Array Solutions Model AS- 8SP, AS-12SP and AS-16SP 8, 12 and 16 Wire Surge Suppressor Manual

8 Terminal Cable Arrestor

16 Terminal Cable Arrestor

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12 Terminal Cable Arrestor - (not pictured)

SteppIR ™

Dear Customer

Thank you and congratulations for purchasing the Array Solutions Premium Surge Arrestor. We are proud to produce the finest Surge Suppressors on the market - and back it up with a Limited Warranty. (Internal Components not covered by warranty) We build and test every one of them in our factory. None of them are built outside or overseas.

What makes the Array Solutions Surge Suppressors a better product than the competition?

1. **Easy to install. Unlike the competition, no fabrication is required on your part. Bolt it on the tower leg, make the connections to your control cables and go!**
2. **Two choices of Suppressors are available depending on your requirements. 8 Wire Suppressors to support typical Amateur Rotator installations. 16 Wire Suppressors when more connections are required.**
3. **Outside terminals are all Stainless steel. No zinc screw terminals to rust!**
4. **Mounting bracket mounts with two galvanized U-bolts so it will not twist on a tower leg, and makes a very high current attachment point.**
5. **Box will bolt directly to most commercially made towers. Box can be directly attached to an existing cable entrance bulkhead or grounding plate by simply removing the tower mounting leg bracket and use the two exposed ¼" x 20 bolts**
6. **The box is a certified NEMA 4X (harsh chemical environmental certified box) - will not corrode and has a rubber seal.**
7. **Buss bar inside is solid AL and will not corrode, will handle huge currents and is solidly bolted to outside solid AL bracket**
8. **Components are easily replaced by customer if necessary.**
9. **All components are secured with mechanical and soldered connections to handle large currents.**
10. **Each component is selected to handle 2,500 amps of surge current.**
10. **Each lead is RF Bypassed to eliminate RF Interference on your control lines which results in more stable operation of your control boxes.**

We realize that we're not the lowest cost company producing Surge Suppressors and that you have many choices of less expensive products. But we are committed to the very best RF devices we can manufacture, and the best service you can get after you buy a product from us. I again thank you for your trust in Array Solutions.

Sincerely,
Jay Terleski

SteppIR ™

Premium Surge Suppressors

DISCLAIMER: While the Array Solutions Premium Surge Suppressor offers a much improved level of protection, due to the nature of lightning, it is impossible to guarantee that your equipment will not suffer any damage in the event of a near-by or direct strike.

Array Solutions offers no guarantee implied or otherwise that this product will protect your equipment completely.

WARNING: DO NOT attempt to install the Surge Suppressor during a lightning storm!

A good grounding system MUST be installed for proper operation of the Array Solutions Premium Surge Suppressors. The user of these products is advised to consult the various references that are available for additional information regarding ground systems and lightning protection.

Installation Instructions (Typical Installation):

1. The Surge Suppressor may be installed at the top of the tower (close to the rotator or switch box). You can also install it at the base of the tower or on a cable entry bulkhead.
2. You may take the cover off anytime and examine the Surge Suppressor. No warranties are violated by doing so. We are proud of our work inside!
3. You will need to cut the control cable in order to install the Surge Suppressor. **MAKE SURE THAT THE POWER IS TURNED OFF TO THE CONTROL LEAD BEING PREPARED**
4. The Surge Suppressor **DOES NOT GO IN SERIES WITH THE CONTROL LEAD**. If you wire it this way, your control box WILL NOT OPERATE. The Surge Suppressor is a SHUNT DEVICE. To visualize the connection, think of a "T". The Control Lead is the Top of the "T" and the Surge Suppressor is the "leg" of the "T"
5. TOOLS:
   - 7/16" Deep Socket, open end wrench or (last resort – adjustable wrench)
   - 11/32" socket, open end wrench or nut driver (Excelite Green – this is the best tool for the job)
   - Sharp knife
   - Wire cutters/Stripper
   - Crimp Tool (You can also use pliers to crimp)

6. Mounting the Surge Suppressor:
   a. Remove the two Galvanized U-Bolts from the mounting bracket.
   b. Install the U-Bolts around the tower leg to suite your installation.
   c. Install the Surge Suppressor, square washer plates and nuts.
   d. Tighten the 7/16" nuts. Over-tightening of the U-Bolts may result in bending of the aluminum bracket.

Installation Instructions (Continued):

7. There are two ways to attach the control leads
   a. Preferred Method is to visit your local hardware store or home center and pick up some Forked Crimp Style Lugs that will fit the #8 stud. Home Depot has two types that will fit; their #10-113 (fits 4-6 stud) works or their #10-114 (fits 6-8 stud). These are crimp style lugs that need NO soldering AND because they are fork style, you don't need to remove the nut to install them (Very handy when working on the tower!). Simply cut and strip about 3/8" of insulation and crimp on the lug. It's a good idea to give the lug a tug to confirm it's crimped properly.

   The 8 Wire Surge Suppressor will require **16** Lugs. The 12 Wire Surge Suppressor will require **24** Lugs. The 16 Wire Surge Suppressor will require **32** Lugs.

   b. ALTERNATIVE METHOD: Cut, strip and tin the leads and wrap them around the stud and tighten the nut. We advise you to consider installing two #8 flat washers if you use this method to insure the wire doesn't pull free of the stud

8. If you match the colors of the leads on your control cables per stud, you should have no issues. The Surge Suppressor was checked at the factory for defects prior to shipment.

9. Make sure that you secure the control cable with tape or cable ties (aka Tie Wraps) to the tower.

Example of a Typical Installation:

Note the installation of the leads