

## UHF SATCOM Helical Antennas

### Fixed Helical UHF SATCOM Antennas

TACO's circularly polarized high gain Fixed UHF SATCOM Antennas are designed to withstand the severest of environmental conditions. Presently used by all branches of the US Military and various Defense Contractors worldwide, TACO's Helicals are an industry leading communication product.

### Solidly Built, Simply Installed

- Solidly constructed using an aluminum mast and ground plane
- Helix supported by dielectric rods running along the mast
- 2-piece ground plane assembles easily with no tools required

### Custom Networks

- Systems tailored to suit specific customer requirements
- Remotely control up to 12 antennas networked with electrical pan & tilt positioners

### Flexible & Adaptable

- 2 mounting options to meet your specific needs
- Mesh design allows for reduced wind loading
- Durability to withstand the most severe of weather conditions
- UFO and MUOS compatible



## MECHANICAL MOUNTS SPECIFICATIONS

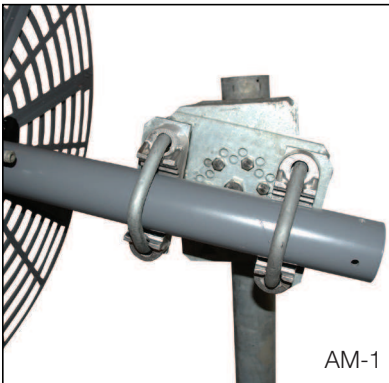
MODEL	TYPE	HEIGHT	POSITION AZ	EL	WEIGHT (NET)	ANTENNA MAST	MOUNTING PIPE	NSN
AM-1	Mast	N/A	Fixed Increments	± 90 15° 31.3 kg	49 lbs. (8.9 to 11.4 cm)	2.875" to 4.5" (7.3 to 11.4 cm)	2.875" to 4.5" (7.3 to 11.4 cm)	5985-01-587-7470
HM-5	Tripod (84 to 122 cm)	33" to 48"	360	- 5 to + 95 27.2 kg	60 lbs.	3" (7.6 cm)	N/A	N/A

### Mounting Options

We have 2 versatile mounts available:

Our AM-1 is an adjustable mast mount with elevation tuning in 15 degree fixed increments. It's solidly constructed from hot-dip galvanized steel to endure the most extreme elements.

The HM-5 is a versatile tripod mount with the ability to adjust and align to any azimuth or elevation angle.



TACO Antenna's ongoing policy of continuing development may result in specification changes to its products.

## ELECTRICAL SPECIFICATIONS

MODEL	H-064A	H-084A NSN 5985-01-587-3790	H-084	H-104	H-124 NSN 5985-01-476-0720	H-065	H-085	H-105	
FREQUENCY RANGE (MHz)	225-400	225-400	240-320	240-320	240-320	300-520	300-520	300-520	
GAIN (dBic)	MAX.	11.9	12.8	13.1	13.4	15.0	12.3	13.2	13.5
	MIN.	8.5	8.8	10.1	10.2	11.0	10.2	10.3	10.5
AXIAL RATIO (dB)	1.17	1.13	1.13	1.1	1.08	1.17	1.13	1.1	
IMPEDANCE (Ω)	50	50	50	50	50	50	50	50	
POLARIZATION	Circular	Circular	Circular	Circular	Circular	Circular	Circular	Circular	
CROSS POL. REJECTION (dB)	20	20	20	20	20	20	20	20	
FRONT TO BACK RATIO (dB)	29.2	29.0	28.9	30.8	29.8	27.9	28.7	29.7	
VSWR	MAX.	1.5:1	1.6:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	
	TYPICAL	1.3	1.3	1.2	1.2	1.2	1.3	1.3	
HPBW (°)	48	52	46	41	41	43	40	37	
1ST SIDELobe SUPPRESSION (dB)	13.8	13.0	12.5	11.4	13.0	15.5	14.0	13.0	
*STD CONNECTOR	N Female	N Female	N Female	N Female	N Female	N Female	N Female	N Female	
MAX. INPUT POWER (W)	500	500	500	500	500	500	500	500	
OPERATING TEMPERATURE (°C)	-40 to +70	-40 to +70	-40 to +70	-40 to +70	-40 to +70	-40 to +70	-40 to +70	-40 to +70	
OPERATING TEMPERATURE (°F)	-40 to +158	-40 to +158	-40 to +158	-40 to +158	-40 to +158	-40 to +158	-40 to +158	-40 to +158	

## MECHANICAL SPECIFICATIONS

MODEL	H-064A	H-084A NSN 5985-01-587-3790	H-084	H-104	H-124 NSN 5985-01-476-0720	H-065	H-085	H-105
NUMBER OF OUTPUTS	1	1	1	1	1	1	1	1
NUMBER OF ELEM. (TURNS)	6	8	8	10	12	6	8	10
OVERALL LENGTH (in.)	84	103	112	134	155	68	84	97
HELICAL DIAMETER (in.)	11.85	11.85	13.43	13.43	13.43	9.0	9.0	9.0
GROUND PLANE DIAMETER (in.)	35	35	35	35	35	35	35	35
MOUNTING STUB LENGTH (in.)	23	23	23	23	23	23	23	23
STUB DIAMETER (in.)	2.87	2.87	2.87	2.87	2.87	2.87	2.87	2.87
ANTENNA WEIGHT (lbs.)	34	38	39	44	49	25	29	33
*TOTAL SHIPPING WEIGHT (lbs.)	124	146	164	199	235	94	114	134
<b>MOUNTING OPTIONS</b>								
TYPE	Mast/Tripod	Mast/Tripod	Mast/Tripod	Mast/Tripod	Mast/Tripod	Mast/Tripod	Mast/Tripod	Mast/Tripod
AZ. ADJUST	360 deg.	360 deg.	360 deg.	360 deg.	360 deg.	360 deg.	360 deg.	360 deg.
EL. ADJUST	90 deg.	90 deg.	90 deg.	90 deg.	90 deg.	90 deg.	90 deg.	90 deg.

\* Weights are approximate values

## WIND LOADING (ANTENNA ONLY)

MODEL	H-064A	H-084A NSN 5985-01-587-3790	H-084	H-104	H-124 NSN 5985-01-476-0720	H-065	H-085	H-105	
WIND AREA (sq. ft.)	(NO ICE)	2.05	2.17	2.5	3.13	3.75	1.07	1.43	1.79
	(1/2" RADIAL ICE)	4.7	4.9	5.64	7.05	8.46	2.42	3.23	4.04
WIND LOAD (ft.-lbs.)	*(NO ICE)	221	259	344	530	755	73	128	199
	** (1/2" RADIAL ICE)	145	169	223	344	491	48	83	129
SURVIVAL RATING: *** (NO ICE)	150 mph	150 mph	150 mph	150 mph	150 mph	150 mph	150 mph	150 mph	

\* Wind Speed = 100 MPH at sea level with One Hundred Percent Humidity at Seventy Degrees Fahrenheit.

\*\* Wind Speed = 50 MPH at sea level with One Hundred Percent Humidity at Zero Degrees Fahrenheit.

\*\*\* Maximum Wind Speed at sea level with One Hundred Percent Humidity at Seventy Degrees Fahrenheit. Safety Factor of 1.65 included.

Rain, salt-fog, sand, dust and fungus: to MIL-STD 810F

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### TACO ANTENNA

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