Security Door Controls

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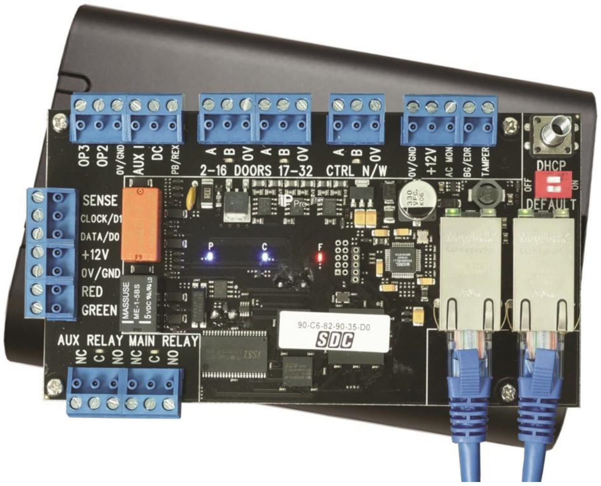
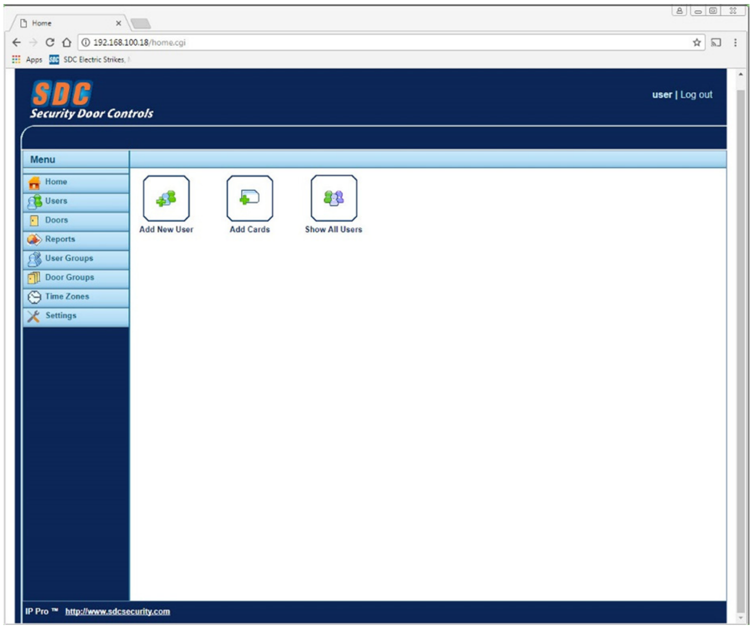
IPPro™

IP-Based Single Door Controller

Operations & Installation Manual





*** Visit: sdcsec.com/ippro**
For Installation video

Any suggestions or comments to this instruction or product are welcome. Please contact us through our website or email engineer@sdcsecurity.com

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1.0 Introduction

1.1 System Overview

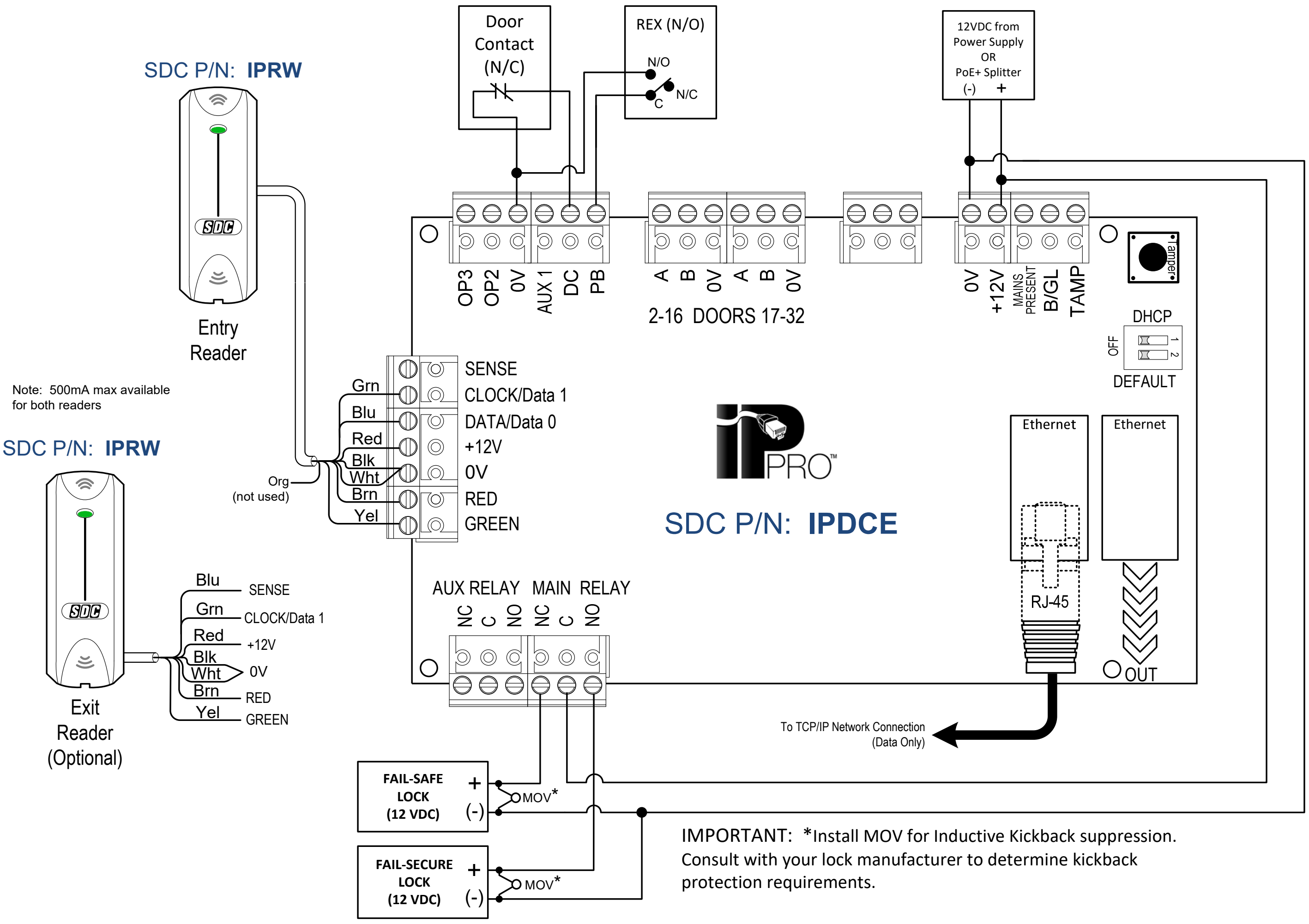
The IP Pro™ Controller (SDC P/N: IPDCE) is an IP-based single door controller. It supports two separate Wiegand readers for true In/Out reader functionality. It may be expanded to two or more openings by adding multiple IPDCE controllers, or with the IP Pro™ Expansion Door Station (P/N: IPDSE). Up to 31 Door Stations may be controlled by a single IP Controller.

The Controller includes an secure, embedded web server which allows installers and users to manage installations without requiring separate software. The web server is easily accessed using a common PC-based web browser (e.g., Microsoft IE, Google Chrome, Mozilla Firefox, etc.)

Both the IPDCE and IPDSE require a 12VDC power source. This requirement may be met by using a traditional 12VDC power supply or by using the IP Pro™ PoE+ Injector (P/N: IPI-30) & Splitter (P/N: IPS-12). The injector/splitter combination allows the controller to connect and be powered using an existing Ethernet network infrastructure. The IPS-12 provides a 12VDC power source capable of powering the controller, reader, and locking device (up to 1.5A total). SDC offers a complete selection of low energy Access Control and Electrified Locking Hardware, guaranteed to work with the IP Pro™ Series controllers.

2.0 Installation Diagrams

2.1 Single Door Wiring

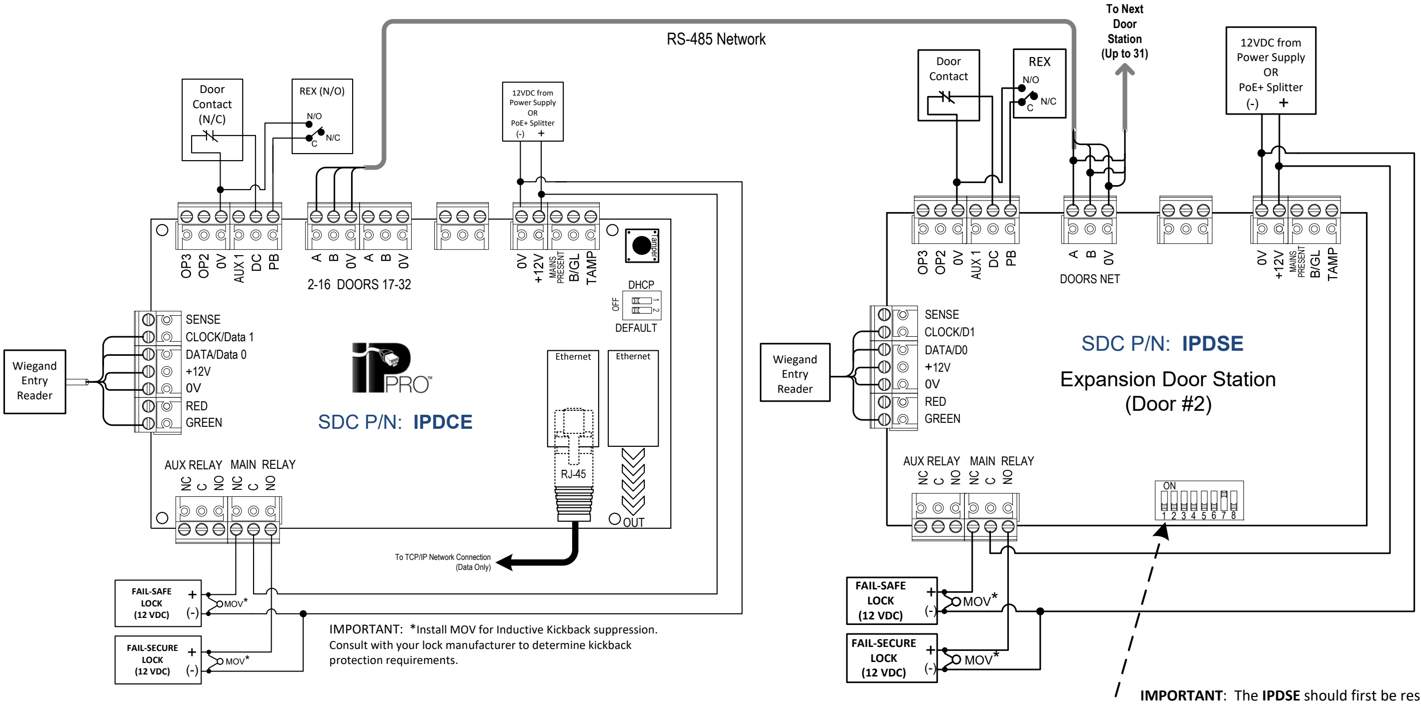


Note: 500mA max available for both readers

IMPORTANT: *Install MOV for Inductive Kickback suppression. Consult with your lock manufacturer to determine kickback protection requirements.

Figure 1. IP Pro™ Single Door Controller – Typical Wiring

2.2 Wiring Two or More Openings (RS-485 Option using with IPDSE's)

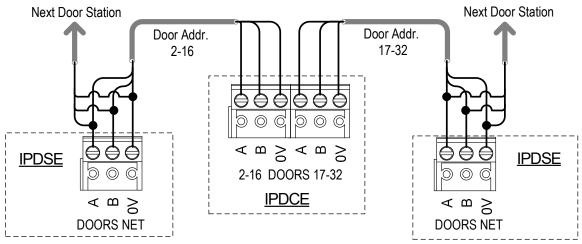


IMPORTANT: *Install MOV for Inductive Kickback suppression. Consult with your lock manufacturer to determine kickback protection requirements.

IMPORTANT: The **IPDSE** should first be reset to its factory default condition before installation. To do this, power the unit up with ALL 8 switches in the OFF position. The unit will beep after 3 seconds. The unit is now defaulted.
Then power off & use the chart below to set the appropriate address.

Figure 2. IP Pro™ Single Door Controller with Expansion Door Station(s) – Typical Wiring

RS-485 NETWORK CONNECTIONS



- The Door Stations RS485 network must be daisy chained (star configuration is not permitted).
- The total maximum length of the Door Stations network should not exceed 4000ft.
- On the Door Stations network connect A to A; B to B and 0V to 0V.
- Use twisted pair cable. Shielded cable is recommended for longer distances or areas where Electromagnetic Interference (EMI) is present. West Penn D2402 or similar.

ON

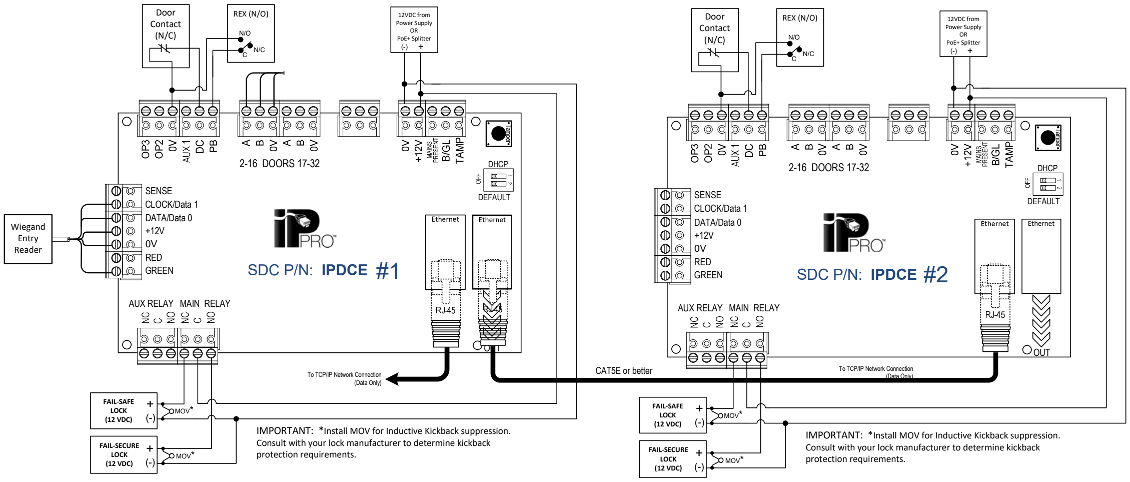
Door # Address	1	2	3	4	5	6	7	8
01	*Not Used – Reserved for IPDCE*							
02	OFF	OFF	OFF	OFF	OFF	OFF	**ON**	OFF
03	OFF	OFF	OFF	OFF	OFF	OFF	**ON**	**ON**
04	OFF	OFF	OFF	OFF	OFF	**ON**	OFF	OFF
05	OFF	OFF	OFF	OFF	OFF	**ON**	OFF	**ON**
06	OFF	OFF	OFF	OFF	OFF	**ON**	**ON**	OFF
07	OFF	OFF	OFF	OFF	OFF	**ON**	**ON**	**ON**
08	OFF	OFF	OFF	OFF	**ON**	OFF	OFF	OFF
09	OFF	OFF	OFF	OFF	**ON**	OFF	OFF	**ON**
10	OFF	OFF	OFF	OFF	**ON**	OFF	**ON**	OFF
11	OFF	OFF	OFF	OFF	**ON**	OFF	**ON**	**ON**
12	OFF	OFF	OFF	OFF	**ON**	**ON**	OFF	OFF
13	OFF	OFF	OFF	OFF	**ON**	**ON**	OFF	**ON**
14	OFF	OFF	OFF	OFF	**ON**	**ON**	**ON**	OFF
15	OFF	OFF	OFF	OFF	**ON**	**ON**	**ON**	**ON**
16	OFF	OFF	OFF	**ON**	OFF	OFF	OFF	OFF

Door # Address								
17	OFF	OFF	OFF	**ON**	OFF	OFF	OFF	**ON**
18	OFF	OFF	OFF	**ON**	OFF	OFF	**ON**	OFF
19	OFF	OFF	OFF	**ON**	OFF	OFF	**ON**	**ON**
20	OFF	OFF	OFF	**ON**	OFF	**ON**	OFF	OFF
21	OFF	OFF	OFF	**ON**	OFF	**ON**	OFF	**ON**
22	OFF	OFF	OFF	**ON**	OFF	**ON**	**ON**	OFF
23	OFF	OFF	OFF	**ON**	OFF	**ON**	**ON**	**ON**
24	OFF	OFF	OFF	**ON**	**ON**	OFF	OFF	OFF
25	OFF	OFF	OFF	**ON**	**ON**	OFF	OFF	**ON**
26	OFF	OFF	OFF	**ON**	**ON**	OFF	**ON**	OFF
27	OFF	OFF	OFF	**ON**	**ON**	OFF	**ON**	**ON**
28	OFF	OFF	OFF	**ON**	**ON**	**ON**	OFF	OFF
29	OFF	OFF	OFF	**ON**	**ON**	**ON**	OFF	**ON**
30	OFF	OFF	OFF	**ON**	**ON**	**ON**	**ON**	OFF
31	OFF	OFF	OFF	**ON**	**ON**	**ON**	**ON**	**ON**
32	OFF	OFF	**ON**	OFF	OFF	OFF	OFF	OFF

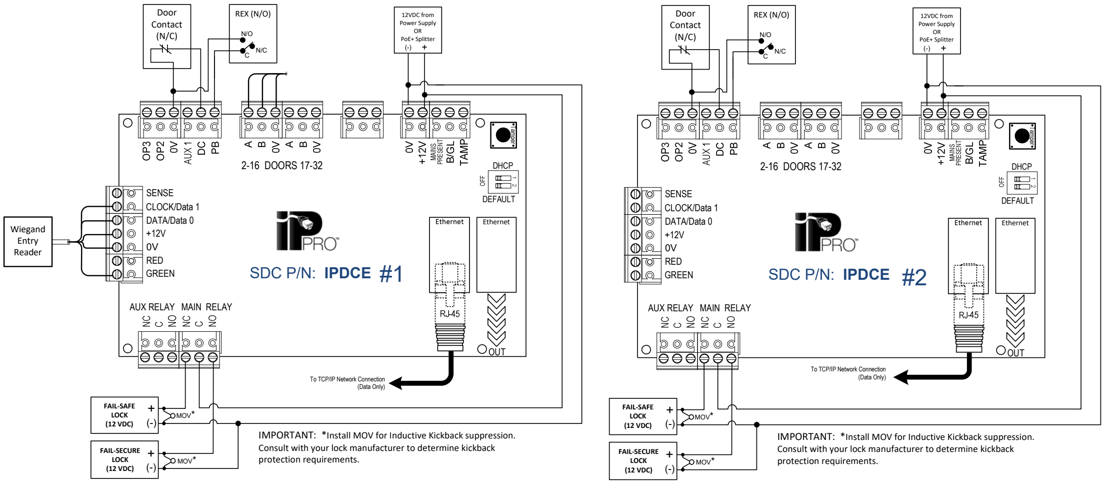
2.3 Connecting Two or More Openings (using Multiple IPDCE's)

NOTE: PLUS software is required & every IPDCE will have a unique IP address, regardless of which of the two options below is used.

Using a single Network Switch Port,


Door Contact (N/C)
REX (N/O)
N/O
N/C
C
12VDC from Power Supply OR PoE+ Splitter
(-) +
OP3
OP2
0V
AUX 1
DC
PB
A
B
0V
A
B
0V
2-16 DOORS 17-32
0V
+12V
MAINS PRESENT
B/GL
TAMP
Tamper
DHCP
OFF
DEFAULT
Wiegand Entry Reader
SENSE
CLOCK/Data 1
DATA/Data 0
+12V
0V
RED
GREEN
PRO
SDC P/N: IPDCE #1
Ethernet
Ethernet
RJ-45
RJ-45
OUT
AUX RELAY MAIN RELAY
NC
C
NO
NC
C
NO
To TCP/IP Network Connection (Data Only)
CAT5E or better
FAIL-SAFE LOCK (12 VDC)
FAIL-SECURE LOCK (12 VDC)
+
(-)
MOV*
IMPORTANT: *Install MOV for Inductive Kickback suppression. Consult with your lock manufacturer to determine kickback protection requirements.
SDC P/N: IPDCE #2
To TCP/IP Network Connection (Data Only)
IMPORTANT: *Install MOV for Inductive Kickback suppression. Consult with your lock manufacturer to determine kickback protection requirements.

Using a Network Switch Port per IPDCE,


Door Contact (N/C)
REX (N/O)
N/O
N/C
C
12VDC from Power Supply OR PoE+ Splitter
(-) +
OP3
OP2
0V
AUX 1
DC
PB
A
B
0V
A
B
0V
2-16 DOORS 17-32
0V
+12V
MAINS PRESENT
B/GL
TAMP
DHCP
OFF
DEFAULT
Wiegand Entry Reader
SENSE
CLOCK/Data 1
DATA/Data 0
+12V
0V
RED
GREEN
PRO
SDC P/N: IPDCE #1
Ethernet
Ethernet
RJ-45
OUT
AUX RELAY MAIN RELAY
NC
C
NO
NC
C
NO
To TCP/IP Network Connection (Data Only)
FAIL-SAFE LOCK (12 VDC)
FAIL-SECURE LOCK (12 VDC)
+
(-)
MOV*
IMPORTANT: *Install MOV for Inductive Kickback suppression. Consult with your lock manufacturer to determine kickback protection requirements.
SDC P/N: IPDCE #2
To TCP/IP Network Connection (Data Only)
IMPORTANT: *Install MOV for Inductive Kickback suppression. Consult with your lock manufacturer to determine kickback protection requirements.

3.0 Controller Status Indicators

Blue: Power

This indicates that the controller has power.

Blue: Communications

Constant illumination indicates that all enabled Door Stations are online.

Flashing indicates that one or more Door Stations are offline.

Red: Fault.

This illuminates to indicate an alarm on the system, possible causes are:

Tamper Open: Controller plastic housing is not closed. In situations where the plastic housing is not being used, connect the TAMP input on the controller PCB to 0V.
Door Station Offline: When one or more enabled door stations is not communicating with the Controller, the Fault LED illuminates and the appropriate indicator on the Door Station will flash.
Low DC Voltage: When voltage to the +12V terminal is less than +9V.
Fuse Blown: The +12V output on the READER terminals is current limited to provide short circuit protection. The Fault LED will illuminate if too much current is pulled from this connection.
AC Mon or BG/EDR Inputs Open: If either of these inputs are turned ON in programming, the input terminal on the board must be shorted or it will report a fault.

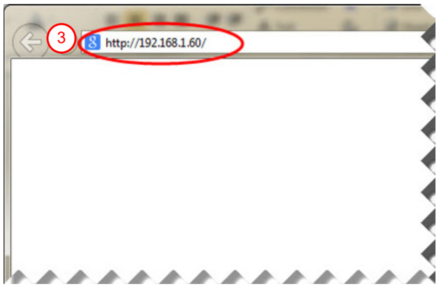
4.0 Quick Start Guide

Step 1:
Connect the IP Pro Door Controller directly to your PC or laptop using an standard or crossover Ethernet cable (CAT5 or better). The Controller is defaulted to use a static (fixed) IP address. The default static IP address is **192.168.1.60**. Refer to Addendum #1 to configure your PC with the following Ethernet adapter settings:

Static IP address: 192.168.1.100 (for example)
Default Netmask: 255.255.255.0
Default Gateway: 192.168.1.1

Step 2:
Open a web browser on your Windows PC (Microsoft Internet Explorer, Mozilla Firefox, or Google Chrome).
NOTE: Minimum PC requirements are Windows 7, 8, or 10.

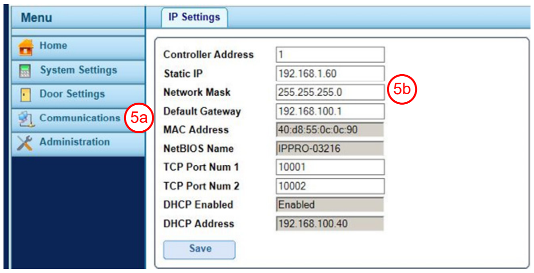
Step 3:
Enter http://192.168.1.60 in the URL bar.
You will be prompted for authentication credentials.



Step 4:
Login to the Controller as **installer**
Login credentials:
Username: **installer**
Password: **999999**

Step 5: Update Communication Settings.

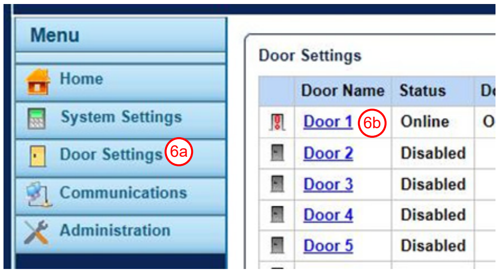
5a. Select “**Communications**” from the Menu.
5b. You may change the Static IP address, Network mask, and Default Gateway, as required, and click **Save**. Changing these settings will reset the controller and require you to return to **Step 2**. If the default settings are acceptable, skip to **Step 6**.



Controller Address 1
Static IP 192.168.1.60
Network Mask 255.255.255.0
Default Gateway 192.168.100.1
MAC Address 40:d8:55:0c:0c:90
NetBIOS Name IPPRO-03216
TCP Port Num 1 10001
TCP Port Num 2 10002
DHCP Enabled Enabled
DHCP Address 192.168.100.40

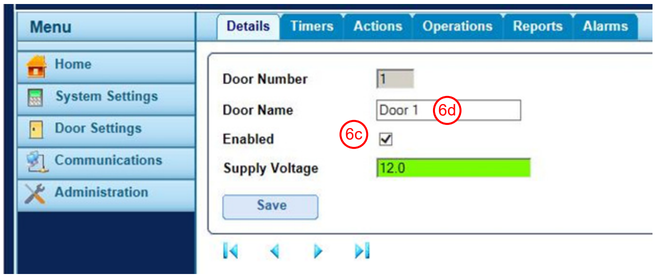
Step 6: Enable Door(s)

6a. Select “**Door Settings**” from the menu, which lists all 32 doors.
6b. Select the Door Name (e.g., Door 1) to be enabled.
6c. Check the **Enabled** box. NOTE: Door 1 is always the IP Door Controller. It will be enabled by default.
6d. Edit the Door Name field, as required, up to 16 characters in length. Click **Save**.



Door Settings

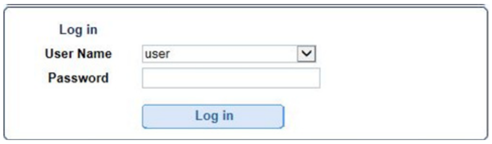
Door Name	Status	De
Door 1	Online	O
Door 2	Disabled	
Door 3	Disabled	
Door 4	Disabled	
Door 5	Disabled	



Door Number 1
Door Name Door 1
Enabled ☑
Supply Voltage 12.0

Step 7:
Logout from **installer** menu (top right corner).

Step 8:
Login to controller as **user**
Login details:
Username: **user**
Password: **123456**



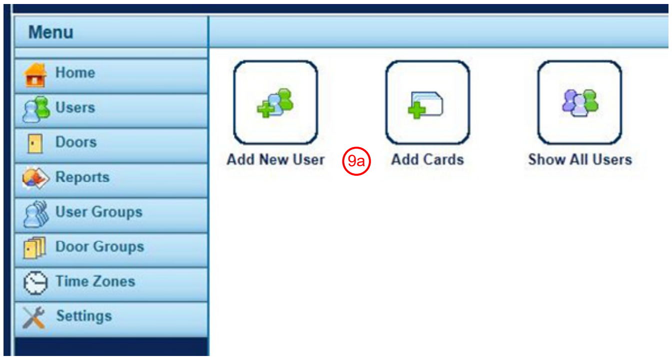
User Name user
Password

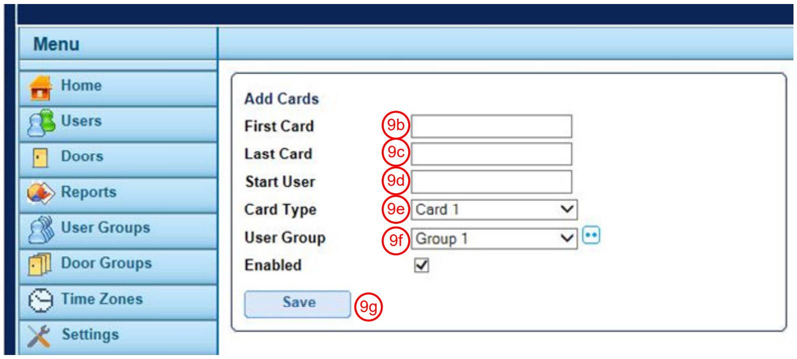
Click Log In.

Step 9: Add User Card(s) – Must be sequential

9a. From the Home Menu, select “**Add Cards**” by clicking on the icon
9b. Enter the “**First Card**” number.
NOTE: For a 26-bit Wiegand reader, the card number consists of a 3-digit facility code + a 5-digit card number (typically printed on the card). For example, if a card has a facility code of ‘110’ and the number printed on the card is ‘01234’, then the number entered into the “First Card” field will be ‘11001234’.
9c. Enter the “**Last Card**” number.
9d. Set the “**Start User**” to ‘1’ (for a new installation)
9e. Set the “Card Type” to ‘Card 1’. Each user may be assigned up to 2 separate credentials (Card 1 or Card 2).
9f. Set the “**User Group**” to ‘Group 1’, and check the **Enabled** box.
NOTE: User Group #1 is enabled by default. By default, ALL users in Group #1 will have 24/7 access to ALL Doors.

9g. Click **Save**.





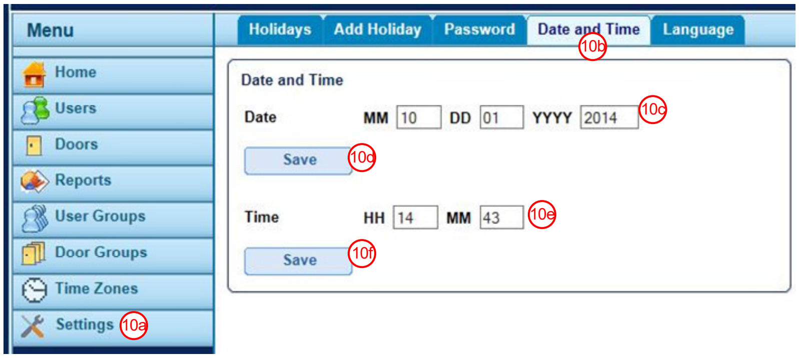
Add Cards

First Card
Last Card
Start User
Card Type Card 1
User Group Group 1
Enabled ☑

Save

Step 10: Set the Controller Date & Time

10a. Select the **Settings** option from the Menu.
10b. Select the **Date and Time** tab.
10c. Enter the Date. Enter the 2-digit Month (MM), 2-digit Day (DD), and 4-digit Year (YYYY).
10d. Click **Save.**
10e. Enter the Time. 2-digit hour (HH, 24hr clock), and 2-digit minutes (MM).
10f. Click **Save**.



Date and Time

Date MM 10 DD 01 YYYY 2014

Save

Time HH 14 MM 43

Save

The IP Pro ™ Door Controller is now ready for use. Logout and close your browser.

5.0 Controller Configuration

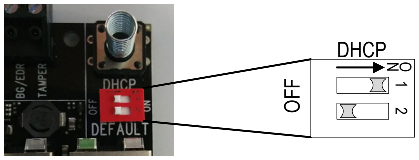
The IP Pro™ Controller has two pre-defined user accounts: i**nstaller** & **user**.

installer account **–** Used to configure global communications and door settings.
Login credentials:
Username: **installer**
Password: **999999**

user account **–** Used for day to day management of the system, such as managing users and access rights.
Login credentials:
Username: **user**
Password: **123456**

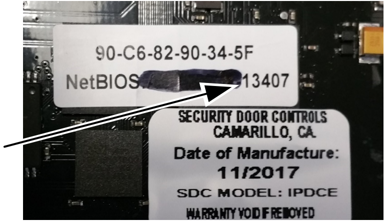
5.1 Connecting the Controller to the Network using a Dynamic IP Address (DHCP)

Step 1: The Controller is defaulted for a static IP address. To enable DHCP, remove power from the Controller.
Step 2: Set DIP switch 1 to the ON position (i.e., Move DIP switch 1 to the right).



Step 3: Connect the Door Controller to IP network and apply power to the Controller
Step 4: Open a compatible web browser from any Windows PC on your network (Internet Explorer, Mozilla Firefox, or Google Chrome). NOTE: Minimum PC OS requirement is Windows 7, 8, or 10.
Step 5: To Login, enter http://ippro-**(followed by the NetBIOS address**).
e.g. http://ippro-13407 (see label on PCB)

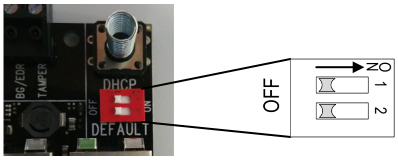
NetBIOS address = last 5 digits



You will be prompted for authentication credentials. It is recommended that you change the Static IP address (see Section 5.3) and always use the new static IP address to when connecting to the Controller.

5.2 Connecting the Controller to a PC using the default Static IP Address

Step 1: Remove power from the Controller and verify that the Controller is defaulted to use a static (fixed) IP address. DIP switch 1 will be set to the OFF position (i.e., to the left).



Step 2: The default static IP address is **192.168.1.60**. Verify that your PC is on the same subnet as the controller or Refer to **Addendum #1** to configure your PC with the following Ethernet adapter settings:

Static IP address: 192.168.1.100 (for example)
Default Netmask: 255.255.255.0
Default Gateway: 192.168.1.1

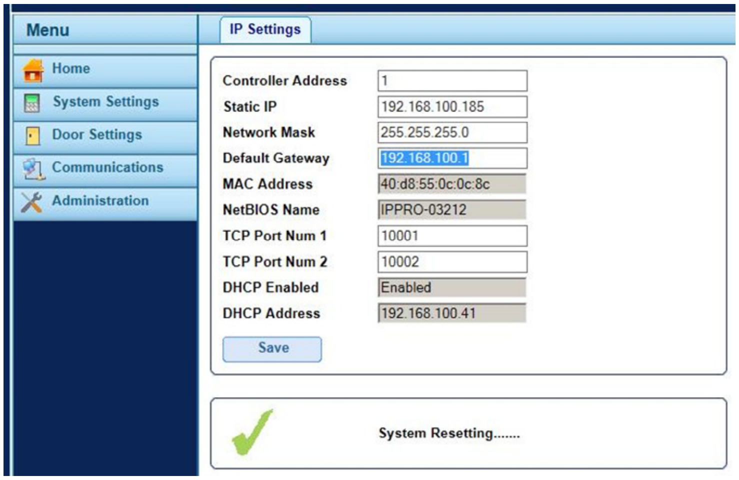
Step 3: Open a web browser on your PC (Internet Explorer, Mozilla Firefox, or Google Chrome).
NOTE: Minimum PC OS requirement is Windows 7, 8, or 10.
Step 4: To Login, enter http://192.168.1.60. You will be prompted for authentication credentials.

5.3 Changing the default Static IP Address

Step 1: Login as “**installer”**
Step 2: Select “**Communications**” from the Menu.
Step 3: Change the Static IP address, Network Mask, and Default Gateway, as required, and click **Save**.
Step 4: The following message will appear:

“Changes to IP settings may require reset
Do you wish to continue?”

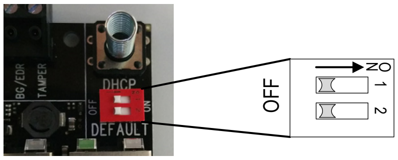
Click **OK**.
Step 5: After “*System Resetting…..…*” & the green checkmark appear, Close the browser.



Controller Address	1
Static IP	192.168.100.185
Network Mask	255.255.255.0
Default Gateway	192.168.100.1
MAC Address	40:d8:55:0c:0c:8c
NetBIOS Name	IPPRO-03212
TCP Port Num 1	10001
TCP Port Num 2	10002
DHCP Enabled	Enabled
DHCP Address	192.168.100.41

✓ System Resetting.......

Step 6: If DHCP is enabled, remove power from the Controller. If DHCP is disabled, skip to Step 8.
Step 7: Set DIP switch 1 to the OFF position (as shown), then re-apply power.

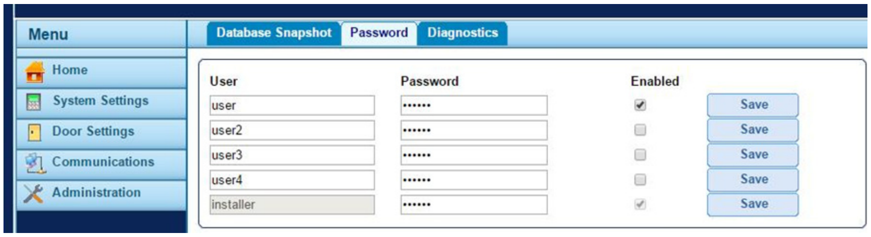


Step 8: To Login, open a web browser an enter http://**(New Static IP Address).**
e.g., **http://192.168.100.185**

5.4 Changing the installer (Administrator) Password

NOTE: Passwords must be 6-16 characters, numbers or letters, and are case-sensitive.

Step 1: Login as “installer”
Step 2: Select “Administration” from the Menu.
Step 3: Click on the “Password” tab
Step 4: Next to the installer user field, enter a new password.
Step 5: Click Save.



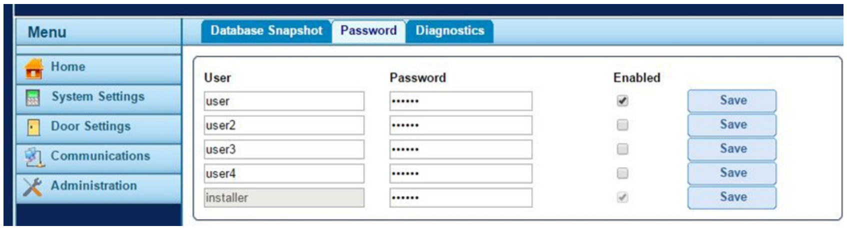
User	Password	Enabled	
user	••••••	☑	Save
user2	••••••	☐	Save
user3	••••••	☐	Save
user4	••••••	☐	Save
installer	••••••	☑	Save

Warning: It’s important that the **installer** password be different from all **user** passwords, and be retained in a secure location. If the installer code is lost, a factory default will be required.

5.5 Changing a User Name & Password

NOTE: Passwords must be 6-16 characters, numbers or letters, and are case-sensitive.
There are four “user level” accounts available for access to the management software. To edit these users:

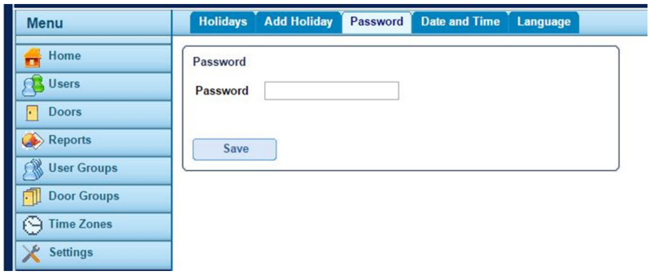
Step 1: Login as “**installer**”
Step 2: Select “**Administration**” from the Menu.
Step 3: Click on the “**Password**” tab
Step 4: Edit the User Name and associated password, as necessary.
Step 5: Verify that the Enabled box is checked.
Step 6: Click **Save.**



User	Password	Enabled	
user	••••••	☑	Save
user2	••••••	□	Save
user3	••••••	□	Save
user4	••••••	□	Save
installer	••••••	☑	Save

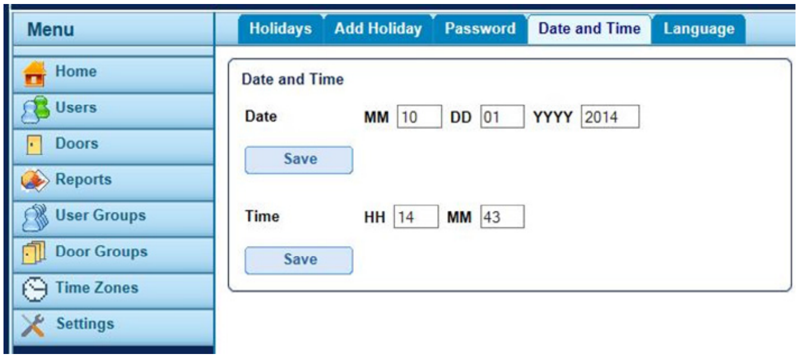
Additionally, each user level account has the capability to change their own password:

Step 1: Login as a user level account.
Step 2: Select “**Settings**” from the Menu.
Step 3: Click on the “**Password**” tab
Step 4: Enter the new password.
Step 5: Confirm the new password
Step 6: Click **Save.**



5.6 Setting the Date & Time

Step 1: Login as a user level account
Step 2: Select the **Settings** option from the Menu.
Step 3: Select the **Date and Time** tab.
Step 4: Enter the Date. Enter a 2-digit Month (MM), 2-digit Day (DD), and 4-digit Year (YYYY).
Step 5: Click **Save.**
Step 6: Enter the Time. Enter a 2-digit hour (HH, 24hr clock), and 2-digit minutes (MM).
Step 7: Click **Save**.



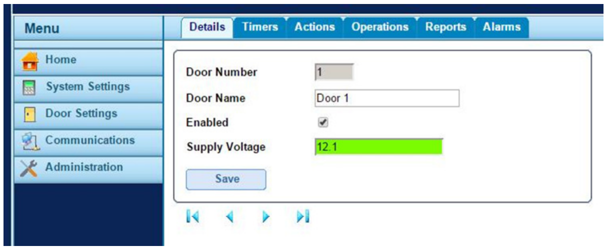
Date MM 10 DD 01 YYYY 2014

Time HH 14 MM 43

6.0 Door Settings

6.1 Enable and Name Doors

Step 1: Login as **installer**
Step 2: Select "**Door Settings**" from the Menu
Step 3: Select the desired door (e.g., Door 1)
Step 4: Check the **Enabled** box
Step 5: Edit the **Door Name** field, as required.
Step 6: Click **Save**.

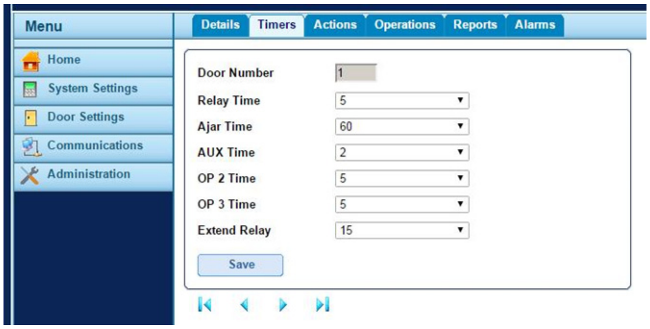


Door Number 1
Door Name Door 1
Enabled ☑
Supply Voltage 12.1

You may use the arrow buttons to navigate to the next door or click Door Settings from the Menu to view all doors.

6.2 Set Door Relay Timers

Step 1: Login as **installer**
Step 2: Select "**Door Settings**" from the Menu
Step 3: Select the desired door (e.g., Door 1)
Step 4: Select the "**Timers**" tab



Door Number 1
Relay Time 5
Ajar Time 60
AUX Time 2
OP 2 Time 5
OP 3 Time 5
Extend Relay 15

Step 5: Use the drop-down menu to adjust
each timer, as required.

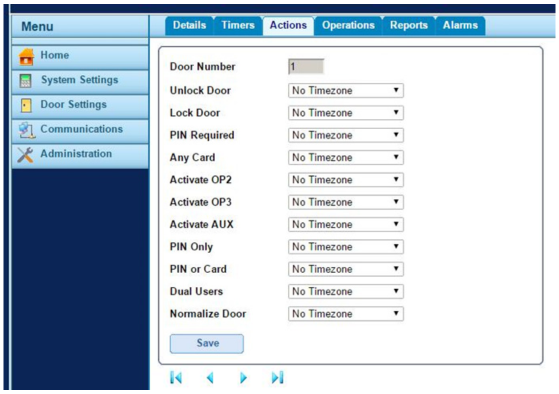
Field Name	Description
Relay Time	Time the main relay is activated in response to a valid card or to operation of the request-to-exit switch.
Ajar Time	Time the door may remain open before a door ajar (held open) condition occurs.
AUX Time	Time the AUX (alarm) output is activated.
OP2 Time	Time the OP2 output is activated.
OP3 Time	Time the OP3 output is activated.
Extend Relay	Time the door relay is activated in response to a valid card for a user with the *Extend Relay* option. In this case, the door relay is activated for an extended period of time for users who may require longer to access the door.

Step 6: **Save**

6.3 Set Door Scheduled Actions

Step 1: Login as **installer**
Step 2: Select "**Door Settings**" from the Menu
Step 3: Select the desired door (e.g., Door 1)
Step 4: Select "**Actions**" tab
Step 5: Using the drop-down menu, select a Timezone
to determine when the Action will be executed.
Refer to Section *7.1 Creating a Timezone.*

Step 6: Click **Save**



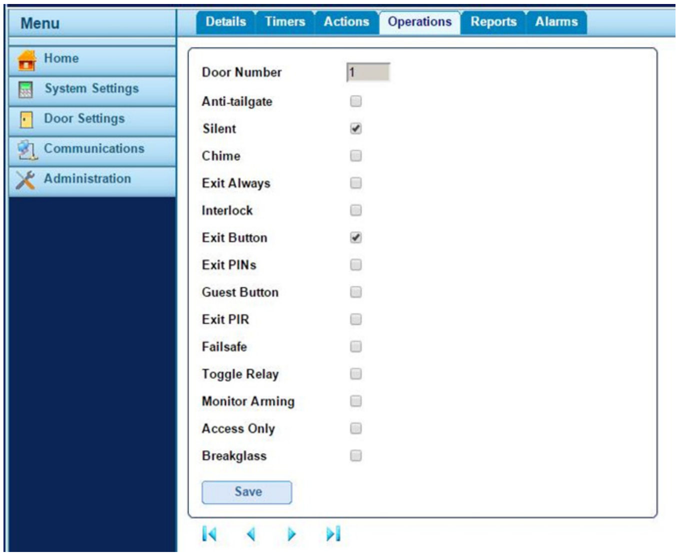
Door Number 1
Unlock Door No Timezone
Lock Door No Timezone
PIN Required No Timezone
Any Card No Timezone
Activate OP2 No Timezone
Activate OP3 No Timezone
Activate AUX No Timezone
PIN Only No Timezone
PIN or Card No Timezone
Dual Users No Timezone
Normalize Door No Timezone

Field Name	Description
Unlock Door	The assigned Timezone determines when the door is automatically unlocked, allowing free access. The main relay is held open, and the green reader LED will flash.
Lock Door	The assigned Timezone determines when the door is automatically locked. When a door is locked, all users will be denied access regardless of their programmed access rights. The door relay is held closed for this time.
PIN Required	The assigned Timezone determines when Card and PIN operation is enforced on the door. When a card is presented during this time, a valid user or group PIN must be entered to gain access.
Any Card	The assigned Timezone determines when ANY card will be allowed access. The only check performed is that a card is presented: the format is irrelevant.
Activate OP2	The assigned Timezone determines when the OP2 output is active. This could be used to control an externally connected device.
Activate OP3	The assigned Timezone determines when the OP3 output is active.
Activate AUX	The assigned Timezone determines when the AUX output is active.
PIN Only	The assigned Timezone determines when PIN Only operation is enforced for the door. During this time, all presented cards will be ignored, and a valid user PIN must be entered to gain access.
PIN or Card	The assigned Timezone determines when either a valid PIN or Card operation is required to gain entry.
Dual Users	The assigned Timezone determines when two valid cards must be presented to gain access.
Normalize Doors	The assigned Timezone determines when the door is normalized(i.e., the door returns to its default state.)

6.4 Advanced Door Operations

Step 1: Login as **installer**
Step 2: Select "**Door Settings**" from the Menu
Step 3: Select the desired door (e.g., Door 1)
Step 4: Select "**Operations**" tab
Step 5: Select the checkbox next to the operations setting to be applied to the selected Door.

Step 6: Click **Save**



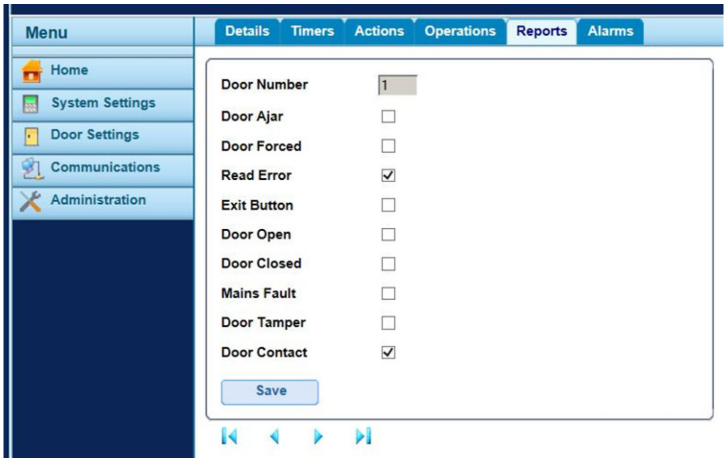
Door Number: 1
Anti-tailgate □
Silent ☑
Chime □
Exit Always □
Interlock □
Exit Button ☑
Exit PINs □
Guest Button □
Exit PIR □
Failsafe □
Toggle Relay □
Monitor Arming □
Access Only □
Breakglass □

Field Name	Description
Anti-tailgate	When selected, the main relay time expires one second after the door is opened. NOTE: A door contact must be connected AND Door Contact must be checked under the Reports tab.
Silent	By default, the door controller gives an audible indication when a card is swiped. When selected, the audible indication is suppressed.
Chime	When selected, the door controller's buzzer sounds momentarily when the door is opened. The Auxiliary output is also activated for a short period of time. NOTE: If the Silent option is also selected, the controller's buzzer will not sound, but the auxiliary output will still activate momentarily.
Exit Always	Normally, the controller applies the same group access rules to users exiting the area as it applies to users being granted access. If this option is selected, normal access rights are ignored and any enabled card can exit irrespective of access rights.
Interlock	If selected, only one door of a connected 2-door interlock may be open/unlocked at any one time. The interlock output (OP3) of each door should be connected to the interlock input (AUX) of the other door. Interlock must be selected on both door controllers. NOTE: 0V lines of both controllers should be connected together.
Exit Button	If selected, the request-to-exit input (PB) is enabled. When this switch is momentarily closed, the relay timer is activated for its programmed period of time. An exit event may also be recorded in the system log.
Exit PINs	Normally in PIN only or Card + PIN operation, PIN codes are used only to gain entry through the door. When selected, the controller requires a PIN code when exiting also.
Guest Button	When an external keypad is being used to gain entry, this option allows the "Bell" button on the keypad to be used to momentarily fire a guest buzzer connected to the auxiliary output of the controller.
Exit PIR	If selected, a Passive Infrared (PIR) device can be used in place of a traditional push button exit switch. The main relay remains unlocked past the relay timer, while the PIR is active.
Failsafe	When using normally energized locking devices, there may be problems with the door remaining locked during a power outage when a stand-by battery is discharging. If this option is selected, the action of the relay is reversed so that the door will fail open in a power outage.
Toggle Relay	If selected, the door can be toggled open or closed by users with the Toggle Relay option enabled. (See Section 8.4)
Monitor Arming	The AUX input on the controller may be connected to a keyswitch or ON/OFF switch. When this signal is low, the controller denies access to users.
Access Only	If selected, the main relay output at the access point is activated if a valid card is presented at an access reader.
Breakglass	If selected, the auxiliary output relay is activated when the B/GL input reads an open circuit.

6.5 Door Reports Settings

Step 1: Login as **installer**
Step 2: Select "**Door Settings**" from the Menu
Step 3: Select the desired door (e.g., Door 1)
Step 4: Select "**Reports**" tab
Step 5: Select the checkbox next to the event types to be reported.

Step 6: Click **Save**



Door Number 1
Door Ajar □
Door Forced □
Read Error ☑
Exit Button □
Door Open □
Door Closed □
Mains Fault □
Door Tamper □
Door Contact ☑

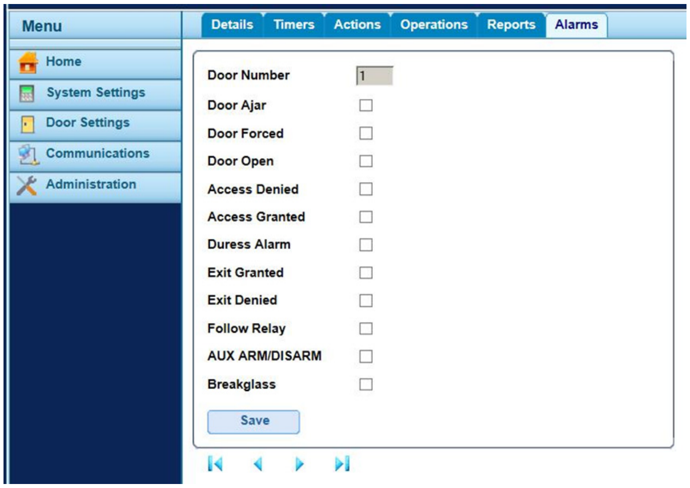
Field Name	Description
Door Ajar	A door ajar event is logged if the door has been open for longer than a predetermined period of time.
Door Forced	A door forced event is logged if the door is opened without being explicitly commanded to open by the controller. This would typically occur if the locking mechanism is bypassed or if the door is physically forced open.
Read Error	A read error event is logged when an incorrect read occurs on an entry or exit reader. An additional error number may be displayed giving further details on the error.
Exit Button	An exit granted (push button) event is logged when a user presses the request-to-exit (egress) switch.
Door Open	A door opened event is logged when the door is physically opened. Door contact required.
Door Closed	A door closed event is logged when the door is physically closed. Door contact required.
Mains Fault	A mains fault event is logged if the primary supply fails. A normally closed, dry contact must be connected to the Mains Present input on the controller.
Door Tamper	A door tamper event is logged if the door is tampered with, that is, if the door station or controller tamper switch is activated.
Door Contact	This is required for a door opened/closed event to be visually annunciated on the Door Settings screen.

6.6 Door Alarms Settings

Use this tab to determine which Alarm conditions will activate the Auxiliary Relay.

Step 1: Login as **installer**
Step 2: Select "**Door Settings**" from the Menu
Step 3: Select the desired door (e.g., Door 1)
Step 4: Select "**Alarms**" tab
Step 5: Select the checkbox next to the condition which will activate the Auxiliary Relay.

Step 6: Click **Save**



Door Number 1
Door Ajar □
Door Forced □
Door Open □
Access Denied □
Access Granted □
Duress Alarm □
Exit Granted □
Exit Denied □
Follow Relay □
AUX ARM/DISARM □
Breakglass □

Field Name	Description
Door Ajar	The AUX output is activated if the door has been open for longer than a predetermined period of time. It is reset once the door is closed or when a valid card is swiped.
Door Forced	The AUX output is activated if the door is opened without being explicitly commanded to open by the controller. It is reset when a valid card is swiped.
Door Open	The AUX output is activated while the door is open.
Access Denied	The AUX output is activated for 2 seconds if an invalid card is swiped.
Access Granted	The AUX output is activated if a valid card is swiped.
Duress Alarm	The AUX output is activated if a duress PIN code is entered. This is when a number 1 greater than the valid PIN is entered in PIN Only or PIN & Swipe operation.
Exit Granted	The AUX output is activated if a valid card is presented at an exit reader.
Exit Denied	The AUX output is activated for 2 seconds if an invalid card is swiped at an exit reader.
Follow Relay	If selected, while the main relay is active, the AUX relay is also active.
AUX ARM/DISARM	Must be used in conjuction with Door Settings - Operations - Monitor Arming
Breakglass	Must be used in conjuction with Door Settings - Operations - Breakglass

7.0 Creating Cardholder Access Rights

To create access rights, every cardholder must be assigned a User Group. A User Group consists of two elements:

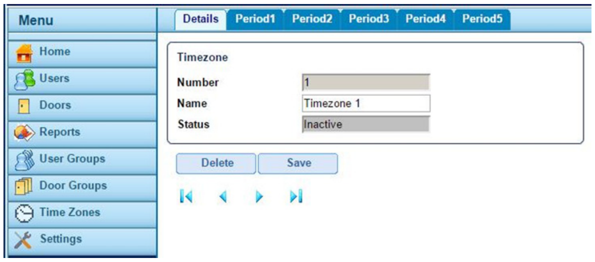
Timezones (Section 7.1) and Door Groups (Section 7.2). NOTE: By default, all User Groups are enabled, and have been given 24/7 access to all enabled doors.

7.1 Creating a Timezone

There are two pre-defined timezones: “**No Timezone**” and “**24 Hours**”. The pre-defined timezones cannot be edited.

To create a new **Timezone,**

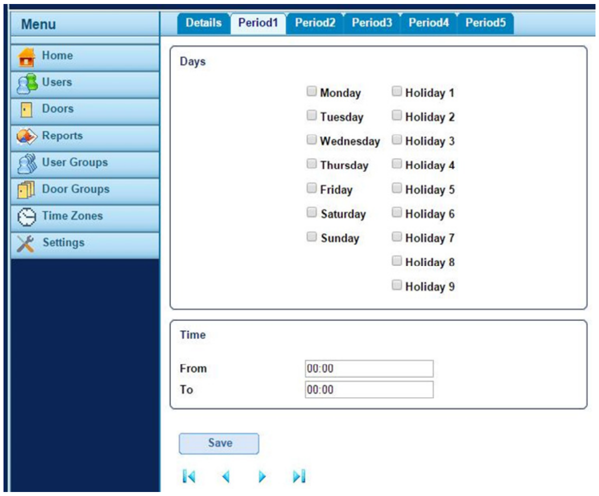
Step 1: Login as a user level account.
Step 2: Select “**Time Zones**” from the Menu.
Step 3: Choose a Timezone Name from the Timezone List (e.g., Timezone 1)
Step 4: From the Details Tab, assign a unique Name to the Timezone, and Click **Save**.



Timezone

Number: 1
Name: Timezone 1
Status: Inactive

Step 5: Select one of the five time period tabs to edit.
Step 6: From the Period Tab, select the Day(s) for which the Timezone will be active.
Step 7: If required, select a Holiday (Type 1 thru 9) when the Timezone will be active. Refer to Section 9.1 *Create/View Holidays*.
Step 8: Edit the Time when the Timezone will be active (00:00 to 23:59)
Step 9: If necessary, select and edit another Period.
Step 10: Click **Save**.



Days

□ Monday □ Holiday 1
□ Tuesday □ Holiday 2
□ Wednesday □ Holiday 3
□ Thursday □ Holiday 4
□ Friday □ Holiday 5
□ Saturday □ Holiday 6
□ Sunday □ Holiday 7
□ Holiday 8
□ Holiday 9

Time

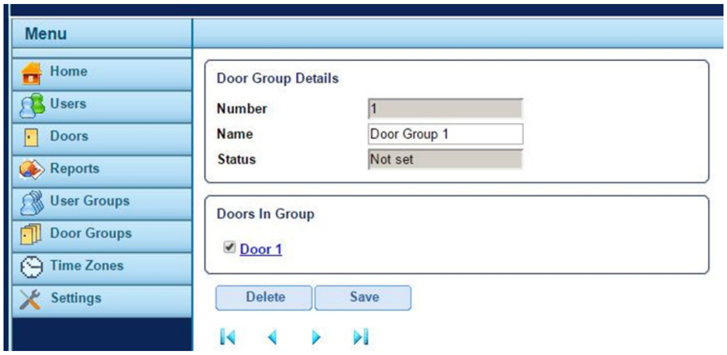
From: 00:00
To: 00:00

7.2 Creating a Door Group

There are two pre-defined Door Groups: “**No Doors**” and “**All Doors**”. The pre-defined door groups cannot be edited.

To create a new **Door Group**,

Step 1: Login as a user level account.
Step 2: Select “**Door Groups**” from the Menu.
Step 3: Choose a Door Group Name from the Door Group List (e.g., Door Group 1)
Step 4: Under Door Group Details, assign a unique Name to the Door Group.
Step 5: Check the box next to the Door(s) which are part of the Door Group. NOTE: Only **Enabled** doors will be available to add to the Door Group.
Step 6: Click **Save**.



Door Group Details

Number: 1
Name: Door Group 1
Status: Not set

Doors In Group

☑ Door 1

7.3 Creating a User Group

NOTE: By default, all User Groups are enabled, and have been given 24/7 access to ALL enabled doors.

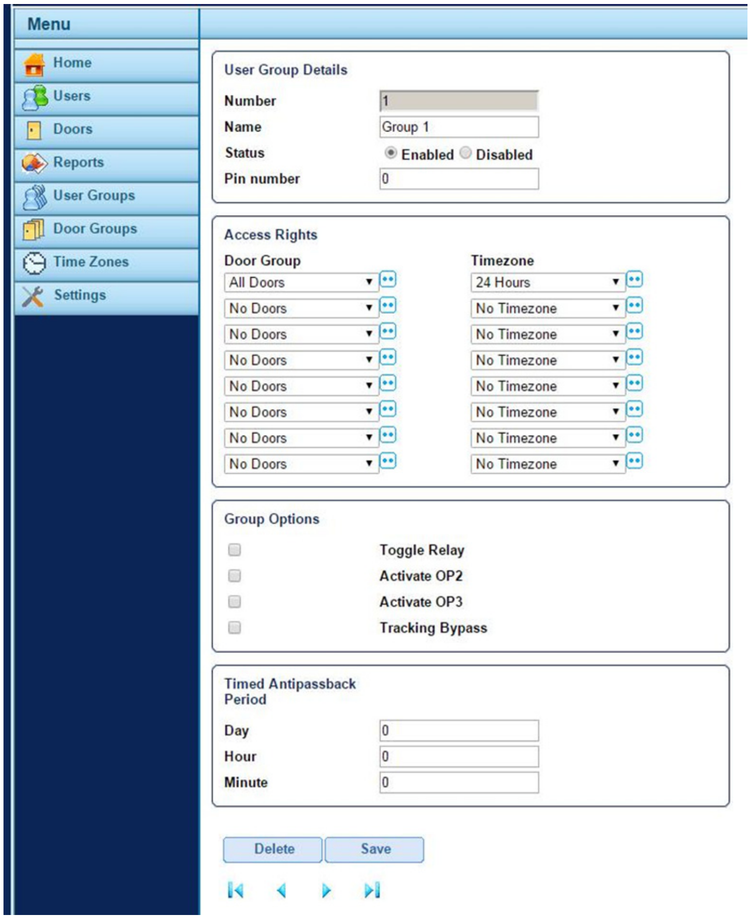
To create a new **User Group,**

Step 1: Login as a user level account.
Step 2: Select “**User Groups**” from the Menu.
Step 3: Choose a User Group Name from the List of Groups (e.g., Group 1)
Step 4: Under User Group Details, assign a unique Name to the User Group.
Step 5: Under Access Rights, use the drop-down menus to assign Door Groups and their respective Timezones. (Up to 8 per Group)

Step 6: Check any Group Options, as required. See descriptions below.
Note: A different setting on the User's Options Tab (See *Section 8.0 – Cardholder Settings*) overrides this setting.

Step 7: To enable anti-passback, set the timed anti-passback period to any other value than 0 days, 0 hours, and 0 minutes. The minimum is 1 minute. The maximum is 7 days, 23 hours, and 59 minutes. See description below.

Step 8: Click **Save**.



User Group Details

Number	1
Name	Group 1
Status	● Enabled ○ Disabled
Pin number	0

Access Rights

Door Group	Timezone
All Doors	24 Hours
No Doors	No Timezone
No Doors	No Timezone
No Doors	No Timezone
No Doors	No Timezone
No Doors	No Timezone
No Doors	No Timezone
No Doors	No Timezone

Group Options

☐ Toggle Relay
☐ Activate OP2
☐ Activate OP3
☐ Tracking Bypass

Timed Antipassback Period

Day	0
Hour	0
Minute	0

Option Name	Description
Toggle Relay	This option causes the relay to toggle whenever a user in this group is granted access. If the door is in its normal state, it will be held unlocked, and the green reader LED will flash. If the door was already unlocked, then it is returned to normal operation.
Activate OP2	This option causes the local OP2 output to be fired for a predetermined period of time whenever a user in this group is granted access.
Activate OP3	This option causes the local OP3 output to be fired for a predetermined period of time whenever a user in this group is granted access.
Tracking Bypass	This option allows tracking functions to be bypassed for users in this group. This means that anti-passback and user-limiting functions do not apply to users in this group.
Timed Antipassback Period	When a user in the Group is granted access through a door, then the user will not be granted access again until the anti-passback time period expires.

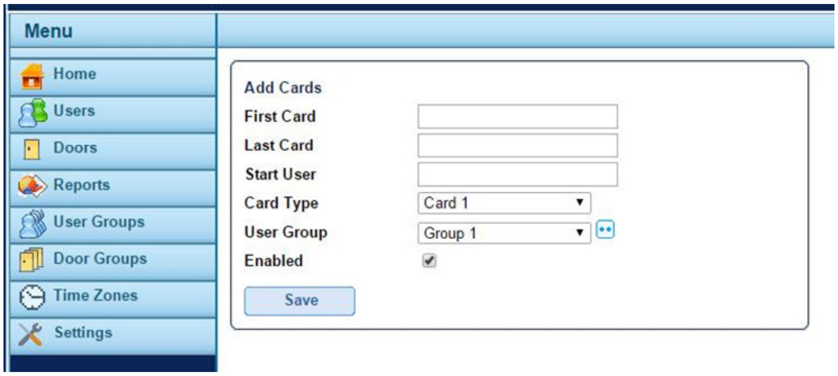
7.4 Assigning a User Group to a Cardholder.

Refer to Section 8.0 for Cardholder configuration.

8.0 Adding Cardholders

8.1 Add a Batch of Cards

Step 1: Login as a user level account.
Step 2: From the Home screen,
select the “**Add Cards**” icon



Add Cards

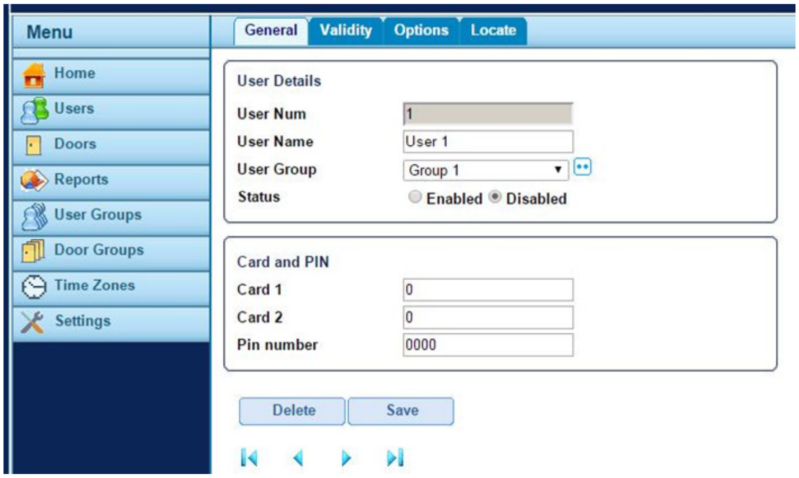
First Card	
Last Card	
Start User	
Card Type	Card 1
User Group	Group 1
Enabled	☑

Step 3: Enter the “**First Card**” number.
NOTE: For a 26-bit Wiegand reader, the card number consists of a 3-digit facility code + a 5-digit card number (typically printed on the card). For example, if a card has a facility code of ‘110’ and the number printed on the card is ‘01234’, then the number entered into the “First Card” field will be ‘11001234’.
Step 4: Enter the “**Last Card**” number.
Step 5: Set the “**Start User**” to ‘1’ (for a new installation)
Step 6: Set the “Card Type” to ‘Card 1’ or ‘Card 2’. Each user may be assigned up to 2 separate credentials (Card 1 or Card 2). If Card 1 has not been used, use Card 1 first.
Step 7: Select a “**User Group**” and check the **Enabled** box.
NOTE: Checking Enabled in Step 7 above enables all the cardholders. User Groups may also need to be enabled (See *Section 7.3 Creating a User Group*)

Step 8: Click **Save**.

8.2 Add an Individual Cardholder

Step 1: Login as a user level account.
Step 2: Select “**Users**” from the Menu
Step 3: From Show All Users,
select a User Name (e.g., User 1)
Step 4: Under User Details, edit the **User name**
Step 5: Using the drop-down menu,
Select a **User Group**
Step 6: Under Status, select “**Enabled**”



User Details

User Num	1
User Name	User 1
User Group	Group 1
Status	○ Enabled ● Disabled

Card and PIN

Card 1	0
Card 2	0
Pin number	0000

Step 7: Enter card number into
either Card 1 or Card 2 field
NOTE: For a 26-bit Wiegand reader, the card number consists of a 3-digit facility code + a 5-digit card number (typically printed on the card). For example, if a card has a facility code of ‘110’ and the number printed on the card is ‘01234’, then the number entered into the “First Card” field will be ‘11001234’.

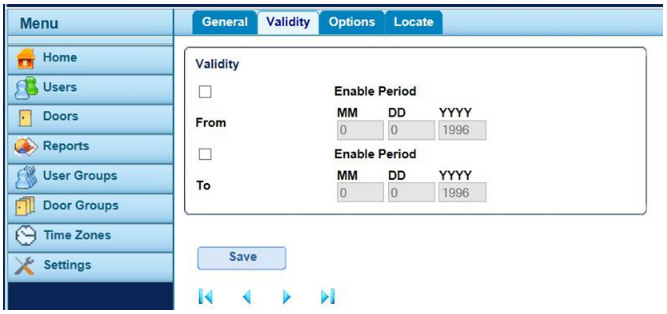
Step 7: Click **Save**

8.3 Change Cardholder Validity (Temporary User)

By default, a user card is always valid and never expires. To change the period of time a cardholder is valid,

Step 1: Login as a user level account.
Step 2: From the Home screen, select “**Users**” from the Menu.
NOTE: If this is a new user, go to Section 8.2, and return to Step 4 after the new cardholder has been added.

Step 3: From Show All Users, select a User Name (e.g., **<u>User 1</u>**)
Step 4: Select the **Validity** Tab.



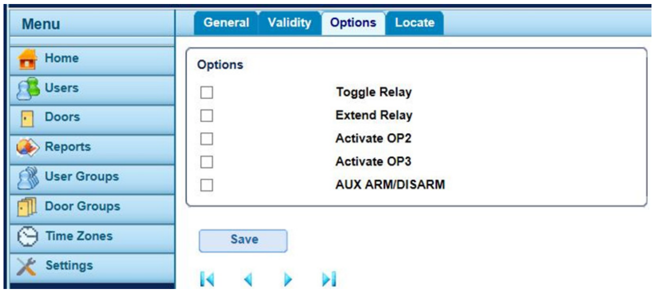
Validity

	□	Enable Period		
From		MM 0	DD 0	YYYY 1996
	□	Enable Period		
To		MM 0	DD 0	YYYY 1996

Step 5: Check the box above “From” to enable the Start Date. Enter a 2-digit Month (MM), 2-digit Day (DD), and 4-digit Year (YYYY). This is the first day the card will be valid.
Step 6: Check the box above “To” to enable the End Date. Enter a 2-digit Month (MM), 2-digit Day (DD), and 4-digit Year (YYYY). This is the last day the card will be valid.
Step 7: Click **Save**.

8.4 Cardholder Options

Step 1: Login as a user level account.
Step 2: From the Home screen, select “**Users**” from the Menu.
Step 3: From Show All Users, select a User Name (e.g., **<u>User 1</u>**)
Step 4: Select the **Options** Tab.



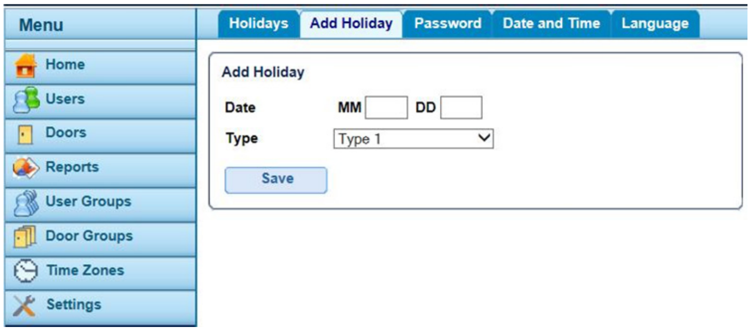
Options

- □ Toggle Relay
- □ Extend Relay
- □ Activate OP2
- □ Activate OP3
- □ AUX ARM/DISARM

Step 5: Check the box next to the desired option(s).

Field Name	Description
Toggle Relay	This option causes the relay to toggle whenever the user is granted access. If the door was in its normal state, it is unlocked, and the green reader LED will flash. If the door was already unlocked, then it is returned to normal operation. This option may be assigned to individual users or to groups.
Extend Relay	This option causes the door relay to remain active for an extended period of time when access is granted. The time is determined by the Extend Relay Timer (See Section 6.2)
Activate OP2	This option causes the local OP2 output to be fired for a predetermined period of time whenever the user is granted access.
Activate OP3	This option causes the local OP3 output to be fired for a predetermined period of time whenever the user is granted access.
AUX ARM/DISARM	This option is not available on the IP Pro Door Controller.

9.0 Holiday Scheduling



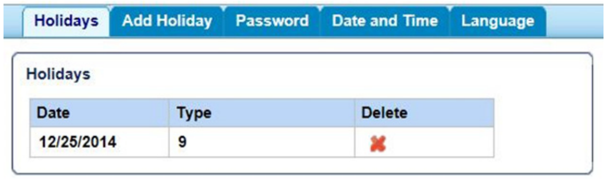
Date MM DD
Type Type 1

9.1 Create/View Holidays

Step 1: Login as a user level account.
Step 2: From the Home screen, select “**Settings**” from the Menu.
Step 3: Select the “**Add Holiday**” Tab.
Step 4: Enter the 2-digit month (MM) and 2-digit day (DD) for the desired holiday.
Step 5: Use the drop-down menu to select the holiday type. There an 9 possible Holiday Types.

Step 6: Click **Save**.

To view all Holidays, select the **Holidays** Tab.



Date	Type	Delete
12/25/2014	9	✖

NOTE: User Groups that have been assigned the “**24 Hours**” Timezone will have normal access on Holidays. User Groups assigned to any other Timezone will only have access for Holiday Types selected in their respective Timezone period (See Section 7.1).

10.0 History Reports

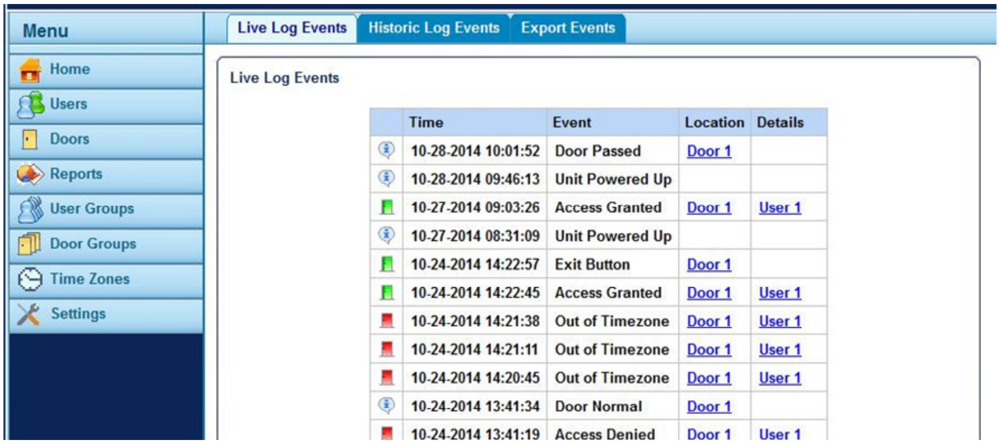
10.1 View Log Events

Step 1: Login as a user level account.
Step 2: From the Home screen, select “**Reports**” from the Menu.

The **Live Log Events** tab lists the previous 25 events.

The **Historic Log Events** tab lists the previous 5000 events (25 events at a time).
Use the arrow buttons to page through the events.

When either log becomes full, the list will drop the oldest event (first in, first out).

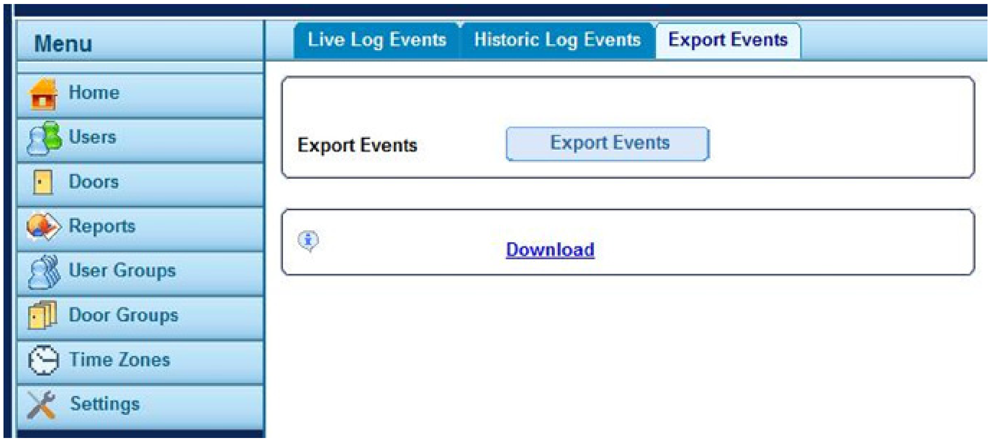


	Time	Event	Location	Details
ⓘ	10-28-2014 10:01:52	Door Passed	Door 1	
ⓘ	10-28-2014 09:46:13	Unit Powered Up		
🟩	10-27-2014 09:03:26	Access Granted	Door 1	User 1
ⓘ	10-27-2014 08:31:09	Unit Powered Up		
🟩	10-24-2014 14:22:57	Exit Button	Door 1	
🟩	10-24-2014 14:22:45	Access Granted	Door 1	User 1
🟥	10-24-2014 14:21:38	Out of Timezone	Door 1	User 1
🟥	10-24-2014 14:21:11	Out of Timezone	Door 1	User 1
🟥	10-24-2014 14:20:45	Out of Timezone	Door 1	User 1
ⓘ	10-24-2014 13:41:34	Door Normal	Door 1	
🟥	10-24-2014 13:41:19	Access Denied	Door 1	User 1

10.2 Export Events

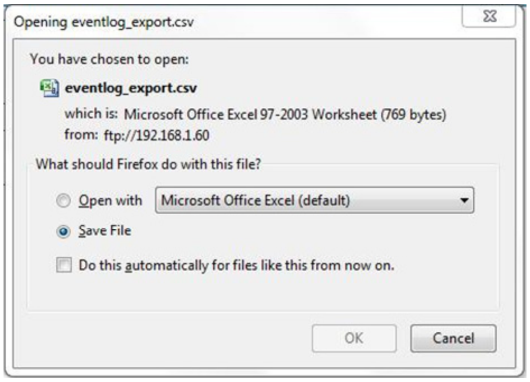
Events may be exported as a .csv format file, viewable & editable in Microsoft Office Excel.
It is recommended that events be exported using Internet Explorer or Mozilla Firefox.

Step 1: Login as a user level account.
Step 2: From the Home screen, select “**Reports**” from
the Menu.
Step 3: Select the “**Export Events**” tab. The download link will appear.
Step 4: Click the **Download** link.



Using Firefox, a window similar to this one will appear:

Click **OK** to Save the file. The ‘eventlog_export.csv’ file will be saved to the local Downloads folder.



Opening eventlog_export.csv

You have chosen to open:

eventlog_export.csv

which is: Microsoft Office Excel 97-2003 Worksheet (769 bytes)

from: ftp://192.168.1.60

What should Firefox do with this file?

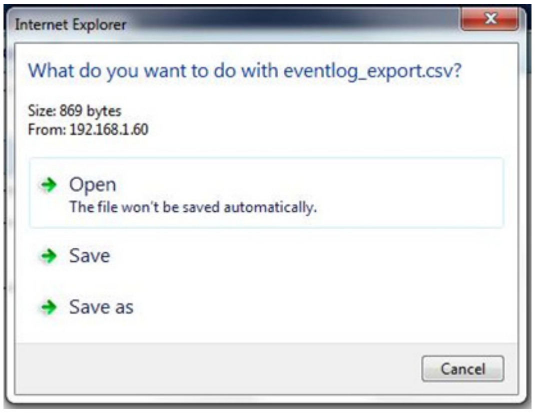
○ Open with Microsoft Office Excel (default)

● Save File

□ Do this automatically for files like this from now on.

Using Internet Explorer, a window similar to this one will appear:

Click **Save as** to rename the file or to change the location where the file is to be saved.



Internet Explorer

What do you want to do with eventlog_export.csv?

Size: 869 bytes
From: 192.168.1.60

Open
The file won't be saved automatically.

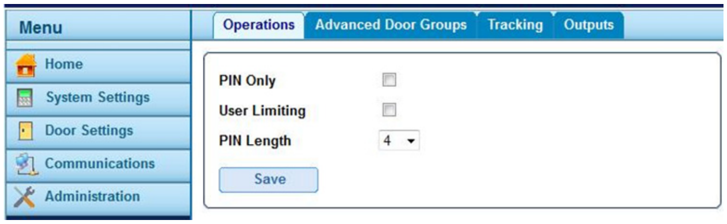
Save

Save as

11.0 Advanced System Settings

The following settings are Global (Systemwide) and will apply to all controllers and door stations on the RS485 network.

11.1 System Operations



PIN Only □
User Limiting □
PIN Length 4

Step 1: Login as **installer**.

Step 2: From the Home screen, select “**System Settings**” from the Menu.

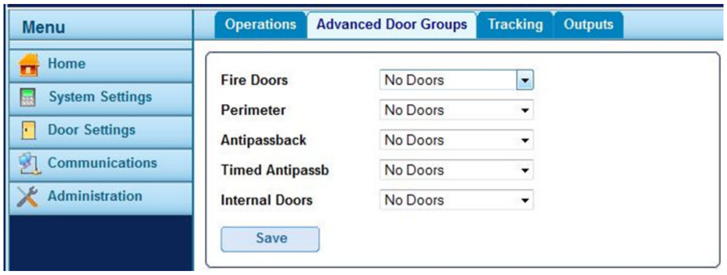
Step 3: Select the **Operations** Tab.

Step 4: Edit the fields as required.

Step 5: Save

Field Name	Description
PIN Only	If selected, PIN Only operation is required on the entire system. No card credentials are accepted in the system.
User Limiting	If selected, when the number of users inside the perimeter area is equal to the maximum of either User Limit A or User Limit B then the controller prevents any more users from entering.
PIN Length	Using the drop-down menu, selects the number of digits required for all cardholder PIN numbers used in Card & PIN mode, PIN Only mode, PIN or Card mode. Default = 4 digits.

11.2 Advanced Door Groups



Fire Doors No Doors
Perimeter No Doors
Antipassback No Doors
Timed Antipassb No Doors
Internal Doors No Doors

Step 1: Login as **installer**.

Step 2: From the Home screen, select “**System Settings**” from the Menu.

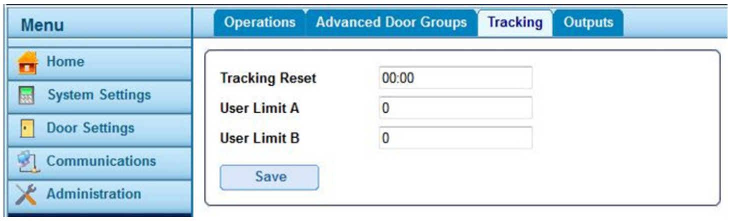
Step 3: Select the **Advanced Door Groups** Tab.

Step 4: Using the drop-down menus, select the appropriate door group to assign as Fire Doors, Perimeter Doors, etc.

Step 5: **Save**

Field Name	Description
Fire Doors	The designated Door Group automatically opens in the event of a fire to allow free passage. A signal from the fire alarm system to the AUX1 input is required.
Perimeter	The designated Door Group contains doors on the perimeter of the installation. This allows the system to keep track of which users are in or out of the installation at a given time. See Tracking (Section 11.3)
Antipassback	The designated Door Group defines which doors are in the Anti-passback area. Doors in this area must have entry/exit readers.
Timed Antipassb	The designated Door Group contains doors that will not re-open for the same card during the anti-passback timed period. The anti-passback timed period is defined in the User Groups (Section 7.3)
Internal Doors	The designated Door Group contains doors inside the perimeter of the installation. These doors deny access if the cardholder has not already entered through the perimeter or anti-passback doors.

11.3 Tracking



Tracking Reset 00:00
User Limit A 0
User Limit B 0

Step 1: Login as **installer**.

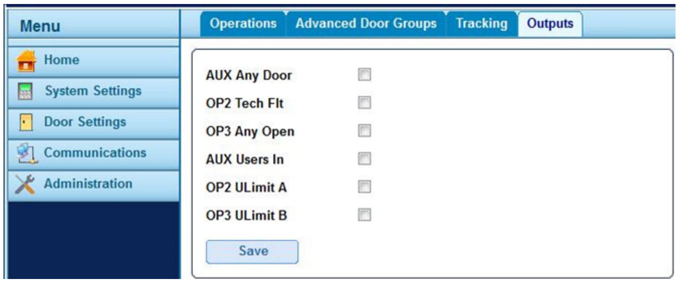
Step 2: From the Home screen, select “**System Settings**” from the Menu.

Step 3: Select the **Tracking** Tab.

Step 4: Edit the fields as required, and **Save**.

Field Name	Description
Tracking Reset	The time of day when the area counts are reset.
User Limit A	These limits specify the maximum number of users that will be allowed in that area. The two limits operate independently.
User Limit B	

11.4 Systemwide Outputs



AUX Any Door ☐
OP2 Tech Flt ☐
OP3 Any Open ☐
AUX Users In ☐
OP2 ULimit A ☐
OP3 ULimit B ☐

Step 1: Login as **installer**.

Step 2: From the Home screen, select "**System Settings**" from the Menu.

Step 3: Select the **Outputs** Tab.

Step 4: Check outputs as required, and **Save**.

Field Name	Description
AUX Any Door	When this option is selected, the AUX output on the IP Door Controller operates if the AUX output for any of the door stations connected to the controller is active.
OP2 Tech Flt	When this option is selected, the AUX output on the IP Door Controller operates if a technical fault condition exists. Technical faults include mains faults, tampers or doors offline.
OP3 Any Open	When this option is selected, the OP3 output on the IP Door Controller operates if any of the doors connected to the controller are open.
AUX Users In	When this option is selected, the AUX output on the IP Door Controller operates while one or more users are within the anti-passback or perimeter area (if configured). The output activates immediately when a user enters the defined area, and de-activates when all users have exited.
OP2 ULimit A	When this option is selected, the OP2 output on the IP Door Controller operates when the number of users within the anti-passback or perimeter area reaches or exceeds User Limit A
OP3 ULimit B	When this option is selected, the OP3 output on the IP Door Controller operates when the number of users within the anti-passback or perimeter area reaches or exceeds User Limit B

12.0 Database Backup

12.1 Create a Backup

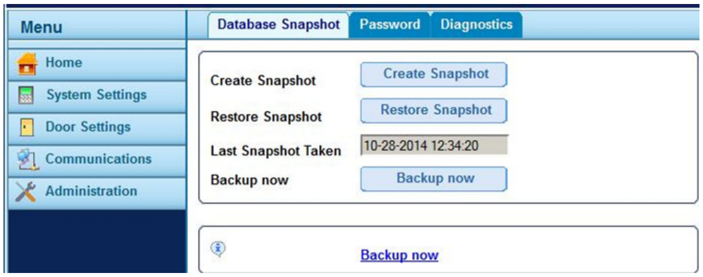
It is recommended that Microsoft Internet Explorer or Mozilla Firefox be used for database backups.
To create a backup of the system database on your PC:

Step 1: Login as **installer**.

Step 2: From the Home screen, select "**Administration**" from the Menu.

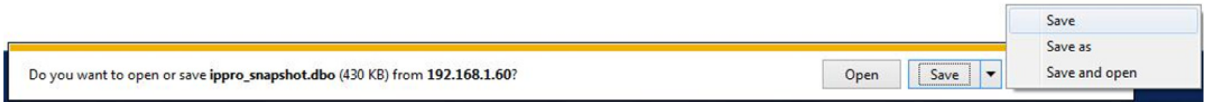
Step 3: From the Database Snapshot Tab, Click **Create Snapshot**. The **Last Snapshot Taken** field will update & the backup now link will appear. A database backup file named ippro_snapshot.dbo has been created on the controller.

Step 4: Click the **<u>Backup now</u>** link.



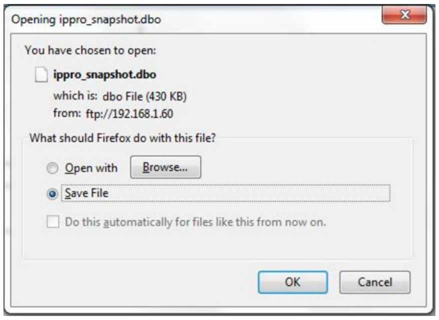
Create Snapshot
Restore Snapshot
Last Snapshot Taken 10-28-2014 12:34:20
Backup now

If using Internet Explorer, select **Save as** when prompted.



Do you want to open or save **ippro_snapshot.dbo** (430 KB) from **192.168.1.60**?

If using Firefox, click **OK** when prompted to save the file to the local Downloads folder.



Opening ippro_snapshot.dbo

You have chosen to open:

ippro_snapshot.dbo

which is: dbo File (430 KB)
from: ftp://192.168.1.60

What should Firefox do with this file?

○ Open with
● Save File
☐ Do this automatically for files like this from now on.

12.2 Restore a Backup

To restore the backup from the PC the installer must use an FTP client. The FTP client can be run from the command line or using an FTP client such as Filezilla.

To restore using the command line FTP:

Step 1: From the command line, enter ftp followed by the IP address of the controller.

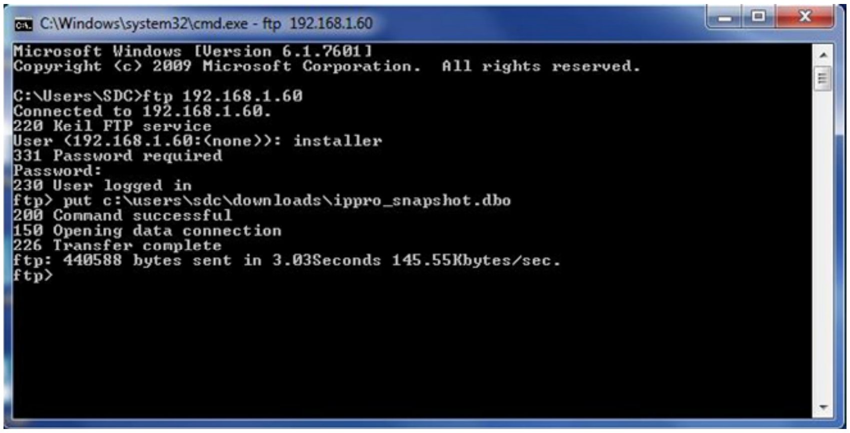
ftp 192.168.1.60

Step 2: Enter the **installer** username and password.

Username: ***installer***
Password: ***999999***

Step 3: Copy the database to the controller. From the FTP command prompt enter ***put directory\filename***. The directory is the PC location where the backup file is stored and the filename must be **ippro_snapshot.dbo**. When successful, the database is restored as a snapshot on the controller.

Step 4: From the ftp command line, type quit.
Step 5: From the command line, type exit and return to the web browser interface.

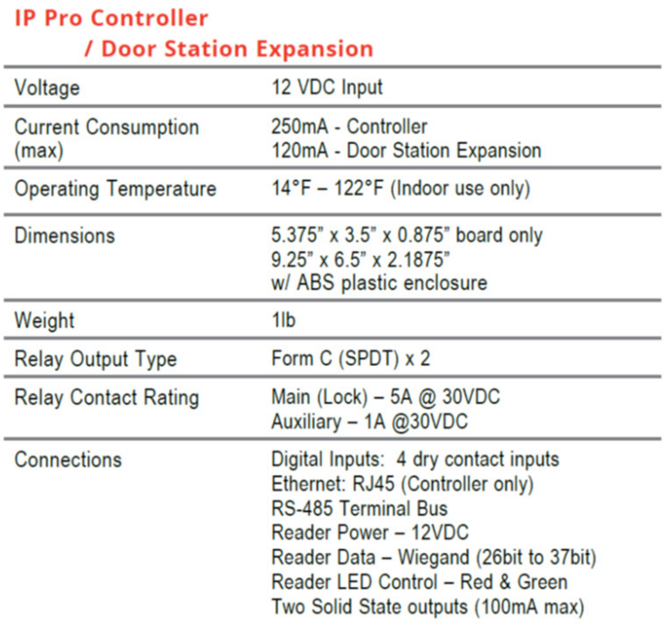


```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation.  All rights reserved.

C:\Users\SDC>ftp 192.168.1.60
Connected to 192.168.1.60.
220 Keil FTP service
User (192.168.1.60:(none)): installer
331 Password required
Password:
230 User logged in
ftp> put c:\users\sdc\downloads\ippro_snapshot.dbo
200 Command successful
150 Opening data connection
226 Transfer complete
ftp: 440588 bytes sent in 3.03Seconds 145.55Kbytes/sec.
ftp>
```

Step 6: Login as **installer**.
Step 7: From the Home screen, select "**Administration**" from the Menu.
Step 8: From the Database Snapshot Tab, Click **Restore Snapshot**.
Step 9: Click **OK** to confirm. The controller has been updated.

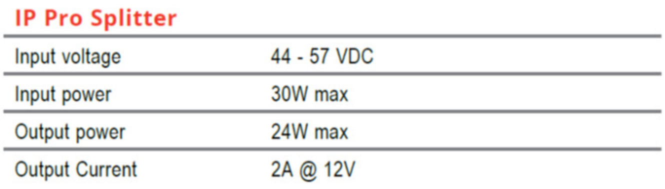
13.0 Features & Specifications

- Controls one door directly, with unlimited expansion capabilities
- TCP/IP communications (100/10Mbps)
- DHCP or Static IP addresses
- Password protected built-in web server (No separate software to install)
- Live transaction monitoring
- Entry & exit reader capability
- Compatible with industry standard Wiegand output readers
- Reader short circuit protection
- 1,000 users (up to 2 credentials per user). 60,000 users when using the PLUS software.
- Batch card enrollment
- 250 User groups/Time Zones/Door Groups
- Holiday support
- Scheduled Events
- Temporary Users
- Audit Trail – Up to 5,000 events maybe exported as a .csv file
- Status LED's – Power, Communications, & Fault on-board diagnostic indicators
- Anti-tailgating
- Supported browsers: Microsoft Internet Explorer, Firefox, Google Chrome
- Multiple credential modes: Card only, PIN only, Pin or Card, Pin & Card
- Door Status Monitoring Input
- Request-to-Exit (REX) Input
- Programmable Auxiliary Input
- Lock Relay Output
- Auxiliary Relay Output
- (2) Programmable Solid-state Outputs
- Tamper Input
- Database backup support



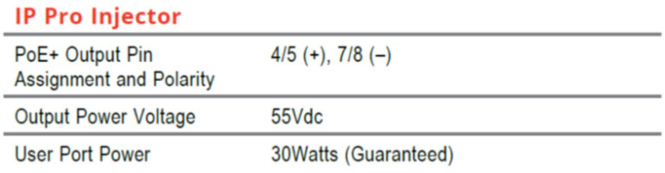
IP Pro Controller / Door Station Expansion

Voltage	12 VDC Input
Current Consumption (max)	250mA - Controller 120mA - Door Station Expansion
Operating Temperature	14°F – 122°F (Indoor use only)
Dimensions	5.375" x 3.5" x 0.875" board only 9.25" x 6.5" x 2.1875" w/ ABS plastic enclosure
Weight	1lb
Relay Output Type	Form C (SPDT) x 2
Relay Contact Rating	Main (Lock) – 5A @ 30VDC Auxiliary – 1A @30VDC
Connections	Digital Inputs: 4 dry contact inputs Ethernet: RJ45 (Controller only) RS-485 Terminal Bus Reader Power – 12VDC Reader Data – Wiegand (26bit to 37bit) Reader LED Control – Red & Green Two Solid State outputs (100mA max)



IP Pro Splitter

Input voltage	44 - 57 VDC
Input power	30W max
Output power	24W max
Output Current	2A @ 12V



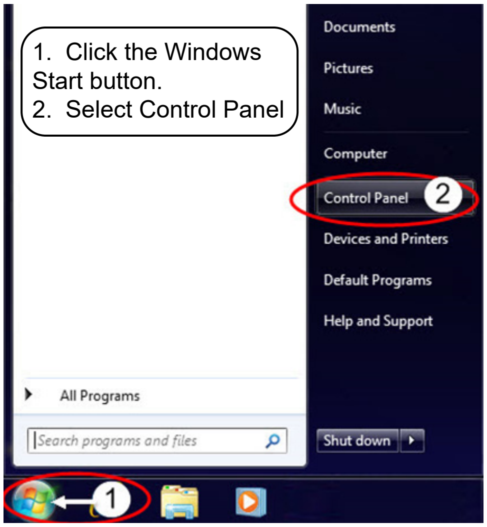
IP Pro Injector

PoE+ Output Pin Assignment and Polarity	4/5 (+), 7/8 (–)
Output Power Voltage	55Vdc
User Port Power	30Watts (Guaranteed)

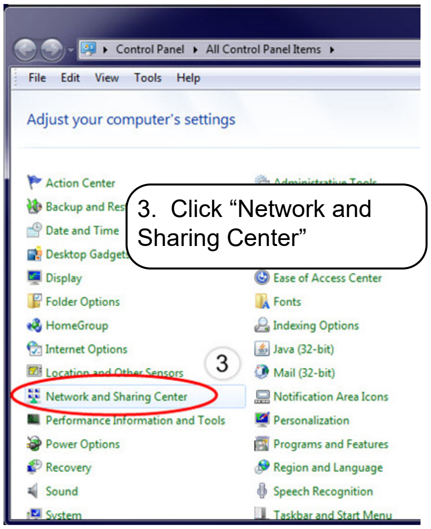
Addendum #1

A1.1 Assign a Static IP Address to your PC

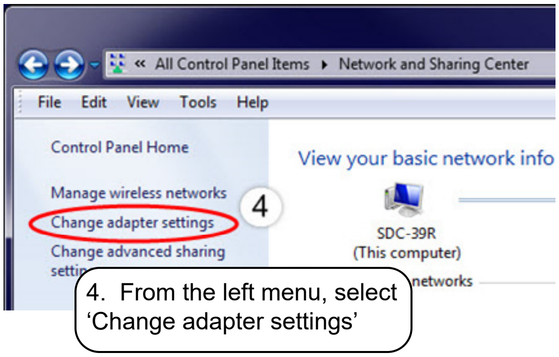
To connect your PC or laptop directly to the IP Pro Controller, your PC must be on the same subnet as the controller. The following example will assign your PC a static IP address on the same subnet as the IP Pro Controller. The controller has a default IP address of 192.168.1.60.



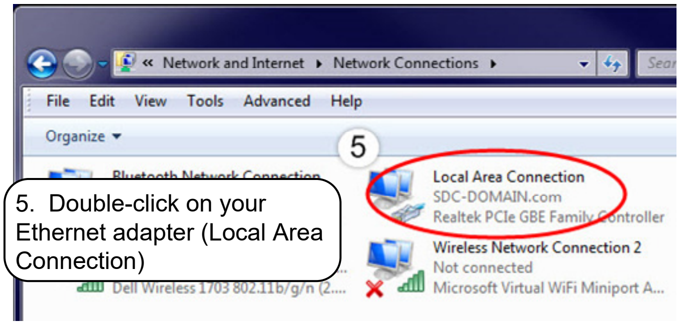
1. Click the Windows Start button.
2. Select Control Panel



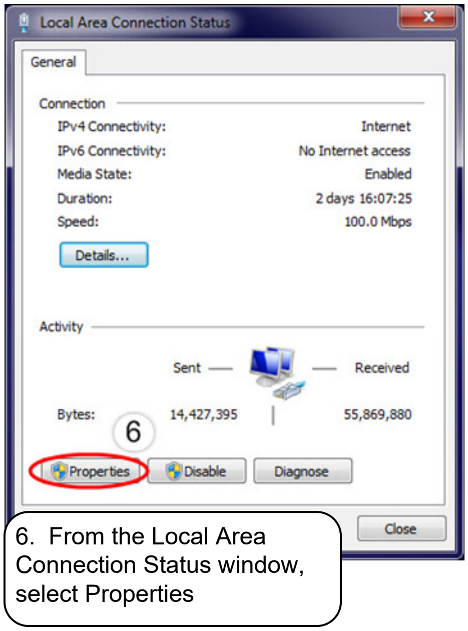
3. Click "Network and Sharing Center"


« All Control Panel Items ▸ Network and Sharing Center
File Edit View Tools Help
Control Panel Home
Manage wireless networks
Change adapter settings
Change advanced sharing settings
View your basic network info
SDC-39R
(This computer)
networks

4. From the left menu, select 'Change adapter settings'


« Network and Internet ▸ Network Connections ▸
File Edit View Tools Advanced Help
Organize
Bluetooth Network Connection
Dell Wireless 1703 802.11b/g/n (2....
Local Area Connection
SDC-DOMAIN.com
Realtek PCIe GBE Family Controller
Wireless Network Connection 2
Not connected
Microsoft Virtual WiFi Miniport A...

5. Double-click on your Ethernet adapter (Local Area Connection)


Local Area Connection Status

General

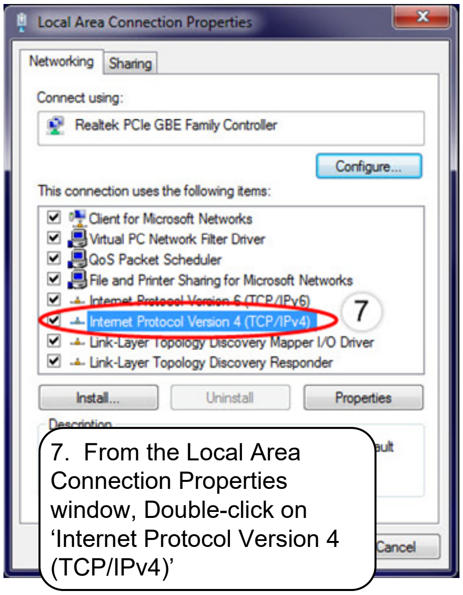
Connection

IPv4 Connectivity:	Internet
IPv6 Connectivity:	No Internet access
Media State:	Enabled
Duration:	2 days 16:07:25
Speed:	100.0 Mbps

Activity

	Sent	Received
Bytes:	14,427,395	55,869,880

6. From the Local Area Connection Status window, select Properties


Local Area Connection Properties

Networking Sharing

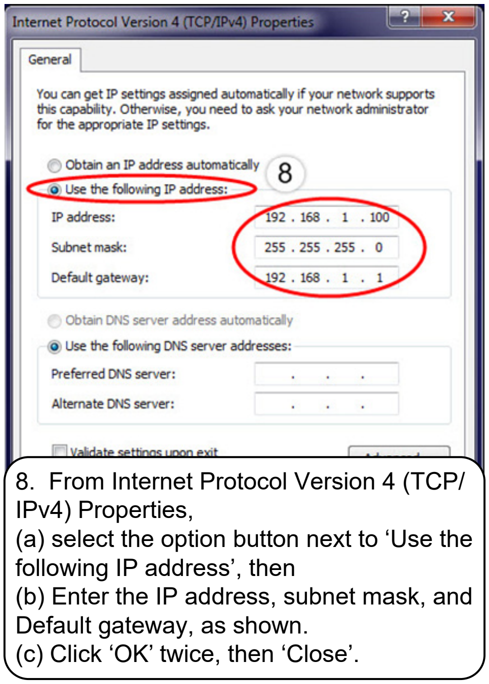
Connect using:

Realtek PCIe GBE Family Controller

This connection uses the following items:

☑ Client for Microsoft Networks
☑ Virtual PC Network Filter Driver
☑ QoS Packet Scheduler
☑ File and Printer Sharing for Microsoft Networks
☑ Internet Protocol Version 6 (TCP/IPv6)
☑ Internet Protocol Version 4 (TCP/IPv4)
☑ Link-Layer Topology Discovery Mapper I/O Driver
☑ Link-Layer Topology Discovery Responder

7. From the Local Area Connection Properties window, Double-click on 'Internet Protocol Version 4 (TCP/IPv4)'


Internet Protocol Version 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically
● Use the following IP address:

IP address:	192 . 168 . 1 . 100
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	192 . 168 . 1 . 1

○ Obtain DNS server address automatically
● Use the following DNS server addresses:

Preferred DNS server:	. . .
Alternate DNS server:	. . .

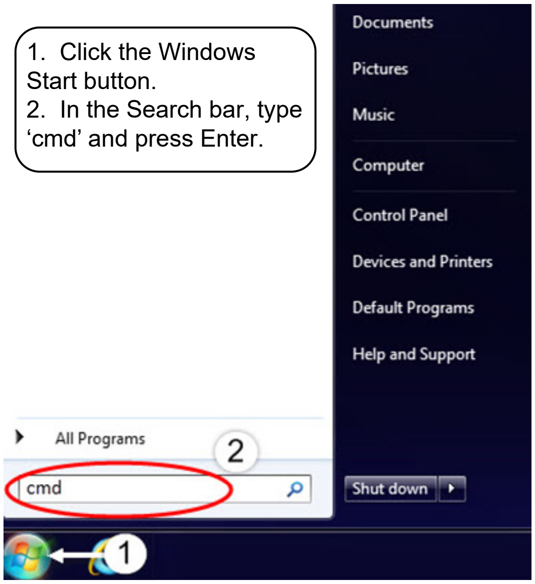
□ Validate settings upon exit

8. From Internet Protocol Version 4 (TCP/IPv4) Properties,
(a) select the option button next to 'Use the following IP address', then
(b) Enter the IP address, subnet mask, and Default gateway, as shown.
(c) Click 'OK' twice, then 'Close'.

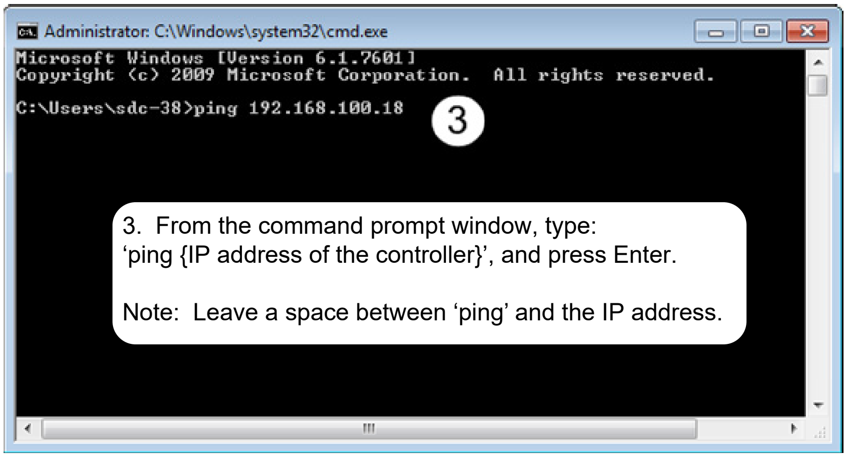
A1.2 Test Communication to the IP Pro Controller (Ping Test)

A ping test can determine whether your computer can communicate to the IP Pro Controller over the network. This is a simple test to troubleshoot your network settings. You can run the test by (a) pinging the controller's IP address or by (b) pinging the controller's NetBIOS address. Pinging the NetBIOS address is useful when the IP address is not known.

To ping the controller's IP address (Windows 7):



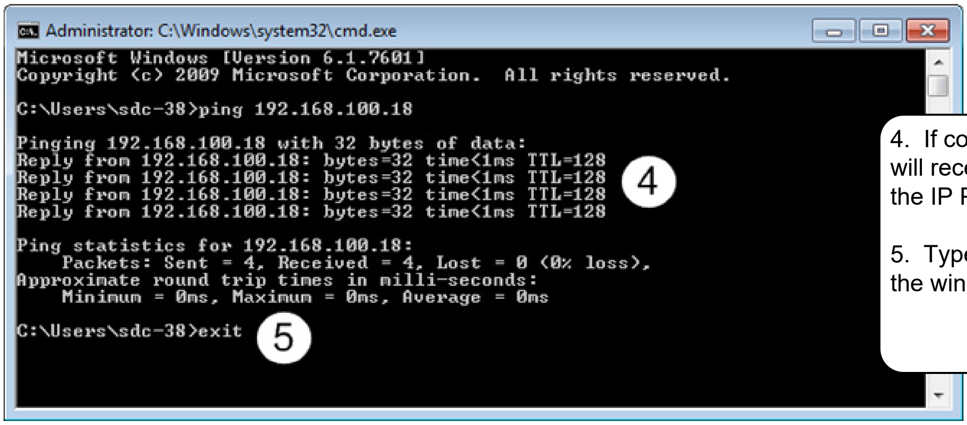
1. Click the Windows Start button.
2. In the Search bar, type 'cmd' and press Enter.



```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation.  All rights reserved.

C:\Users\sdc-38>ping 192.168.100.18
```

3. From the command prompt window, type: 'ping {IP address of the controller}', and press Enter.

Note: Leave a space between 'ping' and the IP address.

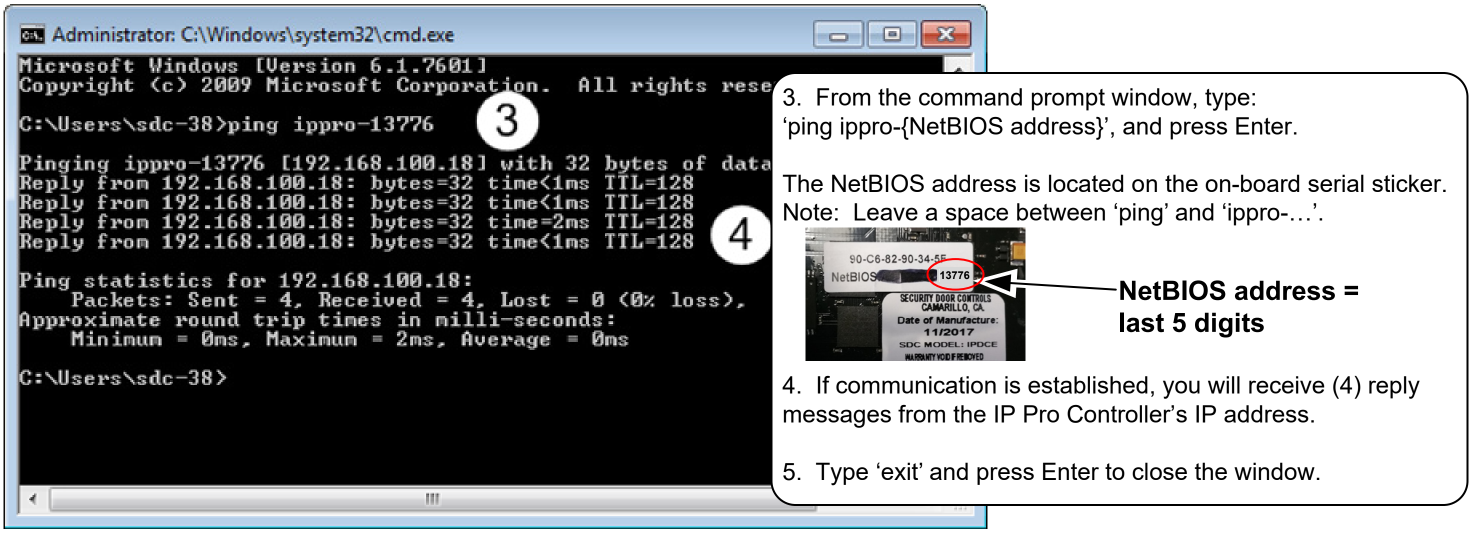


```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation.  All rights reserved.

C:\Users\sdc-38>ping 192.168.100.18

Pinging 192.168.100.18 with 32 bytes of data:
Reply from 192.168.100.18: bytes=32 time<1ms TTL=128
Reply from 192.168.100.18: bytes=32 time<1ms TTL=128
Reply from 192.168.100.18: bytes=32 time<1ms TTL=128
Reply from 192.168.100.18: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.100.18:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\sdc-38>exit
```

4. If communication is established, you will receive (4) reply messages from the IP Pro Controller's IP address.

5. Type 'exit' and press Enter to close the window.

To ping the controller's NetBIOS address:



```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation.  All rights rese

C:\Users\sdc-38>ping ippro-13776

Pinging ippro-13776 [192.168.100.18] with 32 bytes of data
Reply from 192.168.100.18: bytes=32 time<1ms TTL=128
Reply from 192.168.100.18: bytes=32 time<1ms TTL=128
Reply from 192.168.100.18: bytes=32 time=2ms TTL=128
Reply from 192.168.100.18: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.100.18:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 2ms, Average = 0ms

C:\Users\sdc-38>
```

3. From the command prompt window, type: 'ping ippro-{NetBIOS address}', and press Enter.

The NetBIOS address is located on the on-board serial sticker.
Note: Leave a space between 'ping' and 'ippro-…'.

NetBIOS address = last 5 digits

4. If communication is established, you will receive (4) reply messages from the IP Pro Controller's IP address.

5. Type 'exit' and press Enter to close the window.

Addendum #2

A2.1 Wiring & Programming the 920PW/923PW keypad/card reader for PIN or Card Operation

For wiring instructions, follow the diagram that is included with the 920PW/923PW instruction sheet or on the SDC website.

1. Determine the length of PIN to be used (Default = 4 digits). If required, Use Section 11.1 on Page 18 to change the PIN length to 5 or 6 digits.

2. To program the system for PIN or Card operation,
   a. Log into the IPPro web server as “installer”.
   b. Select “Door Settings” from the menu. Click on the blue Door Name to be configured.
   c. Click on the “Actions” tab.
   d. Use the drop-down menu next to “PIN or Card” to select “24 Hours”. **SAVE**.

3. Configure the 920PW/923PW keypad to be in PIN mode by performing the following steps at the keypad:
   a. Press **#9#MasterCode#** {Default MasterCode = 123456. An amber LED will flash to indicated the keypad is in programming mode.
   b. Press **#83#1** {The green LED will momentarily turn on, then the amber LED will begin flashing}
   c. Press ****#**

4. Log in as user and assign PIN numbers to authorized Users as required. Reference Section 8.2 on Page 14.

Addendum #3

A3.1 Port Forwarding for Remote Access

Use this procedure as a general guide to configuring your own router for remote access to the IPPro controller’s web server.

Access your router’s configuration interface.

In your router’s port forwarding configuration,
Set your external port range to 10001 to 10002.
Set your internal port to 80.

Additionally, you want the static ip address of the IPPro controller to be on the same subnet as your router. For example, if your router’s local IP address is 192.168.0.1, then your controller would have the following static settings:

192.168.0.x

255.255.255.0 (mask)

192.168.0.1 (gateway)

Access remotely using router’s external ip address followed by ‘:10001’. For example if your router’s external IP address is 47.144.99.123, you will type 47.144.99.123:10001 into your browser’s URL bar.