

TOUCH-SENSITIVE KEYBOARD

There's no better way to add an exotic touch to a piece of electronic equipment than by employing touch-sensitive switching. The set-up diagrammed here will enable you to employ one, two or however many touch-sensitive switches you need. Electronic musicians, for example, may wish to use 37 units in a 3-octave keyboard.

Each separate unit consists of a touch plate, a silicon-diode detector system, and a 3140 op amp that functions as a voltage comparator. Finger contact with a touch plate feeds 60-Hz power-line radiation from your body, which acts as an antenna, to the detector system. If the rectified AC exceeds 1.2 volts, the 3140's output swings high and remains there for as long as you touch the plate. All stages use the .6-volt drop across D1 as a reference voltage. NOTE: If

you're running a battery-operated device in Dogpatch, this touch-switching arrangement may not work. Most homes, however, have sufficient 60-Hz radiation to trigger these sensitive switches.

PARTS LIST FOR TOUCH-SENSITIVE KEYBOARD

- C1**—C4—.01- μ F capacitor
- D1-D5**—1N914 diode
- IC1-IC2**—3140 FET-input op amp
- R1**—820-ohm, resistor
- R2,R4**—10,000,000-ohm, resistor
- R3,R5**—100,000-ohm, resistor
- TP1,TP2**—touch plates (small, aluminum or copper)

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