

Bristol Instruments, Inc.
Update Procedure for 428 Multi-Wavelength Meter

Document No. 000xxx-x-01

Effective: 3/6/2018

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Revision History

			Approval Signatures	
Rev.	Date	Description	Author/Date	Mgr./ Date
A	3/6/2018	Release of Spectrum_Proc_0.135	Z. Houk, 3/6/2018	

PURPOSE

Remote firmware updates for the 428 Series Multi-Wavelength Meter.

SCOPE

This procedure describes the update process used by a customer to update the embedded MCS and HEX files in Bristol Instruments' 428 Series Multi-Wavelength Meter over USB.

NECESSARY HARDWARE

- 428 Series Multi-Wavelength Meter
- Line Cord/Power Cable
- USB-A to USB-B 2.0 (or greater) cable
- PC running Windows XP, 7, 8, or 10 and one available USB port

NECESSARY SOFTWARE FILES (Supplied by Bristol Instruments)

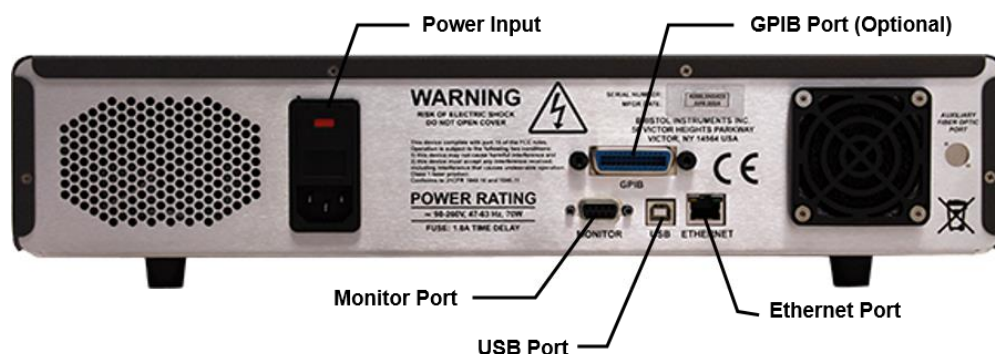
- 428 Update v 1.09-0.135.zip
 - MityDSPGUI
 - VCP_drivers
 - WinPCAP
 - Bristol_428_xm_1.09.mcs
 - Spectrum_Proc_135.hex

Document:	Revision	Date:
000xxx-x-01	A	3/6/2018

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INSTRUCTIONS

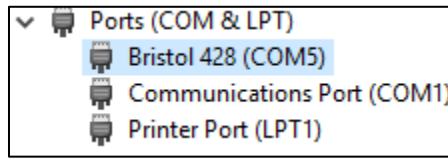
1. Place the 428 Multi-Wavelength Meter on a firm horizontal surface.
2. Make sure that there is at least 2 inches (50 mm) of clearance on all sides of the instrument to allow for ventilation.
3. Verify that the line power meets the requirements shown below.
 - 95 to 260 VAC
 - 47 to 63 Hz
 - Protective Ground
4. Connect the line-power cord to the power input connector on the instrument's back panel.



5. Connect the other end of the line-power cord to the power receptacle.
6. Connect the USB-B end of the USB cable to the back panel of the 428 Series, and the USB-A end to the available USB port on the PC.
7. Place the 428 Update v 1.09-0.135.zip onto the PC and unzip to a directory of your choosing.
8. Power on the 428 Series using the power switch on the instrument's front panel.
9. Run the WinPCAP.exe program and follow the installation wizard's instructions.
10. Open the Device Manager (*Start/Settings/ControlPanel/System/Hardware/Device Manager*)
11. Expand the "COM and LPT ports" listing to show connected devices. The 428 Series will have a description of "Bristol 428". Note the assigned com port number and close the Device Manager.

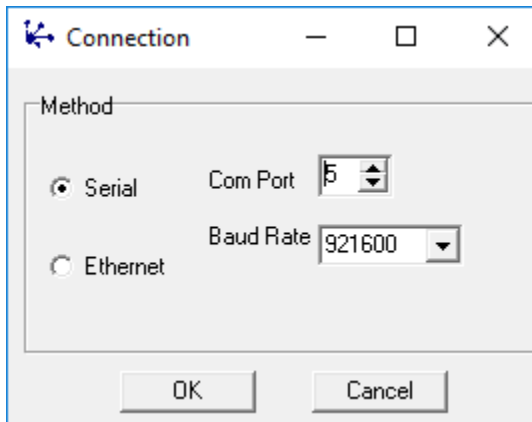
Document:	Revision	Date:
000xxx-x-01	A	3/6/2018

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NOTE: If the instrument is not recognized by the PC, then the appropriate driver will have to be installed by running “BristolVCPInstaller.exe”, found in the VCP_drivers folder.

12. Run the MityDspGUI.exe program.
13. Click the Settings menu, choose Connection, and input the assigned com port noted in Step 11.
14. Set the Baud Rate to 921600, select “Serial”, and then click “OK”.

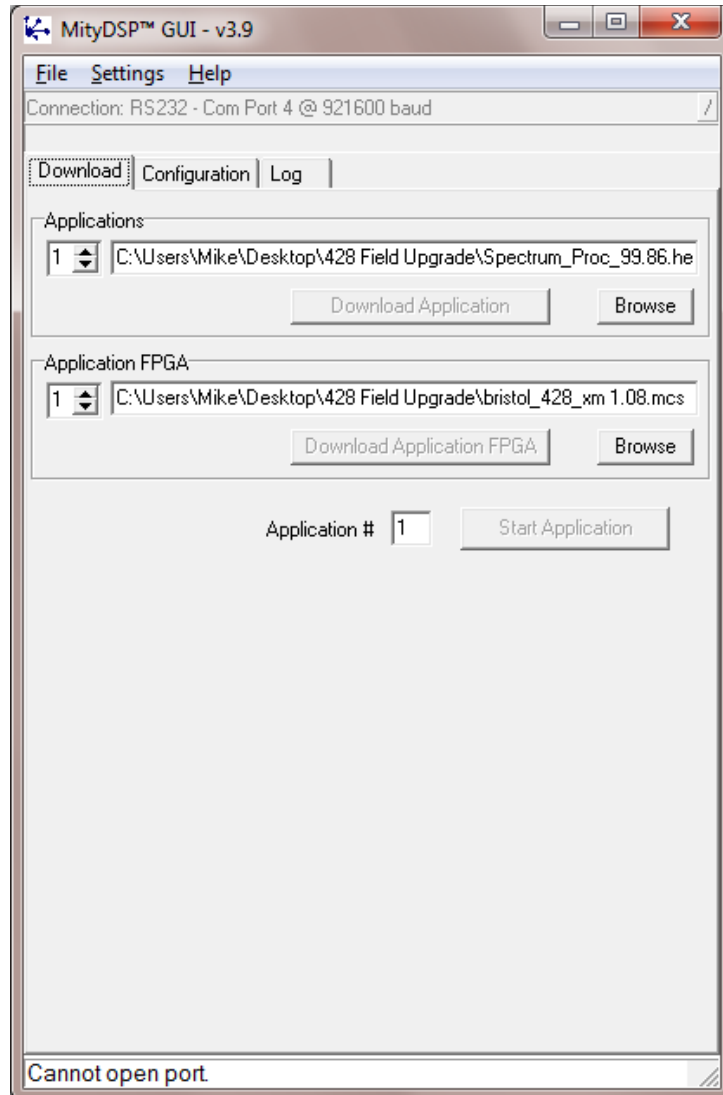


15. Close the MityDspGUI program and power off the 428 Series.
16. Restart the MityDspGUI program and power on the 428 Series.

Document:	Revision	Date:
000xxx-x-01	A	3/6/2018

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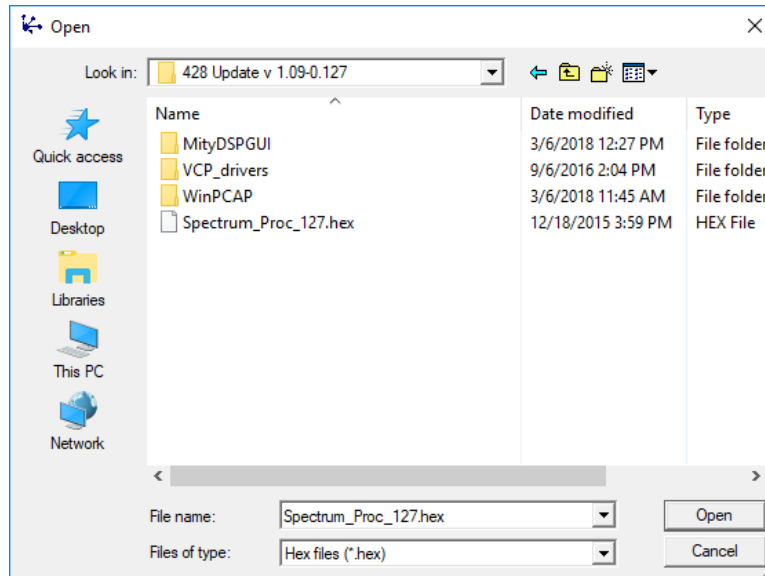
17. When opened, the MityDspGUI window will display the status message “Cannot open port” at the bottom. This message is immediately replaced by “Please start or restart the target...” and followed by “Received configuration from bootloader”. This indicates that communication has been established with the 428 Series.



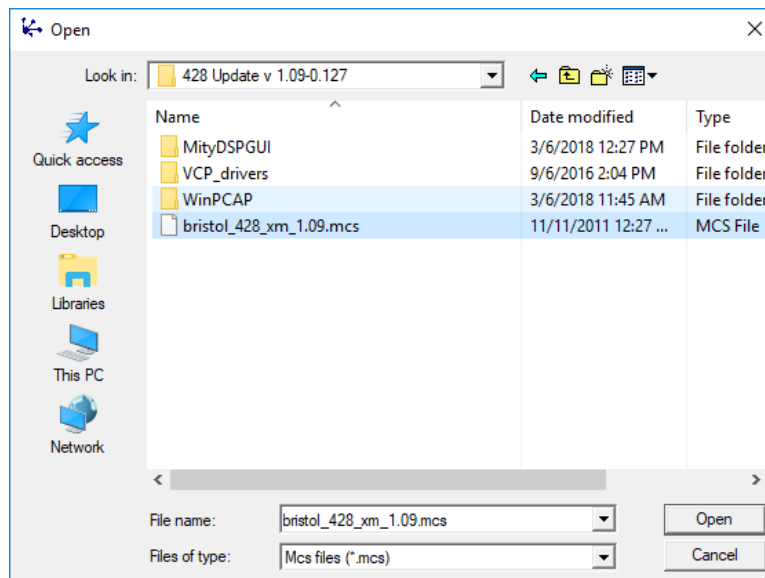
18. Click the *Browse* button in the Applications box and navigate to the “Spectrum_Proc_135.hex” file in the 428 Update folder.

Document:	Revision	Date:
000xxx-x-01	A	3/6/2018

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19. Click the Download Application button and wait until the message at the bottom of the window reads “Successfully downloaded operational code”.
20. Click the Browse button in the Application FPGA box and select the “bristol_428_xm_1.09” file in the 428 Update folder.



21. Click the Download Application FPGA button and wait until the message at the bottom of the window reads “Successfully downloaded FPGA”.
22. Click the Start Application button.
23. Power cycle the instrument to complete the firmware update.

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