

API

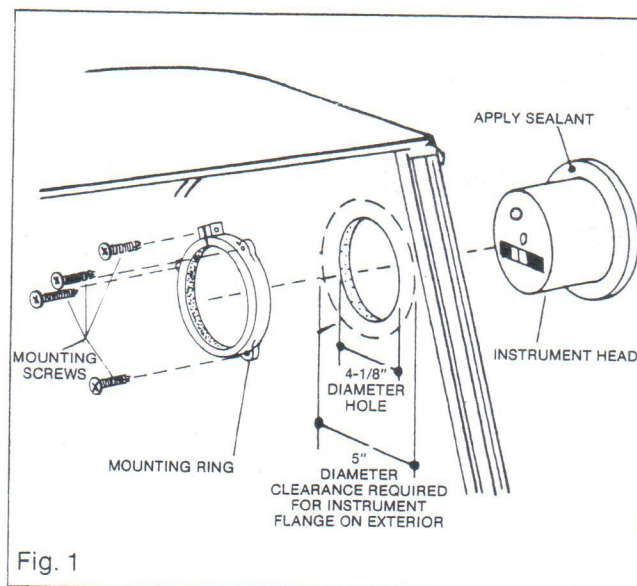
INSTALLATION INSTRUCTIONS

The EMS Model API apparent wind is a precision wind instrument which incorporates the latest in technology to provide high accuracy and reliability. Please take a few minutes to read the following instructions and you will be assured of long and trouble-free service. Locate the serial number on the instrument housing and record for future reference. Note: the series number on the box is not the complete serial number. Be sure to fill out and return the enclosed warranty card for your API.

Serial No. _____

A. INSTRUMENT HEAD INSTALLATION (See Figure 1)

1. Select a flat, smooth area on the instrument panel where the instrument can be easily seen. Check for adequate clearance behind the panel.
2. Cut a 4-1/8" diameter hole in the instrument panel at the selected location.
3. Check instrument fit to assure that unit will seat evenly. If necessary, enlarge the hole slightly using a file.
4. Apply sealing compound (ie: "Boat-Life" caulk) to the backside of the bezel, and insert the unit into the hole in an upright position.
5. Place the mounting ring over the back of the unit. Use one self-tapping screw to lock the ring to the case close to the instrument panel, and use the other three screws to snug the unit to the panel.



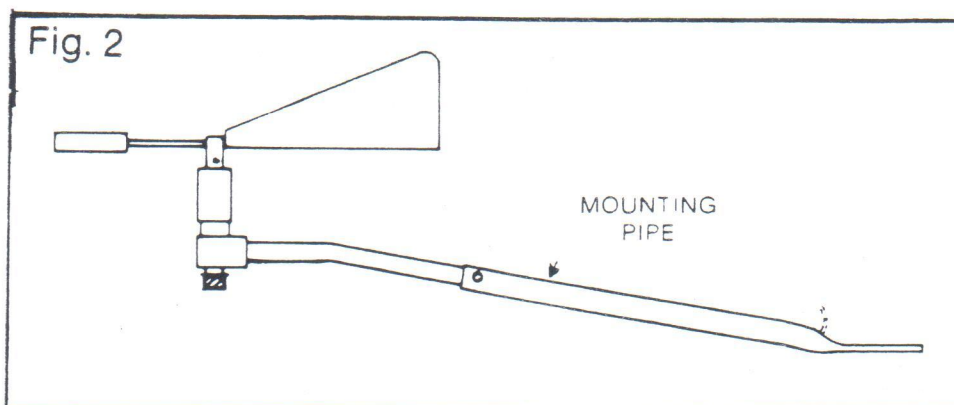
B. MASTHEAD INSTALLATION (See Figure 2)

1. Feed the wire from the masthead unit through the mounting pipe, exiting at the hole in the back.
2. Slip the masthead pipe into the mounting pipe, align holes, and install supplied cotter pin to secure the two pipes together. Use care not to damage the internal wire.
3. Identify the three wires from the wind vane red, black, and white (Note: some models may have a green wire instead of the white). Install the male half of the mast connector supplied using one of the four pins for each wire. One pin will be unused. It is recommended that the connector be waterproofed with a silicone compound where the cables enter the rubber boot.
4. Position the mounting pipe on the top of the mast so that the masthead unit projects forward of the mast. Secure with suitable screws. The mounting pipe is designed to elevate the masthead unit above the top of the mast.

IMPORTANT: WHEN THE MAST UNIT IS MOUNTED TO THE MAST, IT IS CRITICAL THAT THE ALIGNMENT IS SUCH THAT THE VANE WILL EXTEND DIRECTLY FORWARD TOWARDS THE BOW OF THE BOAT.

C. MASTHEAD WIRING

1. Run the 3 conductor cable down the mast and to the instrument location taking care not to damage the cable. The cable may be run inside the mast, exiting through a hole in the side of the mast near the top. If this is done, use a grommet in the hole to prevent wire chafe.
2. Install the female half of the mast connector which mates with the male connector from the masthead unit to the end of the 3 conductor cable. Note the connector is polarized to mate only one way. Be sure when attaching the wires to the connector pins to match the colors of the wires so that when the connector is assembled the same colors will be continued. When satisfied that the wires are properly matched, waterproof the female connector with silicone compound.
3. Connect the 4 pin connector halves together at the masthead.



CAUTION: DO ALL WIRING WITH POWER DISCONNECTED

D. INSTRUMENT WIRING

1. Connect the negative (-) terminal of the battery or electrical circuit of the boat to the negative terminal (-COM) on the back of the instrument.
2. Connect the positive terminal (+12VDC) of the battery or electrical circuit of the boat thru a 1/4 amp fuse to the (POS +12V) terminal on the back of the instrument. An on/off switch may installed in this line if desired.
3. Connect the black wire from the mast cable to the (1) terminal on the back of the instrument.
4. Connect the red wire from the mast cable to the (2) terminal on the back of the instrument.
5. Connect the white wire from the mast cable to the (-COM) terminal on the back of the instrument.
6. Apply power to the circuit and the API will accurately display apparent wind direction.

Night Light:

The API is equipped with a night lighting circuit for use after dark. To use this feature connect the terminal marked (+LIT) to +12V via a separate switch or the boats lighting circuit.

E. CALIBRATION

The API wind instrument was calibrated and tested before leaving the factory, to assure that it is complete and in perfect working condition. Should the instrument ever require re-calibration, we recommend that both the instrument and mast unit be returned to the factory. If, however the need arises to re-calibrate, the following procedure should be used:

To calibrate, remove the small red plastic plug from the hole marked (A) on the back of the instrument. Turn the mast vane to point 90 degrees to port. Using a small screwdriver, 1/8" blade or smaller, insert it into the hole, engage the adjustment screw and turn until the meter reads 90 degrees port. **DO NOT FORCE THE ADJUSTMENT BEYOND THE STOPS.** By moving the vane to the other tack, the unit should be in calibration, if not return to factory for service.

F. TROUBLE SHOOTING

Most problems when the instrument does not read at all are wiring problems. Please check your instrument for loose strands of wire between terminals and especially where wires have been spliced. Check to be sure mast cable was not damaged during installation, and that the proper mast and instrument connections have been made.

Checking the mast unit:

The API mast unit consists of a 5000 ohm precision linear potentiometer. To check, disconnect the red, black, and white wires from the back of the instrument.

Connect an ohmmeter across the red and white wires; a reading of 5000 ohms +/- 10% should be observed.

Connect the ohmmeter across the black and red wires; as the vane is rotated, a proportional resistance from 0 to 5000 ohms should be observed.

Connect the ohmmeter across the black and white wires; as the vane is rotated, a proportional resistance from 0 to 5000 ohms inverse (opposite) to the above should be observed.

G. SERVICE NEEDED?

Should your instrument become inoperative or if you believe there is a problem with the initial installation, please return the unit to the factory for quick prompt service to:

Moor Electronics, Inc.
Service Department
95 Dorothy Street
Buffalo, NY 14206

Telephone: (716) 821-5304 Fax: (716) 821-5306

Include return address, daytime phone number, description of problem, instrument head and masthead unit.

With warranty repairs, proof of purchase date is required. Please enclose proof of purchase date, and \$15.00 to cover the cost of shipping and handling.

With non-warranty repairs you will be advised of the cost upon our inspection of the unit. Payment may be by Master Card, Visa, check or C.O.D.

H. SPARE PARTS

Moor
Part No.



88-400-103 Apparent wind mast unit, complete
88-400-101 Vane only assembly for apparent wind mast unit (rotating assembly)
15-100-250 Wired 5K precision potentiometer for apparent wind mast unit
05-322-000 3 conductor mast cable (per foot)

API

