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Ferran

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(54) **METHOD AND APPARATUS FOR ACQUIRING NOISE REDUCED HIGH FREQUENCY SIGNALS**

USPC 327/91, 94, 379, 551, 552
See application file for complete search history.

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(57) **ABSTRACT**

A system and method receive the output signal from a capacitance diaphragm gauge (CDG) and generate a noise reduced output signal. An input signal processing circuit receives an input signal from a signal source that drives the CDG. The input signal processing circuit generates a segment of N normalized digital samples of the input signal. An output signal processing circuit receives the output signal from the CDG and generates M segments of N digital samples of the CDG output signal and averages the corresponding samples in the M segments to generate a signal segment of N averaged samples. Each of the N averaged samples is multiplied by a corresponding one of the N normalized samples to generate N products. The N products are averaged to generate an average product, which is multiplied by a constant to generate a system output signal with reduced noise.

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(52) **U.S. Cl.** USPC **327/551**; 327/91
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8 Claims, 4 Drawing Sheets

