

# Safety for our Model Ts & for Driver & Passengers.

We talk about making our Ts mechanically reliable & safe but we often overlook the guy coming up from behind. We travel at say 35 MPH, a safe speed for the T considering the inefficient brake system. It is what it is & we drive with that in mind. So if we are traveling at 35 MPH & a vehicle approaching from behind at say 60 MPH that's a closing speed of 25 MPH. That means the vehicle is closing in at 36.666 ft/sec. At 200 ft out the vehicle will be on you in 5.45 sec. Let's hope he sees you!

So how can we make sure we are doing our best to get the attention of others approaching us at higher speeds? The most obvious way is to have warning lights on the rear of our T bright enough that they show up on the brightest sunny day, as that is when we do most of our driving.

Some use a reflective triangle, some people use a strobe light, some use lights with incandescent bulbs & the latest way is to use LED lights.

Personally I think the LED is the most cost effective for the end result. LED bulbs can be found in all shapes, sizes & connection configurations that will replace the original incandescent bulbs..

So 12volt LEDs are the most common although 6volt can be found. There are several approaches to making you & your T safer. I believe I am correct in saying the Model T only ever had one rear light, so we should consider adding a second light. However the original rear light being kerosene powered also has a very dark red lens & even with the brightest LED does not show up to well.

So the next step is to find two rear lights such as those from the Model A, maybe not period correct but close. These you can either find LED bulbs that will plug straight in to the original lamp holder or you can find an LED unit that will replace the original red lens giving you super bright LED Stop & Tail lights. There are many other options that you could find I am sure but I have recently used these units on my Speedster & with a little modification you can turn the unit into a Stop/Side light & a Turn Signal light & Hazard.

The minimum I would recommend is to have Stop Lights & Side Lights (marker lights). With this option a small 12 volt 8 to 10 amp hour battery can be added to the car & would only need charging occasionally, depending on your driving habits.

The second option would be to modify the Model A LED unit as follows so that you can add Turn Signals & Hazard Lights. These units can be found with all Red or Red & Amber LEDs.

The following shows the differences & how to modify them.

## **THREE GOLDEN RULES.**

1. Use the correct Flasher Unit Electronic Flasher Unit **'EP35 Novita From AutoZone'**  
**You will not need load resistors.**
2. Run the ground connection from each light unit directly to the negative terminal of the battery'
3. Never use the frame as a ground. Do not connect the battery negative connection to the frame.

## Model A Rear Light LED lens's as they come out of the box.



Photo #1

Phot #2

Photo #3

Photo #4

Photo #1 Rear view of Red Red Lens

Photo #2 Front view of Red Red Lens

Photo #3 Rear view of Red Amber Lens

Photo #4 Front View of Red Amber Lens

### Connections:

Top large lens - white 0v Red 12v

Red jumper between upper & lower lens

Small lower lens - White 0v Black 12

Small connector - White 0v Black 12v

### Connections:

Top large lens - white 0v Red 12v

Green jumper between upper & lower lens

Small Lower Lens - White 0v Black 12v

Small Connector - White 0v Black 12v

Do a Google search to find best prices:

FTL2831RA-R For 12v neg ground Red Amber lens.

FTL2831LED -R For 12v neg ground Red Red Lens.

Also Google Model A tail lights.

**These Instructions are to modify the Amber / Red LED Unit.**

**First step:**

Cut off the connectors. As the Model T Ignition & Magneto are noisy & not friendly I have a golden rule & that is take the return line back to the 0v (grnd ) on the battery. Do not use the Frame.

**Second step:**

Join the two large white wires One from the Top Lens & the other from the Lower Lens together. This is the 0v (grnd).

Cut the Green Link wire 1/2" from the Top Lens & insulate with heatshrink.

Insulate seperatly the thin Black & White wires these are not used.

**You should now have four wires:**

White 0volt (grnd).

Black Wire - Side Light (Marker) Lower Red Lens.

Green Wire - Stop Light Lower Red Lens.

Red Wire - Turn Signal. Amber Upper Lens.

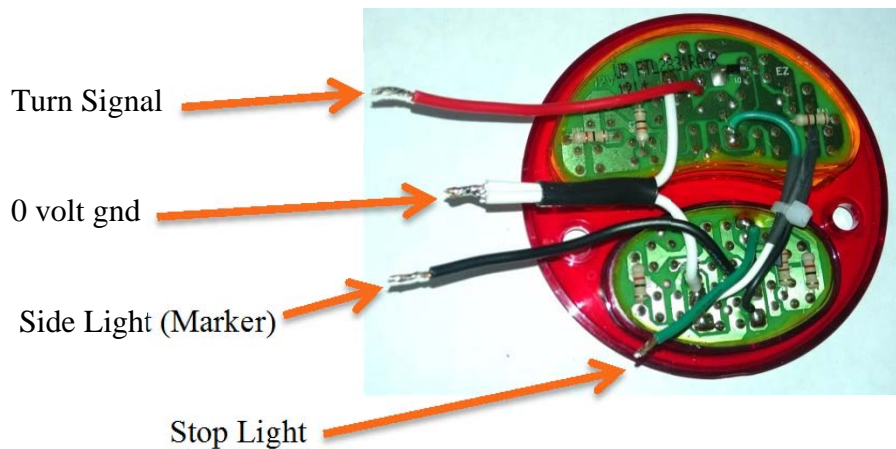


Photo #5 Amber Red LED Unit

**These Instructions to modify the Red / Red LED Unit.**

**First step :**

Cut off the connectors. As the Model T Ignition & Magneto are noisy & not friendly I have a golden rule & that is take the return line back to the 0v (gnd ) on the battery. Do not use the Frame.

**Second step:**

Join the two large white wires one from the Top Lens & the other from the Lower Lens together. This is the 0v (gnd).

Cut the Red Link wire in half.

The half from the Top Lens solder a 327 ohm resistor on the end. (As per Photo #6)

Insulate separately the thin Black & White wires from the lower Lens as these are not used.

Insulate the thick Black wire from the lower Lens as this is not used.

**You should now have four wires:**

White 0volt (gnd).

Thick Red Wire from the upper Lens – Stop Light

Thin Red Wire from the upper Lens with resistor – Side Light

Thin Red Wire from the Lower Lens – Turn Signal

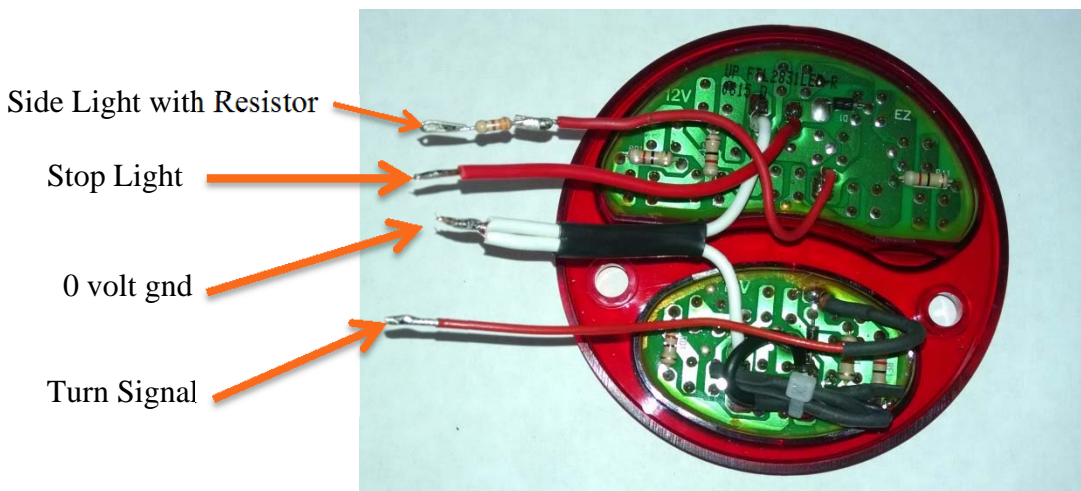


Photo #6 Red Red LED unit

## Next step is to consider the wiring on the car.

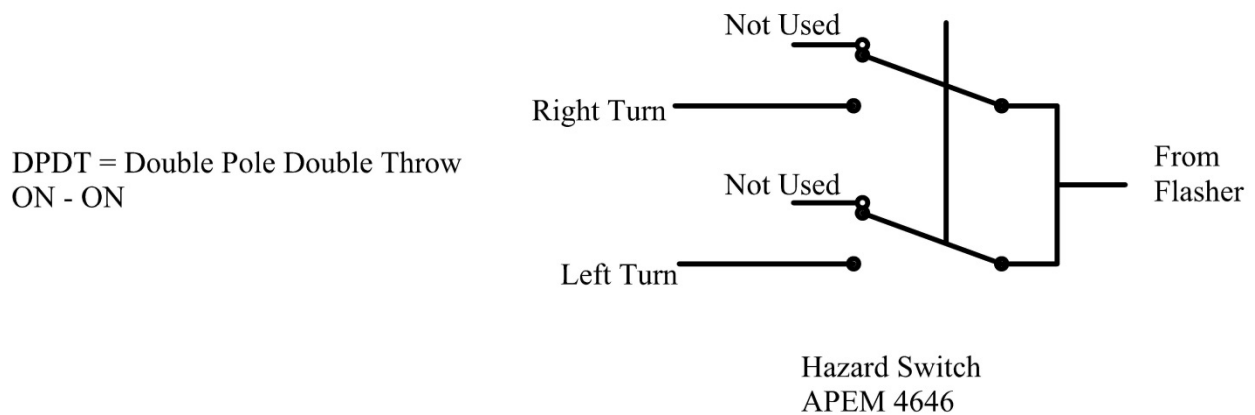
Below is a schematic for Switches & Electronic Flasher that controls Turn Signal & Hazard lights.

Two Switches are used.

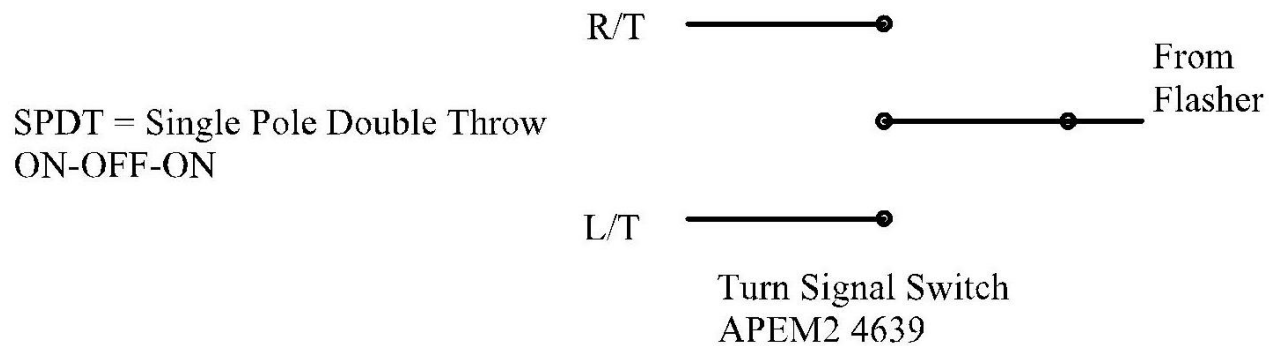
1. A three position ON-OFF-ON SPDT for the turn Signal Left & Right.
2. A two Position ON-ON DPDT for the Hazard Lights.

Let's explain:

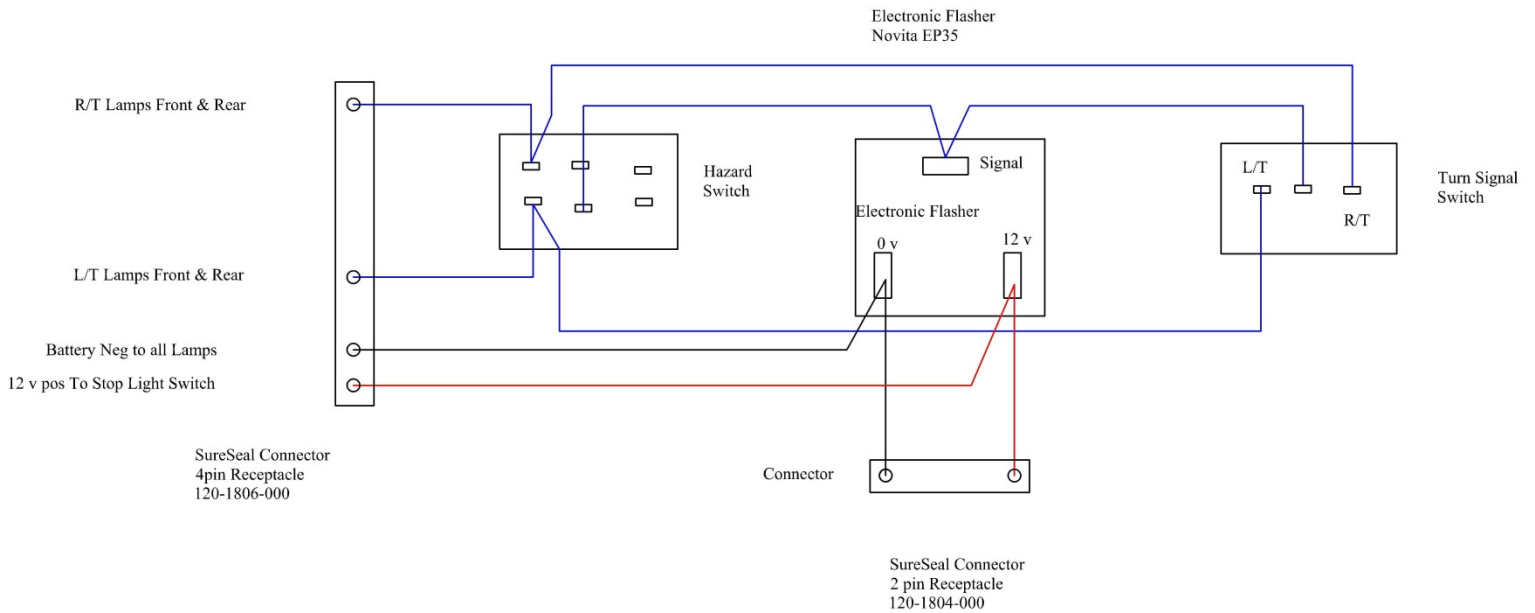
**Hazard Light Switch DPDT = Double Pole Double Throw.**



**Turn Signal Switch SPDT = Single Pole Double Throw.**



# Schematic showing connection of Switches & Electronic Flasher Unit



## Recommended Parts List

Qty	Description	Part #	Manufacture	Supplier
1	Electronic Flasher Unit	EP35	Novita	AutoZone
1	SPDT Toggle Switch	APEM2 4639	APEM	Digikey Electronics
1	DPDT Toggle Switch	APEM 4646	APEM	Digikey Electronics
1	4 Pin water proof con	120-1806-000	Sureseal	Digikey Electronics
1	2 Pin water proof con	120-1804-000	Sureseal	Digikey Electronics