ABSTRACT

DATA RECORDING DEVICE

A method and device for use in measurement and compensation of non-linear bitshift in non-linear communication media such as magnetic and optical recording devices. The method and device are based on special bit patterns constructed to eliminate at least one harmonic of the fundamental frequency of the data pattern if all bits are communicated without any non-linear bitshift. The presence of non-linear bitshift is manifested by the appearance of the harmonic. By measuring the magnitude of the harmonic, the amount of non-linear bitshift is determined, and compensation adjustment is then used to offset its effect on the data detection scheme.

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