日晶科技股份有限公司 / Sunlit System Technology Corp.
μ-Chip System Development

RFID CF Type Reader User's Guide

Model Name: SLC-10200

Version: 1.0

Date: 2006.09.20

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Notice:

In order to avoid misuse or any unexpected damage, please read this guide first.

1. Hardware environment

(1) Product introduction

Sunlit's RFID CF type reader is based on **Hitachi μ-solution** to develop.
It was operated at microwave 2.45GHz frequency band.
This is small and light, can be easily install to PDA, tablet PC.

(2) Specification

Power Supply	DC 3.3V +/-5%	
Operating Environment	0˚C ~45˚C	
Storage Environment	0˚C ~60˚C	
Storing Humidity	5-85% RH	
Static Consumption	90 mW	
Dimensions	130 x 60 x 47 (mm)	
Interface	CF Type II	
RF Output Power	20dBm	
Frequency Range	2435-2465 MHz	
Total Channel	31 channels	
Modulation	FHSS	
Reading Distance	5 - 7 cm @PVC card	
Antenna	Connector	U.FL connector
	Frequency Range	2.4-2.4835 GHz
	Impedance	50 ohm nominal
	Gain	0dBi
	Radiation	Direction
	Polarization	Semi circular
	Beam Degree	90˚

(3) System requirement

Item	Condition	Quantity
Hardware requirement	PDA support CF interface	1
Platform requirement	Windows Pocket PC 2003	1

(4) How to install reader

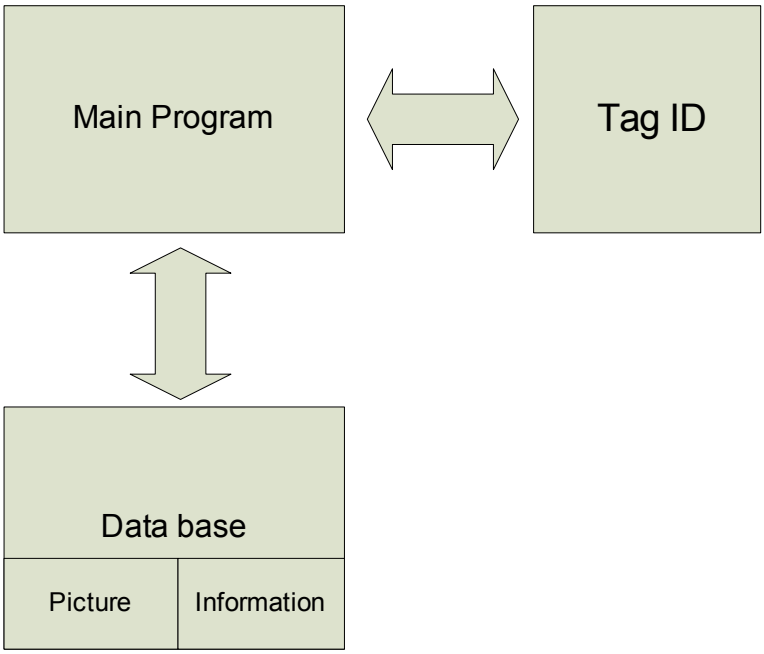
Face the side with LED up, and insert it into PDA CF slot as shown in picture. Normally always insert CF reader by put LED side up, but some PDA put CF slot at reverse side, it means user needs to insert CF reader at back side. (LED down)

2. Demo software environment

(1) Demo software introduction

This demo program can build a database include TAG ID、TAG information and picture. It can be use to demo ex. material manager、In/out control for people… etc.

(2) Block diagram



(3) Demo program operation

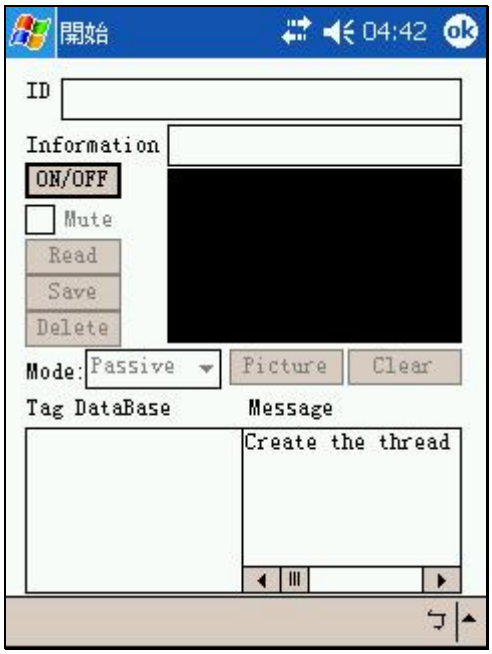
System requirement

Item	Condition	Quantity
PDA	Support CF interface 64MB Flash ROM 64 MB RAM	1
System platform	Windows Pocket PC 2003	1
RFID CF reader		1
Tag	Include Hitachi μ-chip inlet	1

Demo software contents

Item	Description	
Development tool	Microsoft Visual Studio 2005 Traditional Edition	
File contents	WinceDEMO.exe	Main program
	sunlitrfidppc.dll	Dynamic Link Library file
	Database.txt	ID database file after ID saved
	PIC [Folder]	A picture file includes different pictures which correlated with each individual ID

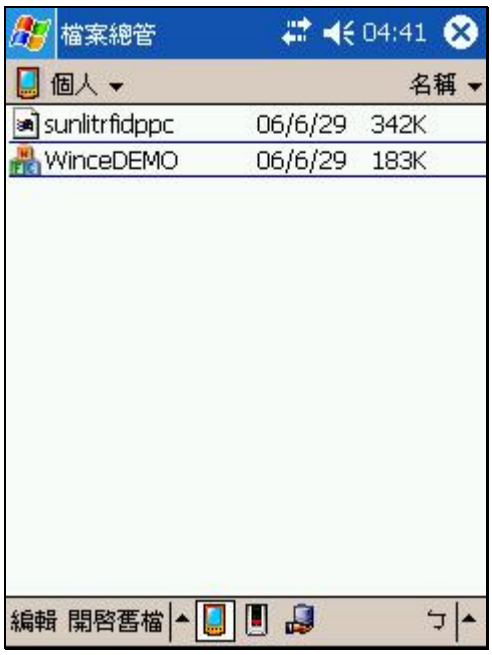
Main Program Window



Function	Description	Function	Description
ID	Display Tag ID when Tag be read.	**Delete**	Delete registered database
Information	Edit information about Tag ID	**Mode**	Select scan mode
ON/OFF	Open/Close comport of reader	**Picture**	Select picture correct with ID
Mute	ON/Off reading sound	**Clear**	Clear text of ID & Message window
Read	Trigger reader to scan	**Tag Database**	Display registered database
Save	Save registered database	**Message**	Display status of reader

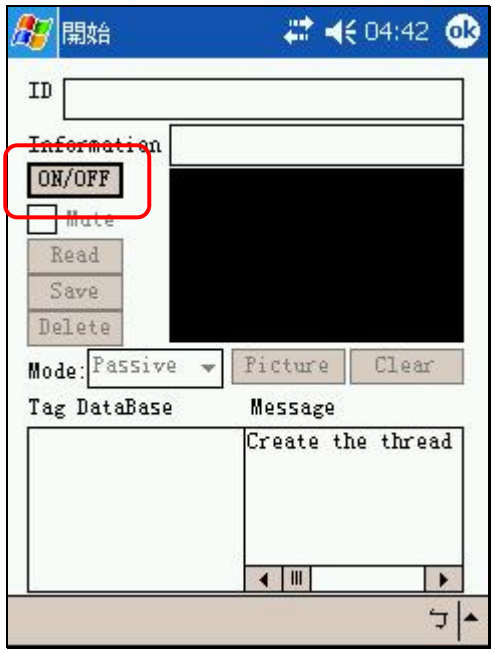
Demo program operation

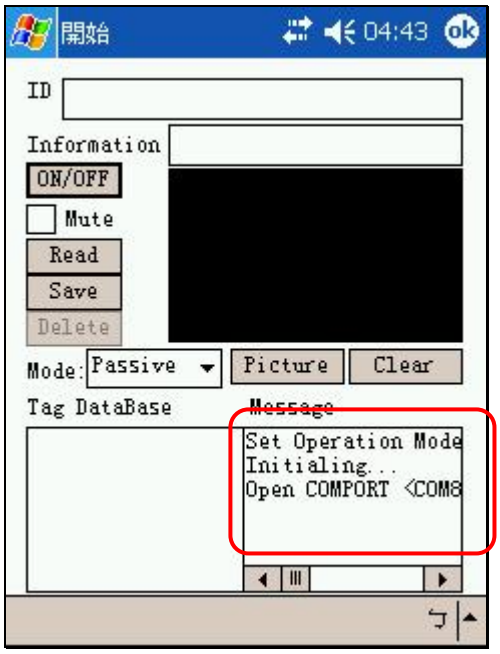
(a) Copy demo program files "**WinceDEMO.exe**" & "**sunlitrfidppc.dll**" to PDA and store at same directory.



(b) Plug reader in CF slot of PDA

(c) Click file "**WinceDEMO.exe**" and click "**ON/OFF**" to open device(Reader)





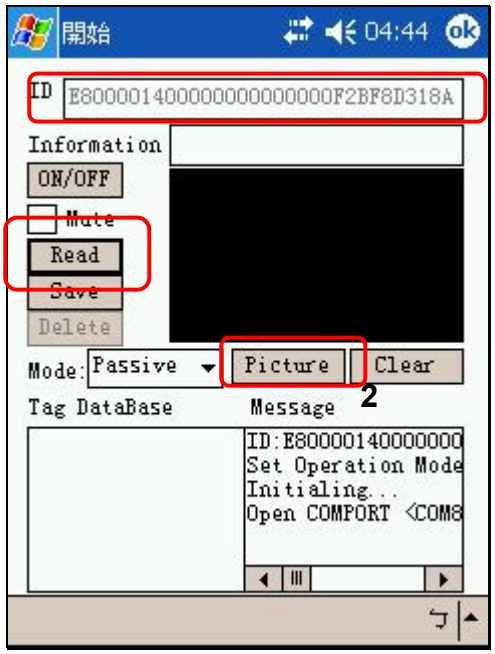
It mean open device successful

(d) Create a ID data base

Be sure the Mode is "**Passive**"

Put the tag on front side of reader, click "**Read**" to scan Tag ID and checking ID number is showing on **ID** window.

Click "**Picture**"→ "**Folder**" to open location of picture that you want to correct with Tag ID.Click "**Type**" to select file type that you want than click picture file

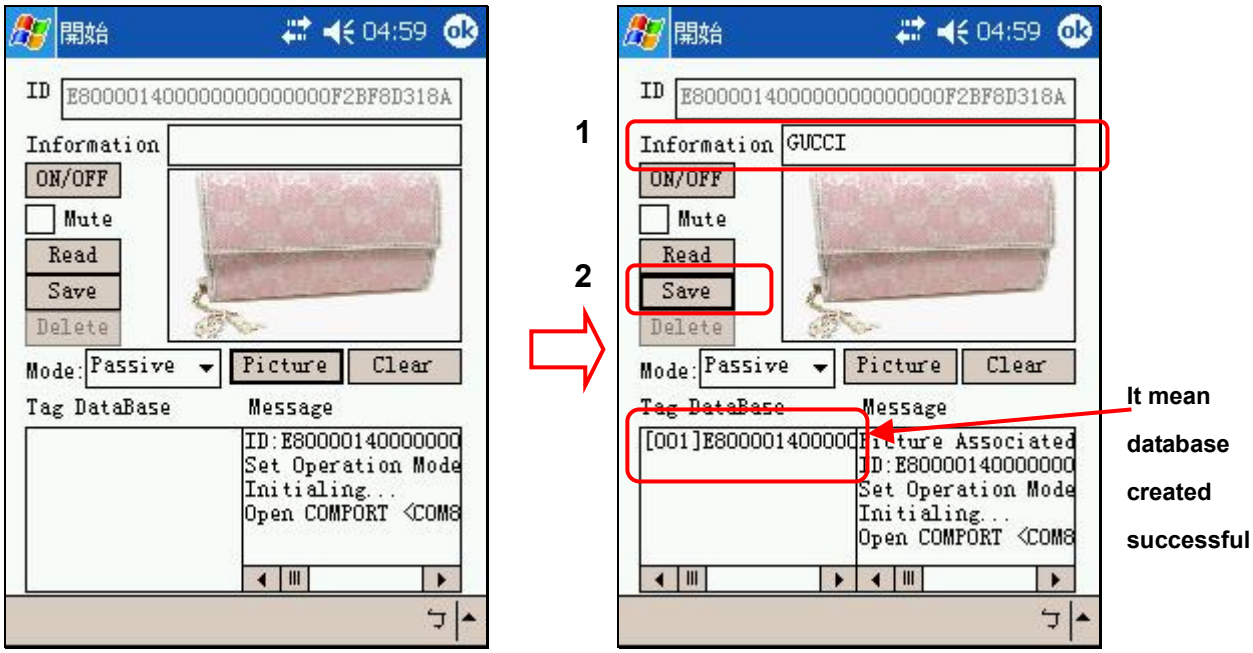


※ **Operation mode**:

Passive: Click **Read** once and reader will scan once.

Active: Click **Read** once and reader will scan continuously.

(e) Editing information about the ID number on “Information” window.
Click “**Save**” and check “**Tag DataBase**” window to complete the data base created procedure.

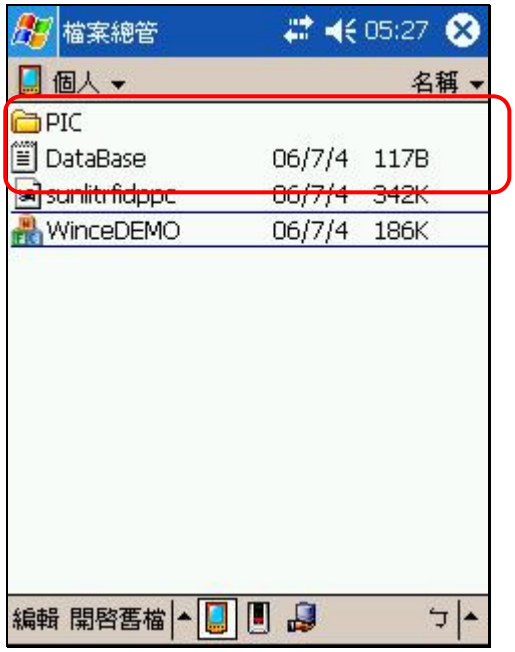


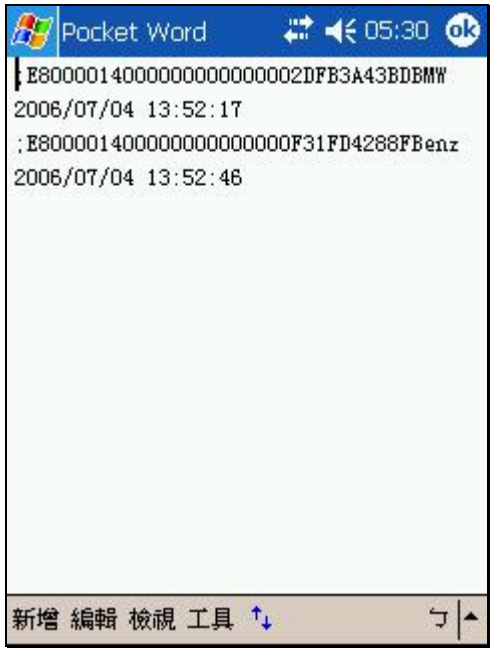
(f) You can follow the step (d) (e) to create some data base that you want.

(g) When you created the data base, the system was created 1 folder and 1 text file:

Item	Description
Database.txt [text file]	ID database file after ID saved
PIC [Folder]	A picture file storage folder about correlate with ID database after picture saved.

Caution: Every PDA are different resolution so the picture is showed different size. If you want it to be matched, you should modify the source code of the project. And showing picture is Windows API,but it is not stable. Showing picture seveval times may cause the Demo AP crashes.

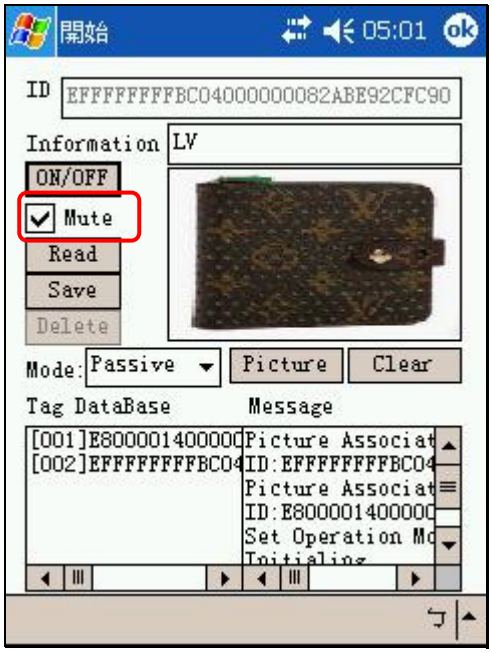




DataBase.txt

(h) Set Mute function

Follow the figure click the" Mute" function check box, the mute function will enable.

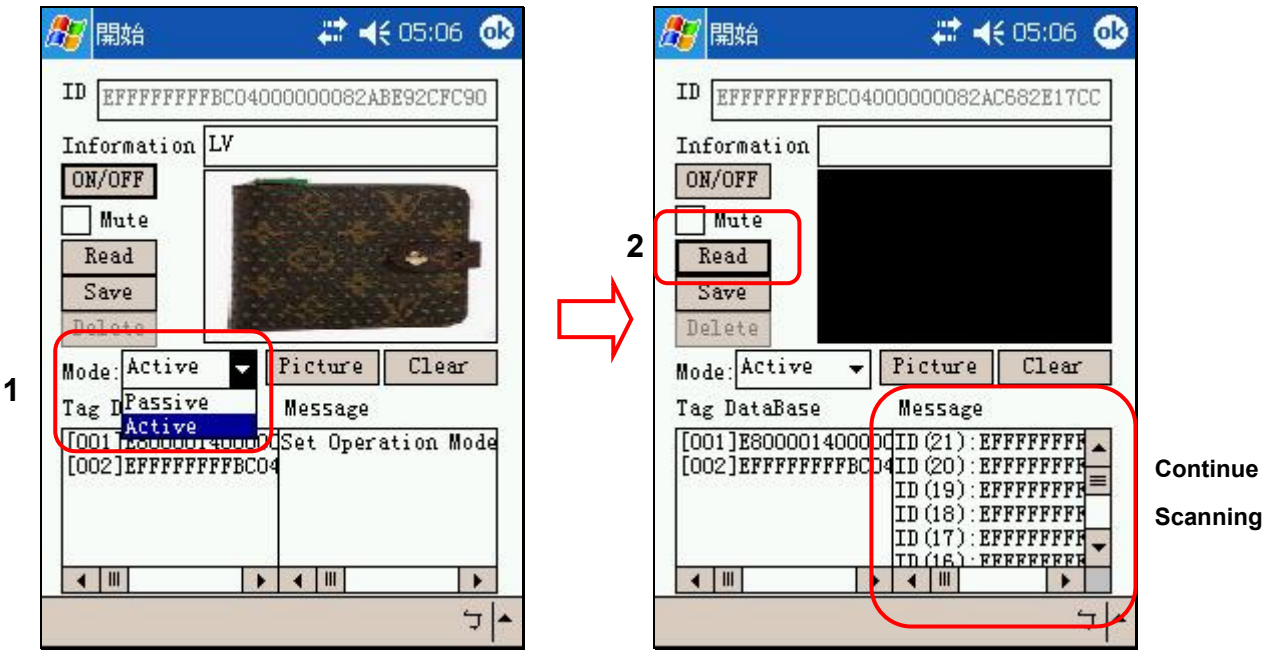


(i) Set Operation mode

Mode: **Active**

Click the "**Mode**" combo box and select "**Active**" item to enable active function

Click "**Read**", if tag scanned by reader and the scan procedures will continuously.



Mode: **Passive**

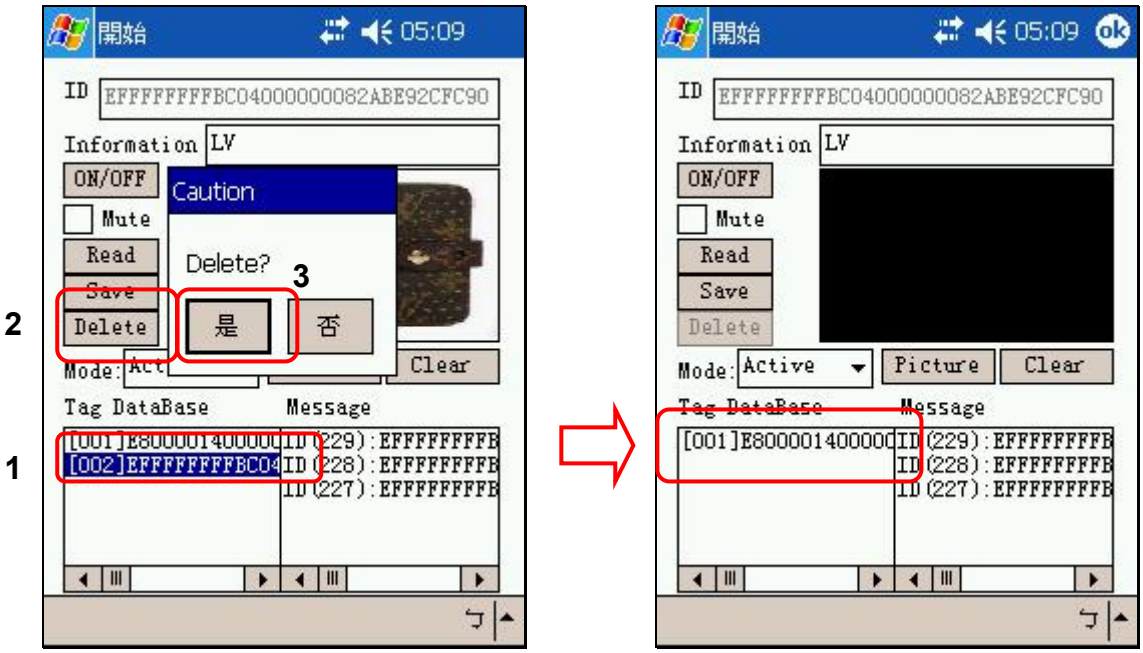
Click "**Mode**" combo box select "**Passive**" item to enable passive function

Click "**Read**" and the reader scanning just only once.

(j) Delete data base

Click data you want to delete on **Tag DataBase** window

Click "**Delete**" and select "**Yes**" to delete data.



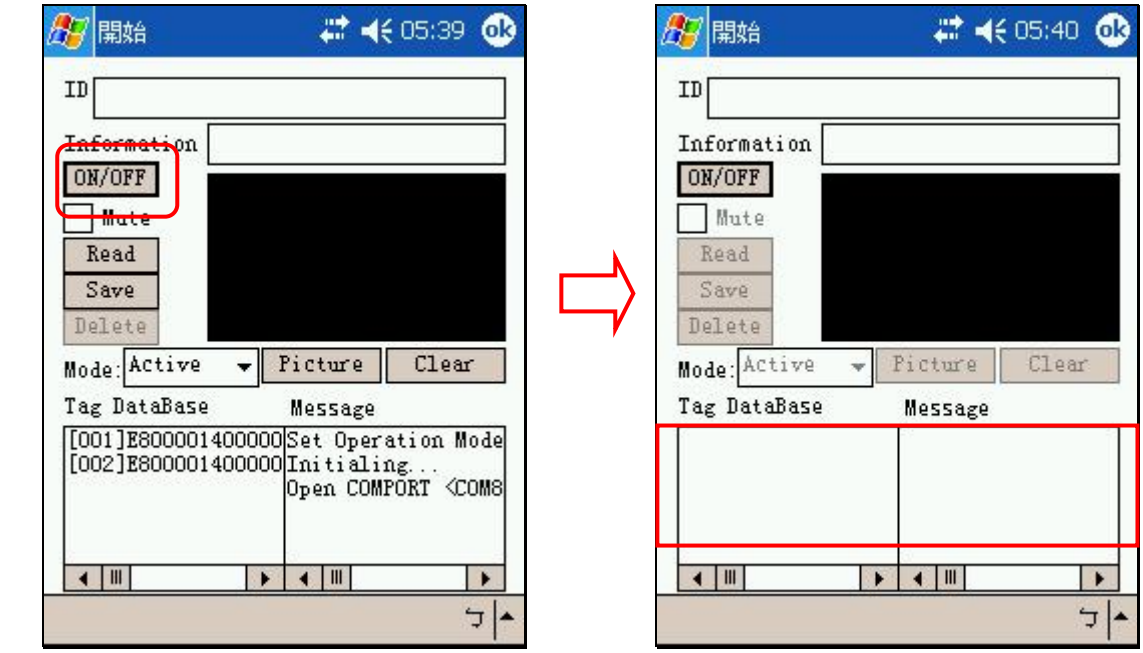
(k) Clear function

If click "Clear" than the text message on the **ID** and **Message** window will be clear.

(l) Disable device(Reader)

To confirm device is open.

Click "**ON/OFF**" to disable device.



3. How to contact us

For further information or in case of difficulties please contact

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FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

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.

CAUTION:

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

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.

This equipment must not be co-located or operating in conjunction with any other antenna or transmitter.