Lighting Control Division

CD250 DALI Group and Scene Programming
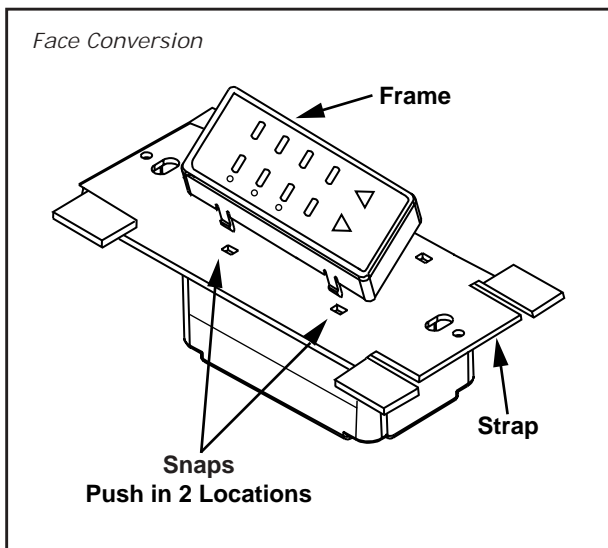
Using CD250 Controllers to program up to 4 groups of lights and to recall 1-8 lighting scenes on a DALI loop

CD-250 DALI Group and Scene Programming

(Summary of Application Note: In this application note, we first show you how to set up a CD250 Controller with a group controller faceplate to act as a **group controller**. Next, we show you how to use it to assign up to 64 individually addressable ballasts on a DALI loop to one of 4 user-programmed groups. Once programmed, the faceplate provides separate group control (ON/OFF and DIM/BRIGHT) for each of the four groups of one or more of the individually addressable ballasts. A "blend" of light levels for each of the four groups of controlled lighting fixtures is called a **lighting scene**. Repeatedly setting the perfect blend for various applications can be time consuming.

To solve that problem, we then show you how to set up a second CD250 switch with a scene controller faceplate to act as a **scene controller** that can recall up to 8 preset lighting scenes at the touch of a button. Each scene is set up using the already programmed CD250 **group controller** to provide a desired blend of light levels for each of the four groups of lights that's appropriate for an application (a speaker, a video presentation, etc.). That blend is then associated with one of the 8 scene buttons on the Scene Controller following the procedure outlined in the section of this application note entitled "Setting Up A Second CD250 As A Scene Controller."
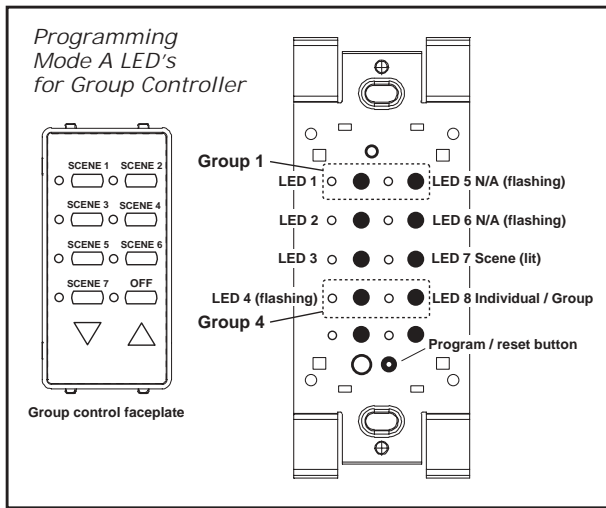
Setting Up A CD250 As A Group Controller

Face Conversion

Frame

Strap

Snaps
Push in 2 Locations

Locating the programming button:

Removing the **group controller faceplate** of the CD250 provides access to the programming/reset button. When a programming procedure calls for setting a programming mode or performing a reset, insert a small object to press the contact located beneath the plastic surface.

Step 1: Start by removing the Group Controller faceplate. If this is a new installation (all new ballasts and controllers), press and hold the "Program/Reset" button for 15 seconds to reset all ballasts on the loop. Resetting clears all ballast group and scene assignments. Upon reset, all ballasts on the loop will go to full bright. Resetting is also recommended to verify all wiring and products are working correctly.
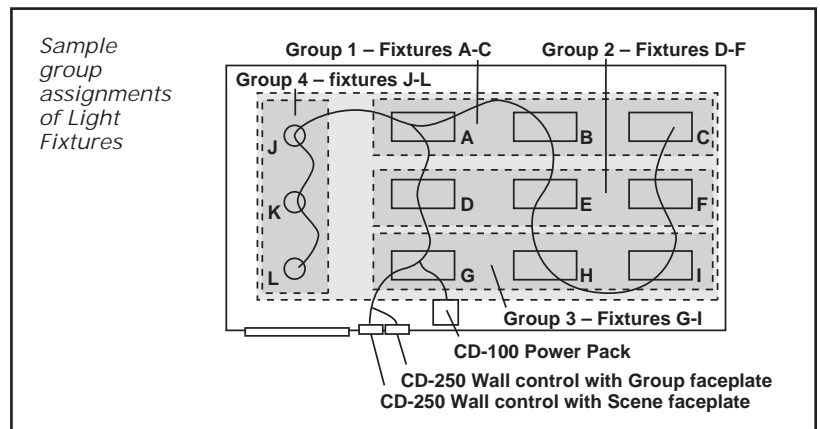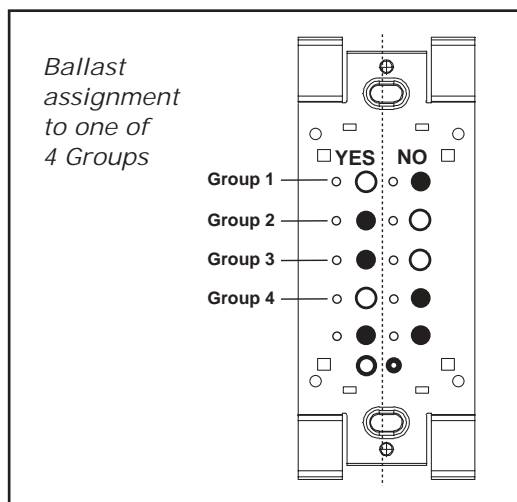
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Programming Mode A LED's for Group Controller

Group control faceplate

Step 2: Quickly press (2 seconds) and release the programming button to place Group Controller in **Programming Mode A**. This mode is confirmed when the 8 LED's are lit or flashing.

Step 3: While in **Programming Mode A**, verify that LED 7 is lit indicating Group Mode. If LED 7 is flashing, press the button next to LED 7 to change the status from blinking to lit. Also verify that LED's 4, 5 and 6 are flashing. If these LED's aren't flashing, press the button next to the LED's to change the status from lit to flashing. The CD250 Controller's starting group defaults to #1 (LED's 1-4 flash). **Note:** If setting up the starting group as other than #1, please refer to the instructions included with the controller to set the switches on the left side to indicate the correct beginning group. Exit **Programming Mode A** by quickly pressing and releasing the programming/reset button

Mapping Ballasts to "Groups" on a CD250 Group Controller

Step 1: Press the "Program/Reset" button for 5 seconds to enter **Programming Mode B**. The LED's flash in a repetitive top-to-bottom sequence and then switch to a side-to-side flashing sequence. Entering this mode causes the light level of all connected fixtures on a DALI loop to dim except those connected to a single ballast which remain at full brightness. This process can take up to one minute, so please wait for this to happen before proceeding. At this point, the Controller's software is waiting for this single ballast to be assigned (mapped) to one of four group buttons. (The side figure shows an example of the mapping of the selected ballast to group 1) **Note:** This ballast must be included in one of the four groups. To include it in a group, press the left button for that group. Then press the right button of the remaining three groups to exclude it from those groups. Once the ballast has been successfully mapped (included in one group and excluded from the other three), the program automatically moves to the next ballast in the DALI loop. The lights controlled by the next selected ballast will be at full brightness, while lights controlled by the other ballasts will be dim. Proceed to map this ballast, and then the program will in turn automatically move you to the next one. The unit automatically exits the programming mode when the last ballast on the DALI loop has been assigned to your chosen group. Note: Group assignments are stored in the ballasts. For multi-point Group control, simply add additional CD250 Controllers to the DALI loop and set them up as Group Controllers. Mapping ballasts to groups is not required.

Step 2: Replace the CD250 Group Controller's faceplate and verify ballast mapping – via each ballast's connected light fixtures – by pressing the associated group ON/OFF buttons and the DIM/BRIGHT arrows.

Ballast assignment to one of 4 Groups

Sample group assignments of Light Fixtures

Group 1 – Fixtures A-C
Group 2 – Fixtures D-F
Group 4 – fixtures J-L
Group 3 – Fixtures G-I
CD-100 Power Pack
CD-250 Wall control with Group faceplate
CD-250 Wall control with Scene faceplate

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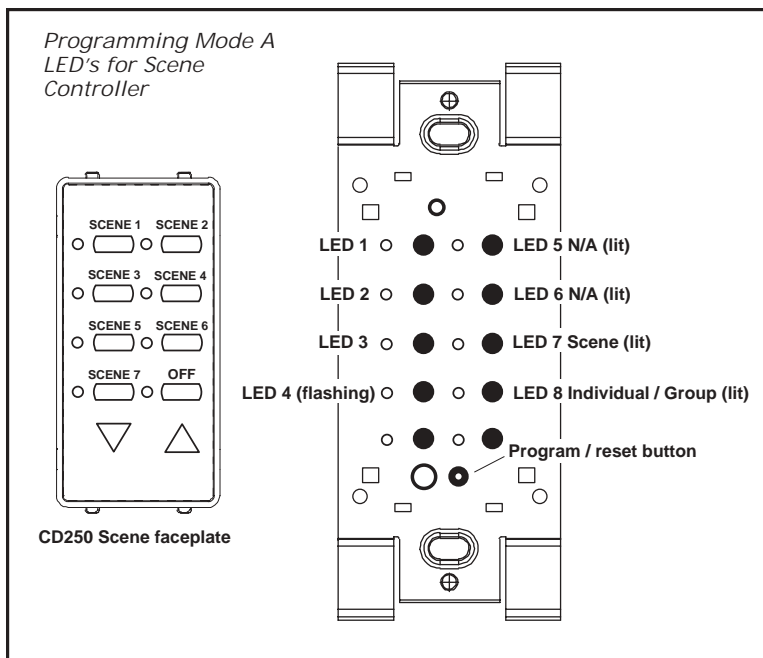*Building a Connected World*

Setting Up A Second CD250 As A Scene Controller

Locating the programming button:

Removing the Scene Controller faceplate of the CD250 provides access to the "Program/Reset" button. When a programming procedure calls for setting a programming mode or performing a reset, insert a small object to press the contact located beneath the plastic surface.

Step 1: Remove the eight-scene-position faceplate of the second CD250 Controller. **Do not perform the "Reset" function (holding in the "Program/Reset" button for 15 seconds) at this time!** Doing so will clear all current ballast group assignments previously assigned with the CD250 Group Controller

Step 2: Quickly press (2 seconds) and release the "Program/Reset" button to place the Controller in **Programming Mode A**. This mode is confirmed when all LED's are lit or flashing.

Programming Mode A LED's for Scene Controller

LED 1

LED 2

LED 3

LED 4 (flashing)

LED 5 N/A (lit)

LED 6 N/A (lit)

LED 7 Scene (lit)

LED 8 Individual / Group (lit)

Program / reset button

CD250 Scene faceplate

SCENE 1 SCENE 2
SCENE 3 SCENE 4
SCENE 5 SCENE 6
SCENE 7 OFF

Step 3: While in **Programming Mode A**, we want to be in Scene Broadcast Mode. Verify that LED 6 is lit, indicating Scene Broadcast Mode. If the LED is flashing, press the button next to the LED to change the status from blinking to lit. Also verify that LED 4 is flashing and that LED's 5 and 7 are lit. If the status of any of these LED's is incorrect, press the button next to the LED in question to change to the needed lit or flashing status. Exit **Programming Mode A** by quickly pressing and releasing the programming/reset button

Programming of Scenes

Step 1: Using the CD250 Group Controller previously programmed, manually set the light levels in the room by using the group buttons and the DIM/BRIGHT arrows on the faceplate to set each group's light level. Once a desired blend of light levels for the four groups of lights that's appropriate to an application is chosen, proceed to step 2.

Step 2: On the CD250 Scene Controller, press the "Program/Reset" button for 5 seconds. The LED's will flash in a side-to-side flashing sequence. The Scene Controller's software is waiting for one of the scene buttons to be pressed. Pressing a button (scene buttons 1-7 and OFF= Scene 8) on the Scene Controller assigns the current blend of group light levels to that button and automatically ends programming mode. Scene levels are actually stored in the ballasts and the Scene Controller recalls the ballast scenes when the button is pressed. For multi-point scene control, simply add additional CD250 Controllers to the DALI loop and set them up as Scene Controllers. (**Warning:** When installing extra CD250 Controllers, do not exceed current capacity of DALI power supply.) Programming of Scene buttons is not required. **Important:** The OFF scene button label on the Scene Controller is offered as a convenience. This button must be programmed to be an OFF scene. To do so, all groups need to be turned OFF and then stored as Scene 8.

Step 3: Repeat steps 1 and 2 until scene buttons 1-7 and the OFF scene button are assigned.

Step 4: Replace the CD250 Scene Controller faceplate and verify scene settings. Using the DIM/BRIGHT arrows, any preset scene's level of illumination can be adjusted up or down.

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