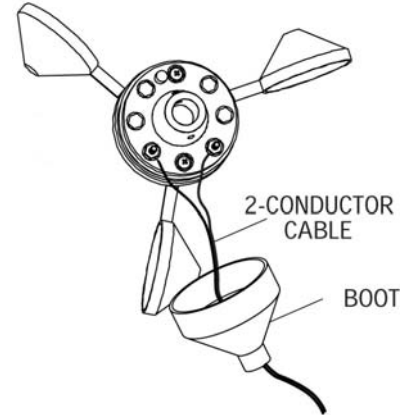


# NOR'EASTER

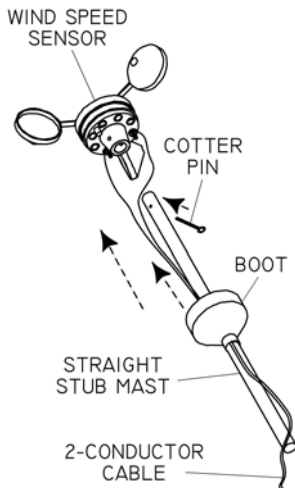
## INSTALLATION

PROPER INSTALLATION IS IMPORTANT. IF YOU NEED ASSISTANCE, CONSULT A CONTRACTOR, ELECTRICIAN OR TELEVISION ANTENNA INSTALLER (CHECK WITH YOUR LOCAL BUILDING SUPPLY OR HARDWARE STORE FOR REFERRALS). TO PROMOTE CONFIDENCE, PERFORM A TRIAL WIRING BEFORE INSTALLATION.

1. Determine where you are going to locate both the rooftop sensor and the Nor'easter read-out. There are lugs on the rooftop end of the 2-wire cable and bare ends on the indoor connection. Run the cable from the indoor read-out, to the rooftop wind speed generator.

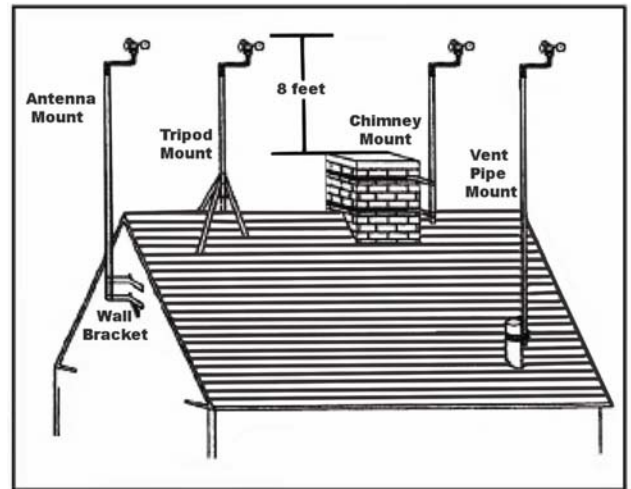


2. Outside, feed the terminal lug end of the 2-wire cable through the rubber boot and connect the lugs to the brass terminal posts on bottom of the wind speed generator (polarity does not matter) and secure them using the brass hex nuts provided in the hardware pack.  
(Important: **DO NOT** adjust the hex nuts that are already on the sensor).

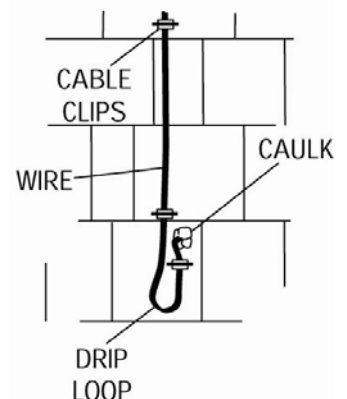


3. Slide the straight stub mast through the rubber boot and insert the mast into the bottom of the wind speed generator. Secure the generator to the straight stub mast using the supplied cotter pin. Coat all wire connections with a silicone sealant and slip the boot over the sensor.

4. Using the two stainless steel hose clamps, attach the straight stub mast to an appropriate base mast  
**NOTE:** For correct wind speed readings, the generator should be mounted a minimum of 8 feet above your roof, as shown in the diagram.



5. Follow the instructions supplied with the antenna mount and secure the mast to the mount.
6. Secure the cable to the mast with cable ties or electrical tape so that rubbing on the mast will not damage it. Secure the wire to the house using cable clips (**DO NOT** staple the cable). Form a drip loop where the wire enters the hole through an exterior wall. Feed an appropriate length of cable into the house and caulk the hole when done.



# NOR'EASTER

## INSTALLATION (cont.)

7. Bring the Nor'easter read-out and the 2-wire rooftop cable to the location where you wish to install it. At the back of the readout, locate the two colored wires with bare ends. Insert one of the colored wires into one of the supplied splice connectors.
8. Insert one of the black wires from the 2-wire rooftop cable into the same splice connector.
9. Hold the splice connector so the yellow-button side is facing down. Check to make sure the wires are inserted all the way into the connector points and crimp the button using a common pair of pliers.  
**Important: DO NOT** over crimp!
10. Repeat the procedure for the remaining two wires.
11. Connect the 120V AC Adaptor or a quality 9V alkaline battery to the battery clip in the cavity of the back of the read-out. When the cups on the rooftop wind speed sensor are rotating, a 2-digit wind reading will show on the display. In normal wind conditions, a fresh alkaline battery will last approximately 2 months.
12. If powered by battery, carefully sit the battery within the cavity in the rear of the block. It is best to align the top of the battery (where the clip connects) on the same side as the hole in the rear of the block.
13. The Nor'easter read-out may be wall mounted using the keyhole slots, or it can stand alone on any horizontal surface.
14. Nor'easter samples and displays wind conditions every 3.4 seconds. The 2-digit display will actually provide readings for winds up to 200 MPH, as shown below:

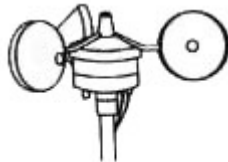
|                     |     |     |     |     |
|---------------------|-----|-----|-----|-----|
| Actual Wind Speed:  | 100 | 120 | 150 | 200 |
| Nor'easter Display: | 00  | 20  | 50  | 00  |

If desirable, you may have up to two additional Nor'easter read-outs in different locations within your home, without the need for any additional rooftop generators. Each read-out must have either AC or battery power. The additional read-outs simply connect in parallel to each other as shown in the diagram on the next page.

The displays may be up to 500 feet apart. Most two conductor cable ranging from 18-26 AWG can be used as an interconnect cable (e.g. speaker wire, bell wire, etc...).

## **IMPORTANT ADDITIONAL INFORMATION**

**Components:** Along with the indicator, the following components are included with this instrument:



Wind Speed  
Generator



Rubber  
Boot



14" Straight  
Stub Mast



2 Stainless  
Mast Clamps



60' 2-Wire  
Cable



120V AC  
Adaptor

**Wind speed generator:** To insure a clear unobstructed path for the wind to the wind speed generator, it should be mounted on a mast at least 8-10' above the highest object on your roof. Remember, your roof is also an obstruction and it usually requires at least 8' of height to avoid the turbulence it creates.

Properly installed, your wind speed sensor will require virtually no maintenance at all. Our generators do not utilize brushes or wiping contacts. All bearings are Rulon-J self-lubricating type, and will perform for many years in the harshest environments.

**Specifications:** All instrumentation or measuring devices have accuracy tolerances and specifications. Making comparisons between different pieces of equipment is appropriate provided the specified accuracies of both are known.

|            | <b>Display Range</b> | <b>Guaranteed Accuracy</b> |
|------------|----------------------|----------------------------|
| Wind Speed | 0-99 MPH             | ±2% Full Scale & Mid Scale |



### **Electrical Damage – Common Causes & Recommended Prevention**

Electrical damage can be caused by many different factors. Below are some of the more common causes and some suggested methods of minimizing potential problems.

#### **Common Causes:**

- **Storm Activity** – lightening in your area can do damage to your instruments in different ways. The obvious way is due to a direct or nearby strike. In addition, lightening storms, dust storms, dry snowstorms and strong dry winds can all cause static electricity to build up on and around your external sensors. Regardless of the cause this built up electricity can discharge itself through the cable connecting the external sensors to the instrument.
- **Power Surges** – A surge may come from the electric company's switching generators or power grids, from local industries or after power interruption when accumulated power suddenly surges back through AC lines. Even the on-and-off switching of large electrical appliances, such as refrigerators or clothes dryers can create damaging fluctuations. This is especially true with sensitive weather recording devices.
- **Yourself** – Are you constantly giving and/or receiving a shock every time you touch a doorknob or another person? If so you have a great deal of static electricity in your environment. Depending on where you live, static electricity may be a year round problem or only a seasonal problem. In either case, it is possible for a person to carry enough of a charge to damage an instrument.

#### **Recommended Prevention:**

**Ground Your Mounting Mast** – **IMPORTANT:** PVC and fiberglass are not recommended mast materials as they can store high amounts of static electricity within themselves. It is recommended that you follow the grounding instructions that came with your mounting mast, while also maintaining accordance to your local Electric Code. In the absence of instructions for your mast system, the following generic guidelines from the **National Electric Code** may be helpful.

- 1) The NEC requires that the antenna mast and mount be grounded directly. No splices or connections are allowed in the ground wire between the mast and the ground rod.
  - 2) Attach one end of a No. 8 (or thicker) copper or aluminum ground wire to the antenna mast. **Note:** As static electricity issues are more common for weather sensors than direct lightening strikes, consider installing the ground wire as physically close to the wind sensors as possible to best combat static electricity issues. For multi-piece (or telescoping) masts, consider connecting the ground to each separate section of the mast.
  - 3) For painted or coated masts, scrape off the coating around the area where the contact will be made. This will ensure a good, solid connection. (Once the ground is attached to the mast, any scraped off portion that is exposed should be recoated with paint or other sealant.)
  - 4) Next, run the ground wire to ground as directly as possible. Standard wire staples can be used to secure the ground wire against the side of the house. Avoid making 90° or sharper turns with the ground wire. A lightning charge has difficulty making such a turn and therefore may discharge into the house. Make ground wire bends as smooth and as gradual as possible.
  - 5) The ground wire must be connected to a ground rod. Water pipes or plumbing fixtures are not acceptable. A good copper-coated steel ground rod driven at least 3 feet into the ground is required. Special clamps that provide a solid connection between the ground wire and ground rod should be used
- **Use Surge Protectors** – For the AC adapter, a UL 1449 rated surge protector with EMI/RFI filtering is recommended. This rating will be clearly listed on the packaging of any good quality surge protector.
  - **Discharge Yourself** – If the instruments are located in an environment where static electricity is a problem, make sure that you discharge yourself before touching the instrument(s). The shock that you get from touching a doorknob or another person can often be sufficient to damage an instrument.