



ACM-PLUS Firmware Upgrade Procedure

1.0 Purpose

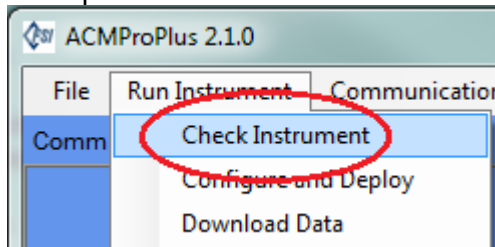
- 1.1 The purpose of this document is to provide instructions for upgrading the firmware in an ACM-PLUS Instrument.

2.0 Materials

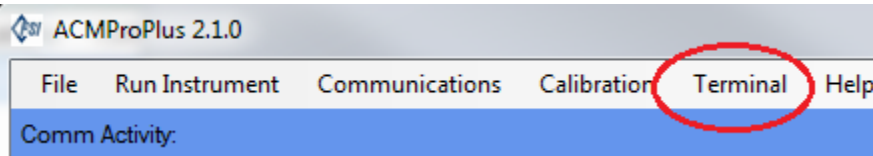
- 2.1 Computer with ACMProPlus installed
- 2.2 ACM-PLUS Test Cable
- 2.3 ACM-PLUS Instrument to be upgraded

3.0 SetUp - Connect with ACMProPlus

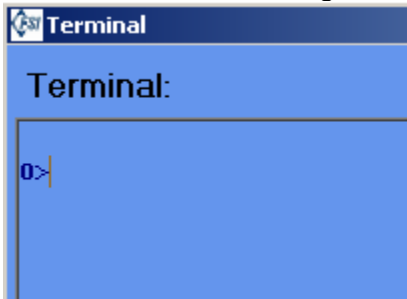
- 3.1 Connect to the ACM-PLUS with ACMProPlus
- 3.2 As per the manual, confirm communications with the Run Instrument -> Check Instrument process



- 3.3 Access the Terminal Window

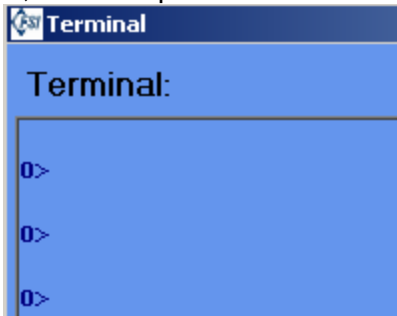


- 3.4 You should now see this dialog:



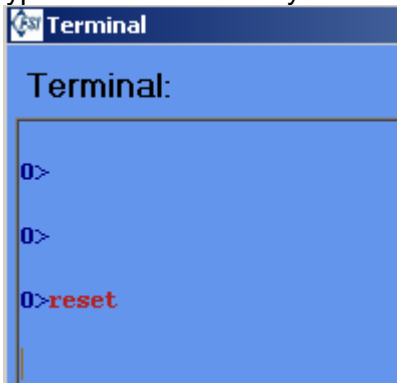


- 3.5 Press the <enter> key a couple of times, you should see the "O>" prompt appear, as in the picture below.



4.0 SetUp - Put ACM-PLUS into Bootloader mode

- 4.1 On the ACMPlus Test Cable, place the switch into the Firmware Upgrade position.(If you have an older test cable, set the switch to ON)
- 4.2 Now type "reset" followed by the <enter> key, as in the picture below

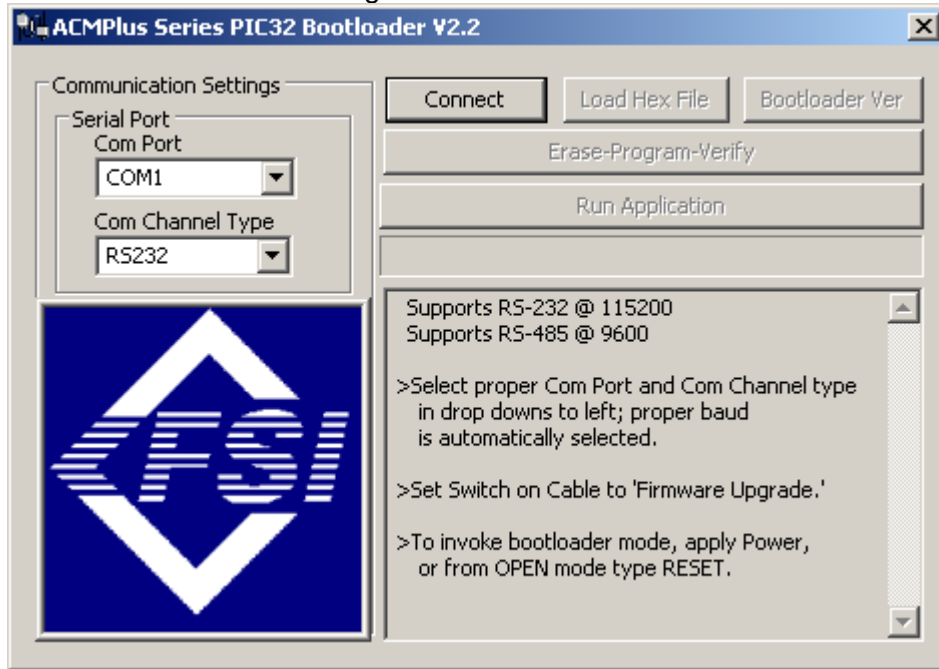


- 4.3 The ACM-PLUS is now in Bootloader mode.
- 4.4 Close ACMProPlus, by exiting out of the Terminal window, and then exiting the program.



5.0 SetUp - Connect with the Bootloader Software

- 5.1 The Bootloader Software and the latest firmware hex file are included in the ACMProPlus Install Package, and were installed to your computer when ACMProPlus was installed.
- 5.2 To find the Bootloader Software, navigate to "C:\Program Files\Falmouth Scientific, Inc\ACMProPlus\bootloader"
- 5.3 Run the bootloader software
 - 5.3.1 Filename is "ACMPlus BL.exe"
 - 5.3.2 You should see the following:



- 5.4 Choose the Serial Port you are connected with using the Com Port list
- 5.5 Select the Com Channel Type from the list: RS-232 or RS-485
- 5.6 Click the "Connect" button

DWG No.: AN2012002	Rev A
TITLE: Firmware upgrade procedure for the ACM-Plus	
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5.7 On successful connection, the Bootloader Firmware Version is displayed in the message window as shown below:



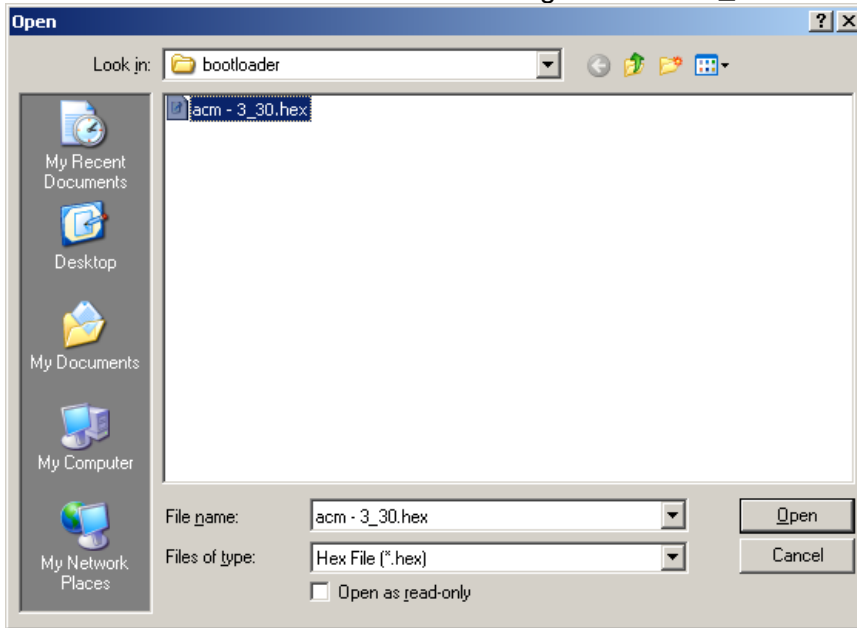
5.8 Verify that Upgrading Firmware can proceed:

5.8.1 **If your Bootloader Firmware Version is 2.0 and you are connected over RS-485, you cannot upgrade your ACM-PLUS using this procedure! Contact FSI for specific instructions to upgrade your instrument.**

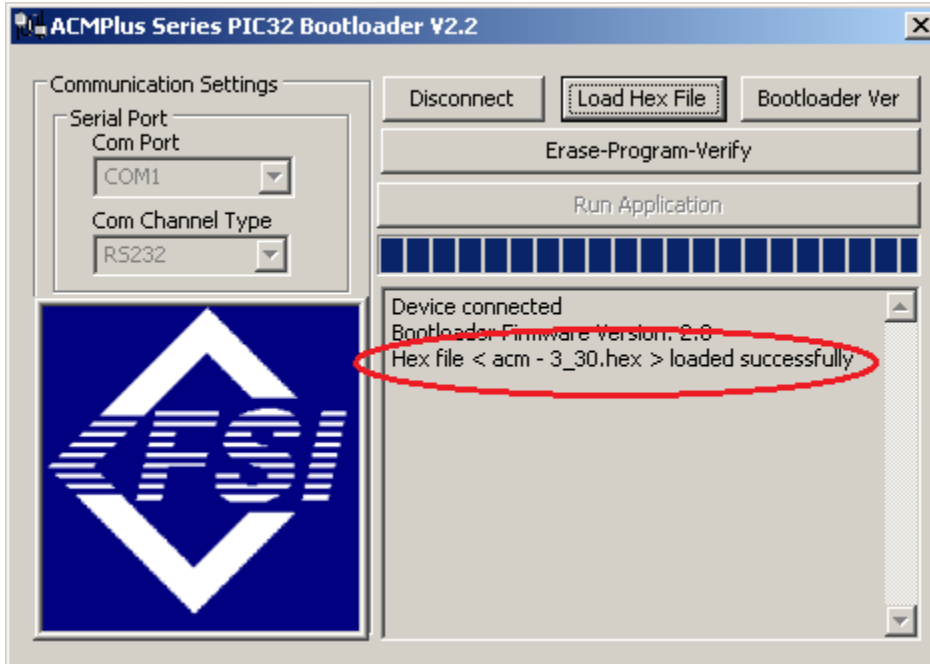
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- 5.9 Click the "Load Hex File" button, navigate to the folder "C:\Program Files\Falmouth Scientific, Inc\ACMProPlus\bootloader" and select the firmware hex file that you wish to install. For this example, we will be upgrading the instrument to Firmware Version 3.30 using file "acm - 3_30.hex"

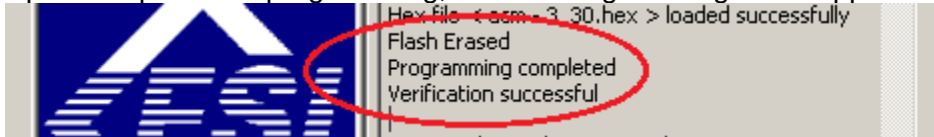


- 5.10 After the hex file has been selected, click the "Open" button
- 5.11 The Bootloader Software will now show the loaded hex file:

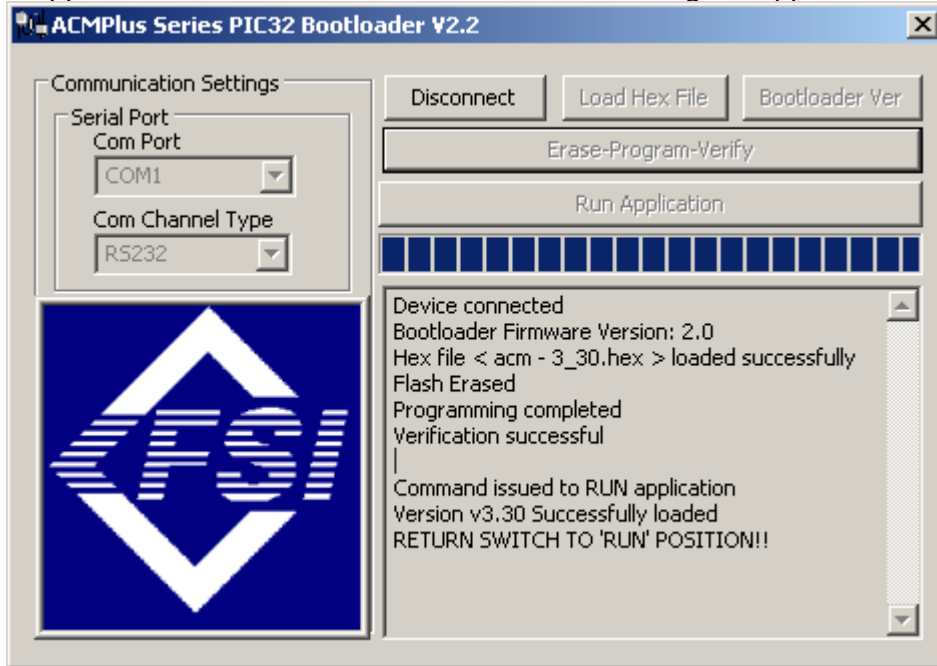




- 5.12 Click the "Erase-Program-Verify" button to start the programming process.
- 5.13 Upon completion of programming, the following messages will appear



- 5.14 To boot up the ACM-PLUS with the newly programmed firmware, click the "Run Application" button. The Bootloader Software dialog will appear as follows:



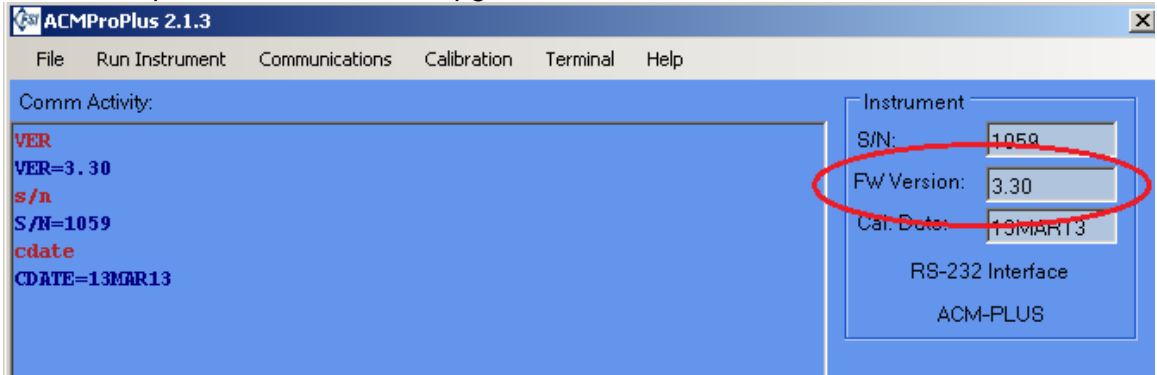
- 5.15 On the ACMPlus Test Cable, place the switch into the RUN position.(If you have an older test cable, set the switch to OFF)
- 5.16 Exit the Bootloader Software

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6.0 Final Verification - Check New Firmware Version with ACMPProPlus

- 6.1 Connect to the ACM-PLUS with ACMPProPlus
- 6.2 As per the manual, confirm communications with the Run Instrument -> Check Instrument process
- 6.3 The FW version should match the version of the hex file that you just loaded. In this example, the firmware was upgraded to version 3.30.



REVISION HISTORY

REV	DESCRIPTION	DATE	APPROVED
-	Initial Revision – Firmware Upgrade Procedure	08/02/2012	
A	Rev A - Update document for new Bootloader Software	10/3/2013	JHW