


REV. B	REVISIONS															
	REV.	DESCRIPTION	APPROVED	DATE												
	-	RELEASED PER ERN SCD-477	B. SHEFFER	07/11/08												
	A	REVISED PER ECO 6801	R. SCOTT	07/15/18												
SH 1	B	REVISED PER ECO 7136	R. SCOTT	07/24/19												
950962																
DWG. NO.																
<table><tr><th>SELEX ES PART NO.</th><th>MFG.</th><th>MFG. PART NO.</th></tr><tr><td>950962-0000</td><td>DB SYSTEMS</td><td>610300-100</td></tr><tr><td>950962-0001</td><td>DB SYSTEMS</td><td>610300-105</td></tr><tr><td>950962-0002</td><td>DB SYSTEMS</td><td>610300-121</td></tr></table>					SELEX ES PART NO.	MFG.	MFG. PART NO.	950962-0000	DB SYSTEMS	610300-100	950962-0001	DB SYSTEMS	610300-105	950962-0002	DB SYSTEMS	610300-121
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950962-0000	DB SYSTEMS	610300-100														
950962-0001	DB SYSTEMS	610300-105														
950962-0002	DB SYSTEMS	610300-121														
VENDOR(S): NAME: DB SYSTEMS WEBSITE: www.dbsant.com																
SPECIFICATION CONTROL DRAWING																
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CONTRACT NO.		 Selex ES, Inc. a Leonardo Company 11300 W. 89 <sup>th</sup> St. Overland Park, KS 66214														
APPROVALS		DATE	ANTENNA-DBS 610 OMNI-DIRECTIONAL													
DRAWN G. DUFFMAN		07/11/08														
CHECKED R. SCOTT		07/14/08														
APPROVED B. SHEFFER		07/11/08	DWG. NO. 950962	REV. B												
FSCM NO. 64415		SIZE A	SHEET 1 OF 7													

**ANTENNA TYPE dBs 610  
SPECIFICATIONS/CHARACTERISTICS**

<b>PERFORMANCE CHARACTERISTICS</b>	
<b>Antenna Parameter</b>	<b>Antenna Performance</b>
1. Type	Omni-directional
2. Circularity	$\pm 2$ dB max on horizon
3. Frequency range	960 through 1215 MHz (no adjustments or tuning required)
4. Array	4 radiator assy's (35" tall)
5. Polarization	Vertically polarized
6. Gain, main beam	6 dB/iso, minimum (see sheets 3, 4)
7. Gain, horizon	3 dB/iso, minimum (see sheets 3, 4)
8. Main beam elevation location	10° nominal above horizon
9. Slope (Vicinity of horizon)	0.35 dB/° nominal
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.
13. Vertical field pattern	The radiation pattern of the antenna in the vertical plane has a lobe of energy not less than 20 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 8 dB. The power gain at angles between 6 and 30 degrees above the horizon shall not pass under a straight line joining the points of co-ordinates (+6°, -15 dB) and (+30°, -25 dB) with values referenced to the peak of the major lobe above the horizon.
14. Size	36" long, 4 radiator assemblies (driven elements), 3 1/4" OD radome. Has top cap and base flange. (see sheets 5 – 7).
15. Weight	12 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 sheets 5 – 7).
17. Weather proofing	Entire Antenna, including all cable connectors is weather proofed such that removal /replacement of radome is possible without sealing compounds. Optional marine upgrade for harsh environments such as salt water,
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).
19. Wind loading	Withstands without damage 100 mile per hour gusts.
20. Monitor ports	Two optional coupling ports for monitoring the signal radiated by the antenna. Located within the radome. 50 ohm nominal impedance. Probe output level is 25 dB $\pm$ 1.5 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.
23. Environmental	FAA-E-2754, FAA-E-2100, exceeds UK CAA specification. Temperature: -50°C to +70°C Humidity: up to 100%

DRAWN G. DUFFMAN

DATE 07/11/08

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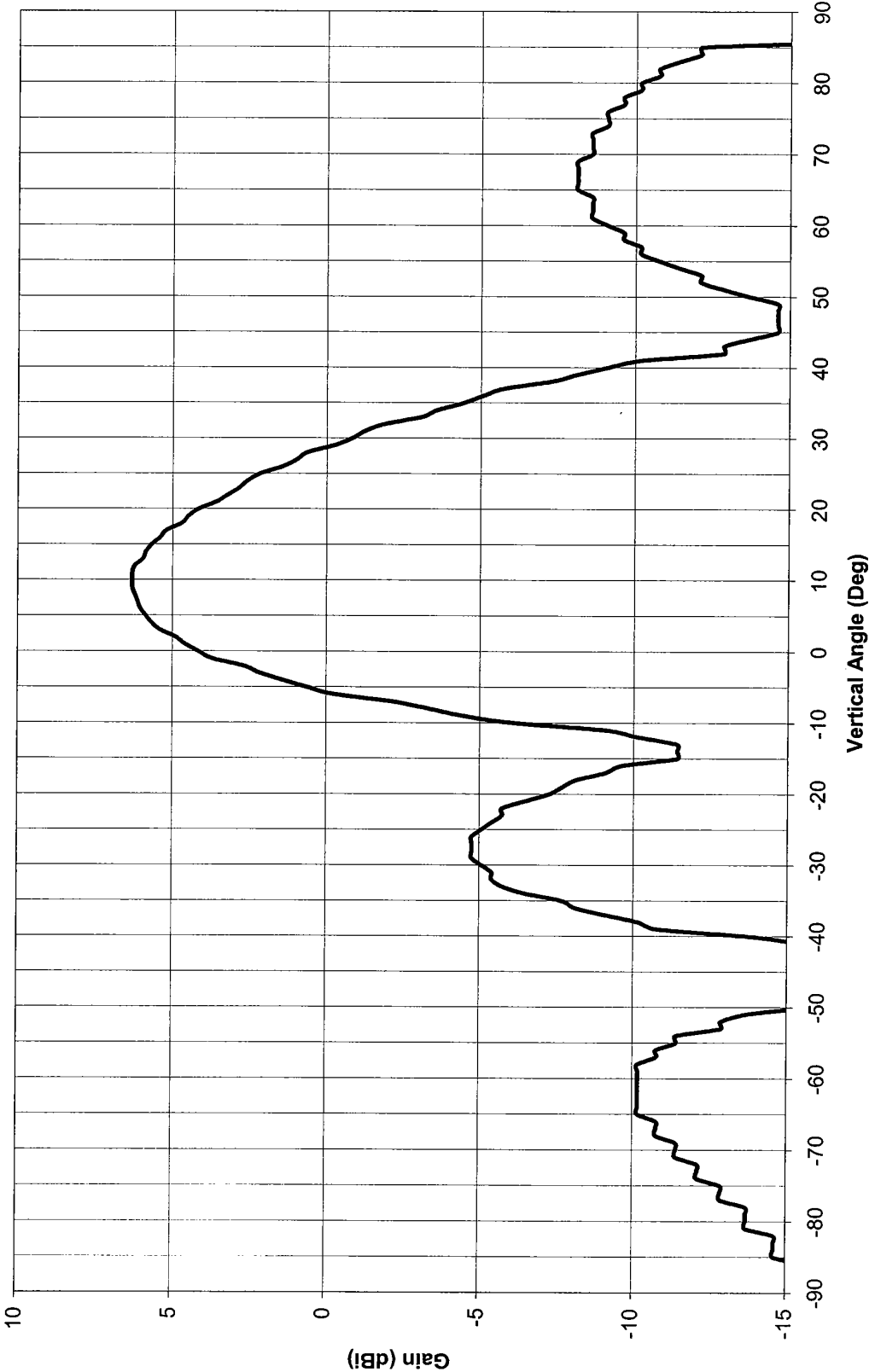
FSCM NO.

**64415**SIZE **A**

SHEET 2 OF 7

950962-0000 and -0001

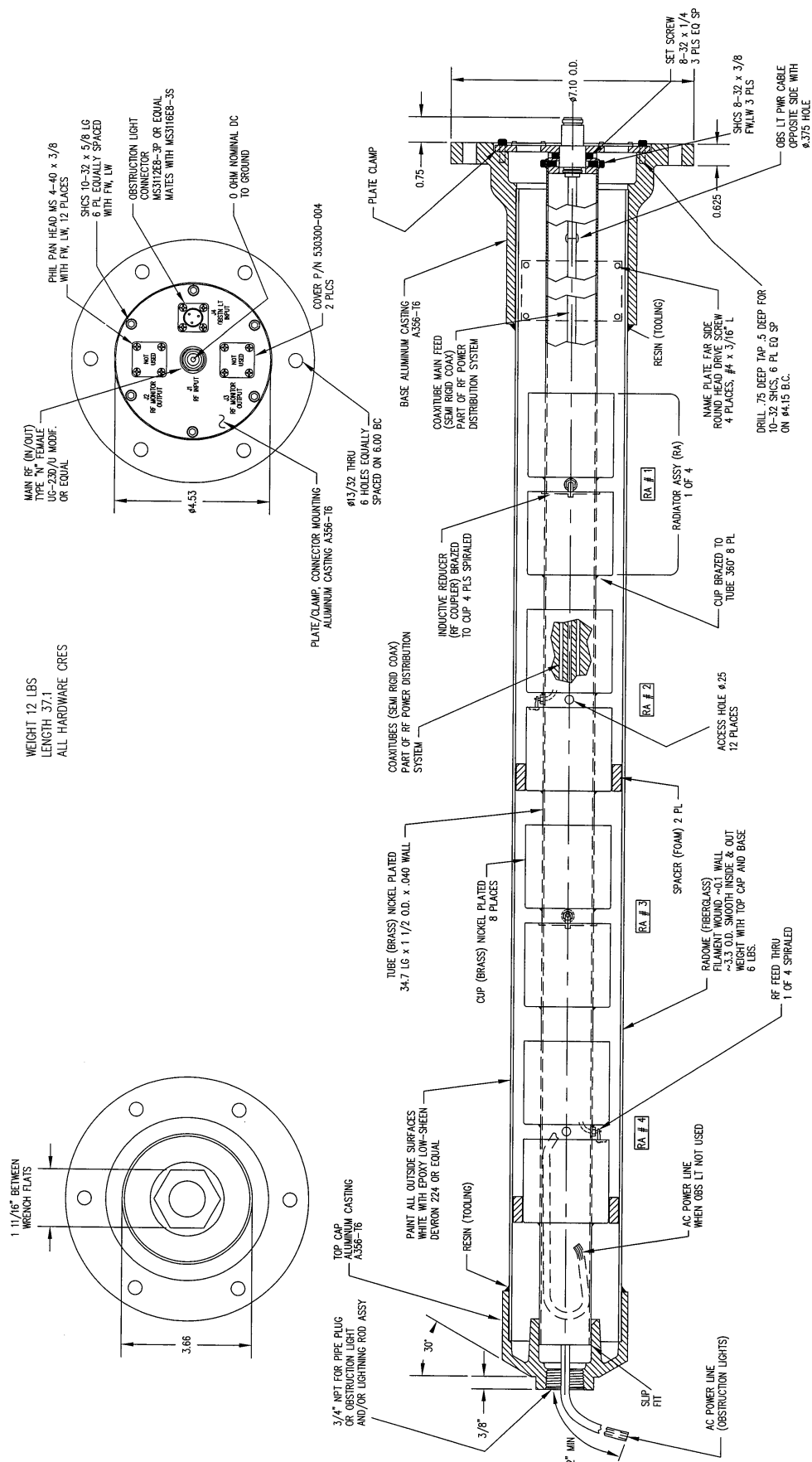
dBs 610 Vertical Pattern, 1090 MHz



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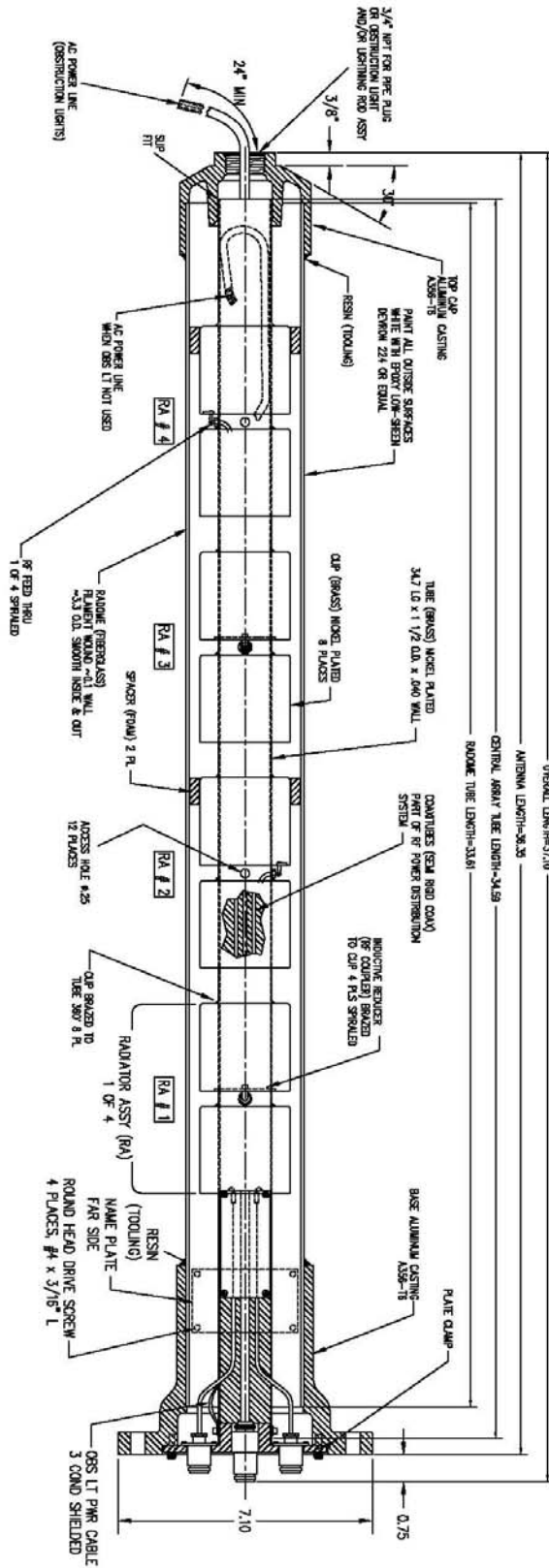
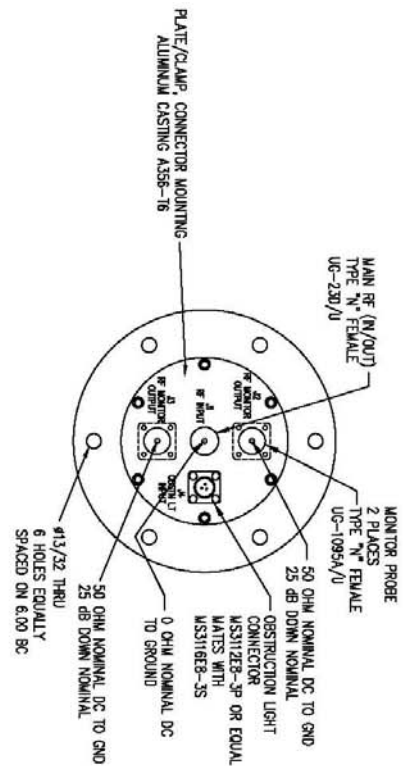
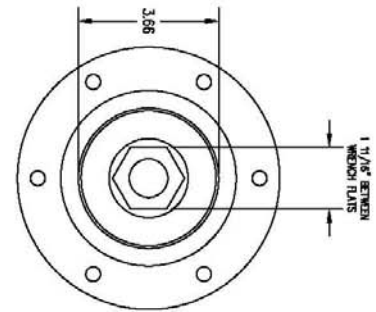


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950962-0001



WEIGHT 12 LBS  
LENGTH 37.1  
ALL HARDWARE CRES

PATENTS PENDING  
ANTENNA, OMNI-DIRECTIONAL  
DISTANCE MEASURING EQUIPMENT  
MODEL DBS 610  
DBS PART NUMBER, 01MLN8-610300-105  
FIGURE 5-8  
5-9  
FILE NAME: DBS-025.DWG

REV. B

SH 6

DWG. NO. 950962

DRAWN G. DUFFMAN

DATE 07/11/08

DWG. NO.

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REV. B

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SIZE A

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