dLAN®

TV SAT Starter Set

devolo

The Network Innovation

devolo dLAN® TV SAT

Contents

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1 Preface

1.1 Thank you for placing your trust in this devolo product

The dLAN TV SAT Starter Set makes complicated wiring of satellite systems a thing of the past. The devolo system uses your home's own electrical network to transmit the TV services. Installation is done in next to no time: Simply connect your satellite system directly to the dLAN TV SAT Multituner and connect this to the mains supply. Thanks to the integrated dLAN adapter, the dLAN TV SAT Multituner converts any power outlet into an antenna socket and brings the TV programme to your television with digital HD quality via the dLAN TV SAT to IP Receiver!

The dLAN TV SAT to IP Receiver is not only a new generation DVB-S2 receiver but also a video recorder. Simply use external USB hard drives as storage media. You can also receive encrypted programs, HbbTV and DLNA.

With an additional dLAN adapter connected to the Internet access device, you can also very easily get satellite TV reception for your smartphone or tablet using the devolo dLAN TV SAT App.

*For more information on the topic of **SAT>IP** and possible **scenarios**, see **8.1 Troubleshooting**. Additionally, the website www.devolo.com contains a lot of SAT information for you.*

1.1.1 About this manual

After a brief introduction to the basics of dLAN and SAT>IP as well as a short summary of dLAN TV SAT Starter Set's functions in **Chapter 2**, **Chapter 3** shows you how to successfully start using your devices.

Chapter 4 provides a detailed description of the configuration options for the integrated configuration interface of the dLAN TV SAT Multituner. For information on the TV and radio reception, see **Chapter 5**.

In **Chapter 6** you learn how to watch satellite TV via the devolo dLAN TV SAT App.

For more information on configuring your dLAN network, see **Chapter 7**.

Tips for bandwidth optimisation, information about product safety and environmental compatibility of the device as well as our warranty terms can be found in **Chapter 8** and conclude the manual.

The **CE** declaration for this product and the technical data are on the included product **CD**.

Description of the symbols

Here we briefly describe the meaning of the symbols used in this manual.

Very important note. Failure to observe this note may result in damage.

Important note that should be observed.

Additional information, background material and configuration tips for your device.

If you have any further ideas or suggestions related to our products, we would be delighted to hear from you at support@devolo.com!

devolo on the Internet

For detailed information on our products or "dLAN", visit www.devolo.com. The **Service Centre** area contains downloadable product descriptions and documentation, as well as updates to devolo software and device firmware.

To avoid damage to this or other devices, use the enclosed components only for their **intended purpose**:

The dLAN TV SAT Multituner is intended for the reception of DVB-S/S2 satellite signals and their transfer to the connected SAT>IP receiver or to an Internet-based terminal device (e. g. smartphone or tablet).
The dLAN TV SAT to IP Receiver is intended for the reception of DVB-S/S2 satellite signals and their transfer to the connected TV set(s).
The dLAN adapter is intended for connecting the dLAN TV SAT to IP Receiver to the dLAN network.

2 Introduction

dLAN is an intelligent, secure technology that lets you set up a home network easily, quickly and economically via your household electrical wiring, without the need for complex and expensive dedicated cabling.

2.1 What exactly is dLAN?

dLAN (**d**irect **L**ocal **A**rea **N**etwork) uses the household power grid to transfer data between computers equipped with suitable adapters and other network components. As a result, any power outlet can be used as a network access point. The data is modulated prior to transfer and sent as a signal via household power lines. State-of-the-art technology ensures that the power and data networks do not interfere with one another. Networking via dLAN is fast and secure. The data is encrypted using a key to prevent interception by third parties.

With dLAN adapters, not only network signals can easily be transferred via the mains supply. Video signals in HD standard and audio signals in digital CD quality can be quickly and easily distributed everywhere in the house this way.

2.2 What does SAT>IP stand for?

SAT>IP is a new communication protocol for receiving and distributing satellite signals. It converts the television signals (DVB-S/S2) into signals that Internet-based terminal devices can read, so that satellite television is possible even on IP devices having no integrated satellite receiver (such as smartphones and tablets). The satellite signals can be forwarded within the home network either wirelessly or by cable.

2.3 The dLAN TV SAT Multituner

● Being equipped with two satellite connections, the twin tuner enables you, for example, to record and play back different TV stations simultaneously on one receiver or to operate two receivers in one home simultaneously.

● Compatible with all common SAT>IP-certified set-top boxes

● Comprehensive support for devolo's dLAN TV SAT to IP Receiver

● Simple configuration of the multituner via dLAN Cockpit or web browser

● With the devolo dLAN TV SAT App, smartphones and tablets become receiver devices for unencrypted satellite TV

- Integrated dLAN adapter—dLAN technology distributes the satellite signal very easily via household power lines.
- Particularly easy installation—no drilling, no mess!
- Can be expanded to up to two dLAN TV SAT Multituners per household. Enables the operation of up to 4 different terminal devices.

2.4 The dLAN TV SAT to IP Receiver

- Reception of digital satellite TV with **encrypted** (pay TV) or unencrypted transmissions in full HD to DVB S2 standard to any TV set in the home – all without antenna cables
- HbbTV—modern videotext sent from the Internet by dLAN to the TV set; an extra dLAN adapter is required.
- Reception of DVB-S2 radio content
- DLNA—dLAN networking with the media server, e.g., for playing videos and/or music on the TV set; an extra dLAN adapter is required.
- Foolproof installation—connection of the dLAN TV SAT to IP Receiver to your TV set using a conventional HDMI or SCART cable. The connection to the power and dLAN network is made using the dLAN adapter supplied by devolo and the included power pack.
- Electronic programme guide (EPG) for controlling the integrated video recorder.
- Record TV programmes on an external USB drive
- Digital AV outputs such as HDMI and S/PDIF for excellent signal transmission to TV and surround sound system

2.5 Sample applications

dLAN TV SAT Starter Set

The dLAN TV SAT Starter Set is the optimum solution for starting to receive satellite TV on your TV set via the power line. In addition, you can use your **smartphone** or **tablet** as a satellite TV receiver device for unencrypted television.

While the **satellite programme** is transmitted from the **dLAN TV SAT Multituner** to the **dLAN TV SAT to IP Receiver** via dLAN, you receive satellite TV using the **dLAN TV SAT App** on your **smartphone** or **tablet** via Wi-Fi. The prerequisite for this scenario is an **existing Wi-Fi connection**, which is connected to the dLAN network via **another dLAN adapter** (as shown in Figure 1 and 2) and thereby also connected to the dLAN TV SAT to IP Receiver and

dLAN TV SAT Multituner. The **computer** in Figure 2 must also be connected via **another dLAN adapter**.
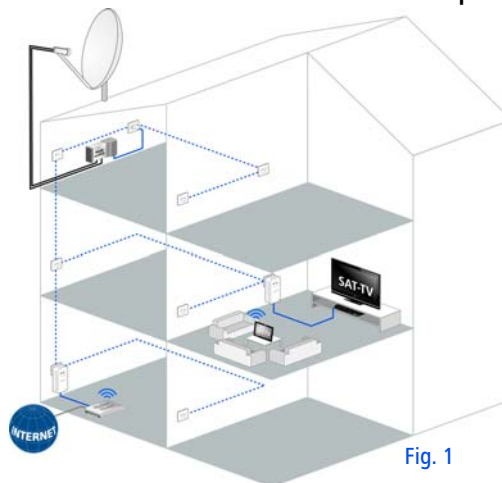
Fig. 1
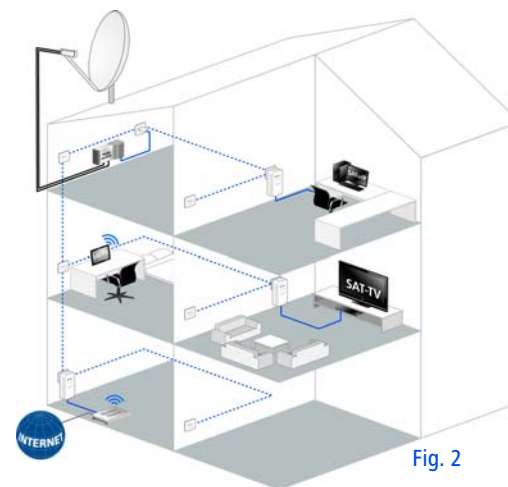
Fig. 2

The dLAN TV SAT Receiver Kit is a sensible addition to the dLAN TV SAT Starter Set if, for example, you plan on having a second television in the home. For more information on the topic of **SAT>IP** *and possible* **scenarios***, see* **8.1 Troubleshooting***. Additionally, the website* www.devolo.com *contains a lot of SAT information for you.*

dLAN TV SAT to IP Receiver and HbbTV via dLAN

HbbTV is a modern kind of video text from the Internet, sent to a TV set. You will need an **existing Internet connection** which (as shown in figure 3) is connected via **another dLAN adapter** to the dLAN home network and therefore to the dLAN TV SAT to IP Receiver and dLAN TV SAT Multituner. This allows dLAN-technology signals and data to be exchanged via the electrical wiring, so the advanced additional information from the transmitter can be transferred from the Internet to the TV set. Currently, not all countries and TV stations offer HbbTV.

*You can read how the dLAN TV SAT to IP Receiver operates in Section **5.4.5 Internet settings**.*

dLAN networking of the
dLAN TV SAT to IP Receiver with a media server (DLNA)

DLNA (Digital Living Network Alliance) is a standard which simplifies the use of digital electronic equipment and makes it easy for them to be used with home networks. For more information, go to www.dlna.org.

If a DLNA media server (e.g. PC with Windows 7 operating system, a router or NAS (Network Access Server))

is also connected by dLAN to your home network, you can view photos or videos on your TV and listen to music files stored on this DLNA media server. (see Fig. 3)

Remember you will need an extra dLAN adapter for this system.

DLNA

DLNA

HbbTV

Fig. 3
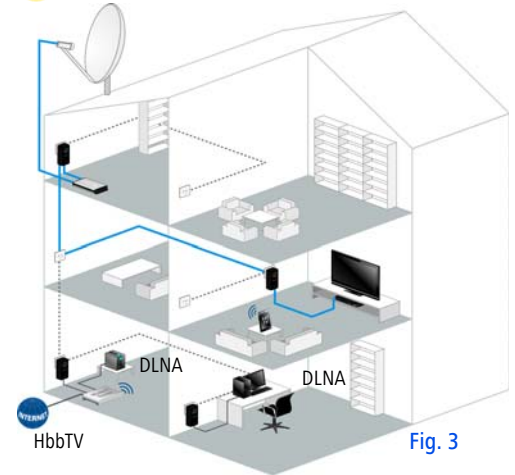
3 Initial use

This chapter covers everything you need to know about the package and setting up your dLAN TV SAT Starter Set.

Fig. 4

3.1 Package contents

Please ensure that the delivery is complete before be-
ginning with the installation of your
dLAN TV SAT Starter Set.

● devolo dLAN TV SAT Multituner
  ○ One Euro 8 network cable
  ○ Two antenna cables (coaxial)
● devolo dLAN TV SAT to IP Receiver
  ○ One mains adapter
  ○ One HDMI cable
● devolo dLAN adapter
  ○ One network cable
● Remote control, incl. batteries
● Hard copy of installation guide
● CD containing software and online documenta-
  tion

devolo AG reserves the right to change the package
contents without prior notice.

3.2 System requirements

● **devolo dLAN TV SAT App**
  ○ **Compatible** with these **Apple** devices:
    iPhone 3GS, iPhone 4, iPhone 4S, iPhone 5,
    iPod touch (3rd Generation), iPod touch (4th

Generation), iPod touch (5th Generation),
iPad and requires iOS Version 5.1 or newer

  ○ **Compatible** with all **Android** devices having
    a dual core processor, NEON support (e.g.
    Tegra3) and Android 4.0.3 ("Ice Cream Sand-
    wich") or newer

  ○ **Compatible** with **Windows 8**
    (available as of Q3/2013)

● **devolo dLAN adapter**
  ○ **Operating systems**: Windows XP (32-bit),
    Windows Vista Home Premium (32-bit/64-bit),
    Windows 7 Home Premium (32-bit),
    Windows 8 (32-bit/64-bit), Linux (Ubuntu),
    Mac (OS X) and all operating systems with
    network support

  ○ **Network connection**

*Please note that the respective network de-
vice must have a network card or network
adapter with a network interface.*

**To set up a dLAN network, you need
two dLAN (AV) devices (200 Mbps or
500 Mbps).**

3.3 Indicators and connections of the dLAN TV SAT Multituner

On the back of the housing next to the two antenna connections you will find the dLAN LEDs, the encryption button and a network jack.

The power jack is located on the side of the housing.

Fig. 5

Antenna connections

This is where you connect the satellite system to the dLAN TV SAT Multituner using the coaxial cable. Once you have made the two connections, you can, for example, simultaneously watch television and record another programme; one satellite connection is used for the television and the other for the recording.

Control lamps

The control lamps (LEDs) show the status for each of the dLAN connections by illuminating and/or flashing in different ways.

● **Power**: Lit a steady green if the dLAN TV SAT Multituner is ready to operate; flashes green if the dLAN TV SAT Multituner is in standby mode. A few seconds after the device is switched on, it goes into PowerSave mode by default.

● **PLC**

○ Is lit a steady green if the network connection is suitable for HD video streaming and online gaming; flashes when data is being transmitted.

○ Is lit a steady orange if the network connection is suitable for SD video streaming and online gaming; flashes when data is being transmitted.

○ Is lit a steady red if the network connection is suitable for simple data transfer and Internet access; flashes when data is being transmitted.

● **Ethernet Link/Act**: Is lit a steady green when a connection to the Ethernet network exists; flashes when data is being transmitted.

Encryption button

Data encryption at the touch of a button; for a functional description of the encryption button, please continue reading in chapter **7 dLAN network**.

Network connection

This is where you connect the dLAN TV SAT Multituner, for example, to your structured wiring via a commercially available network cable.

3.4 Indicators and connections of the dLAN TV SAT to IP Receiver

3.4.1 Front panel

The front panel of the device contains the ON/OFF button, the display, a USB port and the arrow keys.

Fig. 6

Operating status display

- Lights up green when the dLAN TV SAT to IP Receiver is operational.
- Lights up red when the dLAN TV SAT to IP Receiver is in stand-by mode or switched off.

The dLAN TV SAT to IP Receiver complies with current EU power-consumer directives and includes a stand-by mode for lower power consumption (power-saving mode). A few seconds after you switch off the dLAN TV SAT to IP Receiver, the device changes to PowerSave mode by default and the display goes blank.

If power-saving mode is disabled, the time is shown on the display when the dLAN TV SAT to IP Receiver is switched off.

Once the device is in power-saving mode, it takes a few seconds to restart.

If you go in the menu to **Settings** ⟩ **Configuration** ⟩ **PowerSave mode** ⟩, *you can disable the standby mode with low power consumption. To save on energy costs, we recommend leaving power-saving mode active.*

Arrow keys

The arrow keys are used to select the desired programme.

Display

The display shows the status of the dLAN TV SAT to IP Receiver.

USB port

You can connect an external USB storage device (such as a stick) here to view images or play films on your TV set.

Use a high-quality USB cable (compliant with the USB specification).

3.4.2 Rear panel

The rear panel of the housing contains another USB port, plus all the connections needed for connecting the dLAN TV SAT to IP Receiver to your TV set, the dLAN network and the mains supply.

Fig. 7

CI/CI+ module socket

You can also receive encrypted programmes with the dLAN TV SAT to IP Receiver if the appropriate CI module from a pay-TV provider is inserted in the card slot.

ANALOG AUDIO OUT

Use the ANALOG AUDIO OUT socket to connect the dLAN TV SAT to IP Receiver to an analog playback device, such as a stereo system or headphones.

HDMI

The HDMI cable supplied is used to connect the HDMI socket on the dLAN TV SAT to IP Receiver to your TV set.

Ethernet

Use the included network cable to connect the LAN socket of the dLAN TV SAT to IP Receiver and dLAN adapter to the network.

USB port

An external USB hard drive can be connected here for saving TV programmes you want to view later.

> *Please note the following when connecting an external USB hard drive:*

● The first time a hard drive is inserted, the automatic hard drive check may cause a delayed system start of the dLAN TV SAT to IP Receiver. This may take a few minutes.

● Avoid inserting and removing USB devices in quick succession. This may damage the USB device. Do not remove the USB device while a file is being played back or recorded.

● **Also note the following if a high-capacity drive is used**: so that the dLAN TV SAT to IP Receiver can identify a high-capacity drive correctly and without errors, wait about 30 seconds after connecting the two devices before switching the dLAN TV SAT to IP Receiver on again.

> *If you have not already done so, you can go in the menu 5.4.4 Recording configuration and format the detected drive using the dLAN TV SAT to IP Receiver to initialise it for recording. Drives intended for initialisation on a PC can be formatted to FAT32 using one of the freeware tools available on the Web. If the hard drive is formatted in NTFS, only playback functions are available.*

SCART (TV)

A SCART cable is used to connect the SCART output on the dLAN TV SAT to IP Receiver to your TV set.

DIGITAL AUDIO OUT (OPT./TOSLINK)

You connect the digital audio output on the dLAN TV SAT to IP Receiver to the corresponding electrical S/PDIF input on an amplifier.

The sound is normally played back via the audio output on the TV set. It is also possible to connect an additional audio device such as a hi-fi or digital-surround system to handle playback. When connecting a device, always make sure that all other devices are disconnected from the mains supply.

If you are connecting several devices, be sure to use the included mains adapter to provide 12 V DC to an electrical device requiring this. Make sure there is a separate power supply when connecting several devices.

12 V DC

This is where you connect the dLAN TV SAT to IP Receiver to the mains supply.

To avoid electrical damage when connecting the dLAN TV SAT to IP Receiver, always use the power pack supplied. The mains adapter is designed to supply electrical devices with 12 V DC.

3.5 Indicators and connections of the dLAN adapter

The dLAN adapter has a monitoring light (LED), two network jacks and an encryption button.

Monitoring light

The monitoring light (LED) shows all of the statuses for the dLAN adapter by illuminating and/or flashing in different ways:

● The LED **flashes at uniform intervals** (of 2 s) if the dLAN adapter is connected to the **mains supply** but there is **no dLAN connection**.
● The LED **lights up** if the dLAN adapter **is ready to operate** and there is a **dLAN connection**.
● The LED **flashes quickly** if the encryption process (**pairing**) is being performed in the dLAN network.
● The LED **flashes at irregular intervals** (0.5 s/ 2 s) if the dLAN adapter is in **PowerSave mode**.

Network jacks

This is where you connect the dLAN adapter to a computer and/or other network device using commercially available network cables.

Encryption button

Data encryption at the press of a button; for information on how the encryption button functions, refer to Chapter **7 dLAN network** or the respective manual on our Internet site: www.devolo.com.

Integrated electrical socket

Plug the mains adapter provided with the dLAN TV SAT to IP Receiver into the socket on the dLAN adapter. The integrated mains filter eliminates any noise of connected devices and significantly improves data transmission in the home network.

Please note that all dLAN devices to be connected to your network are also connected to your household electrical wiring. A dLAN device switches into standby mode after a short time if no network device (such as a computer) connected to the network interface is switched on. In Standby mode, the dLAN device cannot be accessed via the power supply grid. As soon as the network device (e.g. computer) connected to the network interface is switched on again, your dLAN device can also be reached again via the electrical wiring.

3.6 dLAN TV SAT Multituner

3.6.1 Setup instructions

Positioning on level surface

If you place the dLAN TV SAT Multituner on a **level surface**, select a **stable base**.

Wall mounting

Make sure that no gas, water or power lines in the wall get damaged. There is a danger of electric shock!

Use **suitable fasteners** for the respective base to ensure a **reliable** and **secure** wall mounting.

3.6.2 Connecting the dLAN TV SAT Multituner

① Use one or two coaxial cables with an F-connector to connect the satellite system to the antenna input of the dLAN TV SAT Multituner.

② Plug the Euro 8 cable into the power jack of the dLAN TV SAT Multituner and the power plug into an available power outlet. Thanks to the integrated dLAN adapter, the dLAN TV SAT Multituner is connected directly to the dLAN network (see also **3.8 Connecting the dLAN TV SAT to IP Receiver to the dLAN and**

the mains supply). To secure your dLAN network, continue with your network configuration. For more information, refer to the chapter **7 dLAN network**.

3.7 Connect the dLAN TV SAT to IP Receiver to the TV set.

3.7.1 Connection via HDMI

Use the HDMI cable supplied to connect the dLAN TV SAT to IP Receiver to an HD TV set. Digital image and sound will be transferred **simultaneously** via the HDMI cable. The dLAN TV SAT to IP Receiver also supports HD-ready (1440 x 720) and full HD (1920 x 1080) video resolution.

3.7.2 Connection via SCART

Use a SCART cable to connect the dLAN TV SAT to IP Receiver to an analog TV set. Analog image and sound will be transferred **simultaneously** by the SCART cable.

3.8 Connecting the dLAN TV SAT to IP Receiver to the dLAN and the mains supply

① Connect the dLAN TV SAT to IP Receiver to a dLAN adapter using the included network cable.

> *The Ethernet plug (LAN) should only be connected to a matching Ethernet socket.*

② Insert the hollow plug on the power pack into the **12 V DC** power socket on the dLAN TV SAT to IP Receiver.

③ Insert the plug of the mains adapter into the socket on the dLAN adapter.

④ Then plug the dLAN adapter into a free wall socket.

⑤ The dLAN TV SAT to IP Receiver is now connected to the mains supply and dLAN network and can communicate with the dLAN TV SAT Multituner, which is connected via dLAN (see also **3.6.2 Connecting the dLAN TV SAT Multituner**). To secure your dLAN network, continue with your network configuration. For more information, refer to the chapter **7 dLAN network**.

> *Note that to use HbbTV and DLNA (media server), you will need another dLAN adapter for each to connect them to the dLAN network.*
> *(see **2.5 Sample applications**)*

> *To avoid electrical damage when connecting the dLAN TV SAT to IP Receiver, always use the power pack supplied. This is designed to supply electrical devices with 12 V DC. Make sure there is a separate power supply when connecting several devices.*

3.8.1 First use

① After successfully connecting all components of the dLAN TV SAT Starter Set, switch on the dLAN TV SAT to IP Receiver.

② Then switch on the TV set.

> *If you have connected the devices by HDMI, select the corresponding output to display the TV image.*

③ Press the button for the signal input on the TV set (usually at the side) or on the remote control. The

dLAN TV SAT to IP Receiver will take a few seconds to start.

④ The TV and radio software assistant will then start automatically. For more information, refer to the next chapter **5 TV and radio programme**.

3.9 Installing devolo software

3.9.1 Software for Windows

devolo **dLAN Cockpit** finds all reachable dLAN adapters in your dLAN network, displays information about these devices and encrypts your dLAN network individually.

To install the software, insert the included CD-ROM in the CD drive of your computer. This has to be connected to the dLAN network by an **additional dLAN adapter**.

If AutoPlay is active on your computer, the installation will start automatically. Otherwise, open the directory with the Windows Explorer by right-clicking on **Start** *(or the* **Windows logo***) and selecting* **Explorer** *from the context menu. Then start the installation wizard manually.*

During the installation process, you will be given the choice of installing all software components (**Standard installation**) or selecting individual ones (**Custom installation**).

To take full advantage of the functions of your device, we recommend installing all of the applications.

You will be asked for permission to transfer anonymous performance data related to your dLAN adapter to devolo. The data sent to devolo pertains only to the performance values of your dLAN devices. The data is anonymised and will be used exclusively for statistical purposes. By providing it, you can help us improve our products. You can find the installed software applications in the **Start ⇨ All Programs ⇨ devolo** program group.

3.9.2 Software for Mac (OS X)

The **software ⇨ mac** folder contains the dLAN configuration software.

3.9.3 Software for Linux (Ubuntu)

The **Software ⇨ Linux** folder contains the dLAN configuration software.

Fig. 8

3.10 Remote control

You can use the infrared remote control supplied to operate all the main functions of the TV and radio programme:

Getting started requires just two easy steps:

● Insert the two AAA batteries into the remote control in the correct position (follow the illustration in the battery compartment). Using the batteries incorrectly can damage the remote control.

● Adjust the devices so that the internal receiver of the dLAN TV SAT to IP Receiver is within optical signal range of the remote control.

> *Note that the remote control and receiver communicate using an infrared connection. Therefore, always position the receiver such that it is not being blocked or covered by any objects and can be seen from all desired positions in the room. When pressing keys on the remote control, always point it towards the receiver.*

> *To exclude the risk of fire as much as possible, batteries must never be subjected to excessive heat, such as direct sunlight, fire or the like.*

4 Tuner configuration

The dLAN TV SAT Multituner has a built-in configuration interface that can be called up using a standard web browser. All settings for operating the device can be modified here.

4.1 Calling up the built-in configuration interface

You can access the built-in online configuration interface for the dLAN TV SAT Multituner by using **dLAN Cockpit** software under **Start ▷ All Programs ▷ devolo ▷ dLAN Cockpit**, you can get to the device's configuration interface by clicking on the tab for the dLAN TV SAT Multituner.

Then the program determines the current IP address and starts the configuration in the web browser. You will come directly to the configuration interface.

4.2 Menu description

All menu functions are described in the corresponding interface as well as in the associated chapter in the manual. The sequence of the description in the manual follows the structure of the menu.

Click **Save** to save the settings of the respective area of the configuration interface.

Click **Back** to leave the respective area of the configuration interface.

Select the desired language in the language selection list.
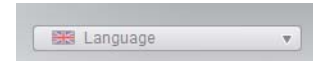
The four central areas of the configuration interface are displayed on the left edge. Click the button of an area to move directly into it.
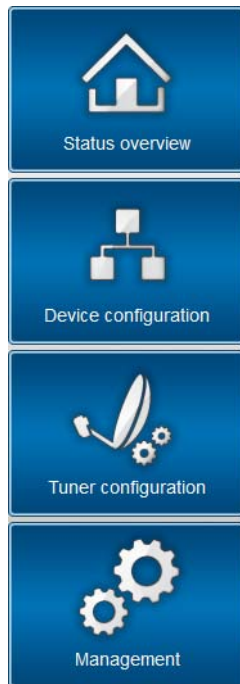
- You can change or modify the various device settings for network and dLAN under **Device configuration**.
- You can set the recording priority in the **Tuner configuration** area.
- The **Management** section is for resetting, securing and restoring your individual configurations. In addition, you can update the firmware of your dLAN TV SAT Multituner here.

- In the **Status overview** area, you get general information about the dLAN TV SAT Multituner and all connected dLAN and LAN devices.

4.3 Status overview

In the **Status overview** area you can track the status of the tuner and your connected dLAN and LAN devices.

4.3.1 dLAN status

To display all connected dLAN devices, click either the **house** icon or the **dLAN devices** arrow. Each connected dLAN device, regardless of whether it is connected locally or remotely in the network, is displayed with its MAC address, name and type. Clicking or tapping the **lock** icon brings you directly to the **dLAN settings** (see **4.4.2 dLAN settings**).

You can add additional dLAN devices to your dLAN network by tapping or clicking on **Add device**. To do this, enter the security ID for the respective dLAN adapter in the **Security ID** field and confirm with **Save**.

Before the networking procedure, note the security IDs of all dLAN adapters. This unique identifier of each dLAN device is located on the label on the housing. It consists of 4 x 4 letters separated by dashes (e.g. ANJR-KMOR-KSHT-QRUV). Ensure that all dLAN adapters are connected to the power grid and computers or other network components as appropriate.

4.3.2 Tuner status

Under **Tuner status** you can see which tuner is switched to a transponder. In addition, you can check the signal strength and signal quality.

Tuner status

| devolo | Switched to transponder | devolo | Available |

Signal strength

Signal quality

Signal strength

Signal quality

4.3.3 Ethernet status

The status and connection speed for the network jack is shown in this area.

Ethernet status

not connected

4.4 Device configuration

In the configuration area of the device you can modify settings for network and dLAN.

》 Network settings
You can set the IP address for the device and alter the settings for the automatic address assignment (DHCP).

》 dLAN® settings
You can protect your dLAN® network using a password.

4.4.1 Network settings

The dLAN TV SAT Multituner also communicates via the TCP/IP protocol as a component of your home network. The IP address required for this can either be entered manually or obtained **automatically** from a **DHCP server**.

The option **Use this to accept network settings automatically from a DHCP server** is enabled in the factory defaults.

If a DHCP server is already present in the network for giving out IP addresses, have the option **Use this to accept network settings automatically from a DHCP server** enabled so that the dLAN TV SAT Multituner automatically receives an address from it.

You can also assign a static IP address by making entries under **IP address** (e.g. '192.168.0.249') and **Netmask** (e.g. 255.255.255.0).

If you happen to forget the IP address of your dLAN TV SAT Multituner, proceed as described under **4.1 Calling up the built-in configuration interface**.

4.4.2 dLAN settings

In a dLAN network, all connected components must use the same password. The dLAN password can be defined in **dLAN Cockpit**, via the **dLAN encryption button** (see Chapter **4 dLAN network**) or at this spot in the configuration interface. You can choose to configure the password **locally** or for the **entire** ("Total") network.

If you only change the password for a **Local device**, you exclude it from your **Total** dLAN **network**.

The dLAN default password is **HomePlugAV.**

dLAN® settings

dLAN® password

Enter the dLAN® network password needed for your device to access your dLAN® network. All devices that are part of a dLAN® network must use the same dLAN® network password.

Define password for: ○ Local device
○ Total network

Password: [   ] 0 Characters
Repeat password: [   ] 0 Characters

4.5 Tuner configuration

If you have occupied both satellite connections on the dLAN TV SAT Multituner and a recording initiated on the dLAN TV Sat to IP Receiver is to have priority over a live stream (data transmission via Internet), enable the option **A recording programmed via the set-top box has priority over a normal stream**.

Tuner configuration

Recordings have priority

☑ A recording programmed via the set-top box has priority over a normal stream.

If you have enabled the above option, your recording will definitely be made, even if two live streams are running simultaneously, for example, on a tablet and on the receiver. In this case, a live stream is automatically cancelled. There will be no message concerning this.

4.6 Management

In the **Management** area you can reset the current configuration to the factory defaults, save it to your computer as a file or restore it from there and update the firmware of the dLAN TV SAT Multituner.

4.6.1 Resetting the configuration

With the **Management ▷ Reset configuration** command, the dLAN TV SAT Multituner is reset to the original factory defaults. In doing so, you lose your personal settings.

The last-assigned dLAN password for the dLAN TV SAT Multituner is also reset. To re-secure your dLAN network individually, read further at **4.3.3 Ethernet status**.

Reset configuration

If you continue, all device settings will be deleted and the factory default settings will be loaded. This will clear all settings that you have changed.

Please be aware that resetting the device to its factory settings also resets the dLAN® password. This may make devices on your dLAN® network inaccessible. If this occurs, please use the dLAN® Configuration Wizard to reconfigure your dLAN® network.

Reset configuration

For backup purposes, all active configuration settings can be transmitted to your computer, stored there as a file and reloaded into the dLAN TV SAT Multituner. In this way, you can for example generate configurations for different network environments, with which you can set up the device quickly and easily.

4.6.2 Saving a configuration file

To save the active configuration to your computer as a file, select the corresponding button in the area **Management** ⟩ **Save configuration file**. Then enter a storage location and name for the settings file.

Save configuration file

You can store the configuration of the device in a file on your computer and restore it later when required.

Save configuration file
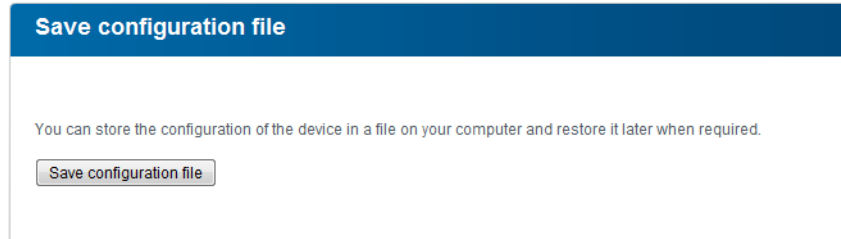
4.6.3 Restoring a configuration

An existing configuration file can be sent to the dLAN TV SAT Multituner in the area **Management ▷ Restore device configuration** and enabled there. Select a suitable file via the **Browse…** button and

start the operation by clicking the **Restore device configuration** button.

Restore device configuration

Please select the configuration file to be loaded onto the device.

File name: [   ] Browse...

Restore device configuration

4.6.4 Update firmware

The firmware of the dLAN TV SAT Multituner includes the software for operating the device. If necessary, de-volo offers new versions on the Internet as a file download, for example to modify existing functions.

Update Firmware

Current firmware version: 1 (2013-01-04)

Please select the firmware file to be loaded onto the device.

File name: [   ] [Browse...]

[Update Firmware]

① To bring the firmware up to the latest version, first go to the devolo website, www.devolo.com, and download the appropriate file for the dLAN TV SAT Multituner to your computer.

② Then in the configuration dialogue, go to the area **Management** ▷ **Update Firmware**. Click **Browse…** and select the downloaded file.

③ Then start the update procedure with the **Update Firmware** button. After a successful update, the dLAN TV SAT Multituner restarts automatically.

Ensure that the update procedure is not interrupted. To do so, it is best to connect your computer to the dLAN TV SAT Multituner via dLAN or LAN rather than WLAN.

5 TV and radio programme

The dLAN TV SAT to IP Receiver allows you to receive digital satellite (DVB-S) TV and radio programmes. Both high-resolution and normal digital TV can be received.

The TV image can be output via HDMI (connection to an HDTV-capable TV set) or SCART cables.

5.1 First Time installation

An installation assistant will take you through the necessary settings in just a few steps.

You mainly use the following buttons on the remote control to proceed through the **First Time installation** dialogue:

● **OK**: to confirm a value or active control button
● **Arrow keys**: to move between different selection windows, options or buttons.

① When you switch the device on for the first time, the installation assistant starts automatically with the language selection.

Select the desired language and confirm with **OK**.

② You are then taken automatically to country and display settings.

● **Country**
● **Time zone**
● **TV type**: Select "4:3" if you have a conventional TV set or "16:9" if you have a broadband TV set connected.
● **Display format**:
  ○ **Auto**: automatic scaling of the screen format to the previously set display format.
  ○ **Pillar box**: if you display "4:3" programme content on a "16:9" TV set or vice versa, a black border may appear on both sides of the screen.

○ **Zoom**: Zoom is used to select what to do with the black frames and how a "4:3" image should be adapted to suit a "16:9" screen and vice versa. Existing bars will be deleted and the image will be scaled to the screen.

● **HD output resolution**: this is where you select the resolution.

After you have confirmed your settings with **OK,** the **Antenna configuration** appears.

③ Here you select the dLAN TV SAT Multituner. You use the **blue button** on the remote control to search for all dLAN TV SAT Multituner connections in the network.
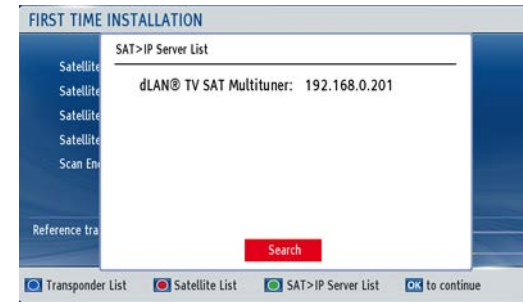
④ The dLAN TV SAT to IP Receiver loads the satellite and transponder list. Select a satellite.

⑤ You end installation by scanning for channels. The installation assistant offers you different options for channel scanning:

● **Load pre-programmed list**: load the channel list prepared by devolo.

● **Start regular search**: the selected satellite is scanned.

● **Search Astra service list**: the channel list information is downloaded from the satellite and the channels sorted by LCN data.

You cannot move the channels using this option.

This scan process will take a few minutes. You can follow the scan progress on the display bar. The scan results are then displayed.

5.2 Menu structure and operation

All settings are selected via the menu in the dLAN TV SAT to IP Receiver using the remote control:

● The layout of the remote control buttons and keys is explained clearly in Section **5.3 The devolo remote control**.

● You press the **MENU** button to access the main menu.

● Use the **arrow keys** to switch between selection options or control buttons.

● Press **OK** to confirm a value or activate a control button.

● Pressing **MENU/BACK** again takes you back to the previous menu or quits the Menu. The software returns to the TV display.

● All the functions or options available for the current menu are explained at the bottom of the screen.

The section below provides a summary of the TV and radio functions. When you switch your receiver on, the software starts with the last selected TV or radio programme.

5.2.1 Channel list

Use the arrow buttons to select the **Channel List** menu and confirm with **OK**. Press **Exit** to return to the selected programme. To call up the channel list for the current programme, press **OK**.

Select programme directly

You can also select a particular TV or radio programme in your current channel list directly using the arrow keys. Use the **Red** or **Green** buttons to scroll one page up or down. The programme place number and the number of the selected channel are displayed in the channel list.

> *Please note that the place number for a particular programme may be different in different programme lists. You can sort the order to suit your own preferences.*

Channel lock

Channel lock (e.g., as parental settings) allows you to make certain channels accessible only with a PIN code.

> **When the device is delivered, the child safety code (PIN) is** 0000. **This PIN is set and changed under** Settings ▷ Configuration ▷ PIN Settings**.**

Highlight the channel you want to lock and select the **Lock** option using the arrow keys. After you confirm

with **OK**, a window appears for you to enter the code (PIN).

Enter the PIN code using the number keys on the remote control. A lock symbol (lock) appears next to the selected channel. Follow the same procedure to unlock the channel.

Creating a favourites list

You can add your favourite programmes in a favourites list. You call up the favourites list either by selecting the **Favourites** option and confirming with **OK**, or by

pressing the **FAV** button on the remote control. You hide the list by pressing **FAV** again.

● **Adding a channel in the favourites list**
  ○ Using the appropriate arrow key, highlight the channel you want to add to the favourites list, and confirm with **OK**. The favourite symbol shows that a channel has been added in the list.

● **Removing channels from the favourites list**
  ○ Using the appropriate arrow key, highlight the channel you want to remove from the favourites list, and confirm with **OK**.

If you press **OK** *again, the channel is added again in the favourites list.*

Moving channels

Using the arrow keys, highlight the channel you want to move. Select the **Move** control button at the bottom of the screen and confirm with **OK**.

Enter the number of the desired channel and confirm with **OK**.

Deleting channels

Using the arrow keys, highlight the channel you want to delete. Select the **Delete** button at the bottom of the screen and confirm with **OK**.

Renaming channels

Using the arrow keys, highlight the channel you want to rename. Select the **Name** button at the bottom of the screen and confirm with **OK**.

You can use the **left/right arrow keys** *to move the entry point to the next or previous character. To change the current character, use the* **UP/DOWN** *keys. For example, you press the* **DOWN key** *to change the letter 'b' to an 'a' and press the* **UP key** *to change it to a 'c'. By pressing the '0...9' keys, you can replace the highlighted character with the one printed above the key.*

Channel list filter

You can activate a filter function for each of the options in Section **5.2.1 Channel list** by pressing **P<P**.

Please note: If the filter function is active, *only the* filtered channels are *displayed. To view* all channels *you first have to de-activate the* filter function. *For more in-formation, refer to Chapter* Channel lock.

5.3 Recording

A USB device or external USB drive must be connected before you can re-cord programmes.

There are four different recording options:

● Instant recording of current programme
● Recording with EPG
● Time-shift recording
● Timer recording

5.3.1 Instant recording

Recording is possible only with the dLAN TV SAT to IP Receiver!

To record the current programme directly, call up the **Record** menu by pressing the record button (**red dot)** on the remote control. The Record OSD appears briefly

and the current programme is recorded. The display on the dLAN TV SAT to IP Receiver indicates successful re-cording with **REC**. Press **STOP** to stop instant record-ing.

Recording safety

The dLAN TV SAT Multituner has a function for **re-cording safety** which, when activated, ensures that desired recordings are successfully carried out, even if both satellite connections are occupied at the time of recording. The following application examples presup-pose that the **recording safety is enabled** (see **4.3.3 Ethernet status**):

Simple to operate

You have **one** dLAN TV SAT to IP Receiver and **one** dLAN TV SAT Multituner (or another twin tuner): You **can watch** a programme and **simultaneously record** another programme on another channel.

> *This scenario does not allow any other stream on your tablet or smartphone via the dLAN TV SAT App, since both connections are already occupied by watching and recording on the receiver.*

Double operation

You have **two** dLAN TV SAT to IP Receivers and **one** dLAN TV SAT Multituner (or another twin tuner):

● Via dLAN TV SAT to IP Receiver **1** you are **watching** a programme and are **simultaneously recording** another programme on another channel.
● Via dLAN TV SAT to IP Receiver **2** you **also start** a **recording**, which cancels the programme from dLAN TV SAT to IP Receiver **1** in progress, so that both recordings can be carried out successfully.

5.3.2 Recording with EPG

An electronic programme guide **(EPG)** shows programme information, so you can quickly get an idea of programmes and their content. You can also directly programme the recording of current or later broadcasts:

● **CH Λ**: shows the programmes from the previous day.

> *It is not possible to view programme information from several days ago. You can only scroll back one day.*

● **CH V**: shows the programmes for the next day.
● **YELLOW (Zoom) button**: reduces/enlarges the info boxes.
● **BLUE button (Channel scan)**: displays the various channel scan options.
● **OK**: opens the **Event options** menu and shows current programmes, or schedules reminders/recording for programmes.
● **Info**: shows programme information.
● **SUBT. (Select genre)**: Option for selecting the genre.
● **LEFT double arrow button**: goes back one page
● **RIGHT double arrow button**: goes forwards one page

● **Text**: browses the programme guide.
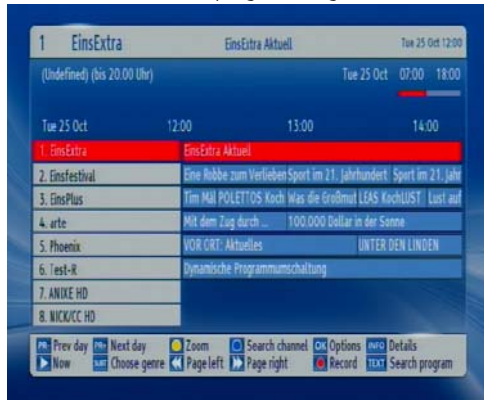
5.3.3 Timeshift recording

In Timeshift mode, the current programme is stopped and is simultaneously stored on the attached USB drive.
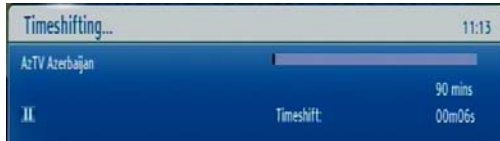
● Press **Pause** to switch to Timeshift mode.
● Press **Playback** to continue viewing the programme from the time of the break. Playback is at normal playback speed x1. The time difference between the real time and timeshift programme is shown on the info line.
● Use the **LEFT/RIGHT arrow keys** to scroll forwards or back during the timeshift playback.
● Press **Stop** to end Timeshift mode.

> *The maximum length of timeshift recording depends on the capacity of the connected USB drive and your setting (max. 1.5 hours) in the* Settings ▷ Recording settings ▷ Max. timeshift time *menu (see* 5.4.4 Recording configuration*).*

5.3.4 Timer recording

The **Timer** function is used to record forthcoming programmes. Press **Timer** on the remote control or select

Menu ⊳ Timer and confirm with **OK** to call up the corresponding menu.
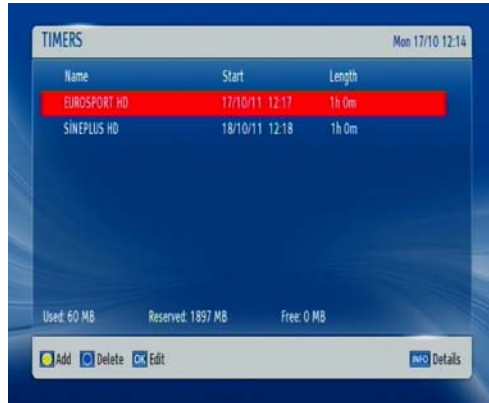
Press **YELLOW** to add a new timer. The **Add Timer** window is displayed.

● **Channel**: you use the **LEFT/RIGHT arrow keys** to navigate through the TV or radio list.

● **Recording type**: the recording type is displayed.

● **Date**: the starting date is entered using the **LEFT/RIGHT arrow keys** and the numeric pad.

● **Start**: the starting time is entered using the **LEFT/RIGHT arrow keys** and the numeric pad.

● **End**: the end time is entered using the **LEFT/RIGHT arrow keys** and the numeric pad.

● **Duration**: duration between starting and end times.

● **Repeat**: you can set the Timer to repeat once, daily or weekly.

● **Playback**: you can use the parental control settings or select Allow or Forbid.

● **Change/Delete**: all changes can be allowed or locked for other users.

● You use the **GREEN button** to store or the **RED** button to terminate the process. **OK** is used to edit the list and the **BLUE** button to delete it.

5.3.5 Switching during live recording

Programmes **highlighted** in the programme list are **inside** a **transponder**, those with a **symbol** are **outside** it.

5.4 Setup

You will find the following parameters under **Setup**:
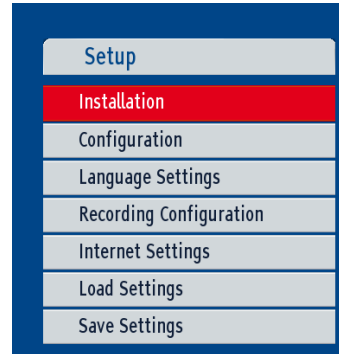
5.4.1 Installation

Under **Installation** you select settings to the dLAN TV SAT to IP Receiver.
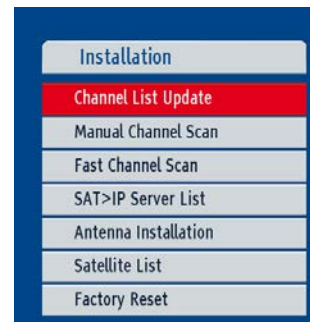
Channel List Update

If you have selected the **Channel List Update** during the **First Time installation**, you can update the channel list using this setting.

Manual channel scan

This is where you manually enter all the details of the desired channel.

- You select the satellite name from the selection list in the **Satellite** field.
- You enter the frequency in the **Frequency** field using number keys 0 to 9.
- You select the polarisation from the selection list in the **Polarisation** field.
- You enter the symbol rate in the **Symbol rate** field using number keys 0 to 9.

- You select the network number from the selection list in the **Network search** field.
- **Channel** scanning:
  - **Yes**: after one transponder has been set, the parameters of other transponders are retrieved from the NIT table (**N**etwork **I**nformation **T**able) and the other transponders set.

*Once the transponder frequency has been entered, the signal level and quality are displayed on the bars at the bottom of the screen. The **Signal quality** bar shows the reception quality. The **Signal level** bar shows the strength of the satellite signal.*

You confirm all entries with **OK**.

Fast Channel Scan

You select **Fast Channel Scan** in the **Installation** menu and confirm with **OK.** In this menu, you select the satellites to be scanned.

You can set the satellite parameters to suit using the navigation buttons:

● Select the **GREEN** button to scan the **selected satellite**.
● Select the **BLUE** button to display the **Transponder list**.
● Press **OK** to scan all satellites.

5.4.2 Configuration

Go to **Settings ◊ Configuration** to select the settings for the dLAN TV SAT to IP Receiver.

The **Country** displays the selection of countries found during the initial set-up.

The **Output settings** allows you to select different options for displaying the image on your TV set.

Note that different TV sets respond differently to changed display parameters from the dLAN TV SAT to IP Receiver and may automatically change your own display mode. In this case, refer to the manual for your TV set. These output settings were applied when you initially set up the device.

● **TV type**: Select "4:3" if you have a conventional TV set or "16:9" if you have a broadband TV set connected.

● **Display format**:

  ○ **Auto**: automatic scaling of the display format to the previously set format.

  ○ **Pillar box**: If you display "4:3" programme content on a "16:9" TV set or vice versa, a black border may appear on both sides of the screen.

  ○ **Zoom**: Zoom is used to select what to do with the black frames and how a "4:3" image should be adapted to suit a "16:9" screen and vice versa. This setting can also be directly selected using the **Videotext (yellow)** key on the remote control.

  ○ **TV output (SCART)**: The receiver can output video signals in RGB and CVBS format via the TV SCART output. Although the RGB format provides the best display quality, not all sets can process this signal. Use the **LEFT/RIGHT** arrow keys to select RGB or CVBS.

● **Prefer Dolby Digital**: Use the **UP/DOWN** arrow keys to select this option, and press the **LEFT/RIGHT** arrow keys to change the setting to **Yes** or **No**.

● **SPDIF Output**:

  ○ LPCM—the dLAN TV SAT to IP Receiver will output stereo PCM

  ○ Dolby Digital—if Dolby Digital audio is available and selected, the dLAN TV SAT to IP Receiver will output Dolby Digital.

● **HDMI Audio Output**:

  ○ LPCM—the dLAN TV SAT to IP Receiver will output stereo PCM.

  ○ Dolby Digital—if Dolby Digital/Dolby Digital+ audio is available and selected, the dLAN TV SAT to IP Receiver will output Dolby Digital/Dolby Digital+.

This function is only available if the optical audio output is used.

● The **Software Version** field displays the version number.

● The **PIN Settings** (parental settings) allows you to make then accessible only by using a PIN code. Select the **PIN Settings** field and confirm with **OK**. If a code (PIN) has been assigned, it is now requested and the following sub-menu opened:

○ **Disabled**: all menus are accessible.

○ **All menus**: all menus are only accessible with a password.

○ **Installation**: the installation menu is locked. The user cannot add channels.

When the device is supplied, the child safety code (PIN) is 0000*.*

Select the **Time settings** field and confirm with **OK**. Select the time zone from the following sub-menu.
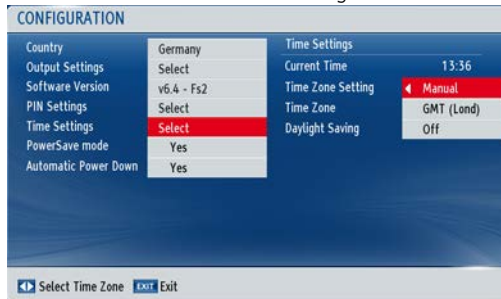
First select the **PowerSave mode** field. You then activate power-saving mode by selecting **Yes** and disable it with **No**.

The dLAN TV SAT to IP Receiver complies with current EU power-consumer directives and includes a stand-by mode for lower power consumption (power-saving mode). Some seconds after you switch off the dLAN TV SAT to IP Receiver, device changes by default to power-saving mode and the display goes blank. If power-saving mode is disabled, the time is shown on the display when the dLAN TV SAT to IP Receiver is switched off. To save on energy costs, we recommend leaving power-saving mode active.

To activate **Automatic Power Down**, select the field and choose **Yes**. The device will switch off automatically after 4 seconds if it has not been used during this time.

5.4.3 Language settings

The language selected is used for the menus and the sound track on TV programmes. Select **Settings** ▷ **Language settings**.

- ● **Menu**: displays the currently set menu language.
- ● **Audio**: displays the desired audio language.
- ● **Subtitle**: displays the desired subtitle language.
- ● **Guide**: displays the desired EPG language.

5.4.4 Recording configuration

A USB drive must be connected before the recording configuration menu can be displayed.

To set the recording parameters, go to **Settings** ▷ **Recording configuration**. The following menu is displayed for configuring recording.

- ● Auto discard

If the USB drive is full and a recording timer has been programmed, the satellite receiver automatically deletes older recordings in line with this setting. The following options can be selected:

- ○ **Off**: the satellite receiver does not delete recordings, and the programmed recording timer is not activated.
- ○ **Oldest**: recordings are deleted starting with the oldest, to make room for the programmed timer.

○ **Longest**: recordings are deleted starting with the longest, to make room for the programmed timer.

○ **Shortest**: recordings are deleted starting with the shortest, to make room for the programmed timer.

○ **Unplayed:** If this option is set to **Excluded**, **recordings that have not been played back will NOT be deleted**. If it is set to **Included** these recordings will also be deleted.

● **Format drive:** If you want to delete all files on the attached USB drive, you can use the **Format disk** option. If you have problems with the USB drive, you can try to fix these by reformatting the disk. Normal operation of the USB drive can generally be restored in most cases. However, any data stored on the USB drive will be lost. Press **OK** when the **Format drive** option is highlighted. A menu appears and asks for a PIN code. If you have not changed it, the code will be the default **0000**. Start formatting with **Yes** and confirm with **OK**.

● **Max. Timeshift**: The maximum length of timeshift recording depends on the capacity of the connected USB drive and your setting (max. 1.5 hours).

Before you format the USB drive, be sure to make a backup of any important recordings.

5.4.5 Internet settings

Under Internet settings you select networks settings. (see also **2.3 Sample applications**)

dLAN TV SAT to IP Receiver and HbbTV via dLAN

HbbTV is a modern kind of video text from the Internet, sent to a TV set. You will need an **existing Internet connection** which (as shown in figure 3) is connected via **another dLAN AV adapter** to the dLAN home network and therefore to the dLAN TV SAT to IP Receiver and the tuner.

It is operated using the coloured buttons on the remote control (**YELLOW/GREEN/BLUE**). The functions available under these buttons depend on the particular transmitter but most are displayed on the screen. Currently, not all countries and TV stations offer HbbTV.

The Internet settings contain the IP address, the subnet mask and the standard gateway for the dLAN TV SAT to IP Receiver. The IP address may be either static or dynamic. The **Static** option requires all entries to be made manually.

If the IP address is not known or if no specific address will be used, select the **Dynamic** option. In this case, the IP address and the other data will be sourced automatically from a DHCP server.

When the device is supplied, *the* dynamic IP address is *set.*

Use the **GREEN** button to test the Internet velocity.

5.4.6 Load settings

This function allows you to reset the dLAN TV SAT to IP Receiver to its previously stored settings. All current settings are lost when the device is reset.

5.4.7 Save settings

This function allows you to save your own settings to the dLAN TV SAT to IP Receiver. When you confirm with **OK**, all previous entries are overwritten.

5.5 Recordings

A USB drive must be connected to the dLAN TV SAT to IP Receiver before the recordings library can appear.

Select **Recordings** in the menu and confirm with **OK**. The available recordings are displayed and managed using the menu at the bottom of the screen:

● **Blue (delete)**: delete the selected recording.

● **P<P (edit)**: edit selected recording.

● **TEXT (Sort)**: change order of recordings. You can choose from a wide range of sorting options.

● **OK (play options)**: activates the **Play Options** menu.

  ○ **Play from start**: plays the recording back from the start.

  ○ **Play from last stop**: continues playback from the last stop.

  ○ **Play from offset**: specifies a specific playback point.

  It is not possible to view the main menu and menu options during playback.

● **Manage chapters**: management of chapter highlights

  ○ **-> (continue)**: continue recording.

  ○ **INFO**: displays the expanded short description.

5.6 Media browser

Select **Media Browser** in the menu and confirm with **OK**. The menu options are displayed:
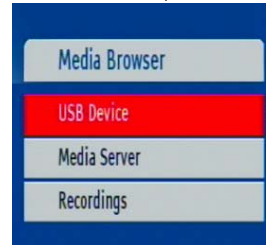
5.6.1 USB device

You can play music, images and video files from a USB device.

If the USB device is not recognised after switching on or off, or after initial set-up, remove it and switch the dLAN TV SAT to IP Receiver off and on again. Then reinsert the USB device.

Playing videos

Select **Media Browser** ⟡ **USB Device** ⟡ **Videos**; all available videos will be displayed.

- ● **0...9 (jump)**: jumps to the file selected using the number keys.
- ● **OK**: plays the current file
- ● **BLUE**: changes the medium type.
- ● **Playback** button: play all media files in the folder, starting with the selected file.
- ● **Pause** button: pause the file playback.
- ● **Stop** button: stop file playback.
- ● **Back** button: start rewind.
- ● **Forwards** button: start fast forward.
- ● **OPT**: set subtitles/audio.
- ● **GREEN**: jump to selected time.
- ● **YELLOW**: set subtitle time correction.
- ● **RED**: set subtitle position.

- ● **BLUE**: set font size of subtitle.
- ● **EXIT**: end video.
- ● **MENU**: return to previous menu.

> *Video formats avi, mpg and mkv are supported.*

Displaying images

Select **Media browser** ⟡ **USB device** ⟡ **Photos**; all available photo files will be displayed.

- ● **0...9 (jump)**: jump to file selected using number keys.
- ● **OK**: display selected photo full size
- ● **Playback** button: start slideshow with all files in folder
  - ○ **Pause** button: pause slideshow.
  - ○ **Stop** button: stop file playback.
  - ○ **GREEN**: activate endless or random playback.
  - ○ **FORWARD/BACK** arrow keys: jump to previous or next file in slideshow.
  - ○ **UP/DOWN** arrow keys: turn photo.
  - ○ **AUDIO**: sort images by date
  - ○ **INFO (help)**: activate function bar.

> *Use **EXIT** to quit the menu and return to the file list.*

- **OPT**: sort files by date
- **YELLOW**: change display style.
- **BLUE**: change medium type.

The JPG image format is supported.

Playing MP3 files

Select **Media Browser** ⋔ **USB Device** ⋔ **Music**; all available music files will be displayed.

- **0...9 (jump)**: jump to file selected using number keys.
- **OK**: play selected file
- **Stop button**: stop file playback.
- **Playback button**: play back all media files in folder, starting with selected file.
- **Pause button**: pause file playback.
- **AUDIO:** sort files.
- **INFO**: activate endless/random playback.
- **BLUE**: change medium type.
- **FORWARD/BACK arrow keys**: jump to previous or next file and plays it back.

Displaying all files

Select **Media Browser** ⋔ **USB Device** ⋔ **All**; all files will be displayed.

5.6.2 Media server (DLNA)

DLNA (Digital Living Network Alliance) is a standard which simplifies the use of digital electronic equipment and makes it easy for them to be used with home networks. For more information, go to www.dlna.org.

If a DLNA media server (e.g., PC with Windows 7 operating system, a router or NAS) is also connected by dLAN to your home network, you can view photos or videos on your TV and listen to music files stored on this DLNA media server (see **2.3 Sample applications**).

In the menu, select **Media Browser** ⋔ **Media Server** and confirm with **OK**.

5.6.3 Conditional access

You can also receive encrypted pay TV programmes with the dLAN TV SAT to IP Receiver if a CI module from a pay-TV provider is inserted in the card slot.

Select **Conditional access** and confirm with **OK**.

To avoid damage to the module and the slot on the dLAN TV SAT to IP Receiver, follow the installation tips below for the CI module:

If the module is inserted or removed, the dLAN TV SAT to IP Receiver MUST

be switched off or disconnected from the mains supply.

① Switch the dLAN TV SAT to IP Receiver off and remove the plug from the socket.

② Without using force, insert the CI module correctly and facing the right way.

③ Connect the dLAN TV SAT to IP Receiver again to the mains supply and switch it on.

Activation of the module will take a few moments.

It may be necessary to set up some CI modules using the **Conditional Access** menu. To do so, open the **Conditional Access** menu and confirm with **OK.**

6 dLAN TV SAT App

With the free dLAN TV SAT App from devolo, you can also receive unencrypted satellite television on your smartphone or tablet. The prerequisite for this is an **existing Wi-Fi connection**, which is connected to the dLAN network via **another dLAN adapter**.

6.1 System requirements

devolo dLAN TV SAT App

● **Compatible** with these **Apple** devices: iPhone 3GS, iPhone 4, iPhone 4S, iPhone 5, iPod touch (3rd Generation), iPod touch (4th Generation), iPod touch (5th Generation), iPad and requires iOS Version 5.1 or newer

● **Compatible** with all **Android** devices having a dual core processor, NEON support (e.g. Tegra3), USB host function and Android 4.0.3 ("Ice Cream Sandwich") or newer

● **Compatible** with **Windows 8**
(available as of Q3/2013)

6.2 Installing dLAN TV SAT App

① After you have hooked up the dLAN TV SAT Multituner and connected it to the Wi-Fi Internet access device using an additional dLAN adapter, download the dLAN TV SAT App from the corresponding store to your smartphone or tablet.

> *The Wi-Fi Internet connection has to be connected to the dLAN network via an additional dLAN adapter.*

> *You can find the devolo app most quickly by clicking on the magnifying glass in the store and searching directly for* **devolo dLAN TV SAT App***.*

② The app link to **dLAN TV SAT App** appears on the screen. Tapping it takes you to the TV menu.

6.3 Menu

The screen surface of the dLAN TV SAT App automatically adjusts to the orientation (horizontal/vertical) of the smartphone or tablet.

You can page through the menu and respective view or "surf" through the programme list by **swiping** *across the screen (left/right or up/down).*

The dLAN TV SAT App includes common TV programme functions which are briefly illustrated in the following.

6.3.1 Live television

The current programme list is displayed under **Live television**. Select a programme by tapping it. The programme screen contains information about **timeshifting** and **EPG**, which can be hidden manually by tapping or hides automatically after a short time.

If you press and hold the **horizontal bar** displayed at the right edge of the screen, you can modify the programme sequence by drag & drop.

The **bar graph** at the right edge of the screen shows the transmission quality of the **Wi-Fi** connection.

By tapping the **gear** at the upper edge of the screen you come to the **Image** and **Audio** setting; the **volume control** is controlled by the megaphone.

6.3.2 Settings

This is where country and satellite specifications are made. To select a channel you can use the preconfigured **Astra** list, which automatically searches for and lists all currently available channels if you tap Automatic detection.

By tapping **Search for selected satellites** you can also start a satellite search manually.

By tapping **Search for channels** you can also start a channel search manually.

Under **Timeshifting buffer**, specify the desired volume for timeshifting recordings.

By tapping **Play audio in the background**, the audio continues playing with the screen switched off.

At the bottom edge of the screen you see the **Wi-Fi access point** through which your smartphone or tablet is currently connected.

Under **Devices** you find information about the connected tuner.

7 dLAN network

Before you can use a dLAN device in your dLAN network, first you have to connect it to other dLAN AV devices as a home network. Two specific pieces of information are especially important for this:

● Shared use of a dLAN password results in a delimited dLAN network.
● Shared use of the dLAN password serves as access control to the dLAN network as well as the encryption, and thereby the interception protection, of the transmitted data.

The dLAN password can be set automatically using the **encryption button** (see **7.1 dLAN network encryption at the touch of a button**) or manually using the **dLAN Cockpit** program (see **7.2 dLAN Cockpit**).

7.1 dLAN network encryption at the touch of a button

To encrypt a dLAN network, in which all associated devices are equipped with an encryption button, simply press the encryption button located on the device. Pressing this button will encrypt your dLAN network with a randomly generated password.

The following section contains exact instructions on the basis of possible network scenarios:

Adapters cannot be configured while in Standby mode.

Encrypting a new dLAN network with a two dLAN adapters

Once both adapters have been successfully connected, press each encryption button **for approx. one second within two minutes of one another**.

That's it! Your dLAN network is now protected against unauthorised access.
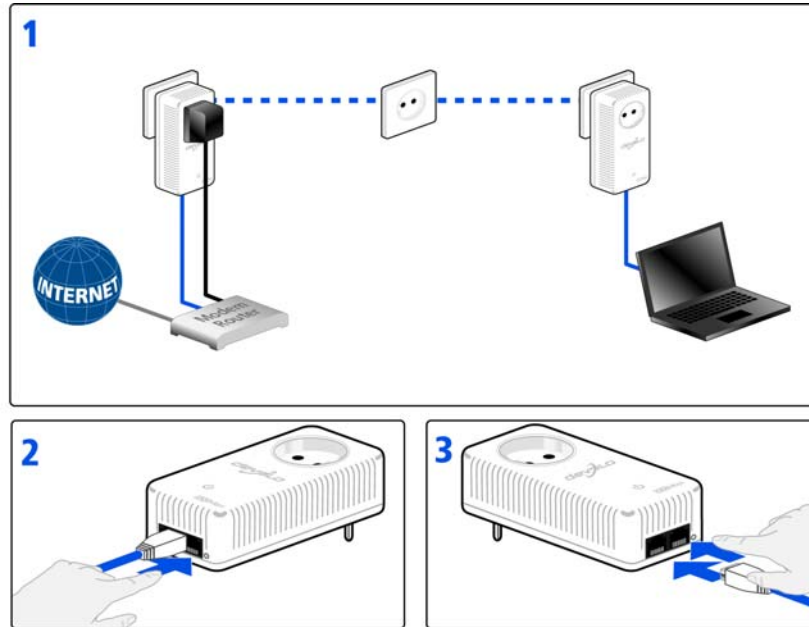
Fig. 9

Expanding an existing dLAN network by adding a new dLAN adapter

If you have already secured your existing dLAN network using the encryption button, use the same method to integrate further adapters. Once you have successfully connected the new dLAN adapter, first press the encryption button (approx. **1 second**) of one of your network's existing adapters, then press the encryption button (approx. **1 second**) of your new dLAN adapter **within two minutes**.

That's it! The new dLAN adapter is now integrated in your network. To integrate additional adapters in your network, repeat the above steps.
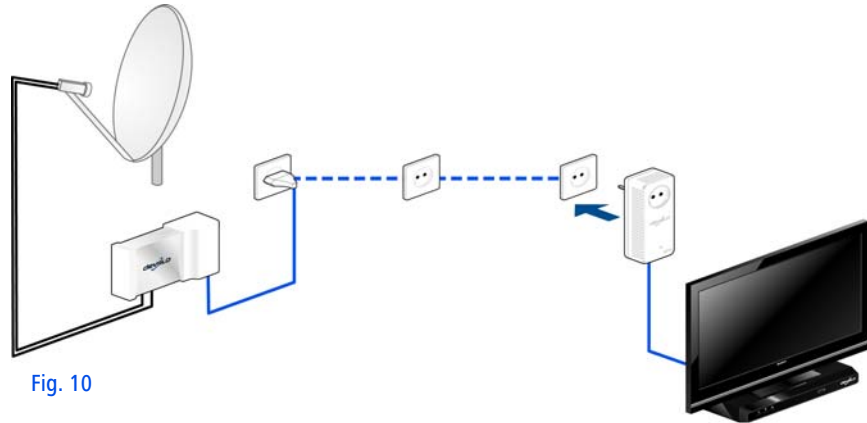
Fig. 10

Removing a dLAN adapter from a network

To remove a dLAN adapter from an existing network, press its encryption button for **at least ten seconds**. The device will be assigned a new randomly generated password and will thus no longer be able to access the network. To integrate the device into a different dLAN network, follow the steps described above, depending on whether you are setting up a new network or adding the adapter to an existing one.
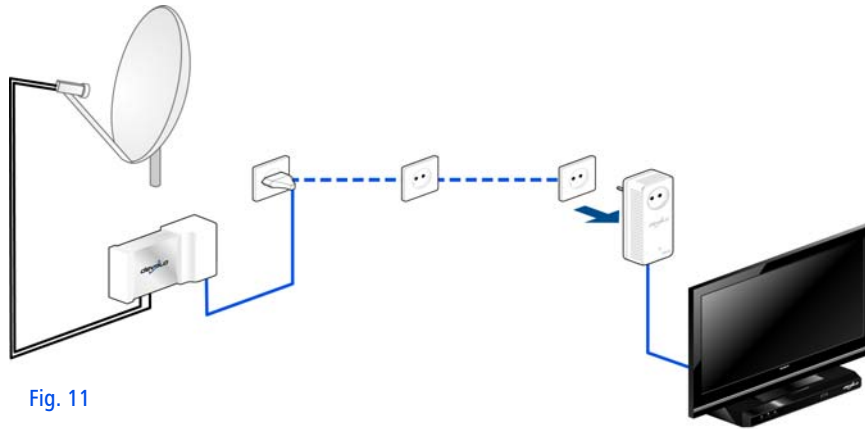
Fig. 11

7.2 dLAN Cockpit

devolo **dLAN Cockpit** is a monitoring and encryption program that detects all reachable dLAN devices in your home network and combines them in a secure network. Due to its logical graphic design, the dLAN Cockpit is easy and intuitive to operate. After installing the devolo software, it can be found in the **Start** ⬧ **Programs** ⬧ **devolo** program group.

After starting the dLAN Cockpit, all reachable dLAN devices in your home network will appear. This may take a moment.

All adapters found in the network appear with as adapter icon with a corresponding product name. The adapter in the middle of the dLAN network identified with the symbol shown here symbolises your locally connected device. If you have multiple dLAN devices connected locally, you can jump back and forth between them. Clicking an adapter icon with the mouse enables the corresponding dLAN device and highlights it.

The coloured connecting lines of the adapters illustrate the current transmission quality:

- **Green**: the network connection is suitable for HD video streaming.
- **Orange**: the network connection is suitable for SD video streaming and online gaming.
- **Red**: the network connection is suitable for simple data transfer and Internet access.

If data transmission from one device to another is actually taking place, the data rate is displayed on the respectively highlighted adapter.

Settings and functions

You can configure settings for the respectively highlighted device or for the network

- via the buttons at the bottom edge of the screen
- or via tabs arranged at the side of each adapter.

You can always use the **Refresh** button to display the current status of devices that have been found (if this hasn't happened automatically).

By means of the **Options** button or the corresponding tabs of the respective adapter, you can learn device information such as the firmware version used and the individual MAC address.

Options are given like assigning an **additional name**, resetting the respective device to the **factory default settings** or **removing** a **device** from the existing dLAN network.

The above-mentioned setting options vary depending on the function and features of your device.

You can also specify whether information on the performance of your dLAN adapters will be transferred to devolo.

The data sent to devolo pertains only to the performance values of your dLAN devices. The data is anonymised and will be used exclusively for statistical purposes. By providing it, you can help us improve our products.

The **Troubleshooting Guide** includes installation instructions and information about how to connect your devices optimally with one another.

7.2.1 Encrypting a network with dLAN Cockpit

If you use dLAN devices **without an encryption button**, data can be encrypted only via **dLAN Cockpit**.

Before the networking procedure, note the security IDs of all dLAN adapters. This unique identifier of each dLAN device is located on the label on the housing. It consists of 4 x 4 letters separated by dashes (e.g. ANJR-KMOR-KSHT-QRUV). Ensure that all dLAN adapters are connected to the power grid and computers or other network components as appropriate.

Scan for local adapter

After dLAN Cockpit is started, it searches for the dLAN adapter connected directly to your computer first.

Adding an adapter

Add all the dLAN devices you want to your dLAN network by selecting the **Add adapter** button. You will need the **16**-character security IDs of the adapters from the label on the housing. Enter it now in the **Security ID** field and confirm with **OK**. If a security ID is correct and the device can be reached in the dLAN network, it will be added to your network of configured adapters and also displayed in the program.

Entering a network password

After you have added all the dLAN devices you want to your dLAN network, select the **Change password** button to assign a shared network password that will apply for all registered adapters in your personal home network.

You can choose between your own password, a random password and the default password. To define your own password with a length of at least eight characters, enter this into the **Network password** text field. Alternatively, you can have a randomly selected, highly secure password assigned using the **Generate secure password** button. Use the **Factory default password** button to reset the dLAN adapter to the default password. Normally, the display of the password is hidden for security reasons. If you enable the option **Show characters**, the current password is displayed in legible form in the text field.

The factory default password is HomePlugAV. Assigning a specific password to a single adapter will exclude it from the remaining dLAN network.

If **dLAN Cockpit** is called up again later after a successful initial installation, for example to **integrate** a **new adapter** into a network, the application remembers the devices that were entered earlier. Enter the new device as described in the **Adding an adapter**

section. The **current network password** is assigned **automatically** to the newly added device.

8 Appendix

8.1 Troubleshooting

Reliability and ease of use are important aspects of the design of **dLAN TV SAT**. If, despite this, a problem should ever occur, this chapter contains a few useful hints intended to allow you to identify and remedy the problem. Additionally, the website www.devolo.com contains a lot of satellite information for you. If you need additional support, the "Preface" chapter at the beginning of this manual tells you how to contact our support department.

Can I also play back the recordings on a computer?

Yes. Recordings from the dLAN TV SAT to IP Receiver can also be played back on a computer. You will find the recordings under **DVR ↻ RECS**. Below this are folders (sorted by the programme's recording date) in which there are **Chunk** files. In order for these Chunks to be able to be played back, for example, by VLC Player, they first have to be renamed as ".ts files".

Which DiSEqC (Digital Satellite Equipment Control) version is supported?

The dLAN TV SAT to IP Receiver supports DiSEqC versions 1.0 and 1.1.

Can I use the dLAN TV SAT to IP Receiver even in a multi-dwelling unit?

When the satellite signals from the dLAN TV SAT to IP Receiver are transmitted via the mains supply, power meters usually attenuate the signal transmission so much that transmission across the meter is not possible—for example, from apartment to apartment.

The typical installation in a multi-dwelling unit provides for a joint satellite system. Such a satellite system is usually connected via an electric mains circuit with its own power meter. There is no direct power connection into the apartment of the user (power meter for "joint power" and power meter for apartment). Thus satellite transmission of the dLAN TV SAT to IP Receiver from the joint satellite system into the apartment is often **not** possible.

Solution: You can use the dLAN TV SAT to IP Receiver within the apartment. Simply connect the dLAN TV SAT Multituner to an existing, available satellite connection socket.

How many dLAN TV SAT to IP Receiver can be operated simultaneously in an electric mains circuit?

You can use up to 3 systems simultaneously.

8.2 Important safety instructions

All safety and operating instructions should be read and understood before using the device, and should be kept for future reference.

● Never open the device. There are no user-serviceable parts inside the device.

Do not try to service this product yourself! Contact qualified technicians each and every time your device needs maintenance. There is a risk of electric shock!

● Use the devices in dry locations only.
● Make sure you provide a stable base.
● To wall mount the dLAN TV SAT Multituner
  ○ select suitable and secure fasteners for the respective base,
  ○ make sure that no gas, water or power lines in the wall get damaged.

There is a danger of electric shock!

● Use the dLAN TV SAT Multituner exclusively with an earthed antenna system compliant with IEC60728-11:2010.

● Always use the included mains adapter to connect the dLAN TV SAT to IP Receiver. This is designed to supply electrical devices with 12 V DC.

To avoid damage to this or other devices, use the enclosed components only for their intended purpose*:*

The dLAN TV SAT Multituner is intended for the reception of DVB-S/S2 satellite signals and their transfer to the connected SAT>IP receiver or to an Internet-based terminal device (e. g. smartphone or tablet).
The dLAN TV SAT to IP Receiver is intended for the reception of DVB-S/S2 satellite signals and their transfer to the connected TV set.
The dLAN adapter is intended for connecting the dLAN TV SAT to IP Receiver to the dLAN network.

● To disconnect the device from the power supply grid, pull the power plug. The power plug must be easily accessible.

Follow the safety notes below to decrease the risk of fire as much as possible:

○ **Do not place any objects on** the **devices**.

○ The devices may **not** be placed directly **next to** open **flame** (such as fire or candles).

○ Do **not** keep the device in **direct sunlight**.

○ **Never set up** the device **near** a **heater** or **radiator**.

○ The device should be located only where sufficient ventilation can be ensured.

○ **Do not** insert any **objects** into the **openings** of the device. Slots and openings on the case serve as ventilation. Never block or cover them.

○ **Batteries** should **never** be exposed to large amounts of **heat**, such as direct sunlight, fire or other heat sources.

● Disconnect the device from the power supply grid before cleaning. Use a moist towel to clean the device. Never use water, paint thinner, benzene, alcohol or other strong cleaning agents when cleaning the device, as these could damage the case.

● Never use the device with a power supply that does not meet the specifications provided on the rating plate. If you do not know what type of power supply you have at home, contact your dealer or energy supplier.

● In the event of damage, disconnect the device from the power supply grid and contact customer service. This applies, for example, if

○ the power cable or plug is damaged.

There is a danger of electric shock!

○ liquid has been spilled on the device or objects have fallen into the device.

○ the device has been exposed to rain or water.

○ the device does not work, even though the operating instructions have been followed properly.

○ the device's case is damaged.

8.3 Bandwidth optimization

To significantly improve the transmission capacity of the network, we recommend that you comply with the following "connection rules":

● Plug the device directly into a wall socket.
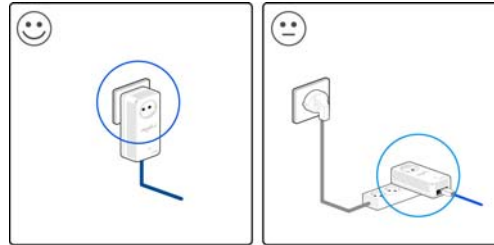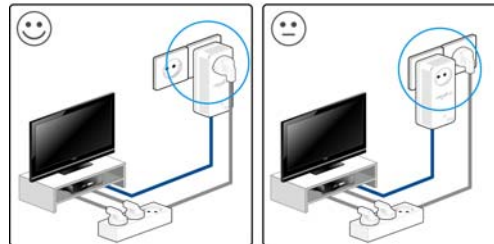

Fig. 12

● To take full advantage of the filter function of the dLAN adapter and to improve data transmission in the network, always plug the multiple socket or

the dLAN TV SAT to IP Receiver into the electrical socket of the dLAN adapter.

8.4 The devolo remote control

The following is a brief explanation of the buttons on the devolo remote control (from left to right):

ON/OFF	switch the dLAN TV SAT to IP Receiver on/off
Mute	switch the mute on/off
HDMI	change the resolution
FAV	switch to the favourites list
TV/Radio	switch between radio and TV
0...9	switch to the displayed channel number, entry of letters
LIB	switch to the recordings
MEDIA	switch to the media browser
EPG	call up the electronical program guide
Volume	volume control
P<>P	last viewed, filter
Program /\ V	channel selection up/down
INFO	call up information of a current program
EXIT, MENU, BACK	quit the menu, call up menu, back to menu

Arrow keys, OK	navigation buttons, confirm actions
Recording, play-back, stop, rewind, pause, fast-forward	start recording, playback records, stop playback, rewind records, pause records, fast-forward records
TEXT	call up teletext
SUBT	switch the subtitle on/off
AUDIO	call up audio options
Coloured buttons	EPG navigation buttons

When inserting the batteries, ensure that the polarity is correct. Using the batteries incorrectly can damage the remote control.

8.5 Disposal

8.5.1 Old devices

To be used in the countries of the European Union and other European countries with a separate collecting system:

The icon with crossed-out wastebasket on the device means that this adapter is an electrical or electronic device that falls within the scope of application of the German Electrical and Electronic Equipment Act ("Elektrogesetz"). Since 24 March 2006, these types of devices may no longer be disposed of with household waste. Rather, in Germany, they can be given to a municipal collection point free of charge. Contact your municipal government to find out the address and hours of the nearest collection point.

8.5.2 Batteries

In Germany, the German Battery Ordinance prohibits batteries and rechargeable batteries from being disposed of with household waste. Instead, you can return these at no charge at your municipal collection point or at the retailer (e. g. supermarket, specialist shop).

8.6 Warranty conditions

The devolo AG warranty is given to purchasers of devolo products in addition to the warranty conditions provided by law and in accordance with the following conditions:

1   Warranty coverage

a)   The warranty covers the equipment delivered and all its parts. Parts will, at devolo's sole discretion, be replaced or repaired free of charge if, despite proven proper handling and adherence to the operating instructions, these parts became defective due to fabrication and/or material defects. Alternatively, devolo reserves the right to replace the defective product with a comparable product with the same specifications and features. Operating manuals and possibly supplied software are excluded from the warranty.

b)   Material and service charges shall be covered by devolo, but not shipping and handling costs involved in transport from the buyer to the service station and/or to devolo.

c)   Replaced parts become property of devolo.

d)   devolo is authorized to carry out technical changes (e.g. firmware updates) beyond repair and replacement of defective parts in order to bring the equipment up to the current technical state. This does not result in any additional charge for the customer. A legal claim to this service does not exist.

2   Warranty period

The warranty period for this devolo product is three years. This period begins at the day of delivery from the devolo dealer. Warranty services carried out by devolo do not result in an extension of the warranty period nor do they initiate a new warranty period. The warranty period for installed replacement parts ends with the warranty period of the device as a whole.

3 Warranty procedure

a) If defects appear during the warranty period, the warranty claims must be made immediately, at the latest within a period of 7 days.

b) In the case of any externally visible damage arising from transport (e.g. damage to the housing), the person carrying out the transportation and the sender should be informed immediately. On discovery of damage which is not externally visible, the transport company and the sender are to be immediately informed in writing, at the latest within 3 days of delivery.

c) Transport to and from the location where the warranty claim is accepted and/or the repaired device is exchanged, is at the purchaser's own risk and cost.

d) Warranty claims are only valid if a copy of the original purchase receipt is returned with the device. devolo reserves the right to require the submission of the original purchase receipt.

4 Suspension of the warranty

All warranty claims will be deemed invalid

a) if the label with the serial number has been removed from the device,

b) if the device is damaged or destroyed as a result of acts of nature or by environmental influences (moisture, electric shock, dust, etc.),

c) if the device was stored or operated under conditions not in compliance with the technical specifications,

d) if the damage occurred due to incorrect handling, especially to non-observance of the system description and the operating instructions,

e) if the device was opened, repaired or modified by persons not contracted by devolo,

f) if the device shows any kind of mechanical damage, or

g) if the warranty claim has not been reported in accordance with 3a) or 3b).

5 Operating mistakes

If it becomes apparent that the reported malfunction of the device has been caused by unsuitable hardware, software, installation or operation, devolo reserves the right to charge the purchaser for the resulting testing costs.

6 Additional regulations

The above conditions define the complete scope of devolo's legal liability.

a) The warranty gives no entitlement to additional claims, such as any refund in full or in part. Compensation claims, regardless of the legal basis, are excluded. This does not apply if e.g. injury to persons or damage to private property are specifically covered by the product liability law, or in cases of intentional act or culpable negligence.

b) Claims for compensation of lost profits, indirect or consequential detriments, are excluded.

c) devolo is not liable for lost data or retrieval of lost data in cases of slight and ordinary negligence.

d) In the case that the intentional or culpable negligence of devolo employees has caused a loss of data, devolo will be liable for those costs typical to the recovery of data where periodic security data back-ups have been made.

e) The warranty is valid only for the first purchaser and is not transferable.

f) The court of jurisdiction is located in Aachen, Germany in the case that the purchaser is a merchant. If the purchaser does not have a court of jurisdiction in the Federal Republic of Germany or if he moves his domicile out of Germany after conclusion of the contract, devolo's court of jurisdiction applies. This is also applicable if the purchaser's domicile is not known at the time of institution of proceedings.

g) The law of the Federal Republic of Germany is applicable. The UN commercial law does not apply to dealings between devolo and the purchaser.

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