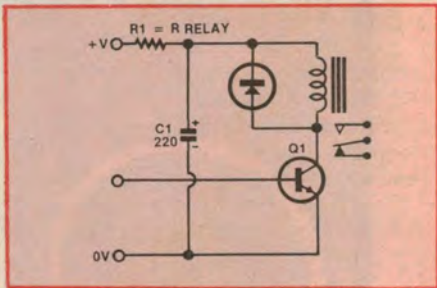


## Relay power saver

Have you ever had the problem that you need a relay for a project, and the only one you have is unsuitable? Either it is designed for intermittent use only, and overheats if it is on for more than a few minutes, or it uses too much power. If you try simply adding a series resistor, the relay may not turn on reliably.

While not new, this simple circuit overcomes these problems by the addition of an electrolytic capacitor able to store enough power to trip the relay. It is based on the principle that the current needed to keep a relay on once tripped is only about half the current required to trip it in the first place. R1 reduces the current to half (and the power dissipation in the relay to a quarter), while C1



stores charge during the relay off period. When Q1 is turned on, C1 discharges through Q1 and the relay, providing enough of a boost to get the contacts closed. In practice, the value of C1 may need some adjustment for the relay used.

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