Programming the Pacific Crest – PDL Rover Radio / Z-Xtreme RTK Rover to use a Trimble RTK Base Station broadcasting CMR RTK messaging format.

Notes: The Z-Xtreme RTK rover must have the ZC00 Firmware (or higher) installed in the Z-Xtreme receiver to take advantage of the CMR RTK messaging format. See the ZC00 Firmware release notes ***(uZ2002_01.doc)*** for complete reference.

Also see the Sales Support document ***"Radio-Info.doc".*** This document provides useful information to re-configure the Pacific Crest PDL Rover Radios.

As indicated in the ***"Radio-Info.doc",*** the Pacific Crest PDL radio modem needs to be re-programmed to accept the Trimble Radio Format. Use the Pacific Crest ***PDLCONF*** software to make the required revisions.

Check List:

With the Pacific Crest PDL external rover radio, or Internal Pacific Crest PDL-RXO radio, (installed internally in the Z-Xtreme RTK Rover receiver).

For the Internal PDL-RXO configuration, you will need Ashtech cable P/N – 700461, the PC Download cable.

For the external PDL Rover Radio, you will need Pacific Crest cable P/N – A00469, Small Lemo connector, female DB-9 and SAE power connector. If the external Pacific Crest radio's internal battery is sufficiently charged, you may use the Pacific Crest cable P/N A01006.

For the PDL Base radio, you will need Pacific Crest cable P/N – A00470,
Big Lemo connector, female DB-9 and SAE power conector.

If your using an Internal PDL-RXO / Z-Xtreme configuration connect to the Internal PDL-RXO using the Ashtech RCS Commander software – establish the daisy chain. (For reference, see the Z-Xtreme FAQ Document).

You will also need the Pacific Crest ***PDLCONF*** software.
This software can be down loaded from Pacific Crest's Web Page:

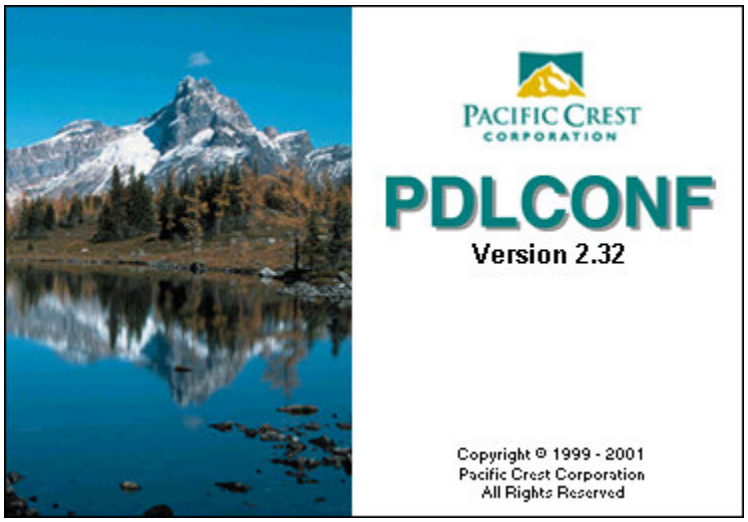
http://www.paccrst.com/downloads

If necessary, down load and install the Pacific Crest ***PDLCONF*** software on your PC.

Note: To Add frequencies to the Pacific Crest Radios, the **PDLCONF – Dealer** version of the software is required. Only authorized agents will have this software. The **PDLCONF – End User** version of the software does not support end users adding frequencies to the PDL radios. If you do not have access to the **PDLCONF – Dealer** version of the software, please contact your Dealer, or Thales Navigation's technical support team. A frequency table can be built and provided to you via an Email attachment. Using the **PDLCONF – End User** software, the prepared frequency table can be imported in the PDL radio.

The following Sales Support Document provides screen captures to assist you re-configuring the Pacific Crest PDL radios to make use of the CMR RTK messaging format.

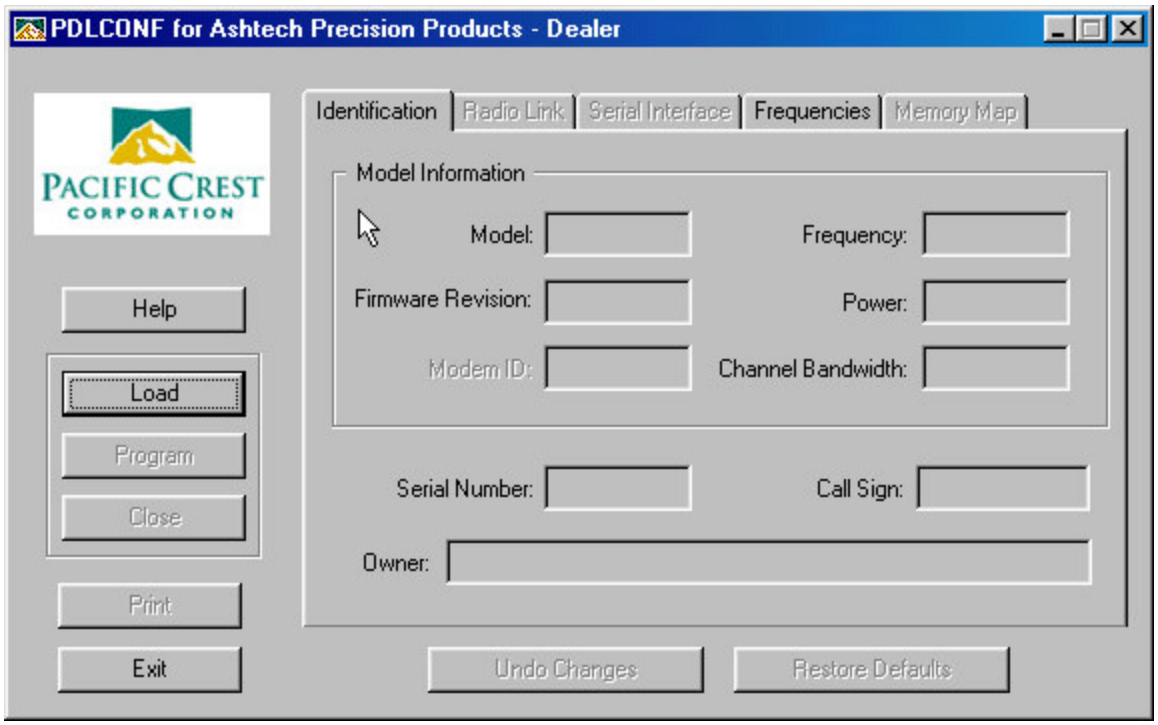
Start | Programs | Pacific Crest Corporation | PDLCONF…



Logo / Splash screen for PDLCONF…

After the Logo / Splash screen times out,

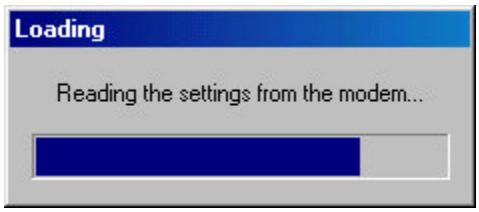
You will observe the Initial PDLCONF – menu…



Ensure the required cable is properly connected to your PC and the Z-Xtreme receiver, (PORT A), or the external PDL radio's Lemo connector. If required, Power ON the external PDL radio.

Next, click on "LOAD" button bar…

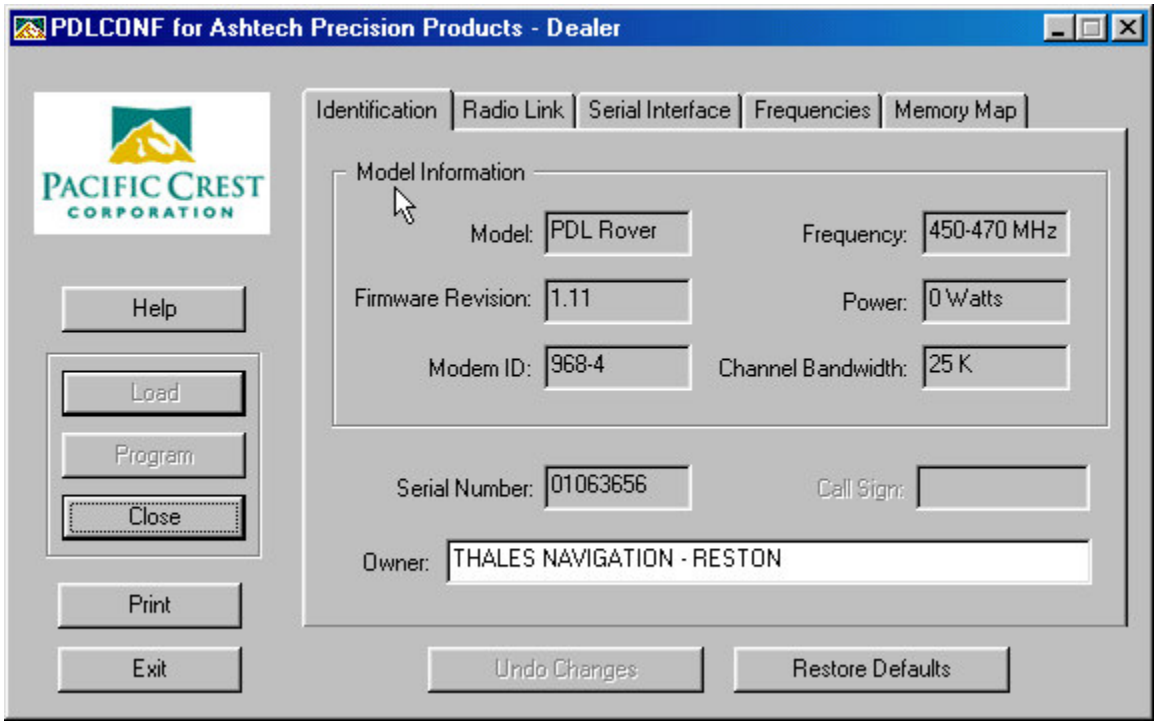
After selecting the "LOAD" option…



You should observe the Loading status dialog…

<u>Tech-Tip:</u> if you observe the program continually polling the Radio's Baud Rate, and failing to connect to the radio, you may need to try a different Baud Rate connection option. The default Baud Rate is 9600.

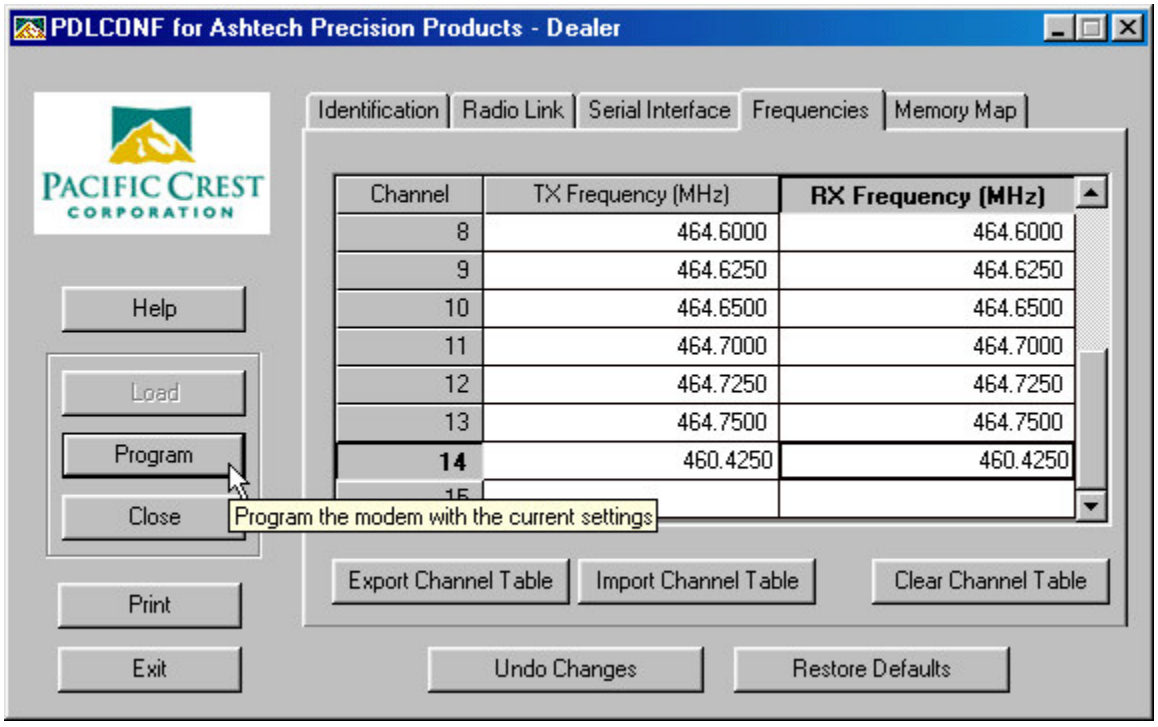
Successful connection to the PDL Radio Modem:



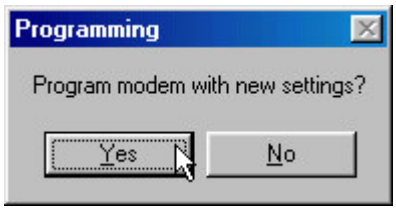
Next, Select the "Frequency" tab…

In this menu, add the Trimble RTK Base Station's (TX)Transmitting Radio Frequency.

In this example, add the UHF Frequency "460.4250" Mhz to the next available Channel slot in the PDL radio TX and RX template.

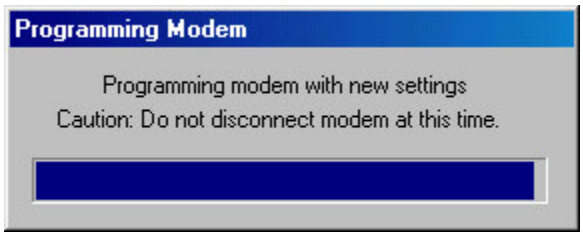


After manually entering the 460.4250 Mhz frequency to the TX and RX template, click on the "PROGRAM" button bar…



Click on the "YES" button bar…

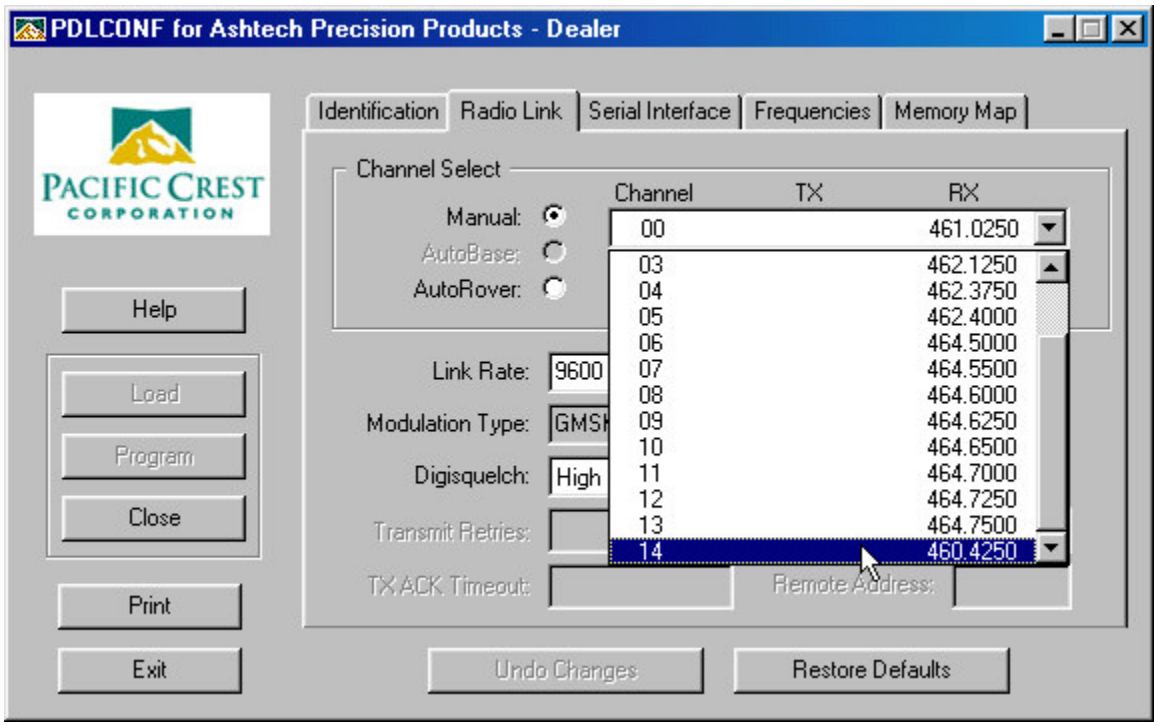
Radio Frequency programming status indication…



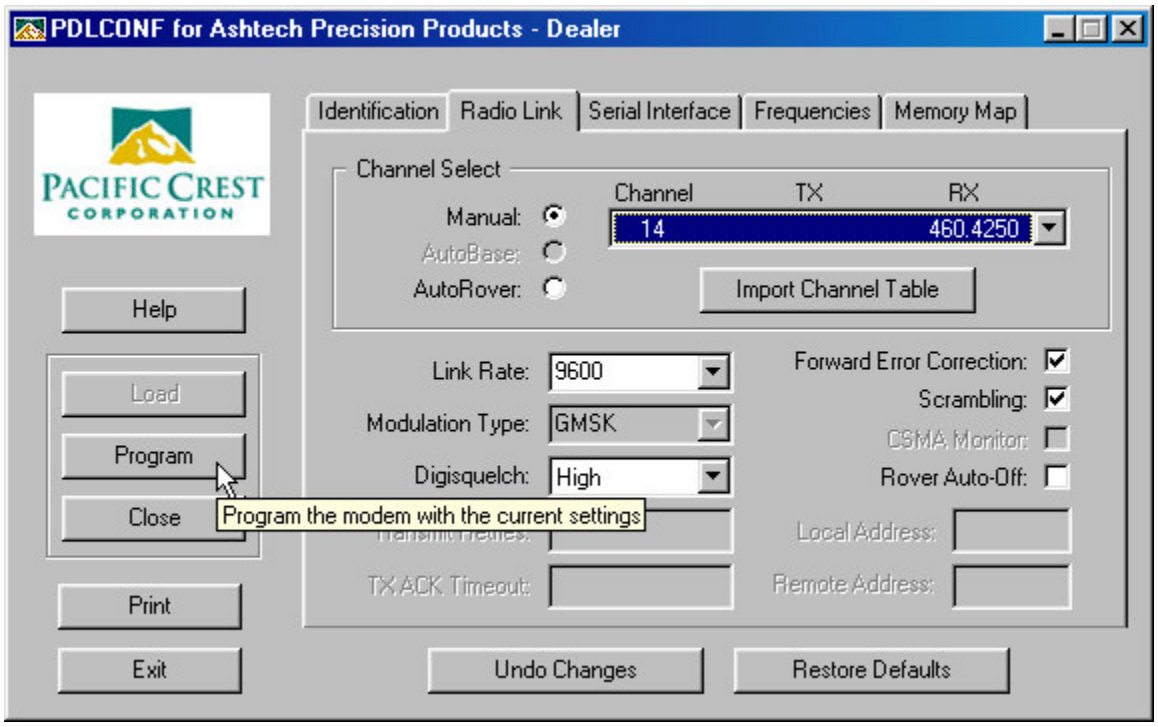
Next Step…

Select the "RADIO LINK" tab…

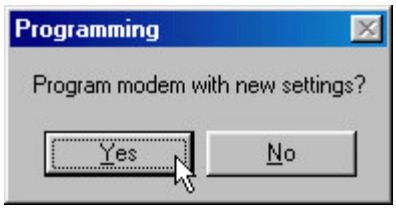
Select the newly added Channel 14 – 460.4250 Mhz frequency,
This instructs the PDL radio to "listen" to this frequency.



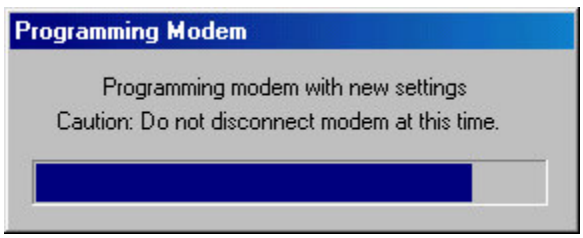
Click on the "PROGRAM" button bar…



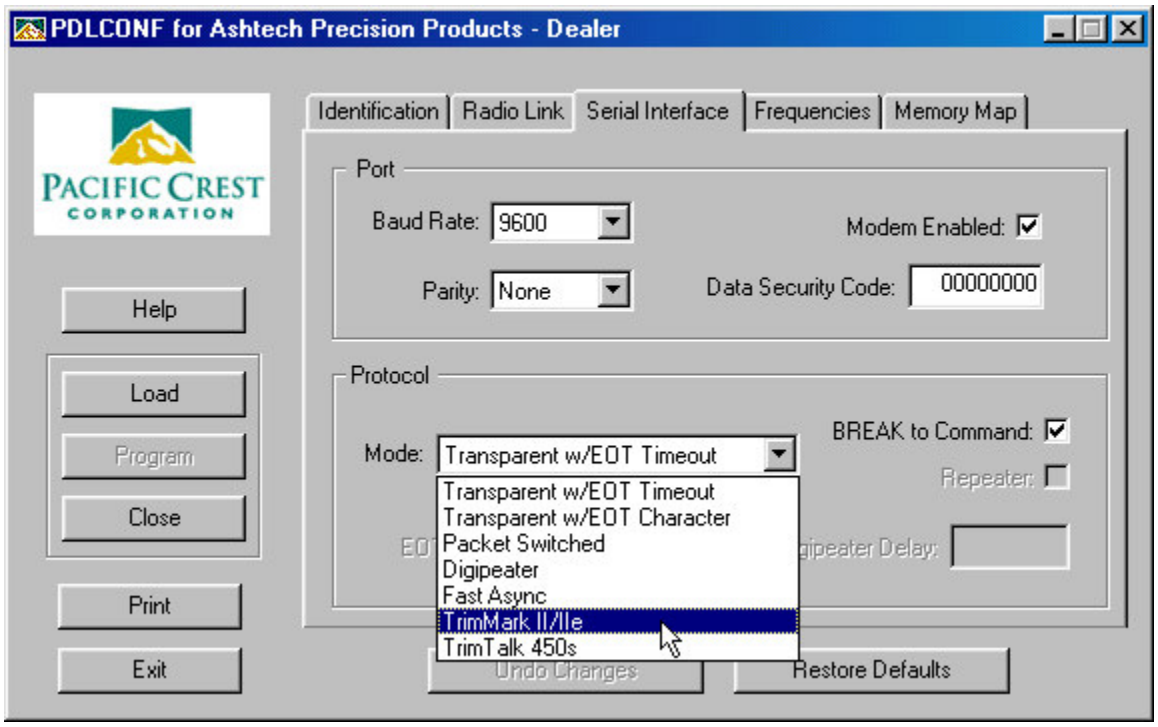
Next, click on the "YES" button bar…



Radio Frequency programming status indication…



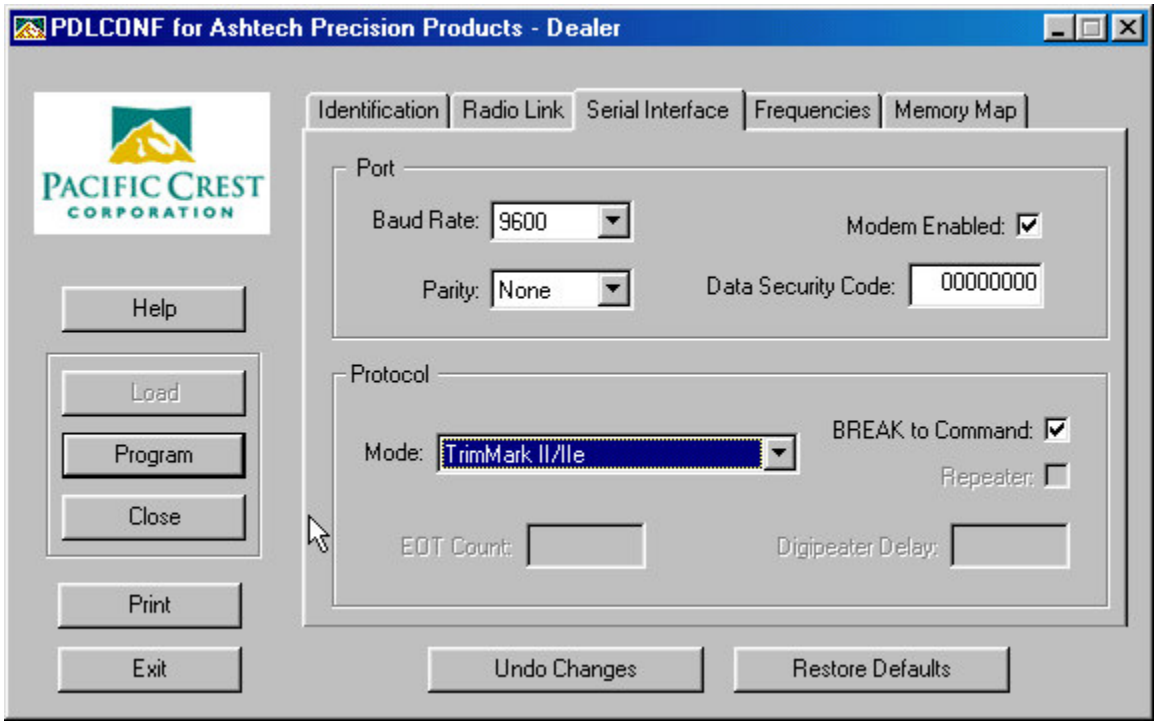
Next, Select the "Serial Interface" menu…



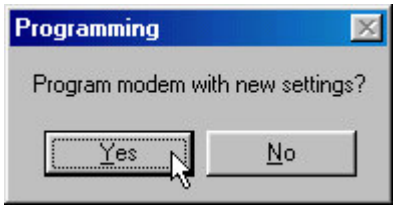
Depending upon the type of Trimble radio being used at the Trimble RTK Base Station location select:

TriMark II/IIe -or- TrimTalk 450s type radio modulation.

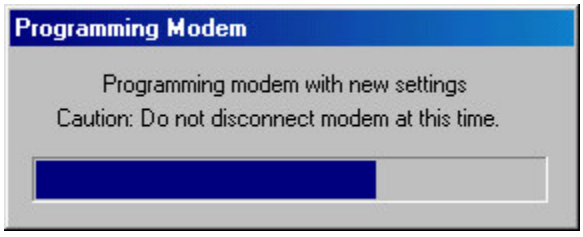
After selecting the proper type of Trimble RTK Base radio modulation, Click on the "PROGRAM" button bar…



Next step…

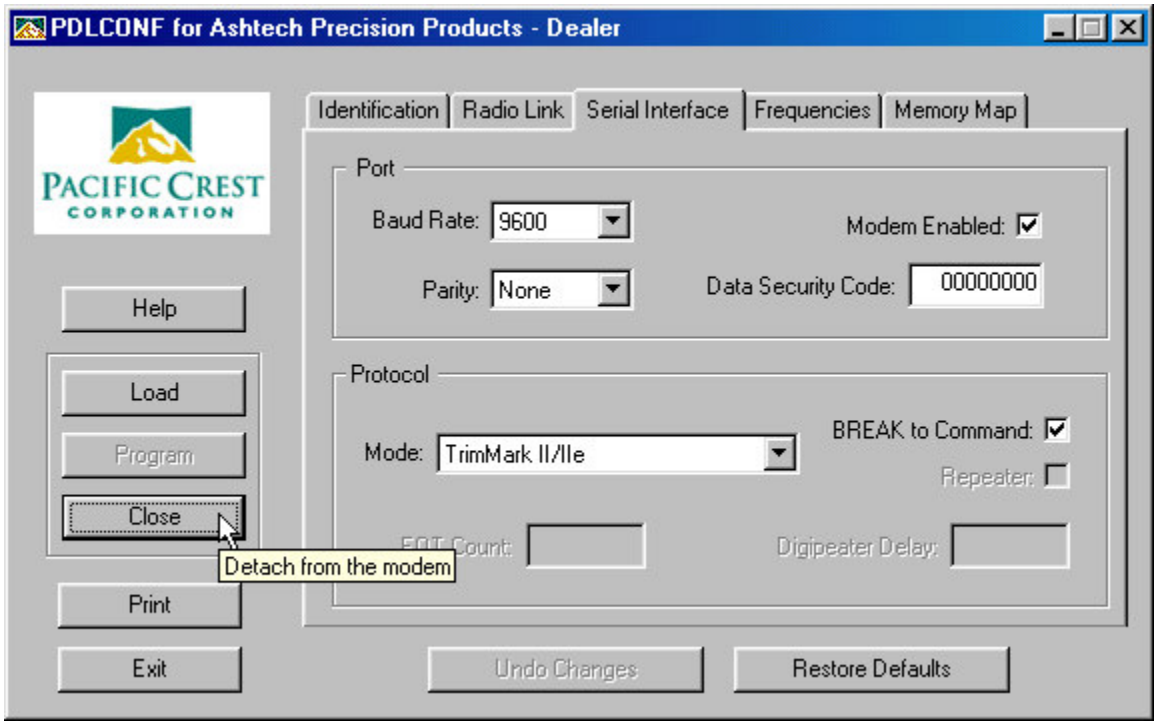


Click on the "YES" button bar…



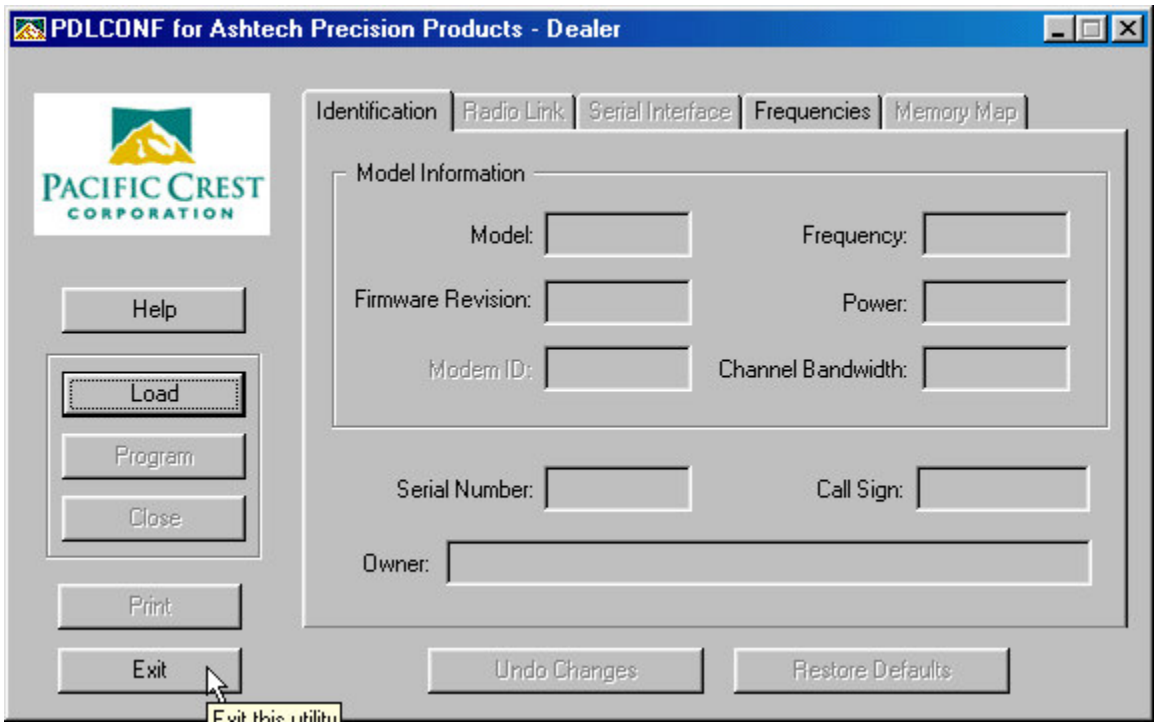
Radio Modulation type programming status indication…

When you completed making these required modifications to the PDL Rover radio modem(s), you can **"CLOSE"** the **PDLCONF** software,



Select the "CLOSE" button bar…

Next, select the **"EXIT"** the **PDLCONF** Software…



This will exit you from the Pacific Crest PDLCONF software.
You can disconnect any cabling used during the radio re-configuration procedures.

If your RTK rover system features the Internal PDL-RXO radio, perform a Parameter reset via the Z-Xtreme's front panel interface, or thru the RCS Commander program. This will reset the receiver, disabling the Daisy chain mode.

You can adjourn outside with the Z-Xtreme RTK Rover to test the reception of the Trimble RTK Base station's CMR messaging format. If you can not "hear" the Trimble RTK Base station, confirm you've programmed the correct Radio Channel and Frequency in the PDL Rover radio.

If the radio channel / frequency selection is correct, you may need to select the alternative Trimble Radio modulation format, remember there are two choices…

TrimMark II/Iie & TrimTalk 450s Modulation formats.

You are ready to survey with your Z-Xtreme RTK Rover, using the local Trimble RTK Base station CMR broadcast.