

Attached are the pictures and wiring diagram for the TMCC earth ground signal test car and a bluetooth meter.

As chris indicated above, using the TMCC earth ground signal test car and a bluetooth meter with data recording capabilities is a handy tool to visually see where you are having signal issues and a easy way to compare results after you make changes on the layout. This is especially true for large/very large layout with TMCC signal issues, where now you can obtain signal readings for those hard to get to places on your layout.

For the Nj-HI railers layout, we found we needed readings of at least in the low 40 ua range for typical steam engines with metal shell to run w/o issues and readings in the high 30s ua range for typical diesel engines to run correctly. I would suggest that anyone using the TMCC earth ground signal test car, first check to see what reading are best for their layout.



Figure 1 TMCC earth ground signal test car and bluetooth meter pulled with #546 engine



Figure 2 Southwire bluetooth meter with data recording capabilities

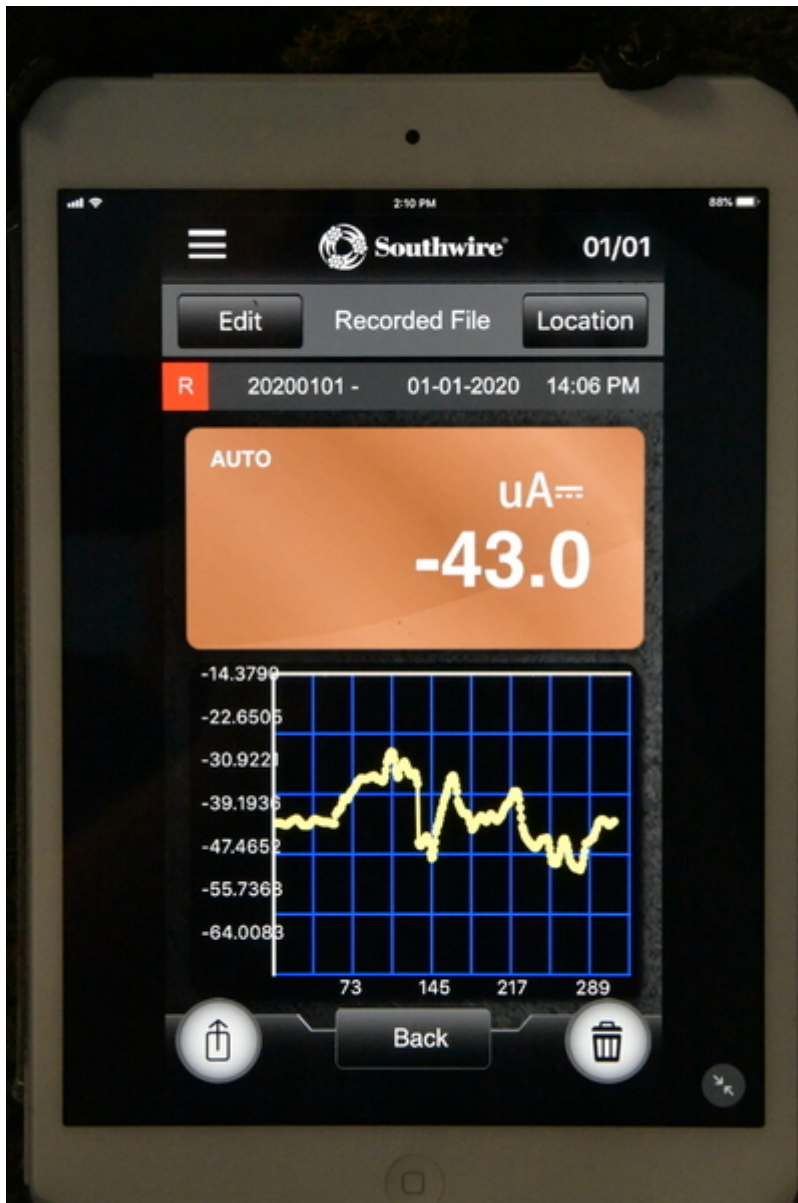


Figure 3 Southwire app used on your smart phone/tablet to receive real time measurements.

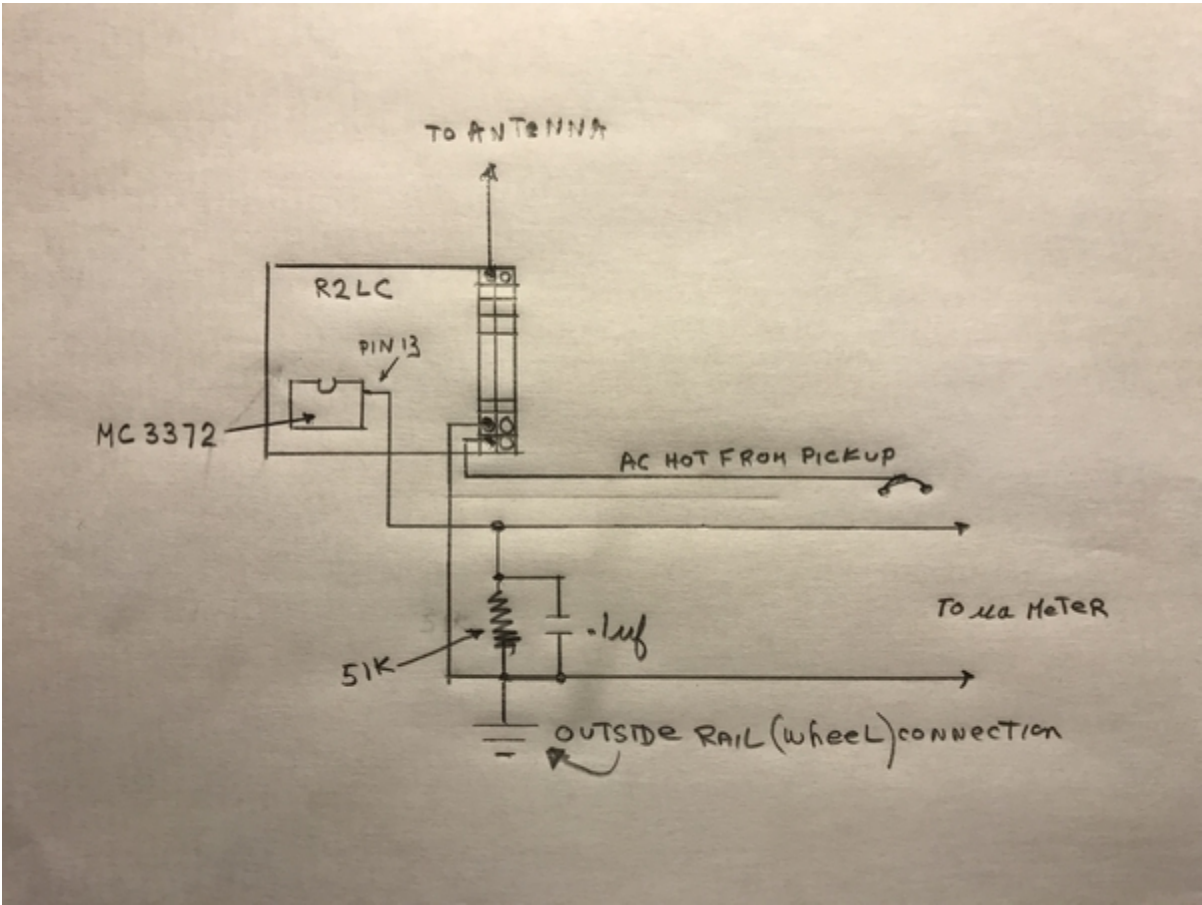


Figure 4 Wiring diagram of the TMCC earth ground test unit.

Google "MC3372 IC specs" for further information for the RSSI pin 13 connection

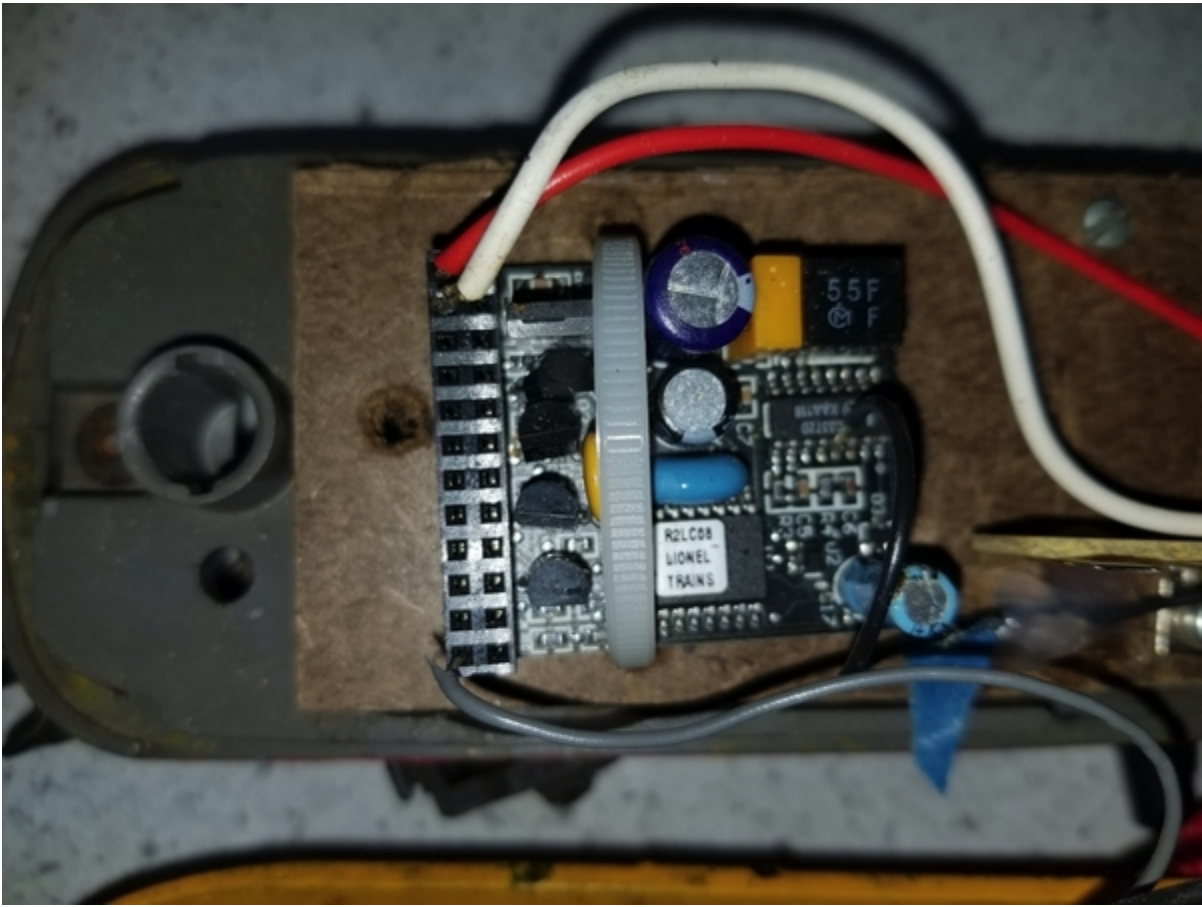


Figure 5 R2LC board connections

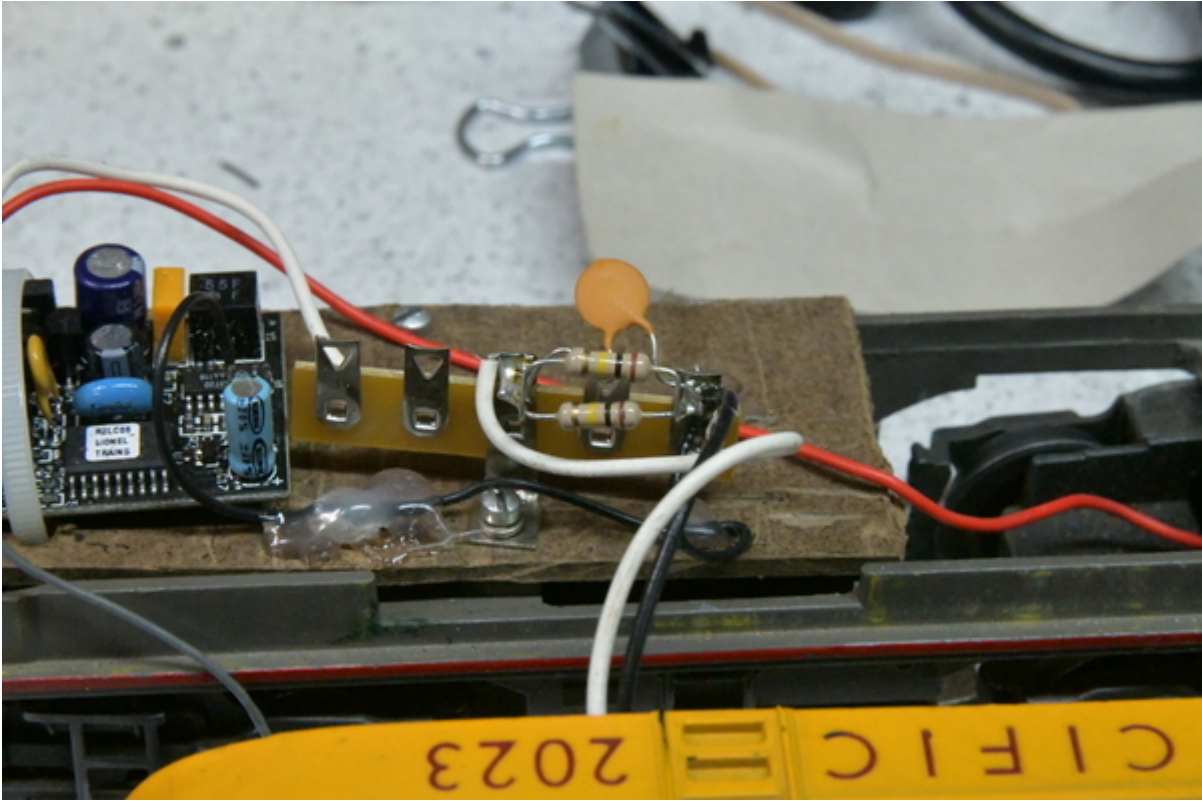


Figure 6 R2LC board with resistor & capacitor

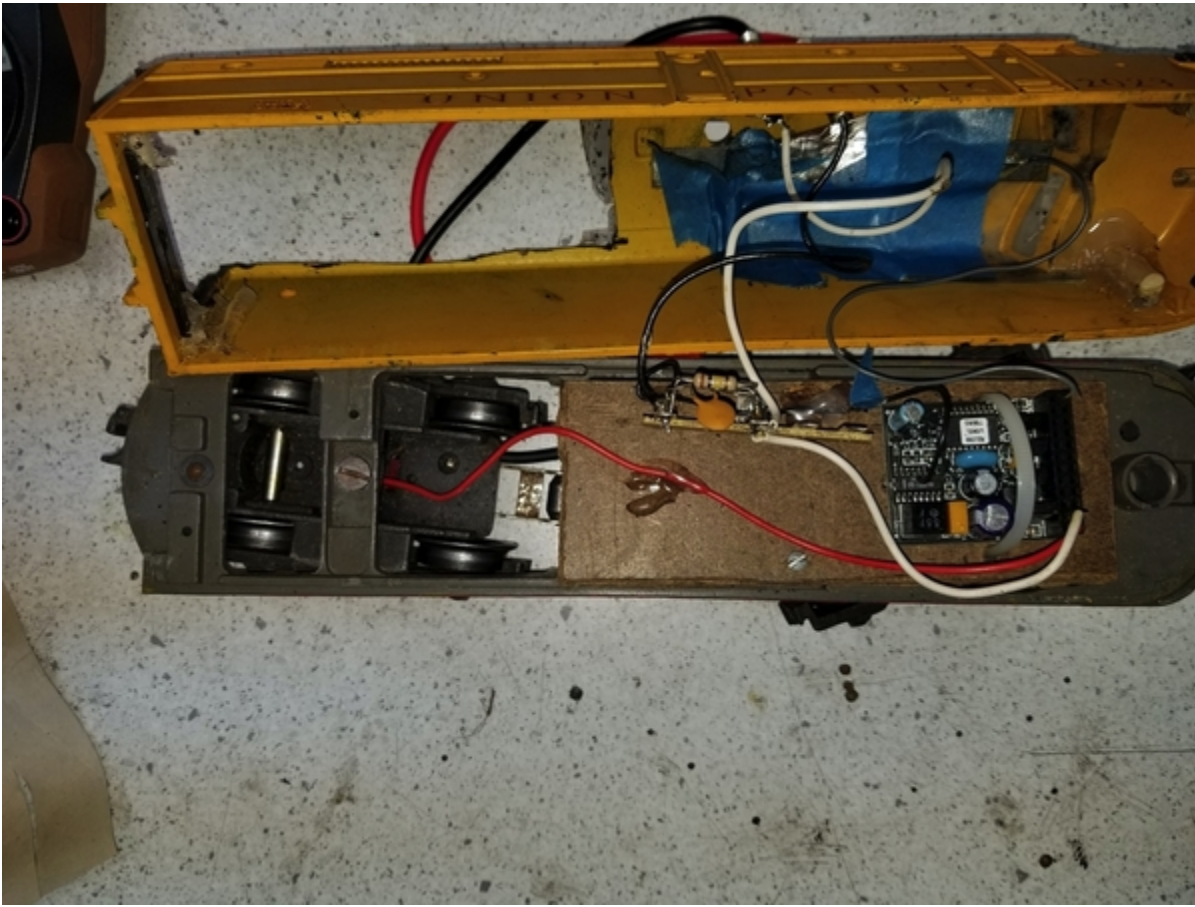


Figure 7 R2LC board with resistor & capacitor (2)

I did not have a 51K resistor, so I used 2 100K resistor in parallel