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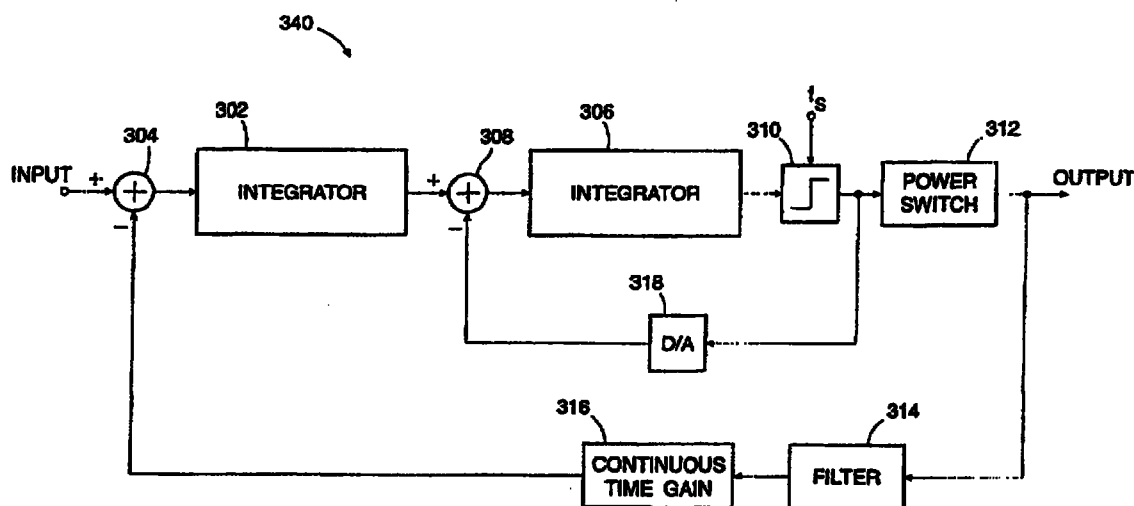

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(54) Title: **OVERSAMPLED, NOISE-SHAPING, MIXED-SIGNAL PROCESSOR**



(57) Abstract

A signal processing circuit is provided which includes a frequency selective network (314) in a feedback loop for noise shaping purposes. A sampling analog-to-digital converter (318) in the feedback loop operates at a sampling frequency substantially above the Nyquist frequency. A switching device (312) is driven by the sampling analog-to-digital converter and produces a continuous-time output signal which is continuously monitored by and fed back to the frequency selective network (314) for noise and distortion correction in the feedback loop. State feedback (i.e., digital or sampled) of the output of the analog-to-digital converter may also be employed in combination with the continuous-time feedback of the switching output.