

# Multi Sensor Weather Station Model AS-2000 Air Scan Multi Modular Weather Monitoring Station

The Model AS-2000 Modular Weather Station is a computer-based meteorological system designed as a “user-friendly” solution for data storage and real-time monitoring of weather conditions. The standard package includes:

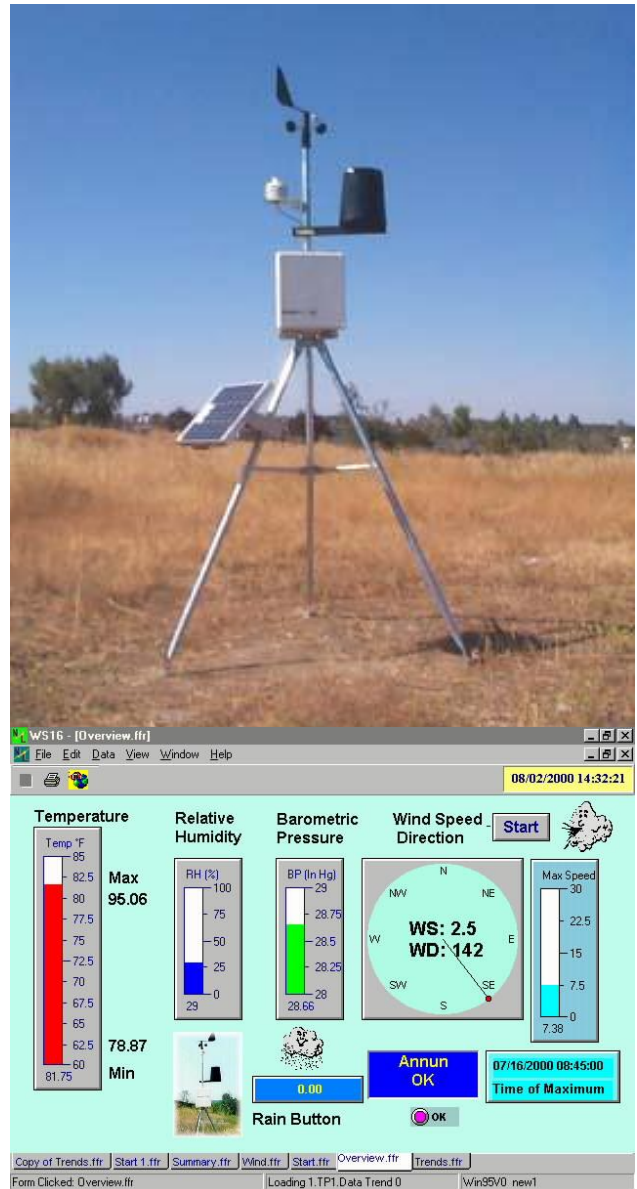
- Wind Speed
- Wind Directions
- Air Temperature
- Relative Humidity
- Barometric Pressure
- Precipitation
- Data Logger
- Tripod & Mast
- Solar Radiation Shield for temp/humidity
- Cables & Mounts
- Set-Up Disk

Additional Sensor options include solar radiation, water or soil temperature, auxiliary air temperature, rain gauge upgrade, evaporation and soil moisture.

The unique modular system design provides plug-and-play functionality for adding or replacing sensors. The AS-2000 Data Acquisition Module includes the following features larger nonvolatile memory, selectable averaging intervals, 12 bit analog conversion, 0.1% F.S. accuracy, two alarm outputs, and optional modem communications.

The AS-2000 is supplied with an attractive desktop data acquisition module with a memory capacity of 128KB RAM (approximately 45 days at 15 minute intervals with 6 sensors). The standard system includes a 120Vac power adapter and RS232 serial port for connection to a personal computer. For outdoor or remote applications, two enclosure options are available. One is for sites with AC power and the other utilizes a solar panel. Both options include a NEMA-4X enclosure and rechargeable battery to allow continued operation in the event of power failure.

Data can be viewed using Windows HyperTerminal or other terminal programs such as Procomm. A one page real-time text display or an ASCII row and column format may be selected. A menu is provided for setting the date and time, alarms, logging interval etc. Optional graphical displays software is available for viewing real-time and historical data charts and graphs.



# Specifications

## Data Acquisition Module

Reporting units: English or Metric, all measurements

Operating power: 10-16 Vdc

Power consumption: 60 mA maximum

Serial port: 9-pin d-sub connector, selectable baud rate, flow control

Memory: 128KB RAM, nonvolatile (45 days at 15 minute intervals with 6 sensors) Expandable to 256KB or 512KB.

## Operating Temperature

Transducers: -40° to 140° F (-40° to 60° C)

Data acquisition module: -40° to 140° F (-40° to 60° C)

## Timekeeping

Format: MM/DD and HH:MM

Accuracy:  $\pm 30$  seconds/month

## Barometric Pressure

Range: 28.25 to 30.75 inches Hg

Measurement span: 2.50 inches Hg (85 hpa)

Resolution:  $\pm 0.01$  inch Hg or  $\pm 0.3$  hpa

Altitude offset: 0 to +10,000 feet, screwdriver adjustable

Absolute Accuracy: .05 inches Hg

## Wind Speed

Range: 0 to 125 mph (0-57 m/s)

Resolution:  $> 0.1$  mph

Accuracy:  $\pm 1$  mph

Starting threshold: 0.8 mph

Time constant: 2 seconds

## Wind Direction

Range: 0-360°

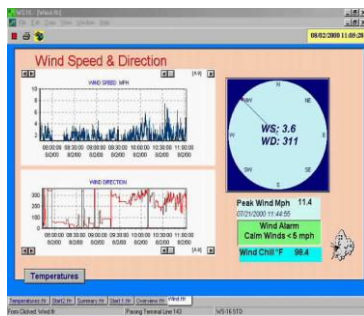
Resolution:  $> 1^\circ$

Accuracy:  $\pm 1^\circ$

Starting threshold:

200-WS-02E: 1.2 mph

200-WS-05E: 0.5mph



## Relative Humidity

Range: 0-100% RH

Accuracy:  $\pm 3\%$  (10-90%)

## Wind Direction

Range: 0 - 360°

Resolution:  $> 1^\circ$

Accuracy:  $\pm 3\%$

Sensor	Data	Maximum	Minimum	Average	Change
Wind Speed	2.50	7.38	0.44	3.67	3.88
Wind Direction	142	303	5	146	34
Temperature 1	81.75	95.06	58.81	78.87	3.18
Temperature 2	76.62	88.12	71.84	71.94	12.18
Rel Humidity	29	73	15	35	92
Baro Pressure	29.66	29.66	28.51	28.51	0.01
Rain	0.00	0.00	0.00	0.00	0.00

## Solar Radiation

(optional)

Sensor: Silicon Pyranometer

Spectral range: .4 to 1.1 microns

Sensitivity: 80 mV / 1000w/m<sup>2</sup> approx

Accuracy:  $\pm 5\%$

## Ordering Information

### AS-2000 Modular Weather Station

includes the following components:

AS-2000D Data Acquisition Module in Desktop Enclosure,

includes set-up disk and 6' serial cable  
200-WS-02E Wind Speed/Direction Sensor,  
40' cable

AS-2000TH Outdoor Temperature &  
Relative Humidity Sensor,  
40' cable

AS-2000THS Solar Radiation Shield for  
temp/rh sensor

AS-2000BP Barometric Pressure Sensor,  
18" cable

AS-2000RC Rain Gauge, includes  
mounting arm and 40' cable

AS-2000TM 5' Tripod & 5' Sensor Mast (8'  
total)

AS-2000P Power Supply, for desktop  
enclosure, 120Vac

### AS-2000EPA High Sensitivity Modular Weather Station

same as above but with:

200-WS-05E High Sensitivity Wind Sensor,  
40' cable

### Options:

AQ-10 Air Quality Particulate Air Monitor

4X-2000 NEMA 4X Enclosure

BATT-2000 Rechargeable Battery Pack