

Exhibit # 9B**TABLE 4: Antenna Location**

#	Location	Latitude	Longitude	Ground Height (m)	Antenna Height Above MSL (m)	Distance to A/C Landing Area (km)	Mounting Structure
Receive/Transmit R/T, 1030 MHz signal							
1	EUGENE ISLAND 189	28 44.884 N	91 22.090 W	0	69.02	helipad on oil platform	Mounted on existing Flare Stack Tower below top of tower
2	EUGENE ISLAND 224	28 34.925 N	91 46.059 W	0	47.07	helipad on oil platform	Mounted on mast that extends above platform by
3	EUGENE ISLAND 51	29 14.197 N	91 41.037 W	0	73.06	helipad on oil platform	Mounted on existing Comm Tower with Obstruction lights
4	PECAN ISLAND	29 37.637 N	92 22.407 W	1.83	65.97	9.66 km from Abbeville	Mounted on existing Comm Tower with Obstruction lights
5	VERMILION BAY	29.40.250 N	91.54.850 W	0	45.72		Mounted on existing Comm Tower with Obstruction light
6	SHIP SHOAL 300	28 14.530 N	91 07.570 W	0	44.63	helipad on oil platform	Mounted on mast on existing structure approximately above helipad. Obstruction lights to be placed at top of antenna.
7	SOUTH MARSH ISLAND 174	28 05.166 N	91 52.522 W	0	50.73	helipad on oil platform	Mounted on existing Flare Stack Tower below top of tower
8	SOUTH MARSH ISLAND 275	29 04.777 N	92 08.095 W	0	46.16	helipad on oil platform	Mounted on pole approximately 2.4 meters above helipad. Obstruction lights to be placed at top of antenna.
10	VERMILLION 178	28 52.681 N	92 28.629 W	0	50.75	helipad on oil platform	Mounted on existing Flare Stack Tower below top of tower
11	VERMILLION 315	28 17.616 N	92 17.611 W	0	40.06	helipad on oil platform	Mounted on pole or small tower.

Table 4. Antenna Locations (Cont.)

#	Location	Latitude	Longitude	Ground Height (m)	Antenna Height Above MSL (m)	Distance to A/C Landing Area (km)	Mounting Structure
Reference Transponder, 1090 MHz signal							
1	EUGENE ISLAND 296	28 20.613 N	91 32.294 W	0	47.68	helipad on oil platform	Mounted on existing Comm Tower with Obstruction lights
2	PERRY	29 55.313 N	92 11.628 W	17.37	78.16	12.87 km from LFT	Mounted on existing Comm Tower with Obstruction lights
3	SOUTH MARSH ISLAND 217	29 26.488 N	92 03.664 W	0	66.58	helipad on oil platform	Mounted on existing Comm Tower with Obstruction lights
4	SOUTH MARSH ISLAND 58	28 40.432 N	92 05.729 W	0	72.06	helipad on oil platform	Mounted on existing Comm Tower with Obstruction lights
5	NEW IBERIA	30.02.080 N	91.47.560 W	3.05	64.01		Mounted on existing Comm Tower with Obstruction light
6	EUGENE ISLAND 158	28.48.850 N	91.44.332 W	0	51.82	0.02286 km to helipad on oil platform	Mounted on existing Comm Tower with Obstruction light
7	EUGENE ISLAND 296	28.20.613 N	91.32.294 W	0	45.72	0.039624 km to helipad on oil platform	Mounted on existing Comm Tower with Obstruction light

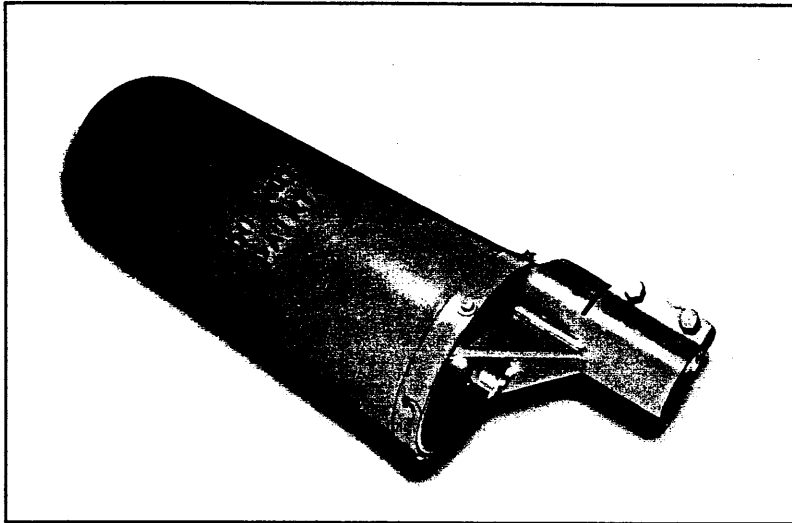
South Marsh Is. 130B 28 17.901 N 92 03.723 W



Antenna Associates Inc.

MICROWAVE ANTENNA SOLUTIONS

AS-177B/UPX ANTENNA



The AS-177B/UPX is a rugged sea/land based IFF/SIF omnidirectional antenna. This unit is utilized either as a stand alone antenna or in conjunction with a directional IFF antenna.

In the stand alone scenario the AS-177B/UPX antenna is used as a transponder/IFF antenna.

When used in conjunction with a directional IFF antenna, the AS-177B/UPX provides the directional antenna with side lobe suppression minimizing false targets.

The AS-177B/UPX antenna is a simple, rugged, low cost antenna that has been used extensively around the world.

FEATURES

- Omnidirectional Azimuth Pattern
- U.S. Navy Approved
- Rugged, Low Cost Construction
- Integrated Filter

AS-177B/UPX ANTENNA CHARACTERISTICS

ELECTRICAL:

Frequency band 1030 $\pm$ 2 & 1090 $\pm$ 2 MHz
Polarization Vertical
Gain Sum 2.8 dBi Min.
Sum Azimuth B.W. Omnidirectional
Sum Elevation B.W. 47.0 deg. Nominal
VSWR Sum
 1030 MHz 1.42 : 1.0 Maximum
 1090 MHz 1.42 : 1.0 Maximum
Power Rating 5 kW Peak
..... 50 W Average

PHYSICAL:

Weight 7 lbs. (3.17 kg)
Height 20.1 in (51.12 cm)
Depth 6.5 in (16.51 cm)

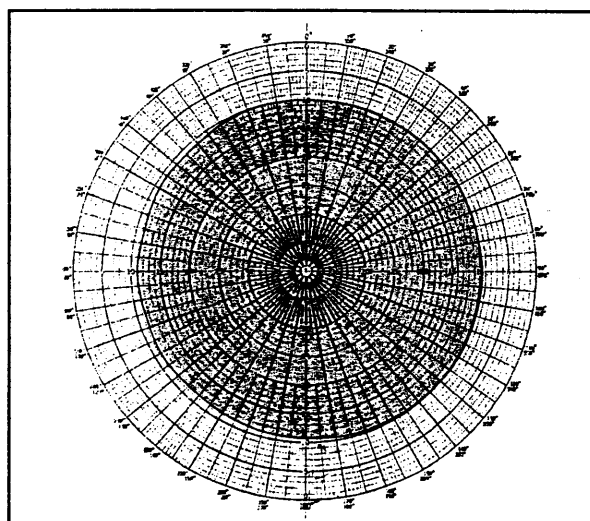
ENVIRONMENTAL

Temperature Hi/Low 125°C to -40°C

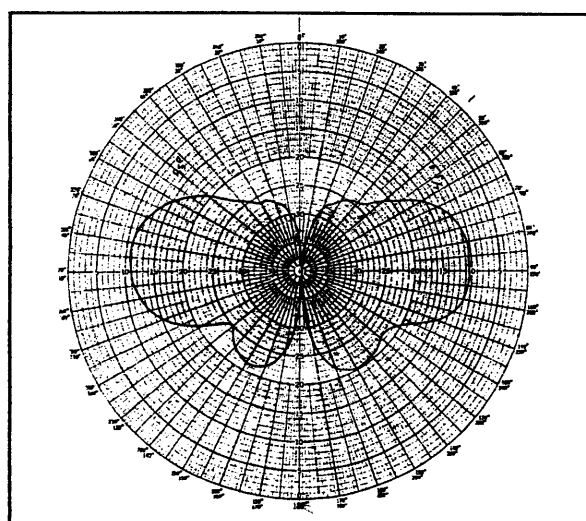
TRADITIONAL MOUNTING Mast Mount (Circular)

NATIONAL STOCK NUMBER (NSN): 5985-00-470-5364

ANTENNA PATTERNS:



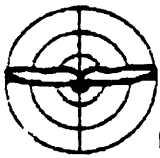
Azimuth Radiation Pattern



Elevation Radiation Pattern

Antenna Associates Inc.

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dB Systems Inc

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Fax #		Fax #	

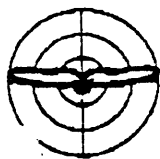
5100A

ANTENNA TYPE DBS 5100A **SECTION 3** **SPECIFICATIONS/CHARACTERISTICS**

3-1 SPECIFICATIONS/CHARACTERISTICS. The following pages contain specifications/characteristics of the type dBs 5100A DME antenna. Installation requirements are found throughout the handbook, sections 3 and 4.

PERFORMANCE CHARACTERISTICS:

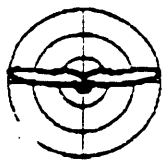
Antenna Parameter	Antenna Performance
1. Type	Omni-directional
2. Circularity	± 1 dB max on horizon
3. Frequency range	960 through 1215 MHz (no adjustments or tuning required)
4. Array	10 radiator assy's (77.8" tall)
5. Polarization	Vertically polarized
6. Gain, main beam	8dB/iso, minimum
7. Gain, horizon	6 dB/iso, minimum
8. Main beam elevation location	3° ± 1° above horizon
9. Slope (Vicinity of horizon)	1 dB/° min
10. Power Handling capability	up to at least 5 kW peak RF power at 3% duty cycle
11. Impedance	50 ohm nominal
12. VSWR	not greater than 2:1 (960-1215 MHz) measured at end of low loss cable not exceeding 5 feet in length.



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TM 5100A

Antenna Parameter (Cont)	Antenna Performance (Cont)
13. Vertical field pattern	The radiation pattern of the antenna in the vertical plane has a lobe of energy not less than 6 degrees wide at the half-power points. The power gain at angles between 10 and 50 degrees below the horizon shall be lower than the power gain at the peak of the major lobe above the horizon by at least 12 dB. The power gain at angles between 6 and 40 degrees above the horizon shall not pass under a straight line joining the points of co-ordinates (+6°, -15 dB) and (+40°, -25 dB) with values referenced to the peak of the major lobe above the horizon.
14. Size	77 13/16" long, 10 radiator assemblies (driven elements) plus a choke assembly at each end, 3 1/4" OD radome. Has top cap and base flange. See 1/2 scale drawing, Figure 5-8.
15. Weight	21 lbs. (excluding obstruction light and mounting fixtures and other optional items).
16. Physical design	A metal tube, 1.5" OD x 1.43" ID (.040" wall thickness) runs through center of antenna for full length. RF transmission line assembly and obstruction light power lines are located within this tube. Also used as lightning down conductor. See Figure 5-8.
17. Weather proofing	Entire Antenna, including all cable connectors is weather proofed such that removal /replacement of radome is possible without sealing compounds.



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TM 5100A

Antenna Parameter (Cont)	Antenna Performance (Cont)
18. Antenna mounting	The configuration of the antenna base is such that the antenna can be mounted directly or indirectly through use of optional adapter (s). See Figure 5-8.
19. Wind loading	Withstands without damage 100 mile per hour gusts.
20. Monitor ports	Two coupling ports for monitoring the signal radiated by the antenna. Located within the radome. 50 ohm nominal impedance. Probe output level is 25 dB $\pm$ 1 dB (for J2 and J3) below power level applied to main RF input connector.
21. Obstruction light (s)	Optional dual, red lamp obstruction light fixture. Connector is MS-3112E8-3P, 13 1/2"H x 12"W x 4"D 5.3 lbs.
22. Connectors RF	Type N Female, 3 each.
23. Pipe adapter	Solid cast aluminum part (A356-T6). Painted white. Adapts 4" OD pipe to antenna base. 12"H x 8" greatest dia., 8.3lbs., excluding cover, stainless steel cover weight 1.5 lbs.