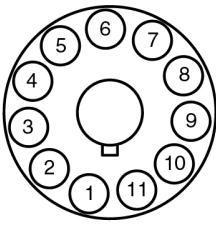# MD2008
METAL LOOP DETECTOR

Please note: The MD2008 must be reset (Dip 8) every time a setting change is made to the dipswitches!
On initial power up the detector will also reset. This will take a couple of seconds. The buzzer will beep when ready.

■□	OFF	**ET SYSTEMS MD2008**	
□■	ON	**Metal loop detector**	

Freq.	1 ■□ Low	1 □■ High	
Sens.	2 ■□ / 3 ■□ Low	2 □■ / 3 ■□ Low/Med.	
	2 ■□ / 3 □■ Med./High	2 □■ / 3 □■ High	
Boost	4 ■□ Off	4 □■ On	
RLY 1	5 ■□ Limited Presence	5 □■ Permanent Presence	
Pulse RLY 2	6 ■□ Pulse on Detect	6 □■ Pulse on Undetect	
RLY 2	7 ■□ Pulse	7 □■ Presence	
Reset	8 ■□ Normal	8 □■ Reset	

1 - AC or +VDC
2 - AC or 0VDC
3 - RLY2 N/O
4 - RLY2 COM
5 - RLY1 N/O
6 - RLY1 COM
7 - SENSING LOOP
8 - SENSING LOOP
9 - Earth/Ground
10 - RLY1 N/C
11 - RLY2 N/C

WARNING! Before powering up check the voltage rating for this unit!

Outline of the dipswitch setting options:-

Dipswitch 1 – Freq. (Frequency):-

This setting is used in cases where two or more loop detectors and sensing loops have been installed. (The sensing loops and detectors should be positioned at least 1m apart). Set one detector to HI frequency and the other set to LO frequency to minimize the effects of crosstalk between the two systems.

OFF = Low frequency
ON = High frequency

Dipswitch 2 and 3 – Sensitivity:-

This setting affects how sensitive the detector is to the amount of metal, and the height of that metal above the sensing loop.

2 OFF and 3 OFF =	**Low sensitivity**
2 ON and 3 OFF =	**Low to Medium sensitivity**
2 OFF and 3 ON =	**Medium to High sensitivity**
2 ON and 3 ON =	**High sensitivity**

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METAL LOOP DETECTOR

Dipswitch 4 - Boost mode:-

This mode is used when the height of the undercarriage of the vehicle increases as it passes over the sensing loop. For example a vehicle towing a trailer where the trailer under carriage is higher than the motor vehicle chassis or in the case of a truck with a lower engine block up front and a higher chassis below the load box.
The detector will remain active for longer as the metal work moves further away from the sensing loop.

OFF =   No boost active
ON =   Boost mode active

Dipswitch 5 – Relay 1 output mode:-

This setting determines how Relay 1 output responds to a vehicle standing still within the sensing loop area.

OFF = Limited presence mode. The relay will remain active for a limited time of approximately 3min even if the vehicle has not left the sensing loop area. In the case of the vehicle exiting the sensing loop area before the time has expired, the relay will de-activate.

ON = Permanent presence mode. The relay will remain active for as long as a vehicle is detected within the sensing loop area. When the vehicle clears the sensing loop area, the relay will de-activate.

Dipswitch 6 – Relay 2 Response (when):-

This setting determines when Relay 2 must respond.

OFF = PULSE ON DETECT. Immediately the vehicle is detected in the sensing loop area.

ON = PULSE ON UNDETECT. Immediately the vehicle leaves the sensing loop area.

(PLEASE NOTE! THIS OPTION ONLY WORKS WHEN DIPSWITCH 7 IS SET TO "PULSE MODE")

Dipswitch 7 – Relay 2 Output type (How):-

This setting determines how Relay 2 responds to a vehicle standing still within the sensing loop area.

OFF = Pulse mode. Relay 2 will activate for 1 sec only. (**Check** Dipswitch 6 setting as to when the relay will pulse).

ON = Permanent Presence mode. Relay 2 will remain active for as long as a vehicle is within the loop sensing area.

Dipswitch 8 – Reset:-

Please note: The MD2008 must be reset every time a setting change is made to the dipswitches!

To reset switch dipswitch 8 on for approximately 2 seconds and then off again. The detector then goes through the setup routine for a few seconds and beeps once when ready. This will also occur on initial power up.

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LED INDICATIONS.

FAULT LED = SENSING LOOP FAULT INDICATATOR:-

OFF =   No fault. Sensing loop is in working condition.

FAST FLASH =   Sensing loop is short circuited or open circuit. Fault is still present.
                        (Relay 1 will also be active as long as the fault is present)

SLOW FLASH = Sensing loop was short circuited or open circuited but is no longer. (Intermittent
                        fault) The detector has not been reset since the fault occurred.
                        (Relay 1 will operate as normal so long as the fault is not present)

### STATUS LED = SENSING LOOP STATUS INDICATOR:-

STEADY FLASH =   Standing by and ready to detect a vehicle.

ON =   Vehicle detected in sensing loop area.

BUZZER INDICATIONS:-

The buzzer will sound so long as a vehicle is detected in the sensing loop range for the first ten
detections after a reset or power-up. This will assist in testing the system on installation.

Preparing the sensing loop.
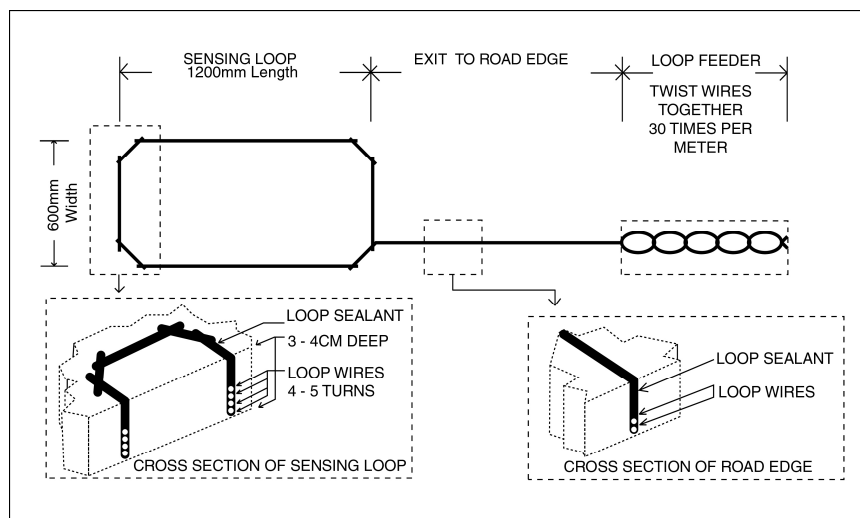
- Use **1.5mm multi-stranded panel flex with silicone insulation** for your sensing loop.
- The sensing loop wire must be one continuous run with **NO JOINS** along its length.
- In cases where re-enforced steel is present below the sensing loop add one or two
  additional turns to prevent the effect of reduced sensitivity caused by the steel.
- The sensing loop **Feeder** (Feeder = section of wire between the detector and sensing loop)
  must be twisted together at least 30 times per meter and be as short as possible.
- To seal your slot use either silicone or better yet bitumen.

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