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Troubleshooting Your Cape Cod® Wind and Weather Instruments

Cape Cod® Wind Speed Indicator:

⇒ *I'm getting no reading at all or operation is intermittent.*

By far the most likely source of the problem is the wiring. First check the splice in the cable just below the base of the roof-top transmitter. If the splice was not soldered, it may have worked loose over time. Then look over the rest of the cable (especially that portion that is outdoors) for breaks or places where the insulation has worn away exposing bare wire(s). Pay particular attention to places where the cable is bent around a corner and where it enters the building and may have been chafing against a sharp edge. Also check for places where the cable is not anchored securely and may have been flexing and chafing against the shingles or siding. Damaged cable can often be repaired with solder and electrical tape.

Also check the back of the dial to make sure neither of the two bare wire leads is touching the metal back of the dial. If the bare lead of either wire is touching any metal other than the clips on the circuit board, it will cause a short and there will be no reading on the dial.

If you are unable to find a problem in the wiring, the next step is to return the dial and roof-top transmitter to the manufacturer for testing and servicing (see below).

⇒ *The wind speed reading is low.*

First, keep in mind that the peak wind speed readings given on weather reports are usually from instruments mounted high on towers along the coast or on mountaintops; the wind speed at your location is apt to be considerably lower.

In most cases low readings result from the roof-top transmitter not receiving a free flow of wind, due to obstructions such as trees, chimneys, etc., or from turbulence caused by the wind deflecting off other parts of the house (e.g., chimney or other sections of roof). In such cases the solution is to relocate the transmitter to another spot, or elevate it so that it is clear of any obstructions.

Another possible cause is a loose set-screw on the wind speed cupwheel, which can result in the cupwheel slipping on the generator shaft, giving a low or intermittent reading. Check the set-screw on the hub of the cupwheel and insure it is securely tightened.

A defective component in the rectifier circuit on the back of the wind speed dial can also result in a low reading. If you are confident the problem is not due to one of the situations described above, return the dial to us for testing (see below).

⇒ *The wind speed roof-unit is noisy.*

The generator bearings need lubricating. The bearings should be oiled every few years. When the bearings become dry, they grind and become noisy. Lubricate the bearings by removing the complete wind speed transmitter from the roof (disconnect the wire at the splice just below the base of the unit), inverting it so that it sits on the three cups, then pour about a teaspoonful of 10-weight motor oil (10w30 or 10w40 – the same oil you use in your car) down the hollow mounting pipe. Leave the unit upside down for a few hours to allow the oil to soak into the generator bearings. After a few hours, turn the unit upright, allow any excess oil to drain out, then reinstall the transmitter on the roof.

If there seems to be a lot of wear in the bearings, one or both bearings may need to be replaced, in which case the transmitter should be returned to the manufacturer at the address below. To check for bearing wear, grasp the cupwheel hub and wiggle it back and forth, and up and down; if there is much play in either direction, the bearing(s) likely need replacement.

⇒ *The glass is cracked.*

Carefully remove any loose pieces of glass if possible, then pack the instrument well, and return it to us at the address below. Taping over the cracks in the glass with duct tape or masking tape may help to prevent further damage in shipment.

Cape Cod[®] Wind Direction Indicator:

⇒ *I'm getting no reading at all, two or more lights are illuminated at the same time, or the operation is erratic.*

By far the most likely source of the problem is the wiring. First check the cable (especially that portion that is outdoors) for breaks or places where the insulation has worn away exposing bare wire(s). Pay particular attention to places where the cable is bent around a corner and where it enters the building and may have been chafing against a sharp edge. Also check for places where the cable is not anchored securely and may have been flexing and chafing against the shingles or siding. Damaged cable can often be repaired with solder and electrical tape.

Also check the power supply plug to be sure it has not been inadvertently removed from the outlet.

If you are unable to find a problem in the wiring, the next step is to return the roof-top transmitter to the manufacturer for testing and servicing. Cut the cable about 5-6" below the base of the transmitter so there is enough of a pigtail to permit testing and to make a splice when the unit is re-installed. Package the transmitter and send it to us for testing/servicing (see below).

⇒ *The lights jump all around the dial in rapid succession.*

In very strong winds, some turbulence is normal and inevitable. But if this condition seems excessive or occurs in only moderate wind speeds, it suggests that the roof-top transmitter is vibrating excessively. This will happen if the unit is mounted on a mast or other extension

subject to vibration, or if the mounting screws were not tightened sufficiently or have worked loose over time. If the unit is mounted on a mast, relocate it to the solid part of the roof (or a chimney).

Cape Cod® Marine Barometer:

⇒ *The pointer never moves or moves very little.*

It is not unusual, particularly during the warmer months, for the barometric pressure to change very little for weeks on end. In most cases, the reason the pointer doesn't move is that the barometric pressure has not changed. It is quite possible, indeed routine, for it to be raining when the barometer pointer is in the "Fair" part of the dial. Although rain is often associated with low pressure, it also often occurs with a frontal passage or summer thunderstorms when the pressure can be quite high.

Before returning your barometer to the manufacturer, you can easily check to see if it is working by tracking the readings for a couple of weeks and comparing the readings to those given on your local weather forecasts (most weather web sites will give the barometric pressure for your area). If, after tracking your barometer's movement for a while, you still feel there is a problem, pack it carefully and return it to us at the address below.

⇒ *The glass is cracked.*

Carefully remove any loose pieces of glass if possible, then pack the instrument well, and return it to us at the address below. Taping over the cracks in the glass with duct tape or masking tape may help to prevent further damage in shipment.

Cape Codder® Clock:

⇒ *The clock is dead.*

First be sure the battery is not dead. If the clock does not run even with a new battery, package it carefully and return it to us at the address below.

Returning parts for servicing:

To return parts for servicing, carefully package the parts with ample cushioning, and enclose a note with your name and contact information. Include your email address if you would like to be contacted by this means.

Ship the package to the address below by whatever means is most convenient for you. It is not necessary to contact us for return authorization beforehand. If you live nearby, feel free to stop by and deliver your instrument in person.

Cape Cod Wind and Weather, Inc.
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Once we receive your parts, we will test and inspect them and contact you promptly (usually in 24 hours or less) with our assessment of what is needed and what the cost will be. Payment can be made by check or credit card. No work will be done without your authorization.

There is a \$30 minimum billing for testing and inspecting parts that are in perfect working condition, so be sure to rule out a wiring problem before returning any parts.

Keeping an eye on the weather since 1939!