



# Getting started with the **EXPLORER<sup>®</sup> 700**

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[inmarsat.com/bgan](http://inmarsat.com/bgan)

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# 1 Introduction

## 1.1 About this guide

This document introduces the EXPLORER 700 terminal, and explains how to set up the terminal for use on the BGAN network, register with the network, and set up data, voice and text connections.

It is intended for first time end-users, Distribution Partners, Service Providers and anyone who wants to use a BGAN terminal to connect to the BGAN network and use network services. A previous knowledge of satellite communications is useful, but not essential.

### The sections include:

- Introducing the terminal – a brief overview of the physical features and interfaces of the terminal, and of the available services.
- Setting up the terminal – includes installing the battery and SIM card, connecting to a computer and registering with the network
- Making voice, data and text connections – an explanation of how to make a voice call, how to make IP data connections or an ISDN data connection, how to set up and open Bluetooth and WLAN connections, and how to send and receive a text message.

## 1.2 Other sources of information

- This is one of a series of PDF documents in the BGAN Solutions Guide. The Solutions Guide is designed to help you make the most of your BGAN terminal. Other documents in the series are available for download from [www.inmarsat.com/bgan](http://www.inmarsat.com/bgan). Click on **Support**, then click on **User guides**.

This Web site also gives further information on the BGAN service, including Industry solutions.

- For help in using BGAN LaunchPad, refer to the documents “Using BGAN LaunchPad” and “Using BGAN LaunchPad on the EXPLORER 700”, available for download from [www.inmarsat.com/bgan](http://www.inmarsat.com/bgan).
- For further information on the EXPLORER 700 terminal, refer to the “EXPLORER 700 User Manual”, supplied in PDF format on the Thrane & Thrane CD.

## 1.3 Upgrading software

- To download the latest USB drivers and BGAN LaunchPad software, go to [www.inmarsat.com/bgan-updates](http://www.inmarsat.com/bgan-updates).
- To obtain the latest terminal firmware, contact your distributor.

## 2 Introducing the terminal

This section introduces the physical characteristics, interfaces and services available on the Thrane & Thrane EXPLORER 700 (called the EXPLORER 700 in the rest of this document).

### 2.1 Physical characteristics

Item	Specification
Manufacturer	Thrane & Thrane
Physical dimensions	Approx. 297 mm x 399 mm x 52 mm (11.7 in. x 15.7in. x 2in.)
Weight (including battery)	3.2 kg (7 lbs)
External power	100-240 Volts AC (47-63Hz)
Battery life	Transmit: 1.5hrs at 492kbps Stand-by time: 36hrs
Ingress protection	IP 52 – transceiver IP66 – antenna

### 2.2 Interfaces

Interface	Equipment needed
2 x RJ45, Auto cross-over MDI/MDI-X (IEEE 802.3 10/100BASE-T)	IP data device, LAN-enabled
USB v1.1	IP data device, USB-enabled
2 x Phone/fax RJ11	RJ11 handset, G3 fax machine
2 x ISDN RJ45	RJ45 handset, ISDN data device
WLAN Access Point (IEEE 802.11 a/b/g)	IP data device, wireless-enabled
Bluetooth v1.2	Bluetooth handset, headset or Bluetooth data device

### 2.3 Services

Services	Specification
Standard IP data	Up to 492kbps (send and receive)
Streaming IP data	32kbps, 64kbps, 128kbps, 256kbps (Multiple streaming sessions simultaneously)
Phone/fax	Standard (4kbps) or Premium (3.1kHz)
ISDN data	UDI/RDI (64kbps)
Text	To other BGAN terminals or cellular mobile phones. From other BGAN terminals, and some mobile phones, depending on service provider.

### 3 Setting up the terminal



This section explains how to set up the EXPLORER 700 terminal and connect to the BGAN network. The steps described are:

- a. Installing BGAN LaunchPad on your computer.
- b. Installing the SIM card and battery.
- c. Obtaining power and charge the battery.
- d. Obtaining a GPS fix.
- e. Connecting the terminal to your computer. Inmarsat recommends that when first setting up you use either:
  - the LAN interface, or
  - the USB interface.If you use USB, you must first install the supplied drivers.
- f. Pointing the terminal and register with the BGAN network.

#### **Pre-requisites**

Before you start, make sure that you have:

- The BGAN terminal.
- The rechargeable battery, supplied with the terminal.
- A USIM card, supplied by your Service Provider.
- The Ethernet cable supplied with the terminal, or the USB cable mounted with a Mini-B connector supplied with the terminal, depending on how you want to connect the terminal to your computer.
- The BGAN LaunchPad installation CD, supplied with the terminal. Make sure that the PC or Mac has the minimum system requirements for BGAN LaunchPad (refer to page 5 for details).
- The USB drivers supplied on your installation CD, if you intend to connect to your computer using USB.
- An RJ11 handset or G3 fax machine if you intend to use the Phone/fax interface.
- An RJ45 handset or ISDN data device if you intend to use the ISDN interface.
- A Bluetooth-enabled computer, with a supported profile, if you intend to connect using Bluetooth.
- A wireless router or wireless-enabled computer, if you intend to use a wireless connection.

## Minimum system requirements for BGAN LaunchPad

The following are the minimum hardware and software requirements for using BGAN LaunchPad to manage the EXPLORER 300 on your computer.

### Hardware requirements

You must have the following on your computer:

- Support for at least one of these interfaces – LAN or Bluetooth.
- Intel Pentium III CPU, or equivalent.
- 100Mb of free hard disk space.
- 128Mb of RAM.
- CD-ROM drive.

### Operating systems

You must have one of the following operating systems on your computer:

- Microsoft Windows 2000 with SP4.
- Microsoft Windows XP with SP2.
- Linux Red Hat 9 - KDE 3.1.10 (Kernel Version 20.4.20-8).
- Mac 10.x

## 3.1 Installing BGAN LaunchPad

To install BGAN LaunchPad on your computer:

- a. Insert the BGAN LaunchPad Installation CD into your computer's CD-ROM drive.
- b. Follow the on-screen instructions.

## 3.2 Installing the SIM card and battery

To get the terminal ready for connection:

- a. The EXPLORER 700 has a transport latch, securing the antenna and receiver during transport. Open the latch as shown below:



- b. Flip up the antenna module and access the keypad and connectors as shown below:

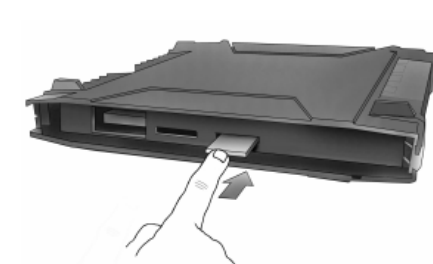


**Note** If required, you can detach the transceiver from the antenna, and use both components separately. Refer to the EXPLORER 700 User Manual for details.

- c. Use a pen or similar object to press the eject button at the SIM slot marked USIM#1, and release the SIM card holder. The SIM card holder is a small plastic frame designed to hold the SIM card.

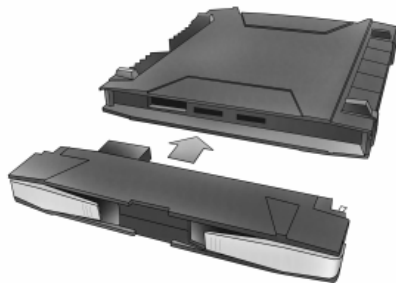


- d. Place the SIM card into the SIM card holder, with the printed side visible.
- e. Insert the holder containing the SIM card into the SIM slot marked USIM#1. Position the holder with the printed side facing down.



- f. Press gently until it snaps into place.

- g. Make sure the battery is positioned correctly as shown below:



### 3.3 Connecting the cables

After inserting SIM card and battery, connect all relevant cables.

#### Connecting the antenna to the transceiver

The EXPLORER 700 has two connectors for connecting the antenna to the transceiver. Note the following:

- If you are going to use the antenna and transceiver attached as one unit, use the short antenna cable provided with your EXPLORER 700.
- If you are going to use the antenna separated from the transceiver, use an antenna cable supplied by Thrane & Thrane (or a cable with similar specifications). For information on available lengths refer to the EXPLORER 700 User Manual.

To connect the antenna, do the following:

- a. Connect the antenna cable to the connector on the antenna module, as shown below:



- b. Connect the other end of the cable to the antenna connector on the transceiver:





**Important:** If you are using the transceiver with the antenna attached, connect the cables before making final adjustments to the antenna position. Otherwise, you may accidentally move the antenna when you connect the cables.

### Connecting to the power supply

To power on the terminal using the power adapter, with the terminal switched off:

- a. Connect the AC/DC power supply to the DC power input of the EXPLORER 700.
- b. Use the power cable to connect the AC/DC adapter to any AC power outlet between 100 and 240 VAC.

**Note** The battery charges automatically whenever the terminal is connected to the power source.

**Note** To ensure accurate information on battery capacity, Thrane & Thrane recommends that you fully charge, then fully discharge the battery (until the terminal closes down automatically), and finally charge the battery again before using the terminal for the first time.

The terminal can be used during the discharging process, but the remaining battery capacity may not be displayed accurately in the BGAN LaunchPad status bar.

### 3.4 Obtaining a GPS fix

**Note** You must install a SIM card before you can obtain a GPS fix.

The BGAN network requires a valid GPS fix to successfully register your BGAN terminal.

- a. Take the EXPLORER 700 outside, open the stand so that the terminal antenna is facing upwards, and place the unit on a flat surface with an open view of the sky.
- b. Switch the unit on using the power button on the left of the display. The EXPLORER 700 automatically searches for a GPS fix when first powered on.
- c. You may be prompted to enter a PIN code. Press C to cancel the PIN code prompt, (you do not need to enter a PIN code to obtain a GPS fix).
- d. Leave the terminal to acquire a GPS fix. This may take a few minutes. To check the terminal's GPS status, enter the PROPERTIES > GPS STATUS menu on the terminal's display panel.
  - If the terminal has a GPS fix, and the position can be displayed, the position is shown in the display, in the format shown below:



- If the terminal has a GPS fix, but the position cannot be displayed the word ACQUIRED is displayed. The position may not be displayed because it is not permitted in this location, or because the terminal is not yet registered on the BGAN network. However, you can still use your terminal even if you cannot view the GPS fix location.



- If the terminal does not have a GPS fix, the display shows almanac data, which is a series of vertical bars giving the status of 16 GPS satellites.

## About GPS

The Global Positioning System (GPS) uses 24 orbital satellites to fix the position of the terminal anywhere on the globe.

- In normal operation, a GPS receiver, such as that built in to the Terminal, needs to be able to receive signals from at least three satellites so that it can then calculate latitude, a longitude and an altitude – this position fix is referred to as a 3-dimensional or 3-D fix. If only two GPS satellites can be seen by the GPS receiver, then the last available altitude measurement is assumed and the GPS receiver calculates a position fix based on latitude and longitude only. This simpler position fix is referred to as a 2-dimensional or 2-D fix and is quicker and easier to obtain than a 3-D fix, but may be less accurate.

Note You can register with the BGAN network with a 2-D or a 3-D fix.

- The GPS receiver may take between a few seconds and 20 minutes to obtain a GPS fix, depending on how frequently the GPS receiver is being used. The frequency of use determines the how quickly the GPS Terminal is able to start.
  - **Hot start** - if the GPS receiver is being used frequently, (that is, at least every two to six hours), it is regularly updated with data from the GPS satellites, and so only takes a short time to obtain a GPS fix after being switched on.
  - **Warm start** - if a GPS receiver has not been used for more than six hours, then it will take longer to obtain a GPS fix, perhaps up to 45 seconds.
  - **Cold start** - if the GPS receiver has not been used for some time or is 300 km or more from where it was last used, it can take between 10 and 20 minutes to obtain a valid position fix.

Following successful registration and providing the Terminal is left switched on and remains stationary, the GPS is no longer needed. Periodically, the BGAN terminal contacts the BGAN network to inform the network that it is still switched on. In addition, the BGAN network periodically checks each terminal for activity, and if there has been no traffic through the terminal, and the terminal has not automatically contacted the BGAN network as described above, then the terminal will be de-registered from the network.

## 3.5 Connecting the terminal to your computer

When you first connect the terminal to your computer, Inmarsat recommends that you use either the LAN or USB interface.

Tip USB can operate over a distance of up to 5m with standard cables. Ethernet can operate over a distance of up to 100m with standard Ethernet cables.

### Connecting over LAN

Note For the LAN interface to work without any further setup, your computer must be configured to obtain an IP address and DNS server address automatically. To check that these settings are configured on your computer, refer to the documentation for your operating system.

### To connect the BGAN terminal to your computer using Ethernet:

- a. Connect the LAN cable to the LAN port of your computer. A suitable cable is provided with the EXPLORER 700.
- b. Connect the other end of the cable to one of the LAN ports on the EXPLORER 700, as shown below. A message confirming the connection is displayed.

**Tip** Some corporate computers are configured with a static IP address. If your computer has a static IP address, you must go into the IP Properties option, and change your computers settings to obtain an IP address automatically.

This is only necessary the first time you connect. You can then change the IP settings to use a static IP address, if required.

### IP addressing on the EXPLORER 700

- In normal operation, the terminal uses its built-in DHCP server to allocate IP addresses automatically. If you want to manually set up IP addressing, you can use the terminal's default range of IP addresses, as shown below:

Terminal IP address	192.168.0.1
Default range of IP addresses	192.168.0.x
Subnet mask	255.255.255.0
DNS	If you use BGAN.INMARSAT.COM as your APN, the default DNS addresses are 172.30.66.7 and 172.30.34.7  If you use another APN, your Distribution Partner supplies you with a DNS address for your APN.

- To test connectivity between your computer and the terminal, ping **192.168.0.1**, from your computer. If a reply is received, your computer is connected to the terminal.
- You have the choice of using the EXPLORER 700 in Multi user mode or Single user mode.
  - Multi user mode - multiple users can share a single data connection. Each user is allocated a private IP address from the terminal's pool of IP addresses.
  - Single user mode – intended for single users, or for use with an external Router. The computer or other hardware connected to the terminal is given a public IP address by the network.

For details on how to set the terminal to Multi user mode or Single user mode, refer to “Using BGAN LaunchPad Help”.

Refer to the Solutions Guide document “BGAN and IP data connections” for further details.

### Connecting over USB

To connect the BGAN terminal to your computer using the USB port:

- a. Install the USB drivers from the supplied installation CD, following the instructions provided. Two USB drivers are installed, creating two COM ports for the computer.

**Tip** To check if the installation was successful, display the list of modems on your operating system (refer to the documentation supplied with your operating system for details on how to do this). Two ports called Thrane & Thrane EXPLORER port 1 and Thrane & Thrane EXPLORER port 2 should be displayed.

- b. Connect one end of the USB cable to the USB port of your computer.
- c. Connect the other end of the cable to the USB connector on the EXPLORER 700.

- d. Power up the terminal. Your computer should now automatically discover that new hardware is connected.
- e. Install the new hardware, as described in the documentation for your operating system.
- f. After pointing, check the connection by opening your dial-up connection as described in the documentation for your operating system.

**Note** USB drivers are provided with your BGAN terminal. You can also download the latest USB drivers from the Inmarsat Web site. Go to [www.inmarsat.com/bgan-updates](http://www.inmarsat.com/bgan-updates) and follow the on-screen instructions.

### Interfacing with the BGAN terminal

You have three ways of interfacing with the BGAN terminal when using the EXPLORER 700.

- BGAN LaunchPad – Inmarsat’s easy to use software interface, that provides step by step instructions on connecting to the BGAN network and setting up satellite connections. You can use BGAN LaunchPad to manage data connections, send and receive text messages, monitor telephone usage and upgrade software. The interface can be installed on any computer connected to the terminal and accessed by double-clicking on a desktop icon. With BGAN LaunchPad, you have access to all the latest customization options and features of the BGAN service. You can also update firmware automatically using BGAN LaunchPad.
- The terminal’s LCD display and keypad – the EXPLORER 300 has an LCD display and keypad for displaying status and for changing simple parameters. For details, refer to the EXPLORER 300 User Manual.
- The terminal’s web interface – the EXPLORER 700 has a built-in web interface for easy configuration of the terminal and software upgrades. The interface can be accessed directly from a computer connected to the terminal by entering the default IP address of 192.168.0.1 into a standard Internet browser. For details, refer to the EXPLORER 700 User Manual.

Inmarsat recommends that only one interface be used to ensure that settings and configurations are not overwritten. This guide assumes use of BGAN LaunchPad.

## 3.6 Registering with the network

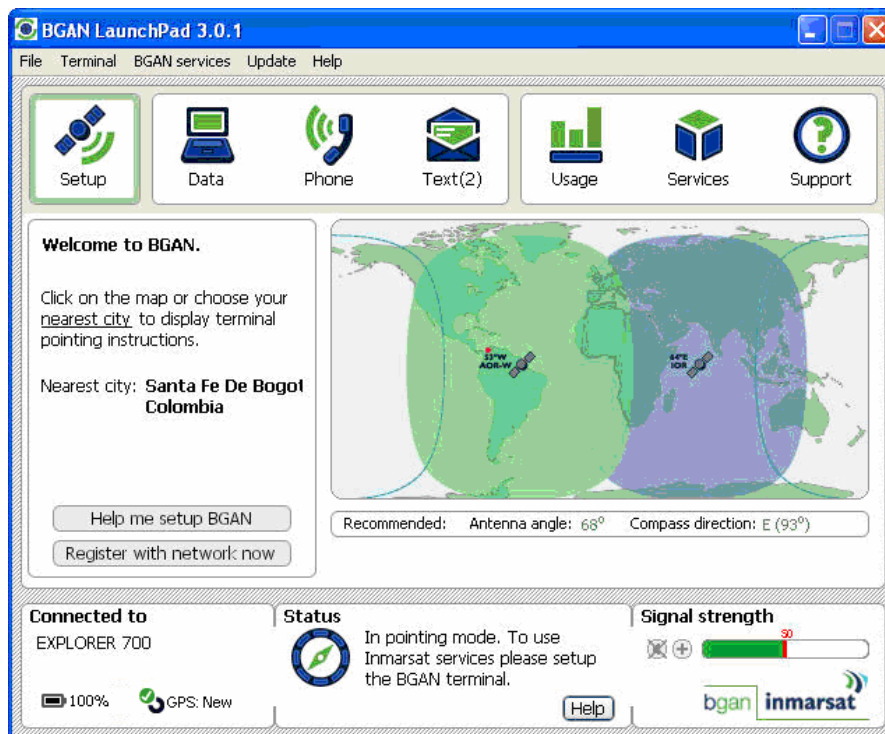
Establishing a connection with the BGAN network requires the careful orientation of the BGAN terminal towards the satellite - a process called pointing. Accurate and precise pointing is important, because a badly-pointed antenna can reduce the data rate achievable over the network. When pointing is complete, you can register the terminal with the BGAN network.

Use the BGAN LaunchPad pointing wizard to step through the process of pointing the terminal and registering with the network. In addition, you can use the BGAN terminal's display and keypad to point the terminal. To use BGAN LaunchPad to point the terminal:

- a. Open BGAN LaunchPad by clicking on the BGAN LaunchPad icon on your desktop.



The following screen is displayed:



The status bar displays the message **In Pointing Mode**.

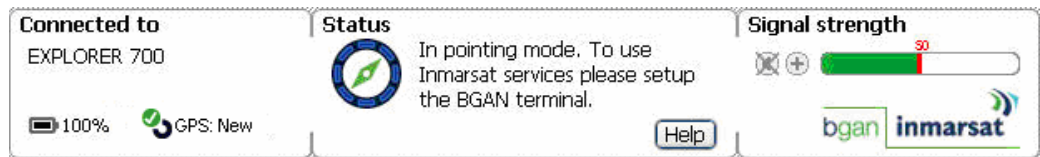
**Note** The coverage map and "Welcome to BGAN" area are provided to assist you in pointing, but the location shown may not correspond to your GPS fix, and does not affect network registration.

- b. Click on Help me setup BGAN and step through the on-screen instructions. BGAN LaunchPad suggests the recommended pointing angle and direction to correctly position the terminal.

**Note** Do not touch the antenna.

- Using the terminals' built-in compass, rotate the terminal left or right until it points in the correct horizontal direction, known as the azimuth.
- Tilt the terminal slowly up or down until it points in the correct vertical direction, known as the elevation.

- c. Monitor the signal strength on the status bar:



Use this information, and the signal strength reading on the terminal's display, to further adjust the antenna position to obtain maximum signal strength. Remember not to touch the antenna.

**Note** If the signal strength is not sufficient, registration may not be possible and the terminal may not be able to establish a data connection.

- d. When you have positioned the terminal to obtain the maximum signal strength, you are ready to register with the network. Click on Register with Network now.

**Tip** You can also register with the network by pressing the OK button on the terminal's keypad at any stage in the pointing process.

By default, BGAN LaunchPad opens a standard IP data connection after successful registration. The status zone reads **Standard Data Connection Open. Ready for Phone, Text and Data.**

- e. Use this information, and the signal strength reading on the terminal's display, to further adjust the antenna position to obtain maximum signal strength. Remember not to touch the antenna.

**Note** If the signal strength is not sufficient, registration may not be possible and the terminal may not be able to establish a data connection.

- f. When you have positioned the terminal to obtain the maximum signal strength, you are ready to register with the network. Click on **Register with Network now.**

**Tip** You can also register with the network by pressing the OK button on the terminal's keypad at any stage in the pointing process.

By default, BGAN LaunchPad opens a standard IP data connection after successful registration. The status zone reads Standard Data Connection Open. Ready for Phone, Text and Data.

- Tip** You can make or receive phone calls, or send and receive a text message even if you do not have an IP data connection.

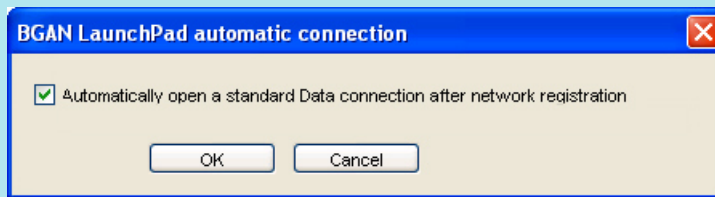
## Automatic mode

The EXPLORER 700 offers the following automatic features:

By default, the terminal automatically opens a data connection after you register with the network. However, there may be a minimum charge for opening an IP data connection (depending on your Service Provider), and data may be transferred across the connection even if you are not actively using an application (for example, your computer may be receiving automatic updates).

If you do not want to incur these charges, you can switch off the automatic connection feature. To do this:

- a Select **BGAN Services > LaunchPad Automatic Connection** from the BGAN LaunchPad main menu.

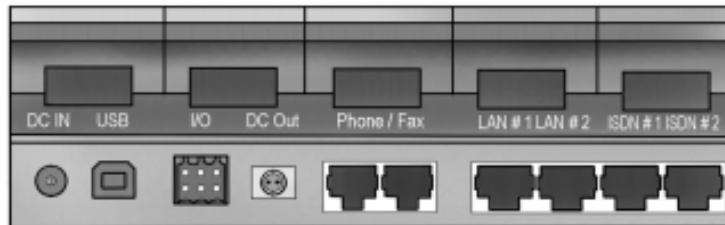


- b Uncheck the check box to turn off automatic data connection.

You can configure the terminal to automatically exit pointing and set up a data connection after power on. This feature is disabled by default, but you can enable it using the EXPLORER 700 Web interface. Refer to the “EXPLORER 700 User Manual” for details.

## 4 Making voice, data and text connections

You can connect to the terminal using any of the following interfaces:



- USB, for IP data connections.
- Phone/fax, for Standard (4kbps) or Premium (3.1kHz) voice connections.
- 2 x LAN ports, for IP data connections. If required, you can connect the LAN port to a hub, switch or router for multi-user connections.
- 2 x ISDN ports, for UDI/RDI (64kbps) voice or ISDN data connections.
- Wireless Access Point, for IP data connections.
- Bluetooth, for Bluetooth handset or headset voice connections, or IP data connections.

If required, you can connect to more than one interface simultaneously.

### 4.1 Making an analogue handset or fax connection

#### Setting call quality

You can choose to receive incoming or make outgoing calls using Standard or Premium voice quality. Standard quality calls are made at 4kbps, premium quality calls are made at 3.1kHz over a 64kbps ISDN channel. If call quality is set to premium, you can connect a G3 fax machine to the phone/fax interface.

- Set the required call quality for all calls in BGAN LaunchPad, as described below. Note that you must set the incoming call quality and outgoing call quality separately.
  - To set the incoming call quality for one or both of the analogue interfaces to Standard (4kbps) or Premium (3.1kHz), go to **BGAN Services > Telephony Settings** in BGAN LaunchPad and select the Incoming Calls tab.

Refer to “Using BGAN LaunchPad on the EXPLORER 700” for details on using this screen.
  - To set the outgoing call quality for one or both of the analogue interfaces to Standard or Premium for all calls, go to **BGAN Services > Telephony Settings** in BGAN LaunchPad and select the Outgoing Calls tab.

Refer to “Using BGAN LaunchPad on the EXPLORER 700” for details on using this screen.
- Set the required call quality for an individual call using the handset. Dial \*1 before dialling the number to set the call quality to Standard, or dial \*2 before dialling the number to set the call quality to Premium.

**Note** Voice calls are charged by call duration, and a 3.1kHz voice call is charged at a higher rate than a 4kbps voice call. Refer to your Service Provider for details on call charges.

To connect a phone or fax to the terminals' phone/fax interface, you need an analog telephone cable with an RJ-11 connector.



**Note** If you are connecting a fax, you must ensure that the voice quality is set to premium (that is 3.1kHz).

Connect the cable to your phone or fax.

- a. Connect one end of the cable to your handset.
- b. Connect the other end of the cable to the phone/fax connector on the BGAN terminal.
- c. Check the connection by making a phone call or sending a fax.

If the connection fails, check the display on the terminal. If the analog phone icon is not present in the display, the interface is off. To turn the interface on:

- a. Using the terminal's display and keypad, select **SETTINGS > INTERFACES**.
- b. Select the **PHONE/FAX** interface.
- c. Select **ON**.

## 4.2 Making an IP Data Connection

### Pre-requisites

Before you can open an IP data connection, ensure that you have done the following:

- Installed a provisioned SIM card, supplied by your Service Provider. The SIM card contains Access Control Point (APN) information, therefore Inmarsat recommends that you do not change the APN after installing the SIM card.
- Connected your computer to the BGAN terminal, using one of the terminal's interfaces.
- Pointed the terminal to obtain the maximum possible signal strength.

Registered with the BGAN network

You can make an IP data connection using any of these interfaces:

- USB.
- LAN – in Multi user mode or Single user mode. Refer to “Connecting over LAN” on page 9.
- Wireless LAN.
- Bluetooth.

## 4.3 Opening a standard data connection

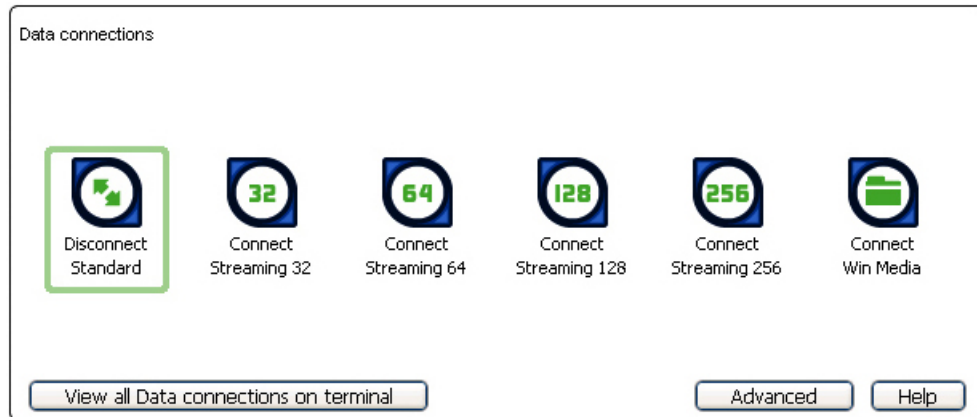


By default, when you first register with the BGAN network, the terminal opens a standard IP data connection. The standard connection is an always-on, best effort connection and is suitable for most basic data applications. It is charged by the amount of data sent and received.

To check that the standard connection is open, select the Data tab in BGAN LaunchPad.



The following screen is displayed:



If the standard connection is open, the words Disconnect Standard are displayed below the connection icon.

**Note** If the standard connection is closed, the words Connect Standard are displayed below the connection icon. Click on the icon to open the standard connection.

You can now browse the Internet, send and receive email and use other IP applications. All traffic is transferred across the standard connection.

#### 4.4 Opening a streaming data connection



If you require a guaranteed data rate for your connection (if, for example, the application is time critical), you can connect using one of the three dedicated streaming connections, at the following data rates:

- 32kbps streaming
- 64kbps streaming
- 128kbps streaming
- 256kbps streaming

Each dedicated streaming class connection is charged by the length of time that the connection is live. When you open a streaming connection, the standard connection is closed.

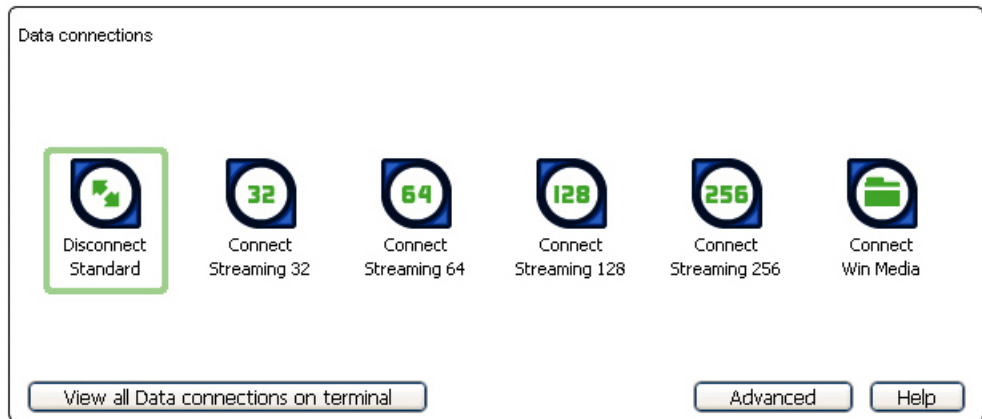
**Tip** By default, error correction (also called network packet retransmission) is switched on. Inmarsat recommends that you turn error correction off for UDP/IP connections, as this feature is not required for this connection type. Refer to “BGAN and IP data connections” for details.

To open a streaming connection:

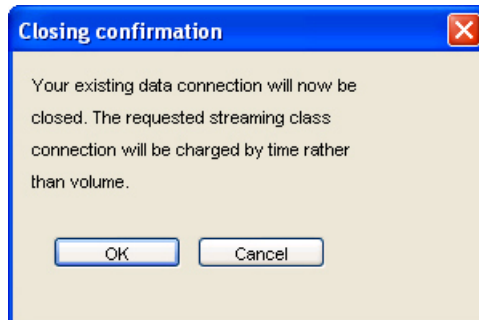
- a. Select the Data tab in BGAN LaunchPad:



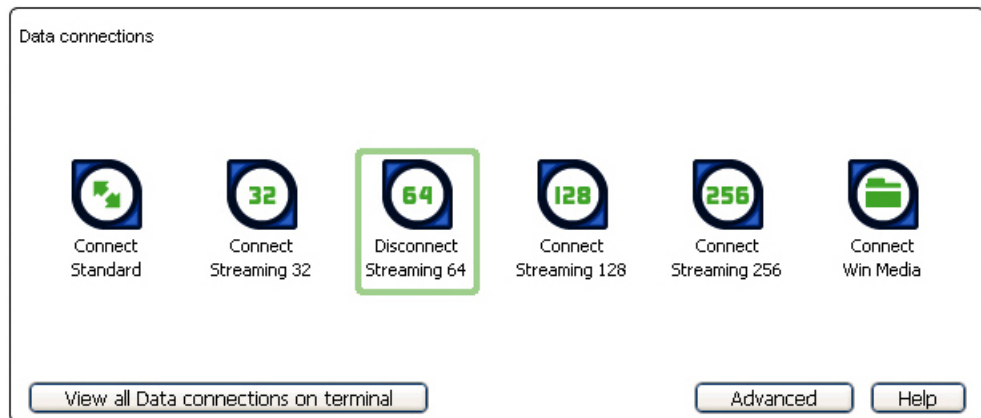
The following screen is displayed:



- b. Select the required streaming connection, for example Streaming 64. The following message is displayed, asking you to confirm that you want to close your current connection and open a new connection, charged by time:



c. Click on **OK**. The new data connection opens, and the following screen is displayed:



The Standard connection is closed, and the Streaming 64 connection is open. All traffic is transferred across the selected streaming connection.

**Note** If you subsequently want to close the streaming connection and open another streaming connection, or reopen the standard connection, repeat steps 1 to 3.

**Note** If you want to close all connections, click on the currently open connection.

#### 4.5 Opening a dedicated streaming connection



In addition to the default connections, BGAN LaunchPad enables you to configure and open one or more dedicated streaming connections (you can associate one of the icons shown above with a dedicated streaming connection). These are assigned to specific applications, for example Win Media, to ensure that the connection for this application's data is not shared with any other application.

You must have a pre-configured standard or streaming connection open before you can open a dedicated streaming connection. This is because each dedicated streaming connection creates a virtual IP data connection which shares the IP address of the pre-configured standard or streaming connection.

For details on configuring dedicated streaming connections, refer to "BGAN LaunchPad Help"

## Traffic Flow Templates

Each dedicated streaming connection is associated with a Traffic Flow Template (TFT). A TFT, also called an Application Template, assigns a priority to a selected type of traffic in order to maximize performance.

BGAN LaunchPad supports the following pre-configured TFTs, any one of which can be selected when you configure a dedicated streaming connection to ensure that the defined traffic has its own dedicated connection:

- FTP
- QuickLink
- QuickTime
- Real Media
- Streambox
- WinMedia

If you want to define your own TFT for another application, contact your Service Provider for assistance.

To open a dedicated streaming connection:

- a. Select the Data tab in BGAN LaunchPad.



In this scenario, you have set up a dedicated streaming connection for Win Media. The Standard connection is currently open.

- b. Select the required dedicated streaming connection, for example Win Media. The following message is displayed, asking you to confirm that you want to open a dedicated connection in addition to your current connection:



- c. Click on **OK**. The new data connection opens and the following screen is displayed:

The Standard and the Win Media connections are both open. All traffic other than Win Media data continues to use the standard connection.

You can open up to 10 dedicated streaming connections in addition to your default connection.

## LAN IP data connections in Multi user mode and Single user mode

IP data connections operate differently depending on whether you are in NAT mode or Modem mode:

- If the terminal is operating in Multi user mode, and multiple users are connected to the Ethernet interface over a hub or switch, all users share the standard or streaming IP data connection. Only one session of BGAN LaunchPad is required. Other users can open a dedicated connection, if required.
- If the terminal is operating in Single user mode, and multiple users are connected to the Ethernet interface over an external router, only one user can request a standard or streaming IP connection. Dedicated connections are not supported.

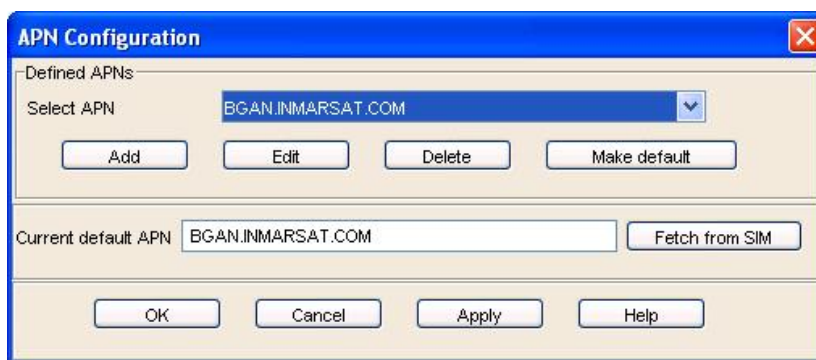
### If you can't make a data connection...

If you can't open a data connection, check that the default Access Point Name (APN) is set correctly. The APN is stored on your SIM and must be configured as the access point for each of your data connections for the data connection to open successfully.

**Tip** If you want to open a dedicated streaming connection, the APN of the dedicated streaming connection must be the same as that of the standard or streaming connection already open.

To check the default APN is set correctly:

- a. Select **LaunchPad Services > APN Options** in BGAN LaunchPad. The APN Configuration screen is displayed, as shown below:



- b. Check the **Current Default APN** text box to ensure that you are connected to the correct APN. If not, either:

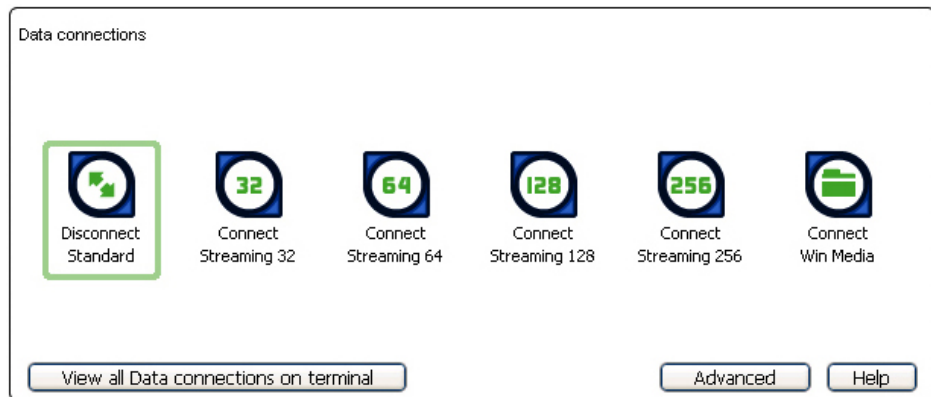
- Click on **Fetch from SIM**.
- Select the required APN from the **Select APN** drop-down list and click on **Make default**.

To check that the APN for a specific data connection is set to the default:

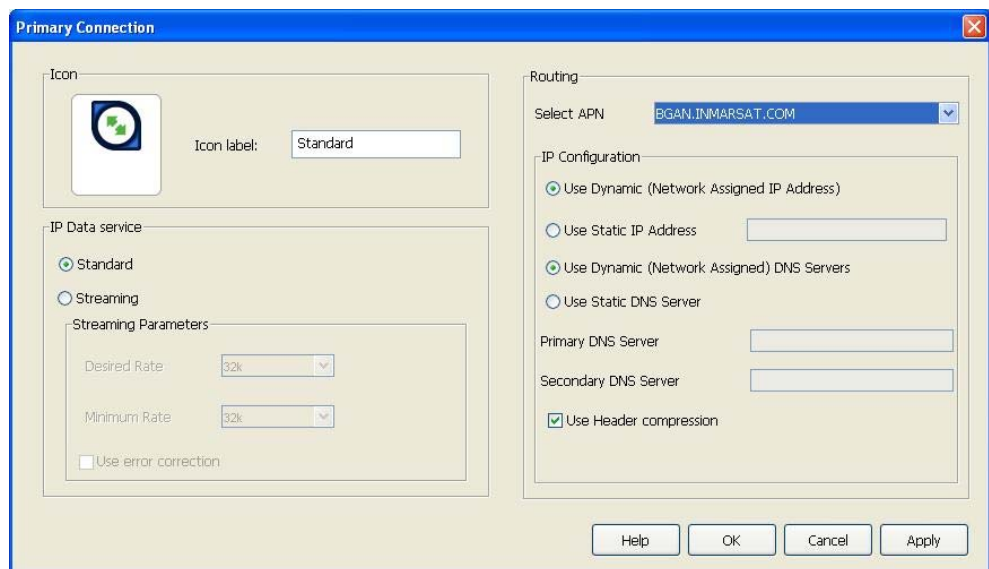
- a. Select the Data tab in BGAN LaunchPad;



The following screen is displayed:



- b. Right-click on the connection you want to check and select **Edit**. The Primary Connection screen is displayed, as shown below:



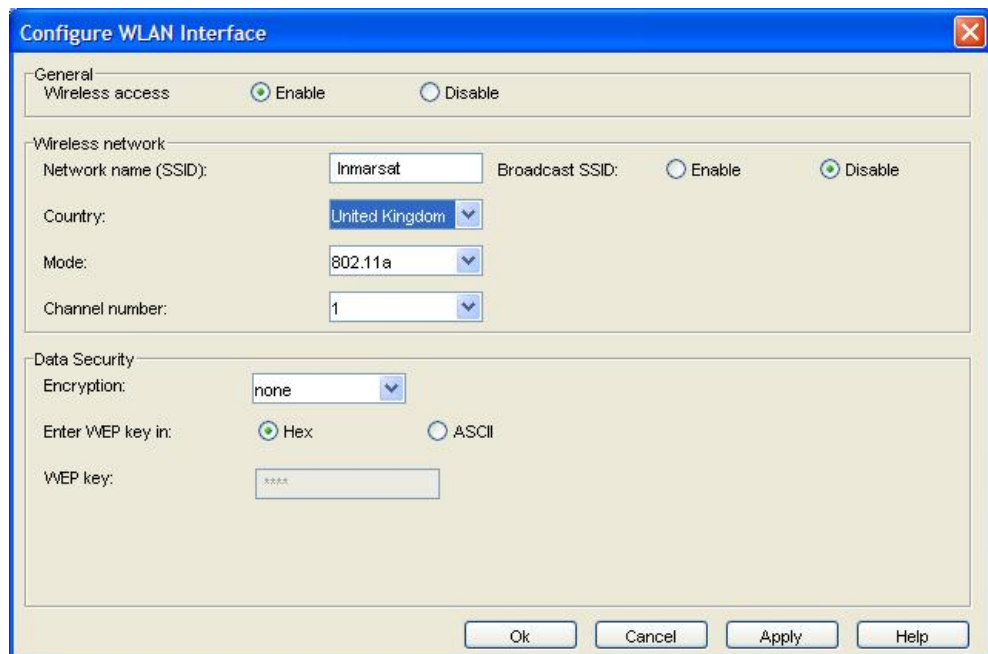
- c. Check the APN displayed in the Select APN field. If it is not correct, select the required APN from the drop-down list and click on OK.

**Tip** Some Distribution Partners assign usernames and passwords to the APN. You may need to enter these when accessing or changing APN details.

## 4.6 Making a wireless LAN connection

The EXPLORER 700 has a built-in wireless LAN (WLAN) 802.11a/b/g Access Point. To set up a WLAN connection, place your computer within 100m from the terminal. Note that this is the maximum distance; the actual distance may be shorter, depending on the environment. In an office environment, you should be able to establish a connection across the adjoining 2-3 rooms. After registration with the network, use BGAN LaunchPad to set up the WLAN interface, as follows:

- a. Select **Terminal > WLAN Interface Settings** from the BGAN LaunchPad main menu. The Configure WLAN Interface dialog box is displayed, as shown below:



- b. Select **Enable** to activate the WLAN interface.
- c. Enter a **Network Name (SSID)**. The default is EXPLORER 700, but you can change this if required.
- d. Select **Enable** next to Broadcast SSID to allow other users to view this access point, or **Disable** to hide the access point from other users.
- e. Select a **Country** from the drop-down list.
- f. Select a **Mode** from the drop-down list. The options vary depending on the Country you select in step 5. The possible options are:
  - 802.11a (5 GHz). In some countries, this mode is restricted to indoor use. Note that if you intend to use Bluetooth and WLAN simultaneously, it is recommended that you use this mode (if available) for optimum performance.
  - 802.11b
  - 802.11g
- g. Select a **Channel number** from the drop-down list. The WLAN channels you may legally use vary in different regions of the world. In some countries, certain channels are not available. Please be sure to select your Country from the drop-down menu before selecting one of the available channels. Channel 11 is common to almost all regions and so it is used as the default.



h. Select an **Encryption standard** from the drop-down list. The option you select here affects the options available in the remainder of the screen. The available options are:

- **None.** No security settings are applied.
- **WPA-TKIP.** Wi-Fi Protected Access, Temporal Key Integrity Protocol.
- **WPA2-AES.** Wi-Fi Protected Access 2, Advanced Encryption Standard. WPA2 is a more robust encryption mechanism than WPA, and is required for some corporate and government use.
- **WEP40.** Wired Equivalent Privacy 40 bit key.
- **WEP104.** Wired Equivalent Privacy 104 bit key.

WPA offers a higher level of security than WEP, by providing longer keys that change dynamically over time.

i. Select an encryption type at the **Enter WEP key in:** prompt. This can be one of the following:

- Hex keys use hexadecimal numbers (0-9, A-F) to encrypt and decrypt data, and are the most widely supported format.
- ASCII (plain text) keys are supported on some operating systems (check that your operating system supports ASCII before you select this option).

j. Enter up to four **WEP key** options, depending on the selections you made in step 8 and step 9. The format depends on whether you selected Hex or ASCII.

- **Hex.** Enter a two digit hexadecimal number (0-9, A-F) in each box on the WEP Key row.
- **ASCII.** Enter a string of 5 characters for 64 bit encryption (WEP40), or 13 characters for 128 bit encryption (WEP104).

Check that each key you set up is exactly the same as the key on your Access Point.

k. Click on **OK** to save the changes, click on **Cancel** to exit without saving, or click on **Apply** to apply the settings for this WLAN session only.

Any computer with WLAN capability and in range of the terminal can detect the terminal's WLAN SSID and connect to it automatically using BGAN LaunchPad.

**To connect to the WLAN interface, after registering the terminal with the network:**

- a. Power up your computer and place it within wireless range of the EXPLORER 700.
- b. Select the EXPLORER 700 access point on your computer. The default name is EXPLORER 700.
- c. Check your connection by browsing to the Internet.

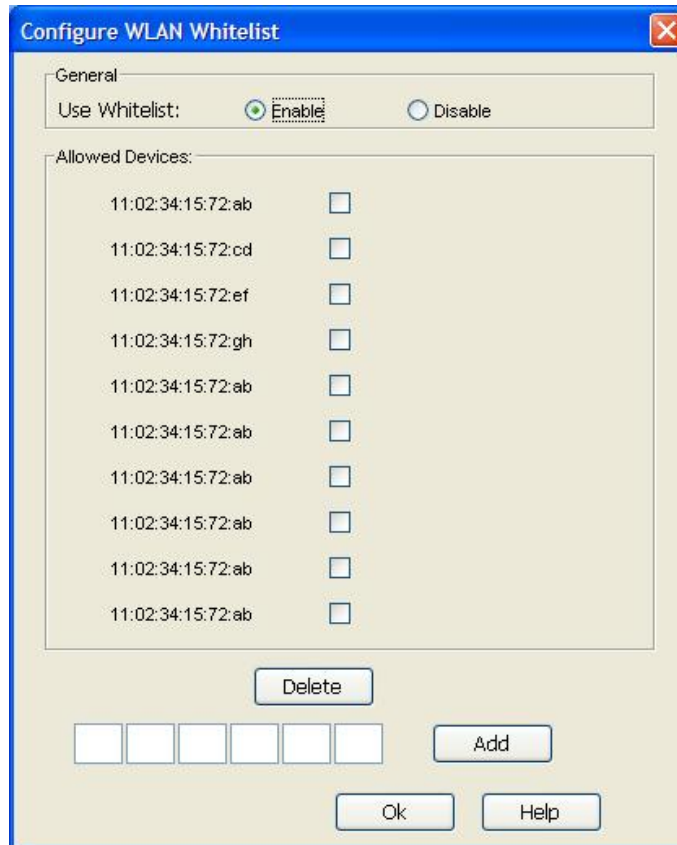
If you want to control access to the terminal's WLAN SSID, use the Whitelist described below.

**Setting up the Whitelist**

If you want to control access to the terminal's SSID, you can enable the terminal's Whitelist feature, and select which computers can access the terminal's WLAN interface. You must know the MAC address of the terminal(s) you want to add to the Whitelist.

**To enable and set up the Whitelist:**

- a. Select **Terminal > WLAN Whitelist** from the BGAN LaunchPad main menu. The Configure WLAN Whitelist window displays, as shown below:



- b. Select **Enable** to activate the Whitelist.
- c. Type the MAC address of the computer that you want to add to the Whitelist into the boxes at the foot of the screen, and click **Add**. This MAC address displays in the Allowed Devices list.
- d. Repeat step c for all computers you want to add to the Whitelist. You can have a total of 10 computers on the Whitelist at any one time. Once 10 computers have been added, the **Add** button greys out and you must delete a computer before you can add another computer to the Whitelist.
- e. Click **OK** to save the displayed information.

If the Whitelist is enabled, only those computers granted access can use the terminal's WLAN interface. If you **Disable** the Whitelist, all computers in range can access the WLAN interface.

To delete one or more computers from the Whitelist, do the following:

- a. Check the check box next to the computer(s) you want to delete from the Whitelist.
- b. Click on **Delete**.

**Tip** The Bluetooth and WLAN interfaces may interfere with each other if they are both active. For optimum performance, do not use Bluetooth and WLAN simultaneously, or use WLAN mode 802.11a.

## 4.7 Making a Bluetooth connection

### Bluetooth and the EXPLORER 700

Interface	Built-in antenna, Bluetooth class 1 v1.2 Also supports class 2 and class 3 peripherals if they support RSSI (Received Signal Strength Indicator).
Supported Profiles	Cordless Telephone Profile (CTP) Service Discovery Application Serial Port Profiles (SPP): Dial-up networking (DUN) LAN Access Profile (LAP) Headset Profile (HSP)
Distance to device	Maximum 100m outdoors

- Your Bluetooth device must be paired with the terminal's built-in Bluetooth modem before you can make Bluetooth calls or transmit Bluetooth data. If you want to pair your device with the terminal, the default device name is "EXPLORER 700", and the default passkey is the terminal serial number. The terminal's serial number is found on the label on the back of the terminal.
- You can use the terminal's in-built Bluetooth modem to open a Bluetooth voice connection or a Bluetooth data connection. To use a Bluetooth device with the BGAN terminal, you first have to enable the Bluetooth interface in the terminal and in the device, and then pair the device with the terminal. To do this, you can either:
  - Search for the terminal from your Bluetooth-enabled device, using your device's Bluetooth software.
  - Search for your Bluetooth-enabled device from the terminal. You can do this using BGAN LaunchPad.

#### Connecting from your device to the terminal

The Bluetooth device must be placed within a maximum distance of 100m from the BGAN terminal. Note that this is the absolute maximum distance; the actual maximum distance may be shorter, depending on the conditions.

To pair with the terminal and open a connection using the Bluetooth software on your Bluetooth device:

- a. Make sure the Bluetooth interface in the terminal is enabled (the interface is enabled by default). You can do this using one of the following methods:
  - From the terminal's display and keypad. From the display menu, select **SETTINGS > INTERFACES**, select **BLUETOOTH**, and make sure the interface is **ON**.
  - From a Bluetooth-enabled computer using BGAN LaunchPad. You must be connected to the terminal via the LAN or USB interface. From the BGAN LaunchPad main menu, select **Terminal > Bluetooth Interface Settings** to display the Configure Bluetooth Interface dialog box. Make sure the **Enable** radio button is selected, and click **OK**.

- From a Bluetooth-enabled computer using the terminal's Web interface. You must be connected to the terminal via the LAN interface or USB interface. Type in 192.168.0.1 into a Web browser to display the Web interface. For information on using the Web interface, refer to the "EXPLORER 700 User Manual".
- b. Enable your Bluetooth device, and search for devices in range. The terminal's default Device Name is EXPLORER 700.
  - c. Enter the terminal's passkey when prompted to pair with the terminal. By default, the passkey is the terminal's serial number, which you can find on the label on the back of the terminal (with the prefix S/N). When you have paired the device and the terminal, the Bluetooth software automatically installs two Bluetooth modems on your computer, one for BGAN LaunchPad and one for dial-up networking.
  - d. Open BGAN LaunchPad. BGAN LaunchPad automatically detects the Bluetooth connection and you can use your device to access Bluetooth services.

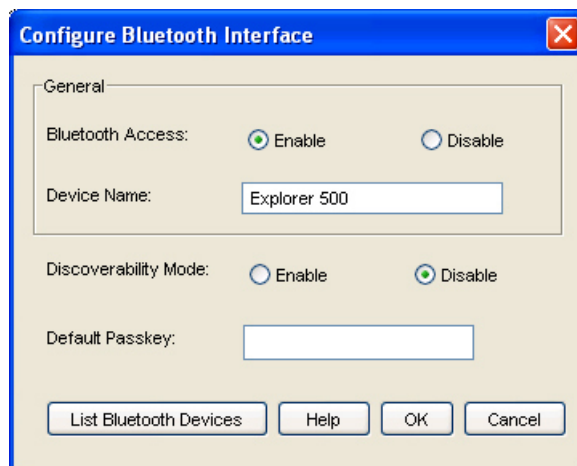
**Tip** If you want to open an IP data connection over Bluetooth using BGAN LaunchPad, you must un-pair from all other devices, so that your computer is paired only with the BGAN terminal. You can now open BGAN LaunchPad and access terminal services over BGAN LaunchPad.

### Connecting from the terminal to your device

The Bluetooth device must be placed within a maximum distance of 100m from the BGAN terminal. Note that this is the absolute maximum distance; the actual maximum distance may be shorter, depending on the conditions.

To search for and pair with your Bluetooth-enabled device from the terminal using BGAN LaunchPad:


- a. From BGAN LaunchPad main menu, select **Terminal > Bluetooth Interface Settings**. The Configure Bluetooth Interface dialog box is displayed, as shown below:



- b. If the Bluetooth interface is not enabled, select the **Enable** radio button.

**Note** The Bluetooth device that you want to pair with must also be enabled.

- c. Click on **List Bluetooth Devices** to list all Bluetooth devices within range. A screen similar to the following is displayed, giving the device address and current status, including pairing information.



Friendly Name	Device Address	Status
Pocket PC	00:05:4E:00:0D:13	In-Range - Not Paired
Anna's Phone	00:80:37:45:ER:08	In-Range - Paired
BGAN Terminal	00:60:57:TR:60:67	In-Range - Paired
Laptop Number One	00:10:C6:2A:DF:78	In-Range - Not Paired

If required, either:

- Pair a device by right-clicking on an unpaired device and selecting Pair. Enter the passkey when prompted.

Or:

- Unpair a device by right-clicking on a paired device and selecting Un-pair.

- d. Click on **OK** to save the configured settings, or click on **Cancel** to exit without saving. When you have paired the device and the terminal, the Bluetooth software automatically installs two Bluetooth modems on your computer, one for BGAN LaunchPad and one for dial-up networking.

BGAN LaunchPad automatically detects the Bluetooth connection and you can use your device to access Bluetooth services.

You cannot make a local call between two Bluetooth handsets using the EXPLORER 700. You can make a local call from a Bluetooth handset or headset to an analogue phone, or from an analogue phone to a Bluetooth handset or headset.

You can look up the local Bluetooth phone numbers using the terminal's display and keypad. To do this, select **PROPERTIES > BLUETOOTH DEVICES > DISPLAY** from the terminal's display.

The list shows all accepted Bluetooth devices with local number and Bluetooth name.

**Tip** If you want to open an IP data connection over Bluetooth using BGAN LaunchPad, you must un-pair from all other devices, so that your computer is paired only with the BGAN terminal. You can now open BGAN LaunchPad and access terminal services across the Bluetooth connection.

**Tip** The Bluetooth and WLAN interfaces may interfere with each other if they are both active. For optimum performance, do not use Bluetooth and WLAN simultaneously, or use WLAN mode 802.11a.

#### **If you can't make a Bluetooth data connection ...**

If you can't make a standard data connection over Bluetooth, check the Dial-up networking properties on your operating system to ensure that the Bluetooth standard modem is selected. Refer to the documentation for your operating system for details.

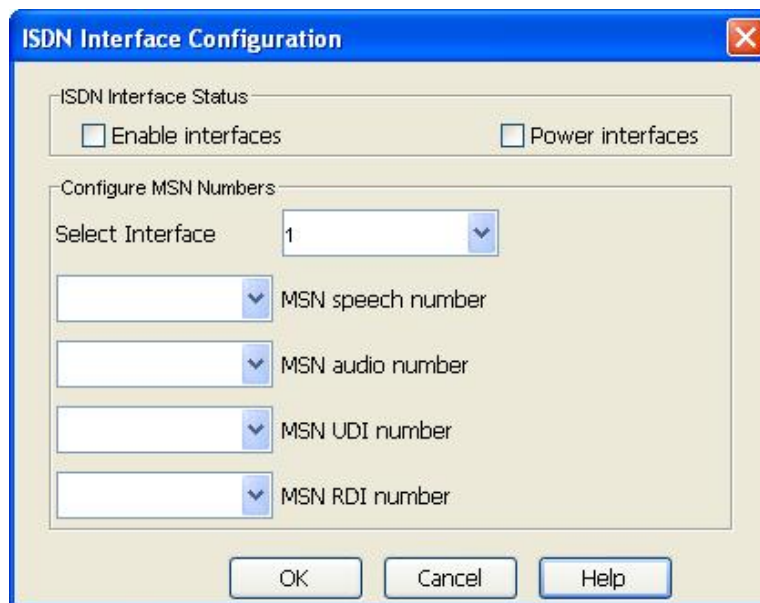
#### 4.8 Making an ISDN data connection

Voice, audio and data can be sent and received via the ISDN interface on the terminal. To make use of this service, you must program an MSN number into the equipment, enter the MSN number of the equipment type into BGAN LaunchPad, and connect the equipment to the ISDN port of the terminal.

**Note** The ISDN interface on the EXPLORER 700 comprises two connectors and supports connection of up to 8 devices simultaneously. However, if you are going to connect more than one device per interface, the devices must be self-powered. The ISDN interface can supply a maximum 1W.

To set up and connect to the ISDN interface:

- a. Program an MSN (Mobile Subscriber Number) into the equipment. Refer to the documentation supplied with your equipment for details.
- b. From BGAN LaunchPad main menu, select **Terminal > ISDN Interface Configuration**. The following screen displays:



- c. Check the **Enable interface** check box to enable both ISDN interfaces.
- d. Check the **Power interface** check box to enable 38v power. This option applies to both interfaces. If the connected ISDN data device is self-powered, you do not need to check this option.
- e. Check the **Dual interface** check box to enable connection of another BGAN terminal to one of the ports.
- f. From the **Select Interface** drop-down list, select either 1 or 2 depending on the interface you want to set up.
- g. Set the MSN number that is to be assigned to each call type. You have the following combination of options for each of the call types:
  - None. No MSN numbers are used. An incoming call is accepted in all devices connected to the port.

- 1\*, 2\*, 3\*, 4\*. If, for example, you select 1\* from the MSN speech number drop-down list, an incoming speech call is accepted by all devices on this port that are programmed with MSN number 1\*.
- 0401 to 0408. These are local call numbers for separate devices connected to port 1.
- 0411 to 0418. These are local call numbers for separate devices connected to port 2.

An incoming call is accepted by all devices that are programmed with the selected MSN and connected to the correct port.

h. Click **OK** to save the changes, or **Cancel** to exit without saving.

#### **Connecting to the ISDN interface – data**

To connect to the ISDN interface, use an ISDN cable with an ISDN connector.

To connect to the ISDN interface:

- Connect your computer to your ISDN modem.
- Connect the ISDN cable between your ISDN modem and one of the ISDN connectors on the EXPLORER 700.

After power up and pointing, activate the dial-up connection on your computer and check your connection by browsing to the Internet.

#### **Connecting to the ISDN interface – voice/fax**

To connect an ISDN phone or G4 fax machine to one of the ISDN connectors, you need an ISDN cable with an ISDN connector.

To connect to the ISDN interface:

- Connect the ISDN cable to your phone or fax machine.
- Connect the other end of the cable to one of the ISDN connectors on the EXPLORER 700.

After power up and pointing, check the connection by making a phone call or sending a fax. R

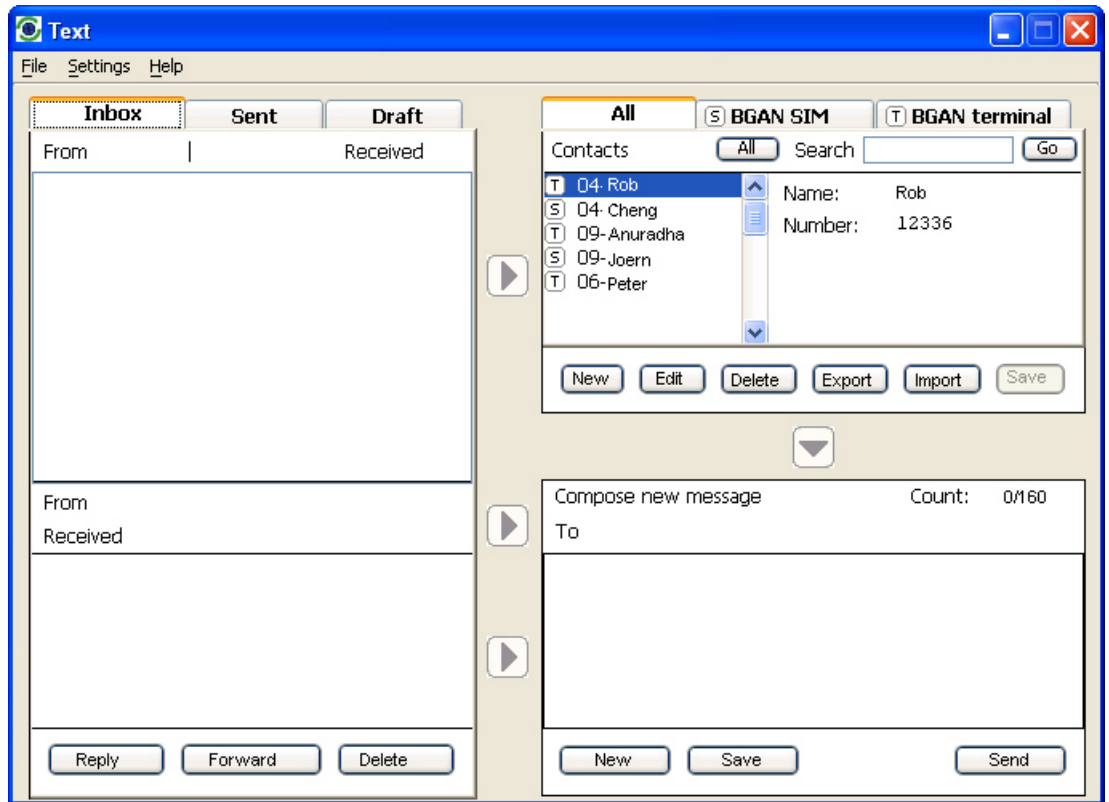
### **4.9 Sending or receiving a text message**

You can send text messages from a BGAN terminal to another BGAN terminal and from a BGAN terminal to a mobile phone. You can also send a text messages from a mobile phone to a BGAN terminal, but only on those networks with which Inmarsat has an agreement.

To access text features, select the Text tab in BGAN LaunchPad:



The following screen is displayed:



Refer to "BGAN LaunchPad Help" for details on using this screen.

**Note** When you receive a text message, the Text message icon in BGAN LaunchPad changes, and the number of new text messages displays.