

# **S9 Series Contactless IC Card Reader**

## **Manual for DEMO.exe**



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# **I. Introduction**

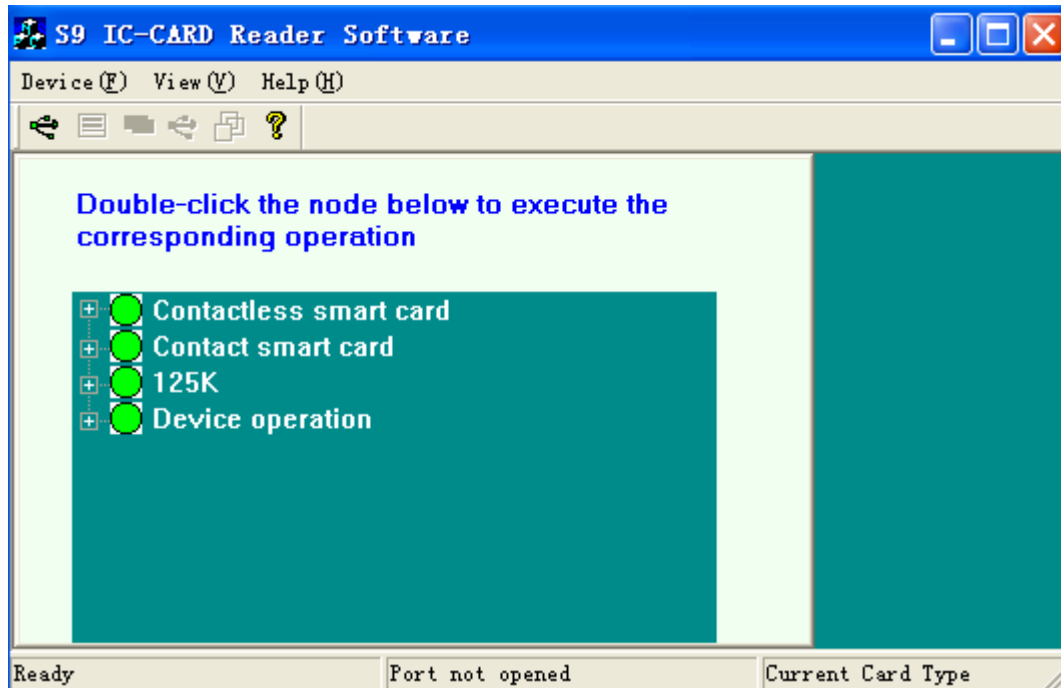
S9 series Dual-Interface Smart Card Reader Writer can support both contact and contactless smart cards, with one slot for smart card of ISO7816 Size and Maximum 3 slots for SAM card of GSM11.11 size. With multi-slots structure, the reader can meet the higher level of security in smart card application. It connects to PC or related devices via RS232 Serial port or USB (PNP, plug and play) port which brings more convenience to customers whether in installation or operation of the reader. And there will be a CD for SDK (Software Development Kits) along with the reader which includes the USB Drivers and Examples for various development platforms, and customers can use the DEMO.exe program to do the testing for rfid card and reader.


S9 Reader is essential front-end processing equipment for IC card applications and system integration. Owning rich and useful interfaces and functions, the reader can be easily applied to many fields such as industry and commerce, telecommunications, postal services, taxation, banking, insurance, medical, meeting attendance, Internet cafe management, gas stations, parking lots and other smart card application programs for charges, stored value and query.

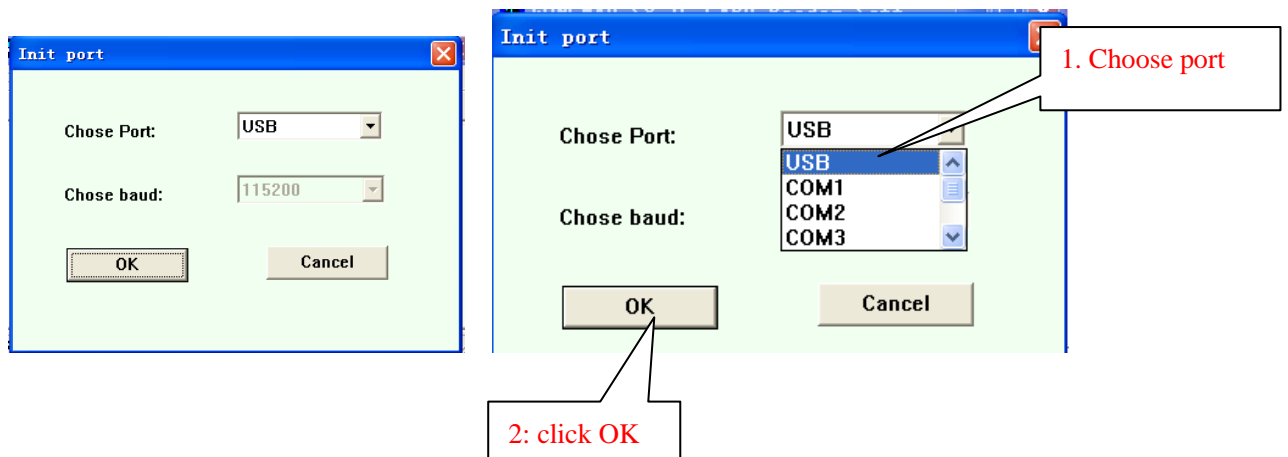
## II. Common Operations for S9 Demo.exe

### 2.1. How to Connect

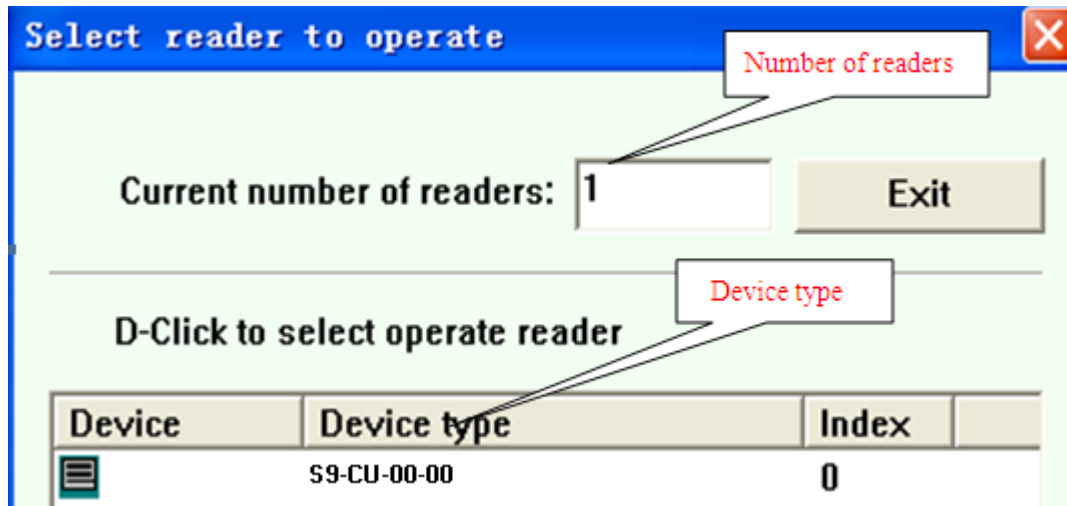
Connect the communication cable to PC, double click to open the program of “S9.exe”, you can find the picture below.



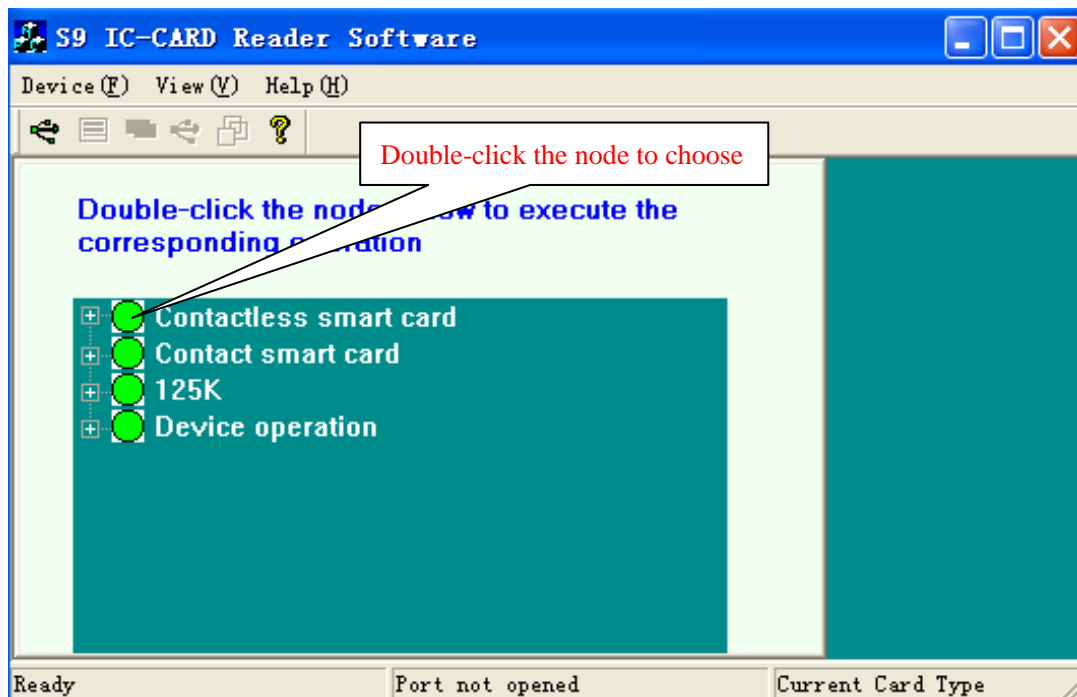
Click “Device” or “” to connect the reader, the default Baud rate is 115200, as the below picture shows.



Take USB Port for example:

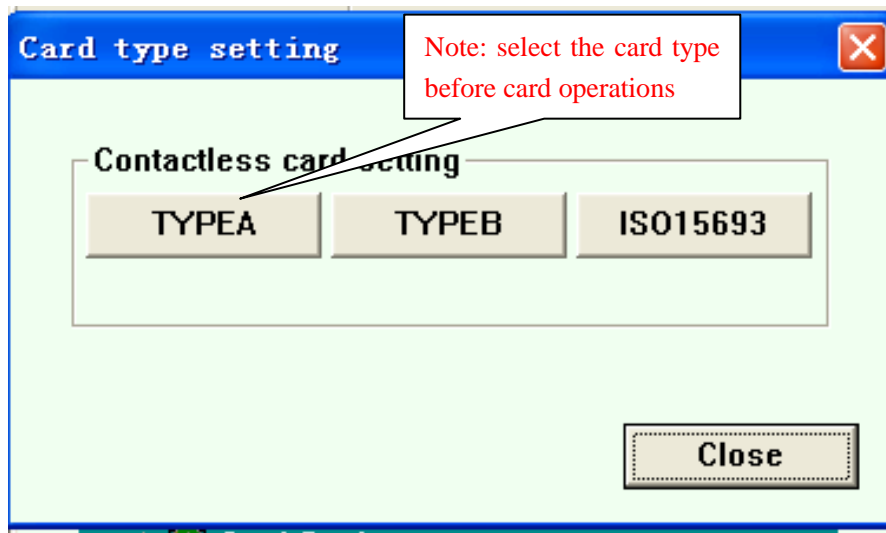


Here you can find the device type and number of reader connected. Then click “Exit”, and you can operate the device now, as the picture shows:



## 2.2. Card Operations

Click “Device operation” → “card setting” → “Close”; as the picture shows:



## III. Operation for Different type of cards

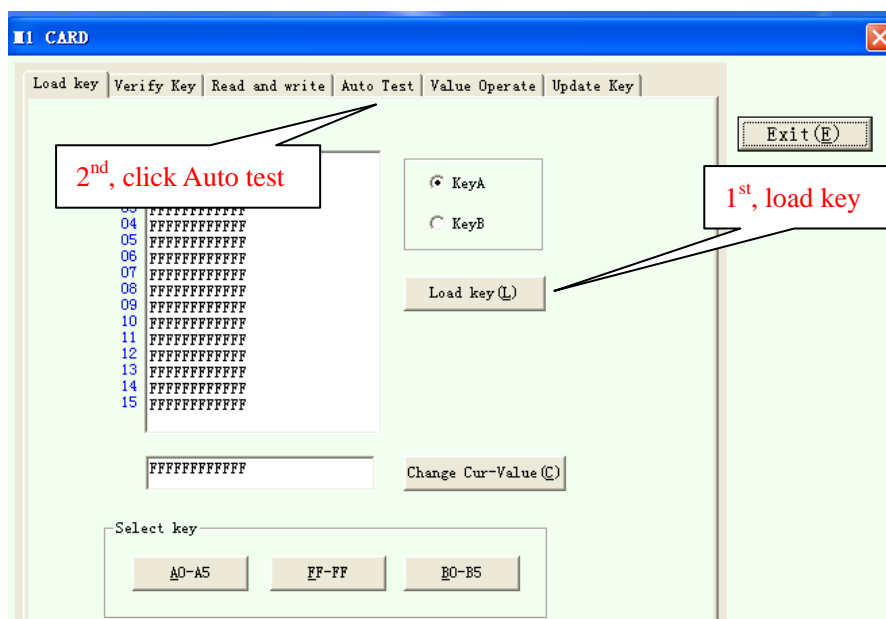
### 3.1 Contactless Smart Card (RFID Card) operation

#### 3.1.1. Mifare S50/S70

First, put the card within the Antenna area. Then “contactless smart card” → “type A” → “M1 card”.

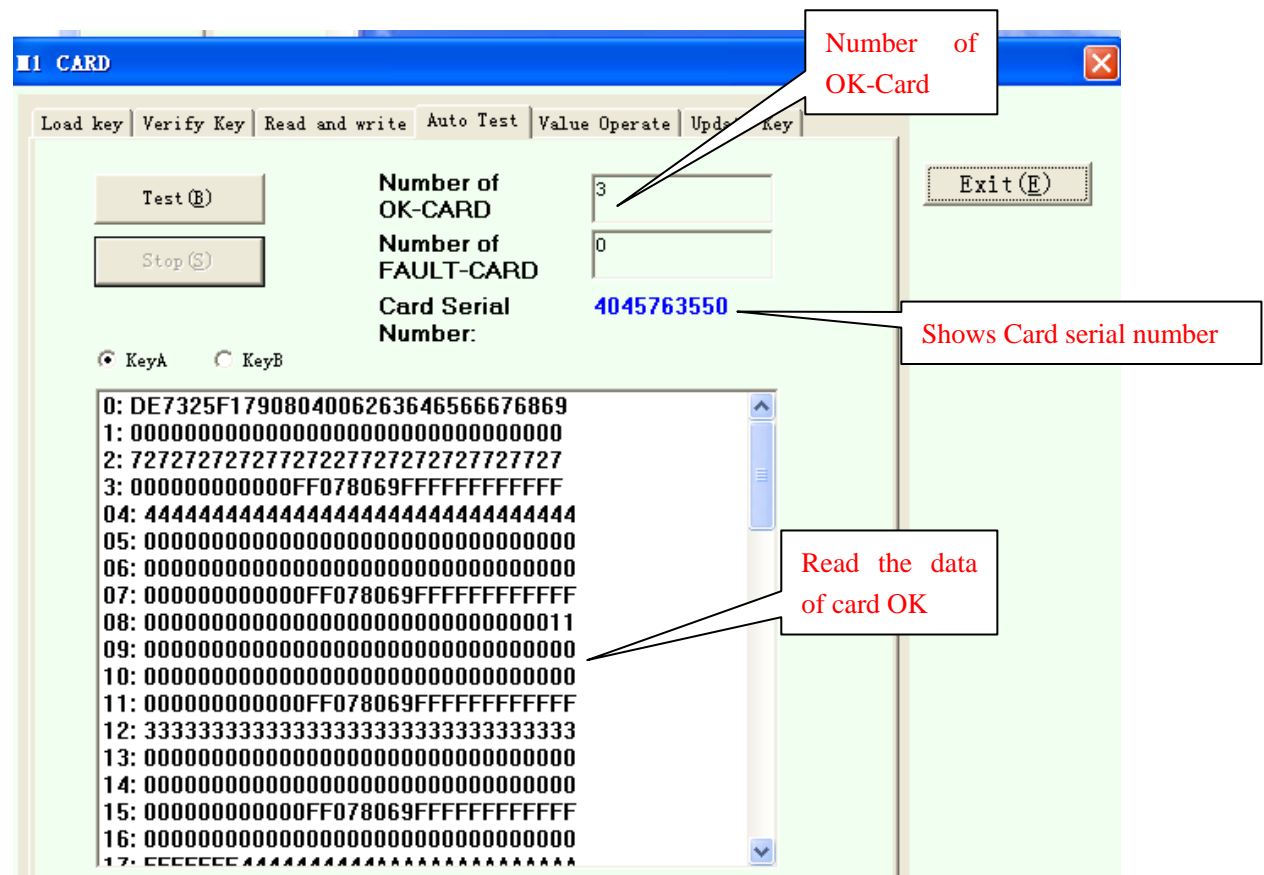
Take “M1 card” for example:

To “load key” first, then do the reading writing of card, you can find the picture below:

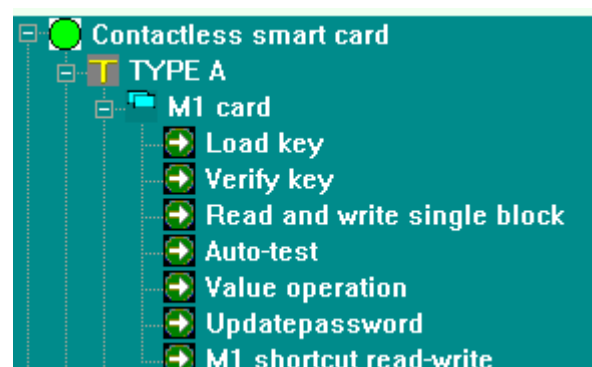


1<sup>st</sup> step: click “Load key”

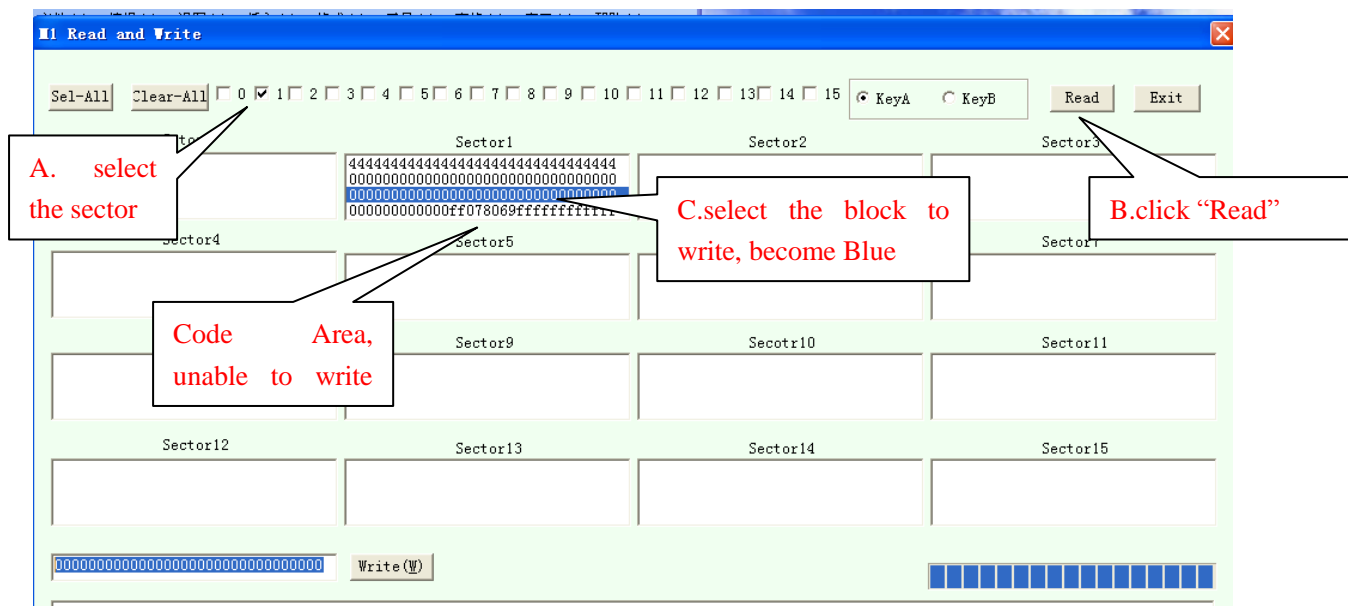
2<sup>nd</sup>, make the device read card automatically: click “Auto test” → “Test(B)”, then you find:



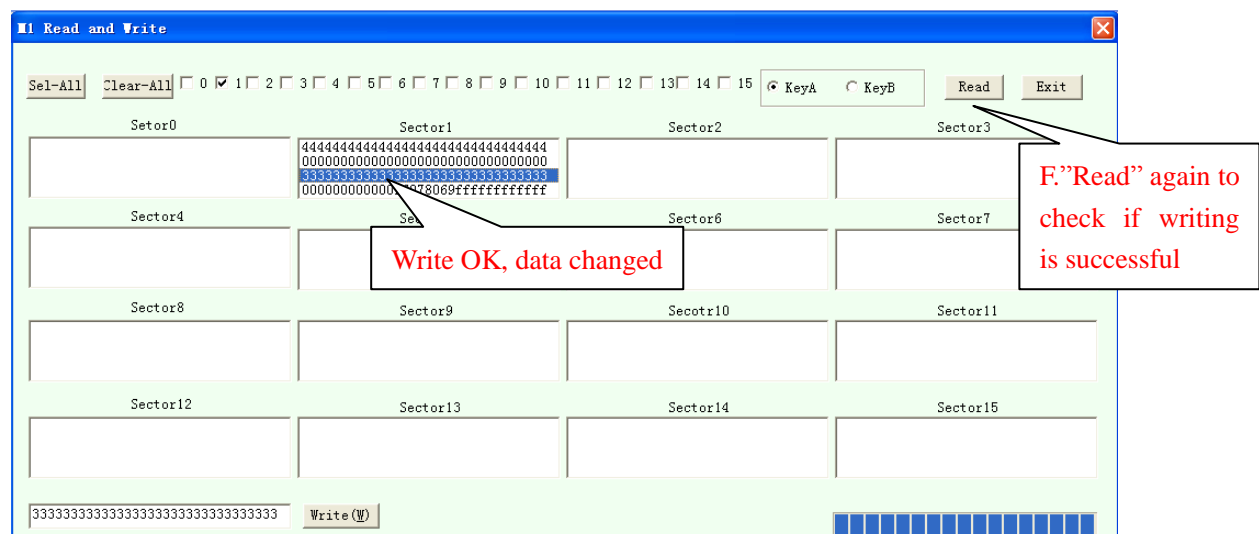
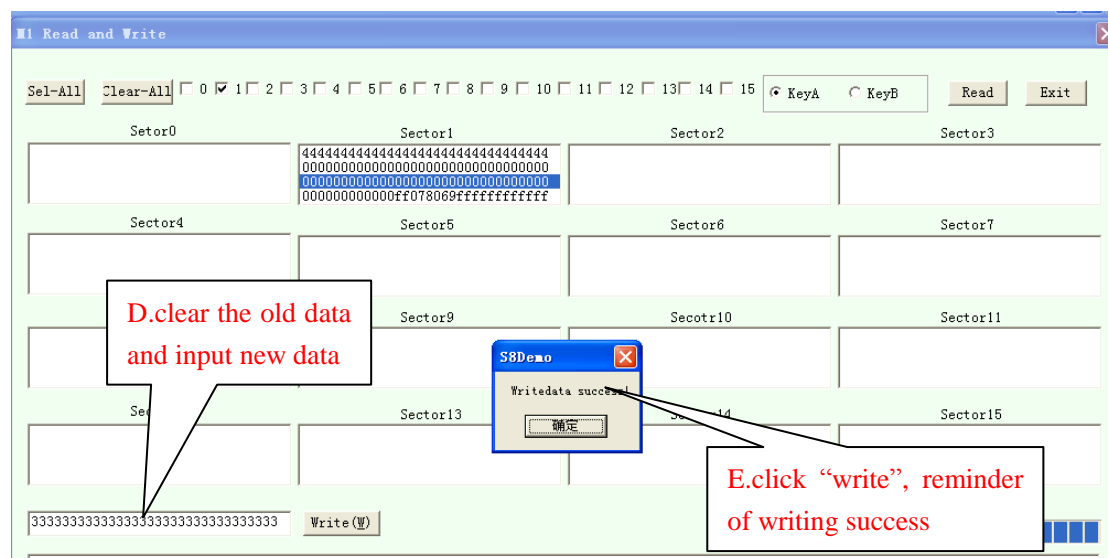
3<sup>rd</sup>, read and write the 16 sectors. Double click “M1shortcut Read-write”,



then you find:



### Reading and Writing show:





### 3.1.2. Ultralight card operation

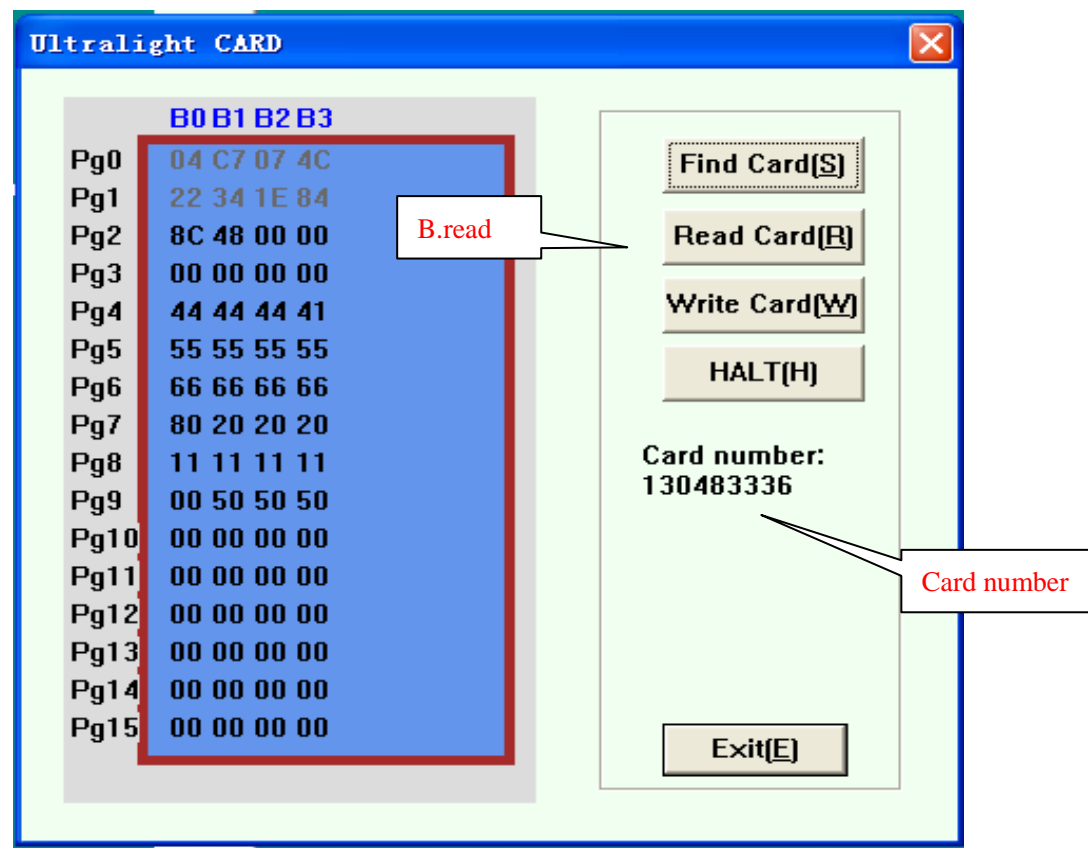
Follow the same steps as S50 to select the card type first.

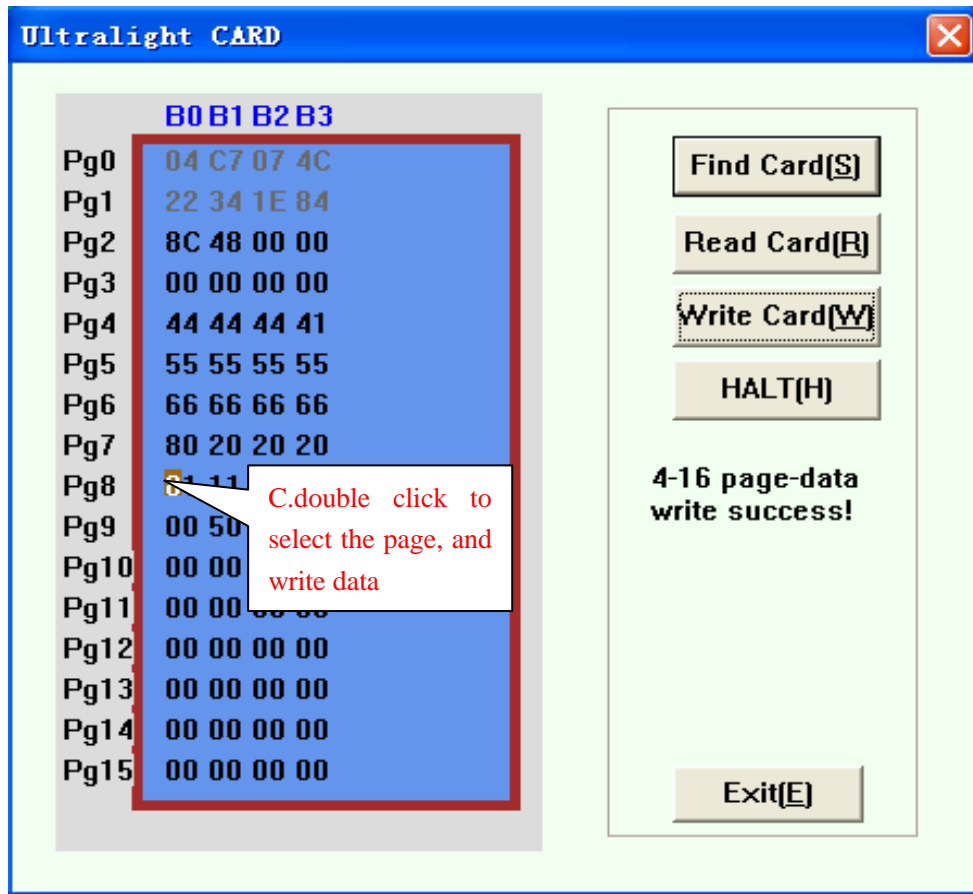
Then double click “Ultralight” and find the picture:

A. click “Find card”, read the card number

B. click “Read card” to read the data.

C. write card: double click to select one page (the color will change), then write data, and click “Write card” to finish writing.



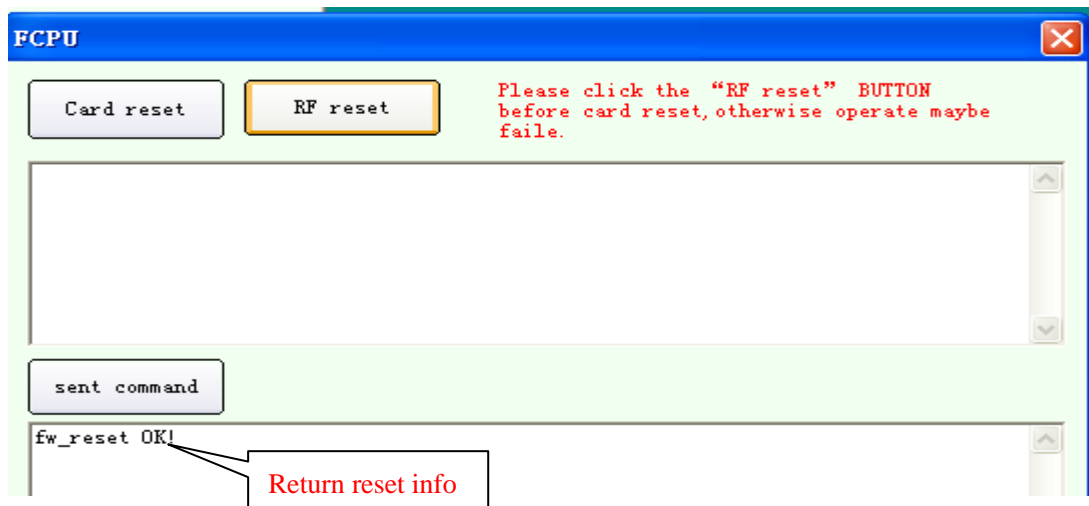


### 3.1.3. Mifare Pro card

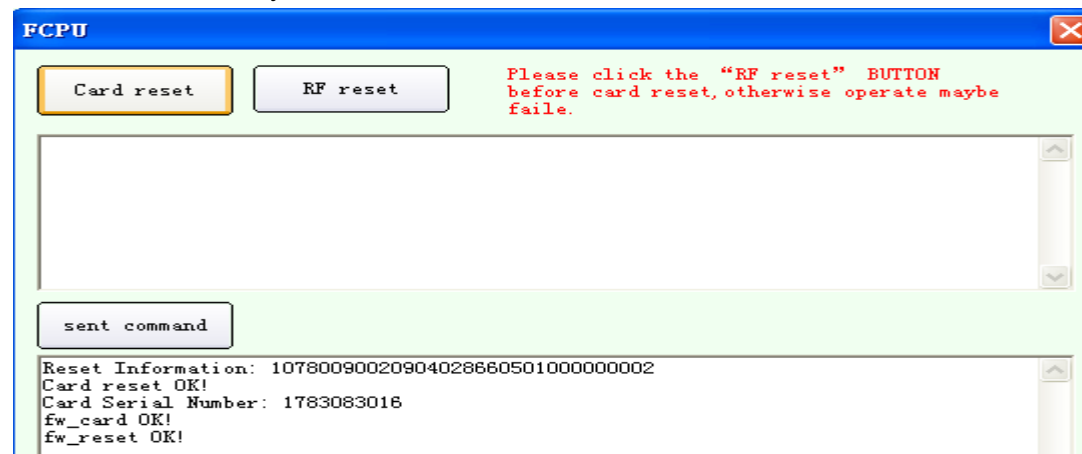
No information for the moment.

### 3.1.4. Contactless CPU card

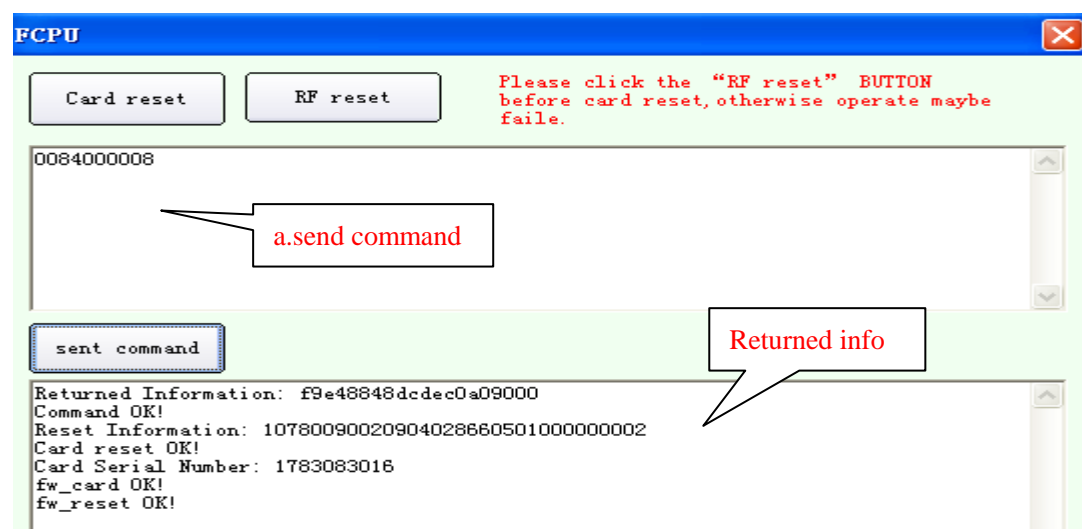
- put the card within the antenna area. Double click to choose "contactless CPU card"
- click "RF Reset", you can find:



C. click “card reset”, you can find:

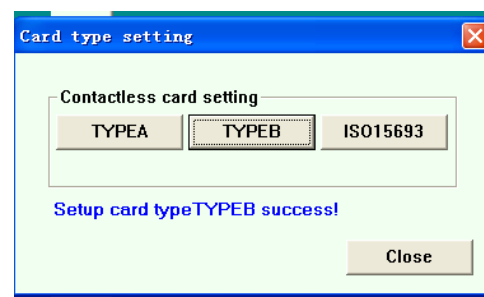
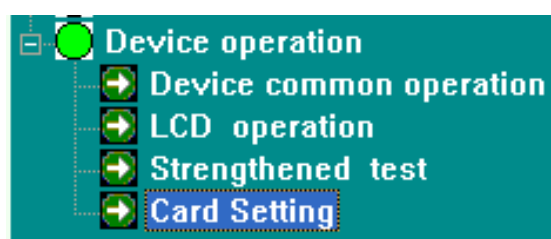


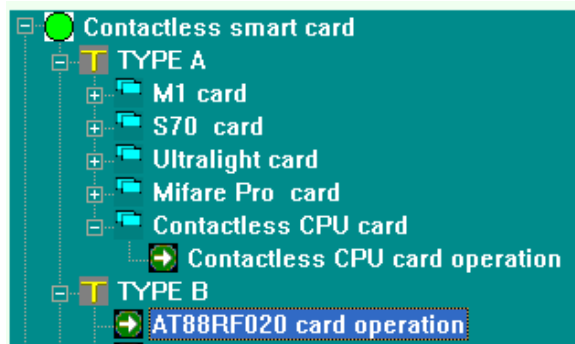
D. send command, and find return value



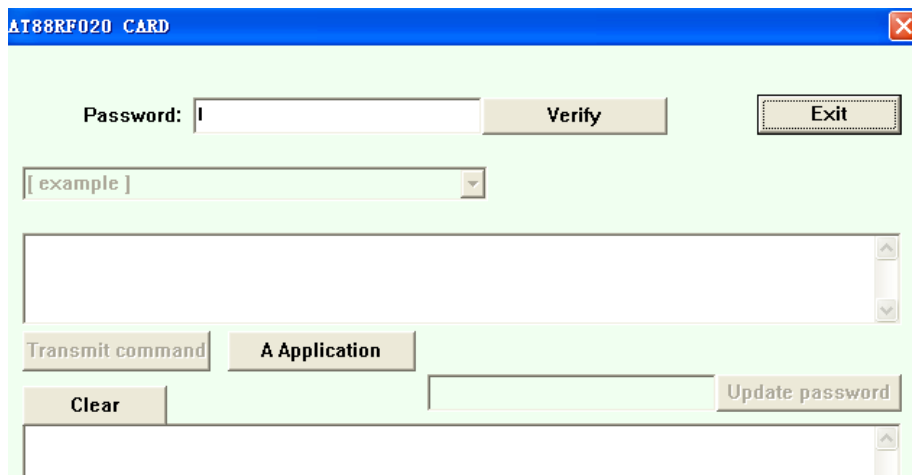
### 3.1.5. At88rf020 card operation

First, select the “Card Setting” –“TYPEB” --- “At88rf020 card operation”

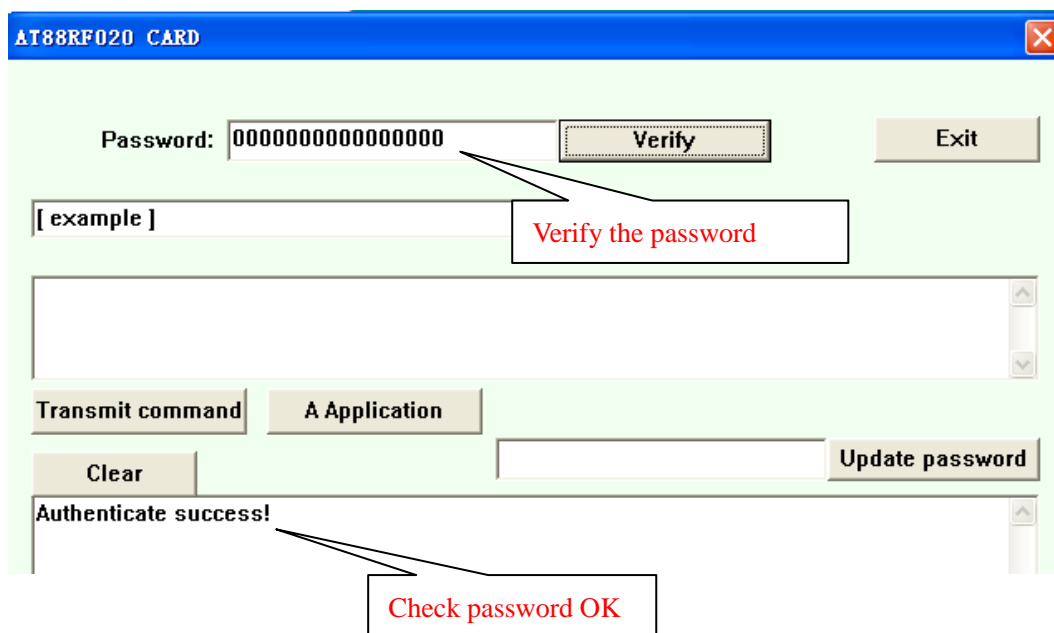




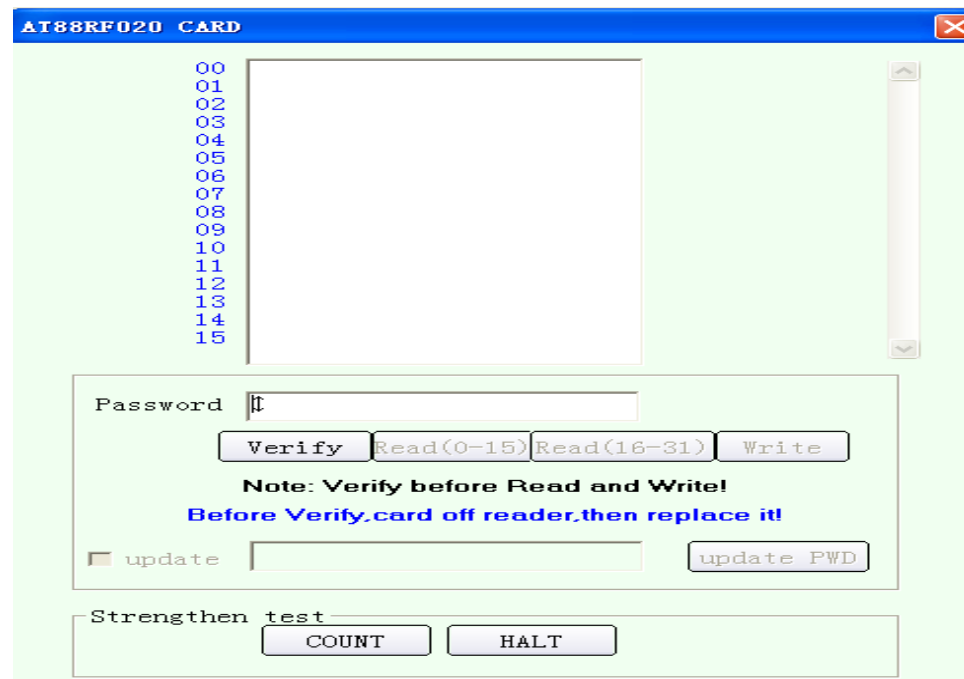
Then you find the pic below:



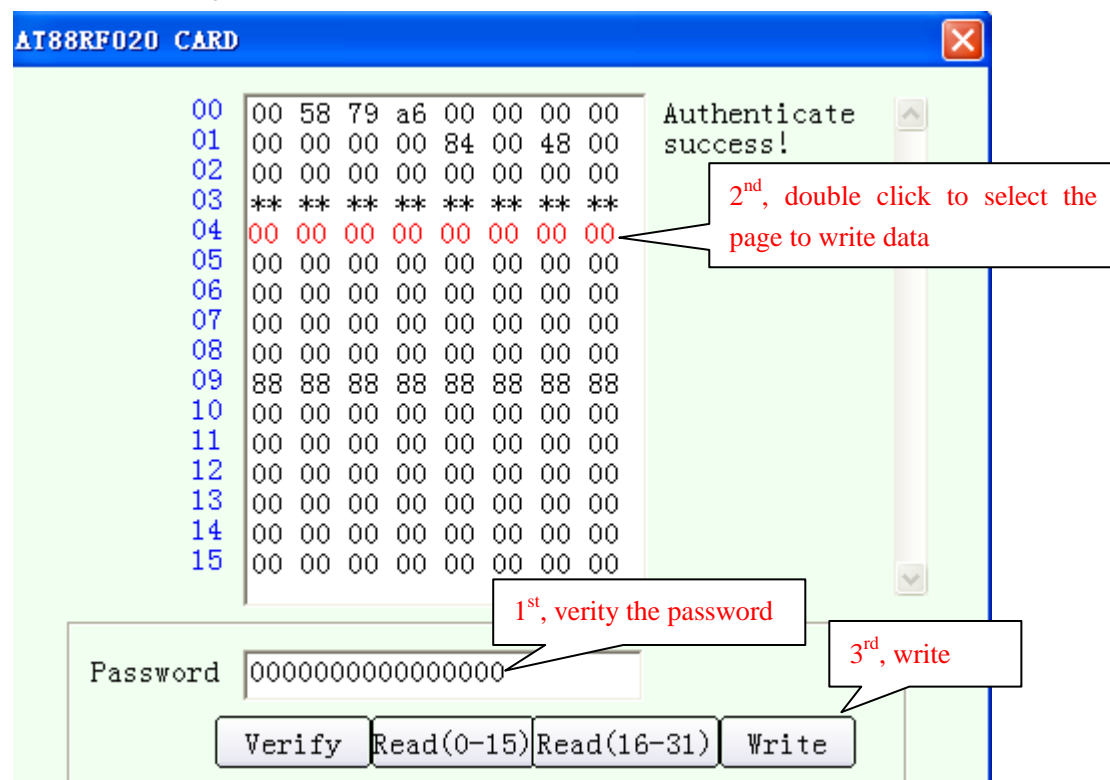
A. First verify the password, the password of Application should be the same with the card's, that is 16 ZEROS.

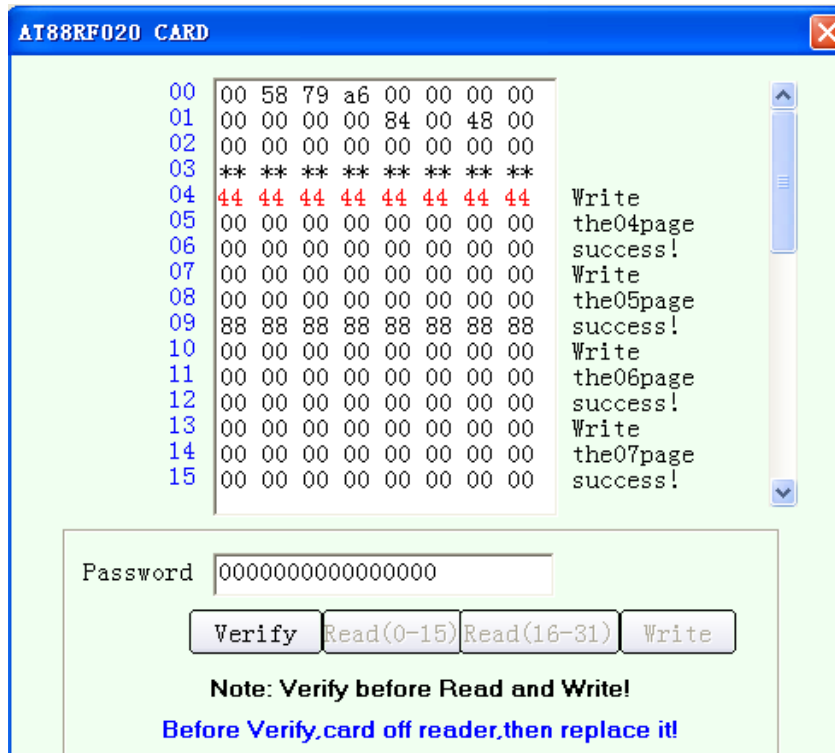
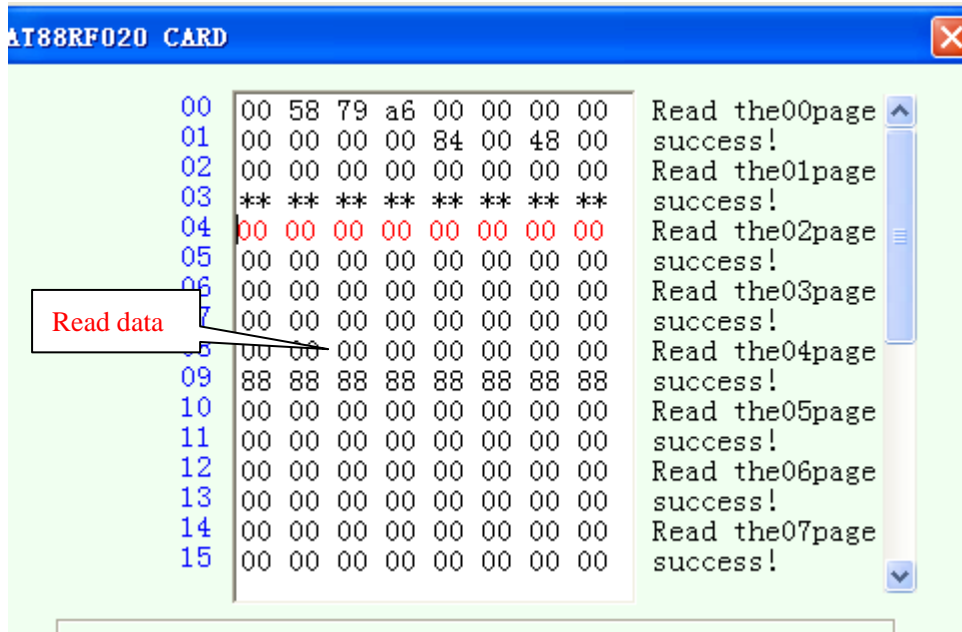


B. Take the Operation of “Application” for example, shown as below:



C. select the pages to read, see picture below:

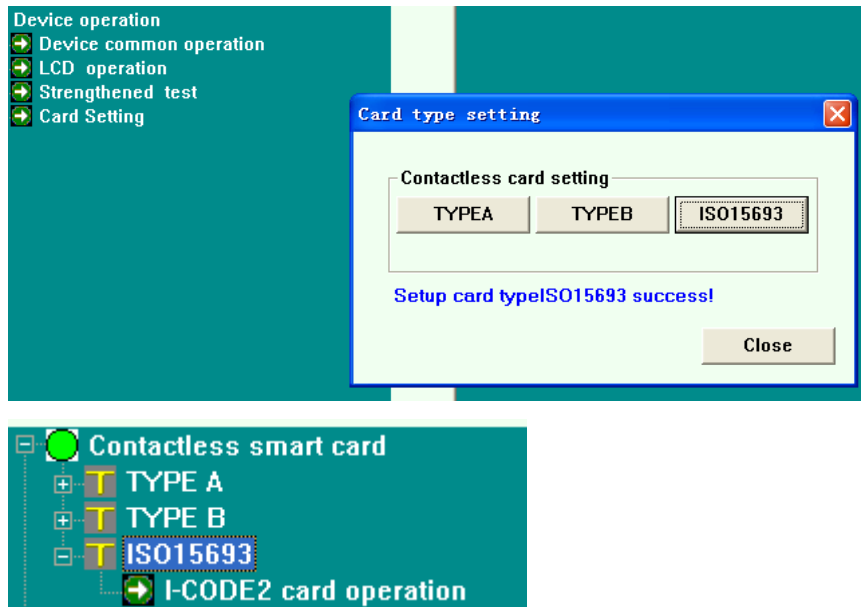




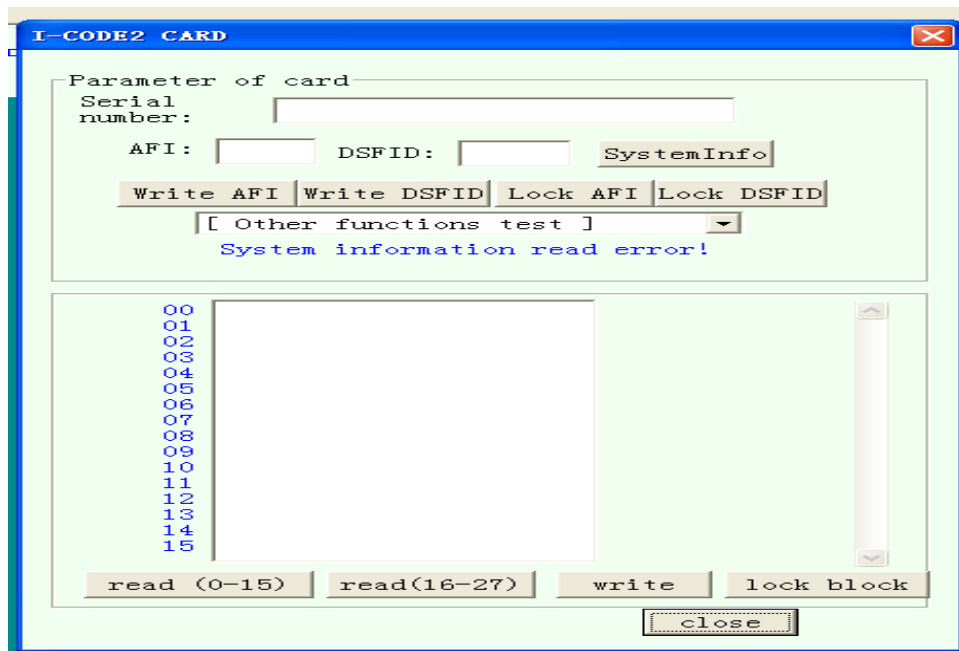
D. Each time you do the reading or writing, need to check the password before operation.  
(Take away the card from Antenna and then for another authentication)

### 3.1.6. I-CODE2 card operation

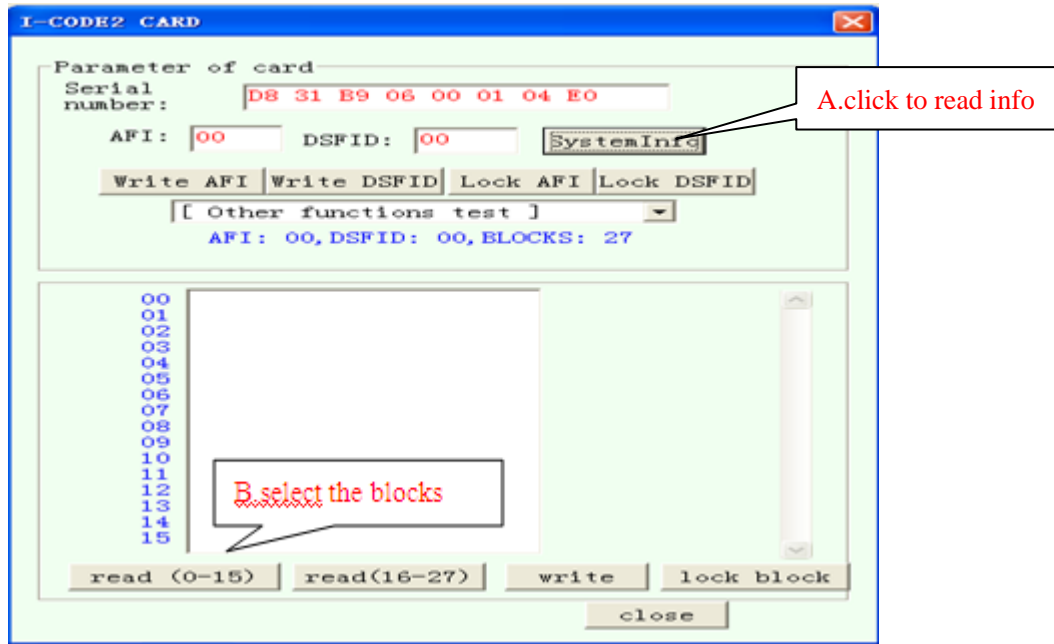
First select the “card setting”, then double click “I-CODE2 card operation”, see the pic:



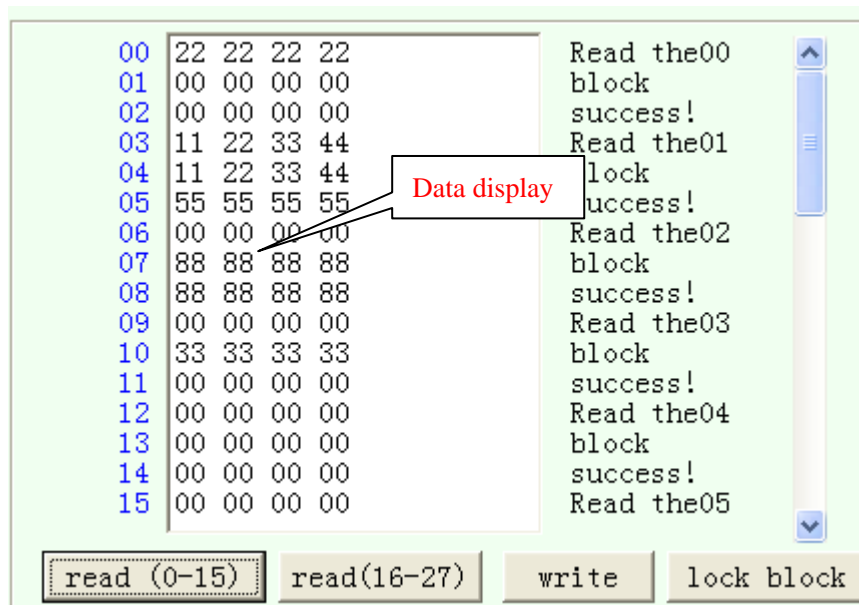
Then you can find this:



A. Read card: click “**SystemInfo**”, see below pic:

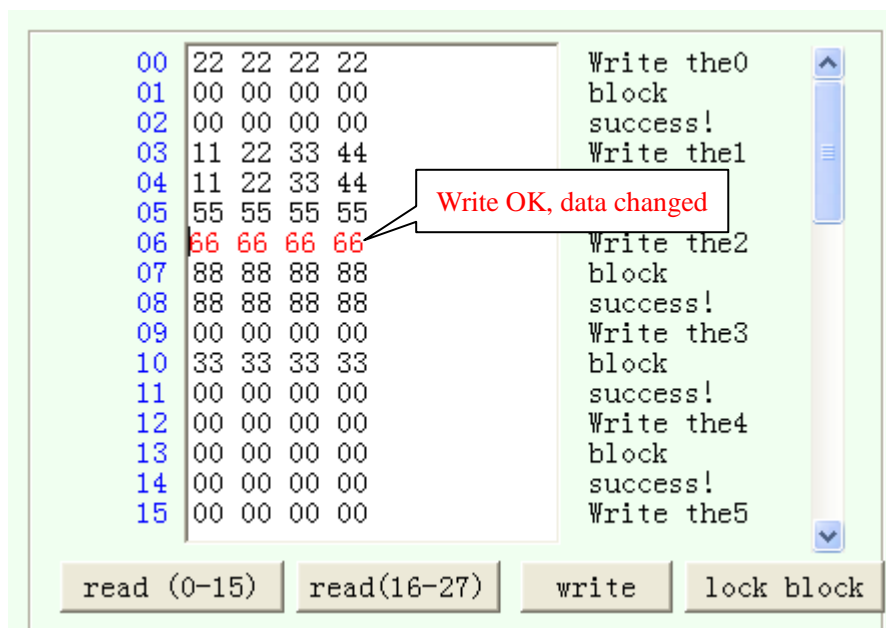
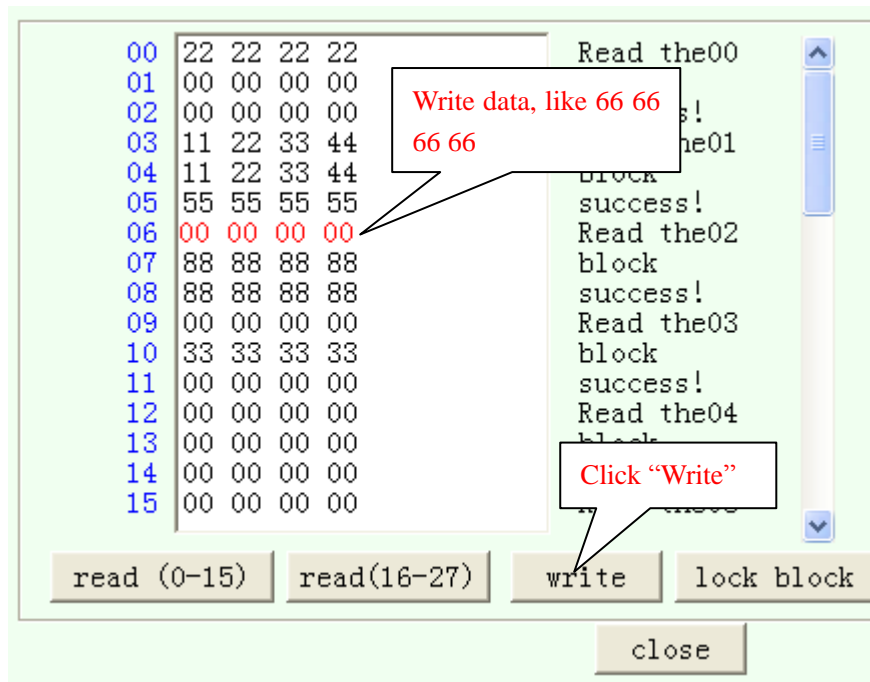


B. Click "Read (0-15)" to read data, see pic below:



C. Write cad: double click to select the block, turn red, then write. See pic:





D. Read again to check if the writing is completed

## 3.2. Contact smart card operation

### 3.2.1. CPU Card operation

Double click “Contact smart card” → “CPU card”→ “CPU card operation”, you can find:

CPU card operation

☒ SAM1 ☐ SAM2 ☐ SAM3 ☐ CPU

Card Reset(R) setup parameter Protocol: 0 time-para 92

reset info:

Send(S)

data of command

returned:

power down(D) Exit(E)

A. Select card and slot, as the above picture shows.

B. Card reset: click “**Card Reset(R)**” to find the reset information. See below picture:

CPU card operation

☐ SAM1 ☐ SAM2 ☐ SAM3 ☒ CPU

Card Reset(R) setup parameter Protocol: 0 time-para 92

reset info: 3B600000

Send(S)

data of command

returned:

power down(D) Exit(E)

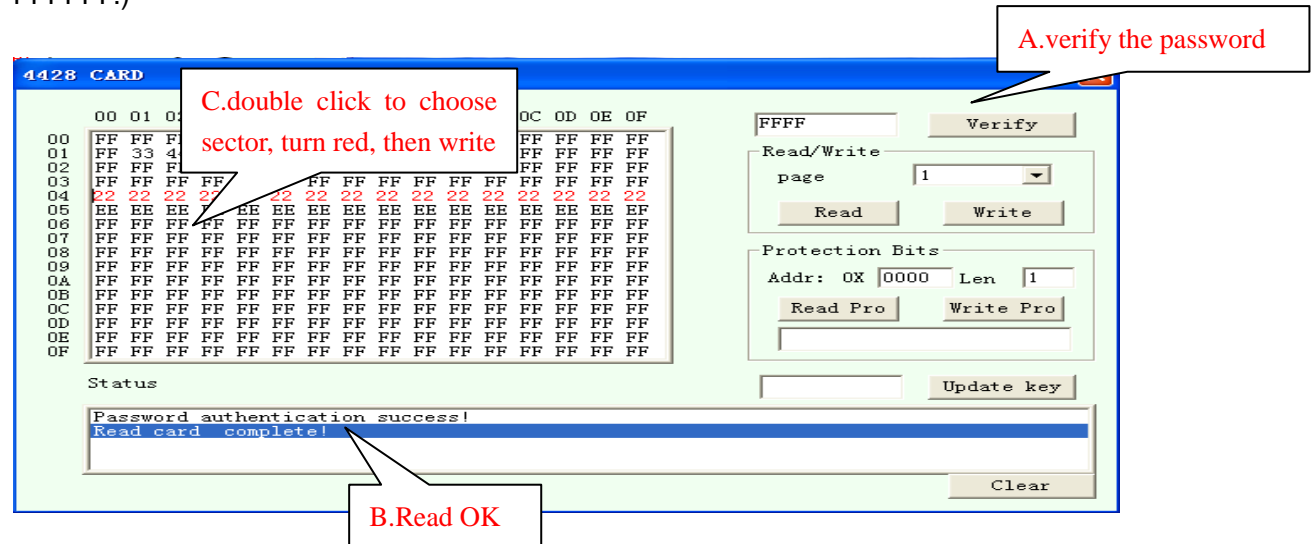
Other type of CPU cards follow the same steps, pls let the power down “power down(D)” before card operation.

### 3.2.2. 4442 card/4428 card operation

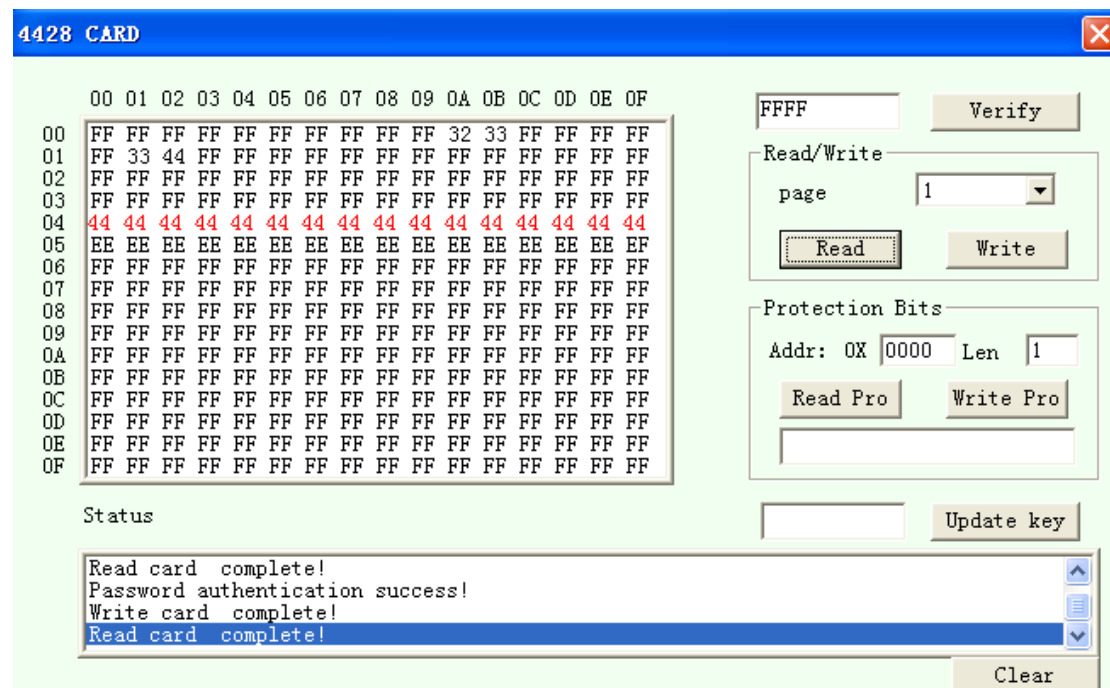
Take 4428 card for example:

Click “Contact smart card” → “4428 card” → “4428 card operation”, see the pic below:

Pls check the password before writing, the card will be blocked in case you check the wrong password for 8 times. (the original password of 4428 card is FFFF, and 4442 FFFFFFFF.)



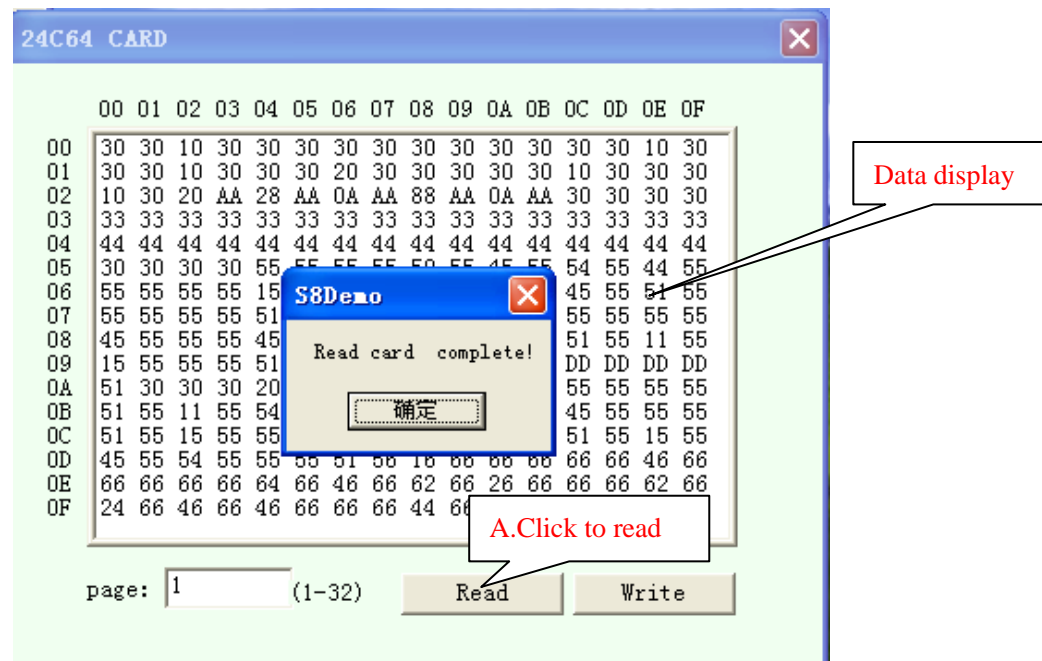
In Sector 4, after writing is completed, read again to find the data changed, see below picture:



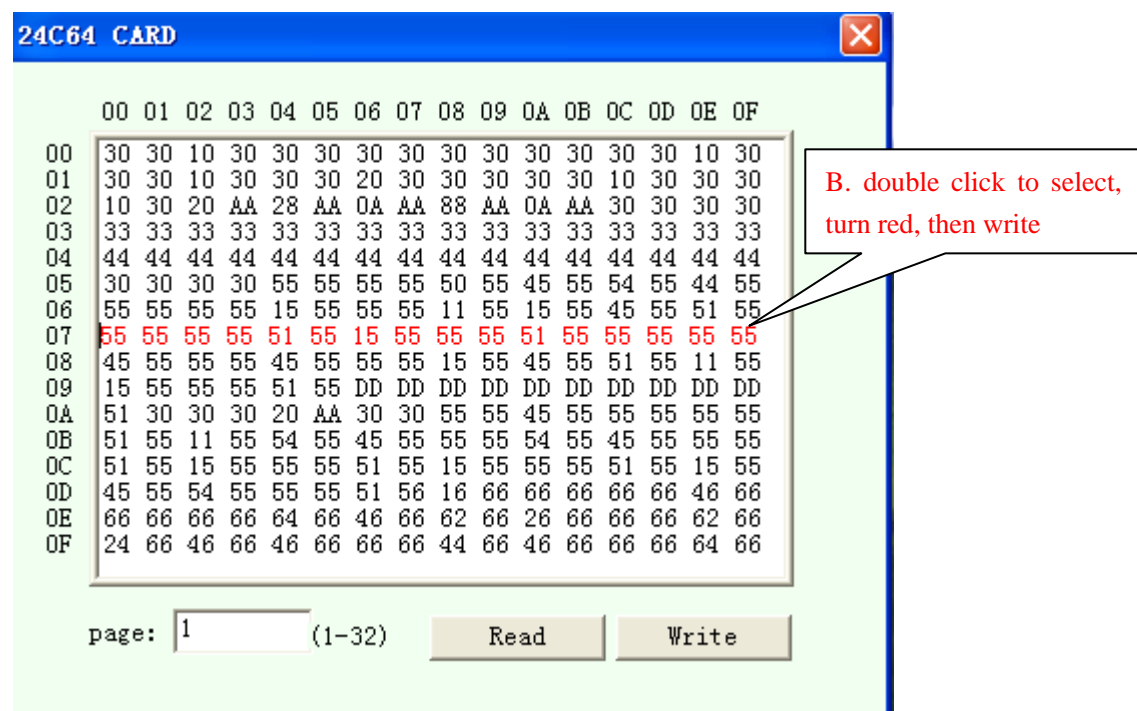
Remark: 4442 card & 4428 card follow the same steps.

### 3.2.3. 24c64 card

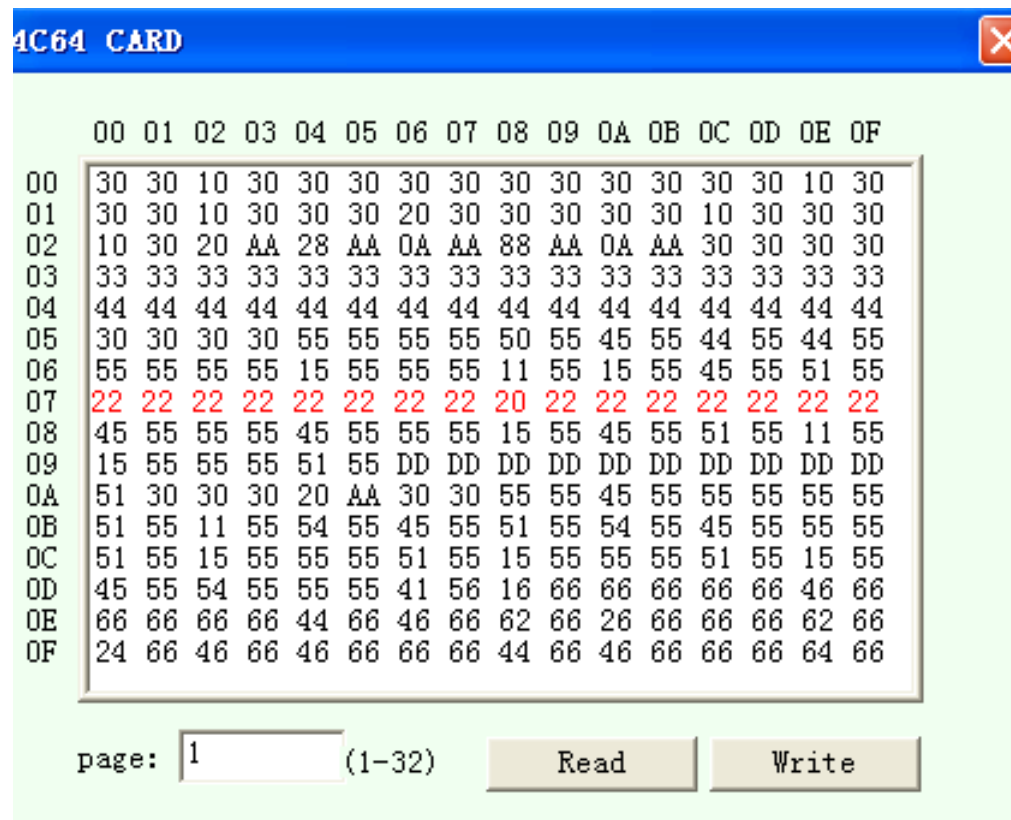
A. Click “Contact smart cad” → “24c64 card” → “24c64 card operation”



B. Write data: double click to select the sector, turn red, then write. See the picture below:



- C. Write: input data like “22 22 22 22 22 22 22 22 22 22 22 22 22 22 22 22 22 22”, click “Write”.  
See pic:



- D. Read again to check if the writing is successful.