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(54) Title: TIME-DIVISION DUPLEX (TDD) ANTENNA SYSTEM

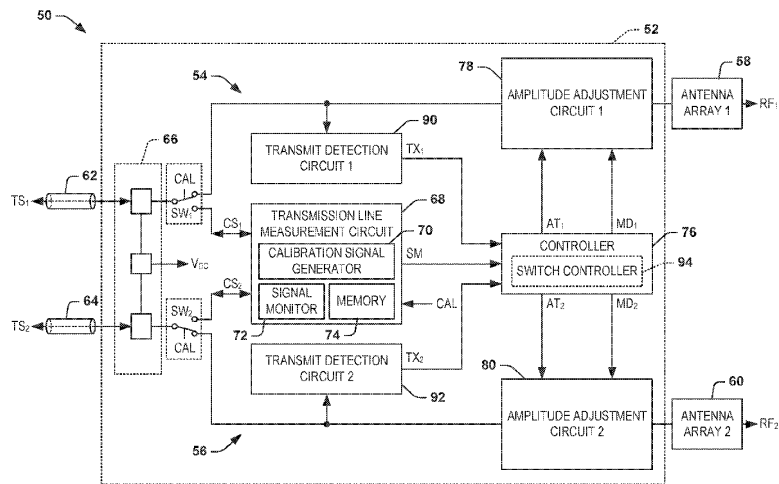


FIG. 2

(57) Abstract: One example includes a self-synchronizing TDD antenna system. The system includes an antenna to communicate transmit and receive signals and an antenna circuit coupled to a user communication system via a transmission line cable. The antenna circuit includes a transmission line measurement circuit to determine signal loss through the transmission line cable and an amplitude adjustment circuit to adjust amplitude of the transmit and/or receive signals based on the determined signal loss. The antenna circuit also includes a transmit detection circuit to monitor signal power of the transmit signal, and a controller to switch the amplitude adjustment circuit from a receive mode to a transmit mode in response to the monitored signal power exceeding a predetermined threshold. In the receive mode, the adjustment circuit applies a receive amplitude adjustment to the receive signal, and in the transmit mode the adjustment circuit applies a transmit amplitude adjustment to the transmit signal.

[Continued on next page]

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