TUNABLE CB ANTENNAS

Compliments of Firestik® Antenna Company Technical Support Team

Throughout history, manufacturers have found a way to create confusion within their markets. Some do it intentionally to overcome their inability to sell their products or services based upon the merits of the product or service. Other manufactures simply ignore the fact that many users of their products have absolutely no background regarding the product and need the most fundamental information from which to build their knowledge base. The antenna industry, by use of vague terminology, has created some confusion too. Two of these areas, "factory pre-tuned" and "tunable antenna", will be explored.

Factory Pre-Tuned

This DOES NOT mean that you can screw the antenna into the mount and go. CB antennas are not plug-and-play devices. "Factory Pre-Tuned" only tells you that the manufacturer has established a standard frequency for the production of their antenna(s) and that the antenna was manufactured to meet that standard. The manufacturers standard refers to a given frequency … NOT a specific SWR reading. Furthermore, the standard is developed on a specific and fixed ground plane. It is doubtful that your vehicle ground plane would match that of the test standard ground plane. You MUST set the SWR of all CB antennas after the antenna is mounted in its final location. Failure to do so will limit the performance of your system and could damage the radio’s circuitry.

Tunable Antenna

All CB antennas are tunable in one way or another. Those antennas that have an easy, often mechanical, tuning device are referred to as a "tunable antenna". Accordingly, lots of people think the other antennas are not tunable and so they make no attempt to have the antenna tuned. This is a critical mistake.

Wire-wound antennas without mechanical tuners, that test electrically long, can be tuned by removing wire from the top. If SWR testing indicates the antenna is electrically short, the coils at the top of the antenna can be separated and spaced further apart or accessories that increase the physical length of the antennas (springs, quick disconnects) can be added.

Solid fiberglass antennas (straight or helical wire impregnated in fiberglass resins) that are electrically too long can have the cap removed and the top can be cut off with a hacksaw. If the SWR test on one of these antennas indicates that it is electrically short, the addition of a spring or quick disconnect (or both) is the only way to correct for the short condition.

Base loaded antennas with wire whips have a set screw (or two) just below the area that the whip is inserted into the loading coil. By loosening up the set screw(s) you are able to slide the whip up or down as required.