



PSD3G Theory of Operation

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1. THEORY OF OPERATION

The TSI PRISM™ PSD3G 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 PSD3G is designed to be worn by prison staff in order to provide personal safety and allow their position within a prison facility to be determined. PSD3Gs send messages with their unique ID number that are detected by location receivers and used to estimate the PSD3G's location. The message also contains the status of the personal safety monitoring devices in the PSD3G. 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 of these transmissions, the unit transmits its 802.11b status message (1 Mbps, DBPSK modulation). The PSD3G includes a low frequency magnetic receiver for remote control activation or detection by an exciter within programmable pre-defined range.