

## Supplement No. 011

# Kannad AF INTEGRA Emergency Locator Transmitter

Aircraft Serial Number:

Aircraft Registration Number:

Date of Issue **29. 01. 2020**

This Supplement must be attached to the POH when the Kannad AF INTEGRA ELT is installed in accordance with the manufacturer's approved documentation.

Information in this Supplement completes or replaces information in the basic POH for the below mentioned parts only. Limitations, procedures and information not mentioned in this Supplement and included in the basic POH stay valid.

This Supplement completes information necessary for the aircraft operation with equipment installed on the aircraft. This Supplement is a permanent part of this POH and must remain in this POH at all times when the Kannad AF INTEGRA ELT is installed.

This supplement is EASA approved under

Approval No.: 10072699

Approval Date: 09. 03. 2020



## RECORD OF REVISIONS

[illegible]

## Chapter 1 GENERAL INFORMATION

The aircraft is equipped with ELT Kannad AF INTEGRA that is installed in accordance with the approved aircraft manufacturer documentation. The Emergency Locator transmitter Kannad AF INTEGRA consists of the unit and the control panel.

ELT Kannad AF INTEGRA has the Authorization No. EASA.210.1265, REV. E, dated 01/12/2015.

## Chapter 2 LIMITATIONS

Kannad AF INTEGRA Operation Manual, Doc. No. DOC09078E (Revision 04 or later) must be available to the flight.

## Chapter 3 EMERGENCY PROCEDURES

### NOTE

Carry out the following procedure in case of necessity.

To transmit an emergency signal:

a. ELT	Check if the emergency locator transmitter was switched on – red indicator on the remote control panel flashing periodically during 121.5 MHz transmission or long flash during 406 MHz transmission, buzzer is buzzing (1 beep per 0.7 second during 121.5 MHz transmission and silence during 406 MHz transmission) and radio station is receiving an audio signal on frequency of 121.5 MHz
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If the ELT was not switched on automatically:

b. <b>ON ARMED RESET/TEST</b> switch on the remote control panel or <b>ARM OFF ON</b> switch on ELT unit	<b>ON</b>
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If the antenna was damaged, if there is a danger of ELT damage, or if the place of emergency landing must be abandoned, then:

c. ELT	Remove from the aircraft and place it in a safe distance from the aircraft or carry with you
d. <b>ARM OFF ON</b> switch on ELT unit	<b>ON</b>

## Chapter 4 NORMAL PROCEDURES

### NOTE

Refer to the Kannad AF INTEGRA Operation Manual,  
Doc. No. DOC09078E (Revision 04 or later) for complete  
operating procedures.

#### Before Takeoff

a.	<b>ARM OFF ON</b> switch on ELT unit	<b>ARM</b>
b.	<b>ON ARMED RESET/TEST</b> switch on the remote control panel	<b>ARMED</b>

#### After Landing

a.	<b>ON ARMED RESET/TEST</b> switch on the remote control panel	<b>ARMED</b>
b.	<b>ARM OFF ON</b> switch on ELT unit	<b>ARM</b>

For long-term parking:

c.	<b>ARM OFF ON</b> switch on ELT unit	<b>OFF</b>
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## Chapter 5 PERFORMANCE

No change.

## Chapter 6 WEIGHT AND BALANCE AND EQUIPMENT LIST

Upon removal or installation of the Kannad AF INTEGRA ELT the change of basic empty weight and corresponding center of gravity of the aircraft must be recorded according to Chapter 6 of the POH.

## Chapter 7 DESCRIPTION OF AIRCRAFT AND SYSTEMS

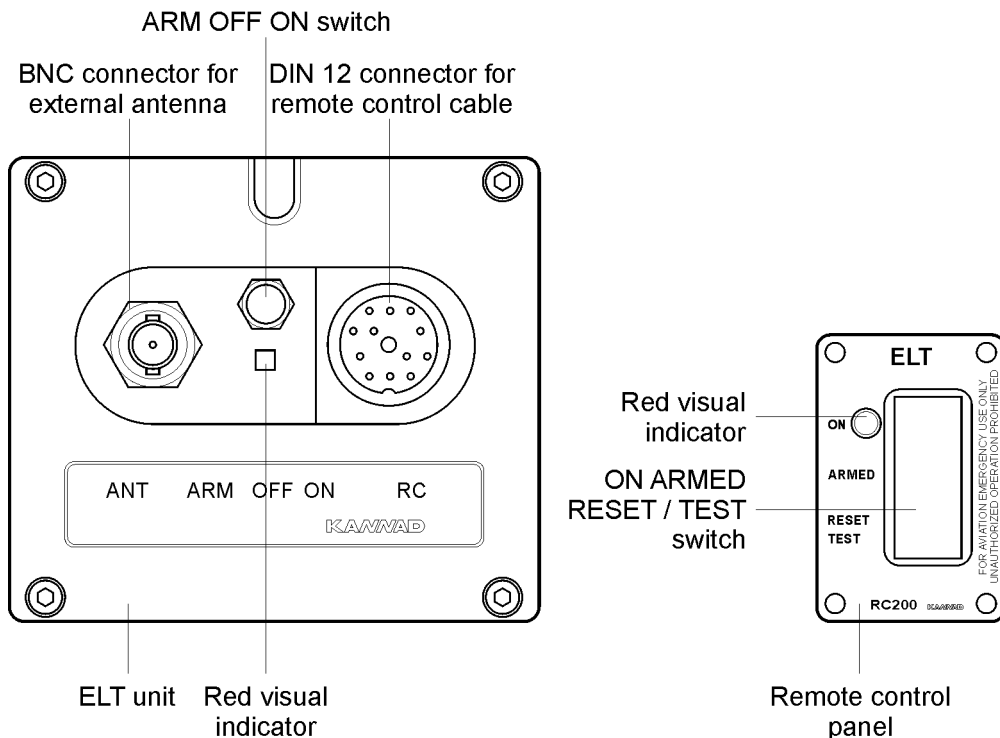
The Kannad AF INTEGRA is an EASA ETSO approved, FAA TSO approved 406 MHz ELT Emergency Locator Transmitter. The Kannad AF INTEGRA ELT consists of the unit, which is installed in the baggage compartment and the remote control panel which is installed in the right section of the instrument panel. The external antenna is installed in a bracket on the right part of the fuselage behind the baggage compartment and is accessible through a baggage bulkhead cover access panel of the baggage compartment bulkhead.

The Kannad AF INTEGRA ELT can be activated either automatically when the crash occurs (activated by a shock sensor) or manually (activated by a switch on the transmitter itself or on RCP). The ELT transmits emergency signals on two frequencies:

- 406 MHz (Cospas-Sarsat frequency) for precise pinpointing and identification of the aircraft,
- 121.5 MHz used for homing in the final stages of the rescue operations.

The KANNAD AF INTEGRA is certified as Automatic Fixed (AF) ELT with the approved outside antennas. It is equipped with a GPS and integrated backup 406 MHz antenna. In emergency situation it can be removed from the aircraft and work independently, if required.

The energy to the unit is provided by a battery pack composed of a LiMnO<sub>2</sub> two-element battery. Until the battery expiry date, the duration of the 121.5 MHz transmission is over 48 hours at -20°C. As it is therefore preferable to keep the battery power for 121.5 MHz homing frequency transmission for the rescue operations, in compliance with Cospas-Sarsat specifications, the 406 MHz transmission is deliberately stopped after 24 hours to extend the 121.5 MHz transmission for as long as possible.



*Fig. 8 - 1 Kannad AF INTEGRA ELT*

The ELT operates automatically if the switch on the unit is in **ARM** position. In a crash, a G-switch (shock detector) turns the ELT "ON" when the ELT is subjected to an important change of velocity (or deceleration). The ELT unit is automatically activated and starts continuously transmitting emergency radio signal at frequency of 121.5 MHz. Every 50 seconds the unit transmits a 406 MHz signal.

Manual activation of the ELT is possible either by setting the switch on the remote control unit to **ON** position or by setting the switch on the unit to **ON** position.

The activated ELT can be switched off by setting the switch on the remote control unit to **RESET** position panel or by setting the switch on the unit to **OFF** position.

The ELT has 4 different modes of operation:

- Off.
- Self-test (temporary mode).
- Armed (standby mode to enable automatic activation by the shock sensor or by a remote control panel).
- On (transmission).

### Off Mode

The ELT is off when the switch is in the **OFF** position; no part of the ELT is energized. This mode must only be selected when the ELT is removed from the aircraft or when the aircraft is parked for a long period or for maintenance.

### Self-Test Mode

The self-test mode is a temporary mode (max duration 15 seconds) in which the ELT checks the main characteristics of the transmitter (Battery voltage, Programming...) and enables digital communication with programming and test equipment. This mode is selected:

- When switching from **OFF** to **ARM** on ELT;
- When switching to **RESET/TEST** on the remote control panel (provided that the switch of the ELT is in the **ARM** position);
- When switching to **ON** prior to transmission.

The buzzer operates during the self-test procedure.

After about 10 seconds, the test result is displayed on the red visual indicator as follows:

- One long flash, duration 1 s, indicates valid test.
- A series of short flashes, 200 ms, indicates a faulty functioning.

The number of flashes indicates the type of failure:

- 3 + 1 = LOW BATTERY VOLTAGE.
- 3 + 2 = LOW TRANSMISSION POWER.
- 3 + 3 = FAULTY VCO LOCKING (FAULTY FREQUENCY).
- 3 + 4 = NO IDENTIFICATION PROGRAMMED.
- 3 + 5 = FAULTY VSWR (LINK TO EXTERNAL ANTENNA).
- 3 + 6 = INTERNAL GPS SERIAL LINK.

### Armed Mode

In order to enable activation by the G-Switch or with the remote control panel, the ELT must be in standby mode with the switch in the **ARM** position. This mode is mandatory during flight. The ELT should remain in the **ARM** position except when the aircraft is parked for a long period or for maintenance.

### On Mode

This mode is selected:

- Manually by switching the ELT to **ON**;
- By switching the remote control panel switch to **ON** (provided that the ELT switch is in the **ARM** position);
- Automatically when a crash occurs (provided that the ELT switch is in the **ARM** position).

When this mode is selected, the ELT starts transmitting:

- After 50 seconds on 406 MHz (one 406 MHz burst every 50 seconds) to the external antenna;
- After the GPS lock on 121.5 MHz (continuous transmission between each 406 MHz burst). If GPS lock does not occur within 5 minutes, the 121.5 MHz will be activated.

The red visual indicator on the ELT and on a remote control panel) flashes and the buzzer operates.

- Red visual indicator:
  - 1 short flash during ELT transmission on 121.5 MHz (every 0.7 seconds);
  - 1 long flash during ELT transmission on 406 MHz (every 50 seconds)
- Buzzer:
  - 1.5 Hz pulse signal (recurrence 0.7 s) during ELT transmission on 121.5 MHz

In case of accidental activation, the ELT can be reset either by switching it to **OFF** or by switching to **RESET** on the remote control panel.

The number of 406 MHz bursts transmitted is recorded. This information is available when the ELT is connected to a programming and test equipment (PR600).

Refer to the Kannad AF INTEGRA Operation Manual, Doc. No. DOC09078E (Revision 04 or later) for complete descriptions of the ELT.

## Chapter 8 HANDLING AND SERVICING

### ELT Functional Check (121.5 MHz Frequency Only)

#### NOTE

It is recommended to perform a self-test at least once every six months but it should not be done more than once a month. Inform the ATC about the check.

#### NOTE

Each self-test consumes energy from the battery. Do not perform self-tests more often than the maximum allowed, the battery life-time might be shorter than specified.

a.	Active frequency of 121.5 MHz	Set on the board transceiver.
b.	Start transmission:	<b>ARM OFF ON</b> switch on ELT unit – <b>ON</b> or <b>ARM</b> or <b>ON ARMED RESET/TEST</b> switch on the remote control panel – <b>ON</b> (the ELT shall be in <b>ARM</b> position)
Only 2 "sweep tones" are heard after 5 seconds, then the 121.5 MHz stops.		
c.	Stop transmission:	<b>ARM OFF ON</b> switch on ELT unit – <b>OFF</b> or <b>ARM</b> or <b>ON ARMED RESET/TEST</b> switch on the remote control panel – <b>RESET/TEST</b> (the ELT shall be in <b>ARM</b> position)
Continue to listen to 121.5 MHz for a few seconds to ensure that the ELT does not continue to transmit after the test is terminated.		
d.	<b>ARM OFF ON</b> switch on ELT unit	<b>ARM</b>

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