Operating Instructions

# Model DB-306

## Four Channel Loop Detector Demonstration Box

### I. General Description

The DB-306 is used to demonstrate the features of Reno A & E's Model E series four-channel loop detectors. It can also be used to test and/or troubleshoot problems with these detectors.

### II. Operating Instructions

Connect the DB-306 to a 120 VAC power source.

**NOTE: The DB-306 is designed to be used with 24 VDC detectors only. Internal circuitry transforms the 120 VAC input voltage to 24 VDC. Under no circumstances should the DB-306 be connected to a 240 VAC power source.**

1) Set the POWER switch to the off position and the four GREEN switches to their off positions. These switches are off when toggled down, and on when toggled up.

2) Connect the detector to the DB-306 by aligning the detector PC Board with the two card guides on the DB-301 detector receptacle. Slide the detector all the way into the receptacle. Be certain that the card edge connector on the detector is fully engaged in the connector on the detector receptacle.

3) Toggle the POWER switch to the on (up) position.

   If you have connected a Model E-1100 series detector to the DB-306, the DETECT OUTPUT LEDs should momentarily flash and the detector LCD should display the normal operation mode screen (three dashes in the seven segment display, "PRESENCE" or "PULSE" below the three dashes, and the Loop 1 symbol in the lower left hand corner of the display).

   If you have connected a Model E-1200 series detector to the DB-306, the DETECT OUTPUT LEDs should momentarily flash, the TS 2 STATUS OUTPUT LEDs should illuminate, and the detector LCD should display the normal operation mode screen (three dashes in the seven segment display, "PRESENCE" or "PULSE" below the three dashes, and the Loop 1 symbol in the lower left hand corner of the display).

4) Since the DB-306 can be used to demonstrate such a wide range of dual channel detectors, it is best to describe the function of each switch, LED, and the two simulated loop zones rather than attempt to describe all the combinations of DB -301 and detector outputs and indications.

   **NOTE:** Some of the function described below may not apply to all of the detectors that can be used in conjunction with the DB-301.

   a) LOOP 1 - Channel 1 (CH. 1) Loop Zone.
   b) LOOP 2 - Channel 2 (CH. 2) Loop Zone.
   c) LOOP 3 - Channel 3 (CH. 3) Loop Zone.
   d) LOOP 4 - Channel 4 (CH. 4) Loop Zone.
   e) POWER Switch - DB-306 and Detector Power Source Control.
   f) RESET Switch - Detector Reset.
   g) CH. 1 OPEN LOOP Switch - Simulated Channel 1 (CH. 1) Open Loop Condition.
   h) CH. 2 OPEN LOOP Switch - Simulated Channel 2 (CH. 2) Open Loop Condition.
   i) CH. 3 OPEN LOOP Switch - Simulated Channel 3 (CH. 3) Open Loop Condition.
   j) CH. 4 OPEN LOOP Switch - Simulated Channel 4 (CH. 4) Open Loop Condition.
   k) CH. 1 PHASE GREEN INPUT Switch - Simulates Channel 1 (CH. 1) Phase Green Input.
   l) CH. 2 PHASE GREEN INPUT Switch - Simulates Channel 2 (CH. 2) Phase Green Input.
   m) CH. 3 PHASE GREEN INPUT Switch - Simulates Channel 3 (CH. 3) Phase Green Input.
   n) CH. 4 PHASE GREEN INPUT Switch - Simulates Channel 4 (CH. 4) Phase Green Input.
   o) CH. 1 TS 2 STATUS LED - Channel 1 (CH. 1) TS 2 Status Output Condition. (Continuous On - Normal Detector Operation, Rapid Flash - Fail Condition.)
   p) CH. 2 TS 2 STATUS LED - Channel 2 (CH. 2) TS 2 Status Output Condition. (Continuous On - Normal Detector Operation, Rapid Flash - Fail Condition.)
   q) CH. 3 TS 2 STATUS LED - Channel 3 (CH. 3) TS 2 Status Output Condition. (Continuous On - Normal Detector Operation, Rapid Flash - Fail Condition.)
   r) CH. 4 TS\2 STATUS LED - Channel 4 (CH. 4) TS 2 Status Output Condition. (Continuous On - Normal Detector Operation, Rapid Flash - Fail Condition.)
   s) CH. 1 DETECT LED - Channel 1 (CH. 1) Detect Condition. (Continuous On - Detector in Presence Mode, Single Flash - Detector in Pulse Mode.)
   t) CH. 2 DETECT LED - Channel 2 (CH. 2) Detect Condition. (Continuous On - Detector in Presence Mode, Single Flash - Detector in Pulse Mode.)
   u) CH. 3 DETECT LED - Channel 3 (CH. 3) Detect Condition. (Continuous On - Detector in Presence Mode, Single Flash - Detector in Pulse Mode.)
   v) CH. 4 DETECT LED - Channel 4 (CH. 4) Detect Condition. (Continuous On - Detector in Presence Mode, Single Flash - Detector in Pulse Mode.)

***NOTE:*** *To simulate a vehicle detection, place one or both of the toy cars that were included with the DB-306 over the white squares labeled LOOP 1 (Channel 1), LOOP 2 (Channel 2), LOOP 3 (Channel 3), or LOOP 4 (Channel 4).*

### III. Connector Pin Assignments

| Pin | Function | Notes |
|---|---|---|
| **A** | D.C. (-) Common | |
| **B** | D.C. (+) Power | |
| **C** | Reset Input | |
| **4/D** | Channel 1 Loop Input | |
| **5/E** | Channel 1 Loop Input | |
| **F** | Channel 1 Output, Drain / Collector | |
| **H** | Channel 1 Output, Source / Emitter | |
| **8/J** | Channel 2 Loop Input | |
| **9/K** | Channel 2 Loop Input | |
| **L** | Chassis Ground | |
| **13/P** | Channel 3 Loop Input | |
| **14/R** | Channel 3 Loop Input | |
| **S** | Channel 3 Output, Drain / Collector | |
| **T** | Channel 3 Output, Source / Emitter | |
| **17/U** | Channel 4 Loop Input | |
| **18/V** | Channel 4 Loop Input | |
| **W** | Channel 2 Output, Drain / Collector | |
| **X** | Channel 2 Output, Source / Emitter | |
| **Y** | Channel 4 Output, Drain / Collector | |
| **Z** | Channel 4 Output, Source / Emitter | |
| **1** | Channel 1 Phase Green Input | Model E-1200 and E/2-1200 only |
| **2** | Channel 2 Phase Green Input | Model E-1200 and E/2-1200 only |
| **3** | Channel 3 Phase Green Input | Model E-1200 and E/2-1200 only |
| **7** | Channel 1 TS 2 Status Output | Model E-1200 and E/2-1200 only |
| **10** | Channel 4 Phase Green Input | Model E-1200 and E/2-1200 only |
| **16** | Channel 3 TS 2 Status Output | Model E-1200 and E/2-1200 only |
| **20** | Channel 2 TS 2 Status Output | Model E-1200 and E/2-1200 only |
| **22** | Channel 4 TS 2 Status Output | Model E-1200 and E/2-1200 only |

***Note:*** *All pins not listed have no connection.*

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