D-Link

Building Networks for People

HORSTBOX

PROFESSIONAL

DVA-G3342SB

Installation Guide

Firmware Version 4.2

DSL WLAN LAN VoIP ISDN Analog

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of about eight inches (20cm) between the radiator and your body.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

CE Mark Warning

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

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Mark Ups

Mark Up	Function	Example
Small caps	Buttons, Links, Name of tabs or pages	Button NEXT Tab TELEPHONY
Italics	Options	*base* or *expert mode*
Coloured background	Notes	**Note:**
Typewriter	URLs	`http://www.dyndns.org/`

Safety Instructions

Please read this section carefully and observe the instructions for your own safety and correct use of the HorstBox Professional.

Observe the warnings and instructions on the device and in the manual.

The HorstBox Professional is built and tested by D-Link Deutschland in accordance with IEC 950/EN60950 and left the works in a perfectly safe condition.

In order to maintain this condition and ensure safe operation, the user must observe the instructions and warnings contained in this manual.

1. The device must be used in accordance with the instructions for use.

2. For transport use the original wrapping or a adequate wrapping. Protect the HorstBox Professional against shocks and blows.

3. To avoid condensation wait until the device has reached room temperature before you put it into operation. The HorstBox Professional has to be dry completely.

4. Consider the information about the environmental conditions in the specification (see section Appendix in the manual). In the manual read section "Installation" and the section "Installation Considerations".

5. Only use the power adaptor supplied.Power adaptor.

6. The electrical installations in the room must correspond to the requirements of the respective regulations.

7. Do not use a main connection in sockets shared by a number of other power consumers. Do not use an extension cable.

8. The unit is complete disconnected from the power source, only when the power cord is disconnected from the power source. Therefore the power cord and its connectors must always remain easily accessible.

9. Take care that there are no cables, particularly power cables, in areas where persons can trip over them. For installation follow the instructions in section "Installation" in the manual.

10. Use only adequate and unbroken power cords and network or telephone cables.

11. Do not connect or disconnect data cable connection during thunderstorms.

12. Clean the HorstBox Professional with a wettish cloth only.

13. Do not set up the device in the proximity of heat sources or in a damp location. Make sure the device has adequate ventilation.

14. Take care that no items or liquids reach into the inside of the housing.

15. In emergencies switch off the device immediately, disconnect the power supply and contact a sales person.

16. Do not open the HorstBox Professional!

17. Repairs should be carried out by qualified service personal only. Unauthorized open ups and unqualified repairs endanger the user(s).

18. Specified normal operation of the HorstBox Professional (according to IEC 950/EN60950) requires the lid to be mounted.

19. The guarantee becomes void, if you add or change parts to the HorstBox Professional.

1 Introduction

Dear Customer,

thank you for choosing a D-Link product.

By choosing the HorstBox Professional you have opted for a high quality product, able to satisfy the requirements for a simple communication infrastructure for data and voice today and in the future. The HorstBox connects D-Link's experience in routing, WLAN, security and telephony over analog and digital lines with the know-how in VoIP.

The HorstBox Professional provides all ports you need today to integrate network and phones efficiently and cost-effectively. Start a gentle migration of standard phones and new technology without the need to renew all equipment at hand at once.

Simply connect the phones to the HorstBox Professional, start the assistant to guide you through the configuration and within minutes you can surf in and phone over the Internet or use the existing phone line.

Please read also the section "Installation Considerations" in the manual (provided as PDF file on the CD-ROM).

D-Link claims that all information contained in this installation guide is constantly being updated in line with the technical alterations and improvements made to the HorstBox Professional and thus this installation guide only reflects the technical status of the HorstBox at the time of printing.

2 Getting Started

Before you install the HorstBox Professional, check to see whether a network is installed and configured. If necessary, install and configure a network according to the documentation of the operating system of your computer.

2.1 Shipment

HorstBox Professional DVA-G3342SB	
1x Power adaptor: 100-240V, 1,2A (Output: 12V, 3,33A) + power cord	
4x Pads (1 bag)	1x WLAN dipol antenna (2,4GHz)
1x Installation guide	1x CD-ROM
1x network cable (CAT-5), blue	1x ADSL cable(RJ11 to RJ45), grey
1x USB cable, grey	1x ISDN cable (RJ45), black
1x ISDN cable (RJ45), red	1x Phone cable (RJ11), red
1x Adaptor: RJ11 plug to 3 TAE ports (NFN) for analog devices	

Table 2.1: Shipment

Please contact your sales person immediately, if parts are missing or broken.

Note: According to the terms of guarantee the HorstBox Professional must be operated only with the power adaptor provided. Elsewise the guarantee becomes void.

2.2 Description

2.2.1 Front Panel

On the front panel of the HorstBox Professional you will find LEDs, which inform about the status of the device and its ports. For details please refer to the manual.

Figure 2.1: HorstBox Professional Front Panel

2.2.2 Back Panel

The back panel houses all ports of the HorstBox and the reset switch. For details please refer to the manual.
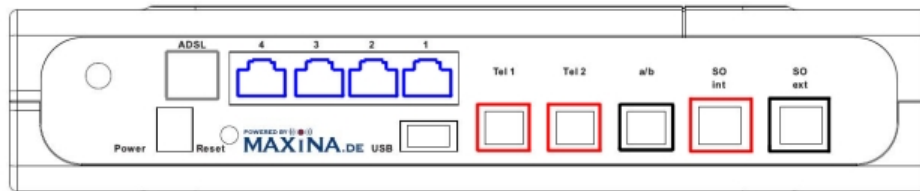
Figure 2.2: Back Panel of HorstBox Professional

2.3 Installation

Please read the section "Installation Considerations" in the manual before installing the HorstBox Professional.

2.3.1 Preparations

Before configuring the HorstBox Professional prepare the device as described in this section.

- Put the pads into the slots at the bottom of the device. The HorstBox can be operated in an upright position too.

- Provide for air circulation.

- Connect the HorstBox Professional to your computer. Use the blue network cable provided. Plug it into one of the blue ports of the device. Plug the other end into the port of the network adapter card (NIC) of your computer.

- Plug the power adaptor plug into the power port of the HorstBox Professional.

- Plug the power plug of the power adaptor into a socket. This will make the HorstBox boot up.

- Boot up the computer you want to use for configuring the HorstBox.

All preparations are done now. You can start to configure the HorstBox Professional after the LED reports readiness of the device. These LEDs should be "on" by now: **Power**, **Stat** and at least 1x **LAN**, assumed that the computer connected to a LAN port is ready, too.

Note: If you plan to integrate the HorstBox Professional into an existing network, you may want to disable the DHCP server temporarily as the HorstBox Professional provides another DHCP server as default. Using two DHCP servers uncontrolled in one network may cause severe problems.

The default IP address of the HorstBox Professional is **192.168.0.1**. Make sure that your network is working in the same segment (192.168.0.x).

An easy way to configure the HorstBox is to connect a computer directly and let it get an IP address from the DHCP server of the HorstBox Professional. Start the HorstBox Professional first, the computer second.

2.3.2 Configuration

> **Note:** For security reasons configure the HorstBox via a network cable only. Do not use a WLAN connection.

To configure the HorstBox Professional via its graphic user interface call up the URL **https://192.168.0.1** in a browser.

If you do the first configuration best use the assistant, which will start automatically in the browser.

The assistant helps you through all important settings and within minutes the HorstBox Professional is up and running.

To change settings or install phones later, call up the URL **https://192.168.0.1** again. If you have changed the default IP address of the HorstBox Professional, start the graphical user interface by typing the changed IP address into the browser. Do not forget to type in the protocol **https://** first.

The graphical user interface shows up in the browser. It is structured by several tabs, one for each area of functionality.

Use the navigation column of each tab to open more pages to set up the HorstBox.

You can switch between basic and expert mode. While the expert mode provides more detailed settings, for most users the settings made in basic mode will be sufficient.

3 Wizard

The Wizard will guide you step-by-step through the installation and configuration of the HorstBox Professional. Within minutes the HorstBox will be ready to go.
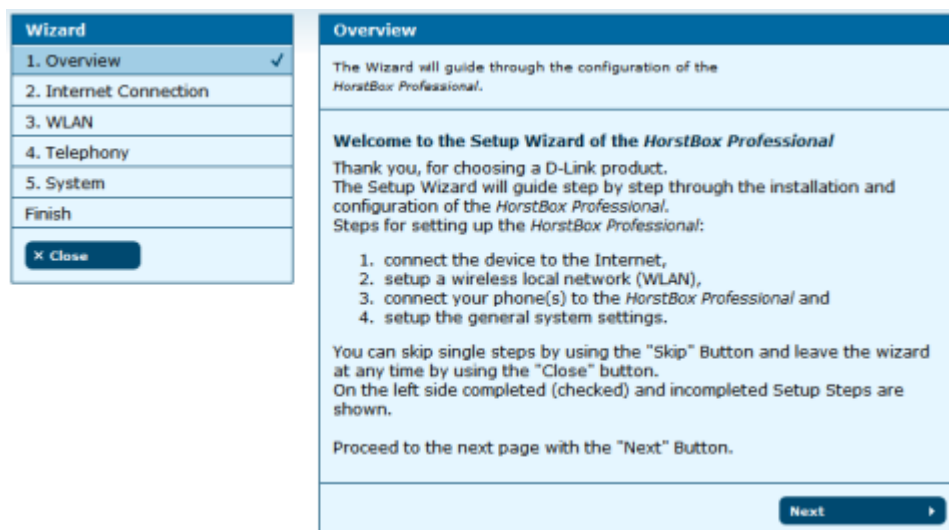
Figure 3.1: Wizard Overview

In the left column all main steps are shown. Steps already executed are ticked off.

To end the wizard at any time, click on CLOSE. No settings will be saved.

Note: For security reasons configure the HorstBox via a network cable only. Do not use a WLAN connection.

The configuration of the HorstBox is arranged in four main steps:

 1. Internet Connection; 2. WLAN; 3. Telephony; 4. System.

To skip a step click on SKIP.

Note: All user names, phone numbers or passwords used in this manual are examples only.
Please make sure to use your own data only!

This section will explain all configuration steps. If you do not want e.g. to connect an analog phone, just skip this step. Click on NEXT, to open the next page.

3.1 Internet Connection

Here you will set up the Internet connection of the HorstBox. Connect the device to the DSL socket, enter all necessary login details and choose some general connectivity options.
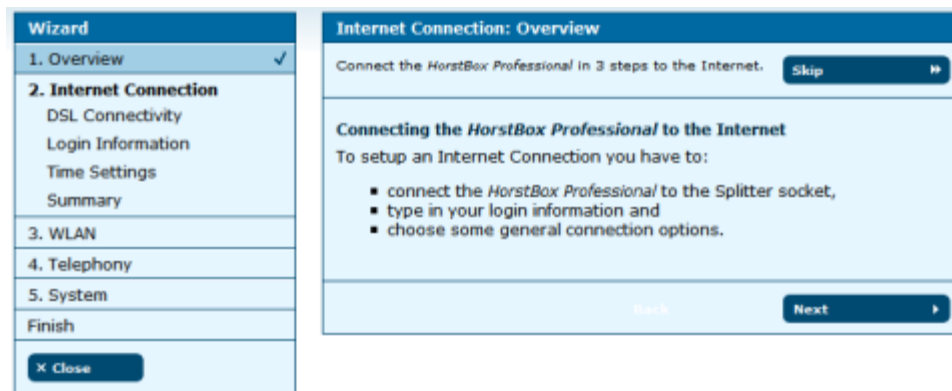
Figure 3.2: Internet Connection: Overview

The overview shows all steps required to set up the Internet connection.
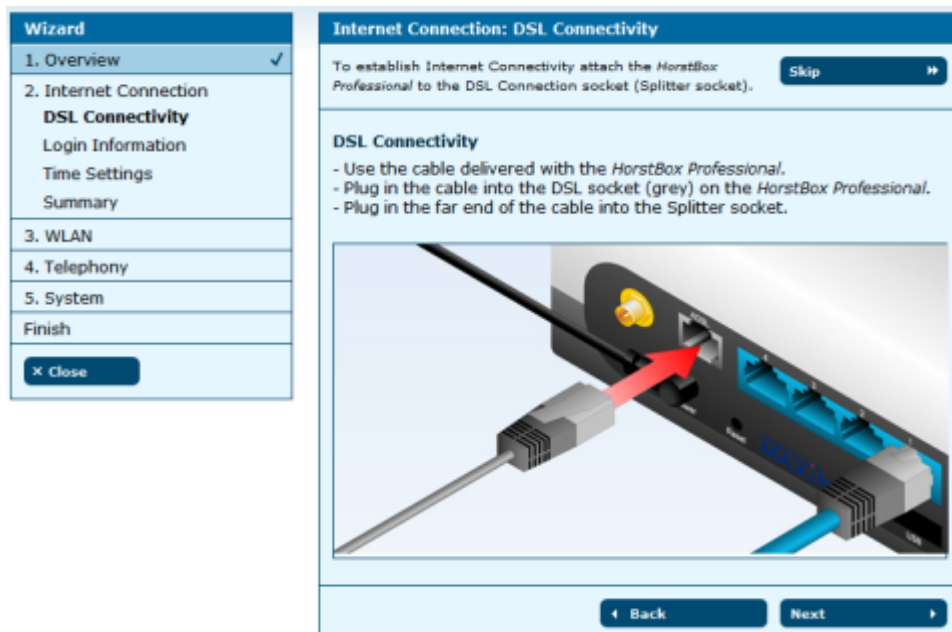
Figure 3.3: Internet Connection: DSL Connectivity

Use the red network cable delivered with the HorstBox. Put one end into the DSL port (grey), the other end into the DSL port on the splitter.

Click on NEXT, to open the next page to enter the login details.

Figure 3.4: Internet Connection: Login details

Your Internet Service Provider (ISP) will provide your login details.

Enter Username and Password for the HorstBox to store and to establish an Internet connection. Your input has to be case sensitve.

Click on NEXT, to open the page for the time settings.

Figure 3.5: Internet Connection: Time Settings

You can define a permanent Internet connection or an automatic disconnection after inactivity.

It is recommended to choose the automatic disconnect after a defined time (e.g. 5 minutes) for time based Internet tariffs.

Use the permanent Internet connection option for flatrates and volume based tariffs.

You can change these settings later on the tab INTERNET, page DSL ACCESS.

Choose an option.

Note: If you choose automatic disconnect after certain period of inactivity, the connection will be terminated. No VoIP calls will go through until a new connection is established.

Click on NEXT, to open the summary page for the Internet connection settings.
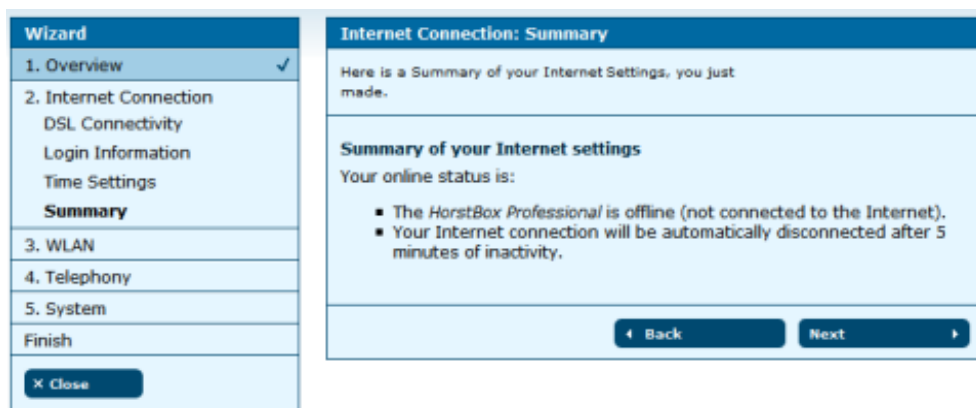
Figure 3.6: Internet Connection: Summary

Click on NEXT, to set up the WLAN in just three simple steps.

3.2 WLAN

Here you will prepare the HorstBox for the WLAN. Attach the antenna to the device, enter a name for your wireless network and choose some simple security options.
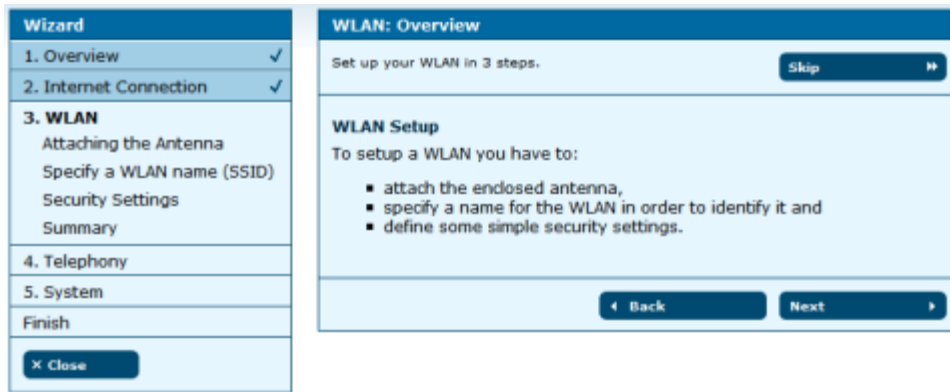
Figure 3.7: WLAN: Overview

Click on NEXT, to get instructions on how to attach the antenna.
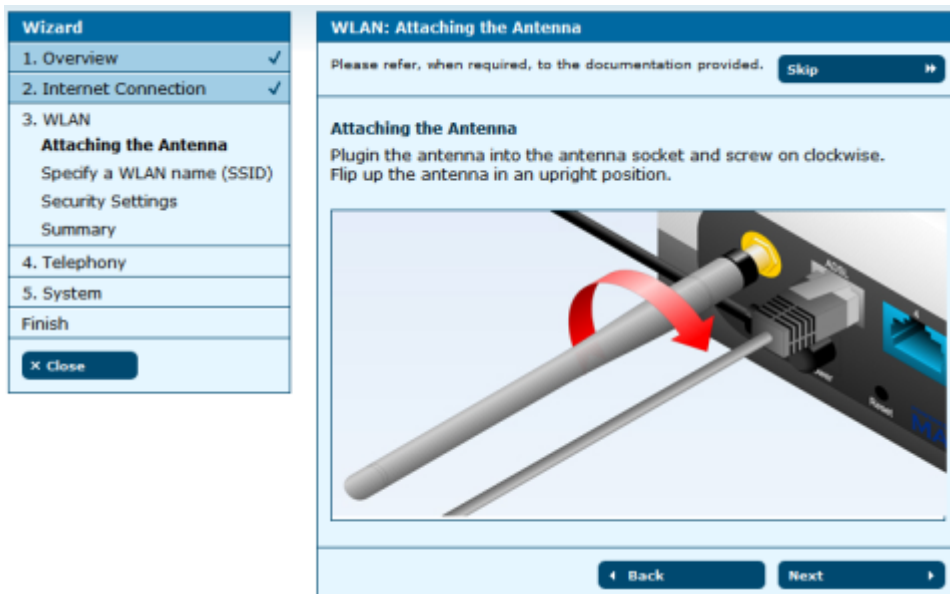
Figure 3.8: WLAN: Attaching the Antenna

Plugin the antenna into the antenna socket and screw on clockwise. Flip up the antenna in an upright position.

Click on NEXT, to open the page to specify a name (SSID) for your WLAN.

Enter an unique name for your WLAN in order to identify and propagate it wireless.

Figure 3.9: WLAN: Name (SSID)

Click on NEXT, to open the page for the security settings.

Figure 3.10: WLAN: Security Settings

Choose an encryption method and a strong password for the communitcation with and within your WLAN.

Without any security your WLAN will be open for everyone!

Note: Use at least WEP as security standard, better WPA. Check whether all WLAN devices are able to handle WPA.

Click on NEXT, to open the summary page for the WLAN settings.
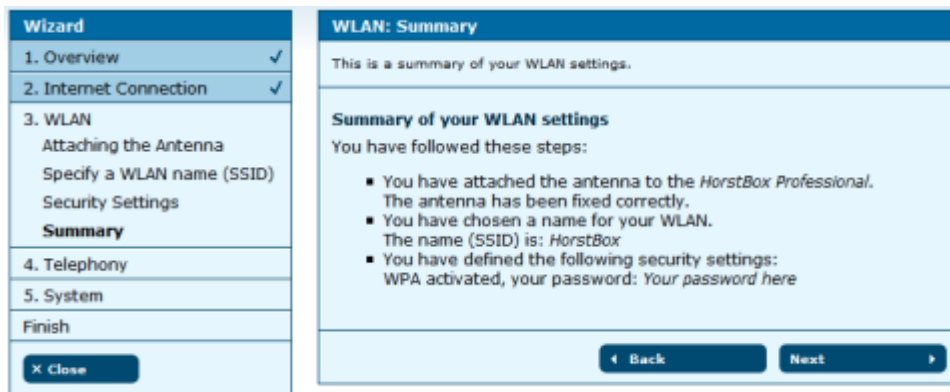
Figure 3.11: WLAN: Summary

Click on NEXT, to configure the HorstBox Professional as a PBX in just four steps.

3.3 Telephony

To use the HorstBox Professional as phone system PBX you must at least connect one phone (analog or ISDN). Configure the HorstBox and do a functional test. You may set up a VoIP account here as well.
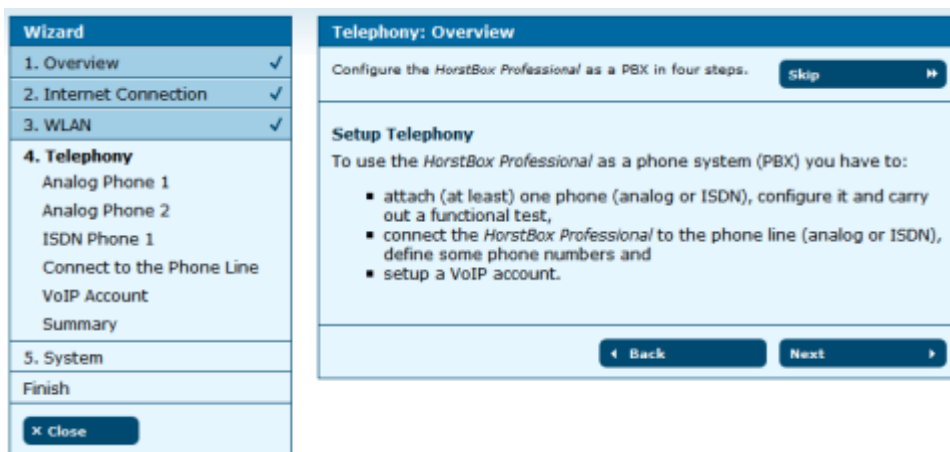
Figure 3.12: Telephony: Overview

Click on NEXT, to learn how to connect an analog phone.

Connect an analog phone to one of the analog ports (red) "Tel 1" or "Tel 2" on the HorstBox. Use the red phone cable provided.
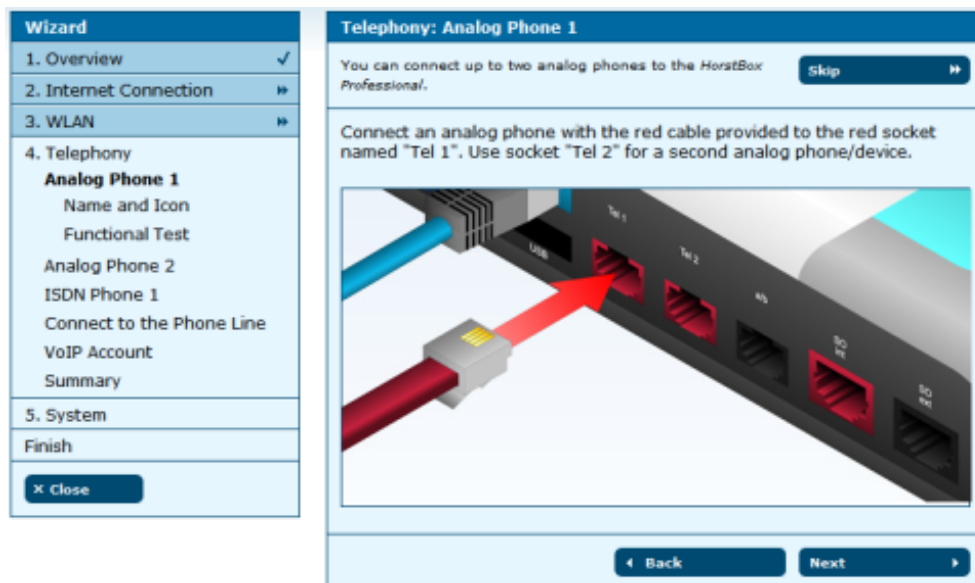
Figure 3.13: Telephony: Connect an Analog Phone

Click on NEXT, to open the page NAME AND ICON.
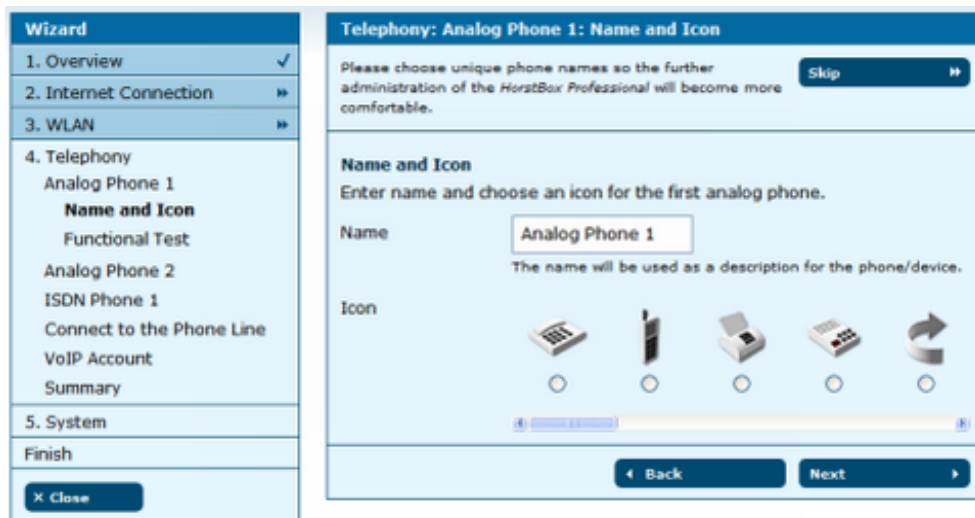
Figure 3.14: Telephony: Name and Icon

Enter a name and choose an icon for the first analog phone.

Please choose unique phone names so the further administration of the HorstBox Professional will become more comfortable.

Note: The icons provide no further functionality, e.g., choosing the white fax icon will not turn your phone into a fax machine.

Click on NEXT, to open the function test page.
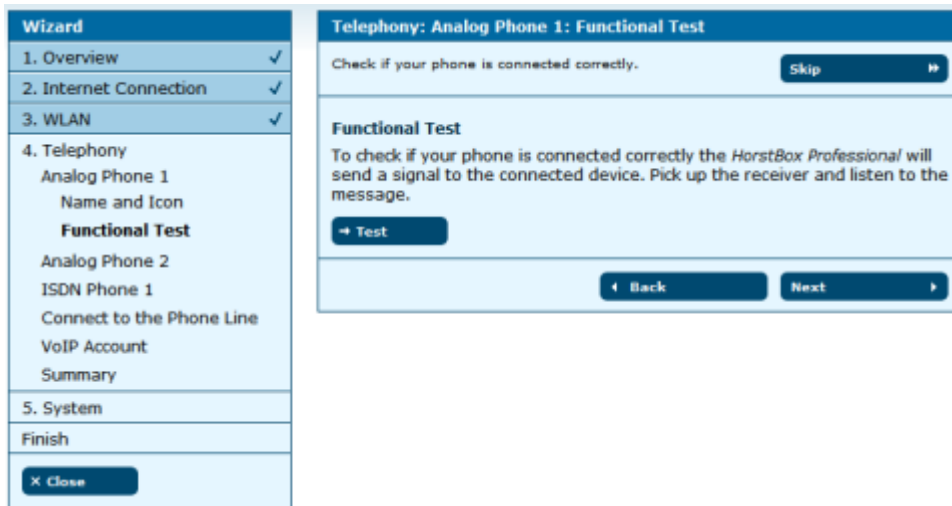
Figure 3.15: Telephony: Functional Test

The functional test checks whether the phone is properly connected. The HorstBox sends a signal and the phone should ring. Pick up the receiver and listen to the friendly voice: "Congratulations! You have successfully set up your phone.".

Click on NEXT, to continue.

If desired, you may connect and set up a second analog phone. Please repeat the steps described above. Else skip this step.

Now you can connect and set up an ISDN phone. Connect the phone to port "S$_0$ Int" on the HorstBox. Use the red phone cable provided.

Figure 3.16: Telephony: ISDN Phone

Click on NEXT.

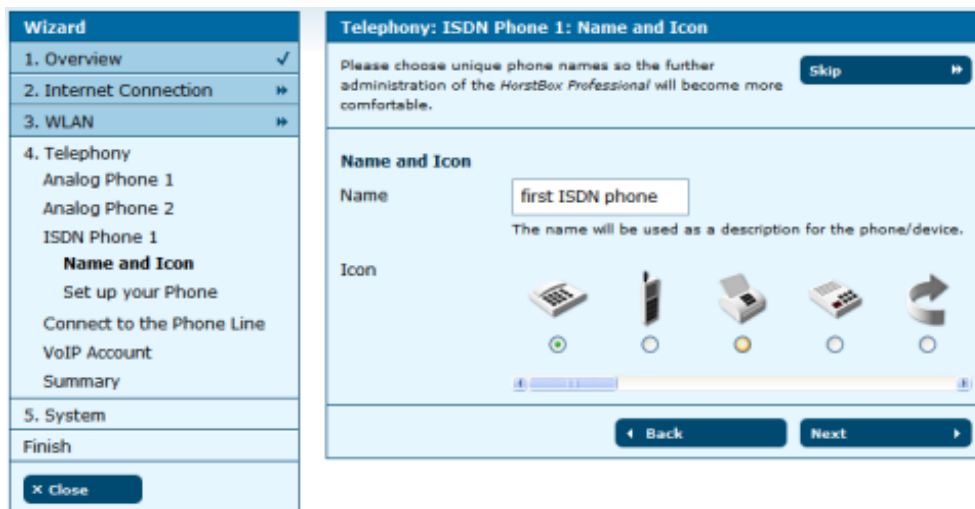Enter a name and choose an icon for the ISDN phone.

Figure 3.17: Telephony: Name and Icon

Please choose unique phone names so the further administration of the HorstBox Professional will become more comfortable.

Note: The icons provide no further functionality, e.g., choosing the white fax icon will not turn your phone into a fax machine.

To connect and set up more ISDN phones later, use page PHONES AND DEVICES on the tab TELEPHONY.

Click on NEXT, to open the function test page.

Before executing the functional test you have to set up the ISDN phone to the internal MSN 300. Please refer to the documentation of your phone.
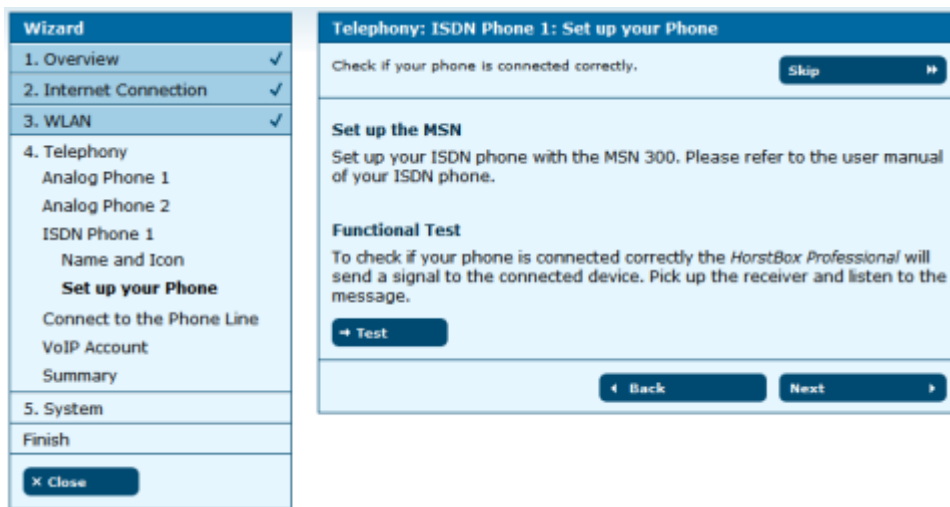
Figure 3.18: Telephony: Functional Test

The functional test checks whether the phone is properly connected. The HorstBox sends a signal and the phone should ring. Pick up the receiver and listen to the friendly voice: "Congratulations! You have successfully set up your phone.".

Click on NEXT, to continue.

Now you will set up the external phone line.
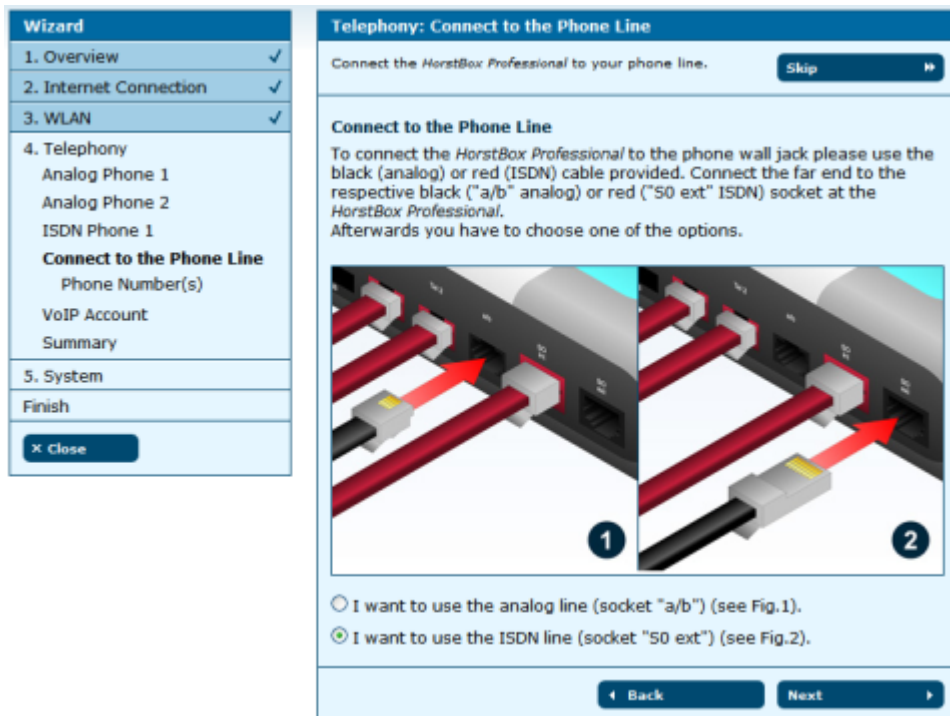
Figure 3.19: Telephony: External Phone Line

To connect the HorstBox Professional to the phone wall jack please use the black (analog) or red (ISDN) cable provided. Connect the far end to the respective black ("a/b" analog) or red ("S0 ext" ISDN) port at the device.

Afterwards you have to choose one of the options: *I want to use the analog line (socket "a/b") (see Fig.1)* or *I want to use the ISDN line (socket "S0 ext") (see Fig.2)*.

Click on NEXT, to enter the phone numbers.

Enter the phone number(s). Use the first ISDN phone number respectively the analog phone number as default number. The HorstBox will use the number to handle outgoing calls. This number will be displayed as "Caller ID".

Figure 3.20: Telephony: Phone Numbers

Click on NEXT.

Figure 3.21: Telephony: VoIP

Before you can use Internet telephony you have to register with a VoIP provider, e.g. SipGate to receive a VoIP phone number.

Click on NEXT.

In the next step please enter your login details for the VoIP account in order to make phone calls over the Internet.

Figure 3.22: Telephony: VoIP login details

Enter host name or IP address of the VoIP server into the field SERVER, the VoIP number into the field PHONE NUMBER, username and password into the appropriate fields.

Click on NEXT for the summary of the telephony settings.

Figure 3.23: Telephony: Summary

Click on NEXT, for the system settings.

3.4 System

Only some more settings are required now:

1. System Time. To make sure that rules and tasks can be executed at the right time you have to set up the system time properly.

2. Password. To protect the HorstBox Professional against unauthorized or illegal access you have to enter an Administration Password. [Default password **admin**.]
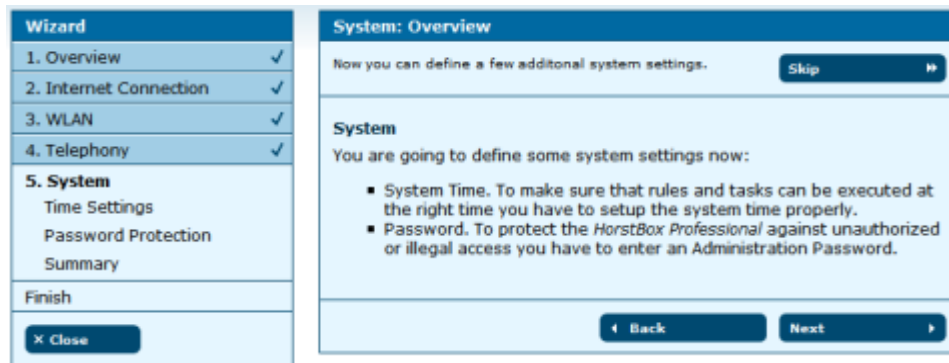

Figure 3.24: System: Overview

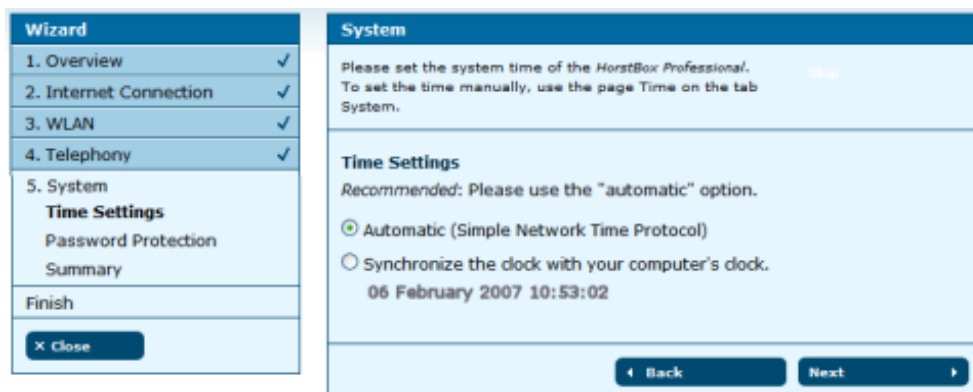Click on NEXT, to set up the time of the HorstBox Professional.

Figure 3.25: System: Time Settings

Let the HorstBox regulate the system time via Network Time Protocl (NTP) automatically or synchronize the system time with your computer's time.

| **Note:** | It's recommended to use the "automatic" option. |

To set the time manually, use the page TIME on the tab SYSTEM.

Choose one option and Click on NEXT, to set up the password protection.

A password protects against unauthorized or illegal access. Change the default password: **admin** at once!

Click on NEXT.

Figure 3.26: System: Password Protection

A new dialog opens up. Enter **admin** as user name and a new strong password. Click on OK to close the dialog.

Click on NEXT, for the summary of the system settings.

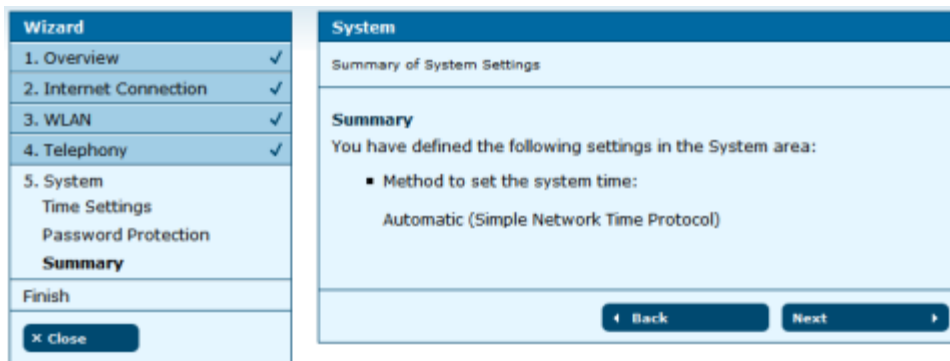

Figure 3.27: System: Summary

You have completed all settings now. To finish the wizard and to save all settings, Click on NEXT in the Summary.

Congratulation! Your HorstBox Professional has been setup successfully and is now ready for use.
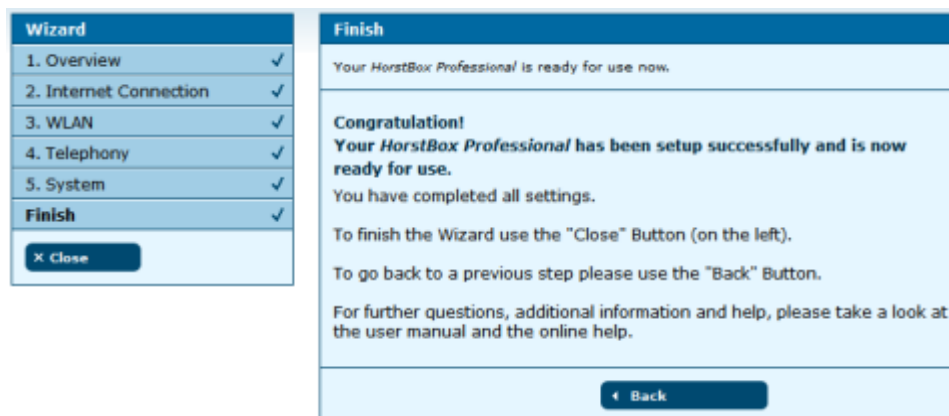
Figure 3.28: Wizard: Finish

For further questions, additional information and help, please take a look at the user manual and the online help.

To go back to a previous step, please click on BACK.

To close the Wizard, click on CLOSE (on the left).

On the status page all important information of your HorstBox Professional (Internet, Telephony, Network and System) can be viewed at a glance.

Figure 3.29: Status page

Note: To open the status page, click on the link in the top right corner or click on the D-Link logo.

How to control the PBX

You may control the PBX via a phone using key combinations:

Combination	Function
✱ ② (1-2)[1]	internal call to analog devices
✱ ③ (0-19)	internal call to ISDN devices
✱ ④ (0-29)	internal call to VoIP devices
✱ ⑤ <Phone number>	use analog account
✱ ⑥ (0-9)<Phone number>	use ISDN account (0-9)
✱ ⑦ (0-9)<Phone number>	use VoIP account (0-9)
✱ ⑧	answer call
✱ ⑧ ⓪	park call
✱ ⑧ (1-9)	unpark call
✱ ⑨ ①	activate "Do not disturb" function
✱ ⑨ ②	deactivate "Do not disturb" function
✱ ✱ <Speed Dialing>	use speed dial number
✱ ✱ <Vanity Number>	use vanity number

[1] (0-9): Enter as next digit: 0 - 9.

Table 3.1: How to control the PBX