

# 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



BendixKing  
KLN 900



BendixKing  
KLN 90B



BendixKing  
KLN 94



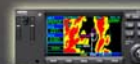
Garmin  
GNS 530W



Garmin  
GPS 500W



Garmin  
GNC 300XL TSO



Garmin  
GPS 400W



## 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 Piper's Mirage, Matrix, Seneca V, Seminole, Arrow, Warrior III, and Meridian

### FEATURES

- Triple Frequencies 406/121.5/243 MHz ELT.
- **Dual Antenna:** Whip Type (300 Knots) and Portable Hand Use, or Rod3 Type (350 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., II 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: F1XB[A][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  
Rod3 antenna: (13.47") 0.4 lb  
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):

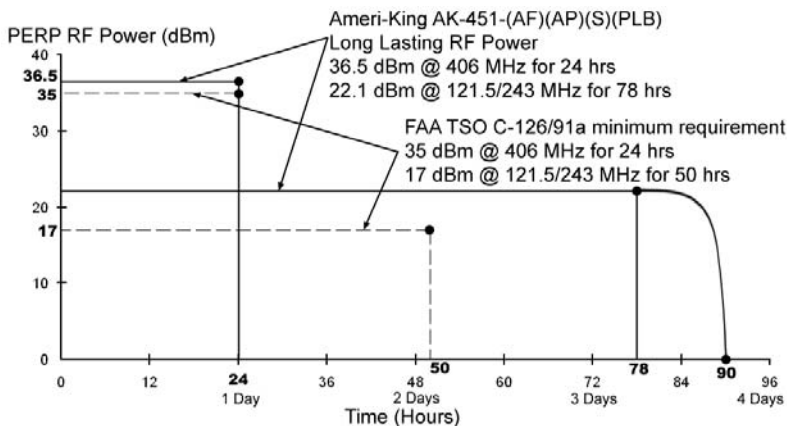
**Operating frequencies:** 406.028 +/- 0.001 MHz  
243.0/ 121.5 MHz +/- 0.0025%

### 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:

**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  
(Not included with Meridian)  
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

**Part No. AK-451-RK1A-GPS-C** includes all items as Part No.  
AK-451-RK1-GPS-C with Rod3 Antenna (451017-2A-C) in  
place of Whip Antenna (451017-4S-C)



**AMERI-KING CORPORATION**

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

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