

## How to do a "Home Made Loop" (test loop):

If an Ohm meter is used across a loop unattached to a detector, it should read about 100ohms + or - 10% and none of the lead wires should read to the ground wire. Digital meters may just read 0.0 or no ohms. This does not mean the loop is 'bad'.

The fastest way to determine where to look if you are having a problem between the Sensor (loop) or a Detector (amplifier) is to replace the Sensor with a Home Made Loop (HML) or if available another Sensor/Detector.

To make a Home Made Loop you will just need about 30' of #14 or #16 AWG Stranded wire. Wind this up in a ring about 12" in diameter. Leave about 1' of lead cable to hook into the control box (to the amplifier). You can use tape to hold the ring together and remember to twist the lead wires going to the ring. This HML will work just like a regular loop sensor only will have limited range. The Detector should be able to use this HML to pick up a soda can or any metal at least 3" x 3" or bigger.

If this works correctly the problem is most likely with the Sensor (loop). If it does not then the problem would be in the Detector (commonly) or the Control Box (rarely). Most Detectors last at least up to 5 years. After that, they are prone to failures due to age, wear and surges. Loop Sensors normally last twice as long as the detectors. They have no moving parts or electronics in them to wear out. Most of these fail due to physical damage from impact, rubbing, or corrosion. 8 out of 10 times it is the cord itself that is damaged or worn. A properly working system should not skip on trucks/SUVs and should not activate when someone walks over it. Unless they are wearing steel toed shoes this has been known to activate a loops.

Sample of a Home Made Loop.



This was made by wrapping the wires around the outside bottom of a 5gal chemical bucket. Tapping the wires as the ring is pulled down off the bottom of the bucket will help keep the wires together. Notice that the lead wires are twisted. This is normally all that you need to test with.

## Other things to consider

Assuming the system checks out but still acts up from time to time, false activation might be from high surge(s) on the supply line. Voltage spikes can cause this problem and a simple surge suppressor on the incoming 110vac line may be needed. Most of the Goodlin Systems control boxes have suppressors on the circuit board. Radio Shack sells a MOV Surge Protector (Catalog #: 276-568) that can be used to suppress line spikes and can be hard wired right to the detector base or harness. As with any electrical units, make sure they have a proper ground to the ground terminal.