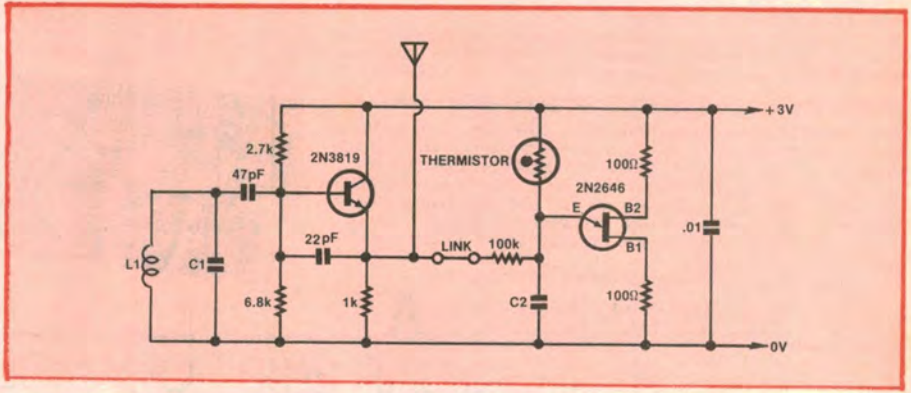
# Bugging a lizard on the FM broadcast band

The circuit shown was developed as an animal (lizard in this case) tracking transmitter, with a temperature information modulator. It operates in the FM broadcast band (88-108MHz).

The transmitter itself is built about the 2N3819 transistor and is a simple oscillator circuit with the frequency being determined by the tuned circuit L1, C1. Stray capacitances and inductances will also effect the output frequency and the effect of these is minimised by careful construction and keeping component leads as short as possible.

Resistors must be carbon or metal film type – wire wound types will act as inductors. Capacitors must be low loss, sub-miniature, plate ceramic types. The aerial was a 50cm length of extra flexible wire. Inductor L1 is three turns of 20g copper wire on a 6mm former, and C1 will be approximately seven to 15pF according to the layout and frequency required.




The temperature sensor/modulator is built around a 2N2646 unijunction wired as an audio frequency relaxation oscillator. The thermistor (T) varies the audio frequency according to the temperature.

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