

Access Control

FaceKey Biometric Security Suite

Quick Installation Guide

For Fingerprint Control Version 3.0



Version 3.0 September 2003

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Introduction

The instructions in this manual refer to version 3.0 of the FaceKey Biometric Security Suite.

The FaceKey Biometric Security Suite provides an integrated security system for access control based around a central controller with an optional battery back-up - Uninterruptable Power Supply (UPS) to ensure lock operation in the event of mains power failure. The Biometric Access Controller is installed inside the secure area. The camera/fingerprint or ID card reader (depending on the options that have been specified) are installed outside the secure area.

The controller can manage the use of up to two door strikes or bolts, restricting access through the door/s using high technology 'biometric' systems that offer the very highest level of security.

FaceKey's recognition technology identifies an individual based on the unique elements of each person's fingerprint or face, with no need for cards, keys, passwords or PINs (though the system can be run with a card reader attached to provide a double level of security if needed).

It is important to note that the fingerprint itself is not stored anywhere, but a unique ID is created for each user based on the information taken from the fingerprint.

A camera and up to two fingerprint readers can be connected, or a fingerprint reader and an ID card reader if required.

This guide is designed to provide quick installation instructions for the FaceKey Biometric Security Suite hardware and should be used in conjunction with the Client and Server software manual. Depending on the options that have been selected for your particular set-up, not all the sections of this guide will be needed by you, refer to the sections suitable for your specific installation.

Important Information

Please read this information before attempting any installation procedures.

WARNING

When connecting up the Biometric Access Controller ensure that the mains power supply is safely isolated. Only power up the controller when installation is complete.

Do not remove the earthing nuts fastened to the side and door of the Access Controller - these are marked with red sealant.

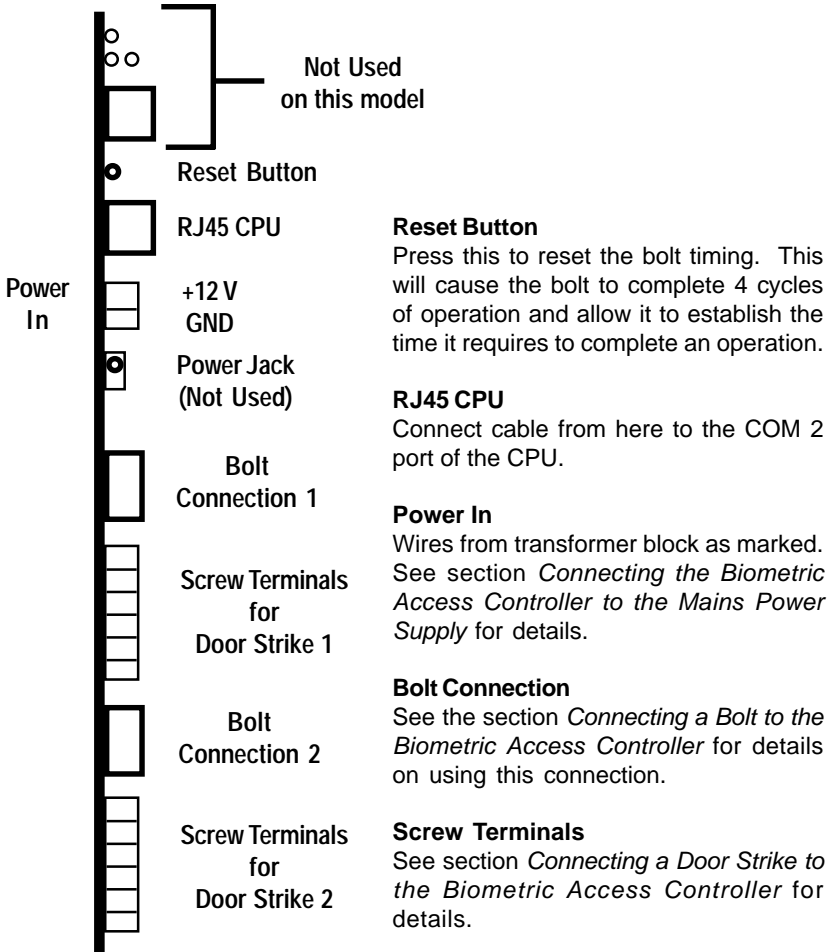
If the battery back-up option is fitted, and If testing or using the Biometric Access Controller without the battery itself actually fitted, ensure that the connectors at the end of the battery leads are insulated

Location Advice

When installing the Biometric Access Controller, please take into account the length of cable required to connect the controller to the device, fingerprint reader, network and mains power supply.

Lock Controller Board Connections

Front View of Connections on the Lock Controller Board
(fixed to the Left side wall of the box)



Not shown: fingerprint reader connections. See section *Connecting a Fingerprint Reader to the Biometric Access Controller* for details on using these connections.

CPU Connections

Important Note: *individual access controllers will differ in the layout of the CPU ports. The ports configuration will be the same as on a regular PC.*

The Biometric Access Controller is supplied with all software pre-installed. A mouse, keyboard and monitor can be connected to the CPU to allow IP address/network configuration and operation of the software.

Other ports on the CPU that will be used are:

USB Ports

The USB ports are used by the fingerprint readers (up to two) and the camera. See the section *Connecting a Camera or Fingerprint Reader to the Biometric Access Controller* for details.

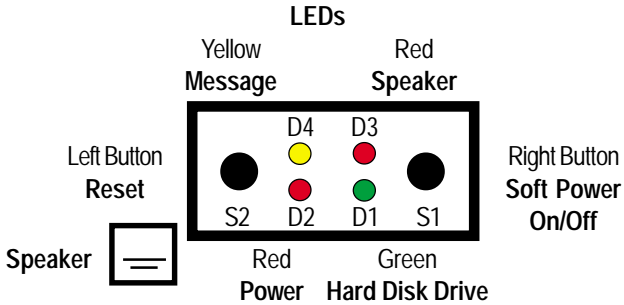
COM 2 Port

This port is used for the CPU to communicate with the lock controller board - this will be set up at the factory and does not need to be altered by the user.

RJ-45 10baseT Network Port

This port is used for connecting the CPU to the network. See the section *Connecting the Biometric Access Controller to the Network* for details.

CPU Control Board Functions



Depending on the layout of the FaceKey Biometric Access Controller (which might be different according to the options fitted) the control board functions layout might be rotated within the box to be viewed differently from that shown above.

Use this labelling list to establish the functions of the buttons and LEDs:

- S1 Soft Power On/Off
- S2 CPU Reset
- D1 Hard Disk Drive
- D2 CPU Power
- D3 Speaker
- D4 Optional (Message)

Connecting a Camera or Fingerprint Reader to the Biometric Access Controller

Both the camera and the fingerprint readers connect to **USB** ports on the CPU of the Biometric Access Controller. All drivers for both the camera and the fingerprint readers are pre-installed, which automatically allows communication between the camera or fingerprint reader and the software.

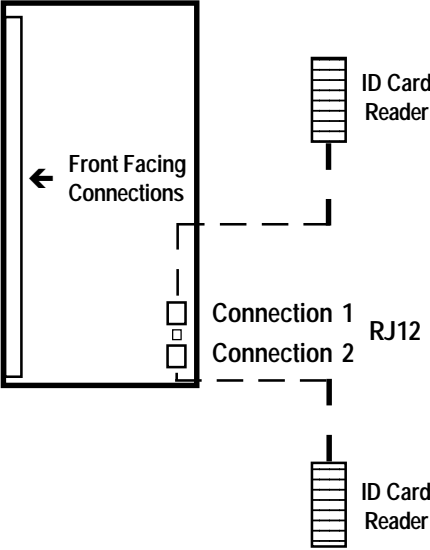
Generally, the devices will be recognised in the order in which they have been plugged into the access controller. For example, a fingerprint reader plugged into the controller's first USB port will appear in channel 1 of the software, a second fingerprint reader plugged into the second USB port will appear in channel 2. It might be necessary to switch around the USB ports to ensure that the correct camera or reader is in the correct channel in the software for your requirements.

This completes the connection of the camera or reader to the Access Controller.

Connecting an ID Card Reader to the Biometric Access Controller

An ID card reader can be connected to the controller with a fingerprint reader if required. This will connect to an **RJ12** port at the back of the lock controller board. Up to two card readers can be connected. The diagram below shows the location of the ports:

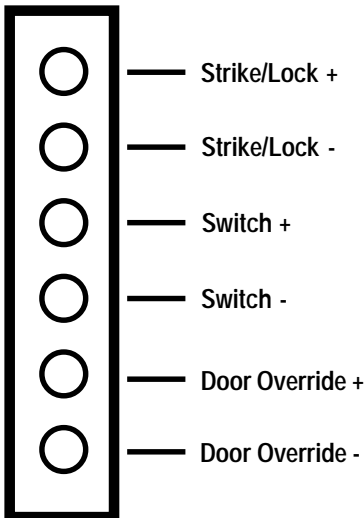
Lock Controller Board
(Fixed to the Left Side of the Controller Box)



Connecting a Door Strike to the Biometric Access Controller

The wires from the door strike are connected to the **Screw Terminals** on the lock controller board. The lock controller board is located on the left side of the Biometric Access Controller. Below is a front view of the terminals (there will be two sets of screw terminals to enable two door strikes to be connected so this layout will be repeated twice).

Screw Terminal Configuration
Top to Bottom



The door strike is connected to the 6-way screw terminal as follows:

The 2-way terminal block of the door strike mechanism is marked with +(plus) and -(minus).

Connect a wire from the **+(plus)** terminal of the mechanism to the **Strike +** connector on the screw terminal.

Connect a second wire from the **-(minus)** terminal of the door strike mechanism to the **Strike -** connector on the screw terminal.

Optional Terminals

Use the **Door Override** terminals if a door override switch is to be fitted.

Another device can be connected to the **Switch** terminals if required (for example a push button for exiting the door or a break glass feature to open the door in an emergency).

Connecting a Bolt to the Biometric Access Controller

The bolt will be supplied with the cable for the connection, and will have an IDC 6-way connector at each end. The cable from the bolt is connected to the **Bolt** port on the lock controller board. The lock controller board is located on the left side wall of the Access Controller. See the diagram in the *Lock Controller Board Connections* section to locate the port (there will be two bolt ports to enable two bolts to be connected so this layout will be repeated twice).

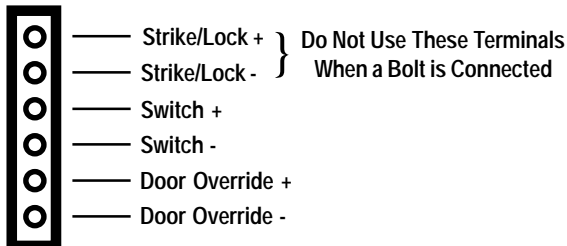
IMPORTANT

Insert the cable's 6-way connector with the long edge of the plastic cover facing the high lip of the male port on the controller Board.

If additional switches are required (for example a push button for exiting the door or a break glass feature to open the door in an emergency) the screw terminals alongside the port can be used to add further connections. For details on using these terminals see the section *Connecting a Door Strike to the Biometric Access Controller* (the only difference will be that the *Strike/Lock* terminals will be inoperative when the bolt is connected).

Screw Terminal Configuration

Top to Bottom (as viewed when fitted into box)



Connecting the Biometric Access Controller to the Mains Power Supply

Standard Fitting

The mains supply cable is connected to the CPU inside the controller. The connection is located under the fan. Pass the cable through the cable access hole on the right side of the box.

Door Strike/Bolt UPS Battery Back-Up Option

If this option is fitted to the control box, the connection procedure is different. Please see below:

WARNING

ENSURE THAT THE POWER SUPPLY IS ISOLATED BEFORE ATTEMPTING CONNECTION

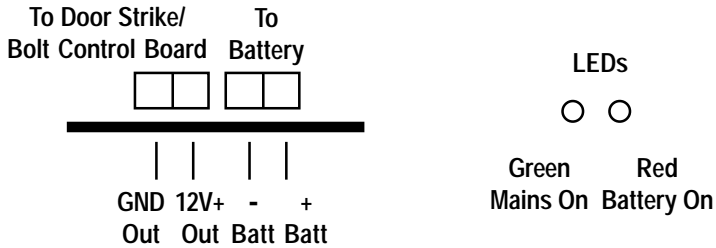
Depending on the local safety regulations, it is recommended that the Access Controller be connected to a switchable and/or fused distribution point with a higher rating than the internal mains fuse.

Fuse rating for fuse F1 (Mains Fuse) is T1.0 A/250V
Fuse rating for fuse F2 (Battery Fuse) is T3.15 A/125V

Always replace a fuse with one of the same rating.

- 1 Plug the supplied mains power lead into the socket on the left end of the Power Supply board (this is located on the floor of the Access Controller).

Following is a view of the terminals on the Power Supply board.



- 2 The **Ground** and **+12 V** wires connect to the lock controller board that is fixed to the left side of the box.
- 3 The **+** (**positive**) and **-** (**negative**) battery leads fit to the respective connectors on the battery (**Note:** three sets of leads with different connectors will be supplied with the Access Controller - use the type that is suitable for the battery that you are fitting).

Battery Details

Any sealed lead acid type rechargeable battery of **12V DC** with **1.2Ah** up to **17 Ah** should be suitable up to a maximum size of:

Width: 180 mm

Depth: 75 mm

Height: 167 mm

The storage capacity of the battery to be used will depend on your particular requirements. An example of a suitable 1.2 Ah battery is the YUASA NP1 2-12. An example of a suitable 17 Ah battery is the YUASA NP17-12i.

Warning

If testing or using the Access Controller without a battery back-up fitted ensure that the connectors at the end of the battery leads are insulated.

- 4 Connect the power supply cable to the mains supply and power up the Biometric Access Controller.
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Connecting the Biometric Access Controller to a Network

If required, the Access Controller can be connected to an Ethernet network.

The port for the Ethernet network connection is on the **CPU**. See the diagram in the *CPU Connections* sections to locate the port.

Connect the 10base-T network cable to the **RJ-45 Ethernet Port**.

The CPU will need to be configured to the network with an IP Address. This can be done using Windows which comes pre-installed on the CPU.

Connecting the Lock Controller Board to the CPU

The lock controller board is located on the left side of the Biometric Access Controller. It connects to the CPU via a supplied cable running from the **RJ45 CPU** port of the lock controller board (see the diagram in the *Lock Controller Board Connections* section to locate the port). The cable connects to a **COM 2** port on the CPU.

Note: this cable is already factory fitted.

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