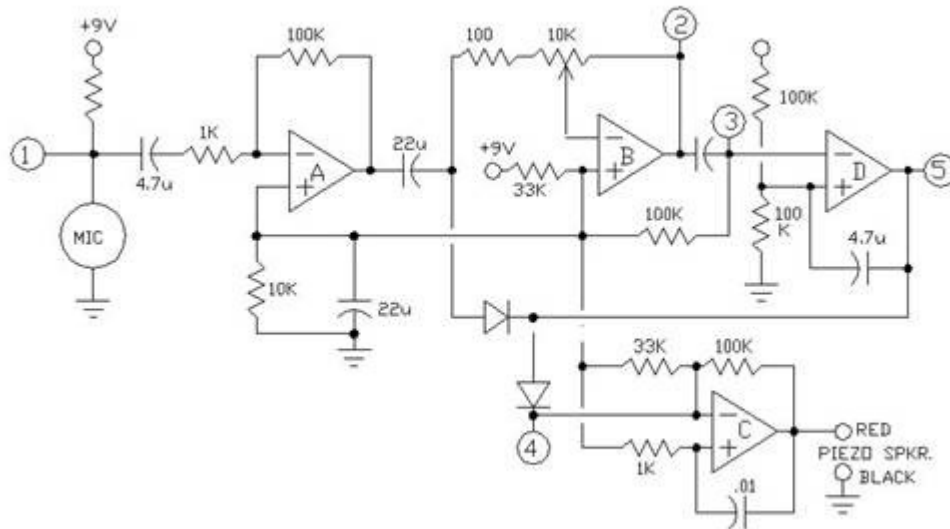# DOG TRAINER/REPLACEMENT

This project was originally designed to train a neighbor's dog not to bark. Returning a small beep for each bark seems to distract the dog's attention. Give the mutt about an hour to wise up during his first lesson. The dog will still bark if he's being chased by an E.T. or a postman, but in most cases, the mindless endless noise is greatly reduced.

The circuit was built around a quad op amp (LM324). Sections A and B form an audio amplifier. The variable 10k pot controls the gain of the signals provided by the microphone.

Section D is a timing circuit which is triggered by the output of the amplifier. When triggered, pin 14 produces a negative-going pulse of about 1/2 second. This pulse enables the audio oscillator while blocking the signals from the microphone.

Section C, the oscillator, produces a tone which drives a piezo speaker.

The parts were picked up at a local Radio Shack ®.

The pulse at point 5 could drive a relay to move heavier objects, such as something to pound on your neighbor's wall when his stereo gets too loud (This circuit can potentially train other stupid things besides dogs).

A dog hears a soft sound and then barks. By connecting the above-mentioned relay to a recording of a dog barking (or of the action of a 12-gauge shotgun chambering a round), you could offer to replace your neighbor's dog. The duration of the pulse can be increased by increasing the 4.7uf capacitor.

By replacing the microphone with some other stimulus at point 1, this circuit could become a general-purpose burglar alarm.

I don't know what you could do with the oscillator. You might use it to modulate a low-power FM transmitter, so you could produce an alarm tone through a nearby FM receiver.

In spite of its versatility, this circuit is very gentle on battery drain, and can be powered by anything between about 5 and 12 volts. This makes it a good candidate for remote or camping alarm applications.