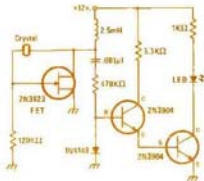


6 Crystal checker

Most hams, and many experimenters, have a small box filled with assorted crystals, some good, some bad. One way of checking the crystals is to use them. But, if the circuit doesn't work, you can't be sure if the crystal is dead, or just incompatible with your electronics. What you need is a *universal checker*.

The circuit is not more than a simple Pierce oscillator with an LED go-no go display. One big advantage to the Pierce circuit is that it requires a good crystal to work. Marginal crystals won't do it.

The ME checker works best with crystals having fundamental frequencies in the seven to eight megahertz range. Since the vast majority of crystals used by hams have fundamentals in this general range, the checker should cover most crystals in your junk box.



Construction is simple, and parts layout is not critical. You may want to parallel different crystal sockets to accommodate the different pin size and spacings you have on hand. The two NPN transistors in the diagram are 2N3904s, but any small signal NPN will work.