

November 16, 2004

Those 'Silent Blinkers'...making them Audible

By Rudy Morris, FCOC

[For new Freightliner MH Chassis with MMDC wiring and noiseless directional signals]

If you are the owner of a newer F/L chassis with the MMDC (Multi – Module Data Computer) wiring, you have undoubtedly noticed that the **directional signals are soundless**. The MMDC module gathers multiple inputs and drives the multi-lamp dash display (alarm bar) including the turn signal lamps. The old mechanical flasher relays were often hard to hear, but the new MMDC **HAS NO flasher module**, no relay to click...completely solid state and silent! *This helps us travel down the highway with our blinkers still blinking long after we used them to enter the highway.*

If you have a flasher plug-in module, see the Nov. issue of FMCA magazine, pg. 30 for a simple method to add a small buzzer to the relay unit to make it more audible. This is the same buzzer I used below.

After researching both Winnebago and F/L drawings, I was able to wire up a simple, economical solution with a few parts from Radio Shack and about 1 hour of time. Of course, I spent many hours researching and finding the magic wires, but the actual time to implement should not take much over 1 hour of your time.

PARTS:

| <u>QTY</u> | <u>Item</u> | <u>Rating</u> | <u>Source</u> | <u>Costs</u> | |
|------------|-------------|---|------------------------------------|--------------|--------|
| 1 | Mini-buzzer | 12V, 15ma | Radio Shack (part no. 273-055A) | \$3.29 | |
| OR | 1 | piezo electric buzzer, 12V, 2300Hz tone, | Radio Shack (part no. 273-059) | \$3.29 | |
| | 2 | Diodes | 50V, PIV | Radio Shack | \$0.59 |
| (2 pk.) | 1N4001 | 1 amp | (part no. 276-1101) | | |

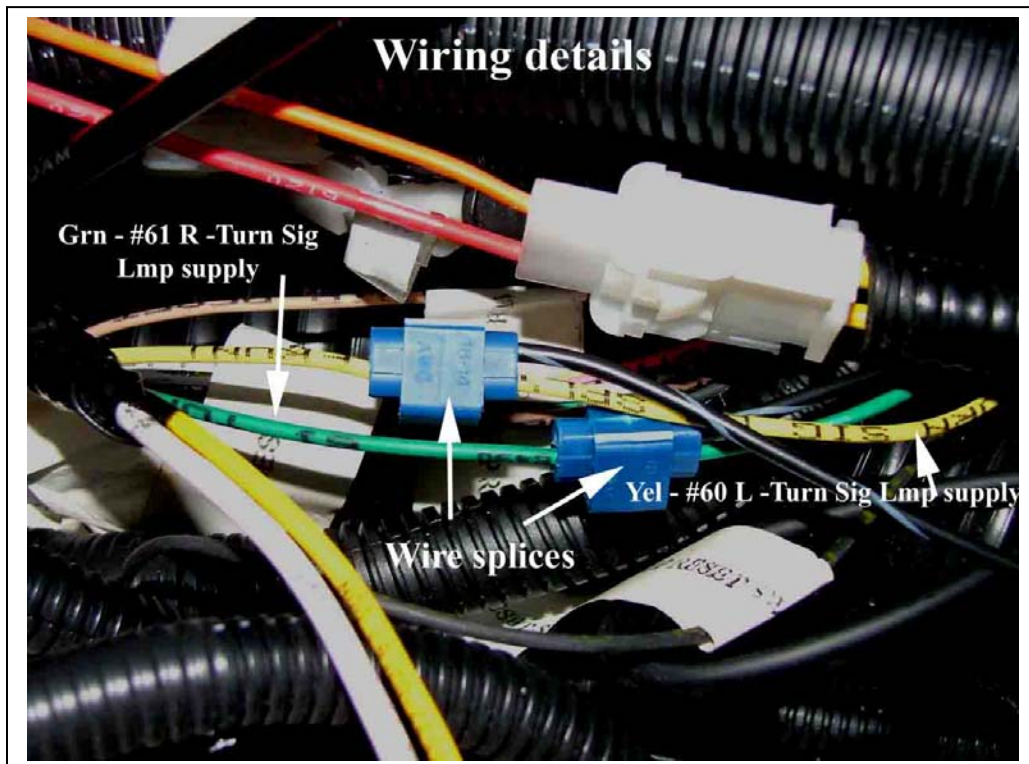
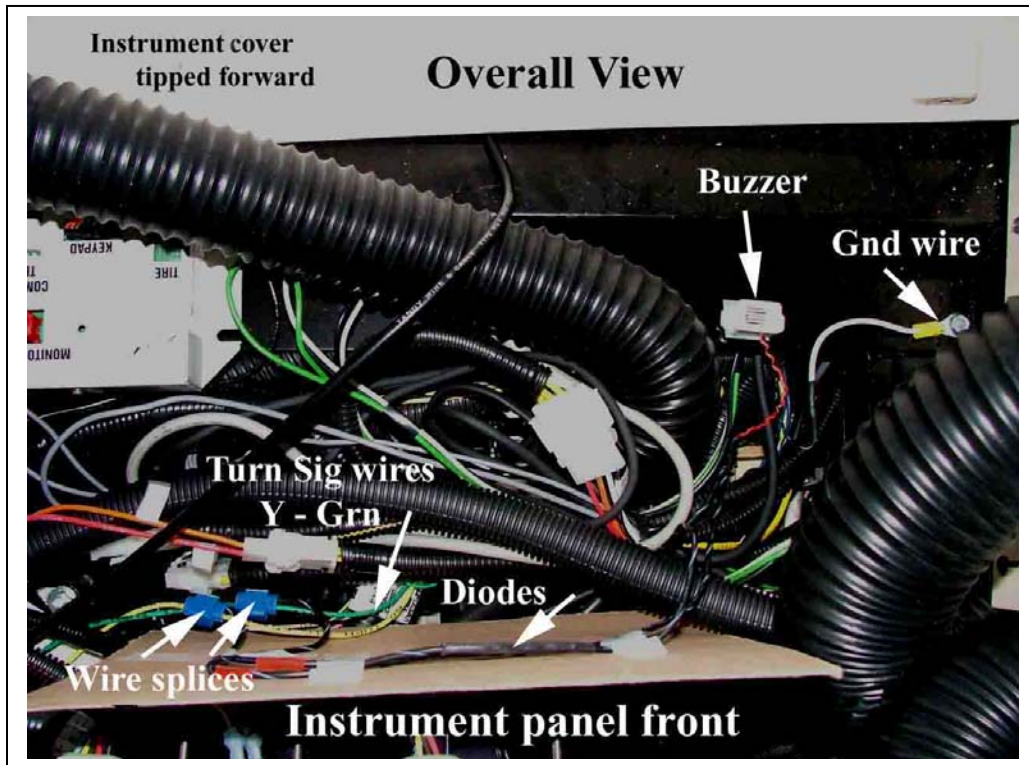
Misc. material & tools

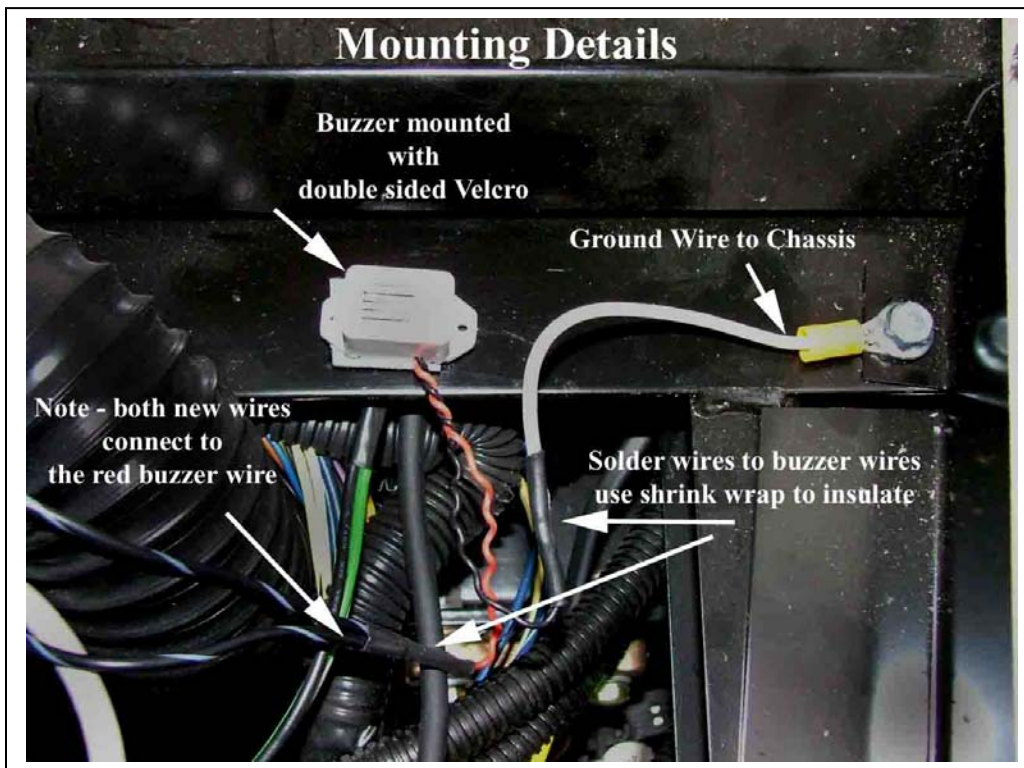
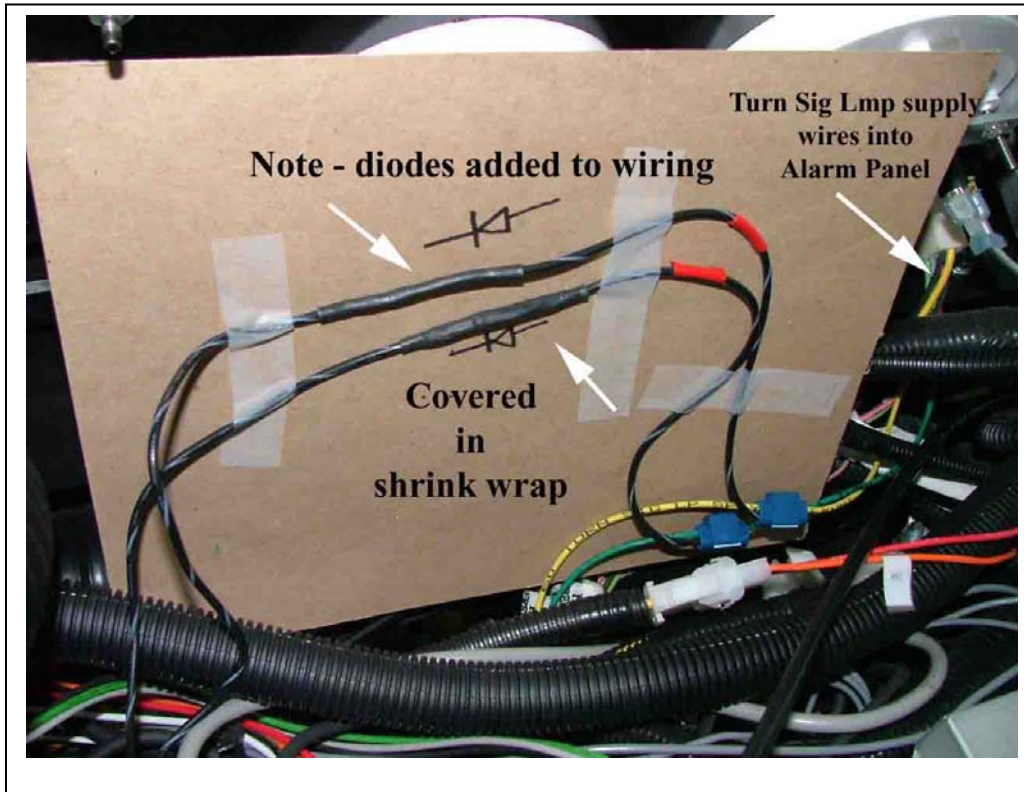
- Approx. four feet of #16-18ga. wire, any color
- Two 3M parallel wire splice connectors (14-16 ga.)

- Solder and iron, small 30W size
- Needle nose pliers

Note: - I bought both buzzers to try them out...I preferred the 'buzz' buzzer to the tone buzzer, but you might like the tone unit better.

Photos:





Procedures:

1. Remove your front panel instrument cover or otherwise gain access to the rear of your alarm lamp display (see **Overall View picture**). Here I've removed the rear screws holding down the instrument panel cover, pulled it toward the rear and tipped it forward leaning against the windshield. This overall view shows the general layout of the instrument wiring and placement for the buzzer (your layout may vary depending on brand of MH). I've placed a temporary piece of brown cardboard with my new wires taped to it for a later photo showing the diodes I've added.
2. Locate the Yellow #60 L Turn Signal Lamp Supply wire...it is labeled as such.
3. Locate the Green #61 R Turn Signal Lamp Supply wire...it is along side the yellow wire and is also labeled.
4. Find a clear spot, which will allow room to add wire splices. I went about 6" downstream from the rear connector on the alarm lamp display unit.
5. Select a location to mount the buzzer...I chose a place close to a chassis screw, which I used for a ground.
6. Measure two lengths of #16 or #18ga. wire that will reach from your splice point to the buzzer.
7. Cut each new wire in half and solder each diode in the middle of the new wires so that the polarity of the diode points towards the buzzer. **Caution: do not over heat the diodes when soldering.** Heat sink the lead with an alligator clip. The diode package will indicate how the diode polarity is marked. The diodes will prevent reverse current from lighting both sets of directional signals when only one is applied. Heat shrink or tape the solder points on the diode leads so that no bare wire or leads show that can short out on metal objects. **Note** – mark your wire so you know which way the diode is pointing after you shrink-wrap or tape it up. See photos, note red tape on wires to mark polarity of diodes after they are shrink wrapped.
8. Connect the upstream, positive end of the one new wire to the Yellow #60 L Turn Signal Lamp Supply wire and the other new wire to the Green #61 R Turn Signal Lamp Supply wire making sure you keep the positive (anode) end of the diode connected to the lamp supply wires. The negative (cathode) end of the diode-equipped wire should be towards the buzzer.
9. Connect the black wire of the buzzer to your ground...you may have to add some wire to this lead to reach your ground point. Since most steel panels under the dash are painted or coated, make sure your ground wire contacts the screw head snugly, or remove a small area under the screw with sand paper to make sure you have a good ground.

10. Connect both new wires together to the red lead of the buzzer.
Note- if you use the piezo electric tone buzzer, it is polarity sensitive and will not work if the red and black wires are reversed.
11. Mount the buzzer to your previously selected spot using double sided tape or Velcro. I chose Velcro with double-sided tape to increase the thickness and dampen the buzzer a bit. If you need more sound, use thin double-sided tape or mount directly to the chassis with screws.
12. Test your new buzzer by turning the directional signals on. It should buzz with each directional signal blink and also the emergency flashers.

If you use the procedure, send me email with your comments and feedback. Send to morrisrc@att.net.

Enjoy your new turn signals WITH audible reminder sounds...no more blinkers left on for 10 miles down the highway!

CU Down the Road

Rudy Morris
FCOC Webmaster
3700 S. Westport Ave. #2500
Sioux Falls, SD 57106