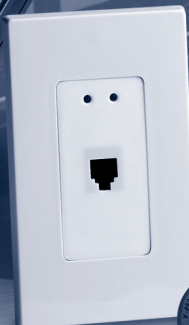


DIMENSIONS™

D3200 Architectural Lighting Control System System Installation Manual



Customizable,
Integrated,
Networkable
Dimming and
Scene Control
System

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CHAPTER 1: OVERVIEW

This manual, after a basic description of the system and its components in this chapter, presents everything you need to know to successfully install the Dimensions D3200 System. The second chapter covers wiring, assembly, and mounting. The Programming chapter helps you program settings that enable D3200 components to work together to create a customized installation. And finally, Testing & Troubleshooting helps you ensure that the system is functioning properly, and sheds light on specific lighting situations so you can make the appropriate adjustments to the system.

SYSTEM

Leviton's Dimensions D3200 Architectural Lighting Control System is a multizone dimming system that allows for the creation and selection of lighting scenes within individual or combined areas. In its simplest form, the system may consist of a single Multizone Controller attached to no more than six loads. A more comprehensive system might include a wall-mounted scene controller, a remote control, two terminator blocks, and setup software enabled through a Leviton jack. The system, which communicates over a Leviton Control Network (LCnet) bus, is modular and can be expanded to meet new requirements.

The following components make up the Dimensions D3200 Architectural Lighting Control System. The Multizone Controller/Dimmer is the only mandatory component.

- D3206 Multizone Controller/Dimmer
- D3208 Multizone Controller/Dimmer
- NE505 Scene Controller with Infrared
- NE210 Infrared Remote Control
- NE600 Terminator Block
- D3200 Setup Software
- NE100 SmartJack
- Leviton Power Extenders

NOTE: Leviton will continue to expand our line of Dimensions-compatible peripherals. Call your Leviton representative for information on additional wall controllers, power extenders, LCnet dimmers and switches, and compatibility with other Leviton lighting control components and systems.

MULTIZONE CONTROLLERS

There are two different Multizone Controller options for the Dimensions D3200 System: the D3206 and D3208. The D3208 is the more full-featured of the two.

About Zones

A zone is either a single load or a group of loads controlled as a single entity. Every lighting load hardwired to a D3206 or D3208 is associated with a zone number that is based on the terminal number to which it is connected. Figure 1-1 is an example of a meeting room with four lighting and two auxiliary zones.

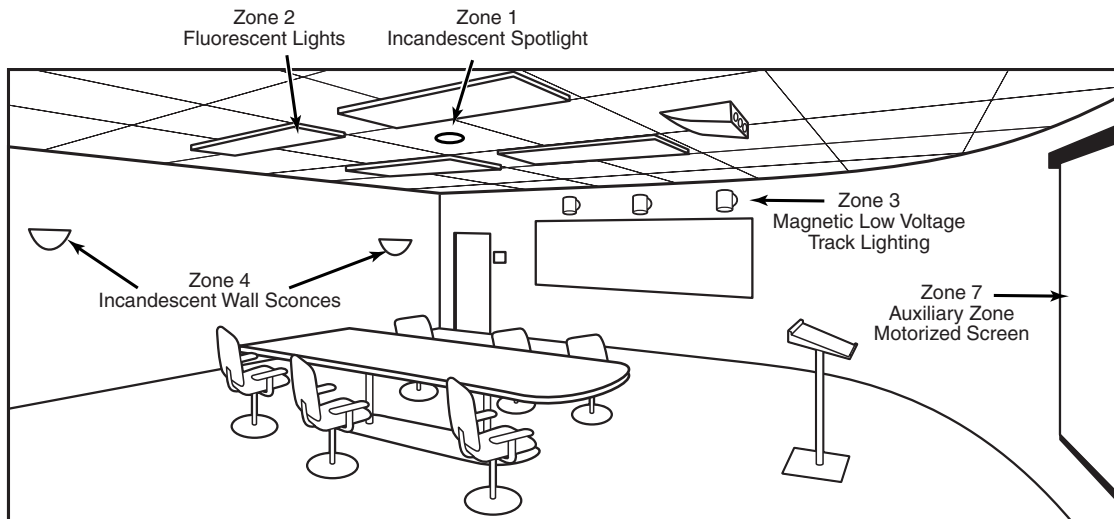


Figure 1-1: Multiple Zones Connected to a Single D3208

NOTE: A load may be mapped to zone number other than the one matching the terminal to which it was wired.

D3206 Controller/Dimmer

The D3206 is a self-contained unit that can be hardwired to control up to six dimmable zones of lighting in a room or group of rooms. It can be programmed to control loads wired to other Multizone Controller units with scene control, as well as to accessory devices wired to the LCnet. The D3206 (Figure 1-2) features a learning infrared receiver for use with a handheld infrared remote control. You can use the unit itself to configure the lighting system during installation. A series of intuitive Wizards (menus) walks you through basic system setup and can be used to customize the system with exact light levels, fade rates, etc. The D3206 is compatible with incandescent, tungsten, magnetic low voltage transformer, Advance Mark X electronic fluorescent dimming ballast, neon, and cold cathode fixtures.



Figure 1-2: D3206 Multizone Controller/Dimmer

D3208 Controller/Dimmer

The D3208 (Figure 1-3) controls up to six lighting loads PLUS it reserves two LED rows for access to auxiliary dimming or switching/motor loads. The D3208 looks exactly like the D3206 except for these two, additional LED rows. It offers all the features of the D3206 and additional functions including scheduled scene changes and join/separate functionality to accommodate grouping for removable partitions.



Figure 1-3:
D3208 Multizone Controller/Dimmer

Multizone Controller/Dimmer Specifications

Input Voltage: 120VAC \pm 10%, 60Hz
 Isolated Output: 24VDC @ 150mA
 Output Power: 1920W/VA total output, 1000W max. per zone,
 1200W/VA max. per side
 Size: 4.73 x 8.80 x 2.65in. (12.0 x 22.4 x 6.7cm)

SCENE CONTROLLER WITH INFRARED

The NE505 Scene Controller (Figure 1-4) is a Decora-style controller with four scene pushbuttons and an off button, which is ideally suited for installation at secondary entranceways. It provides a unique entry pad interface with a learning infrared receiver for use with a compatible Leviton remote control or a standard remote control. The NE505 can be programmed so the user can select amongst four consecutive scenes in a specific group. Ganging additional NE505's next to the first provides more scene selection capability.

The controller must be wired into the LCnet bus as well as to a power source (most likely a nearby Multizone Controller) and programmed for each group.



Figure 1-4:
NE505 Scene Controller

Scene Controller Specifications

Input Voltage: 24VDC
 Input Current: 24mA
 Power Consumption: less than 1W
 Infrared Range: 40 feet
 Angle of Infrared Acceptance: 100°
 Size: 4.71 x 1.76 x 1.36in. (12.0 x 4.5 x 3.5cm)

INFRARED REMOTE CONTROL

Leviton's NE210 Infrared Remote Control (Figure 1-5) has been specifically designed to allow scene control from up to 40 feet from any D3206/8 or NE505 Controller (once the IR codes have been programmed into each controller). The NE210 is black and has eight scene buttons, a group dim/bright button, and max and off buttons. It requires four AAA batteries.

Remote Control Specifications

Input Voltage: 6VDC

Batteries Required: 4AAA (sold separately)

Size: 6.79 x 2.0 x .84in (17.2 x 5.1 x 2.1cm)



Figure 1-5:
NE210 Infrared Remote Control

TERMINATOR BLOCK

The NE600 Terminator Block (Figure 1-6) must be installed as the first and last nodes when the LCnet run combined with the length of all the wires running off the splices IS GREATER THAN 10 FEET. This ensures consistent and reliable communication on the network run of wiring. Terminating additional nodes will degrade network performance and may interrupt communications.

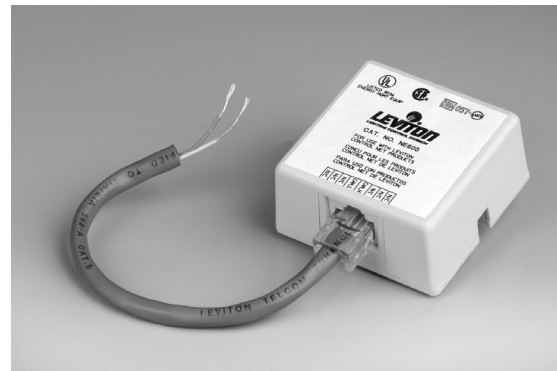


Figure 1-6: NE600 Terminator Block

D3200 SETUP SOFTWARE

D3200 Setup Software is a software tool for setting up the D3200 System, as well as storing these settings and downloading them to additional components. It allows you to enter all names, zone information, groups and configurations, timed events, and more, via a familiar interface. The software is for use on an IBM-compatible PC or laptop attached to a Leviton NE100 SmartJack.

NOTE: Information on D3200 Setup Software, including files for download, can be found on www.leviton.com/D3200.

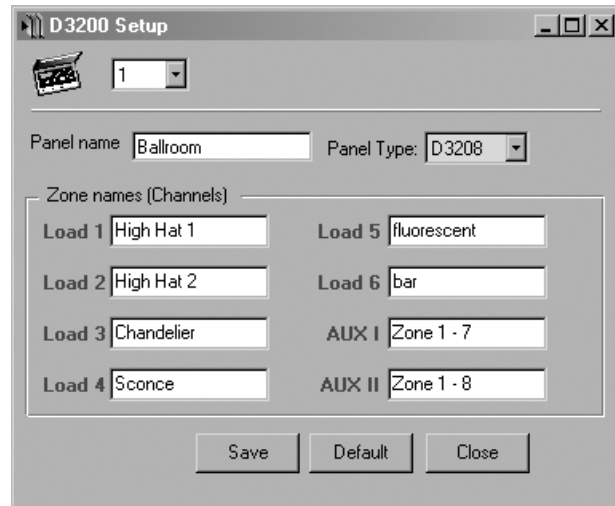


Figure 1-7: D3200 Setup Software, Panel Setup Tab

System Requirements for Leviton Software

Operating System: Windows 95/98/NT4.0/2000
See Website for latest OS compatibility.

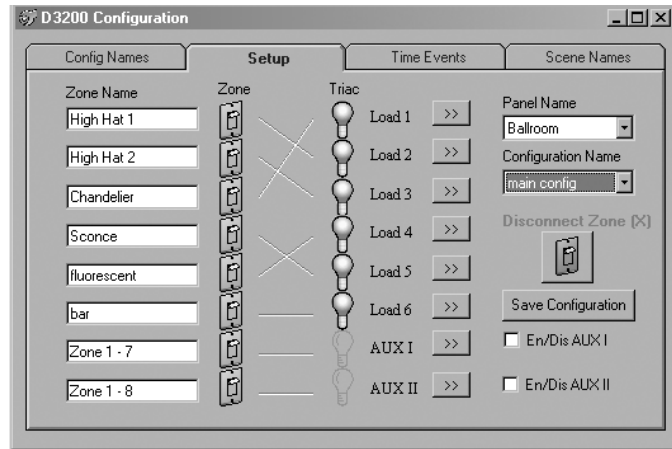


Figure 1-8: D3200 Setup Software, Setup Tab

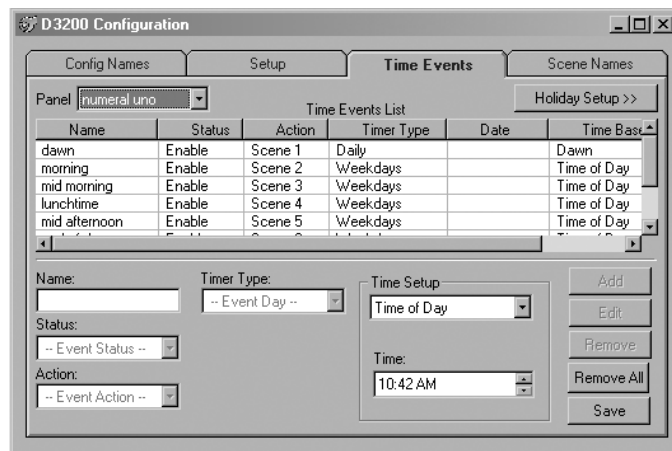


Figure 1-9: D3200 Setup Software, Timed Events Tab

SMARTJACK

The SmartJack is a low voltage Class II wiring device that installs in a standard wallbox. For the installer or user to use the D3200 Setup Software for system configuration or customization, the SmartJack must first be installed and wired to the LCnet. The SmartJack (Figure 1-10) comes with a cable for connecting it to a personal computer or laptop. LED's on the face of the SmartJack indicate communication status.

SmartJack Specifications

Connectivity: RJ11 to DB9 cable

Input Voltage: 24VDC

Input Current: 40mA

Power Consumption: 1W

Size: 4.41 x 1.76 x 1.69in. (11.2 x 4.5 x 4.3cm)



Figure 1-10:
NE100 SmartJack with Cable

POWER EXTENDERS

Leviton offers D3200-compatible power extenders that may be used when load requirements exceed the Multizone Controller's own capacity (more than 1920W/VA per controller, 1000W/VA per zone, or 1200W/VA per side). Leviton's DPSPE-112 or DPSPE-212 power extenders—or other compatible Leviton power extenders as per www.leviton.com/D3200—are available.

CHAPTER 2: INSTALLATION

WIRING & OTHER PRE-INSTALLATION CONSIDERATIONS

If you are installing only one Multizone Controller/Dimmer attached to no more than six zones, you do not need to use LCnet wiring and so may SKIP TO THE POWER CONSIDERATIONS SECTION ON PAGE 9.

Before you can begin installing individual components, you must lay the wiring across which D3200 components will communicate. To do this you'll need know some basic specifications and understand a few, key concepts including addressing and join/separate functionality. This section, combined with job drawings you may have in your possession (and possibly some forms the lighting designer has completed) should provide you with all you need to know to install the Dimensions D3200 Architectural Lighting Control System.

LCNET WIRING

The D3200 System is based on a low-voltage communication bus (see Figure 2-1) called the Leviton Control Network (LCnet), which must be wired in accordance with a few, basic principles. Without the LCnet bus, the Multizone Controller can control only those loads to which it is hardwired. To control remote zones located on other Multizone Controllers, the Controller sends messages over the bus. Only the device(s) for which a message is intended will process the message/scene.

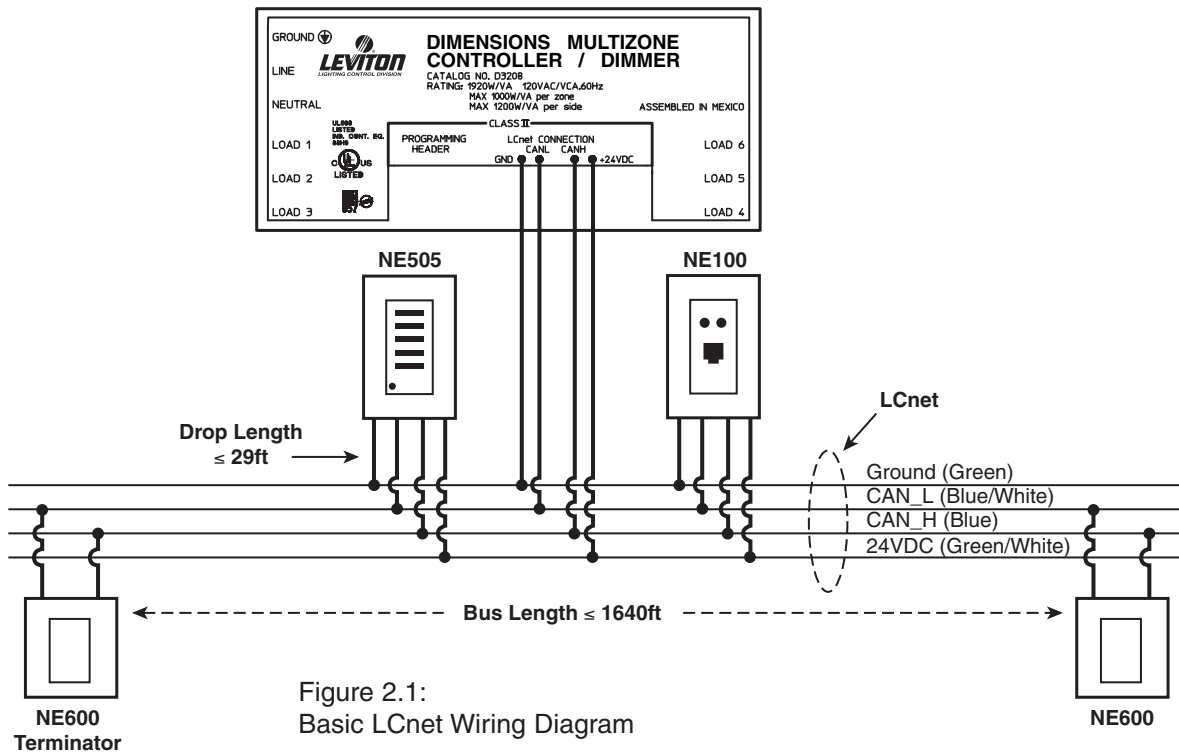


Figure 2.1:
Basic LCnet Wiring Diagram

- NOTE: (1) Leviton recommends using Cat-5 twisted pair wire for best performance.
(2) Every LCnet device must be connected as a tap to the LCnet wire.

The Multizone Controller supplies power to the components to which it is connected via power and ground wires. These wires must be cut when wiring to any system component that should not be drawing power from that specific Multizone Controller.

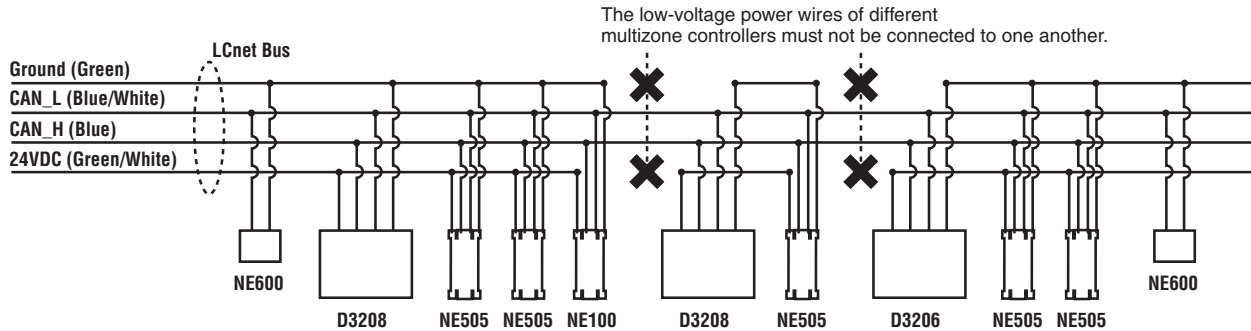


Figure 2-2: Multiple-Zone-Controller System Diagram

Wire Lengths

Plan out the path of all LCnet wires to ensure they can be routed through the building to every node. The total wire length from the beginning to the end of LCnet wiring cannot be more than 1640 feet (500 meters) long. The tap, measured from the splice into the LCnet to the wire’s entry into the device, cannot be more than 29.5 feet (9 meters) long.

Termination

The LCnet bus must be terminated with Terminator Blocks if the LCnet run, as well as the length of all the wires running off the splices, is greater than 10 feet. There is no need to install Terminator Blocks if the total is less than 10 feet. Termination Blocks should be installed one at the beginning (before first node) and one at the end (after last node). Step-by-step instructions for installing Termination Blocks appear on Page 14.

WARNING: Only the first and last nodes should be terminated. Terminating additional nodes will degrade network performance and may interrupt communications, and thus proper lighting functions.

Adding a New Node with a Tap

1. Splice the LCnet wire.
2. Insert a third wire (as in a T).
3. Reconnect wires.

NOTE: Leviton recommends either (1) using IDC crimp-on connectors such as 3M brand Scotchlok™ connectors or (2) splicing the wire and connecting with wire nuts. If using wire nuts, make sure to use the appropriate size for a good connection.

Node Limit

A single D3200 System LCnet can have up to 100 devices attached to it. Additional LCnet bus(es) must be installed if your installation requires more than 100 devices.

POWER CONSIDERATIONS

SmartJack Wiring

The Multizone Controller powers the SmartJack. Because it is not associated with any single address on the LCnet, the SmartJack's power wires can be connected to the nearest Multizone Controller. To do this, splice the SmartJack's LCnet connections to the nearest point in the LCnet wire.

Scene Controller Wiring

We suggest you wire Scene Controllers to the nearest Multizone Controller, as long as this does not put you over the peripheral limitation.

Peripheral Limitations

Zone Controllers can provide power to peripheral devices. Although any component can get its power from any Multizone Controller because either its address (panel number) determines which devices it talks to (as with controllers) or it listens to all messages (as with SmartJacks), there is a limit to what can be attached to a single D3206/D3208. This limit is based on the maximum input current of 150mA.

The chart below (Figure 2-3) presents the input current of each component and the maximum number of any, single peripheral component that may have its power wires connected to a single Multizone Controller when no other peripherals are attached. This information can be used in a simple formula (Figure 2-4) to make sure you don't attach more components than the Multizone Controller can safely accommodate.

Peripheral Catalog No.	Input Current (in mA)	Maximum Quantity
NE505	25	6
NE100	40	3

Figure 2-3: Peripheral Input Current Chart

$$\begin{array}{|c|} \hline \text{Peripheral A Input Current} \\ \hline \mathbf{X} \\ \hline \text{Number of Peripheral A's attached} \\ \text{to single Multizone Controller} \\ \hline \end{array}
 +
 \begin{array}{|c|} \hline \text{Peripheral B Input Current} \\ \hline \mathbf{X} \\ \hline \text{Number of Peripheral B's attached} \\ \text{to single Multizone Controller} \\ \hline \end{array}
 +
 \begin{array}{|c|} \hline \text{Same formula for any} \\ \text{other attached} \\ \text{Peripheral} \\ \hline \end{array}
 \leq 150$$

Figure 2-4: D3206/8 Multizone Controller Load Rating Verification Formula

Example

To be sure NOT TO exceed the Multizone Controller's input current in a conference room with four partitions (1) Determine how many of each component you'd like to install—assume three NE505's, two NE600's, and one NE100. (2) Use these quantities along with the Multizone Controller Load Rating Verification Formula (Figure 2-4) to do the math (Figure 2-5) and verify that the combined input current DOES NOT exceed the maximum input current.

	Quantity		mA		
NE505	3	X	25	=	75
					+
NE600	2	X	0	=	0
					+
NE100	1	X	40	=	40
					115 is ≤ 150 so all components CAN BE wired to the low voltage power and ground wires from a single Multizone Controller.

Figure 2-5: Input Current Calculation

INSTALLING COMPONENTS

If you need more information to help you install any component, instructions with additional illustrations can be found on the components User Guide or Installation Instructions.

WARNING: To avoid fire, shock, or death; turn off power at circuit breaker or fuse and test that power is off before wiring!

WARNING: Disconnect power when servicing fixture or changing lamps.

WARNING: To be installed and/or used in accordance with appropriate electrical codes and regulations.

WARNING: If unsure about any part of these instructions, consult a qualified electrician.

Installing the Multizone Controller/Dimmer

WARNING: Do not connect line voltage wires to low voltage terminals.

WARNING: To reduce the risk of overheating and possible damage to this device and other equipment, do not install to control a receptacle.

WARNING: Use only with the appropriate Advance Mark X™ 120V electronic dimming ballasts for controlling the specific fluorescent lamps.

CAUTION: Use with incandescent, tungsten, 120V halogen fixtures, cold cathode, magnetic low-voltage transformer fixtures, or Mark X™ 120V electronic dimming ballasts only. Do not use this product to control electronic (solid state) low-voltage transformers.

OTHER CAUTIONS:

1. When a magnetic low-voltage circuit is operated at a dim level, with all lamps inoperative, excess current may flow through the transformer. To avoid possible transformer failure due to overcurrent, use a transformer that incorporates thermal protection or a fuse at the primary windings.
2. When using with fluorescent ballasts, both lighting fixture and dimmer must be grounded.
3. Use this device only with copper or copper clad wire. With aluminum wire use only devices marked CO/ALR or CU/AL.
4. Do not mix load types on a single zone (i.e., 120V tungsten and magnetic low voltage).
5. Disconnect power when servicing fixtures or changing lamps.

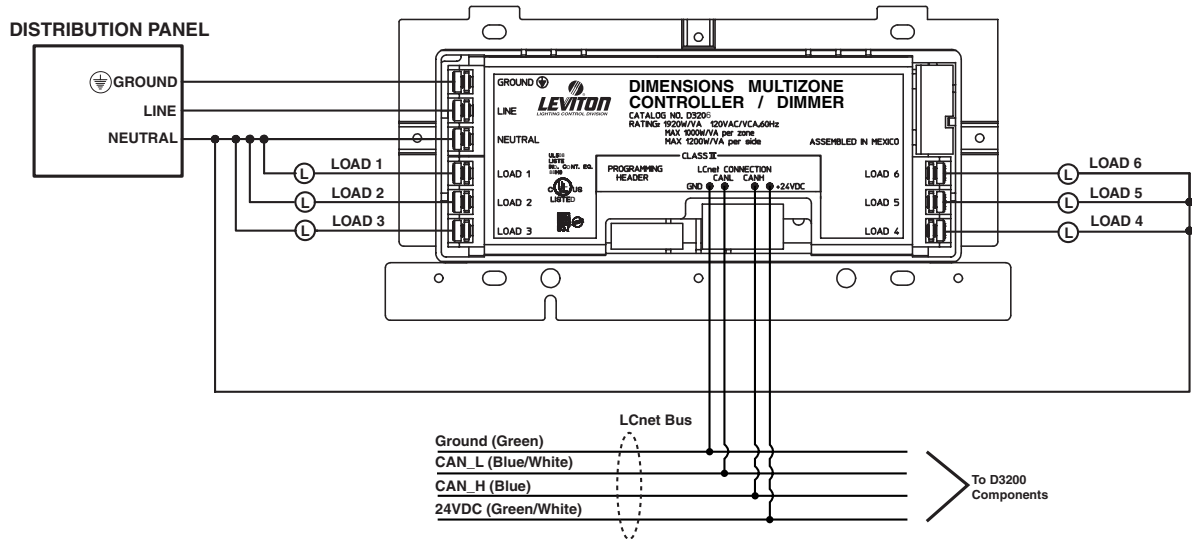


Figure 2-6: Multizone Controller Wiring Diagram

NOTE: The insulation of the Class I field wiring must be rated no less than 75°C.

NOTE: Each screw terminal is capable of holding up to two (2) 12 AWG wires.

Installation Instructions

1. Remove faceplate and insert conductors.
2. Mount Controller in 4-gang box (10⁷/₁₆ in. wide, 2¹/₂ in deep) with 4-gang device cover (10¹¹/₁₆ in. wide, 1/2 in. or 3/4 in. deep)
3. Line Voltage Wiring: Remove 1/2in. (.95cm) of insulation from each circuit conductor. Connect lead wires per wiring diagram (Figure 2-6). Insert straight wires into holes next to appropriate terminal screws and tighten screws to 9in.-lbs. of torque, as per Figure 2-7.

NOTE: Both Multizone Controllers will automatically assign zone numbers to loads based on which terminal you connect each load to. For example: connecting a bank of fixtures to the Load 1 terminal means that those fixtures will be the first Zone on that Multizone Controller. Both Controllers allow you to change these zone numbers, if you desire.

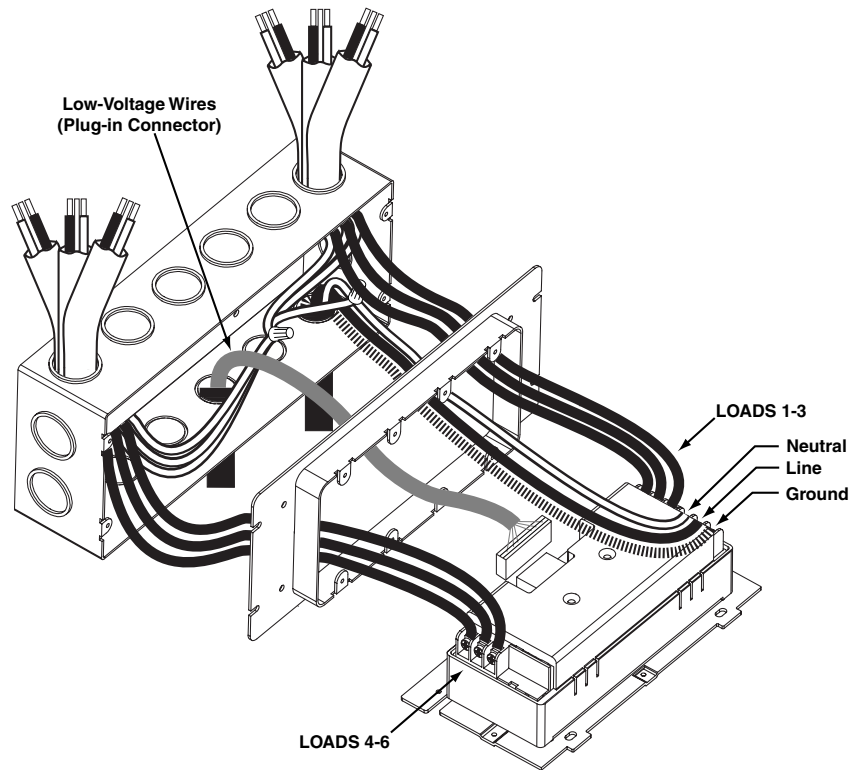


Figure 2-7: Physical Wiring Illustration

4. Low-Voltage Wiring (If LCnet wiring is required): Connect leads per wiring diagram (Figure 2-1) as illustrated in Figure 2-7, insert each lead into appropriate plug connector location by pushing firmly. If using stranded wire, twist strands of each lead tightly (making sure that there are no stray strands) and push firmly into appropriate plug connector location. Tighten the screws on the plug connector—making sure that no bare conductor is showing. Connect plug connector to jack on the back of the Multizone Controller.

NOTE: LCnet must be wired using a twisted pair for the CAN_H and CAN_L wires. Leviton recommends using CAT5 wire.

NOTE: LCnet wires must also be dressed so they are separate from the high voltage (Class I) conductors. Refer to local building codes for the appropriate installation requirements for the low-voltage wiring. Jacketing over the low-voltage wires may be required to provide appropriate insulation from the high-voltage wiring. Leviton recommends 3M brand flexible polyolefin tubing, part #FP-301, 1" diameter.

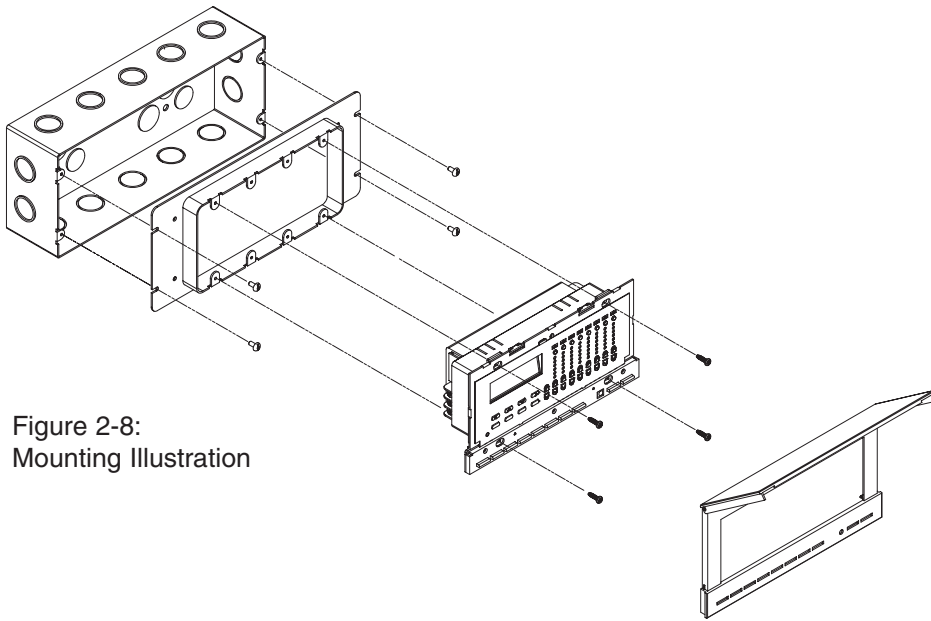


Figure 2-8:
Mounting Illustration

5. Carefully position all wires to provide room in switch box for Multizone Controller. Mount Multizone Controller to raised cover using the screws provided. See Figure 2-8.
6. Snap faceplate back on. MULTIZONE CONTROLLER INSTALLATION IS COMPLETE.

Installing the NE505 Scene Controller

CAUTION: The Scene Controller operates off of low voltage (24VDC). Consult local building codes and regulations for proper low-voltage installation.

Installation Instructions

1. If you would like to change the color of the Controller and need instructions, see Page 16; otherwise proceed.
2. Connect per wiring diagram (Figure 2-9) as follows: Insert each lead into appropriate plug connector location by pushing firmly. If using stranded wire, twist strands of each lead tightly (making sure that there are no stray strands) and push firmly into appropriate plug connector location. Tighten the screws on the plug connector making sure that no bare conductor shows. Connect plug connector to jack on the back of the Controller.
3. Carefully position all wires to provide room in outlet box for Controller. Mount Controller into box with mounting screws supplied. NE505 INSTALLATION IS COMPLETE.

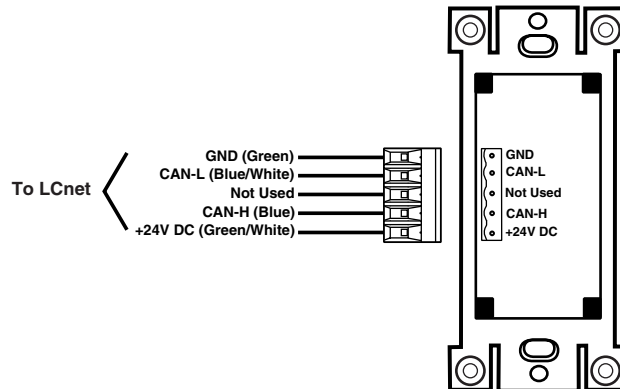


Figure 2-9:
NE505/NE100 Wiring Diagram

Installing the NE600 Terminator Block

Remember that the terminator block must be installed as the first and last nodes if the network's total wire length (including drop lengths) is greater than ten feet.

CAUTION: Do not terminate additional nodes because that may degrade network performance and interrupt communications.

Installation Instructions

- 1a. **USING IDC CONNECTORS:** Connect per wiring diagram (Figure 2-10) as follows: Insert the wires from the pluggable wiring harness into one side of the IDC connector, and the wires from the LCnet into the other end of the connector. Using a set of pliers, crimp the connector. Connect the RJ45 connector into the Terminator Block.
- 1b. **USING WIRE NUTS:** Make sure to use appropriately sized wire connectors and connect per wiring diagram as follows: Remove 3/4in. insulation from each circuit conductor. Connect wires from the pluggable wiring harness and the LCnet by twisting on a wire connector. Twist connector on clockwise making sure that no bare wire shows below the wire connector. Secure each wire connector with electrical tape. Connect the RJ45 connector into the Terminator Block.
2. Mount the Terminator Box into a wallbox or in the ceiling using the double-sided tape provided.
3. Make sure the pluggable wiring harness is connected to the Terminator Block. **TERMINATOR BLOCK INSTALLATION IS COMPLETE.**

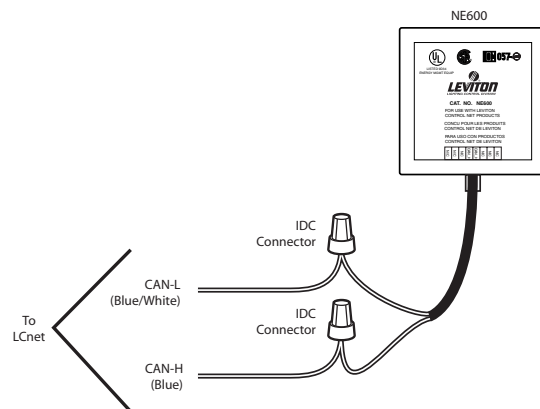


Figure 2-10:
NE600 Wiring Diagram

Installing the NE100 SmartJack

The SmartJack must be installed in any location from which you want to use Leviton software for system setup and/or customization via a personal computer or laptop.

Installation Instructions

1. If you would like to change the color of the jack and need instructions, see Page 16; otherwise proceed.
2. Connect per wiring diagram (Figure 2-9) as follows: Insert each lead into appropriate plug location by pushing firmly. If using stranded wire, twist strands of each lead tightly (making sure that there are no stray strands) and push firmly into appropriate plug location. Tighten the screws on the plug, making sure that no bare conductor shows. Connect plug into connector on the back of the SmartJack.

3. Carefully position all wires to provide room in outlet box for SmartJack. Mount SmartJack into box with mounting screws supplied. NOTE: The SmartJack mounting orientation is with the LED's above the jack opening.
4. Connect the DB-9 end of cable to the personal computer's serial port. Insert the RJ-11 (phone type) jack into the opening on the face of the SmartJack until the lever clicks into place. SMARTJACK INSTALLATION IS COMPLETE.

Installing the Setup Software

System Requirements

Operating System: Windows 95/98/NT4.0/2000. See Website for latest OS compatibility.

Installation Instructions

Download the software from www.leviton.com/D3200 and double-click on the setup icon to begin installation.

Power Extenders

Out of the box, both Multizone Controllers can accommodate up to 1920W/VA per unit, 1000W/VA per zone, and 1200W/VA per side. Use a power extender with loads that would otherwise push you over capacity. Install the power extender according to the instructions provided with the unit and follow Figure 2-11, below, to wire the selected power extender within a D3200 System.

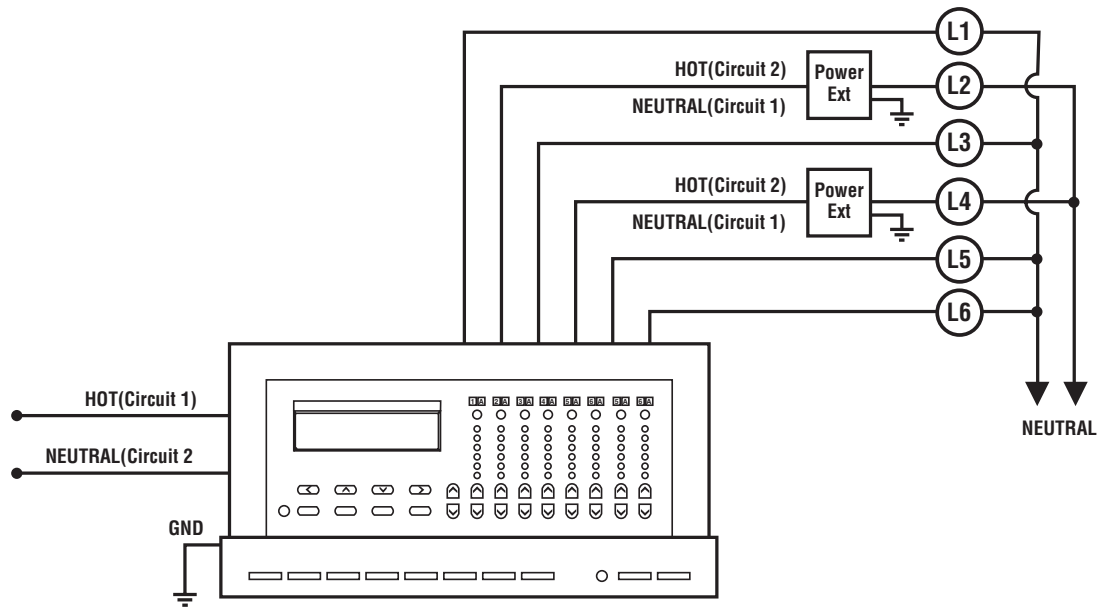


Figure 2-11: Power Extender Wiring Diagram

NOTE: Make sure to add the power extender's wattage into your zone/unit load calculation.

CHANGING INSERT COLOR FOR SCENE CONTROLLER/JACK

The color of the Controllers or SmartJack can be changed to suit the interior design requirements. Each device is shipped with a single color change kit for the switch or jack itself. A matching wallplate can be ordered separately.

Instructions

1. Remove the wallplate.
2. The frame has snaps on its sides. Using a small screwdriver, GENTLY remove the frame from the strap. (See Figure 2-12.)
3. Take the new frame and position it properly to the strap. Line up the plastic snaps with the square holes in the strap. Insert the snaps on one side of the frame into the strap.
4. Firmly press sideways and down to slip the other snaps into place. The frame snaps in with an audible click. Ensure that all four snaps are secure.
5. Re-attach Decora wallplate. COLOR CONVERSION IS COMPLETE.

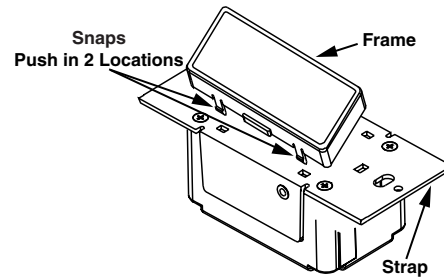


Figure 2-12:
Color Conversion Procedure

CHAPTER 3: PROGRAMMING

This chapter presents what you need to know to program all D3200 wall and remote controllers to operate the desired lighting. While a few of these functions must be programmed in every installation (date, time, device style, etc.), other settings need only be programmed under certain circumstances, such as remote access and/or partitioning. Additional instructions for features that further customize the D3200 System—such as programming timed events—are covered in the D3200 User Guides.

Some installations require more preparation beforehand than others do. If the D3200 system you are installing will be used to combine and separate adjoining areas, you should get the following items/persons together before you begin programming:

- D3200 Partition Setup & Checklist Form
(If someone has already begun filling in this form get those copies, as they may provide useful information. If this is not the case, you can find a blank form in Appendix A that you can copy and fill in yourself.)
- Job drawings
- Drawings of anticipated partition configurations (If these have not been prepared, you should sketch these out and use them as a basis to fill in the partition form.)
- Owner's representative who knows how the Owner wants the lighting system to operate.

NOTE: Connect all Multizone Controllers and related components to the LCnet BEFORE you begin any programming of the D3200 System.

If you have installed the SmartJack and the Setup Software, you may be able to do much of the programming via computer. The latest instructions for programming the D3200 via the Setup Software can be found on www.leviton.com/D3200.

NOTE: This chapter walks you, the installer, through programming function by function. While this may be easiest for those who are new to the system, if you are already familiar with the D3200 (or similar lighting control systems) you may want to program the Multizone Controllers according to the sequence as it flows within the Wizards menus.

MULTIZONE CONTROLLER NAVIGATION BASICS

Both the D3206 and D3208 provide standard panels for interfacing with the D3200 Architectural Lighting Control System. These panels incorporate a series of buttons for dimming, brightening, scene selection and programming, as well as an LCD window with a programming menu that also displays essential scene information. Figure 3-1 labels each button and how it functions. Once familiar with these buttons, you can use them to navigate through the programming instructions that follow.

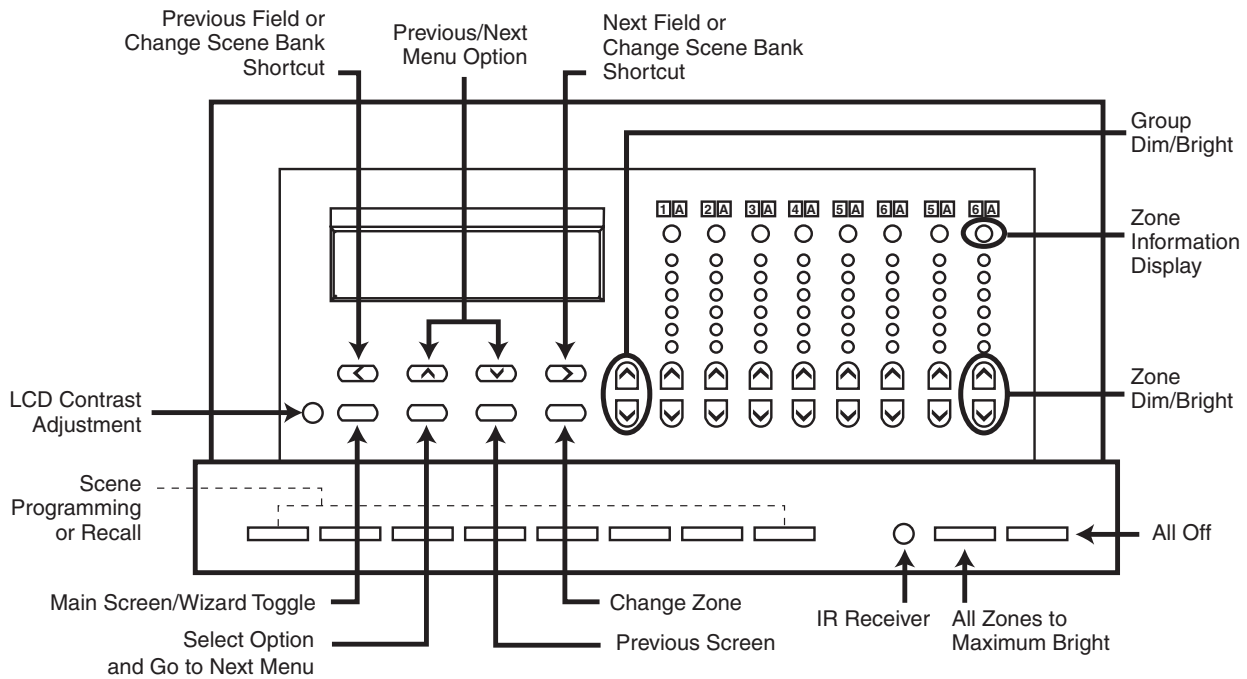


Figure 3-1: D3208 Buttons

NOTE: for more than 30 seconds while programming will cause you to timeout of the program mode and return you to the Main Screen.

Use the buttons on the face of the Multizone Controllers to navigate through the Wizards and perform all D3206/8 programming. Only the first two sections (Entering Basic Setting and Setting the Date & Time) must be done for every D3200 System. Most programming is required to enable specific functions you may or may not need in your installation, such as adjusting controllers to various partition configurations. Whenever you want to skip a step you can press the Select/Next button to accept the default setting. Basic guidelines to help you determine whether or not you need to do the programming presented in a specific section immediately follows each heading.

ENTERING BASIC SETTINGS (MANDATORY)

Running through the SETUP WIZARD is the first step in setting up any Multizone Controller. You must run through these steps on every, individual Multizone Controller. You will only need to use a portion of these instructions if you are installing only a single Multizone Controller. On the other hand, if you are installing a more complex D3200 system you will probably be assigning Panel Numbers (addresses) to each Multizone Controller.

Instructions

1. Press the Wizards button.
2. Press the Up or Down button to select the SETUP WIZARD, then the Select/Next button to access the SETUP WIZARD.
3. Press the Select/Next button to access the Basic screen.
4. Press the Up or Down button to select the desired device Style. You must choose between Architectural and Decora. In general, you should select the Architectural setting if the application requires very precise dimming and brightening. (Figure 3-2 illustrates exactly how these two settings compare to each other. This may help you decide which setting is appropriate for your application.) When you have chosen, press the Select/Next button to save entry and proceed.

Figure 3-2: Architectural vs. Decora Device Style Operations

DIM/BRIGHT Button Functionality	Architectural Setting	Decora Setting
Tap BRIGHT when lights Off	Lights turn on to 0%	Lights turn on to previous level
Tap BRIGHT while lights On	Lights brighten by 1%	Lights brighten a little
Hold BRIGHT down	Lights brighten more the longer you hold the button	Lights brighten more the longer you hold the button
Tap DIM	Lights dim by 1%	Lights turn off
Hold DIM down	Lights dim more the longer	Lights dim more the longer you

5. Press the Up or Down button to select the desired Beep Mode: ON means that the unit will beep every time you depress a button and OFF means there will be no such sound. Press the Select/Next button to save entry and proceed.
6. Press the Up or Down button to select the desired Security mode, then press the Select/Next button to proceed. If you anticipate the need to lock scenes and want the ability to create a password for accessing SCENE buttons, select Lock On. (You will be asked to enter a password consisting of a combination of four scene button selections.) If you know no reason for scenes to be locked in the future, select the Lock Off mode; this provides full accessibility to all functional buttons.

7. Press Select/Next again.
 - A. If you are using multiple Multizone Controllers attached to an LCnet, press Select/Next again and continue to Step 8, skipping the Set Scene Mode screen which you'll come back to later if you're doing partitioning.
 - B. If this is not the case, press the Wizards button and return to Step 1 until you have entered these Basic Settings on every Multizone Controller.
8. WHEN USING MULTIPLE CONTROLLERS ON AN LCNET: Press the Up or Down button to select the desired Panel Number. Then press the Select/Next button to save entry and proceed.
9. Press the Up or Down and Left or Right buttons to Edit Panel Name. (If you do not know what to name this panel you can leave this step to the user, who may change it later.) Press the Select/Next button to save entry and proceed.
10. Press the Wizards button and keep returning to Step 1 until you have run through these settings for all units.

SETTING THE DATE & TIME (MANDATORY)

Entering these basic settings will ensure that each Multizone Controller displays the correct date and time. If more than one Multizone Controller is installed on the LCnet, all units will automatically synchronize when settings are stored on the Multizone Controller being programmed. NOTE: If you are NOT planning to start up the system within two weeks (the length of time the unit will retain date and time settings), skip these instructions for now but don't forget to set the date and time upon startup.

Instructions

1. Press the Wizards button.
2. Press the Up or Down button to select the CLOCK WIZARD.
3. Press the Select/Next button to access the Set Date-Time screen.
4. Press the Select/Next button to access the Adjust Time screen.
5. Enter the time by pressing the Up or Down and Left or Right buttons. Press the Select/Next button to save entry and proceed.
6. Enter the date by pressing the Up or Down and Left or Right buttons. Press the Select/Next button to save entry and proceed.
7. For Daylight Savings, press the Up or Down buttons to toggle between ON and OFF. Set to ON position if Daylight Savings is observed in your area. Set to the OFF position to disable setting. Press the Select/Next button to save entry and proceed. THE TIME AND DATE ARE NOW PROGRAMMED.
8. Press the Wizards button to return to the Main Screen.

SETTING UP REMOTE ZONE CONTROL

In a System without Partitioning

If you would like at least one of the Multizone Controllers to access loads attached to other Multizone Controllers, then you must program "remote zone control" into your D3200 System. Doing this early on in the programming process will ease the remaining programming—as it will allow you to program multiple units from a single controller and save you the effort of walking to each unit to program it separately.

NOTE: Remote Zone Control requires installation of LCnet wiring.

SKIP TO THE NEXT SECTION IF YOUR SYSTEM INCORPORATES PARTITIONING. If you are setting up a system that uses combine/separate functionality (most often to accommodate partitions), skip this section because it will be easier for you to program this while setting up your configuration.

Instructions

1. From the D3206/8 from which you would like to setup remote control, press the Wizards button and then the Up or Down button to select SETUP WIZARD.
2. Press the Select/Next button to access the SETUP WIZARD.
3. Press the Up or Down button to select the PANELS screen and press Select/Next.
4. Press the Select/Next button until you see a screen similar to Figure 3-3.

Figure 3-3



ENTERING LOAD/ZONE INFORMATION

There are several types of information that you may or may not want or need to configure here. If you have already defined all the panel numbers in the preceding section, you can now program the settings in this section from any, one Multizone Controller; otherwise you must repeat this process on every Multizone Controller where you want to program at least one of these settings.

Press Select/Next to skip right through settings that you do not need to reprogram. If at any point you are finished and want to start over or end this sequence immediately, press the Wizards button after your selection.

- Zone Types – Wherever you have hardwired a relay or fluorescent load, you must enter the load types as per the instructions below. The default is incandescent dimming: this includes tungsten, magnetic low voltage transformer, neon, and cold cathode fixtures.
- Zone Name
- Channel Mapping: To assign loads to Channels on remote Multizone Controllers—see Appendix C

Instructions

1. Press the Wizards button and then the Up or Down button to select SETUP WIZARD. Press the Select/Next button to access the SETUP WIZARD.
2. Press the Up or Down button to select the ZONES screen and press Select/Next.
3. Press the Up or Down button to select the desired ZONE and the Left or Right then the Up or Down buttons to select the PANEL to which the desired zone is wired. (You will be able to setup zones from panels that have been included in the Panels Screen.) Press the Select/Next button to save entry and proceed.

NOTE: The Zone Number, unless intentionally reassigned, should match the terminal to which the zone is hardwired to on the D3206/8 (panel number).

4. Press the Up or Down and Left or Right buttons to edit Zone Name. Press the Select/Next button to save entry and proceed. (If you do not know what the user wants to call this zone you can leave this step to the user, who may change it later.)
5. Press the Select/Next button to go to the next screen. (You can define groups later.)

6. Press the Select/Next button, UNLESS YOU WANT TO MAP THE CHANNEL TO BE DIFFERENT THAN THE ZONE NUMBER as physically wired. To change this mapping: Press the Up or Down button to select the desired CHANNEL (1 to 6 or 8, or X). Now press the Select/Next button to save entry and proceed.

NOTE: Two Channels cannot be mapped to the same Channel number, so change the Channel to an "X" as a placeholder. To change 1 to 6, first change the 6 to an "X", then change the 1 to a 6. You may now change the 6 to a 1.

7. Press the Up or Down button to select the desired TYPE. Select REL (for relay or motor load) and skip to Step 9 OR select DIM (for dimming load) and continue to Step 8. Then press the Select/Next button to save entry and proceed.
8. Press the Up or Down button to select the desired LOAD TYPE: Incandescent (for Incandescent, Magnetic Low-Voltage, Cold Cathode, Neon Loads, and Tungsten Loads) or Fluorescent (for Mark X™ Fluorescent). Press the Select/Next button to save entry and proceed.
9. A. If programming additional Zones, press the Select/Next button and return to Step 3.
B. If Zone programming is complete, press the Wizards button to return to the Main Screen.

PARTITIONING

This section will help you if you have installed more than one D3208 on an LCnet and want to use combine/separate functionality. Since programming this function must be very purposeful, as it is meant to accommodate specific room setups and lighting schemes, you will need to gather some information together (spelled out later in this chapter) before you actually begin entering these settings. In addition, it may be helpful for you to more fully understand how the Dimensions system defines Zones, Groups and Configurations before you start to program the system.

About Groups & Configurations

The D3200 System, through the D3208 Controller, handles partitioning as well as access to remote zones through what Leviton refers to as Groups and Configurations.

A GROUP IS a collection of zones that is assigned a unique number. In most, basic situations all six, local zones on a single Multizone Controller are assigned to one group. In more advanced applications, zones from different Multizone Controllers may be part of a single group. Zones of the same number (for example, Zone 2) are differentiated from each other by assigning a unique address (reflecting the panel AND zone numbers) to each Multizone Controller. Programmed scenes are called for a particular group.

A CONFIGURATION IS a set of groups, or group, that is assigned a unique name or number so it may be controlled as a single unit. A configuration includes all settings and parameters for zones, groups and scenes. This is especially useful in areas where temporary partitions are opened and closed to change how a space is configured.

NOTE: In smaller applications where all loads are attached to a single D3208, you can use configurations to divide control of zones between two NE505 Scene Controllers (see Appendix B for more details).

Examples of Partitioning

The D3208 enables you to adjust lighting levels based on room partitioning. Each arrangement of movable walls in a partitioned room corresponds to a particular configuration. As the wall arrangement changes, the configuration selection will need to change to control lighting in accordance with the new setting.

The series of illustrations that follow depict several configurations for a large area with four temporary partitions. Please note that when you set one Multizone Controller to a specific configuration all other Multizone Controllers on the LCnet will automatically revert to the same configuration, as will all NE505 Scene Controllers.



Figure 3-4 presents a configuration that is appropriate when all partitions are down and the space is converted into one, large room. In this configuration, any Multizone Controller can be used to adjust lighting at once. For example, pressing the Scene 2 button on any panel will take all panels to Scene 2. Technically speaking: Configuration 1 contains one group, Group 1, which includes D3208-A, D3208-B, D3208-C, and D3208-D.

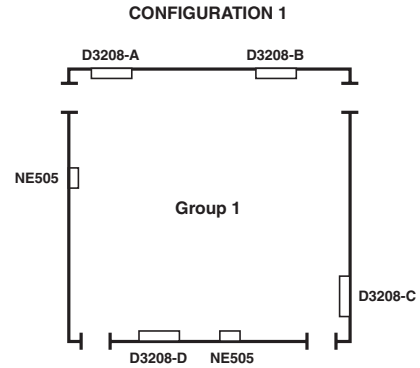


Figure 3-4: Open-Room Configuration



Configuration 2, Figure 3-5, is shows a space divided into two, long rooms. In either space, you can use either of two Multizone Controllers to adjust lighting. For example, pressing Scene 1 on D3208-A will cause both D3208-A and D3208-D to go to Scene 1. Technically speaking: Configuration 2 contains two groups, Group 2—which includes D3208-A and D3208-D, and Group 3—which includes D3208-B and D3208-C. The NE505 (on the left side) should be programmed to select 4 scenes from Group 2 when the system is in Configuration 2—to enable the NE505 to control the desired lights.

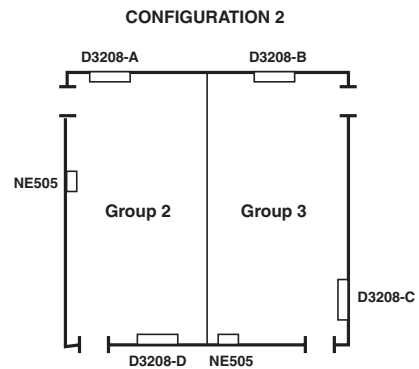
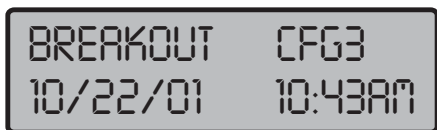


Figure 3-5: Split-Room Configuration



In Configuration 3, the space is divided into four, separate rooms to accommodate all partitions being closed. In this case all D3208's will operate independently of each other. Each Multizone Controller will control solely the lights within the same room. Technically speaking: Configuration 3 contains four groups, Group 4 = D3208-A, Group 5 = D3208-B, Group 6 = D3208-C, and Group 7 = D3208-D. So that it will control the lights within Group 4 only, the NE505 (on the left side) must be programmed to select 4 scenes from Group 4 when in Configuration 3.

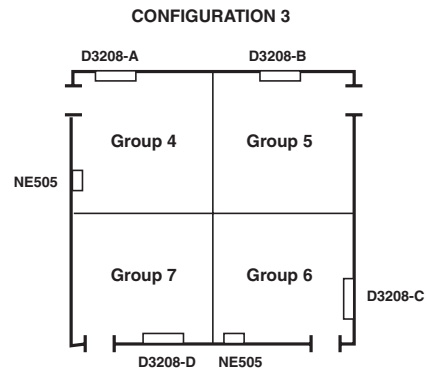


Figure 3-6: Multi-Room Configuration

SETTING UP CONFIGURATIONS

To Accommodate Partitioning with or without Remote Access

These instructions must be repeated for every configuration that you want to create, and can be done from a single D3208 Zone Controller if you choose to set up remote access in this procedure. You must enter settings one zone at a time. Within this procedure you can also set up remote access: in other words, the ability to control loads wired to Multizone Controllers other than the one you are using at the time.

Before You Start

What You Will Need

There can be a lot to keep track of when defining each configuration. In order to ensure that you set them up correctly, you should first spend the time to gather up some information. You may also need to sketch out some plans.

- The specifier, lighting designer or end user may have used Leviton's D3200 Partition Setup and Checklist Form to record how each configuration should be set up. If so, get a copy of these forms. If not, you may want to fill in the forms yourself. The blank form is Appendix A.
- Gather up any job drawings that may help you set up these configurations as they were intended.
- If it hasn't already been done, consider sketching out the installation for each configuration/room layout (similar to Figures 3-4 through 3-6).
- You may also want to have an owner's representative present.

Special Applications

- Partitioning using a single D3208, refer to Appendix B.
- To expand the most basic grouping (from only those loads hardwired to a single Multizone Controller) to include a load hardwired to another Multizone Controller, refer to Appendix C before you begin programming.

Instructions for Setting Up Configurations

1. Press the Wizards button and then the Up or Down button to select SETUP. Press the Select/Next button to access the SETUP WIZARD.
2. Press the Up or Down button to select the PANELS screen and press Select/Next.
3. Press the Up or Down button to select the Configuration Number you want to create, and press the Select/Next button to save entry and proceed.
4. Press the Up or Down and Left or Right buttons to EDIT the NAME of configuration, then press the Select/Next button to save entry and proceed. (If you do not know what the user wants to call this configuration you can leave this step to the user, who may change it later.)
5. Press the Up or Down button to select the desired Scene Group number. Press the Select/Next button to save entry and proceed. (This sets the group for which this panel's scene buttons will call scenes for within this specific configuration.)
6. If you want to set up remote access within this configuration to one or more panels via the Page Zones button: Press the Up or Down button to select the desired Panel Number and the Left or Right buttons to Include (if you want remote access enabled for the selected configuration or Exclude (if you don't want remote access to that panel for the selected configuration, default) the selected panel number. Press the Select/Next button to save entry.
7. If you have not already done so, edit the panel name. Then press the Select/Next button.

8. If the remote panel uses the auxiliary zones, press the Up or Down and Left or Right buttons to enable the zones. Then press the Select/Next button.
9. The Wizard will return you to Step 6. Repeat steps 6 through 8 for each panel to which you want to enable remote access. Press the Wizards button when you are done.
NOTE: Consider setting up remote access to all panels at this point so that you will be able to complete other programming from this same Multizone Controller.

Now its time to set up your groups by assigning a group number to each individual zone for the specified configuration. If you already set up remote access to all panels, you can do this from any one Zone Controller; otherwise you must go to each D3208 to set up its zones.

10. Press the Up or Down button to select Setup Wizard, and then Select/Next.
11. Press the Up or Down button to select the Zones screen, then press the Select/Next.
12. Press the Up or Down button to select the ZONE Number for which you want to assign a group. Press the Select/Next button to save entry and proceed.
13. If you haven't done so already, use the Up or Down and Left or Right buttons to edit the Zone Name. Press the Select/Next button to save entry and proceed.
14. Press the Up or Down button to select the desired GROUP Number for the selected zone under the current configuration. Press the Select/Next button to save entry and proceed.
15. Keep pressing Select/Next until you see DONE!
16. Then, until you have assigned a group number to every zone, press Select/Next once more and return to Step 10. When you are done with all the zones in this configuration, press WIZARDS and return to Step 1 of this section until have run through every configuration.

DEFINING AUXILIARY ZONES

See www.leviton.com/D3200 for information and instructions on integrating auxiliary zones (network dimmers or motor loads) into the D3200 System.

PROGRAMMING SCENES

If the D3200 defaults are not adequate for the scenes you need to set up, now is the time to program specific scenes. In this section you will be defining scene names, fade-transition rates to desired scenes, and Zone dim/bright levels.

If you have been given specific information from the user about the scenes, or you can get an Owner's Representative to give you guidance, you can set the scenes now. If you do not have this information or assistance, you may decide to leave scene programming to an Owner's Representative.

System Scene Defaults

Scenes 01 to 08 will have the following preset levels—with all six physical loads being programmed to the same levels:

Scene 1 – 10%	Scene 5 – 75%
Scene 2 – 25%	Scene 6 – 90%
Scene 3 – 40%	Scene 7 – 55%
Scene 4 – 55%	Scene 8 – 25%

NOTE: Scene programming can also be accessed by holding down a SCENE button for about eight seconds and then proceeding.

Instructions

SKIP directly to Step 11 if you are installing a single Multizone Controller or multiple units NOT attached to an LCnet.

Unless you want all groups to have the same scene selections, you must first switch the Scene Mode setting from its default (Common) setting. SKIP to Step 6 if the default mode is adequate for your installation.

Switching Scene Modes

1. Press the Wizards button.
2. Press the Up or Down button to select the Setup Wizard and the Select/Next button to access the SETUP WIZARD.
3. Press the Select/Next button to access the Basic screen.
4. Keep pressing the Select/Next button until you see the Set Scene Mode screen.

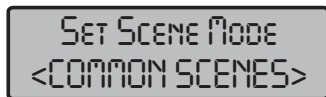


Figure 3-7

5. Press the Up or Down button to select the Different Scene Mode. Press the Select/Next button to save entry and proceed.

If you are partitioning, you must first select the correct configuration. You can do this from any Multizone Controller if you have already set up remote access; otherwise, you must set up these scenes from each, individual Zone Controller.

6. Press the Wizards button and then the Up or Down button to select the CONFIG WIZARD. Press the Select/Next button to access the CONFIG WIZARD.
7. Press the Select/Next button to access the Set Config screen.
8. Press the Up or Down buttons to select the desired Configuration Number.
9. Press the Select/Next button to save entry and return to the CONFIG WIZARD screen.
10. Press the Wizards button.

Now you are ready to program scenes. The settings that define each scene include scene name, fade rate, and light level.

11. Press the Wizards button and then the Up or Down button (if necessary) to select the SCENE WIZARD. Press the Select/Next button to access the SCENE WIZARD.
12. Press the Up or Down button to select the Program Scene screen.
13. Press the Select/Next button to access the Program Scene screen.

14. Press the Up or Down button to select the desired Scene Number and the Select/Next button to save entry and proceed.
15. Press the Up or Down and Left or Right buttons to Edit Scene Name. (If you do not know what the user wants to call this scene you can leave this step to the user, who may change it later.) Press the Select/Next button to save entry and proceed.
16. Press the Up or Down button to set the desired scene fade-to rate (from 0 seconds to 2 hours). The default is 6 seconds. Press the Select/Next button to save entry and proceed.
17. Adjust the levels for each zone and press the Select/Next button twice to store the scene.
18. Return to Step 11 to program additional scenes or press the Wizards button if you are finished.

OPTIONAL

To EXCLUDE a particular zone from executing in a programmed scene:

1. Press the Wizards button and then the Up or Down button (if necessary) to select the SCENE WIZARD. Press the Select/Next button to access the SCENE WIZARD.
2. Press the Up or Down button to select the Exclude Zones screen, then the Select/Next button.
3. Press the Up or Down button to select the desired scene number to modify. Press the Select/Next button to save entry and proceed.
4. Press the Up or Down button to select the zone number you want to Exclude from the scene. Press the Select/Next button to save entry and proceed.
5. Press the Select/Next button again to exclude the zone.
6. To exclude additional zones, Press Select/Next to Repeat Step 4 and 5; otherwise, press the Wizards button to exit.

PROGRAMMING WALL CONTROLLERS TO WORK WITH A REMOTE

Every D3200 System wall controller has a Learning Infrared Receiver. This receiver allows users to program buttons on any compatible handheld remote control (including Leviton's NE210) to select a range of scenes and OFF. You must repeat the programming process with EVERY wall controller to which you want to be able to point a remote control. The process is different for Multizone Controllers and Scene Controllers.

If you are partitioning, please note that the remote, once programmed, will have the ability to recall the same scene numbers for EVERY configuration.

NE505 Scene Controller

1. Press and hold the desired Scene or OFF button on the Controller for approximately 5 to 7 seconds until the controller's LED begins flashing.
2. Press the desired button on the IR remote to correspond with the desired Controller button.
NOTE: If your Controller's LED doesn't stop blinking, press the same button on the remote until it stops blinking.
3. Repeat the above procedure for each button you want to use, including OFF. Do this with every NE505 Controller you want to work with a remote—with the remote with which you want it to work.

D3206/8 Multizone Controller

The IR WIZARD allows for the programming and remote control of up to eight lighting scenes using a Leviton NE210 IR Remote or 32 lighting scenes using any standard IR Remote—as well as MAX, OFF and GROUP DIM/BRIGHT.

1. Press the Wizards button and then the Up or Down button to select the IR WIZARD. Press the Select/Next button to access the IR WIZARD.
2. Press the Select/Next button to access the Learn IR screen.
3. Press the Up or Down button to select the desired Action (SCENE 01-32, DIM, BRIGHT, OFF, MAX, REMOVE ALL). Press the Select/Next button to save entry and proceed.
4. Point the IR Remote at the Multizone Controller and press the button you wish to teach the command you just selected.
5. Press the selected button again to verify programming.
NOTE: Depending on the type of remote control and amount of noise in the room, you may have to press the button on the remote control several times. Continue to press the button (not continually, but with individual presses) until the LCD reads "Done!"
6. Repeat procedure to program remaining commands. Do this with every Multizone Controller you want to work with a remote—with the remote with which you want it to work.

NOTE: To change an existing IR code, you must first remove that code. Use the IR Wizard off the main Wizards menu and the menus will lead you through this simple process.

PROGRAMMING THE NE505 TO SELECT SCENES

If your installation incorporates NE505 Scene Controllers, you must program each NE505 to a four-scene set within a specific group for every configuration. In essence, this allows you to program each NE505 unit to react appropriately to partitions being opened and closed.

In this example two NE505's must be programmed to access scenes within different groups depending on every anticipated configuration. Let's assume there are only three anticipated configurations.

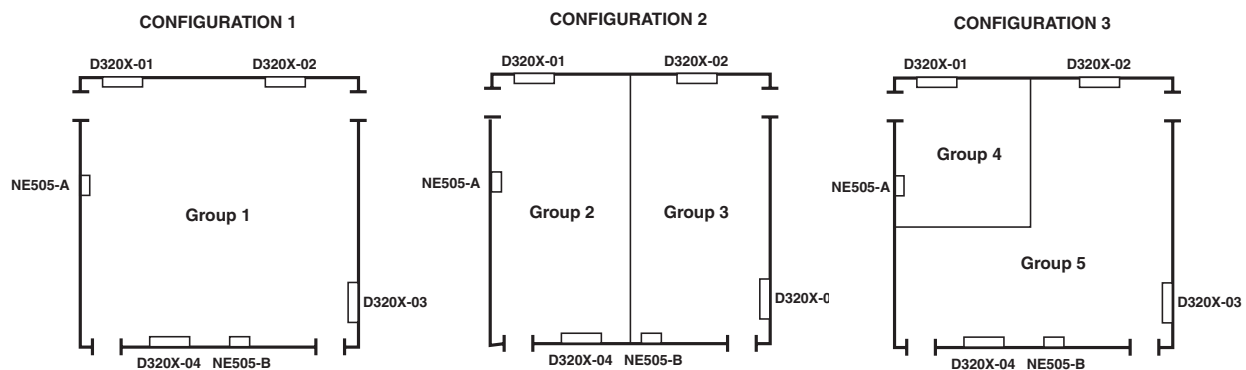


Figure 3-8
Program both NE505's to a four-scene set (for example, both 1 to 4 or one 1 to 4 and the other 5 to 8) in Group 1.

Figure 3-9
Program NE505-A to a four-scene set within Group 2. Program NE505-B to a four-scene set within Group 3.

Figure 3-10
Program NE505-A to a four-scene set within Group 4. Program NE505-B to a four-scene set within Group 5.

Instructions

Program each NE505 using a D3208 that's within the same group as the group from which you want to recall the scenes. Don't forget to change the configuration at the Multizone Controller each time before programming the next range of scenes.

1. If applicable, select the first (or next) configuration on the desired D3208. Skip this step if installing a basic, single Multizone Controller non-partitioning system.
2. Press and hold button 1 and 3 on the NE505 for approximately 5 to 7 seconds. All the LED's will blink to indicate that the Controller is in Program Mode.

NOTE: Pressing any button while the LED's are flashing in the Program Mode will exit the mode without storing programming.

3. Call any scene within the desired range of scenes from the D3206/8: Scenes 1 to 4, 5 to 8, 9 to 12, etc.

Here's how it works. If a scene between 1 and 4 is called on a Multizone Controller, button 1 on the NE505 will be programmed for Scene 1; button 2 for Scene 2; button 3 for Scene 3; and button 4 for Scene 4. If a scene between 5 and 8 is called, button 1 on the Controller will be programmed for Scene 5; button 2 for Scene 6; button 3 for Scene 7; button 4 for Scene 8, and so on.

4. Once the Scene is called, the LED's will stop flashing and the device will exit Program Mode.
5. Repeat the above procedure for each configuration.

NOTE: The OFF button will always be programmed as OFF.

CHAPTER 4: TESTING & TROUBLESHOOTING

This chapter will help you verify that the system and its components are properly installed and operational. Please follow all steps that apply to your installation. If any test uncovers a problem, follow the instructions that follow to resolve the issue. If you still cannot solve it, call Leviton's Tech Line.

TESTING EACH MULTIZONE CONTROLLER

Every D3206 and D3208 unit's local operations should be separately tested. That means checking that power, dimming control, scene control, and if applicable, the infrared receiver is working properly. You can either test each function one controller at a time or you may find it easier to run through each function test on a single controller before moving to the next controller (less walking around). In either case, you can skip to the next test (section) once the unit has passed the test at hand. If a unit does not pass a test, run through the bulleted suggestions that follow it. Don't forget to redo the test when you think you may have found the problem to verify that the problem truly has been solved.

BEFORE YOU START:

You must first restore power at the circuit breaker or fuse before you can test anything.

Power

1. Check for power to EACH Multizone Controller by verifying that the LCD on the front of each unit turns on. If all are on, **THE CONTROLLER HAS PASSED THE TEST.**
IF NOTHING ILLUMINATES there may be a problem with the power.
 - Check that the Controller is wired correctly.
IF THE LCD IS HARD TO READ:
 - a) Remove the overlay by gently lifting and releasing the tabs.
 - b) Use a small screwdriver to turn the potentiometer slightly, until the desired look is achieved.
 - c) Replace the overlay by carefully inserting lower tabs into front slots of frame, then bow overlay so that top tab slips into top slot.

Dimming Control

1. Verify that each zone dims and brightens and turns on and off as expected (and that the LCD displays the proper light level) by pushing the dim/bright arrows. If the lights and the contents of the LCD window adjust appropriately, **THE CONTROLLER HAS PASSED THE TEST.**
IF THE LIGHTS DO NOT RESPOND AS EXPECTED:
 - Push the Zone Info button and make sure that the screen displays the correct load type for each zone on the bottom left-hand corner of the screen.
ZI = incandescent ZF = fluorescent ZR = for relay, non-dimming load
If the load types are incorrect, reprogram them. (See Page 22 for instructions.)

- Push the Zone Info button and if the LCD reads "LOCKED," unlock it via the Lock/Unlock screen in the Zone Wizard.

Zone Unlock Procedure

- Press the Wizards button and then the Up or Down button to select the ZONE WIZARD. Press the Select/Next button to access the ZONE WIZARD.
 - Press the Up or Down buttons to select the Lock/Unlock screen.
 - Press the Select/Next button to access the Lock/Unlock screen.
 - Press the Left or Right buttons to select the Panel and the Up or Down buttons to select the desired Zone to unlock. Press the Select/Next button twice to unlock the zone.
- Make sure the lamps are not burned out. If any are, replace them.
 - Check the wiring against Figure 4-1.

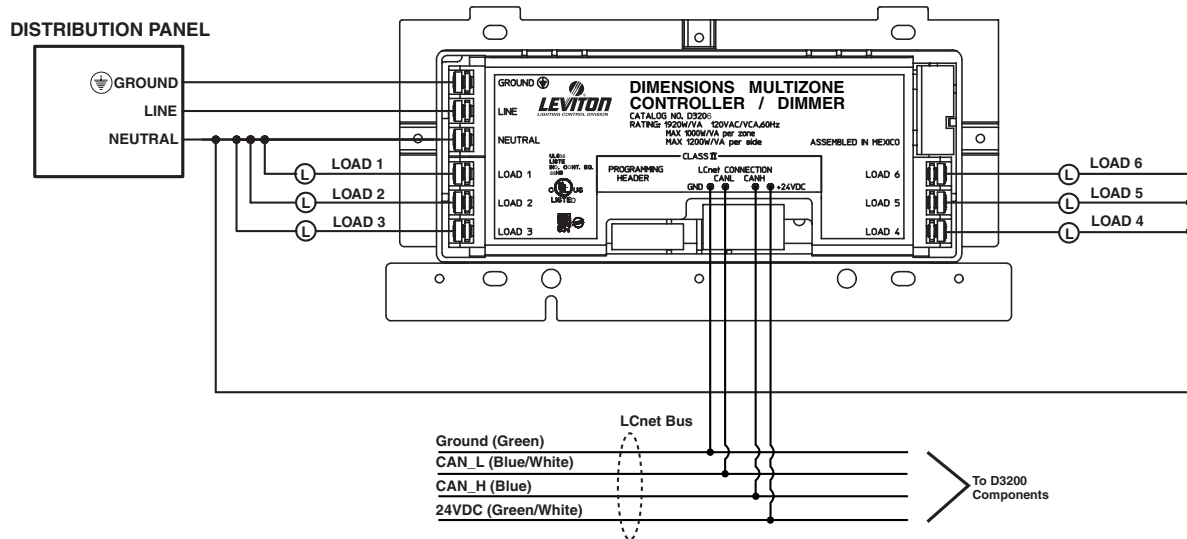


Figure 4-1: Multizone Controller Wiring Diagram

IF THE LIGHTS REMAIN AT FULL BRIGHTNESS no matter what you push there must be a short.

- Before you replace the Multizone Controller with a new one, make sure that the loads you plan on attaching to the Controller are within the limits rated by the device. The D3206 and D3208 units are both rated for the following maximum capacity: 1920W/VA per unit, 1000W/VA per zone, and 1200W/VA per side. Adding power extenders can increase this capacity.
- Check that you have adequate voltage surge suppression for these lines. Inadequate protection may cause shorts.

IF THE LIGHTS ARE FLICKERING, the minimum level for that load may need to be adjusted. This is more likely with fluorescent lighting. To adjust the minimum level:

- Press the Wizards button and then the Up or Down button to select the ZONE WIZARD. Press the Select/Next button to access the ZONE WIZARD.
- Press the Select/Next button to access the Adjust Min Level screen.
- Press the Up or Down buttons or the Dim/Bright buttons to set the individual zone minimum light levels.
NOTE: DO NOT use the Dim Scene buttons to make this adjustment.
- Press the Select/Next button twice to save entry and proceed.

Scene Control

1. Check each scene by pushing each scene button and verifying (a) that the LCD displays the right scene name and (b) that the loads adjust to the right levels. If the lights adjust appropriately, the CONTROLLER HAS PASSED THE TEST.

IF THE SCENE DOES NOT LOOK RIGHT:

- Look at the LCD when you push the scene button and make sure the scene is not locked. If it reads "LOCKED," unlock it via the Scene Lock screen within the Scene Wizard.
Scene Unlock Procedure
 - a. Press the Wizards button and then the Up or Down button to select the SCENE WIZARD. Press the Select/Next button to access the SCENE WIZARD.
 - b. Press the Up or Down button to select the Scene Lock screen.
 - c. Press the Select/Next button to access the Scene Lock screen.
 - d. Press the Up or Down button to set the selected Scene Lock to OFF. Press the Select/Next button to save entry and proceed.
 - e. Press the Select/Next button once to return to the SCENE WIZARD screen or press the Select/Next button and then the Wizards button to return to the Main Screen.
- Verify the fade time. It might be set for such a long time that your adjustment happens too slowly. This can be checked and reprogrammed in the Scene Wizard. (See Page 27, steps 11 through 16 for instructions.)

Infrared Receiver

Check this only with Multizone Controllers to be used with a remote control.

No matter which remote you use, an NE210 or any other standard infrared remote, it must be programmed to every controller you want it to work with.

1. Verify that the programmed buttons on the remote work as intended by pushing each one.
 - If the remote is unresponsive, make sure the batteries are in correctly.
 - If that is not the problem, reprogram the IR codes. (See Page ## for instructions.)

TESTING EACH NE505 SCENE CONTROLLER

Dimensions' NE505 Scene Controller will automatically be set to select scenes 1 through 4. Where applicable, this will apply to every configuration. If you want an NE505 to access other consecutive scenes, you must program it to recognize them. They may be programmed to different scene ranges, depending on which configuration is active.

1. Test each Scene Controller by pushing each button on the NE505, one at a time, and checking the following conditions:
 - a. That the corresponding scene button on every Multizone Controller within the same group illuminates. One NE505 button should always be illuminated. If this does not happen, measure the voltage between the ground pin and +24VDC pin (the first and last pins) and if it does not register between 20 to 26VDC, check the wiring for the following issues:

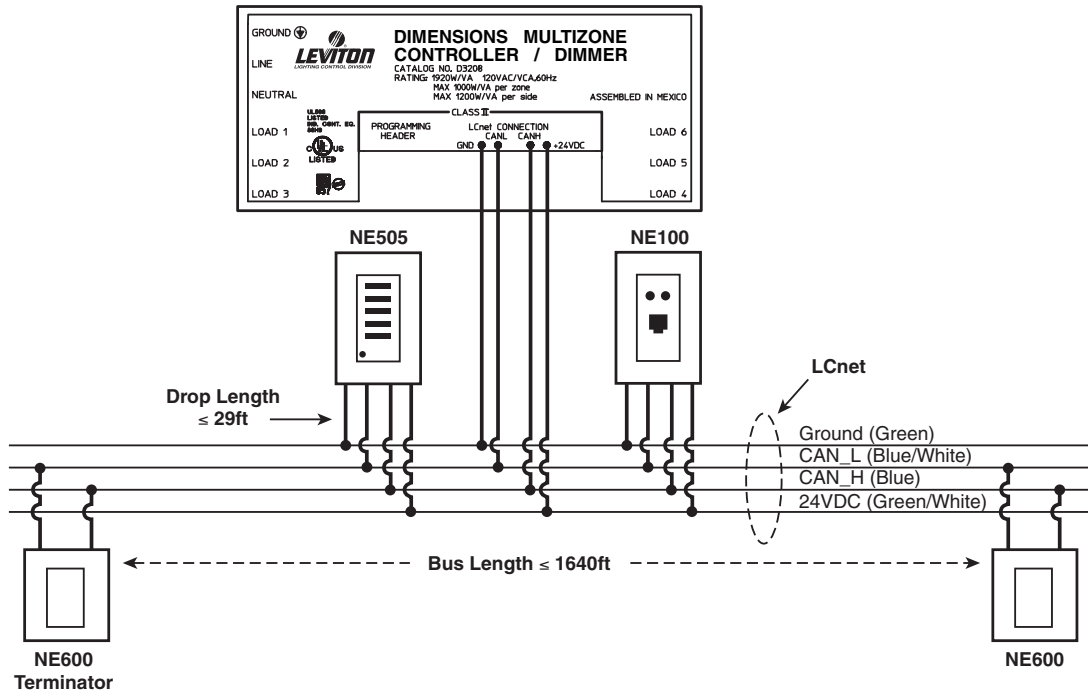


Figure 4-2: Basic LCnet Wiring Diagram

WIRING CHECK

- Check the wiring of the Green/White and Green wires (+24VDC and ground).
 - Make sure the LCnet and all its taps (blue and blue-white twisted pair) are wired using CAT5 twisted pair wire and are wired according to Figure 4-2.
 - Make sure LCnet wires are no longer than 500 meters (1640 feet).
 - Make sure the LCnet tap wires (measured from splice into LCnet to entry into device) are no longer than 9 meters (29.5 feet).
 - Verify that the first and last nodes on the LCnet are terminated, if the LCnet run (including wires running off splices) is longer than 10 feet.
- (b) That the loads adjust to the programmed levels. If they do not:
- Verify the fade time. It could be set for such a long time that your adjustment happens too slowly. This can be checked and reprogrammed in the Scene Wizard. (See Page 27, Steps 11 through 16, for instructions.)
 - Program the NE505 again. In partitioning applications, make sure the NE505 is programmed to one group for each configuration. When programming the NE505, make sure the scene called from the D3206/8 is part of the desired group. (See Page 25 for instructions.)

Infrared Receiver

Check this only with Scene Controllers that will be used with a remote control.

1. Select each of the four scenes and off using the remote control for each configuration for which you have programmed the NE505.
 - If the remote is unresponsive, make sure the batteries are in correctly.
 - If that is not the problem, reprogram the IR codes. (See Page 28 for instructions.)

TESTING MULTIZONE CONTROLLERS NETWORKED TOGETHER

Do these tests only if you have multiple Multizone Controller's working together via LCnet wiring.

Scene Control

You should perform this test as long as all controllers have the ability to work as one group. (This is always the case if there is no partitioning.) The default out of the box is one group. If your installation does incorporate partitioning, you should perform this test **AS LONG AS** one of the programmed configurations links all Multizone Controller's together in one group.

1. First make sure the system is in the configuration where all attached devices are in a single group (automatically the case if your installation does not incorporate combine/separate functionality).
2. Press a scene button and make sure that the other Multizone Controller's go to that same scene. (The same scene button should light up on each unit.) If this works as expected, the CONTROLLER HAS PASSED THE TEST. If they are not behaving as a single unit:
 - Press the scene button again and check to see if the scene is locked. If it reads "LOCKED," unlock it via the within the Scene Wizard as per the Scene Unlock Procedure on Page 33.
 - Press each active Zone Info button to check to see if any zones are locked. If any are locked, unlock them via the Lock/Unlock screen in the Zone Wizard.
 - Check the wiring per Figure 4-3.

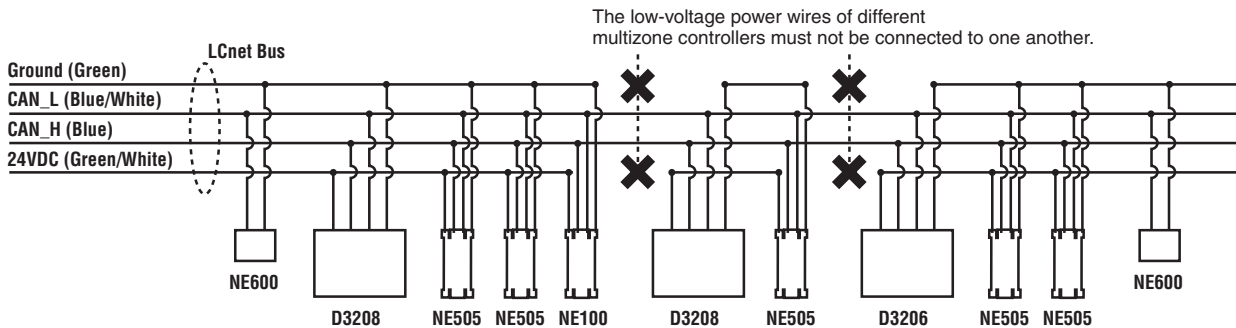


Figure 4-3: Multiple-Zone-Controller System Diagram

Remote Multizone Controller Access

If you have programmed any of the Multizone Controllers to remotely control the loads attached to other Multizone Controllers on the same LCnet, you should test that this is functioning properly. Run through this test for any Controller that you have programmed for remote access to other Multizone Controllers.

Go to each controller you have programmed for remote access and:

1. Press the Page Zones button and select the first panel for remote access. As soon the panel number is "selected" you should notice that the zone LED's shift from displaying their local zones to the zone information and light levels of the loads attached to the remote Multizone Controller just selected.
2. Press any zone's dim or brighten button to verify that the lights wired to the correct remote panel actually dim or brighten. If they do not.
 - Reprogram the Controller you are at using the Setup Wizard. (See Page 19 for instructions.)
 - If this does not work, check the wiring per Figure 4-3.

Partitioning

Perform these tests only in installations where the combine/separate feature is being used.

At this point you should make sure that the groups you have set up are appropriate for the various partition setups you are trying to accommodate. If you have been given filled-in D3200 Partition Setup & Checklist Forms, (which you probably used as your guide while programming combine and separate configurations) please get those out now. You will notice a checkbox that you can use to verify that Dimensions was programmed to these specs. If you were not given this completed form, use the blank form in Appendix A of this manual to record this test and to compare it against any documents or verbal instructions you may have been given regarding partitioning. (Make one copy for each configuration. We suggest you run through every configuration and if you find a discrepancy, after all configurations have been checked, you should go to the instructions on Page 25 and reprogram the group or configuration.

We suggest you check the grouping, the channel mapping, and the scene programming for each configuration.

1. If possible, open all the partitions so that you have one big space and can see all lighting. Record or verify where the various Multizone Controller Panels are located, and which bank of lights each controls.
2. Set the system to the first configuration.
3. Individually check the zones in each Multizone Controller Panel.
 - Press the Zone Info button for each zone, and confirm that each zone is part of the correct group. IF NOT, reprogram the zone for the correct group.
 - Turn on each zone and verify the lights each zone is controlling. IF A PARTICULAR CHANNEL IS CONTROLLING THE WRONG ZONE, reprogram the channel mapping so the desired channels control the desired lights.
4. Verify that the scene groups are correctly programmed.
 - Through the Setup\Panel menu, identify the Scene Group to which the Multizone Controller Panel is programmed.
 - Press the Max button. All of the zones in the Scene Group you just identified will turn on to Max brightness. IF ANY ZONE DOES NOT TURN ON:
 - a. Check to see if the zone is locked. If it is, unlock it.
 - b. If a. is not the problem, the zone may not be in the same group. Reprogram either the Scene Group, or the individual zone's group assignment.
5. Return to Step 2 and select the next available configuration until you have run through every configuration.

APPENDIX A D3200 Partition Setup & Checklist Form

This form can serve two purposes. It can be used by whomever is specifying or designing a D3200 system using partitions AND by whomever is installing the system to verify the setup. If you are using the form to specify the system: check the circles to indicate NE505 use.

You will not need to use the checkboxes at this point. If you are using the form to test the installed system: use the square checkboxes as you run through the Testing & Troubleshooting Chapter to indicate where the installation matches the specified setup.

Fill this section out ONCE per D3200 LCnet. Skip otherwise.

Controller Panel No.: _____	<input type="checkbox"/>	Location of local zones: _____
Controller Panel No.: _____	<input type="checkbox"/>	Location of local zones: _____
Controller Panel No.: _____	<input type="checkbox"/>	Location of local zones: _____
Controller Panel No.: _____	<input type="checkbox"/>	Location of local zones: _____
Controller Panel No.: _____	<input type="checkbox"/>	Location of local zones: _____
Controller Panel No.: _____	<input type="checkbox"/>	Location of local zones: _____

Fill this section out for each configuration.

Config. No./Name: _____ Location of local zones: _____

*Check if programming any
NE505's to this group*



Group No. _____	<input type="checkbox"/>	<input type="radio"/>	Panel/Zone No.(s) in Group _____	<input type="checkbox"/>
Group No. _____	<input type="checkbox"/>	<input type="radio"/>	Panel/Zone No.(s) in Group _____	<input type="checkbox"/>
Group No. _____	<input type="checkbox"/>	<input type="radio"/>	Panel/Zone No.(s) in Group _____	<input type="checkbox"/>
Group No. _____	<input type="checkbox"/>	<input type="radio"/>	Panel/Zone No.(s) in Group _____	<input type="checkbox"/>
Group No. _____	<input type="checkbox"/>	<input type="radio"/>	Panel/Zone No.(s) in Group _____	<input type="checkbox"/>
Group No. _____	<input type="checkbox"/>	<input type="radio"/>	Panel/Zone No.(s) in Group _____	<input type="checkbox"/>

If any NE505's are programmed to work with any groups in this configuration, note here.

NE505 location: _____	Group assigned to: _____	<input type="checkbox"/>
NE505 location: _____	Group assigned to: _____	<input type="checkbox"/>
NE505 location: _____	Group assigned to: _____	<input type="checkbox"/>

APPENDIX B Partitioning with One D3208

You can use the D3208's combine/separate features to split the loads wired to a single MultiZone Controller between two or more NE505 Scene Controllers.

One such application for this scenario is an installation in a single meeting room with less than six lighting loads and a removable partition (Figure B-1). The larger D3208 controller could be installed in the closet and out of sight, while two NE505's could provide scene selection in a sleeker profile. Keep this scenario in mind as you make your choices to define each configuration.

Note how the second illustration (Figure B-2) shows the zones wired to the D3208 divided into two separate groups, and how the NE505 Scene Controllers are programmed to those groups so they can select scenes that affect the lighting within their respective sides of the divided room.

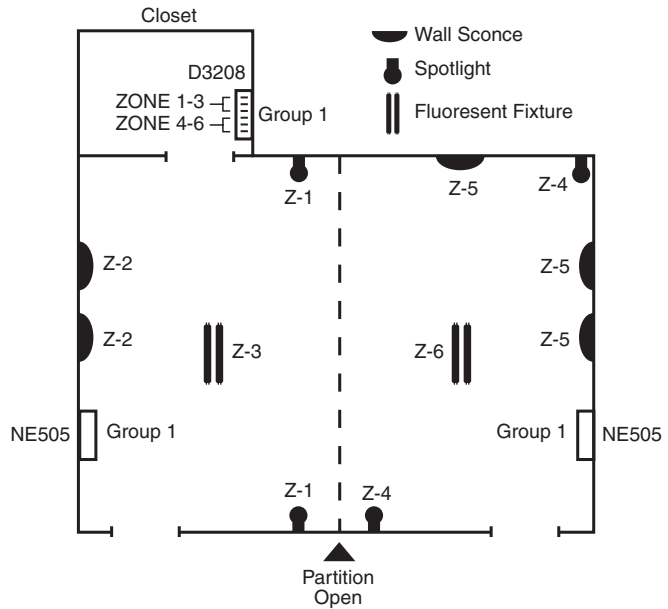


Figure B-1: Open Partition

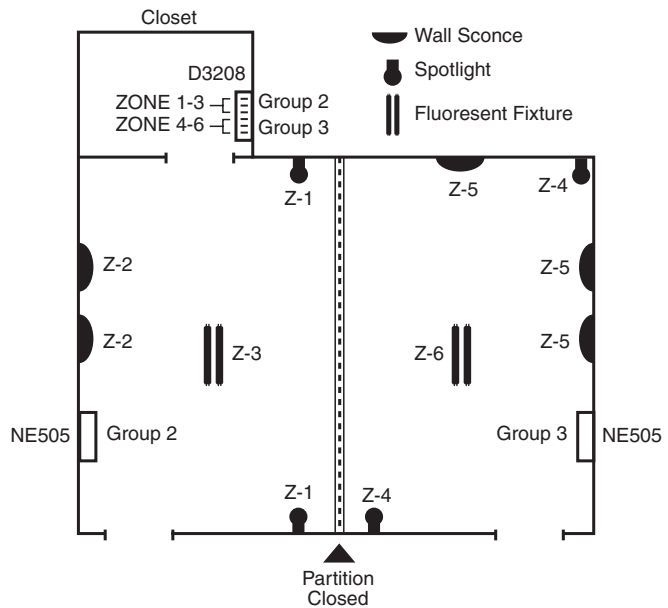


Figure B-2: Closed Partition

APPENDIX C

Grouping Zones from More than One Panel

You may find yourself wanting to assign a greater number of loads than the Multizone Controller can accommodate because you want them all to be in the same group. Although it may be the more common and straightforward, the most basic groups within the D3200 System DO NOT need to directly correspond to the loads hardwired to it. If you have more than six zones in one area and have spare, unassigned zones on another Multizone Controller, you can use those spare zones to accommodate the extra zones. All you have to do is assign the same group number to a load hardwired to another D3208 Multizone Controller.

Note how, in Figure C-1, one of the loads wired to the D3208 in Room B is assigned to Group A, where the rest of the loads in Group A are hardwired to the D3208 in Room A.

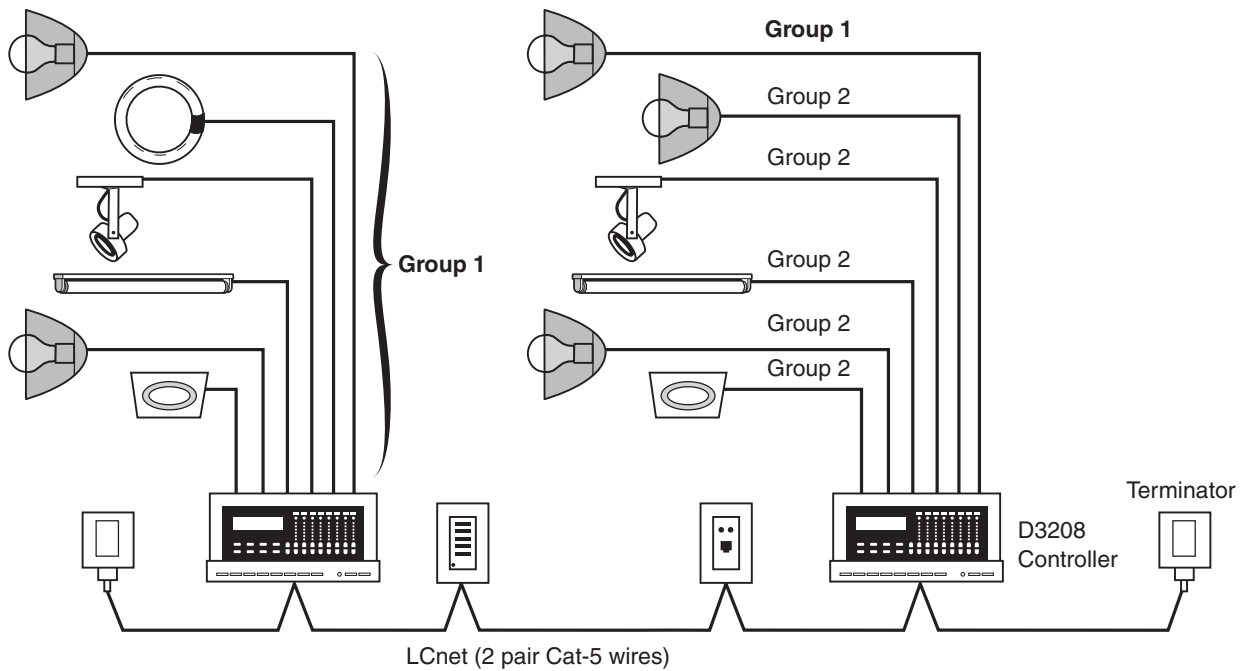
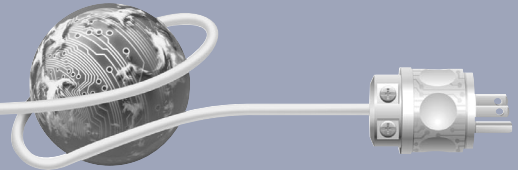


Figure C-1: Alternative Grouping Concept



Leviton Lighting Control Division

20497 S.W. Teton
Tualatin, Oregon 97062
Telephone: 503-404-5500 • FAX 503-404-5600

Leviton Manufacturing Co., Inc.

59-25 Little Neck Parkway, Little Neck, NY 11362-2591
Telephone: 1-800-323-8920 • FAX: 1-800-832-9538
Tech Line (8:30AM-6:00PM E.S.T. Monday-Friday): 1-800-824-3005

Leviton Manufacturing of Canada, Ltd.

165 Hymus Boulevard, Pointe Claire, Quebec H9R 1E9
Telephone: 1-800-469-7890 • FAX: 1-800-563-1853

Leviton S.A. de C.V.

General Arista 54-A Col. Argentina, Mexico D.F., C.P. 11270
Telephone: 011-525-386-1131, 011-525-386-2052 • FAX: 011-525-386-1797

Visit Leviton's Website at www.leviton.com/D3200

