LUTRON®

Maestro® C•L® Advanced Programming Mode
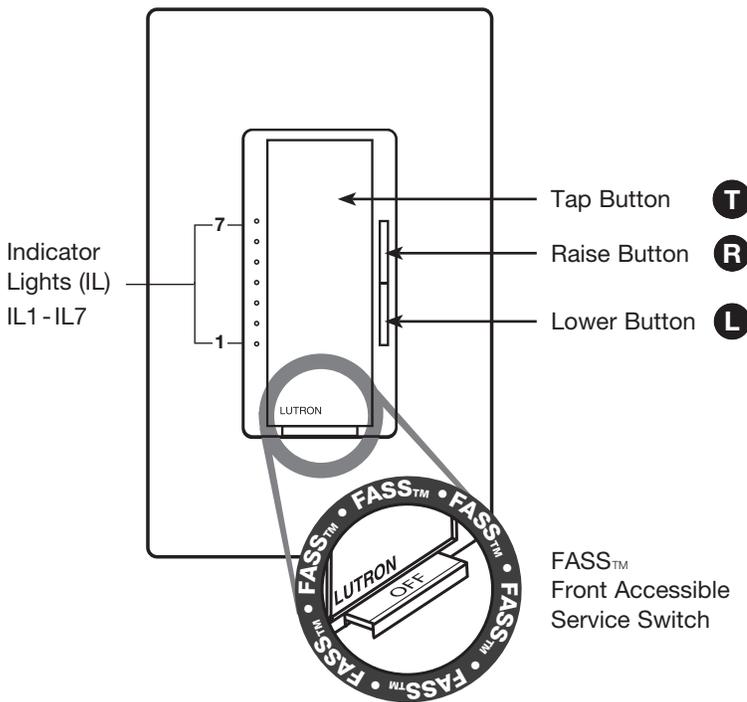
Maestro® C•L® Models

MACL-153M

Overview

The Maestro® C•L® dimmer features an Advanced Programming Mode (APM) that allows the user to customize their dimmer to meet their specific needs. This document serves as a supplement to the instruction sheet. Before entering APM, it is important to have a good understanding of the features included.

Dimmer

Indicator Lights (IL)
IL1 - IL7

Tap Button **T**

Raise Button **R**

Lower Button **L**

FASS™
Front Accessible
Service Switch

Note:

- To replace fixture bulb(s), power may be temporarily disconnected at the light fixture by pulling the FASS™ OUT on the dimmer.
- For any procedure other than routine bulb replacement, power MUST be disconnected at the main electrical panel.

Glossary

Load - The light bulb(s) that the dimmer is controlling.

FASS™ - Tab at bottom of dimmer switch, required to be pulled out for light bulb(s) replacement and entering Advanced Programming Mode (APM); also known as Air Gap.

Normal Operation - Standard use of dimmer switch (ON/OFF, Raise/Lower); Indicator Lights will not be blinking.

Slow Blink - Indication of entering APM, Indicator Lights (ILs) blink slowly at a rate of 4 flashes per second.

Fast Blink - Indication of entering Programming Options, Indicator Lights (ILs) blink quickly at a rate of 8 flashes per second.

Unlocked Preset - A light level setting that allows the dimmer to turn ON to the last dimmed setting.

Locked Preset - A programmable light level setting to which the dimmer will always initially illuminate.

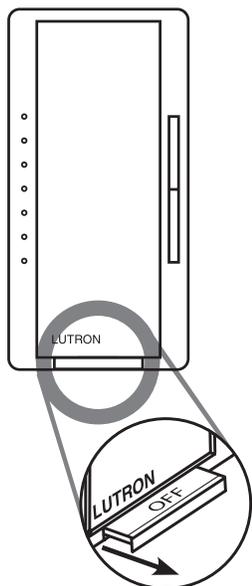*High-End Trim -* Ability to change the highest achievable light level to which the dimmer can be adjusted.

Low-End Trim - Ability to change the lowest achievable light level to which the dimmer can be adjusted.

Default Setting - Original preset programming options that the dimmer is programmed to upon initial use, indicated by ☼.
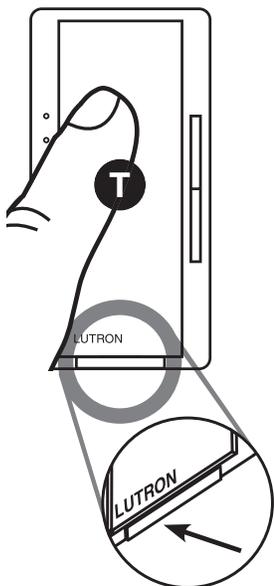
Factory Default - Original preset programming options set up as a starting point for users that wish to customize settings; also known as default setting.

How to Enter Advanced Programming Mode (APM)

1. **Pull the FASS**™ into the **OFF Position** (OUT), and **Wait 5 seconds**.

2. **Press and Hold** the **Tap** button. While continuing to hold the Tap button, **Push the FASS**™ to the **ON Position** (IN) and continue to **Hold the Tap** button for **approximately 5 seconds**.
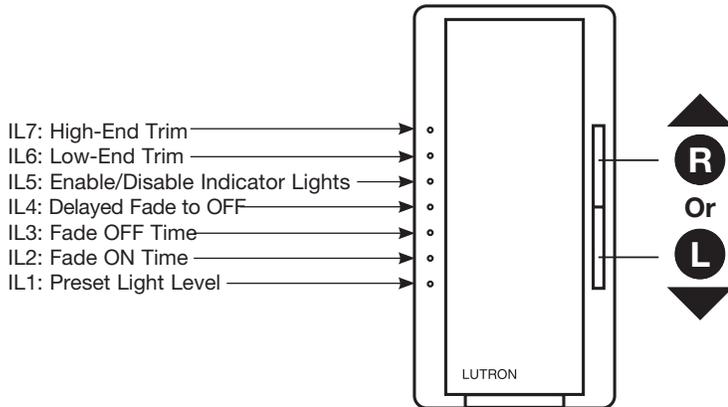

3. Once the bottom Indicator light (IL1) **begins to slowly blink,** indicating that you have entered Advanced Programming Mode, **Release the Tap** button.

Note:

- If there is no activity for 1 minute, the dimmer will automatically exit APM and return to Normal Operation.

How to Enter a Programming Option

1. While in Advanced Programming Mode (APM) as shown on page 3, **Press the Raise/Lower** button to select the desired Programming Option. The slow blinking Indicator Light (IL) will indicate which Option you have selected.

IL7: High-End Trim
IL6: Low-End Trim
IL5: Enable/Disable Indicator Lights
IL4: Delayed Fade to OFF
IL3: Fade OFF Time
IL2: Fade ON Time
IL1: Preset Light Level

R

Or

L

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2. **To Enter** the desired option, **Press the Tap** button. Proceed to the specific Programming Option page to view programming instructions for desired Option.

Note:

- If there is no activity for 1 minute, the dimmer will automatically exit APM and return to Normal Operation.

Programming Option 1: Preset Light Level

What Does It Do:

*If it is preferred that the dimmer **turns ON to the same light level** every time you turn it ON, choose the **Locked Preset**. Double tapping the Tap button in Normal Operation Mode will always bring the light level to maximum intensity. If it is preferred that the **dimmer turns ON to the light level previously used**, choose the **Unlocked Preset** setting.*

SETTINGS

There are 2 settings in **Option 1: Preset Light Level.**

Locked Preset: When programmed for a Locked Preset, the dimmer will always turn ON to the predetermined "locked" level anytime the dimmer is turned ON with a single tap of the Tap button.

Unlocked Preset: When programmed for an Unlocked Preset, the dimmer will turn ON to the light level that it was adjusted to the previous time that the light was ON.

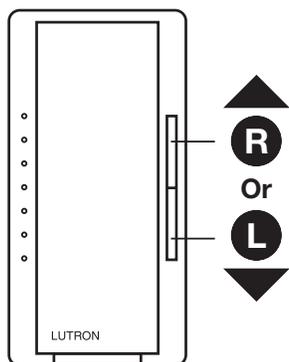**Note: Default Setting is Unlocked Preset.**

DIRECTIONS

Selecting Locked Preset

1. While in Advanced Programming Mode (APM), **Press the Raise/Lower** button to select the first option, Programming Option 1: Preset Light Level. Once Indicator Light **(IL1) is blinking, Press the Tap** button. The IL will then switch to the current setting and **begin blinking rapidly or turn OFF**, indicating that the programming option has been entered.

2. When entering the Preset Light Level option **for the first time upon installing**, the **default setting is "Unlocked."**

   Note: Unlocked Preset is indicated by **NO Indicator Lights turned ON while in Programming Option 1: Preset Light Level.**

   Press the Raise/Lower button to choose desired light intensity. The light will become brighter or dim, reflecting the Locked Preset level as the this feature is adjusted.
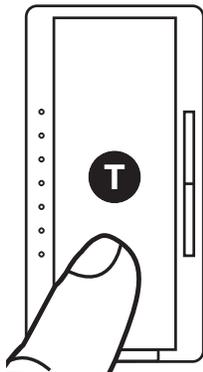

(Continued on next page...)

Note:

- If there is no activity for 1 minute, the dimmer will automatically exit APM and return to Normal Operation.
- To save and exit immediately out of APM to Normal Operation, Press and Hold Tap button until Indicator Light stops blinking.

Programming Option 1: Preset Light Level *(continued)*

3. **To Save** the desired light intensity, **Press the Tap** button. This will immediately exit out of the Programming Option 1: Preset Light Level and return to APM main menu.

Your default light setting has now been redefined. A single tap of the Tap button (when in Normal Operation, not APM) will now always return the dimmer to this selected light setting until preset is deactivated or reset. A double tap will always bring the lights to full intensity.
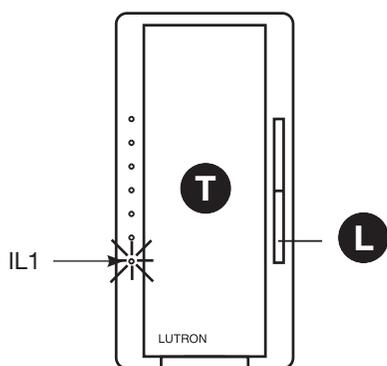
Selecting Unlocked Preset

1. To deactivate a Locked Preset setting so that the **dimmer will turn ON to the light level that it was last set** to while in Normal Operation, the Unlocked Preset must be activated.

   While in **Programming Option 1: Preset Light Level, Press the Lower** button until the bottom Indicator Light is quickly flashing (IL1). **Release the Lower** button and **Press and Hold the Lower** button again for **approximately 3 seconds** or until all Indicator Lights turn OFF.

   Note: The light will remain at its minimum output when you perform this action.

2. **To Save** the Unlocked Preset, **Press the Tap** button. This will immediately exit out of the Programming Option 1: Preset Light Level and return to APM main menu.

IL1

Note:

- If there is no activity for 1 minute, the dimmer will automatically exit APM, however settings will not be saved.
- To save and exit immediately out of APM to Normal Operation, Press and Hold Tap button until Indicator Light stops blinking.

Programming Option 2: Fade ON Time

What Does It Do:

Quicker fade times are more practical and slower fade times are thought to be more elegant. If the room that is controlled by the dimmer is the first or only light that will be turned ON in a particular room, most people find it advantageous to use a faster time so that the room is immediately illuminated. Art lighting or other accent lighting is often more pleasing with a slower fade time.
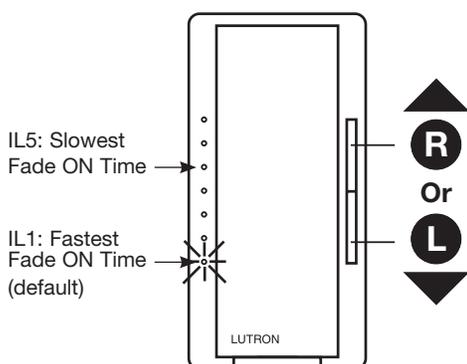
SETTINGS

Fade ON Time allows for control over how quickly the lights will fade up when the dimmer is turned ON. These settings include fade times from OFF to Maximum Light Output in as fast as 0.75 seconds and as slow as 15 seconds.

Note: Default setting is 0.75 seconds (IL1).

DIRECTIONS

Selecting a Fade ON Time

1. While in Advanced Programming Mode (APM), **Press the Raise/Lower** button to select the second option, Programming Option 2: Fade ON Time. Once Indicator Light **(IL2) is blinking, Press the Tap** button. The IL will then switch to the current setting and begin to **blink rapidly,** indicating that the Programming Option has been entered.

2. Upon entering the Fade ON Time programming option by **Pressing the Tap** button and observing the IL changing to a **fast blink**, **Press the Raise/Lower** buttons to **select the desired Fade ON Time**. ILs 1-5 represent the different Fade ON Time settings. Refer to the table below to determine which Fade ON Time is best suited for your needs.

IL5: Slowest Fade ON Time →

R

Or

L

IL1: Fastest Fade ON Time (default) →

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IL Position	Fade ON Time*
5	15 seconds
4	5 seconds
3	3 seconds
2	2.5 seconds
1	0.75 seconds (default)

*Time from OFF to Maximum light level.

3. **To Save** the desired Fade ON Time, **Press the Tap** button. This will immediately exit out of the Fade ON Time Option and return APM main menu.

Note:

- The fade time while using either the Raise or Lower buttons during Normal Operation are not affected by any Fade ON Time modification. These speeds are constant.
- The Fade ON Times will only be seen when the lights are toggled from a Maestro® C•L® or a Companion Dimmer. While using a mechanical switch in a 3-way application, the lights will fade ON and OFF at an accelerated rate.
- If there is no activity for 1 minute, the dimmer will automatically exit APM and return to Normal Operation.
- To save and exit immediately out of APM to Normal Operation, Press and Hold Tap button until Indicator Light stops blinking.

Programming Option 3: Fade OFF Time

What Does It Do:

A slower light Fade OFF Time is suggested for rooms where the user wishes to leave while the lights are still providing illumination. Please be aware that the light dimming may not be immediately noticeable for settings of 5 seconds or longer.
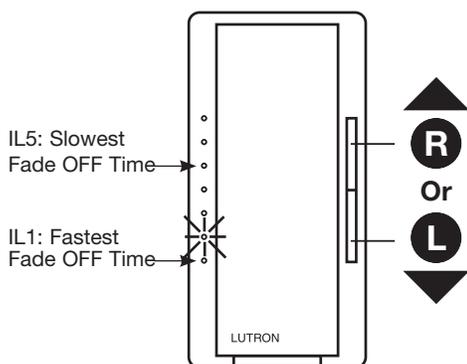
SETTINGS

Fade OFF Time allows for control over how quickly the lights will fade down when the Dimmer is turned OFF. These settings include fade times from Maximum Light Output to OFF in as fast as 0.75 seconds and as slow as 15 seconds.

Note: Default setting is 2.5 seconds (IL2).

DIRECTIONS

Selecting a Fade OFF Time

1. While in Advanced Programming Mode (APM), **Press the Raise/Lower** button to select the third option, Programming Option 3: Fade OFF Time. Once Indicator Light **(IL3) is blinking, Press the Tap** button. The IL will then switch to the current setting and begin to **blink rapidly,** indicating that the Programming Option has been entered.

2. Upon entering the Fade OFF Time programming option by **Pressing the Tap** button and observing the IL changing to a **fast blink**, **Press the Raise/Lower** buttons to select the desired Fade OFF Time. ILs 1-5 represent the different Fade OFF Time settings. Refer to the table below to determine which Fade ON Time is best suited for your needs.

IL5: Slowest Fade OFF Time

IL1: Fastest Fade OFF Time

R

Or

L

IL Position	Fade OFF Time*
5	15 seconds
4	5 seconds
3	3 seconds
2	2.5 seconds (default)
1	0.75 seconds

*Time from OFF to Maximum light level.

3. **To Save** the desired Fade OFF Time, **Press the Tap** button. This will immediately exit out of the Fade OFF Time Option and return to APM main menu.

Note:

- The fade time while using either the Raise or Lower buttons during Normal Operation are not affected by any Fade OFF Time modification. These speeds are constant.
- The Fade OFF Times will only be seen when the lights are toggled from a Maestro® C•L® or a Companion Dimmer. While using a mechanical switch in a 3-way application, the lights will fade ON and OFF at an accelerated rate.
- If there is no activity for 1 minute, the dimmer will automatically exit APM and return to Normal Operation.
- To save and exit immediately out of APM to Normal Operation, Press and Hold Tap button until Indicator Light stops blinking.

Programming Option 4: Delayed Fade to OFF

What Does It Do:

Suggested for use in large rooms where the light control is opposite the exit and immediate dimming is not wanted.
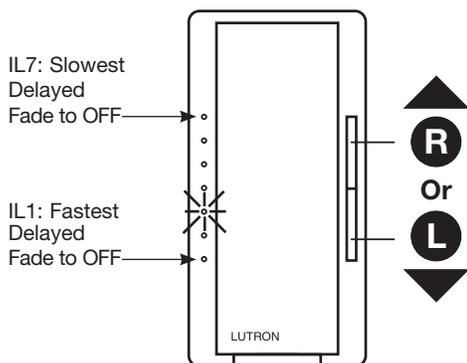
SETTINGS

Delayed Fade to OFF allows for control over how quickly/delayed the lights begin to start the dimming sequence. This setting delays the time between when the Tap button is pressed (Normal Operation) and when the lights actually begin the Fade to OFF process.

Note: Default setting is 30 seconds (IL3).

DIRECTIONS

Setting Delayed Fade to OFF

1. While in Advanced Programming Mode (APM), **Press the Raise/Lower** button to select the fourth option, Programming Option 4: Delayed Fade to OFF. Once Indicator Light **(IL4) is blinking, Press the Tap** button. The IL will then switch to the current setting and begin to **blink rapidly,** indicating that the Programming Option has been entered.

2. Upon entering the Delayed Fade to OFF programming option by **Pressing the Tap** button and observing the IL changing to a **fast blink**, **Press the Raise/Lower** buttons to select the desired Delayed Fade to OFF time. ILs 1-7 represent the different Delayed Fade to OFF times. Refer to the table below to determine which time is best suited for your needs.

IL7: Slowest Delayed Fade to OFF

IL1: Fastest Delayed Fade to OFF

R Or **L**

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IL Position	Delay to Fade Time
7	70 seconds
6	60 seconds
5	50 seconds
4	40 seconds
3	30 seconds (default)
2	20 seconds
1	10 seconds

3. **To Save** the desired Delayed Fade to OFF, **Press the Tap** button. This will immediately exit out of the Delayed Fade to OFF option and return to APM main menu.

4. To use this feature in Normal Operation, while the light is ON, **Press and Hold the Tap button for two seconds** and release. The Delayed Fade to OFF will then initiate.

Note:

- If there is no activity for 1 minute, the dimmer will automatically exit APM and return to Normal Operation.
- To save and exit immediately out of APM to Normal Operation, Press and Hold Tap button until Indicator Light stops blinking.

Programming Option 5: Enable/Disable Indicator Lights

What Does It Do:

When the dimmer is turned OFF and the light goes out, the Indicator Lights remain ON, at a dim glow state, also known as "nightlight mode." Disabling "nightlight mode" is an energy saving practice and also allows the dimmer to be compatible with a broader range of CFLs and LEDs. Enabling "nightlight mode" provides a soft glow for easy location of the dimmer in a dark room.

SETTINGS

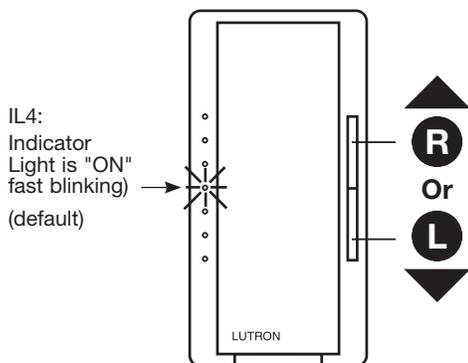Enable/Disable Indicator Lights allows for enabling/disabling of the Indicator Lights when the dimmer is turned OFF.

Note: Default setting is Indicator Lights (nightlight mode): ON (IL4).

DIRECTIONS

Enable/Disable Indicator Lights

1. While in Advanced Programming Mode (APM), **Press the Raise/Lower** button to select the fifth option, Programming Option 5: Enable/Disable Indicator Lights. Once Indicator Light **(IL5) is blinking, Press the Tap** button. The IL will then switch to the current setting and **begin blinking rapidly or turn OFF**, indicating that the programming option has been entered.

2. Upon entering the Enable/Disable Indicator Lights programming option by **Pressing the Tap** button and observing the IL changing to a **fast blink on IL4 or turning OFF**, **Press the Raise/Lower** buttons to disable/enable the nightlight mode (ON/OFF.)

   Note: When pressing any other option other than IL4, all other Indicator Lights will remain OFF. This represents the Disabled Setting.

IL4:
Indicator
Light is "ON"
fast blinking)
(default)

R
Or
L

3. **To Save** the desired Enable/Disable Indicator Lights setting, **Press the Tap** button. This will immediately exit out of the Enable/Disable Indicator Lights option and return to APM main menu.

Note:

- It may be necessary to disable the Indicator Lights (nightlight mode) when using certain CFL and LED bulbs to achieve best bulb performance.
- If there is no activity for 1 minute, the dimmer will automatically exit APM and return to Normal Operation.
- To save and exit immediately out of APM to Normal Operation, Press and Hold Tap button until Indicator Light stops blinking.

Programming Option 6: Low-End Trim

What Does It Do:

Some LED and CFL bulbs require a higher Low-End Trim than others. This feature will eliminate flickering and strobing when the dimmer is turned ON to its lowest setting. This feature can also be used as a personal preference for incandescent or halogen bulbs.

SETTINGS

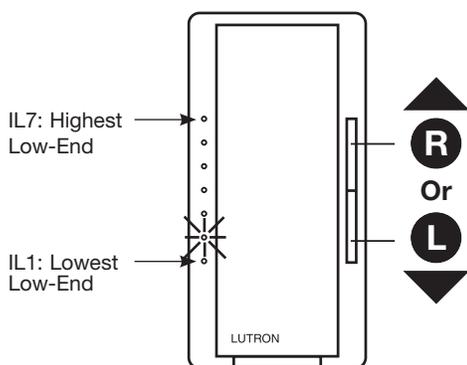Low-End Trim allows the ability to change the lowest dimmer light level to obtain best bulb performance.

Note: Default setting is IL2.

DIRECTIONS

Low-End Trim

1. While in Advanced Programming Mode (APM), **Press the Raise/Lower** button to select the sixth option, Programming Option 6: Low-End Trim. Once Indicator Light **(IL6) is blinking, Press the Tap** button. The IL will then switch to the current setting and begin to **blink rapidly,** indicating that the Programming Option has been entered.

2. Upon entering the Low-End Trim programming option by **Pressing the Tap** and observing the IL changing to a **fast blink**, **Press the Raise/Lower** buttons to select the desired Low-End Trim level.

   Note: While setting the Low-End Trim, it is advised that the programmer observes the actual light (load) and not the Indicator Lights on the dimmer to determine what is the optimum setting. Incremental levels of light intensity exist between each Indicator Light setting, and the programmer may have to press the Raise/Lower button several times to proceed to the next highest/lowest setting.

3. **To Save** the desired Low-End Trim setting, **Press the Tap** button. This will immediately exit out of the Low-End Trim option and return to APM main menu.

Note:

- Low-End Trim adjustment is required for LEDs and CFLs – if not performed, the life of the LED/CFL bulb may be reduced.
- A quick method to adjust Low-End Trim is defined on page 13.
- If there is no activity for 1 minute, the dimmer will automatically exit APM and return to Normal Operation.
- To save and exit immediately out of APM to Normal Operation, Press and Hold Tap button until Indicator Light stops blinking.

Programming Option 7: High-End Trim

What Does It Do:

High-End Trim allows the ability to change the highest achievable light levels.
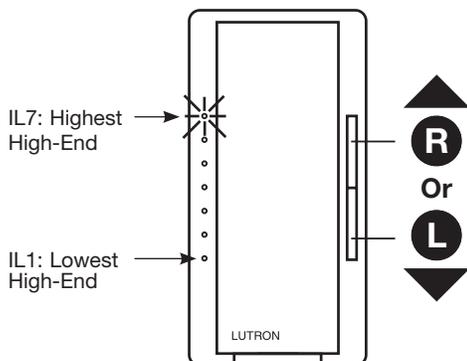
SETTINGS

While setting the High-End Trim, it is advised that the programmer observes the actual light (load) and not the Indicator Lights on the dimmer to determine what is the optimum setting. Incremental levels of light intensity exist between each Indicator Light setting, and the programmer may have to press the Raise/Lower button several times to proceed to the next highest/lowest setting.

Note: Default setting is IL7.

DIRECTIONS

Setting High-End Trim

1. While in Advanced Programming Mode (APM), **Press the Raise/Lower** button to select the seventh option, Programming Option 7: High-End Trim. Once Indicator Light **(IL7) is blinking, Press the Tap** button. The IL will then switch to the current setting and begin to **blink rapidly,** indicating that the Programming Option has been entered.

2. Upon entering the High-End Trim programming option by **Pressing the Tap** and observing the IL changing to a **fast blink**, **Press the Raise/Lower** buttons to select the desired High-End Trim level.

3. To save the desired High-End Trim setting, **Press the Tap** button. This will immediately exit out of the High-End Trim option and return to APM main menu.
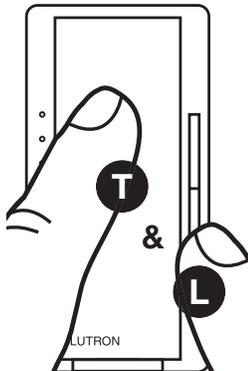
Note:

- In some applications using LED and CFL bulbs, it may be necessary to lower the High-End Trim to achieve an optimum dim range.
- If there is no activity for 1 minute, the dimmer will automatically exit APM and return to Normal Operation.
- To save and exit immediately out of APM to Normal Operation, Press and Hold Tap button until Indicator Light stops blinking.
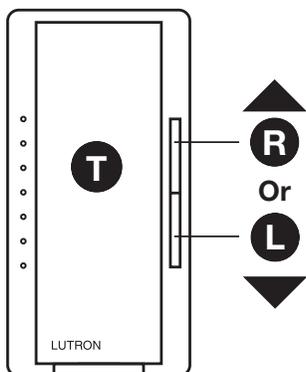
Low-End Trim Shortcut (Entry into Advanced Programming Mode is not required)

For quick changes to the Low-End Trim, a shortcut method has been created that bypasses the APM.
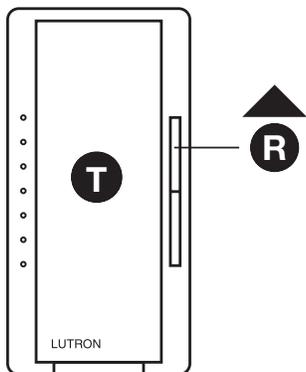
1. **Press and hold the Tap** button and the **Lower** button until an Indicator Light (IL) blinks. The Load will turn OFF and then turn ON to Low-End.

2. Adjust light output using **Raise**/**Lower** button until stable and not flickering. **Press and release the Tap** button to save setting.

3. **Press and release Tap** button to turn load OFF, then press **Raise** button once. If load does not turn ON or remains unstable repeat and in **Step 2** increase light with **Raise** button.
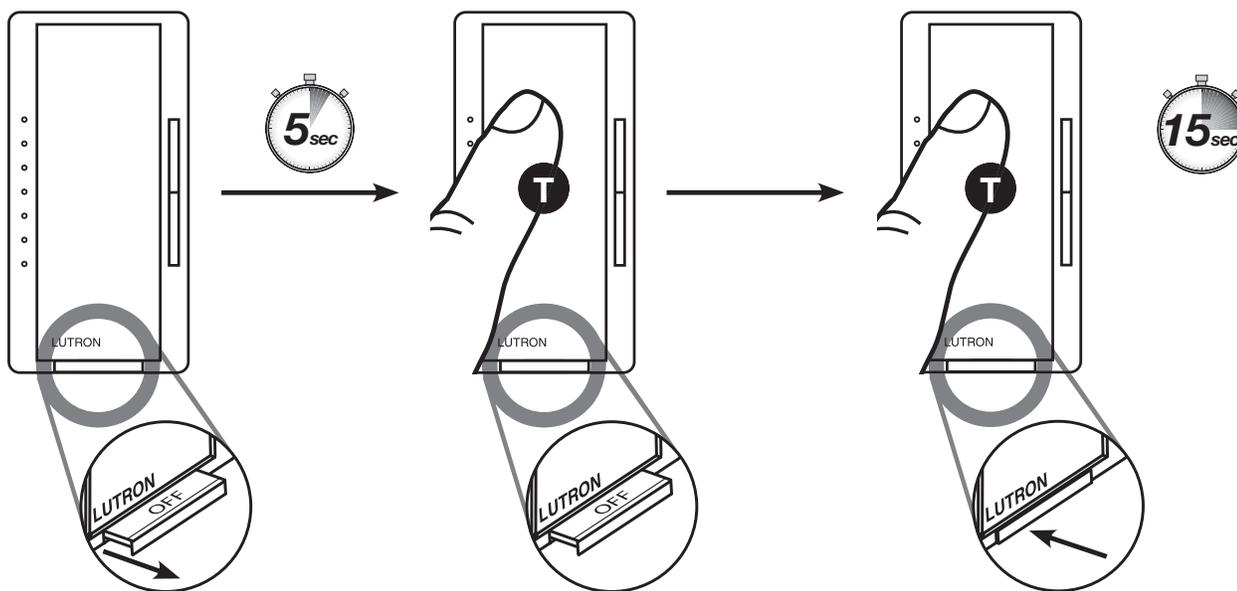
Restoring Default Settings

The Dimmer has the ability to be returned to its original factory settings. This ability allows the programmer a risk-free experience to try multiple setting styles without worry.

Note: The default settings are:

Preset Light Level .... Unlocked Preset (all Indicator Lights turned OFF)
Fade ON Time... 0.75 seconds
Fade OFF Time .... 2.5 seconds
Delayed Fade to OFF.. 30 seconds
Enable/Disable Indicator Lights .... ON
Low-End Trim.. IL2
High-End Trim... IL7 (highest High-End Trim)

To Restore Factory Defaults:

1. **Pull the FASS**™ into the **OFF Position** (OUT), and **Wait 5 seconds**.

2. **Press and Hold** the **Tap** button. While continuing to hold the Tap button, **Push the FASS**™ to the **ON Position** (IN) and continue to **Hold the Tap** button for **approximately 15 seconds**.

   Note: The dimmer will enter Main Menu Mode – **Continue to Hold for the remainder of the 15 seconds**

3. Load (light) will turn OFF and turn back ON to full intensity. This represents a successful factory reset.

Note:

- If you perform the factory reset sequence, you will default your APM settings and may need to adjust Low-End Trim settings to accommodate your particular bulbs.
- While restoring factory defaults the dimmer will enter Main Menu Mode – **Continue to hold the Tap button for the remainder of the 15 seconds.**

Two-Location Applications Using an Existing Switch

SETTINGS

The user has the ability to use an existing 3-way mechanical switch as their second location control. This allows the lights to be controlled from a second location after a simple rewire of the existing switch. If Companion Dimmer(s) are used for a 3-way application, the default setting requires no change.
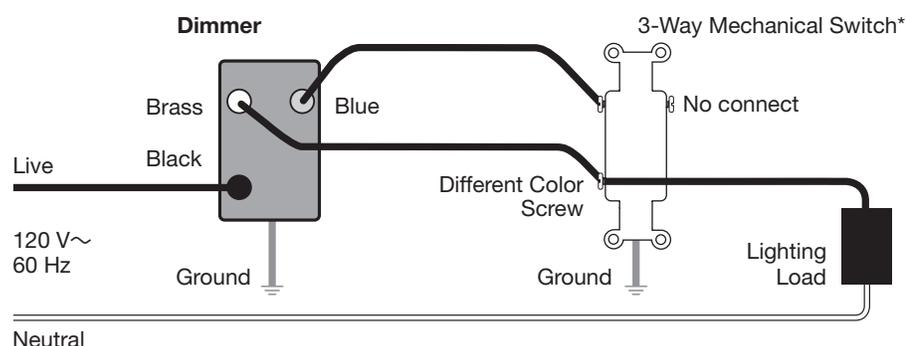
WIRING PREREQUISITES: 3-Way Wiring (Using 3-Way Mechanical Switch)

Note: Diagrams are for reference only. Refer to Instruction sheet for proper wiring procedures.
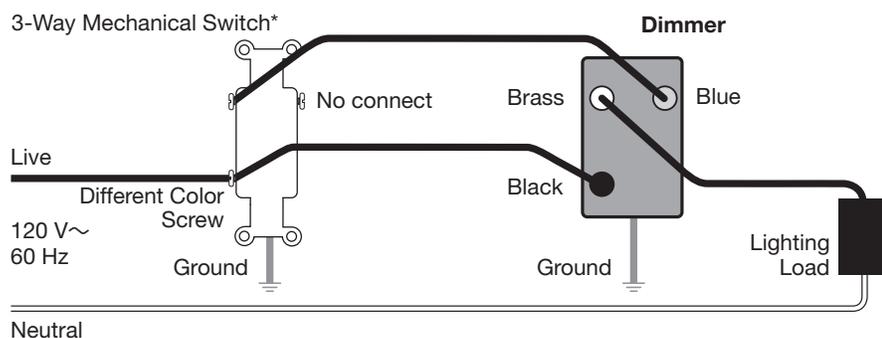
⚠️ **WARNING: Shock Hazard.** May result in serious injury or death.
Turn OFF power at circuit breaker before installing the unit.

Dimmer Line Side

Dimmer Load Side

(Continued on next page...)

Note:

- Rewiring of existing switch is required; consult your instruction sheet for installation procedures.
- If switch was not rewired, this may result in abnormal behavior of the dimmer. Please consult your instruction sheet for wiring procedure.
- If rewiring of the existing mechanical switch was performed but the Two-Location Applications Using an Existing Switch setting is not changed to use the appropriate second location device the dimmer may react abnormally. To resolve, change this setting to using the appropriate device.
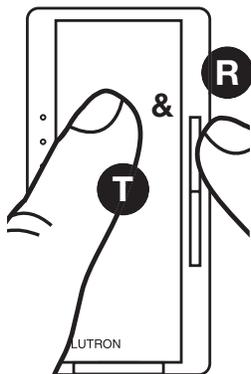
Two-Location Applications Using an Existing Switch *(continued)*

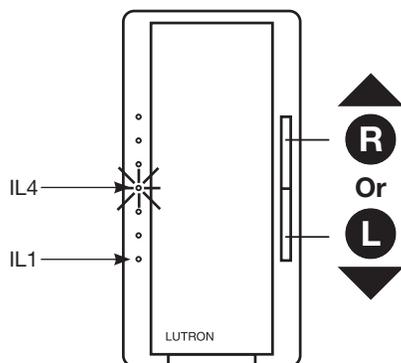**Selecting Two-Location Application Shortcut**

DIRECTIONS

Note: This feature is only accessible through the shortcut and can not be accessed through the Advanced Programming Mode Menu. **Default setting is IL4, Companion Dimmer**

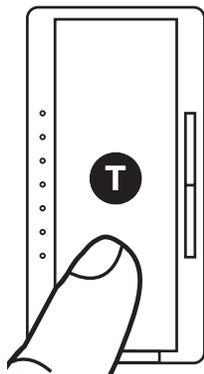1. **Press and Hold the Tap** button and the **Raise** button until an **Indicator Light (IL) blinks.**

2. Use the **Raise/Lower** buttons to select an option:
   – IL1 if a mechanical switch is being used
   – IL4 if a companion dimmer is being used

3. **Single Tap to Save** setting.

Note:

- Rewiring of existing switch is required; consult your instruction sheet for installation procedures.
- Default is IL4, Companion Dimmer.
- If switch was not rewired, this may result in abnormal behavior of the dimmer. Please consult your instruction sheet for wiring procedure.
- If rewiring of the existing mechanical switch was performed but the Two-Location Applications Using an Existing Switch setting is not changed to use the appropriate second location device the dimmer may react abnormally. To resolve, change this setting to using the appropriate device.

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