37

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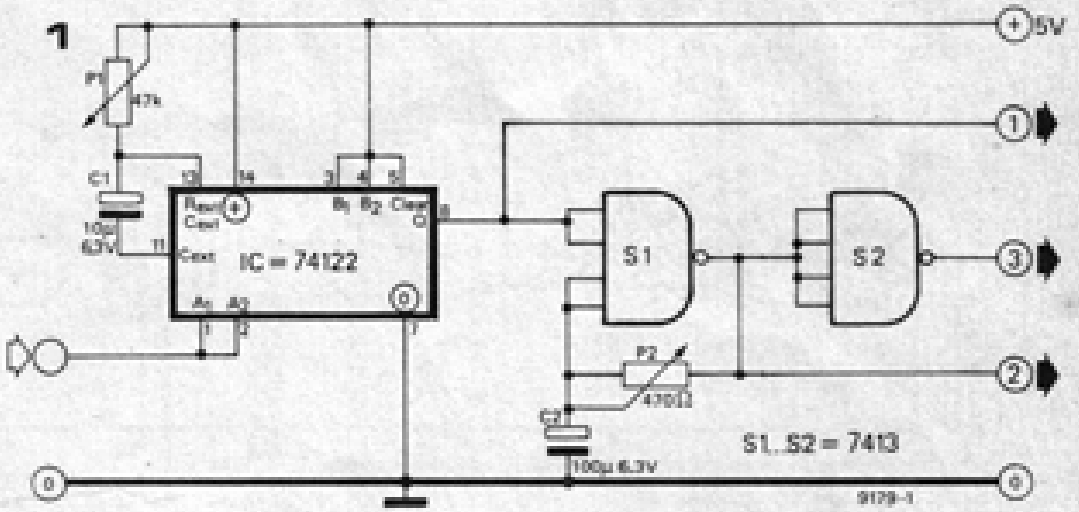
pulse multiplier

This circuit uses a start/stop oscillator and a monostable multivibrator. The monostable is triggered by the trailing edge of the pulse to be multiplied (see pulse train 1 in the diagram). This sets the Schmitt trigger S1 oscillating (2) for a period that can be set by P1. P2 controls the oscillator frequency. In this way, one single incoming pulse generates a well-defined number of outgoing pulses. A further Schmitt trigger S2 is used as a buffer stage and produces the pulse train shown at (3) in the diagram.

P1 must be adjusted to a value permitting the highest number of incoming pulses to be passed on correctly. If the monostable period is too long, the 74122 will act as an unwanted frequency divider. After P1 is set to the correct value, P2 is used to set the desired multiplication coefficient.

The pulse multiplier will find a number of different applications. It will, for instance, permit a low frequency such as heart beats to be counted with reasonable accuracy.

1



2