Newland | When payment happens, When NEWLAND discovered.

N950S POS Terminal

Quick Reference Guide

Packing List

1 POS terminal
1 user manual
1 Li-ion battery
1 power supply
※ All appearances are subject to the actual supply in the box.
※ Pictures in this manual are for reference only.
※ Specifications are subject to change without notice.

- Please check the items when you receive the product and if there is anything defective or missing, please contact your terminal provider.
- For any other AC Type Plug requirement, please contact your terminal provider.

Introduction

- This is a new multi-functional POS terminal – N950S. It has different optional configurations and accessories. Please select by yourself according to this document or supplier.
- Read this guide to understand and make the best use of your terminal. It presents you the necessary information about use, installation, maintenance, safety and security recommendations.

WARNING
Use only the power adapter included with the product to ensure best performance and safety. Maintenance should only be provided by Newland authorized technician. Failure to comply with these instructions will void the manufacturer's responsibility.

Overview of the Terminal

Installation

- **Recommendations**
  The terminal should be kept away from very hot zone and protected from vibrations, dust, damp or electromagnetic radiation (computer screen, wireless intercom etc.)
- **Environment condition**

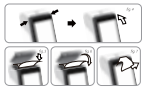
Operating temperature	14℉ to 122℉ (-10℃ - 50℃)
Storage and transportation temperature	-4℉ to 140℉ (-20℃ - 60℃)
Relative humidity	5% – 93% non-condensing at + 104℉ (40℃)
Battery charging conditions	32℉ to 113℉ (0℃ - 45℃)

Installing Battery

- **Caution:**
  1. Make sure that the terminal is power off and the adapter power is disconnected before installing the battery.
  2. Always follow the installation diagram. Improper operation will damage the battery.

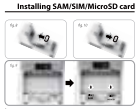
- **Installation steps**
  Step 1: Turn the terminal upside down and push the battery cover in the direction of the arrow to open the battery cover.(fig.1)
  Step 2: Insert the battery plug into the socket and put the battery into the battery compartment.(fig.2)
  Step 3: After the battery is installed, press the battery cable to make the cable height lower than the battery.(fig.3)
  Step 4: Cover the battery cover.(fig.4)
- **Disassembly steps**
  Reverse the above steps.

Paper Roll Installation



- **Step 1**: Open the paper roll cover.(fig.4)
- **Step 2**: Insert the paper roll in the compartment following the directions shown on the picture, and pull 5cm of paper until it protrudes from the top of the terminal. (fig.1)
- **Step 3**: Maintain the paper and close the lid cover until a click sound is heard. (fig.2)
- **Step 4**: Remove the excess paper by tearing along the serrated edge. (fig.3)

Installing SAM/SIM/MicroSD card



⚠ **Warning:**
Make sure that the terminal is power off and the adapter power is disconnected before installing the SAM/SIM/Micro SD card.

- **Step 1**: Turn the terminal upside down and open the battery cover. You should remove the battery first if there is a battery.(fig.1)
- **Step 2**: According to the SIM/SAM/Micro SD card position of the engraved marks on the lower housing, load the required card. Be sure put the cut corner as indicated on the engraved marks.(fig.3)
- **Note**: SIM/SAM/Micro SD are selected subject to the product configuration.
  The status of SIM/SAM/ is subject to the actual order.
- **Step 3**: Replace the battery and cover then turn the terminal facing up.(fig.10)

Charging the Battery

⚠ **Warning:**

1. Only original batteries and power adapters can be used. Using other batteries or power adapters may cause damage to the device and battery, or even explosion.
2. Do not put device with lithium batteries into fire or exposed to high temperatures for a long time, must be away from heat sources, such as sun, heater, microwave oven or water heater. Overheating of the battery may cause an explosion.
3. If the lithium battery is soaked, the lithium battery cannot continue to be used, water in the lithium battery may cause a fire.
4. It is recommended to unplug the charger after full charge in normal use to avoid long-term charging or long-term high power state to accelerate the aging of the lithium battery to extend the battery life.
5. If the device has not been used for more than 1 month, please take out the battery and charge the lithium battery every 3 months to keep it at 50%~60% power.

Switching On/Off the Terminal

- **Power on:** Press power button for about 2 seconds till the LCD is lit to switch on.
- **Power off/Reboot:** Press and hold power button to see a pop-up window, touch the screen to select "Power off" to power off the terminal. (Or to select "Reboot" and then "OK" to reboot the terminal.)
- **Note**: If there is a crash, please press power button for about 10 seconds to reboot the terminal forcibly, or re-plug the battery then boot the terminal.

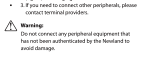
Reading Card

Smart card
Insert the chip card into the terminal as shown by the arrow on the slot with its contact surface (chip) facing up. Do not remove the chip card during the transaction.

Magnetic stripe card
Swipe the magnetic card along the slot with its band facing to terminal. Keep the swiping speed uniform as much as possible. It is allowed to swipe the magnetic card from top to bottom or from bottom to top. Use a regular movement in order to ensure a reliable card reading.

Contactless card
Bring the card firmly up to the RFID reader, keep the card close to the reader during the transaction. The LED indicator at the upside of the LCD will indicate the transaction state during the transaction.

External Connections



- 1. Connect PC and POS terminal (fig. 11) for maintenance and download.
- 2. Connect the power adapter and POS terminal (fig. 12) for charging.
- 3. If you need to connect other peripherals, please contact terminal providers.

⚠ **Warning:**
Do not connect any peripheral equipment that has not been authenticated by the Newland to avoid damage.

Safety

1. Please be sure to take to comply with the specifications in this document.
2. Do not use in proximity of potentially flammable gases or substances.
3. Do not disassemble the terminal, power adapter or battery.
4. Cut off the power immediately, when there is unusual smell, overheating or smoke.
5. There is a risk of explosion if the battery is incorrectly replaced or is placed in a fire. Life-ended batteries must be disposed of at the appropriated sites.
6. Do not use in a near water or humid environment to prevent liquid from entering the device.
7. Do not use the terminal in extremely cold or hot zones, such as near a fire.
8. Do not drop, throw or bend the device.
9. Use in clean environment to avoid entry of small objects into POS.
10. Do not use near hospital equipment without permission.
11. Do not use terminals with radio communication on or near the aircraft, or in any other place where radio communication is prohibited.

Security of Your Terminal

Your terminal fulfills current applicable PCI PTS security requirements. Upon receipt of your terminal you should check for signs of tampering. It is strongly advised that these checks are performed daily after receipt (Be sure the circumstance is brightness or you may use a light tool as well).

1. Check the product name and the hardware version on the label to ensure the product is correct.
2. Check if there are bugs hidden in the IC card slot before IC card is inserted.
3. Check whether the magnetic card slot has the exception of adding magnetic head.
4. Check the appearance of the product to guarantee the device without being modified.
5. This is handheld device, not allowed to be fixed on the wall.
6. Before entering the PIN, the user should be aware of his/her surrounding and use the body, fingers or protection to block the voyeur's sight.

Standards

- **CE Marking**
  The CE marking indicates N950S complies the requirements of European Directive 2014/53/EU of 16 April, 2014 on Radio and Telecommunications Terminal Equipment for:
  1. The protection of the health and the safety of the user and any other person;
  2. The protection requirements with respect to electromagnetic compatibility.
- **Operating Frequency Band(RF)**

Transmitter Frequency:
GSM 900:880M-915MHz; DCS 1800: 1710-1785MHz
WCDMA Band 1: 1920-1980MHz; WCDMA Band 8: 880-915MHz
LTE Band 1: 1920-1980MHz; LTE Band 3: 1710-1785MHz
LTE Band 7: 2500-2570MHz; LTE Band 8: 880-915MHz
LTE Band 20: 832-862MHz; LTE Band 38: 2570-2620MHz
LTE Band 40:2300-2400MHz
Wi-Fi 2.4G: 2412-2472MHz
5G NR n1:1920-2000MHz, 5G NR n3:1710-1785MHz, 5G NR n40:2300-2400MHz
BT4.0: 2402-2480MHz
NFC: 13.56MHz

Receiver Frequency:
GSM 900: 925-960MHz; DCS 1800: 1805-1880MHz
WCDMA Band 1: 2110-2170MHz; WCDMA Band 8: 925-960MHz
LTE Band 1: 2110-2170MHz; LTE Band 3: 1805-1880MHz
LTE Band 7: 2620-2690MHz; LTE Band 8: 925-960MHz
LTE Band 20: 791-821MHz; LTE Band 38: 2570-2620MHz
LTE Band 40: 2300-2400MHz
Wi-Fi 2.4G: 2412-2472MHz
5G NR n1:2110-2170MHz, 5G NR n3:1805-1880MHz, 5G NR n7:2620-2690MHz, 5G NR n20:791-821MHz, 5G NR n40:2300-2400MHz
BT4.0: 2402-2480MHz
NFC: 13.56MHz

RF Output Power:
EIRP/ERP(Conducted)
WCDMA 900: 22.15dBm/10MHz;WCDMA 1900: 22.15dBm/10MHz;
DCS 1800: 29.11dBm/10MHz; PCS 1900: 29.11dBm/10MHz;
WCDMA: 25.17dBm/5MHz; 23.24dBm/3MHz
LTE: 23.53dBm/BW1.4; 23.53dBm/BW3; 23.53dBm/BW5; 23.53dBm/BW10; 23.53dBm/BW20; 23.17dBm/BW1.4; 23.17dBm/BW3; 23.17dBm/BW5; 23.17dBm/BW10; 23.17dBm/BW20
2.4G: 17.75dBm/802.11b/g/n20;
5.2G: 17.75dBm/5.15G-17.75dBm/5.2G-17.75dBm
BT: 9.98dBm
BLE: 0.13dBm
NFC: 24.00dBuA/m@10m

5 GHz band (5FG): W53: Indoor use only

BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR
HR	IT	CY	LV	LT	LU	HU	MT	NL	AT
PL	PT	RO	SI	SK	FI	SE	NO	IS	LI
CH	TR								

- **FCC**
  This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
  1. This device may not cause harmful interference.
  2. This device must accept any interference received, including interference that may cause undesired operation.
- **Caution**
  Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- **Note**
  This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of 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:
  1. Reorient or relocate the receiving antenna.
  2. Increase the separation between the equipment and receiver.
  3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  4. Consult the dealer or an experienced radio/TV technician for help.

- **Specific Absorption Rate (SAR) information**
  SAR tests are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands, although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. Before a new product is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the exposure limit established by the FCC, tests for each POS Terminal are performed in positions and locations as required by the FCC.
  For headset, this part has been tested and meets the FCC RF exposure guidelines when used with an accessory designated for this product or when used with an accessory that contains no metal.
  For baseband, this equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 10mm between the radiator and your body.

- **IC Compliance Statements**
  This device contains licence-exempt transmitter(s)/ receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
  1. This device may not cause interference.
  2. This device must accept any interference, including interference that may cause undesired operation of the device.

  This device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

  L' émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d' Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L' exploitation est autorisée aux deux conditions suivantes :
  1. L' appareil ne doit pas produire de brouillage;
  2. L' appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d' en compromettre le fonctionnement.

  le dispositif utilisé dans la bande 5150-5250 MHz est réservé à une utilisation en intérieur afin de réduire le risque de brouillage préjudiciable aux systèmes mobiles par satellite dans le même canal.

- **RF Exposure Compliance**
  This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
  The portable device is designed to meet the requirements for exposure to radio waves established by the FCC/IC. These requirements set a SAR limit of 1.6 W/kg averaged over gram of tissue. The highest SAR value reported under this standard during product certification for use when properly worn on the body, with 10mm separation. These requirements set a SAR limit of 4.0 W/kg averaged over ten gram of tissue. The highest SAR value reported under this standard during product certification for use when properly worn on the limbs.

  Cet équipement est conforme aux limites d' exposition aux rayonnements ISED établies pour un environnement non contrôlé. L' utilisateur final doit suivre les instructions spécifiques pour satisfaire les normes. Cet émetteur ne doit pas être co-implanté ou fonctionner en conjonction avec toute autre antenne ou transmetteur.
  Le dispositif portatif est conçu pour répondre aux exigences d' exposition aux ondes radio établie par le développement énergétique DURABLE. Ces exigences un SAR limite de 1.6 W/kg en moyenne pour un gramme de tissu. La valeur SAR la plus élevée signalée en vertu de cette norme lors de la certification de produit à utiliser lorsqu' il est correctement porté sur le corps, avec une séparation de 10mm.
  Ces exigences un SAR limite de 4.0 W/kg en moyenne pour un gramme de tissu. La valeur SAR la plus élevée signalée dès vertu de cette norme lors de la certification de produit à utiliser lorsqu' il est correctement porté sur le membres.

Transmitter Frequency:
LTE Band 1: 1920-1980MHz; LTE Band 3: 1710-1785MHz
LTE Band 5: 824-849MHz; LTE Band 7: 2500-2570MHz
LTE Band 12: 699-716MHz; LTE Band 13: 777-787MHz
LTE Band 20: 1832-2012MHz; LTE Band26: 814-849MHz
LTE Band 38: 2570-2620MHz; LTE Band40: 2300-2400MHz
LTE Band 41: 2496-2690MHz
Wi-Fi 2.4G: 2412-2472MHz
5.1 Wi-Fi: 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz
BT4.0: 2402-2480MHz
NFC: 13.56MHz

Receiver Frequency:
LTE Band 1: 2110-2170MHz; LTE Band 3: 1805-1880MHz
LTE Band 5: 869-894MHz; LTE Band 7: 2620-2690MHz
LTE Band 12: 729-746MHz; LTE Band 13: 746-756MHz
LTE Band 20: 791-821MHz; LTE Band 26: 859-894MHz
LTE Band 38: 2570-2620MHz; LTE Band40: 2300-2400MHz
LTE Band 41: 2496-2690MHz
Wi-Fi 2.4G: 2412-2472MHz
5G Wi-Fi: 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz
BT4.0: 2402-2480MHz
NFC: 13.56MHz

Troubleshooting

- **1. The terminal does not turn on**
  1. Check that the battery is installed correctly
  2. Please charge the battery to check if it is fully discharged.
- **II. Battery life is significantly reduced**
  1. Check if the battery is fully charged.
  2. Battery life expires, please replace the battery.
- **III. Can't read the magnetic card or the card swiping has a low success rate**
  1. Check that the magnetic card is swiped correctly (with magnetic band on terminal side).
  2. Check if there any bugs or dirt on the magnetic head. Please clean it.
- **IV. IC cards can't be read**
  1. Make sure you have inserted correctly the Chip card into the chip card reader (with the chip facing up).
  2. Check if the card slot is blocked or if the card is in correct position.
- **V. Ticket cannot be printed or printed incompletely**
  1. Check the presence and proper positioning of the paper roll.
  2. Check the type of paper used is correct.
  3. Check if there is any shredded paper in the printer, clean it.

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