

## PC INTERFACE



# FX

## OPERATING INSTRUCTION

Rev. F  
November 2017

# 1. INTRODUCTION

The purpose of the PC Interface demo software released by Phoxene is to make user aware about the Fx flash devices features and type of functionalities which can be implemented at system level to either monitor or control the Fx device.

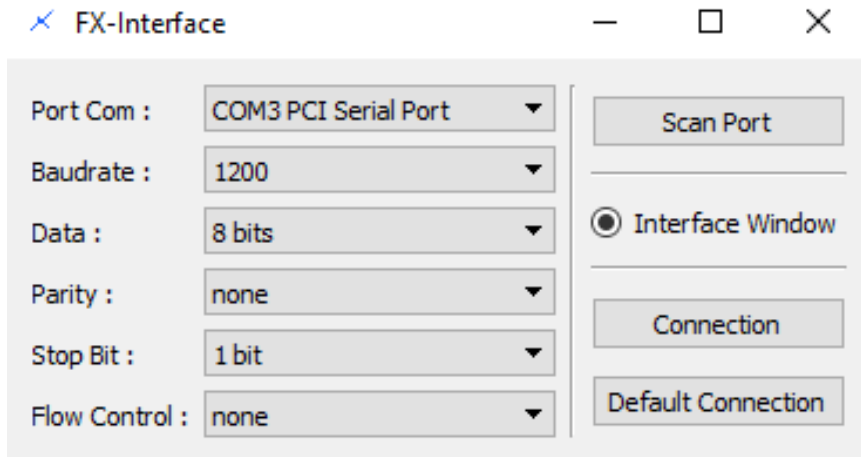
With the Phoxene Fx flash device

- User can choose the energy level of the flash
- By default 2 energy levels are saved in the device memory and can be activated by 2 separate trigger signals
- Energy level can also be dynamically adjusted
- Sequence of flash can be generated with the choice of both the time lapse between shots and the energy level
- Automatic diagnosis can be run
- Standard information such flash counts and temperature are accessible
- To limit the average power consumption 2 modes of standby can be activated

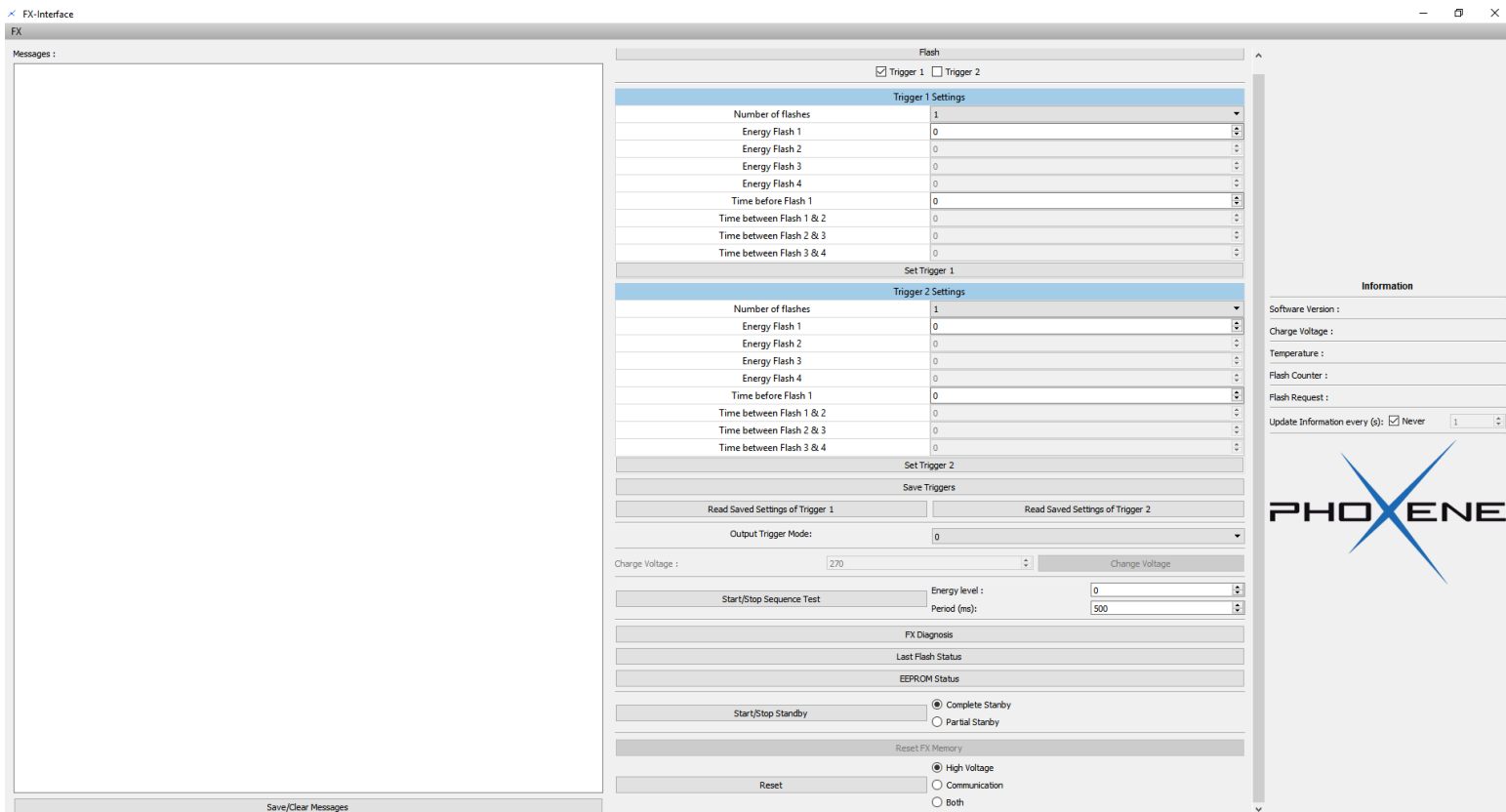
Should you need any support related to this software or have any question on Fx features, please contact us !

## 2. CONNECTION TO FX

1. Connect a RS232 serial wire between the FX flash (J2 connector) and the computer
2. Unzip the file: "FX-InterfacePC.zip"
3. Open the directory previously unzipped
4. Launch "FX-InterfacePC-Rev3-0" executable and the following window appears:



5. Click on "Scan Port" button to detect all serial port of the computer
6. In the drop-down box "Port Com", select the port where the RS232 serial cable is connected
7. Click on "Default Connection" button to connect to FX flash with the default settings. The following window appears:



8. Check on top right part of the window, in the section “Information”, which software is actually loaded in the Fx flash device and follow the next table to open the PC Interface demo software (and the Manual) compatible with your FX software version

<b>FX Software Version</b>	<b>PC Interface demo software</b>	<b>Manual</b>
4.1/5.1	FX-InterfacePC-Rev2-2.exe	FX-PC-Interface-Manual-REV-B
4.2/5.2	FX-InterfacePC-Rev2-3.exe	FX-PC-Interface-Manual-REV-B
4.3/5.2	FX-InterfacePC-Rev2-3.exe	FX-PC-Interface-Manual-REV-B
4.3/5.3	FX-InterfacePC-Rev2-4.exe	FX-PC-Interface-Manual-REV-B
4.4/5.6	FX-InterfacePC-Rev2-5.exe	FX-PC-Interface-Manual-REV-D
5.0/6.0	FX-InterfacePC-Rev3-0.exe	FX-PC-Interface-Manual-REV-F
5.1/6.1	FX-InterfacePC-Rev3-0.exe	FX-PC-Interface-Manual-REV-G

Example: If the FX software version is “4.2/5.2”, the demo software you need to launch is “FX-InterfacePC-Rev2-3.exe”

## 3. SOFTWARE INTERFACE

### 3.1. Command section

Flash

Trigger 1    Trigger 2

Trigger 1 Settings

Number of flashes	1
Energy Flash 1	0
Energy Flash 2	0
Energy Flash 3	0
Energy Flash 4	0
Time before Flash 1	0
Time between Flash 1 & 2	0
Time between Flash 2 & 3	0
Time between Flash 3 & 4	0

Set Trigger 1

Trigger 2 Settings

Number of flashes	1
Energy Flash 1	0
Energy Flash 2	0
Energy Flash 3	0
Energy Flash 4	0
Time before Flash 1	0
Time between Flash 1 & 2	0
Time between Flash 2 & 3	0
Time between Flash 3 & 4	0

Set Trigger 2

Save Triggers

Read Saved Settings of Trigger 1

Read Saved Settings of Trigger 2

Calibrate FX

Read Calibration Status

Read Calibration of the level:

Read

Output Trigger Mode:

Charge Voltage :

Change Voltage

Start/Stop Sequence Test

Energy level :

Start/Stop Standby

Complete Standby  
 Partial Standby

Reset FX Memory

Reset

High Voltage  
 Communication  
 Both

1

2

3

4

5

6

7

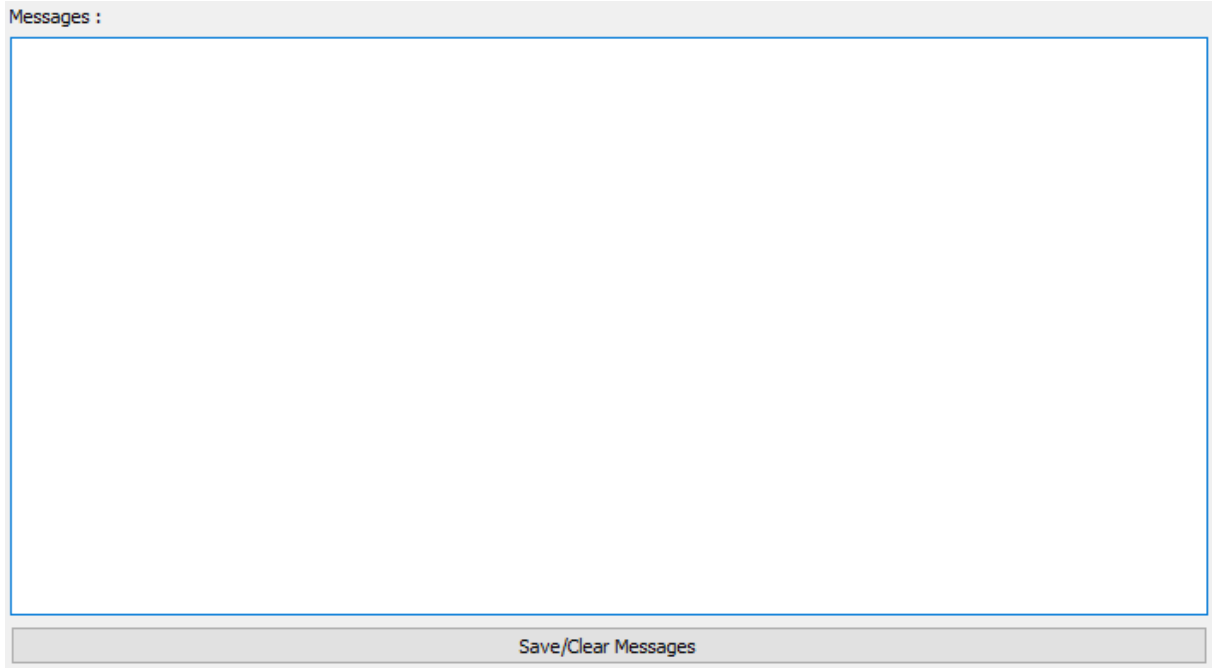
- 1- Generate a flash with "Trigger 1" "Trigger 2"
- 2- Change the 2 flash trigger sequence using the combo box, the drop-down boxes and the conversion table (times are in millisecond).  
The Fx-1 is flexible and a flash trigger sequence can differ from the default sequence saved in the FX flash memory. But at any time you can read and save these settings.
- 3- Change the output trigger mode. (At the opening of the software the combo box is set to 0 but maybe in the FX the output trigger mode is set to 1)
- 4- Generate a sequence choosing energy level and lapse time
- 5- Fx Diagnosis button generates a sequence of flash and, as Last Flash Status button and EEPROM Status button, that leads to a message in the corresponding section
- 6- In Complete Standby mode the device loading is deactivated although in Partial Standby mode the capacitor load is maintained at a minimum level to ensure a capacity of 1 flash
- 7- If any problem occur it's possible to do a software reset of a part of the FX or total software reset.

**Energy levels conversion table:**

Energy	Level
FX1 = 60J - FX2 = 50J	0
10J	1
15J	2
20J	3
25J	4
30J	5
35J	6
40J	7
45J	8
50J	9
55J	10(A)
60J	11(B)
65J	12(C)
70J	13(D)
75J	14(E)
80J	15(F)

For values above 15, the Fx is set at maximum energy

**3.2. Messages section**



This area shows every messages coming from the FX flash. The “Save/Clear Messages” button saves all messages in text file in the software directory and clear the area.

Following the command “Last Flash Status”, different messages can appear:

- low voltage : voltage at capacitors was too low to generate a flash
- overrun : flash missed because of a software protective function limiting generation of flash when too much shots are required in a given timeframe
- flash missed for unknown reason
- flash generated

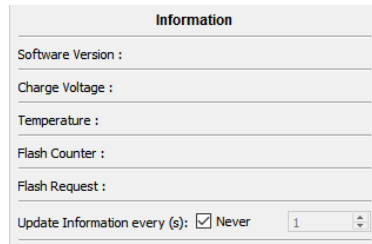
Following the command “Fx Diagnosis”, the flash operates an automatic sequence of about 30 seconds and a message of 13 digits finally appears: xxx\_xx\_xx\_xx\_xx xx

- the 3 first digits represent the power voltage multiplied by 10. For example, if 122 appears, that means that the input voltage is actually 12.2 V
- the 5 following pairs of digits give an indication of the potential origin of default

xx	xx	xx	xx	xx	Interpretation
14		14	14	14	Communication board is in default
	14				Internal Temperature is too high or too low
15		14	14	14	Converter board is in default
15		15	14	14	Converter board is in default
15		15	15	14	Flashtube is weak or if no flash the IGBT board is in default
14		15	15	15	Communication error during diagnosis



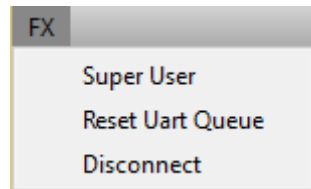
### 3.3. Information section



This section monitors some information of the FX flash. With the drop-down box the updating time can be set. If "Never" is checked the information will be never updated.

Warning : please be sure to have disable automatic update while activating Standby modes

### 3.4. Menu



- "Super User" is a restricted menu. A password is needed to activate this mode
- "Reset Uart Queue" allows to reset the communication between the computer and the FX. Click on this menu when the software send a command to the FX flash and the FX flash never send a response
- "Disconnect" allows to go back to the connection window

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