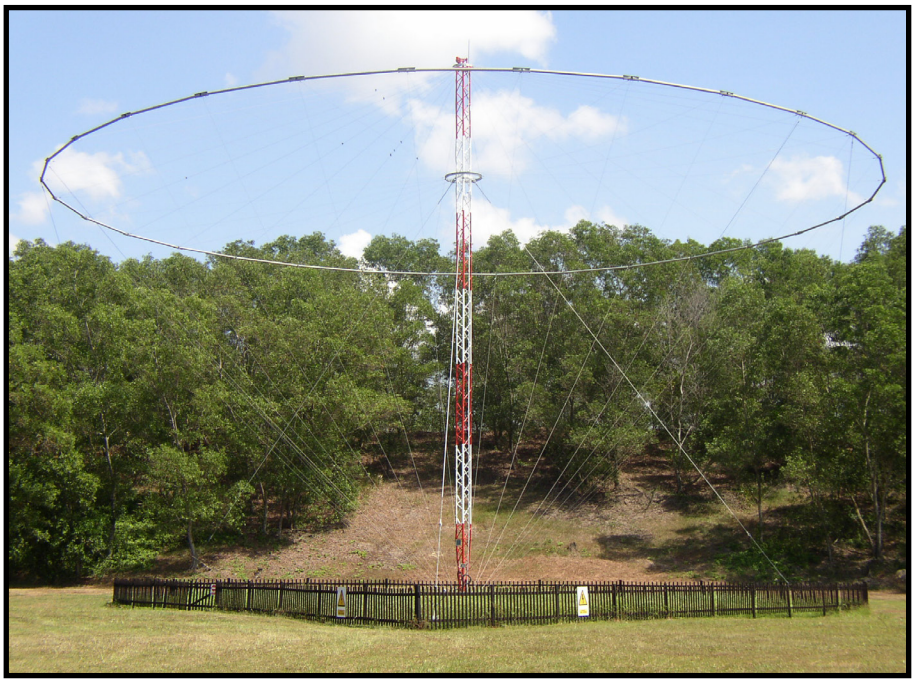
KRATOS
READY FOR WHAT'S NEXT™

1794 Series
Granger
Monocone HF Antenna

- 1.6-32 MHz Frequency Range
- 40 KW Average, 160 KW Peak Power Rating
- Vertical Polarization
- Omnidirectional
- 2.0:1 Maximum VSWR
- Long-Range Communications (Skywave)
- Short-Range Communications (Groundwave)
- Low Angle Radiation Patterns
- Minimum Installation Ground Area



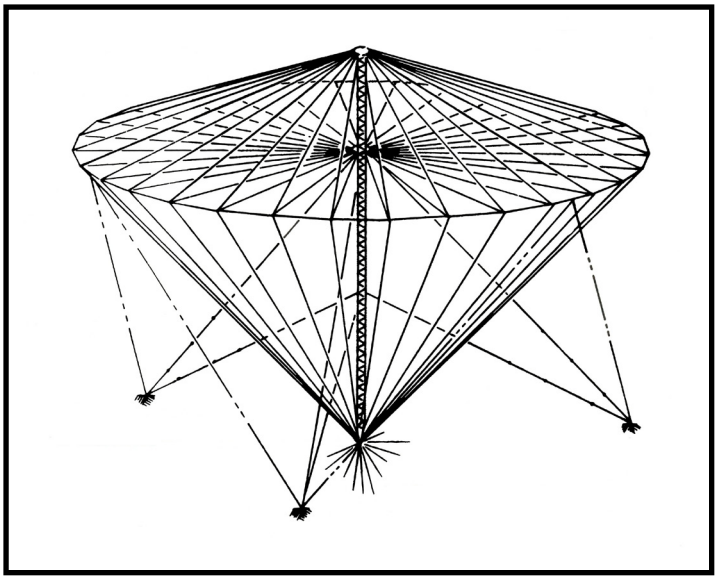
General Description

MONOCONE antennas are designed for very long range, high power transmit applications such as air-to-ground, ship-to-shore and HF broadcast. Advanced design provides superior electrical performance with a single central support tower.

MONOCONE antennas are the first vertical omnidirectional antennas to radiate all HF frequencies effectively. The broad frequency range permits use of the optimum frequency for any distance. The radiation patterns are suitable for skywave propagation at medium and long ranges, and ground-wave proagation at short distances.

Radiation Patterns

Elevation plane radiation patterns are illustrated on page 2. Frequency is stated in terms of the lower frequency limit (f_0), which is 1.6, 2.0, 2.4, 2.8, 4.0, or 5.6 depending on the model. At the higher frequencies, which are generally useful for long range skywave transmission, radiation is concentrated at the lower elevation angles. At the lower frequencies, which are useful for shorter ranges, the radiation patterns show greater gain at higher angles required for skywave transmission, while preserving sufficient gain at the low angles to facilitate ground wave propagation. The radiation patterns shown are representative of the entire frequency range. There are no frequencies within the specified ranges at which patterns deteriorates sugnificantly from those shown.



If installation ground area is limited, low frequency (LF) versions with a low frequency limit equal to 0.8 of the low frequency limit of the standard version can be supplied on special order.

Accessories

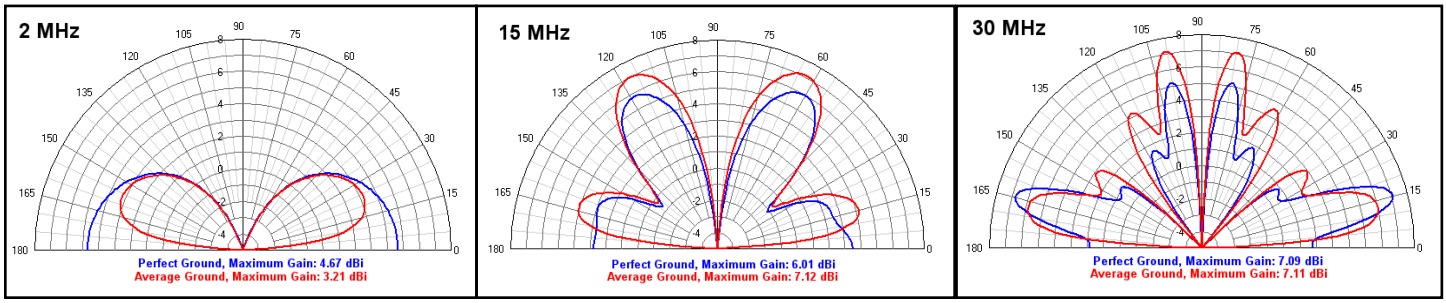
Curtain Erection Kit containing cables, hand winch and miscellaneous hardware for raising the curtain and ring is included with the antenna

Tower Erection Fixture for erection of tower by sections.

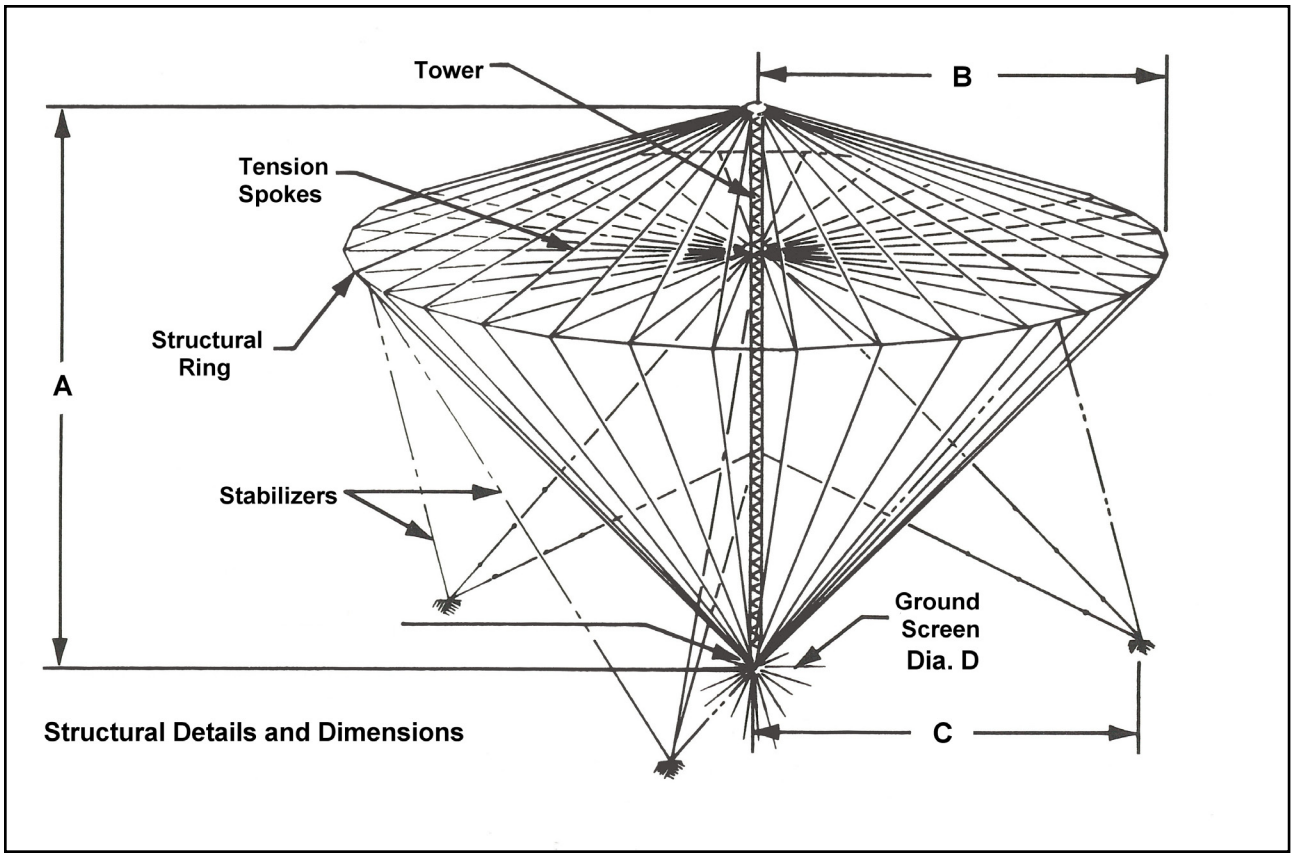
1794 Series Monocone

Characteristics

Type	Omnidirectional Conical Monopole
Frequency Range, MHz	1.6, 2.0, 2.4, 2.8, 4.0, or 5.6-32
Power Rating, kW	Up to 40 average, 160 peak
Polarization	Vertical
VSWR (50 ohms)	2.0:1 maximum
Azimuth Plane Radiation Patterns	Circular within ±0.75 dB
Wind Survival Rating, mph (km/h)	
Without Ice	120 (190)
With 0.5 in (12mm) Radial Ice	90 (140)



Elevation Plane Radiation Patterns (Relative to Isotropic)



Structural Details and Dimensions

1794 Series Monocone

Ordering Information

Type Number*	Frequency Range, MHz	Power Rating, KW		Input Connector Female	Dimensions			
		Average	Peak		A, ft (m)	B, ft (m)	C, ft (m)	D, ft (m)
1794-101LF	1.6-32	10	40	1-5/8" EIA	86 (26)	63 (19)	60 (18)	246 (75)
1794-15LF	1.6-32	5	20	7/8" EIA	86 (26)	63 (19)	60 (18)	246 (75)
1794-11LF	1.6-32	1	4	50 Ohm 'N'	86 (26)	63 (19)	60 (18)	246 (75)
1794-102LF	1.6-32	Receive Only		50 Ohm 'N'	86 (26)	63 (19)	60 (18)	246 (75)
1794-1K	2-32	40	160	3-1/8" EIA	86 (26)	63 (19)	60 (18)	246 (75)
1794-101K	2-32	10	40	1-5/8" EIA	86 (26)	63 (19)	60 (18)	246 (75)
1794-15K	2-32	5	20	7/8" EIA	86 (26)	63 (19)	60 (18)	246 (75)
1794-11K	2-32	1	4	50 Ohm 'N'	86 (26)	63 (19)	60 (18)	246 (75)
1794-102K	2-32	Receive Only		50 Ohm 'N'	86 (26)	63 (19)	60 (18)	246 (75)
1794-3K	2.4-32	40	160	3-1/8" EIA	71 (22)	52 (16)	49 (15)	205 (62.5)
1794-103K	2.4-32	10	40	1-5/8" EIA	71 (22)	52 (16)	49 (15)	205 (62.5)
1794-35K	2.4-32	5	20	7/8" EIA	71 (22)	52 (16)	49 (15)	205 (62.5)
1794-31K	2.4-32	1	4	50 Ohm 'N'	71 (22)	52 (16)	49 (15)	205 (62.5)
1794-104K	2.4-32	Receive Only		50 Ohm 'N'	71 (22)	52 (16)	49 (15)	205 (62.5)
1794-5K	2.8-32	40	160	3-1/8" EIA	61 (18.6)	45 (14)	42 (13)	176 (53.7)
1794-105K	2.8-32	10	40	1-5/8" EIA	61 (18.6)	45 (14)	42 (13)	176 (53.7)
1794-55K	2.8-32	5	20	7/8" EIA	61 (18.6)	45 (14)	42 (13)	176 (53.7)
1794-51K	2.8-32	1	4	50 Ohm 'N'	61 (18.6)	45 (14)	42 (13)	176 (53.7)
1794-106K	2.8-32	Receive Only		50 Ohm 'N'	61 (18.6)	45 (14)	42 (13)	176 (53.7)
1794-7K	4-32	40	160	3-1/8" EIA	43 (13)	32 (10)	29 (9)	123 (37.5)
1794-107K	4-32	10	40	1-5/8" EIA	43 (13)	32 (10)	29 (9)	123 (37.5)
1794-75K	4-32	5	20	7/8" EIA	43 (13)	32 (10)	29 (9)	123 (37.5)
1794-71K	4-32	1	4	50 Ohm 'N'	43 (13)	32 (10)	29 (9)	123 (37.5)
1794-108K	4-32	Receive Only		50 Ohm 'N'	43 (13)	32 (10)	29 (9)	123 (37.5)
1794-9K	5.6-32	40	160	3-1/8" EIA	31 (9.5)	23 (7)	19 (5.8)	88 (26.8)
1794-109K	5.6-32	10	40	1-5/8" EIA	31 (9.5)	23 (7)	19 (5.8)	88 (26.8)
1794-95K	5.6-32	5	20	7/8" EIA	31 (9.5)	23 (7)	19 (5.8)	88 (26.8)
1794-91K	5.6-32	1	4	50 Ohm 'N'	31 (9.5)	23 (7)	19 (5.8)	88 (26.8)
1794-110K	5.6-32	Receive Only		50 Ohm 'N'	31 (9.5)	23 (7)	19 (5.8)	88 (26.8)

***** The letter suffix "K" denotes that the antenna is supplied with "knockdown" (unassembled) tower.

Refer to the sketch on the previous page to reference dimensions

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