

# Operation Theory

**FCC ID : WXAMINI400B**

## **Introduction :**

The product is a wireless guard tour device using a 2.4GHz RF GFSK modulation technology to transmit data packet within 10 meters. The guard tour device provides an accurate and authentic record of patrols carried out by security personnel.

## **Principle of Operation :**

The product is controlled by a micro-controller, 8-bit RISC processor core. It's 3Track reader with rechargeable battery. After swipe a card, 3Track data will be saved in EEPROM and be sent to the host.

The product uses a GFSK modulation technology in combined with some coding schemes to ensure its low bit of error rate within designated distance. The guard tour device uses one RF channel to transmit data to its receiver which has been matched in channel and security bytes. When UID code data is ready in micro-controller, it encodes and sends to RF IC inside the guard tour device. Once RF IC receives the encoded data packet, it will transmit data to the receiver using one of the 85 RF channels ranged from 2402 MHz to 2480 MHz. Each channel is separated by one mega hertz.