



SmaFinger[®] Advanced Reader Quick Start

REV.B
June 10, 2008

SF600/610/601 Specifications:

Application		Offline Fingerprint Reader
Fingerprint Only	Enroll Mode	RS232 or Enroll Card
	Fingerprint Capacity	1900
	Fingerprint Validation	1:N
	Performance	Friendly
Identification speed		<1 sec (1:1) <2 sec (1:N)
Interface		RS232 : 9600bps Wiegand: 26 bits ABA-TK2: 10 Digital Codes
Power Consumption		Max. 200mA @ DC12V
Special instruction: Available only for 100 user cards enrollment in "Card Only" mode		

Output Selection

Wiegand Output

Red ----- Power 9~12V
 Black ----- Power GND
 White ----- Data 1
 Green ----- Data 0
 Yellow ----- N/C
 Blue ----- N/C
►Orange ----- Black (GND)
 Brown ----- N/C or LED Control

ABA-TK2

Red ----- Power 9~12V
 Black ----- Power GND
 White ----- Strobe (Clock)
 Green ----- Data
 Yellow ----- N/C
 Blue ----- N/C
►Orange ----- N/C or Card Present
 Brown ----- N/C or LED Control

RS232

Red ----- Power 9~12V
 Black ----- Power GND
 White ----- N/C
 Green ----- N/C
 Yellow ----- RS232 Output (TX)
 Blue ----- N/C
►Orange ----- Black (GND)
 Brown ----- N/C or LED Control

Output Format

Wiegand (Standard 26 bits)

P	MSB	UID (6 Hex Code)				LSB	P
EVEN PARITY					ODD PARITY		

Pulse Timing

Symbol	Description	Typical Time
Tpw	Pulse Width Time	100us
Tpi	Pulse Interval Time	1.9ms

ABA-TK2

10 LEADING ZERO	MSB	UID (10 DIGITS)	LSB	10 LEADING ZERO
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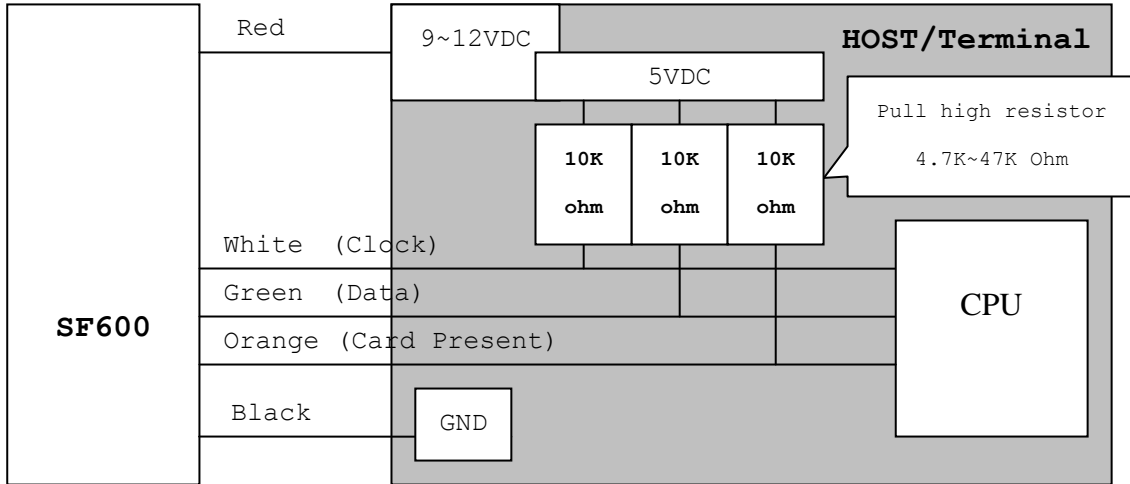
The timing for Card Present, Clock (Strobe) and Data , example as below:

→ ← Bit Time 40IPS (min:280us, typ:330us, max:480us)

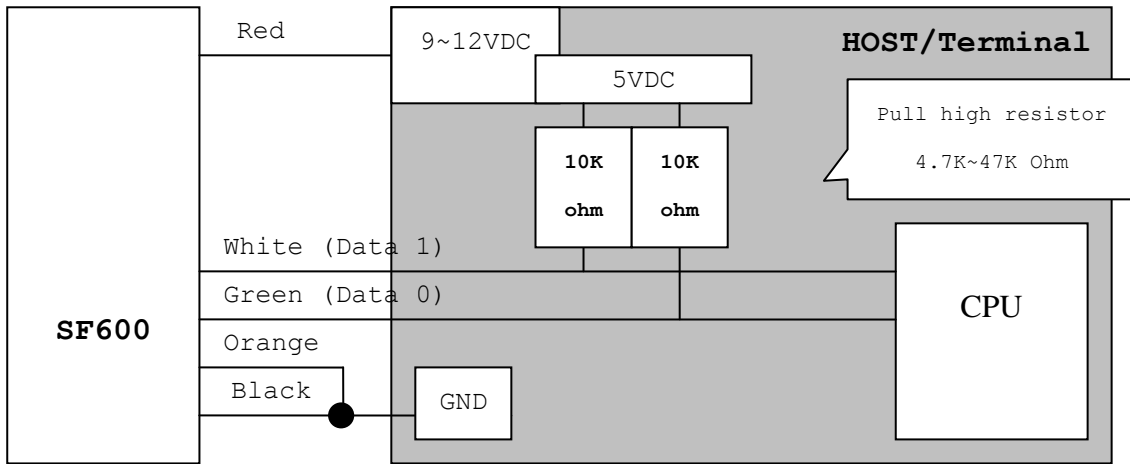
RS232 (9600,n,8,1)

STX(02H)	MSB	UID(8 Hex Code)	LSB	CR	LF	EXT(03H)
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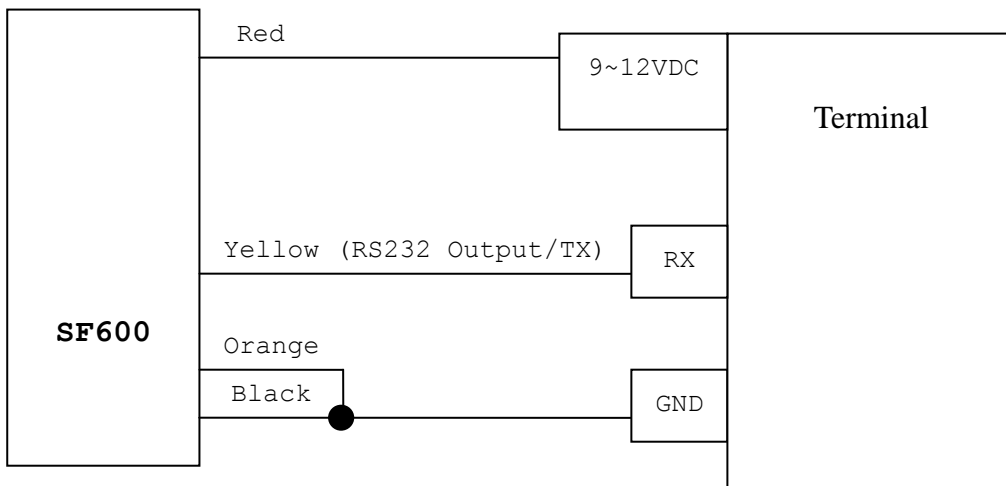
Connection Example for ABA-TK2:



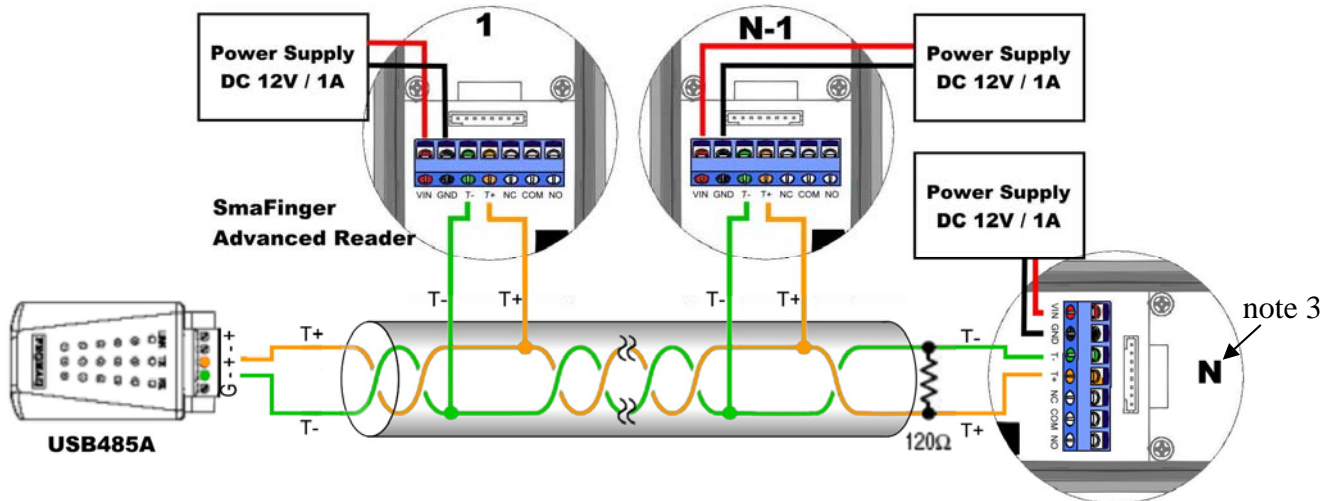
Connection Example for Wiegand:



Connection Example for RS232:

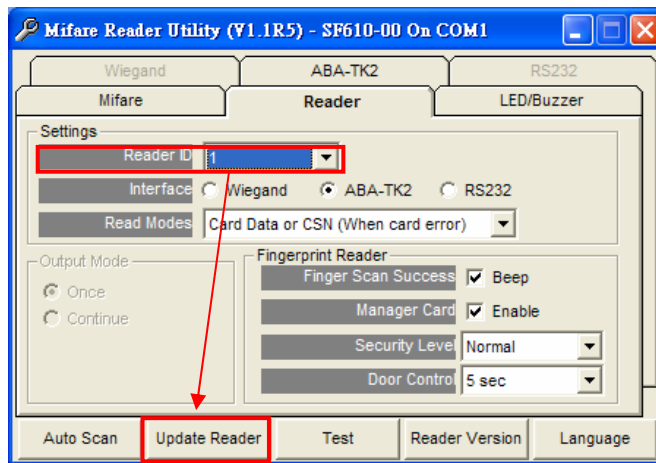


Example for RS485 Connection (Optional)

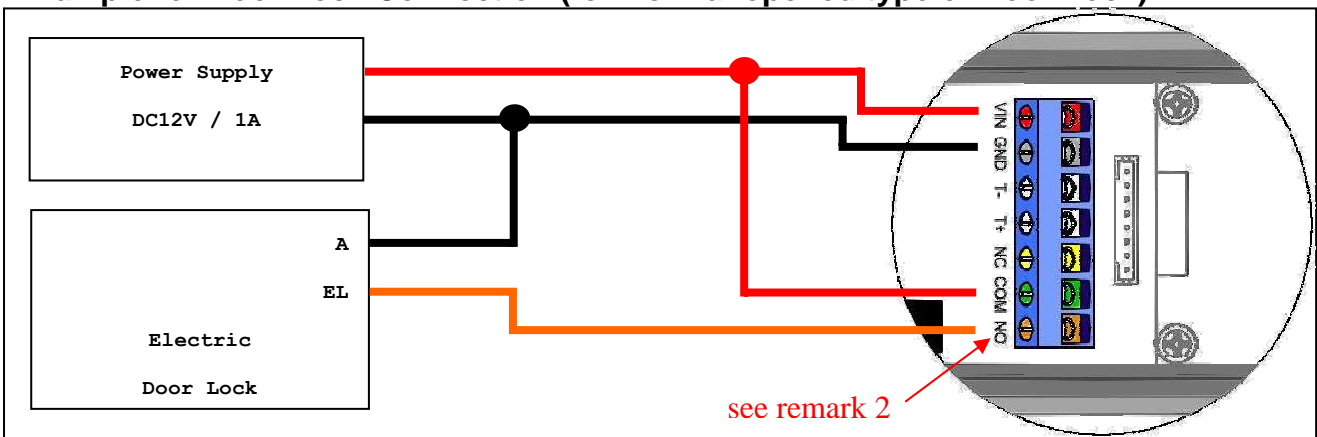


Note:

1. For RS485 network must use USB485A converter.
2. End of wire must connect 120 Ohm terminal resistor.
3. The reader ID is up to 32. Important must have procedure before installation. (Before connect reader, please setup the reader ID, as below figure.)



Example for Door Lock Connection (for Normal-opened type of Door Lock)

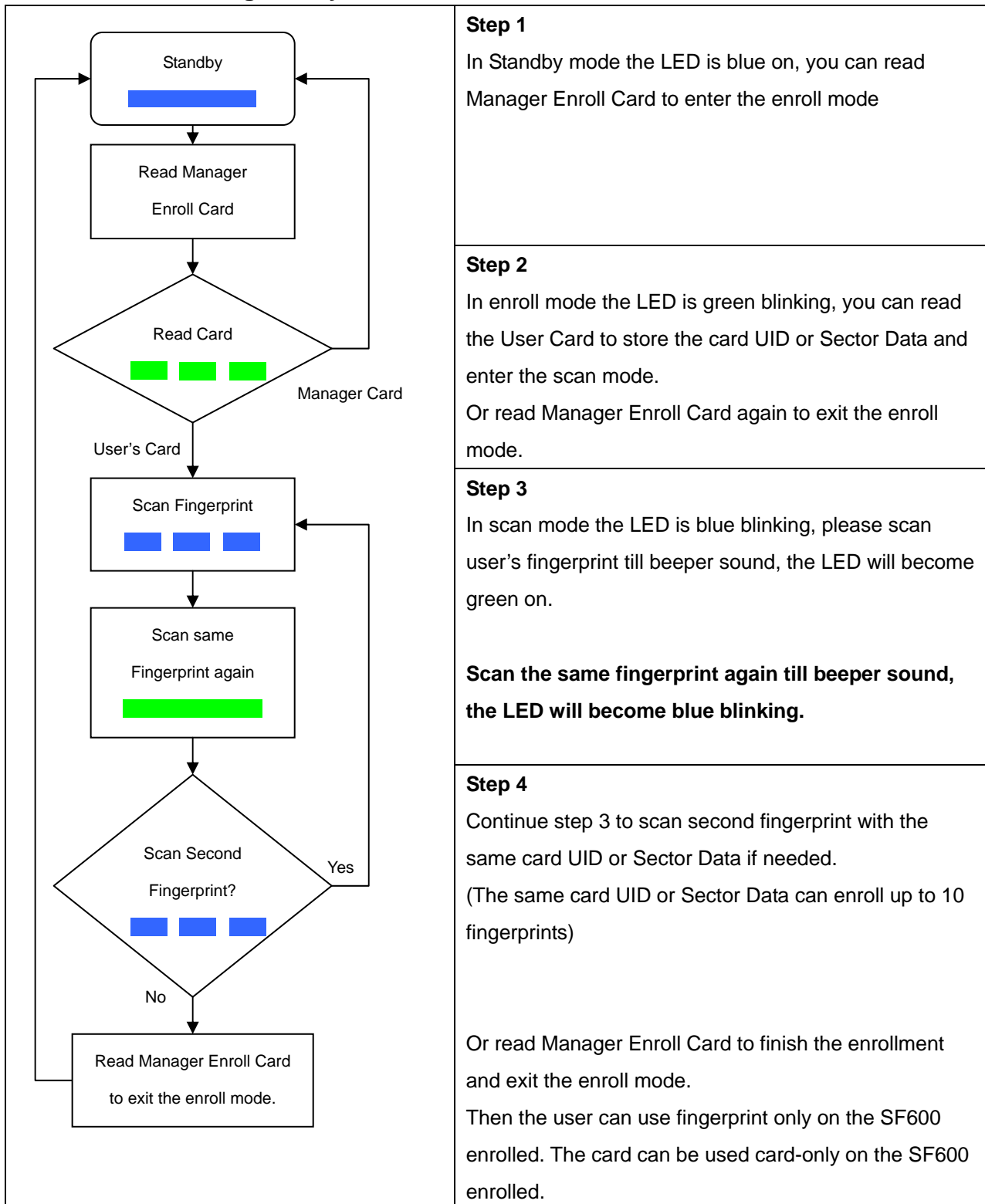


Remark:

1. DO NOT connect power supply from the 8pin connector when you have connected the power supply from VIN at the 7pin connector to avoid damaging the unit.
2. If the lock requires power to lock (eg. EM lock), connect this point to NC
If the lock requires power to unlock (eg. Electric strike), connect this point to NO

Applying Manager Enroll Card for enrollment under different access mode

1. Access Mode: Finger Only



Step 1
In Standby mode the LED is blue on, you can read Manager Enroll Card to enter the enroll mode

Step 2
In enroll mode the LED is green blinking, you can read the User Card to store the card UID or Sector Data and enter the scan mode.
Or read Manager Enroll Card again to exit the enroll mode.

Step 3
In scan mode the LED is blue blinking, please scan user's fingerprint till beeper sound, the LED will become green on.
Scan the same fingerprint again till beeper sound, the LED will become blue blinking.

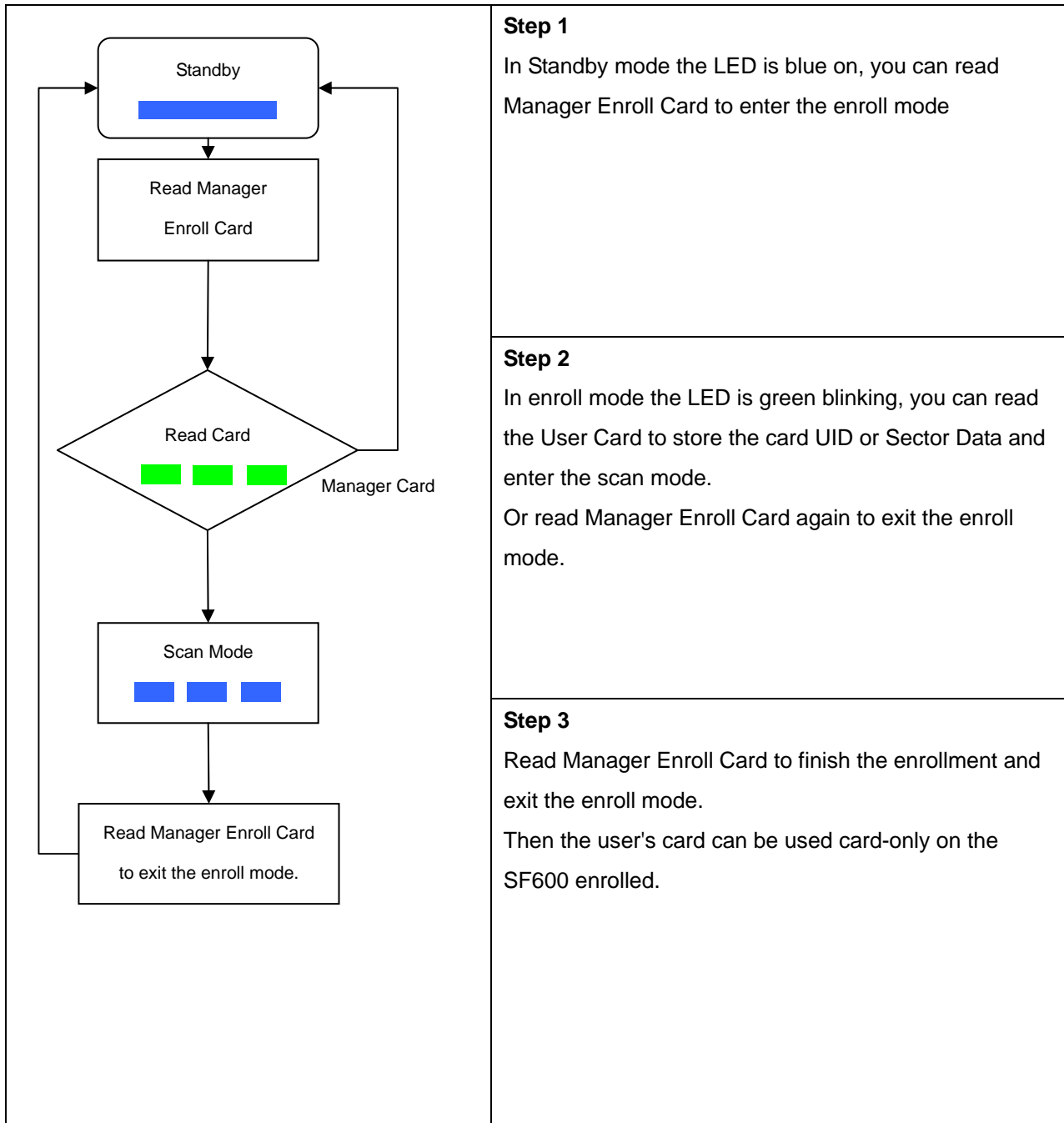
Step 4
Continue step 3 to scan second fingerprint with the same card UID or Sector Data if needed.
(The same card UID or Sector Data can enroll up to 10 fingerprints)

Or read Manager Enroll Card to finish the enrollment and exit the enroll mode.
Then the user can use fingerprint only on the SF600 enrolled. The card can be used card-only on the SF600 enrolled.

Remark:

1. Warning! Keep the User Card and do not lose it! To delete user must use the same User Card. Once you lose User Card, you cannot delete user from reader.
2. For multi-user, please use the Multi-User Card to create serial number automatically.

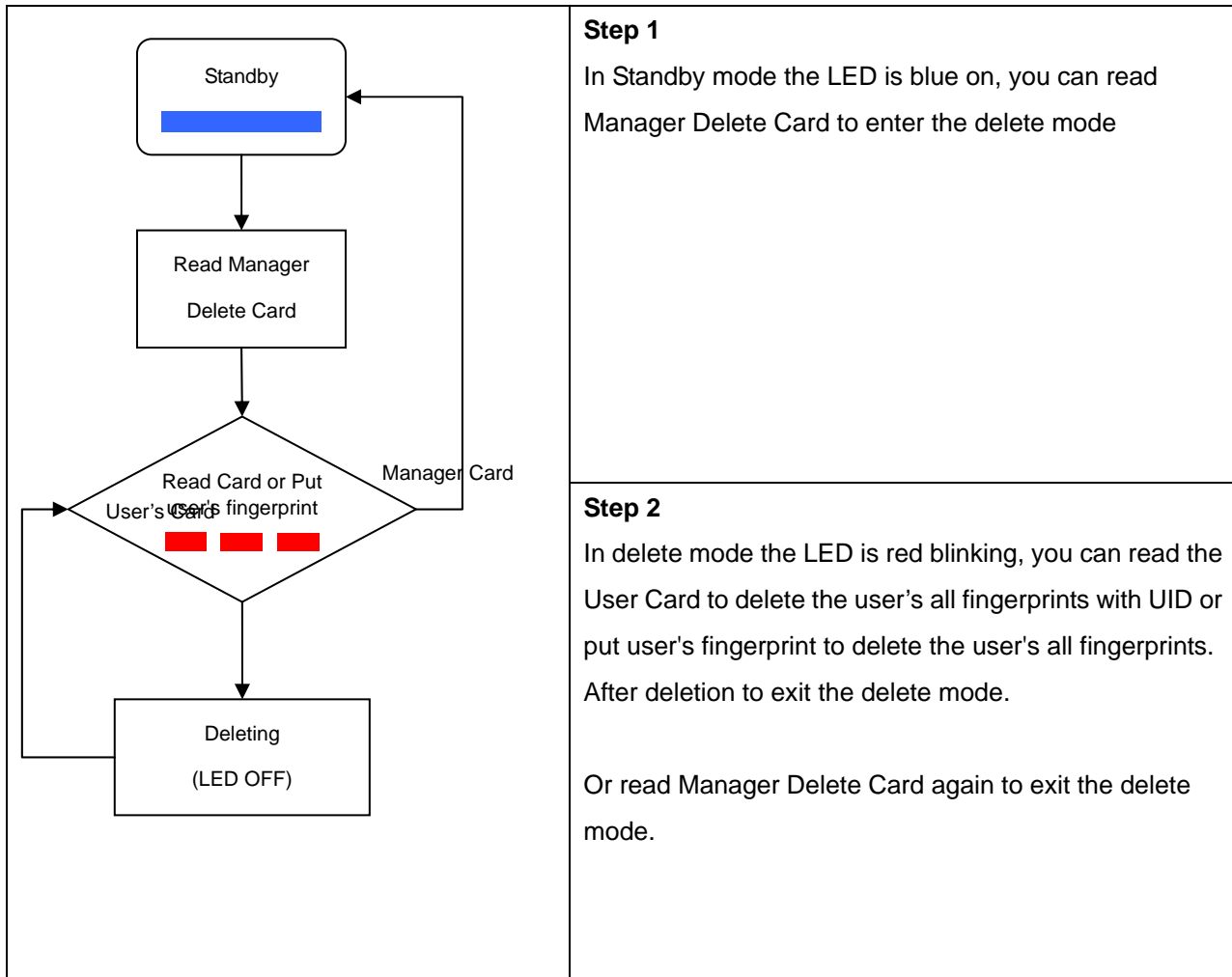
2. Access Mode: Card Only



Remark:

1. Warning! Keep the User Card and do not lose it! To delete user must use the same User Card.
Once you lose User Card, you cannot delete user from reader.
2. The Multi-User Card cannot be used for Card Only access mode.

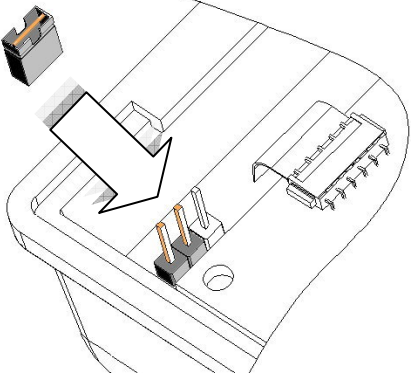
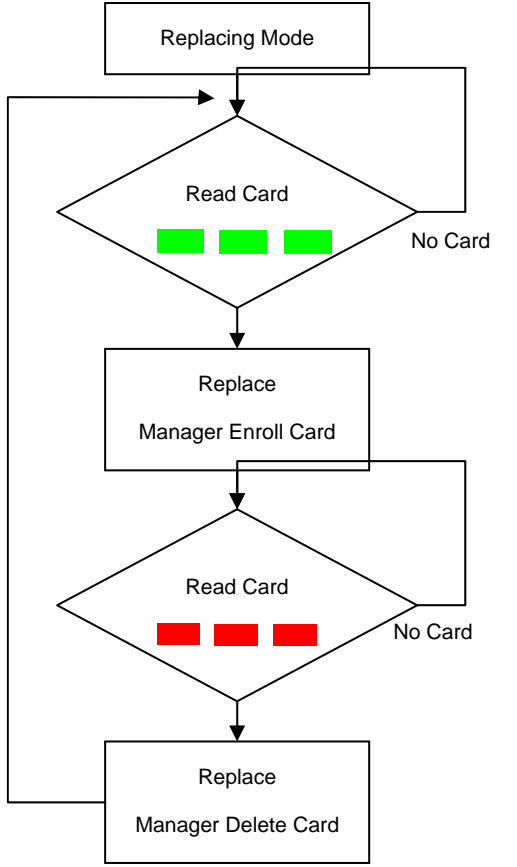
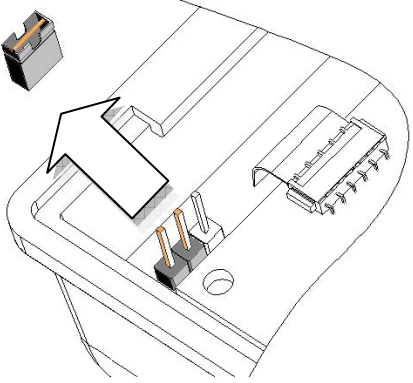
Applying Manager Delete Card for deletion



Remark:

To DELETE the user's fingerprints which are enrolled by the Multi-User Card, it is necessary to put user's fingerprint in Delete Mode.

Replacing a new Manager Enroll Card and Manager Delete Card (Only for SF610/SF601)

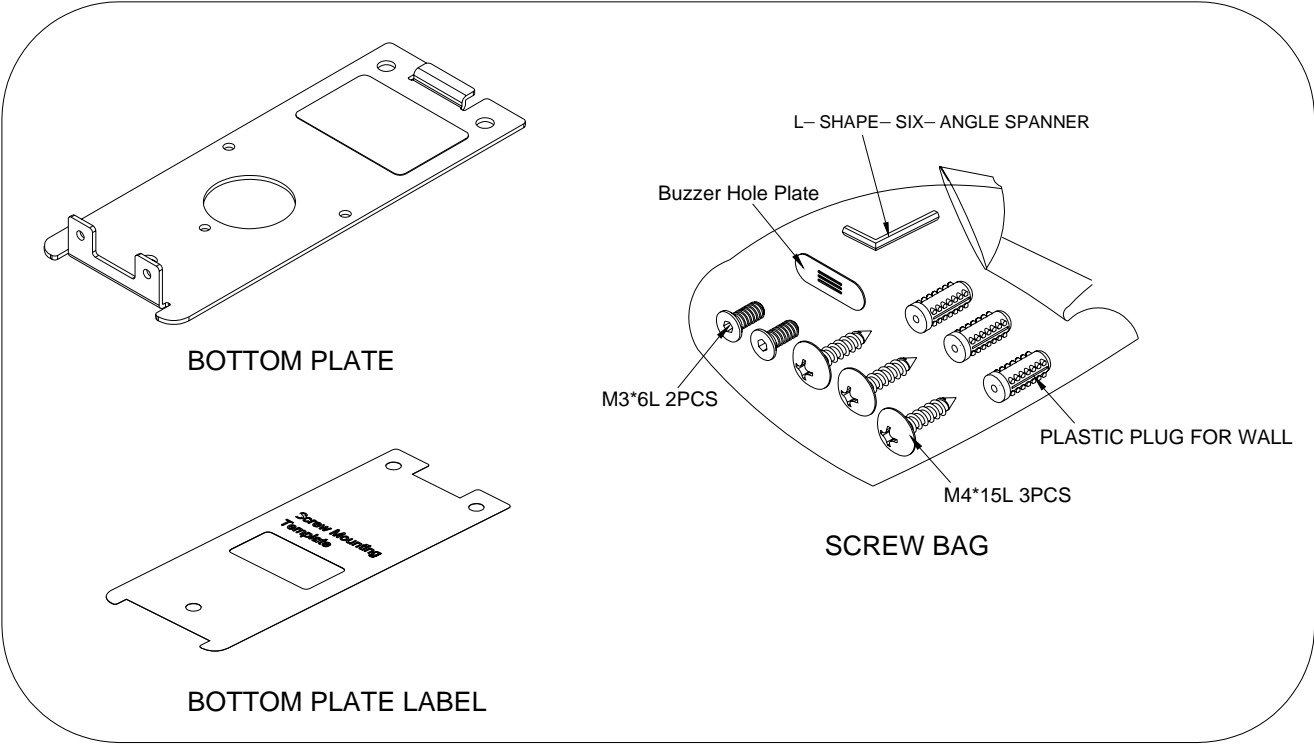
	<p>Step 1</p> <ol style="list-style-type: none"> 1. Power-Off the SmaFinger Reader. 2. To put on the Reset-Pin Jumper. 3. Power-On the SmaFinger Reader.
 <pre> graph TD A[Replacing Mode] --> B{Read Card Green LEDs} B -- No Card --> B B -- Success --> C[Replace Manager Enroll Card] C --> D{Read Card Red LEDs} D -- No Card --> D D -- Success --> E[Replace Manager Delete Card] E --> B </pre>	<p>Step 2</p> <p>In Replacing Enroll Card Mode. When the green LED is blinking, please read a new Enroll card to replace the old Manager Enroll Card.</p> <p>Or power-off and take off the Reset-Pin Jumper to exit the replacing mode.</p>
	<p>Step 3</p> <p>In Replacing Delete Card Mode. When the red LED is blinking, please read a new Delete Card to replace the old Manager Delete Card.</p> <p>Or power-off and take off the Reset-Pin Jumper to exit the replacing mode.</p> <p>Step 4</p> <p>The SmaFinger go back the Step-2 after Step-3 finish.</p> <p>Or Power-off and take off the Reset-Pin Jumper to finish the replacing mode.</p>

Note:
When you lose the Manager Enroll Card or the Manager Delete Card, you have to repeat these steps.

Order Information

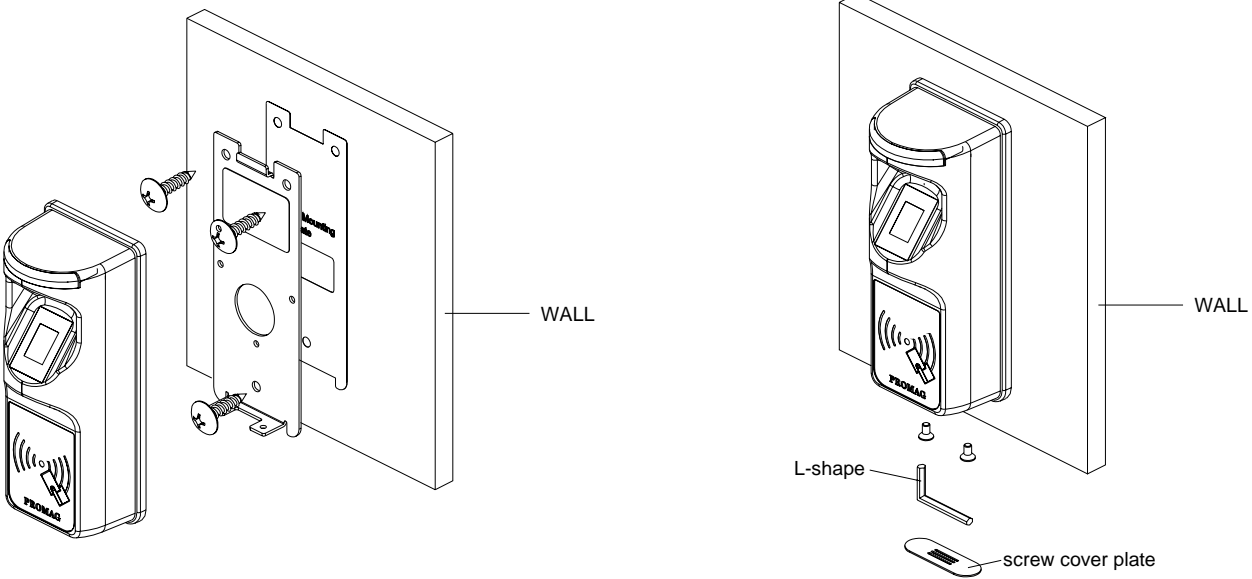
Part Number	Include	Qty.	Descriptions
SF610-00	SF610 Reader	1	SmaFinger Mifare Sector Reader
	KIT-CRD-600	1	Offline Programming Kit
KIT-CRD-600	Manager Enroll Card	1	Mifare® 1K Card
	Manager Delete Card	1	Mifare® 1K Card
	User Card-A	1	Mifare® 1K Card
	User Card-B	1	Mifare® 1K Card
	User Card-C	1	Mifare® 1K Card
SF601EM-00	SF601 Reader	1	SmaFinger 125KHz UID Reader
	KIT-CRD-601-EM	1	Offline Programming Kit
KIT-CRD-601-EM	Manager Enroll Card	1	EM 125KHz Card
	Manager Delete Card	1	EM 125KHz Card
	User Card-A	2	EM 125KHz Card
	User Card-C	1	EM 125KHz Card

Required Items



Secure Mounting Installation

1. Attach the bottom plate label on the target position. Drill the holes to match the bottom plate then fix SmaFinger reader.
2. After fixing SmaFinger with attached screws (using the L-shape spanner), apply screw cover plate for completion.





CAUTION:

The crossed out wheeled bin label that can be found on your product indicates that this product should not be disposed of via the normal household waste stream.

To prevent possible harm to the environment or human health please separate this product from other waste streams to ensure that it can be recycled in an environmentally sound manner.

For more details on available collection facilities please contact your local government office or the retailer where you purchased this product.

This information only applies to customers in the European Union.

For other countries, please contact your local government to investigate the possibility of recycling your product.