SIERRA/MISCO
MODEL 1036HM WIND SENSOR
INSTRUCTION MANUAL, Document #A102839

1.0 INTRODUCTION

1.1 General Description

The Model 1036HM Wind Sensor is a general purpose sensor for monitoring wind speed and wind direction. It is a precision instrument designed to give accurate data over a long period of time. Note: wind direction is referred to as the direction the wind is blowing from, ie. a north wind is air that is moving from north to south.

1.2 Specifications

Wind Speed:

Accuracy:	-/+1% of full scale
Threshold:	1.5 mph
Range:	1.5 mph - 200 mph
Distance Constant:	10 feet
Cup Diameter:	2 inches
Turning Radius:	2.75 inches
Electrical Output:	AC voltage

Wind Direction:

Accuracy:	3 degrees
Linearity:	-/+2%
Threshold:	1 mph
Potentiometer:	0-1000 ohms
Azimuth:	
Mechanical:	360 degrees
Electrical:	350 degrees, 10 degrees open
Distance Constant:	4.8 feet of air
Temperature Range:	-40 to +50 deg C
Turning Radius:	10 5/16 inches

This manuals includes:
3 pages text
A106605 Wiring Diagram
A106102 Wind Sensor Installation Diagram
A106608 Wind Direction Assembly Detail

2.0 INSTALLATION

2.1 Attaching the Wind Direction Vane

The sensor assembly is shipped with the wind direction vane sideways and out of balance; refer to drawing A106608. To balance the vane assembly, loosen the set screw on the top of the spindle and while holding the sensor sideways, adjust the vane so that there is equal weight on each side of the spindle, then tighten the set screw. Return sensor to upright position and confirm that the vane tail is pointing upright.

2.2 Mounting the Sensor

The sensor should be mounted above the highest point of your roof, since large obstacles such as buildings and trees can create fluctuations in wind patterns. It is best to avoid these obstacles if possible. The sensor can be installed on the top of a 1/2 inch pipe and secured with the 1/4-20 set screw; a mounting kit (model 1040M) which permits mounting on your TV antenna or side wall is also available. Care must be taken to insure the sensor is mounted vertically for proper operation. The sensor must next be oriented properly by using a compass and rotating the entire crossarm so that the wind direction side is north of the mount pipe and the wind speed side is south of the pipe. The cable is then routed to the control unit and secured in place.

3.0 MAINTENANCE

3.1 General Maintenance

Sensor should be checked after the first major wind to be sure the mounting hardware is secure. Thereafter it should be checked every six months. In normal conditions where there is not a lot of sand and dirt flying around the anemometer assembly and the vane assembly should be removed annually for cleaning.

3.2 Replacing the Wind Direction Potentiometer

To replace wind direction potentiometer, remove the tail and loosen the vane arm set screw on the spindle (refer to #A106608). Pull gently on counterweight and arm to remove it from the spindle. Loosen the spindle set screw and pull up on the spindle. Remove the three set screws that hold the potentiometer bracket.

3.2 Replacing the Wind Direction Potentiometer (Continued)

Note: Wind sensors built before 1982 do not have this bracket and the set screws hold directly onto the potentiometer.

Gently pull up on the pot shaft until the potentiometer is outside of the arm and cut the wires soldered to pot. Resolder the wires to the replacement potentiometer according to the diagram, place new potentiometer assembly back inside the sensor arm and tighten the set screws. Rotate the potentiometer shaft until the control unit indicates north on the wind direction meter. With the tail centered over the wind speed cups, gently slide the spindle over the potentiometer shaft and tighten the set screw then reassemble the tail. Check the north orientation with the indicator or recording system being used.

4.0 Returns

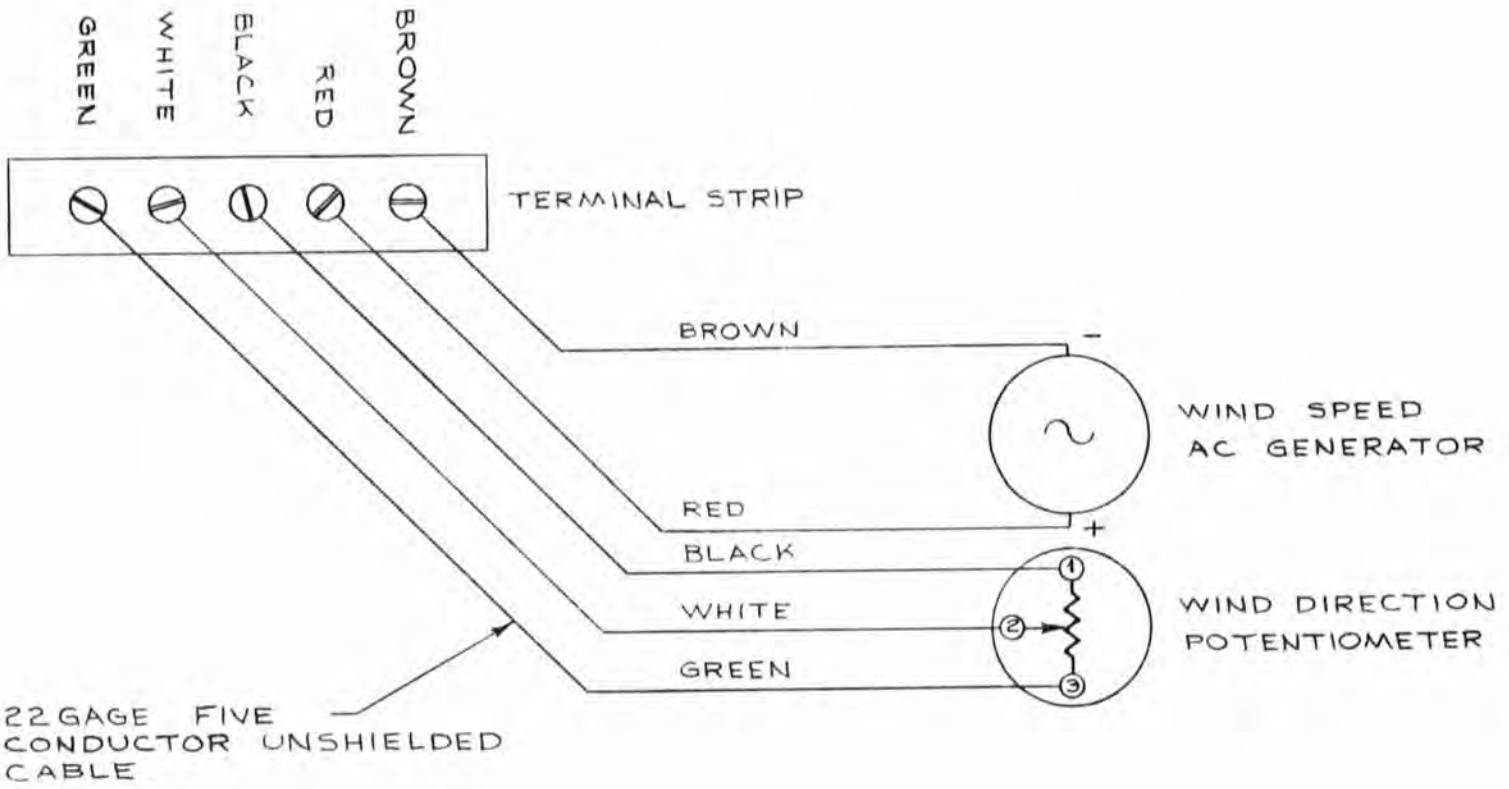
If you need to return the unit to the factory for any reason call Sierra-Misco at (415) 843-1282 or (800) 544-9229 between 8:00AM and 4:00PM Pacific Time. Ask for a Return Authorization Number (RA#) to be assigned to your unit. Carefully pack the unit so that it will not be damaged in shipment. Write the RA# on the outside of the box and on any paperwork enclosed with the unit. Please include a description of the problem and the conditions when the unit failed.

Sierra-Misco
1825 Eastshore Highway
Berkeley, CA 94710
Telephone: (415) 843-1282
FAX Number: (415) 843-9381
Telex: 275945 SMBK UR

Rev Date: 08/07/90

Checked By: _____

Approved By: _____



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DATE: 11 - 84		
1045, 1036, 1033 EXTERNAL WIRING DIAGRAM		
		DRAWING NUMBER A106605

FIGURE 1

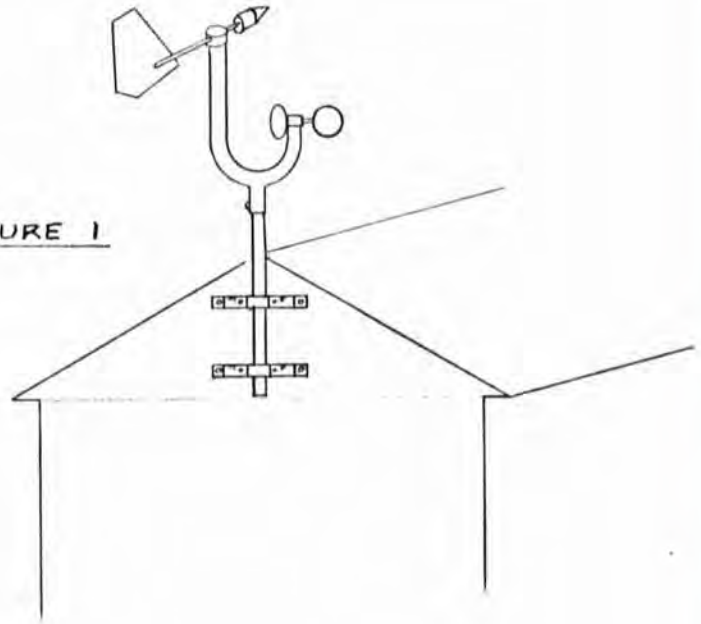
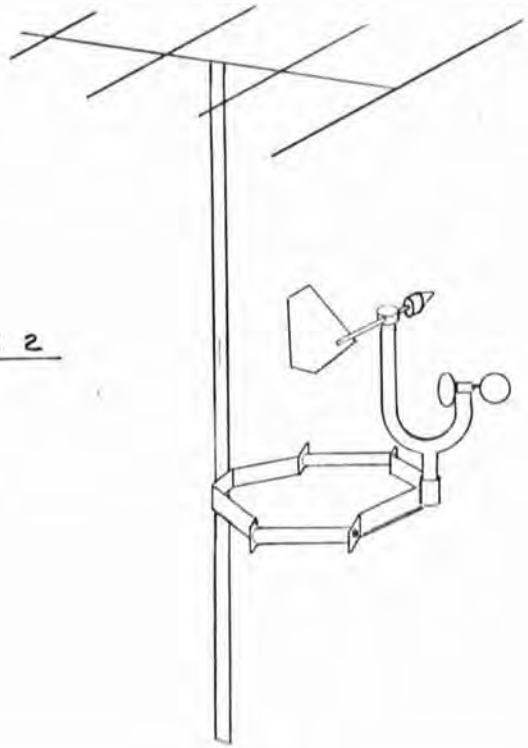


FIGURE 2



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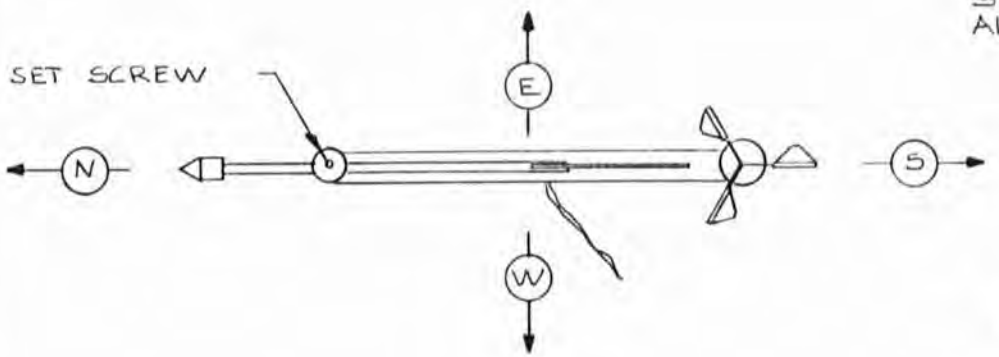
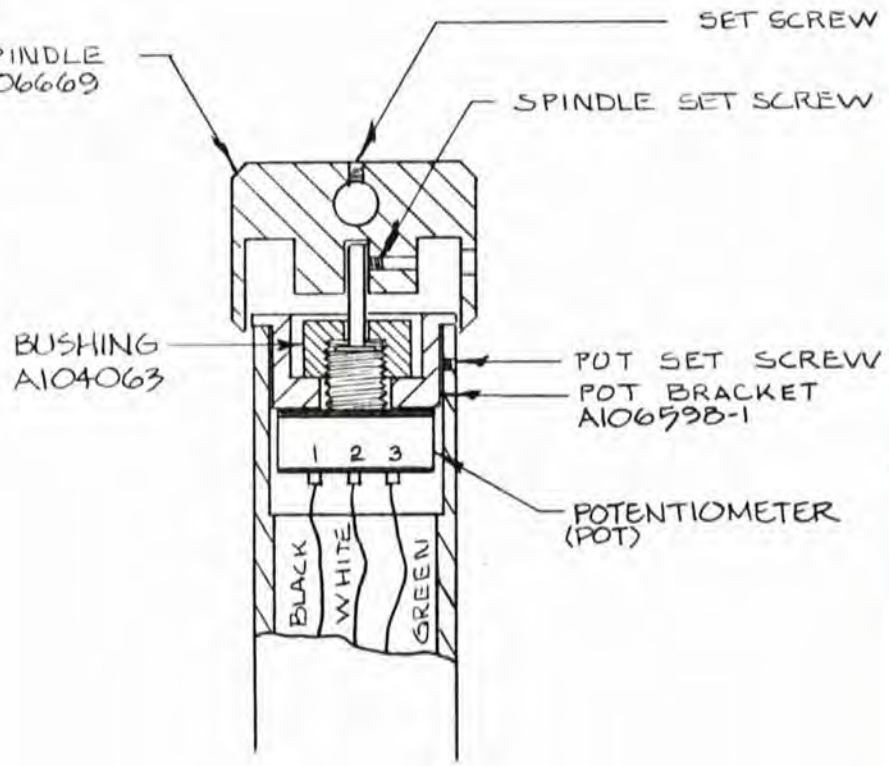
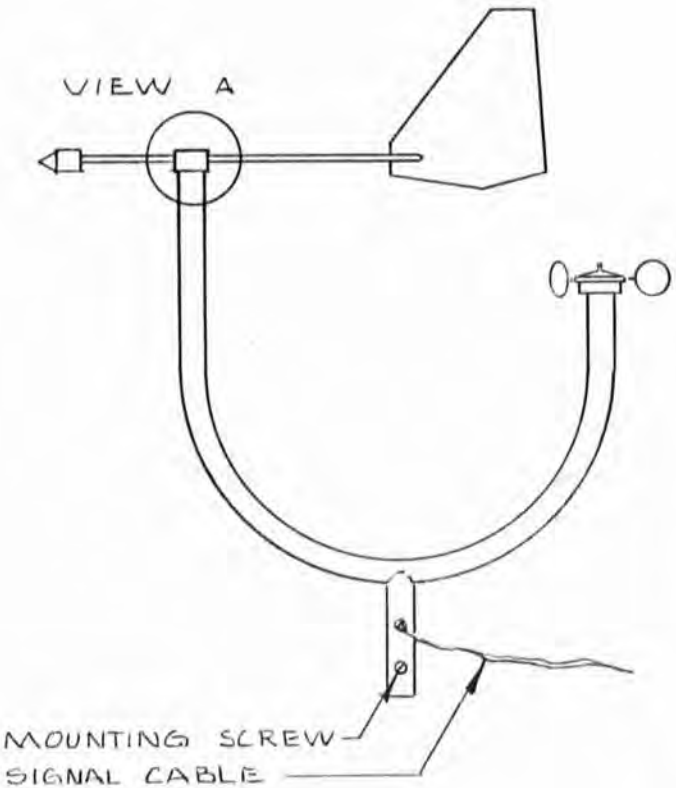
1030, 1032, 1033, 1040, 1045
WIND SENSOR INSTALLATION DIAG

DRAWING NUMBER
A106102





VIEW A
SCALE 1:1



NO	REVISIONS	DATE	DWN	APP'D
1	ECO#555	10/12/88	DK	MS

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DATE: 3:86		REVISED

1045 1045 HM
WIND SENSOR ASSY DETAIL

DRAWING NUMBER
A106608-1