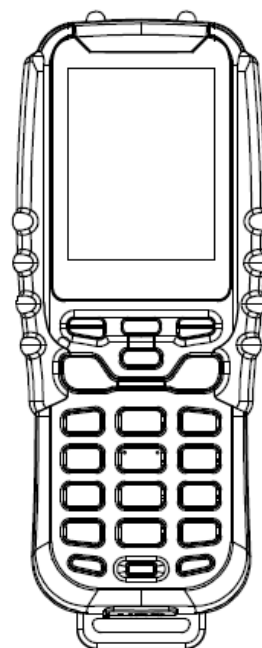# Handheld Data Terminal

HH-22 Series

User's Guide

- Thanks for selecting HH-22 handheld terminals!

- This manual describes the basic use and the specific operation of the machine, please read before using it.

Contents

Safety Precautions

Thanks for selecting HH-22 handheld terminals. Please read the following safety precautions carefully before using the device. Keep this mannual nearby, so you can check it at any time.

⚠ 危险！

This symbol means: If you ignore the requirements prescribed or use improperly, there is a risk of causing death or serious injury.

⚠ 警告！

This symbol means: If you ignore the requirements prescribed or use improperly, there is a possibility of causing death or serious injury.

⚠ 注意！

This symbol means: If you ignore the requirements prescribed or use improperly, there is a possibility of causing death or serious injury.

⚠ 危险！

- ☐ lithium-ion battery
  - ■ Do not get it wet. Water may cause the battery to heat, explosion and on fire.
  - ■ Don't use or leave the battery near the flames or other locations exposed to high temperatures.
  - ■ Don't use this battery for other device. Or, it may cause the battery to heat, explosion and on fire.
  - ■ When charging the battery in the device, do not get the positive (+) and negative (-) grade reversed. Or, it may cause the battery to heat, explosion and on fire.
  - ■ Don't burn or heat the waste battery. Or, it may cause the battery to heat, explosion and on fire.
  - ■ Don't connect the positive and negative poles of the battery in the charger or apparatus.
  - ■ Don't transport or storage the battery together with metal objects, such as hairpins, necklaces. Otherwise, it may cause a short circuit of the battery positive and negative level, so that the battery will heat, explosion and on fire. During the transport, please put the battery in the box.
  - ■ Do not beat, strike or pierce the battery with sharp object like nail. Or, it may cause the battery to heat, explosion and on fire.
  - ■ Do not disassemble and directly solder the battery, or modified in any way. Or, it may cause the battery to heat, explosion and on fire.
  - ■ The battery can only be charged with the specified charger. If you use other charger, it may cause the battery to heat, explosion and on fire.

⚠ 警告！

- ☐ Demolition and modification

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■ Do not attempt in any way to disassemble and modify the battery. Internal high voltage may cause electric shock.

□ Internal Components and Parts

■ Do not touch the internal high-voltage components or parts, or it may cause an electric shock.

□ Unusual circumstances

■ If the collector begins to fever, or produce smoke or strange odor, immediately turn off the power and contact your dealer as soon as possible. If you continue to use, it may cause a risk of fire and electric shock.

□ Foreign objects

■ If a foreign substance enters the collector, you should immediately turn off the power. And contact your dealer as soon as possible. If you continue to use, it may cause a risk of fire and electric shock.

□ Drop and Injury

■ If collector dropped or damaged, immediately turn off the power. And contact with your dealer as soon as possible. If you continue to use, it may cause a risk of fire and electric shock.

□ Humidity

■ Keep the collector away from flower vases, flower pots, cups, glasses and other containers filled with water, and metal. If water and metal enter into the collector, it may cause a risk of fire and electric shock.

□ Laser beam

■ Do not look directly into the laser beam. Otherwise, it will seriously damage the eyes.

□ lithium-ion battery

■ Do not put the battery into a microwave oven or a pressure cooker. Otherwise, it may cause the battery to overheat, explode or burn.

■ Do not use battery with odor, overheating, abnormal color or abnormal shape . Otherwise, it may cause the battery to overheat, explode or burn.

■ If after finishing the normal charge, it can only use for a very short

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time, please stop using it immediately. If you continue charging the abnormal battery, it may cause an explosion or fire.

■ If the battery leaks or odor occurs, immediately remove it from heat or ignition sources nearby. Heat can cause the battery to explode or burn.

■ If fluid from the battery accidentally entering the eye, there is the risk of blindness. Do not rub eyes, immediately rinse with clean water and then ask for medical treatment.

⚠ 注意!

□ Foreign objects

■ Pay attention that there is no metal or flammable materials ether into the collector. These foreign materials may cause a risk of fire and electric shock.

□ Position

■ Don't place the collector on an unstable or uneven surface, or there is a risk of dropping, so it will result in casualties.

■ Please don't place the collector in humidity and dusty place.

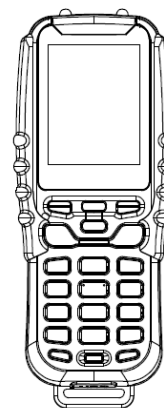■ Don't place the collector in the car in direct sunlight for a long time.

□ LCD Monitor

■ Do not apply too much pressure on the LCD screen, it will subject the screen to strong impact. Otherwise, it may cause the LCD fragmentation, resulting in personal injury

■ If the LCD broken, do not touch the liquid inside, or it may irritate the skin or cause inflammation.

◆ If the liquid from the LCD panel accidentally enter into your mouth, immediately gargle and consult with a doctor.

◆ If accidental contact to the eyes or skin, immediately wash with clean running water for 15 minutes and then ask for medical treatment.

Operation Precautions

- Clean handheld data collector with a soft, dry cloth. Don't wipe with a damp cloth. Do not use benzene, thinner, or other volatile chemicals, or it will make buttons and shell material deformation or corrosion.

- Don't make the press button of handheld data collection downwards. Otherwise, there is likely to be accidental button operation.

- Do not remove the main battery in the state of handheld data collector powered. Otherwise it will lose all data in memory.

- When temperature changes suddenly, it may appear dew condensation on the shell of the handheld data collector. If you operate the data collector at this time, it may affect the normal work. So if there is dew condensation, please use the collector till the device is dry enough.

Preface

HH-22 data collector, also called handheld data terminal, is dedicated design for logistics, warehouses, parking lots, bookstores and other industry.
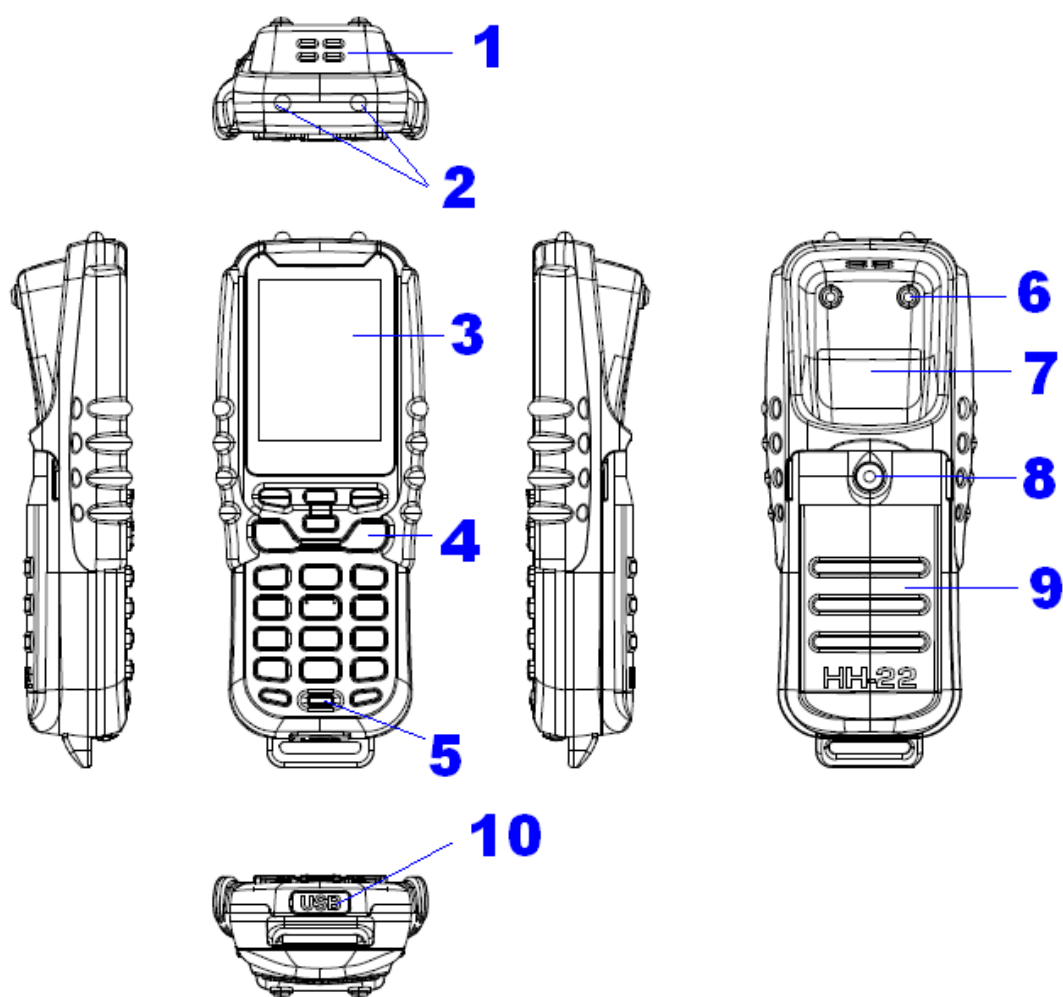
Precautions for Operation of Terminal Collector

□ Do not throw or drop the data collection, or it will subject the device to strong impact. Otherwise it will damage the LCD, interrupt program execution, change the memory contents, or interfere the normal operation of collector.

□ You can only operate the keys with a finger or blunt object. If you press the button with sharp objects, it will damage the key surface, and may lead to an short circuit of internal collector.

□ Clean handheld data collector with a soft, dry cloth. Don't wipe with a damp cloth. Do not use benzene, thinner, or other volatile chemicals, or it will make buttons and shell material deformation or corrosion.

□ Don't make the press button of handheld data collection downwards. Otherwise, there is likely to be accidental button operation.

□ Do not remove the main battery in the state of handheld data collector powered. Otherwise it will lose all data in memory.

□ When temperature changes suddenly, it may appear dew condensation on the shell of the handheld data collector. If you operate the data collector at this time, it may affect the normal work. So if there is dew condensation, please use the collector till the device is dry enough.

Opening the package

Open the box, please check that if the following parts are complete. If there are missing or damaged parts, please contact with your supplier.

1、Data terminal **HH-22**	1
2、User's Guide	1
3、Charger	1
4 、 Communication cables (Configure according to the actual situation)	1
5、warranty card	1

Name and Function of Every Parts

1、the speaker holes	sound emission hole
2、crash bump	
	Bump on the top
3、LCD	Colored TFT display

4、keys	Numeric key + function key + power button
5、the power button	Power button
6、crash bump on the back	Crash bump
7、labeling position,card reader regional	labeling position,card reader regional
8、screws of the battery door	locking screws of the battery door
9、the battery door	the battery door
10、rubber plug of communication interface	rubber plug of communication interface

LCD display

Display Area
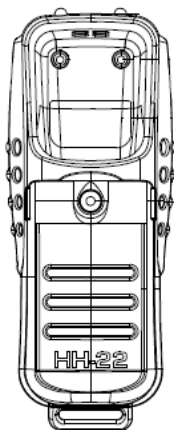### TFT LCD
240（RGB）* 320
color：262K
Character Type:
　　Alphabetic characters, numbers, symbols, Chinese characters.

battery systems and real-time clock of HH-22

battery systems:
　　The data collector uses 3200mAh lithium-ion battery, which can be recharged recycle.

Built-in clock：
　　The device has built-in clock function. Moreover, there are battery protection。Under the situation that the main battery powered off, it can run independently.
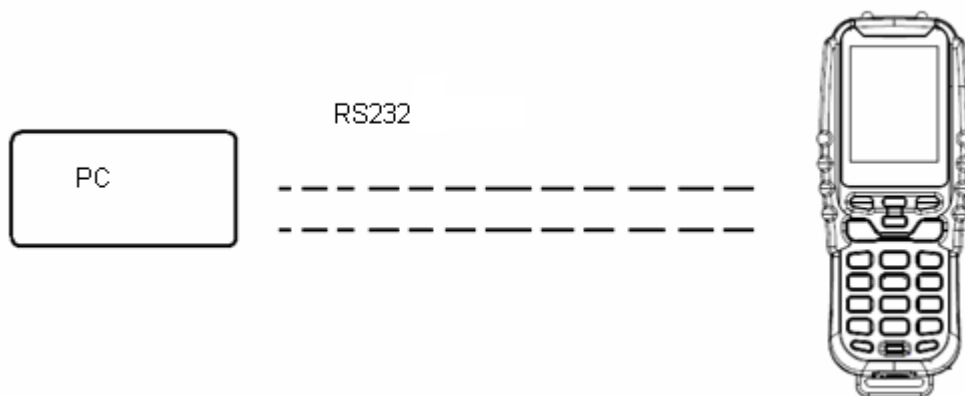
replacement of the battery

　　　　　　1、open the battery lock, you can remove the battery door, then you can replace the battery.

data communications of the collector

1、data communications between the collector and PC

the collector can communicate with the PC through Serial or USB interface.

RS232

PC

Keys and their functions

1 arrow keys	Up down left right
2 control keys	
C	Cancel button.
S	Scan button
3 Numeric keys (including the "*" key and the "#" key)	Character input mode: Input Greek letters or symbols; Digital input mode: Enter numbers from 0-9 or decimal points;
4 Power button	Power on and off
5 Function keys	F1-F2 may have different functions depending on the settings

Technical Specifications of HH-22

Main body	
Processor	32-bit industrial processors.
Memory	【NOR FLASH Memory】:32M bytes
	【NAND FLASH Memory】:256M bytes

LCD display	
	Type: TFT
	Display range: 240 (RGB) * 320 lattice
	color: 262K。
	Operating temperature: -20 ℃ to +70 ℃
RFID operation	
	Band: 1, supports Mifare One contactless cards, as well as non-contact CPU card.
	Reading distance :20-30MM
voice output	voice output
Input System	
	keys: 21, respectively: the number keys, function keys, power key.
Communication Interface	
	Serial communication: Standard RS-232 interface; 9600bps-115200bps.
Buzzer	
	Buzzer output alarm
Clock	
	Clock format: YYYY-MM-DD HH-MM-SS
Battery System	
	Capacity: 3200mAh, rechargeable lithium-ion battery.
	Rated voltage: 3.7 to 4.2V
Size and Weight	
	160mm (length) * 65mm (W) * 35 mm (height).
	200 g
Work Environment	
	Temperature: -5 ℃ to 50 ℃
	Humidity: 30% to 85% RH
	Waterproof: IP54
Product certification	CE certification, FCC certification, RoHS certification

Factory Certification   ISO9001

HH-22 terminal fittings

1 Power Adapter:

Input: 110-220V

Output: 9V，2A. Certification: CCC certification，CE，FCC certification ；

British regulations, national regulations, the U.S., AU, EU...

2 Download / communication lines:

Download line: used for program download and data transfer;

3 battery

Lithium-ion battery 3200mA 3.7V, with CE certification.

Statement:

Specifications and information   mentioned in this specification is used for reference only.There is no other notice content updates, you can check the latest information on the website.

Federal Communications Commission (FCC) Statement

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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:

● 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.

Warning: Changes or modifications made to this device not expressly approved by **Shenzhen Doorate Information Technology Co., LTD** may void the FCC authorization to operate this device.

Note: The manufacturer is not responsible for any radio or tv interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.