

A FIRESTIK TIP TIP

Compliments of Firestik® Antenna Company Technical Support Team

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Okay guys ... this is one of those articles you should read in its entirety before doing anything! I think we'll start with this because too many people damage their antennas by doing the wrong thing.

You should not, under any circumstances, twist the tip when trying to remove it. Twisting could break an internal solder joint or alter the winding coil design.

Rule 1, you **MUST** have the antenna tip installed when taking SWR measurements on fiberglass antennas ... UNLESS you plan to use the antenna without a tip during normal use. Why? If you add the tip after you tune the antenna (... "cause it's easier than putting it on and off"), the antenna will become electrically longer. The reason why this happens has to do with added capacitance. The antenna wants to release the electromagnetic field into the air space and the added material of the tip restricts that function, thus altering the characteristics of the antenna. Accordingly, if you are going to leave the tip on during normal use ... the SWR measurements **MUST** be taken with the tip on. So, take the initial SWR readings, pull the tip, make the adjustment, replace the tip and take new readings. The tip is an optional piece but its use must be considered during the tuning process.

Dealing with the antenna tip

In most cases (but not all), the tips on the mechanically tuned antenna (FS, FG, FL and LG series) are not installed when we package them at the factory. However, the tips are installed on the "cut-to-tune" models such as the "KW" series. **You should not, under any circumstances, twist the tip because you might break an internal solder joint or alter the winding coil.** This is how we recommend removing the antenna tips, either new or old.

On physically short antennas, we hold the antenna between our feet and hook a couple of our fingernails from two hands under the base of the tip and pull upward. On longer antennas, we have another person hold the antenna horizontally and use the finger-tip pull method to remove the tip.

Alternatively, locate a flat edged object and snag the bottom edge of the tip on that edge and pull the antenna towards you. Examples include the edge of a bumper, angle-iron, edge of a bench, etc.. The key is to break the vacuum-like seal that is created when the tip was installed. On very old antennas it may be necessary to carefully slit the edge of the tip length-wise with a knife to get it off ... not always, but sometimes.

Thinking Ahead

With the tip off, you should keep in mind that it may have to be put on and taken off several times during the tuning process. You can use an old fly fisherman's trick to help in the process. To keep their rod sections from sticking together they use natural oils from their face as a lubricant. The best places are the creases on either side of your nose or on your forehead. Either rub the antenna directly on those areas or get some of your natural oils on your finger(s) and rub it on the top two inches of the antenna. If you're fresh out of the shower and haven't "manufactured" some natural oils, try using some WD-40, silicone or other suitable lubricant. Even peanut butter works great (and is effective for cleaning the entire antenna from time to time). You can reinstall the antenna tip for your initial test and easily remove it during your testing procedure.

Once you have the antenna tuned, you might consider pulling it off one last time and wiping it clean to allow it to stay put during normal use. Many off-road users like to wipe it clean and then use a shot of hair spray as a deterrent for it coming off when the antenna contacts occasional tree branches.

Missing Tips

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Missing tips from antennas and/or flags is not a warranty issue.

Tips on antennas and/or flags do not just "fly off" ... we have had them on jet propelled vehicles over 340mph and they stayed put. If a tip comes up missing it was either stolen by somebody who lost the tip from their antenna or flag (and believe it is better you than them) or, trees, garage doors, parking structure roofs, etc removed the tip.

As a precautionary measure to reduce the possibilities of having a tip stolen or removed by overhead objects, the top of the antenna (after tuned) or flagstick can be sprayed with common hairspray and the tip installed immediately thereafter. Alternatively, a smear of silicone-based adhesive can be applied to the stick near the bottom edge of where the tip sits when seated.

To intentionally remove a tip

In most cases, and always with antennas, it is not wise to twist the tip when attempting to remove it. Twisting can alter the wire windings and/or break solder joints on the tunable tip antennas. Excess twisting force by hand or with tools could, in extreme situations, break the adhesive connection between the glass fiber rod and brass extender on tunable tip antennas or strobe ready flagsticks.

To remove a tip you need to break the seal from the bottom edge with a fingernail grip from two hands and with steady upwards pressure. Alternatively, find something with a non-rounded 90-degree edge (work bench edge, angle iron support of some type, etc.), hold the antenna or flag at a 45-degree angle and catch the lower edge of the tip on the edge and pull the antenna or flag stick away from the tip. On products that have been in use for a year or more, it might, on occasion, need to literally be cut from the top of the antenna or flagstick.