

FBI siren with flashing light

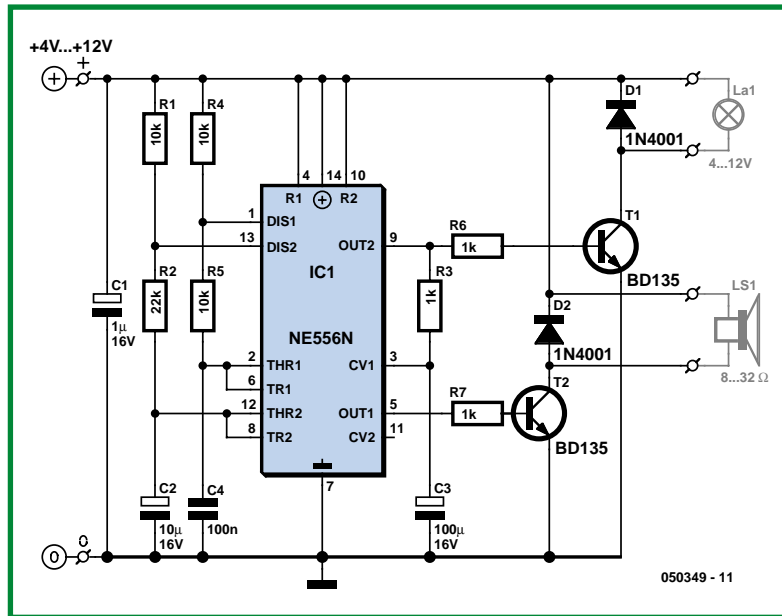
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This ultra-simple circuit will produce the familiar sound of sirens used by US police cars on emergency calls. A small lamp will also flash synchronously with the siren sound. The circuit is capable of powering loads greater than 1 A for one or more lamps or a powerful loudspeaker, the kit producing quite a bit of noise and light.

The circuit is built from two astable multivibrators, in this case the familiar 555 of which two are present in an NE556 case. Of course, you are free to use two 555s if that suits you better. Both timer ICs are configured to operate as astable multivibrators.

The first timer is configured with R1, R2 and C2 to supply a rectangular signal of about 2 Hz at pin 9. The lamp is switched on and off by way of power transis-

tor T1. The second 555 is configured using R4, R5 and C5, and supplies a square wave at pin 5 that drives the loudspeaker. The toggling voltage at the output of the first timer (pin 9) causes electrolytic capacitor C3 to be partly charged and discharged, periodically, via resistor R3. C3 is connected to the control input of the second timer (pin 3), causing it to work as a VCO (voltage controlled amplifier). The upshot is that the frequency of the square wave applied to the loudspeaker rises and falls periodically, rendering a good imitation of the wailing sound of the US



police car siren (we hear too often in movies). The small number of dead-standard components used enables

this circuit to be built on Veroboard without problems.

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