

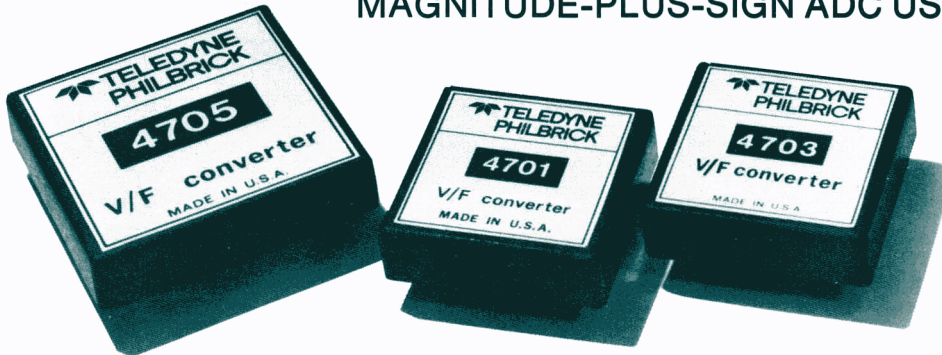
Applications Bulletin

TELEDYNE PHILBRICK

BULLETIN AN-6

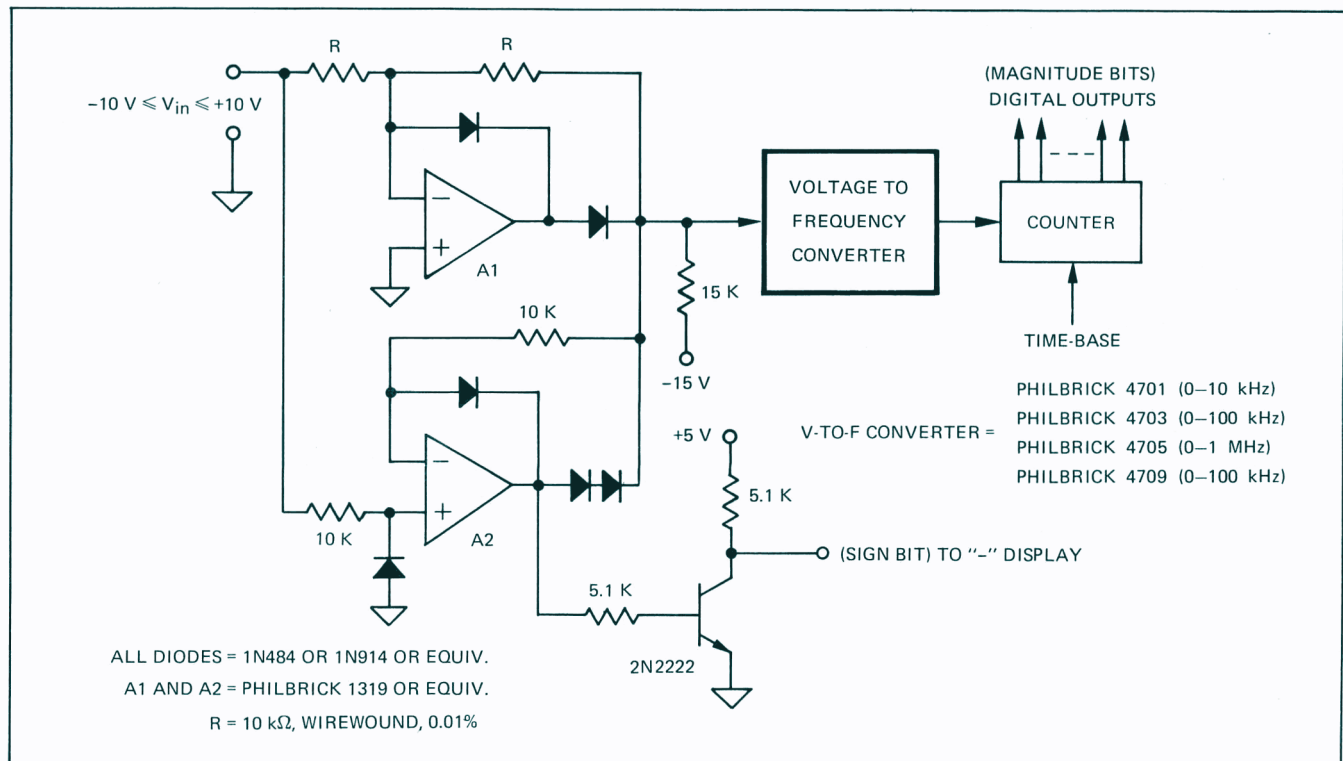
JANUARY 1974

MAGNITUDE-PLUS-SIGN ADC USING A V-F CONVERTER



A simple Absolute-Value Circuit and a counter will transform an inexpensive V-to-F module into a magnitude-plus-sign Analog-to-Digital converter with better than 11-bit linearity and resolution approaching 14-bits.* In the absolute-value circuit, op-amp A2 acts essentially as an ideal diode to faithfully reproduce positive

inputs and also provides the signal for the sign bit. Op-amp A1 inverts only negative inputs. The output from the Voltage-to-Frequency Converter is TTL-compatible frequency-coded information which can be converted to binary or BCD parallel outputs by a counter and time base.



*18-bits with Model 4705 and 4709

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