

(referring to Block Diagram)

The Wrist unit is designed to worn on a person's wrist and its purpose is to receive and display heartbeat and footstep data and transmit control signals via a 915 MHz radio link. It is part of the FitSense Technology model FS-1 system.

The Wrist unit is built on two connected printed circuit boards and powered only by a coin cell battery. A Liquid Crystal Display (LCD) is driven by a Display Processor IC which receives commands and data from the main Microprocessor. It also performs timekeeping.

The Microprocessor manages input from a keypad, receives data from the 915 MHz Transceiver through a receive bit stream and commands the operation of the Display Processor. It also processes data and formats it to conform to the FS-1 network protocol and applies it to the transmitter input of the 915 MHz Transceiver. In addition, the Microprocessor monitors the battery condition and produces tones through a piezoelectric Beeper.

The 915 MHz Transceiver is a RF Monolithics TR1000, with its necessary passive parts. It is a SAW-based device using an ASH (Amplifier Sequenced Hybrid) receiver with no local oscillator. The Transceiver operates in A1 mode (OOK), at a trasmitted data rate of approximately 9600 Bauds. The antenna is stamped and formed sheet metal integrated into the Wrist unit's mechanical structure, and soldered to the printed board containing the 915 MHz Transceiver. There are no adjustable parts in the Wrist unit, and no tune-up procedure.