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(54) **GAIN CONTROL DEVICE, METHOD AND DATA AMPLIFICATION DEVICE USING THE SAME**

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(57) **ABSTRACT**

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A gain control device comprises a sign bit identification device and a gain determination device. The sign bit identification device is used to receive a data, identify a sign bit, and obtain a position of a time slot corresponding to the sign bit. Also, the data comprises a plurality of bits, wherein the most significant bit of the bits is designed to be a sign bit which is used to represent a positive or negative value of the data. The gain determination device is electrically connected to the sign bit identification device, and the gain determination device is used to determine a gain value for amplifying the data based on the position of the time slot corresponding to the sign bit identified through the sign bit identification device.

