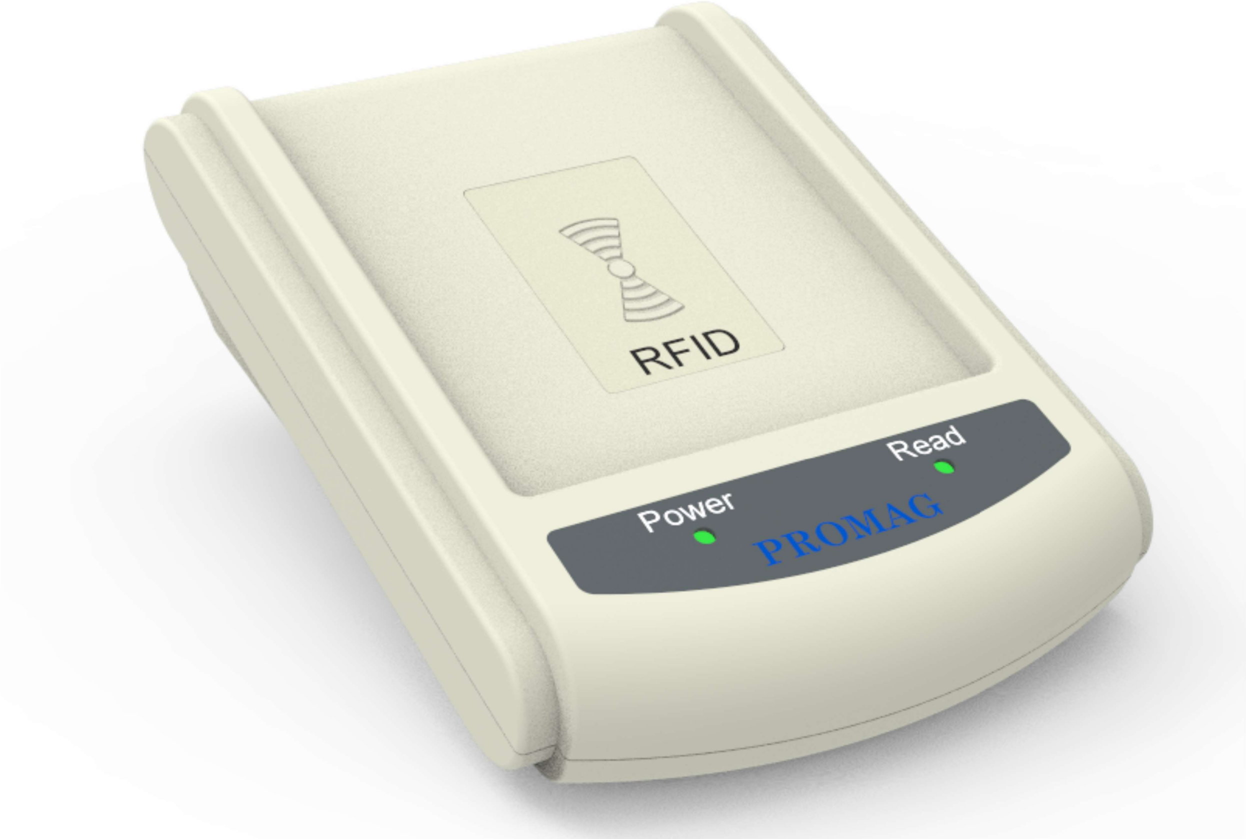
PCR340



Dual Frequency RFID Reader

Manual Part Number: TM951381 REV.A **2023/09/05**

Content

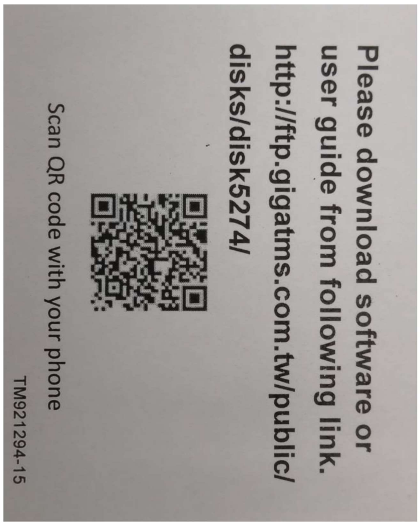
Specification

Card types	1. EM compatible 64 bits, ASK Manchester coding **2.** ISO 14443A Mifare® MF1 1K&4K / Ultralight / DESFire ***Read Only** (For Unique Serial Number / Unique Identifier)
Frequency	125KHz (65.78dBuV/m), 13.56MHz (57.79dBuV/m)
Reading distance	50 mm @ 125KHz (depends on TAG) 40 mm @ 13.56MHz (depends on TAG)
Interface	USB-HID (USB-HID Keyboard), USB-CDC (Communication Device Class)
Power requirement	DC 5V / 200mA、Standby: 50mA
Certificate	CE、FCC
Dimension	120(L) x 86(W) x 42(H) mm
Weight	170g
Operating temperature	0 to 50 degree C
Storage temperature	-10 to 60 degree C
Humidity	10 ~ 90%

Accessories

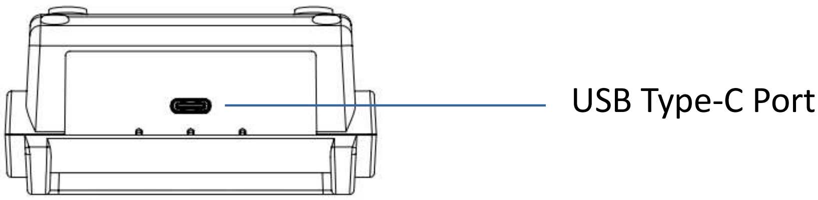
Main Unit
(PCR340)

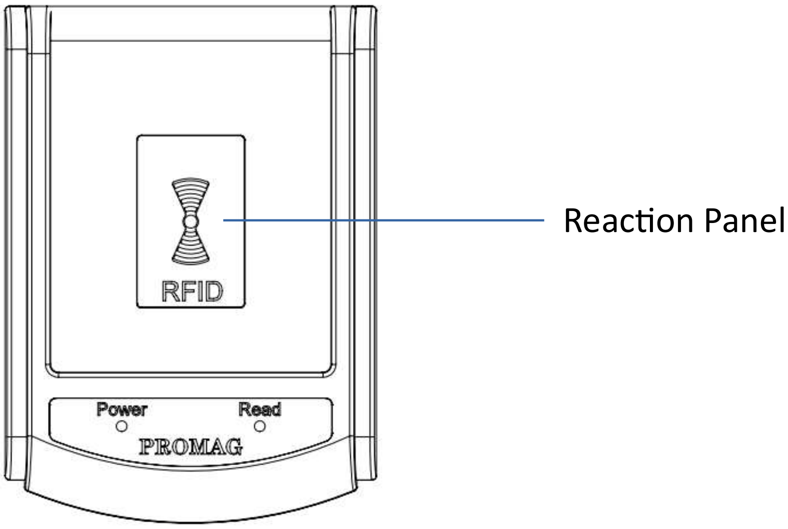
USB Cable
USB-A to USB-C
(WAS-T1214)


Please download software or user guide from following link.
http://ftp.gigatms.com.tw/public/disks/disk5274/
Scan QR code with your phone
TM921294-15

FTP Link Paper
Configuration Software
(DISK5274)

Getting Started





Power / Signal port
The power is from USB connection.

Reaction panel
Put the card on reaction panel to read the card information.

Status LED

Status	Power LED	Read LED	Read Card	Buzzer Sound
Power on	Blink twice	Off	X	Blink twice
Ready	On	Off	O	X
Read ok	On	Blink Once (Green)	X	Blink Once
Firmware Management mode	Off	On (Red)	X	X

Important Instructions

1. **To reach the ideal performance, please keep PCR340 away from the other RFID readers at about 50 cm while PCR340 is under the operation to avoid the interference.**

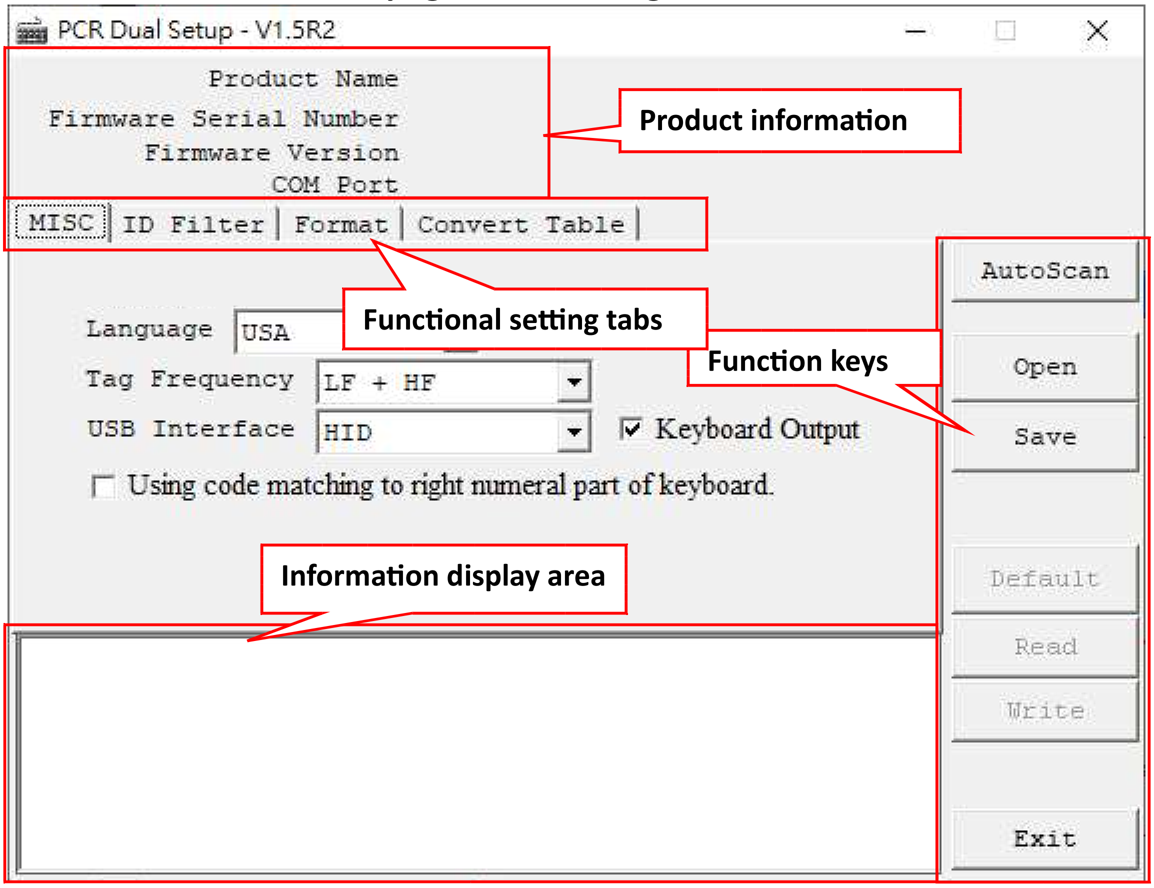
2. **Once continuous card reading is completed, wait for a while until Read LED goes off to access the next card reading.**

3. **Before starting your computer, do not put RFID card on the reaction panel to avoid the error.**

Configuring PCR340 with the Configuration Software

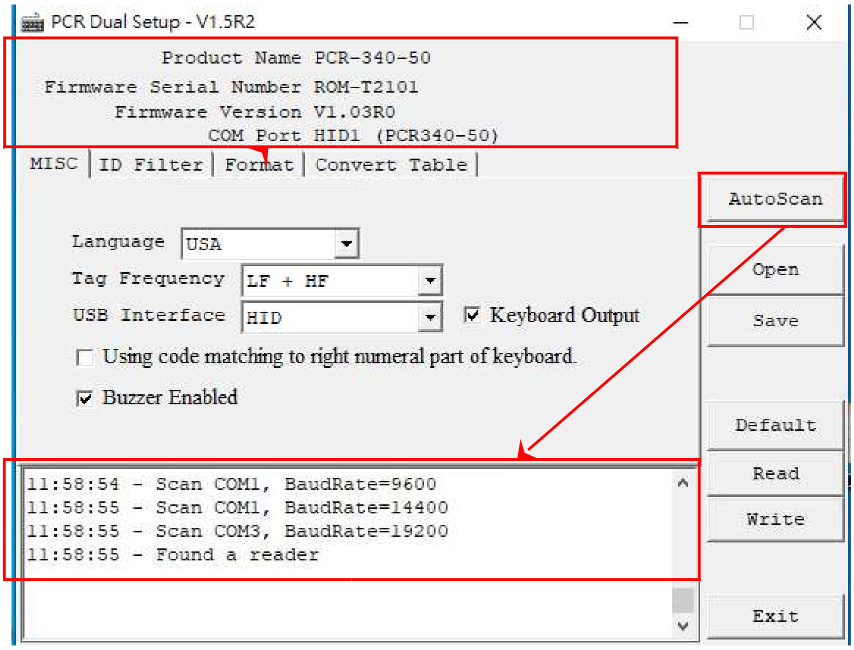
The configuration software (PCR Dual Setup) is in FTP LINK Disk5274. Install the software and USB driver first. Connect PCR340 with your computer through USB port and then run the software.

The main page of the configuration software



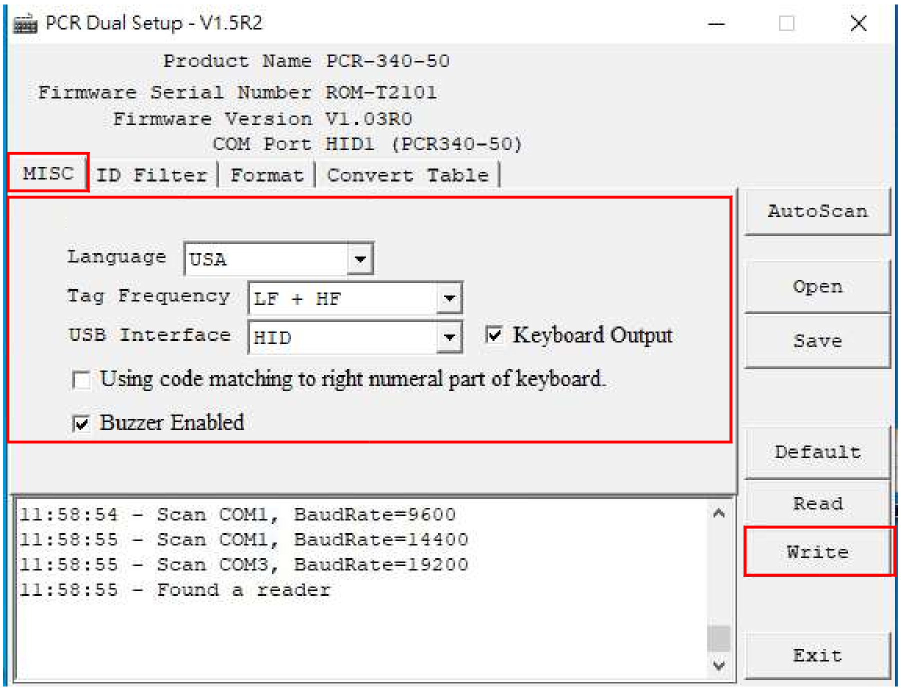
Step 1. Auto Scan

Click [AutoScan] to connect PCR340-50 with your computer. If the connection is successful, it will show "Found a reader" message and the product information as below.



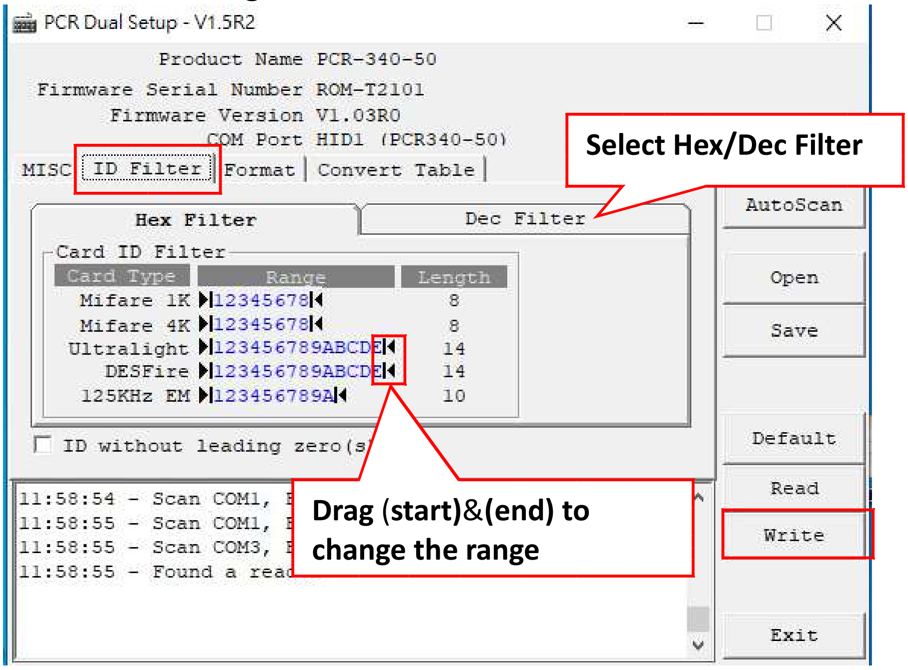
Step 2. MISC

Click [MISC]. Set [Language] (Keyboard type), [Tag Frequency], [USB Interface], [Using code matching to right numeral part of keyboard] and [Buzzer Enabled] if necessary. Then click [Write] to save the settings to PCR340-50.



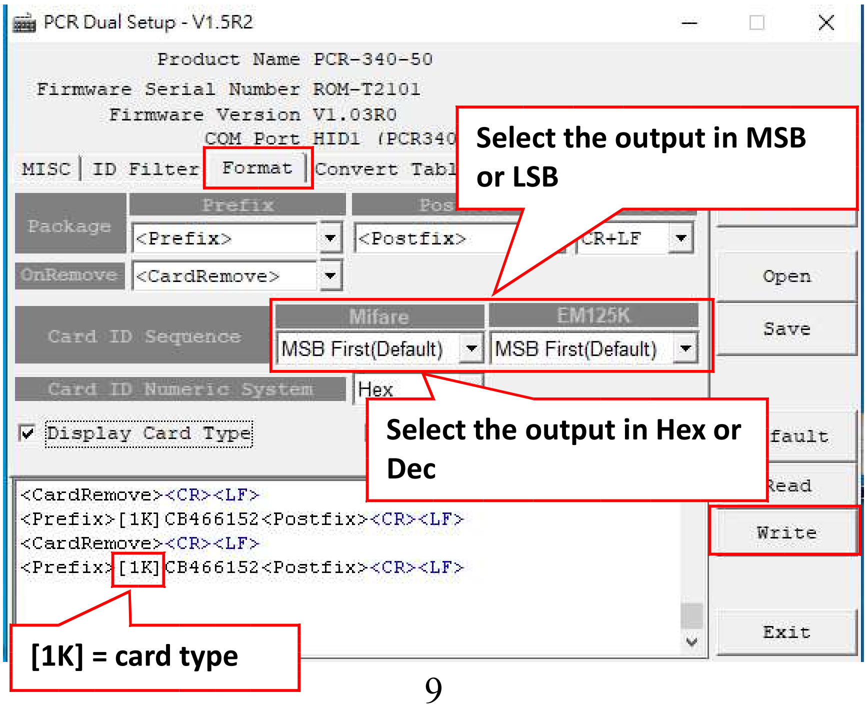
Step 3. ID Filter

Click [ID Filter] to set the card format of data output that you want PCR340-50 to send. Select the [Card Type] and set [Range] and [Length] of data information. Then click [Write] to save the settings to PCR340-50.



Step 4. Format

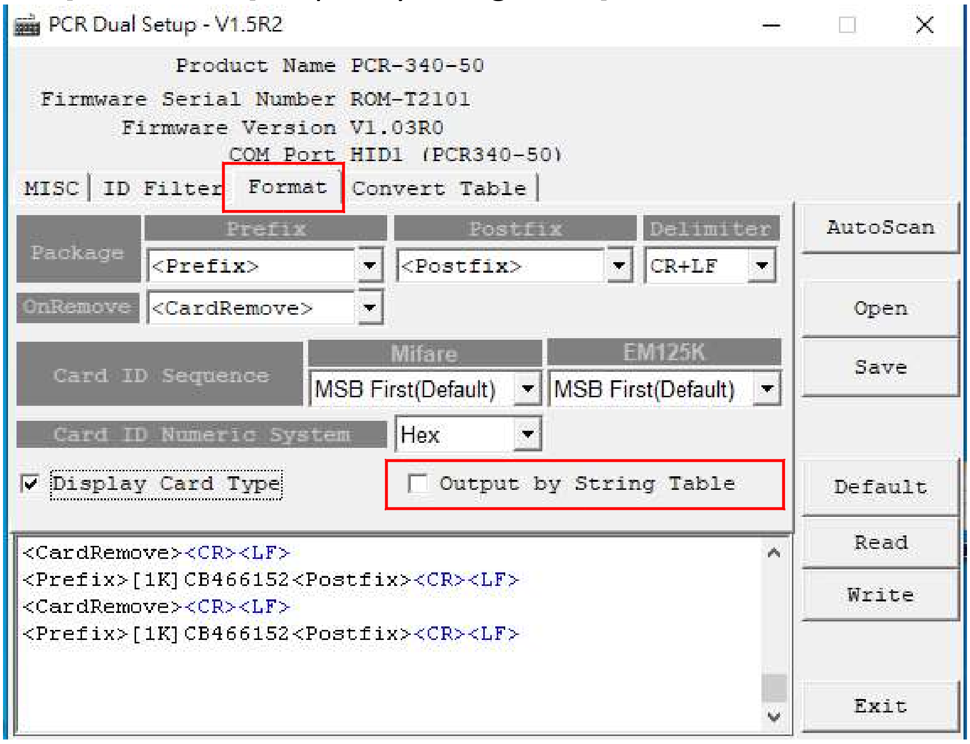
Click [Format]. Set [Prefix] code, [Postfix] code, [OnRemove] message and [Delimiter] if necessary. If you want PCR340-50 to send the card type when the card is read, check [Display Card Type] checkbox. Then click [Write] to save the settings to PCR340-50.



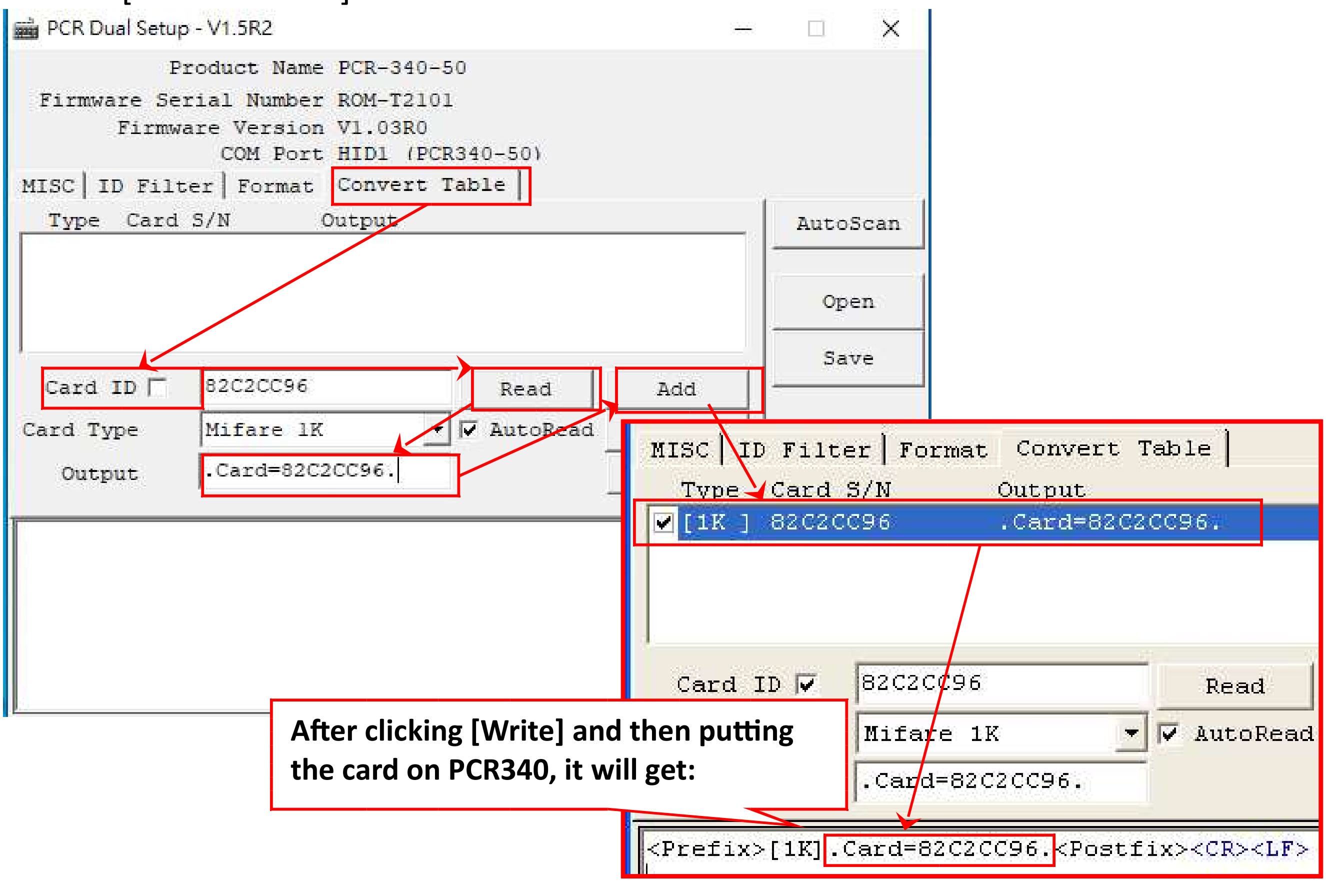
Step 5. Convert Table

If you want PCR340-50 to show alphabetical string instead of card number, click [Convert Table] to edit the message you like by the following procedures.

1. Click [Format] and check [Output by String Table] checkbox.



2. Click [Convert Table] and add a card to the table.



- **Card ID**: If [Card ID] checkbox is checked, it indicates the card number will be converted to the string you set. If [Card ID] checkbox is unchecked, it indicates the card number will not be converted.

- **Read**: When you put a card on PCR340-50, the card number and card type will be shown in the boxes if you click [Read].

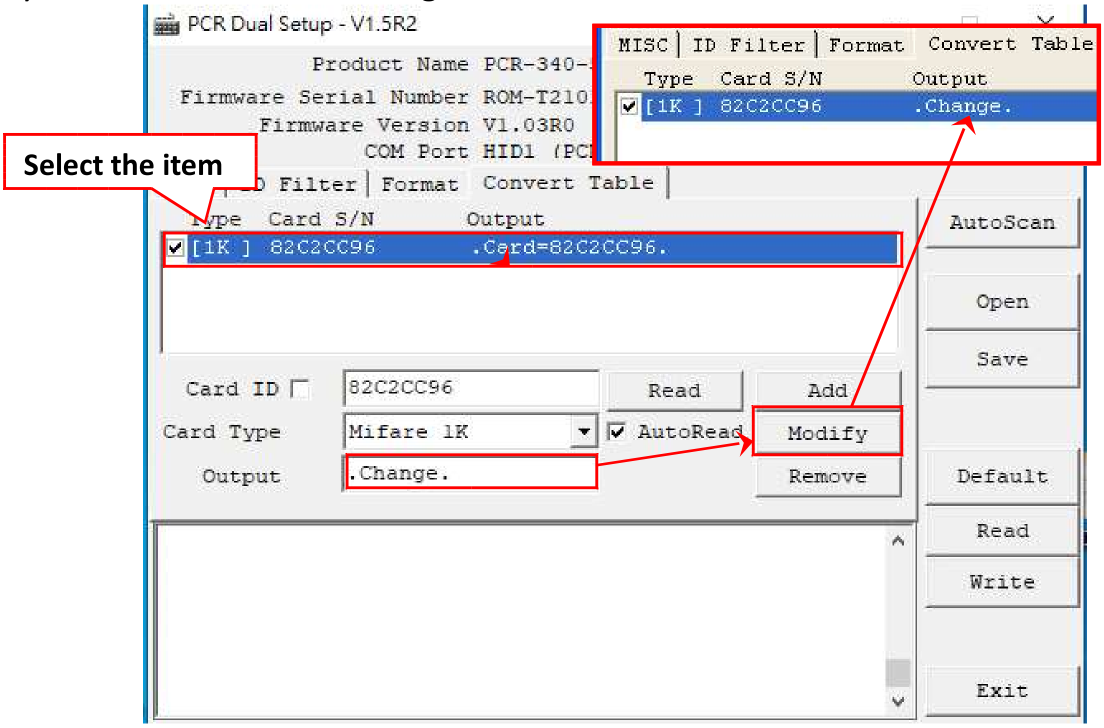
- **AutoRead**: If [AutoRead] checkbox is checked, when you put a card on PCR340-50, the card number and card type will be shown in the boxes automatically.

- You can enter the card number and select [Card Type] manually without putting the card on PCR340-50.

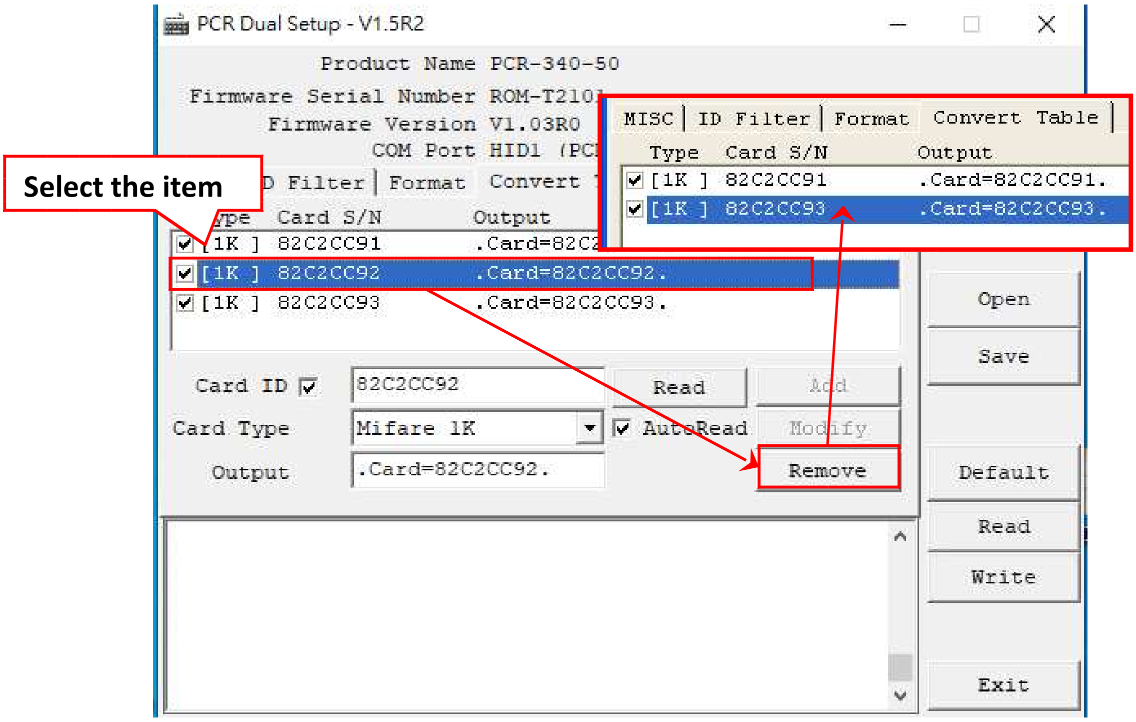
- **Output**: Enter the string you want the card number to be converted in [Output] box.

- **Add**: Click [Add] to add the setting for the card number to the table.

3. Select the item you want to edit and change the setting and then click [Modify] if you want to edit the setting.

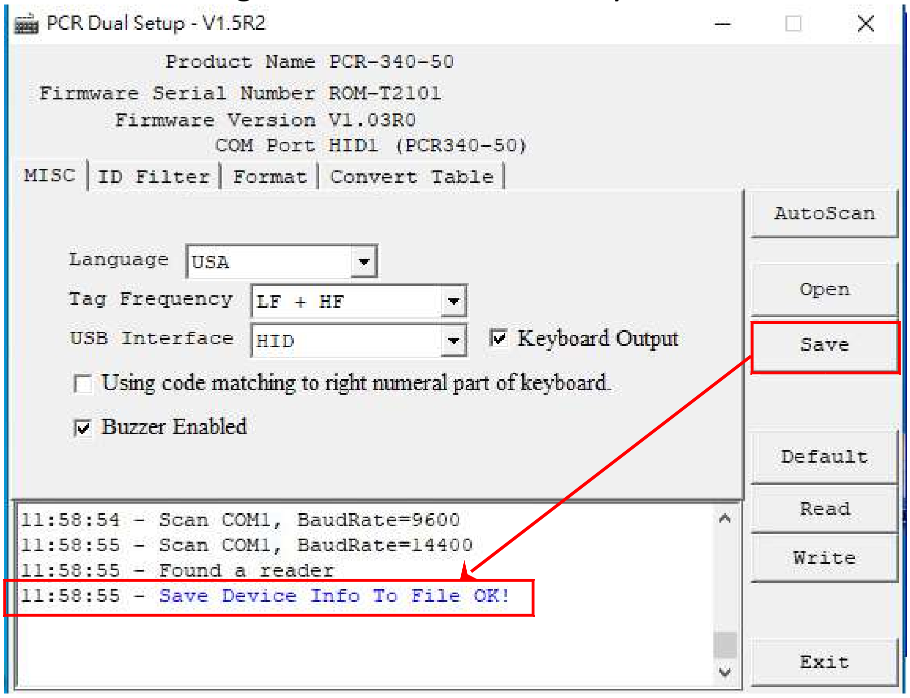


4. Select the item you want to delete from the table and then click [Remove] if you want to remove it.



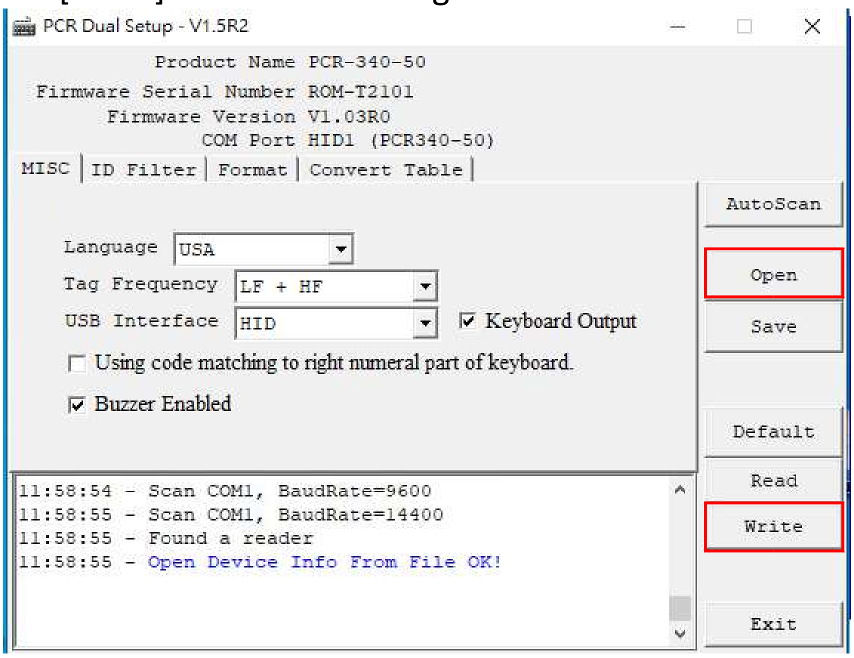
Step 6. Save

Click [Save] to save all settings as a txt file if necessary.



Step 7. Open

If you want to load the settings form the file to PCR340-50, click [Open] to open the file and then click [Write] to load the settings to PCR340-50.



Step 8. Read

Click [Read] if you want to know the current settings of PCR340. The settings will be gotten and shown in the software window.

Step 9. Default

Click [Default] to reset PCR340 if necessary. The followings are the default values.

<table>
<tr><th colspan="5">Default Values</th></tr>
<tr><td>Item</td><td colspan="4">Description</td></tr>
<tr><td>Language</td><td colspan="4">USA</td></tr>
<tr><td>Tag Frequency</td><td colspan="4">LF + HF</td></tr>
<tr><td>USB Interface</td><td colspan="4">HID</td></tr>
<tr><td>Keyboard Output</td><td colspan="4">Enable</td></tr>
<tr><td>Using code matching to right numeral part of keyboard</td><td colspan="4">Disable</td></tr>
<tr><td>Buzzer Enable</td><td colspan="4">Enable</td></tr>
<tr><td>Prefix</td><td colspan="4">Empty</td></tr>
<tr><td>Postfix</td><td colspan="4">Empty</td></tr>
<tr><td>OnRemove</td><td colspan="4">Empty</td></tr>
<tr><td>Delimiter</td><td colspan="4">CR+LF</td></tr>
<tr><td>Display Card Type</td><td colspan="4">Disable</td></tr>
<tr><td>Output by String Table</td><td colspan="4">Disable</td></tr>
<tr><td rowspan="11">Card ID Filter</td><td>Card Type</td><td>Numeric System</td><td>From Character</td><td>Number of Characters</td></tr>
<tr><td rowspan="2">Mifare 1K</td><td>HEX</td><td>1</td><td>8</td></tr>
<tr><td>DEC</td><td>1</td><td>10</td></tr>
<tr><td rowspan="2">Mifare 4K</td><td>HEX</td><td>1</td><td>8</td></tr>
<tr><td>DEC</td><td>1</td><td>10</td></tr>
<tr><td rowspan="2">UltraLight</td><td>HEX</td><td>1</td><td>14</td></tr>
<tr><td>DEC</td><td>1</td><td>18</td></tr>
<tr><td rowspan="2">DesFire</td><td>HEX</td><td>1</td><td>14</td></tr>
<tr><td>DEC</td><td>1</td><td>18</td></tr>
<tr><td rowspan="2">125KHz EM</td><td>HEX</td><td>1</td><td>10</td></tr>
<tr><td>DEC</td><td>1</td><td>14</td></tr>
</table>

Command and Packet Format

Packet format

PC → PCR340

STX	CMD	CONTENTS	CHECKSUM	CR
1 character	1 character	3 character	1 character	1 character

PC ← PCR340

STX	REPLY	CONTENTS	CHECKSUM	CR
1 character	1 character	3 character	1 character	1 character

Functional command

ITEM	Dec	Hex	Function
STX	2	02	Start for test
CMD	ASCII	ASCII	Command code
CONTENTS	ASCII	ASCII	Contents data
CHECKSUM	ASCII	ASCII	Check sum
REPLY	65	41	Acknowledge
CR	13	0D	Carriage return

Instruction command

Command	ASCII	Description
C	43H	Set Register
B	42H	Get Register
V	56H	Get Firmware Version
D	44H	Get Product Name
X	58H	ISP Mode
Y	59H	Show Memory Data

Ack command

Command	ASCII	Contents	Description
A	41H	Reply information	ACK + Information
N	4EH	ERROR Index Table	NCK + Information

Error index

Topic	Error index	Description
Access LEVEL	00	Access Denied or Password Error
COMMAND CODE	01	Command packet is too long
	02	Command packet is empty
	03	Command code is out of range
	04	Illegal Command or Data
DATABASE	05	Database and Register is Empty
	06	Record number is out of range
	07	Check Sum Error
	08	Memory Not Enough
	09	Action Failure
FILE	0A	File Not Exist

Command notation

Write to register (‘C’，43H)

PC→PCR340	STX +’ C ’ + Register address +’ ，’ + Write parameter + CHECKSUM + CR
PC←PCR340	STX + ACK + CR

For Instance:

PC→PCR340	02 + C + 00 + ，+ FF + 5B + 0D
PC←PCR340	02 + A + 0D

Read from register (‘B’，42H)

PC→PCR340	STX + ‘ B ‘ + Register address + CR
PC←PCR340	STX + ACK + Read parameter + Checksum +CR

For Instance:

PC→PCR340	02 +’ B ‘+ 00 + 0D
PC←PCR340	02 + A + FF + CD + 0D

Get F/W version (‘V’，56H)

PC→PCR340	STX +‘ V ‘+ CR
PC←PCR340	STX + ACK + Firmware number + Firmware version + CR

Firmware number: ROM-Txxxx
Firmware version: Vx.xxrm ，Vx.xx: Firmware version rm: Modification frequency

For Instance:

PC→PCR340	02 +‘ V ’+ 0D
PC←PCR340	02 + A + ROM-T2101+ V1.03R2 + 0D

Get Product name (‘D’，56H)

PC→PCR340	STX +‘ D ’+ CR
PC←PCR340	STX + ACK + Product name + Keyboard language + CR

Product: PCR-340X
Keyboard language: USA
For Instance:

PC→PCR340	02 + ‘ V ’ + 0D
PC←PCR340	02 + A + PCR-340X + ，+ USA + 0D

Control mode (‘X’, 58H)

PC→PCR340	STX + X + CR
PC←PCR340	STX + A + CR

For Instance:

PC→PCR340	02 + X + 0D
PC←PCR340	02 + A + 0D

Show memory data (‘Y’，59H)

PC→PCR340	STX + Y + CR
PC←PCR340	STX + Register Table + CR

For Instance:

PC→PCR340	02 + Y + 0D
PC←PCR340	02 + Register Table + 0D

Register table

Functions of the latest version V1.03R2

Register Address	Function	Description
000h ~ 07Fh	Set Corresponding Card ID	16 Characters
100h ~ 1FFh	Set Output Characters	16 Characters
080h	Buzzer control	000h: Off Other Parameter: On
088h	Mifare Card ID Sequence	FFh : Output Card ID in MSB first sequence. 00~FEh : Output Card ID in LSB first sequence.
089h	125KHZ EM Card ID Sequence	FFh : Output Card ID in MSB first sequence. 00~FEh : Output Card ID in LSB first sequence.
090h~091h	Mifare standard MF1 ICS50 Card ID Filter	Register 090h: Start Register 091h: Length ID Filter Range: 1≥(Start+Length-1)≤8
092h~093h	Mifare 4K MF1 ICS70 Card ID Filter	Register 092h: Start Register 093h: Length ID Filter Range: 1≥(Start+Length-1)≤8
094h~095h	Mifare Ultralight MF0 ICS70 Card ID Filter	Register 094h: Start Register 095h: Length ID Filter Range: 1≥(Start+Length-1)≤14
096h~097h	Mifare DESFire MF3 ICD40 Card ID Filter	Register 096h: Start Register 097h: Length ID Filter Range: 1≥(Start+Length-1)≤14
098h~099h	125KHZ EM Card Card ID Filter	Register 098h: Start Register 099h: Length ID Filter Range: 1≥(Start+Length-1)≤10
0A0h ~ 0AFh	Prefix up	16 Characters
0B0h ~ 0BFh	Postfix up	16 Characters
0C0h ~ 0CFh	OnRemove up	16 Characters
0D0h	Delimiter	000h: CR 001h: LF 002h: TAB 003h: None Other Parameter or 0xFF: CR + LF
0D1h	Baudrate	004h: 2400 005h: 4800 006h: 9600 007h: 14400 Other Parameter or 0xFF: 19200
0D2h	Language (Keyboard type)	000h: Japan 001h: France 002h: German 003h: UK 004h: Spain Other Parameter: US
0D3h	USB Interface	000h: CDC Other Parameter: HID
0D4h	Display Card Type	0FFh: NO Display Other Parameter: Display
0D5h	Output by String Table	0FFh: Card ID Other Parameter: String
0D6h	Using code matching to right numeral part of keyboard	000h: Enable Other Parameter: Disable
0D7h	Output Card Format	000h: Output Card Number in Dec. Other Parameter: Output Card Number in Hex
0DAh	Tag Frequency Enable	Bit 0: 125KHz Bit 1: 13.56MHz Bit 2~7: None (1: Enable, 0: Disable)

0DBh	Keyboard Output(USB HID Only)	000h: Disable Other Parameter: Enable
0E0h~0E1h	Mifare standard MF1 ICS50 Card ID Filter	Register 0E0h: Start Register 0E1h: Length ID Filter Range: 1≥(Start+Length-1)≤8
0E2h~0E3h	Mifare 4K MF1 ICS70 Card ID Filter	Register 0E2h: Start Register 0E3h: Length ID Filter Range: 1≥(Start+Length-1)≤8
0E4h~0E5h	Mifare Ultralight MF0 ICS70 Card ID Filter	Register 0E4h: Start Register 0E5h: Length ID Filter Range: 1≥(Start+Length-1)≤14
0E6h~0E7h	Mifare DESFire MF3 ICD40 Card ID Filter	Register 0E6h: Start Register 0E7h: Length ID Filter Range: 1≥(Start+Length-1)≤14
0E8h~0E9h	125KHZ EM Card Card ID Filter	Register 0E8h: Start Register 0E9h: Length ID Filter Range: 1≥(Start+Length-1)≤10

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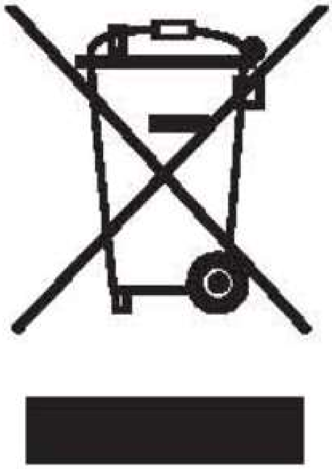

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This symbol means that according to local laws and regulations your product and/or its battery shall be disposed of separately from household waste. When this product reaches its end of life, take it to a collection point designated by local authorities. Proper recycling of your product will protect human health and the environment.

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