

Iridium Extreme[™] Satellite Phone

Data Services Manual



Table of Contents

1	OVI	OVERVIEW1		
2	HOW IT WORKS			
3	BEFORE INSTALLING			
4	USB DRIVER INSTALLATION			
5	MODEM INSTALLATION AND CONFIGURATION4			
	5.1	Important Considerations		4
6	DIALING A CALL			
	6.1	Before Dialing		5
7	DA	<u> </u>		
	7.1 7.2			
8 WINDOWS XP® WALKTHROUGH				
	8.1 8.2 8.3 8.4 8.5	Install A Modem Configure A Modem Placing an Iridium Data Call		10 14 22
9	WINDOWS VISTA® WALKTHROUGH			28
	9.1 9.2 9.3 9.4 9.5	Install A Modem Configure A Modem Placing an Iridium Data Call Uninstall USB Driver		31 37 40
10	WIN	NDOWS 7 [®] WALKTHROUGH		45
	10.1 10.2 10.3 10.4 10.5	Install A Modem Configure A Modem Placing an Iridium Data Call		52 54
11	MA	C OS WALKTHROUGH		59
	11.1 11.2			



1 Overview

Iridium's ExtremeTM Satellite Phone provides dial-up connectivity to another computer, a remote LAN (e.g., a corporate network), or an Internet Service Provider (ISP). This service offers a typical data rate of 2.4 Kbps. You will be able to use Dial-Up Data service just as you would use the modem on your computer to dial a call through the public switched telephone network (PSTN). The only differences are that the dialed telephone number must conform to the international dialing pattern used by Iridium, and that you will use your Iridium phone as the data modem. In essence, your Iridium phone appears as an external modem to your computer.

Before using Dial-Up Data, you will need to install the PPP modem driver onto your computer. This driver is provided on the Iridium ExtremeTM Data CD from your Iridium Service Provider. This document provides detailed instructions on installing this driver.

Iridium Extreme[™] Satellite Phone users must also install the Iridium Extreme[™] USB (VCOMPORT) driver. This driver is available on the Iridium Extreme[™] Data CD or from your Iridium Service Provider. This document provides detailed instructions on installing this driver.

Upon installation of these drivers, you will be able to use standard software applications (e.g., Microsoft Dial-Up Networking) to initiate data calls with the Iridium Dial-Up Data Service.

2 How It Works

The Iridium Dial-Up Data Service functions in much the same way as a modem. From the perspective of your computer, the Iridium handset *is* an external modem. On your computer, you will configure a dial-up networking connection. As part of that connection, you will identify the modem associated with the Iridium handset and the phone number to dial. Then, in dial-up networking you will enter your user name and password to access your data service and you will initiate the connection. Your handset will dial and initiate a connection with the Iridium gateway through the Iridium satellite constellation. Since your Iridium handset is requesting to establish a data connection, the switch at the gateway will route the call through to the data service you have dialed. Once connected and a session has been established, you can access data services such as email, web browsing or FTP just as you would over a standard modem.

The following sections of this document will provide instructions on exactly how to do this.



3 Before Installing

Before beginning the installation, please ensure you have the following items:

- 1) An Iridium ExtremeTM Handset
- 2) The Iridium ExtremeTM Data CD
- 3) USB Cable (Standard to Mini connectors)
- 4) An available USB port on your computer (e.g., COM3)
- 5) Administrator Privileges



Any zip archive should be expanded prior to copying to target PC.

NOTE: If a previous version of the Iridium 9555 or Iridium ExtremeTM USB drivers have been installed on the PC please follow the uninstall directions for your OS before attempting to install the most current Iridium ExtremeTM USB driver.



4 USB Driver Installation

Prior to using the data modem features of your Iridium ExtremeTM handset, you must first install the VCOMPORT ExtremeTM USB Driver. This driver is compatible with the following operating systems:

Operating Systems			
32 bit versions of Windows XP® Service Pack 2 & 3			
64-bit versions of Windows XP® Service Pack 1			
32 & 64 bit versions of Windows Vista® Service Pack 1			
32 & 64 bit versions of Windows 7®			
Users are not required to install a USB driver for Mac OS® X 10.4 - 10.6 (earlier versions of the Mac OS® operating system are not supported)			

For updated information regarding compatibility with other Windows® operating systems, please contact your Iridium Service Provider.

The driver is located in the following directory on your Iridium Extreme[™] Data CD:

Iridium Extreme TM Data CD: \Iridium Extreme Drivers\VCOMPORT



5 Modem Installation and Configuration

Prior to using your Iridium ExtremeTM Satellite Phone as a modem, you must install the Iridium PPP Data Modem on your computer (disregard this step for Windows Vista[®] operating system users) and set up and configure a dial-up networking connection.

The following instructions are **NOT** intended for Direct Internet 3 users. Modem installation and configuration for Direct Internet 3 is done through the Direct Internet 3 Installer. Please refer to the Direct Internet 3 Install Guide for your operating system.

5.1 Important Considerations

- In the dial-up networking connection, TCP/IP should be the only enabled network protocol. You must have an available serial port on your computer (e.g., COM1).
- You must have Administrator privileges if using the Windows XP[®] Professional or Windows Vista[®] operating system.
- The iridium.INF driver is automatically copied into the Windows\INF folder during setup of Direct Internet 3 (see section 7). Users that have not run the Direct Internet 3 setup may retrieve the file from the Iridium Extreme[™] Data CD and copy it manually to the Windows\INF folder (disregard this step for Windows Vista[®] operating system users). The iridium.INF file can be found in the following directory on the Iridium Extreme[™] Data CD:
- If the "Iridium PPP Data Modem" is not available, the "Standard 19200 bps" modem can be used but must be configured with the following "extra initialization string", which sets the correct bearer service for the connection:
 AT+CBST=71,0,1



6 Dialing a Call

6.1 Before Dialing

- 1) Connect the computer to the Iridium Satellite Phone.
- 2) Orient the phone antenna towards a clear view of the sky.
- 3) Verify that the computer is powered on and completely booted.
- 4) Power on the Iridium Satellite Phone and wait for it to register with the Iridium satellite network.



7 Data Connection Services

Some data connection services exist for Iridium subscribers. These services are briefly described below.

7.1 Direct Internet

Iridium's Direct Internet Data Service allows users to connect directly to the Internet via the Iridium gateway. While users are not required to load any special software onto their computer to connect, they will find additional compression and speed benefits from installing the Direct Internet accelerator. However, the service utilizes standard dial-up networking and has been shown to work with a variety of operating systems. Direct Internet software and documentation may be found on:

- 1) The Iridium Extreme TM Data CD
- 2) The Iridium Extreme TM Phone Product web page

 http://www.iridium.com/products/IridiumExtremeSatellitePhone.aspx?section=Software
- 3) Your local Iridium Service Provider

7.2 RUDICS

With RUDICS, you can establish a direct connection between a device connected to the Iridium modem in the field and a program running on your server back home. The program listens on a port number that you register with the gateway. Any time that the modem dials into the gateway using the RUDICS phone number, a socket connection is established between the gateway and your program. Any bytes that you write to the modem show up on the socket and can be read by the program.



8 Windows XP® Walkthrough

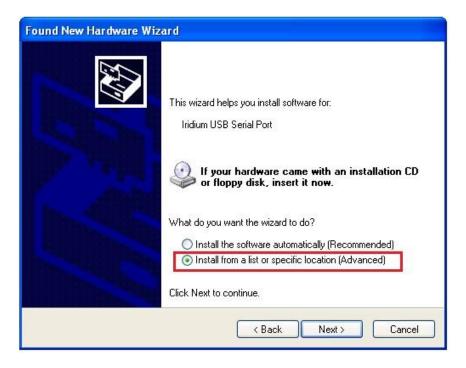
8.1 Install USB Driver

- 1) Ensure the PC is turned on and that a USB port is accessible.
- 2) From the Iridium ExtremeTM Data CD, copy the **VCOMPORT** folder to the your desktop or local drive.
- 3) Power on the Iridium ExtremeTM Handset
- 4) Connect the Iridium ExtremeTM handset to the PC using the USB-mini cable.
- 5) At this time your PC should initialize the Found New Hardware Wizard. At the Welcome screen, select the radio button next to, **No, not at this time** and click **Next**.

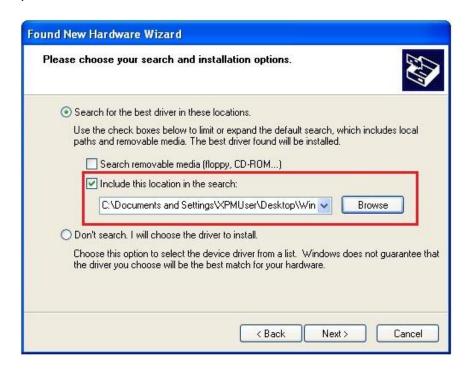




6) Select Install from a list of specific location (Advanced) and click Next.



7) Select the radio button next to Search for the best driver in these locations. Select the check box next to Include this location in the search. Click on the Browse button to browse and select the VCOMPORT folder. Click the Next button when complete.





8) The wizard should then install software for the Iridium USB Serial Port.



9) Once the installation has completed, you will receive a message that the process has completed – click **Finish** to exit.



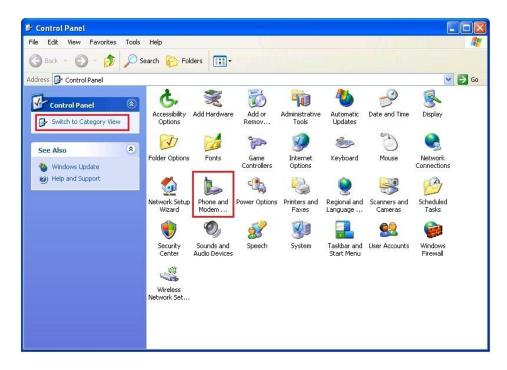


8.2 Install A Modem

- 1) Close all applications.
- 2) Select **Control Panel** from the Windows[®] start menu.

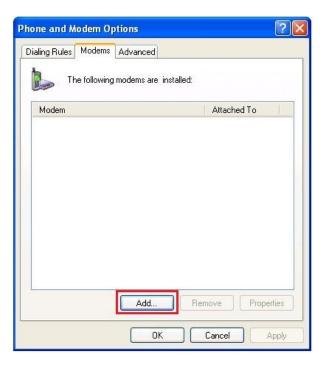


3) Double click on **Phone and Modem Options** from the **Control Panel** window. (Make sure **Control Panel** is classic view.)





4) Click Add... from the Modems tab in the Phone and Modems Options dialog box.



5) Select the checkbox next to **Don't detect my modem; I will select it from the list**. Then, click the **Next>** button.





6) Highlight **Iridium** from the Manufacturer list. Then, select latest **Iridium PPP Data Modem** from the Models list. Click the **Next>** button to continue.





7) Click the **Selected ports** radio button. Choose an available COM Port (e.g., COM1) that will connect to the Iridium device. Click the **Next>** button to continue.



8) Click the **Finish** button once the installation completes.





8.3 Configure A Modem

1) Select **Control Panel** from the Windows[®] start menu.

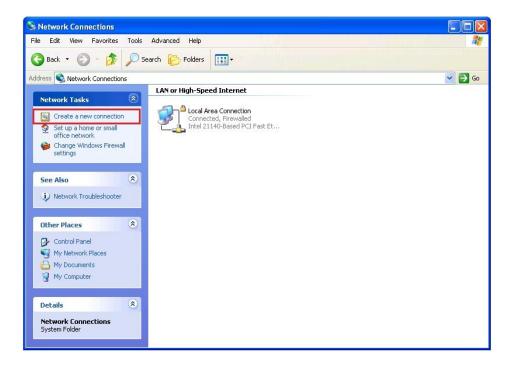




2) Select **Network Connections** from the **Control Panel** window. (Make sure you are using the Classic View)



3) Click on **Create a new connection** from the **Network Tasks** section located on the left pane of the **Network Connections** window.





4) Click the **Next>** button on the **New Connection Wizard** welcome screen.



5) Select the radio button next to **Connect to the Internet**. Click the **Next>** button to continue.





6) Select the radio button next to **Set up my connection manually**. Click the **Next>** button to continue.



7) Select the radio button next to **Connect using a dial-up modem**. Click the **Next>** button to continue.





8) Enter an appropriate name for the connection.



9) Enter your Internet Service Provider or assigned RUDICS dial-up telephone number. Click the **Next** button to continue.





- 10)A window may appear to select either **Anyone's use** or **My use only** for Windows XP[®] Professional Edition users. Select any option and click the **Next>** button to continue.
- 11)Enter the User name and Password provided by your Internet Service Provider. Click the **Next>** button to continue.





12)To access this connection quickly, it is recommended that the checkbox next to the **Add a shortcut to this connection to my desktop** is selected. Click the Finish button.



13) A dial-up connection window will appear. Click on the **Properties** button.

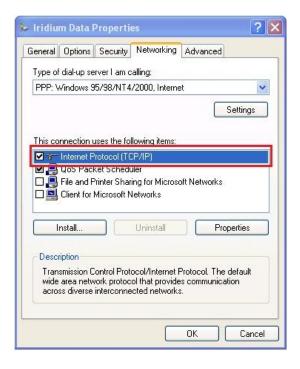




14) For RUDICS or ISPs that don't require a User name or password, uncheck the **Prompt for name and password, certificate, etc.** checkbox in the **Options** tab of **Properties** dialog box.



15) Make sure **Internet Protocol (TCP/IP)** is checked in the **Networking** tab. Uncheck all other components. Click the **OK** button and close all windows when done.





8.4 Placing an Iridium Data Call

1) From the Windows[®] start menu, select **Connect To**. In the sub-menu, select the desired dial-up connection or select **Show all connections** open a new window with all of the dial-up connections.





2) Click on the **Dial** button to initiate the connection.



8.5 Uninstall USB Driver

1) Go to **Start** and right-click **My Computer** and select **Properties**.

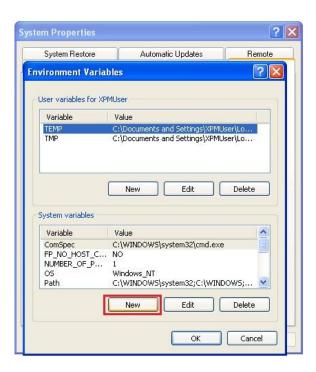




2) Click the **Environmental Variables** button from the **Advanced** tab in the **System Properties** dialog box.



3) Click the **New** button under the **System variables** area in the **Environment Variables** dialog box.

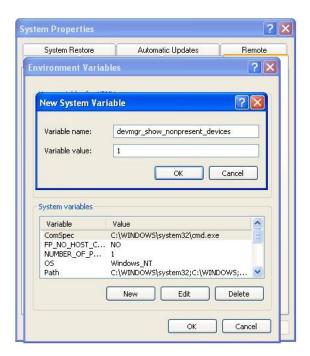




4) Enter the following information in the **New System Variable** dialog box:

Variable Name: devmgr_show_nonpresent_devices

Variable Value: 1

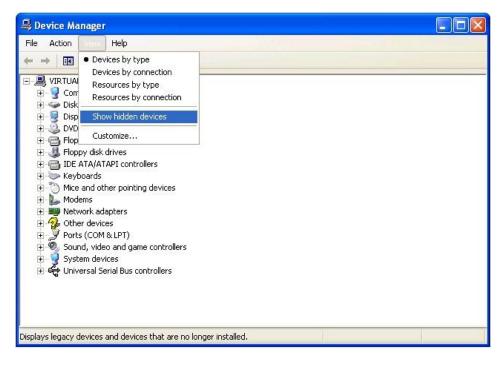


- 5) Click OK in the New System Variable and Environment Variable dialog boxes.
- 6) Click the **Device Manager** button from the **Hardware** tab in the **System Properties** dialog box.

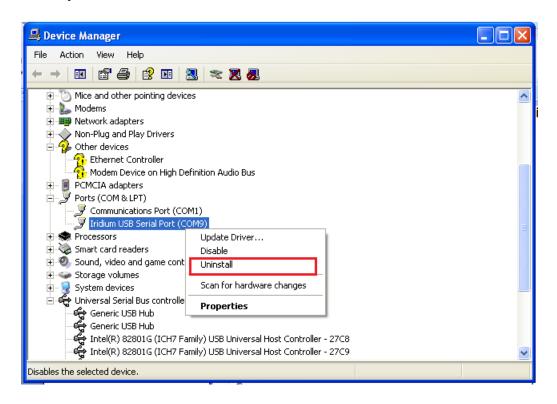




7) Select the View from the top menu and then select Show Hidden Devices.



- 8) Click on the
 next to the Other devices, Ports (COM & LPT) and Universal Serial Bus controllers entries.
- 9) Right-click on any entries that have Iridium and click Uninstall.





- 10) You should see all the previously installed 9505, 9505A and 9555 drivers.
- 11)Close all windows and restart the computer.



9 Windows Vista® Walkthrough

9.1 Install USB Driver

- 1) Ensure the PC is turned on and that a USB port is accessible.
- 2) From the Iridium ExtremeTM Data CD, copy the **VCOMPORT** folder to the your desktop or local drive.
- 3) Power on the Iridium ExtremeTM Handset
- 4) Connect the Iridium ExtremeTM handset to the PC using the USB-mini cable.
- 5) At this time your PC should initialize the Found New Hardware Wizard. Select Locate and install driver software (recommended).





6) If prompted, select **Don't search online**.



7) When prompted, select I don't have the disc. Show me other options.

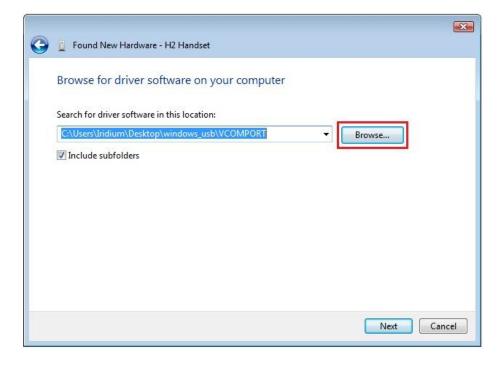




8) Select Browse my computer for driver software (advanced)

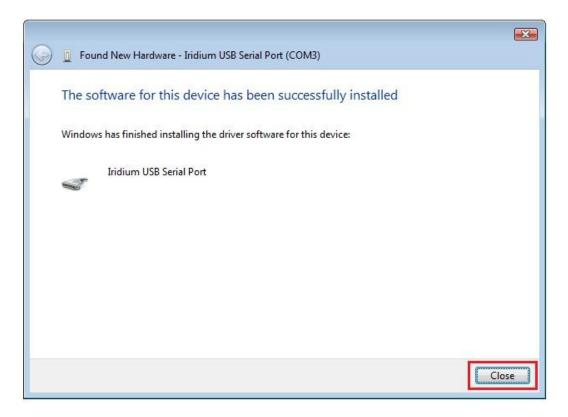


9) Use the **Browse** button to search and select the **VCOMPORT** folder from your desktop or local drive. Be sure **'Include Subfolders'** box is checked. Click the **Next** button to continue.





10)A message will appear when the driver has been successfully installed. Click the **Close** button.



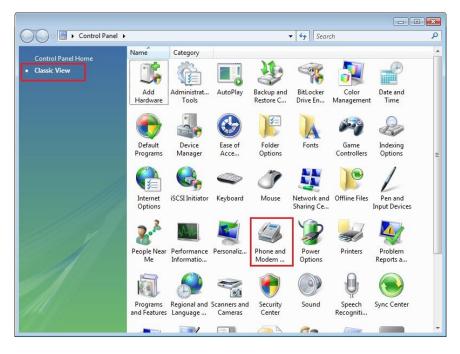
9.2 Install A Modem

- 1) Close all applications.
- 2) Select **Control Panel** from the Windows[®] start menu.

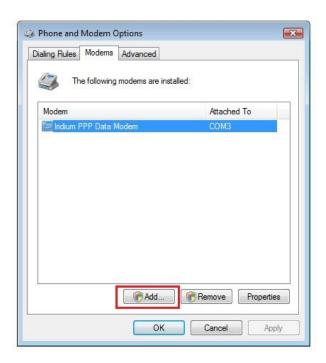




3) Select the **Phone and Modem Options** from the **Control Panel** window. (Make sure you are using the Classic View)



4) Click the **Add...** button from the **Modems** tab in the **Phone and Mode Options** dialog box.

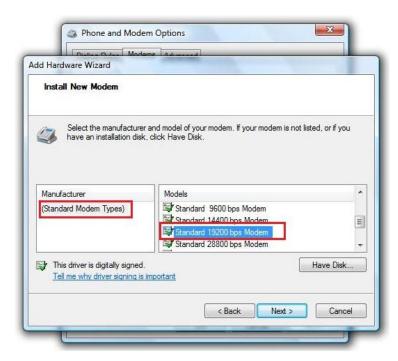




5) Select the checkbox next to **Don't detect my modem**; **I will select it from the list**. Then, click the **Next>** button.

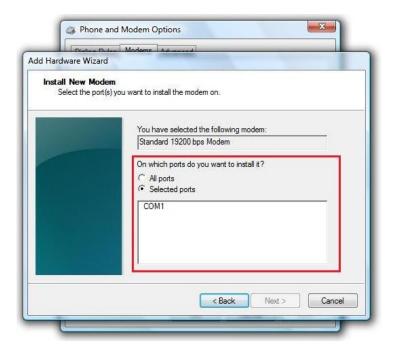


6) Highlight (Standard Modem Types) from the Manufacturer list. Then, select Standard 19200bps Modem from the Models list. Click the Next> button to continue.





7) Click the **Selected ports** radio button. Choose an available COM Port (e.g., COM1) that will connect to the Iridium device. Click the **Next>** button to continue.

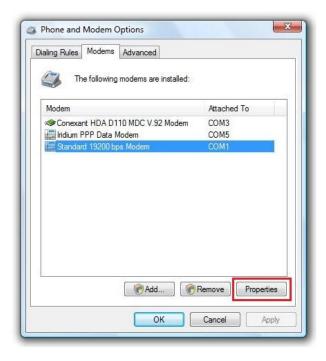


8) Click the **Finish** button once the installation completes.

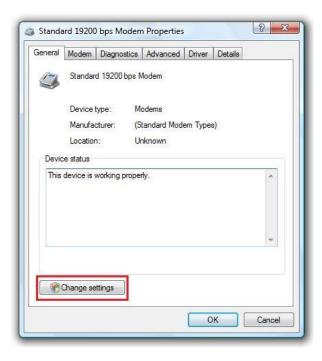




9) Select the **Standard 19200bps Modem** and click the **Properties** button from the **Modems** tab in the **Phone and Modems Options** dialog box.

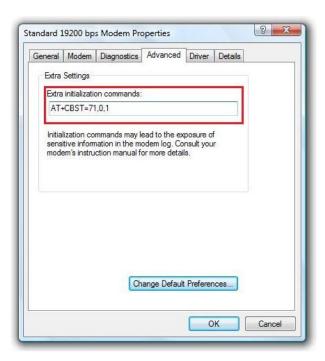


10) Select the **Change settings** button from the **General** tab in the **Standard 19200 bps Modem Properties** dialog box.





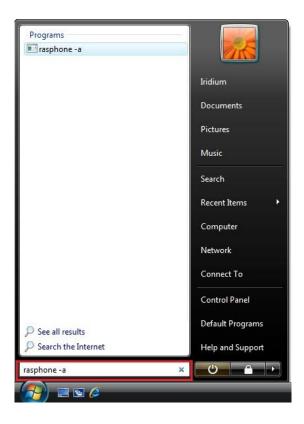
- 11) Select the **Advanced** tab and enter **AT+CBST=71,0,1** in the **Extra initialization commands** text box. Click the **OK** button when done.
- 12) The modem is now installed and properly set up. Close all open windows.





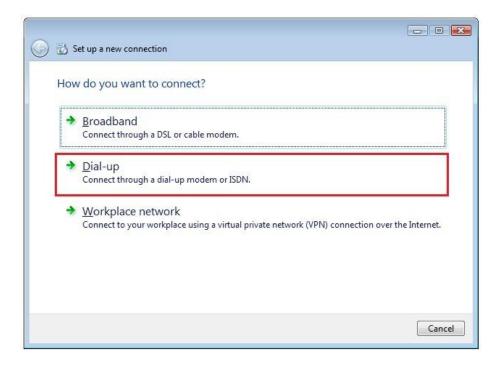
9.3 Configure A Modem

1) From the Windows® start menu, type **rasphone -a** in the Search text box and press the **Enter** key. This will open the **Setup a new connection** window.

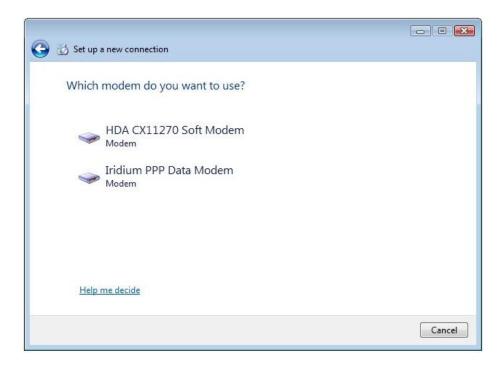




2) Select the Dial-up option.



3) If there is more than one dial-up modem installed, a new window will appear asking to select the modem to be used for this connection.





4) Enter your Internet Service Provider or assigned RUDICS dial-up telephone number. Also, provide an appropriate name for this dial-up connection. Click the **Next** button to continue.



5) Enter the User name and Password provided by your Internet Service Provider. RUDICS does not require User names or passwords. Click the **Create** button when done.



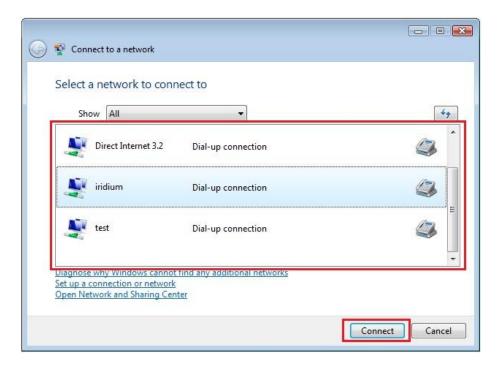


9.4 Placing an Iridium Data Call

1) Select **Connect To** from the Windows® start menu.



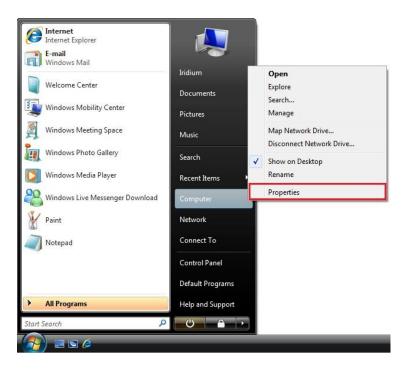
2) Select the desired Dial-up connection and click on the **Connect** button to initiate the connection.



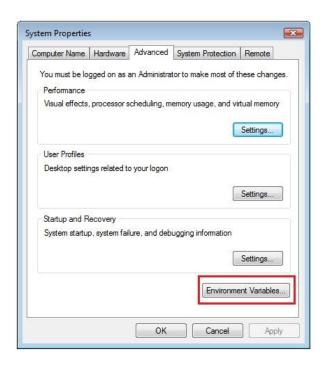


9.5 Uninstall USB Driver

1) From the Windows® start menu, right-click on **Computer** and select **Properties**.

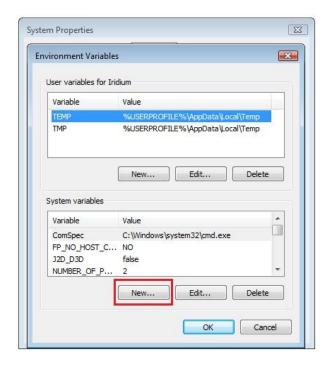


2) Click the **Environment Variables...** button from the **Advanced** tab in the **System Properties** dialog box.





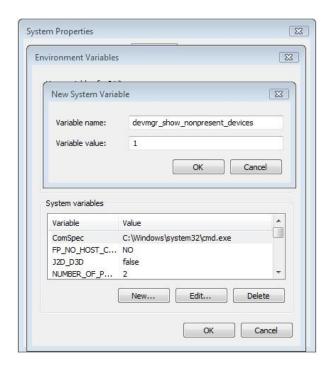
3) Click the New... button under the System variables area in the Environment Variables dialog box.



4) Enter the following information in the **New System Variable** dialog box:

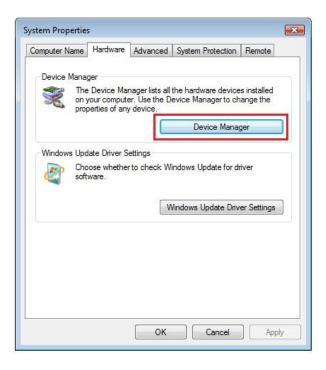
Variable Name: devmgr_show_nonpresent_devices

Variable Value: 1

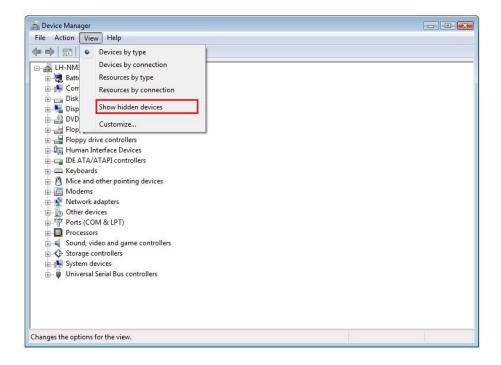




5) Select the **Hardware** tab in the **System Properties** dialog box and click the **Device Manager** button.



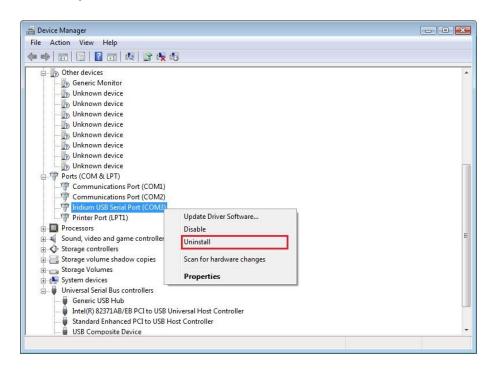
6) Select the View from the top menu and then select Show Hidden Devices.





- 7) Click on the

 next to the Other devices, Ports (COM & LPT) and Universal Serial Bus controllers entries.
- 8) Right-click on any entries that have Iridium and click Uninstall.



9) Select the check box **Delete the driver for this device** and click the **OK** button.



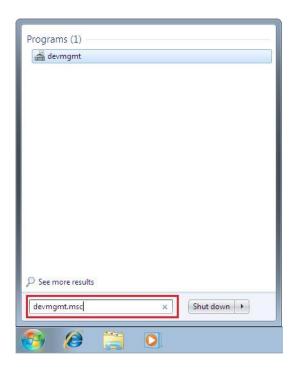
10) Close all open windows and restart the computer.



10 Windows 7® Walkthrough

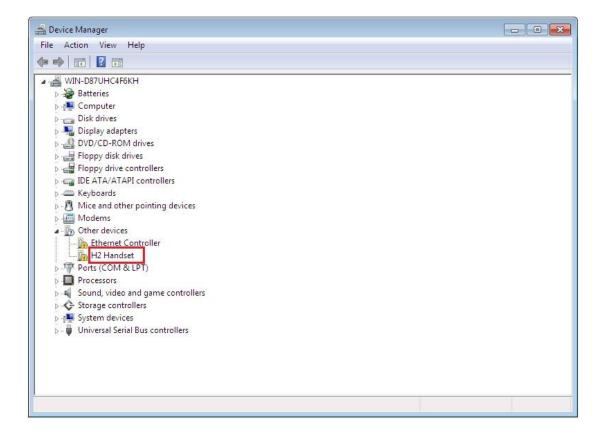
10.1 Install USB Driver

- 1) Ensure the PC is turned on and that a USB port is accessible
- 2) From the Iridium Extreme[™] Data CD, copy the **VCOMPORT** folder to your desktop or local drive.
- 3) Power on the Iridium ExtremeTM handset.
- 4) Connect the Iridium ExtremeTM handset to the PC using the USB-mini cable.
- 5) From the Windows[®] start menu, type **devmgmt.msc** in the Search text box and press the **Enter** key on your keyboard. This will open the **Device Manager** window.



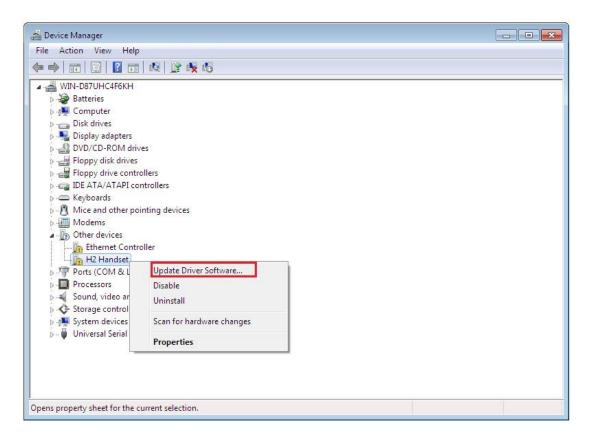


6) Locate the Iridium Extreme[™] Handset (H2 Handset); it will probably be under **Other devices**.

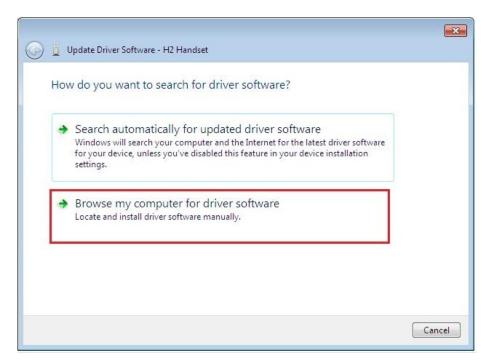




7) Right-click on the Iridium Extreme[™] Handset icon and select **Update Driver Software...**



8) Select Browse my computer for driver software

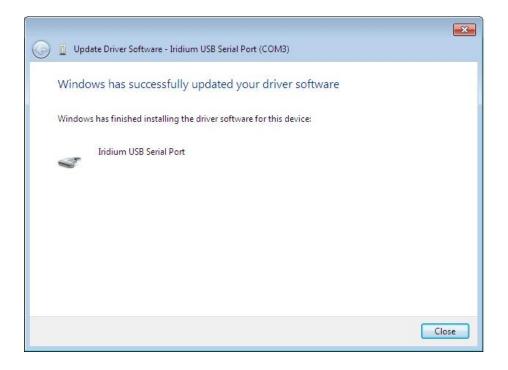




9) Use the **Browse** button to search and select the **VCOMPORT** folder from your desktop or local drive. Be sure **'Include Subfolders'** box is checked. Click the **Next** button to continue.



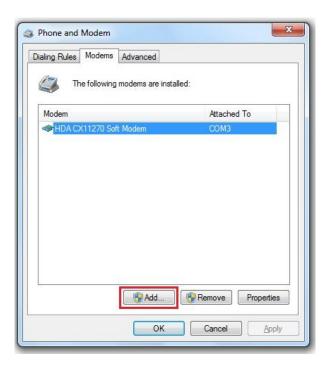
10) A message will appear when the driver has been successfully installed. Click the **Close** button.





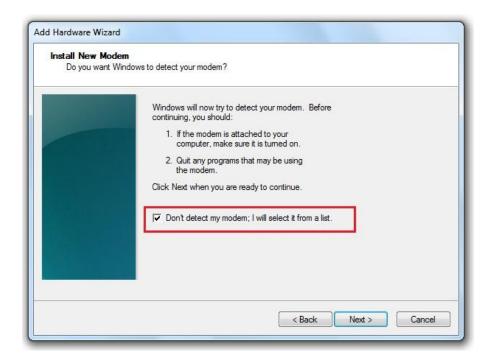
10.2 Install A Modem

- 1) From the Windows[®] start menu, type **telephon.cpl** in the Search text box and press the **Enter** key on your keyboard. This will open the **Phone and Modem** dialog box.
- 2) If a **Location Information** dialog box opens first, enter your telephone area code and click the **OK** button.
- 3) Click the Add... button from the Modems tab in the Phone and Modem dialog box.

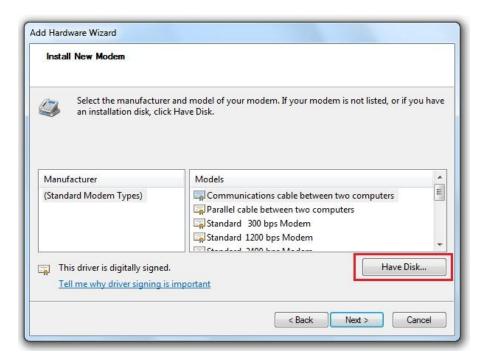




4) Select the checkbox next to **Don't detect my modem**; I will select it from the list. Then, click the **Next>** button.



5) Click the **Have Disk...** button.

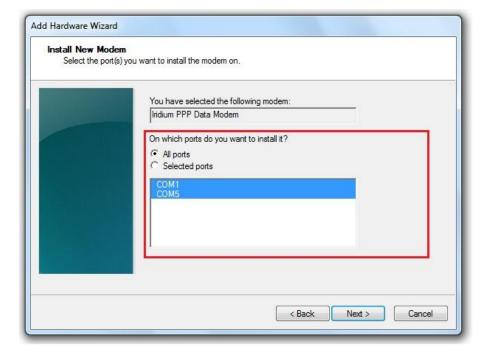




6) Use the **Browse...** button to search and select the iridium.INF file from the CD. Click the **OK** button when done.

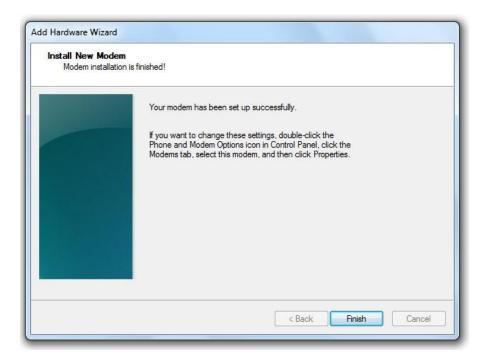


7) Select the All ports radio button. Click on the Next> button to continue.



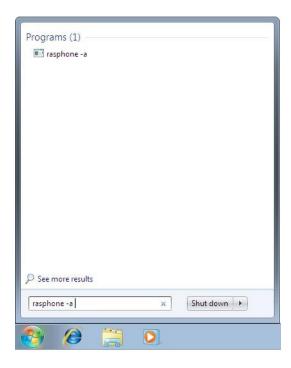


8) Click the **Finish** button to complete the modem installation.



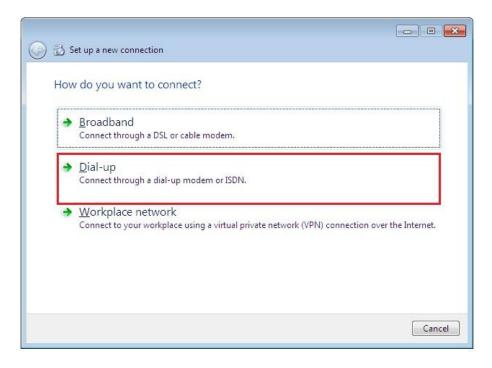
10.3 Configure A Modem

1) From the Windows® start menu, type **rasphone -a** in the Search text box and press the **Enter** key. This will open the **Setup a new connection** window.

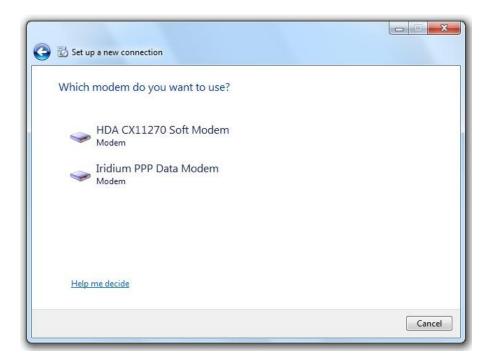




2) Select the Dial-up option.



3) If there is more than one dial-up modem installed, a new window will appear asking to select the modem to be used for this connection.





4) Enter the User name and Password provided by your Internet Service Provider. RUDICS does not require User names or passwords. Click the **Create** button when done.



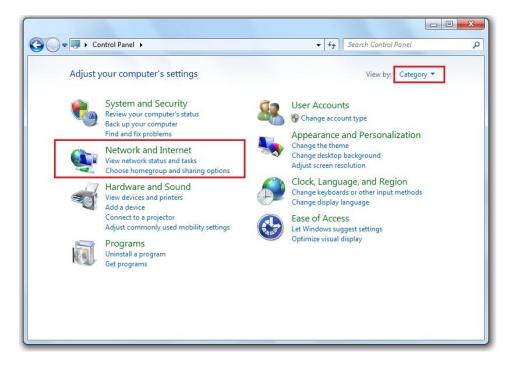
10.4 Placing an Iridium Data Call

1) Select **Control Panel** from the Windows[®] start menu.

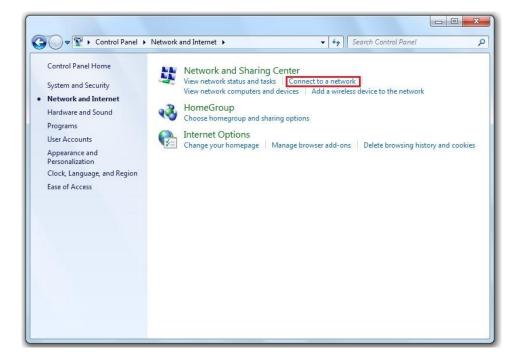




2) Select **Network and Internet** form the **Control Panel** window. (Make sure you are viewing by **Category**)



3) Select Connect to a network under Network and Sharing Center.



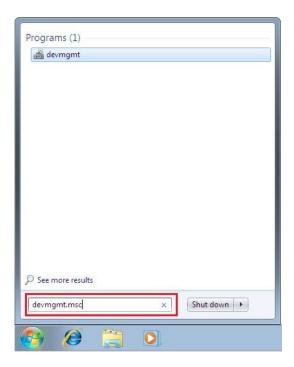


4) A pop-up window will appear. Click on the desired connection and click on the **Connect** button to initiate the connection.



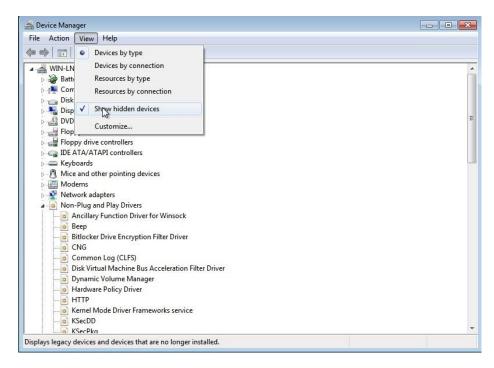
10.5 Uninstall USB Driver

1) From the Windows[®] start menu, type **devmgmt.msc** in the Search text box and press the **Enter** key. This will open the **Device Manager** window.

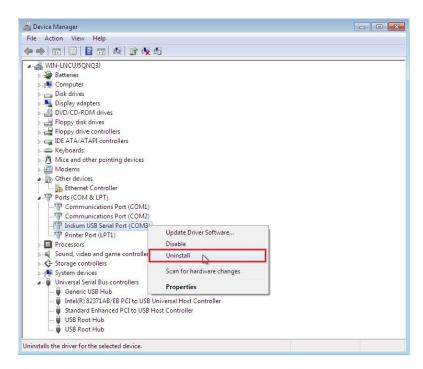




2) Select Show hidden devices from the View menu on the top bar.



- 3) Click on the ▶ next to the Other devices, Ports (COM & LPT) and Universal Serial Bus controllers entries.
- 4) You should see all the previously installed 9505, 9505A and 9555 drivers.
- 5) Right-click on any entries you see which say Iridium and click Uninstall.





6) Select the checkbox next to the **Delete the driver software for this device** and click **OK**.



7) Reboot your computer after you have uninstalled all Iridium drivers.



11 Mac OS Walkthrough

11.1 Configure

The user does not need to install a modem for the Mac OS operating system.

1) Connect the Iridium ExtremeTM phone to the Mac via a USB port, and turn it on. The computer should display a small window stating it has found the handset.



2) Click the **Network Preferences** button, and it opens.





3) Select the *Iridium 9575 Handset* and create a new configuration (e.g., Extreme_PPP).



4) Complete the fields as described in the table below.

Field Name	Value
Configuration	Default
Telephone Number	Internet Service Provider or RUDICS assigned telephone number.
Account Name	Account Name given by your Internet Service Provider. RUDICS 3 does not require an Account Name.
Password	Password for Internet Service Provider. RUDICS does not require a Password.
Show modem status in menu bar	Select the check box for easy access to connection.

5) Click on the Advanced... button.



6) Complete the fields as described in the table below.

Field Name	Value
Vendor	Generic
Model	Dialup Device
Dialing	Tone
Sound	On

7) Select the **PPP** tab and set the following fields as described in the table below.

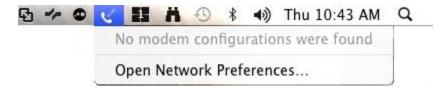
Field Name	Value
Connect automatically when needed	Select
Prompt every 30 minutes	Select
Disconnect if idle for 10 minutes	Select
Disconnect if user logs out	Select
Redial 3 times if busy, waiting 5 seconds before redialing	Select
Send PPP echo packets	Select
TCP header compression	Select

8) Click **OK** to complete configuration

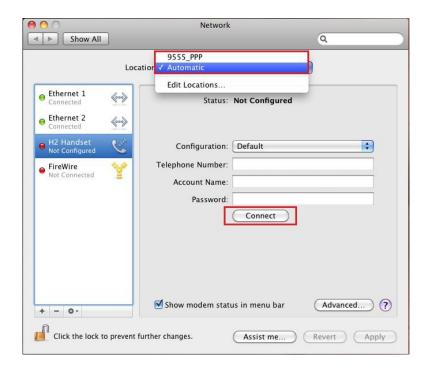


11.2 Placing an Iridium Data Call

1) From the menu, click the modem status icon, and select the desired connection or **Open Network Preferences**.



2) In the new dialog box, select the desired connection and click the **Connect** button.



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