Mini Swipe-Bluetooth Magnetic Card Reader

Android iOS Windows

Portable MSR Reader with Bluetooth Low Energy User's Manual

January 13, 2021

Contents

FCC COMPLIANCE STATEMENT

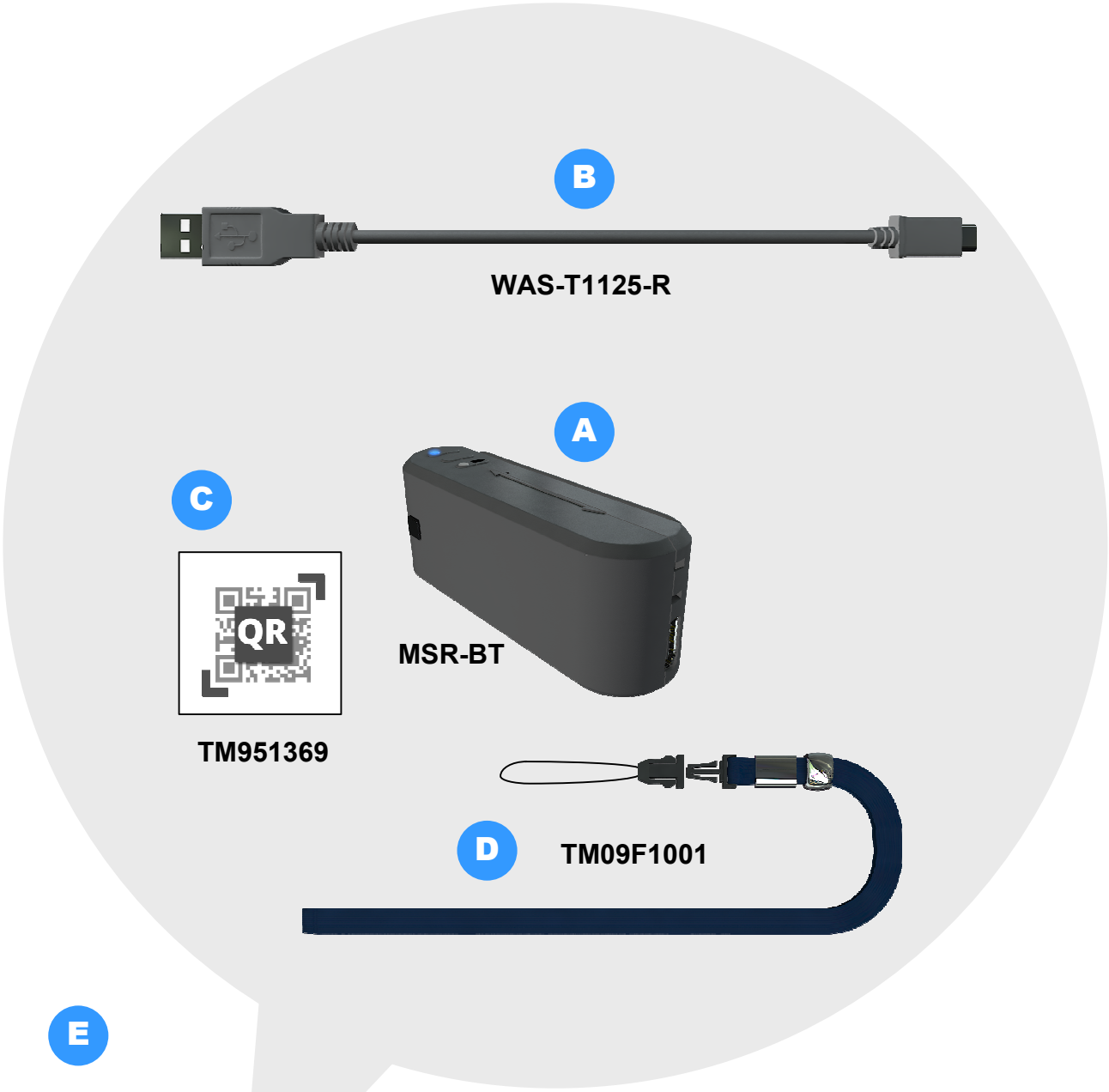
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Information

■ MSR-BT Series Magnetic Swipe Reader

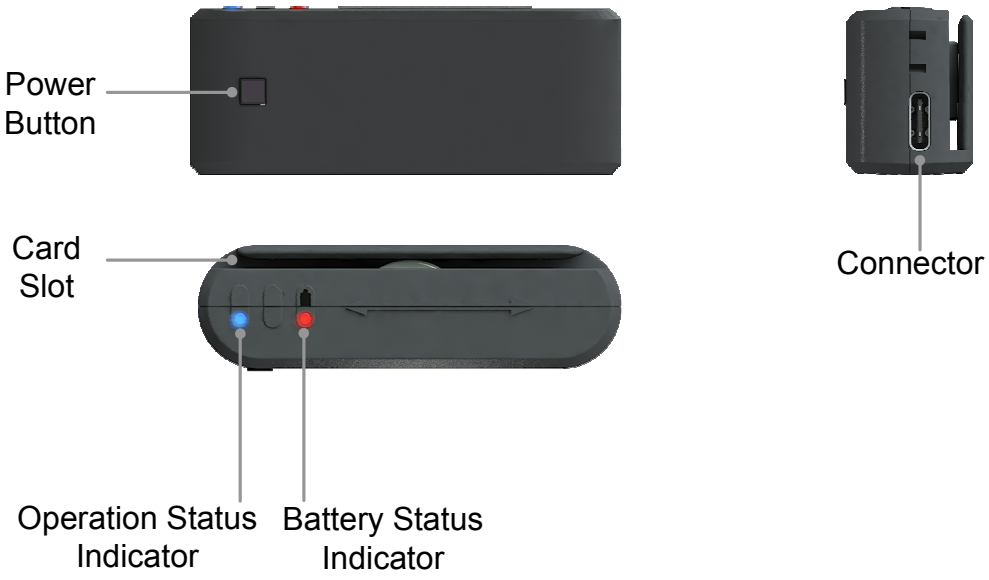
MACHINE TYPE	FUNCTION
 **MSR-BT** **Track 1 & 2 & 3**	MC 1 2 3 Li-Polymer Rechargeable Charge Bluetooth BLE 4.2 USB HID USB-C LED STATUS Buzzer 4 Level AUTO OFF GNET VER 1.2 OTA

■ Standard Package



Item	Description
A	MSR-BT
B	USB Cable (TypeA Male to Type C Male)
C	Download URL Index Description
D	Neck Strap
E	Carton

■ Front Panel Display and Operations



- **Card Reader**
  Swipe the card through the entire length of the slot to read.

- **Operation Status Indicator**
  When encountering erroneous input, defective card, misread or incorrectly encoded data and so on, the device will turn on the ERROR indicator.

- **Battery Status Indicator**
  Indicating the battery is ready ,charging progress , charge done, charge suspend in charge mode or low battery in operational mode.

- **Connector**
  For connection to host computer and external Power for charge Battery .

- **Power Button**
  Turn the MSR-BT on/off power.

Note : Hold the power button for 3 sec for power off.

■ Display Information

Operational Indicator

Status	Blue LED	Red LED	Buzzer	Read Card
Power On	Flashing 2 times		Beep. Beep.	X
Auto Power Off	Flashing 2 times		Beep. Beep.	X
Ready / BLE Disconnected	Flashing	Off	X	X
Ready / BLE Connected	On	Off	X	O
Read OK / BLE Disconnected	Off	Flashing Once	Beep. Beep. Beep.	X
Read OK / BLE Connected	Flashing Once	Off	Beep.	X
Read Error	Off	Flashing Once	Beep. Beep. Beep.	X

Battery Indicator

Status	Green LED	Red LED
Battery Low	-	Flashing
Charge in Progress	On	-
Charge Done / Not charge	Off	-

■ Operational Description

1. Powered by Battery

For normal use, the unit is powered by battery. Push the Power Switch Button for about 2 seconds to turn on the unit. Also push the Power Switch Button for about 2 seconds to turn off the unit. After the unit is turned on, the power would be turned off automatically if there is no swiping a card on the unit in 5 minutes. This means the unit would be turned off if no swiping a card again in every 5 minutes after every card swiping. It would have Low Battery Detect/Warning indication when the unit is powered by battery.

2. Powered by Cable

When the unit is connected with the PC through the communication Cable (WAS-T1125-R) and the PC is running MSR-BT software and open the USB HID for the unit, then the unit will be turned on by the PC through the USB HID PORT. Then you can do the unit Setting, Configuration . When the software closes the USB HID PORT or exits, the power turn off from the PC immediately. When powered by cable from PC, the Power Switch would have no function and the unit would have no Low Battery Detect/Warning function.

3. Bluetooth Connection

Before start using the unit, you must set the Real Time Clock (RTC) inside the unit to your local time. If there is no battery for quite a while or it is powered by cable for quite a while this would cause Real Time clock (RTC) malfunctioned due to no power supply. When put on the battery to turn on the unit and the Red/Green LED take turns blinking, this means the RTC is malfunctioning and you must do the RTC time setting before you use the unit.

4. Low Battery Detect

When powered by battery, it would have Low Battery Detect function. When the battery goes low, the LED would flash red once every 2 second and you must charge battery immediately, otherwise, the unit would shut down any time without pre-warning or when the voltage is low to the automatic power-off value. MSR-BT will automatically power off to maintain normal operation.

5. Charge Status Indication

The MSR-BT cable is connected to USB, it would be charged immediately and the charging green indicator light is on. Once the battery is fully charged, the charging green indicator lights off.

6. Over to Air (OTA)

OTA allows you to quickly upgrade your MSR-BT internal firmware via BLE and also check validity of currently loaded firmware. Contact your dealer for most recent firmware upgrade files.

Connections

WAS-T1125-R

USB Type-A

USB 4P FEMALE PIN	FUNCTION
1	VBUS
3	D -
2	D +
4	GND

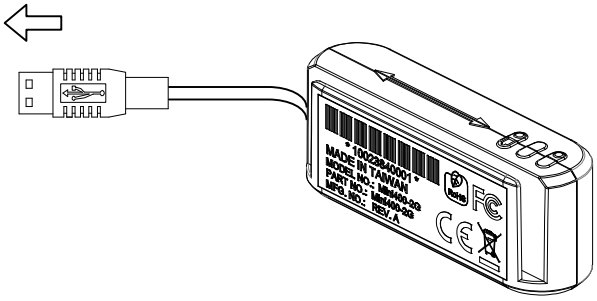
USB Type-C

USB 12P FEMALE PIN	FUNCTION	USB 12P FEMALE PIN	FUNCTION
A1	GND	B12	GND
A2	-	B11	-
A3	-	B10	-
A4	VBUS	B9	VBUS
A5	ID	B8	-
A6	D+	B7	D-
A7	D-	B6	D+
A8	-	B5	ID
A9	VBUS	B4	VBUS
A10	-	B3	-
A11	-	B2	-
A12	GND	B1	GND

Connect to PC

Personal Computer

USB PORT



MSR-BT

Note:

1. When MSR-BT is connected/disconnected to USB port, it would be turned On/Off automatically.
2. Normally the charging time is about 1.5 ~ 2.5 hours (Default setting is low battery charge mode, it is detected when the battery is low, it would be charge until Full automatically). The working hours would be more than 48 hours (Stand alone and Always On). When MSR-BT is connected with USB, it would use power from PC instead.

Card Data Format

CARD DATA STRING

TRACK 1			TRACK 2			TRACK 3			DATE		
SS	*TRACK1 DATA*	ES	SS	*TRACK2 DATA*	ES	SS	*TRACK3 DATA*	ES	DATE	SP	TIME&WEEK
%	*TRACK1 DATA*	?	;	*TRACK2 DATA*	?	+	*TRACK3 DATA*	?	DATE		TIME&WEEK

TRACK# 1

%	CARD ID	?

1. SS is the start sentinel (%).
2. ES is the end sentinel (?).
3. Card Id up to 76 alphanumeric data characters.

Track 1 IATA	
Bits Per Inch	210
Bits Per Character	7
Alphanumeric Characters	79

TRACK# 2

;	CARD ID	?

1. SS is the start sentinel (;).
2. ES is the end sentinel (?).
3. Card Id up to 37 numeric data characters.

Track 2 ABA	
Bits Per Inch	75
Bits Per Character	5
Numeric Characters	40

TRACK# 3

+	CARD ID	?

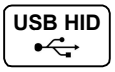
1. SS is the start sentinel (+).
2. ES is the end sentinel (?).
3. Card Id up to 104 numeric data characters.

Track 3 Thrift	
Bits Per Inch	210
Bits Per Character	5
Numeric Characters	107

Specifications

Magnetic Stripe Card :

TRACK 1 / IATA / 210 bpi / 79 Alphanumeric Characters
TRACK 2 / ABA / 75 bpi / 40 Numeric Characters
TRACK 3 / Thrift / 210 bpi / 107 Numeric Characters

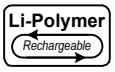


USB Interface :

USB HID (Human Interface Device)

Communication Protocol :

Version 1.2 (GNET V1.2)

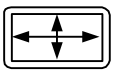


Battery Power :

Rechargeable Lithium-ion Polymer Battery
Nominal Capacity: 250 mAH (Typical)
Nominal Voltage: 3.7 V
Cycle Life: 300 cycles (at least)
Low Battery Detect and Built-in Quick Charge Circuit

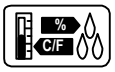
Power Supply for Charge :

USB Powered DC5V 30mA
Charging duration time : 1.5 ~ 2.5 hr
Working duration time after charge : 48 hr (always power on)



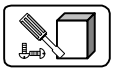
Dimensions :

L 66 x W 19 x H 25.5 mm



Environment :

Operating Temp : 0℃ ~ +40℃ (Discharge)
0℃ ~ +40℃ (Charging)
Storage Temp : -10 ~ +45℃
Humidity : 10 ~ 90 % relative



Mounting :

Portable or Any surface