

# CJ50SP

## User Manual



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## ■ Safety Precautions

In using the present appliance, please keep the following safety regulations in order to prevent any hazard or material damage.



### WARNING

Violating following instructions can cause serious injury or death.

**Do not bend the cable by force or leave it under any heavy object.**

- A damaged cable can cause a fire.

**Do not plug in or unplug with your hands wet.**

- You can be electrocuted.

**Keep the plastic bag out of children's reach.**

- If not, a child may put the bag on his head.

**Do not pull the cable to unplug.**

- This can damage the cable, which is the origin of a fire or a breakdown of the printer.

**You must use only the supplied adapter.**

- It is dangerous to use other adapters.

**Do not plug several products in one multi-outlet.**

- This can provoke over-heating and a fire.
- If the plug is wet or dirty, dry or wipe it before usage.
- If the plug does not fit perfectly with the outlet, do not plug in.
- Be sure to use only standardized multi-outlets.



### CAUTION

Violating following instructions can cause slight wound or damage the appliance.

**Do not use the printer when it is out of order. This can cause a fire or an electrocution.**

- Switch off and unplug the printer before calling your dealer.

**Do not let water or other foreign objects in the printer.**

- If this happened, switch off and unplug the printer before calling your dealer.

**Use only approved accessories and do not try to disassemble, repair or remodel it for yourself.**

- Call your dealer when you need these services.
- Do not touch the blade of auto cutter.

**Install the printer on the stable surface.**

- If the printer falls down, it can be broken and you can hurt yourself.

**Keep the desiccant out of children's reach.**

- If not, they may eat it.

**If you observe a strange smoke, odor or noise from the printer, unplug it before taking following measures.**

- Switch off the printer and unplug the set from the mains.
- After the disappearance of the smoke, call your dealer to repair it.

■ **Battery Safety Precautions** Make sure to review the user manual carefully prior to product use.

Neglecting to heed the following instructions can result in battery overheating, combustion, explosion, damage and/or decline in performance and product life.



**Danger**

1. Do not allow water, seawater, etc. enter or leak into the battery interior. If the safety mechanism within the battery becomes burned out, any charging of the battery can result in abnormal electrical current flow and/or voltage that causes an abnormal chemical reaction, which may then cause the battery to overheat, ignite, and/or explode.
2. Do not use or leave the battery in a location exposed to high temperatures, such as next to a stove, etc. Excessive heat exposure can cause damage to the resin case and/or insulating materials, thus causing short circuits within the battery that may result in battery overheating, combustion, and/or explosion.
3. When charging the battery, use the exclusive charger or follow the charging requirements outlined by CHAMJIN I & C. Charging under conditions not included in such requirements (higher temperature, higher voltage/larger electrical current, use of a modified charger, etc.) can result in excessive battery charging and abnormal electrical current flow and/or voltage that causes an abnormal chemical reaction, which may then cause the battery to overheat, ignite, and/or explode.
4. The battery has clearly delineated plus and minus poles. When inserting the battery into the charger and/or product, make sure to confirm that the battery is properly aligned. Reverse insertion will cause reverse charging that can result in an abnormal chemical reaction, which may then cause the battery to overheat, ignite, and/or explode.
5. Do not place the battery in contact with an electrical power outlet and/or an automobile cigarette lighter jack. Doing so can inflict high voltage that causes excessive electrical current flow, resulting in battery overheating, combustion, and/or explosion.
6. Do not heat the battery or place it in a fire. Doing so can melt the insulating materials and/or damage the safety mechanism or safety equipment, allowing the electrolytic solution to ignite and resulting in battery overheating, combustion, and/or explosion.
7. Do not use the battery in reverse (+) and (–) alignment. Doing so during charging will cause reverse charging that can result in an abnormal chemical reaction. During use, unpredictable electrical current abnormalities can arise, causing battery overheating, combustion, and/or explosion.
8. Do not allow the battery's (+) and (–) poles to come into contact with any metals. In addition, do not carry or store the battery together with metal items, such as necklaces, hairpins, etc. Resulting short circuits within the battery can cause excessive electrical current flow, resulting in battery overheating, combustion, and/or explosion as well as potential overheating of the adjacent metal items (necklaces, hairpins, etc.).
9. Do not throw the battery or subject it to heavy shock. If the safety mechanism within the battery becomes burned out, any charging of the battery can result in abnormal electrical current flow and/or voltage that causes an abnormal chemical reaction, which may then cause the battery to overheat, ignite, and/or explode.

10. Do not pierce the battery with a sharp object, such as a nail, or hit it with a heavy object, such as a hammer, and take care not to step on the battery. The battery may rupture or become warped, causing short circuits within that may result in battery overheating, combustion, and/or explosion.
11. Do not solder the battery directly. The heat can melt the insulating materials and/or damage the safety mechanism or safety equipment, resulting in battery overheating, combustion, and/or explosion.
12. Do not disassemble and/or modify the battery. The battery contains safety equipment and a safety mechanism to prevent danger. Any damage to these components can cause battery overheating, combustion, and/or explosion.
13. Do not charge near a source of heat and/or under direct sunlight. Exposure to high temperatures causes the safety mechanism to activate, thus making charging impossible. In addition, any damage to the safety mechanism itself that may be caused by excessive heat can cause any charging of the battery to result in abnormal electrical current flow and/or voltage that causes an abnormal chemical reaction within the battery and/or battery overheating, combustion, and/or explosion.



#### **Warning**

1. Do not place the battery within the reach of small children to prevent any swallowing accidents. If a small child has swallowed the battery, consult a physician immediately.
2. Do not place the battery in a microwave oven and/or high voltage appliance. Doing so can cause rapid overheating and/or destruction of the sealing, resulting in battery overheating, combustion, and/or explosion.
3. Do not combine and use any battery of different capacity and/or type with the primary battery. Doing so can cause excessive electrical discharge during use or excessive charging during charging, resulting in an abnormal chemical reaction within the battery that can cause battery overheating, combustion, and/or explosion.
4. If during battery usage, storage, or charging, a strange odor or conditions differing from the normal, such as overheating, color changes, warping, etc., are detected, remove the battery from the product or charger and discontinue use. Continued use may cause battery overheating, combustion, and/or explosion.
5. When recharging, if the battery is not charged after the normal fixed charging time, discontinue charging. Continued charging can result in battery overheating, combustion, and/or explosion.
6. If the battery appears to be coated with condensation or emits a strange odor, immediately place it far away from any heat source. The condensation may be caused by a leak of electrolytic solution that can ignite to cause battery combustion and/or explosion.
7. If the battery is leaking electrolytic solution and any of the solution enters the eyes, immediately wash out with clean water, and then consult a physician to receive treatment. Neglecting to do so can cause permanent eye injuries.



### Caution

1. Do not use or leave the battery in a location exposed to high temperatures or intense direct sunlight, such as within an automobile. Doing so can cause battery overheating and/or combustion. In addition, battery performance and product life may be reduced.
2. The battery contains a safety mechanism to prevent danger. Do not use the battery in a location that is prone to static electricity (above the amount covered by the manufacturer's product warranty) that can cause damage to this safety mechanism. Damage to the safety mechanism can result in battery overheating, combustion, and/or explosion.
3. The temperature ranges for battery usage are as follows. Any usage outside of these ranges can result in battery overheating and/or damage. In addition, battery performance and product life may be reduced.
  - Charging: 0 ~ 40°C
  - Product Usage: -20 ~ 60°C
  - Storage: -20 ~ 60°C (30 days)
  - Long-Term Storage: -20 ~ 40°C (90 days)
4. Please review the exclusive charger manual carefully for charging instructions.
5. If upon first use following purchase, a strange odor, overheating, and/or anything deemed out of the ordinary is detected, discontinue use and contact the dealer from which the product was purchased.
6. If a child must use the battery, the child's parent or legal guardian should clearly explain the instructions from the user manual prior to use. In addition, the parent or legal guardian should periodically confirm that usage is being conducted in accordance with user manual instruction during use.
7. Store the battery in a location that is out of the reach of small children. During usage, make sure to also place the charger and/or product out of the reach of small children.
8. If the battery is leaking electrolytic solution, and the solution comes in contact with the skin or clothing, immediately wash thoroughly with clean water. Contact with skin can result in skin disorders.
9. Make sure to review the user manual and precautions carefully prior to use. In addition, after carefully reviewing the user manual and precautions, place them in a secure location for future reference when needed.
10. As the improper exchange of the battery can pose the risk of explosion, replace only with batteries of the same type and grade as designated by the manufacturer. Dispose of used batteries per the instructions provided by the manufacturer.
11. If using the printed side of preprinted paper, this may cause malfunction.



### **Recommended**

1. Review the user manual for instructions concerning insertion/removal of batteries into/from the product.
2. As the battery is slightly charged upon factory shipment, use it to confirm proper product operation upon purchase. If product operation cannot be confirmed or longer use of the product is required, use the exclusive charger to charge the battery.
3. To avoid improper use of the battery, review the product user manual carefully.
4. Do not charge the battery for long times in excess of the normal charging time indicated in the user manual.
5. If the battery is not to be used for a long period of time, remove it from the product and store in a location with low humidity. If the battery is stored while still inserted in the product in a highly humid location, oxidization may occur along with a decline in battery performance.
6. After product usage, make sure to turn power off. Neglecting to do so can cause a decline in battery performance.
7. A battery that has not been used over a long period of time may not be sufficiently charged. Even if the battery is not to be used, charge the battery to the status recommended by the manufacturer once every six months. Neglecting to do so can cause a decline in battery performance and product life.
8. If the battery terminal is dirty, use a dry cloth to wipe clean prior to use. Neglecting to do so can result in poor connection with the product causing power stoppages or failed charging.
9. Each battery has a product life. If the usage time of the product has become short, replace the battery. Wrap the terminals of used batteries with tape to insulate prior to disposal.

### **■ Other Precautions**

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## ■ Warning USA

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications not expressly approved by the manufacturer could void the user's authority to operated the equipment under FCC rules.

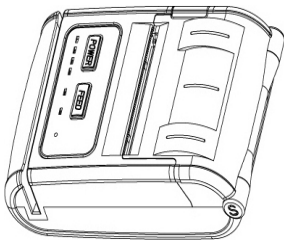
**This Device has been evaluated to comply with RF exposure requirement for general use limit in portable condition. It is safe to be used in sold condition.**



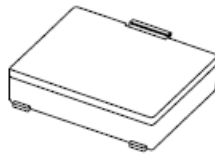
## 1. Content Confirmation

The following items should all be contained in the printer package. Contact the dealer from which the purchase was made if any item is damaged and/or missing.

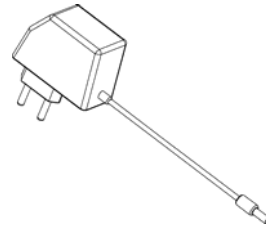
### ※ Basic items



CJ50SP



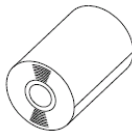
Battery



Battery Charger



Belt Strap



Paper



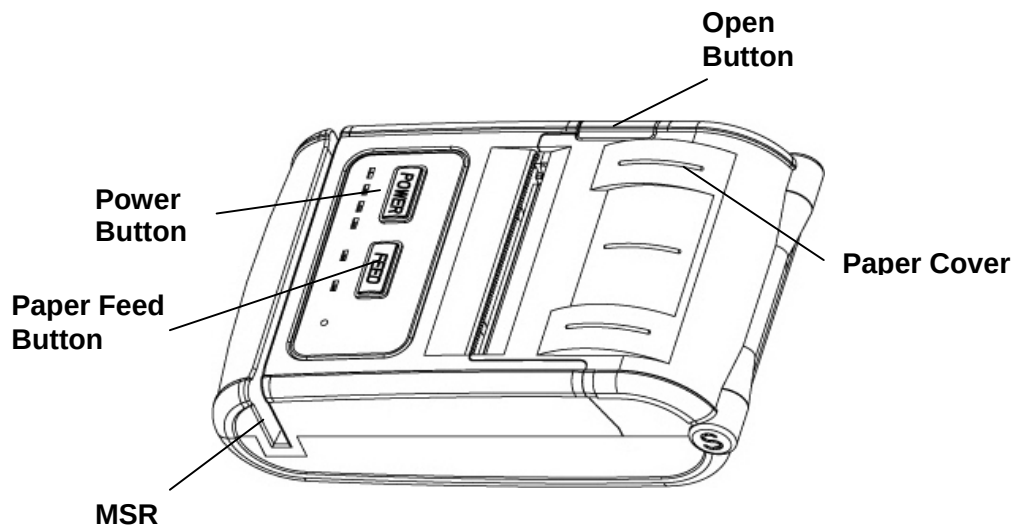
Interface Cable



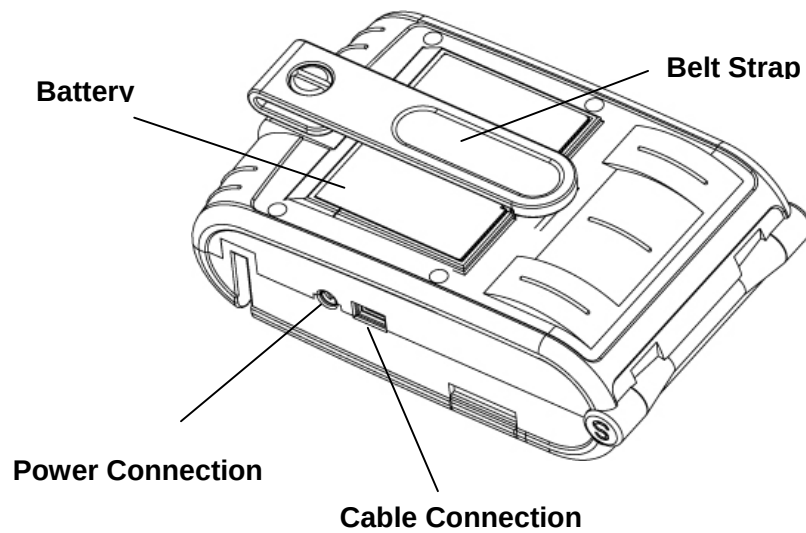
User Manual

## 2. Product Part Names

- Front

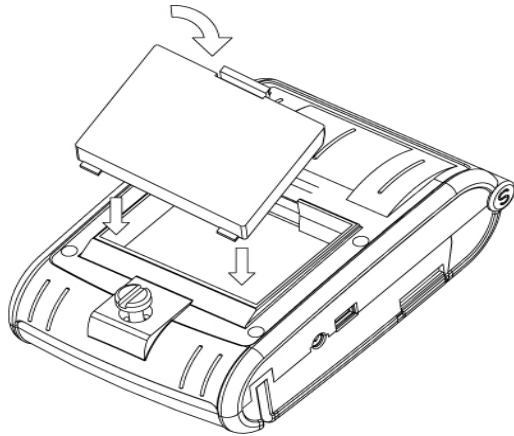


- Rear



### 3. Installation & Usage

#### 3-1 Battery Installation

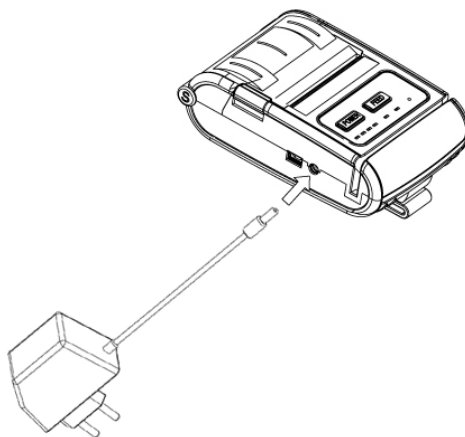


- 1) Insert the battery on the rear side of the printer, aligning the battery hook properly.
- 2) Push the battery into the slot until a snapping sound is heard

#### ***NOTE***

As the battery is not charged at the time of purchase, charge the battery prior to product use.

#### 3-2 Battery Charging



### 3-2-1 Battery Charging Usage

- 1) Turn off the printer power.
- 2) Connect the battery charger to the power connector of the printer
- 3) Plug the Charger into an electrical outlet.

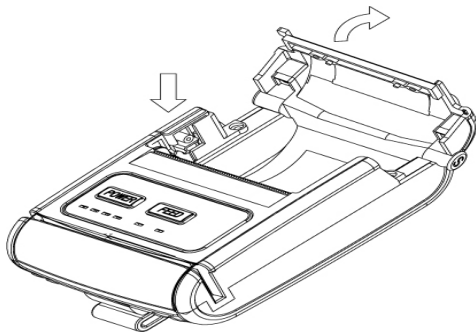
#### **CAUTION**

The printer may incur serious damage if the battery charger provided by CHAMJIN I & C is not used. CHAMJIN I & C is not legally liable for any such damages. (The voltage and electrical current specifications of the printer and battery charger must match.)

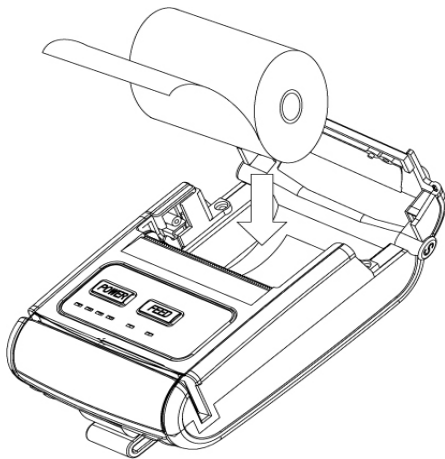
#### **WARNING**

Turn off the power before charging the battery for the printer.

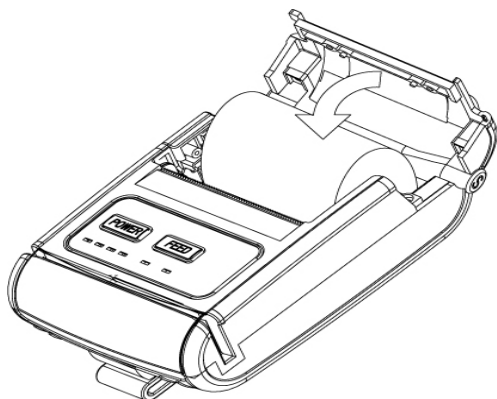
### 3-3 Paper Installation



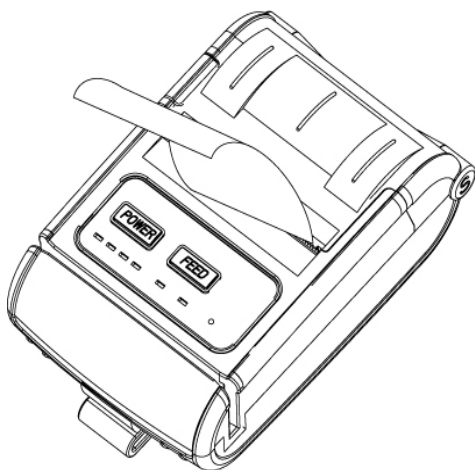
- 1) Press the Open button to open the paper cover.



- 2) Insert the paper as shown in the image. (Remove any remaining core of a fully used paper roll.)

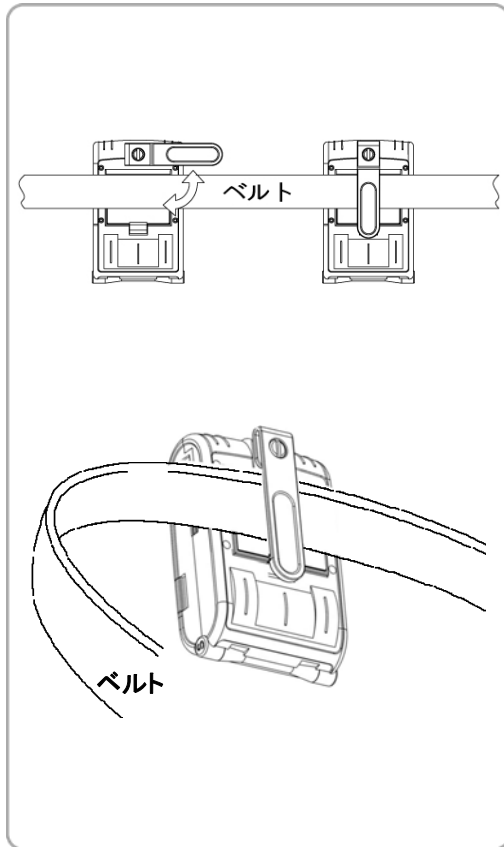


3) Take care to align the paper correctly.



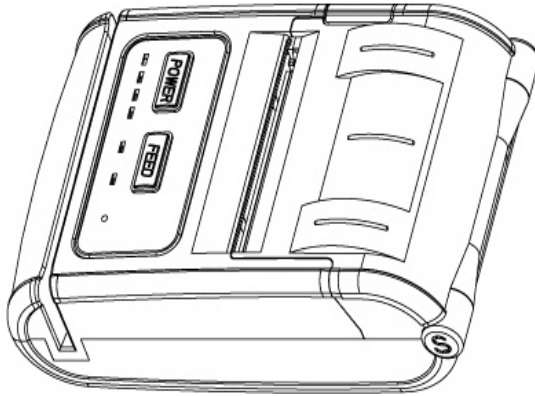
4) Pull the paper out as shown in the image and close the paper cover. Tear off any excess paper in the direction of the side of the printer.

### 3-4 Belt Strap Usage

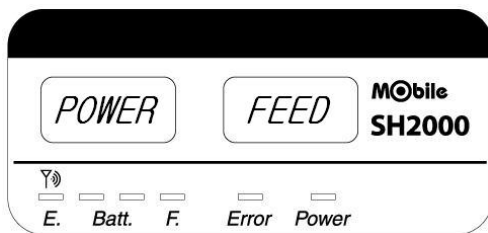


- 1) Insert the belt strap screw into the belt strap hole.
- 2) Use a coin to tighten the belt strap screw as shown in the image.
- 3) Undo the belt strap Velcro.
- 4) Fasten the belt strap to a belt.
- 5) Close the Velcro as shown in the image.

### 3-5 Control Panel Usage



- Power Button



This button is used to turn the printer on and off.

When the printer is off, pressing this button for approximately 2 seconds will turn the power on. When the printer is on, pressing this button for approximately 2 seconds will turn the power off.



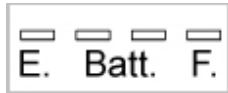
- Paper Feed Button

Paper output can be done manually by pressing this button.

In addition, self-testing can be done.

1) Refer to "4. Self-Test" for self-test information.

- **Battery Status Lamp (Blue or Orange)**



- 1) If three blue lamps(until F) are lit, the battery is fully charged.
- 2) If two blue lamps are lit, the battery is half charged.
- 3) If one blue lamp is lit, the battery is at the lowest charge level.
- 4) If the orange lamp is lit, the battery must be charged or replaced.

- **Error Lamp (Red)**



- 1) If the red lamp is lit, the paper cover is open.
- 2) If the red lamp is blinking, either the paper has been fully used or the print head is overheated.  
(Fill with paper or turn the printer off for at least 10 minutes.)
- 3) If the red lamp continues to blink, it may indicate a more serious problem with the product, and thus an authorized service dealer should be consulted.

- **Bluetooth Lamp (Orange)**



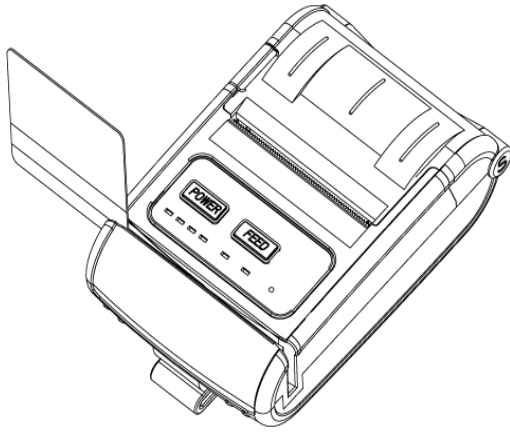
- 1) If the orange lamp turns on in unison with the battery status lamp, the printer can be used with Bluetooth wireless communication.

***NOTE***

The power saving mode is activated after the first communication, with the default time interval being 10 seconds



### 3-6 MSR Usage



Insert the card as shown in the image and swipe in the direction of the arrow.  
(can be done in both directions)

#### **NOTE**

If the card does not register, first check to see if it is properly aligned. When swiping the card,  
the recommended swiping speed is 100 ~ 1500 mm/sec.

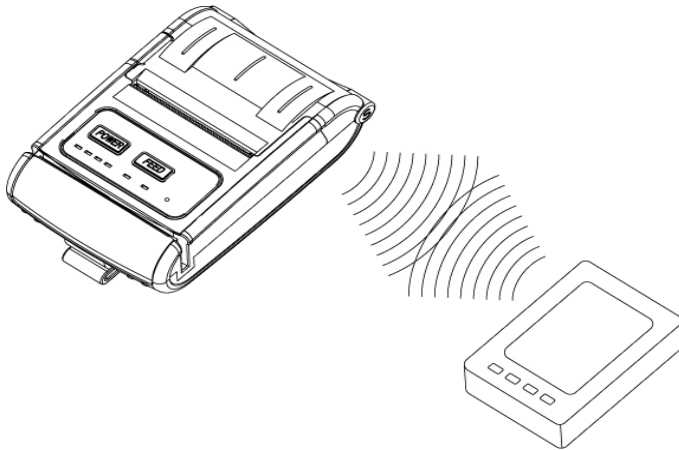
### 4. Self-Test

- 1) Turn the printer power off and close the printer paper cover.
- 2) Pressing the paper feed button and power button simultaneously turns the printer on.
- 3) The printout is produced after releasing the two buttons.
- 4) To add a printout of the ASCII pattern, press the paper feed button once more.
- 5) After the ASCII pattern is printed out, the self-test is automatically terminated.

## 5. Peripherals Connection

This product can communicate with other devices via Bluetooth communication and cable.

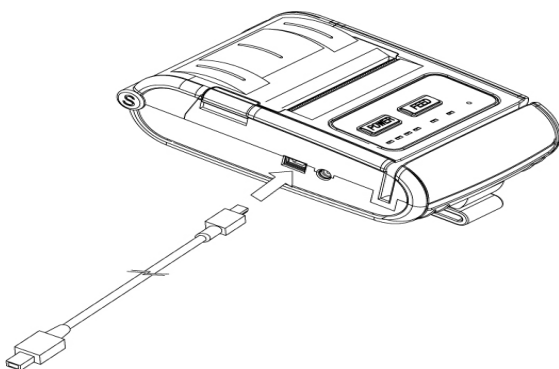
### 5-1 Bluetooth Connection



- 1) The printer can be connected to devices equipped with Bluetooth communication capacity (PDAs, PCs, etc.).
- 2) Use the Bluetooth connection function supported by the device to connect to the printer.

### 5-2 Interface Cable Connection

- 1) Connect the interface cable to the cable connector of the printer.



#### **NOTE**

Use only cables (optional) provided by CHAMJIN I & C (USB, Serial).

2) Connect the interface cable to the USB port of the device (PDAs, PCs, etc.).

3) The interface cable that can be connected with the printer is available in both USB and Serial type.

## 6. Printer Cleaning

If the interior of the printer is dusty, print quality can decline.  
In such a case, follow the instructions below to clean the printer

### *CAUTION*

- Make sure to turn the printer power off prior to cleaning.
  - As the print head gets very hot during printing, if intending to clean the print head, turn the printer power off and wait approximately 10 minute before commencement.
  - When cleaning the print head, take care not to touch the heated portion of the print head.  
→ The print head is susceptible to damage from static electricity, etc.
  - Take care not to allow the print head to become scratched and/or damaged in any way.
- 1) Open the paper cover and remove any paper that may be present.
  - 2) Wipe the print head with a cleaning pen.
  - 3) Use a cloth moistened with an alcohol solution to clean the paper sensor are and remove any paper remnants and/or dust.
  - 4) Insert paper into the printer 1~2 minutes after completing the cleaning process and close the printer cover.

## 7. Appendix

### 7-1 Specifications

|                        |                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Printer</b>         | Print Printing Method<br>Resolution<br>Character Set<br><br>Character Size<br><br>Character per Line<br><br>Printing Speed<br>Interface<br>Driver<br>Drawer Port<br>RECEIVE BUFFER(NV Image)<br>Sensor<br>Emulation<br>Barcodes<br><br>Paper Supply Method<br>MSR | Direct Thermal Printing<br>203 dpi (8dots/mm)<br>Alphanumeric character : 96<br>International character<br>Font A : 12 x 24, Font B : 9 x 24<br>Korean : 24 x 24 (Option), Chinese : 24 x 24 (Option)<br>Font A: 32, Font B: 42<br>Korean : 16, Chinese : 16<br>90 mm/sec<br>RS-232C/USB, Bluetooth<br>Win 98/ME/2000/NT/XP/2003, OPOS<br>None<br>4 kB (None)<br>Paper end sensor<br>ESC/POS<br>1D : Coda Bar, ITF, UPC A, UPC E, Code 39, Code 93<br>Code 128, EAN 8, EAN 13, EAN 18<br>Easy paper loading<br>ISO 7811/7812, JIS I/ II |
| <b>Paper</b>           | Paper type<br>Paper Width<br>Paper Roll Diameter                                                                                                                                                                                                                  | Thermal Paper (Mono)<br>(58 ± 0.5) mm<br>Max. Φ 40 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Reliability</b>     | MCBF<br>TPH<br>BATTERY                                                                                                                                                                                                                                            | 100 Million Pulses.<br>50 km<br>500 Cycles Rechargeable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Battery</b>         | Type<br>Output                                                                                                                                                                                                                                                    | Lithium-ion<br>Voltage : 7.4 V DC<br>Capacity : 1 050 mAh                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Battery Charger</b> | Charging Time<br>Input<br><br>Output                                                                                                                                                                                                                              | 2.5 Hours<br>Voltage : AC (100 ~ 250) V<br>Current : 0.5 A<br>Voltage : DC 8.4 V<br>Current : 0.8 A                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Dimensions</b>      | DIMENSIONS<br>WEIGHT<br>TEMPERATURE                                                                                                                                                                                                                               | 80 mm (W) x 130 mm (L) x 49 mm (H)<br>293 g<br>(5 ~ 45) °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Bluetooth</b>       | Frequency Range<br>No of Channel<br>Operating Temperature<br>Oscillation/Modulation<br>Gain                                                                                                                                                                       | 2 402 MHz ~ 2 480 MHz<br>79<br>(-10 ~ +50) °C<br>PLL/GFSK<br>-3.0 dBi                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

Fequency Table

| Channel(CH) | Frequency(MHz) | (CH) | (MHz) | (CH) | (MHz) | (CH) | (MHz) |
|-------------|----------------|------|-------|------|-------|------|-------|
| 0           | 2 402          | 20   | 2 422 | 40   | 2 442 | 60   | 2 462 |
| 1           | 2 403          | 21   | 2 423 | 41   | 2 443 | 61   | 2 463 |
| 2           | 2 404          | 22   | 2 424 | 42   | 2 444 | 62   | 2 464 |
| 3           | 2 405          | 23   | 2 425 | 43   | 2 445 | 63   | 2 465 |
| 4           | 2 406          | 24   | 2 426 | 44   | 2 446 | 64   | 2 466 |
| 5           | 2 407          | 25   | 2 427 | 45   | 2 447 | 65   | 2 467 |
| 6           | 2 408          | 26   | 2 428 | 46   | 2 448 | 66   | 2 468 |
| 7           | 2 409          | 27   | 2 429 | 47   | 2 449 | 67   | 2 469 |
| 8           | 2 410          | 28   | 2 430 | 48   | 2 450 | 68   | 2 470 |
| 9           | 2 411          | 29   | 2 431 | 49   | 2 451 | 69   | 2 471 |
| 10          | 2 412          | 30   | 2 432 | 50   | 2 452 | 70   | 2 472 |
| 11          | 2 413          | 31   | 2 433 | 51   | 2 453 | 71   | 2 473 |
| 12          | 2 414          | 32   | 2 434 | 52   | 2 454 | 72   | 2 474 |
| 13          | 2 415          | 33   | 2 435 | 53   | 2 455 | 73   | 2 475 |
| 14          | 2 416          | 34   | 2 436 | 54   | 2 456 | 74   | 2 476 |
| 15          | 2 417          | 35   | 2 437 | 55   | 2 457 | 75   | 2 477 |
| 16          | 2 418          | 36   | 2 438 | 56   | 2 458 | 76   | 2 478 |
| 17          | 2 419          | 37   | 2 439 | 57   | 2 459 | 77   | 2 479 |
| 18          | 2 420          | 38   | 2 440 | 58   | 2 460 | 78   | 2 480 |
| 19          | 2 421          | 39   | 2 441 | 59   | 2 461 |      |       |