

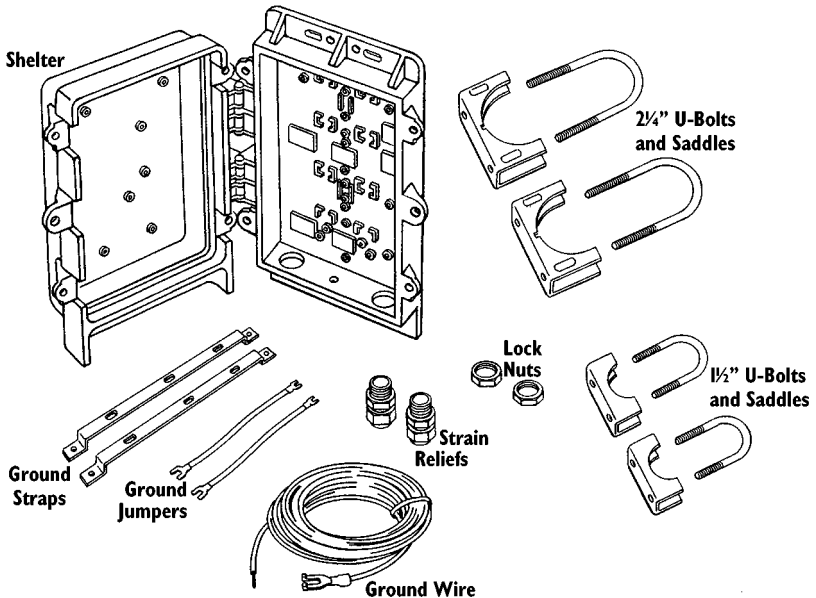
LARGE SURGE-PROTECTOR SHELTER

The weather-resistant Large Surge-Protector Shelter (simply referred to as the shelter in this manual) provides protection from the elements for Surge Protectors (not included) when located outside. Surge Protectors (Davis Product #7767) must be purchased separately.

CAUTION: *Davis Instruments assumes no liability for any injury or damage caused directly or indirectly by the installation or use of this product.*

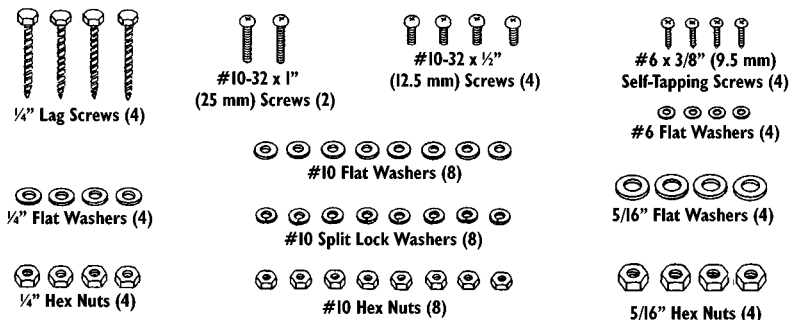
COMPONENTS

The Large Surge Protector Shelter includes the following components. Please make sure that you have all the components before continuing.



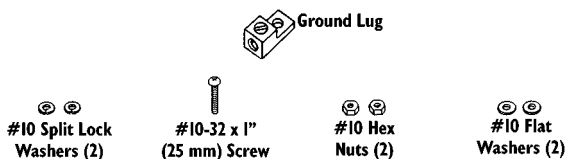
MAIN COMPONENTS

The hardware kit included with the shelter includes the following components. Please make sure that you have all the components before continuing.



HARDWARE KIT COMPONENTS

The ground lug kit included with the shelter includes the following components. Please make sure that you have all the components before continuing.



GROUND LUG KIT COMPONENTS

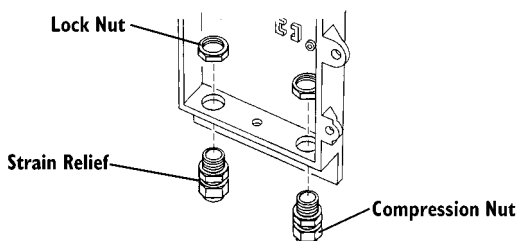
TOOLS AND MATERIALS NEEDED FOR INSTALLATION

You may need some of the following tools and materials in order to install the shelter.

- ◆ Surge Protectors (Davis Product #7767)
The shelter may accommodate up to twelve surge protectors.
- ◆ Medium Flat Head Screwdriver
- ◆ Medium Phillips Head Screwdriver
- ◆ Wrench or 3/8" Nut Driver
- ◆ Large Adjustable Wrench (1 3/8" Opening)
- ◆ Wire Cutter
- ◆ Wire Stripper or Knife
- ◆ Pliers
- ◆ Electrical Tape and/or Silicone Caulking

ATTACHING CABLE STRAIN RELIEFS

Attach both strain reliefs to the shelter as shown below. You will need to install the strain reliefs before running cables into the shelter. Secure the strain reliefs by tightening the lock nuts. Do not tighten the compression nuts until you have attached wires to the surge protectors (see “Attaching Wires to Surge Protectors” on page 8).



INSTALLING STRAIN RELIEFS

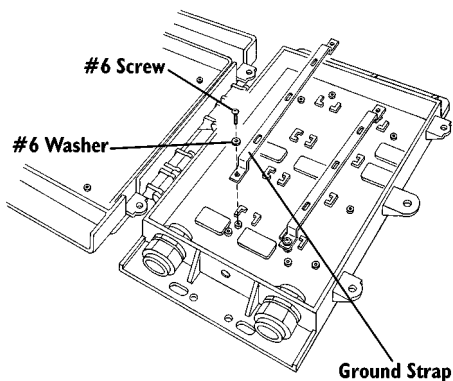
INSTALLING SURGE PROTECTORS AND GROUND WIRES

Follow the instructions below to install surge protectors and ground wires in the shelter.

Installing Surge Protectors

1. Attach the bottom end of each ground strap to the shelter using #6 self-tapping screws and #6 washers as shown below.

Do not attach the top end of the ground strap to the shelter yet.



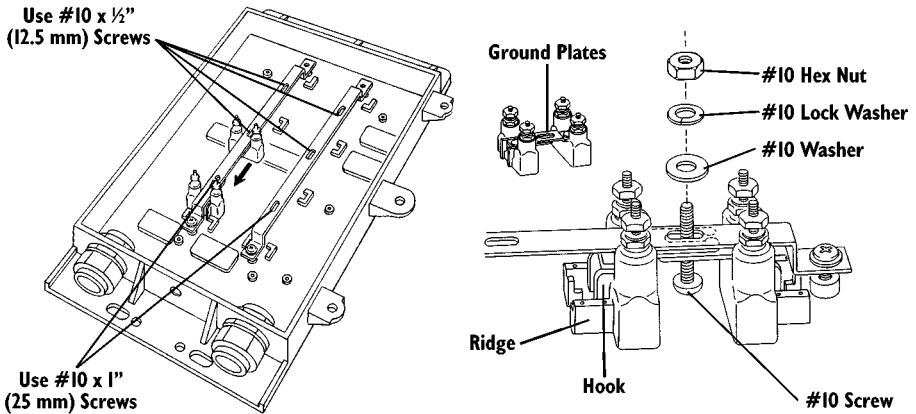
ATTACHING GROUND STRAPS

2. Slide the surge protectors beneath the ground straps.

Fill in starting from the bottom of the shelter. Surge protectors install in pairs, which should be positioned together as shown below. Position each surge protector so the hook fits over the ridge provided on the back panel of the shelter. Make sure the ground plates overlap.

3. Secure each pair of surge protectors in place using a #10 screw, washer, lock washer, and hex nut as shown below.

Use the #10 x 1/2" (12.5 mm) screws for the top surge protector pairs. Use the #10 x 1" (25 mm) screws for the lowest surge protector pairs. The extra screw length allows you to attach the ground wire.

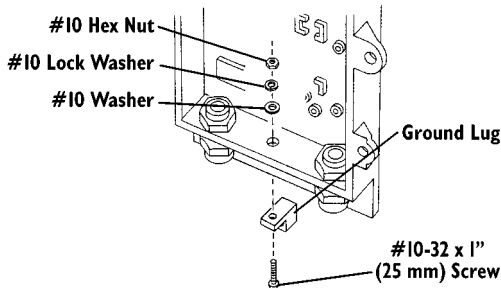


POSITIONING AND SECURING SURGE PROTECTORS

4. When all surge protectors are installed, secure the top end of each ground strap to the shelter using #6 self-tapping screws and # 6 washers.

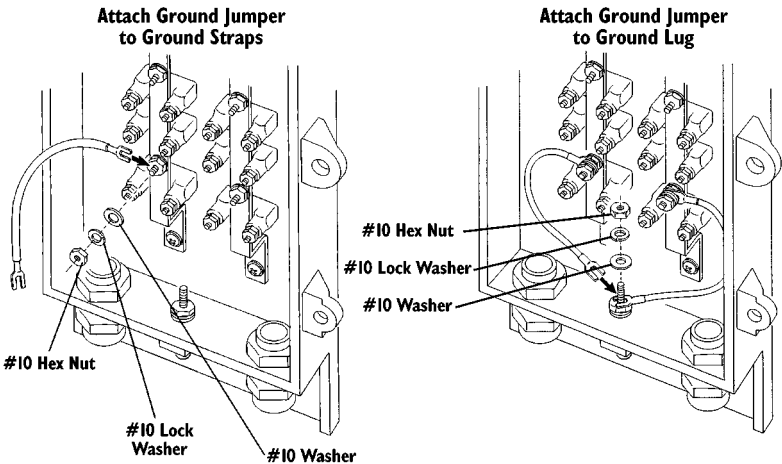
Installing Ground Lug and Ground Jumpers

1. Attach the ground lug to the bottom of the shelter using a #10-32 x 1" (25 mm) screw, washer, lock washer, and hex nut as shown below.



ATTACHING GROUND LUG

2. Slide the spade lug on the end of one ground jumper over the #10-32 screw joining the lowest pair of surge protectors. Secure in place using a #10 washer, lock washer, and hex nut.
Repeat on the other side using the second ground jumper.
3. Slide the spade lug on each ground jumper over the end of the #10 screw holding the ground lug in place. Secure the ground jumper using a #10 washer, lock washer, and hex nut as shown below.



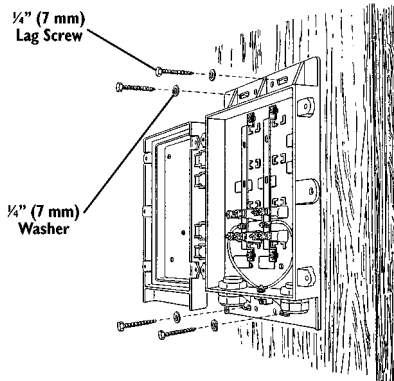
CONNECTING GROUND JUMPERS TO GROUND LUG

MOUNTING THE SHELTER

The instructions below will show you how to mount the shelter against a wall or post, on a small pipe, or on a large pipe.

Mounting the Shelter on a Wall or Post

Attach the shelter to the mounting surface in the desired location using the lag screws and π " flat washers as shown below.

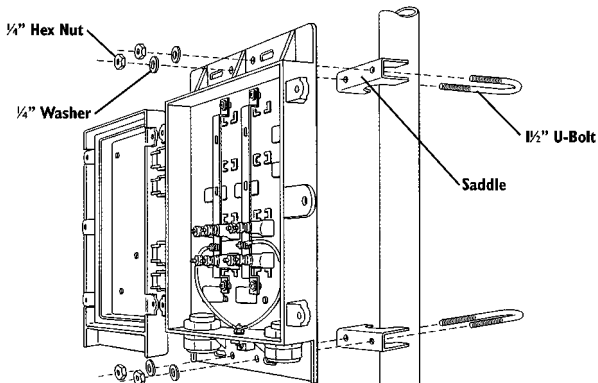


MOUNTING ON A WALL OR POST

Mounting On a Small Pipe

Follow the instructions below to mount the shelter onto a pipe with outside diameter between Ω " and 1π " (19 mm and 31 mm).

1. Hold the rear of the shelter and the $1\frac{1}{2}$ " U-bolt saddles against the pipe and slide the ends of the $1\frac{1}{2}$ " U-bolts through the holes in the saddles and shelter so that the U-bolts wrap around the pipe as shown below.
2. Secure the shelter using a π " flat washer and hex nut on each end of the U-bolts. Tighten the hex nuts until the shelter is firmly attached to the pipe.

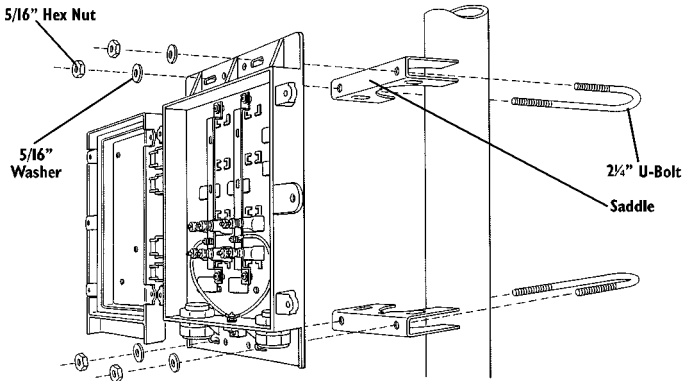


MOUNTING ON A SMALL PIPE

Mounting On a Large Pipe

Follow the instructions below to mount the shelter onto a pipe with outside diameter between 1 1/2" and 2 3/8" (38 mm and 60 mm).

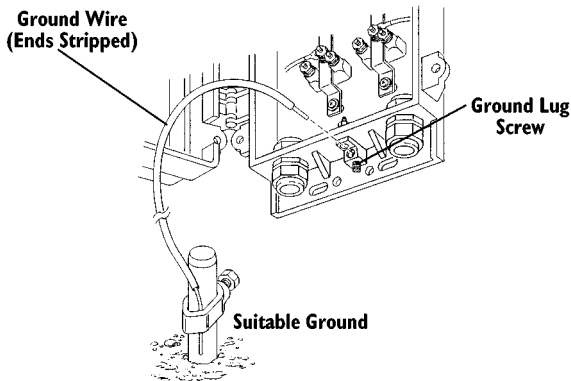
1. Hold the rear of the shelter and the 2π" U-bolt saddles against the pipe and slide the ends of the 2π" U-bolts through the holes in the saddles and shelter so that the U-bolts wrap around the pipe as shown below.
2. Secure the shelter using a 5/16" flat washer and hex nut on each end of the U-bolts. Tighten the hex nuts until the shelter is firmly attached to the pipe.



Mounting on a Large Pipe

GROUNDING THE SHELTER

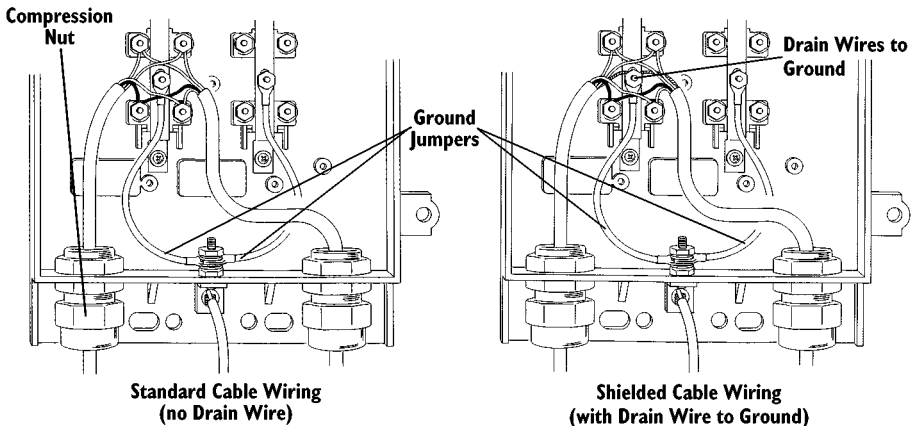
Ground the shelter using the provided ground wire. If you anticipate heavy surges, you may wish to use a heavier wire or multiple wires. Cut the ground wire to the length required to reach from the shelter to a suitable ground, such as Davis Instruments' Grounding Kit (Product #7780). The ground wire should be as short as possible. Strip both ends of the ground wire (remove the spade lug if necessary) and insert one end into the ground lug. Secure in place by tightening the ground lug screw. Attach the other end to a suitable ground.



Grounding the Shelter

ATTACHING WIRES TO SURGE PROTECTORS

Before attaching wires to the surge protectors, route the cable into the shelter by passing the cable up through one of the strain reliefs at the bottom of the shelter. Consult the Surge Protector manual for instructions on attaching wires to the surge protectors. If using shielded cable, connect drain wires to each other or to ground, as shown below.



ATTACHING WIRES TO THE SURGE PROTECTORS

After attaching all wires, tighten the compression nuts on the strain reliefs to secure the wires and create a weather-resistant seal. If there is a large air space around the wires, fill the space by wrapping the wires in electrical tape and/or sealing with silicone caulking.

Product Numbers: 7769

Davis Instruments Part Number: 7395-115
Large Surge Protector Shelter
Rev. B Manual (7/8/99)

This product complies with the essential protection requirements of the EC EMC Directive 89/336/EC.

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