

Provisioning ADL Vantage 35 with Version 5.02 Firmware

Date: 3 July 2019

By: Mark Silver, ms@igage.com, +1-801-412-0011 x16

Thesis

Everything is different in Version 5 radio firmware, information in the printed iG8 and X91+, X900+ User Manual is obsolete if your radio is upgraded to the new firmware.

This new version can be installed in older and newer radios. It appears to have a more reliable listen mode, which makes the repeat function even better. However it is more difficult to program.

Step by step instructions follow.

Important Notes

You can download the latest programming tool and firmware version from the Pacific Crest website: <http://pacificcrest.com/support.php?page=updates>

Firmware and Software Upgrades for ADL Radio Modems

Filename	Description	Revision
ADL_FW.zip	Firmware for ADL radios and modules	5.02.0004
ADLCONF_Setup.zip	ADLCONF configuration software for all ADL radios	4.20.0002

The ADL radios may need to be rebooted (power off, wait 5 seconds, power on) after making channel selections from the front panel or after clicking the Program button from the programming tool. If the radio has been on for a few minutes, the display will go blank. Most of the time pressing the power button for 2 seconds will turn the display back on.

When using the front panel buttons to move through the settings, the display sometimes does not fully load a message. This is a bug, it is in all devices don't let it drive you crazy.

When you have selected the correct 'Data Protocol', the radio display will show 'SATEL /F':

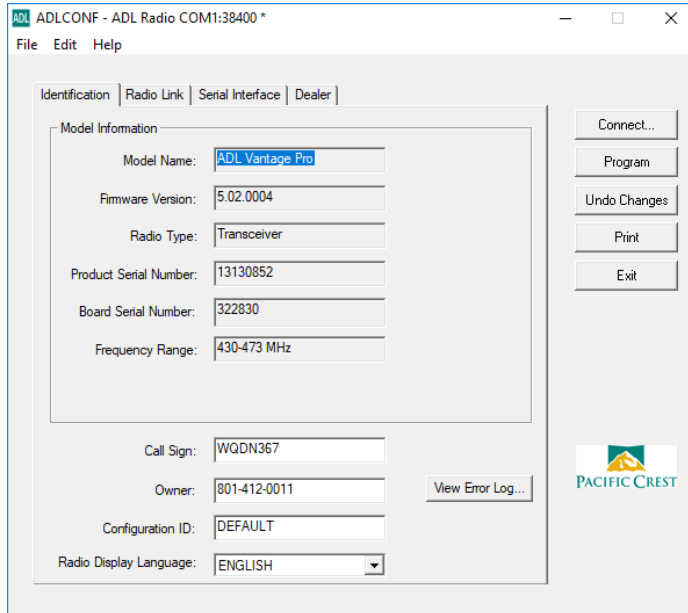


And the 'Radio Link Rate' will be 9600. (This is important, if it is 19,200 you have set the bandwidth to 25 KHz and it will not work.)

Programming as Satel Mode Repeater

You will need a power connector with a serial port cable. If you need to change the bandwidth or frequencies you will need a dealer programming dongle. (iGage can supply these tools.)

Connect by serial port. Attach an antenna before connecting power. The default baud rate is 38400 for the cable connection. You can change this from the front panel of the device. Press 'Connect':

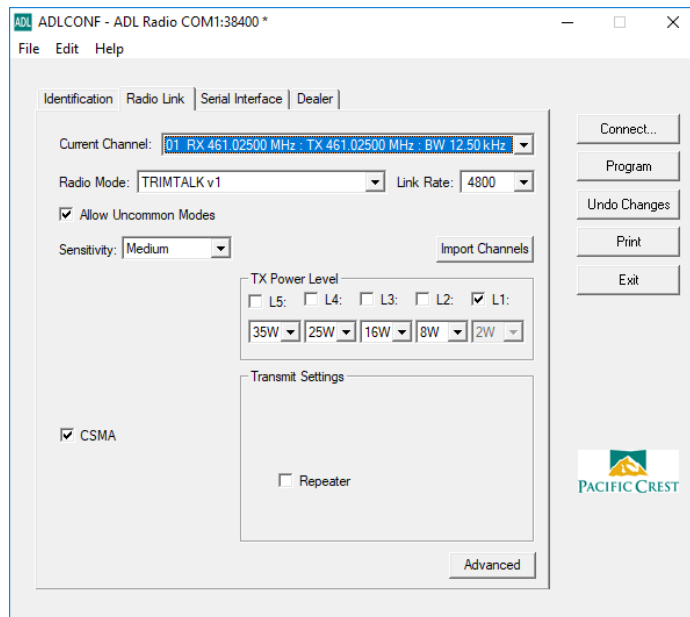


2

We put the owner's phone number in the Owner box. You must have a FCC license to broadcast, and the FCC call sign must be transmitted every 10 minutes. So put your call sign in the appropriate box.

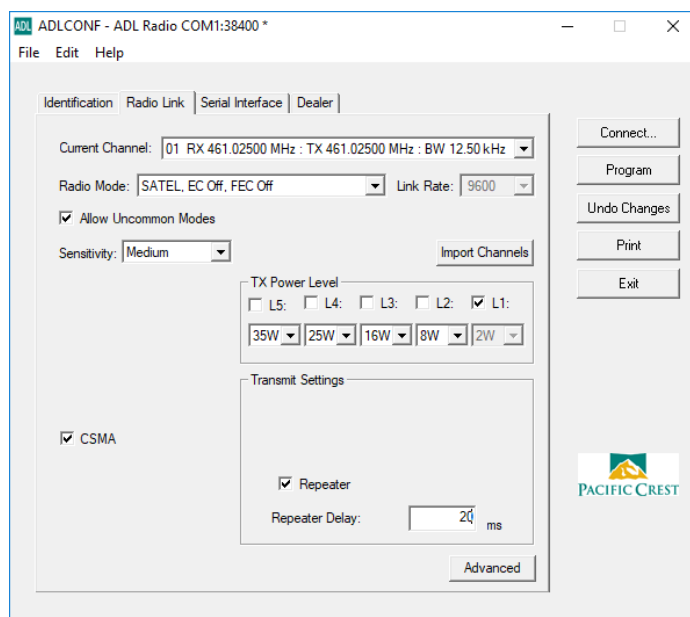
Radio Link

Initially 'Allow Uncommon Modes' will not be checked. Once you check it you must program the radio and then re-connect and re-read the radio configuration.



3

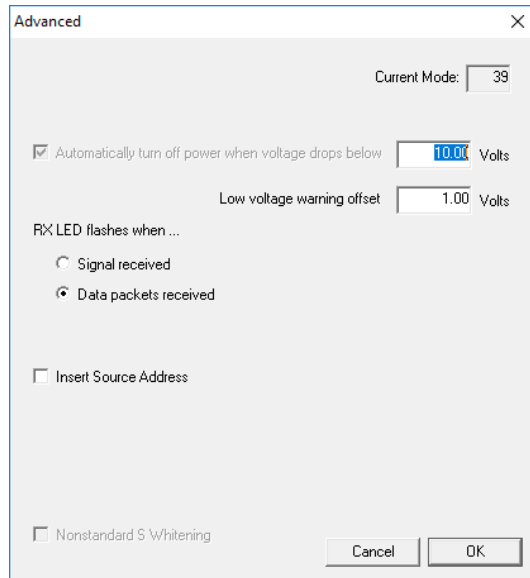
Check the 'Allow Uncommon Modes' box. Then click Program to store the changes. After the upload is complete, click the 'Connect' button to reload the radio configuration.



Now you will be able to select 'SATEL, EC Off, FEC Off' which is the default Satel / 3AS mode that we use for iGage iG receivers. CSMA should be checked for legal operation in the USA unless you have a dedicated, unshared channel. Set the Sensitivity to Medium to keep low power noise from throttling the repeater's output.

Check the 'Repeater' check box. I like to set the repeater delay to 20 ms.

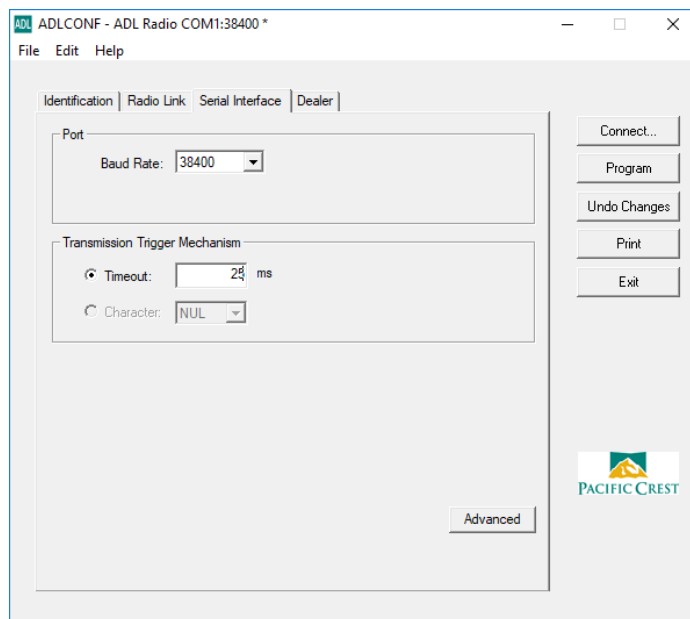
Clicking Advanced:



Leave the default values unchanged.

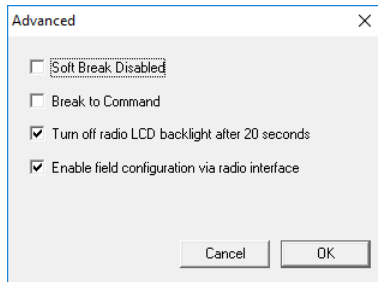
Serial Interface

On the 'Serial Interface' tab:



Leave everything unchanged.

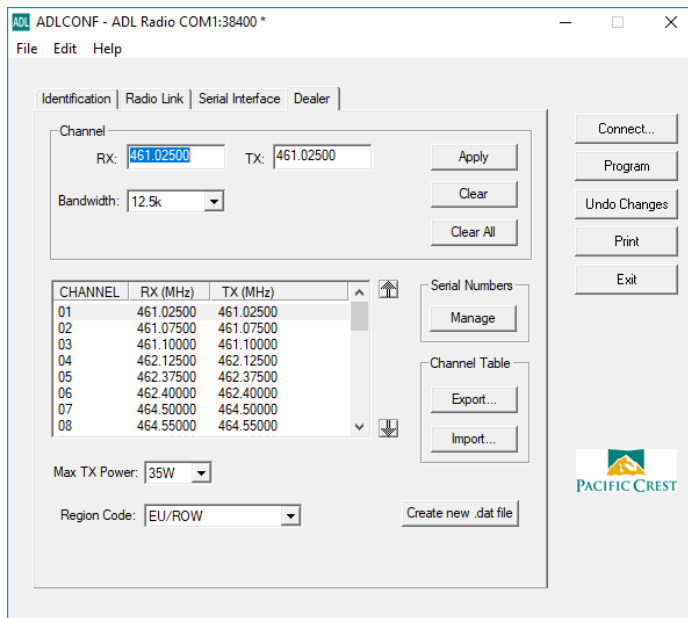
Clicking the Advanced button:



Leave everything unchanged.

Dealer

You won't be able to modify the dealer tab if you don't have a programming dongle. On the 'Dealer' tab:



The Bandwidth must be set to 12.5 KHZ for operation in the USA. You may need to make this change and then return to the 'Radio Link' tab to get the baud rate to register correctly.

It is illegal to program a radio with unlicensed frequencies. In addition to simplex channels (the Rx and Tx frequencies are the same) you may want to program some cross channel pairs like Rx 461.025 Tx 464.700.

Once all settings are correct, click the Program button and subsequent buttons as appropriate.