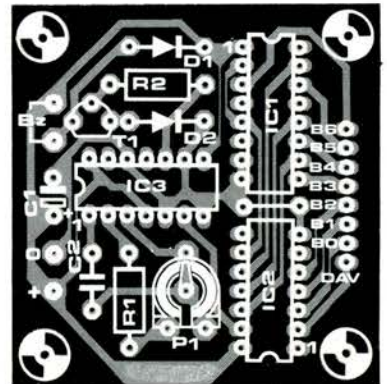
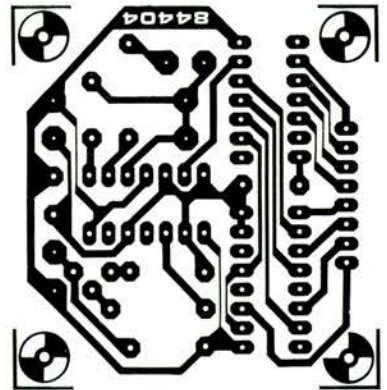


grabs your attention

One of the great things about computers is that no matter what you tell them to do they never complain and always stay quiet. Sometimes, however, it is helpful if a computer can make some noise to catch your attention. In the KB-9 BASIC or Junior BASIC the ASCII character 07 is an 'end of line' indicator, and represents 'BELL' (control + G on the keyboard). The extended Junior does not use this signal, but it can if the circuit shown here is built. The circuit diagram shows just how simple the hardware for this 'bell' is. When the ASCII character 07 (0000 0111) appears on lines B0 . . . B6 (the data output lines of the UART on the Elekterminal) and the DAV (data available, UART pin 19) line is high (indicating that

the whole character has been received) the output of NAND gate N5 goes 'low'. This signal then goes to the TRIGGER input of monostable multivibrator IC3. The external timing components connected to pins 1, 2 and 3 of this 4047B determine the width of its output pulse, and adjusting preset P1 varies this width. The Q output then goes high for a certain length of time and during this time T1 drives the buzzer. The current consumption of the circuit is no more than 20 mA.

The printed circuit board for this circuit is quite small, as could be expected. This is, of course, an advantage when you are trying to squeeze it into what little space there is available in the case of most Elekterminals. Construction is simply a matter of fitting the components onto the board and the only point of note



Parts list

Resistors:
R1 = 390 k
R2 = 12 k
P1 = 1 M preset

Capacitors:
C1 = 1 μ /10 V Ta
C2 = 100 n

Semiconductors:
D1, D2 = 1N4148
T1 = BC 547B
IC1 = 4049
IC2 = 4068
IC3 = 4047B

Miscellaneous:
Bz = 5 . . . 6 V d.c. buzzer

concerns diode D2. This diode may be replaced by a wire bridge if the buzzer volume is too low. The 'software for this bell is just as simple as the hardware. In the KB-9 BASIC or Junior BASIC all it involves is:
PRINT CHR \$(7).

W. Schaij

