

# AMERI-KING CORP.

406 MHZ ELT EMERGENCY LOCATOR TRANSMITTER  
WITH GPS/NAV POSITION INTERFACE  
(406 / 243.0 / 121.5) MHz,  
Part No. AK-451-RK2-GPS-C



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

### DESCRIPTION

The Ameri-King AK-451-RK2-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-RK2-GPS-C is your best choice.

Applicable to all aircrafts from Cessna, Beechcraft, Bombardier, Boeing, Airbus, Eclipse, etc. (see tables on pages 3 and 4 for complete list)

### FEATURES

- Triple Frequencies 406/121.5/243 MHz ELT.
- **Dual Antenna:** Blade Type (1.0 Mach) 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-RK2-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  
Blade antenna: (9" L) 1.4 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):

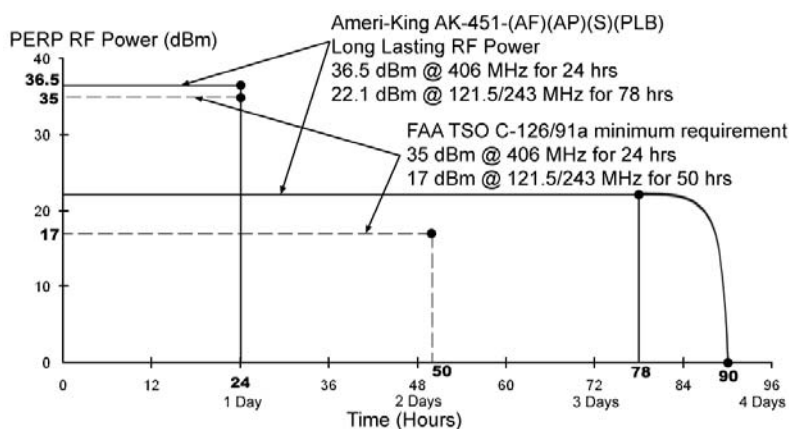
**Operating frequencies:** 406.028 +/- 0.001 MHz  
243.0/ 121.5 MHz +/- 0.0025%

### 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-RK2-GPS-C includes the following items:

- AK-451-GPS-C: ELT Main Unit, 406/121.5/243 MHz
- 451017-3A-C: Blade Antenna, 406/121.5/243 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!!**

17881 Sampson Lane., Huntington Beach, CA 92648

Tel: (714) 842-8555 - Fax: (714) 842-4235

Email: [ameriking9@aol.com](mailto:ameriking9@aol.com) Website: [www.ameri-king.com](http://www.ameri-king.com)

Range	American Champion	Beechcraft	Bell Helicopter	Bombardier	Cessna	Cirrus Aircraft	Commander	Diamond	Eclipse	Embraer	Eurocopter
<b>&gt; 300 ktas</b>  Blade antenna  Part No. AK-451-RK2-GPS-C		King Air B200GT, 308 ktas		Learjet 40 XR, mach 0.81	Mustang, 340 ktas			D-Jet, 315 ktas	Eclipse 400, 330 ktas	EMB 120, 315 ktas	
		King Air 350, 312 ktas		Learjet 45 XR, mach 0.81	CJ1+, 389 ktas				Eclipse 500, 370 ktas	ERJ 135, mach 0.78	
		Premier IA, 451 ktas		Learjet 60 XR, mach 0.81	CJ2+, 418 ktas					ERJ 140, mach 0.78	
				Challenger 300, mach 0.81	CJ3, 417 ktas					ERJ 145, mach 0.78	
				Challenger 605, mach 0.82	CJ4, 435 ktas					ERJ 145 XR, mach 0.80	
				Challenger 850, mach 0.80	Encore+, 428 ktas					Phenom 100, 380 ktas	
				Global 5000, mach 0.89	XLS+, 441 ktas					Phenom 300, 450 ktas	
				Global Express XRS, mach 0.89	Sovereign, 458 ktas  X, 525 ktas					Legacy 450, mach 0.82  Legacy 500, mach 0.82  Legacy 600, mach 0.82  Lineage 1000, mach 0.82	

Range	Hawker	Mooney	Piper Aircraft, Inc.	Robinson Helicopter	Sikorsky
<p data-bbox="121 142 247 175">&gt; 300 ktas</p> <p data-bbox="107 235 262 267">Blade antenna</p> <p data-bbox="52 297 317 358">Part No. AK-451-RK2-GPS-C</p>	<p data-bbox="352 86 625 110">Hawker 400XP, 450 ktas</p> <p data-bbox="352 147 590 172">Hawker 750, 466 ktas</p> <p data-bbox="352 209 625 233">Hawker 850XP, 448 ktas</p> <p data-bbox="352 271 625 295">Hawker 900XP, 466 ktas</p> <p data-bbox="352 332 604 357">Hawker 4000, 482 ktas</p>		<p data-bbox="1062 86 1251 110">PiperJet, 360 ktas</p>		