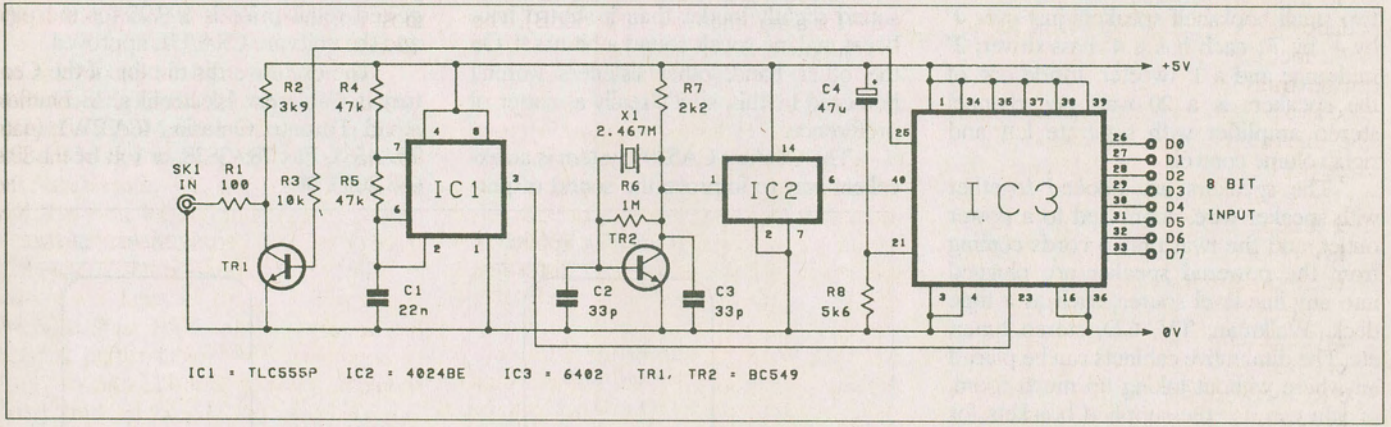
PARALLEL TO SERIAL CONVERTER



This circuit is based on the 6402 UART (IC3). A 4024 (IC2) and TR2 provide a clock circuit that gives a baud rate of 9600. A 555 oscillator is used to provide a continuous stream of pulses to the Transmitter Buffer Register Load input of the UART, and data is transmitted at something approaching the maximum rate possible for 9600 baud. The serial output at SK1 is similar to TTL level rather than the +/-12V of a true RS232 port. Transistors TR1 and 2 can be any general purpose small-signal NPN.

The method of operation is adequate for most purposes, but if necessary an output line from a computer could be used to activate IC3 when required. Note that if a different baud rate is used, the operating frequency of IC1 should be speeded up or slowed down in proportion; the operating frequency of IC1 is inversely proportional to the value of C1. An excessive trigger rate is unlikely to cause any problems with corrupted data, though, since IC3 will almost certainly ignore any excess trigger pulses.

If a low-power 555 is used for IC1, current consumption is only about 10mA. Add another 4mA if a standard 555 is used.