WeatherHawk Inversion

A Temperature Inversion Detection System for Mosquito Abatement

The WeatherHawk Inversion system continuously measures temperature and wind to detect suitable conditions for mosquito abatement. This information enables abatement district managers to efficiently deploy resources.

Benefits

- Labor and chemical savings reduce costs
- Real-time data eliminates guesswork
- 24/7 monitoring of environmental conditions
- Inversion detection for air-quality alerts
- Portability for microclimate monitoring
- SMS alert message capability to one or more cell phones

Product Details

Electronics

A rugged datalogger logs the measurements and sends the data to the base computer using either a serial cable or an optional spread-spectrum radio. The radio option provides wireless capability up to a half mile, line of sight (LOS).

Sensors

Temperature sensors are installed at 3 ft and 30 ft for detecting temperature inversions. A relative humidity sensor is included with the lower temperature sensor. Wind speed and direction sensors are installed on a crossarm at 9 ft. Sensor cables are color coded for easy assembly.

Power

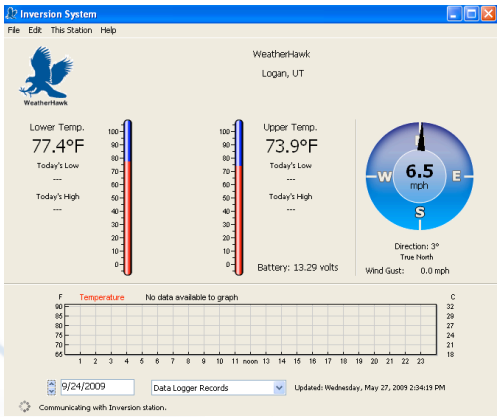
The station runs on AC power or an optional solar panel can provide long-term, remote monitoring.

Mounting Hardware

The electronics enclosure and sensors are mounted to a 30 ft guyed mast. Guy wires attached to ground anchors allow the mast to withstand wind speeds up to 85 mph. An optional 30 ft tower is also available for permanent installations.

Software

Easy-to-use software is both Mac and PC compatible. The software measures, displays, and logs data in real time. When a temperature inversion occurs, the software also provides visual and SMS alerts.



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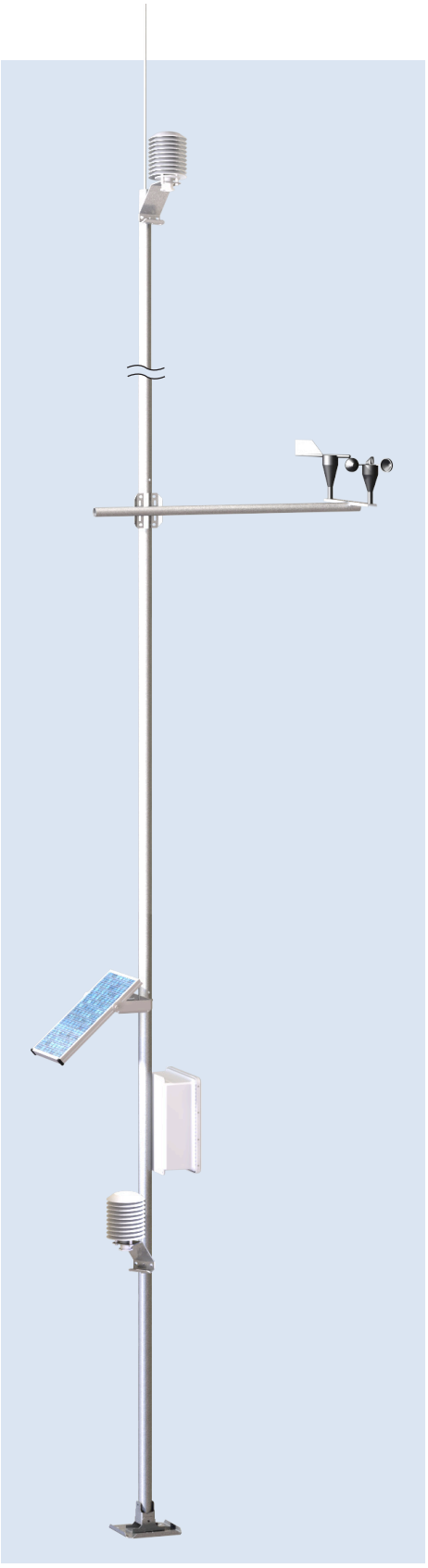
Specifications

Datalogger	
Temperature Range:	-40 to +158° F (-40 to +70° C)
I/O:	Direct connection RS232 Optional wireless RF Optional IP server module
Charging Voltage:	16 to 22 V
Current Drain:	10 mA

Sensors			
Air Temperature (30 ft):	Thermistor	**Range:**	-40 to +122°F (-40 to +50°C)
Air Temperature (3 ft):	Platinum Resistance Thermometer	**Range:**	-13 to +140°F (-25 to +60°C)
Relative Humidity:	Capacitive	**Range:** **Accuracy at 68°F:**	0 to 98% non-condensing ±3% RH (0 to 90% RH) ±5% RH (90 to 98% RH)
Wind Speed:	Three-cup anemometer	**Range:**	0 to 120 mph (0 to 60 m/s)
Wind Direction:	Vane	**Azimuth:**	0 to 360 degrees

Mast		
Weight:	66 lbs (30 kg)	
Length:	30 ft (9.2 m)	consists of five 6-ft (1.82 m) sections
Main Mast Diameter:	1.9” (48.26 mm)	
Top Section Mast Diameter:	1.74” (44.2 mm)	
Base Radius:	20 ft (6 m) to each of three guy points, 120 degrees apart	
Guy Configuration:	three guy cables at two levels	guyed at 12 ft (3.6 m) and at 24 ft (7.2 m)
Recommended Guy Wire Pretension:	100 lbs each	
Maximum Weight of Mounted Equipment:	75 lbs (34 kg)	
Maximum Allowable Wind Gust:	85 mph (136 km/hr)	

Anchors		
Capacity	Duckbill (temporary)	1,100 lbs (485 kg)
	Manta Ray (long term)	3000 lbs (1361 kg)



WeatherHawk®

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