

# MOBILE PHONE BATTERY CHARGER



T.K. HAREENDRAN

Mobile phone chargers available in the market are quite expensive. The circuit presented here comes as a low-cost alternative to charge mobile telephones/battery packs with a rating of

7.2 volts, such as Nokia 6110/6150. The 220-240V AC mains supply is downconverted to 9V AC by transformer X1. The transformer output is rectified by diodes D1 through D4 wired in bridge configuration and the positive DC supply is directly connected to the charger's output contact, while the negative terminal is connected through current limiting resistor R2.

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An external DC supply source (for instance, from a vehicle battery) can also be used to energise the charger, where resistor R4, after polarity protection diode D5, limits the input current to a safe value. The 3-terminal positive voltage regulator LM7806 (IC1) provides a constant voltage output of 7.8V DC since LED1 connected between the common terminal (pin 2) and ground rail of IC1 raises the output voltage to 7.8V DC. LED1 also serves as a power indicator for the external DC supply.

After constructing the circuit on a veroboard, enclose it in a suitable cabinet. A small heat sink is recommended for IC1.

