Ins-30116 Easyprox nano starter kit

Paxton

Technical Support

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Technical help is available: Monday - Friday from 07:00 - 19:00 (GMT)
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Bench test guide

| What's in the box?		
Net2Air USB dongle		
Net2 demonstration cards and keyfobs		
Documentation		
Part Number	**Qty**	**Description**
746-284	1	Easyprox nano
514-326	1	USB desktop reader

Please go to the following link to download your copy of Net2 Lite software. < http://paxton.info/1438 >

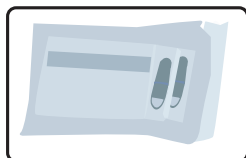The current specification for compatible PC hardware, network and operating systems is available on our website at the following link: http://paxton.info/720
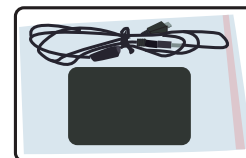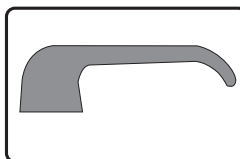
Identify the parts.

1

2

3

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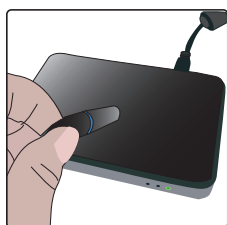

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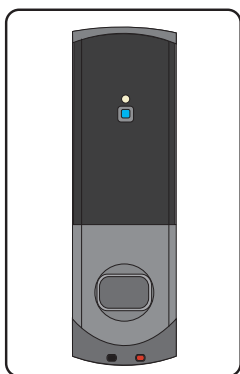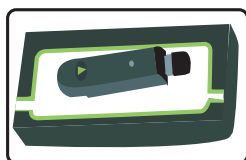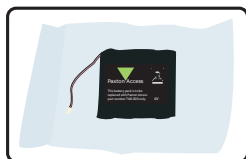
1 - Front lock assembly
2 - Handle
3 - Net2Air dongle
4 - User tokens
5 - Battery pack
6 - Desktop reader
   (underneath main packaging)

Setting up the PC

1. Plug the dongle into a spare USB port.
2. Plug the desktop reader into a spare USB port.
3. Download the software using the link provided.
4. Run the Net2 application - The Net2 Server 'S' icon will display in the System tray.
5. Log in to the application - Password = net2
6. Present a token to the Desktop reader.
7. The 'Add user' page will open. - The token number is displayed in the 'Token number' box.
8. Add a user name and select 'All hours-all doors' as the access level.
9. Click 'Add user' and 'Close'. The user record will display. Use this same token through the remaining sections of this guide.
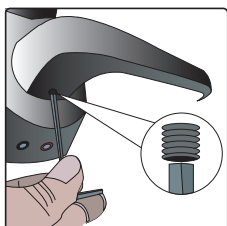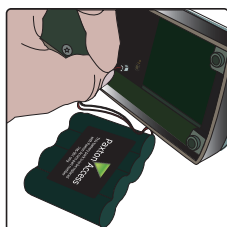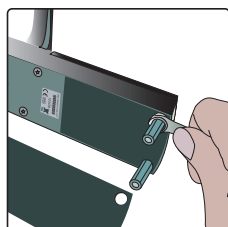
Powering up the Easyprox

1. Remove the plastic access plate at the rear of the unit by removing the top standoff screws.
2. Push the battery pack lead onto the white power plug.
3. Fit the battery pack into the unit and replace and secure the access plate. - The unit will beep twice.
4. LED Indication - Move your hand over the reader and the Red LED will flash. This function is used to turn on the proximity reader to read a token.
5. Slide on the handle and fix with the grub screw.
   - Moving the handle will now also flash the Red LED.

Battery terminals are located on the base to power the unit should the internal battery pack fail during service.

The handle is free to move and does not engage with the lock spindle until access has been granted by presenting a valid user card.

Enrolling the Easyprox

1. With the Net2 software running, click on the Doors icon to display the Doors screen.
2. Present the user card previously enrolled with the desktop reader to Easyprox.
3. The unit will beep and the LED will flash Blue to show Net2Air communications are taking place.
4. Watch the doors screen. The Easyprox will appear as a new door. Any updates for the lock will now be transmitted. - Wait for this to complete.
5. If this fails to happen, move the Easyprox closer to the dongle. If you still have problems, please contact Technical Support.

Software Tour - Click on the following sections in the tree view.

Doors   - This lists all the access control units on Net2 with their type and serial number. Double click on the entry and it will show the settings for this door.

Events - Present the token to the Easyprox. The LED will briefly flash Green and the handle will engage for 3 seconds during which time the unit will beep. The LED will flash Blue during communication with the PC and an entry will appear in the Events Log.

Users   - Select the user. Click the Tokens tab and you will see the token you have assigned. Click the Events tab. You will see the Events logged so far for this user.

Net2 software is common across all Paxton control units (Easyprox, Plus, Classic & Nano) and the screens will self configure to display the relevant data.

Familiarisation

1. Update transmissions.
The Easyprox is a standalone unit. It checks the PC every hour for updates but is otherwise asleep unless woken up to process a user card for access control. This means that changes made at the PC are not immediately received by the lock between these hourly update cycles. Updates (except when the lock is held open by a timezone) can be forced by using the handle to wake up the unit.

Display the Doors screen and double click the entry. Set the door open time to 10 seconds and apply.

If you now touch the handle, the LED will flash Blue as the lock is updated. Presenting a token will now unlock the unit for 10 seconds. Note that if you do not manually call for the update, it would be sent to the door immediately following the next access control token read or at its hourly update.

Restore the door open time to 3 seconds using the above procedure.

2. Net2 Server Configuration Utility.
This utility is used to view the Net2Air bridge units that are being used by the Net2 software. To view this information, run the utility program and select Net2Air bridge tab.

You will see the Net2Air dongle currently in use. This is the screen that you would use to set up Net2Air USB and Net2Air Ethernet bridge units for a larger installation.

3. Software settings - Set up a Door Name.
Display the Doors screen and double click the entry.
Enter the name of the door in the 'Door Name' box and click Apply. If you now click on the Events tab, you will see that the 'Where' column now shows the new name against each entry.

4. Lock assembly - LED indications and Alarms.
Holding the unit in one hand, present the user token and once the LED has flashed Green and the lock has 'clicked' to engage the handle, lower the handle and hold it down.

The unit will attempt to relock after 3 seconds but with the handle held down will fail to do so. The LED will flash Red while it tries to operate the lock. After 10 seconds, the local alarm will sound and it will post 'Easyprox cannot lock' in the Events log. Releasing the handle will stop the alarm and lock the door. A door relock event will be sent to the PC the next time Easyprox communicates with the server.

The following pages contain the full instruction issued with the Easyprox nano.

It includes the following procedures:

- Mounting Easyprox on a door.
- Commissioning.
- Software configuration.
- LED and alarm indications.
- Detailed server operation.
- Battery replacement.
- Flat battery recovery.

The installation requires Net2Air bridge units to achieve the wireless range necessary for reliable communication. The specification table relates to these bridge devices.

The Net2Air dongle provided with this kit should not be used for this purpose.
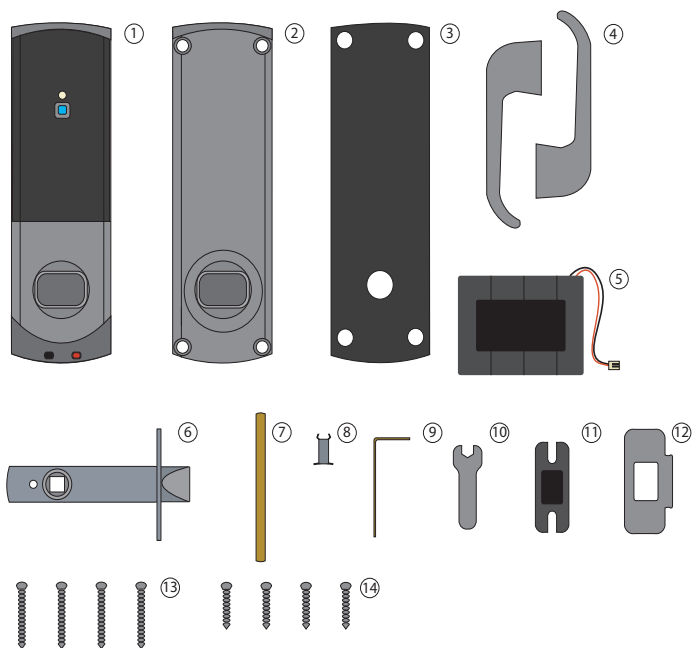
Ins-30107 Easyprox nano

Layout

This wireless unit requires a Net2Air bridge to communicate with the server PC.

This unit is for indoor use only.

Parts list


1) Front Lock Assembly
2) Rear Lock Assembly
3) Rubber Escutcheon x2
4) Left and Right Handles
5) Battery Pack
6) Tubular Mortice Lock
7) Spindle
8) 8 mm Conversion Sleeve
9) 2 mm Allen Key
10) 8 mm Spanner
11) Strike Plate Backbox
12) Strike Plate
13) Long Mounting Screws x4
14) Short Mounting Screws x4

Tools List

Power Drill
Drill bits 10 mm, 25 mm
Philips screwdriver
Hacksaw for cutting bolts
Hammer / Mallet
Chisel 25 mm

Stanley knife
Adhesive tape
Pencil
Tape measure
8 mm spanner   (supplied)
2 mm Allen key (supplied)

Installing the hardware
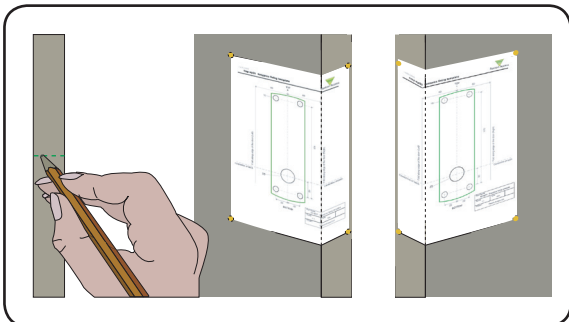
Step 1 - Marking out

Decide on the lock height and mark this on the door.

Fold the template along one dotted line and tape it to the door with the 'Centreline of Latch' at the required height. Mark the 4 x 10 mm and 1 x 25 mm holes. Remove the template, fold along the other dotted line and apply it to the other side of the door at the same height. Mark the holes as before.
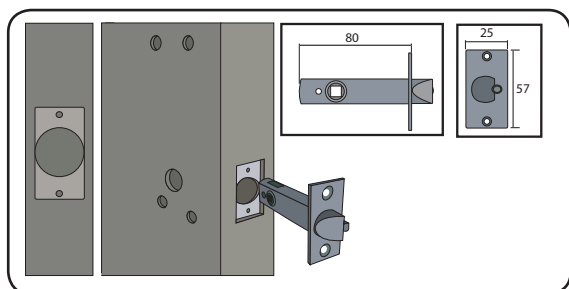
Step 2 - Drilling

Drill a 25 mm hole in the door edge at least 80 mm deep to accept the latch.

Drill the 4 x 10 mm holes for the mounting screws and one 25 mm hole for the spindle. To ensure accuracy you should drill these holes from both sides of the door towards the centre. This also avoids the risk of damaging the door face when the drill breaks through.
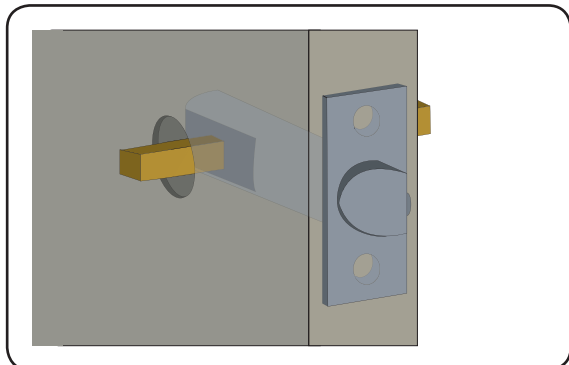
Step 3 - Fitting the latch

Slide in the latch and draw around the faceplate. Remove the latch and score the outline with a Stanley knife to avoid splitting the wood when chiselling.

Chisel a 3.5 mm rebate allowing a flush fit for the latch. Re-fit the latch with the plunger facing away from the door frame and secure with two latch screws.

Cut the spindle to length (Door thickness + 18 mm) and slide into the latch.
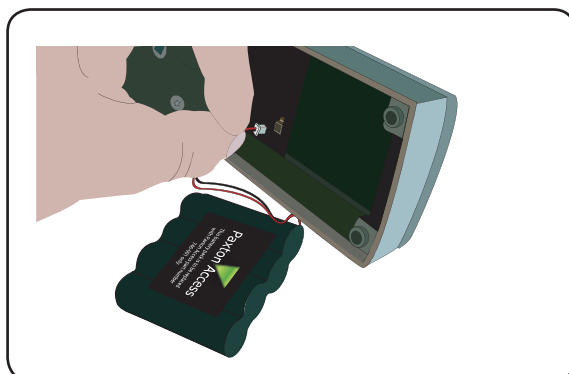
Step 4 - Fitting the battery pack

Remove the access plate at the rear of the unit by removing the top standoff screws. Push the battery pack lead onto the white power plug.

Fit the battery pack and replace the access plate.

Step 5 - Mounting on the door

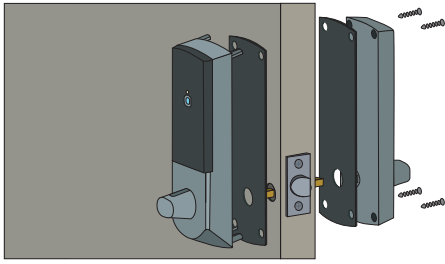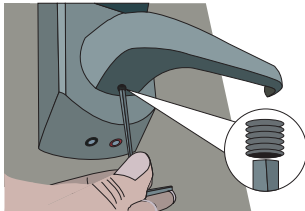Select the short (doors thinner than 45 mm) or long mounting screws and cut to length if required.
(door thickness + 5 mm)

Fit the rubber escutcheons to the front and back plates. Present the front and rear lock assembly to the door, locating the square drive in its recess and join the two parts together with 4 mounting screws.

Step 6 - Fitting the handles

Fit the two handles, positioning the screw holes to the underside and secure with the grub screws provided.

Check the operation of the lock - See Commissioning checks.
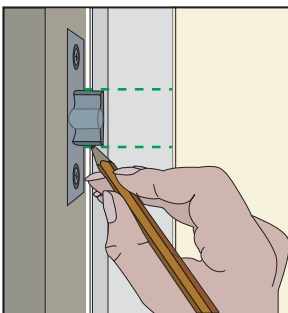
Step 7 - Marking out the strike plate
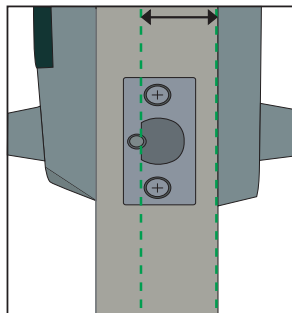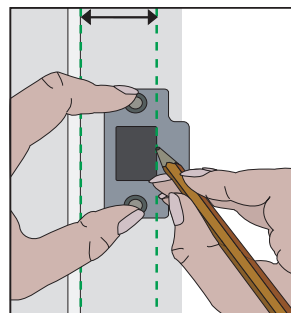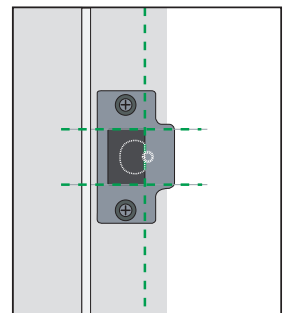
Fig A

Fig B

Fig C

Fig D

Fig A - Vertical position of the strike plate - Close the door and mark the top and bottom position of the latch horizontally across the frame.

Fig B - Horizontal position of the strike plate - Measure the distance from the back edge of the door to the flat face of the latch. (NOT the plunger.)

Fig C - Mark this distance on the frame to show how far back the plate needs to be to hold the door closed.

Fig D - Position the strike plate within these guide lines. Mark the positions of the fixing screws and draw around the 'cut-out' in the strike plate.

Step 8 - Fitting the strike plate

Chisel out a 15 mm aperture to receive the latch bolt.
Fix the strike plate with one latch screw to the surface of the frame.

FROM THE INSIDE: Gently close the door and check that the latch enters the aperture easily with no additional 'play' in the frame. Small adjustments can be made by moving the plate slightly. When satisfied, draw around the outline of the strike plate, remove it. Score around the outline and then cut the rebate to enable the strike plate to lie flush with the surface.

Fix the strike plate using two latch screws and check the lock operation. Remove the strike plate and increase the aperture to accept the strike plate backbox. Now re-fix the strike plate and check the operation of the 'anti-shim' plunger and the door.

The unit is now fully operational and should be enrolled as soon as possible to preserve battery life.

Commissioning checks

With the product fixed securely to the door:

1) Extend the door open time by changing this door's settings on the Net2 PC. Set ' Door open time' to 20 seconds and then present a user card at the door. Before each check, present a user card to unlock the door.

2) Check that the handles are running smoothly, this is best done by depressing the handle all the way to the bottom and then releasing it as slowly as possible, if the handle is left behind at any point it is likely that the product has not been installed squarely enough. Check the handle on both sides of the door.

3) If your finger is able to leave the handle, remove the Easyprox from the door (or slacken the four fixing screws) and see if the problem goes away. If it does, then the installation onto the door is at fault and the drilling of the mounting holes should be checked for alignment.

4) Once the install has successfully passed this test return the door to normal operation by changing the PC setting for this door back to its previous door open time (default 3 seconds) and present a user card.

This test confirms the correct and free operation of the mechanical lock and also ensures that the electronic circuits will shut down correctly preserving battery life.

Software installation

The Net2 software should be loaded on the controlling PC and at least one Net2Air bridge configured to communicate with the unit.

Full documentation is supplied with the Net2Air bridge unit and also on the website as follows:

 AN1051 - Installing Net2 software < http://paxton.info/1520 >
 Ins-30084 - Net2Air USB bridge < http://paxton.info/926 >
 Ins-30085 - Net2Air Ethernet bridge < http://paxton.info/920 >

Download the latest version of Net2 software at: http://paxton.info/1438 before commissioning this product.

The current specification for compatible PC hardware, network and operating systems is available on our website at the following link: http://paxton.info/720

Enrolling an Easyprox

An Easyprox must bind to a Net2Air bridge before it will enrol itself onto the Net2 system. The term 'bind' is used to denote the fixed relationship between a wireless unit and its bridge.

1. Create a user record in the database and assign a Net2 token to the user. This record can be deleted after the installation is complete.

2. You must now wake up the Easyprox. This can be achieved by either raising your hand to be detected by the PIR or moving the handle.

3. Present the same user token to the Easyprox which will then transmit the token number and wait for a response from a bridge.

The software has the 'Enable commissioning mode' set as a default. If this has been turned off in the Server Configuration Utility, it must be enabled for this process to succeed.

If more than one bridge replies, the Easyprox checks the signal strength and selects the strongest bridge to communicate with. The Net2 software confirms that the token number is in the database and if so registers this Easyprox/bridge binding.

An entry is then made on the Doors screen and a special icon is used to denote the wireless connection.

The Blue LED will now flash for several minutes while its software is updated to match the current Net2 version.

There is NO Net2 Easyprox detection function. It is recognised that there could be security issues if the wireless units were detectable from outside the site. During installation, an Easyprox unit binds to a Net2Air bridge which will then only talk to registered units. The Server Configuration Utility also has an ' Enable commissioning' mode which can be turned off to inhibit other units being added.

Software Configuration

Door name: Name the Door.
Door open time: Set the door open time.
Unlock the Door during: Holds the door unlocked during this timezone. - Set to 'At No Time' for normal user operation.

Reader: Local settings for the reader.
Output: Configures the lock for timed release or toggle mode.
Events: Shows the events for this control unit only.
Access Rights: Lists users who have access through this door.

Name: The reader can be named individually if required.
Reader operating mode: Set the operating mode.
Timed operating modes: A different operating mode can be configured within a time window.

Normal Operation

Presenting a valid user token to the unit will cause the LED to briefly flash Green and the door will unlock. The presentation of a barred or unknown user token is indicted by a Red LED display.

The external handle is only engaged once access has been granted. The inside handle is always engaged.

A button on the inside allows the internal handle to be held in the unlocked position.

LED indications	
Blue	Indicates wireless communication with the Net2 software
Green flash + beep	A valid user card has been presented and the handle is engaged
Red flash + low beep	An invalid user card has been presented - No access granted
Red flash	Activity has been sensed but no user card has been presented
Amber constant flashing	A valid user card has been presented - the handle is not horizontal and so the latch cannot release
Red constant flashing	The handle is being held down - The latch cannot relock

Net2Air wireless communication

The access control unit connects to the Net2 system using Paxton Net2Air proprietary wireless technology through a Net2Air bridge.

Radio signals do not always behave as you might expect. For example, a mobile phone that displays a full signal on one part of the site will lose signal completely only a few metres away.

See also: *AN1095 - Net2 wireless access control - How does it work? <* http://paxton.info/974 *>*
                  AN1096 - How to plan a Net2 wireless installation < http://paxton.info/975 *>*

Radio frequency

This product should not be installed within 3 metres of other wireless equipment operating on a 2.4Ghz frequency. To ensure optimum performance other wireless networks should avoid WiFi channels 11, 12 and 13 to reduce the possibility of interference.

Easyprox / server operation

The Easyprox is a standalone unit and stays asleep while there is no user activity. The Net2 server cannot wake up the unit. If the PIR is activated or the handle moved, it powers up the reader circuits in readiness for a token read. Should nothing occur within 3 seconds, the unit will go back to sleep.

If a token is read, then the Easyprox moves into full operation.   The token number is checked against the stored database and access is granted or denied as per a standard Net2 control unit.

The Easyprox now sends this data via its Net2Air bridge connection to the Net2 server software. If any updates need to be sent to the unit, including changes to the user data, these are now transmitted back. The unit will then go back to sleep again waiting for further activity.

After 1 hour of inactivity, the unit will send a heartbeat to the Net2 PC which responds with any updates, as above. This keeps the Easyprox updated even when there is no activity at the door. The 1 hour delay is mitigated by the vastly increased battery life in each unit and the fact that any user activity (card read or handle use) will also cause an immediate update to be made. It therefore follows that a new user may need to trigger an update before being given access through a door.

Some of the Net2 features (e.g. Fire alarm integration, Anti-passback, Lockdown) are not available on this product as wireless communication is not suitable for data critical applications.

During the 1 hour sleep period, any changes made at the PC will not be received. If an immediate update is required, the unit must be woken up by pressing the front button or presenting a user card.

Where a door is held unlocked by software, it will still receive updates every hour. To force an immediate update, the unit must by activated by pressing the front button. A card can then be presented to initiate the update request.

Easyprox reset

The Easyprox holds address information for the bridge that it is bound to. This will cause problems if the unit is to be used on another system.

The unit requires a hardware reset to clear its bridge information. This is achieved as follows:

1. Remove the unit from the door by removing the 4 mounting screws on the rear lock assembly.
2. Remove the access plate at the rear of the front lock assembly (top two standoff screws).
3. Locate the reset push button at the lower right corner of the circuit board.
4. Hold the button down and wake up the unit by briefly depressing the handle. The unit will give a single beep.
5. Push the reset button 4 more times and the unit will beep 5 times and display an AMBER LED.
6. Replace the access plate.
7. Enrol the unit - as above.
8. Refit the lock to the door with the 4 mounting screws.

Low battery warning

When the battery voltage falls below 4V, the user will see a delay between the card being read and access being granted. This delay provides a warning that the battery pack should be replaced.

The warning delay starts at 2 seconds, increasing up to 10 seconds as the battery discharges with use.

Battery replacement

1. Remove the unit from the door by removing the 4 securing screws on the rear lock assembly.
2. Remove the top two standoff screws - Fig 1.
3. Remove the access plate to reveal the battery pack. - Fig 2.
4. Unplug the lead and replace the pack with a new Paxton battery pack. - Fig 3.
   (The unit will retain its settings and should not be manually reset).
5. Refit the access plate and secure.
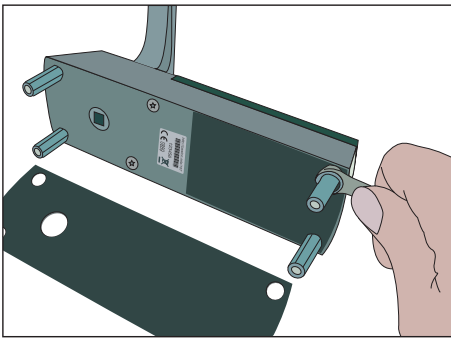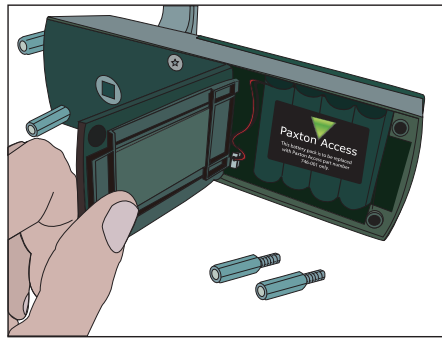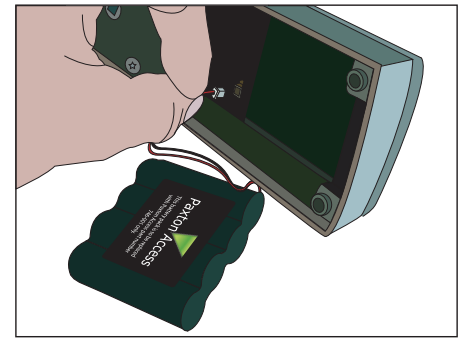6. Refit the unit to the door.

Fig 1

Fig 2

Fig 3

Recovery from a flat battery

Should the battery pack become discharged, the latch will no longer function. This could be in the locked or unlocked state.

Holding a PP3 9V battery up to the contacts on the bottom of the unit will allow the circuitry to operate normally.

A valid user card can then be used to open the door to access the batteries.
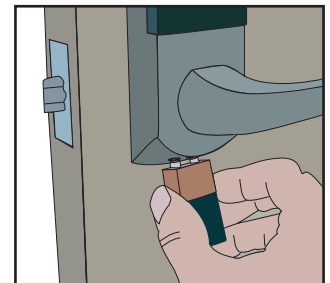
-ve +ve

Alarm Sounder

The alarm is activated when the door fails to re-lock itself. The alarm will sound for 60 seconds during which time the unit will try to lock the door once every 10 seconds. After 60 seconds the unit will then shut down. When the unit is woken up, it will immediately try to lock the door. If it fails, the alarm cycle will start again. Failure to relock will substantially reduce battery life.

Specifications			
Features	Min	Max	
Number of Cards		10,000	
Access levels		250	
Time zones		64	
Maximum door open time	1 sec	99,999 sec	
ACU's per Net2Air bridge - Recommended		10	
Net2Air bridge per system		100	
Net2Air wireless range		20 m	
Events stored in ACU with no server connection		4,096	
Read Range	Token	Keyfob	
	50 mm	30 mm	
Environment	Min	Max	
Operating temperature - Battery limits	0 °C	+ 55 °C	
Waterproof			No
Vandal resistance			Low
Battery type - High capacity (746-003)			Paxton Battery Pack
Typical battery life		30,000 operations	
Dimensions	Width	Height	Depth
Reader/Keypad module (required space on door)	60 mm	194 mm	30 mm
Total outside dimensions (includes handle clearance)	150 mm	194 mm	72 mm

CE0889   The declaration of conformity is available on request. Contact details are provided at: http://paxton.info/596