

Description of AidPad Transmitter

The transmitter of the Aidpad is based on a Microchip rfPIC12F675H radio. It operates at 915MHz using ASK modulation. There is a single operating mode during which the unit transmits once every minute. Every minute the unit sends out 5 packets containing 15 bytes (including preamble). The data is Manchester Encoded and runs at a bit rate of 1600 bits per second. The 5 packets are sent back-to-back then the unit rests for the remainder of the minute.

The antenna of the transmitter is printed on the board. It is 3¼” long and runs down the side of the board. Only the area immediately around the antenna is devoid of a ground plane. The rest of the PCB contains ground plane pours both on the top and bottom. The antenna incorporates a double-pi network to reduce sideband emissions.

The ground plane connection is fed through a wire to the power supply contained on a separate control in the freezer appliance. The wire is approximately 8 feet long.