



RX1250 Real-Time Corrections Via a Cell Phone

December, 2005

RX1250 SmartRover

This guide describes how to configure your RX1250 SmartRover with a Bluetooth enabled cellular phone using a GPRS Data plan for connection to a reference station.

Topics

- Establish a Connection between the RX1250 and Cell Phone via Bluetooth
 - Establish a Connection between the RX1250 to a Reference Station via the Cell Phone Internet Connection
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RX1250 Real-Time Corrections Via a Cell Phone

Purpose

This quick guide provides general procedures to connect the RX1250 to a Bluetooth compatible cellular phone, and access a reference station via the Internet.

Introduction

Many of the cell phone providers today offer GPRS enabled phones with Bluetooth capability. As a result, these cell phones may be utilized to log onto the Internet and receive correction data from a reference station.

Notice: You will need to have a GSM cell phone with a GPRS Data Plan from Cingular, T-Mobile, or Rogers AT&T and have it activated prior to using this quick guide.

This quick guide also assumes that the user is familiar with general GPS surveying procedures and real-time applications.

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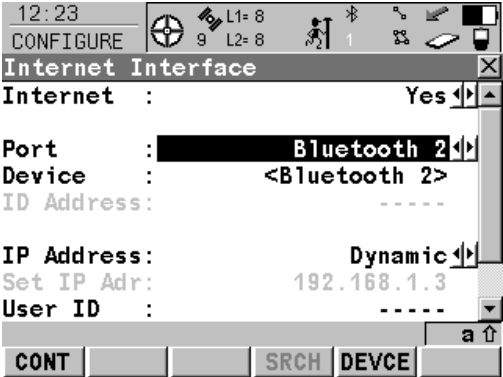
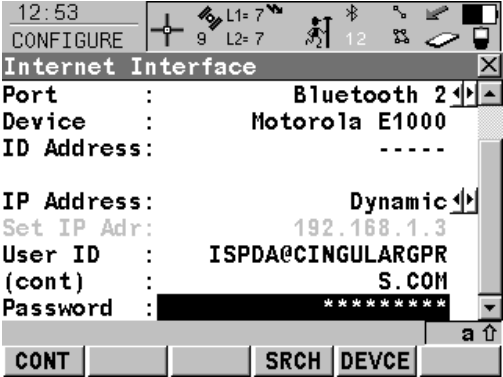
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Step	Action	Display
1	<p>From the Main Menu:</p> <ul style="list-style-type: none"> Tap on 5 Config... <p>This will take you to the GPS1200 Configuration screen.</p>	
2	<p>From the GPS1200 Configuration screen:</p> <ul style="list-style-type: none"> Tap on 4 Interfaces... <p>This will take you to the CONFIGURE Interfaces screen.</p>	
3	<p>From the CONFIGURE Interfaces screen:</p> <ul style="list-style-type: none"> Highlight the Internet interface. Press the F3 (EDIT) button. <p>This will take you to the CONFIGURE Internet Interface screen.</p>	

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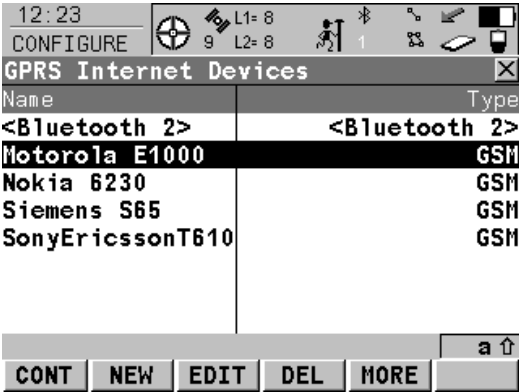
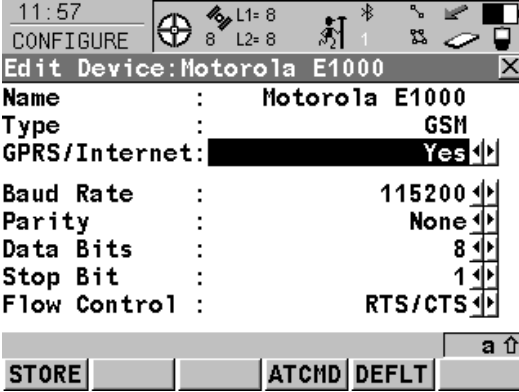
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Step	Action	Display
4	<p>From the CONFIGURE Internet Interface screen:</p> <p>Configure the settings as shown:</p> <ul style="list-style-type: none"> • Set the Internet field to Yes. • Set the Port field to an available Bluetooth port (typically Bluetooth 2 or Bluetooth 3). • Set the IP Address field to Dynamic. <p>Some telephone service providers require a user name and password to sign into the GPRS data network.</p> <ul style="list-style-type: none"> • Enter the User ID and Password as appropriate. (User ID's are often longer which will require both lines of field space). <p>Cingular Wireless: Username: ISPDA@CINGULARGPRS.COM PWD: CINGULAR1</p> <p>Note: See the <i>@ Symbol</i> section at the end of document on how to enter the '@' symbol.</p> <p>T-Mobile Communications: * No username or password necessary.</p> <p>Rogers AT&T Wireless: Username: wapuser1 PWD: wap</p> <ul style="list-style-type: none"> • Press the F5 (DEVCE) button. <p>This will take you to the CONFIGURE GPRS Internet Devices screen.</p>	 

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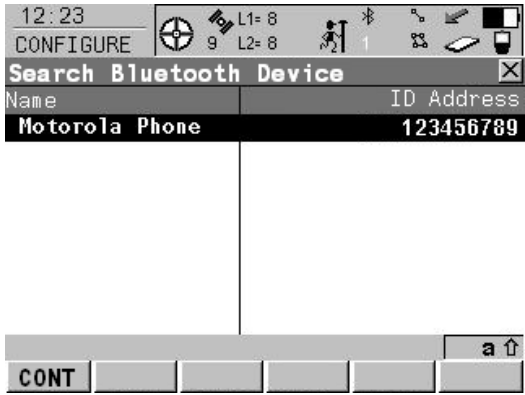
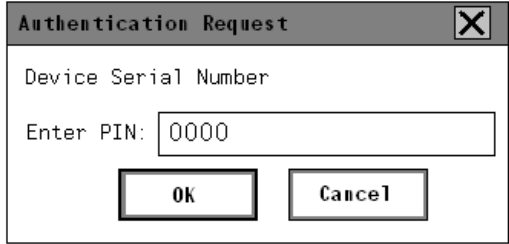
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Step	Action	Display
<p>5</p>	<p>From the CONFIGURE GPRS Internet Devices screen:</p> <ul style="list-style-type: none"> Highlight the appropriate phone brand/model from the GPRS Internet Devices list. <p>Note: For Motorola phones (Motorola Razr and Motorola V 551), select Motorola E1000.</p> <p>Also Note: Currently, ONLY the Motorola Razr and Motorola V 551 have been proven to work with the RX1250.</p> <ul style="list-style-type: none"> Press the F3 (EDIT) button. <p>This will take you to the CONFIGURE Edit Device screen.</p>	
<p>6</p>	<p>From the CONFIGURE Edit Device screen:</p> <ul style="list-style-type: none"> Setup the Edit Device Screen as shown in the display screen on the right. Press the F1 (STORE) button to save the settings. <p>This returns you to the CONFIGURE GPRS Internet Devices screen.</p> <ul style="list-style-type: none"> Press the F1 (CONT) button. <p>This will take you to the CONFIGURE Internet Interface screen.</p>	

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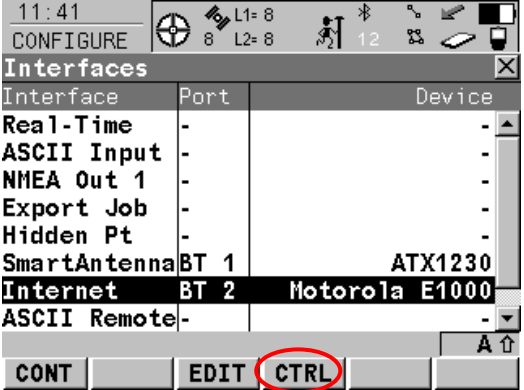
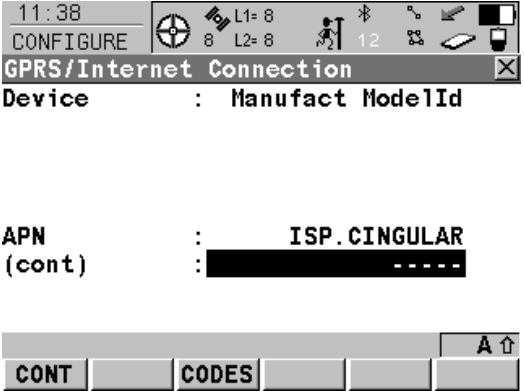
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Step	Action	Display
<p>7</p>	<p>On the cell phone:</p> <ul style="list-style-type: none"> Configure the phone to a Bluetooth 'DISCOVERABLE' mode. <p>* You may need to refer to the cell phone manual to do this, as the protocol will vary between models.</p> <p>On the RX1250:</p> <ul style="list-style-type: none"> Press the F4 (SRCH) button. <p>When the RX1250 has discovered the Bluetooth cell phone, it will display the make and serial number of the phone.</p> <ul style="list-style-type: none"> Press the F1 (CONT) button. <p>This will take you back to the CONFIGURE Interfaces screen.</p>	
<p>8</p>	<p>A dialog box will appear on the cell phone prompting for a pairing code:</p> <ul style="list-style-type: none"> Enter '0000' to pair the device. <p>Back on the RX1250:</p> <ul style="list-style-type: none"> A confirmation dialog will appear, wherein '0000' will need to be entered again to confirm the pairing. Press the F1 (CONT) button when the pairing has completed. <p>This will take you back to the CONFIGURE Interfaces screen.</p>	

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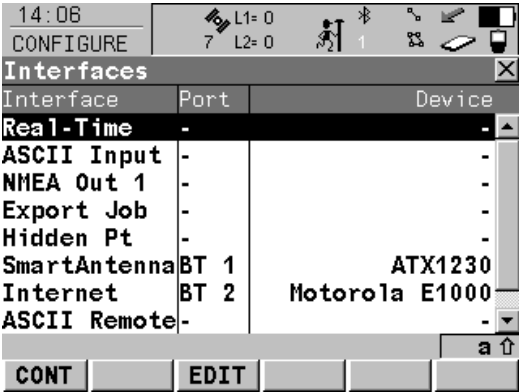
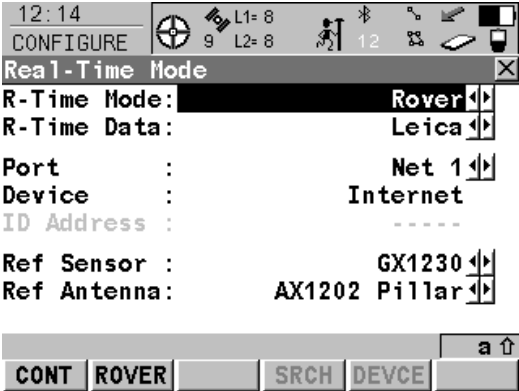
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Step	Action	Display																											
9	<p>From the CONFIGURE Interfaces screen:</p> <ul style="list-style-type: none"> Press the F4 (CTRL) button. Enter the appropriate APN address in the APN field as per the service provider used: <p><u>Cingular Wireless:</u> APN: ISP.CINGULAR</p> <p><u>T-Mobile Communications:</u> APN: internet2.voicestream.com</p> <p><u>Rogers AT&T Wireless (Canada):</u> APN: internet.com</p> <p>Note: The APN may often take up both lines of the provided field; use the (cont) field to continue the APN.</p> <ul style="list-style-type: none"> Press the F1 (CONT) button. <p>This will take you back to the CONFIGURE Interfaces screen.</p>	 <p>11:41 CONFIGURE Interfaces</p> <table border="1"> <thead> <tr> <th>Interface</th> <th>Port</th> <th>Device</th> </tr> </thead> <tbody> <tr><td>Real-Time</td><td>-</td><td>-</td></tr> <tr><td>ASCII Input</td><td>-</td><td>-</td></tr> <tr><td>NMEA Out 1</td><td>-</td><td>-</td></tr> <tr><td>Export Job</td><td>-</td><td>-</td></tr> <tr><td>Hidden Pt</td><td>-</td><td>-</td></tr> <tr><td>SmartAntenna</td><td>BT 1</td><td>ATX1230</td></tr> <tr><td>Internet</td><td>BT 2</td><td>Motorola E1000</td></tr> <tr><td>ASCII Remote</td><td>-</td><td>-</td></tr> </tbody> </table> <p>CONT EDIT CTRL</p>  <p>11:38 CONFIGURE GPRS/Internet Connection</p> <p>Device : Manufact ModelId</p> <p>APN : ISP.CINGULAR (cont) : -----</p> <p>CONT CODES</p>	Interface	Port	Device	Real-Time	-	-	ASCII Input	-	-	NMEA Out 1	-	-	Export Job	-	-	Hidden Pt	-	-	SmartAntenna	BT 1	ATX1230	Internet	BT 2	Motorola E1000	ASCII Remote	-	-
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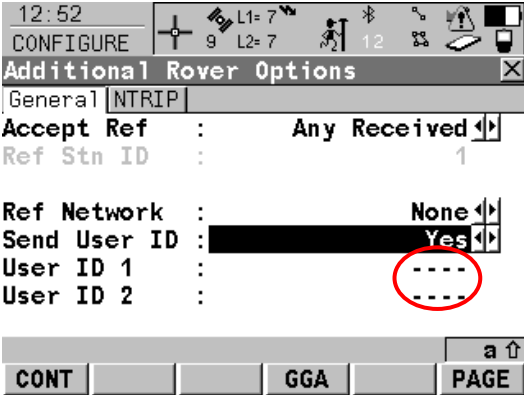
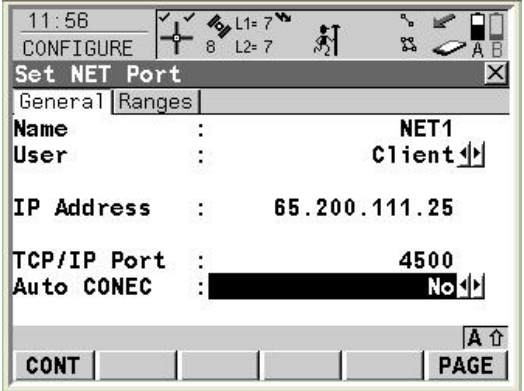
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Step	Action	Display
<p>10</p>	<p>From the CONFIGURE Interfaces screen:</p> <ul style="list-style-type: none"> Highlight the Real-Time interface. Press the F3 (EDIT) button. <p>This will take you to the CONFIGURE Real-Time Mode screen.</p>	
<p>11</p>	<p>From the CONFIGURE Real-Time Mode screen:</p> <ul style="list-style-type: none"> Press the Right Arrow key once on the RX1250 to select Rover mode in the R-Time Mode field. Select the settings as shown on the Real-Time Mode screen on the right. <p>Note: You may use a different selection of Ref Sensor and Ref Antenna than that suggested on the screen to the right.</p> <ul style="list-style-type: none"> Set the Port field to Net 1, 2, or 3 as per their availability. Press the F2 (Rover) button. <p>This will take you to the CONFIGURE Additional Rover Options screen.</p>	

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Step	Action	Display
<p>12</p> <p>From the CONFIGURE Additional Rover Options screen:</p> <p>Configure the settings as shown:</p> <ul style="list-style-type: none"> Enter the appropriate username for the reference station used in the User ID 1 field. Enter the corresponding password for the reference station used in the User ID 2 field. Press the F1 (CONT) button twice. <p>This returns you to the CONFIGURE Interfaces screen.</p>		 <p>12:52 CONFIGURE Additional Rover Options General NTRIP Accept Ref : Any Received Ref Stn ID : 1 Ref Network : None Send User ID : Yes User ID 1 : User ID 2 : CONT GGA PAGE</p>
<p>13</p> <p>From the CONFIGURE Interfaces screen:</p> <ul style="list-style-type: none"> Press the F4 (CTRL) button. <p>Configure the settings of the CONFIGURE Set Net Port screen as follows:</p> <ul style="list-style-type: none"> Set the User field to Client whenever the Rover mode is used. <p>Note: In this example we are using simulation values for the IP Address and TCP/IP Port fields. Enter the information relative to your project.</p> <ul style="list-style-type: none"> Enter the appropriate IP Address of the station employed. Enter the TCP/IP Port number of the station employed. Set Auto CONEC to No. Press the F1 (CONT) button. <p>This will take you back to the CONFIGURE Interfaces screen.</p>		 <p>11:58 CONFIGURE Set NET Port General Ranges Name : NET1 User : Client IP Address : 65.200.111.25 TCP/IP Port : 4500 Auto CONEC : No CONT PAGE</p>

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Step	Action	Display
14	<p>From the CONFIGURE Interfaces screen:</p> <ul style="list-style-type: none"> Press the Shift button. Press the F4 (CONEC) button to connect to the Internet and reference station. 	<p>The screenshot shows the 'CONFIGURE Interfaces' screen. At the top, it displays '12:20' and 'CONFIGURE'. Below this is a table with columns 'Interface', 'Port', and 'Device'. The 'Real-Time' interface is highlighted. Below the table, there are buttons for 'HELP', 'HOME', 'END', 'CONEC' (circled in red), and 'QUIT'.</p>
15	<p>When connection is successful, there will be a prompt indicating that the RX1250 is connected to the reference station.</p> <ul style="list-style-type: none"> Press the Shift button and then the F4 (DISCO) button to disconnect from the connection source. Press the F1 (CONT) button to return to the Main Menu. <p>You may now create a new job file to begin your survey project.</p>	<p>The screenshot shows the 'CONFIGURE Interfaces' screen at 14:29. A message at the bottom of the screen reads 'NET1: Successfully connected'. The 'CONT' button is highlighted.</p>

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@ Symbol

To enter an @ symbol on the RX1250, you must use the keyboard input panel. To access the keyboard input panel:

- Press the **Shift** button and then press the **PROG** button.

This takes you to the WinCE desktop screen.

- Tap on the **Keyboard** symbol on the bottom right-hand corner of the WinCE screen (it is the second one in from the far right).
- Select **Keyboard** from the pop up window.

You should now see a display of a keyboard titled **Input Panel**.

- Tap on the **Smart Rover** application icon on the WinCE toolbar (bottom center of the screen).

This returns you to the CONFIGURE Interfaces screen.

- Tap on the input field where you wish to enter the text containing the @ symbol.
- Use the Input Panel to enter all of the text and then tap on **Shift** and '@' (where the 3 was) to enter the @.
- Continue entering the remainder of the text.

Note: The Input Panel may be dragged around using your touch screen and stylus to get it out of the way.

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Hiding the Input Pane

To hide the Input Panel:

- Press the **SHIFT PROG** button combination again.

This takes you back to the WinCE desktop.

- Tap on the Keyboard icon again.
- Tap on **Hide Input Panel** from within the pop up window.
- Tap on the SmartRover bar at the bottom of the screen.

This returns you to the screen you were in when you pressed the **SHIFT PROG** button combination.

Summary

Through this quick guide, you have followed the procedures to:

- Connect the RX1250 to a cell phone via Bluetooth technology.
- Entered the necessary login details to connect to the reference station for the survey project.
- Connected to the reference station to receive real-time corrections

CONGRATULATIONS! You are now connected to receive real-time corrections on the RX1250 via a Bluetooth-enabled cell phone!
