

Configuring GPS1200 for use with the Intuicom/GFU15 Integrated Spread Spectrum Radio

Quick Guide

August, 2004

WORKING
TOGETHER



Leica
Geosystems

Introduction

Purpose

This guide will lead you through the steps necessary to configure GPS1200 for use with an Intuicom/GFU15 Integrated Spread Spectrum Radio.


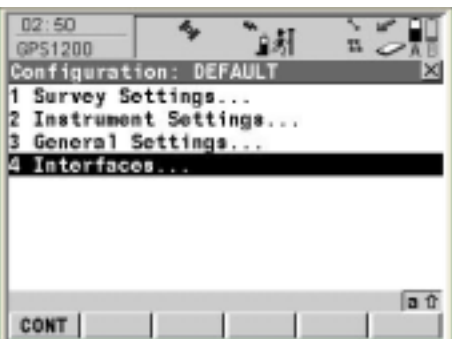
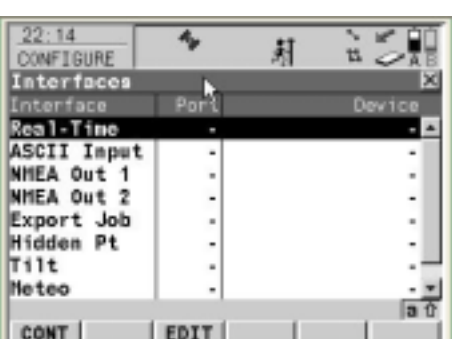
*Three
Simple Steps*

There are only three simple steps to make these new radios ready for production in the field:

- Attach the module to the receiver
 - Configure the device
 - Start Work
-




Continued on next page

Configuring the Radio

Step	Action	Display
1	<p>After attaching the radio module to the GPS1200 Sensor. Turn the receiver on.</p> <p>Note: The Main Menu should be displayed.</p> <p>Select main menu item 5 Config...</p> <p>This will take you to the Configuration: DEFAULT screen.</p>	 <p>The screenshot shows the 'Main Menu' window with a title bar containing '21:28' and 'GPS1200'. The menu items are: 1 Survey, 2 Programs, 3 Manage, 4 Convert, 5 Config, and 6 Tools. A 'CONT' button is visible at the bottom left.</p>
2	<p>Once in the Configuration: DEFAULT screen select menu item 4 Interface...</p> <p>This will take you to the Interfaces screen.</p>	 <p>The screenshot shows the 'Configuration: DEFAULT' window with a title bar containing '02:50' and 'GPS1200'. The menu items are: 1 Survey Settings, 2 Instrument Settings, 3 General Settings, and 4 Interfaces. The '4 Interfaces' option is highlighted. A 'CONT' button is visible at the bottom left.</p>
3	<p>In the Interfaces screen use the Up/Down arrow keys to highlight the interface Real-Time.</p> <p>Press the F3 (EDIT) soft key.</p> <p>This will take you to the Real-Time Mode screen.</p>	 <p>The screenshot shows the 'Interfaces' window with a title bar containing '22:14' and 'CONFIGURE'. It displays a table with columns 'Interface', 'Port', and 'Device'. The 'Real-Time' interface is highlighted. Other interfaces listed include ASCII Input, NMEA Out 1, NMEA Out 2, Export Job, Hidden Pt, Tilt, and Meteo. 'CONT' and 'EDIT' buttons are visible at the bottom.</p>




Continued on next page

Configuring the Radio...Continued

Step	Action	Display
4	<p>In the Real-Time Mode screen.</p> <p>Use the side arrow keys toggle the R-Time Mode to Reference.</p> <p>Press the F5 (DEVCE) soft key to go to Devices screen.</p>	
5	<p>In the Devices screen use the Up/Down arrow keys to move the focus bar and highlight the PacificCrest PDL radio as shown.</p> <p>Press the F2 (NEW) soft key to create a new device.</p> <p>If you would like to create a new device go to step 6 otherwise go to step 8.</p>	
6	<p>In the New Device screen Ensure all Fields are as shown:</p> <p>Name : Intuicom SS Radio</p> <p>Type : Pac Crest PDL</p> <p>Baud Rate : 38400</p> <p>Parity : None</p> <p>Data bits : 8</p> <p>Stop Bits : 1</p> <p>Press the F1 (STORE) soft key to return to the Devices screen.</p>	


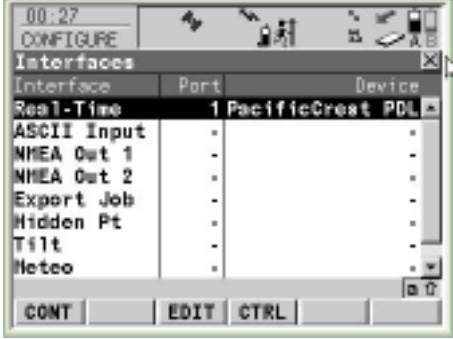

Continued on next page

Configuring the Radio...Continued

Step	Action	Display																											
7	<p>In the Devices screen the new Intuicom SS Radio should be listed.</p> <p>Press the F1 (CONT) soft key to return to the R-Time Mode screen.</p>	 <p>The screenshot shows the 'CONFIGURE' screen with the 'Devices' window open. The window has tabs for 'Radios', 'Modems/GSM', and 'Others'. A table lists various radio models with their names and types. 'Intuicom Ss Radi' is highlighted in the list. At the bottom, there are soft keys: CONT, NEW, EDIT, DEL, MORE, and PAGE.</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>AT-RXH500</td> <td>AT-RXH500</td> </tr> <tr> <td>Intuicom Ss Radi</td> <td>Pac Crest PDL</td> </tr> <tr> <td>PacificCrest PDL</td> <td>Pac Crest PDL</td> </tr> <tr> <td>PacificCrest RFM</td> <td>Pac Crest RFH96W</td> </tr> <tr> <td>Satellite 2ASx</td> <td>Sate1 2ASx</td> </tr> <tr> <td>Satellite 2ASxe</td> <td>Sate1 2ASxE</td> </tr> <tr> <td>Satellite 3AS</td> <td>Sate1 3AS/3ASd</td> </tr> </tbody> </table>	Name	Type	AT-RXH500	AT-RXH500	Intuicom Ss Radi	Pac Crest PDL	PacificCrest PDL	Pac Crest PDL	PacificCrest RFM	Pac Crest RFH96W	Satellite 2ASx	Sate1 2ASx	Satellite 2ASxe	Sate1 2ASxE	Satellite 3AS	Sate1 3AS/3ASd											
Name	Type																												
AT-RXH500	AT-RXH500																												
Intuicom Ss Radi	Pac Crest PDL																												
PacificCrest PDL	Pac Crest PDL																												
PacificCrest RFM	Pac Crest RFH96W																												
Satellite 2ASx	Sate1 2ASx																												
Satellite 2ASxe	Sate1 2ASxE																												
Satellite 3AS	Sate1 3AS/3ASd																												
8	<p>In the R-Time Mode screen.</p> <p>Press the F1 (CONT) soft key to go to the Interfaces screen.</p>	 <p>The screenshot shows the 'CONFIGURE' screen with the 'Real-Time Mode' window open. It displays several configuration fields: 'R-Time Mode' set to 'Reference', 'R-Time Data' set to 'Leica', 'Port' set to 'Port 1', and 'Device' set to 'PacificCrest PDL'. At the bottom, there are soft keys: CONT, REF, RATES, and DEVICE.</p>																											
9	<p>In the Interface screen.</p> <p>Press the F4 (CTRL) soft key.</p> <p>This will take you to the Radio Channel screen.</p>	 <p>The screenshot shows the 'CONFIGURE' screen with the 'Interfaces' window open. It displays a table of interfaces, their ports, and their devices. 'Real-Time' is highlighted. At the bottom, there are soft keys: CONT, EDIT, CTRL, and a blank key.</p> <table border="1"> <thead> <tr> <th>Interface</th> <th>Port</th> <th>Device</th> </tr> </thead> <tbody> <tr> <td>Real-Time</td> <td>1</td> <td>PacificCrest PDL</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>NMEA Out 2</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>Tilt</td> <td>-</td> <td>-</td> </tr> <tr> <td>Meteo</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Interface	Port	Device	Real-Time	1	PacificCrest PDL	ASCII Input	-	-	NMEA Out 1	-	-	NMEA Out 2	-	-	Export Job	-	-	Hidden Pt	-	-	Tilt	-	-	Meteo	-	-
Interface	Port	Device																											
Real-Time	1	PacificCrest PDL																											
ASCII Input	-	-																											
NMEA Out 1	-	-																											
NMEA Out 2	-	-																											
Export Job	-	-																											
Hidden Pt	-	-																											
Tilt	-	-																											
Meteo	-	-																											


Continued on next page

Configuring the Radio...Continued

Step	Action	Display
10	<p>In the Radio Channel screen.</p> <p>Set the Channel to 0 as shown.</p> <p>Press the F1 (CONT) soft key to return to the Interface screen.</p> <p>Important Note: This sets the Intuicom SS Radio w/GFU15 Housing to default channel setup that will always work between Leica GPS1200 Systems.</p> <p>Press the F1 (CONT) soft key to return to the Interface screen.</p>	
11	<p>In the Interface screen.</p> <p>Press the F4 (CTRL) soft key to go to the Radio Channel screen.</p> <p>Important Note: This allows you to get ready to set the radio to be a reference station.</p> <p>The radio has a number of different modes. They include, Base, Rover, repeater, and Rover/Repeater. See Appendix at end of this quick guide for further details.</p>	
12	<p>In the Radio Channel screen.</p> <p>Set the Channel to 14 as shown.</p> <p>Press the F1 (CONT) soft key to store the settings and return to the Interface screen.</p> <p>Important Note: Channels 12-15, sets the mode of the radio. If the radio needs to be in rover mode select channel 15. See Appendix at end of this quick guide for further details.</p>	

Continued on next page

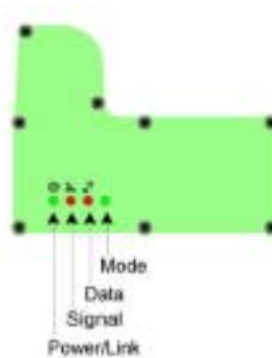
Configuring the Radio...Continued

Step	Action	Display
13	<p>In the Interfaces screen.</p> <p>Press the F1 (CONT) soft key to complete Reference set-up and return to the Main Menu.</p>	
14	<p>To set up the radio for rover operation.</p> <p>Repeat steps 1-7, except change the R-Time mode to Rover and Set the Channel to 15.</p>	

Continued on next page

Appendix

Explanation of LED Indicators



Operation Mode	Status LED			
	Power/Link	Signal	Data	Mode
Base	SR		FR – Data being sent out over RF	SR
Rover	SR – Not Linked SG – Linked	Steady FR – Searching for Base or Repeater	FG – Data being sent to GPS	SG
Repeater	SR – Not Linked SG – Linked		FR – Data being repeated out over RF	FR
Rover-Repeater	SR – Not Linked SG – Linked	SR – solid RF Link to Base or Repeater	FG/FR – Data both being repeated out over RF and sent to GPS	FG
		Flickering (non-steady) Red – weak RF signal		
Setup	SG	SG	SG	SG

SG = Solid Green SR = Solid Red FG = Flashing Green FR = Flashing Red

Continued on next page

Appendix...Continued

Channel Explanations

Changing operation modes is accomplished by sending a channel change command to the unit for a special channel. Only channels 0 through 8 are valid active channels. When the unit receives a channel change request for channels 12, 13, 14 or 15 the unit will respond by changing the Operation mode and leaving the current active channel unchanged. Verify Operation Mode changes by observing the Status LED's.

The following list the channels that need to be set for the different operation modes.

Channel	Operation Mode
12	Rover-Repeater
13	Repeater
14	Base
15	Rover
