



New Mountain Ultrasonic Weather Station Instrument

The New Mountain NM150wx weather station Instrument is the only all-in-one weather sensor that calculates true and apparent wind speed and direction, barometric pressure, air temperature, relative humidity, dew point and wind chill temperature. The internal compass and Global Positioning System, calculates true wind speed and direction. The UV stabilized; compact housing is fully waterproof and resistant to chemicals.

The personal computer based NM150WX Weather Station Instrument comes with our exclusive Weatherview32 Software. Data can be viewed in both digital and analog format and can be continuously saved to a file.



How the New Mountain NM150WX Weather Station Instrument Works



Figure 1

The weather station contains four transducers, visible through the four holes in the top of the sensor's wind channel (see figure 1). These transducers operate in pairs—one transducer injects a pulse into the air, and the other (directly opposite to it) listens for the arrival of that pulse (see figure 2). Each pulse bounces off the anodized aluminum plate at the bottom of the wind channel and is carried by the wind to arrive at the opposing transducer a short time later. When there is no wind, the pulse travels at the speed of sound from the sender to the receiver. Whenever the wind is blowing in that direction, the pulse will arrive sooner than if the air is still. The four transducers take turns in sending and receiving pulses to cover all eventualities of wind direction. A built-in microprocessor combines the measurements from all four transducers to calculate the resultant wind speed and direction.

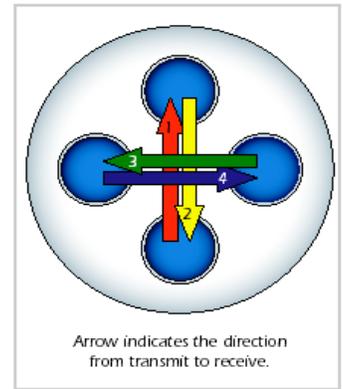
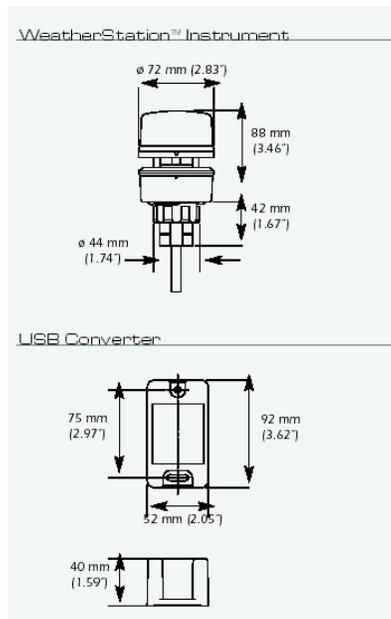


Figure 2

- Wind speed range 0m/s to 40m/sec (0 mph to 92 mph)
- Wind speed resolution .1m/sec (.1 mph)
- Wind speed accuracy .5m/s + 10% of reading
- RMS from 0m.s to 5 m/s, 1m/s or 4% of reading
- RMS from 5m/s to 40m/sec, whichever is greater
- Wind speed in rain 2.5 m/sec (5.7 mph) RMS
- Wind direction range 0 to 360
- Wind direction resolution .1°
- Wind direction accuracy 6°
- RMS from 2m/sec to 5m/sec 3°
- RMS > 5m/sec (0° to 55° C dry)
- Wind direction in rain 8° > 8 knots (9.2 MPH)
- Compass Accuracy 1° RMS
- Air Temp Range -25°C to 55° C
- Air Temp Resolution .1°C
- Air Temp Accuracy +/- 1°C wind >4 knots
- Pressure 850 hPa to 1150 hPa
- Pressure Accuracy +/- 20 hPa
- Humidity Range 10% to 95%
- Accuracy +/- 4 units RH
- Operating temp range -25°C to 55°C



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