

## OVERVIEW

The fail safe plug-in loop detector allows the gate to stay open when vehicles are obstructing the gate path. The loop can be set to function as a Shadow Loop, an Interrupt Loop, or an Exit Loop. For use with CSW24V and CSL24V gate operators ONLY.

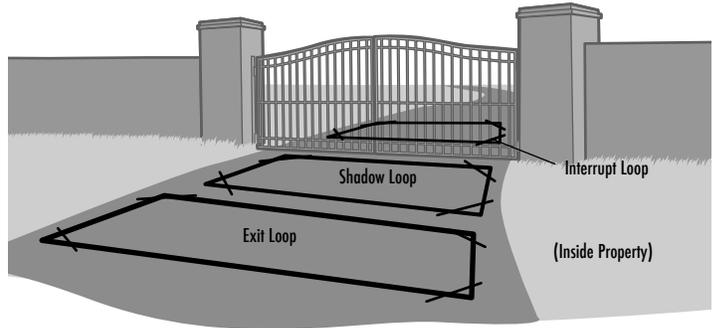
**SHADOW LOOP:** Positioned in the path of a swing gate and is active ONLY when the gate is in the open position. Only used in swing gate applications.

**INTERRUPT LOOP:** Positioned outside the property and when activated will open a closing gate.

**EXIT LOOP:** Positioned inside the property and when activated will open a closed gate.

### CAUTION

To prevent DAMAGE to circuit board, loop detectors and/or the gate operator, installation MUST be performed by a trained gate systems technician.



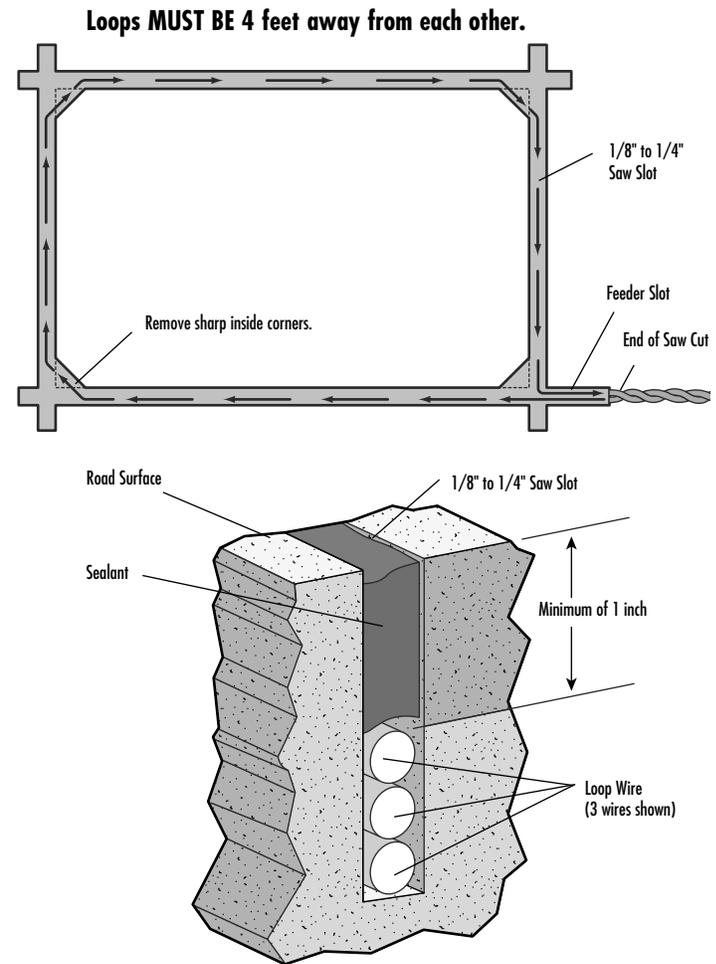
## INSTALLATION

The loop itself must be a continuous length of wire without any breaks or splices. The loop wire can be 14, 16, or 18 gauge stranded wire with either a cross-linked polyethylene (XLPE) or polyester insulation.

- 1** Mark the loop layout on the pavement. Remove sharp inside corners that can damage the loop wire insulation.
- 2** Determine the thickness of the pavement to ensure that the depth of the cut will not exceed the thickness of the pavement before attempting to cut the loop slots. Set the saw to cut a depth (typically 2-2.5 inches) that will ensure a minimum of 1 inch from the top of the loop wires to the pavement surface. The saw width must be larger than the diameter of the loop wire to avoid damage to the wire insulation when placed in the saw cut. Cut the loop, corner angles, and feeder slots. Remove all debris from the saw slot with compressed air. Check that the bottom of the cut is smooth and did not break through the thickness of the pavement.
- 3** Wrap the loop wire in the loop slot using a wooden stick or roller to insert the wire to the bottom of the saw slot until the desired number of turns are reached (Caution: do not use a sharp object). Each turn of wire must lay flat on top of the previous turn.

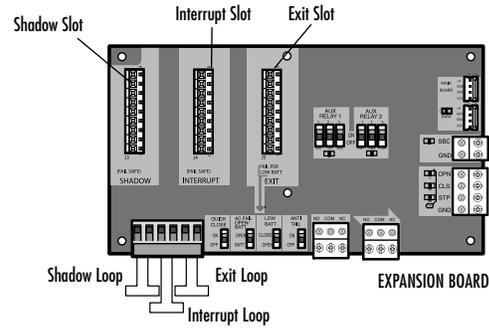
LOOP PERIMETER	NUMBER OF TURNS
10-13 feet	4
14-26 feet	3
27-80 feet	2
81 feet and up	1

- 4** The wire must be twisted a minimum of 6 turns per foot from the end of the feeder slot to the expansion board to minimize noise or interference. If a splice is required in the feeder cable, solder each splice and protect with a moisture proof seal.
- 5** Apply the sealant. The sealant selected should have good adhering properties with similar contraction and expansion characteristics as the pavement material.



## WIRING

- 1 Plug the loop detector into the desired slot (Shadow, Interrupt, or Exit) on the expansion board of the operator. **NOTE:** If only LOOPDETLM loop detectors are used, manual frequency adjustments are not required and crosstalk is eliminated. If a LOOPDETLM is used in combination with other alternate loop detectors, then manual frequency adjustments may be required.
- 2 Insert the twisted wires from the loop into the corresponding terminal (Shadow, Interrupt, or Exit) on the expansion board of the operator. Polarity does not matter.



## OPERATION

BLUE LED	WHITE LED	EXPLANATION
1 Blink (every 10 seconds)	OFF	Normal Operation
2 Blinks	Rapid Blinks (active fault) or OFF	Open Loop (see TROUBLESHOOTING)
3 Blinks	Rapid Blinks (active fault) or OFF	Shorted Loop (see TROUBLESHOOTING)
4 Blinks	Rapid Blinks (active fault)	Failed Authentication (see TROUBLESHOOTING)
OFF	2 Blinks	Successful Reset
OFF	Slow Blinks	Loop detector is in TEST or PROG mode
Solid	Solid	Active Loop

DIAL SETTINGS	EXPLANATION
TEST Mode	Used to test the loop detector
1-8	Determines the sensitivity setting for the loop detector: 1 is the lowest sensitivity (large vehicle) setting and 8 is the highest sensitivity (small vehicle). Default setting is 4.
PROG Mode	Used to change the frequency of the loop detector

### FREQUENCY

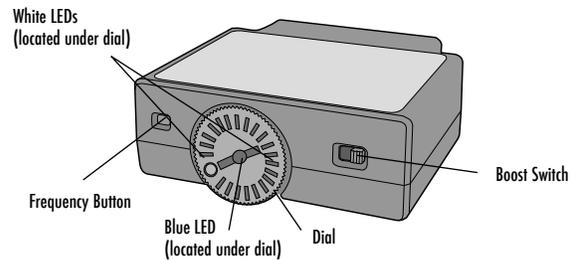
To change the frequency of the loop detector:

- 1 Turn the dial to PROG.
- 2 Press the frequency button to cycle through the 4 frequency settings. **NOTE:** The blue LED will blink to indicate the current frequency setting.

To reset frequency to factory default, hold the frequency button for 5 seconds.

### BOOST SWITCH

The boost switch will increase the sensitivity of the loop detector to detect high profile vehicles (such as semi trucks).



## TROUBLESHOOTING

### Open or Shorted Loop (2 and 3 Blink errors):

Test the loop detector (refer to TEST THE LOOP DETECTOR section). If the loop detector passes the test, this indicates the loop detector is working properly and there is an issue with the loop wiring.

### Failed Authentication (4 Blink error):

- Check the wire connecting the expansion board to the main board or
- Unplug the loop detector then plug it back into the same slot (clears all faults and keeps the current frequency settings, authenticates) or
- Unplug the loop detector. Then unplug the J15 plug on the operator's control board and plug it back in after 2-3 seconds. This allows the loop detector to be plugged into a different slot (clears all faults and keeps the current frequency settings, authenticates).

### To clear a fault:

- Press the reset button on the operator (clears all faults) or
- Unplug the loop detector then plug it back into the same slot.

### The loop is making false detections:

- There is crosstalk between the LOOPDETLM and the alternate loop detector or
- Change the frequency or lower the sensitivity setting of the loop detector.

### The loop will not activate when a vehicle passes over it:

- Turn the boost switch ON or increase the sensitivity of the loop detector or
- If the blue and white LEDs are solid, indicating an Active Loop, and the operator does not activate, there could be a fault. Once the loop is inactive, check the LED codes for a fault (refer to LED table above).

### TEST THE LOOP DETECTOR

- 1 Turn the dial to TEST. The loop detector will send a signal to the main board simulating a vehicle over the loop.
  - Exit:** If the gate is closed, it will open or if the gate is already open it will remain open.
  - Shadow:** Active ONLY when the gate is in the open position. If the gate is open, it will remain open.
  - Interrupt:** If the gate is closing, it will open.
- 2 Turn the dial back to the desired sensitivity setting.

## WARRANTY

### ONE YEAR LIMITED WARRANTY

The Chamberlain Group, Inc. warrants to the first retail purchaser of this product that is free from defect in materials and/or workmanship for a period of 1 year from the date of purchase.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

This Class B digital apparatus complies with Canadian ICES-003.  
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.