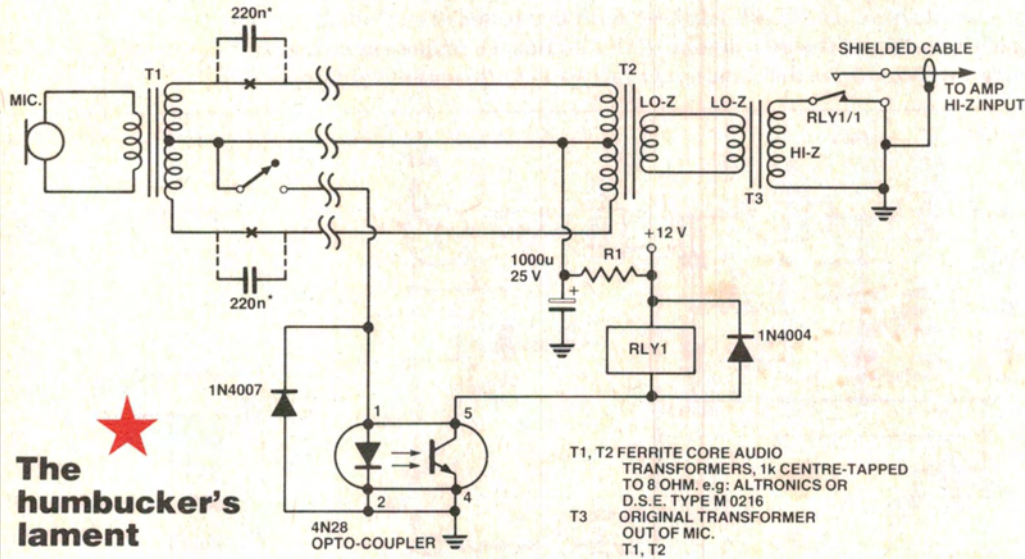

T1, T2 FERRITE CORE AUDIO TRANSFORMERS, 1k CENTRE-TAPPED TO 8 OHM. e.g: ALTRONICS OR D.S.E. TYPE M 0216

T3 ORIGINAL TRANSFORMER OUT OF MIC. T1, T2

*CAPACITORS ONLY NECESSARY IF HUM LOOPS ARE A PROBLEM.

The humbucker's lament

W.C. Gregg, St. Mary's NSW

This idea was invented 'on the spot' when doing a labour of love at a school. A mic was needed in a remote area, some 200 metres distant from the amplifier. Looking around I found an unused telephone-type cable that ran from the room where the amplifier was located to near where the mic needed to be.

The circuit is pretty well self-explanatory. Two low-to-high impedance audio transformers were used at each end of the cable, driven as a balanced line. The centre-tapped hi-Z windings gave me a dc link to do switching with — it's an old remote signalling technique. The switch in the mic was used to drive an opto-coupler to switch a relay, the contacts of which provided mic switching at the amplifier input. Using a relay switched directly via the line causes hum problems from pickup by the relay coil.

The resistor R1 should be adjusted to give about 10-15 mA current through the opto-coupler input. The two 220n capacitors are only necessary if any hum loop develops. Keep all the transformers away from stray magnetic fields. Don't earth the centre-tap wire.

This system has been used at distances up to 1 km. To the naked ear, there is no degradation in frequency response.