REAR FOG LIGHT CONTROLLER WITH DELAY

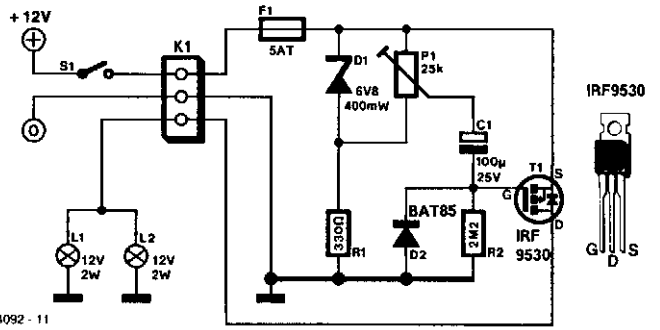

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Fig. 11-2

We assume that most of our readers are thoughtful drivers who do not switch on their rear fog lights when closely followed by other traffic. Following drivers (for an instant) will think that you are braking (although they have seen no reason for your doing so) and thus slam on their brakes as well. This could cause a very dangerous situation. Avoid a potentially dangerous action and install the rear fog light delay circuit, presented here.

Switch S1 is the on/off control for rear fog lights L1 and L2. As soon as this switch is closed, the gate-source voltage (Vgs) of MOSFET T1 will become more and more negative. Thus, the IC will conduct harder and harder. This in turn causes the brightness of the lights to gradually become brighter. Maximum brightness is reached after a delay of about 20 seconds, which is determined by time constant R2/C1.

The gate of T1 can be given a bias by preset P1. This provides compensation for the initial period after the lights are switched on and the lamps do not light, because they need hundreds of milliamperes before they can do so. With P1 set correctly, the lamps will light, albeit weakly, and immediately the control switch is closed. The gate potential is then equal to the voltage at the wiper of P1 (remember that C1 is then still discharged).

Although the dissipation of T1 is a maximum during the transitional period (between switch on and the lamps lighting brightly), the heatsink required is calculated on the basis of the dissipation when the lamps light brightly.