

# Mounting Tripod Kit

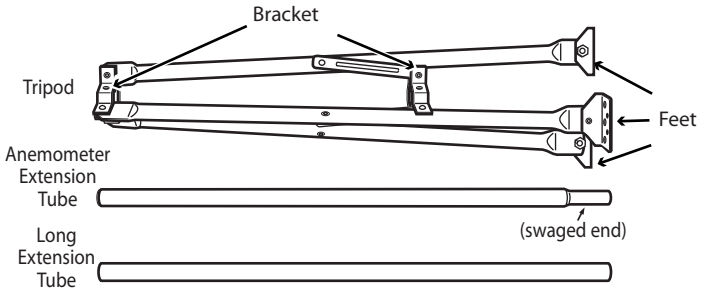
## Installation Manual

For use with Davis's wireless and cabled Vantage Pro2 weather stations, the Mounting Tripod simplifies installation. The tripod supports the Integrated Sensor Suite (ISS) or other station, and features adjustable feet which enable mounting on level surfaces or roof peaks.

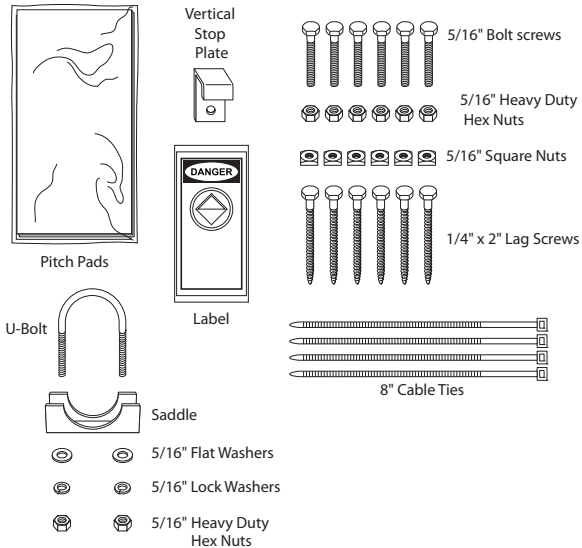
### Components

The Mounting Tripod includes the following poles and mounting hardware. Please make sure you have everything you need before beginning.

#### Poles



#### Hardware



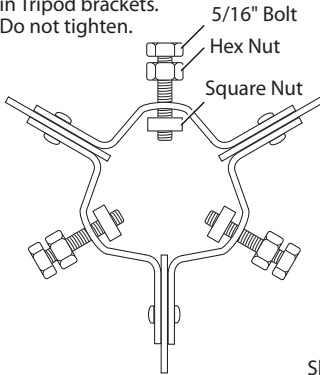
## Tools for Setup

- Adjustable wrench
- Compass or local area map
- Drill with 3/16" or 13/64" (5 mm) bit for the 1/4" lag screws

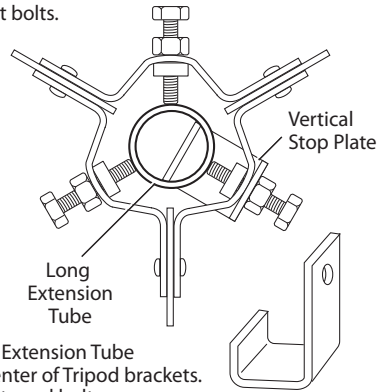
## Tripod Assembly

1. Unfold the tripod so the three feet on the tripod legs are flat on the ground.
2. Thread a hex nut almost all the way onto all six of the 5/16" bolts.
3. Insert one of the 5/16" bolts into the hole in vertical stop plate.

Assemble nuts and bolts in Tripod brackets. Do not tighten.



Use Vertical Stop Plate on one of the lower bracket bolts.



4. Insert the 5/16" bolt with vertical stop plate into one of the holes in the tripod's lower bracket and thread a square nut onto the end of the bolt, on the inside of the bracket.

Do not thread the square nut too far up the bolt.

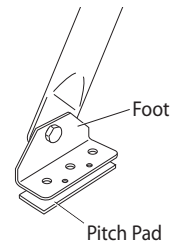
5. Repeat this procedure for the remaining 5/16" bolts. Place them into the holes in both the top and bottom tripod brackets, threading a square nut on the end of each bolt.

Do not thread the square nuts too far up the bolts.

6. Insert the long extension tube into the tripod, sliding it through the brackets. The vertical stop plate should keep the tube from sliding all the way through.

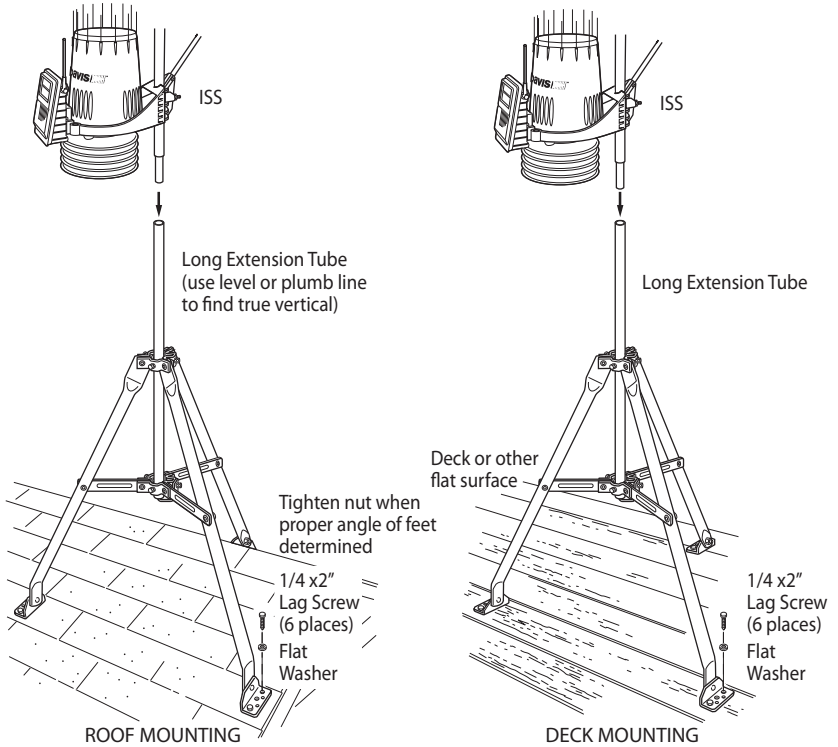
7. Secure the extension tube by tightening the square and hex nuts on the 5/16" bolts until the bolts hold the tube in place securely.

8. Apply pitch pads to the bottom of each foot.



## Mounting the Tripod

Mount the tripod with long extension tube on the desired surface, as shown below. On the following pages are instructions for securing your sensor array or ISS onto the long extension tube.



**Note:** Any metal object may attract a lightning strike, including your weather station or tripod. If lightning strikes your station or strikes somewhere nearby, the station's internal electronics may suffer anywhere between little to extensive damage. The station itself has been designed with considerable surge protection, but to safeguard nearby equipment and structures, we recommend following local recommendations on properly grounding your installation.

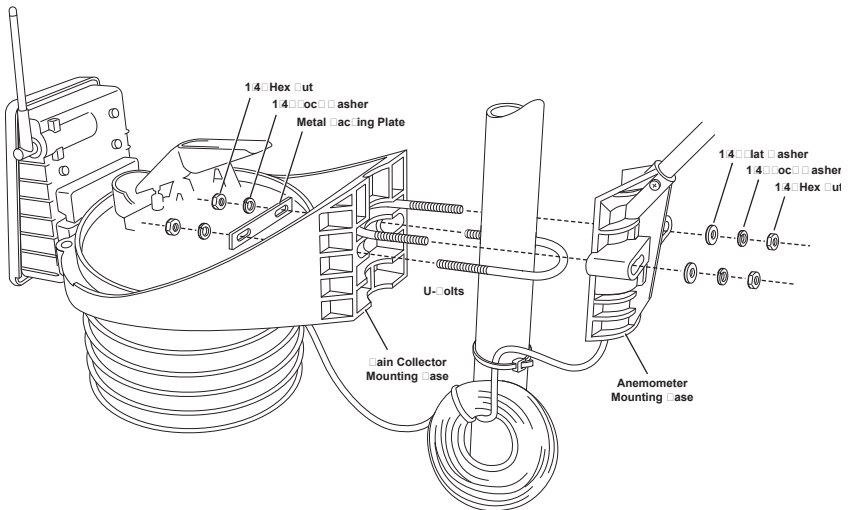
For more information, contact your local lightning protection authority and/or refer to the latest edition of the following articles:

- MIL-HDBK-419A: Grounding, Bonding, and Shielding for Electronic Equipment and Facilities.
- National Fire Protection Association: Standard for Installation of Lightning Protection Systems, ANSI/NFPA 780, National Fire Protection Association, Quincy, MA.
- NEC, National Electrical Code; National Fire Protection Information, Quincy, MA

## Attaching the Vantage Pro2 ISS to the Anemometer Extension Tube

For Vantage Pro2, the anemometer extension tube provided as part of the mounting tripod will be used to support the ISS, which does not come with its own pole. You can mount your ISS on this tube with both sides together or separate. For better access to the hardware securing the rain collector side, remove the rain collector cone by rotating it counter-clockwise and lifting it off of the base.

Mount your ISS and anemometer on the anemometer extension tube together or separately. See the illustration below for more information. Make sure the swaged end of the tube is pointing downward as you secure the ISS to it.



### Option 1: Installing ISS and Anemometer Together

Remember when mounting both sides together that whichever side of the ISS is mounted first, the U-bolt from the opposite side ALSO must be placed around the pole before you tighten anything. (If it is not, there is no way to slide it in later.)

When both sides of the ISS are mounted together with the anemometer arm pointing north, the solar panel on the rain collector side is facing south. In the Northern Hemisphere, this positions the solar panel for optimal exposure to the sun. In the Southern Hemisphere, you will need to position the solar panel facing north for optimal sun exposure.

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The anemometer is factory calibrated to report the correct wind direction when the anemometer arm is aiming north. If you cannot install the anemometer with the arm aiming north, see your *Vantage Pro2 Console Manual* for instructions on how to calibrate the console to display the correct wind direction.

1. Place the U-bolt for the anemometer around the pole so that its round end fits in the top groove of the side of the rain collector side's plastic mounting base. The groove is right above two large holes.
2. While holding the mounting base of the rain collector against the pole, place the two ends of the remaining U-bolt around the pole and through the two holes in the base.
3. Slide the metal backing plate over the bolt ends as they stick out over the rain collector base. Secure the metal backing plate with a lock washer and hex nut on each of the bolt ends as shown previously.

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Note: Do not tighten the hex nuts yet. Leave the hex nuts loose to swivel the ISS base on the pole.

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4. The two ends of the anemometer's U-bolt should now be pointing away from the mounted rain collector side. Slide the anemometer's mounting base over the protruding bolt ends.
5. Place a flat washer, a lock washer and a hex nut on each of the bolt ends as shown above. Do not tighten the nuts yet.
6. Raise the ISS unit to the desired height on the pole and swivel it so the anemometer arm is pointing north.
7. Using an adjustable wrench or 7/16" wrench, tighten all four hex nuts until the ISS is firmly fastened on the pole.
8. Re-attach the rain collector cone by setting the cone back on the base so its latches slide downward into the latch openings on the base, then rotate the cone clockwise.

#### *Option 2: Installing ISS and Anemometer Separately*

1. While holding the mounting base against the pole, place the two ends of a U-bolt around the pole and through the two holes in the base.
2. Slide the metal backing plate over the bolt ends as they stick out toward the rain collector cone. Secure the metal backing plate with a washer, a lock washer, and a hex nut on each of the bolt ends. Do not tighten the nuts yet.
3. For the wireless ISS, swivel the ISS base so the solar panel is facing south (in the Northern Hemisphere), or north (in the Southern Hemisphere).
4. Tighten the hex nuts using an adjustable wrench or 7/16" wrench.
5. Re-attach the rain collector cone.
6. Set the cone back on the base so its latches slide downward into the latch openings on the base. Rotate the cone clockwise.
7. While holding the mounting base against the pole, place a U-bolt around the pole and through the two holes in the base.
8. Place a flat washer, a lock washer and a hex nut on each of the bolt ends.
9. Swivel the anemometer until the arm is pointing north. The anemometer is factory calibrated to report the correct wind direction when the anemometer arm is aiming north. If you cannot install the anemometer with the arm aiming

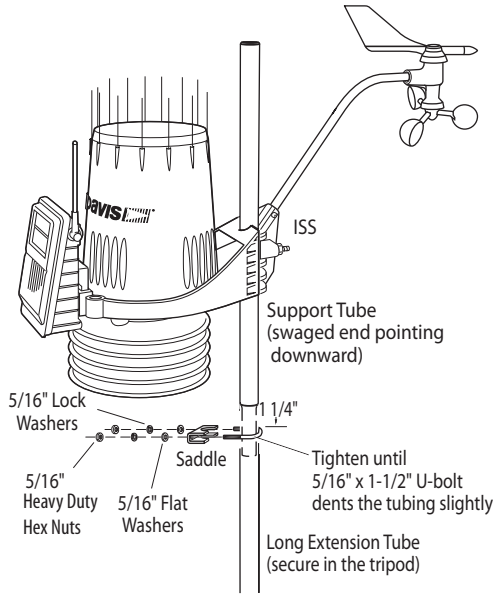
north, see your *Vantage Pro2 Console Manual* for instructions on how to calibrate the console to display the correct wind direction.

10. Using an adjustable wrench or 7/16" wrench, tighten the hex nuts.

## Securing the ISS on the Tripod

Now the ISS is firmly attached to the anemometer extension tube.

1. Insert the swaged end of the anemometer extension tube down into the long extension tube in tripod.
2. Consulting a compass or local map, turn assembly until the anemometer arm points directly north.
3. Place the U-bolt provided with the tripod around the tubes where they overlap. Secure the saddle onto the U-bolt with the flat washers, lock washers, and hex nuts as shown.
4. Tighten the hex nuts quite firmly, until the U-bolt begins to dent the tubing slightly. We recommend the use of a torque wrench with 25 lb-ft of pressure to fasten the hex nuts.



The support tube should be crimped on the extension tube securely to prevent any rocking or rotating.

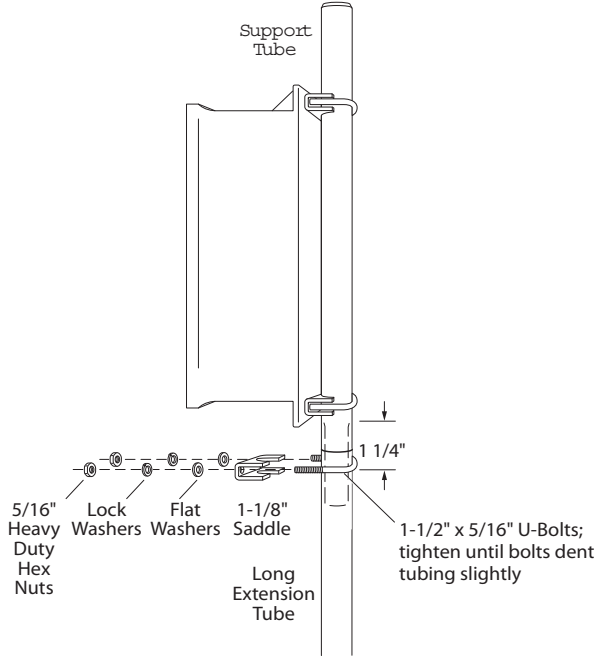
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**Note:** Do not use over 25 lb-ft torque wrench as it may damage the U-bolts.

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## Attaching a Vantage Connect or Universal Shelter

Install a Vantage Connect, Universal Shelter, or Solar Power Kit shelter to the tripod the same way you would an ISS assembly.



5. We recommend the use of a torque wrench with 25 lb-ft of pressure to fasten the hex nuts.

The support tube should be crimped on the extension tube securely to prevent any rocking or rotating.

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**Note:** Do not use over 25 lb-ft torque wrench as it may damage the U-bolts.

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## Contacting Davis Instruments

If you have questions about installing your weather system on a tripod or encounter problems installing a weather station on the tripod, please contact Davis Technical Support. We'll be glad to help.

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Note: Please do not return items to the factory for repair without prior authorization.

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**(510) 732-7814** – Monday – Friday, 7:00 a.m. – 5:30 p.m. Pacific Time.

**(510) 670-0589** – Technical Support Fax.

**support@davisnet.com** – E-mail to Technical Support.

**info@davisnet.com** – General e-mail.

**www.davisnet.com** – Davis Instruments website. See the Weather Support section for copies of user manuals, product specifications, application notes, and information on software updates. Watch for FAQs and other updates.

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