PACIFIC CREST RADIO CONFIGURATION

using PDLCONF version 4.0 software

To configure the Pacific Crest Radios (PDL Base and/or the Internal PDL Rover Radio) you will need to have the following software installed on your computer:

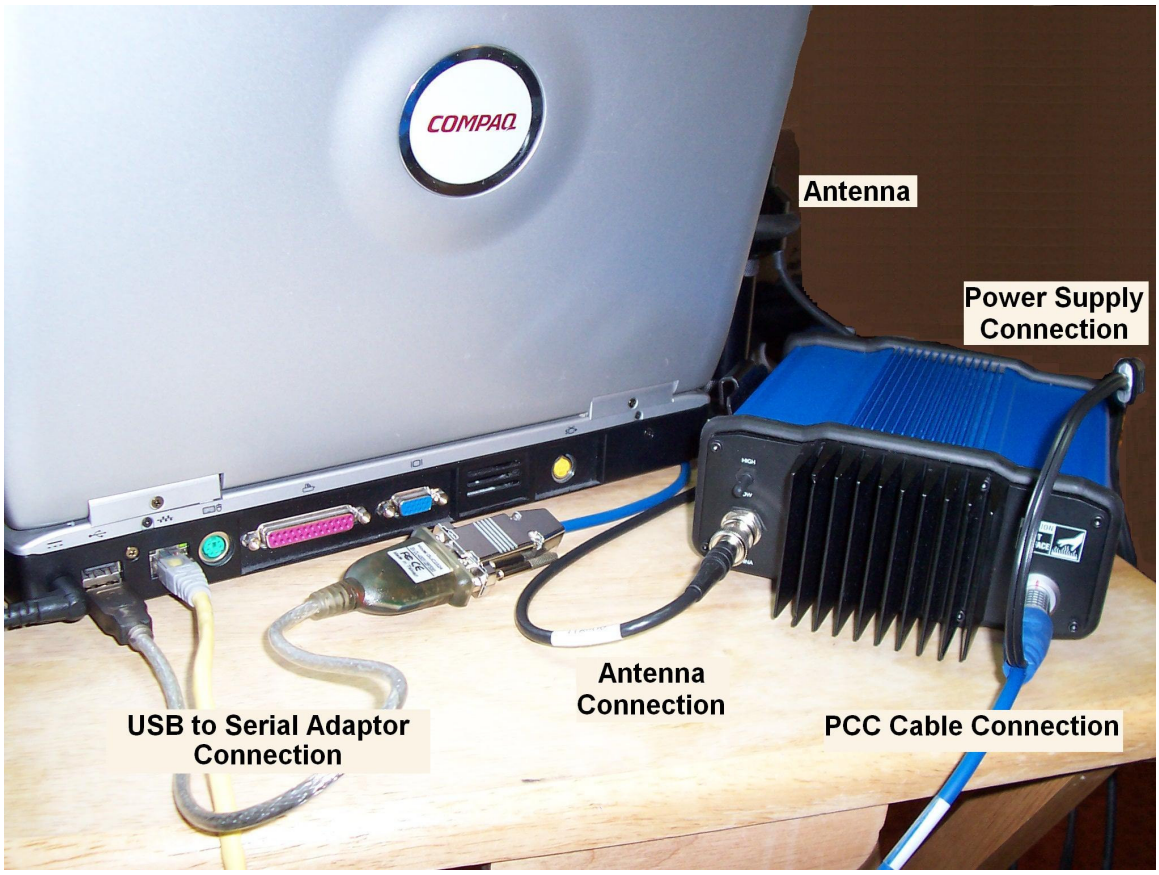
Evaluate (available from Thales Navigation at ftp://ftp.thalesnavigation.com) and

PDLCONF Version 4.0 (available from Pacific Crest at http://www.paccrst.com)

PDL Base Radio Configuration

You will need the PDL Base Radio, antenna, power supply and PCC cable (P/N A00470). For computers with USB ports only you will also need a USB to Serial Adaptor.

Connect the antenna to the Base Radio and then connect the PCC cable to the Base Radio and computer COM Port. Connect the power supply last.

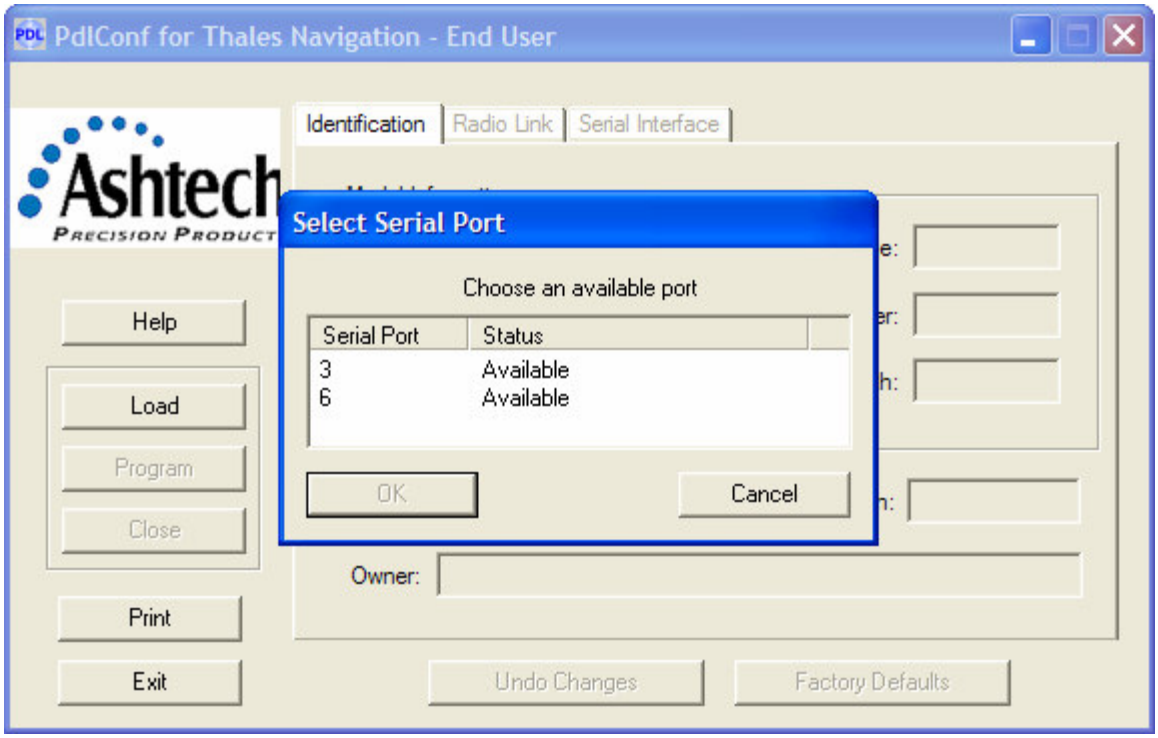


Turn on the Power for the Base Radio only after connecting the antenna.

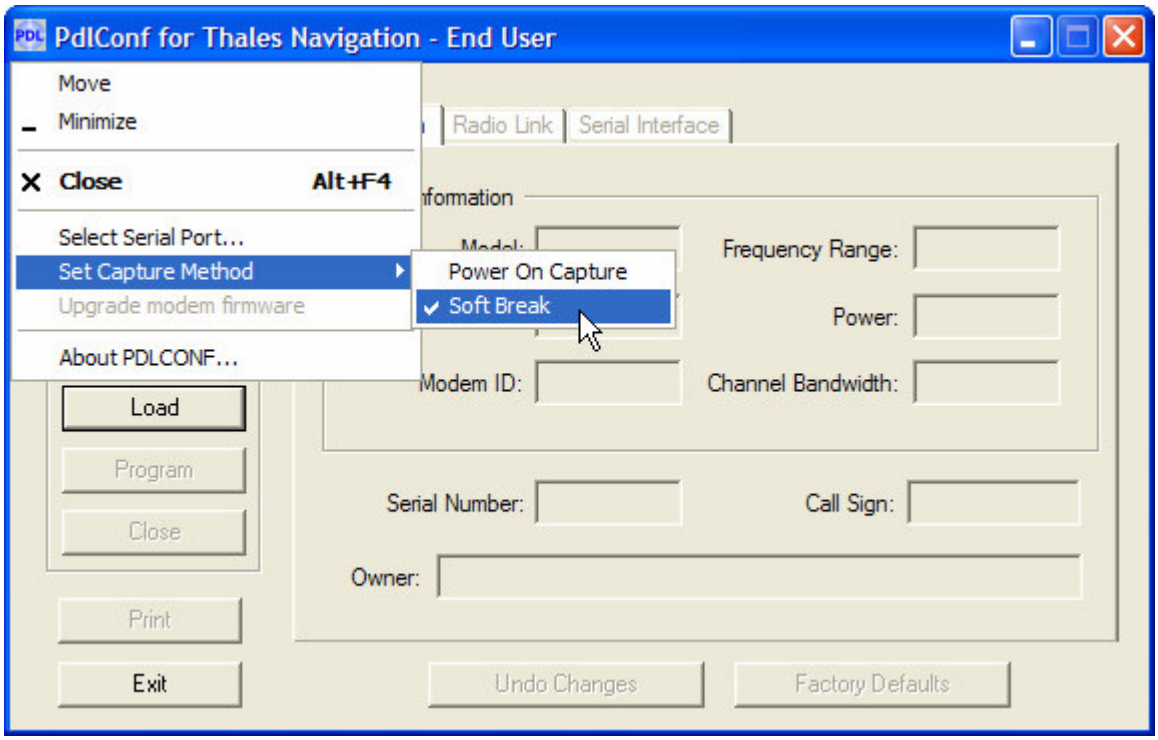
(***NEVER*** *turn on a PDL Radio without first connecting the antenna*)

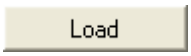
Open the PDLCONF program on the computer.

Select a Serial Port if prompted.

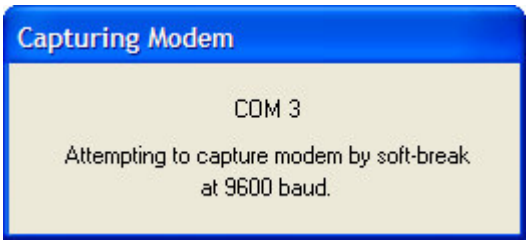


Left click on the  icon in the upper left corner of the dialog box and click on Set Capture Method and Soft Break. If you were not prompted for a Serial Port upon starting the software you can click on Select Serial Port from this menu to open the appropriate dialog box.

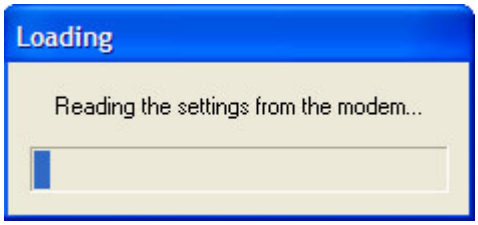


Click on the  button.

The Capturing Modem dialog box should open.

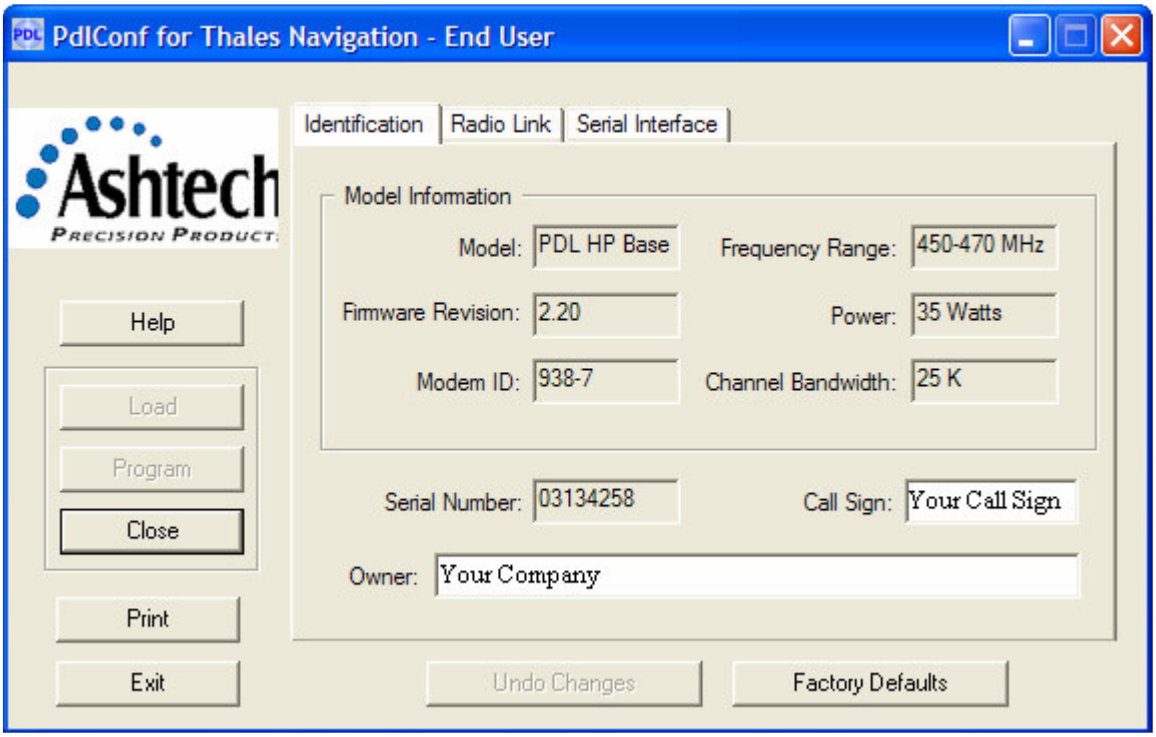


When a successful connection to the Base Radio has been made the Loading dialog box will open and the software will begin reading the current configuration of the radio.

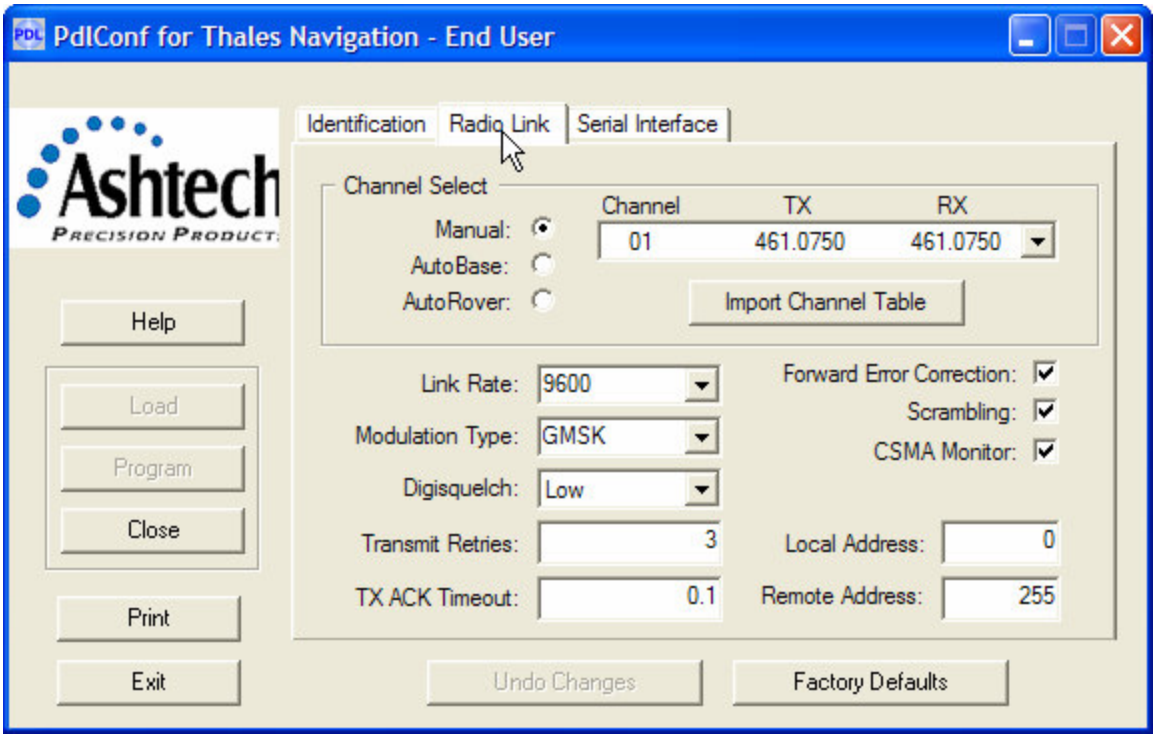


The Port Baud Rate in PDLCONF and the Port Baud Rate of the Base Radio must be set the same for a successful connection, if not an error message will occur. If this happens try again using a different Port Baud Rate.

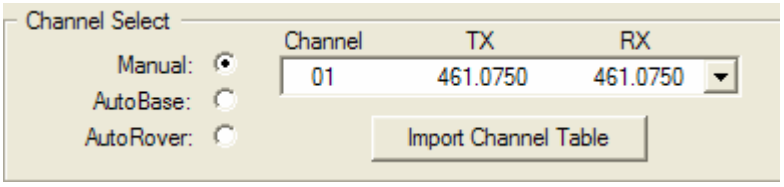
Information from the PDL Base Radio will appear under the Identification Tab. Enter your call sign and company name in the Call Sign and Owner fields.

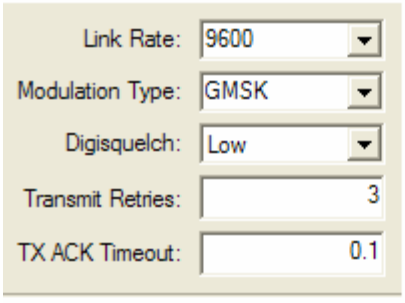


Left Click on the Radio Link Tab



The CHANNEL SELECT box displays the "channel" and "frequency" of the radio. The channel/frequency can be changed by clicking on the down arrow to browse and select the desired settings. The settings are based on your radio license. The Base and Rover Channel / Frequency selections must match.





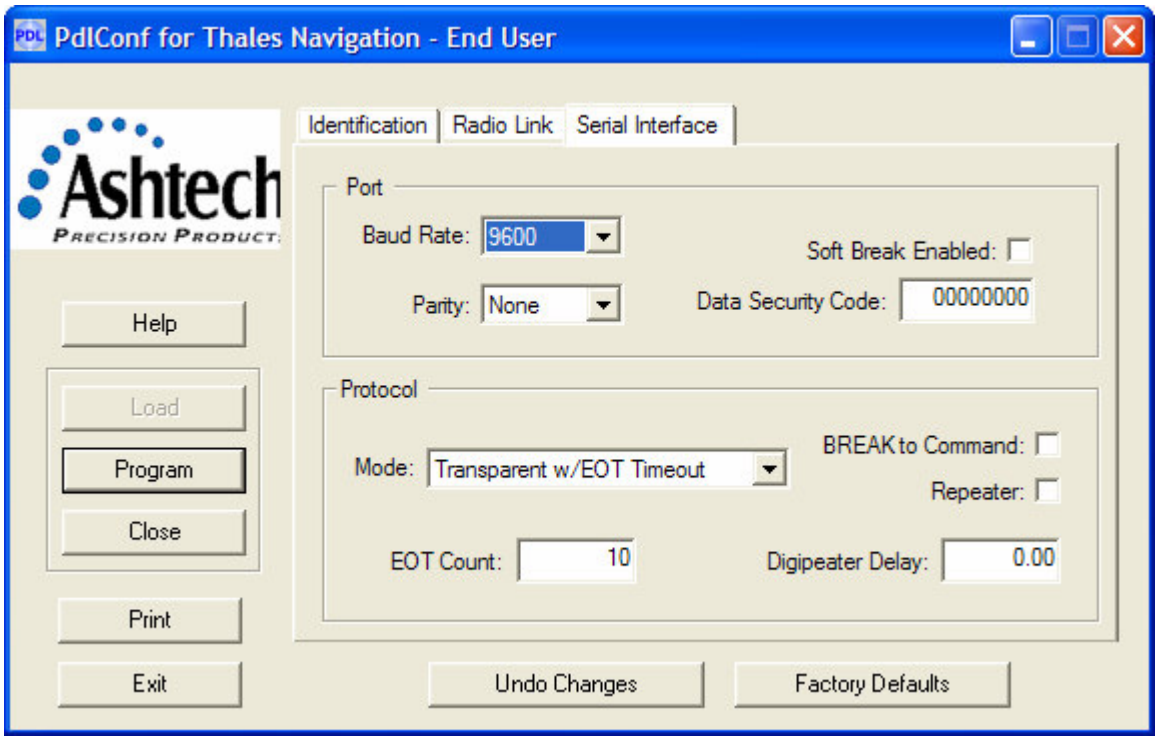
The **LINK RATE** setting is for the Radio to Radio communications over the airwaves. The Base and Rover Link Rates must match.

The **MODULATION TYPE** setting is GMSK. The Base and Rover Modulation Types must match.

The **DIGISQUELCH** setting for the PDL Base Radio is LOW.

The **TX ACK Timeout** value is displayed in milli-seconds. The setting Timeout value is 0.1.

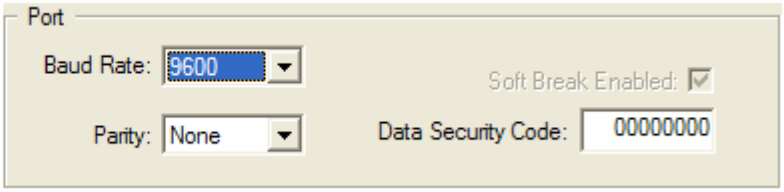
Left Click on the Serial Interface Tab.



The Port Box displays the Baud Rate.

The Port Baud Rate for the PDL Base and the ZXtreme Receiver is 9600.

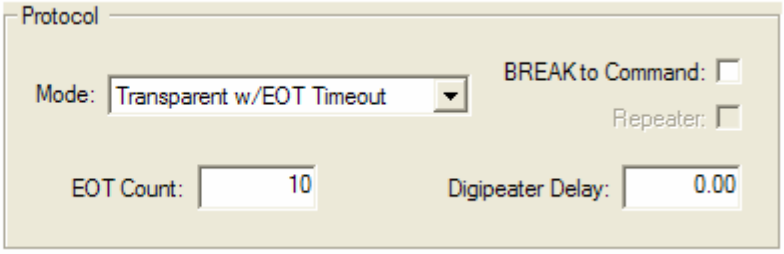
The Port Parity is None.



The Protocol box displays the Mode and EOT Count.

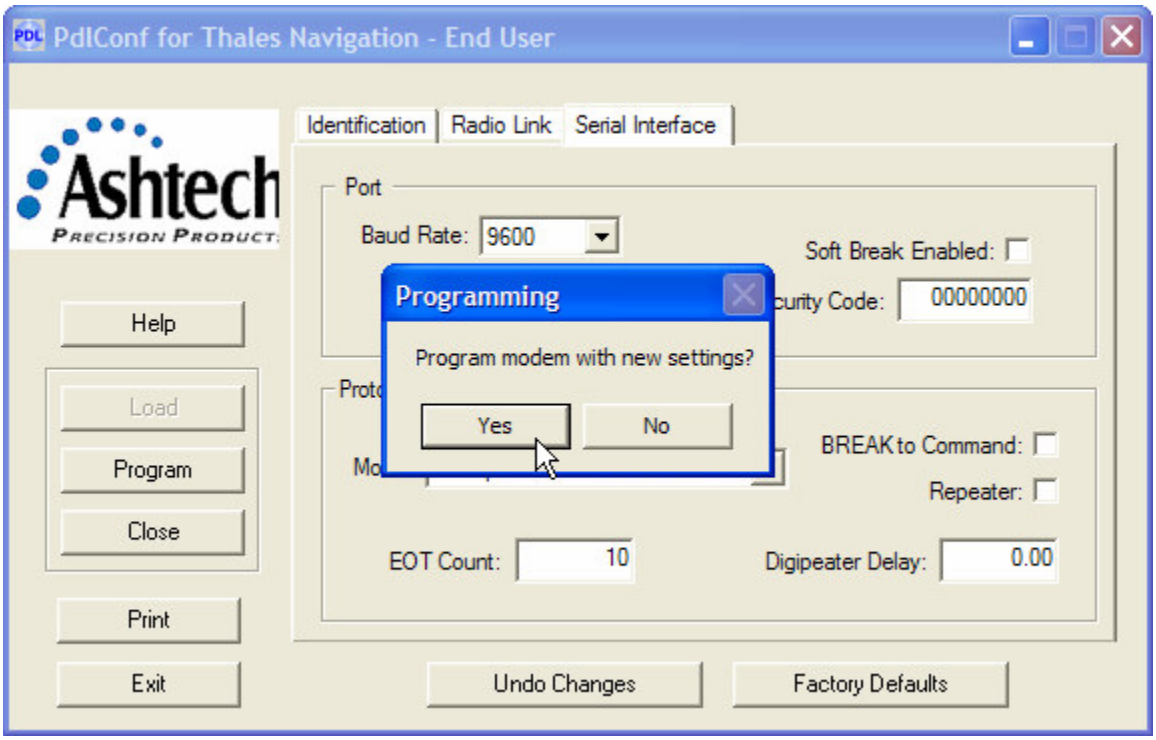
The Mode is Transparent w/ EOT Timeout.

The EOT Count for Thales Navigation GPS Receivers is 10

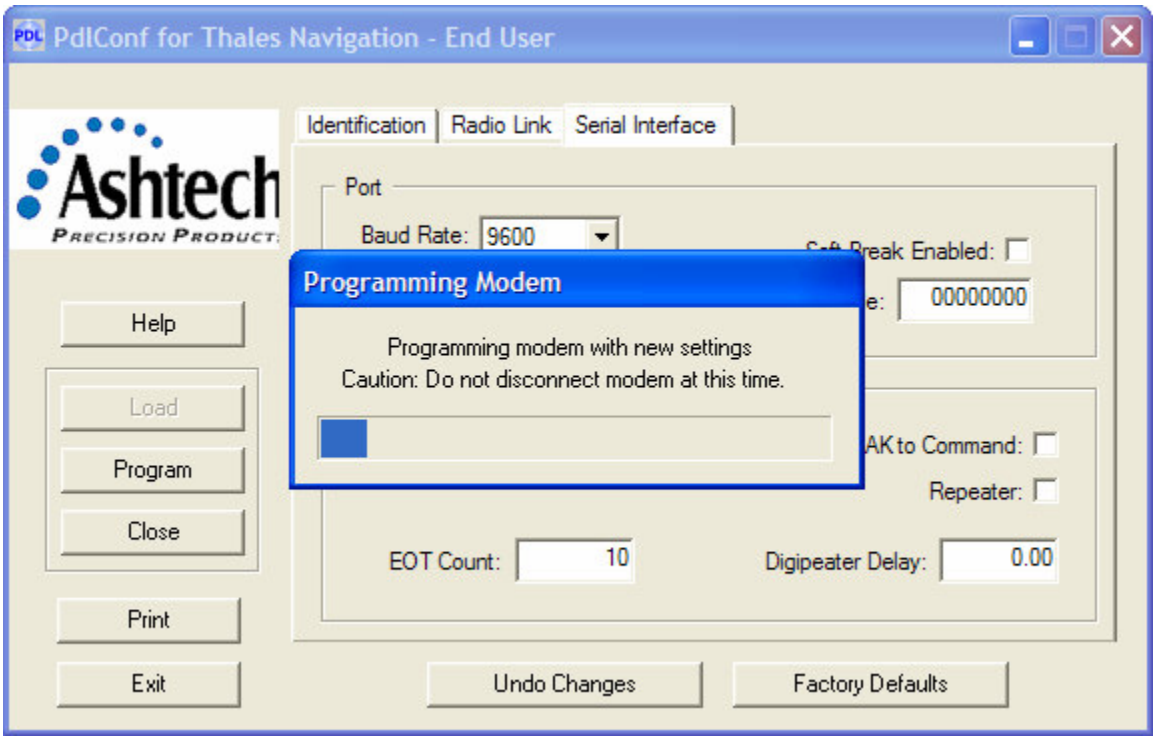


If you have made changes left click on the Program button.

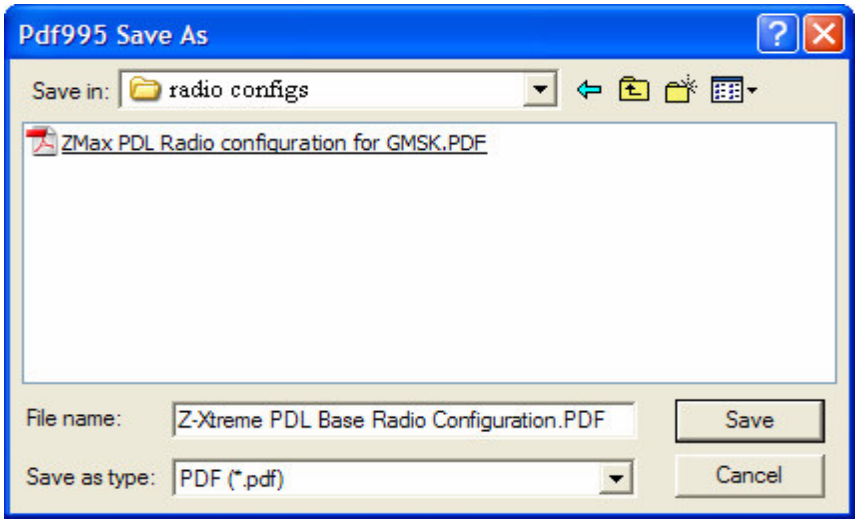
When the Programming dialog box opens left click on the Yes button to confirm.



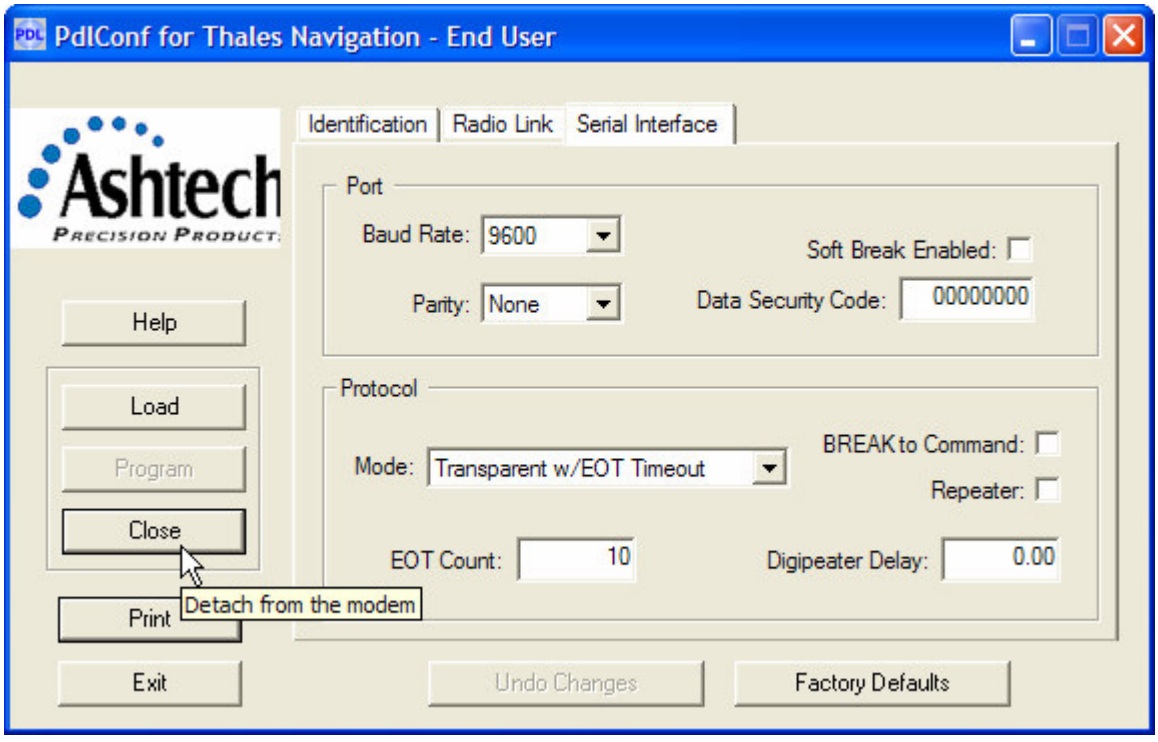
Wait for PDLCONF to complete the programming before proceeding.



Left click on the Print button to print or make a .pdf of the PDL Base Radio Configuration for future reference.



Left click on the Close button to shut down the connection and then the Exit button to exit PDLCONF. Disconnect the PDL Base Radio.



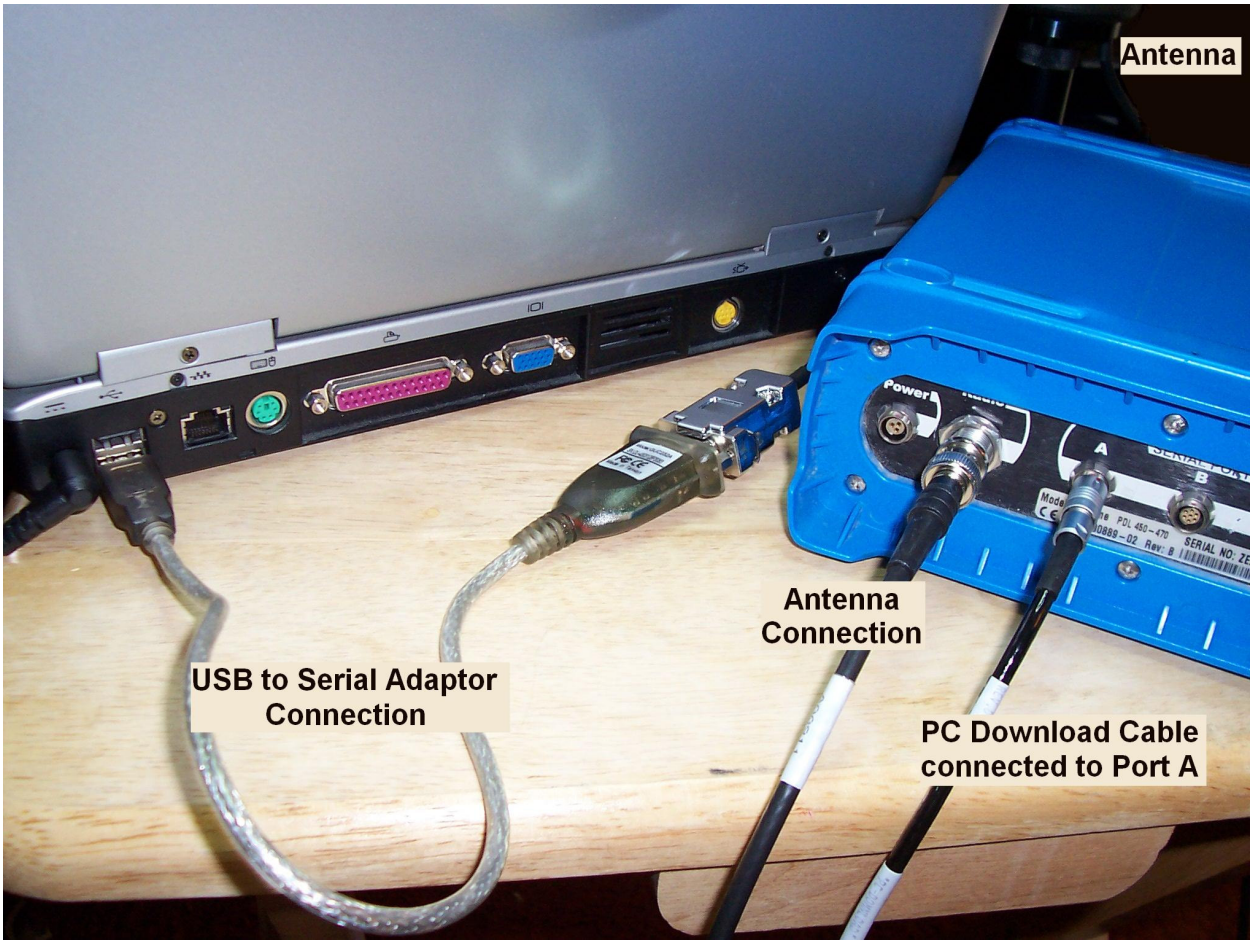
IF NO CHANGES WERE MADE: Left click on the Close button to shut down the connection and then the Exit button to exit PDLCONF. Disconnect the PDL Base Radio.

PDL (Internal) Rover Radio Configuration

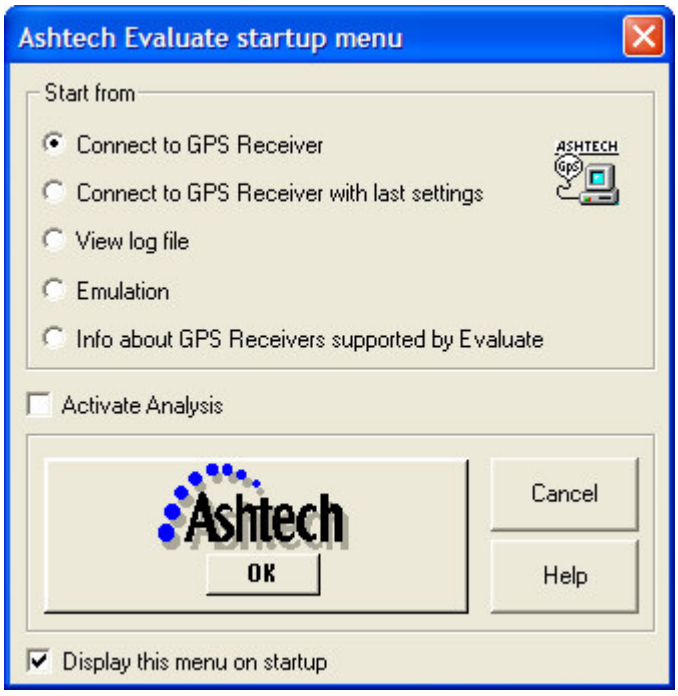
You will need the ZXtreme GPS Receiver with internal PDL Radio, antenna, charged battery and PC-Download cable (P/N 700461). For computers with USB ports only you will also need a USB to Serial Adaptor.

Verify that there is an internal radio installed in the ZXtreme and that it is a PDL Radio. The Model label on the rear panel of the ZXtreme indicates the radio type and frequency range.

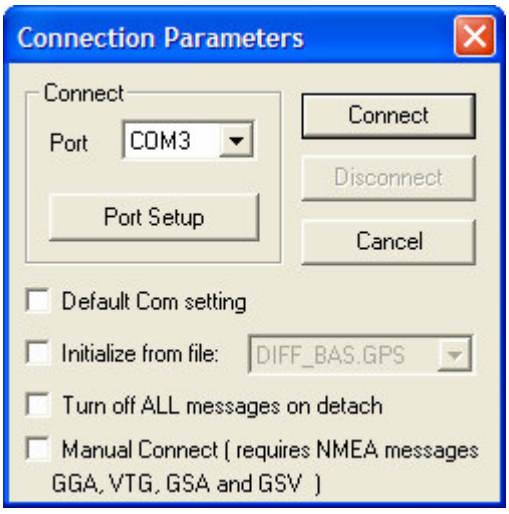
On the back panel of the ZXtreme connect the antenna to the Radio Port and the PC-Download cable to Serial Port A. Then connect the PC-Download cable to the computer COM port. (*If an external power supply is used connect it*.)



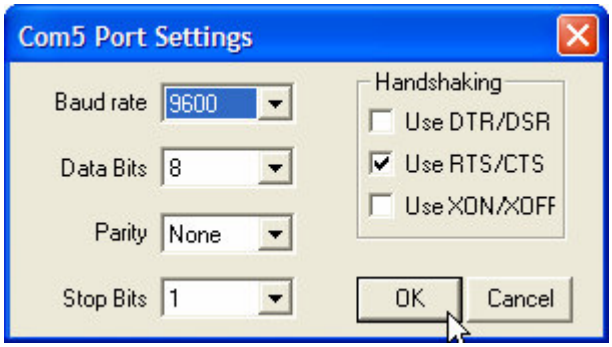
Power on the ZXtreme and open the EVALUATE program on the computer.



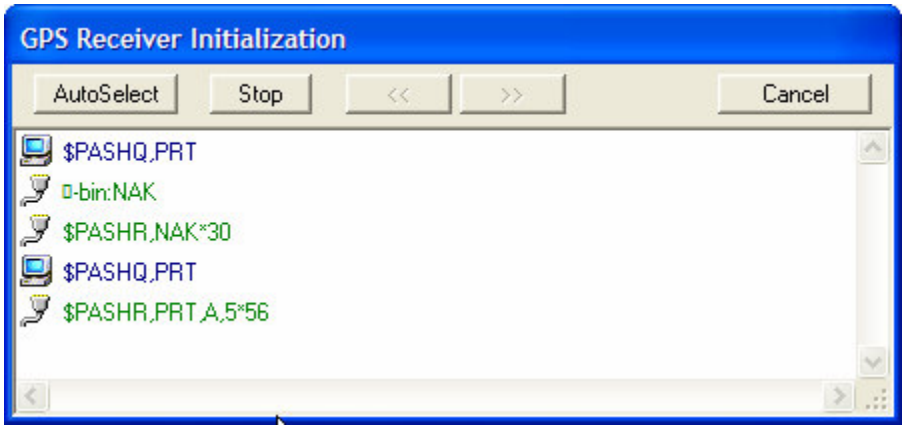
Left click on  and select a COM Port.

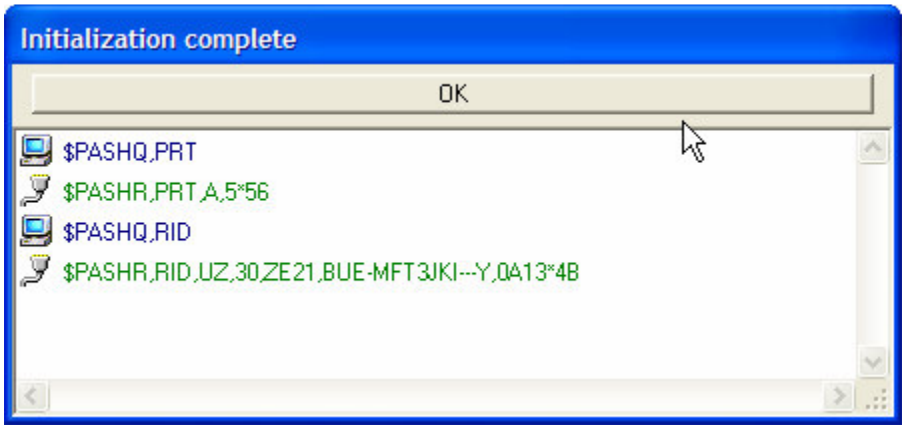


Left click the Port Setup button and set the Port Baud rate to 9600.



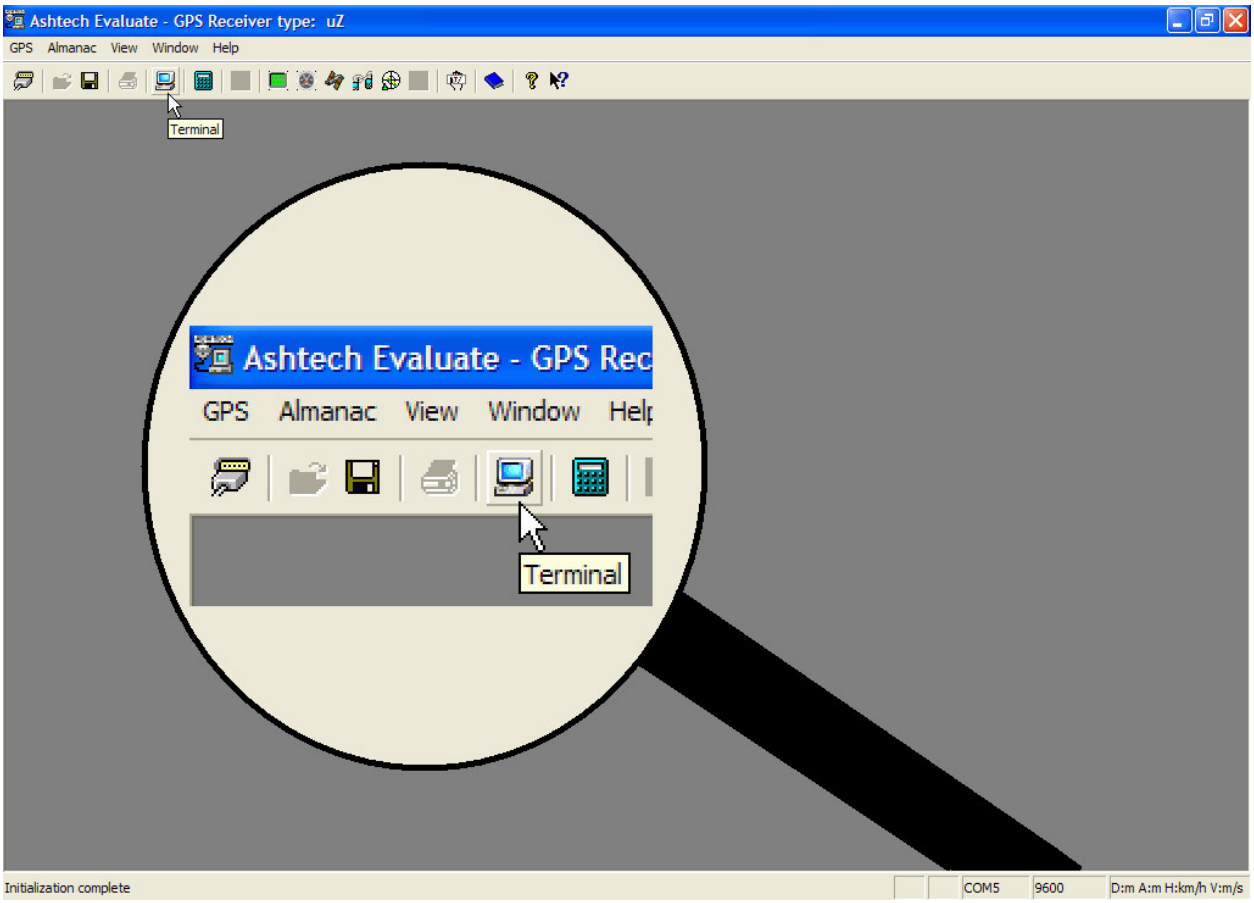
Left click the OK button and Connect. Evaluate will begin the GPS Receiver Initialization.



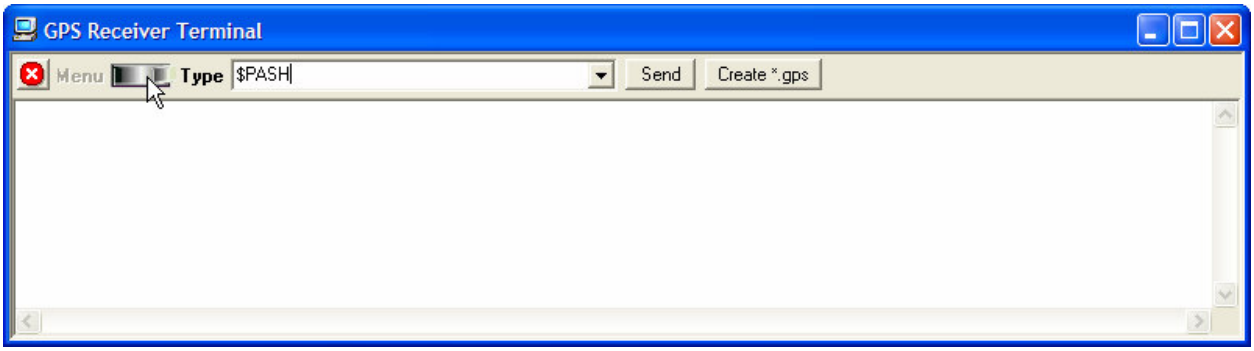


Left click on OK.

Open the Evaluate Terminal Window with a left click on the computer icon.



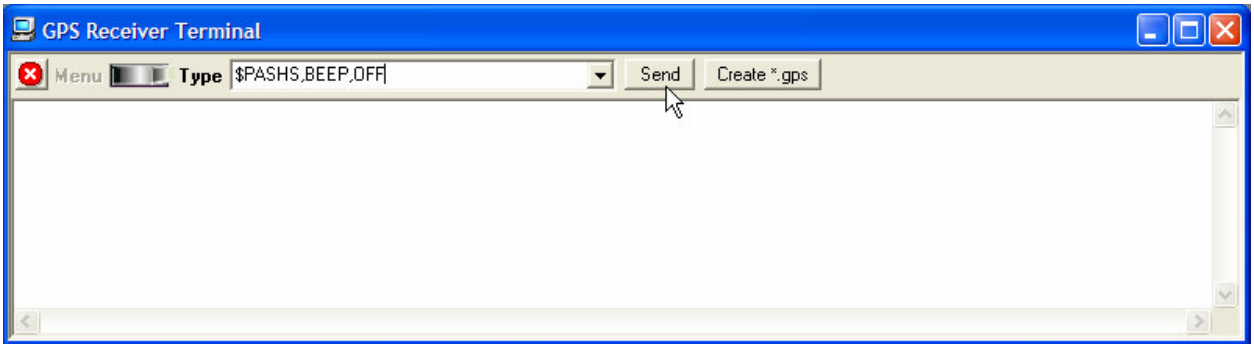
Toggle the terminal window switch from Menu to Type by clicking on the switch.



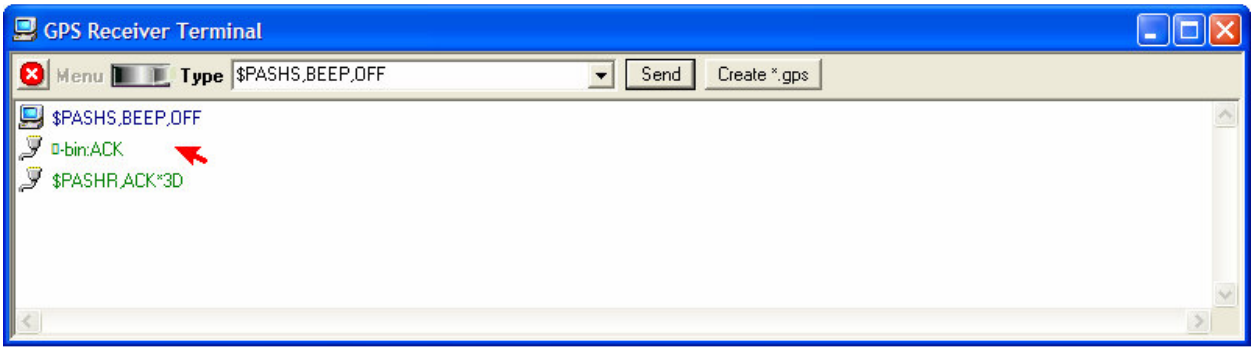
In the Type field enter $PASHS,INI,5,5,5,5,1,0

Left click on the Send button.

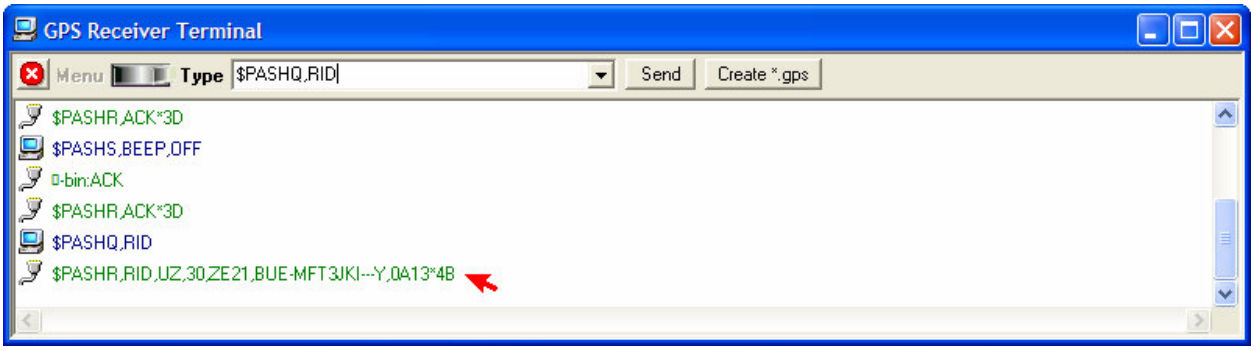
To temporarily turn off the “BEEP” from the receiver enter $PASHS,BEEP,OFF in the Type field and left click on the Send button.



Verify that the receiver responds with ACK and not NAK.



Enter $PASHQ,RID and left click on the Send button. Observe the RID string.



Enter the following $PASH queries and commands:

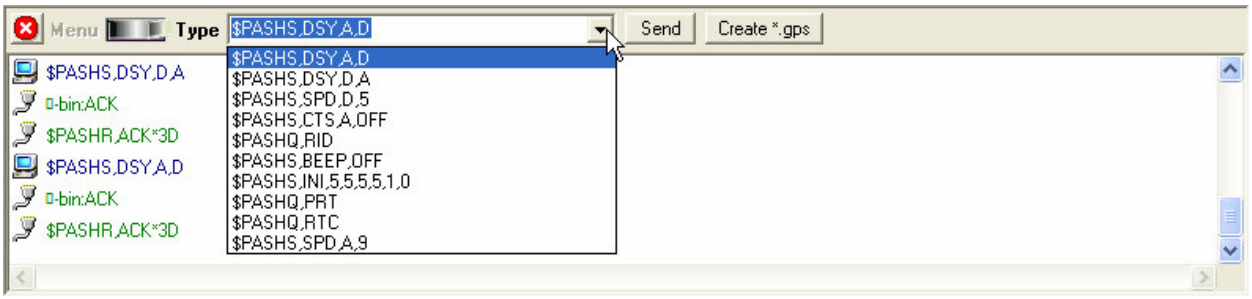
$PASHS,CTS,A,OFF and left click on the Send button. Observe ACK.

$PASHS,SPD,D,5 and left click on the Send button. Observe ACK.

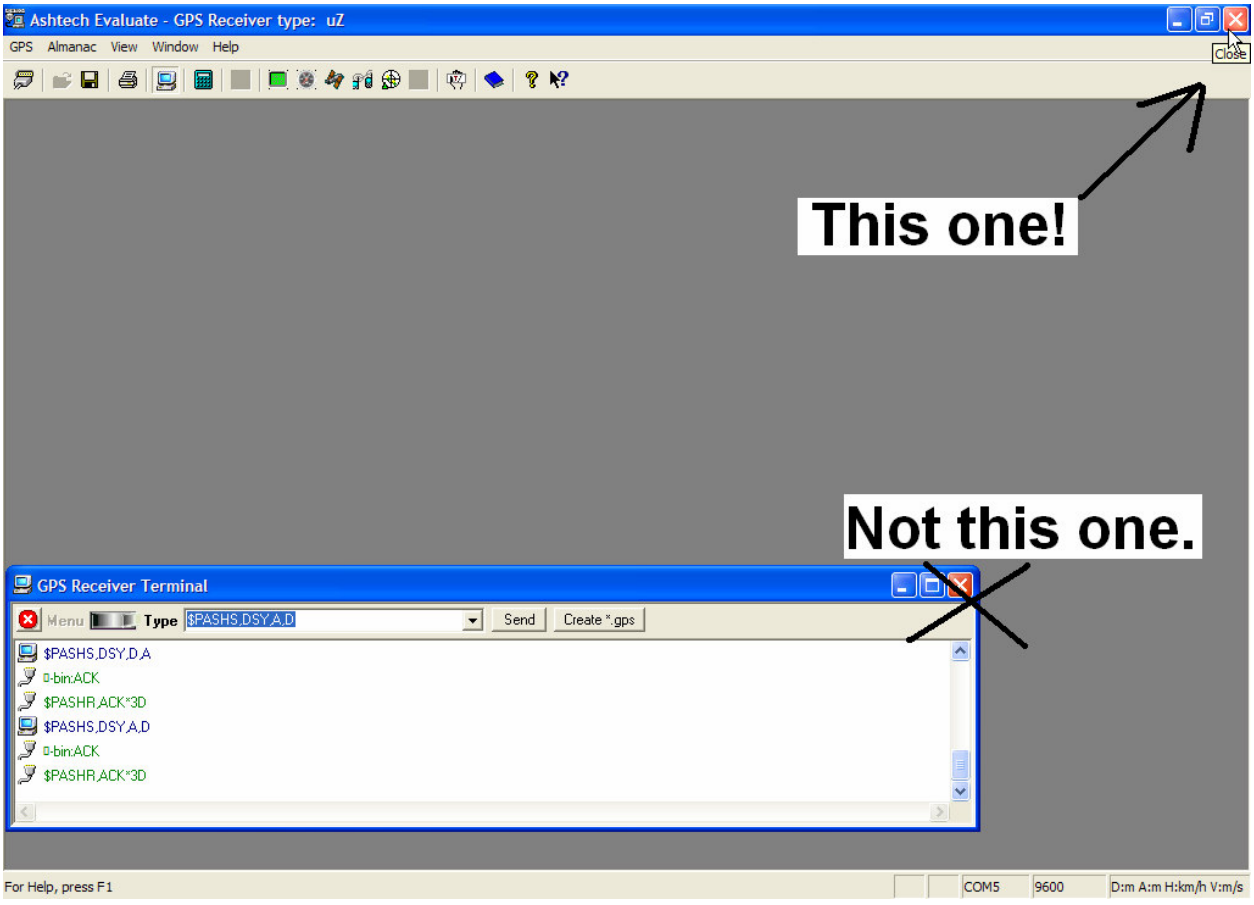
$PASHS,DSY,D,A and left click on the Send button. Observe ACK.

$PASHS,DSY,A,D and left click on the Send button. Observe ACK.

For more information look up the commands in the Z Family manual (available in the reference manuals folder) on the Thales Navigation ftp server. ftp://ftp.thalesnavigation.com



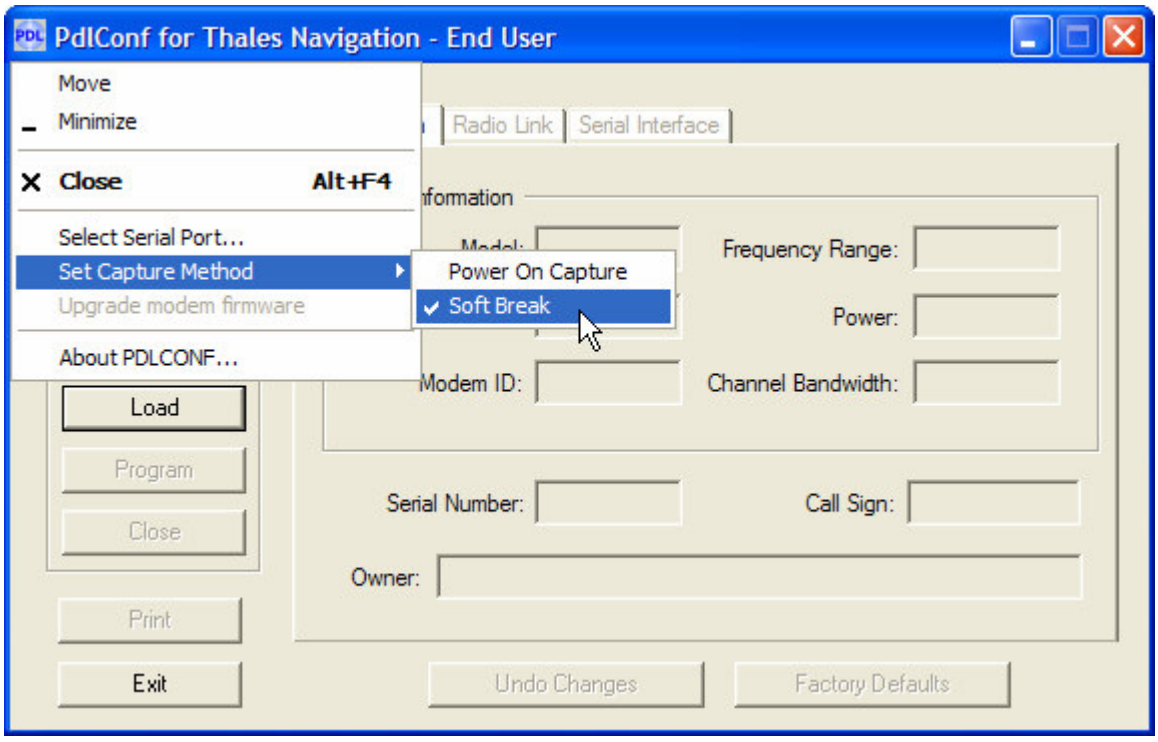
Exit the Evaluate Program with a left click on the close button in the upper right corner of the screen.



Don't disconnect anything yet. Leave it hooked up to configure the internal PDL Radio.

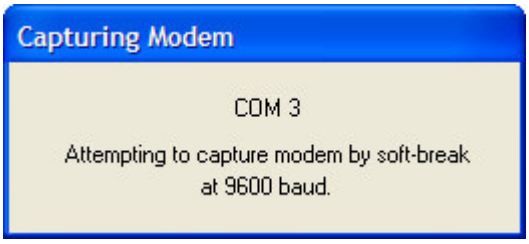
Open the PDLCONF 4.0 program on the computer.

Left click on the  icon in the upper left corner of the dialog box and click on Set Capture Method and Soft Break.

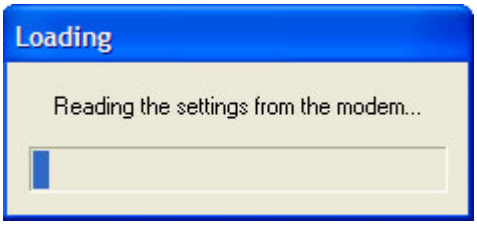


Click on the  button to connect to the radio and check the current settings.

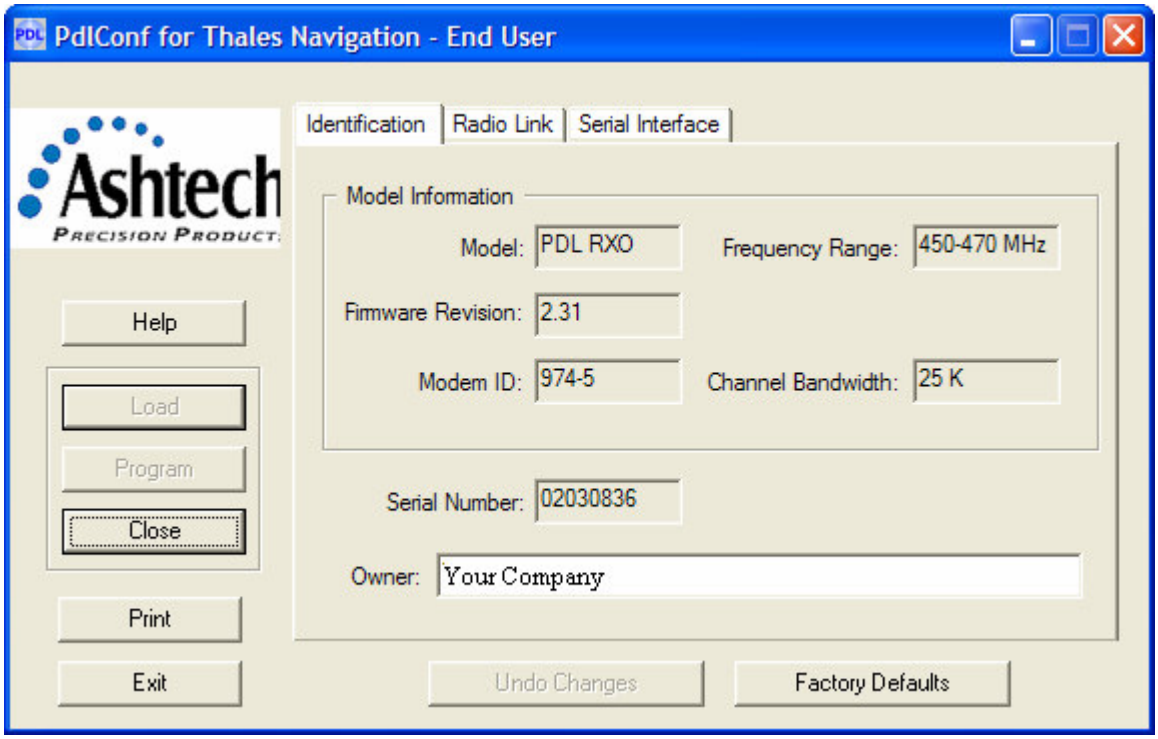
The Capturing Modem dialog box should open.



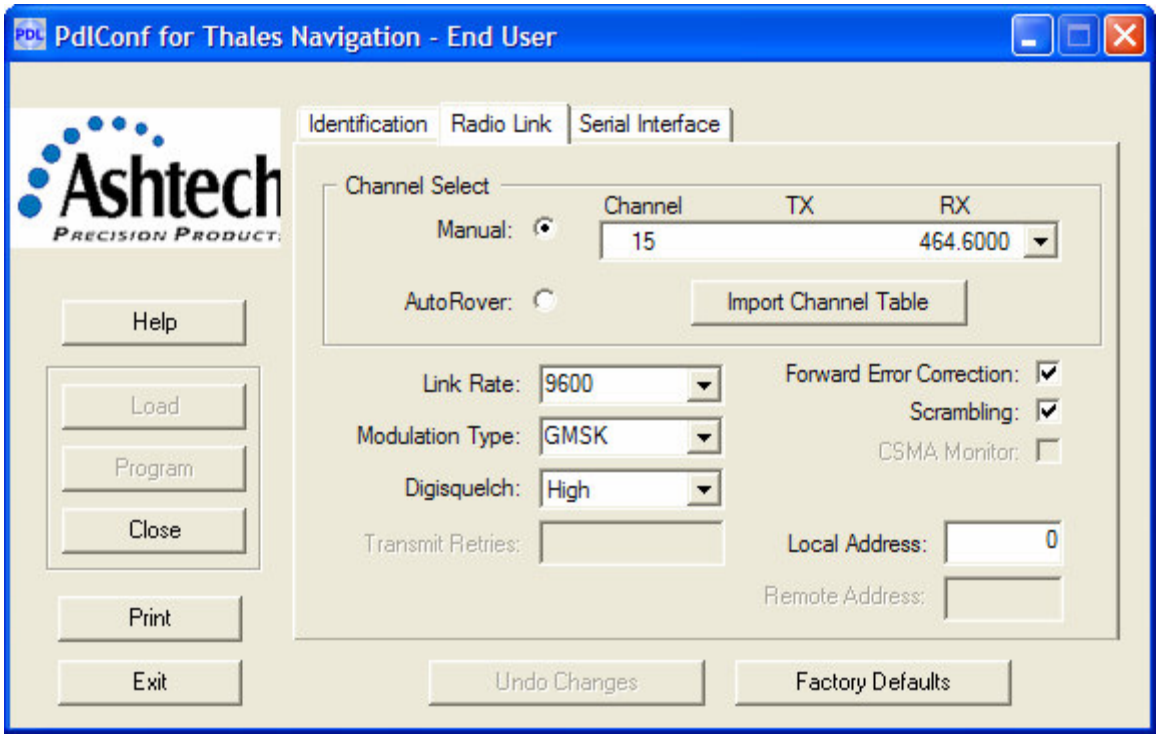
When a successful connection to the PDL Internal Radio has been made the Loading dialog box will open and the software will begin reading the current configuration of the radio.



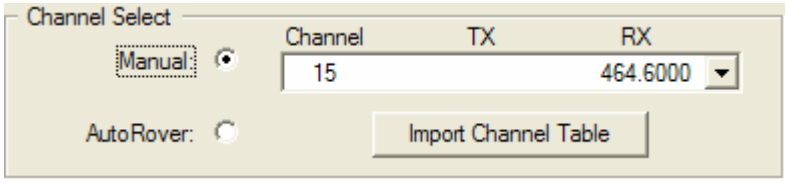
Information from the PDL RXO Internal Radio will appear under the Identification Tab. Enter your company name in the Owner field.



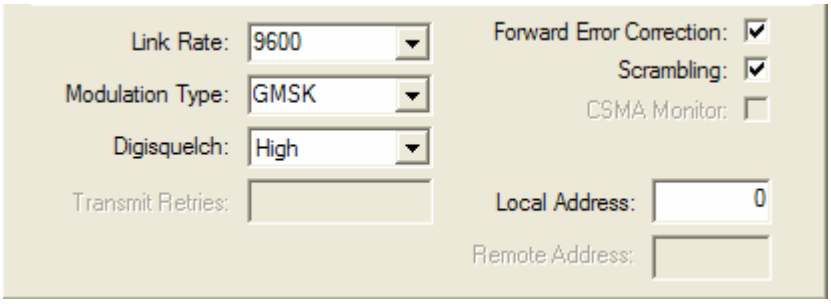
Left Click on the Radio Link Tab.



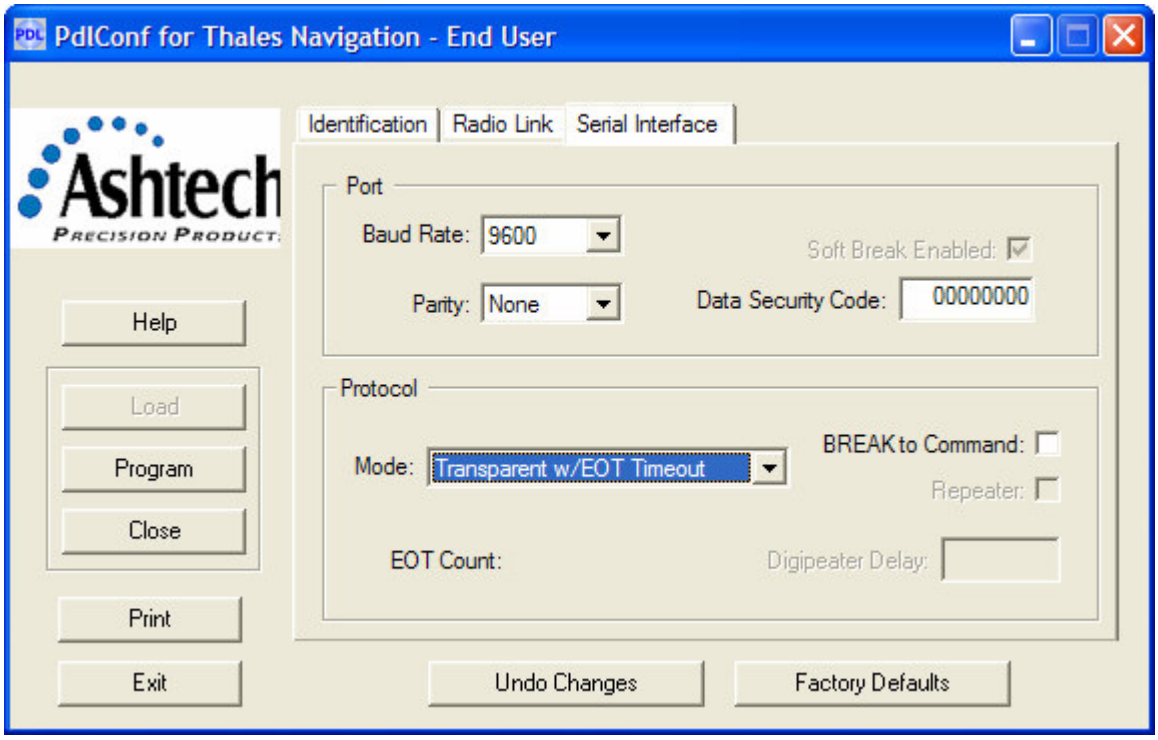
The CHANNEL SELECT box should display the "channel" and "frequency" settings based on your radio license. They can be changed by clicking on the down arrow to browse and select the desired settings. The Base and Rover Channel / Frequency selections must match.



Set the Link Rate, Modulation Type and Digisquelch to match those shown.



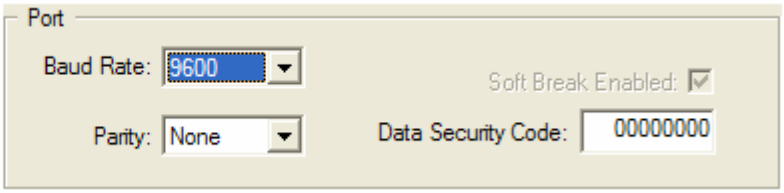
Left Click on the Serial Interface Tab.



The Port Box displays the Baud Rate.

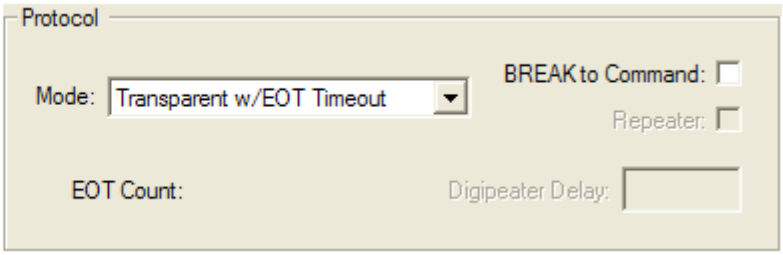
The Port Baud Rate for the PDL Base and the ZXtreme Receiver is 9600.

The Port Parity is None.

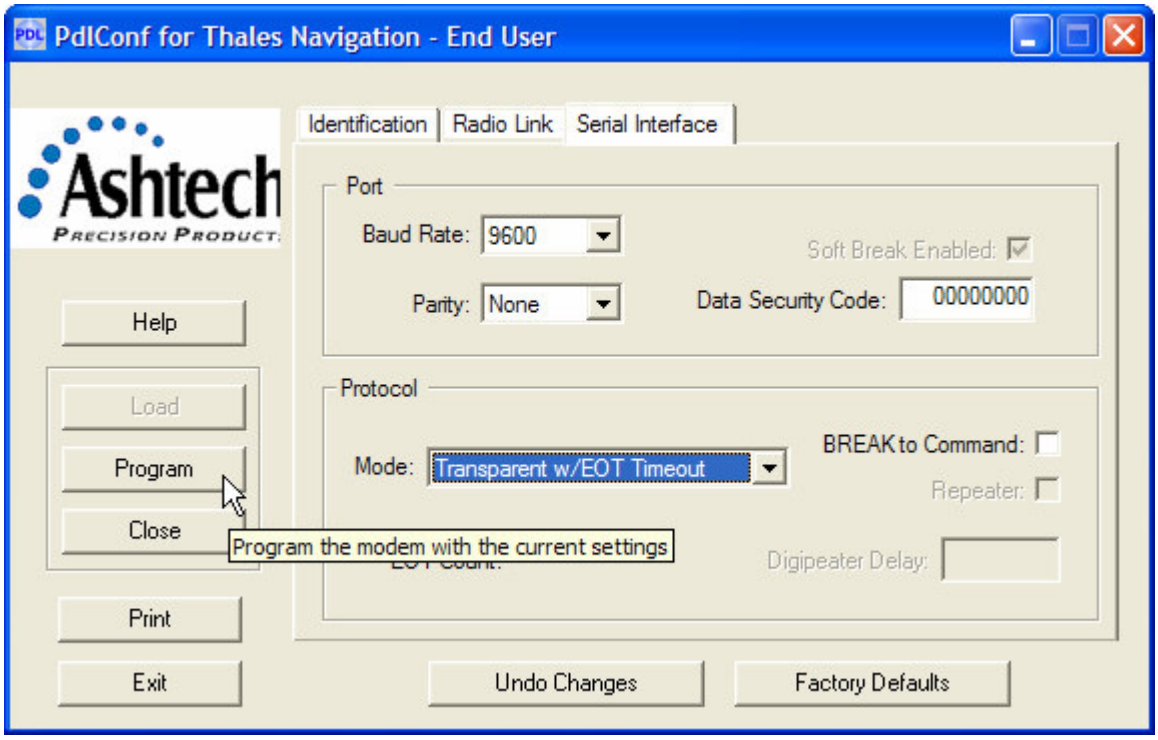


The Protocol box displays the Mode

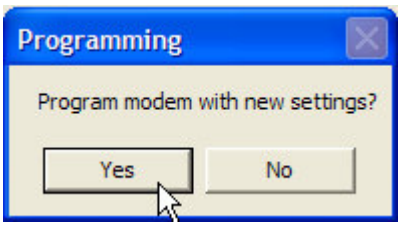
The Mode is Transparent w/EOT Timeout.



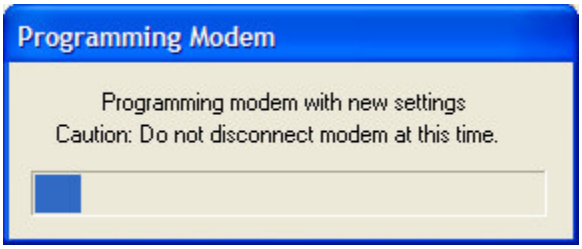
If you have made changes left click on the Program button.



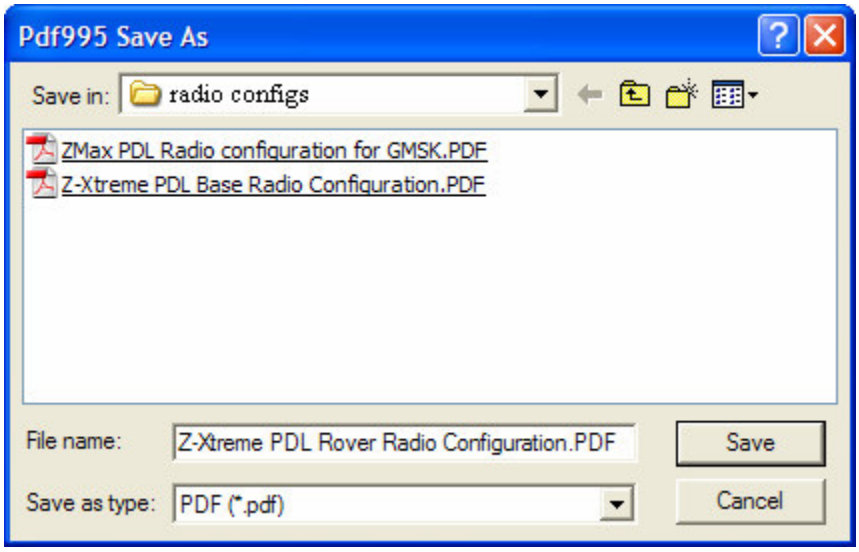
When the Programming dialog box opens left click on the Yes button to confirm.



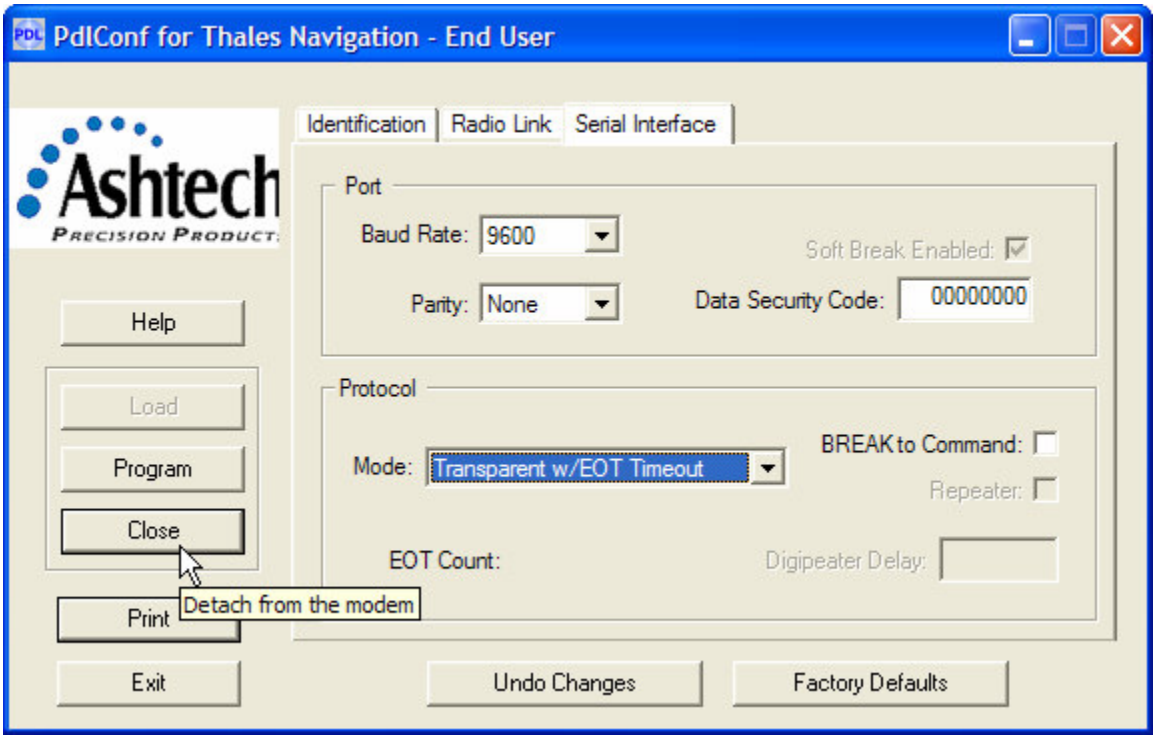
Wait for PDLCONF to complete the programming before proceeding.



Left click on the Print button to print or make a .pdf of the ZXtreme PDL (Internal) Rover Radio Configuration for future reference.



Left click on the Close button to shut down the connection and then the Exit button to exit PDLCONF.



Disconnect the ZXtreme and do a “front panel” RESET. This will cancel the Daisy Chain mode in the receiver and make it RTK ready.

IF NO CHANGES WERE MADE: Left click on the Close button to shut down the connection and the Exit button to exit PDLCONF.

Disconnect the ZXtreme and do a “front panel” RESET. This will cancel the Daisy Chain mode in the receiver and make it RTK ready.

§ 3/30/05