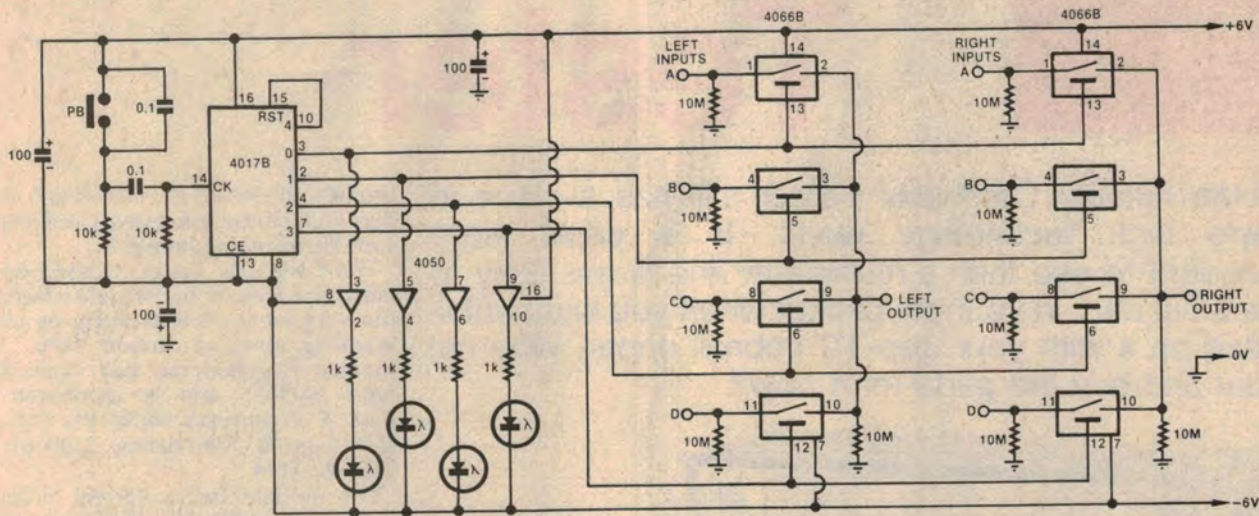


Single Button Sequential Switcher



Here is an idea which permits the selection of any one of four different stereo audio input signals, yet uses only one pushbutton to perform the task. Basis of the idea is the use of two CMOS quad bilateral switches, controlled by a CMOS decade counter set to count to four.

Operation of the pushbutton puts a momentary high on the clock input of the 4017 decade counter, which thus advances one count for each activation of the button. When the count reaches four, the "4" output (pin 10) resets the counter to "0". Outputs "0" to "3" are separately connected to the paralleled control inputs of two 4066 quad SPST switches, such that as the count pro-

gresses from "0" to "3" pairs of "contacts" are made in sequence. The four "output" contacts on each 4066 are connected together, so that each 4066 functions as a four-position single-pole switch.

One 4066 serves to select any one of four "left" inputs to the left output, whilst the other 4066 does likewise for the right inputs and output. Symmetrical power supplies are required, with the maximum peak-to-peak input voltage being limited to just under the total power supply voltage. The inputs and outputs of the 4066s should be ground referenced — hence the $10 \times 10\text{M}\Omega$ resistors. However, if the inputs and outputs are already ground referenced, these

resistors may be omitted. Note that 4066s are intended for low power, low voltage, medium to high circuit impedance switching and must not be used for high voltage, high current switching.

Four units of a 4050 hex non-inverting buffer are paralleled across the four output busses of the 4017, such that each buffer is simultaneously driven with the CMOS switches. The outputs of the buffers are connected to four LED indicators via suitable series resistors. For a 12 volt supply a value of $1.8\text{K}\Omega$ should be about right. For other supply voltages adjust the values as required.

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