

MTK2 & MiK2 Theory of Operation

Overview

Schlage MTK AD-Series Multi-Tech & Keypad Proximity with Smart Card Reader

Reader Assembly

Multi-Tech reader has the capability to read ID badges at 0.125 MHz and 13.56 MHz. When both the transmit capabilities are active the transmitter never transmits at the same time. The Multi-Tech will scan ID cards by transmitting a 125 kHz signal first, and if there is no response it will turn off the 0.125 MHz and then transmit the 13.56 MHz signal. This process will then repeat.

The frequency range of the Multi-Tech is 0.125 MHz and 13.56 MHz. The unit is un-modulated when scanning, AM when reading (both 0.125 MHz and 13.56 MHz transmitter). The antenna for the 0.125 MHz is a non-detachable loop antenna made from 34 gauge wire. The antenna for the 13.56 MHz is a non-detachable PCB trace loop antenna. The microprocessor utilized is PIC24FJ256GB108.