



Technical Help MiniMet

Calibration and Maintenance for MiniMet Weather Stations

1) DATAHOG2 DATALOGGER

The logger should never be used outdoors without either a sensor plug or blanking dustcap fitted to any of its sockets. Periodic check that all are in place is advisable. An annual check / replacement of the internal batteries (if fitted) should be made, and the 'O' ring lid seal replaced. The logger itself should be periodically checked that the electronics is recording accurately. This can be done by Skye or by applying known voltages, currents or digital pulses into the logger inputs and checking the logger's measurements.

2) RELATIVE HUMIDITY SENSOR

These sensors are recommended to be calibrated initially 6 months after installation and then annually. The sensor (or DataHog logger with integral sensors) can be returned to Skye or the RH recalibration kit (SKH 1092 or 1093) provides equipment for the user to make their own recalibrations using the saturated salt solution technique. The radiation screen and mounting should be kept clean to ensure good air flow over the sensor tip.

3) AIR TEMPERATURE

These sensors are recommended to be calibrated annually. Sensors can be returned to Skye or can be checked by a direct comparison against a reference thermometer in a controlled environment. The radiation screen and mounting should be kept clean to ensure good air flow over the sensor tip.

4) SOLAR RADIATION, UV AND LIGHT SENSORS

The light collecting surface of these sensors should be kept clean by gently wiping with a damp cloth. Do not use solvents. Care must be taken not to scratch this surface. These sensors require recalibration every 2 years, return to Skye is recommended for accurate calibration. Pyranometer sensors can be calibrated by a direct comparison against a reference pyranometer under clear sky conditions. Other sensors require an optical bench fitted with a reference lamp.

5) WIND SPEED

These wind speed rotors are initially calibrated in a wind tunnel by comparison with a standard reference rotor calibrated to national standards (NPL). As long as the physical shape or form of these calibrated parts does not change, (i.e. by physical damage to the rotor) then the sensor calibration does not change to any measurable degree as long as the bearings are allowing free movement. A bearing check is recommended annually, with a bearing change recommended at a minimum of every 5 years.

6) WIND DIRECTION

The position of the wind vane relative to the electrical potentiometer inside is calibrated and fixed at the time of manufacture. As long as the physical shape or form of the wind vane and its spindle does not change (i.e. by physical damage), then the sensor calibration does not change to any measurable degree as long as the bearings are allowing free movement. A bearing check is recommended annually, with a bearing change recommended at a minimum of every 5 years.

7) BAROMETER

Recalibration is recommended annually. Sensors can be returned to Skye or can be checked by a direct comparison against a reference.

8) RAINGAUGE

The raingauge top should be kept free of debris at all times. In dusty environments it may be necessary to clean the funnel filter regularly. These gauges can be easily recalibrated by adding an exact volume of water. Full instructions are given in the sensor manual.

Updated 01/07/11

Skye Instruments Ltd

21, Ddole Enterprise Park, Llandrindod Wells
Powys LD1 6DF, United Kingdom

TEL +44 (0)1597 824811
FAX +44 (0)1597 824812

EMAIL skyeemail@skyeinstruments.com
WEB <http://www.skyeinstruments.com>