

# Erratum - K 7214 ESR Meter

Please refer to the following correction. Under the section "Improving battery life", the suggested resistor to replacing is R25 (not R26), with a value of 47k (not 10k) as shown in the original text.

## Optional Modifications

### Heavy-duty protection

To provide greater protection against connection to charged electrolytics, some kit builders have connected an inverse-parallel pair of 1N5404 (or similar) high-power diodes between the test lead sockets. So if you're the kind who's likely to connect the meter to the 120 $\mu$ F input filter capacitor of a 240V-powered switching power supply without checking that it's been properly discharged, this modification is for you.

Reportedly, this protects the meter quite well, although it can result in the probe tips being blown off by large charged capacitors. The resulting surge current can also damage the charged capacitor and the power diodes themselves.

However, without the diodes, the resulting >600A current spike destroys the microcontroller (IC2) and damages C6.

### Improving battery life

If you'd like to get even more battery life out of the meter (and are feeling a bit adventurous), you can replace IC1 (78L05) with an LP2950CZ-5.0 and replace R26 (10k $\Omega$ ) with a 27k $\Omega$  resistor. That done, adjust trimpot VR1 so that the low battery warning triggers at 5.6V instead of the original 7.0V. (Thanks to G. Freeman, South Australia for this idea which was published in the August 1998 issue of "Electronics Australia" magazine).

Should say  
47k

Should say R25

### Disabling automatic switch-off

If you'd like to power the meter from an external 9V DC supply and have it operating continuously, just disconnect one end of R25 (47k $\Omega$ ). This disables the automatic switch-off function but note that the low battery warning will no longer work if you do this.

Of course, you can easily reconnect R25 if you change your mind in the future.

For more modifications, including a buzzer to help you discriminate between good and bad electrolytics without having to look at the meter, go to my ESR Meter Hints web page at

<http://members.ozemail.com.au/~bobpar/esrhints.htm>