

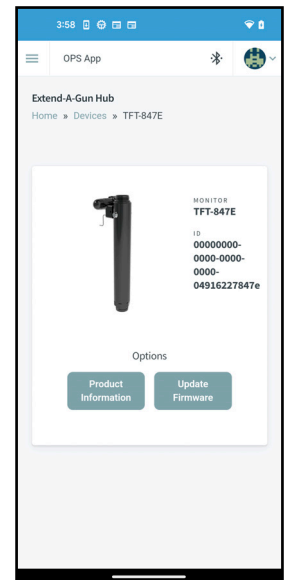
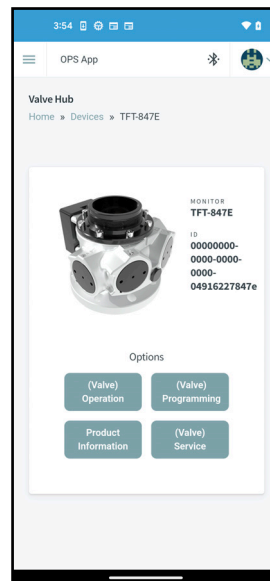
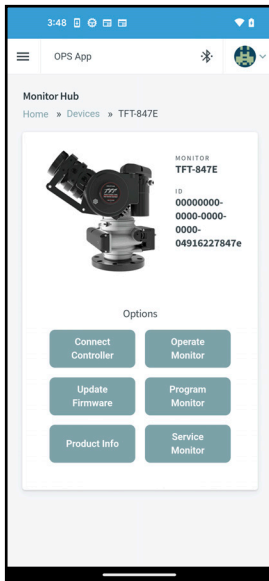
### INSTRUCTION FOR INSTALLATION AND OPERATION

**⚠ DANGER**

Understand manual before use. Operation of this device without understanding the manual and receiving proper training is a misuse of this equipment. Obtain safety information at [tft.com/serial-number](http://tft.com/serial-number).

This equipment is intended for use by trained and qualified emergency services personnel for firefighting. All personnel using this equipment shall have completed a course of education approved by the Authority Having Jurisdiction (AHJ).

This instruction manual is intended to familiarize firefighters and maintenance personnel with the operation, servicing, and safety procedures associated with this product. This manual should be kept available to all operating and maintenance personnel.



## TABLE OF CONTENTS

- 1.0 MEANING OF SAFETY SIGNAL WORDS
- 2.0 SAFETY
- 3.0 SYSTEM OVERVIEW
- 4.0 OPERATION
  - 4.1 APP INSTALLATION
  - 4.2 LOGIN (AVAILABLE JANUARY 2024)
  - 4.3 CONNECT DEVICE
  - 4.4 EXPLORE CONNECTED DEVICES
  - 4.5 MONITOR HUB
    - 4.5.1 CONNECT CONTROLLER (AVAILABLE JANUARY 2024)
    - 4.5.2 DEFAULT MONITOR CONTROLS
    - 4.5.3 PROGRAM MONITOR
      - 4.5.3.1 MOTOR SPEED (AVAILABLE JANUARY 2024)
      - 4.5.3.2 STOW POSITION LOCK
      - 4.5.3.3 PROGRAM STOW
      - 4.5.3.4 PROGRAM OSCILLATE
      - 4.5.3.5 PROGRAM SOFT STOPS
      - 4.5.3.6 PROFILE SUBSCRIPTIONS (AVAILABLE JANUARY 2024)
      - 4.5.3.7 IMPORT DEVICE PROFILE (AVAILABLE JANUARY 2024)
      - 4.5.3.8 EXPORT DEVICE PROFILE (AVAILABLE JANUARY 2024)
      - 4.5.3.9 POWER CYCLE
      - 4.5.3.10 FACTORY RESET
    - 4.5.4 SERVICE MONITOR
    - 4.5.5 UPDATE FIRMWARE (AVAILABLE JANUARY 2024)
  - 4.6 CONTROLLER HUB (AVAILABLE JANUARY 2024)
    - 4.6.1 CONTROLLER BINDINGS (AVAILABLE JANUARY 2024)
      - 4.6.1.1 CUSTOM BUTTON LABELS (AVAILABLE JANUARY 2024)
      - 4.6.1.2 CUSTOM LED DISPLAY LABELS (AVAILABLE JANUARY 2024)
    - 4.6.2 CONTROLLER SETTINGS (AVAILABLE JANUARY 2024)
  - 4.7 VALVE HUB (AVAILABLE JANUARY 2024)
    - 4.7.1 VALVE CONTROL (OPERATION) (AVAILABLE JANUARY 2024)
    - 4.7.2 VALVE PROGRAM (AVAILABLE JANUARY 2024)
    - 4.7.3 VALVE SERVICE (AVAILABLE JANUARY 2024)
  - 4.8 EXTEND-A-GUN HUB (AVAILABLE JANUARY 2024)
- 5.0 MAINTENANCE
- 6.0 WARRANTY

# DANGER

## PERSONAL RESPONSIBILITY CODE

The member companies of FEMSA that provide emergency response equipment and services want responders to know and understand the following:

1. Firefighting and Emergency Response are inherently dangerous activities requiring proper training in their hazards and the use of extreme caution at all times.
2. **IT IS YOUR RESPONSIBILITY** to read and understand any user's instructions, including purpose and limitations, provided with any piece of equipment you may be called on to use.
3. **IT IS YOUR RESPONSIBILITY** to know that you have been properly trained in Firefighting and/or Emergency Response and in the use, precautions, and care of any equipment you may be called upon to use.
4. **IT IS YOUR RESPONSIBILITY** to be in proper physical condition and to maintain the personal skill level required to operate any equipment you may be called upon to use.
5. **IT IS YOUR RESPONSIBILITY** to know that your equipment is in operable condition and has been maintained in accordance with the manufacturer's instructions.
6. Failure to follow these guidelines may result in death, burns or other severe injury.

Fire and Emergency Manufacturers and Service Association, Inc.  
PO Box 147, Lynnfield, MA 01940 - [www.FEMSA.org](http://www.FEMSA.org)

**FEMSA**

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## 1.0 MEANING OF SAFETY SIGNAL WORDS

A safety related message is identified by a safety alert symbol and a signal word to indicate the level of risk involved with a particular hazard. Per ANSI Z535.6, the definitions of the four signal words are as follows:

**⚠ DANGER**

**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.

**⚠ WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

**⚠ CAUTION**

**CAUTION** indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

**NOTICE**

**NOTICE** is used to address practices not related to physical injury.

## 2.0 SAFETY

**⚠ WARNING**

This device is not rated as ignition proof, explosion proof, or intrinsically safe. Use only in locations with adequate ventilation and no hazard of flammable vapor buildup.

**⚠ CAUTION**

The electric drives are current limited but may still produce enough force to cause injury. To avoid injury from moving equipment:

- Be aware that equipment may be remotely operated
- Keep hands and fingers away from pinch points
- Never operate the manual override while electric controls are in operation

**NOTICE**

To prevent mechanical damage, do not drop or throw equipment.

### 3.0 SYSTEM OVERVIEW

The SmartPlex App works in conjunction with the FLEX RC Monitor to operate, program, and service the TFT FLEX RC Monitor and all connected TFT devices including nozzles, valves, and Extend-A-Guns. The app connects to the monitor via a Bluetooth link. The Bluetooth signal transmits over a line-of-sight distance of 100 ft (30 m).



**Do not operate the controller or cell phone while driving. Not focusing solely on driving is a dangerous situation which could lead to serious injury or death.**



**Do not pair the Adapter in the settings page as the module will be paired and the APP will not be able to find the device. All pairing is done automatically within the Application.**

### 4.0 OPERATION

#### 4.1 APP INSTALLATION

A smartphone app is required to operate the FLEX RC from a smartphone. Download the app from either the Google Play Store or the Apple App Store before proceeding. Search FLEX RC in either store.

1. If the app is not already open, find and press the FLEX RC app icon from your list of apps, which will launch the app. (The TFT logo is displayed while opening and the app will bring you to the main display screen.)
2. Allow app to use location if prompted. (This is required for use.)

#### 4.2 LOGIN (AVAILABLE JANUARY 2024)

**Enter Login Credentials**

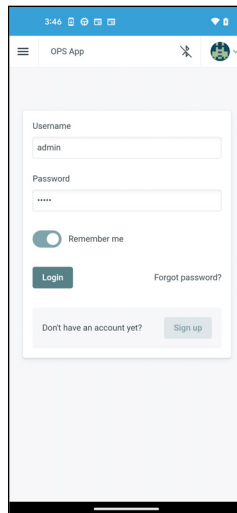


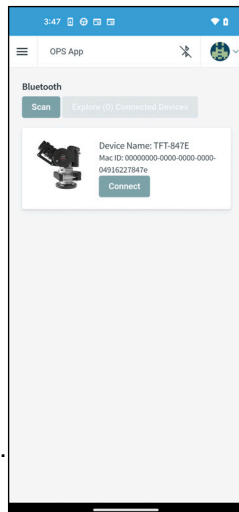
Figure 4.2

#### 4.3 CONNECT DEVICE

**With Bluetooth enabled on your mobile device, press Scan to search for nearby devices.**

**Select Connect to connect to the desired device.**

**Repeat steps to connect multiple devices.**



**Select Disconnect to disconnect from any device.**

**Press Explore Connected Devices to access chosen devices and all connected TFT products.**

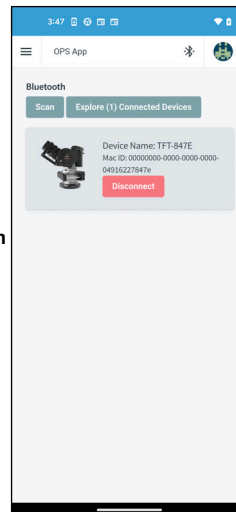
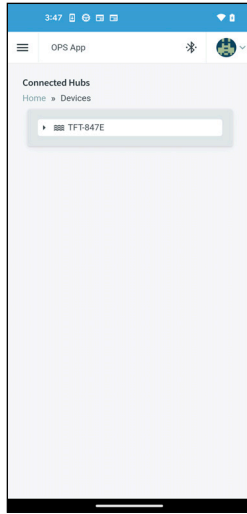


Figure 4.3

## 4.4 EXPLORE CONNECTED DEVICES

Connected devices appear here.



Press Options on the devices you want to explore.

If the device you are exploring is connected to other TFT products, these will appear here.

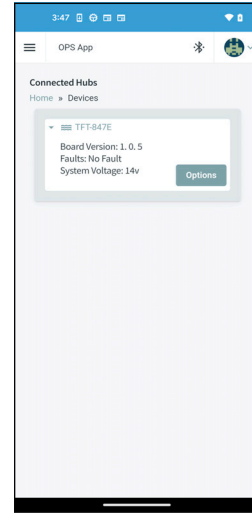


Figure 4.4

## 4.5 MONITOR HUB

Connecting to explore a monitor (see 4.4) opens the Monitor Hub page.

Device Image



Device Serial Number

Descriptions for the Options functions in the following sections

Figure 4.5

### 4.5.1 CONNECT CONTROLLER (AVAILABLE JANUARY 2024)

Align the QR code on the back of the wireless controller within the window on the mobile device.

Select Start Pairing



Repeat for additional controllers

Figure 4.5.1

## 4.5.2 DEFAULT MONITOR CONTROLS

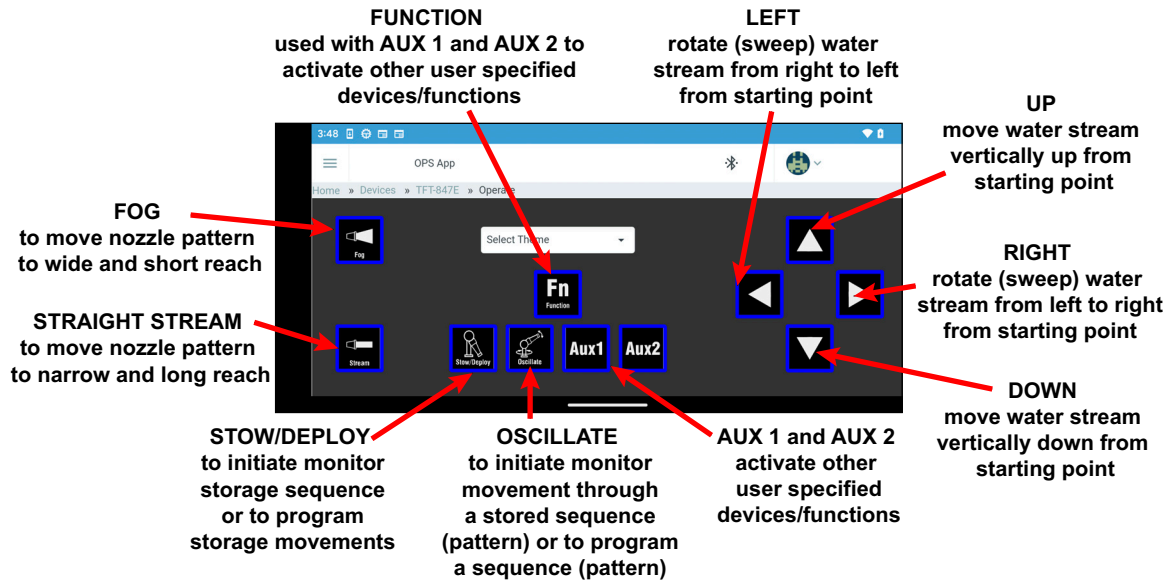


Figure 4.5.2A

If more than one controller is connected to a single device, press the drop-down arrow on Select Theme to select the desired controller layout to be displayed on the app.

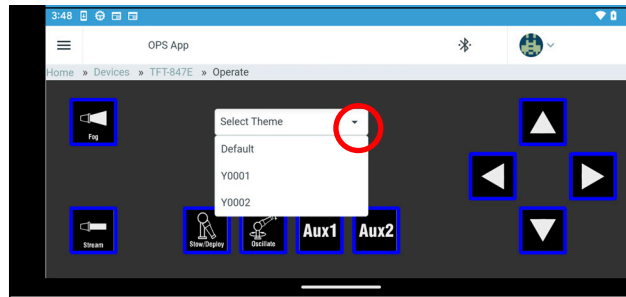


Figure 4.5.2B

## 4.5.3 PROGRAM MONITOR

To access a previously saved monitor program, select it from the drop-down menu

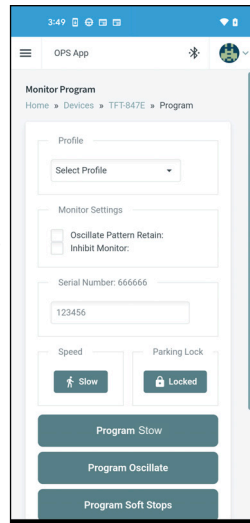
Select to retain the oscillate pattern during a power cycle

Select to inhibit movement of the monitor

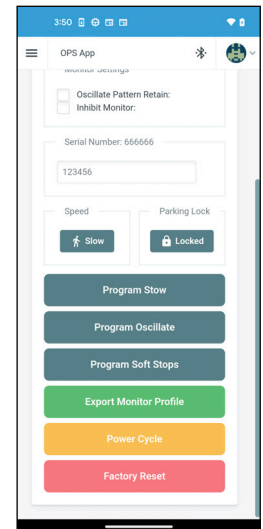
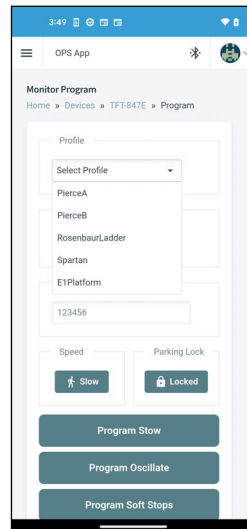
Update the serial number of the monitor

Speed Control Toggle (Fast/Slow)

Prevent changes to the park program outside the app



View from Top of Menu



Scroll to Access All Functions

Figure 4.5.3

### 4.5.3.1 MOTOR SPEED (AVAILABLE JANUARY 2024)

When an operator presses one of the buttons, the associated motor starts in slow speed mode for accurate control of the water stream. After approximately 2 seconds the motor automatically ramps up to fast speed, for quickly moving into position. When quickly changing directions, monitor remains at speed of prior move. If slow speed is selected, monitor does not ramp to fast speed but remains in slow speed.

To operate, press the button to toggle between fast and slow mode.

**NOTE - By default, motor speed is set to fast speed.**

### 4.5.3.2 STOW POSITION LOCK

When STOW POSITION LOCK is set to unlocked, the Stow position can be set and changed from any external controller (see LIY-550).

When the STOW POSITION LOCK is set to locked, the Stow Position can only be changed from the app.

### 4.5.3.3 PROGRAM STOW

The STOW position needs to be programmed during installation.

RECOMMENDED STOW POSITION:

For truck mounted applications, it is recommended that the monitor be stowed in a position such that the monitor's nozzle rests against a bracket or support surface. This will minimize bouncing of the nozzle when the apparatus is traveling.



**On many vehicle installations, the monitor is the highest point on the apparatus. Damage or injury could occur if there is not sufficient clearance to safely pass under doors or overhead obstructions. Always check stowed position of the monitor before moving.**

To program STOW:

1. Use the arrow keys to move the monitor into the desired stow position.
2. Use the Stream/Fog keys to move the nozzle into the desired position
3. Select Store Stow Position to save the position to the monitor.
4. Select Done to exit and return to the previous menu.

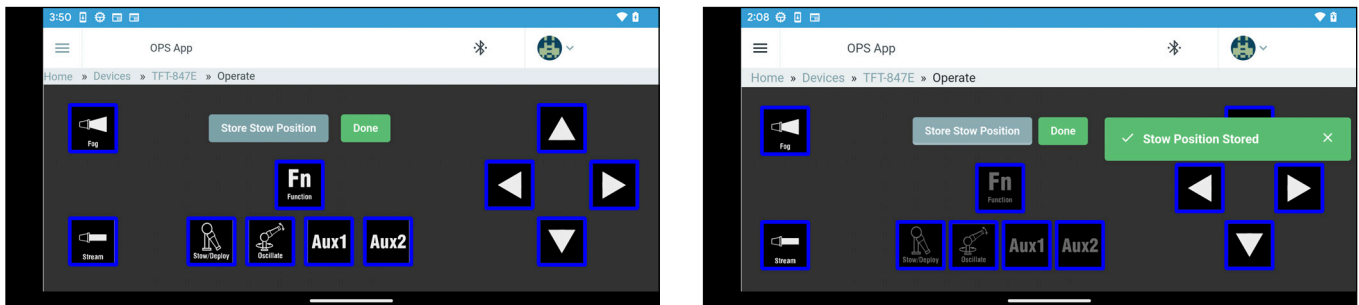


Figure 4.5.3.3

### 4.5.3.4 PROGRAM OSCILLATE

To program OSCILLATE:

1. Use the arrow keys to move the monitor into the first desired oscillate position.
2. Select Store Stow Position to save the position to the monitor.
3. Use the arrow keys to move the monitor into the second desired oscillate position.
4. Select Store Stow Position to save the position to the monitor.
5. Repeat for additional positions or patterns. A minimum of 2 programmed position are required for the monitor to oscillate.
6. Select Done to exit and return to the previous menu.

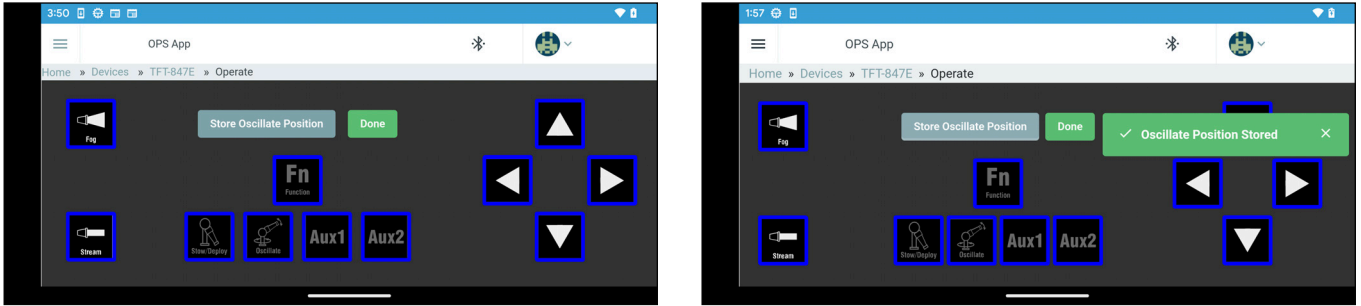


Figure 4.5.3.4

### 4.5.3.5 PROGRAM SOFT STOPS

To program SOFT STOPS:

1. Use the arrow keys to move the monitor into the desired starting position of the first soft stop.
2. Select Store Soft Stop
3. Select the axis (-X or +X for horizontal) (-Y or +Y for vertical) of the desired position to save.
4. Repeat steps for the remaining positions.
5. Select Done to exit and return to the previous menu.

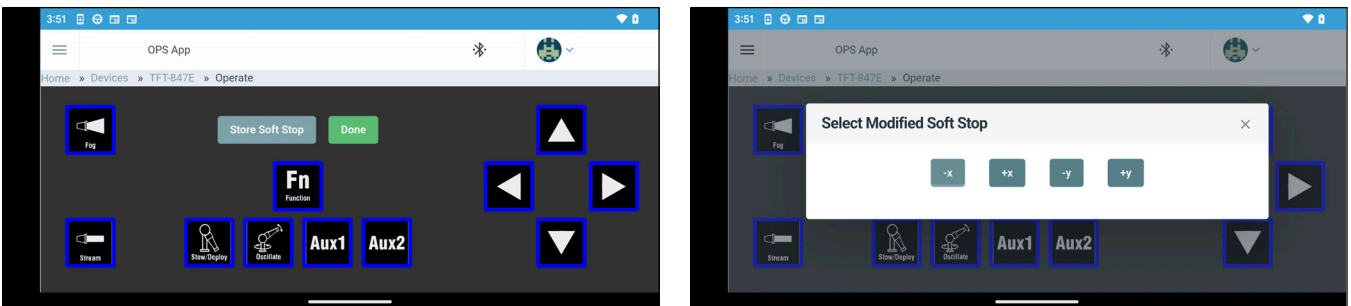


Figure 4.5.3.5

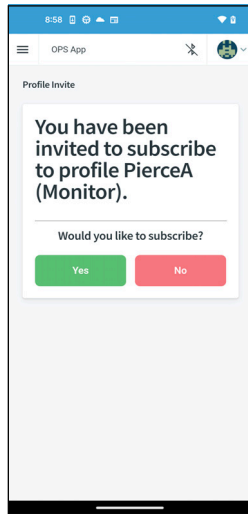


### 4.5.3.6 PROFILE SUBSCRIPTIONS (AVAILABLE JANUARY 2024)

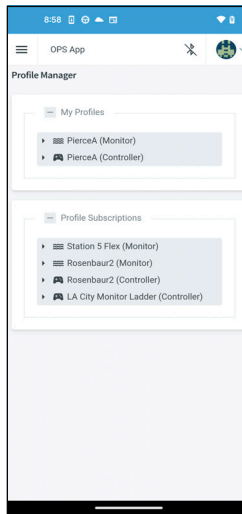
Device profiles can be shared between users

Click on the emailed link to subscribe to a device profile

Select YES to add the device profile



The device profile is added under Profile Subscriptions



Delete - delete profile

Edit - change profile

Share - create a link to email to the profile to another user

Select Unsubscribe to remove a device profile

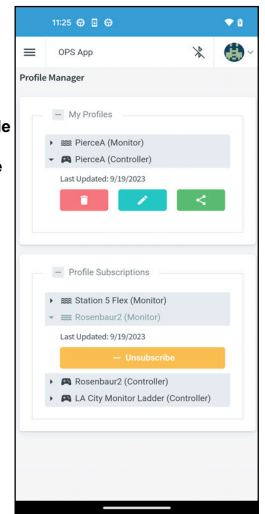
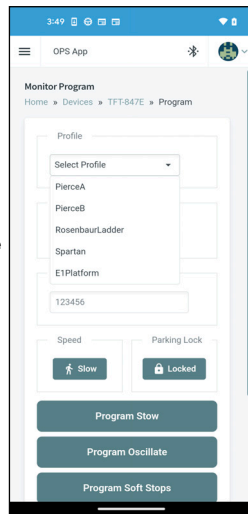


Figure 4.5.3.6

### 4.5.3.7 IMPORT DEVICE PROFILE (AVAILABLE JANUARY 2024)

Select a profile to apply to the connected device



Customize options (check or uncheck)

Select Download to apply the profile to the connected device

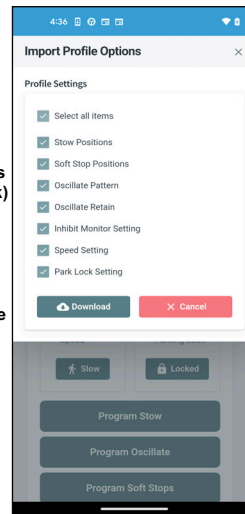
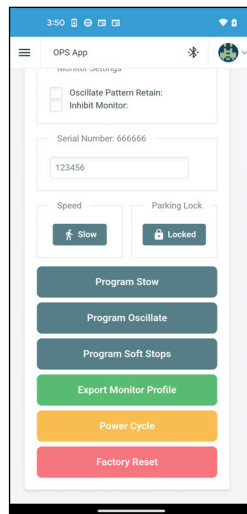


Figure 4.5.3.7

### 4.5.3.8 EXPORT DEVICE PROFILE (AVAILABLE JANUARY 2024)

Program the device

Select Export "Device" Profile (monitor shown)



Check/Uncheck options to include/exclude from the profile

Add a profile name

Select Upload to Export/Save profile

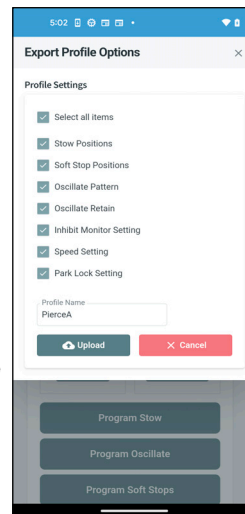


Figure 4.5.3.8

### 4.5.3.9 POWER CYCLE

Selecting POWER CYCLE turns the connected devices ON and OFF.

### 4.5.3.10 FACTORY RESET

Selecting FACTORY RESET returns the connected devices to all default settings.

### 4.5.4 SERVICE MONITOR

This page gives the user axis-specific position data and error messages to diagnose issues with the individual motors within the monitor. If errors are detected, the appropriate error messages will be displayed in a readable text format. Firmware revisions for the YE-BT1 Interface Board, Comm Board, and Motor Board(s) are listed for reference and debugging purposes.

To navigate between the two screens, press the next/previous screen arrow or swipe left or right.

The Back button returns the user to the previous screen.

Axis position is listed as a percentage (0-100%) of the full range of motion.

Voltage being applied to the monitor is also displayed.

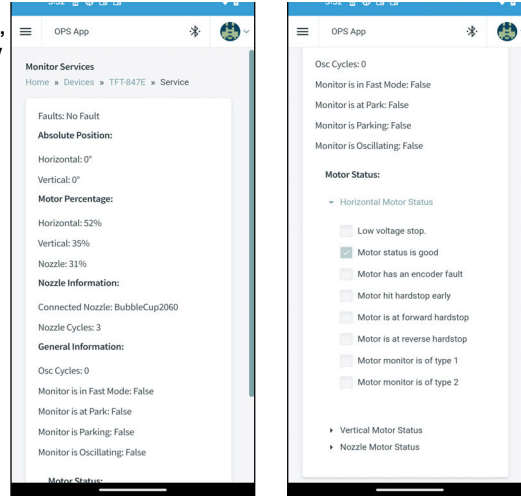


Figure 4.5.4

### POSSIBLE FAULTS/ERRORS/MESSAGES

MOTOR FAULTS OR MESSAGES (horizontal, vertical, nozzle)	MONITOR DIAGNOSTICS FAULTS
Low Voltage Stop	Horizontal, vertical, nozzle motor limited on low voltage
Encoder Fault	Horizontal, vertical, nozzle encoder fault not reset
Motor Board Status: Not Available	Horizontal, vertical, nozzle motor board reset
Hard Stop Hit Early	Horizontal, vertical, nozzle motor position retention - position not valid
At Reverse Hard Stop	I2C problem
At Forward Hard Stop	Park fault - radio or CAN module configuration problem. Stuck button on power up - RS485 check fail.

Table 4.5.4

### 4.5.5 UPDATE FIRMWARE (AVAILABLE JANUARY 2024)

Select from the available firmware updates.

Press Download & Install

Monitor Installation Progress

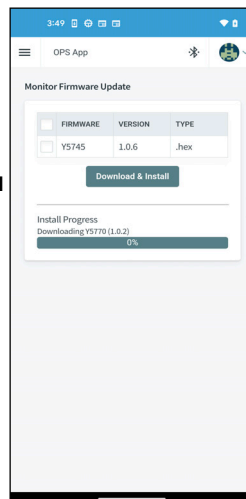
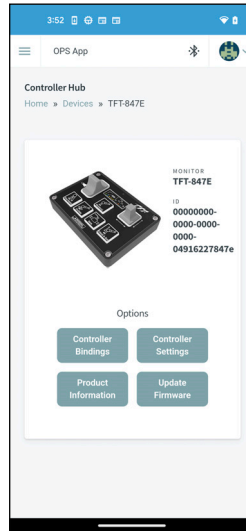


Figure 4.5.5

## 4.6 CONTROLLER HUB (AVAILABLE JANUARY 2024)

Selecting to explore a controller (see 4.4) opens the Controller Hub page.

Device Image



Device Serial Number

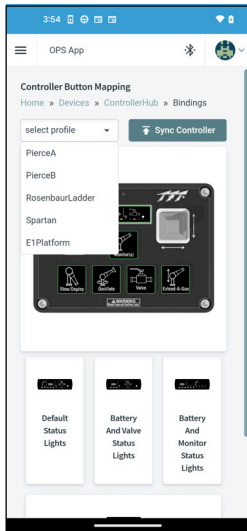
Descriptions for the Options functions in the following sections

Figure 4.6

### 4.6.1 CONTROLLER BINDINGS (AVAILABLE JANUARY 2024)

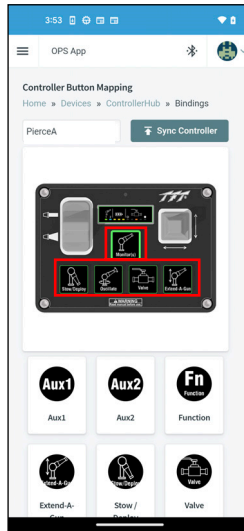
To customize any of the buttons or LED displays on the controller:

1. Select the profile you wish to change.
2. Select the button on the controller you intend to change.
3. Select the new button from the menu below (in the app) that will replace the old button. Scroll to view all choices.
4. Repeat for each button you wish to change.
5. Select Sync Controller to apply the new layout to your controller.
6. Update the button inserts on your controller. See LIY-550 FLEX CONTROLS MANUAL.

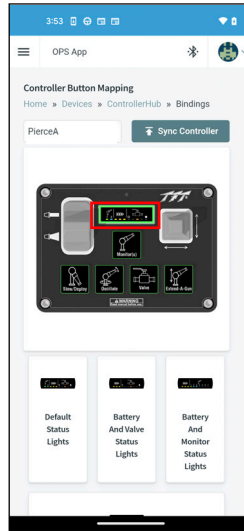


Select a Profile

Scroll to view available options



Controller Buttons



LED Display

Choose option from the list at the bottom of the screen then Sync Controller

Repeat steps for all desired buttons

Select Export Profile to save/share



Figure 4.6.1

### 4.6.1.1 CUSTOM BUTTON LABELS (AVAILABLE JANUARY 2024)

#### INTEGRATED FUNCTIONS







 Monitor(s)	Multi-Monitor - Press to toggle through all connected monitors	 Brightness	Brightness- Press to toggle between different levels of controller backlight brightness
 Valve	Valve Control - Press to toggle between open and close for a connected valve or VUM	 Backlight	Backlight - Press to turn on/off controller backlighting
 Stow/Deploy	Stow/Deploy - After 1 min of power up Press and hold for 5 sec to DEPLOY Press and release to STOW	 Valve Open	Valve Open - Press to open a connected valve
 Extend-A-Gun	Extend-A-Gun - Press to toggle between up and down	 Valve Close	Valve Close - Press to close a connected valve
 Oscillate	Oscillate - Press to engage/disengage Oscillate mode	 On/Off	On/Off - Press to turn a controller on or off
 Fast	Fast - Press to have monitor enter fast motor speed mode	 Function	Function - Hold down while pressing another button to allow an alternative action to occur
 Slow	Slow- Press to have monitor enter slow motor speed mode		

Figure 4.6.1.1A

#### AUXILIARY FUNCTIONS

These buttons are used in conjunction with the YC-COMM relay interface box to control other devices



Figure 4.6.1.1B

### 4.6.1.2 CUSTOM LED DISPLAY LABELS (AVAILABLE JANUARY 2024)





	Display for up to 2 Multi-Monitor Connections, Controller Battery Life, Valve Position
	Display for Controller Battery Life and up to 7 Multi-Monitor Connections
	Display for Controller Battery Life, and Valve Position
	Display for up to 10 Multi-Monitor Connections

Figure 4.6.1.2

## 4.6.2 CONTROLLER SETTINGS (AVAILABLE JANUARY 2024)

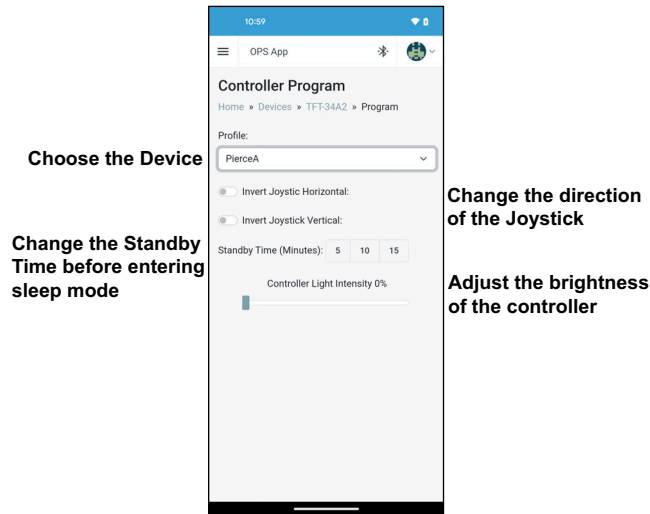


Figure 4.6.2

## 4.7 VALVE HUB (AVAILABLE JANUARY 2024)

Selecting to explore a valve (see 4.4) opens the Valve Hub page.



Figure 4.7.0

## 4.7.1 VALVE CONTROL (OPERATION) (AVAILABLE JANUARY 2024)

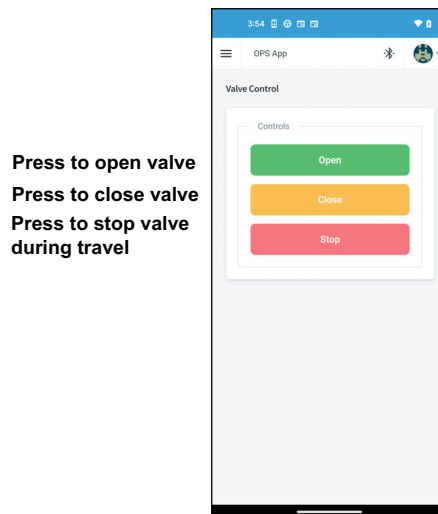
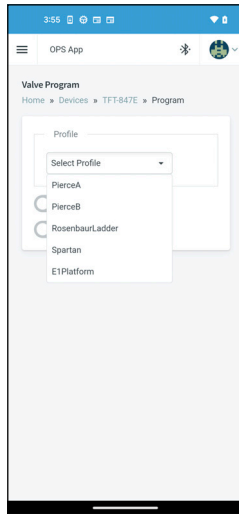


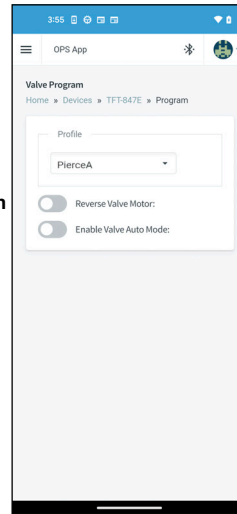
Figure 4.7.1

## 4.7.2 VALVE PROGRAM (AVAILABLE JANUARY 2024)

Choose the device



Reverse motor direction



Valve Auto Mode

Enabled - Valve will open and close completely when the button is pressed and released.

Disabled - Button must be pressed and HELD to move toward open or close. Valve stops when button is released.

Figure 4.7.2

## 4.7.3 VALVE SERVICE (AVAILABLE JANUARY 2024)

Indicates Valve Faults

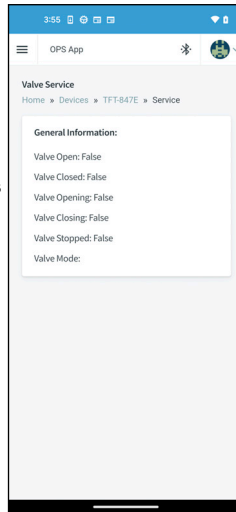


Figure 4.7.3

## 4.8 EXTEND-A-GUN HUB (AVAILABLE JANUARY 2024)

Selecting to explore an Extend-A-Gun (see 4.4) opens the Extend-A-Gun page.

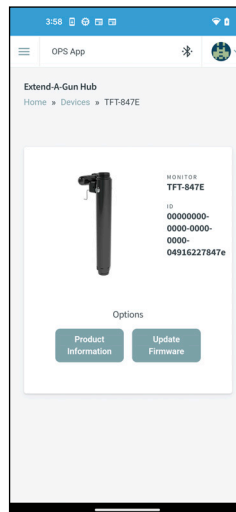


Figure 4.8

## 5.0 MAINTENANCE



**Operating equipment with a damaged or malfunctioning controller may cause equipment not to perform as intended, increasing the risk of damage or injury. Any damaged or malfunctioning controller must have the problem corrected before being placed back in service. Operating with a failed controller is considered a misuse of this equipment.**

Physically inspect controller quarterly at minimum to verify that all functions are operational and that the controls are free from damage and/or corrosion. Check the battery level of the wireless device often and recharge as necessary.

Service test all monitors at least annually to ensure that all controllers are operational. Maintain records of the controller as part of the monitor records.

## 6.0 WARRANTY

Task Force Tips LLC, 3701 Innovation Way, Valparaiso, Indiana 46383-9327 USA (“TFT”) warrants to the original purchaser of its products (“equipment”), and to anyone to whom it is transferred, that the equipment shall be free from defects in material and workmanship during the five (5) year period from the date of purchase for mechanical components, and the two (2) year period from the date of purchase for electrical components. TFT’s obligation under this warranty is specifically limited to replacing or repairing the equipment (or its parts) which are shown by TFT’s examination to be in a defective condition attributable to TFT. To qualify for this limited warranty, the claimant must return the equipment to TFT, at 3701 Innovation Way, Valparaiso, Indiana 46383-9327 USA, within a reasonable time after discovery of the defect. TFT will examine the equipment. If TFT determines that there is a defect attributable to it, TFT will correct the problem within a reasonable time. If the equipment is covered by this limited warranty, TFT will assume the expenses of repair.

If any defect attributable to TFT under this limited warranty cannot be reasonably cured by repair or replacement, TFT may elect to refund the purchase price of the equipment, less reasonable depreciation, in complete discharge of its obligations under this limited warranty. If TFT makes this election, claimant shall return the equipment to TFT free and clear of any liens and encumbrances.

This is a limited warranty. The original purchaser of the equipment, any person to whom it is transferred, and any person who is an intended or unintended beneficiary of the equipment, shall not be entitled to recover from TFT any consequential or incidental damages for injury to person and/or property resulting from any defective equipment manufactured or assembled by TFT.

It is agreed and understood that the price stated for the equipment is in part consideration for limiting TFT’s liability. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above may not apply to you.

TFT shall have no obligation under this limited warranty if the equipment is, or has been, misused or neglected (including failure to provide reasonable maintenance) or if there have been accidents to the equipment or if it has been repaired or altered by someone else.

**THIS IS A LIMITED EXPRESS WARRANTY ONLY. TFT EXPRESSLY DISCLAIMS WITH RESPECT TO THE EQUIPMENT ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND ALL IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE. THERE IS NO WARRANTY OF ANY NATURE MADE BY TFT BEYOND THAT STATED IN THIS DOCUMENT.**

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.