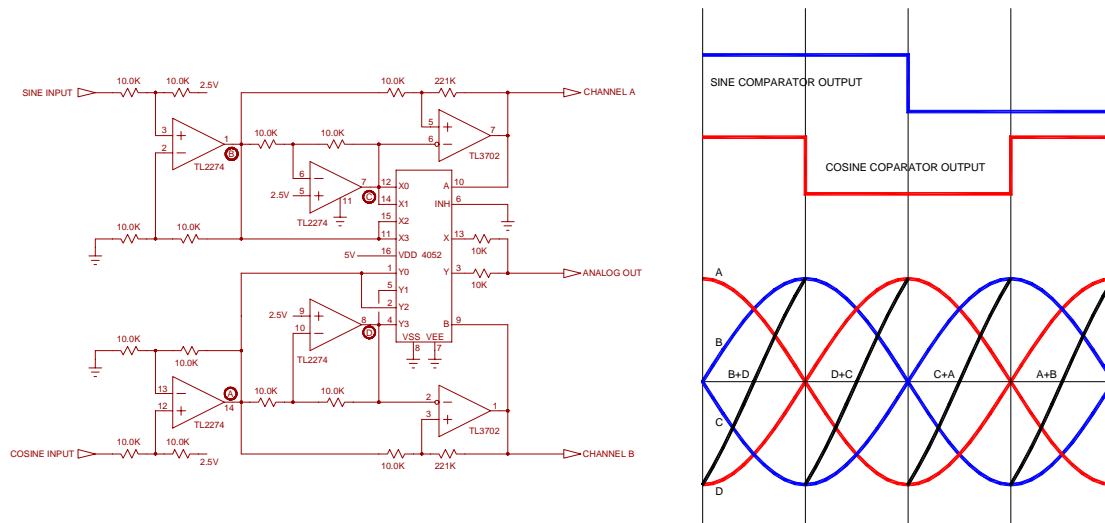


ANALOG OUTPUT ENCODER INTERFACE

This circuit decodes a quasi-sine / cosine encoder outputs into digital quadrature outputs and an analog output that is proportional to the encoder position between counts.



This circuit requires an encoder whose outputs are +/- 1 volt on both channels. A single +5VDC supply is required. The digital outputs are 0 to 5VDC and the analog output is +/- 1 volt centered about 2.5VDC.

The input differentially connected op-amps offset the signal to 2.5VDC and amplify it to 4 volts peak-to-peak. The other two op-amps act as unity gain inverters.

The 4052 dual analog 4-to-1 line multiplexer is addressed by the comparator outputs and selects one of the four op-amp outputs on each multiplexer. Both multiplexer outputs are summed by the two 10K resistors to generate the analog output.

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