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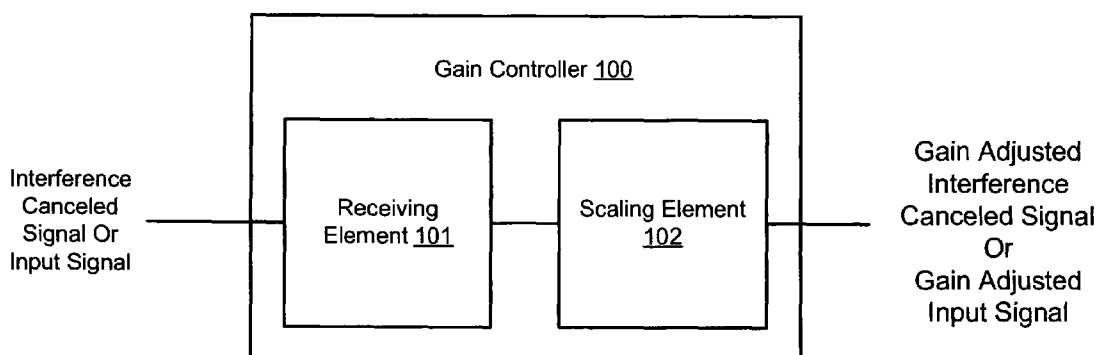
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(54) Title: GAIN CONTROL FOR INTERFERENCE CANCELLATION



(57) **Abstract:** Systems and methods for adjusting amplitude of an input signal through the application of a gain term are presented. In one embodiment, the gain controller (100 in Fig. 1) comprises a scaling element (102) that scales the overall signal energy after interference cancellation is performed. This scaling may compensate for overall signal energy reduction resulting from interference cancellation that improves the SNR of the signals of interest. Since prior art receivers typically adjust signal amplitude at the front-end, the gain controller may adjust the amplitude of an interference-canceled signal to a level that is substantially comparable to the level after front-end scaling. The gain controller also comprises a receiving element (101) configured for receiving either an output canceled signal or an uncanceled received signal as an input. For example, the gain controller may receive an interference-canceled signal output from a Coded Signal Processing Engine or a signal with no interfering components removed.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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USPC: 375/346,354;348/624

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 375/346,354; 348/624

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST (USPAT;EPO;JPO;DERWENT;FPRS;IBM-TDB)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2003/0147481 A1 (CHEN et al) 07 August 2003 (07.08.2003), Fig. 1, [0024-0027]	9,30,40
X	US 5,400,084 A (SCARPA) 21 March 1995 (21.03.1995), Fig.1 and Fig. 4	32- 36,38,39,64,69,87,92, 103,104
X	US 5,646,964 A (USHIROKAWA et al) 08 July 1997 (08.07.1997), Fig.1; Col 4, L54-57	1-8,17-23,48-57,70- 73,75-80,93- 97,103,104

Y		9,30,40

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