

# AMERI-KING CORP.

406 MHZ ELT EMERGENCY LOCATOR TRANSMITTER  
WITH GPS/NAV POSITION INTERFACE  
(406 / 243.0 / 121.5) MHz,  
**Part No. AK-451-RK1-GPS-C**



## WORLD'S LEADING PRODUCER OF ELT AND MULTI AXES ELT

### DESCRIPTION

The Ameri-King AK-451-RK1-GPS-C is an ELT Retrofit Kit, USA FAA TSO'd approved, Transport Canada approved, European EASA ETSO'd approved, Brazil Anatel approved, 406 MHz ELT Emergency Locator Transmitter, Types (AF) Automatic Fixed, (AP) Automatic Portable. It transmits distress signals on triple (406 Satellite /243 Military /121.5 Civilian) MHz frequencies, the aircraft GPS/NAV position.

The supreme advantage feature is the aircraft GPS/NAV Latitude / Longitude exact position shall be transmitted, within 1 minute, on the very first burst, without waiting for a Polar Orbiting Satellite (could be up to 4 hours). Enhance the accuracy significantly, for the ground search area, from 1-3 kilometers (non GPS/ NAV Position) to 22 meters typical (with GPS/NAV Position).

Having triple frequencies insures your distress message reaches both NOAA Satellite Operation and US Air Force AFSR Ground Operation, Search and Rescue Team, with 100% fully confidence, due to transmitting on both 243.0 MHz Military and 121.5 MHz Civilian bands, for immediate ground search dispatch, narrowing the searching time to almost nothing.

The choice is clear, when it come to Safety, Fast, Accuracy, Reliability, Price and Product Support, Ameri-King's AK-451-RK1-GPS-C is your best choice.

Retrofit Applicable to Cessna Single Engine and Caravan Aircraft types: SkyCatcher 162, Skyhawk 172, Skylane 182, Stationair 206, 350 Corvalis, 400 Corvalis TT, Caravan 675, Caravan Amphibian, Grand Caravan, Super Cargomaster

### FEATURES

- Triple Frequencies 406/121.5/243 MHz ELT.
- **Dual Antenna:** Whip Type (300 Knots) and Portable Hand Use.
- Lithium 4 D-cells **up to 78 hours @-20 deg C, @ End of 5 yrs useful life time.**
- Simple Installation. All accessories include Wiring Adapter, Pre-fabricated Wiring Harness Assy, Remote Control Panel, Audible Warn Buzzer, Coaxial Cable Assy, and Universal Mounting Tray
- Interface with aircraft GPS/NAV, via RS-232 Aviation Protocol: Garmin Int'l Inc., Honeywell Bendix King Inc., Trimble Nav Inc., Arnav Inc., Il Morrow Inc.
- Coding Programming Worldwide, all available ELT Protocols, i.e. Long Messages (Location Protocol; User Location Protocol; National Protocol)
- Self Diagnosis built-in. OXCO tech for perfect grad temp stability
- PERP: 5W (406.028 MHz) 50 mw (243.0/121.5) MHz
- RTCA Env Categories: F1XBA[204/183][204/183]XR [204/183]XXSZXXX(AC)204/183(BC)XXXX(C/204)
- Direct Retrofit to 121.5 MHz ELTs manufactured by Ameri-King AK-450, ACK Tech / Pointer / Narco / Artex / Kannad.

**Made in U.S.A.**



# SPECIFICATIONS FOR PART NO. AK-451-RK1-GPS-C

**APPROVALS:** FAA TSO C126/C91a, Transport Canada;  
European EASA ETSO 2C126/91a, Brazil Anatel,  
and Cospas Sarsat ELT Emergency Locator  
Transmitter, Types(AF)(AP)

## PHYSICAL CHARACTERISTICS:

### \*Size and Weight:

Main unit: (4.27"Wx2.95"Hx5.64"L) 1lb 14 oz  
Remote unit: (2.17"Wx1.20"Hx1.18"L) 1.0 oz  
Whip antenna: (15" L) 0.25 Lbs  
Portable antenna: (17"L) 4 oz  
Coax Cable Assy: (6 ft) 5 oz  
Aural Monitor: (0.7"Dia x 1"D) 0.3 oz  
Mounting tray: (4.51"W x 0.75"H x 5.87"L) 4.0 oz

### \*Case and color:

High impact, fire resistant, waterproof, high temperature ABS plastic, safety international orange color.

## GENERAL SPECIFICATIONS (STANDARD CONDITIONS):

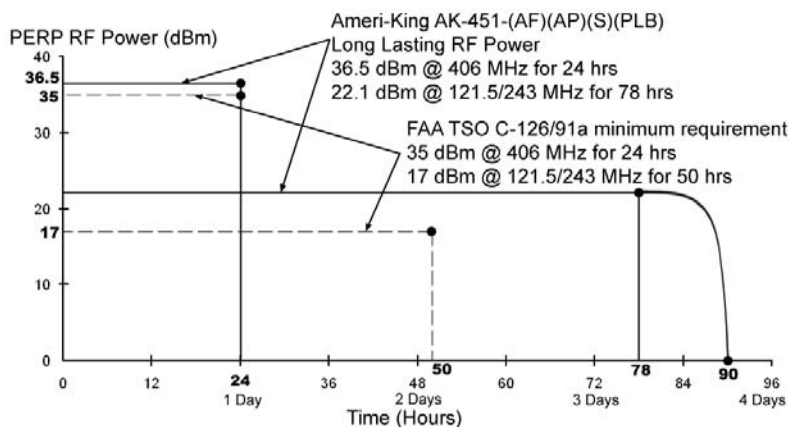
**Operating frequencies:** 406.028 +/- 0.001 MHz  
243.0/ 121.5 MHz +/- 0.0025%

### Transmitter Power Output:

5 W +/- 2 db @ 406 MHz, for 24 Hrs  
22 +/-2 dBm @ 243 and 121.5 MHz, for 78 Hrs

**Self Test:** built-in with Failure detection flashing code number for Diagnostic Maintenance check: RF Output Power & Frequencies, Battery Low Voltage, ELT shuts down, etc.

## OPERATING LIFE, 78 HRS @ -20 deg C @ End of 5 years Battery Life (TYP):



**TYPICAL LIFE TEST @ -20 DEGREES C @ END OF 5-YEAR BATTERY LIFE**

## ENVIRONMENTAL TEST SPECIFICATIONS:

- \* RTCA DO – 204A / 183 / 227
- \* RTCA DO – 160E ENV.CAT F1XBA[204/183][204/183]XR[204/183]XXSZXXX(AC)204/183](BC)XXXX(C/204)
- \* **TEMP. AND ALTITUDE:** Category F1  
Low / High Temperature: -20 / +55 deg C (Operating)  
-55 / +85 deg C (Storage)  
Altitude: 55,000 feet
- \* **AUTOMATIC CRASH ACTIVATION:**  
Velocity change of 2.3 +/- 0.3G (4.5 +/- 0.5 fps)
- \* **CRASHWORTHINESS:** 100G, 23 ms, 6 directions

## INSTALLATION LOCATION:

Tail or Cockpit/ Cabin installation with dual or single Antennas

## PROGRAMMING CODING PROTOCOLS:

Worldwide, all available ELT Protocols in Long Messages (Standard Location/National Location /User Location)

**Location Protocol (Long):** Standard Location ELT ELT with A/C 24 Bit Address; ELT with A/C Operator Designator; ELT with Serial No.; National Location.

**User-Location Protocol (Long):** Aviation; ELT with Serial No.; ELT with A/C Operator Designator & Serial No.; ELT with A/C 24 Bit Address.

## GPS/NAV POSITION INTERFACES:

Interface with Ext. a/c GPS/NAV, via RS-232 Aviation Protocols:

Garmin Int'l Inc 500/400/300/200/100 Series  
Honeywell Bendix King KLN 900/90B/94/89B/88 etc  
Trimble Nav Inc. NAV1000/2000, TNL2100/3100 etc  
Arnav Inc. R50/50i, STAR 5000, FMS5000, MFD etc  
II Morrow Inc. Flybuddy, 2001 NMS, etc.

## ACCESORIES SUPPLIED:

Lithium Batteries Package, **Ultra Long 78 Hrs**, LiMnO<sub>2</sub>; Portable Antenna, aircraft Fixed Whip Antenna, Coax Cable Assembly, Remote Control Panel, Wiring Adapter, Wiring Interconnect Assembly, Audible Monitor, Mounting Tray, Velcro holder, Hex Key Tool. All of the accessories are provided and may be ordered extra separately.

## WARRANTY:

Two (2) years. Optional extended four (4) years. Lifetime warranty includes no charge for the electronic components. After the warranty has expired, customers shall pay only the labor repair cost.

## HOW TO ORDER:

 Cessna Aircraft Co., Wichita, Kansas  
Citation Parts Distribution:  
(800) 835-4000, USA/Canada  
International customers: (316) 517-7542  
Parts for Propeller Aircrafts:  
<http://www.cpdexpress.com/main.html>

Part No. AK-451-RK1-GPS-C includes the following items:

- AK-451-GPS-C: ELT Main Unit, 406/121.5/243 MHz
- 451017-1B-C: Whip Antenna, 406/121.5 MHz
- 451017-4S-C: Portable antenna, 406/121.5/243 MHz
- 451 0171-60-C: Coaxial Cable, RG142, 6 ft
- 450 004-C: Remote Unit Assy
- 450 0041-6-C: Pre-fab Wiring Harness Assy
- 450 014-C: Holder
- 451 018-C: Audio Buzzer, w/ 2 ft wiring
- 451 00181-C: T-Adapter Connector
- 451 014-C: Velcro holder
- SC-451-C: Soft case
- IK-451-1-GPS-C & IK-451-2-GPS-C: Wiring adapter kit
- 450 013-C & 450 013-1-C: Mounting Tray and Adapter tray



**AMERI-KING CORPORATION**

**TOMORROW'S TECHNOLOGY ... TODAY!!**

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