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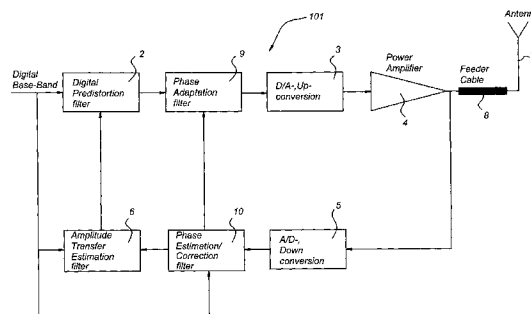
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(54) Title: REAL-TIME DIGITAL PHASE AND GAIN ADAPTATION METHOD USING FEEDBACK AND ARRANGEMENT USING SUCH A METHOD



(57) Abstract: Arrangement for real-time phase and gain adaptation as a function of frequency and gain adaptation as a function of amplitude of an input signal in relation to an output signal, the input signal having a first absolute phase and first power as a function of frequency, the output signal having a second absolute phase and second power as a function of frequency, the output signal, in use, being amplified relative to the input signal, the arrangement including a gain correction, and a power amplifier, the gain correction being arranged for receiving the input signal at a third input and a gain reference signal at the second input and for correcting the first power of the input signal, relative to the second power of the output signal, to form a predistorted outgoing signal and for outputting at the first output the predistorted outgoing signal, the gain reference signal having a gain value identical to the second power of the output signal relative to the first power of the input signal, wherein the arrangement includes a phase correction arranged for receiving the input signal at a third input and a phase reference signal at the second input and for correcting the first absolute phase of the input signal, relative to the second absolute phase of the output signal, as a function of frequency to form a phase-corrected outgoing signal and for outputting at the first output the phase-corrected outgoing signal, the phase reference signal having a phase value identical to the second absolute phase of the output signal relative to the first absolute phase of the input signal, the gain correction and the phase correction using a single feedback signal in the feedback path for deriving the gain reference signal and the phase reference signal, respectively.

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