TRACPHONE®

TracPhone FleetBroadband FB250 & FB500 IP Handset

TracPhone IP Handset User's Guide

TracPhone IP Handset

User's Guide

When connected to a KVH® Industries' TracPhone® FB250 or FB500 terminal, the IP Handset, manufactured by Thrane & Thrane, allows you to make voice calls, edit your contacts list, and view system status information. This user's guide provides all of the information you need to connect, operate, configure, and troubleshoot the IP Handset.

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If you have any comments regarding this manual, please e-mail them to manuals@kvh.com. Your input is greatly appreciated!

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Safety Summary

The following general safety precautions must be observed during all phases of operation, service and repair of this equipment. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture and intended use of the equipment. KVH Industries assumes no liability for the customer's failure to comply with these requirements.

DO NOT OPERATE IN AN EXPLOSIVE ATMOSPHERE

Do not operate the IP Handset in the presence of flammable gases or fumes. Operation of any electrical equipment in such an environment constitutes a definite safety hazard.

KEEP AWAY FROM LIVE CIRCUITS

Operating personnel must not remove equipment covers. Component replacement and internal adjustment must be made by qualified maintenance personnel. Do not replace components with the cable connected. Always disconnect power and discharge circuits before touching them.

About the Manual

Intended Readers

This manual is a user manual for the TracPhone FleetBroadband IP Handset. The readers of the manual include anyone who is using or intends to use the IP Handset. No specific skills are required to operate the IP Handset. However, it is important that you observe all safety requirements listed in the beginning of this manual, and operate the handset according to the guidelines in this manual.

Manual Overview

This manual has the following chapters:

- ***Introduction*** contains an overview and a brief description of the IP Handset.
- ***Getting started*** explains how to connect and start up the handset and gives an overview of the display and keypad. It also contains a short guide to initial configuration and to making the first call.
- ***Operating the IP Handset*** describes how to use and configure the handset and explains the display menus.
- ***Using the web server*** explains how to use the built-in web server of the IP Handset.
- ***Troubleshooting*** contains a short troubleshooting guide and gives information on where to get further help if needed.

This manual may not always reflect the latest software functionality of your IP Handset. To obtain the latest version of the manual, please visit www.kvh.com and download the latest version from the FB250 or FB500 product page.

Typography

In this manual, typography is used as indicated below:

Bold is used for the following purposes:

- To emphasize words.
  Example: “Do **not** touch the antenna”.
- To indicate what the user should select in the user interface.
  Example: “Select **Settings** > **Display**”.

Italic is used to emphasize the paragraph title in cross-references.

Example: “For further information, see *Connecting Cables* on page...”.

`COURIER` is used to indicate display text.

Example: “The display shows `39558880`”.

Table of Contents

Introduction

Welcome

Congratulations on the purchase of your IP Handset!

The IP Handset communicates using Voice over Internet Protocol (VoIP), which means that voice conversations are routed over the Internet or through an IP-based network.

There are two variants of the IP handset: A wired and a wireless variant.

In this chapter

This chapter introduces the IP Handset and gives an overview of its features and functions.

Your IP Handset

Description

The IP Handset is used for making phone calls over an IP based network. When used with a BGAN terminal, the communication is only IP based between the handset and the BGAN terminal. From the BGAN terminal, the call is transmitted as a normal circuit-switched call.

The handset is designed specifically for use in harsh environments and it is dust proof and splash proof.

Excellent sound quality is achieved by including a state-of-the-art echo canceller and noise suppression software.

On the large 2.2" color TFT screen, a graphical user interface provides easy access to all functions including contacts and settings. The user interface also provides direct access to certain features of a connected BGAN terminal.

There are two variants of the handset: A wired model and a wireless model.

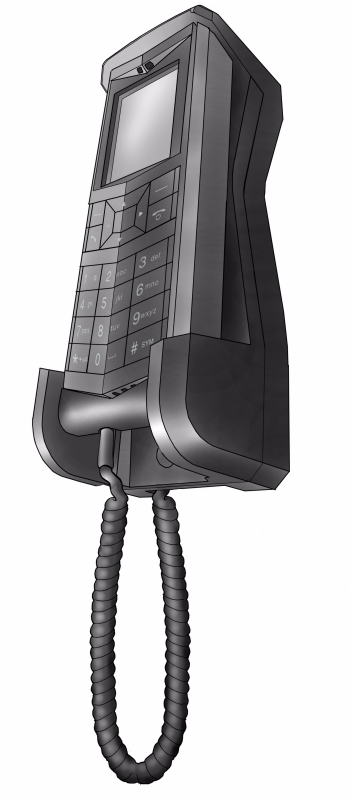
The wired IP handset

The wired handset is powered directly from the LAN interface using Power over Ethernet (PoE), so an external power supply is not needed.

The TracPhone FleetBroadband IP Handset & Cradle, wired, includes the following main units:

- TracPhone FleetBroadband IP Handset, wired
- TracPhone FleetBroadband IP cradle, wired

The IP Handset connects to the cradle with a coil cord. The cradle connects with a fixed LAN cable to a LAN port with PoE, for example in a BGAN terminal (Broadband Global Area Network) for satellite communication.



The wireless IP handset

The wireless IP handset connects to a wireless access point using Wireless Local Area Networking (WLAN).

The internal battery is charged from the dedicated cradle, which connects to an external power supply (12-24 V DC).

The TracPhone FleetBroadband IP Handset & Cradle, wireless, includes the following main units:

- TracPhone FleetBroadband IP Handset, wireless
- TracPhone FleetBroadband IP cradle, wireless

Features

The IP Handset offers the following features:

- Voice communication over Internet or IP based network
- Contacts list with up to 100 entries
- Intuitive user interface and menu system
- Built-in web interface
- High quality color display QVGA
- Rugged but elegant design
- Splash proof and dust proof
- Connectivity to Broadband Global Area Network (BGAN) terminal
- Dedicated menu for BGAN terminals

What's next?

This chapter has provided an overview of the IP Handset.

The next chapters will go into more detail about how to set up and use your handset. The following chapter, *Getting started*, explains how to start up the handset and make the first call.

Getting started

In this chapter

This chapter describes how to install and start up the handset and make the first call. It also gives an overview of the display and keypad and explains how to navigate with the keypad.

Getting started with the wired IP Handset

Introduction

The wired IP Handset connects to the cradle with a coil cord. The cradle connects with a fixed LAN cable to a LAN port with PoE, for example in a BGAN terminal. The IP Handset is powered directly from the LAN (PoE) interface.

Connectors

IP Handset connectors

The IP Handset has a coil cord with a LAN connector for connecting to the cradle or directly to a LAN (PoE) interface.

The handset also has two connectors on the side of the handset:

- one connector for connecting a headset.
- one Mini-USB connector.

Note | These two connectors are currently not functional.

IP cradle connectors

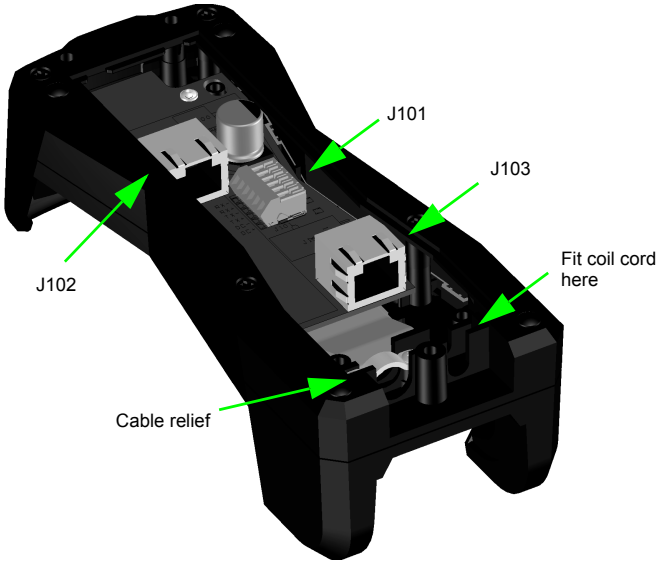
The cradle for the IP handset has two internal LAN connectors and an alternative terminal block for the LAN connection:

- One LAN connector connects to the coil cord from the IP Handset.
- The other LAN connector, or alternatively the terminal block, connects to your LAN cable between the cradle and the BGAN terminal.

Connecting the cables to the IP cradle

Do as follows:

1. Remove the two screws holding the center cover in the bottom of the cradle and take off the cover.



2. Connect the coil cord from the IP Handset to the cradle connector marked J103. Then fit the cable relief mounted on the coil cord into the groove at the cradle exit.
3. To mount the external LAN cable, do one of the following:

- Connect a standard LAN cable to the connector marked J102 in the cradle. This is the cable for connecting to the BGAN terminal or other LAN (PoE) interface.

  Important The space between the cable LAN connector and the PCB is very scarce - make sure the housing of the cable connector is not too thick to allow for the connectors to fit properly.

- Connect the wires of a LAN cable to the terminal block marked J101. The text next to the terminal block indicates which signal goes where.

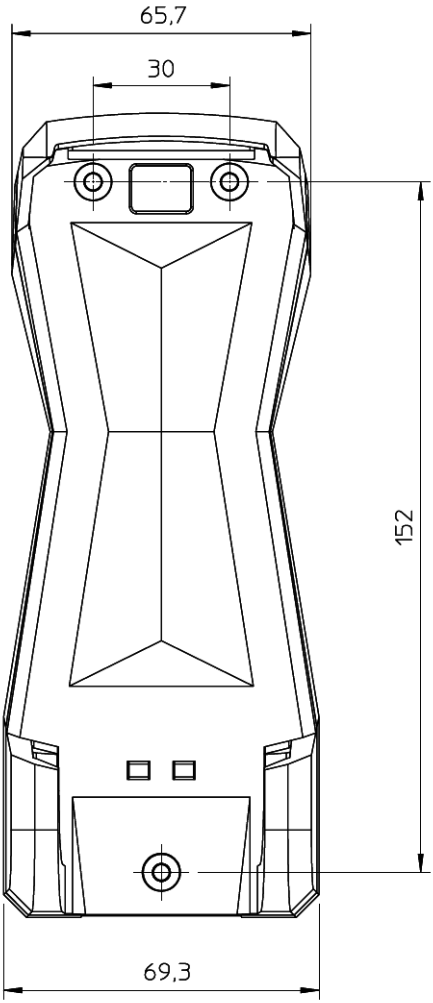
4. Mount cable relief at the cable exit from the cradle.

   Note Make sure the cable relief matches the size of the cable.

5. Mount the cover and fasten the two screws.

Installing the cradle

Mount the cradle on a wall or a desktop with 3 screws fitting in the holes indicated in the drawing below (front view).



Connecting the wired handset to a BGAN terminal

Note The LAN interface on the BGAN terminal must supply Power over Ethernet.

Do as follows:

1. Start up the BGAN terminal as described in the user manual for the terminal.
2. Connect the LAN cable from the IP cradle to one of the LAN (PoE) connectors on the BGAN terminal.

   The cable between cradle and terminal must be maximum 80 m.

   Note If you insert a switch or similar between the cradle and the terminal, make sure that it conforms to the industry PoE standard **IEEE 802.3 af (using data pairs)**.

The handset starts up automatically when connected to the BGAN terminal. However, you may have to configure user name and password if the handset has not been connected before. For further information, see *Establishing a connection using BGAN terminal* on page 21.

Starting up the wired IP Handset

To switch on the IP Handset

The wired IP Handset is automatically powered when it is connected to a LAN interface with PoE.

If the handset has been switched off, you can switch it back on by pressing and holding the on hook key until the display lights up.

If the handset does not start up, the reason may be that there is no PoE in the LAN interface. If you are connecting to a BGAN terminal, check that the PoE indicator on the terminal lights green for the connected port. For further information, refer to the installation manual for the BGAN terminal.

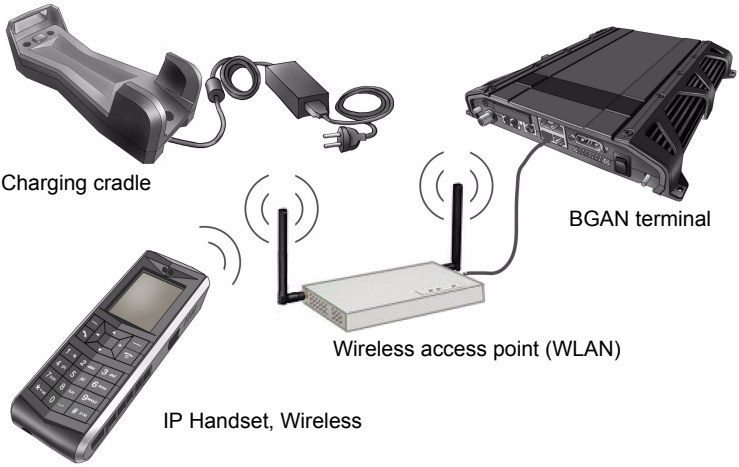
To switch off the IP Handset, press and hold the on hook key again until the display is turned off.

Getting started with the wireless IP Handset

Introduction

Overview

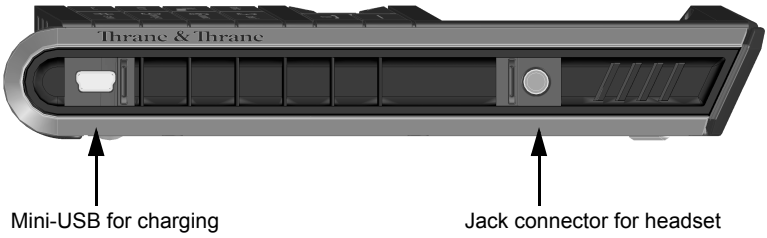
The wireless IP handset connects to a wireless access point, which is connected to a BGAN terminal or other IP connection. The internal battery is charged from the dedicated cradle connected to an external power supply.



IP Handset connectors

The handset has two connectors on the side of the handset:

- one connector for connecting a headset.
- one Mini-USB 5-pin connector, for charging the handset from a computer or USB charger.



Preparing the hardware

Overview

For the wireless IP Handset you need the following hardware:

- a wireless access point complying to the Wireless Local Area Networking (WLAN) standard 802.11b/g
- for charging the handset:
  - an external power supply with 12 V DC to 24 V DC nominal power, min. 7 W, **or**
  - a computer and a USB cable with a mini-USB 5-pin connector at one end and a USB-A connector at the other end.

To connect the wireless access point

You may connect the wireless access point to a BGAN terminal or to your standard network connection.

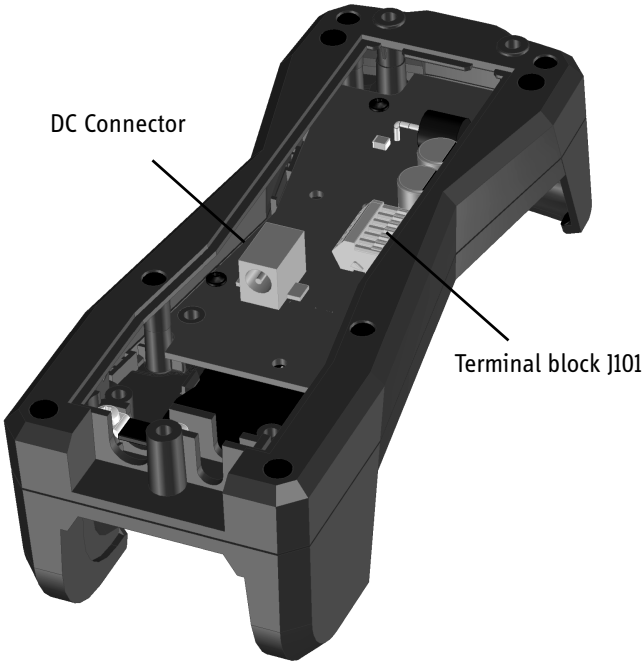
For information on how to install the wireless access point, refer to the documentation that comes with your wireless access point.

To connect the external power supply to the cradle

The cradle for the IP Handset serves as a charger when it is connected to an external power supply (12-24 V DC, 7 W).

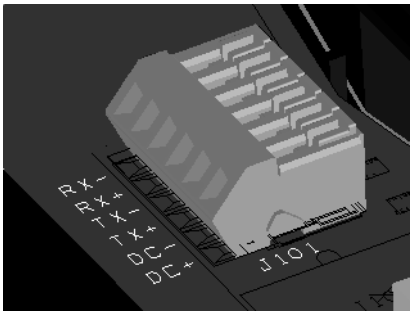
To connect the power supply, do as follows:

1. On the back of the cradle, unscrew the two screws holding the cover.
2. Remove the cover.



3. Connect your power supply to the cradle.
   There are two options for connecting to the cradle:
   - Using the internal DC connector in the cradle.
     The connector is a proprietary DC Jack, 2.5 mm, positive center.

- Using the internal terminal block (J101).
  Connect the wires from your DC supply to DC+ and DC- in the terminal block J101.



4. Secure the cable with a cable relief at the cable exit on the cradle.

   Note Make sure the cable relief matches the size of the cable.

5. Mount the cover and fasten the two screws.

For information on how to mount the cradle on a wall or desktop, see *Installing the cradle* on page 11.

Charging the handset

Introduction

The battery icon next to the handset icon in the top right corner of the display shows the battery status of the handset.

When the battery level is critically low, the handset makes a sound and shows a message, and the icon starts flashing to indicate that the battery needs recharging. If the battery is not recharged, the handset will eventually switch off.

There are two options for charging the handset:

- using the cradle with a power supply
- using a USB cable and a computer or USB charger

To charge the handset using the cradle

The cradle must be connected to an external 12-24 V DC power supply, as described in the previous section.

Place the IP Handset in the cradle with the display facing up. The handset automatically starts the charging process.

To charge the handset from a computer or USB charger

You need a computer or a USB charger and a USB cable with a mini-USB 5-pin connector at one end and a USB-A connector at the other end.

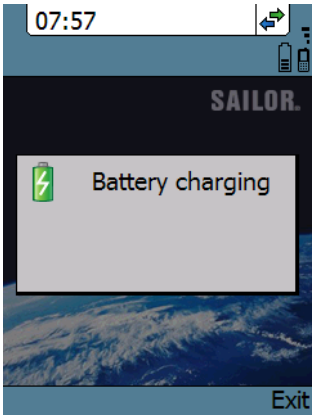
Do as follows:

1. Connect the mini-USB connector to the connector at the side of your handset.
2. Connect the other connector on the cable to a USB port on your computer or your USB charger.

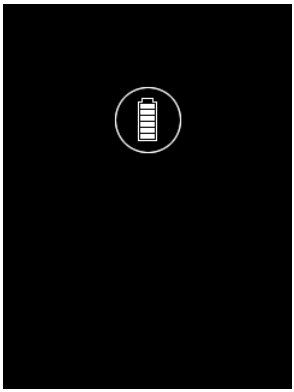
The handset automatically starts the charging process.

Indications during charging process

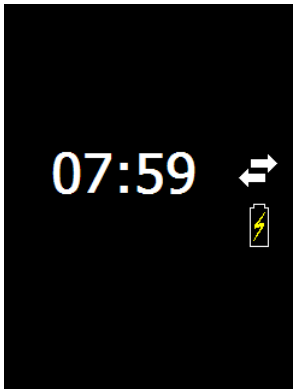
A message appears briefly in the display, the handset makes a sound and the battery icon is animated to show that the battery is charging.



Below are examples of the display when the handset is off and when the handset is in screensaver mode while charging the battery.



Handset off (animated). The icon is turned off after a while, but reappears when a key is pressed.



Screensaver mode

Note If the handset is out of use for a longer period of time, recharge the battery every two years to avoid deterioration of the battery.

Connecting the handset to your wireless access point

Note This procedure is only needed at the first connection. Once connected, the handset will automatically attempt to connect to this access point whenever it is switched on.

Do as follows:

1. Start up the wireless access point.
2. Switch on your wireless IP Handset by pressing and holding the on hook key  until the display lights up.
3. Press the center select key to enter the menu system.
4. Select **Network > Wireless network**.
5. When the list of available access points appears in the display, select the access point you want to connect to.

   Note Access points with a profile matching your IP Handset are marked with  . If this symbol is not present, you cannot connect to an encrypted network until you have set up your wireless profile to match the access point. If you select an encrypted network without a defined profile you are prompted for security settings.
6. If you are prompted for security settings, select **OK** to enter the **Profiles** menu.
7. In the Profiles menu, select the encryption used in your access point. The handset supports WEP, WPA2-PSK -AES and WPA-PSK-TKIP.
8. Select whether your encryption code is hexadecimal or text.
9. Enter your encryption code.
10. Select **Connect**.

    The handset will now attempt to connect to your wireless access point. If the access point is connected to a BGAN terminal, see *Establishing a connection using BGAN terminal* on page 21.

    When the handset is connected to the access point, the display shows **Connected**.

Establishing a connection using BGAN terminal

Using a BGAN terminal

Introduction

By connecting the handset to a BGAN terminal you gain access to the BGAN satellite network with your IP Handset.

When the IP Handset is used with the BGAN terminal, it communicates using Internet protocol between the handset and the terminal. However, on the BGAN network side of the terminal the call is transmitted as a circuit switched Standard Voice or 3.1 kHz Audio call.

When connected with the BGAN terminal the IP Handset provides a dedicated menu for the terminal.

Hardware connection

The wired handset is connected to the BGAN terminal by connecting the Ethernet cable from the cradle to one of the LAN ports of the terminal. For further information, see *Connecting the wired handset to a BGAN terminal* on page 12.

The wireless handset is connected to the BGAN terminal by connecting the Wireless access point to one of the LAN ports of the terminal. For information on how to connect the handset to the access point, see *Connecting the handset to your wireless access point* on page 20.

Establishing a connection

If no SIM PIN is required

If the handset is connected to a BGAN terminal where the SIM PIN is disabled or has already been entered, the BGAN terminal automatically sets up a SIP profile and assigns the local number 0501 to the first handset that is connected.

If one or more handsets have already been connected to the terminal, and the new handset has not been connected to the terminal before, you need to set up the user name, password and local number in the handset and in the web interface of the BGAN terminal. For further information, see *Connecting subsequent handsets to the BGAN terminal* on page 24.

When the display shows the handset ready symbol  in the upper right corner, the handset is ready for making a call.

If the handset ready symbol is crossed out  you cannot make a call. The display will normally show a message explaining why the handset is not ready.

If a SIM PIN is required

If the handset is connected to a BGAN terminal where the SIM PIN is required and has not yet been entered, you need to enter the SIM PIN for the terminal. To do so, you need to know the Administrator user name and password as well as the SIM PIN for the BGAN terminal. Do as follows:

1. From the main screen of the handset, press the center select key to enter the menu system.
2. Select **BGAN**.
3. Select **Enter PIN code**.

   Note This menu item is not available if the PIN has already been accepted. Select **Status > PIN status** to see if the PIN has been accepted.

4. Enter the Administrator user name and select **OK**.

For information on how to type text in the handset, see *Writing text in the handset* on page 47.

5. Enter the Administrator password and select **OK**.
6. Enter the SIM PIN and select **OK.**
   If the SIM PIN is rejected, see the next section *Wrong PIN*.

When the PIN is accepted, the BGAN terminal automatically sets up a SIP profile and assigns the local number 0501 to the first handset that is connected.

If one or more handsets have already been connected to the terminal, and the new handset has not been connected to the terminal before, you need to set up the user name, password and local number in the handset and in the web interface of the BGAN terminal. For further information, see *Connecting subsequent handsets to the BGAN terminal* on page 24.

When the display shows the handset ready symbol  in the upper right corner, the handset is ready for making a call.

If the handset ready symbol is crossed out  you cannot make a call. The display will normally show a message explaining why the handset is not ready.

Wrong PIN

After entering the user name and password, you have 3 attempts to enter the PIN, before you are asked to enter the PUK (Pin Unblocking Key). The PUK is supplied with your BGAN SIM card.
Enter the PUK followed by a new PIN of your own choice. The PIN must be from 4 to 8 digits long.

Caution! If you enter a wrong PUK 10 times, the SIM card will no longer be functional, and you have to contact your Airtime Provider for a new SIM card.

Connecting subsequent handsets to the BGAN terminal

Introduction

If one ore more handsets have already been connected to the terminal, you need to set up the user name, password and local number in the handset and in the web interface of the BGAN terminal.

To set up the handset

To enter the user name and password in the handset, do as follows:

1. Start up your handset as described in the previous sections.
2. Enter the menu system and select **SIP**.
3. Move to the BGAN profile and select **Options** (left select key).)
4. Select **Edit/View**.
5. Select **User name** and enter the user name for your handset. Note that the user name must be the same as the local number for your handset when using the BGAN terminal. Available numbers are 0501 to 0516.
6. Select **Password** and enter the password for your handset.
7. Exit the handset menu system.

To set up the BGAN terminal

To enter the local number and password in the web interface of the BGAN terminal, do as follows:

1. Connect a computer to the LAN interface of the BGAN terminal and start up your browser.
2. Enter the IP address for the terminal. The default IP address is 192.168.0.1. The web interface opens.
3. Select **SETTINGS > IP handsets**.

4. Locate the local number that matches the user name of your handset and click **New**.
5. Enter the password you entered in the handset.

   When the terminal and the handset have recognized each other, a "Configure" link appears next to the new handset. When you click the Configure link the internal web interface of the handset opens. For information on the handset web interface, see *Using the web server* on page 77.

Handset ready

When the display shows the handset ready symbol  in the upper right corner, the handset is ready for making a call.

If the handset ready symbol is crossed out  you cannot make a call. The display will normally show a message explaining why the handset is not ready.

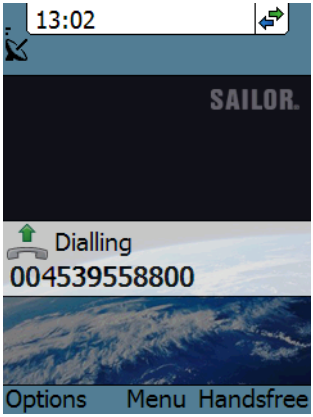
Making the first call

To make a call, type the phone number on the keypad and press the off hook key in the left side of the keypad or press **#**.

The display shows that the number is being dialled.

If the number is in the Contacts list of the handset, you can also select the number from there and dial up with the off hook key.

For further information on how to make calls, see *Making calls* on page 40.

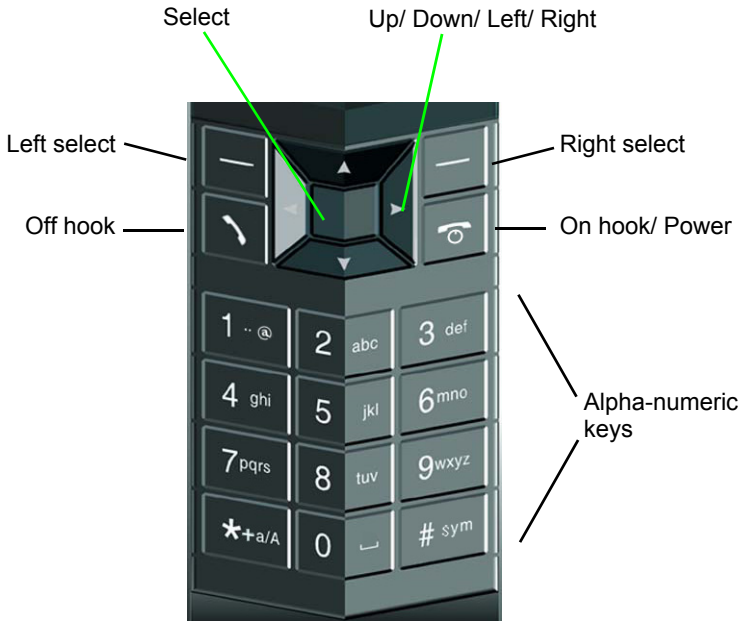


The handset keypad and display

The keypad

Overview

The following drawing shows the keypad of the handset.



The next sections explain the functions of each key in the keypad.

Control keys

The below table shows the functions of the control keys in the upper section of the keypad.

Key	Functions
	Left select. Selects the function shown just above the key (left soft key).
	Right select. Selects the function shown just above the key (right soft key). From main screen: Opens the Contacts list.
	Off hook. After entering a phone number: Initiates a call to the number. From main screen: Opens a list of the latest calls, including incoming, outgoing and missed calls.
	On hook/ Power. When the handset is ringing: Rejects the call. During a call: Ends the call. When in the menu system: Abandons the menu system and displays the main screen. Otherwise: Powers the handset on/off, when pressed and held for 3 seconds. If there is an error and the handset does not power off after approximately 3 seconds, hold the key for 10 seconds, and the handset will perform a hardware reset.

Key	Functions
	Select (center). Selects/confirms the function highlighted in the display.
▲ ◀ ▶ ▼	Navigation. Navigates through the menu system in the display. Right/Left are also used to change settings in the menus. See also *Keypad shortcuts* on page 32.

Alpha-numeric keys

This section shows the functions of the alpha-numeric keys in the lower section of the keypad.

The functions available depend on whether you are typing a phone number (number mode) or text (text mode).

In number mode, you get the number of the key pressed. Only * has two functions.

Press * once: The display shows * .

Press * twice, or press and hold: The display shows **+**.

Press #: The display shows #.

See the available functions in text mode on the next page.

In text mode, you have the functions listed below.

The * key switches between numeric, lowercase and uppercase characters.

To get numbers from lowercase or uppercase mode, press and hold the key.

At numerous presses on the same key, the character changes in the same sequence that the characters are listed in the table below.

Key	Numeric output	Lowercase output	Uppercase output
1	1	. , @ : - ?	. , @ : - ?
2	2	a b c	A B C
3	3	d e f	D E F
4	4	g h i	G H I
5	5	j k l	J K L
6	6	m n o	M N O
7	7	p q r s	P Q R S
8	8	t u v	T U V
9	9	w x y z	W X Y Z
0	0	[space]	[space]
*	Switches between lowercase, uppercase and numbers		
#	Symbols. Displays a list with the following additional symbols: . / : @ $ % ^ & * ( ) ~ ' - _ = + [ ] { } \ | ; ´ " ! < > , ? # € <CR>		

To navigate with the keypad

To enter the menu system from the main screen, press the center select key.

To move through the menus, press the navigation keys (arrows).

To select a highlighted menu item, press the center select key.

To select one of the items in the action texts area, press the key just below the text you want to select.

To go back one level in the current menu, press the right select key (only when **Back** is displayed above the key).

Keypad shortcuts

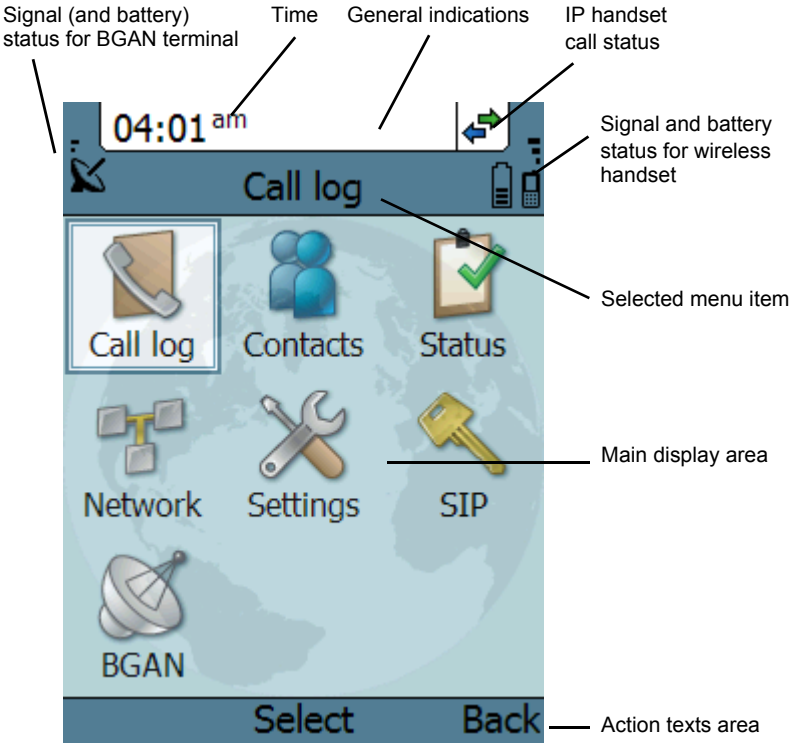
The following shortcuts are available:

▼	When the display is in the main screen, this key gives direct access to the list of contacts.
	When the display is in the main screen, this key opens a list of the latest incoming, outgoing and missed calls.
	When the display is in the menu system, the on hook key will exit the menu system and show the main screen.
	When the display is in the main screen, the right select key will open the list of contacts. From inside the Contacts list, press the first letter of an entry to access the entry in the Contacts list.
Alpha-numeric keys	When the display is in the menu system, an alpha-numeric key will jump to the menu item with the pressed number or, in the Contacts list, to the first entry beginning with the pressed letter.

The display

Overview

The color display of the IP Handset is divided into sections with different information. The sections are outlined below.



BGAN signal and battery status

When the IP Handset is connected to a BGAN terminal, the display shows the signal strength of the BGAN signal. If the BGAN terminal is battery powered, the battery status is also displayed.

Time

The display shows the time of day.

The format is selectable in the **Settings > Date and time** menu.

General indications

General indications are icons that show dynamic information such as missed calls, sounds off, keypad locked and microphone muted.

For explanations of the icons, see *Icons in the display* on page 35.

IP Handset call status

This field shows handset status such as whether or not the handset is ready for making calls, or whether there is an ongoing call.

For explanations of the icons, see *Icons in the display* on page 35.

Signal and battery status for wireless IP Handset

This field shows the signal strength for the wireless connection and battery status for the wireless handset.

Main display area

The main display area primarily displays the menus and messages to the user.

Action texts area

The action texts are used to indicate an action that takes place when the corresponding key is pressed. The corresponding key is the key directly below the text (left select, center select or right select).

Icons in the display

The below table explains the icons in your display.

Icon	Meaning
	Wireless handset (used together with signal strength and battery status).
	BGAN terminal connected (used together with signal strength and battery status if relevant).
	Signal strength for wireless handset and/or for BGAN terminal.
	Battery status for wireless handset and/or for BGAN terminal.
	The handset is ready for making calls.
	The handset is not ready for making calls.
	Incoming call - not yet answered (the handset is ringing).
	Incoming call in progress.
	Outgoing call - not yet answered.

Icon	Meaning
	Outgoing call in progress.
	Call ended.
	Missed call. See the Call log for information on the call.
	The microphone is muted. To reactivate the microphone, select **Options (left select key) > Microphone**.
	The handset is in silent mode. All external sounds from the handset - including ring tones - are muted. Voice is not muted.
	This symbol is shown when you are adjusting the volume.
	The keypad is locked. To unlock the keypad, press the center select key followed by the left select key.
	This symbol is used in the Contacts list to indicate that the number is from the phone book of the BGAN terminal and is read-only.
	When an alpha-numeric key is pressed from inside the Contacts list, this symbol is shown while the handset is searching for entries with the letter pressed.

Icon	Meaning
	Wait - a task is in progress.
	Shown in the list of wireless access points: The wireless connection is encrypted.
	Shown in the list of wireless access points: The wireless connection is not encrypted.
	Shown in the list of wireless access points: The profile for the wireless access point matches the handset.

Screensaver

You can choose to have a screensaver activated when the handset is not used for 1 minute. This screen shows only the time, handset status and general indications such as missed calls.

When you press a key the display returns to the normal display function.

To enable or disable the screensaver, enter the menu system, select **Settings > Display** and select **Screensaver**. When the box is checked, the screensaver is enabled.

What's next?

After reading this chapter you should be able to connect the IP Handset, start up and make a call.

The next chapters provide more information on the user interfaces and the setup of the IP Handset. The following chapter, *Operating the IP Handset*, explains how to setup and use the IP Handset.

Operating the IP Handset

In this chapter

This chapter describes how to use the IP Handset. It also describes how to configure the handset and use the display menu system, including a short description of how to use the IP Handset with a BGAN terminal.

For information on how to connect and start up the handset, and how to navigate with the keypad, refer to the previous chapter, *Getting started*.

User interfaces

The main user interface for the handset is the display menu system. However, with a computer and a browser you can also use the built-in **web server** to access the handset. This way you can take advantage of a larger screen and still access a subset of the handset settings.

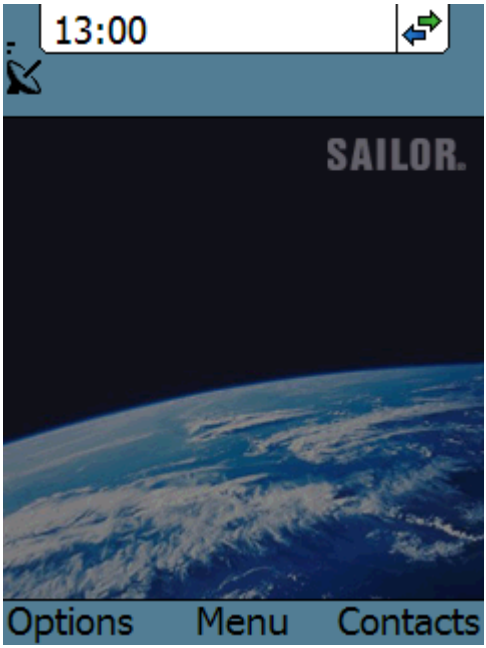
- **The display menu system** is described in *The menu system* on page 49. For an overview of the keys and display, and explanation of keys and display symbols, see *The handset keypad and display* on page 27.
- **The web server** is described in *Using the web server* on page 77.

Handset functions

Making calls

Handset ready

When the status field for the IP Handset shows ready , you can make or receive calls.

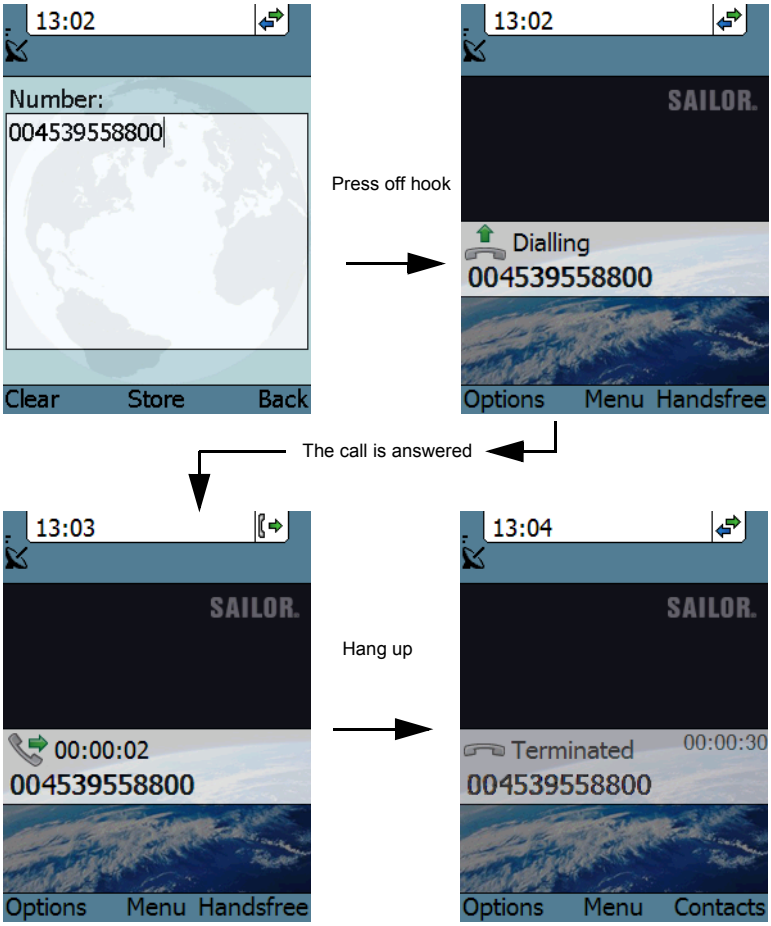


To make a call

To make a call, simply type the phone number and press or **#**.

Note If the handset is in the cradle while you make the call, the mode will automatically be hands-free (default function). For further information, see *To set up the function of the cradle* on page 66.

The display shows the progress as follows:



You can also call a number from your contacts or from a list of recent calls:

- **Contacts**: Press the right select key from the main screen and move to the contact you want to call. Then press the off hook key.
- **Recent calls**: To see the latest calls (incoming, outgoing and missed calls), press from the main screen. Press again to call the selected number.

For information on how to make calls using a BGAN terminal, see *Making a call using a BGAN terminal* on page 43.

To receive a call

When the handset is ringing, the display shows the calling name or number, if known.

Answer the call by pressing the off hook key in the left side of the keypad , or by removing the handset from the cradle. For information on cradle detection, see *To set up the function of the cradle* on page 66.

Note If the handset is in the cradle while you answer the call, the mode will automatically be hands-free (by default).

Any open menus are closed down when the handset is ringing.

You can see unanswered calls under **Call log** in the IP handset menus or in the web interface.

To end or reject a call

Press the on hook key to end an ongoing call or to reject an incoming call.

When the handset is in hand-held mode, you can also end the call by placing the handset in the cradle.

Making a call using a BGAN terminal

To make a call from a handset connected to a BGAN terminal

To make a call from a phone or handset connected to a BGAN terminal, dial

00 <country code> <phone number> followed by or **#**.

Example: To call the number +45 39558800, dial **00 45 39558800** followed by  or **#**.

Note

The default call type is set up in the web interface of the BGAN terminal. However, you can select the call type for your call, using a prefix.

Dial **1** * before the number to make a Standard Voice call.

Dial **2** * before the number to make a 3.1 kHz Audio call.

Example: Dial **2** * **004539558800** to make a 3.1 kHz Audio call to the number +45 39558800.

For further information on call types and the BGAN terminal, refer to the user manual for your BGAN terminal.

To make a call to a handset connected to a BGAN terminal

Note

By default all handsets connected to the terminal will ring on incoming calls.

To make a call to a handset connected to the terminal, dial

+870 <Mobile number>

- **+** is the prefix used in front of the country code for international calls. This is **00** when calling from most countries.
- **Mobile number**: The mobile number of the terminal you are calling.

Example: If you are calling from Denmark and the mobile number for 3.1 kHz Audio is 772112345 on your terminal, and you want to make a call to the terminal using 3.1 kHz Audio, dial **00 870 772112345**.

To see the mobile numbers of your terminal, refer to the information included with your airtime subscription.

Note There are two Voice numbers, one for Standard Voice and one for 3.1 kHz Audio.

For more information on call types and the BGAN terminal, refer to the user manual for your BGAN terminal.

Quick settings

To control the volume

To adjust the voice volume during a call (with the display in the main screen), press ▲ or ▼ on the keypad.

To use hands-free operation

To enable hands-free operation during a call, use the right select key to select **Handsfree**. To go back to hand-held mode, press the right select key again.

In hands-free mode the sound is routed to a speaker, so that you can use the phone without holding it close to the ear. You can adjust the volume with ▲ or ▼ as described in the previous section.

Handset in cradle:

You can also make a hands-free call by leaving the handset in the cradle while making the call. Similarly you can answer a call using hands-free mode by leaving the handset in the cradle while answering the call.

In both cases, the default function is as follows:

- If you remove the handset from the cradle during the call, the mode will automatically change to hand-held.
- When the handset is out of the cradle in **hand-held** mode, the call will be terminated when you put the handset back in the cradle.
- When the handset is out of the cradle in **hands-free** mode, you can put it back in the cradle without terminating the call.

Note You can change this default function under **Settings > Cradle**, if you want the handset to be independent of the cradle. For further information, see *To set up the function of the cradle* on page 66.

To mute the microphone

To mute the microphone during a call, select the left **Options** menu and select **Microphone mute**.

To lock the keypad

To lock the keypad, select the left **Options** menu and select **Lock keypad**.

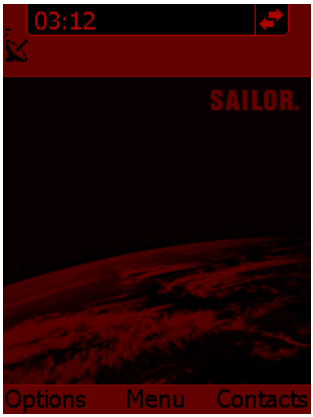
When the keypad is locked you can still answer incoming calls.

To unlock the keypad, press the center select key and then the left select key.

To use night mode

The display has a night mode for operation in low light areas. In night mode, the colors are changed to make the display more suitable for night operation.

To activate night mode, select the left **Options** menu and select **Night mode**.



To use stealth mode

The display has a stealth mode which turns off all lights and/or sounds for external events. Note, however, that the keypad will still light up when you press a key.

To activate stealth mode, select the left **Options** menu and select **Stealth mode**.

Note Stealth mode is only activated for the items you have selected in the Stealth mode menu. See *To use stealth mode* on page 64.

Writing text in the handset

How to use the keys

Press * before the alpha-numeric key to switch between lower case, upper case and numbers.

There are 3 or 4 letters on each key. To obtain the other letters on the key, press the key again.

To move the cursor in the text, use the arrow keys.

To delete the letter just before the cursor, press the left select key **Clear**. Hold the key to delete all the text.

For a list of the key-functions in text-mode, see the table on page 31.

Example

To type “He”, do as follows:

1. Press * one or two times until the lower left corner of the display shows upper case letters.
2. Press the key **4 ghi** two times to display the letter **H**.
3. Press * again until the lower left corner of the display shows lower case letters.
4. Press the key **3 def** two times to display the letter **e**.

Using a headset

You can connect a headset to the wireless IP Handset as follows:

Plug the headset jack into the jack connector on the side of the handset.

The microphone and speaker of the handset are automatically disabled and the headset is used instead.

The menu system

Accessing the menu system

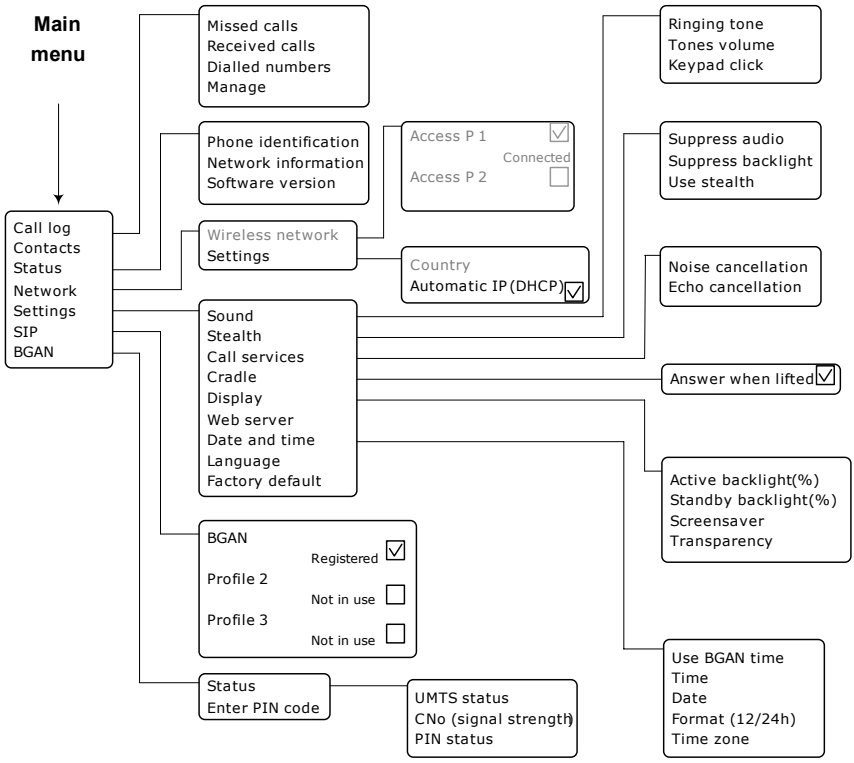
To access the menu system from the main screen, press the center select key.

Move around in the menus with the arrow keys and select with the select keys. Leave the menu system by pressing the on hook key.

Menu overview

The following drawing shows an overview of the menu system.

Note The **Wireless network** menu under Network and the **Country** menu under Network > Settings are not present in the wired handset!



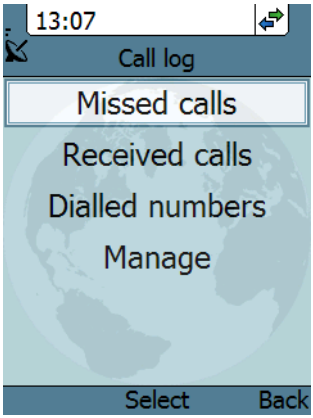
Call log

To see the call log

Note that the call log can hold maximum 100 calls. You can delete calls from the call log. For further information, see the next pages in this section.

Do as follows:

1. From the main menu, select **Call log**.
2. Select the list you want to see.
3. If you want to see details for a call, move to the call and select **View**.
   The display shows the name (if known), the number, time of the call and duration.



To add a number from the call log to the Contacts

Do as follows:

1. In the call log, go to the call and select **Options.**
2. Select **Add to contacts**.
   Note that the Contacts list can hold maximum 100 entries.
3. Type in the name of your new contact and select **OK**.

To delete a number from the call log

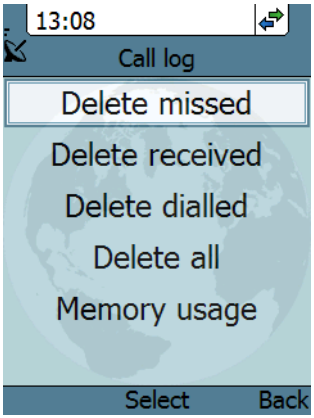
Do as follows:

1. In the call log, go to the call and select **Options.**
2. Select **Delete**.
3. Select **Yes**.

To delete all numbers in a call log folder

Do as follows to delete all numbers in the call log, or all numbers in a subfolder of the call log.

1. In the call log menu (not in one of the subfolders) select **Manage**.
2. Select the folder you want to empty.
3. Select **Yes**.



To see memory usage in the call log

To see the number of stored entries and the maximum allowed number of entries, do as follows:

1. In the call log menu (not in one of the subfolders) select **Manage.**
2. Select **Memory usage**.

Contacts

To see your contacts

Do one of the following:

- From the main screen, press the right select key,
- from the main screen, press ▼, or
- from the main menu, select **Contacts**.

If a contact is from the BGAN phone book it is marked with  . This means you cannot edit or delete the entry.

To call a contact

Do as follows:

1. In your Contacts list, scroll to the contact you want to call.
2. Press the off hook key.

To add a contact

Do as follows:

1. In your Contacts list, press the left select key, **Options**.
2. Select **Add**.
   Note that the Contacts list can hold maximum 100 entries.
3. Type in the name of your contact and select **OK**.
   The name can be maximum 32 characters.
   For information on how to enter text, see *Writing text in the handset* on page 47.
4. Scroll to **Number** and select **Edit**.
5. Type in the number of your contact and select **OK**.
   The number can be maximum 32 characters.

To edit a contact

Do as follows:

1. In your Contacts list, scroll to the contact you want to edit.
2. Press the left select key, **Options**.
3. Select **View/Edit**.
4. Select **Edit**.
5. Change the name of your contact and select **OK**.
   For information on how to enter text, see *Writing text in the handset* on page 47.
6. Scroll to **Number** and select **Edit**.
7. Change the number of your contact and select **OK**.

To delete a contact

Do as follows:

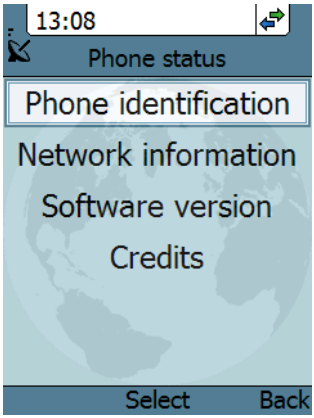
1. In your Contacts list, scroll to the contact you want to delete.
2. Press the left select key, **Options**.
3. Select **Delete**.
4. Press the left select key, **Yes**.

The contact is now deleted from your Contacts list.

Status

To view status for the handset, do as follows:

1. From the main menu, select **Status**.
2. Select **Phone identification** to see the serial number of the IP Handset.
3. Select **Network information** to see:
   - DHCP Enabled/Disabled
   - IP address
   - Subnet mask address
   - Default gateway
   - Physical address (MAC)
4. Select **Software version** to see the version of the IP Handset software.



Network

Note The Wireless network menu described in the following sections is only available in the wireless handset. For the wired handset, go to *To select the IP mode* on page 61.

To connect to the wireless network

If your handset has been connected to the wireless access point before, it will automatically attempt to establish a connection as soon as the access point is within reach.

If it is the first time you connect your handset to the wireless access point, you need to manually connect to the access point.

To connect to the access point, do as follows:

1. Start up your wireless access point.
2. Start up the handset.
3. Enter the menu system and select **Network > Wireless network**.

   A list appears with all wireless access points within reach, together with previously connected access points.

   - means the handset already has a profile for this access point.
   - means the access point uses encryption.
   - means the access point does not use encryption.

   The connected access point (if any) is always placed at the top.

4. Select **Connect** at the network you want to connect to.

If your access point does not use encryption, the handset will automatically connect and create a new profile for the access point.

If your access point uses encryption and it is the first time you connect, you will be prompted for security settings.

Select **OK** to enter the Profiles menu. Then enter the encryption key as described in the next section (from step 5).

When the profile matches the access point, and you have selected **Connect**, the handset will attempt to establish a connection. If the access point is connected to a BGAN terminal, see *Using a BGAN terminal* on page 21 for information on how to connect to the BGAN network.

When the handset is ready for use, you will see the handset ready symbol in the top right corner of the display.

To edit a Wireless network profile

To edit a Wireless network profile, do as follows:

1. From the main menu, select **Network > Wireless network**.
2. Select the access point you want to change profile for.
3. Press the left select key, **Options**.
   Note that if no profile is defined for the selected access point, this menu will only show Connect and Manage.

4. Select **Edit/View profile**.
   There are four types of profile, depending on the type of encryption used. The four types of encryption are:
   - WEP
   - WPA-PSK-TKIP
   - WPA2-PSK-AES
   - No security

   The SSID and security mode of the selected access point are automatically detected by the handset.
5. If you are using WPA or WPA2, select whether you want to enter the encryption key in hexadecimal numbers or text.
6. Enter your encryption key.
7. Select one of the following:
   - Connect (left key) if you want to connect immediately to the access point, or
   - Back (right key) if you want to save the profile for later.

To delete a Wireless network profile

To delete a Wireless network profile, do as follows:

1. In the Wireless network list, go to the access point for which you want to delete the profile.
2. Select **Options** (left select).
3. Select **Delete profile**.
4. Select **Yes** (left select).

The profile for the selected access point is now deleted. If the access point uses encryption, your handset will not be able to connect to the access point unless the security settings are entered again.

To delete all Wireless network profiles

To delete all Wireless network profiles, do as follows:

1. From the Wireless network list, select **Options** (left select).
2. Select **Manage**.
3. Select **Delete all profiles**.

Important When you delete all profiles you will not be able to connect to any access point using encryption, unless you enter the security settings again!

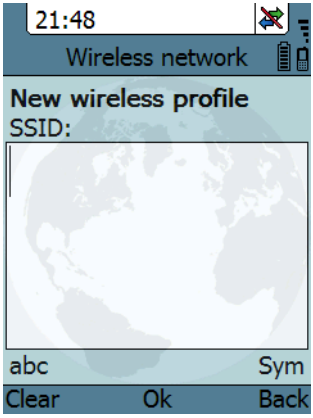
4. Select **Yes** (left select) to confirm.

To create a new Wireless network profile

Normally a new profile is automatically created when you connect to an access point.

If you need to define a profile for an access point that is not currently within reach, do as follows:

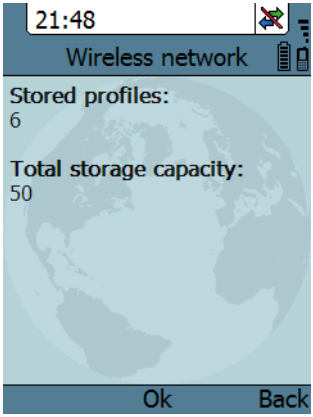
1. From the Wireless network list, select **Options** (left select).
2. Select **Manage**.
3. Select **Add profile**.
4. Type in the SSID of the access point.
5. Select **OK**.
   A new profile is now created
6. Enter the security information for the access point. For further information, see *To edit a Wireless network profile* on page 58.



To see memory usage in the list of Wireless network profiles

To see the number of stored profiles and the maximum allowed number of profiles, do as follows:

1. From the Wireless network list, select **Options** (left select).
2. Select **Manage**.
3. Select **Memory usage**.



To set the country for wireless network use

To make sure you have the right settings for the country your handset is currently located in, you have to enter the country in the handset.

Important In some countries, the use of WLAN is not allowed. Before continuing, make sure WLAN is allowed and licensed in the country where you intend to use it.

To enter the country, do as follows:

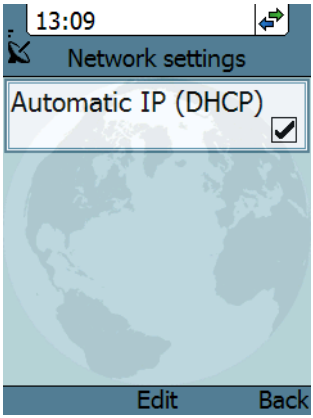
1. Select **Network > Settings > Country**.
2. Scroll to the country your handset is located in and select it.
   If the country is not in the list, select **Other**.

To select the IP mode

You can select whether or not the IP Handset should use DHCP to obtain a dynamic IP address. We recommend using DHCP.

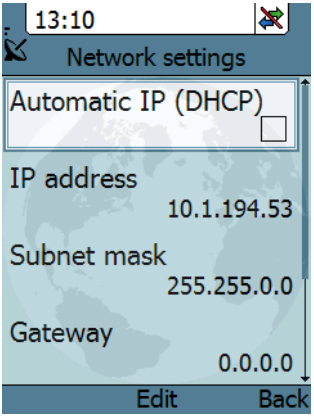
Do as follows:

1. From the main menu, select **Network**.
2. Select **Settings**.
3. Do one of the following:
   - If the IP Handset should use DHCP to automatically obtain an IP address, check the box next to **Automatic IP (DHCP)** and select **Back** or press on hook to exit completely.
   - If the IP address is to be a static IP address, clear the box next to **Automatic IP (DHCP)**. Then select **Yes** to confirm and continue to the next step.



4. If you selected not to use DHCP, scroll down to **IP address**.
5. Click **Edit**, type in the IP address and select **OK**.
6. Continue to **Subnet mask**, **Gateway**, **Primary DNS** and **Secondary DNS** and enter them in the same way.
7. Select **Back** or press on hook to exit.

   The handset will now use the static information you entered, in stead of using DHCP.



Settings

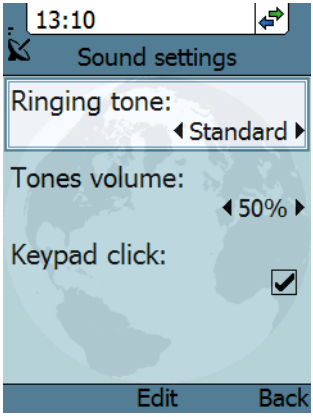
Overview

To access the Settings menu, select **Settings** from the main menu.

To adjust the sound

To adjust the sounds of the handset, do as follows:

1. From the **Settings** menu, select **Sound**.
2. Move to the sound you want to adjust.
3. For **Keypad click**, select **Edit** to change the setting.
4. For the other settings, use the keys ◀ and ▶ to change the setting, or select **Edit**, select the setting you want and select **OK**.



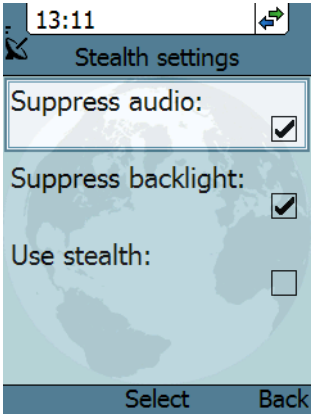
To use stealth mode

Stealth mode is used when the IP Handset should not be noticed. You can select stealth for sound, for light, or for both.

Do as follows:

1. From the **Settings** menu, select **Stealth**.
2. Move to **Suppress audio** and/or **Suppress backlight** and select **Edit** to change the setting.

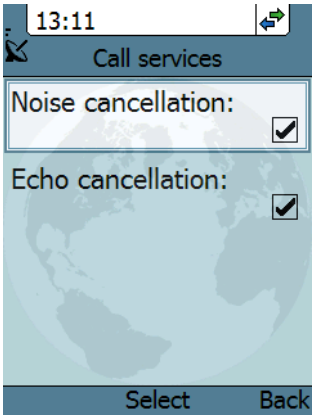
   Note These settings are only activated when **Use stealth** is checked.
3. Move to **Use stealth** and press **Edit** to check/clear the box.
4. When stealth is set up in this menu you can activate and deactivate it from the main screen by selecting **Options > Stealth**.



To enable or disable Noise cancellation and Echo cancellation

Do as follows:

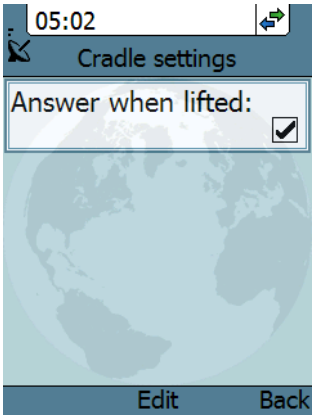
1. From the **Settings** menu, select **Call services**.
2. Move to **Noise cancellation** and/or **Echo cancellation** and use **Select** to change the setting.
   - Echo cancellation should normally be checked (on).
   - Noise cancellation should only be checked when the handset is used in a noisy environment.



To set up the function of the cradle

You can select whether the handset should detect the cradle or not. Do as follows:

1. From the **Settings** menu, select **Cradle**.
2. To have the handset detect whether or not it is in the cradle, check the box. This is the default mode. The function is as follows:
   - You can answer calls by removing the handset from the cradle, and terminate a call by putting the handset back in the cradle.
   - The handset automatically changes to hands-free when you make or answer a call with the handset in the cradle.

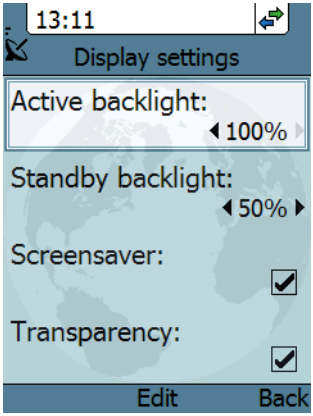


   - If you take the handset from the cradle during the call, it automatically changes back to hand-held.
   - In hand-held mode, when you put the handset in the cradle, the call is terminated.
   - In hands-free mode, when you put the handset in the cradle the call is not affected.
3. To make the handset independent of the cradle, clear the box.
   This means you must always use  or **#** and  to start and end calls, and you can only enable or disable hands-free operation by using the keypad.

To set up the display

To change the display settings, do as follows:

1. From the **Settings** menu, select **Display**.
2. Move to the setting you want to change.
3. For the backlight settings, use the keys ◀ and ▶ to change the percentage.
   Standby backlight can be set to maximum 50%, and the Standby backlight cannot be set higher than the Active backlight.
4. For the remaining settings, select **Edit** to check/clear the box.



The backlight is on for 15 seconds after the last key press.

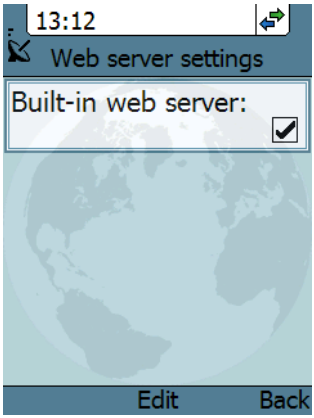
The screensaver is activated 1 minute after the last key press.

To enable or disable the web server

To enable or disable the built-in web server of the handset, do as follows:

1. From the **Settings** menu, select **Web server**.
2. Select **Edit** to enable or disable the web server. The default settings is enabled (checked).

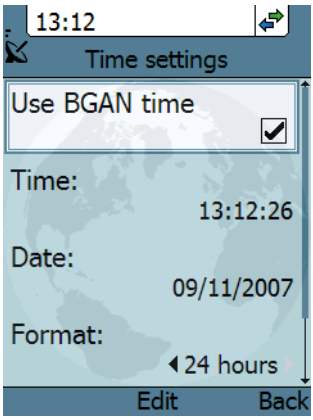
For information on the web server, see *Using the web server* on page 77.



To set the date and time

Note The date and time is only maintained as long as the handset is powered!

To set the date and time, do as follows:



1. From the **Settings** menu, select **Date and time**.
2. If your handset is connected to a BGAN terminal and you want to use the UTC time received from the BGAN satellite, select **Use BGAN time**. Then leave the menu.
3. If you want to set the date and time manually, clear the **Use BGAN time** box. Then continue to the following steps.
4. To change the time, move to **Time:** and press **Edit**. Then type in the new time and select **OK**. The new time is activated immediately.
5. To change the date, move to **Date:** and press **Edit**. Then type in the new date and select **OK**.
6. To switch the time format between 24h and 12h, use the keys ◀ and ▶, or select **Edit** and select the wanted format.
7. To change the time zone, use the keys ◀ and ▶, or select **Edit** and select the wanted time zone.

To select the language

This setting is for future use. Only English language is available at this time.

To apply factory default settings

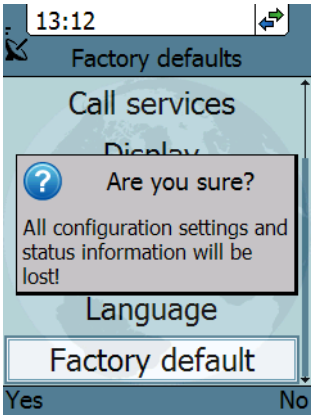
To return to factory default for all settings, do as follows:

1. From the **Settings** menu, select **Factory default**.

   Important All settings and status information are lost when you accept this setting!

2. Select **Yes**.

   All settings and status information are now changed to factory default settings. Note that in some cases this operation may take up to 30 seconds.



SIP

Overview

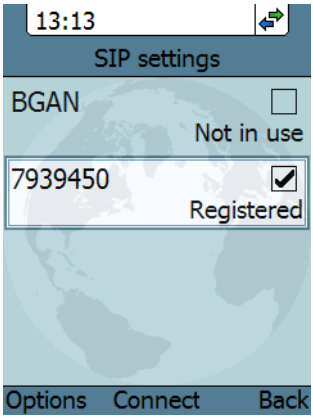
The handset communicates using Session Initiation Protocol (SIP). The profile used for communication depends on your subscription.

To activate a profile

The default profile is the BGAN profile, which is used when the IP Handset is connected to a BGAN terminal.

To activate a profile, do as follows:

1. From the main menu, select **SIP**.
2. Move to the profile you want to use for communication, and select **Connect**.

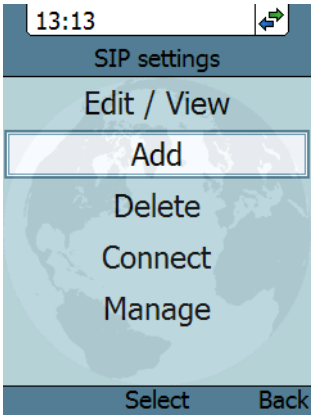


To add a new SIP profile

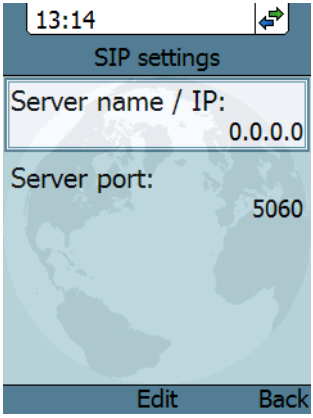
The handset can hold up to 10 profiles.

Do as follows:

1. In the SIP menu, select **Options** (left select key).
2. Select **Add**.
3. Type in the name to use for the new profile and select **OK**.



4. Move to **SIP server** and select **Edit**.
5. At **Server name / IP:**, select **Edit** again.
6. Type in the server name (URL) or IP address and select **OK**.
7. Type in the port number for the SIP server and select **OK**.
8. Select **Back**.



9. Continue through the items in the list, selecting **Edit**, typing in the information and entering with **OK**.

   The items are:

   - **User name**
     When connecting to a BGAN terminal, the user name should be the same as the local number for the handset.
   - **Password**
     When connecting to a BGAN terminal, the password must match the handset password entered in the terminal.
   - **Codec priority**
     Select the codec type that should have the highest priority. You may select G.711 or G.729 A/B.

10. When you have made your changes, select **Back**.
11. If you want to connect immediately with the new profile, select **Connect**. If not, select **Back** to leave the menu.

To edit a profile

1. In the list of profiles, go to the profile you want to change and select **Options > Edit/View**.
2. Edit the settings as described in the previous section.

Note For the BGAN profile, only the user name and password can be changed. The default user name and password are 0501 and 0501.

To delete a profile

Do as follows:

1. In the SIP menu, move to the profile you want to delete and select **Options**.
2. Select **Delete**.
3. Select **Yes**.

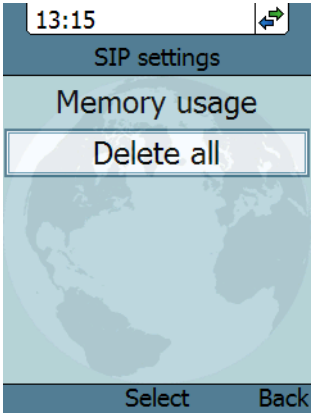
To delete all profiles

Do as follows:

1. From the SIP settings menu, select **Options** (left select key).
2. Select **Manage**.
3. Select **Delete all**.

Important All profiles except BGAN are deleted - this means that you will only be able to connect your handset using the BGAN profile.

4. Select **Yes**.



To see memory usage in the list of SIP profiles

To see the number of profiles in the list and the maximum allowed number of profiles, do as follows:

1. From the SIP settings menu, select **Options** (left select key).
2. Select **Manage**.
3. Select **Memory usage**.

BGAN

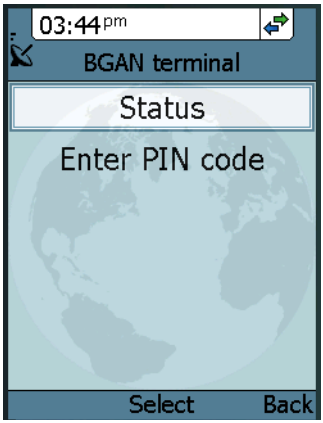
Overview

When the IP Handset is connected to a BGAN terminal, the handset provides a dedicated BGAN menu for the terminal. The following sections describe this menu.

To see the BGAN status

Do as follows:

1. From the menu system select **BGAN**.
2. Select **Status**.
   The status menu shows the following information:
   - **UMTS status** shows the status of the BGAN connection, for example Ready or Registering.
   - **CNo** shows the signal strength of the BGAN connection.
   - **PIN status** shows status of the PIN, for example whether the terminal is waiting for a PIN.



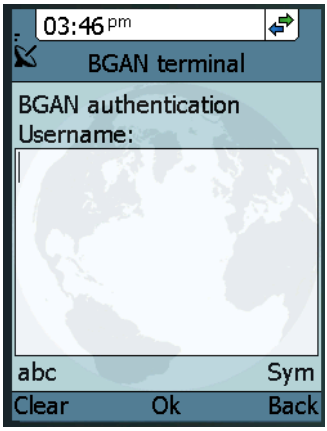
To enter the PIN for the BGAN terminal

Note that this menu item is only available if the BGAN terminal is waiting for a PIN.

Do as follows:

1. From the **BGAN** menu select **Enter PIN code**.
2. Type in the Administrator user name for the terminal and select **OK**.

   For information on how to type text in the handset, see *Writing text in the handset* on page 47.
3. Type in the Administrator password for the terminal and select **OK**.
4. Type in the PIN for the terminal and select **OK**.



What's next?

This chapter has described the basics of how to use the IP Handset.

The following chapter, *Using the web server*, describes how to use the built-in web server of the IP Handset.

Using the web server

In this chapter

This chapter describes how to use the web server in your IP Handset system.

Introduction

The web server

The web server is built into the IP Handset and is primarily used for uploading software and for editing contacts.

You can access the web server from a computer connected to the BGAN terminal you are using for your handset. Use a standard Internet browser.

Internet Explorer 6.0 and 7.0 on Windows, Firefox 2.0 on Windows, Firefox on Linux and Safari on MAC have been tested successfully with the web server. You may be able to use other browser versions as well.

Browser settings

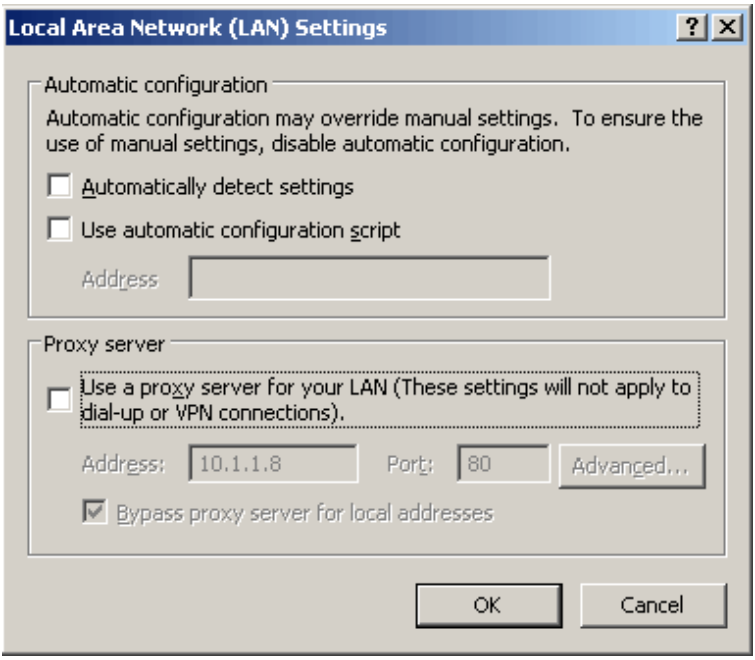
The **Proxy server** settings in your browser must be disabled before accessing the web server.

Most browsers support disabling of the Proxy server settings for one specific IP address, so you can disable Proxy server settings for the web server only, if you wish. Consult your browser help for information.

To disable the use of a Proxy server completely, do as follows:

Note The following description is for Microsoft Internet Explorer. If you are using a different browser, the procedure may be different.

1. In Microsoft Internet Explorer, select **Tools > Internet Options > Connections > LAN Settings**.



2. Clear the box labeled **Use a proxy server for your LAN**.
3. Click **OK**.

When the proxy server settings are disabled, close your browser.

You may need to change this setting back on return to your Internet connection.

Accessing and navigating the web server

To access the web server

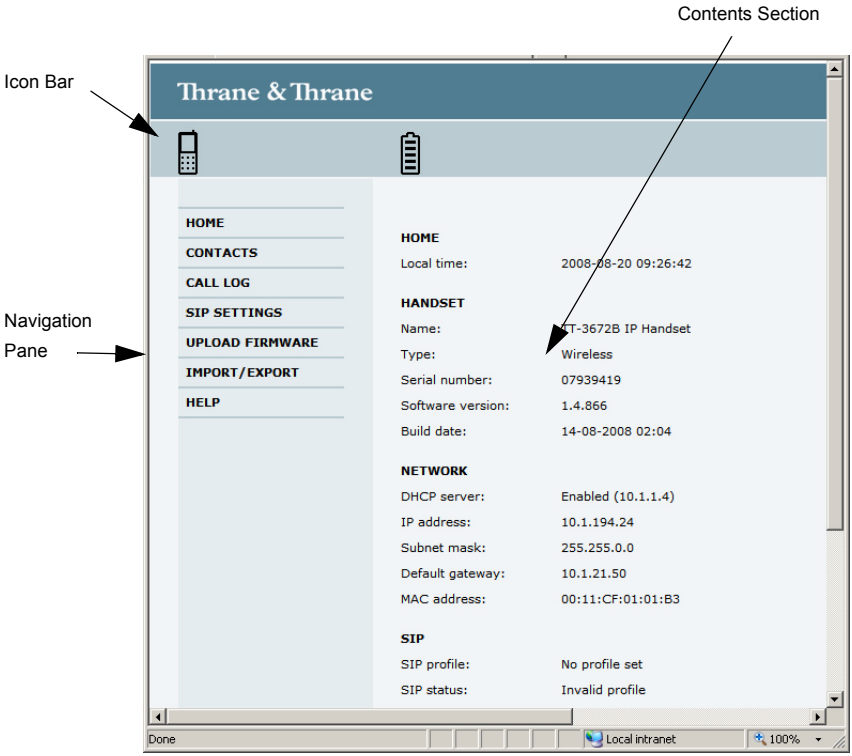
To access the web server from a computer, do as follows:

1. Start up your computer, the BGAN terminal and the IP Handset.
2. Connect your computer to the BGAN terminal using a standard LAN cable.
3. Connect your IP Handset to the BGAN terminal as described in *Getting started* on page 7.
4. Open your browser on the computer and enter the IP address of the IP Handset.

   You can find the IP address in the handset menus under **Status > Network information**.

Overview of the web server

The web server consists of the following sections.



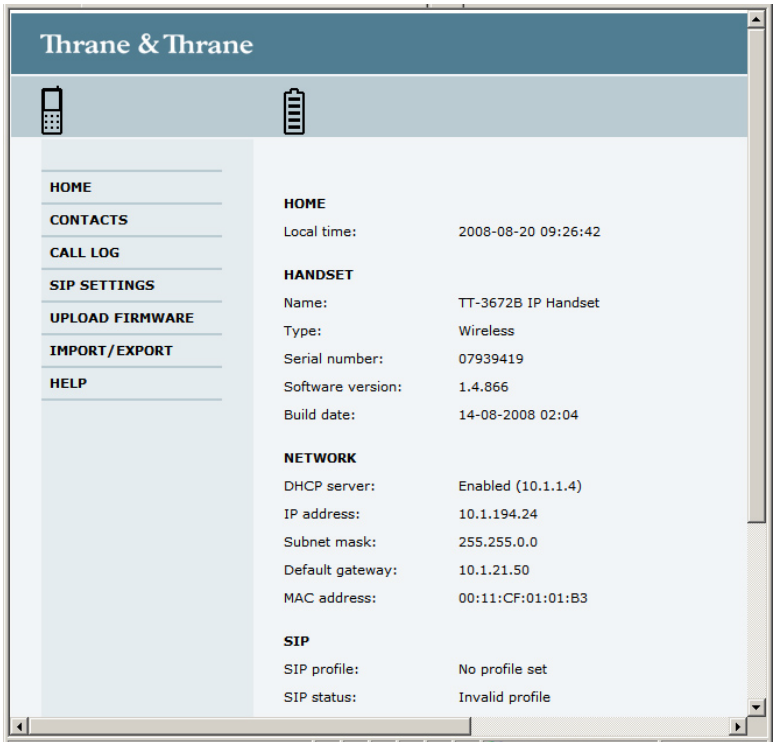
- The **navigation pane** holds the main menu. Clicking an item in the menu opens a submenu in the navigation pane or a new page in the contents section.
- The **icon bar** shows a handset icon to indicate that it is the internal web server of the handset (and not of a BGAN terminal). If the handset is wireless, a battery icon shows the status of the battery. When you pass the cursor over the battery icon a text shows the status, e.g. “Battery: 67%, charging”.
- The **contents section** shows the page selected in the navigation pane. This section is used for viewing or changing settings, or for performing actions.

Pages in the web server

The Home page

The web server starts up on the Home page. To go back to the Home page from another location in the web server, select **Home** from the left navigation pane.

The Home page shows properties and network settings of the handset. The page is automatically updated every 5 seconds.

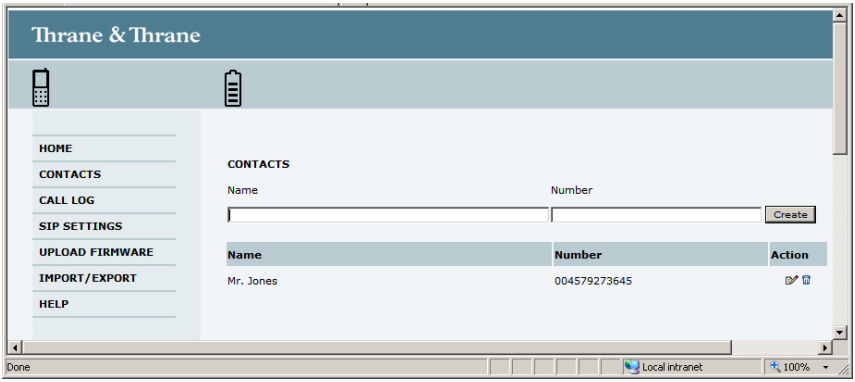


Contacts

The web server gives access to the Contacts list of the handset.

Select **CONTACTS** from the left navigation pane. The page shows the name and number of all contacts in the handset.

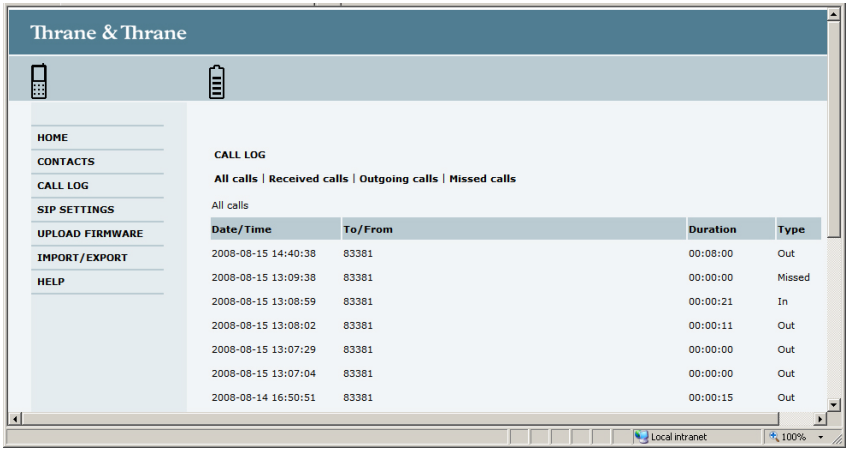
You can sort the list by name or number by clicking **Name** or **Number** in the heading row of the list.



- To add a new contact, type in the name and number at the top of the page and click **Create**. The Contacts list can hold 100 entries.
- To delete a contact, click next to the contact you want to delete.
- To edit a contact, click next to the contact you want to edit, and make your corrections.

Call log

To display the call log of the handset, select **CALL LOG** from the left navigation pane.



For each call the CALL LOG page shows date and time, phone number, duration and whether the call was incoming, outgoing or missed. If the phone number is in the Contacts list, the name of the contact is shown with the number.

The latest calls are listed first.

If you only want to see a subset of the calls, select one of the sub-groups at the top of the page. You can select Received calls, Outgoing calls or Missed calls.

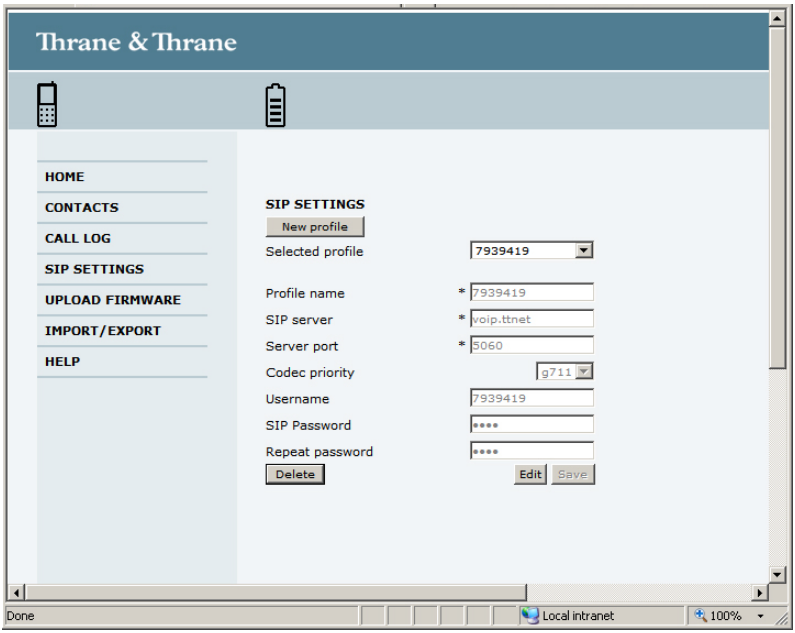
SIP settings

Overview

The handset communicates using SIP (Session Initiation Protocol).

To view the SIP settings of the handset, select **SIP SETTINGS** from the left navigation pane.

The page shows the settings for the current SIP profile.



To add a new profile

The list of SIP profiles can hold maximum 10 profiles.

To add a new profile, do as follows:

1. Click **New profile** at the top of the page.
2. Fill in the list.
   You may not need to fill in all items in the list. Mandatory fields are marked with * .
3. Click **Save** at the bottom of the page.

To edit a profile

Do as follows:

1. From the **Profile** scroll list select the profile you want to edit.
2. Change the settings according to your needs.

   Note For the BGAN profile, you can only change the user name and password. Be careful if you change these - the user name is also the local phone number.
3. Click **Save** at the bottom of the page.

To delete a profile

Do as follows:

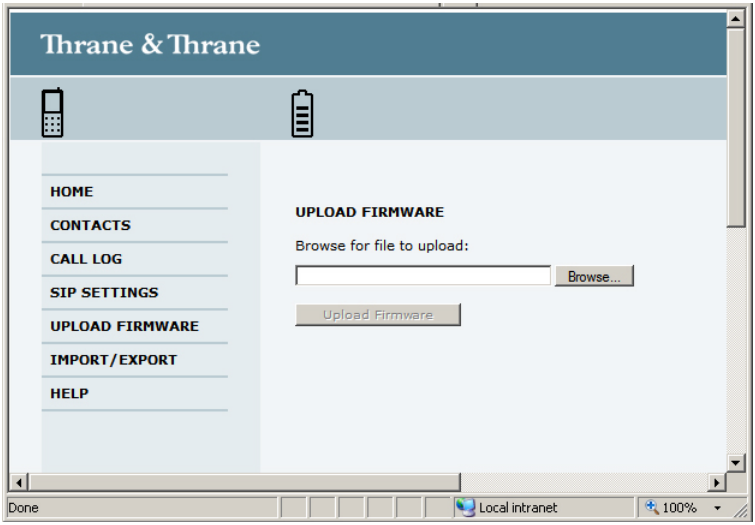
1. From the **Profile** scroll list select the profile you want to delete.
2. Click **Delete** at the bottom of the page.

Uploading firmware

You can use the web server to upload firmware from your computer to the IP Handset.

Do as follows:

1. Select **UPLOAD FIRMWARE** from the left navigation pane.



2. Click **Browse** and locate the firmware you want to upload to the IP Handset.
3. CLick **Upload firmware**.

   The handset initiates firmware upload, showing the progress in the display. When upload is done, the handset automatically restarts with the new firmware.

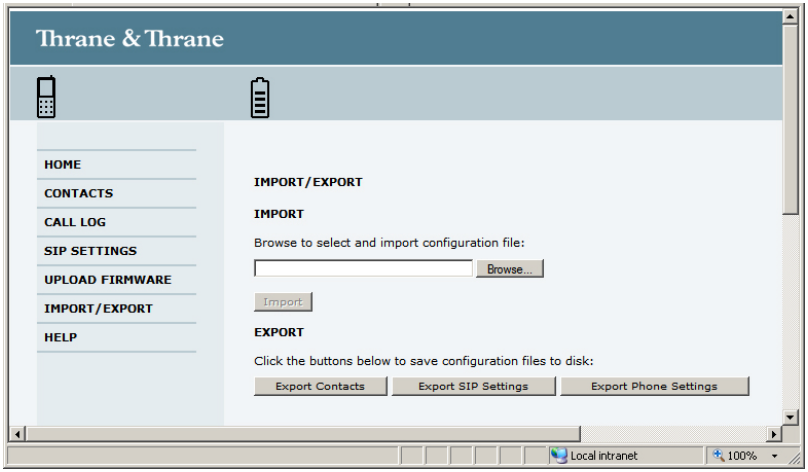
Note After uploading firmware to the handset, you may have to refresh your Internet browser for the web server to display correctly. To refresh the browser, press <shift>+<F5>.

Import/Export settings

Overview

You can import settings to your handset from a file, or export settings from the handset to a file. Using the settings files you can easily copy settings from one handset to another.

Select **IMPORT/EXPORT** from the left navigation pane.



To export settings

You may export a subset of the settings to a file as follows:

1. In the **IMPORT/EXPORT** page, click a button under **EXPORT** to create a settings file. You may export Contacts, SIP settings or Phone settings.
2. Click **Save**, browse to the location where you want the settings file, and click **Save** again.

The file is now saved in the location you specified.

To import settings

There are three types of settings file, each containing a subset of the handset settings. The name of the file indicates which settings are included in the file.

1. Click **Browse**.
2. Browse to the location where the settings file is saved and select the file you want to import.
3. Click **Open**.
4. Click **Import**.

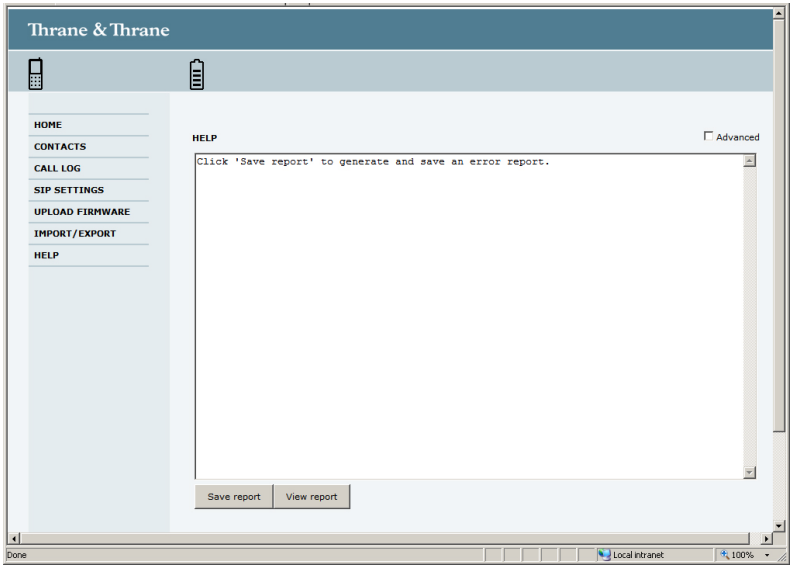
The settings in question are now replaced by the imported settings.

Help

If you are reporting an error with your IP Handset, you may be asked to provide a diagnostics report. The diagnostics report includes information that can be very useful for a service technician.

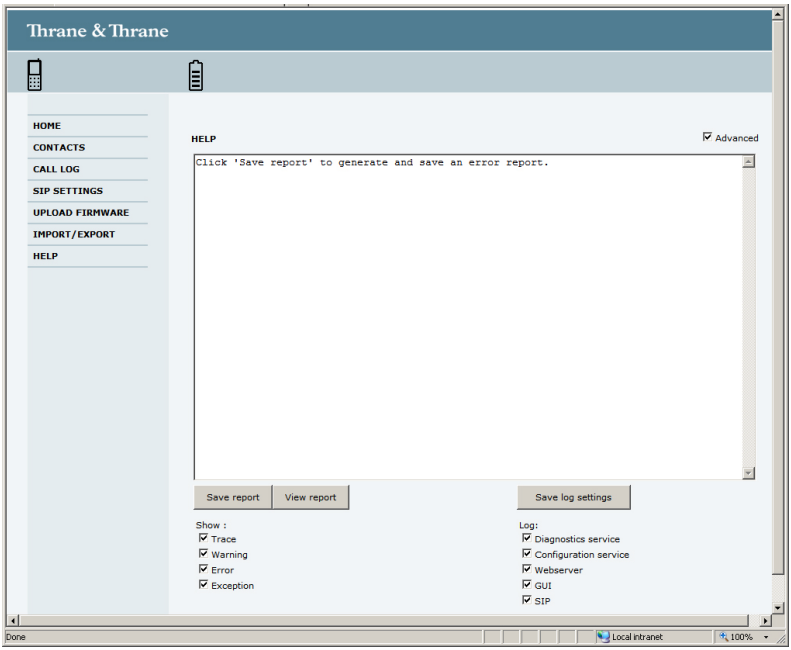
To save a diagnostics report, do as follows:

1. Select **HELP** from the left navigation pane.



2. Click **Save report**.

3. If your service technician needs specific information included in the report, click **Advanced** and select the items needed. Then click **Save report**.



What's next?

This chapter has described how to use the built-in web server of the IP Handset.

The following chapter, *Troubleshooting*, describes how to troubleshoot errors in the handset, and how to get support if necessary.

Troubleshooting

In this chapter

This chapter gives guidelines for troubleshooting,

Getting support

If this manual does not provide the information required to solve your problem, you may want to contact your Airtime Provider or your supplier.

If you can see that the problem is related to airtime and not to your handset, please contact your Airtime Provider

If you need assistance with problems caused by the IP Handset, please call a distributor in your area. You may be asked to generate a diagnostics report. For information on how to generate a report, see *Help* on page 89.

You can find a certified dealer or distributor near you by visiting KVH's web site: www.kvh.com/wheretogetservice.

Troubleshooting guide

The below table provides information on some of the problems that might occur, including possible causes and remedies to solve the problems.

Problem	Possible Cause	Remedy
The handset is not responding to any keys pressed.	An error occurred in the software.	Press and hold the on hook key for at least 10 seconds to switch off the handset. Then switch on the handset again.
No connection to the BGAN network.	1) The PIN code has not been entered in the BGAN terminal, 2) There is an error in the terminal or the BGAN network.	1) Enter the menu system of the handset and select **BGAN > Enter PIN code**. For information on how to enter the PIN, see *Establishing a connection using BGAN terminal* on page 21. 2)See the manuals for the BGAN terminal for information on how to troubleshoot errors.
The handset shows “SIP fault”	No SIP profile is selected, the selected SIP profile is invalid, or the user name or password is wrong.	Enter the menu system and select **SIP** to see the selected profile. Change the profile or select another profile if necessary. For further information, see *SIP* on page 70.

Technical specifications

In this appendix

This appendix contains specifications and outline drawings for the wired IP Handset and cradle and the wireless IP Handset and cradle.

IP Handset, wired

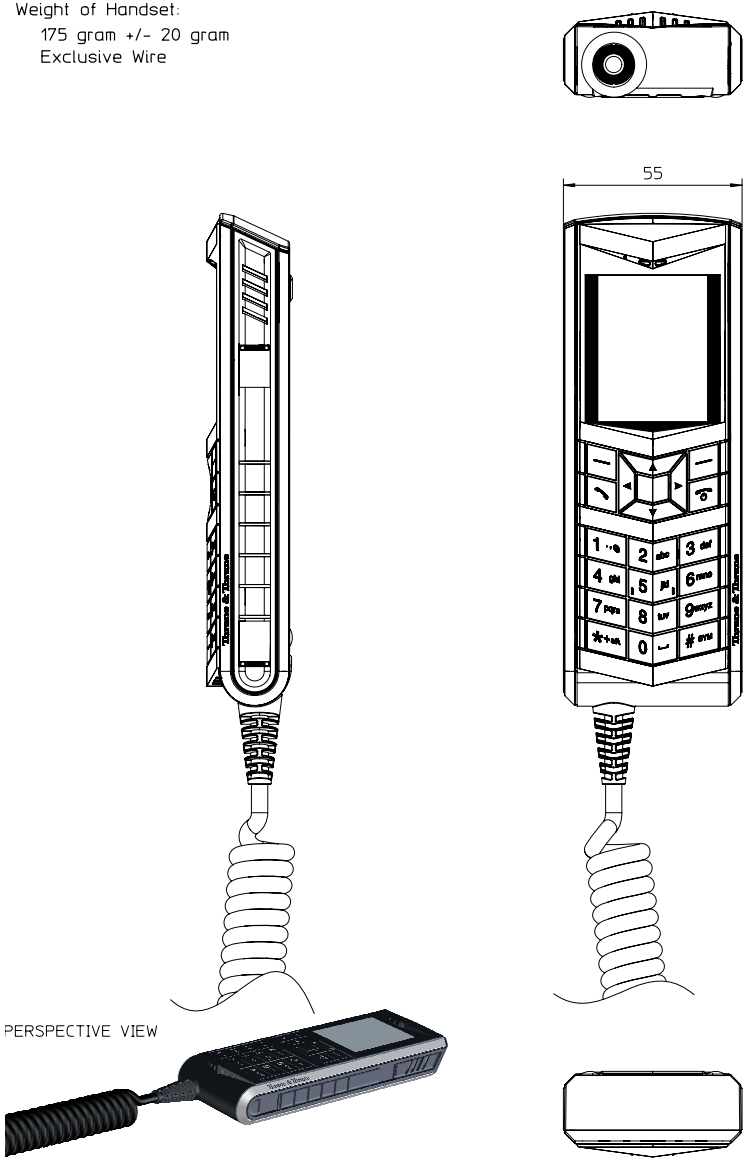
Specifications, wired handset

Item	Specification
Type	TT-3672A Thrane IP Handset, wired
Dimensions (L x B x H)	152 mm x 55 mm x 26.5 mm
Weight	175 g ±20 g
Display	2.2", 240 x 320 pixel TFT color LCD
Operating temperature	-25°C to +45°C
Storage and transport temperature	-25°C to +55°C
Humidity	Up to 95% without condensation
Air pressure, transport	4572 m AMSL

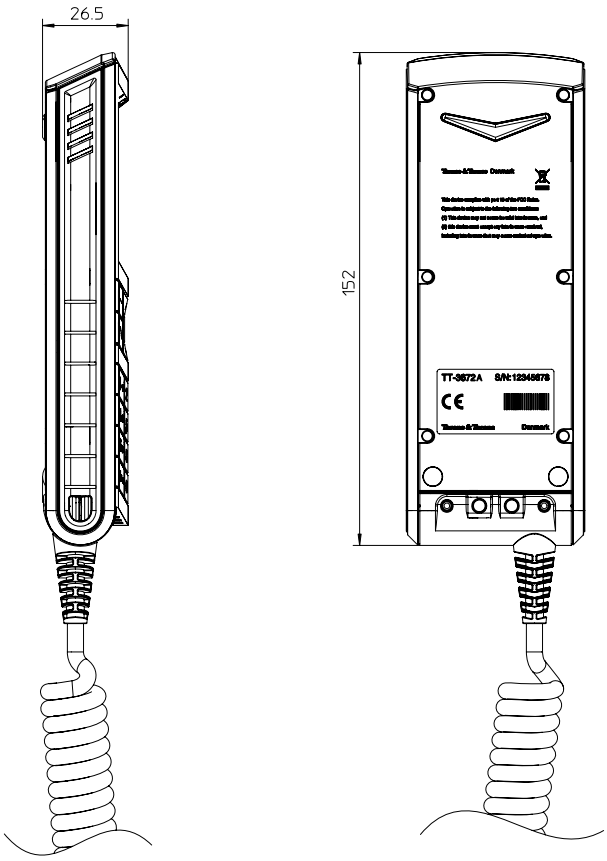
Item	Specification
Power	Power over Ethernet (PoE) class 2 (Alternative B of IEEE802.3af is not supported.)
Power consumption	Max. 7 Watt
Protection category	IP55, dust proof and splash proof
LAN interface	10/100 Mbps
Network Protocol	Internet Protocol (IP)
VoIP Protocol	SIP v2 Session Initiation Protocol (RFC3261), SDP (RFC2327)
Voice Codecs	G.711 and G.729 A/B
Physical interfaces	RJ-45 male connector on fixed cable Not currently used: Headset 2.5 mm jack and Mini-USB 5-pin
Certifications	FCC, CE

Outline dimensions, wired handset

Weight of Handset:
175 gram +/- 20 gram
Exclusive Wire



IP Handset, wired, outline dimensions, continued (side view and back view).



IP Handset, wireless

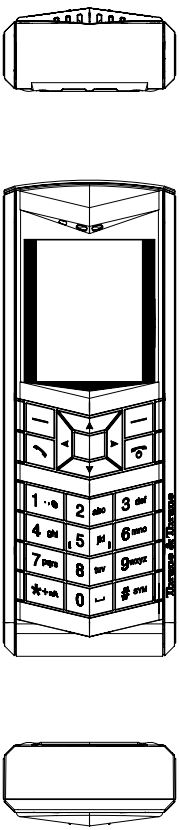
Specifications, wireless handset

Item	Specification
Type	TT-3672B Thrane IP Handset, wireless
Dimensions (L x B x H)	152 mm x 55 mm x 26.5 mm
Weight	175 g ±20 g
Display	2.2", 240 x 320 pixel TFT color LCD
Operating temperature	0°C to +45°C
Storage temperature	Long term (>6 months) -20°C to +25°C Short term (<6 months) -20°C to +45°C
Temperature, transport	-25°C to +55°C
Humidity	Up to 95% without condensation
Protection category	IP55, dust proof and splash proof
Air pressure, transport	4572m AMSL
Battery	Li-Ion 1900 mAh
Charge power (in cradle)	12-24 VDC, 7 Watt max
Standby time	Up to 24 hours

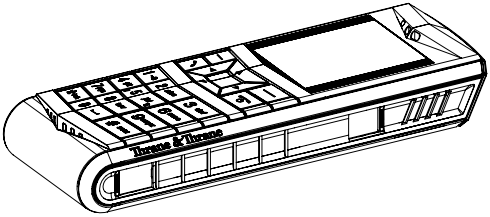
Item	Specification
Talk time	Up to 4 hours
Wireless network interface	Wireless Local Area Network (WLAN) according to 802.11b/g
Network Protocol	Internet Protocol (IP)
VoIP Protocol	SIP v2 Session Initiation Protocol (RFC3261), SDP (RFC2327)
Voice Codecs	G.711 and G.729 A/B
Physical interfaces	Headset 2.5 mm jack Mini-USB 5-pin (charging only)
Certifications	FCC, CE, IC, SAR

Outline dimensions, wireless handset

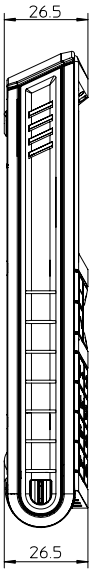
Weight of Handset:
175 gram +/- 20 gram

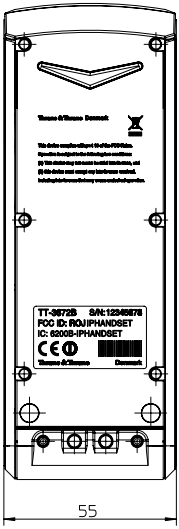


PERSPECTIVE VIEW



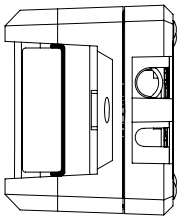
IP Handset, wireless, outline dimensions, continued (side view and back view).

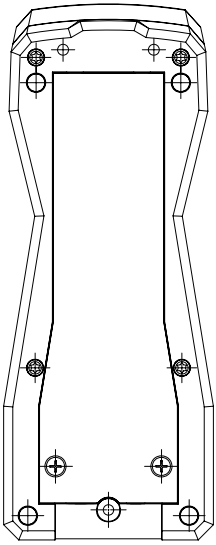


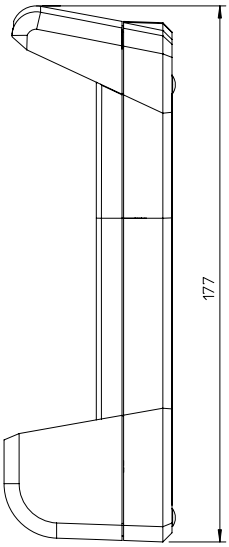


IP cradle outline dimensions

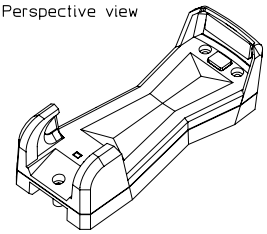
The below outline drawing applies to both the wired and the wireless variant.

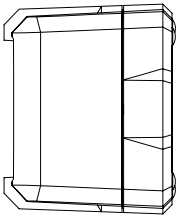




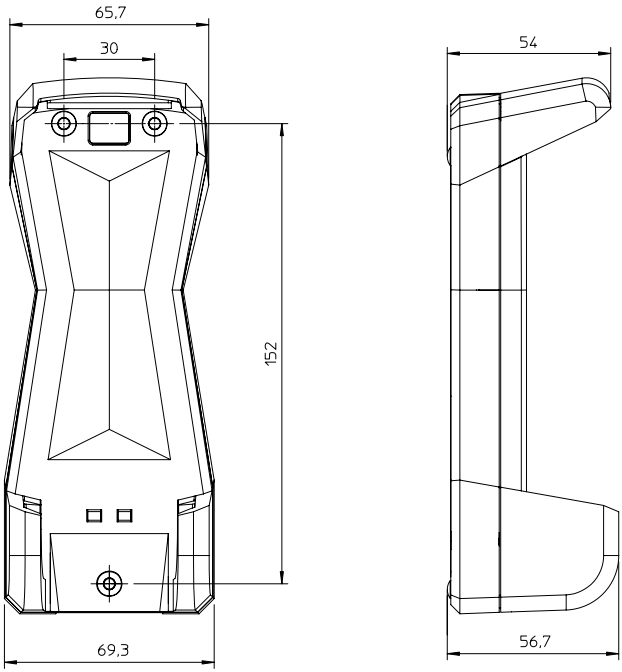


Perspective view





IP cradle outline dimensions, continued (front and side).



Conformity

Thrane IP Handset, wired

CE (LVD & EMC)

The Thrane IP Handset, wired, is CE certified (LVD &EMC directives). as stated in the “Declaration of Conformity with LVD and EMC Directives”, enclosed in copy on the next page.

FCC

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Thrane & Thrane A/S

Declaration of Conformity with LVD and EMC Directives

The undersigned of this letter declares that the following equipment complies with the specifications of EC directive 73/23/EC concerning Low Voltage Safety and EC directive 89/336/EC concerning EMC.

Equipment included in this declaration

TT-3670A Thrane IP Handset & Cradle, wired:

TT-3672A Thrane IP Handset, wired	PN = 403672A
TT-3674A Thrane IP Cradle, wired	PN = 403674A

Equipment Applicability

The TT-3670A Thrane IP Handset is an IP telephone used worldwide for voice communication between the handset and a Thrane & Thrane BGAN terminal or any other IP terminal.

Declaration

The safety requirement with respect to the LVD directive 73/23/EC is met by conforming to the harmonized EU standards EN 60950-1. The protection requirement with respect to the EMC directive 89/336/EC is met by conforming to the harmonized EU standards EN 60945 and EN 55022.

Manufacturer

Thrane & Thrane A/S, Lundtoftegårdsvej 93D, DK-2800 Kgs. Lyngby, Denmark
Porsvej 2, DK-9200 Aalborg SV, Denmark

Place and Date

Kgs. Lyngby, 13. May 2008

CE

Walther Thygesen, CEO
Thrane & Thrane A/S

Doc. no. 99-127009-B

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Bank: Danske Bank · Comp.reg.: 65 72 46 18 · VAT: DK-20 64 94 46

Thrane IP Handset, wireless

CE

The Thrane IP Handset, wireless, is in the process of being CE certified. The Declaration of Conformity will be enclosed in copy at the end of this section when ready.

FCC

Note: 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 communications. 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:

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

See also the FCC/IC Notice on the next page.

FCC/IC Notice

To comply with FCC radiation exposure requirements, use of this device for head body operational configurations is limited to tested configurations and approved by Thrane & Thrane A/S.

THIS MODEL DEVICE MEETS THE GOVERNMENT'S REQUIREMENTS FOR EXPOSURE TO RADIO WAVES.

Your wireless device is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless devices employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg. Tests for SAR are conducted using standard operating positions specified by the FCC with the device transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. Before a device model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., next to the head and body) as required by the FCC for each model. The FCC has granted an Equipment Authorization for this model device with all reported SAR levels evaluated as in compliance with the FCC RF emission guidelines. SAR information on this model device is on file with the FCC and can be found under the Display Grant section http://www.fcc.gov/oet/fccid after searching on FCC ID: ROJIPHANDSET.

B

BGAN	Broadband Global Area Network. A mobile satellite service that offers high-speed data up to 492 kbps and voice telephony. BGAN enables users to access e-mail, corporate networks and the Internet, transfer files and make telephone calls.

C

CE	Conformitée Européenne. This term signifies that a CE certified product conforms to European health, environmental, and safety regulations. In short, it makes the product legal to be sold in the European Union.

D

DHCP	Dynamic Host Configuration Protocol. A protocol for assigning dynamic IP addresses to devices on a network. With dynamic addressing, a device can have a different IP address every time it connects to the network.
DNS	Domain Name Server. A system translating server names (URLs) to server addresses.

I

IEEE	Institute of Electrical and Electronics Engineers. IEEE is a non-profit organization and the world's leading professional association for the advancement of technology.

L

LAN	Local Area Network
LCD	Liquid Crystal Display

M

MAC	Media Access Control address. A hardware address that uniquely identifies each node of a network.

P

PCB	Printed Circuit Board
PIN	Personal Identification Number. A secret numeric password shared between a user and a system, used to authenticate the user to the system.
PoE	Power over Ethernet. A standard for combining power supply with transmission of data over the Ethernet. The source unit "injects" power into the Ethernet cable and the power is "picked up" at the connected device.
PUK	PIN Unblocking Key. An eight-digit code used to unblock a SIM card after three incorrect PINs have been entered. The PUK code is supplied with the SIM card.

Q

QVGA	Quarter Video Graphics Array. A popular term for a computer display with 320 × 240 resolution. QVGA displays are often seen in mobile phones, PDAs and some handheld game consoles.

S

SIM	Subscriber Identity Module.The SIM provides secure storing of the key identifying a mobile phone service subscriber but also subscription information, preferences and storage of text messages.

SIP	Session Initiation Protocol. An application-layer control (signaling) protocol for creating, modifying, and terminating sessions with one or more participants. Used e.g. for Internet telephony.

T

TFT	Thin Film Transistor. A display type using a number of individual display cells, each controlled by its own transistor.

U

UMTS	Universal Mobile Telecommunications System. One of the third-generation (3G) cell phone technologies, standardized by the 3GPP.
URL	Uniform Resource Locator. A name used to describe the address of a specific resource on the internet.
USB	Universal Serial Bus. A serial bus standard to interface devices.

V

VoIP	Voice over Internet Protocol. The routing of voice conversations over the Internet or through an IP-based network.

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TPFB_Handset_Thrane_UG_Cvr_1.08

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