

Introducing the SteppIR Verticals!

BigIR: 6.9 MHz through 54.0 MHz Continuous Coverage

Small IR: 13.8 MHz through 54.0 MHz Continuous Coverage



No traps, coils, capacitors or linear loading of any kind

Full continuous coverage, including WARC bands - without compromise!

Fiberglass element resists wind and ice

World's safest vertical!

Low visual profile - excellent for stealth installations

Works on the same principle as our Yagi - copper strip adjusts inside of fiberglass element

Antenna is always at ideal length - no running outside to make adjustments!

www.steppir.com

Fluidmotion Antenna Systems • 23831 S.E. Tiger MT. RD.
Issaquah, WA 98027 USA • Tel: 425-391-1999 Fax: 425-391-8377

Finally! A high performance, low VSWR vertical antenna with excellent bandwidth and no compromises!

Verticals are available that cover 40 meters through 6 meters by using coils, traps, capacitors or linear loading, but do so at the expense of significant performance reduction. With the addition of the WARC bands on 30m, 17m and 12m, multi-band vertical antenna performance has clearly become a challenge.

A vertical antenna that is precisely adjustable in length while in the air solves the coverage problem, and in addition has vastly improved performance over existing fixed length verticals. The ability to tune the antenna to a specific frequency results in excellent performance on every band – and this means the entire band, with very low VSWR. Resonant antennas must be made a specific length to operate optimally on a given frequency. So, instead of trying to “trick” the antenna into thinking it is a different length, why not just change the antenna length? This is what we have done with the new SteppIR verticals. Each vertical antenna consists of one spool of flat copper strip conductor mounted in the antenna housing. The copper strip is perforated to allow a stepper motor to drive it with a sprocket. Stepper motors are well known for their ability to index very accurately, thus giving very precise control of the antenna

length. In addition element. This telescoping support elem, the motors are brushless and provide extremely long service life. The copper strip is driven out into a hollow, lightweight fiberglass support ent stays extended at all times, while the conductive strip is adjusted to the exact required length using the microprocessor based controller (via 22 gauge 4 conductor shielded control cable). The antenna is easy to assemble and is extremely portable.



SteppIR Microprocessor Based Controller
Controller dimensions: 6” L x 3” H x 3.5” D

Specifications	BigIR	Small IR
Weight	15 lb 6.8 kg	12 lb 5.44 kg
Max. wind surf. area	1.9 ft ² 0.17 m ²	1.0 ft ² .09 m ²
Guyed wind survival (w/ 2 guys@ 14')	80 MPH	100 MPH
Un-Guyed wind survival	60 mph	100 MPH
Element length	32 ft 9.75 m	18 ft 5.49 m
Power Rating	2000 W PEP	2000 W PEP
Frequency coverage MHz	6.9 -54.0	13.8 - 54
Cable Requirements	4 cond	4 cond
Tuning Rate	1.17 MHz / Second	1.17 MHz / Second
Radial System Required?	*YES	*YES
Feed Type	End fed	End fed
Wavelength	1/4	1/4

*Minimum recommended radial system:

At ground level: eight 0.1 wavelength radials cut to the lowest frequency of operation (14 ft at 7 MHz, 8 ft at 13.8 MHz) as close to ground level as possible. Additional radials will increase performance. Above ground: two radials cut to the specific frequency for each band of operation. If you are using wire, we recommend insulated.

Note: In addition to these guidelines, there are many different ways to create reasonable grounding systems.