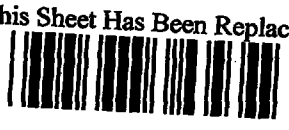
RF COMMUNICATIONS SYSTEM OPERABLE IN THE PRESENCE OF A REPETITIVE INTERFERENCE SOURCE AND RELATED METHODS

Abstract

An RF communication system for operating of a repetitive RF interference source powered from an AC power line. The system uses redundant transmission synchronized to the power line to ensure accurate reception by a second device. The RF communication system comprises a first device powered from an AC power line which also powers the repetitive RF interference source. The first device, comprises an RF transmitter for transmitting in a frequency band of the repetitive RF interference source, a power line sensor, and a data transmit controller, which generates a plurality of data packets with each data packet including an error detecting portion. The data transmit controller also operates the RF transmitter to produce repetitive first and second transmissions of a same data packet responsive to the power line sensor. At least one of the first and second transmissions occurs during an OFF period of the repetitive RF interference source. The second device also includes a data receive controller.

Figure 1

This Sheet Has Been Replaced



THIS SHEET HAS BEEN REPLACED