Gym Assistant
Proximity Access Control Setup

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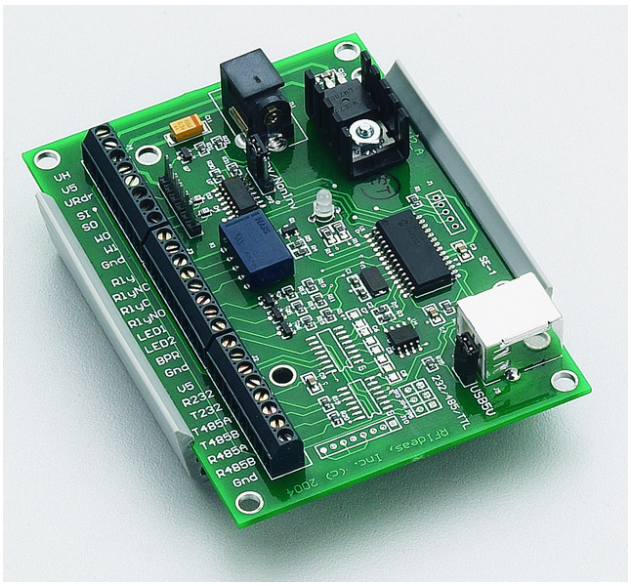
www.gymassistant.com

Note: Please read this entire document before beginning your installation.



1. Introduction

The Weigand/RS232 Converter interfaces between any HID proximity card reader and a 9-pin serial port. The Converter also includes a relay that can be used to trigger an electronic lock. Note that the relay does not actually power the lock, it merely closes a circuit to allow current to flow to the lock.

Note: The Proximity Card interface requires Gym Assistant 2.0. If you do not have version 2.0, please contact Bio-Logic.

2. Before You Begin…

Please read this entire document before beginning your Door Controller installation.

Installing our Access Control system requires only a very basic knowledge of wiring and electronics. These instructions have evolved from over ten years of helping our customers setup and troubleshoot their systems.

We strongly recommend that you connect all of the hardware on the desktop or counter and test the system before installing. This will allow you to work out any technical issues much more easily than after you have run wires and mounted the hardware.

You should also perform any tests included in each step of the installation. Each test is intended to confirm that part of the system before moving onto the next part.

If you have any questions before or during installation, please don't hesitate to call us at 1-877-496-2778 or email support@gymassistant.com.

3. Locating the hardware

The **Proximity Card Reader** can be mounted anywhere outside near the door to be controlled. It does not need to be mounted on the door frame itself since you can specify the amount of time that the door is unlocked after the member swipes his/her card.

We recommend placing the **Weigand Converter/Door Controller** near the computer (for example, mounted under the counter at the front desk). This will allow you to most easily diagnose any problems you may have.

4. Connect the Door Controller to your computer

Plug the flat connector into the connector strip labelled "J10" on the door controller. The J10 connector strip is located near the **Gnd** end of the terminal strip, and it has a white outline around all the pins with an additional white box around the pin on one end. The **brown** wire on the serial cable should be connected to the pin with the surrounding white box.

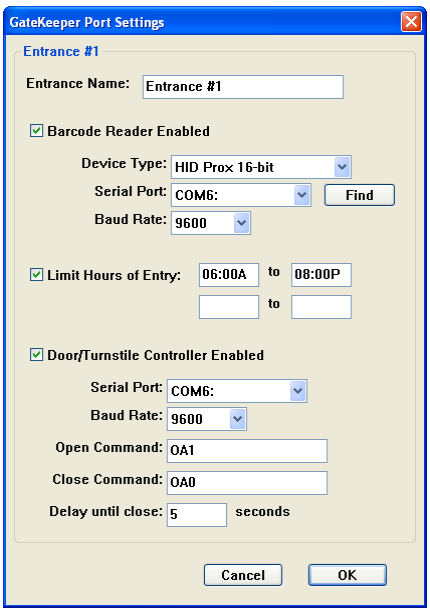
Plug the AD Adapter into the round socket on the door controller. The LED on the door controller should turn red.

If you are connecting multiple

Connect the 9-pin serial to any available serial port on your computer. If you do not have any serial ports available, please see Adding serial ports to your computer below.

5. Configure Settings in GateKeeper

- Start the GateKeeper 2.0 application.
- Select **Ports** from the **Settings** menu. (see below)
- If you are operating two entrances (one for the front-desk and another for the entrance door), then you should see two entrances in the window. Set the controlled entrance as Entrance #1. If you need two entrances but see only one entrance, then please contact Bio-Logic for the code to activate the second entrance.
- Check the **Barcode Reader Enabled** box
- Set the **Device Type** to **HID Prox 24-bit**
- Set **Serial Port** to the port that is connected to the access reader. If you are not sure which port is connected to the reader click the **Find** button then scan a card through the reader. GateKeeper should report which port is connected to the reader.
- **Baud Rate** should always be set to 9600.
- If you want to limit the hours during which the entrance is active, then check the **Limit Hours of Entry** Check the **Door/Turnstile Controller Enabled** box.
- Set the **Serial Port** to the correct port and the **Baud Rate** to 9600.
- Set the **Open Command** to "OA1" (Letter 'O' + A + One, without quotes)
- Set the **Close Command** to "OA0" (Letter 'O' + A + Zero, without quotes)
- Set the **Delay until close** to the number of seconds that you want the door to remain unlocked.
- Click **OK**



Now click the **Open Gate** button in **GateKeeper**. You should hear a click as the relay opens and closes.

6. Connect the Proximity Reader to the Converter

You will find the wiring configuration for your reader in the documents that came with the reader. Be sure to keep these documents in a safe place as you may need them at some point in the future. Below is the standard wiring for most HID proximity card readers.

Reader Wire Color	Description	Converter Terminal
Red	+DC (5-16VDC)	V5
Black	ground	Gnd
Green	Data 0 (data)	W0
White	Data 1 (clock)	W1
Drain	shield ground	
Orange	green LED	LED1
Brown	red LED	LED2
Yellow	beeper	BPR
Blue	hold	(not used)
Violet	card present	(not used)

When the converter is powered up you should hear two short beeps. The LED on the controller should be green and the LED on the reader should be red.

Scan a card near the reader. The reader should beep and the reader LED should flash green and then turn back to red. This means that the controller received a successful scan from the reader.

7. Test the Electronic Lock Operation

Most **electromechanical locks** and **door strikes** are unlocked by closing a circuit and applying a voltage to the lock. This is called a "**Normally-Open**" electrical circuit because in the normal state there is no power flow. The door strike is locked when there is no power to it, and the door strike releases when power is applied.

A **magnetic** lock is held locked by maintaining a voltage to an electromagnet. With the magnet energized a steel plate on the door is held very tightly, keeping the door closed. To unlock the door you must interrupt the power from flowing to the magnet, allowing the steel plate to move away from the magnet. This is called a "**Normally-Closed**" electrical circuit because in the normal state there is power flowing through the circuit.

The Proximity Door Controller can operate in either a **normally-open** or **normally-closed** configuration.

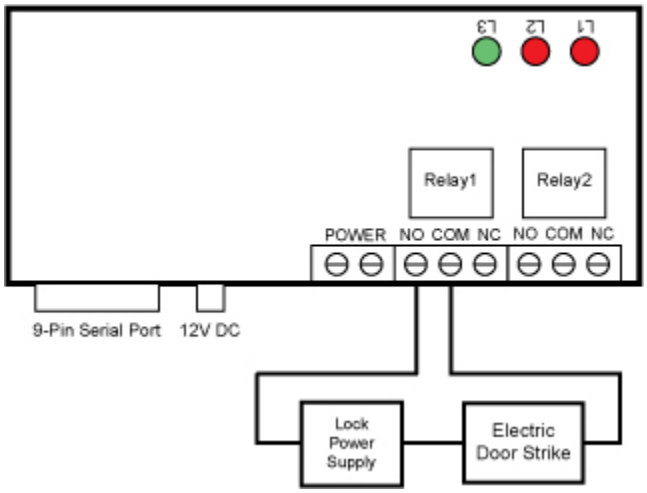
Whether normally-closed or normally-open, the door lock circuit requires a separate **power supply** to provide voltage to the lock.

To test a Normally-Open lock operation, touch the two leads from the lock to the two leads (or terminals) on the power supply. The lock should click as power flows to the lock, causing the lock to release. When you break the connection the lock should click again as the power stops flowing to the lock, causing the lock to re-lock.

To test a Normally-Closed lock operation, connect the two leads from the lock to the two leads (or terminals) on the power supply. The magnet should be energized. If you disconnect any of the leads the magnet should release.

8. Normally-Open Circuit (Electric Door Strike)

- Connect **RlyNO** terminal on the Door Controller to <u>one</u> terminal of the **external power supply** (it doesn't matter which one)
- Connect one **Lock** wire to <u>other</u> terminal of the **external power supply**
- Connect the other **Lock** wire to **RlyC** terminal on the Door Controller.
- Click the **Open Gate** button in **GateKeeper** –the lock should click opened and then close.



Normally-Open circuit using external power supply

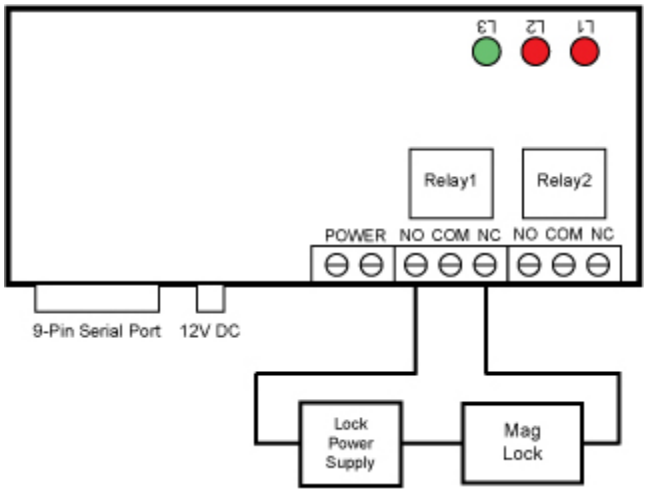
9. Normally-Closed Circuit (Mag-Lock)

For a normally-closed circuit (e.g. a magnetic lock) you will need an external power supply.

To test that the Mag-Lock and power supply, connect the two wires from the lock to the power supply terminals. The lock should be energized and locked. If you disconnect one of the wires from the power supply, then the lock should be released.

To connect the Door Controller to a Mag-Lock:

- Connect **RlyNC** terminal on the Door Controller to <u>one</u> terminal of the **power supply** (it doesn't matter which one)
- Connect one **Lock** wire to <u>other</u> terminal of the **external power supply**
- Connect the other **Lock** wire to **RlyC** terminal on the Door Controller.
- The magnet should be energized, and the door should be locked.
- Click the **Open Gate** button in **GateKeeper** – the lock should release and then lock again.



Normally-Closed circuit using external power supply

10. Test the Door Controller

In GateKeeper, click the **Open Gate** button. You should hear the relay close. After the prescribed time you should hear another click and relay should open.

If nothing happens, then select **Ports** from the **Settings** menu. Then change the **Serial Port** selected under the **Door/Turnstile Controller Enabled** item and try again.

11. Inputting Card Numbers into Gym Assistant

Every proximity card is identified by an 8-digit number that is composed of two parts:

- A 3-digit Facility Code
- A 5-digit card number

In order to guarantee that the proximity cards will work with Gym Assistant the software must have all 8 digits from the card.

To set the card number for a member in Gym Assistant, click the Barcode button while viewing the member's record.

If you scan the members card through the reader then the full 8-digit card number will appear.

If you enter the card number manually you must remember to add the 3-digit Facility Code before the 5-digit card number.

12. Other Imporant Topics

Adding serial ports to your computer

You may need to add one or more serial ports to your computer. You can purchase and install a serial interface (RS-232) card into your computer to provide 2-4 additional serial ports. If you are unsure about installing hardware into your computer, then we recommend that you have a local computer shop install these cards for you.

You can easily add ports yourself, however, by purchasing one or more USB-to-Serial adapters. These adapters plug into a USB port and provide a connector to plug in a serial cable. Make sure that you install the software that came with the adapter before plugging the adapter into your computer.

Windows Energy Settings

It is very important that you change your Windows energy settings to ensure that the entrance remains operating for long periods.

- Open the Control Panel (from the Start button).
- If the label Pick a Category appears, click on Performance and Maintenance.
- Open the Power Options icon.
- Set System Standby to Never.
- Click the Hibernate tab.

- Uncheck the Enable Hibernation checkbox.
- Click OK.
- Close the Control Panel.

Backup power supply

You should purchase a battery backup (also called an Uninterruptible Power Supply or "UPS") and power your computer through it. We recommend that you do not connect any devices other than your computer to the UPS in order to maximize the amount of time that the computer will run in the event of a power outage. Note that connecting your video monitor to the UPS will severely reduce the available battery time.

Computer BIOS Settings

We recommend that you enlist the help of a computer-savvy person to access your computer's low-level BIOS settings and set the configuration that will cause the computer to automatically restart in the event of a power failure. The BIOS settings can usually be accessed by pressing the DELETE or F2 key when your computer first powers on.

Securing the Computer and your club

We recommend that you secure your computer in some way to prevent members from accessing your data or operating the computer. Consider one or more of the following methods to protect your equipment while you are away:

- Keep the computer CPU locked in a cabinet under the desk.
- Unplug the keyboard, mouse and monitor. Lock the keyboard and mouse in a secure place.
- Locate the CPU in a locked room and run a set of long cables (keyboard, mouse, video, speakers) to the front desk for daytime operation.
- Set a password on your system and set your screensaver to require the password.
- Install a video surveillance system to monitor activity at the facility while you are away.

If you have any questions about security, please call Bio-Logic.

Remote Access to Your Computer

Remote access solutions allow you to connect to your computer remotely, which is a very good thing to have when you get a phone call at 5am from a disgruntled member who can't get into the club. GoToMyPC.com and LogMeIn.com both offer excellent solutions for remote access.