

## WaveLinx Classroom Example

### How to program VividTune

#### Overview

The WaveLinx system allows the user to program multiple zones of lighting within a space to provide daylighting or manual dimming of multiple intensity or white tuning zones. These zones can be used independently or together as lighting raise/lower and or white tuning (CCT) adjustments.

This programming guide will outline how to program the WaveLinx system to provide a white tuning application using the WaveLinx mobile application.

#### Features:

- Full control of intensity of lighting via daylighting or manual control
- Full control of white tuning (CCT) with (3000K-5000K) or (2700K-6500K) ranges
- Works with all WaveLinx accessories, wallstations, sensors, dimming switchpacks, etc.\*

*\*VividTune is currently not available with integrated sensor solutions*

#### How it works:

A minimum of two relay switchpacks are used to control the lighting in the space.

- Relay Switchpack 1 – provides intensity control of lighting based on daylighting or manual control of lighting. One relay switchpack should be used for each daylight or dimming zone needed.
- Relay Switchpack 2 – provides white tuning (CCT) control. White tuning control is only affected by manual wallstation commands and is not adjusted by daylighting or occupancy control.

#### How it is wired:

- Relay Switchpack 1 will have Hot/Neutral/Ground/Purple/Gray wired to all fixtures in control Zone 1, this provides on/off and intensity control (Dimming wires landed on solid color dimming leads)
- Relay Switchpack 2 will have Purple/Gray wired to all fixtures in control Zone 1, this provides CCT control (Dimming wires landed on striped color dimming leads)
- Repeat these steps for all required dimming/CCT controls per application

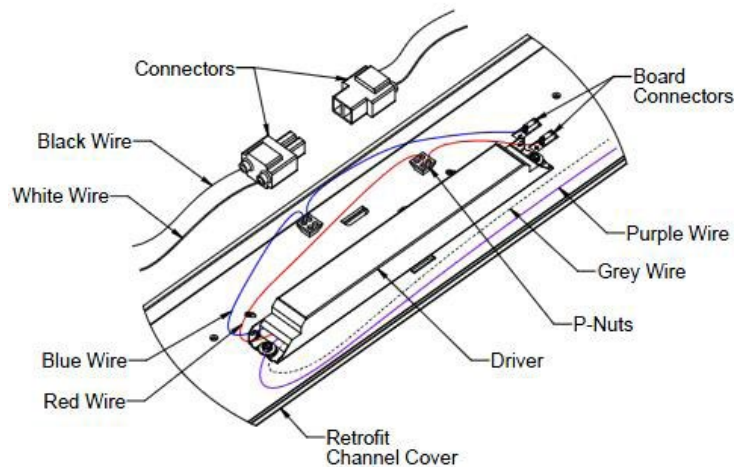
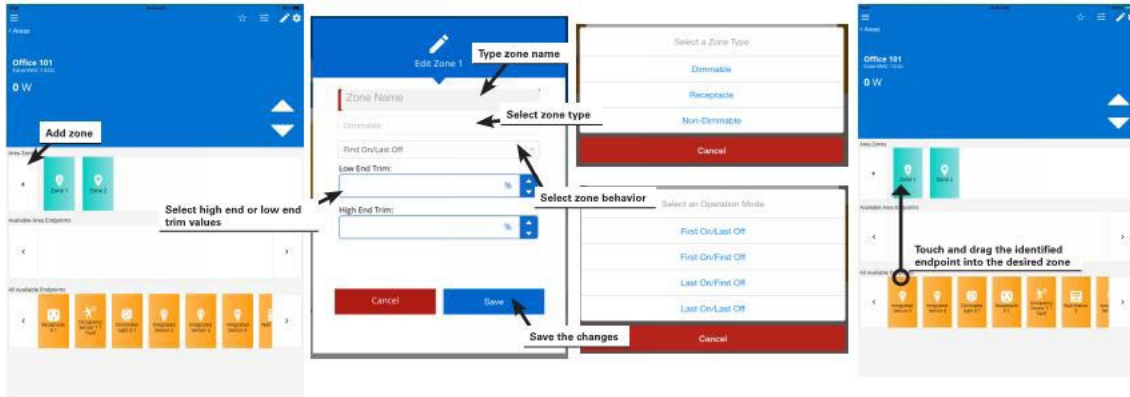


Fig.10

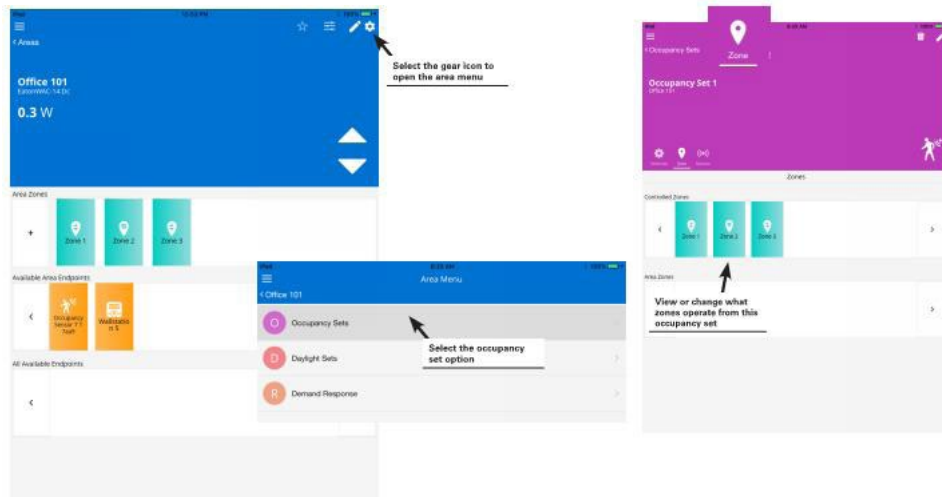
**Zone Setup:**

- Pair relay switchpacks and other devices to the WaveLinx System (see WaveLinx user manual or videos)
- Create an area to be controlled (see WaveLinx user manual or videos)
- Assign relay switchpacks and devices to the created area (see WaveLinx user manual or videos)
- Drag the relay switchpacks that control On/Off and intensity into the intended dimming zone for control (this step will be repeated for each required daylight zone)
- Create a new dimming zone and name it CCT
- Drag the relay switchpack that controls white tuning (CCT) into the CCT zone.



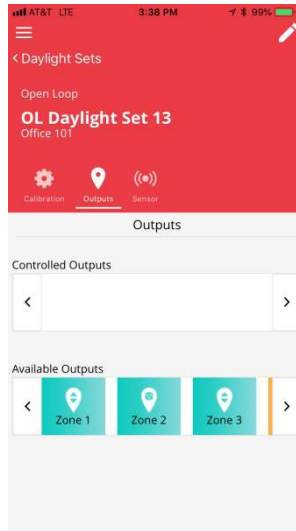
**Ensure occupancy does not affect CCT:**

- Click the Settings gear icon for the area
- Select Occupancy Sets
- Select the Occupancy Set for this area
- Select the Zone icon
- Drag the CCT zone out of the Controlled Zones section and into the Area Zones. If multiple occupancy sets are created for this Area, be sure that the CCT zone is not included in any to ensure that it is not affected.



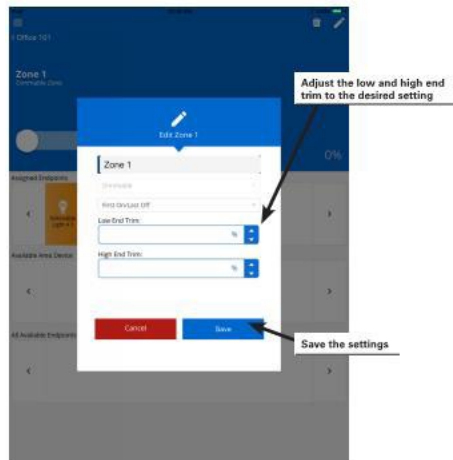
**Ensure daylight sets do not affect CCT:**

- Click the Settings gear icon for the area
- Select Daylight Sets (if a Tile Mount Sensor is not included in this area, Daylight Sets will not be available)
- Select the Open Loop daylight set for this area
- Select the Output icon
- Drag the CCT zone out of the Controlled Outputs section and into the Available Outputs. If multiple Daylight Sets are being used, be sure to remove the CCT out of all sets to ensure that the CCT is not affected.



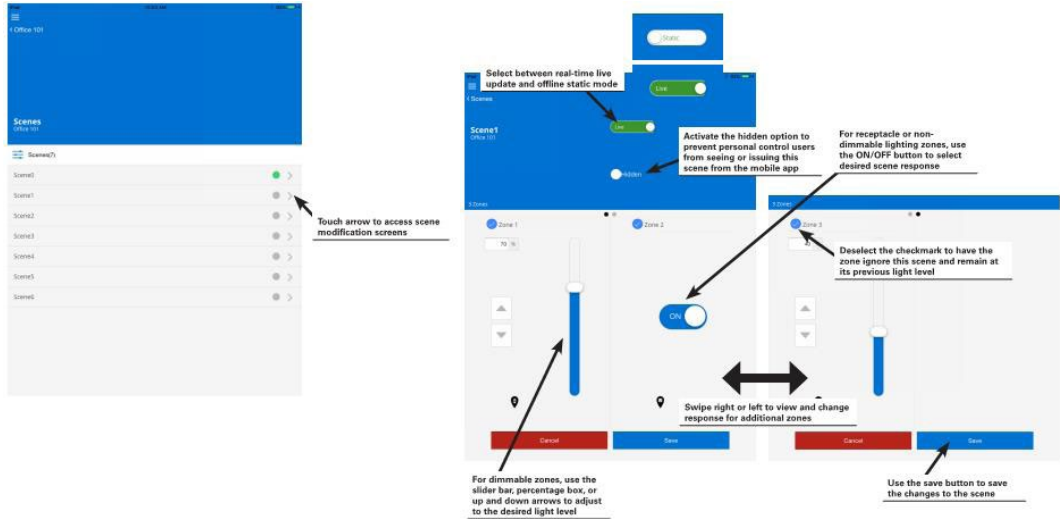
**Ensure high/low trim settings do not affect CCT:**

- Select the CCT zone
- Select the pencil icon in the top right of the page
- Adjust low and high end trim settings to 0% and 100% respectively



**Scene Programming:**

- Click the Scenes icon for the area
- Select the scene in which you intend to modify
- If this is an intensity only scene remove the check mark next to the CCT Zone, this causes the scene to not impact the CCT of this zone and allows only the intensity to be modified
- Repeat for all other scenes

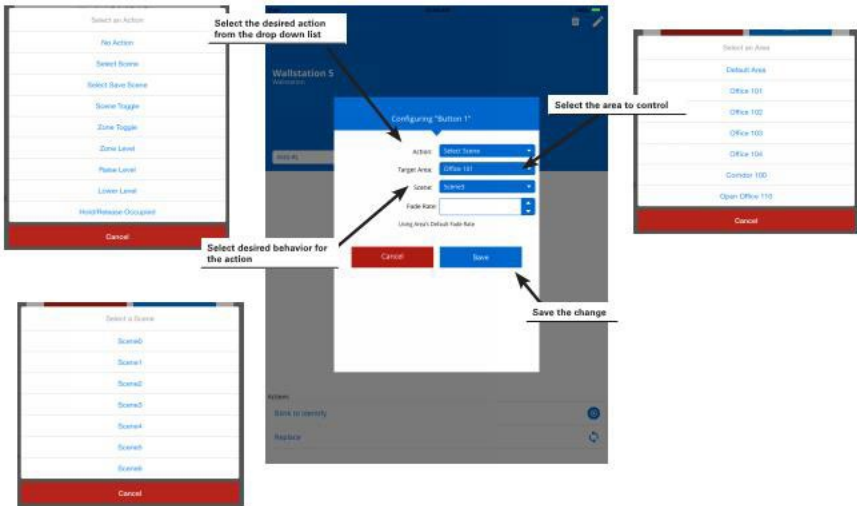


**Wallstation Programming:**

- Select the wallstation icon from the In Area section of the area
- Ensure the selected wallstation in the drop down menu at the top of the page matches the wallstation being configured (example: if configuring a 6-button station, be sure to have W6S selected)
- Select one of the available wallstation buttons in which you would like to program for CCT control
- For White Tuning (CCT) programming ensure the action is one of the following options in the Action drop down menu:
  - Zone Level, Raise Level, Lower Level
- In the Zone drop down menu select the CCT zone
  - For the Level field select the appropriate value to achieve desired CCT (applies to Zone Level action only)
- For intensity control programming, please follow normal programming procedure (see WaveLinX User manual or videos)

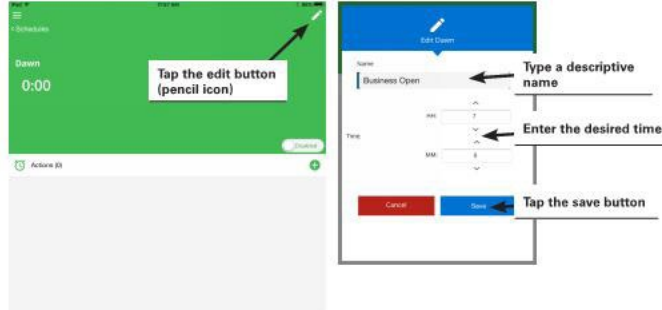
3000K-5000K	
3000K: 1V	10%
3500K: 3.4V	35%
4000K: 6V	60%
4500K: 8.1V	80%
5000K: 10V	100%

2700K-6500K		
2700K	1 V	10%
3000K	1.9 V	18%
3500K	3.7 V	37%
4000K	5.1 V	51%
4500K	6.4 V	64%
5000K	7.6 V	76%
5500K	8.5 V	85%
5700K	8.8 V	88%
6500K	10 V	100%

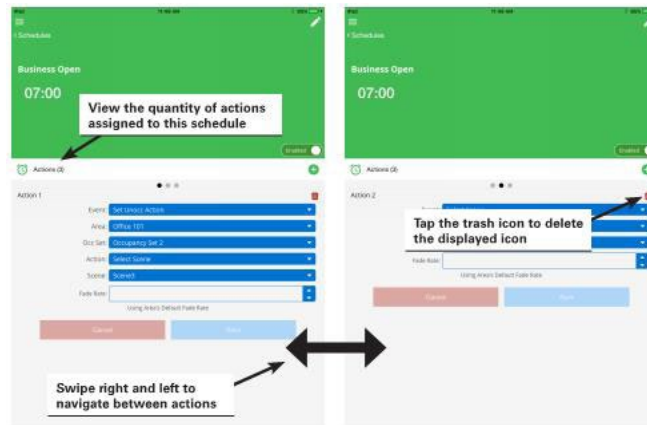


**Adding CCT Control to Schedules:**

- In the Area screen, select the clock icon in the top right corner to choose the Schedules option.
- In the Schedules screen, tap the schedule that you would like to modify. Please note that all schedules are disabled by default and appear grayed out. Schedules are provided default names but can be edited and defined to be active for any time of day.
- Select the pencil icon at the top right to modify the schedule to reflect the intended time and name.

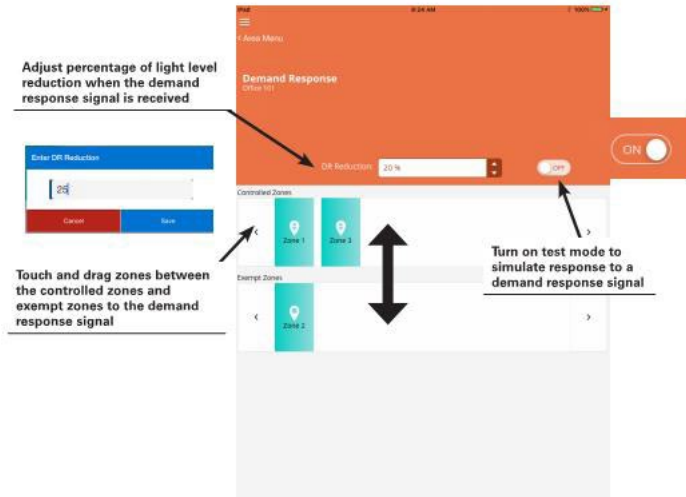


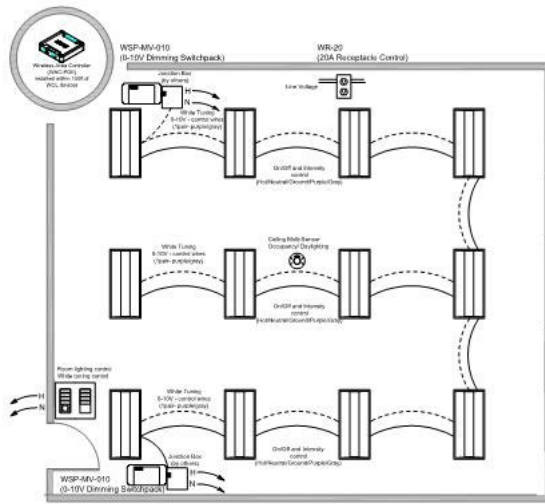
- Ensure that the schedule is enable and select the + icon to add an action.
- Select all Areas that you would like to respond to this Schedule.
- Set the desired unoccupied action, CCT control should be removed from this action from previous Occupancy settings.
- Select the action that you would like the scheduled event to invoke. If a scene is desired, chose "Select Scene" as the option then chose the desired scene from the drop down menu. If zone level control is desired, chose "Zone Level" as the option and select the dimming or CCT % in the level area. Fade rate can be defined if desired



**Ensure Demand Response does not affect CCT:**

- In the Areas list, select the first Area to modify
- In the upper right hand corner, select the gear icon and select Demand Response from the area menu
- Select and drag the CCT zone from the "Controlled Zones" area and move it to the "Exempt Zones" area





**SEQUENCE OF OPERATIONS:**

**LIGHTING**

- CONTINUOUS DIMMING
- CCT WHITE TUNABLE
- PRODUCTIVITY RANGE (3000K-5000K)
- RHYTHM RANGE (2700K-6500K)

**STANDARD CONTROLS**

- AUTOMATIC ON TO 50%
- OPTIONAL VACANCY MODE
- PLUG LOAD TURNS ON WITH OCCUPANCY
- AUTOMATIC OFF OF LIGHTING AND PLUG LOAD ON VACANCY
- OPEN LOOP DAYLIGHTING (OPTIONAL)

**VIVIDTUNE CONTROLS**

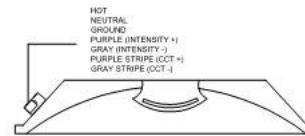
- LIGHT INTENSITY CONTROL
- AUTOMATIC VIA OPEN LOOP DAYLIGHTING
- MANUAL VIA VIVIDTUNE WALLSTATIONS
- COLOR TEMPERATURE TUNING CONTROL
- MANUAL VIA VIVID TUNE WALLSTATIONS

**ADDITIONAL FEATURES**

- AUTOMATIC DEMAND RESPONSE AVAILABLE FROM WIRELESS AREA CONTROLLER
- SCHEDULING OF PARTIAL OFF LIGHT LEVELS AND TIMES FROM WIRELESS AREA CONTROLLER
- UL924 EMERGENCY CONTROL CAPABILITIES AVAILABLE VIA LUMINAIRE BATTERY BACKUP

**Bill of Materials**

Qty	Catalog #	Description
1	WAC-POE	Wireless Area Controller
1	W4S-RL-W	4 Small button scene wallstation w/raise-lower
1	W4S-CCT1-W	4 small button CCT controller
1	CWPD-1500	Ceiling Multi Sensor
2	WR-20	Wireless Receptacle
12	24EN-LD2-34-UNV-L835-CD1-U	Cruze 2x4 with VividTune



[WaveLinx User Manual](#)

**Eaton**

1000 Eaton Boulevard  
Cleveland, OH 44122  
United States  
Eaton.com

Eaton  
Lighting systems  
1121 Highway 74 South  
Peachtree City, GA 30269  
www.eaton.com/lightingsystems

© 2018 Eaton  
All Rights Reserved  
Printed in USA  
Publication No. AP503027EN  
October 5, 2018 10:50 AM

Eaton is a registered trademark.  
All other trademarks are property of their respective owners.