

## Field Programming Tablet (FPT)



User Manual  
Y1-03-0399 Rev. B

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

This manual includes data for the 8800 Series Programming equipment:

### 8800 Series Programmer Configurations

P/N	Programming Capabilities
P/N 8805	Tablet and software only
P/N 8806	ELT 345, ELT 1000 and ME406
P/N 8807	ELT 345, ELT 1000, ME406, C406-N, C406-N HM, C406-1, C406-1 HM, C406-2, C406-2 HM, B406-4, and G406-4
P/N 8808	ELT 345, ELT 1000, ME406, ELT 3000, ELT 3000HM, ELT 4000, ELT 4000HM, C406- N, C406-N HM, C406-1, C406-1 HM, C406-2, C406-2 HM, B406-4, and G406-4
P/N 8809	ELT 4000S

### 8800 Series Cables



ELT 345/1000 ME406  
A3-06-3510-3



C, B, G, Series  
A3-06-3511-3



C406-N PA  
A3-06-3525-3



ELT 3000/4000 PA  
A3-06-3512-3



ELT 4000S  
A3-06-3513-3

### 8800 Series FPT System



FPT Interface 6'  
A3-06-3509-3



FPT Interface  
Box A3-06-3503



FPT Tablet (Stylus  
not included in 8805)

Figure 1 - Equipment Matrix

## **ARTEX PRODUCTS / ACR ELECTRONICS, INC.**

### **FPT USER MANUAL**

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

#### NOTICES

THE INFORMATION CONTAINED HEREIN IS NOT PROPRIETARY.

Information in this manual is subject to change without notice. ACR Electronics, Inc. makes no warranty, expressed or implied, regarding this manual, including but not limited to any implied warranties of merchantability, fitness for a particular purpose, and non-infringement. In addition, ACR Electronics, Inc. makes no warranty regarding the documentation or data contained herein. ACR Electronics, Inc. is not liable in the event of incidental, special, consequential, or any other damages in connection with or arising from furnishing, performance, or use of this manual.

#### AIRWORTHINESS LIMITATIONS

The Airworthiness limitations section is FAA approved and specifies inspections and other maintenance required under 14 CFR§ 43.16 and 91.403 unless an alternative program has been approved.

/

**ARTEX PRODUCTS / ACR ELECTRONICS, INC.**

**FPT USER MANUAL**

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

**TABLE OF CONTENTS**

TABLE OF CONTENTS .....	4
LIST OF FIGURES .....	5
LIST OF ACRONYMS, ABBREVIATIONS AND DEFINITIONS .....	6
RECORD OF REVISIONS .....	8
SERVICE BULLETIN LIST .....	9
LIST OF EFFECTIVE PAGES.....	10
1.0 INTRODUCTION.....	11
2.0 EQUIPMENT NEEDED .....	12
3.0 GETTING STARTED .....	14
4.0 CONNECTION WIZARD .....	17
5.0 COMMUNICATION WITH ELT 345 and ELT 1000 .....	18
6.0 COMMUNICATION WITH ALL OTHER ELT'S .....	19
7.0 HOME PAGE.....	20
8.0 READ DATA .....	22
9.0 PROGRAMMER .....	29
10.0 DECODER .....	33
11.0 FPT DISCONNECTION .....	35
12.0 VIEWING THE MANUAL IN APP .....	36
13.0 UPDATING THE FPT APP.....	37

# ARTEX PRODUCTS / ACR ELECTRONICS, INC.

## FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

### LIST OF FIGURES

Figure 1 - Equipment Matrix.....	2
Figure 2 - FPT Launch Icon .....	14
Figure 3 - FPT Splash Screen .....	14
Figure 4 - FPT EULA .....	15
Figure 5 - FPT EULA .....	16
Figure 6 - FPT Device Connection Wizard .....	17
Figure 7 - FPT ELT 345 Initial Connection Popup .....	18
Figure 8 - FPT C,B,G-406 Init Connection Popup .....	19
Figure 9 - FPT Home Page .....	21
Figure 10 - FPT Read Data Screen .....	23
Figure 11 - FPT Read Data Screen .....	23
Figure 12 - FPT Read ELT Data Screen (C406-N) .....	24
Figure 13 - FPT Read ELT Data Screen (ELT 4000 Series) .....	25
Figure 14 - FPT Read Data Screen (ELT 4000 Series) .....	26
Figure 15 - FPT Read Data Screen .....	27
Figure 16 - FPT Read Data Screen .....	28
Figure 17 – Cospas-Sarsat Programmer .....	30
Figure 18 – Cospas-Sarsat Programmer .....	31
Figure 19 – C406-N, ELT 3000, ELT 4000/4000M Cospas-Sarsat Beacon Programming Page.....	32
Figure 20 - FPT Decoder Screen .....	33
Figure 21 - FPT Decoder Screen .....	34
Figure 22 - FPT Disconnected .....	35
Figure 23 - FPT Manual Viewer .....	36
Figure 24 - FPT Manual Viewer .....	36
Figure 25 - FPT Updater.....	37
Figure 26 - FPT Installer .....	38
Figure 27 - FPT Installer .....	39
Figure 28 - FPT Installer .....	39
Figure 29 - FPT Installer .....	40
Figure 30 - FPT Installer .....	41
Figure 31 - FPT Manual Update Check .....	42
Figure 32 - FPT Update Preference .....	43

## **ARTEX PRODUCTS / ACR ELECTRONICS, INC.**

### **FPT USER MANUAL**

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

### **LIST OF ACRONYMS, ABBREVIATIONS AND DEFINITIONS**

ACTIVATION	Activation refers to an ELT that has been commanded to transmit, by Automatic trigger, manually or crash sensor, and may be transmitting on one or more frequencies.
ARINC	Aeronautical Radio, Incorporated, establishes standards for aviation communication and navigation, such as ARINC 429.
BAUD RATE	The speed at which data is received from the nav source providing position data to the beacon.
BNC	Bayonet Neill–Concelman (BNC), is a two-stud bayonet-style miniature quick connect/disconnect radio frequency connector used for coaxial cable.
CFR	Code of Federal Regulations – The general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government. Title 14, “Aeronautics and Space”, contains the FARs.
COSPAS-SARSAT	The international search and rescue consortium that governs the international satellite-based search and rescue distress alert detection and information distribution system. For a complete description, go to the official web site for the International Cospas-Sarsat Program, <a href="http://www.cospas-sarsat.int">http://www.cospas-sarsat.int</a> . Also abbreviated as C/S.
DECODE	Convert ELT Hex ID to extract what information has been programmed into the beacon unique identifier or complete message.
DUMMY LOAD	Device used to simulate an electrical load for testing purposes, used to avoid inadvertent transmission of a distress message.
ELT	Emergency Locator Transmitter – ELTs are installed on aircraft and used to send emergency signals to the Search and Rescue (SAR) satellite system. The word “beacon” is associated with these devices.
EULA	End User License Agreement
EUROCAE	The European Organization for Civil Aviation Equipment (EUROCAE) is an international organization that deals exclusively with aviation standardization, for both airborne and ground systems and equipment.
FAA	Federal Aviation Administration – The United States government agency for aircraft safety and regulation.
FAR	Federal Aviation Regulations – The rules and regulations governing the manufacture, certification, operation, maintenance, repair and alteration of aircraft in the United States.
FPT	Field Programming Tablet

## **ARTEX PRODUCTS / ACR ELECTRONICS, INC.**

### **FPT USER MANUAL**

**ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S**

GNSS	Global Navigation Satellite System - a satellite system that is used to pinpoint the geographic location of a user's receiver anywhere in the world.
HEX ID	Hexadecimal code that provides unique identifier for Cospas-Sarsat beacons
ICAO	International Civil Aviation Organization <a href="https://www.icao.int">https://www.icao.int</a>
LED	Light Emitting Diode – Semiconductor device that emits light when current is passed through it. Usually used as a status or warning indicator.
LONG PROTOCOL	Long format of digital 406MHz message that allows for transmission of position data to be included, when an external navigation source is interfaced to the ELT.
MIL	The three-letter acronym that stands for “Military” and precedes military specifications and standards numbers (e.g., MIL-W-2828 would indicate a wire specification and MIL-STD-2828 would indicate a standard).
MSG	Abbreviation for Message.
PROGRAMMING	Operation to load pertinent data onto the beacon.
PROTOCOL	A message type defined to specify the type of data transmission for delivery and receipt, in particular to Cospas-Sarsat operations.
P/N	Part Number – Refers to an ACR part number, unless otherwise noted.
RTCA	RTCA Inc. – Organization that makes recommendations for airworthiness; refer to <a href="https://www.rtca.org">https://www.rtca.org</a> for more information.
SAR	Search and Rescue.
SHORT PROTOCOL	Short format of digital 406MHz message, this type of protocol will not include position data.
TSO	Technical Standard Order – A TSO is a minimum performance standard issued by the FAA for specified materials, parts, and appliances used on civil aircraft.
UTC	Coordinated Universal Time – A time standard based on International Atomic Time. UTC is the time system used in aviation and is often associated with Greenwich Mean Time (GMT) and/or “Zulu” time.
TPS	Three-stud bayonet-style miniature quick connect/disconnect radio frequency connector used for coaxial cable. TPS connectors are found in dual-output ELTs such as B406-4, C406-2 and G406-4.

**ARTEX PRODUCTS / ACR ELECTRONICS, INC.**

**FPT USER MANUAL**

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

**RECORD OF REVISIONS**

REVISION	CHANGE	DATE	REVISION	CHANGE	DATE
A	ECO 18287	11/12/24			
B	ECO 18359	4/1/25			



**ARTEX PRODUCTS / ACR ELECTRONICS, INC.**

**FPT USER MANUAL**

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

**SERVICE BULLETIN LIST**

SERVICE BULLETIN NO	ISSUE DATE	SUBJECT	MANUAL REV NO	MANUAL REV DATE

**ARTEX PRODUCTS / ACR ELECTRONICS, INC.****FPT USER MANUAL**

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

**LIST OF EFFECTIVE PAGES**

SUBJECT	PAGE	DATE	SUBJECT	PAGE	DATE
Title Page	1	4/1/25	Read Data (cont.)	23	4/1/25
Illustrated Parts List	2	11/12/24		24	4/1/25
Notices	3	11/12/24		25	4/1/25
Table of Contents	4	11/12/24		26	4/1/25
List of Figures	5	11/12/24		27	4/1/25
List of Acronyms, Abbreviations and Definitions	6	11/12/24		28	4/1/25
	7	11/12/24	Programmer	29	11/12/24
Record of Revisions	8	4/1/25		30	4/1/25
Service Bulletin List	9	11/12/24		31	4/1/25
List of Effective Pages	10	11/12/24		32	4/1/25
Introduction	11	4/1/25	Decoder	33	4/1/25
Equipment Needed	12	4/1/25	FPT Disconnection	34	4/1/25
	13	4/1/25	Viewing The Manual in app	35	4/1/25
Getting Started	14	11/12/24	Updating the FPT APP	36	4/1/25
	15	11/12/24		37	4/1/25
	16	11/12/24		38	11/12/24
Connection Wizard	17	11/12/24		39	11/12/24
COMMUNICATION WITH ELT 345 and ELT 1000	18	4/1/25		40	11/12/24
COMMUNICATION WITH ALL OTHER ELT'S	19	4/1/25		41	11/12/24
Home Page	20	4/1/25		42	4/1/25
	21	4/1/25		43	4/1/25
Read Data	22	4/1/25			

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

## 1.0 INTRODUCTION

1. The FPT is a Maintenance Tool created by ACR Electronics to provide maintenance support to the following ELT beacons:

- ELT 345
- ELT 1000
- C406
- B406
- G406
- ME406
- ELT 3000
- ELT 4000
- ELT 4000M
- ELT 4000S

2. The FPT allows the user to perform the following actions:

- Read ELT Hex ID Data
- Read Battery Data
- Configure and program the 406 MHz Cospas-Sarsat Hex ID
- Programming Adapter Reading and Programming, if applicable
- Save Data Reports

**Note:** This programmer does not measure power or read the beacon transmission transmitted by the radio, and as such it does not require periodic calibration. Aftermarket 406MHz power test equipment must be used to provide an annual beacon power test when required. Please contact your local authority for ELT testing requirements during scheduled inspections.

# ARTEX PRODUCTS / ACR ELECTRONICS, INC.

## FPT USER MANUAL






ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

## 2.0 EQUIPMENT NEEDED

Table 1 – FPT Hardware

FPT (8805)	FPT Interface Box (A3-06-3503)	FPT Interface Cable (A3-06-3509-3)
		

Table 2 – FPT-ELT Interface Cables

ELT 345/1000/ME406 Cable (A3-06-3510-3)	C406 Series Cable <sup>1</sup> (A3-06-3511-3)	C406-N Cable <sup>2</sup> (A3-06-3525-3)
		
ELT 3000/4000/4000M Cable <sup>3</sup> (A3-06-3512-3)	ELT 4000S Cable <sup>4</sup> (A3-06-3513-3)	
		

<sup>1</sup> For B406, C406-1, C406-2, and G406 programming, use cable P/N A3-06-3511-3

<sup>2</sup> For C406-N programming and C406-N Programming Adapter programming, use P/N A3-06-3525-3

<sup>3</sup> For ELT 3000/4000/4000M programming and ELT 3000/4000/4000M Programming Adapter programming, use P/N A3-06-3512-3







<sup>4</sup> For ELT 4000S programming, use P/N A3-06-3513-3

# ARTEX PRODUCTS / ACR ELECTRONICS, INC.

## FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

**Table 3 – ELT Hardware**

ELT 345	ELT 1000	ME406 Series
		
B406, C406 (B406-4 shown)	C406-N	G406
		
ELT 4000	ELT 4000M	ELT 4000S
		
ELT 3000		
		

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

### 3.0 GETTING STARTED

1. Power on the FPT. *Enter credentials if required.*
2. Check the Battery Level on FPT Tablet in the bottom right corner.

**Note:** Consider Battery Levels and how much energy is required to perform maintenance using the tablet.

3. Select the FPT Launch Icon (Figure 2) on the FPT tablet home screen, and double tap to launch the application.



Figure 2 - FPT Launch Icon

4. Wait for the application to launch; the splash screen (Figure 3) will load during the application launch process.



Figure 3 - FPT Splash Screen

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

5. Connect the ELT to the FPT using the Interface Box and applicable cables. Be sure to secure all connections.
6. Upon the first launch of the FPT application, an End-User License Agreement (EULA) appears (Figure 4).

**Note:** The FPT User must accept this EULA to continue.

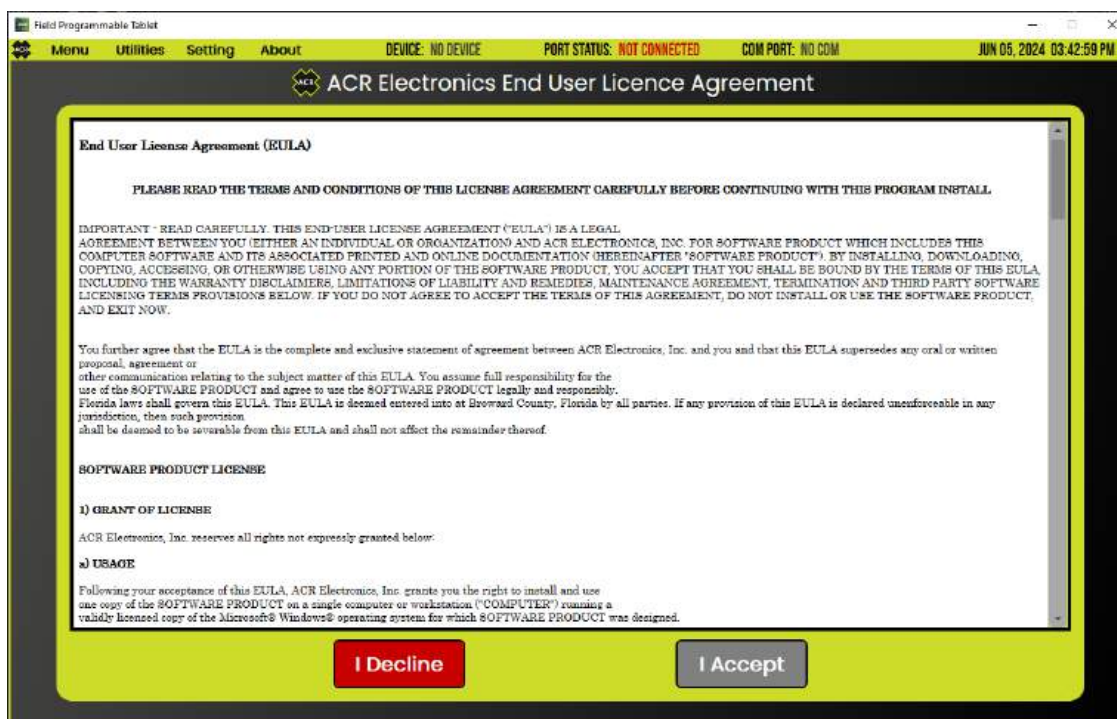


Figure 4 - FPT EULA

7. Once the EULA has been read, the **I Accept** button changes to green (Figure 5) and can be selected.

# ARTEX PRODUCTS / ACR ELECTRONICS, INC.

## FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

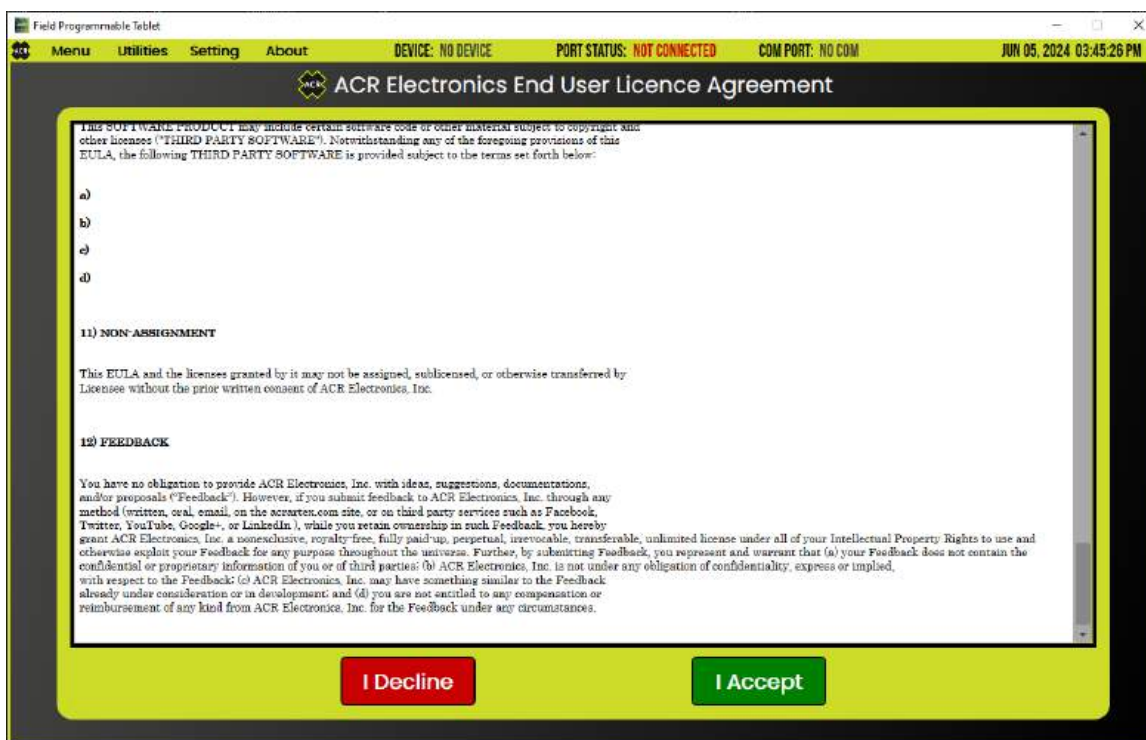


Figure 5 - FPT EULA

8. Once the EULA has been accepted, the device connection screen is displayed.



## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

#### 4.0 CONNECTION WIZARD

**WARNING:** TO AVOID INADVERTENT ACTIVATION USE A 50-0HM DUMMY LOAD ON THE BNC/TPS ANTENNA CONNECTIONS DURING ANY READING OR REPROGRAMMING.

1. On initial startup the FPT displays the Device Connection Wizard screen (Figure 6).
2. The FPT Device Connection Wizard is a step-by-step setup tool for connecting to an ELT device.
3. The steps to connect an ELT are as follows:
  - **Step 1:** Select a COM Port from the drop-down menu to connect to.  
**Note:** This port should be the port for the FPT Interface Cable. If only one port is available, the FPT automatically chooses that port. If more than one port is available, select the dropdown box and select the correct port.
  - **Step 2:** Choose a device by selecting the image of the ELT that is connected.
  - **Step 3:** Once a COM Port and Device has been chosen, select the **Connect** button to establish a connection to the ELT.  
**Note:** Under Step 1, the current selected COM Port and Device is displayed to show the current selections.



Figure 6 - FPT Device Connection Wizard

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

## 5.0 COMMUNICATION WITH ELT 345 and ELT 1000

1. When trying to communicate to an ELT 345 or ELT 1000, these devices require the user to toggle the front panel switch to the test position and to select a corresponding button on the FPT. The FPT prompts the user to perform these actions when necessary.
2. For initial connection to an ELT 345 or ELT1000, a pop-up prompt appears (Figure 7) after the **Connect** button has been selected on the FPT Device Connection Wizard screen.
3. This prompt provides the user with further instructions on how to connect to the device.
4. The user needs to toggle the ELT front panel switch from the ARM/OFF position to the TEST position and release, then select the **Read Device** button on the FPT immediately.
5. If done successfully, the home screen populates information about the device. If the device information does not populate, repeat Step 4.

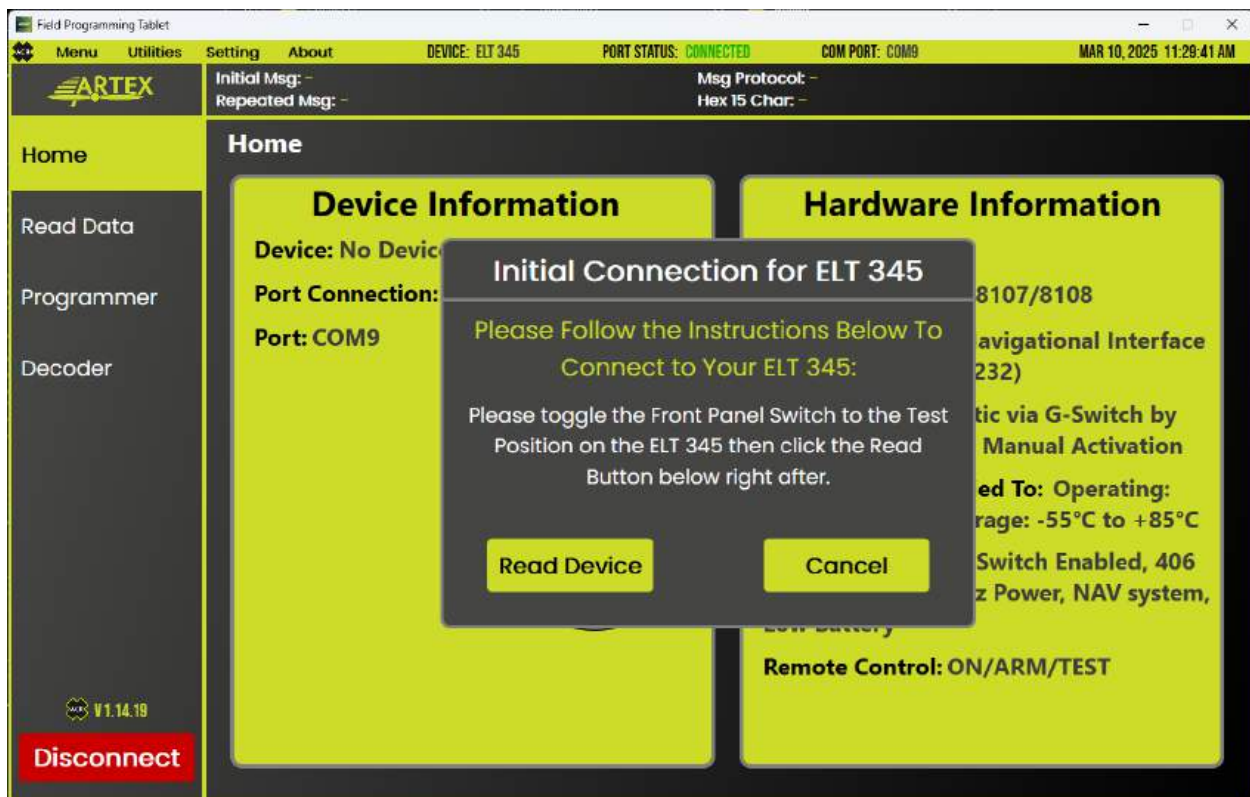


Figure 7 - FPT ELT 345 Initial Connection Popup

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

## 6.0 COMMUNICATION WITH ALL OTHER ELTs

1. For other ELT's (ME406, C,B,G 406 Series, ELT 3000 & 4000 Series) the FPT communicates with these devices without the need for a toggle switch to be flipped to the test position.
2. For **ELT 3000, 4000/4000M, and ELT 4000S**, these devices will connect automatically once the connect button is clicked.
3. For **C,B,G 406 Series ELTs**, a popup window displays (Figure 8) instructions on how to connect to these different ELTs.
4. **Please follow the instructions below:**
  - 4.1. Make sure that a 50-Ohm load is always connected to the BNC and TPS ports when programming or reading a 406 series ELT.
  - 4.2. For the **C406 1/2, B406-4, G406-4** beacons, the front panel switch needs to be in the **ON Position** to read and program using the FPT.
  - 4.3. For the **C406-N** beacon, the front panel switch needs to be in the **OFF Position**.
  - 4.4. **Select** the correct 406 series ELT that is currently connected to the FPT.
  - 4.5. Select the **Read Device** button to connect to the ELT.

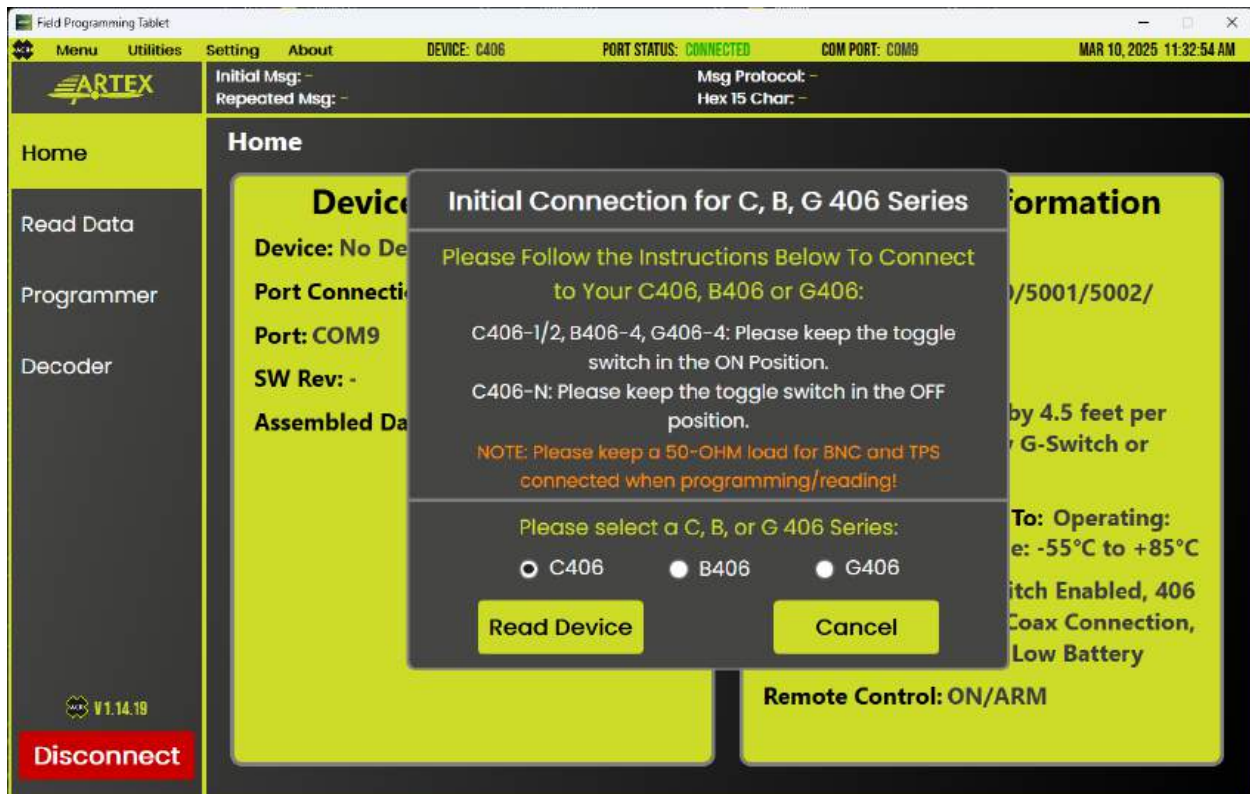


Figure 8 - FPT C,B,G-406 Init Connection Popup

## **ARTEX PRODUCTS / ACR ELECTRONICS, INC.**

### **FPT USER MANUAL**

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

## **7.0 HOME PAGE**

1. The FPT home page provides information about the device that is currently connected.
2. Once connected, the home page displays the following (Figure 9):
  - **Device**
  - **Port Connection**
  - **Com Port #**
  - **SW Rev (Only 406, 3000 & 4000 Series)**
  - **Assembled (Only 406, 3000 & 4000 Series)**
  - **Serial Number (Only 406, 3000 & 4000 Series)**
  - **TAC Number (Only 406, 3000 & 4000 Series)**
  - **Model**
  - **Product SKU**
  - **GPS**
  - **Activation**
  - **Temperature Certified to**
  - **Self-Test Checks**
  - **Remote Control**
3. At the top of the screen the ELT Initial Message, ELT Repeated Message, the current message protocol and the current 15-character Hex ID is displayed. These messages are currently programmed into the connected beacon (also known as Cospas-Sarsat Hex IDs).

**Note:** For ELT 3000 & 4000 Series devices, the 15-character Hex ID will be calculated from the programming screen message.

# ARTEX PRODUCTS / ACR ELECTRONICS, INC.

## FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

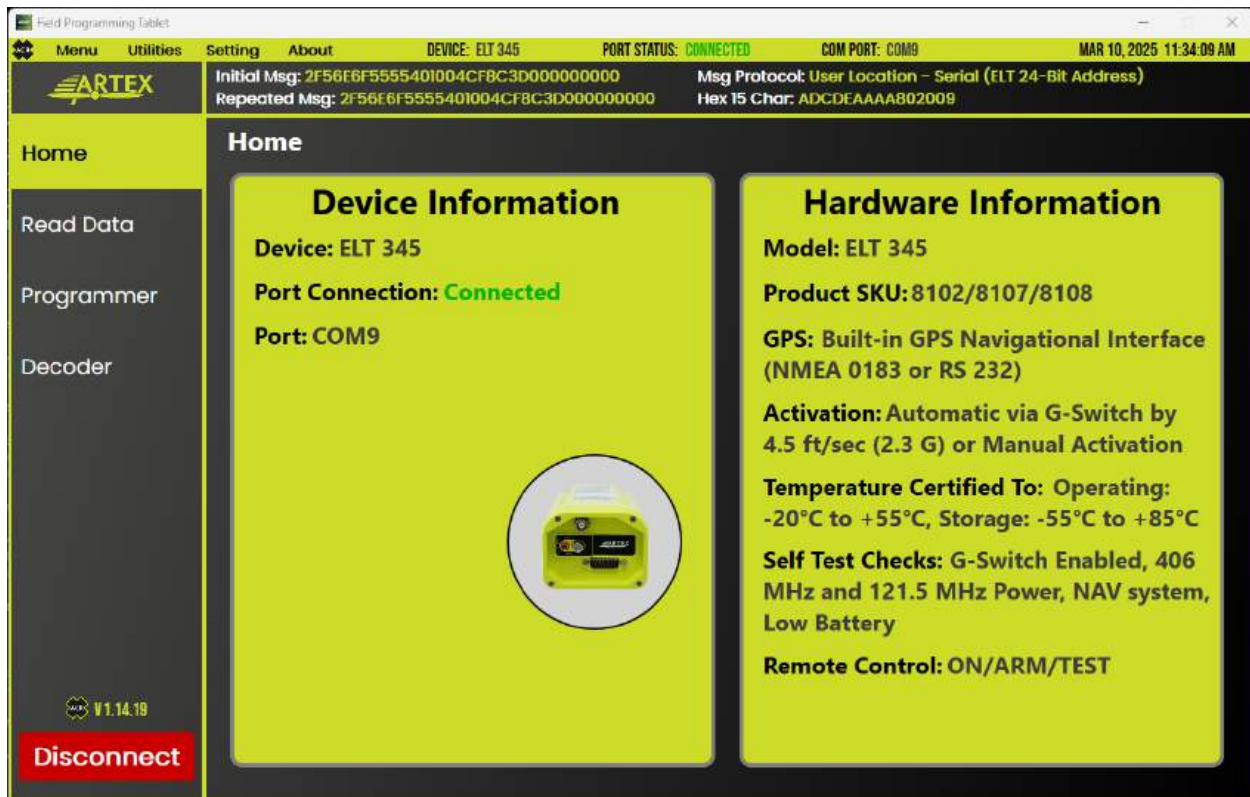


Figure 9 - FPT Home Page

4. To switch between screens, use the navigational menu on the left.
5. The FPT Software Version is listed at the bottom of the menu panel.

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

## 8.0 READ DATA

1. The Read Data page (Figure 10) allows the FPT user to read ELT and Battery data from their respective memory.
2. To read data, select one of the following buttons:
  - 2.1. **Read ELT:** Reads the data and Hex ID stored in the ELT memory.
  - 2.2. **Read Battery:** Reads the following battery data items:
    - **ELT Model Type**
    - **Battery Serial Number**
    - **Elapsed Battery Usage Time**
    - **Battery Activation Count**
  - 2.3. **Get GPS Baud:** Reads the currently set GPS Baud Rate (Available only on ELT 345, ELT 1000).
  - 2.4. **Set GPS Baud:** Sets the GPS Baud Rate to either 4800 or 9600 (Available only on ELT 345, ELT 1000).
- Note:** This is the navigation subsystem baud rate, 4800 bps for NMEA, 9600 bps for Aviation Protocol.
- 2.5. **Read PA:** Reads the programming adapter data (Available only on C406-N, ELT 3000, ELT 4000/ELT 4000M).
- 2.6. **Dump PA:** Displays all memory blocks for the programming adaptor (Available only on C406-N).
- 2.7. **Read Self-Test:** Reads the current Self-Test results from an ELT 3000, ELT 4000/4000M or ELT 4000S.
3. For ELT 345 and ELT 1000s there is a note above the buttons to remind the FPT user to toggle the front panel switch to the test position then select a button immediately after.

**Note:** For the Set GPS Baud please select the button first. A popup window appears. Then toggle the front panel switch to the test position and then select a baud rate.



## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

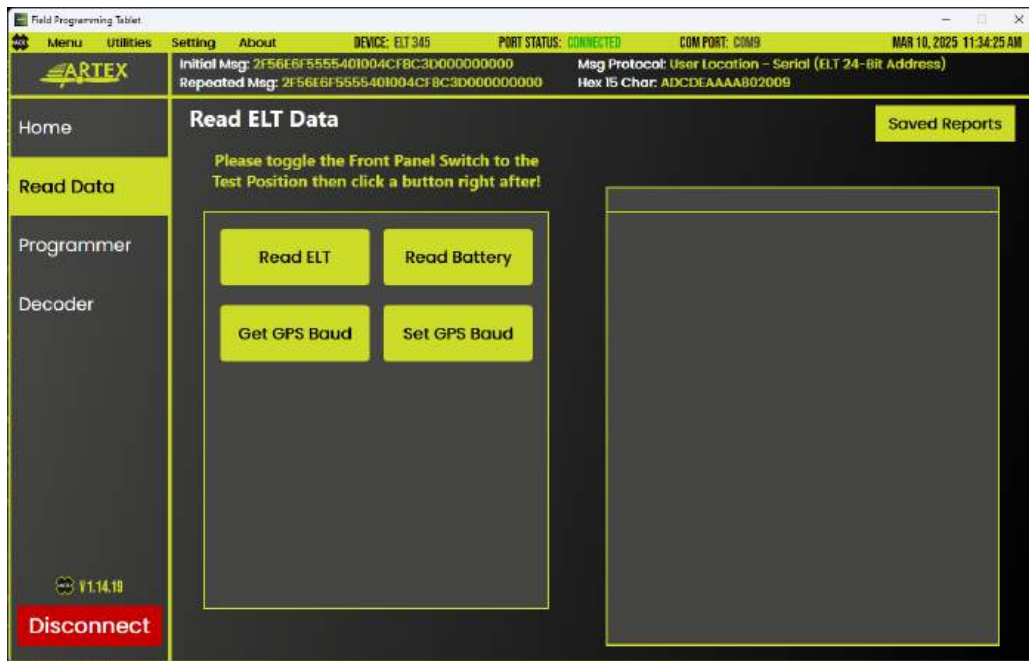


Figure 10 - FPT Read Data Screen

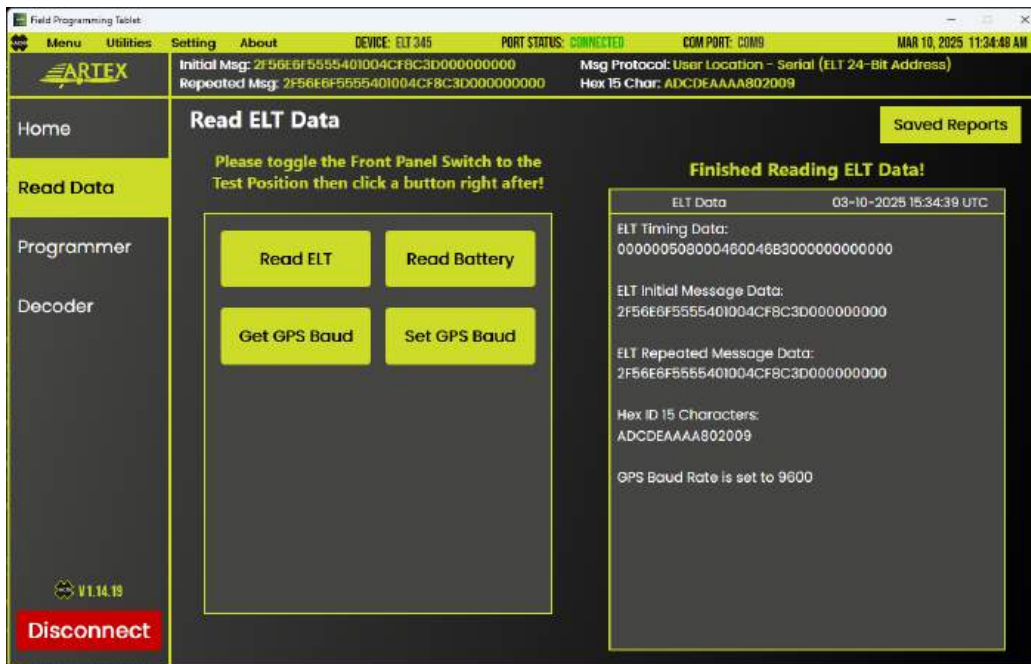


Figure 11 - FPT Read Data Screen

**Note:** If there isn't any data displayed after selecting a button, wait a few seconds then select the same button again. If there still isn't any data displayed, try restarting the FPT software.

- After a reading has successfully completed, a report automatically saves to the FPT tablet.

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

#### 8.1 READ ELT DATA (C406-N)

1. The C406-N has two additional buttons for Reading and Dumping (Figure 12) the data from the Programming Adapter (PA).
2. Once a button is selected, data starts being received. The data is displayed on the right side of the screen in the text box.
3. Text appears above this text box displaying what data is currently being read. This text changes once the reading is complete.

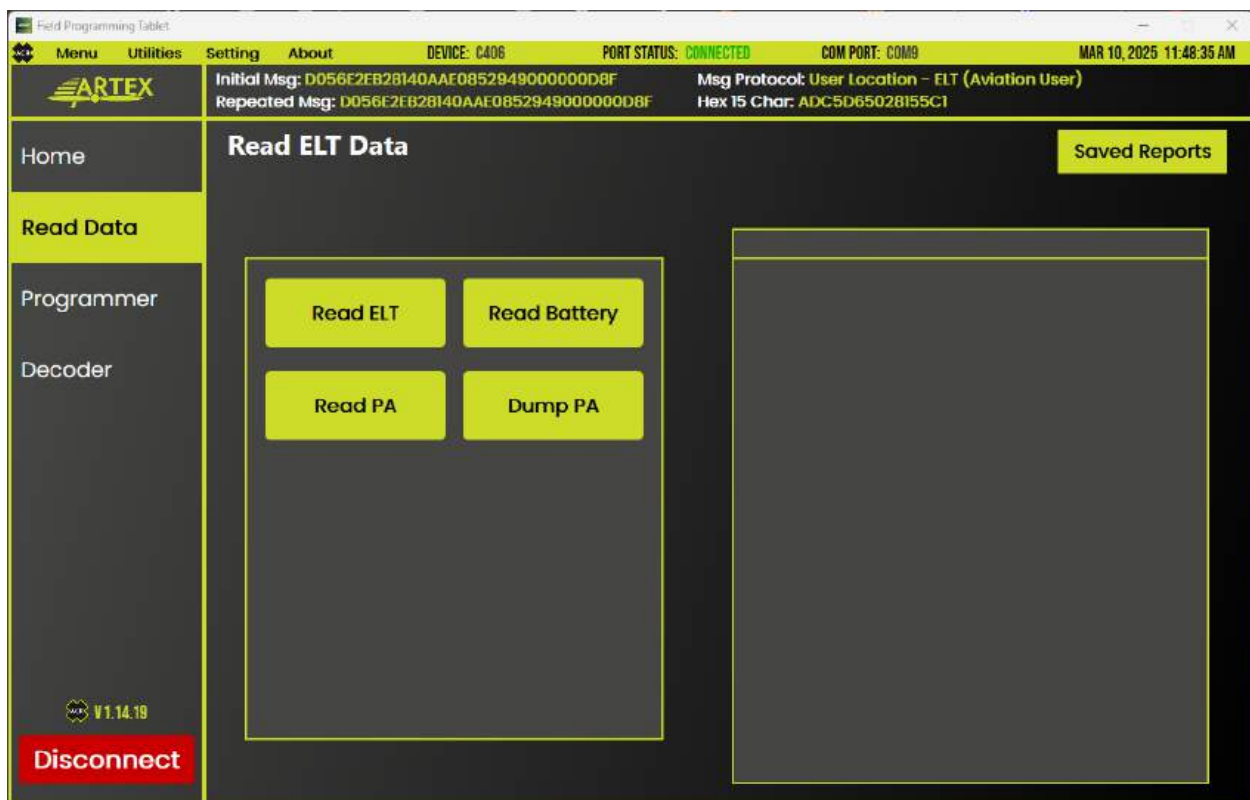


Figure 12 - FPT Read ELT Data Screen (C406-N)



## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

## 8.2 READ ELT DATA (ELT 3000, 4000 SERIES)

1. The ELT 3000, 4000 and 4000M devices have two additional buttons for reading the data from the Programming Adapter (PA) and reading the Self-Test results data (Figure 13).
2. The ELT 4000S will only display the **Read ELT**, **Read Battery** and **Read Self-Test** buttons.
3. The **Read Self-Test** button will retrieve the results from the connected ELT 3000 & 4000 series device and displays PASS/FAIL results.

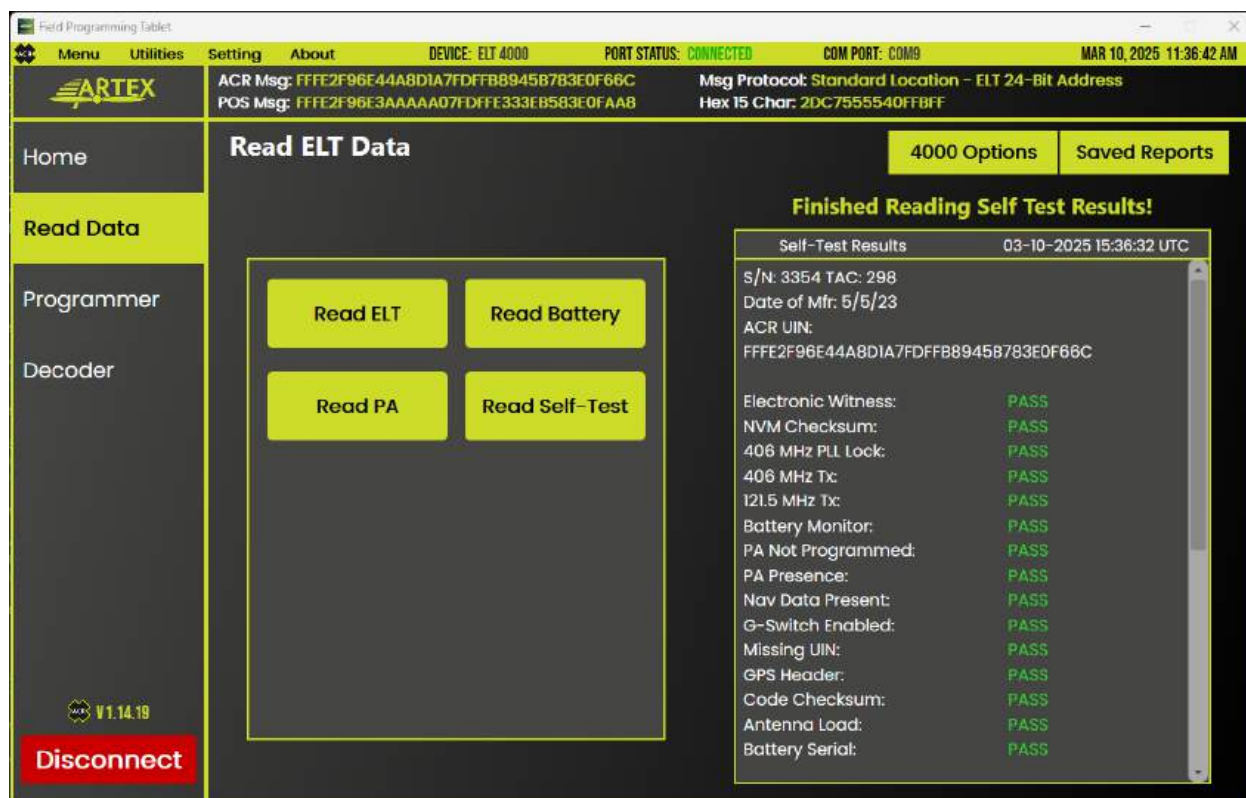


Figure 13 - FPT Read ELT Data Screen (ELT 4000 Series)

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

4. An additional page (4000 Options) is available for the ELT 3000 & 4000 series devices. The ELT 4000 Options tab can be selected at the top right of the screen (Figure 13) to display a new page. Note that the name of the options tab will change based on the connected ELT either 3000 or 4000.
5. The ELT 4000 Options page (Figure 14) displays the currently programmed ELT 4000 configuration options.
6. This page will display a check mark or filled in circle for the options that are currently programmed into the ELT.
7. Only the Enable Programming Adapter and Nav Source options are available to reconfigure.
8. Select the **Read** button to read the currently programmed options.
9. Select the **Program** button to reprogram the ELT 4000 with the selected options.

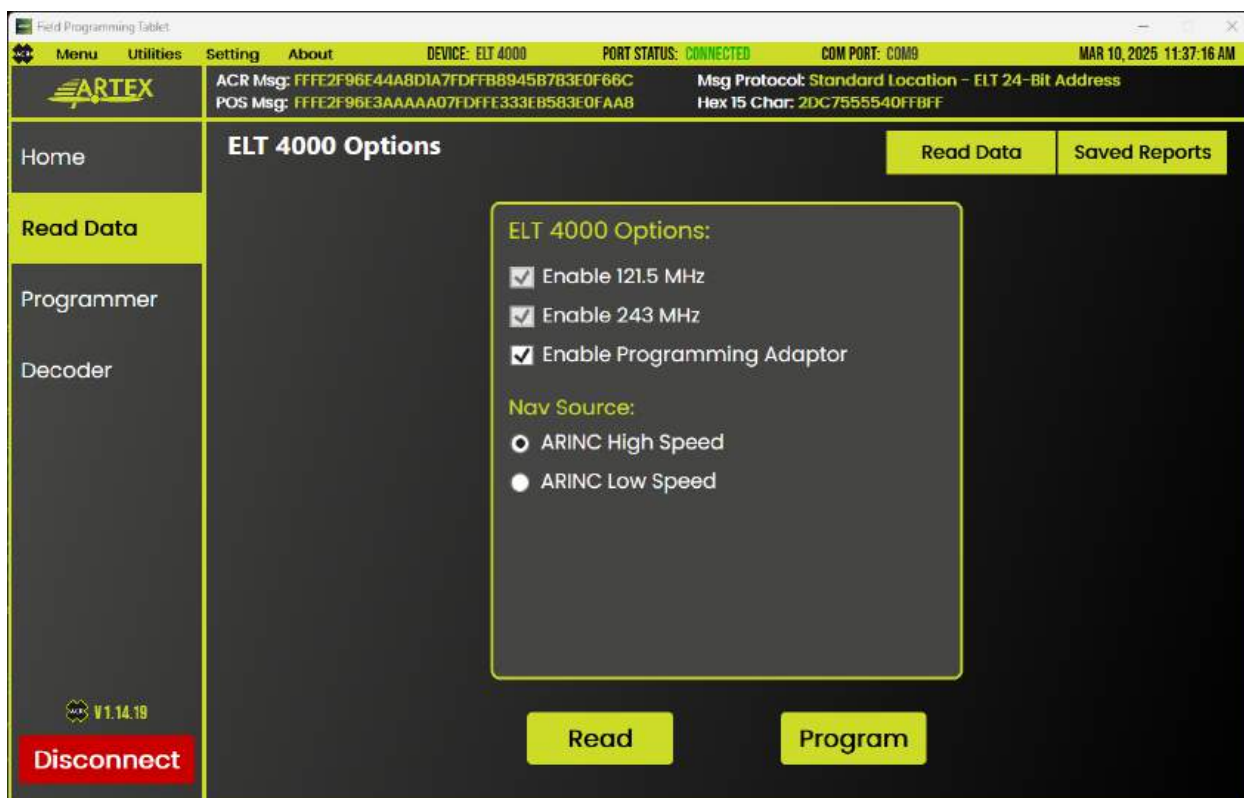


Figure 14 - FPT Read Data Screen (ELT 4000 Series)

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

### 8.3 SAVING AND VIEWING ELT REPORTS

1. The **Read Data** page (Figure 15) allows the user to save ELT reports locally on the FPT Tablet in a PDF file format.
2. To save an ELT report, first select one of the available buttons and wait for the data to finish reading.
3. Once the reading has finished, the retrieved data that is currently displayed on the FPT is automatically saved to the FPT tablet. A message appears to show that the report has been saved.

**Note:** The Get GPS Baud and Set GPS Baud buttons do not save a report.

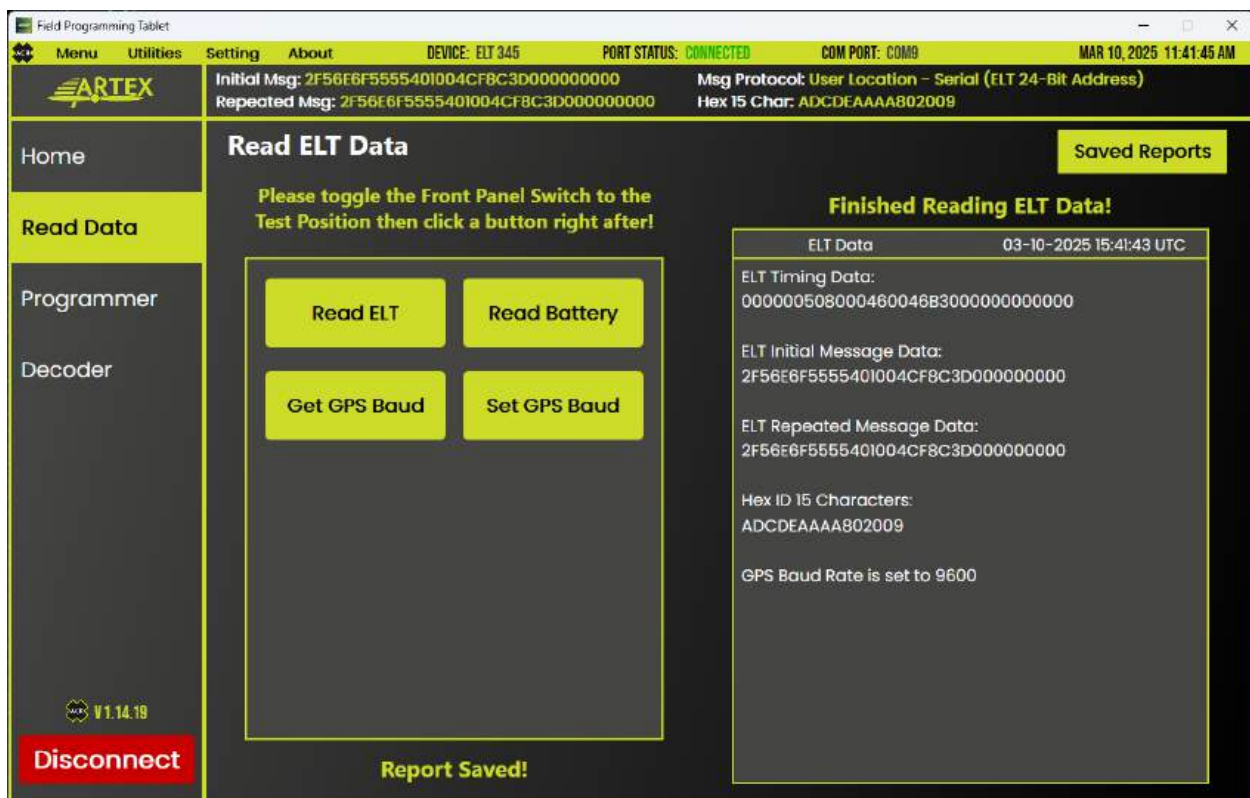


Figure 15 - FPT Read Data Screen

4. To view all currently saved ELT reports, select the **Saved Reports** button located at the top right of the Read ELT Data page. This displays a new page (Figure 16).

**Note:** Reports are ordered by the dates of each report with the most recent report always at the top of the list.

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

5. The **Saved ELT Reports** tab shows the following information:

- **Report Number:** The list order of reports ordered from most recent to oldest.
- **Report Type:** The type of data that the report has.
- **Report Date:** The date that the report was saved on.
- **Reports:** Used to open a saved report.
- **Select Report Type:** Used to switch which type of reports to view. (ELT Data or Battery Data Reports, PA Reports and Self-Test Reports if applicable).

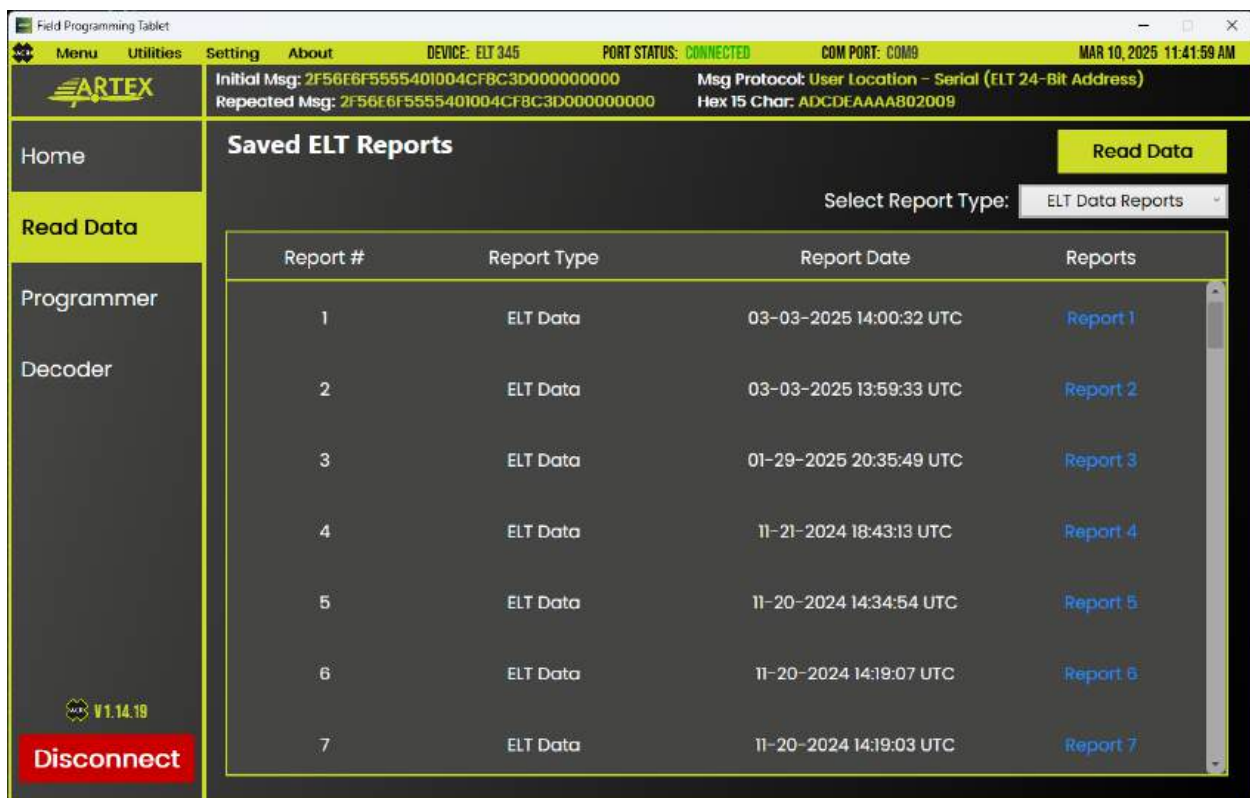


Figure 16 - FPT Read Data Screen

6. To **view** a Saved Report, select the corresponding **Report # (Highlighted in blue)** under the **Reports** column. This opens the PDF report for that item.

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

## 9.0 PROGRAMMER

**WARNING:** ENSURE ANY REPROGRAMMED ELT HEX IDS ARE REGISTERED WITH THE APPROPRIATE 406 MHZ ELT REGISTRATION DATABASE.

1. The **Programmer Page** (Figure 17) offers a useful tool for Cospas-Sarsat Hex ID programming.
2. The Cospas-Sarsat Beacon Programming tool allows the FPT user to configure their own unique Cospas-Sarsat Hex ID to be used on their ELT.
3. This tool programs the ELT memory with the configured Cospas-Sarsat Hex ID when the **Set Hex ID** button is selected.
4. The following is available on the Cospas-Sarsat Beacon Coding tool:
  - a. **Protocol Type:** Sets the programming protocol type.
    - i. User
    - ii. Standard
    - iii. National
  - b. **Beacon Type:** Sets the beacon type, must be set to ELT.
  - c. **Protocol Code:** Sets the ELT Protocol Code.
    - i. Serial User - Aircraft 24-Bit Addr (Short)
    - ii. Serial User - Aircraft Operator (Short)
    - iii. Serial User – ELT Serial (Short)
    - iv. Aviation User – Tail Number (Short/Long)
    - v. Standard – Aircraft 24-Bit Addr (Long)
    - vi. Standard – ELT Serial (Long)
    - vii. National – ELT Serial (Long)
  - d. **Format Flag:** Set the Format Flag. (Short or Long)
  - e. **Country Code:** Set the country code from a list of countries
  - f. **Frame Sync:** Displays that the frame sync pattern during Normal use. **(Non-Configurable)**
  - g. **Homer:** Displays that the homer state is Enabled **(Non-Configurable)**
  - h. **GPS:** Displays that the GPS state is External **(Non-Configurable)**

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

- The FPT user can select a Protocol, then corresponding textboxes will enable to allow text to be entered for protocol configuration.
- The box at the bottom of the screen containing a Hex ID automatically updates based on the information that is entered.

The screenshot shows the 'Cospas-Sarsat Beacon Programming' screen on a Field Programming Tablet. The interface includes a top status bar with 'Menu', 'Utilities', 'Setting', and 'About' tabs. The status bar also displays 'DEVICE: ELT 345', 'PORT STATUS: CONNECTED', 'COM PORT: COM9', and the date 'MAR 10, 2025 11:42:23 AM'. Below the status bar, there are fields for 'Initial Msg: 2F56E6F5555401004CF8C3D000000000' and 'Repeated Msg: 2F56E6F5555401004CF8C3D000000000', along with 'Msg Protocol: User Location - Serial (ELT 24-Bit Address)' and 'Hex 15 Char: ADCDEAAAA802009'. The main programming area is divided into sections for 'Location Protocol' (set to 'User'), 'Beacon Type' (set to 'ELT'), 'Protocol Code' (set to 'Serial - A/C 24-Bit'), and 'Country Code' (set to 'USA (366)'). There are also fields for 'Format Flag' (set to 'Short'), 'A/C 24 bit Addr (Hex)' (set to 'AAAAA0'), 'Aircraft Operator', 'Specific ELT #' (set to '2'), 'Tac Number' (set to '2'), 'Frame Sync' (set to 'Normal'), 'Homer' (set to 'Enabled'), and 'GPS Source' (set to 'External'). At the bottom, there are three hex fields: '36 Hex: FFFE2F56E6F5555401004CF8C3D000000000', '32 Hex: 2F56E6F5555401004CF8C3D000000000', and '15 Hex: ADCDEAAAA802009'. A 'Disconnect' button is visible in the bottom left corner. A note at the bottom states: 'Please toggle the Front Panel Switch to the Test Position then click the Set Hex ID button!'. There are 'Set Hex ID' and 'Save Report' buttons at the bottom right.

Figure 17 – Cospas-Sarsat Programmer

- When finished with configuration, select the **Set Hex ID** button at the bottom of the screen. This programs the ELT with the created Cospas-Sarsat Hex ID. **A popup then appears.**
- This **popup** informs the FPT user of the status of the programming and validation sequence.

**Note:** If a verified Hex ID data is not displayed then there possibly was an error with the programming. Please check your interface box cable connections to the ELT. If the problem persists, try restarting the FPT software and try again (the verified Hex ID data is what is read back after programming a Hex ID).

- Do not close the popup window (Figure 18) until the **“ELT Programming Complete!”** or **“ELT Programming Failed!”** is displayed.



## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

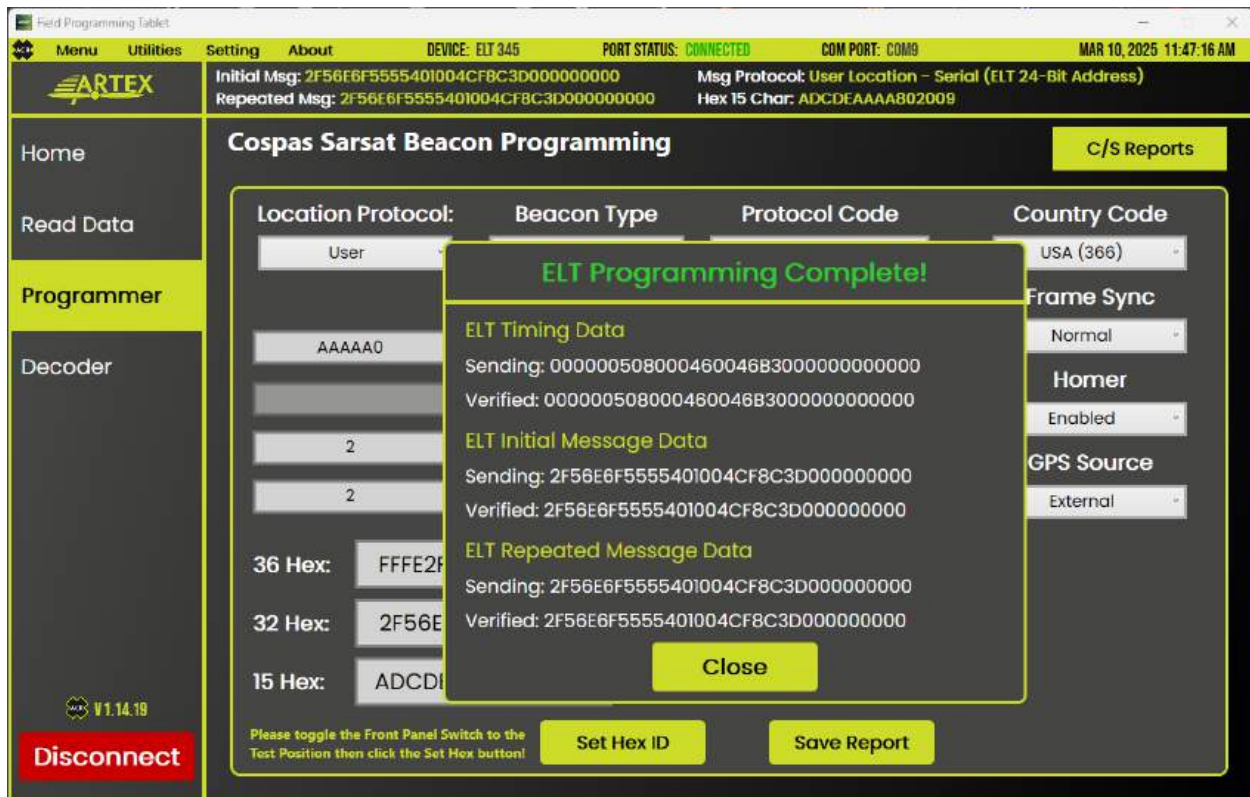


Figure 18 – Cospas-Sarsat Programmer

10. Select the **Close** button to close the popup window.
11. The Cospas-Sarsat Beacon Programming tool can save a Protocol Report that provides information about the currently programmed Cospas-Sarsat Hex ID on the ELT. This can be done by pressing the **Save Report** button.
12. To **view** all currently Saved Protocol Reports, select the **C/S Reports** tab button located at the top right of the Cospas-Sarsat Beacon Programming Page. This displays a new page.

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

#### 9.1 PA PROGRAMMING (C406-N, ELT 3000, ELT 4000/4000M)

When using a **C406-N, ELT 3000, ELT 4000/4000M** on the programmer page, two options appear above the **Set Hex ID** button (Figure 19).

1. Select the **Write ELT** to program the C406-N, ELT 3000, or ELT 4000/4000M memory directly.
2. Select the **Write PA** to program the PA connected to the C406-N, ELT 3000, or ELT 4000/4000M.
3. Once an option is selected, select the **Set Hex ID** button to program the ELT or PA with the current configured Cospas-Sarsat Hex ID.

The screenshot shows the 'Cospas Sarsat Beacon Programming' interface. At the top, a status bar displays 'DEVICE: ELT 4000', 'PORT STATUS: CONNECTED', 'COM PORT: COM9', and the date 'MAR 10, 2025 11:43:07 AM'. Below this, a header section shows 'ACR Msg: FFFE2F96F44A8D1A7FDFFB8945B783E0F66C' and 'POS Msg: FFFE2F96E3AAAAA07FDFFE333EB583E0FAAB'. The main programming area includes several dropdown menus: 'Location Protocol' (User), 'Beacon Type' (ELT), 'Protocol Code' (Serial - A/C 24-Bit), and 'Country Code' (USA (366)). There are also input fields for 'A/C 24 bit Addr (Hex)' (AAAAA0), 'Aircraft Operator', 'Specific ELT #' (2), and 'Tac Number' (2). A 'Format Flag' section has 'Short' selected. On the right, 'Frame Sync' is set to 'Normal', 'Homer' is 'Enabled', and 'GPS Source' is 'External'. At the bottom, there are three hex input fields: '36 Hex: FFFE2F56E6F5555401004CF8C3D000000000', '32 Hex: 2F56E6F5555401004CF8C3D000000000', and '15 Hex: ADCDEAAAA802009'. Below these, there are two radio buttons: 'Write ELT' (selected) and 'Write PA'. At the very bottom, there are 'Set Hex ID' and 'Save Report' buttons. A 'Disconnect' button is located in the bottom left corner of the interface.

Figure 19 – C406-N, ELT 3000, ELT 4000/4000M Cospas-Sarsat Beacon Programming Page



## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

## 10.0 DECODER

The Cospas-Sarsat **Decoder** (Figure 20) provides a tool to decode a Cospas-Sarsat Hex ID.

1. The **FPT Decoder** currently supports decoding Hex IDs of length 36, 32 or 15 and decodes all location protocols for ELT beacons (User, Standard or National).
2. The FPT Decoder allows the FPT user to either enter their own Cospas-Sarsat Hex ID or to get the current programmed Cospas-Sarsat Hex ID that is on the ELT.
3. This beacon decoder is created for first generation beacons of 36, 32 or 15 hex characters and is defined by Cospas-Sarsat T.001 Issue 4 – Rev 6.
4. The following is available on the Decoder Page:
  - **Enter a Cospas-Sarsat Hex ID.**
  - **Get C/S Msg** to get the current programmed Cospas-Sarsat Hex ID on the ELT.
  - **Decode Msg** to decode the entered Cospas-Sarsat Hex ID.

The screenshot displays the 'Field Programming Tablet' (FPT) interface for the 'Cospas Sarsat Decoder'. The top status bar shows 'Menu Utilities Setting About', 'DEVICE: ELT 345', 'PORT STATUS: CONNECTED', 'COM PORT: COM9', and 'MAR 10, 2025 11:43:44 AM'. The main interface has a left sidebar with 'Home', 'Read Data', 'Programmer', and 'Decoder' (highlighted). The main area is titled 'Cospas Sarsat Decoder' and includes a note: 'Please toggle the Front Panel Switch to the Test Position then click the Get Current C/S Msg button right after!'. It features two input fields: 'Enter a Cospas Sarsat ID (36, 32 or 15 Char):' and 'Decoded Hex ID 15 Char:'. Below these are two buttons: 'Get Current C/S Msg:' and 'Decode C/S Msg:'. A table with columns 'Binary Range', 'Binary Content', 'Field Name', and 'Decoded Value' is present, but it is empty. At the bottom, it shows 'Decoder Version: 2.2.0' and '\* Beacon Decoder defined by T.001 Issue 4 - Rev.6.'. A 'Disconnect' button is visible in the bottom left corner.

Binary Range	Binary Content	Field Name	Decoded Value
--------------	----------------	------------	---------------

Figure 20 - FPT Decoder Screen

# ARTEX PRODUCTS / ACR ELECTRONICS, INC.

## FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

5. When the **Decode Msg** button is selected, the entered 36, 32 or 15 character Cospas-Sarsat ID is decoded.
6. If the ID was a 36 or 32 character, then a 15 character Hex is decoded and displayed.
7. The output of the decoder (Figure 21) is in the form of a table with the following columns:
  - **Binary Range:** The interval range that the binary bits are within.
  - **Binary Content:** The binary bit values that are within the set Binary Range.
  - **Field Name:** The identifier that corresponds to the Binary Range.
  - **Decoded Value:** The Field Name information values that are the result of the Binary Content.

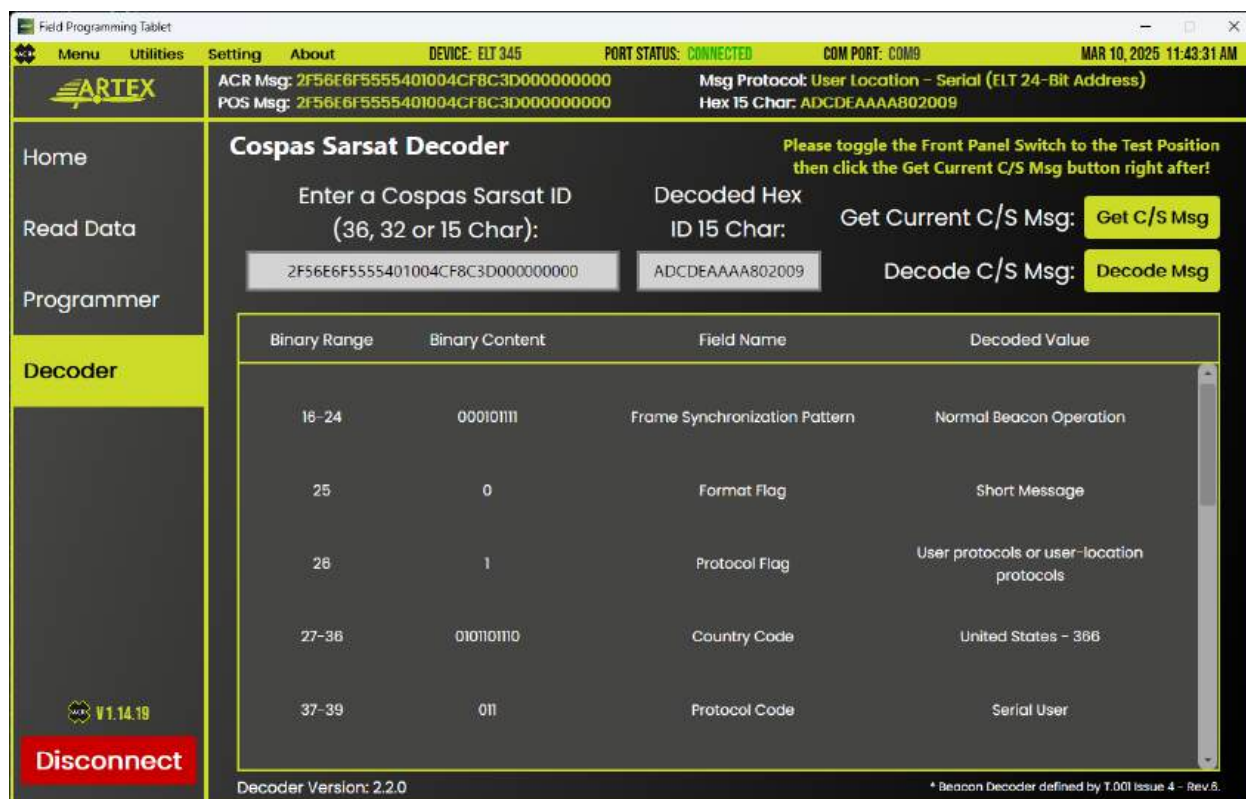


Figure 21 - FPT Decoder Screen

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

## 11.0 FPT DISCONNECTION

1. After an FPT user is finished with their ELT maintenance using the FPT, select the **Disconnect** button at the bottom left of the screen.
2. This disconnects the FPT from the current COM port and the Device Connection Wizard appears (Figure 22).

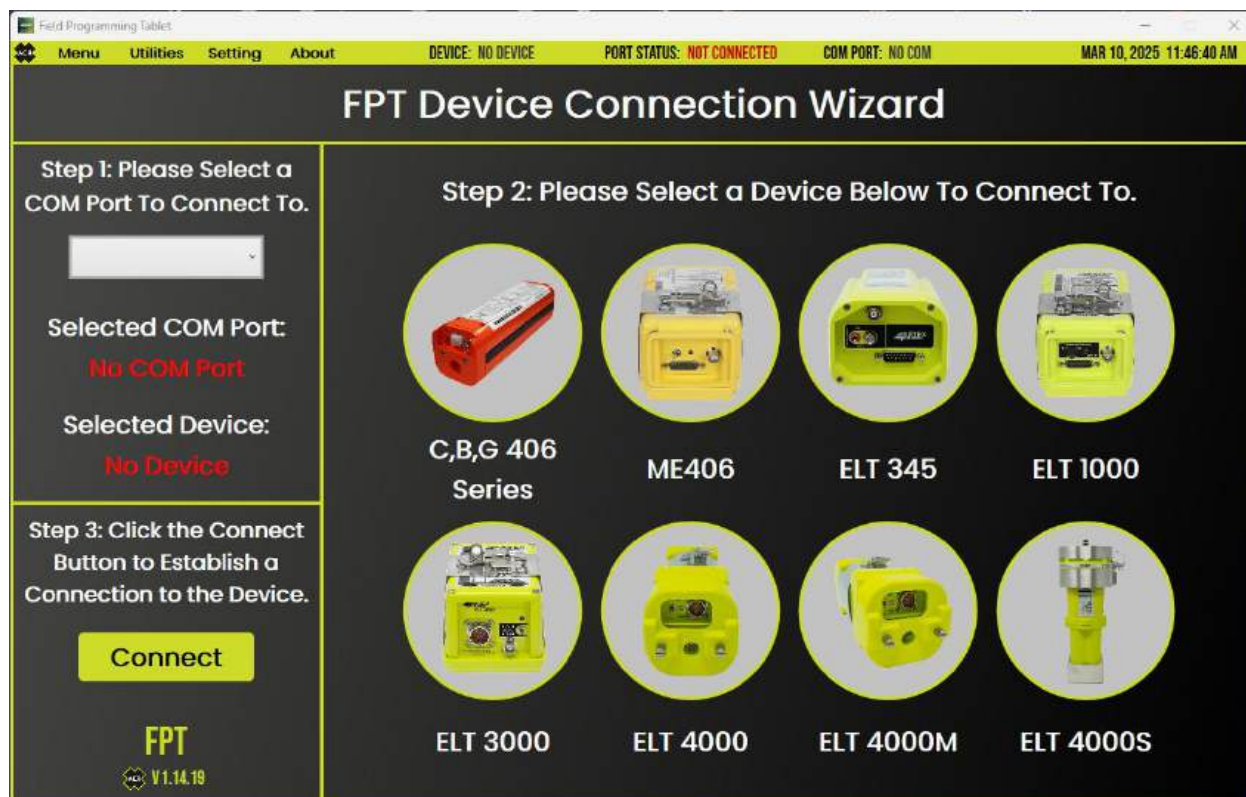


Figure 22 - FPT Disconnected

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

## 12.0 VIEWING THE MANUAL IN APP

1. The FPT offers an in-app manual to help with operating the FPT application.
2. To view the FPT manual in the app, select the **Utilities** menu item at the top of the screen (Figure 23).



Figure 23 - FPT Manual Viewer

3. Select **FPT Manual** to open the manual. A new window appears with the latest manual (Figure 24).



Figure 24 - FPT Manual Viewer



## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

## 13.0 UPDATING THE FPT APP

The FPT offers an automatic over-the-air software update feature. This feature automatically notifies the FPT user of a software update (if available) on initial startup of the application.

**Internet access is required to check for FPT software updates.**

### 13.1 HOW TO UPDATE

1. On initial startup of the application, the FPT verifies that an internet connection is present.
2. Once connected to the internet, the FPT checks for a software update.
3. If an update is found, a popup displays (Figure 25) prompting the user if they want to continue with the update.

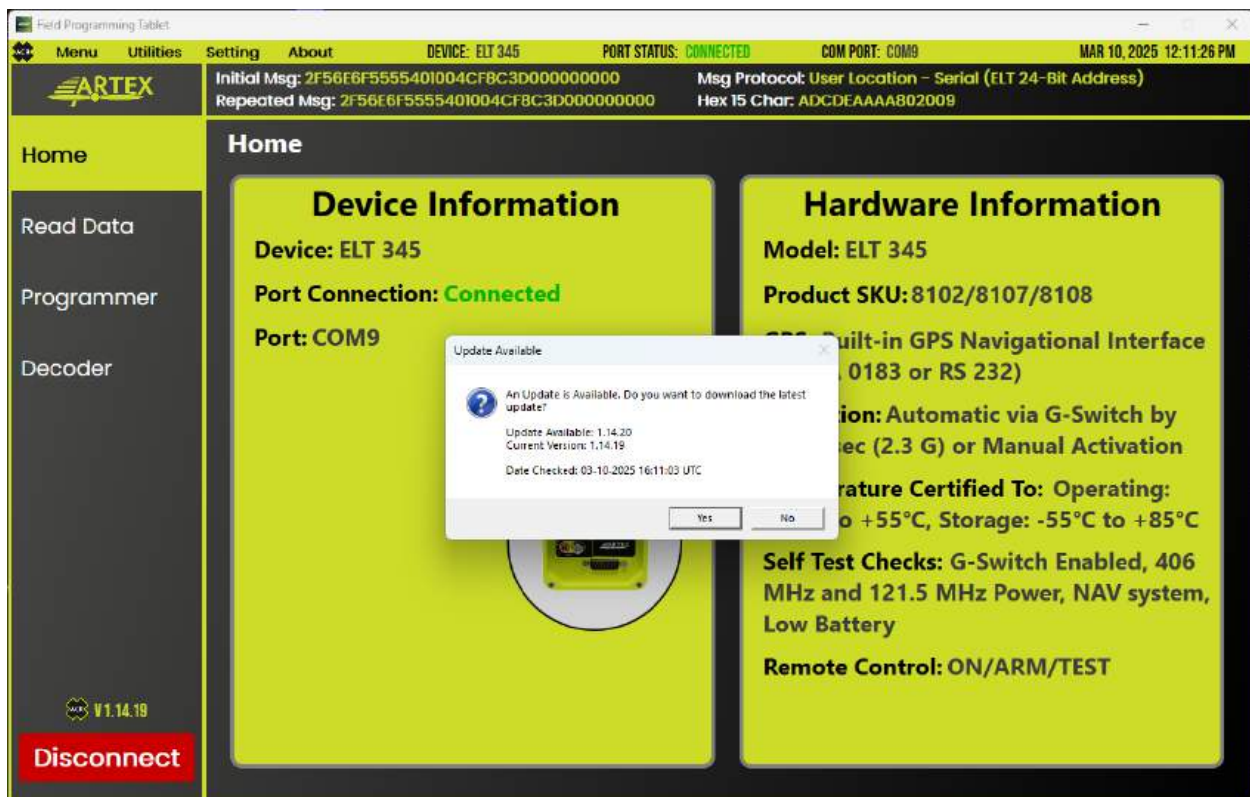


Figure 25 - FPT Updater

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

4. The FPT user can either select **Yes** or **No**.

4.1. Selecting **Yes** continues with the update

**Note:** This closes the FPT application to ensure a proper installation.

4.2. Selecting **No** does not install the update and the FPT user can continue using the application.

5. Once the Yes button is selected, the FPT begins trying to download the update.

6. If successful, the FPT closes and an installer window appears (Figure 26).

7. Proceed through the installer window prompts to properly install the new FPT software update.

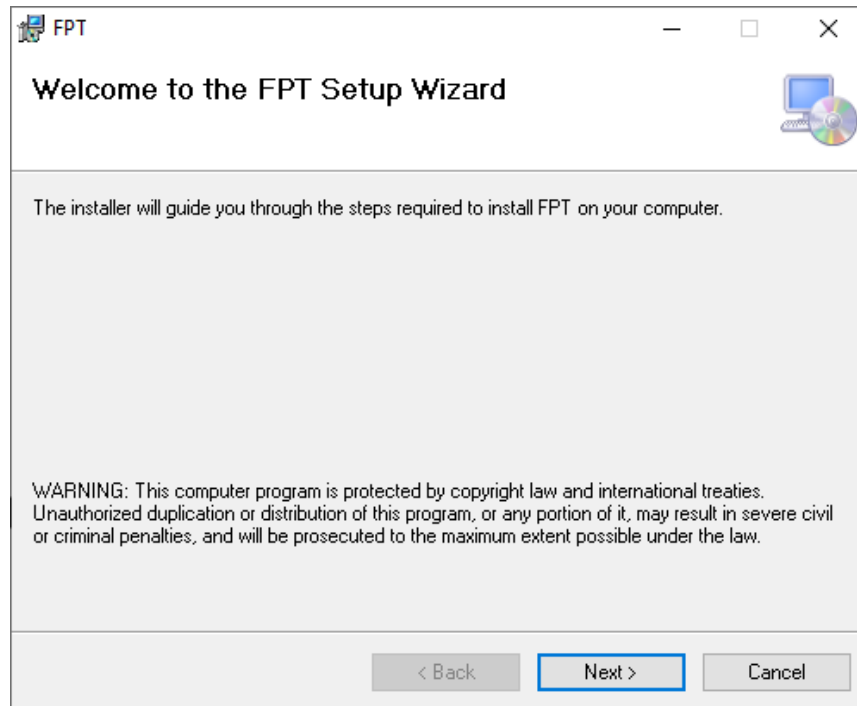


Figure 26 - FPT Installer

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

8. Please read through the End User License Agreement (Figure 27) then select **I Agree** then select **Next**.

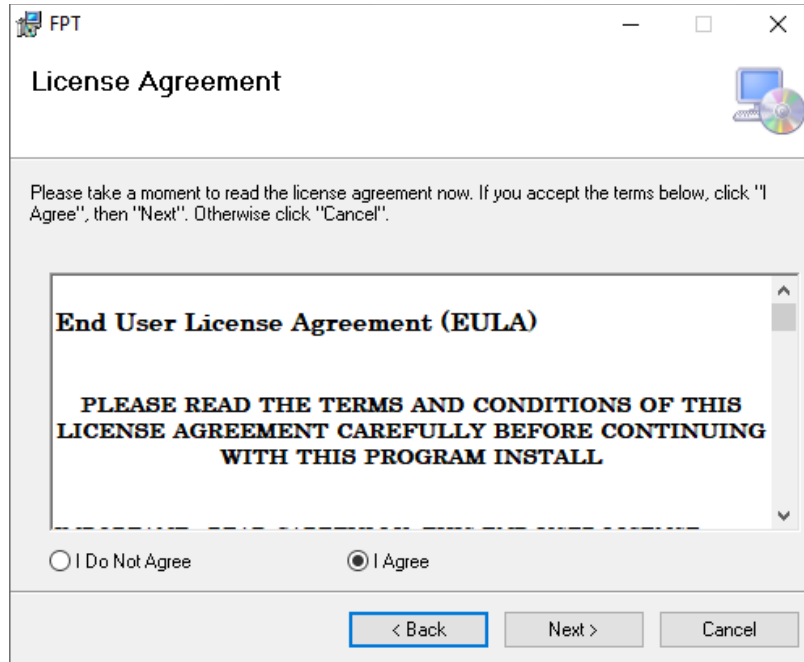


Figure 27 - FPT Installer

9. Verify that the install location is the following path: **C:\Program Files (x86)\ACR Electronics, Inc\FPT\** (Figure 28).
10. Select **Next**.

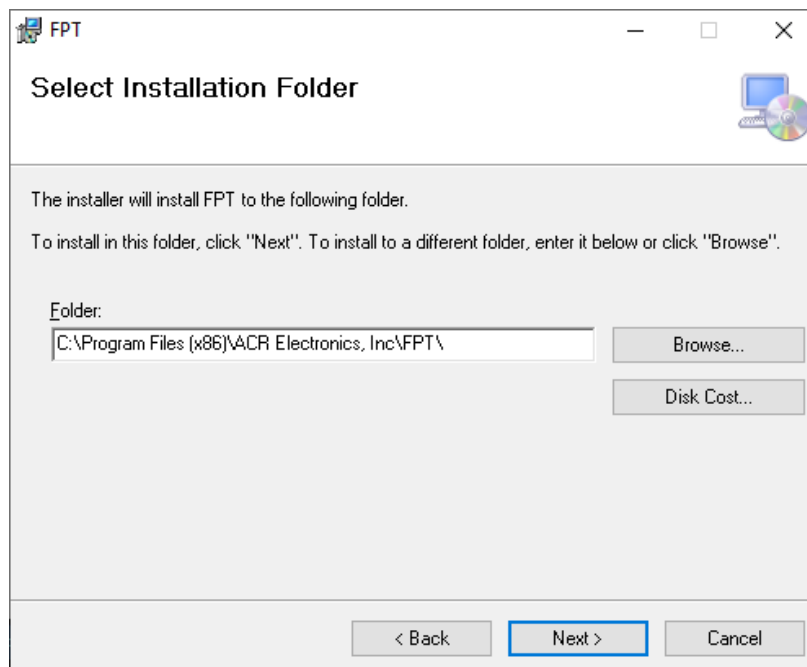


Figure 28 - FPT Installer

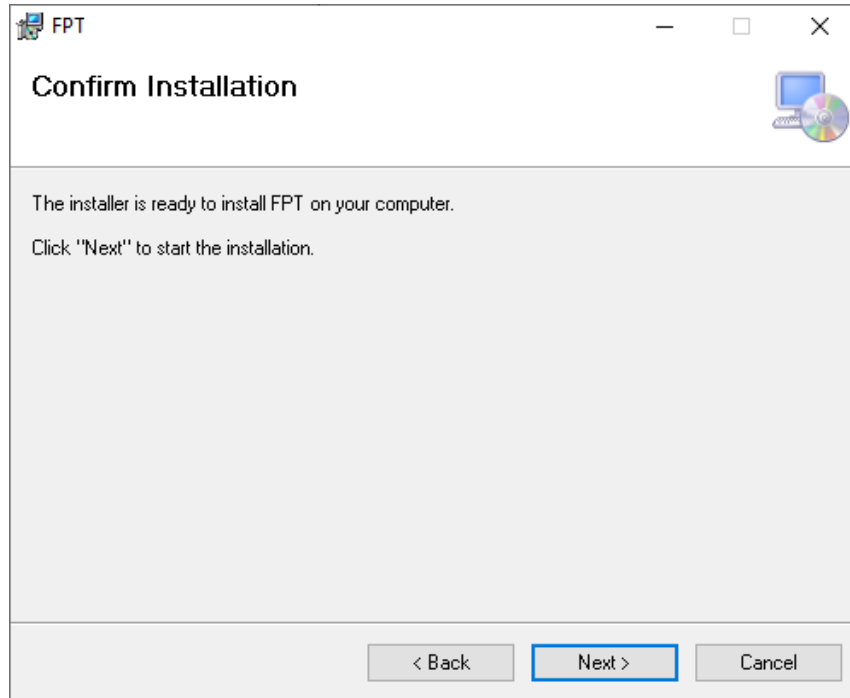


**ARTEX PRODUCTS / ACR ELECTRONICS, INC.**

**FPT USER MANUAL**

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

11. Confirm that you want to install the new FPT software (Figure 29). Select **Next**.



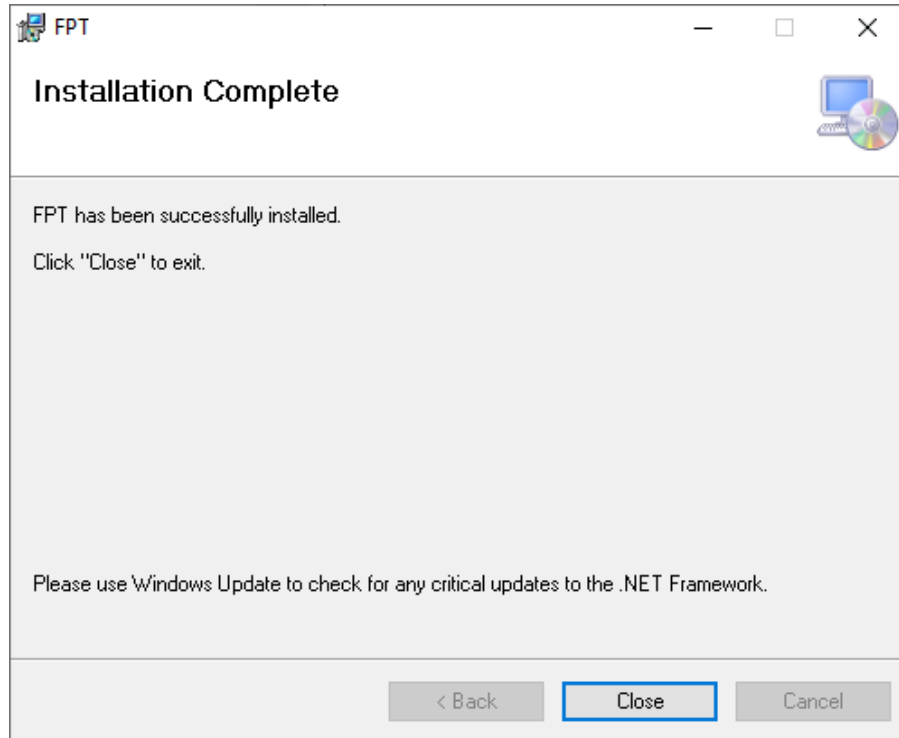
**Figure 29 - FPT Installer**

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

12. Wait for the installation to finish (Figure 30) then select **Close**.



**Figure 30 - FPT Installer**

13. After the installation is complete, please open the FPT app again and verify that the version number at the bottom left of the screen has changed to a newer version.

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

## 13.2 MANUALLY CHECK FOR UPDATES

1. On top of automatically checking for updates, the FPT user may manually check for updates while using the FPT.
2. Select the **Utilities** menu item at the top of the screen then select **Check for Updates** (Figure 31). This manually checks the server for an update.
3. If an update is found, please proceed through the same installation process as in **Section 13.1**.

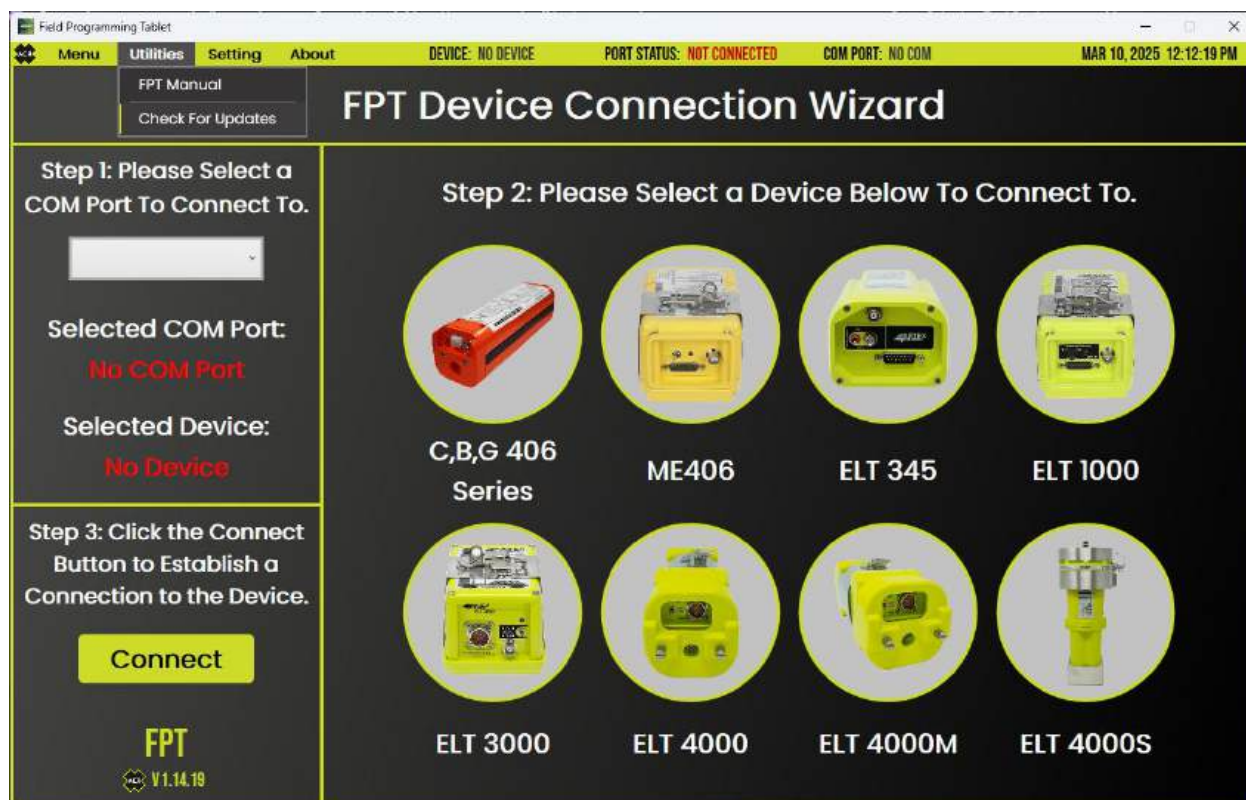


Figure 31 - FPT Manual Update Check

## ARTEX PRODUCTS / ACR ELECTRONICS, INC.

### FPT USER MANUAL

ELT 345 ELT 1000, ME406, C406, B406, G406, ELT 3000, ELT 4000/4000M, ELT 4000S

### 13.3 TURN ON/OFF AUTO UPDATES

1. If the FPT user would prefer not to have automatic updates there is an option to turn them off.
2. It is advised to keep the automatic updates turned on so the FPT can stay up to date with the latest FPT features.

**Note:** If the automatic updates are turned off, the FPT user must manually check for updates.

3. To turn off automatic updates, select the **Utilities** menu item at the top of the screen (Figure 32) then select **Update Checker -> OFF**.
4. To turn back on automatic updates, select the **Utilities** menu item at the top of the screen then select **Update Checker -> ON**.

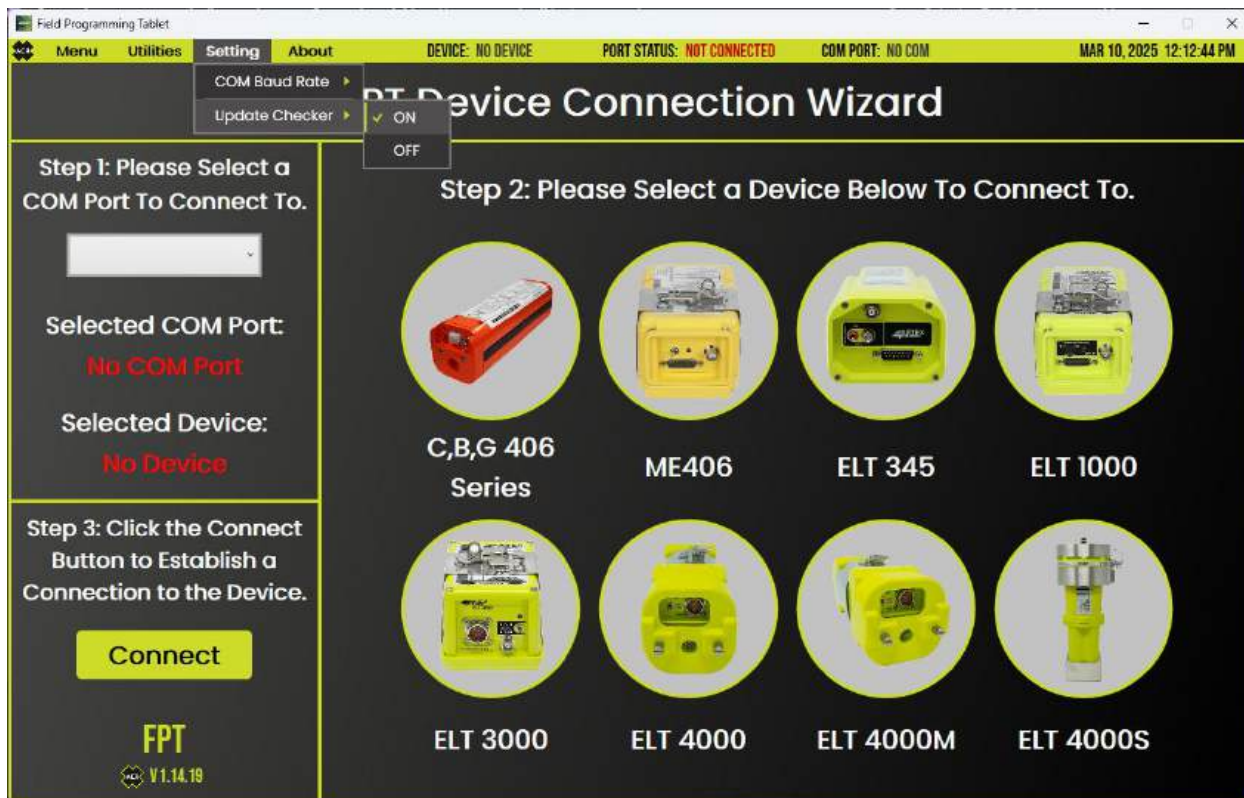


Figure 32 - FPT Update Preference