connected and you use the TV Remote Control to adjust the volume level from the device, this behaviour is normal.

Photos, videos and music from a USB device do not show

• Make sure that the USB storage device is set to Mass Storage Class compliant, as described in the storage device's documentation.

• Make sure that the USB storage device is compatible with the TV.
• Make sure that the audio and picture file formats are supported by the TV.

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

Wi-Fi, Internet and Bluetooth

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

Internet does not work
• If the connection to the router is OK, check the router connection to the Internet.

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

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

Bluetooth lost connection
• Position the wireless speaker within a range of 5 meters from the TV.
• Places with a high amount of wireless activity - apartments with lots of wireless routers - can hamper the wireless connection. Keep the router and wireless speaker as close to the TV as possible.

Bluetooth Audio and Video syncronisation
• Before you purchase a wireless Bluetooth speaker, inform yourself about its quality of Audio to Video syncronisation, commonly called 'lip sync'. Not all Bluetooth devices perform correctly. Ask your dealer for advice.

Wrong Menu Language

Wrong menu language

Change the language back to your language.

1 - Press (the round key above the OK key).
2 - Select the icon (Settings) and press OK.
3 - Press 5 times (down).
4 - Press 3 times (right), select your language and press OK.
5 - Press BACK to close the menu.

29.4
Online Help

To solve any Philips TV related problem, you can consult our online support. You can select your language and enter your product model number.

Go to www.philips.com/support .

On the support site you can find your country's telephone number to contact us as well as answers to frequently asked questions (FAQs). In some countries, you can chat with one of our collaborators and ask your question directly or send a question by email. You can download new TV software or the manual to read on your computer.

29.5
Support and Repair

For support and repair, call the Consumer Care hotline in your country. Our service engineers will take care of a repair, if necessary.

Find the telephone number in the printed documentation that came with the TV.
Or consult our website www.philips.com/support and select your country if needed.

Support app

You can also look up the Support app in the Apps row of the Home menu.
Open this app to find the telephone number to contact us.

TV model number and serial number

You might be asked to provide the TV product model number and serial number. Find these numbers on the packaging label or on the type label on the back or bottom of the TV.

Warning

Do not attemp to repair the TV yourself. This may cause severe injury, irrepairable damage to your TV or void your warranty.

30

Safety and Care

30.1

Safety

Important

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

Secure the TV from Falling Over

Always use the supplied wall bracket to secure the TV from falling over. Mount the bracket and secure the TV onto the bracket, even if you put the TV on the floor.

You can find the mounting instructions in the Quick Start Guide that came with the TV. In case you lost this guide, you can download the guide from www.philips.com
Use the product type number of the TV to look for the Quick Start Guide to download.

Risk of Electric Shock or Fire

• Never expose the TV to rain or water. Never place liquid containers, such as vases, near the TV.
If liquids are spilt on or into the TV, disconnect the TV from the power outlet immediately.
Contact Philips TV Consumer Care to have the TV checked before use.
• Never expose the TV, remote control or batteries to excessive heat. Never place them near burning candles, naked flames or other heat sources, including direct sunlight.
• Never insert objects into the ventilation slots or other openings on the TV.
• Never place heavy objects on the power cord.
• Avoid force coming onto power plugs. Loose power plugs can cause arcing or fire. Ensure that no strain is exerted on the power cord when you swivel the TV screen.
• To disconnect the TV from the mains power, the power plug of the TV must be disconnected. When disconnecting the power, always pull the power plug, never the cord. Ensure that you have full access to the power plug, power cord and outlet socket at all times.

Risk of Injury or Damage to the TV

• Two people are required to lift and carry a TV that weighs more than 25 kg or 55 lbs.
• If you mount the TV on a stand, only use the supplied stand. Secure the stand to the TV tightly. Place the TV on a flat, level surface that can support the weight of the TV and the stand.
• When wall mounted, ensure that the wall mount can safely bear the weight of the TV set. TP Vision bears no responsibility for improper wall mounting that results in accident, injury or damage.
• Parts of this product are made of glass. Handle with care to avoid injury or damage.

Risk of damage to the TV !

Before you connect the TV to the power outlet, ensure that the power voltage matches the value printed on the back of the TV. Never connect the TV to the power outlet if the voltage is different.

Risk of Injury to Children

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

• Never place the TV on a surface covered by a cloth or other material that can be pulled away.
• Ensure that no part of the TV hangs over the edge of the mounting surface.
• Never place the TV on tall furniture, such as a bookcase, without anchoring both the furniture and TV to the wall or a suitable support.
• Teach children about the dangers of climbing on furniture to reach the TV.

Risk of swallowing batteries !

The remote control may contain coin-type batteries which can easily be swallowed by small children. Keep these batteries out of reach of children at all times.

Risk of Overheating

Never install the TV in a confined space. Always leave a space of at least 10 cm or 4 inches around the TV for ventilation. Ensure curtains or other objects never cover the ventilation slots on the TV.

Lightning Storms

Disconnect the TV from the power outlet and antenna before lightning storms.
During lightning storms, never touch any part of the TV, power cord or antenna cable.

Risk of Hearing Damage

Avoid using earphones or headphones at high volumes or for prolonged periods of time.

Low Temperatures

If the TV is transported in temperatures below 5°C or 41°F, unpack the TV and wait until the TV temperature reaches room temperature before connecting the TV to the power outlet.

Humidity

In rare occasions, depending on temperature and humidity, minor condensation can occur on the inside of the TV glass front (on some models). To prevent this, do not expose the TV to direct sunlight, heat or extreme humidity. If condensation occurs, it will disappear spontaneously while the TV is playing for a few hours.
The condensation moisture will not harm the TV or cause malfunction.

30.2

Screen Care

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

31

Terms of Use

31.1

Terms of Use - TV

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This product was brought to the market by TP Vision Europe B.V. or one of its affiliates, hereinafter referred to as TP Vision, which is the manufacturer of the product. TP Vision is the warrantor in relation to the TV with which this booklet was packaged. Philips and the Philips Shield Emblem are registered trademarks of Koninklijke Philips N.V.

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Never attempt to repair the TV yourself. Use the TV and accessories only as intended by the manufacturer. The caution sign printed on the back of the TV indicates risk of electric shock. Never remove the TV cover. Always contact Philips TV Customer Care for service or repairs. Find the telephone number in the printed documentation that came with the TV. Or consult our website www.philips.com/support and select your country if needed. Any operation expressly prohibited in this manual, or any adjustments and assembly procedures not recommended or authorised in this manual, shall void the warranty.

Pixel characteristics
This LCD/LED product has a high number of colour pixels. Although it has effective pixels of 99.999% or more, black dots or bright points of light (red, green or blue) may appear constantly on the screen. This is a structural property of the display (within common industry standards) and is not a malfunction.

TP Vision is committed to developing, producing and marketing products that cause no adverse health effects. TP Vision confirms that, as long as its products are handled properly for their intended use, they are safe to use according to scientific evidence available today. TP Vision plays an active role in the development of international safety standards, enabling TP Vision to anticipate further developments in standardisation for early integration in its products.

31.2

Terms of Use - Smart TV

You can see the terms of use, privacy policy, and also set privacy settings of your Smart TV.

To open the terms of use of Smart TV page...

1 - Press HOME to open the Home menu.
2 - Select Apps to open Apps.
3 - Select Support.

31.3

Terms of Use - Philips App Gallery

In Help, press the colour key Keywords and look up Terms of Use, App Gallery for more information.

32

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32.1

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Ultra HD

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DTS Premium Sound ™

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This device uses PlayReady technology to access PlayReady-protected content and/or WMDRM-protected content. If the device fails to properly enforce restrictions on content usage, content owners may require Microsoft to revoke the device's ability to

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32.7

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Index

A

Age Rating 32
Ambilight+hue, configuration 71
Ambilight+hue, Immersion 72
Ambilight+hue, on or off 72
Ambilight, Ambilight Style 60
Ambilight, Settings 70
Ambilight, TV Switch Off 71
Ambilight, Wall Colour 70
Android Settings 12
Announcements 120
Antenna connection 8
Antenna, Manual Installation 85
APP lock 53
Apps 51
Audio commentary 79
Audio Description 79
Audio Language 33
Audio Language, Primary 33
Audio Language, Secondary 33
Audio Out - Optical, tips 16
Audio Out Delay 18
Audio Out Format 18
Audio Out Levelling 18
Audio Out Offset 18
Audio Out Settings 18
Audio to Video Sync 18
Auto Volume Levelling 68
Automatic Channel Update 83
Automatic switch off 26

B

Backlight Contrast 62
Bass 67
Blu-ray Disc player, connect 19
Bluetooth 20
Bluetooth, Devices 20
Bluetooth, Pairing 20
Bluetooth, Remove device 20
Bluetooth, Select device 20
Brightness, Philips Logo 25

C

Cable, Manual Installation 85
CAM, Conditional Access Module 16
Camcorder, connect 24
Channel 31
Channel List 31
Channel List Copy 85
Channel List Copy, copy 85
Channel List Copy, current version 85
Channel List Copy, upload 86
Channel List, about 31
Channel List, filter 31
Channel List, open 31
Channel List, search 31
Channel logos 75
Channel Update Message 83
Channel, age rating 32
Channel, Antenna Installation 83
Channel, Automatic Channel Update 83
Channel, Cable Installation 83
Channel, Manual channel update 83
Channel, Options 32
Channel, Reinstall 83
Channel, switch to a channel 32
Channel, TV guide 38
Channels, watch two channels 61
Child Lock 75
CI+ 16
Clear Internet Memory 11
Clear LCD 66
Clear Sound 68
Colour 62
Colour control, reset 64
Colour, colour control 63
Colour, Colour enhancement 63
Colour, colour temperature 63
Colour, custom colour temperature 63
Colour, Hue 64
Colour, Saturation 64
Common Interface Slot 16
Computer, connect 24
Connect, USB Flash Drive 23
Connectivity Guide 13
Consumer Care 126
Contact Philips 126
Contrast 62
Contrast, Contrast Mode 64
Contrast, Dynamic Contrast 65
Contrast, Gamma 65
Contrast, Light Sensor 65
Contrast, Perfect Contrast 65
Contrast, Video Contrast 65

D

Digital Text 35
Disposal of TV or batteries 121
DMR, Digital Media Renderer 11
DVB (Digital Video Broadcast) 84
DVD player 19

E

EasyLink 14
EasyLink, On or Off 15
EasyLink, Remote control 15
Eco Settings 72
End of use 121

F

FreeviewPlus 48
Frequency Scan 84
Frequency Step Size 84

G

Game Console, connect 21
Game or Computer 49
Game or Computer, setting 63
Gamepad, connect 21
Gamma 65
Google Play Store 52

H

Hard of hearing 78
HbbTV 37

HDMI MHL 13
HDMI, ARC 13
HDMI, DVI connection 15
HDR programmes 64
HDR upscaling 64
Headphones Volume 68
Headphones, connect 20
Hearing impaired 78
Home Menu 45
Home Theatre System, Multichannel 18
Home Theatre System, problems 19
Home Theatre System, sound 69
Home Theatre System, volume levelling 18
Hue Bridge 71
Hue Bulbs 71

I
Incredible Surround 68
Interactive TV 37
Interactive TV, about 36
Internet memory, clear 10

I
iTV 36

K
Keys on TV 25

L
Light Sensor 73

M
Media 57
Media files, from a cloud storage 57
Media files, from a computer or NAS 57
Media files, from a USB drive 57
Motion, Clear LCD 66
Motion, Perfect Natural Motion 66
MPEG Artefact Reduction 66
Multi View 61

N
Network Frequency 84
Network Frequency Mode 84
Network Installation 9
Network, connect 9
Network, settings 10
Network, Static IP 10
Network, Switch on Wi-Fi 11
Network, TV Network Name 11
Network, View Settings 10
Network, Wi-Fi Smart Screen 11
Network, Wired 10
Network, Wireless 9
Network, WoWLAN 10
Network, WPS 9
Network, WPS with PIN code 9
Noise Reduction 66
Now on TV 43

O
On a TV stand, TV Placement 75
On and Off 25
On the wall, TV Placement 75
Online support 126
Open Source software 87
Options on a Channel 32

P
Parental Rating 32
Partially sighted 78
Perfect Natural Motion 66
Philips Logo, Brightness 25
Photo camera, connect 24
Photos, Videos and Music 57
Picture In Picture 61
Picture Style 62
Picture, Backlight Contrast 62
Picture, Colour 62
Picture, HDR upscaling 64
Picture, picture format 66
Picture, Picture format, advanced 66
Picture, Picture format, basic 66
Picture, quick settings 67
Picture, Sharpness 62
Power connection 7
Power consumption check 72
Problems 124
Problems, Connection, Internet 126
Problems, Connection, Wi-Fi 126
Problems, HDMI Connection 125
Problems, Menu language 126
Problems, Picture 125
Problems, Remote control 124
Problems, Sound 125
Problems, USB Connection 125
Product Fiche 121
Programmes, Recommendations 43

R
Radio stations 31
Reception Quality 84
Recording 40
Recording, TV Guide data 38
Register your product 124
Reinstall TV 83
Remote Control Keyboard 29
Remote Control, accents and symbols 29
Remote Control, Azerty 30
Remote Control, Cyrillic 30
Remote Control, keyboard 29
Remote Control, Qwerty 30
Remote Control, Qwerty and Azerty 29
Remote Control, uppercase 29
Repair 126

S
Safety Instructions 127
Screen care 128
Search with Voice, APP 28
Sharpness 62
Sharpness, MPEG Artefact Reduction 66
Sharpness, Noise reduction 66
Sharpness, Ultra Resolution 65
Sleep Timer 25
Smart Card, CAM 16
Software, Update 87
Sound Style 67
Sound, Auto Volume Levelling 68
Sound, Bass 67
Sound, Clear Sound 68
Sound, Headphones Volume 68
Sound, surround mode 68
Sound, Treble 67
Speakers, Wireless 69
Standby 25

Subtitle 33
Subtitle Language 33
Subtitle Language, Primary 33
Subtitle Language, Secondary 33
Support, online 126
Surround Mode 68
Switch Off Timer 26
Synchronise Audio and Video 18

T

Teletext 35
Terms of Use 129
Terms of Use, App Gallery 12
Test Reception 84
Text 35
Text language, Primary 36
Text language, Secondary 36
Treble 67
TV Guide 38
TV Guide, data and information 38
TV Guide, Reminder 38
TV Installation 83
TV network name 10
TV on Demand 43
TV placement 7
TV Speakers 69

U

Universal Access 78
Universal Access, Hard of hearing 78
Universal Access, Speakers/Headphones 79
USB Hard Drive, disk space 22
USB Hard Drive, Installation 22
USB Keyboard 23
USB Keyboard, connect 23

V

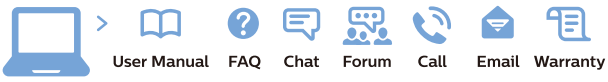
Video on Demand 44
Viewing distance 7
Visually impaired 79
Voice 28

W

Watch TV 32
Wi-Fi 9
Wired Network 10
Wireless Audio 69
Wireless Network 9
Wireless Speakers, about 69
Wireless Speakers, select 69
WoWLAN 10

Y

YPbPr connection, tips 15



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