WEATHER STATION WS-S2
Installation Instructions
(110V)

Wall mount by Key-hole slots in rear 14 inch (355mm) centres

Use cable knock-outs in cabinet to bring cable away

** WARNING **
Disconnect mains supply before removing lid

** WEATHER STATION can be powered by **
12 Volts D.C. at approx. 150 mA
or 110 Volts A.C. 60Hz

12 volt DC supply 110 Volts AC Supply
or Battery backup  FUSE 2A max
INSTALLATION INSTRUCTIONS

Roof Top Wind Sensor
This unit should be mounted on a mast of 25-50mm (1 - 2") diameter, as high and as far away as possible from chimneys, roof peaks, buildings, trees and transmitter aerials which may cause wind turbulence or interference. Where possible the roof top wind sensor should be mounted at least 2 metres above roof peaks and be secured in position with the arm pointing accurately to the NORTH.

The cable from the roof top wind sensor, which is supplied pre-wired, should be run down to the junction box, making sure it is properly secured.

Please note! This cable should not be run in close proximity to power or transmitter cables. If it is necessary to shorten the cable please do this when connecting the cable to the junction box.

WARNING: Under no circumstances should the wind sensor junction box cover or the terminal block inside be sealed in any way as it is designed to breathe.

Junction Box & Power Supply

This unit allows the wiring from the sensors to be terminated away from the main display cabinet and a single multi-core cable to be wired to the display. Five metres (15 ft) of cable are supplied which may be shortened if required. Increasing its length may cause inaccuracies in the temperature read-outs.

To avoid water travelling down cables into the junction box it is important to ensure that the cables drop below the junction box at some point preferably in the form of a 'U' bend. This will allow any water travelling down the cables to drip off.

The mains power supply is wired to this unit and care should be taken to ensure that the correct fuse is used i.e. 2 - 5Amp.

Display Unit

The display unit should be wall mounted by the two key-hole slots in the back panel 355mm (14") centres). The cable may be either channelled into the wall or brought out the side of the cabinet by using the cable knock-out holes at each side and at the bottom of the cabinet. Please make sure no dust gets into the display unit.

The display unit is connected to the junction box by an 12 core cable fitted to a 12 way plug. When connecting please ensure that the connector is the correct way round.
Barometric Pressure
Calibration of the barometer is achieved by adjustment of the screw head on the barometer movement, accessible through a hole in the back panel. This adjustment is best carried out when pressure is high and stable. A reading from your local Airport, Meteorological Station or Weather Forecast will be essential.

Gust Pointer
Rotate the gust knob anti-clockwise until it connects with the wind speed pointer. It will now be carried up to show the maximum speed.

Outside Temperature
The LCD temperature display shows the outside temperature at the roof top sensor. Celsius or Fahrenheit display may be selected by pressing the lowest of the buttons on the left side of the cabinet.

Maximum and Minimum temperatures are displayed as follows:-
Press the “MEM” button until the “MEM” symbol appears on the display.
Press the “MAX” button for the maximum and the “MIN” button for the minimum temperature readings.

Press the “MEM” button again to return to current temperature.

To reset the Maximum and Minimum readings first press the “MEM” button to clear the “MEM” symbol.

Press and hold the “MAX” or “MIN” button and at the same time, momentarily press the “MEM” button.

LCD Display
The LCD display has a back up battery to allow for accidental loss of power whilst still maintaining the records of temperature. Under normal usage the battery should last at least 2 years. Should the display reduce in contrast when the power is off, a replacement AA Alkaline battery is easily fitted by disconnecting the power supply and removing the back panel.

Important - Should the LCD display lock up, i.e. numbers are fixed or strange, slide the switch at the rear of the display unit to OFF for 30 seconds, then slide back to ON. This should cure the problem. If not repeat the operation.
You've installed your Weather Station and find that despite careful attention to detail, it does not work as expected. The following notes may assist in getting your Weather Station working.

Nothing appears to work.

Check that the power supply is turned on at the wall socket. Check power cable correctly wired to the correct terminals in the Junction Box. If the lamps inside the unit are illuminated then the power to the instrument is correctly wired and working.

Wind Direction wrong

If Wind Direction gives the wrong reading, check that the wind sensor has been mounted to point North. If the pointer is permanently displaying a Northerly or North North East wind direction then the wind sensor is not connected to the instrument or is incorrectly wired. Note that if the wind sensor is incorrectly wired then neither wind speed nor direction will work.

Wind Speed not working

Check anemometer cups are turning freely and if so wiring is correct (particularly the blue wire from the Wind Sensor) and the cable not damaged.

Temperature display flashing L.L.L.

This indicates that the temperature probe is not connected to the instrument. Check that the green and white wires from the wind sensor are correctly connected to the appropriate terminals.

Temperature display locked on a fixed temperature.

Check that neither 'Max.' or 'Min.' temperatures are selected. Press 'Mem' button to clear. If neither 'Max.' or 'Min.' temperatures are selected then the display may have locked up during installation. Other indications are that none of the buttons located at the side of the instrument will have any effect on the display. This can sometimes happen and can be corrected as follows:-

Remove the display from the wall (if wall mounted), to the left of the connector there is a small slide switch with two white buttons, slide these to the right to the off position. Leave for one minute, during which time the display(s) should go blank. Now slide the switches to the ON position (to the left). If this procedure fails to cure the problem repeat the procedure once more, waiting a little longer before sliding the switches to the ON position.

Temperature reading inaccurate

If the temperature reading is only 1 or 2 degrees out then the display can be recalibrated as follows:- Remove the display from the wall by lifting the unit and pulling forward. At the back of the temperature display there is a small pre-set with a screw driver-slot visible beneath and to the left of the connector. Adjust this with a small screw-driver to give correct display. Correction of the Aux. Temperature requires removal of the display back and adjustment of the pre-set immediately behind the Aux. Temperature display.

If the cable to the Wind Temperature has been extended, the accuracy of the temperature will be reduced, and although this can be adjusted as above, extremes of temperature may show other errors. If temperature reading is very inaccurate, showing HHH or L.L.L., check wiring to the junction box (usually white & green wires see installation instructions) and cable.

Barometer showing incorrect pressure.

The barometer may need adjusting to the pressure at your location. First obtain a pressure reading from a reliable nearby source such as an airfield or local met office. Having done this locate the adjustment screw visible through the back panel and using a small screwdriver turn the adjusting screw until the pressure reading is the same as that obtained locally. Do not attempt to turn the screw more than one turn in either direction.