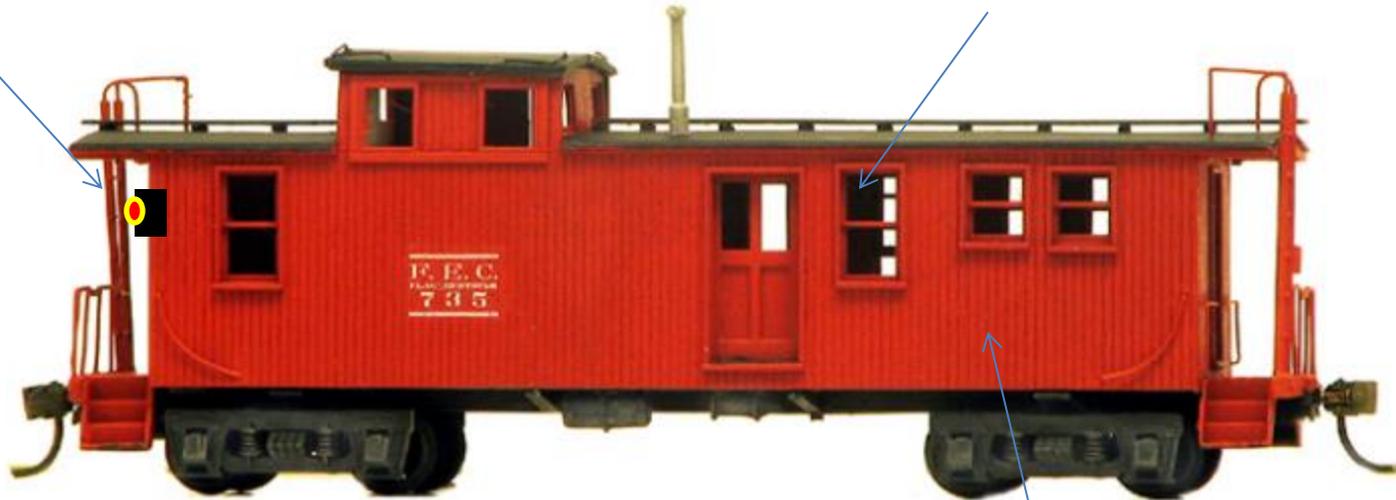


Keith's Caboose Coruscation

What needs to be done?

Small LEDs for rear lights

Interior Light with optional scene



Electrify pick ups for wheels

Install Bridge Rectifier and Cap

First Step : Choose Lights for markers/rear end

Early 40s through mid 60s

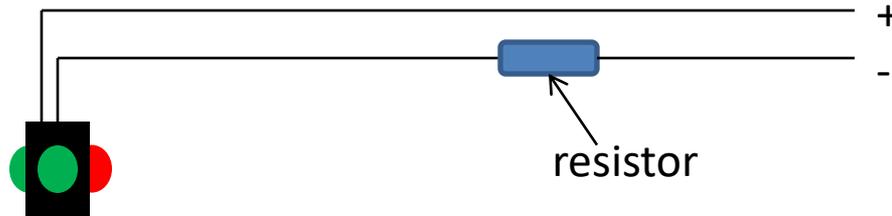


Late 60s onwards

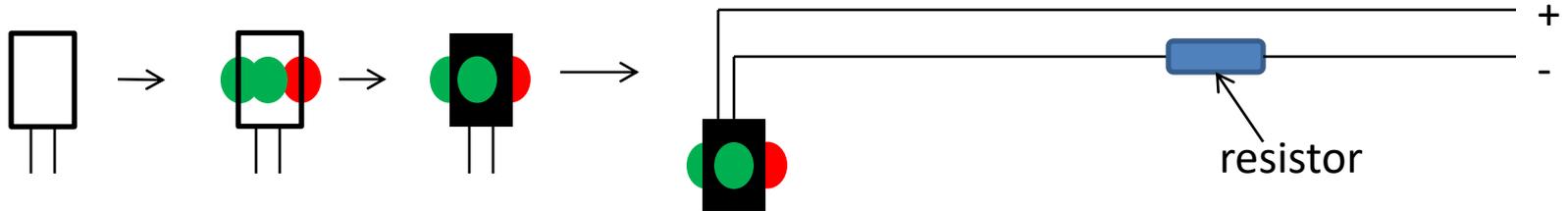


Wiring lights

Expensive : Marker Lights : Easy to install comes with built in lights and resistors

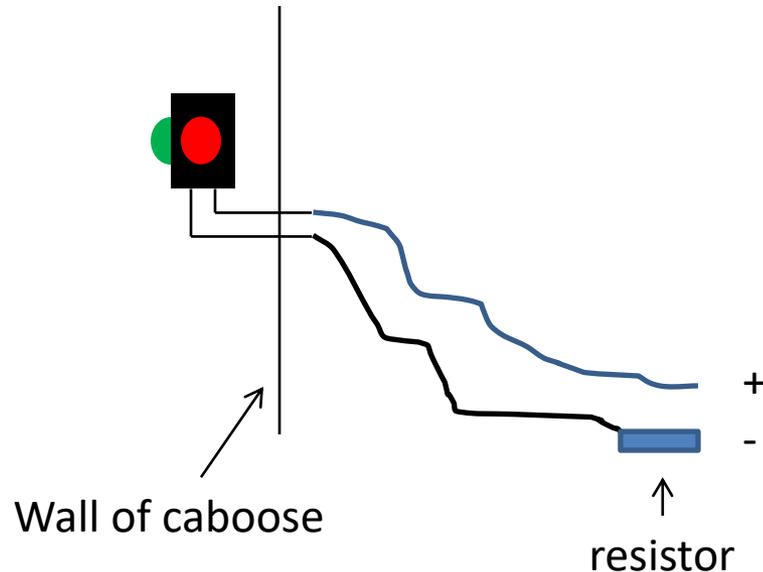


Cheap: Need to paint and color cheap Xmas LED, fit 1K resistor
use ink and white glue 50:50 for spots, black paint for surround



Fitting Marker Lights

Drill hole/holes in side of each side of caboose
(Cheap: Solder wires onto LED connections)
Slide LED/light into position on side
Glue light in position - CA



Fit Cap and Bridge rectifier board

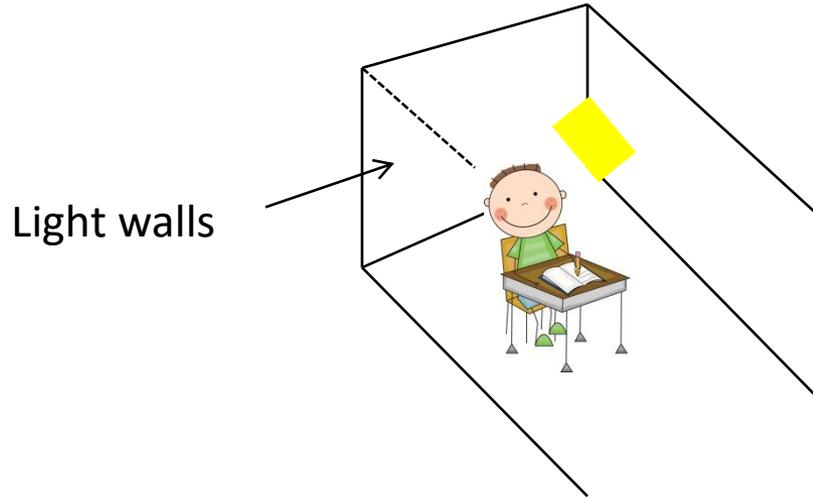


Q: Why do we need this?

A: Prevents flickering lights, you can minimize electrical pick ups, operates on both DC and DCC

Interior Light

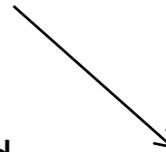
- Suggest lighting up one end of the caboose only and have that interior light, light up a scene inside.
- Have the scene opposite a window so you can see in.



Best to have a seated person at a desk – person low down so can see through window

- Affix surface mount LED (yellow glo type) to ceiling above scene using epoxy
- Wire up as per marker lights. Affix wire to side of walls using epoxy or UV glue. Hide wires as best you can or paint as per background – use light background

Disassembling the caboose



Turn over, undo screws holding trucks on, and then any other screws that hold the body on (could be body mounted or coupler pocket mounted)

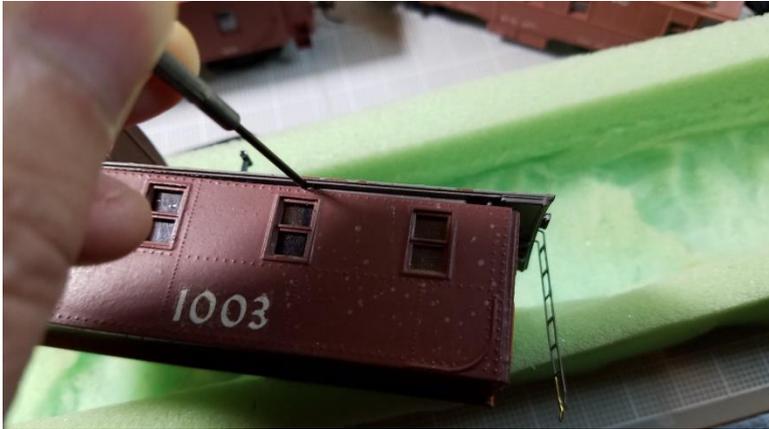


Pull ladders away from base



Then pull base away from body. Note : many different types, so may have to also disassemble roof. Aim is to get inside the body.

Disassembly cont.



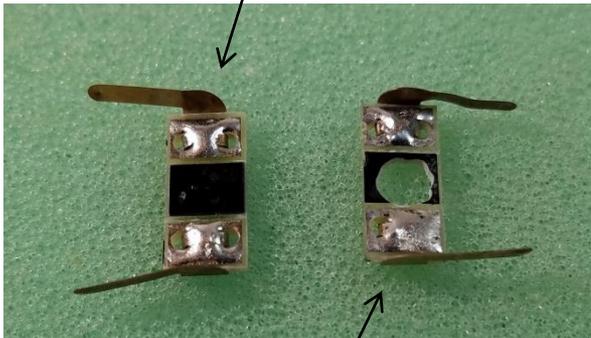
In the case of the Club Western Sierra caboose, I had to prise off the roof with a screwdriver to gain access

Once inside, check to see whether windows are installed. If in bad shape (like this one) or if absent then use pieces of figure/ decoder/ accessory packaging to make windows. Fix with a non CA glue.



Adding contact wipers

Again many different types. This is one. It comes in a set of 8 from ESU Code :50707 (Litchfield).

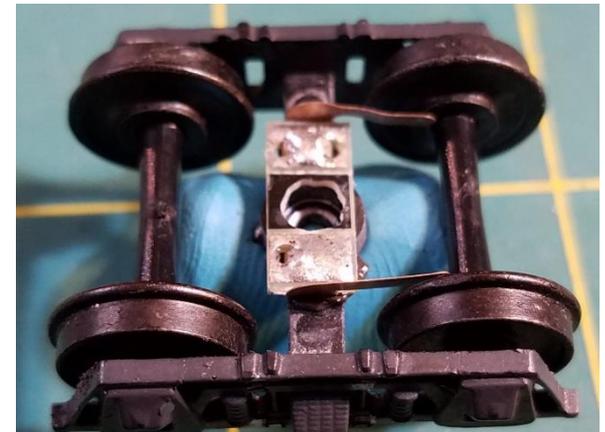


Drill hole to allow truck screw to pass through

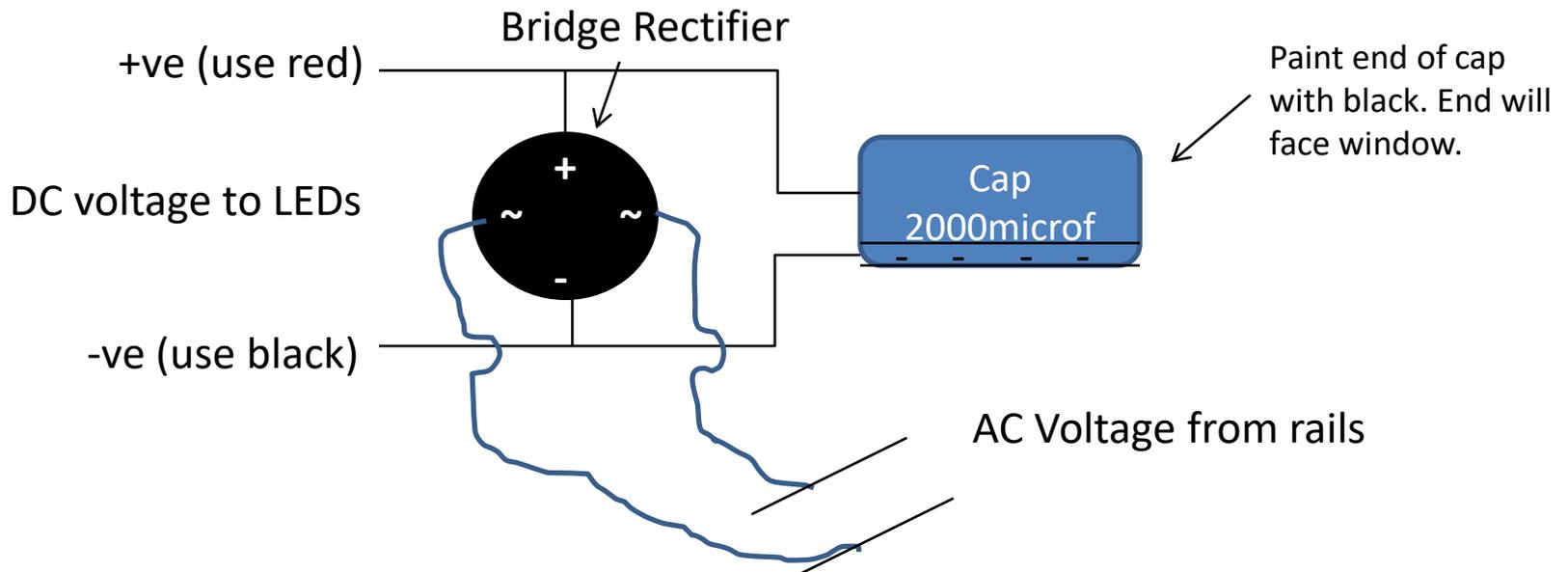
Remove wheel sets, File top smooth



Glue (epoxy) contact wiper on top of truck cross member, insert wheels and bend wipers back out



Capacitor and Bridge Rectifier circuit



Setting an internal scene



Make a simple scene, bench and seated man
Use styrene. Polystyrene cement for glue.



Make a wall to separate
Cap circuit from scene



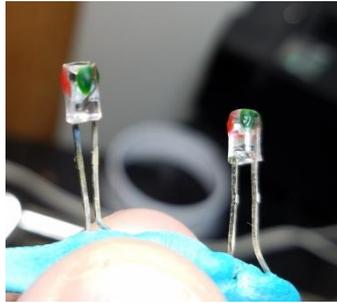
Paint table and wall for a good look

Interior Light



Fix micro LED to styrene cross member – acts as interior light.
Makes light easier to manipulate.
Protect light using UV glue

Making the Marker Lights from scratch!



Use Xmas light LED. Mix Green ink with white glue. Dab twice onto exterior of light. Mix red ink with white glue, dab onto light. Let dry.



Paint light with black paint. Try to make sure green and red patches are circles (not easy!). Test light when dry to see how light proof the paint is. Touch up with more black paint



Drill two holes in caboose body for LED leads

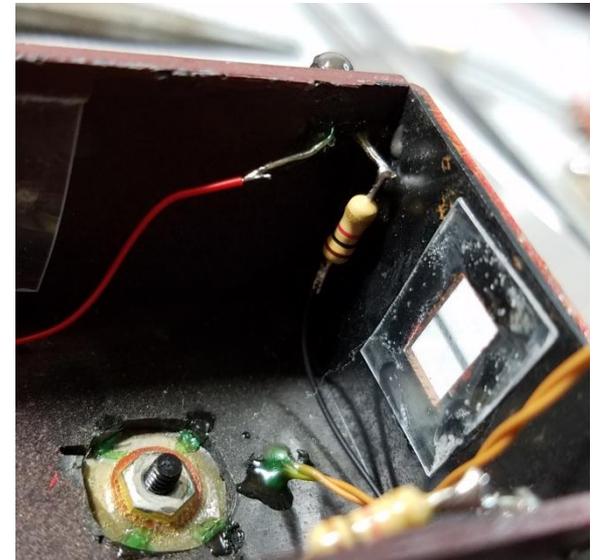


Bend the two leads round the back and insert through holes

Wiring the marker lights inside

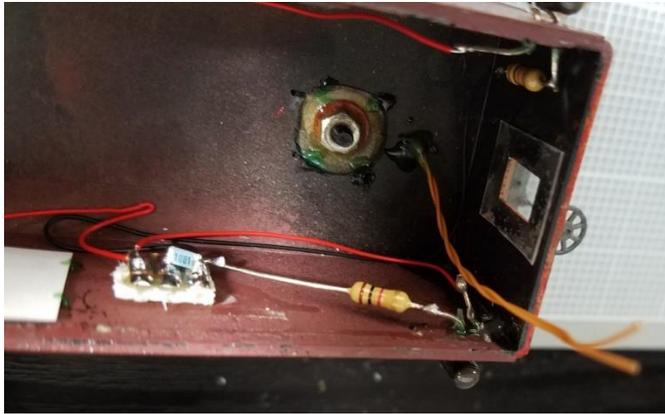


The long LED lead is the +ve. Bend round to allow clearance for Capacitor circuit.

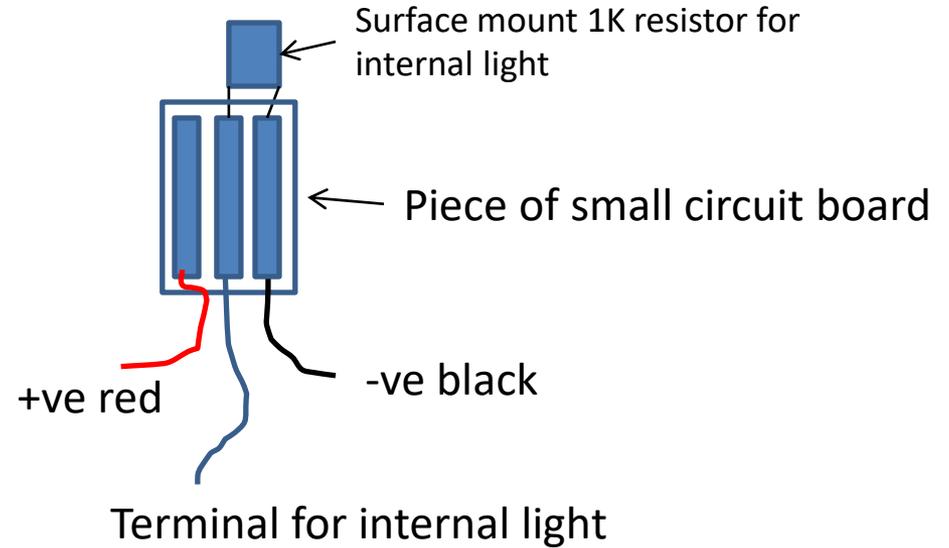


Solder connecting wires. Use red wire for the +ve. Attach a 1K resistor to the -ve side of the LED. Attach black wire.

Tips for making wiring easier



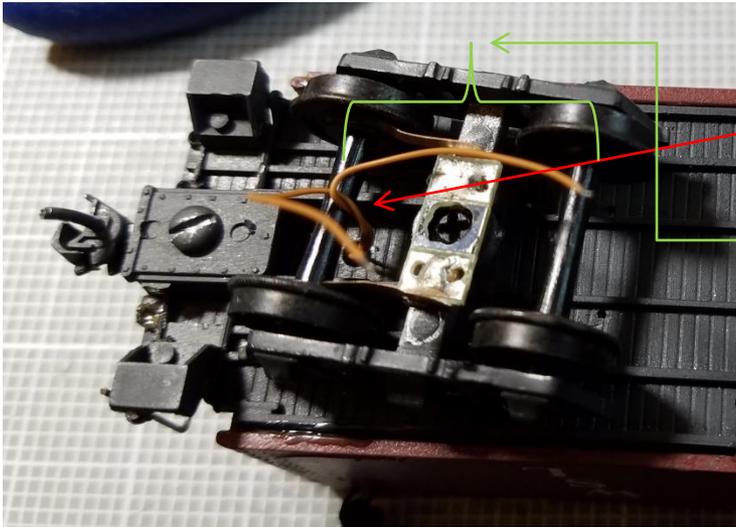
The trick to soldering wires in tight places is to stabilize the solder points as much as possible. A tiny piece of circuit board is useful. Glue first, then add solder points. Wires/resistors can be added, one hand for the wire, one for soldering iron.



Add the capacitor circuit, glue down using epoxy and bullfrog snot.



Connecting the pickups

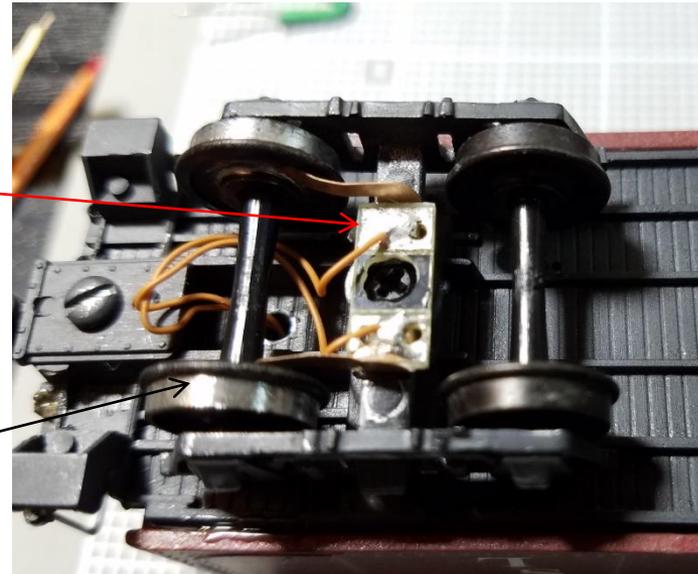


Thread two wires through hole in base and connect with AC feed to cap circuit

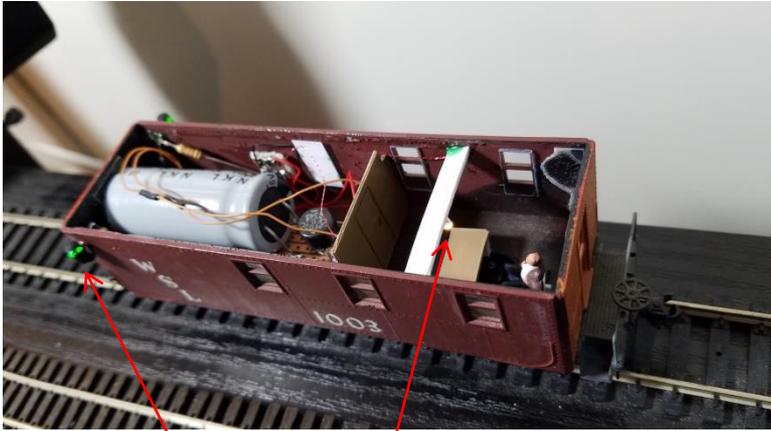
Allow a reasonable length of wire between hole and pick up connection

Solder wires onto the pads on pick up unit

The wheels I used are nasty Kadee ones, please clean off surface black paint



Finishing Off



Lights work!

Test the set up before putting the roof on
Fold the wires over so they do not snag

Despite only one pick up either side, the capacitor compensates.

Wires folded

