HF Antennas and the RVing Ham

HF antenna installation on a Recreational Vehicle presents greater challenges but with more choices than on the family car. On the family vehicle Hams typically rear mount a Screwdriver, Hustler or Hamstick type antenna and are on the air mobile or portable. RVing hams may also operate mobile or portable but more commonly choose portable due to the vehicle being capable of supporting a larger antenna. This article will offer an introduction to some antenna choices for portable RV operation.

Single Band Mobile style antennas: This type presents a low cost, simple, and effective option when frequent band switching isn't priority. These antennas can be 5 to 10 feet tall. In general mounting in a high and clear position (roof or RV ladder) gives good results by avoiding ground loss effects and detuning from the RV sides. Often a quick disconnect mount is utilized for antenna/band changing and removal for travel.

Example of Single Band Mobile Style Antenna

Motorized screwdriver antenna: These allow multiband operation with the ability to fine tune the antenna to the frequency of operation. Whip length (above a 2 foot coil) is typically 6 to to 8 feet with the longer offering better performance. In general mounting in a high and clear position (roof or RV ladder) gives good results by avoiding ground loss effects and detuning from the RV sides. Typically a foldover or quick disconnect mechanism is utilized for travel.

Example of Motorized Screwdriver Antenna

Vertical Trap antenna: These present multiband operation based on the number of traps and the antenna design. Generally bandswitching is automatic and these antennas can be very effective depending on quality and length. Most are designed by the manufacturers for home use but can be installed on RV's. These are tall so often a foldover mechanism is integrated for travel.

Example of Vertical Trap Antenna

Vertical random length antenna: These utilize a random length of conductor which may be a wire inside a fiberglass mast or merely a very long whip. A tuning network is located at the base for matching. Multiband operation depends on length of the antenna and range of tuning network. This arrangement is tall so usually removed for travel, in some cases with a telescoping mast able to be collapsed and stored.

Example of Vertical Random Length Antenna

In all cases keep in mind the antenna element is only half your system, with a counterpoise or ground plane necessary to work against. If your RV has an all metal body (some travel trailers) you have an excellent ground plane by merely connecting the antenna base to roof with a short heavy braid. If your RV has a non-metal body (more common) a ground cable generally isn't sufficient. In that case a good option is to run a number of tuned wires (for bands desired) out from the antenna base. Another option for screwdriver or hamstick style antennas is to merely run a pair of tuned elements in a dipole

configuration. In any case the idea is to design an antenna "system" consisting of two components.

Example of "Tuned Dipole" Configuration

HF radio from an RV may not break the DX pileups but allows worldwide communications from your QTH of choice, possibly a forested State Park, shore of a lake, or the mountains of Alaska.

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