

**Pilot's Operating Handbook and
FAA Approved Airplane Flight Manual
Supplement
for**

**Artex ME406
406 MHz Emergency Locator
Transmitter System**

Aircraft registration: _____
Aircraft serial number: _____

When Artex ME406 406 MHz ELT System is installed in this airplane, this POH Supplement is applicable and must be inserted in the Supplements Section (Section 9) of the Pilot's Operating Handbook. This document must be carried in the airplane at all times. Information in this supplement adds to, supersedes, or deletes information in the basic plane Pilot's Operating Handbook.

Section 1 - General

The 406 MHz emergency locator transmitter (ELT) is a radio-frequency transmitter that generates a signal to assist in search and rescue for missing aircraft. The ELT automatically transmits the standard sweep tone on 121.5 MHz if rapid deceleration is detected. In addition, for the first 24 hours of operation, a 406 MHz signal containing aircraft specific information is transmitted at 50 seconds for 440 milliseconds.



Figure – 1
Artex ME406 ELT System

Section 2 - Limitations

No Change.

Section 3 - Emergency Procedures

Forced Landing

Before performing a forced landing activate the ELT transmitter manually by turning the ELT remote switch in the circuit breaker panel to the 'ON'-position. Immediately after a forced landing, perform the following procedure:

• Note •

The ELT Remote Switch and Control Panel Indicator could be inoperative in the event of a forced landing. If inoperative, the inertia "G" switch will activate automatically. However, to turn the ELT OFF and ON will require manual switching of the main control switch located on the ELT unit.

1. ELT Remote SwitchVerify ON
 - Switch the ELT Remote Switch ON even if the red LED annunciator is flashing.
 - If airplane radio operable and can be safely used (no threat of fire or explosion), turn radio ON and select 121.5 MHz. If the ELT can be heard transmitting, it is working properly.
2. Battery PowerConserve
 - Do not use radio transceiver until rescue aircraft is sighted.

After sighting rescue aircraft:

3. ELT Remote Switch "ARM" position
to prevent radio interference.
 - Attempt contact with rescue aircraft with the radio transceiver set to a frequency of 121.5 MHz. If no contact is established, switch the panel mounted switch to the 'ON'-position immediately.

(Continued on following page)

The ELT transmitter can be removed from the airplane and used as a personal locating device if it is necessary to leave the airplane after an accident. Access the unit as described below and set the ELT transmitter control switch to the 'ON'-position.

1. Remove tail bay access panel along the aft portion of the RH fuselage or the lower aft center access panel of baggage compartment.
2. Disconnect fixed antenna lead from front of unit.
3. Disconnect lead from remote switch and indicator unit.
4. Disconnect antenna from mounting tray.
5. Loosen attach straps and remove transmitter unit.
6. Attach antenna to antenna jack on front of unit.
7. Set main control switch to ON.
8. Hold antenna upright as much as possible.

Section 4 - Normal Procedures

No Change.

Section 5 - Performance

No Change.

Section 6 - Weight & Balance

Installed optional equipment is included in the licensed weight and balance data in Section 6 of the Basic Pilot's Operating Handbook.

Section 7 - Systems Description

This airplane is equipped with a self-contained Artex ME406 406 MHz ELT System. The transmitter unit is automatically activated upon sensing a change of velocity along its longitudinal axis exceeding 4 to 5 feet per second. Once activated, the transmitter transmits VHF band audio sweeps at 121.5 MHz until battery power is gone. In addition, for the first 24 hours of operation, a 406 MHz signal is transmitted at 50-second intervals. This transmission lasts 440 ms and contains identification data received by Cospas-Sarsat satellites. The transmitted data is referenced in a database maintained by the national authority responsible for ELT registration to identify the beacon and owner.

The ELT transmitter is installed immediately behind the aft cabin bulkhead, slightly to the right of the airplane centerline. The transmitter and antenna are accessible through the avionics bay access panel along the aft portion of the RH fuselage or the lower aft center access panel of baggage compartment. The main transmitter control switch is labeled "ON" - "ARM". The transmitter is in the armed position for normal operations. A red LED annunciator flashes when the ELT is transmitting. A battery pack consisting of two "D" cell lithium batteries mounts to a cover assembly within the transmitter to provide power to the transmitter. The expiration date of the batteries are indicated on the outside of the ELT battery case and recorded in the aircraft logs.

A warning buzzer is mounted to the transmitter mounting tray. When the ELT is activated, the buzzer "beeps" periodically. This buzzer operates in tandem with the ELT panel indicator and serves as a redundant annunciation. Power to the buzzer is supplied by the ELT batteries.

The ELT Remote Switch and Control Panel Indicator (RCPI) is located below the circuit breakers on the circuit breaker panel. The RCPI provides test and monitoring functions for the transmitter. The panel contains a switch labeled "ON" - "ARM", and a red LED annunciator. The red LED annunciator flashes when the ELT is transmitting. Power to the LED is supplied by the clock bus on the MCU.

Section 8 - Handling, Servicing & Maintenance

ELT and RCPI batteries must be inspected in accordance with the Airplane Maintenance Manual. The ELT and RCPI batteries must be replaced upon reaching the date stamped on the batteries, after an inadvertent activation of unknown duration, or whenever the batteries have been in use for one cumulative hour.

Inspection / Test

After setting transmitter switch to ARM position, the ELT automatically enters a self-test mode. The self-test transmits a 406 MHz test coded pulse that monitors certain system functions before shutting off. The test pulse is ignored by any satellite that receives the signal, but the ELT uses this pulse to check output power and frequency. Other parameters of the ELT are checked and a set of error codes is generated if a problem is found. The error codes are indicated by a series of pulses on the transmitter LED, remote control panel indicator LED, and alert buzzer.

• Note •

FAA regulations require that transmitter tests only be done during the first 5 minutes of each hour and must not last for more than 3 audio sweeps (1.5 seconds). If you are at a location where there is an FAA control tower or other monitoring facility, notify the facility before beginning the tests. Never activate the ELT while airborne for any reason.

Operators may wish to use a low quality AM broadcast receiver to determine if energy is being transmitted from the antenna. When the antenna of the radio (tuning dial on any setting) is held about 6 inches from the activated ELT antenna, the ELT aural tone will be heard on the AM broadcast receiver. This is not a measured check, but it does provide confidence that the antenna is radiating sufficient power to aid search and rescue. The aircraft's VHF receiver, tuned to 121.5 MHz, may also be used. This receiver, however, is more sensitive and could pick up a weak signal even if the radiating ELT's antenna is disconnected. Thus it does not check the integrity of the ELT

system or provide the same level of confidence as does an AM radio.

1. Tune aircraft receiver to 121.5 MHz.
2. Turn the ELT aircraft panel switch "ON" for about 1 second, then back to the "ARM" position. The receiver should transmit about 3 audio sweeps.
3. At turn-off (back to 'ARM' state) the panel LED and buzzer should present 1 pulse. If more are displayed, determine the problem from the list below.
4. Codes displayed with the associated conditions are as follows:
 - a. 1-Flash: Indicates that the system is operational and that no error conditions were found.
 - b. 2-Flashes: Not used. If displayed, flight prohibited until condition corrected by an authorized technician.
 - c. 3-Flashes: Open or short circuit condition on the antenna output or cable. Flight prohibited until condition corrected by an authorized technician.
 - d. 4-Flashes: Low power detected. Flight prohibited until condition corrected by an authorized technician.
 - e. 5-Flashes: Indicates that the ELT has not been programmed. Does not indicate erroneous or corrupted programmed data. Flight prohibited until condition corrected by an authorized technician.
 - f. 6-Flashes: Indicates that G-switch loop is not installed. Flight prohibited until condition corrected by an authorized technician.
 - g. 7-Flashes: Indicates that the ELT battery has too much accumulated operation time (> 1hr). Flight prohibited until condition corrected by an authorized technician.

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Section 10 - Safety Information

No Change.