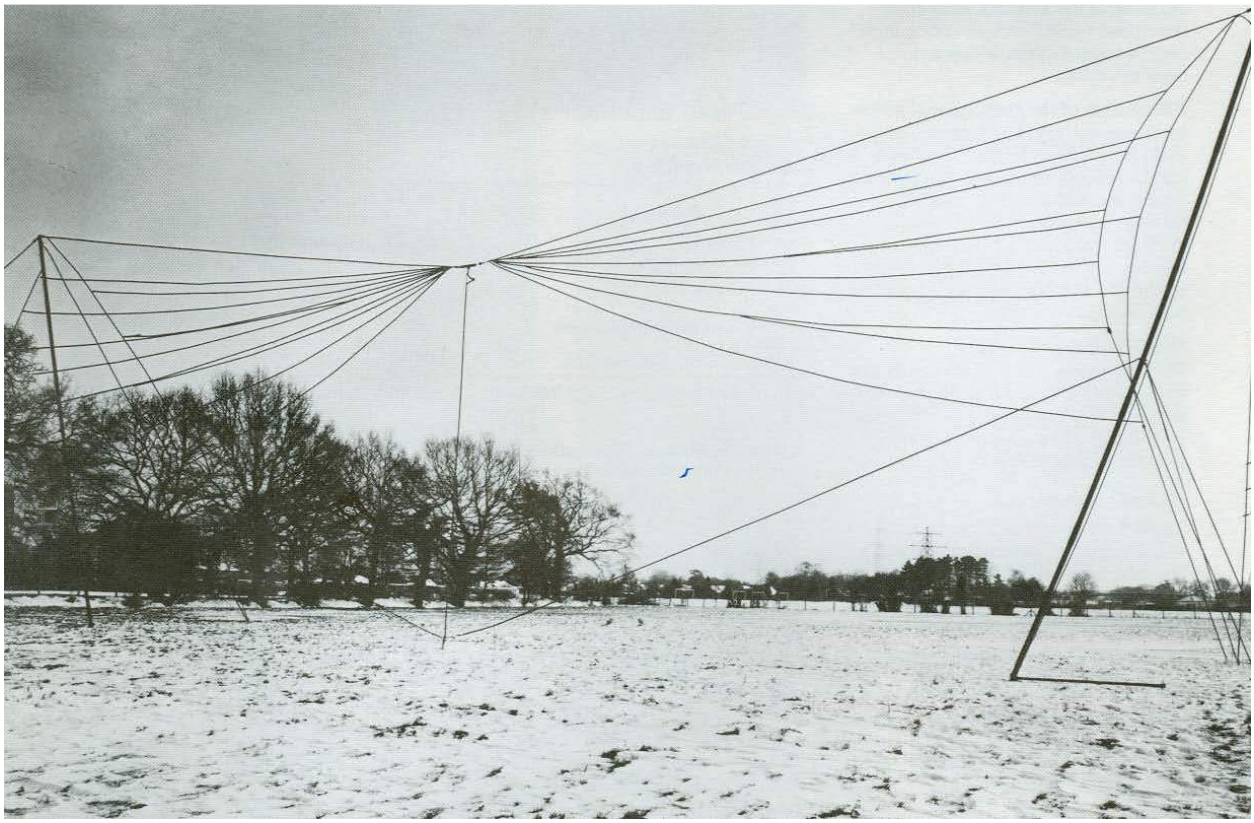
Type 3065 Series GRANGER™
Broadband HF Dipole Antennas



- **1.6-30 MHz Frequency Range**
- **Up to 2.5 kW Average, 5 kW Peak Power Rating**
- **Horizontal Polarization**
- **Omnidirectional**
- **2.3:1 Maximum VSWR**
- **Short-to-Medium Range Communications**
- **No Resistive Loading, Switching or Tuning**

General Description

The 3065 Series Antennas are based on the original full-size broadband HF 1795 Antenna Series. The 3065 Antenna Series is more compact than the 1765 Antenna Series for a given low frequency cut-off. This is achieved by frequency extension techniques which maintain high electrical efficiency.

Features

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

The design of the radiating system has increased the bandwidth over which the azimuth plane pattern is omnidirectional up to five times the lower frequency limit and further reduces the ground area required for installation by 25%.

The resultant broadband antenna configuration permits complete compatibility with channelized as well as frequency-agile, synthesized HF radio systems. The antenna is also offered in a transportable tactical version (3065MT), which can be installed by a crew of four in one hour.

Low VSWR maximizes the power available at the antenna, from solid state power amplifiers, resulting in an overall improvement in communications reliability.

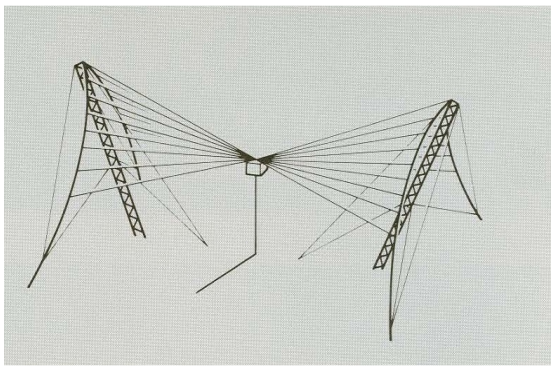
Elimination of the conventional antenna tuning unit (ATU-Coupler), normally required with simple narrow band antennas, maximizes the power available at the antenna, resulting in an overall improvement in communications reliability. In addition, there is a reduction of maintenance/control complexity associated with an ATU-Coupler.

High Take-Off Angle

The elevation plan radiation patterns at the lower frequencies ensure maximum power is radiated at high angles, providing 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.

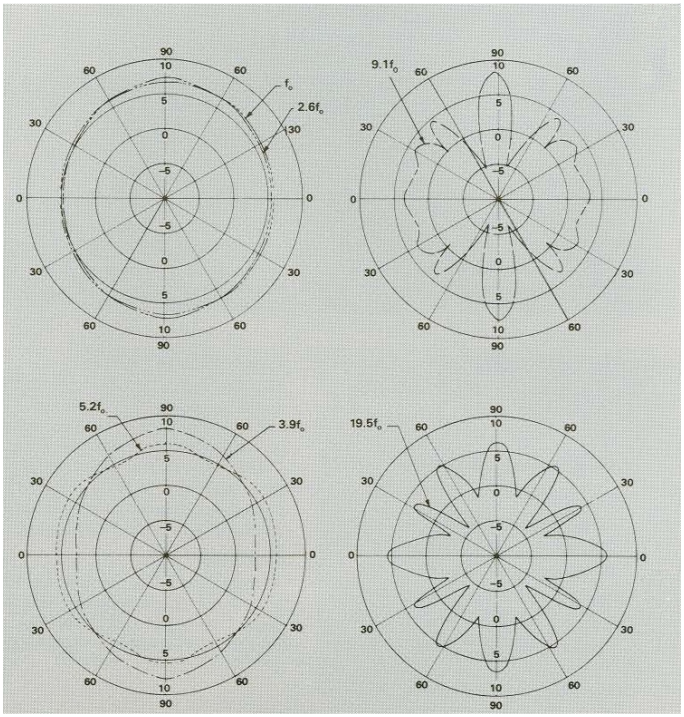


Characteristics

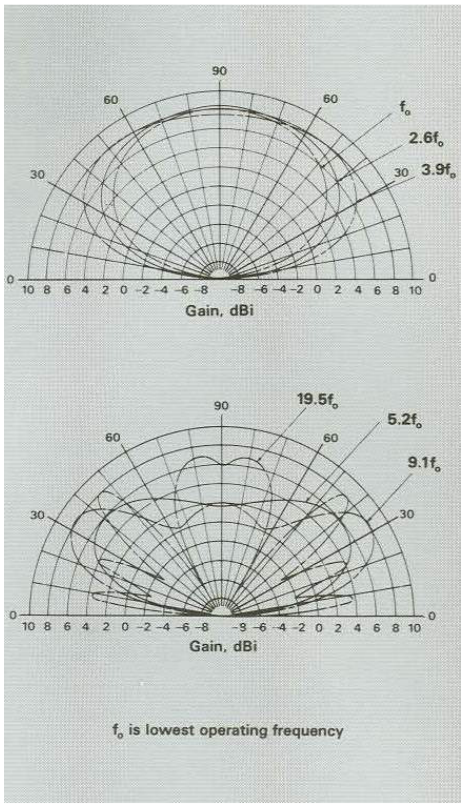
Type	HF broadband dipole
Frequency Range, MHz	1.6 to 3.3 lower limit, 30 max
Power Rating, kW	Up to 2.5 average, 5 peak
Polarization	Horizontal
VSWR (50 ohms)	2.0:1 nominal, 2.3:1 max
Gain, dBi	8 nominal
Wind Survival Rating, mph (km.h)	
Without Ice	140 (224)†
With 0.5 in (12 mm) Radial Ice	50 (80.5)
†Except for 3065MT-113-2T and 3065MT-113-2L 60 mph (96 km/h) without ice, 40 mph (64 km/h) with 0.5 in (12mm) Radial Ice	

Azimuth Plane Radiation Patterns at Beam Maximum

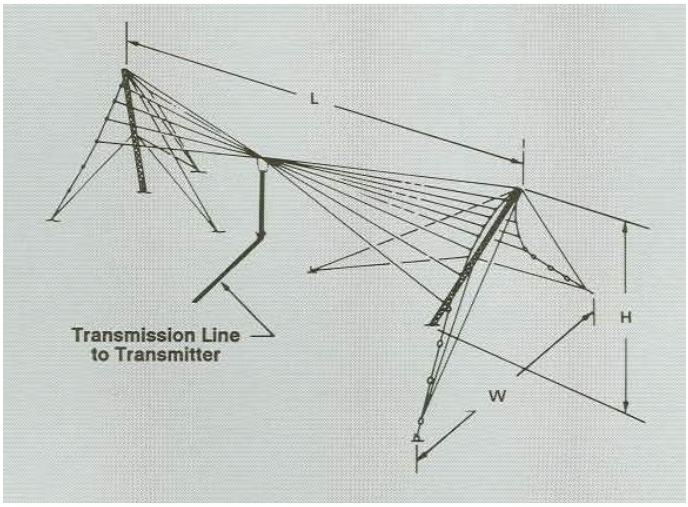
(Directive Gain in dB Relative to Isotropic)



Elevation Plane Radiation Patterns
(Orthogonal to dipole length)



Antenna Dimensions



Ordering Information

Type Number*	Frequency Range MHz	Power Rating kW Average	Peak	Input Connector Female	Length (L) ft (m)	Dimensions Height (H) ft (m)	Width (W) ft (m)
3065-101-1K	1.6-30	Receive Only	Receive Only	Type N Jack	185 (56)	70 (21)	134 (41)
3065-101-2K	1.6-30	1	2	Type N Jack	185 (56)	70 (21)	134 (41)
3065-101-3K	1.6-30	2.5	5	7/8" EIA	185 (56)	70 (21)	134 (41)
3065-102-1K	1.9-30	Receive Only	Receive Only	Type N Jack	160 (49)	60 (18)	115 (35)
3065-102-2K	1.9-30	1	2	Type N Jack	160 (49)	60 (18)	115 (35)
3065-102-3K	1.9-30	2.5	5	7/8" EIA	160 (49)	60 (18)	115 (35)
3065-103-1K	2.6-30	Receive Only	Receive Only	Type N Jack	115 (35)	40 (12)	81 (25)
3065-103-2K	2.6-30	1	2	Type N Jack	115 (35)	40 (12)	81 (25)
3065-103-3K	2.6-30	2.5	5	7/8" EIA	115 (35)	40 (12)	81 (25)
3065-104-1K	3.3-30	Receive Only	Receive Only	Type N Jack	90 (27)	30 (10)	62 (19)
3065-104-2K	3.3-30	1	2	Type N Jack	90 (27)	30 (10)	62 (19)
3065-104-3K	3.3-30	2.5	5	7/8" EIA	90 (27)	30 (10)	62 (19)
3065MT-113-2T	2.0-30	1	2	Type N Jack	115 (35)	40 (12)	62 (19)
3065MT-113-2L	2.0-30	1	2	Type N Jack	115 (35)	40 (12)	62 (19)

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