AC Series

Access Control System

Quick Start Programming Guide for AC Nio

ATTENTION:

This is an abbreviated programming manual addressing basic program settings for an AC Series system using AC Nio.
A complete set of instructions can be found in AC Nio's left-hand side menu or downloaded from www.aiphone.com

AC Nio Quick Start Guide

Introduction

AC Nio is a web-based software for programming the AC Series access control system. AC Nio is used to monitor and administer the system. This guide will cover basic programming and does not include advanced features, installing AC Nio software on a PC, or AC Series hardware and wiring. However, physical access to the hardware is necessary to complete all of the programming steps.

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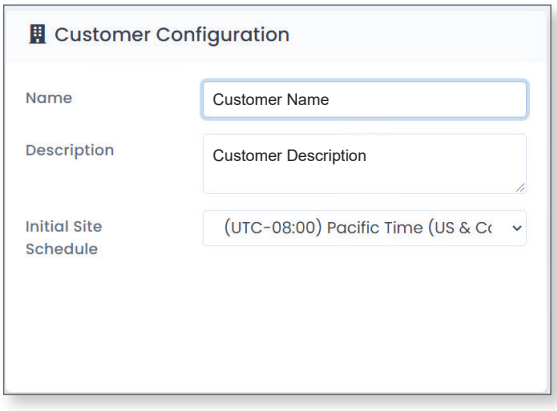
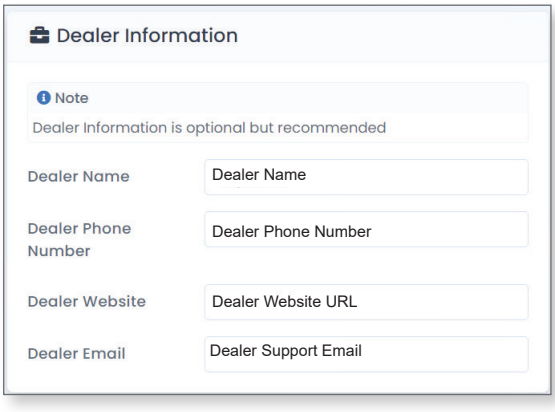
Initial Setup

AC Nio can either be installed locally, or accessed from a PC on the same network as the host. If accessing it from the host PC itself, double click on the icon on the desktop or program list.

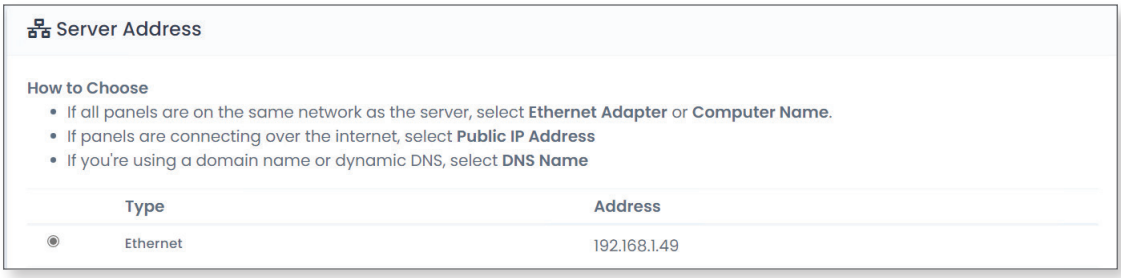
If AC Nio is being accessed from a separate host, make sure the programming PC is in the same IP range as the host. Open a web browser and navigate to **https://[AC Nio host IP Address]:11001**. A message may appear saying that the page is insecure. Follow the prompts in the browser to continue anyway. The prompts will vary depending on the browser used. When loading the web GUI for the first time, the AC Nio initial setup page will be displayed. To begin setup, accept the EULA and click **Next**.

After accepting the EULA, fill out the customer and dealer information on the next page. It is highly recommended to include an email, since that is required for password recovery. Once this information has been filled out, click **Next**.

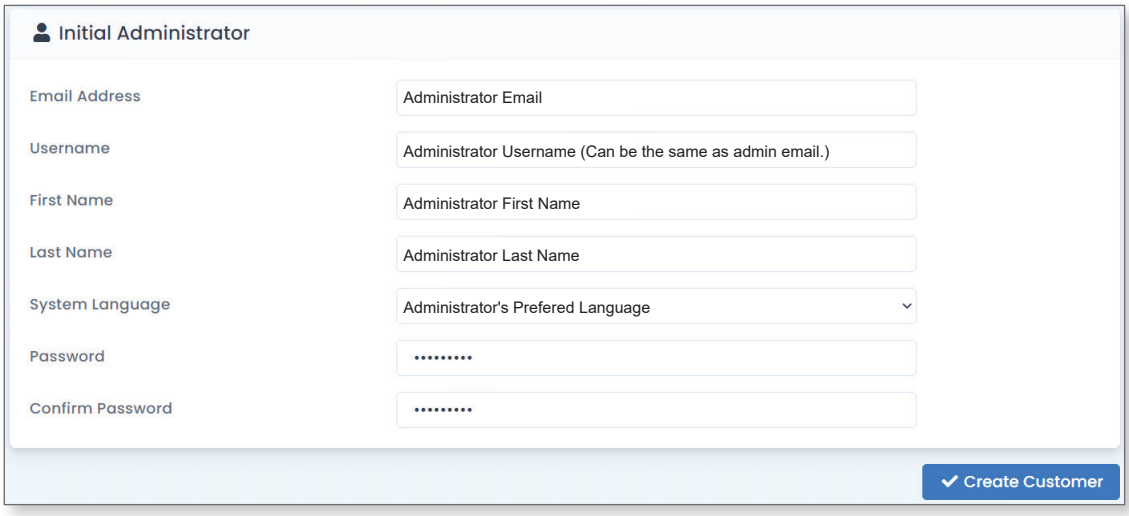




In the Server Address section of the AC Nio initial setup, select the network interface the software will be connected to. This interface requires a static address or a DHCP reservation. Click **Next**.

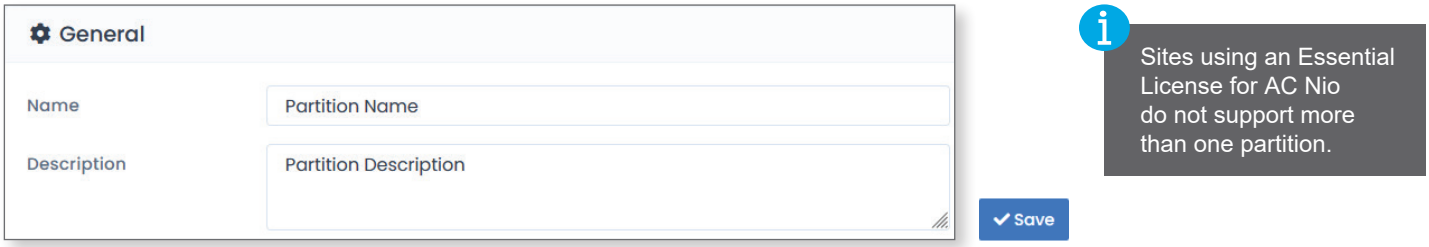


At least one administrator account must be created for the purpose of programming and managing the system. Additional administrator accounts can be added and configured later. Complete the initial administrator form and click **Create Customer**. The log in page will appear. Use the created administrator's email address and password to proceed.

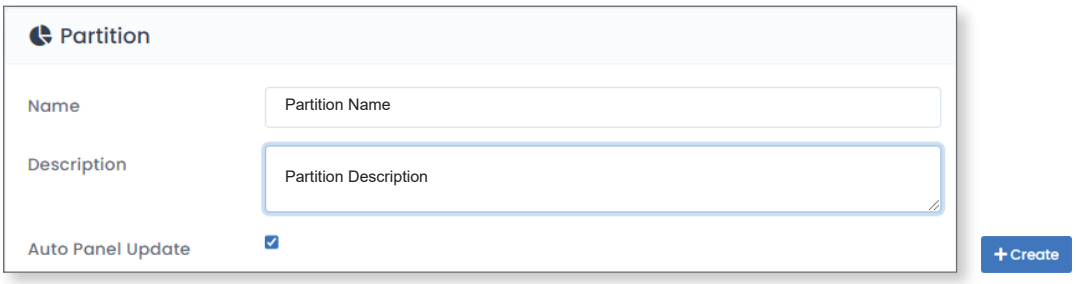


Creating or Modifying Partitions *(Optional)*

Partitions are a way to separate buildings or areas in a system. Administrators can be assigned to specific partitions to delegate system management. Partitions can be created or modified by going to the **System** section on the left-hand side menu and selecting Partitions**.** To modify the default partition, click the cog wheel next to it. If **Auto Panel Update** is checked, any panel that is added to the partition will automatically be updated 15 minutes after changes are made. Fill in the desired information and click **Save**.

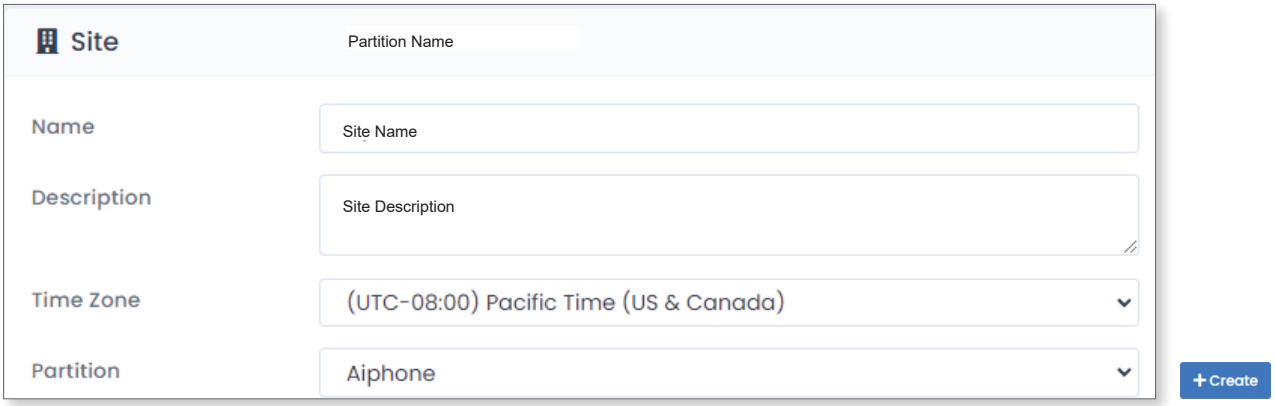


To create a new partition, navigate back to **System,** Partitions. Click the cog wheel next to the default partition to open a new menu. Click **+Add**. Give the partition a **Name** and **Description**. If **Auto Panel Update** is checked, any panel that is added to the partition will automatically be updated 15 minutes after changes are made. Click **+Create** to finish adding the partition to AC Nio.



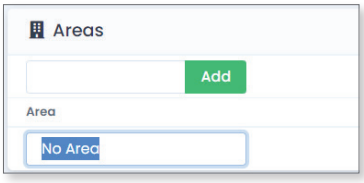
Creating Sites

If a new partition was created, a site must be added underneath it. In the **System** section in the left-hand side menu, select **Sites and Areas**. Click **+Add** to add a new site to the system. Give the site a **Name**, **Description**, **Time Zone** and assign the site to a **Partition**. Click **+Create**.



Creating Areas *(optional, required for anti-passback/user tracking)*

After a site has been created, Areas are created and assigned to doors so the system knows which readers grant access to different parts of a building or campus. Areas are primarily used for anti-passback and user tracking via a Muster Report. To add a new area, click on the cogwheel icon, then click **Areas**. For the first area, rename the field labeled **No Area**. If adding more than one area, enter in the name and click **Add**.



Creating Schedules

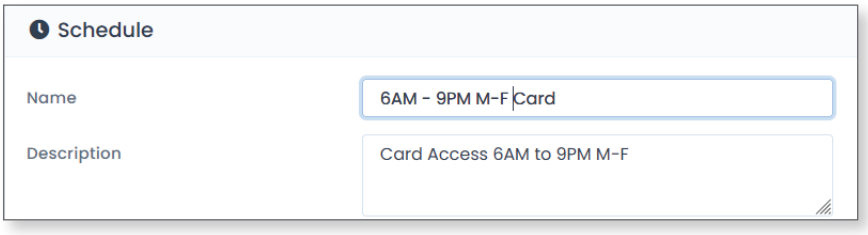
Schedules can be created for **Doors**, **Floors**, **Inputs**, **Outputs**, and **Users**. Schedules are used to control which users have access to particular areas and when.
To create a schedule, navigate to **Scheduling**, Schedules.

Door Schedule: Grants or restricts access to a door based on the set time.
Floor Schedule: Grants or restricts access to a floor based on the set time.
Input Schedule: Enables or disables an input based on a set time.
Output Schedule: Enables or disables an output based on a set time.
User Schedule: Grants or restricts access to specified users based on the set time.

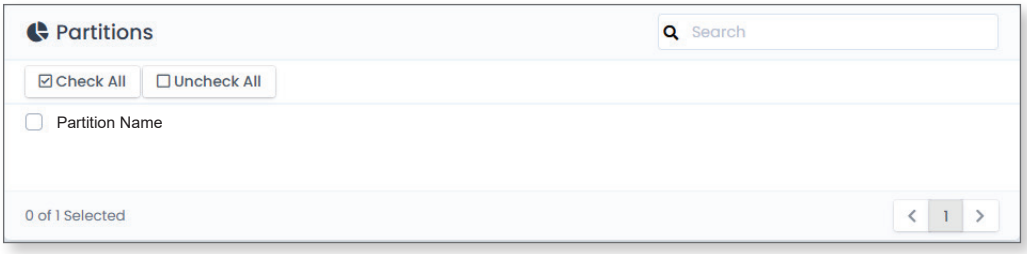
Note: When creating **Access Privilege Groups**, the **User Schedule** will be used to restrict access to users. Access Privilege Groups are covered on page nine of this document.

Click the tab the corresponds to the type of schedule to be created, then click **+Add**.

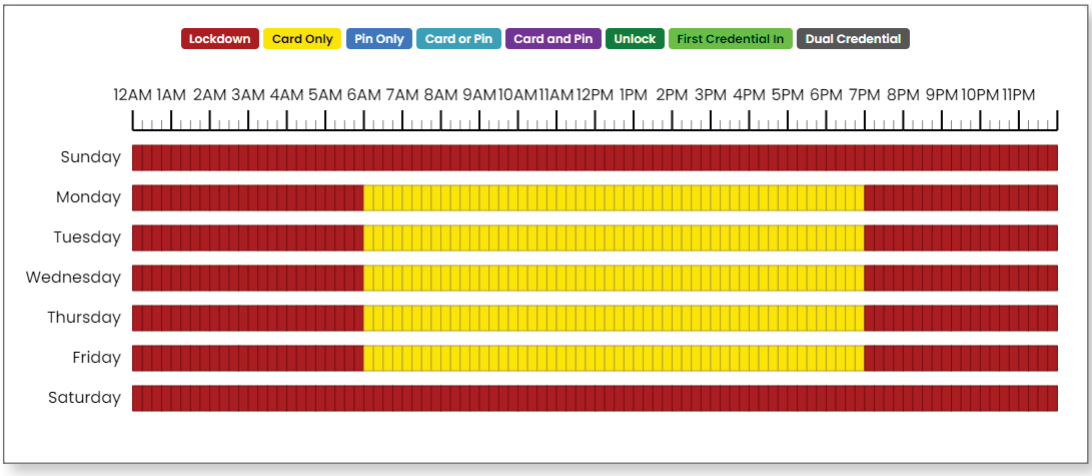
Give the schedule a **Name** and a detailed **Description**.



Select the **Partition**(s) the schedule will used for.



Select the access to schedule. Click and drag the mouse over the date and time access is being set for. Once the schedule is configured, click **+Save**.



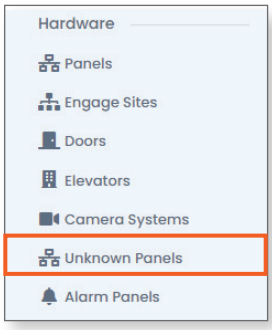
Adding Panels - Panel LCD Screen Steps

Enter setup mode on the new panel's LCD by holding down the **Enter** key until it asks for the pin. The default pin is **0000.** Once the pin is entered, press the **Esc** button to enter the settings menu. For security purposes, changing the set up pin is highly recommended. The server IP address will be set to the IP address of the AC Nio host. The default server port will not need to be changed unless AC Nio is set up with a different communication port.

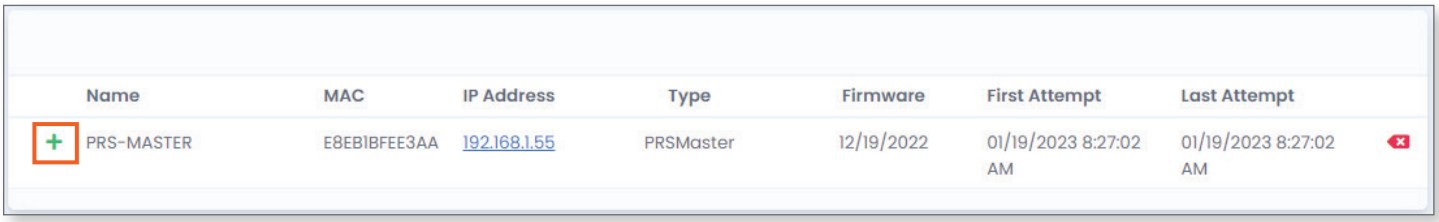
Set up the panel with a static IP address or use DHCP to give the panel an address. Select whether the panel will use DHCP or a static IP address by using the menu option **Panel Comm Mode**. If the communication mode is set to static, the **Panel IP Address**, **Panel Subnet Mask**, **Panel Gateway**, and **Panel DNS** must be set manually.

Adding Panels - AC Nio Steps

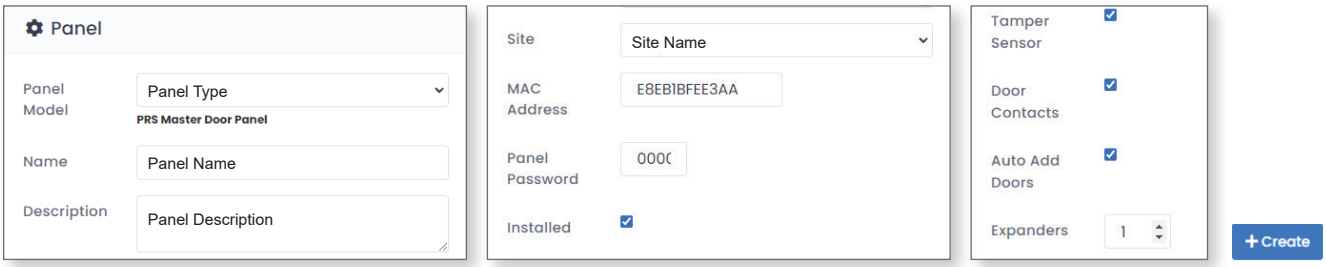
In AC Nio, navigate to **Hardware**, Unknown Panels.



Unknown panels that are communicating with AC Nio will show up in the **Unknown Panels** list. Click [+] to add the panel to the system.



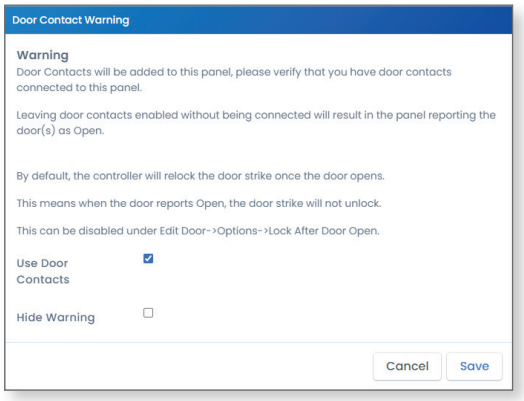
Select a Panel Model using the dropdown menu and give it a Name and Description. Assign the panel to one of the previously created sites. It is highly recommended that the Panel Password be changed for security purposes. Whatever the password is, it must match the pin created on the panel in the previous section. Enter the number of AC-2DE and AC-IOE expander boards connected to the panel's master controller in the Expanders section. Click [**+Create**] when finished.



If Door Contacts is selected, one of the inputs on the panel will be automatically assigned a Door Contact function. If there is not a door contact connected to the input when the settings are uploaded to the panel, AC Nio will report that the door has been forced open and the door will not function.

Adding Panels - AC Nio Steps *(Continued)*

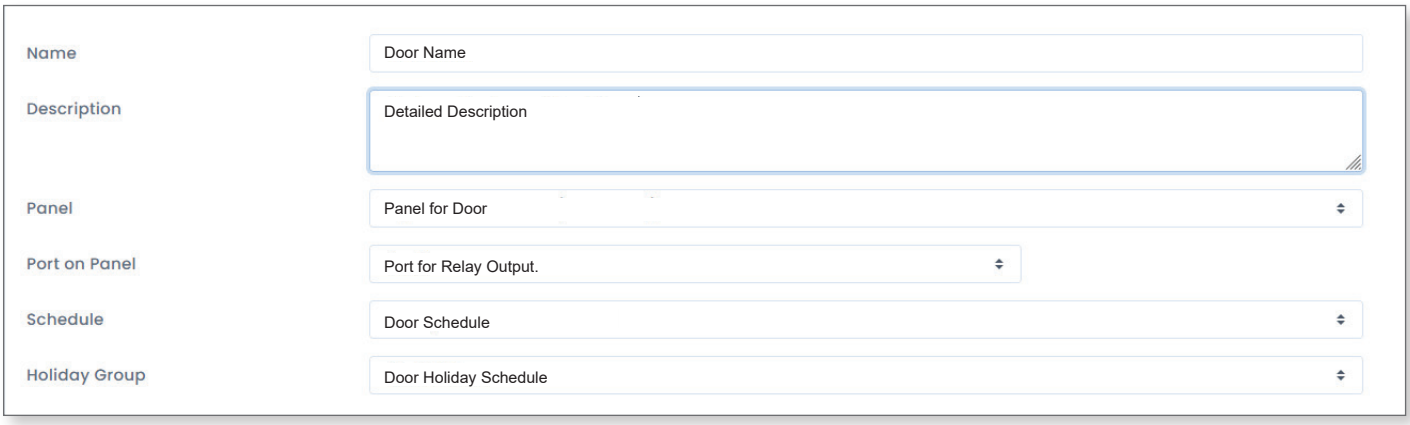
After clicking **+Create**, a pop-up will appear asking if door contacts are being used. Similar to the Auto Add Doors setting, if Use Door Contacts is checked and a door contact is not connected to the panel, the panel will report the door as being forced open. By default, the controller will relock the door strike once the door opens. This means when the door reports Open, the door strike will not unlock. Click **Save** when finished.



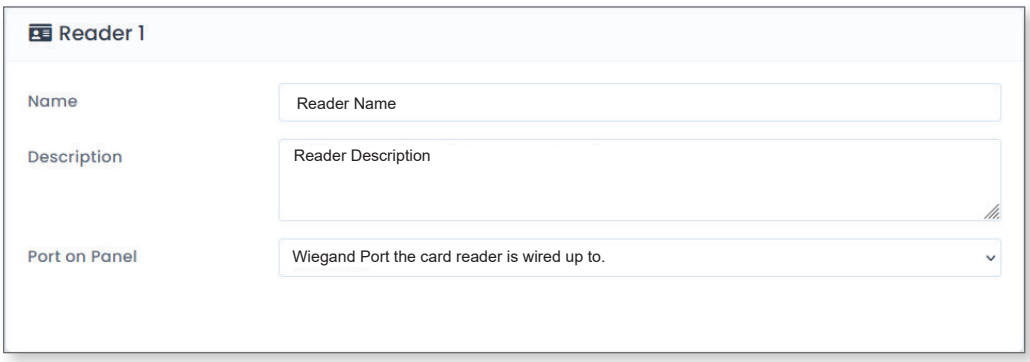
Adding Doors/Elevators

After the panel has been added, doors must be added to the panel, or renamed if added automatically. To begin adding or renaming doors, navigate to **Hardware**, Doors. To add a new door, click **+Add**. If renaming an automatically added door, click the **cogwheel** icon.

Managed will be selected for the door type by default. Give the door a **Name** and detailed **Description**. Use the drop-down menu to select which **Panel** the door will connect to and select door **Port on Panel** to select which port it is connected to. Select a **Schedule** that the reader will use.

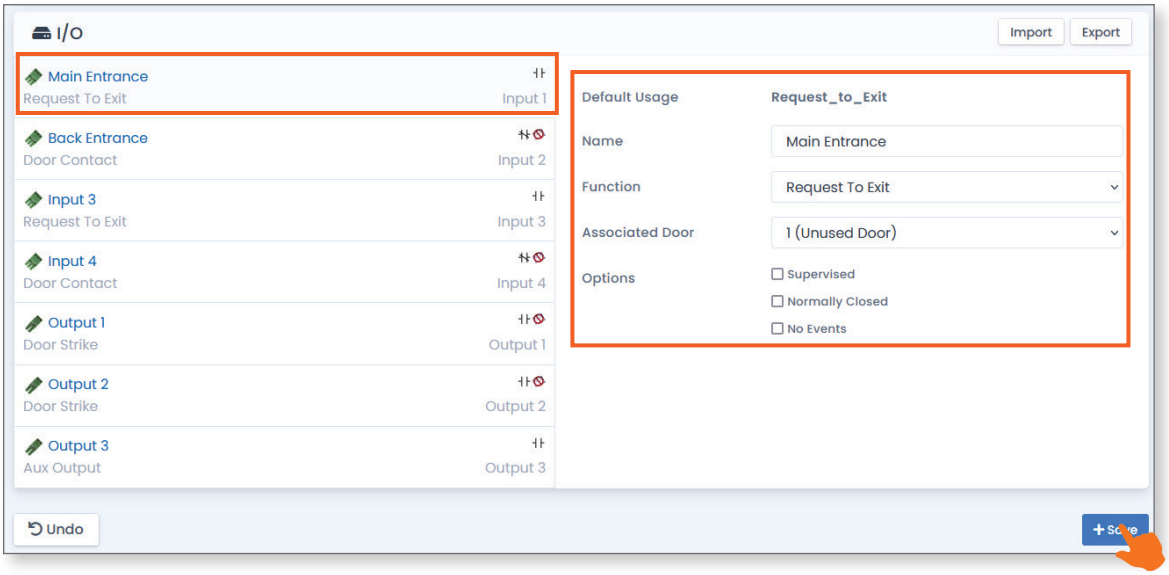


Next, the settings for the reader itself need to be configured. Assign the reader a **Name** and detailed **Description**. Select the Wiegand port the door's card reader will be wired to from in the **Port on Panel** field.



Inputs and Outputs

Once the door is configured, the door's inputs and outputs must be programmed. To configure these, navigate to **Hardware,** Panels. Click on the **cogwheel** icon for the panel with the inputs and outputs to be programmed. Navigate to **I/O**. Select the **I/O Expander** board to be edited on the left, and make the desired changes on the right. Click **+Save**.

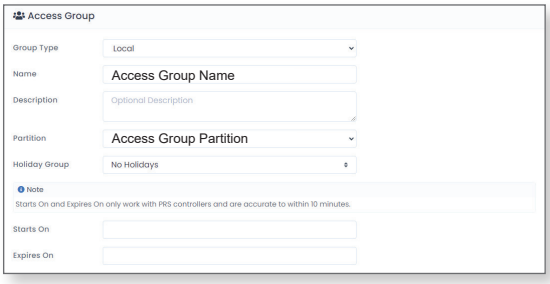


A description of specific input and output functions can be found on the last two pages of this document.
Note: If door contact is selected as an input and no connection is made, the door will always read open and will not perform an unlock function. This is because by default, the door is set to automatically lock when the door is open.

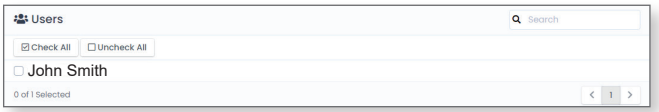
Creating Access Privilege Groups

Access Privilege Groups are a way to delegate access for an entire group. Users can be added to Access Privilege Groups for easy management. For example, an access group can be created for different departments in a company based on the access or restrictions required for those specific employees. Under the **Users** section, select **Access Privilege Groups**, then click **+Add**.

Give the Access Group a **Name**, Enter a detailed **Description** of the group, and assign the group to a **Partition**. If needed, apply a **Holiday Group** schedule. A **Start** and **End** date can be set for the group (*optional*). Once the group expires, the group will no longer grant access.

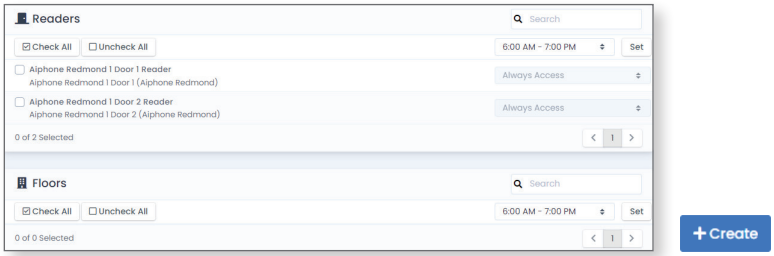


Select any existing users to be added to the group. Users can also be added when they are added to the system.



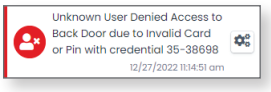
Creating Access Privilege Groups

Select readers and floors users part of this group will have access to and apply a **User Schedule**. Click **+Create** when finished creating the Access Group.

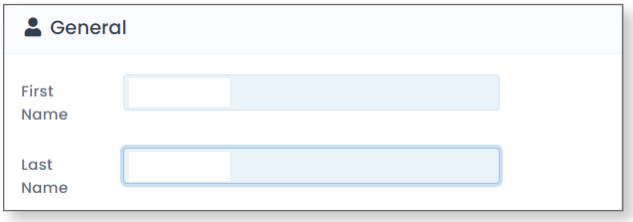


Adding Users/Credentials

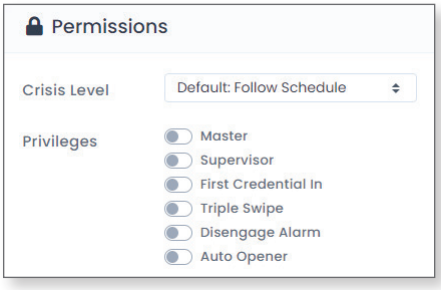
Scan unknown cards to add unknown credentials to the system. On the right-hand notification log, click on the message "Unknown User Denied Access to [Door] due to Invalid Card or Pin."



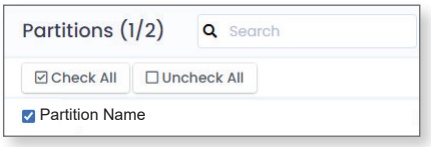
After clicking on the "Unknown user Denied Access" message, a page will load to add new user. The credentials are already input. Complete the **First** and **Last Name** fields.



Assign the user card **Permissions**.

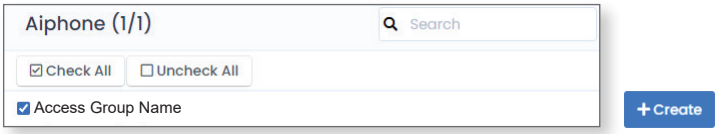


Add the user to at least one partition.



Adding Users/Credentials *(continued)*

Add the user to an Access Privilege Group. The user will have the same permissions as anyone else in the group. Click **+Create** when finished.



Users and card credentials can also be imported into the system via a CSV file. This is ideal if several cards are being added to the system. For a complete guide on creating and importing a .CSV file, refer to the AC Nio settings manual.

Updating Panels

No changes will be in effect until the panel is updated. Click **Update Panels** at the top of the page to send the programming to each panel. If AC Nio goes offline for any reason, the panels will continue functioning with the programming that was last updated.

Backing Up Programming

1. Access the System Manager UI. **https://[AC Nio host IP address]:11002**
   Default Credentials:
   Username: ac
   Password: acaccess

For security purposes, change the default password for the management portal.

2. Click **Backup**.

3. Select the items to backup (default settings are recommended).
   - **Database**
   The AC Nio database (recommended).
   - **Profile Pictures**
   Images associated with users (cardholders) (recommended).
   - **Maps**
   Images associated with any graphical maps.

4. Select backup options (default settings are recommended).
   - **Compress Backup**
   Determines whether the backup file is compressed upon successful backup (recommended).
   - **Remove Files Older then X Days**
   Automatically removes .prbak files from the backup location if the age exceeds the number of days specified. Adjust to keep more backups or uncheck to keep all backups until they are manually deleted.
   - **Encrypt Backup with Password**
   Require a password to restore the backup.

5. Determine where the backup will be saved to. The backup can be saved to a local drive, USB drive or a network share.

6. Select a Backup Schedule.
   - **Disabled**: No automatic schedule. Backup is initiated by hitting the **Save and Run Now** button.
   - **Daily**: Backup occurs once a day at the time specified.
   - **Weekly**: Backup occurs once a week on the day of week and time specified.
   - **Monthly**: Backup occurs once a month on the day and time specified.

7. To immediately run the backup, click **Save and Run Now.** Alternatively, click **Save** to save the backup settings and run on the next scheduled time (if a backup schedule is set).

   If folder or network permissions prevented the backup from being written, an error will be displayed. When performing the first backup, browse to the output and verify the backup has been written. This may take several minutes for larger databases.

Input Functions

Disabled	Will not react to any input status changes on the selected input.
REX (Request to Exit)	Allows the input to be used as a REX. Dry contact input can be used to unlock the associated door via the input.
Door Contact	This input will track if the door is open or closed. Note: If there is nothing connected to this contact and it is enabled, the REX button will not work.
Door Opener to Exit	This input is generally used for handicapped operatiors for activating automatic door openers. Automatic Opener must be enabled in the Door Configuration Options.
Motion Sensor	This input function is used for external motion sensors. Unlock By Motion must be selected in the Door Configuration Options.
AUX Input	This input function has the most configurable options, including input actions such as pulsing outputs, overriding doors, activating alarms.
Emergency Alarm	This input function is used to receive commands from Emergency Alarm Systems. For example, this input can be set to unlock the door and play a buzzer when a fire alarm is triggered.
External Alarm Status	This input function is used to monitor an alarm system status. When the alarm is considered “Armed”, Readers will not accept credentials unless the user associated with that credential has the “Disengage Alarm” user privilege set to on.
Door Opener to Enter	This type of input is generally used for handicapped operators for activating auto-door openers. Automatic opener must be enabled in the door configuration options.
Door Unlocked or Open/Prevent Unlock	Used in mantrap configurations. When the door is open or unlocked, this output will activate, is usually connected to an input on another panel controlling access to the same area. Connect to an input with the function “Door Prevent Unlock”.

Output Functions

Disabled	The output is disabled and will not fire, even if instructed to by override.
Door Strike	Used to define an output as being connected to a door strike or mag lock. **Note:** Output 1 is the only wet contact, therefore door strikes on output 2 and 3 would require an external lock power supply.
Door Opener	Used to define an output that is connected to the trigger Input on an auto door opener device.
External Buzzer	Used for external speakers. Will activate relay when the door is forced or held open. Global buzzer option will allow all doors connected on the same panel to activate the same output.
Alarm Interface	This output is connected to an input on the alarm panel capable of arming the alarm system; the alarm can now be armed using a triple swipe command.
AUX Output	An output that can be triggered from input changes or through triple swipe commands.

Network Ports

The following ports are opened on the AC Nio server for programming AC series hardware.

9876 (TCP)	Hardware communication to AC Nio
11001 (TCP)	Web GUI for AC Nio.
11002 (TCP)	Web GUI for AC Nio Management.