

PLC & HMI Programming Instructions

Revision Control

REV	DCO#	DCO DESCRIPTION	PG #	DATE	INITIALS
A	0371	Initial Release	all	2/13/2017	JCG
B	0371	Expanded Step 3, Changed Steps 4 – 9 Adding Two Steps	1	02/20/17	AY
C	0422	Changed to support the programming of the HMI & PLC using FPGTLoader	all	06/26/18	JCG
D	0422	Changed supplied to installed & section titles, Added Note, 4)a)	1,2,5	05/12/21	JCG
E	0468	Updated for FPOR PLC Type, HMI Screen Changes, Added notes on connection error	All	06/13/22	JCG

MATERIALS:

- The PLC Code in *.fp format
- HMI code in *.GTP format
- USB Cable – Standard A to Standard B
- USB Cable – Standard A to Mini B
- AXP computer

PROCESS:

SOFTWARE INSTALLATION

- 1) Go to C:\Program Files (x86)\Panasonic-ID SUNX Control\FPGT Loader 2 and look for **FPGTLoader.exe**.
- 2) If found then the program is installed, skip the rest of this section.
- 3) Copy the zip file sw_setupfpgtloader2013 into a folder on the computer being used to program the PLC and or HMI.
- 4) Extract the files in the sw_setupfpgtloader2013.zip folder into the folder created in step 3 above.
- 5) Double click on the program SetupFPGTLoader2.0.1.3.exe.
- 6) Click on RUN when prompted.
- 7) Select English language and click OK when prompted.
- 8) Click on NEXT when prompted.
- 9) Click on the circle accepting the license agreement then click NEXT.
- 10) Click INSTALL when prompted.
- 11) If prompted install all drives asked for.
- 12) When prompted click FINISH.
- 13) Open the FPGTLoader2 program.
- 14) Click on the 'Optionen' pull down and click 'Sprache...' and select English then press OK.
- 15) Close the **FPGTLoader2** program and run again to make sure the change to English is active.

SYSTEMS WITH AN HMI & PLC

NOTE: Not all field updates will require both the HMI and PLC to be updated. Skip either the HMI or PLC as needed

- 1) Drop the new *.fp and *.GTP file onto desktop.
- 2) Run the **FPGTLoader2** program.
- 3) Click on the communication setting icon  . (Figure 2)



Figure 1

- 4) Change the top drop-down box to read USB(GT) if it is not already displayed and click OK. (Figure 1)
 - a) If communication cannot be made, then check for and install if missing the USB Cable-Standard-A to Mini-B from the PC to the HMI. Return to step 3 above.
- 5) Click the PLC tab. (Figure 2)
- 6) Click the **Browse** button  (Figure 2) and change the file filter (Figure 3) to 'FPWIN GR files (*.fp)' to locate the new PLC code.
- 7) Select the file and click the **Open** button.

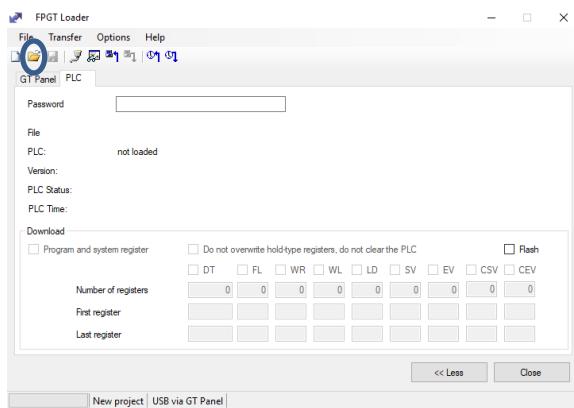


Figure 2

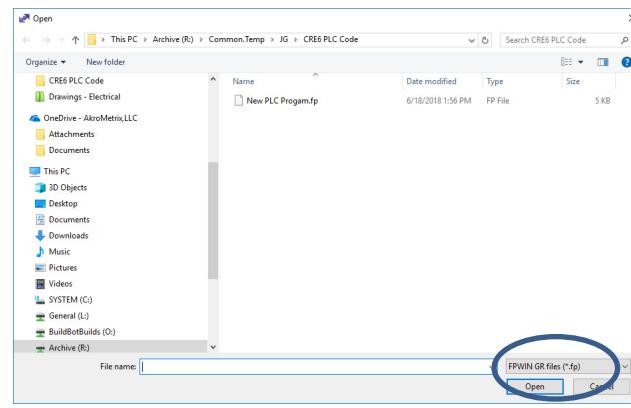


Figure 3

- 8) Double check that the correct file is shown and click the  download icon. (Figure 4)
- 9) When prompted click the **Yes** button to change to program mode.
- 10) When prompted click the **Yes** button to change to run mode.

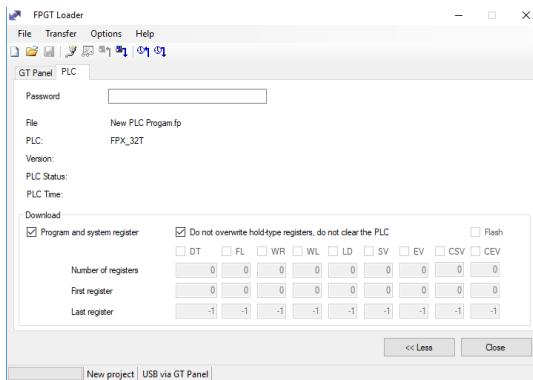


Figure 4

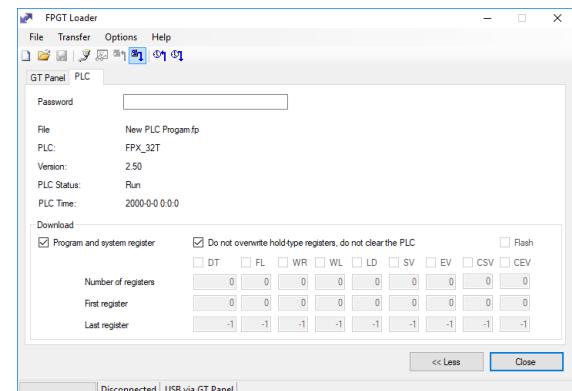


Figure 5

11) The new program is now installed, and the PLC is running. (Figure 5)

12) Click the GT Panel tab. (Figure 6)

13) Click the **Browse** button  to locate the new HMI code file. (Figure 7)

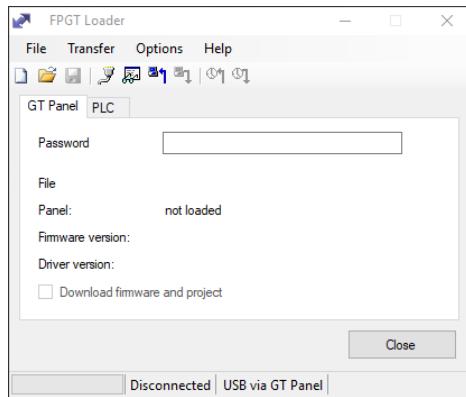


Figure 6

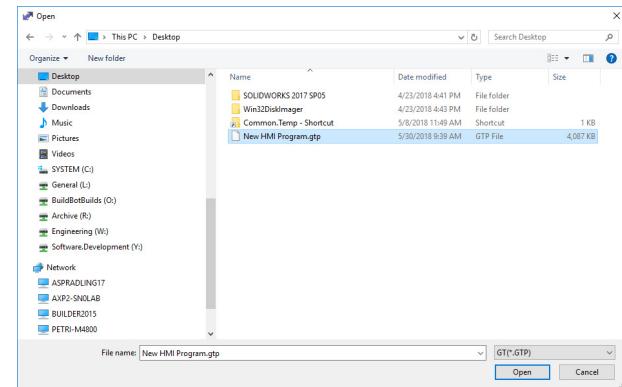


Figure 7

14) Select the file and click the **Open** button (specific .GTP file may have different name). (Figure 7)

- 15) Double check that the correct file is shown and click the  download icon. (Figure 8)
- 16) The HMI will display status messages during the file transfer process and the FPGTLoader program will display in the bottom section of the screen Download finished when complete. (Figure 9)

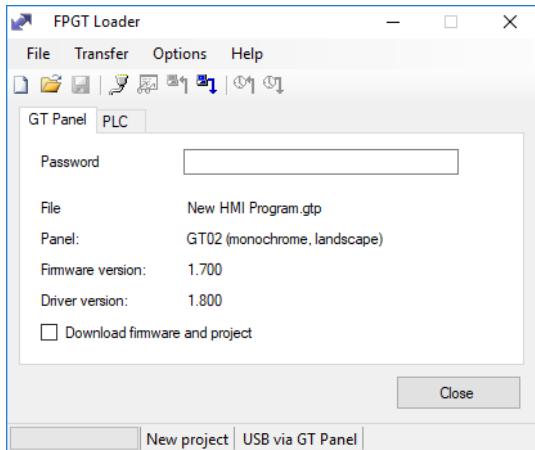


Figure 8

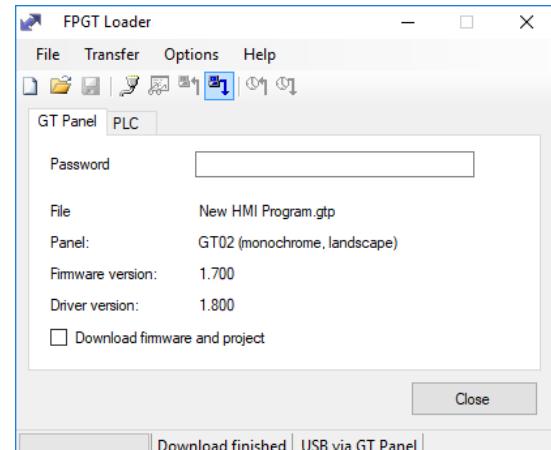


Figure 9

- 17) The new program is now installed, and the HMI is running.
- 18) The HMI should be showing the screen of (Figure 10) for 10 seconds before automatically moving to a device specific screen.



Figure 10

- 19) If the above screen does not appear, then the PLC will need to be reset. See the section on Trouble Shooting.

SYSTEMS WITH A PLC ONLY



HIGH VOLTAGE IS USED IN THE CONTROL CABINET

- 1) Drop the new *.fp file onto desktop.
- 2) Open the control cabinet by either turning off the power or by using the latch defeat feature of the disconnect handle. If power was turn off, turn it back on by rotating the black handle on the AC Disconnect clockwise.
- 3) Connect the PC to the PLC with a USB Cable.
 - a) Standard A to Standard B. (Figure 11)
 - b) Standard A to Mini B (Figure 13)

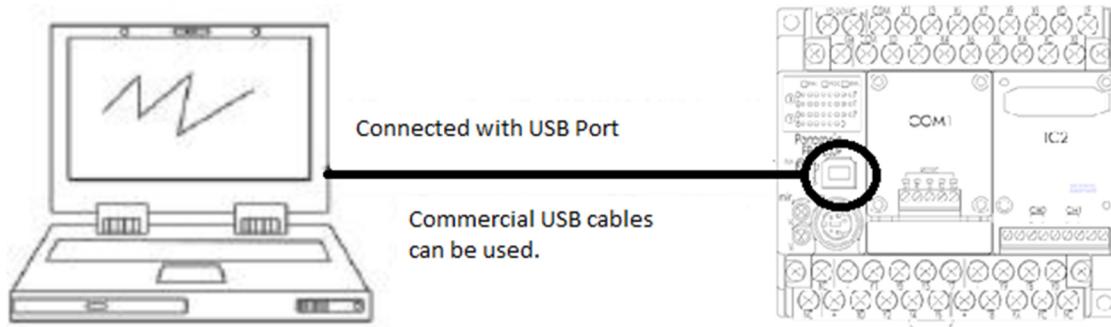


Figure 11 AFPX PLC

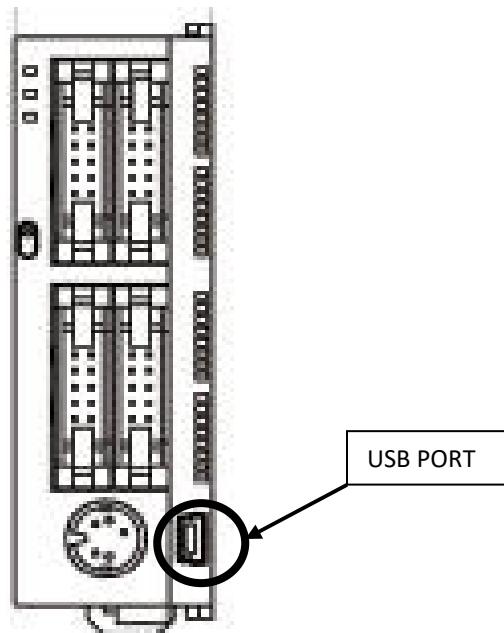


Figure 12 FPOR PLC

- 4) Run the FPGTLoader2 program.
- 5) Click on the communication setting icon .



Figure 13

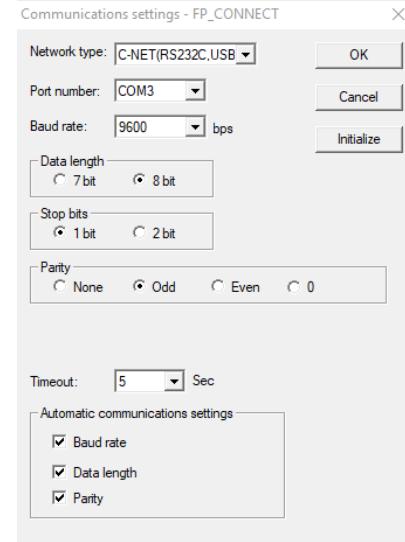


Figure 14

- 6) Change the top drop-down box from USB(GT) to C-NET(RS232C,USB) (Figure 134).
- 7) Change the Port Number to the COM port used by the PLC using the drop-down. If the COM port is not known, then see the Trouble Shooting Section for instruction on how to locate it. After setting the COM Port click on the Initialize button (Figure 145) then click OK. The Port number shown will be the com port your system is using.
- 8) Click the PLC tab. (Figure 156)
- 9) Click the **Browse** button  and change the file filter to 'FPWIN GR files (*.fp)' (Figure 167) and locate the new PLC code.
- 10) Select the file and click the **Open** button. (Figure 167)

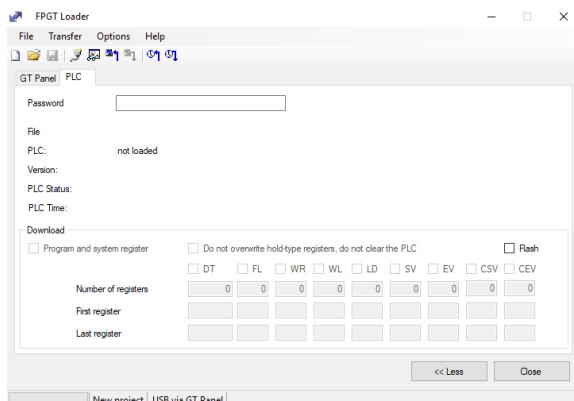


Figure 15

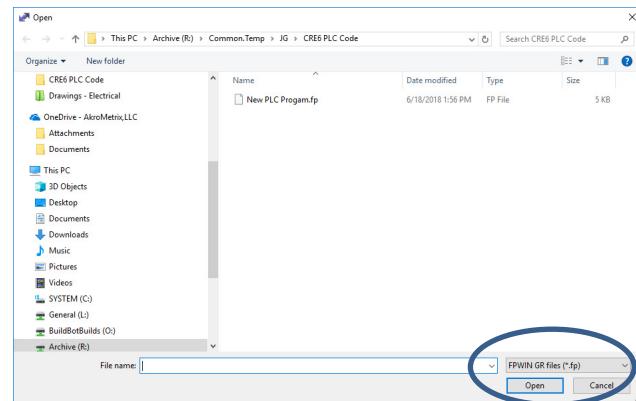


Figure 16

- 11) Double check that the correct file is shown and click the  download icon. (Figure 178)
- 12) If a connection error is displayed, then the COM Port was not set correctly. See the Trouble Shooting Section for help with finding the COM Port that has been assigned by the PC to the PLC.
- 13) When prompted click the **Yes** button to change to program mode.
- 14) When prompted click the **Yes** button to change to run mode.

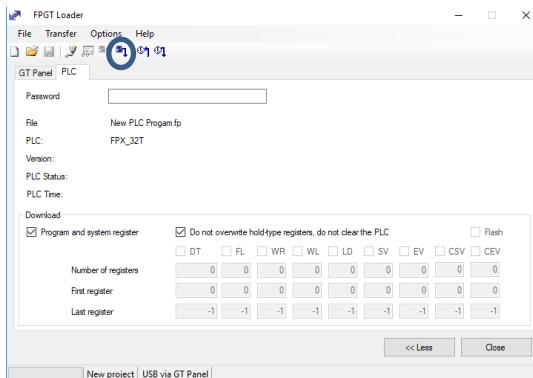


Figure 17

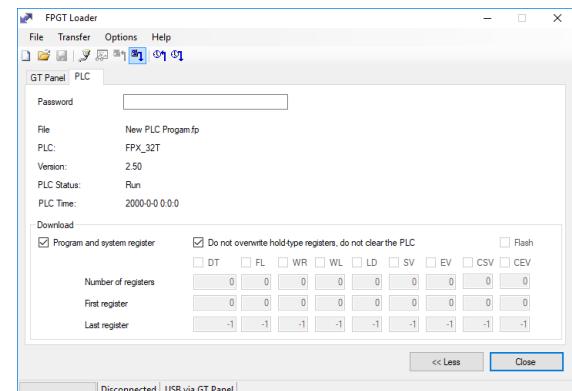


Figure 18

- 15) The new program is now installed, and the PLC is running. (Figure 189)
- 16) The HMI should be showing the screen in (Figure 1920) for 10 seconds before automatically moving to a device specific screen.



Figure 19

- 17) If the above screen (Figure 19) does not appear, then the PLC will need to be reset. See the section on Trouble Shooting.

TROUBLE SHOOTING

- 1) To reset the PLC power down the PC and cycle the main power disconnect switch on the electrical enclosure.
- 2) The following are the instructions on finding the COM Port used by the PLC.

The USB connected to the FP0R is recognized as a COM port by a PC. The COM port number assigned to the USB differs according to the PC environment.

How to confirm COM port

1. Connect the PLC and a PC with a USB cable.

2. Display "Device Manager".

For Windows Vista® or Windows® 7

Select "Windows Start Menu" > "Computer" > "System Properties" > "Device Manager".

For Windows XP

Select "My computer" > "View System information" > "Hardware" tab > "Device Manager".

3. Double-click "Ports (COM & LPT)". As the table of allocation of COM ports is shown, confirm the COM port number.

"Panasonic Electric Works PLC Virtual UART(COMn)" is the allocated COM port.

COM4 is allocated in the following display.

