

A DX CENTRAL REVIEW: Quantum QX v3.0 AM Loop Antenna



Figure 1: The Quantum Loop 3.0 can help take your DX pursuits to the next level!

Get em' while you can

The ever-increasingly hard to find AM DX loop is about to become even more rare

By Loyd Van Horn, W4LVH

Dare I say it, but a good loop antenna is hard to find.

Sure, you can build one, or find a vintage loop antenna on eBay. Still, these days it seems that to find a truly remarkable piece of medium wave engineering is just much more difficult now than it was 20 years ago.

There are a long list of quality AM loops that have passed into and out of the market later. Today, most of the other loops on the market are either insanely expensive or cheap and flimsy attempts at a loop that fail miserably compared to their more expensive counterparts.



In the words of Lee Corso: not so fast, my friends. There is a loop antenna on the market today that is reasonably affordable and packs quite a bit of punch in the results department too.

I bring you the Quantum QX v3.0 AM loop antenna. Produced by Gerry Thomas through his company Radio Plus Electronics in Pensacola, Florida.

Judging by the name, it should be obvious that this is the third installment in the Quantum series. I remember back in the 90s when the Quantum first hit the industry, reading favorable reviews on the quality and workmanship of the build as well as the results it produced once plugged in. Some DXers with pretty well-known names and reputations were singing the praises of the Quantum.

Does the latest incarnation live up to the tradition of earlier Quantum Loops? Does it earn a spot among modern loop antenna's hallowed names like Space Magnet, Kiwa and Palomar? Let's take a look.

A word about this review: I am going to keep this review relatively grounded in regards to the terms and verbiage used here. With it being the holiday buying season, I know that the recipient of the gifted antenna may not always be the one reading this review. I will discuss this antenna in relative laymen terms. For those looking for lots of technical details and jargon, there are plenty of excellent reviews online made by far more qualified individuals than I am to break things down to that level. What you will find here is more of an operational run through than a scientific analysis.

OUT OF THE BOX

The Quantum Loop came extremely well-packaged from the folks at Radio Plus. There were two main components in the box, the amplifier/controller and the loop head. You can also order optional accessories like an AC adapter and a coupler for use with portable radios or those with their own built-in antennas. It also came with a three-page instruction manual to walk you through setup and use of the loop.

The antenna comes in a black finish, with the loop head having a nice piano-black finish. The controller-base is made of a metal housing, the loop head encases the ferrite coil inside with plastic. The knobs and switches are all sturdy, easy to grip and manipulate and well placed for their function. The tuning knob, for instance, is the one you will use the most, which makes it nice that it is the largest knob on the box.

Assembly is very easy. You plug the loop head into the controller-base. That's it. The loop head utilizes a ¼ inch phono plug in connecting to the controller-base. Power is supplied by either the AC adapter accessory or a 9-volt battery.

Looking at the controls, it is fairly straightforward to those with any experience using a powered loop antenna. There is an on/off switch that allows you to choose between AC and DC power, depending on which source you are using. You have your tuning control, to match the loop to the receiving frequency of the radio (this is further controlled with a Low/Mid/High-range switch to quickly jump through the band). There is a gain control to modify how much gain the amplifier is adding to the incoming signal and a QX control that will narrow the tuned passband, improve the signal-to-noise ratio and overall increase signal strength.

In addition, there is a 'Q-spoil' control which can broaden the tuning of the loop for a less touchy QX control (not a very commonly used control, but helpful when needed). Finally, there



is a variable coupling control that can be used when you connect an external antenna directly to the loop head.

On the back of the controller, you will find an SO-239 jack for connecting the loop directly to your communications receiver. If your radio has a built-in antenna, the optional coupler is needed to use the loop. You will also find the jack for plugging in the AC adapter and the battery compartment for the 9-volt battery.

My first impression was this is a well-built device. Each control is clearly labeled and the simple layout permits an ease of use over long periods of time.

Turning the loop head for nulling stations is a pretty effortless maneuver. There is a plastic cover on the metal shaft holding the loop that makes rotating comfortable and easy. Tilting the loop head for deeper nulls is fairly painless. My loop head needed to be tightened slightly, as it was falling when tilted past a certain point. A quick touchup with a screwdriver fixed that.

The footprint of the antenna is certainly much smaller than that of something along the lines of the Kiwa. It fits comfortably on a shelving unit that sits on top of my radio desk. Even at an elevated position, the controls are easy to manipulate and the loop head is easy to rotate and tilt.

The size is especially nice when you take this thing out of the shack. This was probably my favorite aspect of the Quantum once I really started getting into my tests. With the addition of the coupler, I was able to take the Quantum to the bedroom, out in the yard, or in the car while parked in an open field and it was not cumbersome at all to use. Up to this point, the only portable option I had was a Select-A-Tenna. Comparing these two is not a fair fight at all.

It is extremely lightweight, even with the loop head connected. This adds to the portability of the loop, and increases the applications for its use.

PERFORMANCE

For my testing, I used an ICOM R-72 for direct-connection use and a Grundig G4000A for testing portable use with the coupler accessory.

A quick note about your DX environment: no antenna is perfect and no antenna can make up for a less than ideal DX environment. My own DX shack is plagued with noise from my incoming cable wiring, CFI bulbs and a neighbor that loves to leave his TV on all-hours of the day and night. My longwire antennas pick up every bit of this noise, especially in the daytime. While a loop antenna can help you null out certain sources of noise, amplified-loops especially can magnify the noise that you are experiencing in most cases. Don't think that a loop is going to magically erase your noise problems.

When testing a new antenna, especially a loop, it is important to be able to have a basis for comparison. While running my in-shack testing, I compared the ICOM/Quantum combination side-by-side to my Kenwood R-2000 which I had bouncing between two longwire antennas oriented perpendicular to each other. For my portable test, I used the Quantum coupled to the radio, as well as purely the built-in ferrite loop inside the Grundig.

Tuning the loop to a frequency is fairly straightforward. First, you select the appropriate 'range' with the Low/High/Medium selector switch. (Note: It is not oriented Low/Medium/High, but Low/High/Medium. That took some getting used to). The included instructions outline the



frequency ranges covered by each. Then, you turn the 'tune' knob until you see a peak in signal strength on your signal meter, or once you hear one with your ears. It is important to do this with the gain turned fully 'on' (clockwise) and the QX control fully counter-clockwise. Once you have tuned in the frequency, you can manipulate these controls.

Starting with the in-shack testing, I wanted to see how the Quantum handled nighttime DX. I tuned to 560 kHz where WXBT in Columbia, SC is normally dominant. The only other station heard here in South Carolina on this frequency has been WFRB in Frostburg, Maryland. The Kenwood had WXBT coming in weak, but audible. Firing up the Quantum and tuning for 560 kHz, I heard WXBT a bit louder than normal here. With a quick turn of the loop head, though, I suddenly had WQAM-Miami, Florida coming in louder than any other station on the frequency.

I then wanted to check a bit higher up the band. I tuned to 1130 kHz, a frequency that since I moved to South Carolina has been a mash of multiple stations, none wanting to overtake the others for dominance. The longwires on the Kenwood demonstrated this, with 3-4 stations duking it out just above the noise floor. Over on the Quantum, I was able to back off the gain and pull in KWKH in Shreveport, Louisiana.

Higher up the band still, I went to 1440 kHz, which is home of local WGVL, a sports-talk station here in the Upstate. They are usually a bit weaker at night, but still the dominant station on the frequency and this night was no different. With the Quantum though, I was able to null them out and tune in WGMI-Bremen, Georgia with their staggering 62-watts of nighttime signal.

The instructions recommend backing off the gain on the controller to about a 9dB on your radio's signal meter. I agree that this seemed to produce the best results, especially when combined with at least some attenuation on the radio itself. This allowed stations that pulled to the top to really stick out and dominate the frequency.

The QX control took some getting used to. There are detailed instructions included in the documentation that comes with the antenna on how to use it. Now that I am used to it, I haven't found there to be a lot of situations that call for it, but when it is needed, it does make a pretty big difference in helping to further null out pesky stations.

On the portable side of things, I was even more impressed. I was able to leave the noisy conditions surrounding my shack, and head out in my vehicle to a large field. There, I did some daytime portable DX with the Quantum's coupler accessory to match it with my Grundig G4000A. Once again, the Quantum was able to shine.

Once you get this antenna into a noise-free environment, look out. I was able to tune in my former radio station on 540 kHz, WRGC-Sylva, North Carolina. I couldn't duplicate this either with the Grundig's built-in antenna or at home on any combination of radios or antennas. Next up came WZAP-Bristol, Virginia on 690 kHz, a frequency that is normally silent at my DX shack during the daytime. To really see if I could push the Quantum, I tried to get around a pesky local, by completely nulling out the slop of local WYRD on 1330 kHz and was able to pick up WJRI-Lenoir, North Carolina on 1340 kHz.

In my testing, the controls were easy to manipulate, the rotating and tilting of the loop head to null stations was effortless. It will take some getting used to, even for those with experience of amplified loops. This is especially true of the QX control as well as placement and use of the coupler with portable radios.



The nulls were pretty deep for a ferrite-coil loop. They weren't as deep as our old Kiwa, and it did seem to be a bit noisier than the air-coil loops I have used over the years, even in the noise-free environment. But really, this is just splitting hairs at this point. The Quantum performed admirably in every situation I threw at it.

BOTTOM LINE

To say I was impressed with the Quantum is probably an understatement. I still had fresh memories of my father's Kiwa bouncing around in my head, and the Quantum held more than it's own. The added ability to take the Quantum on the road with me made this a slam-dunk choice among the current options of AM loops.

I have honestly tried to find some negatives, to make sure this review didn't sound like a puff-piece. Truthfully, they just aren't there. The screw that controls the tilt of the loop head can get a bit loose at times, but that is easily fixed with a tightening with a screwdriver. Cosmetically, the black finish shows dust and fingerprints pretty easily. If it feels like I am reaching here, I am. I honestly don't have much to point fingers at.

There are better loop antennas that have hit the market that provided deeper nulls and quieter operation. If you want to fork out the money for one of those, or go to the trouble of building one, you probably already have done so. But for the casual DXer, that just wants a reliable and effective loop antenna for their shack that will produce some pretty fantastic DX, I can't think of a better option for your money. Throw in the ease of portability for DXpeditions, ocean-side Trans-Atlantic/Trans-Pacific DX, or just some backcountry, low-noise DX from a tent and this is an absolute winner.

The Quantum QX v3.0 is now shipping from Radio Plus Electronics. You can find them online at their Web site www.dxtools.com where you can find information on the Quantum and other Radio Plus products. The setup I tested, with the loop antenna (\$249) coupler (\$15) and AC adapter (\$6) totaled \$270 US. Gerry offers a 10 percent discount for radio club members.

UPDATE: March, 29, 2020

I am happy to report that my Quantum Loop antenna remains an integral part of my DX shack. Now 8 years after purchasing one for myself, the Quantum has helped pull in many DX catches that were not available to me otherwise, especially while portable or in an outdoor environment and away from noise.

I do want to alert to you that as of the writing of this update, Gerry has plans to, deservedly, retire sometime in 2020. So, if you are set on adding this loop to your shack, you will want to act fast before the last Quantum Loop is made by Gerry's expert hands.

RATINGS

Quality: 4.5 out of 5 stars – The screw that controls the tilt of the loop head may need regular tightening. Understandable, but may cause some irritation with regular use. Other than that, this is a hand-built, high-quality piece of equipment.

Performance: 4.5 out of 5 stars – As an amplified, ferrite-coil loop antenna, it performs



outstandingly well. We aren't talking about a beverage antenna or even an air-coil loop here. But honestly, I never found myself wanting.

Features: 5 out of 5 stars – It has everything you would possibly need. Having the AC adapter included instead of an optional accessory might not be a bad idea, but come on, it's \$6.

Design/Appearance: 4.75 out of 5 stars – The finish can make dust and fingerprints pretty annoying. The layout is perfect, especially for using the loop at an elevated position or where you aren't actually eyeballing it at the time. This makes it much easier to tune with both eyes on the signal meter.

Overall: 4.75 out of 5 stars – Overall, I was very pleased with this antenna. I know what I hope is under my tree this holiday season. Why didn't I get one 20 years ago?