

COMPARISON BETWEEN
ALUMINIUM & FRP (FIBRE GLASS) DISH ANTENNA

Sl. No.	<u>ITEM</u>	<u>FIBRE GLASS (FRP)</u>	<u>ALUMINIUM</u>
01	TENSILE Strength	0.17/1.50 = 11.3 kg/mm.	0.28/2.70 = 10.40 kg/mm.
02	Dish WEIGHT	10% no probability of Roof Damage	65% probability of Roof Cracking
03	SIZE	Smaller Dish, Higher Gain for Same Reception	Larger Dish, Lower Gain for Same Reception
04	MAINTENANCE	free from Corrosion. average Maintenance (soap wash) once a Year	it Corrodes Frequent Maintenance – Anti-Fouling Paint required, Material Cost is high
05	TEMPERATURE Effect	Temperature Effect is nil in Reception	Shape Deforms due to Linear Expansion / Contraction of Al., so Reception becomes poor
06	HAIL-STORM	no Deformity of structure	may Deform the Structure even make Holes in the Dish Surface
07	THUNDERBOLT Effect	Nil, Fiber-Glass is highly bad Conductor of Electricity	Aluminum is highly good Conductor of Electricity, may Destroy you TV set and Others
08	ROUGHNESS of Surface	when Launched: 0.1 mm. Curvature Error Ratio is very less, so Gain is high	when Launched : 5.0 mm Curvature Error Ratio is high, so Gain is low
09	Freedom of Dish (Parabolic Shape)	virtually any Complex surface can Create by FRP, so ideal Parabolic Shape can obtain	freedom is limited due to Construction Method and Characteristic of Material
10	Dish ASSEMBLY	much simpler, Completely One-piece	Complicated, assembled with Ribs, Frames, Nets, Nuts-Bolts etc., which more Complicated
11	OPERATING	very easy to Install / Reinstall the Dish, no Deformation of Shape by Rigorous use of Transportation / Reinstallation	comparatively not so Easy, the Shape may Deform due to the same
12	DIRECTIVITY	better Directivity, so lesser Terrestrial Interference	lesser Directivity so higher Terrestrial Interference
13	COST	slightly High- for instant, but for Long-term it is Cheaper	Cheaper- for instant, but for Long-Term it is Higher
14	RELIABILITY	Overall – RELIABILITY is HIGH	Overall–RELIABILITY is LOW