

**COASTAL ENVIRONMENTAL SYSTEMS, INC.**

# **WEATHERPAK® FOR RAE SYSTEMS PLUMERAЕ**



**COASTAL  
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SYSTEMS, INC.**

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## **WEATHERPAK® for RAE Systems PlumeRAE**

WEATHERPAK® portable weather stations are professional quality instruments that have been the number one choice of Responders for more than 20 years...

WEATHERPAK® is designed to be rapidly deployed (by one person) in or near the hot-zone. Constructed of "non-sparking" aluminum WEATHERPAK® is safe to use... The electronics are intrinsically safe, and the entire system is protected against RF and other electromagnetic interference. No tools are required for assembly. WEATHERPAK® employs no plastic or PVC structural components. It is impervious to most airborne chemicals, moisture and most harsh environmental conditions. The WEATHERPAK® is the only weather station available that is designed specifically for First Responders and that can withstand the rigors associated with this job.

WEATHERPAK® for PlumeRAE is unique in that it employs RAE Systems' RAElink2 wireless modem and an "Ultra-Sonic" Wind Sensor. Unlike mechanical wind sensors, an ultra-sonic wind sensor has no moving parts, is very rugged and is very accurate even at low wind speeds.

Once assembled, WEATHERPAK® for PlumeRAE automatically aligns itself to True North, begins sampling, and then transmits data every 15 seconds. This data can be viewed directly on the ProRAE RemoteHost Controller and also automatically updates the PlumeRAE Plume Measurement Software, developed by SAFER® Systems.

# FEATURES

The WEATHERPAK® has been designed specifically for First Responders.

WEATHERPAK® is easy to deploy, simple to operate, and rugged beyond belief. Coastal has served the fire service and military response community for over twenty years. We understand when you arrive "on scene" you have more serious issues to address than: "How do we get the weather station working?" or "Am I getting accurate weather data?"

Here are just a few examples:

## **AUTOMATICALLY UPDATES SAFER® SYSTEMS ...**

The WEATHERPAK® automatically computes five-minute running averages of wind data and wind stability class (the most important factor in determining chemical plume size and dispersion). This data is updated every 15 seconds, along with air temperature, humidity and barometric pressure.

## **SELF-ALIGNING ELECTRONIC COMPASS**

What is the compass declination or off-set in your area? Do you add or subtract the correction? The WEATHERPAK® eliminates lost time and potentially dangerous misalignments because its internal electronic compass is factory preset for use in your region.

## **CONSTRUCTED OF "NON-SPARKING" ALUMINUM**

The WEATHERPAK® is designed to withstand harsh environments, rough handling and to provide many years of reliable service. Built of a special Mil-Spec grade aluminum, which is extremely rugged and resistant to corrosion, the WEATHERPAK® will survive a 6 foot drop to concrete and is water im-mersible (for decontamination, etc).

## **DEPLOYABLE IN LESS THAN ONE MINUTE ...**

by a Responder wearing protective gear, without using tools. There are no cables to connect...no exposed wires or switches.

## **WEATHERPAK® HAS STOOD THE TEST OF TIME**

Although the WEATHERPAK® has been upgraded many times in its twenty-year history, one thing has remained the same ... the satisfaction and loyalty of the hundreds of WEATHERPAK® users. Talk to your peers who own one or just ask us; we are happy to provide you with our extensive reference list!

# SPECIFICATIONS

## **SENSORS**

### **ULTRASONIC WIND MONITOR**

#### **Wind Speed**

Range: 0 to 60 m/s (130 mph)  
Survival: 100 m/s (220 mph)  
Start Speed: 0.01 m/s (0.02 mph)

#### **Wind Direction**

Range: 360° (No dead band)  
Survival: 100 m/s (220 mph)  
Threshold: 0.01 m/s (0.02 mph)

## **TEMPERATURE**

Operational Range: -40°C to 50°C (-40°F to 122°F)  
Accuracy:  $\pm 0.2^{\circ}\text{C}$  over full range (0.36°F)  
Resolution:  $0.5^{\circ}\text{C}$  (1.0°F)

## **COMPASS**

Accuracy:  $\pm 1.0^{\circ}$   
Resolution:  $1^{\circ}$   
Tilt Limit:  $\pm 45^{\circ}$

## **ELECTRONICS**

32-bit Micro controller  
Memory: 256K (1 MB optional)  
Display: 4 x 20 character LCD with EL backlighting  
EMI/RFI: 3 levels of protection

## **MECHANICAL**

Size: 4" x 22.5" (10.3 cm x 57.2 cm)  
(base unit without wind monitor)  
Weight: 8 lbs (3.6 kg)  
(base unit without wind monitor)

#### **Carry Weight:**

ABS Carry Case w/WEATHERPAK® 24 lbs. (10.9 Kg)  
Canvas Tripod Bag 30 lbs. (13.6 Kg)  
Material: 6061-T6 aluminum, 316SS hardware,  
O-Ring sealed Mil-Spec connector, thermo  
plastic resin coated.

Set-up Time: 60 seconds, from carry case to full operation

## **ENVIRONMENTAL**

The WEATHERPAK® meets or exceeds exposure to the following environmental tests per MIL-STD-810D as follows:

Temperature: Operation from -40°C to 70°C  
(-40°F to 160°F)  
Pressure: Operation from 800 to 1100 mBar  
Humidity: 10 day exposure with 100% RH  
Rain: 20 in/hr  
Shock/Vibration: Survival of 6 ft drop



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