HumanCentric Tag

User Manual

Model: 301-1036-P1

Version 1.0

Overview

The Tag is based on the accessory of Apple's Find My Network specification and uses BLE technology. BLE and Find My network provide positioning for accessory and provide users with an excellent anti-lost experience. Find My is an application technology released by Apple. Peripheral products of this technology (such as accessory), even if they do not have a GPS module, can also use the surrounding Apple devices (such as iPhone, iPad, etc.) to help their positioning.

At present, the Tag has integrated buttons to facilitate user control; according to the size of the item, it can optionally support motion detection, so that the item can quickly sense and alert when there is an unknown movement; built-in boost buzzer drive chip , providing loud and diverse alarm bells; replaceable CR2032 battery, providing longer battery life; with the powerful Find My network, effectively solve problems such as lost items and difficulty in finding items

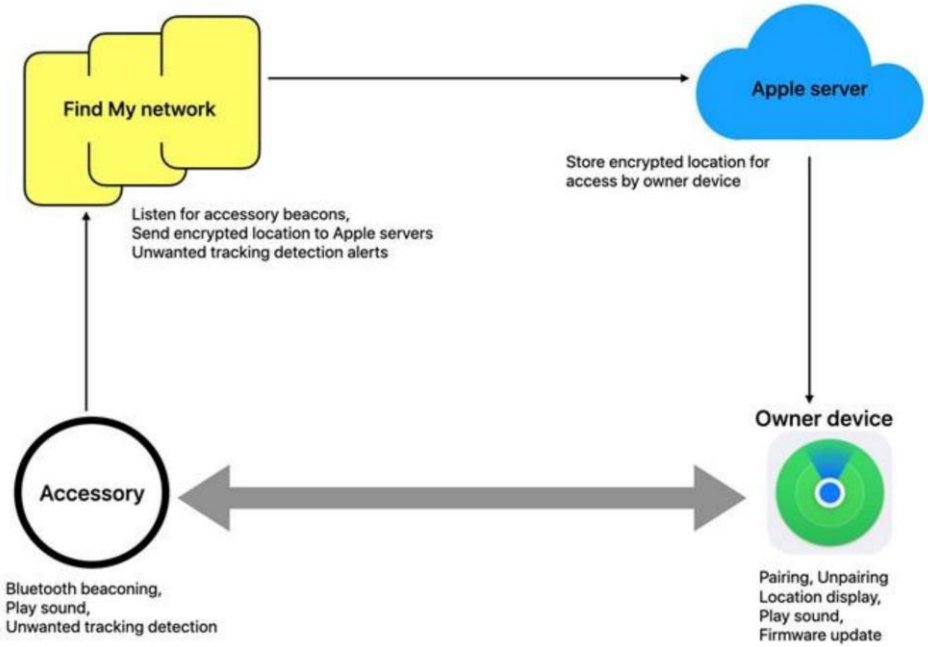
Features

- Buzzer, high volume, even in a noisy environment, can recognize the prompt tone；
- Button, start pairing broadcast according to user needs, enable serial number search and restore factory settings；
- The CR2032 battery can be replaced for power supply, and the product has a stronger battery life；
- Intelligent anti-lost, unknown motion alarm, one key (app terminal) to find objects, location memory, loss mode.

Application

Can be used to prevent loss of daily peripheral objects, such as mobile phones, keys, wallets, backpacks, suitcases, umbrellas, etc.

System block diagram



Owner device

When user binds this demo to the device that has logged in to the Apple ID, then the item is tied to the Apple ID account. Relevant product functions can be realized through Find My app.

Accessory

The item that implements the Find My network protocol, needs to have Bluetooth broadcasting, sound playback, motion detection and other functions according to functional requirements.

Find My network

Apple devices such as iPad, iPhone, and MacBook (with the Find My function enabled) form a huge network. For example, when you travel with an item that supports the Find My protocol (such as HumanCentric Tag), Although your item itself without GPS, the Apple device in this network can provide its own GPS data, associate it with the Apple ID of your item, and upload it to Apple's server. The Apple device with the scanning radio function in the network is called a finder. The more the finder, the more accurate the positioning of the item.

Apple server

Receiving and storing encrypted positioning-related data. Only the owner can decrypt and read the original location information from the encrypted data.

Function description

Battery and detection circuit (implemented in this program)

The battery provides power for the system. The software has a power detection function. It will read the power value from time to time and display it on the app to realize the function of low power alarm.

Button

Users use buttons to trigger device state switching, such as enabling pairing radio, restoring factory settings, etc.

Buzzer

For playing sound. Through the app, you can control the sound of the item to find the item; if it supports the motion detection function, when an unknown motion occurs, the peripheral will play a sound alarm.

Specification list

Category		Specification
Dimensions		Φ36.9*8.8mm
Installation method		Hanging/ place inside
Hardware interface	power supply	CR2032
	button	SMD mechanical button
	buzzer	Piezo buzzer
	Accelerometer	Three-axis accelerometer SC7A20
Software interface	operating system	iPhone or iPod touch with iOS 14.3 or later, iPad with iPadOS 14.3 or later, or Mac with macOS Big Sur 11.1 or later.
	Protocol specification	FMNA spec R1
	APP	Find My
	Other	Firmware update (UARP)
Electrical characteristics	Operating Voltage	2.6v~3.6v
	Power consumption	9.5mA max @adv, 22uA avg @paired
	Transmit power	+4dBm
	Transmission distance	40-50m(Open air)
	Operating temperature	-20~60℃

Instructions for use

App

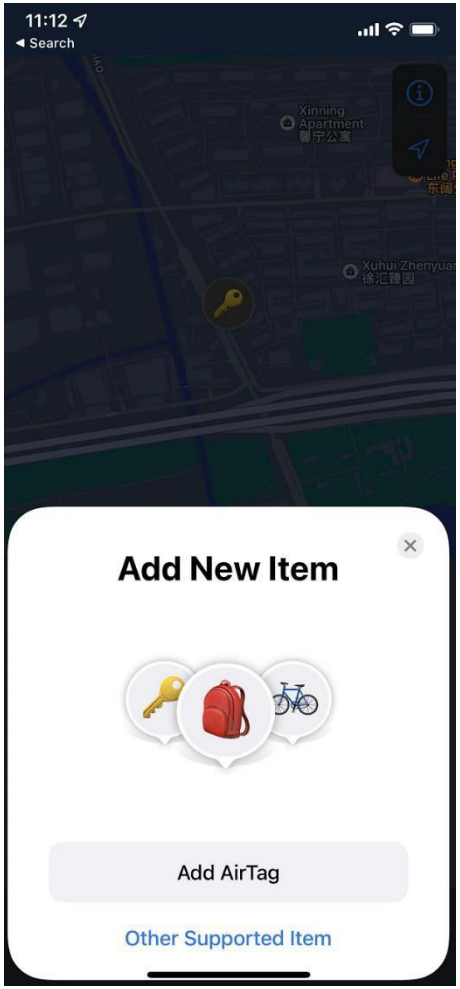
This item does not currently support Android, supports Find My app on iOS. Android will be supported in the next iteration

Support: iPhone or iPod touch with iOS 14.3 or later, iPad with iPadOS 14.3 or later, or Mac with macOS Big Sur 11.1 or later.

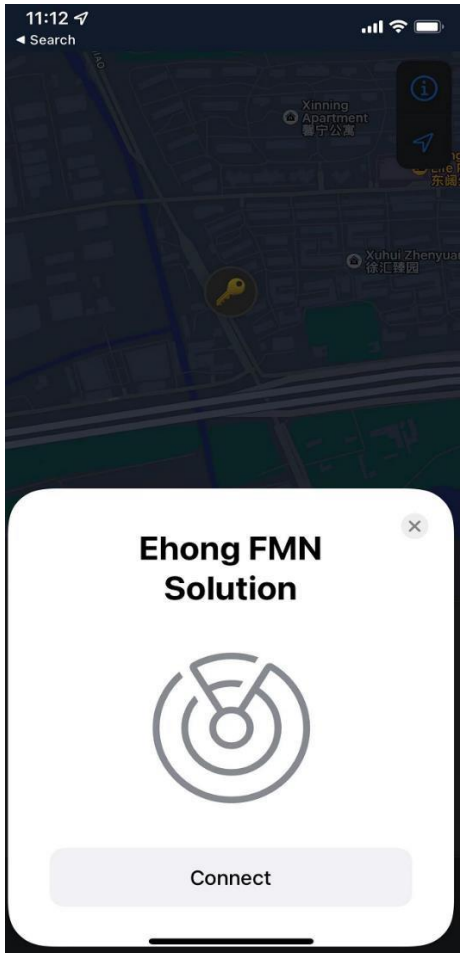
It is recommended to update the system to the latest version for a better experience.

Add device

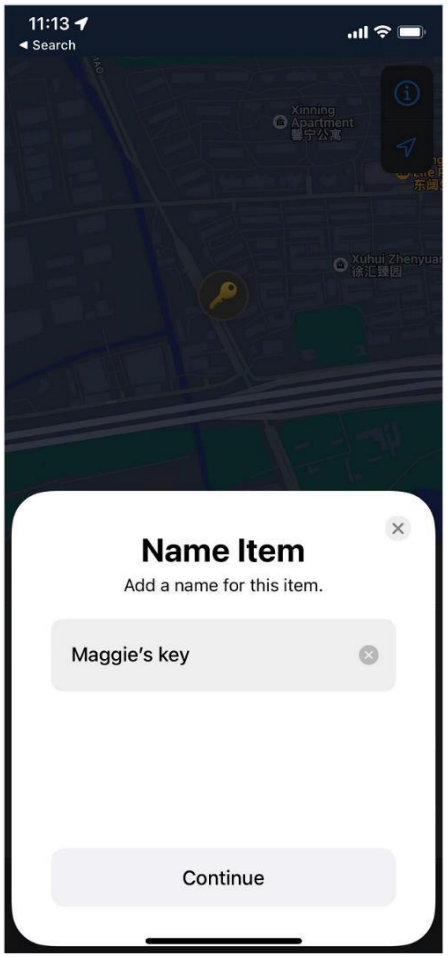
Turn on the Bluetooth function, open the Find My app, click on the item -> add item -> other supported items, as shown in the figure：

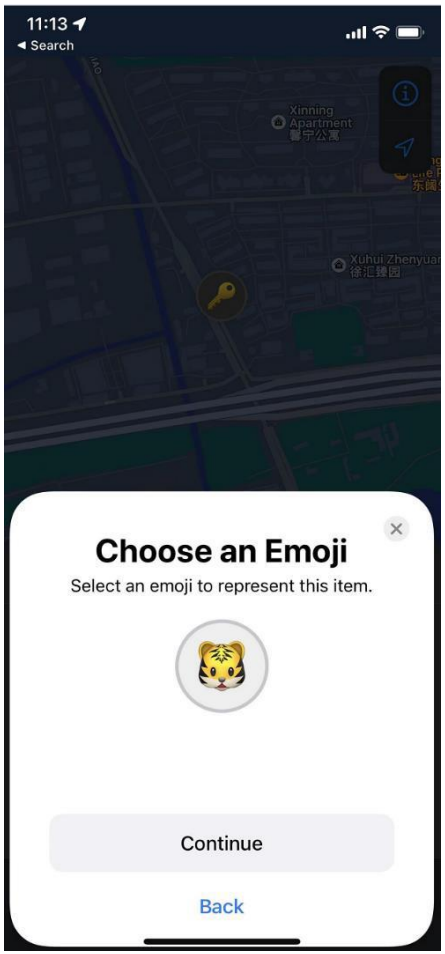


The system will automatically search for the device.
When the device is found, the original device name and icon will be displayed, as shown in the figure

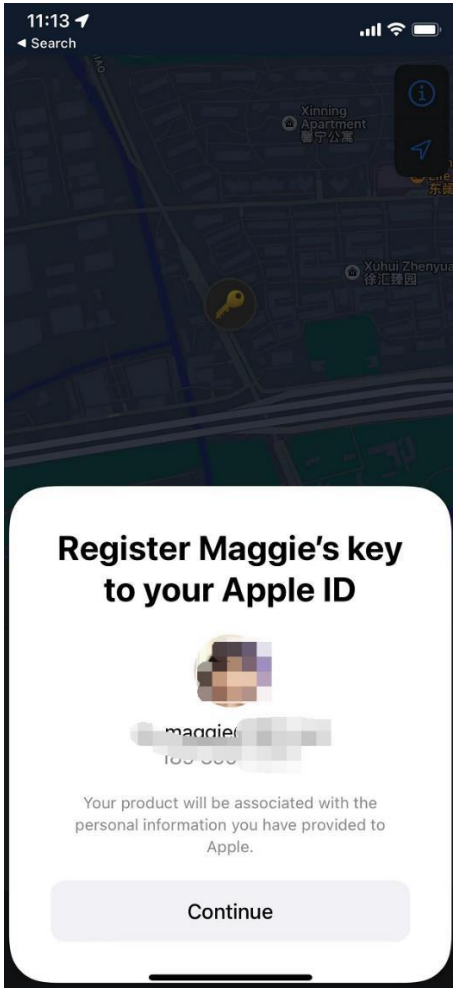


Click Connect, and the user will be prompted to choose an Emoji and name the device, which can be selected as you like, as shown in the figure:

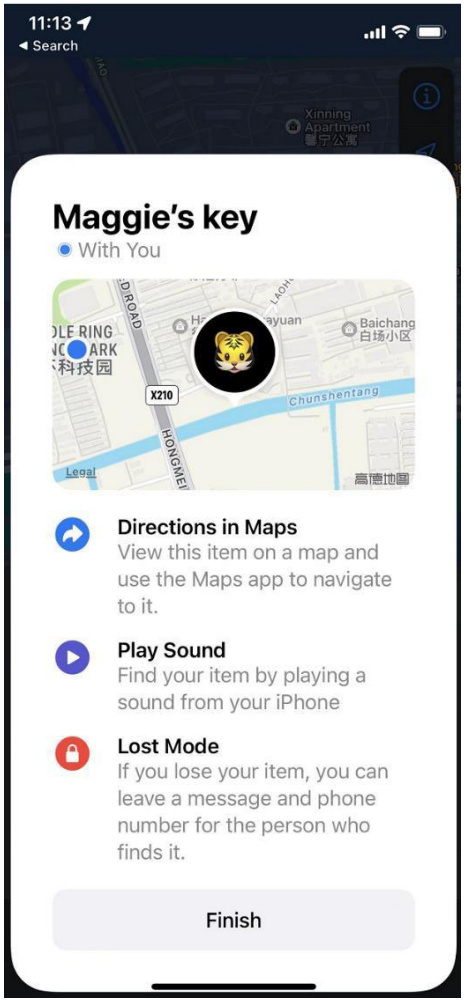




Click continue, the device will register to the Apple ID which had logged in, as shown in the figure：

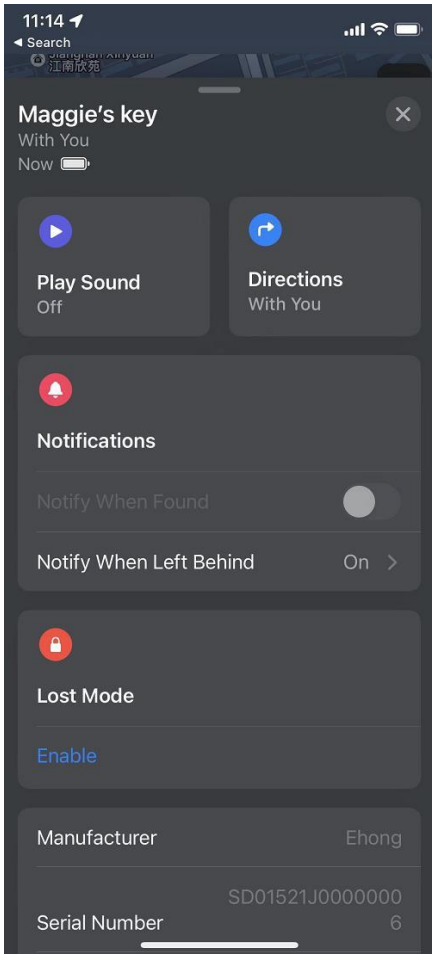


Click Continue, and then click Finish to complete, and the current location of the item will be displayed on the map, as shown in the figure：



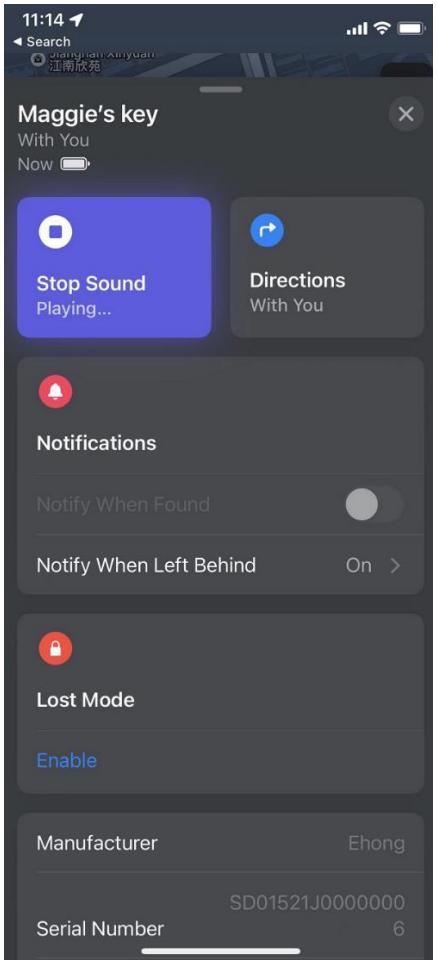
Check item

Click the device had added, you will see the detailed information and the available operations, as shown in the figure:



Find item

When you need to find an item, you can click "Play Sound", the device will beep for 10 seconds, and you can easily find the item, as shown in the figure

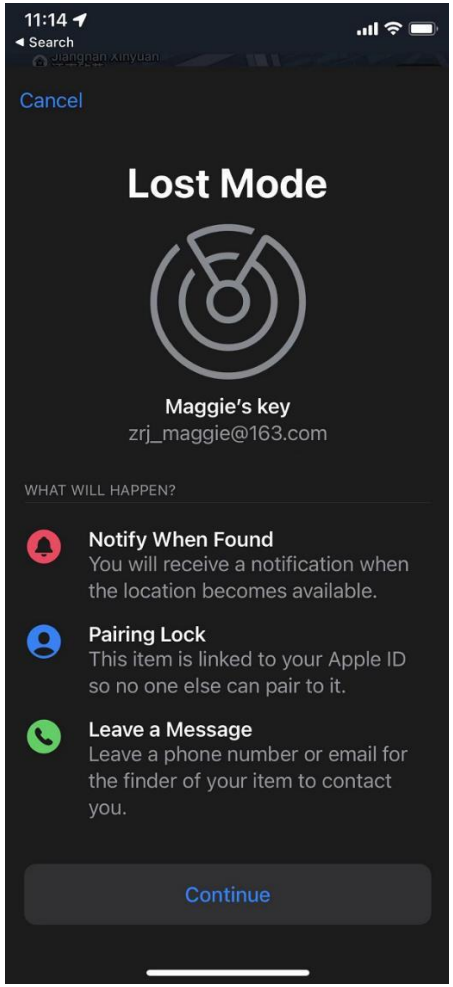


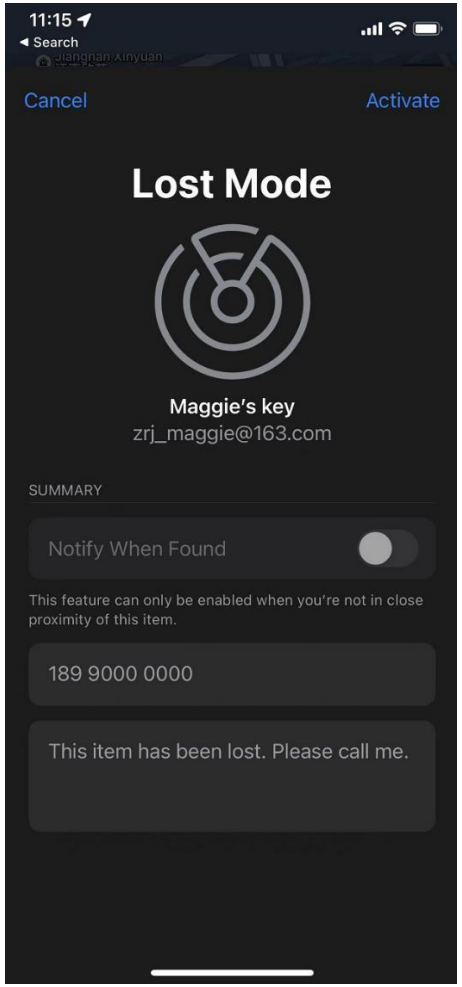
Lost mode

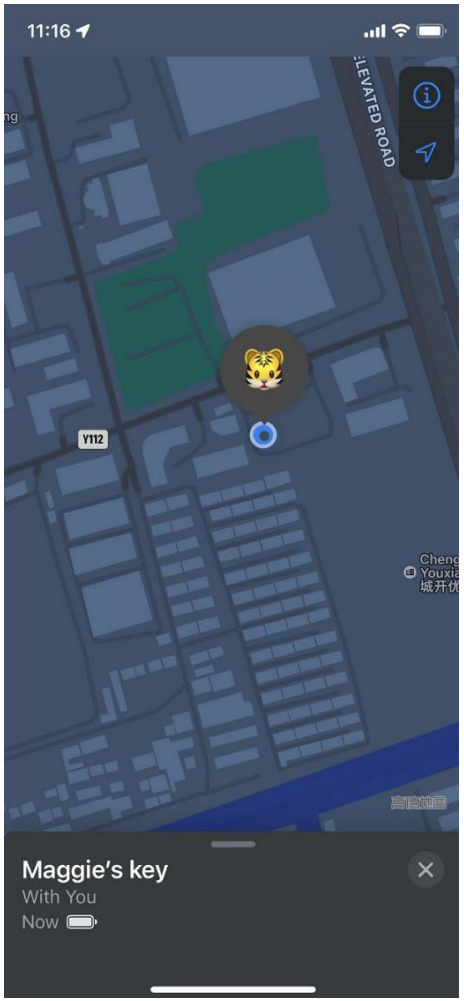
When you lost the device, you can enable the lost mode and leave contact information, other Apple devices will be able to find the item and report the location information; Other people could contact the item owner by checking the contact information left by the item owner. as shown in the figure

Location

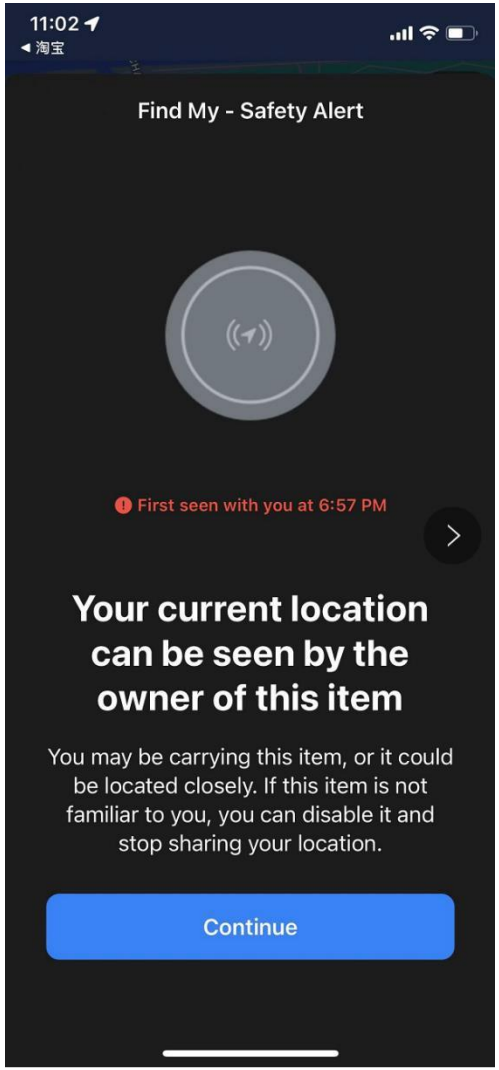
Owner: After the item was picked up by others, if the person who picked up the item is using an iPhone, or there is an iPhone next to the person who picked up the item, we can check where the item is through Find My app.

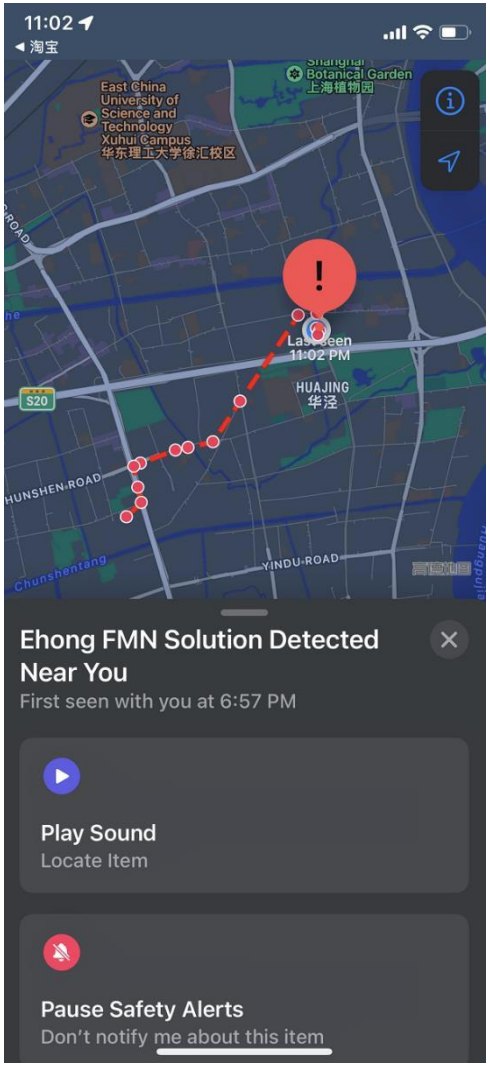

11:14
Search
Cancel
Lost Mode
Maggie's key
zrj_maggie@163.com
WHAT WILL HAPPEN?
Notify When Found
You will receive a notification when the location becomes available.
Pairing Lock
This item is linked to your Apple ID so no one else can pair to it.
Leave a Message
Leave a phone number or email for the finder of your item to contact you.
Continue

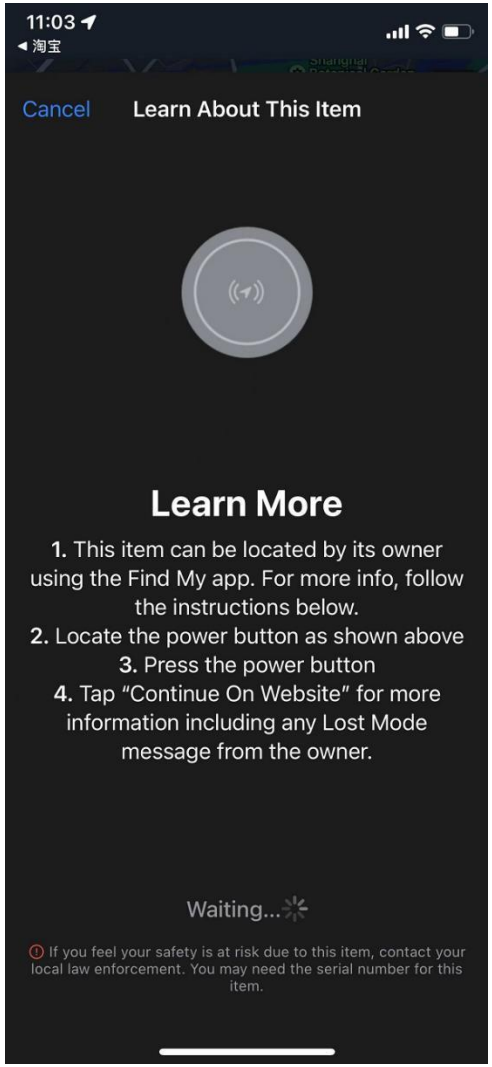

11:15
Search
Cancel
Activate
Lost Mode
Maggie's key
zrj_maggie@163.com
SUMMARY
Notify When Found
This feature can only be enabled when you're not in close proximity of this item.
189 9000 0000
This item has been lost. Please call me.

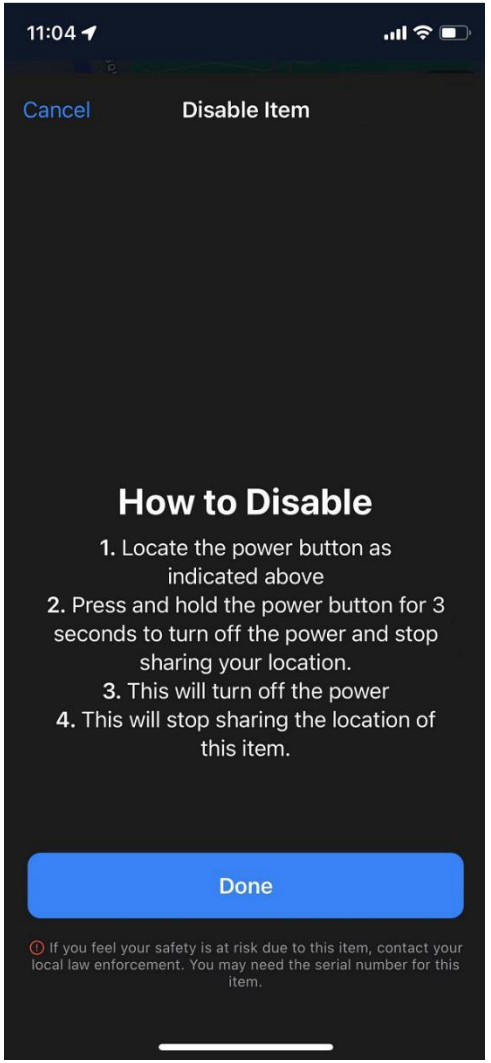

11:16
Y112
Maggie's key
With You
Now

Picker: After picking up the item, take it with you and move it for a certain distance. Apple will detect it and send out a reminder.
The picker can click to see the change from the pick up to the previous position, click to play the sound device buzzer will sound. If the item is set to lost mode, you can see the phone number left by the owner; as shown in the figure: (Anti-tracking function)



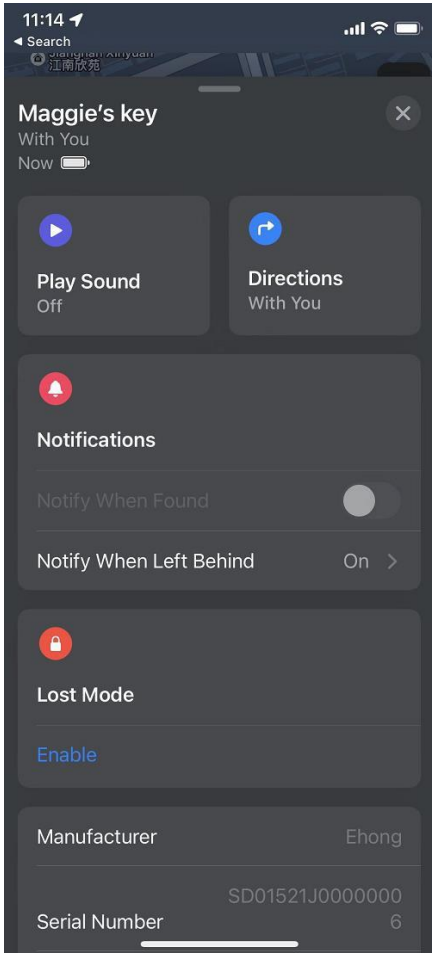


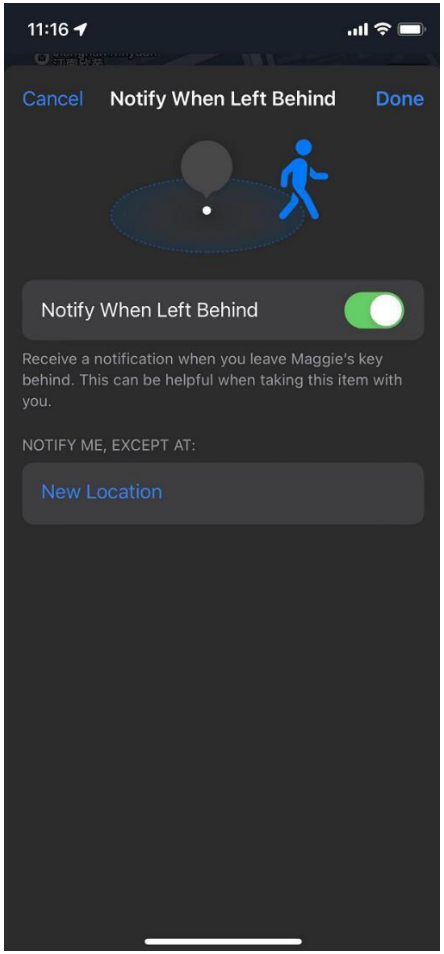




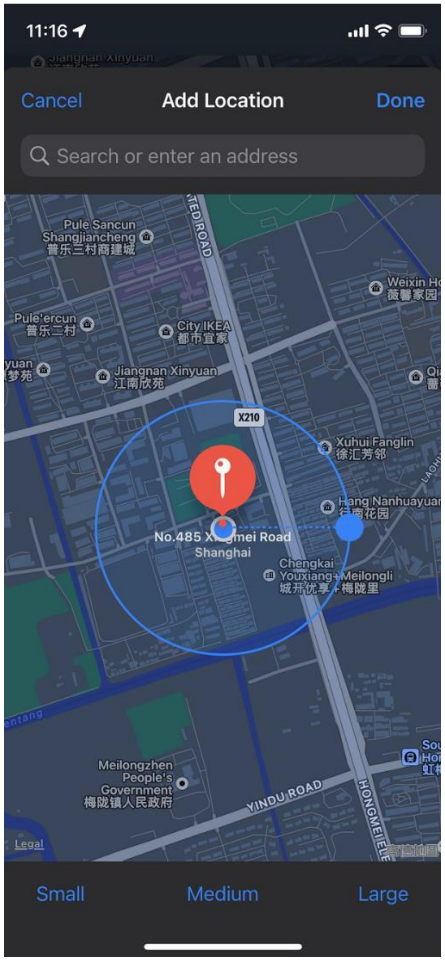
Notify When Left Behind

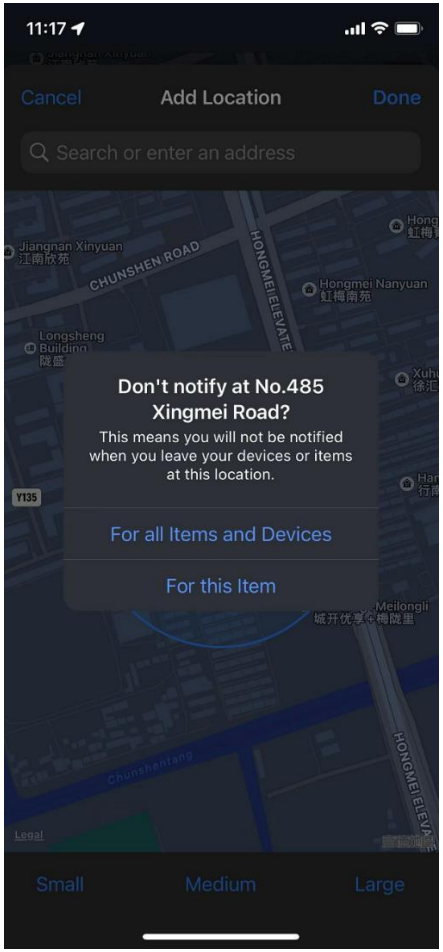
In systems above iOS 15, Apple has added a separation reminder to the "Find My" application. When you drop an item or other Apple devices, the phone will receive a message that the item has been separated. Open Find My app, click on the item -> click on notification when it is lost (default off) -> turn on Notify When Left Behind, as shown in the figure





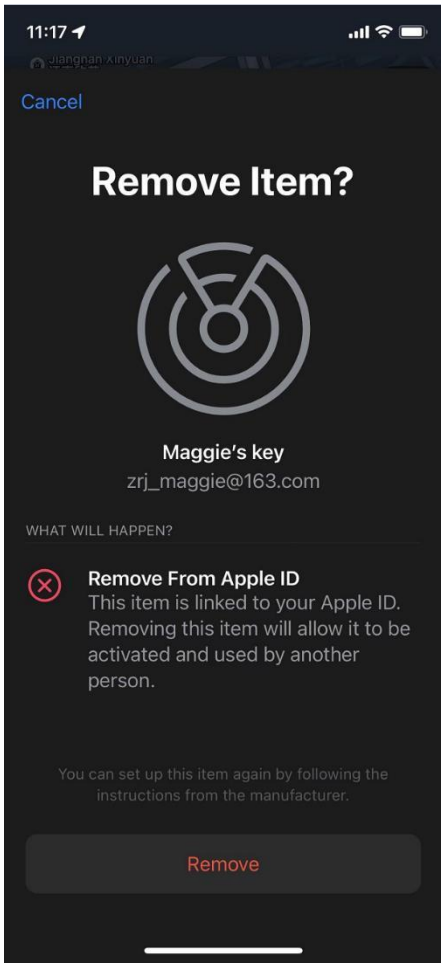
At the same time, it supports custom geographic area settings that are not reminded, as shown in the figure：





Remove item

When you don't need this item any more, you can remove it through Find My APP. At this time, the item is cancelled with the Apple device and can be paired and connected by other Apple devices, as shown in the figure:



Things to note

Remove items from the Find My APP

When removing items in Find My APP, they need to be removed when the item is connected to the Apple device, so that the pairing information in the item can be cleared synchronously.

If it is removed in the unconnected state, it will only be moved on the Apple device. But to the item, the matching information in the item is still there, so the item will not broadcast the match, and will not be discovered and added again.

Clear pairing on the device side

The item is equipped with a button, press the button and hold, when you hear three beeps, keeping holding on it, until you heard a long beep, then factory settings will be restored, at this time, the pairing information of the item will be cleared and the pairing broadcast will start again.

If the item is not removed from the Find My APP, although the item (physical understanding binding) has cleared the matching information, it can only be found but cannot be connected, and it displays "Cannot add item". At this time, you need to unbind the phone using Find My APP before you can connect again.

F&Q

What is the connection distance of the mobile phone and HumanCentric Tag?

40-50 meters (open environment)

Can I add the same item to two Apple devices?

Yes, two devices are required to have the same Apple ID. Apple devices with the same Apple ID will automatically add items. In addition, one mobile phone can add multiple HumanCentric Tag devices.

How long is the battery life of the item?

It is related to the battery capacity and frequency of use.
The general CR2032 battery has the function of finding objects twice a day, and the service life is about 10 months.

How do I find out if an unknown device is tracking me？

If an FMN device that is not bound to your Apple ID follows and is separated from its bound Apple device for more than a few hours, your iPhone (iOS14.5 and above) will receive a corresponding prompt message, please refer to this documentation page 18. And support motion alarm after separation, please see the next part below.

Does it support motion detection alarms?

Support, when the item is far away from the mobile phone for 3 consecutive days, (the specific time depends on Apple's latest technical agreement), when the device moves, the device will alarm (playing sound continuously for 10s)

FCC compliance 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.

changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.