Stack 2 Systems

Designed for tri-band, log periodic or monoband Yagi antennas covering the 40 to 10 meter bands, the Stack 2 Yagi Switch Relay Unit lets you select from two antennas, either individually or simultaneously. This allows you to choose the best vertical radiation angle for the band conditions. It handles 1,000 watts and features reliable Potter and Brumfield relays.

The perfect complement to your Stack 2 Yagi Switch Relay Unit, the Stack 2 Switch Control Console integrates seamlessly with both old and new COMTEK Stack 2 Systems. It runs on 12 Vdc at 1A and includes a power cable.

You can save money by purchasing both components together in a single system. The only other items you’ll need to complete your installation are the three-conductor control cable and 2 equal lengths of 50 Ω coax cable.

- COM-STACK-2 Stack 2 Yagi Switch Relay Unit ............. $226.95
- COM-STKQA Stack 2 Yagi Switch Control Console .......... $125.95
- COM-STACK-2-A Stack 2 Yagi Switch System with Console and Relay Unit ............. $294.95

Stack 3 Systems

Building upon the success of the Stack 2 System, COMTEK offers you even more selectivity, giving you a broader range of signal arrival and transmission angles. The Yagi Array Switch Relay Unit lets you choose from any single (or combination of) three Yagi Beam Antennas. You can also use it to match and switch a 3-monoband Yagi stacked array for any HF band, covering 40, 30, 20, 17, 15, 12 and 10 meters.

To operate the Stack 3 Yagi Array Switch, use a COMTEK Yagi Switch Control Console. This unit helps you select each antenna individually or in any combination of your other two antennas. Indicator lights are intuitive and the controls are user-friendly; the unit works on 110 Vac.

The Switch Unit and Control Console are also available together in an economical package. You just need to add your frequency-specific impedance-matching coax and control cable.

- COM-STACK-3 Stack 3 Yagi Switch Relay Unit ............. $299.95
- COM-STACK3-1 Stack 3 Yagi Switch Control Console .......... $125.95
- COM-STACK-3-A Stack 3 Yagi Switch System with Console and Relay Unit ............. $399.95

Orders by 10 pm ET Ship Same Day, See Page 58 for Details

Skyhawk Yagi Antenna

For HF DXing and contesting, there may be no better choice than the Bencher Skyhawk Yagi antenna. Using the latest computer modeling, Bencher designed this trap-free Yagi to give you powerful performance with a single-tower setup. This antenna features significant gains on the 20, 15 and 10 meter bands. The Skyhawk Antenna resists high wind, reducing wear on your rotor. The EZ-mount system makes installation a snap and there’s no need for tower-top adjustments.

Visit DXEngineering.com for all the specs on the Bencher Skyhawk Yagi Antenna.

BNR-310 Skyhawk Yagi Antenna .......................................................... $1,199.95

Stack 2 Yagi Switch System with Control Console ............. $125.95
COM-STK2A Stack 2 Yagi Switch $226.95
COM-STACK-2 Stack 2 Yagi Switch Relay Unit ............. $294.95

Log Periodic Antenna

Designed for the serious operator who wants the best antenna available, this professional-grade LPDA antenna is tailored to the 10, 12, 15, 17 and 20 meter bands. If you have exact demands for your antenna, there is simply no better option than the Telrex. It has 16 elements on a 42 foot boom, handles 5,000 watts and weights 350 pounds. With 7.5 dBi of gain and a bandwidth of 16 MHz at 2:1 SWR, this antenna is an excellent performer—even for commercial and industrial installations. Get complete antenna specifications at DXEngineering.com.

TEL-143042-135 Log Periodic Dipole Array Antenna ............. $8,000.00

FM Broadcast Band Log Periodic Antenna

Are you trying to hear an LPFM station that’s just out of range or have spotty FM reception that’s causing aggravation? Here is your solution: a commercial-grade broadcast antenna that requires no tuning, will last for decades and covers 88 to 108 MHz. This six-beam antenna has a 3.75 foot boom, can handle 500 watts and uses a female Type N connector. When installed, it gives you a whopping 7.5 dBi of gain—you’ll never have to listen to your favorite drum solo through static again.

CAE-CD-95Y FM Broadcast Band Log Periodic Antenna ............. $361.95

.telephone.603.897.0050 n Fax.603.897.0053

VHF/UHF Log Periodic Antenna

If you don’t have the space (or friendly neighbors) to put up several VHF and UHF antennas, Create offers you an uncompromising single antenna option. Using 21 elements, the wideband directional CLP-5130-1N gets you on the 1.25, 2 and 6 meter bands, plus the 23, 33 and 70cm bands. It handles 500 watts and gives you an average gain of 10 dBi. With a 6.66 foot boom length, it’s compact enough to go almost anywhere and at 11 pounds, it’s perfect for most rotators. You can also use this antenna for VHF/UHF TV, FM broadcast, aviation and government communication applications.

Create’s CLP-5130-2N is similar to the 1N, except it provides 11 dBi of gain and doesn’t offer coverage on the 6 meter band.

CAE-CLP-5130-1N VHF/UHF Log Periodic Antenna, 6-Band ............. $469.95
CAE-CLP-5130-2N VHF/UHF Log Periodic Antenna, 5-Band ............. $343.95

Create's CLP-5130-1N is similar to the 1N, except it provides 11 dBi of gain and doesn’t offer coverage on the 6 meter band.
Tri-Band HF Beam Antennas

If you want to get active on the 10, 15 and 20 meter bands, Hy-Gain’s TH series antennas are an excellent choice. These durable antennas offer excellent gain in an efficient package. You can select the right-sized antenna for your specific installation, whether it’s on a rooftop or a tower. These lightweight, multi-element Yagis also feature aluminum tubing for reduced stress on your rotator. Visit DXEngineering.com for the complete specs.

- **HGN-TH-3JR5** Tri-Band Yagi, 3-Element, 600 W, 8 dBi Gain $359.95
- **HGN-TH-3MK4** Tri-Band Yagi, 3-Element, 1,500 W, 8 dBi Gain $469.95
- **HGN-TH-3MK2** Tri-Band Yagi, 5-Element, 1,500 W, 9 dBi Gain $699.95
- **HGN-TH-7DX** Tri-Band Yagi, 7-Element, 1,500 W, 9.6 dBi Gain $799.95

Monoband HF Beam Antennas

Hy-Gain’s Long John antennas are factory-tuned for optimum performance on a specific band. Designed to fit a 2” O.D. mast, these 3-element antennas handle 1,500 watts and are made from aluminum tubing with stainless steel hardware. Long John antennas represent the perfect blend of performance and durability, in a lightweight package.

- **HGN-LJ-103BA** 10 Meter Monoband Yagi, 7.5 dBi Gain $159.95
- **HGN-LJ-153BA** 15 Meter Monoband Yagi, 7.4 dBi Gain $199.95
- **HGN-LJ-203BA** 20 Meter Monoband Yagi, 7.2 dBi Gain $319.95

**DXE-PS-2B PRO-STACK Broadband Two Antenna Phasing System**

The PS-2B PRO-STACK combines two identical Yagi, log periodic, or vertical antennas in a phased arrangement. It is a broadband system that operates from 160 to 10 meters with no need for coaxial delay lines. The PS-2B can be used in applications requiring these four basic antenna feed selections (impedance matching automatically changes when any antenna port is disconnected).

- Both antenna ports in-phase (default)
- Both antenna ports out-of-phase
- Antenna port 1 only
- Antenna port 2 only

**Additional Applications**

- Scalable Multi-Antenna Systems
- The PS-2B easily adapts to larger arrays. For example, four stacked Yagis can be combined by creating two sets of two and using a third PS-2B to combine the first two sets.
- Phased Verticals
- The system can feed three vertical antennas in a four-pattern array. In this arrangement, the three antennas are individual quarter-wave resonant antennas. The center #2 passive element must be directly grounded at all times. Elements #1 and #3 are then fed in various phase relationships.

**Additional Features**

- 50 Ω system—switched by applying 12-15 volts DC to three control wires
- Power handling up to 5 kW
- High RF-tolerant, silver-PTFE UHF connectors
- Proven high-performance DX Engineering RF Relays
- Safe 12-volt relay operation
- MOV surge protection on control lines
- RoHS-compliant

- **DXE-PS-2B** PRO-STACK Two Antenna Phasing Switch $499.00
- **DXE-PS-2B-P** PRO-STACK Two Antenna Phasing Switch/Controller $575.00

The Control Console is also available separately

- **DXE-EC-PS2** PRO-STACK Control Console $89.95

*Note: Information on the appropriate separation between stacked Yagi antennas in versatile, high-performance array is discussed fully in the ARRL Antenna Book. Generally, stacked Yagi antennas are separated vertically by greater than 1/2-wavelength free space.*

**DX Engineering HEXX Antenna Kits and Components**

You can build a G3TXQ Broadband Design Hexagonal Beam antenna that covers the 20, 17, 15, 12 and 10 meter bands with these simple and affordable kits. These packages are your ticket to a versatile, small and lightweight directional HF Beam antenna.

DX Engineering’s design offers better gain and improved front-to-back performance with a lower SWR, and it uses our patented stainless/PTFE rigid balanced feedpoint system. The feedpoint system provides balanced, 50 Ω connections to the wire elements, eliminating the need for special waterproofing.

You can select from two complete kits for either single or multi-band operation, or you can purchase each component separately to custom build or retrofit an antenna to your unique specifications. *US Patent D624,060

- **DXE-HEXX-STAP-2** 20/17/15/12/10M 5-Band Total Antenna Kit, Mark II $599.95
- **DXE-HEXX-1TAP-2** Single Band, Pre-cut for 20M, Total Antenna Kit, Mark II $367.95
- **DXE-HEXX-5FFF** 5-Band Rigid Feedpoint System $194.95
- **DXE-HEXX-1HBP** Hub Kit $99.95
- **DXE-HEXX-5WRP-2** Single Band Wire Element and Guide Kit, Mark II $149.95
- **DXE-HEXX-1WRP-2** Single Band Wire Element and Guide Kit, Mark II $75.95
- **DXE-HEXX-1SCP-2** Spreader and Center Post Kit, Mark II $199.95

**Flag Pole Buddy Ladder Brackets**

Quickly transform your van, RV or trailer into a temporary antenna tower. Great for EMCOMM, Hamfests, vacations or Field Day, these brackets can be secured virtually anywhere for a tall, easily set up antenna installation. Once installed, you can slide your mast into place while standing safely on the ground. At the end of the day, lowering your antenna is just as easy as putting it up. In addition to antenna applications, you can use the Flag Pole Buddy as the name implies: flying flags at the next Hamfest, Field Day or tailgate party.

- **FLB-106105** For 1.5” O.D. Masts $49.95
- **FLB-106201** For 2.0” O.D. Masts $54.95

More Products, Specs and Photos at DXEngineering.com
**Antennas: Directional**

Cushcraft has a storied history of producing top-notch antennas and antenna accessories. No matter what your demands, chances are Cushcraft makes an antenna to fit your performance needs, space limitations, and budget requirements. The Cushcraft line includes a wide range of HF/VHF/UHF vertical, Yagi, and rotatable dipole antennas. Each antenna style is made with high-quality components and hardware, and is designed to deliver maximum power and efficiency. Proven products, proven performance!

---

**X7 Big Thunder**
**Triband Yagi Antenna**
The X7 Triband Yagi sets new standards in both radiating performance and mechanical reliability. Each mechanical component is designed to survive 100+ mph winds with a 1.25 safety factor. The new 4L Log Cell design eliminates traps from the high current driven elements and reflectors, which yields virtual monoband performance and maximum power handling capability. Traps are employed only in the lower current directors for increased gain and sharper pattern. The result is a truly high-performance antenna that will easily handle the legal limit.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSH-X7</td>
<td>7-Element Beam, 12.5/13 dB</td>
<td>$999.95</td>
</tr>
<tr>
<td>CSH-X740</td>
<td>40M Add-on Kit for X7</td>
<td>$369.95</td>
</tr>
</tbody>
</table>

**XM240 Big Thunder**
**40M Monoband Antenna**
Cushcraft’s XM240 monobander utilizes rugged Big Thunder and high strength aluminum tubing that gives the antenna outstanding wind survivability. Phillystran boom trusses provide extra boom stability. The feed system is a 50 Ω direct feed; VSWR is flat across the band. A high-power 1:1 balun is included. Excellent front-to-back ratio and gain makes the XM240 the right choice for both DX and stacking.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSH-XM240</td>
<td>40M, 2-Element Beam, 6 dB, 22’ Boom</td>
<td>$949.95</td>
</tr>
</tbody>
</table>

**ASL2010**
**Log Periodic Yagi Antenna**
The ASL2010 is the most cost effective high-gain, five-band antenna on the market today. Skylog offers continuous operation from 13.5 to 32 MHz. Antenna gain and beamwidth are constant for uniform coverage from 10 through 20 meters. The ASL2010 is rated for continuous duty at full legal power. Skylog is designed for maximum gain on a manageable 18 foot boom with only 10.1 square feet of wind surface area. Stainless steel hardware and a rugged element design provide years of superior antenna performance. Skylog ASL2010 is the smart choice for multiband HF operation.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSH-ASL2010</td>
<td>20-10M, 8-Element Log Periodic Yagi, 6.4 dB</td>
<td>$949.95</td>
</tr>
</tbody>
</table>

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*World-Class Products Shipped Worldwide*
MA5B Compact Multi-Band HF Antenna
Cushcraft's multi-band HF antenna provides 5-band operation in a package small enough to mount to a tripod. The MA5B does not sacrifice ruggedness, performance and power handling for size and ease of installation.

CSH-MA5B  20-10M 5-Band Mini Beam .................................................. $489.95

CSH-A503S  6M 3-Element Beam, 8 dB, 6' Boom ........................................ $139.95
CSH-A505S  6M 5-Element Beam, 10 dB, 12' Boom ............................. $189.95
CSH-A506S  6M 6-Element Beam, 11 dB, 20' Boom ............................. $369.95
CSH-A627013S 6M/2M/70cm 3-Band, 3/5/5-Element Beam, 7.8 dB; $269.95
CSH-A27010S 2M/70cm 3/3-Element Beam, 7.8 dB ............................... $119.95
CSH-A27010S 2M/70cm 5/5-Element Beam, 10 dB ............................... $159.95
CSH-A1483S  2M 3-Element Wideband Beam, 7.8 dB ......................... $66.95
CSH-A14810S  2M 10-Element Wideband Beam, 13.2 dB, 12' Boom .... $129.95
CSH-A14820T  2M 20-Element Twist Beam, 13 dB .............................. $209.95
CSH-A124WB  2M 4-Element Beam, 10.2 dB, 4' Boom ....................... $109.95
CSH-A1382  2M 13-Element Beam, 15.8 dB, 15' Boom ......................... $239.95
CSH-A2682  2M Pair of 13B2 Vertical Stacked Beams ......................... $589.95
CSH-A171B  2M 17-Element Beam, 18 dB, 31' Boom ........................... $349.95
CSH-A224WB  220 MHz 4-Element Beam, 10.2 dB, 3' Boom ................ $99.95
CSH-A719B  432 MHz 19-Element Beam, 15.5 dB, 13.5' Boom .......... $229.95
CSH-A43011S  430 MHz 11-Element Beam, 13 dB, 4.6' Boom .......... $99.95
CSH-A4496S  440 MHz 6-Element Beam, 10 dB, 2.9' Boom .......... $72.95
CSH-A44911S  440 MHz 11-Element Beam, 13 dB, 4.4' Boom ........ $109.95
CSH-PD2  Power Divider for Two VHF or UHF Antennas .................... $69.95
CSH-PD4  Power Divider for Four VHF or UHF Antennas .................. $89.95

VHF/UHF Yagi Antennas
Cushcraft engineers used computer-aided modeling and test range techniques to optimize the performance of these popular VHF and UHF Yagis. That means you get more gain and cleaner patterns with excellent front-to-back ratios. The S-series antennas have very broad bandwidth so they will not detune in bad weather, and proper spacing combine to make Cushcraft's tribanders the preferred antennas for your HF work. High-gain, low SWR, and wide bandwidth keep the contacts coming in. All U-bolts, clamps, and hardware are stainless steel. Pick the model for the size and performance level that fits your needs. Add 30 or 40 meters with add-on kits.

CSH-A3S  3-Element Triband Beam, 8 dB, 14' Boom ................. $599.95
CSH-A3WS  3-Element WARC Beam, 17/12 meter, 8 dB, 14' Boom ..... $499.95
CSH-A4S  4-Element Triband Beam, 8.9 dB, 18' Boom  .......... $699.95
CSH-MA5B  20-10 Meter 5-Band Mini Beam ......................... $489.95
CSH-X7  7-Element Triband Beam, 12.5/13 dB ......................... $999.95
CSH-XM240  40 Meter 2-Element Beam, 6 dB, 22' Boom ......... $949.95
CSH-TEN3  10 Meter 3-Element Beam, 8 dB, 8' Boom .............. $289.95
CSH-A503S  6 Meter 3-Element Beam, 8 dB, 6' Boom .......... $139.95
CSH-A505S  6 Meter 5-Element Beam, 10 dB, 12' Boom .......... $189.95
CSH-A506S  6 Meter 6-Element Beam, 11 dB, 20' Boom .......... $369.95

CSH-A3  3-Element Triband Beam, 8 dB, 14' Boom ................. $599.95
CSH-A3WS  3-Element WARC Beam, 17/12 meter, 8 dB, 14' Boom ..... $499.95
CSH-A4S  4-Element Triband Beam, 8.9 dB, 18' Boom  .......... $699.95
CSH-MA5B  20-10 Meter 5-Band Mini Beam ......................... $489.95
CSH-X7  7-Element Triband Beam, 12.5/13 dB ......................... $999.95
CSH-XM240  40 Meter 2-Element Beam, 6 dB, 22' Boom ......... $949.95
CSH-TEN3  10 Meter 3-Element Beam, 8 dB, 8' Boom .............. $289.95
CSH-A503S  6 Meter 3-Element Beam, 8 dB, 6' Boom .......... $139.95
CSH-A505S  6 Meter 5-Element Beam, 10 dB, 12' Boom .......... $189.95
CSH-A506S  6 Meter 6-Element Beam, 11 dB, 20' Boom .......... $369.95

Add-on Kits
CSH-A743  40/30 Meter Add-on Kit for CSN-A3 and A3S .... $189.95
CSH-A103  30 Meter Add-on Kit for CSN-A3WS .................. $189.95
CSH-A744  40/30 Meter Add-on Kit for CSH-A4 and A4S .... $189.95
CSH-A7X40  40 Meter Add-on Kit for CSH-A7X .................. $369.95

CSH-A103  30 Meter Add-on Kit for CSH-A3WS .................. $189.95
CSH-A744  40/30 Meter Add-on Kit for CSH-A4 and A4S .... $189.95
CSH-A7X40  40 Meter Add-on Kit for CSH-A7X .................. $369.95

CSH-XM240  40 Meter 2-Element Beam, 6 dB, 22' Boom ......... $949.95
CSH-TEN3  10 Meter 3-Element Beam, 8 dB, 8' Boom .............. $289.95
CSH-A503S  6 Meter 3-Element Beam, 8 dB, 6' Boom .......... $139.95
CSH-A505S  6 Meter 5-Element Beam, 10 dB, 12' Boom .......... $189.95
CSH-A506S  6 Meter 6-Element Beam, 11 dB, 20' Boom .......... $369.95

Add-on Kits
CSH-A743  40/30 Meter Add-on Kit for CSN-A3 and A3S .... $189.95
CSH-A103  30 Meter Add-on Kit for CSN-A3WS .................. $189.95
CSH-A744  40/30 Meter Add-on Kit for CSH-A4 and A4S .... $189.95
CSH-A7X40  40 Meter Add-on Kit for CSH-A7X .................. $369.95

CSH-D3  20/15/10M Rotatable Dipole .................................................. $359.95
CSH-D3W  30/17/12M Triband Rotatable Dipole, WARC .. $359.95
CSH-D4  40/20/15/10M Rotatable Dipole ................................. $399.95
CSH-D40  40M Rotatable Dipole ....................................................... $389.95

Order Online 24/7 at DXEngineering.com
**MSQ-EB144RK2M Satellite Eggbeater Antenna, 2 Meter Band**

Visit DXEngineering.com for complete details.

mounting hardware—practically everything you’ll need to 2M and 70cm antennas, a cross boom VHF/UHF kit and a Satellite Antenna Package is available that includes the budget-friendly price.

- **OSCAR communications.** The small physical footprint of antennas transforms to right-hand circular for excellent polarity patterns at the horizon. Above the horizon, the pattern antennas are equally effective in your base or mobile operating location, whether it’s on a tower, mast or hidden in your attic.

- **Rated at 3,000 watts and weighs just five pounds.** This lightweight and compact HO LOOP antenna is tight on space. The MSQ-10-15M1DX is 20 to 30 MHz Single Band Rotatable Dipole

**Polarity Switch Kits**

Polarity switches modify the performance of your circularly polarized antenna, so you can change between right and left hand circular polarization. These kits are specialized replacement driven elements with built-in relays that work for your M2 Antennas circularly polarized antenna.

The kits include the element, relay, a low-loss coaxial switch and all related hardware. Installation is easy and if you plan to build a new setup, you may want to incorporate a polarity switch right from the beginning.

- **MSQ-PS2M** Polarity Switch Kit, 2 Meter Band ........................................ $159.95
- **MSQ-PS70CM** Polarity Switch Kit, 70cm Band ...................................... $159.95

**Installation, Upgrade and Antenna Building Hardware**

M2 Antennas offers several installation, repair and upgrade parts for your station. Its Cross Booms help you mount multiple Yagi (or eggbeater) antennas, and they’re available with heavy duty aluminum and fiberglass construction that won’t distort your antenna patterns. You can also get boom insulators, clips and clamps to complete your installation.

Find all the pieces available at DXEngineering.com.

- **MSQ-CBVHF-UHF59** Satellite Antenna Cross Boom .................. $44.95
- **MSQ-FBC20** Satellite Antenna Cross Boom, Heavy Duty .............. $188.95
- **MSQ-BUTTON001** Beam Hardware Button Insulators (Bag of 50) ... $13.95
- **MSQ-KEEPER001** Beam Hardware Retainer Clips (Bag of 50) .... $13.95
- **MSQ-UBOLT1-5** Beam Hardware U-Bolt Clamps, 1.5" (Set of 2) .... $9.95
- **MSQ-UBOLT2** Beam Hardware U-Bolt Clamps, 2" (Set of 2) ........ $11.95
- **MSQ-UBOLT3** Beam Hardware U-Bolt Clamps, 3" (Set of 2) ........ $16.95

**HO LOOP Antennas**

These antennas give you excellent SSB and CW communications with a reach of over 200 miles. Excellent for mobile and base weak-signal stations, these antennas offer omnidirectional coverage without a rotator.

- **MSQ-10-15M1DX** HO LOOP Antennas: horizontal polarity means you get upwards of 5 dB of ground gain over a traditional vertical antenna. Plus, the higher you mount your HO LOOP, the more gain you achieve.

There’s an available installation hardware kit that allows you to install your HO LOOP antenna on any 1.25 to 2 inch diameter mast. It includes all the brackets, cradels and hardware you’ll need. For 6M HO LOOP antennas, be sure to order the additional support bracket.

- **MSQ-70CMHOOLOOP** 432 MHz/70cm HO LOOP, 5 dbd Gain (7.1/8.8 dBd Gain) ........................................ $87.00
- **MSQ-222HOOLEOOP** 1.25M HO LOOP, 4.7 dBd Gain (7/8.2 dBd Gain) ........................................ $79.95
- **MSQ-2MHOOLEOOP** 2M HO LOOP, 4 dbd Gain (10/8 dbd Gain (6.83 & 11)) ........................................ $79.95
- **MSQ-6MHOOLEOOP** 6M HO LOOP, 4.2 dbd Gain (11/8.2 dbd Gain (40 & 52)) ........................................ $89.95
- **MSQ-MASTBRKTKit** HO LOOP Base Installation Hardware ................ $22.85
- **MSQ-MTSPMPMDHOMHO** 6M HO LOOP Installation Support Bracket ........................................ $16.95

**20 to 30 MHz Single Band Rotatable Dipole**

An affordable and high quality HF antenna with excellent performance—even if you’re tight on space. The MSQ-10-15M1DX is rated at 3,000 watts and weighs just five pounds. This lightweight and compact antenna is perfect for almost any mounting location, whether it’s on a tower, mast or hidden in your attic.

You can use this antenna with your light duty rotator and it mounts to any 1.25 to 2" O.D. tubing. It can be configured for the 10, 12 or 15 meter amateur bands, or any other HF frequency between 20 and 30 MHz. This antenna breaks down to just four feet long for portable operation.

- **MSQ-10-15M1DX** Single Band Rotatable Dipole ...................................... $239.95

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**Antennas: Directional**

**M2 VHF/UHF Antennas**

M2 Antennas gives you the best performance possible incorporating top-of-the-line features into antennas for every band—and budget. M2 uses computer modeling technology, coupled with weather resistant materials and precise CNC-machined elements, to create antennas that look as well as they perform. Here is the complete line of M2 VHF/UHF Antennas; all the details on the specific antenna you’re looking for are available at DXEngineering.com.

- **MSQ-23CM2E2A** 23cm 22-Element Yagi, 18.2 dbi Gain, 18.8' Boom ........................................ $139.95
- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 11' Boom ........................................ $149.95
- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
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- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
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- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
- **MSQ-24021ATV** 24cm 21-Element Yagi, 16.6 dbi Gain, 14.5' Boom ........................................ $169.95
**HF Log Periodic Antenna**

Get excellent multi-band performance in a single antenna with these LPDA antennas from M2. They'll handle 3,000 watts and include a 4:1 balun. These versatile antennas cover multiple bands without the need for traps and are made to deliver years of reliable service in almost any environment.

The 1030LP8 antenna gets you on the 10, 12, 15, 17, 20 and 30 meter bands with low SWR and an excellent front-to-back ratio with 5.2 dBi of gain. For an antenna that adds 40 meter coverage for a total of seven bands, check out the MSQ-71030LP8. Both antennas have a 29.5 foot boom and a wind surface area of just 13 square feet.

- **MSQ-1030LP8** Six-Band HF Log Periodic Antenna ................................ $2,183.00
- **MSQ-71030LP8** Seven-Band HF Log Periodic Antenna ............................ $2,314.95

**HF Monoband Beam Antennas**

Using the latest computer modeling techniques, M2 Antennas’ engineers have developed an effective, yet lightweight and rugged Yagi design. These antennas are excellent performers and the perfect fit for the contest, DXer and casual operator.

- **MSQ-40M2L** 40 Meter, 5.5 dBi Gain, 3,000 Watts ................................ $1,305.95
- **MSQ-20M5LD** 20 Meter, 10.2 dBi Gain, 3,000 Watts ............................$1,377.00
- **MSQ-20M4DX** 20 Meter, 10.7 dBi Gain, 3,000 Watts ............................$1,204.00
- **MSQ-17M3DX** 17 Meter, 8.5 dBi Gain, 3,000 Watts ............................$639.95
- **MSQ-15M4DX** 15 Meter, 9.7 dBi Gain, 3,000 Watts ............................$801.00
- **MSQ-12M4DX** 12 Meter, 10.7 dBi Gain, 3,000 Watts ............................$635.95
- **MSQ-10M4DX** 10 Meter, 10.1 dBi Gain, 3,000 Watts ............................$590.95

**HF Tri-Band Beam Antenna**

If you want to get on the 10, 15 and 30 meter HF bands, but don’t have the real estate for multiple towers, then these tri-band antennas are your solution. They pack a lot of performance into a versatile and rugged package. They can also handle 3,000 watts, so you get effective coverage on several bands. A balun is included.

- **MSQ-KT34M2** Tri-Band, 4-Element, 7.5 dBi Gain (10M) ......................$1,369.95
- **MSQ-KT36XA** Tri-Band, 6-Element, 10.5 dBi Gain (10M) ....................$1,699.95

**HF Monoband Rotatable Dipole Antenna**

This high-efficiency 40 meter antenna represents the strongest shortened HF radiator on the market. This single-element design is packed with performance, delivering 1.75 dBi of gain while handling 3,000 watts. It is also modifiable to cover any frequency between 6.9 to 10 MHz with a 250 KHz bandwidth.

- **MSQ-40M1L** HF Monoband Rotatable Dipole Antenna ......................... $549.95
Universal Digital Rotor Controller
The DX Engineering-supplied GHE-RT-21 adds advanced operating features to your existing rotor setup—no need to climb the tower! It’s pre-programmed for Hy-Gain HAM-series and T2X units. Setup for most other rotors is solderless (with jumpers) and field-programmable via the front panel or with the included Setup Utility PC software.

- Master/Slave control for stacked arrays turns multiple rotors together or separately
- Counter Rotation operating mode allows you to install a rotor above a rotating tower
- Position rotors with manual push button controls, point-and-shoot presets, or on your computer using RS-232 and USB connections
- PWM variable speed control with start and stop ramping reduces tower and antenna stresses
- Precision heading accuracy up to 1/10°
- Fully supports side-mounted antennas (soft limits prevent running into tower), and over-travel up to 720°
- Offset control allows center of rotation at any heading, north/south center on same mast, and slipped mast compensation
- Programmable reversal and brake delay, speed min./max., limits, ramps, etc.
- High visibility display with adjustable backlight

GHE-RT-21 Universal Digital Rotor Controller ........................................ $559.00
HGN-T-2XRLC Rotor Unit without Console ........................................... $529.95

RT-21D Deluxe Universal Digital Rotor Controller
The RT-21D takes the already excellent RT-21 Rotor Controller and adds an adjustable high-visibility green vacuum fluorescent display. It’s housed in a sleek black chassis to make an attractive addition to your shack.

GHE-RT-21D Deluxe Universal Digital Rotor Controller ................................. $699.00

CD-45II Metered Rotator with Friction Brake and Controller Combo Kit
The CD-45II handles 8.5 square feet when mounted inside a tower, or 5 square feet with a mast adapter.
- Bell rotor design gives complete weather protection
- Low temperature grease good to -30° F
- Dual 24-ball bearing race for load bearing support
- North center scale, dual lighted directional meter indicator
- 8-pin plug/socket on control unit, snap-action control switches, low voltage control
- Handles masts up to 2 1/16” O.D.
- MSLD light duty lower mast support adapter included
- Power requirement: 110V, 60 Hz

HGN-CD-45II Rotor and Console Combo Kit ........................................... $429.95

HDR-300A Heavy Duty Rotator with Digital Readout
The HDR-300A Heavy Duty Rotator is for king-sized antenna arrays with up to 25 square feet wind load area. It features a control cable connector, a hardened stainless steel output shaft, North or South centered calibration, ferrite beads on potentiometer wires to reduce RF susceptibility, and a longer output shaft keyway for added reliability. Heavy duty, self-centering steel mast clamp and hardware included. The digital display is accurate to one degree.

HGN-HDR-300A Rotor and Readout Kit .................................................. $1,349.95

T2X Tailtwister Series II Rotator
This is the complete tower-mounted unit of the T2X rotor, with clamps and mounting hardware included. Ideal for replacing an old Hy-Gain HAM-IV rotator or for use with a third-party controller such as the Green Heron RT-21. The T2X is designed for medium communications arrays of up to 20 square feet wind load area.
- Normal operation down to -30° F
- Steel alloy ring gear good to 100,000 PSI for maximum readability
- Indicator potentiometer with ferrite beads on wires to reduce RF susceptibility
- Weatherproof AMP connector plus 8-pin plug at control box
- Control Console $517701

HGN-T-2X Rotor with Console ................................................................. $699.95
HGN-T-2XRLC Rotor Unit without Console ........................................... $529.95

HAM-IV Rotator
The HAM-IV is the most popular rotator in the world. It is designed for medium-size communications arrays of up to 15 square feet wind load area.
- Normal operation down to -30° F
- Dual 56-ball bearing race for load bearing strength
- Electric locking steel wedge brake
- Ferrite beads on potentiometer wires reduce RF susceptibility
- Cinch plug connector plus 8-pin plug at control box—no screwdriver required
- N or S center of rotations scale on meter
- Low voltage control
- Handles masts up to 2 1/16” O.D.
- Power requirement: 110V, 60 Hz

HGN-HAM-IV Rotor with Console ............................................................ $599.95

HAM-V Rotator with DCU-1 Pathfinder Digital Control
The HAM-V is designed for medium-size communications antenna arrays of up to 15 square feet wind load area. The innovative DCU-1 Pathfinder Control Unit is included. The DCU-1 gives you automatic operation of your brake and rotor, features computer control with RS-232 passthrough, and is compatible with many logging and contest programs. It has 6 presets, 1 degree heading accuracy, automatic 8-second brake delay, and 360 degree choice for center of rotation.
- Low temperature grease permits normal operation down to -30° F
- Ferrite beads on potentiometer wires reduce RF susceptibility
- Cinch plug connector plus 8-pin plug at control box—no screwdriver required
- N or S center of rotations scale on meter
- Handles masts up to 2 1/16” O.D.
- Power requirement: 110V, 60 Hz

HGN-HAM-V HAM-V Rotator with Console ........................................... $929.95

Need Advice? 1-330-572-3200 or DXEngineering@DXEngineering.com
Wire Kit for MSQ-OR2800PX

MSQ-SAFETYWIREKT

Tairotor security and peace-of-mind. Upgrade to an M2 Antenna Safety Wire Kit—get years of installation while preventing the bolts from loosening. This Safety Wire Kit secures your 4- or 6-bolt rotator stays in one place. M2 Antennas makes special drilled to accommodate the included safety wire.

The kit includes 3/8”-24 stainless steel mounting bolts, replacement pins.

• Standard 3” x 3” four-hole mounting bolt pattern (plus two extra holes)

HGN-AR-303 Light Duty Rotator and Controller Combo Kits, 110 Vac ................................................ $89.95

HGN-AR-303X Light Duty Rotator and Controller Combo Kits, 220 Vac ................................................ $89.95

New!

Lower Mast Support Kit

Designed to fit your HAM-IV, HAM-V and T2X, this kit is perfect if you need to mount your rotator to a mast instead of a flat surface.

HGN-MSHD Lower Mast Support Kit ................................................. $99.95

Rotator Hardware

Your tower faces a constant assault from Mother Nature. It’s not uncommon for wind gusts to cause bolts to loosen. Avoid catastrophe by making sure your rotator stays in one place. M2 Antennas makes special rotator hardware to upgrade your current setup. This Safety Wire Kit secures your 4- or 6-bolt rotator installation while preventing the bolts from loosening. The kit includes 3/8”-24 stainless steel mounting bolts, drilled to accommodate the included safety wire. Upgrade to an M2 Antenna Safety Wire Kit—get years of rotor security and peace-of-mind.

HGN-870598 Rotator Connector Parts Pack...........................................$34.95

HGN-SAFETYWIREKT Rotator Hardware Safety Wire Kit for MSQ-OR2800PX................................................................. $47.95

PolyPhaser

Corporation

OR2800PX Rotator Unit

This rotator is designed with you in mind, featuring a high-torque motor and durable construction in a package sized for most common towers and masts. It can handle 1,800 lbs. of vertical load and easily turn large diameter masts with heavy directional antennas. The precision worm drive ensures accuracy, while its sturdy design handles up to 35 square feet of wind load. The OR2800PX Rotator Unit is the perfect match for M2 Antennas’ RC2800PXAZ Rotator Controllers, or it is an excellent choice for a rotator unit to use with a third party rotator controller.

• Massive toothed, ductile iron mast clamps
• Grade 5, 3/8”-24 steel hardware
• Self-centering mast guide
• Drive plate accepts masts from 1 3/4” to 3 1/8” O.D.
• 6-spline output shaft and hub
• Large 2,000 lb. thrust bearing handles high mast loads with low friction
• Lengthened and hardened output shaft
• Heat-treated, machined steel gear train
• Magnetically activated pulse circuit for excellent heading and target accuracy
• Standard 3” x 3” four-hole mounting bolt pattern (plus two extra holes)

HGN-2800200X Rotator Unit ............................................................................... $1,592.00

M2 Antennas

OR2800PXAZ Rotator Unit and Controller System

M2 Antennas bundles its acclaimed OR2800PX Rotator Unit together with the RC2800PXAZ Rotator Controller in a complete system for your mast-mounted directional antennas. This package pairs the pinpoint accuracy of M2’s controller with the rock-solid performance of the rotator. From the high-torque motor of the OR2800PX to the customizable microprocessor of the RC2800PXAZ, this system can be the perfect complement to your directional antenna setup. For complete package details, visit DXEngineering.com.

HGN-2800200X Rotator Unit and Controller System ........................................... $1,774.95

FREE Standard SHIPPING for Orders Over $99, See Page 58 for Details
How to Order

There are three ways to order from DX Engineering:

- Online at www.DXEngineering.com
- By Phone: 1-800-777-0703
- By Fax: 1-330-572-3279

International Phone Orders: 1-330-572-3200

Please provide your e-mail address for most efficient correspondence and to receive order confirmation notices.

Hours of Operation

Ordering (via phone)
Monday - Friday, 8:30 am - 4:30 pm Eastern Time
1230 to 2030 UTC (March-October)
1330 to 2130 UTC (November-February)

Ordering (online)
Order at DXEngineering.com 24 hours a day, 7 days a week

Phone Technical Support
Monday - Friday, 8:30 am - 4:30 pm Eastern Time
1230 to 2030 UTC (March-October)
1330 to 2130 UTC (November-February)

Product Warranties

DX Engineering Products
All products manufactured by DX Engineering are warranted to be free from defects in materials and workmanship for a period of one year from date of shipment. DX Engineering’s sole obligation under this warranty shall be to issue credit, repair, or replace any item or part thereof which is proved to be other than as warranted. No allowance shall be made for any labor charges of buyer for replacement of parts, adjustments or repairs, or any other work, unless DX Engineering authorizes such charges in advance. Repairs to DX Engineering-produced items are warranted for a period of 90 days against defects in materials and workmanship. Repair or replacement is at DX Engineering’s discretion.

Other Manufacturers
Most manufacturers offer their own warranties. All warranties are included with your order. Some manufacturers require their products to be sent directly to them for warranty consideration—before returning any product from another manufacturer, contact us by e-mail or by phone at 1-800-777-0703.

If you want to return any electrical products for warranty consideration, please e-mail us before shipping the items back. We will determine if a warranty claim is valid and where the part needs to be sent. You can also call 1-800-777-0703 to speak to a Customer Service representative. Any item which, in our opinion, represents a defect in materials or workmanship or is otherwise unsatisfactory, will be returned to the manufacturer for examination. You will be charged for the entire order at the time of the initial order. You will be charged for the order at the time of the initial order. In the event of a backorder, we will hold your order until all items are available. If, within 10 days of receiving your purchase, you’re not satisfied, contact our Customer Service department. For new, unopened products, and after our inspection and verification, we will issue a full refund. Opened items will be inspected for missing parts, packaging and item appearance, and may be subject to a restocking or repackaging fee. Send returns postage-paid to the address below with a copy of your receipt and a note explaining the reason for the return. Items without documentation may be returned to you.

Returns

DX Engineering does not have a trial or evaluation period for new equipment. If, within 10 days of receiving your purchase, you’re not satisfied, contact our Customer Service department. For new, unopened products, and after our inspection and verification, we will issue a full refund. Opened items will be inspected for missing parts, packaging and item appearance, and may be subject to a restocking or repackaging fee. Send returns postage-paid to the address below with a copy of your receipt and a note explaining the reason for the return. Items without documentation may be returned to you.

DX Engineering, ATTN: Returns Department
1200 Southeast Ave.
Tullahoma, TN 37388

No returns on special-order products, items drop-shipped by the manufacturer, books or computer software.

Phone: 800.777.0703
International: 330.572.3200
Fax: 330.572.3279
DoD CAGE Code: 3M3H7

E-Mail: DXEngineering@DXEngineering.com
Web: DXEngineering.com

Mail: 1200 Southeast Ave.
Tullahoma, TN 37388

experts@DXEngineering.com
1-330-572-3200: Expert Tech Advice 8:30 am to 4:30 pm ET Monday-Friday

About Shipping

Freight, Shipping and Handling Policies

We ship via ground service at no additional charge (to the contiguous 48 states). In-stock parts are shipped the same day if you order by 10:00 pm Eastern Time (March-October, 0300 UTC November-February), Monday through Friday.

Please Note: We verify all credit card orders for your protection. In rare cases, this process may cause a slight delay in shipping.

Shipping and Handling

Domestic and APO/FPO (United States, excluding HI, AK, PR, US Territories)

Shipping and Handling on domestic orders is non-refundable and based on order subtotal:

<table>
<thead>
<tr>
<th>$0-$24.99</th>
<th>$25-$49.99</th>
<th>$50-$98.99</th>
<th>$99 and up</th>
</tr>
</thead>
<tbody>
<tr>
<td>$6.95</td>
<td>$9.95</td>
<td>$10.95</td>
<td>FREE</td>
</tr>
</tbody>
</table>

No Shipping or Handling fee on orders over $99.

HI, AK, PR and US Territories

Shipping and handling is non-refundable and based on the method selected. Flat rate fees are available, see details below.

International and Canadian

Shipping and handling is non-refundable and based on carrier selection and destination. See details below.

Next Day Shipping

Next Day Shipping is $25.00 for orders up to the first 18 pounds, and $25.00 for each additional 18 pound increment, in addition to the standard delivery and handling fees.

Domestic Non-Standard Shipping Charges

You May Choose:

- Next Day Air: $25.00 for the first 18 lbs., and $25.00 for each additional 18 pound increment (i.e.; 19 to 36 lbs, 37 to 54 pounds, etc.)
- 2-Day Air: $15.00 for the first 18 lbs., and $15.00 for each additional 18 pound increment (i.e.; 19 to 36 lbs, 37 to 54 pounds, etc.)
- Next Day Air Saturday Delivery (where available):
  - The Next Day Air fee + $17.00 per box

Non-Standard Shipping Charges

(Domestic Orders) You May Incur:

- Hazardous Materials: $25.00 per box
- Oversize Items: A special handling surcharge of $8.00-$55.00 per item applies—ask your sales rep for details.
- Truck Freight Fees are charged for products that are too large or too heavy for regular ground service.

Weight

0-100 Lbs.
101-300 Lbs.
301-499 Lbs.
500-649 Lbs.
650-900 Lbs.

To Carrier’s Distribution Center for Pickup*
$89.00
$99.00
$139.00
$169.00
$189.00

To Your Home
$99.00
$109.00
$149.00
$179.00
$199.00

*These rates do not include lift gate fees.

2-Day Air to Alaska, Hawaii and Puerto Rico is available at a discounted rate using this calculation:

Metro: $12.00 + $2.00 per pound
Rural: $12.00 + $2.75 per pound

Ordering/Shipping Details

In-stock parts ship the same day via ground and 2-Day Air if ordered by 10:00 pm Eastern, and via Next Day Air if ordered by 1:00 pm Eastern, Monday through Friday. Saturday Delivery guarantee fees (a part ordered between 7:00 pm Eastern Thursday and 7:00 pm Eastern Friday will be delivered by 3:30 pm Saturday. Oversize or heavy items must be shipped via truck freight at a reduced flat rate (listed above), charged at the time of shipment. APO/FPO orders can only ship via U.S. Postal Service and must be pre-paid by a check or credit card. Truck Freight, Hazardous Materials, and some oversize items cannot be shipped to APO/FPO addresses.

International and Canadian orders are classified as those shipping outside of the U.S. or U.S. territories. For more on shipping rates and times, or to obtain quotes for available shipping methods, call 1-800-777-0703.

Order online, or call 1-800-777-0703. Please provide your e-mail address for more efficient correspondence. All international and Canadian orders must be pre-paid and freight charges are based on billable weight (freight on orders with in-stock parts is billed at checkout; some orders with special-order parts may receive a freight estimate and actual cost is billed at time of shipment). In the event of a backorder, your order will be held until ALL items are in stock to save shipping charges. If you choose a Landed Cost Delivery provider for international orders and all major shipping carriers except USPS for Canadian orders, all duties, taxes and clearance fees are included at checkout. Otherwise, duties and taxes will be billed to you by the shipping company at the time of delivery. Ask your sales rep for details.

Backorders

Domestic Customers

All in-stock items are shipped immediately. Most backordered items are shipped as they become available, which may result in multiple shipments for a single order. Customers’ credit cards will be charged for in-stock items only when they are shipped. If you are paying by PayPal, all charges are made at the time of the initial order.

International and APO/FPO Customers

You will be charged for the entire order at the time of shipment. Your order will not ship until all items are available. In the event of a backorder, we will hold your entire order until ALL items are in stock. This saves you additional shipping charges. If you wish to have the available items shipped and are willing to pay the additional charges please contact us after you place your order.

Liability Statement

DX Engineering’s liability for losses or damages, arising out of any cause whatsoever, is limited to full refund of the purchase price, or at our option, repair or replacement of the part(s). DX Engineering shall not be liable for any consequential or incidental damages. Some states do not allow the exclusion of limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Prices are subject to change without notice. If you have any further questions, please send us an e-mail or contact us at 1-800-777-0703.

Repairs

We can, in most cases, perform repair service on out-of-warranty DX Engineering and COMTEK brand products. The cost of repairs is based on a labor rate of $60.00 per hour, and the total cost is estimated before repair work is started. Contact DX Engineering Customer Service to discuss the repairs needed and to receive shipping instructions.
Faraday did it. So did Hertz. Tesla and Marconi? Absolutely. Their ideas and breakthroughs brought the world closer together. Now, DX Engineering is helping you do it too. Blaze new trails, work more bands, reach out and make new contacts—innovate and communicate. We’ll make sure you have the gear to make it happen, backed up by the best support in the industry.

And We Can Prove it:

Blazing-fast Shipping. If you get your in-stock order placed before 10 pm ET Monday through Friday, we’re putting it on the truck that day. Seriously. That means you’ll get your order as quickly as possible. We know what it feels like to be off the air, waiting on a part. That’s why we ship faster than anyone else.

International Ordering. No matter what part of the planet you’re ordering from, we can make sure your products arrive quickly and correctly. Use our handy international shipping calculator on DXEngineering.com to get accurate shipping quotes before you check out. That way, there are no surprises on your invoice.

Free Standard Shipping for Orders Over $99.* If your order, before tax, is over 99 bucks, then you won’t spend a dime on shipping. (Additional special handling fees may be incurred for Hazardous Materials, Truck Freight, International Orders, Next Day Air, Oversize Shipments, etc.).

Delivering the Big Stuff. Towers are big. Really big. But you don’t have to worry about the logistics; we’ll handle all the shipping arrangements. Then we’ll give you an accurate shipping quote and delivery schedule. DX Engineering has ultra-reliable shipping methods, even if you’ve ordered huge products.

We’re happy to address any shipping questions you have. Contact us:
Phone: 800.777.0703 • International: 330.572.3200 • Fax: 330.572.3279
Mail: 1200 Southeast Ave. • Tallmadge, OH 44278
E-Mail: DXEngineering@DXEngineering.com
Web: DXEngineering.com
DoD CAGE Code: 3M3H7

*Find comprehensive shipping information on the adjacent page.
ARRL Literature

ARRL Amateur Radio publications are known and respected worldwide. Each book is constantly reviewed and updated to reflect advances in technology. They are the cornerstone of every Ham's technical library.

ARR-0977 Tech Class License Manual .................................................. $29.95
ARR-8119 General Class License Manual ................................................ $21.95
ARR-1431 VoIP: Internet Linking for Radio Amateurs ................................. $21.95
ARR-3944 Antenna Modeling for Beginners .............................................. $24.95
ARR-3994 Basic Antennas, Understanding Practical Antennas and Designs .... $29.95
ARR-0125 Nifty E-Z Guide to D-STAR Operation .................................. $13.95
ARR-0922 Remote Operating for Amateur Radio ..................................... $22.95
ARR-0946 Antenna Towers for Radio Amateurs ....................................... $34.95
ARR-1431 VoIP: Internet Linking for Radio Amateurs ................................. $21.95
ARR-3077 Radios to Go! Getting the Most from Your Handheld Transceiver .... $15.95
ARR-3961 Antenna Modeling for Beginners .............................................. $34.95
ARR-4845 The Amateur Radio Public Service Handbook .............................. $34.95
ARR-6153 Emergency Power for Radio Communications .......................... $24.95
ARR-6320 The ABCs of Software Defined Radio ...................................... $19.95

ARRL Operating Manual, 10th Edition .................................................. $27.95
Get on the Air with HF Digital ............................................................. $22.95
Vertical Antenna Classics .................................................................... $22.95
ARR-9795 ARRL's Small Antennas for Small Spaces................................. $22.95
ARR-9392 Ham Radio for Dummies ........................................................ $21.95
ON4UN's Low Band DXing, 5th Edition ................................................. $44.95
ARR-6016 Get on the Air with HF Digital ................................................ $21.95
ARR-5218 Vertical Antenna Classics ........................................................ $22.95
ARR-7075 ARR's Wire Antenna Classics .................................................. $13.95
ARR-7709 ARR's More Wire Antenna Classics, Vol. 2 ................................. $17.95
ARR-8839 ARR's Small Antennas for Small Spaces ................................... $22.95
ARR-8850 ON4UN's Low Band DXing, 5th Edition ................................... $44.95
ARR-9392 Ham Radio for Dummies ........................................................ $21.95
ARR-9636 Two-Way Radios & Scanners for Dummies ............................... $21.95
ARR-9795 ARRL's More Vertical Antenna Classics .................................... $17.95
ARR-6948 ARR Antenna Book, 22nd Edition .............................................. $39.95
ARR-0915 ARR RFI Book, 3rd Edition .................................................... $29.95
ARR-9944 Electronics Projects for Dummies ............................................. $24.95
ARR-9994 Basic Antennas, Understanding Practical Antennas and Designs .... $29.95

Orders by 10 pm ET Ship Same Day, See Page 58 for Details

DX Engineering T-Shirts

The perfect shirt to wear while building your antenna, DX-ing, or just doing nothing in particular. The 100% cotton shirts feature a full-color DX Engineering logo.

DXE-TMA-10016 Black T-Shirt, Large .................................................... $12.95
DXE-TMA-10017 Black T-Shirt, X-Large ............................................... $12.95
DXE-TMA-10018 Black T-Shirt, 2X-Large ............................................. $15.95
DXE-TMA-10019 White T-Shirt, Large .................................................. $12.95
DXE-TMA-10020 White T-Shirt, X-Large ............................................... $12.95
DXE-TMA-10021 White T-Shirt, 2X-Large ............................................. $15.95

DX Engineering Ball Cap

You built your antenna with the best, now wear the best! Our black ball cap features a full-color DX Engineering logo on the front, and is adjustable to fit most everyone.

DXE-TMA-10010 Ball Cap with DXE Logo ............................................. $9.95

Coffee Mugs

Whether it’s a contest all-nighter or early morning DX, these mugs will look great in your kitchen or shack. Be the envy of your club while showing off your Ham pride—sip your coffee from a DX Engineering, Icom or Vibroplex mug.

DXE-COFFEE MUG DX Engineering Coffee Mug .................................. $6.00
ICO-COFFEE MUG Icom Coffee Mug .................................................. $6.00
VIB-COFFEE MUG Vibroplex Coffee Mug ........................................... $8.95

Vibroplex Belt Buckle

Dress your belt with the Vibroplex Bug and celebrate over 100 years of Ham radio. Wearing one of these quality buckles show your passion for Ham radio. The Vibroplex belt buckles show your passion for Ham radio, especially CW. You love the Bug, you’ll love the buckle; dress for operating with Vibroplex belt buckles.

VIB-BUCKLE Belt Buckle, Vibroplex Logo ........................................... $25.00

CQ Magazine Publications

W2FMI Understanding Baluns

W2FMI Jerry Sevick’s compilation of balun performance and design criteria. It offers clear explanations to prompt further discussion of theory and applications.

CQM-SEVICKBALUNS W2FMI Understanding Baluns ....................... $19.95

License Manuals

Learn everything you need to pass your next test. These official study materials from the ARRL are the go-to guides for radio clubs all over the planet. They include easy-to-understand lessons and a comprehensive set of sample exam questions. You’ll also get an intuitive CD-ROM with additional review material and practice exam software.

ARR-5170 Extra Class License Manual .................................................. $29.95
ARR-8119 General Class License Manual .............................................. $29.95
ARR-0977 Tech Class License Manual .................................................. $29.95

Vibroplex Mug

Whether it’s a contest all-nighter or early morning DX, these mugs will look great in your kitchen or shack. Be the envy of your club while showing off your Ham pride—sip your coffee from a DX Engineering, Icom or Vibroplex mug.

DXE-COFFEE MUG DX Engineering Coffee Mug .................................. $6.00
ICO-COFFEE MUG Icom Coffee Mug .................................................. $6.00
VIB-COFFEE MUG Vibroplex Coffee Mug ........................................... $8.95

Vibroplex Belt Buckle

Dress your belt with the Vibroplex Bug and celebrate over 100 years of Ham radio. Wearing one of these quality buckles show your passion for Ham radio, especially CW. You love the Bug, you’ll love the buckle; dress for operating with Vibroplex belt buckles.

VIB-BUCKLE Belt Buckle, Vibroplex Logo ........................................... $25.00

CQ Magazine Publications

W2FMI Understanding Baluns

W2FMI Jerry Sevick’s compilation of balun performance and design criteria. It offers clear explanations to prompt further discussion of theory and applications.

CQM-SEVICKBALUNS W2FMI Understanding Baluns ....................... $19.95

License Manuals

Learn everything you need to pass your next test. These official study materials from the ARRL are the go-to guides for radio clubs all over the planet. They include easy-to-understand lessons and a comprehensive set of sample exam questions. You’ll also get an intuitive CD-ROM with additional review material and practice exam software.

ARR-5170 Extra Class License Manual .................................................. $29.95
ARR-8119 General Class License Manual .............................................. $29.95
ARR-0977 Tech Class License Manual .................................................. $29.95

New! ARR-LIT MAKING Antenna Towers for Radio Amateurs ............. $19.95
Antenna Analyzer

Designed for testing, checking, tuning, or repairing antennas and antenna feedlines, this analyzer is a powerful tool for both professionals and hobbyists. At its core, it is an ultra-precise SWR and impedance measuring device. This analyzer is ideal for checking and tuning an antenna, or making and testing coax assemblies. You can also use it to quickly measure the capacitance or inductance of reactive loads.

A large, bright display gives you SWR, impedance, return loss readouts and much more. It's connects easily to a PC or laptop to unlock even more diagnostic tools. The unit has internal memory storage and can be powered via USB.

Hookup is via a single SO-239 connector and the analyzer has a .1 to 54 MHz frequency range.

REU-AA-54 Antenna Analyzer ............................................................ $349.95

Packaged Tower Kit

TBX Tower has done all of your homework for you by providing a complete tower kit in a single convenient package. The kit has everything you’ll need to erect a self-supporting, 64 foot tower. It includes an eight foot mast, rotor plate, top plate, top-section steps and hardware. The tower uses offset mounting sections to create a step-down design that ensures a correct installation.

The sections are made from pre-galvanized heavy-gauge steel and riveted X-bracing for strength and corrosion resistance. DXEngineering.com has more kits available, depending on your application.

TBX-TBX64 Packaged Tower Kit .................................................... $1,999.95

Active Magnetic Loop

HF Receiving Antenna

This 38 inch diameter loop antenna is designed for reception of MF and HF signals and includes a very high dynamic-range low-noise preamplifier. It can be mounted to a pole, mast, or any flat surface.

The magnetic loop responds primarily to the magnetic field while ensuring high rejection of nearby electrostatic field noise. Interference reduction is further enhanced by the deep nulls of the antenna’s directivity pattern that can be used to null out or reduce interference coming from a specific localized direction. For permanent installation, you can use an inexpensive light duty antenna rotator to maximize the null.

- Very low IMD: works in both strong and weak signal environments
- Up to 30 dB rejection over electrostatic field antennas
- Primary Range: 100 kHz to 30 MHz
- Rejects power line noise
- Rugged construction
- No tuning necessary
- No HOA problems: low profile and works at ground level
- Adjustable output level to optimize output for your radio

PXL-RF-PRO-1B Magnetic Loop Antenna System ....................... $499.99
DX Engineering 75/80 Meter Monoband Vertical Antennas

DX Engineering 75/80FS Series are full size, quarter-wave high-performance antennas with everything you need in a high-performance vertical. They feature ultra-wide SWR bandwidth and unbeaten gain, and can handle the highest power amplifiers for reliable performance. They’re ideally suited for single antenna applications and directional multi-antenna arrays. Visit DXEngineering.com for details.

DXE-7580FS-VA-1 has a 2" O.D. heavy wall base section. Its slim profile means you can hide it easily, even in a small stand of tall trees. Some DXers have painted the antenna to match the bark of the surrounding trees. Because of its slim, full size height, guying is required on this antenna.

DXE-7580FS-VA-2 has a 3" O.D. heavy wall base section and thick-wall 6061 aluminum tubing mid-sections, providing a strong antenna with no guying necessary. The antenna can easily be lowered with the supplied Heavy Duty Plus Stainless Steel Pivot Base and the optional DXE-VRW-1 hand winch.

DXE-7580FS-VA-3 has a 4" O.D. heavy wall base section and stainless steel hardware, creating a very stout 68 foot vertical antenna with no guyng necessary, even in adverse conditions. It can be lowered easily with the supplied Heavy Duty Plus Stainless Steel Pivot Base and the optional DXE-VRW-1 hand winch.

DXE-160VA-1 160M Vertical Antenna

Now you can have a high-performance vertical antenna specifically for the 160 meter band. Achieve the strongest possible presence at your power level and be really competitive!

This custom-designed capacity hat system integrates with light rope guying, allowing you to get on 160 meters with a BIG signal from a vertical monoband antenna that is only 55 feet tall! Constructed from aircraft-grade aluminum, the massive three inch diameter lower section is secured by a Heavy Duty Plus Stainless Steel Pivot Base, which can be lowered easily with the optional DXE-VRW One Man Manual Winch.

A custom designed capacity hat for top performance

An adjustable matching network for the lowest SWR

40 kHz SWR bandwidth - CW/DF Phone

The lowest takeoff angle reduces horizontal QRM signals

DXE-160VA-1 160M Vertical Antenna

DXE-VRW-1 Manual Winch Add-On Kit

DX Engineering High-Performance 160 Meter Quarter-Wave Vertical

Now you can have a high-performance vertical antenna specifically for the 160 meter band. Achieve the strongest possible presence at your power level and be really competitive!

This custom-designed capacity hat system integrates with light rope guying, allowing you to get on 160 meters with a BIG signal from a vertical monoband antenna that is only 55 feet tall! Constructed from aircraft-grade aluminum, the massive three inch diameter lower section is secured by a Heavy Duty Plus Stainless Steel Pivot Base, which can be lowered easily with the optional DXE-VRW One Man Manual Winch.

Antenna Features:

- 5 kW SSB and CW rated
- Unparalleled reliability
- A custom designed capacity hat for top performance
- An adjustable matching network for the lowest SWR
- 40 kHz SWR bandwidth - CW/DF Phone
- The lowest takeoff angle reduces horizontal QRM signals

DXE-160VA-1 160M Vertical Antenna

DXE-VRW-1 Manual Winch Add-On Kit

DXE Engineering THUNDERBOLT® Dual Band High-Performance Vertical Antennas

DXE-80VA-3 80M Vertical Antenna

DXE-8040VA-1 80M Vertical Antenna

DXE-8040-30AOK* 30 Meter Add-On Kit

80/40 Meters

- Full band coverage on 40 and 30 meters with SWR under 2:1—no outboard tuner needed
- Tunable for CW or SSB—change base coil tap for segment
- Maximum legal power handling
- Optimum 53’ overall height
- Self-supporting design withstands 50 mph wind without guyng—easy raising and lowering with optional winch kit

DXE-80VA-3 80M Vertical Antenna

DXE-VRW-1 Manual Winch Kit

DXE-8040VA-1 80M Vertical Antenna

DXE-8040-30AOK* 30 Meter Add-On Kit

80/40 Meters

- Full band coverage on 40 and 30 meters with SWR under 2:1—no outboard tuner needed
- Tunable for CW or SSB—change base coil tap for segment
- Maximum legal power handling
- Optimum 30’ overall height
- Self-supporting design withstands 50 mph wind without guyng—easy raising and lowering with optional winch kit

DXE-80VA-3 80M Vertical Antenna

DXE-VRW-1 Manual Winch Kit

More Products, Specs and Photos at DXEngineering.com
**COMTEK SYSTEMS**

**Vertical Antennas and Arrays**

These rugged, affordable quarter-wave antennas are designed to be used in sets to provide top performance with phased vertical array systems like the COMTEK PVS-2 antenna systems or COMTEK and DXE Four-Square array controllers. The COM-20VA antenna can be used on any single band—20, 17, 15, 12 or 10 meters—by adjusting its length. Constructed from 6063 aircraft-spec aluminum tubing, these antenna taper from a huge base section. High strength, UV-resistant EXTREN insulators and a heavy aluminum plate mounting base ensure long lasting, reliable performance under adverse conditions. The antennas come with V-saddle clamps for installation to your ground-mounted pipe; 2” O.D. pipe is recommended, but the clamps will accept any size from 1” to 2”. Stainless steel hardware included. Light guying is always recommended for phased systems to keep spacing precise and minimize swaying.

### 20 Meter Vertical Antenna

- **COM-20VA**
  - 20M Vertical Antenna ............................................. $148.95
- **COM-20VA-2P**
  - 20M Vertical Antenna, Set of 2 ............................... $277.95
- **DXE-TB-8P**
  - Tilt Base, Kit .................................................... $87.50
- **COM-20VA-4P**
  - 20M Vertical Antenna, Set of 4 ................................. $519.95

### 30 Meter Vertical Antenna

- **COM-30VA**
  - 30M Vertical Antenna .............................................. $168.95
- **COM-30VA-2P**
  - 30M Vertical Antenna, Set of 2 ............................... $315.95
- **COM-30VA-4P**
  - 30M Vertical Antenna, Set of 4 ............................... $589.95
- **DXE-TB-7P**
  - Tilt Base, Kit .................................................... $87.50

### 40 Meter Vertical Antenna

- **COM-40VA**
  - 40M Vertical Antenna .............................................. $178.95
- **COM-40VA-2P**
  - 40M Vertical Antenna, Set of 2 ............................... $333.95
- **COM-40VA-4P**
  - 40M Vertical Antenna, Set of 4 ............................... $623.95
- **DXE-TB-7P**
  - Tilt Base, Kit .................................................... $87.50

See page 62 for Radial Plates and Radial Wire Kits to complete your antenna installation.

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**43 Foot Multi-Band Vertical/Remote Tuner Package**

Includes DXE-MBVE-1 below:

- **DXE-MBVE-2**
  - Antenna Package ................................................. $387.95
- **DXE-MBVE-1-3ATP**
  - 43 Foot Vertical Antenna with SAF-T-TILT™ Base (Tuner Required) ........................................... $648.95

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**43 Foot Standard Multi-Band High-Performance Vertical Antennas (Tuner Required)**

- **DXE-MBVE-5**
  - 43 Foot Vertical Antenna with SAF-T-TILT™ Base (Tuner Required) ........................................... $648.95
  - Antenna Package ................................................. $198.95
  - Antenna Package with Radial Plate .......................... $272.95
  - Antenna Package with UN-43 UNUN ........................... $387.95
  - Antenna Package with MBV-ATU-1A Remote Automatic Tuner .................................................. $648.95

Order Online 24/7 at DXEngineering.com
**Antennas: Vertical**

**Vertical Antenna Matching Network**

Without a means of adjusting feedpoint impedance, achieving the best SWR on 80 meters on some vertical antenna installations with excellent radial systems may be difficult. The Vertical Antenna Matching Network lets you tune a low impedance antenna to the minimum SWR in the user-selected portion of the 80 or 160 meter band without affecting operation on the other, higher frequency bands (if applicable). The Vertical Antenna Matching Network can also be used on 160 meter Inverted-L and Tee-Top wire verticals. The #12 AWG coil wire is tin-nickel plated for high power handling, corrosion resistance, ease of soldering, and long-term reliability.

DXE-VMM-1 Vertical Antenna Matching Network................. $59.95

**Wing Nut No-Tools Kit for DX Engineering Tilt Base**

Use these wing nut knobs for tool-less quick release of the DX Engineering DXE-TB Tilt Bases—handy for lowering the antenna for tuning or daily stealth operation. Simply remove the existing hex nuts and thread on the wing nuts. The old hex nuts store on the tilt base for future use. Purchase two sets to allow tightening of the lower mounting hardware without tools and for extended periods of upright installation and use.

DXE-AOK-TB1193 Wing Nut No-Tools Knobs, Pack of 2........... $7.95

**Guying Kits**

Many locations experience winds that can be damaging to antennas, even at ground level. These kits provide four ground anchors and plenty of 260 pound, 3/16 inch diameter rope to provide the guying necessary to protect your vertical antenna. The black rope is UV-protected to last for years.

DXE-GUY100-KIT BTV Guying Kit, 100’ of Rope.................. $29.95
DXE-GUY200-KIT BTV Guying Kit, 200’ of Rope............... $30.95
DXE-GUY400-KIT Vertical Guying Kit, 400’ of Rope......... $50.95
DXE-GUY1000-KIT HD Vertical Guying Kit with 1,000’ of Rope .................. $89.95
DXE-EA15 Earth Anchor........................................ $5.49

**Accessories for Vertical Antennas**

- **DXE-SSVC-2P V-Saddle Clamp, 1” to 2” O.D.** $9.50
- **DXE-SSVC-3P V-Saddle Clamp, 2.375” to 3” O.D.** $14.95
- **DXE-TB-6P V-Saddle Clamp for Hustler BTV Verticals** $87.50
- **DXE-TB-4P Tilt Base Kit for Antennas Other Than Hustler BTV** $11.95
- **DXE-VFCC-H05-A Vertical Feedline Current Choke** $20.95
- **DXE-400MAXDU003 High Power/Low Loss DCF Jumper Cable, 20’** $20.95
- **SUM-900031 Wire Stripper/Crimper/Cutter Tool** $18.97
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**Radial Wire Kits**

Bulk Radial Wire Kits

You should install as many radials as possible to achieve optimal performance with a grounded vertical. All our radial wire kits use #14 stranded insulated copper wire that is UV-resistant, hard to see, and lays down easily without a preset helix.

- **DXE-RADW-500K Radial Kit, 500’, Ring Terminals, Wire Staples** $74.95
- **DXE-RADW-500KBD Radial Kit, 500’, Ring Terminals, Biodegradable Staples** $74.95
- **DXE-RADW-1000K Radial Kit, 1,000’, Ring Terminals, Wire Staples** $142.95
- **DXE-RADW-1000KBD Radial Kit, 1,000’, Ring Terminals, Biodegradable Staples** $142.95
- **SUM-900031 Wire Stripper/Crimper/Cutter Tool** $18.97

**Pre-Assembled Radial Arms**

Park your radial arms from the end of your radial wires and then create your own radial wires before you install them. We have a variety of radial arms that you can choose from, depending on your needs.

- **DXE-RADW-20RT 20’ Radial Wire with 1/4” Ring Terminals, 20 Pack** $80.95
- **DXE-RADW-32RT 32’ Radial Wire with 1/4” Ring Terminals, 20 Pack** $107.95
- **DXE-RADW-65RT 65’ Radial Wire with 1/4” Ring Terminals, 20 Pack** $189.95

**Pre-Cut Radial Kits**

DX Engineering offers pre-cut radial wire kits for the 10, 15, 20, 40 and 80 meter bands, complete with wire connection hardware for elevated radial installations. Just strip the wire ends, crimp and solder. Each radial is slightly longer than a quarter-wave to allow tuning as necessary.

- **DXE-RADW-1K Radial Wire Kit for 10, 15 and 20M** $26.95
- **DXE-RADW-40K Radial Wire Kit for 40M** $21.95
- **DXE-RADW-80K Radial Wire Kit for 80M** $39.95

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- **DXE-RADW-1K Radial Wire Kit for 10, 15 and 20M** $26.95
- **DXE-RADW-40K Radial Wire Kit for 40M** $21.95
- **DXE-RADW-80K Radial Wire Kit for 80M** $39.95
Vertical Antennas

Patriot Vertical Antennas

Take advantage of the sunspot cycle with the low takeoff angle of Hy-Gain’s Patriot Vertical Antennas. These three antennas feature efficient end-loading coils and capacity hats to give you optimum performance on several bands. They handle 1,500 watts, feature automatic bandswitching and each band is individually tunable. Their sleek, radial-less design means a low wind surface area and small footprint, so you can mount them easily on your deck, roof or patio. Discover the complete features on each antenna at DXEngineering.com.

**HGN-MK-160A 160 Meter Add-On Kit for AV-18HT**
- $119.95
- Length of 29 feet (8.8 meters) contributes to exceptional bandwidths on 40 and 20 meters. Maximum Power: 750 watts average, 1,500 watts PEP.

**DXE-HSR-5BTV-P 5BTV High Performance Package with ACC4**
- $379.00
- Kit, direct coax feed add-on kit, bulkhead coax connector, low loss RG-8/U jumper cable, and stainless steel V-clamps.

**Hy-Tower**

The DX-77A uses a heavy-duty, tiltable mast clamp that accepts masts up to 2.125” O.D. The DX-77A’s overall length of 29 feet (8.8 meters) contributes to exceptional bandwidths on 40 and 20 meters. Maximum Power: 750 watts average, 1,500 watts PEP.

**AV-18HT Hy-Tower 5-Band, 50 Foot Vertical**
- $449.95
- The AV-18HT Hy-Tower is an omni-directional, self-supporting, automatic-bandswitching vertical radiator. It operates on the 10, 12, 15, 17, 20, 30 and 40 meter Amateur bands. No ground radials are required with the AV-18HT. All sections of the antenna.

**AV-12AVQ, AV-14AVQ and AV-18AVQII Multi-Band Trap Verticals**

The 3 band Hy-Gain AV-12AVQ, 4-band AV-14AVQ and 5-band AV-18AVQII use the same trap design as the famous Hy-Gain Thunderbird beams. Separate air dielectric Hy-Q traps with oversize coils give superb stability and quarter-wave resonance on all bands. Their 18 foot overall length fits well in most urban environments. The 14-AVQ covers the 10, 15, 20 and 40 meter bands while the 18-AVQII adds the 80 meter band to the mix.

All Hy-Gain multi-band vertical antennas are entirely self-supporting—no guys required. They offer remarkable DX performance with their extremely low angle of radiation and omnidirectional pattern.

**Hy-Gain vertical antennas handle 1,500 watts PEP SSB, have low SWR and automatic bandswitching. Heavy-duty, slotted, tapered swaged aircraft quality aluminum tubing with full circumference compression clamps is used for radiators.**

All Hy-Gain verticals feature a two year limited warranty.

**HGN-AV-12AVQ**
- 3-Band Trap Vertical... $139.95

**HGN-AV-14AVQ**
- 4-Band Trap Vertical... $179.95

**HGN-AV-18AVQII**
- 5-Band Trap Vertical... $239.95

**DX Engineering Add-On Kits for Hustler BTV Verticals**

DX Engineering offers add-on kits that provide additional frequency band coverage or installation and operating convenience to the popular Hustler BTV vertical antenna family. Simply add the kit, make some minimal tuning adjustments, and you’re on the air with an additional band. The stainless steel DXE-AOK-DCF allows simple connection of coaxial cable with a PL-259 connector.

**DXE-AOK-12M 12 Meter Add-On Kit for Hustler BTV Verticals**
- $59.95

**DXE-AOK-17M 17 Meter Add-On Kit for Hustler BTV Verticals**
- $74.95

**DXE-AOK-60M 60 Meter Add-On Kit for Hustler BTV Verticals**
- $78.95

**DXE-AOK-80M 80 Meter Add-On Kit for Hustler 4BTV Verticals**
- $59.95

**DX Engineering Proven Products, Expert Advice, Same-Day Shipping**