# Paxton

This supplement is a brief guide to installing a Switch2 system. Further information is available for download at: http://paxton.info/45 or call the communications team on: **01273 811011.**

Reader



Fail closed release
\*

(for Paxton exit buttons GREEN and RED wires go to reader terminals)

Exit button
Black/0V and Exit
(push to make)
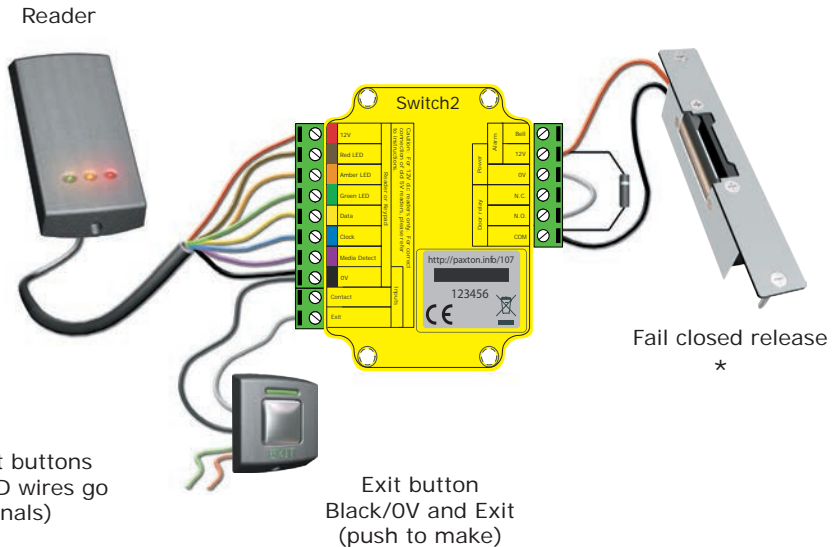
## Fail open locks

For a fail open lock (Maglock), wire 0V to the "N.C." terminal instead of "N.O."

## INITIALISING A NEW SYSTEM

The first time the system is powered up the control unit will beep 3 times a second. This indicates the unit needs programming. There are 3 programming options:

Using tokens only (CARDLOCK or PROXIMITY)  see Section 1

Using codes only (TOUCHLOCK)  see Section 2

Using tokens and PIN/codes (CARDLOCK/PROXIMITY with TOUCHLOCK)  see Section 3

The reader's default indication has all the LED's on.  Access granted is denoted with a single flashing Green LED. Access Denied is a single flashing Red LED.

## FACTORY RESET

1. Disconnect power
2. Disconnect **GREEN** and **MAUVE** wires
3. Insert link wire between **GREEN** and **MAUVE** terminals
4. Reconnect power - unit will beep 4 times
5. Disconnect power
6. Remove link wire
7. Reconnect **GREEN** and **MAUVE** wires
8. Reconnect power - unit will beep 3 times a second
9. Proceed with Initialising a new system

**To change a reader port voltage to 5V,  move the red jumper(s) located beneath the wiring label to the 5V setting.**

# Section 1 - CARDLOCK or PROXIMITY

**Enrolling a card pack.**

Present/swipe enrolment card

FUNCTION CARD
enrolment card

All tokens will now be validated.
Tokens can now be issued to users

**Adding an additional Proximity card pack.** You need to be in possession of a valid enrolment card for this system. Present this enrolment card to the reader and the Amber LED will flash with the Green & Red LED's off. Present the Enrolment card from the new card pack. The reader will beep and all LED's will be lit. The additional cards will now be valid. Repeat this with each reader and with any additional card packs. Any valid enrolment card can be used to add further packs. If an incorrect enrolment card is used to start the process, the Red LED will be lit and the reader will produce a squeak sound as it rejects the card.

**To bar a user:**           Present/swipe user's shadow card
                              The user card is now barred

A user can be re-validated by showing the enrolment card followed
by the user card or re-entered if used in Card+PIN mode.

# Section 2 - TOUCHLOCK

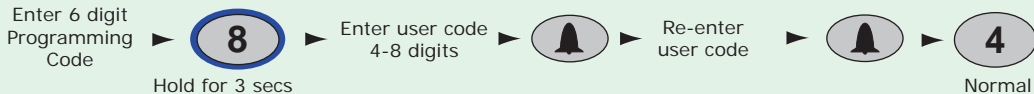**Choose a 6 digit Programming Code and load this into the unit as follows:**

DO NOT USE 123456 - The default User Code (1234) will open
the door before the Programming Code had been fully entered.

🔔 ► 6 digit Programming Code ► 🔔 ► 6 digit Programming Code ► 🔔

**The default user code is now set to 1234**

**You can now set up the user codes and features using the programming chart.**

Example: - Setting a user code to unlock the door under Normal conditions.

Enter 6 digit Programming Code ► **8** ► Enter user code 4-8 digits ► 🔔 ► Re-enter user code ► 🔔 ► **4**

Hold for 3 secs                                                                                      Normal

**START** - Enter the **6 digit Programming Code** and hold down a function key for **3 seconds.** - The unit beeps and the LED flashes faster. Continue the key sequence to set the option - The keypad returns to operating mode.

**Set a user code**
( 8 ) ► Enter user code 4-8 digits ► ( 🔔 ) ► Re-enter user code ► ( 🔔 ) ► ( 4 ) = Normal

OR ( 6 ) = Toggle

**Combined Card & Keypad modes**
( 1 ) [ See Section 3 ]

OR ( 8 ) = Duress

**Door open time (seconds)**
( 5 ) ► ( X )( X )
Enter time in seconds (default = 07, max = 60)

OR ( 2 ) = Delete

**Single or multiple codes**
( 2 ) ► ( 2 ) One code only OR ( 6 ) Multiple codes allowed

**Silent operation**
( 3 ) ► ( 2 ) Beep on OR ( 6 ) Silent

**20 wrong keystrokes = 60 second lockout**
( 4 ) ► ( 2 ) OFF OR ( 6 ) ON

**Exit button**
( 7 ) ► ( 2 ) Open door for time in option 5 OR ( 4 ) Toggle door open until pressed again or toggle code entered

**Change Programming Code**
( 6 ) ► Enter 6 digit Programming Code ► ( 🔔 ) ► Re-enter 6 digit Programming Code ► ( 🔔 )

**Data Reset (except Programming code)**
( 9 ) ► Enter 6 digit Programming Code ► ( 9 )

**Function keys**
( ) = Hold down for 3 secs

## Section 3 - CARDLOCK/PROXIMITY with TOUCHLOCK mode

**(i) The KP reader must first be initialised in TOUCHLOCK mode**: See Section 2
(Individual Toggle function is not available)

**(ii) Set up the required operating mode, as follows:**

Enter 6 digit Programming Code ► **1** (Hold for 3 secs) ► **1** OR **2** OR **3**

Card plus PIN     Card plus Code     Card or Code
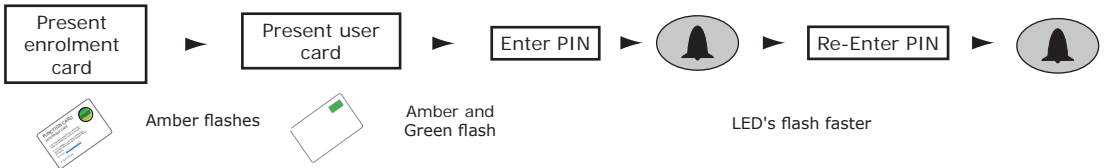
**(iii) Present enrolment card**

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**Card plus Code.** Access is granted by presenting a valid token and then entering a valid user code.

**Card or Code.** Access is granted by presenting a valid token or entering a valid user code.

Touchlock programming - Function 2 to enable multiple user codes, Function 8 to add user codes. (4 digits)

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**Card plus PIN.** A card requires a 4 digit PIN to be assigned to it before it will work, as follows:

Present enrolment card ► Present user card ► Enter PIN ► 🔔 ► Re-Enter PIN ► 🔔

Amber flashes     Amber and Green flash     LED's flash faster

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**This box can be used to write down the Programming Code for future reference.
Ensure that this information is stored in a secure place.**

## Technical Help

Here is the list of topics about this product that receive the most technical support enquiries.
We list them here to help you speed up the installation and trouble shooting process.

**1 - How to reset the controller.**  - See Main Text

**2 - Two readers on the same controller.**
Simply wire the PROXIMITY or CARDLOCK readers in parallel, colour for colour. It is possible to mix 5V and 12V readers. The jumper on the Switch2 must be set to provide 5V at the Red terminal and the 12V reader must then be powered directly from the 12V terminal.

**3. - Replacing a white labelled control unit. (pre 2004 design)**
On a White labelled unit the Red voltage terminal output was 5V DC.  The new Yellow labelled unit has this output set to 12V DC. For systems where 5V readers/keypads are to be used, readers must not be connected to yellow label controllers until the jumper setting has been changed on the controller PCB.
NOTE:  The Touchlock membrane keypad is not compatible with this control unit.

**4 - Initialising with 2 keypads.**
Either Keypad can be used to initialise the controller when using K-Series Keypads. Connect all wires in parallel, colour for colour. If you are using the older Touchlock/SS then you must use the master keypad which has the yellow wire connected to yellow terminal. (The slave keypad will have the yellow wire connected to the mauve terminal.)

**5 - Bell/Alarm Output.**
A 12V DC alarm sounder can be wired between the 12V and Bell terminals. This output is capable of driving a 12V bell/buzzer up to 1A. This load must be taken into consideration when selecting a suitable rated power supply. If door contacts are fitted on a Switch2 system, across the Black and Contacts terminals, the bell/alarm output is activated when the door is forced. On a Switch2 system using a keypad, the bell would normally activate this output. However, when using a door forced alarm, the bell on a keypad will not activate the bell/buzzer connected to this output.

**6 - Door left open alarm.**
This will only work with a fail open release or maglock. Wire the door contact switch to the "Black" (0V) and "Contact" terminals. The alarm should be between the "12V" and "Bell" alarm terminals. The lock is connected across "12V" and the "N.C." terminal and the link between "0V" and "Com.". An additional connection then needs to be made between the "Contact" terminal and the "N.O." terminal. If the door contact is still open when the open time elapses and the door relay returns to its normal position, the door contact is seen to be still open. As this now happens outside of a valid access period it results in an alarm. (This is in effect a door forced alarm that is delayed by waiting for the relay to close) The alarm will sound for 30 seconds.

**7 - Cards - Re-enrolling barred tokens.**
Tokens that have been barred by presenting their corresponding shadow card can be re-enrolled by presenting the Enrolment card to the reader followed by the barred token.

**8 - Cards - Enrolling a function card pack.**
You will need an existing valid enrolment card for this system. Present this enrolment card to the reader and the Amber LED will flash and the Green & Red LED's will be off. Present the enrolment card from the function card pack. The reader will then beep and all the LED's will come on. The function cards will now be valid. Repeat this with each controller.

**9 - Cards - Re-enrol a user - Multiple enrolment cards.**
If multiple card packs are enrolled, there will be multiple enrolment cards. Any enrolment card that is assigned to the system can be used to re-enrol a barred user. Present one of the enrolment cards followed by the user card to re-enrol a barred user.

# Specifications

| Electrical | Min | Max | |
|---|---|---|---|
| Voltage | 11V DC | 14V DC | |
| Current | | 80 mA | |
| Relay switchable voltage | | 24V DC | |
| Relay switchable current | | 4A | |
| **Features** | Min | Max | |
| Number of Users | 1 | 10,000 | |
| Number of Codes | | 50 | |
| Code length | 4 digits | 8 digits | |
| Number of PIN's | | 3,000 | |
| Readers per interface | 1 | 3 | |
| Door open time | 1 sec | 60 sec | |
| Time zones (with additional time clock) | 1 | 2 | |
| Access levels (Colour Zones) | 1 | 3 | |
| Silent operation | | | yes |
| Can be used with fail OPEN locks | | | yes |
| Can be used with fail CLOSED locks | | | yes |
| Exit button input | | | yes |
| Door Contact input | | | yes |
| Alarm/bell output voltage | | | yes |
| **Environment** | Min | Max | |
| Operating temperatures - all items | - 20 °C | + 55 °C | |
| Waterproof | | | no |
| **Dimensions** | Width | Height | Depth |
| Control Unit | 71 mm | 70 mm | 23 mm |
| White plastic housing | 200 mm | 200 mm | 75 mm |

# Contents in box

| | | | |
|---|---|---|---|
| Switch2 control unit | | | |
| White plastic housing - Option | | | |
| 1A power supply with Figure 8 IEC power lead - Option | | | |
| Documentation | | | |
| | | Qty | Description |
| Fitting Kit | fk1-097 | 1 | Switch2 and 1A power supply |
| or | fk1-040 | 1 | Switch2 only |

C E Paxton Access Ltd hereby declares that this product is in conformity with all the essential requirements of the Directive 2014/53/EU. http://paxton.info/3685

The full declaration of conformity is available on request. Contact details are provided at:
http://paxton.info/596

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