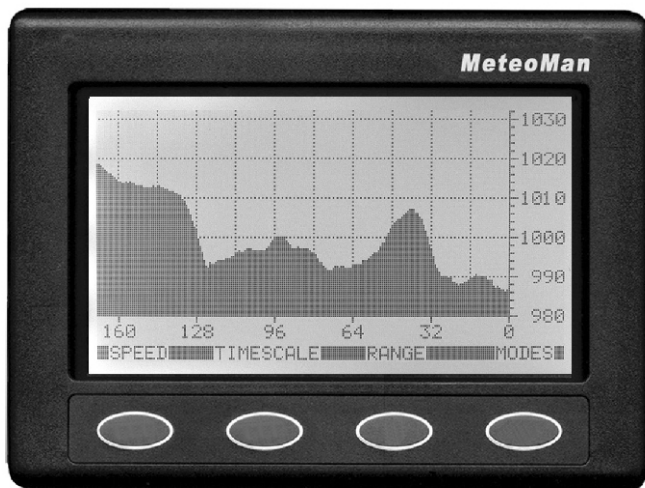


Meteoman Barometer



NASA MARINE LTD

www.nasamarine.com

INTRODUCTION

Meteoman is a precision instrument able to display barometric pressure, ambient temperature, a real time clock, a stopwatch, a race countdown timer, a seven day barograph, and a graph showing 24 hour pressure trend. When connected to the NASA NMEA masthead unit the instrument will also display the wind speed, wind direction (analogue and digital) air temperature and a seven day anemograph.

Alternatively the Meteoman can be connected to the NMEA output of a NASA Clipper wind instrument. Meteoman consumes very little power and has a sleep mode which keeps the real time clock running and continues to log wind speed and atmospheric pressure.

Meteoman is designed to be panel mounted and is supplied with a 12 volt fused cable. An optional cradle mount is available direct from NASA Marine.

INSTALLING THE DISPLAY

The Meteoman is not waterproof and should only be cabin mounted. Select a convenient position for the display on a panel or bulkhead. The site must be flat and the cavity behind the panel must remain dry at all times.

Cut a hole in the panel 103mm high by 143mm wide. Unscrew the wing nut from the rear of the Meteoman and take off the mounting clamp. Fit the 'O' ring in the groove on the rear and place the unit in the hole in the panel.

Refit the mounting clamp, replace and finger tighten the wing nut. Plug the fused power cable into the socket on the rear of the unit and connect to 12 volts.

(The red wire to positive and the wire with the black stripe to negative. The unit is protected against reverse polarity).

INSTALLING THE MASTHEAD UNIT

The masthead sensor is designed for mast mounting and is supplied with 20 metres of cable. Choose a position where the masthead unit can receive an unobstructed flow of air from all directions. The masthead unit must be substantially horizontal, however the orientation with respect to the vessel is unimportant. Four mounting blocks together with four stainless steel self tapping screws are supplied to screw the masthead unit to a metal mast. If the masthead unit is to be fitted to a wooden mast, suitable screws should be used. After the masthead unit is securely fitted, run the cable to the display unit and connect it, using the terminal block, to the short cable. Plug the short cable into the socket on the rear of the Meteoman display unit. The masthead sensor is a generic device and can be used independently of the Meteoman. Refer to section 2 for details.

USING THE METEOMAN

Connect the Meteoman to the vessel's 12 volt supply and full user instructions will be displayed on the screen.

The operation of each key is shown by the box above the key. The first task is to press SETUP where the clock can be set to the correct time and the pressure adjusted to compensate for altitude. After each setting press OK to return to system setup options. To complete the setup options press MORE where there are more settings for backlight period, the standby period, the display contrast and the wind vane calibration. Press DONE to exit setup and the instrument is ready for use.

Pressing MODE enables selection of INSIDE which gives internal temperature and supply voltage or OUTSIDE which gives air pressure, external temperature, wind speed and direction or CLOCK which gives access to the clock, stopwatch and countdown timer. When in outside mode the historical atmospheric pressure (Barograph) can be selected. From the barograph the 24 hour trend (pressure tendency) can be selected. Finally the anemograph can be selected from the trend screen.

SECTION 2

Using the NMEA masthead sensor independently to the Meteoman.
(This procedure is not necessary when using the sensor with the Meteoman).

Mount the sensor as described in the installation instructions. Connect the screen wire to the negative supply and the red wire to 12 volt positive supply. The NMEA output is on the blue wire. The output format is NMEA 0183 and the NMEA sentences MWV and XDR. To calibrate the wind vane heading :- align the wind vane towards the bow of the vessel. (or North in a fixed installation).

- 1 - Disconnect the 12 volt power supply.
- 2 - Link the NMEA output (blue wire) to supply negative
- 3 - Connect the 12 volt power supply.
- 4 - Remove the link between the NMEA output and negative. The display will now show bow (or north) up on the display.

SECTION 3

Questions & Answers

- Q This Display is completely blank.
- A Check the power supply. It should be 12 volts with the centre pin of the power supply connector positive. Check the 1 amp fuse in the power lead.
- Q When calibrating the pressure, how do i know what the local pressure is?
- A Choose a day when there are few isobars (ie. the local pressure is fairly uniform over wide areas), and set the unit to read the day's pressure at sea level which is published widely, such as at the UK National Physical Laboratory. web: www.npl.co.uk/pressure/pressure.html.

Q Can i display the absolute pressure instead of the pressure at sea level?

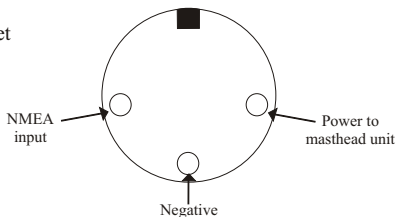
A Yes. Simply calibrate the instrument by reducing the pressure by 3.3mb for every 100 feet you are above sea level.

Q Can I connect a Clipper wind speed instrument to the Meteoman instead of the NMEA wind sensor?

A Yes. Modern Clipper wind speed instruments have an NMEA output which can be connected directly to the Meteoman to give wind speed and direction. The Clipper wind does not have a temperature sensor so the Meteoman will display the internal temperature.

Q What are the connections to the DIN connector socket on the Meteoman?

A Rear view of socket



Q Why does the voltmeter read slightly different than my main voltmeter?

A The Meteoman reads the voltage at the unterminated end of the power supply cable. A slight voltage difference is due to the volt drop in the wiring.

Q Can I use the pressure trend to predict future weather patterns?

A Yes. There is extensive literature available showing the relationship between pressure trend and imminent conditions.

IMPORTANT READ THIS BEFORE UNPACKING INSTRUMENT

Prior to unpacking this instrument read and fully understand the installation instructions. Only proceed with the installation if you are competent to do so. Nasa Marine Ltd. will not accept any responsibility for injury or damage caused by, during or as a result of the installation of this product. Any piece of equipment can fail due to a number of causes. Do not install this equipment if it is the only source of information and its failure could result in injury or death. Instead return the instrument to your retailer for full credit. Remember this equipment is an aid to navigation and not a substitute for proper seamanship. This instrument is used at your own risk, use it prudently and check its operation from time to time against other data. Inspect the installation from time to time and seek advice if any part thereof is not fully seaworthy.

LIMITED WARRANTY

Nasa Marine Ltd. warrants this instrument to be substantially free of defects in both materials and workmanship for a period of one year from the date of purchase. Nasa Marine Ltd. will at its discretion repair or replace any components which fail in normal use within the warranty period. Such repairs or replacements will be made at no charge to the customer for parts and labour. The customer is however responsible for transport costs. This warranty excludes failures resulting from abuse, misuse, accident or unauthorised modifications or repairs. In no event shall Nasa Marine Ltd. be liable for incidental, special, indirect or consequential damages, whether resulting from the use, misuse, the inability to correctly use the instrument or from defects in the instrument.

If any of the above terms are unacceptable to you then return the instrument unopened and unused to your retailer for full credit.

Name _____

Address _____

Dealer Name _____

Address _____

Date of Purchase _____

Proof of purchase may be required for warranty claims.

**©Nasa Marine Ltd.
Boulton Road, Stevenage, Herts SG1 4QG England**