## DK180 Low Frequency Acoustic Beacon



### **Specifications**

Radiant Power Corp's Dukane-Seacom DK180 is designed and qualified to meet the newly developed standards FAA TSO-C200 / ETSO-C200 dated 6/26/2012 as per SAE–AS6254 issued on Feb-2012.

The DK180 will assist in the rapid location of airframe wreckage after an accident at sea by emitting a 8.8 kHz acoustic signal. The device will transmit for a minimum of 30 days in addition to the existing Underwater Location Device (ULD) requirements on FDR and VDR. The lower frequency acoustic signature of the DK180 travels farther than existing ULDs thus improving locating efforts.

### **Physical Characteristics**

Watertight aluminum case (2"dia, 6"length).

Capable of operation at depths of up to 20,000 feet(6096 m)

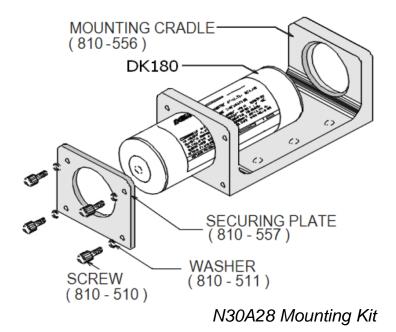
Detectable at a range of 2000 to 4000 yards (1800 to 3600 meters) based on environmental factors.

Sustained pressure up to 8700 psi.

Water switch actuation initiates beacon operation upon immersion in either fresh or salt water.

The battery used to power the DK180 will sustain beacon operation for a minimum of 30 days at an acoustic output of 160 dB operating frequency is 8.8 kHz.

#### **Mounting**





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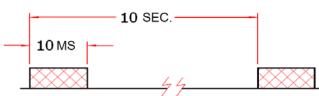
# **DK180**Low Frequency Acoustic Beacon



### **Beacon Specifications**

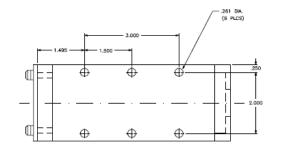
Operating Frequency
Pulse Width
Pulse Repetition Rate
Power Source
Operating Life
Actuation
Size
Weight
Operating Depth
Case Material
Acoustic Output
Warranted Life

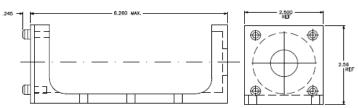
8.8 kHz  $\pm$  1 kHz 10 milliseconds min. 10 Sec max. Lithium battery 30 Days Fresh or salt water 2.0 in (5.1 cm) diameter 6.0 in (15.2 cm) long 26 oz (unit), 16 oz (mounting bracket/hdwr) Surface to 20,000 ft (6096 m) Aluminum 160 dB re 1 µPa at 1m 5 years from date of manufacture



8.8 kHz PULSES

### **Product Dimensions**





## Theory of Operation

The DK180 is a battery operated underwater acoustic pulse generator (beacon / pinger) that is activated when the water switch is immersed in either fresh or salt water.

The water switch is part of a low current triggering circuit, which when closed will initiate normal pulsing of the beacon oscillator circuit. The output voltage of the oscillator is coupled to the piezo-ceramic transducer ring.

The resultant mechanical motion is transmitted to the metal case of the beacon, which in turn radiates acoustic energy into the surrounding water at 8.8 kHz.

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