LOW VOLTAGE CONTROLLER MODES

FOR THE LVC-2000-010 (with exam light override and night mode function)

IMPORTANT: Consult the Directions for Use for your low voltage controller for complete installation instructions

See the chart below to select the appropriate mode to do the following:

Control up to three loads (lights, blinds, shades, etc.)

Turn on and off and/or dim LED lights

Mode Selector Switch		Mode #1 (default)	Mode #2	Mode #3		Mode #4	
		Load 1 and load 2 Independent (ON/OFF), load 3 Exam Light*, Night Mode***	Load 1 and load 2 Sequential, load 3 Exam Light*, Night Mode***	Load 1 Dimming, load 2 Independent (ON/OFF), load 3 Exam Light*, Night Mode***		Load 1 and load 2 Dimming, load 3 Exam Light*, Night Mode***	
				Step Dimming (one direction)	Smooth Dimming** (two direction)	Step Dimming (one direction)	Smooth Dimming** (two direction)
		MS1_MS2_MS3 0=0FF (UP) 1=0N (DOWN)	MS1_MS2_MS3 0=0FF (UP) 1=0N (DOWN)	MS1_MS2_MS3 0=0FF (UP) 1=0N (DOWN)	MS1_MS2_MS3 0=0FF (UP) 1=0N (DOWN)	MS1 MS2 MS3 D=OFF (UP) 1=0N (DOWN)	MS1_MS2_MS3 D=OFF (UP) 1=ON (DOWN)
		MS1=OFF (0) MS2=OFF (0) MS3=OFF (0)	MS1=ON (1) MS2=OFF (0) MS3=OFF (0)	MS1=OFF (0) MS2=ON (1) MS3=OFF (0)	MS1=OFF (0) MS2=ON (1) MS3=ON (1)	MS1=ON (1) MS2=ON (1) MS3=OFF (0)	MS1=ON (1) MS2=ON (1) MS3=ON (1)
Ambient Mode (Pillow Speakers, wall switch) affects Load 1 as follows:	First Toggle	load 1 ON	load 1 ON, load 2 OFF	load 1 ON, Full brightness	First toggle: Load 1 ON, dim level set to Approx. 100% brightness	load 1 ON, Full brightness dimming	First toggle: Load 1 ON, dim level set to Approx. 100% brightness
	Second Toggle	load 1 OFF	load 1 OFF, load 2 ON	load 1 ON, Approx. 60% (4 VDC) brightness		load 1 ON, Approx. 60% (4 VDC) brightness	
	Third Toggle	_	load 1 ON, load 2 ON	load 1 ON, Approx. 30% (1.37 VDC) brightness load 1 ON.	Subsequent sustained presses: smooth dimming*	load 1 ON, Approx. 30% (1.37 VDC) brightness load 1 ON.	Subsequent sustained presses: smooth dimming*
	Fourth Toggle	—	load 1 OFF, load 2 OFF	Approx. 10% (0.8 VDC) brightness	Second toggle:	Approx. 10% (0.8 VDC) brightness	Second toggle:
	Fifth Toggle	_	_	load 1 OFF	Load 1 OFF	load 1 OFF	Load 1 OFF
Reading Mode (Pillow Speakers, wall switch) affects Load 2 as follows:	First Toggle	load 2 ON	_	load 2 ON	load 2 ON	load 2 ON, Full brightness	First toggle: Load 2 ON, dim level set to Approx. 100% brightness Subsequent sustained presses: smooth dimming* Second toggle: Load 2 OFF
	Second Toggle	load 2 OFF		load 2 OFF	load 2 OFF	load 1 ON, Approx. 60% (4 VDC) brightness	
	Third Toggle	_		_	_	load 1 ON, Approx. 30% (1.37 VDC) brightness	
	Fourth Toggle	_	_	_	_	load 1 ON, Approx. 10% (0.8 VDC) brightness	
	Fifth Toggle	_	_	_	_	load 1 OFF	
Night Mode affects Load 1 (ambient lights in Night Mode) as follows:	First Toggle	load 1 ON at 10% brightness, load 3 OFF	load 1 ON at 10% brightness, load 3 OFF	load 1 ON at 10% brightness, load 3 OFF	load 1 ON at 10% brightness, load 3 OFF	load 1 ON at 10% brightness, load 3 OFF	load 1 ON at 10% brightness, load 3 OFF
	Second Toggle	load 1 OFF	load 1 OFF	load 1 OFF	load 1 OFF	load 1 OFF	load 1 OFF
Exam Mode (Pillow Speakers, wall switch) affects Load 3 as follows (see note 2 on page 2 for more detail):	First Toggle	load 1 and 3 maximum brightness	load 1 and 3 maximum brightness	load 1 and 3 maximum brightness	load 1 and 3 maximum brightness	load 1 and 3 maximum brightness	load 1 and 3 maximum brightness
	Second Toggle	load 1 returns to previous setting, load 3 OFF	load 1 returns to previous setting, load 3 OFF	load 1 returns to previous setting, load 3 OFF	load 1 returns to previous setting, load 3 OFF	load 1 returns to previous setting, load 3 OFF	load 1 returns to previous setting, load 3 OFF

* Load 3 (exam light) and load 1 at full brightness (see note 2 on p. 2 for more detail).

** Dimming is only possible if wired to a luminaire with dimmable drivers. If a load is not supplied with a dimmable driver, loads 1 and 2 are limited to ON/OFF control.

*** Load 1 (ambient light) at 10% brightness (see note 3 for more detail)

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LOW VOLTAGE CONTROLLER MODES

FOR THE LVC-2000-010

IMPORTANT: Consult the Directions for Use for your low voltage controller for complete installation instructions

- **1.** A toggle is a switch press that is released within 0.5 seconds.
- 2. A sustained press is a switch press that is held for more than 0.5 seconds before it is released.
- **3.** Smooth dimming means that an initial sustained press of the light button (once the load is ON) will slowly decrease the dimming level from 100% (8.2 VDC) to 10% (0.8 VDC) and latch. This transition occurs in 400 ms increments and takes approximately five seconds total, allowing sufficient time for the user to identify the desired level and release the button to latch to that specific dimming level. A subsequent sustained presses reverses the dimming direction from 10% (0.8 VDC) up to 100% (8.2 VDC) and latches. This transition occurs in 400 ms increments and takes approximately five seconds total. Each successive sustained press continues to reverse the dimming direction between 10% and 100%.

If a sustained press is held down continuously, the dimming output will stop at the maximum or minimum value, depending on the dimming direction. The sustained press must be released, and the switch toggled with a short press in order to turn the load OFF. The next short press will turn the load back ON. The dimming level will always start at 100% (8.2 VDC) when the load is turned ON, and the initial dimming direction is always from 100% (8.2 VDC) to 10% (0.8V VDC). Sustained presses do not have any effect when the load is OFF.

4. There are different wall plates that are compatible with this low voltage controller. Contact your Curbell representative to review options.

Note 1: Smooth Dimming is not functionally compatible with all current patient stations. To verify whether or not smooth dimming is compatible with the patient station employed, connect the LVC-2000-010 in mode 3 and set MS3 ON. TOGGLE Ambient Mode to turn on Load 1 at 100% (8.2 VDC) output. Next, make a SUSTAINED PRESS on Ambient Mode. If the load begins to dim and reaches its minimum output within 10 seconds, then the patient station is compatible with Smooth Dimming. If the state of the light does not visibly change, then the patient station is not compatible with this feature and only ON/OFF control will be possible.

Note 2: In ANY mode, Exam Mode will turn BOTH Load 1 and Load 3 on to maximum brightness, overriding the current state of Load 1. With Load 3 ON, Ambient Mode OR Night Mode will turn Load 3 OFF and return Load 1 to its previous state. Load 2 continues to be controlled ONLY by Reading Mode. Reading Mode becomes disabled when Exam Mode is ON.

Note 3: In ANY mode, Night Mode will turn on Load 1 to 10% brightness, overriding the current state of Load 1. Ambient Mode AND Exam Mode can override Night Mode at any point. Night Mode will turn OFF Load 3 if previously turned ON. Load 2 continues to be controlled ONLY by Switch 2 with the exception of Mode 2.

