

Mastrant Antenna Guy Rope and Accessories

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When you're building your home station or a portable station, you may not give much thought to rope for hanging wire antennas or guying a mast. Take a few minutes to peruse the Mastrant website (www.mastrant.com), and you'll see quite a bit to consider. Based in the Czech Republic, Mastrant offers one-stop-shopping for antenna guy rope and accessories.

Rope: Two Types

Let's start with the rope. Mastrant-P rope has a polyester core and polyester cover and is available in diameters ranging from 2 millimeters ($\frac{3}{32}$ inch) to 14 millimeters ($\frac{1}{2}$ inch). Breaking strength ranges from 220 pounds to 7,060 pounds, with safe working loads from 70 pounds to 2,120 pounds. Elongation (stretch) is specified at 2.4%.

Mastrant-M is a stronger and more expensive rope with a core made from Dyneema DM20, a very strong, ultra-high molecular weight polyethylene fiber. Available sizes range from 2 millimeters ($\frac{3}{32}$ inch) to 12 millimeters ($\frac{1}{2}$ inch). Breaking strength and safe working load ratings are about double the same size Mastrant-P rope. For example, the 3-millimeter P rope is rated for 440/130 pounds, while the same size M rope is 860/260 pounds. The largest size, 12 millimeters, is rated at 12,130 pounds breaking strength and 3,640 pounds safe work-



Figure 10 — Mastrant antenna guy ropes are available in a variety of sizes, and here are just a few. The large spool is 100 meters (330 feet) of 2-millimeter M rope, while the smaller spool is 31 meters (102 feet) of 3-millimeter P rope. The larger piece is 10-millimeter P rope.

ing strength. The M rope is rated at less than 1.2% elongation.

The Mastrant website offers a one-page sheet listing appropriate applications for their products. We ordered some 2- and 3-millimeter P and M rope, which could be used to support wire antennas and guy vertical antennas or even lightweight masts. As shown in Figure 10, the small sizes are really small — nice for a backpack station, for example — yet more than strong enough for the job. The jackets appear to be quite durable and abrasion resistant. The M rope seemed more flexible and easier to coil and handle. We also ordered a sample of the 10-millimeter P rope. This rope handles very well. With a breaking strength of 4,190 pounds, comparable to $\frac{3}{16}$ -inch steel guy wire, Mastrant recommends this and other large sizes for guying lattice towers. (The website has information on guying Rohn 25 and 45 towers with various loads.)

Accessories

Once you've decided on a type of rope, check out the accessories. Mastrant offers a wide range of clamps, thimbles, shackles, carabiners, tensioning devices, mast guy clamps, and other hardware. Material is either stainless



Figure 11 — A small sampling of the many available Mastrant accessories. Clockwise from the top left: mast guy ring, thimbles, duplex wire rope clips, 5-millimeter nylon pulley, 7-millimeter metal anti-tangle pulley.

steel or galvanized, and should hold up well in the elements. Note that the hardware is metric, so you'll need to have suitable wrenches or nutdrivers on hand.

A few of the options are shown in Figure 11. I particularly liked the stainless-steel duplex wire rope clips (see Figure 12). Available for 2- to 10-millimeter rope, they are easy to work with and make a secure connection. The Mastrant website has a section called "Tips and Advice" that shows how to install these for best performance. Use a thimble to protect the rope from chafing, install the clip, tie a couple of knots for safety, and secure the loose end with a tie-wrap to keep it from unraveling. Retighten the hardware when the guy ropes are installed and under tension.

For larger sizes (6 millimeters and up), you could use one or more galvanized fist grips like the one shown in Figure 13. Mastrant also offers rope with a thimble and compression fitting installed on one end.

Finally, Mastrant offers a huge variety of turnbuckles and cleats for tensioning guy ropes. I tried the Line-Lok and Aero Cleat tensioners with 3-milli-

Bottom Line

Mastrant antenna guy rope and accessories offer an integrated approach to supporting wire antennas or guying verticals and masts. The manufacturer's website offers a wealth of specifications and application information.



Figure 12 — Duplex wire rope clip on 3-millimeter rope.



Figure 14 — Aero Cleat tensioner on a 3-millimeter guy line.



Figure 13 — 10-millimeter rope with fist grip (top) and factory installed thimble with compression fitting (bottom).

meter rope. Both of these devices allow you to adjust tension on a guy rope over a wide range without using tools, and are especially handy for portable operations, where the guy stakes are in different positions each time. The Line-Lok is simple to adjust, and I used three of them on 3-millimeter Mastrant-P guy ropes for a 24-foot fiberglass mast holding a temporary wire antenna in my backyard. Once adjusted, the guy ropes held the mast straight all winter without moving. The Aero Cleat (see Figure 14) is similar but offers more rigging options, as shown on the Mastrant website.

Final Thoughts

While rope and hardware are available from your local hardware store, you often can't tell how strong the rope is, how much it stretches, or how it will hold up in the elements. Hardware is often cheaply plated and starts to rust within months. In contrast, the Mastrant ropes are designed to be UV, humidity, and abrasion resistant. Hardware is stainless steel for the most part, and designed to work with specific rope sizes. Detailed specifications and ratings are available, along with quite a bit of application information on Mastrant's website.

Manufacturer: Cassiopeia Consulting, Czech Republic; www.mastrant.com. Distributed in the United States by DX Engineering, GigaParts, and R&L Electronics. *Sample prices:* 100 feet of 3-millimeter rope, \$9 for P and \$25 for M. Stainless-steel, 3-millimeter duplex wire rope clip, \$1.60 and thimble, \$0.33. Tensioners for 3-millimeter rope: Line-Lok, \$4.25 and Aero Cleat, \$10.25.

FlexRadio's *SmartSDR* for iOS

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SmartSDR for iOS is an app for Apple iPhones and iPads developed for FlexRadio Systems by Marcus Roskosch, DL8MRE, that allows you to remotely operate any FlexRadio FLEX-6000 Signature Series transceiver. You can download and install the app from the iTunes Store free of charge, and run the "demo" mode to get a taste of how it looks and functions. If you want the ability to control your FlexRadio transceiver, however, you'll have to purchase "FlexRadio Signature Series Device Support"

from within the app for \$49.99.

For this review, I used a FLEX-6500 transceiver that we had on hand in the ARRL Laboratory. To enable wireless access to the radio, we established an *ad hoc* network with a wireless router, which we then connected to the FLEX-6500 with the requisite ethernet cable.

Bottom Line

SmartSDR for iOS brings control of the FLEX-6000 series SDRs to an iPad or iPhone with many of the features found in the desktop version of the software.

A Couple of Minor Bumps, Then Success

The first step was to link my iPad to the wireless router. That was easy enough. Then, I tapped the *SmartSDR* icon and the application invited me to tap again to connect to the FLEX-6500. Unfortunately, my iPad failed to find the transceiver through the router. After a little exploration, I finally discovered that despite being able to connect to the router, the IP address that I had set previously within *SmartSDR* was well outside the range of addresses the router had assigned to the 6500. That explained why the application could not find it. Once I typed in an address