
QUADS

THE ULTIMATE ANTENNA

When you put up a tower for your CB antenna, you have an excellent structure to go "all the way" with the antenna. If you're going to put up a 40 foot tower, why not take maximum advantage of the height and go for a quad antenna.

THE QUAD:

Each element in a quad array is one full electrical wavelength long as opposed to $\frac{1}{2}$ wavelength for the Yagi. The quad element is formed into a **loop**. Instead of aluminum tubing, a copper wire is used for the radiator. This results in two big advantages: Twice as much radiating conductor per element, and far less weight and wind resistance per element than a Yagi. Because of the extra length in the elements and its loop configuration, a Quad can produce more gain and rejection than a yagi having the same boom or overall array length! In fact a CB Quad having a boom length of only 5' can equal the performance of a yagi having a boom length of 12'. This feature has given Quads a reputation as "Super Powered" base antennas. Another way to look at it is that the Quad delivers more power and rejection **per pound, or per square foot of wind area**, than a yagi.

When we say Quad, we mean an array of only quad elements, not a hybrid quad/yagi combination that have only one quad loop and yagi elements thereafter. The performance advantages of a quad only hold true if it is a **true** quad.

A quad will typically provide more side and rear rejection when tuned for maximum gain than a yagi of comparable length.

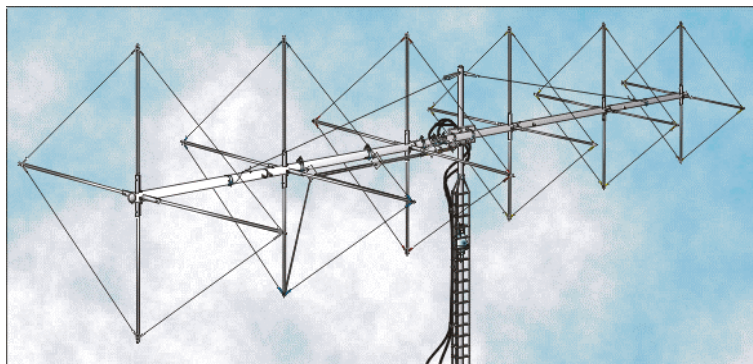
A true quad delivers approximately 2db more forward gain (almost double the power).

Signal Engineering developed a completely new feed system for quads, which provides two independent feed points, one pure vertical polarization, the other pure horizontal; resulting in very low SWR over all channels.

Quad elements consist of **closed** loops, and therefore are not subject to the end capacitance of yagi elements. This means that a quad does **not** pick up precipitation static!

One of the finest examples of a Quad base antenna is the Lightning 6 shown in the illustration.

The quad is on top when all things are considered, especially on-the-air performance, which after all is what we are all trying to improve: Greater distance, less interference, and more reliable communications.



Signal Engineering's **Lightning 6** True Quad.