ULTRASONIC BURGLAR ALARM (April 1987, File: 3/AU/51): A 4.7k resistor should be added across the frequency adjustment potentiometer (VR2). This reduces the frequency range of the transmitter and greatly simplifies the frequency adjustment procedure. The transmitter frequency will be approximately 40kHz with VR2 set to its mechanical centre adjustment. Also the alarm has a tendency to trigger from a drop in supply voltage. This was initially considered an advantage but in practice proved a disadvantage. The problem can be solved by supplying the alarm from a simple 9V voltage regulator circuit. Note that a kit for a suitable regulator (including small PCB) is available from Oatley electronics for $4 including postage and packing.

If for any reason readers find that sensitivity of this project is insufficient it can be easily increased. This is done by reducing the value of R2 from 47k to 27k. A further increase in gain is possible by also reducing the value of R5 to 27k ohm.