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USER MANUAL

BT Mag

Bluetooth Magnetic Stripe Reader

80125501-001-A
8/20/2012

BT Mag User Manual

Revision History

Rev	Date	Description of Changes	By
A	8/20/2012	Initial release	JW

Table of Contents

1 Introduction

The BT Mag is a handheld Magnetic Stripe reader that works with mobile devices or PCs with Bluetooth connectivity. It transfers card data via Bluetooth to POS applications in the host devices.

2 Applicable Documents

80125401-001 Rev.A	BT Mag Requirement Spec
ISO 7810	Identification cards -- Physical characteristics
ISO 7811 - 1 through 6	Identification Cards - Track 1 through 3
ISO 4909	Magnetic stripe content for track 3
ISO 7812	Identification Cards – Identification for issuers Part 1 & 2
ISO 7813	Identification Cards – Financial Transaction Cards
AAMVA Specifications	Drivers License Standards - Most recent available
80101502-001	SPI Securehead manual

3 Features and Benefits

- Connects to any mobile device with Bluetooth capability
- Keychain holes for convenience
- Reads up to 3 tracks of card data
- Supports TDES and AES encryption using DUKPT Key Management
- Wireless range up to 30 feet
- Battery life: 4 hours active, 8 hours standby
- Micro-USB port for battery charging

4 Specifications

- Interface
  - Class 2 Bluetooth
  - Can also be a standalone USB device for key injection when a Micro-B to A USB cable is connected
  - Bluetooth is disabled during key injection or DFU communication

- Magnetic stripe reader
  - Meets ISO 7811 specification
  - Supports AAMVA formats
  - Support single, dual or triple tracks card
  - Bi-directional swipe
  - TDES, & AES Encryption
  - Media Densities: 75 bpi through 210 bpi on all tracks, F2F Encoding Format
  - Media Speed: 5 to 45 IPS
  - Low Amplitude reading: >30 % @210 bpi, >40% @75 bpi

- Batteries
  - Rechargeable battery
  - Battery life:
    - Up to 8 hours in standby mode
    - Up to 4 hours in active mode
    - Active mode is defined as 10+ swipes per hour
  - Charging through MicroUSB interface external charger
  - The unit is functional if Bluetooth connection is on while charging

- LED
  - One Dual-color Led to indicate Bluetooth/Charging status
    - blue indicates Bluetooth connection status
    - Red indicates Charging
  - Another Dual-color LED to indicate power/MSR read status
    - Red indicates bad read
    - Green on twice indicates good read
    - Green blinking indicates power on/standby

- Reliability
  - Magnetic Head Life: 300,000 passes minimum
  - Rail and Cover Life: 100,000 passes minimum
  - MTBF: 300,000 POH

- Electro-Static Discharges (ESD)
  - 6kV contact, and 12kV air discharge

- Environmental

Temperature range

- Operating 0 to 55° C (32 to 131° F) [non-condensing]
- Storage -30 to 70° C (-22 to 158° F) [non-condensing]
- Relative humidity: maximum 95% (non-condensing)

5 Operation

To power on BT Mag, press and hold the power button for 10 seconds. Once the blue LED is blinking, the device is in pairing mode.

LED Definition

Event	BI-COLOR		BI-COLOR		Description
	GREEN	RED	BLUE	RED	
Power on	Flash 3 times ON (200ms) OFF (200ms)	OFF	OFF	X	Only applied when user power on the system or USB plug in.
Power off					Only applied when user shutdown the system or system detect low battery signal.
Power Standby/Sleep	ON(30ms) OFF(4970ms)	OFF	ON(30ms) OFF(4970ms)	X	1.The reader will enter this mode when BT not in Pairing or Connected status
BTM Standby/Sleep					2. Short press the tact SW will force BT to search and build the Link again
MSR - Standby/Sleep					
Pairing	ON(30ms) OFF(4970ms)	OFF	ON(500ms) OFF(500ms)	X	After the reader is power on, that will into the pairing mode.
BTM Connected			ON(30ms) OFF(2970ms)		This mode indicates the MSR is connected with application software and waiting to accept the card swiping
Charging	X	X	X	ON	N/A
Charging Complete		X		OFF	N/A
Low Battery		ON(30ms) OFF(2970ms)		X	The LED is blinking when Battery voltage is lower than 3.3V.
					The reader will shutdown automatically when the battery voltage is lower than 3.2V
MSR - good read	Flash 2 times	OFF		X	Green indicates good read

	ON(500ms) OFF(500ms)		ON(30ms) OFF(2970ms)		
MSR - bad read	OFF	Flash 1 time ON(500ms) OFF(500ms)	ON(30ms) OFF(2970ms)	X	Red indicates bad read

X: Not applicable

6 Outline Drawing