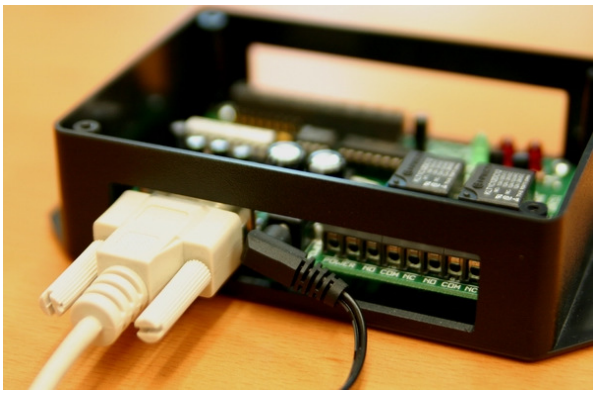
Gym Assistant
Barcode Access Control Setup

Updated August 2010
www.gymassistant.com



1. 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.

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.

2. Important: Test the system components before installing

We strongly recommend that you connect all of the hardware on the desktop 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.

3. Locating the hardware

The **Slot Barcode 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. Place the barcode reader in a location that will be protected from the elements as much as possible. You might also consider placing it in a location that is not easily visible from passersby. If weather is a problem, then you might consider purchasing a hinged plastic cover from Bio-Logic.

We recommend placing the **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 and makes it easy to access the wiring for the controller.

4. Wiring the Barcode Reader

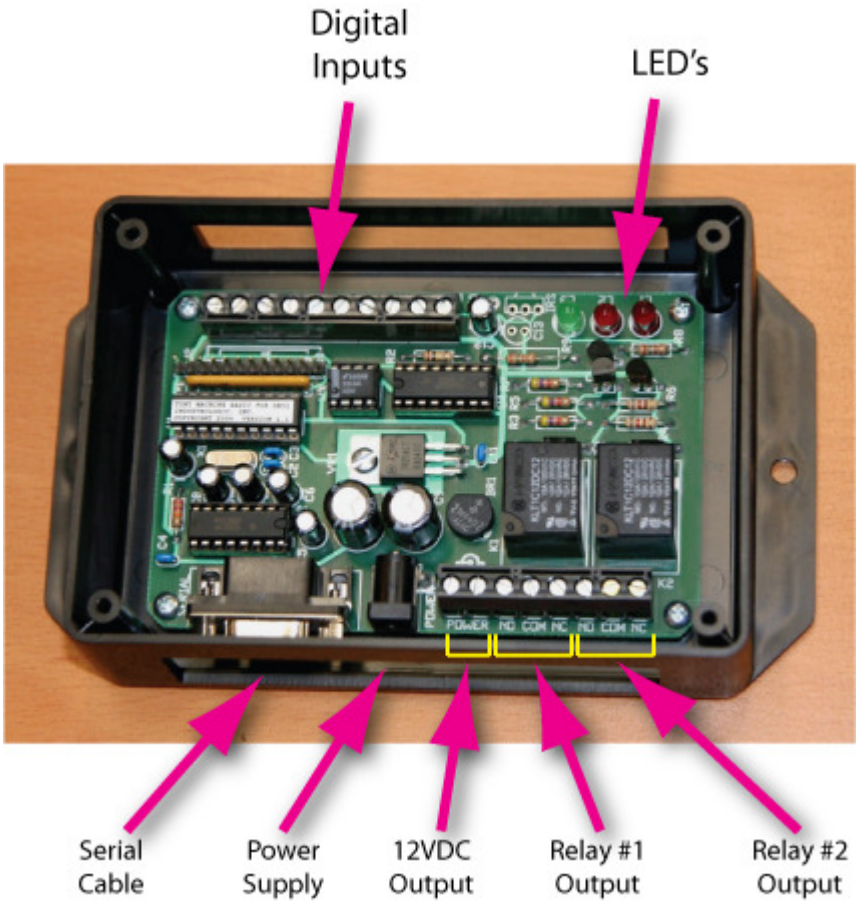
The slot barcode reader included with your access control system is a serial (RS232) device. Because a 9-pin RS232 cable has a very large connector we have modified the cable to make it easier to pass through a wall. The 6-foot serial cable is cut and spliced with RJ45 connectors, which can pass through a half-inch diameter hole. This cable can be extended using a standard Cat5 networking cable up to 100 ft long. At distances over 100 ft the Cat5 extension reliability suffers, though. For longer distances (up to 300 ft) you should use a standard 9-pin serial (RS232) extension cable (or series of cables) for the majority of the distance, and use the Cat5 extension only for the distance needed.

Please call us if you have any questions about wire length

5. Connect the Door Controller to your computer

Connect one end of the 9-pin serial cable to the Door Controller and the other to any available serial port on your computer. If you do not have any serial ports available, you will have to use a USB/Serial Adapter (available at any computer store, at most office supply stores and on our website at www.gymassistant.com/store).

Connect the included power supply to the Door Controller as shown below. The green LED in the Door Controller should blink three times and then remain ON. ***Note: Do not connect any other power supply to the Door Controller, as this can damage the electronics! The power supply should be labeled "Output: 12 VDC, 500ma".***

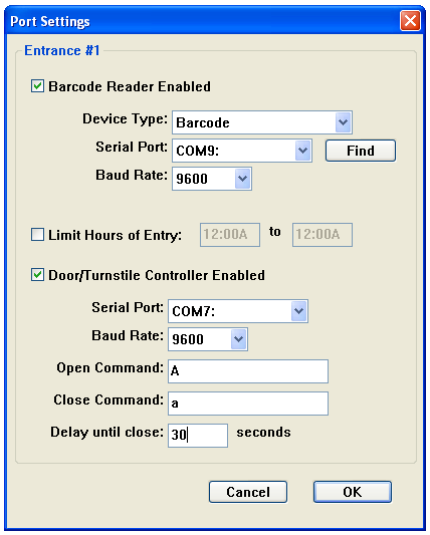


6. Configure Settings in GateKeeper 2.0

****** If you are using Gym Assistant Version 1.5, please skip to the next section. ******

- Start **GateKeeper 2.0**.
- 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. If you need two entrances but see only one entrance, then please contact Bio-Logic for the registration code to activate the second entrance.

  Note: The main access door should be set as Entrance #1.
- Check the **Door/Turnstile Controller Enabled** box.
- 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** checkbox and set the desired hours.
- To control **Relay #1**:
  - Set the **Open Command** to "**A**" (without quotes)
  - Set the **Close Command** to "**a**" (without quotes)
- To control **Relay #2**:
  - Set the **Open Command** to "**B**" (without quotes)
  - Set the **Close Command** to "**b**" (without quotes)
- Set the **Delay until close** to the number of seconds that you want the door to remain unlocked.
- Click OK



Version 2.0 Port Settings

7. Configure Settings in GateKeeper 1.5

****** If you are using Gym Assistant Version 2.0, please go back to the previous section ******

- Start **GateKeeper 1.5**.
- 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. If you need two entrances but see only one entrance, then please contact Bio-Logic for the code to activate the second entrance.

  Note: The main access door should be set as Entrance #1.
- Check **the Door/Turnstile Controller Enabled** box.
- Set the **Serial Port** to the correct port and the **Baud Rate** to **9600**.
- Set the desired **Hours of Operation** for this entrance. If you want the entrance to be active whenever GateKeeper is running, then set the hours to 12am-12am.
- Click **OK**
- Select **Preferences** from the **Settings** menu. (see below)
- To control **Relay #1**:
  Set the **Door/Turnstile Open Command** to "**X1**" (without quotes) to have the door remain open for 10 seconds. Increase the number after the **X** as appropriate for your installation. The number after the **X** specifies the length of time that the door is unlocked by 10-second increments. For example "**X3**" would indicate a 30-second delay.
- To control **Relay #2**:
  Set the **Door/Turnstile Open Command** to "**Y1**" (without quotes) to have the door remain open for 10 seconds. Increase the number after the **Y** as appropriate for your installation. The number after the Y specifies the length of time that the door is unlocked by 10-second increments. For example "**Y3**" would indicate a 30-second delay.

8. Test the Door Controller

In GateKeeper, click the **Open Gate** button. You should hear a loud click and the appropriate red LED (labelled L1 for Relay#1 or L2 for Relay#2) in the Door Controller should turn ON. After the time delay that you specified you should hear another click and the red LED in the Door Controller should turn OFF again.

If nothing happens, then confirm your **Port** and **Open**/**Close** commands and try again.

9. 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.

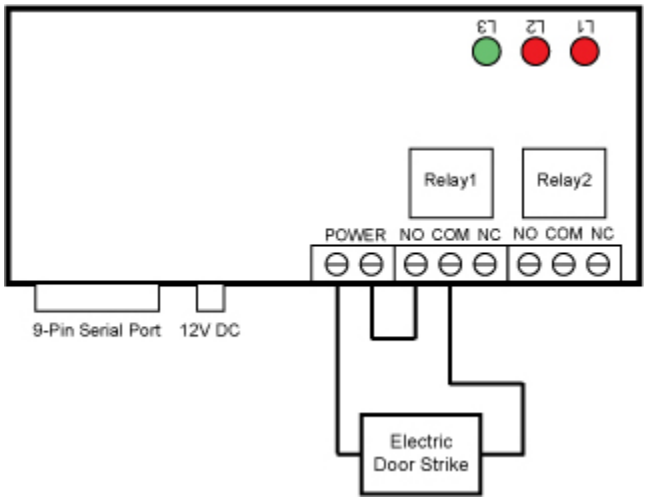
10. Normally-Open Circuit (Electric Door Strike)

*If the lock requires 12VDC then you should be able to tap into the onboard **12VDC Output** terminals on the Door Controller board.*

To test that the 12VDC Output is sufficient, touch the two wires from the lock to the 12VDC Output terminals – the lock should click open and closed.

To power the lock using the onboard 12VDC Output:

- Connect **NO** terminal on the Door Controller to **Left 12VDC Output** terminal on the Door Controller
- Connect one **Lock** wire to **Right 12VDC Output** terminal on the Door Controller
- Connect the <u>other</u> **Lock** wire to **COM** terminal on the Door Controller
- Click the **Open Gate** button in **GateKeeper** – the red LED should light and the lock should click opened and then closed.



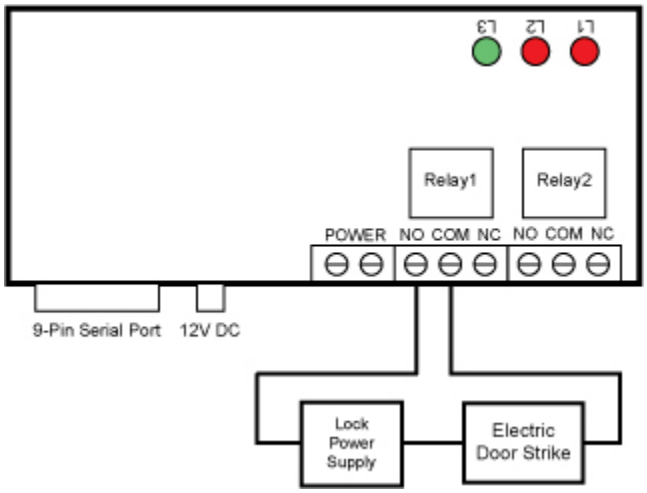
Normally-Open circuit using onboard 12VDC

*If the lock requires power other than 12VDC or the onboard 12VDC Output does not have sufficient current to drive the lock then you must provide a separate **external power supply** for the lock.*

To test that the external power works with the, touch the two wires from the lock to the external power supply terminals (it doesn't matter which terminal) – the lock should click open and closed.

To power the lock using an external power supply:

- Connect **NO** 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 **COM** terminal on the Door Controller.
- Click the **Open Gate** button in **GateKeeper** – the red LED should light and the lock should click opened and then closed.



Normally-Open circuit using external power supply

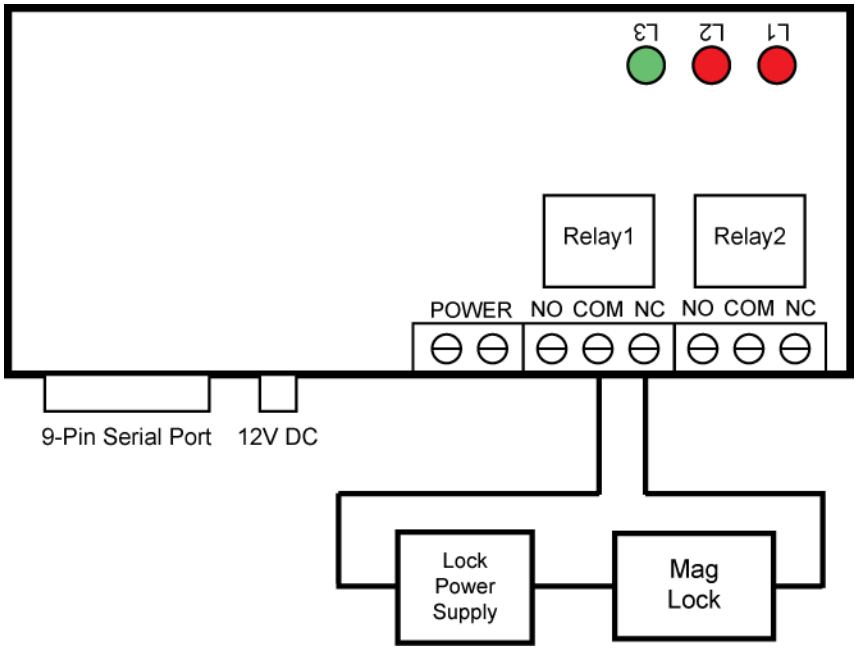
Normally-Closed Circuit (Mag-Lock)

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 **NC** 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 **COM** terminal on the Door Controller.
- The magnet should be energized, and the door should be locked.
- Click the **Open Gate** button in **GateKeeper** – the red LED should light and the lock should release and then lock again.



Normally-Closed circuit using external power supply

11. Test the Door Controller with the Lock

In GateKeeper, click the **Open Gate** button. You should hear the Door Controller click and the red LED in the Door Controller should turn ON and the lock should open. After the prescribed time you should hear the Door Controller click again,and the red LED in the Door Controller should turn OFF again and the door should be locked again.

12. Other Topics

Adding serial ports to your computer

You may need to add one or more serial ports to your computer. You can easily add ports yourself 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. You will find USB/Serial adapters at any computer store and most large office supply stores. Or buy from us at **htttp://www.gymassistant.com/store**

Windows Energy Settings

It is very important that you change your Windows energy settings to ensure that your computer does not go to "sleep":

- 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.

Windows Automatic Update Settings

Windows XP is set by default to automatically download and install system updates. You should change these settings to ensure that your computer does not reboot during the night:

- Open the Control Panel (from the Start button).
- If the label Pick a Category appears, click on Performance and Maintenance.
- Open the Automatic Updates icon.
- Select the item labelled "Download updates for me, but let me choose when to install them."
- 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.

If you are using a Magnetic Lock then you should also have a battery backup for the lock itself. You should not use the same battery backup for the lock and computer, because the lock should remain powered even if the computer battery backup has failed.

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. Many times the issue will be that the member has not paid, and with remote access you can open the door from home to allow the member to workout.

GoToMyPC.com and **LogMeIn.com** both offer excellent solutions for remote access. We have extensive experience with both products and highly recommend them both.

LogMeIn has a free version, and their "Pro" version costs less than $100/year.

GoToMyPC is generally more robust, but it is also more expensive.

Online Backup

We highly recommend using an online backup service to backup not just your Gym Assistant data but any other documents that you value.

Mozy.com provides an excellent online backup product at a great price. We have extensive experience with their services and highly recommend them.