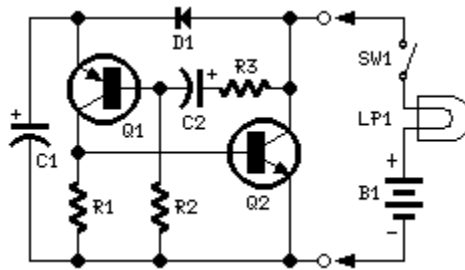


Two-wire Lamp Flasher

**Ideal to operate 3 to 24V DC existing on-circuit lamps
LED operation is also possible**

Circuit diagram:



Parts:

R1	_____6K8	1/4W Resistor
R2	_____270K	1/4W Resistor
R3	_____22K	1/4W Resistor
C1	_____220 μ F	25V Electrolytic Capacitor
C2	_____10 μ F	25V Electrolytic Capacitor
D1	_____1N4002	100V 1A Diode
Q1	_____BC557	45V 100mA PNP Transistor
Q2	_____BD139	80V 1.5A NPN Transistor
LP1	_____Existing filament Lamp:	any type in the range 3-24V 10W max.
SW1	_____Existing On-Off switch	
B1	_____Existing V DC source:	any type in the range 3-24V suited to the lamp adopted

Device purpose:

This circuit has been designed to provide that continuous light lamps already wired into a circuit, become flashing. Simply insert the circuit between existing lamp and negative supply.

Especially suited for car or panel pilot lights, this device can drive lamps up to 10W.

Notes:

- | Break lamp(s) to negative supply connection(s), then insert the circuit between existing lamp(s) connection(s) and negative supply (respecting polarities!).
 - | C1 value can be varied from 100 to 1000 μ F or higher, in order to change flashing frequency.
 - | Although rather oversized, this circuit can also drive any LED, providing a suitable resistor is fitted in series with the light emitting device.
 - | The resistor should be in the range 47R to 2K2, depending on supply voltage.
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