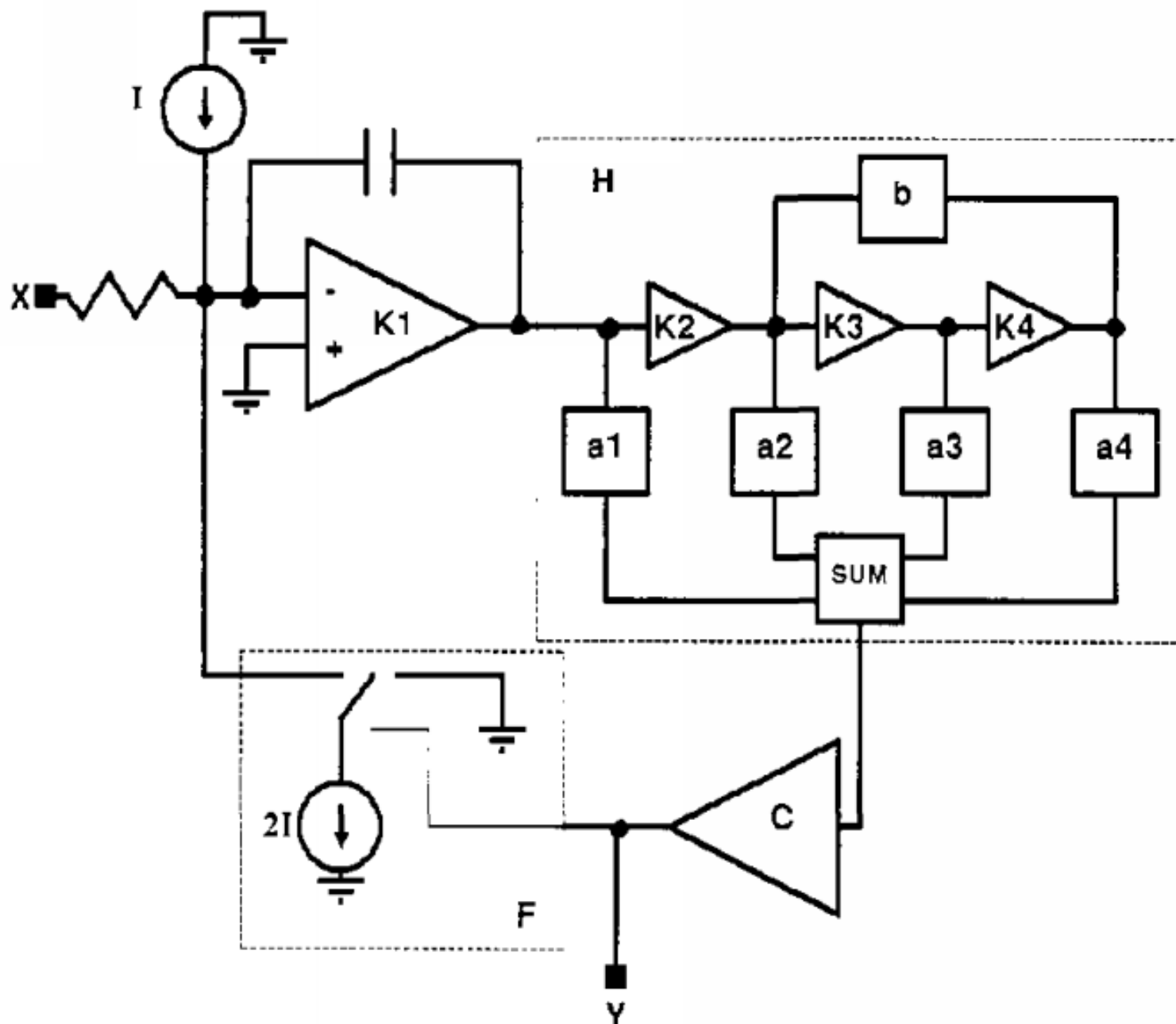


# DELTA SIGMA CONVERTER BREAKS THE 20-BIT BARRIER

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## A Monolithic 20B Delta-Sigma A/D Converter

BY DEMONSTRATING a total harmonic distortion (THD) of -126dB and a dynamic range of 123dB, this paper established the 1-bit delta-sigma converter as the topology-of-choice for high-linearity, low-bandwidth data conversion. The circuit used a 4th-order loop filter containing a continuous-time first stage (with off-chip  $R$  and  $C$ ) plus three switched-capacitor stages clocking at 256kHz. The signal bandwidth of the converter was 500Hz.

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