ROSS

1000-Series Biometric Safe Lock

**Innovative Security Solutions
Designed and Manufactured In Australia
To International Standards**

Distributor

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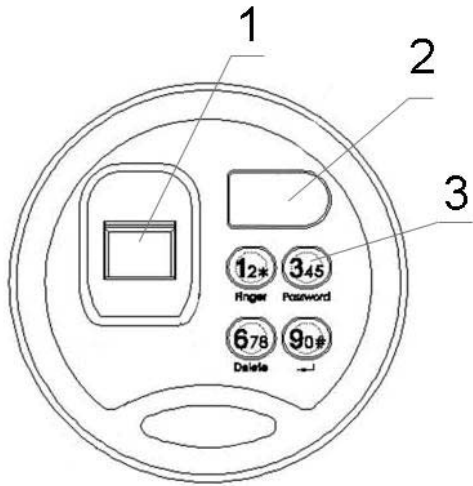Email :- rosslocks@rosslocks.com.au   Web :- www.rosslocks.com.au
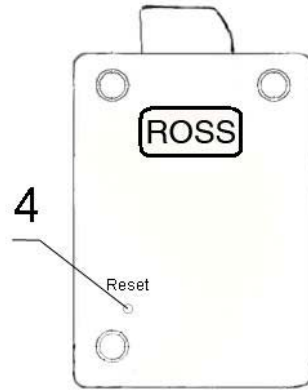
USER MANUAL

**Innovative Security Solutions
Patent Pending – Swivel Bolt**

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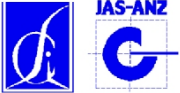
MASTER LOCKSMITHS

World Patent Protection

Biometric Entry Pad　　　　**Electronic Swivel Bolt Lock**

1. Fingerprint Reader Window

2. Display Screen

3. Digital Pad

4. " Reset " Button

Date	Time	Slot #	User Name	Fingerprint (mark finger used)	Password (10-14 digit No.)
		16			
		17			
		18			
		19			
		20			
		21			
		22			
		23			
		24			
		25			
		26			
		27			
		28			
		29			
		30			

Date	Time	Slot #	User Name	Fingerprint (mark finger used)	Password (10-14 digit No.)
		ADMINISTRATOR 1 **1**			
		ADMINISTRATOR 2 **2**			
		3			
		4			
		5			
		6			
		7			
		8			
		9			
		10			
		11			
		12			
		13			
		14			
		15			

CONTENTS

SECURITY LEVEL PROFILES

This unit provides (2) selectable security level settings -

- **Security Level (1)**: The entry pad is operated by either fingerprint or password. This is the factory setting on this unit.
- **Security Level (2)**: The entry pad is operated by fingerprint and its bound password.

Please note:

If the security level is changed from level (1) to level (2), all enrolled fingerprints and passwords are automatically deleted from this unit. If the security level is changed from level (2) to level (1), all enrolled fingerprints and bound passwords are retained on this unit.

Slot #'s **01** & **02** *are recognized as administrators. Only Administrators can add new fingerprints and delete enrolled fingerprints.*

LOW BATTERY WARNING

This unit runs on a 9V alkaline battery. It is recommended that either 'Duracell' or 'Energizer' brands be used. A low battery condition comes into effect when the voltage gets below 6.5V. In this event, the entry pad can only lock and unlock the unit. A **Lo** battery warning listed on the display screen indicates the battery needs to be replaced. This occurs when the voltage gets below 5.2V.

SPECIFICATIONS

- Fingerprint Sensor: 500 DPI optical sensor
- Verification Time: < 1 second
- Registration Capacity:
- 30 fingerprints + 30 passwords
- FRR (False Rejection Rate) : < 0.1 %
- FAR (False Acceptance Rate) : < 0.0001 %
- Password length: 10 – 14 digits
- Static current: < 50 μA (Typical)
- Power Supply: one standard 9V Alkaline battery
- Battery Life Span: About 1 year
- Battery Low Voltage: 5.2 $\pm$ 0.2 V
- Working Temperature: - 10 $^\circ$ C ~ + 65 $^\circ$ C
- Fingerprint Reader Dimension:
- 6" (L) x 2-12/16" (W) x 1-11/16" (T)
- Working Humidity: 10 % ~ 80 %

DISPLAY UNIT INFORMATION

This process allows you to view the base information registered on this unit.

Step 1 Press any key to activate the unit.

Step 2 Press and hold 9️⃣ until (2) audible beeps are sounded.

In this example of (5) enrolled fingerprints, the following information is listed on the display screen –

- **30** identifies there is a capacity to store 30 fingerprint enrolments.
- **Un**, **05** identifies the (5) enrolments presently in place on the unit.
- **u9**, **20**, **02**, **03** identifies the software version installed.

ERROR CODES

- **E0** – The fingerprint enrolment was not successful.

- **E1** – This fingerprint has already been enrolled on this unit.

- **E7** – A communication error has occurred. Try again. If this error occurs again, check all cable connections. If this error persists, contact your supplier for further advice.

- **EP** – The entry pad has entered a (4) minute time-delay cycle.

CHANGING THE BATTERY

Please refer to the diagram below.

- Simply slide the entry pad housing up and carefully pull it away from the mounting surface to expose the battery compartment.

- The battery connector is easily removed by unclipping it from the terminals on top of the battery. Care must be taken to ensure that the wires leading from the battery connector to the entry pad are not pulled out from the housing.

- Once the battery has been changed, carefully position the entry pad back over the mounting screws and slide the entry pad back into position. Ensure there are no wires or cables trapped between the entry pad and the safe door.
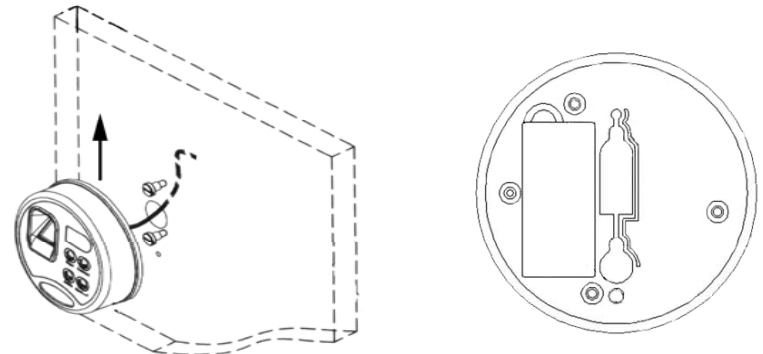
IMPORTANT OPERATIONAL ISSUES

1. **Understand how the unit operates.**

   It is recommended that you read these instructions and understand the sequence of events that need to take place before attempting to action that function on the unit. A time limit exists on all function activations. When this period has elapsed, simply repeat the process.

2. **Enrol a reliable fingerprint image.**

   It is recommended that you use index or middle finger enrolment. To ensure a good scan of the fingerprint, place the core part of the fingerprint in the centre of the reader window scan area.

3. **Enrol a password.**

   Please note that the digital pad is not a full numeric keypad. The (4) buttons presented each represent a set of numbers and not individual numbers. In addition, at a command level, each of the buttons serve multiple purposes. For example, 3ʌ Password represents a 3, 4 and 5. However, at a command level, it is also used to indicate that a password needs to be entered; and in the case of deleting an enrolled fingerprint or password, this button is used as a scroll button to sequentially move back through the slot #'s presently holding enrolments.

Step 3 To register the password against this newly enrolled fingerprint, **P1** is listed on the display screen as the invitation for the password to be entered. Enter the desired password (re: between 10 & 14 digits), and press and hold 9₀# until **P2** is listed on the display screen.

Step 4 **P2** indicates that a verification of the password is required. Re-enter the password and press and hold 9₀# until the slot # associated with your new fingerprint enrolment is again listed on the display screen. This completes the password registration cycle.

Please note:

If a discrepancy is detected between the entered and re-entered password, **no** *is listed on the display screen. If this occurs, simply enter and re-enter the password correctly to complete this fingerprint enrolment.*

Step 2 If the verification proves to be successful, **01** is listed momentarily on the display screen, indicating in this case that administrator #1 access has been verified. **P_** is then listed as the invitation to enter the password bound to this fingerprint. Enter the password. **01** will then be listed on the display screen to indicate the entered password has also been successfully verified, and the handle can now be turned to open the safe door.

ENROL ADDITIONAL FINGERPRINTS - Security Level (2)

1. **Enrol an additional fingerprint /password (Administrator #1 or #2).**

   Step 1 As one of the registered administrators; unlock the unit by presenting a fingerprint and bound password. Wait for the verification process to prove successful. Again, successful verification of either administrator fingerprint is indicated by the listing of either **01** or **02** on the display screen. This in turn is followed by the display screen LED illuminated 'green' in colour, and (2) audible beeps sounding.

   Step 2 To enrol a new fingerprint, press and hold (1₂∗ Finger) until the display screen lists **Fn**. This is now the invitation for a new fingerprint to be enrolled. Again, place the new fingerprint firmly on the reader window and hold until the display window cycles through the enrolment verification process. Initially, **F_** & **F1** are listed to indicate the enrolment process is underway, and this cycle is completed when the next slot # is momentarily listed on the display screen.

4. **Interpreting an error code.**

   A list of error codes have been documented at the end of this guide to aid you in determining what command the unit is finding difficult to complete. For example, an **E1** error will be listed on the display screen when the unit detects that an attempt has been made to duplicate a fingerprint enrolment. Should the problem encountered not be explained by a code in this list, please contact you supplier for further assistance.

5. **Password retry limit exceeded.**

   In the event the unit detects (4) consecutive unsuccessful password attempts, the unit will automatically enter a (4) minute time-delay period. The unit interprets this condition as an improper intrusive event and will enforce this lockout condition on the unit as a deterrent against such activity.

6. **Fingerprint and password time-delay feature.**

   Time-delay is the period of time in minutes that needs to pass before the handle of the door can be turned to open the safe. When set, this lockout period commences as soon as the presented fingerprint or password entered has been validated, and the display screen monitors the time that remains in this period. Any reader window or digital pad activity detected during this period will cause the time-delay period to be restarted.

GETTING STARTED - Security level (1)

This section is documented to security level (1) operational requirements. These same instructions can to be used when security level (2) is engaged. The only difference being; level (2) requires each fingerprint presentation to be supported by the entry of its bound password as well.

1. **Install the 9V battery.**

   Please refer to the section dealing with 'Changing The Battery'. Care should be taken to ensure the wires between the battery connector and the entry pad housing are not pulled out. Once the battery is connected, the display screen will scroll through the settings on this unit, as documented below.

   - **30** identifies there is a capacity to store 30 fingerprint enrolments.
   - **Un**,**00** identifies no enrolments presently in place on this unit.
   - **u9**,**20**,**02**,**03** identifies the software version installed.

2. **Switching on the unit.**

   The entry pad needs to be initially turned on before access to the unit is allowed. This is achieved by either momentarily placing a finger on the reader window, or simply pressing any button on the digital pad. In either case, the reader window will be illuminated 'red' in colour and a single 'beep' will sound, indicating the unit is now ready to receive an instruction.

Step 2 With security level (2) active, a bound password needs to be registered against this fingerprint enrolment. **P1** is listed on the display screen as the invitation for the password to be entered. Enter the desired password (re: between 10 & 14 digits), and press and hold ⑨ until **P2** is listed on the display screen.

Step 3 **P2** indicates that a verification of the password is required. Re-enter the password and press and hold ⑨ until **01** is listed on the display screen. This completes the 1st fingerprint password registration cycle.

Please note:
Please refer to the list of error codes in this guide should your 1st fingerprint enrolment prove to be unsuccessful. Issues may relate to the way the fingerprint has been placed on the reader window or the error code listed will identify what has gone wrong with this enrolment. If it simply appears to be a reader issue, retry the enrolment.

2. **Testing the 1st fingerprint and bound password enrolment.**

   Step 1 Place your fingerprint firmly on the reader window and hold in place until the display window lists **F_**, and the reader window is illuminated 'red' in colour.

Step 5 To confirm the security level change, press and hold 🔘 until (2) audible beeps sound. The new security level setting has now been implemented.

GETTING STARTED - Security level (2)

This section documents how the combination of a fingerprint and bound password are enrolled on this unit when security level (2) is engaged. Please note that all security level (1) features documented in this guide all function the same way with security level (2) engaged, with the exception that a password needs to entered and validated with each fingerprint presentation. In this case, documentation in this guide has not been duplicated to take into account the additional entry of a password to satisfy security level (2) demands.

1. **Enrol the 1st fingerprint and bound password (Administrator #1).**
   Step 1 Place your fingerprint firmly on the reader window and hold in place until the enrolment process is completed. The enrolment process will commence by initially listing **F_** & **F1** on the display screen and will successfully conclude by listing **01** on the display screen. The display screen LED is also illuminated 'green' to confirm the 1st fingerprint enrolment has been successfully completed.

CAUTION: It is recommended that ALL administration functions at this point be performed with the safe door open.

3. **Enrolling the 1st fingerprint (Administrator #1).**
   Place your fingerprint firmly on the reader window and hold in place until the enrolment process is completed. This process will commence with **F_** & **F1** being listed on the display screen. If the fingerprint has been scanned successfully, **01** will be listed on the display screen and the display screen LED is illuminated 'green'. (2) audible beeps sound to confirm the fingerprint enrolment has been successfully completed.

Please note:

In the event that your 1st fingerprint enrolment has been unsuccessful and no error code has been listed on the display screen, the problem will then relate to the way the fingerprint has been placed on the reader window. Simply retry the enrolment, taking note of where your fingerprint is being placed on the scan area of the reader window. Alternatively, if any error code has been listed, please refer to the list of error codes to identify what the problem is in relation to this particular enrolment.

4. **Testing the 1st fingerprint enrolment.**
   Place your fingerprint firmly on the reader window and hold in place until the display window lists **F_** and the reader window is illuminated 'red' in colour. If the verification proves to be successful, the display

screen will list **01**, identifying in this case that administrator #1 access has been verified. This will be followed by the display screen LED illuminated 'green' in colour and (2) audible beeps. The handle can now be turned to open the safe door.

Please note:

If the verification step proves unsuccessful, repeat this procedure. Again, care must be taken to place the fingerprint on the reader window in the same manner as the fingerprint was initially enrolled.

ENROL ADDITIONAL FINGERPRINTS - Security level (1)

1. **Enrolling additional fingerprints (Administrator #1 or #2).**
   This process is similar to the fingerprint enrolment procedure outlined in the 'Getting Started' section of this guide, with the exception that additional fingerprint enrolments need to be certified by an administrator.

Please Note:

Each enrolment will be slotted into the next available slot #. A limit of (30) fingerprint enrolments is set on this unit. Any fingerprint enrolment allocated slot #2, will by default acquire administrator privileges. Care should therefore be taken at the start to ensure this privilege is assigned accordingly.

- The time remaining in this period is listed in minutes on the display screen. When the time remaining becomes less than (1) minute, the countdown is listed in (2) second intervals until the delay period has expired**.** The unit is then released and password entry can resume.

CHANGING THE SECURITY LEVEL PROFILE

1. **To change the security level profile (Administrator #1 or #2).**
   Please refer to the 'Security Level Profiles' section documented earlier in this guide.

   Step 1 As one of the registered administrators, unlock the unit by presenting a fingerprint and wait for the verification process to complete.

   Step 2 Press and release the (1₂* Finger) button to gain access to the unit's security profile. **SL** will initially be listed on the display screen.

   Step 3 Press and hold (9₀#) until (2) audible beeps sound. **01** or **02** will then be listed on the display screen to indicate the level of security presently set on this unit.

   Step 4 Buttons (3₄ₛ Password) and (6₇₈ Delete) allow you to toggle between the (2) security settings. Select the security level setting required.

Follow the 'Getting Started' section of this guide to re-commence the enrolment process. The following steps outline the procedure of deleting ALL slot # enrolments.

Step 1 As one of the registered administrators, unlock the unit by presenting a fingerprint and wait for the verification process to complete.

Step 2 Press and hold 🔘(Delete) and 🔘(Finger) together until (2) audible beeps sound. This is followed by **dA** being listed on the display screen. To confirm this action is to be taken, press and hold the 🔘 button until (2) audible beeps sound. This will result in all slot #'s being listed sequentially on the display screen.

PASSWORD ENTRY RETRY LIMIT EXCEEDED

In the event that the unit detects that (4) consecutive unsuccessful password entry attempts have been made, the unit will automatically enter a (4) minute time-delay cycle. The unit interprets this condition as an improper intrusive event and will enforce this lockout condition on the unit as a deterrent against such activity.

The time-delay cycle then commences:

- **EP** is initially listed on the display screen to indicate that a time-delay period has been activated.

Step 1 As one of the registered administrators, unlock the unit and wait for the verification process to complete. A successful administrator verification will result in either **01** or **02** being listed on the display screen. This will be followed by the display screen LED illuminated 'green' in colour, and (2) audible beeps sound to indicate access to this unit has been successful.

Step 2 As the administrator, to enrol a new fingerprint, press and hold 🔘(Finger) until the display screen lists **Fn**. This is the invitation for the new fingerprint to be presented. Place this fingerprint firmly on the reader window and hold in place until the display window cycles through the enrolment verification process. Initially, **F_** & **F1** are listed to indicate the enrolment process is underway. This cycle is completed when the next slot # is listed on the display screen. For example, if this is the 2nd fingerprint to be enrolled, **02** will be listed on the display screen. The display screen LED illuminated 'green' in colour, and (2) audible beeps sound to confirm this fingerprint has been successfully enrolled.

2. **Testing the additional fingerprint enrolment.**
   Place the newly enrolled fingerprint firmly on the reader window and hold until **F_** is listed on the display screen and the reader window is illuminated 'red' in colour.

If the verification process proves to be successful, **02** will be listed on the display screen; identifying in this case that slot #2 access has been verified. This will be followed by the display screen LED illuminated 'green' in colour and (2) audible beeps sounding. The handle can now be turned to open the safe door.

Please note:

If the verification step proves unsuccessful, repeat this procedure again. Care must be taken to place the fingerprint on the reader window in the same manner as the fingerprint was initially enrolled.

Repeat this procedure for all required fingerprint enrolments.

ENROLLING A PASSWORD - Security level (1)

1. **Associate a password to a fingerprint (Administrator #1 or #2).**

   Step 1 As one of the registered administrators, unlock the unit by presenting a fingerprint and wait for the verification process to complete.

   Step 2 To set a password against an enrolled fingerprint, press and hold (3ᴀ Password) until **Pn** is listed on the display screen. This is now the invitation for the enrolled fingerprint to be presented that requires a password to be set. Present the fingerprint.

   Step 3 If verification proves successful, the slot # assigned to this enrolment will be momentarily listed on the display screen and followed

Please note that as an administrator, you are not able to delete yourself through this process.

Step 1 As one of the registered administrators, unlock the unit by presenting a fingerprint and wait for the verification process to complete.

Step 2 To enter the deletion cycle, press and hold (6₇₈ Delete) until (2) audible beeps sound. This will be followed by **dE** being listed on the display screen, and followed by the last slot # enrolment.

Step 3 Buttons (3ᴀ Password) and (6₇₈ Delete) allow you to scroll through all the slot #'s that contain enrolments. Pressing either button allows you to scroll forward or backward through all these slots #'s. Once you have located the slot # that requires its enrolment to be deleted, press and hold (9₀#) until (2) audible beeps sound. **dE** is then listed on the display screen indicating this slot # has now been cleared of it's enrolment. This slot # is then free to be reused in any new fingerprint enrolment.

2. **Delete ALL fingerprints and passwords (Administrator #1 or #2).**

   The decision to delete all enrolled fingerprints is performed when there is a need to reset the entire unit's access profile. In this process, all enrolments, inclusive of both administrator slots, are deleted.

This will be followed by:

- **dU** and the minutes of time-delay set on the unit to be listed on the display screen with the display screen LED illuminated 'green' in colour.

The time-delay countdown cycle then commences:

- For every 10 seconds that passes, a single audible beep will sound.

- As each minute is counted down, the minutes remaining in the time-delay cycle is re-listed on the display screen.

- When it is detected that less than a minute remains in the time-delay cycle, the countdown in 2 second intervals is then listed on the display screen.

- When the full time-delay period has expired; **00** is momentarily listed and followed by **oP**, indicating the handle of the door can be turned to open the safe.

DELETING ENROLLED FINGERPRINTS AND PASSWORDS

1. **Delete a fingerprint or password (Administrator #1 or #2).**

   The deletion of an enrolled fingerprint is performed by clearing that slot # of the fingerprint or fingerprint/password combination details. The following steps outline the procedure of clearing a slot # of this enrolled detail.

up by **P1**. This is the invitation to enter the desired password, (re: between 10 & 14 digits). Enter the password and press and hold ⑨ until **P2** is listed on the display screen.

Step 4 At this point, **P2** is the request to verify the entered password. Re-enter the password and press and hold ⑨ until the slot # associated with your fingerprint enrolment is listed on the display screen. This completes the password registration cycle.

Please note:

If any variation occurs in the cycle documented in these steps, the password registration will be unsuccessful. Take note of any error code that has been listed on the display screen and take the appropriate action. Alternatively, the password itself may be the problem. Simply repeat the exercise and ensure the entered and re-entered password match in this case.

2. **Testing the password enrolment.**

   - Step 1 Press any key momentarily to switch the unit on.

   - Step 2 Enter the password. Once validated, the slot # associated with this password will be listed on the display screen and the display screen LED illuminated 'green' in colour. The handle can now be turned to open the safe door.

Step 5 To save the time-delay setting, press and hold 🔘 until the revised time-delay in minutes is listed on the display screen. For example, if 15 minutes of time-delay has been set on the unit, this now identifies that the handle of the safe door will only be able to be turned once the time-delay period of 15 minutes has elapsed.

Please note:

If you place an enrolled fingerprint on the reader window whilst the time-delay process is still counting down, the time-delay period will be reset and the countdown period will be restarted.

The implementation of the new time-delay setting does not come into play until after the next fingerprint presentation or password entry has taken place.

The original time-delay setting is retained until the full time-delay reset cycle has been completed. For example, in the event the unit powers off during the reset cycle, the original time-delay setting on the entry pad will still apply.

2. **Testing the time-delay feature - Security level (1).**

Present an enrolled fingerprint and wait for the verification process to complete. For example, **03** will be listed on the display screen indicating slot #3 access has been verified.