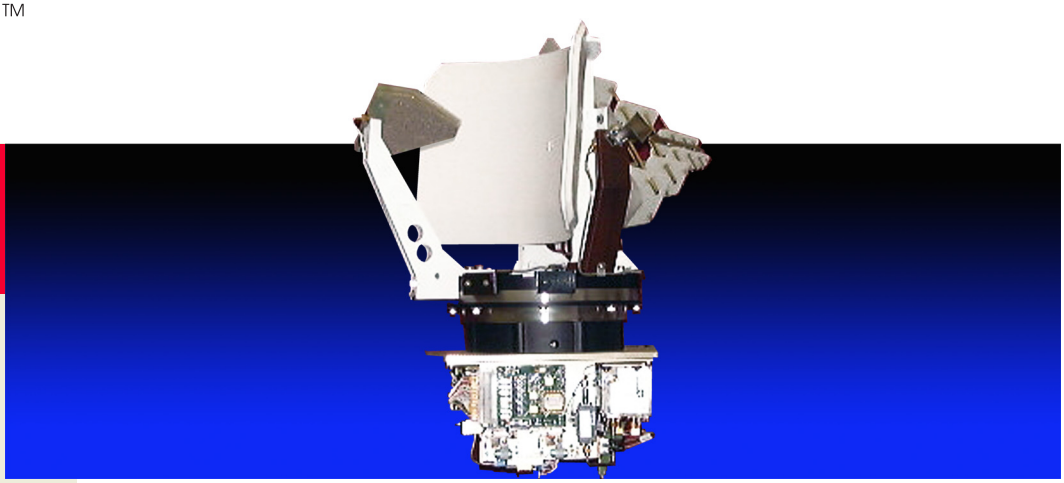
PRODUCT SPECIFICATIONS



Direction Finding (DF) Spinning Antenna System

The DF antenna system operates in either a full spin, variable spin, sector scan or manual modes, providing versatility and adaptability to mission requirements.

The ASC Signal spinning DF antenna system is a compact, lightweight DF antenna designed for mobile, ship borne and airborne applications. Frequency coverage is from 0.5 to 0.18 GHz with an extended band version up to 40 GHz available. All antennas are slant linear polarized.

The DF antenna system operates in either a full spin, variable spin, sector scan or manual modes, providing versatility and adaptability to mission requirements. The rugged construction and flexible configuration allows for applications on ground-based, ship board or airborne platforms.

The directional antenna assembly is comprised of a 0.5 to 2 GHz log periodic dipole array, 2 to 18 GHz shaped reflector with a log periodic dipole feed, and in the case of extended band, two horn antennas covering the 18 to 26 GHz and 26 to 40 GHz frequency ranges. An optional omni-directional antenna mounts on top of the spinning DF Antenna radome.

The direct-drive pedestal design provides high reliability by minimizing the number of moving parts.

A single channel RF rotary joint connecting radio frequency signals is mounted on the rotator center line. The pedestal can be designed to accommodate customer furnished RF distribution circuitry and millimeter down converters.

The system comes complete with a custom designed, full function antenna control unit mounted in a half rack ATR chassis with IEEE-488, RS-422 or RS-232 serial communication modes.

For improved environmental protection, both the DF spinning and omni-directional antennas are radome enclosed.

Antenna Features

- Compact Package
- Spin, Sector and Point Modes
- ± 0.2° Accuracy & 0.1° Pointing Resolution
- Rugged and Field Tested
- Multi-platform Applications
- DC Brushless Motors & No Slip Ring Assembly
- RS-422 Controlled
- Radome Enclosed for Protection
- Optional Omni Antenna

SPECIFICATIONS

Direction Finding (DF) Spinning Antenna System

DF Spinning Antenna

Frequency .... 0.5 to 2.0 GHz Low Band

Range .... 2.0 to 18.0 GHz High Band
1.8 to 40.0 GHz Extended Band

Polarization ... 45 Degrees, Slant Linear

Antenna Gain .. *Frequency (GHz) | Minimum (dBi) | Typical (dBi)

*Frequency (GHz)	Minimum (dBi)	Typical (dBi)
0.5 to 2	4.0	6.5
2	8.0	10.5
4	12.0	14.5
8	15.0	16.5
12	17.0	19.0
18	19.0	21.0
18 to 26	12.5	15.0
26 to 40	12.5	17.0

Azimuth ..... Frequency (GHz) | Maximum (Degree) | Typical (Degree)

Frequency (GHz)	Maximum (Degree)	Typical (Degree)
0.5 to 2	85.0	72.0
2	24.0	20.0
4	12.0	10.5
8	6.0	5.5
12	4.0	3.3
18	3.0	2.4
18 to 26	30.0	20.0
26 to 40	35.0	25.0

Elevation ..... 15° Minimum

Beamwidth .... (-5° to 10° Relative to Horizon)

Azimuth ..... Frequency (GHz) | Degrees

Frequency (GHz)	Degrees
0.5 to 2	±4.0
2 to 12	±1.5
12 to 18	±1.0
18 to 40	±3.0

VSWR ..... < 3.5:1 (Measured at Antenna Connectors)

Spin Rate/
DF Search ..... 0 to 200 rpm Selectable

Sector ..... > 30° Sector 1° - 60°/Sec

Scan Rate ..... < 30° Sector 2 x Sector Width °/Sec

Size..... 19.5 in Diameter x 17.5 High

Weight ..... 40 lb

** Measured at Antenna Elements*

Omnidirectional Antenna

Frequency .... 0.5 to 8.0 GHz Low Band

Range ..... 8.0 to 18.0 GHz High Band
18.0 to 40.0 GHz Extended Band

Polarization ... Slant Linear

Elevation ..... 25° Typical

Beamwidth ... 12° Minimum at 3 dB Points

Deviation from Omni ... ± 1 dB Typical
± 4 dB Maximum

Antenna Gain .. *Frequency (GHz) | Minimum (dBi) | Typical (dBi)

*Frequency (GHz)	Minimum (dBi)	Typical (dBi)
0.5 to 0.6	-10	-7
0.6 to 0.75	-7	-4.4
0.75 to 1.0	-5	-1
1.0 to 1.5	-4	+1.3
1.5 to 2.0	-2	+1
2.0 to 8.0	0	+4
8.0 to 18.0	-4	0
18.0 to 40.0	-4	0

VSWR ..... 0.5 to 0.85 GHz < 6:1
0.85 to 18.0 GHz < 3.5:1
18.0 to 40.0 GHz < 3.5:1

Size ..... 19 in Diameter x 15 in High

Weight ..... 18 lb

Antenna Controller

Dimensions
(Nominal) .... 5 in x 8 in x 22 in

Weight ..... 18 lb

Input Power ... 110/220 vac ± 10% 50/60/400 Hz, One Phase

Modes ..... Standby, Designate, Scan, Spin, Variable Spin, Halt, Resume

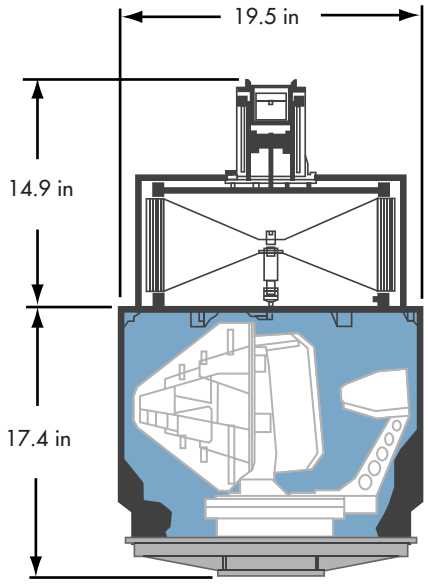
Environmental

Altitude ..... Up to 50,000 Feet

Temperature .. Operational -20° to 50°C
Storage -40° to 70°C

Humidity ..... 0 to 95%

Rain, Sand,
Dust, Vibration
and Shock .... Designed to Meet the Intent of MIL-STD-810



ISO 9001 AV AIB VINCOTTE CERTIFIED FIRM

Call today for pricing and interface details for your application. ASC Signal also supplies custom design, system integration, field installation, and test services.

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