TASK FORCE TIPS®
FIRE FIGHTING EQUIPMENT

FLEX® MONITOR
SmartPlex™ App User Guide

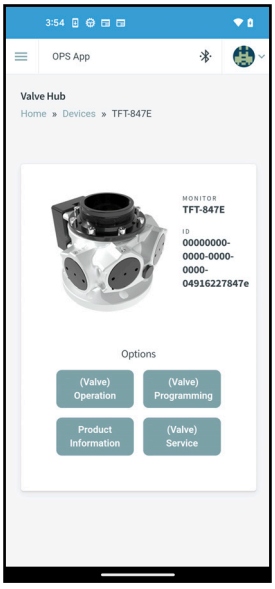
INSTRUCTION FOR INSTALLATION AND OPERATION

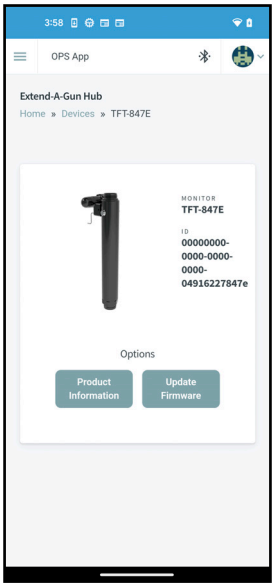
⚠ DANGER

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.

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.





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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).

⚠WARNING **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.**

NOTICE **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.

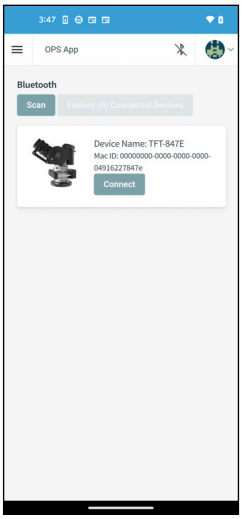
1. If the app is not already open, find and press the FLEX RC app icon from your list of apps, which will launch the app. (The TFT logo is displayed while opening and the app will bring you to the main display screen.
2. Allow app to use location if prompted. (This is required for use.)

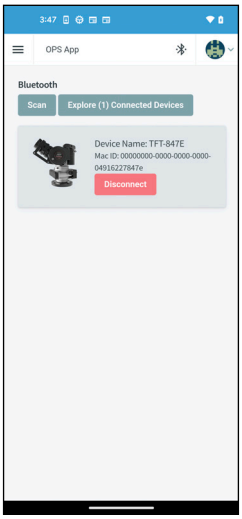
4.2 CONNECT DEVICE

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.





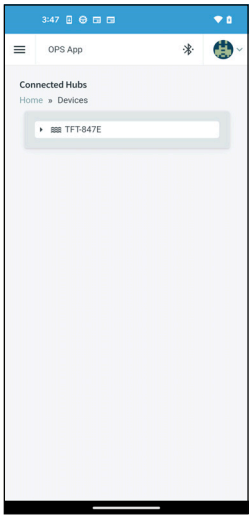
Select Disconnect to disconnect from any device.

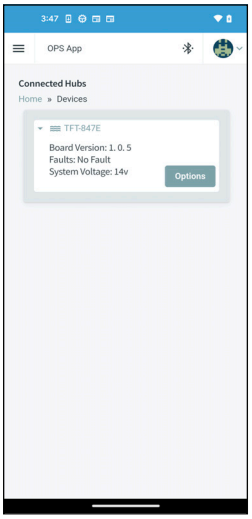
Press Explore Connected Devices to access chosen devices and all connected TFT products.

Figure 4.2

4.3 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 4.3

4.4 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 4.4

4.4.1 CONNECT CONTROLLER

1

Open the App and select SCAN

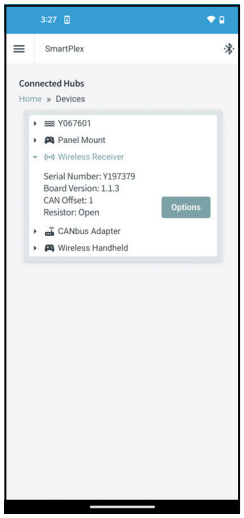
Select CONNECT to pair the App and HUB

2

Select DEVICES to open a menu

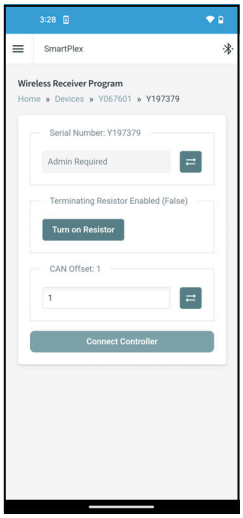
Select the down arrow next to WIRELESS RECEIVER to open a drop-down

Select OPTIONS



3

Select CONNECT CONTROLLER



4

Select SCAN then use the device to scan the QR code label on the back of the controller being connected

5

Press the code and verify it copies to the bottom of the page

Press and hold the joystick on the controller and press START PAIRING

The backlight on the controller will turn PURPLE when paired

To UNPAIR a Wireless Controller

Press and hold down both sides of the FOG and STREAM control stick simultaneously until the backlight on the controller turns TURQUOISE

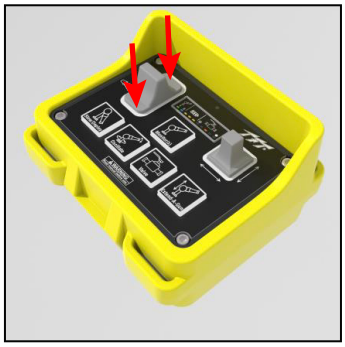


Figure 4.4.1

4.4.2 DEFAULT MONITOR CONTROLS

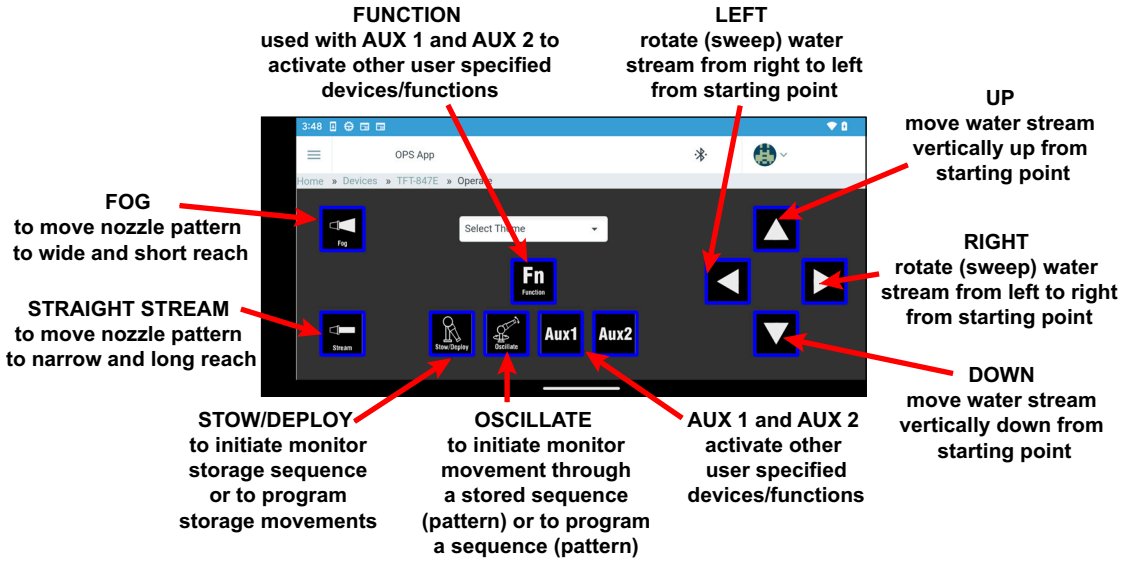


Figure 4.4.2A

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.

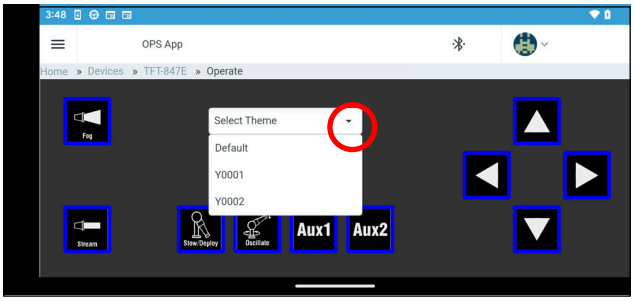


Figure 4.4.2B

4.4.3 PROGRAM MONITOR

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

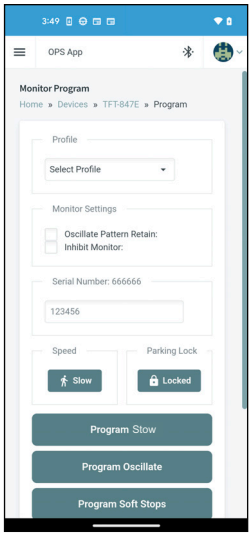
Select to retain the oscillate pattern during a power cycle

Select to inhibit movement of the monitor

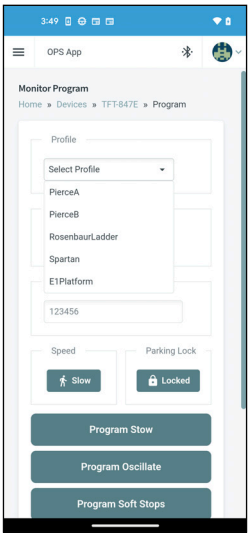
Update the serial number of the monitor

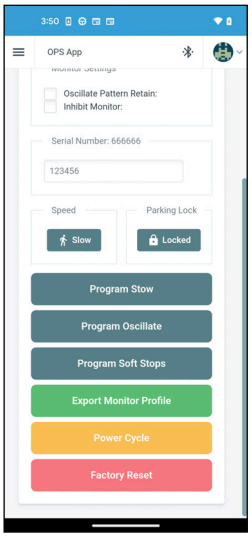
Speed Control Toggle (Fast/Slow)

Prevent changes to the park program outside the app



View from Top of Menu





Scroll to Access All Functions

Figure 4.4.3

4.4.3.1 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.

4.4.3.2 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.

⚠WARNING **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.

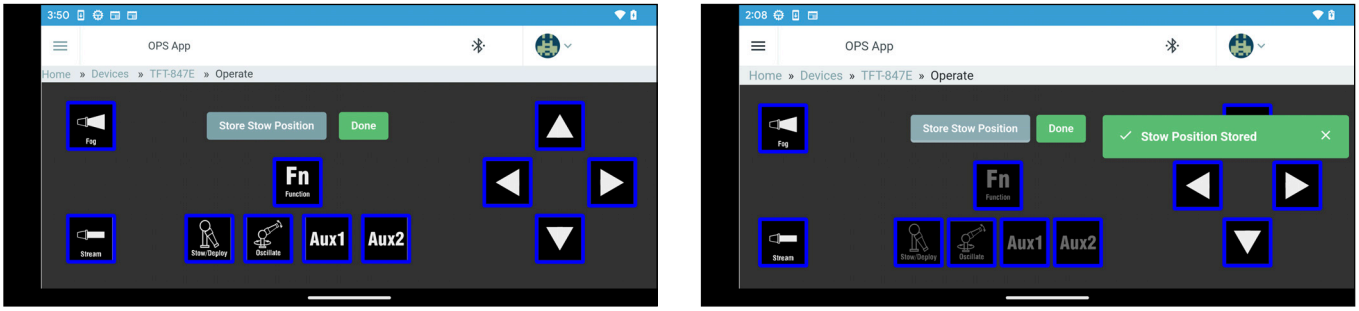


Figure 4.4.3.2

4.4.3.3 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.

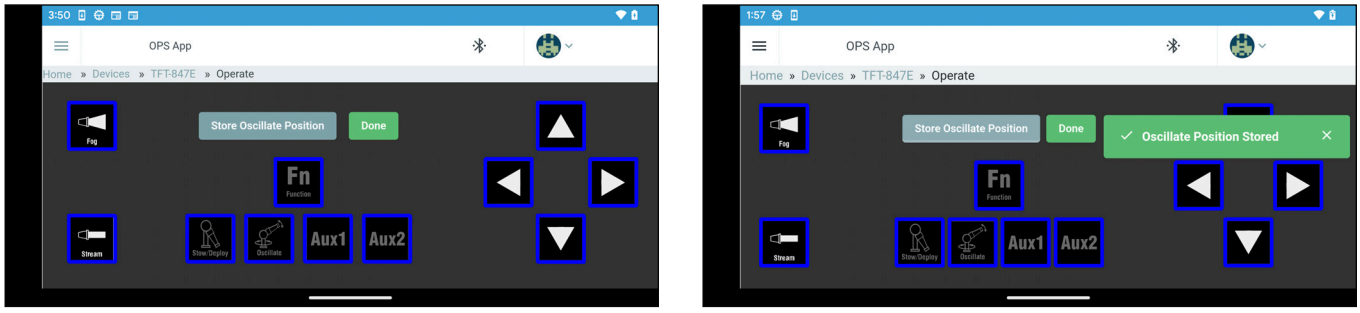


Figure 4.4.3.3

4.4.3.4 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.

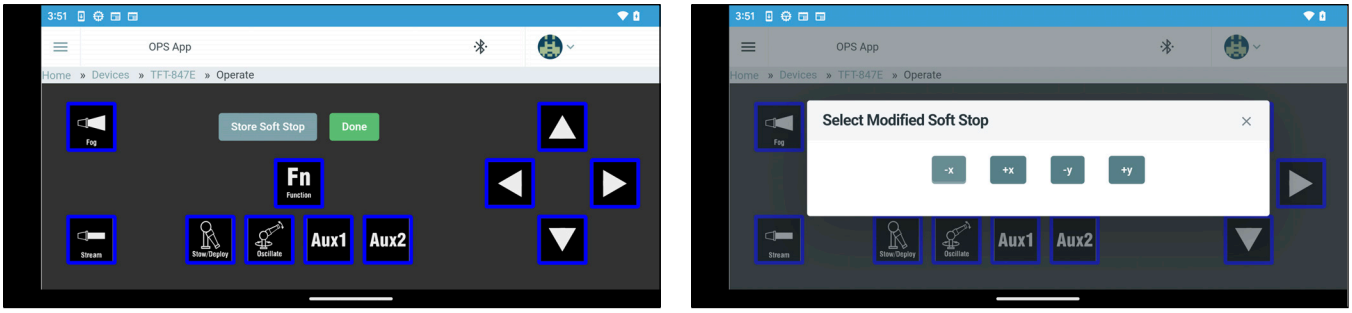


Figure 4.4.3.4

4.4.3.5 PROGRAM VERTICAL & HORIZONTAL HARD STOPS

To program HARD STOPS:

1. Use the arrow keys to move the monitor into the first end of travel position.
   A. For programming VERTICAL HARD STOPS move the monitor to the end of travel UP position.
   B. For programming HORIZONTAL HARD STOPS move the monitor to the end of travel LEFT position.
2. A check in one of the “Motor at Hard Stop” boxes confirms the monitor is at the end of travel. NOTE - IT MAY TAKE 10 SECONDS FOR THE CHECK MARK TO APPEAR IN THE BOX.
3. Use the arrow keys to move the monitor into the opposite end of travel position.
   A. For programming VERTICAL HARD STOPS move the monitor to the end of travel DOWN position.
   B. For programming HORIZONTAL HARD STOPS move the monitor to the end of travel RIGHT position.
4. A check in the other “Motor at Hard Stop” boxes confirms the monitor is at the end of travel. NOTE - IT MAY TAKE 10 SECONDS FOR THE CHECK MARK TO APPEAR IN THE BOX.
5. Select Done to exit and return to the previous menu.

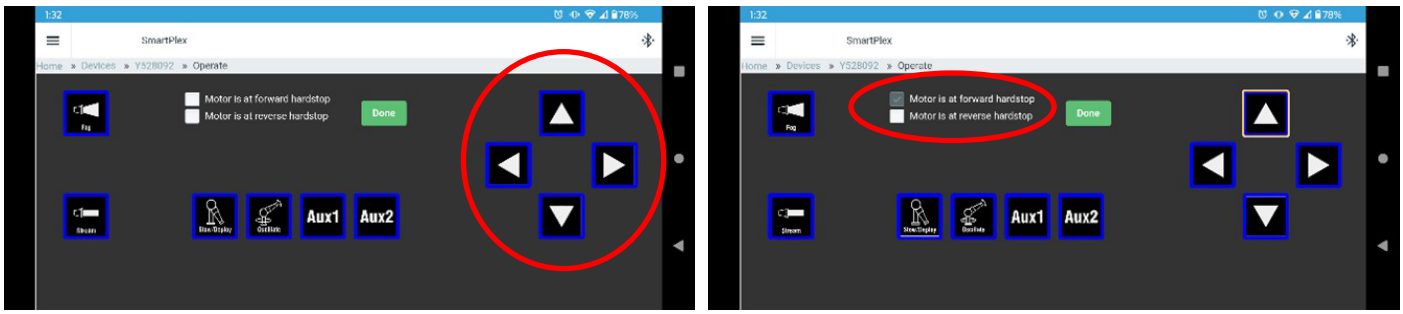


Figure 4.4.3.5

4.4.3.6 POWER CYCLE

Selecting POWER CYCLE turns the connected devices ON and OFF.

4.4.3.7 FACTORY RESET

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

4.4.4 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.

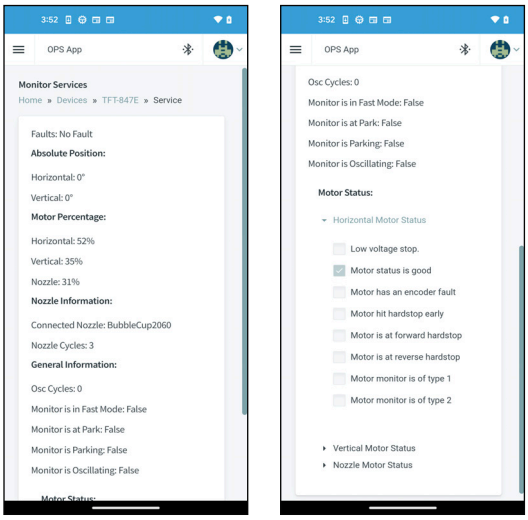


Figure 4.4.4

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 4.4.4

5.0 MAINTENANCE

⚠WARNING **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

Go to tft.com for all warranty information.