Vortex
Antenna Systems
www.vortexantennas.co.uk

SUPPLEMENT - Whirlwind Delta Loop - Top Wire Strain Relief Mechanism to Reduce Tension on the Horizontal Top Wire

With 'Delta Loop' antennas, one of the major weak points in any installation is that of the '**Top-Wire'**. If the antenna is located in an area which experiences high winds and adverse weather, then the top wire may break where it is soldered into the copper tube terminal. The wire itself will usually withstand the strain as it is stainless with a silver coating, but the tube terminal insert is the weak point and this is the area which normally fails first.

To reduce the risk of breakages around this point, Vortex have devised a fairly simple but novel approach to solving the issue. We loop the top wire back around itself using a thimble and duplex clip, both made from 316 Marine Grade stainless steel. The thimble is then held to the element by an insulated '**Mikalor**' stainless 'P' clamp, again made from 316 Marine grade steel. The antenna is then tuned with this mechanism in place.

The thimble acts to relieve most of the tension from the copper tube terminal and places the majority of the wire tension onto the thimble which of course is much stronger. This results in a failry simple but effective way of preventing failures.

Final versions to buyers include stainless '**Nyloc**' nylon insert lock nuts and washers. The nuts shown here are standard purely used during evaluation and setup at the factory.