

SHORT TAKES

KU4AB Model SQ-50 6-Meter Antenna

In the April 2005 “Short Takes” we introduced the amateur community to KU4AB’s innovative 2 meter and 70 cm loop antennas. In the four years since that review, Phil Brazzell has expanded his product line substantially. With Field Day and springtime sporadic-E band openings in mind, I thought it would be a good time to take a look at his Model SQ-50 6 meter antenna.

Simple Design, Simple Installation

The SQ-50 is a square (32 × 32 inch) loop antenna made of high-grade 6061t aluminum rod. The mounting hardware is stainless steel and will accommodate your typical 1½ inch mast.

The antenna arrives completely pre-assembled and there is no tuning required. You simply remove it from its shipping box, slap it onto a mast, connect your coaxial cable and you’re on the air.

The ease of installation makes the SQ-50 particularly attractive for portable operating, either at a Field Day site or on the road as a VHF contest “rover.” For this review, I attached the SQ-50 to a 20 foot mast among the trees in my backyard, feeding it with a length of 9913 coaxial cable. With an adjustable wrench in hand, the installation required all of 10 minutes. The finished product is relatively stealthy (read: hard to see), which is a definite plus.

Back at the radio, I measured the SWR curve, with the result shown in Figure 1. As you can see, the SQ-50 is designed for the low end of the band. It is possible to perform some limited adjustment if you need to shift the SWR curve higher, but I didn’t attempt this. Unless you intend to try FM, most activity on 6 meters is well below 52 MHz.

How Does it Play?

It had been a while since I had dabbled on 6 meters and I had forgotten what a difference a good antenna can make. Yes, the SQ-50 is omnidirectional; you can’t expect the same performance you’d achieve with a directional

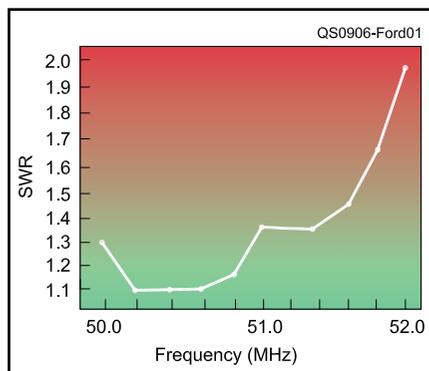


Figure 1 — The measured SWR curve of the SQ-50 installed at a height of 20 feet.

antenna such as a Yagi. Even so, I was very impressed with this little loop.

Six meters is a quirky band. Much of the time it is dead quiet — until it suddenly bursts wide open and you hear signals from hundreds or even thousands of miles away. And then there is meteor scatter, which is relatively easy on 6 meters. You’d be surprised how far your signals will travel when they bounce off the ionized trails of disintegrating space debris. Digital meteor scatter makes this activity possible around the clock.

During the January ARRL VHF Sweepstakes I routinely worked distant stations while running only 100 W output. (The

SQ-50 is rated at 1 kW, but I don’t have that much RF muscle at my station.) Considering that no propagation “enhancements” were involved, I was pleased.

A week later the band lived up to its unpredictable reputation. As I listened during a quiet Saturday afternoon, signals began rising like ghosts out of the noise — a sporadic E opening was unfolding before my eyes! Within minutes I was working stations up and down the band. One of my contacts was W9ILY in Illinois who was also using a loop antenna (not an SQ-50). According to John, my signal was a solid S9 and I was receiving him

equally well.

At other times I used the SQ-50 to work meteor scatter with the *WSJT* software suite (<http://physics.princeton.edu/pulsar/K1JT/>). Using *WSJT*’s FSK441 mode, I successfully completed numerous contacts with the SQ-50. At the time this review was written, my best DX via meteor scatter with the SQ-50 was about 1000 miles.

A Rugged Performer for the Magic Band

The SQ-50 survived a particularly harsh New England winter without complaint. Ice and snow did increase the SWR at times, but those were temporary conditions. And with its 100 MPH wind rating, the SQ-50 had no difficulty handling the icy blasts.

If you are looking for more gain, it’s possible to vertically stack two SQ-50s, so long as you can keep about 12 feet of separation between them. I didn’t try this for the review, but the possibility is intriguing.

Since many HF transceivers now include 6 meters, all you need is a good antenna to enjoy the captivating strangeness of what some hams call the “Magic Band.” The SQ-50 is one such antenna. It’s small enough to fit into any setting and the price is easy on the budget, too.

Manufacturer: KU4AB.COM, 5664 State Route 849 East, Boaz, KY 42027, 901-270-8049; www.ku4ab.com. \$73.95.