Newland

SCANNING MADE SIMPLE

MT90 Orca

mobile computer

user guide

Disclaimer

© 2018 Fujian Newland Auto-ID Tech. Co., Ltd. All rights reserved.

Please read through the manual carefully before using the product and operate it according to the manual. It is advised that you should keep this manual for future reference.

Do not disassemble the device or remove the seal label from the device, doing so will void the product warranty provided by Fujian Newland Auto-ID Tech. Co., Ltd.

All pictures in this manual are for reference only and actual product may differ. Regarding to the product modification and update, Fujian Newland Auto-ID Tech. Co., Ltd. reserves the right to make changes to any software or hardware to improve reliability, function, or design at any time without notice. The information contained herein is subject to change without prior notice.

The products depicted in this manual may include software copyrighted by Fujian Newland Auto-ID Tech. Co., Ltd or third party. The user, corporation or individual, shall not duplicate, in whole or in part, distribute, modify, decompile, disassemble, decode, reverse engineer, rent, transfer or sublicense such software without prior written consent from the copyright holders.

This manual is copyrighted. No part of this publication may be reproduced, distributed or used in any form without written permission from Newland.

Risk Warning Regarding Unauthorized System Updates:

You should use the Newland-provided tool to update this product's system. Modifying system files through installing a third-party ROM system or using any cracking method may result in product malfunction or data loss and this will void your warranty.

Fujian Newland Auto-ID Tech. Co., Ltd. reserves the right to make final interpretation of the statement above.

Fujian Newland Auto-ID Tech. Co., Ltd.
3F, Building A, No.1, Rujiang West Rd., Mawei, Fuzhou, Fujian, China 350015
http://www.newlandaidc.com

Revision History

Version	Description	Date
V1.0.0	Initial release.	January 16, 2018

Table of Contents

Revision History ..... - 3 -

Chapter 1 About This Guide 1

Introduction 1

Documentation Set 1

Chapter Descriptions 2

More Information 2

Chapter 2 Getting Started 3

Introduction 3

Unpacking 3

Accessories (Optional) 3

Getting Started 4

The MT90 4

Keypad 6

LEDs on the MT90 7

Cradle 8

Installing the Battery 9

Removing the Battery 9

Charging the Battery 10

Communicating with PC 12

Installing the Micro SD Card/SIM Card 13

Chapter 3 Basics 14

Introduction 14

Switching On/ Rebooting/ Switching Off the MT90 14

Locking/Unlocking the MT90 15

Home Screen 15

Status Icons 16

Installing App 17

Uninstalling App 17

Date & Time 18
Display 18
Ringtones 19
Restoring Factory Settings 19
Language & Input Method 20
Shortcuts to Apps 21
Widgets 21

Chapter 4 Scanning Barcodes 22

Introduction 22
Scanning 1D Barcode 22
Scanning 2D Barcode 23
Programming Scanner 24

Chapter 5 Bluetooth 32

Chapter 6 Wi-Fi 33

Introduction 33
Wi-Fi Settings 33
IP Settings 34

Chapter 7 Mobile Network 35

Introduction 35
Mobile Network Settings 35
APN Settings 36

Chapter 8 Admin Tool 37

Introduction 37
Setting the Admin Password 37
Setting the Admin Mode 38
Entering/Exiting the User Mode 39

Chapter 9 Whitelist Manager 40

Introduction 40

Logging in Whitelist Manager 40

Chapter 10 Others 42

Camera 42

GPS 43

NFC (optional) 44

Memory Cleanup 45

Chapter 11 System Update 46

Chapter 12 App Development Guide 47

Development Environment 47

Use of Non-standard Interfaces 47

Chapter 13 Maintenance & Troubleshooting 48

Introduction 48

Important Safety & Handling Information 48

Disassembly and Retrofit 48

External Power Supply 48

Abnormal Situation 48

Drop Damage 48

LCD Screen 48

Stacking Heavy Objects 48

Mounting Location 49

Wireless Functionalities 49

Use & Maintenance 49

Battery Safety Guidelines 49

Troubleshooting 50

Chapter 1 About This Guide

Introduction

This guide provides instructions for programming and operating the NLS-MT90 portable data collector (hereinafter referred to as **"the MT90"** or **"the terminal"**).

Documentation Set

The documentation set for the MT90 includes:

- ***NLS-MT90 Portable Data Collector Quick Start*:** Describes how to get the NLS-MT90 up and running.
- ***NLS-MT90 Portable Data Collector User Guide*:** Describes how to program and use the NLS-MT90.

Chapter Descriptions

✧ *Chapter 1 About This Guide*	Provides general description of this manual.
✧ *Chapter 2 Getting Started*	Provides information on getting the MT90 up and running for the first time.
✧ *Chapter 3 Basics*	Describes how to program the MT90 for the use of its basic features.
✧ *Chapter 4 Scanning Barcodes*	Provides the instructions as to how to scan 1D/2D barcodes and how to program the scanner.
✧ Chapter 5 Bluetooth	Explains how to use Bluetooth functionality.
✧ *Chapter 6 Wi-Fi*	Explains how to use Wi-Fi functionality.
✧ *Chapter 7 Mobile Network*	Explains how to use Mobile Network functionality.
✧ *Chapter 8 Admin Tool*	Explains how to use the admin tool.
✧ *Chapter 9 Whitelist Manager*	Explains how to use the whitelist management tool.
✧ *Chapter 10 Others*	Explains how to use Camera, GPS and NFC functionalities.
✧ *Chapter 11 System Update*	Explains how to update the system.
✧ *Chapter 12 App Development Guide*	Describes the app development environment and the use of non-standard interfaces.
✧ *Chapter 13 Maintenance & Troubleshooting*	Provides troubleshooting solutions for issues that might occur when using the MT90.

More Information

For more product and support information, please visit our web site: http://www.newlandaidc.com.

Chapter 2 Getting Started

Introduction

This chapter lists the parts and accessories for the MT90 and explains how to install, remove and charge the battery, and power on the MT90 for the first time.

Unpacking

Carefully remove all protective material from the pack and verify that the following items are present:

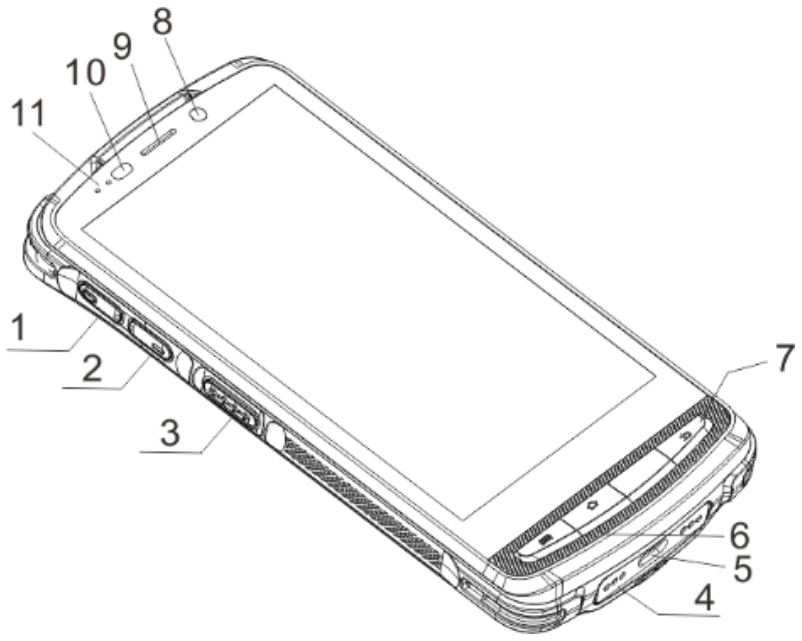
- ✧ 1 x NLS-MT90 portable data collector
- ✧ 1 x USB cable
- ✧ 1 x AC adapter for the MT90
- ✧ 1 x Li-Polymer battery
- ✧ 1 x Hand strap
- ✧ 1 x Quick Start manual

Accessories (Optional)

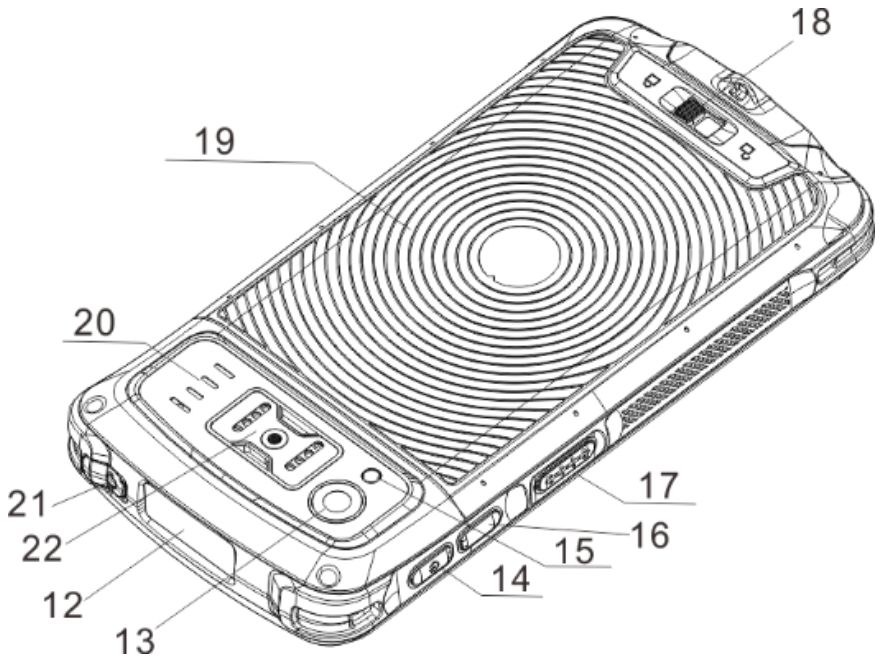
- ✧ Cradle for the MT90
- ✧ DC charging cable
- ✧ Pistol grip

Getting Started

The MT90

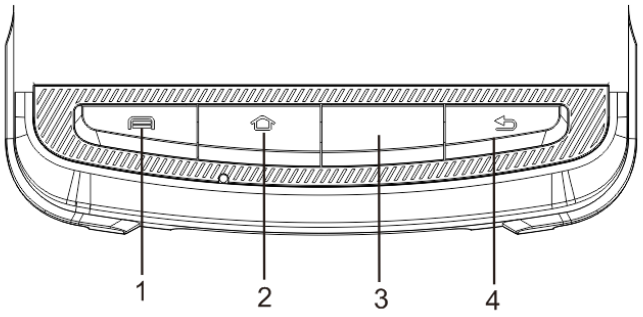


1	Volume+	**2**	Volume-
3	Left Scan Key	**4**	Cradle Connector
5	Micro USB Port	**6**	Microphone
7	Keypad	**8**	Front Camera (optional)
9	Earpiece	**10**	Light/Proximity Sensors
11	Red/Blue LEDs		



12	Scan Window	**13**	Flashlight
14	Power Key	**15**	Rear Camera
16	User-defined Key	**17**	Right Scan Key
18	Battery Cover Latch	**19**	NFC Detection Area
20	Speaker	**21**	Headphone Jack Cover
22	Expansion Port		

Keypad



1	Menu Key	**2**	Home Key
3	Scan Key	**4**	Return Key

The MT90 has 10 keys, with Menu/Home/Scan/Return keys on the front panel, Volume+/Volume-/Scan keys on the left side and Power/User-defined/Scan key on the right side.

Menu Key: Press it to display the menu related to an on-screen item.

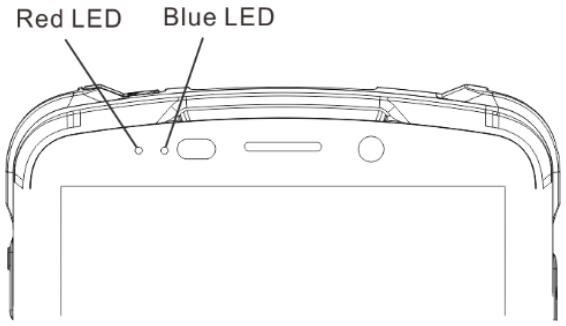
Home Key: Press it to go to the first Main Screen.
Press and hold the key to display the app(s) most recently used. Tap an app to open it.

Function Key: Use it to scan barcodes.

Return Key: Press it to go back to the previous screen.

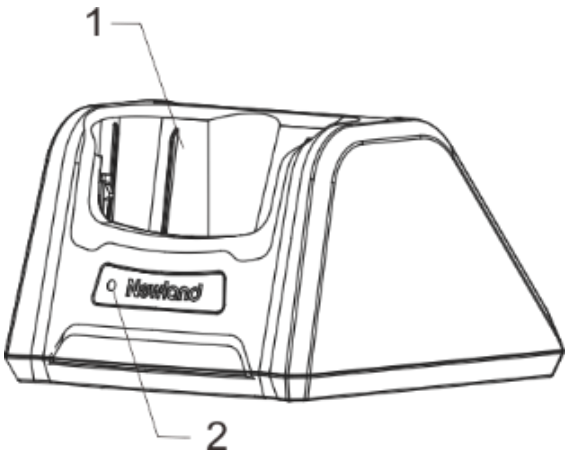
Except the Power key, other keys are user programmable.

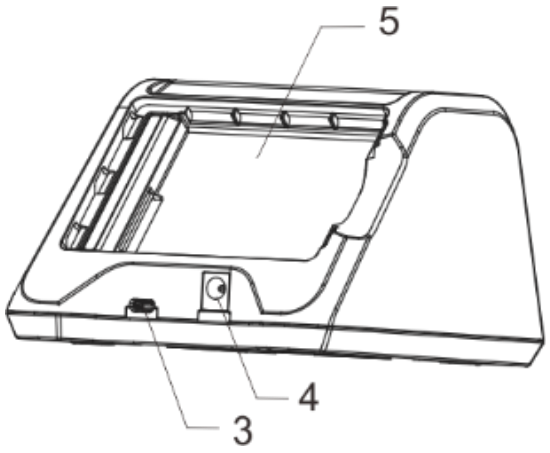
LEDs on the MT90



Scan/Decode	
Blue LED flashes once	Good read
Charging/Battery Statuses	
Blue LED on	Fully charged
Red LED on	Charging in progress
Red LED flashes constantly	Low-battery alert

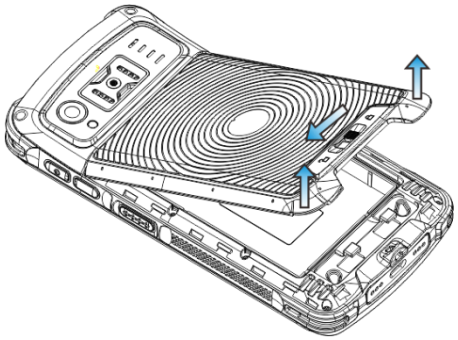
Cradle

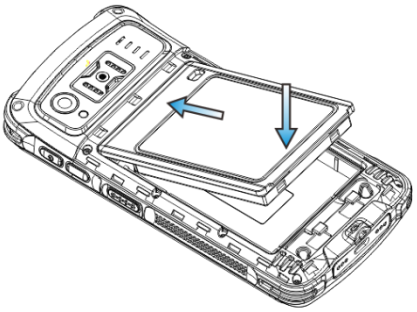




1	Charging Slot	**2**	Charging LED
3	Micro USB Port	**4**	Power Jack
5	Battery Compartment		

Installing the Battery

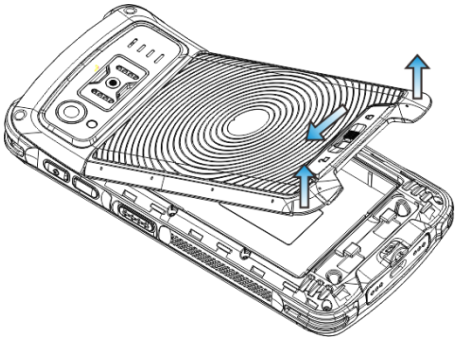


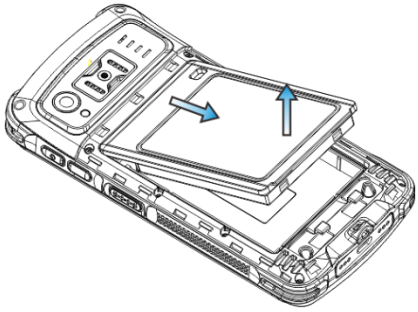


Step 1: Slide the battery cover latch to the unlock position and remove the cover.

Step 2: Insert the battery as indicated into the battery compartment, with its metal contacts facing down and lining up with the metal contacts on the inside of the terminal.

Removing the Battery



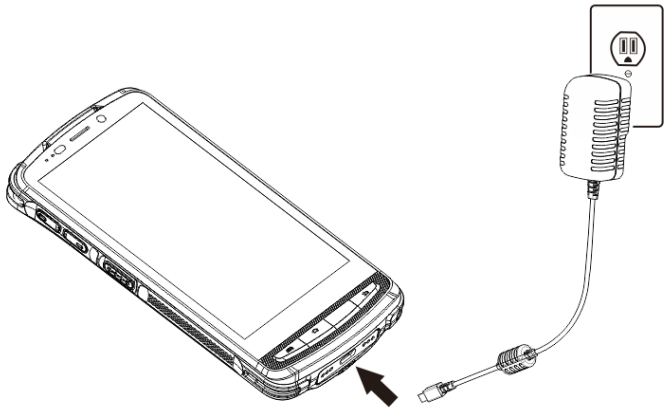


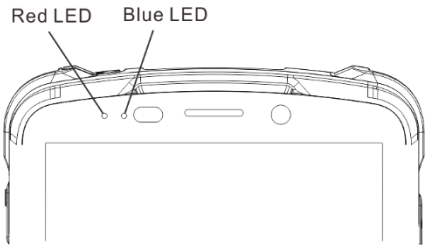
Step 1: Hold down the Power key for 5 seconds and then tap "Power off" to turn off the terminal. Slide the battery cover latch to the unlock position and remove the cover.

Step 2: Remove the battery.

Charging the Battery

✧ Charge with AC adapter: Connect the MT90 to a power outlet using the included AC adapter. When the terminal's battery is less than 5%, it takes about 5 hours to fully charge it (The terminal is shut down or in sleep mode).



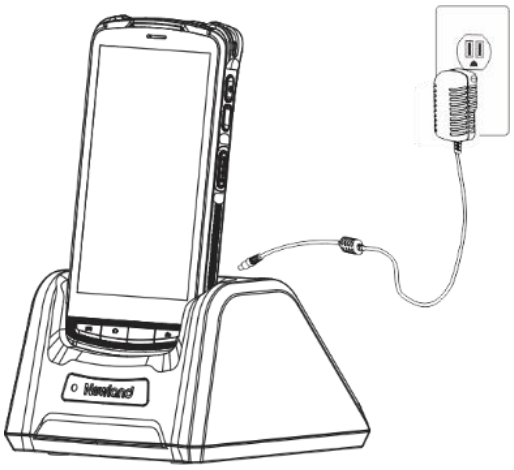


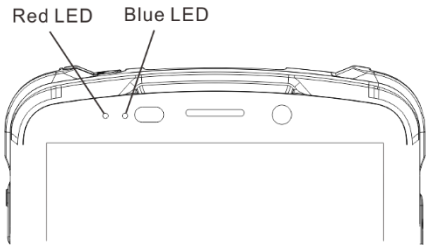
LEDs on the MT90	
Blue LED on	Fully charged
Red LED on	Charging in progress
Red LED flashes constantly	Low-battery alert

Note: Low battery may result in malfunction of the terminal. Before your first use, charge the battery for at least 6 hours.

✧ Charge with cradle

Method 1: Insert the MT90 into the charging slot on the cradle. Connect the cradle to a power outlet using the included AC adapter.

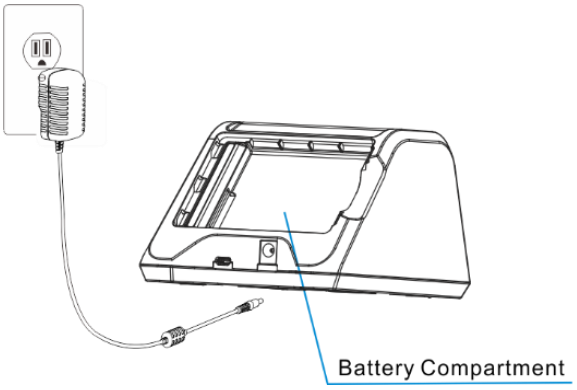


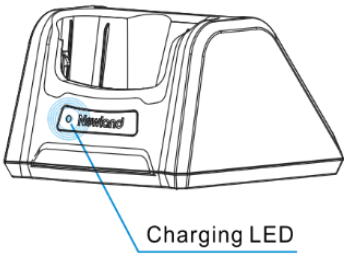


LEDs on the MT90	
Blue LED on	Fully charged
Red LED on	Charging in progress
Red LED flashes constantly	Low-battery alert

Note: When the battery is dead or juice too low to power on the MT90, charge the terminal for 15 minutes before using it.

Method 2: Insert the battery into the battery compartment on the cradle. Connect the cradle to a power outlet using the included AC adapter.





Charging LED on the cradle	
Red LED on	Charging in progress
Green LED on	Fully charged

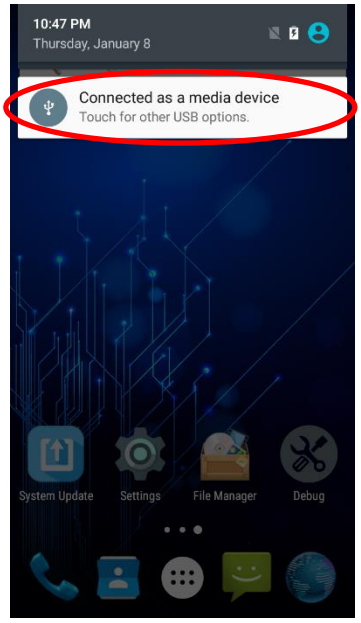
Communicating with PC

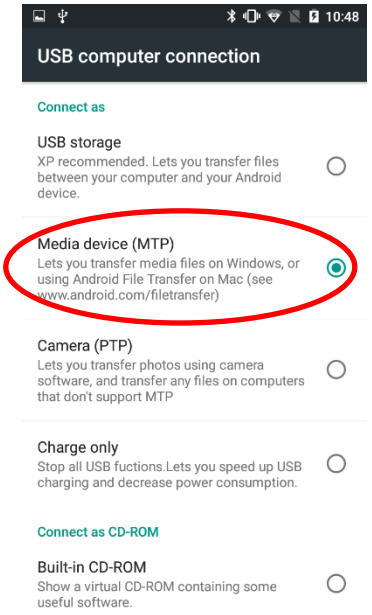
Step 1: Connect the Micro USB port on the MT90 to your computer with the included USB cable.

Step 2: Switch the MT90 on. On the Home screen, swipe from top to bottom with one finger in one smooth motion to reveal the notification bar as shown below.

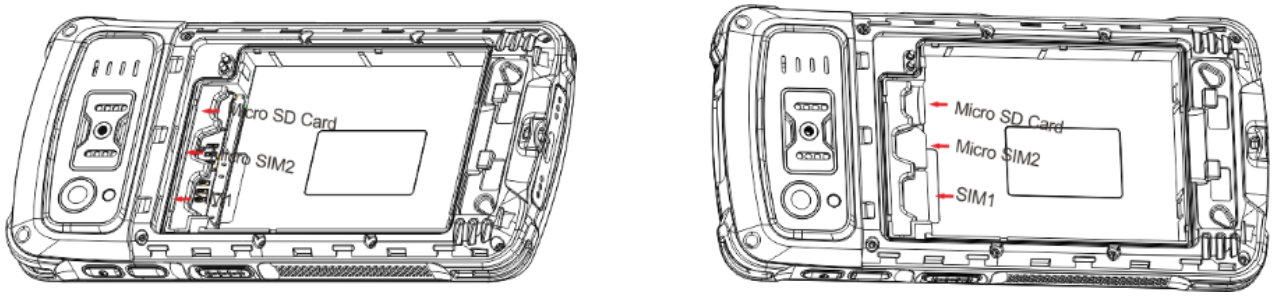
Step 3: Tap “Connected as a media device”.

Step 4: Select “Media device (MTP)”. Navigate to the “My Computer” section of your computer and look for the newly added drive. Double-click it and you will be connected to the MT90. Then you may handle the files on the terminal through your computer.





Installing the Micro SD Card/SIM Card



Step 1: Slide the battery cover latch to the unlock position and remove the cover.

Step 2: Insert the Micro SD card/ SIM card/ Micro SIM card into the corresponding slot, with its metal contacts facing down.

Chapter 3 Basics

Introduction

This chapter provides the basics of setting and using the MT90.

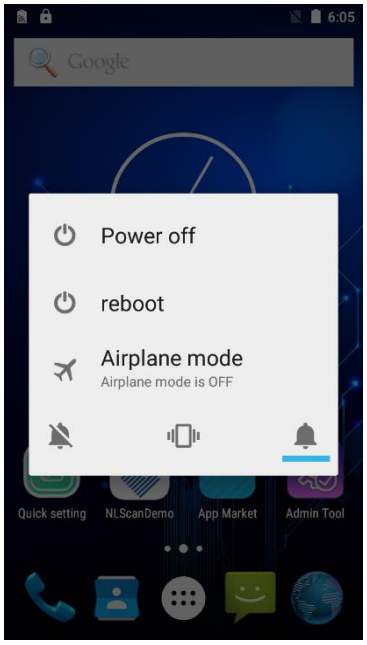
Switching On/ Rebooting/ Switching Off the MT90

After installing the SIM card and battery and having the MT90 fully charged, you may switch the terminal on.

Switch the MT90 on: Hold down the Power key on the right side of the terminal until the terminal vibrates. Note that the initialization is going to take some time before the MT90 displays the Home screen.

Reboot the MT90: Hold down the Power key on the right side of the terminal until the window below pops up, then tap “reboot”.

Switch the MT90 off: Hold down the Power key on the right side of the terminal until the window below pops up, then tap “Power off”.



Locking/Unlocking the MT90

Lock the MT90: Briefly press the Power key on the right side of the terminal. If no operation is performed on the MT90 for a preset period of time, the MT90 locks automatically. You can change how long it takes the screen to lock.

Unlock the MT90: Briefly press the Power key on the right side of the terminal.

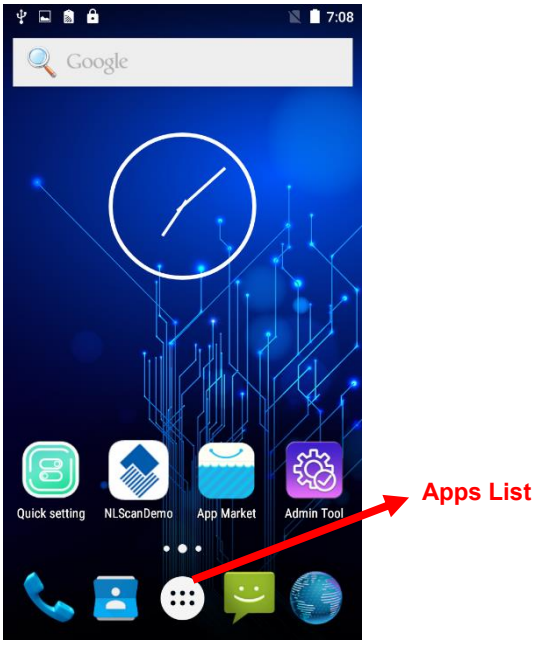
Home Screen

View another home screen: Swipe left or right.

Go to the Home screen: Press the Home key on the front panel of the terminal.

Open an app: Tap it.

View all apps/Open apps list: Tap .



Add an app icon to the Home screen: Tap on the Home screen. Tap and hold your desired app until it appears on the Home screen and then drag it into a blank area.

Delete an app icon on the Home screen: Tap and hold your desired app on the Home screen until “X Remove” appears, then drag the app into it. Note that this operation only removes the icon from the Home screen. To remove the app from the MT90, see the **Uninstalling App** section.

Status Icons

The icons in the status bar at the top of the screen give information about the MT90.

Status Icon	Description	Status Icon	Description
	WLAN		signal strength
	Bluetooth		Airplane mode
	USB connected		USB debugging
	Missed calls		Battery charging in progress
	New messages		Battery fully charged
	Mute mode		Vibrate ON

Installing App

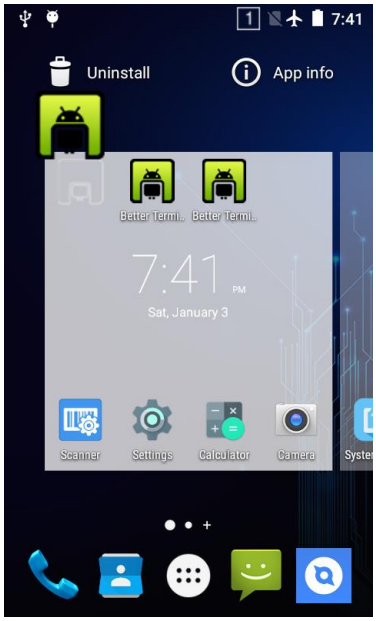
Use one of the following methods to install a new app on the MT90:

1. Download an APK file from online app store and install it.
2. Download software package onto a Micro SD card or PC and copy it to your terminal. Then install it with File Manager.
3. Connect the MT90 to PC with the supplied USB cable. Install a new app using a mobile assistant (such as Baidu Mobile Assistant) installed on the PC.

Uninstalling App

Follow the procedure below to remove an app from the MT90:

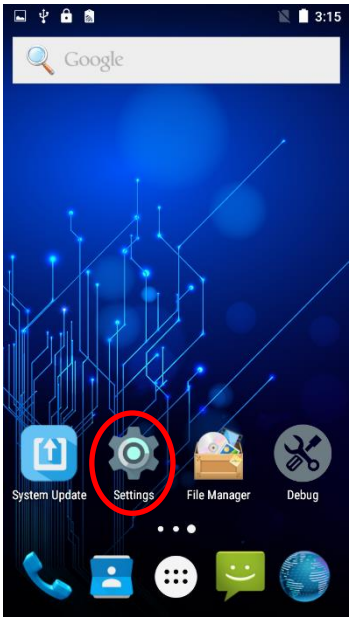
Tap on the Home screen to view all apps. Tap and hold your desired app until a trash bin appears at the top left corner of the screen, then drag it into the trash bin.

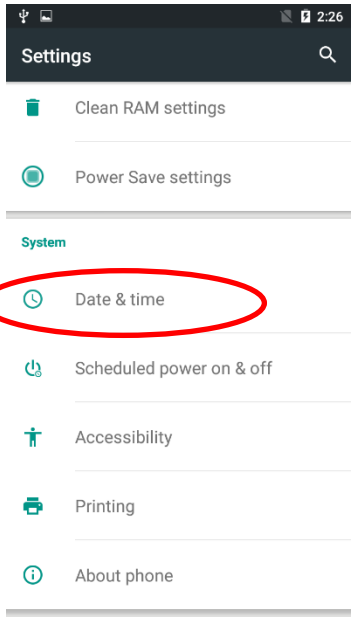


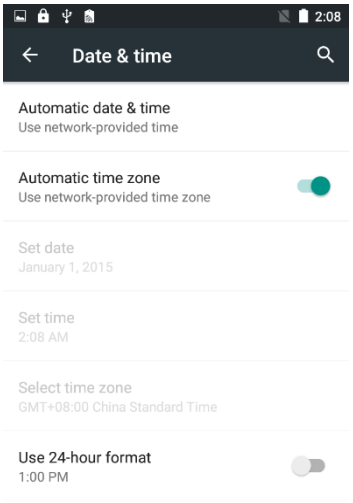
Date & Time

Set the date and time: Tap the app icon

and then “Date & time”, and set the date and time on the screen shown below as per your needs.



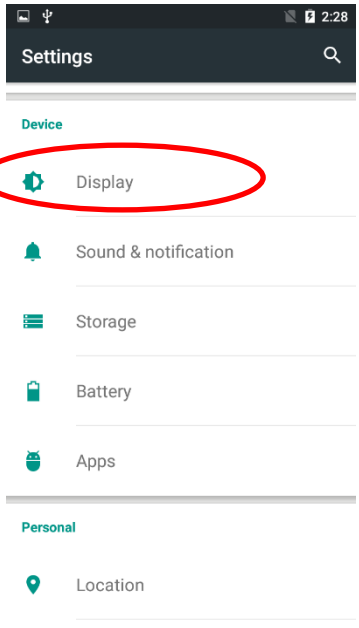


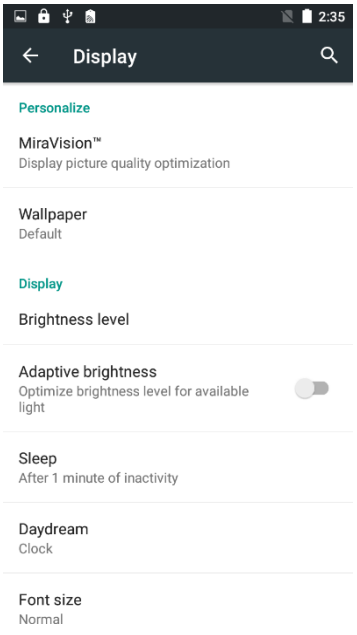


Display

Tap the app icon

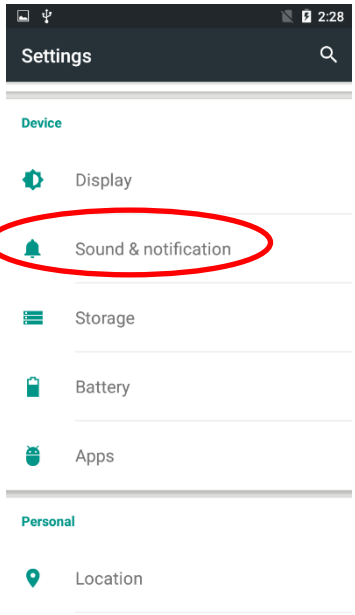
and then “Display”, and set the brightness, wallpaper, sleep timer, front size and other parameters on the screen shown below as per your needs.

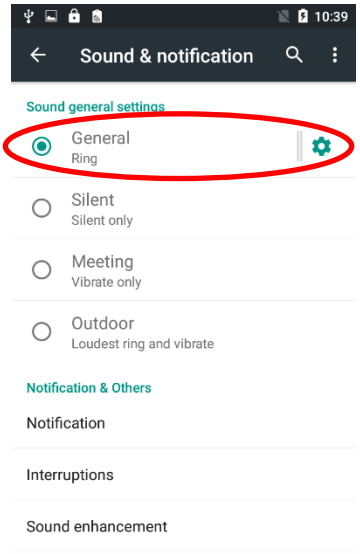


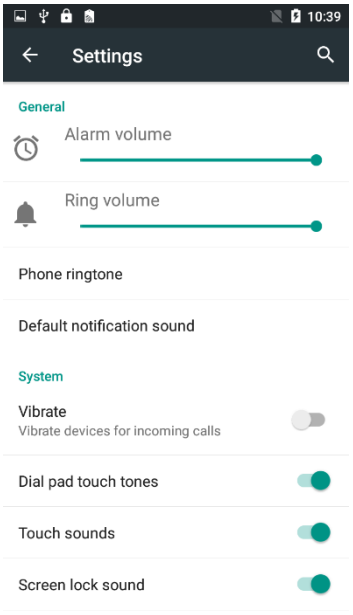


Ringtones

Tap the app icon -> “Sound & notification” -> “General” -> . Then set the ringtones and other notification sounds as per your needs.

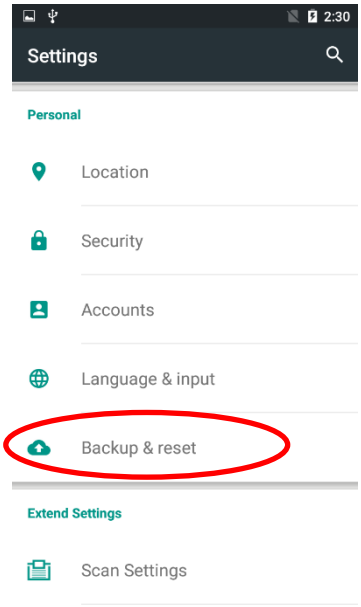


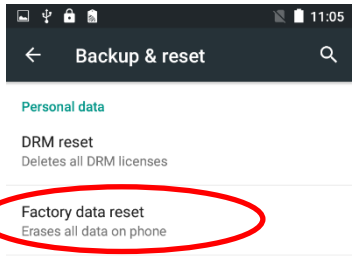


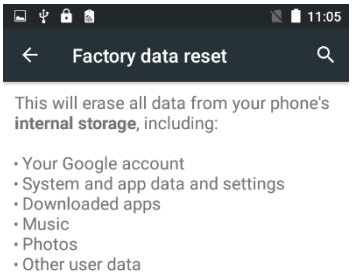


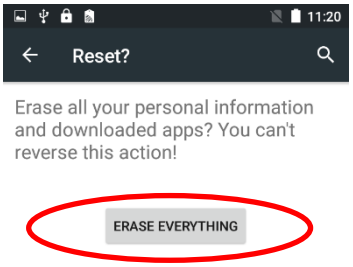
Restoring Factory Settings

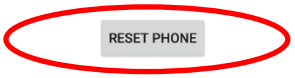
Tap the app icon -> “Backup & reset” -> “Factory data reset” -> “RESET PHONE” -> “ERASE EVERYTHING”.









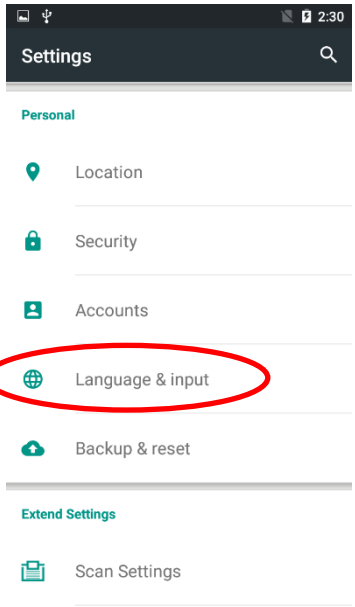


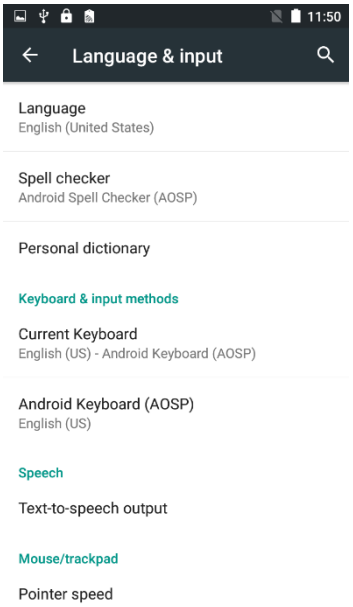
After this operation, the terminal will be reset to factory defaults and all the personal data on the internal storage, such as music and photos, will be deleted.

Language & Input Method

Tap the app icon

-> “Language & input”. Then set the language and input method as per your needs.





Shortcuts to Apps

Create a shortcut to an app on your Home screen: Tap on the Home screen. Tap and hold your desired app and then drag it into the home screen.

Widgets

View all widgets: Tap and hold the Home screen and then tap

.

Open a widget: Tap it.

Add a widget icon to the Home screen: Tap and hold the Home screen and then tap

. Tap and hold your desired widget and then drag it into the home screen.

Chapter 4 Scanning Barcodes

Introduction

This chapter includes scanning tips and instructions for setting up the scanner.

Scanning 1D Barcode

Adjust the scan angle or the distance between the MT90 and the target barcode to ensure the length of laser beam is roughly 8mm greater than that of the barcode, as shown below.

Correct	Wrong

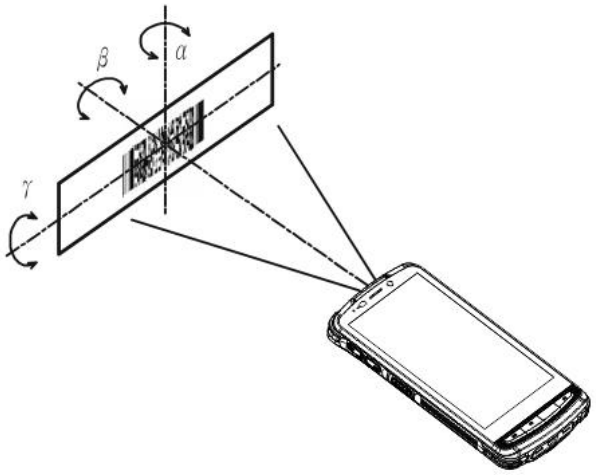
Scanning 2D Barcode

Adjust the scan angle and the distance between the MT90 and the target barcode to make them fall into the following ranges:

1） Point the MT90’s focus lamp at the center of the barcode.

2） Move the MT90 until you find the appropriate scan distance.

3） Optimum scan angles:
Skew (α)< 45° (0° preferably)
Pitch (γ)< 45° (5°- 20° preferably)
Roll (β)= 0° - 360°



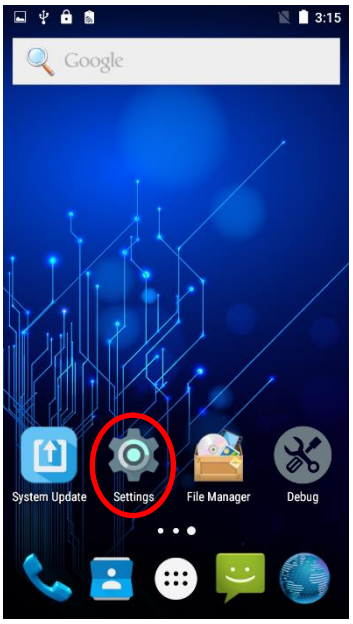
Programming Scanner

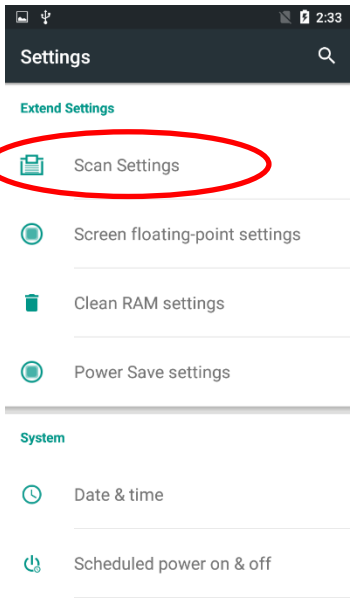
Tap the app icon

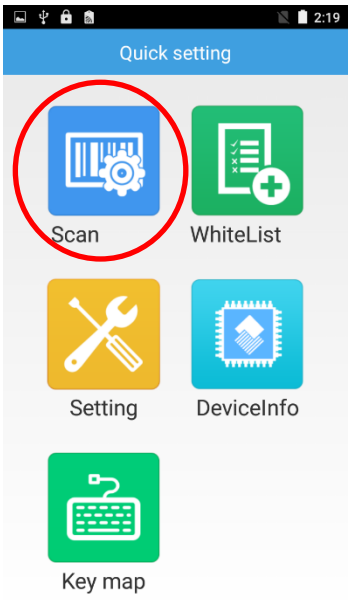
then “Scan Settings”, or tap the app icon

on the Home screen then

. Then set the following items as per your actual needs.

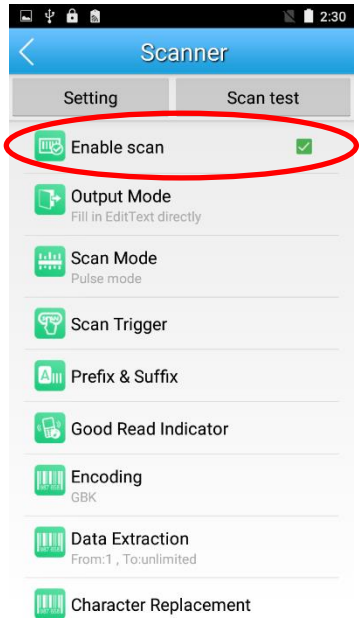






✧ **Enable scan**

Check or uncheck the “Enable scan” item to enable or disable the scanning feature of the MT90



✧ **Output Mode**

The MT90 provides three output modes: Simulate keystroke, Output via API and Fill in EditText directly.

1. **Simulate keystroke:** Output scanned data to keyboard buffer to simulate keyboard input.

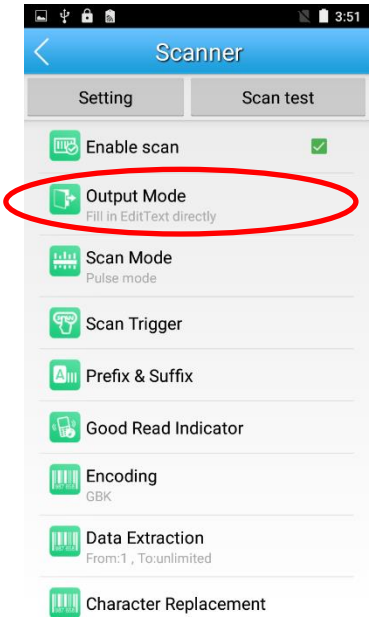
   Character interval (ms): A character interval of 0-100 milliseconds may be placed between the transmission of each character of scanned data.

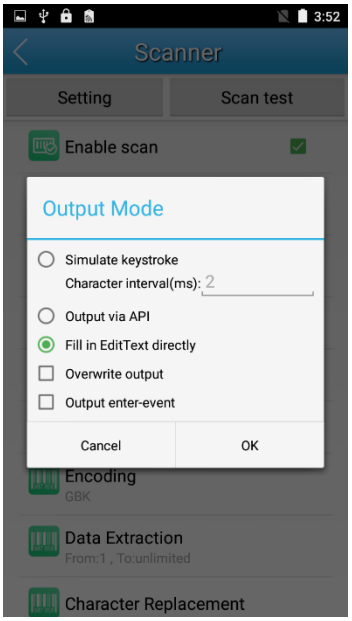
2. **Output via API:** Application acquires scanned data by receiving system broadcasts.

3. **Fill in EditText directly:** Output scanned data at the current cursor position in EditText.

Overwrite output: Clear the text input box before sending the barcode currently scanned to make sure only most recently scanned data is present in the text input box. This feature is available only when **Simulate keystroke** or **Fill in EditText directly** is selected.

Output enter-event: Send an Enter Key after each barcode scanned.





✧ **Scan Mode**

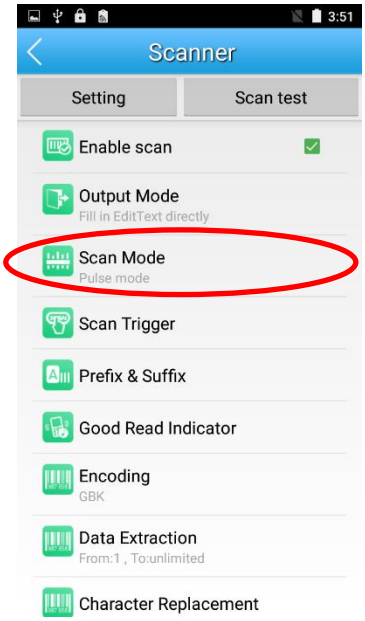
The MT90 provides three scan modes: Level mode, Continuous mode and Pulse mode.

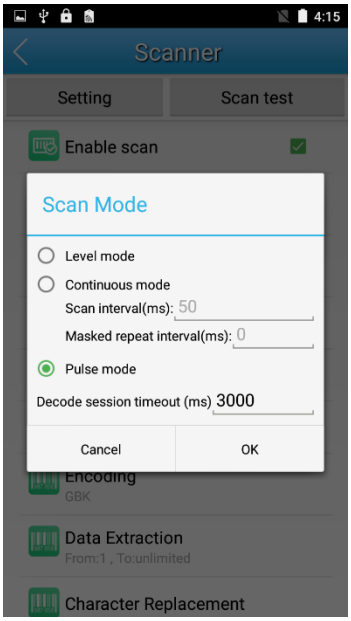
1. **Level mode:** Press the scan trigger to start a decode session which continues until the key is released or the decode session timeout expires or a barcode decodes.
2. **Continuous mode:** Press the scan trigger to continuously read barcodes. To suspend or resume scan operation, simply press the Scan key.

   Scan interval (ms): This parameter sets the timeout between decode sessions.

   Masked repeat interval (ms): This parameter sets the time period before the scanner can read the same barcode a second time.
3. **Pulse mode:** Press the scan trigger to start a decode session which continues until the decode session timeout expires.

Decode session timeout (ms): This parameter sets the maximum time decode session continues during a scan attempt.

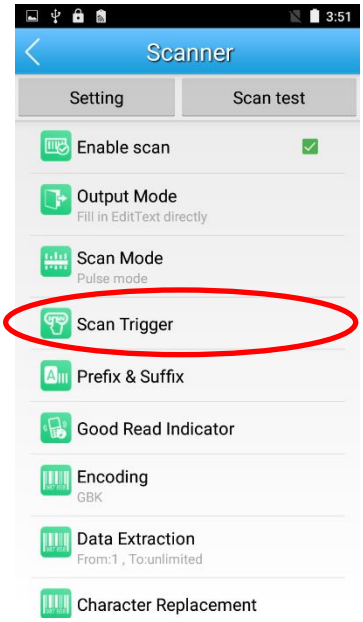


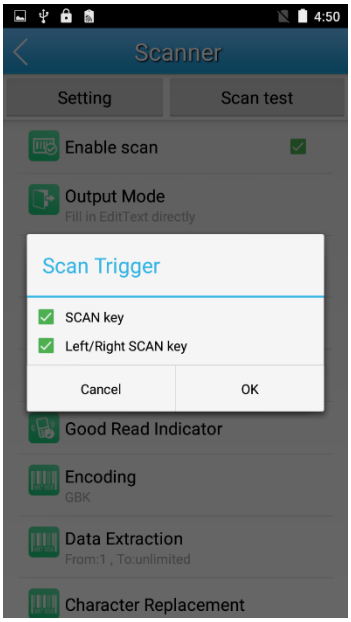


✧ **Scan Trigger**

1. **SCAN key:** Use the Scan key on the front panel of the terminal as scan trigger.

2. **Left/Right SCAN key:** Use the Scan key on the left/right side of the terminal as scan trigger.

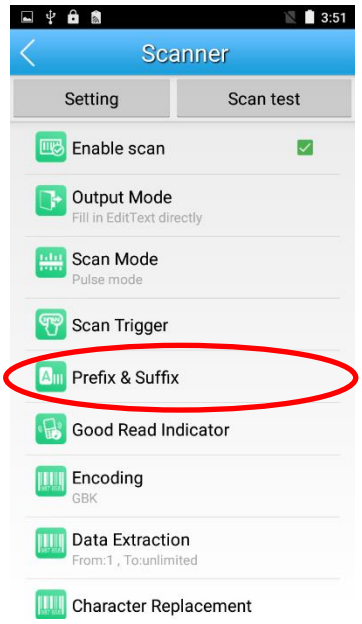


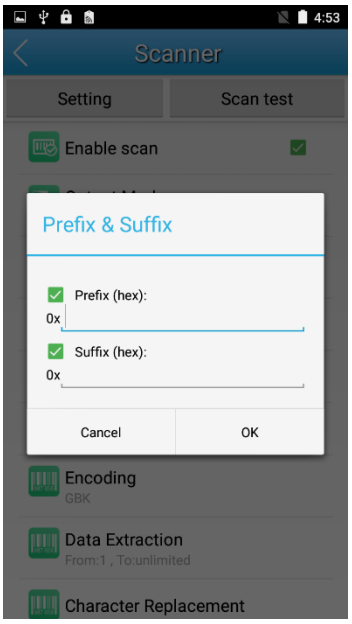


✧ **Prefix & Suffix**

To set the prefix/suffix, enter the hexadecimal value of a desired prefix/suffix and then tap “OK”. For example, if you want

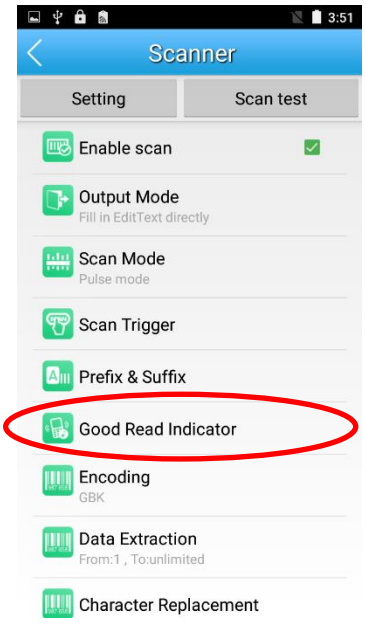
to add a Line Feed character after each barcode, set the suffix to “0A”; if you want to add a Carriage Return character after each barcode, set the suffix to “0D”.

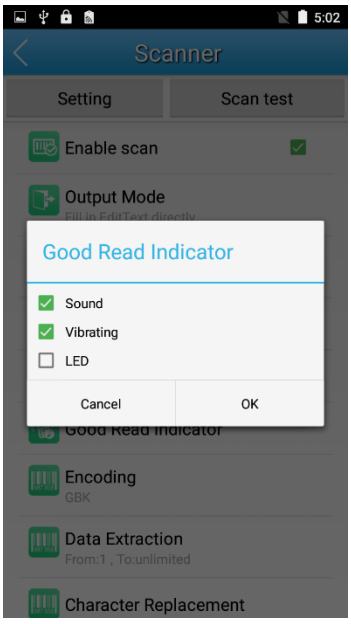




✧ **Good Read Indicator**

1. **Sound:** The MT90 issues a short beep to indicate a good read.
2. **Vibrating:** The MT90 vibrates to indicate a good read.
3. **LED:** The blue LED on the MT90 flashes once to indicate a good read.

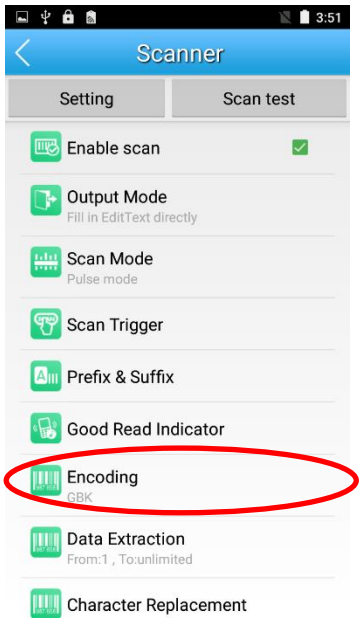


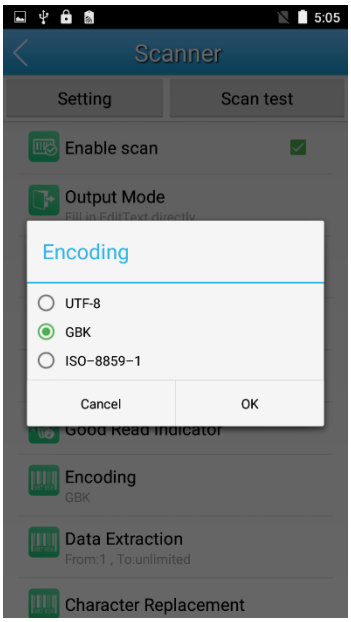


✧ **Encoding**

Choose a character encoding to interpret barcode data.

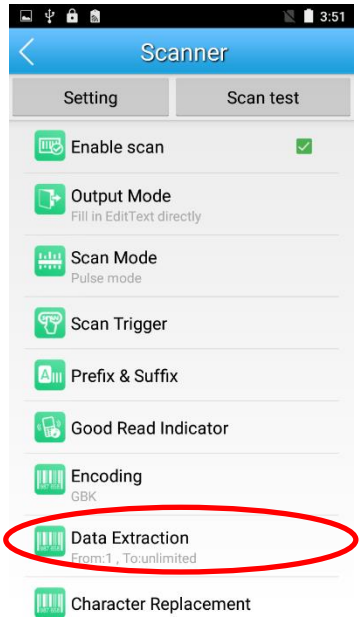
1. **UTF-8:** Dominant Unicode encoding.
2. **GBK:** A character encoding for Chinese characters.
3. **ISO-8859-1:** A common character encoding which covers Western European languages.

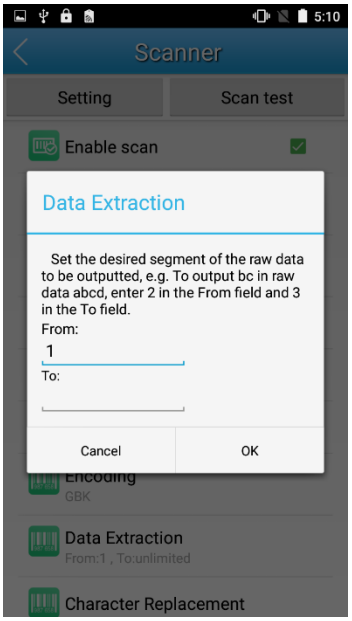




✧ **Data Extraction**

Output only a selected part of raw data, starting from the character at the From position and continuing to the character at the To position (Leaving the To field blank means to the last character of raw data). e.g. From 1 To 3 means to output the first through third characters of raw data.





✧ **Character Replacement**

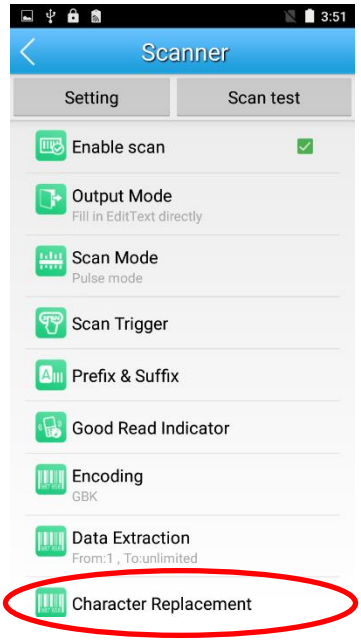
Replace characters in raw data. Up to 10 pairs of character replacements can be programmed here.

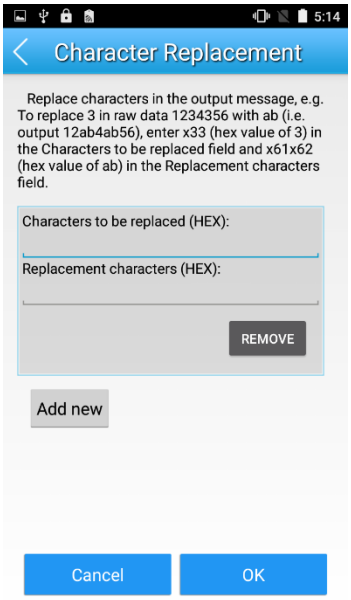
Characters to be replaced (HEX): Enter the ASCII hex values of characters to be replaced, each with a prefix character “x”. e.g. Entering x33x34 means each “34” in the raw data will be replaced.

Replacement characters (HEX): Enter the ASCII hex values of replacement characters, each with a prefix character “x”. e.g. Entering x61x62 means replacing the character(s) specified in the Characters to be replaced field in the raw data with “ab”.

REMOVE: Click it to delete a pair of character replacement.

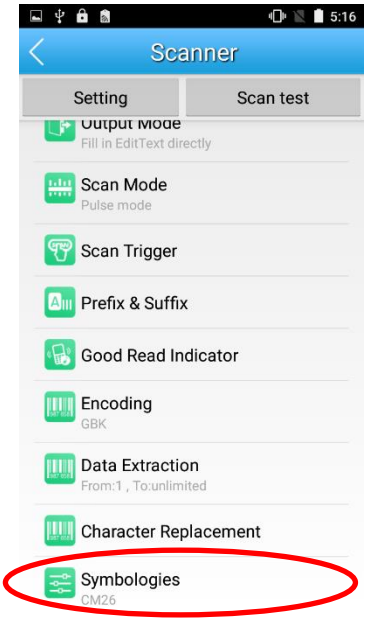
Add new: Click it to add a pair of character replacement.

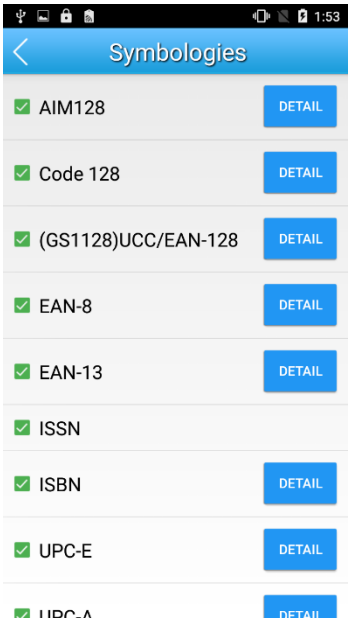




✧ **Symbologies**

Enable or disable the barcode symbologies and set other barcode parameters.





Chapter 5 Bluetooth

This chapter describes how to connect the MT90 to other Bluetooth device.

You can set up a Bluetooth connection between the MT90 and other Bluetooth devices, such as PC, mobile phone. Note that Bluetooth connection works better if there are no obstacles between them.

Before you can use a Bluetooth device with the MT90, you must first pair them.

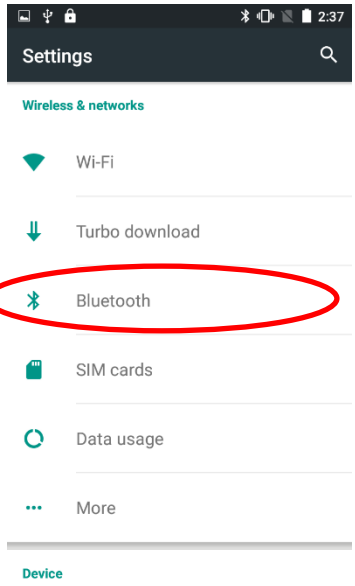
1. Make the Bluetooth device visible to the MT90.

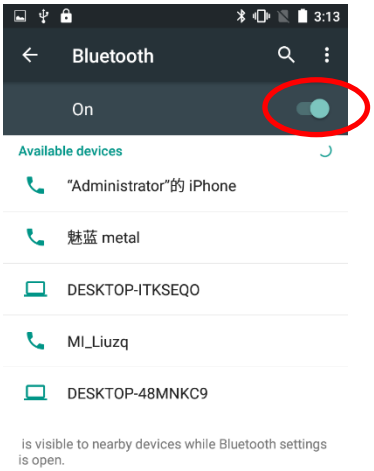
2. Tap the app icon

then “Bluetooth”, and turn Bluetooth on to search for available Bluetooth devices.

3. Select the device from the search results to pair.

4. If prompted, input the pairing code and then tap “OK”; or if the pairing code is given automatically, then tap “PAIR”.





Unpair/rename a paired Bluetooth device: Tap the app icon

then “Bluetooth”, and turn Bluetooth on. Tap beside the paired Bluetooth device. To rename the pair Bluetooth device, edit its name manually and then tap “OK”. To unpair it, tap “FORGET”.

Chapter 6 Wi-Fi

Introduction

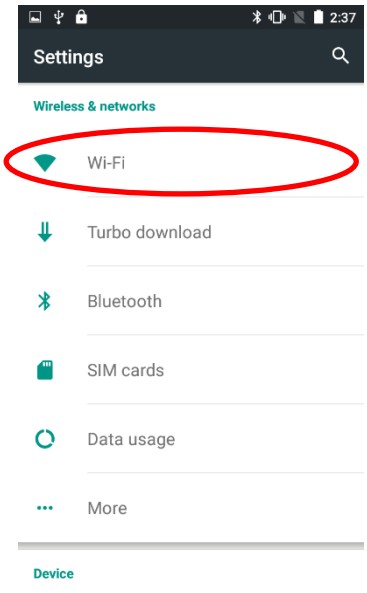
This chapter describes how to connect the PT60 to a Wi-Fi network.

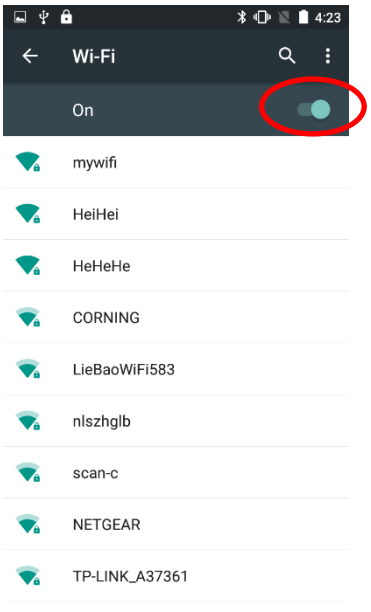
Wi-Fi Settings

Join a Wi-Fi network:

1. Tap the app icon

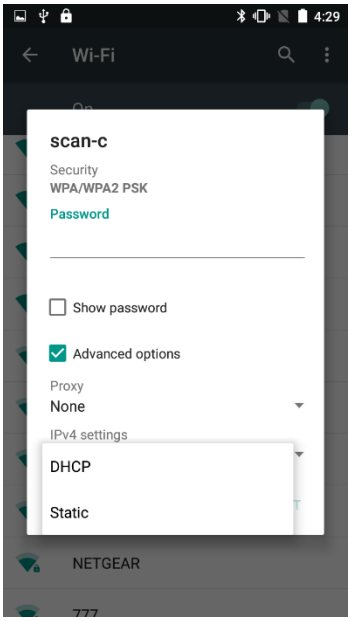
then “Wi-Fi”, and turn Wi-Fi on to find available Wi-Fi networks. If Wi-Fi is already ON, then the terminal will automatically scan for available networks.
2. Tap a network and then enter the password.
3. Tap “CONNECT”.





IP Settings

To set the IP, follow the first two steps of joining a Wi-Fi network, check the “Advanced options” item, tap “DHCP” and choose your desired option.



Chapter 7 Mobile Network

Introduction

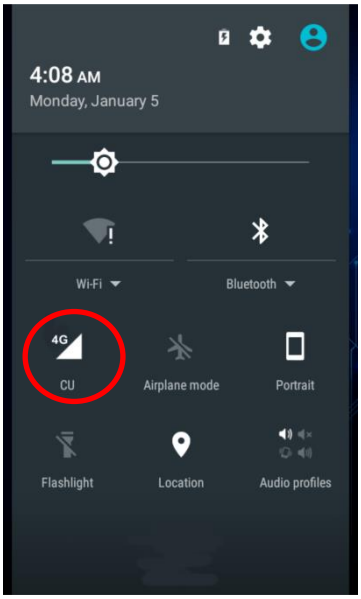
The MT90 can also use 4G network to connect to the internet. To establish 4G connection, you must have a SIM card installed in your MT90.

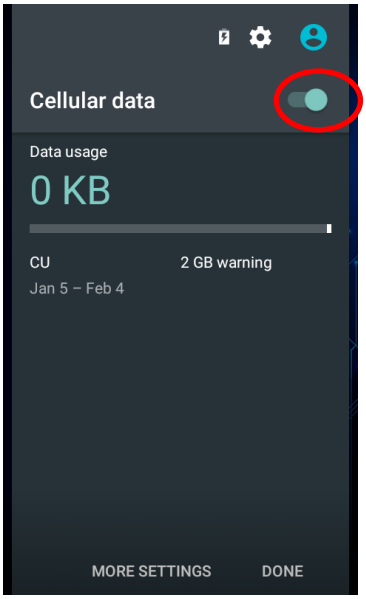
Mobile Network Settings

If no Wi-Fi networks are available, or if you've turned Wi-Fi off, then the MT90 connects to the Internet via your cellular data network when available.

Turn on cellular network: Tap

and then turn Cellular data on.

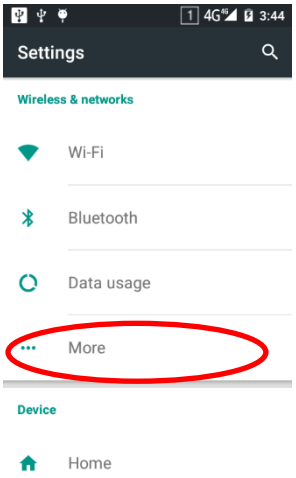


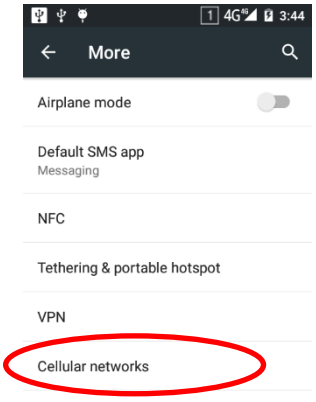


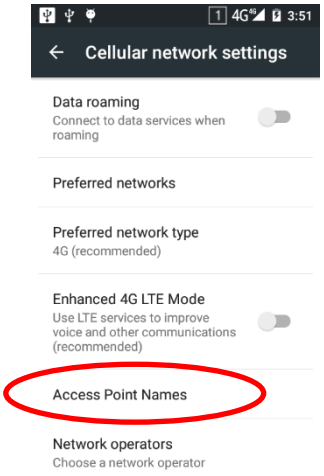
APN Settings

If you cannot connect to the internet when using your terminal's cellular data, you may need to change your APN settings on the MT90 to fix it:

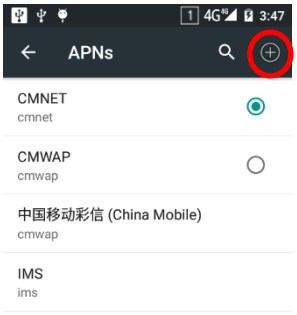
1. Go to Settings -> More -> Cellular networks -> Access Point Names.

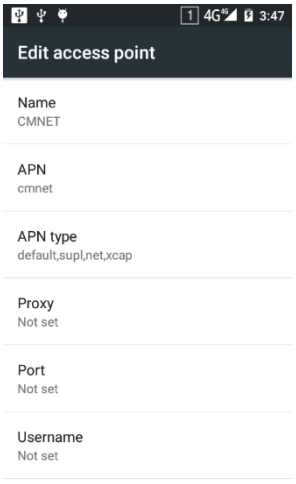






2. Tap in the top right corner of the screen or tap the carrier of your SIM card on the screen. Then manually enter the APN settings. You can contact your carrier or visit their website to get the correct APN settings, or check the APN settings on a mobile device that can access the internet using the SIM card.





3. Press the Return key on the MT90 to go back to the previous screen and then select the APN you just added or edited.

Chapter 8 Admin Tool

Introduction

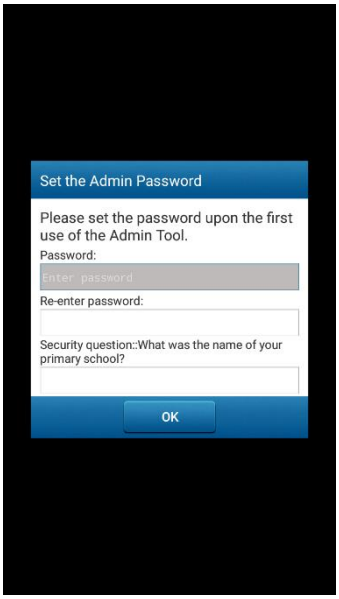
The Admin Tool app is used to specify the apps that users can run on the MT90.

Setting the Admin Password

When you use the admin tool for the first time, you will be asked to set the admin password.

Tap the app icon

. Enter and re-enter the password, input the answer to the security question and tap “OK”. Then you will log into the admin tool.



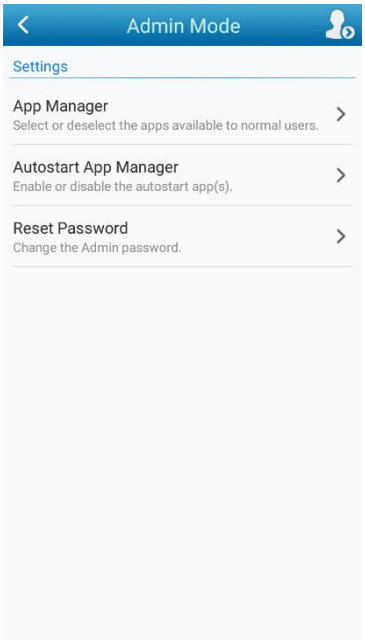
Setting the Admin Mode

After logging into the admin tool, you may set the following parameters as per your actual needs.

1. App Manager: Select or deselect the apps available to normal users.

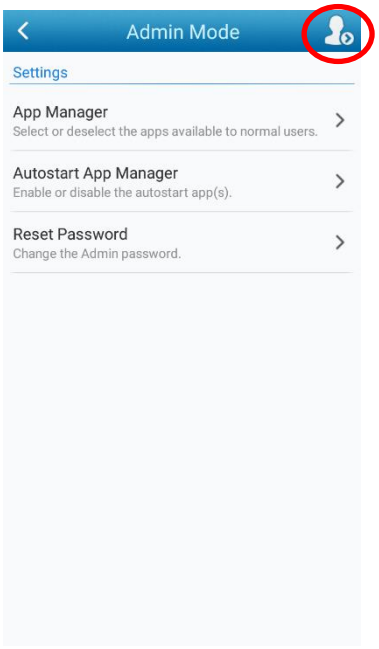
2. Autostart App Manager: Enable or disable the autostart apps.

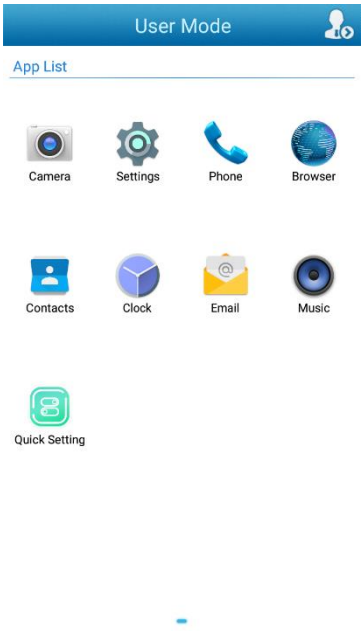
3. Reset Password: Change the Admin password.



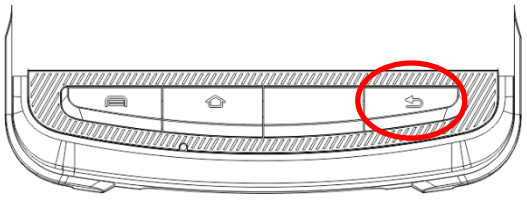
Entering/Exiting the User Mode

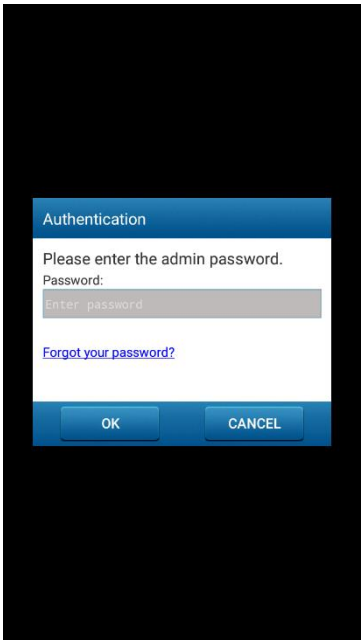
To enter the User mode, tap in the top right corner of the screen.





To exit the User mode, press the Return key on the front panel, enter the Admin password and tap “OK”.





Chapter 9 Whitelist Manager

Introduction

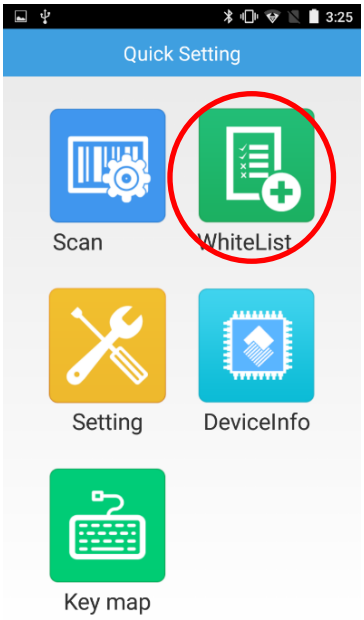
The Whitelist Manager app is used to specify the apps that users can install on the MT90.

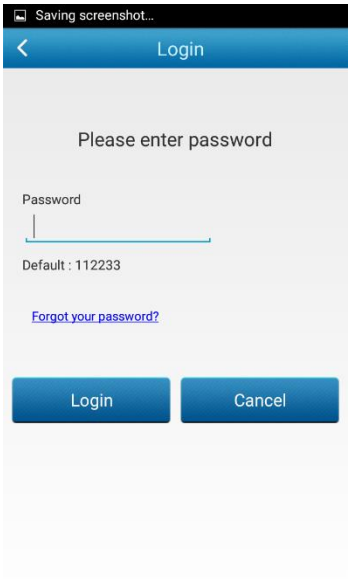
Logging in Whitelist Manager

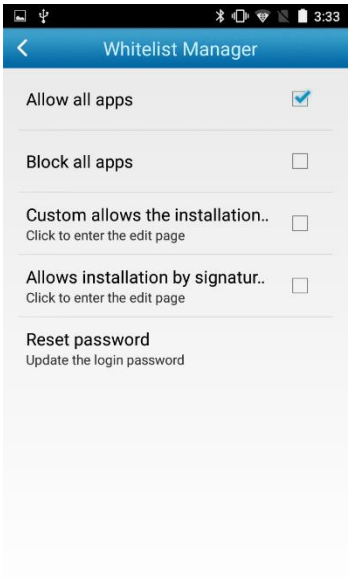
Tap the app icon

on the Home screen then

, enter the password (default: 112233), and tap “Login” to log in the whitelist manager. Then set the whitelist manager as per your actual needs.



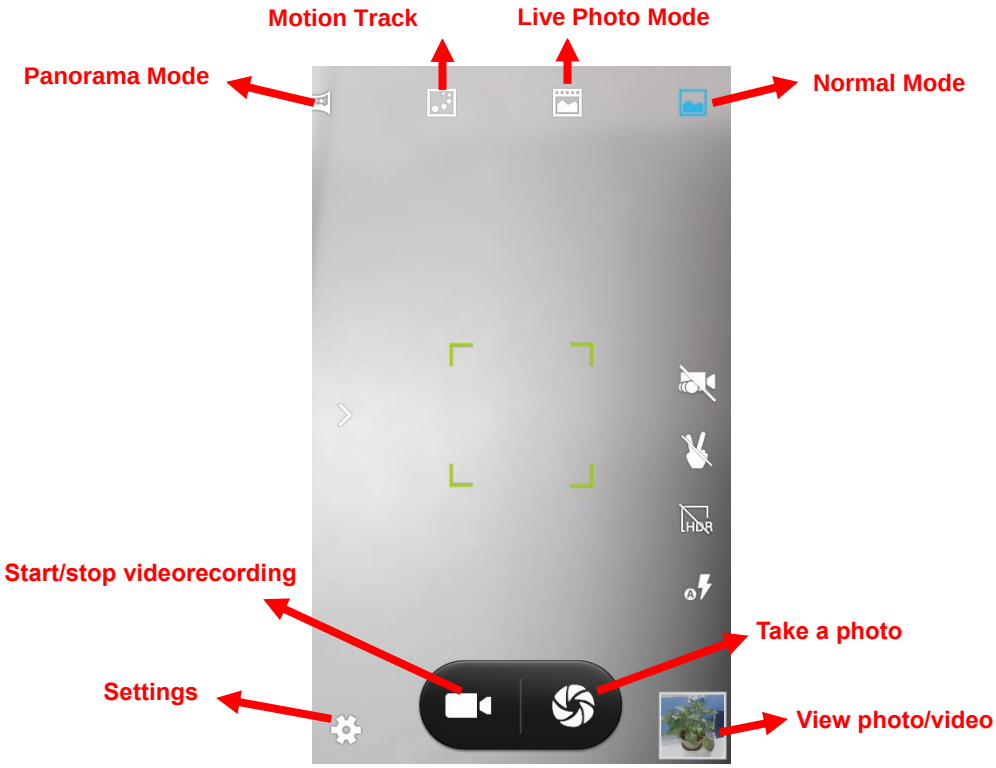

Saving screenshot...
Login
Please enter password
Password
Default : 112233
Forgot your password?
Login
Cancel


3:33
Whitelist Manager
Allow all apps
Block all apps
Custom allows the installation..
Click to enter the edit page
Allows installation by signatur..
Click to enter the edit page
Reset password
Update the login password

Chapter 10 Others

Camera

Tap the app icon to launch the Camera app.



: Tap it to reveal the parameters such as GPS location info, face beauty, exposure, scene mode and white balance and set those parameters as per your needs.

: Tap it to take a photo.

: Tap it to start/stop a video recording.

: Tap the thumbnail image in the bottom right corner of the screen to view the photo or video saved.

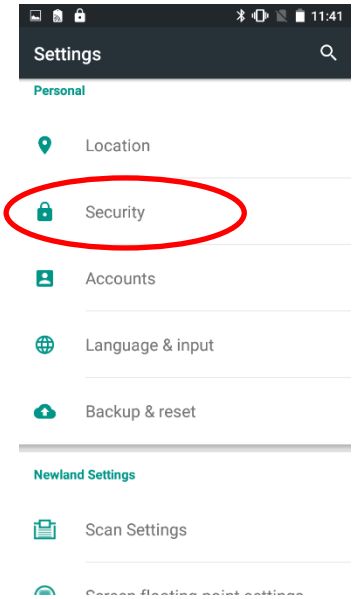
You can also download a camera app from the Internet or develop an app for the camera feature.

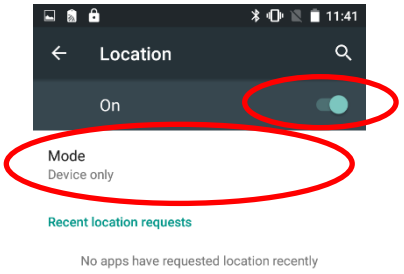
GPS

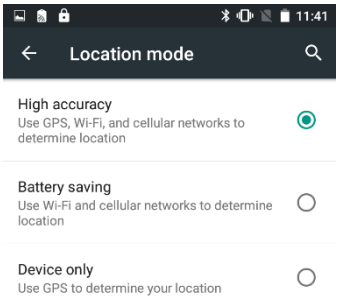
Tap the app icon

then “Location”, and then:

1. Turn Location on.
2. Tap “Mode” and then choose a location mode as per actual need.
3. Use a third-party map app or other GPS app to obtain location information.





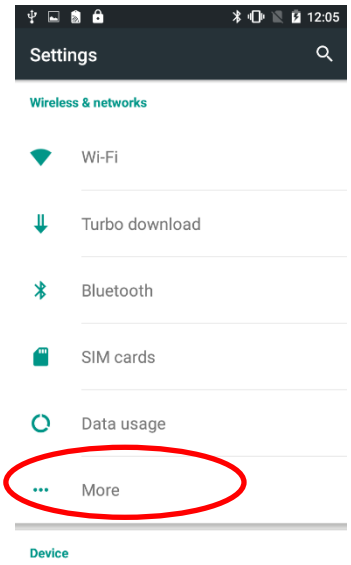


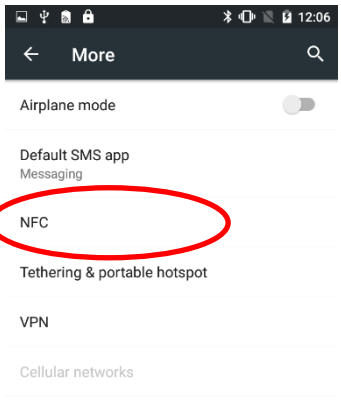
NFC (optional)

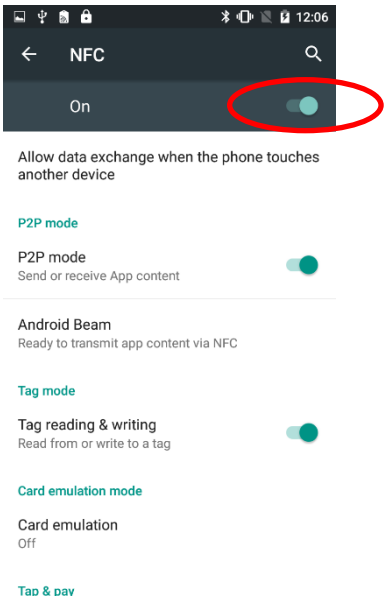
To enable the NFC feature, tap the app icon

-> “More” -> “NFC”, and then turn on NFC.

Then you can install an NFC writer on the MT90 to read and write NFC tags.

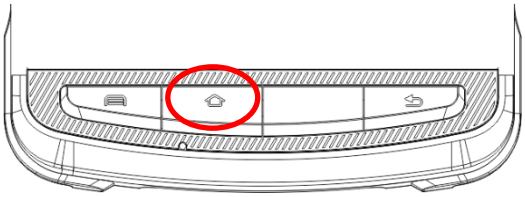


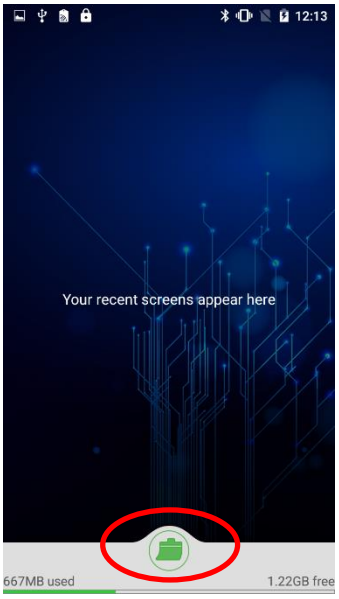




Memory Cleanup

Press and hold the Home key on the keypad until the terminal displays the following screen and then tap to clean up the memory.

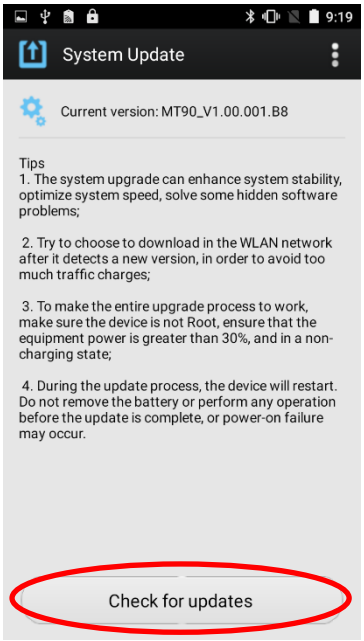




Note: When your terminal becomes less efficiently after having run for extended periods of time, you may perform a memory cleanup or reboot the terminal to fix the problem.

Chapter 11 System Update

Update the system online: Tap on the home screen -> -> “Check for updates”.



Chapter 12 App Development Guide

Development Environment

The MT90 runs on Android 5.1 operating system, so you should use Android SDK 5.1 or lower when developing apps for the MT90.

Use of Non-standard Interfaces

See ***NLS-MT90 SDK Handbook***.

Chapter 13 Maintenance & Troubleshooting

Introduction

This chapter includes important safety and handling information and provides troubleshooting solutions for issues that might occur when using the terminal.

Important Safety & Handling Information

Disassembly and Retrofit

Do not disassemble or retrofit the terminal by yourself. Unauthorized disassembly or retrofit will void the warranty.

External Power Supply

Use only the included AC adapter. Otherwise there is a risk of damage to the terminal.

Abnormal Situation

Keep the terminal away from fire or heat sources. If there is unusual odor, overheating or smoke during charging, immediately cut off the power and disconnect the AC adapter, and contact your dealer or Newland customer service center. Continued use in this case may result in fire or electric shock.

Drop Damage

If the terminal is damaged due to a drop from high place, immediately cut off the power and contact your dealer or Newland customer service center.

LCD Screen

Do not press against or strike the LCD screen. Otherwise it may damage the screen. When handling a cracked or shattered screen, do not touch the liquid that has leaked from it to avoid skin burn or infection.

Stacking Heavy Objects

Do not place heavy objects on the terminal as those objects may fall and cause injury.

Mounting Location

Do not place the terminal on unstable or uneven surfaces as it may fall and cause injury. Do not expose the terminal to humidity or dust as this may cause fire or electric shock. Do not expose the terminal to direct sunlight for extended periods.

Wireless Functionalities

Do not use the terminal's wireless functionalities where wireless device use is prohibited or where it may cause interference or danger, such as in aircrafts, petrol stations.

Use & Maintenance

- ✧ If the terminal cannot be switched on after experiencing a sudden or unexpected power loss or other abnormalities, remove and then reinstall its battery to reset the terminal.
- ✧ Do not throw, drop or strike the terminal. Doing so may damage the LCD display, interrupt running programs, cause data loss in memory and result in malfunction.
- ✧ Clean the scan window regularly. Do not touch it with hands. Scratched or smudged window may degrade reading performance.
- ✧ Do not tap the touch screen with sharp objects. Doing so may damage the screen or cause internal short circuits.
- ✧ Use only a dry soft cloth to clean the terminal. Cleaning it with wet cloth or benzene/ thinner/ other volatile chemicals may deform and shorten the service life of the keypad and shell of the terminal.
- ✧ Do not place the terminal facedown on any surface, or there might be misoperations.
- ✧ Sudden temperature drops may cause condensation on the shell which could cause malfunction. Care should be taken to avoid condensation. If condensation occurs, dry the terminal before use.

Battery Safety Guidelines

- ✧ **Do not dispose of batteries in a fire as they may explode.**
- ✧ The battery can be charged and discharged over 500 times. If the battery life is unreasonably short, please replace the battery with a new one.
- ✧ Use only the included battery and AC adapter.
- ✧ Do not continue to charge a battery that is fully charged. Overcharging will shorten battery lifespan. If a fully charged battery is not used, it will discharge slowly, which does not affect its normal use.
- ✧ Do not use damaged or faulty AC adapters or batteries.
- ✧ **Properly dispose of and recycle batteries. Do not dispose of them as household garbage.**

Troubleshooting

Problem		Possible Cause & Solution
Type	**Description**	
Keypad	Unresponsive keypad or incorrect response to any key entry.	This problem may be caused by unreliable cable connection between keypad and mainboard or keypad malfunction. Please contact Newland after-sales service.
Battery	Charging LED is OFF when charging.	Ensure the AC adapter is plugged in properly.
	Noticeably short battery life.	1. Check the battery level. If the battery is almost depleted, recharge it. 2. Replace the battery if it is faulty.
	Fully charged battery is depleted after the terminal is switched on.	If the battery is faulty, replace it with a new one.
USB	USB communication failure	1. Ensure that the USB cable connections are secure. 2. Ensure that there is no contaminant inside the Micro USB port. 3. If the problem still remains, please contact the after-sales service center.
LCD Screen	No display	1. Ensure the terminal is switched on. 2. If the terminal is in sleep mode, press the Power key to wake it up. 3. Check the battery level. If the battery is depleted, recharge it. 4. Ensure that the battery is properly installed. 5. Replace the battery if it is faulty. 6. If the problem still remains, please contact the after-sales service center.
System	Cannot switch on	1. Check the battery level. If the battery is depleted, recharge it. 2. Switch the terminal on after using the included AC adapter to connect it to a power outlet. If the problem disappears, then continue to charge the terminal. If the problem remains after charging the terminal for a while, replace the battery with a new one.
	System halted	1. The problem may be caused by bugs of downloaded apps. Ensure that only reliable apps are used. 2. The problem may be caused by a sudden or unexpected power loss. Remove and then reinstall its battery to reset the terminal.

Newland

SCANNING MADE SIMPLE

Newland EMEA HQ
+31 (0) 345 87 00 33
info@newland-id.com
newland-id.com

D-A-C-H
+49 (6) 182 82916-16
info@newland-id.de

Benelux
+31 (0) 345 87 00 33
benelux@newland-id.com

Italy
+39 (0) 342 0562227
italy@newland-id.com

United Kingdom
+44 (0) 1442 212020
sales@newland-id.co.uk

South Africa
Gauteng: +27 (0) 11 553 8010
Cape Town: +27 (0) 21 9140819
info@newland-id.co.za

Turkey
+90 (0) 544 538 40 49
turkey@newland-id.com

France
+39 (0) 345 8804096
france@newland-id.com

Ibérica
+34 (0) 93 303 74 66
info@newland-id.es

Nordic & Baltic
+46 (0) 70 88 47 767
nordic@newland-id.com

Russia
+31 (0) 345 87 00 33
russia@newland-id.com

Middle East
+39 (0) 345 8804096
middleeast@newland-id.com

Iran
+90 (0) 544 538 40 49
iran@newland-id.com