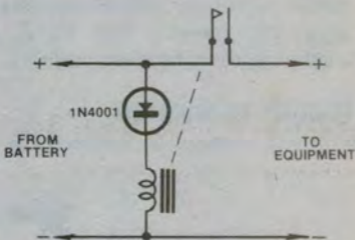


## **Reverse polarity protection circuit**

Portable equipment, such as transceivers, TV receivers etc, designed for use with 12V car electrical systems, require some form of protection against reversed battery connection. One simple arrangement is a diode in series with one lead, and this is completely effective but has the disadvantage that between



0.6 and 1V can be lost across the diode.

This can be avoided by connecting the diode across the input terminals, with suitable polarity, so that it blows the fuse with reversed connection. This is effective and does not introduce any loss, but the blown fuse can be very inconvenient.

The following approach has neither disadvantage. A relay is connected across the input terminals, in series with a diode, so that it operates only with correct connection. The main circuit to the equipment is then wired via the relay's normally open contacts.

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