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## **APPLICATION NOTE CCL BEEPER**

### **Printed Circuit Board (PCB) BEEPER (Revision A)**

1. Connect the truck 12 volt battery supply to terminal “B+”. Connect ground to terminal “GND”.
2. Resistor R11 is for current limiting, including on the power switch, and is usually 200  $\Omega$ .
3. Connect the power switch to the two “SW” terminals, or install jumper “JP1” if no switch is used.
4. The Duration trim pot controls beep length. Cut jumper “JP3” to install an external “Duration” control pot (wiper to terminal “W”). Installing jumper “JP2” does away with all duration control, and leaves R7b as the sole controlling resistance (normally 10 k $\Omega$ ; change to 100 k $\Omega$  if used alone after installing jumper “JP2”).
5. Paul Knight’s meter protection circuit is optionally available by installing jumper “JP4” or by installing a switch from terminal “MP” to ground (“ON” when terminal “MP” is grounded).
6. The Sensitivity trim pot controls the discrimination of the beeper circuit. Cut jumper “JP5” to install an external “Sensitivity” control pot (wiper to terminal “W”).
7. If the BEEPER PCB is mounted directly on the meter, input is automatic. Otherwise, connect the positive CCL meter input to the “IN” terminal.
8. A direct output is available at terminal “OUT” but is not usually used.
9. An optional indicator LED can be connected to terminal “LED” through a switch if desired. Resistor R10 performs current limiting for the LED indicator and is usually 1 k $\Omega$ .
10. The “HI” and “LO” terminals are connected to the Sonalert SC307N annunciator by way of an SPDT switch; use of a “center-off” style switch is preferred.