

WeatherMaster 3000

Quick Start Guide

Quick Deploy Tripod Version

Revision 2.0
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1. Introduction

Welcome to Envirodata. We appreciate your purchase of our WeatherMaster 3000 system, and trust that it will give you long and useful service. We welcome your comments and suggestions at any time. If you experience any difficulties in installing and using the WeatherMaster, please contact us immediately so that we can provide a solution for you.

We wish you well with your application, and hope that the WeatherMaster 3000 is all that you expect it to be, and more.

2. Quick-start Guide

2.1 Overview

The WeatherMaster 3000 with IS12 Tripod has been specially designed for ease of installation, and you will find that rapid deployment is easy to achieve.

Important: Starting the Weather Station – on first receipt.

The Weather Station is delivered calibrated with its program file loaded. However, the Weather Station is shut down **during transit**, so it will need to be started again. This can be done before installation, or while the system is installed in the field. Normally, connecting a computer will start the WeatherMaster, indicated by a 2-second flash rate. If this is not possible, a start plug can be used to start the WeatherMaster, or briefly connect pin 6 and pin 4 of the communication plug.

Each system is supplied with a set of paired UHF modems running on the 2.4GHz frequency, with a 100m line of sight connection. These sets are not interchangeable and are labelled as set 1 and set 2 to remove confusion.

2.2 Software Installation

With your WeatherMaster 3000, you would have bought some software. We have 3 different software options. Please install the software where needed.

Caring for your disk(s) - CD-ROMs

Please ensure that any CD-ROMs supplied by Envirodata are stored in a secure place. It is also a good idea to make a copy of these.

To install the software, first check that you have sufficient free space. There must be at least 20Mb free. If there is not, please clear some space before continuing. Consult your operating system's manual for instruction about how to free disk space.

Using the WeatherMation LIVE software

For this option, you don't need to install any software. Once your station has been installed, please contact Envirodata so they can activate your station.

Installing and using the WeatherMation Self-Hosted software

Follow the instructions supplied with Envirodata's WeatherMation Getting Started Guide.

Installing and using the EasiAccess software

Follow the instructions supplied with Envirodata's EasiAccess software. See the EasiAccess Quick Start Guide in your manual.

2.3 Assembling the System

The WeatherMaster 3000 is shipped without the Mounting Arm, Solar Panel, Wind Speed Cups and Wind Direction Vane attached. This is to ensure that these items are not damaged during transit or installation. Please retain the packaging carton, as it has been specifically designed to protect the weather station, especially the spindle, during transport.



2.3.1 Mounting the station on the IS12 Tripod.

1) Recommended Accessories & Preparation for Rapid Deployment:

- *For this application you will need to source a suitable heavy duty carry case, such as a **Storm im2975**. Modify the foam to suit the WM3000.*
- *If done carefully you will be able to leave the wind speed cups and wind direction vane attached. If unable to leave attached they will need to be connected each time the station is set up for use.*
- *We recommend you provide 15V DC power into the station inside the case while on the vehicle to maintain the internal battery.*
- *There is a mains adapter included.*
- *We can supply cables to assist on request.*
- *This allows the station to remain 'on' in readiness for immediate use.*

2) Fold the tripod legs out to form a stable base

Lock the sliding collar into position using the quick release locking pin provided. Secure the locking pin with the G pin.



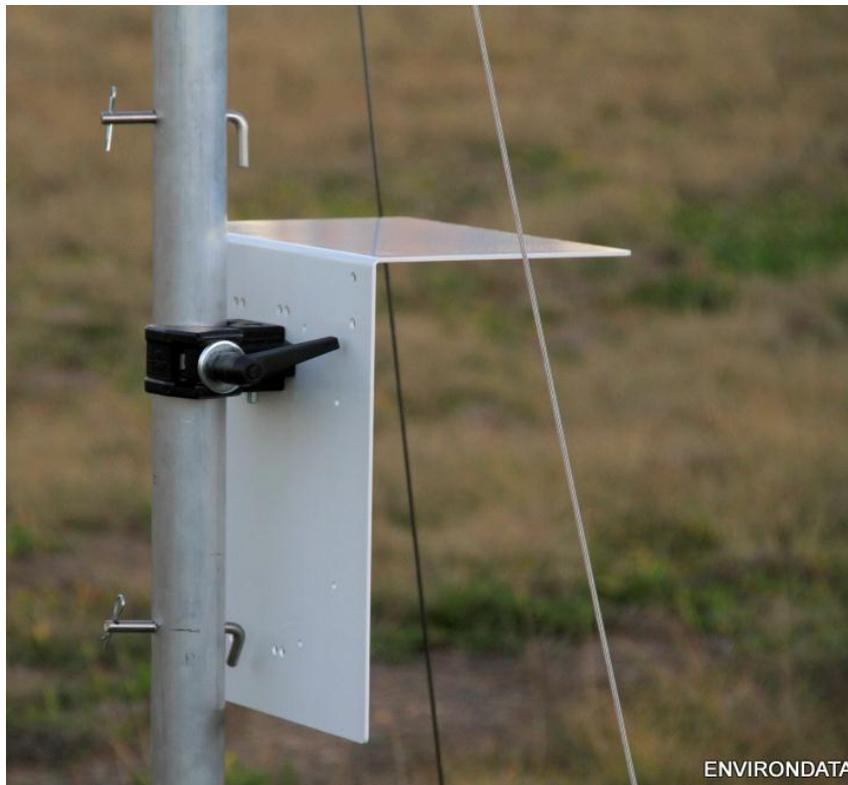
3) Fit the tripod extension into the tripod base.

- a. The mounting arm is pre-fitted to the tripod extension.
- b. Fit the WeatherMaster 3000 mounting bracket onto the 3 bolts on the Mounting Arm. Adjust these bolts to level the system.
- c. Tighten these bolts once level



4) Raise the tripod extension

- d. Make sure the guy wires are attached on the top attachment points & hooked onto the tripod legs, with the Turnbuckles loosened. (NOT undone).
- e. Ensure the mounting arm is pointing over one leg, (not between two).
- f. Connect the communication cable to the large multi-pin connector on the WeatherMaster 3000
- g. Secure the cable to the Mounting arm to keep it out of the way. (Re-useable zip ties are recommended here)
- h. Fit the UHF unit to the post with the quick release clamp, just below the top quick release pin hole.
- i. Raise the central tripod extension until you can align the pre-drilled holes.
- j. Insert the quick release support pins in two positions as shown below:
- k. Lock each into position with the g pin.



- l. Make sure the station is pointing north along the mounting arm.
- m. Reposition the UHF modem to suit the cable length and required position, using the quick release clamp.
- n. Connect the antenna to the sunshade with the wingnuts and bolts supplied, and plug the antenna cable into the UHF modem.

5) Tighten the three guy wires by turning the central part of the turnbuckles.

- a. Tighten each sequentially to provide equal tension
- b. Repeat until the system is steady and level.
- c. Lock the locking nuts on the turnbuckles.



6) Secure the tripod with the supplied sandbags or pegs



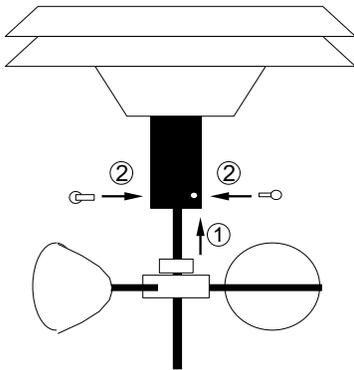
2.3.2 Assembling the Wind Speed cups – first use

The Wind Speed cups need to be mounted on to the lower shaft.

This is achieved by inserting the cup assembly on to the shaft, and then sliding it up until the inner hub fits up into the Delrin (black UV stable plastic) piece.

The recessed mounting screws can then be tightened until the cup assembly is captured in the Delrin piece.

Once mounted, spin the cups a few times to ensure they are free to turn under the influence of airflow.

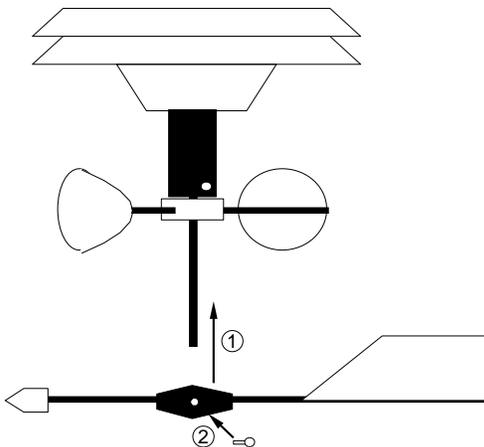


2.3.3 Assembling the Wind Direction vane

Once the Wind Speed Cups have been mounted, the Wind Direction vane needs to be inserted on to the shaft and slid upwards until the vane's hub just covers the end of the shaft. The actual vane should be facing upwards, and there should be sufficient clearance between the vane and cups to ensure correct operation. Check that the vane moves freely under the influence of airflow.

PLEASE NOTE: There is a North Alignment mark on the Spindle Base and on the Vane Base.

1. **THESE MARKS MUST BE ALIGNED**
2. **Once these are aligned, the mounting arm must face NORTH.**
3. **This is all you need to do to set your wind direction.**
4. **DO NOT change the wind direction alignment in the software unless instructed by Envirodata.**



2.4 Siting the WeatherMaster 3000

The weather station will accurately measure its own immediate environment, regardless of its surroundings. However, choosing an open environment will mean the data collected will be more representative of the wider area, rather than the immediate vicinity.

Guidelines for choosing a suitable site include:

Flat, level ground at least 20 metres by 20 metres

Trees, bushes and other obstacles at least four times their own height away

Preferably, a minimum of dust and other pollutants

Secure from the intrusion of animals

2.5 Starting the WeatherMaster 3000

2.5.1 First Time

The WeatherMaster 3000 is supplied switched off. Connecting a computer and initially communicating with the WeatherMaster is all that is required to start the WeatherMaster.

Tip: Connecting Pin 6 to Pin 4 on the RS232 communications port will activate the weather station if you don't have a computer.

2.5.2 Fast deployment

As mentioned earlier; in a rapid deployment scenario we recommend the WeatherMaster system is left on in the storage module, with power supplied to maintain the batteries. This means on rapid deployment assembly, the system is already working.

2.6 Connecting a computer

A communications cable [CB40] is supplied with the system to connect the WeatherMaster 3000 UHF module to the serial port [COM port] of a PC.

Most recent computers do not have a serial or COM port. These computers have a USB [Universal Serial Bus] port instead, for which a USB-serial converter is required. A USB to Serial converter is supplied with your system.

Please note, the fast deployment system is supplied with a UHF modem link with a 100m Line of sight range. The receiver supplied is connected via a USB connection to the Vehicle computer system, which must have our software or a custom application loaded to use the station.

2.8 Checking the WeatherMaster 3000

Once the system is running, you should check the current date and time, and all the sensors to ensure that they are working correctly. If you are unsure whether the readings you are getting are correct, please contact Envirodata on +61 7 4661 4699 or at sales@envirodata.com.au

[Note that sensor readings are updated once every minute.]