



General Product Brochure



SteppIR Antennas
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SteppIR - Why Compromise?

The SteppIR antenna was conceived to solve the problem of covering the eight ham bands (40m, 30m, 20m, 17m, 15m, 12m, 10m and 6m) on one tower without the performance sacrifices caused by interaction between all of the required antennas.

Antenna's are available that cover 20 meters through 10 meters by using interlaced elements or traps, but do so at the expense of significant performance reduction in gain and front to back ratios. With the addition of the WARC bands on 30m, 17m and 12m, the use of interlaced elements and traps has clearly been an exercise in diminishing returns.

Obviously, an antenna that is precisely adjustable in length while in the air would solve the frequency problem, and in addition would have vastly improved performance over existing fixed length antenna's. The ability to tune the antenna to a specific frequency, without regard for bandwidth, results in excellent gain and front to back at every frequency.

The SteppIR design was made possible by the convergence of determination and high tech materials. The availability of new lightweight glass fiber composites, Teflon blended thermoplastics, high conductivity copper-beryllium and extremely reliable stepper motors has allowed the SteppIR to be a commercially feasible product for over 10 years.

The current and future SteppIR products should produce the most potent single tower antenna systems ever seen in Amateur Radio! We thank you for using our SteppIR antenna for your ham radio endeavors.

Warm Regards,

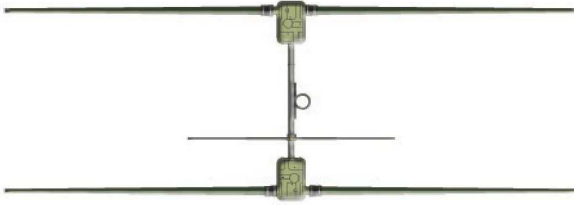
Mike Mertel

Michael (Mike) Mertel - K7IR
President

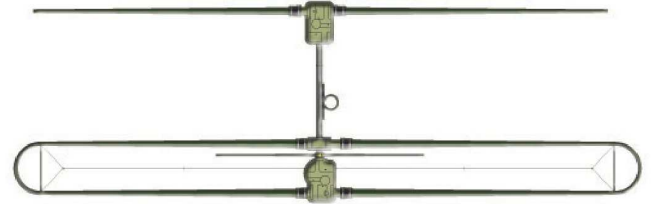




2 Element Yagi Specifications



2E Yagi 20m-6m (with 6m option)

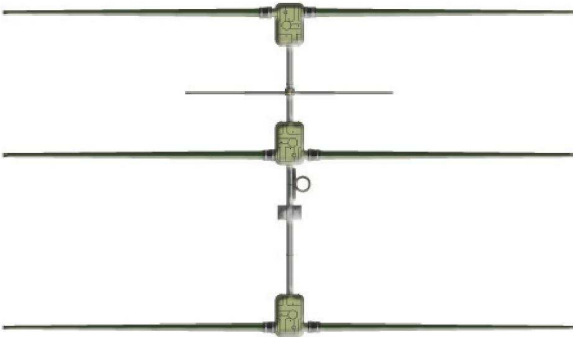


2E Yagi with 40/30 dipole option

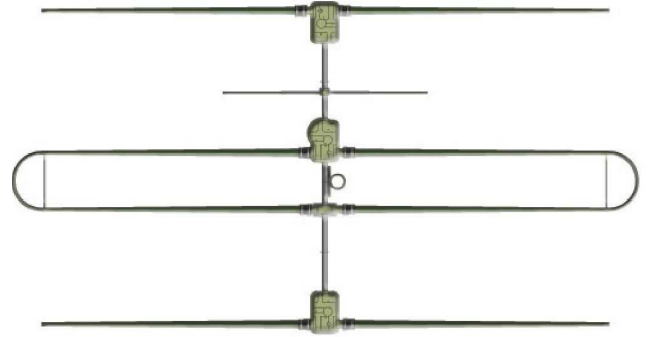
Specifications	2 Element Yagi	2 Element Yagi with 40/30
Boom length	57 in / 1.44 m	57 in / 1.44 m
Boom outside diameter	1.75 in / 4.45 cm	1.75 in / 4.45 cm
Longest element	36 ft / 10.97 m	39 ft / 11.9 m
Turning radius	18.2 ft / 5.53 m	20.0 ft / 6.09 m
Weight	30 lb	37 lb
Wind load	4.0 sq ft / 0.37 sq m	6.0 sq ft / 0.56 sq m
Wind rating	100 mph	100 mph
Adjustable elements	2	2
Power Rating	3000 watts continuous	3000 watts continuous
Feed points	1	1
Frequency coverage	13.9 MHz – 54 MHz	6.8MHz – 54 MHz
Control cable	12 conductor 22 AWG shielded	12 conductor 22 AWG shielded

2E Gain / Front-to-rear (by band)	2E Gain, dBi	2E Front-to-rear, dB	2E with 30/40 Gain, dBi	2E with 30/40 Front-to-rear, dB
40M	N/A	N/A	1.8	N/A
30M	N/A	N/A	2.1	N/A
20M	6.6	21	N/A	N/A
17M	6.6	16	N/A	N/A
15M	6.5	13	N/A	N/A
12M	6.4	11	N/A	N/A
10M	6.2	9	N/A	N/A
6M	5.0	2	N/A	N/A
6M w/passive opt.	8.3	20	N/A	N/A

3 Element Yagi Specifications



3E Yagi 20m-6m (with 6m option)

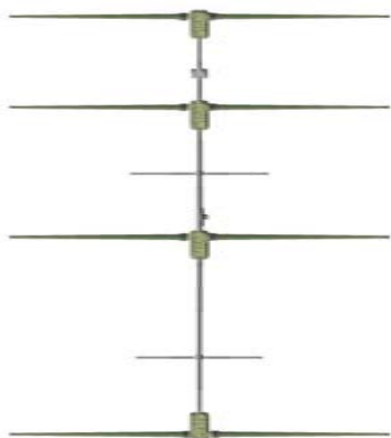


3E Yagi with 40/30 dipole option

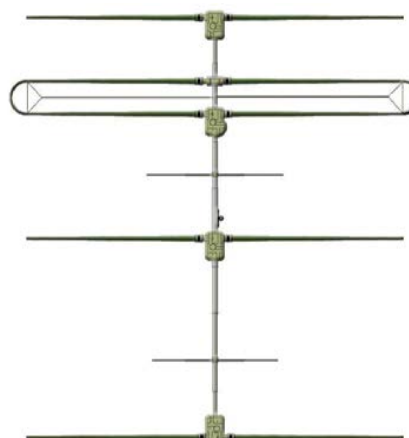
Specifications	3 Element Yagi	3 Element Yagi with 40/30
Boom length	16 ft / 4.87 m	16 ft / 4.87 m
Boom outside diameter	1.75 in / 4.5 cm	1.75 in / 4.5 cm
Longest element	36 ft / 10.97 m	39 ft / 11.9 m
Turning radius	19.7 ft / 6.0 m	19.7 ft / 6.0 m
Weight	51 lb / 23.1 kg	58 lb / 26.3 kg
Wind load	6.1 sq ft / 0.57 sq m	8.1 sq ft / 0.76 sq m
Wind rating	100 mph	100 mph
Adjustable elements	3	3
Power Rating	3000 watts continuous	3000 watts continuous
Feed points	1	1
Frequency coverage	13.8 MHz—54 MHz	6.8—54 MHz
Control cable	12 conductor shielded, 22AWG	12 conductor shielded, 22AWG

3E Gain / Front-to-rear (by band)	3E Gain, dBi	3E Front-to-rear, dB	3E with 30/40 Gain, dBi	3E with 30/40 Front-to-rear, dB
40M	NA	NA	1.8	NA
30M	NA	NA	2.1	NA
20M	7.4	25	7.4	25
17M	8.3	25	8.3	25
15M	8.5	20	8.5	20
12M	8.8	15	8.8	15
10M	9.0	11	9.0	11
6M	6.2	4	6.2	4
6M w/passive opt.	10.1	30	10.1	30

4 Element Yagi Specifications



4E Yagi 20m-6m (with 6m option)

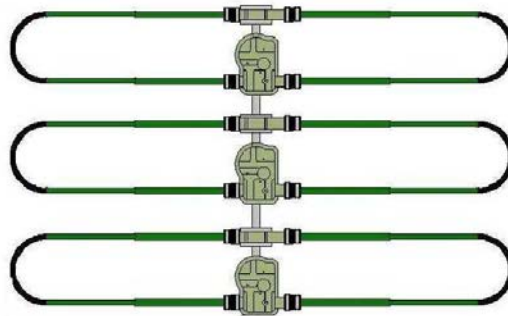


4E Yagi 40m-6m (with 6m option)

Specifications	4 Element Yagi	4 Element Yagi with 40/30
Boom length	32 ft / 9.75 m	32 ft / 9.75 m
Boom outside diameter	1.75 in—2.50 in 4.45 cm—6.35 cm	1.75 in—2.50 in 4.45 cm—6.35 cm
Longest element	36 ft / 10.97 m	39 ft / 11.9 m
Turning radius	24.1 ft / 7.35 m	24.1 / 7.35 m
Weight	99 lb / 45.0 kg	106 lb / 48.2 kg
Wind load	9.7 sq ft / 0.9 sq m	11.7 sq ft / 1.09 sq m
Wind rating	100 mph	100 mph
Adjustable elements	4	4
Power Rating	3000 watts continuous	3000 watts continuous
Feed points	1	1
Frequency coverage	13.8—54 MHz	6.8—54 MHz
Control cable	16 conductor shielded, 22 AWG	16 conductor shielded, 22AWG

4E Gain / Front-to-rear (by band)	4E Gain, dBi	4E Front-to-rear, dB	4E with 30/40 Gain, dBi	4E with 30/40 Front-to-rear, dB
40M	NA	NA	1.8	NA
30M	NA	NA	2.1	NA
20M	9.5	21	9.5	21
17M	10.0	20	10.0	20
15M	10.2	27	10.2	27
12M	10.4	21	10.4	21
10M	10.6	11	10.6	11
6M	7.8	4	7.8	4
6M w/passive opt.	13.0	30	13.0	30

DB11 Yagi Specifications



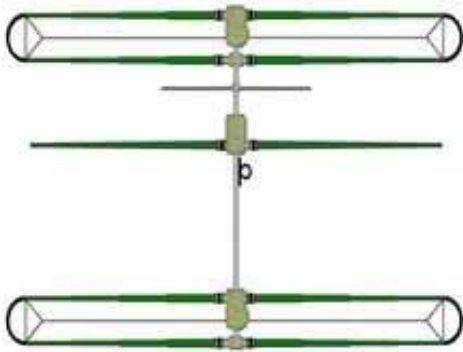
DB 11 Yagi

Specifications	DB11 Yagi
Boom length	11 ft / 3.35 m
Boom outside diameter	1.75 in / 4.4 cm
Longest element	19 ft / 5.79 m
Turning radius	11 ft / 3.35 m
Weight	63 lb / 28.57 kg
Wind load	5.9 sq ft / 0.54 sq m
Wind rating	100 mph
Adjustable elements	3
Power Rating	3000 watts continuous
Feed points	3
Frequency coverage	13.8 MHz—54 MHz
Control cable	16 conductor, shielded 22AWG

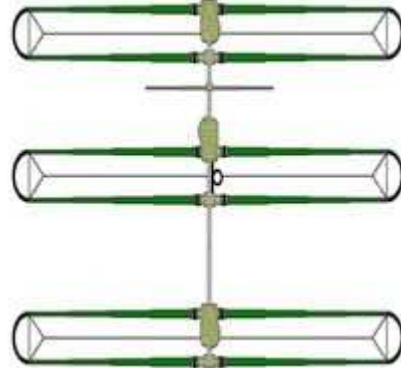
DB11 Gain / Front-to-rear (by band)	DB 11 Yagi Gain, dBi	DB11 Yagi Front-to-rear, dB
20M	6.41	19.53
17M	7.02	16.19
15M	7.08	21.35
12M	7.25	23.17
10M	7.46	24.55
6M	8.76	15.09



DB18 / DB18E Yagi Specifications



DB18 Yagi w / 6m passive option

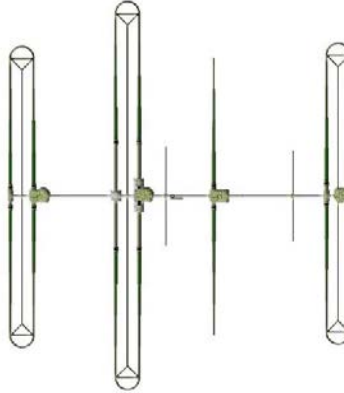


DB18E Yagi w / 6m passive option

Specifications	DB18 Yagi	DB18E Yagi
Boom length	19 ft / 5.79 m	19 ft / 5.79 m
Boom outside diameter	1.75 in—2 in / 4.45—5.08 cm	1.75 in—2 in / 4.45—5.08 cm
Longest element	39 ft / 11.9 m	39 ft / 11.9 m
Turning radius	21.58 ft / 6.57 m	21.58 ft / 6.57 m
Weight	96 lb / 43.5 kg	110 lb / 50.0 kg
Wind load	10.1 sq ft / 0.93 sq m	12.1 sq ft / 1.12 sq m
Wind rating	100 mph	100 mph
Adjustable elements	3	3
Power Rating	3000 watts continuous	3000 watts continuous
Feed points	3	3
Frequency coverage	6.8 MHz—54 MHz	6.8 MHz—54 MHz
Control cable	16 conductor shielded, 22AWG	16 conductor shielded, 22AWG

Gain / Front-to-rear (by band)	DB18 Gain, dBi	DB18 Front-to-rear, dB	DB18E Gain, dBi	DB18E Front-to-rear, dB
40M	6.2	20	6.2	20
30M	5.4	NA	7.0	20
20M	7.4	25	7.4	25
17M	8.3	25	8.3	25
15M	8.5	20	8.5	20
12M	8.8	15	8.8	15
10M	9.0	11	9.0	11
6M	6.2	4	6.2	4
6M w/passive opt.	10.1	30	10.1	30

DB36 Yagi Specifications

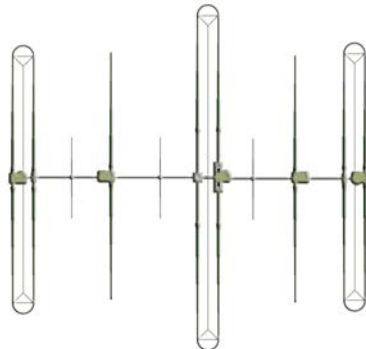


DB36 Yagi (with 6m option)

Specifications	DB36 Element Yagi
Boom length	36 ft / 11.1 m
Boom outside diameter	1.75 in—2.50 in 4.45 cm—6.35 cm
Longest element	49 ft / 14.94 m
Turning radius	26 ft / 8.0 m
Weight	160 lb / 72.8 kg
Wind load	17.5 sq ft / 1.63 sq m
Wind rating	100 mph
Adjustable elements	4
Power Rating	3000 watts continuous
Feed points	1
Frequency coverage	6.8—54 MHz (3.5 w/ opt. 80m dipole)
Control cable	16 conductor shielded, 22 AWG

Gain / front-to-rear (by band)	DB36 Gain, dBi	DB36 Front-to-rear, dB
80M* (optional)	1.35	NA
40M	7.2	21
30M	8.2	18
20M	9.27	21.5
17M	9.88	26.5
15M	10.21	27.1
12M	10.43	21.1
10M	10.65	11.0
6M	4	1.78
6M w/passive opt.	12.75	27.4

DB42 MonstIR Pro Specifications



DB42 with 6m passive option

Specifications	DB42 MonstIR Pro Yagi
Boom length	42 ft 8 in / 13.0 m
Boom outside diameter	1.75 in—3 in / 4.45—7.6 cm
Longest element	49 ft / 14.9 m
Turning radius	29 ft / 8.8 m
Weight	238 lb / 108 kg
Wind load	19.9 sq ft / 1.85 sq m
Wind rating	100 mph
Adjustable elements	5
Power Rating	3000w Key Down / *1500w on 80m (option)
Feed points	2
Frequency coverage	6.8 MHz—54 MHz (*3.5MHz w/ 80m option)
Control cable	25 conductor shielded, 22AWG

Gain / front-to-rear (by band)	Gain, dBi Forward DIR	Front-to-rear, db forward	Gain, dBi Reverse DIR	Front-to-rear, dB reverse
80M (option)	1.7	NA	1.7	NA
40M	8.0	25.5	8.0	23.2
30M	9.0	12.4	9.0	12.4
20M	10.1	22.0	10.0	23.2
17M	10.8	23.2	10.7	21.9
15M	11.0	25.7	10.6	20.0
12M	11.9	24.1	10.4	8.9
10M	12.2	20.0	10.5	11.7
6M	5.0	2.0	5.0	2.0
6M w/passive opt.	14.0	25.0	NA	NA

BigIR Specifications

Specifications	BigIR 1/4 wave vertical
Longest element	32 ft
Weight	15 lb
Wind load	1.9 sq ft
Wind rating (no guys)	50 mph
Wind rating (guyed)	100 mph
Adjustable elements	1
Power Rating 40m-6m Power rating w/ 80m coil	3000 watts continuous 1500 watts continuous*
Feed points	1
Frequency coverage	6.8—54 MHz (3.5 MHz w/ opt. 80m coil)
Control cable	4 conductor shielded, 22AWG 2x4 conductor required when using coil



BigIR Vertical

*Reduced power rating is only applicable when the coil is switched in. When coil is not in use, 3000 watt continuous power rating applies on the other bands.

SmallIR Specifications

Specifications	SmallIR 1/4 wave vertical
Longest element	18 ft
Weight	8 lb
Wind load	1.0 sq ft
Wind rating	100 mph
Adjustable elements	1
Power rating 40m-6m with 40/30 meter coil with 80/40/30 meter coil	3000 watts continuous 1500 watts continuous* 500 watts continuous*
Feed points	1
Frequency coverage	13.8—54 MHz (3.5, 7.0, 10.0 MHz w/opt. coil)
Control cable	4 conductor shielded, 22AWG 2x4 conductor required when using coil



SmallIR Vertical

*Reduced power rating is only applicable when the coil is switched in. When coil is not in use, 3000 watt continuous power rating applies on the other bands.

Dipole Specifications



20m-6m Dipole



40m-6m Dipole

Specifications	20m-6m Dipole	40m-6m Dipole
Boom length	NA	NA
Boom outside diameter	NA	NA
Longest element	36 ft / 10.97 m	39 ft / 11.9 m
Turning radius	18 ft / 5.48 m	19.5 ft / 5.95 m
Weight	15 lb / 6.80 kg	25 lb / 11.4 kg
Wind load	1.9 sq ft / 0.17 sq m	3.8 sq ft / 0.34 sq m
Wind rating	100 mph	100 mph
Adjustable elements	1	1
Power Rating	3000 watts continuous	3000 watts continuous
Feed points	1	1
Frequency coverage	13.8MHz—54 MHz	6.8MHz—54 MHz
SWR Range	1.0:1 to 1.4:1	1.4:1 to 2.0:1
Control cable	4 conductor shielded, 22AWG	4 conductor shielded, 22AWG

Dipole Gain (by band)	20m-6m dipole Gain, dBi	40m-6m dipole Gain, dBi
40M	NA	1.7
30M	NA	1.7
20M	2.2	1.7
17M	2.2	1.7
15M	2.2	1.7
12M	2.2	1.7
10M	2.2	1.7
6M	2.2	1.7

Accessories

AVAILABLE ON ALL ANTENNA PRODUCTS

<p>In-line Voltage Suppressor Line filter for filtering ESD and other unwanted voltages from the control cable. Available in 8, 12, and 16 wire configurations. Manufactured by Array Solutions.</p>	<p>Transceiver interface This option is installed inside the SDA100 controller for automatic adjustment of the antenna whenever the transceiver changes frequency; Works with most modern radios; requires an interface cable</p>
<p>Advanced lightning protection Optional module replaces the standard driver board with a driver board that has relays for each of the driver chips, isolating the sensitive electronics from lightning and dead shorts when not in use. Effectively disconnects the control cable from the controller; Will not provide protection while the antenna is adjusting.</p>	<p>Remote driver board Option that allows user to replace standard control cable with cat5 cable, for runs of up to 3000 feet. Includes an advanced lightning protection (ALP) driver board. This option requires power at the placement point of the remote driver board and may require a short run of standard control cable from antenna to the remote driver board.</p>
<p>Tuning relay (amplifier lockout) Optional tuning relay is placed inside the SDA 100 controller and prohibits the transceiver from transmitting while the antenna is tuning; Not necessary unless using more than 200 watts.</p>	<p>N Connector option Replaces the standard SO239 connector with an N type connector. Optional on all antenna models</p>

AVAILABLE ON YAGI PRODUCTS

<p>6m passive element kit Significantly enhances gain and front to rear performance of antenna using one, two or three (depending on antenna) fixed length aluminum elements.</p>	<p>High wind kit Replaces existing mast plate and hardware with 1/4 inch thick high strength mast plate, along with high strength/grip solid aluminum saddles for the boom and mast connections; Available on 2 and 3 element Yagi.</p>
<p>Connector junction box Optional hinged, weather-proof enclosure containing individual plug-ins for each element housing unit (EHU). Greatly reduces the potential for miswiring; The ability to plug and unplug each EHU connection is very handy when performing maintenance on the antenna.</p>	<p>Element truss kit Optional truss for 40/30 loop element for leveling the element ends; DOES NOT improve wind or ice load limits, for aesthetic purposes only.</p>
<p>80m Dipole This option is available on our DB36 and DB42 Yagi; adds a dipole, balun and antenna switch for operation on the entire 80m band; connects to the reflector element center on one side of the dipole and to director 2 on the other side; performance is 0.4 dB down from a full size dipole.</p>	<p>40/30 loop element Available as an option with our 2, 3 and 4 element Yagi; replaces the driven element with a 39 ft loop that creates a dipole on 40m and 30m; performance is 0.4 dB down from a full sized Yagi using our folded dipole technology; available at purchase or as an upgrade.</p>

AVAILABLE ON VERTICAL / DIPOLE PRODUCTS

<p>80m coil for BigIR Vertical Optional coil attaches to the base of the BigIR to add 80m and 60m operation; precision stepper motor adjusts the rotor over multiple taps for broad frequency coverage; maximum power output of 1500 watts while the coil is switched in.</p>	<p>80/40/30 Coil for SmallIR Optional coil attaches to the base of the SmallIR to add 80m/40m/30m operation; precision stepper motor adjusts the rotor over multiple taps for broad frequency coverage; maximum power output of 500 watts on 80m and 1500 watts on 40/30 while the coil is switched in</p>
<p>Ground radial kits for verticals Sets of 4 insulated wires 16 guage; 9 feet (20m-6m), 16 feet (40m-6m) or 40 feet (80m-6m) long depending on the frequency coverage of the vertical; terminated in a single lug; minimum of 3 sets recommended for reasonable performance.</p>	<p>40/30 Coil for SmallIR Optional coil attaches to the base of the SmallIR to add 40m and 30m operation; precision stepper motor adjusts the rotor over multiple taps for broad frequency coverage; maximum power output of 1500 watts on 40/30 while the coil is switched in.</p>
<p>Elevated radial kits for verticals Sets of 2 insulated wires, 16 gauge x 32 feet long, terminated in a single ring lug; requires one set per band.</p>	<p>1:1 Balun for Dipoles and Verticals 5KW choke balun available in SO239 or N type connection; waterproof enclosure; ideal for keeping RF from coming into the shack over the control cable.</p>
<p>Guy hardware kit Guy ring hardware kit for BigIR; used as a 2nd guy in high wind situations (one guy hardware kit is included with purchase of a BigIR vertical).</p>	<p>Vertical mounting pole Replacement mounting pole for the SmallIR and BigIR verticals (this item is included when purchasing a new vertical); 1.5" swaged end that fits into the bottom of the vertical EHU; 24" length.</p>

MISCELLANEOUS PARTS

<p>DB25 Control cable splice assembly Used to splice control cable ends to a terminal header; mounted on circuit board, with db25 male connector for attaching to electronic controller</p>	<p>24V and 33V power supply 24V for use with control cable runs of 200 feet or less; 33V for use with cable runs of over 200 feet.</p>
<p>Phillystran Wound Kevlar rope with a UV resistant plastic cover; used for boom trusses and tower guys; available sizes: 1200I (1/8"), 2100I (3/16") and 4000I (1/4"). Priced per foot.</p>	<p>Dacron rope High strength Dacron rope, available by the foot in 1/8" and 3/16" sizes</p>
<p>Solid aluminum saddles High strength solid aluminum saddles, two pieces make up a single saddle kit; much stronger than standard U-Bolts available in 1-3/4", 2", 2-1/4" and 2-1/2" sizes</p>	<p>Stainless steel U-bolts Consists of U-Bolt, saddle, bolts and Nylock nuts; available in 1-3/4", 2" and 2-1/2"</p>
<p>Control cable Shielded multi-conductor control cable, 22 AWG; available in 4, 12, 16, 20 and 25 conductor.</p>	<p>Telescoping fiberglass pole 18 foot length, 4 sections, dark green finish; great for wire antenna projects.</p>



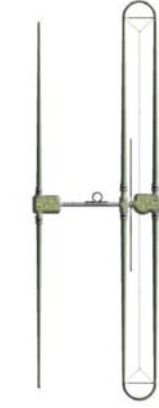
Product Specification Sheet

(all products)

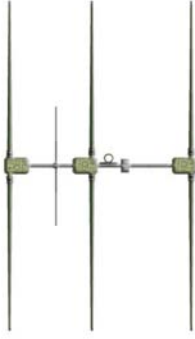
Specifications	Dipole 20m-6m	Dipole 40m-6m	2 element Yagi	3 element Yagi	4 element Yagi	DB11 Yagi	DB18 Yagi	DB18E Yagi	DB36 Yagi	DB42 Yagi MonstIR PRO	40m - 30m Dipole Option	BigIR III Vertical	Small IR Vertical
Weight	15 lb 6.80 kg	25 lb 11.4 kg	30 lb 13.6 kg	51 lb 23.1 kg	91 lb 41.3 kg	63 lb 28.57 kg	96 lb 43.5 kg	110 lb 50 kg	160 lb 72.8 kg	238 lb 108 kg	15 lb 6.80kg	15 lb 6.8 kg	12 lb 5.4 kg
Max. Wind Surface Area	1.9 sq ft 0.17 sq m	3.8 sq ft 0.34 sq m	4.0 sq ft 37 sq m	6.1 sq ft 0.57 sq m	9.7 sq ft 0.90 sq m	5.9 sq ft 0.54 sq m	10.1 sq ft 0.93 sq m	12.1 sq f 1.12 sq m	17.5 sq ft 1.63 sq m	19.9 sq ft 1.85 sq m	2.0 sq ft 0.19 sq m	1.9 sq ft 0.17 m ²	1.0 sq ft 0.9 sq m
Wind Rating	100 MPH EIA-222-C	100 MPH EIA-222-C	100 MPH EIA-222-C	100 MPH EIA-222-C	100 MPH EIA-222-C	100 MPH EIA-222-C	100 MPH EIA-222-C	100 MPH EIA-222-C	100 MPH EIA-222-C	100 MPH EIA-222-C	100 MPH EIA-222-C	50-100 mph EIA-222-C	100 MPH EIA-222-C
Longest Element	36 ft 10.97 m	39 ft 11.9m	36 ft 10.97 m	36 ft 10.97 m	36 ft 10.97 m	19 ft 5.79m	39 ft 11.9m	39 ft 11.9m	49 ft 14.9 m	49 ft 14.9m	39 ft 11.9 m	32 ft 9.75 m	18 ft 5.49 m
Power Rating	3000 Watts Key Down	3000 Watts Key Down	3000 Watts Key Down	3000 Watts Key Down	3000 Watts Key Down	3000 Watts Key Down	3000 Watts Key Down	3000 Watts Key Down	3000 Watts Key Down *1500 w w/80m option	3000w Key Down *1500w w/80m option	3000 Watts Key Down	3000 Watts Key Down	3000 Watts Key Down
Boom Length	—	—	57 in / 1.44 m	16 ft / 4.87 m	32 ft / 9.75 m	11 ft 3.35 m	19 ft 5.79m	19 ft 5.79 m	36 ft	42 ft 8 in 13.0 m	—	—	—
Boom Diameter	—	—	1.75 in 4.5 cm	1.75 in 4.5 cm	2 inch 5.0 cm	1.75 - 3 in 4.4-7.6 cm	1.75- 3.0 in 4.45-7.6 cm	1.75- 3.0 in 4.45-7.6 cm	1.75- 3 in 4.45-7.6 cm	1.75 - 3 in 4.45-7.6 cm	—	—	—
Mast Diameter	1.75 in 4.45 cm	1.75" 4.45 cm	2.0 in 5.08 cm	2.0 in 5.08 cm	2.0 in 5.08 cm	2.0 in 5.08 cm	2 in 5.08 cm	2 in 5.08 cm	2 in	2 in	—	1.5 in 3.81 cm	1.5 in / 3.81 cm
Frequency Coverage	20m - 6m Continuous	40m- 6m Continuous	20m - 6m Continuous *40/30 option avail..	20m - 6m Continuous *40/30 option avail.	20m - 6m Continuous *40/30 option avail.	20m-6m Continuous	40m-6m Continuous (2 el on 30m)	40m-6m Continuous (3 el on 30m)	40m-6m Continuous (80m option available)	40m-6m Continuous (80m option available)	40m - 6m Continuous	40m - 6m Continuous *80m coil option avail.	20m - 6m Continuous *80m coil option avail.
Turning Radius	18 ft 5.48 m	19.5 ft 5.95 m	18.15 ft 5.53 m	19.7 ft 6 m	24.1 ft 7.35 m	10.5 ft 3.20m	21.58 ft 6.57 m	21.58 ft 6.57 m	26 ft 8.0 m	29 ft 8.8 m	NA (Option for 2, 3, & 4 E Yagi)	—	—
Cable Requirements (shielded)	4 conductor 22 AWG	4 Conductor 22 AWG	12 conductor 22 AWG	12 conductor 22 AWG	16 conductor 22 AWG	16 conductor 22 AWG	20 conductor 22 AWG	20 Conductor 22 AWG	16 Conductor 22 AWG	25 Conductor 22 AWG	—	4 conductor 22 AWG 2	4 conductor 22 AWG
Balun Included?	No (optional)	No (optional)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No (optional)	No (optional)



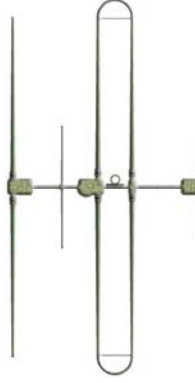
2E 20m-6m



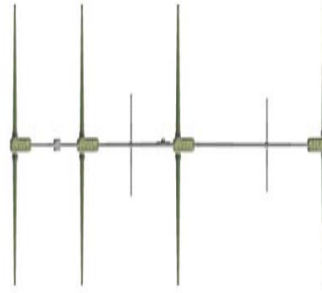
2E 40m-6m



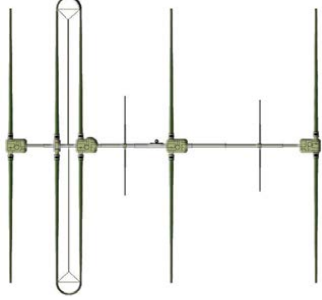
3E 20m-6m



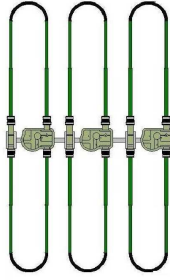
3E 40m-6m



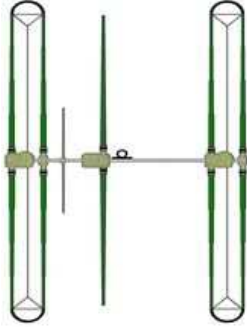
4E 20m-6m



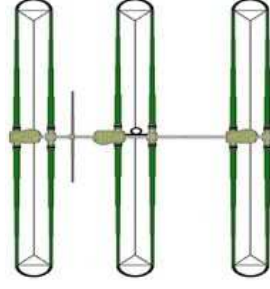
4E 40m-6m



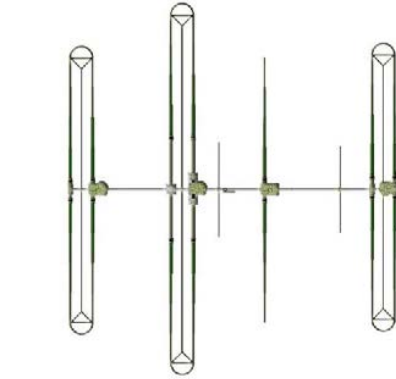
DB11 40m-6m



DB18 40m-6m



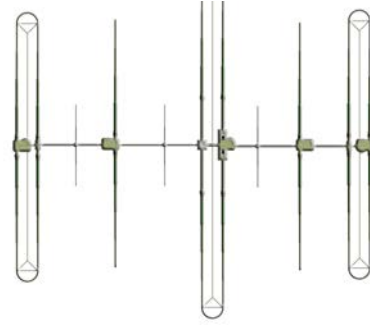
DB18E 40m-6m



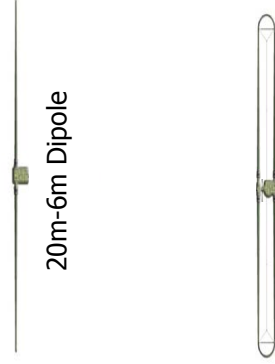
DB36 40m-6m



80m option (DB36 and DB42)



DB42 40m-6m



20m-6m Dipole



40m-6m Dipole



BigIR



SmallIR

SteppIR™