

INSTALLATION INSTRUCTIONS

IMPORTANT! — When handling the VDB102R, use proper grounding procedures to avoid electrical damage to the board.

1. INSTALLATION

- Remove the drive-thru audio or timer system power adapter from its electrical outlet.
- If the VDB102R will replace an existing VDB101, do **a**, **b** and **c** below. If not, skip them and go on to the following step.
 - Disconnect the loop cable from TB1 on the VDB101.
 - Disconnect the VDB101 interconnect cable from its connector on the base station or control unit circuit board. Note the connector and its location.
 - Remove the VDB101 by lifting it off the plastic standoffs that hold it in place.
- Position the VDB102R over the three plastic standoffs on the base station or control unit circuit board and press it firmly until the standoffs snap through the holes on the VDB102R. See Figure 1.
- Connect the loop cable to TB1 at the lower right corner of the VDB102R. See Figure 1.
- Connect the VDB102R interconnect cable to P1, at the upper left corner of the VDB102R. See Figure 1. Be certain the plastic catches on the cable connector are aligned with the plastic catches on the P1 connector. The color-coded connector wires must also match the pin positions shown on Figure 1, below. Connect the other end of the interconnect cable to the circuit board in the base station or control unit according to installation instructions from the drive-thru audio or timer system. If the installation instructions are not available, call HME at 1-800-848-4468.
- If any external equipment will be used that requires a vehicle detect signal to operate, connect it to J3, Relay out 1 or Relay out 2.
- Reconnect the drive-thru or timer system power adapter to its electrical outlet.
- Be certain the LED on the VDB102R is lit when a vehicle is on the loop. If it is not, be certain all connections are tight. If it is still not lit, call HME at 1-800-848-4468.

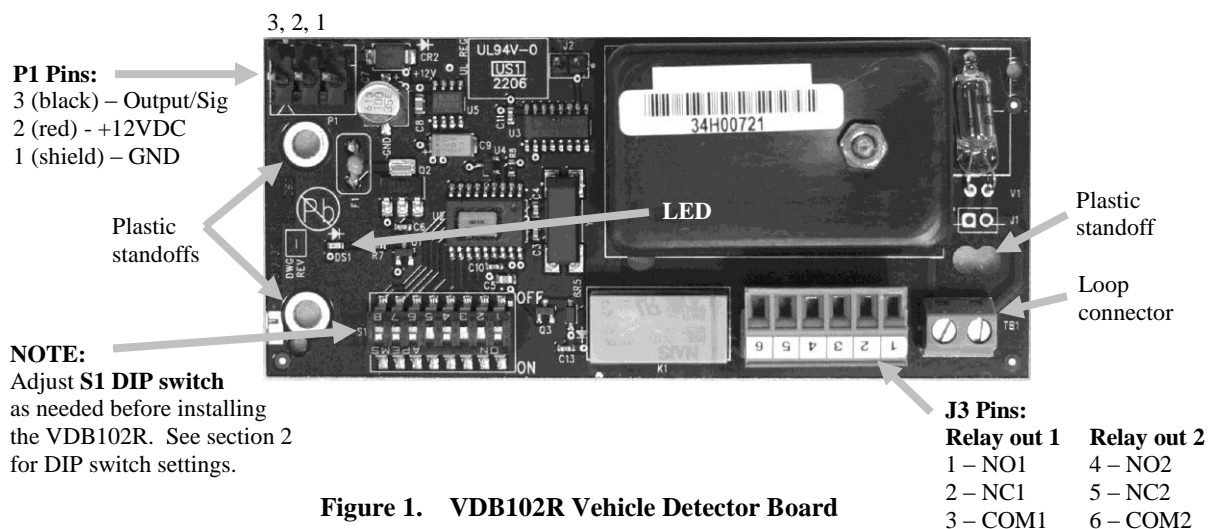


Figure 1. VDB102R Vehicle Detector Board

If it is necessary to change the functions of the VDB102R, refer to the DIP switch settings on the back of this sheet. Normally, no changes will be required.

2. DIP SWITCH SETTINGS

Before installing the VDB102R, the following six functions can be set by switching/moving the switches as indicated in tables A through F below. Refer to Figure 2.

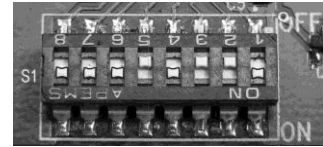


Figure 2. S1 DIP switch

| Switch #1 | Vehicle Presence Auto Reset |
|-----------|-----------------------------|
| OFF | None |
| ON | 20 minute * |

| Switch #2 | Turn-On Sensitivity |
|-----------|---------------------|
| OFF | Normal (2 Hz) * |
| ON | Reduced (3 Hz) |

| Switch #3 | Switch #4 | Turn-Off Threshold |
|-----------|-----------|--------------------|
| OFF | OFF | Extra Low (15%) |
| ON | OFF | Low (25%) |
| OFF | ON | Normal (35%) * |
| ON | ON | High (40%) |

* factory setting

| Switch #5 | Vehicle Present Switching Test |
|-----------|--------------------------------------|
| OFF | Diagnostic off, normal operation * |
| ON | Diagnostic on, 10 sec on, 10 sec off |

| Switch #6 | Switch #7 | Output Delay |
|-----------|-----------|--------------|
| OFF | OFF | 6 second |
| ON | OFF | 4 second |
| OFF | ON | 2 second |
| ON | ON | None * |

| Switch #8 | Output Pulse |
|-----------|---------------------|
| OFF | 0.5 second |
| ON | Steady (no pulse) * |

3. SELF DIAGNOSTICS

If an abnormal condition with the loop or oscillator occurs, the LED will indicate one of the following conditions. There is no Vehicle-Present signal generated during the self diagnostics.

| Problem | LED Blink Rate |
|--------------------------|----------------------|
| No oscillator (<2 KHz) | 1 blink and a pause |
| Open loop (<10 KHz) | 2 blinks and a pause |
| Out of range (10-20 KHz) | 3 blinks and a pause |
| Shorted loop (>75 KHz) | 4 blinks and a pause |

4. RESET PROCEDURE

With no vehicle present over the vehicle detector loop, press the reset switch in the base station or timer for 1 second, or unplug the power cable for 1 second. The LED will go on for 3 seconds. Reset is completed when the LED goes off.

5. TROUBLESHOOTING

Turn-On Sensitivity:

- Set to Reduced (3Hz) to help prevent false turn-on when the frequency drifts or varies due to a bad loop.

Turn-Off Threshold:

- Set to High (40%) if run-on between cars occurs at Normal (35%).
- Set to Extra Low (15%) or Low (25%) to compensate for improperly positioned loops.
- Set for highest percentage possible. Check for run-on or dropouts and set for best operation.

Waste Electrical and Electronic Equipment (WEEE)

The European Union (EU) WEEE Directive (2002/96/EC) places an obligation on producers (manufacturers, distributors and/or retailers) to take-back electronic products at the end of their useful life. The WEEE Directive covers most HME products being sold into the EU as of August 13, 2005. Manufacturers, distributors and retailers are obliged to finance the costs of recovery from municipal collection points, reuse, and recycling of specified percentages per the WEEE requirements.

Instructions for Disposal of WEEE by Users in the European Union

The symbol shown below is on the product or on its packaging which indicates that this product was put on the market after August 13, 2005 and must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of the user's waste equipment by handing it over to a designated collection point for the recycling of WEEE. The separate collection and recycling of waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local authority, your household waste disposal service or the seller from whom you purchased the product.

