PASS3G Theory of Operation

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1. THEORY OF OPERATION

The TSI PRISM™ PASS3G is a component of the TSI PRISM™ real-time location and tracking system. These dedicated battery-powered units send Wi-Fi compatible messages at pre-defined intervals. The PASS3G is designed to be worn by prison inmates in order to provide personal safety and allow their position within a prison facility to be determined. PASS3Gs send messages with their unique ID number that are detected by location receivers and used to estimate the PASS3G's location. The message also contains the status of the tamper monitoring devices in the PASS3G. During typical operation, the unit wakes up every predefined interval and sniffs the air interface in order to detect IEEE 802.11b transmissions. If the air is free or these transmissions, the unit transmits its 802.11b status message (1 Mbps, DBPSK modulation). The PASS3G includes a low frequency magnetic receiver for remote control activation or detection by an exciter within programmable pre-defined range.