tronics, if for no other reason than for the ease of mounting components on the circuit board.)

HOW IT WORKS

While you don't have to understand the following theory behind the Quadrafuzz, the circuit demonstrates a lot of basic principles of musical electronics. So try to get through the schematic shown in Figs. 1 and 2 and pick up what you can; I hope you find it interesting and educational. Incidentally, Fig. 10-13 includes the input, output, tone control, and footswitch stages; Fig. 10-14 shows the four filter and distortion sections. Important

Fig. 10-13 Quadrafuzz input, output, tone control, and footswitch stages.

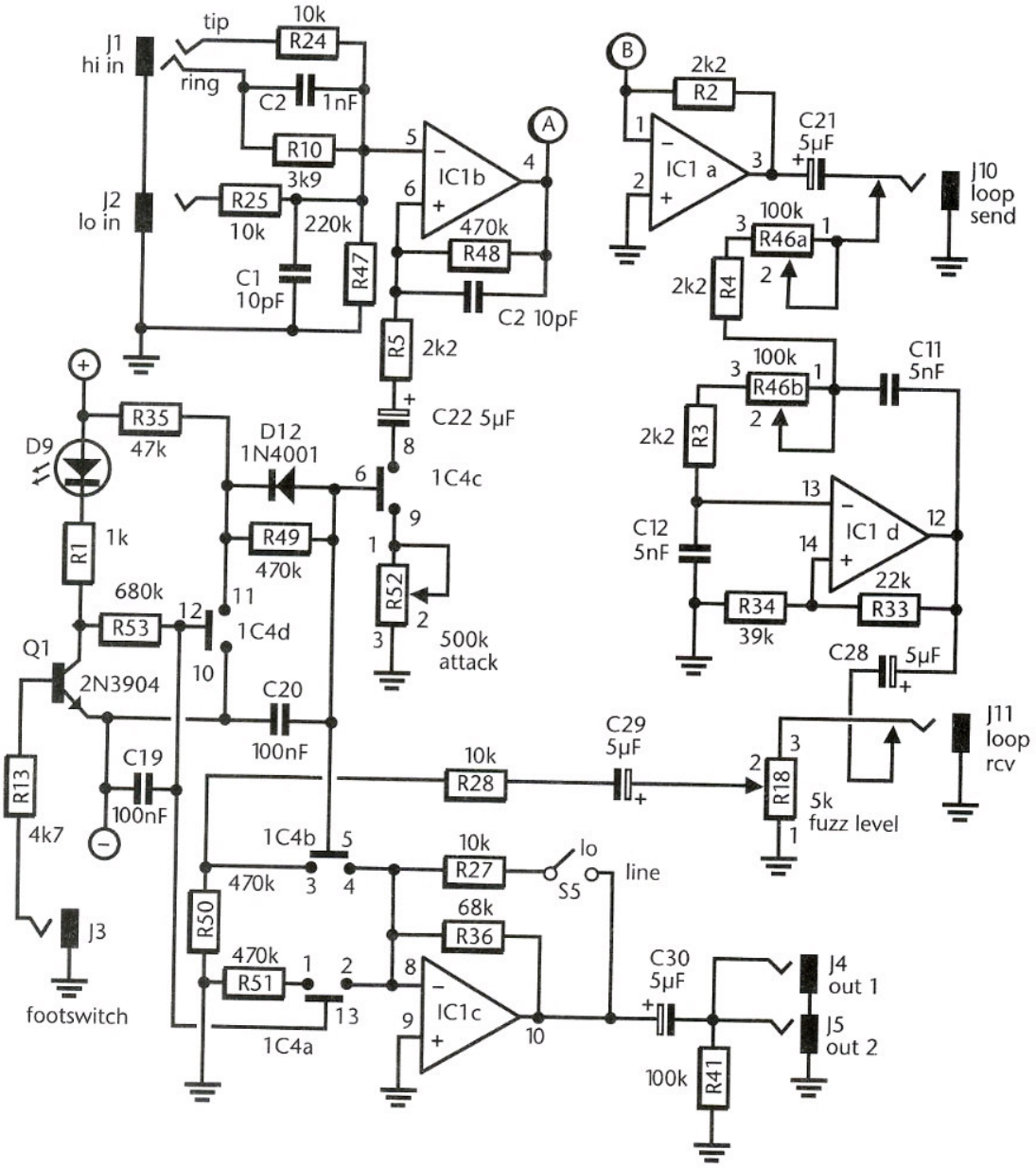
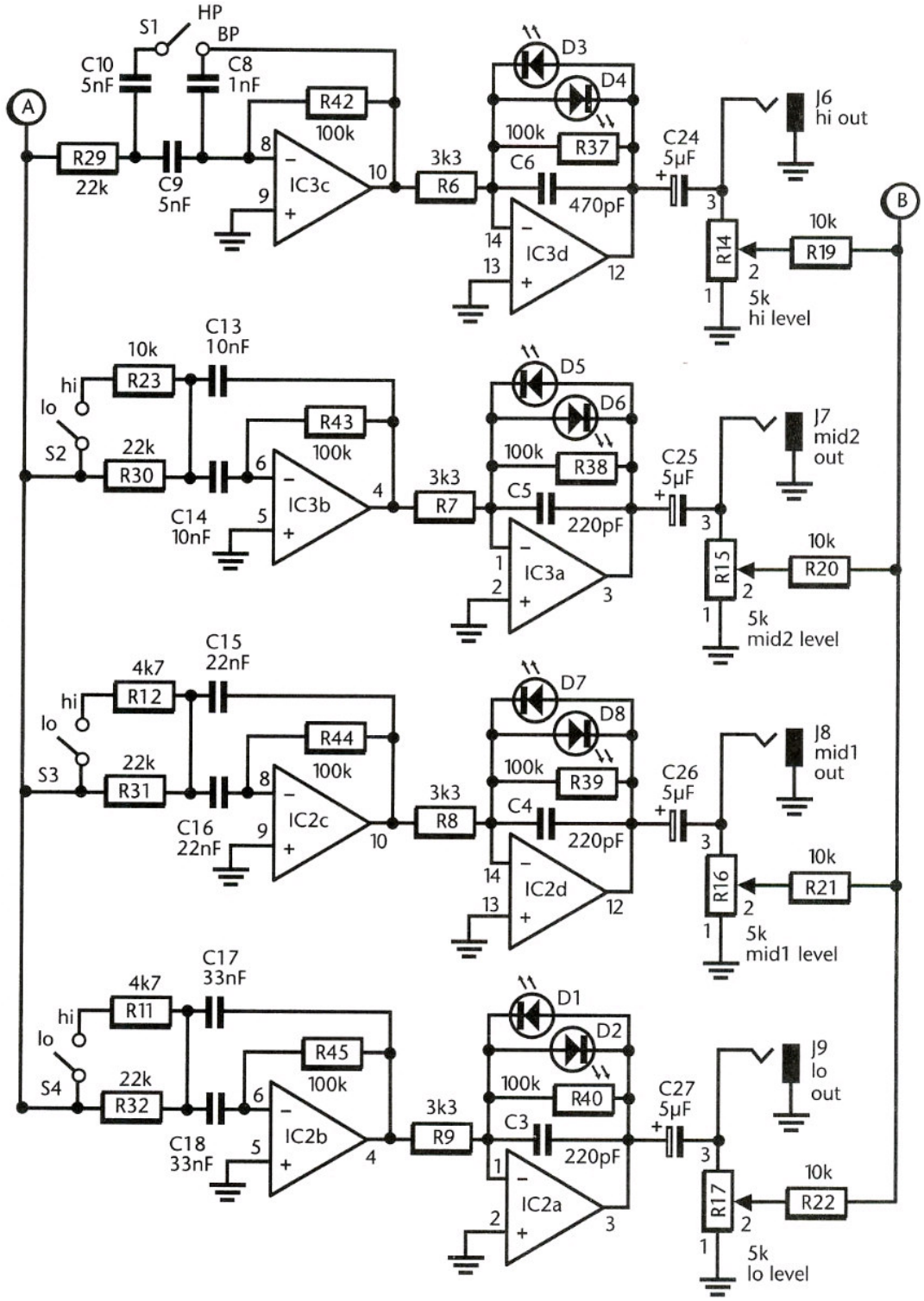


Fig. 10-14
Quadrafuzz filter and distortion sections.

note: the points labeled A and B on each schematic connect together.

The op amp labeled IC1b (integrated circuit 1b) is a preamp that accepts either a high-level input (via J1) or a low-level input (via J2). The Attack control (R52) sets IC1b's gain from a factor of 2 to 200. At higher attack settings, this stage introduces some



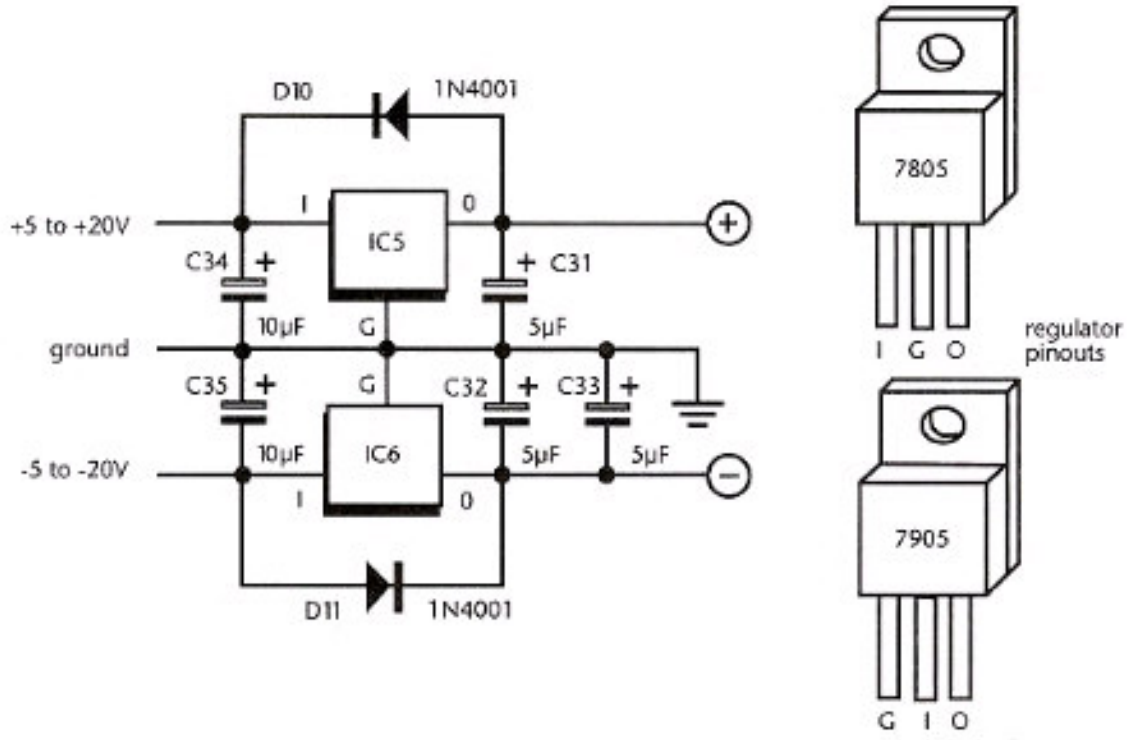


Fig. 10-15 Quadrafuzz power regulators and pinouts.

bypassed, switch IC4c is open (thereby setting the preamp to minimum gain), and IC4a is closed (allowing the preamp output to feed into IC1c). When bypassed, IC4b is also open.

With the fuzz effect active, IC4c closes to provide for adjustment of IC1b's gain, IC4a opens to cut off the straight signal, and IC4b closes to let through the distorted signal. Diode D9, the status LED, is an integral part of the switching circuit. If for some reason you don't want to use an LED, then replace it with a 10k resistor.

Integrated circuits IC5 and IC6 in Fig. 10-15 are regulators that provide a stable power source to the Quadrafuzz. They accept a bipolar supply voltage in the range of ±5 to ±20 volts, and regulate it to a consistent ±5 volts DC. Diodes D10 and D11 provide protection if the regulators' outputs exceed their input voltages (a condition that could otherwise damage the chips).

So much for theory, now for practice.

CONSTRUCTION

The Quadrafuzz is a high-gain, low-level, high-input impedance device; it has just the right features to produce a growling mass of feedback and hum unless you wire things carefully. Since this