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# TSS

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Marketed and Sold through



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**TSS – Supplier of  
lightweight, high-tech materials**

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**Raytheon State-of-the-art  
manufacturing facility  
located in Falls Church, VA**



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## Lightweight Cable Braid

Designed and Manufactured by

**Raytheon IIS**

Patent 5,414,211



Developed as part of U-2 prime mission  
payload weight savings program



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# Termination and Environment



## Standard Termination

Aluminum braid terminates exactly the same as copper braid, all tooling and techniques are completely transferrable

Easy in-field maintenance "Cone" braid termination retains backshell continuity while allowing easy on-pin maintenance

## Salt Fog results

Laboratory harsh environmental conditions testing has been conducted testing to MIL-STD-810C Method 509.1 Salt Fog has been conducted for a 7 day period.

Aluminum braid exhibited minimal effects to salt fog exposure Copper braid exhibited dramatic adverse effects Shielding degradation associated with the salt fog test was 10.0 dB for copper vs 4.2 dB for aluminum

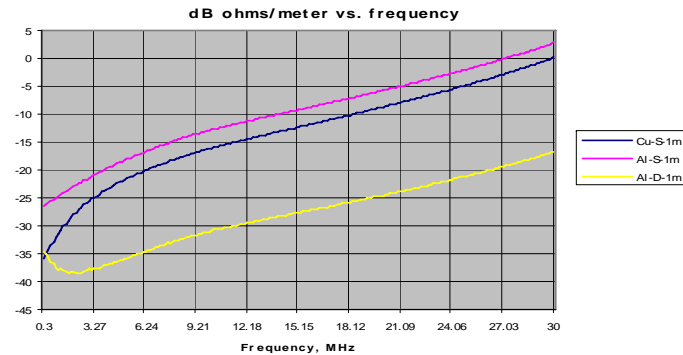


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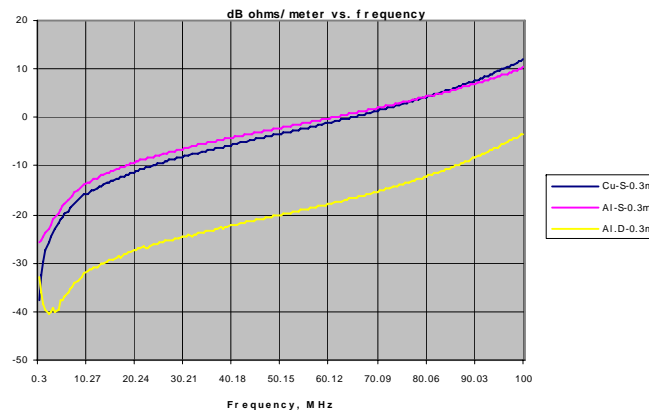
# Performance

Similar to Copper at one third the weight

Transfer Impedance (from 1 meter test sample);  
Al single layer (top); Cu single layer (middle); Al double layer (bottom)

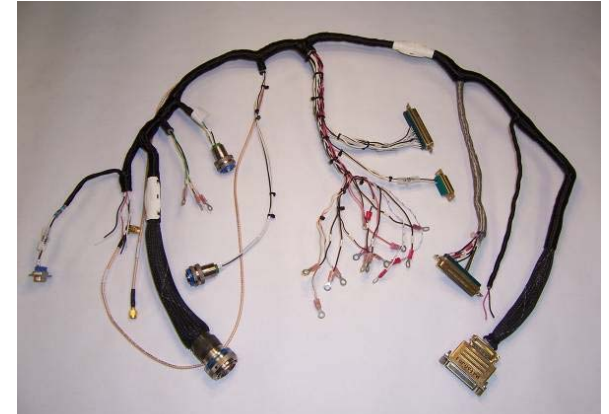


Shield Transfer Impedance (from 0.33m test sample)  
Al single layer (top); Cu single layer (middle); Al double layer (bottom)



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# Cable Harness Configuration



Lightweight braid easily meets complex cable bundle requirement

## Light Weight

- A single layer of the aluminum braid is 1/3 the weight of Copper
- Weight savings can be measured in hundreds of pounds in some applications



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