

Radiation Patterns

In our catalogue we have included radiation patterns for almost every antenna shown, both mobile and base station. These patterns are a “snapshot” of antenna characteristics and an important tool both in choosing antennas and undertaking system planning.

We have recently decided to move to “logarithmic” or power based plots from the previous default method of providing “linear” scaled (voltage based) plots. Linear plots offer greater “fine” definition of the major lobes of antennas but our new logarithmic based plots give output directly graduated in decibels, and this convenience has found great support amongst systems engineers.

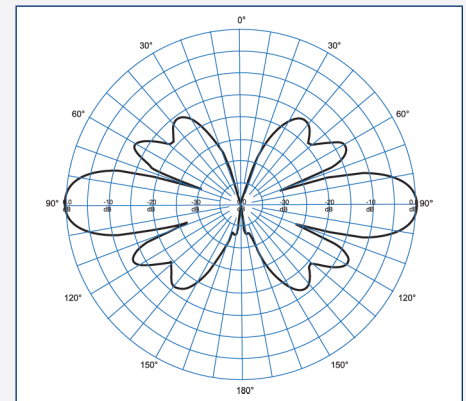
To check if the pattern you are viewing is linear or logarithmic, refer to the scale on the plot. Linear plots are scaled down from 1.0 to 0.1 per graduation on the perpendicular of the plot and our logarithmic plots are generally graduated in decibels, from 0dB (peak level) to -40dB on the centreline of the plot in 5dB increments.

BA80-67 Pattern - Logarithmic

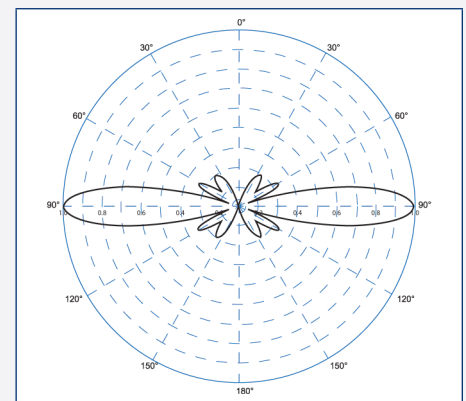
This is an example of our BA80-67 plotted in the logarithmic form. The power level in each “lobe” of the antenna can be clearly read from this pattern, with the level e.g. at -30° from the horizon (120° on plot shown) being 12.5 dB down on the peak gain level at the centreline.

BA80-67 Pattern - Linear

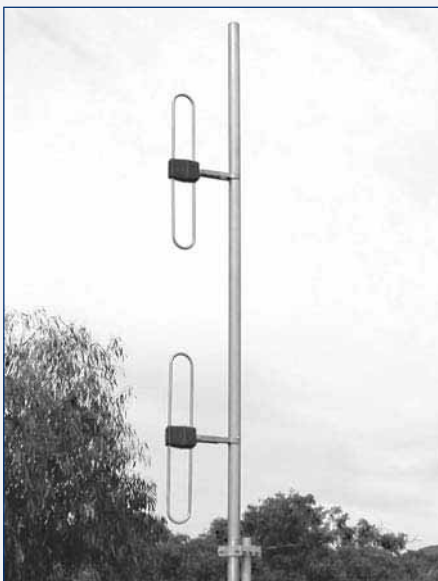
When the same plot for the BA80-67 is displayed based on a linear scale, there is excellent definition in the major lobe, but defining the actual gain offered at -30° from the main lobe becomes much more difficult. For this reason, we have moved to show all antenna plots in a logarithmic form.



BA80-67 Pattern - Logarithmic



BA80-67 Pattern - Linear



What is alodining?

Most of our base station antennas feature “alodined aluminium” construction. Alodining is the end result of the “chromate passivation” of aluminium and in some countries is referred to as “iridited finish”. This is a passive dip finish on aluminium which affords excellent environmental protection (similar to anodising) but maintains the full conductivity of the surface. Alodining our base station antennas ensures that the earthing of the antennas is guaranteed when they are clamped to towers, minimising intermodulation and noise generation at the clamp point and still providing the environmental protection needed for superior service life.