

# SL120 IOS Demo Software User Manual

## Table of Contents

- 1. Initial Interface.....2
- 2. Detection Interface.....3
- 3. Detection Failure .....4
- 4. Successful Detection.....5
- 5. Check the Battery and Buzzer .....6
- 6. Read EPC+TID .....7
- 7. Count Tag .....8
- 8. Read Tag Block .....9
- 9. Write Tag Block .....10
- 10. Lock Tag Block .....11
- 11. Kill Tag .....12

The ultrahigh frequency (UHF) elf is an UHF reader to be used on the iPhone phone via the headphone audio jack, currently supporting 14443A and UltraLight protocols.

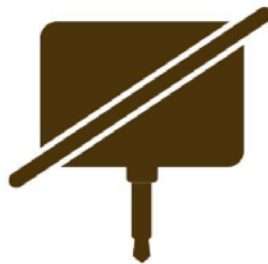
The UHF elf demo software can be installed on iPhone phones with iOS 6.0 system and above, with the supported models from iPhone 4 to the latest iPhone 6s.

This manual mainly describes the operation instructions of the demo software.

## 1. Initial Interface

Open the UHF elf APP with the interface shown in Figure 1. As the UHF elf carries out communication via the headphone audio jack, you must turn the phone to the maximum volume. Before inserting the UHF elf to the headphone jack, the device disconnected message will be displayed on the screen; at this time, any tag related operation can't be performed.

无 SIM 卡 13:49 41%  
Device disconnected. 2016-05-19 Thur.



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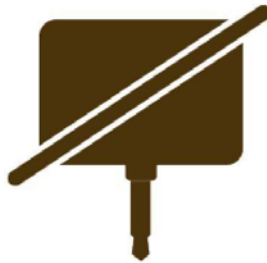
Figure 1

## 2. Detection Interface

Note here that the UHF elf must be fully inserted to the phone's headphone jack; otherwise, the device may not work properly. For some phones, there is a prompt when detecting the insertion event of the headphone jack, such as a headphone icon appearing in the status bar.

After the demo software detects the insertion event of the headphone jack successfully, it will start detecting whether the audio jack of the device communicates normally. At this time, the “Device Detecting” message will be displayed on the screen, as shown in Figure 2.

无 SIM 卡 13:49 41%  
Device detecting... 2016-05-19 Thur.



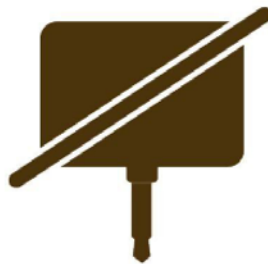
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Figure 2

### 3. Detection Failure

Due to differences between different phone hardware modules and software system coupled with partial compatibility of the UHF elf, it may be unable to perform communication normally on some phones or operate the elf to read/write tags. In case of detection failure, the prompt message of “Detection Failure” will be displayed on the screen, as shown in Figure 3.

无 SIM 卡 17:15 23%  
Device unrecognized 2016-05-19 Thur.



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Figure 3

## 4. Successful Detection

After successful detection, the interface is shown in Figure 4. Next, start commanding the UHF elf to perform tag reading/writing operations. The UHF elf supports counting EPC, reading/writing tag blocks, killing tags and other functions.



Figure 4

## 5. Check the Battery and Buzzer

Click the Settings button at the top left corner of the main interface to enter the following interface. Click “Refresh” to check the battery and buzzer status of the elf. As shown in the figure, there is 24% battery remaining and the buzzer is on. Click the checkbox to turn off the buzzer.

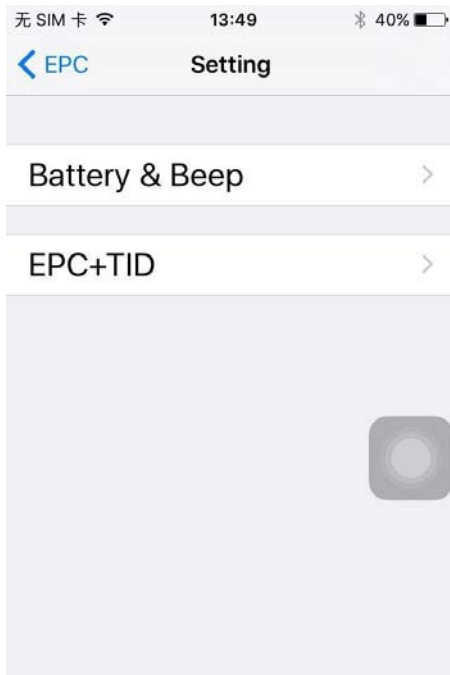


Figure 5

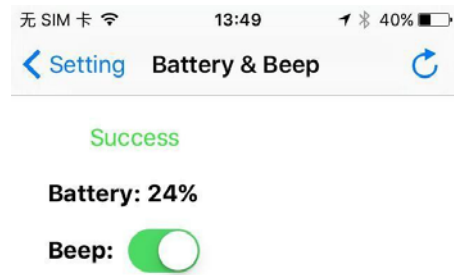
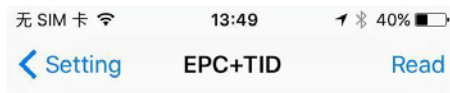


Figure 6

## 6. Read EPC+TID

The UHF elf provides a method of reading tags EPC and TID simultaneously. On the setting interface, switch to the EPC+TID tab, as shown in Figure 8. Enter the access password in the AccPwd text box and click "Read" to start reading the tag data with the interface shown in Figure 9 after successful reading.

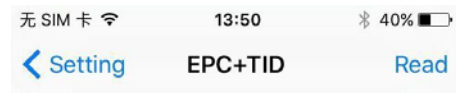


**Access Password(Hex):**

**EPC:**

**TID:**

Figure 7



**Success**

**Access Password(Hex):**

**EPC:** 494E4E4F 56020000 00000693

**TID:** E2003412 012DF400

Figure 8



## 7. Count Tag

Place a tag on the UHF elf and click the “>>>Start<<<” button to starting counting EPC with the display results shown in Figure 10 after successful counting. Click the “>>>Stop<<<” button to stop counting EPC.



Figure 9



Figure 10

## 8. Read Tag Block

On the tag counting interface, click the EPC data in the list to enter the tag operation interface. The Read Tag tab appears first, as shown in Figure 12. In the tab, fill in the AccPwd (access password), Start Address (start address block), Memory Block (tag memory block) and Length (data block length). Click "Read" to start reading the tag data and display the tab block data in the Data location after successful reading, as shown in Figure 13.

无 SIM 卡 13:50 40%

< Tag Access Tag Read Read

**EPC:** 494E4E4F 56020000 00000693

**Access Password(HEX):** 000000...

**Start Address:** 2

**Memory Block:**

EPC USER RFU TID

**Length(WORD):** 6

**Data(HEX):**

Figure 11

## 9. Write Tag Block

Switch to the Write Tag tab, as shown in Figure 14. In the tab, fill in the AccPwd (access password), Start Address(start address block), Memory Block (tag memory block), Length (data block length) and Data (write data). Click "Write" to start writing the tag data with the interface shown in Figure 15 after successful writing.

无 SIM 卡 17:24 21%

< Tag Access Tag Write Write

**EPC:** 494E4E4F 56020000 00000693

**Access Password(HEX):** 000000...

**Start Address:** 2

**Memory Block:**

EPC	USER	RFU
-----	------	-----

**Length(WORD):** 6

**Data(HEX):**

Figure 12

## 10. Lock Tag Block

Switch to the Lock Tag Block tab, as shown in Figure 16. In the tab, fill in the AccPwd (access password), Lock Object(memory block to be locked) and Lock Action (lock action). Click “Lock” to start locking tag blocks with the interface shown in Figure 17 after successful operation.

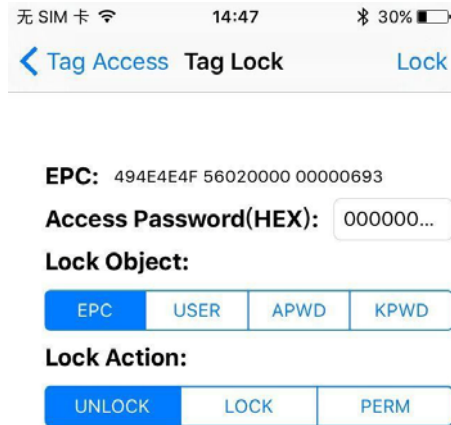


Figure 13

## 11. Kill Tag

Switch to the Kill Tag tab, as shown in Figure 18; fill in the AccPwd (access password) and Kill Pwd (kill password). Click “Kill” to start killing tags with the interface shown in Figure 19 after successful killing.

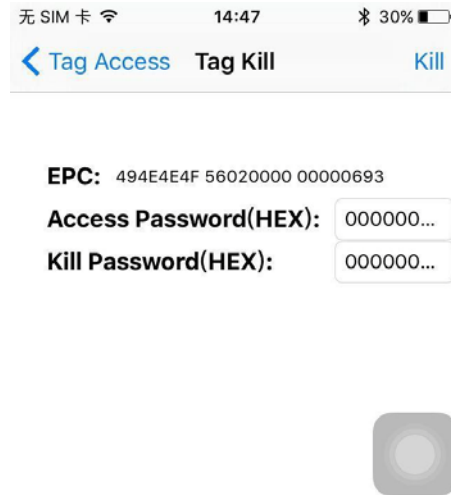


Figure 14