



# Cushcraft

## Amateur Radio Antennas

### Ham Catalog

## Cushcraft R-8 Multiband HF Vertical

## 6-40 Meters



### HF Multiband Vertical Antenna 6, 10, 12, 15, 17, 20, 30, and 40 Meter

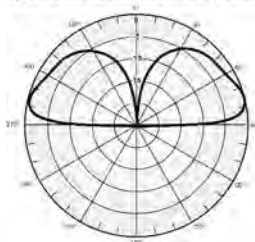
This multiband vertical design provides 8 band coverage encompassing the 6, 10, 12, 15, 17, 20, 30 and 40 meter bands. Cushcraft achieved a major breakthrough in the development of an HF multiband vertical antenna that has been specifically designed for use with a tuner and amplifier. As a result, the antenna more accurately addresses the needs of the contemporary ham shack.

Multiband vertical antennas have always been complicated designs with components as likely to be damaged by high levels of mismatched transmit power as the rigs they are attached to. Before the use of tuners became widespread, the antenna was protected by the same safety mechanisms that protected the rig. Now, the automatic power reduction circuits of the past have actually become a second layer of protective circuitry. Although the auto-tuner provides the ham with a more versatile device as well as protecting the rig's components, the antenna is more vulnerable than ever. With the press of a button, very high loads can be imposed on the antenna. The result to the antenna can be catastrophic failure in some instances.

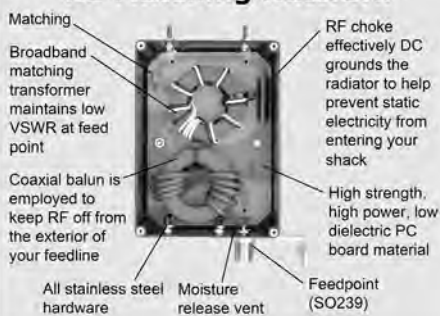
The R-8 is the first multiband vertical designed for the rigors of contemporary operating conditions. Although the antenna is best operated within its 2.0:1 VSWR bandwidth, it can sustain a 3.0:1 VSWR mismatch at full power for typical operating intervals. Now radio amateurs can take full advantage of the versatility that a tuner used in conjunction with a multiband HF vertical antenna can give them. For high wind environments, add the R-8GK, \$56.95 Guy kit-three point non-conductive guy system.

The R-8 provides 360 degree (omni) coverage on the horizon and a low radiation angle in the vertical plane for a better DX.

Typical elevation radiation pattern



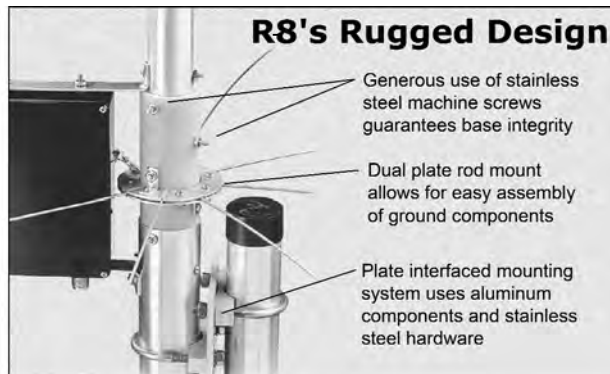
### R8 Matching Network



- **RUGGED CONSTRUCTION**
- **INSTANT BAND CHANGING**
- **SLIM, LOW PROFILE SILHOUETTE**

Specifications:	R-8
Frequency meters	6, 10, 12, 15, 17, 20, 30, 40
Gain (dBi)	3
VSWR at resonance	1.3:1 typical
VSWR 2:1 bandwidth, KHz	40m (150) 30m (>50) 20m (>350) 17m (>100) 15m (>450) 12m (>100) 10m (>1500) 6m (>1500)
Power Watts PEP (FM)	1500 (500)
Radiation angle, deg.	16
Horizontal rad, deg.	360
Height, ft (m)	28.5 (8.7)
Mast size range, in (cm)	1.25-2" (3.18-5.1)
Wind load, ft2 (m2)	1.5 (.14)
Wind surface area	2.5 sq ft (0.23 sq m)
Weight, lb (kg)	23 (10.5)
Shipping Dimensions	3-3/4" x 5-1/4" x 84-1/2"

### R8's Rugged Design



# Cushcraft R-6000 Multiband HF Vertical 6-20 Meters

## The Shape of Things to Come

The R-6000 is a 6 through 20 meter, no ground radial antenna. It includes many of the features of the R8, R7 and R5 antennas. R-6000 means excellent performance, easy installation and use, slim silhouette and high reliability. There are no traps used on 6, 10 and 15 meters for maximum efficiency and power handling.

- **EASY INSTALLATION**

For typical use, tuning is not required

- **INSTANT BAND CHANGING**

To any band 6 through 20 Meters

- **SLIM SILHOUETTE**

Gain favor of family and neighbors with the slim, low profile of the R6000

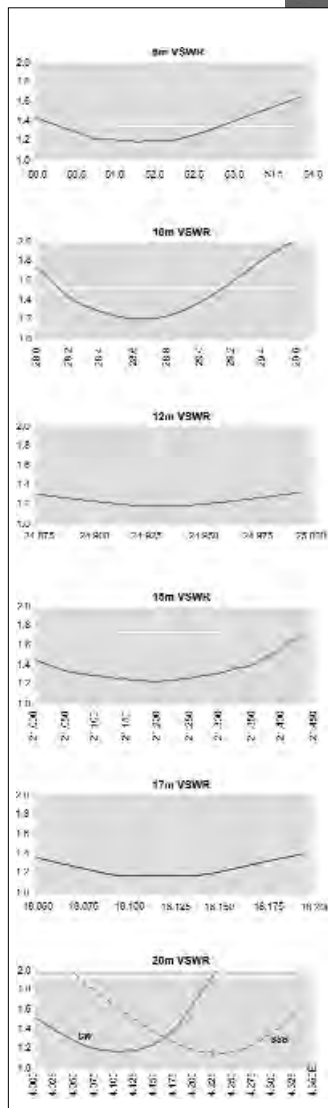
- **6 METER OPERATION**

Join the fun of the "Magic Band" and take advantage of the new HF/50 MHz transceivers

- **AFFORDABLE PRICE**

Cushcraft delivers the best quality and performance at a price no one else can match

Specifications:	R-6000
Frequency, meters	6, 10, 12, 15, 17, 20
Gain (dBi)	3
VSWR at resonance	1.2:1 typical
2:1 bandwidth, KHz	6m >1300 10m >1700 12m >100 15m >450 17m >100 20m 300
Power Watts PEP (FM)	1500 (500)
Radiation angle, deg.	16
Horizontal rad, deg.	360
Height, ft (m)	20.5 (6.25)
Mast size range, in (cm)	1.5 -1.75 (3.8 4.4)
Wind load, ft2 (m2)	1.5 (.14)
Weight, lb (kg)	16 (6.25)
Shipping Dimensions	7"x 4.5" x 63"

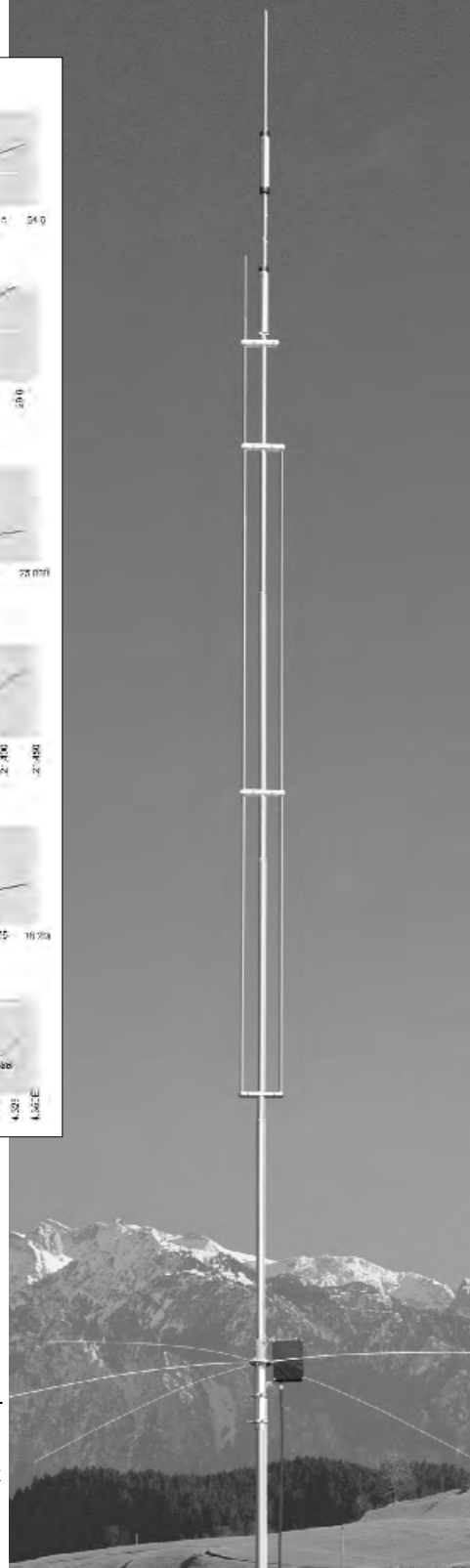


The R-6000 employs quarter wavelength stubs on 10 and 15 Meters to replace standard trap coils. The result is lower loss and wider bandwidth. The R-6000 covers all bands 6 through 15 meters at a VSWR under 2:1. On 20 meters you can select the top 300 KHz or bottom 300 KHz of the band.

The R-6000 weighs only 12-1/2 pounds (5.6 kg). It is lightweight and easy to mount for portable or permanent installations. Machined aluminum clamps and UV stable insulators guarantee years of reliable service. The R-6000 comes with the standard warranty of one year from purchase - plus the industry's leading technical support team stands behind each antenna.

The R-6000 makes an excellent diversity antenna to complement even the most complete stations, or pack up the R-6000 for a trip to the DX location of your dreams.

R-6000  
**\$429<sup>95</sup>**



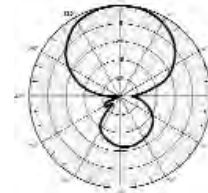
# Cushcraft Compact HF Multi-Band Beam 10-20 Meters

## The MA-5B, Compact HF Multi-Band Beam Small Footprint -- Big Signal

MA-5B  
\$499<sup>95</sup>

MA-5B, Cushcraft's multiband HF antenna provides 5-Band operation in a package small enough to mount to a tripod. The MA-5B is a design that does not sacrifice ruggedness, performance and power handling for size and ease of installation.

Specifications:	MA-5B				
Frequency, Bands	10	12	15	17	20
Elements per Band	2	1	2	1	2
Gain, dBi	5.3	2	4.8	2	3.6
Front to Back Ratio, dB	10	0	12	0	22
Side Lobe Atten. dB	25	20	25	20	25
VSWR 2:1 Bandwidth, KHz	655	>10	225	>100	90
Longest Element, in (cm)	17.1' (52m)	17.1' (52m)	17.1' (52m)	17.1' (52m)	17.1' (52m)
Turning Radius, ft (m)	8.8' (2.7m)	8.8' (2.7m)	8.8' (2.7m)	8.8' (2.7m)	8.8' (2.7m)
Boom Length, ft (m)	7.3' (2.2)	7.3' (2.2)	7.3' (2.2)	7.3' (2.2)	7.3' (2.2)
Boom Diameter, in (cm)	1.5" (3.8cm)	1.5" (3.8cm)	1.5" (3.8cm)	1.5" (3.8cm)	1.5" (3.8cm)
Max. Wind Surface Area	3.22ft <sup>2</sup> (3m <sup>2</sup> )	3.22ft <sup>2</sup> (3m <sup>2</sup> )	3.22ft <sup>2</sup> (3m <sup>2</sup> )	3.22ft <sup>2</sup> (3m <sup>2</sup> )	3.22ft <sup>2</sup> (3m <sup>2</sup> )
Max. Power (Watts PEP) (W)	1200W (100W)	1200W (100W)	1200W (100W)	1200W (100W)	1200W (100W)
Weight, lb (kg)	26.5 (12)	26.5 (12)	26.5 (12)	26.5 (12)	26.5 (12)



High Front to Back Ratio on 10/15/20 M

## Cushcraft Low Frequency Verticals 160 and 80/40 Meters

### MA-8040V 3.5-7.3 MHz Vertical Antenna

MA-8040V is a compact self-supporting HF vertical that delivers excellent DX-hunting performance on 80 and 40 Meters. Only 27 feet tall and weighing in at less than nine pounds, it is small and light enough for one person to handle easily without assistance. Once installed, the MA-8040V virtually disappears against a backdrop of trees and foliage. Parallel resonators use a combination of inductive and capacitive top loading to deliver automatic band switching, high efficiency, and rock-bottom SWR on both bands. Designed to handle maximum legal power and built to last year after year, it's the perfect DX solution when the sunspots silence the higher bands. Radial kit included.

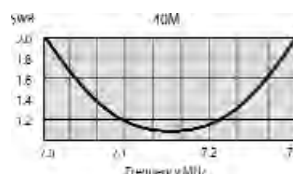
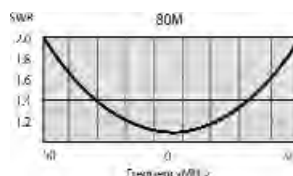


### MA-160V 160-Meter Vertical Monopole Antenna

MA-160V is a compact efficient vertical especially designed for working top-band DX from an average-size house lot. A low launch angle and deep overhead null combine to pull in distant stations while rejecting local QRM. The MA-160V features a heavy-duty high-Q copper loading coil plus a wide 100-inch diameter stainless capacitive hat for high efficiency, resiliency and 1500-Watt power handling. An adjustable stinger provides coverage on any 40-kHz segment across the 1.8-2.0 MHz band. Weighing only 12-pounds, the MA-160V installs easily and blends in with backyard trees and vegetation. Each antenna comes with a 400-foot spool of ground-radial wire plus a Danscord™ insulated guying kit.



Specifications:	MA-8040V	MA-160V
Frequency MHz (MA8040V Tunable)	3.5-7.0 (80M) 7.0-7.3 (40M)	1.8-2.0
Gain, dBi (radial / dependent)	0 (80M), 2 (40M)	0
Minimum VSWR	1.1:1	1.1:1
Bandwidth (2:1 SWR)	100 KHz (80M) 300 KHz (40M)	40 KHz
Polarization	Linear Vertical	Linear Vertical
Power Handling PEP	1500 W	1500 W
Vertical Height (m)	23'-27' (7-8.2)	30'-36' (12-14)
Weight (antenna only) lbs.(kg)	9.0 (4.1)	12 (5.4)
Mount Style	Mast	Mast
Ground Radials	8 Recommended	8 Recommended



## MA-5VA Five-Band Restricted-Space Vertical Antenna

The MA-5VA delivers superb HF multi-band performance while maintaining a neighbor-friendly low profile. Perfect for roof-mounts, patios, small backyards, condos, and motor homes, this 6.5-pound bantam-weight installs quickly without the “heavy lifting” required of larger antennas. Whether you install it permanently or take it down between operating sessions, you’ll appreciate special features like the MA-5VA’s gust-absorbing fiberglass base, resin-sealed resonator coils, aluminum mast blocks, and all-stainless hardware. Best of all, the MA-5VA is solidly engineered-its “no-radial” OCFD design delivers low SWR and high performance without using exotic matching networks or tuners. Simply connect a radio and you’re ready to work the world! The MA-5VA is the perfect restricted-space DX solution for 20, 17, 15, 12, and 10 meters!

- **Light-weight rugged construction**
- **Rapid breakdown for storage or transport**
- **No exotic matching networks or tuners**
- **Advanced “no radial” OCFD design**

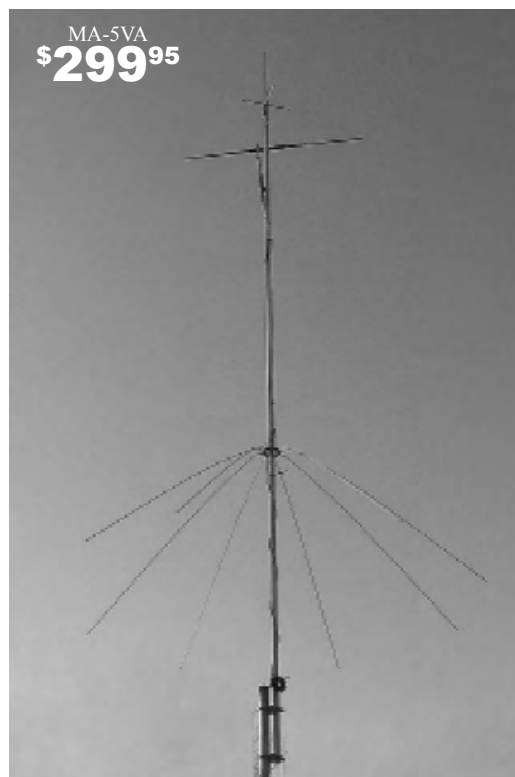
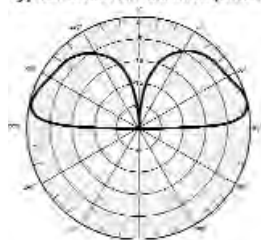
Specifications:	MA5VA	MA6VA
Frequency, meters	10, 12, 15, 17, 20	6, 10, 12, 15, 17, 20
Gain (dBi)	1-2	1-2
VSWR at resonance	1.2:1 All bands	1.2:1 All bands
Wind surface area	.82 ft <sup>2</sup> (.076 m <sup>2</sup> )	.82 ft <sup>2</sup> (.076 m <sup>2</sup> )
Wind Survival, mph	>80	>80
Power Watts PEP, (FM)	250 W (100W)	250 W (100W)
Height, ft (m)	14.7 (4.48)	14.7 (4.48)
Weight, lb (kg)	6.5 (2.95)	6.9 (3.13)
Shipping Dimensions	3"x 3"x 80"-1/2"	3"x 3"x 80"-1/2"

## MA-6VA Six-Band Restricted-Space Vertical Antenna

Made for today’s expanded-coverage radios, Cushcraft’s MA-6VA provides the same great versatility and performance of the MA5VA- with the addition of 6 Meters. Enjoy congestion-free FM-repeater operation and explore the world of exotic seasonal band openings on 50 MHz CW and SSB. It’s a great way to add amateur radio’s “magic band” to your operating repertoire!

- **Neighbor-friendly low profile**
- **Rugged light-weight construction**
- **Air-baggage transportable (longest tube is 54")**
- **Robust mounting hardware included**
- **New bandwidth enhancing 8-rod counterpoise**
- **New low loss balun**

Typical elevation radiation pattern



# Cushcraft HF Yagis and Log Periodics **10-20 Meters**

## X-7 BIG THUNDER TRIBANDER YAGI

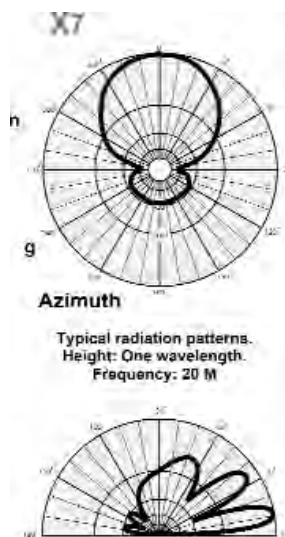
The X-7 Triband Yagi is geared to set new standards in both radiating performance and mechanical reliability. The product development team has employed the latest computer modeling technology to achieve a superior electrical design as well as elegant new mechanical hardware and assembly techniques. Each mechanical component was designed to 100+ MPH wind survival with a 1.25 safety factor. Traps were eliminated from the high current driven elements and reflectors using the new 4L Log Cell design, 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 which will easily handle the legal limit.

- **New High Efficiency Computer Optimized Design for Maximum Gain and Ultra Clean Radiating Pattern**
- **100+ MPH Construction for Best Reliability and Long Life**
- **NEW 4L Log Cell Driven Elements for better VSWR Bandwidth**
- **Trapless Driven Elements and Reflectors for Reliable Power Handling**



X-7  
**\$1099<sup>95</sup>**

Specifications:	X-740	X-7	ALS2010
Frequency Coverage	40 Meters	10, 15, 20 (Meters)	13.5-32 MHz
Number of Elements	1	7	8
Gain, dBi	2	12.5 (20m) @ 14° 13.0 (15m) @ 12° 12.9 (10m) @ 12°	6.4
Front to Back Ratio, dB	30	20	15-20
SWR 2:1 Bandwidth	100 KHz	600 KHz (20m) 750 KHz (15m) 1700 KHz (10m)	18.5 MHz
Longest Element, in (cm)	41 (12.5)	37.2' (11.33)	38 (11.58)
Turning Radius, ft (m)	20.0' (6.09)	20.0' (6.09)	19.25' (5.86)
Boom Length, ft (m)	18' (5.48)	18' (5.48)	18' (5.48)
Wind Load ft <sup>2</sup> (m <sup>2</sup> )	9.9 (.92)	7.9 (.73)	10.1 (.93)
Max. Power Watts PEP	1500W	1500W	1500W
Weight, lb (kg)	80 (36.3)	60 (27.2)	55 (25.5)



### 40-Meter Add-On Kit for X-7 Antenna



X-740  
**\$369<sup>95</sup>**

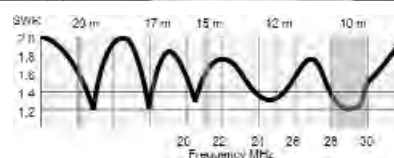
Add this X-740 kit to your X-7 antenna to get 40-Meter coverage. Step-by-step instructions, quick and easy modification for more band coverage.

## LOG PERIODIC

### Skylog ASL-2010, 13 - 32 MHz

The ASL-2010 log periodic antenna is the most cost effective, high gain, five band antenna solution 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 ASL-2010 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. All stainless steel hardware and rugged element design are only some of the many features that provide years of superior antenna performance. Skylog ASL-2010 is the smart choice for multiband HF operation.

- **Continuous five band coverage 13.5-32 MHz**
- **Constant over entire frequency range**
- **6.4 dBi gain, 65 degree beamwidth**
- **18 foot boom and 19.5 foot turning radius**
- **High efficiency design, antenna stays cool and VSWR steady**



## Cushcraft VHF/UHF Yagis

### 6-2 Meters, 440 MHz



A6270-13S  
\$279<sup>95</sup>

#### A6270-13S 6 Meter / 2 Meter / 70 CM

Cushcraft's multiband directional yagi is designed to provide hobbyists who have limited tower or mast space with directional antenna performance on three of the most popular bands. The A6270-13S combines 6 meters, 2 meters and 70 centimeters on one boom. The 2m and 70cm interlaced Yagis are designed to share a common feed line. An independent feed line drives the 6m portion.

- **Outstanding performance thanks to Cushcraft's unmatched multiband design technology and experience.**
- **Rugged stainless steel mounting hardware is easy to install and maintain.**

Specifications:		A6270-13S		
Frequency MHz		50-54	144-148	430-450
Number of Elements	3	5	5	5
Gain, dBi	8	10	10	10
Front to Back Ratio dB	20	20	18	18
SWR 1.2:1 Typical	>1	>4	>10	>10
2:1 Bandwidth, MHz				
Longest Element, in (cm)	117 (300)	117 (300)	117 (300)	117 (300)
Turning Radius, ft (m)	6.16' (1.87)	6.16' (1.87)	6.16' (1.87)	6.16' (1.87)
Boom Length, ft (m)	8.66 (2.66)	8.66 (2.66)	8.66 (2.66)	8.66 (2.66)
Wind Load ft <sup>2</sup> (m <sup>2</sup> )	2.52 (0.23)	2.52 (0.23)	2.52 (0.23)	2.52 (0.23)
Max. Power Watts PEP	1000W	350W	350W	350W
Weight, lb (kg)	9.5 (4.3)	9.5 (4.3)	9.5 (4.3)	9.5 (4.3)

## Cushcraft HF Monobander

### 40 Meters



XM-240  
\$999<sup>95</sup>

#### XM-240 Big Thunder Monobander

Cushcraft's XM-240 monobander utilizes rugged Big Thunder hardware that combined with high strength aluminum tubing affords the antenna outstanding wind survivability. Phillystran boom trusses are used in the XM-240 design for extra boom stability. The unique feed system is a 50 ohm direct feed VSWR is flat across the band. A high power 1:1 balun is included. The XM-240 is field-proven or reliability and performance. Excellent front-to-back ratio and gain makes the XM-240 the right choice for DX and for stacking as well.



Element Hardware



Boom-to-Mast

Specifications:		XM240
Frequency MHz	7.0	7.3
Number of Elements	2	
Gain, dBi	6	
Front to Back Ratio, dB	20	25
Side Lobe Atten. dB	>35	
VSWR typical Minimum	1.1:1	
Longest Element, in (cm)	43 (13.1)	
Turning Radius, ft (m)	24.3 (7.4)	
Boom Length, ft (m)	22 (6.7)	
Wind Surface Area sq ft (sq m)	5.5 (.51)	
Wind Load @ 80 mph, lbs (kg)	142 (64.4)	
MAX. POWER Watts PEP	1500W	
Weight, lb (kg)	5.5 (2.5)	

## Cushcraft 6-Meter & HF "SQUALO" Antennas



Cushcraft  
ASQ-6  
\$139<sup>95</sup>

**New!**

Cushcraft's *SQUALO* is a full half-wave, horizontally polarized omnidirectional antenna. Outstanding all-around performance is achieved through a 360 degree pattern with no deep nulls. The square shape allows full electrical length in compact dimensions. Direct 52 Ohm Reddi-Match

feed provides ease of tuning and broad band coverage. *Squalo* is well suited for horizontally polarized mobile or fixed operation on SSB, CW, and legacy AM. The omni-directional pattern is great for DX beacons and spotting, and elements may be stacked for added gain. *Squalo* is completely universal for mounting anywhere. Packaged with rubber suction cups and magnets for vehicle top mounting for 2 and 6 Meters and a horizontal center

support for mast or tower mounting. The 10, 15, and 20 Meter models are designed for mast/tower mounting. *Squalos* are ideal for net-control, monitoring or as a general coverage antenna. Minimum SWR. Handles 100 Watts PEP CW/SSB.



Mast-mounted Squalo

Model #	Band	Size (LxW)	Price
ASQ-2	2-Meter	10x10 inches	\$119.95
ASQ-6	6-Meter	30x30 inches	\$139.95
ASQ-10	10-Meter	50x50 inches	\$159.95
ASQ-15	15-Meter	65x65 inches	\$189.95
ASQ-20	20-Meter	100x100 in.	\$229.95

# Cushcraft Multiband HF Yagis

## 10 - 40 Meters

### A-4S Four Element Beam - 10, 15 & 20 Meters

A-4S is the true, high performance tribander. Precisely tuned high-power traps, carefully selected element lengths, and proper spacing combine to make the A-4S the preferred antenna for your HF work! This is the premium antenna with all the features that you want. High gain, low SWR, and wide bandwidth keep the contacts coming in. All U-bolts, clamps and hardware are stainless steel. A-4S has pinned boom sections and formed aluminum brackets to keep elements straight in all conditions. Our solid construction keeps the A-4S on the tower! Add 40 meters with A744 kit.

### A-3S Three Element Beam - 10, 15 & 20 Meters

A-3 World Ranger, our top selling tribander, has become the A-3S with all stainless steel hardware. It's a real power-house in a small space and lets you work the pile-ups with confidence. All you need is a lightweight tower and rotator to enjoy the benefits of the A-3S. It's a proven performer in DX-peditions and contests. Handles full power from your amp. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware. When space is a premium, but you want benefits of a full-size tribander, A-3S is right for you! Add 40M with A743 kit.

### A-3WS WARC Bands 3 Element, 12 & 17M

Enjoy the excitement of the WARC bands with this popular beam. A-3WS gives full performance on 12/17 meters. With the addition of our easy-to-use A-103 add on kit, it will also cover 30 meters. A-3WS needs only a lightweight tower and rotator or mount it above an existing tribander. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware.

### 30/40M Add Kits for A-3S/A-4S/A-3WS

40 meters will come alive by adding one of these kits to the dipole of your A-3S or A-4S. Kits include high power traps with heavy wall fiberglass insulator and all hardware. A simple adjustment allows 30 meter operation. For our newest beam, the A3WS, we have a 30 meter add on kit, the A103.

**A-743, \$199.95.** 7 MHz/10 MHz kit for A-3S;

**A-744, \$199.95.** 7 MHz/10 MHz kit for A-4S;

**A-103, \$199.95.** 10 MHz kit for A-3WS.

Specifications:	A743/A744	A743/A744	A103
Band	7 MHz (40 m)	10 MHz (30m)	10 MHz (30m)
Adapter kit, ft (m)	33.19 min. 35.33 max. (10.12-10.77)	27.12 28.1 max. (8.27-8.66)	32.1 (9.8)
Windloading ft <sup>2</sup> (m <sup>2</sup> )	.58 (.05)	.27 (.03)	.15 (.04)
Bandwidth, KHz	125	150	250
Power Rating, Watts	1500 PEP	1500 PEP	1500 PEP
Side Rejection, dB	20	20	20
Weight, lb (kg)	3.44 (1.56)	2.29 (1.04)	3.25 (1.47)



A-4S  
**\$699<sup>95</sup>**



A-3S  
**\$599<sup>95</sup>**

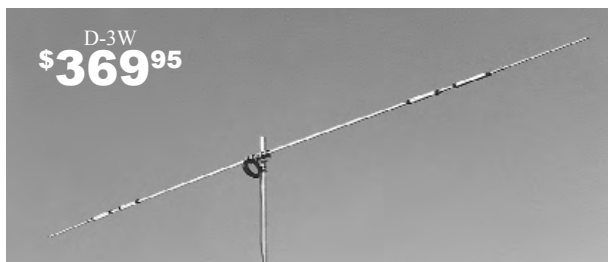


A-3WS  
**\$499<sup>95</sup>**

Specifications:	A-4S	A-3S	A-3WS
Frequency MHz	28, 21, 14	28, 21, 14	24, 18
Number of Elements	4	4	3
Gain, dBi	8.9	8.0	8.0
Front to Back Ratio, dB	25	25	25
SWR 1:2:1 Typical	>500	>500	>300
2:1 Bandwidth, MHz			
Yagi Beam Width, 1deg E-Plane	58	60	60
Longest Element, in (cm)	32 (9.75)	27.75 (8.45)	25.1 (7.66)
Turning Radius, ft (m)	18.4 (5.49)	15.5 (4.72)	14.4 (4.4)
Boom Length, ft (m)	18 (5.48)	14 (4.27)	14 (4.27)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	1.80 (0.17)	4.36 (0.40)	4.1 (0.38)
Max Size Range, in (cm)	1.25-2.00 (3.18-5.08)	1.25-2.00 (3.18-5.08)	1.25-2.00 (3.18-5.08)
Max. Power Watts PEP (M)	1500W (1500)	1500W (1500)	1500W (1500)
Weight, lb (kg)	37 (16.8)	27 (12.9)	22.5 (10.2)

### Rotatable Dipoles

The World Ranger Dipoles give bi-directional patterns and rotatable convenience. You can mount them high and away from the trees for better performance than a wire dipole. These single and multi-band dipoles feature high-performance traps, heavy wall tubing, and rugged hardware for years of enjoyment.



D-3W  
**\$369<sup>95</sup>**

Specifications:	D40 \$399.95	D4 \$419.95	D3 \$369.95	D3W \$369.95
Frequency MHz	7	28, 21, 14, 7	28, 21, 14	24, 18, 10
SWR 1:2:1 Typical	40 > 125	> 350	> 500	> 200
2:1 Bandwidth, MHz				
Power Rating Watts PEP (CW)	1500 (500)	1500 (500)	1500 (500)	1500 (500)
Length ft (m)	42.25 (12.88)	35.8 (10.92)	25.8 (7.86)	34.0 (10.37)
Mast Size, in (cm)	1.5 2 (3.8 5)	1.5 2 (3.8 5)	1.5 2 (3.8 5)	1.5 2 (3.8 5)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	1.3 (.12)	1.3 (.12)	.9 (.08)	.9 (.08)
Weight, lb (kg)	12 (5)	13 (6)	9 (4)	11 (5)

# Cushcraft Dual Band Ringos & Yagis

# 2M/440 MHz

## AR-270B 5.5/7.5 dB Dual Band Ringo

This model gives very high gain with a low angle of radiation and it is only 7.7 feet (2.35 m) high. The AR-270B is computer optimized with two 5/8 wavelength collinear elements on 2 meters and four 5/8 wavelength elements on 70 cm. It is broadband for minimum SWR on both bands. It is easy to assemble with three rugged aluminum tubing sections, a durable mast mount and factory sealed coils for best performance.

## AR-270 3.0/ 5.5 dB Dual Band Ringo

The "Dual Wonder" AR-270 is only 3.75 feet (1.1 meters) high. It has great performance for its size, making it the most popular 2m/70 cm base antenna.

Specifications:	AR270		AR270B	
Frequency MHz	144-148	430-450	144-148	430-450
Gain, dBi	3.0	5.5	5.5	7.5
SWR 1.2:1 Typical	>4	>15	>4	>15
2:1 Bandwidth, MHz				
Horizontal Radiation Pattern, Degrees	360	360	360	360
Height, ft. (m)	3.75 (1.13)		7.7 (2.3)	
Mast Size Range, in	1.25-2 (3.2-5.1)		1.25-2 (3.2-5.1)	
Radial Length, in (cm)	6.75 (17.1)		6.75 (17.1)	
Wind Load, ft2 (m2)	0.27 (0.03)		0.17 (0.041)	
Power, Watts FM	250		250	
Weight, lb (kg)	2 (0.9)		2.4 (1.09)	



## A270-10S and A270-6S 10 and 7.8 dB Dual Band Yagis

Increase your range by selecting one of the new Cushcraft dual band Yagis on 2 meters and 70 cm. You can point the antenna at stations while you are in QSO with them. This will direct more of your output power when transmitting at the same time reducing interference and increasing signal strength when receiving. These antennas are perfect for packet applications. Assembly is a snap with our fully illustrated assembly manuals.

Specifications:	A270-10S		A270-6S	
Frequency	VHF	UHF	VHF	UHF
Number of Elements	5		3	
Forward Gain, dBi	10		7.8	
Front to Back Ratio, dB	20	16	20	16
SWR 1.2:1 Typical	3:1	3:10	3:1	3:20
2:1 Bandwidth, MHz				
Power Rating, Watts PEP	350		350	
3dB Beamwidth, Degrees				
E Plane	52		66	
H Plane	60		108	
Longest Element, in (cm)	40.3 (102.4)		41 (104.1)	
Turning Radius, ft (m)	6 (1.8)		2.8 (.85)	
Boom Length, ft (m)	6.17 (1.9)		2.8 (.85)	
Mast Size Range, in (cm)	1.25-2 (3.2-5.1)		1.25-2 (3.2-5.1)	
Wind Load, ft2 (m2)	.725 (.07)		.3 (.02)	
Weight, lb (kg)	1.8 (.81)		1.7 (.8)	



# Cushcraft Ringo Ranger 2 Meters, 220/440 MHz

## Ringo Ranger II, Ringo Ranger, Ringo Ringo Ranger II

The Ringo Ranger II has more gain, less windload, and more mechanical integrity than other two meter antennas. You'll quickly appreciate the benefits of this amazing antenna! Based on the original WIBX Ringo, the Ringo Ranger II is the latest design featuring three 5/8 wave radiating elements and an adjustable 1/8 wave phasing stub. The result is a very low angle of radiation over your coverage area. The Ringo Ranger II has built-in lightning protection, UV-stabilized insulators, heavy wall tubing, improved decoupling radials to eliminate feedline radiation, and all-weather performance.

Specifications:	ARX-2	ARX-2B	ARX-220B	ARX-450B
Frequency MHz	135-160	135 160	222 225	435 450
SWR 1.2:1 Typical	>6	>3	>5	>5
2:1 Bandwidth, MHz				
Gain, dBi	5.5	7.0	7.0	7.0
Power Rating, Watt (m)	1000	1000	500	500
Radiation Angle, Deg.	16	7	7	7
Horizontal Radiation Pattern, Degrees	360	360	360	360
Radiator Base Dia, in (cm)	5 (12.7)	.75 (1.9)	.75 (1.9)	.50 (1.2)
Height, ft. (m)	1.5 (3.8)	14 (4.3)	9.3 (2.8)	4.9 (1.5)
Mast Size Range, in (cm):	1-1.25 (2.54-3.2)	1.0-1.25 (2.54-3.1)	1.0-1.25 (2.54-3.1)	.75-.88 (1.9-2.22)
Wind Load ft <sup>2</sup> (m <sup>2</sup> )	.33 (.03)	0.5 (0.05)	0.3 (0.03)	20.2 (0.02)
Radial Length, in (cm)	20.5 (52.1)	20.5 (52.1)	3.75 (33.7)	6.75 (17.1)
Weight, lb (kg)	4 (1.8)	6 (2.7)	5 (2.3)	1 (.45)

ARX-450B  
\$99<sup>95</sup>



ARX-220B  
\$114<sup>95</sup>



ARX-2  
\$79<sup>95</sup>



ARX-2B  
\$109<sup>95</sup>



## Ringo

These are the original WIBX F M Ringos. If you want a combination of compact size, wide bandwidth, a low radiation angle, these economical antennas are just for you. Since radials are not needed, you can even use our Ringos indoors. Our Ringos are 1/2 wave and include built-in lightning protection. Put up one of these easily installed antennas and start enjoying FM!

Specifications:	AR-2	AR-6	AR-10	AR-450
Frequency MHz	135 160	50-54	28 29.7	440 460
Gain, dBi	3	3	3	3
Radiation Angle, Deg.	16	16	16	16
Horizontal Radiation Pattern, Degrees:				
SWR 1.2:1 Typical.	10	2	>1.5	20
2:1 Bandwidth, MHz				
Ring Diameter, in (cm)	5 (12.7)	13 (33)	13 (33)	3.5 (8.9)
Radiator Base Dia, in (cm):	.75 (1.9)	1 (2.5)	1 (2.5)	.5 (1.3)
Height, ft. (m):	3.9 (1.2)	10.1 (3.1)	17.6 (5.36)	1.4 (.43)
Mast Size Range, in (cm)	1-1.25	1-1.25	1-1.25	.75-.88
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	.21 (.02)	.37 (.03)	1.68 (.16)	.1 (.01)
Max. Power Watts PEP	1000W	1000W	1000W	500W
Weight, lb (kg):	1.5 (.68)	2.5 (1.1)	4 (1.8)	1 (.45)

AR-450  
\$47<sup>95</sup>



AR-2  
\$64<sup>95</sup>



AR-6  
\$99<sup>95</sup>



AR-10  
\$109<sup>95</sup>

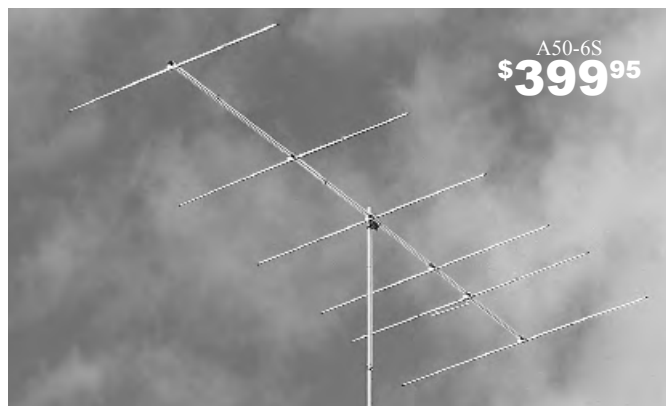


# Cushcraft 6 and 10 Meter Yagis

## 6-10 Meters

### 6 Meter Yagis - SSB/CW/FM

Computer-aided modeling and test range techniques were used by Cushcraft engineers to further optimize the performance of our popular 6 meter Yagis. This process means more gain and cleaner patterns with excellent front-to-back ratios. S-models have very broad bandwidth so they will not detune in bad weather. They feature stainless steel hardware for long trouble-free life. Enjoy the new popularity and exciting contacts on the 6 meter band with one of the S-series Laird Yagis. The A50-3S, A50-5S and A50-6S may be mounted vertically for FM use.



### TEN-3 10 Meter Yagi

Looking for a lightweight, economical alternative to the 10 meter big boys? Choose the TEN-3. Although it's popular with novices and technicians, this antenna is for any ham who wants more gain with a good front to back ratio on 10 meters. This antenna has an 8 foot boom (2.4m) making it easy to install on a very simple mount with only a light rotator. The matching system is our proven Reddi-Match for 50 Ohm no balun feed and SO-238 connector. Make more positive contacts with the TEN-3.



Specifications:	A503S	A505S	A50-6S	TEN3
Frequency MHz	50-54	50-54	50-54	28-29.7
Number of Elements	3	5	6	3
Gain, dBi	8	10.5	11.6	8
Front to Back Ratio, dB	20	24	26	25
Side Lobe Atten. dB	25	25	25	25
SWR 1.2:1 Typical	<1	<1	<1	<1.5
2:1 Bandwidth, MHz				
Longest Element, in (cm)	117 (300)	123 (312)	118 (302)	18 (5.49)
Turning Radius, ft (m)	6' (1.8)	7.8' (2.37)	11.5' (3.5)	9.8' (3.0)
Boom Length, ft (m)	6' (1.8)	12' (3.7)	20' (6.1)	8' (2.44)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	1.80 (0.17)	2.9 (0.273)	4.46 (.41)	2.0 (.20)
Max. Wind Surface Area	3.22ft <sup>2</sup> (3m <sup>2</sup> )	3.22ft <sup>2</sup> (3m <sup>2</sup> )	3.22ft <sup>2</sup> (3m <sup>2</sup> )	3.22ft <sup>2</sup> (3m <sup>2</sup> )
Max. Power Watts PEP	1000W	1000W	1000W	1500W
Weight, lb (kg)	7 (3.2)	11 (5.0)	18 (8.2)	9.9 (4.45)

# Cushcraft Boomer Sideband VHF/UHF Yagis **2 Meters**

## A-13B2 -13 Element Wideband Boomer

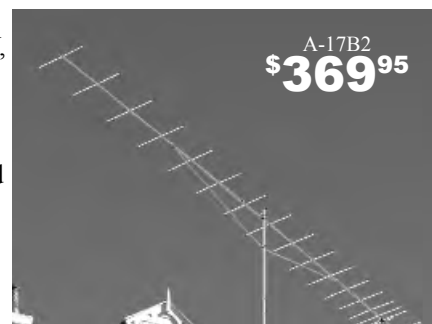
The A-13B2 is as versatile as the A-17B2 is specialized. A-13B2 will be your choice for high performance across the entire 2 meter band. New and experienced hams will enjoy 15.8 dBi gain on FM, packet, CW, or sideband across the 4 MHz operating range. The A13B2 is easily mounted vertically or horizontally for maximum performance on your favorite mode. Its optimum boom length makes it a popular antenna that fits just about anywhere. The new UltraMatch balanced feed on the A-13B2 provides a 50 Ohm match via a standard SO-239 UHF female connector. Model A-13B2N has N connector.



## A-17B2 - 17 Element CW/SSB Boomer

The serious two meter operator who is interested in EME, aurora, scatter, SSB, CW, tropo etc, will choose the A-17B2. It has 17 elements on a 4.5 wavelength boom. Our computer-aided design supported by precise test range data and the latest manufacturing technology gives you a cleaner pattern and 18 dBi gain in this long boom design. Significant enhancement is provided by the new UltraMatch balanced feed system with N-connector.

The UltraMatch is a modified T-match system that provides a balanced current distribution on your Boomer. It uses UltraLink Teflon<sup>®</sup> dielectric cable allowing for low loss high power applications. UltraMatch is completely enclosed for weather proofing. UltraMatch features an N-connector on the A-17B2 and UHF SO239 on the A-13B2. When all-weather performance is important, you will choose the new UltraMatched Boomers everytime.



## A-26B2 - 26 Element Wideband Boomer

This antenna offers the highest gain of any 2 meter FM antenna in the world. The A-26B2 includes 2 complete A-13B2 antennas, stacking boom and phasing harnesses.



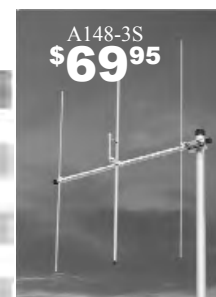
## A-124WB - 4 Element Wideband Boomer

This is the right choice for packet systems and other applications requiring a dedicated directional antenna.



## A148-10S & A148-3S 2M Yagis

These antennas are the newest computer optimized models of our 2 meter Yagis. We have improved both the pattern and gain to give you better FM coverage. The A148-3S is the low priced quality leader for Packet, FM or even portable use. It is easily rear mounted. A148-10S is one of our best value designs with excellent gain and front-to-back ratio. Use it for long range FM or full band 2 meter operation.



Specifications:	A13B2	A17B2	A124WB	A26B2	A1483S	A14810S
Frequency MHz	144-148	144-145	144-148	144-148	144-148	144-148
Elements per Band	13	17	4	26	3	10
Gain, dBi	15.8	18.0	10.2	17	7.8	13.2
Front to Back Ratio, dB	26	26	19	26	18	24
Side Lobe Atten. dB	>60	>60	40	>60		
SWR 1.2:1 Bandwidth MHz	>4	>2	4	>4	>5	14
Longest Element, in (cm)	39.75 (101)	40.75 (103.5)	40.75 (104)	39.75 (101)	41 (104.1)	40.3 (102.4)
Turning Radius, ft (m)	8.9 (2.7)	17.25 (5.26)	4 (1.22)	10.4 (3.18)	2.8 (.8)	6 (1.8)
Boom Length, ft (m)	15 (4.57)	31 (9.45)	4 (1.22)	15 (4.57)	2.8 (.85)	12 (3.6)
Electrical Wavelength	2.2	4.5	.5	2.2		
Wind Load ft <sup>2</sup> (m <sup>2</sup> )	1.8 (.17)	3.9 (.36)	.34 (.034)	4.84 (.45)	.27 (.02)	1.21 (.11)
Max. Power Watts PEP	1500W	1500W	1500W	1500W	1000W	1000W
Weight, lb (kg)	6.7 (.31)	15.75 (7.14)	3 (1.36)	21.5 (9.75)	1.5 (.7)	6 (2.7)

# Cushcraft VHF/UHF Yagis **2 Meters, 220/440 MHz**

## A148-20T 2-Meter Hi-Lo Cross Yagi

Here's the antenna that solves multi-mode problems! Ten vertically polarized and ten horizontally polarized elements provide 11.1 dBi gain covering 144-148 MHz. The horizontal elements handle your CW and SSB needs, while the vertical elements cover FM. Hardware is stainless steel. Separate coax feeds allow polarization changes.

A148-20T  
\$**219<sup>95</sup>**



A-224WB  
\$**99<sup>95</sup>**

## A-224WB 220 MHz Widebands

This 222 MHz 4 element beam is perfect for Packet, FM repeaters, or sideband/CW. It can be mounted for vertical or horizontal polarization.

## A449-6S/A449-11S

440 MHz

Beams

Use one of these 440 MHz beams for your

FM/Packet needs.

Both work great for vertical or horizontal polarization.



A449-6S  
\$**79<sup>95</sup>**

A449-11S  
\$**119<sup>95</sup>**

## A-719B -- FM, CW and SSB 15.5 dBi

Looking for an antenna to enhance performance on all modes of the 70 CM band? The 13.5 foot long 719B is the right choice. Mount it vertical for FM or horizontal for CW and Sideband. The 719B joins the 2 meter 13B2 as a classic for improved performance.



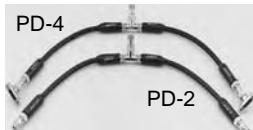
A-719B  
\$**249<sup>95</sup>**

Specifications:	A-224WB	A14820T
Frequency,MHz	222-225	144-148
Number of Elements	4	10/10
Forward Gain, dBi	10.2	13
Front to Back Ratio, dB	20	24
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>5	>4
Power Rating, Watts PEP (FM)	1500 (750)	1000 (500)
3dB Beamwidth, Degrees		
E Plane	60	45
H Plane	88	50
Side Lobe Attenuation, dB E Plane	40	40
Boom Length, ft (m)	3 (.91)	1(3.4)
Electrical Wavelength	0.5	1.6
Longest Element, in (cm)	26.7 (68)	40.6 (103)
Turning Radius, ft (m)	3 (.91)	7.5 (2.3)
Mast Size Range, in (cm)	1.25-2 (3.2-5.1)	1.25-2 (3.2-5.1)
Wind Load, ft2 (m2)	.23 (.021)	0.39(0.11)
Weight, lb (kg)	1.7 (.77)	7 (3.15)

Specifications:	A-719B \$249 <sup>95</sup>	A430-11S \$119 <sup>95</sup>	A4496S \$79 <sup>95</sup>	A449-11S \$119 <sup>95</sup>
Frequency MHz	430-450	430-440	440-450	440-450
Number of Elements	19	11	6	11
Forward Gain, dBi	15.5	13.2	10.5	13.2
Front to Back Ratio, dB	25	20	18	20
SWR 1.2:1 Typical				
2:1 Bandwidth, MHz	20	>10	>10	>10
Power Rating, Watts PEP	2000	350	350	350
3dB Beamwidth, Degrees				
E Plane	24	48	60	48
H Plane	19			
Side Lobe Attenu.,dB,E Plane	60	40	30	40
Boom Length, ft (m)	13.5 (4.1)	4.6 (1.39)	2.9 (0.89)	4.4 (1.35)
Connector Type	N	UHF	UHF	UHF
Longest Element, in (cm)	13.75 (34.9)	14 (35)	13 (33)	13 (33)
Turning Radius, ft (m)	7.25 (2.2)	2.8 (.85)	2.9 (.89)	2.8 (.85)
Mast Size Range, in (cm)	1.25-2 (3.2-5.1)	1.25-1.5 (3.2-5.1)	1.25-2.0 (3.2-5.1)	1.25-1.5 (3.2-5.1)
Wind Load, ft2 (m2)	1.2 (.11)	0.42 (0.04)	0.30 (0.03)	0.39 (0.04)
Weight, lb (kg)	5.6 (2.55)	4 (1.8)	3 (1.4)	4 (1.8)

## Power Divider Harness for Boomers

Our power dividers make it a snap to stack Cushcraft Boomers. Just add equal lengths of 50-Ohm coax to each of the antenna feed points.



**PD-2, \$69.95.** For two A13B2 beams.

**PD-4, \$89.95.** For four A13B2 beams.

**PD-2N, \$79.95.** For two A17B2 beams.

**PD-4N, \$99.95.** For four A17B2 beams.

## Stacking Kits for Cushcraft Boomers

Make stacking your Cushcraft Boomers easy. Choose the Boomer Stacking Kits for your installation. Each stacking kit includes: Stacking Aluminum boom, Power Dividers wire harness and mounting hardware.

**Order P/N: A26B2-VPK, \$169.95** for two A13B2 Boomers.

**Order P/N: A26B2N-VPK, \$189.95** for two A17B2 Boomers.

**Order** two kits for stacking 4 Boomers.

***For your nearest Cushcraft dealer or to order: call 662-323-5803***

**FACTORY ADDRESS:** 308 Industrial Park Road, Starkville, MS 39759 USA • **VOICE:** 662-323-5803 • **FAX:** 662-323-6551

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**Starkville, MS 39759 USA**

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