

SBU2000418 Operational Description

The smart base unit is a Home Unit monitoring device with a 2-way RF interface (418MHz transceiver, GFSK Modulation and 38 KHz bandwidth). When the SBU receives a status signal from the monitored device (bracelet tag), it returns an acknowledge signal.

In order to enhance the RF coverage, the SBU implements RF diversity (2 transceivers with 2 antennas using different polarization).

When activated, the SBU waits for signals from its monitored device, that are transmitted at a pseudorandom interval of between 15 and 16 seconds. Following each received transmission, the SBU returns an acknowledge signal to the monitored device after approximately 10mSec.

The SBU compares received information with a schedule that was downloaded from the Monitor center database.

By comparing the information, the SBU unit sends an event to the monitor center via either PSTN or cellular communication.

In addition, the SBU unit acts as a docking station for the X-tech GPS tracking unit. It provides communication to the X-tech unit using the IrDA protocol to exchange information between them.

The docking station provides 12VDC in order to recharge the X-tech's battery.

The monitored device is a bracelet tag installed on the offender's wrist or ankle, monitored by the system and received by the SBU2000418. Violations to the offender's curfew schedule generate events that are uploaded to the central monitoring station via the cellular network or PSTN.

The SBU2000418 is usually powered by a Wall mounted adapter 100-240VAC to 12V/2A DC. Backup power is supplied by an Internal 7.4V/ 5.2Ah Li-Ion battery pack that provides power for a duration of up to 50 hours.

In addition the SBU has an IrDA port for secondary communication with a PC.