

Quick Loop Tips

1. The loop is one continuous piece of wire that goes from your cabinet out to form your desired loop size, around the loop the correct number of times and comes back to the cabinet. The loop connects to the twisted Gray & Brown pair in the wiring harness. Be sure to make proper connections; they should be weatherproof and soldered if possible.
2. A good loop is essential for proper operation from the detector. Request a Northstar Loop Information Guide for more details on proper sizes and number of coils.
3. To test a loop, checking the insulation resistance to earth will provide the most useful information. First disconnect the detector, then using a 'Megger' set to 500 volts connect one leg of the loop to one lead from the 'Megger'. The other lead from the 'Megger' goes to a good ground. The loop should have an insulation resistance to ground of greater than 20MΩ.
4. Generally a loop will detect a vehicle at a height equal to ½ to 2/3rds the length of the smallest side of the loop. Ex. A 4'x6' loop will detect 2' to 2.5' above the loop wires. A 2'x6' loop will only detect 1' to 1.5' above the loop wires. Note: These examples are 'rule-of-thumb' and site conditions will affect loops differently.

NP2-ESL Connections

1. Loop
2. Loop
3. Relay N.C. / N.O. (Switch B ON)
4. Relay N.O. / N.C. (Switch B ON)
5. Relay Common
6. Power 12VDC
7. Ground

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NP2-ESL Quick Tips

Front Panel

2 LED Indicators.

- **Detect** Relay 1, solid Red during detect or Fault.
- **PWR/FLT** Power, solid Green with correct power supplied. The Power led will go out after 2 minutes from power-on or after a reset. The PWR/FLT led will flash with a double flash for a shorted loop or a single flash for an open circuit loop.

6 Position DIP switch

Sensitivity

- High = SW1 & SW2 ON.
- Med. High = SW2 ON & SW1 OFF
- Med. Low = SW2 OFF & SW1 ON (default)
- Low = SW1 & SW2 OFF

Frequency

- SW5 & SW6 ON = Low
- SW5 ON & SW6 OFF = Medium Low
- SW5 OFF & SW6 ON = Medium High
- SW5 & SW6 OFF = High

Operate separate detectors with loops in close proximity on different frequencies.

Switch A (Not Used)

Switch B OFF = Fail Secure (no output on power fail)

Switch B ON = Fail Safe (Contact closes on power fail)

Reset

Whenever detector settings have been changed or the detector has been newly installed press the reset button. NOTE: this should be done without vehicles present over the loop.

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NP2-ESL Quick Tips – Cont.

1. Connect detector to loop, make sure that the terminal connections are secure. Connect the detector output as needed. The output is fail-secure: it does not provide a contact closure during a power failure. Next, connect the detector to the correct voltage. The power (PWR) LED should be steady GREEN with correct power applied. Green power led will go out after two minutes from power application or after reset.
2. Flashing GREEN fault (PWR/FLT) LED indicates a loop problem , a double flash indicates a shorted loop while a single flash indicates an open circuit loop. Check loop connections and test loop with a 'Megger' for leakage to ground.
3. Sensitivity level 1 (Medium Low) will be adequate for most situations. Operate detector at lowest sensitivity levels that detect all desired vehicles. Observe detector operation and adjust the frequency or sensitivity as necessary. Make sure to operate detectors connected to adjacent loops at different frequency settings.



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