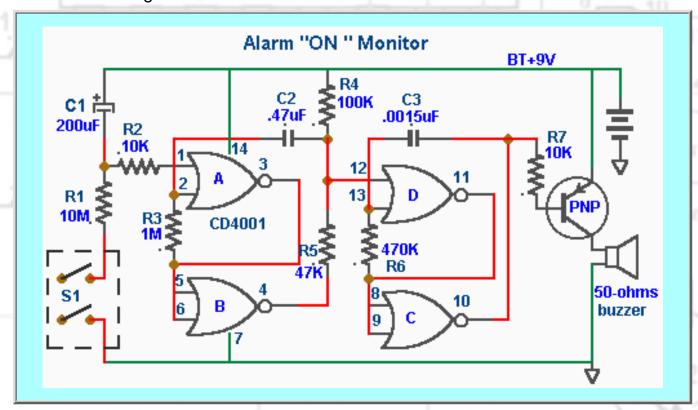


## Handy Dandy #5

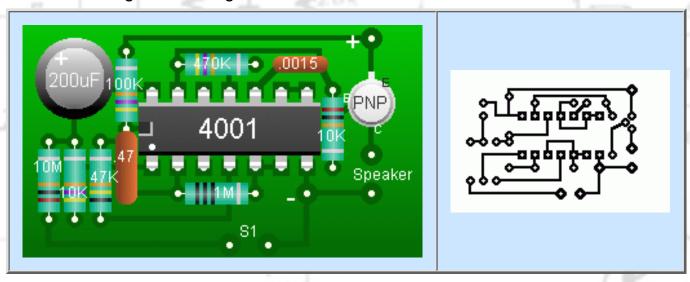
## **Download # 5 in PDF**

As I worked at some project I made constant use of my Bench DMM which has LCD readout. When finished I would turn off the master switch for the equipment in use but always forgot to turn off the DMM and realized several mornings that it had been on all night. I resolved to do something about that. I developed this little Alarm circuit that warns me every 30 mins that my DMM is on. To reset turn the DMM off and turn it on again. I think actually I should have designed for a delay of one hour. Anyway it keeps you alert and if it so happened that I leave the room without turning the DMM off it will alert me to the fact that I forgot to turn it off.



This a physical positioning of the components on an area of about 1"x1/2" of perf. board. Use a Mini 12VDC Piezo buzzer PC mount rated at 85dB or better (RadioShack), it can be situated on the circuit board, observe the polarity on the buzzer. You can increase the delay by using a larger Capacitor(C1), the rating of the capacitor does not need to be greater than 12VDC. An LED was used connected in series with a 1K res. from the collector of Q1 to ground and mounted on the DMM face, but I found it unnecessary, the alarm should be enough. The circuit takes its supply voltage from the 9V Batt. The current used

during the timing mode is less then 1 mA, most of it drawn from the battery when the alarm is on. Open the enclosure of the instrument that you wish to monitor and connect at the switch as shown from the "ON" side of the "DC" supply. As you can see as soon as the power in turned ON the timer is activated through the 10Meg resistor.



As an option this circuit can be used to monitor just about any other type of instruments as long as the supply does not exceed 15 volts. The battery can be eliminated and the power taken from the positive of S1, ensure that the ground side is also connected from the same source.

## <u>Home</u>

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