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## INSTALLATION INSTRUCTIONS:

### SHD-SO239-LA(2.0 & 2.5)<sup>®</sup> Antenna “L” Bracket Base with SS SO239 Connector

Thank you for your purchase; we appreciate your business and interest in our products.

These instructions describe how to install the two versions of our **SHD-SO239-LA series** (“LA”) of “L” bracket antenna base adapters with a stainless steel SO239 connector.

The purpose of these bases is to provide an SO239 connector for directly plugging in your coax PL259 plug, for antennas that are mounted with a base bolt – normally these antennas are connected to the coax with two solder lugs. Our SHD-SO239 base adapters provide a much neater installation!

The photos in these instructions show “what you get” and provide a few examples of the “LA” with some of our mounts.

#### Specifications & Antenna Compatibility

We provide two sizes of the “LA”, which are compatible with a variety of motorized and screwdriver HF antennas. They are made of aluminum with a stainless steel SO239 connector and very short 12 gauge wire that connects to the antenna bolt with a heavy-duty solder lug (**LA2.0 version has 3/8 inch solder lug**, **LA2.5 version has 1/2 inch solder lug**).

1. **SHD-SO239-LA2.0:** “L” bracket 2 inches wide for motorized and screwdriver HF antennas that have a base diameter up to 2 inches. Examples of compatible antennas:
  - Hi Q Antennas “standard” motorized HF antennas that come with 2 inch diameter insulating wafers.
  - High Sierra HS-1500, HS-1800 – replace the High Sierra base with 2 inch diameter wafers that we now sell with a stainless steel 3/8x24 base bolt.
  - Tarheel smaller and full sized HF screwdriver antennas – replace the Tarheel base with 2 inch diameter wafers that we now sell with a stainless steel 3/8x24 base bolts.
  - Any other mobile antennas with a base diameter up to 2 inches and with insulating wafers that mount into a 3/4 inch hole.
2. **SHD-SO239-LA2.5:** “L” bracket 2.5 inches wide for motorized and screwdriver HF antennas that have a base diameter of 2.0 to 2.5 inches. Examples of compatible antennas:
  - Hi Q Antennas “ruggedized” motorized HF antennas that come with 2.5 inch diameter insulating wafers.
  - Any other mobile antennas with a base diameter of 2.0 to 2.5 inches and with insulating wafers that mount into a 3/4 inch hole.

The **two photos** below show what you get with our SHD-SO239 versions, shown in buffed aluminum. They are also available in our five powder coat colors. The only difference is that the “LA-2.5” is 1/2” wider and very slightly taller.



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## Compatible Antenna Mounts

The “SHD-SO239” versions are compatible with the following antenna mounts that we sell or other mounts that have a ¾ inch diameter mounting hole. See example photos at the end of these instructions.

- **UHAM-150 & UHAM-200:** HF motorized/screwdriver antenna mounts with base diameters up to 2 inches, with two points of attachment, adjustable for almost *“any brand” of antenna – “LA-2.0” version only, thickness 3/4”*.
- **BKT-NissanTrac models 3 & 4:** slide-in heavy-duty “L” bracket mount for Nissan trucks with “utility track” – *both LA versions compatible, thickness 1/2”*.
- **AMB-Bkt-1T:** heavy-duty “L” bracket ½” thick x 2.5” wide - *both LA versions compatible, thickness 1/2”*.
- **AMB-Bkt-Mast(D2.0):** super heavy-duty, 4 inch wide, “L” bracket with three U-bolts for mounting to the top of masts up to 2 inches in diameter - *both LA versions compatible, thickness 1/2”*.
- **Other mounts:** at least as wide as the SHD-SO239 (LA-2.0 is 2 inches, LA-2.5 is 2.5 inches wide) with a ¾ inch diameter antenna mounting hole.

## Other Items You May Need

You will need a mount (see list above of our compatible mounts) and antenna mounting hardware with two insulating wafers that fit your antenna.

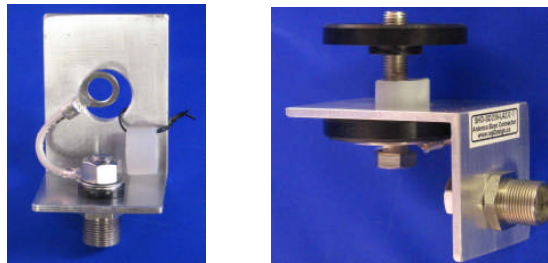
Your bolt must be long enough to accommodate the sum of the following thicknesses: mounting hardware/wafers + SHD SO239 LA + antenna mount + typically at least 7 bolt threads screwed into the bottom of your antenna or antenna quick disconnect. For suggested bolt lengths refer to the table in the **Installation Diagram** below – please note that the suggested bolt lengths are based on the thickness of the parts in our new “**AntMtg Kit-3/8x24, 2.0**” which are similar to what Hi Q Antennas provides with their antennas.

We can provide the additional items below that fit the “LA”, in case you don’t already have them:

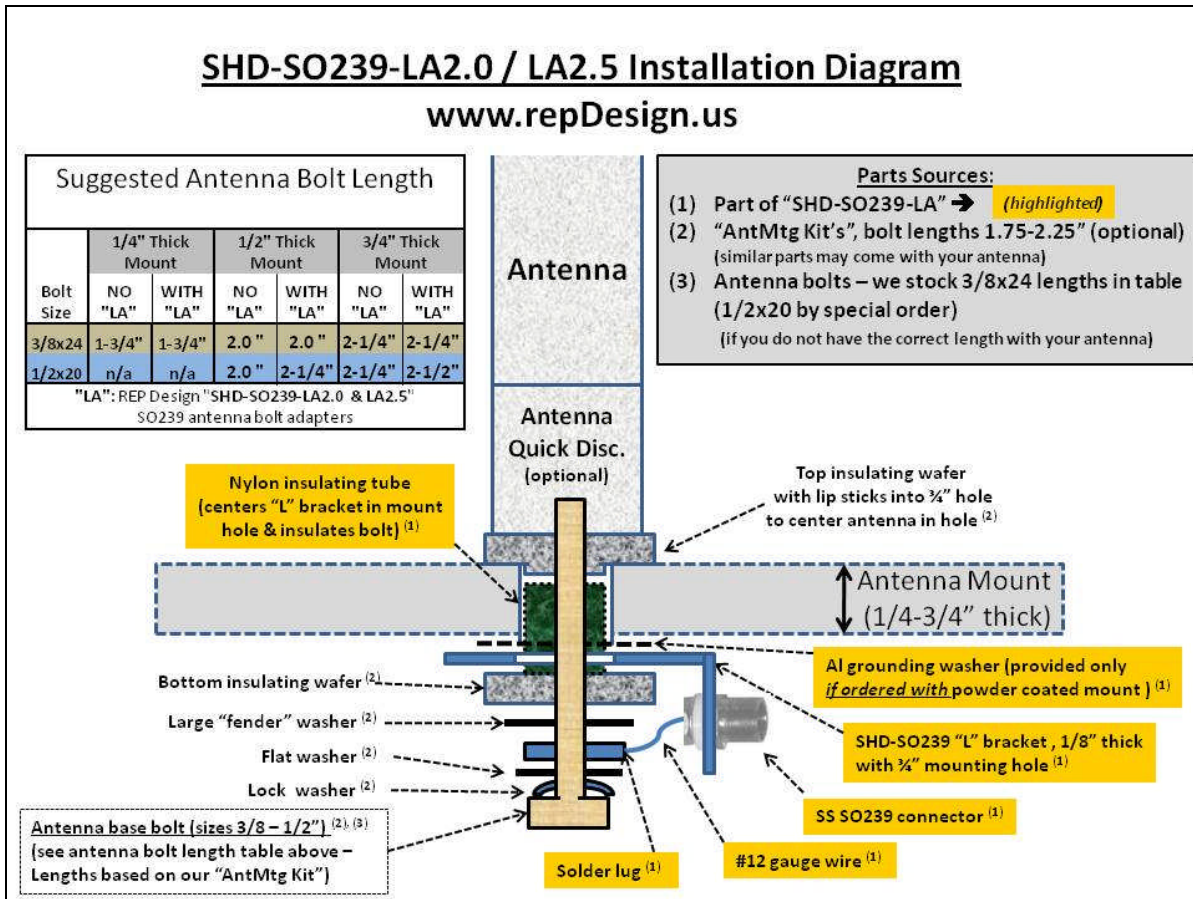
- **AntMtg Kit – 3/8x24, 2.0”:** This kit includes 18-8 stainless steel mounting hardware with two choices of bolt lengths (no solder lug as this comes with the “LA”). This kit is compatible with Hi Q Antennas “standard” models, High Sierra, Tarheel, etc. In fact, this kit is heavier duty than what High Sierra and Tarheel provide.
- **Stainless steel antenna base mounting bolts:** we carry 3/8x24, 18-8 stainless steel, bolts in 2.0 and 2-1/4 inch lengths. These are the same bolts that can be ordered with our “plug and play” **AntMtg Kit-3/8x24, 2.0**. We can provide other lengths, and 1/2x20 bolts, by special order.
- **Heavy-duty antenna mount:** our “LA”s” can be used with a variety of mounts including several of our mounts – see “Compatible Antenna Mounts” section above. You will need to know the thickness of your mount if ordering our AntMtg Kit or one of our antenna bolts (our mounts thickness is in the **Compatible Ant. Mounts** section).
- **Coax TEE connector:** if using an HF shunt load inductor you will need a TEE connector – the middle plugs into the “LA”, one end plugs into your radio coax and the other end plugs into your shunt load inductor.
- **HF shunt load inductor:** you can wind your own, purchase an aftermarket shunt or use our **SHUNT-100** weatherproof adjustable load inductor.

## Installation

This section describes how to install the “LA”s”. Refer to the photos and **Installation Diagram** on the next page. The **left photo** shows what you get with either “LA”. The **right photo** illustrates the “LA” with our “**Ant.Mgt Kit**”.



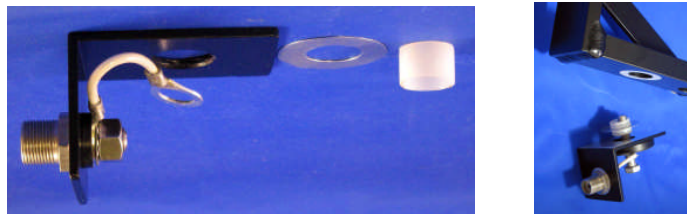
The diagram below illustrates how to install either of our “LA’s”. The antenna mounting hardware shown is included in our “AntMtg Kit – 3/8x24, 2.0” and also comes with Hi Q Antennas motorized HF antennas. It will also fit High Sierra and Tarheel screwdriver antennas. Also shown in the diagram is a **Suggested Bolt Length Table**, based on the thickness of our mounts. If you use other antenna mounting insulators and hardware the length of bolt may be different.



Both “LA” models include a 3/4” OD **nylon tube** (see diagram above) to center the “LA” in the 3/4” diameter antenna mount hole to avoid shorting the antenna bolt against the inside of the hole which is grounded.

If your **mount is powder coated**, you will need a “**grounding washer**” with an inside diameter of 3/4 inches so that the aluminum base of the “LA” grounds directly to the metal on the base of your mount – if not used the thickness of the powder coat will NOT allow a bare metal to bare metal contact between the “LA” and your mount, which will result in improper performance. If you order our “LA” for one of our powder coated mounts we include a custom-made thin aluminum grounding washer at no additional cost (see diagram above and left photo below). If your mount is buffed aluminum, you will NOT need a grounding washer even if the “LA” is powder coated, as all powder coated LA’s have a buffed aluminum base that contacts the mount.

The **photos below** illustrate a powder coated “LA” and one of our powder coated mounts. The thin aluminum washer is shown as the silver object in the left photo.



### **Weatherproofing**

As with all connections, you should weatherproof around the SO239 connector on the “LA” and your coax plug, and around the base of the “LA” that contacts the bottom of your mount. You can use a variety of weatherproofing materials, such as high quality black electrical tape, silicon self fusing tape, “coax seal” putty, “plastic dip” coating, RTV non-corrosive sealer (do NOT use the type that smells like vinegar as this is corrosive), etc.

The goal is to protect all metal to metal contacts and connectors, to prevent corrosion or oxidation of your antenna components. Oxidation can result in poor SWR and other problems as it forms a non conductive layer between parts that must be electrically connected together.

### **Safety First!**

*As with any antenna installation, be careful around thunderstorms and lightning, and you may want to remove your antenna or disconnect the coax BEFORE a storm appears - remember that if you can hear thunder you can be struck by lightning! These instructions are meant to provide general guidelines but can not provide all of the details on how to safely install your antenna components, as each installation is unique. If you feel that you cannot safely install your antenna, you are not sure, or our product does not meet your needs, you may return it for a refund within two weeks (see Warranty for details). **SAFETY FIRST!***

### **Spare parts, accessories, downloads and related products.**

Let us know if you need spare parts or are looking for something that we do not yet provide – your idea could become a new product! As a specialty company, we are looking for unique ideas to serve the amateur and two-way radio community.

### **Warranty Summary**

**All products include a two (2) week "return for any reason" and six (6) month manufacturing defects limited warranty. If you should need to return your product please contact us **IN ADVANCE** to obtain a return authorization number. Please refer to the complete warranty terms that are enclosed with your order; this is also included on our web site.**

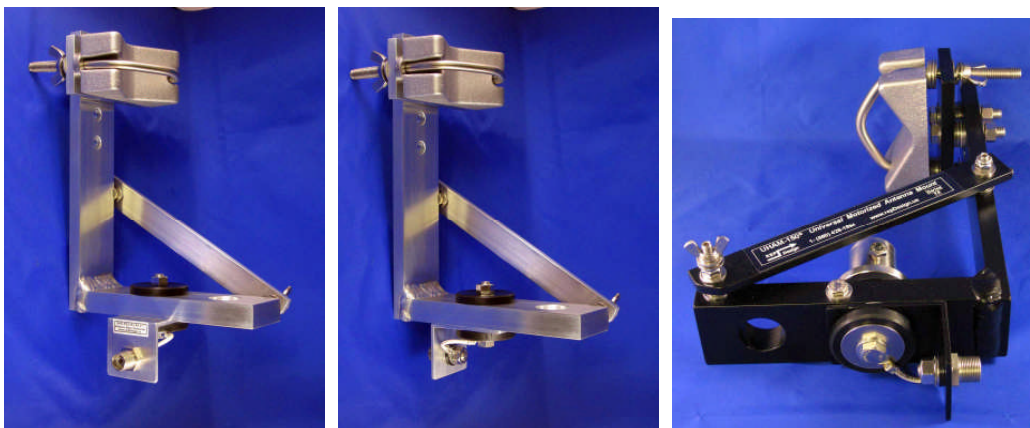
### **Changes to These Instructions**

We periodically update our instructions. The latest versions (PDFs) with color photos can be found on our "DOWNLOADS" web page, under "MANUALS". The version date code is provided at the bottom of each page.

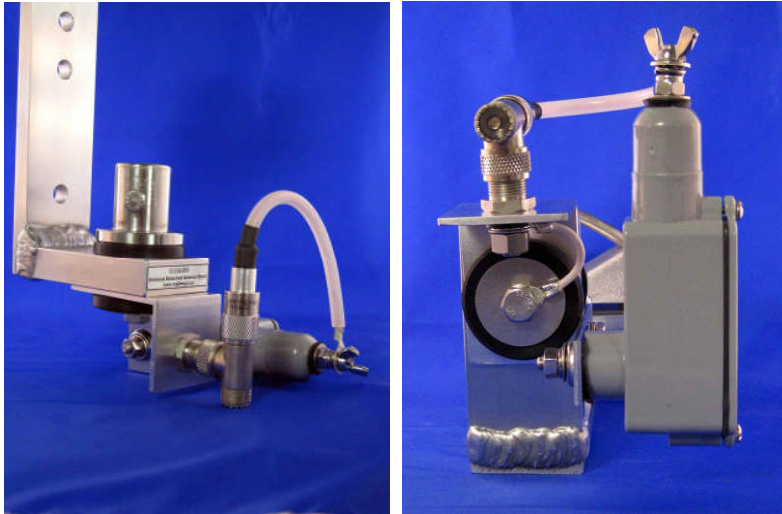
### **Installation Photos**

The following are only a few examples of how the “LA’s” can be mounted.

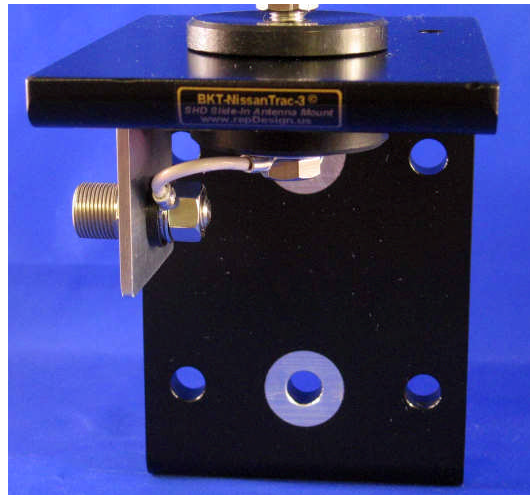
The **three photos below** show the “LA-2.0” with our **UHAM-150 mount**. The right photo shows an **“AntMtg Kit – 3/8x24, 2.0”** and a Hi Q Antennas “GQD” stainless steel quick disconnect ([www.hiqantennas.com](http://www.hiqantennas.com)).



The **two photos below** show the “LA-2.0” with our **UHAM-200 mount**. Both show our “**AntMtg Kit – 3/8x24, 2.0**” , our **SHUNT-100** load inductor and our **Amphenol PL-259 TEE** connector. Also shown is a Hi Q Antennas “GQD” stainless steel quick disconnect ([www.hiqantennas.com](http://www.hiqantennas.com)).



The **photo below** shows the “LA-2.0” with our **BKT-NissanTrac models 3 or 4 slide-in mount** (the track slide insert plate is not shown here). Also shown is our “**AntMtg Kit – 3/8x24, 2.0**” ,



We hope that you find these instructions useful. As with any of our products, we would like to hear from you if you have suggestions or would like to provide photos of your installation for our web site / Photo Gallery (ONLY if you permit us to do so!). **Thanks for purchasing our products. HAPPY DX!**

#### **Other Services We Provide**

Photos, graphics and the writing of these instructions were all done by REP Design LLC; we do this work as part of our associated “Creative Design Images” business. ***Please contact us if you are looking for these services!***