



# *PCS TRIO™*

## Power Control for Permanent Installation

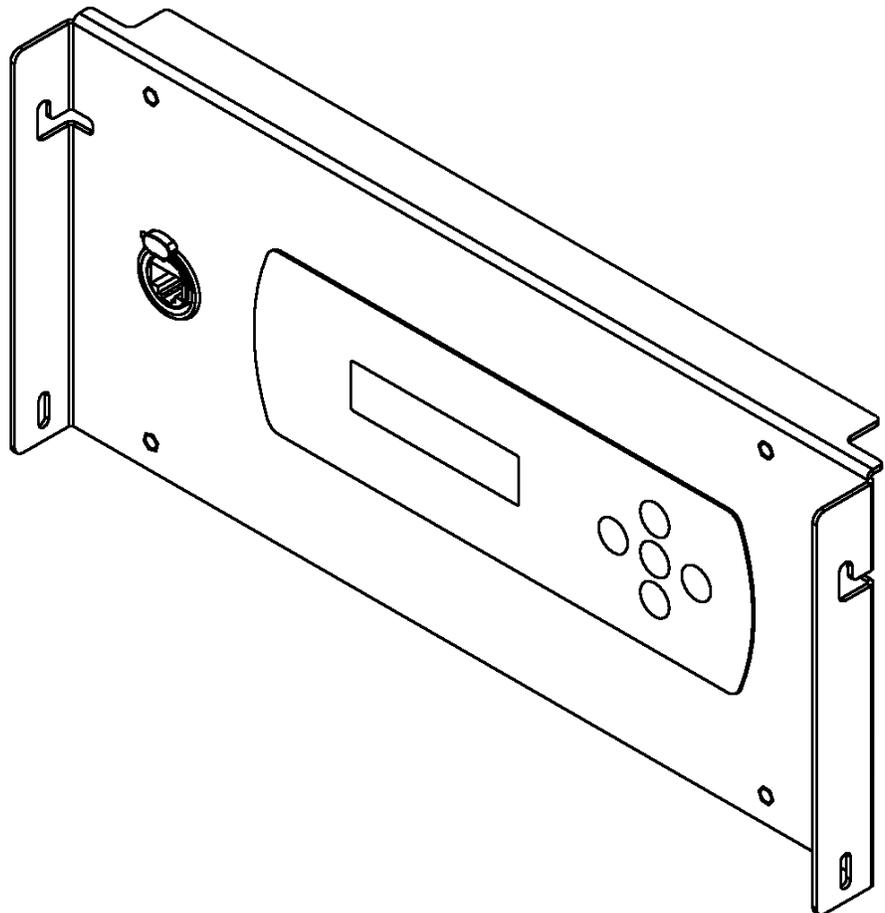
### Panel Commissioning and Maintenance Manual



Evolutionary new lighting control technology

Unprecedented control, convenience and cost-efficiency

Control power to LEDs, moving and incandescent lights, motor loads and other applicable equipment in a single panel



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## Welcome

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Welcome to the commissioning and maintenance guide for the PCS TRIO™ Installation Power Control System. This guide contains important information for the proper configuration, operation and upkeep of this system.

Whether the application requires power management of LEDs, moving lights, incandescent lights, motor loads, powered speakers or other relevant equipment, the design of the Lex Products PCS TRIO™ enables power control over the widest number of applications possible within one panel.

Available in panel capacities of 4, 8 or 16 modules, interchangeable relay and dimmer modules can be switched out easily to meet specific application requirements.

Incorporating the latest in control technology, the Lex Products PCS TRIO™ supports the most widely sourced protocols: DMX512-A, RDM, sACN and Art-Net. This system may be integrated easily with other dimming and control devices.

By consolidating single pole relays, double pole relays and dimmers into modules supporting three phase power fitting into one panel, system installation is simplified significantly as the panel requires less cabling and conduit runs.

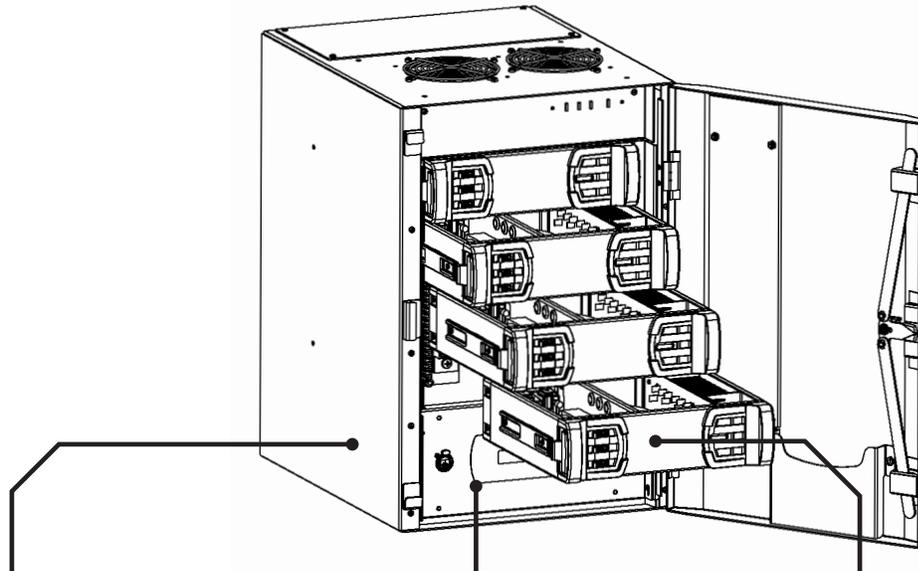
### FCC INFORMATION

**NOTE:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense.

**Caution:** Changes/Modifications not approved by Lex Products Corporation could void the user's authority to operate the equipment.

## Range Overview

The PCS TRIO™ Installation Power Control System has been designed to be assembled on site using those components shown those components shown below. The subsequent Part Number Configuration section shows the components available.



### Module Chamber

Unique panel provides convenient access to line and load terminals. It is designed to be installed separate of the remaining components. This enhances overall system durability by limiting the exposure of sensitive devices during installation.

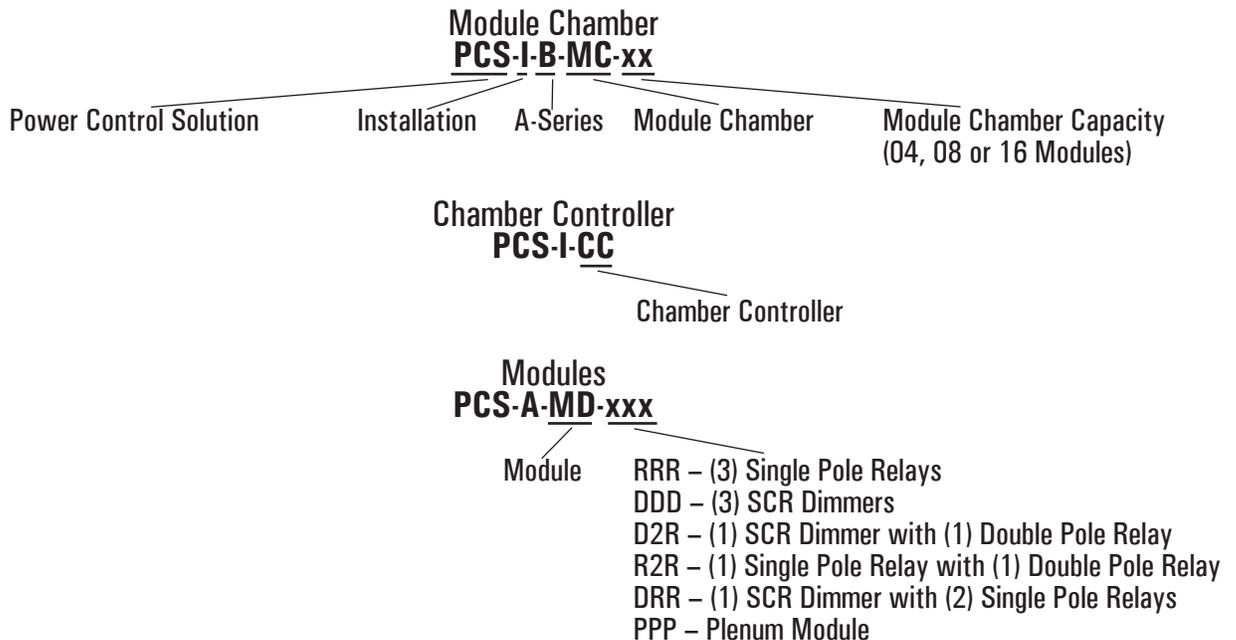
### Chamber Controller

Incorporating state-of-the-art components this unit may be installed in the field and accepts industry standard control protocols: DMX-512A, RDM, sACN and Art-Net

### Modules

Shipped ready for installation, any combination of modules in any order may be installed up to the capacity of the Module Chamber.

## Part Number Configurations



## Pre-Commissioning Checklist

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All equipment manufactured by Lex Products is designed, built and tested to strict tolerances. It is important to the proper and long-term operation of these units that they are installed in accordance with the requirements detailed in the *PCS TRIO™ Power Control for Permanent Installation Panel Installation Manual*. This manual is provided with each Modules Chamber and is available online at [www.lexproducts.com](http://www.lexproducts.com).

### Prior to Arrival On Site - Prior to travelling to the jobsite ensure the checklist below is complete:

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- All system equipment has been delivered to the jobsite and has been installed as required.
- All locations where equipment has been installed are complete and free from construction (drywall, painting, etc.) dirt, dust and debris.
- Arrangements have been made to provide access to ALL system equipment. The term 'access' is to include:
  - Any ladders, lifts (including operators) or other associated equipment required to reach equipment.
  - Accessibility, with any required personnel, to any secured areas.
  - Any safety equipment (glasses, hard hats, vest, etc.) required to access equipment.
- The Electrical Contractor (EC), or an authorized representative of the EC, shall be available at all times during the field check/commissioning. EC, or their representative, shall be available to:
  - Review equipment locations with Lex Products-authorized technician(s).
  - Power up/down equipment.
  - Provide access to equipment.
  - Load Modules into Module Chamber during commissioning.
- The EC shall coordinate with any trades affected by the turning on/off of lights during field check/commissioning.
- The EC shall certify that the line system wiring is protected by a UL 1449 Listed, Type 2 Surge Protective Device (SPD), has been installed per the manufacturer's instructions and is in proper working order.
- ALL system wiring (including line, load and control) is complete between the PCS TRIO™ components and the distribution system.
- ALL system wiring (including line, load and control) between the PCS TRIO™ components and the distribution system has been checked for proper installation, accuracy, shorts and continuity.
- The EC shall coordinate any installations between the Lex Products-certified technician and those trades involved in the control system. Coordination shall include:
  - ALL control and receptacle stations have been wired and installed.
  - The control system shall be certified by that manufacturer's representative to be in a proper working order.
- All DMX/Ethernet cabling has been certified by the control system's representative. Low-voltage cabling shall NOT be terminated in the PCS TRIO™ Module Chamber(s) except by a Lex Products-authorized technician.
- ALL loads have been installed if present.
- ALL Modules are present at the jobsite and have been transported to the Module Chamber location(s).
- ALL Module Chambers have been cleared of dirt, dust and debris.
- Those persons with decision making authority are available to verify system configuration during commissioning.
- Certify that all necessary owners, representatives and staff will be present for demonstration and training for the scheduled time.

### Upon Arrival On Site

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- Locate those persons with decision making authority for the system installation.
- Secure the complete installation paperwork from the *PCS TRIO™ Power Control for Permanent Installation Panel Installation Manual*.
  - Phase/Voltage Record, Appendix B, page 24.
  - Load Wiring Record, Appendix E, page 27.
- Review jobsite, locating and identifying PCS TRIO™ Power Control System components with appropriate personnel for accuracy and completeness.



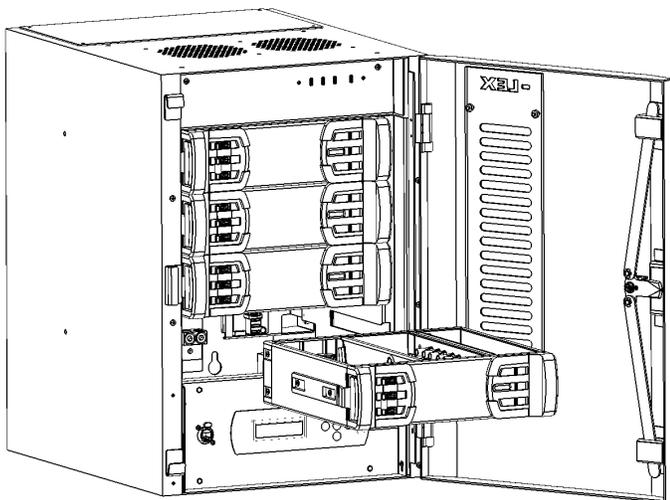
**SAFETY - Ensure line circuit breakers are 'Off' or 'Open' and Lockout/Tagout procedures have been followed prior to proceeding.**

## Control Wiring Termination

The PCS TRIO™ Power Control System is ready for operation using EITHER RS-485 based (DMX-512A, RDM) OR Ethernet-based (sACN, Art-Net) communication protocols. The high voltage sections for each channel continue to provide switched or modulated hot outputs to power the controlled loads.

- The control wiring terminations are located on the printed circuit board (PCB) of the Chamber Controller module, accessible by rotating the Chamber Controller to the open position.
- Connections are made easily through the use of removable plug blocks (DMX-512A or RDM) or IDCs (insulation displacement connections), both of which snap into the PCB.
- Keep all low voltage control wiring separate from high voltage power cabling to ensure safety and to maintain noise immunity.

## Accessing Control Wiring Terminations

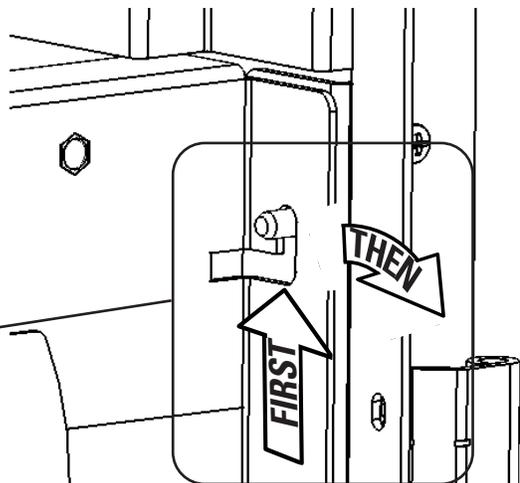
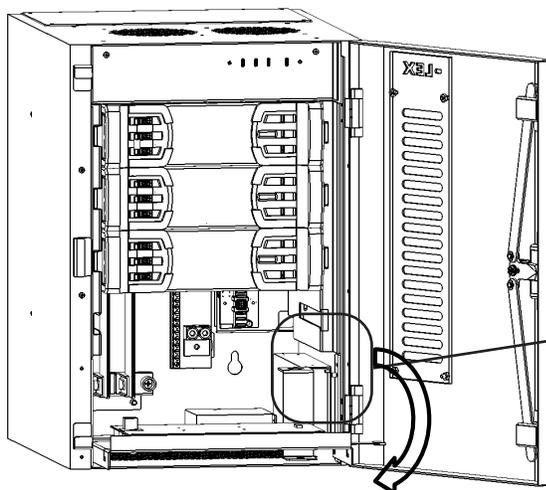


1. Unlock and open Module Chamber door
2. Remove bottom PCS TRIO™ Module and set aside.
  - To remove modules insert fingers into each module grip, depress latches and pull straight out.

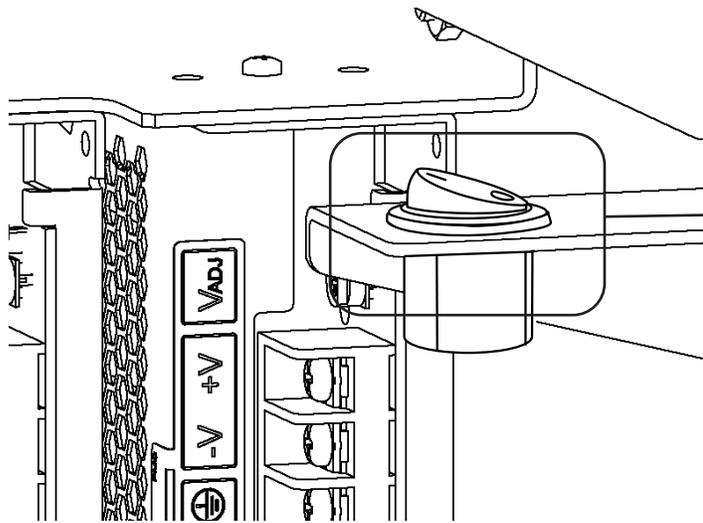
### NOTES:

- Sensitive electronics must be kept from electric shock.
- Ensure that any static electricity has been discharged before handling.

3. Open Chamber Controller module.
4. Rotate Chamber Controller module to rest horizontally.



Accessing Control Wiring Terminations (continued)

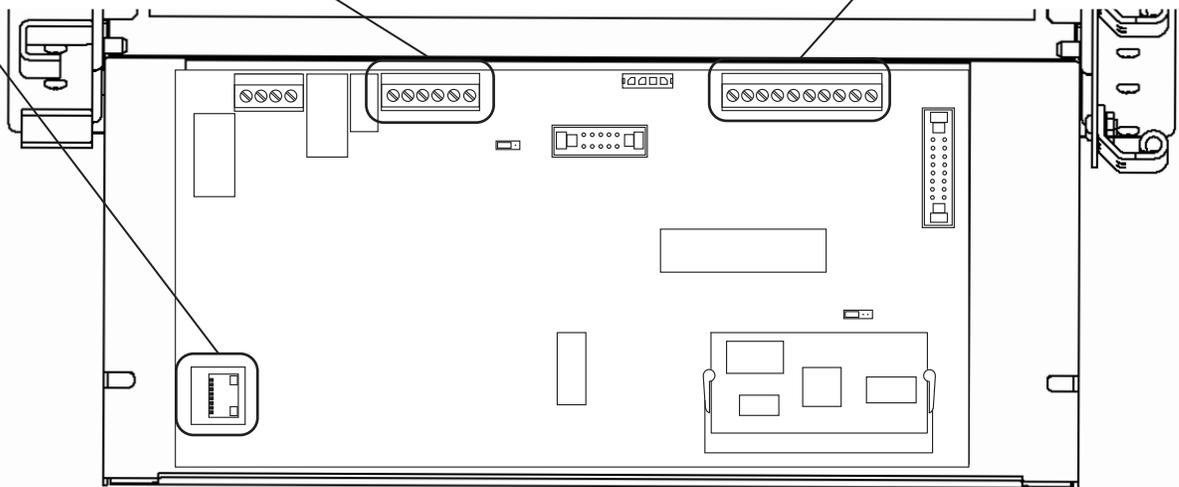
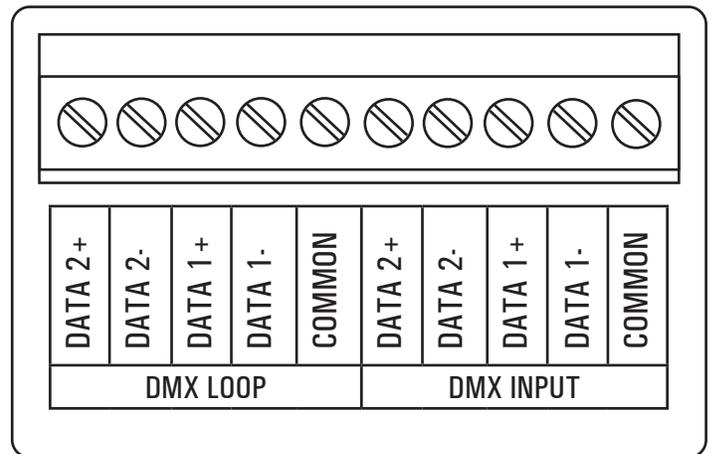
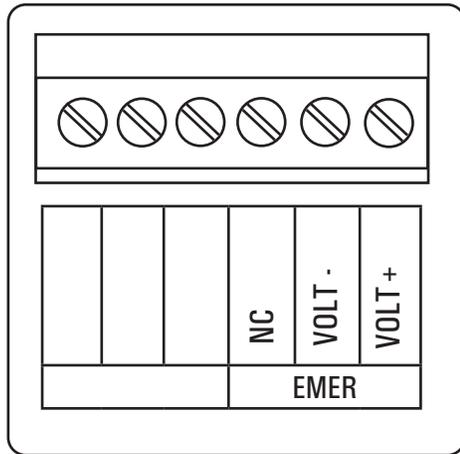
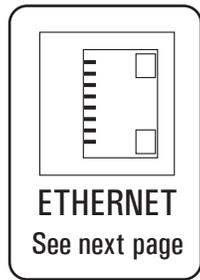


5. Toggle 'ALL ON' switch to OFF.

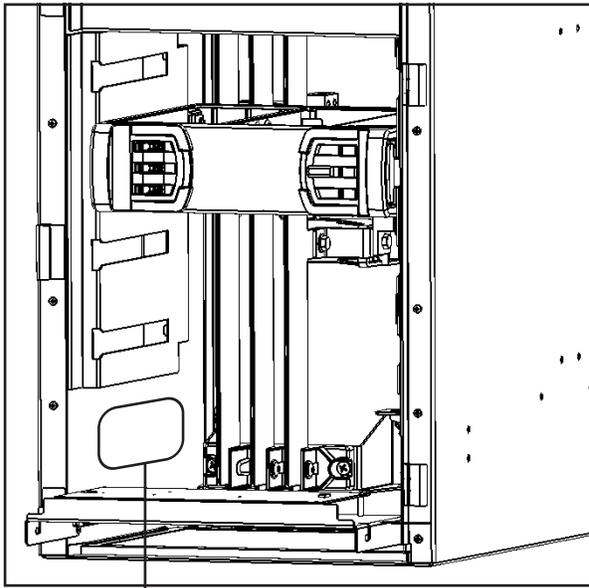
'ALL ON' switch, shown in the 'OFF' position

6. Terminate appropriate control cable to Chamber Controller using the images provided on pages 6 and 7 for guidance.

7. Ensure jumpers are configured for the communication protocol desired. (See page 7 for the proper Control Signal Termination jumper settings.)



Accessing Control Wiring Terminations (continued)



Secure Ethernet 'biscuit' in this area

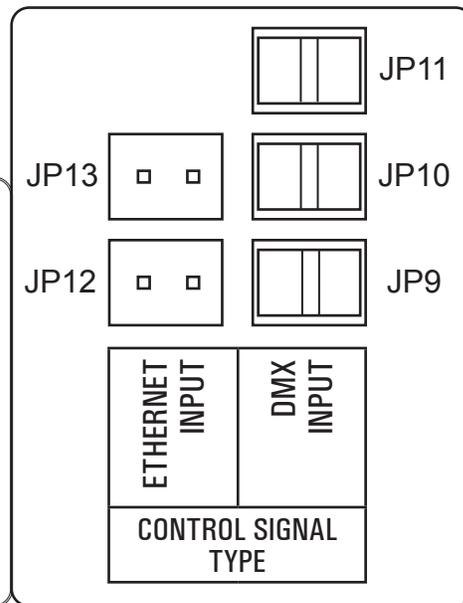
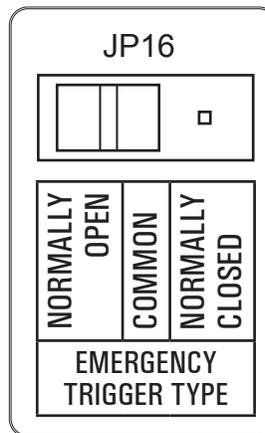
**ETHERNET TERMINATION**

- Termination of Ethernet involves Ethernet 'biscuit', RJ-45 punch-down connector and Cat5e patch cable.
  - Termination Kit (P/N: PCS-I-A-TK) with Ethernet hardware is provided with Chamber Controller.
- Terminate contractor-supplied cable to RJ-45 Connector.
  - T568B is the recommended standard.
- Place RJ-45 Connector in Ethernet 'biscuit'.
- Adhere Ethernet 'biscuit' to inside of Module Chamber.
- Using patch cable provided, interconnect Cat5e biscuit and Chamber Controller module.

**DMX TERMINATION**

- Strip conductor insulation 0.25" (7 mm) for insertion into 10-position pluggable terminal block connector.
- Use the 120 Ohm resistor provided between the DATA- and DATA+ contacts of the DMX LOOP to terminate the DMX/RDM line.

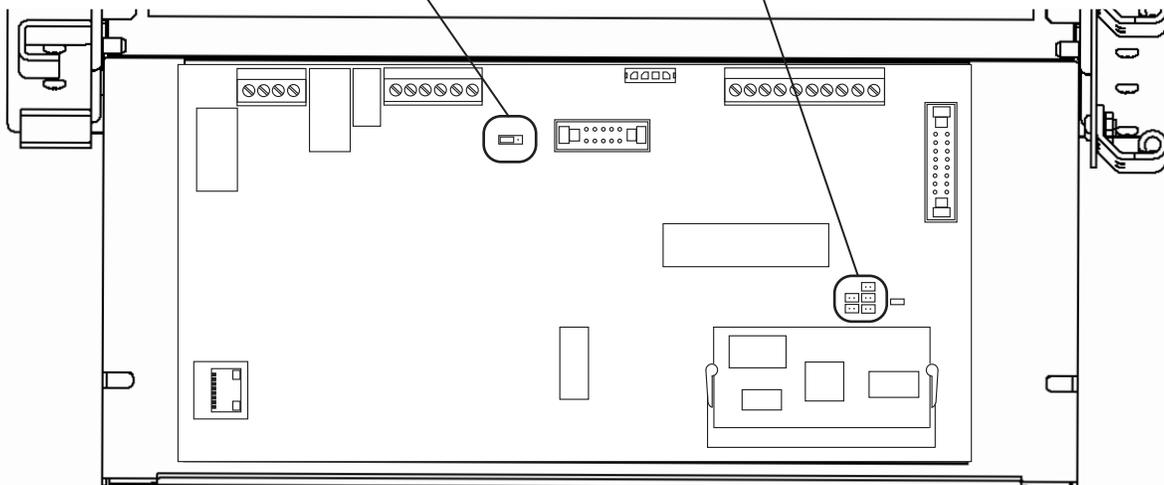
(NORMALLY OPEN input shown)



(DMX/RDM input shown)

**CONTROL SIGNAL TERMINATION**

- RS-485: Jumpers should be placed on JP9, JP10 and JP11 only
- Ethernet: Jumpers should be placed on JP12 and JP13 only

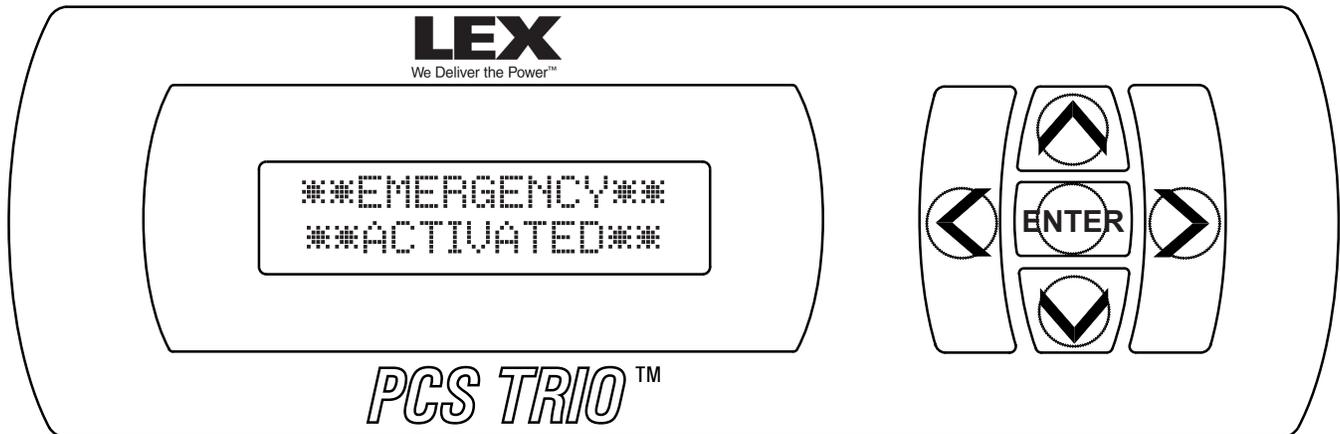


## Chamber Controller Operation - Emergency

The PCS TRIO™ Power Control for Permanent Installation is a UL 924 Compliant system. When the emergency state is signalled to the Chamber Controller via a contact loop (either normally open or normally closed) the system will deactivate outside control and execute a pre-programmed preset.

Instructions to *Store Input as Preset* and *Emergency Preset Selection* are found on pages 15 and 16.

- When the Chamber Controller is signalled to execute an emergency preset, the following display is shown:



### NOTES:

- While in an EMERGENCY ACTIVATED state the following conditions apply:
  - Chamber Controller will lock out any external control.
  - Chamber Controller keypad will be locked out.
  - The status LED at the top of the Module Chamber will glow a steady red.
- Once the emergency signal is removed, the Chamber Controller will remain in an EMERGENCY ACTIVATED state for sixty (60) seconds.
  - This is to ensure the integrity of power restoration before returning the system to its normal state.

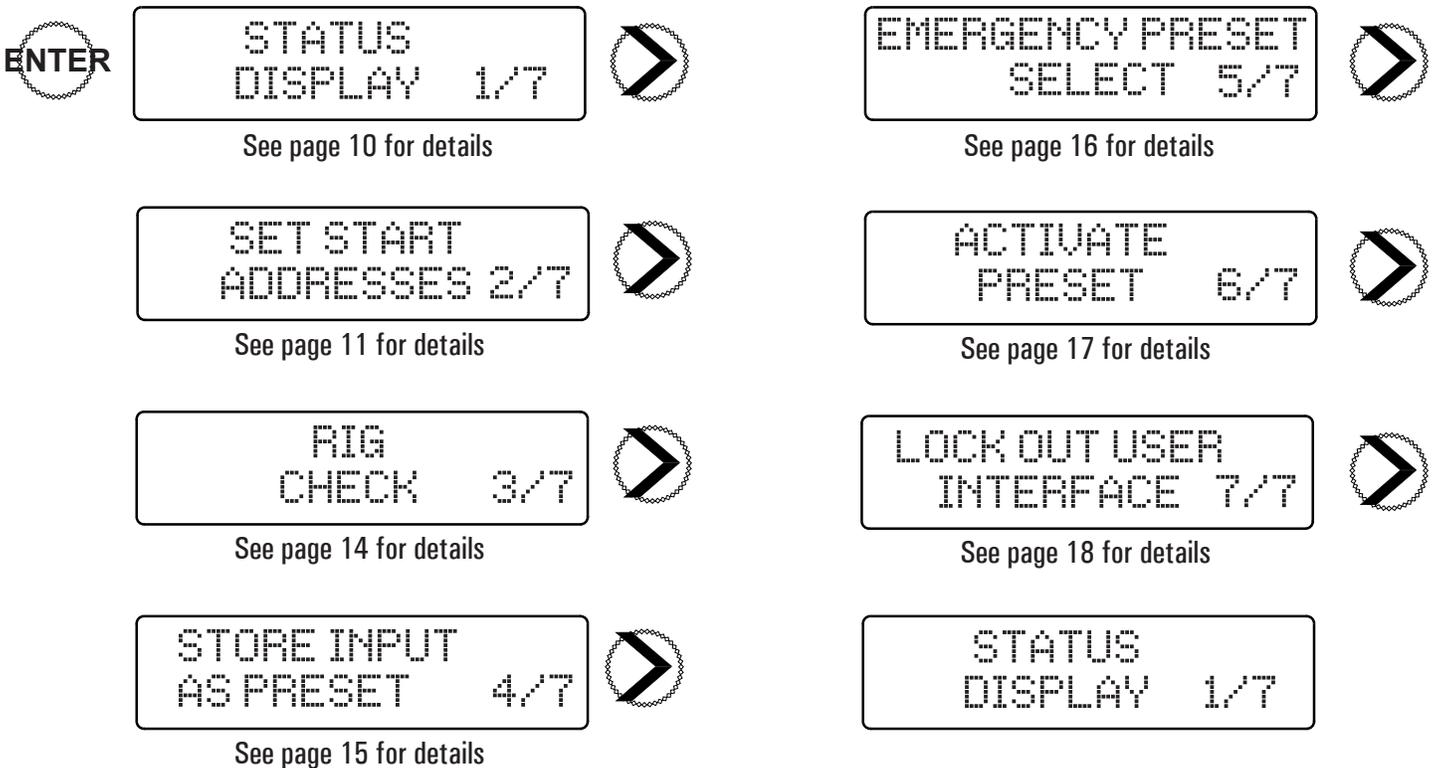
## Chamber Controller Operation - Normal

The PCS TRIO™ Chamber Controller provides an in-place, accessible control panel making the configuration and operation of the PCS TRIO™ Module Chamber and Modules as straightforward as possible.

- Upon startup the following display is shown, where 'Vx-xx' is the software version:

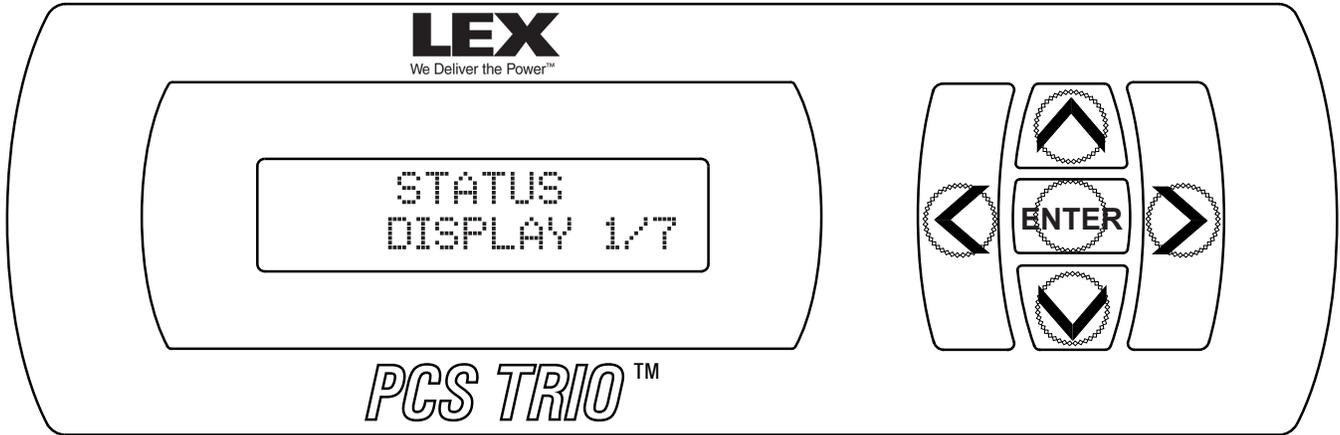


- Pressing the ENTER button activates the Main Menu.
- Pressing the LEFT ARROW and RIGHT ARROW buttons toggle through the Sub-menu options in the following order:

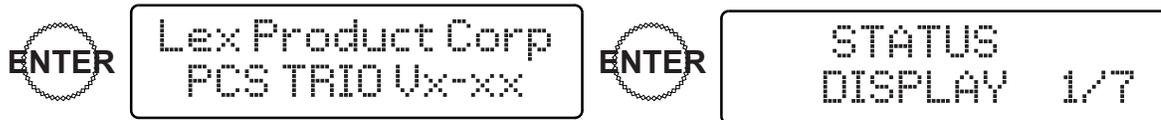


## Chamber Controller Operation - Status Display

The Status Display page provides information on the firmware/software in current use as well as status of the Chamber Controller.



- Pressing the ENTER button will display one of the following. Pressing the ENTER button again will return the display to the Main Menu.



- Lex Product Corp
- In normal operation the display will show the current firmware version.



- OVERRIDE INPUT ACTIVATED indicates the 'ALL ON' button is 'ON'.
  - Independent control is deactivated.



- RDM LOCATE indicates the Chamber Controller is in active Remote Device Management (RDM) 'discovery' mode. The system will return to its normal status once discovery is complete.

## Chamber Controller Operation - Setting the Start Address

The Set Start Address option allows programming of the circuit addresses on a per-circuit (Chan) or per panel (Root) basis.

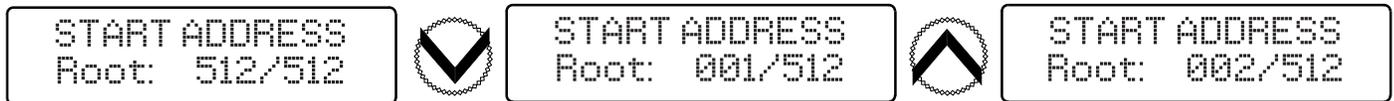


- Pressing the **ENTER** button activates the Sub-menu.
- Pressing the **LEFT ARROW** and **RIGHT ARROW** buttons toggles the Sub-menu options between CHAN and ROOT



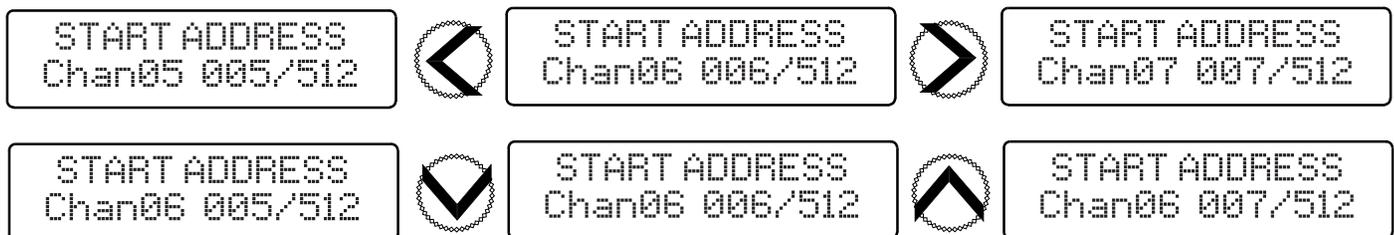
### ROOT

- By using 'Root', the first physical circuit of the top of the Module Chamber is set to the address selected. The remaining circuits are set to consecutive addresses from top to bottom.
- Pressing the **DOWN ARROW** and **UP ARROW** buttons step through the starting addresses of the top circuit.



### CHAN

- By using 'Chan', circuits may be addressed individually.
- Pressing the **LEFT ARROW** and **RIGHT ARROW** buttons step through the channels.
- Pressing the **DOWN ARROW** and **UP ARROW** buttons raise and lower the starting address value for the individual channel shown.



- Pressing the **ENTER** button saves the changes and returns the display to the Main Menu.

### NOTES:

- Changes will take immediate effect as selections are made.

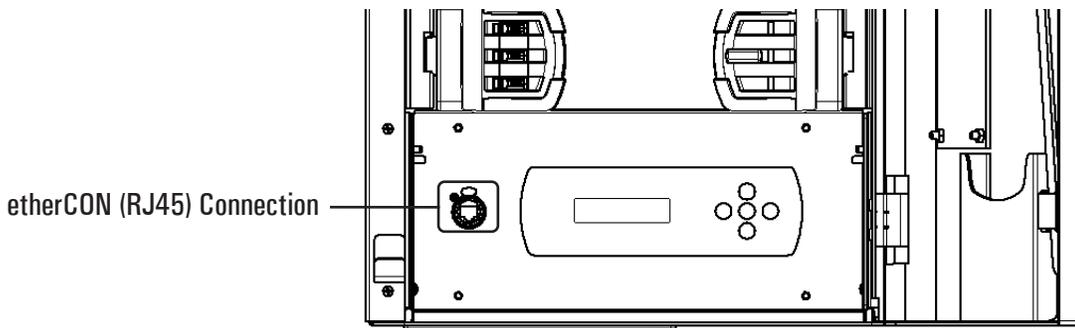
## Chamber Controller Operation - Setting the DMX Universe and IP Address

Setting the DMX Universe and IP (Internet Protocol) Address allows the system to be operated by an internet-based communication protocol, either sACN or Art-Net.

**NOTES:** Control Signal Termination jumpers must be set to the ETHERNET INPUT configuration. Review Page 7 for the proper jumper setting.

Each Chamber Controller is shipped from the factory with the same IP Address: 2.174.61.185. The default IP Address must be changed to avoid collisions when using Ethernet based control systems .

- Using a Cat5e Ethernet cable, connect a computer running Windows® XP, 7, 8 or 10 to the etherCON port on the face of the Chamber Controller. An internal Etherent switch makes a crossover cable unnecessary.
- The computer's Internet Protocol Version 4 (TCP/IPv4) Properties should be configured to the following:
  - IP Address: 2.0.0.1
  - Subnet Mask: 255.0.0.0



- Open a web browser and enter the address shown.

⬅ ➡

### Setting the DMX Universe

- The home page below will be visible. Select 'DMX Settings'.

Port-Addresses: (Net-Sub-Uni)  1 (00-0-0)	Port 1 status: Idle <input type="button" value="DMX Settings"/> (Port 1 - Profile: Custom RDM: On)
	<input type="button" value="IP Settings"/> (IP Address: 2.174.61.185 Subnet Mask: 255.0.0.0 Gateway IP: 0.0.0.0 DHCP: Disabled)
	<input type="button" value="Module Info"/>

- Select the drop down arrow under 'Universe' and select the desired number.

Port-Addresses: (Net-Sub-Uni)  1 (00-0-0)	Module <input type="text" value="00"/>	Net <input type="text" value="0"/>	Subnet <input type="text" value="0"/>			
	Port 1 <input type="text" value="0"/>	Universe <input type="text" value="0"/>	Profile <input type="text" value="Custom"/>	RDM <input type="text" value="On"/>	Transmit Style <input type="text" value="Delta Transmission"/>	Max Refresh Rate <input type="text" value="43.75FPS"/>
<input type="button" value="Cancel"/> <input type="button" value="Save"/>						

• **PLEASE NOTE:** The default setting is Universe '0' since this is typically where Art-Net systems begins. sACN systems typically begin with Universe '1'.

- Select 'Save'. The screen will return to the home page

## Chamber Controller Operation - Setting the DMX Universe and IP Address (continued)

### Setting the IP Address

- From the home page select 'IP Settings'.

Port-Addresses: (Net-Sub-Uni)  1 (00-0-0)	Port 1 status:Idle
	<input type="button" value="DMX Settings"/> (Port 1 - Profile: Custom RDM: On)
	<input type="button" value="IP Settings"/> (IP Address: 2.174.61.103 Subnet Mask: 255.0.0.0 Gateway IP: 0.0.0.0 DHCP: Disabled)
	<input type="button" value="Module Info"/>

- Select 'OK'.

Message from webpage X

? Are you sure you want to edit the network settings?

- Enter the new address in the 'IP Address' field (192.168.0.5 shown for demonstration purposes only). Select 'Save'.

Port-Addresses: (Net-Sub-Uni)  1 (00-0-0)	IP Address: <input type="text" value="192.168.0.5"/>
	Subnet Mask: <input type="text" value="255.255.255.0"/>
	Gateway IP: <input type="text" value="0.0.0.0"/>
	DHCP: Disabled <input checked="" type="checkbox"/>
	Host Name: http://LEXNET Default IP : 2.174.61.103
<input type="button" value="Cancel"/> <input type="button" value="Save"/>	

- Select 'OK'.

Message from webpage X

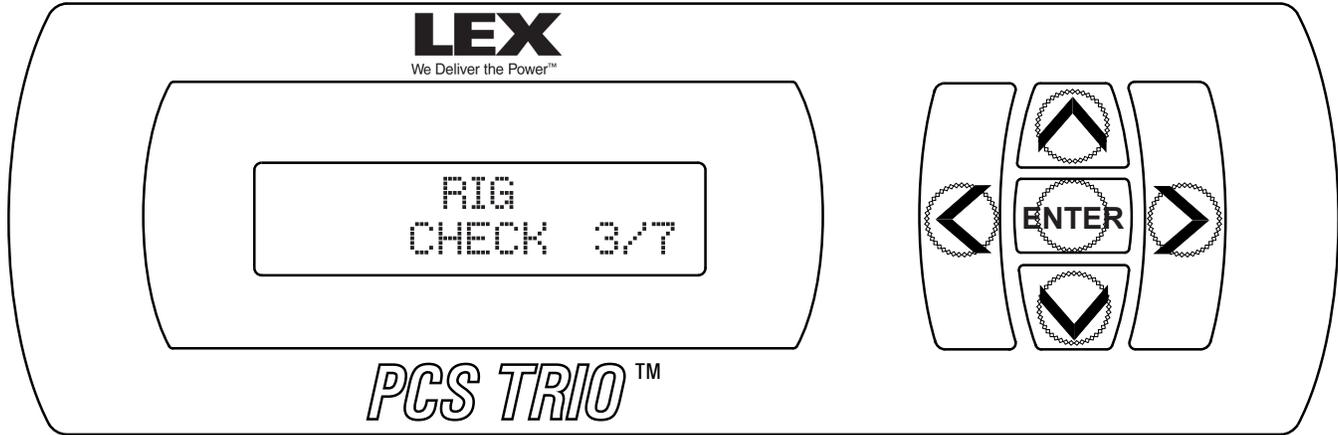
? Are you sure you want to save changes to the network settings?

• **NOTE:**

- When the IP Address change is accepted by the Chamber Controller, the TCP/IPv4 Properties of the computer will no longer be valid and the screen will be blank.
- The computer's TCP/IPv4 properties will need to be changed to the new parameters in order to continue changes.

## Chamber Controller Operation - Rig Check

The RIG CHECK option allows activation of individual circuits without benefit of an external controller. During RIG CHECK normal control operation is suspended.



- Pressing the **ENTER** button activates the Sub-menu.
- Pressing the DOWN ARROW and UP ARROW buttons raise and lower the DMX level of the individual channel shown.



### CHAN

- Pressing the LEFT ARROW and RIGHT ARROW buttons scroll through the channels.



- Pressing the **ENTER** button returns the panel to normal control operation and the display returns to the Main Menu.

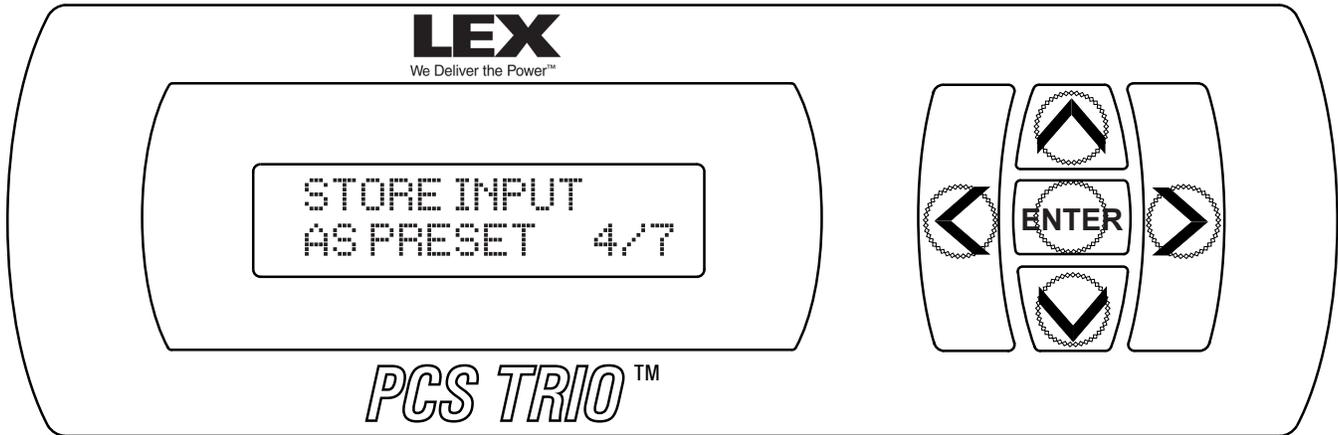
### NOTES:

- Changes will take effect as selections are made.
- Relay channels must be set to a level of 005 or higher in order to close.
- While scrolling through the channels using the LEFT ARROW and RIGHT ARROW buttons, the DMX value will remain at the predetermined level.

## Chamber Controller Operation - Store Input as Preset

The Store Input As Preset option allows 'looks' to be captured within the Chamber Controller.

- A look may be selected to serve as backup in case of control failure or as a selection in case of emergency.
- NOTE: This procedure requires that a look is established by an outside controller in order to be captured.
- Saving overwrites any previously recorded look within that preset.



- Using an outside controller, establish the look that you wish to record.
- Pressing the **ENTER** button activates the Sub-menu.
- Pressing the DOWN ARROW and UP ARROW buttons toggle through the eight (8) available preset locations.



- Pressing the **RIGHT ARROW** button records the 'look' to the preset.
- Pressing the **ENTER** button returns the display to the Main Menu.

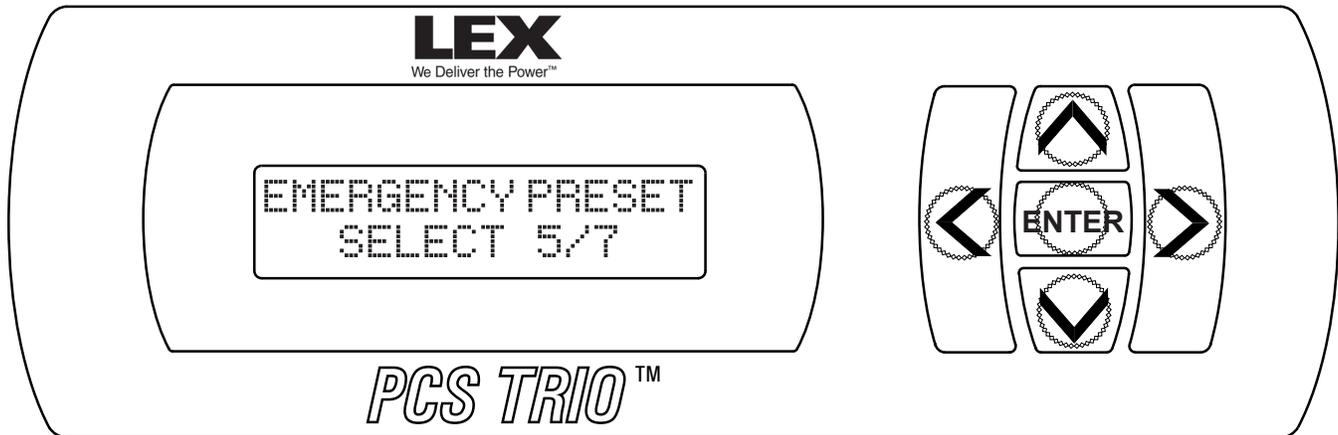
### NOTES:

- The look will be saved without prompting or indication.
- Any previous looks will be overwritten without prompting.
- To playback preset, please proceed to *Chamber Controller Operation - Activate Preset* (page 17) for procedure.

## Chamber Controller Operation - Emergency Preset Select

The Emergency Preset Select option allows a previously recorded Preset to serve as the emergency 'look' when the Chamber Controller receives an emergency signal.

- The Emergency Preset look is activated through a normally-open or normally-closed signal. Please proceed to *Control Wiring Terminations* (pages 6 and 7) for connection.
- When in an EMERGENCY ACTIVATED state the Chamber Controller will not respond to outside control.
- The preset to be used must be recorded prior to its selection as the emergency look, See *Chamber Controller Operation - Store Input as Preset* (page 15) for procedure.
- Changes to the Preset (as detailed on page 15) will be reflected in the emergency look.



- Pressing the **ENTER** button activates the Sub-menu.
- Pressing the DOWN ARROW and UP ARROW buttons toggle through the eight (8) available preset slots.



- Pressing the **RIGHT ARROW** button records the displayed preset as the Emergency Preset.
- Pressing the **ENTER** button returns the display returns to the Main Menu

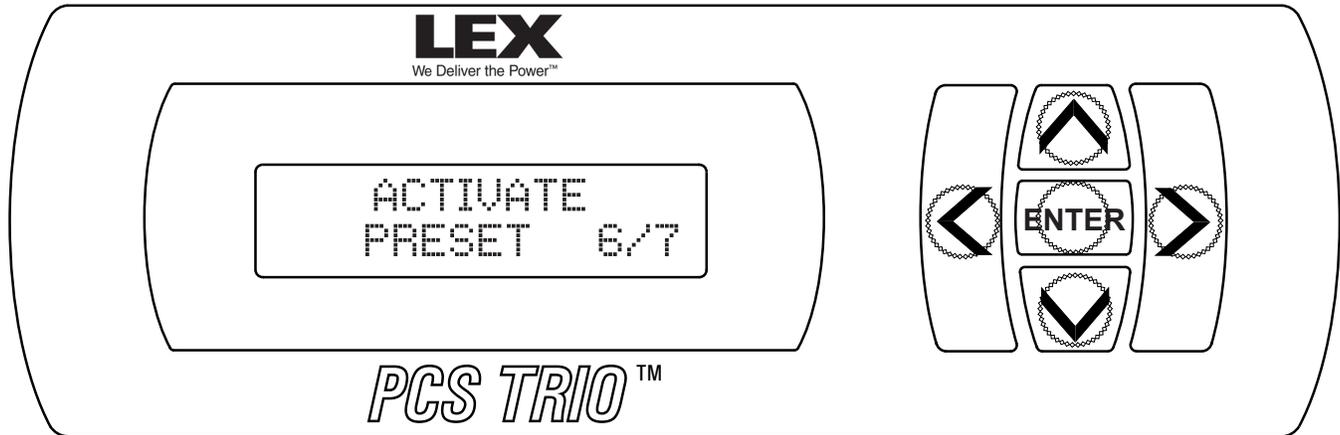
### NOTES:

- The preset will be saved as the emergency look without prompting or indication.
- Any previous preset saved as the emergency look will be overwritten without prompting.
- To playback preset, please proceed to *Chamber Controller Operation - Activate Preset* (page 17) for procedure.

## Chamber Controller Operation - Activate Preset

The Activate Preset option allows the recall of pre-recorded looks without the use of an external controller.

- When a preset is activated in this manner the Chamber Controller will not respond to external control.
- The preset to be used must be recorded prior to its selection. Please proceed to *Chamber Controller Operation - Store Input as Preset* (see page 15).



- Pressing the **ENTER** button activates the Sub-menu.
- Pressing the LEFT ARROW and RIGHT ARROW buttons toggles between ACTIVE and NOT ACTIVE status.



- Pressing the DOWN ARROW and UP ARROW buttons steps through the presets.



- The status must be changed to NOT ACTIVE in order to restore normal operation. Pressing the LEFT ARROW and RIGHT ARROW buttons steps through ACTIVE and NOT ACTIVE status.



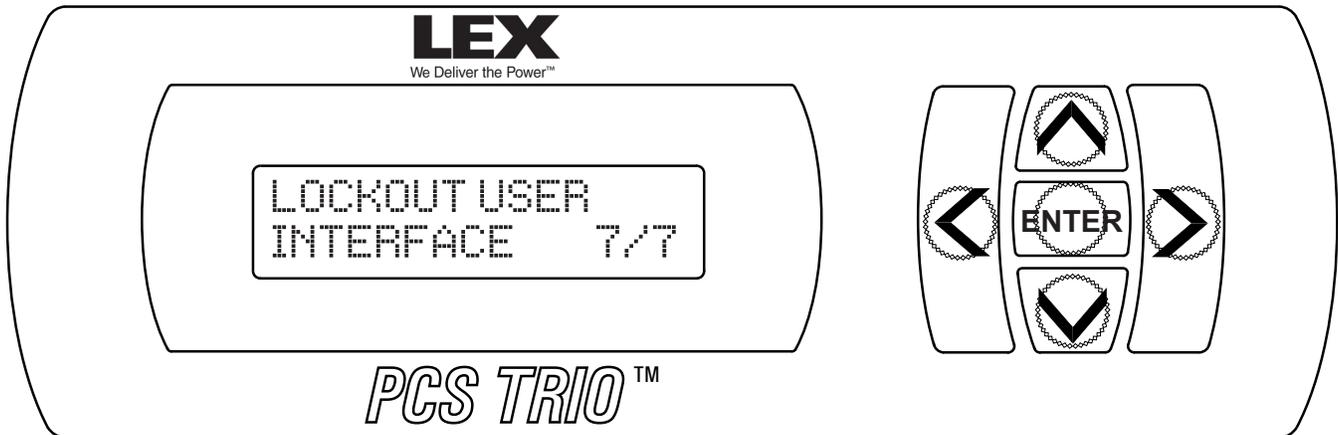
- Pressing the **ENTER** button returns the panel to normal control operation and the display returns to the Main Menu.

### NOTE:

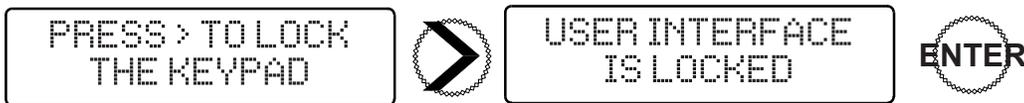
- Changes will take effect as selections are made.

## Chamber Controller Operation - Lockout User Interface

The Lockout User Interface option prevents unintended changes to the Chamber Controller programming once set.



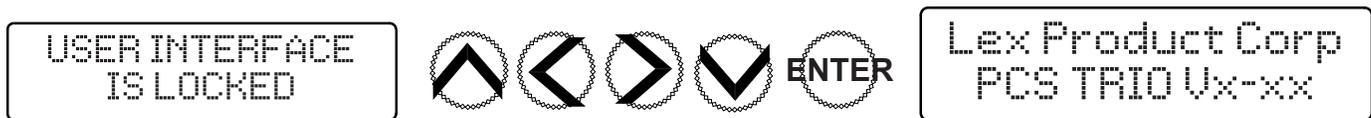
- Pressing the **ENTER** button activates the Sub-menu.
- Pressing the **RIGHT ARROW** and **ENTER** buttons, in order, locks the keypad.



### NOTES:

- While the lockout is in effect, the display will show 'USER INTERFACE IS LOCKED'. Outside control, both normal and emergency, are available and function as programmed. Only keypad operation is locked out.

- Pressing the **UP ARROW**, **LEFT ARROW**, **RIGHT ARROW**, **DOWN ARROW** and **ENTER** buttons, in order, deactivates the lockout and returns the display to the Status Display.



**Troubleshooting**

Symptom	Cause	Solution
One or more 'LEX' blue LEDs out	Missing power to one or more Module Chamber service bus bars	Confirm service power supply is intact
Status LED out	No power to Chamber Controller	Check connection between Module Chamber and Chamber Controller module
	Chamber Controller failure	Replace Chamber Controller module
Status LED illuminated steady red	Module Chamber in 'overtemp' status due to insufficient air flow/ambient room temperature	Clean air filter
		Ensure Module Chamber is properly located per guidelines (page 8, <i>PCS TRIO™ Panel Installation Manual</i> )
Status LED illuminated flashing red - RS-485 (DMX/RDM) Systems	Chamber Controller is not receiving control signal	Check that cabling is securely held in RS-485 termination block and ensure it is firmly seated in Chamber Controller PCB
		Ensure Chamber Controller PCB jumpers are installed as detailed on page 7
		Ensure DMX/RDM signal is intact at Chamber Controller
Status LED illuminated flashing red - Ethernet (sACN/Art-Net) Systems	Chamber Controller is not receiving control signal	Check that cabling is securely held in Ethernet 'biscuit' punch-down block and the jumper cable between Ethernet 'biscuit' and Chamber Controller PCB is secure
		Ensure Chamber Controller PCB jumpers are installed as detailed on page 7
		Ensure Ethernet signal is intact at Chamber Controller
Module Chamber fans do not come on	No power to fans	Check connection between Module Chamber and Chamber Controller module
	Fans broken	Contact your Lex Products dealer for replacement
	Control signal to channels have been at a level of 'zero' for more than twenty minutes	Send a control signal to the channels at a level greater than 'zero'
Load circuit will not energize	Circuit breaker is tripped or off	Cycle circuit breaker
	Module is not properly seated	Remove and reinsert Module
Chamber Controller Module LCD will not illuminate	No power to Chamber Controller Module	Check connection (Backplane) between Module Chamber and Chamber Controller module
	Chamber Controller failure	Replace Chamber Controller module
Chamber Controller will not respond to RS-485 (DMX/RDM) signal	Chamber Controller is not receiving control signal	Ensure integrity of communication system
Chamber Controller will not respond to Ethernet (sACN/Art-Net) signal	Chamber Controller is not receiving control signal	Ensure integrity of communication system
Modules below a certain channel do not respond to control signal	Module(s) not properly seated	Remove and reinsert Modules

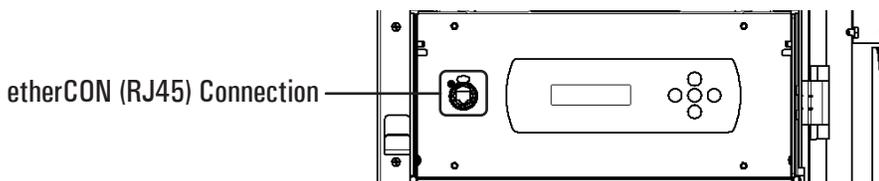
## PCS Manager™ Software - Configuration Download

The *PCS Manager*™ software provides a means to electronically upload, record and/or download the Chamber Controller (P/N: PCS-I-CC) configuration established utilizing the steps outlined in earlier chapters of this document.

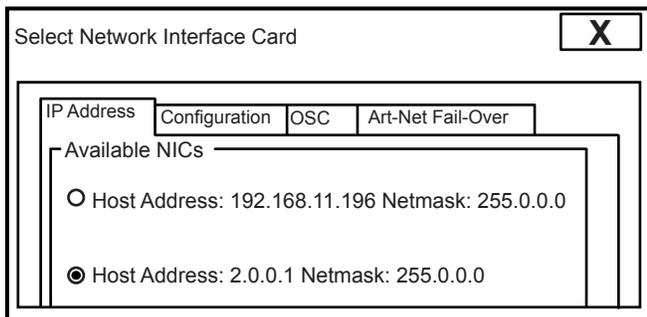
- *PCS Manager*™ requires a computer running Windows® XP, 7, 8 or 10
  - The computer's Internet Protocol Version 4 (TCP/IPv4) Properties should be configured to the system parameters established under the *Setting the IP Address* section on page 13.
  - If no changes to the default Chamber Controller IP Address were made previously, the TCP/IPv4 Properties are as follows:
    - IP Address: 2.0.0.1
    - Subnet Mask: 255.0.0.0
  - The most recent version of the *PCS Manager*™ software is available for download to authorized dealers through [www.lexproducts.com](http://www.lexproducts.com)

## PCS Manager - Configuration Download

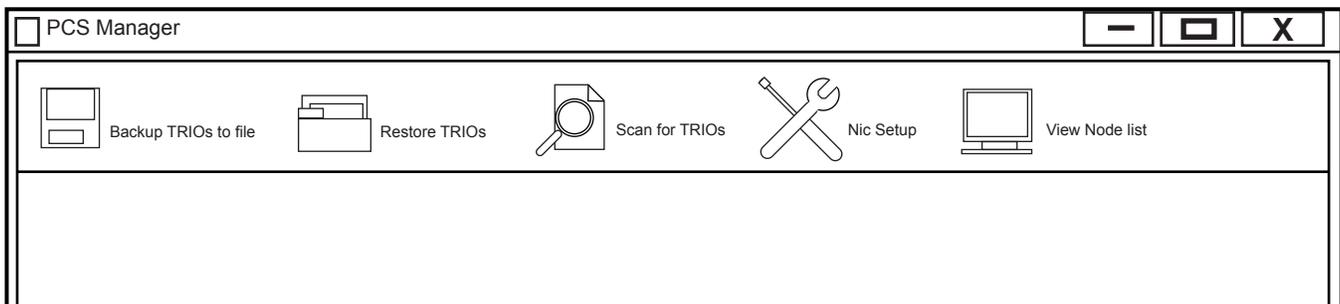
1. Connect the computer to the Chamber Controller at the etherCON port using a Cat5e Ethernet patch cable.



2. Open *PCS Manager*™ on the computer
3. You will be prompted to 'Select Network Interface Card'
  - Select the radio button that matches the system parameters
    - For the purposes of demonstration the default IP Address of the Chamber Controller (2.174.61.185) has not been modified:
  - Select 'Host Address: 2.0.0.1 Netmask: 255.0.0.0'



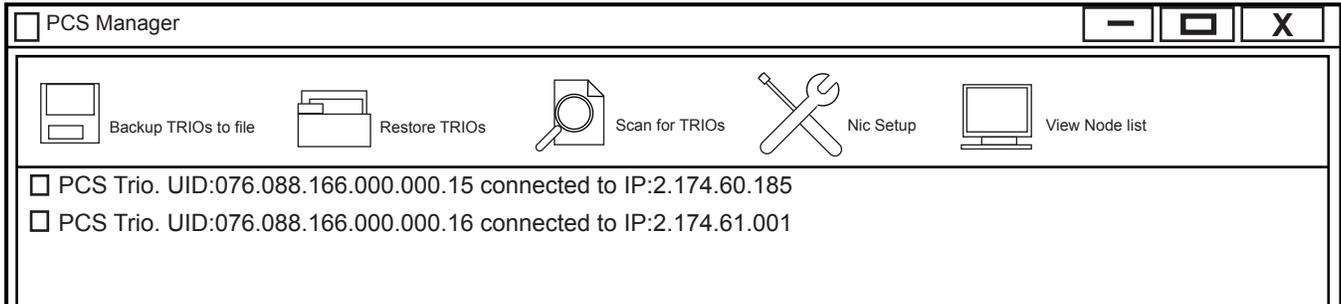
4. The *PCS Manager*™ home-page will appear



## PCS Manager™ Software - Configuration Download (continued)

5. Select the 'Scan for TRIOs' icon.

- *PCS Manager™* will do an Ethernet search for all PCS TRIOs available on the network
  - In an RS-485 based system (DMX or RDM), *PCS Manager™* will only discover the PCS TRIO™ to which it is physically attached.
- Once the scan is complete, a list of those unique identifiers (UID and IP Address) *PCS Manager™* has discovered will be displayed:



6. Select the check box next to the configuration to be saved.

- Only one configuration may be saved at a time.

7. Click the 'Backup TRIOs to file' icon.

- Information to be saved includes addressing (both Ethernet and RS-485), recorded presets as well as the identification of the emergency preset.

8. When prompted, save the files to the desired location on the laptop.

- Notes when saving a *PCS Manager™* file.
  - It is recommended that a unique identifier be added to the defaulted file name for future reference.
  - e.g.: Work-076-088-001-000-000-168-2.174.61.1-USL-RACK.trio
  - e.g.: Work-076-088-001-000-000-168-2.174.61.1-PARK-ST-ELEM.trio
  - The UID and IP Address hooks **MUST BE** left in the file name.
  - If the identity of the referenced Chamber Controller is unknown, see the *PCS Manager™ Chamber Controller Locator* chapter (page 22) for location services.

9. Once saving is complete, *PCS Manager™* may be closed.

10. Transmit the configuration(s) to Lex Products for archiving.

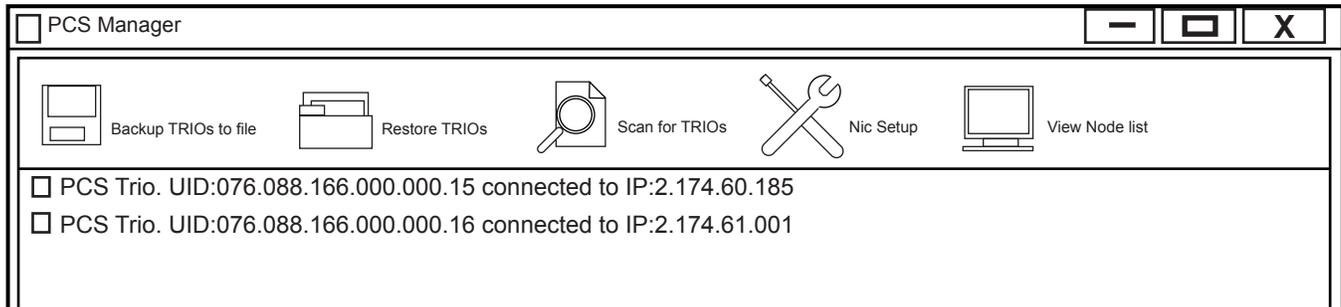
- Technical Support may be reached at 800-643-4460 or via email at [technical\\_support@lexproducts.com](mailto:technical_support@lexproducts.com).

# PCS TRIO™ Power Control System

## PCS Manager™ - Configuration Upload

The *PCS Manager*™ software provides a means to electronically upload a previously stored configuration into a Chamber Controller (P/N: PCS-I-CC).

1. Establish a connection between laptop, *PCS Manager*™ the PCS TRIO system.
  - Follow steps 1 through 6 of the 'PCS Manager - Configuration Download' (page 20) instructions detailed previously.

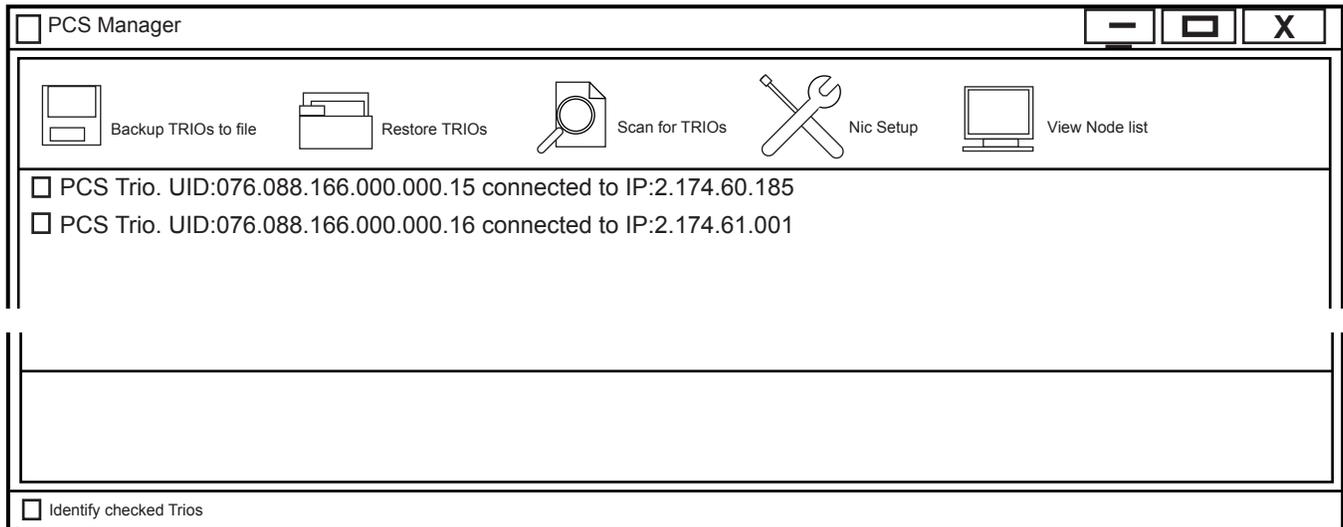


2. Select the check next to the PCS TRIO™ Chamber Controller to receive the configuration upload.
  - NOTE: Selecting more than one Chamber Controller will cause the same configuration to be uploaded to multiple units.
3. Select the 'Restore TRIOS' icon.
4. When prompted, highlight the .trio file to be uploaded and select 'Open'.
5. After a few moments the configuration will be uploaded to the selected Chamber Controller.

## PCS Manager™ - Chamber Controller Locator

The *PCS Manager*™ software provides the means to identify a selected Chamber Controller (P/N: PCS-I-CC) within a system.

1. Establish a connection between laptop, *PCS Manager*™ the PCS TRIO system.
  - Follow steps 1 through 6 of the 'PCS Manager - Configuration Download' (page 20) instruction detailed previously.
2. Select the check next to the PCS TRIO™ Chamber Controller that is to be identified.
  - NOTE: Selecting more than one Chamber Controller will cause Locator to identify multiple units.



3. Select the 'Identify checked Trios' icon in the lower left corner of the *PCS Manager*™ home page.
4. The selected Chamber Controller will display 'RDM LOCATE' on the LCD display.

# PCS TRIO™ Power Control System

## Load Wiring Record - A

PROJECT SIGN-OFF FORM					
Date:					
Project Name:					
Project Location:					
Commissioning:					
Panel Capacity	Module Type & S/N	Circuit	Emer.	Notes	
PCS-I-B-MC-16 - S/N:	PCS-I-B-MC-08 - P/N:	PCS-I-B-MC-04 - S/N:			
		PCS-I-B-MC-08 - P/N:	PCS-I-B-MC-04 - S/N:		
	PCS-I-B-MC-08 - P/N:		PCS-I-B-MC-04 - S/N:		
		PCS-I-B-MC-08 - P/N:	PCS-I-B-MC-04 - S/N:		
PCS-I-B-MC-08 - P/N:	PCS-I-B-MC-04 - S/N:				
	PCS-I-B-MC-08 - P/N:	PCS-I-B-MC-04 - S/N:			
PCS-I-B-MC-08 - P/N:		PCS-I-B-MC-04 - S/N:			
	PCS-I-CC - S/N(s):				



# PCS TRIO™ Power Control System

## Notes Page - B

PHASE	VOLTAGE
Phase A to B	
Phase B to C	
Phase A to C	

PHASE	VOLTAGE
Phase A to Neutral	
Phase B to Neutral	
Phase C to Neutral	

PHASE	VOLTAGE
Neutral to Ground	

Panel Capacity	Module Type & S/N	Circuit	Emer.	Notes
PCS-I-B-MC-16 - S/N:	PCS-I-B-MC-08 - S/N:	PCS-I-B-MC-04 - S/N:		
		PCS-I-B-MC-04 - S/N:		
	PCS-I-B-MC-04 - S/N:			
	PCS-I-B-MC-04 - S/N			
PCS-I-CC - S/N(s):				



## Maintenance

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- The Lex Products PCS TRIO™ is designed for years of trouble-free service after a successful installation and commissioning.
- However, as with any device, certain periodic maintenance procedures should be followed to ensure years of proper operation.
- Please use the following schedule as a guideline while keeping in mind site conditions that may generate the need for more frequent attention.

Schedule	Procedure	Maintenance
Every six (6) months	Air Filter Cleaning	Remove from beneath Chamber Controller and vacuum. Power need not be disconnected to perform this procedure.
 <b>SAFETY - Prior to proceeding with the following procedures ensure line circuit breakers feeding the panel are 'Off' or 'Open' and Lockout/Tagout procedures have been followed.</b>		
Every twelve (12) months	Module Cleaning	Remove individual Modules and clean using compressed air. DO NOT vacuum.
	Module Review	Cycle each circuit breaker to ensure proper operation. Replace modules as needed.
	Fan Check	Visually inspect fan guards at top of Module Chamber to ensure blades spin freely.

## Limited Warranty

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- When this PCS TRIO™ Installation Power Control System is installed and operated according to this manual's instructions Lex Products will repair or replace any of its mechanical or electrical parts if they are found to be defective in material or workmanship within two years of the commissioning date.

## Technical Support

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- Contact us with any questions you have and receive live technical support - 800-643-4460 or via email at [info@lexproducts.com](mailto:info@lexproducts.com)



**LEX**

WE DELIVER THE POWER™

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