A short guide for the solution of the LPDA antenna´s malfunctioning

Several Logarithmic-Periodic-Broadband Antenna´s malfunctioning are related to an incorrect usage of the equipment and can be solved by following the following simple suggestions.

**PROBLEM 1:** If the antenna’s elements have been mounted in a wrong way, e.g. after shipment, the VSWR of the antenna can be strongly affected, showing unexpected characteristics (peaks, differences with respect to the expected data, etc) as shown in the following plot.

![Plot showing VSWR vs Frequency for VULB 9163 with wrong and correct elements mounting](image1)

**SOLUTION:** We suggest to check the mounting of the elements and to be sure that they satisfy the mounting “zig-zag” scheme showed in the following figures (Left figure: side view, Right figure: front view).

![Correct and wrong mounting of LPDA antenna elements](image2)
PROBLEM 2: Unusual shapes of the VSWR can be caused when the antenna’s booms are short-circuited (for example by a conductive label), as shown in the following plot:

SOLUTION: Remove the conductive materials (aluminium or copper labels, etc.) between the two booms of the antenna.
**PROBLEM 3:** the antenna is showing receiving-problems.

**SOLUTION:** if the connection between the coaxial cable and feed-pin indicated by the green arrows in the following left figure is getting loose, they should be re-soldered, using a common solder with temperature between 350-400 °C. Pay attention not to damage or to overheat the cable. Another possible cause could be related to a loosening of the feed-pin screw. To solve this problem remove the round plastic cap on the boom and use the appropriate screwdriver to tighten the screw, as shown in the following right figure.

**SUGGESTION:** no force should be applied to the two booms of the antenna. If they are pressed together the tip parts move away and the connection may get damaged.