

Type **1765 Series**
 Granger
Broadband HF Dipole
Antennas

- **1.6-30 MHz Frequency Range**
- **Up to 10 kW Average, 20 kW Peak Power Rating**
- **Horizontal Polarization**
- **Omnidirectional**
- **2.0:1 Nominal, 2.5:1 Maximum VSWR**
- **Short-to-Medium Range Communications**
- **No Resistive Loading, Switching or Tuning**



Omnidirectional

An omnidirectional radiation pattern at the lower frequencies denotes improved coverage to and from base stations over short-to-medium ranges.

Improved Reliability and Efficiency

The design of the radiating elements has increased the bandwidth over which the azimuth plane pattern is omnidirectional up to four times the lower frequency limit. The unique feature of having the support masts installed approximately 19° off vertical permits the outboard guy anchors to be in the same plane as the top of the mast. This reduces the ground area required for any given size of radiating curtain by approximately 30 percent.

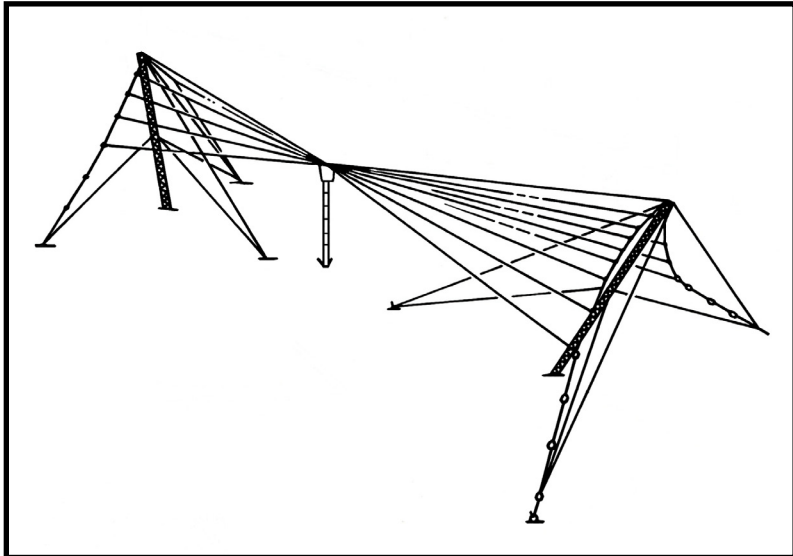
The 1765 antenna requires no tuning or resistive loading circuitry. This permits complete compatibility with multi-channel fixed-tuned radios as well as frequency agile, synthesized HF radio equipment. Elimination of the antenna coupler maximizes the power output of the antenna/transmitter, resulting also in a significant improvement in communication reliability through the reduction of maintenance and/or repair.

High Take-Off Angle

The elevation plane radiation patterns at the lower frequencies denote maximum power is radiated at high angles ensuring reliable communications over short-to-medium ranges.

Accessories

The following accessories are available for ease of installation and maintenance: tower lighting kit, erection kit, paint kit, tool kit, lightning rod kit, anti-climbing kit, and spares kit.

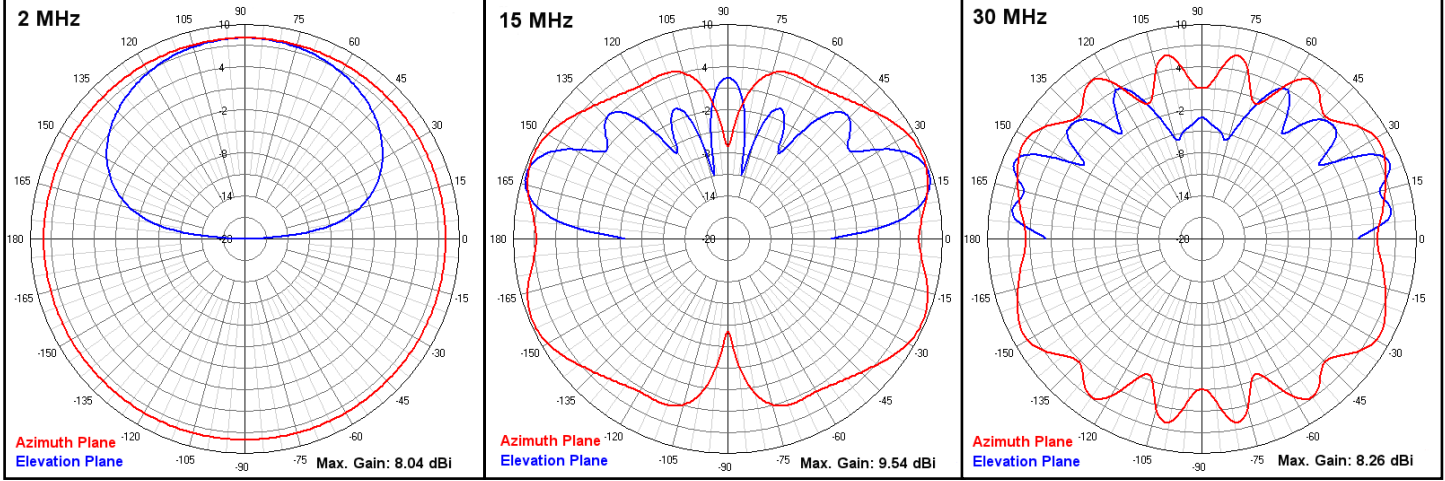


Characteristics

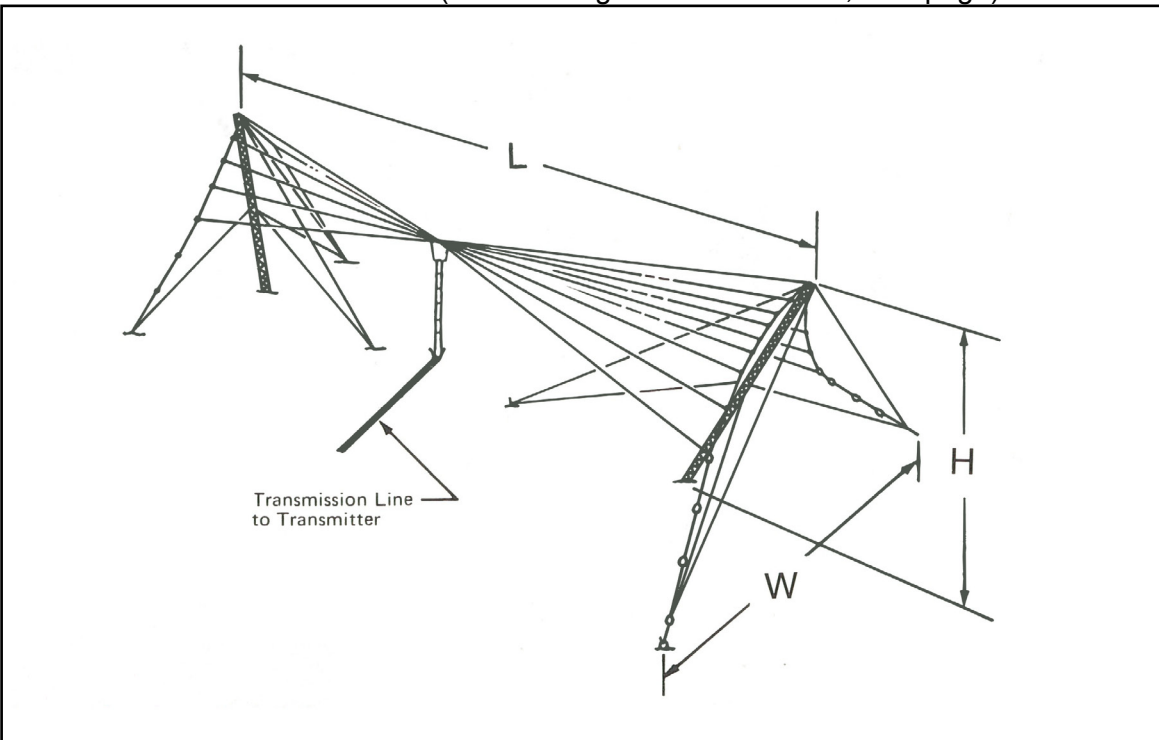
Type	HF Broadband Dipole
Frequency Range, MHz	1.6 to 4.3 lower limit, 30 max
Power Rating, kW	Up to 10 average, 20 peak
Polarization	Horizontal
VSWR (50 ohms)	2.0:1 nominal, 2.5:1 max
Gain, dBi	8 nominal
Wind Survival Rating, mph (km/h)	
Without Ice	140 (224)
With 0.5 in (12mm) Radial Ice	50 (80.5)

1765 Series Broadband Dipole

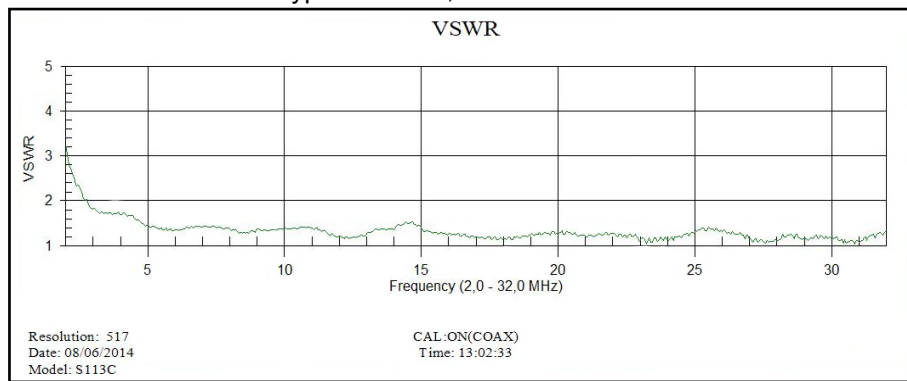
Directive Gain in dB Relative to Isotropic, Over Perfect Ground



Antenna Dimensions (see ordering information Chart, next page)



Typical VSWR, 1765 Antenna



1765 Series Broadband Dipole

Ordering Information

Type Number	Frequency Range, MHz	Power Rating kW Average	Power Rating kW Peak	Input Impedance ohms	Input Connector	Length (L) ft (m)	Dimensions Height (H) ft (m)	Width (W) ft (m)
1765-101-1K	1.6 - 30	10	20	300 Balanced	Open Line	230 (67)	85 (26)	167 (51)
1765-101-2K	1.6 - 30	1	2	50	Type N Jack	230 (67)	85 (26)	167 (51)
1765-101-3K	1.6 - 30	3	6	50	7/8" EIA	230 (67)	85 (26)	167 (51)
1765-101-4K	1.6 - 30	10	20	50	1-5/8" EIA	230 (67)	85 (26)	167 (51)
1765-101-5K	1.6 - 30	Receive Only	Receive Only	75	Type N Jack	230 (67)	85 (26)	167 (51)
1765-101-6K	1.6 - 30	Receive Only	Receive Only	50	Type N Jack	230 (67)	85 (26)	167 (51)
1765-101-10K	1.6 - 30	5	10	50	7/8" EIA	230 (67)	85 (26)	167 (51)
1765-120-1K	2.0 - 30	10	20	300 Balanced	Open Line	184 (56)	69 (21)	135 (41)
1765-120-2K	2.0 - 30	1	2	50	Type N Jack	184 (56)	69 (21)	135 (41)
1765-120-3K	2.0 - 30	3	6	50	7/8" EIA	184 (56)	69 (21)	135 (41)
1765-120-4K	2.0 - 30	10	20	50	1-5/8" EIA	184 (56)	69 (21)	135 (41)
1765-120-5K	2.0 - 30	Receive Only	Receive Only	75	Type N Jack	184 (56)	69 (21)	135 (41)
1765-120-6K	2.0 - 30	Receive Only	Receive Only	50	Type N Jack	184 (56)	69 (21)	135 (41)
1765-120-10K	2.0 - 30	5	10	50	7/8" EIA	184 (56)	69 (21)	135 (41)
1765-121-1K	2.4 - 30	10	20	300 Balanced	Open Line	160 (49)	59 (18)	115 (35)
1765-121-2K	2.4 - 30	1	2	50	Type N Jack	160 (49)	59 (18)	115 (35)
1765-121-3K	2.4 - 30	3	6	50	7/8" EIA	160 (49)	59 (18)	115 (35)
1765-121-4K	2.4 - 30	10	20	50	1-5/8" EIA	160 (49)	59 (18)	115 (35)
1765-121-5K	2.4 - 30	Receive Only	Receive Only	75	Type N Jack	160 (49)	59 (18)	115 (35)
1765-121-6K	2.4 - 30	Receive Only	Receive Only	50	Type N Jack	160 (49)	59 (18)	115 (35)
1765-121-10K	2.4 - 30	5	10	50	7/8" EIA	160 (49)	59 (18)	115 (35)
1765-122-1K	3.4 - 30	10	20	300 Balanced	Open Line	115 (35)	40 (12)	81 (25)
1765-122-2K	3.4 - 30	1	2	50	Type N Jack	115 (35)	40 (12)	81 (25)
1765-122-3K	3.4 - 30	3	6	50	7/8" EIA	115 (35)	40 (12)	81 (25)
1765-122-4K	3.4 - 30	10	20	50	1-5/8" EIA	115 (35)	40 (12)	81 (25)
1765-122-5K	3.4 - 30	Receive Only	Receive Only	75	Type N Jack	115 (35)	40 (12)	81 (25)
1765-122-6K	3.4 - 30	Receive Only	Receive Only	50	Type N Jack	115 (35)	40 (12)	81 (25)
1765-122-10K	3.4 - 30	5	10	50	7/8" EIA	115 (35)	40 (12)	81 (25)
1765-123-1K	4.3 - 30	10	20	300 Balanced	Open Line	90 (27)	30 (10)	62 (19)
1765-123-2K	4.3 - 30	1	2	50	Type N Jack	90 (27)	30 (10)	62 (19)
1765-123-3K	4.3 - 30	3	6	50	7/8" EIA	90 (27)	30 (10)	62 (19)
1765-123-4K	4.3 - 30	10	20	50	1-5/8" EIA	90 (27)	30 (10)	62 (19)
1765-123-5K	4.3 - 30	Receive Only	Receive Only	75	Type N Jack	90 (27)	30 (10)	62 (19)
1765-123-6K	4.3 - 30	Receive Only	Receive Only	50	Type N Jack	90 (27)	30 (10)	62 (19)
1765-123-10K	4.3 - 30	5	10	50	7/8" EIA	90 (27)	30 (10)	62 (19)

*The letter "K" denotes that the antenna is supplied with "knock-down" (unassembled) towers.

Refer to sketch on previous page for reference dimensions

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