uno

IP HYBRID ALARM PANEL

INSTALLATION AND PROGRAMMING GUIDE

(PRELIMINARY)

connect2go

Revision Date: Sept 4, 2023

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This document outlines how to set up a new **UNO** IP Hybrid Alarm Panel.

Your Dealer Account

Before doing anything please make sure you have a **Connect2Go Dealer Account**. If you do not have a **Connect2Go Dealer Account**, go to **www.connect2go.com**, and under the Dealer menu click **Become A Dealer**. After setting up your Dealer Account, you will then need to set up the customer and then add the UNO to their account. For a more complete description of adding new customers and enrolling systems on their account, just log into your dealer account and navigate to the Support -> Guides page and find the Step-by-Step Dealer Guide link or you can copy and paste the link below to go directly there.

https://www.myconnect2go.com/dapp/assets/media/guides/ProandCustomerAccountSetUpGuide.pdf

Activating the UNO Panel

Before electrically connecting the Panel, you must activate it on your customer's account.

1. **Login** in to your **Connect2Go** Dealer Account.
2. Select the client for which you are activating the device.
3. Once in the client's account page, go to the **Devices Section** and Click **Add New Device.**
4. Click on **Begin Activation**.
5. Select **UNO IP Alarm Panel** from the drop-down list.
6. Enter the MAC address for the **UNO** panel. The MAC is a 12 Digit ID number starting with 001C. It consists of HEX digits so only the numbers 0-9 and the letters A-F are valid. The MAC is found on the **UNO** board and appears on the box that the **UNO** came in.
7. Give the **UNO** a name (e.g. House, Cottage).
8. Review the **Terms and Conditions** and check the box indicating you have read and agree to the **Terms and Conditions**.
9. Click **Next** and, if successful, a confirmation message will appear.

Connecting the UNO Panel

Before installing the **UNO**, verify that you have activated it on the customer's account as to ensure that the module downloads any updates, and you can access the panel programming.

If the system is installed at a commercial site, ensure that the outbound UDP port 4021 and the outbound TCP port 4022 are not blocked on the network.

1. Refer to the **UNO wiring diagram (last page of this document)** for details on connecting power and peripherals.
2. Select your mounting arrangement. The **UNO** is designed to mount inside a standard **DSC or Honeywell** enclosure. Keep in mind that the **UNO8** expansion modules have the same mounting-hole pattern as a typical DSC zone expander and can mount on the sides of the DSC enclosure. They can also be stacked on each other.
3. Install expansion modules, (if applicable). Using the included board-to-board standoffs or the standard can-to-board standoffs, and the 4-wire expansion cable. Connect each module to the **UNO** panel in a *daisy-chain* fashion. The order of modules in the chain does not matter. The zone range of each expander is selected using the H7 jumper block on the **UNO8.** The diagram below shows three **UNO8** expanders, forming a 32 zone, 8 programmable-output **UNO** system.
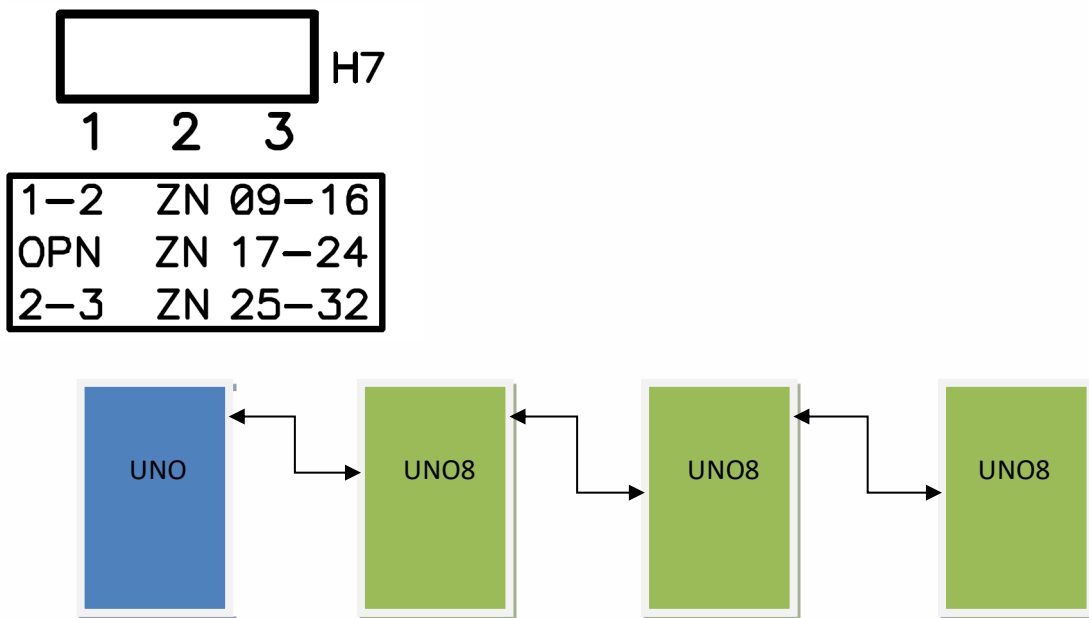
4. Using an 8-Conductor Ethernet Cable (not supplied) with an RJ-45 connector, connect the **UNO** to an available router, hub or switch port on a network with a DHCP Server (usually within a router). Power-up your **UNO.**
5. There are a number of LED lights located on the **UNO**. If installation and activation of the module was done correctly, you will see five solid green LEDs with the LINK LED being flashing occasionally to indicate network traffic. The KEYB LED may be off during the first 10 minutes after installation while the module downloads any firmware updates. Wait 10 minutes before troubleshooting.
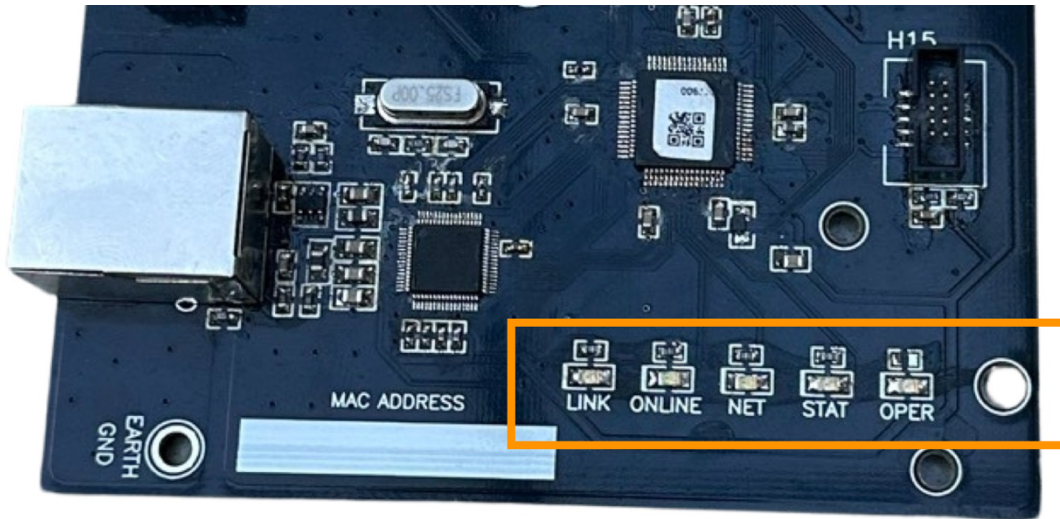
LED Name	Description
OPER	**SOLID GREEN** - Power and functioning.
	OFF – Not functioning and not powered properly.
STAT	**SOLID GREEN –** Panel working properly
	FLASHING – Trouble condition indicated by number of flashes.
	OFF – Panel not working correctly.
NET	**SOLID GREEN** – IP obtained through DHCP server (router).
	FLASHING – Module programmed to static IP.
	OFF – Module cannot obtain IP form DHCP server (router).
ONLINE	**SOLID GREEN –** Module is communicating with servers and account is properly set up.
	FLASHING – Module is communicating with servers but no account exists.
	OFF – Module is not communicating with servers.
LINK	**SOLID GREEN** – Ethernet link established. Will flick with RX/TX.
	OFF - No Ethernet link.

6. After ten minutes the "STAT" LED should also be solid. If the LED is flashing, the number of flashes indicates the trouble condition that exists on the panel.

DO NOT LEAVE the installation until you have five green LEDs lit.
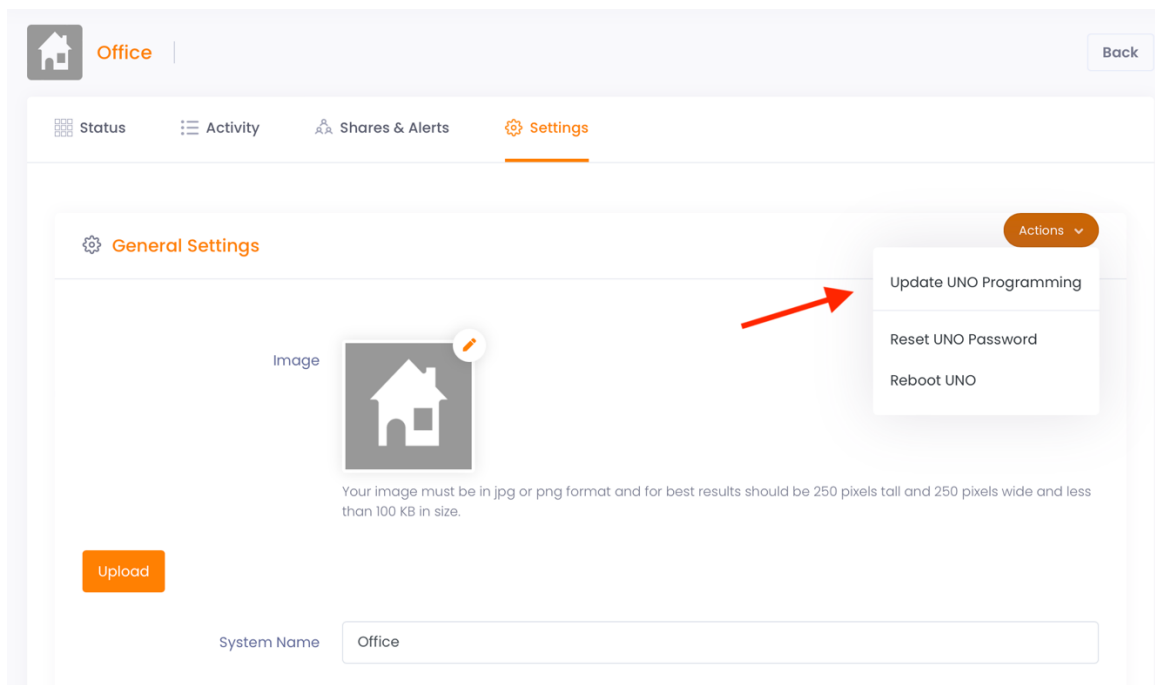
UNO Programming Options

Programming is required for the **UNO** to function properly; Zones have to be defined, user codes added etc. Once your **UNO** is online, you will see an option for programming in your dealer portal. Note the actual programming pages exist in the User's account but are only visible to you the Dealer.

The program settings exist in the panel and are uploaded and downloaded to the panel as you make changes so the panel **must be online** during this process.

From the Client Details page in your dealer account, find the client's device and under the Actions drop-down you will find the option to Update Programming.
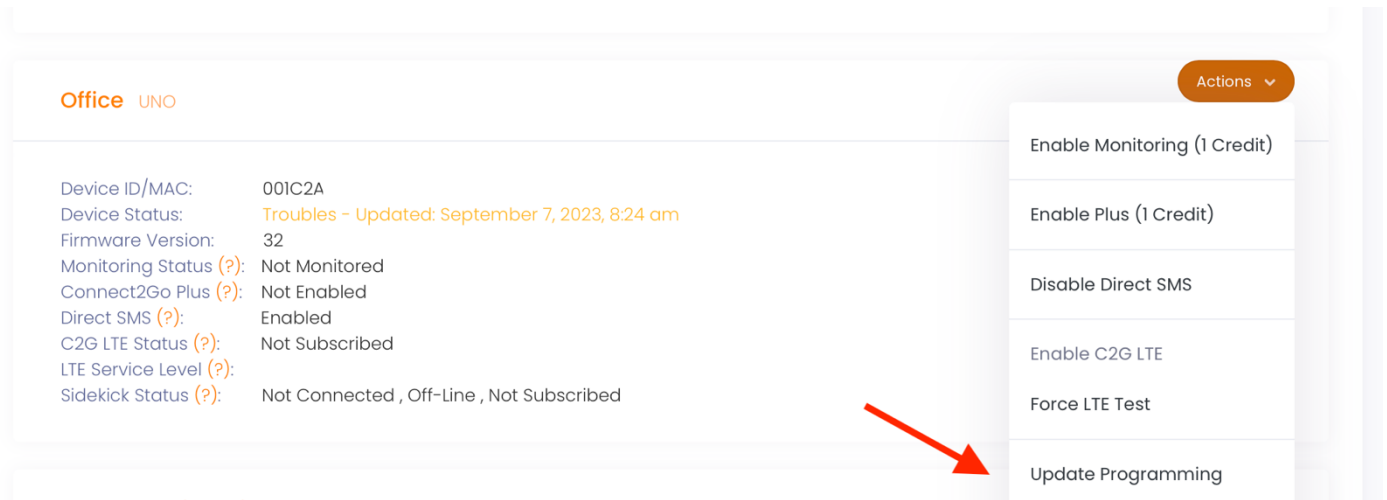

Click on **"Update Programming"** to jump into your customer's account. Once there navigate to the **Details** page for the UNO system you are installing and under the **Settings** tab you will find an **Actions** drop-down that will let you enter the actual programming pages.

Click on **"Update UNO Programming"** to go to the programming section screen. From here you can choose which programming section you would like to work on. There are currently four sections; Zones, Users, FOBs, and Options.
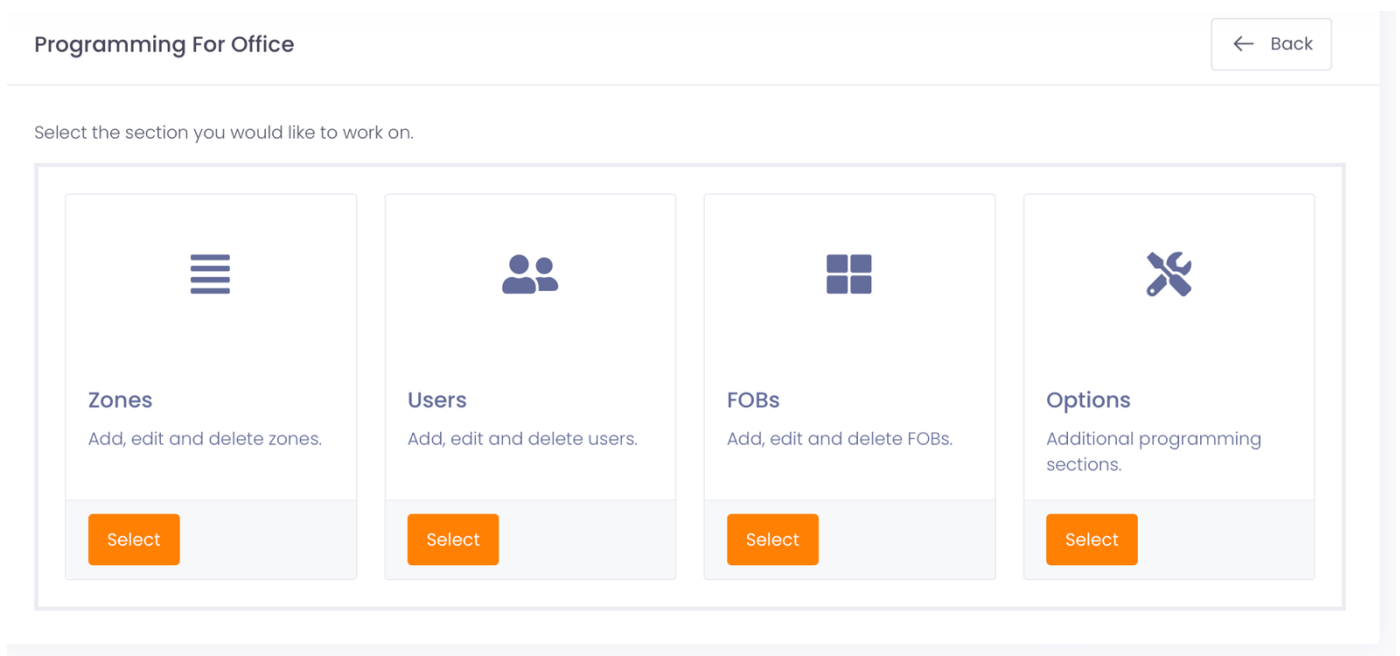
Click on the section **"Select"** to start a programming session for that section. If you are familiar with "downloading" on other on panel types, you will find this interface similar. As soon as you enter programming your UNO will upload the programming information to the server. The date and time of the upload is shown near the top of the programming page as well as the MAC address of the module the data is from. You can go back to the Section selection page by pressing the "**Back**" button. If the data does not populate or is old, try the **"Reload Data"** option.
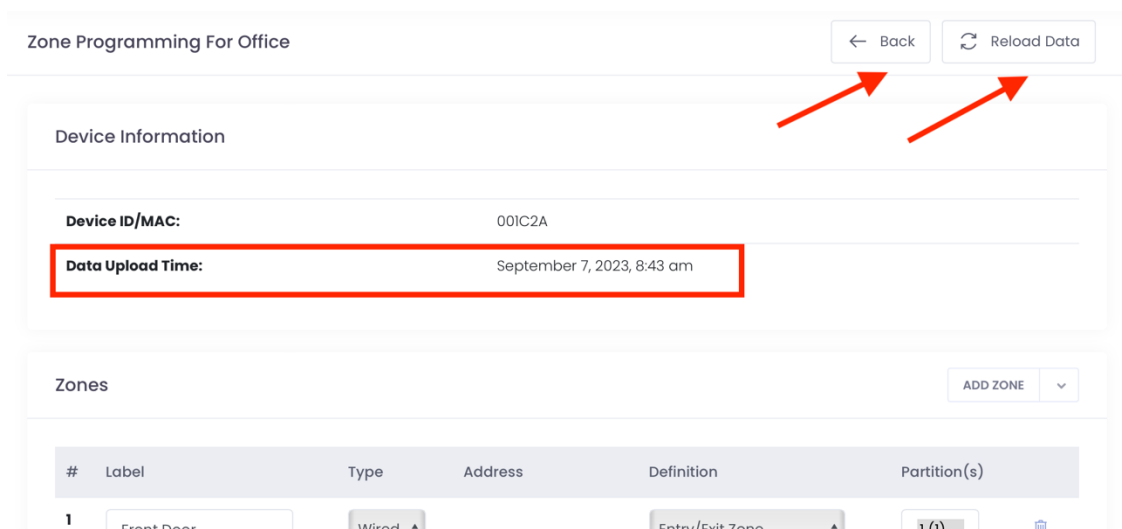
IMPORTANT: Make sure the Data Upload Time is within the last few minutes when starting a session. Data is cached on the server and may be old. Such a scenario would only happen if there were network problems.

Zone Programming Section

The **UNO** Panel supports up to 128 zones. These can be a mix of RF and hardwired zones.

Zone Definitions

Each of the available zones must have a definition to be active on the **UNO** system. There are up to 128 zones available in a fully expanded system these can be wired or wireless in any combination. If using the standard UNO8 zone expanders, they must be located in the same enclosure as the **UNO** Panel.

Zone Number	Host Device	Zone Capabilities
1-8	UNO (ON-BOARD)	Normally Closed, EOL resistors, and Double EOL resistors
9-16	UNO8 (Slot 1)	Normally Closed, EOL resistors, and Double EOL resistors
17-24	UNO8 (Slot 2)	Normally Closed, EOL resistors, and Double EOL resistors
25-32	UNO8 (Slot 3)	Normally Closed, EOL resistors, and Double EOL resistors

Each used zone requires programming of the zone function and how **UNO** will respond to state changes. This is the same as any other security system. Zone definition programming is done through the **device programming** page, with a drop-down box for each type of supported zone definition. Below is a table explaining each zone definition type.

When completed always remember to press the **"Upload To Panel"** button at the bottom of the page to save the changes.

Zone Definition	Description
Null (Not Used)	Not Used –Default
Entry/Exit Zone	This perimeter zone type is used for normal entry doors and uses the programming entry or exit delay upon disarming or arming. These zones also work with the **door chime** feature.
Interior Zone (Stay)	This interior zone will be automatically bypassed when the user arms the partition in **arm-stay** mode.
Instant Zone	This perimeter zone has no entry or exit delay. An example would be a perimeter window. This zone does us the **door chime** feature.
24 Hour Burg	The zone will generate an audible alarm on the partition regardless of the state of the partition. Examples would be fire zones, flooding detectors, or freeze detectors.
Keyswitch (Maintained)	This zone type will arm or disarm a partition by its physical state. An example would be a toggle switch or key-lock. Closing this zone without the partition **ready** will not arm the system. It will automatically arm when the partition becomes **ready.**
Keyswitch (Momentary)	This zone type will toggle the state of partition, **armed** or **disarmed**, when it transitions from open-to-close-to-open. An example would be a momentary push-button switch.
Remote Siren Monitor	
24 Hour Fire	
24 Hour Water	
Panic/Duress (Silent)	
Entry/Exit Zone 2	
Monitor Only	

IMPORTANT: Only 1 **Maintained Keyswitch** zone may be programmed on a system. Programming more than one zone as a **Maintained Keyswitch** zone will cause unpredictable behaviour.

User Programming Section

The **UNO** Panel supports up to 128 users. In the User section you can assign user codes for the system as well as labels for the users. Users can be assigned to a partition or multiple partitions.

When completed always remember to press the **"Upload To Panel"** button at the bottom of the page to save the changes.

FOB Programming Section

The **UNO** Panel supports up to 128 FOBs. In the FOB section you can enter the RF address, assign a function for FOB, as well as, a User number and a Partition.

FOB Definitions

Each of the available FOBs must have a definition to be active on the **UNO** system.

FOB Function	Description
Medical/Personal Emergency	
Momentary Keyswitch	
Audible Panic	
Silent Panic (Holdup)	

When completed always remember to press the **"Upload To Panel"** button at the bottom of the page to save the changes.

Options Programming Section

The **UNO** Panel supports a variety of optional settings that will be familiar to anyone who has installed an alarm panel.

The main option sections are:

- **Programmable Outputs:** Set functions for available programmable outputs.
- **Partitions Enabled:** Select which partitions are enabled on the system.
- **Door Chimes Enabled:** Select whether or not door chime is enabled by partition.
- **Miscellaneous:** Set timers (BTO, Exit Delay, Entry Delay etc.), Zone resistor configurations, 4 or 6 digit code select

Programmable Outputs

The **UNO** platform allows for up to 8 user programmable outputs (PGMs). There are 2 on the main panel and the rest would physically reside on the **UNO8** expansion boards and provide **negative-trigger** (open collector) outputs capable of handling up to **3A** at **16Vdc**. This high-power rating means that a secondary relay is not needed for most applications, i.e. 35W external siren.

In addition to high power, the first programmable output on each expansion module is capable of analog output. This allows the user to control the current through the programmable output from 0% to 100%. This could be used to dim a light, or IR illuminator, or even a DC motor. **NOTE:** Analog output is only available to a programmable output defined as **normal** in the definitions.

> **VERY IMPORTANT!** Do **not** use the expansion bus cable as a return path for your power-supply current. You **MUST** run a separate wire from the negative (common) terminal of your power supply to any one of the **COM** terminals on the **UNO8** when using a PGM sinking more than 100mA of current. **Failure to do so may result in loss of communication with the expansion module.**

PGM Number	Host Platform	Capability
1	**UNO**	Full Analog, Digital (ON/OFF)
2		Digital (ON/OFF)
3	**UNO8**	Full Analog, Digital (ON/OFF)
4	(Slot 1)	Digital (ON/OFF)
5	**UNO8**	Full Analog, Digital (ON/OFF)
6	(Slot 2)	Digital (ON/OFF)
7	**UNO8**	Full Analog, Digital (ON/OFF)
8	(Slot 3)	Digital (ON/OFF)

Table 1: Programmable Output Locations

Below is a list of programmable output functions and their meaning

Programmable Output	Description
Null (Not Used)	Not Used –Default
Bell Follower	When set to this function, the PGM will be active (ON) whenever the system siren would be active. This would only be when the partition is in alarm.
Normal (0% - 100%)	This mode is for user-controllable devices. The user can select whether this PGM is ON, OFF, or some percentage in-between from the **Portal.**
Pulse (2 Seconds)	This mode is typically to control a garage door opener by simulating a button push. Any action on this PGM from the **Connect2Go Portal** will cause the PGM to be active for 2 seconds, and then become in-active.
Ready-to-Arm Follower	A PGM set to this type will be active whenever the partition is **ready**, inactive otherwise.
Status Follower (Armed/Disarmed)	A PGM set to this type will be active whenever the partition is **armed,** inactive otherwise.
Buzzer Follower	A PGM set to this type follows the on-board buzzer (**UNO8)**. This allows for a remote sounder to follow audible notifications similar to a traditional security keypad.

Timers

There are several different system timers that can be set. Each timer can be individualized by partition.

Miscellaneous

Bell Time Out (minutes):

Partition 1	5
Partition 2	5

Exit Delay (seconds):

Partition 1	120
Partition 2	120

Entry Delay (seconds):

Partition 1	30
Partition 2	30

Entry Delay 2 (seconds):

Partition 1	45
Partition 2	45

General Setting Options

The final part of the options section pertains to system wide general settings. These are added and changed regularly so what is shown below may be different from what you see in your **device programming** page. The options are self-explanatory and should be familiar to any security professional.

General Settings

Normally Closed Contacts (OFF - EOL Resistors):

Using Double EOLs (OFF - Single EOLs):

Audible Trouble:

Chirp On Interior Zones:

Auto-Stay Disabled:

Siren Squawk On Arm/Disarm:

Use 6-Digit Codes:

Upload To Panel

When completed always remember to press the **"Upload To Panel"** button at the bottom of the page to save the changes.

Accessing UNO Locally

With the **UNO** Panel installed and functioning, you may have to access the **UNO** locally in order to perform troubleshooting. For more information on accessing **UNO** locally, please refer to the *Accessing UNO for Status, Programming and Troubleshooting Application Note*.

1. To access the **UNO** web interface, type the **UNO** IP address into any browser on the same internal network as the module (i.e. your customer's network). For help on obtaining the **UNO**'s IP address please refer to the *Accessing UNO for Status, Programming and Troubleshooting Application Note*.
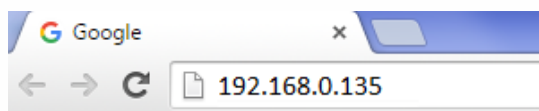
2. Once entered, the following login pop-up should appear. Enter user in both the **User Name** field and the last 6 digits of the MAC in the **Password** field and click **Log In**.

Once you have logged into the web interface, the local **UNO** homepage will appear as seen below. This page allows you to have some rudimentary control over the system as well as showing status. Under **expansion modules**, you will see which expansion modules, if any, have been installed.

Troubleshooting Tips

Zones/Programmable Outputs Not Working

1. Check to make sure the expansion module appears on the local page
2. The status LED on the expansion module show flash slowly if it is online with the **UNO.** If not, check the expansion cable.

Module is Offline with Servers

For Network Troubleshooting, refer to the *Accessing UNO for Status, Programming and Troubleshooting Application Note***.**
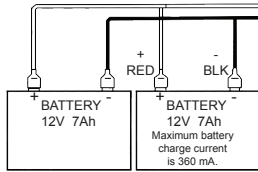
Dealer Support Contact Information:

If you have any questions, concerns or have trouble activating your account and setting up customers, please email our Help Desk at **support@connect2go.com** or call 647-503-3406. Note that phone support is only available, Monday-Friday 9am-4pm EST.

UNO IP Panel UL Wiring Diagram

Household Fire / Burglary / Home Health Care / Commercial Burglary

SIA-FAR Minimum System Requirements:
• 1 UNO Control Panel
• 2 Local annunciation devices

Local annunciation devices may be any combination of these kepads:
• LCD5500Z • PKP-LCD
• LCD5501Z • PKP-ICN

WARNING Incorrect connections may result in PTC failure or improper operation. Inspect wiring and ensure connections are correct before applying power.
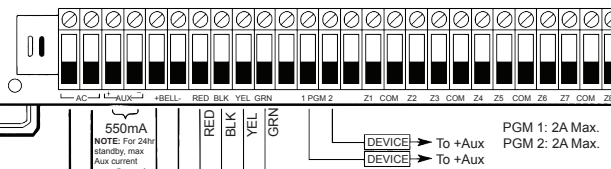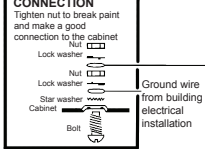
WARNING High voltage. Disconnect AC power prior to servicing.

Expansion Header
Sidekick LTE
UNO8 Zone Expanders

RF Expander Header
UNO-RF433

All circuits are classified for UL installations as power limited/ClassII power limited, except for the battery leads which are not power limited. Do not route any wiring over circuit boards. Maintain at least 1" (25.4mm) separation. Please see Section 2. A minimum 1/4" (6.4mm) separation must be maintained at all points between power limited wiring and all other non-power limited wiring.
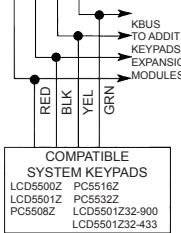
GROUND CONNECTION
Tighten nut to break paint and make a good connection to the cabinet.
Nut
Lock washer
Nut
Lock washer
Star washer
Cabinet
Bolt
Ground wire from building electrical installation

+ RED   - BLK

BATTERY 12V 7Ah
BATTERY 12V 7Ah
Maximum battery charge current is 360 mA.

Battery capacity for standby is at least 24 hours.

**Min./Max operating voltage for devices/sensors/modules is 10.2VDC - 14VDC

550mA
NOTE: For 24hr standby, max Aux current capacity must not exceed 420mA**.

AC —AUX— +BELL- RED BLK YEL GRN 1 PGM 2 Z1 COM Z2 Z3 COM Z4 Z5 COM Z6 Z7 COM Z8   NETWORK   EGND

RED BLK YEL GRN

DEVICE To +Aux
DEVICE To +Aux

PGM 1: 2A Max.
PGM 2: 2A Max.

RJ11 NETWORK JACK

16.5VAC 40VA
120 VAC / 60Hz PRIMARY
Class2 transformer

NOTE: Do not connect transformer to receptacle controlled by a switch.

NOTE: Aux+ (420mA) is shared between Aux+ KBUS and all PGM outputs.

RED BLK YEL GRN

KBUS TO ADDITIONAL KEYPADS AND EXPANSION MODULES**

For Fire Bell/Siren wiring, please refer to *Installation Manual*.

BELL / SIREN 700 mA MAXIMUM OBSERVE POLARITY

COMPATIBLE SYSTEM KEYPADS
LCD5500Z   PC5516Z
LCD5501Z   PC5532Z
PC5508Z   LCD5501Z32-900
           LCD5501Z32-433

2-WIRE SMOKE DETECTORS
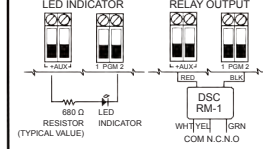
- AUX + BELL RED BLK YEL GRN 1 PGM 2

2200Ω END-OF-LINE RESISTOR EOLR-3
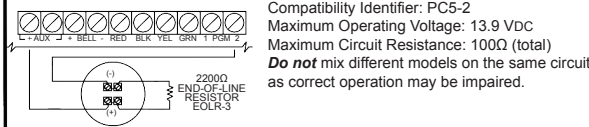
Compatibility Identifier: PC5-2
Maximum Operating Voltage: 13.9 VDC
Maximum Circuit Resistance: 100Ω (total)
Do not mix different models on the same circuit as correct operation may be impaired.
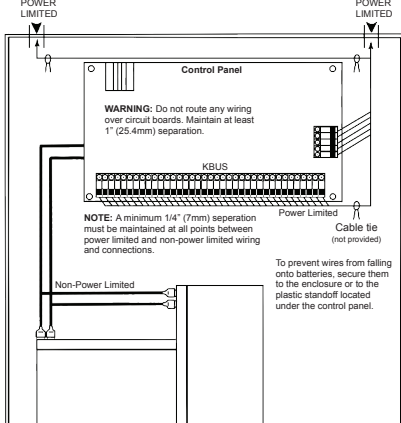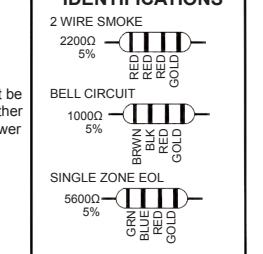
Name	Model	Compatibility ID	Max #	Base
DSC	MN220, -R, -T, -RT	PS-220	30	None
System Sensor	2100TR or 2100AT	A	30	None
Sentrol	429AT or 521B/BXT	S09A	30	None
	400 series, 429C, 429CT	S10A	30	None
	429CST, 429CRT, 429CSST	S11A	30	None
	521CRXT	S11A	30	None
	521B, 521BXT	S10A	30	None
	711U/UT, 712U, 721U/UD/UT	S10A	30	None
	713-5U, 713-6U, 722U	S10A	30	None
	731U, 731UD, 732U	S11A	30	None

PGM CONNECTIONS

LED INDICATOR
-AUX+ 1 PGM 2
RED

680 Ω RESISTOR (TYPICAL VALUE)
LED INDICATOR

RELAY OUTPUT
-AUX+ 1 PGM 2
BLK

DSC RM-1
WHT YEL GRN
COM N.C.N.O

IMPORTANT: Minimum 6.4mm (0.25 in) separation must be maintained between RM-1 circuits and all other wiring.

TYPICAL ZONE CIRCUITS

ANY Z TERMINAL / ANY COM TERMINAL
5600Ω
NORMALLY CLOSED CONTACT WITH END OF LINE RESISTOR

ANY Z TERMINAL / ANY COM TERMINAL
5600Ω
NORMALLY OPEN CONTACT WITH END OF LINE RESISTOR

ANY Z TERMINAL / ANY COM TERMINAL
5600Ω
1 NORMALLY OPEN CONTACT AND 1 NORMALLY CLOSED CONTACT WITH END OF LINE RESISTOR

ANY Z TERMINAL / ANY COM TERMINAL
5600Ω
2 NORMALLY OPEN CONTACTS AND 2 NORMALLY CLOSED CONTACTS WITH END OF LINE RESISTOR

Control Panel

WARNING: Do not route any wiring over circuit boards. Maintain at least 1" (25.4mm) separation.
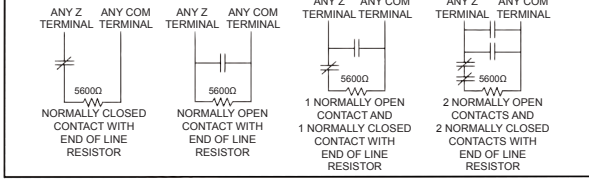
KBUS
Power Limited

NOTE: A minimum 1/4" (7mm) seperation must be maintained at all points between power limited and non-power limited wiring and connections.

Cable tie (not provided)

To prevent wires from falling onto batteries, secure them to the enclosure or to the plastic standoff located under the control panel.

Non-Power Limited

POWER LIMITED   POWER LIMITED

RESISTOR IDENTIFICATIONS

2 WIRE SMOKE
2200Ω 5%
RED RED RED GOLD

BELL CIRCUIT
1000Ω 5%
BRWN BLK RED GOLD

SINGLE ZONE EOL
5600Ω 5%
GRN BLUE RED GOLD

4-WIRE SMOKE DETECTORS

Smoke detector must be latching type (such as DSC MN240 Series). To reset smoke detectors, enter [*] [7] [2].

- AUX / 1 PGM

Zone Input RM-1 POWER LOOP SUPERVISORY RELAY
COM BLK 12VDC 35mA MAXIMUM   WHT

SMOKE DETECTOR POWER 12 VDC
IN   IN
NO ALM
OUT   OUT
LATCHING 4-WIRE SMOKE DETECTOR (for example, DSC MN240 Series).
WHT   RED   GRN

ALARM INITIATING LOOP RESISTANCE: 100Ω

EOLR-2 END OF LINE RESISTOR 5600Ω 0.5W

Refer to installation guidelines in *Installation Manual* and detector manufacturer's literature when locating smoke detectors.
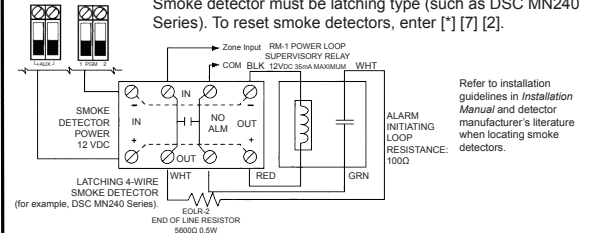
INSTALL BATTERY AND AC WIRING AS SHOWN
IMPORTANT: A minimum of 1/4" (6.4mm) seperation must be maintained at all points between power limited wiring and all other non-power limited wiring and connections. Wire entry for power limited wiring must be separate from non-power limited wiring.

WARNING: Not to be removed by anyone except occupant. This equipment should be installed in accordance with the National Fire Code ANSI/NFPA 72 (National Fire Protection Association, Batterymarch Park, Quincy MA, 02269). Printed information describing proper installation, operation, testing, maintenance, evacuation planning, and repair service is to be provided with this equipment. For compliance with UL-985, at least one hardwired smoke detector is required.

(a) The delay (power-up) (start-up) time marked on the installation wiring diagram of the smoke detector or on the installed smoke detector(s) is to be used.

Circuit (zone)	Control Unit Delay - Sec.	Smoke Detector Model	Delay - Sec. (a)

Temperature Range: 0°C-49°C (32°F-120°F)
Maximum Humidity: 85% R.H
Refer to the *Installation Manual* for complete operating instructions.
The UNO is with limited energy installations per NEC Article 760. Recognized limited energy cable should be used. Observe NEC wiring requirements and local codes defined by the authority having jurisdiction. Security detection devices that require power from the control panel must be UL Listed for the intended application and operate over the range of 11.6-12.6 VDC (residential), 12.0 VDC (commercial).

Control panel is suitable for the following UL installations:
• Grade AA Central Station and Grade AA Police Connect with high line security
• Household Fire and Grade A Household Burglary and Home Health Care Signaling Equipment
• Grade A Local | Grade B Central Station and Police Connect with basic line security
• Grade C Central Station
• Refer to Installation Manuals