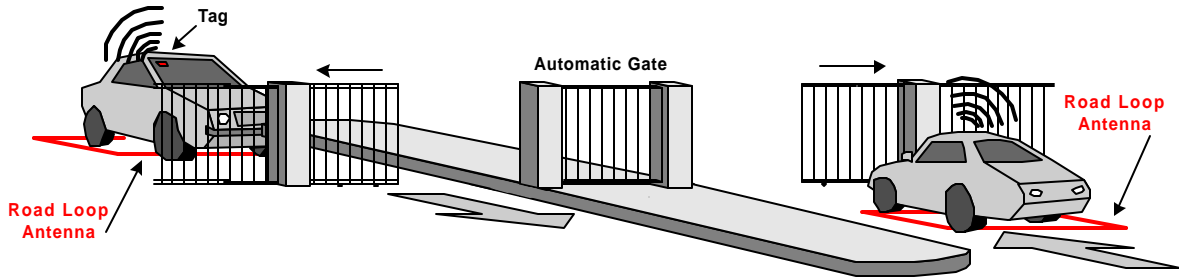




Road Loop Antenna

Installation Overview (Two Lane, Two Way)



1

Prerequisite Tasks

The following tasks need to be completed before proceeding with the Road Loop Antenna installation:

- If applicable, the gate operator or controller has been installed. If not, refer to the Original Equipment Manufacturer's (OEM) manuals.
- Ensure that there is no power-line interference, metal pipe or heavy rebar within 4 inches of where the loop antenna is to be mounted.



Check with all local inspection codes, including building, fire and electrical, to ensure compliance of the Road Loop Antenna installation.



To ensure proper system operation, **do not** substitute antenna kit components. Road Loop Antenna wire must be ordered in specific sizes.

Required Materials



Have the following materials on hand for the installation of the Road Loop Antenna

- Chalk for marking antenna placement
- concrete nails or duct tape for holding wire down during initial placement
- Multimeter for continuity check
- Inductance or LCR meter for measuring the inductance
- A saw for cutting the road surface
- Two 1/8" saw blades with spacer, either abrasive (for asphalt) or diamond (for concrete)
- A 3 1/4" x 3 1/4" x 4 1/2" triangular wood template for cutting corners
- Vacuum or compressed air for cleaning the cut
- A thin dowel for pressing the Road Loop antenna into the cut
- Road sealant - AXCESS recommends Bondo Flexible Embedding Sealer (P-606). 3-M's Detector Loop Sealant or Q-Seal sealant may also be used.



Before permanently installing the Road Loop Antenna, lay out and test the entire ActiveTag system.

2

Road Loop Layout

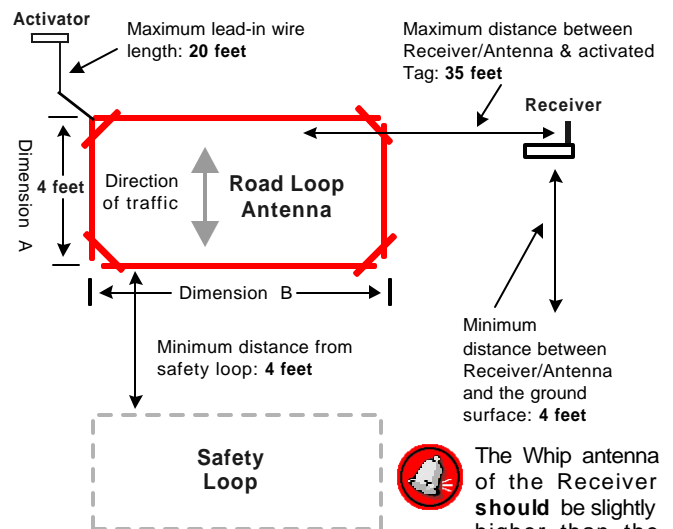
If there is a safety loop for the gate, **do not** use the safety loop's cut for the Road Loop Antenna. If the Road Loop Antenna and the safety loop are installed together, there will be interference and neither is likely to operate properly. **Place the loops at least four feet apart whenever possible.**



The long sides (**Dimension B**) will be **shorter** than the width of the road or lane.



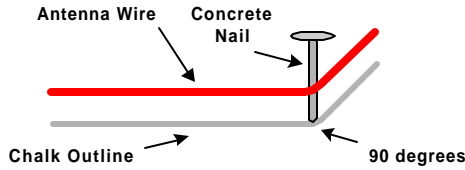
The short sides (**Dimension A**) of the road loop antenna should always measure **4 feet**.



The Whip antenna of the Receiver **should** be slightly higher than the highest tag

Road Loop Antenna

Mark the layout outline for the antenna. Use either chalk or drive concrete nails into the road surface to provide the proper rectangle shape for laying down the antenna wire. Ensure that the corners are 90 degrees.



3 Laying Down Road Loop Antenna

Step 1: Carefully lay out the wire around the pre-marked loop drawn on the roadway. Secure the wire with duct tape as you proceed.

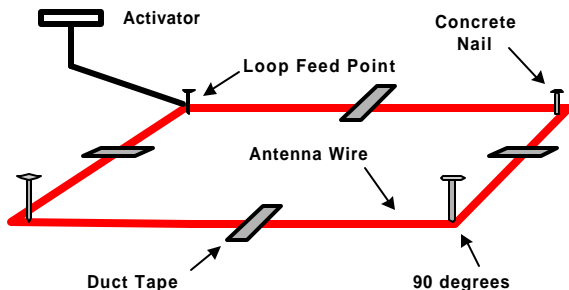
Do not allow the wires to twist.

Antenna Width (Dimension A)	Antenna Length (Dimension B)	Number of Wraps
4 Feet	36 Feet	2
4 Feet	34 Feet	2
4 Feet	32 Feet	2
4 Feet	30 Feet	2
4 Feet	28 Feet	2
4 Feet	26 Feet	3
4 Feet	24 Feet	3
4 Feet	22 Feet	3
4 Feet	20 Feet	3
4 Feet	18 Feet	3
4 Feet	16 Feet	3
4 Feet	14 Feet	4
4 Feet	12 Feet	4
4 Feet	10 Feet	4
4 Feet	8 Feet	4
4 Feet	6 Feet	4

More wraps than recommended will **not** produce more range; rather, it will degrade performance.

The total length of lead-in wire between the Road Loop and the Activator must not exceed **20 feet**. Keep twist in the wires to a minimum as you run them from the Road Loop to the Activator.

Step 2: At the loop feed point, begin to lay wire around the loop (using concrete nails to maintain the corners). Again, secure the loop to the surface with duct tape.

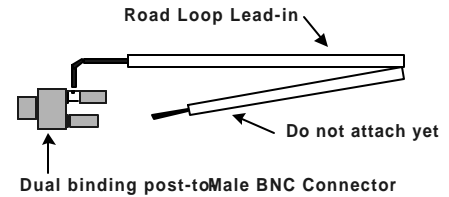


Step 3: When back to the feed point, continue around the loop to complete the appropriate number of wraps according to the chart above.

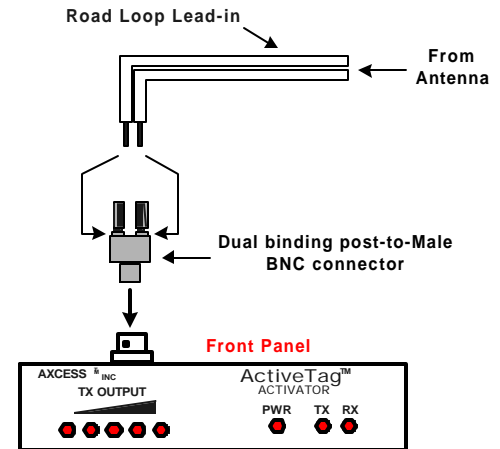
Step 4: After the correct number of wraps have been completed, continue to lead the wire back to the Activator. Again, keep twist to a minimum.

4 Connecting to the Activator

Step 1: Insert the end of the Road Loop wire at the Activator into one side of a binding post-to-BNC connector. Tighten the binding post terminal to secure the lead.



Step 2: Cut away the excess wire, trim and attach the other end of the Road Loop wire to the other half of the binding-post-to-BNC connector.

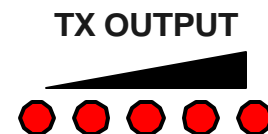


Step 3: Connect the BNC-end of the Road Loop wire to the BNC antenna connector on the Activator.

5 Ensuring Adequate Activation Field

Step 1: Cycle the power of the Activator in order for the antenna's auto-tune feature to function.

Step 2: Check the strength of the TX Output LEDs located on the front panel. A minimum of 4 lit LEDs is desired.



Step 3: Using an LED Test Tag, ensure that the activation field of the Road Loop extends adequately for desired coverage from the center of the Road Loop. Antennas with greater width (**Dimension B**) have larger fields.

Step 4: After ensuring proper operation, remove the wire loop and concrete nails to allow cutting the groove into the roadway.



Refer to the **Configuration Guide** for detailed placement and mounting instructions and options.