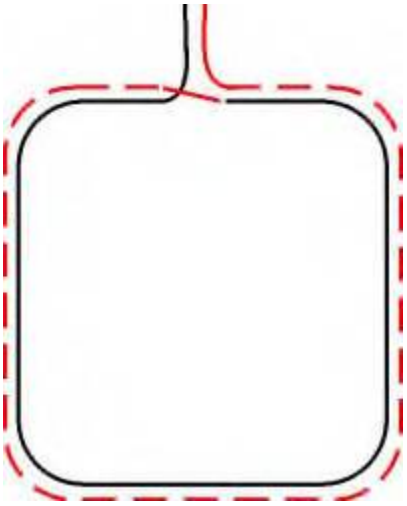
How to Make a Double-Wire (or 2 turn series) Induction Loop

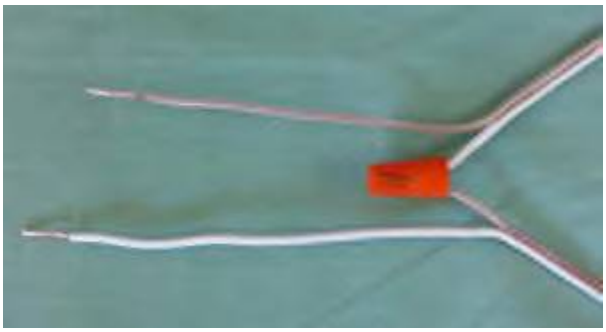


A double wire loop (also known as a “2 turn series loop”) is sometimes used to boost an induction loop system’s signal strength and/or optimize electrical impedance matching. Any parallel two conductor loudspeaker or lamp cord wire may be used unless plenum wiring is specified (do not use twisted wire). Check with the loop system manufacturer regarding the recommended wire gauge (thickness) based on the planned *total run* of wire (loop perimeter + distance to loop amplifier/driver).

Looking carefully at the wire, you'll notice that on one side the wire is smooth and on the other side, the wire is ribbed with the ribs running the length of the wire. Or, sometimes the two wires are color coded. You need to know this so that you can join the end of one wire to the beginning of the other wire, thereby creating the 2 turn series loop.

Please refer to the loop diagram (above). There I've shown it as a black wire (ribbed) and a broken red wire (smooth). With other wire products, you may have a black wire and a white wire, or a clear (or copper) wire and a white (or silver) wire. In any case the black/copper/clear/ribbed wires are considered the "hot" side and the white/white stripe/silver/smooth wire is the "ground" side.

1.Temporarily lay out the two conductor wire around the perimeter of area to be looped. Ideally, this should be at the approximate planned location for the loop wire. Split each end of the wire to separate the individual wires for a distance of a few feet.



2.At one end, cut the smooth (white or silver) wire about 3 inches from the split. At the other end, cut the ribbed (black or copper) wire also about 3 inches from the split.

3.Take about half an inch of insulation off the ends of each of the wires.

4.Twist together the ends of the 3 inch stubs and screw a wire nut on. (See connection photo). For portable applications, this makes it easy to connect and disconnect the loop whenever you set it up or move it. For permanent installations, it is best to twist together, solder and insulate the connection.

5. Connect the remaining two long "tails" to the loop amplifier/driver’s 1 Ohm output terminals and run a full test of the system before performing the final installation.