



## Application Notes

## SP80 Radio Settings Recommendation



Date: March 13, 2014  
Product: SP80  
Subject: **Radio Settings**

### Introduction:

This document describes the procedure to configure the SP80 UHF radio (XDL Micro radio) and gives recommendations about the settings according the used radios. The Pc software ADLCONF from Pacific Crest and the ADLCONF dealer dongle are required (CONFRADIO doesn't support the SP80 radio).

### SP 80 –XDL Configuration

To configure the SP80 XDL UHF radio, follow the steps described below:

- Insert the radio to the SP80 (see page 47 of the user guide)
- Power on the SP80 by pressing simultaneously the  +  to switch the receiver to **Service mode**. Through this mode, the receiver offers direct access to the UHF module via the receiver's port A.
- Run **Pacific Crest ADLCONF** software (connect the **ADLCONF dealer dongle** to your computer) on the computer and connect the SP80 to the PC via the serial port (38 400 bauds) – Use serial cable (PN 59044-SPN). The step by step procedure to do it is described in the “How to use ADLCONF” section (end of this document).
- Configure the radio by following recommendations described in the following section.
- When you have finished to configure the radio, disconnect the serial cable (PN 59044-SPN) and press the SP80 power button to reboot the SP80.

**Radio Settings Recommendations**

**1<sup>st</sup> Case - Pacific Crest Radios\* on the base and on the rover**

If you use Pacific Crest Radios\* on the base and on the rover, we recommend to use these settings:

Settings		BASE		ROVER	
Format	<b>ATOM COMPACT</b>  <b>CMR+ if XDL radio</b>  <b>RTCM3.2 if external radio</b>	Receiver	Radio	Receiver	Radio
		SP80, ProMark800, ProFlex 800, ProMark 500, ProFlex 500	<b>Pacific Crest Radios*</b>	SP80, ProMark800, ProFlex 800, ProMark 500, ProFlex 500	<b>Pacific Crest Radios*</b>
		SP80, ProMark800, ProFlex 800, ProMark 500, ProFlex 500	<b>Pacific Crest Radios*</b>	Epoch50 , Other brand receivers	<b>Pacific Crest Radios*</b>
		Epoch50 , Other brand receivers	<b>Pacific Crest Radios*</b>	SP80, ProMark800, ProFlex 800, ProMark 500, ProFlex 500	<b>Pacific Crest Radios*</b>
Protocol	Transparent FST		Transparent FST		
Baud rate	9600 bauds		9600 bauds		
Modulation	4FSK		4FSK		
FEC	OFF		OFF		
Scrambling	OFF		OFF		

**Pacific Crest Radios\*:** XDL, ADL Vantage, ADL Foundation, ADL Vantage PRO, ADL RXO

**2<sup>nd</sup> Case – Ulink Radio on the base and SP80 XDL radio on the rover**

If you use a **Ulink radio** on the **base** and a XDL radio on the SP80 rover, we recommend to use these settings:

Settings	Base - Ulink radio	SP80 - XDL radio
Format	ATOM compact	
Protocol	Transparent	Ulink
Baud rate	4800 bauds	4800
FEC	Not applicable	OFF
Scrambling	Not applicable	OFF

**3<sup>rd</sup> Case – SP80 with Pacific Crest radio on the base and Ulink Radio on the rover**

If you use a SP80 with a Pacific Crest radios on the **base** and a **Ulink radio** on Rover, we recommend to use these settings:

Settings	SP80 with XDL or ADL radios	Rover - Ulink radio
Format	ATOM compact	
Protocol	Transparent	Ulink
Baud rate	4800 bauds	4800
FEC	Not applicable	OFF
Scrambling	Not applicable	OFF

Note that we don't recommend this configuration: we recommend to use the SP80 as ROVER to take full benefit from the SP80 performances

**Frequency NOT to be used**

We recommend not to use one of the frequencies listed below:

400-430 Mhz	430-450 Mhz	450-470 Mhz
403	430.3	450.0125
403.65	430.95	450.45
404.3	431.6	451.1
404.95	432.00	451.75
405.6	432.25	452.4
406.25	432.9	453.05
406.9	433.55	453.7
407.55	434.2	454.35
408.2	434.85	455
408.85	435.5	455.65
409.4875	436.15	456.3
409.5	436.8	456.95
59.5125	437.45	457.6
410.15	438.1	458.25
410.8	438.75	458.9
411.45	439.4	459.55
412.1	440.05	460.2
412.75	440.7	460.85
413.4	441.35	461.5
413.9875	441.9875	462.15
414.0	442	462.8
414.0125	442.0125	463.45
414.05	442.65	464.1
414.7	443.3	464.75
415.35	443.95	465.4
416	444.6	466.05
416.65	445.25	466.7
417.3	445.9	467.35
417.95	446.55	467.9875
418.6	447.2	468
419.25	447.85	468.65
419.9	448.5	469.3
420.55	449.15	469.95
421.2	449.8	470.6
421.85	449.7875	471.25
422.5		471.9

423.15		472.55
423.8		488.0125
424.45		
425.1		
425.75		
426.4		
427.05		
427.7		
428.35		
429		
429.65		

**On the field**

- If you change a parameters on the base (e.g. frequency), we recommend to power OFF/ON receiver.
- If you use an external ADL radio, make sure that you use the right cable (PN A02507) and not the cable used with the ProMark or ProFlex receivers (PN A000630). These cables look very similar, but the receiver connectors are different.

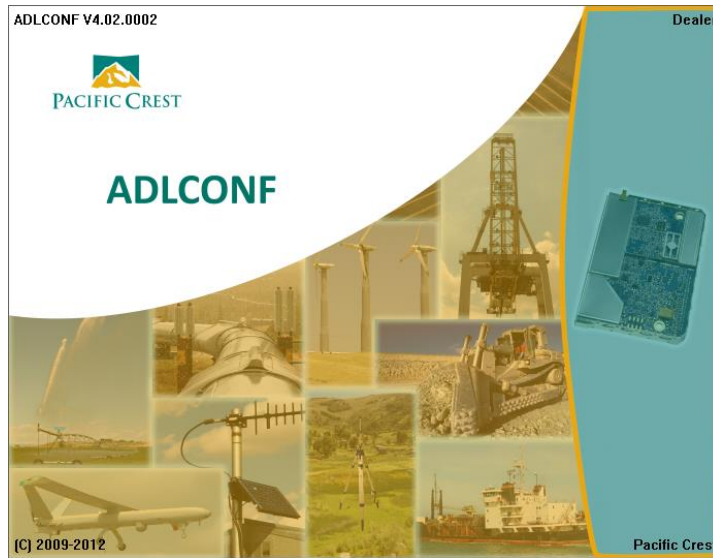
**How to use ADLCONF**

- Power on the SP 80 by pressing simultaneously the Power+Log buttons
- You will enter then in the Service Mode menu

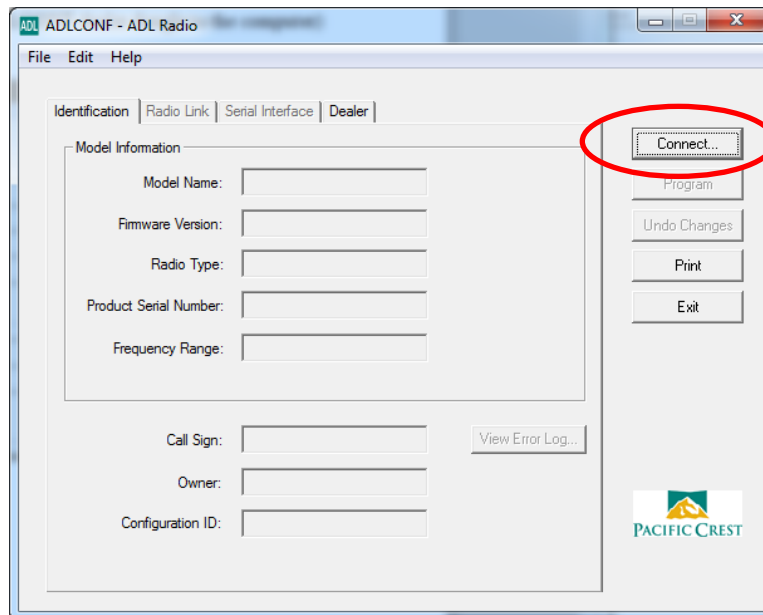


- Connect the SP80 to your PC via serial cable (38 400 bauds)

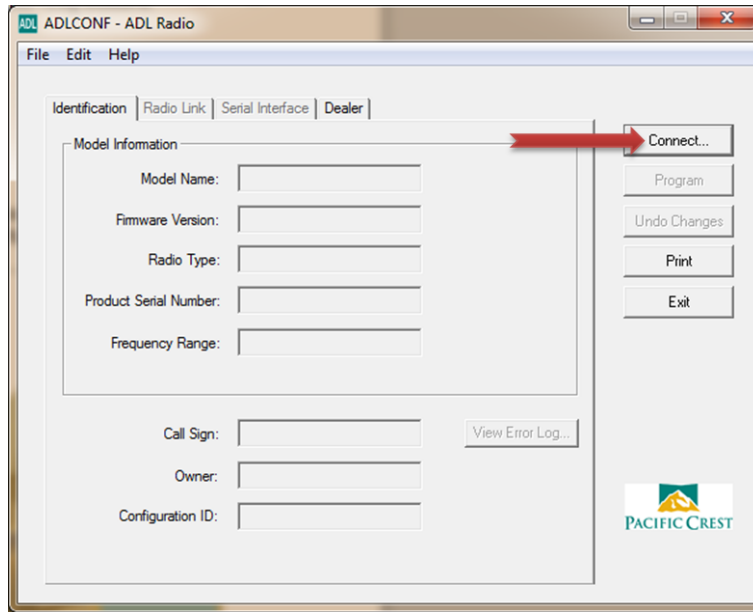
- Launch ADL CONF (don't forget to connect the ADLCONF dealer dongle to the computer)



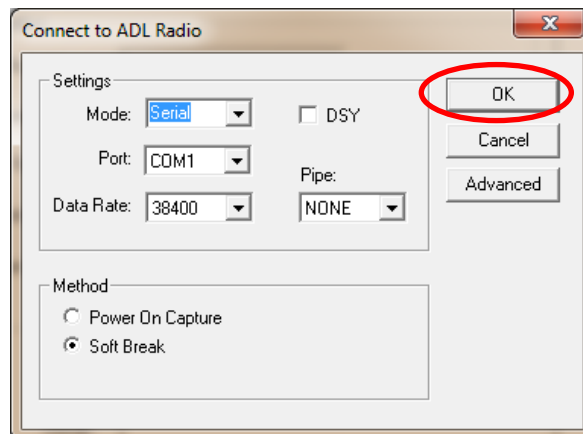
- Launch ADL CONF (don't forget to connect before the ADLCONF dealer dongle to the computer, you should see the "Dealer" tab)



- Click on “Connect” button to read the configuration :

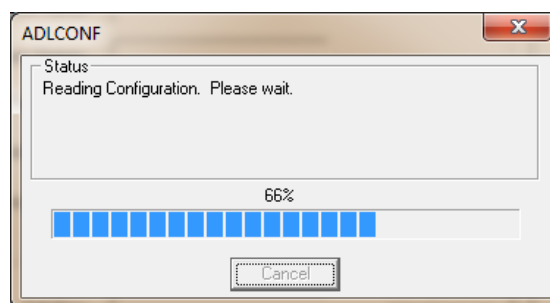


Set the connection settings:

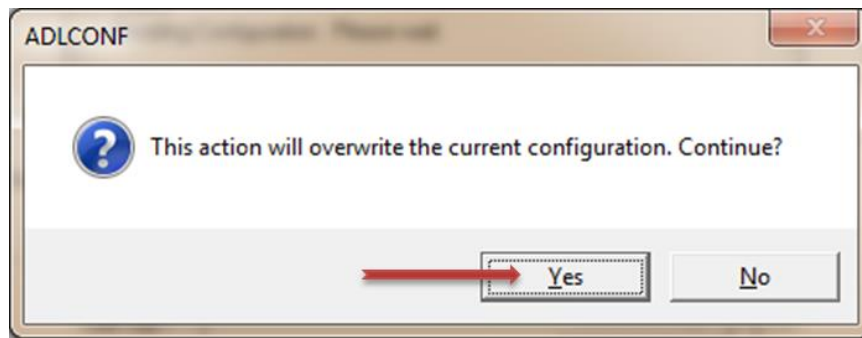


And click on OK button

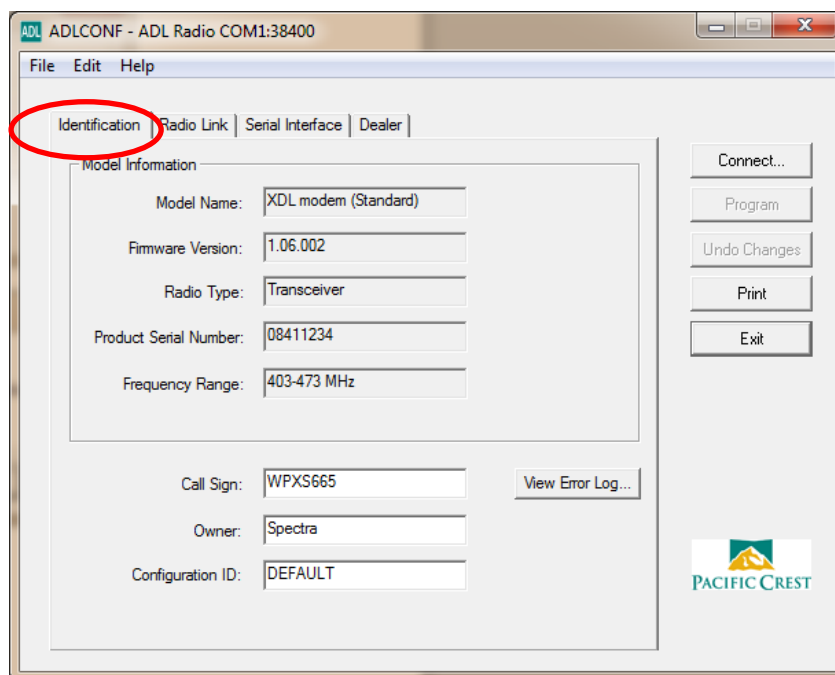
- The configuration is read



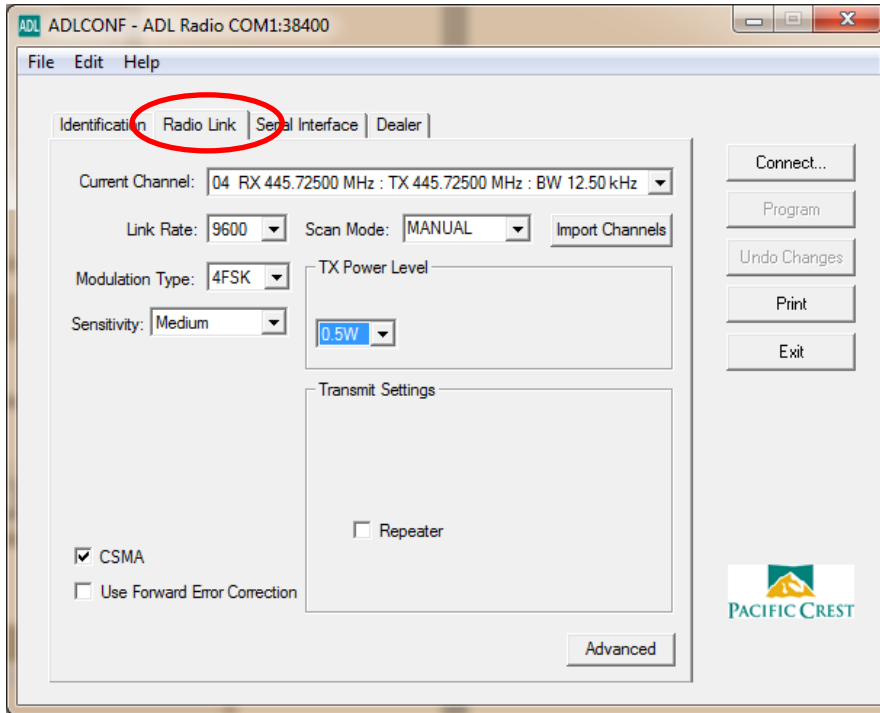
- Click on Yes button to modify the radio settings



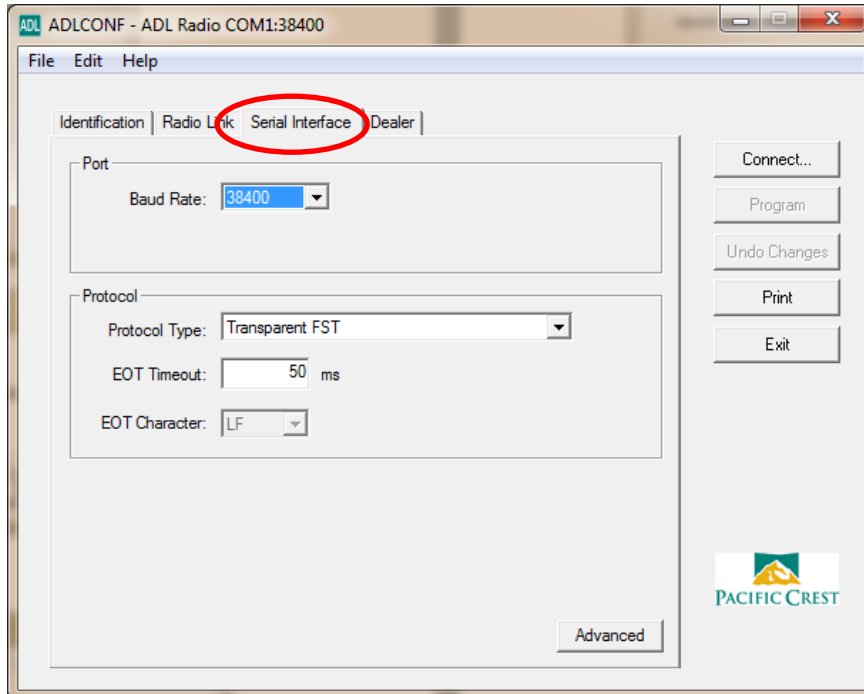
- Go to the Identification Tab to read the radio identification



- Go to the Radio Link Tab to configure the radio link settings

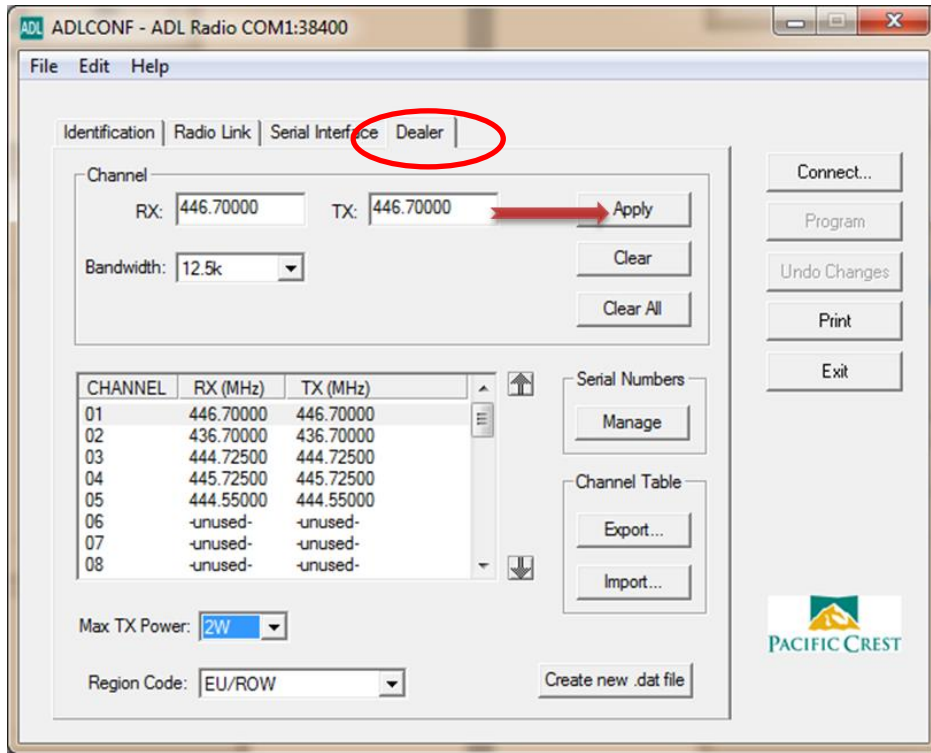


- Go to the Serial Interface tab to check the settings



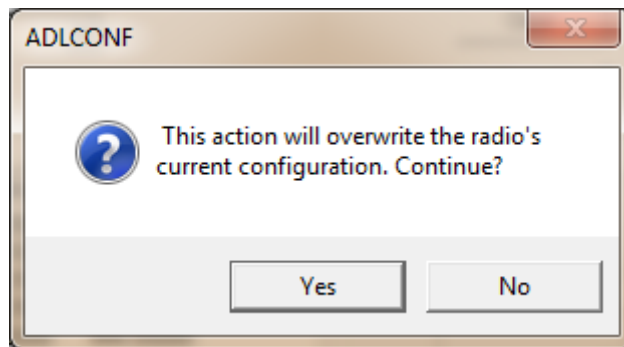


- Go to the Dealer tab check to enter the channel frequency table :

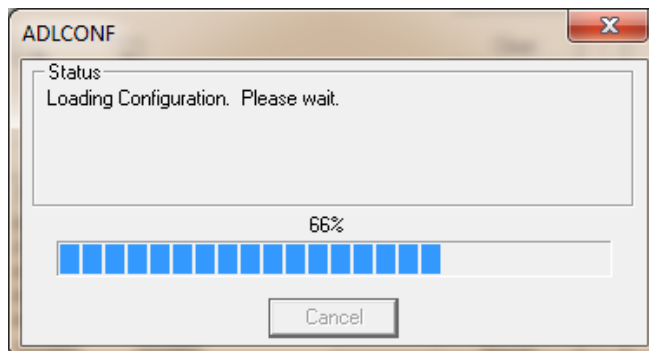


Enter the RX and/or TX frequencies you want to use and click on the Apply button (you have then access to the “Program” button)

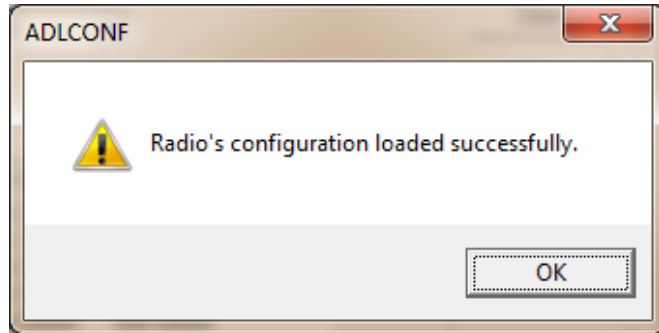
- Click on the “Program” button to send this new configuration to the radio



Click on the “Yes” button



- Wait until this message appears



Click on the "OK" button

- Exit

