SHINEWORLD INNOVATIONS LIMITED

#709-711, UNIT A, YI CHENG COMMERCIAL BUILDING, HONGLI ROAD,
DONGCHENG DISTRICT, DONGGUAN CITY, GUANGDONG PROVINCE,
523000, CHINA | www.swi-cn.com |swi@swi-cn.com |skype: swi-cn

Thermal Portable Receipt Printer

MS-100 series

User Manual

Shineworld Innovation Limited

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Content

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Matters and attentions

Safety precautions

Our company provides lithium battery and adaptor are only suitable for our printer,and never change others apply to ours or will damage printer. Do not throw out battery to dangerous environment (burning/dismantle/washing) or will cause injury and pollution.
Do not open front roll container and touch printer mechanism or will scald finger or other body parts.
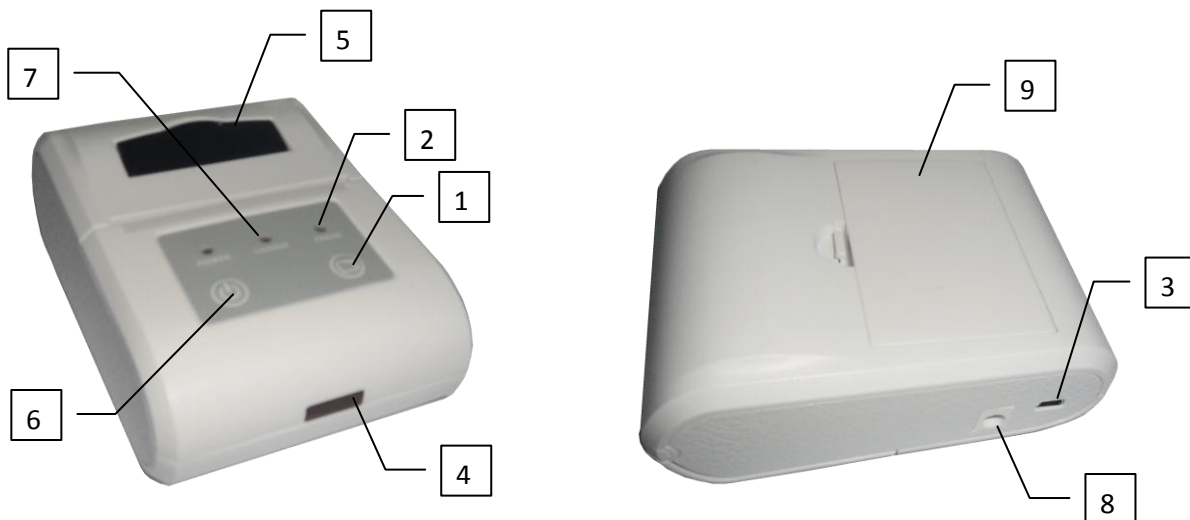
Operation precautions

Never expose printer in moist or dusty environment or will damage printer mechanism.
Never open roll container during printing or will influence printer work.
Pull out cable will lead to printing content incomplete.
Using infrared communication user should keep main device infrared window direct at printers and in 0.5 m distance range or will influence printer work.
Though printer work temperature is from -10 to 50 ℃, but in the high temp 45℃ or low temp 5℃ printing quality will be instability.
Tough printer work humidity is from 5% to 90% RH, but in high moist ambient printing quality will be instability.
Please using standard thermal paper or will damage printer thermal head and influence printing quality.
Please using standard balckmark paper or will influence printer balckmark detection.
Please charge printer after battery powr working out.

Storage precautions

Printer should be stored in stanadard environment(temperature -20℃ to 70℃;humidity5％to 95％), if user need keep storing printer please take out battery.
If user need keep receipt in long time please choose standard paper and store in dry and clean ambient.
Please store thermal paper in cool and lucifugal place.
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Chapter I Brief introduction

1.1 Printer appearance

1. Paper feed
2. Printer status indicator
3. Communication interface
4. Infrared window
5. Front panel
6. Power switch
7. Charge indicator
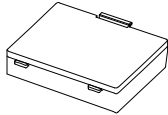8. Power interface
9. Battery panel

1.2 Model name

MS-100 series is 58mm thermal portable receipt printer, according to wireless communication method, it can divid into several types:
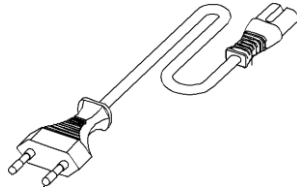
1. MS-100B Bluetooth type
2. MS-100I infrared type

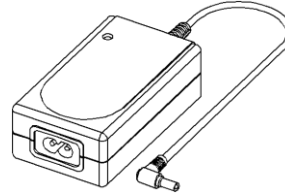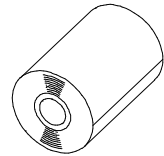# 1.3 Accessories

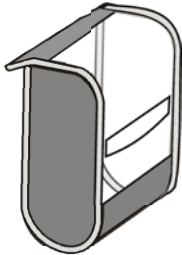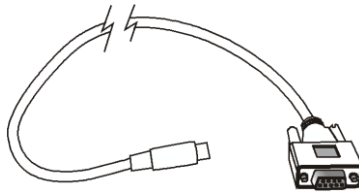Battery   power cable   power charger   paper roll

Leather case   interface cable

Chapter II Printer performance

2.1 printer specification

Type	Portable thermal printer
Printing method	Thermal dot line printing
Paper width	58mm
Paper roll diameter	Max 40 mm
Dot/line	16 chineses /line or 32 englishs /line
Chinese coding scheme	GBK
Font stock	ASCII GB18030
Barcode /bitmap	1D: UPC-A;UPC-E;EAN-13;EAN-8;CODE39;ITF25;CODEBAR;CODE93;CODE128 2D: QR CODE Bitmap
speed	50mm/s（in full power）
Reliability	1,000,000 characters
Printing type	languages、numbers、LOGO、diagram
Resolution	8 dots/mm (203 dpi)
Interface	RS-232/USB/Bluetooth/Infrared
Power supply	Rechargeable lithium battery 1000mAh（charging time 2 hours）
Adaptor	Input : AC90~230V，output: DC9V1A
Standby current	Below 20uA
Abnormal detection	Out-paper、low power、overheating
Paper loading method	Easy loading from front panel
Cutting paper method	Tearing paper out
Command set	ESC/POS

2.2 Physical Property

Outside dimension: 110mm*78mm*42mm

weight: 325g（including roll）

 Roll diameter: ≤40mm

(Different model the interfaces are different, refer to model description)

2.3 Ambient requirement

Working temperature: -10℃～50℃

Working humidity: 20%～85% RH

Storage temperature: -20℃～70℃

Storage humidity: 5%～95% RH

2.4 other instructions

Paper loading method: front panel（details refer to3.1.2 ）

Blackmark detection: available（details refer to4.2 ）

Paper end detection: the indicator of power will blink when paper runs out

Command set: ESC/POS

 Power supply: 1000mAHlithium battery (charge indicator will blink when battery will run
                 out)

Charging time: 2～4hours

Availability work time: 100～200m in 12.5％ density，80～100m 25％ density (work time
will be shorten according to battery lifespan)

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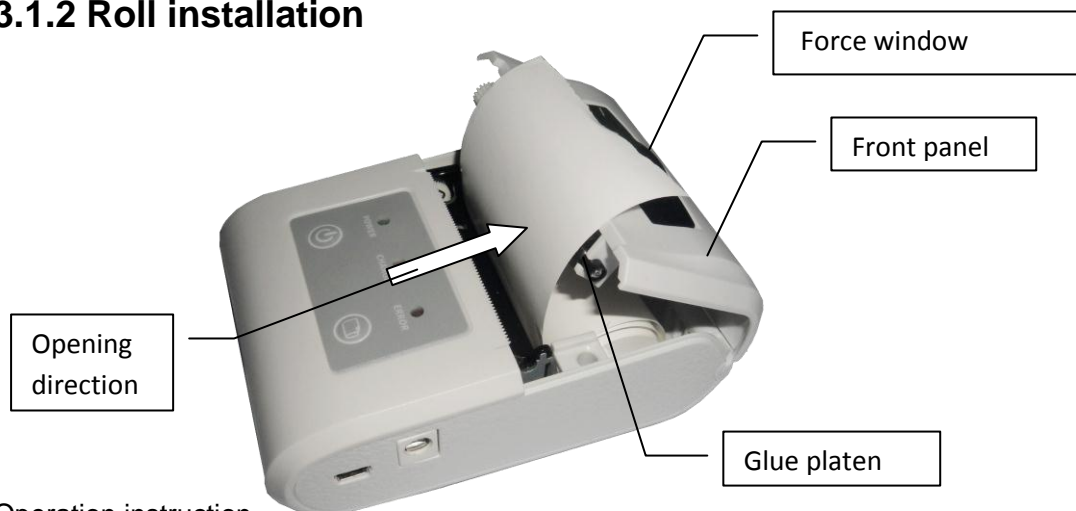
Chapter III Application method

3.1 Preparation

3.1.1 Battery installation

1. Open battery panel after taking off lether case
2. Put battery in its cabin and notice the polarity of positive and negative, as above picture
3. Close battery cabin panel

3.1.2 Roll installation

Operation instruction

1. Push window by index and thumb finger then front panel will open (notice: do not push window in brute force)
2. Put in roll in paper container (notice: put right side of paper in, let thermal paintcoat side down, as picture)
3. Pull small piece of paper out container
4. Put roll in steady and middle in container, then close panel

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3.2 Basic application

3.2.1 Power on

In power off condition, user presses (POWER) switch for 2seconds,then printer will start up, power indicator (green) will turn on.

Notice: when power capacity of printer runs out printer will shut down immediately.If user wants to keep printer working, please change battery or charge printer. (Charging measure follows to 3.2.5)

3.2.2 Power off

In power on condition, user presses (POWER) for 2 seconds,all indicators turns off.

3.2.3 Self test

User can take "self test" procedure for checking setting up and condition.

Self test procedure as follow:

In power off condition user presses paper(FEED)   button firstly and then press(POWER)switch, only when user release " power switch " printer will print self test page out. In the content of page user can know printer setting up and condition information.

3.2.4 Paper feed

In normal condition user press(FEED) button , printer will feed paper and feeding length as 7 mm. user also can adjust feeding length by software tool (on computer).when seting up length as " 0" user should keep pressing(FEED)   button and release it then printer can stop feeding.

If using standard blackmark paper, printer will stop feeding at blackmark block. If user sets up feed length as " 0" printer will keep feeding until user release (FEED)   button.

3.2.5 Battery charging

When printer power runs out printer will shut down immediately. If user want to keep printer working, please charge printer in time as follows:

Plug charger in 220V/50HZ power socket, and connect printer.in charging condition printer charge indicator will turn red, until power full it will extinguish.

During charging printer works normally.

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3.3 Communication connection

3.3.1 Wire communication connection

RS-232C type: interface cable as DB-9 port for computer and MINI DIN port for printer.

USB type: interface cable as USB 2.0 port for computer and MINI DIN port for printer.

3.3.2 Infrared communication connection

MS-100 portable printer is able to work with different portable devices. Such as WINCE palmtop, laptop, PDA, data collector, smart phone, medical device, measurement instrument and more.

Notice: our printer can not work on different IR deveices in same time. (Including original infrared, VIR, IrCOMM)

User applys to " RAW-IR " and " IrDA（IrCOMM）" please put main device infrared ray is directly at infrared window of printer in 50 cm.

3.3.3 Bluetooth communication connection

MS-100 is able to work with different mobile device with Bluetooth, such as handheld terminal, smart phone, tablet PC, laptop and more.

Operation procedures as follow:

1. Through control panel user clicks Bluetooth icon and choose "add Bluetooth device"

2. System will find out "new device"

3. Click "next" and choose the third point" enter your code BLUETOOTH", user enters code "1234"

Notice: user can ask supplier for SDK and Bluetooth test tool

3.4 Indicator signal

There are three indicators on show panel, their signal meanings as follow:

Power indicator (green)	Charge indicator (red)	Error indicator (red)	Printer status
on	off	off	Power on
Shut down	off	off	Power out
off	on	off	charging
off	extinguished	off	Power full
on	off	on	Paper out
Shut down after 30s	off	off	Power off

Notice: printer will power off after 30s standby condition

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Chapter IV other aspects

4.1 Software development kit

User needs to ask supplier for software development kit, this includes hardware interface description, command set text and blackmark standard position criterion

4.2 Blackmark position criterion

Blackmark position level as follows:

Blackmark should be on the right side of paper

Width range: ≥7mm

Length range: 4mm≤length≤6mm

Reflectance rate: <10%

Hps: 0 mm≤Hps≤1mm