

Title (en)  
SIGNAL PROCESSING METHOD AND DEVICE

Title (de)  
SIGNAL-VERARBEITUNGS-METHODE UND -VORRICHTUNG

Title (fr)  
PROCEDE ET DISPOSITIF DE TRAITEMENT DE SIGNAUX

Publication  
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Application  
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Abstract (en)  
[origin: WO9920004A1] The invention relates to digital signal processing and specifically to level control of a pulse density modulated (PDM) signal generated by a sigma-delta modulator. A single-bit pulse density modulated PDM signal is generated by a first sigma-delta modulator (2) being an analog modulator, for instance. Level control is performed by multiplying the single-bit pulse density modulated PDM signal by a multibit multiplier (300) to obtain a multibit number stream, which is reconverted into a single-bit PDM signal by a second digital sigma-delta modulator (4). In accordance with the invention, the performance of the second sigma-delta modulator (4) is better than that of the first sigma-delta modulator (2), as to the signal-to-noise ratio. Thus, the most significant factor in the total signal-to-noise ratio (SNR) is the noise level of the first sigma-delta modulator (2), by which the PDM signal was originally generated. In the subsequent second sigma-delta modulator (4), the PDM signal can then be attenuated as much as is the difference between the SNR performances of the modulators without any decrease in the total signal-to-noise ratio. A relative amplification of the PDM signal is provided in this manner.

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