Wolf RF Systems
http://www.wolfrfsystems.com/
2415 Union Chapel Rd
Fort Wayne, IN 46845

K9AY Loop Antenna
AS-ALY-4 Trouble Shooting Guide

1) Disconnect at least one end of each loop from the relay box to measure the relay action without the loop shorting it out.

2) Connect an ohm meter to the ground terminal of the relay box and connect the other lead of the meter to the antenna terminal that corresponds to the direction switch (SE, NE, NW, SW) on the controller. It should only show a short to ground (through the balun windings) in the selected direction on the control box.

3) The opposite end of the loop connection (this will be SW terminal on the relay box, when the direction switch is set to NE, or NW when the SE direction is selected, etc.) should show the termination resistance. It will be between 330 to 680 ohms depending on the termination switch setting on the controller. You can rotate through the termination selection on the control box to insure that the termination resistance is changing.

4) Do this for all antenna directions. If all checks out, then the switching action of the controller, relay box and cable are connected, working correctly and the termination resistance circuits are OK as well.

Below are the voltages that appear on the connectors at either the control box or the outside relay box.

Note:	X denotes the supply voltage 0 denotes zero voltage

Direction Switching Matrix.
Pins 1-6 can be measured either on the control unit connector or at the relay box.

	SW	NW	NE	SE
6	0	0	0	0
5	0	0	0	0
4	X	X	X	X
3	0	0	0	0
2	0	X	0	X
1	X	X	0	0

Termination Selection Matrix with the direction selector in the SW position. Pins one and two control the direction and pins 3 – 5 control the termination resistance matrix.

	1	2	3	4	5	6	7	8
6	0	0	0	0	0	0	0	0
5	0	X	0	X	0	X	0	X
4	0	0	X	X	0	0	X	X
3	0	0	0	0	X	X	X	X
2	0	0	0	0	0	0	0	0
1	X	X	X	X	X	X	X	X