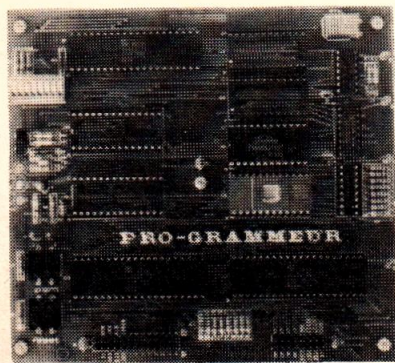


SELF-SUFFICIENT EPROM COPIER/PRO-GRAMMER



Low-Cost Mains Time-Delay Switch Alex Gray

This circuit offers a cheap, reliable replacement for mechanical and pneumatic time-delay switches such as used for corridor lights. It can also be used to protect equipment which is upset by power being applied and removed too rapidly.

When the switch is closed and reopened, the load is switched on for a preset time - $1.1R_1C_2$. During this period, the circuit also switches on its own power. At the end of the time-delay both the load and the circuit are disconnected. In the event of a circuit failure, the push button will still allow the load to be switched on for safety (e.g. in corridor lighting).

If the switch is a normal latching type, the load will be powered as long as the switch is closed, subject to a minimum period. This prevents rapid cycling of the power on and off and may be used to protect equipment susceptible to damage from this situation.

The usual precautions with AC wiring must be observed. In particular, remember that, although the 555 is on a 12V supply, that supply is superimposed on 120 V AC above ground. The switch and the 470nF capacitor must be types designed for high voltage operation.